



Full wwPDB EM Validation Report ⓘ

Dec 11, 2022 – 04:00 pm GMT

PDB ID : 5AKA
EMDB ID : EMD-2917
Title : EM structure of ribosome-SRP-FtsY complex in closed state
Authors : von Loeffelholz, O.; Jiang, Q.; Ariosa, A.; Karuppasamy, M.; Huard, K.;
Berger, I.; Shan, S.; Schaffitzel, C.
Deposited on : 2015-03-03
Resolution : 5.70 Å(reported)

This is a Full wwPDB EM 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/EMValidationReportHelp>

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:

EMDB validation analysis : 0.0.1.dev43
MolProbity : 4.02b-467
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.9
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.31.3

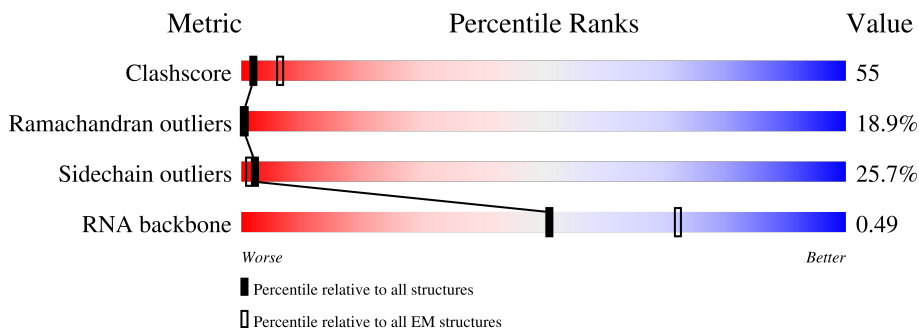
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 5.70 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)	EM structures (#Entries)
Clashscore	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826
RNA backbone	4643	859

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the 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 $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion $< 40\%$). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	0	56	
2	1	54	
3	2	46	
4	3	64	
5	4	38	
6	5	109	
7	6	8	

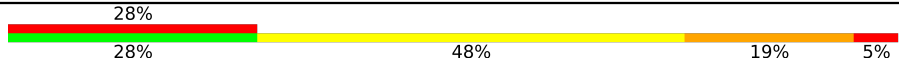

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Mol	Chain	Length	Quality of chain
8	7	74	16% 55% 43%
9	A	120	9% 28% 56% 13%
10	B	2904	24% 58% 15%
11	C	273	38% 13% 42% 35% 8%
12	D	209	35% 13% 51% 33%
13	E	201	28% 15% 52% 27% 5%
14	F	178	31% 24% 48% 25%
15	G	176	25% 25% 56% 17%
16	H	149	32% 27% 52% 19%
17	I	141	32% 30% 65%
18	J	142	41% 9% 52% 35%
19	K	123	26% 20% 54% 20%
20	L	144	39% 19% 29% 26% 22%
21	M	136	36% 18% 46% 25% 11%
22	N	127	37% 17% 50% 30%
23	O	117	38% 20% 46% 30%
24	P	114	44% 11% 38% 41% 10%
25	Q	117	38% 16% 60% 21%
26	R	103	33% 13% 53% 30%
27	S	110	28% 30% 45% 18% 6%
28	T	100	39% 19% 49% 25% 6%
29	U	103	12% 17% 47% 29% 6%
30	V	94	15% 24% 60% 15%
31	W	84	45% 17% 44% 29% 11%
32	X	63	16% 22% 46% 32%

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Mol	Chain	Length	Quality of chain
33	Y	58	 <p>28% 28% 48% 19% 5%</p>
34	Z	70	 <p>24% 21% 43% 23% 13%</p>

2 Entry composition [i](#)

There are 36 unique types of molecules in this entry. The entry contains 92737 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called 50S RIBOSOMAL PROTEIN L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	0	56	444	269	94	80	1	0	0

- Molecule 2 is a protein called 50S RIBOSOMAL PROTEIN L33.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
2	1	54	441	284	81	76	0	0

- Molecule 3 is a protein called 50S RIBOSOMAL PROTEIN L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	2	46	377	228	90	57	2	0	0

- Molecule 4 is a protein called 50S RIBOSOMAL PROTEIN L35.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	3	64	504	323	105	74	2	0	0

- Molecule 5 is a protein called 50S RIBOSOMAL PROTEIN L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	4	38	302	185	65	48	4	0	0

- Molecule 6 is a protein called SIGNAL RECOGNITION PARTICLE PROTEIN.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	5	109	850	523	159	153	15	0	0

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
5	406	SER	CYS	conflict	UNP P0AGD7

- Molecule 7 is a protein called ALA-ALA-ALA-ALA-ALA-ALA-ALA-ALA.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
7	6	8	41	24	8	9	0	0

- Molecule 8 is a RNA chain called 4.5S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
8	7	74	1591	709	298	511	73	0	0

- Molecule 9 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
9	A	117	2507	1116	459	815	117	0	0

- Molecule 10 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
10	B	2841	60995	27210	11229	19715	2841	0	0

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	2798	U	UNK	conflict	GB 731469900
B	2800	A	UNK	conflict	GB 731469900

- Molecule 11 is a protein called 50S RIBOSOMAL PROTEIN L2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
11	C	267	2053	1271	416	359	7	0	0

- Molecule 12 is a protein called 50S RIBOSOMAL PROTEIN L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
12	D	209	1565	979	288	294	4	0	0

- Molecule 13 is a protein called 50S RIBOSOMAL PROTEIN L4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
13	E	201	1552	974	283	290	5	0	0

- Molecule 14 is a protein called 50S RIBOSOMAL PROTEIN L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
14	F	178	1420	905	251	258	6	0	0

- Molecule 15 is a protein called 50S RIBOSOMAL PROTEIN L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
15	G	176	1323	832	243	246	2	0	0

- Molecule 16 is a protein called 50S RIBOSOMAL PROTEIN L9.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
16	H	149	1111	699	197	214	1	0	0

- Molecule 17 is a protein called 50S RIBOSOMAL PROTEIN L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
17	I	141	1032	651	179	196	6	0	0

- Molecule 18 is a protein called 50S RIBOSOMAL PROTEIN L13.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
18	J	140	1112	704	210	194	4	0	0

- Molecule 19 is a protein called 50S RIBOSOMAL PROTEIN L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
19	K	121	930	582	179	164	5	0	0

- Molecule 20 is a protein called 50S RIBOSOMAL PROTEIN L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
20	L	138	1002	623	197	181	1	0	0

- Molecule 21 is a protein called 50S RIBOSOMAL PROTEIN L16.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
21	M	136	1074	686	205	177	6	0	0

- Molecule 22 is a protein called 50S RIBOSOMAL PROTEIN L17.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
22	N	127	1008	621	204	178	5	0	0

- Molecule 23 is a protein called 50S RIBOSOMAL PROTEIN L18.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
23	O	117	900	557	179	163	1	0	0

- Molecule 24 is a protein called 50S RIBOSOMAL PROTEIN L19.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
24	P	114	917	574	179	163	1	0	0

- Molecule 25 is a protein called 50S RIBOSOMAL PROTEIN L20.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
25	Q	117	947	604	192	151	0	0

- Molecule 26 is a protein called 50S RIBOSOMAL PROTEIN L21.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	R	103	Total	C	N	O	S	0	0
			816	516	153	145	2		

- Molecule 27 is a protein called 50S RIBOSOMAL PROTEIN L22.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	S	110	Total	C	N	O	S	0	0
			857	532	166	156	3		

- Molecule 28 is a protein called 50S RIBOSOMAL PROTEIN L23.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	T	99	Total	C	N	O	S	0	0
			777	491	145	139	2		

- Molecule 29 is a protein called 50S RIBOSOMAL PROTEIN L24.

Mol	Chain	Residues	Atoms				AltConf	Trace
29	U	102	Total	C	N	O	0	0
			779	492	146	141		

- Molecule 30 is a protein called 50S RIBOSOMAL PROTEIN L25.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	V	94	Total	C	N	O	S	0	0
			753	479	137	134	3		

- Molecule 31 is a protein called 50S RIBOSOMAL PROTEIN L27.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	W	84	Total	C	N	O	S	0	0
			634	391	129	113	1		

- Molecule 32 is a protein called 50S RIBOSOMAL PROTEIN L29.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	X	63	Total	C	N	O	S	0	0
			509	313	99	95	2		

- Molecule 33 is a protein called 50S RIBOSOMAL PROTEIN L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	Y	58	Total	C	N	O	S	0	0
			449	281	87	79	2		

- Molecule 34 is a protein called 50S RIBOSOMAL PROTEIN L31.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	Z	70	Total	C	N	O	S	0	0
			549	339	104	100	6		

- Molecule 35 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
35	B	110	Total	Mg	0
			110	110	

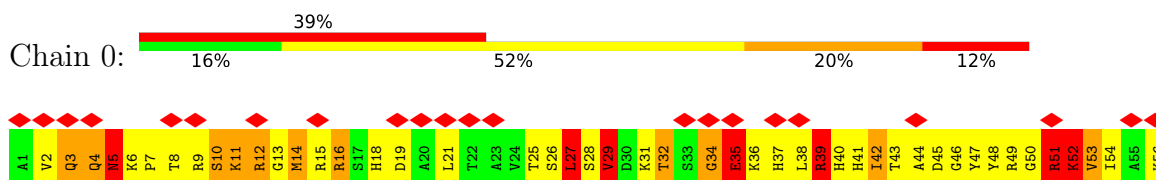
- Molecule 36 is water.

Mol	Chain	Residues	Atoms		AltConf
36	B	497	Total	O	0
			497	497	
36	C	1	Total	O	0
			1	1	
36	E	5	Total	O	0
			5	5	
36	L	2	Total	O	0
			2	2	
36	N	1	Total	O	0
			1	1	

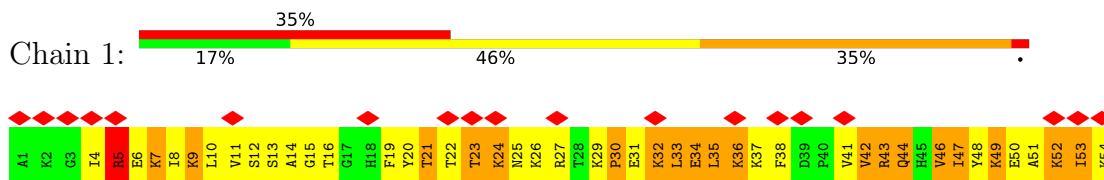
3 Residue-property plots [i](#)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

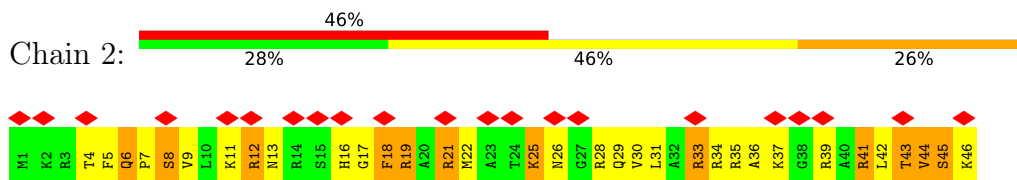
- Molecule 1: 50S RIBOSOMAL PROTEIN L32



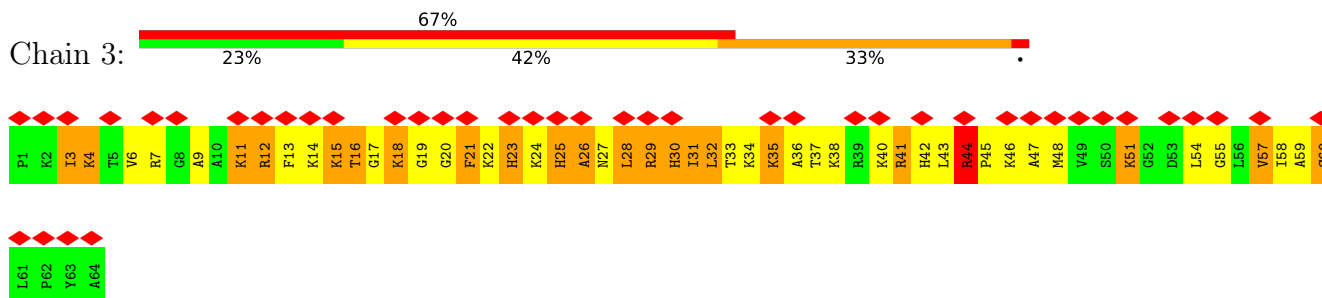
- Molecule 2: 50S RIBOSOMAL PROTEIN L33



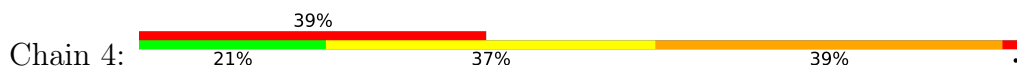
- Molecule 3: 50S RIBOSOMAL PROTEIN L34

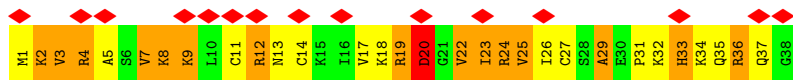


- Molecule 4: 50S RIBOSOMAL PROTEIN L35

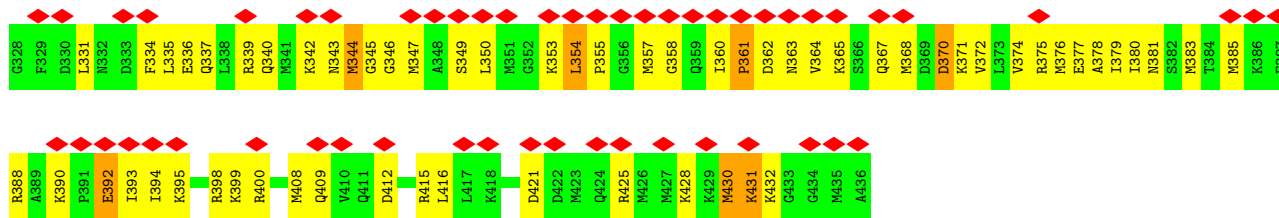
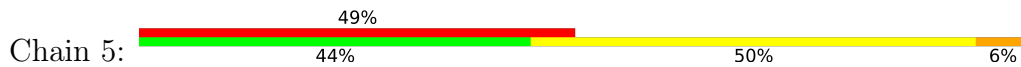


- Molecule 5: 50S RIBOSOMAL PROTEIN L36

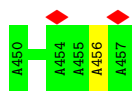
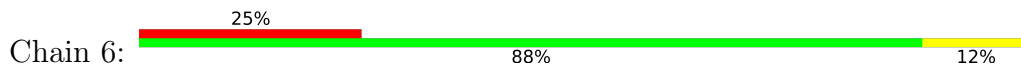




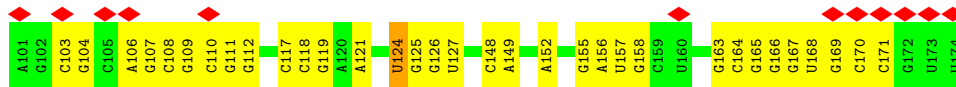
• Molecule 6: SIGNAL RECOGNITION PARTICLE PROTEIN



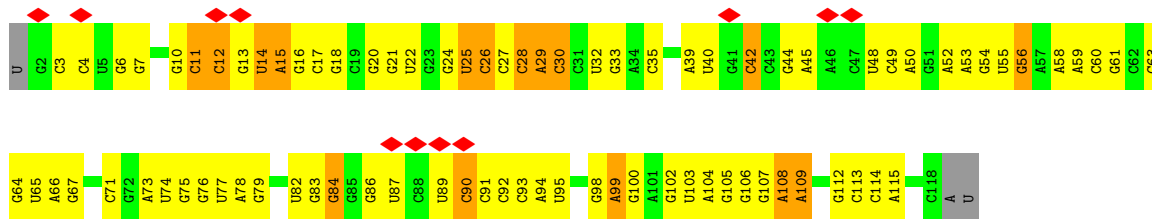
• Molecule 7: ALA-ALA-ALA-ALA-ALA-ALA-ALA-ALA



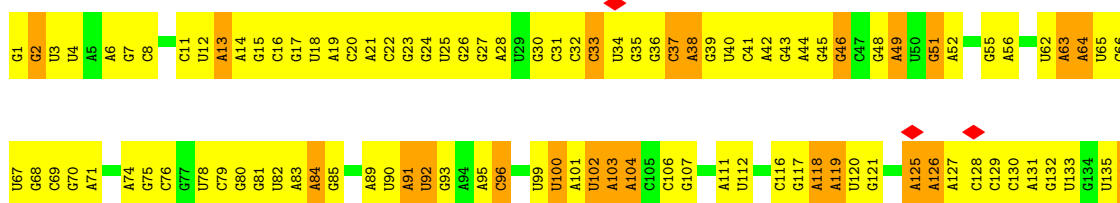
• Molecule 8: 4.5S ribosomal RNA



• Molecule 9: 5S ribosomal RNA



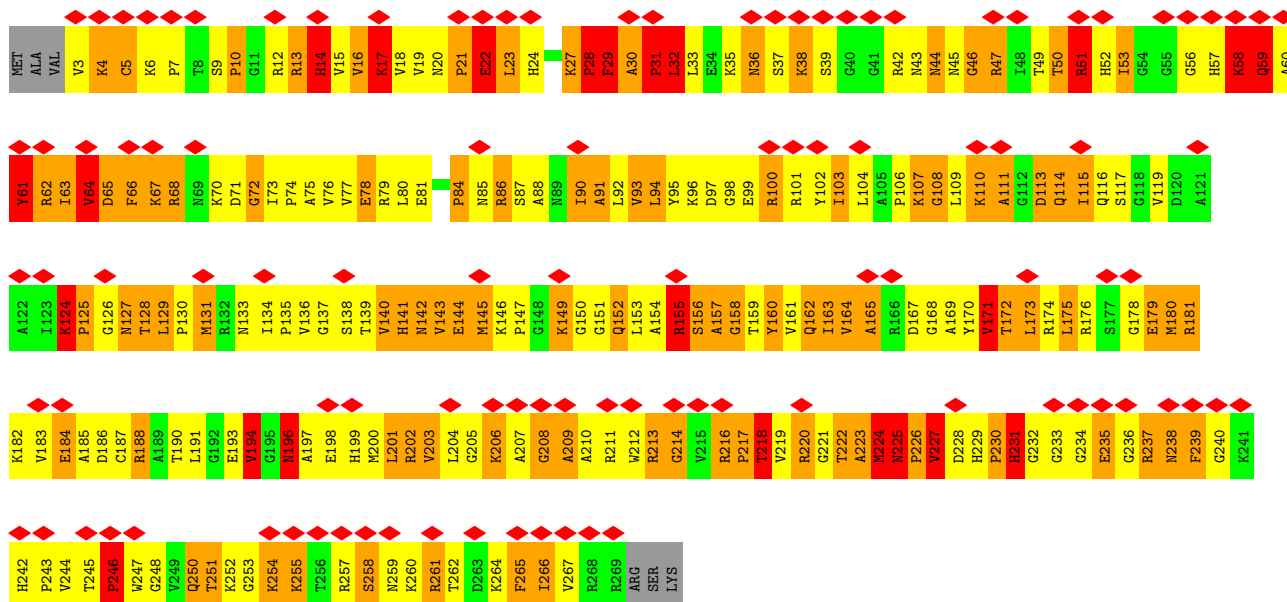
• Molecule 10: 23S ribosomal RNA



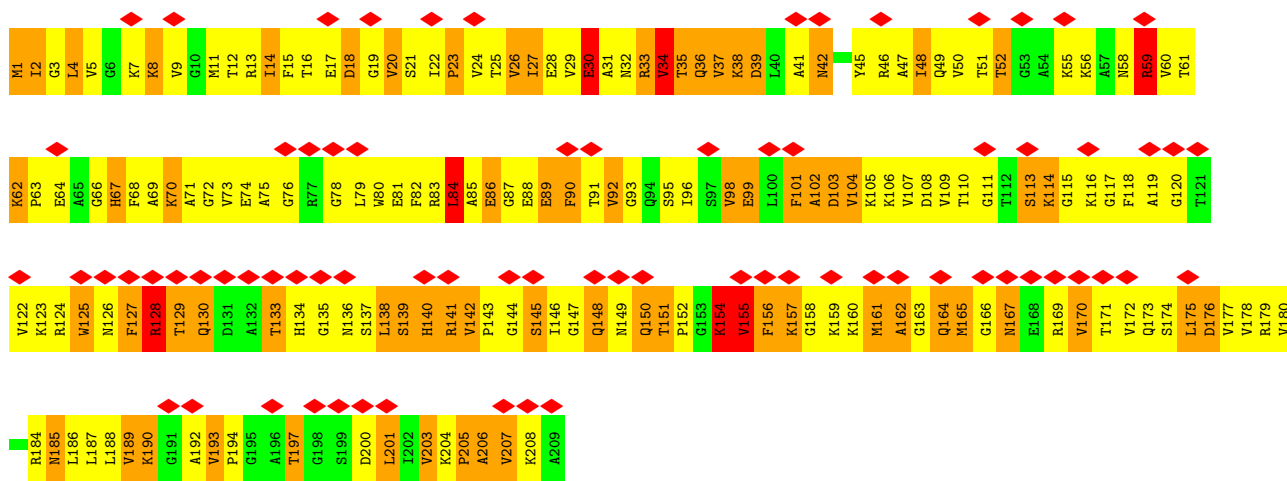
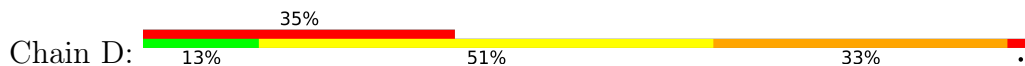
G1922	G1846	A1780	G1715	G1649	U1578	G1516	G1450	C1314	U1249	U1184	G1120
U1923	A1847	U1781	U1716	A1652	A1579	G1517	C1451	C1315	G1260	G1185	C1121
C1924	A1848	U1782	A1653	G1652	A1580	C1518	A1452	U1316	G1261	G1186	G1122
	U1851	A1783	G1718	G1653	G1653	C1519	A1453	G1317	C1261	G1187	G1252
A1927	U1852	A1784	U1719	A1654	U1584	U1520	A1454	U1318	A1263	U1188	G1124
A1928	A1785	A1784	U1720	A1655	U1584	G1521	G1455	U1319	A1264	A1189	G1245
G1929	A1853	A1786	G1721	C1656	C1585	A1522	G1456	C1320	U1255	U1190	A1126
G1930	A1854	A1787	A1722	U1657	A1586	U1523	U1457	A1321	G1266	G1191	
U1931	C1788	C1788	G1723	G1658	U1587	G1524	U1458	A1322	G1267	G1192	U1130
A1932	A1789	A1789	G1724	G1661	G1588	A1525	G1459	C1323	U1268	G1193	G1131
G1933	G1856	C1790	U1725	G1662	U1589	C1526	U1460	G1324	U1269	A1194	U1132
C1934	G1857	A1791	U1726	A1662	A1590	G1527	C1461	U1325	A1260	A1195	A1133
G1935	A1858	A1792	G1727	G1663	A1591	A1528	C1462	U1326	C1261	C1196	A1134
A1936	U1864	C1793	C1728	A1664	C1592	G1529	C1463	A1327	G1197	G1197	C1135
A1937	U1865	C1793	C1728	A1664	C1592	G1529	C1463	A1327	G1197	G1197	C1135
A1938	U1866	A1794	U1729	A1665	C1592	G1529	C1463	A1327	G1197	G1197	C1135
U1939	C1866	C1795	G1730	G1666	A1593	G1530	U1464	U1328	U1266	U1198	G1136
U1940	G1867	C1796	U1731	G1667	A1594	C1531	G1465	U1329	U1267	U1199	G1137
U1941	C1868	G1797	G1732	A1668	C1595	A1532	A1466	C1330	A1269	U1200	G1138
	G1869	U1798	G1733	A1669	A1596	C1533	A1467	G1331	C1201	C1201	G1139
U1943	G1870	G1799	G1734	A1670	A1597	U1534	C1404	G1332	C1270	U1203	C1140
U1944	A1871	C1800	G1735	C1670	A1598	A1535	U1405	G1333	U1203	U1203	U1411
G1945	A1872	A1801	U1736	G1672	A1599	C1536	U1406	G1334	A1204	A1204	A1142
U1946	G1873	A1802	G1737	A1673	C1600	G1537	G1473	C1335	U1273	A1143	A1143
C1947	C1874	A1803	G1738	G1674	G1601	U1538	U1474	A1336	A1274	G1206	A1144
G1948	G1875	C1804	U1739	G1675	U1602	U1539	G1475	G1337	A1275	C1207	C1145
G1949	A1876	A1805	G1740	A1676	A1603	G1540	U1476	G1337	A1276	C1207	C1145
U1950	A1877	C1741	C1741	A1677	U1606	C1541	A1477	G1341	A1277	G1210	G1149
U1951	G1878	A1808	U1742	A1677	C1606	U1542	G1478	C1342	G1277	G1210	G1150
U1952	C1879	A1809	G1743	G1681	C1607	G1543	G1479	C1343	C1211	G1211	C1151
A1953	U1880	A1810	A1744	G1682	A1608	A1544	C1480	G1346	G1279	G1212	C1152
G1954	C1881	A1811	A1745	G1683	A1609	A1545	U1481	A1347	G1280	G1212	C1153
U1955	U1882	G1811	U1746	U1684	A1610	G1546	U1482	C1348	G1281	G1215	G1154
U1956	U1883	U1812	U1747	G1685	C1611	U1547	G1483	C1349	U1282	G1216	A1155
G1957	G1884	A1813	U1748	C1686	G1612	A1548	U1484	C1350	G1283	G1217	A1156
A1958	A1885	A1814	C1748	G1687	G1613	A1549	U1485	C1351	A1284	U1218	A1156
U1959	G1888	C1815	A1749	A1688	U1616	A1550	U1486	C1352	U1285	G1218	G1157
	G1889	C1816	U1750	A1689	C1617	A1551	U1487	A1353	A1286	U1219	C1158
U1963	A1890	A1817	C1752	A1690	A1618	A1552	C1488	A1354	U1287	G1220	U1159
G1964	U1891	U1818	G1753	C1691	U1618	A1553	C1489	G1355	G1288	C1221	G1160
C1965	U1892	A1819	U1754	C1692	A1618	U1554	A1490	C1355	U1289	U1224	C1161
A1966	U1898	A1820	G1755	U1693	G1622	G1555	C1493	A1359	C1291	G1225	G1162
C1967	U1899	A1821	U1756	U1694	U1624	C1556	A1494	G1360	G1292	A1226	G1163
	A1901	G1822	G1756	G1695	U1629	C1557	A1495	G1361	C1293	G1227	G1164
A1970	C1902	C1824	U1757	G1696	U1629	U1558	A1496	C1362	U1294	G1228	A1165
U1971	G1903	U1825	U1758	G1696	U1629	G1559	A1496	C1363	C1295	C1229	A1166
G1972	C1904	U1826	U1759	G1696	U1629	G1560	A1496	G1364	G1296	U1231	C1167
U1973	C1905	U1827	A1759	G1696	U1629	G1561	A1496	G1365	G1297	U1231	G1168
C1974	G1906	U1827	A1759	G1696	U1629	G1562	A1501	C1368	C1298	G1232	A1169
U1979	C1909	G1828	A1762	A1700	G1633	C1563	A1502	G1388	G1299	G1170	C1171
G1980	G1910	A1829	G1763	G1702	A1634	U1562	A1503	A1373	G1300	C1172	G1172
A1981	G1911	C1830	G1764	G1703	A1635	U1563	A1504	G1374	U1301	A1237	U1173
	A1913	C1831	G1765	G1704	U1636	C1564	U1505	G1375	G1301	G1238	U1174
C1986	C1914	G1832	G1766	A1705	A1637	A1566	U1506	C1376	A1302	U1239	A1175
A1987	U1917	C1833	C1771	G1707	C1639	G1567	C1507	C1377	G1303	U1240	U1176
G1988	A1918	G1834	U1708	U1708	A1640	A1568	A1508	U1378	A1304	U1241	G1177
G1989	U1919	U1775	G1709	G1642	A1641	A1569	A1509	A1379	C1305	U1242	G1178
U1990	A1919	U1776	U1710	G1645	A1642	A1570	A1510	U1379	C1309	U1243	C1179
U1991	C1920	G1776	G1711	U1646	G1642	A1571	G1511	G1380	G1310	A1244	U1180
G1992	G1921	U1777	A1712	U1647	G1642	A1572	U1512	G1381	U1310	G1245	U1181
		U1779	A1713	U1647	G1642	A1573	U1513	G1382	U1312	A1246	G1182
			U1714	U1648	G1648	C1574	G1514	G1383	U1313	A1247	U1183
							A1515	A1383		G1248	



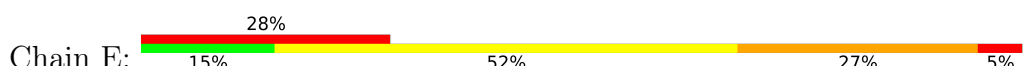
• Molecule 11: 50S RIBOSOMAL PROTEIN L2

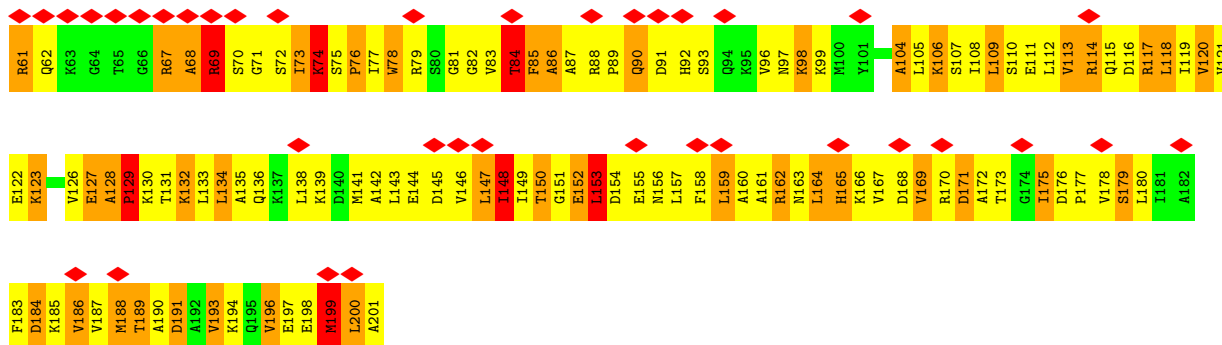


• Molecule 12: 50S RIBOSOMAL PROTEIN L3

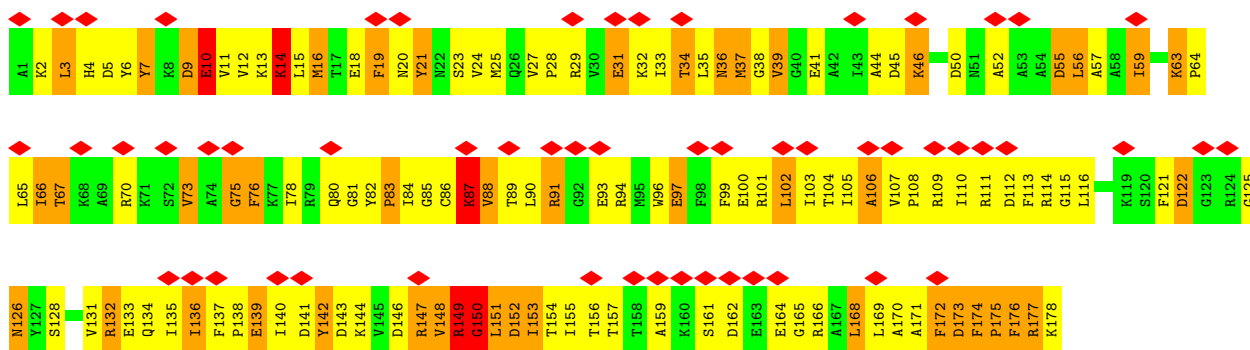


• Molecule 13: 50S RIBOSOMAL PROTEIN L4

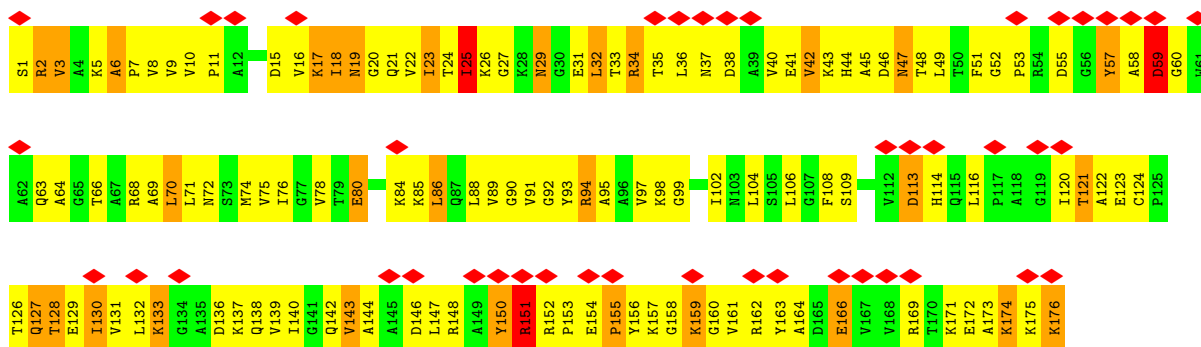




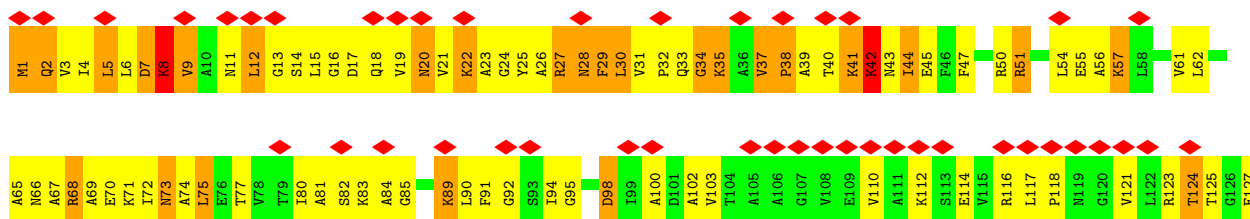
• Molecule 14: 50S RIBOSOMAL PROTEIN L5

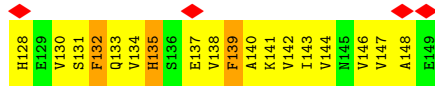


• Molecule 15: 50S RIBOSOMAL PROTEIN L6

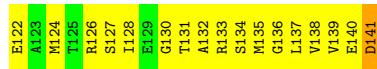
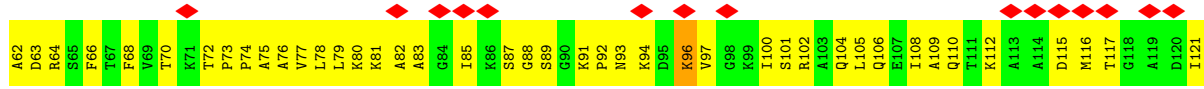
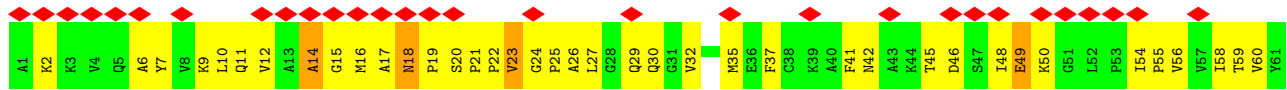


• Molecule 16: 50S RIBOSOMAL PROTEIN L9

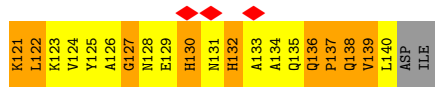
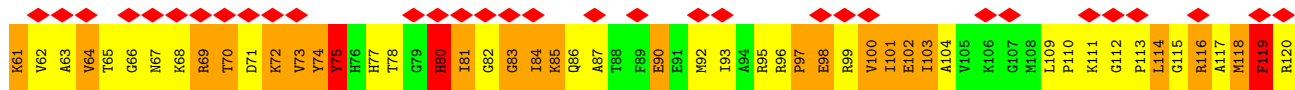
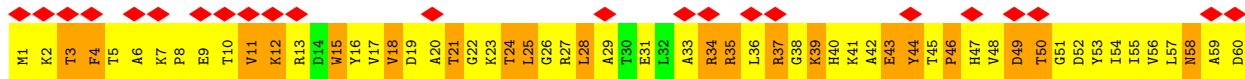




• Molecule 17: 50S RIBOSOMAL PROTEIN L11



• Molecule 18: 50S RIBOSOMAL PROTEIN L13

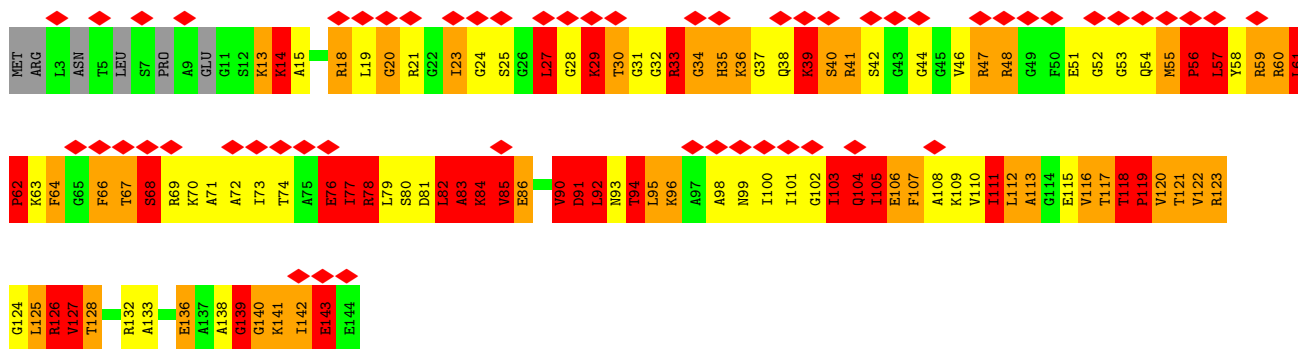


• Molecule 19: 50S RIBOSOMAL PROTEIN L14

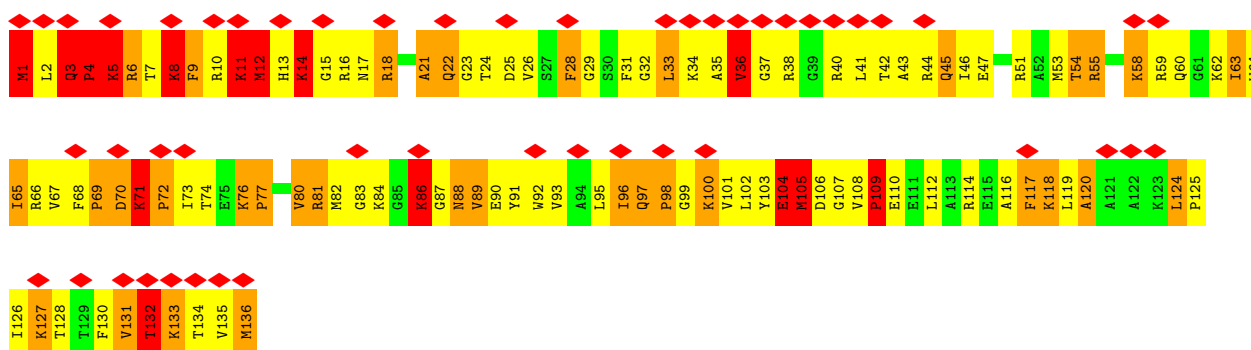
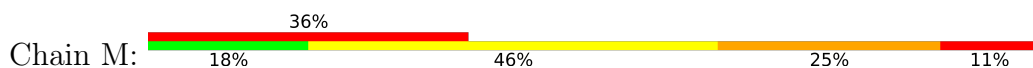


• Molecule 20: 50S RIBOSOMAL PROTEIN L15

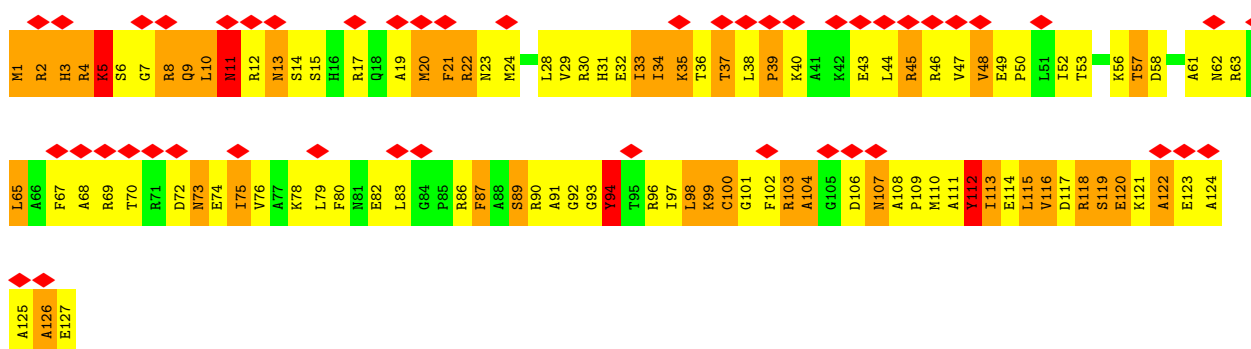
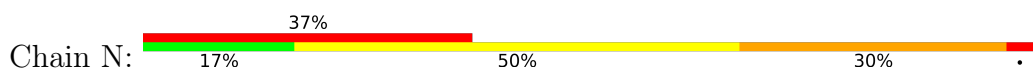




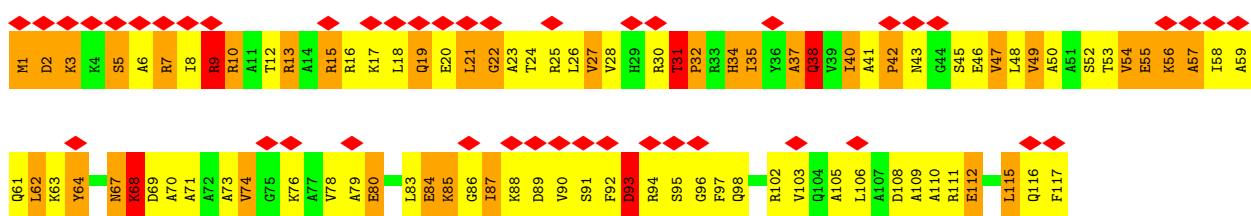
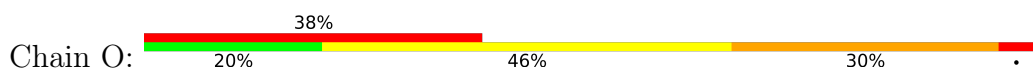
• Molecule 21: 50S RIBOSOMAL PROTEIN L16



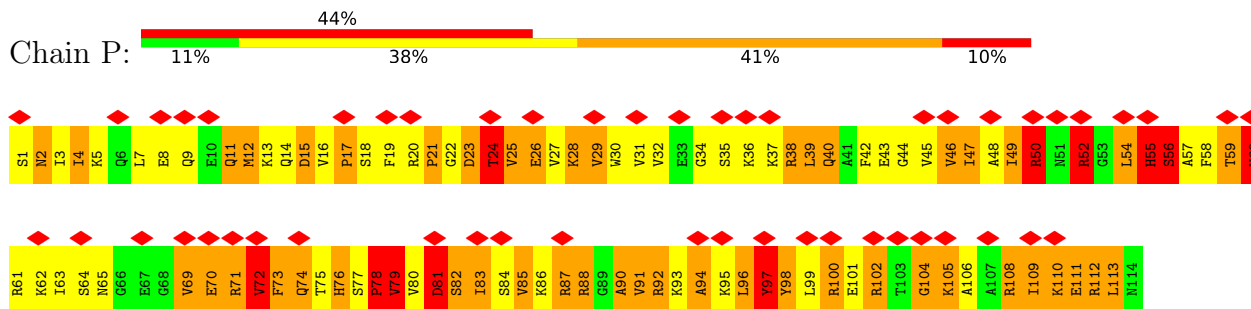
• Molecule 22: 50S RIBOSOMAL PROTEIN L17



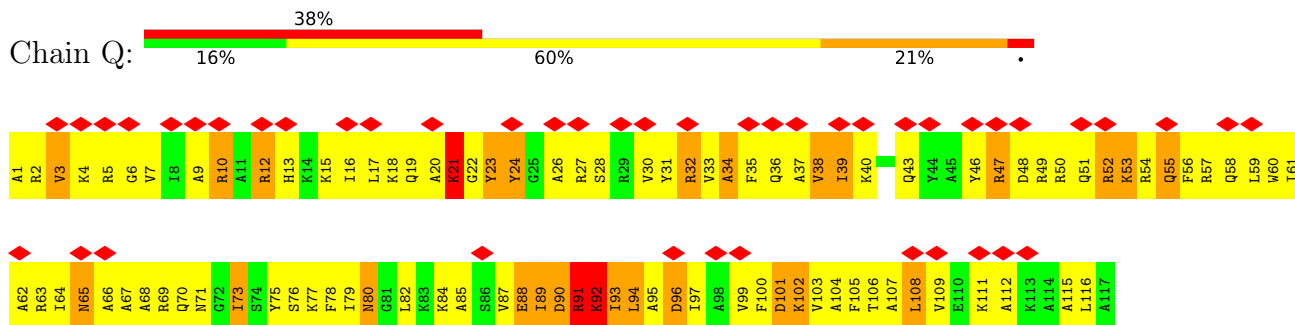
• Molecule 23: 50S RIBOSOMAL PROTEIN L18



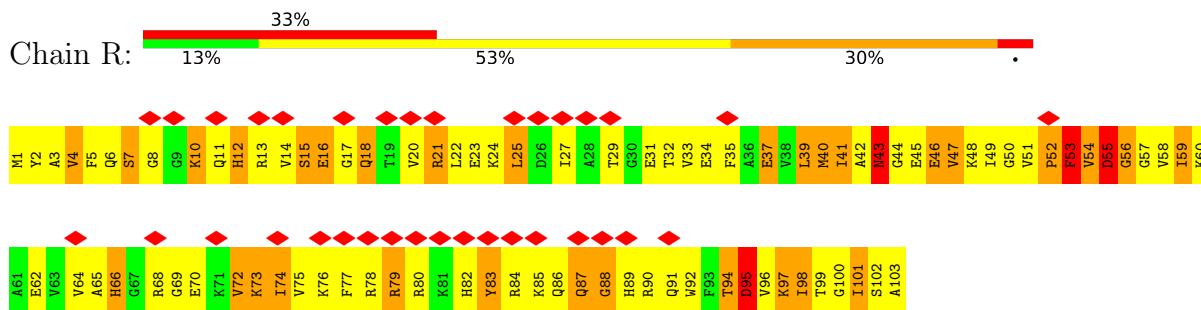
• Molecule 24: 50S RIBOSOMAL PROTEIN L19



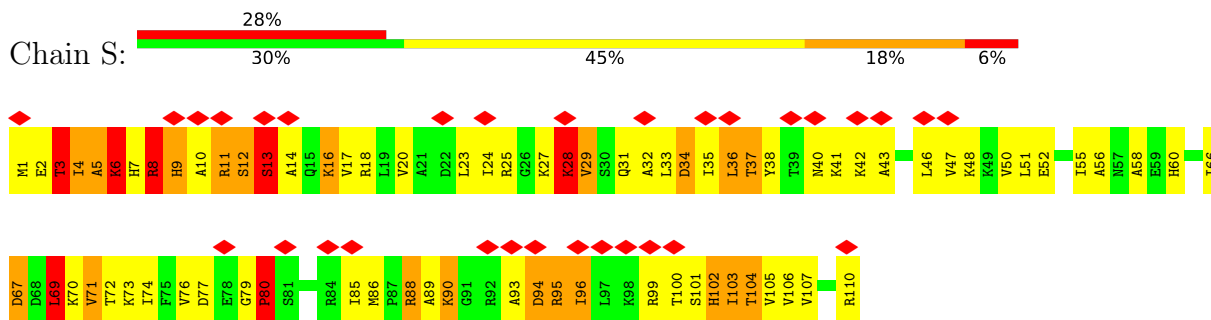
• Molecule 25: 50S RIBOSOMAL PROTEIN L20



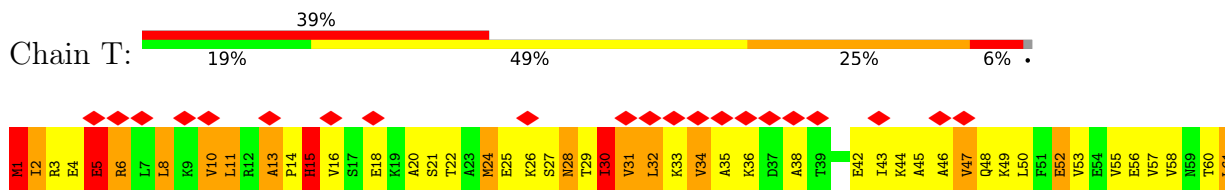
• Molecule 26: 50S RIBOSOMAL PROTEIN L21

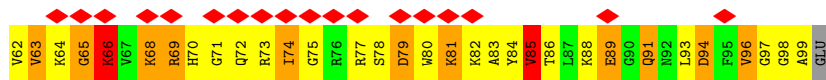


• Molecule 27: 50S RIBOSOMAL PROTEIN L22

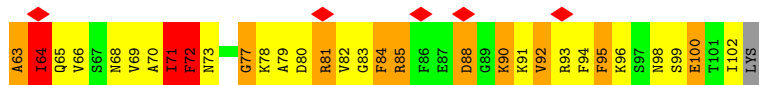
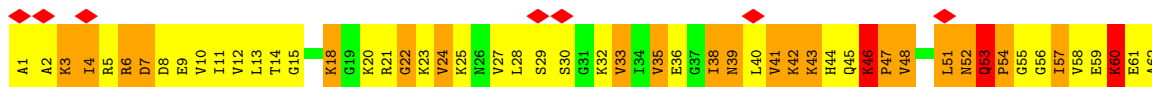
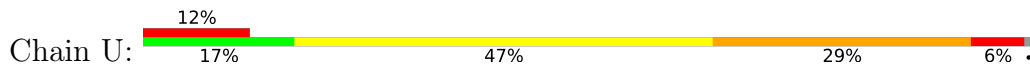


• Molecule 28: 50S RIBOSOMAL PROTEIN L23

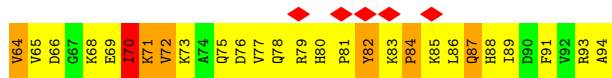




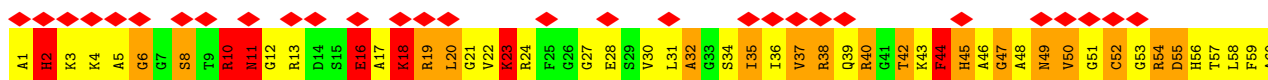
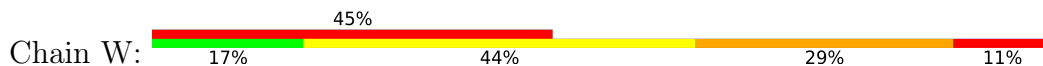
• Molecule 29: 50S RIBOSOMAL PROTEIN L24



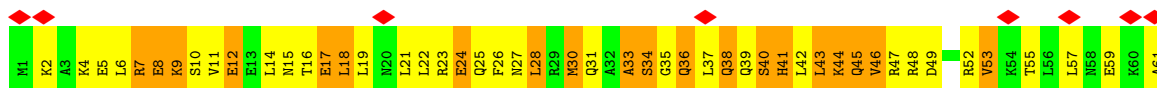
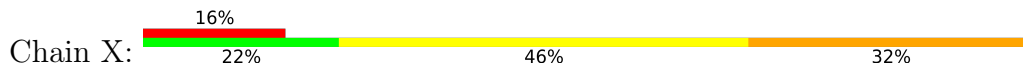
• Molecule 30: 50S RIBOSOMAL PROTEIN L25



• Molecule 31: 50S RIBOSOMAL PROTEIN L27

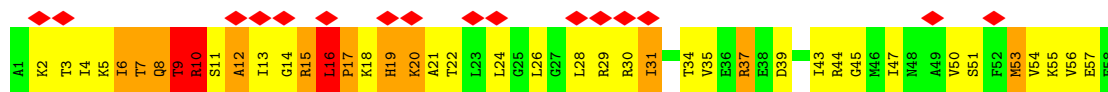


• Molecule 32: 50S RIBOSOMAL PROTEIN L29

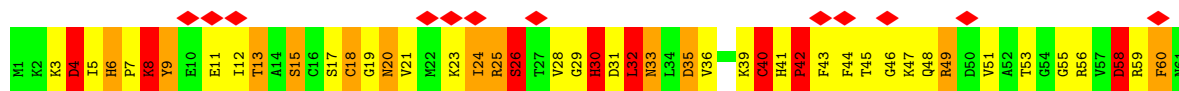
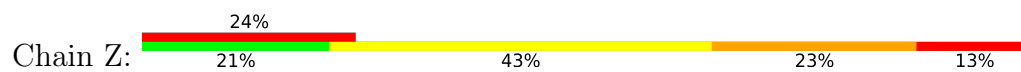


• Molecule 33: 50S RIBOSOMAL PROTEIN L30





• Molecule 34: 50S RIBOSOMAL PROTEIN L31



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	32170	Depositor
Resolution determination method	Not provided	
CTF correction method	PER MICROGRAPH	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	24	Depositor
Minimum defocus (nm)	600	Depositor
Maximum defocus (nm)	3000	Depositor
Magnification	77769	Depositor
Image detector	FEI FALCON II (4k x 4k)	Depositor
Maximum map value	0.158	Depositor
Minimum map value	-0.099	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.014	Depositor
Recommended contour level	0.02	Depositor
Map size (\AA)	360.0, 360.0, 360.0	wwPDB
Map dimensions	180, 180, 180	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	2.0, 2.0, 2.0	Depositor

5 Model quality i

5.1 Standard geometry i

Bond lengths and bond angles in the following residue types are not validated in this section: MG

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	0.53	1/450 (0.2%)	1.15	7/599 (1.2%)
2	1	0.36	0/448	0.71	0/594
3	2	0.33	0/380	0.64	0/498
4	3	0.47	0/513	0.96	1/676 (0.1%)
5	4	0.40	0/303	0.73	0/397
6	5	0.24	0/855	0.38	0/1124
7	6	0.37	0/40	0.26	0/53
8	7	0.13	0/1781	0.63	0/2779
9	A	0.27	0/2803	0.74	0/4371
10	B	0.32	11/68314 (0.0%)	0.77	54/106569 (0.1%)
11	C	0.40	0/2092	0.88	7/2813 (0.2%)
12	D	0.40	0/1586	0.80	2/2134 (0.1%)
13	E	0.45	1/1571 (0.1%)	0.88	6/2113 (0.3%)
14	F	0.33	0/1444	0.87	5/1937 (0.3%)
15	G	0.31	0/1343	0.69	0/1816
16	H	0.27	0/1122	0.59	0/1515
17	I	0.26	0/1046	0.58	0/1410
18	J	0.41	1/1135 (0.1%)	0.72	3/1529 (0.2%)
19	K	0.35	0/939	0.99	2/1258 (0.2%)
20	L	0.71	0/1006	1.61	29/1331 (2.2%)
21	M	0.48	0/1093	1.03	8/1460 (0.5%)
22	N	0.34	0/1021	0.78	4/1364 (0.3%)
23	O	0.30	0/910	0.67	1/1219 (0.1%)
24	P	0.55	0/929	1.40	16/1242 (1.3%)
25	Q	0.41	0/960	0.86	2/1278 (0.2%)
26	R	1.06	6/829 (0.7%)	1.42	13/1107 (1.2%)
27	S	0.28	0/864	0.69	1/1156 (0.1%)
28	T	0.38	0/784	0.77	4/1048 (0.4%)
29	U	0.48	0/787	0.74	3/1051 (0.3%)
30	V	0.30	0/766	0.53	0/1025
31	W	0.36	0/642	0.96	5/848 (0.6%)
32	X	0.29	0/509	0.81	1/674 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
33	Y	0.30	0/453	0.64	0/605
34	Z	0.48	0/559	1.04	5/745 (0.7%)
All	All	0.35	20/100277 (0.0%)	0.80	179/150338 (0.1%)

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
10	B	0	55
11	C	0	3
18	J	0	2
20	L	0	1
24	P	0	1
25	Q	0	1
26	R	0	1
All	All	0	64

All (20) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	R	53	PHE	CB-CG	17.81	1.81	1.51
26	R	54	VAL	N-CA	-11.64	1.23	1.46
26	R	54	VAL	CA-CB	11.12	1.78	1.54
10	B	2196	C	O3'-P	10.16	1.73	1.61
10	B	2052	A	C4'-C3'	-8.24	1.44	1.53
13	E	46	GLN	CB-CG	8.06	1.74	1.52
26	R	53	PHE	CA-CB	7.55	1.70	1.53
10	B	2191	A	O3'-P	-7.38	1.52	1.61
10	B	1248	G	C4'-C3'	7.24	1.61	1.53
26	R	54	VAL	CA-C	7.24	1.71	1.52
10	B	442	G	C5-C6	6.07	1.48	1.42
10	B	37	C	N1-C2	6.04	1.46	1.40
26	R	53	PHE	CG-CD2	5.52	1.47	1.38
18	J	75	TYR	CD2-CE2	-5.47	1.31	1.39
10	B	38	A	C5'-C4'	5.44	1.57	1.51
10	B	1426	G	O3'-P	5.23	1.67	1.61
10	B	1250	G	C4'-C3'	-5.20	1.47	1.52
10	B	2267	A	C5-C6	-5.15	1.36	1.41
1	0	52	LYS	N-CA	5.04	1.56	1.46
10	B	442	G	C6-N1	-5.01	1.36	1.39

All (179) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	B	2791	G	O5'-P-OP1	-28.73	76.22	110.70
10	B	2791	G	O5'-P-OP2	18.24	132.59	110.70
26	R	53	PHE	CA-C-N	-17.34	79.05	117.20
26	R	54	VAL	CB-CA-C	15.12	140.12	111.40
10	B	2790	U	OP1-P-O3'	14.24	136.52	105.20
26	R	54	VAL	CG1-CB-CG2	-14.15	88.26	110.90
26	R	54	VAL	N-CA-C	-13.35	74.96	111.00
20	L	118	THR	C-N-CD	-12.94	92.14	120.60
10	B	2052	A	C5'-C4'-C3'	-12.03	96.75	116.00
21	M	3	GLN	C-N-CD	-11.32	95.70	120.60
10	B	139	U	N1-C1'-C2'	-10.12	100.85	114.00
26	R	54	VAL	N-CA-CB	-10.10	89.29	111.50
24	P	72	VAL	N-CA-C	9.72	137.26	111.00
10	B	2272	U	C5-C4-O4	-9.67	120.10	125.90
21	M	5	LYS	N-CA-C	-9.25	86.03	111.00
25	Q	3	VAL	CB-CA-C	-8.85	94.58	111.40
1	0	52	LYS	CB-CA-C	-8.79	92.82	110.40
26	R	53	PHE	N-CA-CB	8.76	126.36	110.60
10	B	2641	G	N9-C1'-C2'	-8.65	102.48	112.00
20	L	105	ILE	N-CA-C	8.52	134.01	111.00
20	L	85	VAL	N-CA-C	-8.44	88.21	111.00
13	E	84	THR	N-CA-C	8.21	133.18	111.00
24	P	71	ARG	N-CA-C	8.14	132.98	111.00
13	E	44	ARG	NE-CZ-NH2	-8.11	116.25	120.30
24	P	40	GLN	N-CA-C	-8.09	89.15	111.00
10	B	773	U	C5'-C4'-C3'	-7.92	103.34	116.00
10	B	1350	C	C5'-C4'-C3'	-7.88	103.39	116.00
1	0	52	LYS	N-CA-CB	7.83	124.69	110.60
10	B	37	C	C4'-C3'-O3'	7.82	128.64	113.00
20	L	112	LEU	N-CA-C	-7.77	90.03	111.00
24	P	79	VAL	N-CA-C	7.72	131.84	111.00
21	M	132	THR	N-CA-C	7.71	131.83	111.00
21	M	1	MET	CG-SD-CE	7.68	112.48	100.20
10	B	2733	A	N9-C1'-C2'	-7.64	103.59	112.00
13	E	73	ILE	N-CA-C	7.63	131.61	111.00
26	R	53	PHE	CA-C-O	7.58	136.01	120.10
20	L	68	SER	N-CA-C	7.48	131.20	111.00
13	E	74	LYS	N-CA-C	-7.46	90.85	111.00
26	R	46	GLU	N-CA-C	7.35	130.85	111.00
10	B	825	A	C5'-C4'-C3'	-7.30	104.32	116.00
25	Q	52	ARG	NE-CZ-NH2	-7.29	116.65	120.30
10	B	38	A	C5'-C4'-C3'	-7.25	104.40	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	0	27	LEU	CB-CG-CD1	-7.20	98.76	111.00
20	L	77	ILE	N-CA-C	-7.14	91.72	111.00
24	P	28	LYS	N-CA-C	-7.14	91.73	111.00
14	F	150	GLY	N-CA-C	7.11	130.87	113.10
4	3	44	ARG	NE-CZ-NH2	-7.09	116.75	120.30
19	K	91	SER	N-CA-C	-7.07	91.90	111.00
20	L	126	ARG	N-CA-C	7.07	130.09	111.00
26	R	50	GLY	N-CA-C	-7.05	95.47	113.10
34	Z	68	GLY	N-CA-C	-7.04	95.49	113.10
20	L	76	GLU	N-CA-C	-6.95	92.23	111.00
20	L	61	LEU	C-N-CD	-6.92	105.37	120.60
31	W	11	ASN	N-CA-C	6.92	129.70	111.00
10	B	2052	A	O4'-C4'-C3'	6.81	111.55	106.10
1	0	52	LYS	CA-CB-CG	6.79	128.33	113.40
10	B	2259	U	C5'-C4'-C3'	-6.76	105.18	116.00
20	L	14	LYS	N-CA-C	-6.76	92.75	111.00
10	B	1439	A	N9-C1'-C2'	-6.70	104.64	112.00
20	L	78	ARG	N-CA-C	6.56	128.72	111.00
20	L	18	ARG	N-CA-C	6.54	128.66	111.00
32	X	33	ALA	N-CA-C	6.51	128.58	111.00
24	P	14	GLN	N-CA-C	-6.48	93.50	111.00
11	C	32	LEU	N-CA-C	6.45	128.41	111.00
1	0	51	ARG	C-N-CA	6.41	137.74	121.70
10	B	479	A	C4'-C3'-O3'	-6.40	95.95	109.40
31	W	10	ARG	N-CA-C	6.39	128.26	111.00
24	P	29	VAL	N-CA-C	-6.34	93.89	111.00
20	L	92	LEU	N-CA-C	6.33	128.10	111.00
20	L	125	LEU	N-CA-C	-6.32	93.94	111.00
22	N	5	LYS	N-CA-C	6.32	128.06	111.00
27	S	41	LYS	N-CA-C	-6.32	93.94	111.00
24	P	70	GLU	N-CA-C	6.31	128.05	111.00
20	L	139	GLY	N-CA-C	6.30	128.85	113.10
20	L	20	GLY	N-CA-C	6.29	128.83	113.10
20	L	67	THR	N-CA-C	6.29	127.98	111.00
10	B	2318	G	N9-C1'-C2'	-6.28	105.09	112.00
12	D	154	LYS	N-CA-C	-6.26	94.10	111.00
20	L	103	ILE	N-CA-C	6.21	127.75	111.00
13	E	46	GLN	CA-CB-CG	6.17	126.98	113.40
10	B	745	G	C5'-C4'-C3'	-6.13	106.19	116.00
20	L	86	GLU	N-CA-CB	-6.12	99.58	110.60
11	C	238	ASN	N-CA-C	6.11	127.50	111.00
24	P	78	PRO	N-CA-C	6.10	127.97	112.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	0	52	LYS	N-CA-C	-6.08	94.60	111.00
10	B	2052	A	C1'-O4'-C4'	-6.06	105.05	109.90
20	L	39	LYS	N-CA-C	-6.05	94.66	111.00
29	U	48	VAL	C-N-CD	6.05	141.10	128.40
29	U	53	GLN	C-N-CD	6.04	141.09	128.40
29	U	46	LYS	C-N-CD	6.03	141.07	128.40
10	B	1250	G	C4'-C3'-C2'	6.01	108.61	102.60
10	B	268	C	C5'-C4'-C3'	-5.99	106.41	116.00
13	E	44	ARG	NE-CZ-NH1	5.99	123.30	120.30
24	P	81	ASP	N-CA-C	-5.98	94.86	111.00
18	J	80	HIS	N-CA-C	5.95	127.06	111.00
10	B	1397	U	C5'-C4'-C3'	-5.94	106.50	116.00
12	D	145	SER	N-CA-CB	-5.93	101.60	110.50
11	C	28	PRO	CA-C-N	-5.92	104.18	117.20
10	B	2619	C	C5'-C4'-C3'	-5.91	106.55	116.00
10	B	1657	U	N1-C1'-C2'	-5.89	105.52	112.00
22	N	2	ARG	N-CA-C	-5.89	95.09	111.00
34	Z	42	PRO	N-CA-C	5.89	127.42	112.10
10	B	690	G	C5'-C4'-C3'	-5.89	106.58	116.00
21	M	6	ARG	N-CA-C	-5.89	95.11	111.00
26	R	53	PHE	O-C-N	5.88	132.11	122.70
10	B	442	G	C5-C6-O6	5.86	132.12	128.60
10	B	38	A	N9-C1'-C2'	5.85	121.60	114.00
24	P	82	SER	N-CA-C	5.85	126.78	111.00
28	T	1	MET	N-CA-C	-5.82	95.29	111.00
34	Z	43	PHE	N-CA-C	-5.81	95.32	111.00
21	M	8	LYS	N-CA-C	-5.80	95.35	111.00
24	P	109	ILE	N-CA-C	-5.79	95.37	111.00
24	P	54	LEU	N-CA-C	5.78	126.61	111.00
10	B	2790	U	O3'-P-O5'	-5.78	93.02	104.00
31	W	11	ASN	N-CA-CB	-5.76	100.22	110.60
14	F	14	LYS	N-CA-C	-5.76	95.46	111.00
11	C	28	PRO	N-CA-C	5.75	127.06	112.10
10	B	2267	A	C5-C6-N6	-5.75	119.10	123.70
22	N	100	CYS	N-CA-C	-5.75	95.49	111.00
20	L	82	LEU	CA-CB-CG	-5.74	102.11	115.30
22	N	4	ARG	N-CA-C	5.74	126.49	111.00
10	B	2575	C	N1-C1'-C2'	-5.73	105.70	112.00
10	B	2267	A	O4'-C1'-N9	-5.71	103.63	108.20
18	J	115	GLY	N-CA-C	-5.71	98.84	113.10
26	R	88	GLY	N-CA-C	-5.70	98.85	113.10
20	L	111	ILE	N-CA-C	-5.70	95.62	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
19	K	89	ASN	N-CA-C	5.67	126.31	111.00
14	F	106	ALA	N-CA-C	5.66	126.27	111.00
1	0	5	ASN	N-CA-C	5.64	126.23	111.00
28	T	2	ILE	CG1-CB-CG2	5.61	123.74	111.40
18	J	4	PHE	N-CA-C	-5.61	95.86	111.00
28	T	2	ILE	N-CA-C	-5.58	95.92	111.00
10	B	2267	A	C4-N9-C1'	5.58	136.34	126.30
34	Z	26	SER	N-CA-C	5.58	126.06	111.00
10	B	2272	U	N1-C1'-C2'	-5.55	105.90	112.00
20	L	83	ALA	N-CA-C	-5.54	96.03	111.00
11	C	202	ARG	NE-CZ-NH1	5.54	123.07	120.30
24	P	50	ARG	N-CA-C	-5.52	96.08	111.00
10	B	2272	U	N3-C4-O4	-5.51	115.54	119.40
10	B	150	U	C5'-C4'-C3'	-5.48	107.23	116.00
24	P	104	GLY	N-CA-C	5.48	126.80	113.10
10	B	1363	C	C5'-C4'-C3'	-5.48	107.24	116.00
14	F	20	ASN	N-CA-C	5.47	125.78	111.00
10	B	2267	A	C8-N9-C1'	-5.47	117.86	127.70
31	W	10	ARG	C-N-CA	5.47	135.36	121.70
10	B	848	C	C5'-C4'-C3'	-5.46	107.25	116.00
10	B	2052	A	C4'-C3'-C2'	-5.46	97.14	102.60
10	B	1250	G	C5'-C4'-C3'	-5.41	107.35	116.00
10	B	2052	A	N9-C1'-C2'	-5.41	106.05	112.00
11	C	28	PRO	C-N-CA	5.39	135.16	121.70
10	B	2191	A	P-O3'-C3'	5.38	126.15	119.70
24	P	71	ARG	C-N-CA	5.37	135.13	121.70
10	B	2575	C	C5'-C4'-C3'	5.36	124.58	116.00
20	L	77	ILE	C-N-CA	-5.36	108.31	121.70
10	B	139	U	O4'-C1'-N1	5.34	112.47	108.20
20	L	94	THR	N-CA-C	5.34	125.43	111.00
20	L	62	PRO	CA-N-CD	-5.33	104.04	111.50
10	B	2192	U	C5'-C4'-C3'	-5.32	107.49	116.00
10	B	375	G	C5'-C4'-C3'	-5.29	107.53	116.00
20	L	119	PRO	CA-N-CD	-5.28	104.11	111.50
10	B	1251	C	C5'-C4'-C3'	5.24	124.39	116.00
28	T	2	ILE	CB-CA-C	5.24	122.08	111.60
31	W	16	GLU	N-CA-C	5.22	125.09	111.00
26	R	56	GLY	N-CA-C	-5.21	100.07	113.10
10	B	2471	A	C5'-C4'-C3'	-5.21	107.67	116.00
10	B	1600	C	C5'-C4'-C3'	-5.21	107.67	116.00
10	B	1664	A	C5'-C4'-C3'	-5.18	107.71	116.00
10	B	560	C	C5'-C4'-C3'	-5.13	107.79	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	R	43	ASN	N-CA-C	-5.13	97.16	111.00
10	B	2576	G	O5'-P-OP1	-5.10	101.11	105.70
20	L	127	VAL	N-CA-C	5.08	124.72	111.00
34	Z	20	ASN	N-CA-C	5.07	124.68	111.00
11	C	31	PRO	N-CA-C	5.06	125.25	112.10
14	F	73	VAL	N-CA-C	5.04	124.62	111.00
10	B	1656	C	N1-C1'-C2'	-5.04	106.45	112.00
20	L	123	ARG	N-CA-C	-5.04	97.39	111.00
21	M	4	PRO	N-CA-C	-5.03	99.02	112.10
21	M	65	ILE	N-CA-C	-5.01	97.48	111.00
23	O	93	ASP	N-CA-C	-5.00	97.48	111.00

There are no chirality outliers.

