



Full wwPDB X-ray Structure Validation Report ⓘ

Dec 10, 2023 – 12:25 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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

MolProbity : 4.02b-467
Xtrriage (Phenix) : **NOT EXECUTED**
EDS : **NOT EXECUTED**
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36

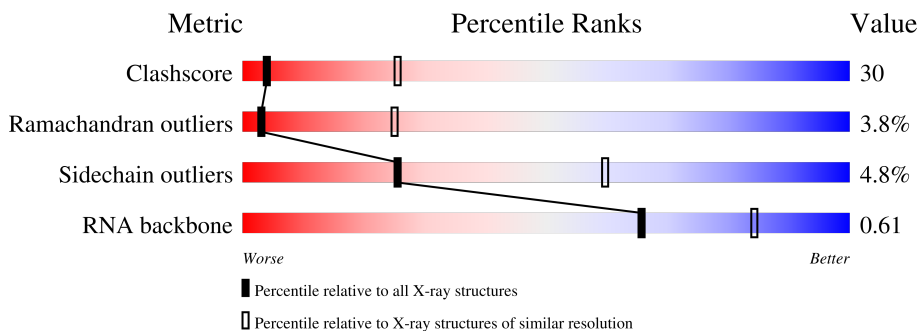
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.50 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	141614	1036 (3.58-3.42)
Ramachandran outliers	138981	1005 (3.58-3.42)
Sidechain outliers	138945	1006 (3.58-3.42)
RNA backbone	3102	1002 (4.00-3.00)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$

Note EDS was not executed.

Mol	Chain	Length	Quality of chain
1	0	2922	32% 43% 13% 6% 6%
2	1	48	38% 56% . .
3	2	92	39% 57% .
4	5	144	9% 14% . 76%
5	9	122	26% 51% 16% 7%
6	A	239	41% 51% 8%

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Mol	Chain	Length	Quality of chain
7	B	337	39% 55% 6%
8	C	246	46% 48% 6%
9	D	176	27% 44% 9% 20%
10	E	177	49% 45% ...
11	F	119	47% 50% .
12	G	348	5% . 91%
13	H	167	29% 56% 8% . 7%
14	I	145	40% 52% 6% ..
15	J	132	52% 45% .
16	K	164	40% 43% 6% 11%
17	L	194	26% 69% 5% .
18	M	186	37% 57% 6%
19	N	115	58% 39% .
20	O	148	56% 38% . .
21	P	95	48% 46% . .
22	Q	154	54% 39% 5% .
23	R	84	48% 50% .
24	S	119	42% 55% .
25	T	66	36% 41% 5% 18%
26	U	70	37% 56% . 6%
27	V	154	44% 51% 5%
28	W	91	41% 41% 10% 9%
29	X	240	27% 30% . 40%
30	Y	73	34% 58% 8%
31	Z	56	36% 62% .

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 i

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
			Total	C	N	O	P			
1	0	2754	59017	26346	10878	19048	2745	0	0	0

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

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

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

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

- Molecule 4 is a protein called TRIGGER FACTOR.

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

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

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

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

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

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

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

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
			Total	C	N	O	S			
8	C	246	1859	1131	344	383	1	0	0	0

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

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

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

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

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

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

- 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	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
			Total	C	N	O			
19	N	115	865	529	161	175	0	0	0

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

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

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

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

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

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

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

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

- Molecule 24 is a protein called RIBOSOMAL PROTEIN L24.

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

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

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

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

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

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

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

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

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

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

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

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

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

- Molecule 31 is a protein called RIBOSOMAL PROTEIN L37E.

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

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

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
32	0	105	Total Mg 105 105	0	0
32	2	1	Total Mg 1 1	0	0
32	9	2	Total Mg 2 2	0	0

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
36	2	1	Total Cd 1 1	0	0
36	N	1	Total Cd 1 1	0	0
36	T	1	Total Cd 1 1	0	0
36	Y	1	Total Cd 1 1	0	0
36	Z	1	Total Cd 1 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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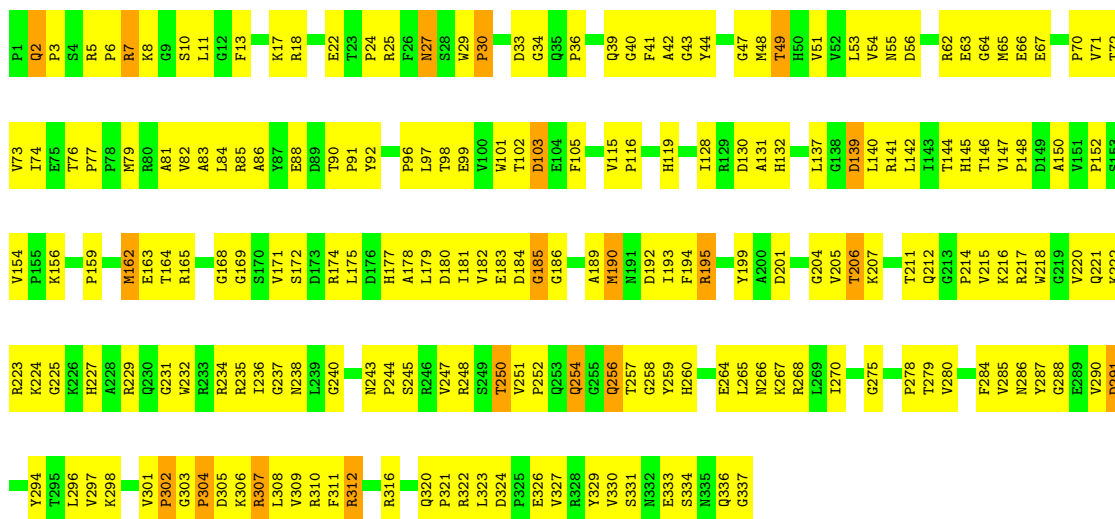
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
37	S	36	Total O 36 36	0	0
37	T	25	Total O 25 25	0	0
37	U	11	Total O 11 11	0	0
37	V	69	Total O 69 69	0	0
37	W	26	Total O 26 26	0	0
37	X	107	Total O 107 107	0	0
37	Y	35	Total O 35 35	0	0
37	Z	50	Total O 50 50	0	0

A1845	A1846	A1847	A1848	G1849	U1850	A1851	A1852	A1853	C1854	G1855	A1856	A1857	A1858	U1859	A1860	A1861	C1862	G1863	A1866	A1867	A1868	A1869	C1870	A1871	A1872	A1873	A1874	A1875	C1876	A1877	A1878	C1880	A1881	C1882	U1883	A1884	A1885	A1886	U1890	C1893	A1894	A1895	A1896	A1897	G1898	A1899	U1901	U1902	U1903	A1904	U1905	C1906	A1909												
U1770	U1771	C1772	G1773	G1774	A1775	A1776	G1777	C1778	A1779	A1783	U1784	G1785	C1786	A1787	A1788	U1789	C1790	U1791	C1792	G1795	A1796	A1797	C1798	C1803	A1804	G1805	G1809	C1810	A1811	G1812	U1813	G1814	A1815	C1816	U1817	C1818	U1819	G1820	G1827	G1828	A1829	C1830	G1831	G1832	U1833	A1834	U1835	A1836	U1837	U1838	A1839	A1840	A1841	A1842											
U1696	G1697	C1700	A1701	A1702	G1703	C1708	A1709	A1710	A1711	A1712	G1713	A1717	G1718	U1719	C1720	C1721	A1722	G1723	U1724	A1725	A1726	G1727	C1730	C1731	A1735	A1736	A1737	U1741	A1742	G1745	A1746	U1747	U1748	U1749	U1750	G1751	G1752	A1753	A1754	A1755	G1756	U1757	U1758	A1759	U1760	U1761	C1762	C1763	A1624	U1766	C1769														
A1630	C1633	U1634	G1635	G1636	A1637	A1641	A1642	C1643	G1646	G1647	U1648	U1649	C1650	C1651	C1652	A1653	U1654	U1655	A1656	A1657	A1658	A1661	C1662	G1663	A1664	G1665	C1666	A1667	U1668	U1672	U1673	C1674	C1675	U1676	U1677	A1678	C1679	C1680	G1681	A1682	U1683	A1684	A1685	C1686	C1687	G1688	U1689	A1690	A1691	C1692	A1693	A1694	A1695												
A1471	C1472	U1473	C1474	A1475	A1476	C1477	U1478	A1482	A1483	G1484	A1485	A1486	A1487	U1488	U1489	G1490	G1491	A1492	A1493	A1494	A1495	A1496	G1497	U1500	A1501	U1502	U1503	C1504	U1505	U1506	C1507	G1510	U1511	U1512	C1513	A1514	A1515	C1516	A1522	G1523	U1524	A1525	A1526	A1527	A1528	G1532	A1533	C1534	G1543	U1544	C1545	C1553													
G1401	C1405	U1406	A1407	A1408	G1409	U1412	A1413	A1414	G1415	G1416	G1417	U1418	U1419	U1422	C1423	A1424	G1425	A1426	A1427	G1430	C1431	A1432	A1433	A1434	A1435	A1436	A1437	A1438	A1439	A1440	U1441	U1442	G1443	G1444	U1445	U1446	U1447	U1448	G1449	C1450	C1451	G1452	G1453	A1457	A1458	A1459	G1460	U1461	A1462	A1463	C1467	U1468	A1469	A1470											
C1332	U1333	C1334	C1335	U1336	A1337	U1338	G1339	U1340	A1341	C1342	C1343	U1346	U1347	A1348	G1351	A1352	C1353	G1354	A1355	A1356	A1357	U1358	U1359	C1360	C1361	C1366	A1367	U1368	A1369	U1370	U1371	A1372	G1373	U1306	A1307	A1375	G1376	C1377	U1378	A1379	A1380	A1381	G1382	G1386	U1387	U1388	G1389	A1392	A1393	C1394	C1397	U1398	A1399	C1400											
C1282	G1285	C1286	C1287	A1288	U1289	A1290	U1291	C1292	U1293	A1294	G1295	A1296	U1297	U1298	G1299	G1302	U1303	U1304	U1305	U1306	U1307	U1309	U1310	U1311	U1312	U1313	U1314	U1315	U1316	U1317	U1318	U1319	A1321	G1325	U1326	G1327	A1328	A1329	A1330	A1331	A1332	A1333	A1334	A1335	A1336	A1337	A1338	A1339	A1340																
G1038	G1039	A1040	U1041	U1042	C1043	G1044	G1045	A1046	C1051	G1052	G1053	G1054	G1055	U1056	A1057	A1058	G1059	C1060	U1066	A1067	C1068	C1069	A1070	G1071	A1072	A1073	U1076	G1077	C1080	A1081	A1082	C1083	G1084	C1085	A1086	G1087	A1088	G1089	U1096	A1097	A1098	G1099	G1100	C1104	C1105	A1106	A1107	U1108	U1109	G1110	U1111														
A1114	U1115	A1116	A1117	A1118	G1119	U1120	U1121	U1122	A1123	A1124	C1125	U1126	C1127	U1128	U1129	G1131	A1132	A1133	G1134	G1135	U1136	G1137	G1138	C1148	U1149	A1150	A1151	A1152	C1153	A1154	U1155	G1156	C1157	A1158	G1159	G1160	A1161	G1162	U1163	U1164	G1165	A1166	G1167	C1168	U1169	U1172	A1173	A1174	G1175	U1180	A1181	C1182	C1183	U1185											
C1186	U1187	A1188	A1189	U1190	A1191	A1192	A1193	A1194	G1195	A1196	G1197	C1201	A1202	U1205	A1207	C1208	C1209	G1210	G1211	C1212	C1213	G1214	A1215	A1216	U1217	U1218	U1219	U1220	U1221	U1222	U1223	U1224	U1225	U1226	U1227	U1228	U1229	U1230	U1231	U1232	U1233	U1234	U1235	U1236	U1237	U1238	U1239	U1240	U1241	U1242	U1243	U1244	U1245	U1246	U1247	U1248	U1249	C1250	C1251	A1252	C1253	C1254	C1257	G1260	A1261
U903	U904	C905	C906	A907	A908	U909	C910	G911	U919	A946	G920	G921	A922	A923	U924	C925	A926	C931	U932	C933	C934	G935	C938	A939	G940	G941	U942	A943	U944	U945	U946	U947	G948	C952	G953	U954	A955	G956	G957	C958	C959	G960	U961	C962	C963	G964	C968	A969	C996	U970	U971	U972	U973	U974	U975	U976	U977	U978	U979	U980					
A835	A836	U837	U840	U841	C842	A843	A844	U845	A846	C847	C848	C849	U850	U851	U852	U853	U854	U855	A856	A857	U858	C859	U860	A861	A867	G868	G869	G870	G871	U872	A875	A876	G877	G878	C881	A882	U883	A884	G885	A886	G887	U888	U889	A894	A895	C896	A897	U898	U899	U900	G902														



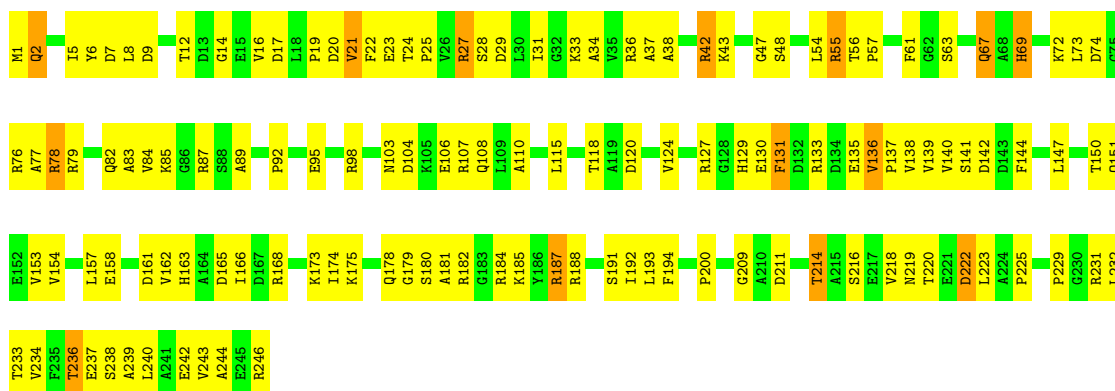
- Molecule 7: 50S RIBOSOMAL PROTEIN L3P

Chain B: 39% 55% 6%



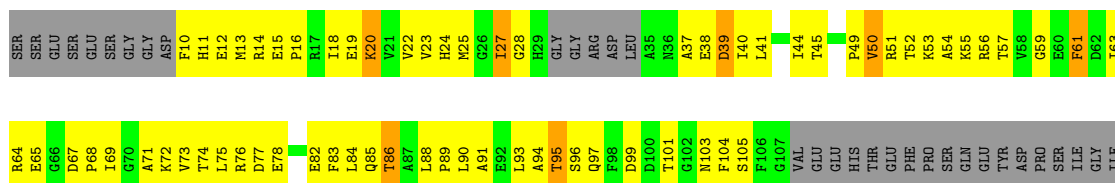
- Molecule 8: 50S RIBOSOMAL PROTEIN L4P

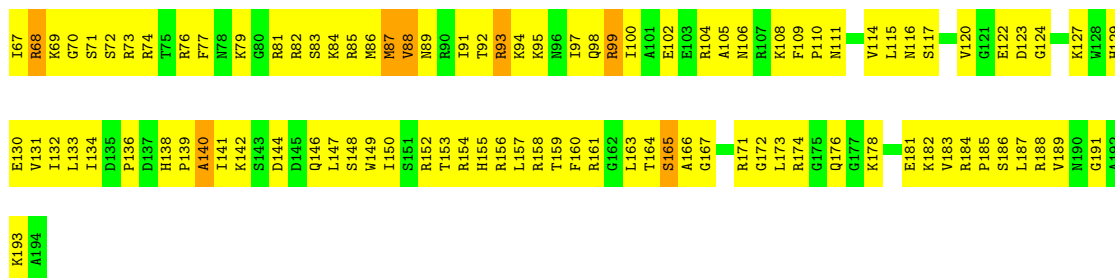
Chain C: 46% 48% 6%



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

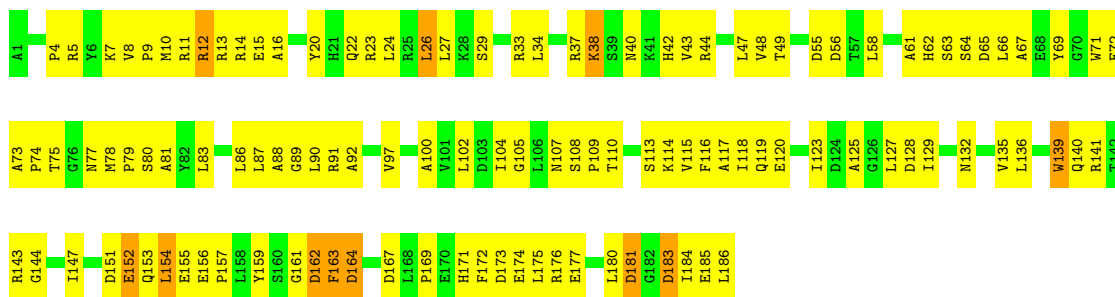
Chain D: 27% 44% 9% 20%





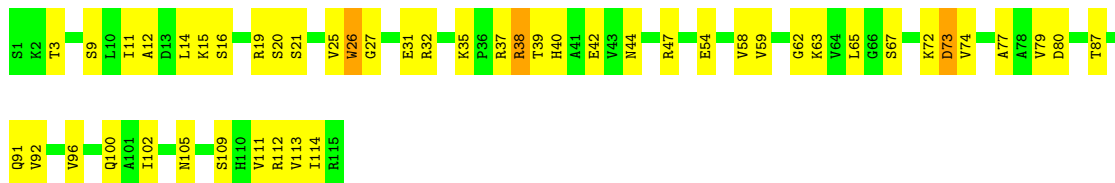
- Molecule 18: 50S RIBOSOMAL PROTEIN L18P

Chain M: 37% 57% 6%



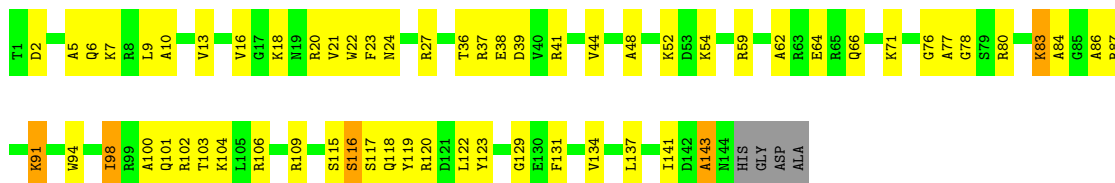
- Molecule 19: 50S RIBOSOMAL PROTEIN L18E

Chain N: 58% 39% 3%



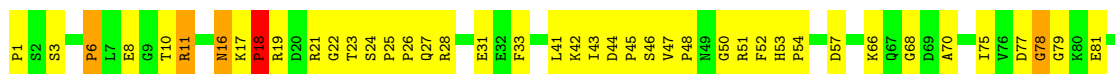
- Molecule 20: 50S RIBOSOMAL PROTEIN L19E

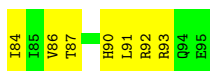
Chain O: 56% 38% 6%



- Molecule 21: 50S RIBOSOMAL PROTEIN L21E

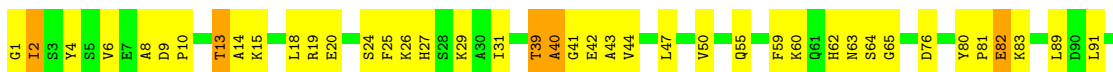
Chain P: 48% 46% 6%





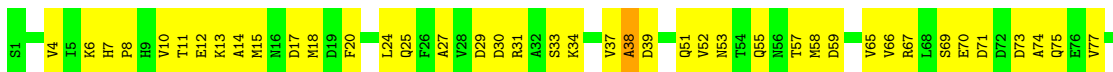
- Molecule 22: 50S RIBOSOMAL PROTEIN L22P HMAL22, HL23, RIBOSOMAL PROTEIN L22

