



# Full wwPDB X-ray Structure Validation Report ⓘ

Feb 11, 2024 – 08:49 AM EST

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.

The types of validation reports are described at

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

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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 : 2.36  
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)  
Refmac : 5.8.0158  
CCP4 : 7.0.044 (Gargrove)  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.36

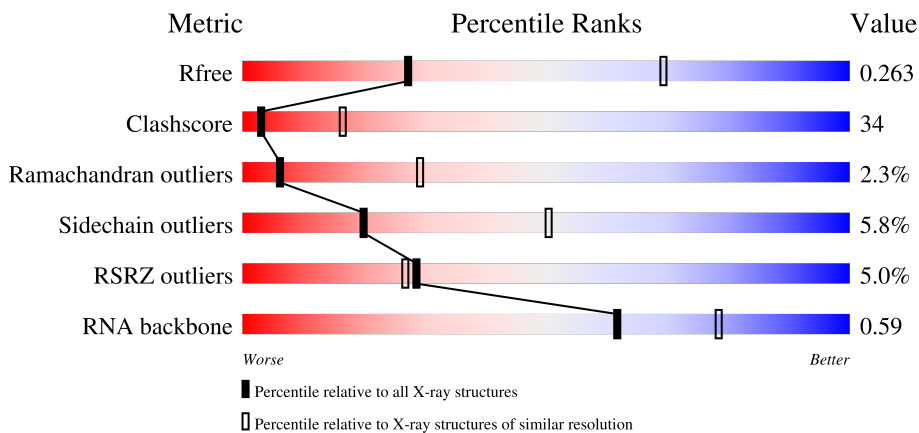
# 1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 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.



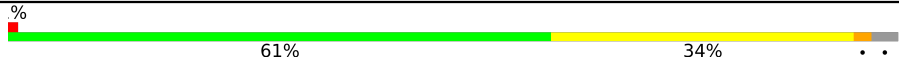
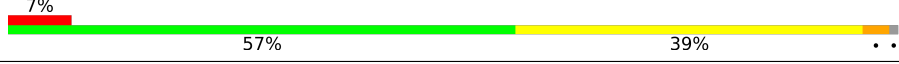
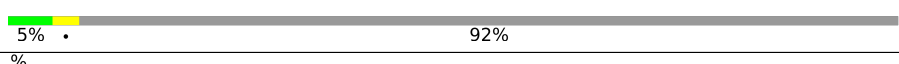


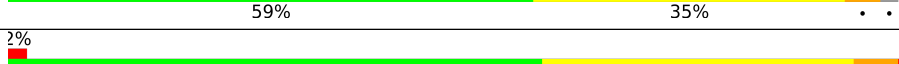


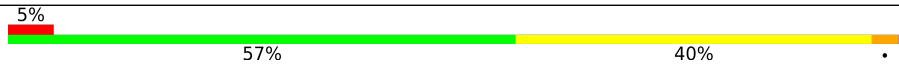

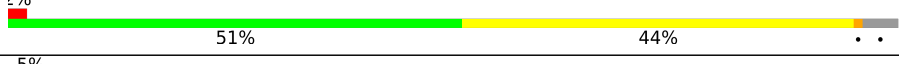
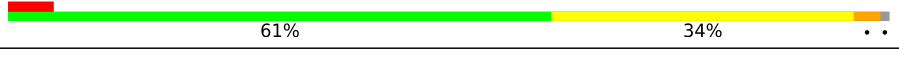
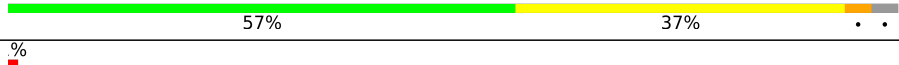
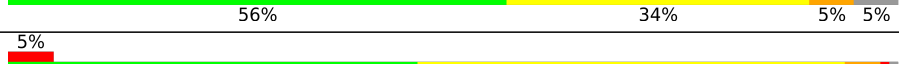

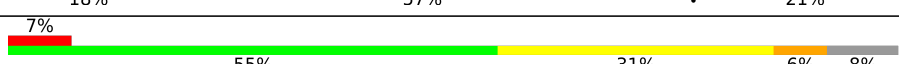

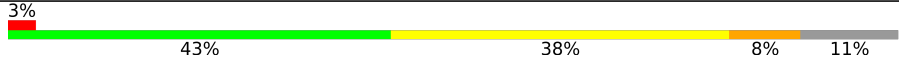
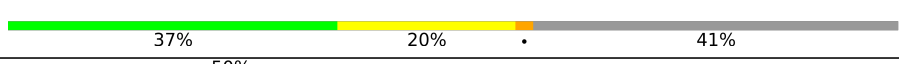


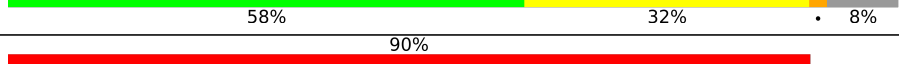



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
$R_{free}$	130704	1149 (3.34-3.26)
Clashscore	141614	1205 (3.34-3.26)
Ramachandran outliers	138981	1183 (3.34-3.26)
Sidechain outliers	138945	1182 (3.34-3.26)
RSRZ outliers	127900	1115 (3.34-3.26)
RNA backbone	3102	1117 (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 of 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	 17% 49% 45%
2	B	338	 46% 50%
3	C	246	 56% 39%
4	D	177	 17% 39% 37% 21%


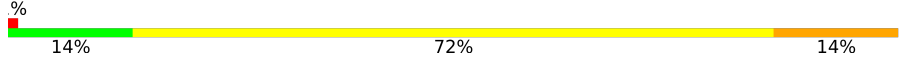
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Mol	Chain	Length	Quality of chain
5	E	178	
6	F	120	
7	G	348	
8	H	177	
9	I	162	
10	J	145	
11	K	132	
12	L	165	
13	M	196	
14	N	187	
15	O	116	
16	P	149	
17	Q	96	
18	R	155	
19	S	85	
20	T	120	
21	U	67	
22	V	71	
23	W	154	
24	X	92	
25	Y	241	
26	Z	116	
27	1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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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



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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	0	2754	Total	C	N	O	P	0	0	0
			59020	26349	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	A	2	Total	Mg	0	0
			2	2		
32	K	1	Total	Mg	0	0
			1	1		
32	T	1	Total	Mg	0	0
			1	1		
32	Y	2	Total	Mg	0	0
			2	2		
32	0	85	Total	Mg	0	0
			85	85		
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	A	1	Total	Cl	0	0
			1	1		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
33	B	1	Total 1	Cl 1	0	0
33	J	4	Total 4	Cl 4	0	0
33	L	1	Total 1	Cl 1	0	0
33	M	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	Q	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	3	1	Total 1	Cl 1	0	0
33	0	8	Total 8	Cl 8	0	0

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

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

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
34	3	2	Total 2	Sr 2	0	0
34	0	93	Total 93	Sr 93	0	0
34	9	2	Total 2	Sr 2	0	0

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

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

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

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

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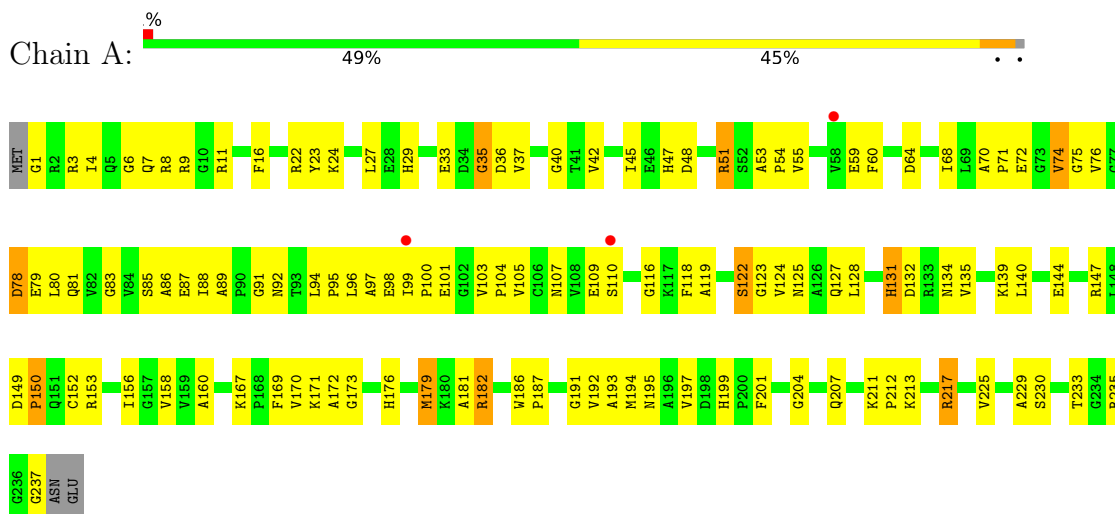
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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
38	P	56	Total O 56 56	0	0
38	Q	58	Total O 58 58	0	0
38	R	78	Total O 78 78	0	0
38	S	37	Total O 37 37	0	0
38	T	41	Total O 41 41	0	0
38	U	34	Total O 34 34	0	0
38	V	10	Total O 10 10	0	0
38	W	71	Total O 71 71	0	0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

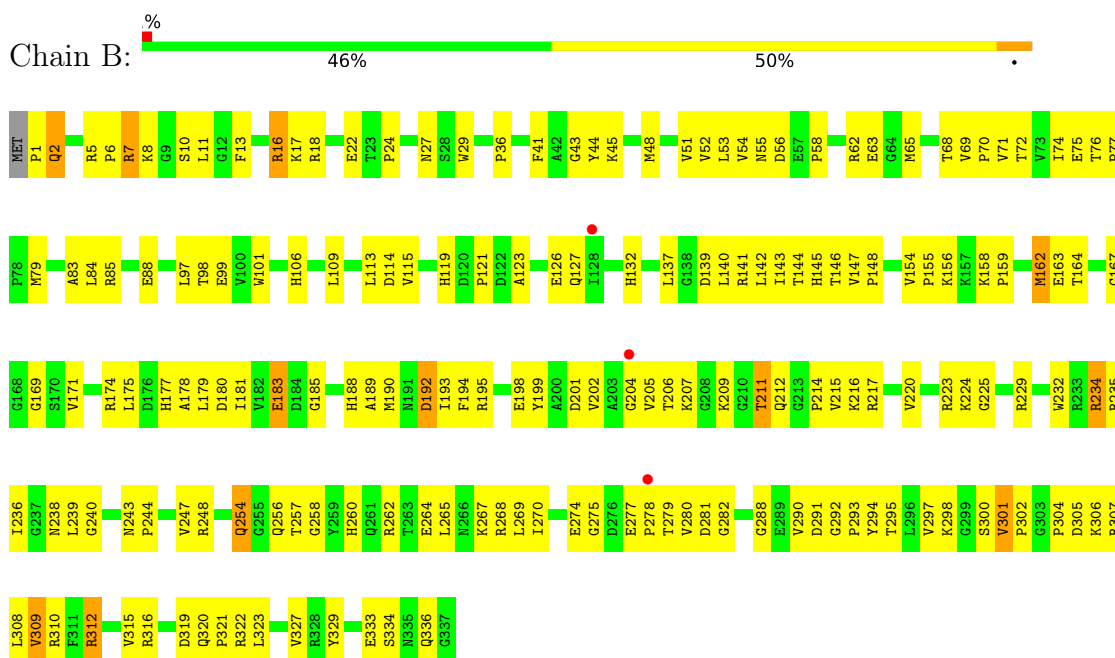
### 3 Residue-property plots i

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

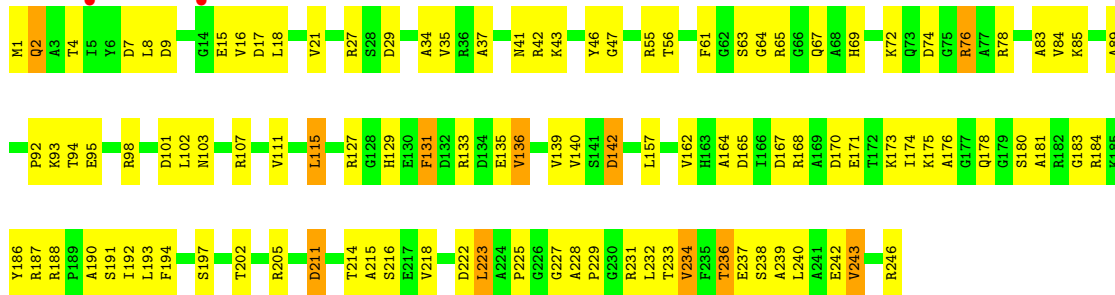
- Molecule 1: 50S ribosomal protein L2P



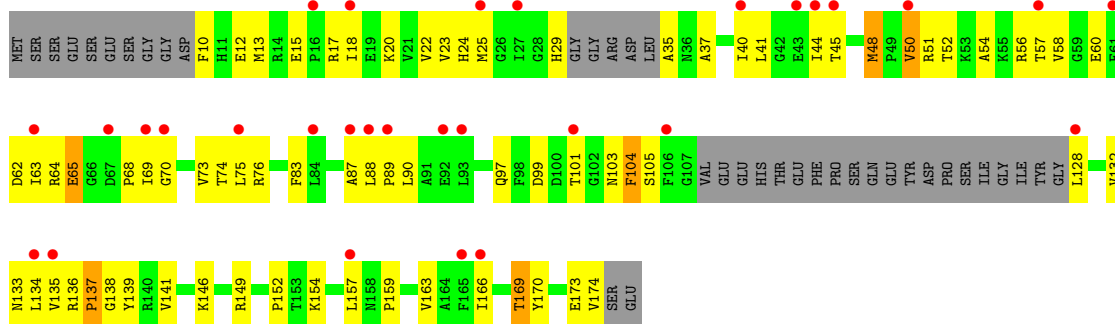
- Molecule 2: 50S ribosomal protein L3P



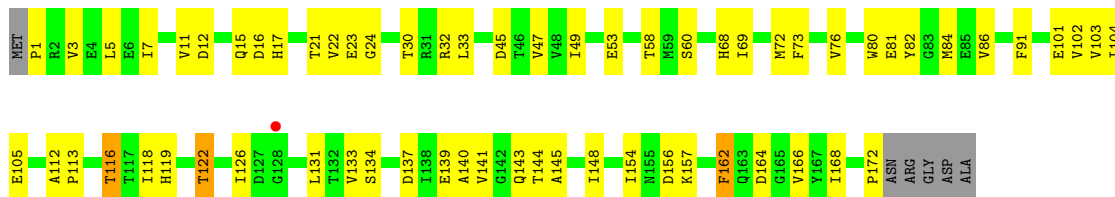
- Molecule 3: 50S ribosomal protein L4P



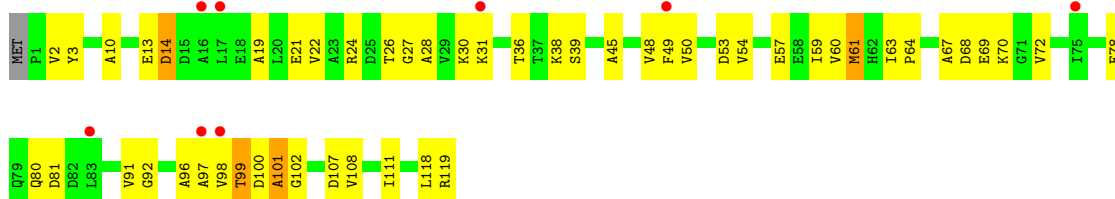
• Molecule 4: 50S ribosomal protein L5P



• Molecule 5: 50S ribosomal protein L6P



• Molecule 6: 50S ribosomal protein L7Ae



• Molecule 7: 50S ribosomal protein L10E



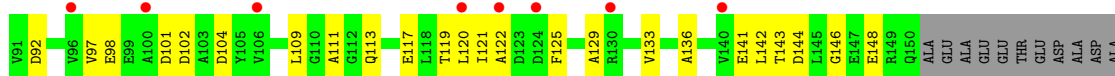
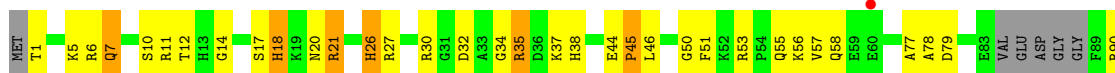




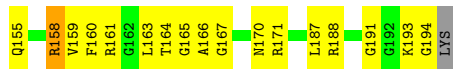
- Molecule 11: 50S ribosomal protein L14P



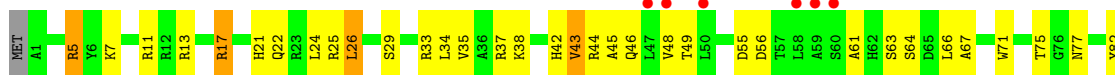
- Molecule 12: 50S ribosomal protein L15P

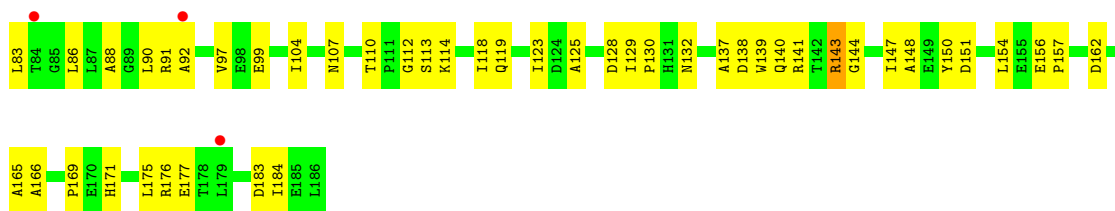


- Molecule 13: 50S ribosomal protein L15e

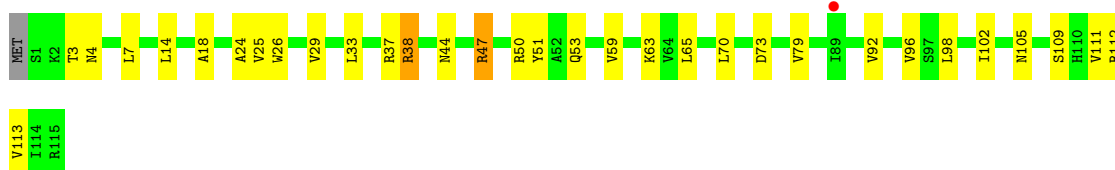


- Molecule 14: 50S ribosomal protein L18P

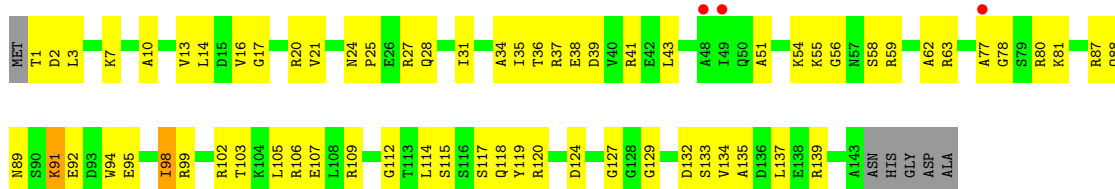




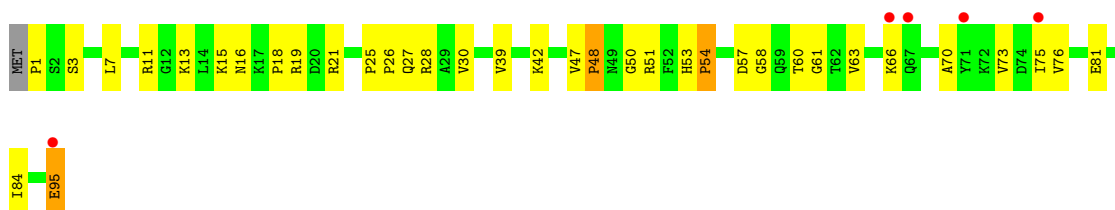
- Molecule 15: 50S ribosomal protein L18e



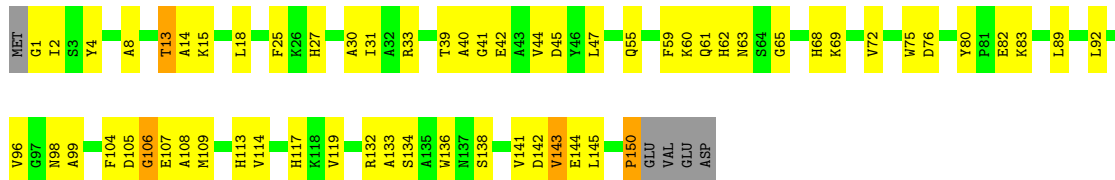
- Molecule 16: 50S ribosomal protein L19e



- Molecule 17: 50S ribosomal protein L21e



- Molecule 18: 50S ribosomal protein L22P

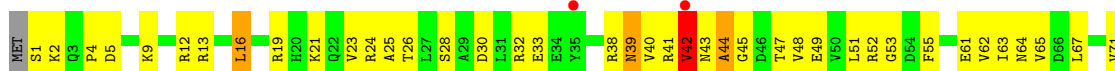


- Molecule 19: 50S ribosomal protein L23P

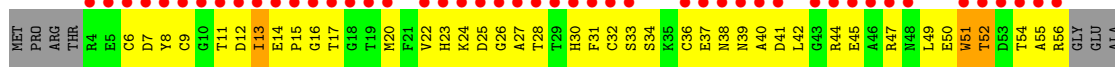
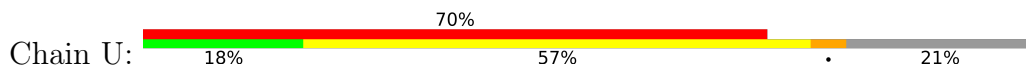


PHE

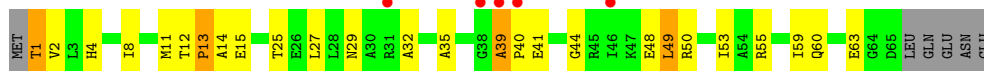
- Molecule 20: 50S ribosomal protein L24P



- Molecule 21: 50S ribosomal protein L24e

GLY  
GLU  
ALA  
GLU  
GLU  
ALA

- Molecule 22: 50S ribosomal protein L29P

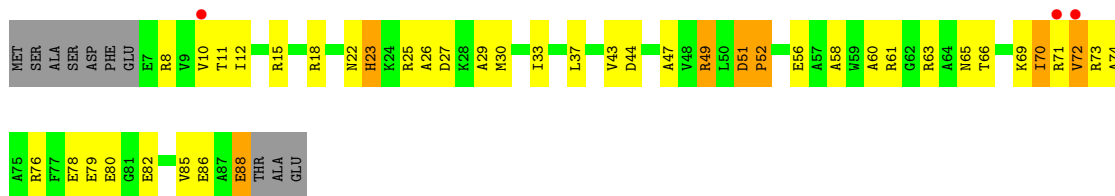


- Molecule 23: 50S ribosomal protein L30P

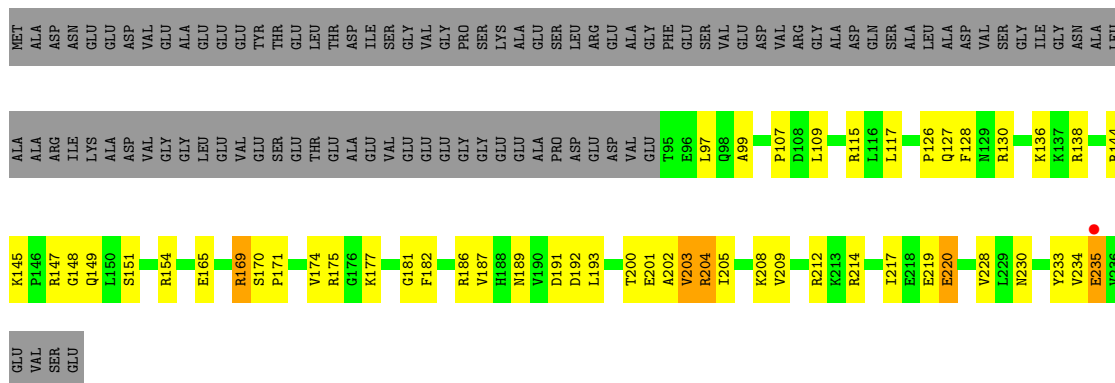
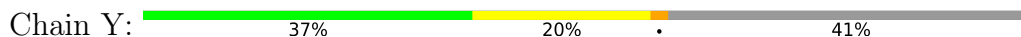


- Molecule 24: 50S ribosomal protein L31e

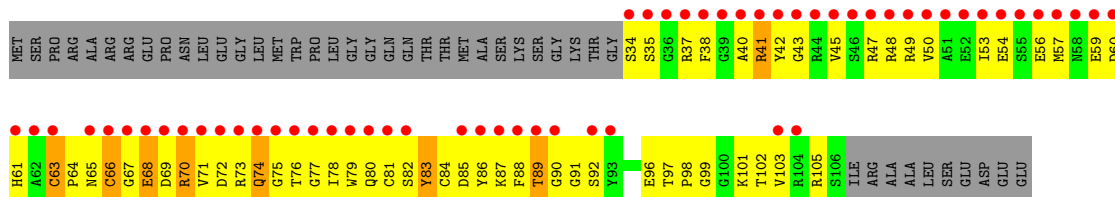




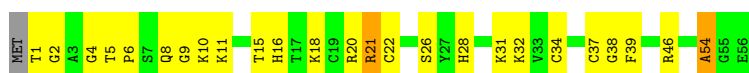
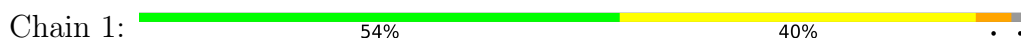
• Molecule 25: 50S ribosomal protein L32e



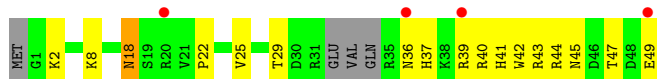
• Molecule 26: 50S ribosomal protein L37Ae



