



# Full wwPDB X-ray Structure Validation Report ⓘ

May 22, 2020 – 01:08 am BST

PDB ID : 3CCJ  
Title : Structure of Anisomycin resistant 50S Ribosomal Subunit: 23S rRNA mutation C2534U  
Authors : Blaha, G.; Gurel, G.  
Deposited on : 2008-02-26  
Resolution : 3.30 Å(reported)

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

We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

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

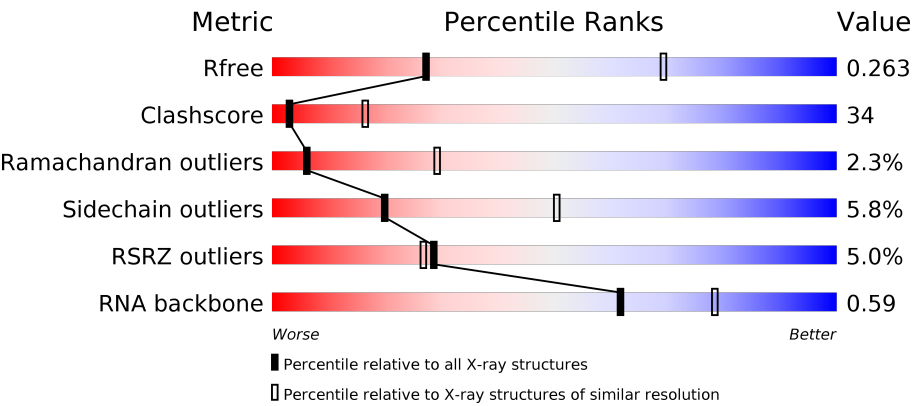
MolProbity : 4.02b-467  
Mogul : 1.8.5 (274361), CSD as541be (2020)  
Xtriage (Phenix) : 1.13  
EDS : 2.11  
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)  
Refmac : 5.8.0158  
CCP4 : 7.0.044 (Gargrove)  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.11

# 1 Overall quality at a glance i

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

The reported resolution of this entry is 3.30 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R <sub>free</sub>	130704	1149 (3.34-3.26)
Clashscore	141614	1205 (3.34-3.26)
Ramachandran outliers	138981	1183 (3.34-3.26)
Sidechain outliers	138945	1182 (3.34-3.26)
RSRZ outliers	127900	1115 (3.34-3.26)
RNA backbone	3102	1117 (3.70-2.90)

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 respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions  $\leq 5\%$ . The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	240	<div><div>49%</div><div>45%</div><div>..</div></div>
2	B	338	<div><div>46%</div><div>50%</div><div>.</div></div>
3	C	246	<div><div>56%</div><div>39%</div><div>.</div></div>
4	D	177	<div><div>17%</div><div>39%</div><div>37%</div><div>21%</div></div>

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Mol	Chain	Length	Quality of chain
5	E	178	
6	F	120	
7	G	348	
8	H	177	
9	I	162	
10	J	145	
11	K	132	
12	L	165	
13	M	196	
14	N	187	
15	O	116	
16	P	149	
17	Q	96	
18	R	155	
19	S	85	
20	T	120	
21	U	67	
22	V	71	
23	W	154	
24	X	92	
25	Y	241	
26	Z	116	
27	1	57	
28	2	50	
29	3	92	

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

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
32	MG	0	8066	-	-	-	X
33	CL	0	8812	-	-	X	-
33	CL	0	8813	-	-	X	-
33	CL	0	8822	-	-	-	X
33	CL	3	8804	-	-	X	-
33	CL	J	8801	-	-	X	-
33	CL	M	8818	-	-	X	-
33	CL	N	8807	-	-	X	-
34	SR	0	8957	-	-	-	X
34	SR	0	8979	-	-	-	X
34	SR	0	8982	-	-	-	X
34	SR	0	9004	-	-	-	X
34	SR	0	9006	-	-	-	X
34	SR	3	8999	-	-	-	X
34	SR	B	8987	-	-	-	X
35	NA	0	8509	-	-	-	X
35	NA	0	8545	-	-	-	X
35	NA	0	8560	-	-	-	X
35	NA	0	8562	-	-	-	X
35	NA	L	8568	-	-	-	X
35	NA	R	8575	-	-	-	X

## 2 Entry composition

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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



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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	0	2754	Total	C	N	O	P	0	0	0
			59020	26349	10872	19054	2745			

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

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

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

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

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
33	0	8	Total	Cl	0	0
			8	8		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
33	J	4	Total 4	Cl 4	0	0
33	Q	1	Total 1	Cl 1	0	0
33	B	1	Total 1	Cl 1	0	0
33	A	1	Total 1	Cl 1	0	0
33	N	1	Total 1	Cl 1	0	0
33	O	1	Total 1	Cl 1	0	0
33	R	1	Total 1	Cl 1	0	0
33	Y	1	Total 1	Cl 1	0	0
33	L	1	Total 1	Cl 1	0	0
33	3	1	Total 1	Cl 1	0	0
33	M	1	Total 1	Cl 1	0	0

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

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

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
34	9	2	Total 2	Sr 2	0	0
34	S	1	Total 1	Sr 1	0	0
34	F	1	Total 1	Sr 1	0	0

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
35	0	63	Total 63	Na 63	0	0
35	J	1	Total 1	Na 1	0	0
35	Q	1	Total 1	Na 1	0	0
35	B	1	Total 1	Na 1	0	0
35	C	1	Total 1	Na 1	0	0
35	R	3	Total 3	Na 3	0	0
35	9	2	Total 2	Na 2	0	0
35	L	1	Total 1	Na 1	0	0
35	S	1	Total 1	Na 1	0	0
35	M	1	Total 1	Na 1	0	0

- Molecule 36 is POTASSIUM ION (three-letter code: K) (formula: K).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
36	0	1	Total 1	K 1	0	0
36	M	1	Total 1	K 1	0	0

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

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
37	O	1	Total Cd 1 1	0	0
37	Z	1	Total Cd 1 1	0	0
37	1	1	Total Cd 1 1	0	0
37	3	1	Total Cd 1 1	0	0
37	U	1	Total Cd 1 1	0	0

- Molecule 38 is water.

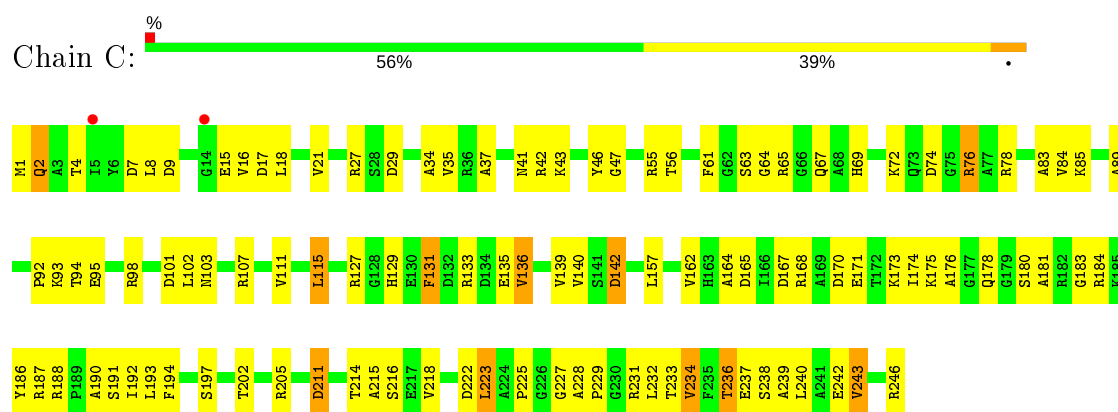
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
38	A	122	Total O 122 122	0	0
38	B	158	Total O 158 158	0	0
38	C	176	Total O 176 176	0	0
38	D	51	Total O 51 51	0	0
38	E	51	Total O 51 51	0	0
38	F	27	Total O 27 27	0	0
38	G	15	Total O 15 15	0	0
38	H	73	Total O 73 73	0	0
38	I	3	Total O 3 3	0	0
38	J	55	Total O 55 55	0	0
38	K	61	Total O 61 61	0	0
38	L	99	Total O 99 99	0	0
38	M	148	Total O 148 148	0	0
38	N	56	Total O 56 56	0	0
38	O	42	Total O 42 42	0	0

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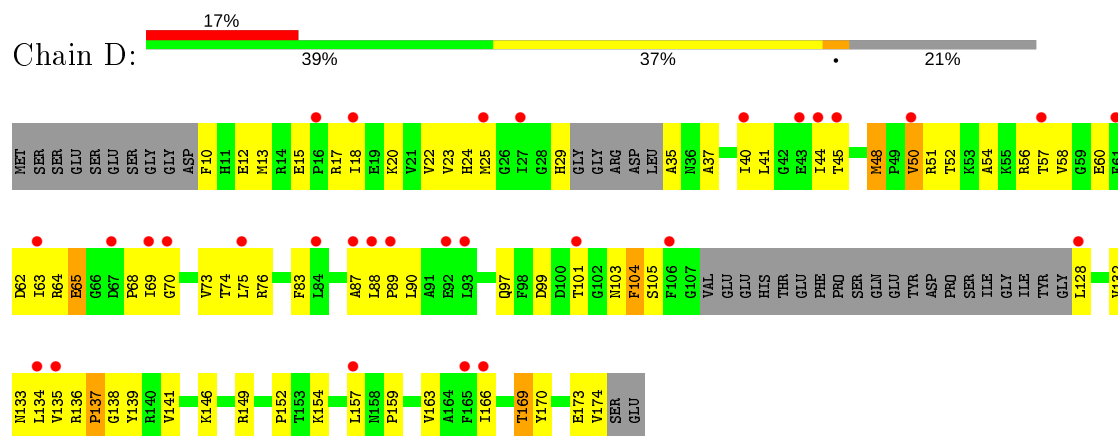
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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
38	P	56	Total 56	O 56	0	0
38	Q	58	Total 58	O 58	0	0
38	R	78	Total 78	O 78	0	0
38	S	37	Total 37	O 37	0	0
38	T	41	Total 41	O 41	0	0
38	U	34	Total 34	O 34	0	0
38	V	10	Total 10	O 10	0	0
38	W	71	Total 71	O 71	0	0
38	X	28	Total 28	O 28	0	0
38	Y	102	Total 102	O 102	0	0
38	Z	33	Total 33	O 33	0	0
38	1	53	Total 53	O 53	0	0
38	2	48	Total 48	O 48	0	0
38	3	80	Total 80	O 80	0	0
38	0	5813	Total 5813	O 5813	0	0
38	9	144	Total 144	O 144	0	0

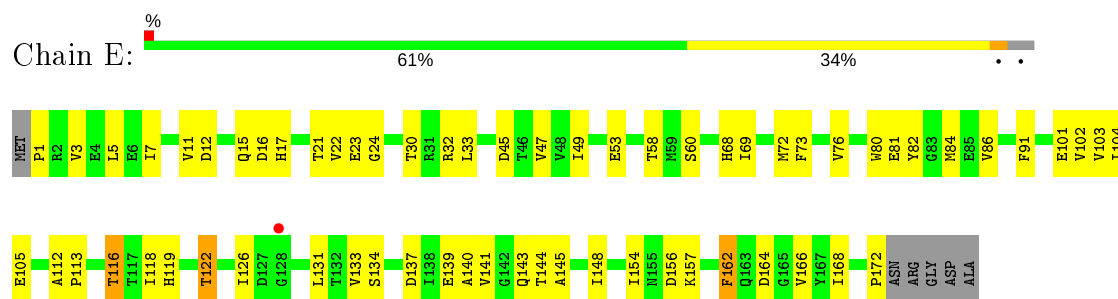




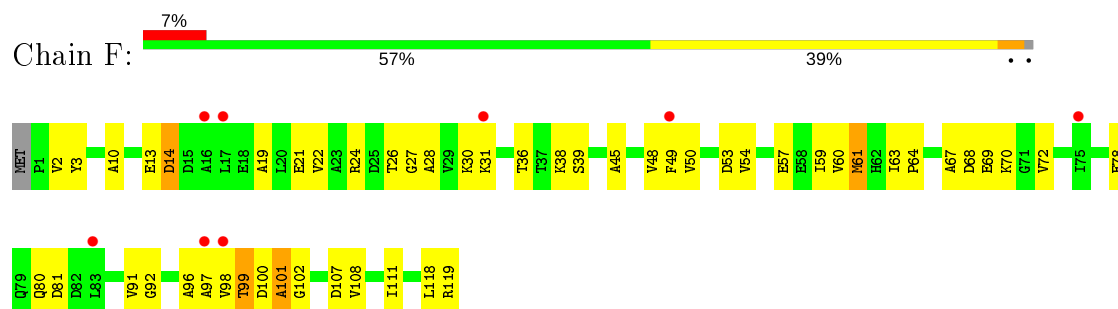
• Molecule 4: 50S ribosomal protein L5P



• Molecule 5: 50S ribosomal protein L6P

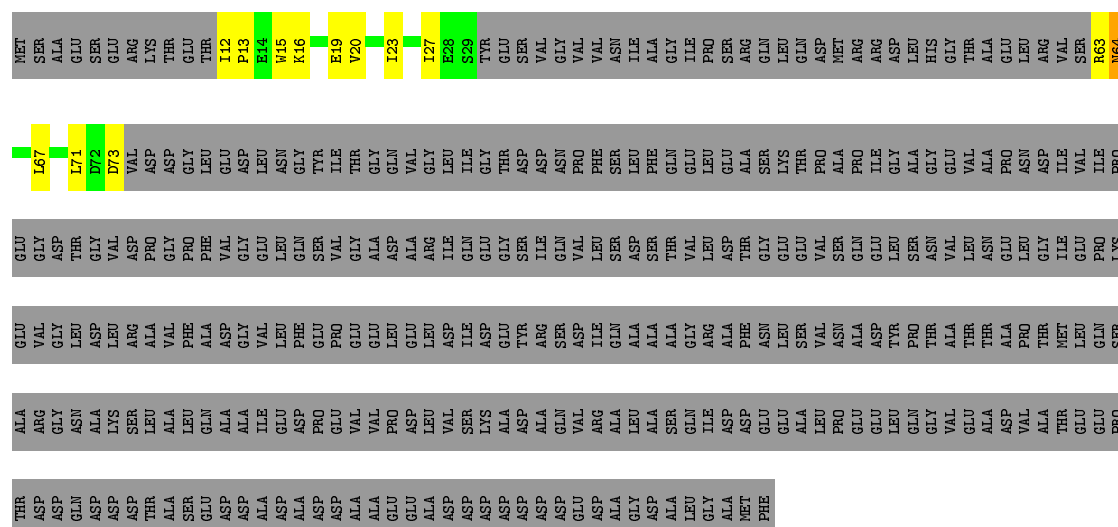


• Molecule 6: 50S ribosomal protein L7Ae



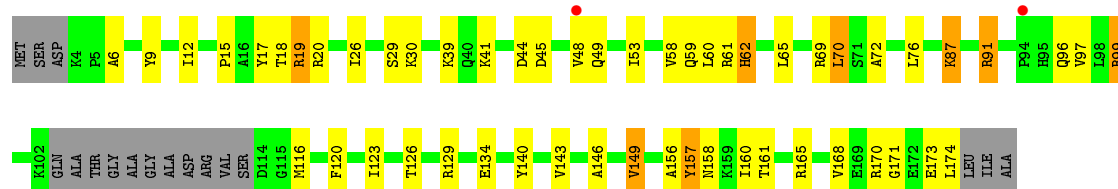
• Molecule 7: 50S ribosomal protein L10E

Chain G:  5% . 92%



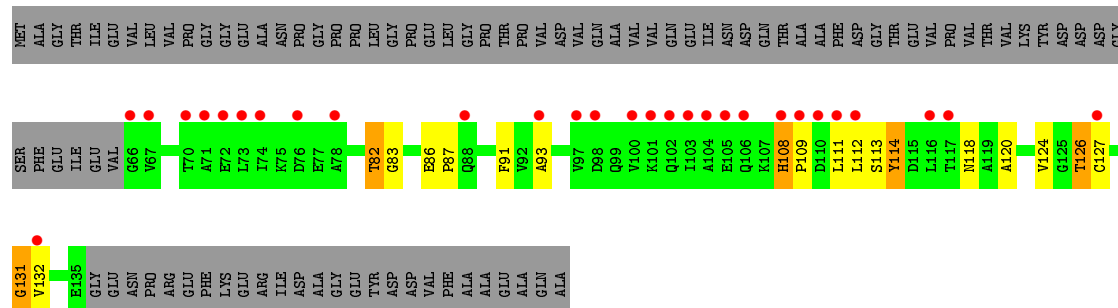
- Molecule 8: 50S ribosomal protein L10e

Chain H: 



- Molecule 9: 50S ribosomal protein L11P

Chain I: 

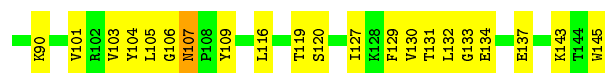


- Molecule 10: 50S ribosomal protein L13P

Chain J:  59% 35% 6%



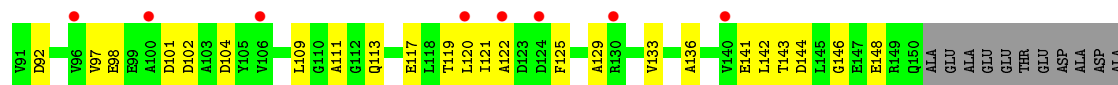
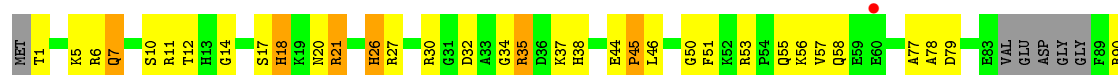




- Molecule 11: 50S ribosomal protein L14P

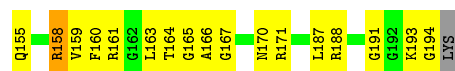


- Molecule 12: 50S ribosomal protein L15P

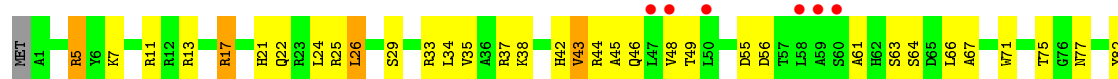


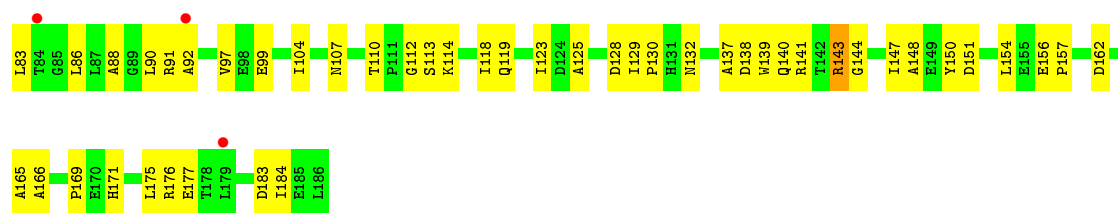
ASP  
GLU  
GLU

- Molecule 13: 50S ribosomal protein L15e

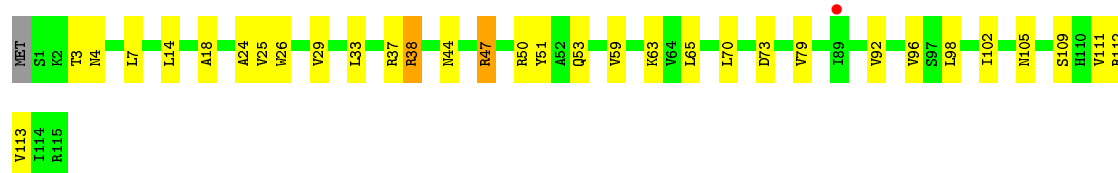


- Molecule 14: 50S ribosomal protein L18P

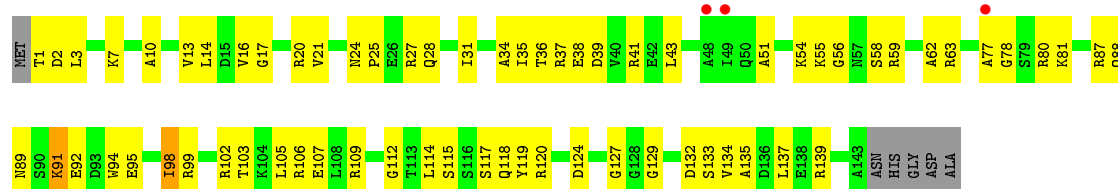




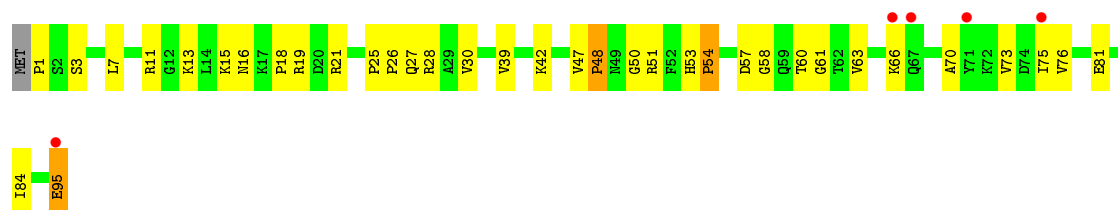
• Molecule 15: 50S ribosomal protein L18e



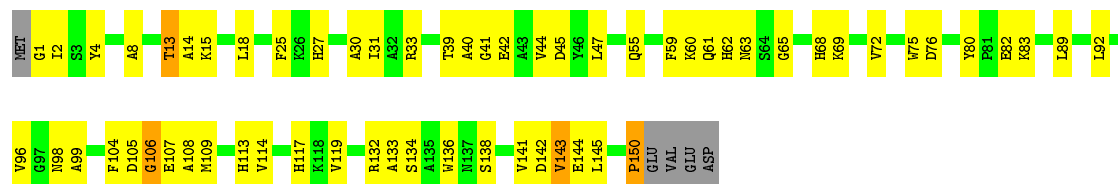
• Molecule 16: 50S ribosomal protein L19e



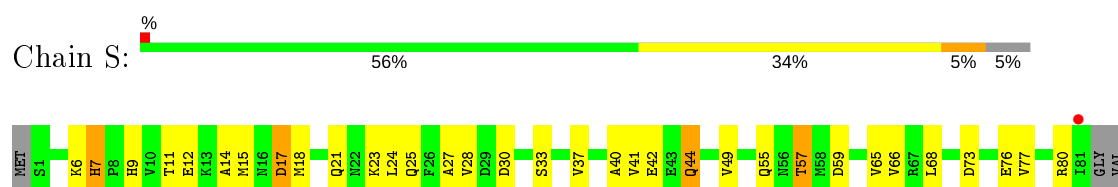
• Molecule 17: 50S ribosomal protein L21e



• Molecule 18: 50S ribosomal protein L22P

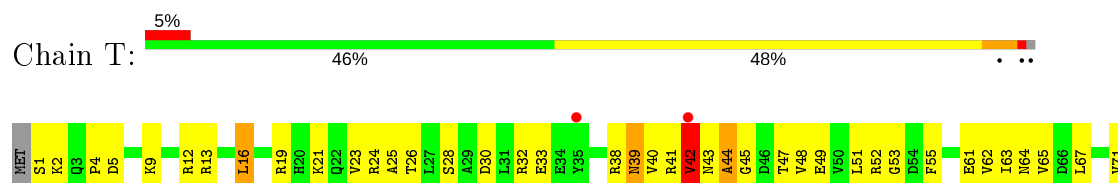


• Molecule 19: 50S ribosomal protein L23P

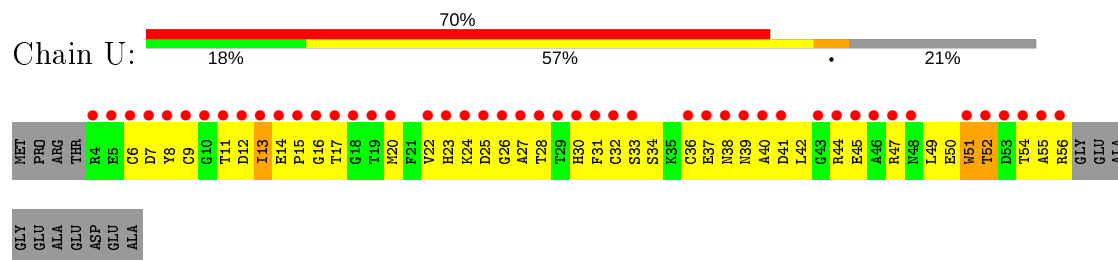


PHE

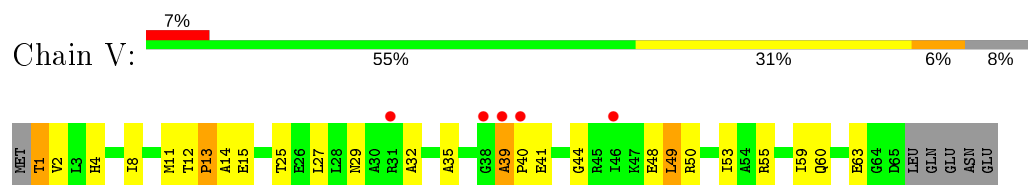
- Molecule 20: 50S ribosomal protein L24P



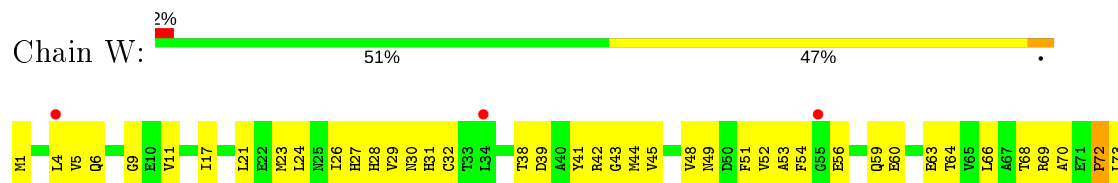
- Molecule 21: 50S ribosomal protein L24e



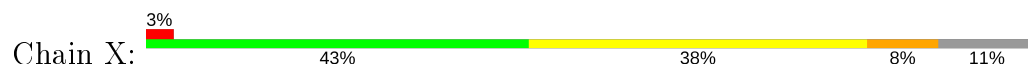
- Molecule 22: 50S ribosomal protein L29P

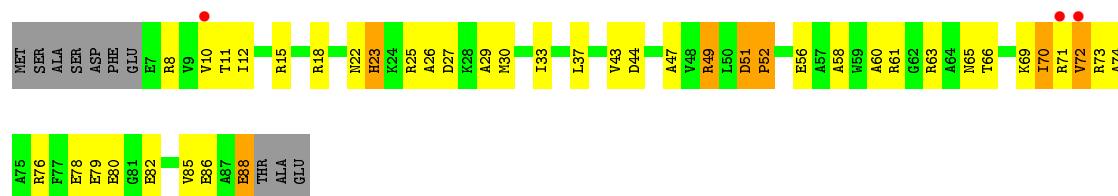


- Molecule 23: 50S ribosomal protein L30P

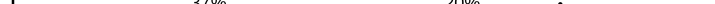


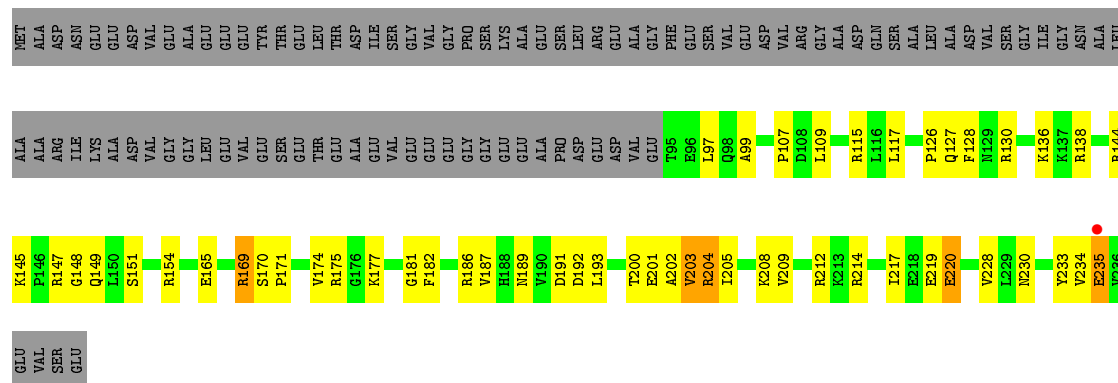
- Molecule 24: 50S ribosomal protein L31e





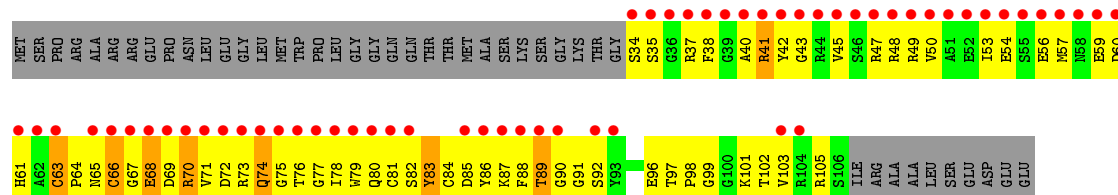
- Molecule 25: 50S ribosomal protein L32e

Chain Y:  37% 20% • 41%



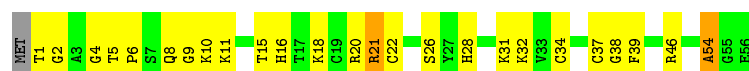
- Molecule 26: 50S ribosomal protein L37Ae

Chain Z:  50%



- Molecule 27: 50S ribosomal protein L37e

Chain 1:  54% 40% 6%

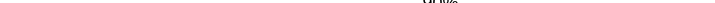


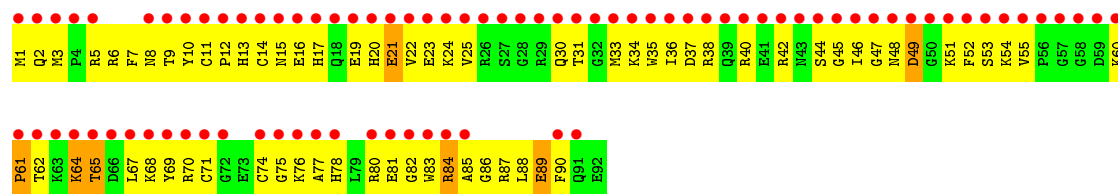
- Molecule 28: 50S ribosomal protein L39e

Chain 2:  8% 58% 32% 8%



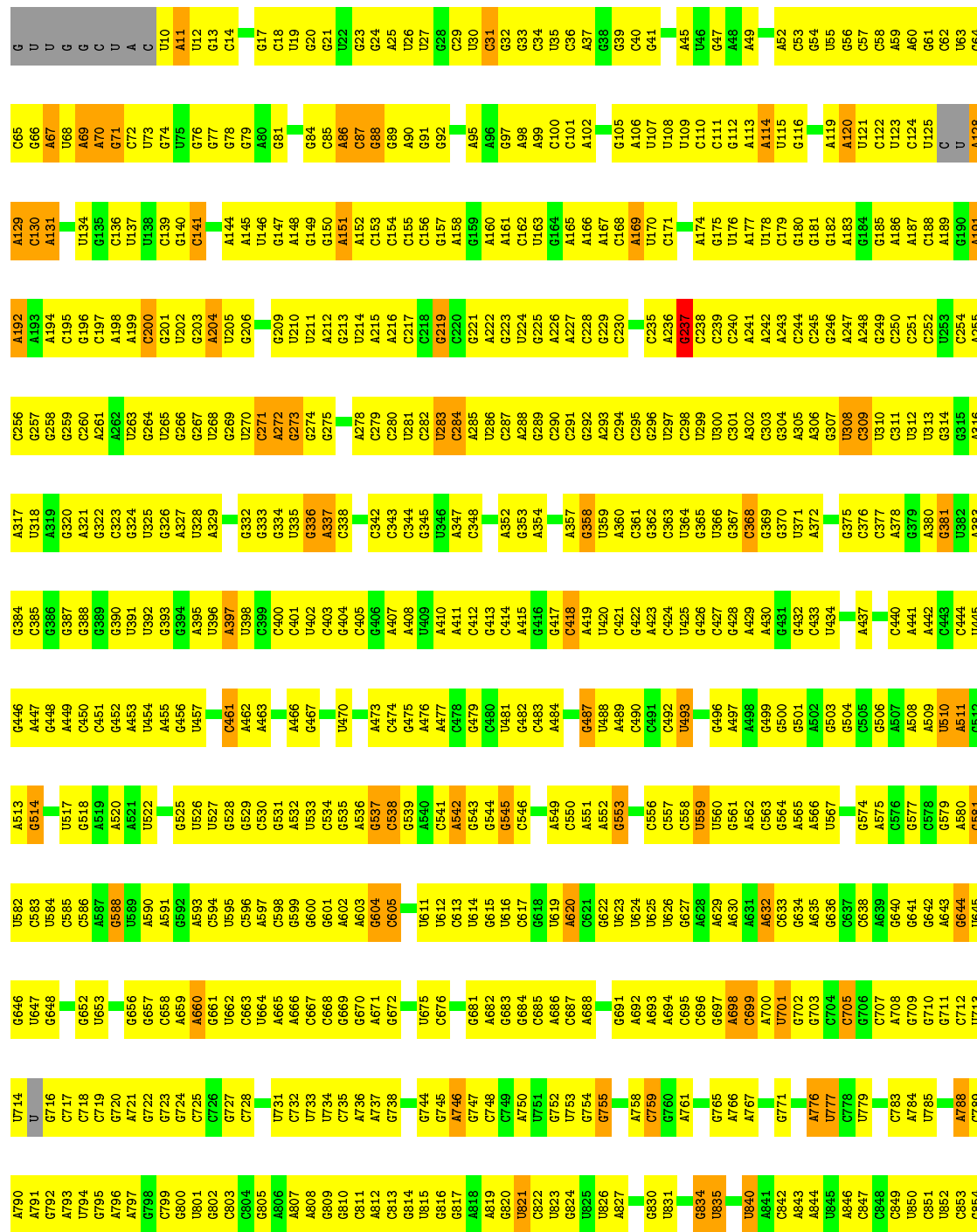
- Molecule 29: 50S ribosomal protein L44E

Chain 3:  90% 24% 68% 8%



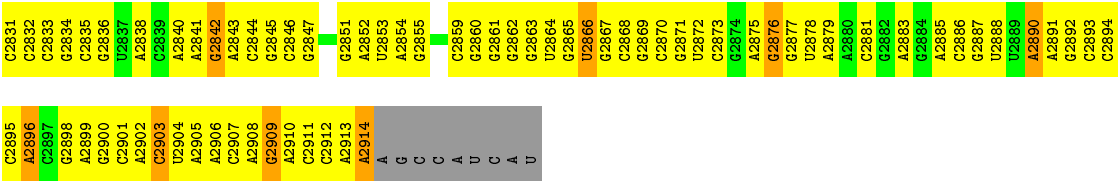
● Molecule 30: 23S RIBOSOMAL RNA

Chain 0: 22% 64% 8% 6%

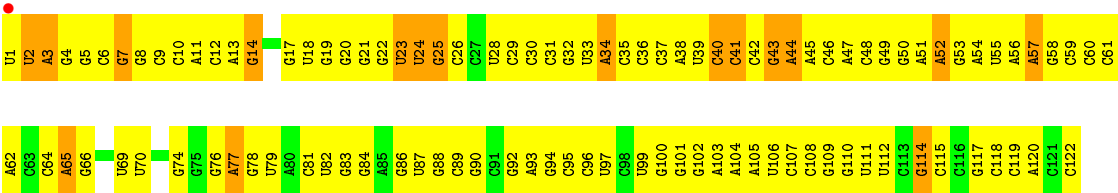


C1792	C1793	C1794	G1730	A1661	U1599	U1539	U1473	G1398	C1332	G1131	G1054	A	U855
G1795	G1796	G1797	C1731	C1662	G1600	G1540	C1474	A1399	U1333	A1132	G1055	G	G856
A1798	A1799	A1799	C1732	G1663	G1601	G1541	G1475	G1400	G1285	G	U1056	U	A857
C1798	C1799	C1799	G1733	A1664	C1602	G1542	A1476	C1335	U1286	G1137	A1057	C	U858
G1799	G1800	G1800	A1734	G1665	G1603	G1543	U1477	U1336	C1287	U1139	A1058	G	C859
A1801	A1802	A1802	C1735	A1667	G1604	G1544	U1478	U1337	C1201	U1140	G1059	G	U860
C1803	C1804	C1804	C1736	U1668	G1605	C1545	A1479	U1338	A1202	C	C1060	C	A861
G1805	G1806	G1806	A1737	G1669	A1606	G1546	A1480	U1408	G1203	C1142	U1061	C	U862
A1807	A1808	A1808	A1738	C1662	A1607	A1547	G1481	G1409	G1204	G	G1062	A	U863
C1809	C1810	C1810	C1739	G1663	G1608	U1548	G1482	U1412	U1205	G1146	U1066	C999	U864
G1811	G1812	G1812	A1740	A1669	C1609	C1549	C1483	C1343	U1206	C1147	A1067	U1000	A867
A1813	A1814	A1814	G1741	G1672	G1610	A1550	G1484	A1345	A1274	C1148	G1068	G940	G868
C1815	C1816	C1816	A1742	C1674	A1612	G1552	A1486	U1346	C1275	U1149	C1069	U942	G869
G1817	G1818	G1818	G1743	C1675	C1613	C1553	A1487	C1420	C1208	A1150	A1070	U1003	G870
A1819	A1820	A1820	G1744	G1676	G1614	C1554	U1488	A1421	G1210	G1151	G1071	G944	G871
C1821	C1822	C1822	G1745	A1677	A1615	G1555	G1489	C1422	G1212	A1152	A1005	U945	U872
G1823	G1824	G1824	U1746	A1678	A1616	G1556	U1490	C1423	C1213	C1153	G1072	A1006	C946
A1825	A1826	A1826	C1617	C1679	C1617	G1557	A1492	C1424	A1215	A1154	A1073	A1007	U947
C1827	C1828	C1828	G1618	C1680	G1618	C1558	A1493	C1425	G1216	G1155	G1074	C1008	U948
A1829	A1830	A1830	G1619	G1681	G1619	C1559	A1494	C1426	G1217	C1156	U1075	G1009	U949
C1831	C1832	C1832	A1682	G1682	C1620	U	C1495	C1427	U1218	G1158	G1076	A951	G878
G1833	G1834	G1834	A1683	C1662	G1621	G1561	A1496	C1428	C1289	G1159	G1077	C1011	G879
A1835	A1836	A1836	A1684	C1663	G1622	G1562	G1497	U1432	G1292	A1160	A1081	A1012	C880
C1837	C1838	C1838	A1685	C1664	C1623	G1563	U1498	A1434	U1293	A1161	A1082	A1013	C881
G1839	G1840	G1840	C1686	C1665	A1824	C1564	U1499	U1435	C1361	G1172	A1096	A1014	A882
A1841	A1842	A1842	C1687	C1666	U1625	C1565	U1500	C1436	G1235	A1173	A1097	C1025	C883
C1843	C1844	C1844	G1688	C1667	A1626	G1566	A1501	C1437	U1237	G1174	G1099	U1027	C884
G1845	G1846	G1846	A1689	U1698	G1627	G1567	A1502	C1438	C1238	A1175	G1100	U1028	G885
A1847	A1848	A1848	C1690	C1691	G1628	G1568	U1503	C1439	C1239	G1176	G1101	U1029	G902
C1849	C1850	C1850	A1691	A1692	G1629	U1569	A1504	U1440	G1240	A1177	C1102	U1030	U903
G1851	G1852	G1852	C1692	C1693	A1830	C1570	U1505	G1441	C1241	G1178	A1032	A1031	U904
A1853	A1854	A1854	A1693	A1694	G1631	G1571	U1506	A1442	U1242	A1181	G1033	C	C905
C1855	C1856	C1856	C1697	C1698	C1632	A1572	C1507	C1443	G1243	G1182	U1041	U1034	C906
G1857	G1858	G1858	U1702	U1702	A1633	A1573	C1508	C1444	U1244	A1183	G1038	C	A907
A1859	A1860	A1860	C1699	C1701	G1634	C1574	U1511	C1445	G1245	C1184	U1115	C	A908
C1861	C1862	C1862	U1703	U1703	U1635	C1575	G1512	C1446	C1246	U1116	U1042	U	A912
G1863	G1864	G1864	A1704	A1704	G1636	G1576	G1513	U1447	U1247	A1117	U1043	C	A916
A1865	A1866	A1866	C1705	C1705	U1637	C1577	C1514	C1448	A1248	U1118	C1043	C	U917
C1867	C1868	C1868	G1706	G1706	U1638	C1578	A1515	C1449	U1249	U1119	C1044	C	C920
G1869	G1870	G1870	C1707	C1707	C1639	C1579	U1516	C1450	G1251	G1185	G1045	G	A922
A1871	A1872	A1872	G1708	G1708	A1641	A1580	C1517	C1451	A1249	A1186	U1046	U	A923
C1873	C1874	C1874	C1709	C1709	A1642	A1581	C1518	C1452	U1250	U1187	C1047	C	G924
G1875	G1876	G1876	A1710	A1710	G1643	C1582	A1519	C1453	G1251	A1188	U1120	C	C925
A1877	A1878	A1878	G1711	G1711	U1644	U1583	G1520	U1454	C1252	G1121	G	A	
C1879	C1880	C1880	A1712	A1712	C1645	C1584	C1521	C1455	A1253	C1127	G1050	G	
G1881	G1882	G1882	G1713	G1713	U1646	C1585	C1522	C1456	C1254	A1129	C1051	G	
A1883	A1884	A1884	C1714	C1714	G1647	G1586	G1523	U1457	A1255	U1128	G1052	A	
C1885	C1886	C1886	A1717	A1717	G1648	C1587	U1524	C1458	C1256	G1190	G1053	G	
G1887	G1888	G1888	G1718	G1718	C1650	G1588	G1525	U1461	A1259	A1191			
A1889	A1890	A1890	C1719	C1719	U1650	G1589	A1526	C1462	G1260	A1192			
C1891	C1892	C1892	A1720	A1720	C1651	A1590	C1527	C1463	G1261	A1193			
G1893	G1894	G1894	C1721	C1721	U1652	A1591	A1528	C1464	C1262	U1194			
A1895	A1896	A1896	U1722	U1722	C1653	C1592	A1529	C1465					
C1897	C1898	C1898	G1723	G1723	G1654	C1593	U1531	U1468					
G1899	G1900	G1900	U1724	U1724	U1655	C1594	G1535	C1469					
A1901	A1902	A1902	C1725	C1725	A1656	G1595	G1536	C1470					
C1903	C1904	C1904	U1726	U1726	U1657	A1596	A1471	A1471					
G1905	G1906	G1906	C1727	C1727	U1658	A1597	C1538	C1472					
A1907	A1908	A1908	U1728	U1728	G1659	A1598							
C1909	C1910	C1910	G1729	G1729	U1660								





● Molecule 31: 5S RIBOSOMAL RNA





## 4 Data and refinement statistics

Property	Value	Source
Space group	C 2 2 21	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	212.01Å 299.25Å 573.81Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	50.00 – 3.30 85.53 – 2.40	Depositor EDS
% Data completeness (in resolution range)	90.6 (50.00-3.30) 89.1 (85.53-2.40)	Depositor EDS
$R_{merge}$	0.18	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	0.00 (at 2.40Å)	Xtriage
Refinement program	CNS 1.0	Depositor
R, $R_{free}$	0.208 , 0.287 0.184 , 0.263	Depositor DCC
$R_{free}$ test set	6547 reflections (0.98%)	wwPDB-VP
Wilson B-factor (Å <sup>2</sup> )	79.9	Xtriage
Anisotropy	0.112	Xtriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.30 , 138.1	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.47$ , $\langle L^2 \rangle = 0.30$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
$F_o, F_c$ correlation	0.93	EDS
Total number of atoms	99122	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	74.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.71% of the height of the origin peak. No significant pseudotranslation is detected.*

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

<sup>2</sup>Theoretical values of  $\langle |L| \rangle$ ,  $\langle L^2 \rangle$  for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

## 5 Model quality ⓘ

### 5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: MG, OMG, CL, SR, NA, K, CD, OMU, UR3, 1MA, PSU

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
1	A	0.37	0/1786	0.66	0/2408
2	B	0.38	0/2690	0.67	0/3652
3	C	0.42	0/1885	0.65	0/2552
4	D	0.35	0/1111	0.58	0/1498
5	E	0.36	0/1382	0.61	0/1880
6	F	0.36	0/901	0.60	0/1224
7	G	0.40	0/241	0.53	0/324
8	H	0.36	0/1302	0.66	0/1743
9	I	0.33	0/526	0.54	0/716
10	J	0.42	0/1136	0.63	0/1530
11	K	0.40	0/1004	0.71	0/1351
12	L	0.35	0/1130	0.64	0/1509
13	M	0.41	0/1582	0.64	0/2116
14	N	0.33	0/1474	0.62	0/1999
15	O	0.37	0/874	0.64	0/1181
16	P	0.39	0/1147	0.56	0/1528
17	Q	0.37	0/749	0.67	0/1005
18	R	1.28	7/1172 (0.6%)	1.10	6/1578 (0.4%)
19	S	0.38	0/648	0.59	0/875
20	T	0.39	0/958	0.67	0/1289
21	U	0.46	0/417	0.64	0/562
22	V	0.35	0/502	0.56	0/675
23	W	0.41	0/1219	0.68	0/1655
24	X	0.39	0/664	0.62	0/895
25	Y	0.39	0/1146	0.64	0/1536
26	Z	0.42	0/584	0.63	0/781
27	1	0.47	0/438	0.63	0/578
28	2	0.38	0/401	0.61	0/529
29	3	0.43	0/771	0.67	0/1024
30	0	0.49	0/65957	0.70	6/102867 (0.0%)
31	9	0.37	0/2904	0.68	0/4526
All	All	0.48	7/98701 (0.0%)	0.69	12/147586 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
18	R	1	0
23	W	0	1
30	0	0	19
All	All	1	20

All (7) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
18	R	150	PRO	CB-CG	27.13	2.85	1.50
18	R	150	PRO	CA-C	-18.46	1.16	1.52
18	R	150	PRO	CG-CD	14.04	1.97	1.50
18	R	150	PRO	C-O	11.94	1.47	1.23
18	R	150	PRO	N-CA	11.49	1.66	1.47
18	R	150	PRO	N-CD	10.76	1.62	1.47
18	R	150	PRO	CA-CB	7.86	1.69	1.53

All (12) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
18	R	150	PRO	CB-CA-C	-22.46	55.84	112.00
18	R	150	PRO	N-CA-C	-19.38	61.71	112.10
18	R	150	PRO	CA-N-CD	12.12	128.68	111.70
18	R	150	PRO	N-CA-CB	11.03	116.54	103.30
18	R	150	PRO	CA-C-O	-8.33	100.20	120.20
30	0	128	A	N9-C1'-C2'	-6.07	105.32	112.00
18	R	150	PRO	CA-CB-CG	-6.06	92.49	104.00
30	0	1592	G	N9-C1'-C2'	5.81	121.56	114.00
30	0	1504	A	C1'-O4'-C4'	-5.70	105.34	109.90
30	0	755	G	O4'-C4'-C3'	-5.08	98.92	104.00
30	0	1504	A	N9-C1'-C2'	5.04	120.56	114.00
30	0	237	G	N9-C1'-C2'	-5.00	106.50	112.00

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
18	R	150	PRO	CA

All (20) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
30	0	1237	U	Sidechain
30	0	1371	U	Sidechain
30	0	1592	G	Sidechain
30	0	1635	U	Sidechain
30	0	1736	A	Sidechain
30	0	1828	G	Sidechain
30	0	1829	A	Sidechain
30	0	1839	A	Sidechain
30	0	1878	G	Sidechain
30	0	2289	G	Sidechain
30	0	2492	U	Sidechain
30	0	2673	U	Sidechain
30	0	2842	G	Sidechain
30	0	2866	U	Sidechain
30	0	493	U	Sidechain
30	0	788	A	Sidechain
30	0	862	U	Sidechain
30	0	882	A	Sidechain
30	0	938	G	Sidechain
23	W	90	TYR	Sidechain

## 5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	1753	0	1766	123	0
2	B	2625	0	2533	168	0
3	C	1860	0	1813	98	0
4	D	1094	0	1085	71	0
5	E	1357	0	1266	49	0
6	F	890	0	843	39	0
7	G	240	0	231	18	0
8	H	1282	0	1292	62	0
9	I	519	0	500	24	0
10	J	1120	0	1098	56	0
11	K	994	0	1027	54	0
12	L	1118	0	1076	54	0
13	M	1558	0	1573	120	0
14	N	1445	0	1401	74	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
15	O	865	0	873	47	0
16	P	1136	0	1123	64	0
17	Q	735	0	729	32	0
18	R	1149	0	1122	58	0
19	S	641	0	605	29	0
20	T	950	0	924	56	0
21	U	410	0	368	58	0
22	V	499	0	511	26	0
23	W	1196	0	1137	79	0
24	X	654	0	653	42	0
25	Y	1130	0	1133	69	0
26	Z	573	0	534	84	0
27	1	431	0	426	27	0
28	2	396	0	413	20	0
29	3	755	0	732	138	0
30	0	59020	0	29802	3476	0
31	9	2599	0	1325	195	0
32	0	85	0	0	0	0
32	9	2	0	0	0	0
32	A	2	0	0	0	0
32	K	1	0	0	0	0
32	T	1	0	0	0	0
32	Y	2	0	0	0	0
33	0	8	0	0	6	0
33	3	1	0	0	4	0
33	A	1	0	0	0	0
33	B	1	0	0	1	0
33	J	4	0	0	4	0
33	L	1	0	0	0	0
33	M	1	0	0	2	0
33	N	1	0	0	2	0
33	O	1	0	0	1	0
33	Q	1	0	0	1	0
33	R	1	0	0	0	0
33	Y	1	0	0	1	0
34	0	93	0	0	0	0
34	1	2	0	0	0	0
34	2	1	0	0	0	0
34	3	2	0	0	0	0
34	9	2	0	0	0	0
34	A	2	0	0	0	0
34	B	2	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
34	F	1	0	0	0	0
34	J	1	0	0	0	0
34	R	1	0	0	0	0
34	S	1	0	0	0	0
35	0	63	0	0	0	0
35	9	2	0	0	0	0
35	B	1	0	0	0	0
35	C	1	0	0	0	0
35	J	1	0	0	0	0
35	L	1	0	0	0	0
35	M	1	0	0	0	0
35	Q	1	0	0	0	0
35	R	3	0	0	0	0
35	S	1	0	0	0	0
36	0	1	0	0	0	0
36	M	1	0	0	0	0
37	1	1	0	0	0	0
37	3	1	0	0	0	0
37	O	1	0	0	0	0
37	U	1	0	0	0	0
37	Z	1	0	0	0	0
38	0	5813	0	0	458	0
38	1	53	0	0	3	0
38	2	48	0	0	0	0
38	3	80	0	0	12	0
38	9	144	0	0	18	0
38	A	122	0	0	13	0
38	B	158	0	0	21	0
38	C	176	0	0	16	0
38	D	51	0	0	7	0
38	E	51	0	0	3	0
38	F	27	0	0	2	0
38	G	15	0	0	1	0
38	H	73	0	0	2	0
38	I	3	0	0	0	0
38	J	55	0	0	4	0
38	K	61	0	0	5	0
38	L	99	0	0	11	0
38	M	148	0	0	15	0
38	N	56	0	0	7	0
38	O	42	0	0	3	0
38	P	56	0	0	4	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
38	Q	58	0	0	5	0
38	R	78	0	0	1	0
38	S	37	0	0	3	0
38	T	41	0	0	3	0
38	U	34	0	0	4	0
38	V	10	0	0	2	0
38	W	71	0	0	4	0
38	X	28	0	0	1	0
38	Y	102	0	0	8	0
38	Z	33	0	0	7	0
All	All	99122	0	59914	5051	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 34.

