



# Full wwPDB X-ray Structure Validation Report ⓘ

Feb 17, 2018 – 02:18 pm GMT

PDB ID : 1W2B  
Title : Trigger Factor ribosome binding domain in complex with 50S  
Authors : Ferbitz, L.; Maier, T.; Patzelt, H.; Bukau, B.; Deuerling, E.; Ban, N.  
Deposited on : 2004-07-01  
Resolution : 3.50 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

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

MolProbity : 4.02b-467  
Xtriage (Phenix) : **NOT EXECUTED**  
EDS : **NOT EXECUTED**  
Percentile statistics : 20171227.v01 (using entries in the PDB archive December 27th 2017)  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : trunk30686

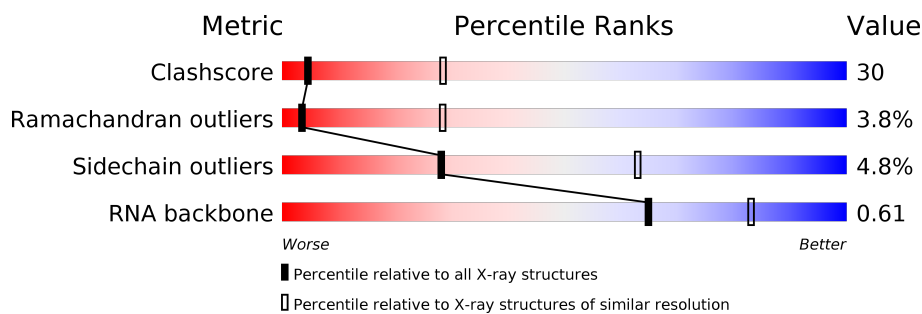
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 3.50 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
Clashscore	122078	1485 (3.60-3.40)
Ramachandran outliers	120005	1446 (3.60-3.40)
Sidechain outliers	119972	1447 (3.60-3.40)
RNA backbone	2633	1052 (4.10-2.90)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria. 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.

Note EDS was not executed.

Mol	Chain	Length	Quality of chain
1	0	2922	
2	1	48	
3	2	92	
4	5	144	
5	9	122	
6	A	239	

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Mol	Chain	Length	Quality of chain
7	B	337	
8	C	246	
9	D	176	
10	E	177	
11	F	119	
12	G	348	
13	H	167	
14	I	145	
15	J	132	
16	K	164	
17	L	194	
18	M	186	
19	N	115	
20	O	148	
21	P	95	
22	Q	154	
23	R	84	
24	S	119	
25	T	66	
26	U	70	
27	V	154	
28	W	91	
29	X	240	
30	Y	73	
31	Z	56	

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
35	CL	I	202	-	-	X	-
35	CL	L	202	-	-	X	-
35	CL	P	102	-	-	X	-
35	CL	X	301	-	-	X	-

## 2 Entry composition

There are 37 unique types of molecules in this entry. The entry contains 98859 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

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

- Molecule 2 is a protein called 50S RIBOSOMAL PROTEIN L39E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	1	46	Total	C	N	O	S	0	0	0
			394	238	86	69	1			

- Molecule 3 is a protein called 50S RIBOSOMAL PROTEIN L44E LA, HLA, RIBOSOMAL PROTEIN L44E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	2	92	Total	C	N	O	S	0	0	0
			755	458	153	137	7			

- Molecule 4 is a protein called TRIGGER FACTOR.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	5	35	Total	C	N	O	S	0	0	0
			273	173	52	47	1			

- Molecule 5 is a RNA chain called 5S RRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	9	122	Total	C	N	O	P	0	0	0
			2600	1160	472	847	121			

- Molecule 6 is a protein called 50S RIBOSOMAL PROTEIN L2P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	A	238	Total	C	N	O	S	0	0	1
			1755	1072	353	325	5			

- Molecule 7 is a protein called 50S RIBOSOMAL PROTEIN L3P.

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

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	310	ARG	PHE	conflict	UNP P20279

- Molecule 8 is a protein called 50S RIBOSOMAL PROTEIN L4P.

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

- Molecule 9 is a protein called 50S RIBOSOMAL PROTEIN L5P HMAL5, HL13, RIBOSOMAL PROTEIN L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	D	141	Total	C	N	O	S	0	0	1
			1095	685	196	210	4			

- Molecule 10 is a protein called 50S RIBOSOMAL PROTEIN L6P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	E	173	Total	C	N	O	S	0	0	1
			1358	840	225	289	4			

- Molecule 11 is a protein called 50S RIBOSOMAL PROTEIN L7AE.

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

- Molecule 12 is a protein called 50S RIBOSOMAL PROTEIN L10E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	G	30	Total	C	N	O	S	0	0	1
			241	149	40	51	1			

- Molecule 13 is a protein called 50S RIBOSOMAL PROTEIN L10E.

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

- Molecule 14 is a protein called 50S RIBOSOMAL PROTEIN L13P.

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

- Molecule 15 is a protein called 50S RIBOSOMAL PROTEIN L14P.

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

- Molecule 16 is a protein called 50S RIBOSOMAL PROTEIN L15P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	K	146	Total	C	N	O	S	0	0	1
			1115	668	223	224				

- Molecule 17 is a protein called 50S RIBOSOMAL PROTEIN L15E.

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

- Molecule 18 is a protein called 50S RIBOSOMAL PROTEIN L18P.

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

- Molecule 19 is a protein called 50S RIBOSOMAL PROTEIN L18E.

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

- Molecule 20 is a protein called 50S RIBOSOMAL PROTEIN L19E.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
20	O	144	Total	C	N	O	0	0	1
			1134	680	231	223			

- Molecule 21 is a protein called 50S RIBOSOMAL PROTEIN L21E.

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

- Molecule 22 is a protein called 50S RIBOSOMAL PROTEIN L22P HMAL22, HL23, RIBOSOMAL PROTEIN L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	Q	151	Total	C	N	O	S	0	0	1
			1150	713	210	223	4			

- Molecule 23 is a protein called 50S RIBOSOMAL PROTEIN L23P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	R	84	Total	C	N	O	S	0	0	0
			664	405	114	142	3			

- Molecule 24 is a protein called RIBOSOMAL PROTEIN L24.

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

- Molecule 25 is a protein called 50S RIBOSOMAL PROTEIN L24P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	T	54	Total	C	N	O	S	0	0	1
			411	244	76	86	5			

- Molecule 26 is a protein called 50S RIBOSOMAL PROTEIN L24E.



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	U	66	Total	C	N	O	S	0	0	1
			500	304	95	100	1			

- Molecule 27 is a protein called 50S RIBOSOMAL PROTEIN L30P.

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

- Molecule 28 is a protein called 50S RIBOSOMAL PROTEIN L31E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	W	83	Total	C	N	O	S	0	0	1
			655	402	130	122	1			

- Molecule 29 is a protein called 50S RIBOSOMAL PROTEIN L32E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	X	143	Total	C	N	O	S	0	0	1
			1131	686	229	216				

- Molecule 30 is a protein called 50S RIBOSOMAL PROTEIN L37AE.

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

- Molecule 31 is a protein called RIBOSOMAL PROTEIN L37E.

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

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
32	0	105	Total	Mg	0	0
			105	105		
32	J	1	Total	Mg	0	0
			1	1		
32	B	3	Total	Mg	0	0
			3	3		

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

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

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

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
34	0	74	Total 74	Na 74	0	0
34	P	1	Total 1	Na 1	0	0
34	Q	2	Total 2	Na 2	0	0
34	K	1	Total 1	Na 1	0	0
34	I	1	Total 1	Na 1	0	0
34	C	1	Total 1	Na 1	0	0
34	A	1	Total 1	Na 1	0	0
34	R	1	Total 1	Na 1	0	0
34	9	2	Total 2	Na 2	0	0
34	L	1	Total 1	Na 1	0	0
34	S	1	Total 1	Na 1	0	0

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
35	0	7	Total 7	Cl 7	0	0
35	P	1	Total 1	Cl 1	0	0
35	J	1	Total 1	Cl 1	0	0
35	Q	1	Total 1	Cl 1	0	0
35	K	2	Total 2	Cl 2	0	0
35	B	1	Total 1	Cl 1	0	0
35	I	3	Total 3	Cl 3	0	0
35	A	1	Total 1	Cl 1	0	0
35	N	1	Total 1	Cl 1	0	0
35	X	1	Total 1	Cl 1	0	0
35	2	1	Total 1	Cl 1	0	0
35	L	1	Total 1	Cl 1	0	0
35	M	1	Total 1	Cl 1	0	0

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

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

- Molecule 37 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
37	0	5875	Total 5875	O 5875	0	0
37	1	49	Total 49	O 49	0	0
37	2	69	Total 69	O 69	0	0
37	9	153	Total 153	O 153	0	0
37	A	135	Total 135	O 135	0	0
37	B	156	Total 156	O 156	0	0
37	C	169	Total 169	O 169	0	0
37	D	52	Total 52	O 52	0	0
37	E	41	Total 41	O 41	0	0
37	F	30	Total 30	O 30	0	0
37	G	20	Total 20	O 20	0	0
37	H	80	Total 80	O 80	0	0
37	I	52	Total 52	O 52	0	0
37	J	61	Total 61	O 61	0	0
37	K	98	Total 98	O 98	0	0
37	L	155	Total 155	O 155	0	0
37	M	60	Total 60	O 60	0	0
37	N	38	Total 38	O 38	0	0
37	O	67	Total 67	O 67	0	0
37	P	53	Total 53	O 53	0	0
37	Q	83	Total 83	O 83	0	0
37	R	32	Total 32	O 32	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
37	S	36	Total 36	O 36	0	0
37	T	25	Total 25	O 25	0	0
37	U	11	Total 11	O 11	0	0
37	V	69	Total 69	O 69	0	0
37	W	26	Total 26	O 26	0	0
37	X	107	Total 107	O 107	0	0
37	Y	35	Total 35	O 35	0	0
37	Z	50	Total 50	O 50	0	0



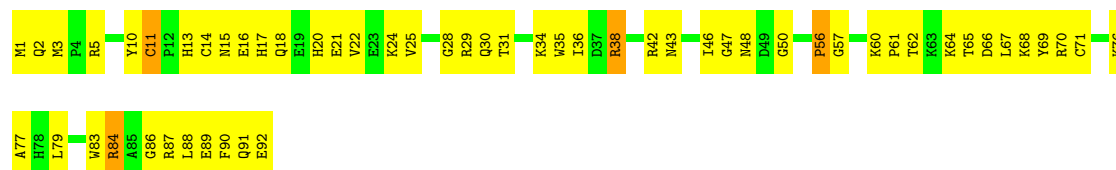
A1910	A1845	U1770	U1696	A1630	A1559	A1471	C1332	C1262	C1186	A1114	G1038	U903	U835
A1919	A1846	U1771	G1697	A1630	U	C1472	U1333	G1265	U1187	U1115	G1039	U904	G836
C1920	A1847	C1772	C1700	C1633	U1561	U1473	C1334	U1266	A1188	U1116	U1040	C905	U837
A1921	A1848	G1773	A1701	G1634	C1562	C1474	C1335	U1267	A1189	A1117	U1041	C906	U840
A1922	G1849	A1775	U1702	U1635	G1563	G1475	U1336	C1268	A1190	A1118	U1042	C907	A841
C1923	A1850	A1776	G1703	G1636	C1564	C1477	U1338	G1269	A1191	G1119	C1043	A908	A841
A1924	G1851	G1777	C1703	A1637	C1565	U1478	U1339	U1270	A1192	U1120	C1044	U909	C842
G1925	A1852	A1778	C1708	A1637	C1566	U1479	G1340	A1271	A1193	G1121	G1045	C910	A843
G1929	C1853	A1779	C1709	A1641	U1567	A1482	G1341	A1272	A1194	U1122	G1046	G911	A844
A1930	G1854	A1780	A1710	A1642	U1568	C1483	C1342	C1272	G1195	A1123	C1061	U919	U845
A1931	C1855	A1781	A1711	C1643	C1570	G1484	C1343	C1273	G1196	A1124	G1052	C920	A846
G1932	A1857	G1782	G1713	G1646	G1571	A1485	U1346	A1278	G1197	U1125	G1053	G921	C847
C1936	A1858	C1786	C1718	G1647	A1572	G1486	U1347	U1279	C1201	C1126	G1054	A922	C848
G1937	A1859	C1787	G1719	G1648	A1573	U1487	A1348	G1283	U1205	U1128	G1055	A923	C849
G1938	U1860	G1788	G1718	G1649	C1574	A1488	A1349	G1284	U1206	U1129	U1056	C924	U850
U1939	C1861	G1789	G1719	G1650	C1575	G1489	G1350	U1287	A1207	U1130	A1057	C925	C853
G1940	C1862	C1790	G1720	C1651	C1576	G1490	G1351	A1287	C1208	G1131	G1058	A926	C854
A1941	C1863	C1791	C1721	C1652	C1577	G1491	A1352	U1288	A1209	A1132	G1059	C931	U855
C1942	A1866	G1795	U1722	A1653	C1578	A1492	C1353	C1289	C1208	U1133	C1060	U932	G856
C1943	G1867	G1796	G1723	U1654	A1580	A1493	G1354	C1290	G1210	G1134	C1061	U933	U857
C1944	G1868	A1796	U1724	G1655	U1583	C1494	A1355	G1291	G1211	G1135	C933	U934	U858
C1946	A1869	G1797	G1725	G1656	C1584	G1496	A1356	U1292	C1212	U1136	C859	G935	C859
G1950	U1871	C1798	G1727	A1657	C1589	G1497	A1357	G1293	C1213	G1138	U1066	U1001	U860
G1951	C1872	C1803	C1730	A1661	A1590	U1500	C1360	A1294	G1214	C1148	C1068	U1002	A861
U1952	A1873	A1804	C1731	C1662	A1591	A1501	C1361	G1295	A1215	U1149	C1069	G1003	A867
A1953	U1874	G1805	G1663	C1665	A1592	A1502	U1304	U1297	G1216	U1150	A1070	U1004	C868
A1954	A1875	G1806	A1664	G1665	C1593	U1503	C1305	U1298	C1229	A1151	A1071	A1005	G869
C1955	C1876	U1807	G1735	G1666	C1594	A1504	A1372	G1299	A1230	A1152	A1072	A1006	G870
U1956	U1877	G1808	A1736	A1667	C1595	A1505	A1373	U1306	A1231	C1153	G1076	A1007	G871
C1957	C1878	A1810	A1737	U1668	U1596	U1506	A1374	U1307	A1232	G1155	G1077	U1008	U872
U1958	U1879	A1811	U1741	G1672	A1597	C1507	A1375	U1308	A1233	U1156	C1080	U1009	A875
G1959	C1880	U1812	A1742	U1673	A1598	U1508	A1376	U1309	U1234	A1157	A1081	U945	A876
A1960	A1881	G1813	G1745	C1674	U1599	G1510	A1377	U1310	U1235	G1158	A1082	U946	G877
A1961	C1882	A1814	A1746	C1675	G1600	G1511	A1378	U1311	U1236	G1159	C1083	G948	G878
C1962	U1883	A1815	A1747	C1676	C1601	G1512	A1379	U1312	U1237	G1160	G1084	C881	C881
C1963	G1884	C1816	U1748	G1677	A1602	C1513	A1379	U1313	C1238	A1161	C1085	U954	A882
U1964	A1885	A1817	G1749	U1677	A1603	A1514	C1377	G1317	G1239	G1162	A1086	A955	U883
U1967	A1886	G1819	C1759	A1678	G1604	A1515	G1378	G1311	G1240	G1163	G1087	C956	C884
A1968	U1890	G1820	G1751	C1679	A1605	C1516	A1379	U1312	A1242	U1164	A1088	A957	C885
A1969	C1893	G1827	C1752	C1680	C1606	A1522	U1380	U1313	C1243	G1165	G1089	G958	A886
G1970	C1894	A1828	C1753	G1681	G1610	G1523	A1381	U1314	U1244	A1166	U1096	C959	G887
G1971	A1895	A1829	A1754	A1682	G1611	U1524	G1382	G1315	C1245	G1167	C1023	G960	U888
A1972	C1896	C1830	U1755	G1683	A1612	G1525	U1383	A1317	A1246	C1168	G1024	A961	C889
G1973	C1897	U1831	G1756	A1684	A1613	A1526	G1386	G1318	A1247	U1169	C1025	C962	C890
G1974	U1898	G1832	U1757	A1685	A1614	A1527	G1387	U1319	A1248	G1172	C1026	C963	G891
U1977	A1900	U1833	U1758	C1686	G1615	U1528	U1388	U1320	U1249	C1173	G1100	G964	G892
A1978	G1901	C1834	A1759	C1687	G1616	U1529	G1389	A1321	C1250	A1174	C1104	U1028	C893
G1979	C1902	A1835	G1760	G1688	G1617	G1532	A1392	G1325	C1251	G1175	C1105	U1029	A894
U1980	U1903	G1836	U1761	A1689	C1618	U1533	A1393	U1326	A1252	C1181	A1106	U1030	A895
A1981	A1904	G1837	C1762	C1690	G1619	C1534	C1394	G1327	C1253	U1180	A1107	G1031	C896
U1982	C1905	U1838	C1763	A1691	C1620	A1463	U1457	U1328	C1254	A1181	G1108	A1032	A897
C1983	U1906	A1839	U1766	C1692	A1624	G1467	C1397	A1328	G1257	C1182	U1109	C1033	C898
U1984	C1907	A1840	C1841	G1693	U1625	G1468	G1398	A1329	G1260	C1183	G1110	G1034	C899
A1985	U1908	A1842	C1769	G1695	C1627	U1544	A1399	A1330	U1111	U1185	U1111	G1035	G901
						C1553	C1400	A1331				C	G902





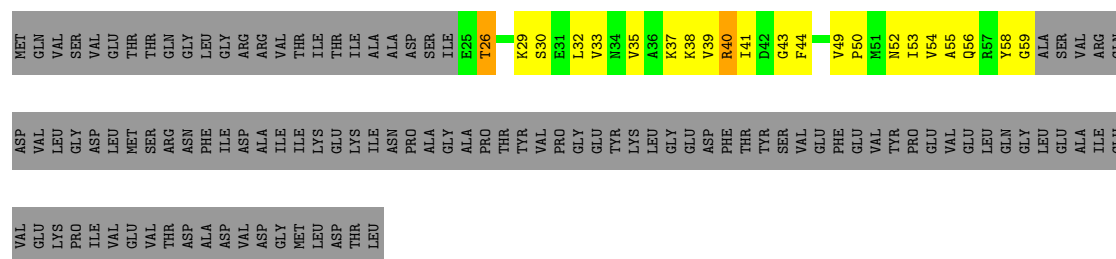
- Molecule 3: 50S RIBOSOMAL PROTEIN L44E LA, HLA, RIBOSOMAL PROTEIN L44E

Chain 2:  39% 57% .

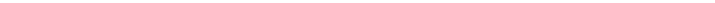


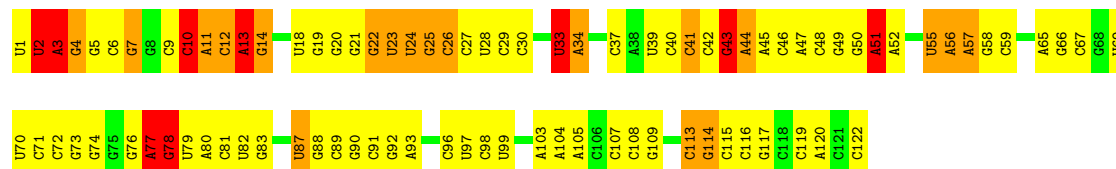
- Molecule 4: TRIGGER FACTOR

Chain 5:  9% 14% . 76%



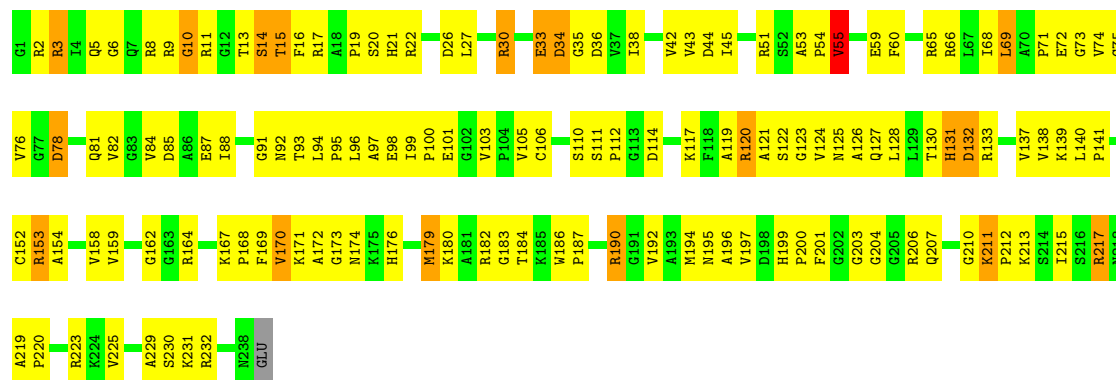
- Molecule 5: 5S rRNA

Chain 9: 

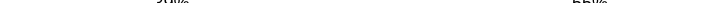


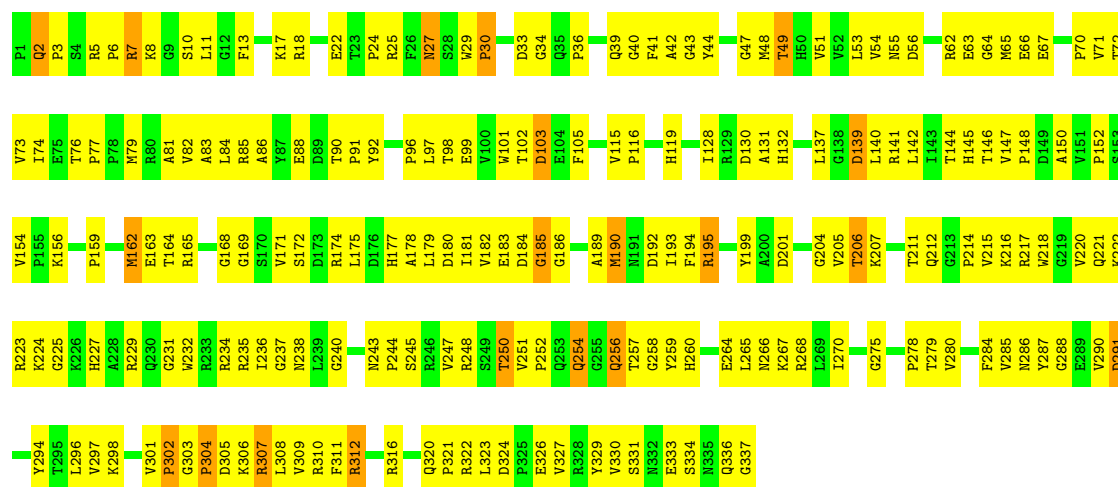
- Molecule 6: 50S RIBOSOMAL PROTEIN L2P

Chain A:  41% 51% 8%

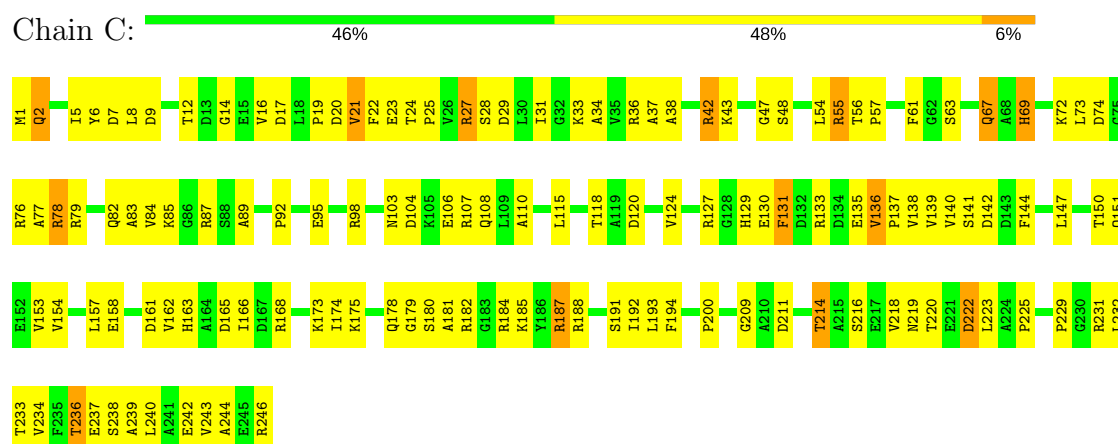


• Molecule 7: 50S RIBOSOMAL PROTEIN L3P

Chain B:  39% 55% 6%



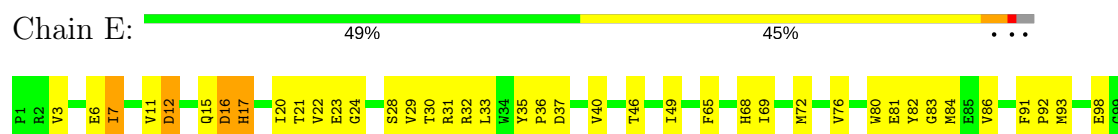
- Molecule 8: 50S RIBOSOMAL PROTEIN L4P



- Molecule 9: 50S RIBOSOMAL PROTEIN L5P HMA15, HL13, RIBOSOMAL PROTEIN L5

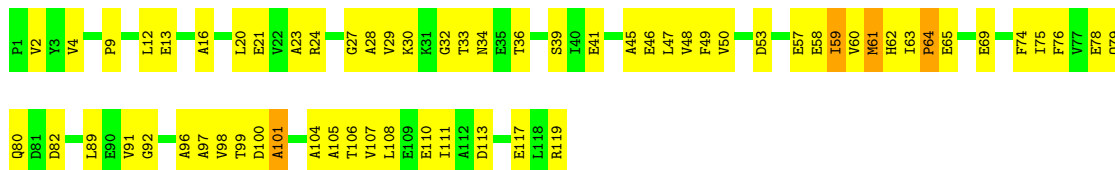


- Molecule 10: 50S RIBOSOMAL PROTEIN L6P

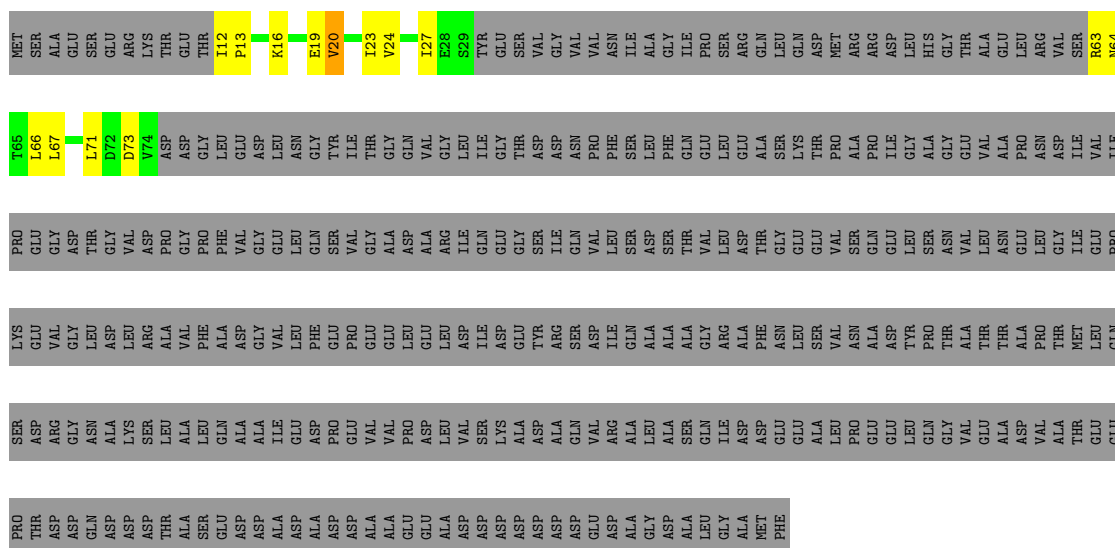




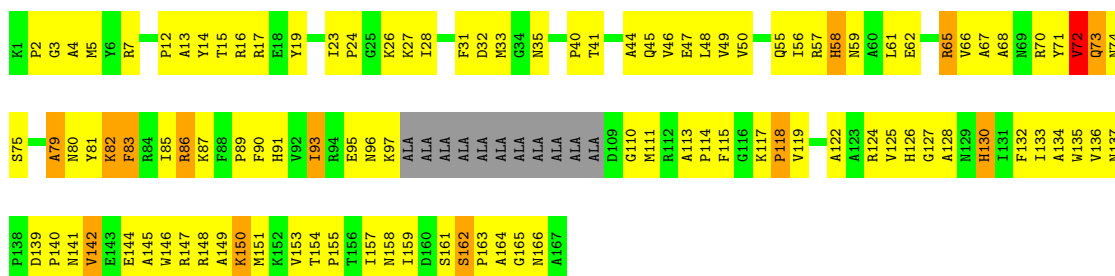
- Molecule 11: 50S RIBOSOMAL PROTEIN L7AE



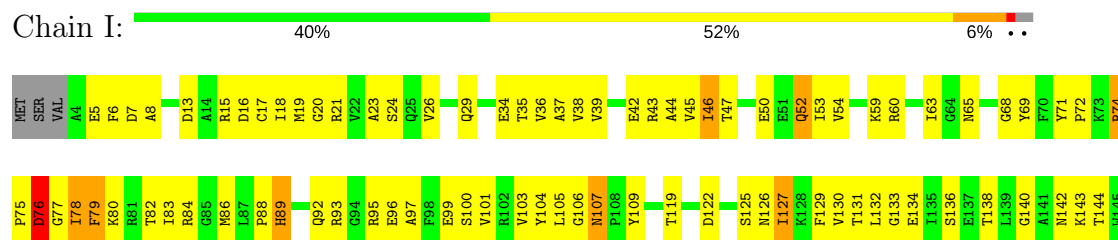
- Molecule 12: 50S RIBOSOMAL PROTEIN L10E



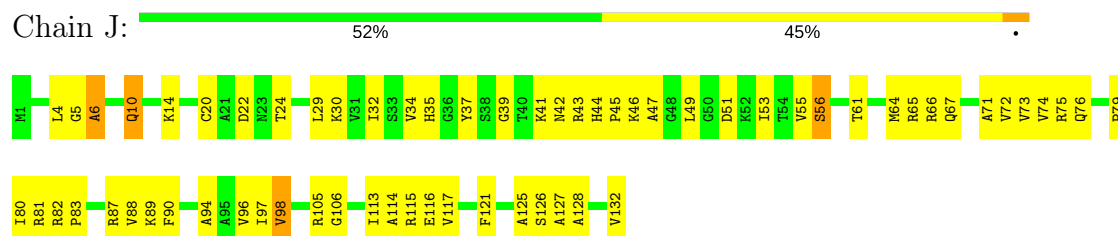
- Molecule 13: 50S RIBOSOMAL PROTEIN L10E



- Molecule 14: 50S RIBOSOMAL PROTEIN L13P



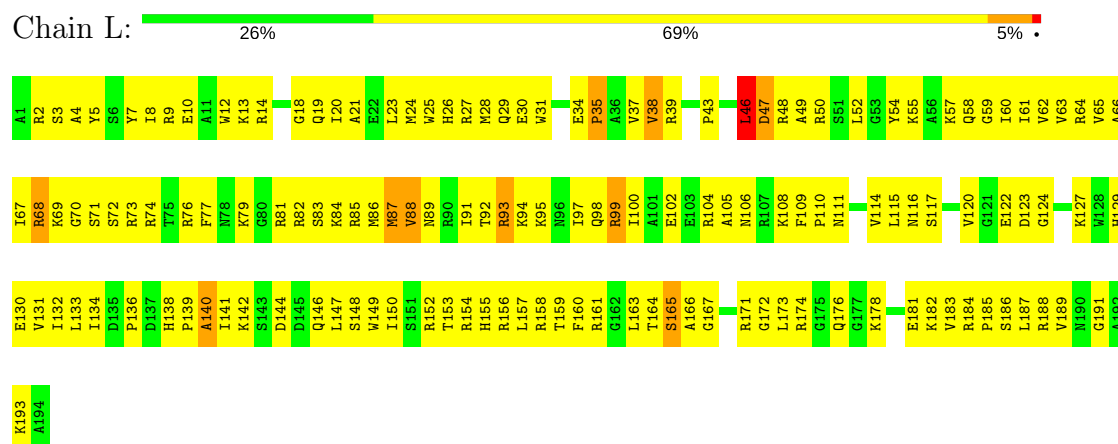
• Molecule 15: 50S RIBOSOMAL PROTEIN L14P



• Molecule 16: 50S RIBOSOMAL PROTEIN L15P

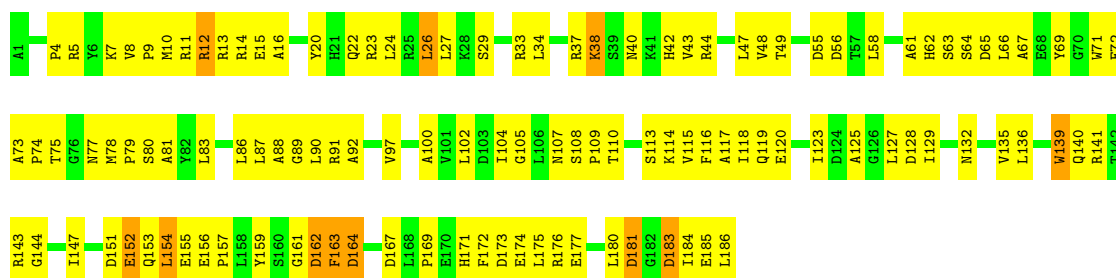


• Molecule 17: 50S RIBOSOMAL PROTEIN L15E



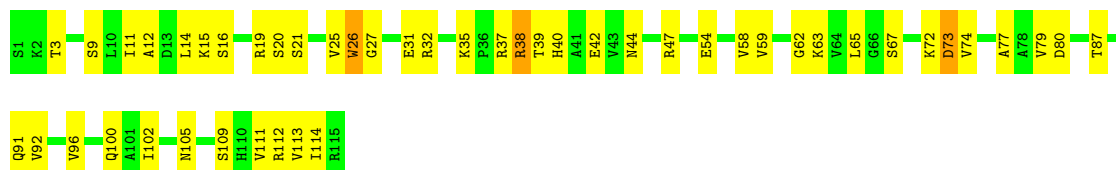
• Molecule 18: 50S RIBOSOMAL PROTEIN L18P





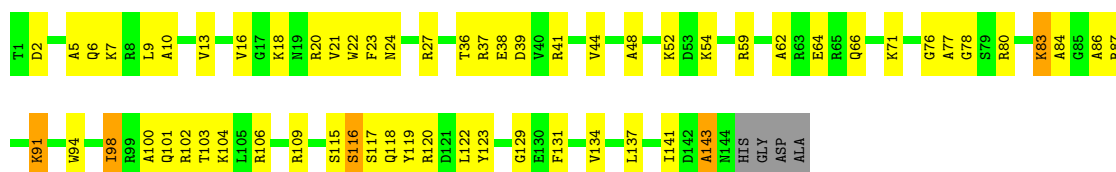
• Molecule 19: 50S RIBOSOMAL PROTEIN L18E

Chain N: 



• Molecule 20: 50S RIBOSOMAL PROTEIN L19E

Chain O: 



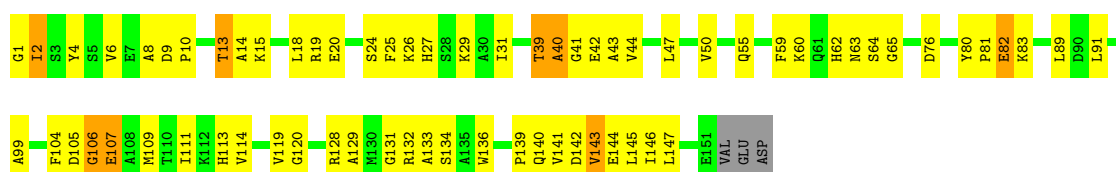
• Molecule 21: 50S RIBOSOMAL PROTEIN L21E

Chain P: 

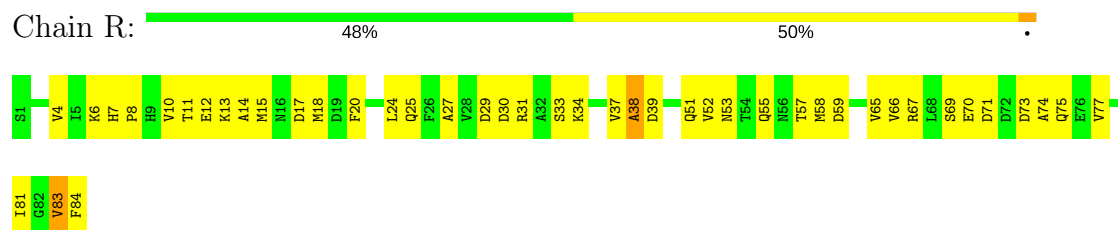


• Molecule 22: 50S RIBOSOMAL PROTEIN L22P HMAL22, HL23, RIBOSOMAL PROTEIN L22

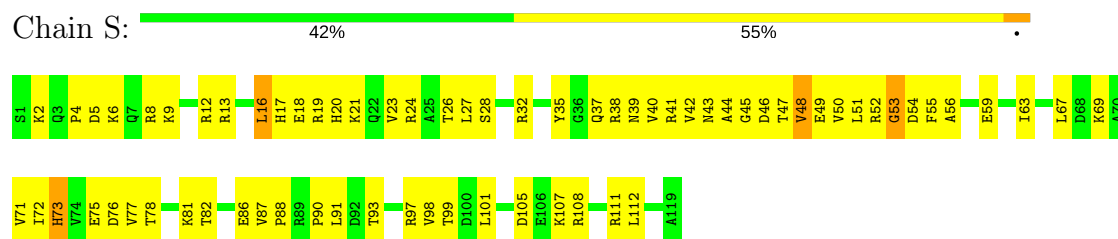
Chain Q: 



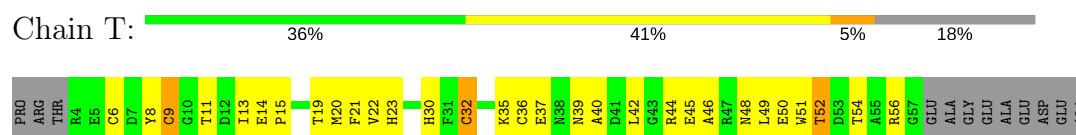
• Molecule 23: 50S RIBOSOMAL PROTEIN L23P



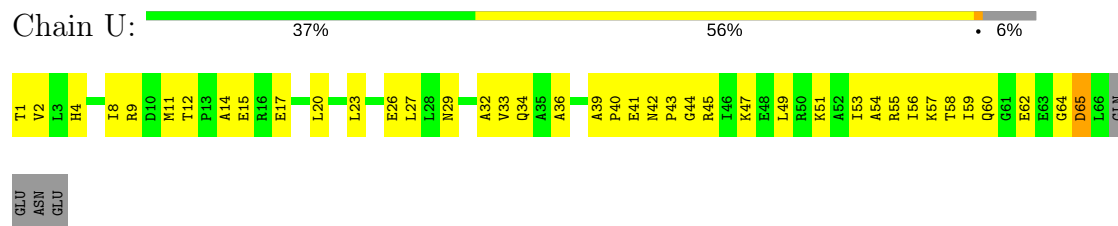
• Molecule 24: RIBOSOMAL PROTEIN L24



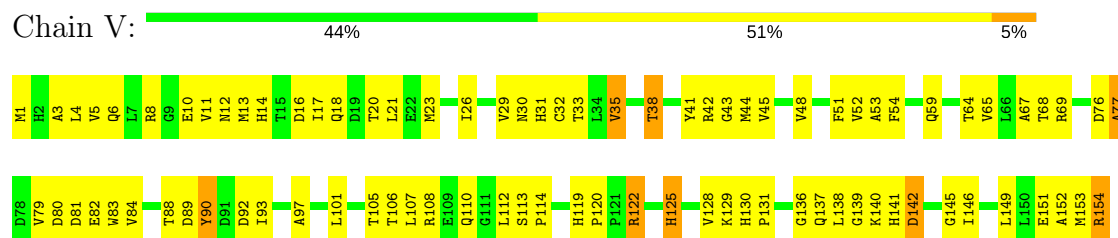
• Molecule 25: 50S RIBOSOMAL PROTEIN L24P



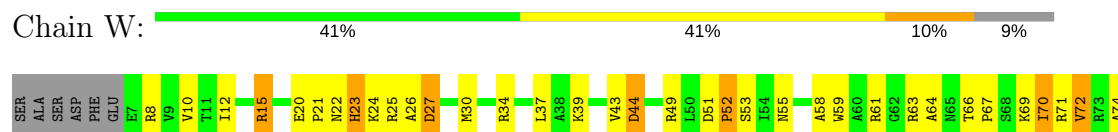
• Molecule 26: 50S RIBOSOMAL PROTEIN L24E

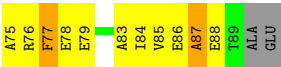


• Molecule 27: 50S RIBOSOMAL PROTEIN L30P

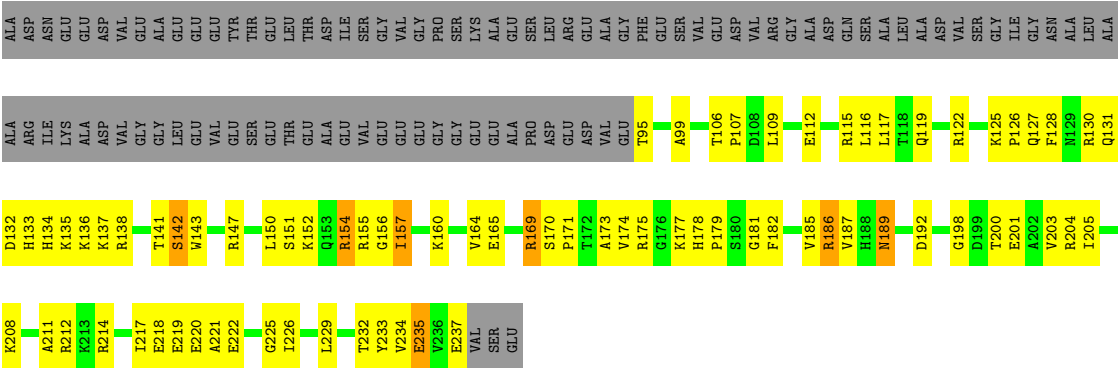
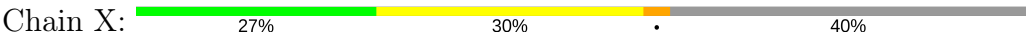


• Molecule 28: 50S RIBOSOMAL PROTEIN L31E

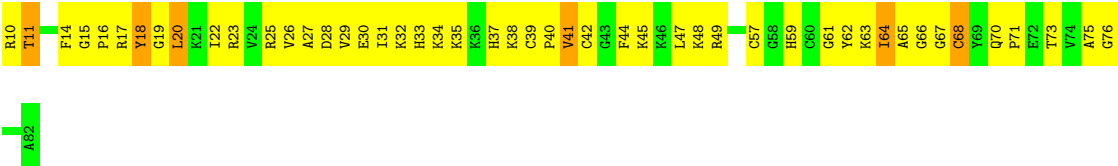
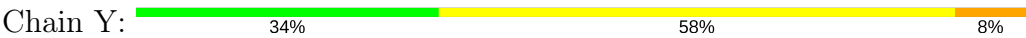




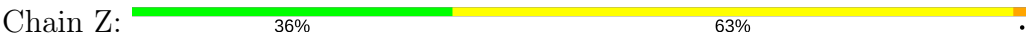
• Molecule 29: 50S RIBOSOMAL PROTEIN L32E



• Molecule 30: 50S RIBOSOMAL PROTEIN L37AE



• Molecule 31: RIBOSOMAL PROTEIN L37E



## 4 Data and refinement statistics

Xtriage (Phenix) and EDS were not executed - this section is therefore incomplete.

Property	Value	Source
Space group	C 2 2 21	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	210.75Å 298.87Å 574.17Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	30.00 – 3.50	Depositor
% Data completeness (in resolution range)	80.3 (30.00-3.50)	Depositor
$R_{merge}$	0.26	Depositor
$R_{sym}$	(Not available)	Depositor
Refinement program	CNS 1.1	Depositor
R, $R_{free}$	0.192 , 0.268	Depositor
Estimated twinning fraction	No twinning to report.	Xtriage
Total number of atoms	98859	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	41.0	wwPDB-VP



## 5 Model quality

### 5.1 Standard geometry

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z  > 5$	RMSZ	$\# Z  > 5$
1	0	0.49	0/66076	0.85	218/103052 (0.2%)
2	1	0.34	0/399	0.56	0/527
3	2	0.34	0/771	0.55	0/1024
4	5	0.38	0/275	0.77	0/366
5	9	0.44	0/2905	0.84	11/4528 (0.2%)
6	A	0.36	0/1788	0.65	0/2411
7	B	0.36	0/2690	0.65	0/3652
8	C	0.37	0/1884	0.62	0/2551
9	D	0.35	0/1112	0.59	0/1500
10	E	0.38	0/1383	0.63	0/1882
11	F	0.35	0/897	0.59	0/1219
12	G	0.41	0/242	0.53	0/326
13	H	0.38	0/1247	0.68	0/1686
14	I	0.37	0/1136	0.63	0/1530
15	J	0.39	0/1004	0.68	0/1351
16	K	0.34	0/1127	0.64	0/1506
17	L	0.40	0/1634	0.66	0/2180
18	M	0.32	0/1474	0.66	0/1999
19	N	0.35	0/874	0.65	0/1181
20	O	0.37	0/1144	0.55	0/1523
21	P	0.37	0/749	0.67	0/1005
22	Q	0.41	0/1173	0.63	0/1580
23	R	0.53	0/672	0.69	0/906
24	S	0.34	0/958	0.65	0/1289
25	T	0.40	0/418	0.57	0/564
26	U	0.36	0/503	0.59	0/677
27	V	0.37	0/1219	0.64	0/1655
28	W	0.37	0/665	0.61	0/897
29	X	0.38	0/1147	0.65	0/1538
30	Y	0.34	0/576	0.58	0/763
31	Z	0.40	0/438	0.63	0/578
All	All	0.45	0/98580	0.80	229/147446 (0.2%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	0	0	65
5	9	0	4
27	V	0	1
All	All	0	70

There are no bond length outliers.

All (229) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	0	535	G	N9-C1'-C2'	10.05	127.07	114.00
1	0	537	G	N9-C1'-C2'	9.91	126.88	114.00
1	0	1235	G	O4'-C1'-N9	8.50	115.00	108.20
1	0	1702	U	N1-C1'-C2'	8.48	125.03	114.00
1	0	337	A	N9-C1'-C2'	8.44	124.97	114.00
1	0	1119	G	N9-C1'-C2'	8.38	124.90	114.00
1	0	317	A	N9-C1'-C2'	8.37	124.88	114.00
1	0	2553	A	N9-C1'-C2'	8.30	124.79	114.00
1	0	1119	G	O4'-C1'-N9	8.28	114.82	108.20
1	0	867	A	N9-C1'-C2'	8.23	124.69	114.00
1	0	819	A	N9-C1'-C2'	8.18	124.63	114.00
1	0	307	G	N9-C1'-C2'	8.09	124.52	114.00
1	0	2102	G	N9-C1'-C2'	8.00	124.40	114.00
1	0	938	G	N9-C1'-C2'	7.96	124.35	114.00
1	0	2073	G	N9-C1'-C2'	7.87	124.23	114.00
1	0	1417	G	N9-C1'-C2'	7.86	124.22	114.00
1	0	2539	U	N1-C1'-C2'	7.81	124.16	114.00
1	0	766	A	N9-C1'-C2'	7.76	124.08	114.00
1	0	1072	G	N9-C1'-C2'	7.75	124.08	114.00
5	9	43	G	N9-C1'-C2'	7.60	123.88	114.00
1	0	1059	G	N9-C1'-C2'	7.59	123.87	114.00
1	0	2866	U	N1-C1'-C2'	7.53	123.79	114.00
1	0	777	U	O4'-C1'-N1	7.52	114.22	108.20
5	9	78	G	N9-C1'-C2'	7.50	123.75	114.00
1	0	1653	A	N9-C1'-C2'	7.48	123.73	114.00
1	0	2074	A	N9-C1'-C2'	7.45	123.69	114.00
1	0	262	A	N9-C1'-C2'	7.43	123.66	114.00
1	0	644	G	N9-C1'-C2'	7.43	123.66	114.00
1	0	1379	A	N9-C1'-C2'	7.32	123.52	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	9	78	G	O4'-C1'-N9	7.31	114.05	108.20
1	0	2645	U	N1-C1'-C2'	7.31	123.50	114.00
1	0	212	A	N9-C1'-C2'	7.30	123.49	114.00
1	0	1604	G	N9-C1'-C2'	7.28	123.46	114.00
1	0	1533	A	N9-C1'-C2'	7.18	123.34	114.00
1	0	487	G	N9-C1'-C2'	7.13	123.27	114.00
1	0	1996	U	N1-C1'-C2'	7.12	123.26	114.00
1	0	2007	A	N9-C1'-C2'	7.11	123.24	114.00
1	0	2532	A	N9-C1'-C2'	7.09	123.22	114.00
1	0	886	A	N9-C1'-C2'	7.06	123.17	114.00
1	0	2889	U	N1-C1'-C2'	7.04	123.14	114.00
1	0	2601	A	N9-C1'-C2'	7.01	123.12	114.00
1	0	31	C	N1-C1'-C2'	7.00	123.10	114.00
1	0	141	C	N1-C1'-C2'	6.97	123.06	114.00
1	0	2896	A	N9-C1'-C2'	6.95	123.03	114.00
1	0	2483	A	N9-C1'-C2'	6.95	123.03	114.00
1	0	701	U	N1-C1'-C2'	6.91	122.98	114.00
1	0	1340	G	N9-C1'-C2'	6.91	122.98	114.00
1	0	537	G	O4'-C1'-N9	6.90	113.72	108.20
1	0	512	G	N9-C1'-C2'	6.83	122.89	114.00
1	0	1164	U	OP1-P-O3'	6.83	120.23	105.20
1	0	2786	G	N9-C1'-C2'	6.83	122.88	114.00
1	0	1165	G	O5'-P-OP1	-6.83	99.55	105.70
1	0	203	G	N9-C1'-C2'	6.83	122.87	114.00
1	0	1030	U	N1-C1'-C2'	6.82	122.86	114.00
1	0	776	A	N9-C1'-C2'	6.73	122.74	114.00
1	0	760	G	N9-C1'-C2'	6.72	122.74	114.00
1	0	2577	A	N9-C1'-C2'	6.70	122.70	114.00
1	0	1407	A	N9-C1'-C2'	6.66	122.66	114.00
1	0	220	C	N1-C1'-C2'	6.65	122.65	114.00
1	0	2072	G	N9-C1'-C2'	6.65	122.64	114.00
1	0	2762	C	N1-C1'-C2'	6.62	122.60	114.00
1	0	2607	U	N1-C1'-C2'	6.60	122.58	114.00
1	0	2282	U	N1-C1'-C2'	6.60	122.57	114.00
1	0	1473	U	N1-C1'-C2'	6.58	122.56	114.00
1	0	338	C	O4'-C1'-N1	6.58	113.46	108.20
1	0	1777	G	N9-C1'-C2'	6.57	122.53	114.00
1	0	338	C	N1-C1'-C2'	6.56	122.52	114.00
1	0	2813	A	N9-C1'-C2'	6.54	122.50	114.00
1	0	1971	G	O4'-C1'-N9	6.51	113.41	108.20
1	0	2674	G	N9-C1'-C2'	6.49	122.44	114.00
1	0	453	A	N9-C1'-C2'	6.47	122.42	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	0	1995	G	N9-C1'-C2'	6.47	122.42	114.00
1	0	1919	A	N9-C1'-C2'	6.47	122.41	114.00
1	0	953	G	N9-C1'-C2'	6.45	122.38	114.00
1	0	1855	G	N9-C1'-C2'	6.43	122.36	114.00
1	0	464	G	O4'-C1'-N9	6.36	113.29	108.20
1	0	1356	A	N9-C1'-C2'	6.34	122.25	114.00
1	0	2681	A	N9-C1'-C2'	6.33	122.22	114.00
1	0	1485	A	N9-C1'-C2'	6.30	122.19	114.00
1	0	45	A	N9-C1'-C2'	6.29	122.18	114.00
1	0	923	A	N9-C1'-C2'	6.29	122.18	114.00
1	0	1232	A	N9-C1'-C2'	6.29	122.18	114.00
1	0	428	G	N9-C1'-C2'	6.28	122.16	114.00
1	0	898	G	N9-C1'-C2'	6.26	122.14	114.00
5	9	10	C	N1-C1'-C2'	6.26	122.14	114.00
1	0	1031	G	N9-C1'-C2'	6.23	122.10	114.00
1	0	1109	U	N1-C1'-C2'	6.23	122.10	114.00
1	0	2718	C	N1-C1'-C2'	6.23	122.10	114.00
1	0	1731	C	N1-C1'-C2'	6.22	122.08	114.00
1	0	868	G	O4'-C1'-N9	6.20	113.16	108.20
1	0	461	C	N1-C1'-C2'	6.19	122.05	114.00
1	0	175	G	O4'-C1'-N9	6.19	113.16	108.20
1	0	1752	G	N9-C1'-C2'	6.19	122.04	114.00
1	0	1235	G	C1'-O4'-C4'	-6.18	104.95	109.90
1	0	1165	G	O5'-P-OP2	-6.18	100.14	105.70
1	0	147	G	N9-C1'-C2'	6.18	122.03	114.00
1	0	1506	U	N1-C1'-C2'	6.17	122.03	114.00
1	0	1730	G	O4'-C1'-N9	6.17	113.13	108.20
1	0	2538	A	N9-C1'-C2'	6.17	122.02	114.00
1	0	1534	C	N1-C1'-C2'	6.16	122.01	114.00
1	0	1234	U	N1-C1'-C2'	6.15	122.00	114.00
1	0	1230	A	N9-C1'-C2'	6.15	122.00	114.00
1	0	1435	U	N1-C1'-C2'	6.13	121.97	114.00
1	0	1664	A	N9-C1'-C2'	6.13	121.97	114.00
1	0	509	A	N9-C1'-C2'	6.12	121.95	114.00
1	0	1438	G	N9-C1'-C2'	6.11	121.94	114.00
1	0	2353	A	N9-C1'-C2'	6.11	121.94	114.00
1	0	86	A	N9-C1'-C2'	6.08	121.90	114.00
1	0	1837	G	N9-C1'-C2'	6.02	121.83	114.00
1	0	2320	U	N1-C1'-C2'	5.95	121.74	114.00
1	0	1504	A	N9-C1'-C2'	5.95	121.73	114.00
1	0	175	G	N9-C1'-C2'	5.94	121.73	114.00
1	0	2552	C	N1-C1'-C2'	5.93	121.71	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	0	952	G	N9-C1'-C2'	5.91	121.68	114.00
1	0	1044	C	O4'-C1'-N1	5.91	112.92	108.20
1	0	1030	U	C1'-O4'-C4'	-5.91	105.18	109.90
1	0	220	C	O4'-C1'-N1	5.90	112.92	108.20
5	9	113	C	O4'-C1'-N1	5.89	112.91	108.20
1	0	1151	G	N9-C1'-C2'	5.87	121.63	114.00
1	0	166	A	N9-C1'-C2'	5.86	121.62	114.00
1	0	2482	G	N9-C1'-C2'	5.86	121.61	114.00
1	0	1654	U	N1-C1'-C2'	5.85	121.61	114.00
1	0	831	U	N1-C1'-C2'	5.85	121.60	114.00
1	0	1355	A	N9-C1'-C2'	5.85	121.60	114.00
1	0	1407	A	O4'-C1'-N9	5.83	112.86	108.20
1	0	845	U	N1-C1'-C2'	5.81	121.55	114.00
1	0	1009	U	N1-C1'-C2'	5.80	121.54	114.00
1	0	1316	G	N9-C1'-C2'	5.80	121.54	114.00
1	0	95	A	N9-C1'-C2'	5.80	121.53	114.00
5	9	3	A	N9-C1'-C2'	5.79	121.53	114.00
1	0	1941	A	N9-C1'-C2'	5.78	121.51	114.00
1	0	1341	A	N9-C1'-C2'	5.76	121.49	114.00
1	0	817	G	N9-C1'-C2'	5.76	121.49	114.00
1	0	1370	G	O4'-C1'-N9	5.74	112.79	108.20
1	0	673	U	N1-C1'-C2'	5.73	121.45	114.00
1	0	904	U	N1-C1'-C2'	5.72	121.44	114.00
1	0	1979	G	C2'-C3'-O3'	5.72	122.85	113.70
1	0	174	A	N9-C1'-C2'	5.71	121.43	114.00
1	0	2316	G	O4'-C1'-N9	5.71	112.77	108.20
1	0	336	G	N9-C1'-C2'	5.71	121.42	114.00
1	0	604	G	N9-C1'-C2'	5.71	121.42	114.00
1	0	1819	G	C5'-C4'-C3'	5.71	125.13	116.00
1	0	66	G	N9-C1'-C2'	5.69	121.40	114.00
1	0	1237	U	N1-C1'-C2'	5.67	121.38	114.00
1	0	1119	G	C1'-O4'-C4'	-5.65	105.38	109.90
1	0	2242	U	N1-C1'-C2'	5.64	121.33	114.00
1	0	417	G	N9-C1'-C2'	5.63	121.32	114.00
1	0	672	G	N9-C1'-C2'	5.63	121.32	114.00
1	0	713	U	N1-C1'-C2'	5.63	121.32	114.00
1	0	1214	G	N9-C1'-C2'	5.63	121.32	114.00
1	0	1369	A	N9-C1'-C2'	5.60	121.28	114.00
1	0	510	U	N1-C1'-C2'	5.58	121.26	114.00
1	0	56	G	N9-C1'-C2'	5.56	121.23	114.00
1	0	192	A	N9-C1'-C2'	5.54	121.21	114.00
1	0	2443	C	N1-C1'-C2'	5.54	121.21	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	0	196	G	N9-C1'-C2'	5.54	121.21	114.00
1	0	1684	A	N9-C1'-C2'	5.54	121.20	114.00
1	0	330	C	N1-C1'-C2'	5.53	121.19	114.00
1	0	2394	A	N9-C1'-C2'	5.53	121.19	114.00
1	0	1692	C	O4'-C1'-N1	5.51	112.61	108.20
1	0	2037	C	N1-C1'-C2'	5.51	121.17	114.00
1	0	2761	A	C5'-C4'-O4'	-5.49	102.51	109.10
1	0	330	C	O4'-C1'-N1	5.49	112.59	108.20
1	0	381	G	O4'-C1'-N9	5.48	112.59	108.20
1	0	463	A	N9-C1'-C2'	5.48	121.12	114.00
1	0	1971	G	N9-C1'-C2'	5.46	121.10	114.00
1	0	893	C	N1-C1'-C2'	5.45	121.08	114.00
1	0	2258	A	N9-C1'-C2'	5.43	121.06	114.00
1	0	1722	U	N1-C1'-C2'	5.42	121.05	114.00
1	0	1030	U	O4'-C1'-N1	5.42	112.53	108.20
1	0	1746	A	O4'-C1'-N9	5.42	112.53	108.20
5	9	78	G	C1'-O4'-C4'	-5.41	105.58	109.90
1	0	2644	C	N1-C1'-C2'	5.40	121.03	114.00
1	0	2092	G	N9-C1'-C2'	5.39	121.01	114.00
1	0	2379	G	O4'-C1'-N9	5.38	112.50	108.20
1	0	1971	G	C1'-O4'-C4'	-5.36	105.61	109.90
1	0	411	A	N9-C1'-C2'	5.36	120.97	114.00
1	0	317	A	O4'-C1'-N9	5.36	112.49	108.20
1	0	338	C	C1'-O4'-C4'	-5.34	105.62	109.90
1	0	1235	G	N9-C1'-C2'	5.33	120.93	114.00
1	0	2749	U	N1-C1'-C2'	5.33	120.92	114.00
1	0	2462	G	N9-C1'-C2'	5.32	120.92	114.00
1	0	2292	C	N1-C1'-C2'	5.32	120.92	114.00
1	0	379	G	N9-C1'-C2'	5.31	120.91	114.00
1	0	1978	A	N9-C1'-C2'	5.31	120.90	114.00
1	0	330	C	C1'-O4'-C4'	-5.30	105.66	109.90
1	0	1494	A	N9-C1'-C2'	5.30	120.89	114.00
1	0	2102	G	O4'-C1'-N9	5.28	112.42	108.20
5	9	113	C	N1-C1'-C2'	5.25	120.82	114.00
1	0	97	G	N9-C1'-C2'	5.24	120.82	114.00
1	0	441	A	N9-C1'-C2'	5.22	120.79	114.00
1	0	2692	G	O4'-C1'-N9	5.22	112.38	108.20
1	0	1872	C	N1-C1'-C2'	5.21	120.78	114.00
1	0	2896	A	O4'-C1'-N9	5.21	112.37	108.20
1	0	236	A	N9-C1'-C2'	5.19	120.75	114.00
1	0	317	A	C1'-O4'-C4'	-5.17	105.77	109.90
1	0	1690	C	N1-C1'-C2'	5.16	120.71	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	0	24	G	N9-C1'-C2'	5.15	120.70	114.00
1	0	1137	G	O4'-C1'-N9	5.15	112.32	108.20
1	0	537	G	C1'-O4'-C4'	-5.15	105.78	109.90
5	9	77	A	N9-C1'-C2'	5.15	120.69	114.00
1	0	1149	U	N1-C1'-C2'	5.14	120.69	114.00
1	0	1029	U	N1-C1'-C2'	5.14	120.68	114.00
1	0	1126	C	N1-C1'-C2'	5.14	120.68	114.00
1	0	264	G	N9-C1'-C2'	5.13	120.68	114.00
1	0	452	G	N9-C1'-C2'	5.13	120.68	114.00
1	0	2902	A	O4'-C1'-N9	5.13	112.30	108.20
1	0	1842	A	N9-C1'-C2'	5.12	120.66	114.00
1	0	1088	A	N9-C1'-C2'	5.12	120.65	114.00
5	9	33	U	N1-C1'-C2'	5.11	120.64	114.00
1	0	1418	U	N1-C1'-C2'	5.11	120.64	114.00
1	0	2553	A	O4'-C1'-N9	5.11	112.28	108.20
1	0	1836	A	N9-C1'-C2'	5.10	120.63	114.00
1	0	1701	A	N9-C1'-C2'	5.10	120.63	114.00
1	0	328	U	N1-C1'-C2'	5.09	120.62	114.00
5	9	87	U	N1-C1'-C2'	5.09	120.62	114.00
1	0	68	U	N1-C1'-C2'	5.08	120.60	114.00
1	0	518	G	N9-C1'-C2'	5.07	120.59	114.00
1	0	1377	C	N1-C1'-C2'	5.07	120.59	114.00
1	0	460	A	N9-C1'-C2'	5.06	120.57	114.00
1	0	2102	G	C1'-O4'-C4'	-5.06	105.86	109.90
1	0	246	G	N9-C1'-C2'	5.05	120.57	114.00
1	0	1407	A	C1'-O4'-C4'	-5.05	105.86	109.90
1	0	688	A	O4'-C1'-N9	5.05	112.24	108.20
1	0	1431	C	O4'-C1'-N1	5.04	112.23	108.20
1	0	660	A	N9-C1'-C2'	5.04	120.55	114.00
1	0	2484	U	N1-C1'-C2'	5.03	120.54	114.00
1	0	2747	C	N1-C1'-C2'	5.03	120.54	114.00
1	0	1473	U	O4'-C1'-N1	5.02	112.22	108.20

There are no chirality outliers.