• Molecule 27: 50S ribosomal protein L37e

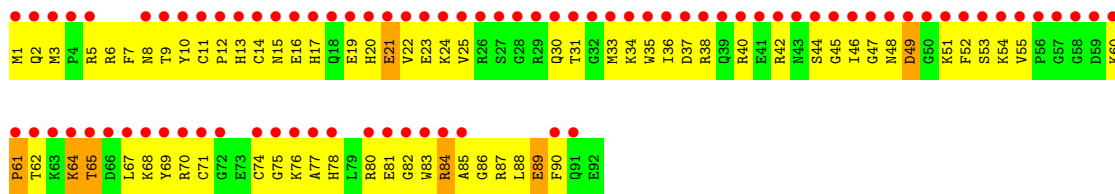


• Molecule 28: 50S ribosomal protein L39e

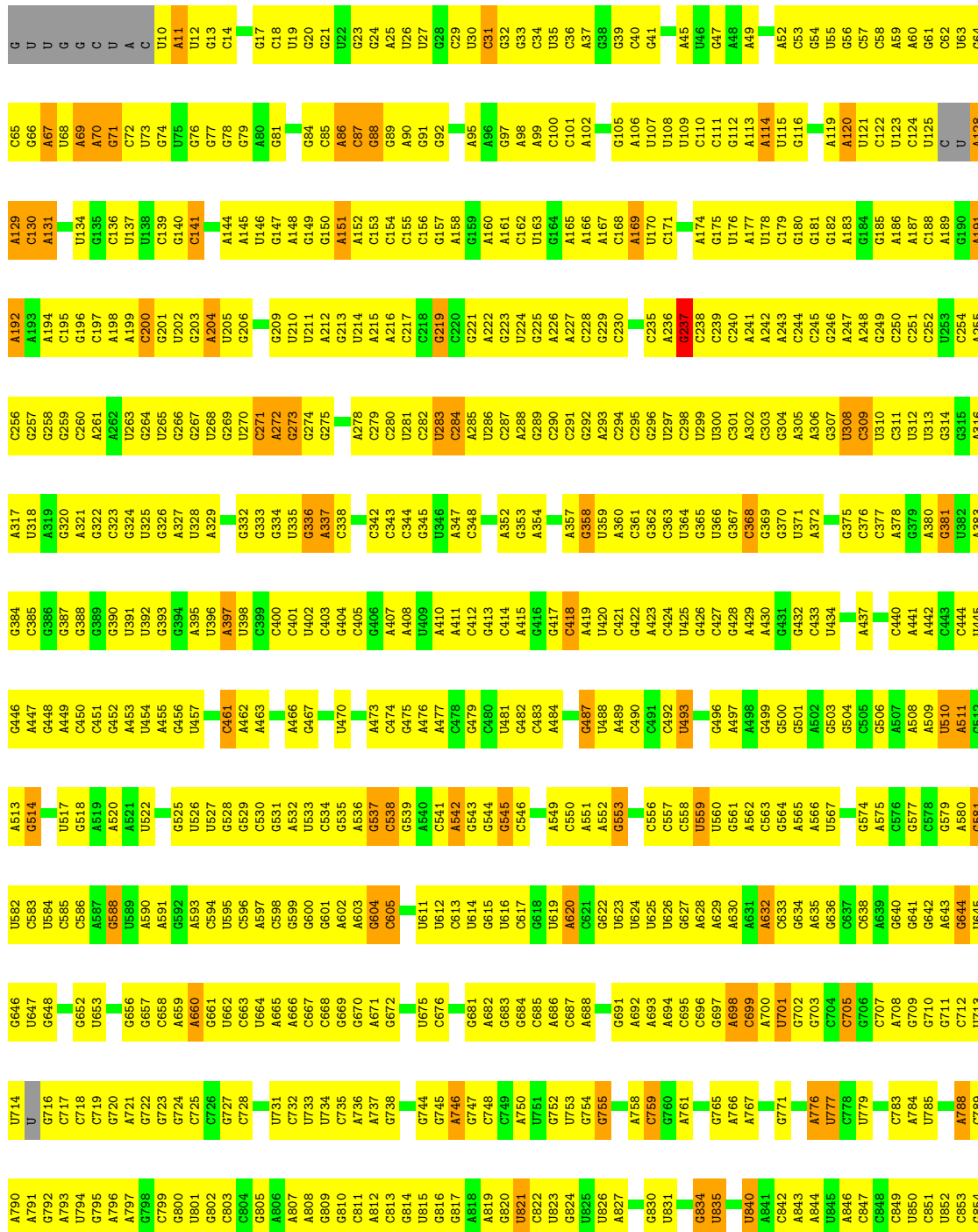
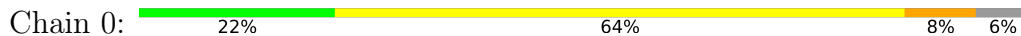


• Molecule 29: 50S ribosomal protein L44E





● Molecule 30: 23S RIBOSOMAL RNA



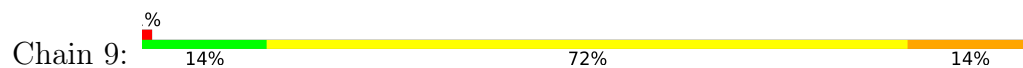
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G1730	C1731	A1732	A1733	A1734	C1735	A1736	A1737	C1738	A1739	A1740	A1741	A1742	G1743	G1744	G1745	U1748	C1749	C1750	G1751	G1752	C1753	A1754	A1755	G1756	C1757	A1758	A1759	G1760	A1761	C1762	C1763	C1764	G1765	G1766	A1767	C1768	C1769	U1770	U1771	C1772	G1773	G1774	A1775	A1778	A1779	G1780	G1781	G1782	A1783	U1784	C1787	U1788	G1789	G1862	G1863	G1864			
A1661	C1662	A1663	A1664	G1665	A1666	U1667	U1668	G1669	A1670	A1671	G1672	A1673	C1674	G1675	G1676	A1677	A1678	C1679	G1680	G1681	A1682	A1683	A1684	C1685	C1686	C1687	G1688	A1689	C1690	A1691	C1692	A1693	G1697	U1698	G1701	U1702	G1706	G1707	G1708	G1709	A1710	A1711	A1712	G1713	A1717	G1718	G1719	C1720	C1721	U1722	G1723	U1724	C1725	U1726	G1727				
U1599	G1600	G1601	C1602	G1603	G1604	G1605	A1606	G1607	U1608	G1609	G1610	A1611	A1612	C1613	G1614	A1615	A1616	C1617	G1618	A1619	U1620	G1621	C1622	A1623	A1624	U1625	G1626	G1627	G1628	G1629	A1630	A1631	C1632	G1633	U1634	U1635	G1636	A1637	U1638	U1639	C1640	A1641	A1642	C1643	A1644	U1645	G1646	G1647	G1648	G1649	C1650	U1654	G1655	A1656	A1657	A1658	A1659	A1660	
U1539	G1540	G1541	G1542	G1543	U1544	C1545	G1546	U1547	U1548	A1549	A1550	C1551	G1552	C1553	A1554	G1555	G1556	G1557	C1558	A1559	U1560	U1561	C1562	G1563	C1564	C1565	C1566	G1567	G1568	U1569	C1570	A1571	A1572	A1573	C1574	C1575	G1576	U1577	C1578	C1579	A1580	A1581	C1582	C1583	A1584	C1585	G1586	U1587	G1588	G1589	A1590	C1591	C1592	C1593	C1594	G1595	A1596	A1597	A1598
U1473	C1474	G1475	A1476	C1477	A1478	A1479	A1480	G1481	U1482	C1483	G1484	A1485	A1486	U1487	U1488	G1489	A1492	A1493	A1494	C1495	A1496	G1497	G1498	U1499	U1500	A1501	A1502	G1503	A1504	A1505	U1506	C1507	C1508	U1511	C1512	C1513	A1514	A1515	U1516	C1517	A1518	U1519	G1520	C1521	A1522	G1523	U1524	G1525	A1526	A1527	A1528	U1531	G1535	U1538	C1538				
G1398	A1399	C1400	G1401	U1336	U1337	U1338	C1342	U1412	U1413	G1414	U1419	C1420	C1421	U1422	C1423	A1424	G1425	C1426	A1427	C1428	U1432	G1433	A1434	U1435	C1436	A1437	G1438	U1439	U1440	G1441	A1442	G1443	G1444	G1445	U1446	U1447	A1448	G1449	C1450	A1451	U1452	G1453	U1454	C1455	C1456	U1457	A1458	U1461	C1462	U1463	C1464	G1468	C1469	A1470	A1471	C1472			
C1332	U1333	C1334	C1335	U1336	U1337	U1338	C1342	U1344	U1345	U1346	U1347	U1350	A1351	A1352	C1353	G1354	A1357	A1358	U1359	C1360	C1361	U1362	G1363	G1364	C1365	C1366	A1369	G1370	U1371	A1372	G1373	C1374	A1375	G1376	C1377	U1378	A1379	U1380	C1383	C1384	G1385	G1386	G1387	U1388	G1389	A1390	G1391	A1392	A1393	C1394	C1395	A1396	C1397						
G1196	G1197	U1198	A1199	A1200	C1201	A1202	G1203	C1204	U1205	U1206	A1207	C1208	G1209	G1210	G1211	C1212	C1213	G1214	A1215	G1216	U1217	U1218	A1222	C1223	G1224	C1225	U1228	C1229	A1230	U1234	G1235	A1236	U1237	C1238	G1239	G1240	G1241	A1242	C1243	U1244	C1245	A1246	A1247	A1248	U1249	U1250	C1251	C1252	C1253	C1254	A1255	A1259	G1260	A1261	C1262				
C1283	U1284	G1285	U1286	C1287	C1288	G1289	A1278	C1272	A1273	A1274	C1275	U1278	U1279	A1280	C1281	U1282	A1287	U1288	C1289	U1292	U1293	A1294	G1295	A1296	U1297	U1298	G1299	A1300	U1302	C1303	C1304	C1305	A1308	U1309	U1310	U1311	G1312	A1313	G1314	G1315	G1316	G1317	G1318	G1319	G1323	G1324	C1325	C1326	A1327	A1328	G1329	A1330	G1331						
G1131	A1132	G1137	U1138	U1139	C1140	C1141	C1142	C1146	C1147	C1148	U1149	A1150	A1151	A1152	C1153	A1154	G1155	C1156	G1157	U1158	G1159	A1161	G1162	A1163	U1164	G1165	U1166	G1167	C1168	U1169	U1170	A1171	G1172	A1173	A1174	C1175	C1176	A1177	U1178	C1179	U1180	A1181	C1182	C1183	U1184	U1185	C1186	U1187	U1188	A1189	G1190	A1191	A1192	A1193	A1194	G1195			
G1084	G1085	A1086	A1087	G1088	C1089	C1090	G1063	C1066	A1067	C1068	C1069	A1070	G1071	G1072	A1073	G1074	G1075	G1076	G1077	A1081	A1082	C1083	C1084	C1085	A1086	U1087	A1088	G1093	G1096	C1102	C1103	U1099	G1110	A1114	U1115	U1116	A1117	A1118	G1119	U1120	C1121	U1121	U1122	U1123	U1124	U1125	U1126	U1127	U1128	U1129	U1130								
G928	U952	G953	C954	G935	C936	C937	G938	A939	G940	G941	U942	A943	G944	G945	U947	U948	U949	G950	C951	G952	C953	U954	A955	G956	A957	G958	C959	U960	U967	G968	G969	U970	G902	U903	U904	C905	C906	A907	C908	A912	A916	U917	C920	A922	A923	G924	C925												
A	G	U	C	G	C	A	A	C999	C1000	U1001	G1002	U1003	C1004	A1005	A1006	C1007	C1008	U1009	C1010	C1011	C1012	A1013	A1014	C1015	U1016	U1017	A1018	C1019	A1020	G1021	A1022	C1023	G1024	C1025	U1026	G1027	U1028	U1029	C1031	A1032	C1033	G1034	G1038	U1041	U1042	C1043	C1044	G1045	G1050	C1051	G1052	A1053							
G856	A857	U858	C859	U860	A861	U862	G863	U864	A867	G868	C869	G870	A871	U872	A875	A876	G877	G878	C879	C880	C881	A882	U883	C884	G885	U888	C889	C890	G891	C892	C893	C896	A897	G898	G902	U903	U904	C905	C906	A907	C908	A912	A916	U917	C920	A922	A923	G924	C925										



C2831 C2832 C2833 C2834 C2835 C2836 U2837 A2838 C2839 A2840 A2841 A2842 A2843 C2844 C2845 C2846 C2847 G2851 A2852 U2853 A2854 G2855 C2859 G2860 G2861 G2862 G2863 U2864 G2865 U2866 G2867 C2868 G2869 C2870 G2871 U2872 C2873 G2874 A2875 G2877 U2878 A2879 C2880 G2882 G2883 G2884 A2885 C2886 G2887 U2888 U2889 A2890 A2891 G2892 C2893 C2894

C2895 A2896 G2897 G2898 G2900 C2901 A2902 C2903 U2904 A2905 A2906 C2907 A2908 G2909 A2910 C2911 C2912 A2913 A2914 A G C C A U U C A U

● Molecule 31: 5S RIBOSOMAL RNA



U1 U2 A3 G4 G5 C6 G7 G8 C9 C10 A11 C12 A13 G14 G17 U18 G19 G20 G21 G22 U23 U24 G25 C26 G27 U28 C29 C30 C31 G32 U33 A34 C35 C36 C37 A38 U39 C40 C41 C42 G43 A44 A45 C46 A47 C48 G49 G50 A51 A52 G53 A54 U55 A56 A57 G58 C59 C61

A62 C63 A64 A65 G66 U69 U70 G74 G75 G76 A77 G78 U79 A80 C81 U82 G83 G84 A85 G86 U87 G88 C89 G90 G91 G92 A93 G94 C95 C96 U97 C98 U99 G100 G101 G102 A103 A104 A105 U106 C107 C108 G109 G110 U111 U112 C113 G114 C115 C116 G117 C118 C119 A120 G121 C122



## 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)	Xtrriage
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	Xtrriage
Anisotropy	0.112	Xtrriage
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>	$\langle  L  \rangle = 0.47$ , $\langle L^2 \rangle = 0.30$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
$F_o, F_c$ correlation	0.93	EDS
Total number of atoms	99122	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	74.0	wwPDB-VP

Xtrriage'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: NA, 1MA, SR, MG, UR3, CL, CD, OMG, PSU, OMU, K

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:CG	18:R:150:PRO:CD	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
26:Z:63:CYS:SG	26:Z:81:CYS:HB2	1.87	1.15
30:0:1523:G:H2'	30:0:1524:U:C6	1.80	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:H5'	30:0:545:G:H8	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:H5'	30:0:2533:C:H6	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
30:0:236:A:H4'	30:0:237:G:H5'	1.37	1.01
30:0:2534:U:H1'	38:0:3475:HOH:O	1.61	1.01
13:M:171:ARG:HD3	30:0:156:C:H5''	1.43	1.00
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
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:HH11	15:O:47:ARG:HG3	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:H8	30:0:871:G:C5'	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:H5'	30:0:545:G:C8	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
30:0:363:C:H1'	38:0:5232:HOH:O	1.69	0.92
30:0:1170:U:H1'	30:0:1172:G:N7	1.83	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
13:M:77:HIS:HB2	13:M:81:ARG:HH21	1.35	0.90
31:9:14:G:H5'	31:9:14:G:H8	1.36	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:H5'	30:0:2533:C:C6	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
13:M:77:HIS:CE1	13:M:86:GLN:HG2	2.07	0.89
30:0:1626:A:H2'	30:0:1627:G:C5'	2.01	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)
30:0:69:A:H5'	30:0:69:A:C8	2.09	0.88
30:0:2507:G:H2'	30:0:2510:C:H42	1.36	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
29:3:42:ARG:NH1	30:0:396:U:H5'	1.88	0.87
30:0:1834:C:H2'	30:0:1840:A:H62	1.38	0.87
4:D:58:VAL:HB	4:D:62:ASP:HB3	1.53	0.87
30:0:541:C:C2'	30:0:542:A:H5''	2.04	0.87
30:0:870:G:H2'	30:0:871:G:H5''	1.57	0.87
11:K:39:GLY:HA2	38:0:5173:HOH:O	1.75	0.87
29:3:47:GLY:HA2	30:0:2121:G:H4'	1.57	0.87
30:0:2442:G:H2'	38:0:9197:HOH:O	1.75	0.87
13:M:70:GLY:HA2	30:0:2263:G:H5''	1.57	0.86
30:0:924:G:H5''	38:0:3656:HOH:O	1.73	0.86
30:0:1483:C:O2'	30:0:1484:G:H5'	1.74	0.86
22:V:39:ALA:H	22:V:40:PRO:HD2	1.41	0.86
30:0:120:A:H3'	38:0:4004:HOH:O	1.74	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:C8	30:0:1118:A:H3'	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
24:X:74:ALA:HB2	24:X:85:VAL:HG13	1.57	0.85
30:0:718:C:O2'	30:0:719:C:H5'	1.76	0.85
30:0:1201:C:H2'	30:0:1202:A:H5'	1.56	0.85
30:0:69:A:H5'	30:0:69:A:H8	1.40	0.85
30:0:877:G:H5'	30:0:878:G:OP1	1.76	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
3:C:1:MET:HG2	3:C:2:GLN:H	1.41	0.85
30:0:424:C:H2'	30:0:425:U:C6	2.09	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
30:0:2102: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)
14:N:141:ARG:HH21	31:9:48:C:H4'	1.42	0.85
30:0:2661:U:H3	30:0:2812:A:H62	1.19	0.85
4:D:154:LYS:H	4:D:154:LYS:HD2	1.42	0.84
30:0:671:A:O2'	30:0:672:G:H2'	1.77	0.84
30:0:391:U:H3'	38:0:4623:HOH:O	1.75	0.84
30:0:1641:A:H2'	30:0:1642:A:H5'	1.59	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
30:0:380:A:H2'	38:0:7130:HOH:O	1.78	0.84
30:0:1964:U:H2'	30:0:1964:U:O2	1.77	0.84
1:A:47:HIS:HD2	30:0:1654:U:H2'	1.41	0.84
14:N:37:ARG:HH12	31:9:6:C:C5'	1.84	0.84
29:3:24:LYS:HE2	33:3:8804:CL:CL	2.14	0.84
30:0:664:U:H5'	38:0:3760:HOH:O	1.77	0.84
2:B:162:MET:HE2	2:B:310:ARG:HD3	1.58	0.84
30:0:24:G:N2	30:0:518:G:H1'	1.93	0.84
30:0:1797:A:H4'	30:0:1798:C:C5	2.13	0.84
30:0:652:G:H5''	38:0:3006:HOH:O	1.78	0.84
30:0:1735:C:O2'	30:0:1736:A:H5'	1.77	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
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
30:0:57:C:H42	30:0:89:G:H1	1.26	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
27:1:20:ARG:HH21	30:0:120:A:H5'	1.43	0.83
30:0:396:U:H4'	38:0:4309:HOH:O	1.79	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
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
29:3:65:THR:HG22	33:3:8804:CL:CL	2.15	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
30:0:461:C:H2'	38:0:3977:HOH:O	1.78	0.83
30:0:2256:G:H2'	30:0:2257:G:H5'	1.61	0.83
13:M:164:THR:HG22	13:M:166:ALA:H	1.44	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1181:A:C2'	30:0:1182:C:H5'	2.09	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
30:0:90:A:H2'	30:0:91:G:O4'	1.79	0.82
30:0:2508:C:H2'	38:0:6666:HOH:O	1.78	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
13:M:82:ARG:O	13:M:86:GLN:HG3	1.80	0.82
14:N:37:ARG:NH1	31:9:6:C:C5'	2.42	0.82
28:2:41:HIS:HD2	28:2:44:ARG:H	1.27	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
30:0:1118:A:H3'	30:0:1118:A:H8	1.45	0.82
29:3:25:VAL:HG22	29:3:68:LYS:HB2	1.60	0.81
30:0:2871:G:H2'	30:0:2872:U:H6	1.45	0.81
30:0:2281:C:H2'	30:0:2282:U:H5'	1.60	0.81
11:K:76:GLN:HA	11:K:93:ASN:HB3	1.62	0.81
29:3:49:ASP:HB3	29:3:52:PHE:HB2	1.62	0.81
30:0:2468:A:H3'	38:0:5402:HOH:O	1.81	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
30:0:385:C:O5'	30:0:385:C:H6	1.64	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
29:3:48:ASN:ND2	30:0:169:A:H1'	1.96	0.81
38:3:9016:HOH:O	30:0:2434:A:H4'	1.81	0.81
30:0:2253:G:H2'	30:0:2254:G:H8	1.45	0.81
30:0:558:C:C2'	30:0:559:U:H5''	2.11	0.81
30:0:1474:C:H6	30:0:1474:C:H5'	1.46	0.81
33:Y:8820:CL:CL	38:0:3632:HOH:O	2.36	0.81
13:M:99:ARG:HE	13:M:170:ASN:HD22	1.29	0.80
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