All (5051) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:150:PRO:CD	18:R:150:PRO:CG	1.97	1.43
30:0:871:G:C8	30:0:871:G:H5'	1.74	1.22
31:9:29:C:H2'	31:9:30:C:H5'	1.21	1.17
14:N:37:ARG:NH1	31:9:6:C:H5''	1.59	1.16
31:9:56:A:H2'	31:9:57:A:H5''	1.23	1.16
31:9:92:G:H2'	31:9:93:A:C8	1.81	1.16
30:0:1160:G:H5'	30:0:1161:A:C5'	1.76	1.15
30:0:1523:G:H2'	30:0:1524:U:C6	1.80	1.15
26:Z:63:CYS:SG	26:Z:81:CYS:HB2	1.87	1.15
30:0:735:C:H2'	30:0:736:A:O4'	1.49	1.12
14:N:67:ALA:HA	14:N:71:TRP:HB3	1.32	1.11
30:0:1165:G:H1'	30:0:1174:A:H1'	1.21	1.11
10:J:82:THR:HG23	30:0:1242:A:H5'	1.27	1.10
30:0:1666:C:O2'	30:0:1667:A:H5''	1.52	1.09
30:0:1205:U:H2'	30:0:1206:U:H5'	1.31	1.09
30:0:545:G:H8	30:0:545:G:H5'	1.12	1.08
30:0:1160:G:C5'	30:0:1161:A:H5'	1.83	1.08
30:0:1632:A:H2'	30:0:1633:C:H5'	1.34	1.08
18:R:150:PRO:CG	18:R:150:PRO:C	2.22	1.07
30:0:1375:A:H2'	30:0:1376:G:H5'	1.37	1.06
26:Z:60:ASP:HB3	26:Z:69:ASP:HB3	1.37	1.06
30:0:424:C:H2'	30:0:425:U:H6	1.20	1.05
30:0:1184:C:H1'	38:0:7367:HOH:O	1.57	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2397:G:H2'	30:0:2398:A:H8	1.20	1.04
25:Y:187:VAL:HG23	25:Y:192:ASP:HB2	1.40	1.04
30:0:871:G:H5'	30:0:871:G:H8	0.89	1.04
30:0:595:U:H3'	38:0:6403:HOH:O	1.57	1.04
30:0:735:C:H3'	30:0:736:A:H8	1.18	1.03
30:0:2533:C:H6	30:0:2533:C:H5'	1.24	1.03
13:M:159:VAL:HG12	33:M:8818:CL:CL	1.96	1.02
14:N:37:ARG:HH12	31:9:6:C:H5''	0.89	1.01
30:0:2534:U:H1'	38:0:3475:HOH:O	1.61	1.01
30:0:236:A:H4'	30:0:237:G:H5'	1.37	1.01
28:2:43:ARG:HH22	30:0:1684:A:H1'	1.21	1.00
29:3:5:ARG:HG3	29:3:6:ARG:HG3	1.43	1.00
13:M:171:ARG:HD3	30:0:156:C:H5''	1.43	1.00
30:0:2717:C:C2'	30:0:2718:C:H5''	1.90	1.00
4:D:25:MET:HE3	4:D:37:ALA:HB1	1.41	1.00
15:O:47:ARG:HG3	15:O:47:ARG:HH11	1.23	1.00
13:M:77:HIS:HE1	13:M:86:GLN:HG2	1.25	1.00
30:0:2502:C:H2'	30:0:2503:A:H5'	1.39	0.99
30:0:735:C:H3'	30:0:736:A:C8	1.98	0.99
13:M:79:ALA:HB3	13:M:81:ARG:HH12	1.28	0.98
29:3:11:CYS:SG	29:3:13:HIS:HD2	1.85	0.98
31:9:76:G:H3'	31:9:77:A:H5''	1.46	0.98
17:Q:27:GLN:HE21	31:9:8:G:H4'	1.27	0.98
30:0:432:G:H3'	38:0:7100:HOH:O	1.63	0.98
30:0:871:G:C5'	30:0:871:G:H8	1.76	0.98
25:Y:208:LYS:NZ	30:0:1343:C:H1'	1.80	0.97
30:0:1563:G:H4'	38:0:4202:HOH:O	1.62	0.97
31:9:56:A:C2'	31:9:57:A:H5''	1.95	0.97
30:0:545:G:C8	30:0:545:G:H5'	2.00	0.96
1:A:51:ARG:HH11	1:A:51:ARG:HB2	1.29	0.96
20:T:64:ASN:HB3	20:T:73:HIS:HB2	1.47	0.96
30:0:496:G:H3'	38:0:7569:HOH:O	1.62	0.96
29:3:13:HIS:HB2	29:3:74:CYS:SG	2.05	0.96
30:0:2420:G:O2'	30:0:2421:G:H5'	1.65	0.95
14:N:37:ARG:HD3	33:N:8807:CL:CL	2.03	0.95
30:0:541:C:H2'	30:0:542:A:H5''	1.46	0.95
30:0:1160:G:H5'	30:0:1161:A:H5'	0.99	0.95
30:0:282:C:O2'	30:0:283:U:H5'	1.64	0.95
25:Y:208:LYS:HZ2	30:0:1343:C:H1'	1.30	0.94
30:0:1451:C:H5'	30:0:1505:U:C5	2.02	0.94
30:0:1528:A:H61	30:0:1663:G:H1'	1.32	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1679:C:H5'	38:0:9328:HOH:O	1.67	0.94
38:Q:2875:HOH:O	30:0:2392:C:H4'	1.66	0.94
30:0:596:C:H2'	30:0:597:A:H8	1.32	0.94
30:0:1166:A:P	30:0:1174:A:H4'	2.08	0.94
30:0:2502:C:C2'	30:0:2503:A:H5'	1.97	0.94
30:0:506:G:H22	30:0:509:A:C5'	1.81	0.94
29:3:36:ILE:HD13	30:0:2432:C:H5''	1.50	0.93
31:9:97:U:H3'	38:9:5983:HOH:O	1.67	0.93
31:9:92:G:H2'	31:9:93:A:H8	1.25	0.93
30:0:1205:U:H2'	30:0:1206:U:C5'	1.98	0.93
30:0:1626:A:H2'	30:0:1627:G:H5'	1.50	0.93
30:0:1523:G:H2'	30:0:1524:U:H6	1.32	0.93
30:0:1603:A:H5'	30:0:1605:G:O4'	1.68	0.93
30:0:2440:C:H4'	38:0:3795:HOH:O	1.68	0.92
30:0:1170:U:H1'	30:0:1172:G:N7	1.83	0.92
30:0:363:C:H1'	38:0:5232:HOH:O	1.69	0.92
30:0:1632:A:C2'	30:0:1633:C:H5'	2.00	0.92
12:L:111:ALA:HB2	30:0:698:A:H5''	1.51	0.92
30:0:2717:C:O2'	30:0:2718:C:H5''	1.69	0.91
30:0:2397:G:H2'	30:0:2398:A:C8	2.05	0.91
30:0:2751:C:H3'	38:0:7172:HOH:O	1.71	0.91
30:0:1181:A:H2'	30:0:1182:C:H5'	1.50	0.91
30:0:1736:A:H1'	38:0:7486:HOH:O	1.70	0.91
30:0:2241:C:H2'	30:0:2242:U:H6	1.36	0.90
30:0:1375:A:C2'	30:0:1376:G:H5'	2.01	0.90
30:0:2717:C:H2'	30:0:2718:C:H5''	1.48	0.90
31:9:14:G:H5'	31:9:14:G:H8	1.36	0.90
13:M:77:HIS:HB2	13:M:81:ARG:HH21	1.35	0.90
30:0:197:C:H5'	38:0:4888:HOH:O	1.71	0.90
30:0:1666:C:C2'	30:0:1667:A:H5''	2.02	0.90
30:0:1774:G:O2'	30:0:1775:A:H5'	1.72	0.89
30:0:2371:G:H5'	38:0:4962:HOH:O	1.70	0.89
30:0:2533:C:C6	30:0:2533:C:H5'	2.06	0.89
30:0:951:A:C2'	30:0:952:G:H5'	2.03	0.89
10:J:82:THR:CG2	30:0:1242:A:H5'	2.02	0.89
30:0:2248:C:H3'	38:0:5390:HOH:O	1.71	0.89
30:0:1626:A:H2'	30:0:1627:G:C5'	2.01	0.89
13:M:77:HIS:CE1	13:M:86:GLN:HG2	2.07	0.89
11:K:18:ILE:HG22	11:K:93:ASN:HD22	1.36	0.88
15:O:3:THR:HG22	30:0:656:G:H5'	1.54	0.88
30:0:1130:U:H2'	30:0:1131:G:O4'	1.73	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2507:G:H2'	30:0:2510:C:H42	1.36	0.88
30:0:69:A:H5'	30:0:69:A:C8	2.09	0.88
15:O:3:THR:CG2	30:0:656:G:H5'	2.04	0.88
31:9:29:C:C2'	31:9:30:C:H5'	2.02	0.88
31:9:49:G:O2'	31:9:50:G:H5'	1.73	0.88
30:0:2415:A:H2'	30:0:2416:G:H5'	1.55	0.88
30:0:947:U:O2'	30:0:948:G:H5'	1.74	0.88
30:0:2329:C:O2'	30:0:2330:U:H5'	1.74	0.87
30:0:1834:C:H2'	30:0:1840:A:H62	1.38	0.87
29:3:42:ARG:NH1	30:0:396:U:H5'	1.88	0.87
30:0:541:C:C2'	30:0:542:A:H5''	2.04	0.87
4:D:58:VAL:HB	4:D:62:ASP:HB3	1.53	0.87
30:0:870:G:H2'	30:0:871:G:H5''	1.57	0.87
29:3:47:GLY:HA2	30:0:2121:G:H4'	1.57	0.87
11:K:39:GLY:HA2	38:0:5173:HOH:O	1.75	0.87
30:0:2442:G:H2'	38:0:9197:HOH:O	1.75	0.87
30:0:924:G:H5''	38:0:3656:HOH:O	1.73	0.86
13:M:70:GLY:HA2	30:0:2263:G:H5''	1.57	0.86
30:0:1483:C:O2'	30:0:1484:G:H5'	1.74	0.86
30:0:120:A:H3'	38:0:4004:HOH:O	1.74	0.86
22:V:39:ALA:H	22:V:40:PRO:HD2	1.41	0.86
30:0:2465:A:H3'	38:0:3625:HOH:O	1.74	0.86
30:0:1206:U:H2'	30:0:1207:A:O4'	1.75	0.86
30:0:559:U:H6	30:0:559:U:H5'	1.40	0.86
30:0:1118:A:H3'	30:0:1118:A:C8	2.10	0.86
30:0:1372:A:H3'	38:0:7091:HOH:O	1.75	0.86
30:0:292:G:H2'	30:0:358:G:N2	1.90	0.86
30:0:1942:A:H5'	38:0:7247:HOH:O	1.76	0.85
30:0:1201:C:H2'	30:0:1202:A:H5'	1.56	0.85
30:0:718:C:O2'	30:0:719:C:H5'	1.76	0.85
24:X:74:ALA:HB2	24:X:85:VAL:HG13	1.57	0.85
30:0:69:A:H5'	30:0:69:A:H8	1.40	0.85
30:0:1351:G:H3'	38:0:6328:HOH:O	1.74	0.85
30:0:1641:A:H2'	30:0:1642:A:C5'	2.05	0.85
30:0:877:G:H5'	30:0:878:G:OP1	1.76	0.85
3:C:1:MET:HG2	3:C:2:GLN:H	1.41	0.85
30:0:1641:A:C2'	30:0:1642:A:H5'	2.06	0.85
30:0:2336:G:O2'	30:0:2337:G:H5'	1.76	0.85
30:0:424:C:H2'	30:0:425:U:C6	2.09	0.85
30:0:2102:G:H2'	38:0:7667:HOH:O	1.75	0.85
18:R:18:LEU:HB2	18:R:143:VAL:HG13	1.59	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2661:U:H3	30:0:2812:A:H62	1.19	0.85
14:N:141:ARG:HH21	31:9:48:C:H4'	1.42	0.85
30:0:671:A:O2'	30:0:672:G:H2'	1.77	0.84
4:D:154:LYS:HD2	4:D:154:LYS:H	1.42	0.84
30:0:1641:A:H2'	30:0:1642:A:H5'	1.59	0.84
30:0:391:U:H3'	38:0:4623:HOH:O	1.75	0.84
30:0:1762:C:H2'	30:0:1763:C:H6	1.41	0.84
30:0:2506:A:HO2'	30:0:2507:G:H8	0.85	0.84
30:0:2868:C:H1'	38:0:7024:HOH:O	1.76	0.84
30:0:1964:U:O2	30:0:1964:U:H2'	1.77	0.84
30:0:380:A:H2'	38:0:7130:HOH:O	1.78	0.84
1:A:47:HIS:HD2	30:0:1654:U:H2'	1.41	0.84
30:0:664:U:H5'	38:0:3760:HOH:O	1.77	0.84
29:3:24:LYS:HE2	33:3:8804:CL:CL	2.14	0.84
14:N:37:ARG:HH12	31:9:6:C:C5'	1.84	0.84
30:0:1797:A:H4'	30:0:1798:C:C5	2.13	0.84
30:0:24:G:N2	30:0:518:G:H1'	1.93	0.84
2:B:162:MET:HE2	2:B:310:ARG:HD3	1.58	0.84
30:0:1735:C:O2'	30:0:1736:A:H5'	1.77	0.84
30:0:652:G:H5''	38:0:3006:HOH:O	1.78	0.84
30:0:282:C:H1'	30:0:368:C:N4	1.93	0.84
30:0:2472:C:H3'	38:0:3589:HOH:O	1.77	0.83
30:0:57:C:H42	30:0:89:G:H1	1.26	0.83
3:C:127:ARG:NH2	3:C:225:PRO:HG2	1.92	0.83
13:M:70:GLY:HA2	30:0:2263:G:C5'	2.08	0.83
30:0:847:C:H1'	38:0:4278:HOH:O	1.76	0.83
30:0:1477:C:O2'	30:0:1478:U:H5'	1.78	0.83
30:0:1810:C:H4'	38:0:6580:HOH:O	1.78	0.83
30:0:1116:U:HO2'	30:0:1118:A:H2	0.90	0.83
30:0:1834:C:H2'	30:0:1840:A:N6	1.93	0.83
30:0:1940:C:H1'	38:0:9376:HOH:O	1.78	0.83
30:0:396:U:H4'	38:0:4309:HOH:O	1.79	0.83
27:1:20:ARG:HH21	30:0:120:A:H5'	1.43	0.83
30:0:2469:A:H1'	38:0:3226:HOH:O	1.78	0.83
30:0:2578:G:H5'	30:0:2578:G:H8	1.43	0.83
29:3:65:THR:HG22	33:3:8804:CL:CL	2.15	0.83
11:K:27:ARG:HD2	11:K:60:GLY:HA2	1.60	0.83
15:O:51:TYR:HD1	30:0:721:A:H4'	1.43	0.83
30:0:2256:G:H2'	30:0:2257:G:H5'	1.61	0.83
30:0:461:C:H2'	38:0:3977:HOH:O	1.78	0.83
30:0:1181:A:C2'	30:0:1182:C:H5'	2.09	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:164:THR:HG22	13:M:166:ALA:H	1.44	0.83
30:0:2769:C:C2'	30:0:2770:G:H5'	2.09	0.82
30:0:2089:A:O2'	30:0:2090:G:H5'	1.79	0.82
30:0:2768:A:H3'	30:0:2768:A:N3	1.94	0.82
20:T:71:VAL:HG11	20:T:90:PRO:HB3	1.60	0.82
30:0:1450:C:H3'	38:0:9443:HOH:O	1.77	0.82
30:0:2474:A:N7	30:0:2621:PSU:H4'	1.94	0.82
30:0:2508:C:H2'	38:0:6666:HOH:O	1.78	0.82
30:0:90:A:H2'	30:0:91:G:O4'	1.79	0.82
30:0:669:G:O2'	30:0:670:G:H5'	1.80	0.82
30:0:282:C:C2'	30:0:283:U:H5'	2.09	0.82
30:0:1477:C:H5'	30:0:1868:G:H5'	1.59	0.82
30:0:1625:U:H4'	38:0:4622:HOH:O	1.80	0.82
30:0:2506:A:O2'	30:0:2507:G:H8	1.63	0.82
28:2:41:HIS:HD2	28:2:44:ARG:H	1.27	0.82
14:N:37:ARG:NH1	31:9:6:C:C5'	2.42	0.82
13:M:82:ARG:O	13:M:86:GLN:HG3	1.80	0.82
30:0:1118:A:H3'	30:0:1118:A:H8	1.45	0.82
30:0:2871:G:H2'	30:0:2872:U:H6	1.45	0.81
29:3:25:VAL:HG22	29:3:68:LYS:HB2	1.60	0.81
30:0:2281:C:H2'	30:0:2282:U:H5'	1.60	0.81
30:0:2468:A:H3'	38:0:5402:HOH:O	1.81	0.81
29:3:49:ASP:HB3	29:3:52:PHE:HB2	1.62	0.81
11:K:76:GLN:HA	11:K:93:ASN:HB3	1.62	0.81
6:F:39:SER:HB3	6:F:45:ALA:HB2	1.62	0.81
38:Y:8920:HOH:O	30:0:1330:A:H4'	1.81	0.81
30:0:1666:C:H2'	30:0:1667:A:C5'	2.10	0.81
30:0:2241:C:H2'	30:0:2242:U:C6	2.15	0.81
30:0:2894:C:O2'	30:0:2895:C:H5'	1.81	0.81
30:0:1116:U:O2'	30:0:1118:A:H2	1.63	0.81
30:0:2769:C:O2'	30:0:2770:G:H5'	1.80	0.81
30:0:385:C:O5'	30:0:385:C:H6	1.64	0.81
29:3:48:ASN:ND2	30:0:169:A:H1'	1.96	0.81
30:0:2253:G:H2'	30:0:2254:G:H8	1.45	0.81
38:3:9016:HOH:O	30:0:2434:A:H4'	1.81	0.81
30:0:1474:C:H6	30:0:1474:C:H5'	1.46	0.81
30:0:558:C:C2'	30:0:559:U:H5''	2.11	0.81
33:Y:8820:CL:CL	38:0:3632:HOH:O	2.36	0.81
30:0:1151:G:H2'	38:0:4973:HOH:O	1.79	0.80
30:0:2065:C:O2'	30:0:2066:C:H5'	1.80	0.80
13:M:99:ARG:HE	13:M:170:ASN:HD22	1.29	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2106:C:H2'	30:0:2107:U:C6	2.16	0.80
30:0:2644:C:H4'	38:0:3380:HOH:O	1.81	0.80
4:D:141:VAL:HG21	31:9:57:A:C8	2.15	0.80
30:0:2505:G:H2'	30:0:2506:A:H5'	1.61	0.80
33:0:8813:CL:CL	38:0:4640:HOH:O	2.37	0.80
3:C:129:HIS:CE1	3:C:231:ARG:HA	2.17	0.80
22:V:1:THR:HG23	22:V:2:VAL:H	1.47	0.80
23:W:38:THR:HG22	23:W:39:ASP:H	1.46	0.80
30:0:1855:G:H4'	30:0:1856:C:O5'	1.78	0.80
1:A:100:PRO:HG2	1:A:103:VAL:HG21	1.64	0.80
30:0:1132:A:N6	30:0:1229:C:H2'	1.97	0.80
30:0:2871:G:H2'	30:0:2872:U:C6	2.16	0.80
30:0:368:C:H2'	30:0:369:G:H5'	1.62	0.80
30:0:56:G:H3'	38:0:5388:HOH:O	1.81	0.80
25:Y:154:ARG:HH21	30:0:1293:U:H5'	1.47	0.80
14:N:144:GLY:O	14:N:147:ILE:HG22	1.81	0.80
15:O:51:TYR:CE1	30:0:721:A:H5''	2.16	0.80
1:A:51:ARG:NH1	1:A:51:ARG:HB2	1.95	0.80
21:U:56:ARG:HD2	30:0:2890:A:C8	2.17	0.80
30:0:1120:U:C6	30:0:1120:U:H5''	2.17	0.79
30:0:2009:G:H5'	38:0:9852:HOH:O	1.81	0.79
30:0:2243:C:H5''	38:0:3730:HOH:O	1.82	0.79
30:0:213:G:N2	30:0:225:G:H2'	1.97	0.79
10:J:52:GLN:HE22	30:0:1119:G:H2'	1.46	0.79
30:0:1346:U:H2'	30:0:1347:U:H6	1.46	0.79
30:0:1596:U:H2'	30:0:1598:A:OP2	1.82	0.79
30:0:2735:U:H2'	30:0:2736:U:H6	1.45	0.79
30:0:2533:C:C5'	30:0:2533:C:H6	1.96	0.79
30:0:449:A:H3'	38:0:5340:HOH:O	1.79	0.79
15:O:51:TYR:CD1	30:0:721:A:H4'	2.18	0.79
30:0:1209:C:H2'	30:0:1210:G:H8	1.44	0.79
30:0:2785:C:H5'	38:0:7614:HOH:O	1.81	0.79
30:0:951:A:O2'	30:0:952:G:H5'	1.81	0.79
8:H:158:ASN:ND2	30:0:2502:C:H4'	1.98	0.79
30:0:1666:C:H2'	30:0:1667:A:H5'	1.65	0.79
30:0:560:U:H2'	30:0:561:G:H8	1.48	0.79
30:0:2315:C:H5''	38:0:3506:HOH:O	1.81	0.79
30:0:506:G:H22	30:0:509:A:H5''	1.48	0.79
31:9:29:C:H2'	31:9:30:C:C5'	2.09	0.79
30:0:1741:U:O2'	30:0:2723:G:H4'	1.82	0.79
30:0:2717:C:H2'	30:0:2718:C:C5'	2.11	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2005:G:OP2	30:0:2005:G:H3'	1.82	0.79
30:0:2750:G:H2'	30:0:2751:C:C6	2.19	0.78
11:K:14:LYS:HB2	11:K:45:PRO:HG2	1.65	0.78
30:0:213:G:H22	30:0:225:G:H2'	1.47	0.78
4:D:141:VAL:HG21	31:9:57:A:H8	1.48	0.78
30:0:2241:C:O2'	30:0:2242:U:H5'	1.83	0.78
30:0:2908:A:H2'	30:0:2909:G:O4'	1.83	0.78
12:L:90:ARG:HA	12:L:119:THR:HB	1.65	0.78
30:0:1278:A:H4'	30:0:1279:U:N3	1.98	0.78
30:0:1505:U:H4'	38:0:5132:HOH:O	1.83	0.78
30:0:2114:C:H3'	38:0:9705:HOH:O	1.82	0.78
30:0:1116:U:H3	30:0:1246:A:H62	1.30	0.78
9:I:83:GLY:H	30:0:1168:C:H5''	1.48	0.78
30:0:1202:A:H2'	30:0:1203:G:O4'	1.82	0.78
30:0:1626:A:C2'	30:0:1627:G:H5'	2.12	0.78
17:Q:15:LYS:HD3	30:0:2364:A:H5''	1.66	0.78
30:0:107:U:H2'	30:0:108:U:H5'	1.66	0.78
30:0:1773:G:H4'	38:0:3502:HOH:O	1.84	0.78
30:0:541:C:H2'	30:0:542:A:C5'	2.13	0.78
25:Y:165:GLU:HB3	38:0:6614:HOH:O	1.83	0.78
30:0:1423:C:O2'	30:0:1424:A:H5'	1.84	0.78
30:0:1664:A:OP1	30:0:1664:A:H8	1.67	0.78
30:0:2439:C:H2'	30:0:2440:C:H6	1.46	0.78
38:B:8996:HOH:O	30:0:2766:A:H5'	1.82	0.78
29:3:3:MET:O	29:3:90:PHE:HA	1.84	0.78
16:P:77:ALA:HA	16:P:80:ARG:HG3	1.64	0.78
30:0:2507:G:H2'	30:0:2510:C:N4	1.99	0.78
11:K:10:GLN:NE2	11:K:10:GLN:H	1.81	0.78
14:N:17:ARG:HB3	14:N:17:ARG:HH11	1.46	0.78
30:0:200:C:H2'	38:0:3428:HOH:O	1.82	0.77
30:0:228:C:C2'	30:0:229:G:H5'	2.14	0.77
30:0:822:C:H1'	38:0:4074:HOH:O	1.82	0.77
30:0:1331:G:O2'	30:0:1332:C:H5'	1.84	0.77
30:0:2410:G:O2'	30:0:2411:C:H5'	1.84	0.77
30:0:2869:G:H5'	38:0:5440:HOH:O	1.84	0.77
30:0:2498:C:O2'	30:0:2499:U:H5'	1.84	0.77
30:0:2794:G:C2	30:0:2795:C:C6	2.73	0.77
24:X:43:VAL:HG12	24:X:44:ASP:H	1.48	0.77
30:0:2812:A:H1'	38:0:5719:HOH:O	1.84	0.77
13:M:139:PRO:HA	13:M:142:GLN:HB2	1.65	0.77
24:X:37:LEU:HD13	24:X:85:VAL:HG21	1.67	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:766:A:H2'	38:0:3818:HOH:O	1.85	0.77
30:0:625:U:H5''	30:0:1044:C:N4	2.00	0.77
30:0:106:A:O2'	30:0:107:U:H5'	1.84	0.77
30:0:182:G:H5'	38:0:5110:HOH:O	1.85	0.77
9:I:87:PRO:HD2	30:0:1180:U:H1'	1.66	0.77
30:0:1947:G:H2'	30:0:1948:G:H8	1.49	0.77
30:0:1119:G:H22	30:0:1246:A:H2	1.33	0.76
30:0:1889:C:C4	30:0:1890:U:C5	2.73	0.76
2:B:36:PRO:HG3	2:B:169:GLY:HA3	1.66	0.76
30:0:154:C:H2'	30:0:155:C:H6	1.48	0.76
30:0:1787:C:O2'	30:0:1788:U:H5'	1.85	0.76
30:0:711:G:C2	30:0:718:C:C2	2.72	0.76
30:0:561:G:H2'	30:0:562:A:H8	1.50	0.76
31:9:52:A:H2'	31:9:53:G:O4'	1.85	0.76
12:L:55:GLN:HA	12:L:58:GLN:HE21	1.49	0.76
17:Q:27:GLN:HE21	31:9:8:G:C4'	1.99	0.76
30:0:1119:G:N2	30:0:1246:A:C2	2.51	0.76
30:0:557:C:O2'	30:0:558:C:H5'	1.86	0.76
1:A:47:HIS:CD2	30:0:1654:U:H2'	2.20	0.76
30:0:506:G:H22	30:0:509:A:H5'	1.48	0.76
1:A:199:HIS:CD2	1:A:201:PHE:H	2.03	0.76
30:0:2073:G:H2'	38:0:3803:HOH:O	1.83	0.76
30:0:2624:A:H1'	38:0:9771:HOH:O	1.84	0.76
3:C:115:LEU:HD13	3:C:223:LEU:HD21	1.68	0.76
5:E:133:VAL:HG12	5:E:141:VAL:HG13	1.66	0.76
30:0:1072:G:H5'	38:0:6511:HOH:O	1.85	0.76
30:0:951:A:H2'	30:0:952:G:H5'	1.66	0.76
31:9:57:A:H2'	31:9:58:G:H5'	1.68	0.76
8:H:59:GLN:HE22	8:H:96:GLN:HG2	1.49	0.76
12:L:53:ARG:HD2	30:0:2441:U:H4'	1.66	0.76
22:V:25:THR:HG22	22:V:29:ASN:HD21	1.50	0.76
30:0:1205:U:C2'	30:0:1206:U:H5'	2.15	0.76
30:0:2803:C:O2'	30:0:2804:C:H5'	1.86	0.76
30:0:2256:G:C2'	30:0:2257:G:H5'	2.16	0.76
30:0:2687:G:O2'	30:0:2688:U:H5'	1.86	0.76
8:H:123:ILE:HD12	8:H:123:ILE:H	1.51	0.76
14:N:141:ARG:NH2	31:9:48:C:H4'	2.00	0.76
23:W:125:HIS:NE2	30:0:1097:A:H5''	2.00	0.75
30:0:1120:U:H6	30:0:1120:U:H5''	1.51	0.75
30:0:1164:U:C2	30:0:1166:A:H4'	2.21	0.75
30:0:1666:C:C2'	30:0:1667:A:C5'	2.63	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:659:A:H5''	38:0:7001:HOH:O	1.87	0.75
30:0:1921:A:O2'	30:0:1922:A:H5'	1.87	0.75
29:3:62:THR:HG21	29:3:84:ARG:HB3	1.68	0.75
23:W:11:VAL:HG11	30:0:1086:A:C6	2.22	0.75
30:0:870:G:C2'	30:0:871:G:H5''	2.17	0.75
1:A:47:HIS:HD2	30:0:1654:U:C2'	1.99	0.75
13:M:95:LYS:HA	13:M:170:ASN:HD21	1.50	0.75
9:I:83:GLY:HA3	30:0:1168:C:H5'	1.68	0.75
30:0:120:A:H2'	30:0:120:A:N3	2.02	0.75
30:0:303:C:O2'	30:0:304:G:H5'	1.86	0.75
2:B:264:GLU:HG2	2:B:267:LYS:HE3	1.68	0.75
30:0:136:C:H2'	30:0:137:U:O4'	1.85	0.75
8:H:120:PHE:CD1	30:0:2311:A:H5'	2.21	0.75
30:0:2697:A:H2'	30:0:2698:G:O4'	1.87	0.75
29:3:74:CYS:SG	29:3:76:LYS:HD2	2.27	0.75
10:J:131:THR:HB	10:J:134:GLU:HG3	1.67	0.75
30:0:1521:C:H2'	30:0:1522:A:H8	1.52	0.75
30:0:300:U:H2'	30:0:301:C:H6	1.52	0.75
2:B:238:ASN:HD22	2:B:240:GLY:H	1.32	0.75
3:C:129:HIS:HE1	3:C:231:ARG:HA	1.51	0.75
8:H:19:ARG:HH12	30:0:1008:C:H5''	1.52	0.74
30:0:1175:G:H2'	30:0:1176:C:O4'	1.87	0.74
2:B:206:THR:HG21	30:0:2716:G:H5''	1.67	0.74
30:0:694:A:H1'	38:0:3795:HOH:O	1.86	0.74
29:3:12:PRO:HG3	30:0:2382:A:H4'	1.68	0.74
31:9:54:A:O2'	31:9:55:U:H5'	1.87	0.74
23:W:88:THR:HB	38:W:6679:HOH:O	1.85	0.74
30:0:1557:G:H2'	30:0:1558:C:H6	1.51	0.74
30:0:503:G:H2'	30:0:504:G:H8	1.51	0.74
30:0:228:C:H2'	30:0:229:G:H5'	1.69	0.74
30:0:2672:C:O2	30:0:2672:C:H2'	1.85	0.74
11:K:8:VAL:HG13	11:K:80:ILE:HG22	1.68	0.74
5:E:143:GLN:HE21	30:0:2780:C:H1'	1.51	0.74
30:0:594:C:H2'	30:0:595:U:H6	1.53	0.74
31:9:14:G:C8	31:9:14:G:H5'	2.21	0.74
30:0:2239:C:H2'	30:0:2240:U:H6	1.50	0.74
30:0:2820:A:H2'	30:0:2821:C:C6	2.22	0.74
30:0:748:C:H3'	38:0:4014:HOH:O	1.86	0.74
30:0:1201:C:H5'	38:0:5677:HOH:O	1.88	0.74
30:0:1741:U:H5'	30:0:1742:A:OP1	1.87	0.74
30:0:119:A:H2'	30:0:120:A:C5'	2.17	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:25:MET:SD	4:D:40:ILE:HD11	2.27	0.74
38:C:8665:HOH:O	30:0:656:G:H1'	1.87	0.74
17:Q:25:PRO:HB2	38:Q:4350:HOH:O	1.88	0.74
30:0:1206:U:H5'	30:0:1206:U:H6	1.50	0.74
30:0:1973:A:H2'	30:0:1974:G:O4'	1.88	0.74
30:0:2827:A:H2'	30:0:2828:G:O4'	1.87	0.74
30:0:681:G:N3	30:0:681:G:H5'	2.02	0.74
23:W:44:MET:HE2	30:0:944:G:H21	1.52	0.74
2:B:88:GLU:HB3	2:B:97:LEU:HD12	1.70	0.74
23:W:88:THR:HG23	23:W:110:GLN:HB3	1.70	0.74
1:A:217:ARG:HH12	30:0:1853:C:H4'	1.50	0.74
30:0:2426:G:H1'	38:0:6014:HOH:O	1.86	0.74
30:0:1527:A:H1'	30:0:1528:A:C8	2.22	0.73
6:F:91:VAL:HG12	6:F:92:GLY:H	1.53	0.73
14:N:21:HIS:CE1	30:0:2369:A:H4'	2.22	0.73
30:0:2472:C:O2'	30:0:2634:G:H4'	1.87	0.73
24:X:26:ALA:HB2	24:X:63:ARG:HA	1.70	0.73
30:0:2130:C:H1'	38:0:3910:HOH:O	1.89	0.73
30:0:2587:OMU:H6	30:0:2587:OMU:O5'	1.88	0.73
30:0:2735:U:H2'	30:0:2736:U:C6	2.23	0.73
30:0:558:C:H2'	30:0:559:U:H5''	1.70	0.73
30:0:871:G:C8	30:0:871:G:C5'	2.59	0.73
30:0:1451:C:H5'	30:0:1505:U:H5	1.51	0.73
29:3:11:CYS:SG	29:3:13:HIS:CD2	2.77	0.73
11:K:8:VAL:HG12	11:K:9:THR:H	1.54	0.73
13:M:74:LYS:HG3	38:M:8885:HOH:O	1.88	0.73
30:0:1181:A:H2'	30:0:1182:C:C5'	2.18	0.73
30:0:1205:U:C2'	30:0:1206:U:C5'	2.66	0.73
30:0:1255:A:H3'	38:0:7057:HOH:O	1.87	0.73
30:0:287:C:H42	30:0:365:G:H1	1.37	0.73
30:0:418:C:H2'	30:0:419:A:C8	2.24	0.73
13:M:99:ARG:HD2	13:M:167:GLY:HA2	1.68	0.73
30:0:119:A:H2'	30:0:120:A:H5''	1.71	0.73
30:0:1366:C:H1'	38:0:9256:HOH:O	1.87	0.73
2:B:198:GLU:HA	38:B:9141:HOH:O	1.88	0.73
5:E:154:ILE:HD11	5:E:157:LYS:HB2	1.70	0.73
30:0:1759:A:N3	30:0:1818:C:H2'	2.04	0.73
30:0:2106:C:H2'	30:0:2107:U:H6	1.52	0.73
2:B:244:PRO:HG3	2:B:248:ARG:HH21	1.53	0.73
12:L:46:LEU:O	30:0:2430:A:H4'	1.88	0.73
30:0:2586:U:H3	30:0:2592:G:H22	1.37	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Y:204:ARG:HH22	30:0:553:G:P	2.12	0.73
26:Z:59:GLU:HB2	26:Z:61:HIS:CE1	2.24	0.73
30:0:116:G:H1'	30:0:129:A:N3	2.04	0.73
30:0:2040:C:O2'	30:0:2041:G:H5'	1.89	0.73
30:0:2667:G:H1'	30:0:2914:A:N3	2.04	0.73
1:A:207:GLN:HA	38:A:8983:HOH:O	1.89	0.73
8:H:29:SER:HA	8:H:62:HIS:HD2	1.52	0.73
29:3:47:GLY:CA	30:0:2121:G:H4'	2.19	0.72
4:D:50:VAL:HG13	31:9:41:C:O4'	1.90	0.72
30:0:1016:U:H2'	30:0:1017:U:H6	1.52	0.72
30:0:1942:A:O2'	30:0:1943:C:H5'	1.89	0.72
30:0:267:G:H2'	30:0:268:U:O4'	1.89	0.72
30:0:2851:G:H2'	30:0:2902:A:H61	1.51	0.72
9:I:83:GLY:H	30:0:1168:C:C5'	2.01	0.72
30:0:596:C:H2'	30:0:597:A:C8	2.20	0.72
30:0:711:G:N2	30:0:718:C:C2	2.58	0.72
27:1:38:GLY:HA3	38:1:6935:HOH:O	1.88	0.72
2:B:212:GLN:HB2	2:B:257:THR:HG21	1.70	0.72
27:1:2:GLY:O	27:1:6:PRO:HG2	1.89	0.72
31:9:49:G:H5''	38:9:4707:HOH:O	1.88	0.72
16:P:80:ARG:HD3	16:P:87:ARG:HH11	1.55	0.72
30:0:1730:G:H5''	30:0:1731:C:H5	1.53	0.72
30:0:2647:C:H1'	38:0:6339:HOH:O	1.87	0.72
30:0:2297:U:O2'	30:0:2298:C:H5'	1.89	0.72
30:0:1474:C:C6	30:0:1474:C:H5'	2.25	0.72
2:B:217:ARG:HG3	2:B:257:THR:HG22	1.72	0.72
3:C:46:TYR:CE1	30:0:450:C:H4'	2.24	0.72
30:0:2576:A:H3'	38:0:9077:HOH:O	1.89	0.72
31:9:36:C:H2'	31:9:37:C:H5'	1.72	0.72
13:M:27:ARG:HH12	13:M:44:THR:HG21	1.53	0.72
16:P:115:SER:H	16:P:118:GLN:HB2	1.55	0.72
30:0:1309:U:H3'	38:0:4114:HOH:O	1.90	0.71
30:0:1667:A:H8	30:0:1667:A:H5'	1.54	0.71
30:0:2061:C:H2'	30:0:2062:A:H5'	1.72	0.71
30:0:2073:G:H5''	38:0:3803:HOH:O	1.88	0.71
30:0:708:A:H2'	30:0:709:G:O4'	1.90	0.71
16:P:13:VAL:HG21	16:P:41:ARG:HG2	1.72	0.71
30:0:2748:G:H2'	38:0:7440:HOH:O	1.89	0.71
13:M:70:GLY:HA2	30:0:2263:G:H4'	1.72	0.71
30:0:2769:C:H2'	30:0:2770:G:O4'	1.88	0.71
12:L:7:GLN:HE21	12:L:7:GLN:HA	1.55	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Z:70:ARG:HG2	26:Z:83:TYR:N	2.05	0.71
29:3:68:LYS:HE3	30:0:2436:U:H5'	1.71	0.71
31:9:108:C:H2'	31:9:109:G:C8	2.24	0.71
18:R:114:VAL:HB	18:R:145:LEU:HD12	1.70	0.71
30:0:192:A:H5'	38:0:7544:HOH:O	1.90	0.71
30:0:2004:U:H2'	30:0:2004:U:O2	1.91	0.71
30:0:2479:A:H5''	38:0:4609:HOH:O	1.91	0.71
21:U:56:ARG:NE	30:0:2890:A:H1'	2.06	0.71
30:0:421:C:H4'	30:0:1919:A:C6	2.25	0.71
20:T:48:VAL:HG21	20:T:96:VAL:HG13	1.72	0.71
30:0:814:G:H4'	38:0:3121:HOH:O	1.90	0.71
3:C:236:THR:HA	38:C:8655:HOH:O	1.90	0.71
30:0:1165:G:H21	30:0:1173:A:C5'	2.04	0.71
30:0:1278:A:H4'	30:0:1279:U:C4	2.26	0.71
30:0:1972:U:H2'	30:0:1973:A:H5'	1.71	0.71
30:0:2256:G:H2'	30:0:2257:G:C5'	2.20	0.71
30:0:24:G:H22	30:0:518:G:H1'	1.56	0.71
8:H:59:GLN:NE2	8:H:129:ARG:HE	1.88	0.71
30:0:1574:C:H2'	30:0:1575:C:H6	1.54	0.71
3:C:174:ILE:HD11	30:0:338:C:H4'	1.73	0.71
1:A:211:LYS:HB3	1:A:212:PRO:HD2	1.70	0.71
23:W:88:THR:HG22	23:W:90:TYR:HD1	1.55	0.71
30:0:1118:A:H62	30:0:1244:U:H3	1.36	0.71
30:0:1477:C:H5'	30:0:1868:G:C5'	2.20	0.71
30:0:2061:C:C2'	30:0:2062:A:H5'	2.20	0.71
30:0:2103:A:H2'	30:0:2104:C:H5'	1.73	0.71
30:0:2505:G:C2'	30:0:2506:A:H5'	2.20	0.71
30:0:2717:C:C2'	30:0:2718:C:C5'	2.68	0.71
30:0:2890:A:N3	30:0:2890:A:H2'	2.06	0.71
30:0:300:U:C5	30:0:301:C:H5	2.09	0.71
2:B:84:LEU:HD23	2:B:142:LEU:HD23	1.73	0.71
30:0:1043:C:H2'	38:0:3180:HOH:O	1.90	0.71
30:0:1342:C:H2'	30:0:1343:C:H5'	1.73	0.71
30:0:2536:C:H3'	38:0:9240:HOH:O	1.90	0.71
31:9:119:C:H4'	38:9:2285:HOH:O	1.90	0.71
30:0:2239:C:H2'	30:0:2240:U:C6	2.26	0.70
30:0:960:G:H1'	38:0:5895:HOH:O	1.89	0.70
23:W:44:MET:CE	30:0:944:G:H21	2.04	0.70
24:X:26:ALA:HB3	24:X:63:ARG:HG3	1.72	0.70
30:0:1189:A:H3'	38:0:7580:HOH:O	1.90	0.70
30:0:1701:A:H4'	30:0:1702:U:H5''	1.72	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2670:G:O2'	30:0:2671:U:H5'	1.91	0.70
30:0:2250:G:H2'	30:0:2251:G:C8	2.26	0.70
30:0:2482:G:H5''	38:0:4984:HOH:O	1.90	0.70
30:0:2689:A:H2'	30:0:2690:U:H5'	1.72	0.70
1:A:179:MET:HG2	1:A:186:TRP:HB2	1.73	0.70
10:J:107:ASN:HD21	10:J:109:TYR:HB2	1.56	0.70
25:Y:187:VAL:HG23	25:Y:192:ASP:CB	2.19	0.70
30:0:106:A:C2'	30:0:107:U:H5'	2.21	0.70
30:0:1118:A:C3'	30:0:1118:A:C8	2.74	0.70
30:0:2747:C:H4'	30:0:2748:G:OP1	1.91	0.70
30:0:282:C:H1'	30:0:368:C:H41	1.54	0.70
30:0:893:C:H5''	38:0:7590:HOH:O	1.90	0.70
17:Q:53:HIS:N	33:Q:8811:CL:CL	2.61	0.70
30:0:1167:G:H2'	30:0:1168:C:O4'	1.91	0.70
30:0:2812:A:H2	30:0:2814:A:H62	1.37	0.70
30:0:447:A:O2'	30:0:448:G:H5'	1.90	0.70
12:L:56:LYS:HE3	30:0:2443:C:H1'	1.74	0.70
30:0:2659:U:H5''	38:0:4098:HOH:O	1.91	0.70
30:0:529:G:C5	30:0:530:C:C5	2.79	0.70
30:0:558:C:H2'	30:0:559:U:C5'	2.22	0.70
24:X:43:VAL:HG11	24:X:82:GLU:HA	1.74	0.70
30:0:1641:A:O2'	30:0:1642:A:H5'	1.90	0.70
30:0:1805:G:O2'	30:0:1806:G:H5'	1.92	0.70
30:0:1835:U:H5	30:0:1840:A:N7	1.89	0.70
38:Y:8887:HOH:O	30:0:2060:A:H4'	1.92	0.70
30:0:2906:A:H5'	30:0:2907:C:O4'	1.92	0.70
30:0:843:A:C2	30:0:846:A:C8	2.80	0.70
2:B:223:ARG:HD3	33:B:8819:CL:CL	2.29	0.70
3:C:174:ILE:CD1	30:0:338:C:H4'	2.22	0.70
16:P:117:SER:HB3	30:0:1593:C:OP1	1.92	0.70
8:H:17:TYR:HE1	30:0:1006:A:H62	1.39	0.70
25:Y:169:ARG:HD2	30:0:1328:A:OP1	1.92	0.70
30:0:243:A:H61	30:0:269:G:C1'	2.05	0.70
30:0:2748:G:H5'	38:0:7440:HOH:O	1.91	0.70
30:0:2752:C:O2'	30:0:2753:G:H5'	1.91	0.70
30:0:2820:A:H2'	30:0:2821:C:H6	1.54	0.70
30:0:292:G:H1'	30:0:360:A:N6	2.06	0.70
13:M:83:SER:HB2	29:3:47:GLY:HA3	1.72	0.70
1:A:4:ILE:HG12	1:A:7:GLN:HG3	1.73	0.70
30:0:1051:C:H2'	30:0:1052:G:O4'	1.92	0.70
30:0:1447:U:H3'	30:0:1506:U:O2	1.92	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:M:8871:HOH:O	30:0:2244:A:H1'	1.92	0.70
30:0:2301:A:H5''	30:0:2302:A:H5'	1.73	0.70
30:0:2783:A:H3'	38:0:5184:HOH:O	1.90	0.70
30:0:671:A:HO2'	30:0:672:G:H2'	1.56	0.70
8:H:26:ILE:HA	8:H:123:ILE:HG21	1.74	0.70
30:0:960:G:H4'	38:0:7334:HOH:O	1.92	0.69
13:M:52:GLN:NE2	13:M:118:TYR:HB3	2.07	0.69
20:T:61:GLU:HG2	38:T:3851:HOH:O	1.90	0.69
30:0:1165:G:O3'	30:0:1174:A:H4'	1.92	0.69
16:P:28:GLN:HE22	30:0:1387:G:H1'	1.57	0.69
38:Q:5297:HOH:O	30:0:2402:A:H4'	1.91	0.69
18:R:98:ASN:HD21	30:0:500:G:H21	1.41	0.69
29:3:51:LYS:HA	29:3:54:LYS:HE3	1.72	0.69
31:9:24:U:H3'	31:9:25:G:C5'	2.22	0.69
1:A:95:PRO:HA	1:A:153:ARG:HA	1.74	0.69
6:F:49:PHE:HB2	6:F:96:ALA:HB3	1.74	0.69
30:0:1931:A:H2'	30:0:1932:G:H5'	1.72	0.69
30:0:289:G:O2'	30:0:290:C:H5'	1.92	0.69
30:0:685:C:O2	30:0:748:C:H4'	1.93	0.69
30:0:2578:G:C8	30:0:2578:G:H5'	2.26	0.69
30:0:1585:C:H2'	30:0:1586:G:H8	1.57	0.69
30:0:1564:C:H5'	38:0:4202:HOH:O	1.93	0.69
28:2:43:ARG:NH2	30:0:1684:A:H1'	2.03	0.69
30:0:210:U:O2'	30:0:211:U:H5'	1.93	0.69
30:0:2787:C:H5	38:0:4591:HOH:O	1.75	0.69
30:0:302:A:C2'	30:0:303:C:H5'	2.22	0.69
30:0:734:U:H2'	30:0:736:A:OP2	1.93	0.69
26:Z:64:PRO:HB2	26:Z:86:TYR:CE2	2.28	0.69
26:Z:57:MET:SD	26:Z:73:ARG:HD2	2.31	0.69
30:0:2591:C:H2'	30:0:2592:G:O4'	1.93	0.69
30:0:2712:G:H1'	38:0:5774:HOH:O	1.92	0.69
30:0:2887:G:H2'	30:0:2888:U:C6	2.27	0.69
22:V:44:GLY:HA3	30:0:92:G:H4'	1.73	0.69
31:9:108:C:H2'	31:9:109:G:H8	1.57	0.69
9:I:82:THR:HG22	30:0:1168:C:H5''	1.73	0.69
30:0:122:C:H5''	38:0:3570:HOH:O	1.91	0.69
30:0:2461:U:O2	30:0:2466:G:H1'	1.92	0.69
3:C:139:VAL:HG13	38:C:8651:HOH:O	1.92	0.69
21:U:45:GLU:HB3	38:U:4381:HOH:O	1.91	0.69
9:I:112:LEU:HD11	30:0:1162:G:H1'	1.75	0.69
30:0:1183:C:H2'	38:0:6169:HOH:O	1.91	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:960:G:N3	30:0:960:G:H2'	2.07	0.69
18:R:96:VAL:HG13	18:R:106:GLY:HA3	1.75	0.69
21:U:9:CYS:SG	21:U:11:THR:HG23	2.32	0.69
30:0:100:C:H2'	30:0:101:C:H6	1.58	0.69
30:0:10:U:C4	30:0:532:A:C8	2.81	0.69
30:0:2064:U:H5'	30:0:2652:U:O3'	1.92	0.69
30:0:1164:U:N3	30:0:1166:A:H4'	2.08	0.69
30:0:1965:C:H2'	30:0:1966:U:C6	2.28	0.69
30:0:2114:C:O2'	30:0:2115:U:H5'	1.93	0.69
30:0:2781:U:C2'	30:0:2782:G:H5'	2.22	0.69
30:0:279:C:O2'	30:0:280:C:H5'	1.93	0.69
30:0:283:U:H5	30:0:284:C:N3	1.91	0.69
30:0:970:U:H6	30:0:970:U:H3'	1.57	0.69
27:1:20:ARG:HG2	30:0:111:C:O2'	1.93	0.69
30:0:1300:G:H1'	38:0:4640:HOH:O	1.90	0.68
30:0:1464:C:H5''	38:0:5843:HOH:O	1.93	0.68
30:0:1706:G:C5	30:0:1707:G:C6	2.81	0.68
13:M:161:ARG:HH11	30:0:183:A:H1'	1.56	0.68
30:0:2318:C:H2'	30:0:2319:C:H6	1.57	0.68
30:0:2824:C:O3'	30:0:2825:C:H6	1.75	0.68
30:0:2852:A:C8	30:0:2902:A:C6	2.82	0.68
30:0:363:C:O2'	30:0:364:U:H5'	1.93	0.68
30:0:432:G:H2'	30:0:433:C:H6	1.58	0.68
30:0:867:A:H5''	38:0:4374:HOH:O	1.92	0.68
30:0:247:A:H2'	38:0:3901:HOH:O	1.93	0.68
30:0:601:G:O2'	30:0:602:A:H5'	1.93	0.68
24:X:73:ARG:HH12	24:X:88:GLU:HA	1.57	0.68
30:0:292:G:H2'	30:0:358:G:H21	1.57	0.68
11:K:28:GLU:HB3	11:K:58:THR:HB	1.75	0.68
14:N:151:ASP:HB3	38:N:8822:HOH:O	1.94	0.68
22:V:25:THR:HG22	22:V:29:ASN:ND2	2.08	0.68
30:0:1157:C:C2'	30:0:1158:G:H5'	2.23	0.68
30:0:1566:C:H2'	30:0:1567:G:H8	1.59	0.68
26:Z:42:TYR:HA	30:0:1829:A:H61	1.59	0.68
26:Z:70:ARG:HG3	26:Z:82:SER:HB2	1.75	0.68
30:0:1398:G:H4'	38:0:6576:HOH:O	1.92	0.68
30:0:169:A:H4'	38:0:9690:HOH:O	1.94	0.68
30:0:2348:C:H2'	30:0:2349:G:H8	1.57	0.68
30:0:2781:U:O2'	30:0:2782:G:H5'	1.94	0.68
30:0:226:A:H1'	30:0:393:G:C5	2.28	0.68
30:0:821:U:H3'	38:0:3750:HOH:O	1.92	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Z:34:SER:HA	30:0:797:A:H4'	1.74	0.68
30:0:1421:C:H2'	30:0:1422:U:H6	1.58	0.68
30:0:1585:C:N3	30:0:1611:G:C2	2.62	0.68
30:0:2281:C:C2'	30:0:2282:U:H5'	2.23	0.68
30:0:2421:G:H1'	38:0:3680:HOH:O	1.94	0.68
30:0:2533:C:O2'	30:0:2534:U:H5'	1.94	0.68
30:0:2564:G:H5''	30:0:2565:C:H5''	1.76	0.68
30:0:308:U:C4	30:0:342:C:H1'	2.29	0.68
4:D:135:VAL:HG21	4:D:139:TYR:CD1	2.29	0.68
30:0:1982:C:H2'	30:0:1983:C:O4'	1.93	0.68
30:0:236:A:C4'	30:0:237:G:H5'	2.20	0.68
30:0:613:C:H2'	30:0:614:U:H6	1.59	0.68
21:U:56:ARG:HD2	30:0:2890:A:H8	1.59	0.68
30:0:1666:C:HO2'	30:0:1667:A:H5''	1.55	0.68
30:0:1970:G:H5''	38:0:6973:HOH:O	1.93	0.68
38:3:9033:HOH:O	30:0:2382:A:H5'	1.94	0.68
13:M:79:ALA:HB3	13:M:81:ARG:NH1	2.04	0.68
15:O:47:ARG:NH1	15:O:47:ARG:HG3	2.03	0.68
30:0:1363:G:H1'	38:0:9415:HOH:O	1.93	0.68
4:D:23:VAL:HG22	4:D:73:VAL:HB	1.74	0.68
9:I:127:CYS:HB3	9:I:132:VAL:HB	1.75	0.68
10:J:90:LYS:HB2	33:J:8802:CL:CL	2.31	0.68
30:0:1074:G:H4'	30:0:1260:G:C6	2.29	0.67
30:0:2685:C:H1'	38:0:3426:HOH:O	1.94	0.67
29:3:81:GLU:HG2	38:3:9067:HOH:O	1.93	0.67
2:B:244:PRO:HG3	2:B:248:ARG:NH2	2.08	0.67
30:0:1829:A:H5''	38:0:3071:HOH:O	1.93	0.67
30:0:2594:C:O2'	30:0:2595:U:H5'	1.94	0.67
30:0:625:U:H5'	38:0:3172:HOH:O	1.93	0.67
30:0:702:G:O2'	30:0:703:G:H5'	1.94	0.67
3:C:115:LEU:HD21	3:C:243:VAL:HG22	1.75	0.67
18:R:150:PRO:O	18:R:150:PRO:CG	2.41	0.67
30:0:1197:G:H1'	30:0:1203:G:H22	1.59	0.67
30:0:1595:G:O2'	30:0:1596:U:H5'	1.94	0.67
30:0:2750:G:H2'	30:0:2751:C:H6	1.58	0.67
1:A:42:VAL:HG21	1:A:74:VAL:CG1	2.24	0.67
2:B:162:MET:CE	2:B:310:ARG:HD3	2.23	0.67
30:0:1165:G:N2	30:0:1173:A:H5'	2.09	0.67
30:0:753:U:H4'	38:0:6877:HOH:O	1.94	0.67
29:3:62:THR:CG2	29:3:84:ARG:HB3	2.25	0.67
4:D:173:GLU:HG3	4:D:174:VAL:HG23	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:91:PHE:CE1	30:0:2694:A:H4'	2.30	0.67
10:J:52:GLN:NE2	30:0:1119:G:H2'	2.09	0.67
30:0:1024:G:C5	30:0:1025:C:C5	2.83	0.67
30:0:1969:A:H3'	30:0:1970:G:N2	2.10	0.67
30:0:2531:U:H4'	38:0:9592:HOH:O	1.94	0.67
1:A:11:ARG:HD3	38:A:8938:HOH:O	1.93	0.67
2:B:179:LEU:O	2:B:183:GLU:HG2	1.93	0.67
29:3:68:LYS:CE	30:0:2436:U:H5'	2.24	0.67
30:0:248:A:H5'	30:0:249:G:OP2	1.93	0.67
30:0:252:C:O2	30:0:252:C:H2'	1.95	0.67
30:0:39:G:C2	30:0:444:C:C2	2.83	0.67
33:J:8801:CL:CL	38:J:4038:HOH:O	2.50	0.67
30:0:1495:C:H1'	30:0:1573:A:H1'	1.77	0.67
30:0:152:A:O2'	30:0:153:C:H5'	1.95	0.67
30:0:1701:A:H5'	38:0:6206:HOH:O	1.95	0.67
30:0:1759:A:C2	30:0:1818:C:C2	2.82	0.67
30:0:1931:A:C2'	30:0:1932:G:H5'	2.25	0.67
31:9:2:U:OP2	31:9:3:A:H5'	1.95	0.67
1:A:96:LEU:HD22	1:A:128:LEU:HD13	1.77	0.67
8:H:59:GLN:HE21	8:H:129:ARG:HE	1.42	0.67
14:N:5:ARG:HH11	14:N:5:ARG:HB2	1.60	0.67
14:N:86:LEU:HD12	14:N:125:ALA:HB2	1.76	0.67
21:U:31:PHE:CG	21:U:37:GLU:HG2	2.29	0.67
30:0:1081:A:H5''	38:0:3140:HOH:O	1.93	0.67
30:0:1391:G:N2	30:0:1434:A:H5''	2.10	0.67
30:0:544:G:H2'	30:0:545:G:H5''	1.76	0.67
27:1:34:CYS:HB3	27:1:39:PHE:H	1.59	0.67
3:C:2:GLN:HA	3:C:18:LEU:H	1.60	0.67
11:K:37:TYR:HB3	38:0:7270:HOH:O	1.94	0.67
30:0:107:U:C2'	30:0:108:U:H5'	2.24	0.67
30:0:2512:U:H4'	30:0:2514:U:O4	1.95	0.67
29:3:35:TRP:HA	29:3:38:ARG:NH1	2.09	0.67
1:A:48:ASP:HB3	38:A:9024:HOH:O	1.94	0.67
30:0:228:C:H2'	30:0:229:G:C5'	2.25	0.67
30:0:67:A:H2'	38:0:4106:HOH:O	1.95	0.67
4:D:88:LEU:HB2	4:D:89:PRO:HD3	1.76	0.67
30:0:1644:C:O2'	30:0:1645:U:H5'	1.94	0.66
30:0:559:U:H2'	30:0:560:U:H5'	1.77	0.66
25:Y:117:LEU:HB2	25:Y:174:VAL:HG21	1.77	0.66
30:0:1609:C:H2'	30:0:1610:G:H8	1.60	0.66
30:0:544:G:C2'	30:0:545:G:H5''	2.26	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:154:LEU:HD11	14:N:157:PRO:HA	1.76	0.66
30:0:154:C:C2	30:0:155:C:C5	2.83	0.66
30:0:1640:C:H5	38:0:6032:HOH:O	1.78	0.66
30:0:1706:G:C6	30:0:1707:G:C6	2.83	0.66
30:0:334:G:H2'	30:0:335:U:O4'	1.95	0.66
31:9:18:U:H2'	31:9:19:G:H8	1.60	0.66
10:J:49:ARG:HD3	30:0:1119:G:OP2	1.95	0.66
30:0:1878:G:H1'	38:0:6044:HOH:O	1.96	0.66
30:0:2313:C:H3'	38:0:5898:HOH:O	1.95	0.66
30:0:2354:A:C2	30:0:2367:A:C8	2.83	0.66
30:0:2846:C:H4'	38:0:5034:HOH:O	1.94	0.66
10:J:26:VAL:HG13	10:J:36:VAL:HG11	1.76	0.66
30:0:2134:G:N2	30:0:2242:U:C2	2.64	0.66
30:0:124:C:H5'	38:0:6332:HOH:O	1.94	0.66
30:0:128:A:C8	30:0:128:A:H3'	2.30	0.66
30:0:1444:G:O2'	30:0:1445:G:H5'	1.96	0.66
30:0:2026:C:O2'	30:0:2027:U:H5'	1.95	0.66
30:0:2133:U:H4'	30:0:2134:G:H5'	1.77	0.66
31:9:5:G:O2'	31:9:6:C:H5'	1.96	0.66
2:B:264:GLU:HG2	2:B:267:LYS:CE	2.26	0.66
15:O:38:ARG:HD3	38:0:7633:HOH:O	1.95	0.66
25:Y:174:VAL:HG23	25:Y:177:LYS:HD2	1.75	0.66
18:R:2:ILE:HG22	30:0:21:G:H4'	1.78	0.66
30:0:2875:A:C2	30:0:2883:A:C2	2.83	0.66
30:0:302:A:O2'	30:0:303:C:H5'	1.95	0.66
31:9:36:C:H4'	38:9:1968:HOH:O	1.94	0.66
23:W:4:LEU:HD23	23:W:54:PHE:HB3	1.76	0.66
30:0:1362:U:O2'	30:0:1363:G:H5'	1.96	0.66
30:0:1809:G:H4'	38:0:6148:HOH:O	1.95	0.66
30:0:940:G:H2'	30:0:941:G:H5'	1.77	0.66
31:9:29:C:C5	31:9:30:C:C6	2.84	0.66
30:0:1711:A:H3'	38:0:6254:HOH:O	1.96	0.66
30:0:2415:A:C2'	30:0:2416:G:H5'	2.24	0.66
38:B:9002:HOH:O	30:0:2678:A:H1'	1.95	0.66
13:M:76:ARG:HA	38:M:8947:HOH:O	1.94	0.66
20:T:9:LYS:HD2	38:0:3736:HOH:O	1.95	0.66
26:Z:43:GLY:HA2	30:0:1771:U:O2	1.95	0.66
30:0:1185:U:H5'	38:0:7367:HOH:O	1.94	0.66
30:0:128:A:H3'	30:0:128:A:H8	1.61	0.66
30:0:1935:C:H2'	30:0:1936:C:H6	1.59	0.66
30:0:582:U:H2'	30:0:583:C:C6	2.31	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:99:ALA:HB1	18:R:109:MET:HE1	1.77	0.66
30:0:1730:G:H4'	30:0:1731:C:H6	1.59	0.65
30:0:228:C:O2'	30:0:229:G:H5'	1.96	0.65
30:0:1165:G:H21	30:0:1173:A:H5'	1.58	0.65
30:0:1856:C:H5'	30:0:1858:A:O4'	1.95	0.65
30:0:2539:U:H1'	38:0:7688:HOH:O	1.95	0.65
30:0:660:A:N6	30:0:746:A:O4'	2.29	0.65
15:O:25:VAL:HG12	30:0:709:G:O2'	1.96	0.65
30:0:77:G:O2'	30:0:78:G:H5'	1.95	0.65
29:3:47:GLY:O	30:0:2121:G:H4'	1.96	0.65
31:9:20:G:H3'	38:9:2984:HOH:O	1.94	0.65
31:9:96:C:H2'	31:9:97:U:H6	1.61	0.65
2:B:270:ILE:HG12	2:B:298:LYS:HB2	1.76	0.65
13:M:97:ILE:HD12	13:M:127:LYS:HD2	1.78	0.65
14:N:130:PRO:HA	38:N:8834:HOH:O	1.96	0.65
16:P:89:ASN:OD1	16:P:92:GLU:HG3	1.97	0.65
30:0:1325:G:C2	30:0:1326:C:C6	2.85	0.65
29:3:47:GLY:HA2	30:0:2121:G:C4'	2.26	0.65
30:0:559:U:H2'	30:0:560:U:C5'	2.27	0.65
30:0:821:U:H2'	30:0:822:C:H6	1.59	0.65
30:0:963:C:H2'	30:0:964:G:C8	2.31	0.65
1:A:135:VAL:HG21	1:A:147:ARG:HB3	1.78	0.65
21:U:52:THR:HG22	21:U:54:THR:H	1.61	0.65
21:U:51:TRP:HA	21:U:56:ARG:HE	1.61	0.65
30:0:1302:G:H5'	30:0:1331:G:H4'	1.79	0.65
1:A:47:HIS:CD2	30:0:1654:U:C6	2.84	0.65
30:0:1878:G:HO2'	30:0:1879:U:H6	1.44	0.65
30:0:272:A:H5'	30:0:273:G:OP2	1.95	0.65
30:0:2872:U:H2'	30:0:2873:C:H6	1.60	0.65
30:0:352:A:O2'	30:0:353:G:H5'	1.95	0.65
30:0:542:A:H5'	30:0:542:A:H8	1.61	0.65
28:2:43:ARG:HH22	30:0:1684:A:C1'	2.02	0.65
8:H:49:GLN:HE21	8:H:170:ARG:HE	1.43	0.65
13:M:66:SER:HB3	13:M:128:TRP:CD1	2.31	0.65
13:M:68:ARG:HB2	38:0:6930:HOH:O	1.95	0.65
30:0:1118:A:H8	30:0:1119:G:H5''	1.62	0.65
30:0:2511:A:H2'	30:0:2512:U:O4'	1.97	0.65
30:0:2474:A:C8	30:0:2621:PSU:H4'	2.31	0.65
30:0:2777:G:O2'	30:0:2778:A:H5'	1.96	0.65
5:E:81:GLU:O	5:E:172:PRO:HD3	1.97	0.65
10:J:105:LEU:HA	38:J:5907:HOH:O	1.95	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Y:182:PHE:HD2	25:Y:200:THR:O	1.80	0.65
30:0:1016:U:C2	30:0:1017:U:C6	2.84	0.65
30:0:1412:U:O4	30:0:1681:G:H2'	1.97	0.65
30:0:255:A:H2'	30:0:256:C:C6	2.32	0.65
30:0:255:A:H2'	30:0:256:C:H6	1.60	0.65
30:0:2742:G:H5'	38:0:5759:HOH:O	1.97	0.65
30:0:2804:C:H2'	30:0:2805:A:O4'	1.97	0.65
25:Y:219:GLU:HG3	25:Y:220:GLU:N	2.11	0.65
26:Z:47:ARG:HH21	30:0:1771:U:H1'	1.61	0.65
30:0:1769:C:O2'	30:0:1770:U:H5'	1.97	0.65
30:0:969:G:N2	30:0:1000:C:C2	2.64	0.65
5:E:7:ILE:HG22	5:E:73:PHE:CZ	2.32	0.65
30:0:1157:C:O2'	30:0:1158:G:H5'	1.97	0.65
30:0:1279:U:O2	30:0:1279:U:H2'	1.95	0.65
30:0:1397:C:O2'	30:0:1398:G:H5'	1.97	0.65
30:0:146:U:O2'	30:0:147:G:H5'	1.97	0.65
30:0:2795:C:O2'	30:0:2796:U:H5'	1.96	0.65
11:K:20:CYS:HB2	11:K:29:LEU:HG	1.77	0.65
30:0:1201:C:H6	38:0:5689:HOH:O	1.78	0.65
30:0:1342:C:C2'	30:0:1343:C:H5'	2.27	0.65
30:0:1742:A:H61	30:0:2037:C:H42	1.44	0.65
30:0:2110:G:H4'	38:0:7608:HOH:O	1.96	0.65
30:0:2867:G:H2'	30:0:2868:C:C6	2.32	0.65
30:0:429:A:C8	38:0:3806:HOH:O	2.50	0.65
2:B:201:ASP:HB2	2:B:312:ARG:HD2	1.77	0.65
15:O:73:ASP:HA	15:O:92:VAL:O	1.96	0.65
30:0:2272:G:H5''	38:0:4183:HOH:O	1.97	0.65
30:0:549:A:C2	30:0:550:C:C2	2.85	0.65
30:0:560:U:H2'	30:0:561:G:C8	2.29	0.65
30:0:574:G:O2'	30:0:575:A:H5'	1.96	0.65
31:9:96:C:H2'	31:9:97:U:C6	2.32	0.65
16:P:98:ILE:HD12	16:P:102:ARG:NE	2.12	0.65
30:0:1118:A:C8	30:0:1119:G:H5''	2.32	0.64
30:0:1527:A:N6	30:0:1663:G:H2'	2.12	0.64
30:0:1741:U:C4	30:0:2033:G:C8	2.85	0.64
30:0:1778:A:H2'	30:0:1779:A:H5'	1.79	0.64
30:0:37:A:C2	30:0:446:G:C2	2.85	0.64
31:9:45:A:C5	31:9:46:C:C5	2.86	0.64
13:M:84:LYS:HB2	30:0:170:U:OP1	1.98	0.64
16:P:114:LEU:HA	16:P:118:GLN:NE2	2.11	0.64
17:Q:13:LYS:HD3	38:0:4008:HOH:O	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1172:G:H1'	38:0:4927:HOH:O	1.96	0.64
30:0:2289:G:O2'	30:0:2290:U:H5'	1.98	0.64
13:M:52:GLN:HE22	13:M:118:TYR:HB3	1.62	0.64
14:N:67:ALA:CA	14:N:71:TRP:HB3	2.21	0.64
30:0:1632:A:C3'	30:0:1633:C:H5'	2.27	0.64
30:0:1359:U:C5	30:0:2101:A:C8	2.85	0.64
30:0:2402:A:O2'	30:0:2403:C:H5'	1.97	0.64
30:0:2278:U:O2	30:0:2470:A:C8	2.50	0.64
30:0:294:C:H5	30:0:357:A:N6	1.94	0.64
30:0:405:C:H3'	38:0:7424:HOH:O	1.95	0.64
30:0:559:U:C2'	30:0:560:U:H5'	2.27	0.64
20:T:1:SER:HB2	30:0:447:A:P	2.37	0.64
30:0:1835:U:C5	30:0:1840:A:N7	2.65	0.64
30:0:2769:C:H2'	30:0:2770:G:C5'	2.27	0.64
31:9:28:U:O2	31:9:28:U:H2'	1.97	0.64
31:9:9:C:H2'	31:9:10:C:H5'	1.79	0.64
21:U:39:ASN:ND2	21:U:44:ARG:HH11	1.96	0.64
30:0:1398:G:O2'	30:0:1399:A:H5'	1.96	0.64
30:0:1628:G:O2'	30:0:1629:G:H5'	1.98	0.64
30:0:1634:G:H2'	30:0:1635:U:C6	2.32	0.64
30:0:2268:C:H2'	30:0:2269:C:H6	1.63	0.64
30:0:2326:C:H4'	30:0:2412:G:C4'	2.27	0.64
38:K:4440:HOH:O	30:0:2582:G:H4'	1.96	0.64
30:0:281:U:H2'	30:0:282:C:O4'	1.97	0.64
30:0:29:C:O2'	30:0:30:U:H5'	1.97	0.64
3:C:2:GLN:HB3	3:C:17:ASP:HA	1.80	0.64
30:0:100:C:C5	30:0:101:C:H5	2.15	0.64
30:0:1750:C:H5''	38:0:3647:HOH:O	1.97	0.64
30:0:1928:C:H2'	30:0:1929:G:O4'	1.97	0.64
30:0:195:C:H2'	30:0:196:G:H5'	1.78	0.64
5:E:91:PHE:HE1	30:0:2694:A:H4'	1.62	0.64
10:J:131:THR:HG22	10:J:133:GLY:H	1.63	0.64
30:0:1159:G:H2'	30:0:1160:G:O4'	1.97	0.64
30:0:1479:G:H5''	38:0:3720:HOH:O	1.97	0.64
30:0:1933:G:N2	30:0:1934:A:H1'	2.12	0.64
30:0:420:U:H2'	30:0:421:C:C6	2.33	0.64
30:0:451:C:O2'	30:0:452:G:H5'	1.97	0.64
25:Y:170:SER:OG	25:Y:175:ARG:HG3	1.98	0.64
30:0:736:A:H2	30:0:2406:U:H1'	1.63	0.64
27:1:1:THR:HB	38:0:7045:HOH:O	1.97	0.64
29:3:11:CYS:SG	29:3:20:HIS:NE2	2.71	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:9:110:G:C5	31:9:111:U:C5	2.85	0.64
30:0:1520:G:O2'	30:0:1521:C:H5'	1.97	0.64
30:0:1568:G:O2'	30:0:1569:U:H5'	1.98	0.64
30:0:1634:G:H3'	38:0:3870:HOH:O	1.96	0.64
30:0:1909:A:H2'	30:0:1910:A:C8	2.32	0.64
21:U:56:ARG:HB2	30:0:2890:A:H8	1.61	0.64
30:0:629:A:H4'	38:0:4483:HOH:O	1.96	0.64
31:9:86:G:C2	31:9:88:G:C8	2.86	0.64
13:M:164:THR:HG22	13:M:166:ALA:N	2.13	0.64
30:0:1933:G:O2'	30:0:1934:A:H5'	1.98	0.64
30:0:2491:G:H1'	38:0:6784:HOH:O	1.96	0.64
30:0:525:G:H5''	38:0:4554:HOH:O	1.98	0.64
31:9:18:U:H2'	31:9:19:G:C8	2.33	0.64
22:V:44:GLY:HA3	30:0:92:G:C4'	2.28	0.64
38:Y:8896:HOH:O	30:0:1357:A:H4'	1.98	0.63
30:0:2769:C:H2'	30:0:2770:G:H5'	1.80	0.63
30:0:594:C:C5	30:0:595:U:C5	2.86	0.63
27:1:46:ARG:HA	38:0:3013:HOH:O	1.98	0.63
31:9:64:C:C2'	31:9:65:A:H5'	2.28	0.63
26:Z:37:ARG:HB2	30:0:819:A:H4'	1.80	0.63
30:0:1160:G:O2'	30:0:1190:G:H8	1.81	0.63
30:0:1641:A:C2'	30:0:1642:A:C5'	2.73	0.63
4:D:154:LYS:HD2	4:D:154:LYS:N	2.11	0.63
8:H:59:GLN:NE2	8:H:96:GLN:HG2	2.13	0.63
1:A:1:GLY:HA2	30:0:2114:C:OP1	1.98	0.63
30:0:2830:U:O2'	30:0:2831:C:H5'	1.98	0.63
30:0:314:G:N2	30:0:317:A:C8	2.66	0.63
30:0:717:C:O2'	30:0:718:C:H5'	1.97	0.63
1:A:105:VAL:HG12	1:A:156:ILE:HA	1.81	0.63
30:0:1224:G:H2'	30:0:1225:C:H6	1.61	0.63
30:0:802:G:H2'	30:0:803:C:C6	2.33	0.63
31:9:89:C:O2'	31:9:90:G:H5'	1.97	0.63
2:B:274:GLU:HA	2:B:292:GLY:O	1.98	0.63
13:M:84:LYS:HD3	13:M:85:ARG:HH11	1.64	0.63
21:U:23:HIS:HD2	21:U:27:ALA:HB3	1.64	0.63
13:M:73:ARG:HG2	30:0:1469:C:H5''	1.79	0.63
26:Z:47:ARG:NH2	30:0:1771:U:H1'	2.14	0.63
29:3:33:MET:HG2	30:0:1922:A:H2'	1.80	0.63
3:C:218:VAL:HG23	3:C:222:ASP:OD1	1.99	0.63
3:C:98:ARG:HD3	38:C:8549:HOH:O	1.98	0.63
7:G:16:LYS:HZ3	7:G:63:ARG:HH12	1.44	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:72:ALA:HB3	38:M:8965:HOH:O	1.97	0.63
14:N:112:GLY:HA2	14:N:137:ALA:HB2	1.79	0.63
25:Y:149:GLN:HG2	38:Y:8856:HOH:O	1.98	0.63
30:0:10:U:H5''	30:0:531:G:C6	2.34	0.63
30:0:1189:A:O2'	30:0:1208:C:H2'	1.97	0.63
30:0:1209:C:H2'	30:0:1210:G:C8	2.31	0.63
30:0:2304:G:H5'	38:0:3355:HOH:O	1.98	0.63
30:0:2564:G:H5''	30:0:2565:C:C5'	2.29	0.63
30:0:297:U:H2'	30:0:298:C:H6	1.63	0.63
30:0:466:A:H61	30:0:475:G:H1'	1.64	0.63
30:0:908:A:C4'	38:0:4914:HOH:O	2.45	0.63
4:D:103:ASN:ND2	4:D:133:ASN:HA	2.13	0.63
13:M:77:HIS:CD2	13:M:81:ARG:H	2.16	0.63
26:Z:47:ARG:HD3	38:Z:8720:HOH:O	1.99	0.63
30:0:1585:C:H2'	30:0:1586:G:C8	2.32	0.63
27:1:10:LYS:HG3	38:1:2979:HOH:O	1.98	0.63
31:9:3:A:H2	31:9:21:G:N3	1.95	0.63
23:W:4:LEU:HD22	23:W:52:VAL:HG21	1.80	0.63
30:0:109:U:O2	30:0:109:U:H2'	1.98	0.63
30:0:2608:C:H2'	38:0:3556:HOH:O	1.98	0.63
1:A:80:LEU:HD22	1:A:91:GLY:HA3	1.81	0.63
18:R:99:ALA:HB1	18:R:109:MET:CE	2.29	0.63
21:U:42:LEU:O	30:0:1810:C:H5'	1.99	0.63
30:0:1449:G:H4'	38:0:9214:HOH:O	1.99	0.63
30:0:1552:G:C6	30:0:1634:G:C6	2.87	0.63
30:0:2255:A:O2'	30:0:2256:G:H5'	1.99	0.63
30:0:432:G:C2	30:0:433:C:C5	2.86	0.63
31:9:17:G:O2'	31:9:18:U:H5'	1.99	0.63
17:Q:27:GLN:HE21	31:9:8:G:C5'	2.12	0.63
1:A:199:HIS:HD2	1:A:201:PHE:H	1.47	0.63
30:0:1819:G:H2'	30:0:1820:G:C5'	2.29	0.62
30:0:2613:G:O2'	30:0:2614:C:H5'	1.99	0.62
30:0:287:C:N4	30:0:365:G:H1	1.96	0.62
11:K:118:ALA:HA	11:K:125:ALA:HB2	1.80	0.62
30:0:1224:G:H2'	30:0:1225:C:C6	2.33	0.62
30:0:1504:A:H5''	38:0:4378:HOH:O	1.99	0.62
30:0:2502:C:H2'	30:0:2503:A:C5'	2.23	0.62
1:A:72:GLU:HG3	26:Z:90:GLY:HA2	1.81	0.62
14:N:119:GLN:O	14:N:123:ILE:HG13	2.00	0.62
14:N:24:LEU:HD13	17:Q:26:PRO:HB3	1.81	0.62
25:Y:174:VAL:CG2	25:Y:177:LYS:HD2	2.28	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Z:63:CYS:SG	26:Z:71:VAL:HG23	2.39	0.62
30:0:1900:A:O2'	30:0:1901:G:H5'	1.99	0.62
30:0:236:A:H4'	30:0:237:G:OP1	1.99	0.62
30:0:2388:C:O2'	30:0:2389:U:H5'	1.99	0.62
30:0:275:G:C2	30:0:376:C:C2	2.87	0.62
30:0:727:G:H3'	30:0:728:C:H6	1.63	0.62
30:0:57:C:N4	30:0:89:G:H1	1.97	0.62
2:B:214:PRO:HD2	38:0:9081:HOH:O	1.99	0.62
18:R:39:THR:HB	18:R:42:GLU:CG	2.30	0.62
30:0:1051:C:H5''	38:0:5864:HOH:O	2.00	0.62
30:0:1156:C:O5'	30:0:1156:C:H6	1.83	0.62
30:0:1182:C:H1'	30:0:1192:A:H8	1.63	0.62
30:0:2071:C:O2'	30:0:2534:U:H4'	2.00	0.62
30:0:2694:A:C8	30:0:2695:C:C5	2.87	0.62
2:B:282:GLY:O	30:0:2898:G:H1'	1.99	0.62
33:0:8812:CL:CL	38:0:5079:HOH:O	2.53	0.62
20:T:19:ARG:HD3	20:T:67:LEU:O	2.00	0.62
30:0:424:C:C2	30:0:425:U:C5	2.87	0.62
30:0:694:A:H2'	30:0:695:C:H5'	1.81	0.62
1:A:42:VAL:O	1:A:76:VAL:HA	2.00	0.62
13:M:68:ARG:HG3	30:0:1469:C:OP1	2.00	0.62
30:0:1619:G:H2'	30:0:1620:C:C6	2.33	0.62
30:0:1667:A:C2	30:0:1668:U:C2	2.88	0.62
30:0:178:U:H2'	30:0:179:C:H6	1.63	0.62
30:0:2246:U:H2'	30:0:2247:C:C6	2.34	0.62
30:0:2637:A:H4'	38:0:4882:HOH:O	1.99	0.62
30:0:290:C:O2'	30:0:291:C:H5'	1.99	0.62
29:3:12:PRO:HD2	38:3:9035:HOH:O	1.98	0.62
2:B:307:ARG:HG3	2:B:307:ARG:HH11	1.64	0.62
30:0:1477:C:C2'	30:0:1478:U:H5'	2.29	0.62
30:0:1666:C:O2	30:0:1667:A:C8	2.53	0.62
30:0:2064:U:H2'	30:0:2065:C:H6	1.64	0.62