All (64) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
10	B	1119	U	Sidechain
10	B	1215	G	Sidechain
10	B	1240	U	Sidechain
10	B	1247	A	Sidechain
10	B	1347	A	Sidechain
10	B	136	G	Sidechain
10	B	1377	G	Sidechain
10	B	139	U	Sidechain
10	B	1419	A	Sidechain
10	B	142	A	Sidechain
10	B	1426	G	Sidechain
10	B	143	C	Sidechain
10	B	1432	G	Sidechain
10	B	1439	A	Sidechain
10	B	1450	G	Sidechain
10	B	1462	C	Sidechain
10	B	1572	A	Sidechain
10	B	1814	G	Sidechain
10	B	1828	G	Sidechain
10	B	1869	G	Sidechain
10	B	1964	G	Sidechain
10	B	2052	A	Sidechain
10	B	2138	G	Sidechain
10	B	221	A	Sidechain
10	B	222	A	Sidechain
10	B	2267	A	Sidechain

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Mol	Chain	Res	Type	Group
10	B	2272	U	Sidechain
10	B	2285	C	Sidechain
10	B	2318	G	Sidechain
10	B	232	G	Sidechain
10	B	2471	A	Sidechain
10	B	2508	G	Sidechain
10	B	2575	C	Sidechain
10	B	2638	G	Sidechain
10	B	2641	G	Sidechain
10	B	2733	A	Sidechain
10	B	2770	G	Sidechain
10	B	2834	G	Sidechain
10	B	2848	G	Sidechain
10	B	2857	G	Sidechain
10	B	2868	A	Sidechain
10	B	2883	A	Sidechain
10	B	370	G	Sidechain
10	B	396	G	Sidechain
10	B	487	C	Sidechain
10	B	500	G	Sidechain
10	B	51	G	Sidechain
10	B	526	A	Sidechain
10	B	630	G	Sidechain
10	B	633	A	Sidechain
10	B	727	A	Sidechain
10	B	729	G	Sidechain
10	B	757	G	Sidechain
10	B	942	G	Sidechain
10	B	946	C	Sidechain
11	C	160	TYR	Sidechain
11	C	29	PHE	Sidechain
11	C	61	TYR	Sidechain
18	J	75	TYR	Sidechain
18	J	80	HIS	Sidechain
20	L	66	PHE	Sidechain
24	P	97	TYR	Sidechain
25	Q	46	TYR	Sidechain
26	R	53	PHE	Mainchain

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	444	0	461	105	0
2	1	441	0	485	68	0
3	2	377	0	418	50	0
4	3	504	0	574	108	0
5	4	302	0	343	45	0
6	5	850	0	897	94	0
7	6	41	0	39	1	0
8	7	1591	0	806	24	0
9	A	2507	0	1270	86	0
10	B	60995	0	30659	4160	0
11	C	2053	0	2122	432	0
12	D	1565	0	1616	377	0
13	E	1552	0	1617	282	0
14	F	1420	0	1460	167	0
15	G	1323	0	1374	165	0
16	H	1111	0	1148	190	0
17	I	1032	0	1088	199	0
18	J	1112	0	1147	217	0
19	K	930	0	1000	119	0
20	L	1002	0	1070	287	0
21	M	1074	0	1157	244	0
22	N	1008	0	1036	232	0
23	O	900	0	935	129	0
24	P	917	0	965	205	0
25	Q	947	0	1022	173	0
26	R	816	0	838	166	0
27	S	857	0	922	120	0
28	T	777	0	840	129	0
29	U	779	0	831	255	0
30	V	753	0	780	104	0
31	W	634	0	656	157	0
32	X	509	0	541	68	0
33	Y	449	0	491	57	0
34	Z	549	0	552	114	0
35	B	110	0	0	0	0
36	B	497	0	0	17	0
36	C	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
36	E	5	0	0	0	0
36	L	2	0	0	0	0
36	N	1	0	0	0	0
All	All	92737	0	61160	8365	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 55.

All (8365) 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)
10:B:1062:G:H21	17:I:134:SER:CB	1.09	1.62
10:B:1059:G:C5'	17:I:117:THR:HG23	1.22	1.60
26:R:54:VAL:CA	26:R:54:VAL:CB	1.78	1.59
26:R:53:PHE:CB	26:R:53:PHE:CG	1.81	1.58
10:B:80:G:C5'	10:B:346:A:C8	1.88	1.53
10:B:1059:G:H5'	17:I:117:THR:CG2	1.34	1.52
10:B:2881:U:C6	22:N:120:GLU:CD	1.80	1.51
10:B:80:G:H5'	10:B:346:A:C8	0.97	1.49
10:B:1063:G:C5'	17:I:76:ALA:HB2	1.41	1.49
10:B:328:U:H4'	29:U:65:GLN:NE2	1.29	1.48
10:B:2881:U:H6	22:N:120:GLU:CD	1.05	1.47
10:B:1473:G:N2	10:B:1518:C:N3	1.63	1.44
10:B:321:U:C5'	13:E:130:LYS:HA	1.48	1.44
10:B:1050:A:C4	10:B:2751:G:N7	1.85	1.43
1:O:50:GLY:C	22:N:118:ARG:NH2	1.73	1.41
10:B:1063:G:C4'	17:I:76:ALA:HB2	1.53	1.39
10:B:2881:U:C6	22:N:120:GLU:OE2	1.72	1.39
10:B:1439:A:C6	10:B:1552:A:N7	1.88	1.38
10:B:80:G:C5'	10:B:346:A:N7	1.79	1.35
10:B:96:C:OP1	32:X:39:GLN:HA	1.26	1.35
6:5:364:VAL:CG1	29:U:51:LEU:CB	1.91	1.34
10:B:1062:G:N2	17:I:134:SER:HB3	1.03	1.34
10:B:336:C:OP1	29:U:81:ARG:HD3	1.19	1.34
10:B:80:G:H5'	10:B:346:A:N7	1.04	1.34
10:B:336:C:H5''	29:U:81:ARG:NE	1.40	1.33
10:B:2880:C:H2'	22:N:120:GLU:OE2	1.21	1.33
10:B:1050:A:C8	10:B:2751:G:C6	2.16	1.33
10:B:1063:G:O3'	17:I:76:ALA:CB	1.75	1.32
16:H:44:ILE:O	16:H:47:PHE:CD1	1.81	1.31
10:B:1050:A:N3	10:B:2751:G:N7	1.78	1.31

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1439:A:N6	10:B:1552:A:N7	1.77	1.30
10:B:1050:A:C8	10:B:2751:G:O6	1.85	1.30
6:5:364:VAL:HG13	29:U:51:LEU:CB	1.26	1.29
10:B:333:G:C4	10:B:334:C:C5	2.20	1.29
10:B:346:A:C2	10:B:347:A:C8	2.20	1.29
10:B:311:A:C8	10:B:332:A:C5	2.20	1.29
10:B:1473:G:N2	10:B:1518:C:C2	2.01	1.29
10:B:1519:G:C5	10:B:1520:U:C5	2.20	1.29
6:5:364:VAL:HG22	29:U:51:LEU:CB	1.63	1.25
10:B:1076:C:O2'	17:I:92:PRO:HB2	1.17	1.25
10:B:328:U:H4'	29:U:65:GLN:CD	1.36	1.24
10:B:1076:C:O4'	17:I:92:PRO:HD2	1.14	1.24
10:B:342:A:C2	10:B:343:C:C5	2.26	1.23
10:B:1050:A:C4	10:B:2751:G:C5	2.26	1.23
10:B:1050:A:N3	10:B:2751:G:C8	2.04	1.23
16:H:44:ILE:O	16:H:47:PHE:HD1	0.96	1.23
10:B:80:G:H4'	10:B:346:A:C5	1.73	1.23
10:B:82:U:OP1	10:B:295:G:O2'	1.54	1.23
10:B:336:C:C5'	29:U:81:ARG:HE	1.50	1.23
10:B:80:G:C4'	10:B:346:A:C5	2.22	1.22
10:B:310:A:C4	10:B:312:G:C8	2.28	1.22
10:B:337:C:P	29:U:81:ARG:NH2	2.11	1.22
10:B:2881:U:C6	22:N:120:GLU:OE1	1.89	1.22
10:B:280:U:C5	10:B:281:C:C5	2.26	1.22
10:B:1474:U:O2	10:B:1517:G:O6	1.59	1.21
10:B:338:G:P	36:B:3141:HOH:O	1.98	1.20
10:B:1475:G:O2'	10:B:1514:G:O6	1.54	1.20
10:B:2881:U:H6	22:N:120:GLU:OE2	0.85	1.20
10:B:291:G:C5	10:B:350:G:C6	2.30	1.19
10:B:348:A:C2	10:B:349:U:C2	2.30	1.19
10:B:84:A:OP2	29:U:91:LYS:HD3	1.40	1.18
10:B:311:A:N7	10:B:332:A:N6	1.91	1.18
10:B:347:A:C2	10:B:348:A:C8	2.29	1.18
22:N:96:ARG:NH2	22:N:118:ARG:H	1.41	1.18
29:U:39:ASN:ND2	29:U:60:LYS:O	1.75	1.18
10:B:79:C:O2'	10:B:346:A:N7	1.73	1.18
10:B:1477:A:C4	10:B:1515:A:C2	2.23	1.18
10:B:279:A:N6	10:B:361:G:N3	1.92	1.17
10:B:1477:A:C1'	10:B:1515:A:C2	2.14	1.17
10:B:96:C:OP2	32:X:38:GLN:O	1.59	1.17
10:B:1525:A:C2	10:B:1526:C:C2	2.31	1.17

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:302:C:H2'	10:B:303:G:H8	1.01	1.17
1:0:50:GLY:O	22:N:118:ARG:NH2	1.68	1.16
6:5:364:VAL:CG2	29:U:51:LEU:HB2	1.53	1.16
1:0:50:GLY:C	22:N:118:ARG:HH22	1.36	1.16
10:B:396:G:H4'	34:Z:28:VAL:HG21	1.29	1.15
10:B:333:G:C5	10:B:334:C:C5	2.34	1.15
10:B:1063:G:C3'	17:I:76:ALA:CB	2.25	1.14
22:N:96:ARG:NH2	22:N:116:VAL:O	1.79	1.14
6:5:364:VAL:HG13	29:U:51:LEU:CA	1.76	1.14
6:5:364:VAL:CG2	29:U:51:LEU:CB	2.17	1.14
10:B:1445:G:C2	10:B:1547:C:N4	2.16	1.14
10:B:301:G:N1	10:B:317:G:N7	1.95	1.14
10:B:333:G:C4	10:B:334:C:H5	1.57	1.14
10:B:1529:G:H2'	10:B:1530:G:H8	1.12	1.14
21:M:3:GLN:N	21:M:4:PRO:HD2	1.41	1.14
10:B:1063:G:C4'	17:I:76:ALA:CB	2.26	1.13
10:B:96:C:P	32:X:39:GLN:HA	1.88	1.13
10:B:1542:U:H2'	10:B:1543:G:H8	1.09	1.13
10:B:2578:G:H1'	12:D:145:SER:HB3	1.29	1.13
10:B:80:G:C5'	10:B:346:A:C5	2.31	1.13
10:B:291:G:C6	10:B:350:G:C5	2.37	1.13
10:B:328:U:C4'	29:U:65:GLN:CD	2.12	1.13
10:B:1097:U:H2'	10:B:1098:A:H5'	1.25	1.13
11:C:30:ALA:H	11:C:31:PRO:HD3	1.12	1.13
10:B:1445:G:N2	10:B:1547:C:C4	2.16	1.12
10:B:1519:G:C6	10:B:1520:U:C5	2.37	1.12
10:B:280:U:C6	10:B:281:C:C5	2.36	1.12
10:B:351:C:H2'	10:B:352:A:H8	0.99	1.11
26:R:74:ILE:HA	26:R:90:ARG:HE	1.15	1.11
10:B:1050:A:N9	10:B:2751:G:C5	2.17	1.11
10:B:80:G:H5'	10:B:346:A:C5	1.84	1.11
10:B:341:C:H2'	10:B:342:A:H8	1.15	1.11
10:B:1050:A:H1'	10:B:2751:G:C4	1.85	1.10
10:B:1063:G:O2'	17:I:135:MET:HB3	1.51	1.10
10:B:272:A:C2	10:B:273:G:C8	2.38	1.10
10:B:2641:G:H5''	18:J:78:THR:HG21	1.30	1.10
20:L:61:LEU:HB3	20:L:62:PRO:HD2	1.12	1.10
26:R:54:VAL:CB	26:R:54:VAL:N	2.15	1.10
10:B:321:U:O4'	13:E:129:PRO:HB2	1.50	1.10
10:B:327:G:N1	10:B:336:C:N3	2.00	1.10
10:B:1063:G:C3'	17:I:76:ALA:HB1	1.82	1.10