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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
4:D:141:VAL:HG21	31:9:57:A:C8	2.15	0.80
30:0:2644:C:H4'	38:0:3380:HOH:O	1.81	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
1:A:100:PRO:HG2	1:A:103:VAL:HG21	1.64	0.80
30:0:1855:G:H4'	30:0:1856:C:O5'	1.78	0.80
30:0:1132:A:N6	30:0:1229:C:H2'	1.97	0.80
25:Y:154:ARG:HH21	30:0:1293:U:H5'	1.47	0.80
30:0:56:G:H3'	38:0:5388:HOH:O	1.81	0.80
30:0:368:C:H2'	30:0:369:G:H5'	1.62	0.80
30:0:2871:G:H2'	30:0:2872:U:C6	2.16	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:HB2	1:A:51:ARG:NH1	1.95	0.80
21:U:56:ARG:HD2	30:0:2890:A:C8	2.17	0.80
30:0:1120:U:H5''	30:0:1120:U:C6	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
10:J:52:GLN:HE22	30:0:1119:G:H2'	1.46	0.79
30:0:213:G:N2	30:0:225:G:H2'	1.97	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
15:O:51:TYR:CD1	30:0:721:A:H4'	2.18	0.79
30:0:449:A:H3'	38:0:5340:HOH:O	1.79	0.79
30:0:2533:C:H6	30:0:2533:C:C5'	1.96	0.79
8:H:158:ASN:ND2	30:0:2502:C:H4'	1.98	0.79
30:0:951:A:O2'	30:0:952:G:H5'	1.81	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
30:0:560:U:H2'	30:0:561:G:H8	1.48	0.79
30:0:1666:C:H2'	30:0:1667:A:H5'	1.65	0.79
30:0:506:G:H22	30:0:509:A:H5''	1.48	0.79
30:0:2315:C:H5''	38:0:3506:HOH:O	1.81	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:H3'	30:0:2005:G:OP2	1.82	0.79
11:K:14:LYS:HB2	11:K:45:PRO:HG2	1.65	0.78
30:0:2750:G:H2'	30:0:2751:C:C6	2.19	0.78
4:D:141:VAL:HG21	31:9:57:A:H8	1.48	0.78
30:0:213:G:H22	30:0:225:G:H2'	1.47	0.78
12:L:90:ARG:HA	12:L:119:THR:HB	1.65	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
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
9:I:83:GLY:H	30:0:1168:C:H5''	1.48	0.78
17:Q:15:LYS:HD3	30:0:2364:A:H5''	1.66	0.78
30:0:1116:U:H3	30:0:1246:A:H62	1.30	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
25:Y:165:GLU:HB3	38:0:6614:HOH:O	1.83	0.78
30:0:107:U:H2'	30:0:108:U:H5'	1.66	0.78
30:0:541:C:H2'	30:0:542:A:C5'	2.13	0.78
30:0:1773:G:H4'	38:0:3502:HOH:O	1.84	0.78
38:B:8996:HOH:O	30:0:2766:A:H5'	1.82	0.78
16:P:77:ALA:HA	16:P:80:ARG:HG3	1.64	0.78
29:3:3:MET:O	29:3:90:PHE:HA	1.84	0.78
30:0:1423:C:O2'	30:0:1424:A:H5'	1.84	0.78
30:0:1664:A:H8	30:0:1664:A:OP1	1.67	0.78
30:0:2439:C:H2'	30:0:2440:C:H6	1.46	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
30:0:2507:G:H2'	30:0:2510:C:N4	1.99	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
24:X:43:VAL:HG12	24:X:44:ASP:H	1.48	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
13:M:139:PRO:HA	13:M:142:GLN:HB2	1.65	0.77
30:0:2812:A:H1'	38:0:5719:HOH:O	1.84	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
9:I:87:PRO:HD2	30:0:1180:U:H1'	1.66	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
30:0:625:U:H5''	30:0:1044:C:N4	2.00	0.77
30:0:1947:G:H2'	30:0:1948:G:H8	1.49	0.77
2:B:36:PRO:HG3	2:B:169:GLY:HA3	1.66	0.76
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
30:0:154:C:H2'	30:0:155:C:H6	1.48	0.76
30:0:711:G:C2	30:0:718:C:C2	2.72	0.76
30:0:1787:C:O2'	30:0:1788:U:H5'	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
30:0:561: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
1:A:47:HIS:CD2	30:0:1654:U:H2'	2.20	0.76
30:0:557:C:O2'	30:0:558:C:H5'	1.86	0.76
30:0:1119:G:N2	30:0:1246:A:C2	2.51	0.76
1:A:199:HIS:CD2	1:A:201:PHE:H	2.03	0.76
30:0:506:G:H22	30:0:509:A:H5'	1.48	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
30:0:2073: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
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
30:0:951:A:H2'	30:0:952:G:H5'	1.66	0.76
30:0:1072:G:H5'	38:0:6511:HOH:O	1.85	0.76
31:9:57:A:H2'	31:9:58:G:H5'	1.68	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
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
30:0:2687:G:O2'	30:0:2688:U:H5'	1.86	0.76
23:W:125:HIS:NE2	30:0:1097:A:H5''	2.00	0.75
30:0:1120:U:H5''	30:0:1120:U:H6	1.51	0.75
30:0:659:A:H5''	38:0:7001:HOH:O	1.87	0.75
30:0:1164:U:C2	30:0:1166:A:H4'	2.21	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1666:C:C2'	30:0:1667:A:C5'	2.63	0.75
30:0:1921:A:O2'	30:0:1922:A:H5'	1.87	0.75
23:W:11:VAL:HG11	30:0:1086:A:C6	2.22	0.75
29:3:62:THR:HG21	29:3:84:ARG:HB3	1.68	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
2:B:264:GLU:HG2	2:B:267:LYS:HE3	1.68	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
8:H:120:PHE:CD1	30:0:2311:A:H5'	2.21	0.75
10:J:131:THR:HB	10:J:134:GLU:HG3	1.67	0.75
29:3:74:CYS:SG	29:3:76:LYS:HD2	2.27	0.75
30:0:136:C:H2'	30:0:137:U:O4'	1.85	0.75
30:0:2697:A:H2'	30:0:2698:G:O4'	1.87	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
30:0:300:U:H2'	30:0:301:C:H6	1.52	0.75
30:0:1521:C:H2'	30:0:1522:A:H8	1.52	0.75
2:B:206:THR:HG21	30:0:2716:G:H5''	1.67	0.74
8:H:19:ARG:HH12	30:0:1008:C:H5''	1.52	0.74
23:W:88:THR:HB	38:W:6679:HOH:O	1.85	0.74
29:3:12:PRO:HG3	30:0:2382:A:H4'	1.68	0.74
30:0:694:A:H1'	38:0:3795:HOH:O	1.86	0.74
30:0:1175:G:H2'	30:0:1176:C:O4'	1.87	0.74
31:9:54:A:O2'	31:9:55:U:H5'	1.87	0.74
30:0:503:G:H2'	30:0:504:G:H8	1.51	0.74
30:0:1557:G:H2'	30:0:1558:C:H6	1.51	0.74
11:K:8:VAL:HG13	11:K:80:ILE:HG22	1.68	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
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:H5'	31:9:14:G:C8	2.21	0.74
30:0:748:C:H3'	38:0:4014:HOH:O	1.86	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
30:0:1201: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
4:D:25:MET:SD	4:D:40:ILE:HD11	2.27	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:119:A:H2'	30:0:120:A:C5'	2.17	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
2:B:88:GLU:HB3	2:B:97:LEU:HD12	1.70	0.74
23:W:44:MET:HE2	30:0:944:G:H21	1.52	0.74
23:W:88:THR:HG23	23:W:110:GLN:HB3	1.70	0.74
30:0:681:G:N3	30:0:681:G:H5'	2.02	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
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
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
30:0:1527:A:H1'	30:0:1528:A:C8	2.22	0.73
24:X:26:ALA:HB2	24:X:63:ARG:HA	1.70	0.73
30:0:2472:C:O2'	30:0:2634:G:H4'	1.87	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
30:0:2130:C:H1'	38:0:3910:HOH:O	1.89	0.73
30:0:2587:OMU:O5'	30:0:2587:OMU:H6	1.88	0.73
30:0:2735:U:H2'	30:0:2736:U:C6	2.23	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
29:3:11:CYS:SG	29:3:13:HIS:CD2	2.77	0.73
30:0:1451:C:H5'	30:0:1505:U:H5	1.51	0.73
13:M:99:ARG:HD2	13:M:167:GLY:HA2	1.68	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
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
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
30:0:119: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
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
25:Y:204:ARG:HH22	30:0:553:G:P	2.12	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Z:59:GLU:HB2	26:Z:61:HIS:CE1	2.24	0.73
30:0:2586:U:H3	30:0:2592:G:H22	1.37	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
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
4:D:50:VAL:HG13	31:9:41:C:O4'	1.90	0.72
29:3:47:GLY:CA	30:0:2121:G:H4'	2.19	0.72
9:I:83:GLY:H	30:0:1168:C:C5'	2.01	0.72
30:0:267:G:H2'	30:0:268:U:O4'	1.89	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
30:0:2851:G:H2'	30:0:2902:A:H61	1.51	0.72
2:B:212:GLN:HB2	2:B:257:THR:HG21	1.70	0.72
27:1:38:GLY:HA3	38:1:6935:HOH:O	1.88	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
16:P:80:ARG:HD3	16:P:87:ARG:HH11	1.55	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
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
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
30:0:1474:C:H5'	30:0:1474:C:C6	2.25	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
30:0:2576: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
16:P:13:VAL:HG21	16:P:41:ARG:HG2	1.72	0.71
30:0:708:A:H2'	30:0:709:G:O4'	1.90	0.71
30:0:1309:U:H3'	38:0:4114:HOH:O	1.90	0.71
30:0:1667:A:H5'	30:0:1667:A:H8	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
30:0:2748:G:H2'	38:0:7440:HOH:O	1.89	0.71
12:L:7:GLN:HA	12:L:7:GLN:HE21	1.55	0.71
13:M:70:GLY:HA2	30:0:2263:G:H4'	1.72	0.71
26:Z:70:ARG:HG2	26:Z:83:TYR:N	2.05	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2769:C:H2'	30:0:2770:G:O4'	1.88	0.71
18:R:114:VAL:HB	18:R:145:LEU:HD12	1.70	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
20:T:48:VAL:HG21	20:T:96:VAL:HG13	1.72	0.71
21:U:56:ARG:NE	30:0:2890:A:H1'	2.06	0.71
30:0:192:A:H5'	38:0:7544:HOH:O	1.90	0.71
30:0:421:C:H4'	30:0:1919:A:C6	2.25	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
3:C:236:THR:HA	38:C:8655:HOH:O	1.90	0.71
30:0:814:G:H4'	38:0:3121:HOH:O	1.90	0.71
8:H:59:GLN:NE2	8:H:129:ARG:HE	1.88	0.71
30:0:24:G:H22	30:0:518:G:H1'	1.56	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
1:A:211:LYS:HB3	1:A:212:PRO:HD2	1.70	0.71
3:C:174:ILE:HD11	30:0:338:C:H4'	1.73	0.71
23:W:88:THR:HG22	23:W:90:TYR:HD1	1.55	0.71
30:0:1574:C:H2'	30:0:1575:C:H6	1.54	0.71
2:B:84:LEU:HD23	2:B:142:LEU:HD23	1.73	0.71
30:0:300:U:C5	30:0:301:C:H5	2.09	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:H2'	30:0:2890:A:N3	2.06	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
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
30:0:960:G:H1'	38:0:5895:HOH:O	1.89	0.70
30:0:2239:C:H2'	30:0:2240:U:C6	2.26	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
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
30:0:2250: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
17:Q:53:HIS:N	33:Q:8811:CL:CL	2.61	0.70
30:0:106:A:C2'	30:0:107:U:H5'	2.21	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
30:0:1118:A:C8	30:0:1118:A:C3'	2.74	0.70
30:0:2747:C:H4'	30:0:2748:G:OP1	1.91	0.70
30:0:447:A:O2'	30:0:448:G:H5'	1.90	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
12:L:56:LYS:HE3	30:0:2443:C:H1'	1.74	0.70
24:X:43:VAL:HG11	24:X:82:GLU:HA	1.74	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
30:0:2659:U:H5''	38:0:4098:HOH:O	1.91	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
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
38:Y:8887:HOH:O	30:0:2060:A:H4'	1.92	0.70
30:0:843:A:C2	30:0:846:A:C8	2.80	0.70
30:0:1835:U:H5	30:0:1840:A:N7	1.89	0.70
30:0:2906:A:H5'	30:0:2907:C:O4'	1.92	0.70
1:A:4:ILE:HG12	1:A:7:GLN:HG3	1.73	0.70
8:H:17:TYR:HE1	30:0:1006:A:H62	1.39	0.70
13:M:83:SER:HB2	29:3:47:GLY:HA3	1.72	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
30:0:292:G:H1'	30:0:360:A:N6	2.06	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
8:H:26:ILE:HA	8:H:123:ILE:HG21	1.74	0.70
38:M:8871:HOH:O	30:0:2244:A:H1'	1.92	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:671:A:HO2'	30:0:672:G:H2'	1.56	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
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
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
30:0:960:G:H4'	38:0:7334:HOH:O	1.92	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
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
30:0:1165:G:O3'	30:0:1174:A:H4'	1.92	0.69
31:9:24:U:H3'	31:9:25:G:C5'	2.22	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
30:0:1931:A:H2'	30:0:1932:G:H5'	1.72	0.69
30:0:2578:G:H5'	30:0:2578:G:C8	2.26	0.69
30:0:1585:C:H2'	30:0:1586:G:H8	1.57	0.69
26:Z:57:MET:SD	26:Z:73:ARG:HD2	2.31	0.69
26:Z:64:PRO:HB2	26:Z:86:TYR:CE2	2.28	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
30:0:302: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
30:0:1564:C:H5'	38:0:4202:HOH:O	1.93	0.69
30:0:2787:C:H5	38:0:4591:HOH:O	1.75	0.69
22:V:44:GLY:HA3	30:0:92:G:H4'	1.73	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
31:9:108:C:H2'	31:9:109:G:H8	1.57	0.69
3:C:139:VAL:HG13	38:C:8651:HOH:O	1.92	0.69
9:I:82:THR:HG22	30:0:1168:C:H5''	1.73	0.69
9:I:112:LEU:HD11	30:0:1162:G:H1'	1.75	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
21:U:45:GLU:HB3	38:U:4381:HOH:O	1.91	0.69
30:0:122:C:H5''	38:0:3570: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
30:0:1183:C:H2'	38:0:6169:HOH:O	1.91	0.69
30:0:2461:U:O2	30:0:2466:G:H1'	1.92	0.69
30:0:10:U:C4	30:0:532:A:C8	2.81	0.69
30:0:100:C:H2'	30:0:101:C:H6	1.58	0.69
30:0:2064:U:H5'	30:0:2652:U:O3'	1.92	0.69
27:1:20:ARG:HG2	30:0:111:C:O2'	1.93	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:H3'	30:0:970:U:H6	1.57	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
13:M:161:ARG:HH11	30:0:183:A:H1'	1.56	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
30:0:1300: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
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
24:X:73:ARG:HH12	24:X:88:GLU:HA	1.57	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
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
30:0:292:G:H2'	30:0:358:G:H21	1.57	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
30:0:1157: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:34:SER:HA	30:0:797:A:H4'	1.74	0.68
30:0:169:A:H4'	38:0:9690:HOH:O	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
30:0:1398:G:H4'	38:0:6576:HOH:O	1.92	0.68
30:0:2348:C:H2'	30:0:2349:G:H8	1.57	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2781:U:O2'	30:0:2782:G:H5'	1.94	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
4:D:135:VAL:HG21	4:D:139:TYR:CD1	2.29	0.68
30:0:308:U:C4	30:0:342:C:H1'	2.29	0.68
30:0:2564:G:H5''	30:0:2565:C:H5''	1.76	0.68
21:U:56:ARG:HD2	30:0:2890:A:H8	1.59	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
30:0:1982:C:H2'	30:0:1983:C:O4'	1.93	0.68
13:M:79:ALA:HB3	13:M:81:ARG:NH1	2.04	0.68
15:O:47:ARG:HG3	15:O:47:ARG:NH1	2.03	0.68
38:3:9033:HOH:O	30:0:2382:A:H5'	1.94	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
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
30:0:1363:G:H1'	38:0:9415:HOH:O	1.93	0.68
2:B:244:PRO:HG3	2:B:248:ARG:NH2	2.08	0.67
29:3:81:GLU:HG2	38:3:9067:HOH:O	1.93	0.67
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
3:C:115:LEU:HD21	3:C:243:VAL:HG22	1.75	0.67
18:R:150:PRO:CG	18:R:150:PRO:O	2.41	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
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
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
30:0:1197: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
4:D:173:GLU:HG3	4:D:174:VAL:HG23	1.76	0.67
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
29:3:62:THR:CG2	29:3:84:ARG:HB3	2.25	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:753:U:H4'	38:0:6877:HOH:O	1.94	0.67
30:0:1165:G:N2	30:0:1173:A:H5'	2.09	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
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
33:J:8801:CL:CL	38:J:4038:HOH:O	2.50	0.67
29:3:68:LYS:CE	30:0:2436:U:H5'	2.24	0.67
30:0:39:G:C2	30:0:444:C:C2	2.83	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
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:HB2	14:N:5:ARG:HH11	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
30:0:152:A:O2'	30:0:153:C:H5'	1.95	0.67
30:0:1495:C:H1'	30:0:1573:A:H1'	1.77	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
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
27:1:34:CYS:HB3	27:1:39:PHE:H	1.59	0.67
30:0:544:G:H2'	30:0:545:G:H5''	1.76	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
1:A:48:ASP:HB3	38:A:9024:HOH:O	1.94	0.67
29:3:35:TRP:HA	29:3:38:ARG:NH1	2.09	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
4:D:88:LEU:HB2	4:D:89:PRO:HD3	1.76	0.67
30:0:67:A:H2'	38:0:4106:HOH:O	1.95	0.67
30:0:228:C:H2'	30:0:229:G:C5'	2.25	0.67
25:Y:117:LEU:HB2	25:Y:174:VAL:HG21	1.77	0.66
30:0:559:U:H2'	30:0:560:U:H5'	1.77	0.66
30:0:1644:C:O2'	30:0:1645:U:H5'	1.94	0.66
14:N:154:LEU:HD11	14:N:157:PRO:HA	1.76	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)
30:0:1609:C:H2'	30:0:1610:G:H8	1.60	0.66
10:J:49:ARG:HD3	30:0:1119:G:OP2	1.95	0.66
30:0:154:C:C2	30:0:155:C:C5	2.83	0.66
30:0:334:G:H2'	30:0:335:U:O4'	1.95	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
31:9:18:U:H2'	31:9:19:G:H8	1.60	0.66
10:J:26:VAL:HG13	10:J:36:VAL:HG11	1.76	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
30:0:2134:G:N2	30:0:2242:U:C2	2.64	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
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
18:R:2:ILE:HG22	30:0:21:G:H4'	1.78	0.66
23:W:4:LEU:HD23	23:W:54:PHE:HB3	1.76	0.66
30:0:302:A:O2'	30:0:303:C:H5'	1.95	0.66
30:0:2875:A:C2	30:0:2883:A:C2	2.83	0.66
31:9:36:C:H4'	38:9:1968:HOH:O	1.94	0.66
30:0:940:G:H2'	30:0:941:G:H5'	1.77	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
31:9:29:C:C5	31:9:30:C:C6	2.84	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
30:0:1711: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
18:R:99:ALA:HB1	18:R:109:MET:HE1	1.77	0.66
30:0:128:A:H3'	30:0:128:A:H8	1.61	0.66
30:0:582:U:H2'	30:0:583:C:C6	2.31	0.66
30:0:1185:U:H5'	38:0:7367:HOH:O	1.94	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1935:C:H2'	30:0:1936:C:H6	1.59	0.66
30:0:228:C:O2'	30:0:229:G:H5'	1.96	0.65
30:0:1730:G:H4'	30:0:1731:C:H6	1.59	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
15:O:25:VAL:HG12	30:0:709:G:O2'	1.96	0.65
16:P:89:ASN:OD1	16:P:92:GLU:HG3	1.97	0.65
29:3:47:GLY:O	30:0:2121:G:H4'	1.96	0.65
30:0:77:G:O2'	30:0:78:G:H5'	1.95	0.65
30:0:660:A:N6	30:0:746:A:O4'	2.29	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
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
1:A:135:VAL:HG21	1:A:147:ARG:HB3	1.78	0.65
21:U:51:TRP:HA	21:U:56:ARG:HE	1.61	0.65
21:U:52:THR:HG22	21:U:54:THR:H	1.61	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
30:0:1325:G:C2	30:0:1326:C:C6	2.85	0.65
1:A:47:HIS:CD2	30:0:1654:U:C6	2.84	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
28:2:43:ARG:HH22	30:0:1684:A:C1'	2.02	0.65
30:0:272:A:H5'	30:0:273:G:OP2	1.95	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
30:0:1302:G:H5'	30:0:1331:G:H4'	1.79	0.65
30:0:1878:G:HO2'	30:0:1879:U:H6	1.44	0.65
30:0:2872:U:H2'	30:0:2873:C:H6	1.60	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
25:Y:182:PHE:HD2	25:Y:200:THR:O	1.80	0.65
30:0:1118:A:H8	30:0:1119:G:H5''	1.62	0.65
30:0:2474:A:C8	30:0:2621:PSU:H4'	2.31	0.65
30:0:2511:A:H2'	30:0:2512:U:O4'	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2777:G:O2'	30:0:2778:A:H5'	1.96	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
30:0:255: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
30:0:1016: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
30:0:2742: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
5:E:7:ILE:HG22	5:E:73:PHE:CZ	2.32	0.65
30:0:969:G:N2	30:0:1000:C:C2	2.64	0.65
30:0:1769:C:O2'	30:0:1770:U:H5'	1.97	0.65
11:K:20:CYS:HB2	11:K:29:LEU:HG	1.77	0.65
30:0:146:U:O2'	30:0:147:G:H5'	1.97	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
30:0:2795:C:O2'	30:0:2796:U:H5'	1.96	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
30:0:429:A:C8	38:0:3806:HOH:O	2.50	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
16:P:98:ILE:HD12	16:P:102:ARG:NE	2.12	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
30:0:2272:G:H5''	38:0:4183:HOH:O	1.97	0.65
31:9:96:C:H2'	31:9:97:U:C6	2.32	0.65
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
30:0:37:A:C2	30:0:446:G:C2	2.85	0.64
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
31:9:45:A:C5	31:9:46:C:C5	2.86	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
30:0:1172: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
20:T:1:SER:HB2	30:0:447:A:P	2.37	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
30:0:1359:U:C5	30:0:2101:A:C8	2.85	0.64
30:0:1632:A:C3'	30:0:1633:C:H5'	2.27	0.64
30:0:2278:U:O2	30:0:2470:A:C8	2.50	0.64
30:0:2402:A:O2'	30:0:2403:C:H5'	1.97	0.64
21:U:39:ASN:ND2	21:U:44:ARG:HH11	1.96	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
31:9:9:C:H2'	31:9:10:C:H5'	1.79	0.64
31:9:28:U:O2	31:9:28:U:H2'	1.97	0.64
3:C:2:GLN:HB3	3:C:17:ASP:HA	1.80	0.64
38:K:4440:HOH:O	30:0:2582:G:H4'	1.96	0.64
30:0:29:C:O2'	30:0:30:U:H5'	1.97	0.64
30:0:281:U:H2'	30:0:282:C:O4'	1.97	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
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
30:0:100:C:C5	30:0:101:C:H5	2.15	0.64
30:0:195:C:H2'	30:0:196:G:H5'	1.78	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
25:Y:170:SER:OG	25:Y:175:ARG:HG3	1.98	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
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
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
30:0:736:A:H2	30:0:2406:U:H1'	1.63	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
13:M:164:THR:HG22	13:M:166:ALA:N	2.13	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
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
31:9:86:G:C2	31:9:88:G:C8	2.86	0.64
22:V:44:GLY:HA3	30:0:92:G:C4'	2.28	0.64
30:0:525:G:H5''	38:0:4554:HOH:O	1.98	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
31:9:18:U:H2'	31:9:19:G:C8	2.33	0.64
38:Y:8896:HOH:O	30:0:1357:A:H4'	1.98	0.63
26:Z:37:ARG:HB2	30:0:819:A:H4'	1.80	0.63
27:1:46:ARG:HA	38:0:3013:HOH:O	1.98	0.63
30:0:594:C:C5	30:0:595:U:C5	2.86	0.63
30:0:2769:C:H2'	30:0:2770:G:H5'	1.80	0.63
31:9:64:C:C2'	31:9:65:A:H5'	2.28	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
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
1:A:1:GLY:HA2	30:0:2114:C:OP1	1.98	0.63
1:A:105:VAL:HG12	1:A:156:ILE:HA	1.81	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
30:0:2830:U:O2'	30:0:2831:C:H5'	1.98	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
30:0:802:G:H2'	30:0:803:C:C6	2.33	0.63
30:0:1224:G:H2'	30:0:1225:C:H6	1.61	0.63
31:9:89:C:O2'	31:9:90:G:H5'	1.97	0.63
3:C:98:ARG:HD3	38:C:8549:HOH:O	1.98	0.63
3:C:218:VAL:HG23	3:C:222:ASP:OD1	1.99	0.63
7:G:16:LYS:HZ3	7:G:63:ARG:HH12	1.44	0.63
13:M:72:ALA:HB3	38:M:8965:HOH:O	1.97	0.63
13:M:73:ARG:HG2	30:0:1469:C:H5''	1.79	0.63
14:N:112:GLY:HA2	14:N:137:ALA:HB2	1.79	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Y:149:GLN:HG2	38:Y:8856:HOH:O	1.98	0.63
26:Z:47:ARG:NH2	30:O:1771:U:H1'	2.14	0.63
29:3:33:MET:HG2	30:O:1922:A:H2'	1.80	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:O:10:U:H5''	30:O:531:G:C6	2.34	0.63
30:O:297:U:H2'	30:O:298:C:H6	1.63	0.63
30:O:466:A:H61	30:O:475:G:H1'	1.64	0.63
30:O:908:A:C4'	38:O:4914:HOH:O	2.45	0.63
30:O:1189:A:O2'	30:O:1208:C:H2'	1.97	0.63
30:O:1209:C:H2'	30:O:1210:G:C8	2.31	0.63
30:O:2304:G:H5'	38:O:3355:HOH:O	1.98	0.63
30:O:2564:G:H5''	30:O:2565:C:C5'	2.29	0.63
23:W:4:LEU:HD22	23:W:52:VAL:HG21	1.80	0.63
27:1:10:LYS:HG3	38:1:2979:HOH:O	1.98	0.63
30:O:1585:C:H2'	30:O:1586:G:C8	2.32	0.63
31:9:3:A:H2	31:9:21:G:N3	1.95	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:O:1810:C:H5'	1.99	0.63
30:O:109:U:O2	30:O:109:U:H2'	1.98	0.63
30:O:2608:C:H2'	38:O:3556:HOH:O	1.98	0.63
1:A:199:HIS:HD2	1:A:201:PHE:H	1.47	0.63
17:Q:27:GLN:HE21	31:9:8:G:C5'	2.12	0.63
30:O:432:G:C2	30:O:433:C:C5	2.86	0.63
30:O:1449:G:H4'	38:O:9214:HOH:O	1.99	0.63
30:O:1552:G:C6	30:O:1634:G:C6	2.87	0.63
30:O:2255:A:O2'	30:O:2256:G:H5'	1.99	0.63
31:9:17:G:O2'	31:9:18:U:H5'	1.99	0.63
11:K:118:ALA:HA	11:K:125:ALA:HB2	1.80	0.62
30:O:287:C:N4	30:O:365:G:H1	1.96	0.62
30:O:1819:G:H2'	30:O:1820:G:C5'	2.29	0.62
30:O:2613:G:O2'	30:O:2614:C:H5'	1.99	0.62
1:A:72:GLU:HG3	26:Z:90:GLY:HA2	1.81	0.62
14:N:24:LEU:HD13	17:Q:26:PRO:HB3	1.81	0.62
14:N:119:GLN:O	14:N:123:ILE:HG13	2.00	0.62
25:Y:174:VAL:CG2	25:Y:177:LYS:HD2	2.28	0.62
26:Z:63:CYS:SG	26:Z:71:VAL:HG23	2.39	0.62
30:O:1224:G:H2'	30:O:1225:C:C6	2.33	0.62
30:O:1504:A:H5''	38:O:4378:HOH:O	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2502:C:H2'	30:0:2503:A:C5'	2.23	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
30:0:57:C:N4	30:0:89:G:H1	1.97	0.62
30:0:236:A:H4'	30:0:237:G:OP1	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
30:0:1900:A:O2'	30:0:1901:G:H5'	1.99	0.62
30:0:2388:C:O2'	30:0:2389:U:H5'	1.99	0.62
2:B:282:GLY:O	30:0:2898:G:H1'	1.99	0.62
20:T:19:ARG:HD3	20:T:67:LEU:O	2.00	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
33:0:8812:CL:CL	38:0:5079:HOH:O	2.53	0.62
1:A:42:VAL:O	1:A:76:VAL:HA	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
2:B:307:ARG:HH11	2:B:307:ARG:HG3	1.64	0.62
13:M:68:ARG:HG3	30:0:1469:C:OP1	2.00	0.62
29:3:12:PRO:HD2	38:3:9035:HOH:O	1.98	0.62
30:0:178:U:H2'	30:0:179:C:H6	1.63	0.62
30:0:290:C:O2'	30:0:291:C:H5'	1.99	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
30:0:2246: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
26:Z:43:GLY:O	26:Z:47:ARG:HG2	1.99	0.62
30:0:737:A:H2'	30:0:738:G:C8	2.34	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
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
30:0:107:U:H2'	30:0:108:U:C5'	2.29	0.62
30:0:1076:G:O2'	30:0:1077:G:H5'	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
3:C:64:GLY:O	30:0:2100:A:H4'	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
30:0:245:C:H2'	30:0:246:G:H5'	1.80	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
30:0:2639:G:O2'	30:0:2640:U:H5'	1.99	0.62
2:B:212:GLN:HA	30:0:1733:A:H4'	1.82	0.62
4:D:25:MET:HE1	4:D:41:LEU:HG	1.81	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
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
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
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
31:9:3:A:N6	31:9:22:G:H1'	2.14	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
30:0:293: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
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
23:W:151:GLU:O	23:W:154:ARG:HB2	1.99	0.61
30:0:853:C:H3'	38:0:4515:HOH:O	1.98	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
3:C:140:VAL:HB	38:C:8655:HOH:O	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:13:GLU:OE2	6:F:78:GLU:HG2	2.00	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
30:0:1346:U:O2'	30:0:1347:U:H5'	2.00	0.61
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
2:B:36:PRO:HB3	2:B:174:ARG:HA	1.81	0.61
6:F:30:LYS:HB2	6:F:97:ALA:HB3	1.83	0.61
6:F:63:ILE:HB	6:F:64:PRO:HD3	1.82	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
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
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
30:0:271: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
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:O2	30:0:2707:C:H2'	2.00	0.61
30:0:2787:C:H2'	30:0:2788:A:O4'	2.00	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
5:E:139:GLU:OE2	30:0:2781:U:H1'	2.01	0.61
12:L:53:ARG:NH2	12:L:57:VAL:HG12	2.15	0.61
12:L:121:ILE:HA	12:L:141:GLU:O	2.01	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
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
30:0:1206:U:H3'	30:0:1206:U:C6	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
30:0:283:U:H5''	30:0:284:C:OP2	2.01	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
16:P:134:VAL:O	16:P:137:LEU:HB3	2.00	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
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