30:0:737:A:H2'	30:0:738:G:C8	2.34	0.62
26:Z:43:GLY:O	26:Z:47:ARG:HG2	1.99	0.62
30:0:1076:G:O2'	30:0:1077:G:H5'	1.99	0.62
30:0:107:U:H2'	30:0:108:U:C5'	2.29	0.62
30:0:1160:G:HO2'	30:0:1190:G:H8	1.47	0.62
30:0:1434:A:H2'	30:0:1436:C:C5	2.34	0.62
30:0:2313:C:H6	38:0:5898:HOH:O	1.82	0.62
30:0:2590:U:H2'	30:0:2591:C:H5'	1.80	0.62
30:0:2851:G:O2'	30:0:2852:A:H5'	1.98	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:129:HIS:CE1	3:C:232:LEU:H	2.18	0.62
11:K:76:GLN:HA	11:K:93:ASN:HA	1.82	0.62
18:R:39:THR:HB	18:R:42:GLU:HG3	1.81	0.62
20:T:32:ARG:HG2	20:T:38:ARG:HA	1.80	0.62
26:Z:73:ARG:HG2	26:Z:74:GLN:H	1.64	0.62
30:0:1309:U:C4	30:0:1310:U:C5	2.88	0.62
30:0:1528:A:N6	30:0:1663:G:H1'	2.11	0.62
30:0:1904:A:H2'	30:0:1905:U:O4'	2.00	0.62
30:0:2010:A:H2'	38:0:5883:HOH:O	1.99	0.62
3:C:64:GLY:O	30:0:2100:A:H4'	1.99	0.62
30:0:245:C:H2'	30:0:246:G:H5'	1.80	0.62
30:0:2639:G:O2'	30:0:2640:U:H5'	1.99	0.62
13:M:70:GLY:HA2	30:0:2263:G:C4'	2.29	0.62
26:Z:70:ARG:HG2	26:Z:83:TYR:H	1.63	0.62
30:0:1161:A:O5'	30:0:1161:A:H8	1.83	0.62
30:0:1346:U:H1'	38:0:4405:HOH:O	2.00	0.62
2:B:212:GLN:HA	30:0:1733:A:H4'	1.82	0.62
8:H:158:ASN:HD22	30:0:2502:C:H4'	1.62	0.62
27:1:54:ALA:HB2	30:0:892:G:H5''	1.82	0.62
4:D:25:MET:HE1	4:D:41:LEU:HG	1.81	0.62
30:0:1165:G:H1'	30:0:1174:A:C1'	2.14	0.61
30:0:1511:U:O2'	30:0:1512:G:H5'	2.00	0.61
30:0:2032:U:H2'	30:0:2033:G:C5'	2.30	0.61
30:0:2251:G:C6	30:0:2252:A:C6	2.88	0.61
29:3:2:GLN:H	30:0:2320:U:H5'	1.64	0.61
30:0:536:A:H3'	38:0:5002:HOH:O	2.00	0.61
30:0:542:A:O2'	30:0:543:G:H5'	2.00	0.61
30:0:661:G:C6	30:0:662:U:C4	2.88	0.61
31:9:3:A:N6	31:9:22:G:H1'	2.14	0.61
30:0:1964:U:O2	30:0:1964:U:C2'	2.48	0.61
30:0:2421:G:H3'	30:0:2422:U:C5'	2.31	0.61
30:0:293:A:O2'	30:0:294:C:H5'	2.00	0.61
30:0:517:U:H2'	30:0:518:G:H5'	1.81	0.61
30:0:957:A:H8	30:0:957:A:O5'	1.83	0.61
13:M:43:PRO:HG3	13:M:62:VAL:HG21	1.83	0.61
25:Y:126:PRO:HG2	25:Y:128:PHE:CE1	2.34	0.61
30:0:1616:A:H5''	30:0:1617:C:OP1	2.00	0.61
30:0:2734:G:H4'	38:0:9571:HOH:O	1.99	0.61
30:0:853:C:H3'	38:0:4515:HOH:O	1.98	0.61
23:W:151:GLU:O	23:W:154:ARG:HB2	1.99	0.61
30:0:1346:U:O2'	30:0:1347:U:H5'	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1921:A:C6	30:0:1922:A:C2	2.88	0.61
30:0:2314:G:C2'	30:0:2315:C:H5'	2.30	0.61
30:0:2635:A:O2'	30:0:2636:C:H5'	1.99	0.61
30:0:807:A:O2'	30:0:808:A:H5'	2.00	0.61
30:0:932:U:O2'	30:0:1296:A:H1'	2.00	0.61
3:C:140:VAL:HB	38:C:8655:HOH:O	2.00	0.61
6:F:13:GLU:OE2	6:F:78:GLU:HG2	2.00	0.61
30:0:1015:C:H2'	30:0:1016:U:H6	1.65	0.61
30:0:1165:G:H3'	30:0:1166:A:C5'	2.31	0.61
30:0:1483:C:C2'	30:0:1484:G:H5'	2.30	0.61
30:0:2070:G:H2'	30:0:2072:G:OP1	2.01	0.61
30:0:243:A:H61	30:0:269:G:H1'	1.64	0.61
30:0:869:G:H1'	38:0:3296:HOH:O	2.01	0.61
30:0:958:G:H4'	31:9:105:A:H4'	1.81	0.61
30:0:963:C:O2	30:0:1005:A:N1	2.33	0.61
2:B:36:PRO:HB3	2:B:174:ARG:HA	1.81	0.61
6:F:63:ILE:HB	6:F:64:PRO:HD3	1.82	0.61
6:F:30:LYS:HB2	6:F:97:ALA:HB3	1.83	0.61
30:0:1613:C:H2'	30:0:1614:G:O4'	2.01	0.61
30:0:1623:C:C5	30:0:1624:A:C5	2.88	0.61
30:0:1774:G:C2'	30:0:1775:A:H5'	2.31	0.61
30:0:1931:A:H2'	30:0:1932:G:C5'	2.30	0.61
30:0:2110:G:C2	30:0:2478:U:C2	2.88	0.61
30:0:2707:C:H2'	30:0:2707:C:O2	2.00	0.61
30:0:2787:C:H2'	30:0:2788:A:O4'	2.00	0.61
30:0:271:C:N4	30:0:378:A:C2	2.69	0.61
30:0:527:U:H2'	30:0:528:G:H8	1.66	0.61
30:0:946:C:H2'	30:0:947:U:C6	2.35	0.61
1:A:51:ARG:HG3	38:A:9024:HOH:O	2.00	0.61
23:W:52:VAL:HG22	23:W:53:ALA:H	1.64	0.61
24:X:47:ALA:HB1	24:X:82:GLU:CB	2.31	0.61
30:0:1206:U:C6	30:0:1206:U:H3'	2.35	0.61
30:0:1670:A:O2'	30:0:1671:U:H5'	2.01	0.61
30:0:2526:C:O2'	30:0:2527:U:H5'	2.01	0.61
5:E:139:GLU:OE2	30:0:2781:U:H1'	2.01	0.61
30:0:60:A:C2	30:0:61:G:C8	2.89	0.61
30:0:723:G:H2'	30:0:724:G:H8	1.63	0.61
29:3:38:ARG:HD2	29:3:42:ARG:HH12	1.66	0.61
29:3:54:LYS:HB3	38:3:9017:HOH:O	1.99	0.61
2:B:142:LEU:HD21	2:B:178:ALA:HB1	1.83	0.61
2:B:267:LYS:HD3	38:B:8996:HOH:O	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:121:ILE:HA	12:L:141:GLU:O	2.01	0.61
12:L:53:ARG:NH2	12:L:57:VAL:HG12	2.15	0.61
30:0:1127:C:C5	30:0:1128:U:C4	2.88	0.61
30:0:1485:A:H3'	38:0:5253:HOH:O	1.99	0.61
30:0:1642:A:C8	30:0:1643:C:C5	2.88	0.61
30:0:2032:U:O2'	30:0:2033:G:H5''	2.00	0.61
30:0:2111:G:H1'	38:0:9053:HOH:O	2.00	0.61
30:0:2637:A:H5'	38:0:9278:HOH:O	1.99	0.61
30:0:283:U:H5''	30:0:284:C:OP2	2.01	0.61
38:H:196:HOH:O	30:0:965:A:H2'	2.00	0.61
24:X:73:ARG:NH2	24:X:88:GLU:HB2	2.15	0.61
30:0:1453:G:H2'	30:0:1454:U:O4'	2.01	0.61
30:0:1790:C:H2'	30:0:1791:U:H6	1.65	0.61
30:0:2248:C:H2'	30:0:2249:G:H8	1.65	0.61
30:0:249:G:N2	30:0:250:C:C2	2.69	0.61
30:0:304:G:H1'	30:0:347:A:N6	2.15	0.61
30:0:684:G:H2'	30:0:685:C:C6	2.36	0.61
16:P:134:VAL:O	16:P:137:LEU:HB3	2.00	0.61
30:0:1165:G:N2	30:0:1173:A:C5'	2.64	0.61
13:M:95:LYS:HE3	30:0:157:G:H4'	1.82	0.61
30:0:1531:U:O2	30:0:1661:A:C2	2.54	0.61
30:0:2727:A:H2'	30:0:2728:C:H5'	1.83	0.61
30:0:946:C:H2'	30:0:947:U:H6	1.65	0.61
30:0:2291:A:C8	30:0:2309:C:H5'	2.36	0.60
30:0:2703:A:H2'	30:0:2704:C:H6	1.66	0.60
30:0:366:U:H2'	30:0:367:G:O4'	2.01	0.60
30:0:64:G:O2'	30:0:65:C:H5'	2.00	0.60
7:G:64:ASN:N	7:G:64:ASN:HD22	1.98	0.60
26:Z:60:ASP:CB	26:Z:69:ASP:HB3	2.23	0.60
30:0:1238:C:H5''	38:0:6777:HOH:O	1.99	0.60
19:S:21:GLN:HE22	30:0:1508:C:H4'	1.66	0.60
29:3:2:GLN:H	30:0:2320:U:C5'	2.14	0.60
30:0:2421:G:H3'	30:0:2422:U:H5''	1.82	0.60
30:0:2563:U:O2'	30:0:2564:G:H8	1.84	0.60
4:D:159:PRO:O	4:D:163:VAL:HG23	2.01	0.60
13:M:28:GLN:O	13:M:32:ARG:HG3	2.00	0.60
13:M:46:LEU:HD22	13:M:50:ARG:HD2	1.82	0.60
16:P:115:SER:N	16:P:118:GLN:HB2	2.15	0.60
21:U:31:PHE:CD2	21:U:37:GLU:HG2	2.36	0.60
23:W:48:VAL:HG12	23:W:52:VAL:HB	1.83	0.60
30:0:1603:A:H5''	30:0:1605:G:H5'	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2820:A:H2'	30:0:2821:C:O4'	2.01	0.60
31:9:55:U:H4'	31:9:56:A:C8	2.36	0.60
1:A:192:VAL:HG23	38:A:9014:HOH:O	2.01	0.60
23:W:24:LEU:HD21	23:W:44:MET:SD	2.42	0.60
9:I:113:SER:HA	30:0:1186:C:H5'	1.83	0.60
30:0:1209:C:O2'	30:0:1210:G:H5'	2.02	0.60
30:0:1819:G:H2'	30:0:1820:G:H5'	1.84	0.60
26:Z:42:TYR:HD2	30:0:1829:A:H61	1.48	0.60
30:0:2089:A:C2'	30:0:2090:G:H5'	2.30	0.60
30:0:2694:A:C2	30:0:2702:A:C4	2.89	0.60
30:0:2757:A:H2'	30:0:2758:G:H5'	1.83	0.60
30:0:513:A:H1'	38:0:3639:HOH:O	2.00	0.60
30:0:545:G:H8	30:0:545:G:C5'	2.00	0.60
30:0:597:A:C2	30:0:598:C:C4	2.89	0.60
31:9:107:C:O2'	31:9:108:C:H5'	2.01	0.60
6:F:2:VAL:HG22	6:F:57:GLU:OE1	2.01	0.60
16:P:35:ILE:HA	38:P:2641:HOH:O	2.00	0.60
30:0:1168:C:C5	30:0:1169:U:C5	2.89	0.60
30:0:1182:C:H1'	30:0:1192:A:C8	2.36	0.60
30:0:1159:G:H1	30:0:1208:C:H42	1.50	0.60
25:Y:154:ARG:NH2	30:0:1293:U:H5'	2.16	0.60
30:0:287:C:H2'	30:0:288:A:C8	2.37	0.60
11:K:76:GLN:HA	11:K:93:ASN:CB	2.31	0.60
21:U:56:ARG:HG3	21:U:56:ARG:HH11	1.66	0.60
30:0:1377:C:C5	30:0:1693:A:C6	2.89	0.60
30:0:1568:G:C4	30:0:1569:U:C6	2.89	0.60
30:0:1928:C:N3	30:0:1929:G:C8	2.70	0.60
30:0:1964:U:H6	38:0:4522:HOH:O	1.83	0.60
30:0:2253:G:H2'	30:0:2254:G:C8	2.32	0.60
30:0:255:A:C5	30:0:256:C:C4	2.89	0.60
30:0:2895:C:H4'	38:0:5133:HOH:O	2.01	0.60
30:0:2900:G:O2'	30:0:2901:C:H5'	2.00	0.60
30:0:316:A:N3	30:0:336:G:O2'	2.34	0.60
30:0:586:C:H5''	38:0:7189:HOH:O	2.02	0.60
30:0:810:G:C5	30:0:811:C:C5	2.89	0.60
31:9:60:C:O2'	31:9:61:C:H5'	2.02	0.60
18:R:82:GLU:HG3	18:R:83:LYS:N	2.16	0.60
22:V:50:ARG:NH1	30:0:56:G:H5''	2.16	0.60
30:0:1203:G:H5'	38:0:7165:HOH:O	2.01	0.60
30:0:1494:A:H4'	30:0:1494:A:OP1	2.01	0.60
30:0:1538:C:O2'	30:0:1539:U:H5'	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1725:C:H4'	38:0:3409:HOH:O	2.00	0.60
30:0:2019:A:H1'	38:0:5660:HOH:O	2.00	0.60
30:0:10:U:C5	30:0:532:A:C8	2.89	0.60
2:B:154:VAL:CG1	2:B:156:LYS:HG2	2.31	0.60
5:E:137:ASP:OD1	5:E:139:GLU:HB2	2.01	0.60
6:F:27:GLY:H	6:F:102:GLY:HA3	1.66	0.60
9:I:112:LEU:CD1	30:0:1162:G:H1'	2.32	0.60
24:X:73:ARG:HH22	24:X:88:GLU:HB2	1.65	0.60
30:0:1566:C:H2'	30:0:1567:G:C8	2.36	0.60
30:0:1883:U:H5''	30:0:2013:G:OP2	2.02	0.60
30:0:300:U:C4	30:0:301:C:C5	2.89	0.60
30:0:31:C:H4'	38:0:7326:HOH:O	2.01	0.60
38:D:217:HOH:O	31:9:54:A:H4'	2.00	0.60
25:Y:189:ASN:HD22	25:Y:191:ASP:H	1.47	0.60
30:0:1421:C:H2'	30:0:1422:U:C6	2.36	0.60
30:0:2757:A:C2'	30:0:2758:G:H5'	2.32	0.60
30:0:2781:U:H2'	30:0:2782:G:H5'	1.84	0.60
30:0:365:G:C5	30:0:366:U:C5	2.90	0.60
30:0:451:C:C5	30:0:452:G:C5	2.90	0.60
29:3:24:LYS:HE3	29:3:90:PHE:HE1	1.67	0.60
29:3:40:ARG:HA	29:3:52:PHE:CE2	2.37	0.60
31:9:94:G:O2'	31:9:95:C:H5'	2.02	0.60
17:Q:1:PRO:HA	30:0:2299:G:O6	2.00	0.60
30:0:1424:A:N1	30:0:1441:G:C6	2.70	0.60
29:3:48:ASN:CG	30:0:169:A:H1'	2.20	0.60
30:0:1934:A:C8	30:0:1935:C:C5	2.90	0.60
30:0:283:U:C5	30:0:284:C:N3	2.69	0.60
31:9:79:U:O2	31:9:79:U:H2'	2.02	0.60
10:J:56:LYS:HE2	10:J:60:ARG:HH21	1.66	0.60
15:O:65:LEU:HD13	30:0:746:A:C6	2.37	0.60
30:0:1081:A:C6	30:0:1082:A:N1	2.69	0.59
30:0:2325:U:O2'	30:0:2411:C:H1'	2.01	0.59
30:0:718:C:C2'	30:0:719:C:H5'	2.32	0.59
29:3:51:LYS:HB3	30:0:219:G:O2'	2.02	0.59
12:L:6:ARG:HD3	30:0:1299:G:O6	2.02	0.59
30:0:724:G:O2'	30:0:725:C:H5'	2.01	0.59
30:0:844:A:C6	30:0:882:A:C5	2.89	0.59
6:F:50:VAL:HG21	6:F:63:ILE:HG21	1.84	0.59
11:K:8:VAL:HG12	11:K:9:THR:N	2.15	0.59
13:M:52:GLN:OE1	13:M:116:ASN:HB3	2.01	0.59
30:0:1083:C:H4'	38:0:7040:HOH:O	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1332:C:H2'	30:0:1333:U:H6	1.66	0.59
30:0:1424:A:C2	30:0:1441:G:C6	2.90	0.59
30:0:1925:G:O2'	30:0:1926:G:H5'	2.02	0.59
30:0:1883:U:H5'	30:0:2012:U:OP2	2.00	0.59
30:0:522:U:O2'	30:0:1366:C:H5'	2.02	0.59
25:Y:148:GLY:HA3	30:0:622:G:P	2.42	0.59
3:C:101:ASP:HB2	30:0:750:A:O3'	2.03	0.59
26:Z:34:SER:HA	30:0:797:A:C4'	2.33	0.59
2:B:310:ARG:HD2	38:B:9130:HOH:O	2.02	0.59
6:F:21:GLU:O	6:F:24:ARG:HG2	2.01	0.59
14:N:114:LYS:O	14:N:118:ILE:HG13	2.02	0.59
21:U:12:ASP:HB2	38:U:6067:HOH:O	2.02	0.59
25:Y:151:SER:HB3	25:Y:154:ARG:HB3	1.84	0.59
30:0:101:C:H2'	30:0:102:A:H8	1.66	0.59
30:0:1213:C:O2'	30:0:1214:G:H5'	2.03	0.59
3:C:225:PRO:O	30:0:1308:A:H4'	2.03	0.59
30:0:1626:A:C2'	30:0:1627:G:C5'	2.77	0.59
30:0:1665:G:O2'	30:0:1666:C:H5'	2.02	0.59
30:0:192:A:C4	30:0:194:A:H1'	2.38	0.59
30:0:625:U:H3'	38:0:3239:HOH:O	2.01	0.59
30:0:891:G:O2'	30:0:892:G:H5'	2.01	0.59
1:A:60:PHE:HD1	1:A:64:ASP:HB3	1.67	0.59
13:M:77:HIS:HB2	13:M:81:ARG:NH2	2.14	0.59
14:N:143:ARG:HH21	14:N:169:PRO:HB2	1.67	0.59
15:O:44:ASN:HB2	33:O:8808:CL:CL	2.38	0.59
30:0:1044:C:H5''	38:0:9030:HOH:O	2.03	0.59
30:0:1270:U:O2'	30:0:1271:A:H5'	2.02	0.59
30:0:1622:G:H2'	30:0:1623:C:H5'	1.83	0.59
30:0:1838:U:O2'	30:0:2644:C:H5'	2.03	0.59
26:Z:40:ALA:O	30:0:2018:A:H2	1.85	0.59
30:0:2297:U:H3'	38:0:7375:HOH:O	2.03	0.59
30:0:2332:A:H3'	30:0:2333:G:H8	1.67	0.59
30:0:2830:U:C2'	30:0:2831:C:H5'	2.33	0.59
30:0:292:G:C2'	30:0:358:G:N2	2.63	0.59
30:0:529:G:H5''	30:0:546:C:O2'	2.03	0.59
30:0:635:A:H2'	30:0:636:G:H5''	1.85	0.59
30:0:62:C:H2'	30:0:63:U:C6	2.36	0.59
30:0:735:C:C3'	30:0:736:A:H8	2.03	0.59
30:0:970:U:H3'	30:0:970:U:C6	2.37	0.59
31:9:64:C:O2'	31:9:65:A:H5'	2.02	0.59
12:L:10:SER:O	12:L:11:ARG:HB3	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:U:23:HIS:CD2	21:U:27:ALA:HB3	2.37	0.59
21:U:49:LEU:HD13	21:U:51:TRP:CZ2	2.37	0.59
23:W:64:THR:O	23:W:68:THR:HG22	2.01	0.59
30:0:1971:G:H5'	38:0:7283:HOH:O	2.02	0.59
30:0:1323:G:H1	30:0:1334:C:H42	1.50	0.59
30:0:20:G:H2'	30:0:21:G:O5'	2.01	0.59
30:0:226:A:H2'	30:0:227:A:O4'	2.02	0.59
30:0:2587:OMU:CM2	30:0:2589:U:C6	2.86	0.59
30:0:2668:G:H2'	30:0:2669:U:H6	1.67	0.59
30:0:711:G:O2'	30:0:712:C:H5'	2.03	0.59
30:0:810:G:C6	30:0:811:C:C4	2.91	0.59
30:0:163:U:O3'	30:0:896:C:H4'	2.02	0.59
30:0:1206:U:C6	30:0:1206:U:H5'	2.35	0.59
30:0:1790:C:H4'	38:0:6543:HOH:O	2.02	0.59
30:0:2731:G:O2'	30:0:2732:U:H5'	2.02	0.59
30:0:559:U:C6	30:0:559:U:H5'	2.31	0.59
31:9:104:A:H3'	38:9:4108:HOH:O	2.02	0.59
8:H:48:VAL:HA	8:H:170:ARG:O	2.03	0.59
8:H:6:ALA:HA	8:H:61:ARG:NH1	2.18	0.59
30:0:1249:U:H2'	30:0:1250:C:C6	2.38	0.59
30:0:1512:G:H2'	30:0:1513:C:H6	1.67	0.59
30:0:1575:C:O2'	30:0:1576:G:H5'	2.03	0.59
30:0:1771:U:O2'	30:0:1773:G:N7	2.36	0.59
30:0:249:G:O2'	30:0:250:C:H5'	2.03	0.59
2:B:5:ARG:HH11	2:B:8:LYS:HE2	1.68	0.59
8:H:53:ILE:HA	8:H:134:GLU:O	2.03	0.59
15:O:112:ARG:HG3	15:O:113:VAL:N	2.18	0.59
19:S:73:ASP:HB3	19:S:76:GLU:HB2	1.85	0.59
24:X:71:ARG:HB2	24:X:88:GLU:HG2	1.84	0.59
30:0:1156:C:C6	30:0:1156:C:H3'	2.37	0.59
30:0:128:A:C8	30:0:128:A:C3'	2.84	0.59
30:0:1309:U:O2'	30:0:1310:U:H5'	2.02	0.59
30:0:2714:U:H2'	30:0:2715:G:C8	2.37	0.59
30:0:368:C:C2'	30:0:369:G:H5'	2.32	0.59
30:0:844:A:C6	30:0:882:A:C6	2.90	0.59
31:9:3:A:C2	31:9:21:G:N3	2.71	0.59
17:Q:27:GLN:NE2	31:9:8:G:H4'	2.08	0.59
13:M:93:ARG:HG2	38:0:3430:HOH:O	2.02	0.59
14:N:34:LEU:HD22	14:N:129:ILE:HD13	1.84	0.59
30:0:1187:U:H2'	38:0:6812:HOH:O	2.02	0.58
30:0:1583:U:O2'	30:0:1584:C:H5'	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:3:80:ARG:NH2	30:0:2381:C:H4'	2.18	0.58
30:0:2563:U:HO2'	30:0:2564:G:H8	1.49	0.58
30:0:2721:U:H3	30:0:2763:G:H1'	1.68	0.58
30:0:937:C:O2'	30:0:938:G:H5'	2.03	0.58
27:1:15:THR:HB	27:1:28:HIS:CD2	2.37	0.58
1:A:22:ARG:HH22	1:A:181:ALA:HA	1.67	0.58
25:Y:205:ILE:HD12	25:Y:214:ARG:NH1	2.18	0.58
30:0:1346:U:H2'	30:0:1347:U:C6	2.32	0.58
30:0:1441:G:H1'	38:0:7665:HOH:O	2.01	0.58
30:0:169:A:HO2'	30:0:170:U:H6	1.48	0.58
18:R:80:TYR:O	30:0:2050:G:H5''	2.03	0.58
30:0:2271:G:N3	30:0:2271:G:H2'	2.17	0.58
29:3:60:LYS:NZ	30:0:2462:G:N7	2.46	0.58
30:0:282:C:H2'	30:0:283:U:O4'	2.02	0.58
1:A:122:SER:O	1:A:124:VAL:HG13	2.03	0.58
1:A:3:ARG:HB2	1:A:8:ARG:HE	1.67	0.58
5:E:145:ALA:HB1	5:E:168:ILE:HD11	1.84	0.58
6:F:49:PHE:HE1	6:F:98:VAL:HG23	1.68	0.58
9:I:93:ALA:O	9:I:132:VAL:HA	2.02	0.58
15:O:4:ASN:HB3	15:O:7:LEU:HB3	1.85	0.58
18:R:59:PHE:O	18:R:63:ASN:HB3	2.02	0.58
23:W:130:HIS:O	23:W:136:GLY:HA3	2.03	0.58
30:0:1170:U:H1'	30:0:1172:G:C8	2.39	0.58
30:0:1523:G:C5	30:0:1524:U:C4	2.91	0.58
30:0:1766:U:O2	30:0:1778:A:H5'	2.03	0.58
30:0:210:U:H2'	30:0:211:U:O4'	2.03	0.58
30:0:2397:G:C5	30:0:2465:A:C6	2.91	0.58
30:0:24:G:C2	30:0:518:G:N3	2.71	0.58
30:0:2572:G:O2'	30:0:2573:G:H5'	2.03	0.58
2:B:79:MET:HB2	2:B:188:HIS:HE1	1.68	0.58
4:D:54:ALA:HB2	4:D:69:ILE:CD1	2.33	0.58
30:0:124:C:H3'	38:0:7559:HOH:O	2.03	0.58
30:0:1579:C:H4'	30:0:1580:A:OP1	2.02	0.58
30:0:170:U:H2'	30:0:171:C:H5'	1.85	0.58
30:0:1829:A:H2'	30:0:1830:C:H5'	1.84	0.58
30:0:2691:A:OP1	30:0:2691:A:H8	1.85	0.58
30:0:2824:C:H5'	30:0:2914:A:N6	2.18	0.58
30:0:433:C:C2	30:0:434:U:C6	2.91	0.58
29:3:78:HIS:HD2	29:3:80:ARG:HG3	1.67	0.58
12:L:77:ALA:HB3	38:L:8831:HOH:O	2.03	0.58
20:T:40:VAL:HG11	20:T:101:LEU:HD21	1.83	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:4:PRO:HB3	30:0:333:G:H5''	1.86	0.58
23:W:4:LEU:O	23:W:32:CYS:HA	2.04	0.58
23:W:80:ASP:O	23:W:84:VAL:HG23	2.03	0.58
24:X:43:VAL:HG22	24:X:76:ARG:NH1	2.18	0.58
30:0:1100:G:N2	30:0:1101:U:C2	2.72	0.58
30:0:1120:U:H5'	30:0:1121:G:OP2	2.04	0.58
30:0:876:A:N7	30:0:878:G:H1'	2.18	0.58
2:B:144:THR:HG22	2:B:145:HIS:H	1.67	0.58
3:C:4:THR:HA	3:C:15:GLU:HB3	1.85	0.58
15:O:59:VAL:HG23	15:O:111:VAL:HG21	1.85	0.58
30:0:1481:G:H2'	30:0:1482:A:C8	2.38	0.58
13:M:95:LYS:CE	30:0:157:G:H4'	2.33	0.58
30:0:1587:U:C2'	30:0:1588:G:H5'	2.32	0.58
30:0:1617:C:C5	30:0:1643:C:H4'	2.38	0.58
30:0:1753:C:H6	30:0:1753:C:O5'	1.86	0.58
16:P:78:GLY:O	30:0:1813:U:H4'	2.04	0.58
30:0:2282:U:H4'	30:0:2309:C:C5	2.39	0.58
30:0:2581:U:H1'	38:0:4436:HOH:O	2.03	0.58
30:0:413:G:O2'	30:0:414:C:H5'	2.03	0.58
30:0:57:C:O2'	30:0:58:C:H5'	2.03	0.58
30:0:65:C:O2'	30:0:66:G:H5'	2.02	0.58
31:9:49:G:C2'	31:9:50:G:H5'	2.33	0.58
31:9:58:G:C8	31:9:59:C:C5	2.91	0.58
1:A:51:ARG:NH2	1:A:53:ALA:HB3	2.18	0.58
4:D:17:ARG:NH1	4:D:137:PRO:HA	2.18	0.58
4:D:134:LEU:HD11	4:D:166:ILE:HD11	1.85	0.58
21:U:39:ASN:HD22	21:U:44:ARG:HD3	1.67	0.58
38:A:8939:HOH:O	30:0:2270:G:H4'	2.04	0.58
30:0:2655:U:C4	30:0:2656:G:N7	2.71	0.58
30:0:499:G:O2'	30:0:500:G:H5'	2.04	0.58
30:0:537:G:O4'	30:0:538:C:C5	2.57	0.58
30:0:881:C:H5''	38:0:3619:HOH:O	2.01	0.58
4:D:57:THR:HG23	4:D:63:ILE:HA	1.85	0.58
6:F:31:LYS:HD2	38:0:4760:HOH:O	2.02	0.58
30:0:1281:C:H2'	30:0:1282:U:O4'	2.04	0.58
16:P:133:SER:HB3	30:0:1793:C:H5''	1.86	0.58
30:0:2493:C:O2	30:0:2493:C:H2'	2.04	0.58
30:0:287:C:H2'	30:0:288:A:H8	1.68	0.58
29:3:44:SER:HA	29:3:49:ASP:OD2	2.04	0.58
31:9:114:G:H2'	31:9:115:C:H6	1.67	0.58
2:B:189:ALA:O	2:B:192:ASP:HB2	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:64:MET:HA	11:K:67:GLN:HE21	1.69	0.58
14:N:48:VAL:CG1	14:N:55:ASP:HB3	2.33	0.58
9:I:83:GLY:CA	30:0:1168:C:H5'	2.32	0.58
30:0:1188:A:N7	30:0:1189:A:C2	2.71	0.58
30:0:149:G:O2'	30:0:150:G:H5'	2.04	0.58
30:0:2780:C:H2'	30:0:2781:U:C6	2.38	0.58
30:0:303:C:C2'	30:0:304:G:H5'	2.34	0.58
30:0:686:A:O2'	30:0:747:G:H4'	2.04	0.58
10:J:27:ALA:HB1	10:J:87:LEU:HD21	1.85	0.58
11:K:114:ALA:HB3	11:K:117:VAL:HG23	1.84	0.58
12:L:143:THR:HG22	12:L:144:ASP:H	1.67	0.58
22:V:39:ALA:H	22:V:40:PRO:CD	2.14	0.58
30:0:1206:U:C6	30:0:1206:U:C3'	2.86	0.58
30:0:1434:A:O2'	30:0:1435:U:H2'	2.04	0.58
30:0:148:A:O2'	30:0:149:G:H5'	2.04	0.58
30:0:2328:U:N3	30:0:2329:C:C5	2.72	0.58
30:0:2387:U:H2'	30:0:2388:C:C6	2.39	0.58
30:0:2498:C:C2'	30:0:2499:U:H5'	2.33	0.58
30:0:2769:C:C2'	30:0:2770:G:C5'	2.82	0.58
4:D:13:MET:HB3	31:9:56:A:C4	2.39	0.58
21:U:56:ARG:HD2	30:0:2890:A:C1'	2.33	0.58
30:0:1167:G:H2'	30:0:1168:C:C6	2.39	0.57
30:0:116:G:H1'	30:0:129:A:C4	2.38	0.57
30:0:1253:C:H2'	30:0:1254:C:H6	1.68	0.57
30:0:1634:G:H2'	30:0:1635:U:H6	1.69	0.57
1:A:237:GLY:O	30:0:1939:U:H5''	2.03	0.57
30:0:229:G:O2'	30:0:230:C:H5'	2.03	0.57
30:0:23:G:H1'	30:0:520:A:N6	2.19	0.57
30:0:2402:A:H1'	38:0:4380:HOH:O	2.04	0.57
30:0:2695:C:N4	30:0:2701:G:N2	2.52	0.57
30:0:413:G:C6	30:0:428:G:C6	2.92	0.57
30:0:727:G:C2	30:0:728:C:H1'	2.39	0.57
4:D:52:THR:HG23	30:0:2346:C:O3'	2.04	0.57
6:F:26:THR:HB	6:F:102:GLY:HA3	1.86	0.57
1:A:167:LYS:CE	26:Z:50:VAL:HG13	2.34	0.57
30:0:907:A:C2	30:0:1299:G:C6	2.92	0.57
30:0:221:G:H5'	38:0:6463:HOH:O	2.03	0.57
5:E:102:VAL:HG11	5:E:148:ILE:HD11	1.86	0.57
20:T:49:GLU:OE2	20:T:97:ARG:HD2	2.05	0.57
30:0:1187:U:O2'	30:0:1189:A:H2	1.87	0.57
30:0:1464:C:H4'	38:0:6125:HOH:O	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2061:C:H2'	30:0:2062:A:C5'	2.34	0.57
29:3:1:MET:HA	30:0:2319:C:H3'	1.86	0.57
30:0:2694:A:C6	30:0:2702:A:C8	2.92	0.57
30:0:962:C:H2'	30:0:963:C:H5'	1.86	0.57
12:L:133:VAL:HA	38:L:8886:HOH:O	2.03	0.57
30:0:1014:A:H5''	31:9:101:G:O2'	2.04	0.57
30:0:1312:G:O2'	30:0:1313:A:H5'	2.05	0.57
30:0:1482:A:O2'	30:0:1483:C:H5'	2.05	0.57
30:0:1587:U:O2'	30:0:1588:G:H5'	2.04	0.57
16:P:88:GLN:HE21	30:0:1800:G:H1'	1.67	0.57
30:0:2103:A:H2'	30:0:2104:C:C5'	2.34	0.57
30:0:2689:A:C2'	30:0:2690:U:H5'	2.34	0.57
30:0:2829:G:N2	30:0:2912:C:C2	2.73	0.57
30:0:745:G:H5''	30:0:746:A:OP1	2.04	0.57
2:B:79:MET:HB2	2:B:188:HIS:CE1	2.39	0.57
3:C:133:ARG:NH2	3:C:135:GLU:HB2	2.19	0.57
19:S:25:GLN:HG2	19:S:65:VAL:HG13	1.87	0.57
20:T:71:VAL:HG11	20:T:90:PRO:CB	2.32	0.57
25:Y:115:ARG:HH21	30:0:1266:U:H4'	1.70	0.57
30:0:1768:C:H2'	30:0:1769:C:O4'	2.04	0.57
30:0:2777:G:H5'	38:0:9874:HOH:O	2.05	0.57
30:0:2843:A:H2'	30:0:2844:C:H5'	1.86	0.57
30:0:387:G:O2'	30:0:388:G:H5'	2.04	0.57
30:0:590:A:H2'	30:0:591:A:H5'	1.86	0.57
28:2:29:THR:HG22	30:0:86:A:O4'	2.04	0.57
29:3:47:GLY:HA2	30:0:2121:G:O2'	2.03	0.57
3:C:34:ALA:HA	3:C:102:LEU:CD2	2.34	0.57
8:H:61:ARG:HH11	8:H:61:ARG:HG3	1.70	0.57
11:K:10:GLN:N	11:K:10:GLN:NE2	2.50	0.57
30:0:1361:C:H2'	30:0:1362:U:H6	1.68	0.57
30:0:1462:C:O2'	30:0:1463:U:H5'	2.04	0.57
30:0:1588:G:C6	30:0:1589:G:N1	2.73	0.57
30:0:1930:A:H2'	30:0:1931:A:C8	2.39	0.57
30:0:1969:A:O2'	30:0:1970:G:H5'	2.05	0.57
30:0:2326:C:H2'	30:0:2327:A:C8	2.38	0.57
30:0:2375:A:H2'	30:0:2376:C:C6	2.39	0.57
30:0:2673:U:C4	30:0:2674:G:C6	2.92	0.57
30:0:2793:A:H1'	38:0:6249:HOH:O	2.04	0.57
30:0:292:G:H8	30:0:292:G:O5'	1.87	0.57
23:W:154:ARG:NH1	30:0:588:G:O6	2.37	0.57
29:3:23:GLU:HA	38:3:9000:HOH:O	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:74:VAL:HG11	11:K:113:ILE:HG12	1.85	0.57
18:R:1:GLY:HA2	18:R:119:VAL:HG21	1.86	0.57
26:Z:99:GLY:O	26:Z:103:VAL:HG23	2.05	0.57
30:0:1278:A:O2'	30:0:1279:U:H3'	2.04	0.57
30:0:1559:A:O2'	30:0:1561:U:H5	1.88	0.57
30:0:559:U:H6	30:0:559:U:C5'	2.14	0.57
30:0:619:U:H3'	38:0:3266:HOH:O	2.04	0.57
30:0:633:C:O2'	30:0:634:G:H5'	2.04	0.57
30:0:64:G:H2'	30:0:65:C:O4'	2.05	0.57
30:0:716:G:N2	30:0:717:C:C2	2.73	0.57
30:0:877:G:C5'	30:0:878:G:OP1	2.51	0.57
31:9:99:U:H2'	31:9:100:G:H8	1.70	0.57
31:9:42:C:H5'	31:9:43:G:OP2	2.03	0.57
16:P:37:ARG:HB2	38:0:4445:HOH:O	2.04	0.57
18:R:18:LEU:HB2	18:R:143:VAL:CG1	2.34	0.57
30:0:1206:U:C5'	30:0:1206:U:H6	2.16	0.57
25:Y:115:ARG:NH2	30:0:1266:U:H4'	2.19	0.57
30:0:1762:C:H2'	30:0:1763:C:C6	2.31	0.57
30:0:2256:G:O2'	30:0:2257:G:H5'	2.05	0.57
4:D:105:SER:OG	30:0:2338:G:H1'	2.05	0.57
30:0:2327:A:H61	30:0:2372:A:N6	2.02	0.57
30:0:840:U:C2	30:0:2648:U:O4	2.58	0.57
29:3:83:TRP:HD1	29:3:85:ALA:HB2	1.69	0.57
19:S:33:SER:O	19:S:37:VAL:HG23	2.04	0.57
30:0:101:C:H2'	30:0:102:A:C8	2.40	0.57
30:0:1398:G:H2'	30:0:1399:A:C8	2.40	0.57
30:0:383:A:H2'	30:0:384:G:O4'	2.05	0.57
30:0:878:G:H5'	38:0:9229:HOH:O	2.04	0.57
28:2:36:ASN:HD22	28:2:39:ARG:HG2	1.70	0.57
17:Q:19:ARG:NH2	31:9:11:A:H3'	2.19	0.57
18:R:39:THR:HG23	18:R:107:GLU:O	2.05	0.57
30:0:1982:C:H3'	30:0:1983:C:C6	2.40	0.57
30:0:2268:C:H2'	30:0:2269:C:C6	2.40	0.57
30:0:2608:C:H3'	38:0:7708:HOH:O	2.04	0.57
31:9:77:A:H1'	31:9:79:U:C6	2.40	0.57
2:B:234:ARG:HD3	30:0:1734:C:OP1	2.04	0.57
4:D:63:ILE:HG13	4:D:64:ARG:N	2.20	0.57
10:J:70:PHE:CD1	30:0:2676:C:H4'	2.40	0.57
14:N:66:LEU:HD11	14:N:83:LEU:HB3	1.87	0.57
20:T:28:SER:O	20:T:32:ARG:HG3	2.05	0.57
20:T:65:VAL:HG22	20:T:72:ILE:HG22	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1185:U:H2'	30:0:1186:C:H6	1.70	0.56
30:0:125:U:H4'	38:0:4400:HOH:O	2.04	0.56
30:0:1325:G:N3	30:0:1326:C:C6	2.73	0.56
30:0:1503:U:O2'	30:0:1504:A:H5'	2.05	0.56
30:0:1748:U:C5	30:0:1749:U:C5	2.93	0.56
30:0:1878:G:O2'	30:0:1879:U:H6	1.88	0.56
30:0:236:A:H4'	30:0:237:G:C5'	2.24	0.56
30:0:2429:A:H5'	38:0:9501:HOH:O	2.05	0.56
30:0:282:C:C2'	30:0:283:U:C5'	2.82	0.56
30:0:686:A:C5	30:0:687:C:C5	2.92	0.56
30:0:792:G:H4'	38:0:3403:HOH:O	2.05	0.56
1:A:230:SER:CB	30:0:1852:A:H4'	2.35	0.56
2:B:235:ARG:HA	38:B:9071:HOH:O	2.03	0.56
3:C:142:ASP:OD1	3:C:237:GLU:HB3	2.05	0.56
19:S:17:ASP:HB3	19:S:23:LYS:HB2	1.88	0.56
30:0:168:C:H6	30:0:168:C:O5'	1.88	0.56
30:0:2570:G:H5''	38:0:4868:HOH:O	2.04	0.56
30:0:2574:G:H2'	30:0:2575:C:H6	1.70	0.56
38:K:992:HOH:O	30:0:2583:A:H5'	2.05	0.56
30:0:293:A:P	30:0:358:G:H22	2.27	0.56
30:0:822:C:C2	30:0:823:U:C5	2.93	0.56
27:1:28:HIS:O	27:1:32:LYS:N	2.34	0.56
26:Z:63:CYS:SG	26:Z:81:CYS:CB	2.79	0.56
8:H:15:PRO:HG3	30:0:1053:G:OP1	2.05	0.56
30:0:1188:A:C5	30:0:1189:A:C2	2.93	0.56
30:0:1748:U:C5	30:0:1749:U:C4	2.92	0.56
30:0:2348:C:H2'	30:0:2349:G:C8	2.39	0.56
30:0:2411:C:H2'	30:0:2412:G:C8	2.40	0.56
30:0:2460:A:C2	30:0:2461:U:C2	2.93	0.56
30:0:2899:A:C2	30:0:2900:G:C4	2.93	0.56
30:0:999:C:O2'	30:0:1000:C:H5'	2.04	0.56
28:2:22:PRO:HG2	28:2:25:VAL:HG23	1.86	0.56
14:N:46:GLN:HE22	31:9:5:G:H21	1.52	0.56
23:W:11:VAL:HG11	30:0:1086:A:N6	2.20	0.56
30:0:1419:U:H5'	30:0:1420:C:OP2	2.05	0.56
30:0:1909:A:N1	30:0:2128:G:H1'	2.21	0.56
30:0:257:G:C2	30:0:258:G:C4	2.93	0.56
30:0:2678:A:O2'	30:0:2679:G:H5'	2.05	0.56
30:0:2799:A:H5'	30:0:2800:A:P	2.44	0.56
30:0:2908:A:H2'	30:0:2909:G:C1'	2.35	0.56
29:3:69:TYR:O	29:3:77:ALA:HA	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:170:ASP:HA	3:C:188:ARG:HH21	1.71	0.56
4:D:87:ALA:O	4:D:90:LEU:HB2	2.06	0.56
12:L:78:ALA:HB2	38:L:8866:HOH:O	2.05	0.56
13:M:115:LEU:HD23	13:M:150:ILE:HD12	1.87	0.56
17:Q:26:PRO:O	17:Q:30:VAL:HG23	2.05	0.56
30:0:1024:G:C6	30:0:1025:C:C4	2.93	0.56
30:0:1024:G:C4	30:0:1025:C:C5	2.92	0.56
30:0:1156:C:O2'	30:0:1157:C:H5'	2.06	0.56
30:0:1304:U:H3	30:0:1350:U:H3	1.52	0.56
30:0:1647:G:O2'	30:0:1648:G:H5'	2.04	0.56
30:0:1678:A:C5	30:0:1679:C:C5	2.93	0.56
30:0:1829:A:C2'	30:0:1830:C:H5'	2.35	0.56
30:0:1903:U:H2'	30:0:1905:U:O4	2.05	0.56
29:3:33:MET:HG2	30:0:1922:A:C2'	2.35	0.56
30:0:2439:C:H2'	30:0:2440:C:C6	2.35	0.56
30:0:556:C:C2	30:0:602:A:C2	2.93	0.56
30:0:669:G:C5	30:0:670:G:C8	2.94	0.56
30:0:669:G:C6	30:0:670:G:N7	2.73	0.56
24:X:43:VAL:HG12	24:X:44:ASP:N	2.17	0.56
30:0:107:U:C5	30:0:108:U:C5	2.94	0.56
10:J:63:ILE:HG23	30:0:1235:G:C1'	2.36	0.56
30:0:1103:C:C2	30:0:1241:G:N2	2.74	0.56
30:0:1568:G:C5	30:0:1569:U:C5	2.94	0.56
30:0:1603:A:H5''	30:0:1604:G:H3'	1.86	0.56
30:0:2001:G:O2'	30:0:2002:C:H5'	2.06	0.56
30:0:2473:U:O2'	30:0:2474:A:H5''	2.04	0.56
30:0:257:G:N2	30:0:258:G:C4	2.73	0.56
30:0:2756:U:H3	30:0:2896:A:H2	1.54	0.56
30:0:292:G:H1'	30:0:360:A:H61	1.70	0.56
30:0:306:A:O2'	30:0:325:U:H1'	2.05	0.56
30:0:380:A:H5'	30:0:430:A:N3	2.20	0.56
14:N:44:ARG:NH1	31:9:4:G:H21	2.03	0.56
1:A:97:ALA:HB2	1:A:150:PRO:HB2	1.88	0.56
30:0:106:A:H2'	30:0:107:U:H5'	1.88	0.56
30:0:1324:G:C6	30:0:1325:G:N7	2.74	0.56
30:0:1586:G:O2'	30:0:1587:U:H5'	2.06	0.56
30:0:1634:G:C5	30:0:1635:U:C4	2.93	0.56
30:0:1635:U:O2'	30:0:1636:G:H5'	2.05	0.56
30:0:1889:C:C5	30:0:1890:U:H5	2.23	0.56
30:0:206:G:C6	30:0:437:A:C2	2.93	0.56
30:0:2279:G:H4'	38:0:7466:HOH:O	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:922:A:N7	30:0:2281:C:H5'	2.21	0.56
30:0:2541:U:H3'	38:0:9065:HOH:O	2.05	0.56
18:R:68:HIS:O	30:0:2842:G:H5'	2.06	0.56
30:0:2872:U:H2'	30:0:2873:C:C6	2.40	0.56
30:0:545:G:C8	30:0:545:G:C5'	2.83	0.56
30:0:613:C:H2'	30:0:614:U:C6	2.40	0.56
30:0:710:G:O2'	30:0:711:G:H5'	2.05	0.56
30:0:940:G:C2'	30:0:941:G:H5'	2.36	0.56
13:M:83:SER:HB2	29:3:47:GLY:CA	2.35	0.56
3:C:27:ARG:NH2	30:0:657:G:OP1	2.37	0.56
15:O:47:ARG:CG	15:O:47:ARG:HH11	2.08	0.56
30:0:1324:G:H3'	38:0:6144:HOH:O	2.06	0.56
19:S:21:GLN:OE1	30:0:1508:C:H5'	2.06	0.56
30:0:264:G:H1'	30:0:265:U:H5	1.69	0.56
30:0:302:A:H2'	30:0:303:C:H5'	1.87	0.56
30:0:483:C:C4	30:0:484:A:C6	2.94	0.56
26:Z:40:ALA:O	30:0:2018:A:C2	2.59	0.56
30:0:1173:A:H4'	30:0:1174:A:C8	2.41	0.56
30:0:1268:C:H2'	30:0:1269:G:C8	2.40	0.56
30:0:1690:C:C5	30:0:1692:C:C4	2.94	0.56
13:M:191:GLY:O	30:0:175:G:H3'	2.05	0.56
30:0:1793:C:H2'	30:0:1794:G:C8	2.41	0.56
30:0:2363:G:C6	30:0:2364:A:C5	2.94	0.56
30:0:2464:C:H5''	30:0:2465:A:OP1	2.05	0.56
30:0:2803:C:C2'	30:0:2804:C:H5'	2.36	0.56
30:0:297:U:H2'	30:0:298:C:C6	2.40	0.56
30:0:700:A:H5''	30:0:701:U:H5'	1.88	0.56
31:9:36:C:C2'	31:9:37:C:H5'	2.35	0.56
31:9:37:C:O2	31:9:47:A:H1'	2.05	0.56
5:E:3:VAL:HG22	5:E:49:ILE:HB	1.88	0.56
6:F:27:GLY:N	6:F:102:GLY:HA3	2.21	0.56
8:H:61:ARG:HG3	38:0:4925:HOH:O	2.06	0.56
10:J:56:LYS:HE2	10:J:60:ARG:NH2	2.20	0.56
30:0:191:A:H2'	30:0:237:G:O6	2.06	0.56
30:0:2377:U:C2	30:0:2378:U:H5	2.23	0.56
30:0:2326:C:H4'	30:0:2412:G:H4'	1.87	0.56
30:0:594:C:C6	30:0:595:U:C5	2.94	0.56
22:V:55:ARG:O	22:V:59:ILE:HG12	2.06	0.56
26:Z:84:CYS:SG	26:Z:86:TYR:HB2	2.45	0.56
30:0:1166:A:H3'	38:0:4377:HOH:O	2.05	0.56
30:0:1481:G:H2'	30:0:1482:A:H8	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1517:C:O2	30:0:1670:A:C2	2.59	0.56
30:0:2128:G:C5	30:0:2129:U:C5	2.94	0.56
30:0:2267:G:O2'	30:0:2268:C:H5'	2.05	0.56
30:0:2661:U:H3	30:0:2812:A:N6	1.97	0.56
30:0:657:G:H2'	30:0:658:C:H6	1.70	0.56
2:B:7:ARG:HG2	2:B:7:ARG:HH11	1.70	0.56
19:S:24:LEU:CD1	19:S:68:LEU:HD11	2.36	0.56
30:0:1202:A:H2'	30:0:1203:G:C8	2.40	0.55
30:0:1515:A:H2'	30:0:1516:U:C6	2.41	0.55
30:0:1571:G:H2'	30:0:1624:A:N6	2.21	0.55
30:0:1797:A:O3'	30:0:1798:C:C6	2.59	0.55
30:0:1819:G:C2'	30:0:1820:G:H5'	2.36	0.55
30:0:2840:A:N3	30:0:2840:A:H2'	2.21	0.55
29:3:70:ARG:HG2	29:3:77:ALA:HB2	1.89	0.55
2:B:5:ARG:HD2	2:B:8:LYS:HE2	1.88	0.55
3:C:27:ARG:HH22	30:0:657:G:P	2.29	0.55
19:S:37:VAL:O	19:S:41:VAL:HG23	2.05	0.55
30:0:1188:A:C6	30:0:1189:A:C6	2.94	0.55
30:0:1482:A:H1'	38:0:9425:HOH:O	2.07	0.55
30:0:1559:A:H1'	30:0:1562:C:N4	2.21	0.55
30:0:2505:G:H2'	30:0:2506:A:C5'	2.32	0.55
30:0:583:C:H2'	30:0:584:U:H6	1.71	0.55
15:O:37:ARG:HD2	30:0:656:G:OP2	2.06	0.55
30:0:694:A:N3	38:0:3795:HOH:O	2.33	0.55
30:0:844:A:N1	30:0:882:A:C5	2.74	0.55
29:3:83:TRP:CD1	29:3:85:ALA:HB2	2.41	0.55
31:9:45:A:N7	31:9:46:C:C5	2.74	0.55
31:9:70:U:H5	38:9:6867:HOH:O	1.90	0.55
4:D:41:LEU:HA	4:D:44:ILE:HG22	1.87	0.55
11:K:27:ARG:CD	11:K:60:GLY:HA2	2.34	0.55
14:N:61:ALA:HB3	14:N:88:ALA:HB2	1.87	0.55
30:0:1177:A:N3	30:0:1177:A:H2'	2.21	0.55
30:0:1159:G:H1	30:0:1208:C:N4	2.04	0.55
30:0:1246:A:C4	30:0:1248:A:C8	2.94	0.55
30:0:1268:C:H2'	30:0:1269:G:H8	1.72	0.55
30:0:1477:C:C5'	30:0:1868:G:C5'	2.84	0.55
30:0:13:G:H2'	30:0:14:C:H6	1.72	0.55
30:0:1521:C:H2'	30:0:1522:A:C8	2.36	0.55
30:0:1581:A:C5	30:0:1582:C:C5	2.94	0.55
30:0:2372:A:H2'	30:0:2373:U:C6	2.41	0.55
30:0:2407:G:O2'	30:0:2408:A:H5'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2451:G:H8	38:0:5131:HOH:O	1.90	0.55
30:0:282:C:HO2'	30:0:283:U:H5'	1.71	0.55
30:0:2851:G:H2'	30:0:2902:A:N6	2.21	0.55
30:0:298:C:N3	30:0:299:U:C5	2.74	0.55
30:0:542:A:H2'	30:0:543:G:O4'	2.06	0.55
30:0:766:A:O2'	30:0:767:A:H5''	2.07	0.55
31:9:110:G:C4	31:9:111:U:C6	2.94	0.55
1:A:88:ILE:HD13	1:A:100:PRO:HD3	1.89	0.55
6:F:53:ASP:OD1	6:F:80:GLN:HB2	2.06	0.55
9:I:111:LEU:HD23	30:0:1163:G:H4'	1.87	0.55
19:S:24:LEU:HD11	19:S:68:LEU:HD11	1.87	0.55
23:W:132:VAL:HG21	23:W:140:LYS:O	2.06	0.55
30:0:1157:C:H2'	30:0:1158:G:H5'	1.87	0.55
30:0:1174:A:C6	30:0:1201:C:H4'	2.41	0.55
30:0:1377:C:H5'	30:0:1377:C:C6	2.41	0.55
30:0:2471:G:C4	30:0:2472:C:C5	2.94	0.55
30:0:2804:C:N4	30:0:2805:A:C2	2.74	0.55
29:3:49:ASP:O	29:3:52:PHE:HD1	1.90	0.55
1:A:97:ALA:HA	1:A:131:HIS:NE2	2.21	0.55
4:D:135:VAL:HG22	4:D:136:ARG:H	1.71	0.55
10:J:74:ARG:HB3	10:J:74:ARG:HH11	1.71	0.55
26:Z:54:GLU:HG3	38:0:7399:HOH:O	2.06	0.55
30:0:1166:A:N3	30:0:1166:A:H2'	2.21	0.55
30:0:52:A:H1'	30:0:121:U:O2	2.06	0.55
30:0:1275:C:N3	30:0:1281:C:N4	2.55	0.55
30:0:1856:C:H1'	38:0:5804:HOH:O	2.06	0.55
30:0:1928:C:O2'	30:0:1929:G:H5'	2.06	0.55
2:B:239:LEU:HD12	30:0:2093:G:OP1	2.06	0.55
4:D:52:THR:HG21	30:0:2346:C:O2'	2.06	0.55
30:0:2541:U:O2	30:0:2619:UR3:H3U2	2.07	0.55
30:0:2891:A:C2	30:0:2892:G:C4	2.95	0.55
29:3:48:ASN:ND2	30:0:169:A:O2'	2.39	0.55
11:K:10:GLN:N	11:K:10:GLN:HE21	2.05	0.55
22:V:8:ILE:HG21	22:V:59:ILE:HG13	1.89	0.55
30:0:1168:C:C4	30:0:1169:U:C5	2.94	0.55
30:0:1559:A:O2'	30:0:1561:U:C5	2.59	0.55
30:0:1736:A:H8	30:0:1736:A:O5'	1.90	0.55
30:0:1835:U:H3'	38:0:5521:HOH:O	2.05	0.55
30:0:1894:C:C5	30:0:1940:C:C5	2.94	0.55
30:0:2346:C:O5'	30:0:2346:C:C6	2.60	0.55
30:0:2607:U:H5'	38:0:5345:HOH:O	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2064:U:H4'	30:0:2653:A:OP1	2.07	0.55
30:0:534:C:O2'	30:0:535:G:H5'	2.07	0.55
30:0:577:G:N2	30:0:580:A:OP2	2.40	0.55
31:9:57:A:H2'	31:9:58:G:C5'	2.36	0.55
31:9:76:G:C3'	31:9:77:A:H5''	2.28	0.55
1:A:6:GLY:HA3	38:0:4582:HOH:O	2.07	0.55
6:F:107:ASP:O	6:F:111:ILE:HG13	2.06	0.55
8:H:9:TYR:O	8:H:59:GLN:HB2	2.07	0.55
10:J:107:ASN:ND2	10:J:109:TYR:H	2.05	0.55
11:K:130:MET:SD	21:U:26:GLY:HA3	2.46	0.55
26:Z:41:ARG:HD2	30:0:1830:C:O2	2.07	0.55
30:0:1212:C:H2'	30:0:1213:C:O4'	2.06	0.55
30:0:1245:C:H3'	30:0:1245:C:H6	1.72	0.55
30:0:1398:G:H2'	30:0:1399:A:H8	1.71	0.55
30:0:1441:G:O2'	30:0:1442:A:H5'	2.06	0.55
30:0:1759:A:C2	30:0:1818:C:N3	2.75	0.55
30:0:2576:A:H4'	30:0:2799:A:N1	2.21	0.55
30:0:279:C:C2'	30:0:280:C:H5'	2.36	0.55
30:0:441:A:H8	30:0:441:A:O5'	1.90	0.55
1:A:217:ARG:HH11	1:A:229:ALA:HB3	1.71	0.55
1:A:51:ARG:CB	1:A:51:ARG:HH11	2.13	0.55
2:B:223:ARG:HG3	2:B:232:TRP:O	2.07	0.55
14:N:147:ILE:HD12	38:9:4707:HOH:O	2.05	0.55
17:Q:61:GLY:HA3	17:Q:73:VAL:CG1	2.36	0.55
22:V:39:ALA:N	22:V:40:PRO:HD2	2.16	0.55
25:Y:99:ALA:HB2	25:Y:233:TYR:CZ	2.41	0.55
30:0:1311:G:C5	30:0:1344:G:C6	2.95	0.55
30:0:1454:U:H5''	30:0:1455:C:OP2	2.06	0.55
30:0:149:G:C2'	30:0:150:G:H5'	2.37	0.55
30:0:1503:U:H2'	30:0:1504:A:O4'	2.07	0.55
30:0:1576:G:C6	30:0:1577:U:C4	2.95	0.55
30:0:1626:A:O2'	30:0:1627:G:H5'	2.05	0.55
30:0:421:C:H4'	30:0:1919:A:N6	2.22	0.55
30:0:2514:U:OP1	30:0:2572:G:H1'	2.06	0.55
30:0:2573:G:O2'	30:0:2574:G:H5'	2.06	0.55
30:0:2840:A:H3'	38:0:7548:HOH:O	2.06	0.55
30:0:558:C:O2'	30:0:559:U:H5''	2.07	0.55
30:0:941:G:C5	30:0:942:U:C4	2.95	0.55
30:0:970:U:C3'	30:0:970:U:C6	2.90	0.55
31:9:13:A:O2'	31:9:14:G:H5''	2.07	0.55
1:A:191:GLY:HA2	1:A:194:MET:HE3	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:123:ALA:O	2:B:126:GLU:HB2	2.07	0.55
5:E:101:GLU:HB2	5:E:116:THR:O	2.07	0.55
6:F:96:ALA:HA	38:F:3111:HOH:O	2.05	0.55
12:L:92:ASP:HA	12:L:121:ILE:HB	1.87	0.55
13:M:147:LEU:O	13:M:150:ILE:HG22	2.07	0.55
14:N:48:VAL:HG11	14:N:55:ASP:HB3	1.88	0.55
26:Z:75:GLY:HA3	38:Z:8716:HOH:O	2.06	0.55
30:0:1038:G:O2'	30:0:1039:G:H5'	2.07	0.55
30:0:1165:G:H3'	30:0:1166:A:H5'	1.89	0.55
30:0:1476:A:O5'	30:0:1476:A:H8	1.89	0.55
30:0:1622:G:C2'	30:0:1623:C:H5'	2.37	0.55
2:B:234:ARG:HG3	30:0:1735:C:OP2	2.07	0.55
30:0:2318:C:H2'	30:0:2319:C:C6	2.41	0.55
30:0:2367:A:C5'	38:0:5062:HOH:O	2.55	0.55
30:0:2710:U:O2'	30:0:2711:U:H5'	2.06	0.55
30:0:2799:A:H5'	30:0:2800:A:OP2	2.07	0.55
30:0:2867:G:H2'	30:0:2868:C:H6	1.72	0.55
30:0:325:U:O2	30:0:326:G:C8	2.60	0.55
13:M:9:ARG:HD2	30:0:380:A:OP2	2.06	0.55
30:0:561:G:H2'	30:0:562:A:C8	2.39	0.55
30:0:56:G:N3	30:0:70:A:C2	2.75	0.55
30:0:661:G:C4	30:0:686:A:C2	2.94	0.55
30:0:716:G:C6	30:0:717:C:N4	2.75	0.55
30:0:731:U:H2'	30:0:732:C:C6	2.41	0.55
30:0:1252:A:H1'	38:0:5158:HOH:O	2.06	0.55
30:0:1562:C:O2	30:0:1562:C:H2'	2.06	0.55
30:0:2019:A:H5'	38:0:4502:HOH:O	2.06	0.55
30:0:10:U:C4	30:0:532:A:H8	2.25	0.55
30:0:62:C:H2'	30:0:63:U:H6	1.72	0.55
30:0:858:U:H2'	30:0:859:C:H6	1.72	0.55
29:3:9:THR:HG23	29:3:20:HIS:ND1	2.22	0.55
1:A:54:PRO:HG2	1:A:160:ALA:HB3	1.88	0.55
15:O:51:TYR:CD1	30:0:721:A:H5''	2.42	0.55
16:P:1:THR:O	30:0:1396:C:H1'	2.07	0.55
18:R:132:ARG:HG2	18:R:133:ALA:N	2.21	0.55
23:W:120:PRO:HG3	30:0:1262:C:H1'	1.88	0.55
26:Z:41:ARG:HG2	38:0:7344:HOH:O	2.07	0.55
20:T:16:LEU:HB2	30:0:100:C:H4'	1.89	0.54
30:0:1186:C:N4	30:0:1187:U:C4	2.75	0.54
30:0:1589:G:H5''	38:0:6772:HOH:O	2.07	0.54
30:0:2327:A:N6	30:0:2372:A:N6	2.55	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2433:A:O5'	30:0:2433:A:H8	1.90	0.54
30:0:2757:A:H2'	30:0:2758:G:C5'	2.37	0.54
38:M:8875:HOH:O	30:0:381:G:H5''	2.06	0.54
30:0:624:U:C2	30:0:632:A:C2	2.96	0.54
13:M:161:ARG:NH1	30:0:183:A:H1'	2.22	0.54
30:0:1198:U:C6	30:0:1200:A:OP2	2.60	0.54
30:0:2745:C:H5''	38:0:6211:HOH:O	2.06	0.54
30:0:2836:G:H5''	38:0:5114:HOH:O	2.07	0.54
1:A:42:VAL:HG23	1:A:78:ASP:O	2.07	0.54
2:B:45:LYS:HD2	2:B:301:VAL:HG12	1.89	0.54
3:C:135:GLU:O	3:C:136:VAL:HB	2.07	0.54
3:C:1:MET:HG2	3:C:2:GLN:N	2.17	0.54
6:F:50:VAL:CG2	6:F:63:ILE:HG21	2.37	0.54
16:P:80:ARG:CD	16:P:87:ARG:HH11	2.20	0.54
25:Y:187:VAL:HG13	25:Y:205:ILE:HA	1.90	0.54
1:A:167:LYS:HD2	26:Z:53:ILE:HG21	1.88	0.54
30:0:1012:A:H8	30:0:1012:A:O5'	1.91	0.54
25:Y:154:ARG:HH22	30:0:1071:G:H4'	1.71	0.54
30:0:1244:U:H4'	30:0:1246:A:O4'	2.08	0.54
30:0:1889:C:H2'	30:0:1890:U:H6	1.70	0.54
30:0:1997:A:N6	30:0:1998:G:C6	2.76	0.54
24:X:23:HIS:HE1	30:0:2044:G:OP1	1.90	0.54
30:0:2247:C:H6	30:0:2247:C:O5'	1.91	0.54
30:0:2278:U:H5'	38:0:9472:HOH:O	2.06	0.54
30:0:736:A:C2	30:0:2406:U:H1'	2.42	0.54
30:0:2420:G:C2'	30:0:2421:G:H5'	2.36	0.54
30:0:2890:A:N3	30:0:2890:A:C2'	2.70	0.54
30:0:378:A:H1'	38:0:3483:HOH:O	2.07	0.54
30:0:95:A:C8	30:0:97:G:N1	2.75	0.54
29:3:47:GLY:C	30:0:2121:G:H4'	2.27	0.54
31:9:58:G:H3'	31:9:59:C:C5	2.42	0.54
13:M:187:LEU:CD2	13:M:194:GLY:HA3	2.38	0.54
18:R:4:TYR:CZ	18:R:15:LYS:HB3	2.42	0.54
19:S:7:HIS:CD2	19:S:27:ALA:HB3	2.42	0.54
21:U:51:TRP:HA	21:U:56:ARG:NE	2.22	0.54
1:A:167:LYS:HE2	26:Z:50:VAL:HG13	1.89	0.54
26:Z:77:GLY:HA2	26:Z:92:SER:HA	1.88	0.54
30:0:1016:U:H2'	30:0:1017:U:C6	2.40	0.54
30:0:1202:A:C8	30:0:1203:G:C8	2.95	0.54
30:0:1384:C:H2'	30:0:1385:G:H8	1.73	0.54
30:0:1502:A:H2'	38:0:9624:HOH:O	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1764:C:O2'	30:0:1765:G:H5'	2.08	0.54
1:A:230:SER:HB2	30:0:1852:A:H4'	1.89	0.54
30:0:2317:C:C5	30:0:2318:C:C4	2.96	0.54
30:0:2367:A:H5''	38:0:5062:HOH:O	2.07	0.54
30:0:2397:G:C5	30:0:2465:A:N6	2.75	0.54
30:0:312:U:O2'	30:0:313:U:H5'	2.07	0.54
30:0:660:A:H4'	30:0:661:G:O5'	2.08	0.54
29:3:45:GLY:HA3	38:3:9027:HOH:O	2.06	0.54
31:9:99:U:H2'	31:9:100:G:C8	2.42	0.54
31:9:9:C:OP2	31:9:10:C:H5	1.91	0.54
31:9:65:A:N6	31:9:112:U:C6	2.75	0.54
1:A:110:SER:O	1:A:152:CYS:SG	2.59	0.54
2:B:41:PHE:CD1	2:B:79:MET:HE2	2.42	0.54
16:P:129:GLY:HA2	38:P:641:HOH:O	2.06	0.54
18:R:105:ASP:HB3	18:R:108:ALA:HB3	1.89	0.54
30:0:100:C:C5	30:0:101:C:C5	2.95	0.54
30:0:1185:U:C2	30:0:1186:C:C6	2.95	0.54
30:0:1380:U:H3'	38:0:9693:HOH:O	2.07	0.54
28:2:42:TRP:HZ2	30:0:1438:G:H1'	1.72	0.54
13:M:171:ARG:NH2	30:0:189:A:OP1	2.41	0.54
30:0:17:G:O2'	30:0:18:C:H5'	2.08	0.54
29:3:31:THR:O	30:0:1923:G:H4'	2.07	0.54
30:0:2117:U:OP2	30:0:2271:G:N2	2.38	0.54
30:0:2426:G:H5'	38:0:9237:HOH:O	2.08	0.54
12:L:57:VAL:HG21	30:0:2443:C:H5'	1.90	0.54
6:F:54:VAL:HG13	30:0:263:U:C4	2.43	0.54
30:0:31:C:H2'	38:0:7589:HOH:O	2.06	0.54
30:0:614:U:H2'	30:0:615:G:H8	1.72	0.54
30:0:68:U:H1'	38:0:6239:HOH:O	2.06	0.54
30:0:951:A:H2'	30:0:952:G:C5'	2.37	0.54
29:3:14:CYS:SG	29:3:74:CYS:HB2	2.48	0.54
29:3:3:MET:SD	29:3:83:TRP:HZ2	2.31	0.54
1:A:186:TRP:CG	1:A:187:PRO:HA	2.43	0.54
17:Q:28:ARG:HG2	38:Q:4350:HOH:O	2.05	0.54
30:0:105:G:O2'	30:0:106:A:H5'	2.07	0.54
30:0:1210:G:C4	30:0:1211:G:C8	2.96	0.54
30:0:1377:C:H6	30:0:1377:C:H5'	1.73	0.54
30:0:1453:G:C2	30:0:1675:C:C2	2.95	0.54
30:0:1886:A:H4'	38:0:9329:HOH:O	2.07	0.54
30:0:308:U:H5'	30:0:309:C:OP1	2.07	0.54
30:0:325:U:O2'	30:0:326:G:H5'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:585:C:H2'	30:0:586:C:C6	2.43	0.54
30:0:807:A:H2'	30:0:808:A:O4'	2.07	0.54
30:0:834:G:H4'	30:0:835:U:OP2	2.08	0.54
1:A:135:VAL:HG11	1:A:147:ARG:NH2	2.22	0.54
16:P:10:ALA:HA	16:P:13:VAL:HG12	1.89	0.54
30:0:1383:U:C4	30:0:1384:C:N4	2.76	0.54
30:0:1494:A:C4	30:0:1495:C:C5	2.96	0.54
30:0:1559:A:N3	30:0:1563:G:O6	2.40	0.54
30:0:1561:U:C5	30:0:1562:C:H5	2.26	0.54
30:0:1496:A:H5'	30:0:1572:A:H1'	1.89	0.54
30:0:1730:G:H5''	30:0:1731:C:C5	2.37	0.54
30:0:1871:U:O4'	30:0:1873:G:C8	2.60	0.54
30:0:2713:G:C2'	30:0:2714:U:H5'	2.38	0.54
30:0:274:G:N2	30:0:377:C:C2	2.76	0.54
30:0:2852:A:C8	30:0:2902:A:N6	2.76	0.54
30:0:492:C:O2'	30:0:493:U:H5'	2.08	0.54
30:0:98:A:C2'	30:0:99:A:H5'	2.37	0.54
1:A:9:ARG:HG2	1:A:16:PHE:CD2	2.42	0.54
1:A:212:PRO:HB2	38:0:4330:HOH:O	2.08	0.54
2:B:297:VAL:HB	38:B:9083:HOH:O	2.06	0.54
13:M:158:ARG:HH11	13:M:158:ARG:HG3	1.73	0.54
30:0:100:C:C6	30:0:101:C:H5	2.26	0.54
30:0:1024:G:C4	30:0:1025:C:C6	2.96	0.54
30:0:1315:G:H3'	30:0:1316:G:H5'	1.90	0.54
30:0:1361:C:H2'	30:0:1362:U:C6	2.43	0.54
30:0:1859:A:N7	30:0:1860:U:C5	2.75	0.54
30:0:2269:C:O2'	30:0:2270:G:H5'	2.07	0.54
30:0:2314:G:H2'	30:0:2315:C:H5'	1.89	0.54
30:0:2327:A:C5	30:0:2328:U:C5	2.96	0.54
30:0:2497:A:C2	30:0:2524:G:C4	2.95	0.54
30:0:2712:G:H5'	38:0:5173:HOH:O	2.07	0.54
30:0:2576:A:H4'	30:0:2799:A:C2	2.43	0.54
8:H:146:ALA:O	8:H:149:VAL:HG12	2.07	0.54
14:N:113:SER:HB3	38:9:5851:HOH:O	2.08	0.54
14:N:86:LEU:O	14:N:90:LEU:HG	2.08	0.54
25:Y:219:GLU:HG3	25:Y:220:GLU:H	1.72	0.54
30:0:1063:G:H5''	38:0:9858:HOH:O	2.08	0.54
30:0:67:A:N1	30:0:109:U:H1'	2.23	0.54
30:0:1192:A:H3'	30:0:1193:A:H5'	1.89	0.54
16:P:2:ASP:OD1	30:0:1396:C:H4'	2.08	0.54
30:0:1503:U:C2'	30:0:1504:A:H5'	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1557:G:O2'	30:0:1558:C:H5'	2.08	0.54
30:0:1641:A:H2'	30:0:1642:A:O4'	2.08	0.54
30:0:1649:G:O2'	30:0:1650:C:H5'	2.08	0.54
30:0:1878:G:C1'	38:0:6044:HOH:O	2.54	0.54
30:0:239:C:H2'	30:0:240:C:O5'	2.07	0.54
14:N:26:LEU:HD13	30:0:2415:A:N3	2.23	0.54
2:B:70:PRO:HG3	30:0:2719:A:C2	2.43	0.54
30:0:908:A:H4'	38:0:4914:HOH:O	2.08	0.54
29:3:2:GLN:HG2	30:0:2320:U:O5'	2.08	0.54
31:9:114:G:C4	31:9:115:C:C5	2.95	0.54
2:B:312:ARG:HD3	2:B:315:VAL:HG13	1.89	0.54
20:T:9:LYS:HE3	20:T:13:ARG:NH1	2.22	0.54
30:0:1185:U:H2'	30:0:1186:C:C6	2.43	0.54
30:0:1187:U:C2	30:0:1189:A:OP2	2.61	0.54
30:0:1730:G:H4'	30:0:1731:C:C6	2.42	0.54
30:0:2246:U:O2'	30:0:2247:C:H5'	2.08	0.54
30:0:2447:A:C5	30:0:2448:U:C5	2.96	0.54
30:0:2278:U:O2	30:0:2470:A:H3'	2.08	0.54
30:0:2506:A:H1'	38:0:3726:HOH:O	2.07	0.54
30:0:2818:A:H2'	30:0:2819:C:H6	1.72	0.54
30:0:49:A:H61	30:0:112:G:C2'	2.22	0.54
30:0:551:A:C6	30:0:552:A:N1	2.75	0.54
30:0:652:G:C2	30:0:653:U:H1'	2.42	0.54
30:0:889:C:H2'	30:0:890:C:C6	2.43	0.54
30:0:903:U:C5'	38:0:4328:HOH:O	2.56	0.54
27:1:28:HIS:HB3	27:1:31:LYS:HB2	1.90	0.54
31:9:30:C:O2	31:9:51:A:H2	1.91	0.54
31:9:59:C:H6	31:9:59:C:O5'	1.91	0.54
2:B:145:HIS:CD2	2:B:146:THR:O	2.61	0.54
2:B:243:ASN:HB2	30:0:2607:U:OP2	2.08	0.54
7:G:64:ASN:HD22	7:G:64:ASN:H	1.55	0.54
14:N:113:SER:HB2	38:N:8850:HOH:O	2.08	0.54
16:P:91:LYS:O	16:P:95:GLU:HG3	2.08	0.54
30:0:1195:G:N1	30:0:1196:C:C4	2.76	0.53
30:0:1200:A:H3'	38:0:5689:HOH:O	2.09	0.53
27:1:18:LYS:HG2	30:0:121:U:O4	2.08	0.53
30:0:1427:A:H61	30:0:1440:U:C1'	2.21	0.53
30:0:1928:C:C4	30:0:1929:G:N7	2.76	0.53
30:0:2716:G:O2'	30:0:2717:C:H5'	2.08	0.53
30:0:790:A:H2'	30:0:791:A:H5'	1.89	0.53
4:D:152:PRO:HD2	31:9:57:A:O2'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:242:GLU:HB2	38:C:8577:HOH:O	2.08	0.53
24:X:10:VAL:HG12	24:X:11:THR:N	2.23	0.53
30:0:146:U:C2'	30:0:147:G:H5'	2.38	0.53
30:0:1548:U:O2'	30:0:1549:C:H5'	2.08	0.53
30:0:1921:A:H2'	30:0:1922:A:O4'	2.08	0.53
30:0:1937:U:O2'	30:0:1938:G:H5'	2.08	0.53
30:0:2326:C:H2'	30:0:2327:A:H8	1.73	0.53
30:0:2327:A:N6	30:0:2372:A:H61	2.06	0.53
30:0:2562:G:H4'	38:0:4188:HOH:O	2.07	0.53
30:0:2681:A:H4'	30:0:2682:C:OP1	2.08	0.53
30:0:282:C:H2'	30:0:283:U:C4'	2.39	0.53
30:0:444:C:H2'	30:0:445:U:C6	2.43	0.53
30:0:506:G:N2	30:0:509:A:H5''	2.22	0.53
30:0:527:U:H2'	30:0:528:G:C8	2.42	0.53
38:D:198:HOH:O	31:9:59:C:H5'	2.09	0.53
10:J:27:ALA:HB1	10:J:87:LEU:CD2	2.38	0.53
24:X:12:ILE:HG21	24:X:33:ILE:HA	1.91	0.53
30:0:1183:C:N4	30:0:1184:C:H41	2.05	0.53
30:0:1294:A:H2'	30:0:1295:G:O4'	2.09	0.53
30:0:1518:A:H61	30:0:1667:A:N6	2.07	0.53
30:0:1540:G:O2'	30:0:1541:G:H5'	2.08	0.53
30:0:1574:C:H2'	30:0:1575:C:C6	2.41	0.53
30:0:1682:A:H5''	38:0:9460:HOH:O	2.08	0.53
38:J:1727:HOH:O	30:0:2065:C:H4'	2.08	0.53
30:0:404:G:OP1	30:0:2131:G:H1'	2.09	0.53
30:0:2414:A:H2'	30:0:2415:A:C8	2.43	0.53
11:K:63:GLU:HG2	38:K:6344:HOH:O	2.08	0.53
12:L:18:HIS:HD2	30:0:902:G:N7	2.05	0.53
13:M:187:LEU:HD21	13:M:194:GLY:HA3	1.91	0.53
23:W:66:LEU:O	23:W:70:ALA:HB3	2.09	0.53
30:0:940:G:N3	30:0:1032:A:C2	2.77	0.53
30:0:1063:G:H8	38:0:9858:HOH:O	1.92	0.53
30:0:1096:U:H1'	38:0:3468:HOH:O	2.08	0.53
30:0:10:U:H5''	30:0:531:G:O6	2.09	0.53
30:0:1216:G:N2	30:0:1217:G:H1'	2.23	0.53
30:0:1387:G:H2'	30:0:1388:U:H6	1.73	0.53
30:0:2314:G:O2'	30:0:2315:C:H5'	2.09	0.53
30:0:2457:U:H2'	30:0:2458:U:H6	1.72	0.53
30:0:2650:U:O2'	30:0:2651:C:H5'	2.08	0.53
29:3:62:THR:HG22	30:0:2317:C:OP2	2.07	0.53
2:B:54:VAL:HB	38:B:9093:HOH:O	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:143:VAL:HG11	8:H:173:GLU:HB3	1.91	0.53
10:J:39:VAL:HG13	10:J:106:GLY:O	2.09	0.53
13:M:159:VAL:CG1	33:M:8818:CL:CL	2.85	0.53
1:A:70:ALA:HB1	26:Z:89:THR:CG2	2.39	0.53
30:0:1502:A:H3'	38:0:9624:HOH:O	2.07	0.53
30:0:1634:G:C3'	38:0:3870:HOH:O	2.56	0.53
30:0:2296:C:H2'	30:0:2297:U:C6	2.43	0.53
30:0:2336:G:C2'	30:0:2337:G:H5'	2.38	0.53
30:0:2511:A:H3'	30:0:2512:U:C6	2.44	0.53
30:0:256:C:H2'	30:0:257:G:O4'	2.09	0.53
29:3:49:ASP:CB	29:3:52:PHE:HB2	2.36	0.53
1:A:127:GLN:HB3	1:A:139:LYS:HB3	1.91	0.53
12:L:120:LEU:HD12	12:L:133:VAL:HG21	1.91	0.53
21:U:42:LEU:HD22	30:0:1810:C:H1'	1.90	0.53
7:G:12:ILE:HG21	30:0:1150:A:N7	2.23	0.53
30:0:1156:C:C3'	30:0:1156:C:C6	2.91	0.53
30:0:1485:A:H1'	38:0:9173:HOH:O	2.07	0.53