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1439:A:N6	10:B:1552:A:C8	2.18	1.10
16:H:50:ARG:HB3	16:H:51:ARG:HD3	1.29	1.10
22:N:96:ARG:NH2	22:N:118:ARG:N	1.98	1.10
6:5:421:ASP:OD2	10:B:490:C:C5	2.04	1.09
10:B:1519:G:C2	10:B:1520:U:C6	2.39	1.09
11:C:124:LYS:HB2	11:C:125:PRO:HD3	1.10	1.09
10:B:342:A:C2	10:B:343:C:C6	2.40	1.09
10:B:346:A:C2	10:B:347:A:N7	2.21	1.09
10:B:82:U:H5'	10:B:295:G:H4'	1.35	1.09
10:B:279:A:H2'	10:B:280:U:H5'	1.23	1.09
10:B:342:A:N1	10:B:343:C:C5	2.20	1.09
1:0:52:LYS:HD2	22:N:118:ARG:CD	1.83	1.09
10:B:323:C:C4	10:B:333:G:C8	2.41	1.09
10:B:1076:C:H1'	17:I:92:PRO:HG2	1.24	1.09
10:B:1115:G:C4	10:B:1116:G:C8	2.40	1.09
10:B:295:G:C6	10:B:344:A:N1	2.20	1.09
10:B:311:A:C8	10:B:332:A:C6	2.40	1.09
10:B:1516:G:N3	10:B:1517:G:C8	2.20	1.09
11:C:20:ASN:HB3	11:C:202:ARG:HB3	1.33	1.09
10:B:283:G:C2	10:B:284:U:C2	2.41	1.08
10:B:301:G:C6	10:B:317:G:N7	2.21	1.08
10:B:1473:G:H1	10:B:1518:C:N4	1.49	1.08
10:B:80:G:H4'	10:B:346:A:C6	1.89	1.08
10:B:1516:G:H2'	10:B:1517:G:H8	1.19	1.08
22:N:32:GLU:HA	22:N:115:LEU:HD21	1.33	1.08
24:P:52:ARG:HB3	24:P:60:VAL:HG11	1.30	1.08
10:B:692:C:H5'	11:C:42:ARG:HB2	1.32	1.08
10:B:1050:A:N9	10:B:2751:G:C6	2.19	1.08
19:K:71:ARG:HB3	19:K:72:PRO:HD2	1.22	1.08
10:B:1547:C:H2'	10:B:1548:A:H8	1.15	1.07
10:B:298:G:OP1	29:U:83:GLY:N	1.86	1.07
10:B:313:G:C2	10:B:314:C:C2	2.42	1.07
10:B:314:C:H2'	10:B:315:G:H8	1.18	1.07
10:B:341:C:H2'	10:B:342:A:C8	1.89	1.07
10:B:288:U:H2'	10:B:289:G:C8	1.89	1.07
10:B:317:G:H2'	10:B:318:C:H6	1.12	1.07
10:B:321:U:H5''	13:E:130:LYS:HA	1.28	1.07
10:B:347:A:C6	10:B:348:A:N7	2.22	1.07
10:B:1524:G:H2'	10:B:1525:A:H8	1.14	1.07
10:B:1548:A:H2'	10:B:1549:A:C8	1.90	1.07
6:5:364:VAL:CG1	29:U:51:LEU:HB2	1.54	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1528:A:N6	10:B:1543:G:O2'	1.88	1.07
11:C:107:LYS:HB2	11:C:194:VAL:HG11	1.36	1.07
10:B:1547:C:H2'	10:B:1548:A:C8	1.89	1.07
10:B:335:C:H2'	10:B:336:C:C6	1.89	1.06
10:B:327:G:N1	10:B:336:C:C4	2.22	1.06
10:B:332:A:N1	10:B:335:C:C2	2.23	1.06
13:E:48:THR:HG22	13:E:49:ARG:H	0.97	1.06
10:B:292:U:H2'	10:B:293:U:C6	1.90	1.06
10:B:1100:C:H2'	10:B:1101:U:H6	1.13	1.06
10:B:1105:U:H2'	10:B:1106:G:C8	1.90	1.06
10:B:1527:G:N2	10:B:1544:A:OP2	1.89	1.06
12:D:24:VAL:HG21	12:D:193:VAL:HG11	1.37	1.06
33:Y:16:LEU:HB2	33:Y:17:PRO:HD3	1.38	1.06
10:B:1059:G:H5''	17:I:117:THR:HG23	1.36	1.06
10:B:1118:C:OP1	30:V:84:PRO:HG2	1.56	1.06
10:B:333:G:C2	10:B:334:C:C6	2.44	1.05
10:B:1524:G:C4	10:B:1525:A:C8	2.44	1.05
31:W:24:ARG:HB2	31:W:59:PHE:HB2	1.38	1.05
10:B:302:C:H2'	10:B:303:G:C8	1.91	1.05
10:B:336:C:OP1	29:U:81:ARG:CD	2.03	1.05
10:B:364:C:H2'	10:B:365:U:C6	1.92	1.05
10:B:1524:G:N3	10:B:1525:A:C8	2.25	1.05
10:B:1529:G:H2'	10:B:1530:G:C8	1.91	1.05
20:L:55:MET:HG2	20:L:56:PRO:HD3	1.32	1.05
22:N:96:ARG:HD3	22:N:119:SER:C	1.46	1.05
10:B:274:C:O2	10:B:363:G:N2	1.88	1.05
10:B:314:C:H2'	10:B:315:G:C8	1.92	1.05
10:B:321:U:C5'	13:E:130:LYS:CA	2.30	1.05
10:B:311:A:N7	10:B:332:A:C6	2.23	1.04
10:B:324:A:C4	10:B:325:G:C8	2.45	1.04
10:B:325:G:H2'	10:B:326:G:H8	1.18	1.04
10:B:355:U:H2'	10:B:356:G:C8	1.91	1.04
10:B:1048:A:C5	10:B:1111:A:C2	2.45	1.04
10:B:1521:G:C8	10:B:1522:A:C8	2.46	1.04
1:0:51:ARG:NH2	22:N:125:ALA:HB1	1.73	1.04
6:5:364:VAL:HG22	29:U:51:LEU:HB3	1.38	1.04
10:B:338:G:H2'	10:B:339:U:H5'	1.39	1.04
10:B:1100:C:H2'	10:B:1101:U:C6	1.91	1.04
10:B:333:G:N3	10:B:334:C:C6	2.26	1.04
6:5:364:VAL:HA	29:U:51:LEU:CD2	1.58	1.04
10:B:325:G:H2'	10:B:326:G:C8	1.92	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1050:A:N7	10:B:2751:G:O6	1.88	1.04
10:B:1519:G:C5	10:B:1520:U:H5	1.68	1.04
10:B:1528:A:C8	10:B:1529:G:C8	2.46	1.03
10:B:305:C:H2'	10:B:306:U:C6	1.92	1.03
10:B:1117:C:H2'	10:B:1118:C:C6	1.94	1.03
10:B:300:A:H2'	10:B:334:C:H1'	1.34	1.03
10:B:1445:G:N2	10:B:1547:C:N4	2.06	1.03
16:H:47:PHE:O	16:H:51:ARG:NH1	1.90	1.03
10:B:80:G:C4'	10:B:346:A:N7	2.19	1.03
10:B:283:G:C4	10:B:284:U:C6	2.47	1.03
10:B:285:G:C6	10:B:286:U:C4	2.46	1.03
10:B:351:C:H2'	10:B:352:A:C8	1.92	1.03
10:B:1063:G:C5'	17:I:76:ALA:CB	2.36	1.03
10:B:1477:A:O4'	10:B:1515:A:N1	1.90	1.03
29:U:39:ASN:CG	29:U:60:LYS:O	1.96	1.03
10:B:1063:G:H5''	17:I:76:ALA:HB2	1.36	1.02
10:B:1474:U:O2	10:B:1517:G:C6	2.11	1.02
10:B:1548:A:H2'	10:B:1549:A:H8	1.16	1.02
10:B:324:A:H2'	10:B:325:G:H5'	1.41	1.02
10:B:1064:C:P	17:I:76:ALA:HB1	1.99	1.02
10:B:1076:C:O4'	17:I:92:PRO:CD	2.05	1.02
10:B:37:C:H2'	13:E:46:GLN:HG2	1.36	1.02
10:B:79:C:O2'	10:B:346:A:C8	2.07	1.02
18:J:11:VAL:HG13	18:J:12:LYS:H	1.24	1.02
13:E:153:LEU:HD13	13:E:193:VAL:HG21	1.38	1.02
10:B:200:U:H5''	34:Z:20:ASN:HB3	1.41	1.02
16:H:82:SER:H	16:H:146:VAL:HG13	1.25	1.02
10:B:298:G:OP1	29:U:82:VAL:C	1.97	1.01
22:N:116:VAL:HG22	22:N:117:ASP:H	1.22	1.01
10:B:315:G:H2'	10:B:316:C:C6	1.95	1.01
10:B:357:C:H2'	10:B:358:U:C6	1.95	1.01
10:B:1037:G:H2'	10:B:1038:G:H8	1.23	1.01
1:O:51:ARG:NH2	22:N:125:ALA:CB	2.24	1.01
10:B:1037:G:H2'	10:B:1038:G:C8	1.95	1.01
10:B:37:C:H2'	13:E:46:GLN:CG	1.91	1.01
10:B:278:A:C6	10:B:362:A:C8	2.48	1.01
10:B:285:G:N1	10:B:355:U:O2	1.94	1.01
10:B:1532:A:N1	10:B:1539:U:N3	2.08	1.01
13:E:128:ALA:HB3	13:E:129:PRO:HD3	1.39	1.01
10:B:298:G:OP1	29:U:82:VAL:CA	2.08	1.00
10:B:1063:G:O3'	17:I:76:ALA:HB1	0.83	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1519:G:C4	10:B:1520:U:C6	2.48	1.00
19:K:66:LYS:HG2	19:K:80:ASP:HA	1.40	1.00
21:M:3:GLN:H	21:M:4:PRO:CD	1.74	1.00
10:B:319:G:H2'	10:B:320:A:C8	1.97	1.00
10:B:336:C:O3'	29:U:81:ARG:NH2	1.92	1.00
10:B:347:A:C5	10:B:348:A:N7	2.30	1.00
33:Y:10:ARG:HE	33:Y:31:ILE:HG13	1.22	1.00
10:B:323:C:N4	10:B:333:G:N7	2.10	1.00
10:B:1115:G:N3	10:B:1116:G:C8	2.30	1.00
10:B:303:G:N2	10:B:314:C:O2	1.94	1.00
10:B:324:A:N6	10:B:338:G:N3	2.08	1.00
10:B:356:G:C2'	10:B:357:C:H5'	1.91	1.00
12:D:154:LYS:HZ2	12:D:156:PHE:HA	1.24	1.00
26:R:53:PHE:HB3	26:R:55:ASP:N	1.76	1.00
10:B:328:U:C4'	29:U:65:GLN:NE2	2.24	1.00
10:B:1535:A:H3'	10:B:1536:C:C6	1.97	1.00
10:B:308:G:N3	10:B:329:G:N2	2.10	0.99
10:B:1438:U:O2	10:B:1553:A:N6	1.95	0.99
21:M:3:GLN:C	21:M:5:LYS:H	1.58	0.99
10:B:1090:A:H2'	10:B:1091:G:C8	1.98	0.99
10:B:2880:C:C2'	22:N:120:GLU:OE2	2.11	0.99
33:Y:9:THR:HB	33:Y:54:VAL:HA	1.45	0.99
10:B:315:G:H2'	10:B:316:C:H6	1.28	0.99
10:B:1059:G:H4'	17:I:116:MET:HA	1.44	0.99
10:B:1076:C:H1'	17:I:92:PRO:CG	1.92	0.99
22:N:44:LEU:HD23	22:N:113:ILE:HD12	1.44	0.99
10:B:1473:G:N2	10:B:1518:C:O2	1.94	0.99
10:B:304:U:O2	10:B:313:G:N1	1.94	0.98
10:B:1064:C:OP1	17:I:80:LYS:HE2	1.64	0.98
34:Z:3:LYS:HB2	34:Z:51:VAL:HG21	1.45	0.98
10:B:1519:G:H2'	10:B:1520:U:H5'	1.46	0.98
10:B:1048:A:N7	10:B:1111:A:C2	2.30	0.98
10:B:2575:C:H5''	12:D:149:ASN:CB	1.94	0.98
10:B:310:A:N3	10:B:312:G:C8	2.32	0.98
10:B:2575:C:H5''	12:D:149:ASN:HB2	1.46	0.98
32:X:28:LEU:HB3	32:X:34:SER:HA	1.46	0.98
10:B:290:U:O2	10:B:350:G:N1	1.96	0.98
10:B:352:A:C6	10:B:353:C:C4	2.52	0.98
10:B:1076:C:HO2'	17:I:92:PRO:HB2	1.20	0.98
29:U:41:VAL:HG22	29:U:42:LYS:H	1.25	0.98
21:M:28:PHE:HB3	21:M:102:LEU:HD21	1.44	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:U:42:LYS:HE3	29:U:43:LYS:H	1.27	0.98
10:B:356:G:H2'	10:B:357:C:H5'	1.43	0.97
10:B:1070:A:H1'	17:I:9:LYS:NZ	1.78	0.97
10:B:270:A:N1	10:B:370:G:C5	2.32	0.97
10:B:275:C:H2'	10:B:276:U:H6	1.28	0.97
10:B:310:A:C4	10:B:312:G:N7	2.32	0.97
10:B:358:U:H2'	10:B:359:G:C8	1.98	0.97
20:L:77:ILE:HB	20:L:110:VAL:HG22	1.46	0.97
26:R:78:ARG:HB3	26:R:87:GLN:HA	1.42	0.97
10:B:285:G:O6	10:B:355:U:N3	1.96	0.97
10:B:298:G:N3	10:B:340:A:N6	2.11	0.97
24:P:25:VAL:HG13	24:P:88:ARG:H	1.25	0.97
10:B:282:A:H2'	10:B:283:G:H5'	1.46	0.97
10:B:1079:C:H2'	10:B:1080:A:H8	1.26	0.97
15:G:15:ASP:HB3	15:G:26:LYS:HB2	1.47	0.97
10:B:1531:C:H2'	10:B:1532:A:C8	1.99	0.97
10:B:271:G:H21	10:B:272:A:H1'	1.28	0.97
10:B:291:G:C6	10:B:350:G:C6	2.53	0.97
10:B:547:A:H3'	10:B:548:G:H8	1.28	0.97
19:K:64:ARG:H	19:K:83:ALA:HB3	1.27	0.97
10:B:83:A:OP2	29:U:90:LYS:O	1.83	0.96
10:B:1541:C:H2'	10:B:1542:U:C6	2.00	0.96
10:B:1102:C:H2'	10:B:1103:A:C8	2.01	0.96
11:C:42:ARG:HG2	11:C:43:ASN:H	1.29	0.96
10:B:1477:A:C4	10:B:1515:A:N3	2.33	0.96
10:B:1474:U:C2	10:B:1517:G:O6	2.18	0.96
10:B:1542:U:H2'	10:B:1543:G:C8	2.01	0.96
10:B:299:A:H1'	10:B:322:A:N6	1.80	0.96
10:B:1097:U:C2'	10:B:1098:A:H5'	1.95	0.96
10:B:1516:G:C4	10:B:1517:G:C8	2.54	0.96
10:B:1050:A:C2	10:B:2751:G:N7	2.32	0.96
10:B:38:A:O4'	13:E:46:GLN:HG3	1.65	0.96
10:B:352:A:H3'	10:B:353:C:H6	1.28	0.96
10:B:338:G:O5'	36:B:3141:HOH:O	1.77	0.95
24:P:28:LYS:HD3	24:P:44:GLY:H	1.29	0.95
10:B:2333:A:H4'	10:B:2334:U:H5''	1.48	0.95
10:B:324:A:C5	10:B:325:G:N7	2.33	0.95
1:O:6:LYS:HE3	10:B:2615:U:H1'	1.47	0.95
10:B:354:A:H2'	10:B:355:U:H5''	1.47	0.95
10:B:356:G:C5	10:B:357:C:C4	2.54	0.95
32:X:36:GLN:HE22	32:X:38:GLN:HE22	1.13	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:276:U:C2'	10:B:277:G:H5''	1.94	0.95
4:3:34:LYS:HB3	4:3:35:LYS:HE2	1.47	0.95
16:H:3:VAL:HB	16:H:37:VAL:HB	1.45	0.95
11:C:124:LYS:HB2	11:C:125:PRO:CD	1.96	0.95
10:B:316:C:H2'	10:B:317:G:H5''	1.49	0.95
10:B:1477:A:C5	10:B:1515:A:C4	2.54	0.95
12:D:170:VAL:HG13	12:D:171:THR:H	1.26	0.95
13:E:60:TRP:HE1	13:E:73:ILE:HD11	1.31	0.95
29:U:84:PHE:HB3	29:U:92:VAL:HG22	1.49	0.94
12:D:149:ASN:HB3	12:D:150:GLN:HG2	1.49	0.94
10:B:284:U:H3	10:B:356:G:H1	1.01	0.94
10:B:313:G:C5	10:B:314:C:C4	2.54	0.94
10:B:1060:U:O4	10:B:1088:A:N6	2.00	0.94
10:B:1513:U:H3'	10:B:1514:G:H5''	1.49	0.94
10:B:1520:U:C2'	10:B:1521:G:H5'	1.97	0.94
10:B:1473:G:C2	10:B:1518:C:N3	2.35	0.94
10:B:287:G:C6	10:B:354:A:C6	2.56	0.94
16:H:83:LYS:HB3	16:H:91:PHE:HB2	1.50	0.94
21:M:3:GLN:C	21:M:5:LYS:N	2.15	0.94
1:0:52:LYS:CD	22:N:118:ARG:CD	2.46	0.94
10:B:96:C:OP2	32:X:38:GLN:C	2.06	0.94
10:B:1076:C:H2'	10:B:1077:A:C8	2.02	0.94
10:B:1076:C:C4'	17:I:92:PRO:HD2	1.97	0.94
10:B:1477:A:C1'	10:B:1515:A:H2	1.68	0.94
10:B:1526:C:C2	10:B:1527:G:C8	2.56	0.94
10:B:2575:C:H4'	12:D:148:GLN:C	1.88	0.94
13:E:48:THR:HG22	13:E:49:ARG:N	1.80	0.94
6:5:425:ARG:NE	10:B:490:C:C5	2.35	0.94
10:B:1444:G:N2	10:B:1548:A:C6	2.36	0.94
10:B:1473:G:H1	10:B:1518:C:H42	1.00	0.94
10:B:1534:U:O2'	10:B:1537:G:O6	1.86	0.94
9:A:75:G:H1'	30:V:29:ILE:HD13	1.50	0.94
18:J:25:LEU:HG	18:J:64:VAL:H	1.32	0.94
10:B:305:C:H2'	10:B:306:U:C5	2.03	0.93
10:B:320:A:O2'	10:B:322:A:OP2	1.85	0.93
10:B:356:G:C6	10:B:357:C:N3	2.37	0.93
10:B:301:G:C2	10:B:317:G:C8	2.57	0.93
1:0:52:LYS:HD2	22:N:118:ARG:NH1	1.84	0.93
32:X:30:MET:HG3	32:X:31:GLN:H	1.33	0.93
10:B:301:G:C6	10:B:317:G:C5	2.56	0.93
25:Q:73:ILE:HG23	25:Q:77:LYS:HB2	1.47	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:269:C:H2'	10:B:270:A:C8	2.04	0.93
10:B:317:G:H2'	10:B:318:C:C6	2.02	0.93
10:B:1110:G:O2'	10:B:1111:A:OP2	1.86	0.93
10:B:271:G:O2'	10:B:272:A:O5'	1.86	0.93
10:B:332:A:C2	10:B:335:C:C4	2.57	0.93
10:B:2204:G:H5'	11:C:149:LYS:HE3	1.50	0.93
27:S:50:VAL:HG11	27:S:103:ILE:HG21	1.51	0.93
10:B:328:U:O2'	29:U:65:GLN:CB	2.17	0.93
10:B:1021:A:H62	10:B:1141:U:H3	1.01	0.93
10:B:1063:G:C3'	17:I:76:ALA:HB2	1.92	0.93
10:B:1040:A:C2	10:B:1115:G:N1	2.37	0.93
20:L:78:ARG:HG2	20:L:99:ASN:HB3	1.48	0.93
21:M:3:GLN:N	21:M:4:PRO:CD	2.28	0.93
6:5:425:ARG:HE	10:B:490:C:H5	1.08	0.92
10:B:1061:U:C4	17:I:9:LYS:HD2	2.04	0.92
13:E:48:THR:CG2	13:E:49:ARG:H	1.79	0.92
1:0:51:ARG:HH21	22:N:125:ALA:HB1	1.27	0.92
10:B:298:G:OP1	29:U:82:VAL:HA	1.68	0.92
10:B:1450:G:H21	10:B:1452:G:H1	1.14	0.92
18:J:16:TYR:HB2	18:J:54:ILE:HG22	1.48	0.92
22:N:10:LEU:H	22:N:17:ARG:HH12	1.12	0.92
10:B:1076:C:C1'	17:I:92:PRO:HD2	1.97	0.92
10:B:1528:A:C6	10:B:1544:A:C8	2.57	0.92
10:B:342:A:C6	10:B:343:C:C5	2.58	0.92
10:B:663:G:H5''	20:L:25:SER:HB2	1.51	0.92
10:B:1519:G:N3	10:B:1520:U:H6	1.68	0.92
10:B:316:C:C2'	10:B:317:G:H5''	2.00	0.92
29:U:23:LYS:HG3	29:U:24:VAL:HG23	1.50	0.92
10:B:301:G:N1	10:B:317:G:C8	2.37	0.92
10:B:361:G:O2'	10:B:362:A:OP2	1.85	0.92
31:W:35:ILE:HG23	31:W:36:ILE:H	1.34	0.92
12:D:2:ILE:HG21	12:D:204:LYS:HA	1.50	0.92
12:D:138:LEU:HD23	12:D:138:LEU:H	1.34	0.92
20:L:85:VAL:HG21	20:L:98:ALA:H	1.34	0.92
10:B:271:G:N2	10:B:272:A:H1'	1.84	0.91
10:B:280:U:C5	10:B:281:C:H5	1.76	0.91
10:B:313:G:C6	10:B:314:C:C4	2.58	0.91
10:B:1076:C:O2'	17:I:92:PRO:CB	2.13	0.91
24:P:47:ILE:HG22	24:P:48:ALA:H	1.33	0.91
29:U:46:LYS:HB3	29:U:53:GLN:HE22	1.33	0.91
10:B:80:G:H5'	10:B:346:A:N9	1.84	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:C:19:VAL:HG12	11:C:20:ASN:H	1.35	0.91
10:B:1038:G:H2'	10:B:1039:A:C8	2.04	0.91
10:B:1524:G:H2'	10:B:1525:A:C8	2.04	0.91
20:L:79:LEU:HA	20:L:113:ALA:HB3	1.50	0.91
10:B:354:A:C2'	10:B:355:U:H5''	2.00	0.91
2:1:12:SER:HA	2:1:50:GLU:HB3	1.52	0.91
10:B:96:C:OP1	32:X:39:GLN:CA	2.18	0.91
10:B:291:G:C2	10:B:350:G:C4	2.58	0.91
10:B:312:G:C2	10:B:313:G:C8	2.59	0.91
10:B:295:G:C2	10:B:296:U:C5	2.58	0.91
10:B:1064:C:OP1	17:I:80:LYS:CE	2.19	0.91
19:K:103:VAL:HB	19:K:107:LEU:HD23	1.52	0.91
10:B:1039:A:C2	10:B:1040:A:C6	2.59	0.91
10:B:1115:G:C5	10:B:1116:G:N7	2.39	0.91
1:0:50:GLY:C	22:N:118:ARG:HH21	1.68	0.91
10:B:1535:A:H5''	10:B:1536:C:C5	2.05	0.91
11:C:20:ASN:HB2	11:C:203:VAL:HG13	1.51	0.91
10:B:923:G:H1'	31:W:23:LYS:HD3	1.50	0.90
18:J:100:VAL:HG13	18:J:101:ILE:HG22	1.49	0.90
21:M:3:GLN:O	21:M:6:ARG:N	2.04	0.90
3:2:42:LEU:HD11	3:2:44:VAL:HG13	1.53	0.90
10:B:283:G:C5	10:B:284:U:C5	2.59	0.90
10:B:1050:A:C2	10:B:2751:G:C8	2.59	0.90
10:B:1519:G:C4	10:B:1520:U:C5	2.60	0.90
10:B:362:A:C2	10:B:363:G:C8	2.60	0.90
10:B:354:A:C3'	10:B:355:U:H5''	2.02	0.90
11:C:124:LYS:CB	11:C:125:PRO:HD3	2.00	0.90
12:D:8:LYS:HB3	24:P:5:LYS:NZ	1.85	0.90
18:J:73:VAL:HB	18:J:75:TYR:CE2	2.06	0.90
20:L:61:LEU:CB	20:L:62:PRO:HD2	1.94	0.90
29:U:78:LYS:HE3	29:U:96:LYS:HB2	1.51	0.90
10:B:347:A:C6	10:B:348:A:C5	2.60	0.90
15:G:26:LYS:HA	15:G:31:GLU:HG2	1.54	0.90
10:B:1076:C:H2'	10:B:1077:A:H8	1.35	0.90
25:Q:48:ASP:HA	25:Q:51:GLN:HG2	1.50	0.90
26:R:47:VAL:HG22	26:R:48:LYS:H	1.34	0.90
33:Y:6:ILE:HG22	33:Y:56:VAL:HG23	1.54	0.90
6:5:421:ASP:OD2	10:B:490:C:C4	2.24	0.89
10:B:346:A:N3	10:B:347:A:C8	2.39	0.89
10:B:1477:A:N7	10:B:1515:A:C5	2.19	0.89
18:J:7:LYS:HD2	18:J:49:ASP:HB2	1.54	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:52:LYS:CE	22:N:118:ARG:HD2	2.03	0.89
10:B:335:C:H2'	10:B:336:C:H6	1.30	0.89
10:B:1036:G:C6	10:B:1120:G:C6	2.60	0.89
10:B:1117:C:H2'	10:B:1118:C:C5	2.06	0.89
10:B:1518:C:H2'	10:B:1519:G:H8	1.37	0.89
25:Q:30:VAL:HG12	25:Q:32:ARG:H	1.37	0.89
10:B:273:G:C6	10:B:274:C:C4	2.61	0.89
10:B:283:G:C6	10:B:284:U:C4	2.60	0.89
10:B:310:A:N9	10:B:312:G:N7	2.20	0.89
10:B:1658:C:OP1	12:D:136:ASN:HA	1.71	0.89
12:D:16:THR:HA	24:P:79:VAL:HB	1.55	0.89
16:H:132:PHE:HB3	16:H:140:ALA:HB3	1.54	0.89
19:K:71:ARG:HB3	19:K:72:PRO:CD	2.02	0.89
10:B:337:C:P	29:U:81:ARG:HH22	1.94	0.89
20:L:111:ILE:HD13	20:L:111:ILE:H	1.38	0.89
10:B:82:U:C5'	10:B:295:G:H4'	2.01	0.89
10:B:283:G:H2'	10:B:284:U:H6	1.36	0.89
11:C:53:ILE:HG12	11:C:218:THR:HA	1.55	0.89
34:Z:36:VAL:HA	34:Z:42:PRO:HD3	1.55	0.89
10:B:1471:G:O6	10:B:1521:G:N2	2.05	0.89
19:K:26:GLY:HA3	19:K:30:ARG:HE	1.35	0.89
10:B:347:A:N3	10:B:348:A:C8	2.41	0.89
10:B:654:A:H2'	10:B:655:A:H5''	1.55	0.89
10:B:1515:A:H2'	10:B:1516:G:H8	1.38	0.89
10:B:1525:A:C2'	10:B:1526:C:H5'	2.03	0.89
10:B:271:G:N7	10:B:367:G:N3	2.20	0.89
10:B:1048:A:N7	10:B:1111:A:N1	2.21	0.89
10:B:1059:G:C5'	17:I:117:THR:CG2	2.16	0.89
15:G:29:ASN:HB2	15:G:78:VAL:HA	1.54	0.89
24:P:108:ARG:H	24:P:108:ARG:HD2	1.38	0.89
10:B:283:G:N1	10:B:357:C:O2	2.06	0.88
10:B:364:C:H2'	10:B:365:U:H6	1.32	0.88
10:B:1112:G:C2	10:B:1113:U:C5	2.61	0.88
10:B:1048:A:C5	10:B:1111:A:H2	1.89	0.88
10:B:347:A:C4	10:B:348:A:C8	2.62	0.88
10:B:350:G:O2'	10:B:351:C:H5'	1.73	0.88
10:B:1063:G:O2'	17:I:135:MET:CB	2.21	0.88
27:S:18:ARG:HH12	27:S:25:ARG:HH22	1.20	0.88
10:B:84:A:P	29:U:91:LYS:HD3	2.13	0.88
10:B:1532:A:C2	10:B:1539:U:N3	2.40	0.88
12:D:118:PHE:HA	12:D:164:GLN:HA	1.53	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:O:26:LEU:HB2	23:O:93:ASP:HA	1.54	0.88
6:5:431:LYS:NZ	10:B:1536:C:OP1	2.07	0.88
10:B:301:G:O2'	10:B:302:C:H5''	1.74	0.88
10:B:352:A:C2	10:B:353:C:C2	2.62	0.88
33:Y:9:THR:HA	33:Y:55:LYS:HG3	1.55	0.88
10:B:357:C:H2'	10:B:358:U:C5	2.08	0.88
10:B:313:G:C6	10:B:314:C:N3	2.42	0.88
10:B:630:G:H1	20:L:69:ARG:HH22	1.22	0.88
10:B:1077:A:H4'	17:I:93:ASN:OD1	1.72	0.88
12:D:165:MET:HE3	12:D:166:GLY:H	1.37	0.88
17:I:27:LEU:HD23	17:I:27:LEU:H	1.37	0.88
24:P:26:GLU:HB3	24:P:46:VAL:HG22	1.55	0.88
19:K:8:LEU:HD23	19:K:82:ASN:HB3	1.53	0.88
10:B:326:G:N1	10:B:327:G:N7	2.22	0.88
10:B:1534:U:H2'	10:B:1536:C:N3	1.89	0.88
10:B:275:C:C6	10:B:276:U:C5	2.63	0.87
10:B:289:G:O2'	10:B:290:U:H5'	1.74	0.87
10:B:1283:G:H22	10:B:1286:A:H5'	1.37	0.87
10:B:1533:C:O2'	10:B:1534:U:H5'	1.74	0.87
11:C:30:ALA:N	11:C:31:PRO:HD3	1.89	0.87
10:B:278:A:N1	10:B:362:A:C8	2.42	0.87
10:B:333:G:C5	10:B:334:C:H5	1.76	0.87
30:V:4:ILE:HB	30:V:63:ILE:HA	1.55	0.87
10:B:1444:G:C2	10:B:1548:A:N1	2.42	0.87
10:B:355:U:H2'	10:B:356:G:H8	1.39	0.87
10:B:997:G:H5'	25:Q:91:ARG:HG3	1.56	0.87
10:B:1519:G:N3	10:B:1520:U:C6	2.41	0.87
17:I:105:LEU:HD11	17:I:139:VAL:HG11	1.54	0.87
19:K:70:ARG:HB3	19:K:76:VAL:HG22	1.55	0.87
23:O:68:LYS:HD3	23:O:68:LYS:H	1.40	0.87
10:B:1540:G:C6	10:B:1541:C:C4	2.62	0.87
29:U:42:LYS:NZ	29:U:42:LYS:HA	1.88	0.87
10:B:1141:U:H4'	10:B:1142:A:O4'	1.74	0.87
10:B:1516:G:O2'	10:B:1517:G:H5'	1.74	0.87
11:C:143:VAL:HG12	11:C:144:GLU:H	1.40	0.87
31:W:42:THR:HB	31:W:65:LYS:HA	1.56	0.87
10:B:301:G:C5	10:B:317:G:C6	2.62	0.87
10:B:332:A:C2	10:B:335:C:C5	2.62	0.87
10:B:1553:A:N7	10:B:1555:G:C6	2.42	0.87
13:E:128:ALA:CB	13:E:129:PRO:HD3	2.03	0.87
25:Q:92:LYS:HA	25:Q:95:ALA:HB2	1.54	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:359:G:C5	10:B:360:U:C4	2.63	0.87
10:B:342:A:N1	10:B:343:C:C4	2.42	0.87
18:J:73:VAL:HB	18:J:75:TYR:HE2	1.34	0.87
25:Q:33:VAL:HG13	25:Q:34:ALA:H	1.39	0.87
4:3:12:ARG:HB3	4:3:23:HIS:HA	1.55	0.86
10:B:271:G:H1	10:B:366:C:HO2'	0.90	0.86
10:B:278:A:C6	10:B:362:A:N7	2.44	0.86
10:B:296:U:H2'	10:B:297:G:C8	2.09	0.86
10:B:325:G:N2	10:B:337:C:O2	2.07	0.86
10:B:348:A:C2	10:B:349:U:N3	2.43	0.86
10:B:350:G:H2'	10:B:351:C:C6	2.10	0.86
10:B:143:C:O2'	28:T:5:GLU:HA	1.75	0.86
10:B:299:A:N3	10:B:322:A:C5	2.43	0.86
10:B:301:G:N3	10:B:302:C:C2	2.42	0.86
10:B:352:A:H3'	10:B:353:C:C6	2.09	0.86
10:B:1544:A:O2'	10:B:1545:A:H5'	1.74	0.86
11:C:181:ARG:HH22	11:C:260:LYS:HD2	1.38	0.86
10:B:285:G:C2	10:B:286:U:C2	2.62	0.86
10:B:277:G:H1'	10:B:361:G:O6	1.75	0.86
10:B:1039:A:O2'	10:B:1040:A:H5'	1.74	0.86
10:B:1061:U:C5	17:I:9:LYS:HD2	2.10	0.86
10:B:2502:G:H5'	10:B:2503:A:H5''	1.57	0.86
21:M:3:GLN:H	21:M:4:PRO:HD2	1.01	0.86
10:B:302:C:O2'	10:B:303:G:H5'	1.76	0.86
10:B:1050:A:C1'	10:B:2751:G:C5	2.59	0.86
10:B:1540:G:C2	10:B:1541:C:C6	2.64	0.86
23:O:8:ILE:HG22	23:O:10:ARG:HG2	1.56	0.86
22:N:96:ARG:HH22	22:N:118:ARG:H	0.87	0.86
10:B:80:G:O2'	10:B:294:A:C2	2.01	0.86
10:B:704:G:H2'	10:B:726:G:H22	1.41	0.86
10:B:997:G:OP1	25:Q:92:LYS:HD2	1.74	0.86
10:B:1445:G:C2	10:B:1547:C:C4	2.61	0.86
10:B:1084:A:O2'	10:B:1085:A:H5'	1.75	0.86
12:D:115:GLY:HA2	12:D:165:MET:HG3	1.58	0.86
16:H:44:ILE:C	16:H:47:PHE:HD1	1.78	0.86
10:B:161:A:H3'	10:B:162:U:H5''	1.56	0.86
10:B:338:G:C5'	36:B:3141:HOH:O	2.22	0.86
10:B:1079:C:O2'	10:B:1080:A:H5'	1.75	0.86
12:D:34:VAL:HG22	12:D:89:GLU:HG2	1.58	0.86
20:L:82:LEU:HD13	20:L:83:ALA:H	1.39	0.86
10:B:269:C:O2'	10:B:270:A:H5'	1.76	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:C:229:HIS:NE2	11:C:244:VAL:HG22	1.91	0.86
10:B:308:G:C6	10:B:309:A:C2	2.64	0.85
10:B:324:A:C2'	10:B:325:G:H5'	2.05	0.85
10:B:1534:U:H2'	10:B:1536:C:C2	2.11	0.85
4:3:11:LYS:HA	20:L:63:LYS:HG3	1.59	0.85
10:B:337:C:H5''	29:U:1:ALA:HA	1.56	0.85
10:B:1036:G:H2'	10:B:1037:G:H8	1.40	0.85
15:G:32:LEU:HD21	15:G:74:MET:HB3	1.57	0.85
10:B:278:A:C2	10:B:362:A:C8	2.63	0.85
10:B:301:G:N2	10:B:316:C:O2	2.08	0.85
10:B:1517:G:H2'	10:B:1518:C:H5'	1.57	0.85
10:B:1524:G:O2'	10:B:1525:A:H5'	1.75	0.85
29:U:46:LYS:CB	29:U:53:GLN:HE22	1.88	0.85
10:B:291:G:C6	10:B:292:U:C4	2.65	0.85
14:F:33:ILE:HG22	14:F:155:ILE:HG12	1.56	0.85
16:H:50:ARG:HB3	16:H:51:ARG:HB3	1.59	0.85
20:L:118:THR:HG23	20:L:119:PRO:HD3	1.59	0.85
4:3:7:ARG:HH21	4:3:11:LYS:HZ1	1.21	0.85
10:B:348:A:C6	10:B:349:U:C4	2.63	0.85
12:D:14:ILE:HA	12:D:19:GLY:HA2	1.58	0.85
13:E:18:THR:HG23	13:E:20:GLY:H	1.41	0.85
16:H:50:ARG:HE	16:H:54:LEU:HG	1.41	0.85
29:U:48:VAL:HB	29:U:54:PRO:CD	2.06	0.85
10:B:319:G:C2	10:B:320:A:C4	2.63	0.85
10:B:1477:A:H1'	10:B:1515:A:H2	1.39	0.85
16:H:84:ALA:HA	16:H:90:LEU:HG	1.59	0.85
24:P:24:THR:HG21	24:P:111:GLU:HG2	1.55	0.85
10:B:293:U:H3	10:B:347:A:H61	1.20	0.85
26:R:1:MET:HA	26:R:46:GLU:HB2	1.58	0.85
10:B:350:G:C5	10:B:351:C:C4	2.64	0.85
10:B:1516:G:H2'	10:B:1517:G:C8	2.09	0.85
10:B:285:G:H2'	10:B:286:U:H5'	1.58	0.85
10:B:528:A:N1	10:B:2042:A:H2'	1.91	0.85
10:B:1525:A:O2'	10:B:1526:C:H5'	1.76	0.85
14:F:115:GLY:HA3	14:F:177:ARG:HB2	1.58	0.85
21:M:69:PRO:HB3	21:M:93:VAL:HG12	1.58	0.85
34:Z:63:ARG:CZ	34:Z:63:ARG:HA	2.06	0.85
10:B:1063:G:O2'	10:B:1064:C:H5'	1.75	0.85
17:I:25:PRO:O	17:I:29:GLN:HG2	1.75	0.85
10:B:291:G:C5	10:B:292:U:C5	2.65	0.84
10:B:359:G:O2'	10:B:360:U:H5'	1.75	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1476:U:N3	10:B:1516:G:N7	2.24	0.84
12:D:38:LYS:HG2	12:D:39:ASP:H	1.42	0.84
13:E:141:MET:SD	13:E:143:LEU:HB2	2.17	0.84
22:N:117:ASP:O	22:N:123:GLU:HB3	1.76	0.84
10:B:95:A:H4'	32:X:40:SER:HB2	1.57	0.84
10:B:297:G:H3'	10:B:298:G:C8	2.11	0.84
10:B:323:C:C5	10:B:333:G:C8	2.65	0.84
28:T:64:LYS:HB3	28:T:77:ARG:HD3	1.59	0.84
10:B:2578:G:C1'	12:D:145:SER:HB3	2.06	0.84
12:D:154:LYS:HZ3	12:D:157:LYS:H	1.24	0.84
15:G:19:ASN:HB3	15:G:22:VAL:HG13	1.59	0.84
18:J:71:ASP:CG	18:J:72:LYS:H	1.80	0.84
25:Q:16:ILE:HD13	25:Q:34:ALA:HB2	1.57	0.84
10:B:27:G:H22	10:B:512:G:H2'	1.42	0.84
10:B:324:A:C6	10:B:325:G:C5	2.65	0.84
10:B:1064:C:O2'	10:B:1065:U:H5'	1.77	0.84
10:B:1075:C:O2'	10:B:1076:C:H5'	1.77	0.84
10:B:1526:C:N1	10:B:1527:G:C8	2.45	0.84
11:C:196:ASN:HB2	11:C:199:HIS:HD2	1.42	0.84
21:M:42:THR:HA	21:M:92:TRP:CD1	2.12	0.84
23:O:19:GLN:HA	31:W:76:ARG:HH22	1.42	0.84
10:B:342:A:N3	10:B:343:C:C6	2.45	0.84
10:B:855:G:N2	31:W:23:LYS:HD2	1.91	0.84
10:B:1092:C:O2'	10:B:1093:G:H5'	1.78	0.84
34:Z:32:LEU:HD11	34:Z:47:LYS:HG3	1.58	0.84
10:B:286:U:O2'	10:B:287:G:H5'	1.78	0.84
10:B:1063:G:H5''	17:I:76:ALA:CB	2.05	0.84
10:B:1113:U:OP1	15:G:2:ARG:HB2	1.76	0.84
12:D:16:THR:HG23	12:D:17:GLU:H	1.43	0.84
10:B:1530:G:N1	10:B:1541:C:N3	2.25	0.84
17:I:55:PRO:HD3	17:I:74:PRO:HD3	1.60	0.84
34:Z:41:HIS:HB2	34:Z:42:PRO:HD2	1.58	0.84
10:B:1059:G:H5'	17:I:117:THR:HG21	1.59	0.84
10:B:1639:C:H2'	10:B:1640:A:H5''	1.58	0.84
3:2:25:LYS:HD3	10:B:1368:G:H5'	1.59	0.84
12:D:62:LYS:HG2	12:D:63:PRO:HD3	1.60	0.84
10:B:278:A:C5	10:B:362:A:N7	2.46	0.84
10:B:352:A:C5	10:B:353:C:C4	2.66	0.84
10:B:1525:A:N1	10:B:1526:C:C2	2.45	0.84
12:D:8:LYS:HB3	24:P:5:LYS:HZ1	1.38	0.84
24:P:47:ILE:HG23	24:P:63:ILE:HG23	1.59	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:R:8:GLY:HA3	26:R:22:LEU:HD11	1.60	0.84
28:T:64:LYS:HE2	28:T:79:ASP:HB2	1.59	0.84
10:B:319:G:C2	10:B:320:A:N3	2.45	0.83
10:B:1062:G:H2'	10:B:1063:G:H8	1.43	0.83
12:D:119:ALA:HA	12:D:123:LYS:HE2	1.60	0.83
10:B:84:A:OP2	29:U:91:LYS:CD	2.24	0.83
11:C:229:HIS:HE2	11:C:244:VAL:HG22	1.43	0.83
26:R:5:PHE:HA	26:R:40:MET:HG2	1.60	0.83
10:B:295:G:C6	10:B:344:A:C6	2.66	0.83
10:B:313:G:O2'	10:B:314:C:H5'	1.78	0.83
11:C:23:LEU:HD12	11:C:202:ARG:HH22	1.43	0.83
10:B:362:A:C4	10:B:363:G:C8	2.67	0.83
34:Z:33:ASN:HB2	34:Z:44:PHE:HB2	1.60	0.83
4:3:7:ARG:NH2	4:3:11:LYS:HZ1	1.76	0.83
10:B:2304:G:H22	10:B:2312:U:H3	1.25	0.83
31:W:28:GLU:H	31:W:61:LYS:HB2	1.44	0.83
5:4:32:LYS:HD2	10:B:2478:A:H5'	1.60	0.83
10:B:1476:U:C4	10:B:1516:G:N7	2.47	0.83
10:B:1520:U:O2'	10:B:1521:G:H5'	1.78	0.83
13:E:89:PRO:O	13:E:90:GLN:HG2	1.78	0.83
14:F:151:LEU:HD23	14:F:153:ILE:HD11	1.60	0.83
10:B:80:G:C2'	10:B:294:A:N3	2.35	0.83
10:B:80:G:H2'	10:B:294:A:N3	1.92	0.83
10:B:282:A:C2'	10:B:283:G:H5'	2.08	0.83
10:B:339:U:O2'	10:B:340:A:H5'	1.78	0.83
10:B:858:G:N3	10:B:2268:A:H2'	1.93	0.83
3:2:13:ASN:HA	3:2:18:PHE:HB2	1.60	0.83
10:B:295:G:C2	10:B:344:A:C2	2.67	0.83
10:B:299:A:C2	10:B:322:A:C8	2.67	0.83
32:X:22:LEU:HB3	32:X:26:PHE:HB2	1.61	0.83
6:5:331:LEU:HD12	6:5:388:ARG:HA	1.59	0.83
10:B:285:G:C2'	10:B:286:U:H5'	2.09	0.83
10:B:340:A:O2'	10:B:341:C:H5'	1.77	0.83
10:B:341:C:O2'	10:B:342:A:H5'	1.77	0.83
10:B:1117:C:N3	10:B:1118:C:N4	2.27	0.83
21:M:69:PRO:HB2	21:M:71:LYS:HZ1	1.44	0.83
2:1:14:ALA:HA	2:1:48:TYR:HA	1.61	0.82
10:B:1036:G:O6	10:B:1120:G:O6	1.98	0.82
10:B:1104:C:O2'	10:B:1105:U:H5'	1.79	0.82
29:U:40:LEU:CD1	29:U:41:VAL:HG12	2.08	0.82
10:B:279:A:C2'	10:B:280:U:H5'	2.08	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:333:G:C4	10:B:334:C:C6	2.67	0.82
10:B:1063:G:H4'	17:I:76:ALA:CB	2.07	0.82
10:B:1064:C:H4'	17:I:88:GLY:H	1.44	0.82
13:E:153:LEU:H	13:E:171:ASP:HB3	1.42	0.82
20:L:29:LYS:HD2	20:L:31:GLY:H	1.42	0.82
10:B:299:A:C2	10:B:322:A:N7	2.47	0.82
10:B:320:A:H3'	13:E:132:LYS:HG2	1.61	0.82
10:B:323:C:C4	10:B:333:G:N7	2.46	0.82
10:B:2053:G:OP1	12:D:150:GLN:HA	1.77	0.82
28:T:58:VAL:HG13	28:T:85:VAL:HG12	1.61	0.82
30:V:77:VAL:HA	30:V:89:ILE:HG22	1.58	0.82
10:B:1038:G:C2	10:B:1039:A:C5	2.67	0.82
10:B:1099:G:O2'	10:B:1100:C:H5'	1.78	0.82
10:B:1444:G:C2	10:B:1548:A:C6	2.67	0.82
10:B:1454:C:H5'	22:N:63:ARG:HH21	1.41	0.82
10:B:1528:A:H2'	10:B:1529:G:H5'	1.60	0.82
28:T:96:VAL:HG22	28:T:97:GLY:H	1.41	0.82
1:O:52:LYS:CD	22:N:118:ARG:HD2	2.09	0.82
10:B:1519:G:C2'	10:B:1520:U:H5'	2.09	0.82
12:D:91:THR:HG23	12:D:92:VAL:HG12	1.61	0.82
10:B:289:G:C5	10:B:290:U:C4	2.68	0.82
10:B:297:G:N2	10:B:341:C:O2	2.12	0.82
10:B:2393:U:H5''	20:L:62:PRO:HA	1.62	0.82
31:W:31:LEU:HD11	31:W:34:SER:HB2	1.62	0.82
10:B:276:U:O2'	10:B:277:G:H5''	1.80	0.82
10:B:340:A:H2'	10:B:341:C:O4'	1.80	0.82
10:B:1439:A:C6	10:B:1552:A:C8	2.62	0.82
26:R:37:GLU:HG2	26:R:62:GLU:H	1.44	0.82
1:O:52:LYS:HD2	22:N:118:ARG:HD2	1.57	0.82
10:B:1524:G:C2'	10:B:1525:A:H8	1.93	0.82
31:W:40:ARG:NH1	31:W:68:PHE:HA	1.95	0.82
6:5:360:ILE:HG13	6:5:363:ASN:HD21	1.45	0.82
10:B:299:A:C4	10:B:322:A:C6	2.67	0.82
10:B:1115:G:C4	10:B:1116:G:N7	2.47	0.82
10:B:1516:G:C2	10:B:1517:G:C8	2.67	0.82
4:3:12:ARG:NH1	4:3:12:ARG:HB2	1.95	0.82
10:B:319:G:C6	10:B:320:A:C6	2.66	0.82
10:B:662:G:H4'	20:L:24:GLY:H	1.43	0.82
10:B:2867:G:H2'	10:B:2867:G:N3	1.93	0.82
31:W:27:GLY:HA2	31:W:60:ALA:HA	1.61	0.82
16:H:5:LEU:HD22	16:H:5:LEU:H	1.44	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:O:19:GLN:H	31:W:76:ARG:HH12	1.28	0.81
26:R:65:ALA:HB3	26:R:99:THR:H	1.45	0.81
32:X:24:GLU:HA	32:X:28:LEU:HB2	1.60	0.81
10:B:1474:U:O2	10:B:1517:G:N1	2.13	0.81
15:G:20:GLY:HA2	15:G:41:GLU:HG2	1.62	0.81
1:O:52:LYS:CD	22:N:118:ARG:HD3	2.10	0.81
10:B:80:G:O2'	10:B:294:A:N3	2.06	0.81
10:B:423:A:H5'	10:B:424:G:H5''	1.62	0.81
10:B:1077:A:O2'	10:B:1078:U:H5'	1.78	0.81
10:B:1115:G:N1	10:B:1116:G:C5	2.49	0.81
10:B:1530:G:N2	10:B:1541:C:O2	2.12	0.81
10:B:2575:C:H4'	12:D:149:ASN:N	1.95	0.81
11:C:23:LEU:H	11:C:202:ARG:NH2	1.77	0.81
14:F:7:TYR:HA	14:F:11:VAL:HB	1.60	0.81
23:O:1:MET:HG2	23:O:3:LYS:H	1.43	0.81
24:P:9:GLN:HB3	24:P:56:SER:HB2	1.62	0.81
10:B:444:C:O2'	13:E:47:LYS:HE2	1.81	0.81
10:B:1178:C:H2'	10:B:1179:G:C8	2.16	0.81
10:B:1533:C:O2	10:B:1538:G:N2	2.13	0.81
17:I:89:SER:HA	17:I:97:VAL:HG21	1.62	0.81
17:I:106:GLN:O	17:I:110:GLN:HG3	1.81	0.81
31:W:40:ARG:HH12	31:W:68:PHE:HA	1.44	0.81
10:B:322:A:C2	10:B:340:A:N1	2.48	0.81
10:B:338:G:C2'	10:B:339:U:H5'	2.09	0.81
10:B:1034:G:C6	10:B:1035:U:N3	2.49	0.81
10:B:1077:A:C2'	10:B:1078:U:H5'	2.09	0.81
16:H:3:VAL:HB	16:H:37:VAL:CB	2.10	0.81
26:R:1:MET:HA	26:R:46:GLU:CB	2.11	0.81
6:5:342:LYS:HE2	6:5:342:LYS:HA	1.62	0.81
10:B:291:G:C4	10:B:350:G:C2	2.69	0.81
10:B:1058:U:O2'	10:B:1059:G:H5'	1.78	0.81
10:B:1553:A:O2'	10:B:1554:U:C6	2.34	0.81
10:B:311:A:C8	10:B:332:A:N7	2.49	0.81
11:C:30:ALA:H	11:C:31:PRO:CD	1.93	0.81
21:M:126:ILE:HG13	21:M:127:LYS:H	1.43	0.81
29:U:44:HIS:HB3	29:U:56:GLY:C	2.01	0.81
10:B:295:G:C4	10:B:344:A:C2	2.68	0.81
10:B:1528:A:H8	10:B:1529:G:C8	1.97	0.81
27:S:27:LYS:H	27:S:27:LYS:HD2	1.46	0.81
10:B:1525:A:C2	10:B:1526:C:N1	2.48	0.81
10:B:2572:A:N7	12:D:150:GLN:HB2	1.96	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:M:108:VAL:HG23	21:M:112:LEU:HD11	1.63	0.81
25:Q:93:ILE:HG23	25:Q:94:LEU:HD13	1.61	0.81
10:B:284:U:O2	10:B:356:G:N2	2.14	0.81
18:J:135:GLN:HG2	18:J:137:PRO:HD2	1.61	0.81
21:M:32:GLY:H	21:M:128:THR:HG22	1.44	0.81
31:W:43:LYS:HG2	31:W:76:ARG:HH21	1.44	0.81
10:B:332:A:C6	10:B:335:C:N3	2.48	0.80
10:B:1064:C:H4'	17:I:88:GLY:N	1.96	0.80
14:F:107:VAL:N	14:F:108:PRO:HD2	1.95	0.80
19:K:71:ARG:CB	19:K:72:PRO:HD2	2.10	0.80
20:L:117:THR:HG21	20:L:120:VAL:HB	1.61	0.80
25:Q:16:ILE:HD12	25:Q:17:LEU:N	1.95	0.80
29:U:45:GLN:O	29:U:47:PRO:HD3	1.81	0.80
29:U:48:VAL:HB	29:U:54:PRO:HD2	1.61	0.80
4:3:24:LYS:HA	4:3:45:PRO:HB3	1.61	0.80
10:B:1048:A:C6	10:B:1049:C:C4	2.68	0.80
12:D:120:GLY:H	12:D:123:LYS:HG3	1.47	0.80
21:M:67:VAL:HB	21:M:100:LYS:HG2	1.62	0.80
10:B:291:G:N1	10:B:350:G:C5	2.49	0.80
12:D:62:LYS:HG2	12:D:63:PRO:CD	2.10	0.80
10:B:275:C:C2'	10:B:276:U:H6	1.94	0.80
10:B:1034:G:C5	10:B:1035:U:C4	2.69	0.80
10:B:1079:C:H2'	10:B:1080:A:C8	2.15	0.80
10:B:2618:G:H21	12:D:155:VAL:HG21	1.45	0.80
11:C:155:ARG:HE	11:C:157:ALA:HB3	1.44	0.80
17:I:122:GLU:O	17:I:126:ARG:HG3	1.82	0.80
10:B:1050:A:H1'	10:B:2751:G:C5	2.17	0.80
10:B:1055:G:O2'	10:B:1056:G:H5'	1.82	0.80
10:B:1542:U:C2'	10:B:1543:G:H8	1.93	0.80
16:H:50:ARG:CB	16:H:51:ARG:HD3	2.12	0.80
23:O:49:VAL:HG22	23:O:50:ALA:H	1.47	0.80
10:B:364:C:H2'	10:B:365:U:C5	2.17	0.80
10:B:1513:U:C3'	10:B:1514:G:H5''	2.10	0.80
10:B:285:G:N1	10:B:286:U:C2	2.50	0.80
10:B:286:U:H2'	10:B:287:G:H8	1.45	0.80
10:B:1526:C:H2'	10:B:1527:G:H8	1.45	0.80
29:U:42:LYS:HE3	29:U:43:LYS:N	1.96	0.80
6:5:412:ASP:HA	6:5:415:ARG:HH12	1.46	0.80
10:B:311:A:N6	10:B:328:U:H2'	1.97	0.80
10:B:332:A:C6	10:B:335:C:C2	2.69	0.80
10:B:1040:A:H2	10:B:1115:G:H1	1.23	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1107:G:O2'	10:B:1108:U:H5'	1.82	0.80
14:F:34:THR:HG23	14:F:89:THR:HG22	1.63	0.80
16:H:73:ASN:N	16:H:73:ASN:HD22	1.80	0.80
16:H:128:HIS:HB3	16:H:144:VAL:HB	1.64	0.80
10:B:280:U:C6	10:B:281:C:C6	2.70	0.80
10:B:287:G:N2	10:B:353:C:O2	2.15	0.80
10:B:294:A:N6	10:B:345:A:O4'	2.15	0.80
10:B:313:G:N1	10:B:314:C:N3	2.29	0.80
11:C:77:VAL:HG21	11:C:109:LEU:HG	1.64	0.80
10:B:38:A:H2'	10:B:39:G:O4'	1.82	0.79
10:B:543:G:H2'	10:B:544:C:H5''	1.64	0.79
10:B:1093:G:O2'	10:B:1094:U:H5'	1.82	0.79
20:L:27:LEU:H	20:L:27:LEU:HD12	1.46	0.79
26:R:47:VAL:HG13	26:R:49:ILE:H	1.46	0.79
10:B:855:G:H21	31:W:23:LYS:HD2	1.45	0.79
10:B:1070:A:H1'	17:I:9:LYS:HZ1	1.46	0.79
10:B:1118:C:O2'	10:B:1119:U:H5'	1.81	0.79
10:B:1531:C:O2	10:B:1540:G:N2	2.13	0.79
23:O:50:ALA:HB2	23:O:83:LEU:HD11	1.64	0.79
27:S:89:ALA:HA	27:S:90:LYS:NZ	1.97	0.79
33:Y:15:ARG:HE	33:Y:15:ARG:N	1.79	0.79
10:B:28:A:H61	10:B:512:G:H1'	1.46	0.79
10:B:285:G:C5	10:B:286:U:C4	2.71	0.79
20:L:67:THR:HG23	20:L:68:SER:H	1.45	0.79
22:N:32:GLU:CA	22:N:115:LEU:HD21	2.11	0.79
4:3:11:LYS:HG2	4:3:12:ARG:HG3	1.61	0.79
5:4:3:VAL:HB	5:4:35:GLN:HA	1.62	0.79
11:C:140:VAL:O	11:C:193:GLU:HB2	1.83	0.79
23:O:64:TYR:HE2	23:O:74:VAL:HG11	1.47	0.79
10:B:304:U:H2'	10:B:305:C:C6	2.18	0.79
10:B:312:G:O2'	10:B:331:C:N4	2.15	0.79
10:B:1102:C:H2'	10:B:1103:A:H8	1.45	0.79
10:B:1131:G:H1'	10:B:1133:A:H62	1.46	0.79
10:B:1526:C:C5	10:B:1527:G:N7	2.50	0.79
26:R:53:PHE:HB3	26:R:55:ASP:H	1.47	0.79
10:B:1061:U:O4'	17:I:9:LYS:NZ	2.15	0.79
10:B:1540:G:C6	10:B:1541:C:C5	2.71	0.79
16:H:37:VAL:H	16:H:38:PRO:HD2	1.47	0.79
20:L:38:GLN:H	20:L:41:ARG:HH11	1.29	0.79
31:W:16:GLU:HG2	31:W:37:VAL:HG22	1.64	0.79
5:4:24:ARG:HG2	5:4:26:ILE:HG12	1.64	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:D:2:ILE:HG13	12:D:3:GLY:H	1.48	0.79
20:L:38:GLN:CD	20:L:39:LYS:H	1.86	0.79
10:B:280:U:H2'	10:B:281:C:C6	2.18	0.79
10:B:1528:A:N1	10:B:1544:A:C8	2.50	0.79
16:H:50:ARG:HH21	16:H:54:LEU:HG	1.47	0.79
16:H:50:ARG:NE	16:H:54:LEU:HG	1.98	0.79
22:N:123:GLU:HG3	22:N:124:ALA:H	1.48	0.79
28:T:61:LEU:HD12	28:T:62:VAL:H	1.47	0.79
33:Y:7:THR:HA	33:Y:34:THR:HA	1.63	0.79
4:3:31:ILE:HG22	4:3:32:LEU:HG	1.64	0.79
10:B:2287:A:O2'	10:B:2288:A:H2'	1.83	0.79
15:G:157:LYS:HB2	15:G:159:LYS:HG2	1.64	0.79
16:H:50:ARG:HB3	16:H:51:ARG:CB	2.12	0.79
26:R:53:PHE:CB	26:R:55:ASP:H	1.96	0.79
31:W:17:ALA:HA	31:W:35:ILE:O	1.83	0.79
10:B:1528:A:C2'	10:B:1529:G:H5'	2.13	0.79
10:B:1544:A:C6	10:B:1545:A:C6	2.71	0.79
25:Q:88:GLU:HA	26:R:53:PHE:CD1	2.18	0.79
27:S:71:VAL:HA	27:S:106:VAL:O	1.82	0.79
5:4:14:CYS:HA	5:4:26:ILE:O	1.82	0.78
6:5:425:ARG:NE	10:B:490:C:H5	1.75	0.78
10:B:1073:A:C2'	10:B:1074:G:H5'	2.13	0.78
10:B:1475:G:O2'	10:B:1514:G:C6	2.37	0.78
1:0:52:LYS:HA	1:0:52:LYS:NZ	1.98	0.78
10:B:1036:G:O2'	10:B:1037:G:H5'	1.83	0.78
10:B:1524:G:C2	10:B:1525:A:N9	2.51	0.78
10:B:1535:A:O2'	10:B:1536:C:H5'	1.83	0.78
10:B:2795:C:H2'	10:B:2796:U:O4'	1.82	0.78
11:C:153:LEU:HD23	11:C:153:LEU:H	1.49	0.78
21:M:71:LYS:HD3	21:M:92:TRP:N	1.98	0.78
29:U:39:ASN:ND2	29:U:60:LYS:C	2.35	0.78
10:B:65:U:H4'	28:T:70:HIS:HD1	1.48	0.78
10:B:328:U:O2'	29:U:65:GLN:HB3	1.82	0.78
21:M:77:PRO:HD3	21:M:86:LYS:HD3	1.65	0.78
28:T:24:MET:HG3	28:T:28:ASN:HA	1.65	0.78
4:3:24:LYS:HZ2	20:L:63:LYS:N	1.82	0.78
10:B:310:A:C2	10:B:312:G:H1'	2.18	0.78
10:B:997:G:H4'	25:Q:91:ARG:HE	1.47	0.78
10:B:2839:G:H21	22:N:92:GLY:HA3	1.49	0.78
15:G:71:LEU:HA	15:G:74:MET:SD	2.23	0.78
10:B:1073:A:H2'	10:B:1074:G:H5'	1.66	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1098:A:C2'	10:B:1099:G:H5'	2.13	0.78
10:B:1117:C:C2	10:B:1118:C:C4	2.71	0.78
10:B:1524:G:H21	10:B:1525:A:H1'	1.46	0.78
13:E:120:VAL:H	13:E:189:THR:HG23	1.47	0.78
28:T:11:LEU:HB2	28:T:32:LEU:HD23	1.65	0.78
10:B:311:A:N1	10:B:328:U:C5	2.52	0.78
10:B:313:G:N1	10:B:314:C:C2	2.51	0.78
10:B:1524:G:C2	10:B:1525:A:C4	2.70	0.78
12:D:5:VAL:HG11	12:D:28:GLU:HA	1.64	0.78
12:D:22:ILE:N	12:D:23:PRO:HD3	1.97	0.78
13:E:84:THR:HG23	13:E:85:PHE:H	1.48	0.78
10:B:1526:C:O2'	10:B:1527:G:H5'	1.83	0.78
10:B:1062:G:H22	17:I:134:SER:HB3	1.45	0.78
10:B:1243:C:O2'	20:L:15:ALA:HB3	1.83	0.78
10:B:333:G:C6	10:B:334:C:C5	2.71	0.78
10:B:339:U:C2'	10:B:340:A:H5'	2.14	0.78
10:B:1024:G:H3'	10:B:1025:G:H5''	1.64	0.78
10:B:1115:G:C2	10:B:1116:G:C8	2.70	0.78
10:B:1174:U:H4'	10:B:1176:U:H3	1.46	0.78
23:O:67:ASN:HA	23:O:71:ALA:HB3	1.66	0.78
27:S:24:ILE:HD13	27:S:36:LEU:HD21	1.65	0.78
31:W:49:ASN:HB2	31:W:53:GLY:HA3	1.64	0.78
10:B:287:G:O2'	10:B:288:U:H5'	1.83	0.78
11:C:50:THR:HG22	11:C:51:ARG:HG3	1.63	0.78
21:M:100:LYS:HE3	21:M:100:LYS:H	1.49	0.78
10:B:270:A:N1	10:B:370:G:C6	2.42	0.77
10:B:291:G:C5	10:B:350:G:C5	2.67	0.77
10:B:327:G:O6	10:B:336:C:N4	2.16	0.77
10:B:333:G:C2	10:B:334:C:C5	2.72	0.77
10:B:1086:A:H3'	10:B:1086:A:N3	1.99	0.77
10:B:1515:A:H2'	10:B:1516:G:C8	2.19	0.77
10:B:1525:A:N1	10:B:1526:C:N3	2.31	0.77
11:C:87:SER:O	11:C:157:ALA:HB2	1.84	0.77
22:N:96:ARG:NE	22:N:118:ARG:O	2.09	0.77
24:P:13:LYS:NZ	24:P:17:PRO:HG3	1.98	0.77
31:W:28:GLU:HB3	31:W:30:VAL:HG23	1.63	0.77
10:B:298:G:H5''	10:B:299:A:OP1	1.84	0.77
10:B:303:G:C2	10:B:304:U:C2	2.73	0.77
10:B:1098:A:O2'	10:B:1099:G:H5'	1.84	0.77
10:B:1520:U:H2'	10:B:1521:G:H5'	1.65	0.77
10:B:1533:C:H2'	10:B:1534:U:C6	2.19	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:J:7:LYS:HD3	18:J:48:VAL:HB	1.66	0.77
23:O:48:LEU:HD23	23:O:49:VAL:H	1.49	0.77
1:O:50:GLY:CA	22:N:118:ARG:HH21	1.98	0.77
10:B:319:G:N1	10:B:320:A:C2	2.52	0.77
12:D:128:ARG:HD2	12:D:144:GLY:HA3	1.66	0.77
18:J:49:ASP:HA	18:J:114:LEU:HD11	1.64	0.77
20:L:56:PRO:HA	20:L:60:ARG:NH2	1.99	0.77
24:P:59:THR:HG23	24:P:76:HIS:CD2	2.19	0.77
29:U:44:HIS:HE1	29:U:47:PRO:CG	1.97	0.77
1:O:45:ASP:HB2	1:O:47:TYR:CD1	2.19	0.77
3:2:44:VAL:HG23	3:2:45:SER:H	1.49	0.77
4:3:34:LYS:HB2	10:B:2420:C:OP1	1.85	0.77
10:B:322:A:C2	10:B:340:A:C2	2.72	0.77
14:F:12:VAL:HG13	14:F:27:VAL:HG21	1.66	0.77
22:N:114:GLU:HG2	22:N:115:LEU:H	1.47	0.77
24:P:26:GLU:HA	24:P:47:ILE:H	1.49	0.77
2:1:31:GLU:HG3	2:1:32:LYS:H	1.49	0.77
10:B:972:A:H3'	10:B:973:A:H5''	1.65	0.77
2:1:53:ILE:HD13	2:1:54:LYS:N	1.99	0.77
10:B:80:G:C4'	10:B:346:A:C6	2.59	0.77
10:B:319:G:N2	10:B:320:A:N3	2.32	0.77
10:B:359:G:C2'	10:B:360:U:H5'	2.13	0.77
10:B:742:A:H2'	10:B:743:A:H8	1.50	0.77
17:I:27:LEU:HD12	17:I:32:VAL:HG11	1.65	0.77
26:R:74:ILE:HA	26:R:90:ARG:NE	1.97	0.77
5:4:25:VAL:HB	5:4:33:HIS:O	1.84	0.77
6:5:394:ILE:HA	6:5:398:ARG:HD2	1.64	0.77
10:B:336:C:H5''	29:U:81:ARG:CZ	2.14	0.77
10:B:1275:A:H3'	10:B:1275:A:N3	1.99	0.77
21:M:65:ILE:HG22	21:M:101:VAL:HA	1.66	0.77
22:N:19:ALA:HA	22:N:22:ARG:HG2	1.65	0.77
6:5:364:VAL:HG13	29:U:51:LEU:HA	1.67	0.77
10:B:1050:A:C1'	10:B:2751:G:C4	2.66	0.77
10:B:1526:C:C2'	10:B:1527:G:H8	1.97	0.77
11:C:216:ARG:HB3	11:C:216:ARG:HH11	1.49	0.77
13:E:73:ILE:C	13:E:75:SER:H	1.88	0.77
28:T:88:LYS:HG2	28:T:89:GLU:H	1.49	0.77
10:B:296:U:O2'	10:B:297:G:H5'	1.83	0.77
10:B:1105:U:H2'	10:B:1106:G:H8	1.46	0.77
11:C:128:THR:HA	11:C:190:THR:HA	1.67	0.77
17:I:63:ASP:O	17:I:64:ARG:HG3	1.84	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:3:24:LYS:HZ3	4:3:29:ARG:HH22	1.33	0.77
10:B:333:G:N3	10:B:334:C:C5	2.50	0.77
10:B:348:A:N1	10:B:349:U:N3	2.33	0.77
10:B:443:A:H5''	13:E:44:ARG:HH12	1.50	0.77
10:B:1061:U:O4	17:I:9:LYS:HB2	1.83	0.77
12:D:138:LEU:HD23	12:D:138:LEU:N	1.99	0.77
17:I:109:ALA:HB1	17:I:124:MET:HG3	1.66	0.77
20:L:103:ILE:HD13	20:L:105:ILE:H	1.50	0.77
21:M:3:GLN:O	21:M:5:LYS:N	2.17	0.77
22:N:96:ARG:HD3	22:N:120:GLU:N	1.99	0.77
5:4:24:ARG:HH12	5:4:36:ARG:HB2	1.48	0.76
10:B:269:C:H2'	10:B:270:A:H8	1.49	0.76
10:B:299:A:C4	10:B:322:A:C5	2.73	0.76
10:B:2346:A:H3'	10:B:2347:C:H5''	1.67	0.76
12:D:154:LYS:NZ	12:D:156:PHE:HA	2.00	0.76
16:H:21:VAL:HG22	16:H:22:LYS:H	1.48	0.76
10:B:283:G:C4	10:B:284:U:C5	2.72	0.76
10:B:299:A:C2	10:B:322:A:C5	2.72	0.76
10:B:1476:U:H2'	10:B:1514:G:N2	2.00	0.76
10:B:2469:A:H4'	21:M:55:ARG:HG3	1.67	0.76
10:B:2723:C:H5''	22:N:3:HIS:HB2	1.66	0.76
18:J:57:LEU:HB3	18:J:128:ASN:HA	1.68	0.76
20:L:80:SER:HB2	20:L:113:ALA:H	1.49	0.76
22:N:29:VAL:HG21	22:N:75:ILE:HD11	1.66	0.76
25:Q:93:ILE:HG23	25:Q:94:LEU:H	1.49	0.76
10:B:954:G:OP1	21:M:17:ASN:HB2	1.86	0.76
11:C:257:ARG:O	11:C:261:ARG:HG3	1.85	0.76
19:K:35:VAL:HG23	19:K:36:GLY:H	1.49	0.76
27:S:18:ARG:HH12	27:S:25:ARG:NH2	1.83	0.76
30:V:80:HIS:HD2	30:V:82:TYR:H	1.32	0.76
10:B:162:U:H4'	10:B:163:C:OP1	1.86	0.76
10:B:342:A:C6	10:B:343:C:H5	2.03	0.76
10:B:356:G:N7	10:B:357:C:N4	2.32	0.76
10:B:1063:G:C2'	10:B:1064:C:H5'	2.15	0.76
10:B:1549:A:H2'	10:B:1550:C:C6	2.20	0.76
10:B:1551:A:H5''	10:B:1552:A:OP2	1.84	0.76
18:J:81:ILE:HG23	18:J:82:GLY:N	1.99	0.76
24:P:52:ARG:O	24:P:60:VAL:HG21	1.85	0.76
27:S:10:ALA:O	27:S:11:ARG:HB3	1.85	0.76
5:4:4:ARG:O	5:4:4:ARG:HG2	1.85	0.76
10:B:1076:C:C1'	17:I:92:PRO:CD	2.63	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:Z:5:ILE:HB	34:Z:51:VAL:CG1	2.15	0.76
10:B:288:U:H2'	10:B:289:G:H8	1.46	0.76
10:B:370:G:O2'	10:B:423:A:H3'	1.86	0.76
10:B:703:U:H2'	10:B:704:G:O4'	1.86	0.76
10:B:1034:G:C6	10:B:1035:U:C4	2.74	0.76
10:B:1039:A:N1	10:B:1040:A:C6	2.54	0.76
10:B:1041:G:N2	10:B:1114:C:O2	2.18	0.76
10:B:1177:G:H2'	10:B:1178:C:C6	2.20	0.76
10:B:1519:G:C5	10:B:1520:U:C6	2.71	0.76
18:J:71:ASP:CG	18:J:72:LYS:N	2.39	0.76
18:J:101:ILE:HG23	18:J:102:GLU:H	1.50	0.76
23:O:19:GLN:HA	31:W:76:ARG:NH2	1.98	0.76
33:Y:16:LEU:HB2	33:Y:17:PRO:CD	2.13	0.76
10:B:291:G:C5	10:B:292:U:C4	2.74	0.76
10:B:335:C:H2'	10:B:336:C:C5	2.20	0.76
10:B:2576:G:N2	12:D:149:ASN:HD21	1.82	0.76
10:B:2674:G:H4'	19:K:30:ARG:HG2	1.67	0.76
12:D:17:GLU:HB2	24:P:80:VAL:HG21	1.67	0.76
15:G:153:PRO:HG2	15:G:162:ARG:HB3	1.68	0.76
18:J:7:LYS:HZ3	18:J:48:VAL:HB	1.51	0.76
32:X:36:GLN:HE22	32:X:38:GLN:NE2	1.84	0.76
2:1:9:LYS:HG2	4:3:34:LYS:NZ	2.00	0.76
14:F:36:ASN:HB2	14:F:87:LYS:HA	1.66	0.76
22:N:96:ARG:HH22	22:N:118:ARG:N	1.68	0.76
2:1:42:VAL:HG12	2:1:43:ARG:NE	2.00	0.76
10:B:299:A:H1'	10:B:322:A:C6	2.21	0.76
10:B:306:U:H2'	10:B:307:G:C8	2.21	0.76
10:B:345:A:OP1	10:B:345:A:H3'	1.86	0.76
10:B:692:C:C5'	11:C:42:ARG:HB2	2.15	0.76
10:B:1526:C:H2'	10:B:1527:G:C8	2.20	0.76
18:J:75:TYR:HA	18:J:86:GLN:O	1.84	0.76
22:N:70:THR:HG21	22:N:75:ILE:HG22	1.68	0.76
34:Z:3:LYS:HG2	34:Z:8:LYS:HA	1.68	0.76
10:B:858:G:H21	10:B:2268:A:H3'	1.51	0.76
10:B:1077:A:H2'	10:B:1078:U:H5'	1.68	0.76
10:B:1519:G:C4	10:B:1520:U:H6	1.94	0.76
10:B:2086:U:H2'	10:B:2087:G:C8	2.21	0.76
29:U:7:ASP:CA	29:U:24:VAL:HA	2.15	0.76
12:D:18:ASP:HB3	12:D:20:VAL:HG22	1.68	0.75
14:F:64:PRO:HA	14:F:88:VAL:HG22	1.68	0.75
16:H:44:ILE:HG22	16:H:47:PHE:HE1	1.50	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:U:40:LEU:HD13	29:U:41:VAL:HG12	1.68	0.75
4:3:41:ARG:HD3	4:3:43:LEU:H	1.49	0.75