All (70) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	0	1009	U	Sidechain
1	0	1017	U	Sidechain
1	0	1109	U	Sidechain
1	0	1149	U	Sidechain
1	0	1164	U	Sidechain

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Mol	Chain	Res	Type	Group
1	0	1230	A	Sidechain
1	0	1234	U	Sidechain
1	0	1260	G	Sidechain
1	0	1314	U	Sidechain
1	0	1435	U	Sidechain
1	0	1506	U	Sidechain
1	0	1604	G	Sidechain
1	0	1654	U	Sidechain
1	0	1702	U	Sidechain
1	0	1736	A	Sidechain
1	0	1777	G	Sidechain
1	0	1809	G	Sidechain
1	0	1828	G	Sidechain
1	0	1874	U	Sidechain
1	0	1941	A	Sidechain
1	0	1977	U	Sidechain
1	0	1996	U	Sidechain
1	0	203	G	Sidechain
1	0	2072	G	Sidechain
1	0	224	U	Sidechain
1	0	2242	U	Sidechain
1	0	2282	U	Sidechain
1	0	2283	G	Sidechain
1	0	2330	U	Sidechain
1	0	2353	A	Sidechain
1	0	2467	A	Sidechain
1	0	2492	U	Sidechain
1	0	2493	C	Sidechain
1	0	2526	C	Sidechain
1	0	2532	A	Sidechain
1	0	2538	A	Sidechain
1	0	2539	U	Sidechain
1	0	2554	U	Sidechain
1	0	262	A	Sidechain
1	0	2645	U	Sidechain
1	0	2674	G	Sidechain
1	0	2681	A	Sidechain
1	0	2786	G	Sidechain
1	0	2791	U	Sidechain
1	0	2825	C	Sidechain
1	0	2836	G	Sidechain
1	0	2865	G	Sidechain

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Mol	Chain	Res	Type	Group
1	0	2866	U	Sidechain
1	0	30	U	Sidechain
1	0	336	G	Sidechain
1	0	359	U	Sidechain
1	0	428	G	Sidechain
1	0	453	A	Sidechain
1	0	535	G	Sidechain
1	0	68	U	Sidechain
1	0	701	U	Sidechain
1	0	766	A	Sidechain
1	0	819	A	Sidechain
1	0	831	U	Sidechain
1	0	845	U	Sidechain
1	0	86	A	Sidechain
1	0	884	C	Sidechain
1	0	898	G	Sidechain
1	0	904	U	Sidechain
1	0	953	G	Sidechain
5	9	13	A	Sidechain
5	9	2	U	Sidechain
5	9	33	U	Sidechain
5	9	51	A	Sidechain
27	V	90	TYR	Sidechain

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

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	0	59017	0	29808	2081	0
2	1	394	0	406	38	0
3	2	755	0	732	81	0
4	5	273	0	296	23	0
5	9	2600	0	1326	119	0
6	A	1755	0	1763	185	0
7	B	2625	0	2533	240	0
8	C	1859	0	1816	166	0
9	D	1095	0	1085	125	0
10	E	1358	0	1266	95	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
11	F	886	0	854	75	0
12	G	241	0	231	20	0
13	H	1216	0	1215	169	0
14	I	1120	0	1098	92	0
15	J	994	0	1027	82	0
16	K	1115	0	1072	91	0
17	L	1606	0	1676	241	0
18	M	1445	0	1401	149	0
19	N	865	0	873	52	0
20	O	1134	0	1127	65	0
21	P	735	0	729	49	0
22	Q	1150	0	1122	76	0
23	R	664	0	626	50	0
24	S	950	0	924	80	0
25	T	411	0	368	35	0
26	U	500	0	511	45	0
27	V	1196	0	1137	120	0
28	W	655	0	653	55	0
29	X	1131	0	1133	100	0
30	Y	564	0	601	85	0
31	Z	431	0	426	45	0
32	0	105	0	0	0	0
32	2	1	0	0	0	0
32	9	2	0	0	0	0
32	A	3	0	0	0	0
32	B	3	0	0	0	0
32	J	1	0	0	0	0
32	S	1	0	0	0	0
32	X	1	0	0	0	0
33	0	2	0	0	0	0
34	0	74	0	0	0	0
34	9	2	0	0	0	0
34	A	1	0	0	0	0
34	C	1	0	0	0	0
34	I	1	0	0	0	0
34	K	1	0	0	0	0
34	L	1	0	0	0	0
34	P	1	0	0	0	0
34	Q	2	0	0	0	0
34	R	1	0	0	0	0
34	S	1	0	0	0	0
35	0	7	0	0	2	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
35	2	1	0	0	0	0
35	A	1	0	0	0	0
35	B	1	0	0	0	0
35	I	3	0	0	3	0
35	J	1	0	0	0	0
35	K	2	0	0	0	0
35	L	1	0	0	2	0
35	M	1	0	0	1	0
35	N	1	0	0	0	0
35	P	1	0	0	2	0
35	Q	1	0	0	0	0
35	X	1	0	0	2	0
36	2	1	0	0	0	0
36	N	1	0	0	0	0
36	T	1	0	0	0	0
36	Y	1	0	0	0	0
36	Z	1	0	0	0	0
37	0	5875	0	0	346	0
37	1	49	0	0	8	0
37	2	69	0	0	7	0
37	9	153	0	0	16	0
37	A	135	0	0	29	0
37	B	156	0	0	31	0
37	C	169	0	0	43	0
37	D	52	0	0	15	0
37	E	41	0	0	8	0
37	F	30	0	0	6	0
37	G	20	0	0	3	0
37	H	80	0	0	19	0
37	I	52	0	0	4	0
37	J	61	0	0	18	0
37	K	98	0	0	23	0
37	L	155	0	0	34	0
37	M	60	0	0	18	0
37	N	38	0	0	5	0
37	O	67	0	0	7	0
37	P	53	0	0	6	0
37	Q	83	0	0	6	0
37	R	32	0	0	6	0
37	S	36	0	0	4	0
37	T	25	0	0	6	0
37	U	11	0	0	2	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
37	V	69	0	0	10	0
37	W	26	0	0	6	0
37	X	107	0	0	13	0
37	Y	35	0	0	10	0
37	Z	50	0	0	2	0
All	All	98859	0	59835	4534	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 30.