Chain Q: 54% 39% 5%



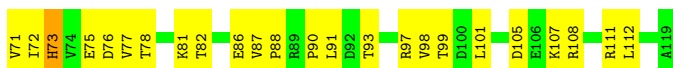
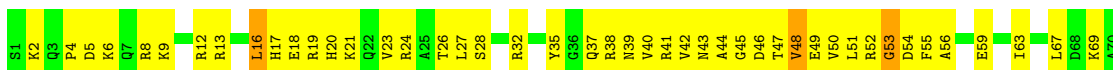
- Molecule 23: 50S RIBOSOMAL PROTEIN L23P

Chain R: 48% 50%



- Molecule 24: RIBOSOMAL PROTEIN L24

Chain S: 42% 55%



- Molecule 25: 50S RIBOSOMAL PROTEIN L24P

Chain T: 36% 41% 5% 18%



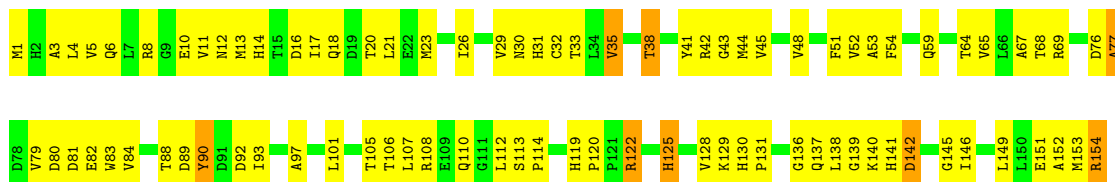
- Molecule 26: 50S RIBOSOMAL PROTEIN L24E

Chain U: 37% 56% 6%



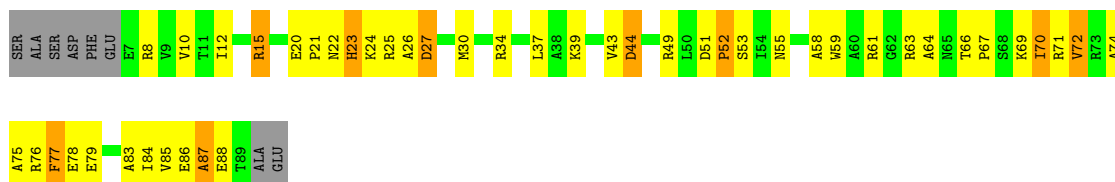
- Molecule 27: 50S RIBOSOMAL PROTEIN L30P

Chain V: 44% 51% 5%



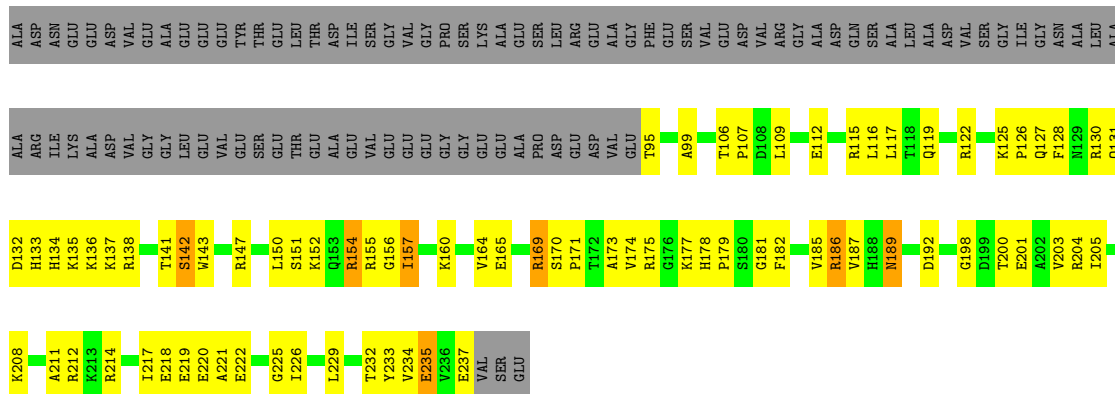
- Molecule 28: 50S RIBOSOMAL PROTEIN L31E

Chain W: 41% 41% 10% 9%



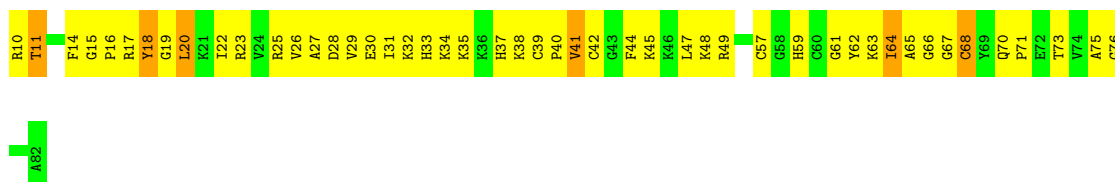
- Molecule 29: 50S RIBOSOMAL PROTEIN L32E

Chain X: 27% 30% 40%



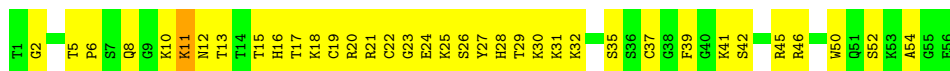
- Molecule 30: 50S RIBOSOMAL PROTEIN L37AE

Chain Y: 34% 58% 8%



- Molecule 31: RIBOSOMAL PROTEIN L37E

Chain Z: 36% 62%



4 Data and refinement statistics

Xtrriage (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, α , β , γ	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.	Xtrriage
Total number of atoms	98859	wwPDB-VP
Average B, all atoms (Å ²)	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: MG, CL, NA, CD, K

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	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:H	9:D:154:LYS:HD2	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:HB3	28:W:15:ARG:HH11	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
1:0:1473:U:H1'	31:Z:42:SER:HB2	1.45	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
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:NE2	15:J:10:GLN:H	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
1:0:871:G:H5'	1:0:871:G:C8	2.05	0.91
1:0:2716:G:H5''	7:B:206:THR:HG21	1.49	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)
37:0:7857: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
1:0:1315:G:H4'	1:0:1316: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
1:0:1116:U:HO2'	1:0:1118:A:H2	0.94	0.88
1:0:21: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
37:0:4071:HOH:O	9:D:99:ASP:HA	1.73	0.88
19:N:32:ARG:O	19:N:32:ARG:HD3	1.72	0.88
1:0:1378:G:H4'	1:0:1379: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
1:0:856:G:H2'	37:0:3682: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
1:0:1835:U:H5	1:0:1840:A:N7	1.71	0.88
37:0:8133: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
37:0:3315: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
37:0:7544:HOH:O	6:A:6:GLY:HA3	1.75	0.86
5:9:92:G:H2'	5:9:93:A:C8	2.09	0.86
11:F:91:VAL:HG12	11:F:92:GLY:N	1.90	0.86
1:0:24:G:N2	1:0:518:G:O2'	2.08	0.86
7:B:307:ARG:HH11	7:B:307:ARG:HB2	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
1:0:1119:G:H22	1:0:1246: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
1:0:533:U:H4'	1:0:534:C:O5'	1.75	0.84
1:0:1679:C:H5'	37:0:5066:HOH:O	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:H	29:X:235:GLU:CD	1.81	0.84
37:0:4206:HOH:O	17:L:157:LEU:HD11	1.78	0.84
7:B:321:PRO:HA	37:B:519:HOH:O	1.78	0.84
1:0:960:G:H4'	37:0:7054:HOH:O	1.77	0.84
1:0:1590:A:N6	1:0:1605:G:H1'	1.91	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:HD22	7:B:27:ASN:H	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
1:0:1652:C:H1'	6:A:164:ARG:HD2	1.59	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:2:3:MET:O	3:2:90:PHE:HA	1.80	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
1:0:553:G:P	29:X:204:ARG:HH22	2.02	0.82
28:W:71:ARG:HB3	28:W:88:GLU:OE1	1.79	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
1:0:1105:C:H4'	1:0:1106:A:OP1	1.77	0.81
1:0:1340:G:O2'	1:0:1341:A:H8	1.62	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
24:S:18:GLU:O	24:S:21:LYS:HG2	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
37:0:3650:HOH:O	17:L:146:GLN:HG2	1.80	0.81
13:H:27:LYS:H	13:H:58:HIS:HD2	1.28	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:52:VAL:HG22	27:V:53:ALA:N	1.96	0.80
27:V:130:HIS:O	27:V:136:GLY:HA3	1.82	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:HB3	14:I:74:ARG:HH11	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
1:0:329:A:H4'	1:0:330:C:OP2	1.81	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
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
37:9:350:HOH:O	21:P:25:PRO:HB2	1.81	0.79
6:A:71:PRO:HD2	6:A:74:VAL:HG21	1.64	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
1:0:262:A:O2'	11:F:32:GLY:HA2	1.82	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
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
37:9:402:HOH:O	27:V:131:PRO:HB2	1.81	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

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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
1:O:2263:G:H4'	17:L:70:GLY:CA	2.15	0.77
17:L:38:VAL:O	17:L:63:VAL:HG13	1.85	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:86:ALA:HA	37:B:502:HOH:O	1.85	0.76
7:B:195:ARG:HD2	7:B:324:ASP:OD1	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
3:2:46:ILE:CG2	17:L:87:MET:HG2	2.12	0.75
6:A:179:MET:HG2	6:A:186:TRP:HB2	1.69	0.75
18:M:61:ALA:HB3	18:M:88:ALA:HB2	1.67	0.75
29:X:189:ASN:HD22	29:X:189:ASN:C	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:542:A:H5'	1:O:542:A:H8	1.51	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: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:HB2	6:A:153:ARG:HH11	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:192:A:H4'	17:L:176:GLN:HE22	1.52	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

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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:282:C:H1'	1:O:368:C:N4	2.02	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
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:271:C:H4'	1:O:272:A: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
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
1:O:962:C:H1'	18:M:5:ARG:NH1	2.04	0.73
5:9:69:U:OP1	18:M:4:PRO:HG3	1.88	0.73
17:L:172:GLY:O	17:L:183:VAL:HG11	1.89	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:771:G:P	17:L:79:LYS:HG3	2.28	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
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
1:0:882:A:H5''	1:0:883:U:OP2	1.87	0.72
1:0:1853:C:H4'	6:A:217:ARG:NH2	2.03	0.72
1:0:2416:G:H2'	1:0:2417:C:C6	2.24	0.72
37:0:4929:HOH:O	10:E:143:GLN:HG2	1.89	0.72
4:5:35:VAL:HG12	4:5:39:VAL:CG1	2.18	0.72
13:H:71:TYR:C	13:H:73:GLN:H	1.92	0.72
1:0:1446:U:H3'	23:R:55:GLN:OE1	1.89	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
1:0:907:A:H2'	1:0:908:A:H8	1.54	0.72
1:0:1730:G:H5'	1:0:1731:C:C6	2.25	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
1:0:2441:U:H4'	16:K:53:ARG:HD2	1.71	0.72
3:2:24:LYS:HE3	3:2:90:PHE:CE1	2.21	0.72
31:Z:21:ARG:HD2	31:Z:37:CYS:SG	2.29	0.72
1:0:272:A:H3'	37:0:5183:HOH:O	1.89	0.72
1:0:1160:G:H5'	1:0:1161:A:C5'	2.05	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
1:0:939:A:H4'	1:0:940:G:O5'	1.88	0.71
1:0:1735:C:O2'	1:0:1736:A:H5'	1.90	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:O	17:L:68:ARG:HD3	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
37:0:7115:HOH:O	29:X:165:GLU:HB3	1.89	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
1:0:31:C:OP2	24:S:8:ARG:HD2	1.90	0.71
1:0:1244:U:OP1	14:I:18:ILE:HD13	1.90	0.71
1:0:2659:U:H4'	37:Q:334:HOH:O	1.91	0.71
6:A:9:ARG:HG2	6:A:16:PHE:CD2	2.25	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
1:0:2081:A:H4'	14:I:69:TYR:CE1	2.26	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
1:0:631:A:N7	1:0:2074:A:H5'	2.05	0.70
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
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
1:0:328:U:H5''	1:0:329:A:OP2	1.91	0.70
1:0:1505:U:H5''	1:0:1506:U: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:O	6:A:88:ILE:HG22	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
37:0:4875:HOH:O	31:Z:46:ARG:HA	1.91	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
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:HG2	24:S:41:ARG:HH11	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:19:GLU:O	9:D:20:LYS:HG2	1.92	0.69
9:D:154:LYS:HD2	9:D:154:LYS:N	2.03	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
1:0:450:C:H1'	37:0:4255:HOH:O	1.93	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
1:0:148: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:H5'	1:0:545:G:H8	1.57	0.69
1:0:1104:C:H4'	14:I:88:PRO:HD3	1.75	0.69
1:0:1328:A:OP1	29:X:169:ARG:HD2	1.92	0.69
1:0:2435:U:OP1	3:2:28:GLY:HA3	1.92	0.69
27:V:81:ASP:OD1	27:V:92:ASP:HB2	1.90	0.69
1:0:1697:G:H1'	37:0:3233:HOH:O	1.93	0.69
1:0:2269:C:H2'	1:0:2270:G:O4'	1.92	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
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