30:0:1561:U:H2'	30:0:1562:C:O5'	2.09	0.53
30:0:1667:A:O2'	30:0:1668:U:H5'	2.09	0.53
30:0:212:A:O4'	30:0:214:U:C6	2.61	0.53
30:0:2326:C:H4'	30:0:2412:G:O4'	2.09	0.53
6:F:59:ILE:CD1	30:0:263:U:C2	2.91	0.53
30:0:2657:G:H1'	38:0:9492:HOH:O	2.08	0.53
30:0:2911:C:O2'	30:0:2912:C:H5'	2.09	0.53
29:3:13:HIS:CD2	29:3:76:LYS:HB2	2.44	0.53
5:E:154:ILE:HD11	5:E:157:LYS:HE2	1.90	0.53
8:H:41:LYS:HE2	8:H:45:ASP:HB3	1.91	0.53
15:O:25:VAL:HG23	15:O:26:TRP:N	2.23	0.53
24:X:85:VAL:HG12	24:X:86:GLU:N	2.24	0.53
26:Z:70:ARG:HA	38:Z:8731:HOH:O	2.07	0.53
30:0:1314:U:H5''	30:0:1316:G:O4'	2.09	0.53
30:0:1369:A:H5'	38:0:7739:HOH:O	2.09	0.53
30:0:1400:C:C2'	30:0:1401:G:H5'	2.39	0.53
30:0:1434:A:H4'	30:0:1435:U:H5	1.74	0.53
30:0:1496:A:H2'	30:0:1497:G:O4'	2.08	0.53
13:M:81:ARG:HG3	30:0:161:A:OP1	2.08	0.53
30:0:1889:C:C5	30:0:1890:U:C5	2.96	0.53
30:0:2387:U:H2'	30:0:2388:C:H6	1.73	0.53
30:0:2781:U:H2'	30:0:2782:G:C5'	2.38	0.53
30:0:364:U:H2'	30:0:365:G:O4'	2.08	0.53
2:B:202:VAL:HG11	2:B:301:VAL:HG22	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:236:THR:HG22	3:C:239:ALA:H	1.74	0.53
3:C:84:VAL:HG12	3:C:85:LYS:HG2	1.90	0.53
18:R:60:LYS:HB2	38:R:8947:HOH:O	2.08	0.53
20:T:47:THR:HB	20:T:100:ASP:HB3	1.89	0.53
38:A:8979:HOH:O	26:Z:91:GLY:HA3	2.08	0.53
30:0:1066:U:H2'	30:0:1067:A:C8	2.44	0.53
30:0:1323:G:N2	30:0:1334:C:N3	2.50	0.53
30:0:256:C:C2'	30:0:257:G:H5'	2.39	0.53
21:U:56:ARG:CZ	30:0:2890:A:H1'	2.39	0.53
30:0:2859:C:H42	30:0:2898:G:H1	1.57	0.53
30:0:2902:A:H2'	30:0:2902:A:N3	2.23	0.53
38:C:8545:HOH:O	30:0:457:U:H4'	2.08	0.53
17:Q:95:GLU:HA	30:0:949:U:H4'	1.90	0.53
29:3:51:LYS:HB2	38:3:9030:HOH:O	2.08	0.53
31:9:110:G:C6	31:9:111:U:C5	2.97	0.53
31:9:61:C:H2'	31:9:62:A:H8	1.74	0.53
2:B:51:VAL:CG2	2:B:327:VAL:HG13	2.39	0.53
3:C:103:ASN:HB3	38:0:9119:HOH:O	2.08	0.53
5:E:166:VAL:HG12	38:E:3134:HOH:O	2.08	0.53
11:K:33:SER:HB2	11:K:54:THR:HB	1.90	0.53
11:K:9:THR:HG23	38:0:3270:HOH:O	2.09	0.53
13:M:27:ARG:HH12	13:M:44:THR:CG2	2.21	0.53
18:R:39:THR:HG22	18:R:41:GLY:H	1.73	0.53
22:V:12:THR:HG22	22:V:15:GLU:HG3	1.91	0.53
30:0:105:G:H1'	38:0:5120:HOH:O	2.08	0.53
30:0:106:A:H2'	30:0:107:U:C5'	2.38	0.53
30:0:1141:U:O2'	30:0:1142:C:H5'	2.09	0.53
30:0:1205:U:O2'	30:0:1206:U:H5''	2.08	0.53
30:0:1423:C:C2'	30:0:1424:A:H5'	2.38	0.53
30:0:265:U:C2	30:0:266:G:C8	2.97	0.53
30:0:2735:U:C2	30:0:2736:U:C5	2.97	0.53
30:0:314:G:C2	30:0:317:A:C8	2.96	0.53
30:0:420:U:H2'	30:0:421:C:H6	1.72	0.53
30:0:488:U:H2'	38:0:3983:HOH:O	2.09	0.53
30:0:559:U:H2'	30:0:560:U:O4'	2.09	0.53
30:0:590:A:C2'	30:0:591:A:H5'	2.39	0.53
31:9:38:A:H2'	31:9:39:U:C6	2.43	0.53
13:M:193:LYS:HB3	30:0:392:U:C5'	2.39	0.53
14:N:63:SER:HB2	14:N:75:THR:HB	1.91	0.53
1:A:167:LYS:HE3	26:Z:50:VAL:HA	1.91	0.53
30:0:1009:U:H5	38:0:6019:HOH:O	1.92	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1191:A:H3'	30:0:1192:A:H5''	1.89	0.53
30:0:1202:A:C8	30:0:1203:G:N7	2.77	0.53
27:1:20:ARG:HA	30:0:121:U:C5	2.43	0.53
30:0:1119:G:C5	30:0:1243:C:C4	2.97	0.53
30:0:1518:A:N6	30:0:1667:A:H61	2.07	0.53
30:0:2402:A:C2'	30:0:2403:C:H5'	2.39	0.53
30:0:2433:A:H2	30:0:2458:U:H3	1.57	0.53
30:0:255:A:C5	30:0:256:C:C5	2.97	0.53
30:0:2589:U:H2'	30:0:2590:U:C6	2.44	0.53
30:0:2770:G:H2'	30:0:2771:G:O4'	2.08	0.53
30:0:334:G:C5	30:0:335:U:C5	2.96	0.53
30:0:535:G:C5	30:0:2063:U:C4	2.97	0.53
29:3:64:LYS:HA	29:3:84:ARG:HA	1.90	0.53
31:9:24:U:H3'	31:9:25:G:H5'	1.91	0.53
31:9:83:G:C2	31:9:84:G:C8	2.97	0.53
2:B:254:GLN:HB3	38:0:3539:HOH:O	2.08	0.53
5:E:1:PRO:HD2	5:E:53:GLU:O	2.09	0.53
8:H:59:GLN:HE21	8:H:129:ARG:HG2	1.73	0.53
30:0:1197:G:H1'	30:0:1203:G:N2	2.24	0.52
30:0:1393:A:C2	30:0:1726:G:H4'	2.44	0.52
30:0:1556:G:O2'	30:0:1557:G:H5'	2.09	0.52
30:0:1585:C:H3'	30:0:1585:C:H6	1.74	0.52
30:0:1774:G:H2'	30:0:1775:A:C5'	2.39	0.52
30:0:1917:G:C5	30:0:1918:U:C5	2.97	0.52
30:0:2292:C:C2	30:0:2463:A:H4'	2.44	0.52
30:0:191:A:N6	30:0:236:A:C2	2.77	0.52
30:0:2377:U:N3	30:0:2378:U:H5	2.06	0.52
30:0:2651:C:H2'	30:0:2652:U:O4'	2.08	0.52
30:0:2792:A:N3	30:0:2792:A:H2'	2.23	0.52
30:0:2878:U:H2'	30:0:2879:A:O4'	2.08	0.52
30:0:537:G:C6	30:0:620:A:C8	2.97	0.52
30:0:661:G:C5	30:0:686:A:C2	2.97	0.52
29:3:60:LYS:HG3	29:3:61:PRO:HD2	1.90	0.52
4:D:76:ARG:CZ	31:9:44:A:H1'	2.40	0.52
2:B:76:THR:H	2:B:294:TYR:HA	1.74	0.52
3:C:103:ASN:ND2	30:0:663:C:H5''	2.24	0.52
14:N:22:GLN:O	14:N:26:LEU:HB2	2.08	0.52
15:O:24:ALA:HB3	30:0:710:G:OP1	2.08	0.52
23:W:129:LYS:HE3	30:0:1099:G:OP1	2.08	0.52
30:0:1303:C:O2	30:0:1353:C:H1'	2.09	0.52
30:0:1523:G:C4	30:0:1524:U:C5	2.98	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:154:C:H2'	30:0:155:C:C6	2.38	0.52
30:0:1679:C:H2'	30:0:1679:C:O2	2.08	0.52
30:0:2292:C:O2	30:0:2463:A:H4'	2.09	0.52
30:0:2377:U:C2	30:0:2378:U:C5	2.97	0.52
29:3:17:HIS:CG	30:0:2409:C:H4'	2.43	0.52
30:0:256:C:H2'	30:0:257:G:H5'	1.89	0.52
30:0:473:A:O2'	30:0:890:C:H5'	2.10	0.52
30:0:1150:A:H8	38:0:4681:HOH:O	1.93	0.52
30:0:1343:C:H2'	30:0:1344:G:O5'	2.09	0.52
30:0:1682:A:O2'	30:0:1683:G:H5''	2.08	0.52
30:0:1769:C:C2'	30:0:1770:U:H5'	2.40	0.52
30:0:536:A:C2	30:0:2075:G:N3	2.78	0.52
30:0:2646:G:C5	30:0:2647:C:C5	2.98	0.52
30:0:579:G:H2'	30:0:580:A:C8	2.45	0.52
30:0:70:A:N3	30:0:70:A:H2'	2.23	0.52
30:0:903:U:H5'	38:0:4328:HOH:O	2.08	0.52
29:3:34:LYS:HB2	29:3:37:ASP:HB2	1.92	0.52
3:C:127:ARG:CZ	3:C:225:PRO:HG2	2.39	0.52
5:E:80:TRP:O	5:E:134:SER:HA	2.09	0.52
23:W:117:ARG:HH22	30:0:1264:U:P	2.32	0.52
30:0:1157:C:H2'	30:0:1158:G:C5'	2.39	0.52
30:0:1168:C:C2'	30:0:1169:U:H5'	2.39	0.52
30:0:1279:U:C2'	30:0:1279:U:O2	2.58	0.52
30:0:1337:G:C5	30:0:1338:U:C5	2.98	0.52
30:0:182:G:O2'	30:0:183:A:H5'	2.10	0.52
30:0:2727:A:N1	30:0:2756:U:C2	2.77	0.52
30:0:462:A:N6	30:0:477:A:C2	2.78	0.52
3:C:42:ARG:NH1	30:0:675:U:O2'	2.43	0.52
30:0:905:C:H3'	38:0:5139:HOH:O	2.10	0.52
1:A:191:GLY:HA2	1:A:194:MET:CE	2.39	0.52
4:D:45:THR:HB	4:D:75:LEU:HD21	1.91	0.52
4:D:54:ALA:HB2	4:D:69:ILE:HD11	1.90	0.52
8:H:72:ALA:HB2	8:H:156:ALA:HB2	1.91	0.52
15:O:50:ARG:HD2	15:O:51:TYR:CE2	2.45	0.52
15:O:59:VAL:HG23	15:O:111:VAL:CG2	2.40	0.52
24:X:73:ARG:NH1	24:X:88:GLU:HA	2.22	0.52
30:0:1150:A:H3'	30:0:1151:G:C5'	2.39	0.52
30:0:1375:A:H2'	30:0:1376:G:C5'	2.26	0.52
30:0:1541:G:O2'	30:0:1542:G:H5'	2.09	0.52
30:0:1634:G:C2'	38:0:3870:HOH:O	2.57	0.52
30:0:1531:U:C2	30:0:1661:A:C2	2.98	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1909:A:H4'	38:0:3505:HOH:O	2.08	0.52
30:0:2250:G:C6	30:0:2251:G:C6	2.98	0.52
30:0:257:G:N2	30:0:258:G:N3	2.58	0.52
30:0:324:G:C2	30:0:325:U:C5	2.98	0.52
30:0:407:A:H2'	30:0:408:A:C8	2.45	0.52
29:3:49:ASP:H	29:3:53:SER:HG	1.58	0.52
29:3:67:LEU:HB2	29:3:69:TYR:CE1	2.45	0.52
2:B:72:THR:HB	38:B:9083:HOH:O	2.10	0.52
13:M:61:ILE:N	13:M:61:ILE:HD12	2.25	0.52
15:O:25:VAL:HG23	15:O:26:TRP:H	1.75	0.52
18:R:76:ASP:OD2	30:0:2087:C:H1'	2.10	0.52
30:0:912:A:C4	30:0:1294:A:C2	2.98	0.52
12:L:6:ARG:NH1	30:0:1299:G:N7	2.57	0.52
30:0:187:A:C5	30:0:188:C:C5	2.97	0.52
30:0:2027:U:O2'	30:0:2028:U:H5'	2.10	0.52
30:0:2054:A:N3	30:0:2054:A:H2'	2.25	0.52
30:0:2579:G:O2'	30:0:2580:G:H5'	2.10	0.52
21:U:56:ARG:NH1	30:0:2890:A:C8	2.78	0.52
30:0:536:A:H2	30:0:2075:G:N3	2.07	0.52
30:0:692:A:H2'	30:0:693:A:O4'	2.10	0.52
6:F:118:LEU:O	6:F:119:ARG:HB3	2.10	0.52
30:0:1642:A:N7	30:0:1643:C:C4	2.78	0.52
30:0:2723:G:O2'	30:0:2724:U:H5'	2.09	0.52
30:0:301:C:H2'	30:0:301:C:O2	2.09	0.52
30:0:312:U:C2	30:0:320:G:N2	2.77	0.52
30:0:594:C:C4	30:0:595:U:C5	2.98	0.52
30:0:682:A:H2'	30:0:683:G:O4'	2.09	0.52
1:A:70:ALA:HB1	26:Z:89:THR:HG21	1.91	0.52
1:A:36:ASP:HA	1:A:83:GLY:HA3	1.90	0.52
2:B:109:LEU:HD11	2:B:113:LEU:HD12	1.92	0.52
12:L:17:SER:HB3	12:L:20:ASN:OD1	2.10	0.52
21:U:44:ARG:HB3	21:U:49:LEU:HD11	1.92	0.52
30:0:2345:A:H3'	30:0:2346:C:C5	2.44	0.52
30:0:2416:G:H2'	30:0:2417:C:C6	2.45	0.52
30:0:2549:C:O2'	30:0:2550:U:H5'	2.10	0.52
30:0:2727:A:C6	30:0:2756:U:C4	2.98	0.52
30:0:285:A:H2'	30:0:286:U:O4'	2.10	0.52
30:0:597:A:H2'	30:0:598:C:C6	2.45	0.52
30:0:790:A:H2'	30:0:791:A:C5'	2.40	0.52
2:B:280:VAL:HG12	2:B:281:ASP:N	2.25	0.52
5:E:21:THR:HA	5:E:30:THR:HA	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:50:VAL:HG13	6:F:60:VAL:HG11	1.91	0.52
10:J:86:MET:HE2	30:0:1241:G:N3	2.25	0.52
19:S:73:ASP:O	19:S:77:VAL:HG23	2.09	0.52
20:T:71:VAL:HG13	20:T:91:LEU:O	2.09	0.52
22:V:11:MET:HB3	22:V:15:GLU:HB2	1.91	0.52
23:W:125:HIS:HE1	38:W:3071:HOH:O	1.92	0.52
30:0:1400:C:H2'	30:0:1401:G:H5'	1.92	0.52
30:0:1649:G:H5'	38:0:9906:HOH:O	2.09	0.52
30:0:2011:A:H4'	30:0:2012:U:O5'	2.10	0.52
30:0:2237:G:H1'	30:0:2238:A:C8	2.45	0.52
30:0:287:C:H3'	30:0:287:C:H6	1.73	0.52
30:0:517:U:C2'	30:0:518:G:H5'	2.40	0.52
30:0:788:A:H4'	38:0:6882:HOH:O	2.09	0.52
29:3:13:HIS:CB	29:3:74:CYS:SG	2.91	0.52
31:9:31:C:O2'	31:9:32:G:H5'	2.09	0.52
2:B:258:GLY:H	2:B:260:HIS:CE1	2.28	0.52
2:B:260:HIS:HE1	38:B:9063:HOH:O	1.93	0.52
8:H:168:VAL:HG13	38:H:216:HOH:O	2.10	0.52
10:J:127:ILE:HG22	33:J:8801:CL:CL	2.47	0.52
11:K:43:ARG:O	30:0:2583:A:H4'	2.10	0.52
13:M:83:SER:CB	29:3:47:GLY:HA3	2.39	0.52
1:A:54:PRO:HD3	26:Z:77:GLY:HA3	1.91	0.52
30:0:1189:A:H1'	30:0:1209:C:O4'	2.10	0.52
30:0:1706:G:C6	30:0:1707:G:N1	2.78	0.52
30:0:1764:C:H2'	30:0:1765:G:O4'	2.10	0.52
30:0:1904:A:C2	30:0:1905:U:H1'	2.45	0.52
30:0:2032:U:C2'	30:0:2033:G:C5'	2.88	0.52
30:0:2128:G:H2'	30:0:2129:U:O4'	2.10	0.52
30:0:2363:G:C6	30:0:2364:A:N7	2.78	0.52
38:B:8993:HOH:O	30:0:2547:C:H1'	2.10	0.52
30:0:2754:G:H2'	30:0:2755:G:O4'	2.09	0.52
30:0:418:C:H2'	30:0:419:A:H8	1.74	0.52
30:0:564:G:N2	30:0:593:A:OP2	2.43	0.52
30:0:643:A:H2	30:0:902:G:N3	2.08	0.52
30:0:700:A:C5'	30:0:701:U:H5'	2.40	0.52
31:9:105:A:H2'	31:9:106:U:H5'	1.92	0.52
1:A:42:VAL:HG21	1:A:74:VAL:HG12	1.90	0.52
2:B:320:GLN:NE2	2:B:321:PRO:HD2	2.25	0.52
3:C:175:LYS:HE3	38:0:6736:HOH:O	2.09	0.52
13:M:87:GLY:HA3	13:M:91:ILE:HD12	1.92	0.52
26:Z:45:VAL:HA	26:Z:48:ARG:HB3	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:110:C:H1'	38:0:6615:HOH:O	2.10	0.51
30:0:1165:G:C1'	30:0:1174:A:H1'	2.15	0.51
30:0:1183:C:C2	30:0:1184:C:C5	2.98	0.51
30:0:1244:U:H6	38:0:4793:HOH:O	1.93	0.51
30:0:1424:A:C2	30:0:1441:G:C2	2.98	0.51
30:0:1947:G:C5	30:0:1948:G:N7	2.78	0.51
30:0:801:U:H6	30:0:801:U:O5'	1.93	0.51
30:0:958:G:H2'	30:0:959:C:C6	2.45	0.51
30:0:962:C:H2'	30:0:963:C:C5'	2.40	0.51
29:3:68:LYS:HE2	29:3:70:ARG:NH1	2.25	0.51
6:F:28:ALA:HB3	6:F:99:THR:O	2.10	0.51
10:J:56:LYS:O	10:J:60:ARG:HG3	2.09	0.51
25:Y:203:VAL:HG12	25:Y:228:VAL:HA	1.92	0.51
26:Z:96:GLU:OE1	26:Z:101:LYS:HG2	2.10	0.51
30:0:116:G:C1'	30:0:129:A:C4	2.93	0.51
30:0:1312:G:C6	30:0:1343:C:N3	2.79	0.51
30:0:152:A:H1'	30:0:440:C:O2'	2.10	0.51
30:0:1545:C:H2'	30:0:1546:G:O4'	2.09	0.51
30:0:1619:G:H2'	30:0:1620:C:O4'	2.09	0.51
30:0:1531:U:C2	30:0:1661:A:N1	2.78	0.51
30:0:1754:A:H2'	30:0:1755:A:O4'	2.10	0.51
30:0:1779:A:H2'	30:0:1780:G:H5'	1.92	0.51
30:0:2255:A:C2	30:0:2256:G:C4	2.98	0.51
30:0:2421:G:H4'	38:0:4740:HOH:O	2.09	0.51
30:0:2073:G:OP2	30:0:2490:A:H5'	2.10	0.51
30:0:2747:C:H3'	38:0:3844:HOH:O	2.09	0.51
30:0:2752:C:C2'	30:0:2753:G:H5'	2.40	0.51
30:0:2765:C:H2'	30:0:2766:A:C8	2.45	0.51
30:0:2658:G:H4'	30:0:2842:G:C8	2.45	0.51
27:1:37:CYS:SG	27:1:39:PHE:HB2	2.51	0.51
29:3:30:GLN:HB3	38:3:9055:HOH:O	2.09	0.51
31:9:35:C:H5''	38:9:4078:HOH:O	2.10	0.51
2:B:207:LYS:HG3	30:0:2717:C:OP1	2.10	0.51
8:H:44:ASP:HA	8:H:170:ARG:HH12	1.76	0.51
12:L:11:ARG:HG2	12:L:12:THR:HG23	1.93	0.51
13:M:120:VAL:HG11	13:M:130:GLU:HG3	1.90	0.51
15:O:96:VAL:HA	38:O:4258:HOH:O	2.10	0.51
18:R:150:PRO:CB	18:R:150:PRO:CG	2.85	0.51
24:X:29:ALA:CB	24:X:66:THR:HG21	2.41	0.51
26:Z:97:THR:O	26:Z:101:LYS:HG3	2.09	0.51
30:0:1096:U:O2	30:0:1261:A:C2	2.64	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1268:C:O2'	30:0:1269:G:H5'	2.10	0.51
30:0:1388:U:H2'	30:0:1389:G:O4'	2.10	0.51
30:0:1540:G:C6	30:0:1646:G:C5	2.98	0.51
30:0:1637:A:C2	30:0:1638:U:C2	2.98	0.51
30:0:1791:U:O2'	30:0:1792:C:H5'	2.10	0.51
30:0:1915:U:H2'	30:0:1916:C:C6	2.46	0.51
30:0:2097:G:N2	30:0:2098:C:H1'	2.25	0.51
30:0:2102:G:N2	30:0:2104:C:C2	2.78	0.51
30:0:2383:G:C6	30:0:2384:U:N3	2.78	0.51
30:0:300:U:C6	30:0:301:C:H5	2.27	0.51
30:0:353:G:H2'	30:0:354:A:C8	2.45	0.51
30:0:369:G:O2'	30:0:370:G:H5'	2.10	0.51
30:0:57:C:C2'	30:0:58:C:H5'	2.39	0.51
1:A:95:PRO:HG2	1:A:98:GLU:HG2	1.91	0.51
3:C:4:THR:HA	3:C:15:GLU:CB	2.41	0.51
4:D:135:VAL:HG22	4:D:136:ARG:N	2.24	0.51
12:L:121:ILE:HG12	12:L:141:GLU:HB2	1.91	0.51
24:X:71:ARG:CB	24:X:88:GLU:HG2	2.40	0.51
30:0:1583:U:C2'	30:0:1584:C:H5'	2.40	0.51
30:0:1947:G:N2	30:0:1966:U:C2	2.78	0.51
30:0:300:U:C4	30:0:301:C:H5	2.28	0.51
30:0:35:U:O2'	30:0:36:C:H5'	2.10	0.51
30:0:623:U:O2'	30:0:624:U:H5'	2.10	0.51
30:0:77:G:C2'	30:0:78:G:H5'	2.39	0.51
30:0:87:C:O2'	30:0:88:G:H5''	2.11	0.51
30:0:1059:G:C8	30:0:2491:G:H4'	2.46	0.51
30:0:1130:U:H5'	38:0:7572:HOH:O	2.11	0.51
28:2:49:GLU:OE1	30:0:120:A:H2	1.92	0.51
30:0:1304:U:H2'	30:0:1305:C:C6	2.44	0.51
30:0:1584:C:O2	30:0:1612:A:C2	2.64	0.51
30:0:1592:G:C5	30:0:1593:C:C4	2.99	0.51
30:0:188:C:O2	30:0:188:C:H2'	2.10	0.51
30:0:1982:C:H3'	30:0:1983:C:H6	1.75	0.51
30:0:2032:U:C2'	30:0:2033:G:H5''	2.41	0.51
29:3:24:LYS:HE3	29:3:90:PHE:CE1	2.46	0.51
29:3:60:LYS:HD2	29:3:61:PRO:HD2	1.92	0.51
1:A:86:ALA:HB3	1:A:94:LEU:HB3	1.92	0.51
2:B:215:VAL:HA	2:B:220:VAL:HG22	1.93	0.51
7:G:13:PRO:HB2	7:G:15:TRP:CD1	2.45	0.51
14:N:42:HIS:HA	14:N:75:THR:O	2.11	0.51
16:P:27:ARG:O	16:P:31:ILE:HG13	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Z:41:ARG:HB3	38:0:5660:HOH:O	2.11	0.51
30:0:939:A:C2	30:0:1027:G:N3	2.79	0.51
30:0:1160:G:H2'	38:0:5570:HOH:O	2.10	0.51
30:0:1168:C:H2'	30:0:1169:U:H5'	1.92	0.51
30:0:1132:A:H61	30:0:1229:C:H2'	1.72	0.51
3:C:83:ALA:HA	30:0:1361:C:H1'	1.92	0.51
30:0:1524:U:O5'	30:0:1524:U:H6	1.93	0.51
30:0:161:A:H2'	30:0:162:C:C6	2.46	0.51
30:0:170:U:C5	30:0:171:C:C6	2.99	0.51
30:0:1745:G:H22	30:0:2033:G:H5'	1.75	0.51
30:0:1819:G:H2'	30:0:1820:G:H4'	1.93	0.51
30:0:20:G:C2'	30:0:21:G:O5'	2.58	0.51
30:0:2375:A:H2'	30:0:2376:C:H6	1.75	0.51
30:0:2407:G:C2	30:0:2408:A:C4	2.99	0.51
30:0:2642:G:H4'	38:0:9613:HOH:O	2.09	0.51
2:B:48:MET:HB2	30:0:2719:A:OP1	2.10	0.51
30:0:422:G:C6	30:0:2446:G:C6	2.99	0.51
30:0:509:A:C6	30:0:511:A:N6	2.79	0.51
30:0:707:C:C2	30:0:708:A:C8	2.98	0.51
30:0:723:G:H2'	30:0:724:G:C8	2.45	0.51
2:B:41:PHE:CE1	2:B:79:MET:HG3	2.45	0.51
21:U:56:ARG:CD	30:0:2890:A:C8	2.89	0.51
30:0:1149:U:C5'	30:0:1151:G:H5'	2.41	0.51
30:0:1195:G:N2	30:0:1205:U:C2	2.78	0.51
30:0:1211:G:H2'	30:0:1212:C:C6	2.46	0.51
30:0:1701:A:H1'	30:0:1710:A:N7	2.26	0.51
30:0:18:C:H2'	30:0:19:U:H6	1.76	0.51
17:Q:11:ARG:HG3	30:0:2363:G:O2'	2.11	0.51
29:3:1:MET:HA	30:0:2320:U:C5'	2.41	0.51
29:3:6:ARG:HG2	29:3:21:GLU:HG2	1.91	0.51
29:3:60:LYS:CG	29:3:61:PRO:HD2	2.40	0.51
31:9:39:U:H3	31:9:42:C:H5''	1.76	0.51
31:9:88:G:C2	31:9:89:C:C5	2.99	0.51
1:A:118:PHE:HB3	1:A:140:LEU:HD22	1.92	0.51
16:P:7:LYS:HD2	16:P:21:VAL:HG13	1.93	0.51
30:0:1042:U:O2'	30:0:1043:C:H5'	2.10	0.51
30:0:68:U:C4	30:0:107:U:H4'	2.46	0.51
30:0:174:A:O4'	30:0:176:U:C6	2.63	0.51
30:0:2061:C:O2'	30:0:2062:A:H5'	2.11	0.51
30:0:2276:U:H2'	30:0:2277:U:C6	2.46	0.51
14:N:25:ARG:HG2	30:0:2416:G:O2'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2644:C:H5	38:0:7010:HOH:O	1.93	0.51
30:0:2842:G:H2'	30:0:2843:A:C5'	2.39	0.51
30:0:302:A:H2'	30:0:303:C:C5'	2.41	0.51
3:C:205:ARG:NH2	30:0:347:A:O2'	2.44	0.51
30:0:483:C:N4	30:0:506:G:O2'	2.44	0.51
30:0:642:G:N2	38:0:9079:HOH:O	2.42	0.51
30:0:960:G:N3	30:0:960:G:C2'	2.72	0.51
29:3:33:MET:CG	30:0:1922:A:H2'	2.41	0.51
31:9:12:C:H5'	31:9:70:U:O4'	2.09	0.51
2:B:329:TYR:CE2	21:U:15:PRO:HG2	2.45	0.51
23:W:131:PRO:O	23:W:136:GLY:N	2.41	0.51
30:0:1377:C:H1'	38:0:3734:HOH:O	2.11	0.51
30:0:1391:G:H2'	30:0:1392:A:H5'	1.92	0.51
30:0:1514:C:O2'	30:0:1515:A:H5'	2.10	0.51
30:0:2356:A:H2'	30:0:2357:G:O4'	2.10	0.51
30:0:2505:G:O2'	30:0:2506:A:H5'	2.10	0.51
20:T:82:THR:HG21	30:0:488:U:O2'	2.11	0.51
30:0:57:C:N3	30:0:89:G:N2	2.55	0.51
28:2:41:HIS:CD2	28:2:44:ARG:H	2.18	0.51
1:A:199:HIS:CE1	1:A:225:VAL:HG11	2.46	0.51
3:C:176:ALA:HB2	30:0:1343:C:C5	2.46	0.51
16:P:99:ARG:HE	30:0:1597:A:H5'	1.76	0.51
30:0:1835:U:H6	38:0:5521:HOH:O	1.93	0.51
30:0:1859:A:C5	30:0:1860:U:C5	2.98	0.51
30:0:1926:G:C4	30:0:1927:A:C8	2.99	0.51
30:0:2050:G:O2'	30:0:2051:G:H5'	2.11	0.51
30:0:2831:C:H2'	30:0:2832:C:O4'	2.11	0.51
30:0:2852:A:O4'	30:0:2853:U:H5	1.94	0.51
30:0:347:A:O2'	30:0:348:C:H5'	2.10	0.51
30:0:546:C:O5'	30:0:546:C:H6	1.94	0.51
30:0:604:G:H4'	30:0:605:C:O5'	2.09	0.51
30:0:727:G:H3'	30:0:728:C:C6	2.46	0.51
29:3:1:MET:HE3	30:0:2320:U:C5	2.46	0.51
38:D:189:HOH:O	31:9:58:G:H1'	2.11	0.51
4:D:17:ARG:CZ	4:D:137:PRO:HA	2.41	0.51
6:F:36:THR:HG23	6:F:97:ALA:HB2	1.93	0.51
7:G:16:LYS:NZ	7:G:63:ARG:HH12	2.07	0.51
8:H:53:ILE:HB	8:H:165:ARG:HB2	1.93	0.51
12:L:117:GLU:HA	38:L:8857:HOH:O	2.11	0.51
12:L:26:HIS:HB2	38:L:8811:HOH:O	2.09	0.51
14:N:37:ARG:CD	33:N:8807:CL:CL	2.90	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:92:LEU:HD23	18:R:145:LEU:HD21	1.93	0.51
30:0:1188:A:C8	30:0:1189:A:C2	2.99	0.50
30:0:1245:C:H3'	30:0:1245:C:C6	2.46	0.50
30:0:1666:C:C2	30:0:1667:A:C8	2.98	0.50
30:0:790:A:H1'	30:0:1710:A:H2'	1.93	0.50
30:0:1878:G:O2'	30:0:1879:U:P	2.69	0.50
30:0:2015:A:H2'	30:0:2016:U:H6	1.76	0.50
30:0:2038:A:O2'	30:0:2039:A:H5'	2.11	0.50
30:0:2622:A:H1'	38:0:4060:HOH:O	2.11	0.50
30:0:2842:G:C2'	30:0:2843:A:H5'	2.41	0.50
21:U:56:ARG:CD	30:0:2890:A:H1'	2.41	0.50
30:0:616:U:C4	30:0:617:C:C4	2.99	0.50
30:0:722:G:H2'	30:0:723:G:H5'	1.93	0.50
30:0:98:A:H2'	30:0:99:A:H5'	1.93	0.50
28:2:2:LYS:HG3	30:0:1486:A:C5	2.46	0.50
31:9:92:G:C6	31:9:93:A:N6	2.79	0.50
11:K:105:ARG:HH11	11:K:105:ARG:HG3	1.75	0.50
16:P:16:VAL:HG12	16:P:20:ARG:HB2	1.93	0.50
23:W:4:LEU:HD23	23:W:54:PHE:CB	2.41	0.50
38:L:8903:HOH:O	25:Y:147:ARG:HG3	2.10	0.50
26:Z:102:THR:HG23	26:Z:105:ARG:HD3	1.92	0.50
30:0:99:A:H2'	30:0:100:C:H5'	1.92	0.50
30:0:1573:A:N7	30:0:1574:C:C2	2.79	0.50
30:0:1908:G:H1'	30:0:1931:A:N6	2.25	0.50
30:0:2088:C:H2'	30:0:2089:A:H8	1.77	0.50
30:0:2642:G:C6	30:0:2643:G:C6	2.99	0.50
30:0:2859:C:N4	30:0:2898:G:H1	2.09	0.50
30:0:59:A:C5'	38:0:4297:HOH:O	2.59	0.50
30:0:812:A:H2'	30:0:813:C:C6	2.47	0.50
28:2:36:ASN:HD22	28:2:39:ARG:CG	2.24	0.50
29:3:60:LYS:CD	29:3:61:PRO:HD2	2.41	0.50
2:B:320:GLN:HE21	2:B:321:PRO:HD2	1.76	0.50
6:F:68:ASP:C	6:F:70:LYS:H	2.15	0.50
10:J:45:VAL:HG23	10:J:130:VAL:O	2.11	0.50
20:T:87:VAL:HB	20:T:88:PRO:HD2	1.93	0.50
21:U:22:VAL:HA	21:U:27:ALA:O	2.11	0.50
30:0:1131:G:C6	30:0:1230:A:C4	3.00	0.50
30:0:1550:A:C2	30:0:1636:G:C4	3.00	0.50
30:0:1572:A:H3'	38:0:4076:HOH:O	2.11	0.50
30:0:1543:G:N1	30:0:1641:A:OP2	2.26	0.50
30:0:1438:G:C4	30:0:1684:A:C2	3.00	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2105:C:H2'	30:0:2106:C:C6	2.47	0.50
30:0:2239:C:C2	30:0:2240:U:C5	3.00	0.50
30:0:2741:A:H2'	30:0:2742:G:O4'	2.10	0.50
30:0:2871:G:C6	30:0:2887:G:C6	2.99	0.50
30:0:323:C:O2'	30:0:324:G:H5'	2.12	0.50
30:0:632:A:C4	30:0:633:C:C5	2.99	0.50
30:0:711:G:C2	30:0:718:C:N3	2.78	0.50
1:A:125:ASN:CB	1:A:158:VAL:HG12	2.41	0.50
1:A:211:LYS:NZ	38:A:9041:HOH:O	2.39	0.50
1:A:40:GLY:O	1:A:79:GLU:HG3	2.10	0.50
2:B:288:GLY:HA2	30:0:2898:G:H4'	1.94	0.50
4:D:135:VAL:HG21	4:D:139:TYR:CG	2.45	0.50
12:L:142:LEU:HD11	12:L:146:GLY:HA3	1.93	0.50
13:M:68:ARG:HD3	13:M:68:ARG:O	2.11	0.50
30:0:1387:G:C2	30:0:1396:C:C2	3.00	0.50
30:0:1488:U:H3'	38:0:6122:HOH:O	2.10	0.50
30:0:1586:G:C5	30:0:1587:U:C5	2.99	0.50
30:0:2248:C:N3	30:0:2254:G:C2	2.80	0.50
30:0:2300:A:C2	30:0:2306:U:C5	3.00	0.50
30:0:2466:G:H5'	38:0:3625:HOH:O	2.10	0.50
30:0:2747:C:C3'	38:0:3844:HOH:O	2.59	0.50
30:0:324:G:C2	30:0:325:U:C6	3.00	0.50
30:0:962:C:C2'	30:0:963:C:H5'	2.42	0.50
27:1:4:GLY:O	27:1:8:GLN:HG2	2.11	0.50
31:9:114:G:H2'	31:9:115:C:C6	2.45	0.50
5:E:118:ILE:HG23	5:E:144:THR:HG21	1.94	0.50
8:H:49:GLN:HG3	8:H:140:TYR:CE2	2.47	0.50
12:L:27:ARG:HH21	12:L:30:ARG:HG2	1.76	0.50
24:X:43:VAL:HG22	24:X:76:ARG:HH12	1.77	0.50
24:X:70:ILE:O	24:X:70:ILE:HG23	2.12	0.50
25:Y:127:GLN:HA	38:Y:8915:HOH:O	2.11	0.50
30:0:1631:A:C6	30:0:1632:A:N1	2.80	0.50
30:0:1742:A:H61	30:0:2037:C:N4	2.08	0.50
30:0:1774:G:C2'	30:0:1775:A:C5'	2.90	0.50
30:0:1933:G:C2'	30:0:1934:A:H5'	2.41	0.50
30:0:2248:C:C2	30:0:2254:G:C2	3.00	0.50
30:0:2771:G:N3	30:0:2771:G:H2'	2.26	0.50
30:0:334:G:C4	30:0:335:U:C6	2.99	0.50
30:0:719:C:H2'	30:0:720:G:O5'	2.11	0.50
30:0:735:C:C2	30:0:736:A:H1'	2.47	0.50
30:0:784:A:H2'	30:0:785:U:O4'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:M:8832:HOH:O	29:3:46:ILE:HB	2.10	0.50
31:9:58:G:N7	31:9:59:C:C4	2.79	0.50
2:B:304:PRO:HD2	2:B:307:ARG:NE	2.27	0.50
2:B:305:ASP:O	2:B:306:LYS:HB2	2.11	0.50
9:I:114:TYR:CD1	9:I:114:TYR:N	2.78	0.50
10:J:104:TYR:HA	38:J:2238:HOH:O	2.12	0.50
10:J:47:THR:HB	38:0:4793:HOH:O	2.11	0.50
20:T:48:VAL:HG23	20:T:97:ARG:C	2.31	0.50
11:K:91:GLU:OE2	21:U:24:LYS:HB2	2.11	0.50
23:W:52:VAL:HG22	23:W:53:ALA:N	2.27	0.50
30:0:1183:C:N3	30:0:1184:C:N4	2.59	0.50
30:0:1323:G:C2	30:0:1324:G:N7	2.80	0.50
30:0:1762:C:N3	30:0:1783:A:C2	2.79	0.50
30:0:2432:C:O5'	30:0:2432:C:H6	1.94	0.50
30:0:2489:G:H1'	38:0:7179:HOH:O	2.11	0.50
30:0:271:C:C2	30:0:273:G:O4'	2.65	0.50
30:0:66:G:C2	30:0:109:U:C4	2.99	0.50
29:3:55:VAL:HG13	38:3:9004:HOH:O	2.12	0.50
31:9:13:A:O4'	31:9:114:G:C8	2.65	0.50
21:U:56:ARG:HG3	21:U:56:ARG:NH1	2.27	0.50
26:Z:61:HIS:HB2	26:Z:71:VAL:HB	1.92	0.50
30:0:1008:C:O2'	30:0:1009:U:H5'	2.12	0.50
30:0:1096:U:C2	30:0:1261:A:C2	3.00	0.50
25:Y:212:ARG:HB2	30:0:1315:G:C4	2.46	0.50
30:0:1544:U:H2'	30:0:1545:C:C6	2.47	0.50
30:0:1948:G:C2	30:0:1949:G:C4	3.00	0.50
30:0:2064:U:H2'	30:0:2065:C:C6	2.47	0.50
30:0:2471:G:H2'	30:0:2472:C:H6	1.75	0.50
30:0:387:G:C2'	30:0:388:G:H5'	2.41	0.50
30:0:415:A:C2	30:0:426:G:C2	2.99	0.50
30:0:45:A:N6	30:0:147:G:C4	2.80	0.50
30:0:790:A:C2'	30:0:791:A:H5'	2.41	0.50
31:9:114:G:C5	31:9:115:C:C5	2.99	0.50
31:9:117:G:H2'	31:9:118:C:H6	1.76	0.50
5:E:69:ILE:HA	5:E:72:MET:CE	2.42	0.50
7:G:19:GLU:O	7:G:23:ILE:HG13	2.12	0.50
12:L:27:ARG:NH2	12:L:30:ARG:HG2	2.27	0.50
21:U:39:ASN:ND2	21:U:51:TRP:HZ2	2.09	0.50
30:0:1067:A:H3'	38:0:4262:HOH:O	2.11	0.50
25:Y:169:ARG:HD3	30:0:1328:A:C8	2.46	0.50
13:M:163:LEU:HD21	30:0:188:C:H5''	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:233:THR:HB	30:0:1942:A:H5''	1.93	0.50
30:0:269:G:C2	30:0:270:U:O4	2.65	0.50
30:0:2721:U:O2'	30:0:2722:G:H5'	2.11	0.50
30:0:272:A:C5'	30:0:273:G:OP2	2.59	0.50
30:0:2878:U:H5''	38:0:4138:HOH:O	2.12	0.50
30:0:287:C:N3	30:0:365:G:N2	2.52	0.50
30:0:317:A:H4'	38:0:3752:HOH:O	2.10	0.50
30:0:669:G:C4	30:0:670:G:C8	2.99	0.50
30:0:937:C:C2'	30:0:938:G:H5'	2.42	0.50
29:3:51:LYS:HD2	30:0:219:G:H4'	1.92	0.50
2:B:280:VAL:HA	38:B:9031:HOH:O	2.11	0.50
4:D:154:LYS:CD	4:D:154:LYS:H	2.21	0.50
12:L:37:LYS:NZ	38:L:8812:HOH:O	2.44	0.50
21:U:7:ASP:HB2	21:U:30:HIS:H	1.77	0.50
23:W:119:HIS:HD2	23:W:120:PRO:O	1.95	0.50
23:W:24:LEU:O	23:W:26:ILE:HG22	2.11	0.50
23:W:38:THR:HG22	23:W:39:ASP:N	2.22	0.50
25:Y:136:LYS:HB2	38:0:9314:HOH:O	2.12	0.50
25:Y:186:ARG:HD2	38:0:4161:HOH:O	2.11	0.50
25:Y:204:ARG:HA	25:Y:230:ASN:OD1	2.11	0.50
30:0:1023:C:H2'	30:0:1024:G:H8	1.77	0.50
30:0:1102:C:H1'	30:0:1109:U:C4	2.47	0.50
30:0:1337:G:C6	30:0:1338:U:C4	2.99	0.50
30:0:1386:G:O2'	30:0:1387:G:H5'	2.12	0.50
30:0:1481:G:O2'	30:0:1482:A:H5'	2.12	0.50
30:0:2277:U:H5	38:0:4871:HOH:O	1.95	0.50
30:0:256:C:H2'	30:0:257:G:C5'	2.41	0.50
30:0:2768:A:C3'	30:0:2768:A:N3	2.72	0.50
30:0:2774:U:O2'	30:0:2775:A:H5'	2.12	0.50
30:0:2851:G:C5	30:0:2902:A:C2	3.00	0.50
30:0:2855:G:C2	30:0:2904:U:C2	2.99	0.50
30:0:347:A:C2'	30:0:348:C:H5'	2.41	0.50
30:0:544:G:H2'	30:0:545:G:C5'	2.42	0.50
30:0:559:U:O2'	30:0:560:U:H5'	2.12	0.50
30:0:685:C:O2'	30:0:748:C:H5''	2.11	0.50
30:0:77:G:H2'	30:0:78:G:C5'	2.42	0.50
30:0:820:G:H5'	30:0:821:U:H5'	1.93	0.50
2:B:10:SER:O	2:B:16:ARG:NH1	2.44	0.50
2:B:236:ILE:HG23	38:B:9080:HOH:O	2.11	0.50
13:M:149:TRP:HZ3	13:M:155:GLN:OE1	1.95	0.50
18:R:60:LYS:HG2	18:R:75:TRP:CD1	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Z:98:PRO:HA	26:Z:101:LYS:HD2	1.93	0.50
30:0:1373:G:C6	30:0:1374:C:C4	2.99	0.49
30:0:1424:A:C2	30:0:1441:G:N1	2.80	0.49
30:0:1718:G:O2'	30:0:1719:G:H5'	2.11	0.49
30:0:2511:A:H2'	30:0:2512:U:C6	2.47	0.49
30:0:2517:A:H2'	30:0:2518:C:O4'	2.12	0.49
30:0:2541:U:H2'	30:0:2542:C:H6	1.77	0.49
30:0:2869:G:H2'	30:0:2870:C:C6	2.47	0.49
21:U:56:ARG:HB2	30:0:2890:A:C8	2.45	0.49
30:0:370:G:O2'	30:0:371:U:H5'	2.12	0.49
30:0:415:A:N3	30:0:426:G:C2	2.80	0.49
30:0:481:U:C4	30:0:487:G:O6	2.65	0.49
30:0:65:C:H2'	30:0:66:G:C8	2.46	0.49
30:0:669:G:C2'	30:0:670:G:H5'	2.42	0.49
29:3:22:VAL:HG12	29:3:67:LEU:HD22	1.94	0.49
2:B:36:PRO:HA	2:B:167:GLY:O	2.12	0.49
14:N:35:VAL:O	14:N:45:ALA:HA	2.11	0.49
15:O:105:ASN:HD21	15:O:109:SER:H	1.59	0.49
20:T:23:VAL:O	20:T:42:VAL:HG23	2.12	0.49
30:0:1038:G:C2'	30:0:1039:G:H5'	2.42	0.49
30:0:1170:U:H2'	30:0:1172:G:OP2	2.13	0.49
30:0:1119:G:N2	30:0:1246:A:H2	2.03	0.49
12:L:14:GLY:O	30:0:1295:G:H5''	2.12	0.49
30:0:1592:G:C2	30:0:1593:C:C2	3.00	0.49
30:0:1678:A:C4	30:0:1679:C:C6	3.00	0.49
30:0:1681:G:H4'	30:0:1682:A:N3	2.26	0.49
30:0:1947:G:C8	30:0:1947:G:H3'	2.47	0.49
30:0:1992:U:O2	30:0:1994:A:H8	1.95	0.49
30:0:202:U:C2'	30:0:203:G:H5'	2.42	0.49
30:0:2503:A:H2'	30:0:2511:A:C6	2.46	0.49
30:0:194:A:N7	30:0:427:C:H5'	2.27	0.49
30:0:561:G:N3	30:0:562:A:C8	2.81	0.49
30:0:707:C:N3	30:0:708:A:C8	2.80	0.49
31:9:61:C:H2'	31:9:62:A:C8	2.46	0.49
31:9:9:C:OP2	31:9:10:C:C5	2.65	0.49
19:S:77:VAL:O	19:S:80:ARG:HG2	2.11	0.49
21:U:7:ASP:HB2	21:U:30:HIS:N	2.27	0.49
23:W:118:LEU:HD12	23:W:153:MET:HE3	1.93	0.49
23:W:6:GLN:HB2	23:W:26:ILE:HD11	1.94	0.49
30:0:1013:A:C2	30:0:1014:A:H1'	2.46	0.49
16:P:3:LEU:HD12	30:0:1397:C:H5'	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1589:G:C5'	38:0:6772:HOH:O	2.60	0.49
30:0:1603:A:C5'	30:0:1605:G:H5'	2.41	0.49
30:0:1611:G:H2'	30:0:1612:A:H8	1.77	0.49
30:0:1617:C:C4	30:0:1643:C:H4'	2.46	0.49
11:K:66:ARG:NH2	30:0:1994:A:OP1	2.40	0.49
30:0:2035:C:O2'	30:0:2036:C:H5'	2.12	0.49
30:0:2444:U:C4	30:0:2445:U:C5	3.00	0.49
30:0:259:G:N2	30:0:260:C:H1'	2.27	0.49
30:0:2845:G:C6	30:0:2846:C:C4	3.00	0.49
30:0:295:C:O2'	30:0:296:G:H5'	2.12	0.49
30:0:566:A:H2'	30:0:567:U:O4'	2.12	0.49
30:0:802:G:H2'	30:0:803:C:H6	1.76	0.49
29:3:33:MET:HG2	30:0:1922:A:O2'	2.11	0.49
29:3:87:ARG:HG2	29:3:88:LEU:H	1.76	0.49
31:9:19:G:C2	31:9:20:G:C8	3.00	0.49
1:A:192:VAL:O	1:A:207:GLN:HG2	2.12	0.49
2:B:44:TYR:OH	2:B:148:PRO:HG3	2.12	0.49
2:B:55:ASN:HB3	2:B:63:GLU:HA	1.93	0.49
8:H:91:ARG:O	30:0:1003:U:H4'	2.11	0.49
11:K:74:VAL:HG21	11:K:96:VAL:HG23	1.94	0.49
20:T:41:ARG:HG2	20:T:41:ARG:HH11	1.77	0.49
24:X:18:ARG:HG2	24:X:25:ARG:NH2	2.27	0.49
30:0:1128:U:H1'	38:0:6010:HOH:O	2.13	0.49
30:0:1166:A:C6	30:0:1181:A:C2	3.00	0.49
30:0:1420:C:H2'	30:0:1420:C:O2	2.10	0.49
30:0:1574:C:C6	30:0:1575:C:H5	2.30	0.49
30:0:1594:C:O2'	30:0:1595:G:H5'	2.12	0.49
30:0:177:A:C8	30:0:178:U:C5	3.01	0.49
30:0:221:G:H2'	30:0:222:A:C8	2.48	0.49
30:0:2295:G:N3	30:0:2361:A:H2	2.10	0.49
30:0:242:A:N6	30:0:269:G:H1'	2.27	0.49
30:0:243:A:N6	30:0:269:G:H1'	2.27	0.49
30:0:2842:G:H2'	30:0:2843:A:H5'	1.95	0.49
30:0:295:C:C2'	30:0:296:G:H5'	2.43	0.49
30:0:727:G:N2	30:0:728:C:H1'	2.27	0.49
30:0:923:A:H2'	38:0:5612:HOH:O	2.11	0.49
2:B:212:GLN:HB2	2:B:257:THR:CG2	2.41	0.49
2:B:256:GLN:HB2	30:0:2656:G:O2'	2.13	0.49
2:B:43:GLY:HA3	2:B:76:THR:HG22	1.93	0.49
8:H:76:LEU:HD21	8:H:149:VAL:HA	1.93	0.49
8:H:39:LYS:HD2	30:0:968:G:O2'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:29:LEU:HB3	11:K:55:VAL:HG21	1.94	0.49
14:N:104:ILE:HD12	14:N:107:ASN:O	2.11	0.49
14:N:171:HIS:CE1	38:N:8855:HOH:O	2.65	0.49
23:W:88:THR:C	23:W:90:TYR:H	2.15	0.49
30:0:1024:G:H2'	30:0:1025:C:H6	1.78	0.49
30:0:116:G:H1'	30:0:129:A:C2	2.47	0.49
30:0:1180:U:O2'	30:0:1181:A:H5'	2.13	0.49
30:0:1194:A:O2'	30:0:1195:G:H5'	2.12	0.49
30:0:1427:A:H61	30:0:1440:U:H1'	1.76	0.49
30:0:1427:A:O2'	30:0:1428:C:H5'	2.13	0.49
30:0:1540:G:C4	30:0:1541:G:C8	3.01	0.49
30:0:1593:C:H2'	30:0:1594:C:H6	1.75	0.49
30:0:1734:C:H6	30:0:1734:C:O5'	1.95	0.49
30:0:2135:A:O4'	30:0:2243:C:N4	2.46	0.49
30:0:2533:C:H2'	30:0:2534:U:O5'	2.13	0.49
30:0:2731:G:H2'	30:0:2732:U:O4'	2.13	0.49
30:0:581:G:O2'	30:0:582:U:H5'	2.13	0.49
30:0:614:U:H2'	30:0:615:G:C8	2.46	0.49
30:0:660:A:C8	30:0:746:A:C6	3.01	0.49
30:0:746:A:H4'	30:0:747:G:OP1	2.11	0.49
31:9:29:C:C5	31:9:30:C:C5	3.00	0.49
31:9:57:A:C2'	31:9:58:G:H5'	2.41	0.49
2:B:41:PHE:CZ	2:B:79:MET:HG3	2.47	0.49
2:B:41:PHE:HA	2:B:79:MET:HE1	1.93	0.49
8:H:12:ILE:HG23	8:H:129:ARG:CZ	2.43	0.49
12:L:21:ARG:HA	12:L:26:HIS:HD2	1.76	0.49
13:M:111:ASN:HB2	38:M:8854:HOH:O	2.11	0.49
30:0:1346:U:C2	30:0:1347:U:C6	3.01	0.49
30:0:1859:A:H8	30:0:1859:A:O5'	1.95	0.49
30:0:2336:G:HO2'	30:0:2337:G:H5'	1.77	0.49
29:3:17:HIS:HB2	30:0:2409:C:H4'	1.94	0.49
30:0:2791:U:C4	30:0:2794:G:O6	2.65	0.49
30:0:2794:G:C6	30:0:2795:C:C5	3.01	0.49
30:0:2807:U:O2'	30:0:2808:U:H5'	2.12	0.49
30:0:375:G:N1	30:0:411:A:C2	2.81	0.49
30:0:626:U:O4	30:0:627:G:C6	2.66	0.49
30:0:735:C:C4	30:0:736:A:C4	3.00	0.49
31:9:30:C:O2	31:9:51:A:C2	2.65	0.49
14:N:148:ALA:C	14:N:150:TYR:H	2.16	0.49
18:R:40:ALA:O	18:R:44:VAL:HG23	2.13	0.49
20:T:9:LYS:HE3	20:T:13:ARG:CZ	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1164:U:O2	30:0:1166:A:H4'	2.12	0.49
30:0:1252:A:C1'	38:0:5158:HOH:O	2.61	0.49
30:0:1315:G:H4'	30:0:1316:G:OP2	2.13	0.49
30:0:1523:G:C4	30:0:1524:U:C4	3.01	0.49
30:0:1942:A:HO2'	30:0:1943:C:H5'	1.77	0.49
30:0:377:C:H6	30:0:377:C:O5'	1.96	0.49
30:0:45:A:C2	30:0:113:A:C6	3.01	0.49
30:0:597:A:H2'	30:0:598:C:H6	1.78	0.49
30:0:863:G:C6	30:0:864:U:C4	3.01	0.49
30:0:883:U:C6	30:0:888:U:H5'	2.47	0.49
2:B:13:PHE:O	2:B:16:ARG:HD2	2.12	0.49
10:J:107:ASN:ND2	10:J:109:TYR:HB2	2.27	0.49
13:M:77:HIS:CB	13:M:81:ARG:HH21	2.18	0.49
13:M:92:THR:HB	30:0:401:C:O2'	2.12	0.49
17:Q:3:SER:HB3	38:0:6444:HOH:O	2.12	0.49
30:0:1096:U:O2'	30:0:1097:A:H5'	2.12	0.49
30:0:1165:G:H21	30:0:1173:A:H5''	1.75	0.49
30:0:1183:C:N3	30:0:1184:C:C5	2.81	0.49
30:0:1623:C:C5	30:0:1624:A:C4	3.00	0.49
30:0:238:C:H4'	30:0:287:C:OP1	2.13	0.49
30:0:2416:G:O2'	30:0:2417:C:H5'	2.12	0.49
30:0:2728:C:H5	38:0:6481:HOH:O	1.94	0.49
30:0:2829:G:O2'	30:0:2830:U:H5'	2.13	0.49
30:0:287:C:H3'	30:0:287:C:C6	2.48	0.49
30:0:514:G:H2'	30:0:514:G:OP1	2.13	0.49
30:0:525:G:H2'	30:0:526:U:O4'	2.12	0.49
30:0:529:G:C6	30:0:530:C:C4	3.01	0.49
30:0:640:G:C4	30:0:641:G:C8	3.00	0.49
30:0:917:U:H5	38:0:4490:HOH:O	1.95	0.49
31:9:89:C:C2'	31:9:90:G:H5'	2.43	0.49
2:B:74:ILE:HD13	2:B:309:VAL:HG21	1.94	0.49
2:B:5:ARG:NH1	2:B:8:LYS:HE2	2.27	0.49
12:L:21:ARG:HG2	38:L:8827:HOH:O	2.12	0.49
13:M:36:ALA:O	13:M:65:VAL:HA	2.12	0.49
18:R:117:HIS:HD2	30:0:20:G:H21	1.59	0.49
25:Y:189:ASN:ND2	25:Y:191:ASP:H	2.09	0.49
26:Z:70:ARG:HH11	26:Z:83:TYR:HB2	1.78	0.49
30:0:1217:G:C2	30:0:1218:U:C2	3.01	0.49
3:C:190:ALA:HB3	30:0:1309:U:OP1	2.13	0.49
30:0:1477:C:H2'	30:0:1478:U:O4'	2.12	0.49
30:0:1575:C:C2'	30:0:1576:G:H5'	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:181:G:H1'	38:0:3246:HOH:O	2.13	0.49
30:0:2028:U:O2'	30:0:2029:C:H5'	2.12	0.49
30:0:2327:A:H2'	30:0:2328:U:H6	1.78	0.49
30:0:2607:U:H4'	38:0:9444:HOH:O	2.13	0.49
30:0:29:C:C2'	30:0:30:U:H5'	2.42	0.49
30:0:736:A:H3'	38:0:7109:HOH:O	2.12	0.49
1:A:109:GLU:HG2	1:A:116:GLY:H	1.78	0.49
11:K:27:ARG:NH1	11:K:27:ARG:HG2	2.28	0.49
12:L:55:GLN:HA	12:L:58:GLN:HG3	1.95	0.49
16:P:103:THR:HG23	16:P:106:ARG:HH12	1.78	0.49
20:T:21:LYS:HA	20:T:24:ARG:HG3	1.95	0.49
25:Y:189:ASN:HA	25:Y:217:ILE:HD11	1.95	0.49
30:0:1060:C:H5''	38:0:9805:HOH:O	2.13	0.49
30:0:1146:C:O2'	30:0:1147:C:H5'	2.13	0.49
30:0:1346:U:C2	30:0:1347:U:C5	3.00	0.49
30:0:152:A:C2	30:0:153:C:C2	3.01	0.49
30:0:1730:G:H2'	30:0:1730:G:N3	2.28	0.49
30:0:1758:U:H2'	30:0:1759:A:O4'	2.13	0.49
30:0:180:G:C2'	30:0:181:G:H5'	2.43	0.49
30:0:1851:G:O2'	30:0:1852:A:H5'	2.13	0.49
30:0:1477:C:C5'	30:0:1868:G:H5''	2.43	0.49
6:F:54:VAL:HA	30:0:263:U:O4	2.12	0.49
30:0:2726:U:O4'	30:0:2749:U:C2	2.66	0.49
30:0:39:G:N2	30:0:444:C:C2	2.81	0.49
31:9:29:C:O5'	31:9:29:C:H6	1.94	0.49
1:A:179:MET:HG2	1:A:186:TRP:CB	2.41	0.49
2:B:223:ARG:NE	2:B:232:TRP:HB3	2.28	0.49
3:C:107:ARG:O	3:C:111:VAL:HG23	2.12	0.49
3:C:76:ARG:NH2	30:0:1363:G:OP1	2.46	0.49
5:E:68:HIS:O	5:E:72:MET:HG3	2.13	0.49
8:H:87:LYS:HB2	8:H:87:LYS:NZ	2.28	0.49
10:J:45:VAL:HG21	10:J:129:PHE:CD1	2.47	0.49
18:R:4:TYR:CE1	18:R:15:LYS:HD3	2.48	0.49
30:0:1394:C:H5'	38:0:4258:HOH:O	2.12	0.48
30:0:1744:G:H2'	30:0:1745:G:H5'	1.95	0.48
30:0:2710:U:O5'	30:0:2710:U:H6	1.95	0.48
30:0:2713:G:O2'	30:0:2714:U:H5'	2.13	0.48
30:0:352:A:C2	30:0:353:G:C4	3.01	0.48
30:0:423:A:H2'	30:0:424:C:O4'	2.13	0.48
30:0:699:C:O2'	30:0:744:G:H1'	2.13	0.48
2:B:262:ARG:HG3	30:0:2716:G:H5'	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:52:THR:HB	4:D:70:GLY:CA	2.44	0.48
10:J:56:LYS:HD2	33:J:8816:CL:CL	2.50	0.48
11:K:28:GLU:HB3	11:K:59:LYS:H	1.78	0.48
13:M:47:ASP:CG	13:M:48:LYS:H	2.16	0.48
18:R:69:LYS:HB2	18:R:72:VAL:HG23	1.95	0.48
20:T:32:ARG:NH1	20:T:38:ARG:NH1	2.61	0.48
21:U:20:MET:HG3	21:U:28:THR:HG23	1.95	0.48
30:0:120:A:C2'	30:0:120:A:N3	2.75	0.48
30:0:1245:C:C3'	30:0:1245:C:C6	2.96	0.48
30:0:1458:A:H4'	38:0:9663:HOH:O	2.14	0.48
30:0:1610:G:C2	30:0:1611:G:C4	3.00	0.48
30:0:1656:A:H2'	30:0:1657:A:C8	2.47	0.48
30:0:1894:C:C5	30:0:1940:C:C4	3.01	0.48
30:0:2023:G:H1'	38:0:9149:HOH:O	2.13	0.48
30:0:2378:U:H4'	38:0:4535:HOH:O	2.14	0.48
30:0:255:A:C4	30:0:256:C:C5	3.01	0.48
30:0:421:C:H2'	30:0:422:G:C8	2.49	0.48
30:0:693:A:H2'	30:0:694:A:C8	2.48	0.48
30:0:694:A:H2'	30:0:695:C:C5'	2.41	0.48
30:0:853:C:H2'	30:0:854:G:O4'	2.12	0.48
30:0:916:A:C2	30:0:928:G:C4	3.02	0.48
29:3:69:TYR:CE1	29:3:80:ARG:HB2	2.48	0.48
31:9:59:C:O5'	31:9:59:C:C6	2.67	0.48
1:A:132:ASP:C	1:A:134:ASN:H	2.15	0.48
4:D:58:VAL:HG12	4:D:60:GLU:HG2	1.96	0.48
15:O:112:ARG:HA	38:0:3167:HOH:O	2.13	0.48
19:S:28:VAL:HG11	19:S:37:VAL:HG13	1.94	0.48
23:W:128:VAL:O	23:W:138:LEU:HD11	2.13	0.48
26:Z:63:CYS:HA	26:Z:71:VAL:HG23	1.95	0.48
30:0:1187:U:HO2'	30:0:1188:A:H8	1.59	0.48
30:0:1190:G:C5	38:0:7580:HOH:O	2.67	0.48
30:0:12:U:H2'	30:0:13:G:H5'	1.93	0.48
30:0:1456:C:H2'	30:0:1457:U:C6	2.48	0.48
30:0:1623:C:N4	30:0:1624:A:C6	2.81	0.48
30:0:1626:A:H2'	30:0:1627:G:O5'	2.13	0.48
30:0:1739:G:O2'	30:0:1740:U:H5'	2.14	0.48
30:0:1794:G:N2	30:0:1796:A:H3'	2.28	0.48
30:0:1973:A:H5'	30:0:1973:A:H8	1.79	0.48
30:0:2055:A:H4'	38:0:7348:HOH:O	2.13	0.48
30:0:2445:U:H2'	30:0:2446:G:C8	2.49	0.48
30:0:2619:UR3:H2'	30:0:2620:U:H2'	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:668:C:O2'	30:0:669:G:H5'	2.12	0.48
30:0:696:C:O2'	30:0:697:G:H5'	2.13	0.48
26:Z:34:SER:CA	30:0:797:A:H4'	2.40	0.48
29:3:2:GLN:NE2	29:3:89:GLU:HB2	2.28	0.48
31:9:24:U:H5'	31:9:25:G:H5'	1.94	0.48
3:C:56:THR:HG21	3:C:78:ARG:HB3	1.96	0.48
5:E:32:ARG:O	5:E:33:LEU:HD23	2.13	0.48
7:G:20:VAL:HA	7:G:23:ILE:HD12	1.93	0.48
15:O:51:TYR:CD1	30:0:721:A:C5'	2.96	0.48
19:S:40:ALA:O	19:S:44:GLN:HB2	2.13	0.48
23:W:5:VAL:HG11	23:W:153:MET:CE	2.43	0.48
23:W:4:LEU:HD11	23:W:45:VAL:HG12	1.94	0.48
23:W:81:ASP:OD1	23:W:92:ASP:HB2	2.14	0.48
24:X:72:VAL:HG22	24:X:85:VAL:HG12	1.95	0.48
26:Z:81:CYS:SG	26:Z:83:TYR:HB3	2.52	0.48
1:A:76:VAL:HG21	26:Z:87:LYS:HB3	1.95	0.48
23:W:41:TYR:OH	30:0:1024:G:H4'	2.12	0.48
30:0:1432:U:H2'	30:0:1432:U:O2	2.13	0.48
19:S:9:HIS:HE1	30:0:1445:G:OP1	1.96	0.48
30:0:1468:G:O2'	30:0:1865:A:H1'	2.13	0.48
30:0:1993:C:C4	30:0:1994:A:C6	3.02	0.48
30:0:2017:U:O2'	30:0:2018:A:C8	2.58	0.48
30:0:2374:G:H2'	30:0:2375:A:C8	2.48	0.48
30:0:2471:G:N3	30:0:2472:C:C6	2.82	0.48
30:0:2596:A:H2	33:0:8812:CL:CL	2.33	0.48
30:0:2672:C:O2	30:0:2672:C:C2'	2.52	0.48
30:0:2794:G:N3	38:0:5810:HOH:O	2.45	0.48
30:0:59:A:H5'	38:0:4297:HOH:O	2.11	0.48
30:0:933:C:H5''	38:0:3370:HOH:O	2.13	0.48
2:B:190:MET:HG3	2:B:194:PHE:HD1	1.79	0.48
2:B:217:ARG:CG	2:B:257:THR:HG22	2.41	0.48
14:N:141:ARG:NH2	31:9:36:C:C2	2.81	0.48
30:0:107:U:C5	30:0:108:U:C4	3.02	0.48
30:0:139:C:O4'	30:0:140:G:C2	2.66	0.48
30:0:1400:C:O2'	30:0:1401:G:H5'	2.13	0.48
30:0:1545:C:C2	30:0:1641:A:N7	2.81	0.48
30:0:177:A:N7	30:0:178:U:C4	2.82	0.48
30:0:2025:G:H1'	38:0:6278:HOH:O	2.13	0.48
30:0:2047:C:H5'	38:0:9817:HOH:O	2.12	0.48
30:0:2240:U:O2'	30:0:2241:C:H5'	2.14	0.48
30:0:2253:G:O2'	30:0:2254:G:H5'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2255:A:C2	30:0:2256:G:N9	2.81	0.48
30:0:2766:A:O2'	30:0:2767:C:H5'	2.13	0.48
30:0:2793:A:H2'	30:0:2794:G:H5'	1.96	0.48
30:0:2818:A:H2'	30:0:2819:C:C6	2.48	0.48
30:0:54:G:N2	30:0:55:U:H1'	2.29	0.48
38:C:8616:HOH:O	30:0:676:C:H4'	2.13	0.48
12:L:113:GLN:HE22	30:0:700:A:H3'	1.78	0.48
27:1:11:LYS:HG2	30:0:777:U:O2'	2.14	0.48
1:A:55:VAL:HG23	1:A:68:ILE:O	2.14	0.48
16:P:114:LEU:HD22	16:P:118:GLN:HB3	1.96	0.48
18:R:63:ASN:ND2	18:R:75:TRP:HZ2	2.11	0.48
20:T:25:ALA:HB2	20:T:93:THR:HB	1.96	0.48
25:Y:200:THR:HG22	25:Y:201:GLU:HG3	1.94	0.48
30:0:1082:A:C2'	30:0:1083:C:OP1	2.62	0.48
30:0:1114:A:O2'	30:0:1115:U:H5'	2.13	0.48
30:0:1160:G:O2'	30:0:1190:G:C8	2.65	0.48
30:0:1149:U:C5	30:0:1215:A:C5	3.02	0.48
30:0:1872:C:H5'	38:0:9434:HOH:O	2.12	0.48
30:0:1842:A:C4	30:0:1979:G:C6	3.00	0.48
30:0:222:A:O5'	30:0:222:A:H8	1.97	0.48
30:0:2761:A:C4	30:0:2763:G:C8	3.02	0.48
30:0:2831:C:C2'	30:0:2832:C:H5'	2.43	0.48
30:0:395:A:H3'	30:0:397:A:N7	2.29	0.48
30:0:65:C:H2'	30:0:66:G:H8	1.78	0.48
30:0:791:A:H4'	30:0:1709:G:H4'	1.96	0.48
31:9:49:G:H2'	31:9:50:G:O4'	2.12	0.48
1:A:144:GLU:HA	38:A:8955:HOH:O	2.14	0.48
4:D:97:GLN:O	4:D:97:GLN:HG2	2.14	0.48
13:M:50:ARG:HB2	38:M:8925:HOH:O	2.13	0.48
16:P:89:ASN:HA	38:P:1926:HOH:O	2.14	0.48
21:U:39:ASN:HD21	21:U:51:TRP:HZ2	1.62	0.48
24:X:47:ALA:HB1	24:X:82:GLU:HB2	1.96	0.48
7:G:12:ILE:HG21	30:0:1150:A:C8	2.49	0.48
30:0:1170:U:C1'	30:0:1172:G:N7	2.67	0.48
30:0:1246:A:C5	30:0:1248:A:C5	3.01	0.48
30:0:1309:U:C4	30:0:1310:U:C4	3.01	0.48
30:0:1332:C:C2	30:0:1333:U:C6	3.01	0.48
30:0:1504:A:C5'	38:0:4378:HOH:O	2.60	0.48
30:0:1739:G:C4	30:0:2041:G:N2	2.82	0.48
30:0:1783:A:C5	30:0:1784:U:C4	3.02	0.48
30:0:1933:G:N2	30:0:1934:A:C1'	2.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1857:A:N1	30:0:2247:C:O4'	2.47	0.48
30:0:2419:U:H5''	30:0:2420:G:H5'	1.96	0.48
30:0:2509:A:H2'	30:0:2510:C:O4'	2.14	0.48
30:0:2852:A:C5	30:0:2902:A:C5	3.02	0.48
30:0:64:G:C4	30:0:70:A:C8	3.02	0.48
30:0:816:G:C6	30:0:817:G:N1	2.82	0.48
1:A:135:VAL:HG11	1:A:147:ARG:HH21	1.78	0.48
11:K:125:ALA:C	11:K:127:ALA:H	2.17	0.48
18:R:47:LEU:HB2	18:R:89:LEU:HD21	1.95	0.48
20:T:112:LEU:HG	20:T:119:ALA:HB3	1.95	0.48
30:0:1174:A:H5'	30:0:1176:C:OP2	2.13	0.48
30:0:1179:C:O5'	30:0:1179:C:H6	1.96	0.48
30:0:1305:C:H1'	38:0:6838:HOH:O	2.13	0.48
30:0:1310:U:C2'	30:0:1311:G:O5'	2.61	0.48
30:0:1668:U:H2'	30:0:1669:G:C8	2.49	0.48
30:0:1980:U:O2'	30:0:1981:A:H5'	2.14	0.48
30:0:202:U:H2'	30:0:203:G:H5'	1.96	0.48
30:0:2113:G:N2	30:0:2473:U:C2	2.82	0.48
30:0:261:A:H8	30:0:261:A:O5'	1.96	0.48
30:0:2686:C:O2	30:0:2709:G:C2	2.66	0.48
30:0:2681:A:N6	30:0:2714:U:H4'	2.29	0.48
30:0:2722:G:N2	30:0:2760:C:O2	2.45	0.48
30:0:2866:U:C2	30:0:2891:A:C8	3.01	0.48
30:0:297:U:H6	30:0:297:U:O5'	1.96	0.48
30:0:310:U:N3	30:0:322:G:C2	2.82	0.48
30:0:333:G:O2'	30:0:334:G:H5'	2.13	0.48
30:0:558:C:H2'	30:0:559:U:H5'	1.94	0.48
30:0:652:G:C5	30:0:754:G:C6	3.02	0.48
30:0:827:A:H5'	38:0:4093:HOH:O	2.14	0.48
31:9:114:G:C6	31:9:115:C:C4	3.01	0.48
31:9:56:A:C3'	31:9:57:A:H5''	2.44	0.48
31:9:77:A:C1'	31:9:79:U:C6	2.96	0.48
1:A:125:ASN:HB3	1:A:158:VAL:HG12	1.96	0.48
1:A:94:LEU:HD12	1:A:98:GLU:CB	2.44	0.48
3:C:102:LEU:HA	38:C:8514:HOH:O	2.14	0.48
3:C:16:VAL:HG12	3:C:17:ASP:N	2.28	0.48
3:C:236:THR:HG22	3:C:239:ALA:N	2.28	0.48
11:K:113:ILE:HD12	11:K:128:ALA:HB2	1.95	0.48
13:M:102:GLU:OE1	13:M:164:THR:HG21	2.14	0.48
17:Q:39:VAL:O	17:Q:60:THR:HA	2.12	0.48
22:V:13:PRO:HA	38:V:874:HOH:O	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:W:56:GLU:O	23:W:143:THR:HG23	2.13	0.48
26:Z:45:VAL:HG13	26:Z:49:ARG:NE	2.29	0.48
30:0:1163:G:N2	30:0:1184:C:N3	2.62	0.48
30:0:1211:G:N2	30:0:1212:C:C2	2.81	0.48
30:0:1029:U:O2'	30:0:1273:C:OP1	2.26	0.48
30:0:147:G:N3	30:0:147:G:H2'	2.29	0.48
1:A:47:HIS:HD2	30:0:1654:U:O2'	1.97	0.48
30:0:168:C:O2'	30:0:169:A:H5'	2.13	0.48
30:0:1698:U:H6	30:0:1698:U:O5'	1.97	0.48
30:0:2533:C:C6	30:0:2533:C:C5'	2.81	0.48
30:0:2614:C:O2'	30:0:2615:U:H5'	2.13	0.48
30:0:2714:U:H2'	30:0:2715:G:H8	1.78	0.48
30:0:2790:C:HO2'	30:0:2791:U:H6	1.61	0.48
30:0:2783:A:N1	30:0:2792:A:C8	2.82	0.48
30:0:2871:G:C5	30:0:2872:U:C4	3.02	0.48
30:0:441:A:H1'	30:0:442:A:N7	2.29	0.48
30:0:454:U:H5'	38:0:5906:HOH:O	2.13	0.48
31:9:22:G:N2	31:9:26:C:H42	2.12	0.48
5:E:21:THR:HG23	5:E:30:THR:OG1	2.14	0.48
6:F:30:LYS:HE2	6:F:99:THR:HG21	1.95	0.48
10:J:80:LYS:HE3	10:J:101:VAL:O	2.13	0.48
14:N:132:ASN:HD22	30:0:2413:A:H4'	1.79	0.48
22:V:4:HIS:O	22:V:8:ILE:HG13	2.13	0.48
30:0:1015:C:H2'	30:0:1016:U:C6	2.46	0.48
30:0:1149:U:O5'	30:0:1151:G:H5'	2.14	0.48
30:0:1183:C:H42	30:0:1184:C:H41	1.62	0.48
30:0:1228:C:H5	38:0:3440:HOH:O	1.97	0.48
30:0:1323:G:H1	30:0:1334:C:N4	2.11	0.48
30:0:1562:C:N3	30:0:1563:G:C6	2.82	0.48
30:0:1603:A:H5'	30:0:1605:G:C4'	2.44	0.48
30:0:2011:A:H5'	30:0:2013:G:H1'	1.96	0.48
30:0:2048:C:P	38:0:9234:HOH:O	2.72	0.48
30:0:223:G:C2	30:0:224:U:C6	3.02	0.48
30:0:2637:A:H4'	38:0:4332:HOH:O	2.14	0.48
30:0:2643:G:N2	38:0:9156:HOH:O	2.47	0.48
2:B:206:THR:CG2	30:0:2716:G:H5''	2.39	0.48
30:0:2770:G:C4	30:0:2771:G:C8	3.01	0.48
30:0:2871:G:C4	30:0:2872:U:C5	3.02	0.48
30:0:451:C:C5	30:0:452:G:C6	3.02	0.48
30:0:549:A:O2'	30:0:550:C:H5'	2.14	0.48
30:0:56:G:C4	30:0:70:A:C2	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:669:G:H2'	30:0:670:G:O4'	2.13	0.48
30:0:694:A:C2'	30:0:695:C:H5'	2.44	0.48
31:9:77:A:H1'	31:9:79:U:C5	2.49	0.48
5:E:105:GLU:HG2	5:E:113:PRO:HB3	1.96	0.48
8:H:17:TYR:HD2	8:H:97:VAL:HB	1.77	0.48
11:K:87:ARG:NH1	38:K:4066:HOH:O	2.46	0.48
6:F:61:MET:HG2	13:M:19:GLN:OE1	2.13	0.48
23:W:125:HIS:HB2	23:W:137:GLN:HG2	1.96	0.48
23:W:91:ASP:HB2	38:W:5425:HOH:O	2.12	0.48
30:0:1592:G:O2'	30:0:1593:C:O5'	2.31	0.47
30:0:181:G:C6	30:0:182:G:C5	3.02	0.47
30:0:2030:A:P	38:0:3847:HOH:O	2.72	0.47
30:0:228:C:C2'	30:0:229:G:C5'	2.87	0.47
30:0:2321:A:C2	30:0:2323:G:C5	3.02	0.47
30:0:425:U:H2'	30:0:425:U:O2	2.13	0.47
30:0:731:U:H2'	30:0:732:C:H6	1.78	0.47
27:1:5:THR:HG23	30:0:1688:G:O2'	2.14	0.47
29:3:34:LYS:O	29:3:38:ARG:HG2	2.13	0.47
31:9:39:U:H1'	31:9:44:A:H61	1.79	0.47
31:9:47:A:C2	31:9:48:C:C2	3.02	0.47
31:9:81:C:C2'	31:9:82:U:H5'	2.44	0.47
7:G:67:LEU:O	7:G:71:LEU:HG	2.14	0.47
10:J:18:ILE:HD13	30:0:1244:U:OP1	2.14	0.47
18:R:113:HIS:O	18:R:145:LEU:HA	2.14	0.47
21:U:50:GLU:O	21:U:56:ARG:HG2	2.14	0.47
23:W:29:VAL:O	23:W:30:ASN:HB2	2.14	0.47
23:W:59:GLN:HE22	23:W:97:ALA:CB	2.27	0.47
30:0:1683:G:H5'	38:0:9801:HOH:O	2.14	0.47
30:0:181:G:N1	30:0:182:G:C5	2.82	0.47
30:0:1878:G:O2'	30:0:1879:U:C6	2.59	0.47
30:0:1998:G:C6	30:0:1999:C:N4	2.82	0.47
30:0:215:A:H61	30:0:225:G:H1'	1.79	0.47
30:0:2329:C:HO2'	30:0:2330:U:H5'	1.75	0.47
30:0:2363:G:C5	30:0:2364:A:C8	3.02	0.47
30:0:52:A:C2	30:0:53:C:C2	3.02	0.47
30:0:73:U:O2'	30:0:74:G:H5'	2.14	0.47
30:0:776:A:H1'	30:0:779:U:O4	2.13	0.47
30:0:940:G:H2'	30:0:941:G:C5'	2.42	0.47
29:3:83:TRP:O	29:3:85:ALA:N	2.48	0.47
31:9:76:G:N2	31:9:106:U:H3	2.11	0.47
1:A:213:LYS:HB2	38:0:9047:HOH:O	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:246:ARG:NE	38:C:8627:HOH:O	2.47	0.47
3:C:34:ALA:HA	3:C:102:LEU:HD21	1.96	0.47
12:L:143:THR:HG22	12:L:144:ASP:N	2.29	0.47
21:U:33:SER:O	21:U:37:GLU:HG3	2.14	0.47
24:X:61:ARG:HB2	24:X:65:ASN:HB2	1.96	0.47