All (4534) 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)
1:0:156:C:H5''	17:L:171:ARG:HD3	1.28	1.14
3:2:46:ILE:HG21	17:L:87:MET:HG2	1.24	1.14
26:U:12:THR:HG22	26:U:15:GLU:HG3	1.28	1.14
11:F:91:VAL:HG12	11:F:92:GLY:H	1.09	1.13
5:9:6:C:H5''	18:M:37:ARG:HH12	1.08	1.11
1:0:871:G:H5'	1:0:871:G:H8	1.17	1.08
8:C:127:ARG:NH2	8:C:225:PRO:HG2	1.68	1.07
1:0:870:G:H2'	1:0:871:G:H5''	1.30	1.06
1:0:1160:G:H5'	1:0:1161:A:H5'	1.10	1.04
5:9:6:C:H5''	18:M:37:ARG:NH1	1.72	1.04
15:J:14:LYS:HB2	15:J:45:PRO:HG2	1.39	1.04
27:V:21:LEU:HD22	27:V:26:ILE:HD11	1.34	1.03
8:C:236:THR:HG22	8:C:239:ALA:H	0.91	1.03
1:0:660:A:H4'	1:0:661:G:O5'	1.57	1.03
15:J:29:LEU:HB3	15:J:55:VAL:HG11	1.41	1.03
8:C:136:VAL:HG22	8:C:137:PRO:HA	1.34	1.02
1:0:1840:A:H4'	1:0:1841:C:O5'	1.61	1.01
13:H:162:SER:HB2	13:H:163:PRO:HD3	1.43	1.01
7:B:162:MET:HE3	7:B:308:LEU:HD21	1.43	1.00
9:D:27:ILE:HG22	9:D:28:GLY:H	1.25	0.99
8:C:236:THR:HG22	8:C:239:ALA:N	1.76	0.99
13:H:45:GLN:HB3	13:H:163:PRO:HD2	1.40	0.99
22:Q:18:LEU:HG	22:Q:91:LEU:HD13	1.42	0.99
1:0:2680:A:H4'	1:0:2681:A:OP1	1.62	0.99
9:D:154:LYS:HD2	9:D:154:LYS:H	1.27	0.99
1:0:1381:A:H4'	1:0:1382:G:O5'	1.60	0.99
18:M:144:GLY:O	18:M:147:ILE:HG22	1.63	0.99
17:L:115:LEU:HD23	17:L:150:ILE:HD12	1.45	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2586:U:H3	1:0:2592:G:H22	1.12	0.97
28:W:15:ARG:HH11	28:W:15:ARG:HB3	1.28	0.97
1:0:1444:G:H5'	4:5:43:GLY:HA2	1.46	0.97
1:0:80:A:H4'	1:0:81:G:O5'	1.63	0.97
27:V:4:LEU:HD22	27:V:52:VAL:HG21	1.47	0.96
1:0:2243:C:HO2'	17:L:25:TRP:HZ2	1.10	0.96
6:A:96:LEU:HD22	6:A:128:LEU:HD22	1.45	0.96
3:2:70:ARG:HG2	3:2:77:ALA:HB2	1.43	0.95
6:A:199:HIS:HD2	6:A:201:PHE:H	1.08	0.95
7:B:264:GLU:HG2	7:B:267:LYS:HE2	1.48	0.95
26:U:1:THR:HG23	26:U:2:VAL:H	1.32	0.95
1:0:1473:U:H1'	31:Z:42:SER:HB2	1.45	0.95
29:X:187:VAL:HG23	29:X:192:ASP:HB2	1.47	0.95
1:0:21:G:H5'	22:Q:2:ILE:HA	1.48	0.95
1:0:2672:C:H1'	37:B:506:HOH:O	1.67	0.95
1:0:870:G:C2'	1:0:871:G:H5''	1.97	0.94
13:H:55:GLN:HE21	13:H:124:ARG:HE	1.04	0.93
15:J:10:GLN:H	15:J:10:GLN:NE2	1.66	0.93
11:F:63:ILE:HB	11:F:64:PRO:HD3	1.51	0.93
27:V:26:ILE:HG13	27:V:26:ILE:O	1.69	0.93
1:0:1242:A:H5'	14:I:82:THR:HG23	1.50	0.93
27:V:137:GLN:HE21	27:V:141:HIS:HE1	1.07	0.92
16:K:79:ASP:HB3	37:K:302:HOH:O	1.67	0.92
1:0:485:A:O2'	1:0:487:G:H5'	1.69	0.92
1:0:631:A:C5	1:0:2074:A:H5'	2.04	0.91
1:0:2716:G:H5''	7:B:206:THR:HG21	1.49	0.91
1:0:871:G:C8	1:0:871:G:H5'	2.05	0.91
1:0:1871:U:H4'	1:0:1872:C:O5'	1.71	0.91
8:C:115:LEU:HD21	8:C:243:VAL:HG13	1.52	0.91
8:C:5:ILE:HD11	8:C:16:VAL:HG23	1.52	0.91
1:0:1886:A:H4'	37:Y:203:HOH:O	1.70	0.91
1:0:1266:U:H4'	29:X:115:ARG:HH21	1.35	0.90
10:E:20:ILE:HD11	10:E:40:VAL:HG11	1.50	0.90
17:L:39:ARG:HA	17:L:63:VAL:HG22	1.51	0.90
1:0:2263:G:H4'	17:L:70:GLY:HA3	1.54	0.90
6:A:211:LYS:HB3	6:A:212:PRO:HD2	1.53	0.90
1:0:271:C:H4'	1:0:272:A:H5''	1.51	0.90
6:A:199:HIS:CD2	6:A:201:PHE:H	1.89	0.90
7:B:238:ASN:HD22	7:B:240:GLY:H	1.19	0.90
1:0:1407:A:O2'	1:0:1408:U:H3'	1.71	0.89
30:Y:37:HIS:HB2	30:Y:47:LEU:HB2	1.54	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:O:7857:HOH:O	7:B:211:THR:HG21	1.73	0.89
7:B:30:PRO:HB2	7:B:39:GLN:NE2	1.86	0.89
17:L:186:SER:O	17:L:189:VAL:HG12	1.71	0.89
1:O:1315:G:H4'	1:O:1316:G:OP2	1.70	0.89
5:9:24:U:O2'	5:9:25:G:H4'	1.73	0.89
27:V:88:THR:HB	37:V:203:HOH:O	1.72	0.89
30:Y:11:THR:OG1	30:Y:23:ARG:HB2	1.73	0.89
1:O:1116:U:HO2'	1:O:1118:A:H2	0.94	0.88
1:O:21:G:C5'	22:Q:2:ILE:HA	2.03	0.88
23:R:33:SER:O	23:R:37:VAL:HG23	1.73	0.88
26:U:42:ASN:HB3	37:U:111:HOH:O	1.74	0.88
37:O:4071:HOH:O	9:D:99:ASP:HA	1.73	0.88
19:N:32:ARG:HD3	19:N:32:ARG:O	1.72	0.88
1:O:1378:G:H4'	1:O:1379:A:O5'	1.73	0.88
3:2:24:LYS:HE3	3:2:90:PHE:HE1	1.38	0.88
18:M:169:PRO:O	18:M:172:PHE:HB3	1.74	0.88
1:O:856:G:H2'	37:O:3682:HOH:O	1.74	0.88
22:Q:8:ALA:HB1	22:Q:13:THR:HG21	1.55	0.88
30:Y:38:LYS:HG2	30:Y:45:LYS:HG2	1.56	0.88
1:O:1835:U:H5	1:O:1840:A:N7	1.71	0.88
37:O:8133:HOH:O	17:L:91:ILE:HG12	1.74	0.87
22:Q:99:ALA:HB1	22:Q:109:MET:HE1	1.53	0.87
5:9:29:C:H2'	5:9:30:C:H5'	1.57	0.87
13:H:75:SER:O	13:H:79:ALA:HB2	1.73	0.87
18:M:37:ARG:HH21	18:M:105:GLY:CA	1.88	0.87
9:D:25:MET:HE2	9:D:41:LEU:HG	1.56	0.87
37:O:3315:HOH:O	8:C:84:VAL:HA	1.74	0.87
15:J:81:ARG:HB2	15:J:87:ARG:HH11	1.38	0.87
28:W:72:VAL:HG22	28:W:85:VAL:HG12	1.56	0.87
13:H:86:ARG:NH1	13:H:133:ILE:HG13	1.89	0.87
13:H:2:PRO:HB2	37:H:215:HOH:O	1.75	0.87
14:I:39:VAL:HG13	14:I:106:GLY:O	1.72	0.87
5:9:92:G:H2'	5:9:93:A:C8	2.09	0.86
37:O:7544:HOH:O	6:A:6:GLY:HA3	1.75	0.86
11:F:91:VAL:HG12	11:F:92:GLY:N	1.90	0.86
1:O:24:G:N2	1:O:518:G:O2'	2.08	0.86
7:B:307:ARG:HB2	7:B:307:ARG:HH11	1.40	0.86
16:K:133:VAL:HA	37:K:343:HOH:O	1.74	0.86
5:9:56:A:H2'	5:9:57:A:H5''	1.57	0.86
1:O:1119:G:H22	1:O:1246:A:H2	1.23	0.86
23:R:77:VAL:HG12	23:R:81:ILE:HD11	1.58	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:C:236:THR:CG2	8:C:239:ALA:H	1.84	0.86
9:D:27:ILE:HD11	9:D:37:ALA:HB2	1.57	0.86
17:L:37:VAL:HG11	17:L:108:LYS:HG3	1.58	0.86
1:0:188:C:H5'	17:L:163:LEU:HD21	1.58	0.86
17:L:71:SER:HB2	17:L:92:THR:HG22	1.57	0.85
15:J:74:VAL:HG21	15:J:96:VAL:HG23	1.58	0.85
1:0:628:A:O2'	1:0:630:A:OP2	1.95	0.85
1:0:1118:A:H8	1:0:1119:G:H5'	1.42	0.85
23:R:10:VAL:HG11	26:U:36:ALA:HA	1.59	0.85
1:0:893:C:H4'	1:0:894:A:O5'	1.75	0.85
8:C:84:VAL:HG12	8:C:85:LYS:HG2	1.59	0.84
1:0:24:G:H22	1:0:518:G:HO2'	1.22	0.84
3:2:25:VAL:HG22	3:2:68:LYS:HG3	1.58	0.84
1:0:1679:C:H5'	37:0:5066:HOH:O	1.75	0.84
1:0:533:U:H4'	1:0:534:C:O5'	1.75	0.84
1:0:1819:G:H2'	1:0:1820:G:H4'	1.60	0.84
1:0:1884:G:O2'	1:0:1885:A:H5'	1.78	0.84
27:V:122:ARG:HH21	27:V:154:ARG:HD2	1.40	0.84
29:X:235:GLU:CD	29:X:235:GLU:H	1.81	0.84
7:B:321:PRO:HA	37:B:519:HOH:O	1.78	0.84
37:0:4206:HOH:O	17:L:157:LEU:HD11	1.78	0.84
1:0:1590:A:N6	1:0:1605:G:H1'	1.91	0.84
1:0:960:G:H4'	37:0:7054:HOH:O	1.77	0.84
14:I:75:PRO:HG2	14:I:105:LEU:HD21	1.60	0.83
37:0:3532:HOH:O	5:9:103:A:H4'	1.78	0.83
15:J:82:ARG:NH2	15:J:115:ARG:HG2	1.94	0.83
1:0:1118:A:C8	1:0:1119:G:H5'	2.13	0.83
1:0:1835:U:H2'	37:0:5187:HOH:O	1.78	0.83
7:B:27:ASN:H	7:B:27:ASN:HD22	1.24	0.83
1:0:1246:A:O2'	1:0:1247:A:H3'	1.78	0.83
1:0:1506:U:H2'	37:0:5535:HOH:O	1.78	0.83
1:0:2111:G:H1'	37:0:4903:HOH:O	1.78	0.83
8:C:1:MET:HG2	8:C:2:GLN:H	1.41	0.83
7:B:162:MET:HG3	7:B:310:ARG:HD3	1.61	0.83
1:0:2284:G:H5'	37:0:6604:HOH:O	1.78	0.83
2:1:41:HIS:H	2:1:45:ASN:HD22	1.25	0.83
1:0:1884:G:H4'	1:0:1885:A:OP1	1.77	0.82
21:P:75:ILE:HD13	21:P:84:ILE:HD11	1.60	0.82
1:0:2270:G:H4'	6:A:223:ARG:HH12	1.41	0.82
1:0:2825:C:H4'	1:0:2826:G:O5'	1.79	0.82
3:2:3:MET:O	3:2:90:PHE:HA	1.80	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1652:C:H1'	6:A:164:ARG:HD2	1.59	0.82
1:0:1688:G:H1	1:0:1692:C:H2'	1.43	0.82
37:0:7980:HOH:O	24:S:53:GLY:HA3	1.78	0.82
1:0:2330:U:H4'	1:0:2331:C:OP1	1.79	0.82
1:0:2638:G:H1'	37:0:4934:HOH:O	1.80	0.82
28:W:71:ARG:HB3	28:W:88:GLU:OE1	1.79	0.82
1:0:553:G:P	29:X:204:ARG:HH22	2.02	0.82
1:0:1166:A:H1'	1:0:1192:A:C2	2.14	0.81
1:0:1130:U:H2'	1:0:1131:G:O4'	1.80	0.81
1:0:1340:G:O2'	1:0:1341:A:H8	1.62	0.81
24:S:18:GLU:O	24:S:21:LYS:HG2	1.80	0.81
1:0:1105:C:H4'	1:0:1106:A:OP1	1.77	0.81
1:0:2503:A:HO2'	1:0:2504:A:H8	1.27	0.81
11:F:96:ALA:HA	37:F:201:HOH:O	1.80	0.81
1:0:1097:A:H5''	27:V:125:HIS:NE2	1.96	0.81
1:0:136:C:H2'	1:0:137:U:O4'	1.81	0.81
1:0:185:G:H4'	1:0:186:A:H4'	1.59	0.81
5:9:24:U:H4'	5:9:25:G:OP1	1.80	0.81
9:D:19:GLU:HG3	37:D:239:HOH:O	1.81	0.81
13:H:27:LYS:H	13:H:58:HIS:HD2	1.28	0.81
37:0:3650:HOH:O	17:L:146:GLN:HG2	1.80	0.81
24:S:71:VAL:HG11	24:S:90:PRO:HB3	1.61	0.81
19:N:47:ARG:HG3	19:N:47:ARG:HH11	1.46	0.81
1:0:182:G:H5'	37:0:3751:HOH:O	1.80	0.80
9:D:54:ALA:HB2	9:D:69:ILE:HD12	1.63	0.80
27:V:137:GLN:NE2	27:V:141:HIS:HE1	1.79	0.80
1:0:2321:A:H4'	1:0:2322:U:OP1	1.82	0.80
3:2:11:CYS:SG	3:2:20:HIS:NE2	2.54	0.80
7:B:51:VAL:HG23	7:B:330:VAL:HG22	1.61	0.80
24:S:71:VAL:HG13	24:S:91:LEU:O	1.81	0.80
1:0:1559:A:H1'	37:0:3551:HOH:O	1.79	0.80
1:0:1751:G:H2'	1:0:1752:G:H5''	1.64	0.80
37:0:4770:HOH:O	7:B:254:GLN:HG3	1.82	0.80
27:V:13:MET:HE2	27:V:18:GLN:HA	1.64	0.80
1:0:2312:G:H2'	1:0:2313:C:H5'	1.64	0.80
1:0:1430:G:H1'	1:0:1691:A:N6	1.96	0.80
11:F:34:ASN:HA	17:L:4:ALA:HB2	1.62	0.80
15:J:74:VAL:HG13	15:J:113:ILE:HG23	1.62	0.80
22:Q:119:VAL:HG21	22:Q:142:ASP:CG	2.02	0.80
27:V:130:HIS:O	27:V:136:GLY:HA3	1.82	0.80
27:V:52:VAL:HG22	27:V:53:ALA:N	1.96	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:2:65:THR:HG23	3:2:67:LEU:HG	1.62	0.80
13:H:56:ILE:HG22	13:H:61:LEU:HD22	1.63	0.80
1:0:1044:C:H5'	1:0:1045:G:OP2	1.82	0.79
13:H:28:ILE:HA	13:H:62:GLU:OE1	1.83	0.79
14:I:74:ARG:HH11	14:I:74:ARG:HB3	1.48	0.79
1:0:2577:A:H2'	37:0:6131:HOH:O	1.80	0.79
1:0:115:U:H1'	1:0:131:A:N7	1.97	0.79
1:0:2122:C:H3'	37:0:3439:HOH:O	1.80	0.79
1:0:790:A:H1'	1:0:1710:A:H2'	1.64	0.79
1:0:1776:A:H4'	1:0:1777:G:O5'	1.83	0.79
1:0:329:A:H4'	1:0:330:C:OP2	1.81	0.79
14:I:26:VAL:HG13	14:I:36:VAL:HG11	1.65	0.79
1:0:1260:G:H2'	37:0:4989:HOH:O	1.82	0.79
13:H:165:GLY:HA3	37:H:271:HOH:O	1.82	0.79
1:0:1771:U:O2'	30:Y:23:ARG:NH2	2.15	0.79
13:H:55:GLN:NE2	13:H:124:ARG:HE	1.79	0.79
21:P:21:ARG:HG2	21:P:22:GLY:H	1.48	0.79
27:V:52:VAL:HG22	27:V:53:ALA:H	1.48	0.79
1:0:2392:C:H4'	37:0:5308:HOH:O	1.83	0.79
6:A:71:PRO:HD2	6:A:74:VAL:HG21	1.64	0.79
37:9:350:HOH:O	21:P:25:PRO:HB2	1.81	0.79
22:Q:44:VAL:HG13	22:Q:89:LEU:HD22	1.65	0.79
1:0:1108:G:H4'	1:0:1109:U:OP1	1.82	0.79
14:I:131:THR:HG22	14:I:133:GLY:H	1.47	0.79
1:0:884:C:H2'	37:0:5983:HOH:O	1.82	0.79
8:C:115:LEU:HD21	8:C:243:VAL:CG1	2.12	0.79
24:S:19:ARG:HD3	24:S:67:LEU:O	1.83	0.78
1:0:198:A:H4'	1:0:199:A:O5'	1.83	0.78
1:0:2582:G:H4'	37:J:303:HOH:O	1.82	0.78
8:C:104:ASP:HA	8:C:107:ARG:HH12	1.47	0.78
18:M:34:LEU:HD13	18:M:47:LEU:HD21	1.65	0.78
13:H:86:ARG:HH11	13:H:133:ILE:HG13	1.45	0.78
1:0:2554:U:H4'	1:0:2555:C:OP1	1.82	0.78
7:B:55:ASN:HB3	7:B:63:GLU:HA	1.64	0.78
1:0:262:A:O2'	11:F:32:GLY:HA2	1.82	0.78
13:H:162:SER:HB2	13:H:163:PRO:CD	2.13	0.78
1:0:1719:G:H1'	37:0:3208:HOH:O	1.83	0.78
16:K:61:ALA:HA	37:K:309:HOH:O	1.82	0.78
18:M:49:THR:HG22	18:M:56:ASP:HB2	1.64	0.78
25:T:14:GLU:OE1	25:T:15:PRO:HD2	1.83	0.78
37:9:402:HOH:O	27:V:131:PRO:HB2	1.81	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:D:39:ASP:HB2	37:D:203:HOH:O	1.83	0.78
20:O:59:ARG:NH2	20:O:66:GLN:HE22	1.82	0.78
1:O:1342:C:O2'	1:O:1343:C:H5'	1.83	0.78
14:I:131:THR:HG22	14:I:133:GLY:N	1.99	0.78
1:O:2661:U:H3	1:O:2812:A:H62	1.32	0.78
22:Q:18:LEU:HB2	22:Q:143:VAL:HG13	1.64	0.78
5:9:78:G:N2	5:9:103:A:OP2	2.15	0.78
1:O:1593:C:H5'	20:O:116:SER:O	1.83	0.77
37:O:5010:HOH:O	22:Q:139:PRO:HD2	1.83	0.77
1:O:2610:U:H4'	37:O:3487:HOH:O	1.84	0.77
1:O:193:A:H3'	37:O:4603:HOH:O	1.84	0.77
1:O:2369:A:H3'	37:O:3788:HOH:O	1.83	0.77
7:B:141:ARG:HD2	7:B:163:GLU:OE2	1.84	0.77
12:G:12:ILE:N	12:G:13:PRO:HD3	2.00	0.77
16:K:35:ARG:HH12	16:K:43:HIS:HB3	1.48	0.77
16:K:67:ARG:O	16:K:71:GLU:HG3	1.85	0.77
1:O:2761:A:H4'	1:O:2762:C:OP1	1.83	0.77
7:B:238:ASN:ND2	7:B:240:GLY:H	1.82	0.77
15:J:29:LEU:HB3	15:J:55:VAL:CG1	2.14	0.77
18:M:24:LEU:HD13	21:P:26:PRO:HB3	1.65	0.77
3:2:70:ARG:HB3	37:2:221:HOH:O	1.83	0.77
37:9:347:HOH:O	18:M:147:ILE:HD12	1.84	0.77
1:O:1120:U:H5'	1:O:1121:G:OP2	1.84	0.77
1:O:2554:U:H2'	1:O:2576:A:H61	1.49	0.77
1:O:2555:C:H3'	37:O:3256:HOH:O	1.85	0.77
1:O:1164:U:H4'	1:O:1165:G:OP1	1.83	0.77
7:B:7:ARG:HG2	7:B:7:ARG:HH11	1.50	0.77
27:V:122:ARG:NH2	27:V:154:ARG:HD2	1.99	0.77
1:O:1984:U:H4'	1:O:1985:U:O5'	1.85	0.77
17:L:38:VAL:O	17:L:63:VAL:HG13	1.85	0.77
1:O:2263:G:H4'	17:L:70:GLY:CA	2.15	0.77
20:O:115:SER:OG	20:O:118:GLN:HG3	1.85	0.77
28:W:78:GLU:HG2	28:W:79:GLU:H	1.48	0.77
30:Y:75:ALA:HB3	37:Y:216:HOH:O	1.85	0.77
10:E:137:ASP:OD1	10:E:139:GLU:HB2	1.85	0.76
11:F:57:GLU:O	11:F:61:MET:HG3	1.85	0.76
17:L:67:ILE:HA	37:L:305:HOH:O	1.85	0.76
28:W:66:THR:HG23	28:W:67:PRO:HD2	1.65	0.76
1:O:2310:G:OP2	13:H:114:PRO:HD2	1.84	0.76
5:9:76:G:H3'	5:9:77:A:H5''	1.67	0.76
13:H:139:ASP:N	13:H:140:PRO:HD3	2.00	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:J:64:MET:HA	15:J:67:GLN:NE2	2.00	0.76
17:L:87:MET:HB2	17:L:91:ILE:HD11	1.67	0.76
7:B:195:ARG:HD2	7:B:324:ASP:OD1	1.85	0.76
7:B:86:ALA:HA	37:B:502:HOH:O	1.85	0.76
13:H:62:GLU:O	13:H:66:VAL:HG23	1.84	0.76
1:O:2815:G:H4'	1:O:2816:A:OP2	1.83	0.76
11:F:21:GLU:O	11:F:24:ARG:HG3	1.86	0.76
13:H:142:VAL:HG13	37:H:236:HOH:O	1.85	0.76
18:M:132:ASN:O	18:M:135:VAL:HG12	1.85	0.76
27:V:137:GLN:HE21	27:V:141:HIS:CE1	1.97	0.76
37:O:4355:HOH:O	6:A:192:VAL:HB	1.84	0.76
17:L:161:ARG:HD2	37:L:391:HOH:O	1.85	0.76
29:X:109:LEU:HA	37:X:440:HOH:O	1.85	0.76
1:O:1059:G:H2'	37:O:6358:HOH:O	1.85	0.76
1:O:1689:A:H62	22:Q:131:GLY:HA2	1.50	0.76
6:A:173:GLY:O	6:A:176:HIS:HB3	1.84	0.76
22:Q:82:GLU:HG3	22:Q:83:LYS:H	1.50	0.76
6:A:71:PRO:HG2	6:A:91:GLY:HA2	1.66	0.75
10:E:68:HIS:O	10:E:72:MET:HG3	1.86	0.75
1:O:2064:U:H2'	1:O:2065:C:H6	1.50	0.75
6:A:179:MET:HG2	6:A:186:TRP:HB2	1.69	0.75
3:2:46:ILE:CG2	17:L:87:MET:HG2	2.12	0.75
18:M:61:ALA:HB3	18:M:88:ALA:HB2	1.67	0.75
29:X:189:ASN:C	29:X:189:ASN:HD22	1.90	0.75
1:O:1137:G:H5''	1:O:1138:G:OP1	1.86	0.75
8:C:104:ASP:HA	8:C:107:ARG:NH1	2.02	0.75
1:O:196:G:O2'	1:O:198:A:N7	2.19	0.75
1:O:2074:A:O2'	1:O:2076:U:OP2	2.05	0.75
1:O:2092:G:O6	1:O:2649:A:H2'	1.86	0.75
1:O:542:A:H5'	1:O:542:A:H8	1.51	0.75
1:O:858:U:H2'	1:O:859:C:C6	2.22	0.75
1:O:1784:U:O2'	20:O:78:GLY:HA3	1.87	0.75
3:2:46:ILE:HG21	17:L:87:MET:CG	2.12	0.75
6:A:153:ARG:HH11	6:A:153:ARG:HB2	1.52	0.75
1:O:2243:C:O2'	17:L:25:TRP:HZ2	1.69	0.75
1:O:2816:A:H5''	1:O:2817:G:H5'	1.67	0.74
7:B:275:GLY:O	7:B:291:ASP:HA	1.87	0.74
17:L:164:THR:HG23	17:L:167:GLY:H	1.51	0.74
1:O:541:C:H2'	1:O:542:A:C5'	2.16	0.74
13:H:55:GLN:HE22	13:H:91:HIS:CD2	2.04	0.74
1:O:192:A:H4'	17:L:176:GLN:HE22	1.52	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:N:87:THR:O	19:N:91:GLN:HG3	1.85	0.74
1:O:1355:A:O2'	1:O:1356:A:H3'	1.88	0.74
20:O:87:ARG:HA	37:O:236:HOH:O	1.86	0.74
1:O:1086:A:N6	27:V:11:VAL:HG11	2.02	0.74
4:5:40:ARG:HG2	4:5:40:ARG:O	1.85	0.74
9:D:99:ASP:HB3	9:D:103:ASN:H	1.53	0.74
18:M:86:LEU:O	18:M:90:LEU:HG	1.87	0.74
1:O:1249:U:H2'	1:O:1250:C:C6	2.23	0.74
1:O:1342:C:C2'	1:O:1343:C:H5'	2.16	0.74
1:O:2300:A:H4'	1:O:2301:A:O5'	1.85	0.74
1:O:282:C:H1'	1:O:368:C:N4	2.02	0.74
8:C:78:ARG:HH11	8:C:78:ARG:HG3	1.51	0.74
1:O:289:G:O2'	1:O:290:C:H5'	1.88	0.74
1:O:2761:A:O2'	1:O:2762:C:H3'	1.88	0.74
18:M:183:ASP:OD2	18:M:186:LEU:HD12	1.87	0.74
1:O:1450:C:O2'	1:O:1494:A:H5'	1.86	0.74
1:O:2115:U:H2'	1:O:2116:U:C6	2.22	0.74
5:9:25:G:H3'	5:9:26:C:C5'	2.18	0.74
1:O:1589:G:H22	1:O:1605:G:H2'	1.51	0.74
1:O:1641:A:H2'	1:O:1642:A:H5'	1.69	0.74
1:O:2546:U:H5'	37:O:6374:HOH:O	1.87	0.74
1:O:271:C:H4'	1:O:272:A:C5'	2.18	0.74
3:2:46:ILE:HB	37:L:302:HOH:O	1.87	0.73
6:A:100:PRO:HG2	6:A:103:VAL:HG21	1.69	0.73
6:A:140:LEU:HB3	6:A:141:PRO:HD2	1.70	0.73
14:I:107:ASN:HD21	14:I:109:TYR:HB2	1.52	0.73
18:M:48:VAL:CG1	18:M:55:ASP:HB3	2.18	0.73
7:B:179:LEU:O	7:B:183:GLU:HG2	1.87	0.73
28:W:37:LEU:HD13	28:W:85:VAL:HG21	1.69	0.73
17:L:172:GLY:O	17:L:183:VAL:HG11	1.89	0.73
5:9:69:U:OP1	18:M:4:PRO:HG3	1.88	0.73
1:O:962:C:H1'	18:M:5:ARG:NH1	2.04	0.73
1:O:1209:C:H2'	1:O:1210:G:H8	1.53	0.73
12:G:12:ILE:HD12	37:G:418:HOH:O	1.88	0.73
15:J:64:MET:HA	15:J:67:GLN:HE21	1.53	0.73
17:L:87:MET:HB2	17:L:91:ILE:CD1	2.18	0.73
1:O:1292:G:H4'	37:O:3628:HOH:O	1.88	0.73
1:O:2790:C:H5'	37:O:7741:HOH:O	1.88	0.73
1:O:2811:A:H4'	1:O:2812:A:O5'	1.87	0.73
1:O:771:G:P	17:L:79:LYS:HG3	2.28	0.73
18:M:87:LEU:HD12	18:M:186:LEU:HD21	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:496:G:H4'	1:0:497:A:OP1	1.86	0.73
1:0:761:A:H4'	1:0:762:C:O5'	1.88	0.73
8:C:72:LYS:HG2	8:C:77:ALA:HA	1.70	0.73
19:N:25:VAL:HG23	19:N:26:TRP:N	2.03	0.73
1:0:1589:G:H4'	37:0:6643:HOH:O	1.88	0.73
1:0:2552:C:O2'	1:0:2553:A:H3'	1.89	0.73
37:0:4378:HOH:O	14:I:65:ASN:HB3	1.87	0.73
37:J:340:HOH:O	25:T:37:GLU:HB3	1.88	0.73
1:0:157:G:H4'	17:L:95:LYS:HE2	1.70	0.73
1:0:675:U:H2'	1:0:676:C:H5'	1.71	0.73
1:0:1293:U:H5'	29:X:154:ARG:HH21	1.54	0.73
5:9:77:A:O2'	5:9:78:G:H4'	1.89	0.73
9:D:135:VAL:HG22	9:D:136:ARG:N	2.02	0.73
18:M:67:ALA:HA	18:M:71:TRP:HB3	1.71	0.72
1:0:2416:G:H2'	1:0:2417:C:C6	2.24	0.72
1:0:882:A:H5''	1:0:883:U:OP2	1.87	0.72
4:5:35:VAL:HG12	4:5:39:VAL:CG1	2.18	0.72
1:0:1853:C:H4'	6:A:217:ARG:NH2	2.03	0.72
37:0:4929:HOH:O	10:E:143:GLN:HG2	1.89	0.72
13:H:71:TYR:C	13:H:73:GLN:H	1.92	0.72
1:0:1603:A:H5'	1:0:1605:G:O4'	1.89	0.72
5:9:56:A:C2'	5:9:57:A:H5''	2.18	0.72
1:0:1446:U:H3'	23:R:55:GLN:OE1	1.89	0.72
1:0:1730:G:H5'	1:0:1731:C:C6	2.25	0.72
1:0:907:A:H2'	1:0:908:A:H8	1.54	0.72
3:2:60:LYS:HG3	3:2:61:PRO:HD2	1.72	0.72
3:2:86:GLY:HA2	37:2:246:HOH:O	1.88	0.72
8:C:127:ARG:HD3	8:C:129:HIS:HE1	1.54	0.72
3:2:24:LYS:HE3	3:2:90:PHE:CE1	2.21	0.72
1:0:2441:U:H4'	16:K:53:ARG:HD2	1.71	0.72
31:Z:21:ARG:HD2	31:Z:37:CYS:SG	2.29	0.72
1:0:1160:G:H5'	1:0:1161:A:C5'	2.05	0.72
1:0:272:A:H3'	37:0:5183:HOH:O	1.89	0.72
10:E:152:THR:HG21	10:E:165:GLY:HA2	1.72	0.72
4:5:35:VAL:HG12	4:5:39:VAL:HG12	1.69	0.72
15:J:81:ARG:HB2	15:J:87:ARG:NH1	2.04	0.72
26:U:27:LEU:HA	26:U:49:LEU:HD13	1.71	0.72
1:0:1450:C:H4'	1:0:1451:C:OP2	1.89	0.72
1:0:2474:A:H4'	1:0:2475:C:O5'	1.90	0.72
7:B:154:VAL:HG12	7:B:156:LYS:HG2	1.71	0.72
8:C:5:ILE:HD11	8:C:16:VAL:CG2	2.20	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:H:31:PHE:CD2	13:H:85:ILE:HG23	2.25	0.72
27:V:35:VAL:HG23	27:V:41:TYR:CD2	2.25	0.72
4:5:29:LYS:O	4:5:33:VAL:HG23	1.90	0.72
6:A:35:GLY:O	6:A:36:ASP:HB3	1.90	0.72
27:V:141:HIS:HB2	27:V:146:ILE:HG12	1.70	0.72
1:0:1730:G:H5'	1:0:1731:C:H6	1.55	0.72
1:0:1819:G:H5'	37:0:5467:HOH:O	1.90	0.72
1:0:1923:G:H4'	3:2:31:THR:O	1.90	0.72
1:0:2483:A:H5'	1:0:2484:U:OP2	1.89	0.72
10:E:23:GLU:HG2	10:E:28:SER:HB3	1.71	0.72
1:0:2072:G:H2'	37:0:5026:HOH:O	1.89	0.71
25:T:9:CYS:SG	25:T:11:THR:HG23	2.29	0.71
26:U:12:THR:HG22	26:U:15:GLU:CG	2.12	0.71
2:1:39:ARG:HG2	37:1:142:HOH:O	1.89	0.71
14:I:74:ARG:O	14:I:78:ILE:HG12	1.90	0.71
24:S:43:ASN:HD22	24:S:108:ARG:NH2	1.88	0.71
1:0:2135:A:O4'	1:0:2243:C:N4	2.23	0.71
1:0:2415:A:H2'	1:0:2416:G:H5'	1.73	0.71
1:0:2469:A:H4'	37:0:3308:HOH:O	1.88	0.71
11:F:91:VAL:CG1	11:F:92:GLY:H	1.94	0.71
13:H:162:SER:CB	13:H:163:PRO:HD3	2.19	0.71
17:L:57:LYS:HG2	17:L:58:GLN:H	1.53	0.71
1:0:1735:C:O2'	1:0:1736:A:H5'	1.90	0.71
1:0:939:A:H4'	1:0:940:G:O5'	1.88	0.71
8:C:25:PRO:HG2	37:C:402:HOH:O	1.90	0.71
9:D:95:THR:C	9:D:97:GLN:H	1.90	0.71
1:0:2755:G:H1'	37:0:4723:HOH:O	1.91	0.71
2:1:36:ASN:HA	37:1:132:HOH:O	1.91	0.71
8:C:61:PHE:HB3	37:C:467:HOH:O	1.90	0.71
17:L:68:ARG:HD3	17:L:68:ARG:O	1.90	0.71
23:R:6:LYS:HB2	23:R:27:ALA:O	1.91	0.71
1:0:1829:A:H61	30:Y:18:TYR:H	1.38	0.71
1:0:2421:G:H1'	37:0:3206:HOH:O	1.90	0.71
5:9:25:G:H3'	5:9:26:C:H5'	1.72	0.71
27:V:68:THR:HG23	27:V:69:ARG:HG2	1.73	0.71
37:0:7115:HOH:O	29:X:165:GLU:HB3	1.89	0.71
1:0:2659:U:H4'	37:Q:334:HOH:O	1.91	0.71
1:0:31:C:OP2	24:S:8:ARG:HD2	1.90	0.71
6:A:9:ARG:HG2	6:A:16:PHE:CD2	2.25	0.71
1:0:1244:U:OP1	14:I:18:ILE:HD13	1.90	0.71
17:L:66:ALA:O	17:L:67:ILE:HD13	1.90	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:S:69:LYS:O	24:S:71:VAL:HG23	1.90	0.71
28:W:20:GLU:HG3	28:W:21:PRO:HD2	1.71	0.71
5:9:3:A:N6	5:9:22:G:H1'	2.06	0.71
6:A:101:GLU:OE2	6:A:131:HIS:HB2	1.91	0.71
7:B:216:LYS:HA	37:B:567:HOH:O	1.91	0.71
8:C:129:HIS:CE1	8:C:231:ARG:HA	2.26	0.71
13:H:58:HIS:HA	13:H:61:LEU:HD23	1.73	0.71
27:V:21:LEU:HD22	27:V:26:ILE:CD1	2.17	0.71
30:Y:31:ILE:O	30:Y:35:LYS:HG3	1.91	0.71
7:B:217:ARG:HG3	7:B:257:THR:HG22	1.73	0.71
8:C:242:GLU:HG3	37:C:439:HOH:O	1.90	0.71
1:0:2081:A:H4'	14:I:69:TYR:CE1	2.26	0.71
1:0:1160:G:C5'	1:0:1161:A:H5'	2.06	0.70
1:0:1417:G:O2'	1:0:1418:U:H6	1.73	0.70
1:0:631:A:N7	1:0:2074:A:H5'	2.05	0.70
37:0:7713:HOH:O	21:P:92:ARG:HG3	1.91	0.70
24:S:48:VAL:HG22	24:S:97:ARG:C	2.11	0.70
1:0:138:U:OP2	1:0:139:C:H5	1.73	0.70
1:0:1505:U:H5''	1:0:1506:U:OP2	1.91	0.70
1:0:328:U:H5''	1:0:329:A:OP2	1.91	0.70
3:2:11:CYS:SG	3:2:71:CYS:HB2	2.30	0.70
1:0:1811:A:C2	1:0:2752:C:H1'	2.25	0.70
18:M:119:GLN:O	18:M:123:ILE:HG13	1.91	0.70
29:X:155:ARG:HD2	37:X:449:HOH:O	1.91	0.70
6:A:162:GLY:HA3	30:Y:73:THR:HG21	1.74	0.70
1:0:105:G:O2'	1:0:106:A:H5'	1.91	0.70
1:0:2419:U:H5''	1:0:2420:G:H5'	1.71	0.70
6:A:88:ILE:HG22	6:A:88:ILE:O	1.92	0.70
10:E:11:VAL:HG12	10:E:12:ASP:N	2.07	0.70
18:M:62:HIS:HB3	18:M:65:ASP:OD1	1.92	0.70
1:0:2783:A:H2'	1:0:2784:A:C8	2.26	0.70
16:K:143:THR:HG22	16:K:144:ASP:N	2.07	0.70
1:0:1417:G:HO2'	1:0:1418:U:H6	1.40	0.70
4:5:35:VAL:O	4:5:39:VAL:HG13	1.91	0.70
37:9:397:HOH:O	18:M:107:ASN:HB3	1.91	0.70
37:0:4875:HOH:O	31:Z:46:ARG:HA	1.91	0.70
1:0:2874:G:H3'	37:0:5041:HOH:O	1.91	0.70
9:D:57:THR:HG23	9:D:63:ILE:HG22	1.74	0.70
10:E:69:ILE:HA	10:E:72:MET:CE	2.22	0.70
13:H:150:LYS:HB2	13:H:157:ILE:HD12	1.74	0.70
27:V:4:LEU:HD23	27:V:54:PHE:HB3	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1701:A:H4'	1:0:1702:U:O5'	1.91	0.70
1:0:2656:G:O2'	1:0:2657:G:H5'	1.91	0.70
5:9:48:C:H4'	18:M:141:ARG:HH21	1.55	0.70
6:A:199:HIS:HD2	6:A:201:PHE:N	1.86	0.70
8:C:214:THR:HG22	8:C:216:SER:H	1.57	0.70
19:N:105:ASN:HD21	19:N:109:SER:H	1.37	0.70
24:S:41:ARG:HH11	24:S:41:ARG:HG2	1.57	0.70
27:V:151:GLU:O	27:V:154:ARG:HB3	1.91	0.70
27:V:88:THR:HG23	27:V:110:GLN:NE2	2.07	0.69
1:0:569:A:H5''	1:0:587:A:N1	2.06	0.69
7:B:175:LEU:C	7:B:175:LEU:HD23	2.13	0.69
1:0:204:A:H2'	1:0:205:U:H5'	1.74	0.69
1:0:2463:A:H4'	1:0:2464:C:OP2	1.91	0.69
3:2:47:GLY:HA2	17:L:83:SER:HB2	1.74	0.69
8:C:72:LYS:HG2	8:C:77:ALA:CA	2.21	0.69
15:J:10:GLN:H	15:J:10:GLN:HE21	1.37	0.69
9:D:154:LYS:HD2	9:D:154:LYS:N	2.03	0.69
9:D:19:GLU:O	9:D:20:LYS:HG2	1.92	0.69
17:L:87:MET:SD	17:L:91:ILE:HD11	2.32	0.69
18:M:113:SER:HB2	37:M:301:HOH:O	1.92	0.69
27:V:88:THR:HG22	27:V:89:ASP:H	1.57	0.69
1:0:2303:A:H1'	37:0:5754:HOH:O	1.92	0.69
1:0:2493:C:H2'	1:0:2525:G:H1	1.56	0.69
1:0:450:C:H1'	37:0:4255:HOH:O	1.93	0.69
1:0:148:A:O2'	1:0:149:G:H5'	1.93	0.69
1:0:2791:U:O2'	1:0:2792:A:H5''	1.93	0.69
15:J:115:ARG:HG3	15:J:116:GLU:N	2.08	0.69
21:P:75:ILE:CD1	21:P:84:ILE:HD11	2.21	0.69
1:0:281:U:H2'	1:0:282:C:O4'	1.93	0.69
1:0:545:G:H8	1:0:545:G:H5'	1.57	0.69
1:0:2435:U:OP1	3:2:28:GLY:HA3	1.92	0.69
1:0:1104:C:H4'	14:I:88:PRO:HD3	1.75	0.69
27:V:81:ASP:OD1	27:V:92:ASP:HB2	1.90	0.69
1:0:1328:A:OP1	29:X:169:ARG:HD2	1.92	0.69
1:0:2269:C:H2'	1:0:2270:G:O4'	1.92	0.69
13:H:4:ALA:HB3	37:H:215:HOH:O	1.91	0.69
14:I:127:ILE:N	35:I:202:CL:CL	2.57	0.69
17:L:9:ARG:HG3	37:L:417:HOH:O	1.91	0.69
1:0:1697:G:H1'	37:0:3233:HOH:O	1.93	0.69
1:0:2636:C:H3'	37:0:4417:HOH:O	1.92	0.69
37:0:4533:HOH:O	27:V:10:GLU:HG2	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1116:U:H3	1:0:1246:A:H62	1.41	0.69
1:0:1486:A:H3'	1:0:1486:A:OP1	1.93	0.69
1:0:2453:G:H5''	37:K:306:HOH:O	1.92	0.69
1:0:2654:C:H5'	37:0:7489:HOH:O	1.92	0.69
7:B:162:MET:CE	7:B:308:LEU:HD21	2.21	0.69
1:0:1340:G:O2'	1:0:1341:A:C8	2.45	0.69
1:0:1579:C:H4'	1:0:1580:A:OP1	1.91	0.68
6:A:88:ILE:HD13	6:A:100:PRO:HD3	1.74	0.68
9:D:27:ILE:HG22	9:D:28:GLY:N	2.04	0.68
17:L:155:HIS:CE1	17:L:158:ARG:HE	2.10	0.68
19:N:77:ALA:HA	19:N:96:VAL:O	1.93	0.68
1:0:21:G:H4'	22:Q:2:ILE:HG22	1.74	0.68
1:0:587:A:H5''	1:0:588:G:OP1	1.94	0.68
20:O:10:ALA:HA	20:O:13:VAL:HG12	1.75	0.68
1:0:1525:G:H2'	1:0:1526:A:C8	2.27	0.68
1:0:339:A:H4'	1:0:340:A:OP1	1.93	0.68
1:0:962:C:H5''	37:0:4692:HOH:O	1.93	0.68
37:0:7228:HOH:O	3:2:61:PRO:HD3	1.93	0.68
5:9:55:U:H5''	5:9:56:A:OP1	1.93	0.68
6:A:27:LEU:HD11	6:A:55:VAL:HG21	1.75	0.68
17:L:88:VAL:HG12	37:L:324:HOH:O	1.93	0.68
1:0:2488:A:H1'	37:0:6810:HOH:O	1.91	0.68
1:0:25:A:H5'	37:0:5934:HOH:O	1.93	0.68
16:K:37:LYS:HA	37:K:341:HOH:O	1.94	0.68
1:0:1831:U:H2'	1:0:1832:G:H5'	1.75	0.68
6:A:93:THR:HG23	6:A:154:ALA:O	1.94	0.68
7:B:225:GLY:HA3	37:B:517:HOH:O	1.92	0.68
8:C:104:ASP:O	8:C:108:GLN:HG3	1.93	0.68
8:C:165:ASP:O	8:C:168:ARG:HB3	1.92	0.68
1:0:1596:U:H2'	1:0:1598:A:OP2	1.93	0.68
1:0:870:G:H2'	1:0:871:G:C5'	2.16	0.68
7:B:201:ASP:HB2	7:B:312:ARG:HD2	1.74	0.68
10:E:133:VAL:HG12	10:E:141:VAL:HG13	1.75	0.68
13:H:14:TYR:H	13:H:91:HIS:CE1	2.12	0.68
14:I:36:VAL:HB	14:I:101:VAL:HG13	1.75	0.68
17:L:97:ILE:HD12	17:L:127:LYS:HD2	1.75	0.68
19:N:105:ASN:HD21	19:N:109:SER:N	1.92	0.68
1:0:554:G:H4'	1:0:555:U:O5'	1.93	0.68
5:9:28:U:H2'	5:9:29:C:C6	2.28	0.68
6:A:51:ARG:HB2	37:A:439:HOH:O	1.93	0.68
7:B:215:VAL:HB	7:B:234:ARG:HH12	1.58	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1400:C:O2'	1:0:1401:G:H5'	1.94	0.68
17:L:35:PRO:CG	17:L:38:VAL:HG23	2.24	0.68
21:P:86:VAL:HG13	21:P:91:LEU:HD11	1.76	0.68
1:0:2489:G:H1'	37:0:6038:HOH:O	1.92	0.68
5:9:41:C:O4'	9:D:50:VAL:HG23	1.94	0.68
11:F:13:GLU:OE2	11:F:78:GLU:HG2	1.94	0.68
29:X:189:ASN:HA	29:X:217:ILE:HD11	1.76	0.68
30:Y:38:LYS:HE2	30:Y:45:LYS:HE2	1.75	0.68
1:0:130:C:H2'	37:0:3236:HOH:O	1.94	0.68
1:0:2403:C:H3'	37:0:4823:HOH:O	1.94	0.68
1:0:1834:C:H2'	1:0:1840:A:N6	2.09	0.67
1:0:2751:C:H3'	37:0:3316:HOH:O	1.94	0.67
5:9:12:C:H2'	37:9:361:HOH:O	1.93	0.67
6:A:110:SER:HB2	6:A:117:LYS:HG3	1.76	0.67
7:B:238:ASN:HD22	7:B:240:GLY:N	1.90	0.67
26:U:12:THR:CG2	26:U:15:GLU:HG3	2.18	0.67
1:0:30:U:H4'	1:0:31:C:OP1	1.92	0.67
1:0:485:A:H4'	1:0:486:A:H5'	1.76	0.67
9:D:166:ILE:HD12	37:D:226:HOH:O	1.95	0.67
17:L:20:ILE:HA	17:L:23:LEU:HB2	1.76	0.67
1:0:547:A:H3'	37:0:4319:HOH:O	1.92	0.67
1:0:877:G:H1'	37:0:5343:HOH:O	1.94	0.67
18:M:58:LEU:N	18:M:58:LEU:HD12	2.10	0.67
37:0:4891:HOH:O	24:S:9:LYS:HD2	1.94	0.67
1:0:1771:U:H4'	30:Y:20:LEU:HD21	1.75	0.67
11:F:20:LEU:O	11:F:23:ALA:HB3	1.94	0.67
13:H:118:PRO:HD2	37:H:273:HOH:O	1.94	0.67
37:0:5386:HOH:O	17:L:14:ARG:HG2	1.94	0.67
1:0:506:G:H3'	37:0:3965:HOH:O	1.92	0.67
1:0:2536:C:H3'	37:0:5890:HOH:O	1.94	0.67
1:0:509:A:H4'	1:0:511:A:H5''	1.77	0.67
9:D:23:VAL:HG12	9:D:130:VAL:HG22	1.76	0.67
30:Y:48:LYS:HG2	37:Y:214:HOH:O	1.93	0.67
1:0:1123:A:N1	1:0:1238:C:H5'	2.10	0.67
1:0:2414:A:H2'	1:0:2415:A:C8	2.30	0.67
1:0:2783:A:H3'	37:0:4874:HOH:O	1.93	0.67
1:0:2887:G:H2'	1:0:2888:U:C6	2.30	0.67
1:0:659:A:H5''	37:0:4678:HOH:O	1.94	0.67
27:V:80:ASP:O	27:V:84:VAL:HG23	1.95	0.67
1:0:2114:C:O2'	1:0:2115:U:H5'	1.94	0.67
1:0:631:A:C6	1:0:2074:A:H5'	2.30	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:153:ARG:CB	6:A:153:ARG:HH11	2.07	0.67
8:C:118:THR:HG22	8:C:137:PRO:HB3	1.76	0.67
1:O:12:U:H2'	1:O:13:G:H5'	1.76	0.67
1:O:2578:G:H5'	1:O:2578:G:H8	1.60	0.67
1:O:746:A:H4'	1:O:747:G:H5'	1.77	0.67
5:9:114:G:H2'	5:9:115:C:C6	2.30	0.67
7:B:72:THR:O	37:B:501:HOH:O	2.12	0.67
8:C:218:VAL:HG12	37:C:411:HOH:O	1.94	0.67
22:Q:99:ALA:HB1	22:Q:109:MET:CE	2.23	0.67
1:O:2379:G:H4'	1:O:2380:A:C5'	2.24	0.67
1:O:2769:C:C2'	1:O:2770:G:H5'	2.25	0.67
1:O:31:C:H2'	37:O:4680:HOH:O	1.95	0.67
7:B:168:GLY:H	7:B:174:ARG:HD3	1.60	0.67
9:D:99:ASP:CB	9:D:103:ASN:H	2.08	0.67
13:H:150:LYS:O	13:H:150:LYS:HG2	1.94	0.67
17:L:43:PRO:HG3	17:L:62:VAL:HG21	1.77	0.67
1:O:1051:C:H2'	1:O:1052:G:O4'	1.95	0.66
1:O:1151:G:O2'	1:O:1214:G:N2	2.28	0.66
1:O:1579:C:O2'	1:O:1580:A:C8	2.49	0.66
1:O:185:G:H4'	1:O:186:A:OP1	1.95	0.66
1:O:541:C:C2'	1:O:542:A:H5''	2.24	0.66
9:D:64:ARG:HB3	9:D:67:ASP:OD2	1.95	0.66
13:H:47:GLU:HB3	13:H:133:ILE:CD1	2.24	0.66
24:S:43:ASN:ND2	24:S:108:ARG:CZ	2.58	0.66
24:S:48:VAL:HG22	24:S:97:ARG:O	1.94	0.66
29:X:95:THR:N	29:X:237:GLU:N	2.43	0.66
1:O:1316:G:O2'	1:O:1340:G:N2	2.28	0.66
1:O:544:G:H2'	1:O:545:G:H5''	1.77	0.66
10:E:31:ARG:NH1	37:E:201:HOH:O	2.28	0.66
15:J:39:GLY:HA2	37:J:301:HOH:O	1.96	0.66
1:O:339:A:O2'	1:O:341:C:OP2	2.13	0.66
20:O:101:GLN:NE2	20:O:131:PHE:HB2	2.09	0.66
27:V:13:MET:HE1	27:V:17:ILE:HG22	1.77	0.66
29:X:222:GLU:HB2	37:X:429:HOH:O	1.95	0.66
1:O:1386:G:H1'	37:O:3331:HOH:O	1.95	0.66
1:O:1590:A:H61	1:O:1605:G:H1'	1.60	0.66
1:O:1855:G:H5'	1:O:1858:A:H1'	1.78	0.66
1:O:1189:A:H1'	1:O:1209:C:H1'	1.78	0.66
1:O:639:A:H2'	1:O:640:G:C8	2.31	0.66
9:D:134:LEU:HD11	9:D:166:ILE:HD11	1.78	0.66
15:J:22:ASP:HB2	37:J:307:HOH:O	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:T:45:GLU:HB2	25:T:48:ASN:ND2	2.11	0.66
1:O:1308:A:H4'	8:C:225:PRO:O	1.95	0.66
1:O:2278:U:H5'	37:O:3474:HOH:O	1.95	0.66
1:O:2670:G:O2'	1:O:2671:U:H5'	1.96	0.66
1:O:70:A:H4'	37:O:6278:HOH:O	1.94	0.66
1:O:817:G:O2'	1:O:818:A:H8	1.78	0.66
22:Q:39:THR:HB	22:Q:42:GLU:HG3	1.77	0.66
24:S:38:ARG:HG3	24:S:38:ARG:HH11	1.61	0.66
27:V:122:ARG:HH11	27:V:122:ARG:HG2	1.60	0.66
1:O:1691:A:H5''	1:O:1692:C:OP2	1.95	0.66
1:O:1878:G:H1'	37:O:5266:HOH:O	1.95	0.66
13:H:48:LEU:HG	13:H:157:ILE:HG21	1.77	0.66
16:K:142:LEU:HG	16:K:146:GLY:HA3	1.78	0.66
18:M:89:GLY:O	18:M:92:ALA:HB3	1.96	0.66
27:V:48:VAL:HG12	27:V:52:VAL:CG1	2.25	0.66
1:O:1115:U:H2'	1:O:1116:U:H6	1.60	0.66
1:O:1118:A:H2'	1:O:1119:G:H5''	1.78	0.66
1:O:558:C:H5'	37:O:3550:HOH:O	1.94	0.66
1:O:1187:U:H2'	37:O:4127:HOH:O	1.96	0.66
7:B:304:PRO:HD2	7:B:307:ARG:NH1	2.11	0.66
10:E:93:MET:CE	10:E:165:GLY:H	2.09	0.66
10:E:93:MET:HE1	10:E:165:GLY:N	2.11	0.66
17:L:172:GLY:O	17:L:183:VAL:HG21	1.96	0.66
25:T:45:GLU:HB2	25:T:48:ASN:HD22	1.61	0.66
27:V:52:VAL:CG2	27:V:53:ALA:H	2.08	0.66
2:1:41:HIS:N	2:1:45:ASN:HD22	1.94	0.66
6:A:65:ARG:O	6:A:66:ARG:HG3	1.94	0.66
20:O:13:VAL:HG21	20:O:41:ARG:HG2	1.78	0.66
1:O:1215:A:O2'	1:O:1216:G:O4'	2.13	0.65
1:O:1341:A:O2'	1:O:1342:C:O4'	2.13	0.65
1:O:1438:G:H5''	1:O:1439:C:OP2	1.96	0.65
1:O:2472:C:O2'	1:O:2634:G:H4'	1.96	0.65
1:O:541:C:H2'	1:O:542:A:H5'	1.78	0.65
1:O:938:G:H2'	37:O:5935:HOH:O	1.95	0.65
6:A:217:ARG:HG2	6:A:229:ALA:HB2	1.77	0.65
17:L:38:VAL:C	17:L:63:VAL:HG13	2.17	0.65
27:V:64:THR:O	27:V:68:THR:HG22	1.95	0.65
1:O:541:C:H2'	1:O:542:A:H5''	1.75	0.65
1:O:1886:A:N3	37:O:3227:HOH:O	2.28	0.65
13:H:149:ALA:C	13:H:151:MET:H	2.00	0.65
1:O:236:A:H4'	1:O:237:G:OP1	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:450:C:OP1	8:C:184:ARG:NH2	2.25	0.65
1:O:816:G:C6	1:O:817:G:N1	2.64	0.65
8:C:115:LEU:HD13	8:C:223:LEU:HD21	1.78	0.65
8:C:233:THR:HG22	8:C:234:VAL:H	1.62	0.65
11:F:48:VAL:HA	11:F:97:ALA:HA	1.79	0.65
28:W:21:PRO:HG2	28:W:24:LYS:HD3	1.79	0.65
1:O:2292:C:O2'	1:O:2464:C:OP2	2.15	0.65
1:O:338:C:H4'	8:C:174:ILE:HD11	1.78	0.65
6:A:168:PRO:O	6:A:170:VAL:HG23	1.97	0.65
7:B:305:ASP:O	7:B:306:LYS:HB2	1.96	0.65
11:F:99:THR:HA	37:F:202:HOH:O	1.95	0.65
16:K:130:ARG:HA	37:K:367:HOH:O	1.95	0.65
24:S:43:ASN:HD22	24:S:108:ARG:CZ	2.10	0.65
31:Z:28:HIS:CD2	31:Z:30:LYS:HB2	2.31	0.65
1:O:1741:U:H5'	1:O:1742:A:OP1	1.97	0.65
1:O:2353:A:H5''	1:O:2354:A:OP1	1.96	0.65
1:O:674:A:H2'	37:O:6653:HOH:O	1.96	0.65
1:O:711:G:H1'	37:O:5442:HOH:O	1.96	0.65
5:9:78:G:HO2'	5:9:79:U:P	2.19	0.65
8:C:246:ARG:HB3	8:C:246:ARG:HH11	1.61	0.65
10:E:154:ILE:HD11	10:E:157:LYS:HE2	1.79	0.65
13:H:148:ARG:O	13:H:151:MET:HB3	1.97	0.65
16:K:136:ALA:HB3	37:K:343:HOH:O	1.95	0.65
1:O:1777:G:H2'	37:O:3942:HOH:O	1.96	0.65
17:L:97:ILE:CD1	17:L:127:LYS:HD2	2.27	0.65
18:M:12:ARG:HB2	18:M:20:TYR:OH	1.96	0.65
1:O:1784:U:O2'	20:O:78:GLY:CA	2.45	0.65
1:O:1855:G:N2	1:O:1874:U:O2'	2.30	0.65
1:O:1978:A:N7	1:O:1980:U:H2'	2.11	0.65
1:O:2241:C:H2'	1:O:2242:U:C6	2.31	0.65
1:O:920:C:H5''	1:O:921:G:O5'	1.97	0.65
7:B:304:PRO:CD	7:B:307:ARG:NH1	2.60	0.65
12:G:20:VAL:O	12:G:24:VAL:HG23	1.96	0.65
13:H:44:ALA:HA	13:H:163:PRO:O	1.97	0.65
17:L:133:LEU:HD12	17:L:133:LEU:N	2.11	0.65
21:P:21:ARG:HG2	21:P:22:GLY:N	2.11	0.65
1:O:1447:U:O4	23:R:13:LYS:HE2	1.96	0.65
23:R:77:VAL:O	23:R:81:ILE:HG13	1.96	0.65
37:O:7272:HOH:O	31:Z:46:ARG:HB2	1.97	0.65
1:O:1134:G:H4'	13:H:151:MET:HE1	1.78	0.65
1:O:1615:A:H4'	37:O:3989:HOH:O	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1829:A:H61	30:Y:18:TYR:N	1.95	0.65
1:0:459:A:H5''	37:0:4693:HOH:O	1.97	0.65
7:B:140:LEU:HA	37:B:502:HOH:O	1.95	0.65
8:C:193:LEU:HD22	8:C:222:ASP:O	1.96	0.65
9:D:19:GLU:O	9:D:133:ASN:HB3	1.97	0.65
25:T:46:ALA:HB1	25:T:52:THR:HG21	1.79	0.65
1:0:1372:A:H3'	37:0:4518:HOH:O	1.96	0.65
1:0:2379:G:H4'	1:0:2380:A:O5'	1.96	0.65
1:0:485:A:H4'	1:0:486:A:C5'	2.27	0.65
1:0:639:A:H2'	1:0:640:G:H8	1.61	0.65
4:5:39:VAL:O	4:5:40:ARG:HD3	1.96	0.65
5:9:14:G:H5'	5:9:14:G:H8	1.61	0.65
7:B:190:MET:HB3	37:B:582:HOH:O	1.96	0.65
13:H:137:ASN:O	13:H:139:ASP:N	2.30	0.65
13:H:26:LYS:HD2	13:H:28:ILE:HB	1.78	0.65
28:W:74:ALA:HB2	28:W:85:VAL:HG13	1.79	0.65
1:0:183:A:H5'	17:L:157:LEU:HD12	1.79	0.64
1:0:330:C:H5''	1:0:331:A:H5'	1.78	0.64
1:0:453:A:N1	1:0:460:A:H2'	2.11	0.64
18:M:43:VAL:HG13	18:M:118:ILE:HD11	1.78	0.64
22:Q:111:ILE:HG23	22:Q:145:LEU:HD11	1.79	0.64
1:0:1087:G:O2'	1:0:1088:A:H8	1.80	0.64
1:0:1173:A:H4'	1:0:1174:A:C8	2.31	0.64
1:0:256:C:H2'	1:0:257:G:O4'	1.98	0.64
1:0:2735:U:H2'	1:0:2736:U:C6	2.33	0.64
1:0:564:G:H1'	37:0:3637:HOH:O	1.97	0.64
6:A:170:VAL:HG22	30:Y:22:ILE:HG23	1.79	0.64
8:C:140:VAL:HB	37:C:424:HOH:O	1.97	0.64
18:M:38:LYS:HD2	18:M:114:LYS:HE3	1.79	0.64
27:V:48:VAL:HG12	27:V:52:VAL:HG11	1.79	0.64
1:0:1967:U:O2'	1:0:1968:A:C8	2.51	0.64
1:0:2637:A:H5'	37:0:8371:HOH:O	1.98	0.64
1:0:907:A:H2'	1:0:908:A:C8	2.32	0.64
7:B:248:ARG:O	7:B:251:VAL:HG12	1.98	0.64
8:C:33:LYS:HA	8:C:36:ARG:NH1	2.13	0.64
13:H:50:VAL:HG21	13:H:125:VAL:HG11	1.79	0.64
14:I:13:ASP:OD1	14:I:15:ARG:HB3	1.97	0.64
15:J:72:VAL:HG11	15:J:121:PHE:CD1	2.33	0.64
18:M:61:ALA:CB	18:M:88:ALA:HB2	2.27	0.64
28:W:15:ARG:NH1	28:W:15:ARG:HB3	2.08	0.64
1:0:1234:U:C2	7:B:244:PRO:HB3	2.33	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:855:U:H4'	1:0:856:G:O5'	1.97	0.64
1:0:1444:G:C5'	4:5:43:GLY:HA2	2.25	0.64
5:9:1:U:H5''	5:9:3:A:OP1	1.97	0.64
7:B:248:ARG:NH2	37:B:504:HOH:O	2.31	0.64
8:C:236:THR:HG21	37:C:426:HOH:O	1.96	0.64
13:H:71:TYR:O	13:H:73:GLN:N	2.31	0.64
16:K:92:ASP:OD1	16:K:94:ARG:HB2	1.98	0.64
17:L:64:ARG:HD2	37:L:335:HOH:O	1.97	0.64
22:Q:9:ASP:O	22:Q:13:THR:HB	1.97	0.64
29:X:187:VAL:HG23	29:X:192:ASP:CB	2.24	0.64
29:X:198:GLY:HA3	29:X:225:GLY:O	1.97	0.64
1:0:1316:G:H1'	1:0:1341:A:N6	2.12	0.64
1:0:1398:G:H2'	1:0:1399:A:C8	2.32	0.64
1:0:1447:U:O2'	23:R:53:ASN:HB3	1.97	0.64
1:0:1685:A:H5''	1:0:1686:C:OP2	1.97	0.64
1:0:1984:U:H1'	1:0:1986:G:OP2	1.98	0.64
1:0:2379:G:H4'	1:0:2380:A:H5''	1.79	0.64
1:0:2896:A:H5'	1:0:2897:C:OP2	1.98	0.64
1:0:330:C:H5''	1:0:331:A:C5'	2.27	0.64
1:0:92:G:H4'	26:U:44:GLY:HA3	1.79	0.64
26:U:56:ILE:O	26:U:60:GLN:HG3	1.97	0.64
27:V:125:HIS:HE1	37:V:229:HOH:O	1.80	0.64
37:C:506:HOH:O	24:S:2:LYS:HE2	1.97	0.64
29:X:135:LYS:HB3	37:X:460:HOH:O	1.98	0.64
29:X:152:LYS:HB3	29:X:160:LYS:HG3	1.80	0.64
1:0:115:U:H1'	1:0:131:A:C8	2.33	0.64
1:0:1758:U:H2'	1:0:1759:A:O4'	1.98	0.64
1:0:2823:G:O2'	1:0:2824:C:H5'	1.98	0.64
1:0:2902:A:H5'	1:0:2903:C:OP1	1.97	0.64
1:0:603:A:H4'	1:0:604:G:O5'	1.98	0.64
1:0:731:U:H2'	1:0:732:C:C6	2.33	0.64
9:D:45:THR:HB	9:D:75:LEU:HD21	1.80	0.64
15:J:74:VAL:HG11	15:J:113:ILE:HG12	1.79	0.64
22:Q:82:GLU:HG3	22:Q:83:LYS:N	2.13	0.64
1:0:813:C:H3'	37:0:5686:HOH:O	1.97	0.64
6:A:43:VAL:HG21	6:A:59:GLU:HG3	1.79	0.64
8:C:233:THR:HG22	8:C:234:VAL:N	2.12	0.64
9:D:135:VAL:HG22	9:D:136:ARG:H	1.61	0.64
1:0:259:G:H21	17:L:58:GLN:NE2	1.95	0.64
20:O:129:GLY:HA2	37:O:222:HOH:O	1.96	0.64
30:Y:30:GLU:HA	30:Y:33:HIS:HB3	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:383:A:H2'	1:0:384:G:O4'	1.97	0.64
9:D:20:LYS:HA	9:D:75:LEU:O	1.97	0.64
13:H:27:LYS:H	13:H:58:HIS:CD2	2.14	0.64
17:L:12:TRP:CE2	17:L:20:ILE:HD11	2.33	0.64
20:O:10:ALA:HA	20:O:13:VAL:CG1	2.28	0.64
27:V:110:GLN:NE2	27:V:110:GLN:HA	2.13	0.64
1:0:1502:A:H2'	37:0:4448:HOH:O	1.97	0.64
1:0:2282:U:H3'	37:0:6544:HOH:O	1.97	0.64
1:0:2388:C:O2'	1:0:2389:U:H5'	1.98	0.64
1:0:2488:A:H61	1:0:2534:C:H42	1.45	0.64
8:C:246:ARG:NH1	8:C:246:ARG:HB3	2.13	0.64
10:E:49:ILE:HD11	10:E:69:ILE:HD12	1.80	0.64
13:H:5:MET:HG3	37:H:215:HOH:O	1.98	0.64
1:0:746:A:C6	19:N:65:LEU:HD13	2.33	0.64
1:0:1930:A:H2'	1:0:1931:A:C8	2.34	0.63
5:9:23:U:H4'	5:9:24:U:OP2	1.98	0.63
9:D:95:THR:O	9:D:97:GLN:N	2.31	0.63
14:I:17:CYS:HA	14:I:119:THR:O	1.98	0.63
37:0:4149:HOH:O	17:L:86:MET:HE3	1.98	0.63
18:M:139:TRP:HA	18:M:139:TRP:CE3	2.31	0.63
1:0:1044:C:H5''	37:0:5167:HOH:O	1.99	0.63
1:0:766:A:O2'	1:0:767:A:O4'	2.16	0.63
8:C:175:LYS:HD3	8:C:184:ARG:O	1.98	0.63
10:E:69:ILE:HA	10:E:72:MET:HE2	1.80	0.63
13:H:14:TYR:N	13:H:91:HIS:CE1	2.67	0.63
15:J:14:LYS:CB	15:J:45:PRO:HG2	2.23	0.63
17:L:84:LYS:HD3	37:L:302:HOH:O	1.97	0.63
27:V:6:GLN:HB2	27:V:26:ILE:HD12	1.80	0.63
6:A:186:TRP:CG	6:A:187:PRO:HA	2.34	0.63
1:0:2780:C:H1'	10:E:143:GLN:HE21	1.62	0.63
1:0:558:C:H2'	1:0:559:U:C5'	2.29	0.63
37:0:4026:HOH:O	7:B:211:THR:HG23	1.98	0.63
1:0:657:G:OP1	8:C:27:ARG:NH2	2.31	0.63
10:E:93:MET:HE1	10:E:165:GLY:H	1.62	0.63
15:J:34:VAL:HB	37:J:345:HOH:O	1.99	0.63
1:0:2649:A:H5''	1:0:2650:U:OP1	1.99	0.63
13:H:17:ARG:HD3	13:H:23:ILE:HD12	1.81	0.63
13:H:3:GLY:HA2	13:H:57:ARG:HH12	1.62	0.63
17:L:37:VAL:CG1	17:L:108:LYS:HG3	2.26	0.63
22:Q:106:GLY:HA2	22:Q:109:MET:HE3	1.80	0.63
28:W:30:MET:HE1	28:W:55:ASN:HA	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:X:226:ILE:HA	37:X:428:HOH:O	1.97	0.63
1:0:797:A:C4'	30:Y:10:ARG:N	2.60	0.63
1:0:2462:G:O6	3:2:61:PRO:HG3	1.98	0.63
6:A:179:MET:HG2	6:A:186:TRP:CB	2.27	0.63
6:A:19:PRO:HD3	37:A:401:HOH:O	1.99	0.63
7:B:70:PRO:O	7:B:71:VAL:HG23	1.99	0.63
9:D:99:ASP:HB2	9:D:103:ASN:HB2	1.80	0.63
18:M:180:LEU:O	18:M:181:ASP:HB3	1.96	0.63
1:0:1115:U:H2'	1:0:1116:U:C6	2.34	0.63
1:0:1835:U:C5	1:0:1840:A:N7	2.62	0.63
1:0:2479:A:H3'	37:0:3302:HOH:O	1.98	0.63
1:0:2581:U:O2'	1:0:2601:A:O2'	2.17	0.63
1:0:885:G:H5''	1:0:886:A:H5'	1.80	0.63
7:B:215:VAL:HB	7:B:234:ARG:NH1	2.13	0.63
26:U:39:ALA:N	26:U:40:PRO:CD	2.61	0.63
1:0:1827:G:H2'	1:0:1828:G:C8	2.34	0.63
1:0:619:U:H3'	37:0:5146:HOH:O	1.99	0.63
8:C:78:ARG:HG3	8:C:78:ARG:NH1	2.11	0.63
10:E:81:GLU:HG2	10:E:134:SER:HB3	1.80	0.63
13:H:26:LYS:HG2	13:H:28:ILE:H	1.63	0.63
15:J:75:ARG:HE	15:J:94:ALA:HB3	1.61	0.63
25:T:44:ARG:HB3	37:T:201:HOH:O	1.99	0.63
1:0:2834:G:OP1	28:W:39:LYS:HE2	1.99	0.63
22:Q:44:VAL:HG13	22:Q:89:LEU:CD2	2.28	0.63
23:R:34:LYS:O	23:R:37:VAL:HB	1.99	0.63
26:U:39:ALA:N	26:U:40:PRO:HD2	2.13	0.63
30:Y:49:ARG:HD2	37:Y:201:HOH:O	1.98	0.63
1:0:2837:U:O2'	7:B:307:ARG:NH1	2.31	0.62
11:F:39:SER:HB3	11:F:45:ALA:HB2	1.80	0.62
12:G:12:ILE:HG22	12:G:12:ILE:O	1.99	0.62
1:0:1151:G:HO2'	1:0:1214:G:N2	1.97	0.62
1:0:1242:A:OP2	14:I:60:ARG:NH2	2.29	0.62
1:0:2769:C:H2'	1:0:2770:G:O4'	1.98	0.62
1:0:398:U:H2'	1:0:399:C:C6	2.34	0.62
1:0:858:U:H2'	1:0:859:C:H6	1.64	0.62
1:0:2468:A:H61	3:2:48:ASN:HD21	1.46	0.62
6:A:192:VAL:CG1	6:A:207:GLN:HB3	2.30	0.62
7:B:214:PRO:HD2	37:B:551:HOH:O	1.99	0.62
7:B:199:TYR:CE2	7:B:268:ARG:HB2	2.33	0.62
7:B:56:ASP:OD1	7:B:322:ARG:HB3	1.98	0.62
8:C:107:ARG:NE	37:C:405:HOH:O	2.32	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:G:12:ILE:HA	37:G:408:HOH:O	1.99	0.62
14:I:59:LYS:O	14:I:63:ILE:HG13	2.00	0.62
17:L:104:ARG:O	17:L:108:LYS:HG2	1.99	0.62
22:Q:40:ALA:O	22:Q:44:VAL:HG23	1.99	0.62
23:R:73:ASP:OD1	23:R:75:GLN:HB2	2.00	0.62