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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:OP1	1:0:1486:A:H3'	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
1:0:339: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
1:0:1525:G:H2'	1:0:1526:A:C8	2.27	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
1:0:25:A:H5'	37:0:5934:HOH:O	1.93	0.68
1:0:2488:A:H1'	37:0:6810:HOH:O	1.91	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
1:0:870:G:H2'	1:0:871:G:C5'	2.16	0.68
1:0:1596:U:H2'	1:0:1598:A:OP2	1.93	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
37:0:4891:HOH:O	24:S:9:LYS:HD2	1.94	0.67
18:M:58:LEU:HD12	18:M:58:LEU:N	2.10	0.67
1:0:1771:U:H4'	30:Y:20:LEU:HD21	1.75	0.67
37:0:5386:HOH:O	17:L:14:ARG:HG2	1.94	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
1:0:506:G:H3'	37:0:3965:HOH:O	1.92	0.67
1:0:509:A:H4'	1:0:511:A:H5''	1.77	0.67
1:0:2536:C:H3'	37:0:5890:HOH:O	1.94	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
1:0:659:A:H5''	37:0:4678:HOH:O	1.94	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
27:V:80:ASP:O	27:V:84:VAL:HG23	1.95	0.67
1:0:631:A:C6	1:0:2074:A:H5'	2.30	0.67
1:0:2114:C:O2'	1:0:2115:U:H5'	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:153:ARG:HH11	6:A:153:ARG:CB	2.07	0.67
8:C:118:THR:HG22	8:C:137:PRO:HB3	1.76	0.67
1:0:12:U:H2'	1:0:13:G:H5'	1.76	0.67
1:0:746:A:H4'	1:0:747:G:H5'	1.77	0.67
1:0:2578:G:H5'	1:0:2578:G:H8	1.60	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
1:0:31:C:H2'	37:0:4680:HOH:O	1.95	0.67
1:0:2379:G:H4'	1:0:2380:A:C5'	2.24	0.67
1:0:2769:C:C2'	1:0:2770:G:H5'	2.25	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
1:0:185:G:H4'	1:0:186:A:OP1	1.95	0.66
1:0:541:C:C2'	1:0:542:A:H5''	2.24	0.66
1:0:1051:C:H2'	1:0:1052:G:O4'	1.95	0.66
1:0:1151:G:O2'	1:0:1214:G:N2	2.28	0.66
1:0:1579:C:O2'	1:0:1580:A:C8	2.49	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
1:0:544:G:H2'	1:0:545:G:H5''	1.77	0.66
1:0:1316:G:O2'	1:0:1340:G:N2	2.28	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
1:0:339:A:O2'	1:0:341: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
1:0:1386:G:H1'	37:0:3331:HOH:O	1.95	0.66
1:0:1590:A:H61	1:0:1605:G:H1'	1.60	0.66
1:0:1855:G:H5'	1:0:1858:A:H1'	1.78	0.66
1:0:639:A:H2'	1:0:640:G:C8	2.31	0.66
1:0:1189:A:H1'	1:0:1209:C:H1'	1.78	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
1:0:70:A:H4'	37:0:6278:HOH:O	1.94	0.66
1:0:817:G:O2'	1:0:818:A:H8	1.78	0.66
1:0:1308:A:H4'	8:C:225:PRO:O	1.95	0.66
1:0:2278:U:H5'	37:0:3474:HOH:O	1.95	0.66
1:0:2670:G:O2'	1:0:2671:U:H5'	1.96	0.66
22:Q:39:THR:HB	22:Q:42:GLU:HG3	1.77	0.66
24:S:38:ARG:HH11	24:S:38:ARG:HG3	1.61	0.66
27:V:122:ARG:HG2	27:V:122:ARG:HH11	1.60	0.66
1:0:1691:A:H5''	1:0:1692:C:OP2	1.95	0.66
1:0:1878:G:H1'	37:0:5266: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
1:0:558:C:H5'	37:0:3550:HOH:O	1.94	0.66
1:0:1115:U:H2'	1:0:1116:U:H6	1.60	0.66
1:0:1118:A:H2'	1:0:1119:G:H5''	1.78	0.66
1:0:1187:U:H2'	37:0:4127: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
1:0:541:C:H2'	1:0:542:A:H5'	1.78	0.65
1:0:938:G:H2'	37:0:5935:HOH:O	1.95	0.65
1:0:1215:A:O2'	1:0:1216:G:O4'	2.13	0.65
1:0:1341:A:O2'	1:0:1342:C:O4'	2.13	0.65
1:0:1438:G:H5''	1:0:1439:C:OP2	1.96	0.65
1:0:2472:C:O2'	1:0:2634:G:H4'	1.96	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
1:0:541:C:H2'	1:0:542:A:H5''	1.75	0.65
1:0:1886:A:N3	37:0:3227:HOH:O	2.28	0.65
13:H:149:ALA:C	13:H:151:MET:H	2.00	0.65
1:0:236:A:H4'	1:0:237: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:338:C:H4'	8:C:174:ILE:HD11	1.78	0.65
1:O:2292:C:O2'	1:O:2464:C:OP2	2.15	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: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
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
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:920:C:H5''	1:O:921:G:O5'	1.97	0.65
1:O:1447:U:O4	23:R:13:LYS:HE2	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
37:O:7272:HOH:O	31:Z:46:ARG:HB2	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:N	17:L:133:LEU:HD12	2.11	0.65
21:P:21:ARG:HG2	21:P:22:GLY:N	2.11	0.65
23:R:77:VAL:O	23:R:81:ILE:HG13	1.96	0.65
1:O:459:A:H5''	37:O:4693:HOH:O	1.97	0.65
1:O:1134:G:H4'	13:H:151:MET:HE1	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1615:A:H4'	37:0:3989:HOH:O	1.97	0.65
1:0:1829:A:H61	30:Y:18:TYR:N	1.95	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
1:0:485: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
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
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:26:LYS:HD2	13:H:28:ILE:HB	1.78	0.65
13:H:137:ASN:O	13:H:139:ASP:N	2.30	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
1:0:256:C:H2'	1:0:257:G:O4'	1.98	0.64
1:0:564:G:H1'	37:0:3637:HOH:O	1.97	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
1:0:2735:U:H2'	1:0:2736:U:C6	2.33	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
1:0:907:A:H2'	1:0:908:A:C8	2.32	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
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:HB3	28:W:15:ARG:NH1	2.08	0.64
1:0:855:U:H4'	1:0:856:G:O5'	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1234:U:C2	7:B:244:PRO:HB3	2.33	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
1:0:92:G:H4'	26:U:44:GLY:HA3	1.79	0.64
1:0:330:C:H5''	1:0:331:A:C5'	2.27	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
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
1:0:603: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
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
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
1:0:259:G:H21	17:L:58:GLN:NE2	1.95	0.64
1:0:813:C:H3'	37:O: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
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
1:0:746:A:C6	19:N:65:LEU:HD13	2.33	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:HB3	8:C:246:ARG:NH1	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
1:0:1930:A:H2'	1:0:1931:A:C8	2.34	0.63
37:0:4149:HOH:O	17:L:86:MET:HE3	1.98	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
18:M:139:TRP:CE3	18:M:139:TRP:HA	2.31	0.63
1:0:766:A:O2'	1:0:767:A:O4'	2.16	0.63
1:0:1044:C:H5''	37:0:5167:HOH:O	1.99	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
1:0:558:C:H2'	1:0:559:U:C5'	2.29	0.63
1:0:657:G:OP1	8:C:27:ARG:NH2	2.31	0.63
1:0:2780:C:H1'	10:E:143:GLN:HE21	1.62	0.63
37:0:4026:HOH:O	7:B:211:THR:HG23	1.98	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
1:0:797:A:C4'	30:Y:10:ARG:N	2.60	0.63
1:0:2649:A:H5''	1:0:2650:U:OP1	1.99	0.63
13:H:3:GLY:HA2	13:H:57:ARG:HH12	1.62	0.63
13:H:17:ARG:HD3	13:H:23:ILE:HD12	1.81	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:W:30:MET:HE1	28:W:55:ASN:HA	1.81	0.63
29:X:226:ILE:HA	37:X:428:HOH:O	1.97	0.63
1:0:2462:G:O6	3:2:61:PRO:HG3	1.98	0.63
6:A:19:PRO:HD3	37:A:401:HOH:O	1.99	0.63
6:A:179:MET:HG2	6:A:186:TRP:CB	2.27	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
1:0:885:G:H5''	1:0:886:A:H5'	1.80	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
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
1:0:619:U:H3'	37:0:5146:HOH:O	1.99	0.63
1:0:1827:G:H2'	1:0:1828:G:C8	2.34	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:O	12:G:12:ILE:HG22	1.99	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
1:0:1151: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
1:0:2468:A:H61	3:2:48:ASN:HD21	1.46	0.62
1:0:2769:C:H2'	1:0:2770:G:O4'	1.98	0.62
6:A:192:VAL:CG1	6:A:207:GLN:HB3	2.30	0.62
7:B:56:ASP:OD1	7:B:322:ARG:HB3	1.98	0.62
7:B:199:TYR:CE2	7:B:268:ARG:HB2	2.33	0.62
7:B:214:PRO:HD2	37:B:551:HOH:O	1.99	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
1:0:449: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
1:0:1053:G:OP1	13:H:12:PRO:HG3	1.99	0.62
1:0:2106:C:H1'	1:0:2484:U:O2	2.00	0.62
1:0:2312:G:C2'	1:0:2313:C:H5'	2.28	0.62
1:0:2850:C:H5''	1:0:2851:G:OP2	1.99	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
1:0:2866:U:C5	25:T:50:GLU:HB2	2.35	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:C:16:VAL:HG12	8:C:17:ASP:N	2.15	0.62
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
1:0:820:G:H5'	1:0:821:U:H5'	1.81	0.62
1:0:2071:C:H5'	37:0:3854:HOH:O	2.00	0.62
37:0:4901:HOH:O	17:L:172:GLY:HA2	1.98	0.62
37:0:5601:HOH:O	8:C:187:ARG:HD3	1.99	0.62
7:B:84:LEU:HD23	7:B:142:LEU:HD23	1.81	0.62
27:V:110:GLN:HA	27:V:110:GLN:HE21	1.63	0.62
1:0:1123:A:C6	1:0:1238:C:H5'	2.35	0.62
1:0:1652:C:H5''	1:0:1653:A:OP2	2.00	0.62
1:0:2820:A:H2'	1:0:2821: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
1:0:766:A:H2'	37:0:6602:HOH:O	2.00	0.62
1:0:779:U:H5'	1:0:1836:A:N1	2.15	0.62
1:0:926:A:H1'	16:K:38:HIS:O	1.99	0.62
1:0:2424:U:H4'	21:P:6:PRO:HD2	1.82	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
1:0:115:U:H1'	1:0:131: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
1:0:402:U:H2'	1:0:403:C:C6	2.35	0.61
1:0:2004:U:H5''	1:0:2005:G:C8	2.34	0.61
1:0:2718: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
1:0:894:A:H2'	37:0:8622:HOH:O	2.00	0.61
1:0:938:G:N2	1:0:1031:G:O2'	2.32	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1209:C:H2'	1:0:1210:G:C8	2.34	0.61
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
1:0:1878:G:H2'	1:0:1879:U:C6	2.35	0.61
37:0:8606:HOH:O	7:B:18:ARG:HD3	2.00	0.61
2:1:21:VAL:HG23	2:1:36:ASN:HB2	1.81	0.61
8:C:136:VAL:CG2	8:C:137:PRO:HA	2.21	0.61
9:D:97:GLN:HG2	9:D:97:GLN:O	2.00	0.61
1:0:393:G:H5''	37:0:3602:HOH:O	2.01	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
37:0:7543:HOH:O	17:L:174:ARG:HD3	1.99	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
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
1:0:1299:G:O6	16:K:6:ARG:HD3	2.01	0.61
2:1:40:ARG:HG3	2:1:45:ASN:CB	2.30	0.61
7:B:27:ASN:HD22	7:B:27:ASN:N	1.98	0.61
18:M:23:ARG:HA	18:M:26:LEU:HD23	1.83	0.61
1:0:432:G:O2'	1:0:433:C:H5'	2.00	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
1:0:1594:C:OP2	20:O:120:ARG:HD2	2.01	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:98:GLN:O	17:L:102:GLU:HG3	2.00	0.61
17:L:184:ARG:CZ	17:L:184:ARG:HB2	2.29	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
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
37:0:6245:HOH:O	7:B:3:PRO:HG2	2.00	0.61
6:A:200:PRO:HG2	6:A:225:VAL:HG21	1.81	0.61
1:0:777:U:H1'	31:Z:13:THR:HB	1.83	0.61
1:0:1105:C:C4'	1:0:1106:A:OP1	2.48	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:H:83:PHE:HZ	13:H:146:TRP:HE1	1.49	0.61
29:X:152:LYS:CB	29:X:160:LYS:HG3	2.31	0.61
1:0:213:G:N2	1:0:225:G:H2'	2.16	0.60
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
1:0:2754:G:O2'	1:0:2755:G:H5'	2.01	0.60
37:0:5724:HOH:O	29:X:150:LEU:HB2	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
1:0:284:C:H4'	1:0:285:A:OP2	2.01	0.60
1:0:1118:A:C8	1:0:1118:A:H3'	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
37:0:8112:HOH:O	7:B:216:LYS:HE2	2.00	0.60
6:A:72:GLU:CD	30:Y:76:GLY:HA3	2.22	0.60
7:B:144:THR:HG22	7:B:145:HIS:N	2.16	0.60
17:L:68:ARG:HB3	37:L:436:HOH:O	2.00	0.60
17:L:155:HIS:ND1	17:L:158:ARG:NE	2.46	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
1:0:2890:A:H1'	25:T:56:ARG:NH2	2.16	0.60
15:J:74:VAL:CG2	15:J:96:VAL:HG23	2.31	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
37:0:6703:HOH:O	17:L:94:LYS:HE3	2.01	0.60
5:9:25:G:C3'	5:9:26:C:H5'	2.32	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
1:0:871:G:H8	1:0:871:G:C5'	2.05	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