30:0:1041:U:C2'	30:0:1042:U:H5'	2.44	0.47
30:0:1093:G:C2	30:0:1264:U:O2	2.67	0.47
30:0:1701:A:H4'	30:0:1702:U:C5'	2.42	0.47
30:0:1883:U:C2'	30:0:1884:G:H5'	2.43	0.47
30:0:2103:A:C2'	30:0:2104:C:H5'	2.41	0.47
30:0:1052:G:O2'	30:0:2300:A:OP2	2.29	0.47
8:H:6:ALA:HB3	30:0:2521:A:OP2	2.13	0.47
30:0:2830:U:H2'	30:0:2831:C:C5'	2.45	0.47
30:0:2826:G:C6	30:0:2913:A:C6	3.02	0.47
15:O:113:VAL:O	30:0:721:A:H1'	2.14	0.47
30:0:662:U:H1'	30:0:748:C:H1'	1.97	0.47
29:3:38:ARG:HB2	29:3:42:ARG:NH1	2.29	0.47
1:A:76:VAL:CG2	26:Z:87:LYS:HB3	2.45	0.47
3:C:170:ASP:HA	3:C:188:ARG:NH2	2.29	0.47
5:E:162:PHE:CD1	5:E:162:PHE:N	2.82	0.47
13:M:159:VAL:HG13	13:M:160:PHE:N	2.29	0.47
17:Q:50:GLY:N	38:Q:5297:HOH:O	2.44	0.47
2:B:333:GLU:OE1	21:U:14:GLU:HG2	2.14	0.47
26:Z:56:GLU:HA	26:Z:59:GLU:OE2	2.13	0.47
30:0:1477:C:C2'	30:0:1478:U:C5'	2.93	0.47
30:0:1561:U:C4	30:0:1562:C:C5	3.02	0.47
30:0:1587:U:H2'	30:0:1588:G:H5'	1.96	0.47
30:0:1999:C:H2'	30:0:2000:G:H8	1.78	0.47
30:0:216:A:O2'	30:0:217:C:H5'	2.15	0.47
30:0:2686:C:O2'	30:0:2687:G:H5'	2.14	0.47
30:0:281:U:H5	38:0:7494:HOH:O	1.97	0.47
30:0:2842:G:H2'	30:0:2843:A:O4'	2.15	0.47
2:B:336:GLN:O	30:0:2862:G:H4'	2.14	0.47
30:0:2864:U:C2'	30:0:2865:G:H5'	2.45	0.47
30:0:52:A:O2'	30:0:53:C:H5'	2.13	0.47
30:0:69:A:C5'	30:0:69:A:C8	2.92	0.47
29:3:65:THR:OG1	29:3:82:GLY:HA3	2.14	0.47
29:3:65:THR:CG2	33:3:8804:CL:CL	2.96	0.47
1:A:132:ASP:HB3	1:A:135:VAL:H	1.78	0.47
2:B:162:MET:HG3	2:B:310:ARG:CZ	2.45	0.47
2:B:195:ARG:HG2	2:B:323:LEU:CD2	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:25:MET:CE	4:D:41:LEU:HG	2.43	0.47
10:J:39:VAL:HG12	10:J:40:ASN:HD22	1.78	0.47
17:Q:48:PRO:O	17:Q:51:ARG:HD2	2.15	0.47
30:0:1139:U:O2'	30:0:1140:C:H5'	2.14	0.47
9:I:83:GLY:N	30:0:1168:C:H5'	2.29	0.47
30:0:1528:A:H61	30:0:1663:G:C1'	2.16	0.47
30:0:1644:C:C2'	30:0:1645:U:H5'	2.44	0.47
30:0:2057:U:O5'	30:0:2057:U:H6	1.96	0.47
30:0:2333:G:C6	30:0:2334:C:C4	3.03	0.47
30:0:2476:C:H2'	30:0:2476:C:O2	2.13	0.47
30:0:2527:U:H2'	30:0:2528:U:O4'	2.15	0.47
30:0:2822:C:H2'	30:0:2823:G:O4'	2.14	0.47
30:0:2830:U:H2'	30:0:2831:C:H5'	1.95	0.47
30:0:647:U:H2'	30:0:648:G:C8	2.50	0.47
30:0:867:A:H2	30:0:880:C:O2	1.97	0.47
31:9:117:G:H2'	31:9:118:C:C6	2.49	0.47
4:D:22:VAL:HA	4:D:73:VAL:O	2.14	0.47
12:L:44:GLU:HA	12:L:45:PRO:HD2	1.71	0.47
30:0:1055:G:N2	30:0:1057:A:H3'	2.29	0.47
30:0:1201:C:C2'	30:0:1202:A:H5'	2.37	0.47
30:0:1248:A:H2'	30:0:1249:U:C6	2.49	0.47
25:Y:169:ARG:NH1	30:0:1327:G:O3'	2.46	0.47
30:0:1345:A:C6	30:0:1346:U:O4	2.67	0.47
30:0:1611:G:N2	30:0:1612:A:C5	2.83	0.47
30:0:1707:G:N2	30:0:1709:G:H3'	2.30	0.47
30:0:1972:U:H2'	30:0:1973:A:C5'	2.43	0.47
30:0:2032:U:H2'	30:0:2033:G:H5''	1.95	0.47
30:0:2319:C:H2'	30:0:2319:C:O2	2.14	0.47
30:0:2332:A:H3'	30:0:2333:G:C8	2.48	0.47
30:0:2831:C:O2	30:0:2910:A:C2	2.67	0.47
30:0:667:C:H2'	30:0:668:C:H6	1.79	0.47
29:3:87:ARG:HG2	29:3:88:LEU:N	2.30	0.47
2:B:58:PRO:HA	2:B:63:GLU:CD	2.34	0.47
3:C:27:ARG:HB2	38:C:8519:HOH:O	2.14	0.47
5:E:84:MET:HG2	5:E:168:ILE:HA	1.97	0.47
12:L:50:GLY:C	30:0:2453:G:H4'	2.34	0.47
13:M:76:ARG:NH2	13:M:77:HIS:NE2	2.63	0.47
18:R:104:PHE:HB3	18:R:109:MET:HE1	1.96	0.47
23:W:9:GLY:HA3	38:0:9333:HOH:O	2.13	0.47
30:0:106:A:N1	30:0:107:U:C2	2.83	0.47
30:0:1116:U:C2'	30:0:1118:A:H2	2.28	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1174:A:H5'	30:0:1176:C:P	2.54	0.47
30:0:1204:C:H2'	38:0:4403:HOH:O	2.15	0.47
30:0:1474:C:H6	30:0:1474:C:C5'	2.20	0.47
30:0:1743:G:H2'	30:0:1744:G:O4'	2.15	0.47
30:0:1889:C:O2'	30:0:1890:U:H5'	2.15	0.47
30:0:2041:G:HO2'	30:0:2726:U:H5	1.62	0.47
30:0:2134:G:H2'	30:0:2135:A:H8	1.79	0.47
30:0:2384:U:H5''	38:0:3473:HOH:O	2.14	0.47
30:0:327:A:H3'	38:0:4015:HOH:O	2.15	0.47
30:0:370:G:N1	30:0:371:U:C4	2.82	0.47
30:0:37:A:C2	30:0:446:G:N3	2.83	0.47
30:0:594:C:H2'	30:0:595:U:C6	2.41	0.47
30:0:661:G:C6	30:0:686:A:N1	2.83	0.47
30:0:711:G:C2	30:0:718:C:O2	2.67	0.47
30:0:849:C:H2'	30:0:850:U:O4'	2.14	0.47
31:9:10:C:H2'	38:9:7164:HOH:O	2.14	0.47
3:C:170:ASP:O	3:C:171:GLU:HG3	2.15	0.47
4:D:52:THR:HB	4:D:70:GLY:N	2.29	0.47
30:0:1050:G:C6	30:0:1051:C:C4	3.03	0.47
30:0:1486:A:H3'	38:0:4435:HOH:O	2.14	0.47
30:0:2002:C:H2'	30:0:2003:U:H5'	1.96	0.47
30:0:2238:A:C2	30:0:2239:C:C4	3.03	0.47
30:0:2353:A:H4'	30:0:2354:A:O5'	2.13	0.47
30:0:2373:U:H1'	38:0:4722:HOH:O	2.14	0.47
30:0:2416:G:H2'	30:0:2417:C:H6	1.80	0.47
30:0:2445:U:H2'	30:0:2446:G:H8	1.79	0.47
30:0:255:A:C6	30:0:256:C:C4	3.03	0.47
30:0:1815:A:H4'	30:0:2751:C:O4'	2.15	0.47
30:0:2824:C:O3'	30:0:2825:C:C6	2.64	0.47
30:0:305:A:C2	30:0:329:A:C4	3.02	0.47
30:0:385:C:O5'	30:0:385:C:C6	2.55	0.47
29:3:64:LYS:HE3	29:3:84:ARG:NH1	2.30	0.47
2:B:267:LYS:HA	38:B:8996:HOH:O	2.13	0.47
2:B:98:THR:CG2	2:B:99:GLU:N	2.77	0.47
8:H:18:THR:HB	38:0:4795:HOH:O	2.14	0.47
13:M:9:ARG:HG3	38:0:3171:HOH:O	2.15	0.47
15:O:29:VAL:HG21	15:O:59:VAL:HG11	1.96	0.47
16:P:39:ASP:O	16:P:43:LEU:HG	2.14	0.47
20:T:38:ARG:NH1	38:0:6594:HOH:O	2.46	0.47
23:W:4:LEU:CD2	23:W:54:PHE:HB3	2.43	0.47
23:W:59:GLN:O	23:W:63:GLU:HG3	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:10:U:C5	30:0:532:A:N7	2.83	0.47
9:I:83:GLY:N	30:0:1168:C:C5'	2.74	0.47
30:0:1188:A:N6	30:0:1189:A:N6	2.63	0.47
30:0:1549:C:O2'	30:0:1550:A:H5'	2.14	0.47
29:3:48:ASN:HB3	30:0:170:U:H5'	1.97	0.47
30:0:1900:A:C2	30:0:1938:G:C4	3.02	0.47
30:0:1974:G:C5	30:0:1975:C:C5	3.02	0.47
30:0:2573:G:C2	30:0:2574:G:C8	3.03	0.47
30:0:2863:G:C2	30:0:2894:C:O2	2.68	0.47
3:C:184:ARG:NH2	30:0:450:C:OP1	2.35	0.47
30:0:463:A:N1	30:0:476:A:H5''	2.30	0.47
30:0:603:A:H4'	30:0:604:G:O5'	2.15	0.47
30:0:719:C:N3	30:0:720:G:H1'	2.30	0.47
30:0:810:G:C4	30:0:811:C:C6	3.02	0.47
30:0:939:A:H5''	38:0:5361:HOH:O	2.13	0.47
10:J:24:SER:HA	10:J:86:MET:SD	2.54	0.47
10:J:42:GLU:HG3	10:J:145:TRP:CD1	2.50	0.47
12:L:34:GLY:HA3	12:L:38:HIS:CE1	2.50	0.47
14:N:176:ARG:HG3	14:N:176:ARG:HH11	1.80	0.47
16:P:94:TRP:CZ2	16:P:98:ILE:HG13	2.50	0.47
30:0:1069:C:H2'	30:0:1070:A:O4'	2.14	0.47
30:0:1118:A:H8	30:0:1119:G:C5'	2.28	0.47
30:0:1199:A:N6	30:0:1200:A:C6	2.83	0.47
30:0:1444:G:O2'	30:0:1502:A:N1	2.38	0.47
16:P:95:GLU:HG2	30:0:1597:A:O4'	2.15	0.47
30:0:1571:G:H1'	30:0:1627:G:N2	2.30	0.47
16:P:88:GLN:NE2	30:0:1800:G:H1'	2.30	0.47
30:0:2297:U:C2	30:0:2298:C:C6	3.03	0.47
30:0:2328:U:C2	30:0:2329:C:C6	3.02	0.47
30:0:235:C:O2'	30:0:236:A:H2'	2.15	0.47
30:0:2673:U:C5	30:0:2674:G:C6	3.03	0.47
30:0:307:G:H3'	30:0:342:C:OP2	2.15	0.47
30:0:53:C:H2'	30:0:54:G:O4'	2.15	0.47
30:0:627:G:H1'	38:0:4390:HOH:O	2.14	0.47
30:0:645:U:O2	30:0:761:A:H2	1.98	0.47
15:O:63:LYS:NZ	30:0:659:A:N7	2.47	0.47
30:0:793:A:C5	30:0:794:U:C5	3.03	0.47
30:0:920:C:H4'	30:0:921:G:C2	2.50	0.47
30:0:951:A:C2'	30:0:952:G:C5'	2.86	0.47
27:1:22:CYS:HA	38:1:2086:HOH:O	2.15	0.47
29:3:1:MET:HE2	29:3:88:LEU:HD11	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:9:105:A:C2'	31:9:106:U:H5'	2.45	0.47
31:9:43:G:N2	31:9:46:C:N3	2.54	0.47
2:B:98:THR:HG22	2:B:99:GLU:N	2.29	0.47
4:D:25:MET:HE3	4:D:37:ALA:CB	2.30	0.47
4:D:58:VAL:CG1	4:D:60:GLU:HG2	2.45	0.47
6:F:48:VAL:HG12	6:F:97:ALA:CB	2.45	0.47
9:I:82:THR:HG22	9:I:83:GLY:H	1.80	0.47
11:K:82:ARG:NH2	11:K:115:ARG:HG2	2.30	0.47
11:K:89:LYS:HA	38:K:7064:HOH:O	2.15	0.47
13:M:81:ARG:HB3	13:M:85:ARG:HB2	1.97	0.47
24:X:12:ILE:HB	24:X:70:ILE:CG2	2.44	0.47
30:0:1392:A:C6	30:0:1395:C:C2	3.03	0.47
38:S:8972:HOH:O	30:0:1507:C:H4'	2.15	0.47
30:0:1987:C:O2'	30:0:1988:C:H5'	2.14	0.47
30:0:2523:U:O5'	30:0:2523:U:H6	1.98	0.47
30:0:278:A:N6	30:0:372:A:N6	2.63	0.47
30:0:396:U:O2'	30:0:397:A:P	2.73	0.47
30:0:54:G:C4	30:0:55:U:C5	3.03	0.47
30:0:594:C:C6	30:0:595:U:H5	2.33	0.47
30:0:686:A:N7	30:0:687:C:C5	2.82	0.47
30:0:800:G:H2'	30:0:801:U:C6	2.50	0.47
30:0:88:G:C6	30:0:89:G:C6	3.03	0.47
2:B:119:HIS:CD2	2:B:121:PRO:HG3	2.50	0.47
2:B:83:ALA:HB3	2:B:143:ILE:HB	1.96	0.47
3:C:214:THR:HG23	38:C:8638:HOH:O	2.15	0.47
4:D:52:THR:CG2	30:0:2346:C:H4'	2.44	0.47
5:E:122:THR:CG2	5:E:133:VAL:HG13	2.45	0.47
13:M:106:SER:HB2	13:M:114:VAL:HG23	1.97	0.47
13:M:86:GLN:NE2	38:M:8888:HOH:O	2.48	0.47
18:R:114:VAL:HB	18:R:145:LEU:CD1	2.43	0.47
30:0:123:U:O2'	30:0:124:C:H5'	2.14	0.46
30:0:1477:C:H2'	30:0:1478:U:C5'	2.44	0.46
30:0:1511:U:O2	30:0:1573:A:H2	1.98	0.46
30:0:1639:U:H2'	30:0:1640:C:O5'	2.15	0.46
30:0:2015:A:C5	30:0:2016:U:C5	3.03	0.46
30:0:2689:A:H2'	30:0:2690:U:C5'	2.43	0.46
30:0:2716:G:C5	30:0:2717:C:C5	3.03	0.46
30:0:2780:C:C4	30:0:2781:U:C4	3.03	0.46
30:0:2826:G:C6	30:0:2913:A:N6	2.83	0.46
30:0:820:G:O2'	30:0:856:G:H4'	2.14	0.46
29:3:15:ASN:O	30:0:2408:A:H4'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:155:GLN:HA	13:M:155:GLN:NE2	2.30	0.46
13:M:28:GLN:HA	13:M:31:TRP:HB2	1.97	0.46
15:O:33:LEU:HD21	15:O:79:VAL:HG21	1.96	0.46
17:Q:25:PRO:HD2	17:Q:28:ARG:HH21	1.80	0.46
19:S:17:ASP:O	19:S:21:GLN:HB2	2.14	0.46
21:U:38:ASN:HA	21:U:41:ASP:OD2	2.14	0.46
24:X:30:MET:HE1	24:X:58:ALA:HB3	1.96	0.46
30:0:1041:U:H2'	30:0:1042:U:H5'	1.97	0.46
30:0:1183:C:C2	30:0:1184:C:H5	2.33	0.46
30:0:1194:A:O5'	30:0:1194:A:H8	1.97	0.46
30:0:1483:C:HO2'	30:0:1484:G:H5'	1.77	0.46
30:0:1579:C:N4	30:0:1618:G:N1	2.63	0.46
30:0:1640:C:C5	38:0:6032:HOH:O	2.55	0.46
30:0:861:A:H4'	30:0:1697:G:H4'	1.97	0.46
30:0:1739:G:C4	30:0:2041:G:C2	3.03	0.46
30:0:229:G:C2'	30:0:230:C:H5'	2.44	0.46
29:3:61:PRO:HG3	30:0:2316:G:O2'	2.15	0.46
30:0:2496:C:H1'	30:0:2527:U:N3	2.29	0.46
30:0:252:C:C2'	30:0:252:C:O2	2.60	0.46
30:0:2634:G:N2	30:0:2635:A:C4	2.83	0.46
30:0:2775:A:C6	30:0:2776:A:C6	3.04	0.46
30:0:2792:A:C2	30:0:2793:A:C8	3.03	0.46
30:0:2828:G:H8	30:0:2828:G:O5'	1.99	0.46
30:0:2871:G:C6	30:0:2872:U:C4	3.03	0.46
30:0:2912:C:C2'	30:0:2913:A:H5'	2.45	0.46
30:0:292:G:C3'	30:0:358:G:H22	2.27	0.46
29:3:46:ILE:HG13	30:0:390:G:OP1	2.14	0.46
30:0:400:C:O2'	30:0:401:C:H5'	2.14	0.46
30:0:861:A:O5'	30:0:861:A:H8	1.98	0.46
29:3:71:CYS:HB3	29:3:75:GLY:N	2.30	0.46
29:3:64:LYS:HA	29:3:83:TRP:O	2.14	0.46
4:D:87:ALA:HA	4:D:90:LEU:HD12	1.97	0.46
6:F:38:LYS:HE3	30:0:244:C:OP2	2.15	0.46
12:L:11:ARG:NH1	30:0:903:U:OP2	2.47	0.46
26:Z:63:CYS:SG	26:Z:71:VAL:CG2	3.03	0.46
30:0:134:U:C2	30:0:145:A:C2	3.04	0.46
30:0:1648:G:C2	30:0:1649:G:C8	3.03	0.46
30:0:1432:U:C5	30:0:1725:C:O4'	2.69	0.46
30:0:1894:C:C2	30:0:1939:U:C4	3.03	0.46
30:0:2072:G:H3'	30:0:2073:G:C5'	2.46	0.46
30:0:686:A:H1'	30:0:747:G:O2'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:76:G:O2'	30:0:77:G:H5'	2.15	0.46
30:0:920:C:H5'	30:0:921:G:C4	2.50	0.46
4:D:48:MET:SD	31:9:41:C:H5''	2.54	0.46
31:9:60:C:H2'	31:9:61:C:O5'	2.15	0.46
4:D:104:PHE:HE2	4:D:132:VAL:HB	1.81	0.46
13:M:115:LEU:HB3	13:M:132:ILE:HG22	1.97	0.46
21:U:23:HIS:HB3	38:U:151:HOH:O	2.14	0.46
26:Z:38:PHE:HD1	26:Z:47:ARG:HB3	1.80	0.46
26:Z:40:ALA:HA	30:0:1773:G:C8	2.50	0.46
30:0:1022:A:C6	30:0:1023:C:C4	3.04	0.46
30:0:1154:A:H2'	30:0:1155:G:C8	2.50	0.46
30:0:1161:A:H1'	38:0:3946:HOH:O	2.15	0.46
30:0:1205:U:C2'	30:0:1206:U:H5''	2.45	0.46
30:0:1324:G:C4	30:0:1325:G:C8	3.03	0.46
30:0:1400:C:H2'	30:0:1401:G:C5'	2.45	0.46
30:0:1421:C:C2	30:0:1444:G:N2	2.83	0.46
30:0:1562:C:C4	30:0:1563:G:C6	3.03	0.46
30:0:161:A:H3'	38:0:9337:HOH:O	2.14	0.46
30:0:1765:G:N1	30:0:1766:U:C4	2.84	0.46
30:0:2095:A:OP1	30:0:2096:A:H4'	2.15	0.46
30:0:2528:U:C2	30:0:2529:G:C8	3.03	0.46
30:0:1741:U:HO2'	30:0:2723:G:H4'	1.76	0.46
30:0:2836:G:H2'	38:0:5114:HOH:O	2.14	0.46
28:2:25:VAL:HG21	30:0:60:A:N6	2.30	0.46
30:0:658:C:O2'	30:0:662:U:OP1	2.30	0.46
30:0:695:C:H2'	30:0:696:C:C6	2.50	0.46
15:O:24:ALA:HB3	30:0:710:G:P	2.56	0.46
31:9:37:C:H2'	31:9:38:A:O4'	2.15	0.46
31:9:1:U:O3'	31:9:3:A:H5''	2.16	0.46
11:K:41:LYS:HA	30:0:2582:G:O3'	2.14	0.46
11:K:76:GLN:HA	11:K:93:ASN:CA	2.44	0.46
26:Z:35:SER:HB3	26:Z:38:PHE:CD1	2.50	0.46
30:0:1211:G:H2'	30:0:1212:C:H6	1.81	0.46
30:0:1152:A:C2	30:0:1216:G:N3	2.84	0.46
30:0:1311:G:C2	30:0:1312:G:C8	3.02	0.46
30:0:144:A:H8	38:0:3164:HOH:O	1.98	0.46
30:0:1719:G:H2'	30:0:1720:C:O4'	2.16	0.46
30:0:1749:U:C2	30:0:1751:G:OP2	2.68	0.46
30:0:1779:A:C2'	30:0:1780:G:H5'	2.45	0.46
30:0:1887:U:N3	30:0:1888:C:C5	2.84	0.46
29:3:1:MET:CE	30:0:2320:U:H5	2.28	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2561:C:O2'	30:0:2562:G:H5'	2.16	0.46
16:P:91:LYS:NZ	30:0:817:G:OP2	2.49	0.46
2:B:79:MET:HE3	38:B:9106:HOH:O	2.14	0.46
8:H:6:ALA:HA	8:H:61:ARG:HH12	1.79	0.46
8:H:96:GLN:NE2	8:H:129:ARG:NH2	2.64	0.46
9:I:124:VAL:C	9:I:126:THR:H	2.19	0.46
21:U:36:CYS:O	21:U:39:ASN:HB2	2.16	0.46
23:W:119:HIS:CG	23:W:120:PRO:HD2	2.51	0.46
26:Z:63:CYS:HA	26:Z:71:VAL:CG2	2.46	0.46
30:0:1002:G:H2'	30:0:1003:U:O5'	2.15	0.46
30:0:1200:A:H2'	38:0:5689:HOH:O	2.14	0.46
30:0:1421:C:C2	30:0:1444:G:C2	3.04	0.46
30:0:1451:C:H2'	30:0:1452:G:H8	1.80	0.46
30:0:1595:G:N3	30:0:1600:G:C2	2.84	0.46
30:0:1804:A:H2'	30:0:1805:G:C8	2.50	0.46
18:R:65:GLY:N	30:0:2088:C:OP1	2.32	0.46
30:0:2133:U:H4'	30:0:2134:G:C5'	2.45	0.46
30:0:2256:G:C2'	30:0:2257:G:C5'	2.88	0.46
30:0:2505:G:H3'	38:0:5576:HOH:O	2.16	0.46
30:0:251:C:H2'	30:0:252:C:H6	1.80	0.46
30:0:2630:G:N2	30:0:2634:G:C4	2.84	0.46
30:0:2731:G:C2'	30:0:2732:U:H5'	2.46	0.46
30:0:2783:A:H2'	30:0:2784:A:C8	2.51	0.46
30:0:2846:C:H2'	30:0:2847:G:H8	1.79	0.46
30:0:33:G:C2	30:0:34:C:C2	3.04	0.46
30:0:466:A:H2'	30:0:467:G:O4'	2.16	0.46
30:0:561:G:C6	30:0:597:A:N6	2.83	0.46
30:0:705:C:OP2	30:0:705:C:H6	1.99	0.46
30:0:735:C:C6	30:0:736:A:C8	3.03	0.46
30:0:735:C:C5	30:0:736:A:C5	3.03	0.46
29:3:38:ARG:NH1	30:0:396:U:OP2	2.48	0.46
29:3:5:ARG:NH1	29:3:90:PHE:HB3	2.30	0.46
8:H:120:PHE:CD1	30:0:2311:A:C5'	2.94	0.46
22:V:8:ILE:CG2	22:V:59:ILE:HG13	2.46	0.46
23:W:108:ARG:HG3	23:W:114:PRO:HG3	1.96	0.46
23:W:11:VAL:HB	38:0:9588:HOH:O	2.15	0.46
25:Y:205:ILE:HG22	25:Y:209:VAL:HG21	1.96	0.46
1:A:45:ILE:CG2	26:Z:78:ILE:HG23	2.45	0.46
30:0:1360:C:H4'	38:0:9187:HOH:O	2.15	0.46
30:0:1472:C:H6	30:0:1472:C:O5'	1.98	0.46
30:0:1518:A:N6	30:0:1667:A:N6	2.64	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1787:C:H2'	30:0:1788:U:H6	1.81	0.46
30:0:1914:C:O2'	30:0:1915:U:H5'	2.14	0.46
30:0:1981:A:H3'	38:0:6549:HOH:O	2.15	0.46
30:0:2438:G:H2'	30:0:2439:C:O4'	2.16	0.46
30:0:2494:G:N7	38:0:9521:HOH:O	2.46	0.46
30:0:2506:A:O2'	30:0:2507:G:O5'	2.34	0.46
30:0:2541:U:H2'	30:0:2542:C:C6	2.51	0.46
30:0:2543:G:H2'	30:0:2544:G:O4'	2.16	0.46
30:0:2587:OMU:CM2	30:0:2589:U:C5	2.99	0.46
30:0:2588:OMG:H3'	30:0:2589:U:H5''	1.98	0.46
30:0:272:A:N1	30:0:369:G:H5''	2.31	0.46
30:0:2838:A:H1'	30:0:2844:C:O2	2.15	0.46
30:0:2873:C:O2	30:0:2873:C:H2'	2.15	0.46
29:3:14:CYS:HB3	29:3:16:GLU:HG2	1.97	0.46
3:C:21:VAL:HG13	38:C:8594:HOH:O	2.16	0.46
3:C:37:ALA:O	3:C:41:ASN:ND2	2.48	0.46
4:D:20:LYS:HG2	4:D:133:ASN:HB3	1.98	0.46
13:M:193:LYS:HB3	30:0:392:U:H5''	1.97	0.46
14:N:49:THR:HG22	14:N:56:ASP:O	2.16	0.46
18:R:8:ALA:HB1	18:R:13:THR:HG21	1.97	0.46
22:V:59:ILE:HG22	22:V:63:GLU:HG2	1.98	0.46
30:0:1463:U:H6	30:0:1463:U:O5'	1.99	0.46
30:0:1540:G:C5	30:0:1541:G:N7	2.83	0.46
30:0:154:C:N3	30:0:155:C:C5	2.83	0.46
1:A:47:HIS:CD2	30:0:1654:U:C2'	2.88	0.46
30:0:1904:A:C8	30:0:1905:U:C5	3.03	0.46
30:0:2668:G:O2'	30:0:2828:G:H4'	2.15	0.46
30:0:2758:G:H2'	30:0:2759:C:H6	1.81	0.46
30:0:2871:G:C5	30:0:2872:U:C5	3.04	0.46
29:3:3:MET:SD	29:3:83:TRP:CZ2	3.08	0.46
1:A:195:ASN:HB3	38:A:8935:HOH:O	2.15	0.46
2:B:145:HIS:HD2	2:B:159:PRO:HB3	1.81	0.46
3:C:191:SER:OG	3:C:192:ILE:N	2.49	0.46
5:E:137:ASP:HA	38:E:4098:HOH:O	2.15	0.46
11:K:8:VAL:CG1	11:K:9:THR:H	2.27	0.46
14:N:13:ARG:HG2	38:0:3438:HOH:O	2.15	0.46
20:T:2:LYS:O	30:0:332:G:H4'	2.15	0.46
23:W:29:VAL:O	30:0:1262:C:H4'	2.16	0.46
30:0:1139:U:H2'	30:0:1140:C:H6	1.80	0.46
30:0:553:G:O4'	30:0:1325:G:H5'	2.16	0.46
30:0:1425:G:C6	30:0:1426:C:N4	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1583:U:H2'	30:0:1584:C:O4'	2.16	0.46
30:0:1735:C:HO2'	30:0:1736:A:H5'	1.80	0.46
30:0:2250:G:C5	30:0:2251:G:C6	3.04	0.46
30:0:2450:C:H2'	30:0:2451:G:O5'	2.15	0.46
30:0:2646:G:C4	30:0:2647:C:C5	3.04	0.46
30:0:2778:A:H2'	30:0:2779:G:O4'	2.16	0.46
1:A:235:ARG:HB2	38:A:9000:HOH:O	2.15	0.46
2:B:269:LEU:HD22	2:B:295:THR:HG21	1.98	0.46
4:D:99:ASP:HB3	4:D:103:ASN:HB2	1.98	0.46
5:E:101:GLU:HG3	5:E:101:GLU:O	2.16	0.46
7:G:20:VAL:HG21	30:0:1150:A:C2	2.51	0.46
8:H:15:PRO:HB3	38:0:6399:HOH:O	2.15	0.46
9:I:118:ASN:HB3	30:0:1185:U:H5''	1.97	0.46
12:L:55:GLN:HA	12:L:58:GLN:NE2	2.26	0.46
13:M:127:LYS:HD3	38:M:8876:HOH:O	2.16	0.46
14:N:138:ASP:O	14:N:140:GLN:N	2.49	0.46
16:P:120:ARG:HD2	16:P:120:ARG:HA	1.59	0.46
22:V:60:GLN:HG2	38:V:874:HOH:O	2.16	0.46
30:0:1387:G:C5	30:0:1388:U:C5	3.04	0.46
30:0:1581:A:C4	30:0:1582:C:C6	3.03	0.46
30:0:1586:G:C2'	30:0:1587:U:H5'	2.46	0.46
30:0:191:A:OP1	30:0:191:A:H4'	2.16	0.46
30:0:1359:U:C5	30:0:2101:A:N7	2.84	0.46
30:0:2330:U:H4'	30:0:2331:C:OP1	2.16	0.46
30:0:2369:A:C4	30:0:2371:G:N7	2.84	0.46
30:0:239:C:C2'	30:0:240:C:O5'	2.64	0.46
30:0:2533:C:C6	30:0:2533:C:C4'	2.99	0.46
30:0:2560:C:O2	30:0:2560:C:H2'	2.16	0.46
13:M:58:GLN:NE2	30:0:259:G:H21	2.14	0.46
30:0:2825:C:H4'	30:0:2826:G:O4'	2.15	0.46
30:0:293:A:C5	30:0:360:A:C2	3.03	0.46
30:0:432:G:N3	30:0:433:C:C5	2.84	0.46
30:0:433:C:O2'	30:0:434:U:H5'	2.15	0.46
30:0:574:G:C2'	30:0:575:A:H5'	2.46	0.46
25:Y:148:GLY:HA3	30:0:622:G:OP1	2.16	0.46
30:0:25:A:O2'	30:0:640:G:H5'	2.16	0.46
30:0:892:G:C6	30:0:893:C:C4	3.04	0.46
5:E:5:LEU:HB2	5:E:47:VAL:HB	1.96	0.46
8:H:17:TYR:HE1	30:0:1006:A:N6	2.10	0.46
9:I:114:TYR:N	9:I:114:TYR:HD1	2.14	0.46
13:M:165:GLY:HA3	30:0:432:G:OP1	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:135:ALA:O	16:P:139:ARG:HG3	2.16	0.46
16:P:16:VAL:CG1	16:P:20:ARG:HB2	2.45	0.46
23:W:73:LEU:HA	23:W:73:LEU:HD12	1.80	0.46
16:P:41:ARG:HH22	30:0:1500:U:P	2.39	0.45
2:B:229:ARG:NH2	30:0:1753:C:O2	2.39	0.45
30:0:1773:G:C2'	30:0:1774:G:H5'	2.45	0.45
30:0:1819:G:H2'	30:0:1820:G:C4'	2.45	0.45
30:0:1970:G:H4'	38:0:7283:HOH:O	2.16	0.45
30:0:2048:C:H3'	38:0:9234:HOH:O	2.16	0.45
30:0:2285:G:H2'	30:0:2286:G:H8	1.81	0.45
30:0:2366:C:O5'	30:0:2366:C:H6	2.00	0.45
30:0:2582:G:C5	30:0:2601:A:C5	3.05	0.45
30:0:2731:G:H8	30:0:2731:G:O5'	1.99	0.45
30:0:2759:C:O2	30:0:2760:C:H1'	2.16	0.45
30:0:292:G:H3'	30:0:358:G:H22	1.81	0.45
30:0:593:A:H1'	38:0:3786:HOH:O	2.14	0.45
30:0:629:A:H2'	30:0:630:A:O4'	2.16	0.45
29:3:7:PHE:HZ	29:3:80:ARG:HH12	1.64	0.45
2:B:177:HIS:O	2:B:181:ILE:HG13	2.16	0.45
21:U:13:ILE:HG23	38:U:3194:HOH:O	2.16	0.45
25:Y:126:PRO:HG2	25:Y:128:PHE:CZ	2.51	0.45
25:Y:177:LYS:HD3	25:Y:181:GLY:O	2.16	0.45
30:0:1196:C:H2'	30:0:1197:G:H5'	1.98	0.45
30:0:1634:G:C6	30:0:1635:U:C4	3.04	0.45
30:0:1676:G:C6	30:0:1677:U:N3	2.84	0.45
30:0:1889:C:C2	30:0:1890:U:C6	3.04	0.45
30:0:1898:G:H2'	30:0:1899:C:C6	2.51	0.45
30:0:1910:A:O2'	30:0:1911:C:H5'	2.16	0.45
30:0:2318:C:O5'	30:0:2318:C:H6	2.00	0.45
30:0:2406:U:C4	30:0:2407:G:N7	2.84	0.45
30:0:2691:A:N1	30:0:2702:A:H5''	2.31	0.45
30:0:445:U:O2'	30:0:446:G:H5'	2.16	0.45
30:0:463:A:H5''	38:0:3793:HOH:O	2.17	0.45
15:O:50:ARG:HG3	30:0:701:U:OP2	2.16	0.45
30:0:722:G:C2'	30:0:723:G:H5'	2.46	0.45
30:0:952:G:H8	38:0:6547:HOH:O	1.99	0.45
31:9:28:U:C2'	31:9:28:U:O2	2.64	0.45
2:B:279:THR:HG22	2:B:280:VAL:N	2.31	0.45
2:B:62:ARG:HA	2:B:65:MET:CE	2.46	0.45
4:D:51:ARG:NH1	4:D:68:PRO:HB3	2.31	0.45
6:F:10:ALA:O	6:F:14:ASP:HB2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:108:VAL:HA	6:F:111:ILE:HD12	1.98	0.45
8:H:30:LYS:H	8:H:62:HIS:CD2	2.34	0.45
10:J:26:VAL:HG13	10:J:36:VAL:CG1	2.45	0.45
14:N:38:LYS:HA	14:N:43:VAL:HG22	1.98	0.45
14:N:64:SER:HB2	38:9:6669:HOH:O	2.16	0.45
18:R:13:THR:HG23	18:R:14:ALA:N	2.30	0.45
26:Z:41:ARG:NH2	30:0:820:G:OP1	2.49	0.45
26:Z:70:ARG:HB3	26:Z:82:SER:H	1.81	0.45
30:0:565:A:N1	30:0:1093:G:H1'	2.32	0.45
30:0:1512:G:C5	30:0:1513:C:C5	3.04	0.45
30:0:1759:A:C2	30:0:1818:C:C4	3.05	0.45
30:0:1801:A:C2	30:0:1802:G:C4	3.04	0.45
30:0:1891:G:H1'	30:0:1972:U:O2	2.17	0.45
30:0:1942:A:H2'	30:0:1943:C:O5'	2.17	0.45
38:B:8989:HOH:O	30:0:2614:C:H4'	2.15	0.45
30:0:2779:G:N2	30:0:2796:U:C2	2.84	0.45
30:0:2892:G:C6	30:0:2893:C:N3	2.85	0.45
27:1:21:ARG:HD2	27:1:37:CYS:SG	2.56	0.45
31:9:7:G:C5'	38:9:5071:HOH:O	2.65	0.45
3:C:233:THR:HG22	3:C:234:VAL:N	2.30	0.45
4:D:54:ALA:HB2	4:D:69:ILE:HD12	1.97	0.45
7:G:16:LYS:O	7:G:20:VAL:HG23	2.16	0.45
13:M:23:LEU:HD13	13:M:27:ARG:HH21	1.81	0.45
18:R:104:PHE:CB	18:R:109:MET:HE1	2.46	0.45
30:0:1188:A:N6	30:0:1189:A:C6	2.84	0.45
30:0:1287:A:C6	30:0:1288:U:C4	3.03	0.45
30:0:1337:G:H2'	30:0:1338:U:H6	1.80	0.45
30:0:1737:A:N6	30:0:1738:C:C4	2.84	0.45
21:U:42:LEU:HB3	30:0:1810:C:O4'	2.16	0.45
1:A:172:ALA:HB2	30:0:1846:U:O2'	2.16	0.45
30:0:1476:A:C2'	30:0:1867:G:O2'	2.64	0.45
30:0:2563:U:O2'	30:0:2564:G:C8	2.68	0.45
30:0:2635:A:C2'	30:0:2636:C:H5'	2.45	0.45
30:0:39:G:H2'	30:0:40:C:O4'	2.16	0.45
30:0:708:A:H61	30:0:720:G:C2'	2.28	0.45
30:0:716:G:N1	30:0:717:C:C4	2.85	0.45
30:0:940:G:C6	30:0:941:G:C5	3.04	0.45
30:0:957:A:O5'	30:0:957:A:C8	2.67	0.45
1:A:75:GLY:HA3	26:Z:86:TYR:CZ	2.51	0.45
3:C:93:LYS:HB3	3:C:95:GLU:OE2	2.16	0.45
5:E:22:VAL:HG12	5:E:76:VAL:HG21	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Y:208:LYS:HD2	38:0:4269:HOH:O	2.17	0.45
30:0:1015:C:O5'	30:0:1015:C:H6	1.99	0.45
30:0:1076:G:C2	30:0:1084:C:C2	3.04	0.45
30:0:1342:C:H2'	30:0:1343:C:C5'	2.45	0.45
30:0:1343:C:C2'	30:0:1344:G:O5'	2.64	0.45
30:0:1606:A:N3	30:0:1606:A:H2'	2.30	0.45
30:0:1641:A:H2'	30:0:1642:A:C4'	2.46	0.45
30:0:2450:C:C2'	30:0:2451:G:O5'	2.64	0.45
30:0:2780:C:C4	30:0:2781:U:O4	2.70	0.45
30:0:2788:A:C6	30:0:2789:U:N3	2.85	0.45
30:0:324:G:N1	30:0:325:U:C5	2.85	0.45
30:0:598:C:C2	30:0:599:G:C8	3.04	0.45
30:0:815:U:O2'	30:0:1598:A:H4'	2.17	0.45
30:0:861:A:C4'	30:0:1697:G:H4'	2.47	0.45
4:D:76:ARG:NH1	31:9:42:C:O2	2.50	0.45
31:9:55:U:H4'	31:9:56:A:H8	1.80	0.45
31:9:5:G:C2'	31:9:6:C:H5'	2.46	0.45
1:A:195:ASN:HB3	1:A:197:VAL:HG12	1.99	0.45
8:H:18:THR:O	8:H:20:ARG:N	2.49	0.45
9:I:86:GLU:HG2	30:0:1180:U:H4'	1.98	0.45
16:P:103:THR:HG23	16:P:106:ARG:NH1	2.31	0.45
19:S:55:GLN:OE1	30:0:1446:U:H2'	2.16	0.45
23:W:6:GLN:CB	23:W:26:ILE:HD11	2.46	0.45
30:0:1167:G:N2	30:0:1180:U:C2	2.85	0.45
30:0:1189:A:C3'	38:0:7580:HOH:O	2.55	0.45
30:0:1241:G:H2'	30:0:1242:A:O4'	2.17	0.45
30:0:1359:U:C5	30:0:2101:A:H8	2.32	0.45
30:0:1630:A:N6	30:0:1631:A:N1	2.65	0.45
28:2:8:LYS:NZ	30:0:1677:U:OP2	2.47	0.45
27:1:9:GLY:HA2	30:0:1687:C:O2	2.16	0.45
30:0:1757:U:H5	38:0:3207:HOH:O	1.99	0.45
29:3:60:LYS:HD3	30:0:2461:U:OP2	2.16	0.45
30:0:251:C:C5	30:0:252:C:H5	2.34	0.45
30:0:2538:A:H3'	38:0:9174:HOH:O	2.17	0.45
30:0:254:C:O2	30:0:254:C:H2'	2.17	0.45
30:0:533:U:H2'	30:0:2814:A:C6	2.52	0.45
30:0:556:C:O2	30:0:602:A:C2	2.69	0.45
30:0:661:G:C5	30:0:662:U:C4	3.04	0.45
30:0:805:G:N2	30:0:807:A:H3'	2.31	0.45
30:0:844:A:H2'	38:0:9567:HOH:O	2.16	0.45
30:0:907:A:C2	30:0:1299:G:C5	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:955:A:H2'	30:0:956:G:H5'	1.97	0.45
29:3:11:CYS:HB2	29:3:20:HIS:CE1	2.51	0.45
31:9:44:A:N6	31:9:45:A:C6	2.85	0.45
1:A:88:ILE:HG22	1:A:88:ILE:O	2.17	0.45
8:H:29:SER:HA	8:H:62:HIS:CD2	2.42	0.45
12:L:129:ALA:O	12:L:133:VAL:HG23	2.16	0.45
30:0:1016:U:C2	30:0:1017:U:C5	3.04	0.45
30:0:1051:C:H1'	38:0:3918:HOH:O	2.17	0.45
30:0:1082:A:H2'	30:0:1083:C:OP1	2.16	0.45
7:G:63:ARG:NH1	30:0:1151:G:OP1	2.50	0.45
30:0:1164:U:H3	30:0:1166:A:H4'	1.78	0.45
30:0:1178:G:H2'	30:0:1179:C:C6	2.51	0.45
30:0:1213:C:C2'	30:0:1214:G:H5'	2.46	0.45
30:0:1274:A:C6	30:0:1275:C:C4	3.05	0.45
30:0:1849:G:C5	30:0:1850:U:C5	3.05	0.45
30:0:1871:U:C6	30:0:1873:G:C4	3.04	0.45
30:0:1934:A:N7	30:0:1935:C:C5	2.85	0.45
30:0:1945:G:H2'	30:0:1946:C:H6	1.82	0.45
30:0:1966:U:H6	30:0:1966:U:O5'	1.99	0.45
30:0:236:A:N3	30:0:237:G:H1'	2.31	0.45
30:0:2497:A:C2	30:0:2524:G:C2	3.04	0.45
30:0:2686:C:C2	30:0:2709:G:C2	3.05	0.45
30:0:2692:G:N2	30:0:2701:G:C4	2.84	0.45
30:0:2891:A:N3	30:0:2891:A:H2'	2.30	0.45
30:0:2898:G:H2'	30:0:2899:A:H8	1.82	0.45
30:0:304:G:H1'	30:0:347:A:H61	1.82	0.45
30:0:293:A:C8	30:0:359:U:O4	2.69	0.45
30:0:402:U:H2'	30:0:403:C:C6	2.51	0.45
2:B:232:TRP:CD1	2:B:235:ARG:HD2	2.51	0.45
3:C:162:VAL:CG2	3:C:232:LEU:HD21	2.47	0.45
4:D:101:THR:O	4:D:157:LEU:HB3	2.17	0.45
12:L:113:GLN:NE2	30:0:700:A:H3'	2.32	0.45
14:N:7:LYS:HE3	17:Q:21:ARG:O	2.16	0.45
18:R:2:ILE:HG22	30:0:21:G:C4'	2.46	0.45
20:T:30:ASP:O	20:T:33:GLU:HB3	2.17	0.45
30:0:1056:U:H2'	30:0:1057:A:O4'	2.16	0.45
30:0:1057:A:H1'	30:0:2492:U:O2'	2.17	0.45
30:0:139:C:H6	30:0:139:C:O5'	1.99	0.45
30:0:13:G:C4	30:0:14:C:C5	3.04	0.45
30:0:1969:A:N7	30:0:1970:G:C6	2.85	0.45
14:N:29:SER:HB3	30:0:2415:A:O2'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2650:U:H6	30:0:2650:U:O5'	1.98	0.45
30:0:2681:A:C6	30:0:2714:U:H4'	2.51	0.45
30:0:2740:G:O2'	30:0:2741:A:H5'	2.16	0.45
30:0:558:C:C2'	30:0:559:U:C5'	2.84	0.45
29:3:5:ARG:HD3	29:3:21:GLU:OE2	2.17	0.45
31:9:36:C:H2'	31:9:37:C:C5'	2.43	0.45
8:H:58:VAL:HG21	8:H:60:LEU:HD21	1.99	0.45
13:M:83:SER:HA	38:M:8888:HOH:O	2.17	0.45
14:N:154:LEU:C	14:N:156:GLU:H	2.20	0.45
23:W:149:LEU:HG	23:W:153:MET:HE1	1.99	0.45
26:Z:71:VAL:HG22	26:Z:88:PHE:CE2	2.51	0.45
30:0:943:A:N6	30:0:1025:C:O2	2.48	0.45
30:0:1592:G:O2'	30:0:1593:C:O4'	2.31	0.45
30:0:1762:C:C2	30:0:1783:A:C2	3.04	0.45
30:0:1947:G:C4	30:0:1948:G:N7	2.85	0.45
30:0:2269:C:C2'	30:0:2270:G:H5'	2.47	0.45
30:0:2299:G:N1	30:0:2300:A:N6	2.65	0.45
30:0:2372:A:H2'	30:0:2373:U:H6	1.80	0.45
30:0:248:A:H3'	30:0:248:A:N3	2.32	0.45
30:0:2505:G:C2'	30:0:2506:A:C5'	2.92	0.45
30:0:2794:G:N3	30:0:2795:C:C6	2.84	0.45
30:0:2854:A:C6	30:0:2905:A:C6	3.05	0.45
30:0:311:C:N3	30:0:321:A:C2	2.85	0.45
30:0:414:C:H2'	30:0:415:A:O4'	2.17	0.45
30:0:557:C:H42	30:0:600:G:H1	1.65	0.45
33:0:8813:CL:CL	38:0:4929:HOH:O	2.58	0.45
30:0:952:G:N3	30:0:2302:A:H2'	2.32	0.45
1:A:23:TYR:HH	1:A:182:ARG:HA	1.82	0.45
2:B:145:HIS:HD2	2:B:146:THR:O	2.00	0.45
7:G:23:ILE:O	7:G:27:ILE:HG13	2.17	0.45
10:J:75:PRO:HG2	10:J:105:LEU:HD21	1.99	0.45
16:P:55:LYS:HG3	16:P:56:GLY:N	2.31	0.45
25:Y:235:GLU:CD	25:Y:235:GLU:H	2.21	0.45
30:0:1086:A:H4'	30:0:1259:A:C2	2.52	0.45
30:0:1201:C:C5	38:0:6157:HOH:O	2.56	0.45
30:0:1511:U:H2'	30:0:1512:G:O4'	2.17	0.45
30:0:152:A:H2'	30:0:153:C:C6	2.52	0.45
30:0:1915:U:H2'	30:0:1916:C:H6	1.82	0.45
30:0:195:C:C2'	30:0:196:G:H5'	2.46	0.45
30:0:1829:A:H2	30:0:2018:A:N1	2.15	0.45
30:0:2070:G:H4'	38:0:4310:HOH:O	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2264:A:H4'	38:0:5143:HOH:O	2.14	0.45
30:0:2291:A:N9	30:0:2309:C:H5'	2.31	0.45
30:0:2315:C:H4'	30:0:2425:A:C6	2.52	0.45
30:0:2634:G:H5''	38:0:3991:HOH:O	2.16	0.45
30:0:2634:G:O2'	30:0:2635:A:H5'	2.17	0.45
30:0:2799:A:N7	30:0:2801:A:C6	2.84	0.45
30:0:482:G:H4'	30:0:508:A:N1	2.32	0.45
30:0:707:C:OP2	30:0:720:G:N1	2.38	0.45
30:0:716:G:C2	30:0:717:C:C2	3.04	0.45
30:0:945:U:H2'	30:0:946:C:C6	2.52	0.45
17:Q:27:GLN:NE2	31:9:8:G:C5'	2.77	0.45
2:B:24:PRO:HG2	2:B:204:GLY:HA2	1.98	0.45
3:C:197:SER:HA	38:C:8638:HOH:O	2.16	0.45
3:C:61:PHE:CD1	3:C:65:ARG:HD2	2.52	0.45
11:K:20:CYS:HB2	11:K:29:LEU:CG	2.43	0.45
19:S:42:GLU:C	19:S:44:GLN:H	2.20	0.45
23:W:44:MET:HE2	30:0:944:G:N2	2.28	0.45
24:X:80:GLU:HB3	38:X:5564:HOH:O	2.17	0.45
25:Y:148:GLY:O	25:Y:154:ARG:HD3	2.17	0.45
30:0:1195:G:C6	30:0:1196:C:C5	3.05	0.44
30:0:1199:A:C6	30:0:1200:A:C6	3.05	0.44
30:0:1424:A:C2	30:0:1441:G:C5	3.05	0.44
30:0:1553:C:H2'	30:0:1554:C:H6	1.81	0.44
30:0:1576:G:H2'	30:0:1577:U:O4'	2.17	0.44
30:0:1658:A:H2'	30:0:1659:A:C8	2.52	0.44
30:0:1673:U:H5''	38:0:3233:HOH:O	2.16	0.44
30:0:1675:C:H1'	38:0:4712:HOH:O	2.16	0.44
30:0:1915:U:O5'	30:0:1915:U:H6	1.99	0.44
30:0:2416:G:H2'	30:0:2417:C:O4'	2.17	0.44
30:0:2502:C:N3	30:0:2518:C:N4	2.65	0.44
30:0:2523:U:O2'	30:0:2524:G:H5'	2.17	0.44
30:0:2096:A:C8	30:0:2539:U:C2	3.05	0.44
30:0:2746:A:N6	30:0:2750:G:C8	2.85	0.44
30:0:2761:A:H1'	30:0:2762:C:H2'	1.99	0.44
30:0:580:A:N1	30:0:1253:C:O2'	2.50	0.44
30:0:583:C:C2	30:0:584:U:C5	3.05	0.44
30:0:665:A:H2'	30:0:666:A:O4'	2.17	0.44
30:0:69:A:C5'	30:0:69:A:H8	2.21	0.44
30:0:816:G:C6	30:0:817:G:C6	3.05	0.44
31:9:36:C:C5	31:9:37:C:C4	3.05	0.44
31:9:5:G:C2	31:9:119:C:O2	2.70	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:100:PRO:HG2	1:A:103:VAL:CG2	2.41	0.44
2:B:41:PHE:HB3	2:B:190:MET:HE2	1.98	0.44
2:B:84:LEU:O	2:B:99:GLU:HA	2.16	0.44
20:T:72:ILE:HD13	20:T:93:THR:HG22	1.99	0.44
23:W:38:THR:O	23:W:42:ARG:HB2	2.16	0.44
23:W:68:THR:HG23	23:W:69:ARG:H	1.82	0.44
30:0:1015:C:C2	30:0:1016:U:C5	3.05	0.44
30:0:940:G:O2'	30:0:1032:A:N1	2.44	0.44
30:0:1253:C:H2'	30:0:1254:C:C6	2.51	0.44
30:0:1447:U:C3'	30:0:1506:U:O2	2.64	0.44
30:0:1609:C:H2'	30:0:1610:G:C8	2.45	0.44
30:0:1790:C:H2'	30:0:1791:U:C6	2.49	0.44
30:0:2102:G:N2	30:0:2103:A:N1	2.64	0.44
30:0:2328:U:C4	30:0:2329:C:C5	3.06	0.44
30:0:2385:G:H2'	30:0:2386:U:H6	1.82	0.44
12:L:53:ARG:CD	30:0:2441:U:H4'	2.42	0.44
30:0:287:C:C3'	30:0:287:C:C6	3.00	0.44
30:0:1787:C:H4'	30:0:2883:A:O4'	2.16	0.44
30:0:2896:A:H2'	30:0:2896:A:N3	2.32	0.44
30:0:324:G:C6	30:0:325:U:C5	3.05	0.44
30:0:565:A:H4'	38:0:3932:HOH:O	2.17	0.44
30:0:632:A:H2'	30:0:633:C:H6	1.83	0.44
30:0:707:C:N3	30:0:708:A:N7	2.64	0.44
28:2:40:ARG:HD2	28:2:47:THR:HG22	1.99	0.44
1:A:101:GLU:OE2	1:A:131:HIS:HB2	2.17	0.44
2:B:223:ARG:HG3	2:B:232:TRP:C	2.37	0.44
2:B:77:PRO:HA	2:B:293:PRO:HB2	1.99	0.44
2:B:6:PRO:HD3	38:0:9962:HOH:O	2.17	0.44
10:J:36:VAL:HG12	10:J:37:ALA:N	2.31	0.44
13:M:74:LYS:HG2	38:M:8947:HOH:O	2.17	0.44
14:N:77:ASN:N	14:N:77:ASN:OD1	2.50	0.44
17:Q:27:GLN:HB2	38:9:466:HOH:O	2.17	0.44
19:S:12:GLU:HB3	38:S:8988:HOH:O	2.16	0.44
23:W:122:ARG:NH2	38:0:5240:HOH:O	2.50	0.44
25:Y:144:ARG:NE	38:Y:8920:HOH:O	2.46	0.44
30:0:99:A:N7	30:0:100:C:C2	2.84	0.44
30:0:10:U:O4	30:0:532:A:OP2	2.36	0.44
30:0:1181:A:O2'	30:0:1182:C:H5'	2.17	0.44
30:0:1205:U:H2'	30:0:1206:U:H5''	1.95	0.44
30:0:1309:U:C2	30:0:1310:U:C6	3.05	0.44
30:0:1337:G:C4	30:0:1338:U:C5	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1538:C:C2'	30:0:1539:U:H5'	2.47	0.44
30:0:1639:U:C2'	30:0:1640:C:O5'	2.66	0.44
30:0:1688:G:C6	30:0:1692:C:C5	3.05	0.44
30:0:1782:G:O2'	30:0:1783:A:H5'	2.16	0.44
30:0:1934:A:N7	30:0:1935:C:C4	2.86	0.44
30:0:1945:G:C5	30:0:1946:C:C5	3.05	0.44
30:0:2251:G:C6	30:0:2252:A:C5	3.05	0.44
30:0:2367:A:C4	30:0:2369:A:N6	2.85	0.44
30:0:2507:G:H5'	38:0:3726:HOH:O	2.17	0.44
30:0:1564:C:H1'	30:0:2738:G:N2	2.33	0.44
30:0:2908:A:H8	30:0:2908:A:O5'	2.00	0.44
2:B:18:ARG:HE	2:B:256:GLN:HE21	1.64	0.44
14:N:71:TRP:HZ2	38:N:8830:HOH:O	2.01	0.44
22:V:44:GLY:O	22:V:48:GLU:HG2	2.16	0.44
30:0:1024:G:C5	30:0:1025:C:C4	3.05	0.44
30:0:1084:C:O5'	30:0:1084:C:H6	2.01	0.44
30:0:1167:G:N2	30:0:1179:C:O2	2.51	0.44
30:0:1179:C:H2'	38:0:3219:HOH:O	2.17	0.44
30:0:1576:G:C5	30:0:1577:U:C4	3.06	0.44
30:0:1755:A:H2'	30:0:1756:G:O4'	2.16	0.44
30:0:1773:G:N2	30:0:1774:G:C8	2.85	0.44
30:0:1998:G:C6	30:0:1999:C:C4	3.05	0.44
30:0:2065:C:C2'	30:0:2066:C:H5'	2.46	0.44
30:0:2286:G:H2'	30:0:2287:C:O4'	2.18	0.44
30:0:2300:A:H4'	30:0:2301:A:N3	2.33	0.44
30:0:23:G:C6	30:0:24:G:C6	3.06	0.44
30:0:644:G:N3	30:0:644:G:H5'	2.33	0.44
30:0:64:G:N3	30:0:70:A:C8	2.86	0.44
30:0:716:G:C6	30:0:717:C:C4	3.05	0.44
3:C:76:ARG:HH21	30:0:1363:G:P	2.41	0.44
5:E:119:HIS:O	5:E:140:ALA:HB1	2.18	0.44
13:M:111:ASN:N	13:M:111:ASN:OD1	2.51	0.44
13:M:76:ARG:HG2	38:M:8825:HOH:O	2.16	0.44
13:M:74:LYS:HD3	13:M:87:GLY:O	2.17	0.44
16:P:124:ASP:O	30:0:801:U:H4'	2.17	0.44
16:P:127:GLY:HA3	38:P:584:HOH:O	2.18	0.44
17:Q:66:LYS:HB2	17:Q:70:ALA:O	2.17	0.44
18:R:1:GLY:HA2	18:R:119:VAL:CG2	2.48	0.44
30:0:1182:C:C1'	30:0:1192:A:C8	2.98	0.44
30:0:1488:U:H4'	30:0:1489:G:OP1	2.18	0.44
30:0:1572:A:OP2	30:0:1624:A:N6	2.46	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:799:C:H1'	30:0:1599:U:H5''	1.99	0.44
30:0:1759:A:N3	30:0:1818:C:C2	2.86	0.44
30:0:1911:C:H2'	30:0:1912:A:O4'	2.18	0.44
30:0:1969:A:H3'	30:0:1970:G:C2	2.52	0.44
30:0:2040:C:C2'	30:0:2041:G:H5'	2.46	0.44
30:0:2497:A:C2	30:0:2524:G:N3	2.85	0.44
30:0:2723:G:H2'	30:0:2724:U:C6	2.53	0.44
30:0:321:A:O2'	30:0:322:G:H5'	2.18	0.44
30:0:421:C:H2'	30:0:422:G:H8	1.82	0.44
30:0:629:A:C2	30:0:2074:A:C2	3.06	0.44
30:0:652:G:C5'	38:0:3006:HOH:O	2.52	0.44
30:0:2596:A:C2	33:0:8812:CL:CL	3.07	0.44
30:0:955:A:C2'	30:0:956:G:H5'	2.47	0.44
30:0:968:G:O2'	30:0:969:G:H5'	2.18	0.44
31:9:64:C:H2'	31:9:65:A:H5'	1.98	0.44
2:B:144:THR:HG22	2:B:145:HIS:N	2.31	0.44
3:C:181:ALA:HB2	30:0:30:U:OP2	2.17	0.44
4:D:52:THR:HB	4:D:70:GLY:H	1.83	0.44
8:H:59:GLN:HE21	8:H:129:ARG:CG	2.30	0.44
8:H:157:TYR:CD1	8:H:157:TYR:C	2.90	0.44
11:K:29:LEU:HB3	11:K:55:VAL:CG2	2.48	0.44
16:P:107:GLU:C	16:P:109:ARG:H	2.21	0.44
16:P:37:ARG:HG3	30:0:1501:A:OP2	2.17	0.44
18:R:1:GLY:O	30:0:21:G:H5'	2.17	0.44
20:T:101:LEU:HD13	20:T:112:LEU:HD11	1.99	0.44
21:U:39:ASN:HD22	21:U:44:ARG:CD	2.30	0.44
25:Y:97:LEU:HA	25:Y:235:GLU:HA	2.00	0.44
26:Z:54:GLU:HG2	38:Z:8715:HOH:O	2.17	0.44
30:0:100:C:C4	30:0:101:C:C5	3.06	0.44
30:0:1138:G:C6	30:0:1139:U:N3	2.86	0.44
30:0:933:C:H4'	30:0:1297:U:H4'	2.00	0.44
30:0:1515:A:C2	30:0:1672:G:C2	3.06	0.44
30:0:1883:U:O2'	30:0:1884:G:H5'	2.17	0.44
30:0:2289:G:O2'	30:0:2291:A:N6	2.50	0.44
30:0:2377:U:N3	30:0:2378:U:C5	2.84	0.44
30:0:2448:U:O2'	30:0:2449:G:H5'	2.18	0.44
30:0:2102:G:O4'	30:0:2538:A:C5	2.70	0.44
30:0:2700:G:C5	30:0:2701:G:C5	3.06	0.44
30:0:2852:A:O4'	30:0:2902:A:N6	2.51	0.44
30:0:291:C:H2'	30:0:292:G:H5'	1.99	0.44
30:0:529:G:H1'	30:0:611:U:O2'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:711:G:C2'	30:0:712:C:H5'	2.48	0.44
30:0:810:G:H2'	30:0:811:C:H6	1.83	0.44
30:0:947:U:C2'	30:0:948:G:H5'	2.47	0.44
30:0:961:A:C6	30:0:1010:C:C5	3.05	0.44
2:B:56:ASP:HB3	2:B:322:ARG:HG2	2.00	0.44
3:C:2:GLN:HA	3:C:17:ASP:HA	1.98	0.44
7:G:16:LYS:HE2	7:G:63:ARG:HH12	1.82	0.44
11:K:27:ARG:HG2	11:K:27:ARG:HH11	1.83	0.44
13:M:109:PHE:HB3	13:M:112:LEU:HD12	2.00	0.44
13:M:85:ARG:N	13:M:85:ARG:HD2	2.33	0.44
13:M:8:ILE:HD13	38:M:8920:HOH:O	2.17	0.44
18:R:30:ALA:HA	18:R:33:ARG:HH11	1.83	0.44
21:U:56:ARG:HD2	30:0:2890:A:H1'	1.97	0.44
30:0:1081:A:C5	30:0:1082:A:C6	3.06	0.44
30:0:1202:A:N7	30:0:1203:G:C5	2.86	0.44
30:0:1328:A:N7	30:0:1329:G:C5	2.85	0.44
30:0:1559:A:HO2'	30:0:1561:U:H5	1.63	0.44
30:0:1576:G:C5	30:0:1577:U:C5	3.06	0.44
26:Z:83:TYR:OH	30:0:1604:G:C4	2.70	0.44
30:0:165:A:H61	30:0:168:C:H3'	1.83	0.44
30:0:2285:G:H2'	30:0:2286:G:C8	2.53	0.44
30:0:2350:G:H2'	30:0:2351:C:H6	1.82	0.44
2:B:300:SER:CB	30:0:2716:G:H21	2.31	0.44
30:0:2727:A:C2'	30:0:2728:C:H5'	2.46	0.44
30:0:282:C:O2'	30:0:283:U:C5'	2.50	0.44
30:0:734:U:H1'	30:0:737:A:H62	1.82	0.44
30:0:862:U:O2'	30:0:863:G:H5'	2.18	0.44
27:1:20:ARG:HA	30:0:121:U:C6	2.53	0.44
29:3:71:CYS:HB3	29:3:75:GLY:H	1.82	0.44
31:9:36:C:C4	31:9:37:C:C2	3.05	0.44
4:D:134:LEU:HB2	4:D:157:LEU:HD23	1.99	0.44
5:E:11:VAL:HG12	5:E:12:ASP:N	2.33	0.44
8:H:173:GLU:O	8:H:174:LEU:HB2	2.18	0.44
9:I:112:LEU:HD11	30:0:1162:G:C1'	2.45	0.44
10:J:63:ILE:HG23	30:0:1235:G:O4'	2.18	0.44
11:K:74:VAL:CG1	11:K:113:ILE:HG12	2.47	0.44
11:K:49:LEU:HA	11:K:73:VAL:CG1	2.48	0.44
11:K:87:ARG:HG3	30:0:2721:U:H4'	1.99	0.44
19:S:6:LYS:O	19:S:7:HIS:HB3	2.18	0.44
30:0:861:A:H4'	30:0:1697:G:C4'	2.48	0.44
16:P:54:LYS:HB2	30:0:1717:A:H5''	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1738:C:O2'	30:0:1739:G:H5'	2.18	0.44
30:0:1749:U:O2	30:0:1751:G:C8	2.71	0.44
30:0:1764:C:H2'	30:0:1765:G:C5'	2.48	0.44
1:A:7:GLN:O	30:0:1862:C:H5'	2.18	0.44
30:0:1929:G:H3'	30:0:1929:G:N3	2.33	0.44
30:0:1932:G:C4	30:0:1933:G:C8	3.06	0.44
30:0:2032:U:H2'	30:0:2033:G:H5'	2.00	0.44
30:0:2119:C:H2'	30:0:2120:U:O4'	2.18	0.44
30:0:23:G:C6	30:0:24:G:N1	2.86	0.44
30:0:2454:C:H6	30:0:2454:C:O5'	2.00	0.44
30:0:2507:G:H22	30:0:2512:U:H5'	1.82	0.44
10:J:70:PHE:CE1	30:0:2676:C:H4'	2.53	0.44
30:0:400:C:H2'	30:0:401:C:C6	2.53	0.44
30:0:463:A:H3'	38:0:6340:HOH:O	2.17	0.44
30:0:736:A:C2'	30:0:737:A:H5'	2.48	0.44
30:0:795:G:N3	30:0:817:G:C2	2.86	0.44
30:0:830:G:C2'	30:0:831:U:H5'	2.48	0.44
30:0:876:A:C6	30:0:878:G:C8	3.06	0.44
30:0:908:A:H1'	38:0:7745:HOH:O	2.17	0.44
31:9:54:A:C2'	31:9:55:U:H5'	2.48	0.44
2:B:119:HIS:C	2:B:121:PRO:HD3	2.38	0.44
2:B:280:VAL:HG13	2:B:333:GLU:O	2.18	0.44
5:E:69:ILE:HA	5:E:72:MET:HE2	2.00	0.44
5:E:86:VAL:HA	5:E:166:VAL:HA	1.99	0.44
10:J:39:VAL:HG12	10:J:40:ASN:ND2	2.33	0.44
14:N:92:ALA:O	14:N:97:VAL:HB	2.18	0.44
25:Y:234:VAL:HG12	25:Y:235:GLU:N	2.32	0.44
26:Z:61:HIS:HB3	38:Z:8707:HOH:O	2.18	0.44
30:0:1159:G:H21	30:0:1189:A:H8	1.66	0.44
30:0:1214:G:H4'	38:0:4703:HOH:O	2.18	0.44
25:Y:171:PRO:HG3	30:0:1267:C:O2'	2.17	0.44
30:0:1561:U:C2'	30:0:1562:C:O5'	2.66	0.44
30:0:1585:C:C2	30:0:1611:G:N2	2.85	0.44
30:0:1517:C:C2	30:0:1670:A:C2	3.05	0.44
30:0:1769:C:H2'	30:0:1770:U:C5'	2.48	0.44
30:0:1947:G:C5	30:0:1970:G:C8	3.06	0.44
30:0:1992:U:C2	30:0:1994:A:OP2	2.71	0.44
30:0:2335:C:H2'	30:0:2336:G:C8	2.52	0.44
30:0:2681:A:H2'	38:0:5519:HOH:O	2.16	0.44
30:0:2723:G:H2'	30:0:2724:U:H6	1.82	0.44
30:0:2748:G:OP1	30:0:2749:U:H5''	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2851:G:N2	30:0:2905:A:N6	2.65	0.44
30:0:370:G:C2	30:0:371:U:C5	3.06	0.44
30:0:612:U:H2'	30:0:613:C:C6	2.53	0.44
30:0:871:G:H4'	38:0:4374:HOH:O	2.17	0.44
30:0:81:G:N3	30:0:98:A:C2	2.86	0.44
27:1:1:THR:HG22	27:1:2:GLY:N	2.33	0.44
31:9:33:U:C2	31:9:43:G:N7	2.86	0.44
2:B:199:TYR:HA	2:B:268:ARG:HA	1.99	0.44
7:G:16:LYS:CE	7:G:63:ARG:HH12	2.31	0.44
18:R:27:HIS:O	18:R:31:ILE:HG13	2.18	0.44
20:T:26:THR:HA	20:T:39:ASN:HB3	2.00	0.44
23:W:129:LYS:HE3	31:9:87:U:H2'	2.00	0.44
25:Y:109:LEU:HA	38:Y:8878:HOH:O	2.18	0.44
25:Y:154:ARG:HH21	30:0:1293:U:C5'	2.22	0.44
26:Z:68:GLU:C	26:Z:70:ARG:H	2.21	0.44
30:0:1020:A:H2'	30:0:1021:G:C8	2.53	0.43
30:0:1061:C:C4	30:0:1062:U:C5	3.06	0.43
30:0:1103:C:N3	30:0:1241:G:N2	2.65	0.43
30:0:1187:U:O2'	30:0:1188:A:C8	2.71	0.43
30:0:1210:G:C2	30:0:1211:G:C8	3.06	0.43
30:0:1377:C:C6	30:0:1693:A:N1	2.86	0.43
30:0:1544:U:H5'	30:0:1618:G:O3'	2.18	0.43
30:0:1552:G:N1	30:0:1634:G:C5	2.86	0.43
30:0:169:A:C6	30:0:2469:A:C6	3.06	0.43
30:0:1744:G:C2'	30:0:1745:G:H5'	2.49	0.43
30:0:2004:U:O2	30:0:2004:U:C2'	2.59	0.43
30:0:2291:A:N3	30:0:2291:A:H2'	2.32	0.43
30:0:2336:G:H1'	38:0:6218:HOH:O	2.18	0.43
30:0:2671:U:N3	30:0:2672:C:C6	2.86	0.43
30:0:268:U:O4	30:0:269:G:N1	2.51	0.43
30:0:2707:C:C2'	30:0:2707:C:O2	2.63	0.43
30:0:1713:G:N2	30:0:2735:U:H4'	2.32	0.43
30:0:2853:U:H2'	30:0:2854:A:C8	2.53	0.43
25:Y:138:ARG:HB3	30:0:638:C:OP1	2.18	0.43
30:0:79:G:N2	30:0:97:G:H1'	2.33	0.43
30:0:807:A:H2'	30:0:808:A:C8	2.53	0.43
30:0:862:U:H5'	38:0:7180:HOH:O	2.18	0.43
30:0:876:A:N7	38:0:4295:HOH:O	2.36	0.43
31:9:23:U:H2'	31:9:24:U:OP2	2.18	0.43
31:9:95:C:N4	38:9:6156:HOH:O	2.50	0.43
1:A:217:ARG:NH1	1:A:229:ALA:HB3	2.31	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:137:LEU:HD21	2:B:140:LEU:HD21	1.99	0.43
2:B:141:ARG:HD2	2:B:163:GLU:OE2	2.18	0.43
3:C:55:ARG:HB2	38:0:9141:HOH:O	2.17	0.43
5:E:103:VAL:HG12	5:E:104:ILE:N	2.32	0.43
9:I:120:ALA:O	9:I:124:VAL:HG23	2.18	0.43
14:N:99:GLU:HB3	14:N:128:ASP:HB2	2.00	0.43
14:N:82:TYR:C	14:N:82:TYR:CD2	2.91	0.43
16:P:36:THR:O	16:P:39:ASP:HB2	2.18	0.43
30:0:68:U:O4	30:0:107:U:H4'	2.18	0.43
30:0:1087:G:H4'	30:0:1088:A:OP1	2.17	0.43
30:0:1169:U:C4	30:0:1170:U:C2	3.06	0.43
30:0:1175:G:H4'	38:0:6771:HOH:O	2.18	0.43
30:0:1332:C:C4	30:0:1333:U:C5	3.06	0.43
30:0:146:U:C4	30:0:147:G:C6	3.07	0.43
30:0:1476:A:H2'	30:0:1867:G:O2'	2.18	0.43
30:0:1492:A:C6	30:0:1493:A:C6	3.06	0.43
30:0:149:G:H2'	30:0:150:G:H5'	2.00	0.43
30:0:1588:G:C6	30:0:1589:G:C6	3.06	0.43
30:0:1592:G:C2	30:0:1593:C:N3	2.86	0.43
30:0:1689:A:OP2	30:0:1689:A:H8	2.01	0.43
30:0:1886:A:C5	30:0:1887:U:C6	3.06	0.43
30:0:1886:A:C5	30:0:1887:U:C5	3.06	0.43
30:0:1901:G:O2'	30:0:1902:G:H5'	2.18	0.43
30:0:419:A:H1'	30:0:1921:A:C2	2.53	0.43
30:0:1925:G:N2	30:0:1926:G:H1'	2.33	0.43
30:0:1947:G:C8	30:0:1947:G:C3'	3.02	0.43
30:0:830:G:N2	30:0:2022:A:C2	2.86	0.43
30:0:2114:C:H2'	30:0:2115:U:H6	1.83	0.43
30:0:2317:C:C5	30:0:2318:C:N4	2.85	0.43
30:0:2374:G:C6	30:0:2375:A:C6	3.05	0.43
30:0:23:G:O5'	30:0:23:G:H8	2.00	0.43
30:0:2456:A:O2'	30:0:2457:U:H5'	2.18	0.43
30:0:2555:C:O5'	30:0:2555:C:H6	2.02	0.43
2:B:247:VAL:HB	30:0:2654:C:H1'	1.99	0.43
30:0:564:G:H2'	30:0:565:A:OP2	2.18	0.43
30:0:647:U:H2'	30:0:648:G:O4'	2.17	0.43
30:0:681:G:N3	30:0:681:G:H2'	2.33	0.43
30:0:816:G:C5	30:0:817:G:C6	3.07	0.43
13:M:83:SER:O	29:3:46:ILE:HG22	2.18	0.43
2:B:85:ARG:NH1	2:B:143:ILE:HD11	2.33	0.43
2:B:320:GLN:HA	2:B:321:PRO:HD3	1.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:16:VAL:HG12	3:C:17:ASP:H	1.83	0.43
4:D:104:PHE:CE2	4:D:132:VAL:HB	2.52	0.43
5:E:11:VAL:HA	5:E:23:GLU:O	2.17	0.43
30:0:1018:A:C6	30:0:1019:C:C4	3.07	0.43
30:0:1209:C:C2	30:0:1210:G:C8	3.06	0.43
30:0:1279:U:H5'	30:0:1280:A:OP2	2.19	0.43
30:0:1319:G:H1'	38:0:4649:HOH:O	2.18	0.43
30:0:1345:A:C4	30:0:1346:U:C5	3.07	0.43
30:0:13:G:H2'	30:0:14:C:C6	2.52	0.43
30:0:1646:G:C2	30:0:1647:G:C8	3.06	0.43
2:B:239:LEU:HD12	30:0:2093:G:P	2.58	0.43
30:0:210:U:H2'	30:0:211:U:H6	1.83	0.43
30:0:2121:G:H5''	38:0:6487:HOH:O	2.17	0.43
30:0:2587:OMU:HM22	30:0:2589:U:C6	2.53	0.43
30:0:343:C:O2'	30:0:344:C:H5'	2.18	0.43
30:0:283:U:O2'	30:0:368:C:C6	2.70	0.43
20:T:2:LYS:HG2	30:0:447:A:OP1	2.18	0.43
30:0:54:G:C4	30:0:55:U:C6	3.06	0.43
30:0:669:G:C5	30:0:670:G:N7	2.87	0.43
30:0:712:C:C5	30:0:714:U:C5	3.07	0.43
30:0:755:G:H5''	38:0:4855:HOH:O	2.18	0.43
28:2:2:LYS:HG3	30:0:1486:A:C4	2.54	0.43
31:9:33:U:H2'	38:9:3797:HOH:O	2.17	0.43
31:9:79:U:C2'	31:9:79:U:O2	2.66	0.43
10:J:53:ILE:O	10:J:57:TYR:HD1	2.00	0.43
14:N:38:LYS:HE3	14:N:38:LYS:HB2	1.86	0.43
17:Q:47:VAL:HA	17:Q:48:PRO:HD3	1.78	0.43
20:T:48:VAL:HG21	20:T:96:VAL:CG1	2.45	0.43
30:0:1032:A:N3	30:0:1032:A:H2'	2.33	0.43
30:0:114:A:H5''	38:0:9745:HOH:O	2.17	0.43
30:0:1166:A:OP2	30:0:1174:A:H4'	2.17	0.43
30:0:1270:U:H2'	30:0:1271:A:C8	2.53	0.43
30:0:1502:A:C3'	38:0:9624:HOH:O	2.64	0.43
30:0:1595:G:C2	30:0:1600:G:C2	3.06	0.43
30:0:1688:G:C6	30:0:1692:C:C6	3.06	0.43
30:0:1711:A:C6	30:0:1712:A:N7	2.86	0.43
30:0:222:A:C4	30:0:223:G:H1'	2.53	0.43
13:M:70:GLY:CA	30:0:2263:G:H4'	2.46	0.43
30:0:2511:A:H3'	30:0:2512:U:H6	1.81	0.43
30:0:2711:U:H4'	38:0:6212:HOH:O	2.18	0.43
30:0:2750:G:C5	30:0:2751:C:C4	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2834:G:H2'	30:0:2835:C:O5'	2.17	0.43
30:0:2854:A:N1	30:0:2905:A:C5	2.86	0.43
30:0:2895:C:O2'	30:0:2896:A:H5''	2.18	0.43
30:0:562:A:C2	30:0:563:C:C2	3.05	0.43
30:0:584:U:N3	30:0:585:C:C5	2.86	0.43
30:0:842:C:H5'	38:0:6855:HOH:O	2.19	0.43
28:2:41:HIS:O	28:2:45:ASN:HB2	2.18	0.43
38:M:8824:HOH:O	29:3:48:ASN:HB2	2.18	0.43
1:A:89:ALA:HB3	1:A:92:ASN:ND2	2.33	0.43
3:C:135:GLU:HB3	38:C:8572:HOH:O	2.18	0.43
3:C:35:VAL:HG11	3:C:227:GLY:N	2.33	0.43
5:E:82:TYR:CD1	5:E:141:VAL:HG12	2.53	0.43
17:Q:58:GLY:HA2	30:0:951:A:O4'	2.17	0.43
18:R:60:LYS:HA	18:R:75:TRP:NE1	2.33	0.43
20:T:44:ALA:HA	20:T:62:VAL:O	2.18	0.43
24:X:22:ASN:OD1	24:X:25:ARG:HD2	2.18	0.43
30:0:1331:G:HO2'	30:0:1332:C:H5'	1.82	0.43
30:0:1455:C:O2'	30:0:1456:C:H5'	2.19	0.43
30:0:1478:U:H2'	30:0:1479:G:C8	2.53	0.43
30:0:1498:G:O2'	30:0:1499:U:H5'	2.18	0.43
30:0:1590:A:C5	30:0:1606:A:N7	2.86	0.43
30:0:1610:G:N1	30:0:1611:G:C5	2.87	0.43
30:0:1615:A:H4'	38:0:5813:HOH:O	2.18	0.43
30:0:1666:C:C2	30:0:1667:A:N7	2.85	0.43
30:0:1768:C:C5	30:0:1769:C:C5	3.06	0.43
30:0:2248:C:C2	30:0:2254:G:N2	2.86	0.43
30:0:236:A:H1'	30:0:237:G:O4'	2.18	0.43
30:0:2385:G:C4	30:0:2386:U:C5	3.07	0.43
30:0:2407:G:N2	30:0:2408:A:N3	2.67	0.43
30:0:2504:A:H2'	30:0:2505:G:O4'	2.18	0.43
30:0:2507:G:O6	30:0:2511:A:H4'	2.19	0.43
30:0:2784:A:O5'	30:0:2784:A:H8	2.02	0.43
30:0:309:C:H42	30:0:322:G:H1	1.66	0.43
29:3:42:ARG:HH11	30:0:396:U:H5'	1.78	0.43
30:0:577:G:C2	30:0:581:G:C5	3.06	0.43
30:0:657:G:H2'	30:0:658:C:C6	2.53	0.43