1:0:1185:U:H2'	1:0:1186:C:C6	2.33	0.62
1:0:1666:C:C2'	1:0:1667:A:H5'	2.30	0.62
1:0:1946:C:O2'	1:0:1970:G:H1'	1.99	0.62
1:0:2362:A:H2'	1:0:2363:G:C8	2.33	0.62
1:0:2681:A:H4'	1:0:2682:C:O5'	1.98	0.62
5:9:13:A:H3'	5:9:14:G:C5'	2.29	0.62
5:9:41:C:C6	9:D:50:VAL:HG21	2.33	0.62
17:L:108:LYS:HD2	37:L:448:HOH:O	1.99	0.62
17:L:139:PRO:O	17:L:140:ALA:CB	2.46	0.62
21:P:41:LEU:HB3	21:P:52:PHE:CZ	2.33	0.62
1:0:1589:G:H22	1:0:1605:G:C2'	2.13	0.62
1:0:1641:A:C8	1:0:1702:U:O4	2.52	0.62
1:0:1760:G:H5'	1:0:1818:C:O2'	1.99	0.62
6:A:125:ASN:HB3	6:A:158:VAL:HG12	1.80	0.62
11:F:32:GLY:N	37:F:201:HOH:O	2.29	0.62
17:L:164:THR:CG2	17:L:167:GLY:H	2.11	0.62
27:V:48:VAL:O	27:V:52:VAL:HG12	2.00	0.62
1:0:1400:C:H1'	37:0:3870:HOH:O	2.00	0.62
1:0:2119:C:O2'	1:0:2120:U:H5'	2.00	0.62
1:0:2316:G:O2'	1:0:2427:C:N4	2.32	0.62
1:0:2680:A:C4'	1:0:2681:A:OP1	2.44	0.62
23:R:25:GLN:HG2	23:R:65:VAL:HG22	1.81	0.62
27:V:88:THR:HG22	27:V:89:ASP:N	2.14	0.62
28:W:25:ARG:HD3	28:W:64:ALA:O	1.99	0.62
1:0:1053:G:OP1	13:H:12:PRO:HG3	1.99	0.62
1:0:2312:G:C2'	1:0:2313:C:H5'	2.28	0.62
1:0:2106:C:H1'	1:0:2484:U:O2	2.00	0.62
1:0:2850:C:H5''	1:0:2851:G:OP2	1.99	0.62
1:0:449:A:C8	8:C:43:LYS:HG2	2.34	0.62
1:0:934:C:H2'	1:0:935:G:C8	2.34	0.62
9:D:140:ARG:N	37:D:202:HOH:O	2.32	0.62
24:S:48:VAL:CG2	24:S:98:VAL:HA	2.30	0.62
28:W:72:VAL:HG22	28:W:85:VAL:CG1	2.28	0.62
30:Y:18:TYR:HB3	30:Y:22:ILE:HG21	1.80	0.62
1:0:2493:C:H3'	37:0:4049:HOH:O	2.00	0.62
8:C:16:VAL:HG12	8:C:17:ASP:N	2.15	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:J:34:VAL:HG22	15:J:47:ALA:HB2	1.82	0.62
16:K:72:ASN:O	16:K:76:LEU:HG	1.99	0.62
24:S:20:HIS:O	24:S:23:VAL:HG22	2.00	0.62
1:O:2866:U:C5	25:T:50:GLU:HB2	2.35	0.62
1:O:2071:C:H5'	37:O:3854:HOH:O	2.00	0.62
1:O:820:G:H5'	1:O:821:U:H5'	1.81	0.62
7:B:84:LEU:HD23	7:B:142:LEU:HD23	1.81	0.62
37:O:5601:HOH:O	8:C:187:ARG:HD3	1.99	0.62
37:O:4901:HOH:O	17:L:172:GLY:HA2	1.98	0.62
27:V:110:GLN:HE21	27:V:110:GLN:HA	1.63	0.62
1:O:1123:A:C6	1:O:1238:C:H5'	2.35	0.62
1:O:1652:C:H5''	1:O:1653:A:OP2	2.00	0.62
1:O:2820:A:H2'	1:O:2821:C:O4'	2.00	0.62
8:C:1:MET:HG2	8:C:2:GLN:N	2.13	0.62
13:H:35:ASN:ND2	13:H:79:ALA:O	2.32	0.62
22:Q:119:VAL:O	22:Q:119:VAL:HG12	1.99	0.62
27:V:52:VAL:CG2	27:V:53:ALA:N	2.62	0.62
28:W:25:ARG:HD2	37:W:105:HOH:O	2.00	0.62
1:O:2424:U:H4'	21:P:6:PRO:HD2	1.82	0.62
1:O:766:A:H2'	37:O:6602:HOH:O	2.00	0.62
1:O:779:U:H5'	1:O:1836:A:N1	2.15	0.62
1:O:926:A:H1'	16:K:38:HIS:O	1.99	0.62
5:9:57:A:O2'	9:D:152:PRO:HD2	2.00	0.62
6:A:190:ARG:NH1	6:A:190:ARG:HB2	2.14	0.62
8:C:130:GLU:HG2	8:C:168:ARG:HD3	1.82	0.62
13:H:127:GLY:O	13:H:128:ALA:HB3	2.00	0.62
17:L:61:ILE:HA	37:L:338:HOH:O	1.98	0.62
18:M:151:ASP:HB3	37:M:311:HOH:O	2.00	0.62
1:O:115:U:H1'	1:O:131:A:C5	2.35	0.61
6:A:125:ASN:CB	6:A:158:VAL:HG12	2.29	0.61
7:B:258:GLY:H	7:B:260:HIS:CE1	2.17	0.61
16:K:68:GLU:HA	37:K:334:HOH:O	1.99	0.61
29:X:187:VAL:HB	37:X:413:HOH:O	1.98	0.61
1:O:2004:U:H5''	1:O:2005:G:C8	2.34	0.61
1:O:402:U:H2'	1:O:403:C:C6	2.35	0.61
1:O:2718:C:H4'	7:B:48:MET:SD	2.40	0.61
19:N:25:VAL:HG23	19:N:26:TRP:H	1.65	0.61
28:W:15:ARG:HH11	28:W:15:ARG:CB	2.08	0.61
31:Z:22:CYS:SG	31:Z:24:GLU:HB2	2.40	0.61
1:O:938:G:N2	1:O:1031:G:O2'	2.32	0.61
1:O:1209:C:H2'	1:O:1210:G:C8	2.34	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2506:A:H1'	37:0:6106:HOH:O	1.99	0.61
1:0:2714:U:H2'	1:0:2715:G:C8	2.35	0.61
1:0:894:A:H2'	37:0:8622:HOH:O	2.00	0.61
1:0:1878:G:H2'	1:0:1879:U:C6	2.35	0.61
2:1:21:VAL:HG23	2:1:36:ASN:HB2	1.81	0.61
37:0:8606:HOH:O	7:B:18:ARG:HD3	2.00	0.61
8:C:136:VAL:CG2	8:C:137:PRO:HA	2.21	0.61
9:D:97:GLN:O	9:D:97:GLN:HG2	2.00	0.61
1:0:1593:C:O2'	1:0:1594:C:H5'	2.01	0.61
1:0:1831:U:C2'	1:0:1832:G:H5'	2.29	0.61
1:0:1876:C:H4'	1:0:1877:G:OP2	2.01	0.61
1:0:393:G:H5''	37:0:3602:HOH:O	2.01	0.61
5:9:9:C:OP2	5:9:10:C:H5	1.83	0.61
7:B:71:VAL:HG11	7:B:296:LEU:HB3	1.82	0.61
9:D:64:ARG:CD	9:D:67:ASP:HB3	2.30	0.61
11:F:27:GLY:HA3	11:F:101:ALA:O	2.01	0.61
37:0:7543:HOH:O	17:L:174:ARG:HD3	1.99	0.61
20:O:9:LEU:O	20:O:13:VAL:HG12	2.00	0.61
23:R:57:THR:HG22	23:R:58:MET:N	2.15	0.61
26:U:64:GLY:O	26:U:65:ASP:HB2	2.00	0.61
2:1:40:ARG:HG3	2:1:45:ASN:CB	2.30	0.61
7:B:27:ASN:N	7:B:27:ASN:HD22	1.98	0.61
1:0:1299:G:O6	16:K:6:ARG:HD3	2.01	0.61
18:M:23:ARG:HA	18:M:26:LEU:HD23	1.83	0.61
1:0:1148:C:O3'	1:0:1151:G:H5'	2.00	0.61
1:0:1189:A:H1'	1:0:1209:C:C1'	2.31	0.61
1:0:432:G:O2'	1:0:433:C:H5'	2.00	0.61
1:0:1683:G:H4'	37:0:6003:HOH:O	2.00	0.61
10:E:23:GLU:HG2	10:E:28:SER:CB	2.31	0.61
14:I:126:ASN:HA	35:I:202:CL:CL	2.38	0.61
17:L:184:ARG:HB2	17:L:184:ARG:CZ	2.29	0.61
17:L:98:GLN:O	17:L:102:GLU:HG3	2.00	0.61
1:0:1594:C:OP2	20:O:120:ARG:HD2	2.01	0.61
1:0:1066:U:H2'	1:0:1067:A:C8	2.35	0.61
1:0:1370:G:O2'	1:0:1371:U:OP2	2.19	0.61
1:0:544:G:H2'	1:0:545:G:C5'	2.31	0.61
1:0:596:C:H2'	1:0:597:A:H8	1.66	0.61
6:A:200:PRO:HG2	6:A:225:VAL:HG21	1.81	0.61
37:0:6245:HOH:O	7:B:3:PRO:HG2	2.00	0.61
1:0:1105:C:C4'	1:0:1106:A:OP1	2.48	0.61
13:H:83:PHE:HZ	13:H:146:TRP:HE1	1.49	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:X:152:LYS:CB	29:X:160:LYS:HG3	2.31	0.61
1:0:777:U:H1'	31:Z:13:THR:HB	1.83	0.61
1:0:625:U:H5''	1:0:1044:C:N4	2.15	0.60
1:0:1497:G:H4'	1:0:1627:G:O2'	2.01	0.60
1:0:1504:A:O2'	1:0:1506:U:OP2	2.16	0.60
1:0:213:G:N2	1:0:225:G:H2'	2.16	0.60
1:0:2754:G:O2'	1:0:2755:G:H5'	2.01	0.60
8:C:154:VAL:O	8:C:158:GLU:HG3	2.01	0.60
10:E:7:ILE:HD11	10:E:11:VAL:C	2.21	0.60
12:G:67:LEU:O	12:G:71:LEU:HG	2.01	0.60
17:L:83:SER:HB3	37:L:412:HOH:O	2.00	0.60
37:0:5724:HOH:O	29:X:150:LEU:HB2	2.01	0.60
1:0:1118:A:H3'	1:0:1118:A:C8	2.36	0.60
1:0:2134:G:C6	1:0:2258:A:C8	2.89	0.60
1:0:2300:A:H2'	37:0:5869:HOH:O	2.01	0.60
1:0:284:C:H4'	1:0:285:A:OP2	2.01	0.60
7:B:144:THR:HG22	7:B:145:HIS:N	2.16	0.60
37:0:8112:HOH:O	7:B:216:LYS:HE2	2.00	0.60
17:L:155:HIS:ND1	17:L:158:ARG:NE	2.46	0.60
17:L:68:ARG:HB3	37:L:436:HOH:O	2.00	0.60
6:A:72:GLU:CD	30:Y:76:GLY:HA3	2.22	0.60
1:0:1333:U:H2'	1:0:1334:C:H6	1.66	0.60
1:0:1919:A:H4'	37:0:5811:HOH:O	2.01	0.60
1:0:2625:C:H4'	37:0:4858:HOH:O	2.00	0.60
11:F:117:GLU:C	11:F:119:ARG:H	2.03	0.60
17:L:57:LYS:CG	17:L:58:GLN:H	2.14	0.60
1:0:1080:C:H4'	1:0:1081:A:OP1	2.00	0.60
1:0:2811:A:H4'	1:0:2812:A:C5'	2.30	0.60
15:J:74:VAL:CG2	15:J:96:VAL:HG23	2.31	0.60
1:0:2890:A:H1'	25:T:56:ARG:NH2	2.16	0.60
1:0:1087:G:H4'	1:0:1088:A:OP1	2.00	0.60
1:0:1488:U:H4'	1:0:1489:G:OP1	2.00	0.60
5:9:25:G:C3'	5:9:26:C:H5'	2.32	0.60
37:0:6703:HOH:O	17:L:94:LYS:HE3	2.01	0.60
25:T:8:TYR:CD2	25:T:36:CYS:HB3	2.36	0.60
27:V:4:LEU:O	27:V:32:CYS:HA	2.02	0.60
1:0:1448:A:O2'	1:0:1450:C:OP2	2.14	0.60
1:0:1748:U:O2	1:0:2034:U:H1'	2.01	0.60
1:0:2064:U:H2'	1:0:2065:C:C6	2.34	0.60
1:0:2906:A:H5'	1:0:2907:C:O4'	2.01	0.60
1:0:871:G:C5'	1:0:871:G:H8	2.05	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:2:22:VAL:HG11	3:2:67:LEU:HD13	1.82	0.60
10:E:83:GLY:O	10:E:169:THR:N	2.31	0.60
11:F:63:ILE:HB	11:F:64:PRO:CD	2.28	0.60
17:L:140:ALA:O	17:L:144:ASP:HB2	2.01	0.60
1:0:2072:G:C6	1:0:2533:C:H1'	2.36	0.60
7:B:189:ALA:HB1	37:B:597:HOH:O	2.00	0.60
18:M:139:TRP:HE3	18:M:139:TRP:HA	1.64	0.60
18:M:37:ARG:HG3	18:M:37:ARG:HH11	1.66	0.60
5:9:6:C:C5'	18:M:37:ARG:NH1	2.58	0.60
22:Q:111:ILE:HG23	22:Q:145:LEU:CD1	2.32	0.60
23:R:51:GLN:HE21	23:R:53:ASN:HD21	1.47	0.60
1:0:1132:A:H3'	37:0:3323:HOH:O	2.00	0.60
1:0:2437:A:H2'	1:0:2438:G:C8	2.37	0.60
1:0:86:A:C2	2:1:25:VAL:HG13	2.37	0.60
2:1:40:ARG:HA	2:1:45:ASN:ND2	2.16	0.60
2:1:49:GLU:HB2	37:1:101:HOH:O	2.01	0.60
6:A:8:ARG:NH1	37:A:405:HOH:O	2.35	0.60
8:C:127:ARG:HD3	8:C:129:HIS:CE1	2.36	0.60
9:D:25:MET:CE	9:D:41:LEU:HG	2.31	0.60
25:T:9:CYS:HA	25:T:52:THR:HG23	1.83	0.60
30:Y:37:HIS:HB2	30:Y:47:LEU:CB	2.29	0.60
1:0:1132:A:N6	1:0:1229:C:H2'	2.16	0.60
1:0:2089:A:O2'	1:0:2090:G:H5'	2.01	0.60
1:0:2760:C:H2'	37:0:4326:HOH:O	2.02	0.60
1:0:464:G:O2'	1:0:465:U:OP2	2.19	0.60
1:0:837:U:H5'	1:0:1737:A:OP1	2.01	0.60
1:0:79:G:N2	1:0:97:G:O2'	2.34	0.60
37:0:6187:HOH:O	3:2:79:LEU:HB2	2.02	0.60
4:5:26:THR:O	4:5:30:SER:HB3	2.01	0.60
6:A:27:LEU:HD11	6:A:55:VAL:CG2	2.31	0.60
7:B:30:PRO:HB2	7:B:39:GLN:HE22	1.63	0.60
28:W:79:GLU:HG3	37:W:123:HOH:O	2.02	0.60
1:0:1315:G:O2'	29:X:211:ALA:HB3	2.02	0.60
1:0:1058:A:H2'	1:0:1060:C:H5'	1.84	0.60
1:0:1862:C:H1'	37:0:6635:HOH:O	2.01	0.60
1:0:2361:A:H2'	1:0:2362:A:C8	2.37	0.60
1:0:2505:G:O2'	1:0:2506:A:H5'	2.02	0.60
5:9:42:C:H2'	37:9:366:HOH:O	2.00	0.60
7:B:217:ARG:HG3	7:B:257:THR:CG2	2.31	0.60
14:I:131:THR:HB	14:I:134:GLU:HG3	1.82	0.60
1:0:1877:G:H5''	37:A:503:HOH:O	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:458:G:N2	1:0:463:A:O2'	2.35	0.59
37:0:4441:HOH:O	3:2:84:ARG:HB3	2.02	0.59
7:B:139:ASP:HB2	7:B:165:ARG:HE	1.67	0.59
13:H:46:VAL:HG12	13:H:146:TRP:HZ3	1.66	0.59
1:0:2064:U:H5'	1:0:2652:U:O3'	2.01	0.59
1:0:290:C:H1'	37:0:4581:HOH:O	2.02	0.59
1:0:631:A:C5	1:0:2074:A:C5'	2.83	0.59
1:0:650:C:O2'	1:0:651:U:H5'	2.02	0.59
5:9:57:A:H2'	5:9:58:G:H5'	1.84	0.59
37:0:3923:HOH:O	7:B:267:LYS:HD3	2.00	0.59
16:K:93:VAL:HG23	16:K:121:ILE:O	2.02	0.59
17:L:9:ARG:HA	37:L:406:HOH:O	2.01	0.59
18:M:43:VAL:HG11	18:M:81:ALA:HA	1.84	0.59
1:0:380:A:H4'	1:0:381:G:OP1	2.00	0.59
1:0:955:A:H2'	1:0:956:G:O4'	2.01	0.59
10:E:20:ILE:CD1	10:E:40:VAL:HG11	2.28	0.59
17:L:114:VAL:HG21	17:L:159:THR:HG21	1.84	0.59
18:M:22:GLN:HG2	18:M:26:LEU:HD22	1.84	0.59
20:O:101:GLN:HE22	20:O:131:PHE:HB2	1.67	0.59
29:X:212:ARG:HB3	37:X:431:HOH:O	2.01	0.59
1:0:637:C:H2'	1:0:638:C:C6	2.36	0.59
16:K:57:VAL:O	16:K:57:VAL:HG12	2.03	0.59
25:T:30:HIS:HB3	37:T:225:HOH:O	2.01	0.59
1:0:797:A:H4'	30:Y:10:ARG:N	2.18	0.59
2:1:49:GLU:H	31:Z:25:LYS:HD2	1.67	0.59
1:0:1426:C:H2'	37:0:6552:HOH:O	2.01	0.59
1:0:1795:G:H2'	1:0:1796:A:O4'	2.01	0.59
1:0:2747:C:H4'	1:0:2748:G:O5'	2.01	0.59
1:0:2748:G:H3'	37:0:4688:HOH:O	2.01	0.59
1:0:2857:C:H2'	1:0:2858:U:C6	2.37	0.59
6:A:192:VAL:HG12	6:A:207:GLN:HB3	1.83	0.59
14:I:36:VAL:HG12	14:I:37:ALA:N	2.16	0.59
20:O:143:ALA:HA	37:O:241:HOH:O	2.03	0.59
1:0:2813:A:H2'	37:0:6389:HOH:O	2.02	0.59
1:0:706:G:HO2'	1:0:707:C:H6	1.49	0.59
37:0:3502:HOH:O	17:L:52:LEU:HD23	2.02	0.59
26:U:29:ASN:O	26:U:33:VAL:HG23	2.02	0.59
28:W:20:GLU:CG	28:W:21:PRO:HD2	2.33	0.59
1:0:17:G:H2'	1:0:18:C:C6	2.37	0.59
1:0:2117:U:OP2	1:0:2271:G:N2	2.34	0.59
1:0:2758:G:H2'	1:0:2759:C:C6	2.38	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:5:39:VAL:C	4:5:40:ARG:HD3	2.23	0.59
7:B:307:ARG:CB	7:B:307:ARG:HH11	2.14	0.59
7:B:85:ARG:NH1	37:B:506:HOH:O	2.35	0.59
24:S:48:VAL:HG23	24:S:98:VAL:HA	1.85	0.59
1:0:131:A:OP2	1:0:141:C:H5	1.84	0.59
1:0:724:G:O2'	1:0:725:C:H5'	2.03	0.59
3:2:34:LYS:HD3	37:2:208:HOH:O	2.01	0.59
13:H:24:PRO:HG2	13:H:119:VAL:O	2.02	0.59
13:H:82:LYS:HB2	13:H:82:LYS:NZ	2.18	0.59
20:O:83:LYS:HG3	20:O:84:ALA:H	1.68	0.59
1:0:2320:U:H5''	1:0:2321:A:O5'	2.02	0.59
1:0:247:A:H2'	1:0:262:A:N6	2.17	0.59
8:C:140:VAL:N	37:C:406:HOH:O	2.34	0.59
9:D:88:LEU:HB2	9:D:89:PRO:HD3	1.84	0.59
13:H:41:THR:HA	37:H:203:HOH:O	2.01	0.59
1:0:771:G:OP2	17:L:79:LYS:HG3	2.03	0.59
18:M:86:LEU:HD12	18:M:125:ALA:HB2	1.85	0.59
1:0:1967:U:O2'	1:0:1968:A:H8	1.83	0.59
1:0:2426:G:H1'	37:0:3872:HOH:O	2.01	0.59
1:0:558:C:C2'	1:0:559:U:H5''	2.33	0.59
1:0:338:C:H4'	8:C:174:ILE:CD1	2.33	0.59
9:D:25:MET:SD	9:D:40:ILE:HD11	2.42	0.59
15:J:14:LYS:HG3	15:J:32:ILE:O	2.03	0.59
1:0:189:A:OP1	17:L:171:ARG:NH2	2.36	0.59
24:S:32:ARG:NH1	24:S:38:ARG:HH12	2.01	0.59
1:0:1118:A:H3'	1:0:1118:A:H8	1.67	0.58
1:0:1946:C:H2'	1:0:1971:G:C8	2.38	0.58
1:0:2275:G:H3'	37:0:6411:HOH:O	2.01	0.58
1:0:2325:C:H2'	1:0:2326:U:C6	2.37	0.58
1:0:366:U:H2'	1:0:367:G:O4'	2.03	0.58
1:0:821:U:H3'	37:0:3786:HOH:O	2.02	0.58
13:H:62:GLU:HA	37:H:209:HOH:O	2.03	0.58
18:M:87:LEU:CD1	18:M:186:LEU:HD21	2.33	0.58
22:Q:76:ASP:HA	37:Q:334:HOH:O	2.03	0.58
29:X:106:THR:HG23	29:X:107:PRO:HD2	1.84	0.58
30:Y:29:VAL:O	30:Y:33:HIS:HB2	2.03	0.58
31:Z:28:HIS:CD2	31:Z:31:LYS:HG3	2.38	0.58
1:0:1369:A:H5'	37:0:5290:HOH:O	2.03	0.58
1:0:1563:G:O2'	1:0:1564:C:O5'	2.21	0.58
1:0:1689:A:P	1:0:1689:A:H8	2.26	0.58
1:0:2251:G:H2'	1:0:2252:A:C8	2.37	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2674:G:H2'	1:0:2810:G:H22	1.68	0.58
3:2:22:VAL:CG1	3:2:67:LEU:HD13	2.33	0.58
5:9:24:U:O2'	5:9:25:G:C4'	2.49	0.58
5:9:96:C:H2'	5:9:97:U:C6	2.37	0.58
9:D:23:VAL:HG21	9:D:45:THR:HG21	1.83	0.58
37:0:5943:HOH:O	24:S:2:LYS:HB3	2.02	0.58
24:S:27:LEU:HD21	24:S:40:VAL:CG1	2.33	0.58
26:U:8:ILE:HG21	26:U:59:ILE:HG13	1.84	0.58
1:0:1187:U:O2'	1:0:1189:A:H2	1.86	0.58
1:0:1316:G:H1'	1:0:1341:A:H62	1.67	0.58
1:0:221:G:H2'	1:0:222:A:C8	2.38	0.58
1:0:1329:A:N1	35:0:3122:CL:CL	2.73	0.58
1:0:638:C:H2'	1:0:639:A:C8	2.38	0.58
1:0:895:A:H4'	37:0:4383:HOH:O	2.04	0.58
6:A:66:ARG:HH11	6:A:66:ARG:HB2	1.67	0.58
7:B:212:GLN:HB2	7:B:257:THR:HG21	1.86	0.58
1:0:30:U:OP2	8:C:181:ALA:HB2	2.02	0.58
17:L:133:LEU:O	17:L:134:ILE:HD13	2.03	0.58
21:P:86:VAL:HG11	21:P:91:LEU:HD21	1.86	0.58
26:U:1:THR:HG23	26:U:2:VAL:N	2.12	0.58
1:0:1446:U:H4'	1:0:1447:U:OP2	2.03	0.58
1:0:1666:C:H2'	1:0:1667:A:H5'	1.86	0.58
1:0:2118:A:H1'	37:0:3820:HOH:O	2.02	0.58
1:0:2620:U:H4'	1:0:2621:U:OP1	2.03	0.58
1:0:2721:U:H4'	15:J:87:ARG:HG3	1.84	0.58
1:0:2811:A:O2'	1:0:2812:A:H5'	2.03	0.58
37:0:4441:HOH:O	3:2:62:THR:HB	2.03	0.58
18:M:20:TYR:N	37:M:304:HOH:O	2.36	0.58
20:O:7:LYS:HD3	20:O:23:PHE:CZ	2.37	0.58
1:0:1097:A:H2'	1:0:1098:A:C8	2.38	0.58
1:0:2445:U:H2'	1:0:2446:G:H8	1.67	0.58
1:0:660:A:C4'	1:0:661:G:O5'	2.41	0.58
6:A:42:VAL:HG23	6:A:78:ASP:O	2.04	0.58
10:E:125:GLU:O	10:E:132:THR:HG22	2.03	0.58
15:J:41:LYS:HG2	15:J:42:ASN:ND2	2.18	0.58
1:0:247:A:H2'	1:0:262:A:H61	1.68	0.58
1:0:2780:C:H2'	1:0:2781:U:C6	2.38	0.58
6:A:13:THR:HA	37:A:483:HOH:O	2.04	0.58
1:0:262:A:HO2'	11:F:32:GLY:HA2	1.67	0.58
27:V:31:HIS:HB3	37:V:235:HOH:O	2.02	0.58
1:0:1249:U:H2'	1:0:1250:C:H6	1.67	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1328:A:C8	29:X:169:ARG:HD3	2.39	0.58
1:0:1406:A:H2'	1:0:1701:A:H61	1.68	0.58
1:0:2271:G:H5''	1:0:2272:G:OP1	2.03	0.58
1:0:2445:U:H2'	1:0:2446:G:C8	2.38	0.58
1:0:263:U:H4'	1:0:264:G:OP2	2.04	0.58
1:0:37:A:H2'	1:0:38:G:C8	2.38	0.58
1:0:775:G:HO2'	1:0:881:C:H5	1.51	0.58
2:1:41:HIS:H	2:1:45:ASN:ND2	1.99	0.58
37:0:4079:HOH:O	6:A:22:ARG:HD3	2.04	0.58
7:B:11:LEU:HD21	7:B:250:THR:HG22	1.85	0.58
13:H:163:PRO:HG2	37:H:266:HOH:O	2.04	0.58
37:0:3289:HOH:O	17:L:82:ARG:HD2	2.02	0.58
18:M:78:MET:HB2	18:M:79:PRO:HD3	1.86	0.58
28:W:43:VAL:HG12	28:W:44:ASP:N	2.19	0.58
1:0:1080:C:H5'	37:0:6316:HOH:O	2.02	0.58
37:0:4773:HOH:O	7:B:206:THR:HB	2.02	0.58
10:E:116:THR:HG22	10:E:151:LEU:HD22	1.85	0.58
11:F:48:VAL:HG12	11:F:97:ALA:CB	2.33	0.58
16:K:117:GLU:HG3	37:K:363:HOH:O	2.02	0.58
29:X:189:ASN:CA	29:X:217:ILE:HD11	2.33	0.58
1:0:1701:A:C4'	1:0:1702:U:O5'	2.51	0.58
1:0:2043:U:O2'	1:0:2044:G:H5'	2.04	0.58
1:0:523:C:H2'	1:0:524:A:C8	2.39	0.58
1:0:833:G:H4'	37:0:5383:HOH:O	2.02	0.58
7:B:102:THR:HG21	37:B:566:HOH:O	2.02	0.58
8:C:162:VAL:HG12	8:C:192:ILE:HD11	1.86	0.58
13:H:65:ARG:HB3	37:H:209:HOH:O	2.03	0.58
1:0:221:G:O5'	16:K:46:LEU:HD22	2.04	0.58
18:M:67:ALA:HA	18:M:71:TRP:CB	2.32	0.58
19:N:42:GLU:N	37:N:301:HOH:O	2.32	0.58
1:0:1689:A:N6	22:Q:131:GLY:HA2	2.19	0.58
1:0:2354:A:H2'	1:0:2354:A:N3	2.18	0.58
1:0:2526:C:H5'	1:0:2526:C:H6	1.68	0.58
1:0:25:A:O2'	1:0:26:U:H5'	2.04	0.58
1:0:2712:G:H5'	37:J:301:HOH:O	2.04	0.58
1:0:368:C:H6	1:0:368:C:O5'	1.87	0.58
1:0:408:A:H2'	1:0:409:U:O4'	2.04	0.58
1:0:544:G:C2'	1:0:545:G:H5''	2.33	0.58
1:0:710:G:O2'	1:0:711:G:H5'	2.04	0.58
7:B:268:ARG:HH12	7:B:322:ARG:NH2	2.02	0.58
10:E:84:MET:HG2	10:E:168:ILE:HD13	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:J:41:LYS:N	37:J:303:HOH:O	2.36	0.58
17:L:55:LYS:HB2	17:L:60:ILE:CD1	2.34	0.58
18:M:47:LEU:HD11	18:M:127:LEU:HD21	1.85	0.58
1:0:1023:C:O2'	1:0:1024:G:H5'	2.05	0.57
1:0:1235:G:H5''	1:0:1236:A:OP1	2.04	0.57
1:0:1117:A:N1	1:0:1244:U:H2'	2.18	0.57
1:0:213:G:O2'	1:0:214:U:OP2	2.22	0.57
1:0:868:G:H4'	1:0:869:G:O5'	2.03	0.57
2:1:42:TRP:CH2	2:1:43:ARG:HD2	2.39	0.57
5:9:43:G:O2'	5:9:44:A:OP2	2.19	0.57
7:B:132:HIS:HB2	7:B:137:LEU:HD22	1.86	0.57
7:B:51:VAL:HG13	7:B:53:LEU:HD13	1.86	0.57
9:D:86:THR:C	9:D:89:PRO:HD2	2.25	0.57
29:X:116:LEU:HD12	29:X:173:ALA:HB3	1.85	0.57
7:B:51:VAL:CG2	7:B:330:VAL:HG22	2.32	0.57
7:B:329:TYR:CE2	25:T:15:PRO:HG2	2.39	0.57
1:0:1342:C:H2'	1:0:1343:C:H5'	1.85	0.57
1:0:542:A:H5'	1:0:542:A:C8	2.37	0.57
37:0:6240:HOH:O	3:2:42:ARG:HD2	2.03	0.57
5:9:22:G:O2'	5:9:24:U:H5'	2.04	0.57
10:E:81:GLU:HA	10:E:133:VAL:O	2.03	0.57
13:H:3:GLY:HA2	13:H:57:ARG:NH1	2.19	0.57
29:X:185:VAL:HG12	37:X:413:HOH:O	2.03	0.57
1:0:1315:G:H2'	29:X:212:ARG:HB2	1.85	0.57
1:0:1351:G:H4'	1:0:1352:A:OP1	2.04	0.57
1:0:1657:A:H2'	1:0:1658:A:C8	2.39	0.57
1:0:2321:A:C4'	1:0:2322:U:OP1	2.53	0.57
1:0:2326:U:H4'	1:0:2412:G:H4'	1.85	0.57
1:0:699:C:C2	1:0:744:G:C2	2.91	0.57
1:0:876:A:C2'	1:0:877:G:H5'	2.34	0.57
3:2:65:THR:CG2	3:2:67:LEU:HG	2.33	0.57
9:D:23:VAL:O	9:D:23:VAL:HG23	2.05	0.57
37:0:4583:HOH:O	14:I:47:THR:HG21	2.03	0.57
17:L:74:ARG:NH1	17:L:74:ARG:HG3	2.19	0.57
24:S:43:ASN:C	24:S:45:GLY:H	2.07	0.57
26:U:12:THR:HG23	26:U:14:ALA:H	1.68	0.57
1:0:1408:U:H4'	1:0:1409:G:OP1	2.04	0.57
1:0:2387:U:H2'	1:0:2388:C:C6	2.39	0.57
1:0:2900:G:H2'	1:0:2901:C:O4'	2.04	0.57
1:0:821:U:H5''	37:0:3533:HOH:O	2.03	0.57
1:0:844:A:H2'	37:0:5217:HOH:O	2.02	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:898:G:H5''	1:0:899:C:OP2	2.04	0.57
2:1:40:ARG:HG3	2:1:45:ASN:HB2	1.86	0.57
5:9:29:C:C2'	5:9:30:C:H5'	2.29	0.57
13:H:130:HIS:CD2	13:H:133:ILE:HD11	2.39	0.57
16:K:7:GLN:HB3	16:K:13:HIS:ND1	2.19	0.57
17:L:24:MET:HE1	17:L:120:VAL:O	2.03	0.57
17:L:37:VAL:HG11	17:L:108:LYS:CG	2.32	0.57
1:0:157:G:H4'	17:L:95:LYS:CE	2.33	0.57
19:N:12:ALA:O	19:N:15:LYS:HB2	2.04	0.57
1:0:1522:A:H2'	1:0:1523:G:H5'	1.87	0.57
1:0:1579:C:O2'	1:0:1580:A:N7	2.37	0.57
1:0:262:A:H5''	1:0:264:G:O4'	2.05	0.57
1:0:2679:G:O3'	1:0:2680:A:H3'	2.04	0.57
1:0:2878:U:H2'	1:0:2879:A:O4'	2.05	0.57
1:0:2910:A:H5''	37:0:5076:HOH:O	2.05	0.57
6:A:211:LYS:HB3	6:A:212:PRO:CD	2.30	0.57
1:0:675:U:H4'	8:C:42:ARG:HB3	1.86	0.57
27:V:21:LEU:HD21	27:V:48:VAL:CG1	2.34	0.57
27:V:79:VAL:HG13	27:V:83:TRP:CE3	2.40	0.57
1:0:1972:U:H2'	1:0:1973:A:H5'	1.87	0.57
1:0:2033:G:H5''	1:0:2034:U:OP1	2.05	0.57
1:0:2584:G:H4'	37:0:5279:HOH:O	2.03	0.57
1:0:604:G:H5'	1:0:605:C:OP1	2.04	0.57
1:0:1684:A:O2'	2:1:43:ARG:NH2	2.38	0.57
1:0:2091:G:O3'	7:B:235:ARG:HD3	2.04	0.57
7:B:320:GLN:HG3	7:B:321:PRO:HD2	1.86	0.57
28:W:49:ARG:HG2	28:W:84:ILE:HG23	1.85	0.57
1:0:1060:C:H5''	37:0:4898:HOH:O	2.03	0.57
1:0:1242:A:H5'	14:I:82:THR:CG2	2.27	0.57
1:0:1417:G:O2'	1:0:1418:U:C6	2.53	0.57
6:A:123:GLY:HA2	6:A:159:VAL:O	2.04	0.57
1:0:1306:U:H5''	8:C:184:ARG:HD3	1.87	0.57
10:E:16:ASP:O	10:E:17:HIS:HB2	2.04	0.57
13:H:166:ASN:HD22	13:H:166:ASN:N	2.03	0.57
14:I:42:GLU:O	14:I:131:THR:HG23	2.05	0.57
17:L:74:ARG:HG3	17:L:74:ARG:HH11	1.69	0.57
17:L:76:ARG:HA	37:L:329:HOH:O	2.04	0.57
18:M:23:ARG:O	18:M:26:LEU:HB2	2.04	0.57
22:Q:18:LEU:HB2	22:Q:143:VAL:CG1	2.33	0.57
22:Q:40:ALA:O	22:Q:43:ALA:HB3	2.04	0.57
1:0:1305:C:H5'	37:0:6640:HOH:O	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1392:A:HO2'	1:0:1394:C:P	2.28	0.57
1:0:2083:A:H3'	37:0:3964:HOH:O	2.04	0.57
1:0:2782:G:O6	1:0:2790:C:H5''	2.04	0.57
1:0:596:C:H2'	1:0:597:A:C8	2.39	0.57
6:A:184:THR:N	37:A:408:HOH:O	2.37	0.57
7:B:280:VAL:HG23	7:B:284:PHE:CZ	2.39	0.57
8:C:236:THR:H	8:C:239:ALA:HB3	1.68	0.57
9:D:140:ARG:HG3	9:D:140:ARG:HH11	1.69	0.57
15:J:49:LEU:HD21	15:J:74:VAL:O	2.04	0.57
17:L:46:LEU:O	17:L:49:ALA:N	2.38	0.57
37:0:4155:HOH:O	24:S:82:THR:HA	2.04	0.57
27:V:122:ARG:HH11	27:V:122:ARG:CG	2.17	0.57
1:0:1193:A:O2'	1:0:1194:A:N7	2.38	0.57
1:0:1488:U:H5''	1:0:1489:G:OP1	2.05	0.57
1:0:1641:A:C2'	1:0:1642:A:H5'	2.35	0.57
1:0:2065:C:O2'	1:0:2066:C:H5'	2.05	0.57
1:0:2503:A:O2'	1:0:2504:A:H8	1.86	0.57
8:C:138:VAL:O	8:C:234:VAL:HA	2.05	0.57
16:K:10:SER:O	16:K:12:THR:N	2.38	0.57
5:9:114:G:O6	18:M:11:ARG:HD3	2.03	0.57
1:0:1407:A:HO2'	1:0:1408:U:H3'	1.70	0.56
1:0:1634:G:H3'	37:0:7433:HOH:O	2.05	0.56
1:0:2237:G:O2'	1:0:2238:A:O4'	2.23	0.56
1:0:2624:A:O2'	1:0:2625:C:H5'	2.04	0.56
1:0:2851:G:H2'	1:0:2902:A:H61	1.68	0.56
1:0:675:U:C2'	1:0:676:C:H5'	2.35	0.56
4:5:37:LYS:O	4:5:38:LYS:HD3	2.05	0.56
6:A:162:GLY:O	30:Y:68:CYS:HB2	2.05	0.56
7:B:7:ARG:HG2	7:B:7:ARG:NH1	2.18	0.56
9:D:65:GLU:HG3	37:D:219:HOH:O	2.03	0.56
1:0:656:G:OP2	19:N:37:ARG:HD2	2.05	0.56
24:S:9:LYS:HE3	24:S:13:ARG:NH1	2.20	0.56
27:V:129:LYS:HB2	37:V:244:HOH:O	2.04	0.56
31:Z:25:LYS:O	31:Z:25:LYS:HG2	2.05	0.56
31:Z:37:CYS:SG	31:Z:39:PHE:HB2	2.45	0.56
1:0:1379:A:H1'	1:0:1408:U:O4	2.06	0.56
1:0:1392:A:O2'	1:0:1394:C:P	2.63	0.56
1:0:192:A:H4'	17:L:176:GLN:NE2	2.20	0.56
1:0:195:C:H2'	1:0:196:G:H5'	1.87	0.56
1:0:2325:C:H1'	37:0:4935:HOH:O	2.04	0.56
1:0:1378:G:H1'	1:0:2747:C:N4	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2852:A:H5''	1:0:2853:U:OP1	2.05	0.56
1:0:821:U:O2'	1:0:822:C:H5'	2.04	0.56
1:0:960:G:N3	1:0:960:G:H2'	2.19	0.56
7:B:128:ILE:O	7:B:131:ALA:HB3	2.05	0.56
7:B:251:VAL:HG13	37:B:535:HOH:O	2.05	0.56
7:B:264:GLU:HG2	7:B:267:LYS:CE	2.29	0.56
18:M:67:ALA:CA	18:M:71:TRP:HB3	2.36	0.56
22:Q:106:GLY:HA2	22:Q:109:MET:CE	2.35	0.56
30:Y:32:LYS:HA	30:Y:35:LYS:CD	2.35	0.56
1:0:1460:G:H1'	37:0:3267:HOH:O	2.06	0.56
1:0:1819:G:H2'	1:0:1820:G:C4'	2.32	0.56
1:0:1829:A:N6	30:Y:18:TYR:H	2.02	0.56
1:0:2124:G:H2'	1:0:2125:G:C8	2.41	0.56
1:0:461:C:H3'	37:0:6241:HOH:O	2.05	0.56
8:C:127:ARG:HH22	8:C:225:PRO:HG2	1.63	0.56
9:D:84:LEU:C	9:D:86:THR:H	2.08	0.56
10:E:108:LEU:HD11	10:E:164:ASP:HB2	1.87	0.56
14:I:107:ASN:ND2	14:I:109:TYR:H	2.03	0.56
17:L:30:GLU:O	17:L:34:GLU:HG3	2.05	0.56
26:U:27:LEU:CA	26:U:49:LEU:HD13	2.34	0.56
27:V:84:VAL:HG12	37:V:203:HOH:O	2.06	0.56
1:0:1477:C:O2'	1:0:1478:U:H5'	2.03	0.56
1:0:755:G:O2'	1:0:756:A:H5'	2.06	0.56
5:9:9:C:OP2	5:9:10:C:C5	2.58	0.56
7:B:223:ARG:HG3	7:B:232:TRP:O	2.05	0.56
12:G:12:ILE:N	12:G:13:PRO:CD	2.68	0.56
17:L:111:ASN:HB2	37:L:364:HOH:O	2.05	0.56
18:M:37:ARG:HH21	18:M:105:GLY:HA3	1.68	0.56
18:M:49:THR:CG2	18:M:56:ASP:HB2	2.34	0.56
21:P:50:GLY:HA3	21:P:87:THR:OG1	2.05	0.56
29:X:170:SER:OG	29:X:175:ARG:HG3	2.05	0.56
1:0:1634:G:H2'	1:0:1635:U:C6	2.40	0.56
1:0:2711:U:H6	1:0:2711:U:O5'	1.88	0.56
1:0:473:A:O2'	1:0:890:C:H5'	2.06	0.56
5:9:92:G:C6	5:9:93:A:C6	2.93	0.56
7:B:215:VAL:HG22	7:B:220:VAL:O	2.06	0.56
19:N:105:ASN:ND2	19:N:109:SER:H	2.04	0.56
37:0:7636:HOH:O	30:Y:31:ILE:HG13	2.04	0.56
1:0:1172:G:H1'	37:0:6554:HOH:O	2.05	0.56
1:0:45:A:H61	1:0:147:G:H2'	1.70	0.56
1:0:169:A:O2'	3:2:48:ASN:HB3	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:1890:U:H1'	1:O:2013:G:N2	2.20	0.56
6:A:230:SER:HB2	6:A:232:ARG:O	2.05	0.56
37:O:3814:HOH:O	13:H:151:MET:HE2	2.05	0.56
17:L:115:LEU:HD23	17:L:150:ILE:CD1	2.29	0.56
17:L:61:ILE:N	17:L:61:ILE:HD12	2.21	0.56
18:M:71:TRP:CE3	18:M:175:LEU:HD22	2.40	0.56
20:O:7:LYS:HD2	20:O:21:VAL:HG21	1.87	0.56
29:X:235:GLU:CD	29:X:235:GLU:N	2.56	0.56
1:O:1073:A:H1'	1:O:1088:A:C2	2.41	0.56
1:O:1333:U:H2'	1:O:1334:C:C6	2.40	0.56
1:O:2065:C:H4'	37:O:4539:HOH:O	2.05	0.56
1:O:2493:C:H1'	1:O:2494:G:N7	2.21	0.56
1:O:2722:G:O2'	1:O:2723:G:H5'	2.05	0.56
1:O:2908:A:H2'	1:O:2909:G:O4'	2.05	0.56
6:A:68:ILE:HD11	37:A:406:HOH:O	2.06	0.56
11:F:101:ALA:HA	37:F:207:HOH:O	2.04	0.56
17:L:65:VAL:HG21	17:L:105:ALA:HB2	1.86	0.56
37:C:461:HOH:O	19:N:3:THR:HG21	2.04	0.56
31:Z:22:CYS:HB2	37:Z:228:HOH:O	2.05	0.56
1:O:1681:G:H4'	1:O:1682:A:N3	2.21	0.56
1:O:1842:A:H2'	37:O:6895:HOH:O	2.05	0.56
1:O:2890:A:H2'	37:O:7465:HOH:O	2.04	0.56
1:O:604:G:H4'	1:O:605:C:O5'	2.05	0.56
3:2:46:ILE:HD13	17:L:87:MET:CG	2.35	0.56
11:F:34:ASN:HA	17:L:4:ALA:CB	2.33	0.56
18:M:91:ARG:HG3	18:M:186:LEU:HD23	1.87	0.56
27:V:21:LEU:CD2	27:V:26:ILE:HD11	2.22	0.56
27:V:38:THR:O	27:V:42:ARG:HB2	2.06	0.56
1:O:1882:C:OP1	6:A:192:VAL:HG23	2.06	0.56
1:O:2638:G:H5'	37:O:8371:HOH:O	2.05	0.56
1:O:371:U:H2'	1:O:372:A:C8	2.41	0.56
2:1:48:ASP:O	2:1:49:GLU:HB2	2.05	0.56
1:O:169:A:HO2'	3:2:48:ASN:HB3	1.71	0.56
6:A:84:VAL:HG13	6:A:98:GLU:HG3	1.88	0.56
7:B:305:ASP:O	7:B:306:LYS:CB	2.54	0.56
8:C:2:GLN:HB3	37:C:451:HOH:O	2.04	0.56
9:D:105:SER:HB2	9:D:131:THR:HG23	1.88	0.56
20:O:10:ALA:CA	20:O:13:VAL:HG12	2.35	0.56
24:S:47:THR:HG22	24:S:99:THR:OG1	2.06	0.56
26:U:4:HIS:HB3	37:U:107:HOH:O	2.05	0.56
1:O:170:U:H2'	1:O:171:C:H5'	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2781:U:H2'	1:0:2782:G:H5'	1.88	0.56
1:0:2837:U:H2'	37:0:7905:HOH:O	2.06	0.56
1:0:2849:U:O4	1:0:2906:A:H5''	2.06	0.56
1:0:357:A:H5''	1:0:358:G:OP1	2.06	0.56
1:0:558:C:H2'	1:0:559:U:H5''	1.87	0.56
7:B:86:ALA:O	7:B:97:LEU:N	2.36	0.56
8:C:133:ARG:HG3	8:C:133:ARG:HH11	1.71	0.56
10:E:104:ILE:HD12	10:E:151:LEU:HD23	1.88	0.56
1:0:1150:A:C2	12:G:20:VAL:HG21	2.40	0.56
15:J:81:ARG:HD3	15:J:87:ARG:NH1	2.20	0.56
18:M:48:VAL:HG11	18:M:55:ASP:HB3	1.88	0.56
1:0:1015:C:H2'	1:0:1016:U:H6	1.71	0.56
1:0:1032:A:N3	1:0:1032:A:H2'	2.21	0.56
1:0:1086:A:C6	27:V:11:VAL:HG11	2.40	0.56
1:0:1418:U:H2'	37:0:5165:HOH:O	2.06	0.56
1:0:1467:C:O2'	1:0:1468:G:H5'	2.06	0.56
1:0:2039:A:H4'	1:0:2760:C:O2'	2.06	0.56
1:0:902:G:N7	16:K:18:HIS:HD2	2.04	0.56
1:0:2101:A:H5''	8:C:63:SER:HB3	1.88	0.56
13:H:73:GLN:OE1	13:H:73:GLN:HA	2.06	0.56
16:K:143:THR:CG2	16:K:144:ASP:N	2.69	0.56
18:M:47:LEU:HD12	18:M:92:ALA:CB	2.35	0.56
19:N:25:VAL:CG2	19:N:26:TRP:N	2.69	0.56
37:K:320:HOH:O	29:X:147:ARG:HG3	2.04	0.56
1:0:2320:U:H4'	1:0:2321:A:O4'	2.07	0.55
1:0:2791:U:H4'	1:0:2792:A:O5'	2.05	0.55
1:0:2812:A:H2	1:0:2814:A:H62	1.53	0.55
1:0:31:C:H4'	37:0:6207:HOH:O	2.06	0.55
6:A:153:ARG:NH1	6:A:153:ARG:HB2	2.18	0.55
6:A:97:ALA:HA	6:A:131:HIS:HE2	1.71	0.55
7:B:168:GLY:N	7:B:174:ARG:HD3	2.20	0.55
1:0:675:U:C4'	8:C:42:ARG:HB3	2.35	0.55
11:F:4:VAL:HG13	11:F:76:PHE:CE1	2.42	0.55
13:H:46:VAL:HA	13:H:161:SER:HA	1.87	0.55
37:0:3633:HOH:O	14:I:47:THR:HB	2.06	0.55
17:L:37:VAL:CB	17:L:108:LYS:HG3	2.36	0.55
18:M:37:ARG:NH2	18:M:105:GLY:CA	2.64	0.55
18:M:47:LEU:HD12	18:M:92:ALA:HB1	1.88	0.55
23:R:24:LEU:HD21	23:R:74:ALA:HB1	1.88	0.55
37:0:7671:HOH:O	23:R:55:GLN:HG3	2.05	0.55
28:W:78:GLU:HG2	28:W:79:GLU:N	2.19	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1773:G:H4'	37:0:3817:HOH:O	2.07	0.55
9:D:163:VAL:HA	37:D:226:HOH:O	2.06	0.55
16:K:125:PHE:CZ	16:K:140:VAL:HG13	2.41	0.55
16:K:145:LEU:HB2	37:K:375:HOH:O	2.07	0.55
24:S:71:VAL:HG11	24:S:90:PRO:CB	2.33	0.55
27:V:3:ALA:O	27:V:54:PHE:HA	2.07	0.55
1:0:1625:U:H4'	37:0:3604:HOH:O	2.05	0.55
1:0:2842:G:H2'	1:0:2843:A:H5'	1.88	0.55
1:0:934:C:H2'	1:0:935:G:H8	1.69	0.55
8:C:219:ASN:HB2	37:C:440:HOH:O	2.06	0.55
9:D:37:ALA:O	9:D:40:ILE:HG12	2.06	0.55
9:D:99:ASP:CB	9:D:103:ASN:HB2	2.37	0.55
1:0:1201:C:H5''	37:0:3924:HOH:O	2.05	0.55
1:0:1342:C:H2'	1:0:1343:C:C5'	2.37	0.55
1:0:1833:U:O2'	1:0:1834:C:H5'	2.06	0.55
1:0:2290:U:H4'	1:0:2291:A:OP1	2.06	0.55
1:0:830:G:H2'	1:0:831:U:O4'	2.06	0.55
7:B:175:LEU:O	7:B:175:LEU:HD23	2.07	0.55
7:B:304:PRO:CG	7:B:307:ARG:NH1	2.70	0.55
9:D:94:ALA:O	9:D:95:THR:O	2.24	0.55
11:F:46:GLU:N	37:F:202:HOH:O	2.40	0.55
16:K:113:GLN:HA	37:K:356:HOH:O	2.06	0.55
18:M:33:ARG:HG3	37:M:325:HOH:O	2.05	0.55
27:V:20:THR:O	27:V:23:MET:N	2.39	0.55
1:0:1127:C:C5	1:0:1128:U:C5	2.94	0.55
1:0:1189:A:H3'	37:0:3297:HOH:O	2.06	0.55
1:0:1837:G:H2'	37:0:7630:HOH:O	2.06	0.55
1:0:371:U:H2'	1:0:372:A:H8	1.71	0.55
1:0:37:A:H2'	1:0:38:G:H8	1.72	0.55
1:0:470:U:H2'	1:0:471:G:O4'	2.07	0.55
1:0:790:A:H4'	1:0:1710:A:N7	2.22	0.55
1:0:87:C:H5''	1:0:88:G:OP2	2.07	0.55
3:2:18:GLN:O	3:2:20:HIS:ND1	2.38	0.55
7:B:205:VAL:O	7:B:307:ARG:NE	2.39	0.55
11:F:78:GLU:HB3	37:F:230:HOH:O	2.06	0.55
14:I:45:VAL:HG23	14:I:130:VAL:O	2.06	0.55
16:K:36:ASP:HB2	37:K:386:HOH:O	2.07	0.55
17:L:139:PRO:O	17:L:140:ALA:HB3	2.05	0.55
22:Q:145:LEU:HD12	22:Q:146:ILE:H	1.71	0.55
24:S:40:VAL:HG22	24:S:41:ARG:N	2.22	0.55
1:0:1340:G:H2'	37:0:6445:HOH:O	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2460:A:O2'	1:0:2461:U:O5'	2.24	0.55
1:0:694:A:H2'	1:0:695:C:H5'	1.88	0.55
10:E:166:VAL:HG12	37:E:225:HOH:O	2.06	0.55
13:H:17:ARG:HD3	13:H:23:ILE:CD1	2.36	0.55
14:I:44:ALA:HB3	14:I:132:LEU:HG	1.89	0.55
15:J:76:GLN:HB2	37:J:330:HOH:O	2.06	0.55
1:0:392:U:C5'	17:L:193:LYS:HB3	2.36	0.55
23:R:83:VAL:HG12	23:R:84:PHE:N	2.21	0.55
25:T:52:THR:HA	37:T:206:HOH:O	2.06	0.55
1:0:1595:G:O2'	1:0:1596:U:H5'	2.06	0.55
1:0:1942:A:H3'	37:0:3845:HOH:O	2.07	0.55
1:0:2082:G:O2'	1:0:2083:A:H5'	2.06	0.55
1:0:2460:A:O2'	1:0:2461:U:O4'	2.25	0.55
1:0:308:U:C4	1:0:342:C:H1'	2.42	0.55
6:A:167:LYS:HE3	30:Y:26:VAL:HG13	1.89	0.55
8:C:180:SER:N	37:C:412:HOH:O	2.40	0.55
22:Q:59:PHE:O	22:Q:63:ASN:HB3	2.07	0.55
29:X:217:ILE:O	29:X:221:ALA:HB2	2.07	0.55
1:0:2464:C:H5''	1:0:2465:A:OP1	2.06	0.55
1:0:381:G:O2'	1:0:382:U:OP2	2.25	0.55
18:M:157:PRO:HA	37:M:312:HOH:O	2.05	0.55
18:M:174:GLU:O	18:M:177:GLU:HB3	2.07	0.55
1:0:1331:A:OP2	29:X:142:SER:OG	2.24	0.55
1:0:1267:C:O2'	29:X:171:PRO:HG3	2.07	0.55
29:X:117:LEU:HA	29:X:174:VAL:HG11	1.89	0.55
29:X:219:GLU:HG3	29:X:220:GLU:N	2.21	0.55
30:Y:10:ARG:HG3	30:Y:11:THR:N	2.21	0.55
6:A:76:VAL:HG23	30:Y:63:LYS:HB3	1.87	0.55
1:0:1702:U:O2'	1:0:1703:G:H5''	2.07	0.55
1:0:1790:C:H2'	1:0:1791:U:H6	1.71	0.55
1:0:2432:C:O2'	1:0:2433:A:H5'	2.07	0.55
1:0:771:G:OP1	17:L:79:LYS:HG3	2.07	0.55
37:0:3763:HOH:O	6:A:11:ARG:HD3	2.05	0.55
8:C:8:LEU:HD13	8:C:147:LEU:HD21	1.89	0.55
11:F:47:LEU:O	11:F:98:VAL:N	2.26	0.55
1:0:1150:A:O2'	12:G:16:LYS:HD3	2.07	0.55
14:I:29:GLN:O	14:I:34:GLU:HB2	2.06	0.55
15:J:106:GLY:HA3	37:J:307:HOH:O	2.07	0.55
17:L:34:GLU:HB3	17:L:35:PRO:HD2	1.88	0.55
17:L:35:PRO:HG3	17:L:38:VAL:HG23	1.86	0.55
18:M:14:ARG:O	18:M:16:ALA:N	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:M:72:GLU:H	18:M:171:HIS:CE1	2.25	0.55
22:Q:6:VAL:HG21	22:Q:113:HIS:CD2	2.42	0.55
24:S:20:HIS:HB3	24:S:41:ARG:HD2	1.89	0.55
26:U:39:ALA:C	26:U:41:GLU:H	2.10	0.55
28:W:63:ARG:O	28:W:63:ARG:HG2	2.06	0.55
29:X:126:PRO:HG2	29:X:128:PHE:CD1	2.42	0.55
1:0:1474:C:H6	1:0:1474:C:H5'	1.72	0.55
1:0:1741:U:O2'	1:0:2723:G:H4'	2.07	0.55
1:0:204:A:C2'	1:0:205:U:H5'	2.37	0.55
1:0:2576:A:N6	37:0:3376:HOH:O	2.39	0.55
1:0:264:G:O2'	1:0:265:U:C5	2.59	0.55
1:0:2827:A:H2'	1:0:2828:G:O4'	2.06	0.55
1:0:346:U:H4'	37:0:3863:HOH:O	2.06	0.55
1:0:561:G:H2'	1:0:562:A:H8	1.73	0.55
37:0:5153:HOH:O	3:2:31:THR:HG22	2.06	0.55
7:B:177:HIS:O	7:B:180:ASP:HB2	2.07	0.55
7:B:18:ARG:HG3	7:B:256:GLN:HG3	1.88	0.55
15:J:115:ARG:HG3	15:J:116:GLU:H	1.72	0.55
27:V:142:ASP:HB3	27:V:145:GLY:H	1.71	0.55
1:0:1270:U:H2'	1:0:1271:A:C8	2.42	0.54
1:0:2037:C:H4'	1:0:2038:A:O5'	2.06	0.54
1:0:2321:A:O2'	1:0:2322:U:H3'	2.08	0.54
5:9:12:C:H5''	5:9:13:A:OP2	2.07	0.54
5:9:56:A:C3'	5:9:57:A:H5''	2.37	0.54
8:C:34:ALA:HB3	8:C:220:THR:HG21	1.89	0.54
12:G:64:ASN:N	12:G:64:ASN:HD22	2.04	0.54
21:P:66:LYS:HB2	21:P:70:ALA:O	2.07	0.54
29:X:126:PRO:HG2	29:X:128:PHE:CE1	2.42	0.54
1:0:2499:U:H2'	1:0:2500:C:C6	2.42	0.54
1:0:2587:U:H2'	1:0:2589:U:H5''	1.88	0.54
1:0:2714:U:H2'	1:0:2715:G:H8	1.70	0.54
1:0:2819:C:O4'	7:B:96:PRO:HB2	2.08	0.54
1:0:473:A:H1'	37:0:3358:HOH:O	2.07	0.54
1:0:753:U:H3'	37:0:3966:HOH:O	2.07	0.54
11:F:107:VAL:O	11:F:111:ILE:HG13	2.07	0.54
15:J:75:ARG:CZ	37:J:320:HOH:O	2.55	0.54
18:M:77:ASN:OD1	18:M:80:SER:HB2	2.06	0.54
18:M:83:LEU:HD13	18:M:175:LEU:HD23	1.89	0.54
20:O:103:THR:O	20:O:106:ARG:HB3	2.06	0.54
29:X:186:ARG:HG2	29:X:186:ARG:HH11	1.71	0.54
1:0:1477:C:H5'	1:0:1868:G:C5'	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1971:G:O2'	1:0:1972:U:OP2	2.22	0.54
1:0:2133:U:H4'	1:0:2134:G:O5'	2.07	0.54
1:0:2354:A:H5''	1:0:2355:G:OP1	2.07	0.54
1:0:2468:A:H61	3:2:48:ASN:ND2	2.04	0.54
1:0:2499:U:H2'	1:0:2500:C:H6	1.72	0.54
1:0:2769:C:H2'	1:0:2770:G:H5'	1.89	0.54
1:0:2791:U:H1'	1:0:2792:A:H5''	1.88	0.54
1:0:463:A:N1	1:0:476:A:H5''	2.23	0.54
1:0:628:A:H2	37:0:5070:HOH:O	1.90	0.54
1:0:62:C:H2'	1:0:63:U:C6	2.42	0.54
1:0:896:C:O2'	1:0:897:A:H5'	2.08	0.54
3:2:87:ARG:HG3	37:2:268:HOH:O	2.06	0.54
7:B:62:ARG:HG2	7:B:62:ARG:HH11	1.72	0.54
11:F:117:GLU:C	11:F:119:ARG:N	2.61	0.54
12:G:23:ILE:O	12:G:27:ILE:HG13	2.07	0.54
13:H:132:PHE:O	13:H:133:ILE:HD13	2.07	0.54
20:O:6:GLN:N	20:O:6:GLN:OE1	2.37	0.54
24:S:38:ARG:HG3	24:S:38:ARG:NH1	2.21	0.54
1:0:1942:A:H4'	6:A:213:LYS:HE2	1.89	0.54
6:A:54:PRO:HG2	37:A:407:HOH:O	2.07	0.54
7:B:243:ASN:HA	7:B:244:PRO:C	2.26	0.54
8:C:200:PRO:HA	37:C:470:HOH:O	2.07	0.54
13:H:136:VAL:HG21	13:H:139:ASP:O	2.08	0.54
18:M:80:SER:HB2	37:M:306:HOH:O	2.06	0.54
23:R:6:LYS:O	23:R:7:HIS:HB3	2.07	0.54
26:U:49:LEU:O	26:U:53:ILE:HG13	2.07	0.54
1:0:1755:A:H4'	37:0:4699:HOH:O	2.08	0.54
1:0:2416:G:H2'	1:0:2417:C:H6	1.72	0.54
1:0:2661:U:H3	1:0:2812:A:N6	2.02	0.54
1:0:293:A:O2'	1:0:294:C:H5'	2.08	0.54
1:0:1853:C:OP1	6:A:231:LYS:HG3	2.07	0.54
6:A:82:VAL:HG22	6:A:93:THR:HB	1.88	0.54
13:H:26:LYS:CG	13:H:28:ILE:H	2.21	0.54
13:H:72:VAL:HG13	13:H:72:VAL:O	2.07	0.54
17:L:139:PRO:HA	17:L:142:LYS:HB2	1.90	0.54
19:N:44:ASN:OD1	19:N:65:LEU:HB2	2.07	0.54
24:S:24:ARG:O	24:S:93:THR:HB	2.07	0.54
1:0:264:G:O2'	1:0:265:U:H5	1.89	0.54
1:0:2781:U:C2'	1:0:2782:G:H5'	2.37	0.54
7:B:279:THR:HA	7:B:284:PHE:HE1	1.73	0.54
7:B:41:PHE:HA	7:B:79:MET:HE2	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:C:188:ARG:HD3	37:C:445:HOH:O	2.07	0.54
8:C:72:LYS:HA	8:C:77:ALA:HA	1.89	0.54
9:D:65:GLU:HA	37:D:219:HOH:O	2.08	0.54
10:E:84:MET:HG2	10:E:168:ILE:HA	1.90	0.54
1:O:1098:A:H2'	1:O:1099:G:O4'	2.08	0.54
1:O:1311:G:O2'	1:O:1312:G:H5'	2.07	0.54
1:O:2028:U:H2'	1:O:2029:C:C6	2.43	0.54
1:O:2769:C:O2'	1:O:2770:G:H5'	2.08	0.54
1:O:60:A:C2	1:O:61:G:C8	2.96	0.54
6:A:94:LEU:N	6:A:94:LEU:HD23	2.23	0.54
7:B:74:ILE:HD13	7:B:309:VAL:HG21	1.90	0.54
9:D:37:ALA:O	9:D:38:GLU:C	2.46	0.54
13:H:136:VAL:HG22	13:H:137:ASN:O	2.07	0.54
13:H:57:ARG:C	13:H:59:ASN:H	2.11	0.54
14:I:77:GLY:O	14:I:78:ILE:C	2.46	0.54
25:T:49:LEU:HD13	25:T:51:TRP:NE1	2.22	0.54
1:O:1165:G:H4'	1:O:1174:A:O2'	2.07	0.54
1:O:2124:G:H2'	1:O:2125:G:H8	1.72	0.54
1:O:2909:G:O2'	1:O:2910:A:H5'	2.07	0.54
1:O:846:A:O2'	1:O:847:C:H5'	2.08	0.54
4:5:53:ILE:C	4:5:55:ALA:H	2.11	0.54
6:A:190:ARG:HH11	6:A:190:ARG:HB2	1.72	0.54
1:O:2295:G:N2	1:O:2314:G:H1'	2.22	0.54
1:O:2656:G:C2'	1:O:2657:G:H5'	2.37	0.54
1:O:2761:A:H3'	37:O:7026:HOH:O	2.07	0.54
1:O:428:G:H5'	37:O:4341:HOH:O	2.07	0.54
1:O:88:G:N3	2:1:24:TRP:HB2	2.23	0.54
4:5:29:LYS:HA	4:5:32:LEU:HD23	1.90	0.54
5:9:5:G:O2'	5:9:6:C:H5'	2.07	0.54
8:C:79:ARG:O	8:C:87:ARG:HG2	2.08	0.54
1:O:2346:C:O3'	9:D:52:THR:CG2	2.56	0.54
16:K:65:ASP:HA	16:K:109:LEU:O	2.07	0.54
17:L:74:ARG:O	17:L:88:VAL:HG13	2.07	0.54
19:N:73:ASP:HA	19:N:92:VAL:O	2.08	0.54
27:V:26:ILE:CG1	27:V:26:ILE:O	2.51	0.54
28:W:26:ALA:HB2	28:W:63:ARG:HA	1.90	0.54
29:X:134:HIS:CE1	29:X:135:LYS:HE3	2.42	0.54
1:O:470:U:O2'	31:Z:16:HIS:CD2	2.61	0.54
1:O:1426:C:H3'	37:O:3482:HOH:O	2.06	0.54
1:O:1460:G:N3	37:O:3267:HOH:O	2.33	0.54
1:O:1783:A:H2'	1:O:1784:U:O4'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:2078:U:O2'	1:O:2079:G:H5'	2.09	0.54
1:O:79:G:N1	1:O:97:G:O2'	2.41	0.54
6:A:211:LYS:HD2	37:A:532:HOH:O	2.06	0.54
7:B:62:ARG:HA	7:B:65:MET:HE3	1.90	0.54
8:C:214:THR:CG2	8:C:216:SER:H	2.20	0.54
9:D:135:VAL:CG2	9:D:136:ARG:N	2.70	0.54
10:E:101:GLU:HA	10:E:118:ILE:HG13	1.89	0.54
14:I:45:VAL:HG21	14:I:129:PHE:CD1	2.43	0.54
15:J:10:GLN:HE21	15:J:10:GLN:N	2.05	0.54
21:P:93:ARG:HG3	21:P:93:ARG:NH1	2.23	0.54
21:P:93:ARG:HG3	21:P:93:ARG:HH11	1.72	0.54
29:X:200:THR:HG22	29:X:201:GLU:CG	2.38	0.54
1:O:2361:A:H5''	37:O:5349:HOH:O	2.08	0.53
1:O:2416:G:H1'	37:O:4703:HOH:O	2.07	0.53
1:O:2594:C:O2'	1:O:2595:U:H5'	2.07	0.53
2:1:3:LYS:HE3	37:1:127:HOH:O	2.07	0.53
3:2:48:ASN:ND2	3:2:50:GLY:H	2.05	0.53
3:2:5:ARG:O	3:2:21:GLU:HA	2.08	0.53
8:C:178:GLN:C	8:C:180:SER:N	2.61	0.53
1:O:450:C:P	8:C:184:ARG:HH22	2.31	0.53
8:C:129:HIS:HE1	8:C:231:ARG:HA	1.73	0.53
13:H:71:TYR:C	13:H:73:GLN:N	2.60	0.53
14:I:15:ARG:O	14:I:16:ASP:HB2	2.08	0.53
16:K:149:ARG:N	37:K:305:HOH:O	2.41	0.53
18:M:154:LEU:O	18:M:155:GLU:HB3	2.07	0.53
20:O:102:ARG:HB2	37:O:201:HOH:O	2.08	0.53
23:R:57:THR:HG23	37:R:227:HOH:O	2.07	0.53
24:S:41:ARG:HG2	24:S:41:ARG:NH1	2.20	0.53
26:U:8:ILE:CG2	26:U:59:ILE:HG13	2.38	0.53
27:V:80:ASP:HB2	37:V:248:HOH:O	2.07	0.53
1:O:621:C:H5'	29:X:132:ASP:OD2	2.08	0.53
1:O:1070:A:H2'	1:O:1071:G:C8	2.43	0.53
1:O:114:A:H4'	1:O:115:U:OP1	2.07	0.53
1:O:2809:G:H2'	1:O:2810:G:O4'	2.08	0.53
1:O:281:U:O2'	1:O:282:C:H5'	2.09	0.53
6:A:2:ARG:NH1	37:A:413:HOH:O	2.41	0.53
7:B:193:ILE:HB	7:B:194:PHE:CD1	2.43	0.53
7:B:205:VAL:HB	7:B:307:ARG:HE	1.74	0.53
9:D:95:THR:C	9:D:97:GLN:N	2.59	0.53
10:E:32:ARG:C	10:E:33:LEU:HD23	2.29	0.53
10:E:69:ILE:HA	10:E:72:MET:HE3	1.88	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:J:87:ARG:NH1	37:J:305:HOH:O	2.40	0.53
20:O:131:PHE:CE2	20:O:137:LEU:HD12	2.43	0.53
21:P:3:SER:HB3	37:P:203:HOH:O	2.07	0.53
31:Z:5:THR:N	31:Z:6:PRO:HD2	2.22	0.53
1:O:1580:A:H8	1:O:1580:A:O5'	1.91	0.53
1:O:1853:C:H4'	6:A:217:ARG:HH22	1.72	0.53
1:O:1968:A:H2'	1:O:1969:A:C8	2.43	0.53
1:O:2754:G:C2'	1:O:2755:G:H5'	2.37	0.53
1:O:170:U:H4'	3:2:48:ASN:O	2.08	0.53
3:2:60:LYS:CG	3:2:61:PRO:HD2	2.36	0.53
7:B:162:MET:HG3	7:B:310:ARG:NH1	2.24	0.53
8:C:120:ASP:O	8:C:124:VAL:HG23	2.07	0.53
8:C:19:PRO:CB	8:C:244:ALA:HB2	2.38	0.53
8:C:95:GLU:HG3	37:C:563:HOH:O	2.07	0.53
15:J:30:LYS:HD3	37:J:350:HOH:O	2.07	0.53
15:J:49:LEU:HD12	15:J:80:ILE:HG21	1.91	0.53
18:M:120:GLU:HG3	18:M:136:LEU:HD13	1.90	0.53
19:N:62:GLY:O	19:N:79:VAL:HB	2.08	0.53
23:R:10:VAL:O	23:R:10:VAL:HG13	2.08	0.53
23:R:57:THR:C	23:R:59:ASP:H	2.12	0.53
23:R:73:ASP:O	23:R:77:VAL:HG23	2.08	0.53
26:U:12:THR:CG2	26:U:15:GLU:H	2.21	0.53
27:V:122:ARG:NH2	27:V:154:ARG:CD	2.71	0.53
1:O:152:A:H1'	1:O:440:C:O2'	2.08	0.53
1:O:169:A:H2'	37:O:6066:HOH:O	2.09	0.53
1:O:2060:A:H4'	37:O:6968:HOH:O	2.07	0.53
1:O:2316:G:H5'	1:O:2317:C:O4'	2.08	0.53
1:O:2326:U:H4'	1:O:2412:G:C4'	2.39	0.53
1:O:2698:G:H2'	1:O:2699:A:C8	2.44	0.53
1:O:2897:C:O2'	1:O:2898:G:H5'	2.09	0.53
7:B:229:ARG:HA	37:B:548:HOH:O	2.08	0.53
13:H:56:ILE:HG22	13:H:61:LEU:CD2	2.37	0.53
17:L:26:HIS:O	17:L:29:GLN:HB2	2.08	0.53
37:9:349:HOH:O	18:M:113:SER:HB3	2.08	0.53
18:M:7:LYS:HB2	37:P:207:HOH:O	2.09	0.53
27:V:21:LEU:HD21	27:V:48:VAL:HG13	1.91	0.53
1:O:119:A:H2'	1:O:120:A:H5''	1.90	0.53
1:O:1131:G:O6	1:O:1230:A:H1'	2.09	0.53
1:O:2362:A:H8	1:O:2362:A:O5'	1.92	0.53
1:O:2442:G:H3'	37:O:3862:HOH:O	2.06	0.53
1:O:2497:A:C2	1:O:2524:G:C2	2.95	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2686:C:O2'	1:0:2687:G:H5'	2.08	0.53
3:2:30:GLN:NE2	37:2:204:HOH:O	2.41	0.53
6:A:131:HIS:O	6:A:132:ASP:HB2	2.07	0.53
9:D:159:PRO:O	9:D:163:VAL:HG23	2.09	0.53
10:E:11:VAL:HG11	10:E:22:VAL:CG1	2.38	0.53
10:E:126:ILE:HB	10:E:131:LEU:HD21	1.91	0.53
17:L:52:LEU:HD21	37:L:301:HOH:O	2.09	0.53
19:N:26:TRP:CE3	19:N:26:TRP:HA	2.44	0.53