13:M:95:LYS:HE3	30:0:157:G:H4'	1.82	0.61
30:0:946:C:H2'	30:0:947:U:H6	1.65	0.61
30:0:1165:G:N2	30:0:1173:A:C5'	2.64	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
7:G:64:ASN:HD22	7:G:64:ASN:N	1.98	0.60
26:Z:60:ASP:CB	26:Z:69:ASP:HB3	2.23	0.60
30:0:64:G:O2'	30:0:65:C:H5'	2.00	0.60
30:0:366:U:H2'	30:0:367:G:O4'	2.01	0.60
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
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
19:S:21:GLN:HE22	30:0:1508:C:H4'	1.66	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
29:3:2:GLN:H	30:0:2320:U:C5'	2.14	0.60
30:0:1238:C:H5''	38:0:6777:HOH:O	1.99	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
1:A:192:VAL:HG23	38:A:9014:HOH:O	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:W:24:LEU:HD21	23:W:44:MET:SD	2.42	0.60
30:0:1603:A:H5''	30:0:1605:G:H5'	1.83	0.60
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
6:F:2:VAL:HG22	6:F:57:GLU:OE1	2.01	0.60
9:I:113:SER:HA	30:0:1186:C:H5'	1.83	0.60
16:P:35:ILE:HA	38:P:2641:HOH:O	2.00	0.60
26:Z:42:TYR:HD2	30:0:1829:A:H61	1.48	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
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
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
31:9:107:C:O2'	31:9:108:C:H5'	2.01	0.60
11:K:76:GLN:HA	11:K:93:ASN:CB	2.31	0.60
21:U:56:ARG:HH11	21:U:56:ARG:HG3	1.66	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
30:0:1159:G:H1	30:0:1208:C:H42	1.50	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
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
30:0:255:A:C5	30:0:256:C:C4	2.89	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
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
30:0:2895: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
31:9:60:C:O2'	31:9:61:C:H5'	2.02	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
30:0:10:U:C5	30:0:532:A:C8	2.89	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
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
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
30:0:31:C:H4'	38:0:7326:HOH:O	2.01	0.60
30:0:300:U:C4	30:0:301:C:C5	2.89	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
17:Q:1:PRO:HA	30:0:2299:G:O6	2.00	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
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
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
31:9:94:G:O2'	31:9:95:C:H5'	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
29:3:48:ASN:CG	30:0:169:A:H1'	2.20	0.60
30:0:283:U:C5	30:0:284:C:N3	2.69	0.60
30:0:1424:A:N1	30:0:1441:G:C6	2.70	0.60
30:0:1934:A:C8	30:0:1935:C:C5	2.90	0.60
31:9:79:U:H2'	31:9:79:U:O2	2.02	0.60
29:3:51:LYS:HB3	30:0:219:G:O2'	2.02	0.59
30:0:718:C:C2'	30:0:719:C:H5'	2.32	0.59
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
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
12:L:6:ARG:HD3	30:0:1299:G:O6	2.02	0.59
13:M:52:GLN:OE1	13:M:116:ASN:HB3	2.01	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
2:B:310:ARG:HD2	38:B:9130:HOH:O	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:101:ASP:HB2	30:0:750:A:O3'	2.03	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:148:GLY:HA3	30:0:622:G:P	2.42	0.59
25:Y:151:SER:HB3	25:Y:154:ARG:HB3	1.84	0.59
26:Z:34:SER:HA	30:0:797:A:C4'	2.33	0.59
30:0:522:U:O2'	30:0:1366:C:H5'	2.02	0.59
30:0:1083:C:H4'	38:0:7040:HOH:O	2.02	0.59
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
30:0:1883:U:H5'	30:0:2012:U:OP2	2.00	0.59
30:0:1925:G:O2'	30:0:1926:G:H5'	2.02	0.59
1:A:60:PHE:HD1	1:A:64:ASP:HB3	1.67	0.59
3:C:225:PRO:O	30:0:1308:A:H4'	2.03	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
30:0:101:C:H2'	30:0:102:A:H8	1.66	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
30:0:1213:C:O2'	30:0:1214:G:H5'	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
12:L:10:SER:O	12:L:11:ARG:HB3	2.02	0.59
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
26:Z:40:ALA:O	30:0:2018:A:H2	1.85	0.59
30:0:62:C:H2'	30:0:63:U:C6	2.36	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
30:0:735: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
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
30:0:2297:U:H3'	38:0:7375:HOH:O	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
31:9:64:C:O2'	31:9:65:A:H5'	2.02	0.59
30:0:1971:G:H5'	38:0:7283:HOH:O	2.02	0.59
30:0:20:G:H2'	30:0:21:G:O5'	2.01	0.59
30:0:163:U:O3'	30:0:896:C:H4'	2.02	0.59
30:0:226:A:H2'	30:0:227:A:O4'	2.02	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
30:0:1323:G:H1	30:0:1334:C:H42	1.50	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
8:H:6:ALA:HA	8:H:61:ARG:NH1	2.18	0.59
8:H:48:VAL:HA	8:H:170:ARG:O	2.03	0.59
30:0:559:U:H5'	30:0:559:U:C6	2.31	0.59
30:0:1206:U:H5'	30:0:1206:U:C6	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
31:9:104:A:H3'	38:9:4108:HOH:O	2.02	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
30:0:249:G:O2'	30:0:250:C:H5'	2.03	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
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
17:Q:27:GLN:NE2	31:9:8:G:H4'	2.08	0.59
30:0:128:A:C8	30:0:128:A:C3'	2.84	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
30:0:1156:C:C6	30:0:1156:C:H3'	2.37	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
31:9:3:A:C2	31:9:21:G:N3	2.71	0.59
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1:15:THR:HB	27:1:28:HIS:CD2	2.37	0.58
29:3:80:ARG:NH2	30:0:2381:C:H4'	2.18	0.58
30:0:937:C:O2'	30:0:938:G:H5'	2.03	0.58
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
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
1:A:3:ARG:HB2	1:A:8:ARG:HE	1.67	0.58
1:A:122:SER:O	1:A:124:VAL:HG13	2.03	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
18:R:80:TYR:O	30:0:2050:G:H5''	2.03	0.58
23:W:130:HIS:O	23:W:136:GLY:HA3	2.03	0.58
29:3:60:LYS:NZ	30:0:2462:G:N7	2.46	0.58
30:0:169:A:HO2'	30:0:170:U:H6	1.48	0.58
30:0:282:C:H2'	30:0:283:U:O4'	2.02	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
30:0:2271:G:N3	30:0:2271:G:H2'	2.17	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
30:0:24:G:C2	30:0:518:G:N3	2.71	0.58
30:0:210:U:H2'	30:0:211:U:O4'	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
30:0:2397:G:C5	30:0:2465:A:C6	2.91	0.58
30:0:2572:G:O2'	30:0:2573:G:H5'	2.03	0.58
12:L:77:ALA:HB3	38:L:8831:HOH:O	2.03	0.58
20:T:4:PRO:HB3	30:0:333:G:H5''	1.86	0.58
20:T:40:VAL:HG11	20:T:101:LEU:HD21	1.83	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
29:3:78:HIS:HD2	29:3:80:ARG:HG3	1.67	0.58
30:0:124:C:H3'	38:0:7559:HOH:O	2.03	0.58
30:0:170:U:H2'	30:0:171:C:H5'	1.85	0.58
30:0:433:C:C2	30:0:434:U:C6	2.91	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1579:C:H4'	30:0:1580:A:OP1	2.02	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
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
30:0:876:A:N7	30:0:878:G:H1'	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
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
13:M:95:LYS:CE	30:0:157:G:H4'	2.33	0.58
16:P:78:GLY:O	30:0:1813:U:H4'	2.04	0.58
21:U:39:ASN:HD22	21:U:44:ARG:HD3	1.67	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
30:0:413:G:O2'	30:0:414:C:H5'	2.03	0.58
30:0:1481:G:H2'	30:0:1482:A:C8	2.38	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:O5'	30:0:1753:C:H6	1.86	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
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
38:A:8939:HOH:O	30:0:2270:G:H4'	2.04	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
30:0:499: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
30:0:2655:U:C4	30:0:2656:G:N7	2.71	0.58
2:B:189:ALA:O	2:B:192:ASP:HB2	2.04	0.58
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
16:P:133:SER:HB3	30:0:1793:C:H5''	1.86	0.58
29:3:44:SER:HA	29:3:49:ASP:OD2	2.04	0.58
30:0:287:C:H2'	30:0:288:A:H8	1.68	0.58
30:0:1281:C:H2'	30:0:1282:U:O4'	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2493:C:O2	30:0:2493:C:H2'	2.04	0.58
31:9:114:G:H2'	31:9:115:C:H6	1.67	0.58
9:I:83:GLY:CA	30:0:1168:C:H5'	2.32	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
30:0:149:G:O2'	30:0:150:G:H5'	2.04	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
30:0:1188:A:N7	30:0:1189:A:C2	2.71	0.58
30:0:2780:C:H2'	30:0:2781:U:C6	2.38	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
30:0:148:A:O2'	30:0:149:G:H5'	2.04	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
30:0:2328: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
1:A:167:LYS:CE	26:Z:50:VAL:HG13	2.34	0.57
1:A:237:GLY:O	30:0:1939:U:H5''	2.03	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
30:0:23:G:H1'	30:0:520:A:N6	2.19	0.57
30:0:116:G:H1'	30:0:129:A:C4	2.38	0.57
30:0:229:G:O2'	30:0:230:C:H5'	2.03	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
30:0:1167:G:H2'	30:0:1168:C:C6	2.39	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
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
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
30:0:221:G:H5'	38:0:6463:HOH:O	2.03	0.57
30:0:907:A:C2	30:0:1299:G:C6	2.92	0.57
12:L:133:VAL:HA	38:L:8886:HOH:O	2.03	0.57
29:3:1:MET:HA	30:0:2319:C:H3'	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:962:C:H2'	30:0:963:C:H5'	1.86	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
30:0:2061:C:H2'	30:0:2062:A:C5'	2.34	0.57
30:0:2694:A:C6	30:0:2702:A:C8	2.92	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
16:P:88:GLN:HE21	30:0:1800:G:H1'	1.67	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
30:0:745:G:H5''	30:0:746:A:OP1	2.04	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
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
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:NE2	11:K:10:GLN:N	2.50	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
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
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
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
23:W:154:ARG:NH1	30:0:588:G:O6	2.37	0.57
26:Z:99:GLY:O	26:Z:103:VAL:HG23	2.05	0.57
29:3:23:GLU:HA	38:3:9000:HOH:O	2.04	0.57
30:0:292:G:O5'	30:0:292:G:H8	1.87	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
30:0:64:G:H2'	30:0:65:C:O4'	2.05	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
30:0:716: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
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
31:9:42:C:H5'	31:9:43:G:OP2	2.03	0.57
31:9:99:U:H2'	31:9:100:G:H8	1.70	0.57
4:D:105:SER:OG	30:0:2338:G:H1'	2.05	0.57
19:S:33:SER:O	19:S:37:VAL:HG23	2.04	0.57
25:Y:115:ARG:NH2	30:0:1266:U:H4'	2.19	0.57
29:3:83:TRP:HD1	29:3:85:ALA:HB2	1.69	0.57
30:0:840:U:C2	30:0:2648:U:O4	2.58	0.57
30:0:1206:U:C5'	30:0:1206:U:H6	2.16	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
30:0:2327:A:H61	30:0:2372:A:N6	2.02	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
28:2:36:ASN:HD22	28:2:39:ARG:HG2	1.70	0.57
30:0:101:C:H2'	30:0:102: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
30:0:1398:G:H2'	30:0:1399:A:C8	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
30:0:125:U:H4'	38:0:4400:HOH:O	2.04	0.56
30:0:236:A:H4'	30:0:237:G:C5'	2.24	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
30:0:1185:U:H2'	30:0:1186:C:H6	1.70	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
30:0:2429:A:H5'	38:0:9501:HOH:O	2.05	0.56
38:K:992:HOH:O	30:0:2583:A:H5'	2.05	0.56
26:Z:63:CYS:SG	26:Z:81:CYS:CB	2.79	0.56
27:1:28:HIS:O	27:1:32:LYS:N	2.34	0.56
30:0:168:C:O5'	30:0:168:C:H6	1.88	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
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
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
8:H:15:PRO:HG3	30:0:1053:G:OP1	2.05	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
14:N:46:GLN:HE22	31:9:5:G:H21	1.52	0.56
17:Q:26:PRO:O	17:Q:30:VAL:HG23	2.05	0.56
23:W:11:VAL:HG11	30:0:1086:A:N6	2.20	0.56
28:2:22:PRO:HG2	28:2:25:VAL:HG23	1.86	0.56
29:3:69:TYR:O	29:3:77:ALA:HA	2.05	0.56
30:0:257:G:C2	30:0:258:G:C4	2.93	0.56
30:0:999:C:O2'	30:0:1000:C:H5'	2.04	0.56
30:0:1188:A:C5	30:0:1189:A:C2	2.93	0.56
30:0:1419:U:H5'	30:0:1420:C:OP2	2.05	0.56
30:0:1748:U:C5	30:0:1749:U:C4	2.92	0.56
30:0:1909:A:N1	30:0:2128:G:H1'	2.21	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2460:A:C2	30:0:2461:U:C2	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
30:0:2899:A:C2	30:0:2900:G:C4	2.93	0.56
30:0:2908:A:H2'	30:0:2909:G:C1'	2.35	0.56
24:X:43:VAL:HG12	24:X:44:ASP:N	2.17	0.56
29:3:33:MET:HG2	30:0:1922:A:C2'	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
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
30:0:2439:C:H2'	30:0:2440:C:C6	2.35	0.56
1:A:97:ALA:HB2	1:A:150:PRO:HB2	1.88	0.56
10:J:63:ILE:HG23	30:0:1235:G:C1'	2.36	0.56
14:N:44:ARG:NH1	31:9:4:G:H21	2.03	0.56
30:0:107:U:C5	30:0:108:U:C5	2.94	0.56
30:0:257:G:N2	30:0:258:G:C4	2.73	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
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
30:0:2756:U:H3	30:0:2896:A:H2	1.54	0.56
3:C:27:ARG:NH2	30:0:657:G:OP1	2.37	0.56
13:M:83:SER:HB2	29:3:47:GLY:CA	2.35	0.56
15:O:47:ARG:HH11	15:O:47:ARG:CG	2.08	0.56
18:R:68:HIS:O	30:0:2842:G:H5'	2.06	0.56
30:0:106:A:H2'	30:0:107:U:H5'	1.88	0.56
30:0:206:G:C6	30:0:437:A:C2	2.93	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:710:G:O2'	30:0:711:G:H5'	2.05	0.56
30:0:922:A:N7	30:0:2281:C:H5'	2.21	0.56
30:0:940:G:C2'	30:0:941:G:H5'	2.36	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
30:0:2279:G:H4'	38:0:7466:HOH:O	2.06	0.56
30:0:2541:U:H3'	38:0:9065:HOH:O	2.05	0.56
30:0:2872:U:H2'	30:0:2873:C:C6	2.40	0.56
19:S:21:GLN:OE1	30:0:1508:C:H5'	2.06	0.56
26:Z:40:ALA:O	30:0:2018:A:C2	2.59	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
30:0:1324:G:H3'	38:0:6144:HOH:O	2.06	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
13:M:191:GLY:O	30:0:175:G:H3'	2.05	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
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
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
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
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
30:0:191:A:H2'	30:0:237:G:O6	2.06	0.56
30:0:594:C:C6	30:0:595:U:C5	2.94	0.56
30:0:2326:C:H4'	30:0:2412:G:H4'	1.87	0.56
30:0:2377:U:C2	30:0:2378:U:H5	2.23	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:657:G:H2'	30:0:658:C:H6	1.70	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
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
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
29:3:70:ARG:HG2	29:3:77:ALA:HB2	1.89	0.55
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
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
15:O:37:ARG:HD2	30:0:656:G:OP2	2.06	0.55
29:3:83:TRP:CD1	29:3:85:ALA:HB2	2.41	0.55
30:0:583:C:H2'	30:0:584:U:H6	1.71	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
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
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
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
30:0:13:G:H2'	30:0:14:C:H6	1.72	0.55
30:0:282:C:HO2'	30:0:283:U:H5'	1.71	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1159:G:H1	30:0:1208:C:N4	2.04	0.55
30:0:1177:A:H2'	30:0:1177:A:N3	2.21	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
30:0:1521: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
30:0:2451:G:H8	38:0:5131:HOH:O	1.90	0.55
30:0:2851:G:H2'	30:0:2902:A:N6	2.21	0.55
31:9:110:G:C4	31:9:111:U:C6	2.94	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
29:3:49:ASP:O	29:3:52:PHE:HD1	1.90	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:C6	30:0:1377:C:H5'	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
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
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
29:3:48:ASN:ND2	30:0:169:A:O2'	2.39	0.55
30:0:52:A:H1'	30:0:121:U:O2	2.06	0.55
30:0:1166:A:H2'	30:0:1166:A:N3	2.21	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
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
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
30:0:534:C:O2'	30:0:535:G:H5'	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:577:G:N2	30:0:580:A:OP2	2.40	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
30:0:2064:U:H4'	30:0:2653:A:OP1	2.07	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
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:51:ARG:HH11	1:A:51:ARG:CB	2.13	0.55
1:A:217:ARG:HH11	1:A:229:ALA:HB3	1.71	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
30:0:279: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
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
1:A:191:GLY:HA2	1:A:194:MET:HE3	1.88	0.55
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
30:0:149:G:C2'	30:0:150:G:H5'	2.37	0.55
30:0:421:C:H4'	30:0:1919:A:N6	2.22	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:C6	30:0:970:U:C3'	2.90	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
30:0:2514: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
31:9:13:A:O2'	31:9:14:G:H5''	2.07	0.55
2:B:234:ARG:HG3	30:0:1735:C:OP2	2.07	0.55
13:M:9:ARG:HD2	30:0:380:A:OP2	2.06	0.55
30:0:56:G:N3	30:0:70:A:C2	2.75	0.55
30:0:325:U:O2	30:0:326:G:C8	2.60	0.55
30:0:561:G:H2'	30:0:562:A:C8	2.39	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
30:0:1038: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:H8	30:0:1476:A:O5'	1.89	0.55
30:0:1622:G:C2'	30:0:1623:C:H5'	2.37	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
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
29:3:9:THR:HG23	29:3:20:HIS:ND1	2.22	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
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
13:M:161:ARG:NH1	30:0:183:A:H1'	2.22	0.54
38:M:8875:HOH:O	30:0:381:G:H5''	2.06	0.54
20:T:16:LEU:HB2	30:0:100:C:H4'	1.89	0.54
30:0:624:U:C2	30:0:632:A:C2	2.96	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
30:0:2433:A:H8	30:0:2433:A:O5'	1.90	0.54
30:0:2757:A:H2'	30:0:2758:G:C5'	2.37	0.54
1:A:42:VAL:HG23	1:A:78:ASP:O	2.07	0.54
1:A:167:LYS:HD2	26:Z:53:ILE:HG21	1.88	0.54
2:B:45:LYS:HD2	2:B:301:VAL:HG12	1.89	0.54
3:C:1:MET:HG2	3:C:2:GLN:N	2.17	0.54
3:C:135:GLU:O	3:C:136:VAL:HB	2.07	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
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:167:LYS:HE2	26:Z:50:VAL:HG13	1.89	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
24:X:23:HIS:HE1	30:0:2044:G:OP1	1.90	0.54
25:Y:154:ARG:HH22	30:0:1071:G:H4'	1.71	0.54
26:Z:77:GLY:HA2	26:Z:92:SER:HA	1.88	0.54
29:3:47:GLY:C	30:0:2121:G:H4'	2.27	0.54
30:0:95:A:C8	30:0:97:G:N1	2.75	0.54
30:0:378:A:H1'	38:0:3483:HOH:O	2.07	0.54
30:0:736:A:C2	30:0:2406:U:H1'	2.42	0.54
30:0:1012:A:H8	30:0:1012:A:O5'	1.91	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
30:0:2247:C:O5'	30:0:2247:C:H6	1.91	0.54
30:0:2278:U:H5'	38:0:9472:HOH:O	2.06	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
31:9:58:G:H3'	31:9:59:C:C5	2.42	0.54
1:A:110:SER:O	1:A:152:CYS:SG	2.59	0.54
1:A:230:SER:HB2	30:0:1852:A:H4'	1.89	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:105:ASP:HB3	18:R:108:ALA:HB3	1.89	0.54
29:3:45:GLY:HA3	38:3:9027:HOH:O	2.06	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
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
30:0:1764:C:O2'	30:0:1765:G:H5'	2.08	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
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
31:9:99:U:H2'	31:9:100:G:C8	2.42	0.54
1:A:186:TRP:CG	1:A:187:PRO:HA	2.43	0.54
6:F:54:VAL:HG13	30:0:263:U:C4	2.43	0.54
12:L:57:VAL:HG21	30:0:2443:C:H5'	1.90	0.54
13:M:171:ARG:NH2	30:0:189:A:OP1	2.41	0.54
17:Q:28:ARG:HG2	38:Q:4350:HOH:O	2.05	0.54
28:2:42:TRP:HZ2	30:0:1438:G:H1'	1.72	0.54
29:3:3:MET:SD	29:3:83:TRP:HZ2	2.31	0.54
29:3:14:CYS:SG	29:3:74:CYS:HB2	2.48	0.54
29:3:31:THR:O	30:0:1923:G:H4'	2.07	0.54
30:0:17:G:O2'	30:0:18:C:H5'	2.08	0.54
30:0:31:C:H2'	38:0:7589:HOH:O	2.06	0.54
30:0:68:U:H1'	38:0:6239:HOH:O	2.06	0.54
30:0:100:C:C5	30:0:101:C:C5	2.95	0.54
30:0:614:U:H2'	30:0:615:G:H8	1.72	0.54
30:0:951:A:H2'	30:0:952:G:C5'	2.37	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
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
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
30:0:105:G:O2'	30:0:106:A:H5'	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:834:G:H4'	30:0:835:U:OP2	2.08	0.54
30:0:1210:G:C4	30:0:1211:G:C8	2.96	0.54
30:0:1377:C:H5'	30:0:1377:C:H6	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
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
30:0:98:A:C2'	30:0:99:A:H5'	2.37	0.54
30:0:274:G:N2	30:0:377:C:C2	2.76	0.54
30:0:492:C:O2'	30:0:493:U:H5'	2.08	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
30:0:1496:A:H5'	30:0:1572:A:H1'	1.89	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
30:0:1730: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
30:0:2852:A:C8	30:0:2902:A:N6	2.76	0.54
8:H:146:ALA:O	8:H:149:VAL:HG12	2.07	0.54
14:N:86:LEU:O	14:N:90:LEU:HG	2.08	0.54
14:N:113:SER:HB3	38:9:5851:HOH:O	2.08	0.54
25:Y:219:GLU:HG3	25:Y:220:GLU:H	1.72	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
30:0:2576:A:H4'	30:0:2799:A:C2	2.43	0.54
30:0:2712:G:H5'	38:0:5173:HOH:O	2.07	0.54
2:B:70:PRO:HG3	30:0:2719:A:C2	2.43	0.54
2:B:312:ARG:HD3	2:B:315:VAL:HG13	1.89	0.54
14:N:26:LEU:HD13	30:0:2415:A:N3	2.23	0.54
16:P:2:ASP:OD1	30:0:1396:C:H4'	2.08	0.54
20:T:9:LYS:HE3	20:T:13:ARG:NH1	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:3:2:GLN:HG2	30:0:2320:U:O5'	2.08	0.54
30:0:67:A:N1	30:0:109:U:H1'	2.23	0.54
30:0:239:C:H2'	30:0:240:C:O5'	2.07	0.54
30:0:908:A:H4'	38:0:4914:HOH:O	2.08	0.54
30:0:1063:G:H5''	38:0:9858:HOH:O	2.08	0.54
30:0:1192:A:H3'	30:0:1193:A:H5'	1.89	0.54
30:0:1503:U:C2'	30:0:1504:A:H5'	2.38	0.54
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
31:9:114:G:C4	31:9:115:C:C5	2.95	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
27:1:28:HIS:HB3	27:1:31:LYS:HB2	1.90	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
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
30:0:2278:U:O2	30:0:2470:A:H3'	2.08	0.54
30:0:2447:A:C5	30:0:2448:U:C5	2.96	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
31:9:30:C:O2	31:9:51:A:H2	1.91	0.54
31:9:59:C:O5'	31:9:59:C:H6	1.91	0.54
3:C:242:GLU:HB2	38:C:8577:HOH:O	2.08	0.53
4:D:152:PRO:HD2	31:9:57:A:O2'	2.08	0.53
24:X:10:VAL:HG12	24:X:11:THR:N	2.23	0.53
27:1:18:LYS:HG2	30:0:121:U:O4	2.08	0.53
30:0:790:A:H2'	30:0:791:A:H5'	1.89	0.53
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
30:0:1427:A:H61	30:0:1440:U:C1'	2.21	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
30:0:146:U:C2'	30:0:147:G:H5'	2.38	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
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
38:J:1727:HOH:O	30:0:2065:C:H4'	2.08	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
30:0:404:G:OP1	30:0:2131:G:H1'	2.09	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
30:0:2414:A:H2'	30:0:2415:A:C8	2.43	0.53
1:A:70:ALA:HB1	26:Z:89:THR:CG2	2.39	0.53
2:B:54:VAL:HB	38:B:9093:HOH:O	2.07	0.53
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
29:3:62:THR:HG22	30:0:2317:C:OP2	2.07	0.53
30:0:10:U:H5''	30:0:531:G:O6	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
30:0:1216:G:N2	30:0:1217:G:H1'	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
29:3:49:ASP:CB	29:3:52:PHE:HB2	2.36	0.53
30:0:256:C:H2'	30:0:257:G:O4'	2.09	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
5:E:154:ILE:HD11	5:E:157:LYS:HE2	1.90	0.53
6:F:59:ILE:CD1	30:0:263:U:C2	2.91	0.53
7:G:12:ILE:HG21	30:0:1150:A:N7	2.23	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
29:3:13:HIS:CD2	29:3:76:LYS:HB2	2.44	0.53
30:0:212:A:O4'	30:0:214:U:C6	2.61	0.53
30:0:1156:C:C6	30:0:1156:C:C3'	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
30:0:2326:C:H4'	30:0:2412:G:O4'	2.09	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
38:A:8979:HOH:O	26:Z:91:GLY:HA3	2.08	0.53
2:B:202:VAL:HG11	2:B:301:VAL:HG22	1.90	0.53
3:C:84:VAL:HG12	3:C:85:LYS:HG2	1.90	0.53
3:C:236:THR:HG22	3:C:239:ALA:H	1.74	0.53
13:M:81:ARG:HG3	30:0:161:A:OP1	2.08	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
30:0:364:U:H2'	30:0:365:G:O4'	2.08	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
38:C:8545:HOH:O	30:0:457:U:H4'	2.08	0.53
5:E:166:VAL:HG12	38:E:3134:HOH:O	2.08	0.53
11:K:9:THR:HG23	38:0:3270:HOH:O	2.09	0.53
11:K:33:SER:HB2	11:K:54:THR:HB	1.90	0.53
13:M:27:ARG:HH12	13:M:44:THR:CG2	2.21	0.53
17:Q:95:GLU:HA	30:0:949:U:H4'	1.90	0.53
18:R:39:THR:HG22	18:R:41:GLY:H	1.73	0.53
21:U:56:ARG:CZ	30:0:2890:A:H1'	2.39	0.53
22:V:12:THR:HG22	22:V:15:GLU:HG3	1.91	0.53
29:3:51:LYS:HB2	38:3:9030:HOH:O	2.08	0.53
30:0:256:C:C2'	30:0:257:G:H5'	2.39	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
30:0:2859: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
31:9:61:C:H2'	31:9:62:A:H8	1.74	0.53
31:9:110:G:C6	31:9:111:U:C5	2.97	0.53
1:A:167:LYS:HE3	26:Z:50:VAL:HA	1.91	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
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
30:0:265:U:C2	30:0:266:G:C8	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
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
30:0:2735:U:C2	30:0:2736:U:C5	2.97	0.53
31:9:38:A:H2'	31:9:39:U:C6	2.43	0.53
2:B:254:GLN:HB3	38:0:3539:HOH:O	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
27:1:20:ARG:HA	30:0:121:U:C5	2.43	0.53
29:3:64:LYS:HA	29:3:84:ARG:HA	1.90	0.53
30:0:255:A:C5	30:0:256:C:C5	2.97	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
30:0:1009:U:H5	38:0:6019:HOH:O	1.92	0.53
30:0:1119:G:C5	30:0:1243:C:C4	2.97	0.53
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
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
30:0:2589: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
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: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
4:D:76:ARG:CZ	31:9:44:A:H1''	2.40	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
29:3:60:LYS:HG3	29:3:61:PRO:HD2	1.90	0.52
30:0:191:A:N6	30:0:236:A:C2	2.77	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
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
30:0:2377: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:H2'	30:0:2792:A:N3	2.23	0.52
30:0:2878:U:H2'	30:0:2879:A:O4'	2.08	0.52
23:W:129:LYS:HE3	30:0:1099:G:OP1	2.08	0.52
29:3:17:HIS:CG	30:0:2409:C:H4'	2.43	0.52
30:0:154:C:H2'	30:0:155:C:C6	2.38	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
30:0:1303: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
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
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
29:3:34:LYS:HB2	29:3:37:ASP:HB2	1.92	0.52
30:0:70:A:H2'	30:0:70:A:N3	2.23	0.52
30:0:536:A:C2	30:0:2075:G:N3	2.78	0.52