30:0:660:A:N7	30:0:746:A:C5	2.87	0.43
30:0:77:G:H2'	30:0:78:G:H5'	2.00	0.43
29:3:40:ARG:HG3	29:3:52:PHE:HD2	1.84	0.43
31:9:49:G:C2'	31:9:50:G:C5'	2.96	0.43
2:B:294:TYR:HE2	38:B:9132:HOH:O	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1:PRO:O	2:B:2:GLN:HB2	2.19	0.43
2:B:302:PRO:HA	30:0:2717:C:H5'	2.01	0.43
3:C:157:LEU:HD11	3:C:194:PHE:HZ	1.84	0.43
4:D:65:GLU:HA	38:D:213:HOH:O	2.18	0.43
14:N:151:ASP:OD1	14:N:166:ALA:HA	2.19	0.43
15:O:14:LEU:CD2	15:O:102:ILE:HD11	2.48	0.43
20:T:41:ARG:HG2	20:T:41:ARG:NH1	2.33	0.43
20:T:77:VAL:HG12	20:T:89:ARG:HB3	2.01	0.43
23:W:60:GLU:O	23:W:63:GLU:HB2	2.18	0.43
30:0:1185:U:H3'	38:0:5640:HOH:O	2.17	0.43
30:0:1595:G:HO2'	30:0:1596:U:H5'	1.83	0.43
30:0:180:G:H2'	30:0:181:G:H5'	1.99	0.43
30:0:1831:U:O2	30:0:1831:U:H2'	2.18	0.43
30:0:1936:C:C2	30:0:1937:U:C5	3.06	0.43
30:0:1999:C:O2'	30:0:2000:G:H5'	2.19	0.43
30:0:2073:G:C6	30:0:2607:U:C2	3.07	0.43
30:0:2135:A:C2	30:0:2241:C:C2	3.07	0.43
30:0:250:C:O2'	30:0:251:C:H5'	2.19	0.43
30:0:2552:C:C6	30:0:2577:A:N7	2.87	0.43
30:0:2687:G:C2'	30:0:2688:U:H5'	2.49	0.43
30:0:2726:U:H5''	30:0:2749:U:H3	1.83	0.43
30:0:241:A:C2	30:0:378:A:H4'	2.54	0.43
30:0:54:G:C5	30:0:55:U:C5	3.07	0.43
30:0:567:U:H5''	38:0:5240:HOH:O	2.18	0.43
15:O:25:VAL:CG1	30:0:709:G:O2'	2.66	0.43
30:0:745:G:H4'	30:0:746:A:OP1	2.19	0.43
30:0:968:G:H2'	30:0:969:G:O4'	2.18	0.43
27:1:16:HIS:HD2	30:0:470:U:O2'	2.02	0.43
31:9:39:U:C2'	31:9:40:C:OP1	2.67	0.43
2:B:209:LYS:HB2	2:B:257:THR:O	2.19	0.43
2:B:279:THR:OG1	2:B:290:VAL:O	2.34	0.43
4:D:146:LYS:NZ	14:N:107:ASN:HD21	2.17	0.43
14:N:154:LEU:CD1	14:N:157:PRO:HA	2.47	0.43
20:T:32:ARG:NH1	20:T:38:ARG:HH12	2.16	0.43
21:U:52:THR:CG2	21:U:54:THR:H	2.29	0.43
23:W:23:MET:O	30:0:1025:C:H5'	2.18	0.43
23:W:27:HIS:HB2	23:W:28:HIS:HD2	1.84	0.43
24:X:60:ALA:HA	38:0:7363:HOH:O	2.17	0.43
30:0:1020:A:O2'	30:0:1021:G:H5'	2.18	0.43
30:0:1021:G:H2'	30:0:1022:A:H8	1.82	0.43
30:0:1087:G:C8	33:0:8822:CL:CL	3.09	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1059:G:C6	30:0:1127:C:C2	3.07	0.43
30:0:1449:G:N3	30:0:1493:A:C2	2.87	0.43
16:P:37:ARG:NE	30:0:1500:U:C5	2.87	0.43
30:0:1513:C:H2'	30:0:1513:C:O2	2.17	0.43
30:0:204:A:H2'	30:0:205:U:H5'	2.00	0.43
30:0:2471:G:C2	30:0:2472:C:C6	3.06	0.43
30:0:2538:A:C3'	38:0:9174:HOH:O	2.66	0.43
30:0:2667:G:O2'	30:0:2668:G:H5'	2.19	0.43
30:0:2679:G:H2'	30:0:2680:A:H3'	1.99	0.43
30:0:26:U:H2'	30:0:27:U:C6	2.53	0.43
30:0:2887:G:H2'	30:0:2888:U:O4'	2.19	0.43
30:0:2903:C:O5'	30:0:2903:C:H6	2.02	0.43
30:0:298:C:C4	30:0:299:U:C5	3.07	0.43
30:0:344:C:H2'	30:0:345:G:O4'	2.19	0.43
30:0:392:U:O2	30:0:398:U:C2	2.72	0.43
30:0:541:C:C2'	30:0:542:A:C5'	2.84	0.43
30:0:732:C:H2'	30:0:733:U:C6	2.54	0.43
1:A:99:ILE:O	1:A:131:HIS:HE1	2.02	0.43
1:A:85:SER:HA	38:A:9033:HOH:O	2.17	0.43
3:C:165:ASP:O	3:C:168:ARG:HB3	2.18	0.43
3:C:214:THR:HG22	3:C:216:SER:OG	2.18	0.43
4:D:12:GLU:O	4:D:15:GLU:HG2	2.18	0.43
11:K:81:ARG:HB2	11:K:87:ARG:NH1	2.33	0.43
15:O:112:ARG:HH11	30:0:709:G:N2	2.16	0.43
25:Y:109:LEU:HD11	25:Y:181:GLY:HA3	2.00	0.43
26:Z:71:VAL:HG22	26:Z:88:PHE:HE2	1.84	0.43
30:0:1308:A:H2'	30:0:1309:U:H6	1.83	0.43
30:0:1549:C:C2'	30:0:1550:A:H5'	2.48	0.43
30:0:1673:U:C5'	38:0:3233:HOH:O	2.66	0.43
30:0:1706:G:H3'	30:0:1707:G:C8	2.54	0.43
30:0:1928:C:C2	30:0:1929:G:C8	3.07	0.43
30:0:2038:A:C2	30:0:2039:A:N7	2.87	0.43
30:0:24:G:C4	30:0:518:G:N2	2.86	0.43
30:0:2687:G:H1	30:0:2707:C:H42	1.67	0.43
30:0:2702:A:H2'	30:0:2702:A:N3	2.34	0.43
30:0:2775:A:H2'	30:0:2776:A:C8	2.53	0.43
30:0:2855:G:C2	30:0:2904:U:O2	2.72	0.43
30:0:2869:G:H2'	30:0:2870:C:O4'	2.19	0.43
30:0:429:A:H8	38:0:3806:HOH:O	1.97	0.43
30:0:433:C:H1'	38:0:3008:HOH:O	2.18	0.43
29:3:1:MET:HA	30:0:2320:U:P	2.59	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:11:ARG:HD3	31:9:114:G:O6	2.19	0.43
31:9:45:A:C8	31:9:46:C:C5	3.07	0.43
31:9:59:C:H1'	38:9:2772:HOH:O	2.17	0.43
2:B:278:PRO:HD3	2:B:294:TYR:CZ	2.54	0.43
5:E:68:HIS:CE1	38:E:5919:HOH:O	2.71	0.43
6:F:19:ALA:O	6:F:22:VAL:HG22	2.18	0.43
13:M:95:LYS:HA	13:M:170:ASN:ND2	2.26	0.43
20:T:26:THR:HB	30:0:343:C:OP1	2.19	0.43
21:U:34:SER:HA	21:U:37:GLU:HB2	2.00	0.43
22:V:39:ALA:C	22:V:41:GLU:H	2.21	0.43
30:0:1216:G:C2	30:0:1217:G:N9	2.87	0.43
30:0:1668:U:H2'	30:0:1669:G:H8	1.84	0.43
30:0:1679:C:N4	38:0:6168:HOH:O	2.51	0.43
30:0:1476:A:HO2'	30:0:1867:G:C2'	2.31	0.43
30:0:2237:G:H1'	30:0:2238:A:N7	2.34	0.43
30:0:2128:G:H1	30:0:2265:U:H3	1.67	0.43
30:0:2297:U:C2'	30:0:2298:C:H5'	2.48	0.43
30:0:2506:A:C4	38:0:5977:HOH:O	2.69	0.43
30:0:2582:G:C2	30:0:2583:A:C8	3.07	0.43
30:0:2803:C:H2'	30:0:2804:C:C5'	2.49	0.43
30:0:2672:C:C2	30:0:2818:A:C2	3.07	0.43
30:0:282:C:H2'	30:0:283:U:C5'	2.49	0.43
2:B:156:LYS:HE3	30:0:2846:C:H5''	2.01	0.43
30:0:2854:A:C2	30:0:2905:A:C4	3.06	0.43
30:0:441:A:O5'	30:0:441:A:C8	2.70	0.43
30:0:559:U:C6	30:0:559:U:C3'	3.01	0.43
30:0:594:C:C4	30:0:595:U:C4	3.06	0.43
30:0:795:G:H1'	30:0:817:G:N2	2.34	0.43
31:9:11:A:C2	31:9:69:U:O4'	2.72	0.43
31:9:4:G:C6	31:9:120:A:C2	3.06	0.43
1:A:59:GLU:HA	1:A:64:ASP:O	2.19	0.43
2:B:79:MET:HB3	2:B:145:HIS:O	2.18	0.43
13:M:48:LYS:HE3	13:M:52:GLN:HE21	1.83	0.43
13:M:70:GLY:CA	13:M:73:ARG:HH12	2.32	0.43
15:O:51:TYR:CD1	30:0:721:A:C4'	2.96	0.43
25:Y:154:ARG:NH1	25:Y:154:ARG:HG2	2.34	0.43
26:Z:72:ASP:HA	38:Z:8728:HOH:O	2.18	0.43
30:0:1151:G:H1'	30:0:1215:A:N6	2.34	0.43
27:1:18:LYS:HE2	30:0:121:U:O4	2.19	0.43
18:R:62:HIS:HB3	30:0:1370:G:O5'	2.18	0.43
30:0:149:G:H2'	30:0:150:G:C5'	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1571:G:H2'	30:0:1624:A:H61	1.83	0.43
30:0:169:A:O2'	30:0:170:U:H6	2.01	0.43
30:0:2295:G:N3	30:0:2361:A:C2	2.87	0.43
30:0:2602:G:H2'	30:0:2603:G:C8	2.54	0.43
30:0:2629:C:C2	30:0:2635:A:C2	3.07	0.43
30:0:2757:A:O2'	30:0:2758:G:H5'	2.19	0.43
30:0:2784:A:C5	30:0:2785:C:C5	3.07	0.43
5:E:60:SER:OG	30:0:2784:A:H1'	2.19	0.43
30:0:301:C:C2'	30:0:301:C:O2	2.67	0.43
30:0:320:G:C6	30:0:321:A:C6	3.07	0.43
30:0:54:G:N3	30:0:55:U:C6	2.86	0.43
30:0:810:G:C4	30:0:811:C:C5	3.07	0.43
30:0:834:G:C4'	30:0:835:U:OP2	2.67	0.43
31:9:39:U:H2'	31:9:40:C:OP1	2.18	0.43
1:A:94:LEU:HD12	1:A:98:GLU:HB3	1.99	0.43
2:B:101:TRP:H	2:B:119:HIS:CD2	2.37	0.43
13:M:155:GLN:HA	13:M:155:GLN:HE21	1.83	0.43
16:P:16:VAL:HG12	16:P:17:GLY:N	2.34	0.43
19:S:57:THR:C	19:S:59:ASP:H	2.22	0.43
22:V:39:ALA:N	22:V:40:PRO:CD	2.78	0.43
24:X:56:GLU:HG2	30:0:1400:C:H4'	2.01	0.43
30:0:1154:A:H2'	30:0:1155:G:H8	1.84	0.42
30:0:1176:C:H6	30:0:1176:C:O5'	2.02	0.42
30:0:1209:C:O2'	30:0:1210:G:C5'	2.67	0.42
30:0:1568:G:H2'	30:0:1569:U:O4'	2.18	0.42
30:0:160:A:C4	30:0:177:A:C2	3.07	0.42
30:0:1522:A:C2	30:0:1665:G:C6	3.06	0.42
30:0:1855:G:H4'	30:0:1856:C:C5'	2.49	0.42
30:0:1972:U:C2'	30:0:1973:A:H5'	2.45	0.42
30:0:2097:G:C2	30:0:2098:C:C6	3.07	0.42
30:0:2253:G:C4	30:0:2254:G:C8	3.06	0.42
30:0:2279:G:H2'	30:0:2280:A:O4'	2.19	0.42
8:H:120:PHE:CE1	30:0:2311:A:H5'	2.54	0.42
30:0:23:G:H1'	30:0:520:A:H61	1.84	0.42
30:0:245:C:C2'	30:0:246:G:H5'	2.47	0.42
30:0:2503:A:H2	30:0:2517:A:N7	2.16	0.42
30:0:2763:G:C2	30:0:2764:C:C2	3.06	0.42
30:0:2864:U:C5	30:0:2865:G:C6	3.07	0.42
30:0:820:G:C5'	30:0:821:U:H5'	2.49	0.42
30:0:852:U:O2'	30:0:853:C:H5'	2.18	0.42
27:1:26:SER:O	27:1:34:CYS:HA	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:9:78:G:N2	31:9:102:G:H2'	2.34	0.42
2:B:75:GLU:C	2:B:77:PRO:HD3	2.39	0.42
4:D:35:ALA:N	38:D:202:HOH:O	2.51	0.42
5:E:137:ASP:O	5:E:141:VAL:HG23	2.19	0.42
5:E:119:HIS:HB2	5:E:144:THR:OG1	2.19	0.42
5:E:15:GLN:HG2	5:E:16:ASP:N	2.34	0.42
5:E:7:ILE:HG12	5:E:45:ASP:O	2.19	0.42
8:H:19:ARG:NH2	30:0:1008:C:OP1	2.51	0.42
12:L:1:THR:HB	12:L:6:ARG:NH1	2.34	0.42
12:L:26:HIS:O	30:0:925:C:H5'	2.19	0.42
13:M:134:ILE:HG23	13:M:141:ILE:HD13	2.00	0.42
13:M:46:LEU:O	13:M:50:ARG:HG3	2.19	0.42
14:N:37:ARG:NH1	31:9:6:C:OP1	2.53	0.42
19:S:11:THR:HG22	30:0:1444:G:H5''	2.00	0.42
19:S:11:THR:H	19:S:14:ALA:HB3	1.84	0.42
20:T:51:LEU:O	20:T:52:ARG:HD3	2.19	0.42
22:V:27:LEU:HB2	22:V:49:LEU:HD22	2.01	0.42
23:W:17:ILE:HG21	23:W:51:PHE:CE1	2.54	0.42
30:0:113:A:P	38:0:9745:HOH:O	2.76	0.42
30:0:1265:G:H1'	38:0:4953:HOH:O	2.18	0.42
30:0:1281:C:C5	30:0:1282:U:C5	3.08	0.42
30:0:1310:U:H2'	30:0:1311:G:O5'	2.18	0.42
30:0:1332:C:O5'	30:0:1332:C:H6	2.01	0.42
25:Y:208:LYS:HZ1	30:0:1343:C:H1'	1.78	0.42
30:0:1365:C:O2'	30:0:1366:C:H5'	2.19	0.42
30:0:1462:C:H2'	30:0:1463:U:C6	2.55	0.42
30:0:1483:C:C2'	30:0:1484:G:C5'	2.96	0.42
30:0:1540:G:C5	30:0:1541:G:C8	3.08	0.42
30:0:1727:G:H1	30:0:2048:C:H42	1.67	0.42
30:0:1741:U:C4	30:0:2033:G:N7	2.87	0.42
30:0:1973:A:C2'	30:0:1974:G:O5'	2.67	0.42
30:0:1991:A:H2'	30:0:1992:U:C6	2.54	0.42
30:0:2038:A:C2	30:0:2039:A:C5	3.07	0.42
30:0:2323:G:H5''	38:0:4740:HOH:O	2.19	0.42
30:0:2382:A:H2'	30:0:2383:G:O4'	2.19	0.42
30:0:2587:OMU:H2'	30:0:2589:U:H5''	2.01	0.42
30:0:2793:A:C2'	30:0:2794:G:H5'	2.48	0.42
30:0:2900:G:H2'	30:0:2901:C:O4'	2.19	0.42
30:0:317:A:H5'	38:0:3704:HOH:O	2.18	0.42
30:0:377:C:O2'	30:0:378:A:H5'	2.19	0.42
30:0:39:G:C2	30:0:444:C:N3	2.86	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:474:C:H1'	38:0:9542:HOH:O	2.18	0.42
30:0:640:G:H1'	38:0:9035:HOH:O	2.19	0.42
29:3:8:ASN:HA	29:3:19:GLU:HA	2.00	0.42
31:9:1:U:H5''	31:9:3:A:OP1	2.19	0.42
3:C:46:TYR:CE2	3:C:98:ARG:NH1	2.87	0.42
8:H:123:ILE:H	8:H:123:ILE:CD1	2.25	0.42
10:J:116:LEU:HB2	10:J:119:THR:HG21	2.01	0.42
10:J:6:PHE:HB3	10:J:109:TYR:OH	2.19	0.42
11:K:74:VAL:HG21	11:K:96:VAL:CG2	2.48	0.42
13:M:70:GLY:HA3	13:M:73:ARG:NH2	2.34	0.42
19:S:49:VAL:HG13	19:S:66:VAL:HG13	2.01	0.42
24:X:85:VAL:HG12	24:X:86:GLU:H	1.83	0.42
25:Y:145:LYS:O	25:Y:147:ARG:HG2	2.19	0.42
1:A:76:VAL:HG23	26:Z:87:LYS:O	2.19	0.42
30:0:1084:C:H2'	30:0:1085:C:H6	1.84	0.42
30:0:1323:G:C2	30:0:1324:G:C8	3.08	0.42
30:0:1592:G:HO2'	30:0:1593:C:C4'	2.32	0.42
30:0:1873:G:H3'	38:0:5163:HOH:O	2.19	0.42
30:0:191:A:N1	30:0:236:A:O2'	2.43	0.42
30:0:1948:G:C6	30:0:1949:G:C6	3.07	0.42
30:0:2269:C:H2'	30:0:2270:G:C5'	2.49	0.42
30:0:241:A:OP2	30:0:269:G:N2	2.49	0.42
30:0:2453:G:O2'	30:0:2454:C:H5'	2.19	0.42
30:0:2663:U:C4	30:0:2664:A:C6	3.07	0.42
30:0:272:A:C2	30:0:369:G:H5''	2.54	0.42
30:0:2738:G:O2'	30:0:2739:A:H5'	2.19	0.42
30:0:2881:C:O5'	30:0:2881:C:H6	2.01	0.42
30:0:291:C:C2'	30:0:292:G:H5'	2.49	0.42
28:2:37:HIS:CE1	30:0:462:A:C8	3.08	0.42
30:0:713:U:H6	30:0:713:U:O5'	2.01	0.42
30:0:869:G:OP2	30:0:869:G:C8	2.73	0.42
29:3:60:LYS:C	29:3:62:THR:H	2.22	0.42
29:3:24:LYS:HG2	33:3:8804:CL:CL	2.56	0.42
1:A:95:PRO:HD3	1:A:153:ARG:HG2	2.00	0.42
2:B:175:LEU:C	2:B:175:LEU:HD23	2.39	0.42
10:J:77:GLY:O	10:J:80:LYS:N	2.53	0.42
12:L:51:PHE:HE1	12:L:53:ARG:HG3	1.85	0.42
18:R:4:TYR:HA	18:R:144:GLU:OE2	2.19	0.42
23:W:5:VAL:HG11	23:W:153:MET:HE1	2.01	0.42
24:X:51:ASP:HB3	24:X:85:VAL:O	2.18	0.42
24:X:69:LYS:O	24:X:70:ILE:HB	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:100:C:C6	30:0:101:C:C5	3.06	0.42
7:G:16:LYS:NZ	30:0:1151:G:OP1	2.49	0.42
30:0:1165:G:N2	30:0:1173:A:H5''	2.32	0.42
30:0:1206:U:C6	30:0:1206:U:C4'	3.02	0.42
30:0:129:A:O2'	30:0:131:A:OP1	2.37	0.42
30:0:1334:C:O2'	30:0:1335:C:H5'	2.19	0.42
30:0:1904:A:H3'	30:0:1905:U:H6	1.84	0.42
30:0:2113:G:C6	30:0:2114:C:C4	3.08	0.42
30:0:2278:U:C5'	38:0:9472:HOH:O	2.65	0.42
30:0:2471:G:C2	30:0:2472:C:C5	3.07	0.42
30:0:25:A:C2'	30:0:26:U:H5'	2.50	0.42
1:A:204:GLY:N	30:0:2634:G:OP2	2.52	0.42
30:0:2669:U:C2	30:0:2670:G:C8	3.07	0.42
30:0:2694:A:H3'	30:0:2695:C:H6	1.83	0.42
30:0:2833:C:O2'	30:0:2834:G:H5'	2.19	0.42
30:0:2866:U:O2	30:0:2891:A:C8	2.72	0.42
30:0:451:C:C5	30:0:452:G:N7	2.88	0.42
30:0:500:G:H2'	30:0:501:G:H8	1.84	0.42
30:0:623:U:H2'	30:0:624:U:H6	1.84	0.42
25:Y:138:ARG:HB3	30:0:638:C:P	2.59	0.42
30:0:844:A:C2	30:0:882:A:C4	3.07	0.42
29:3:11:CYS:HA	29:3:12:PRO:HD2	1.90	0.42
29:3:69:TYR:CD1	29:3:78:HIS:O	2.72	0.42
31:9:34:A:H2'	31:9:35:C:O4'	2.19	0.42
31:9:60:C:H6	31:9:60:C:O5'	2.02	0.42
2:B:106:HIS:CE1	2:B:147:VAL:HG13	2.54	0.42
2:B:298:LYS:HD3	38:B:9105:HOH:O	2.18	0.42
2:B:85:ARG:NH2	30:0:2671:U:O2	2.52	0.42
3:C:193:LEU:HA	3:C:211:ASP:O	2.19	0.42
4:D:25:MET:HG2	4:D:128:LEU:HA	2.00	0.42
5:E:24:GLY:N	5:E:76:VAL:HB	2.34	0.42
6:F:48:VAL:HG12	6:F:97:ALA:HB2	2.01	0.42
8:H:53:ILE:HD12	8:H:165:ARG:HD2	2.01	0.42
11:K:98:VAL:HG22	11:K:102:GLU:C	2.40	0.42
13:M:73:ARG:HG3	30:0:1864:C:O2'	2.19	0.42
13:M:70:GLY:N	13:M:73:ARG:HH12	2.17	0.42
15:O:98:LEU:O	15:O:102:ILE:HG13	2.20	0.42
18:R:98:ASN:HD21	30:0:500:G:N2	2.12	0.42
23:W:88:THR:HG23	23:W:110:GLN:HE21	1.84	0.42
25:Y:189:ASN:N	25:Y:192:ASP:OD2	2.53	0.42
26:Z:35:SER:HB3	26:Z:38:PHE:CE1	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1152:A:H2	30:0:1216:G:N3	2.18	0.42
30:0:1266:U:H2'	30:0:1267:C:C6	2.54	0.42
30:0:1278:A:O5'	30:0:1278:A:H8	2.01	0.42
30:0:1523:G:H2'	30:0:1524:U:C5	2.43	0.42
30:0:1495:C:C1'	30:0:1573:A:H1'	2.48	0.42
30:0:1723:G:H2'	38:0:9626:HOH:O	2.19	0.42
30:0:1750:C:C5'	38:0:3647:HOH:O	2.62	0.42
30:0:1765:G:C6	30:0:1766:U:C4	3.07	0.42
30:0:2048:C:C5'	38:0:9234:HOH:O	2.67	0.42
18:R:69:LYS:NZ	30:0:2049:C:OP1	2.50	0.42
30:0:2128:G:C4	30:0:2129:U:C6	3.07	0.42
30:0:2321:A:C5	30:0:2323:G:C8	3.08	0.42
30:0:2323:G:N2	38:0:6034:HOH:O	2.51	0.42
29:3:10:TYR:HD1	30:0:2408:A:HO2'	1.61	0.42
30:0:2414:A:C2	30:0:2415:A:C6	3.07	0.42
30:0:2471:G:C5	30:0:2472:C:C5	3.08	0.42
30:0:2861:G:C6	30:0:2862:G:N7	2.88	0.42
21:U:56:ARG:CB	30:0:2890:A:H8	2.30	0.42
30:0:2898:G:O2'	30:0:2899:A:H5'	2.18	0.42
30:0:499:G:H2'	30:0:500:G:O4'	2.19	0.42
30:0:60:A:N3	30:0:61:G:C8	2.88	0.42
30:0:85:C:H3'	30:0:86:A:H2'	2.02	0.42
30:0:939:A:N1	30:0:1027:G:O2'	2.39	0.42
30:0:965:A:C2	30:0:1004:C:C2	3.08	0.42
29:3:46:ILE:HA	38:0:7804:HOH:O	2.19	0.42
31:9:44:A:H2'	31:9:45:A:O4'	2.19	0.42
31:9:88:G:C2	31:9:96:C:O2	2.72	0.42
1:A:94:LEU:HG	1:A:99:ILE:CD1	2.50	0.42
5:E:112:ALA:HA	5:E:113:PRO:HD3	1.87	0.42
5:E:131:LEU:HD12	5:E:166:VAL:HG11	2.02	0.42
10:J:74:ARG:CB	10:J:74:ARG:HH11	2.32	0.42
13:M:106:SER:HB2	13:M:114:VAL:CG2	2.49	0.42
13:M:120:VAL:CG1	13:M:130:GLU:HG3	2.49	0.42
13:M:118:TYR:CZ	13:M:130:GLU:HB2	2.54	0.42
30:0:1023:C:H2'	30:0:1024:G:C8	2.55	0.42
30:0:1713:G:N2	30:0:2735:U:H5'	2.35	0.42
30:0:1768:C:C5	30:0:1769:C:C4	3.07	0.42
21:U:42:LEU:HD22	30:0:1810:C:C1'	2.49	0.42
1:A:169:PHE:HB2	30:0:1847:A:H4'	2.02	0.42
30:0:1942:A:C2'	30:0:1943:C:O5'	2.68	0.42
30:0:2117:U:O2	30:0:2117:U:H2'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2383:G:N2	30:0:2406:U:C2	2.87	0.42
30:0:2809:G:H2'	30:0:2810:G:O4'	2.19	0.42
30:0:500:G:C4	30:0:501:G:C8	3.08	0.42
30:0:656:G:H2'	30:0:657:G:H8	1.85	0.42
30:0:667:C:C2	30:0:668:C:C5	3.08	0.42
12:L:109:LEU:HD11	30:0:697:G:C2	2.54	0.42
30:0:796:A:C2	30:0:797:A:C4	3.08	0.42
30:0:810:G:H2'	30:0:811:C:O4'	2.20	0.42
2:B:17:LYS:HB2	30:0:2657:G:OP1	2.19	0.42
2:B:265:LEU:HD21	2:B:316:ARG:HD3	2.01	0.42
3:C:67:GLN:NE2	3:C:72:LYS:NZ	2.68	0.42
3:C:93:LYS:O	3:C:98:ARG:NH2	2.52	0.42
8:H:49:GLN:NE2	8:H:170:ARG:HE	2.14	0.42
19:S:11:THR:HA	38:S:8963:HOH:O	2.19	0.42
24:X:47:ALA:HB1	24:X:82:GLU:HB3	2.02	0.42
24:X:49:ARG:HH21	30:0:1385:G:H4'	1.84	0.42
25:Y:130:ARG:HD2	38:Y:8855:HOH:O	2.20	0.42
26:Z:57:MET:HG3	26:Z:79:TRP:CH2	2.55	0.42
30:0:1332:C:O2'	30:0:1333:U:H5'	2.20	0.42
30:0:1394:C:H5	38:0:7433:HOH:O	2.02	0.42
30:0:1579:C:H1'	30:0:1580:A:C8	2.54	0.42
30:0:1545:C:N3	30:0:1641:A:N7	2.68	0.42
30:0:1667:A:H5'	30:0:1667:A:C8	2.42	0.42
30:0:1679:C:O2	30:0:1679:C:C2'	2.67	0.42
30:0:175:G:O2'	30:0:176:U:OP2	2.37	0.42
30:0:180:G:O2'	30:0:181:G:H5'	2.19	0.42
30:0:1945:G:C4	30:0:1946:C:C6	3.08	0.42
30:0:2010:A:C2'	38:0:5883:HOH:O	2.62	0.42
30:0:536:A:C6	30:0:2076:U:H5'	2.54	0.42
30:0:2082:G:H2'	30:0:2083:A:C8	2.55	0.42
30:0:2243:C:O2'	30:0:2258:A:N6	2.52	0.42
30:0:2317:C:C4	30:0:2318:C:C4	3.08	0.42
30:0:2415:A:C3'	30:0:2416:G:H5'	2.48	0.42
30:0:2637:A:C4'	38:0:4332:HOH:O	2.66	0.42
30:0:2734:G:O2'	30:0:2735:U:H5'	2.20	0.42
30:0:2764:C:O2'	30:0:2765:C:H5'	2.18	0.42
30:0:2786:G:O2'	30:0:2787:C:H5'	2.19	0.42
30:0:2831:C:C2	30:0:2910:A:C2	3.07	0.42
30:0:2757:A:C4	30:0:2896:A:C2	3.07	0.42
30:0:322:G:C2	30:0:323:C:C2	3.07	0.42
30:0:710:G:C2'	30:0:711:G:H5'	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:758:A:H2'	30:0:759:C:O4'	2.20	0.42
1:A:27:LEU:HD21	1:A:55:VAL:HG21	2.02	0.42
1:A:35:GLY:O	1:A:36:ASP:HB3	2.20	0.42
2:B:101:TRP:HB2	2:B:119:HIS:CD2	2.55	0.42
2:B:154:VAL:HG12	2:B:156:LYS:HG2	2.02	0.42
2:B:211:THR:HG21	38:0:7356:HOH:O	2.18	0.42
2:B:216:LYS:HE2	38:B:9030:HOH:O	2.20	0.42
10:J:80:LYS:NZ	30:0:2815:G:N7	2.67	0.42
13:M:47:ASP:CG	13:M:48:LYS:N	2.73	0.42
15:O:14:LEU:HG	15:O:102:ILE:HD11	2.02	0.42
18:R:25:PHE:HA	18:R:141:VAL:HG21	2.01	0.42
18:R:18:LEU:HA	18:R:18:LEU:HD23	1.86	0.42
19:S:23:LYS:HE2	38:0:4624:HOH:O	2.19	0.42
20:T:102:ASP:O	20:T:103:LEU:HD23	2.19	0.42
30:0:1028:U:H5'	30:0:1031:G:O4'	2.19	0.42
30:0:1202:A:C8	30:0:1203:G:C5	3.08	0.42
30:0:1325:G:H2'	30:0:1326:C:H6	1.85	0.42
30:0:1562:C:N4	38:0:5793:HOH:O	2.51	0.42
30:0:1669:G:O2'	30:0:1670:A:H5'	2.19	0.42
30:0:1805:G:C2'	30:0:1806:G:H5'	2.50	0.42
30:0:188:C:H1'	38:0:9585:HOH:O	2.20	0.42
30:0:1930:A:O2'	30:0:1931:A:H5'	2.19	0.42
30:0:210:U:H2'	30:0:211:U:C6	2.55	0.42
30:0:214:U:H5'	38:0:6061:HOH:O	2.20	0.42
30:0:2249:G:C6	30:0:2253:G:O6	2.73	0.42
29:3:1:MET:CA	30:0:2319:C:H3'	2.50	0.42
29:3:1:MET:HE3	30:0:2320:U:H5	1.81	0.42
30:0:2345:A:H3'	30:0:2346:C:H5	1.84	0.42
30:0:2336:G:C6	30:0:2349:G:C6	3.08	0.42
30:0:2372:A:H2'	30:0:2373:U:O4'	2.20	0.42
30:0:2321:A:H2	30:0:2378:U:C4	2.37	0.42
12:L:57:VAL:HG11	30:0:2442:G:OP1	2.20	0.42
30:0:2527:U:O2'	30:0:2528:U:H5'	2.19	0.42
30:0:2780:C:H2'	30:0:2781:U:H6	1.83	0.42
30:0:2675:A:H1'	30:0:2813:A:C2	2.54	0.42
30:0:40:C:N4	30:0:41:G:O6	2.53	0.42
30:0:426:G:O2'	30:0:427:C:H5'	2.20	0.42
30:0:462:A:N6	30:0:477:A:H2	2.16	0.42
30:0:510:U:H4'	38:0:5151:HOH:O	2.20	0.42
30:0:533:U:C5	30:0:2812:A:H2	2.37	0.42
30:0:683:G:O2'	30:0:684:G:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:777:U:OP2	30:0:777:U:H4'	2.19	0.42
27:1:5:THR:N	27:1:6:PRO:HD2	2.34	0.42
29:3:60:LYS:O	29:3:62:THR:N	2.52	0.42
31:9:4:G:C5	31:9:120:A:C2	3.08	0.42
4:D:152:PRO:HG2	31:9:58:G:OP1	2.20	0.42
31:9:7:G:H5''	38:9:5071:HOH:O	2.20	0.42
8:H:161:THR:HG23	30:0:2521:A:OP1	2.19	0.42
12:L:136:ALA:HB3	38:L:8886:HOH:O	2.20	0.42
12:L:5:LYS:HA	12:L:5:LYS:HD2	1.85	0.42
16:P:16:VAL:HG13	16:P:20:ARG:NH1	2.34	0.42
18:R:136:TRP:CE2	30:0:2053:G:H4'	2.54	0.42
20:T:61:GLU:O	20:T:63:ILE:HG12	2.20	0.42
21:U:17:THR:HG23	30:0:2720:C:O3'	2.20	0.42
22:V:12:THR:HG23	22:V:14:ALA:H	1.84	0.42
23:W:31:HIS:HB3	38:W:5420:HOH:O	2.19	0.42
30:0:1186:C:H2'	30:0:1187:U:H5'	2.02	0.42
30:0:1324:G:C5	30:0:1325:G:N7	2.88	0.42
30:0:1407:A:O2'	30:0:1408:U:H3'	2.20	0.42
30:0:1493:A:C2'	30:0:1494:A:H5''	2.50	0.42
30:0:13:G:C2	30:0:14:C:C5	3.07	0.42
16:P:41:ARG:NH2	30:0:1500:U:OP2	2.52	0.42
30:0:151:A:H2'	30:0:152:A:O4'	2.20	0.42
30:0:1641:A:C8	30:0:1702:U:O4	2.73	0.42
30:0:1765:G:H1'	30:0:1780:G:N2	2.34	0.42
30:0:1849:G:C6	30:0:1850:U:C5	3.08	0.42
30:0:236:A:C4'	30:0:237:G:OP1	2.65	0.42
6:F:54:VAL:HG13	30:0:263:U:C5	2.55	0.42
30:0:266:G:O2'	30:0:267:G:H5'	2.20	0.42
30:0:55:U:O2'	30:0:69:A:H2'	2.20	0.42
30:0:686:A:C5	30:0:687:C:C6	3.08	0.42
30:0:700:A:O5'	30:0:701:U:H5'	2.20	0.42
30:0:735:C:C2	30:0:736:A:C1'	3.02	0.42
30:0:788:A:H2'	30:0:789:C:C6	2.55	0.42
1:A:171:LYS:HB2	30:0:820:G:N7	2.34	0.42
30:0:968:G:C2	30:0:1001:U:O2	2.72	0.42
31:9:22:G:C6	31:9:55:U:C2	3.08	0.42
1:A:173:GLY:O	1:A:176:HIS:HB3	2.20	0.42
2:B:97:LEU:HD21	2:B:127:GLN:HG2	2.02	0.42
2:B:195:ARG:HG2	2:B:323:LEU:HD22	2.00	0.42
4:D:48:MET:HE2	31:9:41:C:H5'	2.02	0.42
8:H:157:TYR:HA	8:H:160:ILE:HG12	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Z:77:GLY:CA	26:Z:92:SER:HA	2.49	0.42
30:0:1552:G:C6	30:0:1634:G:C5	3.08	0.42
30:0:1572:A:C2	30:0:1573:A:C4	3.08	0.42
30:0:1771:U:H4'	30:0:1772:C:OP2	2.20	0.42
30:0:194:A:OP2	30:0:426:G:N2	2.49	0.42
30:0:2067:A:C4	30:0:2068:G:C8	3.08	0.42
30:0:221:G:C6	30:0:222:A:C6	3.08	0.42
30:0:2286:G:H2'	30:0:2287:C:H6	1.85	0.42
30:0:1058:A:O4'	30:0:2492:U:H4'	2.20	0.42
30:0:2508:C:H3'	38:0:4505:HOH:O	2.20	0.42
30:0:2561:C:H42	30:0:2572:G:H1	1.66	0.42
30:0:2721:U:O2	30:0:2763:G:H4'	2.19	0.42
30:0:454:U:C2	38:0:9035:HOH:O	2.57	0.42
30:0:577:G:C2	30:0:581:G:C6	3.08	0.42
30:0:708:A:H2'	30:0:709:G:C8	2.54	0.42
30:0:719:C:C2'	30:0:720:G:O5'	2.68	0.42
30:0:736:A:O2'	30:0:737:A:H5'	2.19	0.42
30:0:822:C:N3	30:0:823:U:C5	2.87	0.42
30:0:824:G:N2	30:0:826:U:C5	2.87	0.42
30:0:870:G:C3'	30:0:871:G:H5''	2.50	0.42
30:0:967:U:C2	30:0:1002:G:C4	3.08	0.42
31:9:110:G:N2	31:9:111:U:H1'	2.35	0.42
2:B:280:VAL:CG1	2:B:281:ASP:N	2.82	0.42
4:D:83:PHE:CE2	4:D:87:ALA:HB2	2.55	0.42
6:F:67:ALA:HB1	6:F:72:VAL:O	2.20	0.42
13:M:49:ALA:C	13:M:54:TYR:HB3	2.40	0.42
16:P:109:ARG:HD3	16:P:119:TYR:CD1	2.55	0.42
16:P:81:LYS:O	30:0:1761:U:H5'	2.19	0.42
20:T:40:VAL:CG2	20:T:108:ARG:HH21	2.32	0.42
30:0:1033:C:H2'	30:0:1034:G:O4'	2.20	0.41
30:0:1142:C:C2	30:0:1222:A:C2	3.08	0.41
30:0:1246:A:C4	30:0:1248:A:N7	2.88	0.41
30:0:1305:C:P	38:0:9049:HOH:O	2.78	0.41
30:0:1475:G:O2'	30:0:1866:A:N1	2.42	0.41
30:0:2002:C:H2'	30:0:2003:U:C5'	2.50	0.41
30:0:2073:G:C6	30:0:2489:G:H4'	2.55	0.41
30:0:2694:A:N6	30:0:2701:G:H1'	2.35	0.41
5:E:68:HIS:CE1	30:0:2782:G:H4'	2.55	0.41
30:0:489:A:C6	30:0:490:C:C2	3.08	0.41
30:0:852:U:H5	38:0:7598:HOH:O	2.02	0.41
31:9:37:C:N3	31:9:43:G:C6	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:N:8817:HOH:O	31:9:51:A:H2'	2.20	0.41
1:A:122:SER:O	1:A:124:VAL:N	2.53	0.41
2:B:202:VAL:HG11	2:B:301:VAL:CG2	2.50	0.41
2:B:275:GLY:O	2:B:291:ASP:HA	2.20	0.41
2:B:162:MET:CE	2:B:308:LEU:HD21	2.50	0.41
2:B:69:VAL:HA	2:B:70:PRO:HD3	1.80	0.41
5:E:139:GLU:OE2	30:0:2781:U:C1'	2.65	0.41
6:F:101:ALA:HA	38:F:5413:HOH:O	2.20	0.41
8:H:12:ILE:HG23	8:H:129:ARG:NE	2.35	0.41
8:H:99:ARG:NH1	30:0:1055:G:OP2	2.53	0.41
10:J:45:VAL:HG22	10:J:46:ILE:N	2.34	0.41
11:K:113:ILE:HG22	11:K:114:ALA:N	2.35	0.41
16:P:3:LEU:HD22	16:P:31:ILE:HG22	2.02	0.41
18:R:30:ALA:HA	18:R:33:ARG:NH1	2.35	0.41
22:V:49:LEU:O	22:V:53:ILE:HG13	2.20	0.41
23:W:119:HIS:CG	38:0:5240:HOH:O	2.73	0.41
23:W:119:HIS:CD2	23:W:120:PRO:O	2.73	0.41
30:0:1023:C:H4'	38:0:6013:HOH:O	2.20	0.41
30:0:940:G:C5	30:0:1027:G:C2	3.08	0.41
30:0:1337:G:H2'	30:0:1338:U:C6	2.55	0.41
30:0:1377:C:C5	30:0:1693:A:N6	2.87	0.41
30:0:1478:U:H2'	30:0:1479:G:H8	1.82	0.41
30:0:1569:U:O2'	30:0:1633:C:H4'	2.20	0.41
30:0:1597:A:C4	30:0:1598:A:C8	3.09	0.41
30:0:168:C:C2'	30:0:169:A:H5'	2.50	0.41
30:0:2255:A:C2'	30:0:2256:G:H5'	2.50	0.41
30:0:226:A:H1'	30:0:393:G:C6	2.54	0.41
29:3:17:HIS:CB	30:0:2409:C:H4'	2.49	0.41
30:0:2512:U:C4'	30:0:2514:U:O4	2.67	0.41
30:0:25:A:H2'	30:0:26:U:C5'	2.50	0.41
30:0:2686:C:H2'	30:0:2687:G:C8	2.54	0.41
30:0:2768:A:H2'	30:0:2769:C:C6	2.56	0.41
30:0:2852:A:N7	30:0:2902:A:C6	2.88	0.41
30:0:529:G:C6	30:0:530:C:C5	3.08	0.41
30:0:685:C:O2'	30:0:748:C:OP1	2.34	0.41
30:0:178:U:H1'	30:0:771:G:O2'	2.20	0.41
30:0:84:G:C6	30:0:85:C:C4	3.08	0.41
30:0:962:C:C5	30:0:963:C:C5	3.08	0.41
31:9:36:C:H5	31:9:37:C:C4	2.38	0.41
3:C:133:ARG:HD2	38:C:8611:HOH:O	2.21	0.41
13:M:188:ARG:HD3	30:0:155:C:OP2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:42:ARG:HA	13:M:43:PRO:HD3	1.89	0.41
17:Q:76:VAL:HA	17:Q:81:GLU:HA	2.01	0.41
21:U:47:ARG:O	21:U:55:ALA:HB2	2.20	0.41
25:Y:169:ARG:HH11	30:0:1328:A:P	2.43	0.41
30:0:1504:A:O2'	30:0:1506:U:OP2	2.38	0.41
30:0:1634:G:C4	30:0:1635:U:C5	3.08	0.41
30:0:1667:A:H2'	30:0:1668:U:O4'	2.20	0.41
30:0:222:A:C5	30:0:223:G:H1'	2.55	0.41
30:0:2700:G:C6	30:0:2701:G:C4	3.08	0.41
30:0:404:G:C5	30:0:405:C:C5	3.07	0.41
30:0:564:G:C2'	30:0:565:A:OP2	2.68	0.41
30:0:646:G:H2'	30:0:647:U:C6	2.55	0.41
30:0:783:C:H6	30:0:783:C:O5'	2.03	0.41
30:0:814:G:H2'	30:0:815:U:H6	1.84	0.41
28:2:22:PRO:HG2	28:2:25:VAL:CG2	2.51	0.41
29:3:86:GLY:HA2	38:3:9031:HOH:O	2.19	0.41
31:9:102:G:O2'	31:9:103:A:O4'	2.35	0.41
31:9:17:G:C2	31:9:64:C:N3	2.88	0.41
2:B:254:GLN:HG3	38:0:9701:HOH:O	2.20	0.41
3:C:69:HIS:O	30:0:765:G:H4'	2.21	0.41
4:D:18:ILE:HG12	4:D:134:LEU:CD2	2.50	0.41
8:H:116:MET:HB3	30:0:2283:G:C5	2.56	0.41
8:H:61:ARG:HG3	8:H:61:ARG:NH1	2.34	0.41
9:I:91:PHE:CD2	9:I:131:GLY:HA2	2.56	0.41
11:K:124:VAL:O	11:K:127:ALA:HB3	2.20	0.41
18:R:39:THR:HG22	18:R:41:GLY:N	2.35	0.41
21:U:38:ASN:O	21:U:42:LEU:HG	2.20	0.41
23:W:69:ARG:HG3	23:W:118:LEU:HA	2.02	0.41
25:Y:189:ASN:HD21	25:Y:191:ASP:HB2	1.85	0.41
30:0:1159:G:C8	30:0:1160:G:C8	3.09	0.41
30:0:1206:U:H2'	30:0:1207:A:C1'	2.48	0.41
30:0:1407:A:H4'	38:0:4676:HOH:O	2.21	0.41
30:0:1505:U:H6	30:0:1505:U:H2'	1.70	0.41
30:0:154:C:C2	30:0:155:C:C6	3.08	0.41
13:M:188:ARG:HB2	30:0:156:C:OP2	2.21	0.41
30:0:1641:A:H8	30:0:1702:U:O4	2.02	0.41
30:0:178:U:H2'	30:0:179:C:C6	2.50	0.41
30:0:1933:G:C2	30:0:1934:A:N9	2.88	0.41
30:0:2119:C:O2'	30:0:2120:U:H5'	2.19	0.41
30:0:2484:U:H4'	38:0:9461:HOH:O	2.19	0.41
10:J:70:PHE:HD1	30:0:2676:C:H4'	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2699:A:H2'	30:0:2700:G:O4'	2.20	0.41
30:0:2716:G:H2'	30:0:2717:C:H6	1.84	0.41
30:0:2793:A:C5	30:0:2794:G:C8	3.09	0.41
30:0:2861:G:C5	30:0:2862:G:C8	3.08	0.41
30:0:2869:G:C6	30:0:2870:C:C4	3.08	0.41
30:0:291:C:H2'	30:0:292:G:C5'	2.50	0.41
30:0:305:A:C5	30:0:329:A:C2	3.08	0.41
30:0:577:G:N2	30:0:581:G:C5	2.89	0.41
30:0:530:C:H4'	30:0:612:U:H4'	2.02	0.41
30:0:633:C:C2	38:0:9317:HOH:O	2.72	0.41
30:0:851:C:H4'	38:0:5526:HOH:O	2.20	0.41
29:3:51:LYS:C	29:3:53:SER:H	2.24	0.41
1:A:194:MET:SD	30:0:875:A:C2	3.14	0.41
3:C:127:ARG:HD3	3:C:129:HIS:HE1	1.85	0.41
3:C:133:ARG:CZ	3:C:135:GLU:HB2	2.51	0.41
3:C:228:ALA:HA	3:C:229:PRO:HD3	1.79	0.41
3:C:95:GLU:CD	3:C:95:GLU:H	2.23	0.41
4:D:22:VAL:HG22	4:D:74:THR:HG22	2.02	0.41
4:D:51:ARG:HH11	4:D:68:PRO:HB3	1.84	0.41
13:M:68:ARG:CZ	13:M:73:ARG:NH1	2.83	0.41
15:O:70:LEU:O	15:O:92:VAL:HG21	2.20	0.41
18:R:114:VAL:HA	18:R:144:GLU:O	2.20	0.41
21:U:8:TYR:CE1	21:U:40:ALA:HB2	2.56	0.41
23:W:110:GLN:HA	23:W:110:GLN:NE2	2.35	0.41
23:W:154:ARG:HD2	38:0:6479:HOH:O	2.19	0.41
24:X:72:VAL:HG22	24:X:85:VAL:CG1	2.51	0.41
25:Y:107:PRO:HB3	25:Y:182:PHE:CD2	2.56	0.41
25:Y:107:PRO:HB3	25:Y:182:PHE:CE2	2.56	0.41
26:Z:66:CYS:O	26:Z:68:GLU:N	2.53	0.41
26:Z:70:ARG:HG2	26:Z:70:ARG:HH11	1.85	0.41
30:0:1061:C:H1'	30:0:2283:G:O6	2.20	0.41
30:0:106:A:C2'	30:0:107:U:C5'	2.92	0.41
30:0:1150:A:H3'	30:0:1151:G:H5'	2.02	0.41
30:0:1427:A:N6	30:0:1440:U:H1'	2.35	0.41
30:0:1549:C:H3'	30:0:1549:C:C6	2.56	0.41
30:0:1562:C:N3	30:0:1563:G:C5	2.88	0.41
30:0:1547:A:C2	30:0:1639:U:O2	2.73	0.41
30:0:1664:A:OP1	30:0:1664:A:C8	2.60	0.41
30:0:1739:G:C2'	30:0:1740:U:H5'	2.50	0.41
30:0:1891:G:H1'	30:0:1972:U:C2	2.55	0.41
30:0:215:A:N6	30:0:225:G:H1'	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2350:G:O2'	30:0:2351:C:H5'	2.20	0.41
30:0:2326:C:O2	30:0:2375:A:C2	2.73	0.41
30:0:2425:A:H2'	38:0:9237:HOH:O	2.19	0.41
30:0:2543:G:O3'	30:0:2590:U:H5'	2.21	0.41
30:0:2599:A:C6	30:0:2600:A:C6	3.08	0.41
30:0:2852:A:C2	30:0:2901:C:C4	3.08	0.41
30:0:2885:A:H2'	30:0:2886:C:O4'	2.20	0.41
30:0:410:A:O4'	30:0:412:C:C2	2.73	0.41
30:0:510:U:H6	38:0:7340:HOH:O	2.03	0.41
30:0:52:A:C4'	30:0:121:U:H3	2.34	0.41
30:0:542:A:H5'	30:0:542:A:C8	2.50	0.41
30:0:635:A:H2	38:0:9223:HOH:O	2.02	0.41
30:0:745:G:C4'	30:0:746:A:OP1	2.69	0.41
30:0:752:G:H2'	30:0:753:U:O4'	2.21	0.41
30:0:824:G:H2'	30:0:826:U:OP1	2.19	0.41
29:3:34:LYS:N	29:3:34:LYS:HD2	2.35	0.41
1:A:23:TYR:OH	1:A:182:ARG:HA	2.21	0.41
3:C:164:ALA:HA	3:C:167:ASP:OD1	2.20	0.41
10:J:19:MET:HG3	10:J:79:PHE:CE1	2.55	0.41
14:N:110:THR:CG2	31:9:37:C:H4'	2.51	0.41
16:P:98:ILE:HD12	16:P:102:ARG:CZ	2.49	0.41
16:P:105:LEU:HD21	16:P:137:LEU:HD21	2.02	0.41
18:R:134:SER:HB2	30:0:2055:A:H5'	2.00	0.41
25:Y:107:PRO:HD3	25:Y:182:PHE:CE1	2.56	0.41
26:Z:41:ARG:HD3	38:Z:8709:HOH:O	2.20	0.41
30:0:1161:A:O5'	30:0:1161:A:C8	2.70	0.41
30:0:1165:G:H4'	30:0:1174:A:O2'	2.20	0.41
30:0:1449:G:N3	30:0:1449:G:H2'	2.36	0.41
30:0:1512:G:C4	30:0:1513:C:C6	3.09	0.41
30:0:151:A:C2	30:0:152:A:C4	3.09	0.41
30:0:165:A:N7	30:0:167:A:OP1	2.53	0.41
30:0:1708:C:H2'	30:0:1709:G:O4'	2.20	0.41
30:0:1773:G:H2'	30:0:1774:G:H5'	2.01	0.41
30:0:1907:U:O2	30:0:1933:G:C2	2.73	0.41
30:0:2064:U:O2'	30:0:2065:C:H5'	2.21	0.41
30:0:2106:C:H1'	38:0:9577:HOH:O	2.20	0.41
30:0:2123:A:H3'	30:0:2124:G:H8	1.85	0.41
30:0:2670:G:C2'	30:0:2671:U:H5'	2.49	0.41
30:0:2088:C:H1'	30:0:2841:A:C2	2.56	0.41
30:0:2900:G:C2'	30:0:2901:C:H5'	2.51	0.41
30:0:347:A:H2'	30:0:348:C:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:395:A:H5'	30:0:396:U:H5''	2.01	0.41
30:0:40:C:H6	30:0:40:C:O5'	2.04	0.41
30:0:483:C:N4	30:0:484:A:C6	2.88	0.41
30:0:52:A:C6	30:0:53:C:C4	3.08	0.41
30:0:626:U:C4	30:0:627:G:C6	3.09	0.41
28:2:40:ARG:HG2	28:2:41:HIS:N	2.36	0.41
29:3:35:TRP:CE3	29:3:36:ILE:HG12	2.55	0.41
14:N:33:ARG:NH2	31:9:6:C:O2'	2.51	0.41
1:A:103:VAL:HA	1:A:104:PRO:HD3	1.76	0.41
1:A:149:ASP:HA	1:A:150:PRO:HD2	1.86	0.41
4:D:138:GLY:N	38:D:225:HOH:O	2.54	0.41
10:J:77:GLY:O	10:J:78:ILE:C	2.58	0.41
12:L:148:GLU:HG3	38:L:8856:HOH:O	2.19	0.41
14:N:13:ARG:HD2	14:N:13:ARG:HA	1.87	0.41
15:O:18:ALA:HB2	38:O:3062:HOH:O	2.19	0.41
15:O:25:VAL:O	15:O:29:VAL:HG23	2.21	0.41
23:W:21:LEU:HD21	23:W:48:VAL:HG11	2.02	0.41
23:W:69:ARG:HA	23:W:69:ARG:HD3	1.76	0.41
24:X:29:ALA:O	24:X:33:ILE:HG13	2.20	0.41
24:X:74:ALA:HB1	24:X:85:VAL:HG22	2.02	0.41
30:0:1281:C:C5	30:0:1282:U:C4	3.08	0.41
30:0:1483:C:H2'	30:0:1484:G:C5'	2.50	0.41
30:0:1611:G:C2	30:0:1612:A:N7	2.89	0.41
30:0:1631:A:C5	30:0:1632:A:C6	3.09	0.41
30:0:1644:C:H2'	30:0:1645:U:O4'	2.21	0.41
30:0:165:A:C6	30:0:168:C:C5	3.09	0.41
30:0:1898:G:O2'	30:0:1899:C:H5'	2.20	0.41
30:0:1971:G:C5'	38:0:7283:HOH:O	2.64	0.41
30:0:2300:A:N3	30:0:2306:U:C4	2.88	0.41
30:0:2321:A:C2	30:0:2378:U:N3	2.88	0.41
30:0:2410:G:C2'	30:0:2411:C:H5'	2.50	0.41
30:0:2588:OMG:H2'	30:0:2589:U:H4'	2.02	0.41
6:F:59:ILE:HD13	30:0:263:U:O4'	2.21	0.41
30:0:2639:G:H2'	30:0:2640:U:O5'	2.21	0.41
30:0:2834:G:C2'	30:0:2835:C:O5'	2.68	0.41
30:0:2860:G:C6	30:0:2861:G:C5	3.08	0.41
30:0:2876:G:H2'	30:0:2877:G:C8	2.56	0.41
30:0:353:G:C6	30:0:354:A:C6	3.09	0.41
30:0:385:C:C6	30:0:385:C:C3'	3.03	0.41
30:0:396:U:O2'	30:0:397:A:O5'	2.37	0.41
30:0:640:G:O2'	30:0:641:G:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:935:G:O2'	30:0:936:C:H5'	2.21	0.41
31:9:44:A:C6	31:9:45:A:C5	3.09	0.41
31:9:77:A:C4	31:9:79:U:C4	3.09	0.41
3:C:142:ASP:OD2	3:C:238:SER:HB2	2.21	0.41
4:D:169:THR:HG22	4:D:170:TYR:CD1	2.55	0.41
6:F:28:ALA:C	6:F:99:THR:HG23	2.41	0.41
13:M:97:ILE:CD1	13:M:127:LYS:HD2	2.49	0.41
4:D:146:LYS:HD3	14:N:107:ASN:HD21	1.86	0.41
14:N:11:ARG:NH1	31:9:8:G:O6	2.54	0.41
14:N:91:ARG:HD2	38:N:8813:HOH:O	2.20	0.41
15:O:105:ASN:ND2	15:O:109:SER:H	2.19	0.41
16:P:24:ASN:HA	16:P:25:PRO:HD3	1.90	0.41
20:T:41:ARG:NH1	20:T:42:VAL:O	2.53	0.41
20:T:43:ASN:C	20:T:45:GLY:H	2.23	0.41
20:T:52:ARG:NH2	30:0:308:U:H2'	2.36	0.41
22:V:32:ALA:O	22:V:35:ALA:HB3	2.20	0.41
23:W:44:MET:CE	30:0:944:G:N2	2.80	0.41
25:Y:182:PHE:CG	25:Y:202:ALA:HB2	2.55	0.41
30:0:969:G:C2	30:0:1000:C:N3	2.89	0.41
30:0:1004:C:H4'	38:0:7615:HOH:O	2.20	0.41
30:0:11:A:N3	30:0:11:A:H2'	2.36	0.41
30:0:1279:U:C5'	30:0:1280:A:OP2	2.68	0.41
30:0:1357:A:H1'	38:0:4127:HOH:O	2.19	0.41
30:0:1570:C:H2'	30:0:1571:G:H5'	2.03	0.41
30:0:1552:G:C2	30:0:1634:G:C4	3.09	0.41
30:0:1646:G:N3	30:0:1647:G:C8	2.88	0.41
30:0:1680:C:H5'	38:0:7195:HOH:O	2.19	0.41
30:0:2324:G:H4'	30:0:2418:G:O2'	2.21	0.41
30:0:2432:C:O5'	30:0:2432:C:C6	2.73	0.41
30:0:2292:C:C2	30:0:2463:A:C4'	3.04	0.41
30:0:2551:C:O2'	30:0:2552:C:H5'	2.21	0.41
30:0:2597:U:H2'	30:0:2598:U:H5'	2.02	0.41
30:0:2617:G:H2'	30:0:2617:G:N3	2.35	0.41
30:0:533:U:C5	30:0:2812:A:C2	3.09	0.41
30:0:361:C:H2'	30:0:362:G:O4'	2.21	0.41
30:0:450:C:H1'	38:0:4341:HOH:O	2.19	0.41
30:0:455:A:H2'	30:0:456:G:O4'	2.20	0.41
30:0:72:C:H5'	38:0:5822:HOH:O	2.21	0.41
30:0:955:A:H2'	30:0:956:G:C5'	2.51	0.41
1:A:80:LEU:HA	1:A:92:ASN:OD1	2.21	0.41
1:A:81:GLN:O	1:A:92:ASN:HB3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:293:PRO:HD2	38:B:9050:HOH:O	2.21	0.41
3:C:7:ASP:C	3:C:9:ASP:H	2.24	0.41
4:D:40:ILE:HG23	38:D:203:HOH:O	2.19	0.41
10:J:34:GLU:O	10:J:36:VAL:HG23	2.21	0.41
14:N:44:ARG:CG	14:N:45:ALA:N	2.84	0.41
14:N:35:VAL:HB	14:N:46:GLN:HB2	2.03	0.41
15:O:44:ASN:OD1	15:O:65:LEU:HB2	2.21	0.41
17:Q:75:ILE:HG12	17:Q:84:ILE:CD1	2.51	0.41
23:W:72:PRO:HG2	23:W:77:ALA:HB3	2.02	0.41
24:X:30:MET:CE	24:X:58:ALA:HB3	2.50	0.41
25:Y:205:ILE:HG13	25:Y:205:ILE:H	1.72	0.41
30:0:1175:G:N3	30:0:1193:A:C6	2.88	0.41
30:0:1199:A:N6	30:0:1200:A:N6	2.68	0.41
30:0:1248:A:H2'	30:0:1249:U:H6	1.84	0.41
30:0:1378:G:H4'	38:0:9224:HOH:O	2.20	0.41
30:0:1486:A:H2'	38:0:4435:HOH:O	2.20	0.41
30:0:1561:U:C5	30:0:1562:C:C5	3.07	0.41
30:0:1594:C:C2	30:0:1601:G:N2	2.89	0.41
30:0:1730:G:C5'	30:0:1731:C:C5	3.03	0.41
30:0:1787:C:H2'	30:0:1788:U:C6	2.56	0.41
30:0:1806:G:H1'	30:0:2875:A:N3	2.36	0.41
30:0:1925:G:C2	30:0:1926:G:C8	3.09	0.41
30:0:2055:A:C4'	38:0:7348:HOH:O	2.68	0.41
30:0:275:G:N2	30:0:376:C:C2	2.88	0.41
30:0:2866:U:H5''	38:0:6354:HOH:O	2.20	0.41
30:0:300:U:H2'	30:0:301:C:C6	2.43	0.41
30:0:393:G:H5''	38:0:9856:HOH:O	2.21	0.41
30:0:420:U:H5'	30:0:1920:C:C2	2.56	0.41
3:C:43:LYS:HG2	30:0:449:A:C8	2.56	0.41
30:0:481:U:C5	30:0:487:G:O6	2.74	0.41
30:0:509:A:C6	30:0:511:A:C6	3.09	0.41
30:0:567:U:C5'	38:0:5240:HOH:O	2.69	0.41
30:0:790:A:H2'	30:0:791:A:O4'	2.20	0.41
30:0:939:A:C5'	38:0:5361:HOH:O	2.68	0.41
17:Q:19:ARG:HH22	31:9:11:A:H3'	1.82	0.41
1:A:193:ALA:HB2	38:A:9014:HOH:O	2.21	0.41
2:B:224:LYS:HA	2:B:224:LYS:HD3	1.83	0.41
3:C:173:LYS:O	3:C:186:TYR:HA	2.20	0.41
3:C:76:ARG:HB3	3:C:78:ARG:NH1	2.35	0.41
9:I:108:HIS:HB2	9:I:109:PRO:HD3	2.03	0.41
10:J:133:GLY:O	10:J:137:GLU:HG3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:71:TRP:HB2	14:N:175:LEU:HD22	2.02	0.41
19:S:11:THR:O	19:S:15:MET:HG2	2.21	0.41
20:T:71:VAL:HG12	20:T:72:ILE:N	2.36	0.41
25:Y:149:GLN:HG3	38:0:3330:HOH:O	2.20	0.41
26:Z:77:GLY:N	26:Z:92:SER:HA	2.36	0.41
25:Y:154:ARG:NH2	30:0:1071:G:H4'	2.36	0.41
30:0:119:A:C2'	30:0:120:A:C5'	2.96	0.41
30:0:1118:A:N6	30:0:1244:U:H3	2.11	0.41
30:0:1252:A:H4'	38:0:9925:HOH:O	2.21	0.41
30:0:1503:U:H2'	30:0:1504:A:C5'	2.51	0.41
30:0:157:G:C6	30:0:158:A:N7	2.89	0.41
30:0:1608:G:O2'	30:0:1609:C:H5'	2.20	0.41
30:0:1713:G:H1'	38:0:5026:HOH:O	2.21	0.41
3:C:63:SER:HB3	30:0:2101:A:H5'	2.03	0.41
30:0:2135:A:C2	30:0:2241:C:O2	2.74	0.41
30:0:2327:A:H2'	30:0:2328:U:C6	2.56	0.41
30:0:2444:U:C5	30:0:2445:U:C5	3.09	0.41
30:0:2474:A:H4'	30:0:2475:C:H3'	2.03	0.41
30:0:254:C:C2	30:0:255:A:C8	3.09	0.41
30:0:2683:G:C4	30:0:2712:G:N2	2.89	0.41
30:0:2727:A:C6	30:0:2756:U:N3	2.88	0.41
30:0:2761:A:N3	30:0:2762:C:O2'	2.52	0.41
30:0:303:C:H2'	30:0:304:G:C5'	2.51	0.41
30:0:292:G:N1	30:0:358:G:H1'	2.35	0.41
29:3:52:PHE:HB3	38:3:9036:HOH:O	2.21	0.41
1:A:29:HIS:CE1	1:A:107:ASN:HD22	2.39	0.41
1:A:70:ALA:HA	1:A:71:PRO:HD3	1.71	0.41
2:B:292:GLY:O	2:B:294:TYR:HD2	2.03	0.41
8:H:70:LEU:HD12	8:H:70:LEU:HA	1.93	0.41
11:K:49:LEU:HD23	11:K:49:LEU:C	2.41	0.41
12:L:117:GLU:HG2	38:L:8870:HOH:O	2.20	0.41
12:L:97:VAL:HG12	12:L:98:GLU:O	2.21	0.41
17:Q:42:LYS:HA	17:Q:42:LYS:HD2	1.92	0.41
26:Z:53:ILE:O	26:Z:57:MET:HB2	2.20	0.41
30:0:1063:G:O5'	30:0:2307:A:H1'	2.21	0.41
30:0:47:G:H1'	30:0:114:A:N1	2.35	0.41
30:0:1158:G:C6	30:0:1159:G:C5	3.08	0.41
30:0:1292:G:O5'	30:0:1292:G:H8	2.04	0.41
30:0:1419:U:H3'	30:0:1419:U:O2	2.21	0.41
30:0:1497:G:C2	30:0:1498:G:C4	3.09	0.41
30:0:1562:C:C2'	30:0:1562:C:O2	2.67	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1792:C:O5'	30:0:1792:C:H6	2.03	0.41
13:M:71:SER:HB3	30:0:2264:A:OP1	2.21	0.41
29:3:2:GLN:N	30:0:2320:U:H5'	2.35	0.41
30:0:2528:U:H2'	30:0:2529:G:O4'	2.21	0.41
30:0:816:G:H8	30:0:816:G:O5'	2.04	0.41
30:0:92:G:H5'	38:0:7329:HOH:O	2.21	0.41
2:B:256:GLN:HG2	38:B:9140:HOH:O	2.19	0.41
7:G:63:ARG:N	38:G:2569:HOH:O	2.54	0.41
13:M:14:ASN:C	13:M:16:GLY:H	2.24	0.41
13:M:84:LYS:HD3	13:M:85:ARG:NH1	2.34	0.41
20:T:78:THR:HB	20:T:86:GLU:HG3	2.03	0.41
21:U:34:SER:HA	21:U:37:GLU:CG	2.51	0.41
24:X:26:ALA:CB	24:X:63:ARG:HA	2.46	0.41
8:H:91:ARG:HB2	30:0:1003:U:OP1	2.21	0.40
30:0:101:C:O2	30:0:102:A:C8	2.74	0.40
30:0:1195:G:C2	30:0:1205:U:N3	2.89	0.40
30:0:1249:U:H2'	30:0:1250:C:H6	1.85	0.40
30:0:130:C:H3'	30:0:141:C:H5	1.85	0.40
30:0:1384:C:O5'	30:0:1384:C:H6	2.04	0.40
30:0:1461:U:O2'	30:0:1462:C:H5'	2.21	0.40
30:0:1503:U:C4	30:0:1504:A:C5	3.09	0.40
16:P:63:ARG:NE	30:0:1549:C:OP1	2.54	0.40
30:0:1587:U:H2'	30:0:1588:G:C5'	2.51	0.40
30:0:1597:A:C5	30:0:1598:A:C8	3.10	0.40
30:0:1628:G:C2'	30:0:1629:G:H5'	2.51	0.40
30:0:2015:A:O2'	30:0:2016:U:H5'	2.21	0.40
30:0:2255:A:N1	30:0:2256:G:C4	2.88	0.40
30:0:226:A:H1'	30:0:393:G:N7	2.35	0.40
30:0:2502:C:O2'	30:0:2503:A:H5'	2.20	0.40
30:0:2600:A:H2'	30:0:2601:A:O4'	2.22	0.40
30:0:2713:G:H2'	30:0:2714:U:H5'	2.02	0.40
30:0:2759:C:H2'	30:0:2760:C:O4'	2.22	0.40
30:0:2766:A:C5	30:0:2767:C:C5	3.09	0.40
30:0:2768:A:H2'	30:0:2769:C:O4'	2.20	0.40
30:0:361:C:H2'	30:0:362:G:C8	2.56	0.40
30:0:36:C:C2	30:0:447:A:C2	3.09	0.40
30:0:559:U:C6	30:0:559:U:C4'	3.04	0.40
30:0:582:U:H2'	30:0:583:C:H6	1.84	0.40
30:0:669:G:C6	30:0:670:G:C5	3.09	0.40
30:0:707:C:C4	30:0:708:A:N7	2.89	0.40
30:0:731:U:O2'	30:0:732:C:H5'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:834:G:H3'	30:0:835:U:H4'	2.03	0.40
23:W:43:GLY:HA3	30:0:945:U:O2'	2.21	0.40
31:9:3:A:C8	31:9:26:C:N3	2.90	0.40
1:A:199:HIS:CD2	1:A:201:PHE:HB2	2.56	0.40
2:B:146:THR:O	2:B:148:PRO:HD3	2.21	0.40
3:C:131:PHE:N	3:C:131:PHE:CD2	2.89	0.40
3:C:178:GLN:C	3:C:180:SER:N	2.74	0.40
3:C:193:LEU:HD13	3:C:222:ASP:HB2	2.02	0.40
10:J:31:LEU:HD23	10:J:31:LEU:HA	1.87	0.40
17:Q:7:LEU:HD12	30:0:2424:U:H1'	2.03	0.40
20:T:12:ARG:NH1	38:T:3035:HOH:O	2.54	0.40
23:W:59:GLN:HE22	23:W:97:ALA:HB3	1.86	0.40
26:Z:41:ARG:O	26:Z:47:ARG:NH1	2.53	0.40
30:0:1585:C:N3	30:0:1611:G:N2	2.68	0.40
16:P:102:ARG:CZ	30:0:1596:U:C5	3.04	0.40
30:0:1601:G:H2'	30:0:1602:C:C6	2.57	0.40
30:0:1624:A:H4'	30:0:1626:A:H5''	2.04	0.40
30:0:1419:U:H2'	30:0:1685:A:C2	2.56	0.40
30:0:1726:G:C6	30:0:2050:G:O6	2.75	0.40
30:0:2089:A:H2'	30:0:2090:G:C5'	2.52	0.40
30:0:2319:C:C2'	30:0:2319:C:O2	2.69	0.40
30:0:2333:G:C2	30:0:2334:C:C2	3.10	0.40
30:0:2541:U:H5'	30:0:2611:G:O6	2.22	0.40
30:0:2554:U:O4'	30:0:2577:A:N6	2.53	0.40
30:0:2582:G:H22	30:0:2596:A:H2	1.69	0.40
30:0:2588:OMG:HM21	38:0:5634:HOH:O	2.22	0.40
30:0:2582:G:C8	30:0:2601:A:C4	3.09	0.40
30:0:2721:U:H5	38:0:9305:HOH:O	2.04	0.40
30:0:2769:C:C5	30:0:2770:G:N7	2.89	0.40
30:0:2769:C:H2'	30:0:2770:G:C4'	2.51	0.40
30:0:2896:A:C2'	30:0:2896:A:N3	2.84	0.40
30:0:316:A:C4	30:0:337:A:C2	3.10	0.40
3:C:202:THR:HG21	30:0:328:U:O2	2.22	0.40
30:0:453:A:C4	30:0:479:G:C8	3.09	0.40
30:0:590:A:H2'	30:0:591:A:C5'	2.50	0.40
30:0:691:G:N2	30:0:694:A:OP2	2.45	0.40
31:9:114:G:C6	31:9:115:C:N4	2.89	0.40
10:J:38:VAL:HB	10:J:103:VAL:HG22	2.03	0.40
10:J:14:ALA:O	10:J:44:ALA:HA	2.21	0.40
13:M:37:VAL:HG21	13:M:108:THR:OG1	2.21	0.40
16:P:31:ILE:O	16:P:34:ALA:HB3	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:59:ARG:O	16:P:62:ALA:HB3	2.20	0.40
30:0:1002:G:C2'	30:0:1003:U:O5'	2.70	0.40
30:0:1096:U:H2'	30:0:1097:A:O5'	2.21	0.40
30:0:1119:G:N2	30:0:1246:A:N1	2.68	0.40
30:0:1166:A:H5''	30:0:1167:G:OP2	2.20	0.40
30:0:1168:C:H1'	38:0:7314:HOH:O	2.22	0.40
30:0:1386:G:C2	30:0:1397:C:N3	2.89	0.40
30:0:139:C:H4'	30:0:140:G:O5'	2.21	0.40
30:0:1432:U:C6	30:0:1725:C:H1'	2.56	0.40
30:0:1515:A:H2'	30:0:1516:U:O4'	2.21	0.40
30:0:1623:C:C4	30:0:1624:A:C6	3.10	0.40
30:0:1972:U:C2'	30:0:1973:A:C5'	2.99	0.40
30:0:1742:A:N6	30:0:2037:C:H42	2.14	0.40
30:0:2081:A:C6	30:0:2082:G:C5	3.09	0.40
30:0:2359:G:C5	30:0:2360:C:C4	3.10	0.40
30:0:2367:A:H5'	38:0:5062:HOH:O	2.18	0.40
30:0:2377:U:H6	30:0:2377:U:O5'	2.03	0.40
30:0:2515:C:C2'	30:0:2516:G:H5'	2.51	0.40
30:0:2766:A:H2'	30:0:2767:C:H6	1.86	0.40
30:0:302:A:C2'	30:0:303:C:C5'	2.96	0.40
30:0:702:G:C2	30:0:703:G:C8	3.09	0.40
29:3:11:CYS:C	29:3:13:HIS:H	2.21	0.40
31:9:74:G:N2	31:9:108:C:H1'	2.36	0.40
1:A:87:GLU:HB3	1:A:92:ASN:ND2	2.36	0.40
2:B:154:VAL:HA	2:B:155:PRO:HD3	1.82	0.40
2:B:29:TRP:CH2	2:B:164:THR:HA	2.55	0.40
2:B:281:ASP:HB2	2:B:334:SER:HB2	2.01	0.40
2:B:52:VAL:O	2:B:53:LEU:HD12	2.22	0.40
2:B:68:THR:HG21	21:U:16:GLY:HA3	2.03	0.40
13:M:73:ARG:HB2	30:0:1470:A:OP1	2.21	0.40
16:P:88:GLN:HE21	30:0:1800:G:C1'	2.34	0.40
20:T:24:ARG:NH2	20:T:40:VAL:HA	2.36	0.40
20:T:52:ARG:O	30:0:317:A:OP1	2.38	0.40
30:0:1116:U:C2	30:0:1246:A:N6	2.90	0.40
30:0:1119:G:C6	30:0:1243:C:C4	3.10	0.40
30:0:1526:A:H4'	30:0:1527:A:O4'	2.20	0.40
30:0:1592:G:C6	30:0:1593:C:N4	2.89	0.40
30:0:1801:A:C2	30:0:1802:G:N9	2.90	0.40
30:0:18:C:H2'	30:0:19:U:C6	2.56	0.40
30:0:209:G:O2'	30:0:665:A:H1'	2.22	0.40
30:0:2370:A:O5'	30:0:2370:A:H8	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2383:G:C6	30:0:2384:U:C4	3.10	0.40
30:0:2533:C:C2'	30:0:2534:U:O5'	2.69	0.40
30:0:2570:G:H2'	30:0:2571:C:H6	1.86	0.40
30:0:2591:C:H2'	30:0:2592:G:C5'	2.51	0.40
30:0:2669:U:N3	30:0:2670:G:N7	2.69	0.40
30:0:2716:G:C4	30:0:2717:C:C6	3.09	0.40
30:0:2831:C:H2'	30:0:2832:C:H5'	2.03	0.40
30:0:2863:G:H1'	38:0:3258:HOH:O	2.21	0.40
30:0:2912:C:H2'	30:0:2913:A:H5'	2.04	0.40
30:0:462:A:H3'	38:0:4838:HOH:O	2.21	0.40
30:0:71:G:H1'	38:0:5249:HOH:O	2.21	0.40
30:0:878:G:C5'	38:0:9229:HOH:O	2.67	0.40
31:9:58:G:H3'	31:9:59:C:C6	2.57	0.40
1:A:75:GLY:HA2	26:Z:88:PHE:HA	2.03	0.40
2:B:146:THR:C	2:B:148:PRO:HD3	2.41	0.40
2:B:56:ASP:HB2	2:B:322:ARG:HE	1.86	0.40
3:C:183:GLY:HA2	20:T:4:PRO:HD3	2.03	0.40
10:J:19:MET:HG3	10:J:79:PHE:CD1	2.57	0.40
11:K:48:GLY:O	11:K:51:ASP:HB2	2.21	0.40
12:L:122:ALA:H	12:L:125:PHE:HZ	1.70	0.40
15:O:59:VAL:CG2	15:O:111:VAL:HG21	2.50	0.40
15:O:26:TRP:N	38:O:3062:HOH:O	2.54	0.40
16:P:38:GLU:HA	16:P:41:ARG:HH11	1.87	0.40
16:P:14:LEU:HD13	16:P:51:ALA:HB2	2.02	0.40
20:T:55:PHE:HB2	38:T:6384:HOH:O	2.22	0.40
30:0:1117:A:C2	30:0:1244:U:C2	3.09	0.40
30:0:1162:G:O2'	30:0:1163:G:H5'	2.20	0.40
30:0:1211:G:C2	30:0:1212:C:C2	3.09	0.40
30:0:1293:U:O2'	30:0:1294:A:H5'	2.22	0.40
30:0:1362:U:C2	30:0:1363:G:C8	3.09	0.40
30:0:1561:U:C6	30:0:1562:C:H5	2.39	0.40
30:0:1585:C:C6	30:0:1585:C:C3'	3.05	0.40
30:0:1598:A:C2	30:0:1599:U:C2	3.09	0.40
30:0:1719:G:N3	38:0:3705:HOH:O	2.37	0.40
30:0:1733:A:C2	30:0:1734:C:H1'	2.57	0.40
30:0:1849:G:H1'	30:0:2011:A:N1	2.37	0.40
30:0:1916:C:C2	30:0:1924:A:C2	3.08	0.40
30:0:1997:A:C6	30:0:1998:G:C5	3.09	0.40
30:0:199:A:H2'	30:0:201:G:C8	2.57	0.40
30:0:2299:G:C6	30:0:2300:A:C6	3.09	0.40
30:0:2363:G:C5	30:0:2364:A:N7	2.90	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2634:G:C2	30:0:2635:A:C5	3.09	0.40
2:B:262:ARG:HG3	30:0:2716:G:C5'	2.52	0.40
30:0:2851:G:C2'	30:0:2852:A:H5'	2.52	0.40
30:0:31:C:O2'	30:0:32:G:H5'	2.22	0.40
30:0:499:G:C2'	30:0:500:G:H5'	2.51	0.40
30:0:487:G:C4	30:0:513:A:N1	2.90	0.40
30:0:632:A:C5	30:0:633:C:C5	3.10	0.40
30:0:732:C:H2'	30:0:733:U:H6	1.86	0.40
30:0:662:U:O2'	30:0:748:C:O2	2.33	0.40
29:3:40:ARG:HG3	29:3:52:PHE:CD2	2.56	0.40
31:9:36:C:N4	31:9:37:C:C2	2.89	0.40
1:A:199:HIS:HD2	1:A:201:PHE:HB2	1.85	0.40
2:B:22:GLU:HA	2:B:205:VAL:HG21	2.04	0.40
2:B:300:SER:HB3	38:0:4626:HOH:O	2.22	0.40
3:C:2:GLN:HA	3:C:18:LEU:N	2.33	0.40
3:C:47:GLY:HA2	3:C:92:PRO:O	2.22	0.40
3:C:84:VAL:O	3:C:85:LYS:HB2	2.22	0.40
13:M:76:ARG:O	13:M:77:HIS:C	2.60	0.40
15:O:112:ARG:HD2	38:0:9670:HOH:O	2.21	0.40
19:S:15:MET:O	19:S:18:MET:HB3	2.21	0.40
19:S:6:LYS:HB2	19:S:27:ALA:O	2.21	0.40
20:T:43:ASN:ND2	20:T:108:ARG:CZ	2.85	0.40
21:U:6:CYS:HB2	21:U:32:CYS:HB3	2.04	0.40
22:V:27:LEU:HA	22:V:49:LEU:HD13	2.04	0.40
23:W:68:THR:HG23	23:W:69:ARG:N	2.36	0.40
26:Z:80:GLN:CG	26:Z:81:CYS:N	2.85	0.40