20:O:98:ILE:HD12	20:O:102:ARG:NE	2.23	0.53
27:V:14:HIS:HB2	27:V:17:ILE:HG13	1.90	0.53
28:W:75:ALA:O	28:W:83:ALA:HA	2.08	0.53
30:Y:39:CYS:HB2	30:Y:47:LEU:HG	1.90	0.53
1:0:1044:C:O3'	1:0:1045:G:H4'	2.09	0.53
1:0:1735:C:H2'	1:0:1736:A:H8	1.73	0.53
1:0:2256:G:H2'	1:0:2257:G:H5'	1.90	0.53
1:0:2897:C:H2'	1:0:2898:G:H8	1.72	0.53
5:9:44:A:O4'	9:D:76:ARG:NE	2.41	0.53
9:D:173:GLU:HG3	9:D:174:VAL:N	2.24	0.53
1:0:2346:C:O2'	9:D:52:THR:HG21	2.08	0.53
1:0:2432:C:H2'	1:0:2433:A:H8	1.73	0.53
1:0:2761:A:H2'	1:0:2763:G:N7	2.24	0.53
1:0:1884:G:O6	6:A:190:ARG:HD3	2.08	0.53
7:B:162:MET:CE	7:B:310:ARG:HD3	2.39	0.53
8:C:246:ARG:NE	37:C:411:HOH:O	2.40	0.53
9:D:55:LYS:HA	37:D:219:HOH:O	2.07	0.53
11:F:58:GLU:HB3	17:L:8:ILE:HG23	1.91	0.53
14:I:95:ARG:O	14:I:99:GLU:HB2	2.09	0.53
17:L:99:ARG:HD2	17:L:167:GLY:HA2	1.89	0.53
24:S:41:ARG:NH1	24:S:42:VAL:O	2.42	0.53
29:X:106:THR:CG2	29:X:107:PRO:HD2	2.39	0.53
1:0:1527:A:O2'	1:0:1528:A:O4'	2.27	0.53
1:0:1574:C:H2'	1:0:1575:C:H6	1.72	0.53
1:0:538:C:H4'	1:0:539:G:OP2	2.08	0.53
6:A:9:ARG:HG2	6:A:16:PHE:CE2	2.43	0.53
7:B:98:THR:HG22	7:B:99:GLU:H	1.74	0.53
9:D:55:LYS:O	9:D:56:ARG:HB2	2.08	0.53
1:0:2443:C:O2'	16:K:56:LYS:CE	2.56	0.53
20:O:80:ARG:HG2	20:O:87:ARG:CZ	2.39	0.53
21:P:24:SER:HB3	21:P:28:ARG:HH21	1.73	0.53
1:0:1132:A:H2'	1:0:1133:A:C8	2.44	0.53
1:0:1803:C:H2'	1:0:1804:A:C8	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1850:U:O4'	1:0:1941:A:C2	2.62	0.53
1:0:210:U:H2'	1:0:211:U:C6	2.44	0.53
1:0:2473:U:H1'	37:0:5468:HOH:O	2.08	0.53
1:0:2537:G:H5''	1:0:2538:A:H5''	1.91	0.53
1:0:558:C:H2'	1:0:559:U:H5'	1.89	0.53
1:0:945:U:O2'	27:V:43:GLY:HA3	2.09	0.53
6:A:13:THR:O	6:A:14:SER:C	2.47	0.53
6:A:30:ARG:HG3	6:A:66:ARG:NH1	2.23	0.53
17:L:48:ARG:NH1	17:L:52:LEU:HD21	2.24	0.53
19:N:42:GLU:HB2	37:N:308:HOH:O	2.09	0.53
23:R:57:THR:HG22	23:R:59:ASP:N	2.24	0.53
1:0:110:C:H2'	1:0:111:C:H6	1.74	0.53
1:0:1356:A:O2'	1:0:1357:A:O4'	2.27	0.53
1:0:2842:G:C2'	1:0:2843:A:H5'	2.39	0.53
1:0:941:G:H2'	1:0:942:U:O4'	2.09	0.53
9:D:94:ALA:HB3	9:D:174:VAL:HA	1.91	0.53
11:F:53:ASP:OD1	11:F:80:GLN:HB2	2.09	0.53
14:I:68:GLY:HA2	35:I:204:CL:CL	2.46	0.53
17:L:69:LYS:HD3	17:L:124:GLY:O	2.08	0.53
19:N:72:LYS:O	19:N:74:VAL:HG22	2.09	0.53
23:R:11:THR:O	23:R:12:GLU:C	2.44	0.53
1:0:67:A:OP2	1:0:108:U:H5'	2.08	0.52
1:0:1293:U:O2'	1:0:1294:A:H5'	2.09	0.52
1:0:1766:U:O2	1:0:1778:A:H5'	2.09	0.52
1:0:1941:A:H4'	37:0:5758:HOH:O	2.09	0.52
1:0:249:G:H1'	1:0:265:U:O2	2.08	0.52
1:0:2889:U:H1'	1:0:2891:A:H1'	1.90	0.52
11:F:65:GLU:O	11:F:69:GLU:HG2	2.10	0.52
1:0:145:A:H2'	1:0:146:U:C6	2.44	0.52
1:0:1636:G:O2'	1:0:1637:A:H5'	2.08	0.52
1:0:1875:A:H1'	1:0:1877:G:C5	2.44	0.52
5:9:56:A:C4	9:D:13:MET:HB3	2.43	0.52
6:A:192:VAL:HG12	6:A:192:VAL:O	2.08	0.52
7:B:81:ALA:O	7:B:186:GLY:HA3	2.08	0.52
8:C:130:GLU:O	8:C:131:PHE:HB3	2.09	0.52
18:M:67:ALA:HA	18:M:71:TRP:H	1.74	0.52
18:M:73:ALA:N	37:M:308:HOH:O	2.42	0.52
21:P:11:ARG:HD3	37:P:211:HOH:O	2.08	0.52
25:T:9:CYS:HA	25:T:52:THR:CG2	2.40	0.52
26:U:51:LYS:O	26:U:54:ALA:HB3	2.08	0.52
27:V:8:ARG:HD3	27:V:51:PHE:HA	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:W:27:ASP:OD2	28:W:27:ASP:N	2.42	0.52
29:X:133:HIS:HD2	37:X:435:HOH:O	1.92	0.52
29:X:189:ASN:HB2	37:X:415:HOH:O	2.10	0.52
31:Z:50:TRP:C	31:Z:52:SER:H	2.10	0.52
1:0:1325:G:O2'	1:0:1326:U:H5'	2.08	0.52
1:0:1471:A:H2'	1:0:1472:C:C6	2.44	0.52
1:0:1886:A:H5''	37:0:8274:HOH:O	2.09	0.52
1:0:2703:A:H2'	1:0:2704:C:H6	1.75	0.52
1:0:333:G:O2'	1:0:334:G:H5'	2.08	0.52
1:0:746:A:O2'	1:0:747:G:C8	2.61	0.52
1:0:921:G:H4'	1:0:924:G:C6	2.44	0.52
37:0:5559:HOH:O	16:K:8:ARG:HD3	2.08	0.52
23:R:29:ASP:OD1	23:R:31:ARG:NH1	2.43	0.52
26:U:55:ARG:O	26:U:58:THR:HB	2.09	0.52
30:Y:10:ARG:HA	37:Y:218:HOH:O	2.09	0.52
1:0:2478:U:O2'	1:0:2479:A:H5'	2.08	0.52
1:0:2550:U:H2'	1:0:2551:C:H6	1.73	0.52
1:0:2597:U:H2'	1:0:2598:U:H5'	1.91	0.52
1:0:2659:U:H4'	22:Q:76:ASP:HB3	1.91	0.52
1:0:280:C:H2'	1:0:281:U:O4'	2.09	0.52
1:0:541:C:C2'	1:0:542:A:C5'	2.84	0.52
7:B:83:ALA:HB2	7:B:101:TRP:CD2	2.44	0.52
9:D:59:GLY:C	9:D:61:PHE:H	2.13	0.52
14:I:38:VAL:HB	14:I:103:VAL:HG13	1.91	0.52
15:J:71:ALA:HB2	15:J:97:ILE:HA	1.91	0.52
16:K:26:HIS:HB2	37:K:336:HOH:O	2.09	0.52
16:K:35:ARG:C	16:K:35:ARG:HD3	2.30	0.52
19:N:11:ILE:HG22	19:N:12:ALA:N	2.25	0.52
1:0:1469:C:N3	1:0:1472:C:OP2	2.43	0.52
1:0:1488:U:C4'	1:0:1489:G:OP1	2.57	0.52
1:0:1785:G:H8	1:0:1785:G:O5'	1.91	0.52
1:0:1852:A:C2	1:0:1880:C:C2	2.98	0.52
1:0:1894:C:H5''	1:0:1895:A:OP1	2.09	0.52
1:0:229:G:O2'	1:0:230:C:H5'	2.09	0.52
1:0:485:A:C4'	1:0:486:A:H5'	2.39	0.52
1:0:625:U:H2'	1:0:627:G:OP2	2.10	0.52
1:0:761:A:H4'	1:0:762:C:C5'	2.39	0.52
4:5:54:VAL:HG12	4:5:54:VAL:O	2.09	0.52
9:D:154:LYS:CD	9:D:154:LYS:H	2.08	0.52
9:D:23:VAL:HG21	9:D:45:THR:CG2	2.40	0.52
10:E:166:VAL:HG12	10:E:167:TYR:N	2.23	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:T:36:CYS:HG	25:T:51:TRP:HH2	1.57	0.52
28:W:70:ILE:O	28:W:70:ILE:HG23	2.08	0.52
37:0:5824:HOH:O	29:X:136:LYS:HB2	2.10	0.52
1:0:1829:A:N6	30:Y:18:TYR:HA	2.25	0.52
30:Y:19:GLY:O	30:Y:23:ARG:HG2	2.09	0.52
1:0:1296:A:H8	1:0:1296:A:O5'	1.91	0.52
1:0:1526:A:H5''	1:0:1527:A:OP1	2.10	0.52
1:0:1574:C:H2'	1:0:1575:C:C6	2.44	0.52
1:0:1746:A:N6	1:0:1754:A:H61	2.08	0.52
1:0:2419:U:H5''	1:0:2420:G:C5'	2.39	0.52
1:0:2620:U:C4'	1:0:2621:U:OP1	2.58	0.52
1:0:395:A:N1	1:0:2443:C:N4	2.56	0.52
3:2:91:GLN:O	3:2:92:GLU:HB2	2.09	0.52
5:9:119:C:H2'	5:9:120:A:H8	1.75	0.52
8:C:133:ARG:NH1	37:C:413:HOH:O	2.42	0.52
10:E:11:VAL:CG1	10:E:12:ASP:N	2.72	0.52
15:J:125:ALA:C	15:J:127:ALA:H	2.13	0.52
15:J:82:ARG:HH21	15:J:115:ARG:HG2	1.71	0.52
17:L:85:ARG:NE	37:L:311:HOH:O	2.43	0.52
18:M:37:ARG:HE	18:M:105:GLY:HA3	1.75	0.52
18:M:37:ARG:HH21	18:M:105:GLY:N	2.08	0.52
22:Q:113:HIS:HE1	22:Q:144:GLU:CD	2.13	0.52
25:T:8:TYR:CE1	25:T:40:ALA:HB2	2.44	0.52
1:0:1589:G:N2	1:0:1605:G:O2'	2.43	0.52
1:0:321:A:O2'	1:0:322:G:H5'	2.09	0.52
1:0:42:C:H1'	37:0:6413:HOH:O	2.10	0.52
1:0:88:G:H2'	1:0:89:G:C8	2.44	0.52
5:9:119:C:H1'	37:9:321:HOH:O	2.09	0.52
5:9:77:A:H1'	5:9:79:U:C6	2.44	0.52
7:B:304:PRO:HD2	7:B:307:ARG:HH11	1.75	0.52
13:H:149:ALA:C	13:H:151:MET:N	2.63	0.52
17:L:115:LEU:CD2	17:L:150:ILE:HD12	2.29	0.52
19:N:113:VAL:O	19:N:114:ILE:HD13	2.08	0.52
22:Q:132:ARG:HG2	22:Q:133:ALA:N	2.25	0.52
27:V:4:LEU:HB2	27:V:33:THR:HG22	1.91	0.52
29:X:125:LYS:HB2	29:X:126:PRO:HD2	1.91	0.52
30:Y:39:CYS:HA	30:Y:47:LEU:HD11	1.92	0.52
6:A:73:GLY:N	30:Y:65:ALA:O	2.35	0.52
1:0:1126:C:N4	1:0:1129:C:H1'	2.25	0.52
1:0:2419:U:OP1	1:0:2420:G:H5''	2.09	0.52
1:0:2587:U:C2	1:0:2589:U:H5'	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2691:A:H5''	1:0:2692:G:OP1	2.10	0.52
1:0:2911:C:H2'	1:0:2912:C:C6	2.45	0.52
2:1:22:PRO:HG2	2:1:25:VAL:HG23	1.91	0.52
8:C:118:THR:O	8:C:136:VAL:HG13	2.10	0.52
1:0:692:A:HO2'	16:K:51:PHE:HD2	1.58	0.52
18:M:37:ARG:NH2	18:M:105:GLY:HA3	2.24	0.52
24:S:23:VAL:HG23	24:S:41:ARG:HG3	1.92	0.52
27:V:13:MET:HE2	27:V:18:GLN:CA	2.38	0.52
1:0:1015:C:C2	1:0:1016:U:C5	2.98	0.52
1:0:1941:A:O2'	1:0:1942:A:OP2	2.25	0.52
1:0:2642:G:H2'	1:0:2643:G:O4'	2.09	0.52
1:0:2670:G:N2	7:B:85:ARG:HH22	2.08	0.52
1:0:402:U:H1'	37:0:3378:HOH:O	2.08	0.52
10:E:158:ASP:OD1	10:E:160:ARG:N	2.36	0.52
1:0:1235:G:H1'	14:I:63:ILE:HG23	1.91	0.52
17:L:159:THR:HA	37:L:360:HOH:O	2.10	0.52
27:V:14:HIS:HB3	27:V:16:ASP:OD1	2.10	0.52
1:0:1338:U:H2'	1:0:1339:G:O4'	2.10	0.52
1:0:1406:A:H2'	1:0:1701:A:N6	2.24	0.52
1:0:1840:A:H4'	1:0:1841:C:C5'	2.38	0.52
1:0:184:G:O2'	1:0:185:G:H5'	2.09	0.52
1:0:2295:G:O2'	1:0:2296:C:H5'	2.09	0.52
1:0:2524:G:H21	1:0:2526:C:N4	2.07	0.52
1:0:2781:U:H1'	10:E:139:GLU:OE2	2.10	0.52
1:0:460:A:H5''	1:0:461:C:OP2	2.10	0.52
1:0:820:G:H5'	1:0:821:U:C5'	2.40	0.52
5:9:10:C:H4'	5:9:13:A:N6	2.25	0.52
7:B:41:PHE:HB2	7:B:193:ILE:HD12	1.91	0.52
1:0:1008:C:H5''	13:H:16:ARG:HH12	1.75	0.52
1:0:1109:U:O4	14:I:21:ARG:HA	2.10	0.52
1:0:1085:C:H2'	1:0:1086:A:H5'	1.91	0.51
1:0:1298:U:H2'	1:0:1299:G:C8	2.44	0.51
1:0:2310:G:H2'	1:0:2311:A:H8	1.74	0.51
1:0:523:C:H2'	1:0:524:A:H8	1.75	0.51
6:A:53:ALA:HB3	37:A:439:HOH:O	2.09	0.51
11:F:48:VAL:HG12	11:F:97:ALA:HB1	1.92	0.51
13:H:26:LYS:HD2	13:H:28:ILE:HD12	1.91	0.51
13:H:75:SER:HB3	13:H:79:ALA:CB	2.40	0.51
15:J:79:PRO:HA	15:J:88:VAL:O	2.10	0.51
20:O:22:TRP:C	20:O:23:PHE:HD1	2.13	0.51
30:Y:30:GLU:HB3	30:Y:34:LYS:HE3	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1114:A:O2'	1:0:1115:U:H5'	2.10	0.51
1:0:1288:U:H5''	37:0:5537:HOH:O	2.09	0.51
1:0:1883:U:H2'	1:0:1884:G:O4'	2.10	0.51
1:0:1909:A:N1	1:0:2128:G:H1'	2.26	0.51
1:0:380:A:C4'	1:0:381:G:OP1	2.57	0.51
1:0:485:A:N3	1:0:487:G:H5''	2.25	0.51
1:0:899:C:OP1	1:0:923:A:O2'	2.29	0.51
5:9:34:A:H1'	18:M:153:GLN:HE22	1.75	0.51
5:9:57:A:H2'	5:9:58:G:C5'	2.40	0.51
7:B:175:LEU:C	7:B:175:LEU:CD2	2.78	0.51
10:E:84:MET:HE1	10:E:133:VAL:CG2	2.40	0.51
18:M:100:ALA:O	18:M:129:ILE:HG23	2.10	0.51
22:Q:83:LYS:HB3	37:Q:306:HOH:O	2.08	0.51
30:Y:14:PHE:HB3	30:Y:18:TYR:HD1	1.74	0.51
1:0:1235:G:C1'	14:I:63:ILE:HG23	2.40	0.51
1:0:1641:A:H2'	1:0:1642:A:C5'	2.39	0.51
1:0:1874:U:HO2'	1:0:1875:A:P	2.34	0.51
1:0:2795:C:O2'	1:0:2796:U:H5'	2.10	0.51
1:0:2909:G:H2'	1:0:2910:A:H8	1.76	0.51
1:0:30:U:O4	1:0:452:G:O2'	2.27	0.51
1:0:420:U:H2'	1:0:421:C:C6	2.45	0.51
1:0:595:U:O2'	1:0:596:C:H5'	2.11	0.51
1:0:68:U:C5	1:0:107:U:H4'	2.46	0.51
1:0:2408:A:H1'	3:2:10:TYR:CD1	2.45	0.51
5:9:23:U:C4'	5:9:24:U:OP2	2.58	0.51
6:A:220:PRO:HD2	6:A:223:ARG:HD3	1.92	0.51
10:E:152:THR:HG21	10:E:165:GLY:CA	2.40	0.51
13:H:87:LYS:HE2	37:H:240:HOH:O	2.11	0.51
17:L:82:ARG:O	17:L:86:MET:HG3	2.11	0.51
1:0:1829:A:H61	30:Y:18:TYR:HA	1.74	0.51
30:Y:39:CYS:SG	30:Y:40:PRO:HD2	2.50	0.51
1:0:1238:C:H5''	1:0:1239:G:OP2	2.09	0.51
1:0:1894:C:C2	1:0:1939:U:C4	2.99	0.51
1:0:653:C:H5''	37:N:304:HOH:O	2.10	0.51
4:5:44:PHE:HB3	4:5:49:VAL:HG22	1.92	0.51
6:A:20:SER:O	6:A:22:ARG:N	2.43	0.51
6:A:211:LYS:NZ	37:A:416:HOH:O	2.42	0.51
8:C:76:ARG:HD2	37:C:528:HOH:O	2.09	0.51
9:D:135:VAL:CG2	9:D:136:ARG:H	2.24	0.51
22:Q:27:HIS:ND1	22:Q:81:PRO:HB3	2.25	0.51
25:T:49:LEU:HD13	25:T:51:TRP:HE1	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:1088:A:O2'	1:O:1089:G:H5''	2.11	0.51
1:O:1118:A:H3'	1:O:1119:G:H5'	1.93	0.51
1:O:145:A:H2'	1:O:146:U:H6	1.75	0.51
1:O:2712:G:OP1	15:J:43:ARG:NH1	2.44	0.51
1:O:590:A:H2'	1:O:591:A:H5'	1.92	0.51
1:O:629:A:H4'	37:O:4917:HOH:O	2.11	0.51
6:A:72:GLU:HG3	30:Y:66:GLY:HA2	1.93	0.51
7:B:268:ARG:NH1	7:B:322:ARG:NH2	2.59	0.51
8:C:67:GLN:HA	37:C:518:HOH:O	2.10	0.51
11:F:63:ILE:CB	11:F:64:PRO:HD3	2.31	0.51
13:H:161:SER:HB3	37:H:237:HOH:O	2.11	0.51
16:K:41:HIS:O	16:K:42:ASN:HB2	2.10	0.51
1:O:1674:C:P	23:R:34:LYS:HG3	2.50	0.51
26:U:55:ARG:O	26:U:58:THR:N	2.43	0.51
29:X:119:GLN:O	29:X:122:ARG:N	2.43	0.51
30:Y:14:PHE:HB3	30:Y:18:TYR:CD1	2.45	0.51
1:O:106:A:H1'	37:O:4331:HOH:O	2.09	0.51
1:O:1165:G:H1'	1:O:1174:A:H1'	1.92	0.51
1:O:1701:A:C2	1:O:1710:A:H1'	2.46	0.51
1:O:2534:C:OP2	37:O:3201:HOH:O	2.19	0.51
1:O:485:A:HO2'	1:O:486:A:P	2.33	0.51
6:A:51:ARG:HH11	6:A:51:ARG:HB3	1.75	0.51
37:O:3608:HOH:O	8:C:77:ALA:HB3	2.10	0.51
11:F:106:THR:O	11:F:110:GLU:HG3	2.11	0.51
13:H:45:GLN:HB2	13:H:135:TRP:CD1	2.46	0.51
19:N:25:VAL:CG2	19:N:26:TRP:H	2.24	0.51
27:V:1:MET:HE3	27:V:101:LEU:HA	1.92	0.51
29:X:134:HIS:HE1	29:X:135:LYS:HE3	1.74	0.51
1:O:1001:U:O2'	1:O:1002:G:H5'	2.11	0.51
1:O:1307:A:H2'	1:O:1308:A:C8	2.45	0.51
1:O:1315:G:O2'	29:X:212:ARG:N	2.44	0.51
1:O:1589:G:O2'	1:O:1590:A:C8	2.64	0.51
1:O:1859:A:N7	1:O:1860:U:C5	2.79	0.51
1:O:623:U:O2'	1:O:624:U:H5'	2.11	0.51
1:O:2504:A:H4'	13:H:70:ARG:HH11	1.75	0.51
14:I:42:GLU:HG2	14:I:43:ARG:N	2.26	0.51
15:J:10:GLN:N	15:J:10:GLN:NE2	2.48	0.51
17:L:185:PRO:HG2	37:L:381:HOH:O	2.10	0.51
1:O:74:A:H5'	26:U:9:ARG:HH22	1.75	0.51
31:Z:28:HIS:CD2	31:Z:31:LYS:HE2	2.46	0.51
31:Z:5:THR:HB	31:Z:6:PRO:CD	2.39	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1118:A:H2'	1:0:1119:G:C5'	2.40	0.51
1:0:1186:C:H42	1:0:1190:G:H22	1.58	0.51
1:0:1563:G:O2'	1:0:1564:C:P	2.69	0.51
1:0:2106:C:H6	1:0:2106:C:O5'	1.94	0.51
1:0:2239:C:H2'	1:0:2240:U:C6	2.46	0.51
1:0:2263:G:O2'	17:L:70:GLY:HA2	2.10	0.51
1:0:2761:A:O2'	1:0:2762:C:C3'	2.59	0.51
1:0:496:G:C6	1:0:498:A:C6	2.98	0.51
1:0:631:A:C2	1:0:2073:G:O2'	2.64	0.51
1:0:657:G:H2'	1:0:658:C:C6	2.46	0.51
1:0:938:G:OP2	1:0:938:G:C8	2.63	0.51
7:B:221:GLN:HE22	15:J:42:ASN:HD22	1.57	0.51
7:B:206:THR:O	7:B:259:TYR:HA	2.11	0.51
13:H:83:PHE:CD1	13:H:134:ALA:HB2	2.46	0.51
14:I:131:THR:CG2	14:I:133:GLY:H	2.19	0.51
14:I:74:ARG:NH1	14:I:76:ASP:HB2	2.25	0.51
20:O:64:GLU:HG2	37:O:247:HOH:O	2.11	0.51
1:0:1085:C:C2'	1:0:1086:A:H5'	2.40	0.51
1:0:2330:U:H2'	37:O:6868:HOH:O	2.10	0.51
1:0:271:C:H4'	1:0:272:A:OP1	2.11	0.51
1:0:48:A:H2'	1:0:49:A:C8	2.46	0.51
1:0:631:A:N3	1:0:2073:G:O2'	2.43	0.51
7:B:154:VAL:CG1	7:B:156:LYS:HG2	2.38	0.51
8:C:103:ASN:HA	37:C:484:HOH:O	2.11	0.51
13:H:15:THR:HG22	13:H:90:PHE:O	2.11	0.51
15:J:20:CYS:HB2	15:J:29:LEU:HG	1.92	0.51
28:W:61:ARG:N	37:W:102:HOH:O	2.44	0.51
29:X:200:THR:HG22	29:X:201:GLU:HG3	1.93	0.51
1:0:1034:G:O2'	1:0:1035:C:H5'	2.10	0.51
1:0:1069:C:O2'	1:0:1070:A:H5'	2.11	0.51
1:0:1486:A:C4	2:1:2:LYS:HG3	2.46	0.51
1:0:1496:G:H2'	1:0:1497:G:H8	1.75	0.51
1:0:1579:C:C4'	1:0:1580:A:OP1	2.56	0.51
1:0:1527:A:N6	1:0:1663:G:H2'	2.26	0.51
1:0:2457:U:H2'	1:0:2458:U:H6	1.75	0.51
1:0:486:A:H4'	24:S:81:LYS:HG2	1.93	0.51
1:0:538:C:O2	1:0:538:C:H2'	2.11	0.51
3:2:2:GLN:OE1	3:2:89:GLU:HB2	2.10	0.51
6:A:186:TRP:CD1	6:A:187:PRO:HA	2.46	0.51
6:A:217:ARG:HG2	6:A:229:ALA:CB	2.41	0.51
7:B:162:MET:HG3	7:B:310:ARG:CD	2.35	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:F:21:GLU:O	11:F:24:ARG:CG	2.58	0.51
16:K:122:ALA:HB3	16:K:125:PHE:CZ	2.46	0.51
17:L:37:VAL:HG21	17:L:108:LYS:HG3	1.92	0.51
1:O:187:A:OP1	17:L:154:ARG:NE	2.44	0.51
23:R:15:MET:O	23:R:18:MET:N	2.44	0.51
24:S:50:VAL:HG12	24:S:56:ALA:HA	1.91	0.51
26:U:58:THR:O	26:U:62:GLU:HG3	2.11	0.51
29:X:187:VAL:HG13	29:X:205:ILE:HA	1.93	0.51
1:O:1057:A:H1'	1:O:2492:U:O2'	2.12	0.50
1:O:1515:A:H2'	1:O:1516:C:C6	2.46	0.50
1:O:1609:C:H2'	1:O:1610:G:C8	2.46	0.50
1:O:1759:A:H5''	37:O:7566:HOH:O	2.10	0.50
1:O:2064:U:O2'	1:O:2065:C:H5'	2.11	0.50
1:O:2757:A:O3'	7:B:285:VAL:HG11	2.11	0.50
1:O:151:A:C2	1:O:442:A:C8	2.99	0.50
1:O:697:G:H5''	37:O:3693:HOH:O	2.11	0.50
9:D:170:TYR:O	9:D:171:ASP:HB3	2.12	0.50
9:D:27:ILE:CD1	9:D:37:ALA:HB2	2.37	0.50
10:E:80:TRP:O	10:E:134:SER:HA	2.11	0.50
13:H:86:ARG:HH11	13:H:133:ILE:CG1	2.21	0.50
17:L:149:TRP:CD2	17:L:150:ILE:N	2.79	0.50
17:L:71:SER:CB	17:L:92:THR:HG22	2.35	0.50
18:M:139:TRP:N	37:M:309:HOH:O	2.43	0.50
19:N:26:TRP:HE3	19:N:26:TRP:HA	1.76	0.50
25:T:39:ASN:HD22	25:T:49:LEU:HD11	1.76	0.50
29:X:132:ASP:OD1	29:X:135:LYS:NZ	2.44	0.50
1:O:1118:A:C3'	1:O:1118:A:C8	2.94	0.50
1:O:1185:U:H2'	1:O:1186:C:H6	1.74	0.50
1:O:1378:G:H1'	1:O:2747:C:C4	2.46	0.50
1:O:1449:G:H2'	1:O:1493:A:C2	2.47	0.50
1:O:1875:A:H1'	1:O:1877:G:C6	2.46	0.50
1:O:316:A:N3	1:O:336:G:O2'	2.42	0.50
1:O:675:U:H2'	1:O:676:C:C5'	2.39	0.50
1:O:868:G:H3'	37:O:8544:HOH:O	2.09	0.50
1:O:962:C:H1'	18:M:5:ARG:HH12	1.75	0.50
8:C:21:VAL:HG13	37:C:494:HOH:O	2.09	0.50
9:D:51:ARG:HD3	37:D:228:HOH:O	2.11	0.50
11:F:104:ALA:O	11:F:106:THR:N	2.45	0.50
17:L:147:LEU:O	17:L:150:ILE:HG22	2.12	0.50
37:O:3724:HOH:O	19:N:39:THR:HB	2.10	0.50
20:O:115:SER:C	20:O:117:SER:H	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:O:76:GLY:C	20:O:78:GLY:H	2.15	0.50
1:O:2053:G:H4'	22:Q:136:TRP:CE2	2.46	0.50
1:O:1719:G:O2'	1:O:1720:C:H5'	2.10	0.50
1:O:1736:A:C2	1:O:1737:A:C4	2.99	0.50
1:O:1745:G:H2'	37:O:8659:HOH:O	2.11	0.50
1:O:2073:G:C6	1:O:2607:U:C2	2.99	0.50
1:O:2577:A:OP2	37:O:3202:HOH:O	2.19	0.50
1:O:2586:U:H3	1:O:2592:G:N2	1.95	0.50
1:O:2700:G:H2'	1:O:2701:G:C5'	2.42	0.50
1:O:2769:C:H2'	1:O:2770:G:C5'	2.42	0.50
1:O:226:A:H1'	1:O:393:G:C5	2.46	0.50
1:O:560:C:H42	1:O:597:A:H61	1.59	0.50
1:O:892:G:H5''	31:Z:54:ALA:HB2	1.92	0.50
1:O:98:A:C2'	1:O:99:A:H5'	2.41	0.50
7:B:150:ALA:O	7:B:152:PRO:HD3	2.11	0.50
9:D:153:THR:HG22	37:D:242:HOH:O	2.11	0.50
13:H:31:PHE:HA	13:H:85:ILE:CG2	2.41	0.50
13:H:68:ALA:HB2	13:H:149:ALA:HB2	1.94	0.50
26:U:34:GLN:HG3	26:U:41:GLU:OE2	2.12	0.50
27:V:128:VAL:O	27:V:138:LEU:HD11	2.11	0.50
28:W:74:ALA:CB	28:W:85:VAL:HG22	2.42	0.50
29:X:178:HIS:CG	29:X:179:PRO:HD2	2.46	0.50
1:O:1392:A:N1	1:O:1435:U:H2'	2.27	0.50
1:O:1400:C:C2'	1:O:1401:G:H5'	2.41	0.50
1:O:1762:C:H2'	1:O:1763:C:C6	2.46	0.50
1:O:1787:C:O2'	1:O:1788:U:H5'	2.11	0.50
1:O:2367:A:H5''	1:O:2368:A:OP1	2.11	0.50
1:O:2520:G:O2'	1:O:2521:A:H5'	2.12	0.50
1:O:2768:A:H2'	1:O:2769:C:O4'	2.12	0.50
1:O:637:C:H2'	1:O:638:C:H6	1.76	0.50
1:O:772:G:H2'	1:O:773:A:O4'	2.12	0.50
5:9:20:G:O2'	5:9:21:G:H5'	2.12	0.50
5:9:37:C:O2	5:9:47:A:H1'	2.11	0.50
7:B:44:TYR:OH	7:B:148:PRO:HG3	2.12	0.50
9:D:135:VAL:HG21	9:D:139:TYR:HB2	1.92	0.50
9:D:22:VAL:HG22	9:D:74:THR:HG22	1.92	0.50
10:E:145:ALA:O	10:E:148:ILE:HB	2.12	0.50
17:L:104:ARG:HD3	37:L:379:HOH:O	2.10	0.50
18:M:34:LEU:HA	18:M:47:LEU:HD23	1.93	0.50
22:Q:114:VAL:HA	22:Q:144:GLU:O	2.10	0.50
1:O:1196:C:H2'	1:O:1197:G:H5'	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1708:C:O2'	1:0:1709:G:H5'	2.12	0.50
1:0:1925:G:H5'	3:2:29:ARG:NH1	2.27	0.50
1:0:2071:C:H4'	1:0:2072:G:C8	2.47	0.50
1:0:2688:U:H2'	1:0:2689:A:C8	2.46	0.50
1:0:588:G:O2'	1:0:589:U:OP2	2.30	0.50
5:9:29:C:H2'	5:9:30:C:C5'	2.36	0.50
7:B:171:VAL:HG23	7:B:172:SER:H	1.75	0.50
8:C:144:PHE:CD1	8:C:147:LEU:HD12	2.46	0.50
13:H:97:LYS:HD3	13:H:117:LYS:HE2	1.94	0.50
13:H:26:LYS:CD	13:H:28:ILE:HB	2.41	0.50
15:J:132:VAL:HG11	25:T:22:VAL:HG22	1.93	0.50
15:J:90:PHE:HB3	37:J:336:HOH:O	2.11	0.50
16:K:73:VAL:HG23	16:K:74:THR:N	2.26	0.50
17:L:84:LYS:HD3	17:L:84:LYS:O	2.12	0.50
18:M:184:ILE:HG22	18:M:185:GLU:N	2.25	0.50
24:S:4:PRO:O	24:S:8:ARG:HG3	2.12	0.50
24:S:81:LYS:HD2	24:S:87:VAL:HG11	1.93	0.50
30:Y:39:CYS:O	30:Y:42:CYS:O	2.28	0.50
1:0:1473:U:C1'	31:Z:42:SER:HB2	2.32	0.50
1:0:1087:G:HO2'	1:0:1088:A:H8	1.50	0.50
1:0:1272:C:O2'	1:0:1273:C:H5'	2.12	0.50
1:0:1674:C:OP1	23:R:34:LYS:HG3	2.12	0.50
1:0:2614:C:H3'	37:0:3333:HOH:O	2.10	0.50
1:0:284:C:N4	37:0:3526:HOH:O	2.44	0.50
1:0:440:C:H2'	1:0:441:A:O4'	2.12	0.50
1:0:584:U:H3'	37:0:3695:HOH:O	2.12	0.50
1:0:163:U:O3'	1:0:896:C:H4'	2.11	0.50
9:D:27:ILE:CG2	9:D:28:GLY:H	2.09	0.50
10:E:3:VAL:CG2	10:E:49:ILE:HB	2.41	0.50
11:F:36:THR:HG23	11:F:97:ALA:HB2	1.93	0.50
13:H:24:PRO:HG2	13:H:119:VAL:C	2.32	0.50
14:I:75:PRO:HD3	14:I:136:SER:OG	2.11	0.50
15:J:89:LYS:HA	37:J:312:HOH:O	2.12	0.50
16:K:143:THR:HG22	16:K:145:LEU:H	1.77	0.50
17:L:49:ALA:HB1	17:L:54:TYR:CB	2.42	0.50
24:S:37:GLN:HB3	37:S:308:HOH:O	2.11	0.50
1:0:1674:C:OP1	23:R:34:LYS:N	2.40	0.50
1:0:1942:A:O2'	1:0:1943:C:H5'	2.11	0.50
1:0:1942:A:H2'	1:0:1943:C:H6	1.77	0.50
1:0:2313:C:H1'	37:0:3598:HOH:O	2.12	0.50
1:0:589:U:H2'	1:0:590:A:H8	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:899:C:H5'	37:0:4913:HOH:O	2.10	0.50
6:A:51:ARG:C	6:A:53:ALA:H	2.15	0.50
9:D:128:LEU:HB2	37:D:224:HOH:O	2.11	0.50
16:K:105:TYR:N	37:K:309:HOH:O	2.44	0.50
1:0:182:G:H4'	17:L:157:LEU:HD13	1.93	0.50
18:M:102:LEU:HG	18:M:104:ILE:HG23	1.93	0.50
1:0:952:G:OP1	21:P:42:LYS:HE2	2.11	0.50
23:R:52:VAL:HG22	23:R:66:VAL:HG13	1.93	0.50
24:S:35:TYR:CD2	24:S:112:LEU:HD22	2.47	0.50
30:Y:67:GLY:CA	30:Y:70:GLN:O	2.60	0.50
1:0:102:A:H1'	37:0:6057:HOH:O	2.11	0.50
1:0:1316:G:C2'	1:0:1340:G:H22	2.25	0.50
1:0:1746:A:H61	1:0:1754:A:H61	1.58	0.50
1:0:1773:G:N7	37:0:3284:HOH:O	2.35	0.50
1:0:536:A:C6	1:0:2076:U:H5'	2.47	0.50
1:0:2321:A:O2'	1:0:2322:U:C3'	2.60	0.50
1:0:2543:G:H2'	1:0:2544:G:O4'	2.11	0.50
13:H:157:ILE:HG22	13:H:158:ASN:N	2.27	0.50
13:H:159:ILE:HG22	13:H:159:ILE:O	2.11	0.50
14:I:15:ARG:NH1	14:I:43:ARG:NH1	2.60	0.50
17:L:152:ARG:HA	37:L:380:HOH:O	2.10	0.50
27:V:122:ARG:HG3	27:V:152:ALA:O	2.12	0.50
27:V:5:VAL:C	27:V:52:VAL:HG23	2.32	0.50
29:X:169:ARG:NH2	35:X:301:CL:CL	2.81	0.50
30:Y:22:ILE:O	30:Y:26:VAL:HG23	2.12	0.50
1:0:1422:U:H2'	1:0:1423:C:C6	2.47	0.50
1:0:2335:C:H2'	1:0:2336:G:C8	2.47	0.50
1:0:2324:G:N2	1:0:2377:U:H1'	2.27	0.50
1:0:466:A:H2'	1:0:467:G:O4'	2.12	0.50
8:C:7:ASP:OD2	8:C:9:ASP:HB2	2.12	0.50
13:H:127:GLY:O	13:H:128:ALA:CB	2.59	0.50
27:V:122:ARG:HH21	27:V:154:ARG:CD	2.18	0.50
1:0:1007:A:H2'	13:H:19:TYR:CZ	2.47	0.49
1:0:1512:G:O2'	1:0:1513:C:H5'	2.11	0.49
1:0:1701:A:H5''	1:0:1702:U:O5'	2.12	0.49
1:0:1856:C:N4	1:0:1877:G:H21	2.10	0.49
1:0:1898:G:O2'	1:0:1899:C:H5'	2.12	0.49
1:0:2110:G:H4'	37:0:5461:HOH:O	2.12	0.49
1:0:561:G:O2'	1:0:562:A:H5'	2.11	0.49
1:0:796:A:C2	1:0:797:A:C4	2.99	0.49
1:0:807:A:H2'	1:0:808:A:C8	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:817:G:O2'	1:0:818:A:C8	2.60	0.49
9:D:11:HIS:C	9:D:13:MET:H	2.14	0.49
15:J:74:VAL:CG1	15:J:113:ILE:HG23	2.39	0.49
17:L:46:LEU:HG	37:L:312:HOH:O	2.11	0.49
22:Q:25:PHE:CE2	22:Q:29:LYS:HE2	2.47	0.49
1:0:1181:A:O2'	1:0:1182:C:H5'	2.12	0.49
1:0:1302:G:O2'	1:0:1303:C:H5'	2.12	0.49
1:0:1326:U:H1'	37:0:6912:HOH:O	2.12	0.49
1:0:138:U:H5''	1:0:139:C:OP2	2.12	0.49
1:0:1688:G:H4'	31:Z:8:GLN:HG3	1.94	0.49
1:0:631:A:N7	1:0:2074:A:C5'	2.75	0.49
1:0:265:U:C2	1:0:266:G:C8	3.00	0.49
1:0:892:G:C6	1:0:893:C:C4	3.01	0.49
6:A:132:ASP:OD1	6:A:133:ARG:N	2.44	0.49
11:F:108:LEU:O	11:F:108:LEU:HD12	2.11	0.49
11:F:60:VAL:O	11:F:62:HIS:N	2.46	0.49
11:F:48:VAL:CG2	11:F:74:PHE:HB3	2.42	0.49
13:H:57:ARG:O	13:H:59:ASN:N	2.45	0.49
13:H:15:THR:HG22	13:H:91:HIS:HA	1.92	0.49
37:0:4174:HOH:O	19:N:37:ARG:HG3	2.12	0.49
1:0:21:G:H5''	22:Q:1:GLY:O	2.11	0.49
1:0:1031:G:O2'	1:0:1032:A:OP2	2.29	0.49
1:0:1393:A:H2'	1:0:1394:C:C6	2.46	0.49
1:0:1790:C:H2'	1:0:1791:U:C6	2.47	0.49
1:0:2378:U:H4'	1:0:2379:G:OP1	2.12	0.49
1:0:2415:A:N3	18:M:26:LEU:HD13	2.27	0.49
1:0:2766:A:O2'	1:0:2767:C:H5'	2.13	0.49
1:0:285:A:H2'	1:0:286:U:O4'	2.11	0.49
1:0:645:U:H2'	1:0:646:G:C8	2.47	0.49
1:0:923:A:H8	37:0:4683:HOH:O	1.95	0.49
5:9:70:U:H2'	5:9:71:C:O4'	2.12	0.49
8:C:84:VAL:O	8:C:85:LYS:HB2	2.12	0.49
10:E:103:VAL:HG12	10:E:104:ILE:N	2.26	0.49
10:E:126:ILE:HB	10:E:131:LEU:CD2	2.42	0.49
1:0:2694:A:H4'	10:E:91:PHE:CE1	2.48	0.49
14:I:74:ARG:NH1	14:I:76:ASP:OD2	2.42	0.49
15:J:5:GLY:O	15:J:6:ALA:HB2	2.12	0.49
17:L:27:ARG:O	17:L:28:MET:C	2.50	0.49
28:W:20:GLU:HG3	28:W:21:PRO:CD	2.41	0.49
28:W:26:ALA:HB3	28:W:63:ARG:HG3	1.94	0.49
1:0:1009:U:HO2'	1:0:1010:C:H5	1.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1748:U:C5	1:0:1749:U:C4	3.00	0.49
1:0:1987:C:O5'	1:0:1987:C:H6	1.94	0.49
1:0:2757:A:H2'	1:0:2758:G:O4'	2.12	0.49
1:0:840:U:H2'	1:0:2648:U:O4	2.12	0.49
1:0:952:G:O2'	1:0:2302:A:O2'	2.23	0.49
1:0:1486:A:C5	2:1:2:LYS:HG3	2.48	0.49
1:0:2408:A:H1'	3:2:10:TYR:CE1	2.47	0.49
7:B:195:ARG:HG2	7:B:323:LEU:HD22	1.94	0.49
7:B:279:THR:CG2	7:B:280:VAL:N	2.75	0.49
18:M:29:SER:HA	37:M:319:HOH:O	2.11	0.49
19:N:47:ARG:NH1	19:N:47:ARG:HG3	2.18	0.49
20:O:120:ARG:NH2	20:O:123:TYR:CD2	2.79	0.49
29:X:186:ARG:NH1	29:X:186:ARG:HG2	2.27	0.49
1:0:1543:G:N1	1:0:1641:A:OP2	2.42	0.49
1:0:2010:A:H2'	37:0:3377:HOH:O	2.12	0.49
1:0:2713:G:O2'	1:0:2714:U:H5'	2.12	0.49
1:0:418:C:H2'	1:0:419:A:H8	1.77	0.49
1:0:505:C:N3	1:0:509:A:N7	2.61	0.49
1:0:737:A:H2'	1:0:738:G:O4'	2.12	0.49
1:0:869:G:H1'	1:0:886:A:C2	2.48	0.49
2:1:36:ASN:O	2:1:39:ARG:HG3	2.12	0.49
9:D:101:THR:HG22	9:D:101:THR:O	2.12	0.49
13:H:57:ARG:C	13:H:59:ASN:N	2.64	0.49
16:K:20:ASN:HB2	37:K:314:HOH:O	2.11	0.49
1:0:164:G:O3'	16:K:30:ARG:HB2	2.13	0.49
17:L:97:ILE:O	17:L:100:ILE:N	2.46	0.49
18:M:37:ARG:CG	18:M:37:ARG:HH11	2.25	0.49
20:O:41:ARG:O	20:O:44:VAL:HB	2.12	0.49
24:S:55:PHE:CD2	24:S:77:VAL:HG13	2.47	0.49
29:X:141:THR:HG23	29:X:142:SER:H	1.77	0.49
1:0:797:A:O4'	30:Y:10:ARG:N	2.46	0.49
30:Y:10:ARG:HB2	30:Y:27:ALA:CB	2.42	0.49
1:0:1060:C:O2'	1:0:1061:C:H5'	2.13	0.49
1:0:1278:A:H4'	1:0:1279:U:C4	2.47	0.49
1:0:1753:C:O2	7:B:229:ARG:NH2	2.45	0.49
1:0:1759:A:O2'	1:0:1818:C:H2'	2.13	0.49
1:0:2502:C:C2'	1:0:2503:A:H5'	2.42	0.49
1:0:2587:U:O2	1:0:2589:U:H5'	2.13	0.49
5:9:91:C:H2'	5:9:92:G:O4'	2.12	0.49
1:0:1855:G:O6	6:A:141:PRO:HG2	2.12	0.49
7:B:142:LEU:HD22	7:B:182:VAL:CG2	2.41	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:B:66:GLU:HG2	37:B:641:HOH:O	2.12	0.49
16:K:4:LYS:HA	16:K:7:GLN:HG2	1.92	0.49
17:L:172:GLY:C	17:L:183:VAL:HG11	2.32	0.49
19:N:25:VAL:HG23	19:N:26:TRP:CE3	2.48	0.49
20:O:59:ARG:O	20:O:62:ALA:HB3	2.12	0.49
22:Q:43:ALA:O	22:Q:47:LEU:HG	2.13	0.49
27:V:139:GLY:O	27:V:141:HIS:HD2	1.96	0.49
27:V:38:THR:HG22	37:V:217:HOH:O	2.12	0.49
28:W:71:ARG:N	37:W:101:HOH:O	2.43	0.49
31:Z:21:ARG:NH1	31:Z:45:ARG:HD3	2.27	0.49
1:O:1015:C:H2'	1:O:1016:U:C6	2.47	0.49
1:O:1076:G:O2'	1:O:1077:G:H5'	2.11	0.49
1:O:1117:A:N6	1:O:1244:U:HO2'	2.11	0.49
1:O:1450:C:C4'	1:O:1451:C:OP2	2.58	0.49
1:O:1503:U:H2'	1:O:1504:A:O4'	2.12	0.49
1:O:1446:U:O2'	1:O:1677:U:H2'	2.13	0.49
1:O:1684:A:H1'	1:O:1691:A:H1'	1.94	0.49
1:O:1773:G:C2'	1:O:1774:G:H5'	2.42	0.49
1:O:1867:G:N2	1:O:1868:G:H1'	2.28	0.49
1:O:2411:C:O2'	1:O:2412:G:H5'	2.13	0.49
1:O:363:A:H1'	37:O:3877:HOH:O	2.12	0.49
6:A:179:MET:HA	6:A:179:MET:CE	2.43	0.49
6:A:215:ILE:HD11	6:A:219:ALA:HB2	1.94	0.49
1:O:2819:C:H4'	7:B:97:LEU:O	2.13	0.49
9:D:91:ALA:HB1	37:D:223:HOH:O	2.11	0.49
11:F:53:ASP:OD2	11:F:80:GLN:HB3	2.12	0.49
1:O:1150:A:H2	12:G:20:VAL:HG21	1.77	0.49
13:H:113:ALA:N	13:H:114:PRO:CD	2.75	0.49
27:V:42:ARG:O	27:V:45:VAL:HG22	2.13	0.49
1:O:1128:U:H5''	1:O:1129:C:OP2	2.13	0.49
1:O:1134:G:H4'	13:H:151:MET:CE	2.43	0.49
1:O:1135:G:P	37:H:204:HOH:O	2.71	0.49
1:O:11:A:O3'	22:Q:60:LYS:NZ	2.45	0.49
1:O:45:A:N6	1:O:147:G:H2'	2.28	0.49
1:O:1859:A:H8	1:O:1859:A:O5'	1.95	0.49
1:O:2004:U:H2'	1:O:2005:G:OP1	2.13	0.49
1:O:299:U:H5'	37:O:3445:HOH:O	2.11	0.49
1:O:332:G:O5'	1:O:332:G:H8	1.96	0.49
1:O:603:A:H5''	1:O:604:G:OP1	2.12	0.49
1:O:699:C:H2'	1:O:744:G:N3	2.27	0.49
1:O:792:G:O2'	1:O:793:A:H5'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:61:G:C6	1:0:86:A:N6	2.81	0.49
8:C:19:PRO:HB3	8:C:244:ALA:HB2	1.94	0.49
13:H:49:VAL:O	13:H:157:ILE:HG23	2.12	0.49
14:I:15:ARG:HA	14:I:43:ARG:O	2.12	0.49
14:I:6:PHE:HB3	14:I:109:TYR:OH	2.13	0.49
17:L:5:TYR:CE2	17:L:46:LEU:HD13	2.48	0.49
17:L:61:ILE:HG22	17:L:62:VAL:N	2.27	0.49
29:X:112:GLU:OE1	29:X:115:ARG:NH1	2.45	0.49
29:X:141:THR:O	29:X:142:SER:C	2.51	0.49
1:0:1237:U:H3	1:0:1241:G:P	2.36	0.49
1:0:1477:C:C5'	1:0:1868:G:H5''	2.43	0.49
1:0:2533:C:H5'	1:0:2533:C:H6	1.78	0.49
1:0:2839:C:H2'	1:0:2840:A:H5''	1.95	0.49
1:0:513:A:N3	37:0:3283:HOH:O	2.35	0.49
1:0:821:U:H2'	1:0:822:C:H6	1.78	0.49
1:0:848:C:H5'	37:0:3412:HOH:O	2.11	0.49
37:0:5689:HOH:O	3:2:66:ASP:HB2	2.11	0.49
5:9:20:G:H3'	37:9:316:HOH:O	2.12	0.49
7:B:103:ASP:HB2	37:B:575:HOH:O	2.12	0.49
7:B:195:ARG:NE	7:B:323:LEU:HD13	2.28	0.49
7:B:258:GLY:N	7:B:260:HIS:CE1	2.80	0.49
37:0:3543:HOH:O	7:B:337:GLY:N	2.46	0.49
10:E:81:GLU:HG2	10:E:134:SER:CB	2.43	0.49
1:0:2309:C:O2'	13:H:113:ALA:N	2.46	0.49
13:H:12:PRO:O	13:H:91:HIS:HE1	1.96	0.49
14:I:142:ASN:O	14:I:144:THR:N	2.46	0.49
14:I:89:HIS:O	14:I:95:ARG:HB2	2.12	0.49
15:J:105:ARG:O	15:J:105:ARG:HG2	2.13	0.49
15:J:35:HIS:HB2	37:J:346:HOH:O	2.13	0.49
17:L:48:ARG:NH1	37:L:301:HOH:O	2.45	0.49
21:P:8:GLU:O	21:P:10:THR:HG23	2.12	0.49
37:0:3699:HOH:O	27:V:119:HIS:HE1	1.94	0.49
1:0:1137:G:C5'	1:0:1138:G:OP1	2.59	0.49
1:0:1351:G:H3'	37:0:7814:HOH:O	2.12	0.49
1:0:1388:U:H2'	1:0:1389:G:O4'	2.13	0.49
1:0:1474:C:O2'	1:0:1475:G:H5'	2.13	0.49
1:0:1657:A:N6	37:0:3503:HOH:O	2.44	0.49
1:0:216:A:H2'	1:0:217:C:H6	1.78	0.49
1:0:2466:G:H5''	37:0:6588:HOH:O	2.12	0.49
1:0:306:A:H2'	1:0:341:C:O2'	2.13	0.49
10:E:107:PHE:CE2	10:E:108:LEU:HD13	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:I:77:GLY:O	14:I:79:PHE:N	2.46	0.49
16:K:149:ARG:O	16:K:150:GLN:HB2	2.12	0.49
20:O:7:LYS:HD2	20:O:21:VAL:CG2	2.43	0.49
27:V:1:MET:CE	27:V:101:LEU:HD23	2.42	0.49
30:Y:39:CYS:SG	30:Y:62:TYR:HD2	2.36	0.49
1:O:1019:C:O2'	1:O:1020:A:H5'	2.13	0.48
1:O:1081:A:H5''	37:O:7179:HOH:O	2.12	0.48
1:O:1313:A:H5'	29:X:208:LYS:O	2.12	0.48
1:O:1380:U:H2'	37:O:8155:HOH:O	2.13	0.48
1:O:1462:C:H2'	1:O:1463:A:C8	2.48	0.48
1:O:1829:A:H61	30:Y:18:TYR:CA	2.26	0.48
1:O:183:A:C5'	17:L:157:LEU:HD12	2.43	0.48
1:O:2300:A:C4'	1:O:2301:A:O5'	2.60	0.48
1:O:2480:G:O2'	1:O:2481:G:H5'	2.13	0.48
1:O:240:C:H5''	1:O:270:U:O4	2.13	0.48
1:O:2727:A:C6	1:O:2756:U:C2	3.01	0.48
37:O:3546:HOH:O	7:B:48:MET:N	2.46	0.48
7:B:41:PHE:CE1	7:B:79:MET:HG3	2.47	0.48
8:C:31:ILE:HD13	8:C:229:PRO:HB3	1.94	0.48
9:D:18:ILE:HG12	9:D:134:LEU:CD2	2.43	0.48
9:D:139:TYR:HB3	37:D:202:HOH:O	2.12	0.48
9:D:64:ARG:HD3	9:D:67:ASP:HB3	1.93	0.48
17:L:37:VAL:HG21	17:L:108:LYS:HE3	1.94	0.48
37:2:227:HOH:O	17:L:84:LYS:HE2	2.13	0.48
21:P:45:PRO:O	21:P:51:ARG:NH2	2.46	0.48
22:Q:39:THR:O	22:Q:41:GLY:N	2.46	0.48
24:S:43:ASN:ND2	24:S:108:ARG:NE	2.60	0.48
25:T:45:GLU:HB3	37:T:215:HOH:O	2.13	0.48
1:O:1689:A:OP2	1:O:1689:A:H8	1.96	0.48
1:O:2059:U:H2'	1:O:2060:A:C8	2.48	0.48
1:O:2325:C:H2'	1:O:2326:U:H6	1.78	0.48
1:O:2588:G:H3'	1:O:2589:U:H5''	1.94	0.48
1:O:2657:G:O2'	1:O:2842:G:N7	2.42	0.48
1:O:358:G:H3'	37:O:7912:HOH:O	2.13	0.48
1:O:764:C:C2'	1:O:765:G:H5'	2.43	0.48
5:9:119:C:H2'	5:9:120:A:C8	2.48	0.48
8:C:193:LEU:HA	8:C:211:ASP:O	2.13	0.48
17:L:12:TRP:HB2	37:L:406:HOH:O	2.12	0.48
20:O:80:ARG:HG2	20:O:87:ARG:NE	2.28	0.48
24:S:27:LEU:HD21	24:S:40:VAL:HB	1.95	0.48
29:X:112:GLU:HA	29:X:112:GLU:OE1	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1266:U:O3'	29:X:115:ARG:NH2	2.46	0.48
1:0:1088:A:C6	1:0:1291:A:H1'	2.48	0.48
1:0:1527:A:O2'	1:0:1528:A:O5'	2.31	0.48
1:0:1711:A:O2'	1:0:1712:A:H5'	2.12	0.48
1:0:1941:A:HO2'	1:0:1942:A:P	2.35	0.48
1:0:2415:A:C2'	1:0:2416:G:H5'	2.40	0.48
1:0:2729:C:H1'	1:0:2864:U:O2'	2.13	0.48
1:0:2732:U:O2'	1:0:2733:U:H5'	2.13	0.48
1:0:2747:C:H4'	1:0:2748:G:H4'	1.94	0.48
1:0:2754:G:H4'	37:0:6082:HOH:O	2.12	0.48
1:0:849:C:O2'	1:0:850:U:H5'	2.12	0.48
7:B:24:PRO:HG2	7:B:204:GLY:HA2	1.96	0.48
37:0:5920:HOH:O	7:B:236:ILE:HA	2.13	0.48
10:E:11:VAL:HG12	10:E:12:ASP:H	1.78	0.48
10:E:81:GLU:O	10:E:172:PRO:HD3	2.12	0.48
13:H:27:LYS:N	13:H:58:HIS:HD2	2.05	0.48
1:0:1003:U:O2	13:H:90:PHE:HZ	1.96	0.48
3:2:46:ILE:HD13	17:L:87:MET:HB3	1.96	0.48
18:M:175:LEU:O	18:M:176:ARG:C	2.49	0.48
23:R:10:VAL:CG1	26:U:36:ALA:HA	2.38	0.48
27:V:35:VAL:CG2	27:V:41:TYR:CD2	2.96	0.48
30:Y:33:HIS:NE2	37:Y:201:HOH:O	2.35	0.48
1:0:202:U:H2'	1:0:203:G:O4'	2.13	0.48
1:0:559:U:H6	1:0:559:U:H5'	1.78	0.48
1:0:585:C:H5''	37:0:7364:HOH:O	2.12	0.48
1:0:88:G:C2	2:1:24:TRP:HB2	2.48	0.48
1:0:87:C:H2'	2:1:30:ASP:OD2	2.14	0.48
7:B:223:ARG:NH1	7:B:232:TRP:CB	2.76	0.48
7:B:258:GLY:H	7:B:260:HIS:HE1	1.61	0.48
7:B:53:LEU:HD21	7:B:270:ILE:HG23	1.94	0.48
12:G:27:ILE:HD13	12:G:71:LEU:HD23	1.95	0.48
13:H:136:VAL:HG22	13:H:137:ASN:N	2.27	0.48
14:I:46:ILE:HA	37:I:304:HOH:O	2.13	0.48
17:L:87:MET:H	17:L:87:MET:HG3	1.41	0.48
18:M:58:LEU:N	18:M:58:LEU:CD1	2.76	0.48
23:R:57:THR:HG22	23:R:59:ASP:H	1.78	0.48
26:U:64:GLY:O	26:U:65:ASP:CB	2.62	0.48
27:V:48:VAL:O	27:V:48:VAL:HG12	2.14	0.48
30:Y:30:GLU:HA	30:Y:33:HIS:CB	2.43	0.48
1:0:1617:C:H5''	1:0:1618:G:OP2	2.13	0.48
1:0:198:A:C5	1:0:2444:U:O4'	2.66	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:220:C:C2	16:K:48:LYS:HE2	2.49	0.48
1:0:2483:A:H4'	37:0:5975:HOH:O	2.14	0.48
1:0:2715:G:N2	7:B:264:GLU:OE1	2.46	0.48
1:0:2768:A:O2'	1:0:2769:C:H5'	2.13	0.48
1:0:485:A:H4'	1:0:486:A:OP1	2.12	0.48
1:0:881:C:H2'	37:0:5626:HOH:O	2.11	0.48
8:C:161:ASP:HA	37:C:545:HOH:O	2.12	0.48
8:C:5:ILE:HG22	8:C:6:TYR:N	2.28	0.48
13:H:46:VAL:O	13:H:146:TRP:HH2	1.97	0.48
16:K:143:THR:HG22	16:K:144:ASP:H	1.77	0.48
17:L:184:ARG:HG3	17:L:185:PRO:HA	1.95	0.48
17:L:85:ARG:HA	17:L:87:MET:CE	2.43	0.48
18:M:163:PHE:O	18:M:164:ASP:O	2.32	0.48
19:N:96:VAL:CG1	19:N:100:GLN:HB2	2.43	0.48
21:P:53:HIS:N	35:P:102:CL:CL	2.76	0.48
22:Q:50:VAL:HA	22:Q:55:GLN:O	2.14	0.48
25:T:13:ILE:HG12	25:T:32:CYS:HB2	1.94	0.48
1:0:2034:U:H5''	37:0:7528:HOH:O	2.13	0.48
1:0:2379:G:H8	37:0:4249:HOH:O	1.97	0.48
1:0:2674:G:H1'	1:0:2813:A:N6	2.28	0.48
1:0:2842:G:H2'	1:0:2843:A:C5'	2.43	0.48
8:C:136:VAL:HA	8:C:137:PRO:O	2.14	0.48
11:F:16:ALA:HA	11:F:111:ILE:HD13	1.96	0.48
13:H:157:ILE:CG2	13:H:158:ASN:N	2.77	0.48
24:S:71:VAL:HG12	24:S:72:ILE:N	2.28	0.48
27:V:149:LEU:HG	27:V:153:MET:CE	2.42	0.48
29:X:127:GLN:HB2	37:X:409:HOH:O	2.13	0.48
1:0:1009:U:O2'	1:0:1010:C:C5	2.66	0.48
1:0:1020:A:H2'	1:0:1021:G:C8	2.48	0.48
1:0:907:A:H4'	1:0:1328:A:C2	2.48	0.48
1:0:155:C:OP2	17:L:188:ARG:NH1	2.35	0.48
1:0:1594:C:O2'	1:0:1595:G:H5'	2.13	0.48
1:0:228:C:C2'	1:0:229:G:H5'	2.43	0.48
1:0:2322:U:H4'	1:0:2323:G:OP1	2.14	0.48
1:0:2429:A:H2'	1:0:2430:A:C8	2.49	0.48
1:0:2573:G:O2'	1:0:2574:G:H5'	2.14	0.48
1:0:24:G:O2'	1:0:25:A:P	2.71	0.48
1:0:2735:U:H2'	1:0:2736:U:H6	1.79	0.48
1:0:297:U:H2'	1:0:298:C:C6	2.49	0.48
1:0:764:C:H2'	1:0:765:G:O4'	2.14	0.48
1:0:824:G:H2'	1:0:826:U:OP1	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1:40:ARG:HD2	2:1:47:THR:HG22	1.95	0.48
3:2:16:GLU:HG3	3:2:18:GLN:HE21	1.78	0.48
37:B:523:HOH:O	14:I:104:TYR:HA	2.13	0.48
16:K:98:GLU:O	16:K:99:GLU:HB2	2.14	0.48
17:L:47:ASP:CG	17:L:48:ARG:N	2.67	0.48
18:M:97:VAL:HG12	18:M:127:LEU:HD11	1.96	0.48
18:M:152:GLU:C	18:M:154:LEU:H	2.17	0.48
27:V:54:PHE:CZ	27:V:140:LYS:HB2	2.49	0.48
1:0:1589:G:N2	1:0:1605:G:C2'	2.77	0.48
1:0:2463:A:C4'	1:0:2464:C:OP2	2.59	0.48
1:0:477:A:C2	1:0:478:C:C2	3.02	0.48
1:0:877:G:H5'	1:0:878:G:OP1	2.14	0.48
1:0:1736:A:OP1	7:B:231:GLY:HA2	2.14	0.48
8:C:20:ASP:O	8:C:23:GLU:N	2.46	0.48
1:0:2780:C:C1'	10:E:143:GLN:HE21	2.26	0.48
10:E:32:ARG:O	10:E:33:LEU:HD23	2.14	0.48
1:0:1003:U:H4'	13:H:86:ARG:O	2.13	0.48
17:L:123:ASP:OD1	17:L:123:ASP:C	2.52	0.48
21:P:41:LEU:N	21:P:41:LEU:HD12	2.28	0.48
26:U:27:LEU:HD13	26:U:49:LEU:HB3	1.96	0.48
27:V:4:LEU:HB2	27:V:33:THR:CG2	2.43	0.48
28:W:22:ASN:O	28:W:24:LYS:N	2.46	0.48
1:0:1020:A:H2'	1:0:1021:G:H8	1.79	0.48
1:0:1158:G:O2'	1:0:1159:G:H5'	2.14	0.48
1:0:1266:U:H4'	29:X:115:ARG:NH2	2.17	0.48
1:0:1295:G:H5''	16:K:14:GLY:O	2.13	0.48
1:0:1756:G:H1'	37:0:3286:HOH:O	2.12	0.48
1:0:230:C:O2'	1:0:231:G:H5'	2.14	0.48
1:0:761:A:H5'	1:0:763:C:OP2	2.13	0.48
1:0:954:U:H3'	37:0:3457:HOH:O	2.13	0.48
6:A:105:VAL:HG12	6:A:106:CYS:N	2.28	0.48
37:0:6635:HOH:O	6:A:11:ARG:HA	2.13	0.48
6:A:33:GLU:O	6:A:34:ASP:HB2	2.14	0.48
6:A:9:ARG:NE	37:A:424:HOH:O	2.47	0.48
7:B:76:THR:N	7:B:77:PRO:HD3	2.28	0.48
17:L:173:LEU:HD23	17:L:183:VAL:HG12	1.96	0.48
17:L:157:LEU:HA	35:L:202:CL:CL	2.50	0.48
17:L:37:VAL:CG1	17:L:63:VAL:HG11	2.43	0.48
21:P:77:ASP:O	21:P:79:GLY:N	2.47	0.48
1:0:2054:A:N3	22:Q:128:ARG:NH2	2.62	0.48
1:0:1262:C:H1'	27:V:120:PRO:HG3	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:Z:26:SER:HB3	31:Z:35:SER:OG	2.14	0.48
1:0:1270:U:H2'	1:0:1271:A:H8	1.79	0.48
1:0:1346:U:H2'	1:0:1347:U:C6	2.49	0.48
1:0:1921:A:O2'	1:0:1922:A:H5'	2.14	0.48
1:0:2561:C:O2'	1:0:2562:G:H5'	2.14	0.48
1:0:473:A:O2'	1:0:474:C:H5'	2.14	0.48
3:2:35:TRP:HA	3:2:38:ARG:NH1	2.28	0.48
6:A:105:VAL:O	6:A:126:ALA:N	2.35	0.48
7:B:144:THR:CG2	7:B:145:HIS:N	2.77	0.48
7:B:70:PRO:O	7:B:71:VAL:CG2	2.62	0.48
9:D:27:ILE:HD11	9:D:37:ALA:CB	2.36	0.48
14:I:92:GLN:O	14:I:96:GLU:HB2	2.14	0.48
17:L:48:ARG:O	17:L:52:LEU:HG	2.14	0.48
24:S:26:THR:HG23	24:S:26:THR:O	2.13	0.48
24:S:46:ASP:OD1	24:S:101:LEU:HA	2.14	0.48
26:U:42:ASN:O	26:U:44:GLY:N	2.47	0.48
31:Z:22:CYS:SG	31:Z:24:GLU:N	2.79	0.48
1:0:1085:C:H2'	1:0:1086:A:C5'	2.44	0.47
1:0:114:A:H5'	1:0:115:U:OP1	2.14	0.47
1:0:139:C:H4'	1:0:140:G:C2	2.49	0.47
1:0:1647:G:O2'	1:0:1648:G:H5'	2.14	0.47
1:0:185:G:C4'	1:0:186:A:OP1	2.61	0.47
1:0:1901:G:O2'	1:0:1902:G:H5'	2.14	0.47
1:0:2121:G:H5''	37:0:4557:HOH:O	2.12	0.47
1:0:2691:A:N1	1:0:2702:A:H5''	2.28	0.47
1:0:358:G:C2'	1:0:359:U:OP2	2.62	0.47
1:0:80:A:H1'	1:0:81:G:O4'	2.14	0.47
1:0:868:G:O5'	1:0:870:G:H1'	2.14	0.47
5:9:74:G:H1	5:9:107:C:H42	1.62	0.47
5:9:43:G:C2	5:9:47:A:C2	3.02	0.47
8:C:236:THR:HA	37:C:424:HOH:O	2.14	0.47
1:0:264:G:O6	11:F:32:GLY:HA3	2.14	0.47
22:Q:145:LEU:HD12	22:Q:146:ILE:N	2.28	0.47
24:S:105:ASP:OD1	24:S:107:LYS:N	2.42	0.47
27:V:122:ARG:NH1	27:V:122:ARG:CG	2.76	0.47
29:X:151:SER:HB3	29:X:154:ARG:CB	2.44	0.47
30:Y:10:ARG:HG3	30:Y:11:THR:H	1.78	0.47
1:0:1058:A:H2'	1:0:1060:C:C5'	2.44	0.47
1:0:1309:U:H2'	1:0:1310:U:O4'	2.14	0.47
1:0:1851:G:O2'	1:0:1852:A:H5'	2.14	0.47
1:0:1878:G:H1'	37:0:3893:HOH:O	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2272:G:N2	1:0:2273:C:H1'	2.29	0.47
1:0:746:A:H4'	1:0:747:G:C5'	2.43	0.47
1:0:799:C:O2'	1:0:800:G:H5'	2.15	0.47
1:0:904:U:O2	1:0:1354:G:O5'	2.33	0.47
5:9:98:C:O2'	5:9:99:U:H5'	2.14	0.47
9:D:23:VAL:CG2	9:D:73:VAL:HB	2.44	0.47
12:G:19:GLU:HG3	12:G:23:ILE:HD11	1.96	0.47
13:H:137:ASN:ND2	37:H:206:HOH:O	2.46	0.47
15:J:87:ARG:NE	37:J:315:HOH:O	2.48	0.47
16:K:126:SER:O	16:K:129:ALA:HB3	2.14	0.47
17:L:173:LEU:HA	17:L:183:VAL:HG11	1.96	0.47
18:M:140:GLN:O	18:M:143:ARG:HB2	2.13	0.47
18:M:73:ALA:HB1	18:M:74:PRO:HD2	1.95	0.47
26:U:12:THR:HG23	26:U:14:ALA:N	2.30	0.47
26:U:57:LYS:HA	26:U:60:GLN:HE21	1.80	0.47
1:0:1503:U:H3'	1:0:1503:U:H6	1.80	0.47
1:0:1666:C:O2'	1:0:1667:A:H5'	2.14	0.47
1:0:1862:C:O2'	1:0:1863:G:H5'	2.14	0.47
1:0:2451:G:H8	37:0:3393:HOH:O	1.97	0.47
1:0:2526:C:O2'	1:0:2527:U:H5'	2.14	0.47
1:0:2756:U:H2'	1:0:2757:A:C8	2.50	0.47
1:0:2793:A:H2'	1:0:2794:G:H5'	1.96	0.47
1:0:451:C:H2'	1:0:452:G:O4'	2.15	0.47
1:0:901:G:OP2	16:K:18:HIS:HE1	1.96	0.47
1:0:98:A:H2'	1:0:99:A:H5'	1.96	0.47
3:2:84:ARG:HG3	3:2:84:ARG:HH11	1.78	0.47
5:9:13:A:H1'	5:9:114:G:C5	2.49	0.47
8:C:141:SER:HB2	37:C:551:HOH:O	2.14	0.47
9:D:54:ALA:CB	9:D:69:ILE:HD12	2.40	0.47
16:K:145:LEU:HD23	16:K:145:LEU:O	2.13	0.47
16:K:35:ARG:HB2	16:K:35:ARG:NH1	2.30	0.47
1:0:709:G:O2'	19:N:25:VAL:HG12	2.13	0.47
19:N:35:LYS:O	19:N:40:HIS:NE2	2.48	0.47
1:0:1088:A:OP2	1:0:1261:A:H4'	2.14	0.47
1:0:1253:C:H2'	1:0:1254:C:H6	1.80	0.47
1:0:1798:C:O5'	1:0:1798:C:H6	1.96	0.47
1:0:1847:A:C8	1:0:1848:G:C8	3.03	0.47
1:0:2084:C:N4	37:0:3612:HOH:O	2.46	0.47
1:0:2670:G:N2	37:0:3512:HOH:O	2.44	0.47
1:0:2821:C:H4'	7:B:116:PRO:HG3	1.97	0.47
1:0:380:A:C4	17:L:13:LYS:HG2	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:B:217:ARG:HE	7:B:257:THR:HG22	1.78	0.47
8:C:107:ARG:O	8:C:110:ALA:N	2.48	0.47
9:D:173:GLU:OE1	9:D:174:VAL:HG23	2.14	0.47
13:H:154:THR:HB	13:H:155:PRO:HD3	1.97	0.47
17:L:49:ALA:C	17:L:54:TYR:HB3	2.33	0.47
5:9:6:C:OP1	18:M:37:ARG:NH1	2.47	0.47
22:Q:104:PHE:HB2	22:Q:109:MET:HE1	1.95	0.47
22:Q:39:THR:O	22:Q:40:ALA:C	2.53	0.47
26:U:12:THR:HG22	26:U:15:GLU:H	1.79	0.47
1:0:1292:G:O5'	1:0:1292:G:H8	1.97	0.47
1:0:1389:G:H1'	1:0:1435:U:O2	2.15	0.47
1:0:1525:G:H2'	1:0:1526:A:H8	1.74	0.47
1:0:2776:A:H2'	1:0:2777:G:O4'	2.14	0.47
1:0:282:C:H1'	1:0:368:C:H42	1.80	0.47
1:0:2851:G:H2'	1:0:2902:A:N6	2.28	0.47
1:0:2866:U:H5'	37:0:7935:HOH:O	2.13	0.47