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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
5:9:6:C:C5'	18:M:37:ARG:NH1	2.58	0.60
7:B:189:ALA:HB1	37:B:597:HOH:O	2.00	0.60
18:M:37:ARG:HH11	18:M:37:ARG:HG3	1.66	0.60
18:M:139:TRP:HA	18:M:139:TRP:HE3	1.64	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
1:0:86:A:C2	2:1:25:VAL:HG13	2.37	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
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
1:0:79:G:N2	1:0:97:G:O2'	2.34	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
1:0:1132:A:N6	1:0:1229:C:H2'	2.16	0.60
1:0:1315:G:O2'	29:X:211:ALA:HB3	2.02	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
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
1:0:1058: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
1:0:458:G:N2	1:0:463:A:O2'	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:1877:G:H5''	37:A:503:HOH:O	2.01	0.59
37:O: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:O:290:C:H1'	37:O:4581:HOH:O	2.02	0.59
1:O:631:A:C5	1:O:2074:A:C5'	2.83	0.59
1:O:650:C:O2'	1:O:651:U:H5'	2.02	0.59
1:O:2064:U:H5'	1:O:2652:U:O3'	2.01	0.59
37:O:3923:HOH:O	7:B:267:LYS:HD3	2.00	0.59
5:9:57:A:H2'	5:9:58:G:H5'	1.84	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:O:380:A:H4'	1:O:381:G:OP1	2.00	0.59
1:O:955:A:H2'	1:O: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:O:637:C:H2'	1:O:638:C:C6	2.36	0.59
1:O: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
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:O:1426:C:H2'	37:O:6552:HOH:O	2.01	0.59
1:O:1795:G:H2'	1:O:1796:A:O4'	2.01	0.59
1:O:2747:C:H4'	1:O:2748:G:O5'	2.01	0.59
1:O:2748:G:H3'	37:O:4688:HOH:O	2.01	0.59
1:O:2857:C:H2'	1:O: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:O:706:G:HO2'	1:O:707:C:H6	1.49	0.59
1:O:2813:A:H2'	37:O:6389:HOH:O	2.02	0.59
37:O: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:O:17:G:H2'	1:O:18:C:C6	2.37	0.59
1:O:2117:U:OP2	1:O:2271:G:N2	2.34	0.59
1:O:2758:G:H2'	1:O: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:85:ARG:NH1	37:B:506:HOH:O	2.35	0.59
7:B:307:ARG:HH11	7:B:307:ARG:CB	2.14	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
1:0:247:A:H2'	1:0:262:A:N6	2.17	0.59
1:0:771:G:OP2	17:L:79:LYS:HG3	2.03	0.59
1:0:2320:U:H5''	1:0:2321:A:O5'	2.02	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
18:M:86:LEU:HD12	18:M:125:ALA:HB2	1.85	0.59
1:0:189:A:OP1	17:L:171:ARG:NH2	2.36	0.59
1:0:338:C:H4'	8:C:174:ILE:CD1	2.33	0.59
1:0:558:C:C2'	1:0:559:U:H5''	2.33	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
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
24:S:32:ARG:NH1	24:S:38:ARG:HH12	2.01	0.59
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
1:0:1118:A:H8	1:0:1118:A:H3'	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
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
37:0:5943:HOH:O	24:S:2:LYS:HB3	2.02	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
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
1:0:30:U:OP2	8:C:181:ALA:HB2	2.02	0.58
1:0:221:G:H2'	1:0:222:A:C8	2.38	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
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
1:0:1329:A:N1	35:0:3122:CL:CL	2.73	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
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
1:0:660:A:C4'	1:0:661:G:O5'	2.41	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
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
1:0:262:A:HO2'	11:F:32:GLY:HA2	1.67	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
27:V:31:HIS:HB3	37:V:235:HOH:O	2.02	0.58
1:0:37:A:H2'	1:0:38:G:C8	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:263:U:H4'	1:0:264:G:OP2	2.04	0.58
1:0:775:G:HO2'	1:0:881:C:H5	1.51	0.58
1:0:1249:U:H2'	1:0:1250:C:H6	1.67	0.58
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
37:0:3289:HOH:O	17:L:82:ARG:HD2	2.02	0.58
37:0:4079:HOH:O	6:A:22:ARG:HD3	2.04	0.58
2:1:41:HIS:H	2:1:45:ASN:ND2	1.99	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
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
1:0:221:G:O5'	16:K:46:LEU:HD22	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
1:0:1689:A:N6	22:Q:131:GLY:HA2	2.19	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
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
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
1:0:25:A:O2'	1:0:26:U:H5'	2.04	0.58
1:0:368:C:O5'	1:0:368:C:H6	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
1:0:2354:A:H2'	1:0:2354:A:N3	2.18	0.58
1:0:2526:C:H6	1:0:2526:C:H5'	1.68	0.58
1:0:2712:G:H5'	37:J:301:HOH:O	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
1:0:213: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
1:0:1023:C:O2'	1:0:1024:G:H5'	2.05	0.57
1:0:1117:A:N1	1:0:1244:U:H2'	2.18	0.57
1:0:1235:G:H5''	1:0:1236:A:OP1	2.04	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:51:VAL:HG13	7:B:53:LEU:HD13	1.86	0.57
7:B:132:HIS:HB2	7:B:137:LEU:HD22	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
1:0:542:A:H5'	1:0:542:A:C8	2.37	0.57
1:0:1342:C:H2'	1:0:1343:C:H5'	1.85	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
1:0:699: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
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
37:0:4583:HOH:O	14:I:47:THR:HG21	2.03	0.57
3:2:65:THR:CG2	3:2:67:LEU:HG	2.33	0.57
9:D:23:VAL:HG23	9:D:23:VAL:O	2.05	0.57
17:L:74:ARG:HG3	17:L:74:ARG:NH1	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
1:0:157:G:H4'	17:L:95:LYS:CE	2.33	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
1:0:898:G:H5''	1:0:899:C:OP2	2.04	0.57
1:0:1408:U:H4'	1:0:1409:G:OP1	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
19:N:12:ALA:O	19:N:15:LYS:HB2	2.04	0.57
1:0:262:A:H5''	1:0:264:G:O4'	2.05	0.57
1:0:675:U:H4'	8:C:42:ARG:HB3	1.86	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
1:0:2679: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
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
1:0:604: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
1:0:1972: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
1:0:2091:G:O3'	7:B:235:ARG:HD3	2.04	0.57
1:0:2584:G:H4'	37:0:5279:HOH:O	2.03	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
1:0:1306:U:H5''	8:C:184:ARG:HD3	1.87	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
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
1:0:596:C:H2'	1:0:597:A:C8	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1305:C:H5'	37:0:6640:HOH:O	2.04	0.57
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
37:0:4155:HOH:O	24:S:82:THR:HA	2.04	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:HH11	9:D:140:ARG:HG3	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
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
5:9:114:G:O6	18:M:11:ARG:HD3	2.03	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
1:0:656:G:OP2	19:N:37:ARG:HD2	2.05	0.56
1:0:675:U:C2'	1:0:676:C:H5'	2.35	0.56
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
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
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
1:0:192: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
1:0:821: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
1:0:1378:G:H1'	1:0:2747:C:N4	2.21	0.56
1:0:1379:A:H1'	1:0:1408:U:O4	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1392:A:O2'	1:0:1394:C:P	2.63	0.56
1:0:2325:C:H1'	37:0:4935:HOH:O	2.04	0.56
1:0:2852:A:H5''	1:0:2853:U:OP1	2.05	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
1:0:461:C:H3'	37:0:6241:HOH:O	2.05	0.56
1:0:755:G:O2'	1:0:756:A:H5'	2.06	0.56
1:0:1460:G:H1'	37:0:3267:HOH:O	2.06	0.56
1:0:1477:C:O2'	1:0:1478:U:H5'	2.03	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
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
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
12:G:12:ILE:N	12:G:13:PRO:CD	2.68	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
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
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
29:X:170:SER:OG	29:X:175:ARG:HG3	2.05	0.56
1:0:473:A:O2'	1:0:890:C:H5'	2.06	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
37:0:7636:HOH:O	30:Y:31:ILE:HG13	2.04	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
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
1:0:1172:G:H1'	37:0:6554:HOH:O	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1890:U:H1'	1:0:2013:G:N2	2.20	0.56
37:0:3814:HOH:O	13:H:151:MET:HE2	2.05	0.56
6:A:230:SER:HB2	6:A:232:ARG:O	2.05	0.56
17:L:61:ILE:N	17:L:61:ILE:HD12	2.21	0.56
17:L:115:LEU:HD23	17:L:150:ILE:CD1	2.29	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
1:0:1073:A:H1'	1:0:1088:A:C2	2.41	0.56
1:0:1333:U:H2'	1:0:1334:C:C6	2.40	0.56
1:0:2065:C:H4'	37:0:4539:HOH:O	2.05	0.56
1:0:2493:C:H1'	1:0:2494:G:N7	2.21	0.56
1:0:2722:G:O2'	1:0:2723:G:H5'	2.05	0.56
1:0:2908:A:H2'	1:0:2909:G:O4'	2.05	0.56
6:A:68:ILE:HD11	37:A:406:HOH:O	2.06	0.56
37:C:461:HOH:O	19:N:3:THR:HG21	2.04	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
31:Z:22:CYS:HB2	37:Z:228:HOH:O	2.05	0.56
1:0:604:G:H4'	1:0:605:C:O5'	2.05	0.56
1:0:1681:G:H4'	1:0:1682:A:N3	2.21	0.56
1:0:1842:A:H2'	37:0:6895:HOH:O	2.05	0.56
1:0:2890:A:H2'	37:0:7465:HOH:O	2.04	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
1:0:169:A:HO2'	3:2:48:ASN:HB3	1.71	0.56
1:0:371:U:H2'	1:0:372:A:C8	2.41	0.56
1:0:1882:C:OP1	6:A:192:VAL:HG23	2.06	0.56
1:0:2638:G:H5'	37:0:8371:HOH:O	2.05	0.56
2:1:48:ASP:O	2:1:49:GLU:HB2	2.05	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
1:0:170:U:H2'	1:0:171:C:H5'	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:1150:A:C2	12:G:20:VAL:HG21	2.40	0.56
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
7:B:86:ALA:O	7:B:97:LEU:N	2.36	0.56
8:C:133:ARG:HH11	8:C:133:ARG:HG3	1.71	0.56
10:E:104:ILE:HD12	10:E:151:LEU:HD23	1.88	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
1:0:902:G:N7	16:K:18:HIS:HD2	2.04	0.56
1:0:1015:C:H2'	1:0:1016:U:H6	1.71	0.56
1:0:1032:A:H2'	1:0:1032:A:N3	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
1:0:2101:A:H5''	8:C:63:SER:HB3	1.88	0.56
13:H:73:GLN:HA	13:H:73:GLN:OE1	2.06	0.56
16:K:143:THR:CG2	16:K:144:ASP:N	2.69	0.56
37:K:320:HOH:O	29:X:147:ARG:HG3	2.04	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
1:0:31:C:H4'	37:0:6207:HOH:O	2.06	0.55
1:0:675:U:C4'	8:C:42:ARG:HB3	2.35	0.55
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
37:0:3633:HOH:O	14:I:47:THR:HB	2.06	0.55
37:0:7671:HOH:O	23:R:55:GLN:HG3	2.05	0.55
6:A:97:ALA:HA	6:A:131:HIS:HE2	1.71	0.55
6:A:153:ARG:HB2	6:A:153:ARG:NH1	2.18	0.55
7:B:168:GLY:N	7:B:174:ARG:HD3	2.20	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
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
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
1:0:934:C:H2'	1:0:935:G:H8	1.69	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
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
1:0:830:G:H2'	1:0:831:U:O4'	2.06	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
7:B:175:LEU:HD23	7:B:175:LEU:O	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
1:0:37:A:H2'	1:0:38:G:H8	1.72	0.55
1:0:87:C:H5''	1:0:88:G:OP2	2.07	0.55
1:0:371:U:H2'	1:0:372:A:H8	1.71	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
1:0:1127: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
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
1:0:392:U:C5'	17:L:193:LYS:HB3	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:694:A:H2'	1:0:695:C:H5'	1.88	0.55
1:0:1340:G:H2'	37:0:6445:HOH:O	2.07	0.55
1:0:2460:A:O2'	1:0:2461:U:O5'	2.24	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
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
1:0:308:U:C4	1:0:342:C:H1'	2.42	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
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
1:0:381:G:O2'	1:0:382:U:OP2	2.25	0.55
1:0:1267:C:O2'	29:X:171:PRO:HG3	2.07	0.55
1:0:1331:A:OP2	29:X:142:SER:OG	2.24	0.55
1:0:2464:C:H5''	1:0:2465:A:OP1	2.06	0.55
6:A:76:VAL:HG23	30:Y:63:LYS:HB3	1.87	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
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
1:0:771:G:OP1	17:L:79:LYS:HG3	2.07	0.55
1:0:1150:A:O2'	12:G:16:LYS:HD3	2.07	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
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
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
1:0:204:A:C2'	1:0:205:U:H5'	2.37	0.55
1:0:264:G:O2'	1:0:265:U:C5	2.59	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
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
1:0:2576:A:N6	37:0:3376:HOH:O	2.39	0.55
1:0:2827:A:H2'	1:0:2828:G:O4'	2.06	0.55
37:0:5153:HOH:O	3:2:31:THR:HG22	2.06	0.55
7:B:18:ARG:HG3	7:B:256:GLN:HG3	1.88	0.55
7:B:177:HIS:O	7:B:180:ASP:HB2	2.07	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:HD22	12:G:64:ASN:N	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
1:0:473: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
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
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:HH11	29:X:186:ARG:HG2	1.71	0.54
1:0:62:C:H2'	1:0:63:U:C6	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:896:C:O2'	1:0:897:A:H5'	2.08	0.54
1:0:1477:C:H5'	1:0:1868:G:C5'	2.37	0.54
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
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:OE1	20:O:6:GLN:N	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
1:0:293:A:O2'	1:0:294:C:H5'	2.08	0.54
1:0:1755:A:H4'	37:0:4699:HOH:O	2.08	0.54
1:0:1853:C:OP1	6:A:231:LYS:HG3	2.07	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
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:O	13:H:72:VAL:HG13	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:41:PHE:HA	7:B:79:MET:HE2	1.89	0.54
7:B:279:THR:HA	7:B:284:PHE:HE1	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:C:72:LYS:HA	8:C:77:ALA:HA	1.89	0.54
8:C:188:ARG:HD3	37:C:445:HOH:O	2.07	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
1:0:60:A:C2	1:0:61:G:C8	2.96	0.54
1:0:1098:A:H2'	1:0:1099:G:O4'	2.08	0.54
1:0:1311:G:O2'	1:0:1312:G:H5'	2.07	0.54
1:0:2028:U:H2'	1:0:2029:C:C6	2.43	0.54
1:0:2769:C:O2'	1:0:2770:G:H5'	2.08	0.54
6:A:94:LEU:HD23	6:A:94:LEU:N	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:57:ARG:C	13:H:59:ASN:H	2.11	0.54
13:H:136:VAL:HG22	13:H:137:ASN:O	2.07	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
1:0:846:A:O2'	1:0:847:C:H5'	2.08	0.54
1:0:1165:G:H4'	1:0:1174:A:O2'	2.07	0.54
1:0:2124:G:H2'	1:0:2125:G:H8	1.72	0.54
1:0:2909:G:O2'	1:0:2910:A:H5'	2.07	0.54
4:5:53:ILE:C	4:5:55:ALA:H	2.11	0.54
6:A:190:ARG:HB2	6:A:190:ARG:HH11	1.72	0.54
1:0:88:G:N3	2:1:24:TRP:HB2	2.23	0.54
1:0:428:G:H5'	37:0:4341:HOH:O	2.07	0.54
1:0:470:U:O2'	31:Z:16:HIS:CD2	2.61	0.54
1:0:2295:G:N2	1:0:2314:G:H1'	2.22	0.54
1:0:2346:C:O3'	9:D:52:THR:CG2	2.56	0.54
1:0:2656:G:C2'	1:0:2657:G:H5'	2.37	0.54
1:0:2761:A:H3'	37:0:7026:HOH:O	2.07	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
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:O	27:V:26:ILE:CG1	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
1:0:79:G:N1	1:0:97:G:O2'	2.41	0.54
1:0:1426:C:H3'	37:0:3482:HOH:O	2.06	0.54
1:0:1460:G:N3	37:0:3267:HOH:O	2.33	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1783:A:H2'	1:0:1784:U:O4'	2.08	0.54
1:0:2078:U:O2'	1:0:2079:G:H5'	2.09	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
1:0:450:C:P	8:C:184:ARG:HH22	2.31	0.53
1:0:621:C:H5'	29:X:132:ASP:OD2	2.08	0.53
1:0:2361:A:H5''	37:0:5349:HOH:O	2.08	0.53
1:0:2416:G:H1'	37:0:4703:HOH:O	2.07	0.53
1:0:2594:C:O2'	1:0:2595:U:H5'	2.07	0.53
2:1:3:LYS:HE3	37:1:127:HOH:O	2.07	0.53
3:2:5:ARG:O	3:2:21:GLU:HA	2.08	0.53
3:2:48:ASN:ND2	3:2:50:GLY:H	2.05	0.53
8:C:129:HIS:HE1	8:C:231:ARG:HA	1.73	0.53
8:C:178:GLN:C	8:C:180:SER:N	2.61	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
1:0:114:A:H4'	1:0:115:U:OP1	2.07	0.53
1:0:281:U:O2'	1:0:282:C:H5'	2.09	0.53
1:0:1070:A:H2'	1:0:1071:G:C8	2.43	0.53
1:0:2809:G:H2'	1:0:2810:G:O4'	2.08	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
1:0:170:U:H4'	3:2:48:ASN:O	2.08	0.53
1:0:1580:A:H8	1:0:1580:A:O5'	1.91	0.53
1:0:1853:C:H4'	6:A:217:ARG:HH22	1.72	0.53
1:0:1968:A:H2'	1:0:1969:A:C8	2.43	0.53
1:0:2754:G:C2'	1:0:2755:G:H5'	2.37	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: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
8:C:120:ASP:O	8:C:124:VAL:HG23	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:HG13	23:R:10:VAL:O	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
1:0:152:A:H1'	1:0:440:C:O2'	2.08	0.53
1:0:169:A:H2'	37:0:6066:HOH:O	2.09	0.53
1:0:2060:A:H4'	37:0:6968:HOH:O	2.07	0.53
1:0:2316:G:H5'	1:0:2317:C:O4'	2.08	0.53
1:0:2326:U:H4'	1:0:2412:G:C4'	2.39	0.53
1:0:2698:G:H2'	1:0:2699:A:C8	2.44	0.53
1:0:2897:C:O2'	1:0:2898:G:H5'	2.09	0.53
37:9:349:HOH:O	18:M:113:SER:HB3	2.08	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
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
1:0:119:A:H2'	1:0:120:A:H5''	1.90	0.53
1:0:1131:G:O6	1:0:1230:A:H1'	2.09	0.53
1:0:2362:A:O5'	1:0:2362:A:H8	1.92	0.53
1:0:2442:G:H3'	37:0:3862:HOH:O	2.06	0.53
1:0:2497:A:C2	1:0:2524: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
1:0:1884:G:O6	6:A:190:ARG:HD3	2.08	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
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
1:0:538:C:H4'	1:0:539:G:OP2	2.08	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
1:0:2443:C:O2'	16:K:56:LYS:CE	2.56	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
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
1:0:210:U:H2'	1:0:211:U:C6	2.44	0.53
1:0:558:C:H2'	1:0:559:U:H5'	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:945:U:O2'	27:V:43:GLY:HA3	2.09	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
1:0:1850:U:O4'	1:0:1941:A:C2	2.62	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
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
1:0:941:G:H2'	1:0:942:U:O4'	2.09	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
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
1:0:249:G:H1'	1:0:265:U:O2	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
1:0:2889: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
1:0:333: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
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
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
1:0:280: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
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
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
1:0:229: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
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:O5'	1:0:1785:G:H8	1.91	0.52
1:0:1829:A:N6	30:Y:18:TYR:HA	2.25	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
37:0:5824:HOH:O	29:X:136:LYS:HB2	2.10	0.52
4:5:54:VAL:O	4:5:54:VAL:HG12	2.09	0.52
9:D:23:VAL:HG21	9:D:45:THR:CG2	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:D:154:LYS:H	9:D:154:LYS:CD	2.08	0.52
10:E:166:VAL:HG12	10:E:167:TYR:N	2.23	0.52
25:T:36:CYS:HG	25:T:51:TRP:HH2	1.57	0.52
28:W:70:ILE:HG23	28:W:70:ILE:O	2.08	0.52
30:Y:19:GLY:O	30:Y:23:ARG:HG2	2.09	0.52
1:0:395:A:N1	1:0:2443:C:N4	2.56	0.52
1:0:1296:A:O5'	1:0:1296:A:H8	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
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:82:ARG:HH21	15:J:115:ARG:HG2	1.71	0.52
15:J:125:ALA:C	15:J:127:ALA:H	2.13	0.52
17:L:85:ARG:NE	37:L:311:HOH:O	2.43	0.52
18:M:37:ARG:HH21	18:M:105:GLY:N	2.08	0.52
18:M:37:ARG:HE	18:M:105:GLY:HA3	1.75	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
1:0:42: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
1:0:321:A:O2'	1:0:322:G:H5'	2.09	0.52
1:0:1589:G:N2	1:0:1605:G:O2'	2.43	0.52
5:9:77:A:H1'	5:9:79:U:C6	2.44	0.52
5:9:119:C:H1'	37:9:321:HOH:O	2.09	0.52
6:A:73:GLY:N	30:Y:65:ALA:O	2.35	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
1:0:692:A:HO2'	16:K:51:PHE:HD2	1.58	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2587:U:C2	1:0:2589:U:H5'	2.45	0.52
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
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
1:0:402:U:H1'	37:0:3378:HOH:O	2.08	0.52
1:0:1015:C:C2	1:0:1016:U:C5	2.98	0.52
1:0:1235:G:H1'	14:I:63:ILE:HG23	1.91	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
10:E:158:ASP:OD1	10:E:160:ARG:N	2.36	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
1:0:184:G:O2'	1:0:185:G:H5'	2.09	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
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
1:0:1338: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
1:0:2295: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
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
1:0:523:C:H2'	1:0:524:A:H8	1.75	0.51
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
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)
1:0:380: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
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
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
1:0:30:U:O4	1:0:452:G:O2'	2.27	0.51
1:0:68:U:C5	1:0:107:U:H4'	2.46	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
1:0:1235: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
1:0:1829:A:H61	30:Y:18:TYR:HA	1.74	0.51
1:0:1874:U:HO2'	1:0:1875:A:P	2.34	0.51
1:0:2408:A:H1'	3:2:10:TYR:CD1	2.45	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
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
30:Y:39:CYS:SG	30:Y:40:PRO:HD2	2.50	0.51
1:0:653:C:H5''	37:N:304:HOH:O	2.10	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
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)
1:0:145:A:H2'	1:0:146:U:H6	1.75	0.51
1:0:590:A:H2'	1:0:591:A:H5'	1.92	0.51
1:0:629:A:H4'	37:0:4917:HOH:O	2.11	0.51
1:0:1088:A:O2'	1:0:1089:G:H5''	2.11	0.51
1:0:1118:A:H3'	1:0:1119:G:H5'	1.93	0.51
1:0:1674:C:P	23:R:34:LYS:HG3	2.50	0.51
1:0:2712:G:OP1	15:J:43:ARG:NH1	2.44	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
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
1:0:106:A:H1'	37:0:4331:HOH:O	2.09	0.51
1:0:485:A:HO2'	1:0:486:A:P	2.33	0.51
1:0:1165:G:H1'	1:0:1174:A:H1'	1.92	0.51
1:0:1701:A:C2	1:0:1710:A:H1'	2.46	0.51
1:0:2534:C:OP2	37:0:3201:HOH:O	2.19	0.51
37:0:3608:HOH:O	8:C:77:ALA:HB3	2.10	0.51
6:A:51:ARG:HB3	6:A:51:ARG:HH11	1.75	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
1:0:74:A:H5'	26:U:9:ARG:HH22	1.75	0.51
1:0:623:U:O2'	1:0:624:U:H5'	2.11	0.51
1:0:1001:U:O2'	1:0:1002:G:H5'	2.11	0.51
1:0:1307:A:H2'	1:0:1308:A:C8	2.45	0.51
1:0:1315:G:O2'	29:X:212:ARG:N	2.44	0.51
1:0:1589:G:O2'	1:0:1590:A:C8	2.64	0.51
1:0:1859:A:N7	1:0:1860:U:C5	2.79	0.51
1:0:2504: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:NE2	15:J:10:GLN:N	2.48	0.51
17:L:185:PRO:HG2	37:L:381:HOH:O	2.10	0.51
31:Z:5:THR:HB	31:Z:6:PRO:CD	2.39	0.51
31:Z:28:HIS:CD2	31:Z:31:LYS:HE2	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:C8	1:0:938:G:OP2	2.63	0.51
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:O5'	1:0:2106:C:H6	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
7:B:206:THR:O	7:B:259:TYR:HA	2.11	0.51
7:B:221:GLN:HE22	15:J:42:ASN:HD22	1.57	0.51
13:H:83:PHE:CD1	13:H:134:ALA:HB2	2.46	0.51
14:I:74:ARG:NH1	14:I:76:ASP:HB2	2.25	0.51
14:I:131:THR:CG2	14:I:133:GLY:H	2.19	0.51
20:O:64:GLU:HG2	37:O:247:HOH:O	2.11	0.51
1:0:48:A:H2'	1:0:49:A:C8	2.46	0.51
1:0:271:C:H4'	1:0:272:A:OP1	2.11	0.51
1:0:631:A:N3	1:0:2073:G:O2'	2.43	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
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
1:0:187:A:OP1	17:L:154:ARG:NE	2.44	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
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
1:0:1527:A:N6	1:0:1663:G:H2'	2.26	0.51
1:0:1579:C:C4'	1:0:1580:A:OP1	2.56	0.51
1:0:2457:U:H2'	1:0:2458:U:H6	1.75	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:B:162:MET:HG3	7:B:310:ARG:CD	2.35	0.51
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
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
1:0:151:A:C2	1:0:442:A:C8	2.99	0.50
1:0:697:G:H5''	37:0:3693:HOH:O	2.11	0.50
1:0:1057:A:H1'	1:0:2492:U:O2'	2.12	0.50
1:0:1515:A:H2'	1:0:1516:C:C6	2.46	0.50
1:0:1609:C:H2'	1:0:1610:G:C8	2.46	0.50
1:0:1759:A:H5''	37:0:7566:HOH:O	2.10	0.50
1:0:2064:U:O2'	1:0:2065:C:H5'	2.11	0.50
1:0:2757:A:O3'	7:B:285:VAL:HG11	2.11	0.50
9:D:27:ILE:CD1	9:D:37:ALA:HB2	2.37	0.50
9:D:170:TYR:O	9:D:171:ASP:HB3	2.12	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:71:SER:CB	17:L:92:THR:HG22	2.35	0.50
17:L:149:TRP:CD2	17:L:150:ILE:N	2.79	0.50
18:M:139:TRP:N	37:M:309:HOH:O	2.43	0.50
19:N:26:TRP:HA	19:N:26:TRP:HE3	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
1:0:316:A:N3	1:0:336:G:O2'	2.42	0.50
1:0:675:U:H2'	1:0:676:C:C5'	2.39	0.50
1:0:868:G:H3'	37:0:8544:HOH:O	2.09	0.50
1:0:962:C:H1'	18:M:5:ARG:HH12	1.75	0.50
1:0:1118:A:C8	1:0:1118:A:C3'	2.94	0.50
1:0:1185:U:H2'	1:0:1186:C:H6	1.74	0.50
1:0:1378:G:H1'	1:0:2747:C:C4	2.46	0.50
1:0:1449:G:H2'	1:0:1493:A:C2	2.47	0.50
1:0:1875:A:H1'	1:0:1877:G:C6	2.46	0.50
1:0:2053:G:H4'	22:Q:136:TRP:CE2	2.46	0.50
37:0:3724:HOH:O	19:N:39:THR:HB	2.10	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