10:B:324:A:N3	10:B:325:G:C8	2.54	0.75
10:B:812:C:H5'	20:L:32:GLY:HA2	1.67	0.75
10:B:919:U:H2'	10:B:920:A:C8	2.21	0.75
10:B:1062:G:N2	17:I:134:SER:CB	1.91	0.75
10:B:1524:G:N2	10:B:1525:A:H1'	2.01	0.75
11:C:224:MET:HA	11:C:232:GLY:HA2	1.68	0.75
12:D:107:VAL:HA	12:D:205:PRO:O	1.85	0.75
24:P:47:ILE:HG22	24:P:48:ALA:N	2.01	0.75
10:B:319:G:C2	10:B:320:A:C2	2.75	0.75
10:B:2239:G:H5'	11:C:246:PRO:CD	2.16	0.75
17:I:14:ALA:HA	17:I:45:THR:HG21	1.68	0.75
26:R:54:VAL:N	26:R:54:VAL:HB	2.01	0.75
10:B:289:G:C2'	10:B:290:U:H5'	2.17	0.75
10:B:2563:U:H5''	19:K:27:GLY:HA2	1.68	0.75
16:H:50:ARG:NH2	16:H:54:LEU:HG	2.00	0.75
21:M:107:GLY:C	21:M:109:PRO:HD2	2.06	0.75
10:B:317:G:C4	10:B:318:C:C6	2.74	0.75
10:B:751:A:H5'	27:S:90:LYS:HE2	1.67	0.75
10:B:1074:G:O2'	10:B:1075:C:H5'	1.86	0.75
10:B:1113:U:O2'	10:B:1114:C:H5'	1.86	0.75
15:G:120:ILE:HG12	15:G:140:ILE:HG22	1.68	0.75
16:H:50:ARG:HH21	16:H:54:LEU:CG	1.99	0.75
17:I:89:SER:HB2	17:I:136:GLY:HA3	1.68	0.75
24:P:25:VAL:HG11	24:P:87:ARG:HA	1.68	0.75
32:X:38:GLN:NE2	32:X:38:GLN:H	1.84	0.75
10:B:742:A:H2'	10:B:743:A:C8	2.21	0.75
10:B:1048:A:C6	10:B:1111:A:C2	2.74	0.75
10:B:1064:C:H4'	17:I:88:GLY:HA3	1.69	0.75
16:H:82:SER:N	16:H:146:VAL:HG13	2.00	0.75
20:L:61:LEU:HB3	20:L:62:PRO:CD	2.06	0.75
23:O:68:LYS:HD3	23:O:68:LYS:N	2.02	0.75
28:T:30:ILE:HG23	28:T:31:VAL:N	2.01	0.75
10:B:28:A:N6	10:B:512:G:H1'	2.02	0.75
10:B:140:C:H4'	10:B:141:G:H21	1.51	0.75
11:C:179:GLU:HG3	11:C:266:ILE:HG22	1.67	0.75
13:E:59:PRO:HD2	13:E:60:TRP:NE1	2.01	0.75
21:M:23:GLY:N	21:M:96:ILE:HD12	2.00	0.75
10:B:301:G:C5	10:B:317:G:C5	2.75	0.75
10:B:479:A:O2'	10:B:481:G:H5'	1.86	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:508:A:H2'	10:B:509:C:H5'	1.69	0.75
10:B:1115:G:C6	10:B:1116:G:N7	2.55	0.75
22:N:116:VAL:N	22:N:119:SER:OG	2.19	0.75
26:R:53:PHE:CB	26:R:55:ASP:N	2.47	0.75
2:1:12:SER:HB2	2:1:21:THR:O	1.87	0.75
10:B:283:G:C5	10:B:284:U:C4	2.74	0.75
17:I:20:SER:HB3	17:I:21:PRO:HD3	1.67	0.75
19:K:101:GLY:O	19:K:119:ALA:HB1	1.87	0.75
10:B:125:A:H3'	10:B:126:A:C5'	2.17	0.74
32:X:14:LEU:O	32:X:17:GLU:HB2	1.87	0.74
6:5:364:VAL:HG21	29:U:51:LEU:HB2	1.61	0.74
10:B:1549:A:O3'	10:B:1740:G:N2	2.19	0.74
10:B:1553:A:C5	10:B:1555:G:C5	2.74	0.74
11:C:127:ASN:HD22	11:C:128:THR:H	1.35	0.74
17:I:89:SER:HA	17:I:97:VAL:CG2	2.17	0.74
20:L:82:LEU:HD21	20:L:92:LEU:HD12	1.68	0.74
20:L:117:THR:HG21	20:L:120:VAL:CB	2.16	0.74
24:P:49:ILE:C	24:P:50:ARG:HG3	2.06	0.74
26:R:69:GLY:HA2	26:R:96:VAL:HA	1.69	0.74
34:Z:55:GLY:HA2	34:Z:63:ARG:HG3	1.69	0.74
1:0:39:ARG:HB3	1:0:39:ARG:HH11	1.52	0.74
10:B:275:C:H2'	10:B:276:U:C6	2.19	0.74
10:B:289:G:H2'	10:B:290:U:C6	2.22	0.74
10:B:1084:A:C2'	10:B:1085:A:H5'	2.17	0.74
10:B:1469:A:H2'	10:B:1470:A:C8	2.22	0.74
10:B:1521:G:H2'	10:B:1522:A:C8	2.21	0.74
16:H:50:ARG:HH21	16:H:54:LEU:CD1	2.00	0.74
18:J:39:LYS:HZ1	25:Q:69:ARG:HD2	1.51	0.74
21:M:70:ASP:N	21:M:71:LYS:HZ2	1.85	0.74
30:V:35:GLU:HG3	30:V:93:ARG:HD3	1.69	0.74
10:B:297:G:H2'	10:B:298:G:C1'	2.17	0.74
10:B:346:A:N1	10:B:347:A:N7	2.36	0.74
10:B:1255:U:H2'	13:E:67:ARG:HB3	1.68	0.74
10:B:1477:A:O4'	10:B:1515:A:C2	2.33	0.74
12:D:110:THR:HG22	12:D:171:THR:HA	1.67	0.74
30:V:79:ARG:HA	30:V:86:LEU:HA	1.69	0.74
31:W:39:GLN:HA	31:W:68:PHE:HA	1.68	0.74
10:B:135:U:H2'	10:B:136:G:C8	2.23	0.74
10:B:285:G:C6	10:B:356:G:C2	2.76	0.74
10:B:298:G:N2	10:B:340:A:H62	1.85	0.74
10:B:326:G:N1	10:B:327:G:C5	2.56	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1048:A:H2'	10:B:1049:C:H5'	1.70	0.74
10:B:1059:G:C4'	17:I:117:THR:H	1.99	0.74
10:B:1064:C:H4'	17:I:88:GLY:CA	2.18	0.74
10:B:1178:C:H2'	10:B:1179:G:H8	1.53	0.74
10:B:1544:A:C2	10:B:1545:A:C4	2.76	0.74
21:M:69:PRO:HB2	21:M:71:LYS:NZ	2.02	0.74
10:B:107:G:O2'	10:B:293:U:O2'	1.80	0.74
10:B:150:U:H2'	10:B:151:C:C6	2.23	0.74
10:B:285:G:C2	10:B:286:U:N1	2.56	0.74
10:B:322:A:N3	10:B:340:A:C2	2.56	0.74
10:B:348:A:H2'	10:B:349:U:C6	2.22	0.74
10:B:1528:A:H2'	10:B:1529:G:C5'	2.16	0.74
13:E:60:TRP:NE1	13:E:73:ILE:HD11	2.03	0.74
13:E:105:LEU:HD22	13:E:177:PRO:HG2	1.70	0.74
17:I:7:TYR:HB2	17:I:58:ILE:O	1.87	0.74
29:U:41:VAL:HG22	29:U:42:LYS:N	2.03	0.74
29:U:42:LYS:HA	29:U:42:LYS:CE	2.16	0.74
10:B:291:G:C6	10:B:350:G:N7	2.55	0.74
10:B:856:G:H21	31:W:22:VAL:HG11	1.53	0.74
10:B:80:G:O2'	10:B:294:A:C4	2.39	0.74
10:B:278:A:C5	10:B:362:A:C8	2.76	0.74
10:B:310:A:C5	10:B:312:G:C5	2.76	0.74
10:B:346:A:N1	10:B:347:A:C5	2.55	0.74
10:B:1076:C:O2'	10:B:1077:A:H5'	1.87	0.74
10:B:1540:G:N1	10:B:1541:C:C4	2.55	0.74
16:H:50:ARG:HB3	16:H:51:ARG:CD	2.13	0.74
26:R:90:ARG:HH11	26:R:91:GLN:H	1.33	0.74
10:B:291:G:C4	10:B:292:U:C5	2.76	0.74
10:B:442:G:H1'	13:E:44:ARG:HD2	1.70	0.74
10:B:1070:A:H1'	17:I:9:LYS:HZ2	1.49	0.74
12:D:151:THR:O	12:D:152:PRO:C	2.26	0.74
13:E:133:LEU:HD12	13:E:136:GLN:HG3	1.68	0.74
14:F:116:LEU:HG	14:F:176:PHE:HA	1.68	0.74
21:M:11:LYS:HG2	21:M:12:MET:H	1.51	0.74
21:M:96:ILE:HG23	21:M:97:GLN:H	1.53	0.74
10:B:96:C:P	32:X:39:GLN:CA	2.74	0.74
10:B:163:C:H2'	10:B:164:C:O4'	1.87	0.74
10:B:278:A:C2	10:B:279:A:N7	2.56	0.74
10:B:352:A:C6	10:B:353:C:N3	2.56	0.74
12:D:33:ARG:HG3	12:D:93:GLY:HA2	1.70	0.74
14:F:101:ARG:HD2	14:F:105:ILE:HD12	1.68	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:M:109:PRO:HA	21:M:112:LEU:HB2	1.69	0.74
10:B:271:G:H1	10:B:366:C:C2'	2.01	0.73
10:B:311:A:N7	10:B:332:A:C5	2.51	0.73
10:B:326:G:H2'	10:B:327:G:H5'	1.70	0.73
10:B:2216:G:H2'	10:B:2217:G:H8	1.52	0.73
16:H:41:LYS:H	16:H:41:LYS:HD2	1.52	0.73
22:N:96:ARG:CD	22:N:119:SER:C	2.38	0.73
4:3:7:ARG:HE	4:3:11:LYS:HZ3	1.36	0.73
12:D:154:LYS:NZ	12:D:157:LYS:H	1.86	0.73
22:N:96:ARG:HH22	22:N:116:VAL:C	1.90	0.73
29:U:40:LEU:HD13	29:U:41:VAL:N	2.03	0.73
31:W:66:VAL:HG22	31:W:67:LYS:N	2.03	0.73
10:B:99:U:C6	29:U:5:ARG:NH2	2.57	0.73
10:B:285:G:C5	10:B:286:U:C5	2.77	0.73
10:B:338:G:N1	10:B:339:U:C2	2.56	0.73
10:B:1076:C:C1'	17:I:92:PRO:CG	2.65	0.73
25:Q:33:VAL:HG23	25:Q:37:ALA:HB3	1.71	0.73
10:B:276:U:H2'	10:B:277:G:H5''	1.70	0.73
10:B:308:G:C6	10:B:309:A:N1	2.55	0.73
10:B:340:A:C8	10:B:341:C:C5	2.77	0.73
10:B:1059:G:H4'	17:I:117:THR:N	2.03	0.73
10:B:1444:G:N2	10:B:1548:A:C5	2.56	0.73
13:E:98:LYS:HG3	13:E:99:LYS:N	2.02	0.73
10:B:299:A:H1'	10:B:322:A:H61	1.51	0.73
10:B:347:A:N1	10:B:348:A:C8	2.56	0.73
10:B:1324:G:H1'	10:B:1616:A:N6	2.03	0.73
10:B:1477:A:C5	10:B:1515:A:C5	2.73	0.73
10:B:1519:G:N1	10:B:1520:U:C6	2.56	0.73
10:B:1524:G:C2'	10:B:1525:A:H5'	2.18	0.73
10:B:1526:C:N1	10:B:1527:G:H8	1.86	0.73
18:J:11:VAL:HG13	18:J:12:LYS:N	2.02	0.73
20:L:110:VAL:HB	20:L:126:ARG:NH2	2.02	0.73
29:U:46:LYS:NZ	29:U:54:PRO:O	2.19	0.73
30:V:80:HIS:CD2	30:V:83:LYS:H	2.05	0.73
33:Y:10:ARG:NE	33:Y:31:ILE:HG13	2.02	0.73
6:5:364:VAL:HG11	29:U:51:LEU:HB2	1.62	0.73
10:B:1524:G:C4	10:B:1525:A:N7	2.56	0.73
12:D:92:VAL:HG13	12:D:93:GLY:H	1.53	0.73
18:J:112:GLY:O	18:J:116:ARG:HB2	1.88	0.73
20:L:30:THR:HB	20:L:36:LYS:HB2	1.69	0.73
1:0:52:LYS:HD2	22:N:118:ARG:CZ	2.19	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:2:13:ASN:HB2	3:2:18:PHE:HD2	1.53	0.73
10:B:317:G:N2	10:B:318:C:H1'	2.03	0.73
17:I:21:PRO:HB2	17:I:22:PRO:HD3	1.70	0.73
20:L:30:THR:HA	20:L:36:LYS:NZ	2.03	0.73
10:B:45:G:H5'	10:B:46:G:H5'	1.71	0.73
10:B:285:G:C6	10:B:286:U:N3	2.56	0.73
10:B:1059:G:H4'	17:I:117:THR:H	1.53	0.73
10:B:1526:C:C6	10:B:1527:G:C8	2.76	0.73
12:D:154:LYS:HZ3	12:D:157:LYS:N	1.86	0.73
22:N:28:LEU:HD11	22:N:44:LEU:HD21	1.68	0.73
22:N:100:CYS:HB3	22:N:110:MET:HB2	1.70	0.73
32:X:49:ASP:HB3	32:X:52:ARG:HH21	1.53	0.73
10:B:1553:A:N7	10:B:1555:G:C5	2.56	0.73
12:D:8:LYS:HA	12:D:197:THR:HG23	1.69	0.73
20:L:120:VAL:HG22	20:L:122:VAL:HG22	1.71	0.73
24:P:23:ASP:H	24:P:93:LYS:HE2	1.54	0.73
1:0:29:VAL:HG23	1:0:36:LYS:NZ	2.02	0.73
3:2:34:ARG:HE	3:2:42:LEU:HD13	1.54	0.73
10:B:1797:G:O3'	11:C:253:GLY:HA2	1.89	0.73
10:B:2354:C:H4'	31:W:30:VAL:HG13	1.69	0.73
13:E:113:VAL:HG23	13:E:117:ARG:CZ	2.18	0.73
21:M:41:LEU:HB2	21:M:93:VAL:HG22	1.70	0.73
22:N:76:VAL:HA	22:N:79:LEU:HD12	1.71	0.73
23:O:8:ILE:HG22	23:O:10:ARG:H	1.52	0.73
26:R:4:VAL:HA	26:R:12:HIS:HB3	1.69	0.73
10:B:80:G:C5'	10:B:346:A:C4	2.71	0.72
10:B:327:G:C6	10:B:336:C:N3	2.57	0.72
10:B:811:U:H2'	20:L:31:GLY:HA3	1.71	0.72
10:B:1111:A:O3'	10:B:1112:G:O4'	2.07	0.72
10:B:1453:A:N6	22:N:74:GLU:HG2	2.04	0.72
10:B:1520:U:N3	10:B:1521:G:C2	2.54	0.72
10:B:2328:A:H2'	10:B:2329:U:C6	2.24	0.72
20:L:118:THR:CG2	20:L:119:PRO:HD3	2.19	0.72
24:P:28:LYS:HD3	24:P:44:GLY:N	2.03	0.72
10:B:275:C:C5	10:B:276:U:C5	2.77	0.72
10:B:323:C:C5	10:B:333:G:H8	2.05	0.72
10:B:445:C:OP1	25:Q:1:ALA:HB3	1.89	0.72
10:B:2471:A:O2'	10:B:2472:G:H8	1.73	0.72
14:F:133:GLU:HG2	14:F:147:ARG:HG2	1.71	0.72
22:N:116:VAL:HG22	22:N:117:ASP:N	2.03	0.72
26:R:42:ALA:HA	26:R:54:VAL:HA	1.71	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:V:24:ASN:O	30:V:44:HIS:HB2	1.89	0.72
10:B:37:C:C2'	13:E:46:GLN:HG2	2.16	0.72
10:B:271:G:O6	10:B:366:C:H2'	1.89	0.72
10:B:295:G:C5	10:B:344:A:C2	2.78	0.72
10:B:442:G:H22	13:E:46:GLN:NE2	1.87	0.72
10:B:1518:C:H2'	10:B:1519:G:C8	2.24	0.72
27:S:47:VAL:HG12	27:S:103:ILE:HD13	1.70	0.72
10:B:79:C:O3'	10:B:346:A:H8	1.72	0.72
10:B:326:G:C2	10:B:327:G:N7	2.57	0.72
10:B:1081:U:O2'	10:B:1082:U:H5'	1.90	0.72
10:B:1538:G:N2	10:B:1539:U:H1'	2.05	0.72
11:C:50:THR:O	11:C:51:ARG:HG3	1.89	0.72
10:B:317:G:N3	10:B:318:C:C6	2.58	0.72
10:B:1516:G:C2	10:B:1517:G:N9	2.58	0.72
10:B:1517:G:H2'	10:B:1518:C:C5'	2.19	0.72
10:B:1803:A:O3'	11:C:254:LYS:HD2	1.90	0.72
18:J:25:LEU:HD12	18:J:62:VAL:HA	1.70	0.72
31:W:24:ARG:HB3	31:W:57:THR:O	1.90	0.72
6:5:364:VAL:HA	29:U:51:LEU:HD21	1.68	0.72
10:B:80:G:H5'	10:B:346:A:C4	2.23	0.72
10:B:291:G:N1	10:B:350:G:N7	2.38	0.72
10:B:1075:C:H2'	10:B:1076:C:C6	2.25	0.72
10:B:2498:C:O2'	10:B:2499:C:H5'	1.89	0.72
20:L:27:LEU:C	20:L:29:LYS:H	1.93	0.72
20:L:85:VAL:HG11	20:L:98:ALA:HB3	1.71	0.72
21:M:73:ILE:O	21:M:74:THR:HB	1.88	0.72
10:B:295:G:N1	10:B:296:U:C4	2.57	0.72
10:B:1203:U:H3'	10:B:1204:A:H5''	1.70	0.72
10:B:1283:G:N2	10:B:1286:A:H5'	2.02	0.72
14:F:126:ASN:HD22	14:F:126:ASN:N	1.87	0.72
24:P:59:THR:HG23	24:P:76:HIS:NE2	2.04	0.72
27:S:7:HIS:HB3	27:S:102:HIS:HA	1.71	0.72
29:U:7:ASP:HA	29:U:24:VAL:HA	1.72	0.72
6:5:364:VAL:CG1	29:U:51:LEU:CA	2.50	0.72
11:C:141:HIS:CD2	11:C:193:GLU:H	2.07	0.72
13:E:146:VAL:O	13:E:147:LEU:HB2	1.88	0.72
15:G:157:LYS:HG3	15:G:159:LYS:HZ2	1.55	0.72
22:N:116:VAL:HG22	22:N:123:GLU:OE1	1.90	0.72
5:4:24:ARG:HA	5:4:34:LYS:O	1.90	0.72
10:B:301:G:H1'	10:B:302:C:C6	2.25	0.72
10:B:338:G:H2'	10:B:339:U:C5'	2.18	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1437:C:H2'	10:B:1438:U:C6	2.25	0.72
10:B:1524:G:C2	10:B:1525:A:C8	2.78	0.72
10:B:1526:C:C6	10:B:1527:G:N7	2.58	0.72
12:D:11:MET:HG2	12:D:12:THR:H	1.55	0.72
12:D:154:LYS:O	12:D:155:VAL:HG12	1.88	0.72
23:O:17:LYS:HE3	23:O:43:ASN:HB2	1.70	0.72
29:U:44:HIS:HE1	29:U:47:PRO:CD	2.01	0.72
1:0:36:LYS:HG3	1:0:40:HIS:O	1.88	0.72
10:B:310:A:C8	10:B:312:G:N7	2.58	0.72
10:B:333:G:N3	10:B:334:C:H6	1.84	0.72
10:B:1080:A:O2'	10:B:1081:U:H5'	1.89	0.72
10:B:1486:U:H2'	10:B:1487:U:C6	2.25	0.72
10:B:1545:A:C2'	10:B:1546:G:H5'	2.20	0.72
16:H:4:ILE:H	16:H:37:VAL:HB	1.53	0.72
29:U:42:LYS:HD2	29:U:60:LYS:CB	2.18	0.72
29:U:44:HIS:HE1	29:U:47:PRO:HG3	1.54	0.72
34:Z:69:SER:O	34:Z:70:LYS:HB2	1.90	0.72
10:B:138:U:H2'	10:B:140:C:H1'	1.71	0.71
10:B:146:A:H2'	10:B:147:C:C6	2.25	0.71
10:B:283:G:C2	10:B:284:U:N1	2.57	0.71
10:B:301:G:H5'	10:B:334:C:O2	1.89	0.71
10:B:1048:A:C5	10:B:1049:C:C4	2.78	0.71
10:B:1115:G:H2'	10:B:1116:G:H8	1.54	0.71
10:B:1392:A:H62	28:T:18:GLU:HG2	1.53	0.71
16:H:57:LYS:HG3	16:H:61:VAL:HG21	1.71	0.71
22:N:44:LEU:O	22:N:47:VAL:HG22	1.90	0.71
5:4:1:MET:HB3	10:B:2527:C:H1'	1.71	0.71
10:B:265:A:O2'	10:B:266:G:H4'	1.90	0.71
10:B:291:G:N1	10:B:350:G:C8	2.58	0.71
10:B:1050:A:C4	10:B:2751:G:C6	2.74	0.71
10:B:1113:U:OP1	15:G:2:ARG:CB	2.37	0.71
10:B:2895:G:H2'	10:B:2896:C:C6	2.25	0.71
20:L:82:LEU:HD13	20:L:83:ALA:N	2.06	0.71
27:S:66:ILE:H	27:S:66:ILE:HD12	1.54	0.71
29:U:42:LYS:CD	29:U:60:LYS:HG2	2.19	0.71
10:B:84:A:H3'	29:U:5:ARG:HD2	1.71	0.71
10:B:295:G:C5	10:B:344:A:N1	2.58	0.71
10:B:312:G:H2'	10:B:312:G:N3	2.04	0.71
10:B:331:C:O2'	10:B:332:A:H5'	1.90	0.71
10:B:1036:G:H2'	10:B:1037:G:C8	2.23	0.71
14:F:107:VAL:HG21	14:F:175:PRO:HG3	1.71	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:U:11:ILE:HB	29:U:69:VAL:HB	1.72	0.71
33:Y:54:VAL:HG22	33:Y:55:LYS:H	1.55	0.71
34:Z:25:ARG:HG3	34:Z:26:SER:N	2.04	0.71
34:Z:59:ARG:HH21	34:Z:62:LYS:NZ	1.88	0.71
8:7:104:G:H1	8:7:171:C:H42	1.37	0.71
10:B:78:U:H2'	10:B:79:C:C6	2.26	0.71
10:B:300:A:H1'	10:B:319:G:O4'	1.90	0.71
10:B:1913:A:H1'	10:B:1914:C:OP1	1.90	0.71
11:C:110:LYS:HD2	11:C:111:ALA:H	1.55	0.71
12:D:187:LEU:HD23	12:D:188:LEU:N	2.05	0.71
16:H:134:VAL:HG13	16:H:135:HIS:H	1.56	0.71
21:M:100:LYS:O	21:M:100:LYS:HD2	1.90	0.71
25:Q:88:GLU:HA	26:R:53:PHE:CE1	2.25	0.71
25:Q:96:ASP:O	25:Q:99:VAL:HG22	1.90	0.71
31:W:6:GLY:C	31:W:8:SER:H	1.94	0.71
10:B:80:G:O4'	10:B:346:A:N7	2.23	0.71
10:B:297:G:C6	10:B:298:G:C2	2.77	0.71
10:B:1095:A:H2'	10:B:1096:A:C8	2.25	0.71
12:D:154:LYS:C	12:D:156:PHE:H	1.91	0.71
22:N:127:GLU:OE1	22:N:127:GLU:N	2.23	0.71
10:B:285:G:N1	10:B:286:U:N3	2.38	0.71
10:B:332:A:C2	10:B:335:C:C6	2.77	0.71
11:C:88:ALA:HB1	11:C:156:SER:HB3	1.71	0.71
11:C:245:THR:O	11:C:247:TRP:N	2.22	0.71
21:M:9:PHE:HA	21:M:10:ARG:HH21	1.53	0.71
4:3:41:ARG:HB3	4:3:43:LEU:HD22	1.73	0.71
10:B:324:A:C5	10:B:325:G:C8	2.78	0.71
10:B:1115:G:C2	10:B:1116:G:C4	2.78	0.71
10:B:2147:A:H5'	10:B:2148:G:H5'	1.71	0.71
16:H:125:THR:HA	16:H:146:VAL:HB	1.73	0.71
10:B:324:A:H2'	10:B:325:G:C5'	2.20	0.71
13:E:131:THR:O	13:E:134:LEU:HB2	1.90	0.71
22:N:96:ARG:NH2	22:N:118:ARG:CA	2.38	0.71
29:U:44:HIS:CE1	29:U:47:PRO:HG3	2.26	0.71
4:3:24:LYS:HD3	20:L:62:PRO:O	1.91	0.71
6:5:377:GLU:HG2	6:5:381:ASN:HD21	1.56	0.71
10:B:25:U:H5''	27:S:80:PRO:HD3	1.73	0.71
10:B:1549:A:N3	10:B:1550:C:C5	2.59	0.71
19:K:2:ILE:HG22	19:K:67:LYS:NZ	2.04	0.71
1:0:45:ASP:HB2	1:0:47:TYR:HD1	1.53	0.71
10:B:336:C:C3'	29:U:81:ARG:HH21	2.01	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:662:G:H4'	20:L:24:GLY:N	2.05	0.71
10:B:2880:C:O5'	22:N:121:LYS:HE2	1.90	0.71
12:D:148:GLN:HG3	12:D:151:THR:OG1	1.91	0.71
10:B:1039:A:N1	10:B:1040:A:N6	2.39	0.70
10:B:1080:A:H2'	10:B:1081:U:C6	2.25	0.70
12:D:129:THR:O	12:D:130:GLN:HB2	1.90	0.70
13:E:4:VAL:HB	13:E:117:ARG:HH21	1.56	0.70
34:Z:59:ARG:HE	34:Z:62:LYS:HD2	1.56	0.70
10:B:324:A:H61	10:B:338:G:C2'	2.03	0.70
10:B:350:G:C2'	10:B:351:C:H5'	2.21	0.70
10:B:1534:U:C2	10:B:1538:G:C2	2.79	0.70
10:B:1639:C:C2'	10:B:1640:A:H5''	2.21	0.70
11:C:106:PRO:HD2	11:C:109:LEU:HD22	1.72	0.70
12:D:62:LYS:H	12:D:62:LYS:CD	2.04	0.70
13:E:31:VAL:HG22	13:E:96:VAL:HG21	1.72	0.70
14:F:63:LYS:HE2	14:F:64:PRO:HD2	1.73	0.70
20:L:120:VAL:HG12	20:L:138:ALA:HB3	1.73	0.70
26:R:78:ARG:CB	26:R:87:GLN:HA	2.20	0.70
10:B:118:A:H5'	10:B:119:A:H8	1.56	0.70
10:B:283:G:N3	10:B:284:U:N1	2.40	0.70
10:B:285:G:C4	10:B:286:U:C5	2.78	0.70
10:B:365:U:C2	10:B:366:C:C5	2.79	0.70
10:B:1115:G:C6	10:B:1116:G:C5	2.79	0.70
11:C:50:THR:C	11:C:51:ARG:HG3	2.12	0.70
24:P:92:ARG:CZ	24:P:110:LYS:HB3	2.21	0.70
10:B:317:G:C2'	10:B:318:C:H6	1.99	0.70
10:B:1034:G:H2'	10:B:1035:U:H5'	1.74	0.70
20:L:142:ILE:HG13	20:L:143:GLU:H	1.56	0.70
29:U:79:ALA:O	29:U:96:LYS:HA	1.92	0.70
10:B:314:C:O2'	10:B:315:G:H5'	1.92	0.70
10:B:743:A:O2'	10:B:744:U:H5'	1.91	0.70
10:B:851:C:O2'	33:Y:45:GLY:HA3	1.92	0.70
12:D:37:VAL:HG22	12:D:46:ARG:HE	1.57	0.70
13:E:118:LEU:HD12	13:E:187:VAL:HG12	1.73	0.70
14:F:135:ILE:HD13	14:F:138:PRO:HA	1.72	0.70
16:H:3:VAL:HG22	16:H:21:VAL:HG11	1.72	0.70
20:L:94:THR:HG23	20:L:95:LEU:HD12	1.72	0.70
10:B:308:G:H3'	10:B:309:A:C8	2.26	0.70
10:B:590:A:H2'	10:B:591:U:C6	2.27	0.70
10:B:1038:G:N1	10:B:1039:A:C6	2.60	0.70
10:B:1545:A:H2'	10:B:1546:G:H5'	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2052:A:H5'	12:D:148:GLN:C	2.12	0.70
13:E:146:VAL:O	13:E:184:ASP:HB2	1.92	0.70
13:E:193:VAL:HG12	13:E:194:LYS:HD2	1.73	0.70
22:N:120:GLU:OE2	22:N:121:LYS:NZ	2.24	0.70
25:Q:10:ARG:HA	25:Q:10:ARG:CZ	2.22	0.70
26:R:6:GLN:HA	26:R:10:LYS:HA	1.74	0.70
31:W:66:VAL:HG13	31:W:67:LYS:H	1.56	0.70
6:5:343:ASN:O	6:5:344:MET:HG2	1.91	0.70
10:B:1109:C:C4	10:B:1110:G:C6	2.79	0.70
11:C:3:VAL:HG12	11:C:4:LYS:H	1.56	0.70
11:C:22:GLU:HA	11:C:202:ARG:CZ	2.22	0.70
11:C:107:LYS:H	11:C:194:VAL:HG21	1.55	0.70
12:D:3:GLY:HA2	12:D:49:GLN:OE1	1.91	0.70
18:J:24:THR:C	18:J:25:LEU:HD22	2.12	0.70
21:M:40:ARG:HH11	21:M:92:TRP:HE3	1.40	0.70
22:N:101:GLY:HA2	22:N:109:PRO:HA	1.73	0.70
25:Q:30:VAL:O	25:Q:33:VAL:HG12	1.91	0.70
28:T:8:LEU:HD23	28:T:8:LEU:H	1.55	0.70
29:U:69:VAL:HG13	29:U:77:GLY:H	1.54	0.70
32:X:21:LEU:HD23	32:X:47:ARG:HG3	1.74	0.70
10:B:352:A:C4	10:B:353:C:C5	2.79	0.70
10:B:1476:U:H2'	10:B:1514:G:H22	1.55	0.70
10:B:1676:A:O2'	12:D:133:THR:HG23	1.92	0.70
11:C:180:MET:HB2	11:C:265:PHE:HB3	1.73	0.70
10:B:324:A:C2	10:B:325:G:C8	2.80	0.70
10:B:1476:U:OP2	10:B:1514:G:N1	2.24	0.70
10:B:1813:G:H21	11:C:51:ARG:HG2	1.55	0.70
10:B:2484:G:H1'	21:M:119:LEU:HD12	1.73	0.70
21:M:100:LYS:HE3	21:M:100:LYS:N	2.07	0.70
4:3:7:ARG:CZ	20:L:63:LYS:HD3	2.22	0.70
10:B:283:G:H2'	10:B:284:U:C6	2.23	0.70
10:B:1525:A:H2'	10:B:1526:C:H5'	1.71	0.70
10:B:2064:C:H2'	10:B:2065:C:C6	2.27	0.70
15:G:9:VAL:HG23	15:G:47:ASN:HB2	1.74	0.70
23:O:17:LYS:HE2	31:W:77:LYS:HD2	1.73	0.70
28:T:96:VAL:HG22	28:T:97:GLY:N	2.07	0.70
10:B:356:G:N7	10:B:357:C:C4	2.60	0.69
10:B:1549:A:H2'	10:B:1550:C:C5	2.27	0.69
11:C:117:SER:HB3	11:C:127:ASN:CG	2.12	0.69
27:S:8:ARG:CZ	27:S:102:HIS:NE2	2.55	0.69
6:5:428:LYS:NZ	10:B:1283:G:OP1	2.21	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1528:A:H3'	10:B:1529:G:H8	1.57	0.69
10:B:1540:G:H2'	10:B:1541:C:C5'	2.21	0.69
10:B:1857:G:H2'	10:B:1884:G:H22	1.56	0.69
10:B:2512:C:H4'	12:D:146:ILE:HG12	1.72	0.69
18:J:77:HIS:HD2	18:J:85:LYS:H	1.40	0.69
20:L:25:SER:HB3	20:L:27:LEU:HG	1.72	0.69
25:Q:52:ARG:NH2	25:Q:55:GLN:HG2	2.07	0.69
10:B:76:C:H5'	32:X:48:ARG:HH12	1.57	0.69
10:B:287:G:O6	10:B:354:A:N6	2.25	0.69
10:B:1519:G:C6	10:B:1520:U:C6	2.79	0.69
10:B:1542:U:O2'	10:B:1543:G:H5'	1.91	0.69
12:D:106:LYS:NZ	12:D:208:LYS:HD3	2.07	0.69
31:W:43:LYS:HG2	31:W:76:ARG:NH2	2.07	0.69
10:B:283:G:N1	10:B:284:U:C2	2.60	0.69
10:B:1594:U:H2'	10:B:1595:C:C6	2.27	0.69
11:C:74:PRO:HB2	11:C:96:LYS:HE3	1.74	0.69
13:E:73:ILE:HG22	13:E:73:ILE:O	1.92	0.69
18:J:17:VAL:HG13	18:J:57:LEU:HD21	1.73	0.69
20:L:38:GLN:O	20:L:39:LYS:HG3	1.92	0.69
26:R:66:HIS:H	26:R:98:ILE:HD13	1.57	0.69
26:R:90:ARG:NH1	26:R:91:GLN:H	1.90	0.69
31:W:47:GLY:HA3	31:W:55:ASP:HB3	1.72	0.69
10:B:319:G:C5	10:B:333:G:N1	2.61	0.69
10:B:1525:A:C6	10:B:1526:C:C4	2.81	0.69
10:B:1902:C:H4'	11:C:240:GLY:O	1.92	0.69
20:L:29:LYS:HD2	20:L:30:THR:H	1.55	0.69
21:M:108:VAL:O	21:M:110:GLU:N	2.25	0.69
21:M:108:VAL:N	21:M:109:PRO:HD2	2.06	0.69
28:T:30:ILE:HG22	28:T:85:VAL:HG22	1.74	0.69
28:T:66:LYS:H	28:T:77:ARG:HA	1.56	0.69
34:Z:26:SER:O	34:Z:28:VAL:HG13	1.93	0.69
10:B:291:G:C5	10:B:350:G:N1	2.59	0.69
10:B:326:G:C2	10:B:327:G:C5	2.81	0.69
10:B:332:A:N3	10:B:335:C:C4	2.60	0.69
10:B:775:G:H4'	10:B:776:G:H5'	1.72	0.69
10:B:990:A:H1'	10:B:1156:A:C2	2.27	0.69
10:B:1112:G:N3	10:B:1112:G:H2'	2.07	0.69
10:B:1118:C:OP1	30:V:84:PRO:CG	2.37	0.69
10:B:1516:G:N2	10:B:1517:G:H1'	2.07	0.69
10:B:1993:U:H4'	12:D:134:HIS:HE1	1.55	0.69
10:B:2155:U:H2'	10:B:2156:G:O4'	1.91	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2621:G:O2'	12:D:164:GLN:HB2	1.93	0.69
10:B:2769:U:H2'	10:B:2770:G:H8	1.58	0.69
17:I:135:MET:HG3	17:I:137:LEU:HG	1.73	0.69
29:U:44:HIS:HD1	29:U:45:GLN:N	1.90	0.69
34:Z:63:ARG:HA	34:Z:63:ARG:NE	2.08	0.69
10:B:346:A:N1	10:B:347:A:C8	2.61	0.69
10:B:1115:G:C2	10:B:1116:G:C5	2.81	0.69
10:B:1439:A:C5	10:B:1552:A:N7	2.59	0.69
11:C:127:ASN:HD22	11:C:128:THR:N	1.90	0.69
19:K:85:VAL:HG11	19:K:115:ILE:HD12	1.73	0.69
20:L:95:LEU:HD12	20:L:95:LEU:H	1.58	0.69
22:N:10:LEU:H	22:N:17:ARG:NH1	1.88	0.69
6:5:428:LYS:NZ	10:B:1283:G:P	2.66	0.69
9:A:49:C:H2'	9:A:50:A:H8	1.56	0.69
9:A:98:G:H1	30:V:14:LYS:HB2	1.57	0.69
10:B:287:G:C2'	10:B:288:U:H5'	2.23	0.69
10:B:295:G:N1	10:B:344:A:C6	2.61	0.69
10:B:319:G:C6	10:B:333:G:C6	2.80	0.69
10:B:354:A:H3'	10:B:355:U:H5''	1.75	0.69
10:B:1021:A:N6	10:B:1141:U:H3	1.82	0.69
10:B:1052:C:O2'	10:B:1053:C:H5'	1.93	0.69
10:B:1053:C:C4	10:B:1107:G:N1	2.60	0.69
10:B:1285:A:H2'	10:B:1286:A:H5''	1.75	0.69
10:B:2307:G:H4'	10:B:2311:A:H61	1.58	0.69
11:C:27:LYS:N	11:C:28:PRO:CD	2.56	0.69
11:C:155:ARG:HB3	11:C:159:THR:HG21	1.74	0.69
13:E:119:ILE:HA	13:E:189:THR:HA	1.74	0.69
16:H:81:ALA:HA	16:H:146:VAL:HA	1.75	0.69
20:L:78:ARG:HH21	20:L:82:LEU:HD23	1.58	0.69
21:M:136:MET:SD	30:V:76:ASP:HB2	2.33	0.69
10:B:278:A:H2	10:B:279:A:N7	1.91	0.69
10:B:1059:G:H4'	17:I:116:MET:CA	2.22	0.69
10:B:1110:G:HO2'	10:B:1111:A:P	2.15	0.69
10:B:1440:U:H2'	10:B:1441:G:H8	1.57	0.69
10:B:1537:G:H3'	10:B:1537:G:N3	2.07	0.69
10:B:2512:C:H1'	12:D:146:ILE:HG23	1.75	0.69
20:L:106:GLU:HG2	20:L:107:PHE:H	1.57	0.69
10:B:1799:G:H4'	10:B:1800:C:O5'	1.92	0.69
11:C:61:TYR:CD2	11:C:84:PRO:HD2	2.28	0.69
11:C:110:LYS:HD2	11:C:111:ALA:N	2.07	0.69
11:C:181:ARG:NH2	11:C:260:LYS:HD2	2.08	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:E:135:ALA:HA	13:E:138:LEU:HB2	1.74	0.69
16:H:50:ARG:CB	16:H:51:ARG:HB3	2.23	0.69
16:H:73:ASN:ND2	16:H:74:ALA:H	1.91	0.69
10:B:340:A:C2'	10:B:341:C:H5'	2.22	0.68
10:B:346:A:H2'	10:B:347:A:O4'	1.93	0.68
10:B:352:A:C5	10:B:353:C:C5	2.81	0.68
10:B:1050:A:C5	10:B:2751:G:N7	2.56	0.68
10:B:1079:C:C2'	10:B:1080:A:H5'	2.23	0.68
14:F:56:LEU:O	14:F:59:ILE:HG22	1.93	0.68
17:I:11:GLN:HA	17:I:55:PRO:HA	1.74	0.68
17:I:32:VAL:HG22	17:I:60:VAL:HG21	1.73	0.68
21:M:108:VAL:N	21:M:109:PRO:CD	2.56	0.68
29:U:43:LYS:NZ	29:U:44:HIS:HA	2.08	0.68
1:O:51:ARG:N	22:N:118:ARG:NH2	2.41	0.68
10:B:273:G:N1	10:B:274:C:C2	2.61	0.68
10:B:278:A:N1	10:B:361:G:N3	2.42	0.68
10:B:330:A:N3	10:B:330:A:H2'	2.06	0.68
10:B:336:C:H5''	29:U:81:ARG:HE	0.61	0.68
10:B:547:A:H3'	10:B:548:G:C8	2.21	0.68
10:B:1091:G:O2'	10:B:1092:C:H5'	1.92	0.68
10:B:1485:U:H2'	10:B:1486:U:C6	2.28	0.68
10:B:2052:A:H4'	12:D:148:GLN:HG2	1.73	0.68
26:R:62:GLU:HG3	26:R:103:ALA:HA	1.75	0.68
28:T:13:ALA:O	28:T:32:LEU:HA	1.92	0.68
10:B:1042:G:C4	10:B:1043:C:C5	2.81	0.68
14:F:107:VAL:N	14:F:108:PRO:CD	2.55	0.68
16:H:6:LEU:HA	16:H:15:LEU:C	2.14	0.68
18:J:10:THR:HB	18:J:13:ARG:HH12	1.58	0.68
29:U:3:LYS:HE3	29:U:81:ARG:HH22	1.59	0.68
3:2:33:ARG:O	3:2:37:LYS:HB2	1.93	0.68
10:B:80:G:C5'	10:B:346:A:N9	2.49	0.68
10:B:324:A:N6	10:B:339:U:H5'	2.08	0.68
10:B:352:A:N1	10:B:353:C:C2	2.62	0.68
16:H:44:ILE:C	16:H:47:PHE:CD1	2.61	0.68
26:R:54:VAL:CA	26:R:54:VAL:CG1	2.69	0.68
29:U:3:LYS:HE3	29:U:81:ARG:NH2	2.07	0.68
10:B:291:G:C2	10:B:350:G:N9	2.60	0.68
10:B:1182:G:H2'	10:B:1183:U:O4'	1.93	0.68
10:B:1354:A:H2'	10:B:1355:G:O4'	1.94	0.68
10:B:1534:U:C2	10:B:1538:G:N1	2.61	0.68
10:B:1565:C:OP1	11:C:23:LEU:HD23	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:G:40:VAL:HG13	15:G:52:GLY:O	1.92	0.68
21:M:8:LYS:HD2	21:M:70:ASP:HA	1.76	0.68
1:0:31:LYS:HD3	1:0:47:TYR:HE2	1.57	0.68
10:B:271:G:N7	10:B:367:G:C4	2.62	0.68
10:B:1513:U:C4	10:B:1514:G:C8	2.82	0.68
21:M:4:PRO:O	21:M:5:LYS:O	2.12	0.68
34:Z:3:LYS:HE3	34:Z:8:LYS:HA	1.75	0.68
10:B:313:G:H2'	10:B:314:C:C6	2.28	0.68
10:B:956:G:N2	10:B:959:A:H3'	2.09	0.68
10:B:1454:C:C5'	22:N:63:ARG:HH21	2.07	0.68
10:B:2786:U:H4'	12:D:66:GLY:HA2	1.74	0.68
11:C:136:VAL:HG12	11:C:165:ALA:HA	1.75	0.68
11:C:155:ARG:HH11	11:C:155:ARG:HG2	1.59	0.68
13:E:48:THR:HG23	13:E:86:ALA:HB1	1.76	0.68
18:J:43:GLU:HG3	18:J:44:TYR:H	1.58	0.68
20:L:56:PRO:C	20:L:60:ARG:HB2	2.13	0.68
24:P:5:LYS:C	24:P:7:LEU:H	1.96	0.68
10:B:313:G:C4	10:B:314:C:C5	2.82	0.68
10:B:352:A:N1	10:B:353:C:N3	2.42	0.68
10:B:1568:G:OP1	11:C:61:TYR:HB2	1.94	0.68
10:B:2301:C:H2'	10:B:2302:U:C6	2.28	0.68
10:B:2645:G:H3'	10:B:2646:C:H5'	1.75	0.68
18:J:58:ASN:ND2	18:J:128:ASN:HB2	2.08	0.68
23:O:55:GLU:HG3	23:O:56:LYS:H	1.58	0.68
28:T:65:GLY:O	28:T:66:LYS:HB3	1.93	0.68
29:U:46:LYS:HB3	29:U:53:GLN:NE2	2.06	0.68
34:Z:5:ILE:HD12	34:Z:5:ILE:H	1.59	0.68
6:5:346:GLY:HA3	6:5:350:LEU:HD23	1.76	0.68
10:B:27:G:N2	10:B:512:G:H2'	2.09	0.68
10:B:362:A:N3	10:B:363:G:C8	2.62	0.68
10:B:1054:A:O2'	10:B:1055:G:H5'	1.94	0.68
12:D:114:LYS:HB3	22:N:3:HIS:NE2	2.08	0.68
15:G:175:LYS:HD3	15:G:176:LYS:N	2.09	0.68
18:J:58:ASN:HA	18:J:126:ALA:HA	1.76	0.68
20:L:30:THR:HG22	20:L:36:LYS:HZ2	1.59	0.68
20:L:100:ILE:HG12	20:L:102:GLY:H	1.59	0.68
34:Z:5:ILE:HB	34:Z:51:VAL:HG12	1.74	0.68
10:B:291:G:N7	10:B:350:G:C6	2.60	0.68
10:B:362:A:C5	10:B:363:G:N7	2.61	0.68
11:C:19:VAL:HG12	11:C:20:ASN:N	2.08	0.68
11:C:22:GLU:HA	11:C:202:ARG:NE	2.09	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:C:119:VAL:HG22	11:C:133:ASN:HD21	1.57	0.68
11:C:220:ARG:NE	11:C:220:ARG:HA	2.09	0.68
14:F:33:ILE:HG13	14:F:34:THR:H	1.58	0.68
21:M:38:ARG:HG2	21:M:96:ILE:HG12	1.76	0.68
21:M:101:VAL:O	21:M:102:LEU:HD12	1.94	0.68
10:B:150:U:H2'	10:B:151:C:H6	1.58	0.67
10:B:299:A:P	10:B:299:A:H8	2.17	0.67
10:B:308:G:N1	10:B:309:A:C2	2.62	0.67
10:B:337:C:H2'	10:B:338:G:O4'	1.94	0.67
10:B:348:A:C4	10:B:349:U:C6	2.82	0.67
10:B:1048:A:C6	10:B:1049:C:N3	2.62	0.67
10:B:1048:A:C2'	10:B:1049:C:H5'	2.25	0.67
16:H:130:VAL:HB	16:H:142:VAL:HB	1.76	0.67
10:B:297:G:C6	10:B:298:G:N1	2.62	0.67
10:B:337:C:OP2	29:U:81:ARG:CZ	2.42	0.67
10:B:359:G:H2'	10:B:360:U:C6	2.29	0.67
10:B:450:G:H4'	13:E:47:LYS:HZ2	1.59	0.67
10:B:630:G:H1	20:L:69:ARG:NH2	1.90	0.67
10:B:1542:U:O5'	10:B:1542:U:H6	1.77	0.67
10:B:1818:U:H5''	11:C:155:ARG:CG	2.24	0.67
10:B:2037:A:H2'	10:B:2038:G:C8	2.30	0.67
10:B:2784:U:H5''	12:D:41:ALA:HB1	1.75	0.67
11:C:28:PRO:HB2	11:C:79:ARG:HH21	1.58	0.67
15:G:29:ASN:HD22	15:G:29:ASN:N	1.91	0.67
18:J:67:ASN:O	18:J:70:THR:HG22	1.94	0.67
20:L:56:PRO:HA	20:L:60:ARG:CZ	2.23	0.67
24:P:45:VAL:HG13	24:P:65:ASN:HD22	1.59	0.67
24:P:77:SER:HB2	24:P:78:PRO:HD3	1.76	0.67
10:B:191:A:H2'	10:B:192:C:C6	2.29	0.67
10:B:215:G:H4'	10:B:216:A:H4'	1.77	0.67
10:B:278:A:C2	10:B:361:G:N3	2.63	0.67
10:B:346:A:N3	10:B:346:A:H3'	2.09	0.67
15:G:23:ILE:O	15:G:33:THR:HA	1.95	0.67
18:J:7:LYS:NZ	18:J:48:VAL:HB	2.09	0.67
18:J:11:VAL:HG11	18:J:44:TYR:CE1	2.30	0.67
18:J:37:ARG:HH21	18:J:110:PRO:HG3	1.58	0.67
18:J:100:VAL:HG22	18:J:101:ILE:H	1.59	0.67
23:O:9:ARG:HA	23:O:12:THR:HG23	1.76	0.67
26:R:53:PHE:CD1	26:R:54:VAL:HB	2.30	0.67
10:B:1063:G:O5'	17:I:76:ALA:HB2	1.91	0.67
10:B:2198:A:H4'	10:B:2199:A:OP1	1.95	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:D:109:VAL:HG11	12:D:193:VAL:HG23	1.76	0.67
16:H:8:LYS:HB3	16:H:14:SER:HA	1.75	0.67
20:L:85:VAL:CG2	20:L:98:ALA:H	2.05	0.67
22:N:115:LEU:N	22:N:115:LEU:HD23	2.10	0.67
23:O:10:ARG:HH11	23:O:10:ARG:HG3	1.59	0.67
24:P:22:GLY:HA3	24:P:91:VAL:HG13	1.75	0.67
29:U:44:HIS:HE1	29:U:47:PRO:HD3	1.59	0.67
10:B:300:A:N3	10:B:319:G:H1'	2.09	0.67
10:B:307:G:N2	10:B:309:A:H3'	2.10	0.67
10:B:869:G:H2'	10:B:870:U:H6	1.58	0.67
10:B:1856:U:H2'	10:B:1857:G:O4'	1.95	0.67
10:B:2723:C:OP1	22:N:3:HIS:HB3	1.93	0.67
12:D:101:PHE:O	12:D:102:ALA:HB3	1.95	0.67
22:N:73:ASN:HD22	22:N:73:ASN:N	1.91	0.67
24:P:70:GLU:HG2	24:P:71:ARG:HG2	1.75	0.67
26:R:18:GLN:HE21	26:R:99:THR:HB	1.57	0.67
1:O:51:ARG:C	22:N:118:ARG:CZ	2.61	0.67
10:B:317:G:C4	10:B:318:C:C5	2.82	0.67
10:B:320:A:C4'	13:E:130:LYS:NZ	2.57	0.67
10:B:2572:A:C5	12:D:150:GLN:HB2	2.30	0.67
10:B:2840:C:H5''	22:N:53:THR:HG21	1.75	0.67
11:C:140:VAL:O	11:C:141:HIS:HB2	1.93	0.67
12:D:15:PHE:HD2	12:D:18:ASP:HB2	1.58	0.67
18:J:77:HIS:CD2	18:J:84:ILE:HB	2.29	0.67
25:Q:57:ARG:HD2	25:Q:92:LYS:HZ2	1.58	0.67
25:Q:77:LYS:HB3	25:Q:116:LEU:HD11	1.75	0.67
31:W:23:LYS:HB2	31:W:23:LYS:HZ2	1.60	0.67
31:W:66:VAL:HG22	31:W:67:LYS:H	1.59	0.67
10:B:335:C:O5'	10:B:335:C:H6	1.78	0.67
10:B:346:A:C4	10:B:347:A:C8	2.83	0.67
11:C:68:ARG:HH21	11:C:190:THR:HG23	1.58	0.67
12:D:21:SER:C	12:D:23:PRO:HD3	2.15	0.67
16:H:26:ALA:HB1	16:H:31:VAL:HG23	1.76	0.67
23:O:15:ARG:HH22	23:O:17:LYS:HD2	1.59	0.67
29:U:48:VAL:HB	29:U:54:PRO:HD3	1.74	0.67
1:O:52:LYS:CD	22:N:118:ARG:NH1	2.58	0.67
10:B:1450:G:N2	10:B:1452:G:H1	1.91	0.67
10:B:1818:U:H2'	11:C:152:GLN:O	1.94	0.67
10:B:2239:G:H5'	11:C:246:PRO:HD2	1.77	0.67
12:D:128:ARG:HD2	12:D:144:GLY:CA	2.25	0.67
12:D:142:VAL:C	12:D:144:GLY:N	2.39	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:G:86:LEU:HB2	15:G:130:ILE:HB	1.76	0.67
16:H:82:SER:HB2	16:H:94:ILE:HD11	1.74	0.67
19:K:2:ILE:HD11	19:K:8:LEU:HD11	1.75	0.67
29:U:38:ILE:HB	29:U:62:ALA:HB3	1.75	0.67
29:U:95:PHE:HD2	29:U:96:LYS:HG2	1.59	0.67
4:3:29:ARG:NH2	20:L:62:PRO:HB3	2.10	0.67
10:B:65:U:H4'	28:T:70:HIS:ND1	2.10	0.67
10:B:80:G:H5''	10:B:346:A:C8	2.23	0.67
10:B:95:A:H4'	32:X:40:SER:CB	2.24	0.67
10:B:298:G:O6	36:B:3138:HOH:O	2.13	0.67
10:B:298:G:H21	10:B:340:A:H62	1.43	0.67
10:B:1062:G:H2'	10:B:1063:G:C8	2.27	0.67
10:B:1073:A:O2'	10:B:1074:G:H5'	1.95	0.67
10:B:2324:U:H5'	10:B:2325:G:H5''	1.77	0.67
23:O:38:GLN:HA	23:O:50:ALA:HB3	1.77	0.67
32:X:30:MET:HG3	32:X:31:GLN:N	2.08	0.67
10:B:301:G:C4	10:B:302:C:C4	2.83	0.67
10:B:1022:G:N7	18:J:68:LYS:HE3	2.10	0.67
10:B:1523:U:O5'	10:B:1523:U:H6	1.78	0.67
10:B:2039:U:H2'	10:B:2040:G:H8	1.59	0.67
11:C:22:GLU:HA	11:C:202:ARG:NH2	2.09	0.67
11:C:144:GLU:HB2	11:C:146:LYS:O	1.94	0.67
12:D:117:GLY:O	12:D:165:MET:HB2	1.94	0.67
13:E:59:PRO:HD2	13:E:60:TRP:CE2	2.30	0.67
13:E:164:LEU:O	13:E:165:HIS:HB2	1.93	0.67
26:R:78:ARG:HD3	26:R:88:GLY:N	2.10	0.67
29:U:42:LYS:HD2	29:U:60:LYS:HG2	1.77	0.67
10:B:91:A:H2'	10:B:92:U:C6	2.29	0.66
10:B:273:G:C5	10:B:274:C:C4	2.82	0.66
10:B:479:A:N3	10:B:481:G:H5''	2.09	0.66
10:B:594:U:H2'	10:B:595:C:C6	2.29	0.66
10:B:1043:C:O5'	10:B:1043:C:H6	1.78	0.66
10:B:1098:A:H2'	10:B:1099:G:H5'	1.77	0.66
10:B:2336:A:H1'	10:B:2337:G:OP1	1.95	0.66
1:0:51:ARG:NH2	22:N:125:ALA:HB2	2.10	0.66
10:B:138:U:H2'	10:B:140:C:C1'	2.25	0.66
10:B:139:U:N3	28:T:1:MET:HB2	2.11	0.66
10:B:192:C:H2'	10:B:193:U:H5'	1.77	0.66
10:B:319:G:H2'	10:B:320:A:H8	1.59	0.66
10:B:327:G:C2	10:B:336:C:C2	2.83	0.66
10:B:442:G:N2	13:E:46:GLN:NE2	2.44	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1112:G:N3	10:B:1113:U:C5	2.64	0.66
10:B:1447:C:H2'	10:B:1448:G:H8	1.60	0.66
10:B:1521:G:C8	10:B:1522:A:N7	2.64	0.66
10:B:1550:C:H5'	10:B:1741:C:O2	1.95	0.66
10:B:1844:C:OP1	11:C:252:LYS:HA	1.95	0.66
12:D:98:VAL:HA	12:D:101:PHE:CE2	2.30	0.66
13:E:149:ILE:HG13	13:E:186:VAL:HG13	1.77	0.66
14:F:174:PHE:N	14:F:175:PRO:CD	2.56	0.66
21:M:133:LYS:HG3	30:V:57:TYR:HB3	1.76	0.66
22:N:37:THR:HA	22:N:109:PRO:O	1.95	0.66
25:Q:92:LYS:HG2	25:Q:93:ILE:H	1.59	0.66
26:R:6:GLN:HB3	26:R:10:LYS:HE3	1.76	0.66
26:R:42:ALA:HA	26:R:54:VAL:HG22	1.77	0.66
32:X:55:THR:HG22	32:X:59:GLU:OE1	1.94	0.66
2:1:46:VAL:HG22	2:1:47:ILE:H	1.59	0.66
9:A:114:C:O2'	23:O:49:VAL:HG21	1.95	0.66
10:B:324:A:N6	10:B:338:G:H2'	2.10	0.66
10:B:1540:G:H2'	10:B:1541:C:H5'	1.75	0.66
10:B:2339:C:H2'	10:B:2340:A:H8	1.61	0.66
11:C:163:ILE:HG22	11:C:164:VAL:H	1.59	0.66
12:D:34:VAL:HG22	12:D:89:GLU:CG	2.25	0.66
19:K:98:ARG:HA	19:K:118:LEU:HD22	1.77	0.66
26:R:18:GLN:HB3	26:R:99:THR:HA	1.75	0.66
1:0:41:HIS:CG	1:0:48:TYR:HA	2.31	0.66
5:4:20:ASP:OD1	5:4:22:VAL:HG13	1.96	0.66
10:B:38:A:C8	13:E:46:GLN:CD	2.69	0.66
10:B:273:G:C6	10:B:274:C:N3	2.64	0.66
10:B:317:G:H21	10:B:318:C:H1'	1.58	0.66
10:B:1406:U:H2'	10:B:1407:G:H8	1.60	0.66
10:B:2859:G:H2'	10:B:2860:A:C8	2.31	0.66
12:D:170:VAL:HG21	12:D:194:PRO:HG2	1.77	0.66
15:G:5:LYS:HB3	15:G:68:ARG:NH2	2.10	0.66
18:J:99:ARG:HA	18:J:103:ILE:HG13	1.75	0.66
22:N:72:ASP:HB3	22:N:74:GLU:HG3	1.76	0.66
22:N:98:LEU:O	22:N:111:ALA:HA	1.94	0.66
23:O:40:ILE:HA	23:O:48:LEU:HB3	1.77	0.66
25:Q:39:ILE:O	25:Q:43:GLN:HG3	1.95	0.66
10:B:301:G:C6	10:B:317:G:C6	2.82	0.66
10:B:309:A:H8	10:B:309:A:P	2.19	0.66
10:B:1387:A:H2'	10:B:1388:G:H8	1.61	0.66
10:B:1654:A:OP1	22:N:1:MET:HB2	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2575:C:C5'	12:D:149:ASN:HB2	2.21	0.66
11:C:42:ARG:HG2	11:C:43:ASN:N	2.06	0.66
18:J:119:PHE:CG	18:J:120:ARG:N	2.63	0.66
25:Q:33:VAL:HG13	25:Q:34:ALA:N	2.07	0.66
30:V:14:LYS:NZ	30:V:18:ARG:HD2	2.11	0.66
30:V:80:HIS:N	30:V:87:GLN:HE22	1.94	0.66
1:0:11:LYS:HG3	1:0:12:ARG:N	2.10	0.66
10:B:155:A:H2'	10:B:156:A:C8	2.30	0.66
10:B:281:C:H2'	10:B:282:A:C8	2.31	0.66
10:B:1459:G:O2'	10:B:1460:U:H5'	1.95	0.66
11:C:76:VAL:O	11:C:93:VAL:HA	1.96	0.66
27:S:52:GLU:HA	27:S:55:ILE:HG22	1.78	0.66
30:V:26:PHE:HE2	30:V:44:HIS:HA	1.61	0.66
5:4:14:CYS:SG	5:4:25:VAL:HG12	2.36	0.66
10:B:528:A:C2	10:B:2043:C:H4'	2.30	0.66
10:B:1528:A:H2'	10:B:1529:G:O4'	1.95	0.66
10:B:1538:G:C6	10:B:1539:U:C5	2.84	0.66
10:B:1843:C:H5''	11:C:252:LYS:NZ	2.10	0.66
13:E:44:ARG:HD3	13:E:44:ARG:H	1.60	0.66
22:N:12:ARG:HD3	22:N:20:MET:HG3	1.78	0.66
22:N:34:ILE:HD13	22:N:34:ILE:N	2.11	0.66
3:2:7:PRO:HG2	10:B:1309:G:H4'	1.78	0.66
10:B:321:U:C1'	13:E:129:PRO:HB2	2.25	0.66
10:B:441:U:H2'	10:B:442:G:H8	1.61	0.66
10:B:691:C:O2'	11:C:42:ARG:HD2	1.96	0.66
10:B:855:G:H21	31:W:23:LYS:CD	2.08	0.66
10:B:2216:G:H2'	10:B:2217:G:C8	2.30	0.66
10:B:2339:C:H2'	10:B:2340:A:C8	2.30	0.66
29:U:47:PRO:HD2	29:U:48:VAL:H	1.60	0.66
32:X:19:LEU:O	32:X:22:LEU:HB2	1.96	0.66
3:2:33:ARG:HD3	10:B:467:G:OP1	1.96	0.66
10:B:276:U:O2'	10:B:278:A:N7	2.27	0.66
10:B:293:U:H6	10:B:293:U:O5'	1.78	0.66
10:B:1015:U:H2'	10:B:1016:G:H8	1.60	0.66
17:I:20:SER:O	17:I:25:PRO:HD2	1.96	0.66
17:I:91:LYS:HB2	17:I:94:LYS:HD2	1.78	0.66
20:L:54:GLN:HB3	20:L:56:PRO:HD2	1.78	0.66
21:M:36:VAL:HA	21:M:97:GLN:HG2	1.78	0.66
9:A:60:C:H2'	9:A:61:G:C8	2.31	0.66
10:B:336:C:C4'	29:U:81:ARG:HH21	2.09	0.66
10:B:633:A:O5'	10:B:633:A:H8	1.79	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:968:C:H2'	10:B:969:G:H8	1.61	0.66
10:B:1866:A:H2'	10:B:1867:G:O4'	1.96	0.66
10:B:2270:A:H4'	31:W:18:LYS:CG	2.25	0.66
13:E:113:VAL:HG23	13:E:117:ARG:NH2	2.11	0.66
16:H:50:ARG:CZ	16:H:54:LEU:HG	2.25	0.66
17:I:116:MET:HE1	17:I:124:MET:O	1.96	0.66
20:L:69:ARG:HG3	20:L:69:ARG:O	1.95	0.66
29:U:44:HIS:CE1	29:U:47:PRO:HD3	2.31	0.66
10:B:277:G:H1'	10:B:361:G:C6	2.31	0.65
10:B:295:G:C6	10:B:344:A:C2	2.83	0.65
10:B:301:G:C5	10:B:302:C:C4	2.84	0.65
10:B:320:A:C8	13:E:132:LYS:HB3	2.31	0.65
10:B:934:U:H2'	10:B:935:C:C6	2.31	0.65
10:B:1038:G:C2	10:B:1039:A:C6	2.83	0.65
10:B:1484:U:H2'	10:B:1485:U:C6	2.31	0.65
12:D:170:VAL:HG13	12:D:171:THR:N	2.06	0.65
15:G:86:LEU:HD13	15:G:163:TYR:HA	1.78	0.65
24:P:38:ARG:HG3	24:P:39:LEU:H	1.61	0.65
24:P:52:ARG:HB3	24:P:60:VAL:CG1	2.18	0.65
29:U:48:VAL:O	29:U:53:GLN:HG2	1.95	0.65
10:B:341:C:O5'	10:B:341:C:H6	1.79	0.65
10:B:354:A:H2'	10:B:355:U:C5'	2.25	0.65
10:B:1064:C:P	17:I:76:ALA:CB	2.73	0.65
14:F:132:ARG:HD3	14:F:133:GLU:HB2	1.78	0.65
20:L:38:GLN:H	20:L:41:ARG:NH1	1.94	0.65
30:V:70:ILE:HG12	30:V:71:LYS:H	1.61	0.65
1:O:8:THR:HG23	1:O:9:ARG:H	1.61	0.65
10:B:394:C:H2'	10:B:395:U:O4'	1.96	0.65
10:B:1066:U:O5'	10:B:1066:U:H6	1.78	0.65
10:B:1070:A:C1'	17:I:9:LYS:NZ	2.58	0.65
10:B:1101:U:H2'	10:B:1102:C:H5'	1.78	0.65
10:B:1104:C:C2'	10:B:1105:U:H5'	2.26	0.65
10:B:1727:C:H2'	10:B:1728:C:C6	2.31	0.65
10:B:1794:A:H2'	10:B:1795:C:C6	2.31	0.65
13:E:116:ASP:HB2	13:E:185:LYS:HA	1.78	0.65
20:L:91:ASP:HB2	20:L:123:ARG:HH11	1.62	0.65
22:N:62:ASN:ND2	22:N:80:PHE:HB3	2.12	0.65
23:O:56:LYS:HE3	23:O:57:ALA:N	2.11	0.65
28:T:63:VAL:HG13	28:T:80:TRP:HB2	1.79	0.65
30:V:77:VAL:HG21	30:V:79:ARG:HH21	1.61	0.65
31:W:32:ALA:O	31:W:66:VAL:HG11	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Y:20:LYS:HA	33:Y:24:LEU:HB2	1.77	0.65
10:B:222:A:H61	10:B:232:G:H1'	1.61	0.65
10:B:332:A:N1	10:B:335:C:N3	2.42	0.65
10:B:1059:G:H5'	17:I:117:THR:HG23	0.66	0.65
10:B:1373:A:H2'	10:B:1374:G:O4'	1.96	0.65
10:B:2025:C:H2'	10:B:2026:U:C6	2.31	0.65
10:B:2308:G:H5'	10:B:2309:A:H5''	1.77	0.65
19:K:71:ARG:O	19:K:72:PRO:C	2.34	0.65
20:L:118:THR:N	20:L:119:PRO:CD	2.56	0.65
23:O:37:ALA:O	23:O:38:GLN:HG2	1.97	0.65
1:O:29:VAL:HG23	1:O:36:LYS:HZ2	1.60	0.65
10:B:362:A:C5	10:B:363:G:C8	2.85	0.65
10:B:1037:G:C2'	10:B:1038:G:H8	2.04	0.65
10:B:1508:A:H5''	10:B:1509:A:N7	2.12	0.65
10:B:1530:G:H2'	10:B:1530:G:N3	2.10	0.65
10:B:2512:C:H5''	12:D:125:TRP:HZ3	1.61	0.65
10:B:2619:C:H4'	12:D:157:LYS:HA	1.79	0.65
11:C:92:LEU:O	11:C:93:VAL:HB	1.95	0.65
12:D:130:GLN:NE2	12:D:138:LEU:HD12	2.12	0.65
18:J:3:THR:HG21	25:Q:93:ILE:HG13	1.78	0.65
10:B:64:A:H2'	10:B:65:U:C6	2.31	0.65
10:B:305:C:H6	10:B:305:C:O5'	1.79	0.65
10:B:441:U:O2'	10:B:442:G:H5'	1.97	0.65
10:B:911:A:N6	21:M:13:HIS:HB3	2.12	0.65
10:B:1440:U:H2'	10:B:1441:G:C8	2.31	0.65
11:C:155:ARG:HG2	11:C:155:ARG:NH1	2.10	0.65
16:H:50:ARG:CG	16:H:51:ARG:HB3	2.27	0.65
17:I:27:LEU:H	17:I:27:LEU:CD2	2.08	0.65
18:J:39:LYS:NZ	25:Q:69:ARG:HD2	2.11	0.65
21:M:9:PHE:CG	21:M:10:ARG:N	2.64	0.65
10:B:271:G:C8	10:B:367:G:N3	2.65	0.65
10:B:289:G:C6	10:B:290:U:C4	2.85	0.65
10:B:295:G:C2	10:B:296:U:C6	2.84	0.65
10:B:296:U:N3	10:B:343:C:N3	2.44	0.65
10:B:1118:C:O5'	10:B:1118:C:H6	1.79	0.65
10:B:2557:G:H2'	10:B:2558:C:C6	2.31	0.65
12:D:83:ARG:HG2	12:D:84:LEU:N	2.11	0.65
12:D:149:ASN:CB	12:D:150:GLN:HG2	2.25	0.65
18:J:10:THR:HB	18:J:13:ARG:NH1	2.11	0.65
27:S:34:ASP:H	27:S:37:THR:HG22	1.62	0.65
31:W:23:LYS:HB2	31:W:23:LYS:NZ	2.12	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:215:G:C4'	10:B:216:A:H4'	2.27	0.65
10:B:278:A:C5	10:B:362:A:C5	2.83	0.65
10:B:337:C:P	29:U:81:ARG:CZ	2.84	0.65
10:B:347:A:C2	10:B:348:A:N9	2.65	0.65
10:B:854:C:H2'	10:B:855:G:H8	1.61	0.65
10:B:1410:G:H2'	10:B:1411:U:C6	2.31	0.65
10:B:1516:G:C2'	10:B:1517:G:H5'	2.25	0.65
10:B:1516:G:C2'	10:B:1517:G:H8	2.02	0.65
11:C:143:VAL:O	11:C:152:GLN:HB2	1.97	0.65
12:D:23:PRO:HB3	12:D:189:VAL:N	2.11	0.65
16:H:3:VAL:HG22	16:H:21:VAL:HG21	1.78	0.65
21:M:12:MET:HG2	21:M:12:MET:O	1.96	0.65
21:M:67:VAL:HG21	21:M:95:LEU:HD21	1.78	0.65
23:O:40:ILE:HD13	23:O:40:ILE:H	1.62	0.65
26:R:53:PHE:O	26:R:54:VAL:O	2.15	0.65
31:W:31:LEU:HD11	31:W:34:SER:CB	2.27	0.65
10:B:21:A:O2'	10:B:22:C:H5'	1.97	0.65
10:B:340:A:N7	10:B:341:C:C4	2.65	0.65
10:B:559:G:H1'	25:Q:55:GLN:NE2	2.12	0.65
10:B:1132:U:H5''	18:J:85:LYS:HZ3	1.60	0.65
10:B:1838:C:N4	10:B:1898:U:H2'	2.11	0.65
10:B:2758:A:H2'	10:B:2759:G:O4'	1.96	0.65
11:C:181:ARG:HH12	11:C:260:LYS:HZ2	1.44	0.65
12:D:83:ARG:HG2	12:D:84:LEU:H	1.62	0.65
16:H:6:LEU:HD12	16:H:15:LEU:HA	1.77	0.65
21:M:33:LEU:N	21:M:101:VAL:HG22	2.12	0.65
24:P:13:LYS:HZ2	24:P:17:PRO:HG3	1.61	0.65
31:W:23:LYS:HE3	31:W:24:ARG:O	1.96	0.65
6:5:370:ASP:HA	6:5:374:VAL:HG23	1.79	0.65
10:B:273:G:H2'	10:B:273:G:N3	2.12	0.65
10:B:347:A:N3	10:B:348:A:H8	1.95	0.65
10:B:1521:G:H3'	10:B:1522:A:H2'	1.78	0.65
10:B:1540:G:O6	10:B:1541:C:N4	2.30	0.65
10:B:1652:A:H62	22:N:11:ASN:ND2	1.94	0.65
10:B:2039:U:H2'	10:B:2040:G:C8	2.31	0.65
10:B:2336:A:N6	31:W:69:GLU:HG3	2.12	0.65
11:C:53:ILE:HG21	11:C:218:THR:HG23	1.78	0.65
12:D:128:ARG:HH11	12:D:144:GLY:CA	2.10	0.65
13:E:128:ALA:HB3	13:E:129:PRO:CD	2.20	0.65
14:F:33:ILE:HA	14:F:155:ILE:HA	1.77	0.65
15:G:148:ARG:HH21	15:G:153:PRO:HD2	1.62	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:M:70:ASP:H	21:M:71:LYS:HZ2	1.42	0.65
1:0:51:ARG:HD2	1:0:56:LYS:OXT	1.97	0.64
4:3:11:LYS:CA	20:L:63:LYS:HG3	2.26	0.64
10:B:281:C:O2'	10:B:282:A:H5'	1.97	0.64
10:B:292:U:N3	10:B:348:A:C2	2.64	0.64
10:B:720:U:H2'	10:B:721:A:C8	2.32	0.64
10:B:784:G:O2'	10:B:785:G:H5''	1.97	0.64
11:C:171:VAL:HB	11:C:182:LYS:HB3	1.77	0.64
13:E:43:THR:HG23	13:E:44:ARG:NE	2.12	0.64
15:G:157:LYS:HG3	15:G:159:LYS:NZ	2.11	0.64
20:L:94:THR:HB	20:L:103:ILE:HG13	1.78	0.64
21:M:70:ASP:H	21:M:71:LYS:NZ	1.95	0.64
25:Q:97:ILE:HA	25:Q:100:PHE:CZ	2.32	0.64
10:B:263:G:H2'	10:B:264:C:O4'	1.97	0.64
10:B:348:A:H2'	10:B:349:U:O4'	1.95	0.64
10:B:616:A:H3'	10:B:617:G:H8	1.62	0.64
10:B:811:U:C5	20:L:29:LYS:HD3	2.32	0.64
10:B:2393:U:H5'	20:L:62:PRO:HD3	1.77	0.64
11:C:127:ASN:ND2	11:C:128:THR:H	1.95	0.64
25:Q:57:ARG:HA	25:Q:60:TRP:HE3	1.61	0.64
34:Z:25:ARG:HH11	34:Z:25:ARG:HB2	1.60	0.64
10:B:299:A:N3	10:B:322:A:C6	2.66	0.64
10:B:301:G:C4	10:B:302:C:N3	2.65	0.64
10:B:784:G:H5''	11:C:225:ASN:HD21	1.60	0.64
10:B:2880:C:H1'	22:N:92:GLY:O	1.97	0.64
12:D:154:LYS:HZ1	18:J:81:ILE:HD13	1.63	0.64
13:E:115:GLN:HA	13:E:185:LYS:HE3	1.79	0.64
15:G:25:ILE:O	15:G:31:GLU:HA	1.97	0.64
20:L:132:ARG:O	20:L:136:GLU:HB3	1.98	0.64
29:U:9:GLU:HA	29:U:23:LYS:HA	1.80	0.64
30:V:69:GLU:HG2	30:V:70:ILE:N	2.11	0.64
31:W:66:VAL:HG13	31:W:67:LYS:HG3	1.79	0.64
4:3:41:ARG:NH1	4:3:42:HIS:HB3	2.13	0.64
9:A:20:G:H2'	9:A:21:G:H8	1.63	0.64
10:B:143:C:H2'	10:B:144:A:C1'	2.27	0.64
10:B:172:A:H2'	10:B:173:A:C8	2.33	0.64
10:B:274:C:H6	10:B:274:C:O5'	1.79	0.64
10:B:773:U:H5'	10:B:774:G:OP2	1.97	0.64
10:B:813:U:H2'	10:B:814:C:C6	2.33	0.64
10:B:1386:C:H2'	10:B:1387:A:C8	2.32	0.64
10:B:1540:G:N1	10:B:1541:C:C5	2.65	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:D:128:ARG:NH1	12:D:130:GLN:NE2	2.46	0.64