1:0:458:G:C2	1:0:464:G:C4	3.02	0.47
1:0:731:U:H2'	1:0:732:C:H6	1.80	0.47
7:B:280:VAL:HG13	7:B:333:GLU:O	2.15	0.47
7:B:40:GLY:HA2	7:B:311:PHE:O	2.15	0.47
8:C:69:HIS:CD2	8:C:69:HIS:N	2.80	0.47
9:D:25:MET:CE	9:D:37:ALA:HB1	2.43	0.47
10:E:98:GLU:OE1	10:E:103:VAL:HG21	2.14	0.47
13:H:47:GLU:HB3	13:H:133:ILE:HD13	1.95	0.47
1:0:392:U:H5''	17:L:193:LYS:HB3	1.96	0.47
20:O:71:LYS:HG2	37:O:267:HOH:O	2.13	0.47
23:R:57:THR:CG2	23:R:58:MET:N	2.77	0.47
24:S:43:ASN:HB2	24:S:46:ASP:OD2	2.14	0.47
28:W:76:ARG:O	28:W:77:PHE:HB3	2.14	0.47
37:0:6032:HOH:O	30:Y:17:ARG:HG2	2.14	0.47
1:0:1023:C:C2'	1:0:1024:G:H5'	2.44	0.47
1:0:1268:C:O2'	1:0:1269:G:H5'	2.14	0.47
1:0:1688:G:N1	1:0:1692:C:H2'	2.21	0.47
1:0:220:C:H1'	37:0:5823:HOH:O	2.14	0.47
1:0:2597:U:H5''	37:0:3268:HOH:O	2.13	0.47
1:0:876:A:O2'	1:0:877:G:H5'	2.14	0.47
5:9:119:C:O2'	5:9:120:A:H5'	2.14	0.47
7:B:147:VAL:O	7:B:147:VAL:HG12	2.14	0.47
15:J:80:ILE:O	15:J:87:ARG:HA	2.15	0.47
17:L:134:ILE:HG23	17:L:141:ILE:HD13	1.96	0.47
18:M:13:ARG:HD3	37:M:358:HOH:O	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:M:7:LYS:HE3	21:P:21:ARG:O	2.14	0.47
27:V:54:PHE:CE1	27:V:140:LYS:HB2	2.49	0.47
28:W:87:ALA:O	28:W:88:GLU:HG2	2.14	0.47
1:O:1710:A:H5''	1:O:1711:A:OP2	2.15	0.47
1:O:2634:G:H2'	1:O:2635:A:H8	1.80	0.47
1:O:778:C:C2	1:O:881:C:O4'	2.68	0.47
1:O:954:U:O2'	1:O:955:A:H5'	2.14	0.47
5:9:2:U:H4'	37:9:301:HOH:O	2.14	0.47
6:A:127:GLN:HB3	6:A:139:LYS:HB3	1.95	0.47
7:B:43:GLY:O	7:B:309:VAL:HG22	2.15	0.47
7:B:6:PRO:HB3	37:B:613:HOH:O	2.13	0.47
7:B:74:ILE:HG13	37:B:501:HOH:O	2.15	0.47
8:C:107:ARG:CB	8:C:107:ARG:HH11	2.27	0.47
14:I:71:TYR:CD2	14:I:72:PRO:O	2.67	0.47
20:O:36:THR:O	20:O:39:ASP:HB2	2.14	0.47
20:O:76:GLY:C	20:O:78:GLY:N	2.67	0.47
21:P:33:PHE:HE2	21:P:93:ARG:HG3	1.79	0.47
29:X:178:HIS:CD2	29:X:229:LEU:HD13	2.50	0.47
30:Y:27:ALA:HA	37:Y:218:HOH:O	2.14	0.47
30:Y:57:CYS:O	30:Y:61:GLY:N	2.39	0.47
1:O:1619:G:H2'	1:O:1620:C:C6	2.48	0.47
1:O:842:C:O2	1:O:1693:A:H2'	2.14	0.47
1:O:2270:G:H4'	6:A:223:ARG:NH1	2.20	0.47
1:O:2581:U:H5''	1:O:2582:G:H5'	1.96	0.47
1:O:2700:G:H2'	1:O:2701:G:H5'	1.96	0.47
1:O:289:G:N2	1:O:363:A:H2	2.13	0.47
7:B:82:VAL:HG12	7:B:101:TRP:CE3	2.50	0.47
9:D:86:THR:O	9:D:90:LEU:HG	2.14	0.47
10:E:101:GLU:HB3	10:E:117:THR:HA	1.97	0.47
14:I:45:VAL:HG22	14:I:46:ILE:N	2.30	0.47
14:I:71:TYR:CD1	14:I:72:PRO:HD2	2.50	0.47
17:L:134:ILE:O	17:L:136:PRO:HD3	2.15	0.47
37:O:4174:HOH:O	19:N:37:ARG:CG	2.62	0.47
23:R:20:PHE:CD2	23:R:20:PHE:N	2.81	0.47
25:T:36:CYS:SG	25:T:51:TRP:HH2	2.37	0.47
28:W:52:PRO:O	28:W:53:SER:C	2.52	0.47
29:X:107:PRO:HD3	29:X:182:PHE:CE1	2.49	0.47
1:O:1131:G:C6	1:O:1230:A:C4	3.03	0.47
1:O:1544:U:H2'	1:O:1545:C:C6	2.50	0.47
1:O:1566:C:O2'	1:O:1567:A:H5'	2.15	0.47
1:O:1574:C:H6	1:O:1574:C:O5'	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1882:C:OP1	6:A:192:VAL:N	2.43	0.47
1:0:1925:G:H5'	3:2:29:ARG:HH12	1.79	0.47
1:0:2033:G:C6	1:0:2038:A:C2	3.03	0.47
1:0:922:A:N7	1:0:2281:C:H5'	2.30	0.47
1:0:2474:A:H4'	1:0:2475:C:C5'	2.45	0.47
1:0:2747:C:H4'	1:0:2748:G:C4'	2.45	0.47
1:0:656:G:H2'	1:0:657:G:H8	1.80	0.47
1:0:661:G:C5	1:0:686:A:C2	3.03	0.47
5:9:108:C:O2'	5:9:109:G:H5'	2.15	0.47
6:A:200:PRO:CG	6:A:225:VAL:HG21	2.44	0.47
7:B:139:ASP:HB2	7:B:165:ARG:NE	2.30	0.47
8:C:219:ASN:O	8:C:222:ASP:OD1	2.33	0.47
9:D:84:LEU:HD22	9:D:88:LEU:HD21	1.96	0.47
11:F:101:ALA:HB2	11:F:108:LEU:HD23	1.96	0.47
17:L:106:ASN:HB2	17:L:114:VAL:CG2	2.45	0.47
17:L:174:ARG:NH1	37:L:310:HOH:O	2.42	0.47
17:L:77:PHE:CD1	17:L:77:PHE:O	2.68	0.47
3:2:47:GLY:CA	17:L:83:SER:HB2	2.45	0.47
18:M:154:LEU:O	18:M:155:GLU:CB	2.62	0.47
29:X:156:GLY:O	29:X:157:ILE:C	2.52	0.47
29:X:189:ASN:C	29:X:189:ASN:ND2	2.62	0.47
1:0:1392:A:O2'	1:0:1394:C:OP2	2.31	0.47
1:0:1473:U:O2'	31:Z:41:LYS:HE2	2.15	0.47
1:0:1618:G:O2'	1:0:1619:G:H5'	2.15	0.47
1:0:1930:A:C6	1:0:1931:A:C6	3.03	0.47
1:0:2040:C:H2'	1:0:2041:G:O4'	2.14	0.47
1:0:2681:A:H62	7:B:10:SER:HA	1.80	0.47
6:A:167:LYS:CE	30:Y:26:VAL:HG13	2.44	0.47
7:B:222:LYS:O	7:B:223:ARG:C	2.52	0.47
9:D:11:HIS:O	9:D:12:GLU:HB3	2.15	0.47
11:F:4:VAL:HG13	11:F:76:PHE:CD1	2.49	0.47
13:H:50:VAL:CG2	13:H:125:VAL:HG11	2.44	0.47
16:K:65:ASP:OD1	16:K:109:LEU:HB2	2.15	0.47
18:M:143:ARG:HA	18:M:172:PHE:CD2	2.50	0.47
19:N:113:VAL:C	19:N:114:ILE:HD13	2.36	0.47
21:P:43:ILE:HA	21:P:90:HIS:ND1	2.30	0.47
22:Q:39:THR:HB	22:Q:42:GLU:CG	2.44	0.47
26:U:1:THR:HG23	26:U:2:VAL:HG23	1.96	0.47
1:0:1154:A:H2'	1:0:1155:G:C8	2.50	0.47
1:0:1268:C:H2'	1:0:1269:G:H8	1.80	0.47
1:0:1727:G:H5'	37:O:4763:HOH:O	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2493:C:H5''	1:0:2494:G:OP1	2.14	0.47
1:0:2897:C:H2'	1:0:2898:G:C8	2.50	0.47
1:0:367:G:O2'	1:0:368:C:H5'	2.15	0.47
1:0:487:G:H1'	1:0:512:G:H21	1.80	0.47
1:0:640:G:H1'	37:0:4381:HOH:O	2.15	0.47
1:0:656:G:O2'	1:0:657:G:H5'	2.14	0.47
2:1:13:LYS:O	2:1:16:ASN:N	2.48	0.47
1:0:1845:A:P	6:A:190:ARG:NH1	2.88	0.47
8:C:19:PRO:HG2	8:C:22:PHE:CD1	2.50	0.47
9:D:41:LEU:O	9:D:44:ILE:HG22	2.15	0.47
1:0:2503:A:P	13:H:147:ARG:HH22	2.38	0.47
13:H:50:VAL:HA	13:H:157:ILE:HG12	1.97	0.47
13:H:44:ALA:HB3	13:H:136:VAL:O	2.15	0.47
14:I:46:ILE:HG12	14:I:53:ILE:HD13	1.96	0.47
1:0:380:A:C6	17:L:13:LYS:HD3	2.50	0.47
11:F:61:MET:HB3	17:L:19:GLN:OE1	2.15	0.47
18:M:171:HIS:CE1	37:M:308:HOH:O	2.68	0.47
18:M:37:ARG:NE	18:M:105:GLY:HA3	2.30	0.47
20:O:76:GLY:O	20:O:78:GLY:N	2.47	0.47
21:P:21:ARG:NH2	37:P:207:HOH:O	2.46	0.47
24:S:63:ILE:N	24:S:73:HIS:O	2.46	0.47
24:S:51:LEU:HD11	24:S:97:ARG:HB2	1.97	0.47
28:W:87:ALA:O	28:W:88:GLU:CG	2.63	0.47
1:0:1039:G:H2'	1:0:1040:A:O4'	2.15	0.46
1:0:1096:U:O2'	1:0:1097:A:H5'	2.15	0.46
1:0:1270:U:O2'	1:0:1271:A:H5'	2.15	0.46
1:0:1441:G:H1'	37:0:6651:HOH:O	2.15	0.46
1:0:1496:G:H2'	1:0:1497:G:C8	2.50	0.46
1:0:1776:A:O2'	1:0:1777:G:H5''	2.14	0.46
1:0:2353:A:O2'	18:M:7:LYS:HB3	2.15	0.46
1:0:2726:U:P	1:0:2755:G:H22	2.38	0.46
1:0:2871:G:C6	1:0:2872:U:C4	3.04	0.46
1:0:381:G:OP1	17:L:48:ARG:NH2	2.39	0.46
1:0:404:G:H5''	1:0:2131:G:O4'	2.15	0.46
1:0:452:G:H4'	1:0:455:A:N3	2.30	0.46
1:0:522:U:O2'	1:0:1366:C:H5'	2.16	0.46
1:0:654:A:H2'	1:0:655:U:C6	2.51	0.46
5:9:76:G:C3'	5:9:77:A:H5''	2.41	0.46
6:A:121:ALA:O	6:A:124:VAL:HG22	2.15	0.46
37:0:5476:HOH:O	6:A:182:ARG:HD2	2.15	0.46
7:B:51:VAL:HG13	7:B:53:LEU:CD1	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:C:103:ASN:HB2	8:C:106:GLU:HB2	1.96	0.46
14:I:52:GLN:HG3	14:I:53:ILE:N	2.29	0.46
16:K:32:ASP:O	16:K:35:ARG:HB3	2.15	0.46
17:L:185:PRO:HG2	17:L:189:VAL:HG11	1.97	0.46
17:L:71:SER:O	17:L:73:ARG:NH1	2.48	0.46
5:9:4:G:O2'	18:M:44:ARG:NH2	2.48	0.46
21:P:46:SER:O	21:P:48:PRO:HD3	2.14	0.46
27:V:154:ARG:HB3	27:V:154:ARG:HE	1.45	0.46
29:X:143:TRP:CE2	29:X:164:VAL:HG23	2.50	0.46
1:0:1448:A:H4'	37:0:3565:HOH:O	2.14	0.46
1:0:2050:G:H3'	37:0:3360:HOH:O	2.15	0.46
1:0:2271:G:H5'	1:0:2272:G:N7	2.30	0.46
1:0:263:U:O4	11:F:80:GLN:OE1	2.34	0.46
1:0:492:C:O2'	1:0:493:U:H5'	2.16	0.46
3:2:14:CYS:CB	3:2:18:GLN:HE22	2.28	0.46
6:A:100:PRO:HG2	6:A:103:VAL:CG2	2.41	0.46
7:B:24:PRO:HD3	37:B:524:HOH:O	2.15	0.46
7:B:206:THR:HA	7:B:303:GLY:H	1.80	0.46
7:B:41:PHE:N	37:B:521:HOH:O	2.48	0.46
8:C:185:LYS:N	37:C:410:HOH:O	2.48	0.46
13:H:130:HIS:CG	13:H:133:ILE:HD11	2.50	0.46
16:K:91:VAL:HG13	16:K:120:LEU:HD23	1.96	0.46
16:K:92:ASP:HA	16:K:121:ILE:HB	1.98	0.46
18:M:73:ALA:HB1	18:M:74:PRO:CD	2.46	0.46
26:U:12:THR:HG23	26:U:14:ALA:HB3	1.97	0.46
1:0:1014:A:H2'	1:0:1015:C:H5'	1.97	0.46
1:0:1515:A:C2	1:0:1672:G:C2	3.03	0.46
1:0:1684:A:O2'	1:0:1685:A:H5'	2.15	0.46
1:0:1754:A:H2'	1:0:1755:A:O4'	2.16	0.46
1:0:1762:C:H2'	1:0:1763:C:H6	1.81	0.46
1:0:1769:C:O5'	1:0:1769:C:H6	1.97	0.46
1:0:630:A:H2	1:0:2072:G:OP2	1.99	0.46
1:0:840:U:C2	1:0:2648:U:C4	3.04	0.46
1:0:541:C:O2'	1:0:542:A:H5''	2.14	0.46
1:0:714:U:H6	1:0:714:U:O5'	1.98	0.46
1:0:777:U:H2'	37:0:4817:HOH:O	2.15	0.46
1:0:910:C:O2'	1:0:932:U:OP1	2.28	0.46
1:0:968:G:O2'	1:0:969:G:H5'	2.15	0.46
7:B:27:ASN:H	7:B:27:ASN:ND2	2.03	0.46
7:B:301:VAL:O	7:B:302:PRO:O	2.34	0.46
8:C:219:ASN:N	8:C:222:ASP:OD1	2.47	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:H:139:ASP:HA	37:H:211:HOH:O	2.16	0.46
14:I:24:SER:HA	14:I:86:MET:SD	2.55	0.46
15:J:114:ALA:O	15:J:117:VAL:HG23	2.16	0.46
20:O:27:ARG:HD3	20:O:48:ALA:HB2	1.98	0.46
22:Q:89:LEU:HA	22:Q:89:LEU:HD23	1.78	0.46
37:O:8317:HOH:O	29:X:208:LYS:HD2	2.15	0.46
1:O:1004:C:O2'	1:O:1005:A:H5'	2.16	0.46
1:O:1009:U:O2'	1:O:1010:C:H5	1.98	0.46
1:O:1130:U:H5'	37:O:5078:HOH:O	2.16	0.46
1:O:1700:C:N4	37:O:3691:HOH:O	2.48	0.46
1:O:1730:G:C5'	1:O:1731:C:H6	2.25	0.46
1:O:1998:G:C6	1:O:1999:C:C4	3.04	0.46
1:O:2055:A:H5'	22:Q:134:SER:HB2	1.98	0.46
1:O:2757:A:C2'	1:O:2758:G:H5'	2.45	0.46
1:O:2791:U:C4	1:O:2794:G:C6	3.03	0.46
1:O:2815:G:C4'	1:O:2816:A:OP2	2.59	0.46
1:O:664:U:O2'	1:O:665:A:H5'	2.15	0.46
1:O:894:A:H5''	1:O:895:A:OP2	2.15	0.46
1:O:963:C:H2'	1:O:964:G:C8	2.50	0.46
5:9:1:U:O3'	5:9:3:A:H5'	2.16	0.46
7:B:29:TRP:CH2	7:B:164:THR:HA	2.51	0.46
7:B:51:VAL:CG2	7:B:327:VAL:HG13	2.44	0.46
13:H:31:PHE:HE2	13:H:87:LYS:O	1.97	0.46
16:K:133:VAL:HG13	37:K:311:HOH:O	2.15	0.46
27:V:110:GLN:NE2	27:V:110:GLN:CA	2.78	0.46
27:V:93:ILE:HB	37:V:206:HOH:O	2.14	0.46
1:O:1041:U:H2'	1:O:1042:U:H5'	1.98	0.46
1:O:1159:G:H1	1:O:1208:C:H42	1.64	0.46
1:O:1589:G:O2'	1:O:1590:A:H8	1.99	0.46
1:O:1680:C:H2'	1:O:1681:G:O4'	2.15	0.46
1:O:1832:G:O2'	1:O:1833:U:H5'	2.15	0.46
1:O:1905:U:H2'	1:O:1906:C:C6	2.51	0.46
1:O:1981:A:O2'	1:O:1983:C:N4	2.49	0.46
1:O:2083:A:H2'	1:O:2084:C:H5''	1.98	0.46
1:O:2103:A:H2'	1:O:2104:C:H5'	1.97	0.46
1:O:2626:C:H2'	1:O:2627:G:C8	2.50	0.46
1:O:675:U:H6	1:O:675:U:O5'	1.99	0.46
1:O:708:A:H2'	1:O:709:G:O4'	2.14	0.46
1:O:783:C:O2'	1:O:784:A:H5'	2.16	0.46
1:O:78:G:C6	1:O:79:G:N1	2.83	0.46
1:O:816:G:C6	1:O:817:G:C6	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:795:G:H2'	1:0:817:G:H22	1.80	0.46
6:A:195:ASN:HB2	6:A:197:VAL:HG12	1.96	0.46
7:B:168:GLY:O	7:B:174:ARG:NH1	2.49	0.46
8:C:180:SER:HB2	37:C:408:HOH:O	2.14	0.46
5:9:57:A:C8	9:D:141:VAL:HG21	2.50	0.46
10:E:100:ASP:HB2	37:E:230:HOH:O	2.15	0.46
10:E:154:ILE:HD11	10:E:157:LYS:CE	2.45	0.46
13:H:57:ARG:HG3	13:H:57:ARG:HH11	1.81	0.46
14:I:107:ASN:ND2	14:I:109:TYR:HB2	2.27	0.46
14:I:77:GLY:O	14:I:80:LYS:N	2.49	0.46
1:0:926:A:O2'	16:K:41:HIS:CD2	2.69	0.46
17:L:61:ILE:CG2	17:L:62:VAL:N	2.77	0.46
19:N:40:HIS:HA	37:N:307:HOH:O	2.14	0.46
1:0:1013:A:C2	1:0:1014:A:H1'	2.49	0.46
1:0:111:C:O2'	31:Z:20:ARG:HG2	2.15	0.46
1:0:2241:C:H2'	1:0:2242:U:H6	1.79	0.46
1:0:2700:G:C2'	1:0:2701:G:H5'	2.45	0.46
1:0:2911:C:H2'	1:0:2912:C:H6	1.80	0.46
1:0:418:C:H2'	1:0:419:A:C8	2.50	0.46
2:1:1:GLY:HA3	37:1:112:HOH:O	2.15	0.46
7:B:162:MET:HE2	7:B:310:ARG:HD3	1.96	0.46
7:B:217:ARG:HD3	7:B:218:TRP:NE1	2.31	0.46
7:B:251:VAL:HG23	7:B:252:PRO:HD2	1.97	0.46
8:C:16:VAL:CG1	8:C:17:ASP:N	2.77	0.46
8:C:236:THR:O	8:C:237:GLU:C	2.53	0.46
13:H:142:VAL:C	13:H:144:GLU:N	2.69	0.46
13:H:68:ALA:CB	13:H:145:ALA:O	2.63	0.46
14:I:93:ARG:HH11	14:I:93:ARG:HB3	1.79	0.46
15:J:53:ILE:HG13	15:J:55:VAL:HG23	1.98	0.46
16:K:144:ASP:O	16:K:147:GLU:HB2	2.15	0.46
16:K:38:HIS:CD2	16:K:39:GLU:HG3	2.51	0.46
17:L:31:TRP:HA	17:L:34:GLU:HG3	1.97	0.46
17:L:69:LYS:O	17:L:73:ARG:NH2	2.49	0.46
17:L:81:ARG:O	17:L:86:MET:HE2	2.16	0.46
18:M:72:GLU:H	18:M:171:HIS:HE1	1.63	0.46
24:S:50:VAL:HG11	24:S:55:PHE:C	2.36	0.46
1:0:1023:C:H2'	1:0:1024:G:O4'	2.15	0.46
1:0:10:U:O4	1:0:532:A:OP2	2.34	0.46
1:0:1175:G:H8	37:0:7234:HOH:O	1.97	0.46
1:0:1211:G:O2'	1:0:1212:C:H5'	2.16	0.46
1:0:1291:A:O2'	1:0:1292:G:H5'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1488:U:C5'	1:0:1489:G:OP1	2.64	0.46
1:0:1746:A:H61	1:0:1754:A:N6	2.14	0.46
1:0:17:G:H2'	1:0:18:C:H6	1.75	0.46
1:0:1999:C:H2'	1:0:2000:G:H8	1.80	0.46
1:0:2579:G:O2'	1:0:2580:G:H5'	2.16	0.46
1:0:2073:G:H1	1:0:2607:U:H1'	1.81	0.46
1:0:2831:C:H2'	1:0:2832:C:H5'	1.97	0.46
1:0:319:A:H4'	1:0:338:C:C5	2.51	0.46
1:0:25:A:N6	1:0:518:G:H1'	2.30	0.46
1:0:672:G:H1'	37:0:7432:HOH:O	2.15	0.46
1:0:790:A:H4'	1:0:1710:A:C8	2.51	0.46
1:0:818:A:C6	1:0:819:A:C2	3.03	0.46
1:0:871:G:C8	1:0:871:G:C5'	2.88	0.46
4:5:58:TYR:HB3	4:5:59:GLY:H	1.57	0.46
6:A:51:ARG:HB3	6:A:51:ARG:NH1	2.31	0.46
7:B:2:GLN:HG3	37:B:651:HOH:O	2.16	0.46
15:J:32:ILE:HD11	15:J:56:SER:HB3	1.97	0.46
15:J:72:VAL:HG11	15:J:121:PHE:CE1	2.50	0.46
17:L:63:VAL:HG21	17:L:109:PHE:CZ	2.51	0.46
24:S:52:ARG:O	24:S:53:GLY:O	2.34	0.46
24:S:75:GLU:O	24:S:76:ASP:HB2	2.16	0.46
25:T:49:LEU:HD11	37:T:201:HOH:O	2.14	0.46
31:Z:22:CYS:SG	31:Z:23:GLY:N	2.88	0.46
1:0:1184:C:H2'	1:0:1185:U:H6	1.80	0.46
1:0:1186:C:H42	1:0:1190:G:N2	2.14	0.46
1:0:1392:A:O2'	1:0:1394:C:OP1	2.34	0.46
1:0:1444:G:O2'	1:0:1445:G:H5'	2.16	0.46
1:0:1749:U:H3'	37:0:3204:HOH:O	2.16	0.46
1:0:1778:A:H2'	1:0:1779:A:H5'	1.98	0.46
1:0:1872:C:O2'	6:A:26:ASP:HA	2.16	0.46
1:0:198:A:N7	1:0:2444:U:H5'	2.31	0.46
1:0:2348:C:O2'	1:0:2349:G:H5'	2.16	0.46
1:0:2812:A:H4'	1:0:2813:A:O5'	2.15	0.46
1:0:1787:C:H4'	1:0:2883:A:O4'	2.14	0.46
1:0:448:G:H3'	37:C:478:HOH:O	2.15	0.46
1:0:653:C:H2'	1:0:654:A:C8	2.51	0.46
1:0:86:A:O2'	2:1:28:LYS:HE2	2.15	0.46
3:2:13:HIS:CD2	3:2:76:LYS:HB3	2.51	0.46
6:A:128:LEU:HG	37:A:462:HOH:O	2.15	0.46
6:A:172:ALA:O	6:A:173:GLY:C	2.53	0.46
8:C:238:SER:HB3	37:C:439:HOH:O	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:L:46:LEU:O	17:L:47:ASP:C	2.54	0.46
22:Q:4:TYR:N	37:Q:304:HOH:O	2.47	0.46
27:V:13:MET:CE	27:V:17:ILE:HG22	2.45	0.46
1:O:1126:C:O2'	1:O:1128:U:C5	2.68	0.46
1:O:1412:U:O2'	1:O:1413:A:H5'	2.15	0.46
1:O:1570:C:C2'	1:O:1571:G:H5'	2.46	0.46
1:O:175:G:HO2'	1:O:176:U:P	2.36	0.46
1:O:536:A:N6	1:O:2076:U:H5'	2.30	0.46
1:O:2106:C:H2'	1:O:2107:U:C6	2.51	0.46
1:O:2533:C:H3'	37:O:3201:HOH:O	2.16	0.46
1:O:264:G:HO2'	1:O:265:U:H5	1.61	0.46
1:O:2688:U:H2'	1:O:2689:A:H8	1.81	0.46
1:O:2723:G:H1'	37:O:4629:HOH:O	2.15	0.46
1:O:2869:G:H2'	1:O:2870:C:C6	2.51	0.46
1:O:308:U:C2	24:S:52:ARG:NH2	2.84	0.46
1:O:559:U:H2'	1:O:560:C:O4'	2.15	0.46
6:A:199:HIS:CG	6:A:200:PRO:HD2	2.51	0.46
6:A:66:ARG:CB	6:A:66:ARG:NH1	2.78	0.46
7:B:265:LEU:N	7:B:265:LEU:HD12	2.31	0.46
8:C:24:THR:HG23	8:C:25:PRO:HD2	1.97	0.46
9:D:57:THR:HG23	9:D:63:ILE:CG2	2.44	0.46
12:G:19:GLU:O	12:G:20:VAL:C	2.54	0.46
1:O:1007:A:H2'	13:H:19:TYR:CE1	2.51	0.46
37:O:3237:HOH:O	13:H:95:GLU:HA	2.15	0.46
16:K:53:ARG:NH2	16:K:57:VAL:HG12	2.31	0.46
37:O:3460:HOH:O	17:L:104:ARG:HG3	2.14	0.46
17:L:24:MET:HB3	17:L:28:MET:HE3	1.97	0.46
18:M:115:VAL:HG23	18:M:116:PHE:N	2.30	0.46
23:R:25:GLN:CG	23:R:65:VAL:HG22	2.46	0.46
1:O:100:C:H5'	24:S:16:LEU:HD12	1.97	0.46
24:S:78:THR:CB	24:S:86:GLU:HG2	2.45	0.46
28:W:85:VAL:HG12	28:W:86:GLU:N	2.30	0.46
1:O:1335:C:H2'	1:O:1336:U:C6	2.50	0.46
1:O:1441:G:H2'	1:O:1442:A:H8	1.81	0.46
1:O:2087:C:O2'	1:O:2088:C:H5'	2.16	0.46
1:O:2847:G:H4'	37:O:3369:HOH:O	2.15	0.46
1:O:407:A:H3'	37:O:3234:HOH:O	2.15	0.46
1:O:558:C:C2'	1:O:559:U:C5'	2.93	0.46
2:1:10:ARG:O	2:1:11:LEU:C	2.55	0.46
5:9:47:A:C2	5:9:48:C:C2	3.04	0.46
6:A:128:LEU:HD13	6:A:138:VAL:HG22	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:9:ARG:O	6:A:10:GLY:C	2.54	0.46
7:B:223:ARG:NH1	7:B:232:TRP:HB3	2.31	0.46
7:B:7:ARG:CG	7:B:7:ARG:NH1	2.79	0.46
8:C:21:VAL:C	8:C:23:GLU:H	2.20	0.46
8:C:27:ARG:HG3	8:C:29:ASP:OD1	2.16	0.46
10:E:86:VAL:HA	10:E:166:VAL:HA	1.98	0.46
11:F:100:ASP:O	11:F:101:ALA:O	2.34	0.46
12:G:63:ARG:HB2	12:G:66:LEU:HG	1.97	0.46
15:J:113:ILE:HD12	15:J:128:ALA:HB2	1.98	0.46
17:L:35:PRO:HG2	17:L:38:VAL:HG23	1.97	0.46
20:O:109:ARG:NH1	20:O:119:TYR:CE2	2.84	0.46
23:R:51:GLN:NE2	37:R:203:HOH:O	2.49	0.46
28:W:22:ASN:C	28:W:24:LYS:H	2.18	0.46
28:W:12:ILE:O	28:W:69:LYS:HA	2.16	0.46
30:Y:11:THR:O	30:Y:11:THR:HG23	2.16	0.46
31:Z:19:CYS:HA	31:Z:27:TYR:HB2	1.98	0.46
1:O:1042:U:O2'	1:O:1043:C:H5'	2.16	0.45
1:O:1419:U:H2'	1:O:1685:A:C2	2.51	0.45
1:O:2115:U:H2'	1:O:2116:U:H6	1.79	0.45
1:O:2758:G:H2'	1:O:2759:C:H6	1.81	0.45
1:O:2862:G:H4'	7:B:336:GLN:O	2.17	0.45
1:O:2829:G:N2	1:O:2912:C:C2	2.84	0.45
1:O:289:G:N2	1:O:363:A:C2	2.84	0.45
1:O:370:G:N2	1:O:371:U:C2	2.84	0.45
1:O:381:G:H5''	37:O:3623:HOH:O	2.15	0.45
1:O:458:G:C6	1:O:459:A:C6	3.04	0.45
1:O:559:U:O2'	1:O:560:C:H5'	2.16	0.45
5:9:11:A:C2	5:9:69:U:O4'	2.69	0.45
5:9:14:G:C8	5:9:14:G:H5'	2.45	0.45
5:9:39:U:H1'	5:9:44:A:H61	1.81	0.45
6:A:66:ARG:CB	6:A:66:ARG:HH11	2.29	0.45
7:B:181:ILE:HD11	37:B:587:HOH:O	2.15	0.45
11:F:9:PRO:O	11:F:12:LEU:N	2.48	0.45
13:H:113:ALA:N	13:H:114:PRO:HD3	2.31	0.45
13:H:139:ASP:N	13:H:140:PRO:CD	2.75	0.45
13:H:13:ALA:HA	13:H:91:HIS:CE1	2.51	0.45
14:I:97:ALA:O	14:I:100:SER:N	2.45	0.45
14:I:36:VAL:CG1	14:I:37:ALA:N	2.79	0.45
16:K:143:THR:CG2	16:K:144:ASP:H	2.28	0.45
17:L:134:ILE:CG2	17:L:141:ILE:HD13	2.46	0.45
18:M:14:ARG:C	18:M:16:ALA:N	2.70	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:W:8:ARG:NH1	37:W:104:HOH:O	2.49	0.45
30:Y:11:THR:CG2	30:Y:23:ARG:HB2	2.46	0.45
30:Y:40:PRO:CD	30:Y:64:ILE:HD13	2.46	0.45
1:0:1609:C:H2'	1:0:1610:G:H8	1.81	0.45
1:0:1667:A:H2'	1:0:1668:U:C6	2.50	0.45
1:0:1702:U:H1'	37:0:3886:HOH:O	2.16	0.45
1:0:191:A:N1	1:0:236:A:O2'	2.49	0.45
1:0:2033:G:C2	1:0:2038:A:C5	3.04	0.45
1:0:2113:G:O2'	1:0:2114:C:H5'	2.16	0.45
1:0:213:G:O2'	1:0:225:G:N1	2.49	0.45
1:0:2467:A:H3'	37:0:4925:HOH:O	2.16	0.45
1:0:2709:G:O2'	1:0:2710:U:H5'	2.17	0.45
1:0:736:A:H5''	37:0:3521:HOH:O	2.16	0.45
4:5:41:ILE:HD11	4:5:49:VAL:CG1	2.46	0.45
5:9:24:U:O2'	5:9:25:G:C5'	2.64	0.45
7:B:232:TRP:CD1	7:B:235:ARG:HD2	2.52	0.45
7:B:2:GLN:HB2	37:B:591:HOH:O	2.15	0.45
13:H:35:ASN:ND2	13:H:80:ASN:HA	2.31	0.45
17:L:157:LEU:HD23	37:L:430:HOH:O	2.16	0.45
17:L:77:PHE:HE2	17:L:86:MET:HB3	1.80	0.45
18:M:14:ARG:C	18:M:16:ALA:H	2.19	0.45
1:0:841:A:C8	22:Q:129:ALA:HB1	2.51	0.45
25:T:52:THR:HG22	25:T:54:THR:H	1.81	0.45
27:V:110:GLN:HE21	27:V:110:GLN:CA	2.26	0.45
27:V:17:ILE:O	27:V:20:THR:HB	2.17	0.45
1:0:1165:G:O2'	1:0:1174:A:H1'	2.16	0.45
1:0:1278:A:P	19:N:19:ARG:HH22	2.39	0.45
1:0:2311:A:H4'	13:H:115:PHE:CZ	2.51	0.45
1:0:2370:A:H5''	1:0:2371:G:OP2	2.15	0.45
1:0:485:A:H1'	1:0:486:A:C8	2.51	0.45
1:0:51:G:O2'	1:0:52:A:H5'	2.15	0.45
1:0:779:U:H5'	1:0:1836:A:C2	2.51	0.45
3:2:65:THR:HB	3:2:83:TRP:H	1.81	0.45
5:9:92:G:H2'	5:9:93:A:H8	1.71	0.45
6:A:95:PRO:HA	6:A:153:ARG:HA	1.97	0.45
1:0:2898:G:H4'	7:B:288:GLY:HA2	1.98	0.45
7:B:90:THR:C	7:B:92:TYR:H	2.20	0.45
14:I:97:ALA:O	14:I:101:VAL:HG23	2.16	0.45
5:9:28:U:H5''	18:M:40:ASN:ND2	2.32	0.45
21:P:66:LYS:HD3	21:P:68:GLY:O	2.16	0.45
22:Q:120:GLY:O	22:Q:140:GLN:N	2.44	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:Q:141:VAL:HG12	22:Q:142:ASP:N	2.31	0.45
24:S:26:THR:OG1	24:S:32:ARG:NH2	2.47	0.45
1:O:1331:A:O2'	1:O:1332:C:H5'	2.17	0.45
1:O:1514:C:H2'	1:O:1515:A:C8	2.52	0.45
1:O:1642:A:C8	1:O:1643:C:C5	3.04	0.45
1:O:1882:C:H5''	6:A:192:VAL:CG2	2.47	0.45
1:O:2103:A:N3	1:O:2103:A:H2'	2.32	0.45
1:O:2411:C:H4'	37:O:4941:HOH:O	2.17	0.45
1:O:2397:G:C5	1:O:2465:A:C6	3.04	0.45
1:O:2517:A:C2'	1:O:2518:C:H5'	2.46	0.45
1:O:2517:A:O2'	1:O:2518:C:H5'	2.16	0.45
1:O:2554:U:C4'	1:O:2555:C:OP1	2.57	0.45
1:O:381:G:O2'	1:O:382:U:H5	1.98	0.45
1:O:958:G:O2'	1:O:959:C:H5'	2.16	0.45
2:1:22:PRO:HG2	2:1:25:VAL:CG2	2.46	0.45
6:A:211:LYS:HB2	37:A:421:HOH:O	2.16	0.45
7:B:49:THR:HG21	7:B:331:SER:O	2.17	0.45
11:F:101:ALA:HB2	11:F:108:LEU:CD2	2.46	0.45
11:F:62:HIS:O	11:F:63:ILE:C	2.54	0.45
13:H:32:ASP:C	13:H:33:MET:HG3	2.37	0.45
13:H:81:TYR:C	13:H:81:TYR:CD1	2.90	0.45
1:O:197:C:OP2	16:K:56:LYS:HD2	2.16	0.45
18:M:114:LYS:O	18:M:117:ALA:HB3	2.16	0.45
22:Q:39:THR:O	22:Q:42:GLU:N	2.49	0.45
27:V:67:ALA:HB2	27:V:93:ILE:HD13	1.97	0.45
31:Z:17:THR:N	31:Z:27:TYR:O	2.50	0.45
1:O:1572:A:O2'	1:O:1573:A:H5'	2.17	0.45
1:O:1893:C:O2	1:O:1968:A:H2	2.00	0.45
1:O:2125:G:H4'	37:O:8118:HOH:O	2.15	0.45
1:O:786:G:O2'	1:O:787:G:H5'	2.17	0.45
6:A:200:PRO:HA	37:A:471:HOH:O	2.17	0.45
9:D:50:VAL:O	9:D:71:ALA:HA	2.17	0.45
13:H:45:GLN:HE21	13:H:135:TRP:HZ2	1.64	0.45
13:H:86:ARG:HD3	13:H:133:ILE:HG12	1.98	0.45
10:E:36:PRO:CG	14:I:127:ILE:HB	2.47	0.45
14:I:8:ALA:HA	14:I:35:THR:HG22	1.99	0.45
15:J:115:ARG:HD2	15:J:116:GLU:OE2	2.16	0.45
16:K:73:VAL:HG21	16:K:116:HIS:CD2	2.52	0.45
18:M:164:ASP:OD1	18:M:167:ASP:HA	2.16	0.45
27:V:54:PHE:C	27:V:146:ILE:HD11	2.36	0.45
1:O:101:C:H2'	1:O:102:A:C8	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1119:G:C6	1:0:1243:C:C4	3.05	0.45
1:0:1251:C:H2'	1:0:1252:A:O4'	2.17	0.45
1:0:1423:C:O2'	1:0:1424:A:H5'	2.16	0.45
1:0:1476:A:H8	1:0:1476:A:O5'	2.00	0.45
1:0:1513:C:O2'	1:0:1514:C:H5'	2.16	0.45
1:0:24:G:HO2'	1:0:25:A:H8	1.61	0.45
1:0:2687:G:O2'	1:0:2688:U:H5'	2.17	0.45
1:0:2752:C:O2'	1:0:2753:G:H5'	2.16	0.45
1:0:2873:C:N4	1:0:2874:G:C6	2.85	0.45
1:0:30:U:C4	1:0:452:G:O2'	2.70	0.45
1:0:939:A:N6	1:0:1031:G:H1'	2.31	0.45
5:9:45:A:H2'	5:9:46:C:C6	2.52	0.45
6:A:53:ALA:HB1	6:A:54:PRO:HD2	1.99	0.45
6:A:8:ARG:HG2	37:A:405:HOH:O	2.17	0.45
8:C:73:LEU:N	8:C:76:ARG:O	2.36	0.45
11:F:58:GLU:OE1	17:L:27:ARG:NH2	2.36	0.45
13:H:153:VAL:HG21	13:H:157:ILE:CD1	2.47	0.45
13:H:150:LYS:HB2	13:H:157:ILE:HB	1.99	0.45
15:J:66:ARG:HH11	15:J:66:ARG:HG2	1.80	0.45
16:K:98:GLU:O	16:K:99:GLU:CB	2.63	0.45
17:L:52:LEU:HD13	17:L:116:ASN:OD1	2.16	0.45
17:L:39:ARG:CA	17:L:63:VAL:HG22	2.34	0.45
37:O:3403:HOH:O	20:O:37:ARG:HB2	2.16	0.45
20:O:13:VAL:CG2	20:O:41:ARG:HG2	2.46	0.45
29:X:133:HIS:CD2	37:X:435:HOH:O	2.68	0.45
37:O:6879:HOH:O	31:Z:10:LYS:HB3	2.16	0.45
1:0:1266:U:H2'	1:0:1267:C:O4'	2.17	0.45
1:0:1701:A:C5'	1:0:1702:U:O5'	2.65	0.45
1:0:1866:A:N7	1:0:1867:G:H1'	2.31	0.45
1:0:1905:U:H2'	1:0:1906:C:H6	1.80	0.45
1:0:214:U:H5'	37:O:7574:HOH:O	2.16	0.45
1:0:228:C:H2'	1:0:229:G:H5'	1.98	0.45
1:0:2578:G:C8	1:0:2578:G:H5'	2.46	0.45
1:0:537:G:C6	1:0:620:A:C8	3.04	0.45
1:0:625:U:H5'	37:O:3746:HOH:O	2.16	0.45
1:0:629:A:H2'	1:0:630:A:O4'	2.16	0.45
2:1:43:ARG:HD3	37:1:136:HOH:O	2.17	0.45
6:A:153:ARG:HD3	37:A:526:HOH:O	2.15	0.45
8:C:12:THR:HB	37:C:429:HOH:O	2.16	0.45
8:C:135:GLU:HB3	37:C:450:HOH:O	2.16	0.45
8:C:69:HIS:CD2	8:C:69:HIS:H	2.34	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2443:C:O2'	16:K:56:LYS:HE3	2.17	0.45
18:M:34:LEU:HD22	18:M:129:ILE:HD13	1.99	0.45
24:S:78:THR:HB	24:S:86:GLU:HG2	1.99	0.45
29:X:218:GLU:OE1	29:X:232:THR:OG1	2.25	0.45
30:Y:32:LYS:HA	30:Y:35:LYS:HG3	1.99	0.45
31:Z:28:HIS:NE2	31:Z:31:LYS:HE2	2.31	0.45
1:0:114:A:C4'	1:0:115:U:OP1	2.63	0.45
1:0:1447:U:H3'	1:0:1506:U:O2	2.16	0.45
1:0:1501:A:H4'	37:0:6307:HOH:O	2.16	0.45
1:0:1570:C:O2'	1:0:1571:G:H5'	2.16	0.45
1:0:222:A:H2'	1:0:223:G:O4'	2.17	0.45
1:0:2264:A:OP1	17:L:71:SER:HB3	2.17	0.45
1:0:2317:C:OP2	3:2:62:THR:HB	2.17	0.45
1:0:2630:G:N2	1:0:2633:A:OP2	2.48	0.45
1:0:482:G:N2	1:0:484:A:H3'	2.32	0.45
5:9:42:C:O2	9:D:76:ARG:NH1	2.49	0.45
1:0:894:A:N1	8:C:87:ARG:NH2	2.65	0.45
11:F:41:GLU:OE2	17:L:2:ARG:HB2	2.17	0.45
15:J:87:ARG:HB2	25:T:19:THR:HG23	1.98	0.45
1:0:1708:C:O4'	20:O:86:ALA:HB1	2.16	0.45
22:Q:19:ARG:O	22:Q:20:GLU:C	2.55	0.45
25:T:20:MET:CE	25:T:30:HIS:NE2	2.80	0.45
27:V:113:SER:HA	27:V:114:PRO:HD3	1.81	0.45
29:X:214:ARG:HG2	29:X:214:ARG:HH11	1.82	0.45
30:Y:62:TYR:CE2	30:Y:64:ILE:HG23	2.51	0.45
1:0:1191:A:H3'	1:0:1192:A:H5''	1.99	0.45
1:0:12:U:C2'	1:0:13:G:H5'	2.47	0.45
1:0:1717:A:H5''	20:O:54:LYS:HB2	1.98	0.45
1:0:1875:A:OP1	6:A:120:ARG:N	2.45	0.45
1:0:2784:A:H8	1:0:2784:A:O5'	2.00	0.45
1:0:418:C:C4	1:0:2442:G:N2	2.85	0.45
1:0:450:C:H6	1:0:450:C:O5'	1.99	0.45
1:0:907:A:H4'	1:0:1328:A:N1	2.30	0.45
1:0:99:A:N1	24:S:20:HIS:NE2	2.61	0.45
6:A:36:ASP:OD2	6:A:85:ASP:HB2	2.16	0.45
7:B:185:GLY:HA2	37:B:566:HOH:O	2.16	0.45
7:B:55:ASN:HB3	7:B:64:GLY:H	1.82	0.45
9:D:167:GLU:C	9:D:169:THR:H	2.20	0.45
11:F:49:PHE:HE1	11:F:98:VAL:HG23	1.82	0.45
18:M:47:LEU:HD23	18:M:47:LEU:HA	1.71	0.45
19:N:14:LEU:HD23	19:N:102:ILE:HD11	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:654:A:OP2	19:N:38:ARG:HD3	2.17	0.45
20:O:2:ASP:C	20:O:2:ASP:OD1	2.54	0.45
1:0:2393:C:H4'	21:P:78:GLY:HA3	1.99	0.45
28:W:34:ARG:HG3	28:W:34:ARG:HH11	1.81	0.45
29:X:211:ALA:HA	29:X:214:ARG:HD3	1.99	0.45
29:X:234:VAL:HG12	29:X:235:GLU:N	2.32	0.45
31:Z:37:CYS:SG	31:Z:39:PHE:CB	3.05	0.45
1:0:1181:A:C2'	1:0:1182:C:H5'	2.47	0.45
1:0:1236:A:H2'	1:0:1237:U:O4'	2.17	0.45
1:0:1318:A:H2'	1:0:1319:G:O4'	2.17	0.45
1:0:1359:U:O5'	1:0:1360:C:H5''	2.17	0.45
1:0:2102:G:C2	1:0:2104:C:C4	3.05	0.45
1:0:2316:G:H2'	1:0:2462:G:O6	2.17	0.45
1:0:2321:A:O2'	1:0:2322:U:O3'	2.35	0.45
1:0:2617:G:C2	1:0:2618:G:C8	3.05	0.45
1:0:2626:C:H2'	1:0:2627:G:H8	1.82	0.45
1:0:2091:G:H22	1:0:2653:A:H2	1.63	0.45
1:0:358:G:O2'	1:0:359:U:OP2	2.34	0.45
3:2:1:MET:SD	3:2:83:TRP:NE1	2.80	0.45
5:9:58:G:H3'	5:9:59:C:C6	2.51	0.45
8:C:78:ARG:HG2	37:C:421:HOH:O	2.16	0.45
13:H:14:TYR:N	13:H:91:HIS:HE1	2.14	0.45
14:I:74:ARG:C	14:I:76:ASP:N	2.70	0.45
16:K:64:ILE:O	16:K:64:ILE:HG23	2.16	0.45
17:L:87:MET:CE	37:L:351:HOH:O	2.66	0.45
18:M:127:LEU:HA	18:M:127:LEU:HD12	1.85	0.45
4:5:50:PRO:HG2	23:R:15:MET:HG3	1.99	0.45
27:V:122:ARG:NH1	27:V:152:ALA:O	2.50	0.45
27:V:21:LEU:HD23	27:V:48:VAL:HG21	1.98	0.45
30:Y:10:ARG:CG	30:Y:11:THR:H	2.28	0.45
30:Y:32:LYS:HA	30:Y:35:LYS:HD2	1.98	0.45
1:0:1507:C:O5'	1:0:1507:C:H6	2.00	0.44
1:0:1510:G:H2'	1:0:1511:U:O4'	2.16	0.44
1:0:1675:C:H5''	2:1:5:LYS:HD2	1.99	0.44
1:0:429:A:C6	1:0:430:A:C6	3.05	0.44
1:0:72:C:H2'	1:0:73:C:H6	1.81	0.44
1:0:821:U:H2'	1:0:822:C:C6	2.52	0.44
1:0:775:G:O2'	1:0:881:C:C5	2.69	0.44
1:0:889:C:H2'	1:0:890:C:C6	2.52	0.44
1:0:2768:A:C8	7:B:316:ARG:HB2	2.52	0.44
9:D:94:ALA:HB3	9:D:174:VAL:CA	2.46	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:E:138:ILE:HG23	10:E:139:GLU:N	2.32	0.44
11:F:104:ALA:C	11:F:106:THR:H	2.21	0.44
1:0:431:G:P	17:L:48:ARG:HH12	2.40	0.44
22:Q:4:TYR:CZ	22:Q:15:LYS:HB3	2.51	0.44
27:V:105:THR:HG23	27:V:106:THR:N	2.31	0.44
28:W:10:VAL:HG13	37:W:115:HOH:O	2.16	0.44
1:0:1131:G:O2'	1:0:1132:A:H5'	2.17	0.44
1:0:1201:C:H2'	1:0:1202:A:H5'	1.99	0.44
1:0:1205:U:H2'	1:0:1206:U:C5'	2.47	0.44
1:0:1532:G:C6	1:0:1533:A:C6	3.05	0.44
1:0:1747:A:H1'	37:0:7019:HOH:O	2.17	0.44
1:0:1754:A:H5''	37:0:3950:HOH:O	2.16	0.44
1:0:2814:A:H4'	1:0:2815:G:H5''	1.98	0.44
1:0:290:C:H2'	1:0:291:C:O4'	2.17	0.44
1:0:703:G:O2'	1:0:704:C:H5'	2.17	0.44
5:9:50:G:C6	5:9:51:A:C6	3.04	0.44
6:A:97:ALA:HA	6:A:131:HIS:NE2	2.32	0.44
6:A:22:ARG:NH1	37:A:426:HOH:O	2.50	0.44
7:B:22:GLU:HA	7:B:205:VAL:HG21	1.99	0.44
7:B:265:LEU:CD2	7:B:316:ARG:HD3	2.47	0.44
8:C:72:LYS:HD2	37:C:536:HOH:O	2.17	0.44
10:E:157:LYS:NZ	37:E:204:HOH:O	2.47	0.44
10:E:37:ASP:OD1	14:I:125:SER:HB3	2.17	0.44
10:E:6:GLU:HA	10:E:46:THR:HG22	1.99	0.44
14:I:19:MET:O	14:I:20:GLY:C	2.55	0.44
17:L:102:GLU:OE2	17:L:117:SER:OG	2.29	0.44
17:L:9:ARG:O	17:L:10:GLU:C	2.55	0.44
17:L:48:ARG:HH11	17:L:52:LEU:HD21	1.80	0.44
37:0:3724:HOH:O	19:N:32:ARG:NH2	2.50	0.44
20:O:134:VAL:O	20:O:137:LEU:HB3	2.17	0.44
20:O:7:LYS:HD3	20:O:23:PHE:CE1	2.53	0.44
23:R:8:PRO:HD2	26:U:32:ALA:HA	1.98	0.44
30:Y:73:THR:HG22	37:Y:213:HOH:O	2.17	0.44
1:0:118:G:N2	1:0:123:U:H1'	2.32	0.44
1:0:159:G:H1	1:0:175:G:HO2'	1.65	0.44
1:0:1971:G:C2'	1:0:1972:U:OP2	2.65	0.44
1:0:207:U:H5'	37:0:7029:HOH:O	2.18	0.44
1:0:2547:C:H2'	1:0:2548:C:H6	1.81	0.44
1:0:2580:G:H1'	37:0:5019:HOH:O	2.16	0.44
1:0:287:C:H6	1:0:287:C:O5'	2.00	0.44
1:0:321:A:H1'	37:0:3740:HOH:O	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:413:G:H2'	1:0:414:C:C6	2.52	0.44
1:0:621:C:H2'	1:0:622:G:C8	2.53	0.44
1:0:876:A:N7	1:0:878:G:H1'	2.31	0.44
1:0:892:G:C6	1:0:893:C:N3	2.86	0.44
4:5:50:PRO:O	4:5:54:VAL:HG23	2.17	0.44
6:A:14:SER:N	6:A:17:ARG:HH21	2.15	0.44
6:A:81:GLN:HG3	6:A:92:ASN:HD21	1.82	0.44
1:0:2846:C:H4'	7:B:156:LYS:HB3	1.99	0.44
9:D:15:GLU:HA	9:D:16:PRO:HD3	1.77	0.44
11:F:28:ALA:HB3	11:F:99:THR:O	2.18	0.44
13:H:55:GLN:HE22	13:H:91:HIS:HD2	1.60	0.44
13:H:73:GLN:OE1	13:H:73:GLN:CA	2.64	0.44
14:I:89:HIS:CE1	37:I:333:HOH:O	2.70	0.44
16:K:21:ARG:N	37:K:308:HOH:O	2.50	0.44
18:M:110:THR:HB	18:M:113:SER:OG	2.18	0.44
21:P:18:PRO:O	21:P:21:ARG:HB2	2.18	0.44
22:Q:39:THR:HG23	22:Q:107:GLU:O	2.17	0.44
1:0:317:A:OP1	24:S:52:ARG:O	2.35	0.44
1:0:1205:U:H2'	1:0:1206:U:H5''	1.98	0.44
1:0:1361:C:H1'	8:C:83:ALA:HA	1.99	0.44
1:0:1450:C:O2'	1:0:1493:A:H2'	2.17	0.44
1:0:1500:U:P	20:O:41:ARG:HH22	2.40	0.44
1:0:1886:A:O2'	30:Y:20:LEU:HB2	2.18	0.44
1:0:2251:G:H2'	1:0:2252:A:H8	1.81	0.44
1:0:2325:C:O2'	1:0:2411:C:H1'	2.18	0.44
1:0:24:G:O2'	1:0:25:A:H8	2.01	0.44
1:0:2806:C:H2'	1:0:2807:U:C6	2.53	0.44
1:0:309:C:OP1	24:S:97:ARG:NH2	2.49	0.44
1:0:454:U:H3'	37:O:8058:HOH:O	2.17	0.44
1:0:841:A:C4	1:0:843:A:C6	3.06	0.44
5:9:104:A:O2'	5:9:105:A:H5'	2.17	0.44
7:B:42:ALA:H	7:B:79:MET:HE2	1.83	0.44
8:C:133:ARG:HG3	8:C:133:ARG:NH1	2.31	0.44
8:C:193:LEU:O	8:C:233:THR:HG23	2.17	0.44
8:C:76:ARG:HG2	8:C:78:ARG:NH1	2.31	0.44
9:D:78:GLU:O	9:D:82:GLU:HG3	2.18	0.44
10:E:103:VAL:CG1	10:E:104:ILE:N	2.81	0.44
17:L:133:LEU:N	17:L:133:LEU:CD1	2.79	0.44
18:M:132:ASN:HA	37:M:345:HOH:O	2.17	0.44
18:M:73:ALA:HB2	18:M:163:PHE:CZ	2.52	0.44
28:W:66:THR:CG2	28:W:67:PRO:HD2	2.40	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:X:187:VAL:CG1	29:X:205:ILE:HA	2.47	0.44
1:0:777:U:O2'	31:Z:11:LYS:HA	2.18	0.44
1:0:471:G:H4'	31:Z:16:HIS:CE1	2.52	0.44
1:0:1067:A:C2	1:0:1068:C:C2	3.05	0.44
1:0:1942:A:O3'	6:A:213:LYS:HE2	2.18	0.44
1:0:2102:G:H2'	37:0:5265:HOH:O	2.17	0.44
1:0:400:C:H2'	1:0:401:C:C6	2.53	0.44
1:0:815:U:O2'	1:0:816:G:H5'	2.18	0.44
1:0:938:G:OP2	1:0:938:G:H8	2.01	0.44
1:0:960:G:N3	1:0:960:G:C2'	2.80	0.44
5:9:27:C:H2'	5:9:28:U:O4'	2.17	0.44
7:B:279:THR:OG1	7:B:290:VAL:O	2.32	0.44
8:C:142:ASP:OD1	8:C:236:THR:HG23	2.18	0.44
9:D:69:ILE:HG22	9:D:69:ILE:O	2.18	0.44
10:E:49:ILE:HD11	10:E:69:ILE:CD1	2.46	0.44
16:K:65:ASP:CG	16:K:111:ALA:HB3	2.37	0.44
17:L:52:LEU:HD11	37:L:301:HOH:O	2.16	0.44
19:N:59:VAL:HG23	19:N:111:VAL:HG23	1.99	0.44
21:P:44:ASP:O	21:P:47:VAL:N	2.49	0.44
22:Q:104:PHE:CB	22:Q:109:MET:HE1	2.48	0.44
27:V:65:VAL:HA	27:V:68:THR:HG22	1.99	0.44
37:0:6841:HOH:O	31:Z:12:ASN:HB3	2.17	0.44
31:Z:28:HIS:O	31:Z:30:LYS:N	2.50	0.44
1:0:111:C:H2'	1:0:112:G:O4'	2.18	0.44
1:0:1306:U:OP1	8:C:179:GLY:HA3	2.18	0.44
1:0:1320:U:H2'	1:0:1321:A:C8	2.52	0.44
1:0:1346:U:H2'	1:0:1347:U:H6	1.83	0.44
1:0:1370:G:N7	22:Q:24:SER:OG	2.45	0.44
1:0:1527:A:H61	1:0:1663:G:H2'	1.83	0.44
1:0:1634:G:H2'	1:0:1635:U:H6	1.79	0.44
1:0:2135:A:O2'	1:0:2136:G:H5'	2.18	0.44
1:0:2357:G:O2'	1:0:2358:U:H5'	2.18	0.44
1:0:809:G:O2'	1:0:810:G:H5'	2.18	0.44
6:A:55:VAL:HG12	6:A:55:VAL:O	2.17	0.44
7:B:142:LEU:HD21	7:B:178:ALA:HB1	1.98	0.44
8:C:178:GLN:C	8:C:180:SER:H	2.19	0.44
5:9:41:C:N4	9:D:72:LYS:HE3	2.32	0.44
10:E:82:TYR:CD1	10:E:141:VAL:HG12	2.53	0.44
10:E:20:ILE:O	10:E:30:THR:HA	2.18	0.44
10:E:24:GLY:N	10:E:76:VAL:HB	2.32	0.44
13:H:47:GLU:CB	13:H:133:ILE:CD1	2.95	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:2443:C:O2'	16:K:56:LYS:HE2	2.17	0.44
17:L:187:LEU:HD23	17:L:187:LEU:HA	1.80	0.44
18:M:108:SER:HA	18:M:109:PRO:HD3	1.74	0.44
18:M:37:ARG:CZ	37:M:305:HOH:O	2.66	0.44
21:P:25:PRO:HA	21:P:26:PRO:HD3	1.84	0.44
27:V:29:VAL:O	27:V:30:ASN:HB2	2.18	0.44
28:W:74:ALA:HB2	28:W:85:VAL:CG1	2.47	0.44
28:W:86:GLU:O	28:W:87:ALA:O	2.35	0.44
31:Z:15:THR:HB	31:Z:28:HIS:CE1	2.53	0.44
1:O:1024:G:C6	1:O:1025:C:N3	2.86	0.44
1:O:1448:A:N9	1:O:1506:U:H1'	2.33	0.44
1:O:1855:G:N1	1:O:1875:A:C8	2.85	0.44
1:O:1898:G:H2'	1:O:1899:C:C6	2.52	0.44
1:O:840:U:O2	1:O:2055:A:H1'	2.18	0.44
1:O:2531:U:H2'	1:O:2532:A:O4'	2.17	0.44
1:O:2634:G:H2'	1:O:2635:A:C8	2.53	0.44
1:O:2716:G:H5''	7:B:206:THR:CG2	2.34	0.44
1:O:1562:C:H42	1:O:2738:G:H1	1.65	0.44
1:O:2775:A:C6	1:O:2776:A:C6	3.05	0.44
1:O:782:G:N2	37:O:3844:HOH:O	2.51	0.44
5:9:25:G:H4'	37:9:339:HOH:O	2.17	0.44
7:B:278:PRO:HD3	7:B:294:TYR:CE2	2.52	0.44
9:D:10:PHE:CD1	9:D:11:HIS:N	2.86	0.44
13:H:153:VAL:HA	37:H:218:HOH:O	2.17	0.44
13:H:150:LYS:HA	13:H:153:VAL:HG22	1.99	0.44
13:H:2:PRO:HD2	13:H:5:MET:SD	2.57	0.44
14:I:23:ALA:O	14:I:26:VAL:N	2.50	0.44
18:M:159:TYR:HE2	18:M:163:PHE:HE2	1.66	0.44
18:M:23:ARG:O	18:M:27:LEU:HG	2.17	0.44
23:R:18:MET:HG3	23:R:74:ALA:CB	2.48	0.44
24:S:105:ASP:HA	37:S:324:HOH:O	2.17	0.44
29:X:131:GLN:O	29:X:132:ASP:HB2	2.17	0.44
1:O:1109:U:O4	14:I:24:SER:HB3	2.18	0.44
1:O:1189:A:O2'	1:O:1208:C:H2'	2.17	0.44
1:O:1284:G:N2	37:O:3725:HOH:O	2.49	0.44
1:O:1491:G:H4'	1:O:1492:A:OP2	2.17	0.44
1:O:1816:C:H2'	1:O:1817:U:O4'	2.18	0.44
1:O:2057:U:O5'	1:O:2057:U:H6	2.00	0.44
1:O:2644:C:O2'	1:O:2645:U:H5'	2.18	0.44
1:O:2791:U:O2'	1:O:2792:A:C5'	2.62	0.44
1:O:2843:A:H2'	1:O:2844:C:H5'	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:947:U:O2'	1:0:948:G:H5'	2.18	0.44
6:A:19:PRO:O	6:A:20:SER:C	2.55	0.44
6:A:51:ARG:O	6:A:53:ALA:N	2.50	0.44
6:A:5:GLN:HB2	37:A:445:HOH:O	2.18	0.44
6:A:84:VAL:HG13	6:A:98:GLU:CG	2.47	0.44
8:C:107:ARG:NH1	8:C:107:ARG:HB3	2.32	0.44
8:C:37:ALA:O	8:C:38:ALA:C	2.56	0.44
11:F:29:VAL:HA	11:F:99:THR:HG22	2.00	0.44
11:F:2:VAL:HG22	11:F:57:GLU:OE1	2.17	0.44
14:I:71:TYR:CG	14:I:72:PRO:HD2	2.53	0.44
17:L:106:ASN:ND2	35:L:202:CL:CL	2.87	0.44
17:L:106:ASN:O	17:L:109:PHE:N	2.47	0.44
3:2:46:ILE:HD13	17:L:87:MET:HG2	2.00	0.44
18:M:37:ARG:NE	37:M:305:HOH:O	2.51	0.44
20:O:38:GLU:HA	20:O:41:ARG:HH11	1.82	0.44
26:U:17:GLU:O	26:U:20:LEU:HB3	2.17	0.44
29:X:170:SER:HG	29:X:175:ARG:HG3	1.82	0.44
30:Y:17:ARG:O	30:Y:18:TYR:HB2	2.18	0.44
1:0:1046:G:N3	1:0:1082:A:H2	2.15	0.44
1:0:1109:U:C2	14:I:21:ARG:NH1	2.86	0.44
1:0:1118:A:C3'	1:0:1119:G:H5'	2.48	0.44
1:0:130:C:O2'	1:0:131:A:N7	2.51	0.44
1:0:1370:G:OP2	22:Q:26:LYS:NZ	2.48	0.44
1:0:1598:A:H2'	1:0:1599:U:O4'	2.18	0.44
1:0:1650:C:H6	1:0:1650:C:O5'	2.01	0.44
1:0:1870:C:O5'	1:0:1870:C:H6	2.01	0.44
1:0:2754:G:H2'	1:0:2755:G:C5'	2.47	0.44
1:0:285:A:N6	1:0:367:G:H1'	2.33	0.44
2:1:14:LEU:HD23	2:1:14:LEU:HA	1.83	0.44
7:B:130:ASP:HB2	37:B:640:HOH:O	2.18	0.44
7:B:47:GLY:O	7:B:73:VAL:N	2.50	0.44
9:D:146:LYS:NZ	18:M:107:ASN:ND2	2.65	0.44
11:F:104:ALA:C	11:F:106:THR:N	2.70	0.44
11:F:33:THR:HG21	11:F:59:ILE:O	2.17	0.44
13:H:142:VAL:C	13:H:144:GLU:H	2.21	0.44
13:H:150:LYS:HE2	37:H:204:HOH:O	2.17	0.44
13:H:47:GLU:OE2	13:H:162:SER:OG	2.34	0.44
13:H:72:VAL:C	13:H:74:ASN:H	2.20	0.44
16:K:51:PHE:H	16:K:51:PHE:HD2	1.66	0.44
17:L:57:LYS:HG2	17:L:58:GLN:N	2.29	0.44
9:D:146:LYS:NZ	18:M:107:ASN:HD21	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:N:72:LYS:O	19:N:74:VAL:N	2.41	0.44
23:R:81:ILE:O	23:R:83:VAL:HG23	2.17	0.44
24:S:43:ASN:C	24:S:45:GLY:N	2.71	0.44
29:X:141:THR:HG23	29:X:142:SER:N	2.32	0.44
30:Y:32:LYS:HG2	30:Y:35:LYS:NZ	2.32	0.44
31:Z:16:HIS:N	37:Z:211:HOH:O	2.51	0.44
1:0:101:C:H2'	1:0:102:A:H8	1.83	0.43
1:0:1283:G:O2'	1:0:1284:G:H5'	2.17	0.43
1:0:1314:U:H1'	1:0:1316:G:C2	2.53	0.43
1:0:1819:G:H2'	1:0:1820:G:C5'	2.48	0.43
1:0:192:A:N6	1:0:194:A:C2	2.86	0.43
1:0:2256:G:H2'	1:0:2257:G:C5'	2.48	0.43
1:0:2379:G:O2'	1:0:2418:G:H2'	2.17	0.43
1:0:2825:C:H4'	1:0:2826:G:O4'	2.18	0.43
1:0:593:A:C2'	1:0:594:C:H5'	2.47	0.43
1:0:710:G:C2'	1:0:711:G:H5'	2.48	0.43
3:2:64:LYS:HE2	3:2:84:ARG:HH12	1.83	0.43
3:2:64:LYS:HE2	3:2:84:ARG:NH1	2.33	0.43
5:9:107:C:O2'	5:9:108:C:H5'	2.18	0.43
7:B:62:ARG:HA	7:B:65:MET:CE	2.47	0.43
8:C:104:ASP:OD1	8:C:107:ARG:NH2	2.51	0.43
8:C:214:THR:HG22	8:C:216:SER:N	2.28	0.43
9:D:10:PHE:CG	9:D:11:HIS:N	2.86	0.43
9:D:173:GLU:CG	9:D:174:VAL:H	2.31	0.43
17:L:165:SER:HB3	37:L:303:HOH:O	2.17	0.43
18:M:141:ARG:N	37:M:309:HOH:O	2.50	0.43
19:N:38:ARG:NH1	37:N:304:HOH:O	2.51	0.43
1:0:1719:G:OP1	20:O:18:LYS:HG3	2.18	0.43
31:Z:28:HIS:O	31:Z:32:LYS:N	2.41	0.43
1:0:1055:G:H5'	13:H:114:PRO:O	2.19	0.43
1:0:106:A:C2	1:0:107:U:C2	3.06	0.43
1:0:1347:U:O2'	1:0:1348:A:H5'	2.18	0.43
1:0:1527:A:O2'	1:0:1528:A:C8	2.68	0.43
1:0:1656:A:H2'	1:0:1657:A:O4'	2.18	0.43
1:0:2276:U:H2'	1:0:2277:U:C6	2.53	0.43
1:0:2754:G:H2'	1:0:2755:G:O4'	2.18	0.43
1:0:538:C:O2	1:0:538:C:C2'	2.65	0.43
1:0:820:G:C5'	1:0:821:U:H5'	2.48	0.43
1:0:919:U:P	37:0:3429:HOH:O	2.76	0.43
5:9:28:U:H5	37:9:435:HOH:O	2.01	0.43
6:A:122:SER:O	6:A:124:VAL:HG13	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:O:6803:HOH:O	17:L:91:ILE:HD13	2.18	0.43
21:P:19:ARG:C	21:P:21:ARG:H	2.21	0.43
27:V:8:ARG:HB2	27:V:51:PHE:HB3	2.00	0.43
29:X:142:SER:HB2	37:X:465:HOH:O	2.18	0.43
1:O:1041:U:C2'	1:O:1042:U:H5'	2.48	0.43
1:O:1859:A:H2'	1:O:1860:U:H5'	1.99	0.43
1:O:1878:G:H2'	1:O:1879:U:H6	1.79	0.43
1:O:2630:G:O6	6:A:206:ARG:NH2	2.51	0.43
1:O:2831:C:C2'	1:O:2832:C:H5'	2.48	0.43
1:O:363:A:H2'	1:O:364:C:C6	2.52	0.43
1:O:480:C:H5''	1:O:481:U:OP2	2.19	0.43
1:O:396:U:H5'	3:2:42:ARG:NH1	2.34	0.43
6:A:112:PRO:N	6:A:152:CYS:SG	2.91	0.43
6:A:51:ARG:CB	6:A:51:ARG:NH1	2.81	0.43
7:B:105:PHE:CD1	7:B:115:VAL:HG13	2.54	0.43
8:C:55:ARG:HB2	37:C:462:HOH:O	2.17	0.43
10:E:112:ALA:HA	10:E:113:PRO:HD3	1.87	0.43
10:E:146:ALA:O	10:E:150:GLN:HG2	2.18	0.43
15:J:61:THR:HB	37:J:348:HOH:O	2.18	0.43
16:K:55:GLN:HA	16:K:58:GLN:HE21	1.83	0.43
37:O:3782:HOH:O	17:L:178:LYS:HB2	2.18	0.43
17:L:54:TYR:HB2	17:L:132:ILE:HD13	1.99	0.43
27:V:76:ASP:O	27:V:77:ALA:C	2.56	0.43
37:O:6727:HOH:O	29:X:137:LYS:HD3	2.18	0.43
30:Y:67:GLY:HA3	30:Y:70:GLN:O	2.18	0.43
31:Z:28:HIS:HD2	31:Z:31:LYS:HG3	1.83	0.43
1:O:2519:C:O2'	1:O:2520:G:H5'	2.19	0.43
1:O:2553:A:H5''	37:O:6999:HOH:O	2.18	0.43
1:O:2616:G:H2'	1:O:2645:U:O4	2.17	0.43
1:O:2791:U:C4	1:O:2794:G:O6	2.70	0.43
1:O:318:C:H41	1:O:336:G:H5''	1.84	0.43
1:O:377:C:H5	37:O:4985:HOH:O	2.01	0.43
1:O:766:A:H1'	1:O:2478:U:O2'	2.19	0.43
5:9:114:G:H2'	5:9:115:C:H6	1.79	0.43
6:A:194:MET:HE3	37:A:499:HOH:O	2.18	0.43
9:D:14:ARG:NH1	37:D:208:HOH:O	2.48	0.43
10:E:15:GLN:HG3	10:E:20:ILE:HG12	2.00	0.43
10:E:21:THR:HA	10:E:29:VAL:O	2.18	0.43
14:I:138:THR:C	14:I:140:GLY:H	2.21	0.43
14:I:46:ILE:O	14:I:46:ILE:HG12	2.18	0.43
17:L:156:ARG:NH1	37:L:322:HOH:O	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:M:64:SER:C	18:M:66:LEU:H	2.21	0.43
20:O:115:SER:C	20:O:117:SER:N	2.71	0.43
20:O:22:TRP:CZ2	20:O:24:ASN:HA	2.53	0.43
25:T:9:CYS:CA	25:T:52:THR:HG23	2.49	0.43
37:O:8155:HOH:O	28:W:23:HIS:HD2	2.00	0.43
29:X:177:LYS:HD3	29:X:181:GLY:O	2.18	0.43
1:O:1119:G:N2	1:O:1246:A:C2	2.82	0.43
1:O:1682:A:H5''	37:O:4885:HOH:O	2.17	0.43
1:O:1929:G:H1'	37:O:6275:HOH:O	2.18	0.43
1:O:2028:U:H2'	1:O:2029:C:H6	1.83	0.43
1:O:2550:U:O2'	1:O:2551:C:H5'	2.19	0.43
1:O:558:C:O2'	1:O:559:U:H5''	2.19	0.43
1:O:590:A:C2'	1:O:591:A:H5'	2.48	0.43
1:O:747:G:H1'	37:O:3792:HOH:O	2.19	0.43
1:O:796:A:H62	1:O:817:G:H1'	1.82	0.43
1:O:909:U:C2	1:O:910:C:C6	3.06	0.43
3:2:64:LYS:HA	3:2:84:ARG:HA	1.99	0.43
7:B:62:ARG:CB	7:B:65:MET:HE3	2.49	0.43
9:D:49:PRO:HG3	37:D:204:HOH:O	2.18	0.43
9:D:84:LEU:C	9:D:86:THR:N	2.71	0.43
11:F:49:PHE:N	11:F:49:PHE:CD1	2.86	0.43
12:G:64:ASN:ND2	12:G:64:ASN:N	2.66	0.43
17:L:83:SER:N	17:L:86:MET:HE2	2.34	0.43
20:O:120:ARG:NH2	20:O:123:TYR:HD2	2.17	0.43
20:O:16:VAL:HG12	20:O:20:ARG:HB2	2.00	0.43
21:P:11:ARG:NH1	37:P:211:HOH:O	2.51	0.43
26:U:12:THR:CG2	26:U:14:ALA:HB3	2.48	0.43