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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
20:O:115:SER:C	20:O:117:SER:H	2.12	0.50
1:0:98:A:C2'	1:0:99:A:H5'	2.41	0.50
1:0:226:A:H1'	1:0:393:G:C5	2.46	0.50
1:0:560:C:H42	1:0:597:A:H61	1.59	0.50
1:0:892:G:H5''	31:Z:54:ALA:HB2	1.92	0.50
1:0:1719:G:O2'	1:0:1720:C:H5'	2.10	0.50
1:0:1736:A:C2	1:0:1737:A:C4	2.99	0.50
1:0:1745:G:H2'	37:O:8659:HOH:O	2.11	0.50
1:0:2073:G:C6	1:0:2607:U:C2	2.99	0.50
1:0:2577:A:OP2	37:O:3202:HOH:O	2.19	0.50
1:0:2586:U:H3	1:0:2592:G:N2	1.95	0.50
1:0:2700:G:H2'	1:0:2701:G:C5'	2.42	0.50
1:0:2769:C:H2'	1:0:2770:G:C5'	2.42	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
1:0:637:C:H2'	1:0:638:C:H6	1.76	0.50
1:0:772:G:H2'	1:0:773:A:O4'	2.12	0.50
1:0:1392:A:N1	1:0:1435:U:H2'	2.27	0.50
1:0:1400:C:C2'	1:0:1401:G:H5'	2.41	0.50
1:0:1762:C:H2'	1:0:1763:C:C6	2.46	0.50
1:0:1787:C:O2'	1:0:1788:U:H5'	2.11	0.50
1:0:2367:A:H5''	1:0:2368:A:OP1	2.11	0.50
1:0:2520:G:O2'	1:0:2521:A:H5'	2.12	0.50
1:0:2768:A:H2'	1:0:2769:C: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:22:VAL:HG22	9:D:74:THR:HG22	1.92	0.50
9:D:135:VAL:HG21	9:D:139:TYR:HB2	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
1:0:588:G:O2'	1:0:589:U:OP2	2.30	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1196:C:H2'	1:0:1197:G:H5'	1.93	0.50
1:0:1473:U:C1'	31:Z:42:SER:HB2	2.32	0.50
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
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:26:LYS:CD	13:H:28:ILE:HB	2.41	0.50
13:H:97:LYS:HD3	13:H:117:LYS:HE2	1.94	0.50
15:J:90:PHE:HB3	37:J:336:HOH:O	2.11	0.50
15:J:132:VAL:HG11	25:T:22:VAL:HG22	1.93	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
1:0:163:U:O3'	1:0:896:C:H4'	2.11	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
1:0:1087: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
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
1:0:182:G:H4'	17:L:157:LEU:HD13	1.93	0.50
1:0:589:U:H2'	1:0:590:A:H8	1.77	0.50
1:0:899:C:H5'	37:0:4913:HOH:O	2.10	0.50
1:0:952:G:OP1	21:P:42:LYS:HE2	2.11	0.50
1:0:1674:C:OP1	23:R:34:LYS:N	2.40	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
18:M:102:LEU:HG	18:M:104:ILE:HG23	1.93	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
1:0:536:A:C6	1:0:2076:U:H5'	2.47	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
1:0:2321: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:5:VAL:C	27:V:52:VAL:HG23	2.32	0.50
27:V:122:ARG:HG3	27:V:152:ALA:O	2.12	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
1:0:466:A:H2'	1:0:467:G:O4'	2.12	0.50
1:0:1422:U:H2'	1:0:1423:C:C6	2.47	0.50
1:0:2324:G:N2	1:0:2377:U:H1'	2.27	0.50
1:0:2335:C:H2'	1:0:2336:G:C8	2.47	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
1:0:561: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
1:0:817:G:O2'	1:0:818:A:C8	2.60	0.49
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2110:G:H4'	37:0:5461:HOH:O	2.12	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
1:0:21:G:H5''	22:Q:1:GLY:O	2.11	0.49
1:0:138:U:H5''	1:0:139:C:OP2	2.12	0.49
1:0:265:U:C2	1:0:266:G:C8	3.00	0.49
1:0:631:A:N7	1:0:2074:A:C5'	2.75	0.49
1:0:892:G:C6	1:0:893:C:C4	3.01	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
1:0:1688:G:H4'	31:Z:8:GLN:HG3	1.94	0.49
37:0:4174:HOH:O	19:N:37:ARG:HG3	2.12	0.49
6:A:132:ASP:OD1	6:A:133:ARG:N	2.44	0.49
11:F:48:VAL:CG2	11:F:74:PHE:HB3	2.42	0.49
11:F:60:VAL:O	11:F:62:HIS:N	2.46	0.49
11:F:108:LEU:O	11:F:108:LEU:HD12	2.11	0.49
13:H:15:THR:HG22	13:H:91:HIS:HA	1.92	0.49
13:H:57:ARG:O	13:H:59:ASN:N	2.45	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
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
1:0:2694:A:H4'	10:E:91:PHE:CE1	2.48	0.49
1:0:2766:A:O2'	1:0:2767:C:H5'	2.13	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
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
1:0:840:U:H2'	1:0:2648:U:O4	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:952:G:O2'	1:0:2302:A:O2'	2.23	0.49
1:0:1009:U:HO2'	1:0:1010:C:H5	1.60	0.49
1:0:1486:A:C5	2:1:2:LYS:HG3	2.48	0.49
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
1:0:2408:A:H1'	3:2:10:TYR:CE1	2.47	0.49
1:0:2757:A:H2'	1:0:2758:G:O4'	2.12	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:HG3	19:N:47:ARG:NH1	2.18	0.49
20:O:120:ARG:NH2	20:O:123:TYR:CD2	2.79	0.49
29:X:186:ARG:HG2	29:X:186:ARG:NH1	2.27	0.49
1:0:164:G:O3'	16:K:30:ARG:HB2	2.13	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
1:0:797:A:O4'	30:Y:10:ARG:N	2.46	0.49
1:0:869:G:H1'	1:0:886:A:C2	2.48	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
2:1:36:ASN:O	2:1:39:ARG:HG3	2.12	0.49
9:D:101:THR:O	9:D:101:THR:HG22	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
17:L:97:ILE:O	17:L:100:ILE:N	2.46	0.49
18:M:37:ARG:HH11	18:M:37:ARG:CG	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
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
1:0:1855:G:O6	6:A:141:PRO:HG2	2.12	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
7:B:66:GLU:HG2	37:B:641:HOH:O	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:B:142:LEU:HD22	7:B:182:VAL:CG2	2.41	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:38:THR:HG22	37:V:217:HOH:O	2.12	0.49
27:V:139:GLY:O	27:V:141:HIS:HD2	1.96	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
1:0:363:A:H1'	37:0:3877:HOH:O	2.12	0.49
1:0:1015:C:H2'	1:0:1016:U:C6	2.47	0.49
1:0:1076:G:O2'	1:0:1077:G:H5'	2.11	0.49
1:0:1117:A:N6	1:0:1244:U:HO2'	2.11	0.49
1:0:1150:A:H2	12:G:20:VAL:HG21	1.77	0.49
1:0:1446:U:O2'	1:0:1677:U:H2'	2.13	0.49
1:0:1450:C:C4'	1:0:1451:C:OP2	2.58	0.49
1:0:1503:U:H2'	1:0:1504:A:O4'	2.12	0.49
1:0:1684:A:H1'	1:0:1691:A:H1'	1.94	0.49
1:0:1773:G:C2'	1:0:1774:G:H5'	2.42	0.49
1:0:1867:G:N2	1:0:1868:G:H1'	2.28	0.49
1:0:2411:C:O2'	1:0:2412:G:H5'	2.13	0.49
1:0:2819:C:H4'	7:B:97:LEU:O	2.13	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
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
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
1:0:11:A:O3'	22:Q:60:LYS:NZ	2.45	0.49
1:0:45:A:N6	1:0:147:G:H2'	2.28	0.49
1:0:61:G:C6	1:0:86:A:N6	2.81	0.49
1:0:299:U:H5'	37:0:3445:HOH:O	2.11	0.49
1:0:332:G:H8	1:0:332:G:O5'	1.96	0.49
1:0:603:A:H5''	1:0:604:G:OP1	2.12	0.49
1:0:699:C:H2'	1:0:744:G:N3	2.27	0.49
1:0:792:G:O2'	1:0:793:A:H5'	2.13	0.49
1:0:1128:U:H5''	1:0:1129:C:OP2	2.13	0.49
1:0:1134:G:H4'	13:H:151:MET:CE	2.43	0.49
1:0:1135:G:P	37:H:204:HOH:O	2.71	0.49
1:0:1859:A:H8	1:0:1859:A:O5'	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2004:U:H2'	1:0:2005:G:OP1	2.13	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:6:PHE:HB3	14:I:109:TYR:OH	2.13	0.49
14:I:15:ARG:HA	14:I:43:ARG:O	2.12	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
1:0:513: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
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
1:0:2309:C:O2'	13:H:113:ALA:N	2.46	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
37:0:3543:HOH:O	7:B:337:GLY:N	2.46	0.49
37:0:3699:HOH:O	27:V:119:HIS:HE1	1.94	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
10:E:81:GLU:HG2	10:E:134:SER:CB	2.43	0.49
13:H:12:PRO:O	13:H:91:HIS:HE1	1.96	0.49
14:I:89:HIS:O	14:I:95:ARG:HB2	2.12	0.49
14:I:142:ASN:O	14:I:144:THR:N	2.46	0.49
15:J:35:HIS:HB2	37:J:346:HOH:O	2.13	0.49
15:J:105:ARG:O	15:J:105:ARG:HG2	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
1:0:216:A:H2'	1:0:217:C:H6	1.78	0.49
1:0:306:A:H2'	1:0:341:C:O2'	2.13	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
1:0:2466:G:H5''	37:0:6588:HOH:O	2.12	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:183:A:C5'	17:L:157:LEU:HD12	2.43	0.48
1:O:240:C:H5''	1:O:270:U:O4	2.13	0.48
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: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: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
37:2:227:HOH:O	17:L:84:LYS:HE2	2.13	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:64:ARG:HD3	9:D:67:ASP:HB3	1.93	0.48
9:D:139:TYR:HB3	37:D:202:HOH:O	2.12	0.48
17:L:37:VAL:HG21	17:L:108:LYS:HE3	1.94	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: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
1:O:1266:U:O3'	29:X:115:ARG:NH2	2.46	0.48
1:O:1689:A:H8	1:O:1689:A:OP2	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:X:112:GLU:OE1	29:X:112:GLU:HA	2.14	0.48
1:0:849:C:O2'	1:0:850:U:H5'	2.12	0.48
1:0:1003:U:O2	13:H:90:PHE:HZ	1.96	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
37:0:5920:HOH:O	7:B:236:ILE:HA	2.13	0.48
3:2:46:ILE:HD13	17:L:87:MET:HB3	1.96	0.48
7:B:24:PRO:HG2	7:B:204:GLY:HA2	1.96	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
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
1:0:87:C:H2'	2:1:30:ASP:OD2	2.14	0.48
1:0:88:G:C2	2:1:24:TRP:HB2	2.48	0.48
1:0:202:U:H2'	1:0:203:G:O4'	2.13	0.48
1:0:559:U:H5'	1:0:559:U:H6	1.78	0.48
1:0:585:C:H5''	37:0:7364:HOH:O	2.12	0.48
7:B:53:LEU:HD21	7:B:270:ILE:HG23	1.94	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
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:HG12	27:V:48:VAL:O	2.14	0.48
30:Y:30:GLU:HA	30:Y:33:HIS:CB	2.43	0.48
1:0:198:A:C5	1:0:2444:U:O4'	2.66	0.48
1:0:220:C:C2	16:K:48:LYS:HE2	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:1617:C:H5''	1:0:1618:G:OP2	2.13	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
8:C:5:ILE:HG22	8:C:6:TYR:N	2.28	0.48
8:C:161:ASP:HA	37:C:545:HOH:O	2.12	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:85:ARG:HA	17:L:87:MET:CE	2.43	0.48
17:L:184:ARG:HG3	17:L:185:PRO:HA	1.95	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
1:0:24:G:O2'	1:0:25:A:P	2.71	0.48
1:0:155:C:OP2	17:L:188:ARG:NH1	2.35	0.48
1:0:228:C:C2'	1:0:229:G:H5'	2.43	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
1:0:907:A:H4'	1:0:1328:A:C2	2.48	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
1:0:1594:C:O2'	1:0:1595:G:H5'	2.13	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
1:0:2735:U:H2'	1:0:2736:U:H6	1.79	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
1:0:477: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
1:0:1003:U:H4'	13:H:86:ARG:O	2.13	0.48
1:0:1589:G:N2	1:0:1605:G:C2'	2.77	0.48
1:0:1736:A:OP1	7:B:231:GLY:HA2	2.14	0.48
1:0:2463:A:C4'	1:0:2464:C:OP2	2.59	0.48
1:0:2780:C:C1'	10:E:143:GLN:HE21	2.26	0.48
8:C:20:ASP:O	8:C:23:GLU:N	2.46	0.48
10:E:32:ARG:O	10:E:33:LEU:HD23	2.14	0.48
17:L:123:ASP:C	17:L:123:ASP:OD1	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
1:0:230: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
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
1:0:1262:C:H1'	27:V:120:PRO:HG3	1.95	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
1:0:2054:A:N3	22:Q:128:ARG:NH2	2.62	0.48
37:0:6635:HOH:O	6:A:11:ARG:HA	2.13	0.48
6:A:9:ARG:NE	37:A:424:HOH:O	2.47	0.48
6:A:33:GLU:O	6:A:34:ASP:HB2	2.14	0.48
6:A:105:VAL:HG12	6:A:106:CYS:N	2.28	0.48
7:B:76:THR:N	7:B:77:PRO:HD3	2.28	0.48
17:L:37:VAL:CG1	17:L:63:VAL:HG11	2.43	0.48
17:L:157:LEU:HA	35:L:202:CL:CL	2.50	0.48
17:L:173:LEU:HD23	17:L:183:VAL:HG12	1.96	0.48
21:P:77:ASP:O	21:P:79:GLY:N	2.47	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
1:0:473:A:O2'	1:0:474:C:H5'	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
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:70:PRO:O	7:B:71:VAL:CG2	2.62	0.48
7:B:144:THR:CG2	7:B:145:HIS:N	2.77	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
1:0:80:A:H1'	1:0:81:G:O4'	2.14	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
1:0:185:G:C4'	1:0:186:A:OP1	2.61	0.47
1:0:264:G:O6	11:F:32:GLY:HA3	2.14	0.47
1:0:358:G:C2'	1:0:359:U:OP2	2.62	0.47
1:0:868:G:O5'	1:0:870:G:H1'	2.14	0.47
1:0:1085:C:H2'	1:0:1086:A:C5'	2.44	0.47
1:0:1647:G:O2'	1:0:1648:G:H5'	2.14	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
5:9:43:G:C2	5:9:47:A:C2	3.02	0.47
5:9:74:G:H1	5:9:107:C:H42	1.62	0.47
8:C:236:THR:HA	37:C:424:HOH:O	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:CG	27:V:122:ARG:NH1	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
1:0:746: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
1:0:1058:A:H2'	1:0:1060:C:C5'	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:2272:G:N2	1:0:2273:C:H1'	2.29	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:73:ALA:HB1	18:M:74:PRO:HD2	1.95	0.47
18:M:140:GLN:O	18:M:143:ARG:HB2	2.13	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
1:0:98:A:H2'	1:0:99:A:H5'	1.96	0.47
1:0:451:C:H2'	1:0:452:G:O4'	2.15	0.47
1:0:709:G:O2'	19:N:25:VAL:HG12	2.13	0.47
1:0:901:G:OP2	16:K:18:HIS:HE1	1.96	0.47
1:0:1503:U:H6	1:0:1503:U:H3'	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
3:2:84:ARG:HH11	3:2:84:ARG:HG3	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:35:ARG:NH1	16:K:35:ARG:HB2	2.30	0.47
16:K:145:LEU:O	16:K:145:LEU:HD23	2.13	0.47
19:N:35:LYS:O	19:N:40:HIS:NE2	2.48	0.47
1:0:380:A:C4	17:L:13:LYS:HG2	2.49	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:9:6:C:OP1	18:M:37:ARG:NH1	2.47	0.47
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
22:Q:39:THR:O	22:Q:40:ALA:C	2.53	0.47
22:Q:104:PHE:HB2	22:Q:109:MET:HE1	1.95	0.47
26:U:12:THR:HG22	26:U:15:GLU:H	1.79	0.47
1:0:282:C:H1'	1:0:368:C:H42	1.80	0.47
1:0:392:U:H5''	17:L:193:LYS:HB3	1.96	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
1:0:1292:G:H8	1:0:1292:G:O5'	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
1:0:2851:G:H2'	1:0:2902:A:N6	2.28	0.47
1:0:2866:U:H5'	37:O:7935:HOH:O	2.13	0.47
37:O:6032:HOH:O	30:Y:17:ARG:HG2	2.14	0.47
7:B:40:GLY:HA2	7:B:311:PHE:O	2.15	0.47
7:B:280:VAL:HG13	7:B:333:GLU: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
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
1:0:220:C:H1'	37:O:5823:HOH:O	2.14	0.47
1:0:876:A:O2'	1:0:877:G:H5'	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
1:0:2597:U:H5''	37:O:3268:HOH:O	2.13	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:7:LYS:HE3	21:P:21:ARG:O	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:M:13:ARG:HD3	37:M:358:HOH:O	2.15	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:289:G:N2	1:O:363:A:H2	2.13	0.47
1:O:778:C:C2	1:O:881:C:O4'	2.68	0.47
1:O:842:C:O2	1:O:1693:A:H2'	2.14	0.47
1:O:954:U:O2'	1:O:955:A:H5'	2.14	0.47
1:O:1619:G:H2'	1:O:1620:C:C6	2.48	0.47
1:O:1710:A:H5''	1:O:1711:A:OP2	2.15	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:2634:G:H2'	1:O:2635:A:H8	1.80	0.47
1:O:2700:G:H2'	1:O:2701:G:H5'	1.96	0.47
37:O:4174:HOH:O	19:N:37:ARG:CG	2.62	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:6:PRO:HB3	37:B:613:HOH:O	2.13	0.47
7:B:43:GLY:O	7:B:309:VAL:HG22	2.15	0.47
7:B:74:ILE:HG13	37:B:501:HOH:O	2.15	0.47
7:B:82:VAL:HG12	7:B:101:TRP:CE3	2.50	0.47
8:C:107:ARG:CB	8:C:107:ARG:HH11	2.27	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:CD2	14:I:72:PRO:O	2.67	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
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
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
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:656:G:H2'	1:O:657:G:H8	1.80	0.47
1:O:661:G:C5	1:O:686:A:C2	3.03	0.47
1:O:922:A:N7	1:O:2281:C:H5'	2.30	0.47
1:O:1131:G:C6	1:O:1230:A:C4	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1544:U:H2'	1:0:1545:C:C6	2.50	0.47
1:0:1566:C:O2'	1:0:1567:A:H5'	2.15	0.47
1:0:1574:C:O5'	1:0:1574:C:H6	1.97	0.47
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
1:0:2474: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
3:2:47:GLY:CA	17:L:83:SER:HB2	2.45	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:77:PHE:CD1	17:L:77:PHE:O	2.68	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
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
1:0:367:G:O2'	1:0:368:C:H5'	2.15	0.47
1:0:380:A:C6	17:L:13:LYS:HD3	2.50	0.47
1:0:487:G:H1'	1:0:512:G:H21	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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'	37:0:4763:HOH:O	2.14	0.47
1:0:1845:A:P	6:A:190:ARG:NH1	2.88	0.47
1:0:2493:C:H5''	1:0:2494:G:OP1	2.14	0.47
1:0:2503:A:P	13:H:147:ARG:HH22	2.38	0.47
1:0:2897:C:H2'	1:0:2898:G:C8	2.50	0.47
2:1:13:LYS:O	2:1:16:ASN:N	2.48	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
11:F:61:MET:HB3	17:L:19:GLN:OE1	2.15	0.47
13:H:44:ALA:HB3	13:H:136:VAL:O	2.15	0.47
13:H:50:VAL:HA	13:H:157:ILE:HG12	1.97	0.47
14:I:46:ILE:HG12	14:I:53:ILE:HD13	1.96	0.47
18:M:37:ARG:NE	18:M:105:GLY:HA3	2.30	0.47
18:M:171:HIS:CE1	37:M:308:HOH:O	2.68	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:51:LEU:HD11	24:S:97:ARG:HB2	1.97	0.47
24:S:63:ILE:N	24:S:73:HIS:O	2.46	0.47
28:W:87:ALA:O	28:W:88:GLU:CG	2.63	0.47
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
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
37:0:5476:HOH:O	6:A:182:ARG:HD2	2.15	0.46
5:9:4:G:O2'	18:M:44:ARG:NH2	2.48	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:B:51:VAL:HG13	7:B:53:LEU:CD1	2.45	0.46
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:71:SER:O	17:L:73:ARG:NH1	2.48	0.46
17:L:185:PRO:HG2	17:L:189:VAL:HG11	1.97	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
1:0:263: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
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
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:41:PHE:N	37:B:521:HOH:O	2.48	0.46
7:B:206:THR:HA	7:B:303:GLY:H	1.80	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
1:0:541:C:O2'	1:0:542:A:H5''	2.14	0.46
1:0:630:A:H2	1:0:2072:G:OP2	1.99	0.46
1:0:714:U:O5'	1:0:714:U:H6	1.98	0.46
1:0:777:U:H2'	37:0:4817:HOH:O	2.15	0.46
1:0:840:U:C2	1:0:2648:U:C4	3.04	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
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
37:0:8317:HOH:O	29:X:208:LYS:HD2	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:C:219:ASN:N	8:C:222:ASP:OD1	2.47	0.46
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:HD23	22:Q:89:LEU:HA	1.78	0.46
1:0:664:U:O2'	1:0:665:A:H5'	2.15	0.46
1:0:894:A:H5''	1:0:895:A:OP2	2.15	0.46
1:0:963:C:H2'	1:0:964:G:C8	2.50	0.46
1:0:1004:C:O2'	1:0:1005:A:H5'	2.16	0.46
1:0:1009:U:O2'	1:0:1010:C:H5	1.98	0.46
1:0:1130:U:H5'	37:0:5078:HOH:O	2.16	0.46
1:0:1700:C:N4	37:0:3691:HOH:O	2.48	0.46
1:0:1730:G:C5'	1:0:1731:C:H6	2.25	0.46
1:0:1998:G:C6	1:0:1999:C:C4	3.04	0.46
1:0:2055:A:H5'	22:Q:134:SER:HB2	1.98	0.46
1:0:2757:A:C2'	1:0:2758:G:H5'	2.45	0.46
1:0:2791:U:C4	1:0:2794:G:C6	3.03	0.46
1:0:2815:G:C4'	1:0:2816:A:OP2	2.59	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:93:ILE:HB	37:V:206:HOH:O	2.14	0.46
27:V:110:GLN:NE2	27:V:110:GLN:CA	2.78	0.46
1:0:78:G:C6	1:0:79:G:N1	2.83	0.46
1:0:675:U:H6	1:0:675:U:O5'	1.99	0.46
1:0:708:A:H2'	1:0:709:G:O4'	2.14	0.46
1:0:783:C:O2'	1:0:784:A:H5'	2.16	0.46
1:0:795:G:H2'	1:0:817:G:H22	1.80	0.46
1:0:816:G:C6	1:0:817:G:C6	3.04	0.46
1:0:926:A:O2'	16:K:41:HIS:CD2	2.69	0.46
1:0:1041:U:H2'	1:0:1042:U:H5'	1.98	0.46
1:0:1159:G:H1	1:0:1208:C:H42	1.64	0.46
1:0:1589:G:O2'	1:0:1590:A:H8	1.99	0.46
1:0:1680:C:H2'	1:0:1681:G:O4'	2.15	0.46
1:0:1832:G:O2'	1:0:1833:U:H5'	2.15	0.46
1:0:1905:U:H2'	1:0:1906:C:C6	2.51	0.46
1:0:1981:A:O2'	1:0:1983:C:N4	2.49	0.46
1:0:2083:A:H2'	1:0:2084:C:H5''	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2103:A:H2'	1:0:2104:C:H5'	1.97	0.46
1:0:2626:C:H2'	1:0:2627:G:C8	2.50	0.46
5:9:57:A:C8	9:D:141:VAL:HG21	2.50	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
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:77:GLY:O	14:I:80:LYS:N	2.49	0.46
14:I:107:ASN:ND2	14:I:109:TYR:HB2	2.27	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
1:0:111:C:O2'	31:Z:20:ARG:HG2	2.15	0.46
1:0:418:C:H2'	1:0:419:A:C8	2.50	0.46
1:0:1013:A:C2	1:0:1014:A:H1'	2.49	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
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:68:ALA:CB	13:H:145:ALA:O	2.63	0.46
13:H:142:VAL:C	13:H:144:GLU:N	2.69	0.46
14:I:93:ARG:HB3	14:I:93:ARG:HH11	1.79	0.46
15:J:53:ILE:HG13	15:J:55:VAL:HG23	1.98	0.46
16:K:38:HIS:CD2	16:K:39:GLU:HG3	2.51	0.46
16:K:144:ASP:O	16:K:147:GLU:HB2	2.15	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
1:0:10:U:O4	1:0:532:A:OP2	2.34	0.46
1:0:17:G:H2'	1:0:18:C:H6	1.75	0.46
1:0:25:A:N6	1:0:518:G:H1'	2.30	0.46
1:0:319:A:H4'	1:0:338:C:C5	2.51	0.46
1:0:672:G:H1'	37:0:7432:HOH:O	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:1023:C:H2'	1:0:1024:G:O4'	2.15	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
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
1:0:1999:C:H2'	1:0:2000:G:H8	1.80	0.46
1:0:2073:G:H1	1:0:2607:U:H1'	1.81	0.46
1:0:2579:G:O2'	1:0:2580:G:H5'	2.16	0.46
1:0:2831:C:H2'	1:0:2832:C:H5'	1.97	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
1:0:86:A:O2'	2:1:28:LYS:HE2	2.15	0.46
1:0:198:A:N7	1:0:2444:U:H5'	2.31	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
1:0:1184: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
1:0:1787:C:H4'	1:0:2883:A:O4'	2.14	0.46
1:0:1872:C:O2'	6:A:26:ASP:HA	2.16	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
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
1:0:100:C:H5'	24:S:16:LEU:HD12	1.97	0.46
1:0:175:G:HO2'	1:0:176:U:P	2.36	0.46
1:0:264:G:HO2'	1:0:265:U:H5	1.61	0.46
1:0:308:U:C2	24:S:52:ARG:NH2	2.84	0.46
1:0:536:A:N6	1:0:2076:U:H5'	2.30	0.46
1:0:559:U:H2'	1:0:560:C:O4'	2.15	0.46
1:0:1007:A:H2'	13:H:19:TYR:CE1	2.51	0.46
1:0:1126:C:O2'	1:0:1128:U:C5	2.68	0.46
1:0:1412:U:O2'	1:0:1413:A:H5'	2.15	0.46
1:0:1570:C:C2'	1:0:1571:G:H5'	2.46	0.46
1:0:2106:C:H2'	1:0:2107:U:C6	2.51	0.46
1:0:2533:C:H3'	37:0:3201:HOH:O	2.16	0.46
1:0:2688:U:H2'	1:0:2689:A:H8	1.81	0.46
1:0:2723:G:H1'	37:0:4629:HOH:O	2.15	0.46
1:0:2869:G:H2'	1:0:2870:C:C6	2.51	0.46
37:0:3237:HOH:O	13:H:95:GLU:HA	2.15	0.46
37:0:3460:HOH:O	17:L:104:ARG:HG3	2.14	0.46
6:A:66:ARG:NH1	6:A:66:ARG:CB	2.78	0.46
6:A:199:HIS:CG	6:A:200:PRO:HD2	2.51	0.46
7:B:265:LEU:HD12	7:B:265:LEU:N	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
16:K:53:ARG:NH2	16:K:57:VAL:HG12	2.31	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
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
1:0:407:A:H3'	37:0:3234:HOH:O	2.15	0.46
1:0:558:C:C2'	1:0:559:U:C5'	2.93	0.46
1:0:1335:C:H2'	1:0:1336:U:C6	2.50	0.46
1:0:1441:G:H2'	1:0:1442:A:H8	1.81	0.46
1:0:2087:C:O2'	1:0:2088:C:H5'	2.16	0.46
1:0:2847:G:H4'	37:0:3369:HOH:O	2.15	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:9:ARG:O	6:A:10:GLY:C	2.54	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:128:LEU:HD13	6:A:138:VAL:HG22	1.98	0.46
7:B:7:ARG:NH1	7:B:7:ARG:CG	2.79	0.46
7:B:223:ARG:NH1	7:B:232:TRP:HB3	2.31	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:12:ILE:O	28:W:69:LYS:HA	2.16	0.46
28:W:22:ASN:C	28:W:24:LYS:H	2.18	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: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
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:2829:G:N2	1:O:2912:C:C2	2.84	0.45
1:O:2862:G:H4'	7:B:336:GLN:O	2.17	0.45
5:9:11:A:C2	5:9:69:U:O4'	2.69	0.45
5:9:14:G:H5'	5:9:14:G:C8	2.45	0.45
5:9:39:U:H1'	5:9:44:A:H61	1.81	0.45
6:A:66:ARG:HH11	6:A:66:ARG:CB	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:13:ALA:HA	13:H:91:HIS:CE1	2.51	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
14:I:36:VAL:CG1	14:I:37:ALA:N	2.79	0.45
14:I:97:ALA:O	14:I:100:SER:N	2.45	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
1:0:191:A:N1	1:0:236:A:O2'	2.49	0.45
1:0:213:G:O2'	1:0:225:G:N1	2.49	0.45
1:0:736:A:H5''	37:0:3521:HOH:O	2.16	0.45
1:0:841:A:C8	22:Q:129:ALA:HB1	2.51	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
1:0:2033: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
1:0:2467: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
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:2:GLN:HB2	37:B:591:HOH:O	2.15	0.45
7:B:232:TRP:CD1	7:B:235:ARG:HD2	2.52	0.45
13:H:35:ASN:ND2	13:H:80:ASN:HA	2.31	0.45
17:L:77:PHE:HE2	17:L:86:MET:HB3	1.80	0.45
17:L:157:LEU:HD23	37:L:430:HOH:O	2.16	0.45
18:M:14:ARG:C	18:M:16:ALA:H	2.19	0.45
25:T:52:THR:HG22	25:T:54:THR:H	1.81	0.45
27:V:17:ILE:O	27:V:20:THR:HB	2.17	0.45
27:V:110:GLN:HE21	27:V:110:GLN:CA	2.26	0.45
1:0:51:G:O2'	1:0:52:A:H5'	2.15	0.45
1:0:485:A:H1'	1:0:486:A:C8	2.51	0.45
1:0:779:U:H5'	1:0:1836:A:C2	2.51	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
1:0:2898:G:H4'	7:B:288:GLY:HA2	1.98	0.45
3:2:65:THR:HB	3:2:83:TRP:H	1.81	0.45
5:9:28:U:H5''	18:M:40:ASN:ND2	2.32	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