30:0:579:G:H2'	30:0:580:A:C8	2.45	0.52
30:0:903:U:H5'	38:0:4328:HOH:O	2.08	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
30:0:2646:G:C5	30:0:2647:C:C5	2.98	0.52
1:A:191:GLY:HA2	1:A:194:MET:CE	2.39	0.52
3:C:42:ARG:NH1	30:0:675:U:O2'	2.43	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
30:0:182:G:O2'	30:0:183:A:H5'	2.10	0.52
30:0:462:A:N6	30:0:477:A:C2	2.78	0.52
30:0:905:C:H3'	38:0:5139:HOH:O	2.10	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:O2	30:0:1279:U:C2'	2.58	0.52
30:0:1337:G:C5	30:0:1338:U:C5	2.98	0.52
30:0:2727:A:N1	30:0:2756:U:C2	2.77	0.52
2:B:72:THR:HB	38:B:9083:HOH:O	2.10	0.52
13:M:61:ILE:HD12	13:M:61:ILE:N	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
29:3:49:ASP:H	29:3:53:SER:HG	1.58	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:3:67:LEU:HB2	29:3:69:TYR:CE1	2.45	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
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
30:0:1531:U:C2	30:0:1661:A:C2	2.98	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
30:0:1909: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
6:F:118:LEU:O	6:F:119:ARG:HB3	2.10	0.52
12:L:6:ARG:NH1	30:0:1299:G:N7	2.57	0.52
21:U:56:ARG:NH1	30:0:2890:A:C8	2.78	0.52
30:0:187:A:C5	30:0:188:C:C5	2.97	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
30:0:912:A:C4	30:0:1294:A:C2	2.98	0.52
30:0:2027:U:O2'	30:0:2028:U:H5'	2.10	0.52
30:0:2054:A:H2'	30:0:2054:A:N3	2.25	0.52
30:0:2579:G:O2'	30:0:2580:G:H5'	2.10	0.52
1:A:36:ASP:HA	1:A:83:GLY:HA3	1.90	0.52
1:A:70:ALA:HB1	26:Z:89:THR:HG21	1.91	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
30:0:301:C:O2	30:0:301:C:H2'	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
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
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
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
30:0:285:A:H2'	30:0:286:U:O4'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
1:A:54:PRO:HD3	26:Z:77:GLY:HA3	1.91	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
29:3:13:HIS:CB	29:3:74:CYS:SG	2.91	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
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
31:9:31:C:O2'	31:9:32:G:H5'	2.09	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
38:B:8993:HOH:O	30:0:2547:C:H1'	2.10	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
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
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
30:0:2754:G:H2'	30:0:2755:G:O4'	2.09	0.52
31:9:105:A:H2'	31:9:106:U:H5'	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
29:3:68:LYS:HE2	29:3:70:ARG:NH1	2.25	0.51
30:0:110:C:H1'	38:0:6615:HOH:O	2.10	0.51
30:0:801:U:O5'	30:0:801:U:H6	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
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
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:CG	18:R:150:PRO:CB	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
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
30:0:116:G:C1'	30:0:129:A:C4	2.93	0.51
30:0:152:A:H1'	30:0:440:C:O2'	2.10	0.51
30:0:1312:G:C6	30:0:1343:C:N3	2.79	0.51
30:0:1531:U:C2	30:0:1661:A:N1	2.78	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
30:0:1754: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
30:0:2073:G:OP2	30:0:2490:A:H5'	2.10	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
30:0:2658:G:H4'	30:0:2842:G:C8	2.45	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
31:9:35:C:H5''	38:9:4078:HOH:O	2.10	0.51
1:A:95:PRO:HG2	1:A:98:GLU:HG2	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
30:0:57:C:C2'	30:0:58:C:H5'	2.39	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
30:0:1096:U:O2	30:0:1261:A:C2	2.64	0.51
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
30:0:35:U:O2'	30:0:36:C: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
30:0:300:U:C4	30:0:301:C:H5	2.28	0.51
30:0:623:U:O2'	30:0:624:U:H5'	2.10	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
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
26:Z:41:ARG:HB3	38:0:5660:HOH:O	2.11	0.51
28:2:49:GLU:OE1	30:0:120:A:H2	1.92	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
30:0:188:C:O2	30:0:188:C:H2'	2.10	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
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
30:0:1982:C:H3'	30:0:1983:C:H6	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2032:U:C2'	30:0:2033:G:H5''	2.41	0.51
2:B:41:PHE:CE1	2:B:79:MET:HG3	2.45	0.51
2:B:48:MET:HB2	30:0:2719:A:OP1	2.10	0.51
3:C:83:ALA:HA	30:0:1361:C:H1'	1.92	0.51
21:U:56:ARG:CD	30:0:2890:A:C8	2.89	0.51
30:0:20:G:C2'	30:0:21:G:O5'	2.58	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
30:0:422: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
30:0:939:A:C2	30:0:1027:G:N3	2.79	0.51
30:0:1132:A:H61	30:0:1229:C:H2'	1.72	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
30:0:1524:U:H6	30:0:1524:U:O5'	1.93	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
30:0:2375: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
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
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
30:0:18:C:H2'	30:0:19:U:H6	1.76	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
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
2:B:329:TYR:CE2	21:U:15:PRO:HG2	2.45	0.51
3:C:205:ARG:NH2	30:0:347:A:O2'	2.44	0.51
14:N:25:ARG:HG2	30:0:2416:G:O2'	2.11	0.51
23:W:131:PRO:O	23:W:136:GLY:N	2.41	0.51
29:3:33:MET:CG	30:0:1922:A:H2'	2.41	0.51
30:0:68:U:C4	30:0:107:U:H4'	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:174:A:O4'	30:0:176:U:C6	2.63	0.51
30:0:302:A:H2'	30:0:303:C:C5'	2.41	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
30:0:1042:U:O2'	30:0:1043:C:H5'	2.10	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
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
31:9:12:C:H5'	31:9:70:U:O4'	2.09	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
20:T:82:THR:HG21	30:0:488:U:O2'	2.11	0.51
28:2:41:HIS:CD2	28:2:44:ARG:H	2.18	0.51
30:0:57:C:N3	30:0:89:G:N2	2.55	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
4:D:17:ARG:CZ	4:D:137:PRO:HA	2.41	0.51
38:D:189:HOH:O	31:9:58:G:H1'	2.11	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:26:HIS:HB2	38:L:8811:HOH:O	2.09	0.51
12:L:117:GLU:HA	38:L:8857:HOH:O	2.11	0.51
14:N:37:ARG:CD	33:N:8807:CL:CL	2.90	0.51
18:R:92:LEU:HD23	18:R:145:LEU:HD21	1.93	0.51
29:3:1:MET:HE3	30:0:2320:U:C5	2.46	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2852:A:O4'	30:0:2853:U:H5	1.94	0.51
11:K:105:ARG:HH11	11:K:105:ARG:HG3	1.75	0.50
38:L:8903:HOH:O	25:Y:147:ARG:HG3	2.10	0.50
16:P:16:VAL:HG12	16:P:20:ARG:HB2	1.93	0.50
21:U:56:ARG:CD	30:0:2890:A:H1'	2.41	0.50
23:W:4:LEU:HD23	23:W:54:PHE:CB	2.41	0.50
26:Z:102:THR:HG23	26:Z:105:ARG:HD3	1.92	0.50
28:2:2:LYS:HG3	30:0:1486:A:C5	2.46	0.50
30:0:98:A:H2'	30:0:99:A:H5'	1.93	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
30:0:790:A:H1'	30:0:1710:A:H2'	1.93	0.50
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
30:0:1878: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
31:9:92:G:C6	31:9:93:A:N6	2.79	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
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
30:0:59:A:C5'	38:0:4297:HOH:O	2.59	0.50
30:0:99:A:H2'	30:0:100:C:H5'	1.92	0.50
30:0:812:A:H2'	30:0:813:C:C6	2.47	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
1:A:40:GLY:O	1:A:79:GLU:HG3	2.10	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:142:LEU:HD11	12:L:146:GLY:HA3	1.93	0.50
13:M:68:ARG:O	13:M:68:ARG:HD3	2.11	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
30:0:1131:G:C6	30:0:1230:A:C4	3.00	0.50
30:0:1438:G:C4	30:0:1684:A:C2	3.00	0.50
30:0:1543:G:N1	30:0:1641:A:OP2	2.26	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
30:0:2105: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
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:HG23	24:X:70:ILE:O	2.12	0.50
25:Y:127:GLN:HA	38:Y:8915:HOH:O	2.11	0.50
27:1:4:GLY:O	27:1:8:GLN:HG2	2.11	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
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
31:9:114:G:H2'	31:9:115:C:C6	2.45	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:47:THR:HB	38:0:4793:HOH:O	2.11	0.50
10:J:104:TYR:HA	38:J:2238:HOH:O	2.12	0.50
11:K:91:GLU:OE2	21:U:24:LYS:HB2	2.11	0.50
38:M:8832:HOH:O	29:3:46:ILE:HB	2.10	0.50
20:T:48:VAL:HG23	20:T:97:ARG:C	2.31	0.50
23:W:52:VAL:HG22	23:W:53:ALA:N	2.27	0.50
30:0:334:G:C4	30:0:335:U:C6	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
31:9:58:G:N7	31:9:59:C:C4	2.79	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
29:3:55:VAL:HG13	38:3:9004:HOH:O	2.12	0.50
30:0:66:G:C2	30:0:109:U:C4	2.99	0.50
30:0:271:C:C2	30:0:273:G:O4'	2.65	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
31:9:13:A:O4'	31:9:114:G:C8	2.65	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
25:Y:212:ARG:HB2	30:0:1315:G:C4	2.46	0.50
30:0:45:A:N6	30:0:147:G:C4	2.80	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
30:0:790:A:C2'	30:0:791:A:H5'	2.41	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
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
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
1:A:233:THR:HB	30:0:1942:A:H5''	1.93	0.50
2:B:280:VAL:HA	38:B:9031:HOH:O	2.11	0.50
4:D:154:LYS:H	4:D:154:LYS:CD	2.21	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:37:LYS:NZ	38:L:8812:HOH:O	2.44	0.50
13:M:163:LEU:HD21	30:0:188:C:H5''	1.93	0.50
21:U:7:ASP:HB2	21:U:30:HIS:H	1.77	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
23:W:119:HIS:HD2	23:W:120:PRO:O	1.95	0.50
25:Y:136:LYS:HB2	38:0:9314:HOH:O	2.12	0.50
25:Y:169:ARG:HD3	30:0:1328:A:C8	2.46	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
29:3:51:LYS:HD2	30:0:219:G:H4'	1.92	0.50
30:0:269:G:C2	30:0:270:U:O4	2.65	0.50
30:0:272:A:C5'	30:0:273:G:OP2	2.59	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
30:0:1067:A:H3'	38:0:4262:HOH:O	2.11	0.50
30:0:2721:U:O2'	30:0:2722:G:H5'	2.11	0.50
30:0:2878:U:H5''	38:0:4138:HOH:O	2.12	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
26:Z:98:PRO:HA	26:Z:101:LYS:HD2	1.93	0.50
30:0:77:G:H2'	30:0:78:G:C5'	2.42	0.50
30:0:256:C:H2'	30:0:257:G:C5'	2.41	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
30:0:820:G:H5'	30:0:821:U:H5'	1.93	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
30:0:2768:A:N3	30:0:2768:A:C3'	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2855:G:C2	30:0:2904:U:C2	2.99	0.50
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
21:U:56:ARG:HB2	30:0:2890:A:C8	2.45	0.49
29:3:22:VAL:HG12	29:3:67:LEU:HD22	1.94	0.49
30:0:65:C:H2'	30:0:66:G:C8	2.46	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
30:0:669:G:C2'	30:0:670:G:H5'	2.42	0.49
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
12:L:14:GLY:O	30:0:1295:G:H5''	2.12	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:6:GLN:HB2	23:W:26:ILE:HD11	1.94	0.49
23:W:118:LEU:HD12	23:W:153:MET:HE3	1.93	0.49
30:0:194:A:N7	30:0:427:C:H5'	2.27	0.49
30:0:202:U:C2'	30:0:203:G:H5'	2.42	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
30:0:1038:G:C2'	30:0:1039:G:H5'	2.42	0.49
30:0:1119:G:N2	30:0:1246:A:H2	2.03	0.49
30:0:1170:U:H2'	30:0:1172:G:OP2	2.13	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
30:0:2503:A:H2'	30:0:2511:A:C6	2.46	0.49
31:9:9:C:OP2	31:9:10:C:C5	2.65	0.49
31:9:61:C:H2'	31:9:62:A:C8	2.46	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:66:ARG:NH2	30:0:1994:A:OP1	2.40	0.49
11:K:74:VAL:HG21	11:K:96:VAL:HG23	1.94	0.49
16:P:3:LEU:HD12	30:0:1397:C:H5'	1.95	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
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
30:0:259:G:N2	30:0:260:C:H1'	2.27	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
30:0:1013:A:C2	30:0:1014:A:H1'	2.46	0.49
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
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
30:0:2845:G:C6	30:0:2846:C:C4	3.00	0.49
31:9:19:G:C2	31:9:20:G:C8	3.00	0.49
2:B:43:GLY:HA3	2:B:76:THR:HG22	1.93	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
8:H:39:LYS:HD2	30:0:968:G:O2'	2.13	0.49
8:H:76:LEU:HD21	8:H:149:VAL:HA	1.93	0.49
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
30:0:177: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
30:0:242: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
30:0:295: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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
30:0:2295:G:N3	30:0:2361:A:H2	2.10	0.49
30:0:2842:G:H2'	30:0:2843:A:H5'	1.95	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
30:0:116:G:H1'	30:0:129:A:C2	2.47	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
30:0:1024:G:H2'	30:0:1025:C:H6	1.78	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:O5'	30:0:1734:C:H6	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
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
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
29:3:17:HIS:HB2	30:0:2409:C:H4'	1.94	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
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
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
31:9:30:C:O2	31:9:51:A:C2	2.65	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
30:0:45:A:C2	30:0:113:A:C6	3.01	0.49
30:0:377:C:H6	30:0:377:C:O5'	1.96	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
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
2:B:5:ARG:NH1	2:B:8:LYS:HE2	2.27	0.49
2:B:74:ILE:HD13	2:B:309:VAL:HG21	1.94	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
30:0:238:C:H4'	30:0:287:C:OP1	2.13	0.49
30:0:287:C:H3'	30:0:287:C:C6	2.48	0.49
30:0:514:G:OP1	30:0:514:G:H2'	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
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
30:0:2416: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
31:9:89:C:C2'	31:9:90:G:H5'	2.43	0.49
1:A:109:GLU:HG2	1:A:116:GLY:H	1.78	0.49
3:C:190:ALA:HB3	30:0:1309:U:OP1	2.13	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
30:0:29:C:C2'	30:0:30:U:H5'	2.42	0.49
30:0:181:G:H1'	38:0:3246:HOH:O	2.13	0.49
30:0:736:A:H3'	38:0:7109:HOH:O	2.12	0.49
30:0:1217:G:C2	30:0:1218:U:C2	3.01	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
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
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:76:ARG:NH2	30:0:1363:G:OP1	2.46	0.49
3:C:107:ARG:O	3:C:111:VAL:HG23	2.12	0.49
5:E:68:HIS:O	5:E:72:MET:HG3	2.13	0.49
6:F:54:VAL:HA	30:0:263:U:O4	2.12	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
30:0:39:G:N2	30:0:444:C:C2	2.81	0.49
30:0:152:A:C2	30:0:153:C:C2	3.01	0.49
30:0:180:G:C2'	30:0:181:G:H5'	2.43	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
30:0:1477:C:C5'	30:0:1868:G:H5''	2.43	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
30:0:1851:G:O2'	30:0:1852:A:H5'	2.13	0.49
30:0:2726:U:O4'	30:0:2749:U:C2	2.66	0.49
31:9:29:C:H6	31:9:29:C:O5'	1.94	0.49
2:B:262:ARG:HG3	30:0:2716:G:H5'	1.95	0.48
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:H6	30:0:2710:U:O5'	1.95	0.48
30:0:2713:G:O2'	30:0:2714:U:H5'	2.13	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
29:3:69:TYR:CE1	29:3:80:ARG:HB2	2.48	0.48
30:0:120:A:N3	30:0:120:A:C2'	2.75	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
30:0:1245:C:C6	30:0:1245:C:C3'	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
31:9:59:C:O5'	31:9:59:C:C6	2.67	0.48
1:A:76:VAL:HG21	26:Z:87:LYS:HB3	1.95	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:4:LEU:HD11	23:W:45:VAL:HG12	1.94	0.48
23:W:5:VAL:HG11	23:W:153:MET:CE	2.43	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:34:SER:CA	30:0:797:A:H4'	2.40	0.48
26:Z:81:CYS:SG	26:Z:83:TYR:HB3	2.52	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:3:2:GLN:NE2	29:3:89:GLU:HB2	2.28	0.48
30:0:12:U:H2'	30:0:13:G:H5'	1.93	0.48
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
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
30:0:1456: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
31:9:24:U:H5'	31:9:25:G:H5'	1.94	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
19:S:9:HIS:HE1	30:0:1445:G:OP1	1.96	0.48
23:W:41:TYR:OH	30:0:1024:G:H4'	2.12	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
30:0:1432:U:O2	30:0:1432:U:H2'	2.13	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
1:A:55:VAL:HG23	1:A:68:ILE:O	2.14	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
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
27:1:11:LYS:HG2	30:0:777:U:O2'	2.14	0.48
30:0:54:G:N2	30:0:55:U:H1'	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
30:0:177:A:N7	30:0:178:U:C4	2.82	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
30:0:2025: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
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
1:A:144:GLU:HA	38:A:8955:HOH:O	2.14	0.48
4:D:97:GLN:HG2	4:D:97:GLN:O	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
30:0:65:C:H2'	30:0:66:G:H8	1.78	0.48
30:0:222:A:H8	30:0:222:A:O5'	1.97	0.48
30:0:395:A:H3'	30:0:397:A:N7	2.29	0.48
30:0:791:A:H4'	30:0:1709:G:H4'	1.96	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
30:0:1149:U:C5	30:0:1215:A:C5	3.02	0.48
30:0:1160:G:O2'	30:0:1190:G:C8	2.65	0.48
30:0:1842:A:C4	30:0:1979:G:C6	3.00	0.48
30:0:1872:C:H5'	38:0:9434:HOH:O	2.12	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
31:9:49:G:H2'	31:9:50:G:O4'	2.12	0.48
1:A:135:VAL:HG11	1:A:147:ARG:HH21	1.78	0.48
7:G:12:ILE:HG21	30:0:1150:A:C8	2.49	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
30:0:64: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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
30:0:1857:A:N1	30:0:2247:C:O4'	2.47	0.48
30:0:1933:G:N2	30:0:1934:A:C1'	2.77	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
1:A:94:LEU:HD12	1:A:98:GLU:CB	2.44	0.48
1:A:125:ASN:HB3	1:A:158:VAL:HG12	1.96	0.48
3:C:16:VAL:HG12	3:C:17:ASP:N	2.28	0.48
3:C:102:LEU:HA	38:C:8514:HOH:O	2.14	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
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
30:0:202:U:H2'	30:0:203:G:H5'	1.96	0.48
30:0:261:A:H8	30:0:261:A:O5'	1.96	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
30:0:1174:A:H5'	30:0:1176:C:OP2	2.13	0.48
30:0:1179:C:H6	30:0:1179:C:O5'	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
30:0:2113:G:N2	30:0:2473:U:C2	2.82	0.48
30:0:2681:A:N6	30:0:2714:U:H4'	2.29	0.48
30:0:2686:C:O2	30:0:2709:G:C2	2.66	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
31:9:56:A:C3'	31:9:57:A:H5''	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:9:77:A:C1'	31:9:79:U:C6	2.96	0.48
31:9:114:G:C6	31:9:115:C:C4	3.01	0.48
1:A:47:HIS:HD2	30:0:1654:U:O2'	1.97	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
30:0:147:G:N3	30:0:147:G:H2'	2.29	0.48
30:0:168:C:O2'	30:0:169:A:H5'	2.13	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
30:0:1029:U:O2'	30:0:1273:C:OP1	2.26	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
30:0:1698:U:O5'	30:0:1698:U:H6	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
30:0:2783:A:N1	30:0:2792:A:C8	2.82	0.48
30:0:2790:C:HO2'	30:0:2791:U:H6	1.61	0.48
30:0:2871:G:C5	30:0:2872:U:C4	3.02	0.48
31:9:22:G:N2	31:9:26:C:H42	2.12	0.48
2:B:206:THR:CG2	30:0:2716:G:H5''	2.39	0.48
5:E:105:GLU:HG2	5:E:113:PRO:HB3	1.96	0.48
6:F:61:MET:HG2	13:M:19:GLN:OE1	2.13	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
23:W:91:ASP:HB2	38:W:5425:HOH:O	2.12	0.48
23:W:125:HIS:HB2	23:W:137:GLN:HG2	1.96	0.48
30:0:56:G:C4	30:0:70:A:C2	3.02	0.48
30:0:223:G:C2	30:0:224:U:C6	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
30:0:669: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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
30:0:2637: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
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
31:9:77:A:H1'	31:9:79:U:C5	2.49	0.48
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
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
30:0:181:G:C6	30:0:182:G:C5	3.02	0.47
30:0:228:C:C2'	30:0:229:G:C5'	2.87	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
30:0:1592:G:O2'	30:0:1593:C:O5'	2.31	0.47
30:0:2030:A:P	38:0:3847:HOH:O	2.72	0.47
30:0:2321:A:C2	30:0:2323:G:C5	3.02	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
1:A:213:LYS:HB2	38:0:9047:HOH:O	2.14	0.47
3:C:34:ALA:HA	3:C:102:LEU:HD21	1.96	0.47
3:C:246:ARG:NE	38:C:8627:HOH:O	2.47	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
29:3:83:TRP:O	29:3:85:ALA:N	2.48	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
30:0:181:G:N1	30:0:182:G:C5	2.82	0.47
30:0:215:A:H61	30:0:225:G:H1'	1.79	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
30:0:1683:G:H5'	38:0:9801:HOH:O	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
30:0:2329: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
31:9:76:G:N2	31:9:106:U:H3	2.11	0.47
1:A:76:VAL:CG2	26:Z:87:LYS:HB3	2.45	0.47
2:B:333:GLU:OE1	21:U:14:GLU:HG2	2.14	0.47
3:C:170:ASP:HA	3:C:188:ARG:NH2	2.29	0.47
5:E:162:PHE:N	5:E:162:PHE:CD1	2.82	0.47
8:H:6:ALA:HB3	30:0:2521:A:OP2	2.13	0.47
13:M:159:VAL:HG13	13:M:160:PHE:N	2.29	0.47
15:O:113:VAL:O	30:0:721:A:H1'	2.14	0.47
17:Q:50:GLY:N	38:Q:5297:HOH:O	2.44	0.47
26:Z:56:GLU:HA	26:Z:59:GLU:OE2	2.13	0.47
29:3:38:ARG:HB2	29:3:42:ARG:NH1	2.29	0.47
30:0:662:U:H1'	30:0:748:C:H1'	1.97	0.47
30:0:1041:U:C2'	30:0:1042:U:H5'	2.44	0.47
30:0:1052:G:O2'	30:0:2300:A:OP2	2.29	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
30:0:2826:G:C6	30:0:2913:A:C6	3.02	0.47
30:0:2830:U:H2'	30:0:2831:C:C5'	2.45	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
2:B:336:GLN:O	30:0:2862:G:H4'	2.14	0.47
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
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
30:0:52:A:O2'	30:0:53:C:H5'	2.13	0.47
30:0:69:A:C8	30:0:69:A:C5'	2.92	0.47
30:0:216:A:O2'	30:0:217:C:H5'	2.15	0.47
30:0:281:U:H5	38:0:7494:HOH:O	1.97	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2686:C:O2'	30:0:2687:G:H5'	2.14	0.47
30:0:2842:G:H2'	30:0:2843:A:O4'	2.15	0.47
30:0:2864:U:C2'	30:0:2865:G:H5'	2.45	0.47
4:D:22:VAL:HA	4:D:73:VAL:O	2.14	0.47
9:I:83:GLY:N	30:0:1168:C:H5'	2.29	0.47
12:L:44:GLU:HA	12:L:45:PRO:HD2	1.71	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
30:0:1139:U:O2'	30:0:1140:C:H5'	2.14	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
31:9:117:G:H2'	31:9:118:C:C6	2.49	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
25:Y:169:ARG:NH1	30:0:1327:G:O3'	2.46	0.47
29:3:87:ARG:HG2	29:3:88:LEU:N	2.30	0.47
30:0:667:C:H2'	30:0:668:C:H6	1.79	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
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:O2	30:0:2319:C:H2'	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
2:B:98:THR:CG2	2:B:99:GLU:N	2.77	0.47
2:B:267:LYS:HA	38:B:8996:HOH:O	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
29:3:64:LYS:HE3	29:3:84:ARG:NH1	2.30	0.47
30:0:37:A:C2	30:0:446:G:N3	2.83	0.47
30:0:106:A:N1	30:0:107:U:C2	2.83	0.47
30:0:255:A:C6	30:0:256:C:C4	3.03	0.47
30:0:305:A:C2	30:0:329:A:C4	3.02	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
30:0:385:C:O5'	30:0:385:C:C6	2.55	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
30:0:1050:G:C6	30:0:1051:C:C4	3.03	0.47
30:0:1116:U:C2'	30:0:1118:A:H2	2.28	0.47
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
30:0:1486:A:H3'	38:0:4435:HOH:O	2.14	0.47
30:0:1743:G:H2'	30:0:1744:G:O4'	2.15	0.47
30:0:1815:A:H4'	30:0:2751:C:O4'	2.15	0.47
30:0:1889:C:O2'	30:0:1890:U:H5'	2.15	0.47
30:0:2002:C:H2'	30:0:2003:U:H5'	1.96	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
30:0:2238: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
30:0:2384:U:H5''	38:0:3473: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
30:0:2824:C:O3'	30:0:2825:C:C6	2.64	0.47
31:9:10:C:H2'	38:9:7164:HOH:O	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:184:ARG:NH2	30:0:450:C:OP1	2.35	0.47
9:I:83:GLY:N	30:0:1168:C:C5'	2.74	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
29:3:48:ASN:HB3	30:0:170:U:H5'	1.97	0.47
30:0:10:U:C5	30:0:532:A:N7	2.83	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
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
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
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
15:O:63:LYS:NZ	30:0:659:A:N7	2.47	0.47
16:P:88:GLN:NE2	30:0:1800:G:H1'	2.30	0.47
16:P:95:GLU:HG2	30:0:1597:A:O4'	2.15	0.47
24:X:12:ILE:HB	24:X:70:ILE:CG2	2.44	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
30:0:53:C:H2'	30:0:54:G:O4'	2.15	0.47
30:0:235:C:O2'	30:0:236:A:H2'	2.15	0.47
30:0:307:G:H3'	30:0:342:C:OP2	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:951:A:C2'	30:0:952:G:C5'	2.86	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
30:0:1571:G:H1'	30:0:1627:G:N2	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
30:0:2673:U:C5	30:0:2674:G:C6	3.03	0.47
31:9:43:G:N2	31:9:46:C:N3	2.54	0.47
31:9:105:A:C2'	31:9:106:U:H5'	2.45	0.47
2:B:83:ALA:HB3	2:B:143:ILE:HB	1.96	0.47
2:B:119:HIS:CD2	2:B:121:PRO:HG3	2.50	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:86:GLN:NE2	38:M:8888:HOH:O	2.48	0.47
13:M:106:SER:HB2	13:M:114:VAL:HG23	1.97	0.47
18:R:114:VAL:HB	18:R:145:LEU:CD1	2.43	0.47
38:S:8972:HOH:O	30:0:1507:C:H4'	2.15	0.47
30:0:54:G:C4	30:0:55:U:C5	3.03	0.47
30:0:88:G:C6	30:0:89:G:C6	3.03	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
30:0:594: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
30:0:1392:A:C6	30:0:1395:C:C2	3.03	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
13:M:28:GLN:HA	13:M:31:TRP:HB2	1.97	0.46
13:M:155:GLN:NE2	13:M:155:GLN:HA	2.30	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
29:3:15:ASN:O	30:0:2408:A:H4'	2.15	0.46
30:0:123:U:O2'	30:0:124:C:H5'	2.14	0.46
30:0:820:G:O2'	30:0:856:G:H4'	2.14	0.46
30:0:1477:C:H2'	30:0:1478:U:C5'	2.44	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
29:3:46:ILE:HG13	30:0:390:G:OP1	2.14	0.46
29:3:61:PRO:HG3	30:0:2316:G:O2'	2.15	0.46
29:3:64:LYS:HA	29:3:83:TRP:O	2.14	0.46
29:3:71:CYS:HB3	29:3:75:GLY:N	2.30	0.46
30:0:229:G:C2'	30:0:230:C:H5'	2.44	0.46
30:0:252:C:O2	30:0:252:C:C2'	2.60	0.46
30:0:292:G:C3'	30:0:358:G:H22	2.27	0.46
30:0:400:C:O2'	30:0:401:C:H5'	2.14	0.46
30:0:861:A:H4'	30:0:1697:G:H4'	1.97	0.46
30:0:861:A:O5'	30:0:861:A:H8	1.98	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
30:0:1739:G:C4	30:0:2041:G:C2	3.03	0.46
30:0:2496:C:H1'	30:0:2527:U:N3	2.29	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:O5'	30:0:2828:G:H8	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
4:D:48:MET:SD	31:9:41:C:H5''	2.54	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