17:I:100:ILE:O	17:I:139:VAL:HA	1.97	0.64
21:M:71:LYS:HE2	21:M:91:TYR:HB3	1.80	0.64
22:N:49:GLU:HB2	22:N:50:PRO:HD3	1.78	0.64
26:R:37:GLU:OE1	26:R:62:GLU:HB2	1.97	0.64
31:W:44:PHE:O	31:W:76:ARG:HA	1.96	0.64
10:B:83:A:N7	29:U:90:LYS:HB3	2.11	0.64
10:B:367:G:O2'	10:B:368:A:OP2	2.12	0.64
10:B:2467:C:O4'	21:M:118:LYS:HG2	1.98	0.64
10:B:2800:A:H2'	10:B:2801:G:O4'	1.98	0.64
16:H:140:ALA:C	16:H:141:LYS:HD3	2.18	0.64
18:J:15:TRP:HA	18:J:53:TYR:O	1.98	0.64
18:J:18:VAL:HG22	18:J:56:VAL:HA	1.78	0.64
18:J:90:GLU:O	18:J:93:ILE:HG22	1.98	0.64
20:L:94:THR:HA	20:L:96:LYS:HE2	1.79	0.64
25:Q:85:ALA:CB	25:Q:88:GLU:HB2	2.27	0.64
27:S:6:LYS:HB3	27:S:104:THR:HG22	1.78	0.64
4:3:7:ARG:HE	4:3:11:LYS:NZ	1.94	0.64
10:B:62:U:H3'	10:B:63:A:H8	1.62	0.64
10:B:632:A:H2'	10:B:633:A:C8	2.33	0.64
10:B:1090:A:C6	10:B:1102:C:C2	2.86	0.64
10:B:1109:C:N3	10:B:1110:G:C6	2.65	0.64
11:C:30:ALA:N	11:C:31:PRO:CD	2.53	0.64
11:C:68:ARG:NH2	11:C:127:ASN:HA	2.13	0.64
19:K:108:ARG:HA	19:K:116:ILE:HG21	1.79	0.64
20:L:14:LYS:HZ3	20:L:14:LYS:HA	1.61	0.64
21:M:33:LEU:HB2	21:M:101:VAL:CG2	2.27	0.64
1:0:52:LYS:HA	1:0:52:LYS:HZ3	1.62	0.64
10:B:309:A:N3	10:B:329:G:O2'	2.31	0.64
10:B:1063:G:HO2'	10:B:1064:C:H5'	1.61	0.64
10:B:1090:A:H2'	10:B:1091:G:H8	1.55	0.64
10:B:1116:G:C2	10:B:1117:C:C6	2.86	0.64
10:B:1176:U:H2'	10:B:1177:G:O4'	1.98	0.64
10:B:1189:A:O3'	20:L:41:ARG:HG2	1.98	0.64
10:B:1412:U:H2'	10:B:1413:A:C8	2.33	0.64
10:B:1544:A:C2'	10:B:1545:A:H5'	2.26	0.64
11:C:119:VAL:HG22	11:C:133:ASN:ND2	2.13	0.64
12:D:5:VAL:HG11	12:D:29:VAL:H	1.63	0.64
18:J:45:THR:HG22	25:Q:63:ARG:NH2	2.13	0.64
26:R:43:ASN:C	26:R:45:GLU:H	1.98	0.64
26:R:66:HIS:N	26:R:98:ILE:HD13	2.12	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:X:12:GLU:HB2	32:X:14:LEU:CD1	2.28	0.64
10:B:2053:G:OP1	12:D:149:ASN:O	2.16	0.64
10:B:2395:C:H2'	10:B:2396:G:O4'	1.96	0.64
10:B:2881:U:C5	22:N:120:GLU:OE1	2.45	0.64
11:C:164:VAL:HB	11:C:167:ASP:OD1	1.98	0.64
12:D:60:VAL:HB	12:D:63:PRO:HG2	1.80	0.64
24:P:38:ARG:CG	24:P:39:LEU:H	2.09	0.64
27:S:17:VAL:HA	27:S:43:ALA:HB1	1.77	0.64
33:Y:9:THR:HB	33:Y:54:VAL:CA	2.25	0.64
34:Z:8:LYS:HD2	34:Z:9:TYR:H	1.63	0.64
4:3:24:LYS:NZ	4:3:29:ARG:HH22	1.96	0.64
10:B:295:G:C2	10:B:344:A:N3	2.66	0.64
10:B:309:A:H1'	10:B:329:G:C2	2.32	0.64
10:B:321:U:H5''	13:E:130:LYS:CA	2.09	0.64
10:B:347:A:C6	10:B:348:A:C8	2.85	0.64
10:B:794:A:H2'	10:B:795:C:C6	2.33	0.64
11:C:66:PHE:O	11:C:68:ARG:N	2.30	0.64
15:G:6:ALA:HB3	15:G:7:PRO:HD3	1.80	0.64
18:J:41:LYS:O	25:Q:66:ALA:HB1	1.98	0.64
10:B:278:A:H3'	10:B:278:A:N3	2.13	0.64
10:B:338:G:H5'	36:B:3141:HOH:O	1.93	0.64
10:B:418:C:H2'	10:B:419:U:C6	2.32	0.64
10:B:877:A:H2'	10:B:899:A:N1	2.13	0.64
10:B:1036:G:O6	10:B:1120:G:C6	2.50	0.64
10:B:1039:A:C2	10:B:1040:A:C5	2.86	0.64
10:B:1074:G:H2'	10:B:1075:C:C6	2.32	0.64
11:C:68:ARG:HD3	11:C:103:ILE:CD1	2.27	0.64
11:C:141:HIS:CB	11:C:190:THR:HB	2.28	0.64
11:C:170:TYR:O	11:C:171:VAL:HG13	1.97	0.64
12:D:1:MET:HE2	12:D:84:LEU:HD13	1.80	0.64
12:D:157:LYS:HZ3	12:D:158:GLY:HA3	1.63	0.64
24:P:84:SER:O	24:P:86:LYS:N	2.31	0.64
29:U:78:LYS:HG3	29:U:96:LYS:HE3	1.79	0.64
10:B:181:A:H2'	10:B:182:A:H8	1.63	0.63
10:B:321:U:O5'	13:E:130:LYS:HA	1.96	0.63
10:B:1083:U:H1'	10:B:1086:A:N6	2.12	0.63
10:B:1224:U:H4'	26:R:90:ARG:HB3	1.79	0.63
10:B:1447:C:O2'	10:B:1544:A:C2	2.50	0.63
10:B:1539:U:H3'	10:B:1540:G:H8	1.63	0.63
10:B:2331:G:H5'	31:W:70:VAL:HG13	1.79	0.63
12:D:154:LYS:C	12:D:156:PHE:N	2.51	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:E:152:GLU:HG2	13:E:153:LEU:N	2.13	0.63
14:F:35:LEU:HA	14:F:153:ILE:HA	1.78	0.63
18:J:35:ARG:HH21	18:J:40:HIS:N	1.95	0.63
20:L:122:VAL:HG23	20:L:139:GLY:O	1.98	0.63
23:O:10:ARG:HG3	23:O:10:ARG:NH1	2.13	0.63
2:1:9:LYS:HG2	4:3:34:LYS:HZ1	1.63	0.63
10:B:142:A:H2'	10:B:143:C:C6	2.33	0.63
10:B:142:A:H1'	28:T:2:ILE:HG21	1.79	0.63
10:B:1049:C:O2'	10:B:1050:A:H5'	1.99	0.63
10:B:1081:U:O5'	10:B:1081:U:H6	1.80	0.63
10:B:2354:C:H4'	31:W:30:VAL:HG22	1.79	0.63
10:B:2759:G:H4'	15:G:34:ARG:HH12	1.62	0.63
11:C:68:ARG:NH2	11:C:190:THR:HG23	2.13	0.63
13:E:147:LEU:O	13:E:148:ILE:HG13	1.98	0.63
13:E:159:LEU:HA	13:E:169:VAL:HG21	1.80	0.63
26:R:5:PHE:HA	26:R:40:MET:CG	2.27	0.63
6:5:431:LYS:NZ	10:B:1536:C:P	2.72	0.63
10:B:170:U:H2'	10:B:171:U:C6	2.33	0.63
10:B:291:G:C8	10:B:350:G:N1	2.67	0.63
10:B:992:C:H2'	10:B:993:G:H8	1.63	0.63
10:B:1797:G:H5'	11:C:251:THR:HA	1.79	0.63
11:C:196:ASN:HB2	11:C:199:HIS:CD2	2.30	0.63
20:L:142:ILE:HG13	20:L:143:GLU:N	2.13	0.63
21:M:35:ALA:O	21:M:36:VAL:HG22	1.98	0.63
21:M:82:MET:HB2	21:M:84:LYS:NZ	2.13	0.63
23:O:87:ILE:HG22	23:O:115:LEU:H	1.63	0.63
24:P:23:ASP:N	24:P:93:LYS:HE2	2.13	0.63
1:0:32:THR:HG23	1:0:34:GLY:H	1.63	0.63
6:5:344:MET:HG3	6:5:346:GLY:H	1.63	0.63
6:5:378:ALA:HA	6:5:381:ASN:HD22	1.63	0.63
10:B:589:U:H2'	10:B:590:A:C8	2.33	0.63
10:B:1108:U:O5'	10:B:1108:U:H6	1.80	0.63
10:B:1251:C:H6	25:Q:5:ARG:HH21	1.47	0.63
10:B:1537:G:N3	10:B:1537:G:H5''	2.13	0.63
10:B:1537:G:H2'	10:B:1538:G:C4'	2.28	0.63
10:B:1590:A:H2'	10:B:1591:A:C8	2.34	0.63
10:B:2041:U:H2'	10:B:2042:A:C8	2.34	0.63
10:B:2749:A:OP2	15:G:3:VAL:HG11	1.97	0.63
11:C:138:SER:HA	11:C:162:GLN:HG2	1.79	0.63
12:D:170:VAL:HG11	12:D:194:PRO:HG2	1.80	0.63
13:E:72:SER:O	13:E:75:SER:HB2	1.99	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:G:16:VAL:HG21	15:G:44:HIS:NE2	2.14	0.63
16:H:116:ARG:HB2	16:H:133:GLN:HB2	1.81	0.63
18:J:37:ARG:NH2	18:J:110:PRO:HG3	2.13	0.63
21:M:73:ILE:HD11	21:M:92:TRP:HB2	1.78	0.63
26:R:54:VAL:CB	26:R:54:VAL:HA	2.17	0.63
27:S:71:VAL:HG22	27:S:107:VAL:HG12	1.80	0.63
10:B:273:G:N1	10:B:274:C:N3	2.46	0.63
10:B:285:G:O2'	10:B:286:U:H5'	1.99	0.63
10:B:363:G:C2	10:B:364:C:C2	2.87	0.63
10:B:1381:G:C2'	10:B:1382:G:H5'	2.29	0.63
10:B:2901:C:H2'	10:B:2902:C:H5'	1.80	0.63
11:C:53:ILE:HD13	11:C:218:THR:HG23	1.80	0.63
19:K:99:ILE:HG12	19:K:115:ILE:HG13	1.80	0.63
19:K:103:VAL:HB	19:K:107:LEU:CD2	2.28	0.63
27:S:28:LYS:HD3	27:S:71:VAL:HG21	1.80	0.63
8:7:164:C:H2'	8:7:165:G:H8	1.63	0.63
10:B:278:A:O3'	10:B:279:A:H8	1.81	0.63
10:B:423:A:H5'	10:B:424:G:C5'	2.28	0.63
10:B:1065:U:O5'	10:B:1065:U:H6	1.80	0.63
10:B:1083:U:H2'	10:B:1085:A:OP2	1.98	0.63
10:B:1442:U:H2'	10:B:1443:U:C6	2.34	0.63
10:B:2144:G:H22	10:B:2148:G:H1'	1.64	0.63
10:B:2722:G:H2'	10:B:2723:C:C6	2.33	0.63
10:B:2813:A:H2'	10:B:2814:A:C8	2.33	0.63
11:C:124:LYS:CB	11:C:125:PRO:CD	2.71	0.63
16:H:35:LYS:O	16:H:37:VAL:HG13	1.98	0.63
16:H:124:THR:HG22	16:H:125:THR:H	1.64	0.63
18:J:8:PRO:HB2	18:J:11:VAL:HB	1.81	0.63
20:L:78:ARG:N	20:L:110:VAL:HG13	2.13	0.63
20:L:91:ASP:HA	20:L:123:ARG:HB2	1.80	0.63
26:R:53:PHE:HB3	26:R:55:ASP:HB2	1.79	0.63
29:U:59:GLU:O	29:U:60:LYS:HB2	1.99	0.63
34:Z:32:LEU:HD22	34:Z:33:ASN:N	2.14	0.63
10:B:7:G:H1'	18:J:135:GLN:HE21	1.63	0.63
10:B:356:G:C5	10:B:357:C:N3	2.64	0.63
10:B:607:U:OP2	13:E:98:LYS:HG2	1.97	0.63
10:B:796:C:H2'	10:B:797:G:H8	1.64	0.63
10:B:1219:U:H2'	10:B:1220:G:C8	2.33	0.63
10:B:1444:G:N1	10:B:1548:A:N6	2.47	0.63
10:B:1535:A:H3'	10:B:1536:C:H6	1.59	0.63
10:B:2008:C:H2'	10:B:2009:A:H8	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2789:C:H2'	10:B:2893:A:N7	2.14	0.63
11:C:23:LEU:H	11:C:202:ARG:HH21	1.45	0.63
11:C:146:LYS:HB3	11:C:147:PRO:HD2	1.81	0.63
16:H:3:VAL:HG13	16:H:21:VAL:HG11	1.79	0.63
20:L:118:THR:CB	20:L:119:PRO:HD3	2.28	0.63
27:S:89:ALA:HA	27:S:90:LYS:HZ2	1.63	0.63
33:Y:9:THR:CB	33:Y:54:VAL:HA	2.25	0.63
2:1:13:SER:N	2:1:50:GLU:HA	2.13	0.63
10:B:13:A:H61	10:B:525:U:H2'	1.63	0.63
10:B:270:A:C6	10:B:370:G:N1	2.50	0.63
10:B:283:G:N3	10:B:284:U:C6	2.67	0.63
10:B:304:U:O2'	10:B:305:C:H5'	1.98	0.63
10:B:309:A:H8	10:B:309:A:O5'	1.82	0.63
10:B:1034:G:C5	10:B:1035:U:C5	2.87	0.63
10:B:1174:U:H4'	10:B:1176:U:N3	2.13	0.63
10:B:1460:U:H5''	10:B:1461:C:C6	2.34	0.63
10:B:1484:U:H2'	10:B:1485:U:H6	1.64	0.63
10:B:1495:A:H2'	10:B:1496:A:C8	2.33	0.63
11:C:117:SER:HB3	11:C:127:ASN:ND2	2.14	0.63
11:C:231:HIS:ND1	11:C:231:HIS:O	2.31	0.63
12:D:2:ILE:HB	12:D:205:PRO:HD3	1.80	0.63
15:G:137:LYS:HA	15:G:140:ILE:HG12	1.80	0.63
19:K:102:PRO:HA	19:K:121:GLU:HB3	1.80	0.63
20:L:77:ILE:HG22	20:L:78:ARG:H	1.64	0.63
29:U:4:ILE:HG21	29:U:25:LYS:HE2	1.80	0.63
29:U:43:LYS:HD2	29:U:44:HIS:N	2.13	0.63
10:B:444:C:H5''	13:E:44:ARG:NH1	2.14	0.63
10:B:450:G:H4'	13:E:47:LYS:HG2	1.80	0.63
10:B:1210:G:H5'	10:B:1212:G:O4'	1.99	0.63
10:B:1516:G:C2	10:B:1517:G:C4	2.87	0.63
10:B:1821:A:H5'	11:C:155:ARG:HD2	1.81	0.63
10:B:1854:A:H62	10:B:1888:G:H8	1.47	0.63
10:B:2228:G:H2'	10:B:2229:U:C6	2.33	0.63
11:C:29:PHE:HB2	11:C:31:PRO:CD	2.28	0.63
11:C:224:MET:HG3	11:C:233:GLY:O	1.99	0.63
12:D:140:HIS:O	12:D:142:VAL:N	2.32	0.63
12:D:142:VAL:HB	12:D:143:PRO:HD2	1.80	0.63
25:Q:92:LYS:CG	25:Q:93:ILE:H	2.12	0.63
30:V:5:ASN:HA	30:V:64:VAL:HB	1.79	0.63
34:Z:53:THR:HA	34:Z:56:ARG:HD2	1.81	0.63
6:5:358:GLY:H	6:5:361:PRO:HG3	1.63	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:280:U:H2'	10:B:281:C:C1'	2.29	0.62
10:B:636:G:OP2	20:L:128:THR:HG22	1.99	0.62
10:B:1054:A:H8	10:B:1054:A:O5'	1.82	0.62
10:B:1485:U:H2'	10:B:1486:U:H6	1.64	0.62
10:B:1517:G:C2'	10:B:1518:C:H5'	2.29	0.62
10:B:1521:G:H2'	10:B:1522:A:H8	1.63	0.62
10:B:2077:A:H2'	10:B:2078:C:C6	2.34	0.62
15:G:32:LEU:HD21	15:G:74:MET:CB	2.29	0.62
17:I:74:PRO:O	17:I:77:VAL:HG22	1.99	0.62
17:I:77:VAL:HA	17:I:80:LYS:CE	2.29	0.62
18:J:58:ASN:HA	18:J:127:GLY:N	2.14	0.62
25:Q:60:TRP:CE2	25:Q:93:ILE:HA	2.34	0.62
29:U:27:VAL:HA	29:U:32:LYS:O	1.99	0.62
34:Z:9:TYR:CZ	34:Z:11:GLU:HB2	2.34	0.62
10:B:143:C:O2	28:T:4:GLU:HG2	1.99	0.62
10:B:469:G:OP2	13:E:55:SER:HB3	1.98	0.62
10:B:596:U:H2'	10:B:597:G:C8	2.34	0.62
10:B:2814:A:H2'	10:B:2815:C:H6	1.64	0.62
10:B:2820:A:C4	22:N:4:ARG:HD3	2.34	0.62
12:D:167:ASN:ND2	12:D:167:ASN:H	1.96	0.62
26:R:2:TYR:H	26:R:46:GLU:HB2	1.63	0.62
29:U:45:GLN:O	29:U:55:GLY:HA2	1.99	0.62
9:A:60:C:H2'	9:A:61:G:H8	1.63	0.62
9:A:98:G:H1	30:V:14:LYS:CB	2.12	0.62
10:B:142:A:H1'	28:T:2:ILE:CG2	2.29	0.62
10:B:307:G:H22	10:B:309:A:H3'	1.63	0.62
10:B:332:A:C2	10:B:335:C:C2	2.87	0.62
10:B:946:C:H2'	10:B:947:A:C8	2.33	0.62
10:B:1533:C:C2'	10:B:1534:U:H5'	2.29	0.62
10:B:1552:A:H2'	10:B:1553:A:C5'	2.29	0.62
10:B:1790:C:H4'	11:C:207:ALA:HB2	1.81	0.62
10:B:2179:C:H2'	10:B:2180:U:C6	2.34	0.62
12:D:5:VAL:HG11	12:D:29:VAL:N	2.14	0.62
12:D:12:THR:OG1	12:D:14:ILE:HG12	2.00	0.62
16:H:125:THR:CB	16:H:146:VAL:HB	2.29	0.62
10:B:1099:G:C2'	10:B:1100:C:H5'	2.29	0.62
10:B:1791:A:H1'	11:C:206:LYS:NZ	2.14	0.62
10:B:2591:C:H2'	10:B:2592:G:C8	2.33	0.62
13:E:127:GLU:HB2	13:E:130:LYS:HB2	1.80	0.62
22:N:24:MET:HE2	22:N:44:LEU:HD13	1.81	0.62
24:P:1:SER:HA	24:P:4:ILE:HD12	1.79	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Q:65:ASN:HA	25:Q:75:TYR:HB2	1.81	0.62
31:W:17:ALA:O	31:W:35:ILE:HA	2.00	0.62
1:0:51:ARG:O	22:N:118:ARG:CZ	2.47	0.62
10:B:181:A:H2'	10:B:182:A:C8	2.34	0.62
10:B:287:G:C6	10:B:354:A:C5	2.86	0.62
10:B:311:A:C4	10:B:332:A:N7	2.67	0.62
10:B:324:A:C6	10:B:325:G:N7	2.67	0.62
10:B:352:A:H2'	10:B:352:A:N3	2.15	0.62
10:B:2241:A:H2'	10:B:2242:G:C8	2.34	0.62
11:C:20:ASN:HD22	11:C:202:ARG:HA	1.63	0.62
12:D:37:VAL:HG12	12:D:38:LYS:HZ3	1.65	0.62
13:E:150:THR:HA	13:E:187:VAL:HG23	1.81	0.62
14:F:107:VAL:H	14:F:108:PRO:HD2	1.64	0.62
16:H:69:ALA:HB2	16:H:139:PHE:O	1.98	0.62
20:L:118:THR:H	20:L:119:PRO:CD	2.11	0.62
27:S:89:ALA:HA	27:S:90:LYS:HZ1	1.64	0.62
10:B:359:G:H2'	10:B:360:U:H5'	1.81	0.62
10:B:395:U:H2'	10:B:396:G:N7	2.14	0.62
10:B:1445:G:N1	10:B:1547:C:N4	2.47	0.62
10:B:2405:G:H1'	10:B:2412:A:H61	1.65	0.62
10:B:2537:U:H2'	10:B:2538:C:C6	2.34	0.62
10:B:2834:G:H1'	10:B:2883:A:N6	2.14	0.62
26:R:39:LEU:HD12	26:R:60:LYS:HB2	1.80	0.62
28:T:28:ASN:HD22	28:T:28:ASN:N	1.95	0.62
10:B:306:U:O5'	10:B:306:U:H6	1.83	0.62
10:B:1035:U:HO2'	10:B:1036:G:H8	1.45	0.62
10:B:1040:A:N1	10:B:1116:G:C6	2.67	0.62
10:B:1053:C:N3	10:B:1107:G:N1	2.47	0.62
10:B:1553:A:O2'	10:B:1554:U:H2'	1.98	0.62
10:B:2597:G:H5''	11:C:239:PHE:O	2.00	0.62
10:B:2784:U:H2'	10:B:2785:C:H6	1.65	0.62
16:H:37:VAL:N	16:H:38:PRO:HD2	2.13	0.62
31:W:30:VAL:HG12	31:W:31:LEU:N	2.14	0.62
1:0:35:GLU:CD	1:0:43:THR:HG22	2.20	0.62
5:4:33:HIS:H	5:4:33:HIS:CD2	2.17	0.62
9:A:49:C:H2'	9:A:50:A:C8	2.34	0.62
10:B:280:U:C5	10:B:281:C:C4	2.87	0.62
10:B:1158:C:H5''	33:Y:30:ARG:HD3	1.82	0.62
10:B:1406:U:H2'	10:B:1407:G:C8	2.35	0.62
10:B:1794:A:H2'	10:B:1795:C:H6	1.64	0.62
11:C:103:ILE:HG22	11:C:104:LEU:N	2.15	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:J:28:LEU:HD23	18:J:29:ALA:N	2.14	0.62
22:N:98:LEU:HB2	22:N:112:TYR:CE1	2.35	0.62
10:B:704:G:H1'	10:B:727:A:N6	2.14	0.62
10:B:1091:G:C2'	10:B:1092:C:H5'	2.30	0.62
10:B:1116:G:H2'	10:B:1116:G:N3	2.15	0.62
10:B:1198:U:H2'	10:B:1199:U:C6	2.35	0.62
10:B:1429:G:H2'	10:B:1430:G:H8	1.64	0.62
10:B:1470:A:H3'	10:B:1471:G:H8	1.63	0.62
10:B:1473:G:N1	10:B:1518:C:N4	2.26	0.62
10:B:1539:U:H5'	10:B:1540:G:OP2	2.00	0.62
14:F:133:GLU:HG3	14:F:134:GLN:H	1.64	0.62
20:L:29:LYS:HD2	20:L:31:GLY:N	2.12	0.62
22:N:123:GLU:HG3	22:N:124:ALA:N	2.15	0.62
29:U:88:ASP:HB2	29:U:91:LYS:O	1.99	0.62
10:B:2405:G:H1'	10:B:2412:A:N6	2.15	0.62
10:B:2783:U:H2'	10:B:2784:U:C6	2.35	0.62
18:J:102:GLU:HG2	18:J:103:ILE:N	2.15	0.62
19:K:63:VAL:HB	19:K:83:ALA:CB	2.29	0.62
22:N:13:ASN:HD22	22:N:15:SER:HB2	1.65	0.62
30:V:40:ILE:HD13	30:V:40:ILE:H	1.65	0.62
32:X:22:LEU:HA	32:X:47:ARG:HH12	1.65	0.62
6:5:354:LEU:HD13	6:5:357:MET:HG2	1.80	0.61
10:B:929:U:H5'	33:Y:37:ARG:NH1	2.15	0.61
10:B:1077:A:H2'	10:B:1078:U:C5'	2.30	0.61
10:B:1175:A:H3'	10:B:1176:U:O4'	2.00	0.61
10:B:1532:A:H2	10:B:1539:U:O2	1.82	0.61
10:B:2722:G:H2'	10:B:2723:C:H6	1.64	0.61
12:D:84:LEU:HD21	12:D:86:GLU:HB2	1.82	0.61
18:J:63:ALA:HA	18:J:69:ARG:HD2	1.81	0.61
20:L:78:ARG:H	20:L:78:ARG:CZ	2.13	0.61
24:P:38:ARG:C	24:P:39:LEU:HD12	2.20	0.61
24:P:47:ILE:CG2	24:P:48:ALA:H	2.11	0.61
24:P:59:THR:O	24:P:60:VAL:HG13	1.99	0.61
26:R:68:ARG:HD2	26:R:70:GLU:OE1	1.99	0.61
34:Z:3:LYS:HB2	34:Z:51:VAL:CG2	2.25	0.61
9:A:104:A:H2'	9:A:105:G:O4'	2.00	0.61
10:B:417:C:H2'	10:B:418:C:H6	1.65	0.61
10:B:545:U:H2'	10:B:547:A:OP2	2.00	0.61
10:B:1188:U:H4'	26:R:83:TYR:HB2	1.82	0.61
10:B:1523:U:H6	10:B:1523:U:P	2.22	0.61
11:C:143:VAL:HG11	11:C:173:LEU:HD11	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:L:55:MET:N	20:L:56:PRO:CD	2.62	0.61
23:O:41:ALA:HB1	23:O:42:PRO:HD2	1.82	0.61
32:X:49:ASP:HB3	32:X:52:ARG:NH2	2.15	0.61
4:3:11:LYS:NZ	20:L:63:LYS:HB2	2.15	0.61
4:3:12:ARG:HB2	4:3:12:ARG:HH11	1.64	0.61
10:B:271:G:C6	10:B:366:C:H2'	2.34	0.61
10:B:279:A:H2'	10:B:280:U:C5'	2.14	0.61
10:B:324:A:C2	10:B:325:G:N9	2.68	0.61
10:B:332:A:C4	10:B:335:C:C4	2.88	0.61
10:B:564:C:O2'	10:B:565:C:H5'	2.00	0.61
10:B:580:U:H2'	10:B:581:C:C6	2.35	0.61
10:B:587:C:OP2	20:L:29:LYS:HG2	2.01	0.61
10:B:903:C:H2'	10:B:904:G:H8	1.64	0.61
10:B:1063:G:H5''	17:I:76:ALA:N	2.15	0.61
10:B:1107:G:H2'	10:B:1108:U:C6	2.34	0.61
10:B:1131:G:H1'	10:B:1133:A:N6	2.14	0.61
10:B:2267:A:N6	10:B:2272:U:C4	2.68	0.61
14:F:140:ILE:HG22	14:F:142:TYR:H	1.65	0.61
15:G:88:LEU:HD11	15:G:95:ALA:HB2	1.81	0.61
16:H:50:ARG:HG2	16:H:51:ARG:HA	1.81	0.61
18:J:11:VAL:HG11	18:J:44:TYR:CD1	2.35	0.61
18:J:81:ILE:HG12	18:J:82:GLY:H	1.65	0.61
20:L:109:LYS:HA	20:L:126:ARG:HB2	1.82	0.61
21:M:63:ILE:HD11	21:M:65:ILE:HG23	1.82	0.61
22:N:4:ARG:HG3	22:N:5:LYS:N	2.16	0.61
29:U:11:ILE:HB	29:U:69:VAL:CB	2.30	0.61
29:U:35:VAL:HG12	29:U:36:GLU:H	1.64	0.61
34:Z:49:ARG:C	34:Z:51:VAL:H	2.03	0.61
10:B:316:C:H2'	10:B:317:G:C5'	2.25	0.61
10:B:854:C:H2'	10:B:855:G:C8	2.34	0.61
10:B:917:A:C2	10:B:918:A:H1'	2.36	0.61
10:B:2704:C:H2'	10:B:2705:A:O4'	1.99	0.61
11:C:229:HIS:ND1	11:C:230:PRO:HD2	2.16	0.61
12:D:157:LYS:NZ	12:D:158:GLY:HA3	2.15	0.61
14:F:41:GLU:HB2	14:F:45:ASP:N	2.15	0.61
14:F:83:PRO:HG2	14:F:84:ILE:H	1.64	0.61
17:I:11:GLN:HG3	17:I:11:GLN:O	2.01	0.61
23:O:41:ALA:HB3	23:O:45:SER:HB3	1.81	0.61
26:R:35:PHE:HB2	26:R:64:VAL:CG2	2.31	0.61
31:W:46:ALA:H	31:W:75:ASN:CG	2.02	0.61
4:3:34:LYS:HE3	10:B:2420:C:OP1	1.99	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:301:G:C2	10:B:302:C:C2	2.88	0.61
10:B:347:A:C5	10:B:348:A:C8	2.87	0.61
10:B:350:G:N7	10:B:351:C:N4	2.48	0.61
10:B:1056:G:O2'	10:B:1086:A:H1'	2.01	0.61
10:B:1183:U:H2'	10:B:1184:U:C6	2.35	0.61
10:B:2228:G:H2'	10:B:2229:U:H6	1.66	0.61
10:B:2266:A:H4'	10:B:2267:A:N7	2.16	0.61
10:B:2287:A:HO2'	10:B:2288:A:H2'	1.64	0.61
10:B:2292:U:H2'	10:B:2293:G:H8	1.65	0.61
24:P:76:HIS:CD2	24:P:76:HIS:H	2.18	0.61
25:Q:85:ALA:HB1	25:Q:88:GLU:HB2	1.83	0.61
25:Q:94:LEU:HD13	25:Q:94:LEU:H	1.66	0.61
29:U:44:HIS:O	29:U:57:ILE:HB	2.00	0.61
30:V:21:ARG:HA	30:V:25:LYS:O	2.00	0.61
33:Y:44:ARG:HG3	33:Y:45:GLY:N	2.15	0.61
4:3:22:LYS:HZ3	10:B:650:C:H5''	1.66	0.61
10:B:328:U:C4'	29:U:65:GLN:OE1	2.47	0.61
10:B:328:U:O2'	29:U:65:GLN:HB2	2.01	0.61
10:B:608:A:H2'	10:B:609:A:C8	2.35	0.61
10:B:664:G:H2'	10:B:665:U:H6	1.65	0.61
10:B:856:G:H2'	10:B:857:G:C8	2.36	0.61
10:B:992:C:O2'	10:B:993:G:H5'	2.01	0.61
11:C:50:THR:HG22	11:C:51:ARG:CG	2.31	0.61
11:C:224:MET:HA	11:C:232:GLY:CA	2.30	0.61
14:F:34:THR:O	14:F:153:ILE:HA	2.01	0.61
15:G:10:VAL:HG12	15:G:47:ASN:O	1.99	0.61
17:I:105:LEU:HD11	17:I:139:VAL:CG1	2.28	0.61
18:J:34:ARG:HB3	18:J:39:LYS:HB2	1.83	0.61
21:M:64:TRP:O	21:M:102:LEU:HB2	2.01	0.61
22:N:37:THR:HG1	22:N:40:LYS:HB2	1.63	0.61
1:0:8:THR:HG23	1:0:9:ARG:N	2.16	0.61
10:B:268:C:C4	10:B:269:C:N4	2.68	0.61
10:B:270:A:N1	10:B:370:G:C4	2.68	0.61
10:B:357:C:O2'	10:B:358:U:H5'	1.99	0.61
10:B:478:A:N1	10:B:500:G:H4'	2.16	0.61
10:B:764:A:OP2	11:C:213:ARG:NH2	2.33	0.61
10:B:1076:C:C1'	17:I:92:PRO:HG2	2.14	0.61
10:B:1197:G:H2'	10:B:1198:U:C6	2.35	0.61
10:B:1532:A:H2	10:B:1539:U:C2	2.18	0.61
10:B:1553:A:HO2'	10:B:1554:U:H6	1.45	0.61
10:B:1818:U:O3'	11:C:155:ARG:HB2	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1826:G:OP2	11:C:221:GLY:HA2	2.01	0.61
11:C:209:ALA:HB1	11:C:213:ARG:NH1	2.15	0.61
13:E:151:GLY:O	13:E:190:ALA:HB2	2.00	0.61
18:J:41:LYS:NZ	18:J:46:PRO:HD3	2.15	0.61
24:P:62:LYS:HE2	24:P:74:GLN:HE22	1.66	0.61
28:T:3:ARG:O	28:T:3:ARG:HG2	2.00	0.61
29:U:42:LYS:HD3	29:U:60:LYS:HG2	1.81	0.61
30:V:44:HIS:NE2	30:V:85:LYS:HB2	2.16	0.61
10:B:19:A:H2'	10:B:20:C:C6	2.36	0.61
10:B:283:G:C6	10:B:284:U:N3	2.69	0.61
10:B:333:G:C6	10:B:334:C:C4	2.89	0.61
10:B:1405:U:H2'	10:B:1406:U:C6	2.36	0.61
10:B:1519:G:N7	10:B:1520:U:H5	1.99	0.61
10:B:1534:U:O2'	10:B:1535:A:H8	1.84	0.61
10:B:2881:U:C5'	22:N:121:LYS:HD3	2.26	0.61
12:D:12:THR:HB	12:D:21:SER:O	2.01	0.61
16:H:69:ALA:HB2	16:H:140:ALA:HA	1.83	0.61
16:H:73:ASN:HD22	16:H:73:ASN:H	1.47	0.61
17:I:32:VAL:HG22	17:I:60:VAL:CG2	2.31	0.61
18:J:18:VAL:CG2	18:J:56:VAL:HA	2.30	0.61
19:K:60:ALA:HA	19:K:87:LEU:HG	1.83	0.61
23:O:48:LEU:HD23	23:O:49:VAL:N	2.16	0.61
25:Q:60:TRP:O	25:Q:63:ARG:HG2	2.00	0.61
28:T:69:ARG:H	28:T:75:GLY:HA3	1.66	0.61
29:U:52:ASN:N	29:U:52:ASN:OD1	2.33	0.61
5:4:1:MET:HA	10:B:2527:C:O2'	2.00	0.61
9:A:50:A:H5''	23:O:68:LYS:HD2	1.82	0.61
10:B:143:C:H2'	10:B:144:A:N9	2.16	0.61
10:B:196:A:H2'	10:B:196:A:N3	2.16	0.61
10:B:348:A:H2'	10:B:349:U:H6	1.64	0.61
10:B:946:C:H2'	10:B:947:A:H8	1.66	0.61
10:B:1050:A:C1'	10:B:2751:G:C6	2.84	0.61
10:B:1095:A:O2'	10:B:1096:A:H5'	2.00	0.61
10:B:1486:U:H2'	10:B:1487:U:H6	1.66	0.61
10:B:2138:G:H2'	10:B:2139:U:C6	2.36	0.61
10:B:2301:C:H2'	10:B:2302:U:H6	1.65	0.61
10:B:2852:G:H2'	10:B:2853:C:C6	2.36	0.61
10:B:2872:A:O2'	10:B:2873:A:H5''	2.01	0.61
11:C:77:VAL:HG23	11:C:115:ILE:HD11	1.83	0.61
14:F:106:ALA:CB	14:F:136:ILE:HG23	2.30	0.61
18:J:17:VAL:HG23	18:J:139:VAL:HB	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:P:27:VAL:HG21	24:P:86:LYS:HB2	1.82	0.61
25:Q:27:ARG:HA	25:Q:33:VAL:HB	1.83	0.61
26:R:47:VAL:HG22	26:R:48:LYS:N	2.14	0.61
29:U:12:VAL:HG11	29:U:18:LYS:H	1.65	0.61
1:0:52:LYS:HD2	22:N:118:ARG:NE	2.14	0.61
6:5:428:LYS:HZ3	10:B:1283:G:P	2.23	0.61
10:B:708:G:H2'	10:B:709:U:C6	2.36	0.61
10:B:2836:U:H2'	10:B:2837:A:H8	1.65	0.61
11:C:191:LEU:O	11:C:191:LEU:HD22	2.00	0.61
14:F:64:PRO:HA	14:F:88:VAL:CG2	2.29	0.61
18:J:25:LEU:HG	18:J:64:VAL:N	2.10	0.61
20:L:66:PHE:CD1	20:L:66:PHE:N	2.68	0.61
25:Q:47:ARG:HH22	25:Q:50:ARG:HG2	1.66	0.61
26:R:42:ALA:CA	26:R:54:VAL:HA	2.30	0.61
26:R:79:ARG:HD3	26:R:86:GLN:NE2	2.16	0.61
3:2:35:ARG:HH21	10:B:55:G:P	2.23	0.60
9:A:29:A:H3'	9:A:30:C:H6	1.65	0.60
10:B:116:C:H2'	10:B:117:G:C8	2.36	0.60
10:B:275:C:O5'	10:B:275:C:H6	1.84	0.60
10:B:289:G:H8	10:B:289:G:O5'	1.83	0.60
10:B:311:A:N9	10:B:332:A:N7	2.49	0.60
10:B:321:U:H5'	13:E:130:LYS:CA	1.87	0.60
10:B:336:C:P	29:U:81:ARG:HD3	2.35	0.60
10:B:414:C:H2'	10:B:415:A:C8	2.36	0.60
10:B:437:U:H2'	10:B:438:G:C8	2.36	0.60
10:B:527:C:H5''	10:B:2779:U:O2	2.00	0.60
10:B:639:U:H2'	10:B:640:C:C6	2.36	0.60
10:B:1040:A:H2	10:B:1115:G:H22	1.48	0.60
10:B:1052:C:H6	10:B:1052:C:O5'	1.84	0.60
10:B:1203:U:H3'	10:B:1204:A:C5'	2.30	0.60
10:B:1590:A:H2'	10:B:1591:A:H8	1.65	0.60
10:B:2144:G:H2'	10:B:2146:C:OP2	2.01	0.60
10:B:2461:A:H2'	10:B:2462:C:C6	2.36	0.60
10:B:2784:U:H2'	10:B:2785:C:C6	2.35	0.60
18:J:20:ALA:HB1	18:J:59:ALA:HA	1.83	0.60
21:M:88:ASN:O	21:M:89:VAL:HG12	2.00	0.60
26:R:37:GLU:CG	26:R:62:GLU:H	2.13	0.60
26:R:97:LYS:O	26:R:98:ILE:HB	2.01	0.60
30:V:70:ILE:N	30:V:70:ILE:HD13	2.16	0.60
1:0:26:SER:HB2	1:0:38:LEU:HD12	1.83	0.60
1:0:52:LYS:CE	22:N:118:ARG:CD	2.75	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:3:11:LYS:HE2	20:L:60:ARG:HD3	1.84	0.60
10:B:240:C:H3'	10:B:241:A:H5''	1.83	0.60
10:B:273:G:C2	10:B:274:C:C6	2.90	0.60
10:B:327:G:C6	10:B:336:C:C4	2.89	0.60
10:B:419:U:H2'	10:B:420:C:H6	1.66	0.60
10:B:1532:A:N1	10:B:1540:G:C6	2.69	0.60
10:B:1553:A:O2'	10:B:1554:U:H6	1.80	0.60
10:B:2037:A:H2'	10:B:2038:G:H8	1.65	0.60
10:B:2579:C:O2'	12:D:138:LEU:HD13	2.01	0.60
10:B:2751:G:O5'	15:G:3:VAL:HG13	2.01	0.60
11:C:16:VAL:C	11:C:17:LYS:HE2	2.22	0.60
13:E:98:LYS:HG3	13:E:99:LYS:H	1.65	0.60
16:H:66:ASN:HA	16:H:138:VAL:HG21	1.81	0.60
16:H:121:VAL:HG21	16:H:128:HIS:NE2	2.17	0.60
20:L:55:MET:N	20:L:56:PRO:HD2	2.16	0.60
22:N:7:GLY:O	22:N:8:ARG:HB2	2.01	0.60
26:R:20:VAL:HG13	26:R:97:LYS:NZ	2.16	0.60
10:B:287:G:N1	10:B:288:U:C4	2.69	0.60
10:B:301:G:C4	10:B:302:C:C2	2.89	0.60
10:B:833:A:H2'	10:B:834:G:C8	2.36	0.60
10:B:1219:U:H2'	10:B:1220:G:H8	1.65	0.60
10:B:1709:U:H2'	10:B:1710:G:H8	1.66	0.60
10:B:1779:U:H5	10:B:1784:A:N7	1.99	0.60
11:C:140:VAL:HG23	11:C:193:GLU:OE2	2.01	0.60
12:D:88:GLU:CG	12:D:89:GLU:H	2.14	0.60
13:E:91:ASP:O	13:E:92:HIS:HB2	2.02	0.60
14:F:125:GLY:HA3	14:F:159:ALA:HB3	1.83	0.60
15:G:124:CYS:HB3	15:G:129:GLU:O	2.01	0.60
21:M:88:ASN:ND2	21:M:88:ASN:N	2.49	0.60
24:P:23:ASP:HA	24:P:49:ILE:HB	1.83	0.60
25:Q:88:GLU:OE1	25:Q:111:LYS:HD2	2.00	0.60
27:S:7:HIS:CG	27:S:8:ARG:H	2.19	0.60
29:U:42:LYS:HD2	29:U:60:LYS:CG	2.31	0.60
34:Z:15:SER:HB2	34:Z:25:ARG:NH1	2.15	0.60
4:3:24:LYS:HB2	20:L:64:PHE:CD2	2.36	0.60
10:B:45:G:C5'	10:B:46:G:H5'	2.32	0.60
10:B:286:U:H2'	10:B:287:G:C8	2.34	0.60
10:B:342:A:C2	10:B:343:C:C4	2.84	0.60
10:B:594:U:H2'	10:B:595:C:H6	1.66	0.60
10:B:598:U:H2'	10:B:599:A:H8	1.65	0.60
10:B:1050:A:C5	10:B:2751:G:O6	2.54	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1050:A:H2'	10:B:1051:G:O4'	2.00	0.60
10:B:1874:C:H2'	10:B:1875:G:O4'	2.00	0.60
10:B:2575:C:H5''	12:D:149:ASN:HB3	1.80	0.60
11:C:37:SER:H	11:C:62:ARG:HB2	1.66	0.60
13:E:170:ARG:HH21	13:E:175:ILE:HD12	1.66	0.60
23:O:35:ILE:HD13	23:O:35:ILE:N	2.17	0.60
29:U:46:LYS:HB3	29:U:46:LYS:NZ	2.17	0.60
31:W:49:ASN:HB2	31:W:53:GLY:CA	2.30	0.60
31:W:66:VAL:HG13	31:W:67:LYS:N	2.16	0.60
34:Z:25:ARG:HG3	34:Z:26:SER:H	1.65	0.60
2:1:42:VAL:CG1	2:1:43:ARG:HG3	2.30	0.60
5:4:7:VAL:O	5:4:23:ILE:HG21	2.01	0.60
10:B:297:G:N7	10:B:298:G:C6	2.70	0.60
10:B:558:U:OP1	18:J:113:PRO:HG2	2.01	0.60
10:B:990:A:H1'	10:B:1156:A:H2	1.64	0.60
10:B:1015:U:H2'	10:B:1016:G:C8	2.37	0.60
10:B:1104:C:O5'	10:B:1104:C:H6	1.85	0.60
10:B:1319:C:O2'	10:B:1320:C:H5'	2.01	0.60
10:B:1528:A:C6	10:B:1544:A:N7	2.68	0.60
10:B:1552:A:H2'	10:B:1553:A:H5'	1.83	0.60
10:B:2229:U:H2'	10:B:2230:G:C8	2.37	0.60
10:B:2291:U:H2'	10:B:2292:U:C6	2.36	0.60
15:G:173:ALA:HB3	15:G:174:LYS:NZ	2.16	0.60
19:K:99:ILE:HD13	19:K:118:LEU:HD13	1.83	0.60
24:P:26:GLU:HA	24:P:47:ILE:N	2.15	0.60
24:P:93:LYS:HB3	24:P:96:LEU:HA	1.83	0.60
25:Q:57:ARG:HD2	25:Q:92:LYS:NZ	2.15	0.60
1:0:50:GLY:CA	22:N:118:ARG:NH2	2.56	0.60
2:1:42:VAL:HG13	2:1:43:ARG:N	2.16	0.60
9:A:48:U:H2'	9:A:49:C:C6	2.36	0.60
10:B:347:A:H2'	10:B:348:A:H5'	1.83	0.60
10:B:936:A:H2'	10:B:937:C:C6	2.37	0.60
10:B:1070:A:N6	17:I:9:LYS:O	2.34	0.60
10:B:2000:C:O2'	10:B:2001:C:H5'	2.02	0.60
10:B:2469:A:H5''	21:M:55:ARG:HD2	1.82	0.60
10:B:2547:A:H2'	10:B:2548:U:C6	2.37	0.60
10:B:2669:G:H2'	10:B:2670:A:H8	1.66	0.60
10:B:2774:C:H2'	10:B:2775:G:O4'	2.01	0.60
11:C:37:SER:OG	11:C:38:LYS:N	2.34	0.60
13:E:9:GLN:NE2	13:E:120:VAL:HG13	2.15	0.60
17:I:37:PHE:HB2	17:I:66:PHE:CZ	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:I:85:ILE:HD13	17:I:137:LEU:HD21	1.83	0.60
19:K:99:ILE:HG22	19:K:119:ALA:HB2	1.84	0.60
24:P:27:VAL:HG12	24:P:47:ILE:HD11	1.82	0.60
28:T:30:ILE:O	28:T:84:TYR:HA	2.02	0.60
30:V:46:LYS:O	30:V:50:MET:HG3	2.02	0.60
31:W:40:ARG:NH1	31:W:40:ARG:N	2.50	0.60
4:3:44:ARG:HB3	4:3:45:PRO:HD2	1.84	0.60
10:B:222:A:N6	10:B:232:G:H1'	2.17	0.60
10:B:272:A:C2	10:B:273:G:H8	2.15	0.60
10:B:295:G:N1	10:B:344:A:N1	2.49	0.60
10:B:298:G:O3'	10:B:299:A:H8	1.83	0.60
10:B:704:G:H1'	10:B:727:A:H61	1.67	0.60
10:B:1519:G:H2'	10:B:1520:U:C5'	2.27	0.60
10:B:2639:A:H2'	10:B:2640:G:O4'	2.02	0.60
15:G:97:VAL:HG23	15:G:124:CYS:SG	2.41	0.60
18:J:102:GLU:HG2	18:J:103:ILE:HG12	1.81	0.60
19:K:47:ILE:HG23	19:K:48:PRO:HD2	1.82	0.60
29:U:7:ASP:N	29:U:24:VAL:HA	2.17	0.60
10:B:273:G:C2	10:B:274:C:C2	2.90	0.60
10:B:278:A:N1	10:B:362:A:H8	2.00	0.60
10:B:340:A:C8	10:B:341:C:C4	2.89	0.60
10:B:1007:C:H5''	18:J:37:ARG:NH2	2.16	0.60
10:B:1109:C:N3	10:B:1110:G:N1	2.49	0.60
10:B:1113:U:OP1	15:G:2:ARG:HG2	2.02	0.60
10:B:1381:G:H2'	10:B:1382:G:H5'	1.84	0.60
10:B:1469:A:H2'	10:B:1470:A:H8	1.66	0.60
10:B:1473:G:C2	10:B:1519:G:C6	2.90	0.60
10:B:2428:G:HO2'	20:L:58:TYR:HE1	1.49	0.60
10:B:2591:C:H2'	10:B:2592:G:H8	1.65	0.60
11:C:172:THR:O	11:C:173:LEU:HB2	2.01	0.60
12:D:175:LEU:HD11	12:D:192:ALA:HB3	1.82	0.60
14:F:9:ASP:O	14:F:10:GLU:HB2	2.00	0.60
16:H:2:GLN:N	16:H:21:VAL:HG12	2.16	0.60
17:I:130:GLY:HA2	17:I:133:ARG:HH21	1.67	0.60
22:N:28:LEU:HD12	22:N:28:LEU:H	1.66	0.60
25:Q:101:ASP:HB3	25:Q:104:ALA:HB3	1.84	0.60
33:Y:3:THR:HG21	33:Y:43:ILE:HB	1.83	0.60
10:B:19:A:H5''	25:Q:20:ALA:O	2.02	0.60
10:B:320:A:H3'	13:E:132:LYS:CG	2.31	0.60
10:B:324:A:H61	10:B:338:G:H2'	1.65	0.60
10:B:346:A:C6	10:B:347:A:C4	2.89	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1690:A:H2'	10:B:1691:C:O4'	2.01	0.60
10:B:1790:C:P	11:C:219:VAL:HB	2.42	0.60
10:B:2500:U:H5'	10:B:2501:C:OP2	2.02	0.60
10:B:2512:C:C4'	12:D:146:ILE:HG12	2.31	0.60
10:B:2688:G:H1'	10:B:2721:A:N6	2.17	0.60
10:B:2873:A:N3	22:N:6:SER:HA	2.16	0.60
11:C:224:MET:O	11:C:225:ASN:HB2	2.01	0.60
12:D:37:VAL:HB	12:D:42:ASN:CG	2.21	0.60
13:E:18:THR:HG23	13:E:20:GLY:N	2.15	0.60
13:E:48:THR:CG2	13:E:86:ALA:HB1	2.32	0.60
18:J:81:ILE:HG23	18:J:82:GLY:H	1.67	0.60
20:L:27:LEU:HD12	20:L:27:LEU:N	2.16	0.60
20:L:78:ARG:NH2	20:L:82:LEU:HD23	2.16	0.60
29:U:81:ARG:HD2	29:U:81:ARG:N	2.16	0.60
1:0:2:VAL:HG22	1:0:3:GLN:H	1.67	0.60
4:3:26:ALA:HB1	4:3:29:ARG:CG	2.32	0.60
6:5:367:GLN:HB3	6:5:371:LYS:HB2	1.84	0.60
10:B:303:G:H2'	10:B:304:U:C6	2.37	0.60
10:B:304:U:H2'	10:B:305:C:C5	2.37	0.60
10:B:921:C:O2'	10:B:922:C:H5'	2.02	0.60
10:B:1042:G:C2	10:B:1043:C:C6	2.89	0.60
10:B:1070:A:C1'	17:I:9:LYS:HZ2	2.15	0.60
10:B:1722:A:N6	10:B:1738:G:H1'	2.17	0.60
10:B:1820:U:O2	11:C:200:MET:HB2	2.02	0.60
10:B:2292:U:H2'	10:B:2293:G:C8	2.37	0.60
10:B:2600:A:O2'	10:B:2601:C:H5'	2.01	0.60
10:B:2813:A:H2'	10:B:2814:A:H8	1.67	0.60
10:B:2848:G:C4	24:P:96:LEU:HD23	2.37	0.60
13:E:180:LEU:HA	13:E:186:VAL:HG21	1.84	0.60
14:F:59:ILE:HD11	14:F:137:PHE:CD2	2.37	0.60
14:F:177:ARG:HG2	14:F:178:LYS:H	1.67	0.60
18:J:17:VAL:CG1	18:J:57:LEU:HD21	2.32	0.60
1:0:52:LYS:NZ	22:N:118:ARG:HD2	2.16	0.59
10:B:37:C:C2	13:E:46:GLN:CD	2.75	0.59
10:B:721:A:H2'	10:B:722:A:C8	2.37	0.59
10:B:1171:G:H2'	10:B:1172:C:O4'	2.02	0.59
10:B:1524:G:C5	10:B:1525:A:N7	2.70	0.59
10:B:1857:G:H1'	10:B:1885:A:N6	2.17	0.59
10:B:2741:A:H2'	10:B:2742:G:O4'	2.02	0.59
19:K:25:LEU:HD12	19:K:38:ILE:HB	1.84	0.59
20:L:77:ILE:HG13	20:L:108:ALA:HB1	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:M:66:ARG:H	21:M:100:LYS:HB2	1.67	0.59
24:P:99:LEU:HD12	24:P:101:GLU:OE2	2.02	0.59
10:B:95:A:O2'	32:X:40:SER:HB3	2.02	0.59
10:B:271:G:O2'	10:B:272:A:H8	1.85	0.59
10:B:356:G:C6	10:B:357:C:C4	2.86	0.59
10:B:458:G:N2	10:B:469:G:H2'	2.17	0.59
10:B:869:G:H2'	10:B:870:U:C6	2.37	0.59
10:B:1192:G:O2'	10:B:1193:G:H5'	2.02	0.59
10:B:1327:A:H2'	10:B:1328:A:O4'	2.02	0.59
10:B:1526:C:H2'	10:B:1527:G:O4'	2.02	0.59
14:F:36:ASN:HD22	14:F:87:LYS:H	1.47	0.59
16:H:17:ASP:OD2	16:H:21:VAL:HB	2.02	0.59
17:I:77:VAL:HA	17:I:80:LYS:HE2	1.85	0.59
24:P:31:VAL:HA	24:P:81:ASP:CB	2.31	0.59
3:2:19:ARG:HB3	10:B:126:A:O5'	2.02	0.59
10:B:283:G:N1	10:B:284:U:N3	2.50	0.59
10:B:297:G:N1	10:B:342:A:C6	2.70	0.59
10:B:322:A:H4'	10:B:340:A:O4'	2.02	0.59
10:B:340:A:H2'	10:B:341:C:C5'	2.32	0.59
10:B:1048:A:N1	10:B:1049:C:C2	2.69	0.59
10:B:1444:G:N2	10:B:1548:A:N1	2.50	0.59
10:B:1533:C:H2'	10:B:1534:U:H6	1.66	0.59
10:B:2723:C:H5''	22:N:3:HIS:CB	2.32	0.59
10:B:2769:U:H2'	10:B:2770:G:C8	2.37	0.59
11:C:10:PRO:HD2	11:C:202:ARG:HH12	1.67	0.59
11:C:220:ARG:HH11	11:C:220:ARG:HG3	1.67	0.59
12:D:34:VAL:HG23	12:D:93:GLY:HA3	1.84	0.59
15:G:159:LYS:HG3	15:G:159:LYS:O	2.02	0.59
18:J:64:VAL:HG11	18:J:68:LYS:HD2	1.84	0.59
22:N:35:LYS:HA	22:N:112:TYR:HA	1.83	0.59
1:0:52:LYS:HD2	22:N:118:ARG:HD3	1.75	0.59
10:B:198:C:C2'	10:B:199:A:H5''	2.32	0.59
10:B:291:G:N9	10:B:350:G:C2	2.70	0.59
10:B:328:U:C5'	29:U:65:GLN:OE1	2.51	0.59
10:B:347:A:C4	10:B:348:A:N7	2.68	0.59
10:B:362:A:N3	10:B:363:G:H8	2.00	0.59
19:K:11:ALA:HB3	19:K:85:VAL:CG2	2.32	0.59
20:L:47:ARG:HD2	20:L:48:ARG:N	2.16	0.59
21:M:4:PRO:O	21:M:5:LYS:C	2.36	0.59
21:M:41:LEU:HG	21:M:95:LEU:HD12	1.84	0.59
29:U:41:VAL:HG13	29:U:42:LYS:N	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:Z:66:ILE:HB	34:Z:67:PRO:HD3	1.84	0.59
10:B:99:U:H6	29:U:5:ARG:NH2	1.97	0.59
10:B:362:A:C6	10:B:363:G:C8	2.90	0.59
10:B:855:G:H21	31:W:23:LYS:CB	2.15	0.59
10:B:1062:G:C2	10:B:1063:G:C5	2.90	0.59
10:B:2053:G:OP1	12:D:150:GLN:CA	2.50	0.59
11:C:171:VAL:HG12	11:C:183:VAL:C	2.22	0.59
11:C:226:PRO:HD3	11:C:233:GLY:N	2.17	0.59
13:E:109:LEU:HD23	13:E:110:SER:N	2.18	0.59
13:E:198:GLU:C	13:E:200:LEU:H	2.05	0.59
16:H:51:ARG:O	16:H:55:GLU:N	2.36	0.59
18:J:16:TYR:O	18:J:55:ILE:HG22	2.01	0.59
21:M:31:PHE:CD2	21:M:128:THR:HG21	2.38	0.59
29:U:90:LYS:HG3	29:U:91:LYS:H	1.68	0.59
33:Y:7:THR:HB	33:Y:34:THR:HB	1.85	0.59
3:2:12:ARG:HH21	3:2:18:PHE:H	1.50	0.59
10:B:313:G:C2'	10:B:314:C:H5'	2.32	0.59
10:B:348:A:C5	10:B:349:U:C5	2.90	0.59
10:B:967:U:H2'	10:B:968:C:C6	2.37	0.59
10:B:1048:A:C2	10:B:1049:C:C2	2.91	0.59
10:B:2386:A:H4'	31:W:38:ARG:HB2	1.84	0.59
12:D:17:GLU:CB	24:P:80:VAL:HG21	2.32	0.59
13:E:3:LEU:O	13:E:4:VAL:HG12	2.02	0.59
13:E:156:ASN:ND2	13:E:157:LEU:HG	2.17	0.59
14:F:108:PRO:HA	14:F:113:PHE:CD1	2.38	0.59
23:O:64:TYR:CE2	23:O:74:VAL:HG11	2.34	0.59
24:P:25:VAL:CG1	24:P:87:ARG:HA	2.33	0.59
24:P:52:ARG:HG2	24:P:54:LEU:HB2	1.83	0.59
29:U:94:PHE:HD2	29:U:95:PHE:H	1.50	0.59
34:Z:44:PHE:HD1	34:Z:44:PHE:H	1.50	0.59
3:2:17:GLY:HA2	3:2:21:ARG:NH1	2.17	0.59
10:B:348:A:C4	10:B:349:U:C5	2.90	0.59
10:B:1516:G:C4	10:B:1517:G:N7	2.70	0.59
10:B:1537:G:H2'	10:B:1538:G:H4'	1.84	0.59
10:B:2305:U:N3	14:F:150:GLY:HA3	2.17	0.59
11:C:29:PHE:HB2	11:C:31:PRO:HD2	1.83	0.59
11:C:198:GLU:HA	11:C:201:LEU:HB2	1.83	0.59
12:D:16:THR:CA	24:P:79:VAL:HB	2.31	0.59
14:F:135:ILE:C	14:F:137:PHE:H	2.05	0.59
16:H:11:ASN:ND2	16:H:12:LEU:H	2.00	0.59
16:H:116:ARG:HB3	16:H:131:SER:O	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:K:97:THR:OG1	19:K:98:ARG:HD2	2.02	0.59
26:R:69:GLY:O	26:R:70:GLU:HG3	2.02	0.59
31:W:10:ARG:CB	31:W:10:ARG:HH11	2.16	0.59
31:W:40:ARG:NH1	31:W:40:ARG:H	2.01	0.59
32:X:36:GLN:NE2	32:X:38:GLN:HE22	1.93	0.59
32:X:44:LYS:CD	32:X:48:ARG:HE	2.16	0.59
34:Z:59:ARG:HH21	34:Z:62:LYS:HZ2	1.49	0.59
6:5:344:MET:HB2	6:5:347:MET:HG2	1.84	0.59
6:5:364:VAL:HA	29:U:51:LEU:HD22	1.73	0.59
9:A:27:C:H5'	23:O:34:HIS:CE1	2.37	0.59
10:B:36:G:H2'	10:B:37:C:O4'	2.00	0.59
10:B:295:G:N1	10:B:344:A:C2	2.71	0.59
10:B:319:G:C5	10:B:333:G:C2	2.90	0.59
10:B:340:A:N7	10:B:341:C:N3	2.51	0.59
10:B:1042:G:N3	10:B:1043:C:C5	2.71	0.59
10:B:1063:G:H4'	17:I:76:ALA:CA	2.33	0.59
10:B:1155:A:N6	33:Y:10:ARG:HH22	2.00	0.59
10:B:1187:G:H5''	26:R:84:ARG:CZ	2.33	0.59
10:B:2236:U:H2'	10:B:2237:G:O4'	2.02	0.59
10:B:2274:A:H2'	10:B:2276:G:OP1	2.02	0.59
10:B:2804:U:H2'	10:B:2805:C:H6	1.66	0.59
21:M:35:ALA:HB3	21:M:97:GLN:C	2.23	0.59
3:2:41:ARG:HE	10:B:459:U:H5'	1.68	0.59
10:B:966:G:H2'	10:B:967:U:C6	2.38	0.59
10:B:1094:U:H1'	10:B:1097:U:H5	1.67	0.59
10:B:1115:G:C2	10:B:1116:G:N9	2.71	0.59
11:C:227:VAL:HG12	11:C:228:ASP:OD1	2.03	0.59
13:E:120:VAL:H	13:E:189:THR:CG2	2.15	0.59
15:G:8:VAL:O	15:G:48:THR:HA	2.02	0.59
23:O:16:ARG:HG3	23:O:20:GLU:HG3	1.85	0.59
30:V:46:LYS:HA	30:V:46:LYS:HE3	1.85	0.59
32:X:44:LYS:HD2	32:X:48:ARG:HE	1.68	0.59
9:A:12:C:H41	31:W:50:VAL:HG23	1.67	0.59
10:B:26:G:H1'	10:B:515:A:N6	2.17	0.59
10:B:184:C:H2'	10:B:185:G:H8	1.68	0.59
10:B:417:C:H2'	10:B:418:C:C6	2.37	0.59
10:B:1038:G:H2'	10:B:1039:A:H8	1.66	0.59
10:B:1476:U:OP2	10:B:1514:G:N2	2.36	0.59
10:B:2296:U:H4'	10:B:2297:A:OP1	2.02	0.59
12:D:52:THR:HG22	12:D:75:ALA:HB1	1.84	0.59
12:D:62:LYS:H	12:D:62:LYS:HE3	1.68	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:D:138:LEU:N	12:D:138:LEU:CD2	2.66	0.59
13:E:43:THR:O	13:E:89:PRO:HA	2.02	0.59
13:E:106:LYS:HA	13:E:108:ILE:HD13	1.83	0.59
16:H:85:GLY:O	16:H:89:LYS:N	2.36	0.59
17:I:121:ILE:O	17:I:124:MET:HG2	2.03	0.59
19:K:98:ARG:C	19:K:99:ILE:HD12	2.23	0.59
22:N:82:GLU:O	22:N:86:ARG:HG3	2.02	0.59
29:U:73:ASN:HB2	29:U:96:LYS:NZ	2.18	0.59
29:U:85:ARG:HD3	29:U:85:ARG:N	2.18	0.59
10:B:139:U:O2'	28:T:1:MET:HA	2.03	0.58
10:B:298:G:O5'	10:B:298:G:H8	1.86	0.58
10:B:1387:A:H5'	10:B:1469:A:H1'	1.84	0.58
10:B:1476:U:N3	10:B:1516:G:C8	2.71	0.58
10:B:1549:A:C4	10:B:1550:C:C5	2.91	0.58
11:C:204:LEU:HB3	11:C:210:ALA:HB1	1.85	0.58
14:F:174:PHE:N	14:F:175:PRO:HD2	2.18	0.58
28:T:1:MET:HE1	28:T:2:ILE:HB	1.85	0.58
4:3:11:LYS:HZ2	20:L:63:LYS:HB2	1.67	0.58
9:A:52:A:H2'	9:A:53:A:O4'	2.03	0.58
10:B:322:A:H5'	10:B:340:A:H1'	1.84	0.58
10:B:326:G:C6	10:B:327:G:N7	2.70	0.58
10:B:956:G:H5''	21:M:76:LYS:HD3	1.84	0.58
10:B:1476:U:C6	10:B:1516:G:O6	2.56	0.58
10:B:1542:U:C2'	10:B:1543:G:H5'	2.33	0.58
10:B:2297:A:N6	10:B:2319:G:H5''	2.18	0.58
10:B:2619:C:H1'	12:D:155:VAL:HG11	1.85	0.58
10:B:2849:U:H4'	10:B:2850:A:H5'	1.84	0.58
10:B:2895:G:H2'	10:B:2896:C:H6	1.68	0.58
11:C:75:ALA:HB1	11:C:93:VAL:HG13	1.84	0.58
11:C:139:THR:HA	11:C:193:GLU:OE1	2.03	0.58
11:C:216:ARG:HB3	11:C:217:PRO:CD	2.33	0.58
12:D:23:PRO:HB3	12:D:189:VAL:H	1.67	0.58
18:J:125:TYR:HE2	18:J:134:ALA:HB2	1.67	0.58
21:M:3:GLN:OE1	21:M:47:GLU:HB2	2.03	0.58
23:O:13:ARG:HB2	23:O:13:ARG:HH11	1.69	0.58
25:Q:102:LYS:H	25:Q:102:LYS:HD2	1.68	0.58
29:U:23:LYS:O	29:U:25:LYS:HG3	2.03	0.58
31:W:23:LYS:NZ	31:W:24:ARG:HG2	2.17	0.58
1:0:52:LYS:HA	1:0:52:LYS:HZ2	1.66	0.58
4:3:48:MET:SD	4:3:51:LYS:HG2	2.42	0.58
6:5:425:ARG:HD2	10:B:490:C:N4	2.19	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:95:A:H5'	32:X:37:LEU:HA	1.85	0.58
10:B:671:C:N4	20:L:39:LYS:HG2	2.18	0.58
10:B:751:A:C5'	27:S:90:LYS:HE2	2.33	0.58
10:B:811:U:H2'	20:L:31:GLY:CA	2.33	0.58
19:K:80:ASP:OD1	24:P:70:GLU:HB3	2.03	0.58
20:L:117:THR:HB	20:L:119:PRO:O	2.02	0.58
20:L:119:PRO:O	20:L:120:VAL:HB	2.03	0.58
22:N:83:LEU:HA	22:N:86:ARG:HD3	1.84	0.58
23:O:16:ARG:NE	23:O:16:ARG:HA	2.18	0.58
23:O:40:ILE:HG12	23:O:41:ALA:O	2.03	0.58
23:O:98:GLN:O	23:O:103:VAL:HG21	2.04	0.58
24:P:27:VAL:HG12	24:P:47:ILE:CD1	2.34	0.58
26:R:53:PHE:O	26:R:54:VAL:C	2.37	0.58
28:T:38:ALA:O	28:T:42:GLU:HB2	2.03	0.58
30:V:80:HIS:HB2	30:V:85:LYS:HG3	1.86	0.58
9:A:86:G:H2'	9:A:87:U:O4'	2.04	0.58
10:B:319:G:H8	10:B:319:G:O5'	1.86	0.58
10:B:1063:G:HO2'	17:I:135:MET:CB	2.15	0.58
10:B:1538:G:H8	10:B:1538:G:O5'	1.87	0.58
10:B:1973:G:H2'	10:B:1974:C:C6	2.38	0.58
10:B:2415:G:H2'	10:B:2416:C:C6	2.38	0.58
10:B:2809:A:H2'	10:B:2810:A:C8	2.38	0.58
10:B:2840:C:H5'	22:N:53:THR:CG2	2.34	0.58
10:B:2845:U:H4'	24:P:54:LEU:HD21	1.85	0.58
15:G:42:VAL:HG12	15:G:51:PHE:HD2	1.68	0.58
15:G:148:ARG:NH2	15:G:153:PRO:HD2	2.18	0.58
18:J:19:ASP:HB2	18:J:21:THR:HG23	1.84	0.58
1:O:6:LYS:HE3	10:B:2615:U:C1'	2.28	0.58
10:B:189:G:H2'	10:B:205:G:N2	2.18	0.58
10:B:340:A:C8	10:B:341:C:C6	2.91	0.58
10:B:943:A:P	20:L:42:SER:HB3	2.43	0.58
10:B:958:U:C4	21:M:18:ARG:HB2	2.39	0.58
10:B:1068:G:H2'	10:B:1069:A:H5'	1.86	0.58
10:B:1075:C:H6	10:B:1075:C:O5'	1.86	0.58
10:B:1532:A:N1	10:B:1539:U:C4	2.70	0.58
10:B:1799:G:OP1	11:C:255:LYS:HG2	2.04	0.58
10:B:2052:A:H5'	12:D:148:GLN:O	2.02	0.58
10:B:2888:C:H2'	10:B:2889:C:C6	2.39	0.58
11:C:140:VAL:HG23	11:C:141:HIS:H	1.67	0.58
15:G:132:LEU:HD11	15:G:144:ALA:HB2	1.85	0.58
20:L:96:LYS:HD3	20:L:96:LYS:N	2.18	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:M:88:ASN:N	21:M:88:ASN:HD22	2.02	0.58
25:Q:102:LYS:HD2	25:Q:102:LYS:N	2.17	0.58
26:R:4:VAL:CA	26:R:12:HIS:HB3	2.33	0.58
27:S:14:ALA:O	27:S:17:VAL:HG22	2.03	0.58
32:X:36:GLN:NE2	32:X:36:GLN:H	2.01	0.58
3:2:13:ASN:CG	10:B:125:A:H4'	2.23	0.58
10:B:76:C:C5'	32:X:48:ARG:HH12	2.16	0.58
10:B:285:G:C4	10:B:286:U:C6	2.91	0.58
10:B:1544:A:N1	10:B:1545:A:C2	2.72	0.58
10:B:2811:G:OP1	12:D:62:LYS:HE2	2.04	0.58
11:C:45:ASN:O	11:C:46:GLY:C	2.41	0.58
11:C:66:PHE:O	11:C:67:LYS:C	2.42	0.58
12:D:45:TYR:O	12:D:46:ARG:HG2	2.04	0.58
12:D:193:VAL:HG13	12:D:193:VAL:O	2.02	0.58
18:J:41:LYS:HD2	18:J:44:TYR:O	2.03	0.58
2:1:12:SER:HA	2:1:50:GLU:CB	2.30	0.58
10:B:291:G:C4	10:B:350:G:N1	2.72	0.58
10:B:586:A:H5''	13:E:85:PHE:CE2	2.39	0.58
10:B:1187:G:H5''	26:R:84:ARG:NE	2.18	0.58
11:C:141:HIS:HB3	11:C:190:THR:HB	1.85	0.58
12:D:31:ALA:HB2	12:D:49:GLN:NE2	2.19	0.58
14:F:12:VAL:HG22	14:F:27:VAL:HG11	1.86	0.58
15:G:94:ARG:HB2	15:G:94:ARG:HH11	1.68	0.58
21:M:105:MET:HE3	21:M:106:ASP:C	2.23	0.58
29:U:6:ARG:C	29:U:8:ASP:H	2.07	0.58
10:B:17:G:H2'	10:B:18:U:C6	2.38	0.58
10:B:327:G:N1	10:B:336:C:C2	2.69	0.58
10:B:347:A:N1	10:B:348:A:C5	2.71	0.58
10:B:484:C:O4'	29:U:45:GLN:NE2	2.31	0.58
10:B:1070:A:N7	10:B:1096:A:O2'	2.35	0.58
10:B:1476:U:C2	10:B:1516:G:C5	2.91	0.58
10:B:1505:A:H2'	10:B:1506:U:C6	2.38	0.58
10:B:1791:A:OP1	11:C:211:ARG:HG2	2.04	0.58
10:B:1802:A:H2'	10:B:1803:A:C8	2.39	0.58
10:B:2213:U:O2	10:B:2213:U:C2'	2.52	0.58
10:B:2246:G:H2'	10:B:2247:A:C8	2.38	0.58
10:B:2804:U:H2'	10:B:2805:C:C6	2.38	0.58
10:B:2814:A:H2'	10:B:2815:C:C6	2.38	0.58
10:B:2898:U:H2'	10:B:2899:A:H8	1.68	0.58
11:C:222:THR:C	11:C:224:MET:H	2.06	0.58
13:E:152:GLU:HB3	13:E:171:ASP:OD2	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:I:10:LEU:HD12	17:I:10:LEU:O	2.04	0.58
19:K:2:ILE:HG22	19:K:67:LYS:HZ2	1.67	0.58
23:O:15:ARG:NH2	23:O:17:LYS:HD2	2.19	0.58
24:P:5:LYS:C	24:P:7:LEU:N	2.55	0.58
24:P:26:GLU:CB	24:P:46:VAL:HG22	2.32	0.58
24:P:38:ARG:HH11	24:P:39:LEU:H	1.52	0.58
31:W:21:GLY:HA3	31:W:32:ALA:CB	2.34	0.58
34:Z:25:ARG:HH11	34:Z:25:ARG:CB	2.17	0.58
6:5:390:LYS:HB2	6:5:393:ILE:HD13	1.84	0.58
9:A:39:A:O2'	9:A:40:U:H5'	2.03	0.58
9:A:107:G:O2'	9:A:108:A:H5'	2.04	0.58
10:B:170:U:H2'	10:B:171:U:H6	1.69	0.58
10:B:291:G:N3	10:B:350:G:C4	2.71	0.58
10:B:308:G:C3'	10:B:309:A:C8	2.86	0.58
10:B:339:U:H2'	10:B:340:A:H5'	1.86	0.58
10:B:1553:A:C6	10:B:1555:G:C4	2.92	0.58
10:B:1681:G:H2'	10:B:1757:A:N1	2.19	0.58
13:E:122:GLU:HB3	13:E:152:GLU:HB2	1.85	0.58
13:E:153:LEU:HD21	13:E:201:ALA:O	2.04	0.58
17:I:79:LEU:HD23	17:I:108:ILE:CD1	2.33	0.58
17:I:85:ILE:CD1	17:I:137:LEU:HD21	2.34	0.58
18:J:139:VAL:O	18:J:140:LEU:HD23	2.03	0.58
24:P:8:GLU:HA	24:P:11:GLN:HG3	1.86	0.58
26:R:1:MET:HA	26:R:46:GLU:HB3	1.86	0.58
29:U:11:ILE:HG23	29:U:20:LYS:O	2.04	0.58
10:B:83:A:C5	29:U:90:LYS:HB3	2.39	0.58
10:B:337:C:C5'	29:U:1:ALA:HA	2.31	0.58
10:B:450:G:H4'	13:E:47:LYS:NZ	2.18	0.58
10:B:910:A:H62	21:M:15:GLY:HA3	1.68	0.58
10:B:974:G:H1'	10:B:975:A:C8	2.38	0.58
10:B:1042:G:C6	10:B:1043:C:C4	2.92	0.58
10:B:1065:U:O2'	10:B:1066:U:H5'	2.03	0.58
10:B:1204:A:N1	10:B:1241:A:N1	2.52	0.58
10:B:1520:U:O4	10:B:1521:G:N1	2.37	0.58
10:B:2578:G:N3	12:D:145:SER:HB2	2.19	0.58
10:B:2803:G:H2'	10:B:2804:U:C6	2.39	0.58
12:D:101:PHE:O	12:D:102:ALA:CB	2.51	0.58
14:F:102:LEU:O	14:F:107:VAL:HG23	2.04	0.58
14:F:161:SER:OG	14:F:164:GLU:HB2	2.03	0.58
24:P:47:ILE:HA	24:P:63:ILE:HG23	1.86	0.58