37:K:360:HOH:O	29:X:147:ARG:HD2	2.18	0.43
1:O:1168:C:H2'	1:O:1169:U:O4'	2.18	0.43
1:O:1189:A:H1'	1:O:1209:C:O4'	2.19	0.43
1:O:1335:C:H2'	1:O:1336:U:H6	1.83	0.43
1:O:1414:A:H2'	1:O:1415:G:O4'	2.18	0.43
1:O:1673:U:P	37:O:3561:HOH:O	2.76	0.43
1:O:175:G:O2'	1:O:176:U:OP2	2.24	0.43
1:O:1839:A:H5'	1:O:2643:G:H4'	2.01	0.43
1:O:1902:G:H2'	1:O:1903:U:O4'	2.19	0.43
1:O:1909:A:H2'	1:O:1910:A:C8	2.53	0.43
1:O:213:G:H22	1:O:225:G:H2'	1.83	0.43
1:O:228:C:H2'	1:O:229:G:O4'	2.19	0.43
1:O:402:U:H2'	1:O:403:C:H6	1.81	0.43
1:O:488:U:O2'	24:S:82:THR:HG21	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:487:G:O2'	1:0:488:U:OP2	2.37	0.43
1:0:483:C:N4	1:0:506:G:O2'	2.50	0.43
1:0:627:G:H1'	37:0:3703:HOH:O	2.19	0.43
1:0:77:G:C2'	1:0:78:G:H5'	2.49	0.43
1:0:955:A:C2	1:0:1013:A:C4	3.07	0.43
3:2:69:TYR:O	3:2:77:ALA:HA	2.17	0.43
5:9:45:A:OP1	9:D:140:ARG:NH1	2.51	0.43
6:A:15:THR:N	37:A:422:HOH:O	2.46	0.43
6:A:20:SER:C	6:A:22:ARG:N	2.72	0.43
7:B:183:GLU:OE1	7:B:183:GLU:HA	2.18	0.43
7:B:247:VAL:HG13	7:B:251:VAL:HG11	1.99	0.43
7:B:41:PHE:CD1	7:B:79:MET:HE2	2.54	0.43
11:F:108:LEU:C	11:F:108:LEU:HD12	2.39	0.43
13:H:111:MET:O	13:H:114:PRO:HD3	2.17	0.43
15:J:41:LYS:O	15:J:42:ASN:HB2	2.18	0.43
1:0:2413:A:N7	18:M:109:PRO:HB3	2.34	0.43
1:0:100:C:H4'	24:S:16:LEU:HB2	1.99	0.43
30:Y:47:LEU:HD23	30:Y:57:CYS:HB2	2.00	0.43
1:0:112:G:OP1	31:Z:20:ARG:NH1	2.50	0.43
1:0:1299:G:N2	37:0:3868:HOH:O	2.52	0.43
1:0:1318:A:O2'	1:0:1319:G:H5'	2.17	0.43
1:0:1589:G:N2	1:0:1605:G:H2'	2.27	0.43
1:0:1876:C:C4'	1:0:1877:G:OP2	2.66	0.43
1:0:187:A:H3'	1:0:188:C:H6	1.83	0.43
1:0:1943:C:O4'	6:A:212:PRO:HA	2.18	0.43
1:0:2290:U:C4'	1:0:2291:A:OP1	2.67	0.43
1:0:2595:U:H2'	1:0:2596:A:C8	2.54	0.43
1:0:2866:U:H2'	37:T:208:HOH:O	2.18	0.43
3:2:38:ARG:O	3:2:42:ARG:HB2	2.18	0.43
3:2:60:LYS:HG3	3:2:61:PRO:CD	2.47	0.43
4:5:52:ASN:O	4:5:55:ALA:HB2	2.19	0.43
5:9:82:U:H2'	5:9:83:G:C8	2.54	0.43
6:A:199:HIS:CD2	6:A:201:PHE:HB2	2.53	0.43
7:B:212:GLN:HB2	7:B:257:THR:CG2	2.48	0.43
7:B:195:ARG:HE	7:B:323:LEU:HD13	1.84	0.43
8:C:98:ARG:NH1	37:C:403:HOH:O	2.30	0.43
10:E:32:ARG:NH2	37:E:206:HOH:O	2.51	0.43
15:J:14:LYS:HD2	15:J:45:PRO:HG3	1.99	0.43
15:J:65:ARG:O	15:J:66:ARG:HB2	2.18	0.43
16:K:73:VAL:HG23	16:K:74:THR:H	1.84	0.43
17:L:59:GLY:HA3	17:L:141:ILE:HD11	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:M:120:GLU:O	18:M:123:ILE:HB	2.18	0.43
20:O:5:ALA:HB3	20:O:6:GLN:OE1	2.19	0.43
1:O:1370:G:H5'	22:Q:64:SER:OG	2.18	0.43
23:R:38:ALA:O	23:R:39:ASP:C	2.57	0.43
27:V:59:GLN:NE2	27:V:97:ALA:HB3	2.33	0.43
1:O:1031:G:HO2'	1:O:1032:A:P	2.42	0.43
1:O:1165:G:H8	1:O:1165:G:OP1	2.02	0.43
1:O:1325:G:H2'	1:O:1326:U:H6	1.84	0.43
1:O:1666:C:O2'	1:O:1667:A:C5'	2.67	0.43
1:O:1759:A:O2'	1:O:1818:C:C2'	2.66	0.43
1:O:1846:U:H2'	1:O:1847:A:C5	2.54	0.43
1:O:1477:C:H5'	1:O:1868:G:H5''	2.01	0.43
1:O:1884:G:O2'	1:O:1885:A:C5'	2.57	0.43
1:O:213:G:HO2'	1:O:214:U:H5	1.65	0.43
1:O:388:G:H5''	1:O:2266:A:OP1	2.18	0.43
1:O:2298:C:H2'	1:O:2299:G:O4'	2.19	0.43
1:O:2350:G:H2'	1:O:2351:C:H6	1.82	0.43
1:O:2659:U:C4'	22:Q:76:ASP:HB3	2.49	0.43
1:O:545:G:C8	1:O:545:G:H5'	2.46	0.43
1:O:638:C:H2'	1:O:639:A:H8	1.84	0.43
6:A:190:ARG:NH2	6:A:207:GLN:OE1	2.52	0.43
6:A:94:LEU:HG	6:A:99:ILE:CD1	2.49	0.43
10:E:40:VAL:HB	37:E:232:HOH:O	2.18	0.43
12:G:71:LEU:C	12:G:73:ASP:N	2.72	0.43
15:J:34:VAL:O	15:J:35:HIS:C	2.57	0.43
24:S:2:LYS:HE2	37:S:321:HOH:O	2.17	0.43
1:O:1871:U:O4'	1:O:1873:G:C8	2.72	0.43
1:O:2088:C:H1'	1:O:2841:A:N1	2.34	0.43
1:O:2112:A:N1	1:O:2113:G:C6	2.87	0.43
1:O:2488:A:H2'	1:O:2489:G:O4'	2.19	0.43
1:O:2101:A:H1'	1:O:2537:G:C1'	2.49	0.43
1:O:2563:U:H2'	1:O:2565:C:O5'	2.19	0.43
1:O:305:A:N1	1:O:329:A:H2'	2.33	0.43
1:O:816:G:H2'	1:O:817:G:O4'	2.18	0.43
3:2:67:LEU:HD11	3:2:88:LEU:HD21	2.00	0.43
6:A:36:ASP:CG	6:A:36:ASP:O	2.57	0.43
1:O:2657:G:OP1	7:B:17:LYS:HB2	2.18	0.43
7:B:36:PRO:HA	7:B:168:GLY:CA	2.48	0.43
8:C:151:GLN:HB3	37:C:447:HOH:O	2.18	0.43
15:J:113:ILE:HG22	15:J:114:ALA:N	2.33	0.43
16:K:35:ARG:NH1	16:K:43:HIS:HB3	2.25	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:L:102:GLU:OE1	17:L:164:THR:HG21	2.19	0.43
17:L:98:GLN:HB2	17:L:129:HIS:CD2	2.54	0.43
17:L:184:ARG:HB2	17:L:184:ARG:NH1	2.33	0.43
17:L:4:ALA:O	17:L:7:TYR:HB2	2.19	0.43
17:L:8:ILE:HD13	37:L:330:HOH:O	2.18	0.43
18:M:33:ARG:O	18:M:47:LEU:HA	2.19	0.43
19:N:11:ILE:O	19:N:14:LEU:HB2	2.19	0.43
23:R:24:LEU:CD2	23:R:74:ALA:HB1	2.49	0.43
27:V:48:VAL:CG1	27:V:48:VAL:O	2.67	0.43
1:0:110:C:H2'	1:0:111:C:C6	2.51	0.43
1:0:1245:C:O5'	1:0:1245:C:H6	2.02	0.43
1:0:1273:C:C2	1:0:1284:G:C2	3.07	0.43
1:0:1449:G:H5''	1:0:1450:C:OP2	2.18	0.43
1:0:1682:A:O2'	1:0:1683:G:H5''	2.18	0.43
1:0:1829:A:C8	1:0:1885:A:C8	3.06	0.43
1:0:200:U:H5''	1:0:201:G:OP2	2.19	0.43
1:0:2524:G:C6	1:0:2525:G:N1	2.87	0.43
1:0:45:A:C8	1:0:47:G:N2	2.87	0.43
1:0:696:C:O2'	1:0:697:G:H5'	2.18	0.43
1:0:933:C:H2'	1:0:934:C:C6	2.54	0.43
1:0:1925:G:OP1	3:2:29:ARG:NH2	2.52	0.43
1:0:169:A:O2'	3:2:48:ASN:ND2	2.50	0.43
4:5:41:ILE:HD11	4:5:49:VAL:HG13	2.01	0.43
5:9:45:A:H2'	5:9:46:C:H6	1.83	0.43
6:A:130:THR:HB	6:A:137:VAL:HB	2.01	0.43
6:A:3:ARG:H	6:A:3:ARG:HG2	1.62	0.43
6:A:72:GLU:OE2	30:Y:76:GLY:HA3	2.18	0.43
7:B:232:TRP:HD1	7:B:235:ARG:HD2	1.84	0.43
1:0:1311:G:O6	8:C:173:LYS:HE3	2.19	0.43
8:C:194:PHE:HA	8:C:234:VAL:HG13	2.00	0.43
5:9:57:A:H8	9:D:141:VAL:HG21	1.84	0.43
10:E:11:VAL:HG11	10:E:22:VAL:HG13	1.99	0.43
13:H:47:GLU:HG2	13:H:133:ILE:HD12	2.00	0.43
13:H:85:ILE:HG23	13:H:85:ILE:O	2.19	0.43
14:I:39:VAL:HG11	14:I:107:ASN:CB	2.49	0.43
14:I:50:GLU:O	14:I:54:VAL:HG23	2.18	0.43
1:0:2123:A:H5'	17:L:89:ASN:ND2	2.34	0.43
18:M:69:TYR:HE2	18:M:183:ASP:OD2	2.02	0.43
18:M:91:ARG:HG3	18:M:186:LEU:CD2	2.48	0.43
20:O:38:GLU:HA	20:O:41:ARG:NH1	2.34	0.43
24:S:43:ASN:O	24:S:45:GLY:N	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:V:11:VAL:O	27:V:12:ASN:HB2	2.18	0.43
28:W:78:GLU:OE2	28:W:79:GLU:OE2	2.36	0.43
1:0:638:C:OP2	29:X:138:ARG:HD3	2.18	0.43
1:0:1382:G:O2'	28:W:27:ASP:OD1	2.36	0.42
1:0:2050:G:H5''	22:Q:80:TYR:O	2.19	0.42
1:0:210:U:H2'	1:0:211:U:H6	1.83	0.42
1:0:2110:G:O2'	1:0:2111:G:H5'	2.19	0.42
1:0:2324:G:H4'	1:0:2418:G:O2'	2.18	0.42
1:0:319:A:H4'	1:0:338:C:C4	2.54	0.42
1:0:217:C:H5'	1:0:395:A:H1'	1.99	0.42
1:0:503:G:C2	1:0:504:G:C8	3.07	0.42
1:0:537:G:C4	1:0:538:C:N4	2.87	0.42
1:0:582:C:N4	37:0:3904:HOH:O	2.52	0.42
1:0:645:U:H2'	1:0:646:G:H8	1.84	0.42
1:0:656:G:H5'	19:N:3:THR:HB	2.01	0.42
37:0:8580:HOH:O	3:2:36:ILE:HG21	2.18	0.42
1:0:2717:C:OP1	7:B:207:LYS:HG3	2.18	0.42
9:D:166:ILE:O	9:D:167:GLU:C	2.56	0.42
10:E:132:THR:HB	37:E:220:HOH:O	2.18	0.42
10:E:93:MET:HE2	10:E:93:MET:HB2	1.84	0.42
13:H:59:ASN:HD22	13:H:59:ASN:N	2.17	0.42
13:H:65:ARG:NH2	13:H:66:VAL:HG22	2.34	0.42
17:L:57:LYS:NZ	17:L:144:ASP:OD2	2.47	0.42
18:M:151:ASP:O	18:M:154:LEU:HB2	2.19	0.42
22:Q:27:HIS:O	22:Q:31:ILE:HG13	2.19	0.42
23:R:69:SER:C	23:R:71:ASP:H	2.23	0.42
24:S:48:VAL:HG22	24:S:98:VAL:HA	1.99	0.42
25:T:52:THR:HG22	25:T:54:THR:N	2.34	0.42
26:U:23:LEU:O	26:U:26:GLU:N	2.51	0.42
27:V:149:LEU:HG	27:V:153:MET:HE2	1.99	0.42
27:V:88:THR:HG23	27:V:110:GLN:HE21	1.81	0.42
29:X:200:THR:HG22	29:X:201:GLU:HG2	2.01	0.42
1:0:1153:C:N3	1:0:2786:G:O6	2.52	0.42
1:0:1155:G:H2'	1:0:1156:C:C6	2.53	0.42
1:0:1167:G:O2'	1:0:1168:C:H5'	2.18	0.42
1:0:1664:A:O2'	1:0:1665:G:OP2	2.35	0.42
1:0:1831:U:H2'	1:0:1832:G:C5'	2.46	0.42
1:0:1872:C:H5	6:A:20:SER:HB3	1.84	0.42
1:0:1882:C:O2'	1:0:2012:U:OP2	2.37	0.42
1:0:2239:C:H2'	1:0:2240:U:H6	1.83	0.42
1:0:2301:A:H5''	1:0:2302:A:H5'	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2387:U:O2	1:0:2402:A:C2	2.72	0.42
1:0:2670:G:C2'	1:0:2671:U:H5'	2.49	0.42
1:0:2700:G:O2'	1:0:2701:G:H5'	2.18	0.42
1:0:51:G:H4'	31:Z:22:CYS:O	2.19	0.42
1:0:652:G:H5''	37:0:4237:HOH:O	2.17	0.42
2:1:9:LYS:O	2:1:12:ALA:HB3	2.18	0.42
5:9:25:G:H5''	5:9:26:C:C6	2.54	0.42
6:A:183:GLY:HA2	37:A:408:HOH:O	2.17	0.42
37:0:5284:HOH:O	6:A:206:ARG:HD3	2.19	0.42
6:A:192:VAL:HG11	6:A:207:GLN:HB3	1.99	0.42
8:C:222:ASP:O	8:C:231:ARG:HD3	2.19	0.42
10:E:106:ASN:ND2	10:E:109:GLY:HA2	2.34	0.42
13:H:75:SER:HB3	13:H:79:ALA:HB1	2.01	0.42
17:L:144:ASP:O	17:L:148:SER:HB3	2.18	0.42
21:P:86:VAL:CG1	21:P:91:LEU:HD11	2.46	0.42
28:W:43:VAL:CG1	28:W:44:ASP:N	2.82	0.42
1:0:1307:A:OP2	8:C:175:LYS:NZ	2.53	0.42
1:0:1374:C:H4'	1:0:1431:C:C4	2.54	0.42
1:0:1619:G:C5	1:0:1620:C:C4	3.07	0.42
1:0:1790:C:H5	20:O:71:LYS:HE3	1.85	0.42
1:0:2417:C:H6	1:0:2417:C:O5'	2.03	0.42
1:0:2597:U:C2'	1:0:2598:U:H5'	2.49	0.42
1:0:2085:A:C2	1:0:2660:G:N3	2.88	0.42
1:0:2706:A:H2'	1:0:2707:C:O4'	2.19	0.42
1:0:2843:A:C2'	1:0:2844:C:H5'	2.49	0.42
1:0:319:A:O2'	1:0:320:G:H5'	2.19	0.42
1:0:47:G:O2'	1:0:114:A:N6	2.52	0.42
3:2:10:TYR:HB2	3:2:17:HIS:CE1	2.54	0.42
3:2:67:LEU:HD21	3:2:88:LEU:CD2	2.49	0.42
8:C:150:THR:O	8:C:153:VAL:N	2.53	0.42
8:C:233:THR:CG2	8:C:234:VAL:N	2.80	0.42
9:D:18:ILE:HG12	9:D:134:LEU:HD21	2.02	0.42
9:D:99:ASP:HB2	9:D:103:ASN:CB	2.48	0.42
10:E:11:VAL:CG1	10:E:12:ASP:H	2.32	0.42
10:E:104:ILE:CD1	10:E:151:LEU:HD23	2.49	0.42
10:E:156:ASP:OD2	10:E:157:LYS:NZ	2.46	0.42
15:J:97:ILE:HG22	15:J:98:VAL:N	2.33	0.42
1:0:901:G:OP2	16:K:18:HIS:CE1	2.72	0.42
1:0:904:U:H2'	16:K:8:ARG:HD2	2.00	0.42
17:L:18:GLY:O	17:L:21:ALA:HB3	2.19	0.42
18:M:13:ARG:HA	18:M:13:ARG:HD2	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:N:63:LYS:HA	19:N:80:ASP:O	2.19	0.42
22:Q:26:LYS:HD3	22:Q:62:HIS:CG	2.54	0.42
1:0:1810:C:H1'	25:T:42:LEU:HD22	2.01	0.42
1:0:1571:G:C2'	1:0:1626:A:H61	2.32	0.42
1:0:1666:C:H2'	1:0:1667:A:H8	1.85	0.42
1:0:882:A:H4'	1:0:1837:G:O6	2.19	0.42
1:0:2011:A:H4'	1:0:2012:U:O5'	2.19	0.42
1:0:2088:C:OP1	22:Q:65:GLY:N	2.32	0.42
1:0:2281:C:H2'	1:0:2282:U:O4'	2.19	0.42
1:0:2357:G:C2'	1:0:2358:U:H5'	2.50	0.42
1:0:2493:C:H2'	1:0:2525:G:N1	2.29	0.42
1:0:2518:C:C4	1:0:2519:C:C4	3.08	0.42
1:0:2857:C:H2'	1:0:2858:U:H6	1.80	0.42
1:0:581:G:H5'	37:0:6332:HOH:O	2.20	0.42
1:0:955:A:C2'	1:0:956:G:H5'	2.49	0.42
3:2:46:ILE:O	17:L:84:LYS:HG2	2.20	0.42
3:2:84:ARG:HB2	37:2:245:HOH:O	2.19	0.42
4:5:41:ILE:CD1	4:5:49:VAL:HG11	2.49	0.42
5:9:67:C:C6	5:9:67:C:H3'	2.55	0.42
6:A:105:VAL:CG1	6:A:106:CYS:N	2.82	0.42
37:0:4108:HOH:O	8:C:103:ASN:HB3	2.18	0.42
11:F:99:THR:HG23	11:F:99:THR:O	2.19	0.42
13:H:93:ILE:H	13:H:93:ILE:HG12	1.58	0.42
14:I:47:THR:N	37:I:304:HOH:O	2.47	0.42
15:J:51:ASP:HA	37:J:328:HOH:O	2.18	0.42
15:J:49:LEU:HA	15:J:73:VAL:HG12	2.01	0.42
17:L:37:VAL:HG21	17:L:108:LYS:CG	2.49	0.42
17:L:37:VAL:HG13	17:L:63:VAL:HG11	2.00	0.42
37:9:365:HOH:O	18:M:23:ARG:HD3	2.18	0.42
19:N:58:VAL:HG13	19:N:114:ILE:HG12	2.02	0.42
23:R:67:ARG:NH1	37:R:203:HOH:O	2.53	0.42
24:S:77:VAL:HB	37:S:317:HOH:O	2.19	0.42
29:X:152:LYS:HB2	29:X:160:LYS:HG3	2.02	0.42
1:0:1773:G:C8	30:Y:16:PRO:HA	2.55	0.42
31:Z:22:CYS:SG	31:Z:24:GLU:CB	3.07	0.42
1:0:1342:C:C2'	1:0:1343:C:C5'	2.90	0.42
1:0:1761:U:H2'	1:0:1762:C:H6	1.85	0.42
1:0:2045:G:H5''	37:0:7174:HOH:O	2.18	0.42
1:0:2265:U:H2'	1:0:2266:A:C8	2.55	0.42
1:0:2381:C:H2'	1:0:2382:A:H8	1.84	0.42
1:0:2526:C:C6	1:0:2526:C:H5'	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2654:C:O2'	1:0:2655:U:H5'	2.19	0.42
1:0:412:C:O2'	1:0:413:G:H5'	2.18	0.42
1:0:45:A:H5'	1:0:47:G:O4'	2.19	0.42
1:0:786:G:H2'	1:0:787:G:O4'	2.19	0.42
1:0:855:U:H5''	37:0:5079:HOH:O	2.19	0.42
7:B:238:ASN:ND2	7:B:240:GLY:N	2.55	0.42
7:B:62:ARG:CA	7:B:65:MET:HE3	2.48	0.42
7:B:84:LEU:O	7:B:99:GLU:HA	2.19	0.42
8:C:14:GLY:N	37:C:429:HOH:O	2.52	0.42
8:C:191:SER:OG	8:C:209:GLY:C	2.58	0.42
8:C:73:LEU:O	8:C:74:ASP:HB2	2.20	0.42
10:E:132:THR:O	10:E:132:THR:HG23	2.19	0.42
13:H:33:MET:HB2	13:H:83:PHE:HB3	2.01	0.42
1:0:533:U:O2'	14:I:95:ARG:NH1	2.52	0.42
15:J:4:LEU:HA	15:J:4:LEU:HD23	1.84	0.42
16:K:20:ASN:N	37:K:308:HOH:O	2.51	0.42
16:K:94:ARG:NH1	16:K:143:THR:HG21	2.35	0.42
17:L:146:GLN:O	17:L:147:LEU:HD23	2.19	0.42
17:L:165:SER:OG	17:L:166:ALA:N	2.51	0.42
18:M:34:LEU:CD2	18:M:129:ILE:HD13	2.49	0.42
18:M:161:GLY:O	18:M:162:ASP:C	2.58	0.42
20:O:131:PHE:CD2	20:O:137:LEU:HA	2.53	0.42
24:S:12:ARG:O	24:S:19:ARG:NH2	2.53	0.42
31:Z:50:TRP:C	31:Z:52:SER:N	2.73	0.42
1:0:132:A:O2'	1:0:133:U:H5'	2.20	0.42
1:0:1788:U:C2	1:0:1805:G:N2	2.88	0.42
1:0:2406:U:C4	1:0:2407:G:N7	2.88	0.42
1:0:2731:G:H2'	1:0:2732:U:O4'	2.20	0.42
1:0:288:A:H61	1:0:364:C:H42	1.67	0.42
1:0:241:A:C2	1:0:378:A:H4'	2.55	0.42
1:0:433:C:H2'	1:0:434:U:O4'	2.20	0.42
1:0:77:G:H2'	1:0:78:G:H5'	2.01	0.42
1:0:79:G:C2	1:0:97:G:O2'	2.73	0.42
1:0:876:A:H2'	1:0:877:G:H5'	2.01	0.42
5:9:81:C:C2'	5:9:82:U:H5'	2.50	0.42
5:9:89:C:O2'	5:9:90:G:H5'	2.19	0.42
6:A:203:GLY:HA2	37:A:456:HOH:O	2.19	0.42
6:A:85:ASP:HA	37:A:417:HOH:O	2.19	0.42
7:B:171:VAL:HG23	7:B:172:SER:N	2.34	0.42
37:0:3953:HOH:O	7:B:227:HIS:HB3	2.19	0.42
1:0:1234:U:N3	7:B:244:PRO:HB3	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:B:297:VAL:HB	37:B:501:HOH:O	2.19	0.42
7:B:70:PRO:C	7:B:71:VAL:HG23	2.40	0.42
7:B:5:ARG:HD2	7:B:8:LYS:NZ	2.35	0.42
9:D:25:MET:HE1	9:D:37:ALA:HB1	2.01	0.42
10:E:162:PHE:CD1	10:E:162:PHE:N	2.88	0.42
10:E:145:ALA:HB1	10:E:168:ILE:CD1	2.49	0.42
18:M:47:LEU:HD11	18:M:127:LEU:CD2	2.49	0.42
19:N:112:ARG:HG2	19:N:114:ILE:HD11	2.00	0.42
21:P:52:PHE:HB2	35:P:102:CL:CL	2.57	0.42
27:V:1:MET:HE1	27:V:101:LEU:HD23	2.02	0.42
27:V:90:TYR:N	27:V:90:TYR:CD1	2.87	0.42
28:W:30:MET:HE3	28:W:59:TRP:HE1	1.84	0.42
28:W:85:VAL:HG12	28:W:86:GLU:H	1.84	0.42
29:X:151:SER:HB3	29:X:154:ARG:HB2	2.02	0.42
1:0:106:A:H2'	1:0:107:U:O4'	2.19	0.42
1:0:1118:A:C3'	1:0:1119:G:C5'	2.98	0.42
1:0:47:G:O2'	1:0:114:A:N1	2.35	0.42
1:0:1152:A:C4	1:0:1215:A:C2	3.07	0.42
1:0:1166:A:OP1	1:0:1174:A:H4'	2.20	0.42
1:0:1165:G:O2'	1:0:1174:A:C1'	2.68	0.42
1:0:1268:C:H2'	1:0:1269:G:C8	2.55	0.42
1:0:1761:U:H2'	1:0:1762:C:C6	2.55	0.42
1:0:2059:U:H2'	1:0:2060:A:H8	1.84	0.42
1:0:2462:G:H4'	1:0:2464:C:C6	2.54	0.42
1:0:2546:U:O2'	7:B:237:GLY:N	2.53	0.42
1:0:2643:G:N2	37:0:3902:HOH:O	2.52	0.42
1:0:316:A:H5'	24:S:54:ASP:OD2	2.20	0.42
1:0:632:A:H4'	1:0:2535:U:H4'	2.01	0.42
1:0:939:A:N1	1:0:1027:G:O2'	2.40	0.42
1:0:946:C:H6	1:0:946:C:O5'	2.02	0.42
6:A:93:THR:HA	6:A:154:ALA:O	2.19	0.42
7:B:265:LEU:HD23	7:B:316:ARG:CG	2.49	0.42
8:C:211:ASP:HA	37:C:465:HOH:O	2.19	0.42
37:0:8283:HOH:O	8:C:73:LEU:HD11	2.20	0.42
13:H:162:SER:CB	13:H:163:PRO:CD	2.85	0.42
14:I:45:VAL:HA	14:I:130:VAL:O	2.19	0.42
16:K:11:ARG:NH2	16:K:18:HIS:HB3	2.35	0.42
21:P:31:GLU:HA	21:P:31:GLU:OE1	2.19	0.42
22:Q:132:ARG:NH2	37:Q:310:HOH:O	2.52	0.42
30:Y:25:ARG:O	30:Y:29:VAL:HG23	2.20	0.42
6:A:164:ARG:HB2	30:Y:68:CYS:SG	2.60	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1135:G:O2'	1:0:1136:U:H5'	2.20	0.42
1:0:1173:A:H4'	1:0:1174:A:H8	1.82	0.42
1:0:1431:C:H5'	1:0:1432:U:OP2	2.19	0.42
1:0:1449:G:N2	1:0:1514:C:C2	2.88	0.42
1:0:1453:G:OP2	1:0:1491:G:N2	2.47	0.42
1:0:168:C:H6	1:0:168:C:O5'	2.02	0.42
1:0:2084:C:O2'	1:0:2085:A:H5'	2.19	0.42
1:0:212:A:N6	1:0:227:A:OP2	2.53	0.42
1:0:2382:A:H1'	3:2:10:TYR:CE2	2.55	0.42
1:0:2635:A:N7	37:0:3300:HOH:O	2.36	0.42
1:0:282:C:H2'	1:0:283:U:O4'	2.20	0.42
1:0:793:A:O2'	1:0:794:U:H5'	2.19	0.42
1:0:861:A:H1'	1:0:1488:U:O4	2.19	0.42
3:2:42:ARG:HB3	3:2:43:ASN:OD1	2.19	0.42
7:B:179:LEU:O	7:B:183:GLU:CG	2.64	0.42
7:B:36:PRO:HA	7:B:168:GLY:HA3	2.02	0.42
8:C:107:ARG:HH11	8:C:107:ARG:HB3	1.84	0.42
8:C:82:GLN:C	37:C:419:HOH:O	2.58	0.42
9:D:44:ILE:HG23	9:D:45:THR:HG23	2.02	0.42
11:F:50:VAL:HG21	11:F:63:ILE:HG21	2.01	0.42
11:F:59:ILE:HG22	11:F:59:ILE:O	2.19	0.42
14:I:76:ASP:HA	37:I:312:HOH:O	2.19	0.42
15:J:74:VAL:CG1	15:J:113:ILE:HG12	2.48	0.42
37:0:7102:HOH:O	15:J:41:LYS:HE3	2.19	0.42
1:0:2430:A:H4'	16:K:46:LEU:O	2.19	0.42
18:M:10:MET:HG3	37:M:327:HOH:O	2.19	0.42
18:M:63:SER:O	18:M:66:LEU:CB	2.68	0.42
19:N:44:ASN:HB3	19:N:67:SER:O	2.19	0.42
21:P:44:ASP:O	21:P:45:PRO:C	2.57	0.42
25:T:52:THR:CG2	25:T:54:THR:HB	2.50	0.42
37:0:5824:HOH:O	29:X:136:LYS:HD3	2.19	0.42
29:X:99:ALA:HA	29:X:232:THR:O	2.20	0.42
1:0:1566:C:H2'	1:0:1567:A:H8	1.85	0.42
1:0:1592:G:O2'	1:0:1593:C:O4'	2.38	0.42
1:0:1602:C:H4'	37:0:4177:HOH:O	2.20	0.42
1:0:1623:C:C4	1:0:1624:A:C6	3.08	0.42
1:0:1636:G:C2'	1:0:1637:A:H5'	2.49	0.42
1:0:1950:G:N2	37:0:3934:HOH:O	2.53	0.42
1:0:2105:C:O2'	1:0:2284:G:N2	2.52	0.42
1:0:1052:G:O2'	1:0:2300:A:OP2	2.32	0.42
1:0:2304:G:H5'	37:P:213:HOH:O	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2657:G:N2	1:0:2658:G:H1'	2.35	0.42
1:0:2670:G:H22	7:B:85:ARG:HH22	1.67	0.42
1:0:2785:C:H5''	1:0:2786:G:OP2	2.19	0.42
1:0:414:C:O2'	1:0:415:A:H5'	2.19	0.42
1:0:509:A:C6	1:0:512:G:C6	3.08	0.42
1:0:56:G:C8	1:0:59:A:C8	3.07	0.42
1:0:795:G:H1'	1:0:818:A:N6	2.34	0.42
1:0:853:C:H2'	1:0:854:G:O4'	2.20	0.42
1:0:902:G:H5''	37:0:4689:HOH:O	2.20	0.42
5:9:18:U:O2'	5:9:19:G:H5'	2.20	0.42
5:9:42:C:O2	9:D:76:ARG:HD2	2.20	0.42
6:A:65:ARG:C	6:A:66:ARG:HG3	2.40	0.42
6:A:75:GLY:HA2	30:Y:63:LYS:O	2.19	0.42
7:B:139:ASP:CB	7:B:165:ARG:HE	2.31	0.42
7:B:279:THR:OG1	7:B:290:VAL:HB	2.20	0.42
7:B:286:ASN:O	7:B:306:LYS:HE3	2.18	0.42
8:C:163:HIS:O	8:C:166:ILE:N	2.53	0.42
14:I:74:ARG:HH11	14:I:74:ARG:CB	2.27	0.42
15:J:34:VAL:HG21	15:J:46:LYS:O	2.19	0.42
17:L:61:ILE:HG13	37:L:338:HOH:O	2.20	0.42
37:0:7621:HOH:O	17:L:68:ARG:CB	2.68	0.42
18:M:113:SER:C	37:M:301:HOH:O	2.57	0.42
20:O:104:LYS:HD2	20:O:104:LYS:HA	1.86	0.42
23:R:11:THR:O	23:R:14:ALA:HB3	2.19	0.42
1:0:944:G:H21	27:V:44:MET:CE	2.33	0.42
28:W:76:ARG:HH11	28:W:76:ARG:HG3	1.85	0.42
29:X:232:THR:HG22	29:X:233:TYR:N	2.34	0.42
30:Y:47:LEU:CD1	30:Y:64:ILE:HD11	2.50	0.42
1:0:580:A:N3	1:0:1111:U:H1'	2.35	0.42
1:0:1117:A:C2	1:0:1244:U:C2	3.08	0.42
1:0:1184:C:O2'	1:0:1185:U:H5'	2.20	0.42
1:0:1184:C:H2'	1:0:1185:U:C6	2.55	0.42
1:0:1329:A:H2	37:0:3868:HOH:O	2.02	0.42
1:0:1630:A:H8	1:0:1630:A:OP1	2.03	0.42
1:0:2323:G:N2	1:0:2378:U:H1'	2.34	0.42
1:0:2503:A:O2'	1:0:2504:A:C8	2.63	0.42
1:0:2523:U:O5'	1:0:2523:U:H6	2.03	0.42
1:0:37:A:C2	1:0:446:G:C2	3.08	0.42
1:0:581:G:O2'	1:0:582:C:H5'	2.20	0.42
1:0:952:G:O2'	1:0:2302:A:C2'	2.68	0.42
5:9:116:C:O2'	5:9:117:G:H5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:9:40:C:N4	9:D:53:LYS:HE3	2.34	0.42
6:A:110:SER:N	6:A:114:ASP:OD2	2.52	0.42
6:A:111:SER:N	6:A:114:ASP:OD2	2.49	0.42
7:B:54:VAL:HB	37:B:550:HOH:O	2.18	0.42
9:D:156:ARG:HH11	9:D:156:ARG:HG3	1.85	0.42
13:H:162:SER:O	13:H:164:ALA:N	2.53	0.42
13:H:96:ASN:OD1	13:H:114:PRO:HA	2.19	0.42
14:I:83:ILE:O	14:I:84:ARG:C	2.59	0.42
16:K:125:PHE:CD1	16:K:125:PHE:N	2.87	0.42
1:0:156:C:C5'	17:L:171:ARG:HD3	2.22	0.42
17:L:181:GLU:CD	17:L:181:GLU:H	2.22	0.42
1:0:189:A:O2'	17:L:184:ARG:HD3	2.19	0.42
17:L:5:TYR:HE2	17:L:46:LEU:HD13	1.84	0.42
23:R:13:LYS:NZ	37:R:204:HOH:O	2.53	0.42
27:V:122:ARG:CZ	37:V:216:HOH:O	2.68	0.42
27:V:130:HIS:C	27:V:136:GLY:HA3	2.39	0.42
27:V:128:VAL:C	27:V:138:LEU:HD11	2.40	0.42
29:X:169:ARG:NE	35:X:301:CL:CL	2.89	0.42
1:0:1197:G:N2	37:0:3924:HOH:O	2.53	0.41
1:0:1398:G:H2'	1:0:1399:A:H8	1.81	0.41
1:0:1482:A:O2'	1:0:1483:C:H5'	2.20	0.41
1:0:1920:C:O2'	1:0:1921:A:H5'	2.19	0.41
1:0:204:A:H2'	1:0:205:U:C5'	2.48	0.41
1:0:2495:U:O2'	1:0:2496:C:H5'	2.20	0.41
1:0:2619:U:H2'	1:0:2620:U:C6	2.55	0.41
1:0:295:C:O2'	1:0:296:G:H5'	2.20	0.41
1:0:426:G:C6	1:0:427:C:C4	3.08	0.41
1:0:883:U:O2	1:0:883:U:H3'	2.20	0.41
5:9:12:C:OP2	5:9:69:U:O2'	2.38	0.41
5:9:3:A:H61	5:9:22:G:H1'	1.82	0.41
5:9:39:U:H3'	5:9:40:C:H5''	2.01	0.41
5:9:43:G:C2'	5:9:44:A:OP2	2.68	0.41
6:A:87:GLU:HB3	37:A:452:HOH:O	2.19	0.41
7:B:280:VAL:HG12	7:B:334:SER:HA	2.02	0.41
8:C:85:LYS:HB3	37:C:438:HOH:O	2.20	0.41
8:C:47:GLY:HA2	8:C:92:PRO:HB2	2.02	0.41
1:0:2566:A:H4'	10:E:161:VAL:HG21	2.01	0.41
11:F:53:ASP:OD2	11:F:80:GLN:CB	2.68	0.41
14:I:18:ILE:HA	14:I:45:VAL:O	2.20	0.41
15:J:125:ALA:O	15:J:127:ALA:N	2.53	0.41
17:L:186:SER:OG	17:L:189:VAL:HG12	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:L:3:SER:O	17:L:4:ALA:C	2.57	0.41
17:L:62:VAL:HA	17:L:131:VAL:O	2.20	0.41
21:P:16:ASN:HA	21:P:16:ASN:HD22	1.65	0.41
21:P:90:HIS:O	21:P:91:LEU:HD23	2.19	0.41
22:Q:9:ASP:HA	22:Q:10:PRO:HD2	1.89	0.41
29:X:107:PRO:HB3	29:X:182:PHE:CE2	2.55	0.41
30:Y:30:GLU:HB2	37:Y:218:HOH:O	2.18	0.41
6:A:75:GLY:HA2	30:Y:64:ILE:HA	2.01	0.41
1:O:1246:A:O2'	1:O:1247:A:C3'	2.61	0.41
1:O:1702:U:HO2'	1:O:1703:G:H5''	1.85	0.41
1:O:1813:U:H3'	1:O:1814:G:H5'	2.02	0.41
1:O:2449:G:H2'	1:O:2450:C:C6	2.55	0.41
1:O:2757:A:O2'	1:O:2758:G:H5'	2.20	0.41
1:O:353:G:C6	1:O:354:A:C6	3.08	0.41
1:O:62:C:H2'	1:O:63:U:H6	1.85	0.41
1:O:630:A:H4'	1:O:631:A:OP1	2.18	0.41
1:O:75:U:H2'	1:O:76:G:H8	1.85	0.41
5:9:51:A:H4'	37:9:358:HOH:O	2.20	0.41
1:O:1942:A:H4'	6:A:213:LYS:CE	2.49	0.41
7:B:265:LEU:HD21	7:B:316:ARG:HD3	2.02	0.41
7:B:54:VAL:CG2	7:B:326:GLU:HB3	2.51	0.41
9:D:104:PHE:CE2	9:D:166:ILE:CD1	3.02	0.41
11:F:63:ILE:CB	11:F:64:PRO:CD	2.92	0.41
14:I:72:PRO:HG2	14:I:78:ILE:HD13	2.01	0.41
17:L:59:GLY:HA3	17:L:141:ILE:CD1	2.50	0.41
17:L:157:LEU:HB3	17:L:160:PHE:HD1	1.85	0.41
17:L:46:LEU:HD22	17:L:50:ARG:HG3	2.01	0.41
17:L:46:LEU:HA	17:L:46:LEU:HD23	1.89	0.41
17:L:93:ARG:H	17:L:93:ARG:HG2	1.51	0.41
21:P:45:PRO:HA	21:P:51:ARG:NH2	2.35	0.41
22:Q:119:VAL:CG1	22:Q:119:VAL:O	2.66	0.41
24:S:48:VAL:HG13	24:S:49:GLU:N	2.34	0.41
27:V:20:THR:O	27:V:21:LEU:C	2.56	0.41
29:X:178:HIS:HD2	29:X:229:LEU:HD13	1.85	0.41
1:O:1196:C:C2'	1:O:1197:G:H5'	2.50	0.41
1:O:1213:C:H2'	1:O:1214:G:O4'	2.20	0.41
1:O:1598:A:C2	1:O:1599:U:C2	3.09	0.41
1:O:1476:A:O2'	1:O:1868:G:H5'	2.21	0.41
1:O:1878:G:H5'	37:O:3784:HOH:O	2.19	0.41
1:O:24:G:C2'	1:O:25:A:OP2	2.68	0.41
1:O:292:G:H8	1:O:292:G:O5'	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:331:A:N6	1:0:345:G:O2'	2.54	0.41
3:2:25:VAL:CG2	3:2:68:LYS:HG3	2.41	0.41
9:D:67:ASP:HA	9:D:68:PRO:HD3	1.96	0.41
17:L:28:MET:HA	17:L:31:TRP:HB2	2.02	0.41
18:M:37:ARG:HD3	35:M:201:CL:CL	2.57	0.41
22:Q:14:ALA:HB3	22:Q:147:LEU:HB2	2.02	0.41
24:S:17:HIS:O	24:S:20:HIS:HD2	2.03	0.41
25:T:6:CYS:SG	25:T:8:TYR:HB3	2.60	0.41
31:Z:21:ARG:HD2	31:Z:39:PHE:HB2	2.01	0.41
1:0:1117:A:N1	1:0:1244:U:C2'	2.82	0.41
1:0:1924:A:H1'	37:0:3547:HOH:O	2.20	0.41
1:0:1932:G:H8	1:0:1932:G:O5'	2.03	0.41
1:0:2039:A:OP2	7:B:234:ARG:NH2	2.53	0.41
1:0:2124:G:H1'	37:0:3442:HOH:O	2.21	0.41
1:0:2387:U:C2	1:0:2402:A:C2	3.08	0.41
1:0:2389:U:H4'	21:P:53:HIS:HD2	1.86	0.41
1:0:2497:A:C2	1:0:2524:G:N3	2.88	0.41
1:0:2653:A:H2'	1:0:2654:C:C6	2.55	0.41
1:0:2690:U:H4'	10:E:111:LYS:HE3	2.03	0.41
5:9:13:A:N3	5:9:114:G:C6	2.88	0.41
7:B:195:ARG:NH1	7:B:324:ASP:OD1	2.49	0.41
13:H:16:ARG:HB2	37:H:224:HOH:O	2.19	0.41
13:H:89:PRO:HA	13:H:122:ALA:O	2.20	0.41
14:I:75:PRO:HD3	14:I:136:SER:CB	2.50	0.41
16:K:91:VAL:CG1	16:K:120:LEU:HD23	2.49	0.41
17:L:57:LYS:CG	17:L:58:GLN:N	2.81	0.41
37:0:4335:HOH:O	20:O:91:LYS:HE3	2.21	0.41
21:P:17:LYS:O	21:P:18:PRO:C	2.58	0.41
24:S:28:SER:O	24:S:32:ARG:HG3	2.19	0.41
25:T:21:PHE:HE2	25:T:23:HIS:ND1	2.19	0.41
1:0:68:U:C4	1:0:107:U:H4'	2.56	0.41
1:0:129:A:O2'	1:0:130:C:H5''	2.20	0.41
1:0:1463:A:O5'	1:0:1463:A:H8	2.03	0.41
1:0:1493:A:O2'	1:0:1494:A:H5''	2.19	0.41
1:0:1507:C:H4'	37:0:3606:HOH:O	2.19	0.41
1:0:1701:A:H4'	1:0:1702:U:C5'	2.50	0.41
1:0:1847:A:C2'	1:0:1848:G:H5'	2.50	0.41
1:0:2071:C:H4'	1:0:2072:G:H8	1.85	0.41
1:0:2554:U:H3'	1:0:2554:U:OP1	2.21	0.41
1:0:2620:U:H5''	1:0:2621:U:OP1	2.20	0.41
1:0:2655:U:C4	1:0:2656:G:N7	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2718:C:H5	37:0:8135:HOH:O	2.03	0.41
1:0:2735:U:N3	1:0:2736:U:C4	2.89	0.41
1:0:368:C:H2'	1:0:369:G:H5'	2.03	0.41
1:0:445:U:H1'	37:0:3445:HOH:O	2.20	0.41
1:0:605:C:C2	1:0:606:C:C5	3.08	0.41
1:0:2433:A:OP1	3:2:36:ILE:CG2	2.69	0.41
5:9:48:C:H4'	18:M:141:ARG:NH2	2.29	0.41
6:A:195:ASN:O	6:A:196:ALA:C	2.58	0.41
7:B:101:TRP:HB2	7:B:119:HIS:CD2	2.55	0.41
7:B:145:HIS:HD2	7:B:146:THR:O	2.03	0.41
7:B:304:PRO:HD2	7:B:307:ARG:HD2	2.02	0.41
7:B:25:ARG:HA	7:B:310:ARG:HH21	1.84	0.41
8:C:136:VAL:HA	8:C:137:PRO:C	2.40	0.41
8:C:232:LEU:HA	37:C:512:HOH:O	2.20	0.41
13:H:26:LYS:HB2	37:H:256:HOH:O	2.20	0.41
15:J:6:ALA:HB3	15:J:116:GLU:HG2	2.02	0.41
17:L:153:THR:O	17:L:156:ARG:HG3	2.20	0.41
17:L:114:VAL:HB	17:L:159:THR:HG23	2.02	0.41
17:L:186:SER:O	17:L:187:LEU:C	2.57	0.41
20:O:122:LEU:HD11	20:O:141:ILE:HG12	2.02	0.41
37:9:315:HOH:O	21:P:27:GLN:HB2	2.20	0.41
24:S:6:LYS:HA	24:S:9:LYS:HB3	2.02	0.41
1:0:1167:G:N2	1:0:1180:U:C2	2.89	0.41
1:0:1279:U:O2	1:0:1279:U:H2'	2.20	0.41
1:0:1522:A:C2'	1:0:1523:G:H5'	2.51	0.41
1:0:1367:A:C2	1:0:2058:G:C2	3.08	0.41
1:0:2092:G:H5'	37:B:554:HOH:O	2.19	0.41
1:0:2407:G:O2'	1:0:2408:A:H5'	2.21	0.41
1:0:2493:C:O2'	1:0:2495:U:O4	2.22	0.41
1:0:383:A:H2'	1:0:384:G:C5'	2.51	0.41
1:0:512:G:H5''	1:0:515:C:H1'	2.02	0.41
1:0:818:A:N6	1:0:819:A:N1	2.69	0.41
1:0:840:U:C2	1:0:2648:U:O4	2.73	0.41
1:0:911:G:H5'	1:0:932:U:OP1	2.20	0.41
1:0:953:G:H5'	1:0:954:U:OP1	2.21	0.41
5:9:72:C:O2'	5:9:73:G:H5'	2.20	0.41
6:A:130:THR:HG22	6:A:131:HIS:O	2.20	0.41
6:A:44:ASP:OD1	6:A:45:ILE:N	2.54	0.41
7:B:13:PHE:N	7:B:13:PHE:CD1	2.88	0.41
7:B:56:ASP:HB3	7:B:322:ARG:HH21	1.84	0.41
10:E:31:ARG:HH12	10:E:68:HIS:CE1	2.38	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:E:91:PHE:HA	10:E:92:PRO:HD3	1.85	0.41
11:F:30:LYS:HE2	11:F:99:THR:HG21	2.02	0.41
13:H:144:GLU:HA	13:H:144:GLU:OE1	2.20	0.41
13:H:7:ARG:HD2	13:H:154:THR:HG21	2.02	0.41
17:L:182:LYS:HG2	37:L:387:HOH:O	2.19	0.41
17:L:77:PHE:CD1	17:L:79:LYS:O	2.74	0.41
19:N:15:LYS:O	19:N:16:SER:C	2.58	0.41
22:Q:105:ASP:O	22:Q:106:GLY:C	2.59	0.41
24:S:49:GLU:HB3	24:S:59:GLU:HG2	2.03	0.41
30:Y:33:HIS:NE2	30:Y:49:ARG:HD2	2.35	0.41
1:O:1115:U:O2'	1:O:1116:U:H5'	2.20	0.41
1:O:154:C:H2'	1:O:155:C:H6	1.86	0.41
1:O:1599:U:H2'	1:O:1600:G:O4'	2.21	0.41
1:O:1700:C:H5''	1:O:1701:A:OP2	2.21	0.41
1:O:1936:C:O2'	1:O:1937:U:H5'	2.21	0.41
1:O:2037:C:OP1	1:O:2037:C:H6	2.03	0.41
1:O:245:C:C2	1:O:267:G:N1	2.88	0.41
1:O:2691:A:C4'	1:O:2692:G:OP1	2.69	0.41
1:O:197:C:H5	35:O:3121:CL:CL	2.41	0.41
1:O:538:C:C4'	1:O:539:G:OP2	2.68	0.41
1:O:876:A:N3	1:O:876:A:H2'	2.36	0.41
1:O:931:C:H2'	1:O:932:U:H6	1.86	0.41
5:9:33:U:H3'	37:9:410:HOH:O	2.21	0.41
6:A:190:ARG:NH2	37:A:431:HOH:O	2.53	0.41
6:A:210:GLY:HA3	37:A:476:HOH:O	2.19	0.41
6:A:20:SER:C	6:A:22:ARG:H	2.24	0.41
7:B:320:GLN:HG3	7:B:321:PRO:CD	2.50	0.41
13:H:32:ASP:O	13:H:33:MET:HG3	2.20	0.41
15:J:44:HIS:N	15:J:44:HIS:CD2	2.88	0.41
17:L:68:ARG:N	37:L:305:HOH:O	2.36	0.41
18:M:102:LEU:N	37:M:310:HOH:O	2.44	0.41
18:M:115:VAL:O	18:M:118:ILE:HB	2.21	0.41
18:M:143:ARG:NH1	18:M:173:ASP:OD2	2.53	0.41
18:M:175:LEU:HD12	18:M:175:LEU:HA	1.87	0.41
18:M:37:ARG:HH21	18:M:105:GLY:HA2	1.77	0.41
21:P:47:VAL:CG1	21:P:90:HIS:HE2	2.33	0.41
22:Q:113:HIS:O	22:Q:145:LEU:HD12	2.21	0.41
1:O:79:G:H3'	24:S:111:ARG:HH12	1.86	0.41
24:S:88:PRO:O	24:S:90:PRO:HD3	2.21	0.41
27:V:88:THR:HG23	27:V:110:GLN:HB3	2.03	0.41
27:V:154:ARG:NH2	37:V:209:HOH:O	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:944:G:C8	27:V:23:MET:HE1	2.55	0.41
1:0:1025:C:H2'	1:0:1026:C:C6	2.55	0.41
1:0:1246:A:C4	1:0:1248:A:C8	3.08	0.41
1:0:1666:C:H2'	1:0:1667:A:C8	2.55	0.41
1:0:1695:G:O2'	1:0:1696:U:H5'	2.21	0.41
1:0:834:G:H4'	1:0:1754:A:H5'	2.03	0.41
1:0:1979:G:O2'	1:0:1980:U:OP1	2.37	0.41
1:0:2005:G:H4'	1:0:2006:C:OP2	2.21	0.41
1:0:2691:A:H4'	1:0:2692:G:OP1	2.20	0.41
1:0:2692:G:O2'	1:0:2701:G:N1	2.54	0.41
1:0:486:A:H1'	37:0:3238:HOH:O	2.19	0.41
5:9:49:G:O2'	5:9:50:G:H5'	2.21	0.41
6:A:204:GLY:HA3	37:A:480:HOH:O	2.21	0.41
7:B:148:PRO:HB2	7:B:156:LYS:O	2.20	0.41
1:0:1735:C:H5'	7:B:235:ARG:HH21	1.85	0.41
7:B:316:ARG:O	7:B:316:ARG:HG3	2.20	0.41
8:C:157:LEU:HD11	8:C:194:PHE:HZ	1.86	0.41
8:C:193:LEU:CD2	8:C:223:LEU:HD12	2.50	0.41
11:F:16:ALA:HB2	11:F:75:ILE:HD13	2.03	0.41
11:F:79:GLN:O	11:F:82:ASP:HB2	2.21	0.41
1:0:2502:C:C4'	13:H:151:MET:HG2	2.51	0.41
14:I:122:ASP:HB3	14:I:125:SER:OG	2.21	0.41
15:J:34:VAL:CG2	15:J:47:ALA:HB2	2.48	0.41
15:J:4:LEU:HD22	15:J:116:GLU:HB3	2.02	0.41
15:J:55:VAL:HG12	15:J:56:SER:N	2.34	0.41
16:K:140:VAL:HG12	16:K:140:VAL:O	2.20	0.41
37:0:4580:HOH:O	16:K:34:GLY:HA2	2.21	0.41
17:L:149:TRP:CE3	17:L:150:ILE:HA	2.56	0.41
1:0:175:G:H3'	17:L:191:GLY:O	2.21	0.41
23:R:69:SER:O	23:R:71:ASP:N	2.54	0.41
1:0:308:U:H2'	24:S:52:ARG:HH22	1.84	0.41
26:U:26:GLU:HB3	26:U:49:LEU:HD21	2.02	0.41
26:U:45:ARG:C	26:U:47:LYS:N	2.73	0.41
29:X:178:HIS:CE1	29:X:179:PRO:HG2	2.56	0.41
30:Y:17:ARG:O	30:Y:18:TYR:CB	2.68	0.41
2:1:48:ASP:HA	31:Z:25:LYS:HD2	2.03	0.41
1:0:1015:C:O5'	1:0:1015:C:H6	2.04	0.41
1:0:931:C:C2	1:0:1040:A:C6	3.09	0.41
1:0:1327:G:N1	1:0:1331:A:C6	2.88	0.41
1:0:1730:G:H5'	1:0:1731:C:C5	2.55	0.41
1:0:1902:G:O2'	1:0:1903:U:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2299:G:O6	21:P:1:PRO:HA	2.20	0.41
1:0:2338:G:H1'	9:D:105:SER:OG	2.21	0.41
1:0:2369:A:O2'	1:0:2370:A:C8	2.74	0.41
1:0:2753:G:O2'	1:0:2754:G:H5'	2.20	0.41
1:0:2811:A:H4'	1:0:2812:A:H5''	2.01	0.41
1:0:333:G:C2'	1:0:334:G:H5'	2.51	0.41
1:0:390:G:H2'	1:0:391:U:C6	2.55	0.41
1:0:391:U:OP2	17:L:84:LYS:NZ	2.51	0.41
1:0:451:C:OP2	8:C:182:ARG:NH2	2.53	0.41
1:0:60:A:N6	2:1:25:VAL:HG21	2.36	0.41
5:9:13:A:H3'	5:9:14:G:H5''	2.02	0.41
6:A:94:LEU:HG	6:A:99:ILE:HD11	2.02	0.41
7:B:146:THR:O	7:B:159:PRO:HB3	2.21	0.41
9:D:173:GLU:HG3	9:D:174:VAL:H	1.84	0.41
10:E:33:LEU:HB3	10:E:65:PHE:CE1	2.56	0.41
10:E:72:MET:O	10:E:76:VAL:HG22	2.21	0.41
11:F:48:VAL:HG22	11:F:74:PHE:HB3	2.03	0.41
13:H:48:LEU:HB3	13:H:132:PHE:HB2	2.03	0.41
13:H:46:VAL:HG12	13:H:146:TRP:CZ3	2.52	0.41
14:I:130:VAL:HG12	14:I:131:THR:N	2.36	0.41
18:M:164:ASP:CG	18:M:167:ASP:HA	2.40	0.41
18:M:8:VAL:O	18:M:8:VAL:HG12	2.21	0.41
19:N:44:ASN:HA	19:N:65:LEU:O	2.21	0.41
22:Q:111:ILE:O	22:Q:111:ILE:HG22	2.21	0.41
27:V:108:ARG:CG	27:V:114:PRO:HG3	2.51	0.41
27:V:125:HIS:HB2	27:V:137:GLN:OE1	2.21	0.41
27:V:137:GLN:O	27:V:137:GLN:HG3	2.20	0.41
30:Y:39:CYS:HA	30:Y:47:LEU:CD1	2.50	0.41
1:0:1037:G:O2'	1:0:1038:G:H5'	2.21	0.41
1:0:1089:G:N7	1:0:1290:G:C6	2.89	0.41
1:0:1329:A:OP2	29:X:125:LYS:NZ	2.51	0.41
1:0:1495:C:H1'	1:0:1573:A:H1'	2.03	0.41
1:0:152:A:O2'	1:0:153:C:H5'	2.20	0.41
1:0:1646:G:O2'	1:0:1647:G:H5'	2.20	0.41
1:0:1661:A:H2'	1:0:1662:C:O4'	2.21	0.41
1:0:1447:U:OP1	1:0:1677:U:H2'	2.21	0.41
1:0:2404:G:H1'	37:0:6989:HOH:O	2.20	0.41
1:0:2744:G:H5''	28:W:61:ARG:O	2.21	0.41
1:0:623:U:H2'	1:0:624:U:C6	2.56	0.41
1:0:1852:A:H4'	6:A:230:SER:CB	2.51	0.41
1:0:1874:U:P	6:A:51:ARG:HD2	2.61	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:94:LEU:HD12	6:A:98:GLU:HB2	2.02	0.41
7:B:30:PRO:HB2	7:B:39:GLN:HE21	1.79	0.41
8:C:54:LEU:O	8:C:56:THR:N	2.52	0.41
9:D:59:GLY:C	9:D:61:PHE:N	2.73	0.41
5:9:44:A:C1'	9:D:76:ARG:HE	2.33	0.41
10:E:35:TYR:CD2	10:E:36:PRO:HD2	2.56	0.41
17:L:87:MET:CE	17:L:91:ILE:HD11	2.50	0.41
5:9:7:G:OP1	18:M:23:ARG:NE	2.54	0.41
20:O:115:SER:O	20:O:117:SER:N	2.54	0.41
22:Q:41:GLY:O	22:Q:42:GLU:C	2.59	0.41
23:R:55:GLN:NE2	37:R:206:HOH:O	2.54	0.41
23:R:69:SER:C	23:R:71:ASP:N	2.74	0.41
27:V:107:LEU:HD23	27:V:112:LEU:HD12	2.03	0.41
28:W:30:MET:HE1	28:W:58:ALA:HB3	2.03	0.41
29:X:218:GLU:OE2	29:X:232:THR:N	2.54	0.41
1:0:938:G:N1	1:0:1031:G:O2'	2.52	0.41
1:0:1100:G:N3	1:0:1107:A:H2	2.19	0.41
1:0:1205:U:C2'	1:0:1206:U:H5''	2.51	0.41
1:0:1289:C:H3'	37:0:5354:HOH:O	2.20	0.41
1:0:2525:G:H5''	1:0:2526:C:OP1	2.21	0.41
1:0:2616:G:H5''	1:0:2617:G:OP1	2.21	0.41
1:0:2716:G:H1'	37:B:526:HOH:O	2.19	0.41
1:0:2778:A:C2	1:0:2797:C:O2	2.73	0.41
1:0:2831:C:H2'	1:0:2832:C:C5'	2.50	0.41
1:0:298:C:H1'	37:0:4344:HOH:O	2.20	0.41
1:0:411:A:H4'	1:0:412:C:OP2	2.21	0.41
1:0:636:G:H5'	1:0:2059:U:OP2	2.21	0.41
1:0:677:C:H6	1:0:677:C:O5'	2.03	0.41
1:0:962:C:C4	1:0:963:C:C4	3.09	0.41
2:1:1:GLY:CA	37:1:112:HOH:O	2.69	0.41
6:A:125:ASN:HB2	6:A:158:VAL:HG12	2.00	0.41
6:A:38:ILE:HG23	6:A:60:PHE:HD2	1.86	0.41
8:C:139:VAL:HG13	37:C:406:HOH:O	2.21	0.41
13:H:166:ASN:ND2	13:H:166:ASN:N	2.68	0.41
13:H:31:PHE:HD2	13:H:85:ILE:HG23	1.81	0.41
15:J:24:THR:OG1	15:J:97:ILE:HD12	2.21	0.41
16:K:22:ARG:HB3	16:K:23:GLY:H	1.53	0.41
17:L:120:VAL:HG11	17:L:130:GLU:OE2	2.21	0.41
17:L:87:MET:HE1	37:L:351:HOH:O	2.20	0.41
20:O:100:ALA:HA	37:O:209:HOH:O	2.20	0.41
27:V:59:GLN:HE22	27:V:97:ALA:HB3	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:Y:66:GLY:HA3	30:Y:71:PRO:O	2.21	0.41
1:0:1006:A:N1	1:0:2311:A:H1'	2.35	0.40
1:0:1158:G:C2'	1:0:1159:G:H5'	2.51	0.40
1:0:1244:U:H2'	37:0:4583:HOH:O	2.20	0.40
1:0:128:A:C8	1:0:128:A:H3'	2.56	0.40
1:0:1500:U:OP2	20:O:41:ARG:NH2	2.54	0.40
1:0:1791:U:O2'	1:0:1792:C:H5'	2.21	0.40
1:0:2385:G:H2'	1:0:2386:U:C6	2.56	0.40
1:0:2472:C:O2'	1:0:2473:U:H5'	2.20	0.40
1:0:2640:U:H2'	1:0:2641:C:C6	2.56	0.40
1:0:2742:G:C2	1:0:2743:A:C4	3.09	0.40
1:0:2768:A:N7	7:B:316:ARG:HB2	2.35	0.40
1:0:2898:G:H2'	1:0:2899:A:C8	2.57	0.40
1:0:297:U:H6	1:0:297:U:O5'	2.04	0.40
1:0:297:U:H2'	1:0:298:C:H6	1.85	0.40
1:0:336:G:C2	1:0:483:C:C2	3.09	0.40
1:0:363:A:H2'	1:0:364:C:H6	1.86	0.40
1:0:607:G:H2'	1:0:608:A:O4'	2.21	0.40
1:0:686:A:H1'	1:0:747:G:O2'	2.22	0.40
2:1:11:LEU:HA	2:1:11:LEU:HD23	1.89	0.40
5:9:80:A:H2'	5:9:81:C:O4'	2.21	0.40
37:0:3527:HOH:O	6:A:164:ARG:NH2	2.53	0.40
7:B:243:ASN:HA	7:B:245:SER:N	2.35	0.40
9:D:146:LYS:HZ1	18:M:107:ASN:ND2	2.19	0.40
9:D:172:VAL:HG12	9:D:173:GLU:N	2.35	0.40
13:H:151:MET:CE	13:H:151:MET:HA	2.51	0.40
15:J:37:TYR:CE2	15:J:45:PRO:HA	2.56	0.40
16:K:68:GLU:O	16:K:69:ILE:C	2.60	0.40
17:L:138:HIS:ND1	17:L:139:PRO:O	2.52	0.40
18:M:154:LEU:C	18:M:156:GLU:H	2.24	0.40
25:T:35:LYS:O	25:T:39:ASN:OD1	2.39	0.40
26:U:12:THR:O	26:U:14:ALA:N	2.54	0.40
30:Y:40:PRO:HD3	30:Y:47:LEU:HD11	2.03	0.40
1:0:1019:C:H2'	1:0:1020:A:H8	1.87	0.40
1:0:1180:U:H2'	1:0:1181:A:O4'	2.21	0.40
1:0:1206:U:H2'	1:0:1207:A:O4'	2.20	0.40
1:0:1041:U:H4'	1:0:1295:G:H5'	2.04	0.40
1:0:1327:G:N2	1:0:1331:A:C4	2.89	0.40
1:0:1339:G:C6	1:0:1340:G:N1	2.89	0.40
1:0:1621:G:O2'	1:0:1622:G:H5'	2.21	0.40
1:0:1649:G:O2'	1:0:1650:C:H5'	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2005:G:O2'	1:0:2008:U:OP2	2.24	0.40
1:0:2320:U:H5	3:2:1:MET:CE	2.33	0.40
1:0:290:C:N3	1:0:363:A:C2	2.89	0.40
1:0:359:U:H2'	1:0:360:A:H8	1.85	0.40
1:0:477:A:C6	1:0:478:C:C4	3.10	0.40
1:0:535:G:C5	1:0:2063:U:C4	3.09	0.40
1:0:79:G:N2	1:0:98:A:C8	2.89	0.40
3:2:11:CYS:SG	3:2:20:HIS:CE1	3.11	0.40
1:0:2433:A:O3'	3:2:30:GLN:OE1	2.39	0.40
5:9:25:G:H2'	5:9:26:C:H5'	2.03	0.40
6:A:170:VAL:HG13	30:Y:22:ILE:HG21	2.02	0.40
1:0:1942:A:H5''	6:A:213:LYS:CE	2.51	0.40
7:B:88:GLU:O	7:B:88:GLU:HG3	2.21	0.40
8:C:211:ASP:HB2	8:C:231:ARG:NH2	2.37	0.40
9:D:23:VAL:HG11	9:D:83:PHE:CZ	2.56	0.40
11:F:29:VAL:HG12	11:F:98:VAL:HA	2.03	0.40
11:F:20:LEU:HD13	11:F:98:VAL:HG22	2.03	0.40
1:0:1150:A:C2'	12:G:16:LYS:HD3	2.51	0.40
12:G:63:ARG:N	37:G:403:HOH:O	2.54	0.40
1:0:259:G:N2	17:L:58:GLN:NE2	2.66	0.40
18:M:22:GLN:O	18:M:26:LEU:HD22	2.22	0.40
27:V:51:PHE:CD1	27:V:51:PHE:N	2.89	0.40
29:X:130:ARG:HG2	29:X:131:GLN:N	2.36	0.40
1:0:1243:C:H6	1:0:1243:C:O5'	2.03	0.40
1:0:1271:A:O2'	1:0:1272:C:H5'	2.22	0.40
1:0:1404:C:H4'	1:0:1408:U:C5	2.55	0.40
1:0:1457:U:O2'	1:0:1458:A:H5'	2.21	0.40
1:0:1553:C:H6	1:0:1553:C:O5'	2.04	0.40
1:0:1568:G:O2'	1:0:1569:U:H5'	2.21	0.40
1:0:1583:U:O2'	1:0:1584:C:H5'	2.22	0.40
1:0:1713:G:C2'	37:0:3224:HOH:O	2.67	0.40
1:0:1769:C:O2'	1:0:1770:U:H5'	2.22	0.40
1:0:1847:A:H4'	6:A:169:PHE:HB2	2.03	0.40
1:0:1860:U:H2'	1:0:1861:C:O4'	2.21	0.40
1:0:1866:A:C5	1:0:1867:G:H1'	2.56	0.40
1:0:1985:U:H5''	1:0:1986:G:OP2	2.20	0.40
1:0:2525:G:H2'	37:0:8692:HOH:O	2.21	0.40
1:0:2607:U:O5'	1:0:2609:G:H4'	2.21	0.40
1:0:2616:G:C4	1:0:2645:U:C4	3.10	0.40
1:0:2750:G:H2'	1:0:2751:C:O4'	2.22	0.40
1:0:2908:A:H8	1:0:2908:A:O5'	2.05	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:380:A:C2	17:L:13:LYS:HB3	2.55	0.40
1:0:473:A:H8	1:0:473:A:O5'	2.04	0.40
1:0:645:U:OP2	16:K:4:LYS:HE2	2.21	0.40
1:0:688:A:N6	1:0:698:A:O5'	2.51	0.40
7:B:223:ARG:O	7:B:224:LYS:HD3	2.21	0.40
7:B:284:PHE:O	7:B:287:TYR:N	2.52	0.40
37:0:4050:HOH:O	7:B:298:LYS:HD3	2.21	0.40
8:C:57:PRO:HD2	8:C:73:LEU:HD22	2.03	0.40
10:E:84:MET:HE3	10:E:131:LEU:HD13	2.02	0.40
10:E:6:GLU:HG2	10:E:46:THR:HG22	2.03	0.40
11:F:89:LEU:HA	11:F:89:LEU:HD23	1.88	0.40
13:H:141:ASN:O	13:H:144:GLU:HB3	2.21	0.40
14:I:130:VAL:CG1	14:I:131:THR:N	2.84	0.40
16:K:24:ALA:HB2	16:K:27:ARG:NH2	2.36	0.40
17:L:131:VAL:HG12	17:L:133:LEU:HD12	2.03	0.40
18:M:42:HIS:CE1	18:M:75:THR:OG1	2.74	0.40
19:N:27:GLY:O	19:N:31:GLU:HG3	2.22	0.40
21:P:86:VAL:CG2	21:P:90:HIS:HB2	2.51	0.40
27:V:108:ARG:HG3	27:V:114:PRO:HG3	2.04	0.40
27:V:80:ASP:OD1	27:V:82:GLU:HB3	2.21	0.40
28:W:30:MET:CE	28:W:55:ASN:HA	2.49	0.40
30:Y:41:VAL:HG23	30:Y:62:TYR:CD2	2.56	0.40
1:0:1265:G:C6	1:0:1266:U:C4	3.10	0.40
1:0:2038:A:O2'	1:0:2039:A:H5'	2.21	0.40
1:0:2101:A:H1'	1:0:2537:G:O4'	2.21	0.40
1:0:171:C:O2	1:0:222:A:H2	2.05	0.40
1:0:2256:G:C2'	1:0:2257:G:H5'	2.51	0.40
1:0:2110:G:C2	1:0:2478:U:C2	3.09	0.40
1:0:2517:A:H2'	1:0:2518:C:O4'	2.22	0.40
1:0:2692:G:O2'	1:0:2693:U:OP2	2.38	0.40
1:0:623:U:H2'	1:0:624:U:H6	1.87	0.40
1:0:955:A:H2'	1:0:956:G:H5'	2.04	0.40
4:5:53:ILE:CG1	23:R:15:MET:HE2	2.52	0.40
5:9:25:G:C2'	5:9:26:C:H5'	2.51	0.40
6:A:171:LYS:HE3	6:A:174:ASN:OD1	2.21	0.40
7:B:27:ASN:ND2	7:B:27:ASN:N	2.67	0.40
8:C:5:ILE:CD1	8:C:16:VAL:HG23	2.37	0.40
8:C:20:ASP:O	8:C:21:VAL:C	2.60	0.40
8:C:76:ARG:HG2	8:C:78:ARG:HH12	1.86	0.40
9:D:166:ILE:O	9:D:169:THR:N	2.55	0.40
11:F:110:GLU:HA	11:F:113:ASP:OD2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:H:45:GLN:HG3	13:H:135:TRP:NE1	2.36	0.40
13:H:153:VAL:HG21	13:H:157:ILE:HD11	2.04	0.40
13:H:57:ARG:HG3	13:H:57:ARG:NH1	2.37	0.40
14:I:39:VAL:HG11	14:I:107:ASN:CG	2.42	0.40
16:K:43:HIS:HE1	37:K:376:HOH:O	2.03	0.40
17:L:122:GLU:OE2	17:L:127:LYS:HE2	2.22	0.40
19:N:47:ARG:NH1	19:N:47:ARG:CG	2.79	0.40
23:R:53:ASN:ND2	37:R:205:HOH:O	2.53	0.40
26:U:11:MET:HB3	26:U:15:GLU:HB2	2.03	0.40
30:Y:14:PHE:HE2	37:Y:206:HOH:O	2.05	0.40
30:Y:47:LEU:HD11	30:Y:64:ILE:HD11	2.02	0.40
1:O:1137:G:C4'	1:O:1138:G:OP1	2.69	0.40
1:O:1153:C:C4	1:O:1154:A:N7	2.90	0.40
1:O:1107:A:N3	1:O:1257:C:H1'	2.37	0.40
1:O:1386:G:C2	1:O:1397:C:N3	2.89	0.40
1:O:1460:G:O2'	1:O:1461:U:H5'	2.21	0.40
1:O:1718:G:OP1	20:O:20:ARG:HD3	2.21	0.40
1:O:1884:G:O6	6:A:190:ARG:CD	2.69	0.40
1:O:1946:C:C5	1:O:1971:G:C6	3.08	0.40
1:O:2246:U:O2'	1:O:2247:C:H5'	2.22	0.40
1:O:260:C:H2'	1:O:261:A:C8	2.57	0.40
1:O:2623:G:C6	1:O:2642:G:N1	2.89	0.40
1:O:40:C:H6	1:O:40:C:O5'	2.05	0.40
1:O:611:U:H2'	1:O:612:U:C6	2.57	0.40
1:O:610:G:O2'	1:O:611:U:H5'	2.21	0.40
1:O:926:A:H5'	16:K:39:GLU:OE2	2.22	0.40
2:1:49:GLU:HB2	37:1:108:HOH:O	2.22	0.40
6:A:170:VAL:HG13	30:Y:22:ILE:CG2	2.51	0.40
8:C:108:GLN:HB3	37:C:513:HOH:O	2.21	0.40
9:D:76:ARG:O	9:D:77:ASP:HB2	2.22	0.40
10:E:166:VAL:HB	37:E:214:HOH:O	2.21	0.40
13:H:130:HIS:HB2	13:H:133:ILE:HD11	2.02	0.40
16:K:72:ASN:HB2	37:K:317:HOH:O	2.20	0.40
17:L:47:ASP:CG	17:L:48:ARG:H	2.24	0.40
22:Q:15:LYS:HE3	37:Q:368:HOH:O	2.21	0.40
24:S:26:THR:O	24:S:97:ARG:HG3	2.22	0.40
29:X:160:LYS:HA	29:X:160:LYS:HD3	1.94	0.40