There are no symmetry-related clashes.

## 5.3 Torsion angles [i](#)

### 5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	235/240 (98%)	198 (84%)	28 (12%)	9 (4%)	3	19
2	B	335/338 (99%)	287 (86%)	42 (12%)	6 (2%)	8	35
3	C	244/246 (99%)	211 (86%)	29 (12%)	4 (2%)	9	36
4	D	134/177 (76%)	109 (81%)	22 (16%)	3 (2%)	6	30
5	E	170/178 (96%)	152 (89%)	16 (9%)	2 (1%)	13	42
6	F	117/120 (98%)	102 (87%)	11 (9%)	4 (3%)	3	22
7	G	25/348 (7%)	23 (92%)	2 (8%)	0	100	100
8	H	156/177 (88%)	139 (89%)	14 (9%)	3 (2%)	8	34
9	I	68/162 (42%)	56 (82%)	10 (15%)	2 (3%)	4	24
10	J	140/145 (97%)	125 (89%)	12 (9%)	3 (2%)	7	31
11	K	130/132 (98%)	107 (82%)	21 (16%)	2 (2%)	10	38
12	L	141/165 (86%)	112 (79%)	25 (18%)	4 (3%)	5	25
13	M	192/196 (98%)	165 (86%)	22 (12%)	5 (3%)	5	27
14	N	184/187 (98%)	156 (85%)	23 (12%)	5 (3%)	5	26
15	O	113/116 (97%)	109 (96%)	4 (4%)	0	100	100
16	P	141/149 (95%)	125 (89%)	13 (9%)	3 (2%)	7	31
17	Q	93/96 (97%)	82 (88%)	7 (8%)	4 (4%)	2	16
18	R	148/155 (96%)	132 (89%)	15 (10%)	1 (1%)	22	54
19	S	79/85 (93%)	67 (85%)	11 (14%)	1 (1%)	12	40
20	T	117/120 (98%)	95 (81%)	18 (15%)	4 (3%)	3	22
21	U	51/67 (76%)	46 (90%)	3 (6%)	2 (4%)	3	18
22	V	63/71 (89%)	57 (90%)	5 (8%)	1 (2%)	9	36
23	W	152/154 (99%)	129 (85%)	21 (14%)	2 (1%)	12	40
24	X	80/92 (87%)	68 (85%)	8 (10%)	4 (5%)	2	14
25	Y	140/241 (58%)	131 (94%)	8 (6%)	1 (1%)	22	54
26	Z	71/116 (61%)	52 (73%)	13 (18%)	6 (8%)	1	5
27	1	54/57 (95%)	48 (89%)	5 (9%)	1 (2%)	8	34
28	2	42/50 (84%)	37 (88%)	4 (10%)	1 (2%)	6	28
29	3	90/92 (98%)	73 (81%)	14 (16%)	3 (3%)	4	22
All	All	3705/4472 (83%)	3193 (86%)	426 (12%)	86 (2%)	6	29