25:Q:92:LYS:O	25:Q:94:LEU:HD13	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:65:U:H2'	10:B:66:C:H6	1.69	0.57
10:B:977:G:O2'	10:B:978:G:H5'	2.04	0.57
10:B:1550:C:P	10:B:1740:G:N2	2.77	0.57
10:B:2304:G:N2	10:B:2312:U:H3	2.00	0.57
10:B:2646:C:H2'	10:B:2647:U:O4'	2.04	0.57
12:D:22:ILE:N	12:D:23:PRO:CD	2.65	0.57
20:L:77:ILE:HA	20:L:101:ILE:HD13	1.86	0.57
22:N:57:THR:OG1	22:N:61:ALA:HB3	2.04	0.57
29:U:5:ARG:HG2	29:U:6:ARG:H	1.67	0.57
31:W:45:HIS:ND1	31:W:45:HIS:N	2.52	0.57
10:B:286:U:O2	10:B:354:A:H2	1.87	0.57
10:B:295:G:N3	10:B:344:A:C2	2.72	0.57
10:B:419:U:H2'	10:B:420:C:C6	2.38	0.57
10:B:433:C:O2'	10:B:434:U:H5'	2.04	0.57
10:B:519:U:H5''	27:S:18:ARG:NH2	2.19	0.57
10:B:1024:G:C3'	10:B:1025:G:H5''	2.34	0.57
10:B:2278:A:C8	31:W:8:SER:HB3	2.38	0.57
10:B:2734:A:H2'	10:B:2735:G:H5'	1.86	0.57
11:C:21:PRO:O	11:C:22:GLU:HB2	2.04	0.57
11:C:23:LEU:N	11:C:202:ARG:NH2	2.51	0.57
16:H:44:ILE:HG22	16:H:47:PHE:CE1	2.37	0.57
17:I:102:ARG:HD3	17:I:141:ASP:OD1	2.04	0.57
17:I:109:ALA:HB1	17:I:124:MET:CG	2.33	0.57
19:K:108:ARG:HD2	19:K:113:MET:HE1	1.86	0.57
22:N:19:ALA:C	22:N:21:PHE:H	2.06	0.57
22:N:37:THR:OG1	22:N:40:LYS:HB2	2.04	0.57
31:W:36:ILE:HD12	31:W:70:VAL:HG21	1.86	0.57
1:0:42:ILE:HD11	1:0:44:ALA:HB3	1.86	0.57
1:0:51:ARG:C	22:N:118:ARG:NH2	2.58	0.57
2:1:22:THR:O	2:1:23:THR:HG23	2.03	0.57
5:4:11:CYS:SG	5:4:12:ARG:N	2.75	0.57
9:A:32:U:H2'	9:A:33:G:O4'	2.04	0.57
10:B:27:G:H1'	10:B:513:A:N6	2.19	0.57
10:B:182:A:H2'	10:B:183:C:C6	2.39	0.57
10:B:287:G:H2'	10:B:288:U:H5'	1.87	0.57
10:B:298:G:H22	10:B:341:C:H42	1.53	0.57
10:B:305:C:N3	10:B:313:G:C6	2.71	0.57
10:B:416:U:H2'	10:B:417:C:C6	2.39	0.57
10:B:784:G:H5''	11:C:225:ASN:ND2	2.19	0.57
10:B:992:C:H1'	26:R:91:GLN:HG3	1.87	0.57
10:B:997:G:C5'	25:Q:91:ARG:HG3	2.32	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1092:C:H2'	10:B:1093:G:C8	2.40	0.57
10:B:1151:A:H4'	25:Q:80:ASN:OD1	2.04	0.57
10:B:1244:A:O2'	10:B:1245:G:H5'	2.04	0.57
10:B:2328:A:H2'	10:B:2329:U:H6	1.66	0.57
10:B:2749:A:P	15:G:3:VAL:HG11	2.44	0.57
11:C:12:ARG:NE	11:C:18:VAL:HG11	2.19	0.57
14:F:126:ASN:N	14:F:126:ASN:ND2	2.51	0.57
16:H:44:ILE:CG2	16:H:47:PHE:HE1	2.15	0.57
16:H:89:LYS:O	16:H:90:LEU:HD12	2.03	0.57
18:J:81:ILE:O	18:J:84:ILE:HG12	2.04	0.57
20:L:54:GLN:C	20:L:56:PRO:HD2	2.25	0.57
22:N:38:LEU:HB2	22:N:39:PRO:HD3	1.86	0.57
24:P:47:ILE:HG23	24:P:63:ILE:CG2	2.33	0.57
26:R:75:VAL:H	26:R:90:ARG:NE	2.02	0.57
27:S:86:MET:O	27:S:94:ASP:HB3	2.03	0.57
1:0:35:GLU:C	1:0:37:HIS:H	2.06	0.57
10:B:18:U:H2'	10:B:19:A:H8	1.69	0.57
10:B:280:U:O4	10:B:361:G:N2	2.37	0.57
10:B:348:A:N3	10:B:349:U:N1	2.51	0.57
10:B:359:G:C6	10:B:360:U:C4	2.92	0.57
10:B:441:U:H2'	10:B:442:G:C8	2.38	0.57
10:B:705:A:N6	10:B:726:G:H1'	2.19	0.57
10:B:729:G:H5''	10:B:730:A:H5''	1.86	0.57
10:B:1464:G:H2'	10:B:1465:G:H8	1.69	0.57
11:C:28:PRO:HB2	11:C:79:ARG:NH2	2.20	0.57
16:H:8:LYS:O	16:H:8:LYS:HD3	2.04	0.57
19:K:7:MET:HE2	19:K:20:MET:HA	1.85	0.57
21:M:96:ILE:HG23	21:M:97:GLN:N	2.18	0.57
22:N:48:VAL:O	22:N:52:ILE:HG12	2.04	0.57
23:O:17:LYS:O	23:O:21:LEU:HA	2.03	0.57
23:O:108:ASP:HB3	23:O:111:ARG:NH2	2.19	0.57
30:V:63:ILE:O	30:V:65:VAL:HG22	2.03	0.57
30:V:66:ASP:HB3	30:V:68:LYS:HG2	1.85	0.57
34:Z:47:LYS:HB2	34:Z:51:VAL:HB	1.86	0.57
10:B:144:A:H2'	10:B:145:C:H6	1.69	0.57
10:B:348:A:N1	10:B:349:U:C4	2.69	0.57
10:B:448:U:H1'	13:E:79:ARG:HG3	1.85	0.57
10:B:580:U:O3'	25:Q:30:VAL:HG13	2.03	0.57
10:B:657:U:H2'	10:B:658:U:C6	2.39	0.57
10:B:1042:G:N3	10:B:1043:C:C6	2.73	0.57
10:B:1301:A:O2'	10:B:1302:A:H2'	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1412:U:H2'	10:B:1413:A:H8	1.69	0.57
10:B:1529:G:N3	10:B:1530:G:C8	2.72	0.57
10:B:1544:A:H2'	10:B:1545:A:C8	2.40	0.57
10:B:2064:C:H2'	10:B:2065:C:H6	1.69	0.57
10:B:2213:U:O2	10:B:2213:U:H2'	2.04	0.57
10:B:2305:U:H1'	14:F:132:ARG:HA	1.87	0.57
10:B:2393:U:C5'	20:L:62:PRO:HA	2.31	0.57
10:B:2443:C:O2'	10:B:2444:G:H5'	2.04	0.57
11:C:225:ASN:O	11:C:227:VAL:N	2.38	0.57
14:F:70:ARG:HA	14:F:80:GLN:HG3	1.84	0.57
18:J:35:ARG:HA	18:J:35:ARG:NE	2.19	0.57
22:N:116:VAL:C	22:N:118:ARG:H	2.08	0.57
24:P:7:LEU:O	24:P:7:LEU:HD13	2.05	0.57
24:P:13:LYS:HA	24:P:15:ASP:OD1	2.04	0.57
25:Q:10:ARG:HA	25:Q:10:ARG:NE	2.19	0.57
27:S:17:VAL:HG23	27:S:76:VAL:HG11	1.85	0.57
6:5:390:LYS:O	6:5:393:ILE:HG12	2.05	0.57
9:A:63:C:H2'	9:A:64:G:H8	1.69	0.57
10:B:84:A:O5'	29:U:91:LYS:NZ	2.36	0.57
10:B:299:A:C2	10:B:300:A:C2	2.93	0.57
10:B:299:A:C6	10:B:300:A:N1	2.72	0.57
10:B:310:A:C6	10:B:330:A:N6	2.73	0.57
10:B:311:A:N6	10:B:328:U:C6	2.73	0.57
10:B:346:A:C5	10:B:347:A:H1'	2.40	0.57
10:B:364:C:C2'	10:B:365:U:H6	2.14	0.57
10:B:483:A:C2'	29:U:45:GLN:NE2	2.65	0.57
10:B:956:G:H22	10:B:959:A:H3'	1.69	0.57
10:B:1051:G:C6	10:B:1052:C:N4	2.73	0.57
10:B:1229:C:H2'	10:B:1230:A:H8	1.68	0.57
10:B:1528:A:C2	10:B:1544:A:C4	2.92	0.57
10:B:1532:A:C2	10:B:1539:U:C2	2.92	0.57
10:B:2144:G:C4	10:B:2146:C:H5'	2.39	0.57
10:B:2218:G:H2'	10:B:2219:U:C6	2.40	0.57
10:B:2314:A:H2'	10:B:2315:G:C8	2.40	0.57
10:B:2898:U:H2'	10:B:2899:A:C8	2.40	0.57
11:C:68:ARG:HD2	11:C:127:ASN:HD21	1.68	0.57
12:D:4:LEU:HD13	12:D:79:LEU:HD11	1.87	0.57
13:E:138:LEU:HD22	13:E:144:GLU:HA	1.86	0.57
13:E:152:GLU:O	13:E:153:LEU:HB2	2.04	0.57
14:F:13:LYS:HD3	14:F:16:MET:HG3	1.85	0.57
15:G:10:VAL:HG12	15:G:47:ASN:HA	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:J:45:THR:CB	25:Q:63:ARG:HH22	2.18	0.57
23:O:8:ILE:O	23:O:10:ARG:N	2.38	0.57
27:S:88:ARG:HD2	27:S:93:ALA:HB3	1.86	0.57
27:S:103:ILE:HG23	27:S:104:THR:N	2.18	0.57
31:W:45:HIS:HA	31:W:75:ASN:CB	2.34	0.57
3:2:21:ARG:HB3	3:2:31:LEU:HD21	1.86	0.57
4:3:12:ARG:NH2	4:3:55:GLY:HA3	2.20	0.57
4:3:31:ILE:HD13	10:B:2392:A:OP2	2.03	0.57
10:B:287:G:C5	10:B:354:A:C6	2.93	0.57
10:B:319:G:N1	10:B:320:A:N1	2.52	0.57
10:B:326:G:N2	10:B:327:G:C5	2.73	0.57
10:B:342:A:C5	10:B:343:C:H5	2.23	0.57
10:B:483:A:H2'	29:U:45:GLN:NE2	2.18	0.57
10:B:832:U:H2'	10:B:833:A:C8	2.39	0.57
10:B:932:U:H5'	10:B:933:A:OP1	2.05	0.57
10:B:1108:U:H2'	10:B:1109:C:H6	1.68	0.57
10:B:1447:C:H2'	10:B:1448:G:C8	2.39	0.57
10:B:1534:U:O2'	10:B:1535:A:H2'	2.04	0.57
12:D:84:LEU:CD2	12:D:86:GLU:HB2	2.35	0.57
16:H:80:ILE:HD11	16:H:102:ALA:HA	1.86	0.57
18:J:41:LYS:HD2	18:J:44:TYR:HB2	1.87	0.57
18:J:61:LYS:HA	18:J:61:LYS:HE2	1.86	0.57
20:L:77:ILE:HG22	20:L:78:ARG:N	2.19	0.57
21:M:102:LEU:HB3	21:M:104:GLU:OE1	2.04	0.57
27:S:70:LYS:O	27:S:71:VAL:HB	2.04	0.57
31:W:42:THR:HG22	31:W:43:LYS:O	2.05	0.57
33:Y:16:LEU:N	33:Y:16:LEU:HD12	2.19	0.57
10:B:316:C:C3'	10:B:317:G:H5''	2.35	0.57
10:B:347:A:N6	10:B:348:A:C6	2.73	0.57
10:B:350:G:C5	10:B:351:C:N4	2.73	0.57
10:B:527:C:H5''	10:B:2779:U:C2	2.40	0.57
10:B:910:A:H2'	10:B:911:A:C8	2.39	0.57
10:B:1059:G:O2'	17:I:116:MET:HG2	2.04	0.57
10:B:1062:G:C4	10:B:1063:G:N7	2.73	0.57
10:B:1072:C:O5'	10:B:1072:C:H6	1.88	0.57
10:B:1166:G:H2'	10:B:1167:C:C6	2.39	0.57
10:B:1532:A:H3'	10:B:1533:C:C5	2.40	0.57
10:B:1714:U:H3'	10:B:1715:G:C5'	2.35	0.57
10:B:1818:U:C3'	11:C:155:ARG:HB2	2.34	0.57
10:B:1843:C:H5''	11:C:252:LYS:HZ1	1.69	0.57
12:D:35:THR:HG22	12:D:46:ARG:HH22	1.70	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:E:50:ALA:O	13:E:74:LYS:HB2	2.03	0.57
14:F:116:LEU:HD12	14:F:176:PHE:CD2	2.39	0.57
17:I:91:LYS:HG3	17:I:91:LYS:O	2.05	0.57
18:J:25:LEU:HD12	18:J:62:VAL:CA	2.35	0.57
20:L:55:MET:HG2	20:L:56:PRO:CD	2.22	0.57
20:L:77:ILE:HD13	20:L:92:LEU:HD13	1.87	0.57
24:P:47:ILE:CG2	24:P:63:ILE:HG23	2.34	0.57
25:Q:106:THR:O	25:Q:109:VAL:HG22	2.05	0.57
34:Z:30:HIS:H	34:Z:48:GLN:CD	2.07	0.57
4:3:4:LYS:HG2	10:B:243:U:OP1	2.05	0.57
4:3:16:THR:HG21	4:3:22:LYS:NZ	2.18	0.57
9:A:26:C:H2'	9:A:27:C:O4'	2.05	0.57
10:B:270:A:O2'	10:B:368:A:N3	2.32	0.57
10:B:287:G:N1	10:B:354:A:C5	2.73	0.57
10:B:324:A:C6	10:B:339:U:H5'	2.39	0.57
10:B:332:A:C2	10:B:335:C:N3	2.71	0.57
10:B:350:G:H2'	10:B:351:C:H6	1.67	0.57
10:B:1038:G:N2	10:B:1117:C:C2	2.73	0.57
10:B:1655:A:C2	10:B:2049:G:H5''	2.38	0.57
10:B:1676:A:H2'	10:B:1677:A:O4'	2.04	0.57
10:B:2189:U:H2'	10:B:2190:G:H8	1.70	0.57
10:B:2246:G:H2'	10:B:2247:A:H8	1.70	0.57
10:B:2617:U:C2'	10:B:2618:G:H5'	2.35	0.57
10:B:2650:U:H2'	10:B:2651:C:C6	2.40	0.57
10:B:2679:A:O2'	10:B:2680:U:H5'	2.05	0.57
12:D:4:LEU:HB2	12:D:201:LEU:O	2.05	0.57
12:D:45:TYR:CE2	12:D:83:ARG:HG3	2.40	0.57
12:D:107:VAL:HG23	12:D:204:LYS:O	2.04	0.57
12:D:115:GLY:O	22:N:3:HIS:NE2	2.37	0.57
14:F:133:GLU:OE1	14:F:147:ARG:HD3	2.05	0.57
15:G:5:LYS:HB3	15:G:68:ARG:CZ	2.35	0.57
18:J:73:VAL:HG23	18:J:74:TYR:H	1.69	0.57
19:K:73:ASP:OD1	19:K:74:GLY:N	2.37	0.57
21:M:127:LYS:CE	30:V:84:PRO:HG3	2.34	0.57
22:N:121:LYS:O	22:N:122:ALA:HB2	2.05	0.57
23:O:55:GLU:HB2	23:O:60:GLU:O	2.05	0.57
24:P:97:TYR:O	24:P:98:TYR:HB2	2.03	0.57
28:T:50:LEU:C	28:T:52:GLU:H	2.08	0.57
30:V:4:ILE:HD11	30:V:61:LEU:HD12	1.87	0.57
10:B:283:G:N2	10:B:284:U:C2	2.73	0.57
10:B:359:G:H2'	10:B:360:U:H6	1.67	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:363:G:N2	10:B:364:C:C2	2.73	0.57
10:B:1038:G:N2	10:B:1039:A:C4	2.73	0.57
10:B:1544:A:N6	10:B:1545:A:C6	2.73	0.57
10:B:2270:A:H4'	31:W:18:LYS:HG2	1.87	0.57
11:C:164:VAL:HB	11:C:167:ASP:OD2	2.05	0.57
12:D:170:VAL:HG11	12:D:194:PRO:CB	2.35	0.57
16:H:21:VAL:HG13	16:H:22:LYS:O	2.05	0.57
17:I:46:ASP:HA	17:I:50:LYS:HG3	1.87	0.57
18:J:58:ASN:O	18:J:126:ALA:HA	2.05	0.57
20:L:94:THR:HB	20:L:103:ILE:CG1	2.34	0.57
20:L:103:ILE:HD13	20:L:104:GLN:H	1.70	0.57
21:M:5:LYS:O	21:M:5:LYS:HD2	2.04	0.57
24:P:22:GLY:HA2	24:P:93:LYS:HE2	1.87	0.57
25:Q:27:ARG:HG3	25:Q:32:ARG:HH21	1.69	0.57
29:U:13:LEU:HG	29:U:69:VAL:HG22	1.85	0.57
2:1:42:VAL:HG12	2:1:43:ARG:HG3	1.87	0.56
4:3:16:THR:HG21	4:3:22:LYS:HZ1	1.69	0.56
10:B:244:A:H2'	10:B:245:G:O4'	2.04	0.56
10:B:328:U:H4'	29:U:65:GLN:OE1	1.98	0.56
10:B:360:U:H3'	10:B:361:G:C8	2.40	0.56
10:B:737:C:O2'	10:B:738:G:H5'	2.05	0.56
10:B:828:U:H4'	10:B:831:G:N1	2.20	0.56
10:B:1038:G:C6	10:B:1039:A:N6	2.73	0.56
10:B:1039:A:C6	10:B:1040:A:N6	2.73	0.56
10:B:1053:C:N4	10:B:1107:G:H1	2.03	0.56
10:B:1059:G:C4'	17:I:117:THR:N	2.67	0.56
10:B:1299:G:H4'	10:B:1301:A:H1'	1.86	0.56
10:B:2077:A:H2'	10:B:2078:C:H6	1.69	0.56
10:B:2800:A:N3	10:B:2801:G:H1'	2.20	0.56
14:F:33:ILE:HD11	14:F:90:LEU:HD13	1.87	0.56
15:G:17:LYS:HB3	15:G:24:THR:CG2	2.34	0.56
16:H:125:THR:CA	16:H:146:VAL:HB	2.34	0.56
18:J:58:ASN:HA	18:J:127:GLY:H	1.70	0.56
22:N:115:LEU:O	22:N:116:VAL:HG12	2.05	0.56
25:Q:27:ARG:HG3	25:Q:32:ARG:NH2	2.19	0.56
27:S:18:ARG:NH1	27:S:25:ARG:HH22	1.97	0.56
33:Y:13:ILE:HA	33:Y:19:HIS:HE1	1.70	0.56
4:3:15:LYS:HG2	4:3:19:GLY:HA2	1.87	0.56
9:A:28:C:H5'	9:A:29:A:OP2	2.05	0.56
10:B:37:C:O2'	13:E:46:GLN:HB3	2.04	0.56
10:B:280:U:C4	10:B:361:G:N2	2.73	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1099:G:C6	10:B:1100:C:N4	2.73	0.56
10:B:1444:G:H1	10:B:1548:A:N6	2.03	0.56
10:B:2008:C:H2'	10:B:2009:A:C8	2.40	0.56
10:B:2294:G:O2'	10:B:2295:C:H5'	2.06	0.56
10:B:2331:G:H2'	10:B:2332:C:C6	2.40	0.56
10:B:2680:U:H5'	12:D:194:PRO:HA	1.87	0.56
10:B:2688:G:H1'	10:B:2721:A:H61	1.69	0.56
10:B:2786:U:C4'	12:D:66:GLY:HA2	2.36	0.56
10:B:2867:G:N3	10:B:2867:G:C2'	2.67	0.56
11:C:80:LEU:HA	11:C:91:ALA:HA	1.87	0.56
12:D:62:LYS:H	12:D:62:LYS:CE	2.17	0.56
13:E:115:GLN:HB3	13:E:185:LYS:HZ2	1.69	0.56
19:K:70:ARG:CB	19:K:76:VAL:HG22	2.31	0.56
20:L:61:LEU:CB	20:L:62:PRO:CD	2.75	0.56
21:M:84:LYS:NZ	21:M:84:LYS:H	2.04	0.56
22:N:107:ASN:OD1	27:S:40:ASN:HB3	2.04	0.56
28:T:64:LYS:HB3	28:T:77:ARG:HH11	1.70	0.56
31:W:44:PHE:HB3	31:W:76:ARG:CG	2.35	0.56
2:1:31:GLU:HB3	2:1:32:LYS:HE3	1.86	0.56
4:3:11:LYS:HA	20:L:63:LYS:CG	2.32	0.56
4:3:29:ARG:HA	4:3:33:THR:CG2	2.35	0.56
9:A:113:C:H4'	23:O:47:VAL:HG12	1.87	0.56
10:B:285:G:N3	10:B:286:U:C6	2.73	0.56
10:B:319:G:C8	10:B:333:G:N2	2.73	0.56
10:B:352:A:C6	10:B:353:C:N4	2.73	0.56
10:B:972:A:C3'	10:B:973:A:H5''	2.33	0.56
10:B:1043:C:H2'	10:B:1044:C:C6	2.41	0.56
10:B:1061:U:C4	17:I:9:LYS:HB2	2.39	0.56
10:B:1102:C:O2'	10:B:1103:A:H5'	2.05	0.56
10:B:1112:G:N2	10:B:1113:U:C6	2.73	0.56
10:B:1117:C:C2	10:B:1118:C:N4	2.73	0.56
10:B:1155:A:H61	33:Y:10:ARG:HH22	1.53	0.56
10:B:1593:A:H2'	10:B:1594:U:C6	2.39	0.56
10:B:1932:A:H2'	10:B:1933:G:O4'	2.04	0.56
10:B:2262:U:H2'	10:B:2263:C:H6	1.69	0.56
10:B:2621:G:HO2'	12:D:164:GLN:HB2	1.70	0.56
10:B:2789:C:H3'	10:B:2893:A:H62	1.70	0.56
11:C:242:HIS:N	11:C:243:PRO:CD	2.68	0.56
11:C:257:ARG:NH1	11:C:257:ARG:HA	2.21	0.56
12:D:11:MET:SD	24:P:9:GLN:HG2	2.46	0.56
12:D:52:THR:HG22	12:D:76:GLY:N	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:E:6:LYS:NZ	13:E:119:ILE:H	2.03	0.56
14:F:165:GLY:HA2	14:F:168:LEU:HD21	1.87	0.56
15:G:106:LEU:HD23	15:G:151:ARG:HB2	1.88	0.56
16:H:82:SER:HB3	16:H:90:LEU:HD23	1.86	0.56
21:M:3:GLN:HG2	21:M:47:GLU:N	2.21	0.56
21:M:8:LYS:H	21:M:8:LYS:HE2	1.70	0.56
21:M:33:LEU:HB2	21:M:101:VAL:HG21	1.87	0.56
21:M:73:ILE:HD11	21:M:92:TRP:H	1.71	0.56
23:O:54:VAL:O	23:O:62:LEU:HD23	2.06	0.56
23:O:58:ILE:HG13	23:O:59:ALA:N	2.19	0.56
25:Q:73:ILE:HG13	25:Q:77:LYS:HD2	1.88	0.56
25:Q:92:LYS:CA	25:Q:95:ALA:HB2	2.29	0.56
28:T:1:MET:CG	28:T:2:ILE:H	2.19	0.56
28:T:61:LEU:HD12	28:T:62:VAL:N	2.19	0.56
1:O:52:LYS:HD3	22:N:118:ARG:HD3	1.86	0.56
10:B:6:A:O2'	18:J:135:GLN:HB2	2.04	0.56
10:B:80:G:P	10:B:346:A:C8	2.99	0.56
10:B:82:U:H2'	10:B:83:A:C8	2.41	0.56
10:B:279:A:C8	10:B:362:A:H1'	2.40	0.56
10:B:299:A:N9	10:B:322:A:N1	2.54	0.56
10:B:313:G:C6	10:B:314:C:N4	2.73	0.56
10:B:347:A:N1	10:B:348:A:N7	2.54	0.56
10:B:596:U:H2'	10:B:597:G:H8	1.69	0.56
10:B:634:C:H2'	10:B:635:C:C6	2.40	0.56
10:B:634:C:H2'	10:B:635:C:H6	1.70	0.56
10:B:986:C:O2'	10:B:987:C:H5'	2.05	0.56
10:B:1054:A:H2'	10:B:1055:G:H8	1.70	0.56
10:B:1056:G:O5'	10:B:1056:G:H8	1.87	0.56
10:B:1676:A:C1'	12:D:134:HIS:HB3	2.35	0.56
10:B:1709:U:H2'	10:B:1710:G:C8	2.40	0.56
10:B:1716:U:H2'	10:B:1717:A:C8	2.41	0.56
10:B:2556:C:H2'	10:B:2557:G:O4'	2.06	0.56
10:B:2836:U:H2'	10:B:2837:A:C8	2.41	0.56
11:C:27:LYS:HB3	11:C:80:LEU:O	2.06	0.56
11:C:67:LYS:HG3	11:C:68:ARG:H	1.71	0.56
12:D:118:PHE:CA	12:D:164:GLN:HG3	2.35	0.56
16:H:50:ARG:HH21	16:H:54:LEU:HD12	1.67	0.56
19:K:41:ILE:HG23	19:K:42:THR:N	2.19	0.56
19:K:119:ALA:O	19:K:120:PRO:C	2.44	0.56
21:M:14:LYS:NZ	21:M:14:LYS:HB3	2.20	0.56
22:N:1:MET:HE1	22:N:2:ARG:HB2	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:N:34:ILE:O	22:N:34:ILE:HG12	2.05	0.56
26:R:90:ARG:NH2	26:R:92:TRP:HB3	2.20	0.56
29:U:25:LYS:HA	29:U:35:VAL:H	1.70	0.56
4:3:38:LYS:HD2	10:B:2351:G:O6	2.06	0.56
9:A:6:G:H2'	9:A:7:G:C8	2.40	0.56
10:B:141:G:C2	28:T:2:ILE:HG13	2.40	0.56
10:B:273:G:C4	10:B:274:C:C5	2.93	0.56
10:B:299:A:C5	10:B:300:A:N6	2.73	0.56
10:B:332:A:C4	10:B:335:C:N4	2.73	0.56
10:B:813:U:H2'	10:B:814:C:H6	1.70	0.56
10:B:1229:C:H2'	10:B:1230:A:C8	2.40	0.56
10:B:1258:U:O4'	13:E:79:ARG:HD3	2.06	0.56
10:B:1437:C:H2'	10:B:1438:U:H6	1.67	0.56
10:B:1524:G:N3	10:B:1525:A:N9	2.49	0.56
10:B:1547:C:O2'	10:B:1548:A:H5'	2.05	0.56
10:B:1570:A:H2'	10:B:1571:A:C8	2.40	0.56
10:B:1818:U:OP1	11:C:155:ARG:HA	2.06	0.56
10:B:1903:G:OP1	11:C:239:PHE:HA	2.05	0.56
10:B:2061:G:H3'	36:B:3446:HOH:O	2.05	0.56
11:C:159:THR:C	11:C:160:TYR:HD1	2.07	0.56
11:C:160:TYR:O	11:C:161:VAL:HG23	2.06	0.56
19:K:47:ILE:HG22	19:K:49:ARG:H	1.68	0.56
4:3:26:ALA:HB1	4:3:29:ARG:HG3	1.87	0.56
10:B:315:G:C2'	10:B:316:C:H6	2.12	0.56
10:B:407:G:O2'	10:B:408:G:H5'	2.06	0.56
10:B:1519:G:C3'	10:B:1520:U:H5'	2.34	0.56
10:B:1523:U:P	10:B:1523:U:C6	2.98	0.56
10:B:1544:A:C6	10:B:1545:A:C5	2.93	0.56
10:B:1552:A:C2'	10:B:1553:A:H5''	2.35	0.56
10:B:1700:A:H2'	10:B:1701:A:H5'	1.87	0.56
10:B:2415:G:H2'	10:B:2416:C:H6	1.68	0.56
11:C:63:ILE:HG22	11:C:64:VAL:H	1.70	0.56
13:E:106:LYS:HB2	13:E:106:LYS:NZ	2.21	0.56
15:G:97:VAL:HG21	15:G:123:GLU:HA	1.87	0.56
18:J:46:PRO:O	18:J:47:HIS:HB2	2.05	0.56
19:K:5:GLN:HA	19:K:20:MET:SD	2.46	0.56
20:L:77:ILE:HB	20:L:110:VAL:CG2	2.28	0.56
20:L:126:ARG:HE	20:L:127:VAL:N	2.04	0.56
21:M:69:PRO:O	21:M:70:ASP:HB3	2.06	0.56
23:O:21:LEU:HD13	23:O:22:GLY:N	2.21	0.56
26:R:59:ILE:HG13	26:R:59:ILE:O	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:U:47:PRO:CD	29:U:48:VAL:H	2.18	0.56
29:U:82:VAL:HB	29:U:94:PHE:CD2	2.40	0.56
9:A:20:G:H2'	9:A:21:G:C8	2.40	0.56
10:B:278:A:C4	10:B:362:A:C8	2.94	0.56
10:B:301:G:N2	10:B:317:G:C8	2.73	0.56
10:B:350:G:HO2'	10:B:351:C:H5'	1.70	0.56
10:B:764:A:H5''	11:C:208:GLY:CA	2.35	0.56
10:B:1197:G:H2'	10:B:1198:U:H6	1.70	0.56
10:B:1441:G:H2'	10:B:1442:U:C6	2.41	0.56
10:B:1528:A:N6	10:B:1544:A:C8	2.73	0.56
10:B:1540:G:C6	10:B:1541:C:N4	2.73	0.56
10:B:1759:A:H4'	10:B:2715:C:O4'	2.04	0.56
10:B:2052:A:C4'	12:D:148:GLN:H	2.19	0.56
10:B:2533:U:H2'	10:B:2534:A:O4'	2.06	0.56
11:C:15:VAL:HG12	11:C:16:VAL:HG23	1.86	0.56
13:E:194:LYS:HE3	13:E:201:ALA:HB2	1.88	0.56
15:G:116:LEU:HD21	15:G:120:ILE:HB	1.87	0.56
16:H:2:GLN:HE22	16:H:19:VAL:C	2.09	0.56
17:I:23:VAL:HG23	17:I:24:GLY:H	1.70	0.56
20:L:13:LYS:O	20:L:14:LYS:HB2	2.05	0.56
20:L:38:GLN:NE2	20:L:39:LYS:H	2.03	0.56
21:M:5:LYS:HD3	21:M:91:TYR:CG	2.41	0.56
21:M:116:ALA:HA	21:M:119:LEU:HD23	1.86	0.56
24:P:15:ASP:OD1	24:P:15:ASP:N	2.38	0.56
24:P:99:LEU:HD21	24:P:109:ILE:HG23	1.88	0.56
26:R:20:VAL:HB	26:R:95:ASP:HB2	1.87	0.56
27:S:9:HIS:O	27:S:10:ALA:HB3	2.05	0.56
29:U:44:HIS:ND1	29:U:55:GLY:O	2.39	0.56
30:V:42:LEU:HB2	30:V:47:VAL:HG21	1.87	0.56
31:W:19:ARG:HH22	31:W:71:LYS:HD2	1.70	0.56
31:W:58:LEU:HA	31:W:79:ILE:HG21	1.87	0.56
34:Z:5:ILE:HB	34:Z:51:VAL:HG13	1.86	0.56
1:O:6:LYS:CE	10:B:2615:U:H1'	2.29	0.56
8:7:169:G:H2'	8:7:170:C:O4'	2.06	0.56
10:B:272:A:N1	10:B:273:G:C8	2.74	0.56
10:B:312:G:N2	10:B:313:G:C8	2.73	0.56
10:B:644:A:O2'	10:B:645:C:H2'	2.05	0.56
10:B:660:C:H2'	10:B:661:A:C8	2.40	0.56
10:B:864:G:O2'	10:B:865:C:H5'	2.05	0.56
10:B:1063:G:H5''	17:I:76:ALA:CA	2.36	0.56
10:B:1544:A:HO2'	10:B:1545:A:H5'	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:C:22:GLU:CD	11:C:202:ARG:HE	2.09	0.56
11:C:129:LEU:HD23	11:C:130:PRO:HD2	1.88	0.56
11:C:144:GLU:OE2	11:C:188:ARG:HG3	2.06	0.56
12:D:15:PHE:CD2	12:D:18:ASP:HB2	2.40	0.56
12:D:88:GLU:HG2	12:D:89:GLU:H	1.70	0.56
12:D:119:ALA:HA	12:D:123:LYS:CE	2.34	0.56
15:G:122:ALA:HA	15:G:131:VAL:O	2.05	0.56
21:M:11:LYS:HG2	21:M:12:MET:N	2.20	0.56
23:O:105:ALA:O	23:O:109:ALA:HB2	2.05	0.56
24:P:13:LYS:HZ2	24:P:15:ASP:HB2	1.71	0.56
26:R:5:PHE:CG	26:R:6:GLN:N	2.74	0.56
32:X:14:LEU:HG	32:X:53:VAL:HG12	1.88	0.56
2:1:47:ILE:HG13	2:1:48:TYR:H	1.71	0.56
4:3:7:ARG:NE	4:3:11:LYS:NZ	2.53	0.56
10:B:283:G:H2'	10:B:284:U:O4'	2.06	0.56
10:B:292:U:O2'	10:B:293:U:H5'	2.06	0.56
10:B:296:U:O2	10:B:342:A:H2	1.89	0.56
10:B:299:A:N1	10:B:300:A:N1	2.54	0.56
10:B:345:A:H3'	10:B:345:A:P	2.46	0.56
10:B:348:A:N3	10:B:349:U:C2	2.73	0.56
10:B:758:C:O2	10:B:1981:A:H2	1.89	0.56
10:B:903:C:H2'	10:B:904:G:C8	2.40	0.56
10:B:1163:G:O2'	10:B:1164:C:H5'	2.06	0.56
10:B:1387:A:H2'	10:B:1388:G:C8	2.41	0.56
10:B:2230:G:H1'	34:Z:30:HIS:CD2	2.41	0.56
10:B:2528:U:O2'	10:B:2529:G:H3'	2.06	0.56
10:B:2751:G:H5''	15:G:3:VAL:HA	1.88	0.56
11:C:155:ARG:O	11:C:157:ALA:N	2.39	0.56
11:C:257:ARG:HA	11:C:257:ARG:CZ	2.36	0.56
12:D:29:VAL:HG12	12:D:185:ASN:ND2	2.21	0.56
13:E:149:ILE:HD11	13:E:180:LEU:HD23	1.87	0.56
17:I:124:MET:O	17:I:128:ILE:HG12	2.06	0.56
18:J:64:VAL:HG12	18:J:65:THR:H	1.71	0.56
20:L:95:LEU:HD12	20:L:95:LEU:N	2.21	0.56
26:R:79:ARG:HD3	26:R:86:GLN:CD	2.25	0.56
30:V:77:VAL:HG21	30:V:79:ARG:HE	1.71	0.56
1:0:52:LYS:HZ3	22:N:118:ARG:HD2	1.71	0.56
10:B:289:G:H2'	10:B:290:U:H6	1.67	0.56
10:B:325:G:N2	10:B:326:G:C4	2.73	0.56
10:B:1121:C:H2'	10:B:1122:G:O4'	2.05	0.56
10:B:1270:C:H5''	10:B:1271:G:O5'	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1454:C:H5'	22:N:63:ARG:NH2	2.19	0.56
10:B:2335:A:OP2	23:O:9:ARG:HG3	2.06	0.56
10:B:2369:A:O2'	10:B:2370:G:H5'	2.06	0.56
10:B:2682:A:H5''	24:P:55:HIS:NE2	2.21	0.56
11:C:216:ARG:HH11	11:C:217:PRO:HD2	1.70	0.56
12:D:142:VAL:O	12:D:143:PRO:C	2.42	0.56
13:E:48:THR:HG23	13:E:87:ALA:H	1.70	0.56
15:G:85:LYS:HA	15:G:130:ILE:O	2.06	0.56
15:G:102:ILE:HG22	15:G:114:HIS:O	2.06	0.56
16:H:26:ALA:HA	16:H:30:LEU:HB2	1.88	0.56
16:H:83:LYS:CB	16:H:91:PHE:HB2	2.31	0.56
17:I:10:LEU:HD13	17:I:12:VAL:HG13	1.87	0.56
18:J:7:LYS:C	18:J:9:GLU:H	2.10	0.56
18:J:15:TRP:HB3	18:J:53:TYR:CD2	2.41	0.56
22:N:22:ARG:HG3	22:N:23:ASN:N	2.20	0.56
24:P:2:ASN:HD22	24:P:2:ASN:H	1.52	0.56
29:U:42:LYS:HA	29:U:42:LYS:HZ2	1.68	0.56
29:U:43:LYS:HD2	29:U:44:HIS:H	1.69	0.56
10:B:969:G:H2'	10:B:970:U:C6	2.41	0.55
10:B:1540:G:H2'	10:B:1541:C:H5''	1.88	0.55
10:B:1819:A:OP1	11:C:153:LEU:HB2	2.05	0.55
10:B:2840:C:H2'	10:B:2841:C:H6	1.71	0.55
12:D:86:GLU:HG2	12:D:87:GLY:H	1.71	0.55
12:D:116:LYS:H	12:D:165:MET:HG3	1.71	0.55
14:F:37:MET:HG2	14:F:86:CYS:HB2	1.88	0.55
18:J:35:ARG:HE	18:J:39:LYS:HB3	1.71	0.55
24:P:7:LEU:HD13	24:P:11:GLN:HG2	1.88	0.55
24:P:96:LEU:HG	24:P:97:TYR:H	1.72	0.55
25:Q:4:LYS:O	25:Q:7:VAL:HG13	2.05	0.55
26:R:35:PHE:HB2	26:R:64:VAL:HG21	1.88	0.55
28:T:56:GLU:HB2	28:T:86:THR:OG1	2.06	0.55
10:B:287:G:C6	10:B:354:A:N6	2.73	0.55
10:B:310:A:C2	10:B:312:G:C1'	2.88	0.55
10:B:313:G:C5	10:B:314:C:N4	2.73	0.55
10:B:1076:C:C2'	17:I:92:PRO:HB2	2.29	0.55
10:B:1181:U:H2'	10:B:1182:G:C8	2.40	0.55
10:B:1251:C:H2'	25:Q:5:ARG:NH2	2.21	0.55
10:B:1540:G:C2	10:B:1541:C:C5	2.94	0.55
10:B:2278:A:H8	31:W:8:SER:HB3	1.72	0.55
11:C:222:THR:HA	11:C:231:HIS:CE1	2.42	0.55
15:G:163:TYR:HB2	15:G:166:GLU:HB2	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:H:11:ASN:HD22	16:H:12:LEU:H	1.54	0.55
20:L:82:LEU:HD22	20:L:86:GLU:OE1	2.06	0.55
22:N:33:ILE:H	22:N:33:ILE:HD13	1.71	0.55
28:T:62:VAL:O	28:T:63:VAL:O	2.24	0.55
1:O:10:SER:HA	10:B:16:C:O3'	2.06	0.55
10:B:143:C:H2'	10:B:144:A:C8	2.40	0.55
10:B:292:U:H2'	10:B:293:U:C5	2.39	0.55
10:B:1063:G:H4'	17:I:76:ALA:HA	1.88	0.55
10:B:1112:G:C2	10:B:1113:U:C6	2.94	0.55
10:B:1429:G:H2'	10:B:1430:G:C8	2.41	0.55
10:B:1847:A:H4'	10:B:1848:A:C8	2.42	0.55
10:B:2212:A:N7	10:B:2214:C:N4	2.54	0.55
10:B:2308:G:N3	10:B:2308:G:H5''	2.20	0.55
13:E:1:MET:O	13:E:14:VAL:HG22	2.06	0.55
16:H:31:VAL:HG22	16:H:37:VAL:HG22	1.89	0.55
18:J:7:LYS:HD2	18:J:49:ASP:CB	2.34	0.55
19:K:2:ILE:HG23	19:K:33:ALA:O	2.06	0.55
21:M:18:ARG:HB3	21:M:40:ARG:NH2	2.22	0.55
23:O:49:VAL:HG22	23:O:50:ALA:N	2.19	0.55
24:P:91:VAL:HB	24:P:113:LEU:CB	2.35	0.55
29:U:29:SER:O	29:U:30:SER:HB2	2.04	0.55
3:2:5:PHE:O	10:B:686:U:H1'	2.06	0.55
4:3:23:HIS:CD2	4:3:47:ALA:HA	2.41	0.55
4:3:27:ASN:HB3	4:3:28:LEU:HG	1.88	0.55
5:4:31:PRO:HB2	10:B:2527:C:H5''	1.89	0.55
6:5:412:ASP:HA	6:5:415:ARG:NH1	2.20	0.55
10:B:297:G:C3'	10:B:298:G:C8	2.86	0.55
10:B:319:G:N2	10:B:320:A:C2	2.73	0.55
10:B:320:A:H8	10:B:320:A:O5'	1.90	0.55
10:B:360:U:O3'	10:B:361:G:O4'	2.24	0.55
10:B:436:C:O2'	10:B:437:U:H5'	2.05	0.55
10:B:548:G:H5''	10:B:549:G:O4'	2.07	0.55
10:B:643:A:N6	10:B:2370:G:H1'	2.21	0.55
10:B:796:C:H2'	10:B:797:G:C8	2.41	0.55
10:B:1064:C:C4'	17:I:88:GLY:HA3	2.35	0.55
10:B:1857:G:H2'	10:B:1884:G:N2	2.20	0.55
10:B:1951:U:H2'	10:B:1953:A:OP2	2.05	0.55
10:B:2666:C:O2	10:B:2666:C:O4'	2.25	0.55
10:B:2839:G:H2'	10:B:2840:C:C6	2.42	0.55
10:B:2852:G:H2'	10:B:2853:C:H6	1.72	0.55
12:D:48:ILE:HD12	12:D:80:TRP:HE1	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:D:167:ASN:H	12:D:167:ASN:HD22	1.54	0.55
14:F:110:ILE:HG22	14:F:112:ASP:H	1.71	0.55
16:H:4:ILE:C	16:H:37:VAL:HG12	2.26	0.55
16:H:73:ASN:N	16:H:73:ASN:ND2	2.52	0.55
17:I:63:ASP:O	17:I:64:ARG:CG	2.53	0.55
18:J:57:LEU:HD12	18:J:128:ASN:HA	1.89	0.55
19:K:98:ARG:HD2	19:K:98:ARG:H	1.71	0.55
19:K:107:LEU:HD11	19:K:115:ILE:HG21	1.87	0.55
22:N:33:ILE:HD13	22:N:33:ILE:N	2.21	0.55
26:R:47:VAL:HG13	26:R:49:ILE:N	2.20	0.55
26:R:62:GLU:CG	26:R:103:ALA:HA	2.36	0.55
26:R:80:ARG:HG3	26:R:80:ARG:O	2.06	0.55
2:1:13:SER:H	2:1:50:GLU:HA	1.72	0.55
3:2:8:SER:OG	3:2:11:LYS:HB2	2.07	0.55
4:3:16:THR:HB	10:B:651:G:P	2.47	0.55
10:B:125:A:H3'	10:B:126:A:H5''	1.88	0.55
10:B:275:C:H2'	10:B:276:U:O4'	2.06	0.55
10:B:349:U:O2	10:B:349:U:H2'	2.07	0.55
10:B:395:U:H2'	10:B:396:G:C8	2.41	0.55
10:B:1098:A:H2'	10:B:1099:G:H8	1.70	0.55
10:B:1517:G:C2	10:B:1518:C:C6	2.95	0.55
10:B:1534:U:H4'	10:B:1535:A:OP1	2.06	0.55
10:B:1676:A:O4'	12:D:134:HIS:HB3	2.06	0.55
10:B:1812:U:H1'	11:C:45:ASN:OD1	2.05	0.55
10:B:1878:G:H2'	10:B:1879:C:C6	2.41	0.55
11:C:37:SER:H	11:C:62:ARG:CB	2.20	0.55
13:E:29:HIS:O	13:E:33:VAL:HG23	2.07	0.55
14:F:121:PHE:CZ	14:F:169:LEU:HD12	2.42	0.55
16:H:44:ILE:CG2	16:H:47:PHE:CE1	2.90	0.55
16:H:50:ARG:HE	16:H:54:LEU:CG	2.17	0.55
17:I:49:GLU:CG	17:I:54:ILE:HD11	2.36	0.55
18:J:25:LEU:HD13	18:J:25:LEU:N	2.21	0.55
19:K:58:LEU:HB3	19:K:89:ASN:HD21	1.71	0.55
23:O:20:GLU:HB3	23:O:23:ALA:CB	2.37	0.55
24:P:76:HIS:CD2	24:P:76:HIS:N	2.74	0.55
28:T:77:ARG:HG2	28:T:78:SER:H	1.69	0.55
29:U:94:PHE:CZ	29:U:100:GLU:HA	2.42	0.55
10:B:37:C:H2'	13:E:46:GLN:CB	2.35	0.55
10:B:352:A:C4	10:B:353:C:C6	2.95	0.55
10:B:718:A:H3'	10:B:719:C:H6	1.71	0.55
10:B:753:A:H2'	10:B:754:U:C6	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1000:A:H2'	10:B:1001:A:C8	2.42	0.55
10:B:1013:C:H2'	10:B:1014:A:C8	2.40	0.55
10:B:1048:A:C5	10:B:1049:C:C5	2.95	0.55
10:B:1063:G:H2'	10:B:1064:C:H5'	1.87	0.55
10:B:1820:U:H3	11:C:197:ALA:CB	2.20	0.55
10:B:2150:C:H2'	10:B:2151:U:O4'	2.05	0.55
10:B:2218:G:H2'	10:B:2219:U:H6	1.71	0.55
10:B:2760:C:O2'	10:B:2761:A:H5'	2.07	0.55
11:C:238:ASN:HB3	11:C:242:HIS:NE2	2.21	0.55
12:D:38:LYS:HG2	12:D:39:ASP:N	2.19	0.55
12:D:109:VAL:O	12:D:172:VAL:HG22	2.06	0.55
13:E:118:LEU:N	13:E:118:LEU:HD23	2.21	0.55
14:F:41:GLU:HB3	14:F:44:ALA:HB3	1.87	0.55
19:K:76:VAL:O	24:P:73:PHE:HA	2.06	0.55
21:M:58:LYS:C	21:M:60:GLN:H	2.09	0.55
27:S:29:VAL:HG11	27:S:69:LEU:HB2	1.89	0.55
33:Y:16:LEU:HD12	33:Y:16:LEU:H	1.71	0.55
33:Y:54:VAL:HG22	33:Y:55:LYS:N	2.22	0.55
2:1:31:GLU:O	2:1:33:LEU:HG	2.05	0.55
2:1:42:VAL:HG12	2:1:43:ARG:HE	1.70	0.55
10:B:280:U:C4	10:B:281:C:N4	2.75	0.55
10:B:294:A:N6	10:B:345:A:C4	2.74	0.55
10:B:359:G:C8	10:B:360:U:C5	2.95	0.55
10:B:845:A:C2	10:B:847:U:H1'	2.42	0.55
10:B:871:U:H2'	10:B:872:U:H6	1.72	0.55
10:B:1078:U:O5'	10:B:1078:U:H6	1.90	0.55
10:B:1116:G:N2	10:B:1117:C:O4'	2.40	0.55
10:B:1130:U:O2'	10:B:1131:G:H2'	2.07	0.55
10:B:1155:A:H61	33:Y:10:ARG:HH12	1.54	0.55
10:B:2011:U:OP2	27:S:16:LYS:HE3	2.07	0.55
10:B:2184:A:H2'	10:B:2185:U:C6	2.42	0.55
10:B:2578:G:N3	12:D:145:SER:CB	2.70	0.55
11:C:128:THR:HG22	11:C:188:ARG:HB2	1.89	0.55
15:G:5:LYS:HG3	15:G:68:ARG:HB2	1.89	0.55
15:G:84:LYS:HZ2	15:G:85:LYS:N	2.05	0.55
17:I:138:VAL:HG12	17:I:139:VAL:N	2.22	0.55
26:R:22:LEU:O	26:R:96:VAL:HG22	2.05	0.55
27:S:7:HIS:HB3	27:S:102:HIS:CA	2.36	0.55
28:T:15:HIS:ND1	28:T:31:VAL:HG11	2.21	0.55
28:T:48:GLN:HG3	28:T:49:LYS:N	2.20	0.55
31:W:55:ASP:CG	31:W:56:HIS:N	2.59	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:414:C:H2'	10:B:415:A:H8	1.71	0.55
10:B:771:G:O2'	10:B:772:C:H5'	2.06	0.55
10:B:898:C:H2'	10:B:899:A:C8	2.41	0.55
10:B:973:A:H8	10:B:973:A:OP1	1.89	0.55
10:B:1006:C:O2'	10:B:1007:C:H5'	2.07	0.55
10:B:1520:U:H2'	10:B:1520:U:O2	2.07	0.55
10:B:1816:C:C5	11:C:62:ARG:HD2	2.42	0.55
10:B:2354:C:O2'	31:W:31:LEU:HB2	2.06	0.55
10:B:2617:U:H2'	10:B:2618:G:H5'	1.89	0.55
10:B:2678:C:H2'	10:B:2679:A:C8	2.42	0.55
11:C:27:LYS:HA	11:C:79:ARG:NH1	2.22	0.55
14:F:36:ASN:O	14:F:152:ASP:HB2	2.06	0.55
16:H:11:ASN:ND2	16:H:12:LEU:N	2.55	0.55
18:J:80:HIS:O	18:J:81:ILE:C	2.45	0.55
20:L:92:LEU:HG	20:L:96:LYS:HZ3	1.72	0.55
21:M:3:GLN:HG2	21:M:46:ILE:HB	1.89	0.55
29:U:23:LYS:O	29:U:25:LYS:N	2.39	0.55
29:U:41:VAL:CG2	29:U:42:LYS:H	2.04	0.55
32:X:45:GLN:NE2	32:X:45:GLN:H	2.05	0.55
34:Z:59:ARG:HE	34:Z:62:LYS:CD	2.18	0.55
10:B:111:A:H2'	10:B:112:U:O4'	2.06	0.55
10:B:209:C:H2'	10:B:210:C:H6	1.71	0.55
10:B:295:G:C2	10:B:296:U:C4	2.94	0.55
10:B:452:G:OP1	13:E:52:VAL:HG22	2.07	0.55
10:B:922:C:H2'	10:B:923:G:C8	2.42	0.55
10:B:1013:C:H2'	10:B:1014:A:H8	1.72	0.55
10:B:1109:C:N4	10:B:1110:G:C6	2.75	0.55
10:B:1512:C:C2'	10:B:1513:U:H5'	2.37	0.55
10:B:2729:G:H2'	10:B:2730:C:C6	2.41	0.55
11:C:155:ARG:HH21	11:C:157:ALA:HB2	1.70	0.55
12:D:150:GLN:C	12:D:151:THR:CG2	2.75	0.55
14:F:46:LYS:O	14:F:50:ASP:HB3	2.06	0.55
22:N:118:ARG:O	22:N:118:ARG:HG2	2.07	0.55
23:O:24:THR:OG1	23:O:91:SER:HA	2.07	0.55
5:4:2:LYS:NZ	5:4:2:LYS:HB3	2.22	0.55
6:5:349:SER:O	6:5:353:LYS:HG2	2.07	0.55
10:B:275:C:C6	10:B:276:U:C6	2.95	0.55
10:B:279:A:C6	10:B:280:U:C2	2.95	0.55
10:B:342:A:C5	10:B:343:C:C5	2.95	0.55
10:B:866:A:H61	10:B:913:U:C4'	2.19	0.55
36:B:3264:HOH:O	22:N:15:SER:HB3	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:C:21:PRO:N	11:C:202:ARG:HD2	2.22	0.55
12:D:2:ILE:HG21	12:D:203:VAL:O	2.07	0.55
16:H:21:VAL:HG22	16:H:22:LYS:N	2.21	0.55
17:I:27:LEU:HD23	17:I:27:LEU:N	2.17	0.55
18:J:45:THR:HG22	25:Q:63:ARG:HH22	1.72	0.55
18:J:102:GLU:OE2	18:J:124:VAL:HG11	2.06	0.55
20:L:77:ILE:HG22	20:L:78:ARG:CZ	2.37	0.55
24:P:47:ILE:HG23	24:P:63:ILE:HA	1.88	0.55
25:Q:93:ILE:HG23	25:Q:94:LEU:N	2.19	0.55
29:U:99:SER:OG	29:U:102:ILE:HD11	2.07	0.55
31:W:44:PHE:CE2	31:W:60:ALA:HB3	2.41	0.55
4:3:22:LYS:NZ	10:B:650:C:H5'	2.22	0.54
10:B:11:C:H2'	10:B:12:U:H5'	1.88	0.54
10:B:45:G:H5'	10:B:46:G:OP1	2.06	0.54
10:B:297:G:H3'	10:B:298:G:H8	1.71	0.54
10:B:586:A:H5''	13:E:85:PHE:HE2	1.71	0.54
10:B:1101:U:H2'	10:B:1101:U:O2	2.07	0.54
10:B:1166:G:H2'	10:B:1167:C:H6	1.72	0.54
10:B:1539:U:C2	10:B:1540:G:N7	2.76	0.54
10:B:2247:A:H2'	10:B:2248:C:C6	2.41	0.54
10:B:2698:U:H2'	10:B:2699:C:C6	2.42	0.54
10:B:2849:U:N3	10:B:2867:G:H1'	2.22	0.54
11:C:68:ARG:HD3	11:C:103:ILE:HD11	1.88	0.54
11:C:235:GLU:HG3	11:C:237:ARG:HD3	1.89	0.54
15:G:126:THR:C	15:G:128:THR:H	2.11	0.54
18:J:18:VAL:HG22	18:J:55:ILE:O	2.07	0.54
19:K:104:THR:O	19:K:107:LEU:HB3	2.07	0.54
23:O:1:MET:HG2	23:O:2:ASP:N	2.21	0.54
23:O:40:ILE:HG22	23:O:48:LEU:O	2.06	0.54
24:P:83:ILE:HG22	24:P:85:VAL:H	1.73	0.54
25:Q:97:ILE:HD13	25:Q:100:PHE:CZ	2.42	0.54
31:W:6:GLY:O	31:W:8:SER:N	2.40	0.54
31:W:43:LYS:HA	31:W:63:ASP:OD1	2.07	0.54
2:1:42:VAL:O	2:1:43:ARG:HB2	2.07	0.54
9:A:90:C:H2'	9:A:91:C:O4'	2.07	0.54
10:B:142:A:H2'	10:B:143:C:C5	2.42	0.54
10:B:310:A:C2	10:B:312:G:C8	2.95	0.54
10:B:313:G:C5	10:B:314:C:C5	2.95	0.54
10:B:318:C:O2'	10:B:319:G:O5'	2.25	0.54
10:B:337:C:OP1	29:U:81:ARG:NH2	2.26	0.54
10:B:365:U:O2	10:B:365:U:H2'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1062:G:N3	10:B:1063:G:C8	2.75	0.54
10:B:1539:U:O2	10:B:1539:U:H2'	2.07	0.54
10:B:1583:A:H4'	10:B:1585:C:C4	2.42	0.54
10:B:2751:G:OP1	15:G:1:SER:HB2	2.07	0.54
12:D:62:LYS:H	12:D:62:LYS:HD3	1.71	0.54
12:D:146:ILE:N	12:D:146:ILE:HD12	2.23	0.54
12:D:151:THR:O	12:D:152:PRO:O	2.24	0.54
14:F:169:LEU:HA	14:F:172:PHE:CZ	2.42	0.54
15:G:153:PRO:HB3	15:G:158:GLY:O	2.07	0.54
18:J:81:ILE:CG1	18:J:82:GLY:H	2.19	0.54
19:K:56:ASP:O	19:K:58:LEU:HG	2.07	0.54
20:L:118:THR:N	20:L:119:PRO:HD3	2.21	0.54
21:M:3:GLN:HB3	21:M:46:ILE:HB	1.89	0.54
22:N:113:ILE:HG22	22:N:114:GLU:N	2.22	0.54
27:S:85:ILE:HG22	27:S:86:MET:N	2.23	0.54
28:T:30:ILE:HG22	28:T:84:TYR:O	2.07	0.54
28:T:62:VAL:O	28:T:63:VAL:HG12	2.06	0.54
29:U:44:HIS:HB3	29:U:57:ILE:N	2.22	0.54
32:X:41:HIS:HB2	32:X:45:GLN:OE1	2.06	0.54
2:1:42:VAL:CG1	2:1:43:ARG:N	2.70	0.54
3:2:25:LYS:H	3:2:25:LYS:HE3	1.73	0.54
10:B:26:G:H1'	10:B:514:A:N6	2.22	0.54
10:B:997:G:O2'	10:B:998:C:H5'	2.08	0.54
10:B:1028:A:H2'	10:B:1029:A:C8	2.43	0.54
10:B:1046:A:C3'	10:B:1047:G:H5''	2.36	0.54
10:B:1068:G:O5'	10:B:1068:G:H8	1.90	0.54
10:B:1188:U:O2'	10:B:1189:A:H5'	2.08	0.54
10:B:1506:U:H2'	10:B:1507:C:C6	2.42	0.54
10:B:1641:A:H2'	10:B:1642:G:O4'	2.07	0.54
10:B:2794:C:H2'	10:B:2795:C:C6	2.41	0.54
13:E:52:VAL:HG13	13:E:53:THR:N	2.23	0.54
15:G:17:LYS:O	15:G:23:ILE:HD12	2.08	0.54
20:L:60:ARG:HH11	20:L:60:ARG:HA	1.72	0.54
20:L:78:ARG:NH2	20:L:110:VAL:HG11	2.22	0.54
23:O:76:LYS:HG2	23:O:110:ALA:HB2	1.87	0.54
23:O:76:LYS:HB2	23:O:106:LEU:HD22	1.88	0.54
24:P:63:ILE:O	24:P:72:VAL:HG12	2.07	0.54
25:Q:4:LYS:O	25:Q:7:VAL:HG22	2.08	0.54
1:0:9:ARG:O	1:0:11:LYS:N	2.40	0.54
4:3:24:LYS:HZ1	4:3:29:ARG:HH12	1.53	0.54
6:5:394:ILE:HG23	6:5:398:ARG:HB2	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:49:A:OP1	10:B:49:A:H4'	2.07	0.54
10:B:291:G:C4	10:B:350:G:C4	2.95	0.54
10:B:345:A:C2	10:B:347:A:N6	2.76	0.54
10:B:1034:G:C2'	10:B:1035:U:H5'	2.36	0.54
10:B:1162:G:O2'	10:B:1163:G:H5'	2.06	0.54
10:B:1252:G:O6	25:Q:35:PHE:HB2	2.08	0.54
10:B:1550:C:H2'	10:B:1551:A:C8	2.43	0.54
10:B:1724:G:H2'	10:B:1725:U:H6	1.73	0.54
10:B:1935:G:H1'	10:B:1964:G:N2	2.21	0.54
11:C:160:TYR:CG	11:C:193:GLU:HG2	2.43	0.54
16:H:50:ARG:CB	16:H:51:ARG:CA	2.86	0.54
31:W:39:GLN:C	31:W:40:ARG:HG3	2.26	0.54
10:B:273:G:C2	10:B:274:C:N1	2.75	0.54
10:B:283:G:N2	10:B:284:U:O2	2.41	0.54
10:B:357:C:C2	10:B:358:U:C4	2.95	0.54
10:B:378:C:O2'	10:B:379:G:H5'	2.08	0.54
10:B:1064:C:C2'	10:B:1065:U:H5'	2.37	0.54
10:B:1103:A:H8	10:B:1103:A:O5'	1.89	0.54
10:B:1113:U:H2'	10:B:1113:U:O2	2.07	0.54
10:B:1132:U:H5	18:J:85:LYS:HE2	1.71	0.54
10:B:1540:G:C5	10:B:1541:C:C5	2.95	0.54
10:B:2820:A:O4'	22:N:4:ARG:HB2	2.07	0.54
11:C:129:LEU:CD2	11:C:133:ASN:HB2	2.37	0.54
12:D:37:VAL:HG22	12:D:46:ARG:NE	2.21	0.54
12:D:192:ALA:O	12:D:193:VAL:HG12	2.08	0.54
13:E:141:MET:SD	13:E:143:LEU:HD22	2.48	0.54
13:E:187:VAL:HG23	13:E:187:VAL:O	2.07	0.54
14:F:66:ILE:HA	14:F:85:GLY:O	2.08	0.54
14:F:121:PHE:HE2	14:F:166:ARG:H	1.56	0.54
16:H:90:LEU:HD13	16:H:123:ARG:O	2.08	0.54
16:H:121:VAL:HG11	16:H:128:HIS:CD2	2.43	0.54
20:L:77:ILE:HG22	20:L:78:ARG:NE	2.23	0.54
20:L:123:ARG:HB3	20:L:143:GLU:OE2	2.07	0.54
22:N:32:GLU:HB3	22:N:33:ILE:HD13	1.89	0.54
23:O:16:ARG:O	23:O:20:GLU:HB2	2.07	0.54
25:Q:94:LEU:HD22	25:Q:95:ALA:N	2.23	0.54
26:R:39:LEU:HD11	26:R:57:GLY:O	2.08	0.54
28:T:1:MET:CE	28:T:2:ILE:HB	2.38	0.54
10:B:342:A:C4	10:B:343:C:C5	2.96	0.54
10:B:1053:C:H2'	10:B:1054:A:C8	2.43	0.54
10:B:1067:A:O2'	10:B:1068:G:H5'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1181:U:H2'	10:B:1182:G:H8	1.72	0.54
10:B:1242:U:H2'	10:B:1243:C:C6	2.42	0.54
10:B:1524:G:HO2'	10:B:1525:A:H5'	1.71	0.54
10:B:1535:A:C5'	10:B:1536:C:C5	2.86	0.54
11:C:20:ASN:HB2	11:C:203:VAL:CG1	2.31	0.54
11:C:21:PRO:HG2	11:C:202:ARG:NH1	2.23	0.54
12:D:58:ASN:O	12:D:59:ARG:HB2	2.06	0.54
18:J:7:LYS:CD	18:J:48:VAL:HB	2.37	0.54
20:L:57:LEU:C	20:L:59:ARG:H	2.11	0.54
26:R:39:LEU:HG	26:R:41:ILE:CG1	2.37	0.54
27:S:29:VAL:HG22	27:S:71:VAL:HG23	1.89	0.54
27:S:34:ASP:H	27:S:37:THR:CG2	2.20	0.54
28:T:24:MET:HE2	28:T:29:THR:H	1.71	0.54
29:U:42:LYS:CE	29:U:42:LYS:CA	2.86	0.54
31:W:23:LYS:HG3	31:W:24:ARG:N	2.23	0.54
34:Z:69:SER:C	34:Z:70:LYS:HE2	2.28	0.54
1:0:11:LYS:HG3	1:0:12:ARG:H	1.72	0.54
5:4:1:MET:H1	10:B:2478:A:H5''	1.73	0.54
6:5:428:LYS:HZ1	10:B:1283:G:P	2.31	0.54
9:A:99:A:N3	9:A:99:A:H2'	2.23	0.54
10:B:6:A:HO2'	18:J:135:GLN:HB2	1.72	0.54
10:B:285:G:N2	10:B:286:U:H1'	2.22	0.54
10:B:299:A:C5	10:B:300:A:C6	2.96	0.54
10:B:306:U:H2'	10:B:307:G:H8	1.69	0.54
10:B:311:A:H1'	10:B:332:A:C8	2.42	0.54
10:B:356:G:C5	10:B:357:C:N4	2.73	0.54
10:B:362:A:H2'	10:B:363:G:H5'	1.90	0.54
10:B:770:G:O2'	10:B:771:G:H5'	2.07	0.54
10:B:1062:G:O2'	17:I:131:THR:HG22	2.08	0.54
10:B:1117:C:C4	10:B:1118:C:N4	2.76	0.54
10:B:1754:A:OP1	24:P:95:LYS:HB2	2.06	0.54
10:B:2576:G:N2	12:D:149:ASN:ND2	2.54	0.54
10:B:2618:G:O2'	12:D:154:LYS:O	2.26	0.54
12:D:118:PHE:N	12:D:164:GLN:HG3	2.23	0.54
13:E:133:LEU:HD12	13:E:136:GLN:CG	2.38	0.54
16:H:40:THR:O	16:H:41:LYS:C	2.45	0.54
22:N:117:ASP:C	22:N:123:GLU:HB3	2.28	0.54
23:O:19:GLN:CA	31:W:76:ARG:HH22	2.18	0.54
25:Q:51:GLN:O	25:Q:54:ARG:HG2	2.07	0.54
26:R:42:ALA:C	26:R:44:GLY:N	2.60	0.54
29:U:25:LYS:HG2	29:U:35:VAL:HG22	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:V:40:ILE:HD13	30:V:40:ILE:N	2.23	0.54
32:X:27:ASN:O	32:X:30:MET:HG2	2.08	0.54
1:0:4:GLN:O	1:0:5:ASN:C	2.44	0.54
8:7:164:C:H2'	8:7:165:G:C8	2.42	0.54
9:A:54:G:H2'	9:A:55:U:C6	2.43	0.54
10:B:6:A:H2'	10:B:7:G:C8	2.42	0.54
10:B:313:G:N2	10:B:314:C:C2	2.73	0.54
10:B:588:U:OP1	20:L:28:GLY:HA2	2.07	0.54
10:B:620:G:H5'	10:B:620:G:N3	2.22	0.54
10:B:1332:G:H2'	10:B:1332:G:N3	2.21	0.54
10:B:2849:U:H4'	10:B:2850:A:C5'	2.38	0.54
11:C:10:PRO:HG2	11:C:23:LEU:HD11	1.89	0.54
12:D:142:VAL:HB	12:D:143:PRO:CD	2.37	0.54
16:H:66:ASN:CB	16:H:138:VAL:HG11	2.37	0.54
17:I:130:GLY:HA2	17:I:133:ARG:NH2	2.23	0.54
18:J:1:MET:SD	26:R:14:VAL:HG21	2.47	0.54
19:K:16:ALA:N	19:K:46:ALA:HA	2.23	0.54
24:P:13:LYS:HZ1	24:P:17:PRO:HG3	1.71	0.54
29:U:42:LYS:CD	29:U:60:LYS:CG	2.86	0.54
33:Y:3:THR:O	33:Y:6:ILE:HG23	2.08	0.54
34:Z:17:SER:N	34:Z:21:VAL:HG23	2.23	0.54
9:A:78:A:H2'	9:A:79:G:O4'	2.07	0.54
10:B:41:C:H2'	10:B:42:A:C8	2.42	0.54
10:B:272:A:N1	10:B:366:C:C2	2.76	0.54
10:B:273:G:C6	10:B:274:C:N4	2.76	0.54
10:B:313:G:C2	10:B:314:C:N1	2.76	0.54
10:B:396:G:H5'	34:Z:9:TYR:HB2	1.89	0.54
10:B:598:U:H2'	10:B:599:A:C8	2.42	0.54
10:B:969:G:H2'	10:B:970:U:H6	1.73	0.54
10:B:1045:C:H3'	10:B:1046:A:C5'	2.38	0.54
10:B:1055:G:HO2'	10:B:1085:A:H2	1.51	0.54
10:B:1084:A:H2'	10:B:1085:A:H5'	1.90	0.54
10:B:1098:A:H2'	10:B:1099:G:C5'	2.38	0.54
10:B:1101:U:C2'	10:B:1102:C:H5'	2.37	0.54
10:B:1106:G:H8	10:B:1106:G:O5'	1.91	0.54
10:B:1256:G:H21	13:E:77:ILE:HG23	1.73	0.54
10:B:1316:U:O2'	10:B:1317:G:H5'	2.08	0.54
10:B:1993:U:H4'	12:D:134:HIS:CE1	2.41	0.54
10:B:2066:C:O2'	10:B:2067:G:H5'	2.07	0.54
10:B:2206:C:O2'	10:B:2207:C:H5'	2.07	0.54
10:B:2484:G:O2'	10:B:2485:G:H5'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2893:A:H5''	10:B:2894:G:H5'	1.89	0.54
12:D:35:THR:HB	12:D:48:ILE:HB	1.88	0.54
13:E:123:LYS:HB3	13:E:126:VAL:HG23	1.90	0.54
15:G:86:LEU:HD12	15:G:161:VAL:HG12	1.88	0.54
17:I:102:ARG:HD3	17:I:141:ASP:CG	2.27	0.54
18:J:42:ALA:HB1	25:Q:67:ALA:HB2	1.89	0.54
19:K:108:ARG:HD2	19:K:113:MET:CE	2.37	0.54
20:L:38:GLN:C	20:L:40:SER:N	2.53	0.54
21:M:72:PRO:HB3	21:M:88:ASN:OD1	2.08	0.54
26:R:48:LYS:HG3	26:R:49:ILE:CD1	2.37	0.54
29:U:100:GLU:O	29:U:102:ILE:HG13	2.08	0.54
10:B:276:U:H2'	10:B:276:U:O2	2.07	0.54
10:B:278:A:N1	10:B:361:G:C4	2.76	0.54
10:B:540:C:O2'	10:B:541:A:H5'	2.08	0.54
10:B:557:C:O2'	18:J:114:LEU:HD13	2.08	0.54
10:B:1090:A:C6	10:B:1102:C:N3	2.75	0.54
10:B:1125:G:H3'	10:B:1126:A:H5''	1.88	0.54
10:B:1476:U:P	10:B:1514:G:H1	2.31	0.54
10:B:1579:A:H2'	10:B:1580:A:C8	2.43	0.54
10:B:1771:C:H2'	10:B:1772:A:H8	1.73	0.54
10:B:1771:C:H2'	10:B:1772:A:C8	2.42	0.54
10:B:1939:U:H5'	10:B:1939:U:H6	1.72	0.54
10:B:2471:A:O2'	10:B:2472:G:C8	2.55	0.54
10:B:2785:C:H2'	10:B:2786:U:C6	2.42	0.54
12:D:15:PHE:HB3	12:D:18:ASP:HB2	1.89	0.54
13:E:52:VAL:HG22	13:E:53:THR:H	1.72	0.54
14:F:59:ILE:HD13	14:F:59:ILE:O	2.08	0.54
16:H:134:VAL:HG13	16:H:135:HIS:N	2.21	0.54
21:M:18:ARG:HB3	21:M:40:ARG:HH22	1.73	0.54
27:S:33:LEU:HB3	27:S:37:THR:HB	1.90	0.54
33:Y:35:VAL:CG1	33:Y:37:ARG:HH21	2.21	0.54
34:Z:29:GLY:HA3	34:Z:48:GLN:OE1	2.07	0.54
4:3:12:ARG:HB2	4:3:12:ARG:CZ	2.38	0.53
10:B:131:A:H2'	10:B:132:G:H8	1.73	0.53
10:B:172:A:H2'	10:B:173:A:H8	1.70	0.53
10:B:291:G:C2	10:B:350:G:C5	2.94	0.53
10:B:299:A:C8	10:B:322:A:C2	2.96	0.53
10:B:301:G:C1'	10:B:302:C:C6	2.92	0.53
10:B:311:A:H62	10:B:328:U:H2'	1.72	0.53
10:B:753:A:H2'	10:B:754:U:H6	1.72	0.53
10:B:926:G:H2'	10:B:927:A:H8	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:995:C:N4	18:J:2:LYS:HB3	2.22	0.53
10:B:1040:A:H2	10:B:1115:G:N1	1.91	0.53
10:B:1488:C:O2'	10:B:1489:C:H5'	2.08	0.53
10:B:1550:C:H2'	10:B:1550:C:O2	2.09	0.53
10:B:1742:U:H2'	10:B:1743:G:C8	2.42	0.53
10:B:1821:A:H2'	10:B:1822:C:C6	2.43	0.53
10:B:2669:G:H2'	10:B:2670:A:C8	2.43	0.53
10:B:2784:U:H4'	12:D:41:ALA:O	2.08	0.53
11:C:154:ALA:C	11:C:156:SER:H	2.11	0.53
11:C:164:VAL:HB	11:C:167:ASP:CG	2.29	0.53
11:C:224:MET:HB3	11:C:233:GLY:H	1.72	0.53
12:D:170:VAL:CG1	12:D:171:THR:H	2.09	0.53
12:D:175:LEU:HD22	12:D:189:VAL:HG12	1.90	0.53
13:E:132:LYS:HB2	13:E:132:LYS:NZ	2.23	0.53
17:I:27:LEU:HB2	17:I:32:VAL:HG21	1.91	0.53
17:I:102:ARG:HD3	17:I:141:ASP:OD2	2.08	0.53
24:P:18:SER:HB2	24:P:87:ARG:NE	2.22	0.53
24:P:54:LEU:O	24:P:56:SER:N	2.41	0.53
28:T:84:TYR:O	28:T:85:VAL:HG22	2.09	0.53
29:U:39:ASN:HD21	29:U:60:LYS:C	2.09	0.53
30:V:89:ILE:HD12	30:V:89:ILE:O	2.08	0.53
10:B:131:A:H2'	10:B:132:G:C8	2.44	0.53
10:B:230:G:H2'	10:B:231:A:H8	1.72	0.53
10:B:271:G:C8	10:B:367:G:C2	2.95	0.53
10:B:311:A:C5	10:B:332:A:N7	2.76	0.53
10:B:315:G:C2	10:B:316:C:C2	2.96	0.53
10:B:363:G:H2'	10:B:364:C:C6	2.43	0.53
10:B:529:A:OP2	18:J:113:PRO:HD3	2.08	0.53
10:B:538:A:O2'	10:B:539:G:H5'	2.08	0.53
10:B:663:G:OP1	20:L:27:LEU:HD21	2.07	0.53
10:B:1061:U:C6	17:I:9:LYS:HD2	2.42	0.53
10:B:1091:G:H8	10:B:1091:G:O5'	1.91	0.53
10:B:1535:A:H3'	10:B:1536:C:C5	2.43	0.53
11:C:68:ARG:HD2	11:C:127:ASN:ND2	2.23	0.53
11:C:212:TRP:CZ3	11:C:217:PRO:HD3	2.43	0.53
11:C:247:TRP:O	11:C:247:TRP:HD1	1.92	0.53
12:D:120:GLY:H	12:D:123:LYS:CG	2.16	0.53
13:E:50:ALA:O	13:E:74:LYS:HD2	2.08	0.53
14:F:63:LYS:HE2	14:F:64:PRO:CD	2.38	0.53
15:G:137:LYS:HA	15:G:140:ILE:CG1	2.38	0.53
17:I:79:LEU:HD11	17:I:131:THR:OG1	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:M:82:MET:HB2	21:M:84:LYS:CE	2.38	0.53