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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
30:0:134:U:C2	30:0:145:A:C2	3.04	0.46
30:0:686:A:H1'	30:0:747:G:O2'	2.16	0.46
30:0:920:C:H5'	30:0:921:G:C4	2.50	0.46
30:0:1432:U:C5	30:0:1725:C:O4'	2.69	0.46
30:0:1648:G:C2	30:0:1649:G:C8	3.03	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
31:9:60:C:H2'	31:9:61:C:O5'	2.15	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
15:O:24:ALA:HB3	30:0:710:G:P	2.56	0.46
26:Z:35:SER:HB3	26:Z:38:PHE:CD1	2.50	0.46
28:2:25:VAL:HG21	30:0:60:A:N6	2.30	0.46
30:0:161:A:H3'	38:0:9337:HOH:O	2.14	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
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
30:0:1741:U:HO2'	30:0:2723:G:H4'	1.76	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
30:0:2836:G:H2'	38:0:5114:HOH:O	2.14	0.46
31:9:1:U:O3'	31:9:3:A:H5''	2.16	0.46
31:9:37:C:H2'	31:9:38:A:O4'	2.15	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
16:P:91:LYS:NZ	30:0:817:G:OP2	2.49	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
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)
30:0:144:A:H8	38:0:3164:HOH:O	1.98	0.46
30:0:1152:A:C2	30:0:1216:G:N3	2.84	0.46
30:0:1211:G:H2'	30:0:1212:C:H6	1.81	0.46
30:0:1311:G:C2	30:0:1312:G:C8	3.02	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
30:0:2561:C:O2'	30:0:2562:G:H5'	2.16	0.46
1:A:45:ILE:CG2	26:Z:78:ILE:HG23	2.45	0.46
8:H:120:PHE:CD1	30:0:2311:A:C5'	2.94	0.46
18:R:65:GLY:N	30:0:2088:C:OP1	2.32	0.46
22:V:8:ILE:CG2	22:V:59:ILE:HG13	2.46	0.46
23:W:11:VAL:HB	38:0:9588:HOH:O	2.15	0.46
23:W:108:ARG:HG3	23:W:114:PRO:HG3	1.96	0.46
25:Y:205:ILE:HG22	25:Y:209:VAL:HG21	1.96	0.46
29:3:5:ARG:NH1	29:3:90:PHE:HB3	2.30	0.46
29:3:38:ARG:NH1	30:0:396:U:OP2	2.48	0.46
30:0:33:G:C2	30:0:34:C:C2	3.04	0.46
30:0:251:C:H2'	30:0:252:C:H6	1.80	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:H6	30:0:705:C:OP2	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
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
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
30:0:2630: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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
29:3:14:CYS:HB3	29:3:16:GLU:HG2	1.97	0.46
30:0:272:A:N1	30:0:369:G:H5''	2.31	0.46
30:0:1360:C:H4'	38:0:9187:HOH:O	2.15	0.46
30:0:1472:C:O5'	30:0:1472:C:H6	1.98	0.46
30:0:1518:A:N6	30:0:1667:A:N6	2.64	0.46
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
30:0:2838: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
1:A:47:HIS:CD2	30:0:1654:U:C2'	2.88	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
29:3:3:MET:SD	29:3:83:TRP:CZ2	3.08	0.46
30:0:154:C:N3	30:0:155:C:C5	2.83	0.46
30:0:1463:U:O5'	30:0:1463:U:H6	1.99	0.46
30:0:1540:G:C5	30:0:1541:G:N7	2.83	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:HA	16:P:120:ARG:HD2	1.59	0.46
22:V:60:GLN:HG2	38:V:874:HOH:O	2.16	0.46
30:0:553:G:O4'	30:0:1325:G:H5'	2.16	0.46
30:0:1139:U:H2'	30:0:1140:C:H6	1.80	0.46
30:0:1425:G:C6	30:0:1426:C:N4	2.84	0.46
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
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:58:GLN:NE2	30:0:259:G:H21	2.14	0.46
13:M:165:GLY:HA3	30:0:432:G:OP1	2.16	0.46
16:P:16:VAL:CG1	16:P:20:ARG:HB2	2.45	0.46
16:P:135:ALA:O	16:P:139:ARG:HG3	2.16	0.46
23:W:73:LEU:HD12	23:W:73:LEU:HA	1.80	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
30:0:191:A:H4'	30:0:191:A:OP1	2.16	0.46
30:0:239:C:C2'	30:0:240:C:O5'	2.64	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
30:0:892:G:C6	30:0:893:C:C4	3.04	0.46
30:0:1359:U:C5	30:0:2101:A:N7	2.84	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
30:0:2330: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
30:0:2825:C:H4'	30:0:2826:G:O4'	2.15	0.46
2:B:177:HIS:O	2:B:181:ILE:HG13	2.16	0.45
2:B:229:ARG:NH2	30:0:1753:C:O2	2.39	0.45
16:P:41:ARG:HH22	30:0:1500:U:P	2.39	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
29:3:7:PHE:HZ	29:3:80:ARG:HH12	1.64	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
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
2:B:62:ARG:HA	2:B:65:MET:CE	2.46	0.45
2:B:279:THR:HG22	2:B:280:VAL:N	2.31	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
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
15:O:50:ARG:HG3	30:0:701:U:OP2	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
30:0:445: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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
31:9:28:U:O2	31:9:28:U:C2'	2.64	0.45
38:B:8989:HOH:O	30:0:2614:C:H4'	2.15	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
27:1:21:ARG:HD2	27:1:37:CYS:SG	2.56	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
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
31:9:7:G:C5'	38:9:5071:HOH:O	2.65	0.45
1:A:75:GLY:HA3	26:Z:86:TYR:CZ	2.51	0.45
1:A:172:ALA:HB2	30:0:1846:U:O2'	2.16	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
21:U:42:LEU:HB3	30:0:1810:C:O4'	2.16	0.45
25:Y:208:LYS:HD2	38:0:4269:HOH:O	2.17	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
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
30:0:1476:A:C2'	30:0:1867:G:O2'	2.64	0.45
30:0:1737:A:N6	30:0:1738:C:C4	2.84	0.45
30:0:2563:U:O2'	30:0:2564:G:C8	2.68	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2635:A:C2'	30:0:2636:C:H5'	2.45	0.45
1:A:195:ASN:HB3	1:A:197:VAL:HG12	1.99	0.45
4:D:76:ARG:NH1	31:9:42:C:O2	2.50	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
30:0:324: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
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
31:9:5:G:C2'	31:9:6:C:H5'	2.46	0.45
31:9:55:U:H4'	31:9:56:A:H8	1.80	0.45
1:A:88:ILE:O	1:A:88:ILE:HG22	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
27:1:9:GLY:HA2	30:0:1687:C:O2	2.16	0.45
28:2:8:LYS:NZ	30:0:1677:U:OP2	2.47	0.45
29:3:11:CYS:HB2	29:3:20:HIS:CE1	2.51	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
30:0:254: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
30:0:955:A:H2'	30:0:956:G:H5'	1.97	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
30:0:1757:U:H5	38:0:3207:HOH:O	1.99	0.45
30:0:2538:A:H3'	38:0:9174:HOH:O	2.17	0.45
31:9:44:A:N6	31:9:45:A:C6	2.85	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
7:G:63:ARG:NH1	30:0:1151:G:OP1	2.50	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
30:0:236:A:N3	30:0:237:G:H1'	2.31	0.45
30:0:293:A:C8	30:0:359:U:O4	2.69	0.45
30:0:304:G:H1'	30:0:347:A:H61	1.82	0.45
30:0:402:U:H2'	30:0:403:C:C6	2.51	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
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:O5'	30:0:1966:U:H6	1.99	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:H2'	30:0:2891:A:N3	2.30	0.45
30:0:2898:G:H2'	30:0:2899:A:H8	1.82	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:29:SER:HB3	30:0:2415:A:O2'	2.16	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:3:5:ARG:HD3	29:3:21:GLU:OE2	2.17	0.45
30:0:13:G:C4	30:0:14:C:C5	3.04	0.45
30:0:139:C:O5'	30:0:139:C:H6	1.99	0.45
30:0:558:C:C2'	30:0:559:U:C5'	2.84	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
30:0:1969:A:N7	30:0:1970:G:C6	2.85	0.45
30:0:2650:U:O5'	30:0:2650:U:H6	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
31:9:36:C:H2'	31:9:37:C:C5'	2.43	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
30:0:248:A:H3'	30:0:248:A:N3	2.32	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
30:0:943:A:N6	30:0:1025:C:O2	2.48	0.45
30:0:952:G:N3	30:0:2302:A:H2'	2.32	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
30:0:2505: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
33:0:8813:CL:CL	38:0:4929:HOH:O	2.58	0.45
2:B:24:PRO:HG2	2:B:204:GLY:HA2	1.98	0.45
3:C:61:PHE:CD1	3:C:65:ARG:HD2	2.52	0.45
3:C:197:SER:HA	38:C:8638:HOH:O	2.16	0.45
11:K:20:CYS:HB2	11:K:29:LEU:CG	2.43	0.45
17:Q:27:GLN:NE2	31:9:8:G:C5'	2.77	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Y:148:GLY:O	25:Y:154:ARG:HD3	2.17	0.45
30:0:152:A:H2'	30:0:153:C:C6	2.52	0.45
30:0:195:C:C2'	30:0:196:G:H5'	2.46	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
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
30:0:1829:A:H2	30:0:2018:A:N1	2.15	0.45
30:0:1915:U:H2'	30:0:1916:C:H6	1.82	0.45
30:0:2070:G:H4'	38:0:4310:HOH:O	2.17	0.45
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
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
30:0:69:A:H8	30:0:69:A:C5'	2.21	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
30:0:816:G:C6	30:0:817:G:C6	3.05	0.44
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
30:0:2096:A:C8	30:0:2539:U:C2	3.05	0.44
30:0:2416:G:H2'	30:0:2417:C:O4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
30:0:2746: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
31:9:5:G:C2	31:9:119:C:O2	2.70	0.44
31:9:36:C:C5	31:9:37:C:C4	3.05	0.44
1:A:101:GLU:OE2	1:A:131:HIS:HB2	2.17	0.44
2:B:6:PRO:HD3	38:0:9962:HOH:O	2.17	0.44
2:B:77:PRO:HA	2:B:293:PRO:HB2	1.99	0.44
2:B:223:ARG:HG3	2:B:232:TRP:C	2.37	0.44
10:J:36:VAL:HG12	10:J:37:ALA:N	2.31	0.44
12:L:53:ARG:CD	30:0:2441:U:H4'	2.42	0.44
13:M:74:LYS:HG2	38:M:8947:HOH:O	2.17	0.44
14:N:77:ASN:OD1	14:N:77:ASN:N	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
28:2:40:ARG:HD2	28:2:47:THR:HG22	1.99	0.44
30:0:287:C:C6	30:0:287:C:C3'	3.00	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
30:0:940:G:O2'	30:0:1032:A:N1	2.44	0.44
30:0:1015:C:C2	30:0:1016:U:C5	3.05	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
30:0:1787:C:H4'	30:0:2883:A:O4'	2.16	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
30:0:2896:A:N3	30:0:2896:A:H2'	2.32	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
30:0:10:U:O4	30:0:532:A:OP2	2.36	0.44
30:0:99:A:N7	30:0:100:C:C2	2.84	0.44
30:0:1181:A:O2'	30:0:1182:C:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
30:0:1538:C:C2'	30:0:1539:U:H5'	2.47	0.44
30:0:1564:C:H1'	30:0:2738:G:N2	2.33	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
30:0:2908:A:O5'	30:0:2908:A:H8	2.00	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:74:LYS:HD3	13:M:87:GLY:O	2.17	0.44
13:M:76:ARG:HG2	38:M:8825:HOH:O	2.16	0.44
13:M:111:ASN:OD1	13:M:111:ASN:N	2.51	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
30:0:23:G:C6	30:0:24:G:C6	3.06	0.44
30:0:64:G:N3	30:0:70:A:C8	2.86	0.44
30:0:644:G:H5'	30:0:644:G:N3	2.33	0.44
30:0:716:G:C6	30:0:717:C:C4	3.05	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:37:ARG:HG3	30:0:1501:A:OP2	2.17	0.44
16:P:107:GLU:C	16:P:109:ARG:H	2.21	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
30:0:321: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
30:0:799:C:H1'	30:0:1599:U:H5''	1.99	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
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
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
30:0:2596:A:C2	33:0:8812:CL:CL	3.07	0.44
30:0:2723:G:H2'	30:0:2724:U:C6	2.53	0.44
31:9:64:C:H2'	31:9:65:A:H5'	1.98	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:8:ILE:HD13	38:M:8920:HOH:O	2.17	0.44
13:M:85:ARG:HD2	13:M:85:ARG:N	2.33	0.44
13:M:109:PHE:HB3	13:M:112:LEU:HD12	2.00	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
30:0:100:C:C4	30:0:101:C:C5	3.06	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
30:0:711:G:C2'	30:0:712:C:H5'	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:810:G:H2'	30:0:811:C:H6	1.83	0.44
30:0:933:C:H4'	30:0:1297:U:H4'	2.00	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
30:0:1138:G:C6	30:0:1139:U:N3	2.86	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
30:0:2102:G:O4'	30:0:2538:A:C5	2.70	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
30:0:2700: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
2:B:300:SER:CB	30:0:2716:G:H21	2.31	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:49:LEU:HA	11:K:73:VAL:CG1	2.48	0.44
11:K:74:VAL:CG1	11:K:113:ILE:HG12	2.47	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
26:Z:83:TYR:OH	30:0:1604:G:C4	2.70	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
30:0:165:A:H61	30:0:168:C:H3'	1.83	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
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
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
30:0:2727:A:C2'	30:0:2728:C:H5'	2.46	0.44
31:9:36:C:C4	31:9:37:C:C2	3.05	0.44
1:A:7:GLN:O	30:0:1862:C:H5'	2.18	0.44
2:B:119:HIS:C	2:B:121:PRO:HD3	2.38	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
10:J:70:PHE:CE1	30:0:2676:C:H4'	2.53	0.44
14:N:92:ALA:O	14:N:97:VAL:HB	2.18	0.44
16:P:54:LYS:HB2	30:0:1717:A:H5''	2.00	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
30:0:23:G:C6	30:0:24:G:N1	2.86	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
30:0:861:A:H4'	30:0:1697:G:C4'	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
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
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
30:0:2454:C:O5'	30:0:2454:C:H6	2.00	0.44
30:0:2507:G:H22	30:0:2512:U:H5'	1.82	0.44
31:9:54:A:C2'	31:9:55:U:H5'	2.48	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
25:Y:171:PRO:HG3	30:0:1267:C:O2'	2.17	0.44
26:Z:68:GLU:C	26:Z:70:ARG:H	2.21	0.44
27:1:1:THR:HG22	27:1:2:GLY:N	2.33	0.44
30:0:81:G:N3	30:0:98:A:C2	2.86	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:871:G:H4'	38:0:4374:HOH:O	2.17	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
30:0:1517:C:C2	30:0:1670:A:C2	3.05	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
30:0:1769: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
30:0:2851:G:N2	30:0:2905:A:N6	2.65	0.44
31:9:33:U:C2	31:9:43:G:N7	2.86	0.44
1:A:217:ARG:NH1	1:A:229:ALA:HB3	2.31	0.43
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:82:TYR:C	14:N:82:TYR:CD2	2.91	0.43
14:N:99:GLU:HB3	14:N:128:ASP:HB2	2.00	0.43
16:P:36:THR:O	16:P:39:ASP:HB2	2.18	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
30:0:169:A:C6	30:0:2469:A:C6	3.06	0.43
30:0:268:U:O4	30:0:269:G:N1	2.51	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
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
30:0:1713:G:N2	30:0:2735:U:H4'	2.32	0.43
30:0:1744:G:C2'	30:0:1745:G:H5'	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2004:U:O2	30:0:2004:U:C2'	2.59	0.43
30:0:2291:A:H2'	30:0:2291:A:N3	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
30:0:2707:C:O2	30:0:2707:C:C2'	2.63	0.43
30:0:2853:U:H2'	30:0:2854:A:C8	2.53	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
2:B:85:ARG:NH1	2:B:143:ILE:HD11	2.33	0.43
2:B:247:VAL:HB	30:0:2654:C:H1'	1.99	0.43
2:B:320:GLN:HA	2:B:321:PRO:HD3	1.86	0.43
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
13:M:83:SER:O	29:3:46:ILE:HG22	2.18	0.43
30:0:23:G:H8	30:0:23:G:O5'	2.00	0.43
30:0:68:U:O4	30:0:107:U:H4'	2.18	0.43
30:0:146:U:C4	30:0:147:G:C6	3.07	0.43
30:0:149:G:H2'	30:0:150:G:H5'	2.00	0.43
30:0:419:A:H1'	30:0:1921:A:C2	2.53	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
30:0:830:G:N2	30:0:2022:A:C2	2.86	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
30:0:1476: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
30:0:1588: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:H8	30:0:1689:A:OP2	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
30:0:1925: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
30:0:2114: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2374:G:C6	30:0:2375:A:C6	3.05	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:239:LEU:HD12	30:0:2093:G:P	2.58	0.43
10:J:53:ILE:O	10:J:57:TYR:HD1	2.00	0.43
14:N:38:LYS:HB2	14:N:38:LYS:HE3	1.86	0.43
17:Q:47:VAL:HA	17:Q:48:PRO:HD3	1.78	0.43
20:T:2:LYS:HG2	30:0:447:A:OP1	2.18	0.43
20:T:48:VAL:HG21	20:T:96:VAL:CG1	2.45	0.43
28:2:2:LYS:HG3	30:0:1486:A:C4	2.54	0.43
30:0:13:G:H2'	30:0:14:C:C6	2.52	0.43
30:0:54:G:C4	30:0:55:U:C6	3.06	0.43
30:0:210:U:H2'	30:0:211:U:H6	1.83	0.43
30:0:283:U:O2'	30:0:368:C:C6	2.70	0.43
30:0:343:C:O2'	30:0:344:C:H5'	2.18	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
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
30:0:1646:G:C2	30:0:1647:G:C8	3.06	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
31:9:33:U:H2'	38:9:3797:HOH:O	2.17	0.43
31:9:79:U:O2	31:9:79:U:C2'	2.66	0.43
1:A:89:ALA:HB3	1:A:92:ASN:ND2	2.33	0.43
3:C:35:VAL:HG11	3:C:227:GLY:N	2.33	0.43
3:C:135:GLU:HB3	38:C:8572:HOH:O	2.18	0.43
5:E:82:TYR:CD1	5:E:141:VAL:HG12	2.53	0.43
13:M:70:GLY:CA	30:0:2263:G:H4'	2.46	0.43
38:M:8824:HOH:O	29:3:48:ASN:HB2	2.18	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
28:2:41:HIS:O	28:2:45:ASN:HB2	2.18	0.43
30:0:114:A:H5''	38:0:9745:HOH:O	2.17	0.43
30:0:222:A:C4	30:0:223:G:H1'	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
30:0:1032:A:H2'	30:0:1032:A:N3	2.33	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
30:0:2511: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
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
2:B:1:PRO:O	2:B:2:GLN:HB2	2.19	0.43
2:B:294:TYR:HE2	38:B:9132:HOH:O	2.00	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
29:3:40:ARG:HG3	29:3:52:PHE:HD2	1.84	0.43
29:3:42:ARG:HH11	30:0:396:U:H5'	1.78	0.43
30:0:77:G:H2'	30:0:78:G:H5'	2.00	0.43
30:0:236:A:H1'	30:0:237:G:O4'	2.18	0.43
30:0:309:C:H42	30:0:322:G:H1	1.66	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
30:0:1331: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
30:0:2385: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
31:9:49:G:C2'	31:9:50:G:C5'	2.96	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
15:O:25:VAL:CG1	30:0:709:G:O2'	2.66	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
27:1:16:HIS:HD2	30:0:470:U:O2'	2.02	0.43
30:0:54:G:C5	30:0:55:U:C5	3.07	0.43
30:0:180:G:H2'	30:0:181:G:H5'	1.99	0.43
30:0:241:A:C2	30:0:378:A:H4'	2.54	0.43
30:0:250:C:O2'	30:0:251:C:H5'	2.19	0.43
30:0:567:U:H5''	38:0:5240:HOH:O	2.18	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
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
30:0:1831: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
30:0:2552: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
31:9:39:U:C2'	31:9:40:C:OP1	2.67	0.43
1:A:85:SER:HA	38:A:9033:HOH:O	2.17	0.43
1:A:99:ILE:O	1:A:131:HIS:HE1	2.02	0.43
3:C:165:ASP:O	3:C:168:ARG:HB3	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
16:P:37:ARG:NE	30:0:1500:U:C5	2.87	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
30:0:26:U:H2'	30:0:27:U:C6	2.53	0.43
30:0:204:A:H2'	30:0:205:U:H5'	2.00	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
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
30:0:1059:G:C6	30:0:1127:C:C2	3.07	0.43
30:0:1087:G:C8	33:0:8822:CL:CL	3.09	0.43
30:0:1449:G:N3	30:0:1493:A:C2	2.87	0.43
30:0:1513:C:O2	30:0:1513:C:H2'	2.17	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
30:0:2887:G:H2'	30:0:2888:U:O4'	2.19	0.43
30:0:2903:C:H6	30:0:2903:C:O5'	2.02	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
14:N:11:ARG:HD3	31:9:114:G:O6	2.19	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
29:3:1:MET:HA	30:0:2320:U:P	2.59	0.43
30:0:24:G:C4	30:0:518:G:N2	2.86	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
30:0:2687: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
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
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
2:B:156:LYS:HE3	30:0:2846:C:H5''	2.01	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
30:0:282:C:H2'	30:0:283:U:C5'	2.49	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
30:0:1216:G:C2	30:0:1217:G:N9	2.87	0.43
30:0:1476:A:HO2'	30:0:1867:G:C2'	2.31	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
30:0:2128:G:H1	30:0:2265:U:H3	1.67	0.43
30:0:2237:G:H1'	30:0:2238:A:N7	2.34	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
30:0:2672:C:C2	30:0:2818:A:C2	3.07	0.43
30:0:2803:C:H2'	30:0:2804:C:C5'	2.49	0.43
30:0:2854:A:C2	30:0:2905:A:C4	3.06	0.43
31:9:4:G:C6	31:9:120:A:C2	3.06	0.43
31:9:11:A:C2	31:9:69:U:O4'	2.72	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
5:E:60:SER:OG	30:0:2784:A:H1'	2.19	0.43
13:M:155:GLN:HA	13:M:155:GLN:HE21	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:16:VAL:HG12	16:P:17:GLY:N	2.34	0.43
18:R:62:HIS:HB3	30:0:1370:G:O5'	2.18	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
27:1:18:LYS:HE2	30:0:121:U:O4	2.19	0.43
30:0:54:G:N3	30:0:55:U:C6	2.86	0.43
30:0:149:G:H2'	30:0:150:G:C5'	2.49	0.43
30:0:169:A:O2'	30:0:170:U:H6	2.01	0.43
30:0:301:C:O2	30:0:301:C:C2'	2.67	0.43
30:0:320:G:C6	30:0:321:A:C6	3.07	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
30:0:1151:G:H1'	30:0:1215:A:N6	2.34	0.43
30:0:1571:G:H2'	30:0:1624:A:H61	1.83	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
31:9:39:U:H2'	31:9:40:C:OP1	2.18	0.43
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:7:ILE:HG12	5:E:45:ASP:O	2.19	0.42
5:E:15:GLN:HG2	5:E:16:ASP:N	2.34	0.42
5:E:119:HIS:HB2	5:E:144:THR:OG1	2.19	0.42
5:E:137:ASP:O	5:E:141:VAL:HG23	2.19	0.42
8:H:19:ARG:NH2	30:0:1008:C:OP1	2.51	0.42
8:H:120:PHE:CE1	30:0:2311:A:H5'	2.54	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:46:LEU:O	13:M:50:ARG:HG3	2.19	0.42
13:M:134:ILE:HG23	13:M:141:ILE:HD13	2.00	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
27:1:26:SER:O	27:1:34:CYS:HA	2.19	0.42
30:0:23:G:H1'	30:0:520:A:H61	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:160:A:C4	30:0:177:A:C2	3.07	0.42
30:0:245:C:C2'	30:0:246:G:H5'	2.47	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
30:0:1154:A:H2'	30:0:1155:G:H8	1.84	0.42
30:0:1176:C:O5'	30:0:1176:C:H6	2.02	0.42
30:0:1209:C:O2'	30:0:1210:G:C5'	2.67	0.42
30:0:1522:A:C2	30:0:1665:G:C6	3.06	0.42
30:0:1568:G:H2'	30:0:1569:U:O4'	2.18	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
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
31:9:78:G:N2	31:9:102:G:H2'	2.34	0.42
1:A:76:VAL:HG23	26:Z:87:LYS:O	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:6:PHE:HB3	10:J:109:TYR:OH	2.19	0.42
10:J:116:LEU:HB2	10:J:119:THR:HG21	2.01	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
25:Y:208:LYS:HZ1	30:0:1343:C:H1'	1.78	0.42
29:3:8:ASN:HA	29:3:19:GLU:HA	2.00	0.42
30:0:39:G:C2	30:0:444:C:N3	2.86	0.42
30:0:113:A:P	38:0:9745:HOH:O	2.76	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
30:0:474: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
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
30:0:1365:C:O2'	30:0:1366:C:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
31:9:1:U:H5''	31:9:3:A:OP1	2.19	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
28:2:37:HIS:CE1	30:0:462:A:C8	3.08	0.42
29:3:24:LYS:HG2	33:3:8804:CL:CL	2.56	0.42
29:3:60:LYS:C	29:3:62:THR:H	2.22	0.42
30:0:191:A:N1	30:0:236:A:O2'	2.43	0.42
30:0:241:A:OP2	30:0:269:G:N2	2.49	0.42
30:0:272:A:C2	30:0:369:G:H5''	2.54	0.42
30:0:291:C:C2'	30:0:292:G:H5'	2.49	0.42
30:0:713:U:O5'	30:0:713:U:H6	2.01	0.42
30:0:869:G:C8	30:0:869:G:OP2	2.73	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
30:0:1948: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
30:0:2453: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
30:0:2738:G:O2'	30:0:2739:A:H5'	2.19	0.42
30:0:2881:C:H6	30:0:2881:C:O5'	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:204:GLY:N	30:0:2634:G:OP2	2.52	0.42
2:B:85:ARG:NH2	30:0:2671:U:O2	2.52	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
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
7:G:16:LYS:NZ	30:0:1151:G:OP1	2.49	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:70:GLY:N	13:M:73:ARG:HH12	2.17	0.42
13:M:73:ARG:HG3	30:0:1864:C:O2'	2.19	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:138:ARG:HB3	30:0:638:C:P	2.59	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
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
30:0:25:A:C2'	30:0:26:U:H5'	2.50	0.42
30:0:100:C:C6	30:0:101:C:C5	3.06	0.42
30:0:129:A:O2'	30:0:131:A:OP1	2.37	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
30:0:844:A:C2	30:0:882:A:C4	3.07	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
30:0:1334: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
30:0:2669: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
31:9:34:A:H2'	31:9:35:C:O4'	2.19	0.42
31:9:60:C:O5'	31:9:60:C:H6	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:HH11	10:J:74:ARG:CB	2.32	0.42
13:M:106:SER:HB2	13:M:114:VAL:CG2	2.49	0.42
13:M:118:TYR:CZ	13:M:130:GLU:HB2	2.54	0.42
13:M:120:VAL:CG1	13:M:130:GLU:HG3	2.49	0.42
18:R:69:LYS:NZ	30:0:2049:C:OP1	2.50	0.42
21:U:56:ARG:CB	30:0:2890:A:H8	2.30	0.42
29:3:10:TYR:HD1	30:0:2408:A:HO2'	1.61	0.42
29:3:46:ILE:HA	38:0:7804:HOH:O	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
30:0:499:G:H2'	30:0:500:G:O4'	2.19	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
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:H8	30:0:1278:A:O5'	2.01	0.42
30:0:1495:C:C1'	30:0:1573:A:H1'	2.48	0.42
30:0:1523:G:H2'	30:0:1524:U:C5	2.43	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
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
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
30:0:2898:G:O2'	30:0:2899:A:H5'	2.18	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:169:PHE:HB2	30:0:1847:A:H4'	2.02	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
12:L:109:LEU:HD11	30:0:697:G:C2	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:11:THR:HA	38:S:8963:HOH:O	2.19	0.42
21:U:42:LEU:HD22	30:0:1810:C:C1'	2.49	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
30:0:500: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
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
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
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
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
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:18:LEU:HD23	18:R:18:LEU:HA	1.86	0.42
18:R:25:PHE:HA	18:R:141:VAL:HG21	2.01	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
30:0:175: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
30:0:322:G:C2	30:0:323:C:C2	3.07	0.42
30:0:536:A:C6	30:0:2076:U:H5'	2.54	0.42
30:0:710:G:C2'	30:0:711:G:H5'	2.50	0.42
30:0:758:A:H2'	30:0:759:C:O4'	2.20	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
30:0:1545:C:N3	30:0:1641:A:N7	2.68	0.42
30:0:1579:C:H1'	30:0:1580:A:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
30:0:1945: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
30:0:2082: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
30:0:2757:A:C4	30:0:2896:A:C2	3.07	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
4:D:152:PRO:HG2	31:9:58:G:OP1	2.20	0.42
8:H:161:THR:HG23	30:0:2521:A:OP1	2.19	0.42
12:L:5:LYS:HA	12:L:5:LYS:HD2	1.85	0.42
12:L:57:VAL:HG11	30:0:2442:G:OP1	2.20	0.42
12:L:136:ALA:HB3	38:L:8886:HOH:O	2.20	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
27:1:5:THR:N	27:1:6:PRO:HD2	2.34	0.42
29:3:1:MET:HE3	30:0:2320:U:H5	1.81	0.42
29:3:1:MET:CA	30:0:2319:C:H3'	2.50	0.42
29:3:60:LYS:O	29:3:62:THR:N	2.52	0.42
30:0:40:C:N4	30:0:41:G:O6	2.53	0.42
30:0:188:C:H1'	38:0:9585:HOH:O	2.20	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
30:0:426: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
30:0:777:U:OP2	30:0:777:U:H4'	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
30:0:1930:A:O2'	30:0:1931:A:H5'	2.19	0.42
30:0:2249:G:C6	30:0:2253:G:O6	2.73	0.42
30:0:2321:A:H2	30:0:2378:U:C4	2.37	0.42
30:0:2336:G:C6	30:0:2349:G:C6	3.08	0.42
30:0:2345:A:H3'	30:0:2346:C:H5	1.84	0.42
30:0:2372:A:H2'	30:0:2373:U:O4'	2.20	0.42
30:0:2527:U:O2'	30:0:2528:U:H5'	2.19	0.42
30:0:2675:A:H1'	30:0:2813:A:C2	2.54	0.42
30:0:2780:C:H2'	30:0:2781:U:H6	1.83	0.42
31:9:4:G:C5	31:9:120:A:C2	3.08	0.42
31:9:7:G:H5''	38:9:5071:HOH:O	2.20	0.42
1:A:171:LYS:HB2	30:0:820:G:N7	2.34	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
6:F:54:VAL:HG13	30:0:263:U:C5	2.55	0.42
8:H:157:TYR:HA	8:H:160:ILE:HG12	2.01	0.42
16:P:41:ARG:NH2	30:0:1500:U:OP2	2.52	0.42
26:Z:77:GLY:CA	26:Z:92:SER:HA	2.49	0.42
30:0:13:G:C2	30:0:14:C:C5	3.07	0.42
30:0:55:U:O2'	30:0:69:A:H2'	2.20	0.42
30:0:151:A:H2'	30:0:152:A:O4'	2.20	0.42
30:0:236:A:C4'	30:0:237:G:OP1	2.65	0.42
30:0:266:G:O2'	30:0:267:G:H5'	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
30:0:968:G:C2	30:0:1001:U:O2	2.72	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
30:0:1641: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:9:22:G:C6	31:9:55:U:C2	3.08	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:81:LYS:O	30:0:1761:U:H5'	2.19	0.42
16:P:109:ARG:HD3	16:P:119:TYR:CD1	2.55	0.42
20:T:40:VAL:CG2	20:T:108:ARG:HH21	2.32	0.42
30:0:194:A:OP2	30:0:426:G:N2	2.49	0.42
30:0:221:G:C6	30:0:222:A:C6	3.08	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
30:0:1058:A:O4'	30:0:2492:U:H4'	2.20	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
30:0:2067:A:C4	30:0:2068:G:C8	3.08	0.42
30:0:2286:G:H2'	30:0:2287:C:H6	1.85	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
31:9:110:G:N2	31:9:111:U:H1'	2.35	0.42
1:A:122:SER:O	1:A:124:VAL:N	2.53	0.41
2:B:69:VAL:HA	2:B:70:PRO:HD3	1.80	0.41
2:B:162:MET:CE	2:B:308:LEU:HD21	2.50	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
5:E:68:HIS:CE1	30:0:2782:G:H4'	2.55	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