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
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:197:C:OP2	16:K:56:LYS:HD2	2.16	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
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:H2'	1:O:2103:A:N3	2.32	0.45
1:O:2397:G:C5	1:O:2465:A:C6	3.04	0.45
1:O:2411:C:H4'	37:O:4941:HOH:O	2.17	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
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:62:HIS:O	11:F:63:ILE:C	2.54	0.45
11:F:101:ALA:HB2	11:F:108:LEU:CD2	2.46	0.45
13:H:32:ASP:C	13:H:33:MET:HG3	2.37	0.45
13:H:81:TYR:CD1	13:H:81:TYR:C	2.90	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:786:G:O2'	1:O:787:G:H5'	2.17	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
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
10:E:36:PRO:CG	14:I:127:ILE:HB	2.47	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
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:24:G:HO2'	1:O:25:A:H8	1.61	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:30:U:C4	1:0:452:G:O2'	2.70	0.45
1:0:101:C:H2'	1:0:102:A:C8	2.51	0.45
1:0:939:A:N6	1:0:1031:G:H1'	2.31	0.45
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
1:0:2687: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
37:0:3403:HOH:O	20:O:37:ARG:HB2	2.16	0.45
37:0:6879:HOH:O	31:Z:10:LYS:HB3	2.16	0.45
5:9:45:A:H2'	5:9:46:C:C6	2.52	0.45
6:A:8:ARG:HG2	37:A:405:HOH:O	2.17	0.45
6:A:53:ALA:HB1	6:A:54:PRO:HD2	1.99	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:150:LYS:HB2	13:H:157:ILE:HB	1.99	0.45
13:H:153:VAL:HG21	13:H:157:ILE:CD1	2.47	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:39:ARG:CA	17:L:63:VAL:HG22	2.34	0.45
17:L:52:LEU:HD13	17:L:116:ASN:OD1	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
1:0:214:U:H5'	37:0:7574:HOH:O	2.16	0.45
1:0:228:C:H2'	1:0:229:G:H5'	1.98	0.45
1:0:537:G:C6	1:0:620:A:C8	3.04	0.45
1:0:625:U:H5'	37:0:3746:HOH:O	2.16	0.45
1:0:629:A:H2'	1:0:630:A:O4'	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
1:0:2443:C:O2'	16:K:56:LYS:HE3	2.17	0.45
1:0:2578:G:H5'	1:0:2578:G:C8	2.46	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: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)
8:C:135:GLU:HB3	37:C:450:HOH:O	2.16	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
1:0:222:A:H2'	1:0:223:G:O4'	2.17	0.45
1:0:482:G:N2	1:0:484:A:H3'	2.32	0.45
1:0:894:A:N1	8:C:87:ARG:NH2	2.65	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
1:0:1708:C:O4'	20:O:86:ALA:HB1	2.16	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
5:9:42:C:O2	9:D:76:ARG:NH1	2.49	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
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
1:0:12:U:C2'	1:0:13:G:H5'	2.47	0.45
1:0:99:A:N1	24:S:20:HIS:NE2	2.61	0.45
1:0:418:C:C4	1:0:2442:G:N2	2.85	0.45
1:0:450:C:O5'	1:0:450:C:H6	1.99	0.45
1:0:654:A:OP2	19:N:38:ARG:HD3	2.17	0.45
1:0:907:A:H4'	1:0:1328:A:N1	2.30	0.45
1:0:1191:A:H3'	1:0:1192:A:H5''	1.99	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
1:0:2393:C:H4'	21:P:78:GLY:HA3	1.99	0.45
1:0:2784:A:O5'	1:0:2784:A:H8	2.00	0.45
6:A:36:ASP:OD2	6:A:85:ASP:HB2	2.16	0.45
7:B:55:ASN:HB3	7:B:64:GLY:H	1.82	0.45
7:B:185:GLY:HA2	37:B:566:HOH:O	2.16	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
20:O:2:ASP:C	20:O:2:ASP:OD1	2.54	0.45
28:W:34:ARG:HH11	28:W:34:ARG:HG3	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
1:0:358:G:O2'	1:0:359:U:OP2	2.34	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
1:0:2091:G:H22	1:0:2653:A:H2	1.63	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
3:2:1:MET:SD	3:2:83:TRP:NE1	2.80	0.45
4:5:50:PRO:HG2	23:R:15:MET:HG3	1.99	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:HG23	16:K:64:ILE:O	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
27:V:21:LEU:HD23	27:V:48:VAL:HG21	1.98	0.45
27:V:122:ARG:NH1	27:V:152:ALA:O	2.50	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
1:0:72:C:H2'	1:0:73:C:H6	1.81	0.44
1:0:429:A:C6	1:0:430:A:C6	3.05	0.44
1:0:431:G:P	17:L:48:ARG:HH12	2.40	0.44
1:0:775:G:O2'	1:0:881:C:C5	2.69	0.44
1:0:821:U:H2'	1:0:822:C:C6	2.52	0.44
1:0:889:C:H2'	1:0:890:C:C6	2.52	0.44
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
1:0:2768:A:C8	7:B:316:ARG:HB2	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:D:94:ALA:HB3	9:D:174:VAL:CA	2.46	0.44
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
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
1:0:290: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
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
37:0:3724:HOH:O	19:N:32:ARG:NH2	2.50	0.44
5:9:50:G:C6	5:9:51:A:C6	3.04	0.44
6:A:22:ARG:NH1	37:A:426:HOH:O	2.50	0.44
6:A:97:ALA:HA	6:A:131:HIS:NE2	2.32	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:6:GLU:HA	10:E:46:THR:HG22	1.99	0.44
10:E:37:ASP:OD1	14:I:125:SER:HB3	2.17	0.44
10:E:157:LYS:NZ	37:E:204:HOH:O	2.47	0.44
14:I:19:MET:O	14:I:20:GLY:C	2.55	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
17:L:102:GLU:OE2	17:L:117:SER:OG	2.29	0.44
20:O:7:LYS:HD3	20:O:23:PHE:CE1	2.53	0.44
20:O:134:VAL:O	20:O:137:LEU:HB3	2.17	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
1:0:207:U:H5'	37:0:7029:HOH:O	2.18	0.44
1:0:287:C:H6	1:0:287:C:O5'	2.00	0.44
1:0:317:A:OP1	24:S:52:ARG:O	2.35	0.44
1:0:321:A:H1'	37:0:3740:HOH:O	2.16	0.44
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:1971:G:C2'	1:0:1972:U:OP2	2.65	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
1:0:2846:C:H4'	7:B:156:LYS:HB3	1.99	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
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
1:0:24:G:O2'	1:0:25:A:H8	2.01	0.44
1:0:309:C:OP1	24:S:97:ARG:NH2	2.49	0.44
1:0:454:U:H3'	37:0:8058:HOH:O	2.17	0.44
1:0:471:G:H4'	31:Z:16:HIS:CE1	2.52	0.44
1:0:777:U:O2'	31:Z:11:LYS:HA	2.18	0.44
1:0:841:A:C4	1:0:843:A:C6	3.06	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
1:0:2806:C:H2'	1:0:2807:U:C6	2.53	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:76:ARG:HG2	8:C:78:ARG:NH1	2.31	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
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:73:ALA:HB2	18:M:163:PHE:CZ	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:M:132:ASN:HA	37:M:345:HOH:O	2.17	0.44
28:W:66:THR:CG2	28:W:67:PRO:HD2	2.40	0.44
29:X:187:VAL:CG1	29:X:205:ILE:HA	2.47	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
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
37:0:6841:HOH:O	31:Z:12:ASN:HB3	2.17	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
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
1:0:809:G:O2'	1:0:810:G:H5'	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
1:0:2443:C:O2'	16:K:56:LYS:HE2	2.17	0.44
5:9:41:C:N4	9:D:72:LYS:HE3	2.32	0.44
6:A:55:VAL:O	6:A:55:VAL:HG12	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
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
10:E:82:TYR:CD1	10:E:141:VAL:HG12	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:H:47:GLU:CB	13:H:133:ILE:CD1	2.95	0.44
17:L:187:LEU:HD23	17:L:187:LEU:HA	1.80	0.44
18:M:37:ARG:CZ	37:M:305:HOH:O	2.66	0.44
18:M:108:SER:HA	18:M:109:PRO:HD3	1.74	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
1:0:782:G:N2	37:0:3844:HOH:O	2.51	0.44
1:0:840:U:O2	1:0:2055:A:H1'	2.18	0.44
1:0:1024:G:C6	1:0:1025:C:N3	2.86	0.44
1:0:1448:A:N9	1:0:1506:U:H1'	2.33	0.44
1:0:1562:C:H42	1:0:2738:G:H1	1.65	0.44
1:0:1855:G:N1	1:0:1875:A:C8	2.85	0.44
1:0:1898:G:H2'	1:0:1899:C:C6	2.52	0.44
1:0:2531:U:H2'	1:0:2532:A:O4'	2.17	0.44
1:0:2634:G:H2'	1:0:2635:A:C8	2.53	0.44
1:0:2716:G:H5''	7:B:206:THR:CG2	2.34	0.44
1:0:2775:A:C6	1:0:2776:A:C6	3.05	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:2:PRO:HD2	13:H:5:MET:SD	2.57	0.44
13:H:150:LYS:HA	13:H:153:VAL:HG22	1.99	0.44
13:H:153:VAL:HA	37:H:218:HOH:O	2.17	0.44
14:I:23:ALA:O	14:I:26:VAL:N	2.50	0.44
18:M:23:ARG:O	18:M:27:LEU:HG	2.17	0.44
18:M:159:TYR:HE2	18:M:163:PHE:HE2	1.66	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
1:0:947:U:O2'	1:0:948:G:H5'	2.18	0.44
1:0:1109:U:O4	14:I:24:SER:HB3	2.18	0.44
1:0:1189:A:O2'	1:0:1208:C:H2'	2.17	0.44
1:0:1284:G:N2	37:0:3725:HOH:O	2.49	0.44
1:0:1491:G:H4'	1:0:1492:A:OP2	2.17	0.44
1:0:1816:C:H2'	1:0:1817:U:O4'	2.18	0.44
1:0:2057:U:O5'	1:0:2057:U:H6	2.00	0.44
1:0:2644:C:O2'	1:0:2645:U:H5'	2.18	0.44
1:0:2791:U:O2'	1:0:2792:A:C5'	2.62	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2843:A:H2'	1:0:2844:C:H5'	1.99	0.44
3:2:46:ILE:HD13	17:L:87:MET:HG2	2.00	0.44
6:A:5:GLN:HB2	37:A:445:HOH:O	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:84:VAL:HG13	6:A:98:GLU:CG	2.47	0.44
8:C:37:ALA:O	8:C:38:ALA:C	2.56	0.44
8:C:107:ARG:NH1	8:C:107:ARG:HB3	2.32	0.44
11:F:2:VAL:HG22	11:F:57:GLU:OE1	2.17	0.44
11:F:29:VAL:HA	11:F:99:THR:HG22	2.00	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
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
1:0:130:C:O2'	1:0:131:A:N7	2.51	0.44
1:0:285:A:N6	1:0:367:G:H1'	2.33	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
1:0:1370: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:O5'	1:0:1650:C:H6	2.01	0.44
1:0:1870:C:H6	1:0:1870:C:O5'	2.01	0.44
1:0:2754:G:H2'	1:0:2755:G:C5'	2.47	0.44
2:1:14:LEU:HD23	2:1:14:LEU:HA	1.83	0.44
7:B:47:GLY:O	7:B:73:VAL:N	2.50	0.44
7:B:130:ASP:HB2	37:B:640:HOH:O	2.18	0.44
9:D:146:LYS:NZ	18:M:107:ASN:ND2	2.65	0.44
9:D:146:LYS:NZ	18:M:107:ASN:HD21	2.16	0.44
11:F:33:THR:HG21	11:F:59:ILE:O	2.17	0.44
11:F:104:ALA:C	11:F:106:THR:N	2.70	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
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
16:K:51:PHE:HD2	16:K:51:PHE:H	1.66	0.44
17:L:57:LYS:HG2	17:L:58:GLN:N	2.29	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
1:0:192:A:N6	1:0:194:A:C2	2.86	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
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
1:0:1719:G:OP1	20:O:18:LYS:HG3	2.18	0.43
1:0:1819:G:H2'	1:0:1820:G:C5'	2.48	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
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
31:Z:28:HIS:O	31:Z:32:LYS:N	2.41	0.43
1:0:106:A:C2	1:0:107:U:C2	3.06	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
1:0:1055:G:H5'	13:H:114:PRO:O	2.19	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
37:0:6803:HOH:O	17:L:91:ILE:HD13	2.18	0.43
5:9:28:U:H5	37:9:435:HOH:O	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:122:SER:O	6:A:124:VAL:HG13	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
1:0:363:A:H2'	1:0:364:C:C6	2.52	0.43
1:0:396:U:H5'	3:2:42:ARG:NH1	2.34	0.43
1:0:480:C:H5''	1:0:481:U:OP2	2.19	0.43
1:0:1041:U:C2'	1:0:1042:U:H5'	2.48	0.43
1:0:1859:A:H2'	1:0:1860:U:H5'	1.99	0.43
1:0:1878:G:H2'	1:0:1879:U:H6	1.79	0.43
1:0:2630:G:O6	6:A:206:ARG:NH2	2.51	0.43
1:0:2831:C:C2'	1:0:2832:C:H5'	2.48	0.43
37:0:3782:HOH:O	17:L:178:LYS:HB2	2.18	0.43
37:0:6727:HOH:O	29:X:137:LYS:HD3	2.18	0.43
6:A:51:ARG:NH1	6:A:51:ARG:CB	2.81	0.43
6:A:112:PRO:N	6:A:152:CYS:SG	2.91	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
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
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
1:0:318:C:H41	1:0:336:G:H5''	1.84	0.43
1:0:377:C:H5	37:0:4985:HOH:O	2.01	0.43
1:0:766:A:H1'	1:0:2478:U:O2'	2.19	0.43
1:0:2519:C:O2'	1:0:2520:G:H5'	2.19	0.43
1:0:2553:A:H5''	37:0:6999:HOH:O	2.18	0.43
1:0:2616:G:H2'	1:0:2645:U:O4	2.17	0.43
1:0:2791:U:C4	1:0:2794:G:O6	2.70	0.43
37:0:8155:HOH:O	28:W:23:HIS:HD2	2.00	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:46:ILE:HG12	14:I:46:ILE:O	2.18	0.43
14:I:138:THR:C	14:I:140:GLY:H	2.21	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:L:156:ARG:NH1	37:L:322:HOH:O	2.51	0.43
18:M:64:SER:C	18:M:66:LEU:H	2.21	0.43
20:O:22:TRP:CZ2	20:O:24:ASN:HA	2.53	0.43
20:O:115:SER:C	20:O:117:SER:N	2.71	0.43
25:T:9:CYS:CA	25:T:52:THR:HG23	2.49	0.43
29:X:177:LYS:HD3	29:X:181:GLY:O	2.18	0.43
1:0:558:C:O2'	1:0:559:U:H5''	2.19	0.43
1:0:590:A:C2'	1:0:591:A:H5'	2.48	0.43
1:0:747:G:H1'	37:0:3792:HOH:O	2.19	0.43
1:0:796:A:H62	1:0:817:G:H1'	1.82	0.43
1:0:909:U:C2	1:0:910:C:C6	3.06	0.43
1:0:1119:G:N2	1:0:1246:A:C2	2.82	0.43
1:0:1682:A:H5''	37:0:4885:HOH:O	2.17	0.43
1:0:1929:G:H1'	37:0:6275:HOH:O	2.18	0.43
1:0:2028:U:H2'	1:0:2029:C:H6	1.83	0.43
1:0:2550:U:O2'	1:0:2551:C:H5'	2.19	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:N	12:G:64:ASN:ND2	2.66	0.43
37:K:360:HOH:O	29:X:147:ARG:HD2	2.18	0.43
17:L:83:SER:N	17:L:86:MET:HE2	2.34	0.43
20:O:16:VAL:HG12	20:O:20:ARG:HB2	2.00	0.43
20:O:120:ARG:NH2	20:O:123:TYR:HD2	2.17	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
1:0:77:G:C2'	1:0:78:G:H5'	2.49	0.43
1:0:100:C:H4'	24:S:16:LEU:HB2	1.99	0.43
1:0:175:G:O2'	1:0:176:U:OP2	2.24	0.43
1:0:213:G:H22	1:0:225:G:H2'	1.83	0.43
1:0:228:C:H2'	1:0:229:G:O4'	2.19	0.43
1:0:402:U:H2'	1:0:403:C:H6	1.81	0.43
1:0:483:C:N4	1:0:506:G:O2'	2.50	0.43
1:0:487:G:O2'	1:0:488:U:OP2	2.37	0.43
1:0:488:U:O2'	24:S:82:THR:HG21	2.19	0.43
1:0:627:G:H1'	37:0:3703:HOH:O	2.19	0.43
1:0:955:A:C2	1:0:1013:A:C4	3.07	0.43
1:0:1168:C:H2'	1:0:1169:U:O4'	2.18	0.43
1:0:1189:A:H1'	1:0:1209:C:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1335:C:H2'	1:0:1336:U:H6	1.83	0.43
1:0:1414:A:H2'	1:0:1415:G:O4'	2.18	0.43
1:0:1673:U:P	37:0:3561:HOH:O	2.76	0.43
1:0:1839:A:H5'	1:0:2643:G:H4'	2.01	0.43
1:0:1902:G:H2'	1:0:1903:U:O4'	2.19	0.43
1:0:1909:A:H2'	1:0:1910:A:C8	2.53	0.43
1:0:2413:A:N7	18:M:109:PRO:HB3	2.34	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:41:PHE:CD1	7:B:79:MET:HE2	2.54	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
11:F:108:LEU:HD12	11:F:108:LEU:C	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
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
1:0:187:A:H3'	1:0:188:C:H6	1.83	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
1:0:1370:G:H5'	22:Q:64:SER:OG	2.18	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
1:0:1943: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:195:ARG:HE	7:B:323:LEU:HD13	1.84	0.43
7:B:212:GLN:HB2	7:B:257:THR:CG2	2.48	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:L:59:GLY:HA3	17:L:141:ILE:HD11	2.00	0.43
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
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
1:0:213:G:HO2'	1:0:214:U:H5	1.65	0.43
1:0:388:G:H5''	1:0:2266:A:OP1	2.18	0.43
1:0:545:G:H5'	1:0:545:G:C8	2.46	0.43
1:0:638:C:H2'	1:0:639:A:H8	1.84	0.43
1:0:1031:G:HO2'	1:0:1032:A:P	2.42	0.43
1:0:1165:G:OP1	1:0:1165:G:H8	2.02	0.43
1:0:1325:G:H2'	1:0:1326:U:H6	1.84	0.43
1:0:1477:C:H5'	1:0:1868:G:H5''	2.01	0.43
1:0:1666:C:O2'	1:0:1667:A:C5'	2.67	0.43
1:0:1759:A:O2'	1:0:1818:C:C2'	2.66	0.43
1:0:1846:U:H2'	1:0:1847:A:C5	2.54	0.43
1:0:1884:G:O2'	1:0:1885:A:C5'	2.57	0.43
1:0:2298:C:H2'	1:0:2299:G:O4'	2.19	0.43
1:0:2350:G:H2'	1:0:2351:C:H6	1.82	0.43
1:0:2659:U:C4'	22:Q:76:ASP:HB3	2.49	0.43
6:A:94:LEU:HG	6:A:99:ILE:CD1	2.49	0.43
6:A:190:ARG:NH2	6:A:207:GLN:OE1	2.52	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
1:0:305:A:N1	1:0:329:A:H2'	2.33	0.43
1:0:816:G:H2'	1:0:817:G:O4'	2.18	0.43
1:0:1871:U:O4'	1:0:1873:G:C8	2.72	0.43
1:0:2088:C:H1'	1:0:2841:A:N1	2.34	0.43
1:0:2101:A:H1'	1:0:2537:G:C1'	2.49	0.43
1:0:2112:A:N1	1:0:2113:G:C6	2.87	0.43
1:0:2488:A:H2'	1:0:2489:G:O4'	2.19	0.43
1:0:2563:U:H2'	1:0:2565:C:O5'	2.19	0.43
1:0:2657:G:OP1	7:B:17:LYS:HB2	2.18	0.43
3:2:67:LEU:HD11	3:2:88:LEU:HD21	2.00	0.43
6:A:36:ASP:O	6:A:36:ASP:CG	2.57	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: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
17:L:98:GLN:HB2	17:L:129:HIS:CD2	2.54	0.43
17:L:102:GLU:OE1	17:L:164:THR:HG21	2.19	0.43
17:L:184:ARG:HB2	17:L:184:ARG:NH1	2.33	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:O	27:V:48:VAL:CG1	2.67	0.43
1:0:45:A:C8	1:0:47:G:N2	2.87	0.43
1:0:110:C:H2'	1:0:111:C:C6	2.51	0.43
1:0:169:A:O2'	3:2:48:ASN:ND2	2.50	0.43
1:0:200:U:H5''	1:0:201:G:OP2	2.19	0.43
1:0:638:C:OP2	29:X:138:ARG:HD3	2.18	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
1:0:1245: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
1:0:1311:G:O6	8:C:173:LYS:HE3	2.19	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
1:0:1925:G:OP1	3:2:29:ARG:NH2	2.52	0.43
1:0:2123:A:H5'	17:L:89:ASN:ND2	2.34	0.43
1:0:2524:G:C6	1:0:2525:G:N1	2.87	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
5:9:57:A:H8	9:D:141:VAL:HG21	1.84	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
6:A:130:THR:HB	6:A:137:VAL:HB	2.01	0.43
7:B:232:TRP:HD1	7:B:235:ARG:HD2	1.84	0.43
8:C:194:PHE:HA	8:C:234:VAL:HG13	2.00	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:S:43:ASN:O	24:S:45:GLY:N	2.52	0.43
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
1:0:210:U:H2'	1:0:211:U:H6	1.83	0.42
1:0:217:C:H5'	1:0:395:A:H1'	1.99	0.42
1:0:319:A:H4'	1:0:338:C:C4	2.54	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
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
1:0:2110: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
1:0:2717:C:OP1	7:B:207:LYS:HG3	2.18	0.42
37:0:8580:HOH:O	3:2:36:ILE:HG21	2.18	0.42
9:D:166:ILE:O	9:D:167:GLU:C	2.56	0.42
10:E:93:MET:HB2	10:E:93:MET:HE2	1.84	0.42
10:E:132:THR:HB	37:E:220:HOH:O	2.18	0.42
13:H:59:ASN:N	13:H:59:ASN:HD22	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:88:THR:HG23	27:V:110:GLN:HE21	1.81	0.42
27:V:149:LEU:HG	27:V:153:MET:HE2	1.99	0.42
29:X:200:THR:HG22	29:X:201:GLU:HG2	2.01	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
37:0:5284:HOH:O	6:A:206:ARG:HD3	2.19	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
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
1:0:47:G:O2'	1:0:114:A:N6	2.52	0.42
1:0:319:A:O2'	1:0:320:G:H5'	2.19	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
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
1:0:1810:C:H1'	25:T:42:LEU:HD22	2.01	0.42
1:0:2085:A:C2	1:0:2660:G:N3	2.88	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
1:0:2706: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
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
17:L:18:GLY:O	17:L:21:ALA:HB3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:M:13:ARG:HA	18:M:13:ARG:HD2	1.83	0.42
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
1:0:581:G:H5'	37:0:6332:HOH:O	2.20	0.42
1:0:882:A:H4'	1:0:1837:G:O6	2.19	0.42
1:0:955:A:C2'	1:0:956:G:H5'	2.49	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
1:0:1773:G:C8	30:Y:16:PRO:HA	2.55	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
37:0:4108:HOH:O	8:C:103:ASN:HB3	2.18	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:H3'	5:9:67:C:C6	2.55	0.42
37:9:365:HOH:O	18:M:23:ARG:HD3	2.18	0.42
6:A:105:VAL:CG1	6:A:106:CYS:N	2.82	0.42
11:F:99:THR:O	11:F:99:THR:HG23	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:49:LEU:HA	15:J:73:VAL:HG12	2.01	0.42
15:J:51:ASP:HA	37:J:328:HOH:O	2.18	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
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
31:Z:22:CYS:SG	31:Z:24:GLU:CB	3.07	0.42
1:0:45:A:H5'	1:0:47:G:O4'	2.19	0.42
1:0:412:C:O2'	1:0:413:G:H5'	2.18	0.42
1:0:533:U:O2'	14:I:95:ARG:NH1	2.52	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
1:0:1342:C:C2'	1:0:1343:C:C5'	2.90	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:H5'	1:0:2526:C:C6	2.53	0.42
1:0:2654:C:O2'	1:0:2655:U:H5'	2.19	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
7:B:238:ASN:ND2	7:B:240:GLY:N	2.55	0.42
8:C:14:GLY:N	37:C:429:HOH:O	2.52	0.42
8:C:73:LEU:O	8:C:74:ASP:HB2	2.20	0.42
8:C:191:SER:OG	8:C:209:GLY:C	2.58	0.42
10:E:132:THR:HG23	10:E:132:THR:O	2.19	0.42
13:H:33:MET:HB2	13:H:83:PHE:HB3	2.01	0.42
15:J:4:LEU:HD23	15:J:4:LEU:HA	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
1:0:77: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
1:0:132:A:O2'	1:0:133:U:H5'	2.20	0.42
1:0:241:A:C2	1:0:378:A:H4'	2.55	0.42
1:0:288:A:H61	1:0:364:C:H42	1.67	0.42
1:0:433:C:H2'	1:0:434:U:O4'	2.20	0.42
1:0:876:A:H2'	1:0:877:G:H5'	2.01	0.42
1:0:1234:U:N3	7:B:244:PRO:HB3	2.34	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
37:0:3953:HOH:O	7:B:227:HIS:HB3	2.19	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:85:ASP:HA	37:A:417:HOH:O	2.19	0.42
6:A:203:GLY:HA2	37:A:456:HOH:O	2.19	0.42
7:B:5:ARG:HD2	7:B:8:LYS:NZ	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:B:70:PRO:C	7:B:71:VAL:HG23	2.40	0.42
7:B:171:VAL:HG23	7:B:172:SER:N	2.34	0.42
7:B:297:VAL:HB	37:B:501:HOH:O	2.19	0.42
9:D:25:MET:HE1	9:D:37:ALA:HB1	2.01	0.42
10:E:145:ALA:HB1	10:E:168:ILE:CD1	2.49	0.42
10:E:162:PHE:CD1	10:E:162:PHE:N	2.88	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:CD1	27:V:90:TYR:N	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
1:0:47:G:O2'	1:0:114:A:N1	2.35	0.42
1:0:106:A:H2'	1:0:107:U:O4'	2.19	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
1:0:1118:A:C3'	1:0:1119:G:C5'	2.98	0.42
1:0:1152:A:C4	1:0:1215:A:C2	3.07	0.42
1:0:1165:G:O2'	1:0:1174:A:C1'	2.68	0.42
1:0:1166:A:OP1	1:0:1174:A:H4'	2.20	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
37:0:8283:HOH:O	8:C:73:LEU:HD11	2.20	0.42
6:A:93:THR:HA	6:A:154:ALA:O	2.19	0.42
6:A:164:ARG:HB2	30:Y:68:CYS:SG	2.60	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
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:OE1	21:P:31:GLU:HA	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:168:C:O5'	1:0:168:C:H6	2.02	0.42
1:0:212:A:N6	1:0:227:A:OP2	2.53	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
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
1:0:2084:C:O2'	1:0:2085:A:H5'	2.19	0.42
1:0:2382:A:H1'	3:2:10:TYR:CE2	2.55	0.42
1:0:2430:A:H4'	16:K:46:LEU:O	2.19	0.42
1:0:2635:A:N7	37:0:3300:HOH:O	2.36	0.42
37:0:5824:HOH:O	29:X:136:LYS:HD3	2.19	0.42
37:0:7102:HOH:O	15:J:41:LYS:HE3	2.19	0.42
3:2:42:ARG:HB3	3:2:43:ASN:OD1	2.19	0.42
7:B:36:PRO:HA	7:B:168:GLY:HA3	2.02	0.42
7:B:179:LEU:O	7:B:183:GLU:CG	2.64	0.42
8:C:82:GLN:C	37:C:419:HOH:O	2.58	0.42
8:C:107:ARG:HH11	8:C:107:ARG:HB3	1.84	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:O	11:F:59:ILE:HG22	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
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
29:X:99:ALA:HA	29:X:232:THR:O	2.20	0.42
1:0:56:G:C8	1:0:59:A:C8	3.07	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
1:0:795: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
1:0:944:G:H21	27:V:44:MET:CE	2.33	0.42
1:0:1052:G:O2'	1:0:2300:A:OP2	2.32	0.42
1:0:1566:C:H2'	1:0:1567:A:H8	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:2304:G:H5'	37:P:213:HOH:O	2.20	0.42
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
37:0:7621:HOH:O	17:L:68:ARG:CB	2.68	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
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
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
1:0:37:A:C2	1:0:446:G:C2	3.08	0.42
1:0:156:C:C5'	17:L:171:ARG:HD3	2.22	0.42
1:0:189:A:O2'	17:L:184:ARG:HD3	2.19	0.42
1:0:580:A:N3	1:0:1111:U:H1'	2.35	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
1:0:1117:A:C2	1:0:1244:U:C2	3.08	0.42
1:0:1184:C:H2'	1:0:1185:U:C6	2.55	0.42
1:0:1184:C:O2'	1:0:1185:U:H5'	2.20	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2523:U:O5'	1:0:2523:U:H6	2.03	0.42
5:9:40:C:N4	9:D:53:LYS:HE3	2.34	0.42
5:9:116:C:O2'	5:9:117:G:H5'	2.20	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:HG3	9:D:156:ARG:HH11	1.85	0.42
13:H:96:ASN:OD1	13:H:114:PRO:HA	2.19	0.42
13:H:162:SER:O	13:H:164:ALA:N	2.53	0.42
14:I:83:ILE:O	14:I:84:ARG:C	2.59	0.42
16:K:125:PHE:N	16:K:125:PHE:CD1	2.87	0.42
17:L:5:TYR:HE2	17:L:46:LEU:HD13	1.84	0.42
17:L:181:GLU:H	17:L:181:GLU:CD	2.22	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:128:VAL:C	27:V:138:LEU:HD11	2.40	0.42
27:V:130:HIS:C	27:V:136:GLY:HA3	2.39	0.42
29:X:169:ARG:NE	35:X:301:CL:CL	2.89	0.42
1:0:204:A:H2'	1:0:205:U:C5'	2.48	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
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
1:0:2495:U:O2'	1:0:2496:C:H5'	2.20	0.41
1:0:2566:A:H4'	10:E:161:VAL:HG21	2.01	0.41
1:0:2619:U:H2'	1:0:2620:U:C6	2.55	0.41
5:9:3:A:H61	5:9:22:G:H1'	1.82	0.41
5:9:12:C:OP2	5:9:69:U:O2'	2.38	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:75:GLY:HA2	30:Y:64:ILE:HA	2.01	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:47:GLY:HA2	8:C:92:PRO:HB2	2.02	0.41
8:C:85:LYS:HB3	37:C:438:HOH:O	2.20	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