24:P:52:ARG:HH11	24:P:54:LEU:CB	2.19	0.53
3:2:43:THR:O	3:2:44:VAL:C	2.47	0.53
4:3:24:LYS:NZ	20:L:63:LYS:N	2.56	0.53
10:B:328:U:O2'	29:U:65:GLN:CG	2.55	0.53
10:B:366:C:H2'	10:B:366:C:O2	2.09	0.53
10:B:633:A:OP1	20:L:69:ARG:HB2	2.07	0.53
10:B:809:G:O6	20:L:39:LYS:HE3	2.09	0.53
10:B:950:G:H2'	10:B:951:C:C6	2.43	0.53
10:B:2097:A:H2'	10:B:2098:U:C6	2.43	0.53
10:B:2678:C:H2'	10:B:2679:A:H8	1.73	0.53
10:B:2787:C:O2'	10:B:2788:C:H5'	2.08	0.53
11:C:209:ALA:HA	11:C:213:ARG:CZ	2.38	0.53
17:I:18:ASN:N	17:I:19:PRO:HD2	2.23	0.53
21:M:96:ILE:HD13	21:M:97:GLN:CB	2.39	0.53
24:P:16:VAL:O	24:P:17:PRO:O	2.26	0.53
29:U:42:LYS:HD2	29:U:60:LYS:HB2	1.90	0.53
1:0:52:LYS:HE2	22:N:118:ARG:HD2	1.87	0.53
2:1:35:LEU:C	2:1:36:LYS:HD2	2.28	0.53
4:3:13:PHE:O	4:3:14:LYS:HG2	2.09	0.53
10:B:184:C:H2'	10:B:185:G:C8	2.43	0.53
10:B:278:A:C2	10:B:361:G:C2	2.96	0.53
10:B:297:G:C5	10:B:298:G:C6	2.96	0.53
10:B:298:G:P	29:U:83:GLY:N	2.81	0.53
10:B:319:G:C4	10:B:333:G:C2	2.97	0.53
10:B:320:A:C5'	13:E:130:LYS:NZ	2.71	0.53
10:B:1097:U:H2'	10:B:1098:A:C5'	2.18	0.53
10:B:1123:C:H2'	10:B:1124:G:H8	1.73	0.53
10:B:1259:G:H2'	10:B:1260:A:H8	1.73	0.53
10:B:1549:A:C2	10:B:1550:C:C4	2.96	0.53
10:B:1945:G:H2'	10:B:1946:U:C6	2.44	0.53
10:B:2273:A:H2'	10:B:2274:A:C8	2.43	0.53
11:C:10:PRO:HD2	11:C:23:LEU:HD11	1.91	0.53
11:C:114:GLN:HB2	11:C:124:LYS:NZ	2.23	0.53
15:G:60:GLY:O	15:G:63:GLN:HG2	2.08	0.53
18:J:119:PHE:HE1	18:J:121:LYS:HD3	1.72	0.53
25:Q:69:ARG:HG3	25:Q:70:GLN:N	2.23	0.53
26:R:66:HIS:HA	26:R:98:ILE:HD13	1.89	0.53
8:7:110:C:H2'	8:7:111:G:C8	2.43	0.53
10:B:18:U:H2'	10:B:19:A:C8	2.43	0.53
10:B:146:A:H2'	10:B:147:C:H6	1.72	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:299:A:P	10:B:299:A:C8	3.00	0.53
10:B:664:G:H2'	10:B:665:U:C6	2.42	0.53
10:B:823:C:O2'	10:B:824:U:H5'	2.09	0.53
10:B:1517:G:C2'	10:B:1518:C:C5'	2.86	0.53
10:B:1525:A:C6	10:B:1526:C:N3	2.76	0.53
10:B:1810:A:H2'	10:B:1811:G:O4'	2.08	0.53
10:B:2240:U:O2'	10:B:2241:A:H5'	2.07	0.53
10:B:2526:G:H2'	10:B:2527:C:C6	2.44	0.53
10:B:2771:C:H2'	10:B:2772:C:C6	2.43	0.53
10:B:2820:A:O5'	22:N:4:ARG:HA	2.08	0.53
11:C:181:ARG:NH1	11:C:260:LYS:HZ2	2.07	0.53
14:F:33:ILE:HD11	14:F:90:LEU:HB2	1.89	0.53
15:G:27:GLY:HA3	15:G:78:VAL:HB	1.90	0.53
18:J:34:ARG:HB3	18:J:39:LYS:HD2	1.89	0.53
18:J:136:GLN:N	18:J:137:PRO:CD	2.71	0.53
19:K:102:PRO:HB3	19:K:121:GLU:OE1	2.09	0.53
24:P:8:GLU:HA	24:P:11:GLN:CG	2.37	0.53
24:P:25:VAL:HG11	24:P:86:LYS:O	2.09	0.53
25:Q:92:LYS:O	25:Q:94:LEU:N	2.42	0.53
2:1:8:ILE:HG23	2:1:27:ARG:HE	1.72	0.53
10:B:301:G:H1'	10:B:302:C:N1	2.24	0.53
10:B:313:G:H2'	10:B:314:C:H6	1.71	0.53
10:B:319:G:N3	10:B:320:A:C4	2.76	0.53
10:B:322:A:C4	10:B:340:A:C2	2.96	0.53
10:B:699:A:H2'	10:B:700:G:O4'	2.08	0.53
10:B:934:U:H2'	10:B:935:C:H6	1.71	0.53
10:B:1442:U:H2'	10:B:1443:U:H6	1.71	0.53
10:B:1789:A:OP1	11:C:219:VAL:HG12	2.09	0.53
10:B:1904:G:H1'	10:B:1927:A:N1	2.24	0.53
10:B:2186:G:H2'	10:B:2187:U:O4'	2.09	0.53
10:B:2379:G:H2'	10:B:2380:C:C6	2.43	0.53
10:B:2590:A:H2'	10:B:2591:C:C6	2.43	0.53
10:B:2862:G:H2'	10:B:2863:C:C6	2.43	0.53
13:E:149:ILE:CG1	13:E:186:VAL:HG13	2.39	0.53
16:H:6:LEU:HA	16:H:15:LEU:CA	2.38	0.53
20:L:117:THR:CG2	20:L:120:VAL:HB	2.36	0.53
22:N:35:LYS:HA	22:N:111:ALA:O	2.09	0.53
23:O:87:ILE:HG13	23:O:88:LYS:H	1.73	0.53
25:Q:23:TYR:O	25:Q:24:TYR:HB2	2.09	0.53
30:V:79:ARG:C	30:V:87:GLN:HE22	2.12	0.53
1:0:2:VAL:HG22	1:0:3:GLN:N	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:281:C:H2'	10:B:281:C:O2	2.09	0.53
10:B:291:G:H1'	10:B:350:G:N2	2.23	0.53
10:B:340:A:C2'	10:B:341:C:C5'	2.86	0.53
10:B:404:A:H4'	10:B:405:U:H5'	1.89	0.53
10:B:498:G:O2'	10:B:499:U:H5'	2.07	0.53
10:B:857:G:O2'	10:B:858:G:H5'	2.09	0.53
10:B:1254:A:H2'	13:E:69:ARG:HH12	1.73	0.53
10:B:1518:C:C2	10:B:1519:G:C8	2.96	0.53
10:B:1658:C:OP1	12:D:136:ASN:CA	2.50	0.53
12:D:5:VAL:HB	12:D:27:ILE:O	2.09	0.53
12:D:17:GLU:CG	24:P:80:VAL:HG21	2.38	0.53
12:D:68:PHE:O	12:D:70:LYS:N	2.40	0.53
13:E:38:GLY:C	13:E:40:ARG:H	2.12	0.53
19:K:59:LYS:HD2	19:K:92:GLU:OE2	2.08	0.53
21:M:135:VAL:HA	30:V:76:ASP:OD1	2.09	0.53
26:R:53:PHE:HB3	26:R:55:ASP:CA	2.37	0.53
27:S:32:ALA:O	27:S:33:LEU:HD13	2.08	0.53
4:3:24:LYS:HA	4:3:45:PRO:CB	2.34	0.53
9:A:42:C:H6	14:F:65:LEU:HD13	1.73	0.53
10:B:26:G:H1'	10:B:515:A:H61	1.74	0.53
10:B:136:G:H2'	10:B:137:U:C6	2.44	0.53
10:B:144:A:H2'	10:B:145:C:C6	2.43	0.53
10:B:161:A:C3'	10:B:162:U:H5''	2.34	0.53
10:B:326:G:H2'	10:B:327:G:C5'	2.36	0.53
10:B:672:C:O2'	10:B:673:C:H5'	2.09	0.53
10:B:709:U:H2'	10:B:710:U:C6	2.44	0.53
10:B:1079:C:C4	10:B:1088:A:C2	2.96	0.53
10:B:1192:G:C2'	10:B:1193:G:H5'	2.39	0.53
10:B:1395:A:H4'	10:B:1397:U:C5	2.44	0.53
10:B:1444:G:H2'	10:B:1445:G:H8	1.74	0.53
10:B:1464:G:H2'	10:B:1465:G:C8	2.43	0.53
10:B:1509:A:H5'	10:B:1510:G:H5'	1.89	0.53
10:B:1979:U:O2'	10:B:1980:G:H5'	2.09	0.53
10:B:2539:C:O2'	10:B:2540:C:H5'	2.09	0.53
10:B:2620:C:O4'	12:D:161:MET:HG3	2.09	0.53
11:C:12:ARG:HB2	11:C:18:VAL:HG12	1.91	0.53
11:C:208:GLY:C	11:C:210:ALA:H	2.12	0.53
13:E:142:ALA:C	13:E:143:LEU:HD12	2.29	0.53
15:G:139:VAL:O	15:G:143:VAL:HG23	2.08	0.53
16:H:66:ASN:HB2	16:H:138:VAL:HG11	1.91	0.53
16:H:89:LYS:HZ1	16:H:90:LEU:HB2	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:I:23:VAL:HG23	17:I:24:GLY:N	2.23	0.53
20:L:14:LYS:HA	20:L:14:LYS:NZ	2.24	0.53
22:N:21:PHE:CE2	22:N:43:GLU:HG2	2.44	0.53
25:Q:39:ILE:HG23	26:R:80:ARG:HD3	1.91	0.53
32:X:8:GLU:O	32:X:10:SER:N	2.42	0.53
10:B:6:A:H2'	10:B:7:G:H8	1.74	0.53
10:B:76:C:H5'	32:X:48:ARG:NH1	2.23	0.53
10:B:142:A:N3	28:T:2:ILE:HG23	2.23	0.53
10:B:282:A:C6	10:B:359:G:N1	2.77	0.53
10:B:299:A:C1'	10:B:322:A:C6	2.90	0.53
10:B:318:C:O2	10:B:318:C:H2'	2.09	0.53
10:B:337:C:OP2	29:U:81:ARG:NH2	2.40	0.53
10:B:794:A:H2'	10:B:795:C:H6	1.74	0.53
10:B:1441:G:H2'	10:B:1442:U:H6	1.73	0.53
10:B:1739:A:H2'	10:B:1740:G:C8	2.44	0.53
10:B:1842:G:H2'	10:B:1843:C:H6	1.74	0.53
10:B:2195:U:H2'	10:B:2196:C:C6	2.44	0.53
10:B:2743:U:H2'	10:B:2744:G:O4'	2.09	0.53
10:B:2785:C:H2'	10:B:2786:U:H6	1.73	0.53
11:C:44:ASN:HA	11:C:49:THR:O	2.09	0.53
13:E:3:LEU:HB2	13:E:12:LEU:HD13	1.91	0.53
13:E:44:ARG:HG2	13:E:45:ALA:H	1.73	0.53
13:E:104:ALA:O	13:E:105:LEU:HD23	2.09	0.53
16:H:82:SER:H	16:H:146:VAL:CG1	2.10	0.53
20:L:30:THR:HA	20:L:36:LYS:HZ1	1.74	0.53
20:L:90:VAL:HG21	20:L:121:THR:H	1.74	0.53
24:P:38:ARG:HH11	24:P:39:LEU:N	2.06	0.53
24:P:69:VAL:HG12	24:P:70:GLU:N	2.24	0.53
26:R:64:VAL:HB	26:R:98:ILE:HD12	1.90	0.53
28:T:16:VAL:HG13	28:T:16:VAL:O	2.08	0.53
28:T:24:MET:CE	28:T:29:THR:H	2.20	0.53
9:A:91:C:O2'	9:A:92:C:H5'	2.09	0.53
10:B:37:C:C2'	13:E:46:GLN:HB3	2.38	0.53
10:B:55:G:H2'	10:B:56:A:H8	1.73	0.53
10:B:284:U:O2	10:B:284:U:H2'	2.07	0.53
10:B:321:U:P	13:E:130:LYS:HA	2.49	0.53
10:B:352:A:C2	10:B:353:C:N1	2.77	0.53
10:B:747:U:H4'	27:S:89:ALA:HB2	1.91	0.53
10:B:943:A:OP1	20:L:42:SER:HB3	2.09	0.53
10:B:988:A:H3'	33:Y:12:ALA:HB2	1.89	0.53
10:B:1450:G:N2	10:B:1452:G:N1	2.55	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1474:U:H2'	10:B:1475:G:H5'	1.90	0.53
10:B:2027:G:O2'	10:B:2028:U:H5'	2.09	0.53
10:B:2298:A:H2'	10:B:2299:U:O4'	2.09	0.53
10:B:2333:A:O2'	23:O:7:ARG:HD3	2.09	0.53
10:B:2471:A:HO2'	10:B:2472:G:H8	1.52	0.53
11:C:53:ILE:HD13	11:C:218:THR:CG2	2.39	0.53
11:C:68:ARG:HD3	11:C:103:ILE:HD12	1.91	0.53
11:C:160:TYR:CD1	11:C:193:GLU:HG2	2.44	0.53
15:G:126:THR:CG2	15:G:128:THR:HG23	2.39	0.53
18:J:7:LYS:HD3	18:J:48:VAL:CB	2.39	0.53
21:M:34:LYS:HA	21:M:99:GLY:HA3	1.92	0.53
23:O:54:VAL:HG21	23:O:78:VAL:HG11	1.91	0.53
26:R:53:PHE:CB	26:R:55:ASP:HB2	2.39	0.53
27:S:6:LYS:HA	27:S:104:THR:HA	1.91	0.53
28:T:66:LYS:N	28:T:77:ARG:HA	2.24	0.53
4:3:26:ALA:HB3	4:3:29:ARG:CZ	2.39	0.52
10:B:80:G:C1'	10:B:346:A:H62	2.22	0.52
10:B:182:A:H2'	10:B:183:C:H6	1.74	0.52
10:B:236:C:O2'	10:B:237:C:H5'	2.09	0.52
10:B:327:G:C6	10:B:336:C:N4	2.76	0.52
10:B:343:C:O2	10:B:343:C:H2'	2.09	0.52
10:B:587:C:H4'	10:B:588:U:C6	2.44	0.52
10:B:705:A:N6	10:B:726:G:O2'	2.41	0.52
10:B:1118:C:C2'	10:B:1119:U:H5'	2.39	0.52
10:B:1444:G:N1	10:B:1548:A:C6	2.77	0.52
10:B:1512:C:H2'	10:B:1513:U:H5'	1.90	0.52
10:B:1513:U:H3'	10:B:1514:G:C5'	2.32	0.52
10:B:2104:C:H2'	10:B:2105:U:C5	2.44	0.52
10:B:2732:G:H3'	10:B:2733:A:H5'	1.92	0.52
10:B:2740:A:H2'	10:B:2741:A:C8	2.44	0.52
11:C:171:VAL:HB	11:C:182:LYS:CB	2.39	0.52
11:C:172:THR:HG22	11:C:173:LEU:H	1.74	0.52
12:D:16:THR:C	24:P:80:VAL:HB	2.29	0.52
26:R:41:ILE:C	26:R:43:ASN:H	2.11	0.52
31:W:42:THR:CB	31:W:66:VAL:H	2.22	0.52
32:X:30:MET:CG	32:X:31:GLN:H	2.11	0.52
34:Z:40:CYS:O	34:Z:41:HIS:HB3	2.08	0.52
1:0:16:ARG:HA	1:0:19:ASP:OD2	2.09	0.52
4:3:7:ARG:NE	4:3:11:LYS:HZ3	2.03	0.52
10:B:297:G:N7	10:B:298:G:C5	2.77	0.52
10:B:566:U:O2'	10:B:567:U:H5'	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:691:C:H4'	11:C:42:ARG:NE	2.24	0.52
10:B:718:A:H3'	10:B:719:C:C6	2.45	0.52
10:B:740:C:H5''	10:B:1784:A:OP1	2.09	0.52
10:B:991:C:H2'	10:B:992:C:H6	1.74	0.52
10:B:1092:C:H2'	10:B:1093:G:H8	1.74	0.52
10:B:1429:G:O2'	10:B:1430:G:H5'	2.09	0.52
10:B:2181:U:H2'	10:B:2182:U:O4'	2.10	0.52
10:B:2344:U:H4'	10:B:2345:G:OP1	2.09	0.52
10:B:2586:U:H2'	10:B:2587:A:C8	2.44	0.52
10:B:2626:C:O2'	10:B:2627:G:H5'	2.08	0.52
10:B:2834:G:H1'	10:B:2883:A:H61	1.74	0.52
12:D:26:VAL:HG23	12:D:187:LEU:HB3	1.90	0.52
14:F:78:ILE:HG23	14:F:82:TYR:HD2	1.74	0.52
15:G:42:VAL:HG12	15:G:51:PHE:CD2	2.44	0.52
17:I:83:ALA:N	17:I:100:ILE:HD11	2.24	0.52
18:J:13:ARG:HH11	18:J:13:ARG:HG3	1.73	0.52
18:J:99:ARG:O	18:J:100:VAL:HB	2.08	0.52
19:K:84:CYS:O	19:K:85:VAL:HB	2.10	0.52
24:P:25:VAL:HG13	24:P:88:ARG:N	2.09	0.52
31:W:42:THR:HG21	31:W:66:VAL:HG12	1.90	0.52
6:5:431:LYS:NZ	6:5:432:LYS:HE2	2.24	0.52
10:B:160:A:H2'	10:B:161:A:C8	2.45	0.52
10:B:854:C:O2'	10:B:855:G:H5'	2.09	0.52
10:B:877:A:H2	10:B:900:A:N7	2.08	0.52
10:B:1028:A:N6	10:B:1125:G:H2'	2.24	0.52
10:B:1526:C:C4	10:B:1527:G:N7	2.77	0.52
10:B:2682:A:N3	12:D:22:ILE:HD11	2.24	0.52
11:C:139:THR:CG2	11:C:193:GLU:HB3	2.40	0.52
12:D:170:VAL:HG11	12:D:194:PRO:CG	2.39	0.52
13:E:138:LEU:HD21	13:E:167:VAL:HG21	1.91	0.52
15:G:126:THR:HG23	15:G:128:THR:HG23	1.91	0.52
18:J:19:ASP:OD1	18:J:20:ALA:N	2.42	0.52
18:J:25:LEU:HD12	18:J:62:VAL:HG12	1.92	0.52
20:L:27:LEU:C	20:L:29:LYS:N	2.61	0.52
26:R:37:GLU:HG2	26:R:62:GLU:N	2.16	0.52
27:S:32:ALA:C	27:S:33:LEU:HD22	2.29	0.52
27:S:42:LYS:O	27:S:46:LEU:HG	2.09	0.52
30:V:63:ILE:HD11	30:V:72:VAL:HG21	1.91	0.52
33:Y:37:ARG:HG3	33:Y:37:ARG:HH11	1.75	0.52
2:1:33:LEU:O	2:1:34:GLU:HG2	2.10	0.52
3:2:34:ARG:HH11	3:2:34:ARG:HG3	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:3:4:LYS:NZ	4:3:59:ALA:H	2.07	0.52
8:7:104:G:H1	8:7:171:C:N4	2.05	0.52
10:B:43:G:H2'	10:B:44:A:O4'	2.10	0.52
10:B:282:A:N6	10:B:283:G:O6	2.42	0.52
10:B:283:G:N3	10:B:284:U:H1'	2.25	0.52
10:B:445:C:O2'	10:B:446:G:H5'	2.09	0.52
10:B:812:C:C5'	20:L:32:GLY:HA2	2.39	0.52
10:B:1548:A:C2	10:B:1549:A:C5	2.97	0.52
10:B:1799:G:C5	11:C:175:LEU:HD13	2.44	0.52
10:B:2074:U:H2'	10:B:2075:U:C6	2.44	0.52
10:B:2502:G:H5'	10:B:2503:A:C5'	2.33	0.52
16:H:83:LYS:HB2	16:H:92:GLY:H	1.74	0.52
22:N:22:ARG:NH1	22:N:69:ARG:HA	2.24	0.52
23:O:2:ASP:HA	23:O:5:SER:O	2.10	0.52
23:O:19:GLN:N	31:W:76:ARG:HH12	2.01	0.52
23:O:58:ILE:HG13	23:O:59:ALA:H	1.74	0.52
24:P:92:ARG:NH2	24:P:110:LYS:HE2	2.24	0.52
25:Q:21:LYS:C	25:Q:23:TYR:H	2.12	0.52
25:Q:68:ALA:HB2	25:Q:105:PHE:HZ	1.75	0.52
25:Q:91:ARG:HG2	26:R:10:LYS:CE	2.40	0.52
26:R:66:HIS:CA	26:R:98:ILE:HD13	2.38	0.52
26:R:78:ARG:HG2	26:R:88:GLY:H	1.74	0.52
27:S:7:HIS:CD2	27:S:8:ARG:H	2.27	0.52
27:S:29:VAL:HG21	27:S:69:LEU:C	2.30	0.52
27:S:34:ASP:N	27:S:37:THR:HG22	2.23	0.52
2:1:44:GLN:OE1	2:1:46:VAL:HB	2.09	0.52
4:3:4:LYS:HE3	4:3:58:ILE:HB	1.90	0.52
6:5:421:ASP:OD2	10:B:490:C:N4	2.41	0.52
10:B:285:G:H2'	10:B:286:U:C5'	2.35	0.52
10:B:289:G:H2'	10:B:290:U:H5'	1.92	0.52
10:B:326:G:C2	10:B:327:G:C8	2.97	0.52
10:B:334:C:O2	10:B:334:C:H2'	2.09	0.52
10:B:359:G:C5	10:B:360:U:C5	2.98	0.52
10:B:365:U:H2'	10:B:366:C:C6	2.44	0.52
10:B:365:U:N3	10:B:366:C:C4	2.78	0.52
10:B:811:U:O2	10:B:1250:G:H3'	2.10	0.52
10:B:975:A:H1'	10:B:990:A:C2	2.45	0.52
10:B:1187:G:H5''	26:R:84:ARG:CD	2.39	0.52
10:B:1346:G:O2'	10:B:1347:A:H5'	2.08	0.52
10:B:1553:A:C5	10:B:1555:G:C4	2.98	0.52
10:B:1750:G:H2'	10:B:1751:U:C6	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2393:U:H5'	20:L:62:PRO:CD	2.39	0.52
10:B:2511:U:H4'	12:D:128:ARG:CZ	2.39	0.52
20:L:79:LEU:CA	20:L:113:ALA:HB3	2.31	0.52
21:M:42:THR:HA	21:M:92:TRP:HD1	1.73	0.52
23:O:1:MET:HG3	23:O:3:LYS:HE3	1.89	0.52
25:Q:111:LYS:HB2	26:R:52:PRO:HB3	1.91	0.52
28:T:88:LYS:HG2	28:T:89:GLU:N	2.23	0.52
2:1:31:GLU:CG	2:1:32:LYS:H	2.20	0.52
2:1:34:GLU:O	2:1:35:LEU:HB3	2.09	0.52
4:3:29:ARG:HA	4:3:33:THR:HG23	1.91	0.52
10:B:291:G:C2	10:B:350:G:C8	2.97	0.52
10:B:346:A:N3	10:B:347:A:H8	2.01	0.52
10:B:362:A:C6	10:B:363:G:N7	2.78	0.52
10:B:365:U:C4	10:B:366:C:N4	2.78	0.52
10:B:494:G:O2'	10:B:495:G:H5'	2.09	0.52
10:B:950:G:H2'	10:B:951:C:H6	1.74	0.52
10:B:968:C:H2'	10:B:969:G:C8	2.42	0.52
10:B:1274:A:N3	10:B:1297:C:H1'	2.25	0.52
10:B:1444:G:H2'	10:B:1445:G:C8	2.44	0.52
10:B:1528:A:H3'	10:B:1529:G:C8	2.40	0.52
10:B:1573:G:H2'	10:B:1574:C:H5'	1.91	0.52
10:B:1601:G:OP1	28:T:62:VAL:HG21	2.09	0.52
10:B:1736:U:H2'	10:B:1737:G:O4'	2.09	0.52
10:B:2147:A:H5'	10:B:2148:G:C5'	2.39	0.52
10:B:2210:U:N3	10:B:2212:A:N7	2.58	0.52
12:D:1:MET:CE	12:D:84:LEU:HD13	2.39	0.52
13:E:6:LYS:HB2	13:E:12:LEU:HD11	1.92	0.52
13:E:43:THR:O	13:E:43:THR:HG22	2.08	0.52
13:E:88:ARG:NH1	13:E:88:ARG:HB2	2.24	0.52
16:H:57:LYS:HE3	16:H:61:VAL:HG23	1.92	0.52
20:L:29:LYS:NZ	20:L:31:GLY:HA3	2.23	0.52
24:P:32:VAL:HB	24:P:80:VAL:HG22	1.92	0.52
26:R:42:ALA:HB3	26:R:45:GLU:HB2	1.92	0.52
30:V:6:ALA:HB1	30:V:41:GLU:O	2.10	0.52
31:W:35:ILE:HG23	31:W:36:ILE:N	2.14	0.52
34:Z:30:HIS:HE1	34:Z:49:ARG:HB2	1.74	0.52
10:B:15:G:O2'	10:B:16:C:H5'	2.10	0.52
10:B:83:A:N7	29:U:90:LYS:CB	2.72	0.52
10:B:100:U:OP1	10:B:100:U:H2'	2.09	0.52
10:B:173:A:H2'	10:B:174:U:H6	1.75	0.52
10:B:287:G:C6	10:B:288:U:C4	2.98	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:299:A:N9	10:B:322:A:C6	2.77	0.52
10:B:310:A:C4	10:B:330:A:N1	2.78	0.52
10:B:311:A:H61	10:B:328:U:H2'	1.70	0.52
10:B:348:A:C5	10:B:349:U:C4	2.98	0.52
10:B:1092:C:C2'	10:B:1093:G:H5'	2.40	0.52
10:B:1096:A:H8	10:B:1096:A:O5'	1.93	0.52
10:B:1513:U:C3'	10:B:1514:G:C5'	2.87	0.52
10:B:1521:G:H8	10:B:1522:A:C8	2.21	0.52
11:C:141:HIS:CG	11:C:190:THR:HB	2.44	0.52
12:D:5:VAL:HG21	12:D:28:GLU:HA	1.92	0.52
12:D:67:HIS:O	12:D:71:ALA:HB3	2.10	0.52
13:E:44:ARG:HD3	13:E:44:ARG:N	2.24	0.52
17:I:116:MET:CE	17:I:127:SER:HB2	2.40	0.52
17:I:122:GLU:CD	17:I:122:GLU:H	2.12	0.52
18:J:57:LEU:HD12	18:J:128:ASN:C	2.30	0.52
20:L:117:THR:HG21	20:L:120:VAL:CG1	2.38	0.52
23:O:73:ALA:HA	23:O:109:ALA:HB2	1.90	0.52
24:P:24:THR:CG2	24:P:111:GLU:HG2	2.33	0.52
24:P:108:ARG:H	24:P:108:ARG:CD	2.14	0.52
29:U:38:ILE:CB	29:U:62:ALA:HB3	2.40	0.52
10:B:203:A:H2'	10:B:204:A:C8	2.44	0.52
10:B:285:G:C2	10:B:286:U:C6	2.97	0.52
10:B:307:G:H5''	10:B:308:G:OP2	2.10	0.52
10:B:554:U:H2'	10:B:555:G:O4'	2.09	0.52
10:B:1109:C:O2	10:B:1109:C:H2'	2.09	0.52
10:B:1453:A:H61	22:N:74:GLU:HG2	1.73	0.52
10:B:1528:A:N1	10:B:1544:A:N9	2.58	0.52
10:B:2734:A:C2'	10:B:2735:G:H5'	2.39	0.52
12:D:8:LYS:HD2	24:P:5:LYS:NZ	2.24	0.52
12:D:13:ARG:HA	12:D:13:ARG:HH11	1.75	0.52
13:E:141:MET:CG	13:E:143:LEU:HB2	2.40	0.52
13:E:149:ILE:HG12	13:E:186:VAL:HG22	1.90	0.52
15:G:171:LYS:O	15:G:172:GLU:HG2	2.08	0.52
16:H:3:VAL:CG2	16:H:21:VAL:HG21	2.39	0.52
17:I:85:ILE:HD12	17:I:87:SER:O	2.10	0.52
21:M:73:ILE:HG22	21:M:74:THR:N	2.24	0.52
21:M:96:ILE:O	21:M:97:GLN:HG3	2.10	0.52
24:P:52:ARG:CG	24:P:54:LEU:HB2	2.40	0.52
26:R:49:ILE:O	26:R:51:VAL:HG23	2.09	0.52
29:U:43:LYS:HZ1	29:U:44:HIS:HA	1.73	0.52
10:B:139:U:H5''	10:B:140:C:C5	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:156:A:H2'	10:B:157:C:C6	2.45	0.52
10:B:271:G:N1	10:B:366:C:C2'	2.73	0.52
10:B:273:G:C5	10:B:274:C:N4	2.78	0.52
10:B:278:A:C4	10:B:362:A:C4	2.98	0.52
10:B:301:G:C2	10:B:302:C:N3	2.78	0.52
10:B:321:U:OP2	13:E:130:LYS:CA	2.58	0.52
10:B:324:A:N6	10:B:325:G:C6	2.78	0.52
10:B:344:A:O5'	10:B:344:A:H8	1.93	0.52
10:B:362:A:N1	10:B:363:G:C8	2.78	0.52
10:B:520:G:H2'	10:B:521:U:C6	2.44	0.52
10:B:1063:G:H5''	17:I:76:ALA:H	1.74	0.52
10:B:1487:U:H2'	10:B:1488:C:H6	1.75	0.52
10:B:1521:G:C2'	10:B:1522:A:H8	2.23	0.52
10:B:1529:G:C2'	10:B:1530:G:H8	2.04	0.52
10:B:1688:U:O2	10:B:1700:A:H5'	2.09	0.52
10:B:1842:G:H2'	10:B:1843:C:C6	2.45	0.52
10:B:2305:U:H2'	10:B:2306:C:C6	2.45	0.52
10:B:2618:G:N2	12:D:155:VAL:HG21	2.22	0.52
10:B:2848:G:O2'	24:P:96:LEU:HD22	2.10	0.52
11:C:66:PHE:O	11:C:68:ARG:HG2	2.10	0.52
14:F:65:LEU:C	14:F:67:THR:H	2.12	0.52
15:G:25:ILE:O	15:G:25:ILE:HG23	2.10	0.52
22:N:96:ARG:O	22:N:113:ILE:HA	2.09	0.52
26:R:78:ARG:HB3	26:R:87:GLN:CA	2.29	0.52
27:S:56:ALA:C	27:S:58:ALA:H	2.11	0.52
27:S:90:LYS:N	27:S:90:LYS:HE3	2.25	0.52
30:V:77:VAL:CG2	30:V:79:ARG:HE	2.23	0.52
31:W:35:ILE:CG2	31:W:36:ILE:H	2.15	0.52
31:W:36:ILE:HG21	31:W:68:PHE:HD2	1.75	0.52
31:W:57:THR:O	31:W:58:LEU:HB3	2.09	0.52
34:Z:5:ILE:HD13	34:Z:47:LYS:HB3	1.92	0.52
34:Z:13:THR:HG23	34:Z:25:ARG:HB3	1.91	0.52
10:B:142:A:H8	10:B:142:A:OP2	1.93	0.52
10:B:297:G:H2'	10:B:298:G:O4'	2.09	0.52
10:B:346:A:N3	10:B:346:A:C5'	2.73	0.52
10:B:433:C:H2'	10:B:434:U:C6	2.45	0.52
10:B:575:A:O2'	10:B:576:U:H5'	2.10	0.52
10:B:1050:A:C5	10:B:2751:G:C6	2.98	0.52
10:B:1116:G:H2'	10:B:1117:C:H5'	1.91	0.52
10:B:1552:A:C5'	10:B:1552:A:N3	2.73	0.52
10:B:2188:U:H2'	10:B:2189:U:C6	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2336:A:H61	31:W:69:GLU:HG3	1.74	0.52
10:B:2599:G:N7	11:C:234:GLY:HA2	2.25	0.52
13:E:150:THR:HB	13:E:171:ASP:OD2	2.10	0.52
15:G:137:LYS:O	15:G:140:ILE:HG13	2.09	0.52
16:H:128:HIS:CB	16:H:144:VAL:HB	2.38	0.52
18:J:72:LYS:HB2	18:J:90:GLU:HB2	1.91	0.52
21:M:126:ILE:HG13	21:M:127:LYS:N	2.19	0.52
24:P:23:ASP:H	24:P:93:LYS:CE	2.22	0.52
26:R:47:VAL:C	26:R:49:ILE:H	2.11	0.52
32:X:14:LEU:HD21	32:X:57:LEU:HB2	1.90	0.52
9:A:42:C:C6	14:F:65:LEU:HD13	2.45	0.51
10:B:300:A:N3	10:B:319:G:C1'	2.73	0.51
10:B:316:C:H2'	10:B:316:C:O2	2.09	0.51
10:B:496:G:H2'	10:B:497:A:O4'	2.09	0.51
10:B:611:C:H2'	10:B:612:G:O4'	2.11	0.51
10:B:615:U:C2	13:E:38:GLY:HA3	2.44	0.51
10:B:671:C:N4	20:L:39:LYS:HE3	2.25	0.51
10:B:1231:U:H2'	10:B:1232:G:H8	1.75	0.51
10:B:1292:G:H2'	10:B:1293:C:C6	2.45	0.51
10:B:1552:A:C2'	10:B:1553:A:C5'	2.88	0.51
10:B:1564:C:O2'	10:B:1565:C:H5'	2.10	0.51
10:B:1599:U:H2'	10:B:1600:C:C6	2.45	0.51
10:B:1681:G:N3	10:B:1762:A:H2'	2.25	0.51
10:B:1722:A:H61	10:B:1738:G:H1'	1.75	0.51
10:B:1785:A:H2'	10:B:1787:A:N7	2.24	0.51
10:B:1889:A:H2'	10:B:1890:A:C8	2.45	0.51
10:B:2307:G:H2'	10:B:2307:G:N3	2.25	0.51
10:B:2728:U:H2'	10:B:2729:G:H8	1.74	0.51
10:B:2811:G:OP1	12:D:61:THR:HB	2.09	0.51
11:C:119:VAL:HG22	11:C:130:PRO:HG2	1.92	0.51
12:D:83:ARG:HG2	12:D:83:ARG:HH11	1.76	0.51
13:E:53:THR:O	13:E:55:SER:N	2.41	0.51
14:F:106:ALA:HB3	14:F:136:ILE:HG23	1.92	0.51
14:F:107:VAL:HB	14:F:108:PRO:HD3	1.91	0.51
16:H:100:ALA:O	16:H:103:VAL:HG22	2.10	0.51
18:J:109:LEU:O	18:J:111:LYS:HG3	2.09	0.51
21:M:71:LYS:HZ3	21:M:91:TYR:HD2	1.57	0.51
23:O:43:ASN:HA	23:O:46:GLU:OE1	2.11	0.51
24:P:61:ARG:NH2	24:P:75:THR:HB	2.26	0.51
24:P:77:SER:H	24:P:78:PRO:CD	2.23	0.51
27:S:8:ARG:NH1	27:S:80:PRO:HD2	2.24	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:Z:3:LYS:HG3	34:Z:3:LYS:O	2.09	0.51
3:2:19:ARG:NH2	10:B:125:A:OP2	2.44	0.51
4:3:41:ARG:CZ	4:3:42:HIS:H	2.22	0.51
6:5:425:ARG:CZ	10:B:490:C:H5	2.21	0.51
10:B:84:A:O5'	29:U:91:LYS:CE	2.57	0.51
10:B:185:G:H2'	10:B:186:G:O4'	2.10	0.51
10:B:307:G:C2'	10:B:330:A:N6	2.73	0.51
10:B:667:U:H2'	10:B:668:A:O4'	2.10	0.51
10:B:852:U:H2'	10:B:853:C:C6	2.45	0.51
10:B:1040:A:H2	10:B:1115:G:N2	2.08	0.51
10:B:1041:G:H5'	10:B:1042:G:OP1	2.10	0.51
10:B:1081:U:C2'	10:B:1082:U:H5'	2.40	0.51
10:B:1374:G:H2'	10:B:1375:U:C6	2.45	0.51
10:B:1445:G:N2	10:B:1547:C:C5	2.77	0.51
10:B:2485:G:H1'	21:M:118:LYS:HZ3	1.74	0.51
10:B:2537:U:H2'	10:B:2538:C:H6	1.76	0.51
10:B:2800:A:H2'	10:B:2801:G:C1'	2.39	0.51
11:C:63:ILE:O	11:C:64:VAL:HG13	2.10	0.51
12:D:12:THR:O	12:D:13:ARG:HD2	2.11	0.51
13:E:17:THR:O	13:E:18:THR:HG22	2.10	0.51
13:E:88:ARG:HB2	13:E:88:ARG:HH11	1.75	0.51
18:J:34:ARG:HD3	18:J:39:LYS:HB2	1.92	0.51
22:N:125:ALA:O	22:N:126:ALA:HB2	2.09	0.51
23:O:1:MET:CG	23:O:2:ASP:N	2.73	0.51
25:Q:111:LYS:O	25:Q:115:ALA:HB2	2.10	0.51
28:T:31:VAL:O	28:T:83:ALA:O	2.28	0.51
29:U:42:LYS:HE3	29:U:42:LYS:HA	1.92	0.51
30:V:23:ALA:O	30:V:24:ASN:HB2	2.10	0.51
1:0:46:GLY:O	1:0:52:LYS:HB3	2.10	0.51
4:3:23:HIS:CD2	4:3:23:HIS:H	2.27	0.51
5:4:9:LYS:O	5:4:25:VAL:HG13	2.10	0.51
10:B:280:U:C4	10:B:281:C:C4	2.99	0.51
10:B:293:U:C4	10:B:345:A:C6	2.98	0.51
10:B:311:A:C6	10:B:328:U:C5	2.99	0.51
10:B:317:G:C2	10:B:318:C:N1	2.78	0.51
10:B:353:C:O2	10:B:353:C:H2'	2.09	0.51
10:B:1317:G:H2'	10:B:1318:U:O4'	2.11	0.51
10:B:1513:U:C2'	10:B:1514:G:H5''	2.40	0.51
10:B:1571:A:H2'	10:B:1572:A:C8	2.46	0.51
10:B:1682:G:H2'	10:B:1683:U:C6	2.45	0.51
10:B:1854:A:N6	10:B:1888:G:H1'	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2229:U:H2'	10:B:2230:G:H8	1.75	0.51
10:B:2425:A:H5'	10:B:2427:C:O4'	2.10	0.51
10:B:2645:G:H4'	10:B:2732:G:H2'	1.92	0.51
12:D:62:LYS:N	12:D:63:PRO:HD2	2.25	0.51
13:E:153:LEU:HD11	13:E:201:ALA:HA	1.93	0.51
14:F:59:ILE:HD11	14:F:137:PHE:CG	2.45	0.51
14:F:99:PHE:C	14:F:101:ARG:H	2.13	0.51
14:F:106:ALA:HB1	14:F:136:ILE:HG23	1.90	0.51
14:F:173:ASP:CG	14:F:173:ASP:O	2.47	0.51
19:K:63:VAL:HB	19:K:83:ALA:HB3	1.91	0.51
20:L:116:VAL:HG12	20:L:117:THR:H	1.76	0.51
21:M:96:ILE:HD13	21:M:97:GLN:HB2	1.91	0.51
27:S:86:MET:HB2	27:S:96:ILE:HD11	1.92	0.51
28:T:5:GLU:CG	28:T:6:ARG:H	2.23	0.51
31:W:16:GLU:HA	31:W:18:LYS:HE2	1.93	0.51
34:Z:59:ARG:HG3	34:Z:62:LYS:HB2	1.91	0.51
1:0:32:THR:OG1	1:0:42:ILE:HD12	2.10	0.51
9:A:17:C:O2'	9:A:18:G:H5'	2.09	0.51
10:B:64:A:H2'	10:B:65:U:H6	1.73	0.51
10:B:65:U:H2'	10:B:66:C:C6	2.46	0.51
10:B:82:U:H5'	10:B:295:G:C4'	2.23	0.51
10:B:291:G:N2	10:B:350:G:C1'	2.73	0.51
10:B:338:G:C6	10:B:339:U:N3	2.78	0.51
10:B:365:U:C2	10:B:366:C:C6	2.99	0.51
10:B:570:G:H2'	10:B:2030:A:N7	2.25	0.51
10:B:660:C:H2'	10:B:661:A:H8	1.74	0.51
10:B:1164:C:H2'	10:B:1165:A:C8	2.46	0.51
10:B:1529:G:C2	10:B:1530:G:C5	2.99	0.51
12:D:128:ARG:HE	12:D:128:ARG:C	2.13	0.51
14:F:66:ILE:HG22	14:F:83:PRO:HB2	1.91	0.51
14:F:126:ASN:ND2	14:F:157:THR:H	2.09	0.51
18:J:36:LEU:HD11	18:J:122:LEU:HD23	1.92	0.51
20:L:39:LYS:HB3	20:L:46:VAL:HG13	1.92	0.51
29:U:43:LYS:CD	29:U:44:HIS:N	2.73	0.51
30:V:9:ARG:HH12	30:V:27:PRO:HA	1.74	0.51
3:2:39:ARG:O	10:B:458:G:H5''	2.10	0.51
5:4:1:MET:CB	10:B:2527:C:H1'	2.40	0.51
10:B:80:G:O4'	10:B:346:A:N6	2.43	0.51
10:B:172:A:O2'	10:B:173:A:H5'	2.11	0.51
10:B:278:A:N3	10:B:278:A:C2'	2.73	0.51
10:B:283:G:N3	10:B:284:U:C1'	2.73	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:360:U:H3'	10:B:361:G:N7	2.25	0.51
10:B:705:A:H61	10:B:726:G:H1'	1.75	0.51
10:B:741:U:H2'	10:B:742:A:C8	2.45	0.51
10:B:1034:G:C6	10:B:1035:U:C2	2.98	0.51
10:B:1042:G:C2	10:B:1043:C:C5	2.99	0.51
10:B:1132:U:H5''	18:J:85:LYS:NZ	2.25	0.51
10:B:1220:G:H2'	10:B:1221:C:C6	2.45	0.51
10:B:1312:U:OP2	28:T:66:LYS:HG2	2.11	0.51
10:B:1313:U:H4'	10:B:1332:G:H4'	1.92	0.51
10:B:1530:G:N2	10:B:1531:C:C2	2.79	0.51
10:B:2297:A:H61	10:B:2319:G:C3'	2.23	0.51
10:B:2491:U:H5''	10:B:2570:G:H5''	1.93	0.51
12:D:98:VAL:HA	12:D:101:PHE:CZ	2.46	0.51
12:D:118:PHE:HA	12:D:164:GLN:HG3	1.93	0.51
15:G:15:ASP:O	15:G:25:ILE:HA	2.11	0.51
24:P:59:THR:HG1	24:P:76:HIS:CG	2.28	0.51
25:Q:92:LYS:O	25:Q:93:ILE:CG2	2.59	0.51
26:R:65:ALA:O	26:R:66:HIS:HB2	2.11	0.51
27:S:28:LYS:HB3	27:S:71:VAL:HB	1.91	0.51
29:U:94:PHE:CD2	29:U:95:PHE:N	2.78	0.51
34:Z:15:SER:CB	34:Z:23:LYS:HD3	2.41	0.51
34:Z:66:ILE:C	34:Z:68:GLY:N	2.64	0.51
4:3:17:GLY:HA3	10:B:651:G:H4'	1.93	0.51
10:B:362:A:C4	10:B:363:G:H8	2.21	0.51
10:B:460:A:H2'	10:B:461:C:O4'	2.10	0.51
10:B:1113:U:OP1	15:G:2:ARG:CG	2.59	0.51
10:B:1259:G:H2'	10:B:1260:A:C8	2.45	0.51
10:B:1923:U:H2'	10:B:1924:C:C6	2.45	0.51
10:B:2465:C:O2'	10:B:2466:C:H5'	2.11	0.51
10:B:2665:A:C2'	10:B:2666:C:H5'	2.40	0.51
10:B:2869:G:H2'	10:B:2870:C:C6	2.46	0.51
12:D:45:TYR:CZ	12:D:83:ARG:HG3	2.45	0.51
13:E:44:ARG:O	13:E:45:ALA:C	2.49	0.51
13:E:170:ARG:HH21	13:E:175:ILE:CD1	2.24	0.51
14:F:97:GLU:O	14:F:100:GLU:HG3	2.11	0.51
15:G:34:ARG:HG3	15:G:35:THR:N	2.25	0.51
18:J:18:VAL:O	18:J:57:LEU:HD23	2.10	0.51
18:J:84:ILE:HG22	18:J:85:LYS:N	2.26	0.51
20:L:56:PRO:O	20:L:60:ARG:N	2.44	0.51
20:L:80:SER:O	20:L:116:VAL:HA	2.10	0.51
21:M:53:MET:O	21:M:54:THR:HG23	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:N:97:ILE:CD1	22:N:113:ILE:HG12	2.41	0.51
23:O:64:TYR:CD2	23:O:74:VAL:HG21	2.45	0.51
24:P:59:THR:O	24:P:59:THR:HG22	2.10	0.51
24:P:61:ARG:CZ	24:P:61:ARG:HB2	2.41	0.51
24:P:80:VAL:HG13	24:P:80:VAL:O	2.11	0.51
24:P:90:ALA:HB3	24:P:112:ARG:HA	1.92	0.51
25:Q:60:TRP:O	25:Q:64:ILE:HG13	2.10	0.51
25:Q:92:LYS:O	25:Q:94:LEU:HD22	2.11	0.51
30:V:14:LYS:HZ2	30:V:18:ARG:HD2	1.76	0.51
32:X:40:SER:O	32:X:42:LEU:HD12	2.09	0.51
4:3:3:ILE:HG22	10:B:254:G:O6	2.10	0.51
6:5:343:ASN:O	6:5:345:GLY:N	2.39	0.51
10:B:295:G:N3	10:B:296:U:C5	2.77	0.51
10:B:313:G:C4	10:B:314:C:C4	2.98	0.51
10:B:346:A:N3	10:B:346:A:C3'	2.73	0.51
10:B:361:G:C8	10:B:361:G:P	3.03	0.51
10:B:523:C:O2'	10:B:524:G:H5'	2.10	0.51
10:B:923:G:H1'	31:W:23:LYS:CD	2.31	0.51
10:B:1068:G:C2'	10:B:1069:A:H5'	2.40	0.51
10:B:1077:A:C2'	10:B:1078:U:C5'	2.86	0.51
10:B:1086:A:N3	10:B:1086:A:C3'	2.73	0.51
10:B:1519:G:C6	10:B:1520:U:C4	2.95	0.51
10:B:1633:G:O2'	10:B:1634:A:H5''	2.10	0.51
11:C:71:ASP:C	11:C:73:ILE:HD12	2.31	0.51
12:D:35:THR:HG22	12:D:46:ARG:NH2	2.26	0.51
13:E:143:LEU:HD23	13:E:185:LYS:HB2	1.92	0.51
15:G:84:LYS:HB3	15:G:132:LEU:HD12	1.93	0.51
16:H:35:LYS:H	16:H:35:LYS:HD2	1.76	0.51
18:J:20:ALA:HB2	18:J:56:VAL:HG13	1.93	0.51
18:J:41:LYS:HZ3	18:J:46:PRO:HD3	1.75	0.51
23:O:76:LYS:HE3	23:O:80:GLU:HB2	1.91	0.51
24:P:29:VAL:O	24:P:31:VAL:HG23	2.11	0.51
24:P:61:ARG:NH2	24:P:63:ILE:HD11	2.25	0.51
26:R:39:LEU:HD12	26:R:60:LYS:N	2.26	0.51
28:T:30:ILE:CG2	28:T:31:VAL:N	2.71	0.51
28:T:34:VAL:CG1	28:T:43:ILE:HD11	2.40	0.51
31:W:10:ARG:HH11	31:W:10:ARG:HB3	1.75	0.51
31:W:69:GLU:O	31:W:69:GLU:HG2	2.10	0.51
34:Z:59:ARG:HG3	34:Z:62:LYS:CG	2.41	0.51
8:7:166:G:H2'	8:7:167:G:H5'	1.92	0.51
10:B:313:G:N2	10:B:314:C:O2	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:324:A:O2'	10:B:325:G:H5'	2.11	0.51
10:B:359:G:HO2'	10:B:360:U:H5'	1.74	0.51
10:B:527:C:H4'	10:B:527:C:OP1	2.11	0.51
10:B:1042:G:C2	10:B:1043:C:C2	2.99	0.51
10:B:1552:A:H2'	10:B:1553:A:H5''	1.93	0.51
10:B:1568:G:C5'	11:C:60:ALA:HB3	2.41	0.51
10:B:1737:G:H5'	10:B:1738:G:OP2	2.10	0.51
10:B:1817:G:OP1	11:C:62:ARG:NH2	2.43	0.51
10:B:2073:C:O2'	10:B:2074:U:H5'	2.11	0.51
10:B:2149:U:O2'	10:B:2150:C:H5'	2.10	0.51
10:B:2412:A:H2'	10:B:2413:G:O4'	2.10	0.51
10:B:2491:U:H5''	10:B:2570:G:C5'	2.40	0.51
10:B:2512:C:H2'	10:B:2513:A:O4'	2.11	0.51
11:C:128:THR:CA	11:C:190:THR:HA	2.39	0.51
11:C:220:ARG:HG3	11:C:220:ARG:NH1	2.26	0.51
12:D:124:ARG:NH2	12:D:163:GLY:HA3	2.25	0.51
14:F:23:SER:C	14:F:25:MET:H	2.14	0.51
15:G:102:ILE:O	15:G:113:ASP:HA	2.11	0.51
20:L:120:VAL:O	20:L:120:VAL:HG13	2.10	0.51
31:W:36:ILE:HG21	31:W:68:PHE:CD2	2.46	0.51
34:Z:58:ASP:CG	34:Z:63:ARG:HH11	2.13	0.51
1:O:28:SER:O	1:O:32:THR:HG22	2.11	0.51
9:A:21:G:O2'	9:A:22:U:H5'	2.11	0.51
10:B:156:A:H2'	10:B:157:C:H6	1.76	0.51
10:B:280:U:C2'	10:B:281:C:C6	2.92	0.51
10:B:336:C:H2'	10:B:336:C:O2	2.09	0.51
10:B:362:A:N3	10:B:362:A:H2'	2.25	0.51
10:B:1053:C:N3	10:B:1107:G:C2	2.79	0.51
10:B:1132:U:C5	18:J:85:LYS:HE2	2.46	0.51
10:B:1180:U:O2'	10:B:1181:U:H5'	2.11	0.51
10:B:1215:G:O2'	10:B:1216:G:H5'	2.11	0.51
10:B:1479:G:N1	10:B:1513:U:C2	2.79	0.51
10:B:1821:A:H5'	11:C:155:ARG:HH11	1.75	0.51
10:B:1917:U:H2'	10:B:1918:A:H5'	1.93	0.51
10:B:1999:C:O2'	10:B:2000:C:H5'	2.11	0.51
10:B:2014:A:P	27:S:95:ARG:HH21	2.33	0.51
10:B:2297:A:N6	10:B:2319:G:H3'	2.26	0.51
10:B:2365:G:H4'	31:W:65:LYS:HD3	1.91	0.51
10:B:2600:A:H62	11:C:235:GLU:HB3	1.75	0.51
18:J:13:ARG:NH1	18:J:13:ARG:HG3	2.26	0.51
19:K:104:THR:HB	19:K:106:GLU:OE1	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:L:81:ASP:HB3	20:L:86:GLU:OE2	2.10	0.51
20:L:93:ASN:O	20:L:94:THR:HB	2.10	0.51
20:L:108:ALA:O	20:L:109:LYS:HB3	2.11	0.51
22:N:19:ALA:C	22:N:21:PHE:N	2.62	0.51
22:N:75:ILE:O	22:N:75:ILE:HD13	2.10	0.51
25:Q:27:ARG:O	25:Q:33:VAL:HG21	2.10	0.51
25:Q:48:ASP:O	25:Q:52:ARG:HB2	2.10	0.51
26:R:3:ALA:HB3	26:R:14:VAL:O	2.11	0.51
27:S:29:VAL:CG2	27:S:71:VAL:HG23	2.41	0.51
29:U:78:LYS:HB3	29:U:96:LYS:HB3	1.93	0.51
30:V:10:LYS:HG2	30:V:11:GLU:HG3	1.93	0.51
31:W:6:GLY:C	31:W:8:SER:N	2.60	0.51
5:4:12:ARG:H	5:4:12:ARG:HD2	1.77	0.51
5:4:22:VAL:HG11	5:4:36:ARG:HE	1.75	0.51
10:B:161:A:H62	10:B:165:A:H61	1.58	0.51
10:B:283:G:C2'	10:B:284:U:H6	2.17	0.51
10:B:321:U:OP2	13:E:130:LYS:HA	2.11	0.51
10:B:1334:G:O2'	10:B:1335:C:H5'	2.11	0.51
10:B:1797:G:OP1	11:C:251:THR:HG23	2.11	0.51
10:B:2364:C:H2'	10:B:2365:G:O4'	2.11	0.51
10:B:2511:U:H2'	10:B:2512:C:O4'	2.11	0.51
10:B:2729:G:H2'	10:B:2730:C:H6	1.75	0.51
10:B:2820:A:H4'	22:N:4:ARG:H	1.76	0.51
11:C:42:ARG:CG	11:C:43:ASN:H	2.11	0.51
12:D:108:ASP:CB	12:D:173:GLN:HA	2.40	0.51
13:E:143:LEU:HD21	13:E:185:LYS:HD3	1.92	0.51
15:G:10:VAL:HG13	15:G:10:VAL:O	2.11	0.51
15:G:17:LYS:HB3	15:G:24:THR:HG22	1.93	0.51
16:H:6:LEU:H	16:H:16:GLY:N	2.09	0.51
19:K:87:LEU:HA	19:K:95:ILE:H	1.75	0.51
20:L:92:LEU:HD21	20:L:96:LYS:HZ1	1.75	0.51
21:M:8:LYS:O	21:M:9:PHE:C	2.47	0.51
22:N:30:ARG:HB3	22:N:31:HIS:ND1	2.26	0.51
24:P:55:HIS:O	24:P:57:ALA:N	2.44	0.51
3:2:34:ARG:HE	3:2:42:LEU:CD1	2.22	0.50
10:B:80:G:HO2'	10:B:294:A:N3	1.48	0.50
10:B:271:G:N7	10:B:367:G:C2	2.80	0.50
10:B:272:A:N3	10:B:273:G:C8	2.78	0.50
10:B:285:G:N2	10:B:286:U:C2	2.79	0.50
10:B:338:G:C2	10:B:339:U:C2	2.98	0.50
10:B:536:G:H4'	25:Q:56:PHE:CZ	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:582:A:H2'	10:B:583:G:H8	1.75	0.50
10:B:1289:C:H2'	10:B:1290:C:C6	2.46	0.50
10:B:1400:U:H2'	10:B:1401:G:C8	2.46	0.50
10:B:1553:A:C8	10:B:1555:G:C6	2.99	0.50
10:B:2712:C:H3'	10:B:2714:G:H5''	1.92	0.50
12:D:175:LEU:HB3	12:D:189:VAL:CG1	2.41	0.50
12:D:206:ALA:C	12:D:208:LYS:H	2.15	0.50
13:E:173:THR:O	13:E:175:ILE:HG22	2.12	0.50
19:K:108:ARG:HH21	24:P:36:LYS:HG3	1.77	0.50
20:L:111:ILE:H	20:L:111:ILE:CD1	2.12	0.50
20:L:125:LEU:C	20:L:126:ARG:HG3	2.31	0.50
21:M:67:VAL:CG2	21:M:95:LEU:HD21	2.41	0.50
22:N:9:GLN:HA	22:N:17:ARG:NH1	2.27	0.50
24:P:2:ASN:HD22	24:P:2:ASN:N	2.09	0.50
24:P:91:VAL:HB	24:P:113:LEU:HB2	1.93	0.50
31:W:45:HIS:HA	31:W:75:ASN:HB3	1.92	0.50
31:W:49:ASN:O	31:W:50:VAL:HB	2.11	0.50
33:Y:9:THR:OG1	33:Y:10:ARG:N	2.42	0.50
3:2:30:VAL:O	3:2:33:ARG:HG3	2.11	0.50
4:3:11:LYS:HG2	4:3:12:ARG:CG	2.39	0.50
10:B:15:G:H2'	10:B:16:C:H6	1.76	0.50
10:B:167:A:H2'	10:B:168:G:O4'	2.10	0.50
10:B:176:A:O2'	10:B:177:G:H5'	2.10	0.50
10:B:1025:G:H8	10:B:1025:G:OP1	1.94	0.50
10:B:1034:G:N1	10:B:1035:U:C2	2.79	0.50
10:B:1519:G:C2'	10:B:1520:U:C5'	2.86	0.50
10:B:2222:C:O2'	10:B:2223:G:H5'	2.09	0.50
10:B:2305:U:H3	14:F:150:GLY:HA3	1.75	0.50
10:B:2860:A:O5'	10:B:2860:A:H8	1.93	0.50
12:D:128:ARG:HH11	12:D:144:GLY:HA3	1.75	0.50
12:D:128:ARG:CZ	12:D:130:GLN:CD	2.80	0.50
22:N:52:ILE:HG21	22:N:94:TYR:CE2	2.46	0.50
24:P:8:GLU:OE1	24:P:8:GLU:N	2.45	0.50
26:R:85:LYS:C	26:R:87:GLN:H	2.13	0.50
27:S:71:VAL:HG22	27:S:107:VAL:CG1	2.40	0.50
30:V:16:ALA:HA	30:V:19:ARG:HE	1.76	0.50
30:V:21:ARG:NH2	30:V:27:PRO:HG3	2.27	0.50
30:V:21:ARG:HE	30:V:87:GLN:CB	2.23	0.50
32:X:12:GLU:HB2	32:X:14:LEU:HD12	1.93	0.50
6:5:360:ILE:O	6:5:360:ILE:HG12	2.11	0.50
9:A:113:C:H2'	9:A:114:C:O4'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:62:U:H3'	10:B:63:A:C8	2.44	0.50
10:B:277:G:H4'	10:B:278:A:N6	2.27	0.50
10:B:285:G:N2	10:B:286:U:C1'	2.74	0.50
10:B:287:G:N2	10:B:288:U:C2	2.80	0.50
10:B:294:A:N7	10:B:345:A:C6	2.79	0.50
10:B:321:U:H5''	13:E:131:THR:H	1.76	0.50
10:B:443:A:OP1	13:E:44:ARG:NH2	2.44	0.50
10:B:589:U:H2'	10:B:590:A:H8	1.76	0.50
10:B:671:C:H42	20:L:39:LYS:HE3	1.76	0.50
10:B:948:C:H2'	10:B:949:G:H8	1.76	0.50
10:B:1444:G:N2	10:B:1548:A:C2	2.79	0.50
10:B:1747:U:H2'	10:B:1748:C:C6	2.46	0.50
10:B:1939:U:O2	10:B:1967:C:H4'	2.11	0.50
10:B:2195:U:H2'	10:B:2196:C:H6	1.76	0.50
10:B:2439:A:C8	10:B:2586:U:H4'	2.46	0.50
10:B:2516:A:O2'	10:B:2517:C:H5'	2.11	0.50
11:C:63:ILE:HG21	11:C:90:ILE:HD13	1.92	0.50
11:C:136:VAL:HA	11:C:165:ALA:HA	1.92	0.50
12:D:7:LYS:HA	12:D:26:VAL:HG12	1.92	0.50
18:J:78:THR:HB	18:J:80:HIS:HD2	1.77	0.50
20:L:77:ILE:CD1	20:L:92:LEU:HD22	2.41	0.50
22:N:117:ASP:O	22:N:118:ARG:HB2	2.12	0.50
28:T:33:LYS:HE3	28:T:80:TRP:NE1	2.26	0.50
30:V:80:HIS:CD2	30:V:81:PRO:HD2	2.46	0.50
2:1:42:VAL:HG22	10:B:643:A:C6	2.46	0.50
10:B:224:U:O4	10:B:420:C:H5'	2.12	0.50
10:B:298:G:H22	10:B:341:C:N4	2.10	0.50
10:B:347:A:N6	10:B:348:A:C5	2.79	0.50
10:B:584:C:OP2	25:Q:5:ARG:HB2	2.11	0.50
10:B:988:A:OP2	33:Y:11:SER:HA	2.11	0.50
10:B:1037:G:N3	10:B:1038:G:N7	2.60	0.50
10:B:1538:G:C5	10:B:1539:U:C5	3.00	0.50
10:B:2263:C:H2'	10:B:2264:C:H6	1.77	0.50
10:B:2455:G:H2'	10:B:2456:C:C6	2.46	0.50
10:B:2839:G:H2'	10:B:2840:C:H6	1.75	0.50
10:B:2874:C:H2'	10:B:2875:C:C6	2.46	0.50
12:D:74:GLU:OE1	12:D:74:GLU:HA	2.11	0.50
13:E:130:LYS:HA	13:E:130:LYS:HE2	1.91	0.50
14:F:126:ASN:OD1	14:F:156:THR:HG23	2.11	0.50
15:G:154:GLU:OE1	15:G:156:TYR:HB2	2.11	0.50
16:H:29:PHE:H	16:H:32:PRO:CG	2.25	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:L:82:LEU:HD21	20:L:92:LEU:CD1	2.38	0.50
21:M:42:THR:O	21:M:44:ARG:N	2.41	0.50
28:T:3:ARG:HH21	28:T:8:LEU:CD2	2.24	0.50
5:4:24:ARG:NH1	5:4:36:ARG:HB2	2.24	0.50
10:B:866:A:H61	10:B:913:U:H4'	1.77	0.50
10:B:1540:G:C2'	10:B:1541:C:C5'	2.87	0.50
10:B:2686:G:H2'	10:B:2687:U:C6	2.46	0.50
10:B:2899:A:H2'	10:B:2900:A:C8	2.47	0.50
11:C:179:GLU:CG	11:C:266:ILE:HG22	2.40	0.50
13:E:132:LYS:HB2	13:E:132:LYS:HZ2	1.76	0.50
14:F:103:ILE:HG13	14:F:104:THR:H	1.77	0.50
22:N:123:GLU:CG	22:N:124:ALA:N	2.74	0.50
26:R:18:GLN:HA	26:R:99:THR:HA	1.93	0.50
27:S:48:LYS:O	27:S:51:LEU:HB3	2.12	0.50
29:U:25:LYS:CG	29:U:35:VAL:HA	2.41	0.50
30:V:26:PHE:HZ	30:V:47:VAL:HB	1.77	0.50
30:V:30:ILE:HD11	30:V:63:ILE:HD12	1.94	0.50
34:Z:32:LEU:O	34:Z:46:GLY:HA2	2.12	0.50
34:Z:66:ILE:C	34:Z:68:GLY:H	2.13	0.50
2:1:26:LYS:HE3	10:B:2285:C:OP1	2.12	0.50
3:2:34:ARG:NE	3:2:42:LEU:HD13	2.26	0.50
6:5:346:GLY:HA2	6:5:349:SER:HB2	1.93	0.50
9:A:64:G:O2'	9:A:65:U:H5'	2.11	0.50
10:B:1527:G:H2'	10:B:1527:G:N3	2.26	0.50
10:B:1637:A:H2'	10:B:1638:C:C6	2.47	0.50
10:B:1821:A:H5'	11:C:155:ARG:NH1	2.27	0.50
10:B:2049:G:O2'	10:B:2050:C:H5'	2.11	0.50
10:B:2219:U:O2'	10:B:2220:U:H5'	2.11	0.50
10:B:2276:G:OP2	21:M:83:GLY:HA3	2.12	0.50
10:B:2336:A:HO2'	10:B:2337:G:P	2.35	0.50
11:C:163:ILE:HG22	11:C:164:VAL:N	2.27	0.50
12:D:33:ARG:HG3	12:D:93:GLY:CA	2.41	0.50
12:D:106:LYS:HZ2	12:D:208:LYS:HD3	1.77	0.50
13:E:43:THR:HG1	13:E:44:ARG:HH21	1.60	0.50
15:G:85:LYS:HB2	15:G:164:ALA:HB2	1.94	0.50
16:H:3:VAL:HB	16:H:37:VAL:CG2	2.41	0.50
19:K:64:ARG:N	19:K:83:ALA:HB3	2.10	0.50
20:L:125:LEU:HA	20:L:142:ILE:O	2.11	0.50
21:M:74:THR:HA	21:M:87:GLY:O	2.12	0.50
21:M:112:LEU:HD12	21:M:112:LEU:N	2.26	0.50
27:S:86:MET:HB2	27:S:96:ILE:CD1	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:50:GLY:N	22:N:118:ARG:HH21	2.10	0.50
4:3:12:ARG:HG2	4:3:23:HIS:HB3	1.94	0.50
9:A:58:A:H2'	9:A:59:A:O4'	2.11	0.50
10:B:80:G:C1'	10:B:346:A:N6	2.75	0.50
10:B:207:A:H2'	10:B:208:C:O4'	2.12	0.50
10:B:272:A:N1	10:B:273:G:N7	2.59	0.50
10:B:275:C:N1	10:B:276:U:C6	2.80	0.50
10:B:280:U:H2'	10:B:281:C:O4'	2.11	0.50
10:B:299:A:C6	10:B:300:A:C6	3.00	0.50
10:B:712:G:H2'	10:B:713:G:O4'	2.12	0.50
10:B:956:G:H1'	21:M:81:ARG:HH22	1.76	0.50
10:B:1074:G:C6	10:B:1075:C:N4	2.79	0.50
10:B:1164:C:H2'	10:B:1165:A:H8	1.76	0.50
10:B:1373:A:H4'	10:B:2212:A:N3	2.26	0.50
10:B:1537:G:N3	10:B:1537:G:C3'	2.73	0.50
10:B:2303:G:H2'	10:B:2304:G:H5'	1.94	0.50
12:D:106:LYS:HA	12:D:176:ASP:HA	1.93	0.50
12:D:142:VAL:O	12:D:144:GLY:N	2.44	0.50
13:E:3:LEU:HB2	13:E:12:LEU:HB2	1.94	0.50
14:F:107:VAL:HG12	14:F:113:PHE:CE1	2.47	0.50
14:F:109:ARG:CB	14:F:136:ILE:HG13	2.41	0.50
15:G:104:LEU:HB3	15:G:106:LEU:HD13	1.92	0.50
22:N:87:PHE:HB2	22:N:94:TYR:CZ	2.47	0.50
24:P:83:ILE:HB	24:P:85:VAL:HG23	1.93	0.50
30:V:26:PHE:CE2	30:V:44:HIS:HA	2.44	0.50
31:W:59:PHE:HE1	31:W:81:ILE:HD13	1.76	0.50
32:X:59:GLU:C	32:X:61:ALA:H	2.15	0.50
2:1:34:GLU:N	2:1:52:LYS:O	2.45	0.50
4:3:24:LYS:HD3	20:L:62:PRO:C	2.31	0.50
4:3:44:ARG:HH22	10:B:649:G:N2	2.09	0.50
5:4:19:ARG:HD3	10:B:2756:U:OP2	2.12	0.50
9:A:15:A:H1'	9:A:109:A:C8	2.46	0.50
10:B:316:C:O2	10:B:317:G:H8	1.94	0.50
10:B:359:G:N7	10:B:360:U:C4	2.79	0.50
10:B:511:U:O5'	10:B:511:U:H6	1.95	0.50
10:B:1360:G:H2'	10:B:1361:G:H5'	1.93	0.50
10:B:1445:G:N3	10:B:1547:C:N3	2.60	0.50
10:B:1533:C:HO2'	10:B:1534:U:H5'	1.74	0.50
10:B:1545:A:O2'	10:B:1546:G:H5'	2.12	0.50
10:B:1549:A:H2'	10:B:1550:C:H6	1.71	0.50
10:B:2483:C:H4'	21:M:51:ARG:HH12	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2776:A:H4'	10:B:2777:G:C5'	2.42	0.50
10:B:2879:A:H4'	10:B:2880:C:OP1	2.12	0.50
12:D:13:ARG:HB2	12:D:21:SER:HG	1.77	0.50
12:D:128:ARG:HH12	12:D:130:GLN:NE2	2.09	0.50
12:D:175:LEU:HD13	12:D:189:VAL:HG11	1.92	0.50
13:E:13:THR:HG22	13:E:119:ILE:HD12	1.94	0.50
18:J:125:TYR:CE2	18:J:134:ALA:HB2	2.45	0.50
21:M:42:THR:HG22	21:M:45:GLN:HB2	1.93	0.50
21:M:69:PRO:CB	21:M:93:VAL:HG12	2.37	0.50
27:S:24:ILE:O	27:S:74:ILE:HD12	2.11	0.50
28:T:69:ARG:N	28:T:75:GLY:HA3	2.27	0.50
33:Y:8:GLN:O	33:Y:55:LYS:HE2	2.12	0.50
8:7:124:U:H2'	8:7:125:G:C8	2.47	0.50
9:A:29:A:H3'	9:A:30:C:C6	2.45	0.50
9:A:82:U:O2'	9:A:83:G:H5'	2.12	0.50
10:B:37:C:O2'	13:E:47:LYS:HG3	2.12	0.50
10:B:41:C:H2'	10:B:42:A:H8	1.76	0.50
10:B:282:A:C4	10:B:283:G:N7	2.79	0.50
10:B:338:G:C6	10:B:339:U:C2	3.00	0.50
10:B:367:G:O2'	10:B:368:A:P	2.70	0.50
10:B:1064:C:H2'	10:B:1065:U:C6	2.46	0.50
10:B:1074:G:C2	10:B:1075:C:C4	3.00	0.50
10:B:1676:A:H1'	12:D:134:HIS:HB3	1.94	0.50
10:B:2097:A:H2'	10:B:2098:U:H6	1.77	0.50
10:B:2196:C:O2'	10:B:2197:U:H5'	2.12	0.50
11:C:115:ILE:HA	11:C:126:GLY:CA	2.42	0.50
11:C:216:ARG:HB3	11:C:217:PRO:HD2	1.94	0.50
13:E:44:ARG:N	13:E:44:ARG:CD	2.75	0.50
14:F:128:SER:HA	14:F:154:THR:HG23	1.94	0.50
16:H:50:ARG:HG2	16:H:51:ARG:HB3	1.94	0.50
16:H:89:LYS:HZ2	16:H:123:ARG:HD3	1.77	0.50
18:J:43:GLU:O	18:J:44:TYR:C	2.50	0.50
20:L:38:GLN:H	20:L:41:ARG:HD2	1.76	0.50
20:L:61:LEU:O	20:L:62:PRO:O	2.29	0.50
20:L:67:THR:O	20:L:68:SER:CB	2.59	0.50
21:M:71:LYS:C	21:M:71:LYS:HD2	2.32	0.50
21:M:80:VAL:HG12	21:M:81:ARG:N	2.27	0.50
28:T:28:ASN:N	28:T:28:ASN:ND2	2.58	0.50
29:U:56:GLY:C	29:U:58:VAL:H	2.15	0.50
31:W:16:GLU:N	31:W:18:LYS:NZ	2.60	0.50
10:B:92:U:H2'	10:B:93:G:O4'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:208:C:H2'	10:B:209:C:C6	2.46	0.49
10:B:308:G:H2'	10:B:309:A:C8	2.47	0.49
10:B:310:A:C5	10:B:312:G:N7	2.75	0.49
10:B:532:A:H4'	10:B:533:G:C8	2.46	0.49
10:B:1073:A:H2'	10:B:1074:G:C5'	2.38	0.49
10:B:1520:U:N3	10:B:1521:G:C4	2.80	0.49
10:B:1540:G:C2	10:B:1541:C:N1	2.80	0.49
10:B:1562:U:H2'	10:B:1563:U:C6	2.46	0.49
10:B:1751:U:H2'	10:B:1752:C:C6	2.47	0.49
10:B:2192:U:H2'	10:B:2193:G:O4'	2.12	0.49
10:B:2258:C:OP2	31:W:3:LYS:HG2	2.12	0.49
10:B:2301:C:O2'	10:B:2302:U:H5'	2.11	0.49
10:B:2386:A:H2'	10:B:2387:U:C6	2.47	0.49
10:B:2400:G:O2'	10:B:2401:U:H5'	2.12	0.49
10:B:2665:A:O2'	10:B:2666:C:H5'	2.12	0.49
10:B:2712:C:H2'	10:B:2714:G:O3'	2.12	0.49
15:G:84:LYS:O	15:G:132:LEU:HG	2.12	0.49
19:K:14:SER:O	19:K:52:VAL:HB	2.11	0.49
20:L:82:LEU:HD12	20:L:90:VAL:HG13	1.93	0.49
21:M:34:LYS:O	21:M:124:LEU:HB2	2.11	0.49
24:P:77:SER:CB	24:P:78:PRO:HD3	2.42	0.49
10:B:189:G:H2'	10:B:205:G:H22	1.76	0.49
10:B:609:A:H2'	10:B:610:C:O4'	2.12	0.49
10:B:685:A:H1'	10:B:688:U:O4	2.12	0.49
10:B:827:U:H5'	10:B:828:U:O5'	2.12	0.49
10:B:875:G:H2'	10:B:876:C:O2	2.12	0.49
10:B:1056:G:N2	10:B:1104:C:N4	2.60	0.49
10:B:1115:G:H2'	10:B:1116:G:C8	2.40	0.49
10:B:1177:G:H2'	10:B:1178:C:H6	1.76	0.49
10:B:1909:C:H2'	10:B:1910:G:H8	1.76	0.49
10:B:2352:A:H2'	10:B:2353:G:O4'	2.11	0.49
10:B:2471:A:O2'	10:B:2472:G:O5'	2.30	0.49
10:B:2659:G:OP1	15:G:157:LYS:HE2	2.12	0.49
10:B:2684:U:OP1	24:P:59:THR:HG22	2.12	0.49
10:B:2751:G:OP2	15:G:3:VAL:HG22	2.12	0.49
10:B:2840:C:H2'	10:B:2841:C:C6	2.46	0.49
11:C:16:VAL:CA	11:C:17:LYS:HE2	2.42	0.49
11:C:130:PRO:HD2	11:C:133:ASN:HD22	1.77	0.49
12:D:38:LYS:HD3	12:D:38:LYS:N	2.27	0.49
12:D:172:VAL:HG21	12:D:175:LEU:HD12	1.95	0.49
15:G:66:THR:O	15:G:70:LEU:HB2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:H:9:VAL:C	16:H:11:ASN:H	2.14	0.49
18:J:35:ARG:NH2	18:J:40:HIS:N	2.60	0.49