There are no symmetry-related clashes.

## 5.3 Torsion angles ⓘ

### 5.3.1 Protein backbone ⓘ

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	1	42/48 (88%)	37 (88%)	5 (12%)	0	100	100
3	2	90/92 (98%)	82 (91%)	5 (6%)	3 (3%)	4	32
4	5	33/144 (23%)	24 (73%)	9 (27%)	0	100	100
6	A	236/239 (99%)	197 (84%)	27 (11%)	12 (5%)	2	21
7	B	335/337 (99%)	281 (84%)	40 (12%)	14 (4%)	3	26
8	C	244/246 (99%)	201 (82%)	37 (15%)	6 (2%)	6	37
9	D	135/176 (77%)	90 (67%)	31 (23%)	14 (10%)	0	7
10	E	171/177 (97%)	147 (86%)	21 (12%)	3 (2%)	9	44
11	F	117/119 (98%)	97 (83%)	16 (14%)	4 (3%)	4	31
12	G	26/348 (8%)	23 (88%)	2 (8%)	1 (4%)	3	28
13	H	152/167 (91%)	123 (81%)	21 (14%)	8 (5%)	2	20
14	I	140/145 (97%)	117 (84%)	17 (12%)	6 (4%)	3	25
15	J	130/132 (98%)	115 (88%)	13 (10%)	2 (2%)	11	48
16	K	142/164 (87%)	116 (82%)	20 (14%)	6 (4%)	3	26
17	L	192/194 (99%)	144 (75%)	40 (21%)	8 (4%)	3	26
18	M	184/186 (99%)	153 (83%)	24 (13%)	7 (4%)	3	28
19	N	113/115 (98%)	92 (81%)	17 (15%)	4 (4%)	4	31
20	O	142/148 (96%)	126 (89%)	12 (8%)	4 (3%)	5	35
21	P	93/95 (98%)	72 (77%)	16 (17%)	5 (5%)	2	20
22	Q	149/154 (97%)	127 (85%)	18 (12%)	4 (3%)	5	36
23	R	82/84 (98%)	68 (83%)	9 (11%)	5 (6%)	1	17
24	S	117/119 (98%)	101 (86%)	13 (11%)	3 (3%)	6	36
25	T	52/66 (79%)	49 (94%)	3 (6%)	0	100	100
26	U	64/70 (91%)	49 (77%)	13 (20%)	2 (3%)	4	33
27	V	152/154 (99%)	132 (87%)	19 (12%)	1 (1%)	24	65

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
28	W	81/91 (89%)	65 (80%)	11 (14%)	5 (6%)	1	17
29	X	141/240 (59%)	126 (89%)	12 (8%)	3 (2%)	8	41
30	Y	71/73 (97%)	59 (83%)	7 (10%)	5 (7%)	1	14
31	Z	54/56 (96%)	43 (80%)	7 (13%)	4 (7%)	1	12
All	All	3680/4379 (84%)	3056 (83%)	485 (13%)	139 (4%)	3	28

All (139) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
9	D	20	LYS
9	D	93	LEU
9	D	95	THR
9	D	144	ARG
9	D	173	GLU
9	D	174	VAL
11	F	61	MET
11	F	101	ALA
13	H	72	VAL
13	H	162	SER
14	I	143	LYS
16	K	80	ASP
16	K	150	GLN
18	M	154	LEU
18	M	162	ASP
18	M	164	ASP
18	M	183	ASP
21	P	23	THR
23	R	83	VAL
26	U	65	ASP
28	W	87	ALA
3	2	84	ARG
6	A	15	THR
6	A	21	HIS
7	B	139	ASP
7	B	169	GLY
7	B	184	ASP
7	B	266	ASN
10	E	164	ASP
11	F	105	ALA
14	I	76	ASP
14	I	78	ILE

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Mol	Chain	Res	Type
14	I	89	HIS
17	L	72	SER
17	L	140	ALA
18	M	15	GLU
18	M	181	ASP
20	O	143	ALA
22	Q	40	ALA
22	Q	106	GLY
23	R	4	VAL
23	R	30	ASP
24	S	16	LEU
24	S	53	GLY
27	V	77	ALA
28	W	23	HIS
28	W	70	ILE
29	X	157	ILE
30	Y	20	LEU
31	Z	2	GLY
31	Z	18	LYS
3	2	56	PRO
6	A	14	SER
6	A	119	ALA
6	A	180	LYS
7	B	192	ASP
7	B	302	PRO
8	C	69	HIS
8	C	131	PHE
9	D	39	ASP
9	D	96	SER
9	D	137	PRO
10	E	17	HIS
10	E	145	ALA
13	H	40	PRO
13	H	79	ALA
14	I	5	GLU
15	J	126	SER
16	K	11	ARG
16	K	21	ARG
17	L	35	PRO
17	L	46	LEU
18	M	9	PRO
19	N	20	SER

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Mol	Chain	Res	Type
19	N	21	SER
19	N	73	ASP
20	O	116	SER
24	S	44	ALA
26	U	43	PRO
28	W	77	PHE
29	X	142	SER
30	Y	18	TYR
31	Z	29	THR
3	2	57	GLY
6	A	34	ASP
6	A	55	VAL
6	A	132	ASP
7	B	206	THR
7	B	291	ASP
9	D	85	GLN
9	D	171	ASP
14	I	7	ASP
15	J	6	ALA
17	L	165	SER
19	N	54	GLU
20	O	77	ALA
21	P	54	PRO
21	P	78	GLY
22	Q	107	GLU
29	X	169	ARG
31	Z	11	LYS
6	A	69	LEU
7	B	2	GLN
7	B	34	GLY
7	B	67	GLU
7	B	91	PRO
7	B	185	GLY
8	C	48	SER
8	C	55	ARG
13	H	58	HIS
16	K	45	PRO
17	L	47	ASP
17	L	110	PRO
20	O	83	LYS
21	P	18	PRO
23	R	38	ALA

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Mol	Chain	Res	Type
23	R	70	GLU
30	Y	41	VAL
30	Y	59	HIS
6	A	10	GLY
6	A	211	LYS
8	C	89	ALA
9	D	27	ILE
13	H	67	ALA
16	K	13	HIS
28	W	52	PRO
6	A	170	VAL
21	P	6	PRO
30	Y	15	GLY
9	D	135	VAL
11	F	59	ILE
13	H	110	GLY
13	H	118	PRO
17	L	88	VAL
22	Q	2	ILE
7	B	30	PRO
8	C	21	VAL
12	G	20	VAL
9	D	130	VAL

### 5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	1	42/44 (96%)	40 (95%)	2 (5%)	28	63
3	2	79/79 (100%)	75 (95%)	4 (5%)	26	61
4	5	29/122 (24%)	26 (90%)	3 (10%)	8	33
6	A	179/181 (99%)	167 (93%)	12 (7%)	18	52
7	B	282/282 (100%)	268 (95%)	14 (5%)	27	61
8	C	193/193 (100%)	181 (94%)	12 (6%)	20	55

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
9	D	117/147 (80%)	109 (93%)	8 (7%)	17	52
10	E	152/155 (98%)	147 (97%)	5 (3%)	41	72
11	F	92/92 (100%)	91 (99%)	1 (1%)	76	89
12	G	27/283 (10%)	27 (100%)	0	100	100
13	H	122/122 (100%)	111 (91%)	11 (9%)	10	39
14	I	118/121 (98%)	111 (94%)	7 (6%)	21	57
15	J	106/106 (100%)	102 (96%)	4 (4%)	36	69
16	K	112/126 (89%)	106 (95%)	6 (5%)	24	59
17	L	166/166 (100%)	160 (96%)	6 (4%)	38	70
18	M	149/149 (100%)	142 (95%)	7 (5%)	29	63
19	N	93/93 (100%)	90 (97%)	3 (3%)	42	73
20	O	113/116 (97%)	109 (96%)	4 (4%)	39	71
21	P	79/79 (100%)	74 (94%)	5 (6%)	20	55
22	Q	117/121 (97%)	113 (97%)	4 (3%)	40	72
23	R	73/73 (100%)	72 (99%)	1 (1%)	69	87
24	S	105/105 (100%)	101 (96%)	4 (4%)	36	69
25	T	44/52 (85%)	41 (93%)	3 (7%)	17	52
26	U	51/56 (91%)	51 (100%)	0	100	100
27	V	130/130 (100%)	124 (95%)	6 (5%)	29	64
28	W	66/73 (90%)	61 (92%)	5 (8%)	14	47
29	X	120/195 (62%)	115 (96%)	5 (4%)	32	66
30	Y	56/56 (100%)	51 (91%)	5 (9%)	11	40
31	Z	46/46 (100%)	46 (100%)	0	100	100
All	All	3058/3563 (86%)	2911 (95%)	147 (5%)	28	63

All (147) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	1	16	ASN
2	1	18	ASN
3	2	11	CYS
3	2	15	ASN
3	2	38	ARG
3	2	56	PRO

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Mol	Chain	Res	Type
4	5	26	THR
4	5	40	ARG
4	5	56	GLN
6	A	3	ARG
6	A	30	ARG
6	A	33	GLU
6	A	55	VAL
6	A	69	LEU
6	A	78	ASP
6	A	120	ARG
6	A	131	HIS
6	A	153	ARG
6	A	179	MET
6	A	190	ARG
6	A	217	ARG
7	B	7	ARG
7	B	27	ASN
7	B	33	ASP
7	B	49	THR
7	B	103	ASP
7	B	162	MET
7	B	190	MET
7	B	195	ARG
7	B	250	THR
7	B	254	GLN
7	B	256	GLN
7	B	304	PRO
7	B	307	ARG
7	B	312	ARG
8	C	2	GLN
8	C	27	ARG
8	C	28	SER
8	C	42	ARG
8	C	67	GLN
8	C	78	ARG
8	C	136	VAL
8	C	187	ARG
8	C	214	THR
8	C	222	ASP
8	C	236	THR
8	C	240	LEU
9	D	24	HIS

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Mol	Chain	Res	Type
9	D	50	VAL
9	D	61	PHE
9	D	86	THR
9	D	131	THR
9	D	133	ASN
9	D	136	ARG
9	D	137	PRO
10	E	7	ILE
10	E	12	ASP
10	E	16	ASP
10	E	102	VAL
10	E	164	ASP
11	F	64	PRO
13	H	65	ARG
13	H	72	VAL
13	H	73	GLN
13	H	82	LYS
13	H	83	PHE
13	H	86	ARG
13	H	93	ILE
13	H	126	HIS
13	H	130	HIS
13	H	142	VAL
13	H	150	LYS
14	I	46	ILE
14	I	52	GLN
14	I	74	ARG
14	I	76	ASP
14	I	79	PHE
14	I	107	ASN
14	I	127	ILE
15	J	10	GLN
15	J	56	SER
15	J	83	PRO
15	J	98	VAL
16	K	18	HIS
16	K	30	ARG
16	K	35	ARG
16	K	51	PHE
16	K	80	ASP
16	K	117	GLU
17	L	38	VAL

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Mol	Chain	Res	Type
17	L	46	LEU
17	L	68	ARG
17	L	87	MET
17	L	93	ARG
17	L	99	ARG
18	M	12	ARG
18	M	26	LEU
18	M	38	LYS
18	M	128	ASP
18	M	139	TRP
18	M	152	GLU
18	M	163	PHE
19	N	9	SER
19	N	26	TRP
19	N	38	ARG
20	O	52	LYS
20	O	91	LYS
20	O	94	TRP
20	O	98	ILE
21	P	11	ARG
21	P	16	ASN
21	P	18	PRO
21	P	57	ASP
21	P	81	GLU
22	Q	13	THR
22	Q	39	THR
22	Q	82	GLU
22	Q	143	VAL
23	R	17	ASP
24	S	5	ASP
24	S	39	ASN
24	S	48	VAL
24	S	73	HIS
25	T	9	CYS
25	T	32	CYS
25	T	52	THR
27	V	35	VAL
27	V	38	THR
27	V	122	ARG
27	V	125	HIS
27	V	142	ASP
27	V	154	ARG

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Mol	Chain	Res	Type
28	W	15	ARG
28	W	27	ASP
28	W	44	ASP
28	W	51	ASP
28	W	72	VAL
29	X	154	ARG
29	X	186	ARG
29	X	189	ASN
29	X	203	VAL
29	X	235	GLU
30	Y	11	THR
30	Y	28	ASP
30	Y	44	PHE
30	Y	64	ILE
30	Y	68	CYS

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (87) such sidechains are listed below:

Mol	Chain	Res	Type
2	1	16	ASN
2	1	18	ASN
2	1	41	HIS
2	1	45	ASN
3	2	13	HIS
3	2	17	HIS
3	2	48	ASN
4	5	56	GLN
6	A	92	ASN
6	A	199	HIS
7	B	27	ASN
7	B	39	GLN
7	B	145	HIS
7	B	238	ASN
7	B	260	HIS
7	B	320	GLN
8	C	39	GLN
8	C	41	ASN
8	C	129	HIS
9	D	47	GLN
9	D	103	ASN
9	D	133	ASN
10	E	15	GLN

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Mol	Chain	Res	Type
10	E	106	ASN
10	E	143	GLN
10	E	150	GLN
11	F	80	GLN
12	G	64	ASN
13	H	8	ASN
13	H	55	GLN
13	H	58	HIS
13	H	59	ASN
13	H	69	ASN
13	H	74	ASN
13	H	80	ASN
13	H	91	HIS
13	H	126	HIS
13	H	137	ASN
13	H	166	ASN
14	I	107	ASN
15	J	10	GLN
15	J	42	ASN
16	K	18	HIS
16	K	41	HIS
16	K	42	ASN
16	K	43	HIS
16	K	58	GLN
17	L	26	HIS
17	L	58	GLN
17	L	78	ASN
17	L	89	ASN
17	L	176	GLN
18	M	40	ASN
18	M	93	GLN
18	M	107	ASN
18	M	119	GLN
18	M	153	GLN
19	N	105	ASN
20	O	50	GLN
20	O	66	GLN
21	P	16	ASN
21	P	40	HIS
22	Q	61	GLN
22	Q	94	ASN
22	Q	98	ASN

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Mol	Chain	Res	Type
22	Q	113	HIS
23	R	21	GLN
23	R	51	GLN
24	S	43	ASN
25	T	39	ASN
25	T	48	ASN
26	U	60	GLN
27	V	6	GLN
27	V	59	GLN
27	V	87	HIS
27	V	110	GLN
27	V	119	HIS
27	V	125	HIS
27	V	141	HIS
28	W	23	HIS
29	X	119	GLN
29	X	133	HIS
29	X	134	HIS
29	X	149	GLN
29	X	189	ASN
31	Z	16	HIS
31	Z	28	HIS

### 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	0	2745/2922 (93%)	542 (19%)	360 (13%)
5	9	121/122 (99%)	27 (22%)	14 (11%)
All	All	2866/3044 (94%)	569 (19%)	374 (13%)

All (569) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	0	24	G
1	0	25	A
1	0	31	C
1	0	32	G
1	0	46	U
1	0	47	G
1	0	56	G
1	0	60	A

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Mol	Chain	Res	Type
1	0	67	A
1	0	68	U
1	0	69	A
1	0	70	A
1	0	71	G
1	0	81	G
1	0	86	A
1	0	87	C
1	0	88	G
1	0	95	A
1	0	96	A
1	0	97	G
1	0	98	A
1	0	114	A
1	0	115	U
1	0	116	G
1	0	120	A
1	0	130	C
1	0	139	C
1	0	140	G
1	0	141	C
1	0	142	G
1	0	151	A
1	0	166	A
1	0	174	A
1	0	175	G
1	0	186	A
1	0	191	A
1	0	192	A
1	0	193	A
1	0	198	A
1	0	199	A
1	0	212	A
1	0	213	G
1	0	219	G
1	0	220	C
1	0	237	G
1	0	247	A
1	0	248	A
1	0	262	A
1	0	263	U
1	0	264	G

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Mol	Chain	Res	Type
1	0	265	U
1	0	271	C
1	0	272	A
1	0	273	G
1	0	283	U
1	0	284	C
1	0	285	A
1	0	307	G
1	0	308	U
1	0	309	C
1	0	317	A
1	0	318	C
1	0	329	A
1	0	330	C
1	0	331	A
1	0	336	G
1	0	337	A
1	0	338	C
1	0	340	A
1	0	345	G
1	0	357	A
1	0	358	G
1	0	359	U
1	0	379	G
1	0	380	A
1	0	381	G
1	0	397	A
1	0	410	A
1	0	411	A
1	0	412	C
1	0	417	G
1	0	418	C
1	0	441	A
1	0	448	G
1	0	449	A
1	0	452	G
1	0	453	A
1	0	454	U
1	0	455	A
1	0	460	A
1	0	461	C
1	0	462	A

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Mol	Chain	Res	Type
1	0	463	A
1	0	464	G
1	0	481	U
1	0	485	A
1	0	486	A
1	0	487	G
1	0	488	U
1	0	497	A
1	0	498	A
1	0	511	A
1	0	514	G
1	0	533	U
1	0	534	C
1	0	535	G
1	0	536	A
1	0	537	G
1	0	538	C
1	0	539	G
1	0	542	A
1	0	545	G
1	0	549	A
1	0	553	G
1	0	555	U
1	0	559	U
1	0	587	A
1	0	588	G
1	0	604	G
1	0	605	C
1	0	620	A
1	0	628	A
1	0	629	A
1	0	631	A
1	0	632	A
1	0	661	G
1	0	673	U
1	0	674	A
1	0	675	U
1	0	681	G
1	0	682	A
1	0	688	A
1	0	689	G
1	0	698	A

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Mol	Chain	Res	Type
1	0	701	U
1	0	702	G
1	0	713	U
1	0	714	U
1	0	734	U
1	0	746	A
1	0	747	G
1	0	759	C
1	0	761	A
1	0	762	C
1	0	778	C
1	0	809	G
1	0	817	G
1	0	819	A
1	0	820	G
1	0	821	U
1	0	831	U
1	0	832	U
1	0	835	U
1	0	840	U
1	0	845	U
1	0	846	A
1	0	856	G
1	0	868	G
1	0	869	G
1	0	870	G
1	0	871	G
1	0	872	U
1	0	875	A
1	0	876	A
1	0	877	G
1	0	878	G
1	0	882	A
1	0	883	U
1	0	884	C
1	0	885	G
1	0	886	A
1	0	887	G
1	0	893	C
1	0	894	A
1	0	895	A
1	0	898	G

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Mol	Chain	Res	Type
1	0	904	U
1	0	905	C
1	0	920	C
1	0	921	G
1	0	923	A
1	0	938	G
1	0	939	A
1	0	940	G
1	0	942	U
1	0	943	A
1	0	953	G
1	0	954	U
1	0	960	G
1	0	961	A
1	0	1006	A
1	0	1008	C
1	0	1009	U
1	0	1010	C
1	0	1029	U
1	0	1030	U
1	0	1032	A
1	0	1044	C
1	0	1045	G
1	0	1059	G
1	0	1060	C
1	0	1071	G
1	0	1072	G
1	0	1081	A
1	0	1083	C
1	0	1087	G
1	0	1088	A
1	0	1105	C
1	0	1106	A
1	0	1108	G
1	0	1109	U
1	0	1110	G
1	0	1117	A
1	0	1118	A
1	0	1119	G
1	0	1120	U
1	0	1124	A
1	0	1126	C

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Mol	Chain	Res	Type
1	0	1127	C
1	0	1128	U
1	0	1129	C
1	0	1130	U
1	0	1138	G
1	0	1149	U
1	0	1150	A
1	0	1151	G
1	0	1162	G
1	0	1164	U
1	0	1165	G
1	0	1166	A
1	0	1174	A
1	0	1175	G
1	0	1193	A
1	0	1194	A
1	0	1206	U
1	0	1214	G
1	0	1216	G
1	0	1230	A
1	0	1231	A
1	0	1233	A
1	0	1234	U
1	0	1235	G
1	0	1236	A
1	0	1238	C
1	0	1239	G
1	0	1242	A
1	0	1245	C
1	0	1247	A
1	0	1248	A
1	0	1261	A
1	0	1279	U
1	0	1287	A
1	0	1289	C
1	0	1290	G
1	0	1291	A
1	0	1314	U
1	0	1315	G
1	0	1316	G
1	0	1340	G
1	0	1342	C

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Mol	Chain	Res	Type
1	0	1352	A
1	0	1353	C
1	0	1354	G
1	0	1355	A
1	0	1356	A
1	0	1357	A
1	0	1358	A
1	0	1360	C
1	0	1369	A
1	0	1370	G
1	0	1376	G
1	0	1377	C
1	0	1378	G
1	0	1379	A
1	0	1381	A
1	0	1382	G
1	0	1393	A
1	0	1408	U
1	0	1409	G
1	0	1417	G
1	0	1418	U
1	0	1419	U
1	0	1426	C
1	0	1427	A
1	0	1431	C
1	0	1435	U
1	0	1439	C
1	0	1447	U
1	0	1448	A
1	0	1451	C
1	0	1473	U
1	0	1474	C
1	0	1485	A
1	0	1486	A
1	0	1487	A
1	0	1489	G
1	0	1492	A
1	0	1494	A
1	0	1505	U
1	0	1506	U
1	0	1507	C
1	0	1524	U

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Mol	Chain	Res	Type
1	0	1525	G
1	0	1526	A
1	0	1527	A
1	0	1533	A
1	0	1534	C
1	0	1562	C
1	0	1564	C
1	0	1580	A
1	0	1589	G
1	0	1592	G
1	0	1604	G
1	0	1605	G
1	0	1606	A
1	0	1617	C
1	0	1618	G
1	0	1624	A
1	0	1625	U
1	0	1626	A
1	0	1633	C
1	0	1634	G
1	0	1653	A
1	0	1654	U
1	0	1656	A
1	0	1664	A
1	0	1667	A
1	0	1677	U
1	0	1678	A
1	0	1682	A
1	0	1684	A
1	0	1686	C
1	0	1691	A
1	0	1692	C
1	0	1693	A
1	0	1701	A
1	0	1702	U
1	0	1711	A
1	0	1722	U
1	0	1723	G
1	0	1725	C
1	0	1731	C
1	0	1745	G
1	0	1746	A

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Mol	Chain	Res	Type
1	0	1747	A
1	0	1759	A
1	0	1760	G
1	0	1772	C
1	0	1776	A
1	0	1777	G
1	0	1778	A
1	0	1784	U
1	0	1785	G
1	0	1798	C
1	0	1814	G
1	0	1815	A
1	0	1820	G
1	0	1829	A
1	0	1836	A
1	0	1837	G
1	0	1840	A
1	0	1841	C
1	0	1842	A
1	0	1855	G
1	0	1856	C
1	0	1857	A
1	0	1858	A
1	0	1871	U
1	0	1872	C
1	0	1873	G
1	0	1875	A
1	0	1876	C
1	0	1877	G
1	0	1885	A
1	0	1895	A
1	0	1904	A
1	0	1919	A
1	0	1920	C
1	0	1942	A
1	0	1968	A
1	0	1971	G
1	0	1973	A
1	0	1974	G
1	0	1978	A
1	0	1979	G
1	0	1980	U

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Mol	Chain	Res	Type
1	0	1981	A
1	0	1982	C
1	0	1984	U
1	0	1985	U
1	0	1986	G
1	0	1996	U
1	0	1997	A
1	0	2005	G
1	0	2006	C
1	0	2007	A
1	0	2008	U
1	0	2012	U
1	0	2013	G
1	0	2021	C
1	0	2022	A
1	0	2033	G
1	0	2034	U
1	0	2037	C
1	0	2038	A
1	0	2072	G
1	0	2073	G
1	0	2074	A
1	0	2075	G
1	0	2076	U
1	0	2077	C
1	0	2093	G
1	0	2096	A
1	0	2101	A
1	0	2102	G
1	0	2103	A
1	0	2108	A
1	0	2109	U
1	0	2110	G
1	0	2133	U
1	0	2134	G
1	0	2243	C
1	0	2271	G
1	0	2272	G
1	0	2282	U
1	0	2283	G
1	0	2284	G
1	0	2291	A

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Mol	Chain	Res	Type
1	0	2293	G
1	0	2300	A
1	0	2301	A
1	0	2317	C
1	0	2321	A
1	0	2322	U
1	0	2323	G
1	0	2331	C
1	0	2354	A
1	0	2355	G
1	0	2361	A
1	0	2368	A
1	0	2369	A
1	0	2370	A
1	0	2371	G
1	0	2378	U
1	0	2379	G
1	0	2380	A
1	0	2381	C
1	0	2391	C
1	0	2392	C
1	0	2394	A
1	0	2395	A
1	0	2444	U
1	0	2462	G
1	0	2463	A
1	0	2464	C
1	0	2465	A
1	0	2466	G
1	0	2467	A
1	0	2469	A
1	0	2470	A
1	0	2474	A
1	0	2475	C
1	0	2476	C
1	0	2480	G
1	0	2482	G
1	0	2483	A
1	0	2484	U
1	0	2485	A
1	0	2493	C
1	0	2494	G

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Mol	Chain	Res	Type
1	0	2509	A
1	0	2511	A
1	0	2525	G
1	0	2526	C
1	0	2532	A
1	0	2533	C
1	0	2537	G
1	0	2538	A
1	0	2539	U
1	0	2540	G
1	0	2541	U
1	0	2553	A
1	0	2554	U
1	0	2555	C
1	0	2564	G
1	0	2577	A
1	0	2578	G
1	0	2589	U
1	0	2601	A
1	0	2602	G
1	0	2608	C
1	0	2613	G
1	0	2616	G
1	0	2617	G
1	0	2621	U
1	0	2637	A
1	0	2638	G
1	0	2645	U
1	0	2648	U
1	0	2649	A
1	0	2650	U
1	0	2664	A
1	0	2680	A
1	0	2681	A
1	0	2682	C
1	0	2691	A
1	0	2692	G
1	0	2719	A
1	0	2726	U
1	0	2747	C
1	0	2748	G
1	0	2761	A

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Mol	Chain	Res	Type
1	0	2762	C
1	0	2768	A
1	0	2785	C
1	0	2786	G
1	0	2787	C
1	0	2791	U
1	0	2792	A
1	0	2800	A
1	0	2801	A
1	0	2811	A
1	0	2812	A
1	0	2813	A
1	0	2814	A
1	0	2815	G
1	0	2816	A
1	0	2826	G
1	0	2838	A
1	0	2850	C
1	0	2851	G
1	0	2852	A
1	0	2853	U
1	0	2866	U
1	0	2876	G
1	0	2889	U
1	0	2890	A
1	0	2896	A
1	0	2897	C
1	0	2903	C
1	0	2909	G
1	0	2914	A
5	9	2	U
5	9	4	G
5	9	7	G
5	9	10	C
5	9	11	A
5	9	12	C
5	9	13	A
5	9	14	G
5	9	22	G
5	9	23	U
5	9	24	U
5	9	25	G

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Mol	Chain	Res	Type
5	9	26	C
5	9	34	A
5	9	41	C
5	9	43	G
5	9	44	A
5	9	51	A
5	9	52	A
5	9	56	A
5	9	57	A
5	9	66	G
5	9	77	A
5	9	78	G
5	9	88	G
5	9	114	G
5	9	122	C

All (374) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	0	24	G
1	0	30	U
1	0	31	C
1	0	45	A
1	0	46	U
1	0	56	G
1	0	59	A
1	0	66	G
1	0	67	A
1	0	68	U
1	0	70	A
1	0	80	A
1	0	86	A
1	0	87	C
1	0	95	A
1	0	96	A
1	0	97	G
1	0	114	A
1	0	115	U
1	0	129	A
1	0	139	C
1	0	141	C
1	0	147	G

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Mol	Chain	Res	Type
1	0	166	A
1	0	169	A
1	0	174	A
1	0	175	G
1	0	185	G
1	0	191	A
1	0	192	A
1	0	196	G
1	0	198	A
1	0	200	U
1	0	203	G
1	0	212	A
1	0	220	C
1	0	236	A
1	0	247	A
1	0	262	A
1	0	263	U
1	0	264	G
1	0	271	C
1	0	284	C
1	0	307	G
1	0	317	A
1	0	318	C
1	0	328	U
1	0	329	A
1	0	330	C
1	0	336	G
1	0	337	A
1	0	338	C
1	0	339	A
1	0	357	A
1	0	358	G
1	0	379	G
1	0	380	A
1	0	381	G
1	0	410	A
1	0	411	A
1	0	417	G
1	0	441	A
1	0	448	G
1	0	452	G
1	0	453	A

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Mol	Chain	Res	Type
1	0	454	U
1	0	460	A
1	0	461	C
1	0	463	A
1	0	464	G
1	0	480	C
1	0	485	A
1	0	487	G
1	0	496	G
1	0	512	G
1	0	518	G
1	0	533	U
1	0	535	G
1	0	537	G
1	0	538	C
1	0	554	G
1	0	587	A
1	0	603	A
1	0	604	G
1	0	628	A
1	0	630	A
1	0	631	A
1	0	644	G
1	0	660	A
1	0	672	G
1	0	673	U
1	0	674	A
1	0	681	G
1	0	688	A
1	0	701	U
1	0	713	U
1	0	746	A
1	0	760	G
1	0	761	A
1	0	766	A
1	0	776	A
1	0	777	U
1	0	817	G
1	0	819	A
1	0	831	U
1	0	834	G
1	0	845	U

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Mol	Chain	Res	Type
1	0	855	U
1	0	857	A
1	0	867	A
1	0	868	G
1	0	869	G
1	0	871	G
1	0	875	A
1	0	877	G
1	0	882	A
1	0	884	C
1	0	885	G
1	0	886	A
1	0	893	C
1	0	894	A
1	0	898	G
1	0	904	U
1	0	923	A
1	0	938	G
1	0	939	A
1	0	942	U
1	0	952	G
1	0	953	G
1	0	1009	U
1	0	1029	U
1	0	1030	U
1	0	1031	G
1	0	1044	C
1	0	1059	G
1	0	1071	G
1	0	1072	G
1	0	1080	C
1	0	1087	G
1	0	1105	C
1	0	1108	G
1	0	1117	A
1	0	1119	G
1	0	1123	A
1	0	1126	C
1	0	1128	U
1	0	1137	G
1	0	1149	U
1	0	1150	A

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Mol	Chain	Res	Type
1	0	1151	G
1	0	1164	U
1	0	1193	A
1	0	1215	A
1	0	1230	A
1	0	1232	A
1	0	1234	U
1	0	1235	G
1	0	1237	U
1	0	1246	A
1	0	1247	A
1	0	1260	G
1	0	1290	G
1	0	1314	U
1	0	1315	G
1	0	1316	G
1	0	1340	G
1	0	1341	A
1	0	1351	G
1	0	1352	A
1	0	1354	G
1	0	1355	A
1	0	1356	A
1	0	1357	A
1	0	1369	A
1	0	1370	G
1	0	1376	G
1	0	1377	C
1	0	1378	G
1	0	1379	A
1	0	1380	U
1	0	1381	A
1	0	1392	A
1	0	1405	U
1	0	1406	A
1	0	1407	A
1	0	1408	U
1	0	1417	G
1	0	1418	U
1	0	1426	C
1	0	1430	G
1	0	1431	C

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Mol	Chain	Res	Type
1	0	1435	U
1	0	1438	G
1	0	1446	U
1	0	1447	U
1	0	1448	A
1	0	1450	C
1	0	1473	U
1	0	1485	A
1	0	1486	A
1	0	1488	U
1	0	1491	G
1	0	1494	A
1	0	1505	U
1	0	1506	U
1	0	1524	U
1	0	1526	A
1	0	1533	A
1	0	1534	C
1	0	1563	G
1	0	1579	C
1	0	1591	A
1	0	1603	A
1	0	1604	G
1	0	1605	G
1	0	1617	C
1	0	1652	C
1	0	1653	A
1	0	1654	U
1	0	1664	A
1	0	1677	U
1	0	1683	G
1	0	1684	A
1	0	1685	A
1	0	1690	C
1	0	1691	A
1	0	1692	C
1	0	1693	A
1	0	1701	A
1	0	1702	U
1	0	1710	A
1	0	1722	U
1	0	1730	G

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Mol	Chain	Res	Type
1	0	1731	C
1	0	1745	G
1	0	1746	A
1	0	1752	G
1	0	1759	A
1	0	1771	U
1	0	1772	C
1	0	1776	A
1	0	1777	G
1	0	1784	U
1	0	1814	G
1	0	1836	A
1	0	1837	G
1	0	1840	A
1	0	1842	A
1	0	1855	G
1	0	1856	C
1	0	1857	A
1	0	1871	U
1	0	1872	C
1	0	1875	A
1	0	1876	C
1	0	1884	G
1	0	1894	C
1	0	1919	A
1	0	1941	A
1	0	1970	G
1	0	1977	U
1	0	1978	A
1	0	1979	G
1	0	1980	U
1	0	1981	A
1	0	1984	U
1	0	1985	U
1	0	1995	G
1	0	1996	U
1	0	2005	G
1	0	2007	A
1	0	2011	A
1	0	2021	C
1	0	2033	G
1	0	2037	C

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Mol	Chain	Res	Type
1	0	2072	G
1	0	2073	G
1	0	2074	A
1	0	2076	U
1	0	2092	G
1	0	2102	G
1	0	2108	A
1	0	2133	U
1	0	2243	C
1	0	2258	A
1	0	2271	G
1	0	2282	U
1	0	2283	G
1	0	2290	U
1	0	2292	C
1	0	2300	A
1	0	2309	C
1	0	2316	G
1	0	2320	U
1	0	2321	A
1	0	2322	U
1	0	2330	U
1	0	2353	A
1	0	2354	A
1	0	2367	A
1	0	2370	A
1	0	2378	U
1	0	2379	G
1	0	2380	A
1	0	2391	C
1	0	2394	A
1	0	2443	C
1	0	2462	G
1	0	2463	A
1	0	2465	A
1	0	2469	A
1	0	2474	A
1	0	2482	G
1	0	2483	A
1	0	2484	U
1	0	2493	C
1	0	2525	G

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Mol	Chain	Res	Type
1	0	2526	C
1	0	2532	A
1	0	2538	A
1	0	2539	U
1	0	2553	A
1	0	2554	U
1	0	2577	A
1	0	2601	A
1	0	2607	U
1	0	2616	G
1	0	2620	U
1	0	2636	C
1	0	2637	A
1	0	2644	C
1	0	2645	U
1	0	2648	U
1	0	2649	A
1	0	2680	A
1	0	2681	A
1	0	2691	A
1	0	2718	C
1	0	2747	C
1	0	2748	G
1	0	2749	U
1	0	2761	A
1	0	2762	C
1	0	2785	C
1	0	2786	G
1	0	2791	U
1	0	2811	A
1	0	2812	A
1	0	2813	A
1	0	2814	A
1	0	2815	G
1	0	2825	C
1	0	2837	U
1	0	2849	U
1	0	2850	C
1	0	2852	A
1	0	2866	U
1	0	2889	U
1	0	2896	A

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Mol	Chain	Res	Type
1	0	2902	A
5	9	3	A
5	9	10	C
5	9	12	C
5	9	13	A
5	9	23	U
5	9	24	U
5	9	33	U
5	9	43	G
5	9	51	A
5	9	55	U
5	9	65	A
5	9	78	G
5	9	87	U
5	9	113	C

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

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

## 5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

## 5.6 Ligand geometry [i](#)

Of 232 ligands modelled in this entry, 232 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

## 5.7 Other polymers [i](#)

There are no such residues in this entry.

## 5.8 Polymer linkage issues

There are no chain breaks in this entry.

## 6 Fit of model and data

### 6.1 Protein, DNA and RNA chains

EDS was not executed - this section is therefore empty.

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

EDS was not executed - this section is therefore empty.

### 6.3 Carbohydrates

EDS was not executed - this section is therefore empty.

### 6.4 Ligands

EDS was not executed - this section is therefore empty.

### 6.5 Other polymers

EDS was not executed - this section is therefore empty.