All (86) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	123	GLY
4	D	65	GLU
4	D	137	PRO
6	F	61	MET
6	F	101	ALA
8	H	19	ARG
12	L	21	ARG
13	M	79	ALA
14	N	139	TRP
14	N	184	ILE
20	T	16	LEU
24	X	70	ILE
29	3	64	LYS
1	A	170	VAL
2	B	225	GLY
10	J	143	LYS
12	L	45	PRO
14	N	162	ASP
19	S	30	ASP
23	W	72	PRO
26	Z	85	ASP
26	Z	89	THR
28	2	18	ASN
29	3	84	ARG
1	A	24	LYS
1	A	33	GLU
2	B	183	GLU
3	C	215	ALA
6	F	69	GLU
11	K	10	GLN
11	K	83	PRO
12	L	32	ASP
14	N	165	ALA
14	N	183	ASP
17	Q	63	VAL
20	T	44	ALA
20	T	53	GLY
21	U	51	TRP
24	X	23	HIS
25	Y	193	LEU
26	Z	67	GLY
26	Z	83	TYR
27	1	54	ALA

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Mol	Chain	Res	Type
29	3	61	PRO
1	A	35	GLY
1	A	37	VAL
1	A	150	PRO
2	B	2	GLN
3	C	8	LEU
3	C	89	ALA
4	D	56	ARG
6	F	100	ASP
12	L	35	ARG
16	P	112	GLY
17	Q	48	PRO
24	X	52	PRO
24	X	78	GLU
26	Z	65	ASN
26	Z	76	THR
1	A	119	ALA
2	B	158	LYS
2	B	171	VAL
5	E	17	HIS
8	H	70	LEU
13	M	73	ARG
13	M	154	ASP
16	P	58	SER
22	V	39	ALA
23	W	49	ASN
3	C	136	VAL
5	E	122	THR
8	H	171	GLY
9	I	108	HIS
9	I	131	GLY
10	J	78	ILE
13	M	15	PRO
13	M	88	VAL
16	P	132	ASP
20	T	42	VAL
1	A	74	VAL
21	U	13	ILE
2	B	185	GLY
17	Q	18	PRO
17	Q	54	PRO
10	J	18	ILE

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Mol	Chain	Res	Type
18	R	106	GLY

### 5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	179/182 (98%)	172 (96%)	7 (4%)	32	62
2	B	282/283 (100%)	261 (93%)	21 (7%)	13	40
3	C	193/193 (100%)	178 (92%)	15 (8%)	12	38
4	D	117/148 (79%)	109 (93%)	8 (7%)	16	44
5	E	152/156 (97%)	146 (96%)	6 (4%)	32	62
6	F	93/94 (99%)	89 (96%)	4 (4%)	29	59
7	G	27/282 (10%)	25 (93%)	2 (7%)	13	40
8	H	134/145 (92%)	125 (93%)	9 (7%)	16	45
9	I	58/130 (45%)	55 (95%)	3 (5%)	23	54
10	J	118/121 (98%)	112 (95%)	6 (5%)	24	54
11	K	106/106 (100%)	98 (92%)	8 (8%)	13	39
12	L	113/127 (89%)	105 (93%)	8 (7%)	14	42
13	M	158/160 (99%)	148 (94%)	10 (6%)	18	47
14	N	149/150 (99%)	143 (96%)	6 (4%)	31	61
15	O	93/94 (99%)	90 (97%)	3 (3%)	39	67
16	P	113/117 (97%)	111 (98%)	2 (2%)	59	78
17	Q	79/80 (99%)	75 (95%)	4 (5%)	24	54
18	R	117/122 (96%)	110 (94%)	7 (6%)	19	49
19	S	71/74 (96%)	67 (94%)	4 (6%)	21	52
20	T	105/106 (99%)	97 (92%)	8 (8%)	13	39
21	U	44/53 (83%)	42 (96%)	2 (4%)	27	58
22	V	51/57 (90%)	48 (94%)	3 (6%)	19	49
23	W	130/130 (100%)	124 (95%)	6 (5%)	27	58

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
24	X	66/74 (89%)	57 (86%)	9 (14%)	3	16
25	Y	120/196 (61%)	115 (96%)	5 (4%)	30	60
26	Z	60/94 (64%)	54 (90%)	6 (10%)	7	27
27	1	46/47 (98%)	45 (98%)	1 (2%)	52	74
28	2	42/46 (91%)	41 (98%)	1 (2%)	49	73
29	3	79/79 (100%)	75 (95%)	4 (5%)	24	54
All	All	3095/3646 (85%)	2917 (94%)	178 (6%)	20	50

All (178) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	51	ARG
1	A	78	ASP
1	A	122	SER
1	A	131	HIS
1	A	179	MET
1	A	182	ARG
1	A	217	ARG
2	B	7	ARG
2	B	11	LEU
2	B	16	ARG
2	B	27	ASN
2	B	71	VAL
2	B	114	ASP
2	B	115	VAL
2	B	132	HIS
2	B	139	ASP
2	B	162	MET
2	B	180	ASP
2	B	192	ASP
2	B	193	ILE
2	B	211	THR
2	B	234	ARG
2	B	254	GLN
2	B	277	GLU
2	B	301	VAL
2	B	309	VAL
2	B	312	ARG
2	B	319	ASP
3	C	2	GLN

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Mol	Chain	Res	Type
3	C	29	ASP
3	C	74	ASP
3	C	76	ARG
3	C	94	THR
3	C	115	LEU
3	C	131	PHE
3	C	142	ASP
3	C	187	ARG
3	C	211	ASP
3	C	223	LEU
3	C	234	VAL
3	C	236	THR
3	C	240	LEU
3	C	243	VAL
4	D	10	PHE
4	D	24	HIS
4	D	29	HIS
4	D	48	MET
4	D	50	VAL
4	D	104	PHE
4	D	149	ARG
4	D	169	THR
5	E	58	THR
5	E	116	THR
5	E	126	ILE
5	E	156	ASP
5	E	162	PHE
5	E	164	ASP
6	F	3	TYR
6	F	14	ASP
6	F	81	ASP
6	F	99	THR
7	G	64	ASN
7	G	73	ASP
8	H	62	HIS
8	H	65	LEU
8	H	69	ARG
8	H	87	LYS
8	H	91	ARG
8	H	99	ARG
8	H	126	THR
8	H	149	VAL

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Mol	Chain	Res	Type
8	H	157	TYR
9	I	82	THR
9	I	114	TYR
9	I	126	THR
10	J	46	ILE
10	J	52	GLN
10	J	74	ARG
10	J	107	ASN
10	J	120	SER
10	J	132	LEU
11	K	10	GLN
11	K	12	LEU
11	K	27	ARG
11	K	83	PRO
11	K	91	GLU
11	K	93	ASN
11	K	98	VAL
11	K	115	ARG
12	L	7	GLN
12	L	18	HIS
12	L	26	HIS
12	L	35	ARG
12	L	79	ASP
12	L	101	ASP
12	L	102	ASP
12	L	104	ASP
13	M	46	LEU
13	M	68	ARG
13	M	76	ARG
13	M	84	LYS
13	M	99	ARG
13	M	116	ASN
13	M	123	ASP
13	M	125	ARG
13	M	133	LEU
13	M	158	ARG
14	N	5	ARG
14	N	17	ARG
14	N	26	LEU
14	N	43	VAL
14	N	143	ARG
14	N	177	GLU

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Mol	Chain	Res	Type
15	O	38	ARG
15	O	47	ARG
15	O	53	GLN
16	P	91	LYS
16	P	98	ILE
17	Q	16	ASN
17	Q	54	PRO
17	Q	57	ASP
17	Q	95	GLU
18	R	13	THR
18	R	45	ASP
18	R	55	GLN
18	R	61	GLN
18	R	138	SER
18	R	142	ASP
18	R	143	VAL
19	S	7	HIS
19	S	17	ASP
19	S	44	GLN
19	S	57	THR
20	T	5	ASP
20	T	39	ASN
20	T	42	VAL
20	T	73	HIS
20	T	96	VAL
20	T	115	GLU
20	T	116	ASP
20	T	117	ASP
21	U	25	ASP
21	U	52	THR
22	V	1	THR
22	V	13	PRO
22	V	49	LEU
23	W	1	MET
23	W	78	ASP
23	W	88	THR
23	W	125	HIS
23	W	126	ASP
23	W	146	ILE
24	X	8	ARG
24	X	15	ARG
24	X	27	ASP

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Mol	Chain	Res	Type
24	X	49	ARG
24	X	51	ASP
24	X	52	PRO
24	X	72	VAL
24	X	79	GLU
24	X	88	GLU
25	Y	169	ARG
25	Y	203	VAL
25	Y	204	ARG
25	Y	220	GLU
25	Y	235	GLU
26	Z	41	ARG
26	Z	63	CYS
26	Z	66	CYS
26	Z	68	GLU
26	Z	70	ARG
26	Z	74	GLN
27	1	21	ARG
28	2	18	ASN
29	3	21	GLU
29	3	49	ASP
29	3	65	THR
29	3	89	GLU

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (80) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	29	HIS
1	A	47	HIS
1	A	176	HIS
1	A	199	HIS
2	B	27	ASN
2	B	145	HIS
2	B	188	HIS
2	B	238	ASN
2	B	260	HIS
2	B	286	ASN
2	B	320	GLN
3	C	2	GLN
3	C	67	GLN
3	C	73	GLN
3	C	129	HIS

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Mol	Chain	Res	Type
3	C	151	GLN
4	D	47	GLN
4	D	103	ASN
4	D	133	ASN
5	E	74	HIS
5	E	143	GLN
7	G	64	ASN
8	H	34	HIS
8	H	49	GLN
8	H	59	GLN
8	H	62	HIS
10	J	52	GLN
10	J	107	ASN
10	J	142	ASN
11	K	10	GLN
11	K	44	HIS
11	K	67	GLN
11	K	93	ASN
12	L	7	GLN
12	L	18	HIS
12	L	41	HIS
12	L	58	GLN
13	M	24	GLN
13	M	58	GLN
13	M	86	GLN
13	M	170	ASN
14	N	21	HIS
14	N	53	ASN
14	N	93	GLN
14	N	107	ASN
14	N	132	ASN
16	P	88	GLN
16	P	118	GLN
17	Q	16	ASN
17	Q	27	GLN
17	Q	40	HIS
18	R	94	ASN
18	R	98	ASN
18	R	123	GLN
19	S	7	HIS
19	S	9	HIS
19	S	25	GLN

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Mol	Chain	Res	Type
19	S	44	GLN
20	T	39	ASN
21	U	23	HIS
21	U	30	HIS
21	U	39	ASN
22	V	29	ASN
22	V	34	GLN
22	V	60	GLN
23	W	2	HIS
23	W	28	HIS
23	W	110	GLN
23	W	119	HIS
24	X	23	HIS
25	Y	189	ASN
26	Z	61	HIS
27	1	16	HIS
28	2	36	ASN
28	2	41	HIS
29	3	2	GLN
29	3	13	HIS
29	3	39	GLN
29	3	48	ASN
29	3	78	HIS

### 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
30	0	2745/2923 (93%)	263 (9%)	14 (0%)
31	9	121/122 (99%)	18 (14%)	1 (0%)
All	All	2866/3045 (94%)	281 (9%)	15 (0%)

All (281) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
30	0	11	A
30	0	31	C
30	0	67	A
30	0	69	A
30	0	70	A
30	0	71	G
30	0	86	A

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Mol	Chain	Res	Type
30	0	87	C
30	0	88	G
30	0	114	A
30	0	115	U
30	0	120	A
30	0	130	C
30	0	131	A
30	0	141	C
30	0	151	A
30	0	166	A
30	0	169	A
30	0	185	G
30	0	186	A
30	0	191	A
30	0	192	A
30	0	198	A
30	0	200	C
30	0	204	A
30	0	219	G
30	0	237	G
30	0	271	C
30	0	272	A
30	0	273	G
30	0	283	U
30	0	284	C
30	0	308	U
30	0	309	C
30	0	318	U
30	0	336	G
30	0	337	A
30	0	358	G
30	0	368	C
30	0	381	G
30	0	397	A
30	0	417	G
30	0	418	C
30	0	461	C
30	0	487	G
30	0	497	A
30	0	510	U
30	0	511	A
30	0	514	G

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Mol	Chain	Res	Type
30	0	537	G
30	0	538	C
30	0	539	G
30	0	542	A
30	0	545	G
30	0	553	G
30	0	559	U
30	0	581	G
30	0	588	G
30	0	604	G
30	0	605	C
30	0	620	A
30	0	632	A
30	0	644	G
30	0	660	A
30	0	688	A
30	0	698	A
30	0	699	C
30	0	701	U
30	0	705	C
30	0	746	A
30	0	759	C
30	0	776	A
30	0	777	U
30	0	809	G
30	0	821	U
30	0	835	U
30	0	840	U
30	0	857	A
30	0	868	G
30	0	869	G
30	0	871	G
30	0	872	U
30	0	875	A
30	0	877	G
30	0	878	G
30	0	882	A
30	0	884	C
30	0	885	G
30	0	898	G
30	0	905	C
30	0	921	G

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Mol	Chain	Res	Type
30	0	923	A
30	0	953	G
30	0	960	G
30	0	1006	A
30	0	1008	C
30	0	1029	U
30	0	1044	C
30	0	1045	G
30	0	1059	G
30	0	1060	C
30	0	1072	G
30	0	1081	A
30	0	1083	C
30	0	1088	A
30	0	1109	U
30	0	1110	G
30	0	1119	G
30	0	1121	G
30	0	1130	U
30	0	1137	G
30	0	1151	G
30	0	1161	A
30	0	1164	U
30	0	1165	G
30	0	1166	A
30	0	1174	A
30	0	1175	G
30	0	1185	U
30	0	1192	A
30	0	1193	A
30	0	1202	A
30	0	1206	U
30	0	1207	A
30	0	1216	G
30	0	1234	U
30	0	1238	C
30	0	1239	G
30	0	1279	U
30	0	1280	A
30	0	1287	A
30	0	1289	C
30	0	1331	G

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Mol	Chain	Res	Type
30	0	1342	C
30	0	1351	G
30	0	1353	C
30	0	1354	G
30	0	1360	C
30	0	1377	C
30	0	1378	G
30	0	1380	U
30	0	1407	A
30	0	1409	G
30	0	1474	C
30	0	1488	U
30	0	1505	U
30	0	1506	U
30	0	1524	U
30	0	1525	G
30	0	1526	A
30	0	1528	A
30	0	1535	G
30	0	1559	A
30	0	1562	C
30	0	1592	G
30	0	1617	C
30	0	1625	U
30	0	1626	A
30	0	1627	G
30	0	1634	G
30	0	1656	A
30	0	1667	A
30	0	1682	A
30	0	1684	A
30	0	1685	A
30	0	1692	C
30	0	1701	A
30	0	1722	U
30	0	1723	G
30	0	1725	C
30	0	1730	G
30	0	1731	C
30	0	1732	A
30	0	1752	G
30	0	1778	A

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Mol	Chain	Res	Type
30	0	1779	A
30	0	1798	C
30	0	1819	G
30	0	1820	G
30	0	1829	A
30	0	1856	C
30	0	1875	A
30	0	1879	U
30	0	1885	A
30	0	1919	A
30	0	1968	A
30	0	1971	G
30	0	1973	A
30	0	1978	A
30	0	1979	G
30	0	1996	U
30	0	2004	U
30	0	2006	C
30	0	2007	A
30	0	2008	U
30	0	2012	U
30	0	2013	G
30	0	2033	G
30	0	2034	U
30	0	2064	U
30	0	2072	G
30	0	2073	G
30	0	2074	A
30	0	2096	A
30	0	2101	A
30	0	2102	G
30	0	2103	A
30	0	2110	G
30	0	2134	G
30	0	2243	C
30	0	2258	A
30	0	2271	G
30	0	2272	G
30	0	2291	A
30	0	2317	C
30	0	2320	U
30	0	2321	A

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Mol	Chain	Res	Type
30	0	2354	A
30	0	2361	A
30	0	2369	A
30	0	2379	G
30	0	2419	U
30	0	2422	U
30	0	2434	A
30	0	2462	G
30	0	2466	G
30	0	2467	A
30	0	2476	C
30	0	2483	A
30	0	2507	G
30	0	2511	A
30	0	2513	A
30	0	2533	C
30	0	2537	G
30	0	2541	U
30	0	2553	A
30	0	2589	U
30	0	2601	A
30	0	2602	G
30	0	2607	U
30	0	2608	C
30	0	2613	G
30	0	2649	A
30	0	2664	A
30	0	2681	A
30	0	2682	C
30	0	2726	U
30	0	2747	C
30	0	2748	G
30	0	2749	U
30	0	2750	G
30	0	2762	C
30	0	2768	A
30	0	2800	A
30	0	2811	A
30	0	2812	A
30	0	2825	C
30	0	2876	G
30	0	2890	A

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Mol	Chain	Res	Type
30	0	2896	A
30	0	2903	C
30	0	2909	G
30	0	2914	A
31	9	2	U
31	9	3	A
31	9	7	G
31	9	14	G
31	9	23	U
31	9	24	U
31	9	25	G
31	9	34	A
31	9	40	C
31	9	41	C
31	9	43	G
31	9	44	A
31	9	52	A
31	9	57	A
31	9	66	G
31	9	77	A
31	9	114	G
31	9	122	C

All (15) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
30	0	69	A
30	0	129	A
30	0	604	G
30	0	644	G
30	0	834	G
30	0	871	G
30	0	1237	U
30	0	1352	A
30	0	1377	C
30	0	1504	A
30	0	2011	A
30	0	2466	G
30	0	2526	C
30	0	2718	C
31	9	65	A

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

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

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
30	UR3	0	2619	30	14,22,23	0.74	1 (7%)	15,32,35	0.56	0
30	PSU	0	2621	30	17,21,22	1.70	3 (17%)	20,30,33	5.47	4 (20%)
30	OMG	0	2588	30	18,26,27	1.08	2 (11%)	20,38,41	2.61	4 (20%)
30	OMU	0	2587	30	14,22,23	0.92	1 (7%)	14,31,34	1.17	1 (7%)
30	1MA	0	628	30,35	15,25,26	0.77	0	15,37,40	1.41	1 (6%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
30	UR3	0	2619	30	-	0/5/25/26	0/2/2/2
30	PSU	0	2621	30	-	0/7/25/26	0/2/2/2
30	OMG	0	2588	30	-	0/5/27/28	0/3/3/3
30	OMU	0	2587	30	-	0/7/27/28	0/2/2/2
30	1MA	0	628	30,35	-	0/3/25/26	0/3/3/3

All (7) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
30	0	2621	PSU	C5-C1'	-5.36	1.47	1.52
30	0	2588	OMG	C6-N1	3.55	1.39	1.33
30	0	2621	PSU	C4-N3	2.82	1.38	1.33
30	0	2587	OMU	C4-N3	2.27	1.37	1.33
30	0	2621	PSU	C2-N1	2.19	1.42	1.38
30	0	2588	OMG	C8-N7	-2.10	1.31	1.34
30	0	2619	UR3	C6-C5	-2.04	1.33	1.38

All (10) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
30	0	2621	PSU	N1-C2-N3	-17.46	114.55	128.43
30	0	2621	PSU	C4-N3-C2	14.38	127.28	115.14
30	0	2588	OMG	C5-C6-N1	-8.75	111.46	123.43
30	0	2621	PSU	C5-C4-N3	-8.16	114.84	125.36
30	0	2588	OMG	C6-N1-C2	5.83	125.19	115.93
30	0	628	1MA	C2-N3-C4	-4.61	110.82	116.58
30	0	2587	OMU	C5-C4-N3	-3.96	114.59	123.31
30	0	2588	OMG	C2-N3-C4	-3.06	111.86	115.36
30	0	2621	PSU	C6-N1-C2	2.60	119.66	115.36
30	0	2588	OMG	N3-C2-N1	-2.42	124.00	127.22

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

4 monomers are involved in 12 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
30	0	2619	UR3	2	0
30	0	2621	PSU	2	0
30	0	2588	OMG	3	0
30	0	2587	OMU	5	0

## 5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

## 5.6 Ligand geometry [i](#)

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

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

## 5.7 Other polymers

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	A	237/240 (98%)	-0.28	3 (1%) 77 77	36, 78, 117, 135	0
2	B	337/338 (99%)	-0.40	3 (0%) 84 84	36, 72, 106, 116	0
3	C	246/246 (100%)	-0.46	2 (0%) 86 86	31, 60, 87, 97	0
4	D	140/177 (79%)	0.83	30 (21%) 0 1	91, 126, 152, 162	0
5	E	172/178 (96%)	-0.27	1 (0%) 89 90	62, 89, 116, 123	0
6	F	119/120 (99%)	0.12	8 (6%) 17 17	68, 96, 130, 142	0
7	G	29/348 (8%)	0.21	0 100 100	104, 117, 126, 127	0
8	H	160/177 (90%)	0.04	2 (1%) 77 77	57, 81, 125, 130	0
9	I	70/162 (43%)	1.77	29 (41%) 0 0	149, 172, 188, 190	0
10	J	142/145 (97%)	-0.28	1 (0%) 87 88	48, 67, 90, 114	0
11	K	132/132 (100%)	-0.36	2 (1%) 73 72	38, 69, 98, 107	0
12	L	145/165 (87%)	0.29	9 (6%) 20 20	50, 96, 141, 147	0
13	M	194/196 (98%)	0.00	10 (5%) 27 25	41, 61, 109, 119	0
14	N	186/187 (99%)	0.17	9 (4%) 30 28	72, 94, 145, 152	0
15	O	115/116 (99%)	-0.52	1 (0%) 84 84	57, 72, 93, 98	0
16	P	143/149 (95%)	-0.27	3 (2%) 63 62	52, 74, 92, 103	0
17	Q	95/96 (98%)	-0.09	5 (5%) 26 24	55, 71, 88, 103	0
18	R	150/155 (96%)	-0.49	0 100 100	45, 61, 87, 109	0
19	S	81/85 (95%)	-0.39	1 (1%) 79 78	61, 80, 103, 113	0
20	T	119/120 (99%)	0.02	6 (5%) 28 27	51, 74, 105, 132	0
21	U	53/67 (79%)	3.92	47 (88%) 0 0	119, 128, 137, 138	0
22	V	65/71 (91%)	0.47	5 (7%) 13 12	68, 97, 141, 146	0
23	W	154/154 (100%)	-0.13	3 (1%) 66 65	49, 66, 88, 103	0
24	X	82/92 (89%)	0.16	3 (3%) 41 38	57, 81, 104, 121	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
25	Y	142/241 (58%)	-0.49	1 (0%) 87 88	39, 59, 87, 116	0
26	Z	73/116 (62%)	5.59	58 (79%) 0 0	109, 128, 137, 141	0
27	1	56/57 (98%)	-0.45	0 100 100	34, 47, 56, 60	0
28	2	46/50 (92%)	0.06	4 (8%) 10 10	43, 84, 116, 122	0
29	3	92/92 (100%)	5.69	83 (90%) 0 0	112, 132, 141, 144	0
30	0	2749/2923 (94%)	-0.61	1 (0%) 100 100	31, 64, 118, 195	0
31	9	122/122 (100%)	-0.75	1 (0%) 86 86	53, 94, 121, 167	0
All	All	6646/7517 (88%)	-0.15	331 (4%) 28 27	31, 72, 133, 195	0

All (331) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
29	3	41	GLU	21.4
26	Z	35	SER	15.5
29	3	45	GLY	15.4
29	3	35	TRP	15.3
29	3	38	ARG	14.7
29	3	34	LYS	14.3
26	Z	34	SER	14.1
26	Z	45	VAL	13.9
29	3	39	GLN	13.1
26	Z	46	SER	12.9
29	3	42	ARG	12.8
26	Z	56	GLU	12.2
26	Z	58	ASN	12.0
29	3	44	SER	11.9
26	Z	50	VAL	11.6
26	Z	55	SER	11.0
26	Z	77	GLY	10.8
29	3	43	ASN	10.5
26	Z	44	ARG	10.0
26	Z	69	ASP	9.7
29	3	11	CYS	9.7
26	Z	43	GLY	9.6
29	3	37	ASP	9.6
26	Z	78	ILE	9.5
29	3	36	ILE	9.5
29	3	31	THR	9.3
29	3	13	HIS	8.9
26	Z	79	TRP	8.9

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Mol	Chain	Res	Type	RSRZ
29	3	62	THR	8.8
29	3	57	GLY	8.7
26	Z	68	GLU	8.5
21	U	9	CYS	8.4
26	Z	38	PHE	8.4
29	3	33	MET	8.4
29	3	40	ARG	8.3
26	Z	61	HIS	8.2
13	M	80	GLY	8.2
29	3	32	GLY	8.2
26	Z	89	THR	7.9
29	3	48	ASN	7.7
29	3	71	CYS	7.7
29	3	14	CYS	7.6
26	Z	53	ILE	7.6
21	U	28	THR	7.6
29	3	30	GLN	7.5
29	3	59	ASP	7.3
29	3	75	GLY	7.3
21	U	54	THR	7.2
26	Z	42	TYR	7.2
26	Z	49	ARG	7.2
26	Z	71	VAL	7.1
29	3	49	ASP	7.1
29	3	27	SER	7.1
29	3	82	GLY	7.0
26	Z	59	GLU	7.0
26	Z	62	ALA	6.9
29	3	22	VAL	6.8
21	U	52	THR	6.8
26	Z	63	CYS	6.8
26	Z	36	GLY	6.7
26	Z	80	GLN	6.7
9	I	74	ILE	6.7
29	3	61	PRO	6.6
21	U	39	ASN	6.6
29	3	68	LYS	6.6
13	M	73	ARG	6.5
29	3	53	SER	6.5
29	3	76	LYS	6.4
26	Z	39	GLY	6.3
13	M	90	ARG	6.2

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Mol	Chain	Res	Type	RSRZ
26	Z	88	PHE	6.2
26	Z	57	MET	6.1
29	3	15	ASN	6.0
26	Z	81	CYS	6.0
21	U	10	GLY	6.0
21	U	53	ASP	6.0
29	3	47	GLY	6.0
29	3	19	GLU	5.9
26	Z	47	ARG	5.9
9	I	117	THR	5.9
26	Z	54	GLU	5.9
29	3	74	CYS	5.9
9	I	108	HIS	5.8
29	3	56	PRO	5.7
29	3	60	LYS	5.6
29	3	10	TYR	5.5
13	M	89	THR	5.5
21	U	13	ILE	5.5
29	3	78	HIS	5.4
26	Z	70	ARG	5.4
29	3	12	PRO	5.4
21	U	6	CYS	5.3
26	Z	74	GLN	5.3
21	U	30	HIS	5.3
26	Z	60	ASP	5.3
26	Z	76	THR	5.2
26	Z	82	SER	5.2
21	U	25	ASP	5.2
29	3	23	GLU	5.2
29	3	83	TRP	5.2
9	I	70	THR	5.2
9	I	104	ALA	5.2
26	Z	66	CYS	5.1
28	2	36	ASN	5.1
12	L	106	VAL	5.1
21	U	29	THR	5.1
21	U	40	ALA	5.1
21	U	5	GLU	5.0
21	U	19	THR	5.0
29	3	25	VAL	5.0
21	U	11	THR	4.9
21	U	46	ALA	4.9

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Mol	Chain	Res	Type	RSRZ
20	T	112	LEU	4.9
29	3	63	LYS	4.8
29	3	18	GLN	4.8
21	U	48	ASN	4.7
21	U	15	PRO	4.7
13	M	81	ARG	4.7
29	3	51	LYS	4.7
29	3	72	GLY	4.7
29	3	20	HIS	4.7
26	Z	37	ARG	4.6
26	Z	51	ALA	4.6
21	U	20	MET	4.6
20	T	119	ALA	4.6
21	U	4	ARG	4.6
26	Z	90	GLY	4.5
21	U	23	HIS	4.5
21	U	31	PHE	4.5
21	U	7	ASP	4.4
29	3	77	ALA	4.4
26	Z	72	ASP	4.4
29	3	65	THR	4.4
22	V	39	ALA	4.4
21	U	36	CYS	4.4
26	Z	67	GLY	4.3
26	Z	92	SER	4.3
4	D	45	THR	4.2
4	D	166	ILE	4.2
29	3	16	GLU	4.2
24	X	10	VAL	4.2
4	D	70	GLY	4.2
21	U	14	GLU	4.2
9	I	103	ILE	4.1
9	I	106	GLN	4.1
26	Z	86	TYR	4.1
21	U	8	TYR	4.0
9	I	66	GLY	4.0
4	D	18	ILE	4.0
29	3	21	GLU	4.0
26	Z	48	ARG	3.9
19	S	81	ILE	3.9
9	I	72	GLU	3.9
29	3	69	TYR	3.9

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Mol	Chain	Res	Type	RSRZ
4	D	69	ILE	3.9
4	D	88	LEU	3.8
4	D	44	ILE	3.8
21	U	24	LYS	3.7
21	U	41	ASP	3.7
29	3	28	GLY	3.7
29	3	17	HIS	3.7
9	I	97	VAL	3.7
29	3	64	LYS	3.7
9	I	101	LYS	3.7
14	N	58	LEU	3.6
13	M	86	GLN	3.6
26	Z	93	TYR	3.6
4	D	63	ILE	3.6
21	U	12	ASP	3.6
31	9	1	U	3.5
29	3	91	GLN	3.5
26	Z	87	LYS	3.5
29	3	52	PHE	3.5
29	3	80	ARG	3.5
21	U	55	ALA	3.5
29	3	8	ASN	3.5
9	I	109	PRO	3.4
20	T	42	VAL	3.4
21	U	22	VAL	3.4
16	P	49	ILE	3.4
21	U	32	CYS	3.4
17	Q	71	TYR	3.4
26	Z	41	ARG	3.4
13	M	87	GLY	3.4
9	I	98	ASP	3.4
29	3	1	MET	3.4
6	F	75	ILE	3.4
29	3	67	LEU	3.4
4	D	27	ILE	3.3
29	3	81	GLU	3.3
4	D	157	LEU	3.3
5	E	128	GLY	3.3
21	U	51	TRP	3.2
22	V	38	GLY	3.2
9	I	105	GLU	3.2
4	D	40	ILE	3.2

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Mol	Chain	Res	Type	RSRZ
29	3	66	ASP	3.2
9	I	112	LEU	3.2
20	T	118	SER	3.2
26	Z	40	ALA	3.2
29	3	50	GLY	3.1
9	I	100	VAL	3.1
21	U	44	ARG	3.1
4	D	87	ALA	3.1
21	U	26	GLY	3.1
4	D	75	LEU	3.1
29	3	58	GLY	3.0
14	N	48	VAL	3.0
23	W	4	LEU	3.0
1	A	99	ILE	3.0
29	3	29	ARG	3.0
9	I	73	LEU	3.0
14	N	47	LEU	3.0
14	N	50	LEU	3.0
9	I	71	ALA	3.0
29	3	84	ARG	3.0
23	W	34	LEU	2.9
29	3	55	VAL	2.9
9	I	93	ALA	2.9
15	O	89	ILE	2.9
21	U	45	GLU	2.9
29	3	85	ALA	2.9
9	I	111	LEU	2.9
26	Z	85	ASP	2.8
12	L	96	VAL	2.8
11	K	67	GLN	2.8
12	L	120	LEU	2.8
9	I	132	VAL	2.8
12	L	140	VAL	2.8
14	N	179	LEU	2.8
29	3	46	ILE	2.8
29	3	54	LYS	2.8
9	I	102	GLN	2.8
6	F	98	VAL	2.8
26	Z	104	ARG	2.8
12	L	100	ALA	2.8
9	I	67	VAL	2.8
12	L	60	GLU	2.7

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Mol	Chain	Res	Type	RSRZ
30	0	1198	U	2.7
21	U	47	ARG	2.7
29	3	9	THR	2.7
29	3	2	GLN	2.7
29	3	70	ARG	2.7
4	D	101	THR	2.7
26	Z	103	VAL	2.7
24	X	72	VAL	2.7
4	D	25	MET	2.6
21	U	43	GLY	2.6
4	D	16	PRO	2.6
14	N	60	SER	2.6
2	B	278	PRO	2.6
1	A	58	VAL	2.6
6	F	17	LEU	2.6
29	3	24	LYS	2.6
29	3	3	MET	2.6
13	M	79	ALA	2.6
4	D	84	LEU	2.6
9	I	78	ALA	2.5
20	T	101	LEU	2.5
14	N	92	ALA	2.5
23	W	55	GLY	2.5
24	X	71	ARG	2.5
12	L	122	ALA	2.5
4	D	165	PHE	2.5
1	A	110	SER	2.5
26	Z	52	GLU	2.5
4	D	50	VAL	2.5
22	V	40	PRO	2.5
6	F	83	LEU	2.4
21	U	17	THR	2.4
13	M	76	ARG	2.4
22	V	46	ILE	2.4
26	Z	65	ASN	2.4
28	2	20	ARG	2.4
29	3	26	ARG	2.4
2	B	128	ILE	2.4
6	F	49	PHE	2.3
29	3	5	ARG	2.3
17	Q	67	GLN	2.3
4	D	106	PHE	2.3

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Mol	Chain	Res	Type	RSRZ
4	D	67	ASP	2.3
26	Z	73	ARG	2.3
13	M	77	HIS	2.3
2	B	204	GLY	2.3
17	Q	95	GLU	2.3
4	D	93	LEU	2.3
21	U	27	ALA	2.3
21	U	33	SER	2.3
28	2	49	GLU	2.2
4	D	57	THR	2.2
21	U	56	ARG	2.2
4	D	89	PRO	2.2
16	P	77	ALA	2.2
9	I	110	ASP	2.2
4	D	61	PHE	2.2
8	H	48	VAL	2.2
21	U	18	GLY	2.2
9	I	88	GLN	2.2
14	N	84	THR	2.2
4	D	134	LEU	2.2
11	K	4	LEU	2.2
4	D	135	VAL	2.2
26	Z	75	GLY	2.2
9	I	76	ASP	2.2
29	3	4	PRO	2.2
6	F	16	ALA	2.1
10	J	27	ALA	2.1
8	H	94	PRO	2.1
17	Q	75	ILE	2.1
21	U	37	GLU	2.1
29	3	90	PHE	2.1
9	I	116	LEU	2.1
16	P	48	ALA	2.1
28	2	39	ARG	2.1
6	F	97	ALA	2.1
20	T	35	TYR	2.1
3	C	14	GLY	2.1
6	F	31	LYS	2.1
4	D	92	GLU	2.1
12	L	124	ASP	2.1
14	N	59	ALA	2.1
4	D	128	LEU	2.1

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Mol	Chain	Res	Type	RSRZ
12	L	130	ARG	2.1
3	C	5	ILE	2.1
21	U	38	ASN	2.1
4	D	43	GLU	2.0
17	Q	66	LYS	2.0
9	I	127	CYS	2.0
21	U	16	GLY	2.0
22	V	31	ARG	2.0
25	Y	235	GLU	2.0

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

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95<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	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
30	PSU	0	2621	20/21	0.96	0.20	49,51,60,60	0
30	OMG	0	2588	24/25	0.97	0.14	48,51,54,55	0
30	1MA	0	628	23/24	0.98	0.17	37,44,45,46	0
30	UR3	0	2619	21/22	0.98	0.14	56,57,60,60	0
30	OMU	0	2587	21/22	0.98	0.13	51,52,54,56	0

## 6.3 Carbohydrates [i](#)

There are no carbohydrates in this entry.

## 6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. 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	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
35	NA	L	8568	1/1	-0.00	0.63	59,59,59,59	0
34	SR	0	8979	1/1	0.43	0.69	200,200,200,200	0
34	SR	0	8982	1/1	0.54	0.78	200,200,200,200	0
35	NA	0	8553	1/1	0.55	0.22	81,81,81,81	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
35	NA	0	8560	1/1	0.56	0.43	80,80,80,80	0
34	SR	0	8991	1/1	0.57	0.09	188,188,188,188	0
33	CL	0	8822	1/1	0.60	0.91	140,140,140,140	0
35	NA	Q	8540	1/1	0.60	0.12	74,74,74,74	0
34	SR	0	9006	1/1	0.65	0.52	200,200,200,200	0
35	NA	0	8509	1/1	0.66	0.43	84,84,84,84	0
35	NA	0	8528	1/1	0.69	0.40	113,113,113,113	0
37	CD	U	8701	1/1	0.69	0.39	180,180,180,180	0
34	SR	3	8999	1/1	0.69	0.43	200,200,200,200	0
35	NA	0	8562	1/1	0.70	1.01	83,83,83,83	0
34	SR	0	8957	1/1	0.72	1.76	200,200,200,200	0
34	SR	0	8960	1/1	0.73	0.06	156,156,156,156	0
34	SR	0	9001	1/1	0.73	0.13	200,200,200,200	0
34	SR	0	8971	1/1	0.73	0.16	200,200,200,200	0
33	CL	J	8821	1/1	0.74	0.26	99,99,99,99	0
34	SR	B	8987	1/1	0.74	0.79	200,200,200,200	0
34	SR	3	8932	1/1	0.74	0.11	148,148,148,148	0
32	MG	0	8066	1/1	0.75	0.45	71,71,71,71	0
35	NA	0	8545	1/1	0.75	0.43	74,74,74,74	0
32	MG	0	8031	1/1	0.76	0.11	68,68,68,68	0
33	CL	J	8801	1/1	0.76	0.22	85,85,85,85	0
35	NA	R	8575	1/1	0.77	0.50	97,97,97,97	0
34	SR	0	9004	1/1	0.78	1.32	200,200,200,200	0
33	CL	3	8804	1/1	0.79	0.11	98,98,98,98	0
33	CL	0	8815	1/1	0.80	0.24	130,130,130,130	0
34	SR	0	8928	1/1	0.80	0.12	156,156,156,156	0
35	NA	0	8518	1/1	0.80	0.85	91,91,91,91	0
32	MG	T	8057	1/1	0.80	0.08	80,80,80,80	0
34	SR	0	8993	1/1	0.81	0.05	200,200,200,200	0
32	MG	0	8087	1/1	0.81	0.06	22,22,22,22	0
33	CL	N	8807	1/1	0.81	0.49	99,99,99,99	0
35	NA	B	8552	1/1	0.81	0.55	70,70,70,70	0
35	NA	0	8507	1/1	0.81	0.20	38,38,38,38	0
35	NA	0	8524	1/1	0.81	0.42	53,53,53,53	0
35	NA	0	8549	1/1	0.81	0.28	96,96,96,96	0
35	NA	0	8570	1/1	0.81	0.18	57,57,57,57	0
37	CD	3	8704	1/1	0.81	0.59	183,183,183,183	0
34	SR	0	8955	1/1	0.82	0.11	200,200,200,200	0
34	SR	0	8983	1/1	0.83	0.30	200,200,200,200	0
35	NA	0	8544	1/1	0.83	0.45	76,76,76,76	0
35	NA	0	8501	1/1	0.84	0.26	53,53,53,53	0
34	SR	0	8968	1/1	0.84	0.18	175,175,175,175	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
34	SR	0	8975	1/1	0.84	0.06	189,189,189,189	0
34	SR	0	8964	1/1	0.84	0.25	176,176,176,176	0
34	SR	0	8974	1/1	0.85	0.42	196,196,196,196	0
32	MG	Y	8077	1/1	0.85	0.39	58,58,58,58	0
32	MG	9	8074	1/1	0.85	0.23	97,97,97,97	0
32	MG	0	8068	1/1	0.85	0.08	44,44,44,44	0
33	CL	L	8810	1/1	0.85	0.12	91,91,91,91	0
35	NA	0	8571	1/1	0.86	0.36	99,99,99,99	0
34	SR	0	9000	1/1	0.86	0.15	200,200,200,200	0
33	CL	J	8802	1/1	0.86	0.11	86,86,86,86	0
34	SR	9	9003	1/1	0.86	0.04	200,200,200,200	0
32	MG	0	8065	1/1	0.86	0.10	66,66,66,66	0
32	MG	0	8008	1/1	0.86	0.20	26,26,26,26	0
35	NA	0	8519	1/1	0.87	0.19	51,51,51,51	0
34	SR	0	8959	1/1	0.87	0.06	190,190,190,190	0
35	NA	R	8532	1/1	0.87	0.21	68,68,68,68	0
35	NA	0	8536	1/1	0.88	0.12	64,64,64,64	0
32	MG	0	8032	1/1	0.88	0.05	47,47,47,47	0
34	SR	0	8989	1/1	0.88	0.13	174,174,174,174	0
35	NA	0	8522	1/1	0.88	0.26	130,130,130,130	0
34	SR	F	9005	1/1	0.88	0.15	170,170,170,170	0
35	NA	0	8556	1/1	0.89	0.39	94,94,94,94	0
35	NA	0	8502	1/1	0.89	0.19	66,66,66,66	0
34	SR	0	8988	1/1	0.89	0.05	200,200,200,200	0
33	CL	B	8819	1/1	0.89	1.19	83,83,83,83	0
34	SR	0	8953	1/1	0.89	0.33	179,179,179,179	0
34	SR	0	8919	1/1	0.89	0.09	185,185,185,185	0
33	CL	O	8808	1/1	0.89	0.38	114,114,114,114	0
35	NA	0	8506	1/1	0.89	0.56	91,91,91,91	0
35	NA	0	8525	1/1	0.90	0.55	113,113,113,113	0
35	NA	0	8557	1/1	0.90	0.06	70,70,70,70	0
32	MG	0	8081	1/1	0.90	0.38	116,116,116,116	0
35	NA	0	8529	1/1	0.90	0.16	61,61,61,61	0
34	SR	0	8969	1/1	0.90	1.49	200,200,200,200	0
34	SR	0	8984	1/1	0.90	0.03	124,124,124,124	0
32	MG	0	8092	1/1	0.90	0.09	53,53,53,53	0
35	NA	0	8508	1/1	0.90	0.35	118,118,118,118	0
34	SR	A	8930	1/1	0.91	0.11	131,131,131,131	0
34	SR	0	8970	1/1	0.91	0.15	158,158,158,158	0
34	SR	0	8956	1/1	0.91	0.24	200,200,200,200	0
32	MG	0	8046	1/1	0.91	0.07	44,44,44,44	0
32	MG	0	8093	1/1	0.91	0.16	48,48,48,48	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
34	SR	J	8986	1/1	0.91	0.34	200,200,200,200	0
34	SR	0	8976	1/1	0.92	0.26	195,195,195,195	0
35	NA	0	8516	1/1	0.92	0.22	27,27,27,27	0
32	MG	0	8042	1/1	0.92	0.05	75,75,75,75	0
34	SR	0	8972	1/1	0.92	0.18	138,138,138,138	0
32	MG	0	8038	1/1	0.92	0.12	94,94,94,94	0
32	MG	0	8067	1/1	0.92	0.27	47,47,47,47	0
34	SR	B	8950	1/1	0.92	0.15	123,123,123,123	0
32	MG	0	8053	1/1	0.92	0.13	88,88,88,88	0
33	CL	0	8803	1/1	0.92	0.14	82,82,82,82	0
35	NA	J	8538	1/1	0.92	0.12	84,84,84,84	0
35	NA	9	8572	1/1	0.92	0.08	71,71,71,71	0
34	SR	0	8938	1/1	0.92	0.06	200,200,200,200	0
34	SR	0	8977	1/1	0.92	0.05	200,200,200,200	0
32	MG	0	8011	1/1	0.93	0.21	33,33,33,33	0
33	CL	J	8816	1/1	0.93	2.10	99,99,99,99	0
35	NA	0	8511	1/1	0.93	0.09	53,53,53,53	0
35	NA	0	8517	1/1	0.93	0.21	69,69,69,69	0
34	SR	0	8908	1/1	0.93	0.10	99,99,99,99	0
35	NA	0	8555	1/1	0.93	0.25	80,80,80,80	0
33	CL	0	8805	1/1	0.93	0.38	105,105,105,105	0
32	MG	0	8023	1/1	0.93	0.21	38,38,38,38	0
32	MG	0	8049	1/1	0.94	0.26	82,82,82,82	0
35	NA	0	8573	1/1	0.94	0.25	89,89,89,89	0
35	NA	0	8574	1/1	0.94	1.44	92,92,92,92	0
32	MG	0	8079	1/1	0.94	0.31	57,57,57,57	0
34	SR	0	8922	1/1	0.94	0.27	181,181,181,181	0
34	SR	0	8963	1/1	0.94	0.12	117,117,117,117	0
32	MG	0	8085	1/1	0.94	0.11	67,67,67,67	0
34	SR	0	8927	1/1	0.94	0.10	171,171,171,171	0
35	NA	0	8523	1/1	0.94	0.22	51,51,51,51	0
35	NA	0	8537	1/1	0.94	0.12	46,46,46,46	0
32	MG	0	8026	1/1	0.94	0.14	37,37,37,37	0
35	NA	0	8547	1/1	0.94	0.49	115,115,115,115	0
34	SR	0	8936	1/1	0.94	0.10	114,114,114,114	0
34	SR	0	8962	1/1	0.94	0.06	168,168,168,168	0
32	MG	0	8064	1/1	0.94	0.23	51,51,51,51	0
33	CL	M	8818	1/1	0.94	0.29	58,58,58,58	0
32	MG	0	8003	1/1	0.94	0.20	27,27,27,27	0
32	MG	0	8020	1/1	0.94	0.19	50,50,50,50	0
32	MG	K	8054	1/1	0.94	0.15	42,42,42,42	0
34	SR	0	8926	1/1	0.95	0.23	131,131,131,131	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
32	MG	0	8082	1/1	0.95	0.19	62,62,62,62	0
35	NA	0	8526	1/1	0.95	0.11	67,67,67,67	0
34	SR	0	8997	1/1	0.95	0.92	200,200,200,200	0
34	SR	0	8998	1/1	0.95	0.65	200,200,200,200	0
35	NA	0	8554	1/1	0.95	0.36	124,124,124,124	0
32	MG	0	8030	1/1	0.95	0.91	75,75,75,75	0
35	NA	0	8564	1/1	0.95	0.67	87,87,87,87	0
34	SR	0	8951	1/1	0.95	0.17	183,183,183,183	0
32	MG	A	8051	1/1	0.95	0.23	95,95,95,95	0
32	MG	0	8015	1/1	0.95	0.13	30,30,30,30	0
35	NA	0	8563	1/1	0.95	0.25	66,66,66,66	0
35	NA	0	8550	1/1	0.95	0.12	129,129,129,129	0
34	SR	0	8925	1/1	0.95	0.14	98,98,98,98	0
32	MG	0	8052	1/1	0.95	0.13	63,63,63,63	0
34	SR	0	8965	1/1	0.95	0.23	160,160,160,160	0
32	MG	0	8010	1/1	0.96	0.13	46,46,46,46	0
32	MG	0	8089	1/1	0.96	0.28	56,56,56,56	0
32	MG	0	8018	1/1	0.96	0.08	34,34,34,34	0
34	SR	2	8947	1/1	0.96	0.12	195,195,195,195	0
32	MG	9	8040	1/1	0.96	0.18	101,101,101,101	0
35	NA	R	8533	1/1	0.96	0.07	94,94,94,94	0
33	CL	Q	8811	1/1	0.96	0.72	124,124,124,124	0
34	SR	0	8911	1/1	0.96	0.14	100,100,100,100	0
34	SR	0	8978	1/1	0.96	0.07	132,132,132,132	0
32	MG	0	8019	1/1	0.96	0.18	19,19,19,19	0
32	MG	0	8056	1/1	0.96	0.14	47,47,47,47	0
37	CD	Z	8703	1/1	0.96	0.43	188,188,188,188	0
32	MG	0	8043	1/1	0.96	0.22	62,62,62,62	0
35	NA	0	8515	1/1	0.96	0.09	35,35,35,35	0
32	MG	0	8091	1/1	0.96	0.30	67,67,67,67	0
32	MG	0	8061	1/1	0.96	0.31	47,47,47,47	0
34	SR	0	9002	1/1	0.96	0.14	200,200,200,200	0
32	MG	0	8033	1/1	0.96	0.20	69,69,69,69	0
35	NA	S	8510	1/1	0.96	0.06	41,41,41,41	0
34	SR	0	8915	1/1	0.96	0.12	123,123,123,123	0
35	NA	0	8566	1/1	0.96	0.25	86,86,86,86	0
33	CL	0	8817	1/1	0.96	0.10	84,84,84,84	0
34	SR	0	8942	1/1	0.96	0.05	123,123,123,123	0
35	NA	0	8514	1/1	0.96	0.38	74,74,74,74	0
32	MG	0	8039	1/1	0.96	0.20	94,94,94,94	0
34	SR	A	8929	1/1	0.96	0.09	139,139,139,139	0
33	CL	Y	8820	1/1	0.96	0.13	58,58,58,58	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
35	NA	0	8546	1/1	0.96	1.01	108,108,108,108	0
32	MG	0	8058	1/1	0.96	0.07	7,7,7,7	0
35	NA	0	8535	1/1	0.96	0.25	58,58,58,58	0
35	NA	M	8539	1/1	0.97	0.12	38,38,38,38	0
35	NA	0	8542	1/1	0.97	0.41	79,79,79,79	0
34	SR	0	8923	1/1	0.97	0.09	108,108,108,108	0
34	SR	0	8935	1/1	0.97	0.15	101,101,101,101	0
33	CL	0	8813	1/1	0.97	0.21	64,64,64,64	0
35	NA	0	8561	1/1	0.97	0.14	53,53,53,53	0
32	MG	0	8007	1/1	0.97	0.07	21,21,21,21	0
33	CL	0	8812	1/1	0.97	0.08	70,70,70,70	0
34	SR	0	8985	1/1	0.97	0.10	168,168,168,168	0
35	NA	0	8534	1/1	0.97	0.27	53,53,53,53	0
35	NA	0	8558	1/1	0.97	0.24	82,82,82,82	0
34	SR	0	8920	1/1	0.97	0.08	145,145,145,145	0
34	SR	0	8943	1/1	0.97	0.10	89,89,89,89	0
32	MG	0	8055	1/1	0.97	0.30	60,60,60,60	0
32	MG	0	8029	1/1	0.97	0.10	62,62,62,62	0
32	MG	A	8050	1/1	0.97	0.12	69,69,69,69	0
34	SR	0	8992	1/1	0.97	0.23	141,141,141,141	0
34	SR	0	8946	1/1	0.97	0.24	144,144,144,144	0
35	NA	9	8543	1/1	0.97	0.26	51,51,51,51	0
33	CL	A	8809	1/1	0.97	0.34	116,116,116,116	0
33	CL	0	8814	1/1	0.97	0.28	51,51,51,51	0
32	MG	0	8075	1/1	0.97	0.06	50,50,50,50	0
32	MG	0	8088	1/1	0.97	0.17	53,53,53,53	0
36	K	M	8402	1/1	0.97	0.21	96,96,96,96	0
32	MG	0	8073	1/1	0.97	0.09	89,89,89,89	0
34	SR	1	8952	1/1	0.97	0.12	92,92,92,92	0
35	NA	0	8504	1/1	0.97	0.33	41,41,41,41	0
32	MG	0	8024	1/1	0.97	0.03	39,39,39,39	0
32	MG	0	8021	1/1	0.97	0.07	31,31,31,31	0
32	MG	0	8009	1/1	0.97	0.24	24,24,24,24	0
34	SR	0	8924	1/1	0.97	0.23	131,131,131,131	0
34	SR	0	8939	1/1	0.97	0.07	155,155,155,155	0
34	SR	0	8934	1/1	0.98	0.10	138,138,138,138	0
32	MG	0	8022	1/1	0.98	0.20	25,25,25,25	0
34	SR	0	8910	1/1	0.98	0.13	118,118,118,118	0
34	SR	0	8937	1/1	0.98	0.26	126,126,126,126	0
34	SR	0	8995	1/1	0.98	0.16	123,123,123,123	0
32	MG	0	8037	1/1	0.98	0.31	92,92,92,92	0
32	MG	0	8060	1/1	0.98	0.04	58,58,58,58	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
34	SR	S	8961	1/1	0.98	0.10	130,130,130,130	0
35	NA	0	8569	1/1	0.98	0.12	71,71,71,71	0
32	MG	0	8001	1/1	0.98	0.14	42,42,42,42	0
32	MG	0	8044	1/1	0.98	0.10	59,59,59,59	0
32	MG	0	8078	1/1	0.98	0.36	72,72,72,72	0
35	NA	0	8559	1/1	0.98	0.51	96,96,96,96	0
33	CL	R	8806	1/1	0.98	0.15	66,66,66,66	0
32	MG	0	8059	1/1	0.98	0.06	55,55,55,55	0
34	SR	9	8980	1/1	0.98	0.16	191,191,191,191	0
34	SR	0	8931	1/1	0.98	0.15	120,120,120,120	0
32	MG	0	8034	1/1	0.98	0.06	50,50,50,50	0
32	MG	0	8041	1/1	0.98	0.19	25,25,25,25	0
32	MG	0	8005	1/1	0.98	0.22	24,24,24,24	0
34	SR	0	9008	1/1	0.98	0.10	94,94,94,94	0
34	SR	0	8945	1/1	0.98	0.07	119,119,119,119	0
34	SR	0	8990	1/1	0.98	0.14	113,113,113,113	0
34	SR	0	8914	1/1	0.98	0.22	133,133,133,133	0
34	SR	0	9007	1/1	0.98	1.31	200,200,200,200	0
32	MG	0	8013	1/1	0.98	0.06	19,19,19,19	0
34	SR	0	8981	1/1	0.98	0.13	198,198,198,198	0
32	MG	0	8016	1/1	0.98	0.15	41,41,41,41	0
35	NA	0	8530	1/1	0.98	0.17	53,53,53,53	0
32	MG	0	8006	1/1	0.98	0.10	44,44,44,44	0
34	SR	0	8996	1/1	0.98	0.48	200,200,200,200	0
32	MG	0	8080	1/1	0.98	0.27	65,65,65,65	0
34	SR	0	8994	1/1	0.98	0.11	200,200,200,200	0
35	NA	0	8531	1/1	0.98	0.18	54,54,54,54	0
36	K	0	8401	1/1	0.98	0.62	145,145,145,145	0
34	SR	0	8954	1/1	0.98	0.15	115,115,115,115	0
35	NA	0	8541	1/1	0.98	0.18	60,60,60,60	0
35	NA	0	8527	1/1	0.99	0.31	92,92,92,92	0
32	MG	0	8017	1/1	0.99	0.14	28,28,28,28	0
32	MG	0	8062	1/1	0.99	0.18	66,66,66,66	0
34	SR	R	8912	1/1	0.99	0.24	107,107,107,107	0
32	MG	0	8028	1/1	0.99	0.09	13,13,13,13	0
34	SR	0	8909	1/1	0.99	0.08	100,100,100,100	0
34	SR	0	8904	1/1	0.99	0.23	73,73,73,73	0
35	NA	C	8503	1/1	0.99	0.12	36,36,36,36	0
32	MG	0	8014	1/1	0.99	0.08	25,25,25,25	0
32	MG	0	8047	1/1	0.99	0.40	90,90,90,90	0
34	SR	0	8918	1/1	0.99	0.10	88,88,88,88	0
32	MG	0	8002	1/1	0.99	0.14	31,31,31,31	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
35	NA	0	8521	1/1	0.99	0.26	40,40,40,40	0
34	SR	0	8941	1/1	0.99	0.26	141,141,141,141	0
32	MG	0	8090	1/1	0.99	0.11	57,57,57,57	0
32	MG	0	8045	1/1	0.99	0.09	28,28,28,28	0
32	MG	0	8036	1/1	0.99	0.10	62,62,62,62	0
32	MG	0	8070	1/1	0.99	0.16	39,39,39,39	0
34	SR	0	8905	1/1	0.99	0.28	68,68,68,68	0
34	SR	0	8966	1/1	0.99	0.07	101,101,101,101	0
34	SR	0	8933	1/1	0.99	0.16	126,126,126,126	0
32	MG	Y	8086	1/1	0.99	0.26	52,52,52,52	0
32	MG	0	8035	1/1	0.99	0.17	76,76,76,76	0
35	NA	0	8567	1/1	0.99	0.44	83,83,83,83	0
34	SR	0	8967	1/1	0.99	0.06	163,163,163,163	0
32	MG	0	8004	1/1	0.99	0.11	19,19,19,19	0
32	MG	0	8084	1/1	0.99	0.13	37,37,37,37	0
34	SR	0	8949	1/1	0.99	0.07	128,128,128,128	0
32	MG	0	8063	1/1	0.99	0.12	60,60,60,60	0
34	SR	0	8917	1/1	0.99	0.10	111,111,111,111	0
34	SR	0	8940	1/1	0.99	0.10	93,93,93,93	0
32	MG	0	8072	1/1	0.99	0.09	45,45,45,45	0
35	NA	0	8513	1/1	0.99	0.19	67,67,67,67	0
35	NA	0	8551	1/1	0.99	0.16	75,75,75,75	0
34	SR	0	8973	1/1	0.99	0.16	142,142,142,142	0
34	SR	0	8916	1/1	0.99	0.05	110,110,110,110	0
34	SR	0	8948	1/1	0.99	0.09	110,110,110,110	0
32	MG	0	8071	1/1	0.99	0.13	78,78,78,78	0
32	MG	0	8048	1/1	0.99	0.31	26,26,26,26	0
35	NA	0	8548	1/1	0.99	0.05	44,44,44,44	0
35	NA	0	8565	1/1	0.99	0.16	85,85,85,85	0
35	NA	0	8512	1/1	0.99	0.24	40,40,40,40	0
32	MG	0	8083	1/1	0.99	0.35	58,58,58,58	0
35	NA	0	8520	1/1	0.99	0.06	44,44,44,44	0
35	NA	0	8505	1/1	0.99	0.22	37,37,37,37	0
37	CD	O	8705	1/1	0.99	0.05	105,105,105,105	0
34	SR	0	8944	1/1	0.99	0.05	168,168,168,168	0
32	MG	0	8069	1/1	0.99	0.12	73,73,73,73	0
34	SR	0	8903	1/1	0.99	0.23	63,63,63,63	0
37	CD	1	8702	1/1	0.99	0.11	78,78,78,78	0
34	SR	0	8921	1/1	0.99	0.09	88,88,88,88	0
34	SR	0	8958	1/1	1.00	0.13	126,126,126,126	0
34	SR	0	8907	1/1	1.00	0.17	60,60,60,60	0
32	MG	0	8027	1/1	1.00	0.10	44,44,44,44	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
34	SR	0	8906	1/1	1.00	0.14	66,66,66,66	0
32	MG	0	8012	1/1	1.00	0.22	26,26,26,26	0
32	MG	0	8076	1/1	1.00	0.32	76,76,76,76	0
34	SR	0	8902	1/1	1.00	0.07	72,72,72,72	0
34	SR	1	8913	1/1	1.00	0.10	108,108,108,108	0
32	MG	0	8025	1/1	1.00	0.04	23,23,23,23	0
34	SR	0	8901	1/1	1.00	0.14	73,73,73,73	0

## 6.5 Other polymers [i](#)

There are no such residues in this entry.