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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
17:L:186:SER:OG	17:L:189:VAL:HG12	2.20	0.41
21:P:16:ASN:HD22	21:P:16:ASN:HA	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
1:0:62:C:H2'	1:0:63:U:H6	1.85	0.41
1:0:75:U:H2'	1:0:76:G:H8	1.85	0.41
1:0:353:G:C6	1:0:354:A:C6	3.08	0.41
1:0:630:A:H4'	1:0:631:A:OP1	2.18	0.41
1:0:1246:A:O2'	1:0:1247:A:C3'	2.61	0.41
1:0:1702:U:HO2'	1:0:1703:G:H5''	1.85	0.41
1:0:1813:U:H3'	1:0:1814:G:H5'	2.02	0.41
1:0:1942:A:H4'	6:A:213:LYS:CE	2.49	0.41
1:0:2449:G:H2'	1:0:2450:C:C6	2.55	0.41
1:0:2757:A:O2'	1:0:2758:G:H5'	2.20	0.41
5:9:51:A:H4'	37:9:358:HOH:O	2.20	0.41
7:B:54:VAL:CG2	7:B:326:GLU:HB3	2.51	0.41
7:B:265:LEU:HD21	7:B:316:ARG:HD3	2.02	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:46:LEU:HD22	17:L:50:ARG:HG3	2.01	0.41
17:L:46:LEU:HD23	17:L:46:LEU:HA	1.89	0.41
17:L:59:GLY:HA3	17:L:141:ILE:CD1	2.50	0.41
17:L:93:ARG:H	17:L:93:ARG:HG2	1.51	0.41
17:L:157:LEU:HB3	17:L:160:PHE:HD1	1.85	0.41
21:P:45:PRO:HA	21:P:51:ARG:NH2	2.35	0.41
22:Q:119:VAL:O	22:Q:119:VAL:CG1	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
1:0:24:G:C2'	1:0:25:A:OP2	2.68	0.41
1:0:292:G:O5'	1:0:292:G:H8	2.02	0.41
1:0:331:A:N6	1:0:345:G:O2'	2.54	0.41
1:0:1196:C:C2'	1:0:1197:G:H5'	2.50	0.41
1:0:1213:C:H2'	1:0:1214:G:O4'	2.20	0.41
1:0:1476:A:O2'	1:0:1868:G:H5'	2.21	0.41
1:0:1598:A:C2	1:0:1599:U:C2	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1878:G:H5'	37:0:3784:HOH:O	2.19	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
37:0:4335:HOH:O	20:O:91:LYS:HE3	2.21	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
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
1:0:368: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
1:0:1463: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2433:A:OP1	3:2:36:ILE:CG2	2.69	0.41
1:0:2554:U:OP1	1:0:2554:U:H3'	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
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
5:9:48:C:H4'	18:M:141:ARG:NH2	2.29	0.41
37:9:315:HOH:O	21:P:27:GLN:HB2	2.20	0.41
6:A:195:ASN:O	6:A:196:ALA:C	2.58	0.41
7:B:25:ARG:HA	7:B:310:ARG:HH21	1.84	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
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:114:VAL:HB	17:L:159:THR:HG23	2.02	0.41
17:L:153:THR:O	17:L:156:ARG:HG3	2.20	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
24:S:6:LYS:HA	24:S:9:LYS:HB3	2.02	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
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
1:0:1367:A:C2	1:0:2058:G:C2	3.08	0.41
1:0:1522:A:C2'	1:0:1523:G:H5'	2.51	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
5:9:72:C:O2'	5:9:73:G:H5'	2.20	0.41
6:A:44:ASP:OD1	6:A:45:ILE:N	2.54	0.41
6:A:130:THR:HG22	6:A:131:HIS:O	2.20	0.41
7:B:13:PHE:CD1	7:B:13:PHE:N	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:7:ARG:HD2	13:H:154:THR:HG21	2.02	0.41
13:H:144:GLU:OE1	13:H:144:GLU:HA	2.20	0.41
17:L:77:PHE:CD1	17:L:79:LYS:O	2.74	0.41
17:L:182:LYS:HG2	37:L:387:HOH:O	2.19	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
1:0:79:G:H3'	24:S:111:ARG:HH12	1.86	0.41
1:0:154:C:H2'	1:0:155:C:H6	1.86	0.41
1:0:197:C:H5	35:0:3121:CL:CL	2.41	0.41
1:0:245:C:C2	1:0:267:G:N1	2.88	0.41
1:0:538:C:C4'	1:0:539:G:OP2	2.68	0.41
1:0:876:A:H2'	1:0:876:A:N3	2.36	0.41
1:0:931:C:H2'	1:0:932:U:H6	1.86	0.41
1:0:944:G:C8	27:V:23:MET:HE1	2.55	0.41
1:0:1115:U:O2'	1:0:1116:U:H5'	2.20	0.41
1:0:1599:U:H2'	1:0:1600:G:O4'	2.21	0.41
1:0:1700:C:H5''	1:0:1701:A:OP2	2.21	0.41
1:0:1936:C:O2'	1:0:1937:U:H5'	2.21	0.41
1:0:2037:C:OP1	1:0:2037:C:H6	2.03	0.41
1:0:2691:A:C4'	1:0:2692:G:OP1	2.69	0.41
5:9:33:U:H3'	37:9:410:HOH:O	2.21	0.41
6:A:20:SER:C	6:A:22:ARG:H	2.24	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
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:CD2	15:J:44:HIS:N	2.88	0.41
17:L:68:ARG:N	37:L:305:HOH:O	2.36	0.41
18:M:37:ARG:HH21	18:M:105:GLY:HA2	1.77	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:V:154:ARG:NH2	37:V:209:HOH:O	2.54	0.41
1:0:175:G:H3'	17:L:191:GLY:O	2.21	0.41
1:0:308:U:H2'	24:S:52:ARG:HH22	1.84	0.41
1:0:486:A:H1'	37:0:3238:HOH:O	2.19	0.41
1:0:834:G:H4'	1:0:1754:A:H5'	2.03	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
1:0:1735:C:H5'	7:B:235:ARG:HH21	1.85	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
1:0:2502:C:C4'	13:H:151:MET:HG2	2.51	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
37:0:4580:HOH:O	16:K:34:GLY:HA2	2.21	0.41
2:1:48:ASP:HA	31:Z:25:LYS:HD2	2.03	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
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
14:I:122:ASP:HB3	14:I:125:SER:OG	2.21	0.41
15:J:4:LEU:HD22	15:J:116:GLU:HB3	2.02	0.41
15:J:34:VAL:CG2	15:J:47:ALA:HB2	2.48	0.41
15:J:55:VAL:HG12	15:J:56:SER:N	2.34	0.41
16:K:140:VAL:O	16:K:140:VAL:HG12	2.20	0.41
17:L:149:TRP:CE3	17:L:150:ILE:HA	2.56	0.41
23:R:69:SER:O	23:R:71:ASP:N	2.54	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
1:0:60:A:N6	2:1:25:VAL:HG21	2.36	0.41
1:0:152:A:O2'	1:0:153:C:H5'	2.20	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:451:C:OP2	8:C:182:ARG:NH2	2.53	0.41
1:0:623:U:H2'	1:0:624:U:C6	2.56	0.41
1:0:931:C:C2	1:0:1040:A:C6	3.09	0.41
1:0:1015:C:H6	1:0:1015:C:O5'	2.04	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
1:0:1327:G:N1	1:0:1331:A:C6	2.88	0.41
1:0:1329:A:OP2	29:X:125:LYS:NZ	2.51	0.41
1:0:1447:U:OP1	1:0:1677:U:H2'	2.21	0.41
1:0:1495:C:H1'	1:0:1573:A:H1'	2.03	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
1:0:1730:G:H5'	1:0:1731:C:C5	2.55	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
1:0:1902:G:O2'	1:0:1903:U:H5'	2.20	0.41
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
1:0:2404: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
1:0:2753: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
5:9:7:G:OP1	18:M:23:ARG:NE	2.54	0.41
5:9:13:A:H3'	5:9:14:G:H5''	2.02	0.41
5:9:44:A:C1'	9:D:76:ARG:HE	2.33	0.41
6:A:94:LEU:HG	6:A:99:ILE:HD11	2.02	0.41
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
7:B:146:THR:O	7:B:159:PRO:HB3	2.21	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
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:35:TYR:CD2	10:E:36:PRO:HD2	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:46:VAL:HG12	13:H:146:TRP:CZ3	2.52	0.41
13:H:48:LEU:HB3	13:H:132:PHE:HB2	2.03	0.41
14:I:130:VAL:HG12	14:I:131:THR:N	2.36	0.41
17:L:87:MET:CE	17:L:91:ILE:HD11	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:M:8:VAL:O	18:M:8:VAL:HG12	2.21	0.41
18:M:164:ASP:CG	18:M:167:ASP:HA	2.40	0.41
19:N:44:ASN:HA	19:N:65:LEU:O	2.21	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
22:Q:111:ILE:O	22:Q:111:ILE:HG22	2.21	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
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
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
30:Y:39:CYS:HA	30:Y:47:LEU:CD1	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:O5'	1:0:677:C:H6	2.03	0.41
1:0:938:G:N1	1:0:1031:G:O2'	2.52	0.41
1:0:962:C:C4	1:0:963:C:C4	3.09	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
2:1:1:GLY:CA	37:1:112:HOH:O	2.69	0.41
6:A:38:ILE:HG23	6:A:60:PHE:HD2	1.86	0.41
6:A:125:ASN:HB2	6:A:158:VAL:HG12	2.00	0.41
8:C:139:VAL:HG13	37:C:406:HOH:O	2.21	0.41
13:H:31:PHE:HD2	13:H:85:ILE:HG23	1.81	0.41
13:H:166:ASN:N	13:H:166:ASN:ND2	2.68	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:87:MET:HE1	37:L:351:HOH:O	2.20	0.41
17:L:120:VAL:HG11	17:L:130:GLU:OE2	2.21	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
1:0:128:A:C8	1:0:128:A:H3'	2.56	0.40
1:0:297:U:H2'	1:0:298:C:H6	1.85	0.40
1:0:297:U:O5'	1:0:297:U:H6	2.04	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
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
1:0:1500: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
37:0:3527:HOH:O	6:A:164:ARG:NH2	2.53	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
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
1:0:79:G:N2	1:0:98:A:C8	2.89	0.40
1:0:259:G:N2	17:L:58:GLN:NE2	2.66	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
1:0:1019:C:H2'	1:0:1020:A:H8	1.87	0.40
1:0:1041:U:H4'	1:0:1295:G:H5'	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1150:A:C2'	12:G:16:LYS:HD3	2.51	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
1:0:1327: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
1:0:1942:A:H5''	6:A:213:LYS:CE	2.51	0.40
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
1:0:2433:A:O3'	3:2:30:GLN:OE1	2.39	0.40
3:2:11:CYS:SG	3:2:20:HIS:CE1	3.11	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
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:20:LEU:HD13	11:F:98:VAL:HG22	2.03	0.40
11:F:29:VAL:HG12	11:F:98:VAL:HA	2.03	0.40
12:G:63:ARG:N	37:G:403:HOH:O	2.54	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
1:0:380: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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:O5'	1:0:2908:A:H8	2.05	0.40
37:0:4050:HOH:O	7:B:298:LYS:HD3	2.21	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
8:C:57:PRO:HD2	8:C:73:LEU:HD22	2.03	0.40
10:E:6:GLU:HG2	10:E:46:THR:HG22	2.03	0.40
10:E:84:MET:HE3	10:E:131:LEU:HD13	2.02	0.40
11:F:89:LEU:HD23	11:F:89:LEU:HA	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:80:ASP:OD1	27:V:82:GLU:HB3	2.21	0.40
27:V:108:ARG:HG3	27:V:114:PRO:HG3	2.04	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
1:0:171:C:O2	1:0:222:A:H2	2.05	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
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
1:0:2110:G:C2	1:0:2478:U:C2	3.09	0.40
1:0:2256:G:C2'	1:0:2257:G:H5'	2.51	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
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:N	7:B:27:ASN:ND2	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:57:ARG:NH1	13:H:57:ARG:HG3	2.37	0.40
13:H:153:VAL:HG21	13:H:157:ILE:HD11	2.04	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
1:0:40:C:H6	1:0:40:C:O5'	2.05	0.40
1:0:260:C:H2'	1:0:261:A:C8	2.57	0.40
1:0:610:G:O2'	1:0:611:U:H5'	2.21	0.40
1:0:611:U:H2'	1:0:612:U:C6	2.57	0.40
1:0:926:A:H5'	16:K:39:GLU:OE2	2.22	0.40
1:0:1107:A:N3	1:0:1257:C:H1'	2.37	0.40
1:0:1137:G:C4'	1:0:1138:G:OP1	2.69	0.40
1:0:1153:C:C4	1:0:1154:A:N7	2.90	0.40
1:0:1386:G:C2	1:0:1397:C:N3	2.89	0.40
1:0:1460:G:O2'	1:0:1461:U:H5'	2.21	0.40
1:0:1718:G:OP1	20:O:20:ARG:HD3	2.21	0.40
1:0:1884:G:O6	6:A:190:ARG:CD	2.69	0.40
1:0:1946:C:C5	1:0:1971:G:C6	3.08	0.40
1:0:2246:U:O2'	1:0:2247:C:H5'	2.22	0.40
1:0:2623:G:C6	1:0:2642:G:N1	2.89	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:HD3	29:X:160:LYS:HA	1.94	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	1	42/48 (88%)	37 (88%)	5 (12%)	0	100	100
3	2	90/92 (98%)	82 (91%)	5 (6%)	3 (3%)	4	28
4	5	33/144 (23%)	24 (73%)	9 (27%)	0	100	100
6	A	236/239 (99%)	197 (84%)	27 (11%)	12 (5%)	2	19
7	B	335/337 (99%)	281 (84%)	40 (12%)	14 (4%)	3	23
8	C	244/246 (99%)	201 (82%)	37 (15%)	6 (2%)	5	34
9	D	135/176 (77%)	90 (67%)	31 (23%)	14 (10%)	0	7
10	E	171/177 (97%)	147 (86%)	21 (12%)	3 (2%)	8	41
11	F	117/119 (98%)	97 (83%)	16 (14%)	4 (3%)	3	28
12	G	26/348 (8%)	23 (88%)	2 (8%)	1 (4%)	3	25
13	H	152/167 (91%)	123 (81%)	21 (14%)	8 (5%)	2	17
14	I	140/145 (97%)	117 (84%)	17 (12%)	6 (4%)	2	22
15	J	130/132 (98%)	115 (88%)	13 (10%)	2 (2%)	10	45
16	K	142/164 (87%)	116 (82%)	20 (14%)	6 (4%)	3	23
17	L	192/194 (99%)	144 (75%)	40 (21%)	8 (4%)	3	23
18	M	184/186 (99%)	153 (83%)	24 (13%)	7 (4%)	3	25
19	N	113/115 (98%)	92 (81%)	17 (15%)	4 (4%)	3	27
20	O	142/148 (96%)	126 (89%)	12 (8%)	4 (3%)	5	32
21	P	93/95 (98%)	72 (77%)	16 (17%)	5 (5%)	2	17
22	Q	149/154 (97%)	127 (85%)	18 (12%)	4 (3%)	5	33
23	R	82/84 (98%)	68 (83%)	9 (11%)	5 (6%)	1	15
24	S	117/119 (98%)	101 (86%)	13 (11%)	3 (3%)	5	33
25	T	52/66 (79%)	49 (94%)	3 (6%)	0	100	100
26	U	64/70 (91%)	49 (77%)	13 (20%)	2 (3%)	4	30
27	V	152/154 (99%)	132 (87%)	19 (12%)	1 (1%)	22	61