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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
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
30:0:489: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
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
31:9:37:C:N3	31:9:43:G:C6	2.88	0.41
3:C:133:ARG:HD2	38:C:8611:HOH:O	2.21	0.41
13:M:42:ARG:HA	13:M:43:PRO:HD3	1.89	0.41
13:M:188:ARG:HD3	30:0:155:C:OP2	2.20	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
29:3:17:HIS:CB	30:0:2409:C:H4'	2.49	0.41
30:0:25:A:H2'	30:0:26:U:C5'	2.50	0.41
30:0:84:G:C6	30:0:85:C:C4	3.08	0.41
30:0:168:C:C2'	30:0:169:A:H5'	2.50	0.41
30:0:178:U:H1'	30:0:771:G:O2'	2.20	0.41
30:0:226:A:H1'	30:0:393:G:C6	2.54	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
30:0:940:G:C5	30:0:1027:G:C2	3.08	0.41
30:0:962:C:C5	30:0:963:C:C5	3.08	0.41
30:0:1023:C:H4'	38:0:6013:HOH:O	2.20	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
30:0:2255:A:C2'	30:0:2256:G:H5'	2.50	0.41
30:0:2512:U:C4'	30:0:2514:U:O4	2.67	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
31:9:36:C:H5	31:9:37:C:C4	2.38	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:61:ARG:NH1	8:H:61:ARG:HG3	2.34	0.41
8:H:116:MET:HB3	30:0:2283:G:C5	2.56	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
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
30:0:222:A:C5	30:0:223:G:H1'	2.55	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:O5'	30:0:783:C:H6	2.03	0.41
30:0:814:G:H2'	30:0:815:U:H6	1.84	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
30:0:2700:G:C6	30:0:2701:G:C4	3.08	0.41
31:9:17:G:C2	31:9:64:C:N3	2.88	0.41
31:9:102:G:O2'	31:9:103:A:O4'	2.35	0.41
1:A:194:MET:SD	30:0:875:A:C2	3.14	0.41
3:C:95:GLU:CD	3:C:95:GLU:H	2.23	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
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
10:J:70:PHE:HD1	30:0:2676:C:H4'	1.86	0.41
13:M:68:ARG:CZ	13:M:73:ARG:NH1	2.83	0.41
13:M:188:ARG:HB2	30:0:156:C:OP2	2.21	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
29:3:51:LYS:C	29:3:53:SER:H	2.24	0.41
30:0:154:C:C2	30:0:155:C:C6	3.08	0.41
30:0:178:U:H2'	30:0:179:C:C6	2.50	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
30:0:530:C:H4'	30:0:612:U:H4'	2.02	0.41
30:0:577:G:N2	30:0:581:G:C5	2.89	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
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
30:0:1641:A:H8	30:0:1702:U:O4	2.02	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
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
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
29:3:34:LYS:HD2	29:3:34:LYS:N	2.35	0.41
30:0:52:A:C4'	30:0:121:U:H3	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:106:A:C2'	30:0:107:U:C5'	2.92	0.41
30:0:215:A:N6	30:0:225:G:H1'	2.35	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
30:0:542: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
30:0:1061:C:H1'	30:0:2283:G:O6	2.20	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
30:0:1547:A:C2	30:0:1639:U:O2	2.73	0.41
30:0:1549:C:C6	30:0:1549:C:H3'	2.56	0.41
30:0:1562:C:N3	30:0:1563:G:C5	2.88	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
30:0:2326:C:O2	30:0:2375:A:C2	2.73	0.41
30:0:2350:G:O2'	30:0:2351:C:H5'	2.20	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
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:HA	14:N:13:ARG:HD2	1.87	0.41
14:N:33:ARG:NH2	31:9:6:C:O2'	2.51	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
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
30:0:40:C:H6	30:0:40:C:O5'	2.04	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:52:A:C6	30:0:53:C:C4	3.08	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
30:0:347:A:H2'	30:0:348:C:O4'	2.20	0.41
30:0:395:A:H5'	30:0:396:U:H5''	2.01	0.41
30:0:483:C:N4	30:0:484:A:C6	2.88	0.41
30:0:626:U:C4	30:0:627:G:C6	3.09	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
30:0:1708: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
30:0:2088:C:H1'	30:0:2841:A:C2	2.56	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
30:0:2900:G:C2'	30:0:2901:C:H5'	2.51	0.41
3:C:142:ASP:OD2	3:C:238:SER:HB2	2.21	0.41
4:D:146:LYS:HD3	14:N:107:ASN:HD21	1.86	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
6:F:59:ILE:HD13	30:0:263:U:O4'	2.21	0.41
13:M:97:ILE:CD1	13:M:127:LYS:HD2	2.49	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
30:0:165:A:C6	30:0:168:C:C5	3.09	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
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
30:0:1898: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
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
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
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
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:35:VAL:HB	14:N:46:GLN:HB2	2.03	0.41
14:N:44:ARG:CG	14:N:45:ALA:N	2.84	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:H	25:Y:205:ILE:HG13	1.72	0.41
30:0:11:A:N3	30:0:11:A:H2'	2.36	0.41
30:0:72:C:H5'	38:0:5822:HOH:O	2.21	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
30:0:533:U:C5	30:0:2812:A:C2	3.09	0.41
30:0:955:A:H2'	30:0:956:G:C5'	2.51	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
30:0:1279:U:C5'	30:0:1280:A:OP2	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1357:A:H1'	38:0:4127:HOH:O	2.19	0.41
30:0:1552:G:C2	30:0:1634:G:C4	3.09	0.41
30:0:1570:C:H2'	30:0:1571:G:H5'	2.03	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
30:0:2292:C:C2	30:0:2463:A:C4'	3.04	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
30:0:2551: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:N3	30:0:2617:G:H2'	2.35	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
1:A:193:ALA:HB2	38:A:9014:HOH:O	2.21	0.41
2:B:224:LYS:HD3	2:B:224:LYS:HA	1.83	0.41
2:B:292:GLY:O	2:B:294:TYR:HD2	2.03	0.41
3:C:43:LYS:HG2	30:0:449:A:C8	2.56	0.41
3:C:63:SER:HB3	30:0:2101:A:H5'	2.03	0.41
3:C:76:ARG:HB3	3:C:78:ARG:NH1	2.35	0.41
3:C:173:LYS:O	3:C:186:TYR:HA	2.20	0.41
8:H:70:LEU:HD12	8:H:70:LEU:HA	1.93	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
11:K:49:LEU:HD23	11:K:49:LEU:C	2.41	0.41
12:L:97:VAL:HG12	12:L:98:GLU:O	2.21	0.41
12:L:117:GLU:HG2	38:L:8870:HOH:O	2.20	0.41
14:N:71:TRP:HB2	14:N:175:LEU:HD22	2.02	0.41
17:Q:19:ARG:HH22	31:9:11:A:H3'	1.82	0.41
17:Q:42:LYS:HA	17:Q:42:LYS:HD2	1.92	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
25:Y:154:ARG:NH2	30:0:1071:G:H4'	2.36	0.41
26:Z:53:ILE:O	26:Z:57:MET:HB2	2.20	0.41
26:Z:77:GLY:N	26:Z:92:SER:HA	2.36	0.41
29:3:52:PHE:HB3	38:3:9036:HOH:O	2.21	0.41
30:0:119:A:C2'	30:0:120:A:C5'	2.96	0.41
30:0:157:G:C6	30:0:158:A:N7	2.89	0.41
30:0:254:C:C2	30:0:255:A:C8	3.09	0.41
30:0:275:G:N2	30:0:376:C:C2	2.88	0.41
30:0:292:G:N1	30:0:358:G:H1'	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:300:U:H2'	30:0:301:C:C6	2.43	0.41
30:0:303:C:H2'	30:0:304:G:C5'	2.51	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
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
30:0:1118:A:N6	30:0:1244:U:H3	2.11	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
30:0:1252:A:H4'	38:0:9925:HOH:O	2.21	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
30:0:1503:U:H2'	30:0:1504:A:C5'	2.51	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
30:0:1608: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
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
30:0:2135: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
30:0:2683: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
30:0:2866:U:H5''	38:0:6354:HOH:O	2.20	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:71:SER:HB3	30:0:2264:A:OP1	2.21	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:X:26:ALA:CB	24:X:63:ARG:HA	2.46	0.41
29:3:2:GLN:N	30:0:2320:U:H5'	2.35	0.41
30:0:47:G:H1'	30:0:114:A:N1	2.35	0.41
30:0:92:G:H5'	38:0:7329:HOH:O	2.21	0.41
30:0:816:G:O5'	30:0:816:G:H8	2.04	0.41
30:0:1063:G:O5'	30:0:2307:A:H1'	2.21	0.41
30:0:1158:G:C6	30:0:1159:G:C5	3.08	0.41
30:0:1292:G:H8	30:0:1292:G:O5'	2.04	0.41
30:0:1419:U:O2	30:0:1419:U:H3'	2.21	0.41
30:0:1497:G:C2	30:0:1498:G:C4	3.09	0.41
30:0:1562:C:O2	30:0:1562:C:C2'	2.67	0.41
30:0:1792:C:H6	30:0:1792:C:O5'	2.03	0.41
30:0:2528:U:H2'	30:0:2529:G:O4'	2.21	0.41
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
8:H:91:ARG:HB2	30:0:1003:U:OP1	2.21	0.40
10:J:31:LEU:HA	10:J:31:LEU:HD23	1.87	0.40
16:P:63:ARG:NE	30:0:1549:C:OP1	2.54	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:43:GLY:HA3	30:0:945:U:O2'	2.21	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
30:0:36:C:C2	30:0:447:A:C2	3.09	0.40
30:0:101:C:O2	30:0:102:A:C8	2.74	0.40
30:0:130:C:H3'	30:0:141:C:H5	1.85	0.40
30:0:226:A:H1'	30:0:393:G:N7	2.35	0.40
30:0:361:C:H2'	30:0:362:G:C8	2.56	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
30:0:834:G:H3'	30:0:835:U:H4'	2.03	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
30:0:1384: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1503:U:C4	30:0:1504:A:C5	3.09	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
30:0:2502: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
31:9:3:A:C8	31:9:26:C:N3	2.90	0.40
3:C:202:THR:HG21	30:0:328:U:O2	2.22	0.40
10:J:14:ALA:O	10:J:44:ALA:HA	2.21	0.40
10:J:38:VAL:HB	10:J:103:VAL:HG22	2.03	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
16:P:59:ARG:O	16:P:62:ALA:HB3	2.20	0.40
16:P:102:ARG:CZ	30:0:1596:U:C5	3.04	0.40
30:0:316:A:C4	30:0:337:A:C2	3.10	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
30:0:1419:U:H2'	30:0:1685:A:C2	2.56	0.40
30:0:1585:C:N3	30:0:1611:G:N2	2.68	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
30:0:1726: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:O2	30:0:2319:C:C2'	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
30:0:2582:G:C8	30:0:2601:A:C4	3.09	0.40
30:0:2588:OMG:HM21	38:0:5634:HOH:O	2.22	0.40
30:0:2721:U:H5	38:0:9305:HOH:O	2.04	0.40
30:0:2769:C:H2'	30:0:2770:G:C4'	2.51	0.40
30:0:2769:C:C5	30:0:2770:G:N7	2.89	0.40
30:0:2896:A:N3	30:0:2896:A:C2'	2.84	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:9:114:G:C6	31:9:115:C:N4	2.89	0.40
1:A:87:GLU:HB3	1:A:92:ASN:ND2	2.36	0.40
2:B:29:TRP:CH2	2:B:164:THR:HA	2.55	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
2:B:154:VAL:HA	2:B:155:PRO:HD3	1.82	0.40
2:B:281:ASP:HB2	2:B:334:SER:HB2	2.01	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
29:3:11:CYS:C	29:3:13:HIS:H	2.21	0.40
30:0:139:C:H4'	30:0:140:G:O5'	2.21	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
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
30:0:1432: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
30:0:1742:A:N6	30:0:2037:C:H42	2.14	0.40
30:0:1972:U:C2'	30:0:1973:A:C5'	2.99	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
31:9:74:G:N2	31:9:108:C:H1'	2.36	0.40
1:A:75:GLY:HA2	26:Z:88:PHE:HA	2.03	0.40
2:B:56:ASP:HB2	2:B:322:ARG:HE	1.86	0.40
2:B:146:THR:C	2:B:148:PRO:HD3	2.41	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:26:TRP:N	38:O:3062:HOH:O	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:59:VAL:CG2	15:O:111:VAL:HG21	2.50	0.40
16:P:14:LEU:HD13	16:P:51:ALA:HB2	2.02	0.40
16:P:38:GLU:HA	16:P:41:ARG:HH11	1.87	0.40
20:T:55:PHE:HB2	38:T:6384:HOH:O	2.22	0.40
30:0:18:C:H2'	30:0:19:U:C6	2.56	0.40
30:0:71:G:H1'	38:0:5249:HOH:O	2.21	0.40
30:0:209:G:O2'	30:0:665:A:H1'	2.22	0.40
30:0:462:A:H3'	38:0:4838:HOH:O	2.21	0.40
30:0:878:G:C5'	38:0:9229:HOH:O	2.67	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
30:0:2370:A:O5'	30:0:2370:A:H8	2.03	0.40
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
31:9:58:G:H3'	31:9:59:C:C6	2.57	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:262:ARG:HG3	30:0:2716:G:C5'	2.52	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:6:LYS:HB2	19:S:27:ALA:O	2.21	0.40
19:S:15:MET:O	19:S:18:MET:HB3	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:3:40:ARG:HG3	29:3:52:PHE:CD2	2.56	0.40
30:0:31:C:O2'	30:0:32:G:H5'	2.22	0.40
30:0:199:A:H2'	30:0:201:G:C8	2.57	0.40
30:0:487:G:C4	30:0:513:A:N1	2.90	0.40
30:0:499:G:C2'	30:0:500:G:H5'	2.51	0.40
30:0:632:A:C5	30:0:633:C:C5	3.10	0.40
30:0:662:U:O2'	30:0:748:C:O2	2.33	0.40
30:0:732:C:H2'	30:0:733:U:H6	1.86	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:C3'	30:0:1585:C:C6	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
30:0:2299: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
30:0:2634:G:C2	30:0:2635:A:C5	3.09	0.40
30:0:2851:G:C2'	30:0:2852:A:H5'	2.52	0.40
31:9:36:C:N4	31:9:37:C:C2	2.89	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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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 [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	A	179/182 (98%)	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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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