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
28	W	81/91 (89%)	65 (80%)	11 (14%)	5 (6%)	1	15
29	X	141/240 (59%)	126 (89%)	12 (8%)	3 (2%)	7	38
30	Y	71/73 (97%)	59 (83%)	7 (10%)	5 (7%)	1	12
31	Z	54/56 (96%)	43 (80%)	7 (13%)	4 (7%)	1	11
All	All	3680/4379 (84%)	3056 (83%)	485 (13%)	139 (4%)	3	25

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 [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
2	1	42/44 (96%)	40 (95%)	2 (5%)	25 60
3	2	79/79 (100%)	75 (95%)	4 (5%)	24 57
4	5	29/122 (24%)	26 (90%)	3 (10%)	7 32
6	A	179/181 (99%)	167 (93%)	12 (7%)	16 48
7	B	282/282 (100%)	268 (95%)	14 (5%)	24 58
8	C	193/193 (100%)	181 (94%)	12 (6%)	18 51

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
9	D	117/147 (80%)	109 (93%)	8 (7%)	16	48
10	E	152/155 (98%)	147 (97%)	5 (3%)	38	68
11	F	92/92 (100%)	91 (99%)	1 (1%)	73	88
12	G	27/283 (10%)	27 (100%)	0	100	100
13	H	122/122 (100%)	111 (91%)	11 (9%)	9	37
14	I	118/121 (98%)	111 (94%)	7 (6%)	19	53
15	J	106/106 (100%)	102 (96%)	4 (4%)	33	65
16	K	112/126 (89%)	106 (95%)	6 (5%)	22	55
17	L	166/166 (100%)	160 (96%)	6 (4%)	35	66
18	M	149/149 (100%)	142 (95%)	7 (5%)	26	60
19	N	93/93 (100%)	90 (97%)	3 (3%)	39	69
20	O	113/116 (97%)	109 (96%)	4 (4%)	36	67
21	P	79/79 (100%)	74 (94%)	5 (6%)	18	51
22	Q	117/121 (97%)	113 (97%)	4 (3%)	37	68
23	R	73/73 (100%)	72 (99%)	1 (1%)	67	85
24	S	105/105 (100%)	101 (96%)	4 (4%)	33	65
25	T	44/52 (85%)	41 (93%)	3 (7%)	16	48
26	U	51/56 (91%)	51 (100%)	0	100	100
27	V	130/130 (100%)	124 (95%)	6 (5%)	27	61
28	W	66/73 (90%)	61 (92%)	5 (8%)	13	43
29	X	120/195 (62%)	115 (96%)	5 (4%)	30	63
30	Y	56/56 (100%)	51 (91%)	5 (9%)	9	37
31	Z	46/46 (100%)	46 (100%)	0	100	100
All	All	3058/3563 (86%)	2911 (95%)	147 (5%)	25	60

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

Sometimes 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 monosaccharides 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 [i](#)

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

EDS was not executed - this section is therefore empty.

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

EDS was not executed - this section is therefore empty.

6.3 Carbohydrates [i](#)

EDS was not executed - this section is therefore empty.

6.4 Ligands [i](#)

EDS was not executed - this section is therefore empty.

6.5 Other polymers [i](#)

EDS was not executed - this section is therefore empty.