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

<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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 [i](#)

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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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:

<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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 [i](#)

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

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
30	PSU	0	2621	30	18,21,22	1.40	3 (16%)	22,30,33	1.32	3 (13%)
30	UR3	0	2619	30	19,22,23	0.52	0	26,32,35	0.61	1 (3%)
30	1MA	0	628	30,35	16,25,26	1.34	3 (18%)	18,37,40	1.16	2 (11%)
30	OMU	0	2587	30	19,22,23	0.41	0	26,31,34	0.39	0
30	OMG	0	2588	30	18,26,27	1.10	2 (11%)	19,38,41	0.73	1 (5%)

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	PSU	0	2621	30	-	0/7/25/26	0/2/2/2
30	UR3	0	2619	30	-	0/7/25/26	0/2/2/2
30	1MA	0	628	30,35	-	0/3/25/26	0/3/3/3
30	OMU	0	2587	30	-	0/9/27/28	0/2/2/2
30	OMG	0	2588	30	-	0/5/27/28	0/3/3/3

All (8) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
30	0	2621	PSU	C2-N1	4.28	1.42	1.36
30	0	628	1MA	C2-N3	3.28	1.33	1.29
30	0	2588	OMG	C5-C6	-2.99	1.41	1.47
30	0	2621	PSU	C6-C5	2.59	1.38	1.35
30	0	628	1MA	C6-N6	2.48	1.33	1.27
30	0	2588	OMG	C8-N7	-2.38	1.31	1.35
30	0	2621	PSU	C4-C5	-2.07	1.38	1.44
30	0	628	1MA	C8-N7	-2.00	1.31	1.35

All (7) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
30	0	2621	PSU	C6-C5-C4	3.58	120.70	118.20
30	0	2621	PSU	C6-N1-C2	-2.96	119.66	122.68
30	0	628	1MA	N1-C2-N3	2.81	129.29	126.02
30	0	2621	PSU	O2-C2-N1	2.62	125.67	122.79
30	0	628	1MA	C5-C6-N1	2.56	117.71	113.90
30	0	2619	UR3	C4-N3-C2	2.45	126.88	124.56
30	0	2588	OMG	O6-C6-C5	2.13	128.54	124.37

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	2621	PSU	2	0
30	0	2619	UR3	2	0
30	0	2587	OMU	5	0
30	0	2588	OMG	3	0

## 5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

## 5.6 Ligand geometry [i](#)

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

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

## 5.7 Other polymers [i](#)

There are no such residues in this entry.

## 5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

## 6 Fit of model and data [i](#)

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

In the following table, the column labelled ‘#RSRZ > 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
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 monosaccharides in this entry.

## 6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 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
34	SR	3	8999	1/1	0.69	0.43	200,200,200,200	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
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	8971	1/1	0.73	0.16	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	3	8932	1/1	0.74	0.11	148,148,148,148	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
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
32	MG	T	8057	1/1	0.80	0.08	80,80,80,80	0
35	NA	0	8518	1/1	0.80	0.85	91,91,91,91	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
32	MG	0	8087	1/1	0.81	0.06	22,22,22,22	0
34	SR	0	8993	1/1	0.81	0.05	200,200,200,200	0
35	NA	0	8549	1/1	0.81	0.28	96,96,96,96	0
35	NA	0	8507	1/1	0.81	0.20	38,38,38,38	0
35	NA	B	8552	1/1	0.81	0.55	70,70,70,70	0
33	CL	N	8807	1/1	0.81	0.49	99,99,99,99	0
35	NA	0	8570	1/1	0.81	0.18	57,57,57,57	0
35	NA	0	8524	1/1	0.81	0.42	53,53,53,53	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
34	SR	0	8975	1/1	0.84	0.06	189,189,189,189	0
35	NA	0	8501	1/1	0.84	0.26	53,53,53,53	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
34	SR	0	8968	1/1	0.84	0.18	175,175,175,175	0
34	SR	0	8964	1/1	0.84	0.25	176,176,176,176	0
32	MG	0	8068	1/1	0.85	0.08	44,44,44,44	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
33	CL	L	8810	1/1	0.85	0.12	91,91,91,91	0
32	MG	9	8074	1/1	0.85	0.23	97,97,97,97	0
34	SR	9	9003	1/1	0.86	0.04	200,200,200,200	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
35	NA	0	8571	1/1	0.86	0.36	99,99,99,99	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	R	8532	1/1	0.87	0.21	68,68,68,68	0
34	SR	0	8959	1/1	0.87	0.06	190,190,190,190	0
35	NA	0	8519	1/1	0.87	0.19	51,51,51,51	0
32	MG	0	8032	1/1	0.88	0.05	47,47,47,47	0
35	NA	0	8522	1/1	0.88	0.26	130,130,130,130	0
34	SR	0	8989	1/1	0.88	0.13	174,174,174,174	0
34	SR	F	9005	1/1	0.88	0.15	170,170,170,170	0
35	NA	0	8536	1/1	0.88	0.12	64,64,64,64	0
34	SR	0	8953	1/1	0.89	0.33	179,179,179,179	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
35	NA	0	8506	1/1	0.89	0.56	91,91,91,91	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	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
34	SR	0	8969	1/1	0.90	1.49	200,200,200,200	0
35	NA	0	8557	1/1	0.90	0.06	70,70,70,70	0
35	NA	0	8529	1/1	0.90	0.16	61,61,61,61	0
34	SR	0	8984	1/1	0.90	0.03	124,124,124,124	0
32	MG	0	8081	1/1	0.90	0.38	116,116,116,116	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
35	NA	0	8525	1/1	0.90	0.55	113,113,113,113	0
34	SR	0	8970	1/1	0.91	0.15	158,158,158,158	0
34	SR	J	8986	1/1	0.91	0.34	200,200,200,200	0
34	SR	A	8930	1/1	0.91	0.11	131,131,131,131	0
32	MG	0	8093	1/1	0.91	0.16	48,48,48,48	0
34	SR	0	8956	1/1	0.91	0.24	200,200,200,200	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
32	MG	0	8046	1/1	0.91	0.07	44,44,44,44	0
33	CL	0	8803	1/1	0.92	0.14	82,82,82,82	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
35	NA	0	8516	1/1	0.92	0.22	27,27,27,27	0
35	NA	J	8538	1/1	0.92	0.12	84,84,84,84	0
32	MG	0	8053	1/1	0.92	0.13	88,88,88,88	0
34	SR	0	8972	1/1	0.92	0.18	138,138,138,138	0
34	SR	B	8950	1/1	0.92	0.15	123,123,123,123	0
32	MG	0	8042	1/1	0.92	0.05	75,75,75,75	0
34	SR	0	8976	1/1	0.92	0.26	195,195,195,195	0
35	NA	9	8572	1/1	0.92	0.08	71,71,71,71	0
34	SR	0	8977	1/1	0.92	0.05	200,200,200,200	0
34	SR	0	8938	1/1	0.92	0.06	200,200,200,200	0
35	NA	0	8517	1/1	0.93	0.21	69,69,69,69	0
32	MG	0	8023	1/1	0.93	0.21	38,38,38,38	0
33	CL	J	8816	1/1	0.93	2.10	99,99,99,99	0
33	CL	0	8805	1/1	0.93	0.38	105,105,105,105	0
32	MG	0	8011	1/1	0.93	0.21	33,33,33,33	0
35	NA	0	8511	1/1	0.93	0.09	53,53,53,53	0
35	NA	0	8555	1/1	0.93	0.25	80,80,80,80	0
34	SR	0	8908	1/1	0.93	0.10	99,99,99,99	0
32	MG	K	8054	1/1	0.94	0.15	42,42,42,42	0
35	NA	0	8537	1/1	0.94	0.12	46,46,46,46	0
34	SR	0	8936	1/1	0.94	0.10	114,114,114,114	0
33	CL	M	8818	1/1	0.94	0.29	58,58,58,58	0
35	NA	0	8547	1/1	0.94	0.49	115,115,115,115	0
32	MG	0	8026	1/1	0.94	0.14	37,37,37,37	0
32	MG	0	8003	1/1	0.94	0.20	27,27,27,27	0
32	MG	0	8049	1/1	0.94	0.26	82,82,82,82	0
32	MG	0	8079	1/1	0.94	0.31	57,57,57,57	0
32	MG	0	8020	1/1	0.94	0.19	50,50,50,50	0
32	MG	0	8085	1/1	0.94	0.11	67,67,67,67	0
34	SR	0	8962	1/1	0.94	0.06	168,168,168,168	0
35	NA	0	8523	1/1	0.94	0.22	51,51,51,51	0
34	SR	0	8963	1/1	0.94	0.12	117,117,117,117	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	8064	1/1	0.94	0.23	51,51,51,51	0
34	SR	0	8922	1/1	0.94	0.27	181,181,181,181	0
34	SR	0	8927	1/1	0.94	0.10	171,171,171,171	0
34	SR	0	8925	1/1	0.95	0.14	98,98,98,98	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
35	NA	0	8554	1/1	0.95	0.36	124,124,124,124	0
34	SR	0	8926	1/1	0.95	0.23	131,131,131,131	0
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
32	MG	0	8015	1/1	0.95	0.13	30,30,30,30	0
32	MG	A	8051	1/1	0.95	0.23	95,95,95,95	0
35	NA	0	8563	1/1	0.95	0.25	66,66,66,66	0
35	NA	0	8564	1/1	0.95	0.67	87,87,87,87	0
32	MG	0	8030	1/1	0.95	0.91	75,75,75,75	0
34	SR	0	8951	1/1	0.95	0.17	183,183,183,183	0
32	MG	0	8052	1/1	0.95	0.13	63,63,63,63	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
34	SR	0	8965	1/1	0.95	0.23	160,160,160,160	0
35	NA	0	8550	1/1	0.95	0.12	129,129,129,129	0
32	MG	0	8033	1/1	0.96	0.20	69,69,69,69	0
32	MG	0	8010	1/1	0.96	0.13	46,46,46,46	0
33	CL	0	8817	1/1	0.96	0.10	84,84,84,84	0
35	NA	0	8535	1/1	0.96	0.25	58,58,58,58	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
34	SR	0	8942	1/1	0.96	0.05	123,123,123,123	0
35	NA	R	8533	1/1	0.96	0.07	94,94,94,94	0
35	NA	0	8546	1/1	0.96	1.01	108,108,108,108	0
34	SR	0	8978	1/1	0.96	0.07	132,132,132,132	0
35	NA	S	8510	1/1	0.96	0.06	41,41,41,41	0
32	MG	0	8056	1/1	0.96	0.14	47,47,47,47	0
32	MG	0	8058	1/1	0.96	0.07	7,7,7,7	0
32	MG	0	8061	1/1	0.96	0.31	47,47,47,47	0
32	MG	0	8018	1/1	0.96	0.08	34,34,34,34	0
32	MG	0	8089	1/1	0.96	0.28	56,56,56,56	0
34	SR	2	8947	1/1	0.96	0.12	195,195,195,195	0
32	MG	0	8091	1/1	0.96	0.30	67,67,67,67	0
35	NA	0	8514	1/1	0.96	0.38	74,74,74,74	0
35	NA	0	8515	1/1	0.96	0.09	35,35,35,35	0
32	MG	0	8043	1/1	0.96	0.22	62,62,62,62	0
35	NA	0	8566	1/1	0.96	0.25	86,86,86,86	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	8915	1/1	0.96	0.12	123,123,123,123	0
33	CL	Y	8820	1/1	0.96	0.13	58,58,58,58	0
34	SR	0	9002	1/1	0.96	0.14	200,200,200,200	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
32	MG	0	8019	1/1	0.96	0.18	19,19,19,19	0
37	CD	Z	8703	1/1	0.96	0.43	188,188,188,188	0
32	MG	9	8040	1/1	0.96	0.18	101,101,101,101	0
34	SR	0	8939	1/1	0.97	0.07	155,155,155,155	0
34	SR	1	8952	1/1	0.97	0.12	92,92,92,92	0
34	SR	0	8943	1/1	0.97	0.10	89,89,89,89	0
35	NA	0	8542	1/1	0.97	0.41	79,79,79,79	0
34	SR	0	8946	1/1	0.97	0.24	144,144,144,144	0
32	MG	A	8050	1/1	0.97	0.12	69,69,69,69	0
32	MG	0	8029	1/1	0.97	0.10	62,62,62,62	0
33	CL	0	8812	1/1	0.97	0.08	70,70,70,70	0
35	NA	0	8504	1/1	0.97	0.33	41,41,41,41	0
34	SR	0	8985	1/1	0.97	0.10	168,168,168,168	0
33	CL	0	8813	1/1	0.97	0.21	64,64,64,64	0
33	CL	0	8814	1/1	0.97	0.28	51,51,51,51	0
32	MG	0	8088	1/1	0.97	0.17	53,53,53,53	0
34	SR	0	8992	1/1	0.97	0.23	141,141,141,141	0
32	MG	0	8055	1/1	0.97	0.30	60,60,60,60	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
35	NA	0	8561	1/1	0.97	0.14	53,53,53,53	0
32	MG	0	8009	1/1	0.97	0.24	24,24,24,24	0
34	SR	0	8923	1/1	0.97	0.09	108,108,108,108	0
34	SR	0	8924	1/1	0.97	0.23	131,131,131,131	0
32	MG	0	8073	1/1	0.97	0.09	89,89,89,89	0
32	MG	0	8075	1/1	0.97	0.06	50,50,50,50	0
32	MG	0	8021	1/1	0.97	0.07	31,31,31,31	0
32	MG	0	8007	1/1	0.97	0.07	21,21,21,21	0
34	SR	0	8935	1/1	0.97	0.15	101,101,101,101	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
36	K	M	8402	1/1	0.97	0.21	96,96,96,96	0
32	MG	0	8024	1/1	0.97	0.03	39,39,39,39	0
35	NA	M	8539	1/1	0.97	0.12	38,38,38,38	0
35	NA	0	8534	1/1	0.97	0.27	53,53,53,53	0
34	SR	0	8937	1/1	0.98	0.26	126,126,126,126	0
32	MG	0	8078	1/1	0.98	0.36	72,72,72,72	0
32	MG	0	8013	1/1	0.98	0.06	19,19,19,19	0
32	MG	0	8080	1/1	0.98	0.27	65,65,65,65	0
35	NA	0	8541	1/1	0.98	0.18	60,60,60,60	0
34	SR	0	8910	1/1	0.98	0.13	118,118,118,118	0
34	SR	0	8945	1/1	0.98	0.07	119,119,119,119	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
32	MG	0	8041	1/1	0.98	0.19	25,25,25,25	0
34	SR	0	8981	1/1	0.98	0.13	198,198,198,198	0
34	SR	0	8914	1/1	0.98	0.22	133,133,133,133	0
32	MG	0	8059	1/1	0.98	0.06	55,55,55,55	0
34	SR	0	8954	1/1	0.98	0.15	115,115,115,115	0
32	MG	0	8060	1/1	0.98	0.04	58,58,58,58	0
32	MG	0	8006	1/1	0.98	0.10	44,44,44,44	0
32	MG	0	8022	1/1	0.98	0.20	25,25,25,25	0
34	SR	0	8990	1/1	0.98	0.14	113,113,113,113	0
32	MG	0	8044	1/1	0.98	0.10	59,59,59,59	0
32	MG	0	8016	1/1	0.98	0.15	41,41,41,41	0
35	NA	0	8559	1/1	0.98	0.51	96,96,96,96	0
32	MG	0	8001	1/1	0.98	0.14	42,42,42,42	0
34	SR	0	8994	1/1	0.98	0.11	200,200,200,200	0
34	SR	0	8995	1/1	0.98	0.16	123,123,123,123	0
34	SR	0	8996	1/1	0.98	0.48	200,200,200,200	0
33	CL	R	8806	1/1	0.98	0.15	66,66,66,66	0
32	MG	0	8034	1/1	0.98	0.06	50,50,50,50	0
35	NA	0	8569	1/1	0.98	0.12	71,71,71,71	0
34	SR	S	8961	1/1	0.98	0.10	130,130,130,130	0
34	SR	0	8931	1/1	0.98	0.15	120,120,120,120	0
34	SR	0	8934	1/1	0.98	0.10	138,138,138,138	0
32	MG	0	8037	1/1	0.98	0.31	92,92,92,92	0
32	MG	0	8005	1/1	0.98	0.22	24,24,24,24	0
34	SR	0	9007	1/1	0.98	1.31	200,200,200,200	0
34	SR	0	9008	1/1	0.98	0.10	94,94,94,94	0
36	K	0	8401	1/1	0.98	0.62	145,145,145,145	0
34	SR	9	8980	1/1	0.98	0.16	191,191,191,191	0
35	NA	0	8530	1/1	0.98	0.17	53,53,53,53	0
35	NA	0	8531	1/1	0.98	0.18	54,54,54,54	0
34	SR	0	8909	1/1	0.99	0.08	100,100,100,100	0
32	MG	0	8090	1/1	0.99	0.11	57,57,57,57	0
32	MG	0	8017	1/1	0.99	0.14	28,28,28,28	0
35	NA	0	8527	1/1	0.99	0.31	92,92,92,92	0
32	MG	Y	8086	1/1	0.99	0.26	52,52,52,52	0
32	MG	0	8069	1/1	0.99	0.12	73,73,73,73	0
34	SR	0	8916	1/1	0.99	0.05	110,110,110,110	0
34	SR	0	8917	1/1	0.99	0.10	111,111,111,111	0
34	SR	0	8918	1/1	0.99	0.10	88,88,88,88	0
32	MG	0	8070	1/1	0.99	0.16	39,39,39,39	0
32	MG	0	8071	1/1	0.99	0.13	78,78,78,78	0
34	SR	0	8921	1/1	0.99	0.09	88,88,88,88	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
32	MG	0	8072	1/1	0.99	0.09	45,45,45,45	0
34	SR	0	8966	1/1	0.99	0.07	101,101,101,101	0
34	SR	0	8967	1/1	0.99	0.06	163,163,163,163	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	8004	1/1	0.99	0.11	19,19,19,19	0
35	NA	0	8548	1/1	0.99	0.05	44,44,44,44	0
32	MG	0	8028	1/1	0.99	0.09	13,13,13,13	0
32	MG	0	8035	1/1	0.99	0.17	76,76,76,76	0
35	NA	0	8551	1/1	0.99	0.16	75,75,75,75	0
32	MG	0	8045	1/1	0.99	0.09	28,28,28,28	0
34	SR	0	8973	1/1	0.99	0.16	142,142,142,142	0
32	MG	0	8036	1/1	0.99	0.10	62,62,62,62	0
32	MG	0	8062	1/1	0.99	0.18	66,66,66,66	0
34	SR	0	8933	1/1	0.99	0.16	126,126,126,126	0
34	SR	R	8912	1/1	0.99	0.24	107,107,107,107	0
32	MG	0	8083	1/1	0.99	0.35	58,58,58,58	0
35	NA	0	8505	1/1	0.99	0.22	37,37,37,37	0
32	MG	0	8084	1/1	0.99	0.13	37,37,37,37	0
32	MG	0	8063	1/1	0.99	0.12	60,60,60,60	0
32	MG	0	8047	1/1	0.99	0.40	90,90,90,90	0
32	MG	0	8048	1/1	0.99	0.31	26,26,26,26	0
35	NA	0	8565	1/1	0.99	0.16	85,85,85,85	0
34	SR	0	8940	1/1	0.99	0.10	93,93,93,93	0
35	NA	0	8567	1/1	0.99	0.44	83,83,83,83	0
35	NA	0	8512	1/1	0.99	0.24	40,40,40,40	0
35	NA	0	8513	1/1	0.99	0.19	67,67,67,67	0
34	SR	0	8941	1/1	0.99	0.26	141,141,141,141	0
34	SR	0	8903	1/1	0.99	0.23	63,63,63,63	0
34	SR	0	8904	1/1	0.99	0.23	73,73,73,73	0
34	SR	0	8944	1/1	0.99	0.05	168,168,168,168	0
34	SR	0	8905	1/1	0.99	0.28	68,68,68,68	0
32	MG	0	8002	1/1	0.99	0.14	31,31,31,31	0
35	NA	0	8520	1/1	0.99	0.06	44,44,44,44	0
37	CD	O	8705	1/1	0.99	0.05	105,105,105,105	0
35	NA	0	8521	1/1	0.99	0.26	40,40,40,40	0
34	SR	0	8948	1/1	0.99	0.09	110,110,110,110	0
37	CD	1	8702	1/1	0.99	0.11	78,78,78,78	0
34	SR	0	8949	1/1	0.99	0.07	128,128,128,128	0
34	SR	1	8913	1/1	1.00	0.10	108,108,108,108	0
32	MG	0	8076	1/1	1.00	0.32	76,76,76,76	0
34	SR	0	8958	1/1	1.00	0.13	126,126,126,126	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
32	MG	0	8025	1/1	1.00	0.04	23,23,23,23	0
34	SR	0	8906	1/1	1.00	0.14	66,66,66,66	0
34	SR	0	8907	1/1	1.00	0.17	60,60,60,60	0
32	MG	0	8012	1/1	1.00	0.22	26,26,26,26	0
32	MG	0	8027	1/1	1.00	0.10	44,44,44,44	0
34	SR	0	8901	1/1	1.00	0.14	73,73,73,73	0
34	SR	0	8902	1/1	1.00	0.07	72,72,72,72	0

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

There are no such residues in this entry.