18:J:56:VAL:HG12	18:J:57:LEU:N	2.26	0.49
19:K:85:VAL:O	19:K:87:LEU:HD23	2.11	0.49
22:N:65:LEU:CD1	22:N:68:ALA:HB3	2.42	0.49
23:O:34:HIS:ND1	23:O:34:HIS:N	2.60	0.49
24:P:109:ILE:O	24:P:110:LYS:C	2.49	0.49
27:S:28:LYS:HB3	27:S:71:VAL:CG2	2.43	0.49
30:V:6:ALA:HB3	30:V:65:VAL:CG1	2.42	0.49
3:2:25:LYS:HE3	3:2:25:LYS:N	2.28	0.49
4:3:3:ILE:HD13	4:3:3:ILE:N	2.27	0.49
10:B:301:G:N2	10:B:315:G:N2	2.60	0.49
10:B:310:A:C6	10:B:330:A:C6	3.00	0.49
10:B:440:C:H2'	10:B:441:U:H6	1.77	0.49
10:B:446:G:OP2	25:Q:2:ARG:HD2	2.12	0.49
10:B:557:C:H2'	10:B:558:U:C6	2.47	0.49
10:B:716:A:H2'	10:B:717:C:O4'	2.12	0.49
10:B:784:G:C5'	11:C:225:ASN:HD21	2.23	0.49
10:B:1019:U:H2'	10:B:1020:A:C8	2.47	0.49
10:B:1064:C:OP1	17:I:80:LYS:NZ	2.44	0.49
10:B:1118:C:H2'	10:B:1119:U:C5'	2.42	0.49
10:B:1424:G:H2'	10:B:1425:G:O4'	2.13	0.49
10:B:1722:A:H2'	10:B:1723:G:C8	2.47	0.49
10:B:2354:C:C4'	31:W:30:VAL:HG13	2.42	0.49
10:B:2484:G:H4'	21:M:45:GLN:OE1	2.12	0.49
10:B:2751:G:P	15:G:3:VAL:HG13	2.51	0.49
10:B:2874:C:OP1	22:N:5:LYS:HG2	2.13	0.49
11:C:107:LYS:H	11:C:194:VAL:CG2	2.21	0.49
11:C:242:HIS:N	11:C:242:HIS:ND1	2.60	0.49
15:G:26:LYS:CA	15:G:31:GLU:HG2	2.34	0.49
15:G:51:PHE:HE1	15:G:63:GLN:HE21	1.60	0.49
16:H:82:SER:HB3	16:H:90:LEU:CD2	2.42	0.49
17:I:77:VAL:HA	17:I:80:LYS:HE3	1.93	0.49
18:J:46:PRO:C	18:J:48:VAL:H	2.15	0.49
19:K:119:ALA:N	19:K:120:PRO:CD	2.76	0.49
20:L:79:LEU:HD12	20:L:79:LEU:N	2.27	0.49
21:M:42:THR:HG23	21:M:45:GLN:H	1.77	0.49
22:N:38:LEU:N	22:N:39:PRO:CD	2.75	0.49
25:Q:92:LYS:CG	25:Q:93:ILE:N	2.75	0.49
29:U:42:LYS:HG3	29:U:43:LYS:N	2.27	0.49
30:V:17:SER:HB3	30:V:21:ARG:HH12	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:W:35:ILE:HG13	31:W:36:ILE:N	2.27	0.49
2:1:33:LEU:N	2:1:52:LYS:HB3	2.27	0.49
4:3:11:LYS:HZ2	20:L:63:LYS:CG	2.25	0.49
6:5:339:ARG:O	6:5:342:LYS:HG2	2.12	0.49
10:B:257:C:H2'	10:B:258:G:O4'	2.12	0.49
10:B:898:C:N3	10:B:899:A:N6	2.61	0.49
10:B:1048:A:C4	10:B:1049:C:C5	3.00	0.49
10:B:1062:G:C2	10:B:1063:G:N7	2.80	0.49
10:B:1090:A:N6	10:B:1102:C:N3	2.60	0.49
10:B:1110:G:N2	10:B:1111:A:N6	2.60	0.49
10:B:1199:U:C1'	25:Q:2:ARG:HB2	2.42	0.49
10:B:1351:C:O2'	10:B:1571:A:H1'	2.12	0.49
10:B:1479:G:C2	10:B:1513:U:O2	2.65	0.49
10:B:1560:G:H2'	10:B:1561:C:C6	2.47	0.49
10:B:1791:A:H5'	11:C:207:ALA:HA	1.93	0.49
11:C:115:ILE:HG23	11:C:126:GLY:O	2.12	0.49
11:C:131:MET:O	11:C:134:ILE:HB	2.13	0.49
11:C:136:VAL:O	11:C:163:ILE:HB	2.12	0.49
11:C:180:MET:HB2	11:C:265:PHE:CB	2.40	0.49
12:D:13:ARG:CZ	24:P:8:GLU:HB3	2.43	0.49
13:E:6:LYS:HB2	13:E:12:LEU:CD1	2.42	0.49
13:E:111:GLU:C	13:E:113:VAL:H	2.16	0.49
14:F:109:ARG:HG2	14:F:136:ILE:HG13	1.95	0.49
16:H:83:LYS:HB2	16:H:92:GLY:N	2.27	0.49
18:J:7:LYS:HZ3	18:J:49:ASP:H	1.59	0.49
22:N:101:GLY:H	22:N:110:MET:HB2	1.78	0.49
23:O:1:MET:HG2	23:O:2:ASP:H	1.76	0.49
27:S:28:LYS:CB	27:S:71:VAL:HB	2.42	0.49
31:W:30:VAL:CG1	31:W:31:LEU:N	2.76	0.49
1:0:29:VAL:HB	1:0:36:LYS:HD2	1.93	0.49
3:2:17:GLY:HA2	3:2:21:ARG:HH12	1.76	0.49
9:A:50:A:H5''	23:O:68:LYS:HG3	1.94	0.49
10:B:79:C:C2'	10:B:346:A:N7	2.71	0.49
10:B:235:U:H2'	10:B:236:C:C6	2.48	0.49
10:B:287:G:C2	10:B:288:U:C4	3.00	0.49
10:B:295:G:C2	10:B:344:A:C4	3.00	0.49
10:B:328:U:HO2'	29:U:65:GLN:HB2	1.77	0.49
10:B:492:A:H2'	10:B:493:G:O4'	2.12	0.49
10:B:565:C:O2'	10:B:566:U:H5'	2.13	0.49
10:B:962:G:N2	21:M:81:ARG:HH21	2.11	0.49
10:B:991:C:H2'	10:B:992:C:C6	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1010:A:O2'	10:B:1152:C:H1'	2.12	0.49
10:B:1109:C:N3	10:B:1110:G:C2	2.81	0.49
10:B:1199:U:H1'	25:Q:2:ARG:HB2	1.95	0.49
10:B:1513:U:C4	10:B:1514:G:N7	2.80	0.49
10:B:1540:G:N2	10:B:1541:C:N1	2.60	0.49
10:B:1684:G:H2'	10:B:1685:C:C6	2.47	0.49
10:B:1708:C:H2'	10:B:1709:U:H6	1.78	0.49
10:B:2657:A:H2'	10:B:2658:C:O4'	2.13	0.49
13:E:141:MET:HG3	13:E:143:LEU:HB2	1.93	0.49
13:E:176:ASP:OD1	13:E:178:VAL:HG22	2.11	0.49
16:H:81:ALA:CB	16:H:147:VAL:H	2.24	0.49
16:H:147:VAL:HG12	16:H:148:ALA:H	1.77	0.49
17:I:75:ALA:CB	17:I:131:THR:HG21	2.42	0.49
18:J:103:ILE:O	18:J:103:ILE:HG22	2.12	0.49
19:K:40:LYS:HA	19:K:59:LYS:HA	1.94	0.49
21:M:95:LEU:HD22	21:M:98:PRO:HG3	1.94	0.49
22:N:45:ARG:HB2	22:N:49:GLU:OE2	2.12	0.49
24:P:61:ARG:HH22	24:P:63:ILE:HD11	1.78	0.49
29:U:5:ARG:CG	29:U:6:ARG:H	2.24	0.49
29:U:38:ILE:O	29:U:39:ASN:HB2	2.12	0.49
29:U:78:LYS:CE	29:U:96:LYS:HB2	2.34	0.49
31:W:24:ARG:HD2	31:W:59:PHE:HD2	1.77	0.49
33:Y:4:ILE:O	33:Y:5:LYS:HB2	2.12	0.49
34:Z:19:GLY:O	34:Z:20:ASN:HB2	2.11	0.49
34:Z:48:GLN:H	34:Z:51:VAL:HB	1.78	0.49
34:Z:59:ARG:NE	34:Z:62:LYS:HD2	2.26	0.49
4:3:11:LYS:HZ2	20:L:63:LYS:HG3	1.77	0.49
4:3:16:THR:C	4:3:18:LYS:H	2.16	0.49
10:B:584:C:OP2	25:Q:5:ARG:HD3	2.12	0.49
10:B:817:C:O2'	10:B:839:U:H5''	2.12	0.49
10:B:831:G:O3'	20:L:44:GLY:HA3	2.13	0.49
10:B:877:A:C2	10:B:900:A:N7	2.80	0.49
10:B:922:C:H2'	10:B:923:G:H8	1.77	0.49
10:B:1060:U:C2	10:B:1088:A:N7	2.81	0.49
10:B:1521:G:C2'	10:B:1522:A:C8	2.93	0.49
10:B:1710:G:H4'	10:B:2858:C:O2	2.12	0.49
10:B:1729:U:C5	10:B:1730:C:H1'	2.48	0.49
10:B:2247:A:O2'	10:B:2248:C:H5'	2.12	0.49
11:C:172:THR:O	11:C:173:LEU:CB	2.61	0.49
11:C:266:ILE:HG13	11:C:266:ILE:O	2.13	0.49
12:D:120:GLY:HA2	12:D:162:ALA:HA	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:D:148:GLN:HB2	12:D:151:THR:HG23	1.95	0.49
21:M:29:GLY:HA3	21:M:104:GLU:OE1	2.12	0.49
21:M:73:ILE:HD11	21:M:92:TRP:N	2.28	0.49
22:N:22:ARG:HE	22:N:69:ARG:HE	1.58	0.49
25:Q:16:ILE:HD11	25:Q:31:TYR:CD1	2.47	0.49
29:U:35:VAL:HG12	29:U:36:GLU:N	2.27	0.49
31:W:65:LYS:O	31:W:66:VAL:HB	2.12	0.49
33:Y:6:ILE:HD13	33:Y:6:ILE:N	2.28	0.49
1:O:28:SER:O	1:O:36:LYS:HB2	2.13	0.49
2:1:24:LYS:NZ	10:B:2285:C:H41	2.09	0.49
10:B:41:C:O2'	10:B:42:A:H5'	2.13	0.49
10:B:320:A:H4'	13:E:130:LYS:NZ	2.27	0.49
10:B:338:G:N1	10:B:339:U:O2	2.46	0.49
10:B:348:A:C2	10:B:349:U:N1	2.79	0.49
10:B:679:C:O2'	10:B:680:C:H5'	2.13	0.49
10:B:1018:U:O2'	10:B:1019:U:H5'	2.13	0.49
10:B:1060:U:OP2	17:I:115:ASP:HB3	2.12	0.49
10:B:1074:G:HO2'	10:B:1075:C:H5'	1.77	0.49
10:B:1115:G:C2	10:B:1116:G:N7	2.80	0.49
10:B:1188:U:H4'	26:R:83:TYR:CB	2.42	0.49
10:B:1190:G:P	20:L:41:ARG:HG2	2.52	0.49
10:B:1225:G:H5''	26:R:78:ARG:HH22	1.78	0.49
10:B:1287:A:O2'	10:B:1288:G:H5'	2.12	0.49
10:B:1476:U:H1'	10:B:1515:A:C6	2.38	0.49
10:B:1494:A:H2'	10:B:1495:A:C8	2.46	0.49
10:B:1526:C:C1'	10:B:1527:G:H8	2.26	0.49
10:B:1666:G:O2'	10:B:1667:G:H5'	2.12	0.49
10:B:1719:G:O2'	10:B:1720:U:H5'	2.13	0.49
10:B:1957:C:H2'	10:B:1958:C:H6	1.77	0.49
10:B:2318:G:O2'	10:B:2319:G:C2	2.65	0.49
10:B:2623:G:O2'	10:B:2624:G:H5'	2.12	0.49
10:B:2683:C:H2'	10:B:2684:U:C6	2.47	0.49
10:B:2757:A:H2'	10:B:2757:A:N3	2.26	0.49
10:B:2888:C:H2'	10:B:2889:C:H6	1.76	0.49
12:D:2:ILE:HG13	12:D:3:GLY:N	2.23	0.49
12:D:106:LYS:HZ1	12:D:208:LYS:HD3	1.76	0.49
16:H:69:ALA:CB	16:H:140:ALA:HA	2.43	0.49
21:M:86:LYS:HD2	21:M:86:LYS:H	1.78	0.49
21:M:130:PHE:CD2	21:M:131:VAL:HG22	2.47	0.49
22:N:116:VAL:O	22:N:118:ARG:N	2.43	0.49
24:P:31:VAL:HA	24:P:81:ASP:HA	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:P:52:ARG:CB	24:P:60:VAL:HG11	2.22	0.49
26:R:33:VAL:O	26:R:34:GLU:HB2	2.11	0.49
30:V:60:VAL:HG13	30:V:72:VAL:O	2.12	0.49
30:V:77:VAL:HG21	30:V:79:ARG:NH2	2.27	0.49
2:1:7:LYS:HD2	2:1:8:ILE:O	2.12	0.49
2:1:20:TYR:O	2:1:21:THR:HB	2.13	0.49
2:1:51:ALA:C	2:1:52:LYS:HD2	2.33	0.49
3:2:13:ASN:OD1	10:B:125:A:H4'	2.13	0.49
10:B:141:G:N2	28:T:2:ILE:HG13	2.27	0.49
10:B:173:A:H2'	10:B:174:U:C6	2.48	0.49
10:B:689:A:H2'	10:B:690:G:C8	2.47	0.49
10:B:847:U:O2	10:B:847:U:O4'	2.30	0.49
10:B:1048:A:N6	10:B:1111:A:C2	2.81	0.49
10:B:1062:G:O2'	10:B:1063:G:H5'	2.12	0.49
10:B:1115:G:C6	10:B:1116:G:C6	3.01	0.49
10:B:1184:U:O2'	10:B:1185:G:H5'	2.12	0.49
10:B:1220:G:H2'	10:B:1221:C:H6	1.77	0.49
10:B:1591:A:H2'	10:B:1592:C:C6	2.47	0.49
10:B:1629:U:O2	10:B:2698:U:H5''	2.13	0.49
10:B:1645:G:H5''	10:B:1646:C:H5'	1.93	0.49
10:B:2441:U:O2'	10:B:2442:C:H5'	2.12	0.49
13:E:9:GLN:CD	13:E:120:VAL:HG13	2.33	0.49
15:G:89:VAL:HG21	15:G:162:ARG:HE	1.77	0.49
16:H:57:LYS:HG3	16:H:61:VAL:CG2	2.40	0.49
18:J:35:ARG:HH21	18:J:40:HIS:H	1.61	0.49
20:L:21:ARG:HB3	20:L:21:ARG:NH1	2.28	0.49
21:M:80:VAL:HG12	21:M:81:ARG:HG2	1.95	0.49
25:Q:112:ALA:HA	25:Q:115:ALA:HB3	1.94	0.49
26:R:39:LEU:HA	26:R:60:LYS:O	2.12	0.49
27:S:27:LYS:H	27:S:27:LYS:CD	2.22	0.49
32:X:22:LEU:CD2	32:X:25:GLN:HB3	2.43	0.49
1:0:15:ARG:HD2	10:B:2047:C:OP1	2.13	0.49
1:0:52:LYS:HZ3	22:N:118:ARG:NH1	2.11	0.49
9:A:52:A:H3'	9:A:53:A:C8	2.47	0.49
10:B:7:G:H2'	10:B:8:C:O4'	2.13	0.49
10:B:121:G:H4'	10:B:149:A:H5'	1.94	0.49
10:B:279:A:H1'	10:B:362:A:O2'	2.13	0.49
10:B:295:G:N1	10:B:296:U:C5	2.78	0.49
10:B:310:A:N7	10:B:312:G:C5	2.81	0.49
10:B:333:G:N1	10:B:334:C:C5	2.81	0.49
10:B:356:G:C3'	10:B:357:C:H5'	2.41	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:926:G:H2'	10:B:927:A:C8	2.47	0.49
10:B:932:U:H2'	10:B:934:U:C4	2.48	0.49
10:B:1061:U:O4'	10:B:1070:A:H1'	2.13	0.49
10:B:1075:C:C4	10:B:1076:C:N4	2.81	0.49
10:B:1137:G:H2'	10:B:1138:G:O4'	2.13	0.49
10:B:1275:A:N3	10:B:1275:A:C3'	2.75	0.49
10:B:1311:G:H21	10:B:1603:A:H62	1.60	0.49
10:B:1405:U:H2'	10:B:1406:U:H6	1.75	0.49
10:B:1513:U:H2'	10:B:1514:G:C4'	2.43	0.49
10:B:1729:U:H2'	10:B:1730:C:H4'	1.95	0.49
10:B:1878:G:H2'	10:B:1879:C:H6	1.78	0.49
10:B:2803:G:H2'	10:B:2804:U:H6	1.76	0.49
11:C:4:LYS:HG3	11:C:5:CYS:SG	2.53	0.49
12:D:61:THR:H	12:D:62:LYS:HE3	1.77	0.49
12:D:170:VAL:HG22	12:D:171:THR:N	2.27	0.49
14:F:65:LEU:HD23	14:F:87:LYS:HD2	1.94	0.49
18:J:10:THR:CB	18:J:13:ARG:HH22	2.25	0.49
20:L:78:ARG:CG	20:L:99:ASN:HB3	2.33	0.49
21:M:34:LYS:HD3	21:M:98:PRO:O	2.12	0.49
21:M:97:GLN:N	21:M:98:PRO:CD	2.75	0.49
21:M:134:THR:O	30:V:77:VAL:HG13	2.13	0.49
25:Q:13:HIS:O	25:Q:17:LEU:HB2	2.13	0.49
31:W:44:PHE:CD2	31:W:60:ALA:HB3	2.48	0.49
1:0:3:GLN:N	1:0:3:GLN:NE2	2.60	0.49
5:4:11:CYS:HB3	5:4:14:CYS:SG	2.52	0.49
10:B:280:U:C6	10:B:281:C:H5	2.04	0.49
10:B:319:G:N7	10:B:333:G:N1	2.60	0.49
10:B:326:G:C2'	10:B:327:G:H5'	2.41	0.49
10:B:702:U:O2'	10:B:703:U:H5'	2.12	0.49
10:B:918:A:H2'	10:B:919:U:H5'	1.95	0.49
10:B:1011:G:H5''	25:Q:76:SER:OG	2.11	0.49
10:B:1430:G:H2'	10:B:1431:A:C8	2.48	0.49
10:B:2016:U:H2'	10:B:2017:U:C6	2.47	0.49
10:B:2053:G:O2'	10:B:2054:A:H5'	2.13	0.49
10:B:2636:C:H2'	10:B:2637:U:C6	2.47	0.49
10:B:2654:A:N1	10:B:2665:A:H5''	2.28	0.49
11:C:114:GLN:HB2	11:C:124:LYS:HZ1	1.77	0.49
11:C:179:GLU:HB2	11:C:266:ILE:HG22	1.95	0.49
12:D:24:VAL:CG2	12:D:193:VAL:HG11	2.26	0.49
12:D:170:VAL:HG11	12:D:194:PRO:HB2	1.95	0.49
18:J:15:TRP:HB3	18:J:53:TYR:CE2	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:K:107:LEU:C	19:K:109:SER:H	2.15	0.49
20:L:85:VAL:N	20:L:86:GLU:HG3	2.28	0.49
20:L:126:ARG:O	20:L:127:VAL:HG13	2.13	0.49
21:M:2:LEU:HB3	21:M:4:PRO:HD2	1.94	0.49
26:R:72:VAL:HG23	26:R:73:LYS:N	2.27	0.49
33:Y:9:THR:HB	33:Y:53:MET:O	2.13	0.49
34:Z:35:ASP:C	34:Z:42:PRO:HB3	2.32	0.49
34:Z:49:ARG:O	34:Z:51:VAL:HG23	2.13	0.49
3:2:35:ARG:NH1	3:2:39:ARG:HA	2.28	0.48
6:5:367:GLN:HG2	29:U:51:LEU:HD21	1.95	0.48
10:B:37:C:H2'	13:E:46:GLN:HB3	1.94	0.48
10:B:162:U:O2'	10:B:163:C:H5'	2.13	0.48
10:B:200:U:C5'	34:Z:20:ASN:HB3	2.28	0.48
10:B:208:C:H2'	10:B:209:C:H6	1.78	0.48
10:B:233:A:N6	10:B:428:A:H61	2.11	0.48
10:B:268:C:N4	10:B:269:C:N4	2.60	0.48
10:B:272:A:N3	10:B:273:G:H8	2.11	0.48
10:B:299:A:C5	10:B:322:A:C4	3.01	0.48
10:B:320:A:N9	13:E:132:LYS:HB3	2.27	0.48
10:B:325:G:C2	10:B:326:G:C4	3.00	0.48
10:B:559:G:H1'	25:Q:55:GLN:HE22	1.76	0.48
10:B:587:C:O5'	10:B:587:C:H6	1.96	0.48
10:B:727:A:OP1	10:B:1431:A:O2'	2.27	0.48
10:B:1041:G:C6	10:B:1115:G:C6	3.00	0.48
10:B:1095:A:H2	17:I:26:ALA:HA	1.78	0.48
10:B:1141:U:OP1	18:J:27:ARG:HD3	2.13	0.48
10:B:1692:U:H2'	10:B:1694:C:C5	2.47	0.48
10:B:2398:U:H2'	10:B:2399:G:C8	2.48	0.48
10:B:2578:G:H1'	12:D:145:SER:CB	2.20	0.48
10:B:2649:C:H2'	10:B:2650:U:H6	1.78	0.48
10:B:2700:A:H2'	10:B:2701:U:H6	1.77	0.48
11:C:164:VAL:O	11:C:164:VAL:HG12	2.12	0.48
11:C:174:ARG:HG3	11:C:180:MET:SD	2.53	0.48
12:D:13:ARG:HA	12:D:13:ARG:NH1	2.28	0.48
12:D:62:LYS:HE3	12:D:62:LYS:N	2.27	0.48
13:E:43:THR:HG23	13:E:44:ARG:CZ	2.42	0.48
14:F:144:LYS:HG2	14:F:144:LYS:O	2.13	0.48
14:F:165:GLY:HA2	14:F:168:LEU:HD11	1.95	0.48
15:G:37:ASN:HB3	15:G:63:GLN:HE22	1.78	0.48
17:I:19:PRO:HB2	17:I:22:PRO:HD2	1.95	0.48
20:L:61:LEU:HD13	20:L:61:LEU:N	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:L:77:ILE:HG22	20:L:78:ARG:NH2	2.28	0.48
23:O:8:ILE:HG23	23:O:9:ARG:N	2.26	0.48
24:P:45:VAL:HG21	24:P:73:PHE:HD2	1.77	0.48
28:T:29:THR:HG22	28:T:86:THR:HG22	1.94	0.48
28:T:29:THR:HG22	28:T:86:THR:HA	1.94	0.48
30:V:78:GLN:HB2	30:V:88:HIS:O	2.13	0.48
31:W:28:GLU:C	31:W:30:VAL:H	2.16	0.48
32:X:45:GLN:H	32:X:45:GLN:HE21	1.61	0.48
2:1:15:GLY:HA3	2:1:47:ILE:HD12	1.95	0.48
10:B:84:A:O5'	29:U:91:LYS:HD3	2.13	0.48
10:B:350:G:N7	10:B:351:C:C4	2.81	0.48
10:B:1009:A:O2'	25:Q:61:ILE:HD11	2.13	0.48
10:B:1055:G:C2'	10:B:1056:G:H5'	2.43	0.48
10:B:1255:U:C2	13:E:67:ARG:HA	2.48	0.48
10:B:1300:G:H4'	10:B:1301:A:O5'	2.13	0.48
10:B:1516:G:HO2'	10:B:1517:G:H5'	1.76	0.48
10:B:1652:A:H62	22:N:11:ASN:HD21	1.61	0.48
10:B:2334:U:OP2	23:O:7:ARG:HA	2.13	0.48
10:B:2634:A:H2'	10:B:2635:A:C8	2.48	0.48
10:B:2821:A:H2'	10:B:2822:G:C8	2.48	0.48
10:B:2848:G:C5	24:P:96:LEU:HD23	2.48	0.48
11:C:16:VAL:HA	11:C:17:LYS:HE2	1.95	0.48
11:C:38:LYS:HD3	11:C:39:SER:O	2.12	0.48
11:C:168:GLY:O	11:C:169:ALA:HB3	2.14	0.48
12:D:34:VAL:CG2	12:D:93:GLY:HA3	2.42	0.48
12:D:51:THR:O	12:D:52:THR:HB	2.11	0.48
12:D:83:ARG:O	12:D:84:LEU:HB3	2.13	0.48
12:D:125:TRP:O	12:D:126:ASN:HB2	2.12	0.48
13:E:57:LYS:HA	13:E:57:LYS:HE3	1.94	0.48
15:G:136:ASP:O	15:G:140:ILE:HG23	2.13	0.48
17:I:7:TYR:HB2	17:I:59:THR:HA	1.93	0.48
19:K:103:VAL:HG22	19:K:121:GLU:O	2.13	0.48
24:P:77:SER:N	24:P:78:PRO:CD	2.76	0.48
27:S:32:ALA:HA	27:S:51:LEU:HD11	1.94	0.48
27:S:47:VAL:O	27:S:51:LEU:HB2	2.13	0.48
30:V:21:ARG:HE	30:V:87:GLN:HB3	1.78	0.48
31:W:40:ARG:HG3	31:W:40:ARG:HH11	1.78	0.48
32:X:38:GLN:HG2	32:X:39:GLN:N	2.29	0.48
1:0:32:THR:HG22	1:0:32:THR:O	2.13	0.48
10:B:38:A:H1'	13:E:44:ARG:HA	1.95	0.48
10:B:297:G:N2	10:B:342:A:C4	2.81	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:345:A:N3	10:B:347:A:N6	2.61	0.48
10:B:348:A:H2	10:B:349:U:C2	2.17	0.48
10:B:356:G:O2'	10:B:357:C:H5'	2.13	0.48
10:B:540:C:H2'	10:B:541:A:H8	1.77	0.48
10:B:825:A:H2'	10:B:826:U:O4'	2.12	0.48
10:B:1053:C:N4	10:B:1107:G:N1	2.61	0.48
10:B:1144:A:O2'	10:B:1145:C:H5'	2.13	0.48
10:B:1948:G:O2'	10:B:1949:G:H5'	2.13	0.48
12:D:128:ARG:NE	12:D:129:THR:O	2.46	0.48
13:E:122:GLU:OE1	13:E:152:GLU:HG3	2.14	0.48
14:F:151:LEU:CD2	14:F:153:ILE:HD11	2.37	0.48
16:H:30:LEU:HD13	16:H:35:LYS:HD3	1.94	0.48
17:I:49:GLU:HG2	17:I:54:ILE:HD11	1.94	0.48
20:L:117:THR:OG1	20:L:118:THR:N	2.45	0.48
21:M:8:LYS:HE2	21:M:8:LYS:N	2.27	0.48
25:Q:33:VAL:CG2	25:Q:37:ALA:HB3	2.41	0.48
26:R:42:ALA:HA	26:R:54:VAL:HG13	1.94	0.48
27:S:6:LYS:HB3	27:S:104:THR:HA	1.96	0.48
27:S:29:VAL:C	27:S:31:GLN:H	2.15	0.48
28:T:58:VAL:HA	28:T:85:VAL:HA	1.95	0.48
31:W:2:HIS:CE1	31:W:4:LYS:HB3	2.48	0.48
31:W:44:PHE:CE2	31:W:80:SER:HA	2.49	0.48
31:W:45:HIS:CE1	31:W:64:GLY:HA3	2.49	0.48
8:7:157:U:H2'	8:7:158:G:C8	2.47	0.48
10:B:64:A:N6	10:B:91:A:N6	2.62	0.48
10:B:211:C:O2'	10:B:212:G:H5'	2.13	0.48
10:B:300:A:P	10:B:300:A:H8	2.37	0.48
10:B:301:G:N2	10:B:315:G:H22	2.11	0.48
10:B:324:A:C6	10:B:339:U:C5'	2.97	0.48
10:B:338:G:C2'	10:B:339:U:C5'	2.86	0.48
10:B:348:A:N3	10:B:349:U:C6	2.80	0.48
10:B:351:C:C2'	10:B:352:A:H8	1.94	0.48
10:B:1056:G:N2	10:B:1104:C:H42	2.11	0.48
10:B:1445:G:C2	10:B:1547:C:N3	2.81	0.48
10:B:1549:A:C2	10:B:1550:C:C5	3.01	0.48
10:B:1563:U:H2'	10:B:1564:C:C6	2.48	0.48
10:B:1957:C:H2'	10:B:1958:C:C6	2.48	0.48
10:B:2152:G:H2'	10:B:2153:C:C6	2.49	0.48
10:B:2185:U:H2'	10:B:2186:G:H8	1.78	0.48
11:C:10:PRO:CD	11:C:202:ARG:HH12	2.27	0.48
12:D:92:VAL:HG13	12:D:93:GLY:N	2.23	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:H:1:MET:H1	16:H:23:ALA:HB2	1.78	0.48
16:H:50:ARG:CB	16:H:51:ARG:CB	2.86	0.48
20:L:124:GLY:O	20:L:125:LEU:HB2	2.13	0.48
21:M:22:GLN:HG2	21:M:23:GLY:N	2.27	0.48
21:M:65:ILE:HG22	21:M:101:VAL:HG12	1.95	0.48
24:P:7:LEU:O	24:P:11:GLN:HG2	2.13	0.48
24:P:85:VAL:O	24:P:87:ARG:NH1	2.46	0.48
29:U:5:ARG:HG2	29:U:6:ARG:N	2.28	0.48
31:W:56:HIS:CE1	31:W:58:LEU:HB2	2.48	0.48
34:Z:59:ARG:HG3	34:Z:62:LYS:CB	2.44	0.48
4:3:41:ARG:HB3	4:3:43:LEU:CD2	2.42	0.48
5:4:7:VAL:HG12	5:4:8:LYS:H	1.79	0.48
6:5:375:ARG:O	6:5:379:ILE:HG13	2.14	0.48
9:A:74:U:H2'	9:A:75:G:O4'	2.13	0.48
10:B:84:A:C3'	29:U:5:ARG:HD2	2.40	0.48
10:B:125:A:H3'	10:B:126:A:H5'	1.93	0.48
10:B:301:G:C2	10:B:317:G:N7	2.71	0.48
10:B:310:A:C8	10:B:312:G:C5	3.00	0.48
10:B:313:G:C4	10:B:314:C:C6	3.01	0.48
10:B:319:G:N1	10:B:320:A:C6	2.82	0.48
10:B:396:G:C4'	34:Z:28:VAL:HG21	2.22	0.48
10:B:1525:A:N3	10:B:1526:C:C6	2.82	0.48
10:B:1947:C:O2'	10:B:1948:G:H5'	2.13	0.48
11:C:141:HIS:N	11:C:193:GLU:OE2	2.46	0.48
12:D:86:GLU:CG	12:D:87:GLY:H	2.27	0.48
12:D:111:GLY:HA3	12:D:194:PRO:O	2.13	0.48
12:D:113:SER:O	12:D:167:ASN:HA	2.13	0.48
16:H:1:MET:C	16:H:21:VAL:HG12	2.34	0.48
21:M:95:LEU:HD22	21:M:98:PRO:CG	2.44	0.48
25:Q:16:ILE:HD12	25:Q:17:LEU:H	1.77	0.48
25:Q:35:PHE:HB3	25:Q:39:ILE:HD12	1.94	0.48
25:Q:105:PHE:O	25:Q:109:VAL:HG13	2.13	0.48
26:R:85:LYS:C	26:R:87:GLN:N	2.66	0.48
29:U:70:ALA:O	29:U:72:PHE:N	2.47	0.48
31:W:43:LYS:O	31:W:45:HIS:N	2.47	0.48
34:Z:59:ARG:CG	34:Z:62:LYS:HB2	2.44	0.48
1:0:35:GLU:OE1	1:0:43:THR:HG22	2.14	0.48
8:7:111:G:H2'	8:7:112:G:C8	2.49	0.48
9:A:49:C:OP2	23:O:30:ARG:NH2	2.47	0.48
10:B:189:G:OP1	34:Z:24:ILE:HD12	2.13	0.48
10:B:209:C:H2'	10:B:210:C:C6	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:269:C:C2	10:B:270:A:N7	2.81	0.48
10:B:347:A:C2'	10:B:348:A:H5'	2.44	0.48
10:B:639:U:H2'	10:B:640:C:H6	1.79	0.48
10:B:923:G:O2'	10:B:924:G:H5'	2.13	0.48
10:B:1091:G:H2'	10:B:1092:C:H5'	1.94	0.48
10:B:1159:U:H2'	10:B:1160:G:H8	1.78	0.48
10:B:1171:G:H2'	10:B:1172:C:C1'	2.43	0.48
10:B:1287:A:H3'	10:B:1288:G:N2	2.28	0.48
10:B:1295:C:H2'	10:B:1296:G:C8	2.49	0.48
10:B:1400:U:H2'	10:B:1401:G:H8	1.77	0.48
10:B:1528:A:O2'	10:B:1529:G:H5'	2.14	0.48
10:B:1539:U:N3	10:B:1540:G:N7	2.61	0.48
10:B:1541:C:O2'	10:B:1542:U:O4'	2.29	0.48
10:B:2379:G:H5'	23:O:20:GLU:OE1	2.13	0.48
10:B:2461:A:H2'	10:B:2462:C:H6	1.78	0.48
10:B:2518:A:H2'	10:B:2518:A:N3	2.28	0.48
11:C:143:VAL:HG12	11:C:144:GLU:N	2.19	0.48
12:D:13:ARG:NH1	24:P:12:MET:SD	2.87	0.48
12:D:181:ASP:O	12:D:184:ARG:HB3	2.13	0.48
14:F:32:LYS:O	14:F:156:THR:N	2.42	0.48
15:G:75:VAL:HG23	15:G:76:ILE:N	2.28	0.48
18:J:120:ARG:O	18:J:122:LEU:N	2.37	0.48
19:K:36:GLY:HA2	19:K:62:VAL:O	2.12	0.48
25:Q:21:LYS:HB3	25:Q:23:TYR:CD1	2.48	0.48
26:R:53:PHE:HA	26:R:54:VAL:HB	1.96	0.48
26:R:58:VAL:HG22	26:R:59:ILE:N	2.28	0.48
27:S:71:VAL:CG2	27:S:107:VAL:HG12	2.44	0.48
29:U:3:LYS:NZ	29:U:3:LYS:HB2	2.27	0.48
29:U:44:HIS:ND1	29:U:45:GLN:N	2.60	0.48
29:U:78:LYS:HB3	29:U:96:LYS:CB	2.43	0.48
10:B:289:G:C4	10:B:290:U:C5	3.01	0.48
10:B:314:C:H6	10:B:314:C:O5'	1.97	0.48
10:B:321:U:H5''	13:E:131:THR:N	2.29	0.48
10:B:363:G:N2	10:B:364:C:O2	2.47	0.48
10:B:478:A:H5''	10:B:479:A:OP2	2.13	0.48
10:B:782:A:O2'	11:C:223:ALA:HB1	2.13	0.48
10:B:807:U:O2'	10:B:808:G:H5'	2.14	0.48
10:B:1094:U:H2'	10:B:1096:A:OP2	2.14	0.48
10:B:1269:A:H2'	10:B:1270:C:C6	2.48	0.48
10:B:1477:A:H1'	10:B:1515:A:C2	2.16	0.48
10:B:1477:A:H2'	10:B:1478:G:O4'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1583:A:H4'	10:B:1585:C:N3	2.29	0.48
10:B:2398:U:H2'	10:B:2399:G:H8	1.77	0.48
10:B:2512:C:O2'	12:D:146:ILE:HG21	2.13	0.48
11:C:179:GLU:OE1	11:C:267:VAL:HG22	2.14	0.48
12:D:4:LEU:HD23	12:D:49:GLN:HG2	1.96	0.48
17:I:81:LYS:HG3	17:I:82:ALA:N	2.29	0.48
19:K:11:ALA:HB3	19:K:85:VAL:HG23	1.94	0.48
20:L:96:LYS:O	20:L:100:ILE:HD12	2.14	0.48
20:L:140:GLY:O	20:L:141:LYS:O	2.32	0.48
22:N:28:LEU:HD22	22:N:48:VAL:HG11	1.95	0.48
23:O:41:ALA:CB	23:O:45:SER:HB3	2.43	0.48
26:R:39:LEU:CD1	26:R:60:LYS:HB2	2.44	0.48
27:S:29:VAL:C	27:S:31:GLN:N	2.67	0.48
28:T:31:VAL:CG1	28:T:82:LYS:HE3	2.43	0.48
29:U:44:HIS:HB3	29:U:56:GLY:O	2.13	0.48
29:U:46:LYS:HB2	29:U:53:GLN:HE22	1.75	0.48
29:U:59:GLU:OE1	29:U:60:LYS:N	2.47	0.48
31:W:44:PHE:HB3	31:W:76:ARG:HG2	1.95	0.48
10:B:32:C:H5'	10:B:1238:G:OP1	2.14	0.48
10:B:39:G:H2'	10:B:40:U:H6	1.78	0.48
10:B:273:G:N1	10:B:274:C:C4	2.82	0.48
10:B:320:A:H5''	13:E:130:LYS:NZ	2.28	0.48
10:B:350:G:C6	10:B:351:C:N3	2.82	0.48
10:B:401:A:H2'	10:B:402:A:C8	2.49	0.48
10:B:580:U:O2'	10:B:581:C:H5'	2.14	0.48
10:B:765:C:H2'	10:B:766:U:C6	2.48	0.48
10:B:984:A:P	10:B:985:C:H41	2.37	0.48
10:B:1168:G:H2'	10:B:1169:A:O4'	2.13	0.48
10:B:1513:U:H2'	10:B:1514:G:O4'	2.14	0.48
10:B:1526:C:O2	10:B:1546:G:N2	2.46	0.48
10:B:1656:C:H2'	10:B:1657:U:H6	1.77	0.48
10:B:1661:G:O2'	10:B:1662:U:H5'	2.13	0.48
10:B:1666:G:C2'	10:B:1667:G:H5'	2.43	0.48
10:B:1818:U:H5''	11:C:155:ARG:HG2	1.95	0.48
10:B:1999:C:H5''	10:B:2723:C:O2'	2.14	0.48
10:B:2247:A:H3'	36:B:3166:HOH:O	2.12	0.48
10:B:2329:U:H2'	10:B:2330:G:C8	2.49	0.48
10:B:2692:G:O2'	10:B:2693:G:H5'	2.14	0.48
11:C:84:PRO:O	11:C:86:ARG:N	2.40	0.48
11:C:248:GLY:HA3	11:C:252:LYS:HE3	1.95	0.48
12:D:2:ILE:CG2	12:D:204:LYS:HA	2.33	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:D:16:THR:HG23	12:D:17:GLU:N	2.21	0.48
13:E:24:ASN:O	13:E:24:ASN:CG	2.52	0.48
15:G:40:VAL:CG2	15:G:53:PRO:HA	2.44	0.48
16:H:4:ILE:O	16:H:37:VAL:HG12	2.14	0.48
18:J:58:ASN:HA	18:J:126:ALA:CA	2.44	0.48
19:K:20:MET:O	19:K:42:THR:N	2.47	0.48
19:K:25:LEU:C	19:K:27:GLY:H	2.16	0.48
21:M:62:LYS:CB	21:M:104:GLU:HB2	2.44	0.48
21:M:65:ILE:HA	21:M:101:VAL:HA	1.94	0.48
21:M:109:PRO:O	21:M:112:LEU:HB2	2.14	0.48
24:P:13:LYS:HE3	24:P:77:SER:HB3	1.96	0.48
24:P:62:LYS:HG2	24:P:74:GLN:OE1	2.13	0.48
25:Q:47:ARG:NE	25:Q:47:ARG:HA	2.26	0.48
31:W:23:LYS:HZ2	31:W:24:ARG:HG2	1.78	0.48
31:W:46:ALA:O	31:W:55:ASP:O	2.32	0.48
32:X:43:LEU:HA	32:X:47:ARG:HB3	1.96	0.48
4:3:44:ARG:CB	4:3:45:PRO:HD2	2.43	0.48
10:B:416:U:H2'	10:B:417:C:H6	1.79	0.48
10:B:822:G:H2'	10:B:823:C:H6	1.79	0.48
10:B:1042:G:N3	10:B:1042:G:H2'	2.29	0.48
10:B:1062:G:N2	17:I:134:SER:OG	2.45	0.48
10:B:1205:A:H4'	10:B:1206:G:OP2	2.13	0.48
10:B:1230:A:H2'	10:B:1231:U:H6	1.78	0.48
10:B:1965:C:H5''	10:B:1966:A:H2'	1.96	0.48
10:B:2076:U:O4'	10:B:2076:U:O2	2.29	0.48
10:B:2331:G:H2'	10:B:2332:C:H6	1.79	0.48
10:B:2543:G:H2'	10:B:2544:G:O4'	2.14	0.48
11:C:13:ARG:O	11:C:15:VAL:HG23	2.14	0.48
11:C:27:LYS:HA	11:C:79:ARG:HH12	1.78	0.48
11:C:87:SER:O	11:C:155:ARG:NH2	2.47	0.48
11:C:205:GLY:O	11:C:206:LYS:HG2	2.14	0.48
12:D:122:VAL:HG21	12:D:141:ARG:HA	1.96	0.48
12:D:127:PHE:O	12:D:128:ARG:HB2	2.14	0.48
12:D:170:VAL:HG21	12:D:194:PRO:CG	2.42	0.48
14:F:14:LYS:O	14:F:18:GLU:HB3	2.13	0.48
14:F:75:GLY:O	14:F:76:PHE:HB2	2.13	0.48
17:I:48:ILE:O	17:I:49:GLU:HB3	2.14	0.48
20:L:82:LEU:HD22	20:L:82:LEU:HA	1.49	0.48
20:L:110:VAL:HB	20:L:126:ARG:HH22	1.77	0.48
22:N:8:ARG:CZ	22:N:46:ARG:HD2	2.44	0.48
22:N:29:VAL:HB	22:N:75:ILE:HG12	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:N:36:THR:O	22:N:40:LYS:HB2	2.14	0.48
27:S:3:THR:HG23	27:S:107:VAL:HG23	1.95	0.48
27:S:4:ILE:HG22	27:S:5:ALA:H	1.78	0.48
30:V:26:PHE:HB2	30:V:27:PRO:HD2	1.95	0.48
2:1:46:VAL:C	2:1:47:ILE:HG12	2.34	0.48
3:2:7:PRO:CG	10:B:1309:G:H4'	2.43	0.48
6:5:425:ARG:NH2	10:B:490:C:H5	2.11	0.48
8:7:156:A:H2'	8:7:157:U:O4'	2.14	0.48
10:B:230:G:H2'	10:B:231:A:C8	2.48	0.48
10:B:285:G:C5	10:B:356:G:N2	2.82	0.48
10:B:350:G:C8	10:B:351:C:C5	3.02	0.48
10:B:570:G:O2'	10:B:571:U:H5'	2.14	0.48
10:B:757:G:H2'	10:B:758:C:H5'	1.95	0.48
10:B:1041:G:N1	10:B:1115:G:C5	2.82	0.48
10:B:1069:A:C4	10:B:1073:A:N7	2.81	0.48
10:B:1092:C:HO2'	10:B:1093:G:H5'	1.76	0.48
10:B:1156:A:N6	25:Q:47:ARG:HD3	2.29	0.48
10:B:1359:A:H2'	10:B:1360:G:O4'	2.13	0.48
10:B:1526:C:HO2'	10:B:1527:G:H5'	1.79	0.48
10:B:1531:C:C2'	10:B:1532:A:C8	2.86	0.48
10:B:1986:C:O2'	10:B:1987:A:H5'	2.14	0.48
10:B:2147:A:H5'	10:B:2148:G:C4'	2.44	0.48
10:B:2322:A:N6	10:B:2333:A:H62	2.10	0.48
10:B:2373:G:H2'	10:B:2374:C:C6	2.49	0.48
10:B:2776:A:H4'	10:B:2777:G:O5'	2.13	0.48
11:C:16:VAL:O	11:C:16:VAL:HG12	2.14	0.48
11:C:140:VAL:HG23	11:C:141:HIS:N	2.28	0.48
12:D:61:THR:HB	12:D:62:LYS:CE	2.43	0.48
12:D:200:ASP:O	12:D:201:LEU:HB2	2.13	0.48
14:F:133:GLU:O	14:F:134:GLN:HB2	2.14	0.48
16:H:89:LYS:HE3	16:H:123:ARG:HB2	1.96	0.48
17:I:14:ALA:HB1	17:I:50:LYS:HA	1.95	0.48
21:M:64:TRP:O	21:M:102:LEU:N	2.47	0.48
22:N:17:ARG:O	22:N:21:PHE:HB2	2.14	0.48
22:N:19:ALA:O	22:N:21:PHE:N	2.47	0.48
23:O:20:GLU:HB3	23:O:23:ALA:HB2	1.96	0.48
23:O:64:TYR:CE2	23:O:74:VAL:HG21	2.49	0.48
23:O:71:ALA:O	23:O:74:VAL:HG23	2.14	0.48
25:Q:47:ARG:HH12	25:Q:50:ARG:HD2	1.79	0.48
25:Q:52:ARG:CZ	25:Q:55:GLN:HG2	2.43	0.48
26:R:47:VAL:C	26:R:49:ILE:N	2.67	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:U:44:HIS:CE1	29:U:47:PRO:CD	2.90	0.48
29:U:96:LYS:HE2	29:U:98:ASN:HB3	1.95	0.48
1:O:29:VAL:HG23	1:O:36:LYS:HZ3	1.77	0.47
9:A:27:C:H3'	9:A:28:C:H6	1.78	0.47
9:A:112:G:O2'	9:A:113:C:H5'	2.14	0.47
10:B:19:A:H2'	10:B:20:C:H6	1.78	0.47
10:B:84:A:OP2	29:U:91:LYS:CG	2.62	0.47
10:B:299:A:C4	10:B:322:A:C4	3.01	0.47
10:B:320:A:OP2	13:E:132:LYS:CE	2.62	0.47
10:B:359:G:H2'	10:B:360:U:C5'	2.44	0.47
10:B:636:G:O6	20:L:76:GLU:HG2	2.14	0.47
10:B:1035:U:O2'	10:B:1036:G:H5'	2.14	0.47
10:B:1042:G:N2	10:B:1043:C:N1	2.62	0.47
10:B:1133:A:H4'	10:B:1134:A:H5''	1.95	0.47
10:B:1188:U:C2'	10:B:1189:A:H5'	2.44	0.47
10:B:1351:C:H4'	10:B:1572:A:O4'	2.14	0.47
10:B:1413:A:H2'	10:B:1414:C:C6	2.49	0.47
10:B:1439:A:N7	10:B:1440:U:N1	2.62	0.47
10:B:1439:A:N7	10:B:1440:U:C6	2.82	0.47
10:B:1444:G:C2	10:B:1548:A:C2	3.02	0.47
10:B:1514:G:OP1	10:B:1514:G:H4'	2.14	0.47
10:B:1553:A:C8	10:B:1555:G:C5	3.02	0.47
10:B:1599:U:H2'	10:B:1600:C:H6	1.78	0.47
10:B:1870:C:H3'	10:B:1871:A:C8	2.49	0.47
10:B:2648:G:H2'	10:B:2649:C:C6	2.48	0.47
11:C:24:HIS:HB2	11:C:27:LYS:HE3	1.96	0.47
11:C:46:GLY:O	11:C:47:ARG:HB2	2.14	0.47
11:C:156:SER:O	11:C:194:VAL:O	2.32	0.47
11:C:222:THR:C	11:C:224:MET:N	2.67	0.47
12:D:84:LEU:O	12:D:85:ALA:HB3	2.14	0.47
12:D:138:LEU:O	12:D:139:SER:C	2.53	0.47
12:D:154:LYS:HZ1	18:J:81:ILE:HG21	1.78	0.47
13:E:78:TRP:N	13:E:78:TRP:HE3	2.11	0.47
13:E:151:GLY:HA2	13:E:171:ASP:HA	1.95	0.47
16:H:98:ASP:O	16:H:102:ALA:HB2	2.13	0.47
16:H:114:GLU:O	16:H:133:GLN:HB3	2.14	0.47
20:L:38:GLN:N	20:L:41:ARG:CD	2.77	0.47
20:L:71:ALA:HB1	20:L:74:THR:OG1	2.14	0.47
20:L:94:THR:OG1	20:L:103:ILE:HB	2.14	0.47
21:M:73:ILE:CD1	21:M:92:TRP:H	2.27	0.47
23:O:26:LEU:HD13	23:O:92:PHE:O	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:P:52:ARG:HH11	24:P:54:LEU:HB2	1.79	0.47
24:P:59:THR:HA	24:P:76:HIS:HA	1.95	0.47
25:Q:75:TYR:CZ	25:Q:79:ILE:HD11	2.49	0.47
26:R:5:PHE:N	26:R:12:HIS:CB	2.77	0.47
27:S:20:VAL:O	27:S:23:LEU:HB2	2.14	0.47
31:W:44:PHE:CD1	31:W:44:PHE:C	2.88	0.47
2:1:24:LYS:HZ2	10:B:2285:C:H41	1.60	0.47
4:3:44:ARG:HB3	4:3:45:PRO:CD	2.43	0.47
9:A:54:G:H2'	9:A:55:U:H6	1.79	0.47
10:B:39:G:H2'	10:B:40:U:C6	2.48	0.47
10:B:333:G:C5	10:B:334:C:C4	2.99	0.47
10:B:355:U:O2'	10:B:356:G:H5'	2.13	0.47
10:B:418:C:H2'	10:B:419:U:H6	1.75	0.47
10:B:490:C:H3'	10:B:491:G:H5''	1.96	0.47
10:B:526:A:N6	10:B:2626:C:H4'	2.29	0.47
10:B:1054:A:H2'	10:B:1055:G:C8	2.47	0.47
10:B:1104:C:H2'	10:B:1105:U:H5'	1.94	0.47
10:B:1170:C:O2'	10:B:1171:G:H5'	2.15	0.47
10:B:1172:C:H2'	10:B:1173:U:O4'	2.14	0.47
10:B:1230:A:H2'	10:B:1231:U:C6	2.49	0.47
10:B:1241:A:H2'	10:B:1242:U:H5'	1.96	0.47
10:B:2052:A:H2'	10:B:2052:A:N3	2.29	0.47
10:B:2221:G:H2'	10:B:2222:C:C6	2.50	0.47
10:B:2472:G:H2'	10:B:2475:C:H42	1.79	0.47
10:B:2553:G:H2'	10:B:2554:U:C4'	2.45	0.47
10:B:2761:A:H1'	15:G:142:GLN:NE2	2.29	0.47
12:D:38:LYS:N	12:D:38:LYS:CD	2.77	0.47
12:D:135:GLY:C	12:D:137:SER:N	2.68	0.47
16:H:7:ASP:O	16:H:9:VAL:HG23	2.14	0.47
16:H:56:ALA:HB3	16:H:57:LYS:NZ	2.29	0.47
18:J:43:GLU:HB3	25:Q:99:VAL:HG12	1.96	0.47
19:K:33:ALA:HB3	19:K:39:ILE:HD11	1.96	0.47
20:L:133:ALA:HA	20:L:136:GLU:OE2	2.13	0.47
22:N:65:LEU:HD12	22:N:68:ALA:HB3	1.96	0.47
23:O:8:ILE:C	23:O:10:ARG:H	2.18	0.47
23:O:46:GLU:C	23:O:48:LEU:H	2.18	0.47
24:P:11:GLN:O	24:P:12:MET:HG3	2.13	0.47
25:Q:59:LEU:HD11	25:Q:63:ARG:NH2	2.29	0.47
28:T:85:VAL:O	28:T:85:VAL:CG2	2.62	0.47
29:U:27:VAL:HB	29:U:33:VAL:HG13	1.95	0.47
34:Z:59:ARG:HE	34:Z:62:LYS:CE	2.27	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:6:LYS:HA	1:0:7:PRO:HD3	1.68	0.47
1:0:39:ARG:HH12	22:N:99:LYS:CE	2.27	0.47
4:3:13:PHE:O	4:3:13:PHE:CG	2.68	0.47
10:B:308:G:C5	10:B:309:A:C6	3.02	0.47
10:B:326:G:C2'	10:B:327:G:C5'	2.92	0.47
10:B:582:A:H2'	10:B:583:G:C8	2.49	0.47
10:B:811:U:OP2	20:L:31:GLY:HA2	2.13	0.47
10:B:1068:G:N1	10:B:1069:A:N6	2.61	0.47
10:B:1156:A:N6	25:Q:47:ARG:CD	2.77	0.47
10:B:1919:A:H2'	10:B:1920:C:H5'	1.95	0.47
10:B:2070:A:H2'	10:B:2071:A:O4'	2.14	0.47
10:B:2083:G:H2'	10:B:2084:C:C6	2.50	0.47
10:B:2331:G:C5'	31:W:70:VAL:HG13	2.43	0.47
11:C:64:VAL:HB	11:C:65:ASP:H	1.33	0.47
11:C:227:VAL:HG12	11:C:228:ASP:N	2.29	0.47
12:D:150:GLN:C	12:D:151:THR:HG22	2.34	0.47
16:H:100:ALA:HB1	16:H:110:VAL:CG2	2.44	0.47
18:J:35:ARG:CZ	18:J:40:HIS:HB2	2.45	0.47
18:J:49:ASP:O	18:J:50:THR:HB	2.14	0.47
18:J:100:VAL:HG22	18:J:101:ILE:N	2.27	0.47
19:K:107:LEU:O	19:K:107:LEU:HD12	2.14	0.47
20:L:85:VAL:HG21	20:L:98:ALA:N	2.16	0.47
20:L:109:LYS:HA	20:L:126:ARG:CB	2.44	0.47
20:L:127:VAL:HB	20:L:128:THR:H	1.32	0.47
21:M:73:ILE:HD13	21:M:90:GLU:HG2	1.94	0.47
22:N:116:VAL:CG2	22:N:117:ASP:H	2.05	0.47
25:Q:101:ASP:OD2	25:Q:104:ALA:HB2	2.14	0.47
29:U:2:ALA:C	29:U:4:ILE:H	2.16	0.47
30:V:16:ALA:HA	30:V:19:ARG:NE	2.29	0.47
31:W:47:GLY:HA2	31:W:67:LYS:HZ3	1.79	0.47
3:2:35:ARG:HH12	3:2:39:ARG:HG2	1.80	0.47
4:3:24:LYS:HD2	20:L:64:PHE:H	1.78	0.47
9:A:30:C:H1'	9:A:58:A:N1	2.29	0.47
10:B:295:G:C4	10:B:296:U:C5	3.03	0.47
10:B:320:A:OP2	13:E:132:LYS:HE2	2.14	0.47
10:B:324:A:C6	10:B:339:U:C4'	2.97	0.47
10:B:356:G:H8	10:B:356:G:O5'	1.96	0.47
10:B:673:C:H5''	13:E:76:PRO:HD2	1.96	0.47
10:B:773:U:H4'	11:C:47:ARG:HA	1.95	0.47
10:B:1109:C:N4	10:B:1110:G:O6	2.48	0.47
10:B:1560:G:H2'	10:B:1561:C:H6	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2070:A:H2'	10:B:2071:A:C8	2.49	0.47
13:E:44:ARG:CG	13:E:45:ALA:H	2.27	0.47
13:E:72:SER:O	13:E:73:ILE:HD13	2.14	0.47
18:J:29:ALA:O	18:J:33:ALA:N	2.44	0.47
18:J:43:GLU:CB	25:Q:99:VAL:HG12	2.45	0.47
19:K:108:ARG:HG3	19:K:108:ARG:HH11	1.79	0.47
20:L:80:SER:OG	20:L:116:VAL:HG13	2.15	0.47
20:L:117:THR:HG21	20:L:120:VAL:HG11	1.97	0.47
25:Q:97:ILE:HD13	25:Q:100:PHE:HZ	1.80	0.47
26:R:35:PHE:HB2	26:R:64:VAL:HG22	1.96	0.47
27:S:106:VAL:HG12	27:S:107:VAL:N	2.28	0.47
30:V:61:LEU:O	30:V:71:LYS:HA	2.15	0.47
31:W:21:GLY:HA3	31:W:32:ALA:HB1	1.96	0.47
32:X:14:LEU:CD2	32:X:57:LEU:HB2	2.44	0.47
34:Z:3:LYS:CD	34:Z:6:HIS:HB3	2.44	0.47
34:Z:5:ILE:HG23	34:Z:63:ARG:HE	1.78	0.47
34:Z:31:ASP:HA	34:Z:47:LYS:O	2.14	0.47
2:1:34:GLU:OE1	2:1:36:LYS:HE2	2.13	0.47
3:2:30:VAL:HA	3:2:33:ARG:HD2	1.96	0.47
4:3:24:LYS:HB2	20:L:64:PHE:CE2	2.50	0.47
6:5:432:LYS:HE3	10:B:1536:C:H5'	1.09	0.47
9:A:94:A:H2'	9:A:95:U:O4'	2.14	0.47
10:B:26:G:H2'	10:B:27:G:C1'	2.44	0.47
10:B:271:G:N1	10:B:366:C:O2'	2.14	0.47
10:B:273:G:N2	10:B:274:C:C1'	2.78	0.47
10:B:327:G:N2	10:B:336:C:C2	2.83	0.47
10:B:342:A:C4	10:B:343:C:C6	3.03	0.47
10:B:358:U:C2'	10:B:359:G:C8	2.86	0.47
10:B:863:A:H2'	10:B:864:G:C8	2.50	0.47
10:B:974:G:O4'	10:B:990:A:N6	2.47	0.47
10:B:1430:G:H2'	10:B:1431:A:H8	1.77	0.47
10:B:1843:C:H4'	11:C:250:GLN:HB3	1.96	0.47
10:B:2221:G:H2'	10:B:2222:C:H6	1.78	0.47
10:B:2395:C:O5'	10:B:2395:C:H6	1.98	0.47
10:B:2443:C:H2'	10:B:2444:G:C8	2.50	0.47
11:C:141:HIS:O	11:C:143:VAL:HG23	2.14	0.47
11:C:216:ARG:NH1	11:C:217:PRO:HD2	2.29	0.47
12:D:142:VAL:C	12:D:144:GLY:H	2.13	0.47
13:E:111:GLU:O	13:E:113:VAL:HG12	2.14	0.47
14:F:16:MET:HE3	14:F:21:TYR:HD1	1.78	0.47
14:F:102:LEU:C	14:F:107:VAL:HG23	2.35	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:H:29:PHE:H	16:H:32:PRO:HD2	1.79	0.47
17:I:77:VAL:HG23	17:I:78:LEU:N	2.29	0.47
19:K:58:LEU:HB3	19:K:89:ASN:ND2	2.29	0.47
20:L:84:LYS:HA	20:L:84:LYS:HE3	1.97	0.47
20:L:85:VAL:CG1	20:L:86:GLU:HG2	2.44	0.47
20:L:85:VAL:HG12	20:L:86:GLU:CG	2.44	0.47
21:M:38:ARG:HA	21:M:96:ILE:O	2.14	0.47
25:Q:93:ILE:CG2	25:Q:94:LEU:HD13	2.40	0.47
27:S:6:LYS:HB2	27:S:6:LYS:NZ	2.30	0.47
27:S:88:ARG:HB3	27:S:89:ALA:H	1.50	0.47
28:T:50:LEU:HD22	28:T:50:LEU:N	2.29	0.47
30:V:4:ILE:HG22	30:V:63:ILE:HG23	1.96	0.47
1:0:11:LYS:O	1:0:12:ARG:HB3	2.15	0.47
2:1:15:GLY:CA	2:1:47:ILE:HD12	2.44	0.47
9:A:52:A:H3'	9:A:53:A:H8	1.80	0.47
9:A:76:G:H2'	9:A:77:U:O4'	2.13	0.47
10:B:278:A:N3	10:B:362:A:H1'	2.30	0.47
10:B:289:G:C6	10:B:290:U:N3	2.83	0.47
10:B:291:G:N7	10:B:350:G:N1	2.61	0.47
10:B:306:U:C2	10:B:312:G:N1	2.83	0.47
10:B:1524:G:N2	10:B:1525:A:C1'	2.73	0.47
10:B:1995:U:OP1	12:D:129:THR:HG22	2.15	0.47
10:B:2617:U:H2'	10:B:2618:G:C5'	2.45	0.47
11:C:103:ILE:CG2	11:C:104:LEU:N	2.78	0.47
11:C:254:LYS:HB3	11:C:255:LYS:H	1.55	0.47
12:D:17:GLU:HA	24:P:80:VAL:HG11	1.97	0.47
13:E:97:ASN:N	13:E:97:ASN:ND2	2.61	0.47
13:E:134:LEU:HD22	13:E:138:LEU:HG	1.97	0.47
13:E:158:PHE:C	13:E:160:ALA:H	2.17	0.47
14:F:6:TYR:O	14:F:11:VAL:HG23	2.15	0.47
14:F:55:ASP:OD1	14:F:148:VAL:HG11	2.15	0.47
16:H:1:MET:N	16:H:23:ALA:HB2	2.29	0.47
17:I:72:THR:HB	17:I:73:PRO:HD2	1.96	0.47
18:J:58:ASN:C	18:J:60:ASP:H	2.18	0.47
20:L:82:LEU:O	20:L:117:THR:HG22	2.15	0.47
23:O:67:ASN:CA	23:O:71:ALA:HB3	2.41	0.47
24:P:92:ARG:HH22	24:P:110:LYS:HE2	1.77	0.47
27:S:34:ASP:HA	27:S:37:THR:HG22	1.96	0.47
30:V:72:VAL:O	30:V:94:ALA:HB2	2.14	0.47
32:X:47:ARG:O	32:X:47:ARG:HG2	2.13	0.47
1:0:3:GLN:HB2	1:0:6:LYS:HE2	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:52:LYS:HE2	22:N:118:ARG:CD	2.45	0.47
3:2:35:ARG:O	3:2:39:ARG:HA	2.14	0.47
6:5:334:PHE:HA	6:5:337:GLN:HE21	1.78	0.47
9:A:49:C:O2'	9:A:50:A:H5'	2.14	0.47
10:B:233:A:H61	10:B:428:A:H61	1.61	0.47
10:B:277:G:H4'	10:B:278:A:C6	2.50	0.47
10:B:278:A:N3	10:B:278:A:C3'	2.77	0.47
10:B:311:A:N6	10:B:328:U:C2'	2.73	0.47
10:B:320:A:P	13:E:132:LYS:HE2	2.55	0.47
10:B:322:A:H1'	10:B:339:U:O2	2.14	0.47
10:B:946:C:P	36:B:3290:HOH:O	2.72	0.47
10:B:1439:A:N1	10:B:1552:A:C8	2.83	0.47
10:B:1476:U:C6	10:B:1516:G:C6	3.03	0.47
10:B:1516:G:N2	10:B:1517:G:C1'	2.75	0.47
10:B:1754:A:OP2	24:P:94:ALA:HB1	2.15	0.47
10:B:1771:C:O2'	10:B:1772:A:H5'	2.15	0.47
10:B:1812:U:H2'	10:B:1813:G:H8	1.78	0.47
10:B:1938:A:O2'	10:B:1939:U:H5''	2.15	0.47
10:B:2019:A:O2'	25:Q:32:ARG:NH2	2.47	0.47
10:B:2197:U:O2'	10:B:2198:A:H2'	2.14	0.47
10:B:2213:U:H2'	10:B:2214:C:H5'	1.96	0.47
10:B:2249:U:H4'	10:B:2275:C:C5	2.50	0.47
10:B:2620:C:C4'	12:D:161:MET:HG3	2.45	0.47
10:B:2862:G:H2'	10:B:2863:C:H6	1.79	0.47
11:C:29:PHE:HB2	11:C:31:PRO:HD3	1.94	0.47
11:C:36:ASN:HB3	11:C:63:ILE:HD13	1.96	0.47
11:C:75:ALA:HB2	11:C:95:TYR:CE1	2.50	0.47
11:C:250:GLN:O	11:C:251:THR:HB	2.15	0.47
12:D:108:ASP:HB3	12:D:173:GLN:HA	1.96	0.47
12:D:130:GLN:O	12:D:140:HIS:ND1	2.48	0.47
12:D:150:GLN:O	12:D:151:THR:HG22	2.15	0.47
12:D:154:LYS:NZ	18:J:81:ILE:HG21	2.29	0.47
13:E:28:VAL:O	13:E:32:VAL:HG23	2.14	0.47
14:F:35:LEU:O	14:F:36:ASN:HB3	2.13	0.47
15:G:29:ASN:N	15:G:29:ASN:ND2	2.61	0.47
15:G:104:LEU:HB3	15:G:106:LEU:CD1	2.45	0.47
16:H:50:ARG:CG	16:H:51:ARG:HA	2.45	0.47
19:K:12:ASP:HB3	19:K:85:VAL:HG13	1.97	0.47
19:K:85:VAL:O	19:K:85:VAL:HG12	2.14	0.47
21:M:90:GLU:O	21:M:91:TYR:HB2	2.14	0.47
21:M:109:PRO:HA	21:M:112:LEU:HD22	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:M:131:VAL:HG23	21:M:132:THR:H	1.80	0.47
22:N:7:GLY:O	22:N:8:ARG:CB	2.63	0.47
22:N:106:ASP:O	22:N:108:ALA:N	2.48	0.47
24:P:22:GLY:CA	24:P:91:VAL:HG13	2.43	0.47
24:P:29:VAL:O	24:P:44:GLY:HA3	2.15	0.47
24:P:91:VAL:HG12	24:P:92:ARG:N	2.30	0.47
26:R:76:LYS:HE3	26:R:78:ARG:HD2	1.95	0.47
26:R:90:ARG:NH1	26:R:91:GLN:N	2.62	0.47
27:S:27:LYS:HD2	27:S:27:LYS:N	2.23	0.47
27:S:28:LYS:HA	27:S:31:GLN:HB2	1.96	0.47
29:U:43:LYS:HZ3	29:U:44:HIS:HA	1.79	0.47
30:V:2:PHE:CB	30:V:61:LEU:HD22	2.45	0.47
30:V:63:ILE:HG22	30:V:65:VAL:HG13	1.97	0.47
30:V:80:HIS:CD2	30:V:83:LYS:HB2	2.50	0.47
30:V:80:HIS:CA	30:V:87:GLN:HE22	2.28	0.47
30:V:82:TYR:N	30:V:82:TYR:CD1	2.83	0.47
31:W:16:GLU:O	31:W:16:GLU:HG3	2.14	0.47
31:W:19:ARG:NH2	31:W:71:LYS:HD2	2.30	0.47
32:X:22:LEU:O	32:X:23:ARG:C	2.53	0.47
2:1:37:LYS:NZ	2:1:46:VAL:HA	2.29	0.47
6:5:350:LEU:HD22	6:5:350:LEU:N	2.29	0.47
6:5:360:ILE:O	6:5:360:ILE:HG23	2.15	0.47
10:B:28:A:O2'	10:B:583:G:H5'	2.14	0.47
10:B:79:C:O3'	10:B:346:A:C8	2.59	0.47
10:B:246:C:C2'	10:B:247:G:H5'	2.45	0.47
10:B:297:G:O6	10:B:298:G:N1	2.48	0.47
10:B:352:A:N6	10:B:353:C:N4	2.63	0.47
10:B:543:G:C2'	10:B:544:C:H5''	2.39	0.47
10:B:832:U:O2'	20:L:53:GLY:HA3	2.15	0.47
10:B:993:G:O2'	10:B:994:C:H5'	2.15	0.47
10:B:1022:G:N2	10:B:1142:A:C2	2.81	0.47
10:B:1410:G:H2'	10:B:1411:U:H6	1.79	0.47
10:B:1526:C:C2'	10:B:1527:G:C8	2.86	0.47
10:B:1531:C:C4	10:B:1532:A:N6	2.83	0.47
10:B:1548:A:C4	10:B:1549:A:N7	2.83	0.47
10:B:1692:U:H2'	10:B:1694:C:C4	2.49	0.47
10:B:1789:A:H5'	11:C:220:ARG:HH21	1.78	0.47
10:B:1936:A:H2	10:B:1943:U:C5	2.32	0.47
10:B:2299:U:H2'	10:B:2300:C:C6	2.50	0.47
10:B:2543:G:H5'	10:B:2543:G:H8	1.79	0.47
10:B:2645:G:H3'	10:B:2646:C:C5'	2.42	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2819:G:H2'	10:B:2821:A:N7	2.29	0.47
10:B:2860:A:H2'	10:B:2861:U:O4'	2.14	0.47
10:B:2896:C:H2'	10:B:2897:U:C6	2.50	0.47
11:C:78:GLU:CB	11:C:92:LEU:HD23	2.45	0.47
11:C:204:LEU:HD12	11:C:211:ARG:HD3	1.97	0.47
12:D:4:LEU:CD2	12:D:49:GLN:HG2	2.44	0.47
14:F:107:VAL:HG11	14:F:175:PRO:HB2	1.95	0.47
16:H:1:MET:HA	16:H:21:VAL:O	2.15	0.47
18:J:5:THR:HB	18:J:45:THR:HG23	1.96	0.47
18:J:41:LYS:HG2	18:J:42:ALA:N	2.30	0.47
18:J:45:THR:CG2	25:Q:63:ARG:HH22	2.28	0.47
18:J:55:ILE:HA	18:J:122:LEU:O	2.14	0.47
19:K:26:GLY:HA3	19:K:30:ARG:NE	2.17	0.47
21:M:6:ARG:HG3	21:M:7:THR:O	2.15	0.47
21:M:33:LEU:CD2	21:M:124:LEU:HG	2.45	0.47
21:M:36:VAL:HG12	30:V:82:TYR:CB	2.45	0.47
21:M:117:PHE:HB2	21:M:124:LEU:HD21	1.97	0.47
22:N:1:MET:SD	22:N:2:ARG:HD3	2.54	0.47
22:N:46:ARG:O	22:N:50:PRO:HG2	2.14	0.47
22:N:57:THR:HG23	22:N:58:ASP:H	1.80	0.47
24:P:47:ILE:CA	24:P:63:ILE:HG23	2.45	0.47
26:R:23:GLU:HA	26:R:96:VAL:HG13	1.97	0.47
30:V:44:HIS:O	30:V:48:MET:HB3	2.14	0.47
34:Z:8:LYS:HD2	34:Z:9:TYR:N	2.29	0.47
34:Z:59:ARG:HH21	34:Z:62:LYS:HZ1	1.62	0.47
1:0:42:ILE:HD13	1:0:47:TYR:CE1	2.50	0.47
10:B:137:U:H2'	10:B:138:U:O4'	2.15	0.47
10:B:152:A:H2'	10:B:153:U:C6	2.49	0.47
10:B:291:G:C4	10:B:350:G:C6	2.96	0.47
10:B:296:U:N3	10:B:343:C:C4	2.74	0.47
10:B:309:A:C8	10:B:309:A:P	3.05	0.47
10:B:354:A:C3'	10:B:355:U:C5'	2.86	0.47
10:B:1090:A:C2	10:B:1091:G:C6	3.03	0.47
10:B:2309:A:C5	10:B:2310:C:N3	2.83	0.47
10:B:2671:G:H2'	10:B:2672:U:C6	2.49	0.47
11:C:59:GLN:O	11:C:60:ALA:HB3	2.14	0.47
11:C:81:GLU:O	11:C:90:ILE:HG22	2.15	0.47
11:C:155:ARG:NE	11:C:157:ALA:HB3	2.23	0.47
13:E:25:GLU:O	13:E:26:ALA:C	2.53	0.47
13:E:44:ARG:C	13:E:46:GLN:N	2.68	0.47
13:E:104:ALA:C	13:E:105:LEU:HD23	2.35	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:F:33:ILE:HG13	14:F:34:THR:N	2.27	0.47
16:H:68:ARG:O	16:H:72:ILE:HG22	2.15	0.47
18:J:93:ILE:CD1	18:J:100:VAL:HG11	2.44	0.47
20:L:39:LYS:HB2	20:L:46:VAL:HG22	1.97	0.47
20:L:103:ILE:CD1	20:L:105:ILE:H	2.24	0.47
23:O:8:ILE:CG2	23:O:9:ARG:N	2.77	0.47
24:P:23:ASP:O	24:P:25:VAL:N	2.48	0.47
24:P:62:LYS:HE2	24:P:74:GLN:NE2	2.30	0.47
26:R:58:VAL:HG22	26:R:59:ILE:HG23	1.96	0.47
27:S:33:LEU:O	27:S:35:ILE:N	2.45	0.47
28:T:30:ILE:CG2	28:T:32:LEU:HD13	2.45	0.47
30:V:41:GLU:C	30:V:42:LEU:HD23	2.35	0.47
31:W:64:GLY:O	31:W:65:LYS:O	2.33	0.47
34:Z:24:ILE:HG12	34:Z:25:ARG:N	2.28	0.47
9:A:50:A:H5''	23:O:68:LYS:CG	2.45	0.47
9:A:86:G:H3'	9:A:87:U:H6	1.80	0.47
9:A:89:U:O2	10:B:958:U:H2'	2.15	0.47
10:B:144:A:H2'	10:B:145:C:O4'	2.15	0.47
10:B:295:G:C4	10:B:344:A:H2	2.29	0.47
10:B:323:C:OP2	10:B:324:A:H8	1.98	0.47
10:B:340:A:H2'	10:B:341:C:C6	2.50	0.47
10:B:978:G:H2'	10:B:979:A:H8	1.80	0.47
10:B:1079:C:H2'	10:B:1080:A:H5'	1.97	0.47
10:B:1255:U:C2'	13:E:67:ARG:HB3	2.40	0.47
10:B:1399:C:H2'	10:B:1400:U:C6	2.50	0.47
10:B:1592:C:H2'	10:B:1593:A:H8	1.80	0.47
10:B:1714:U:H3'	10:B:1715:G:H5'	1.95	0.47
10:B:2425:A:H5''	10:B:2426:A:H3'	1.97	0.47
10:B:2788:C:H2'	10:B:2789:C:C6	2.50	0.47
10:B:2881:U:C5	22:N:120:GLU:OE2	2.52	0.47
12:D:13:ARG:NH1	24:P:8:GLU:HB3	2.30	0.47
14:F:70:ARG:HA	14:F:80:GLN:HE21	1.80	0.47
15:G:153:PRO:HG3	15:G:160:GLY:C	2.35	0.47
16:H:50:ARG:HB3	16:H:51:ARG:CA	2.45	0.47
18:J:7:LYS:CE	18:J:48:VAL:HB	2.45	0.47
19:K:28:SER:O	19:K:29:HIS:HB2	2.15	0.47
23:O:30:ARG:NH2	23:O:102:ARG:HD2	2.29	0.47
23:O:76:LYS:HB2	23:O:106:LEU:HD13	1.97	0.47
26:R:31:GLU:O	26:R:32:THR:HB	2.15	0.47
27:S:29:VAL:HG21	27:S:70:LYS:N	2.30	0.47
29:U:2:ALA:C	29:U:3:LYS:HD3	2.34	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Y:50:VAL:O	33:Y:53:MET:HB2	2.15	0.47
34:Z:15:SER:HB3	34:Z:23:LYS:HD3	1.97	0.47
2:1:9:LYS:HD2	2:1:9:LYS:N	2.31	0.46
3:2:41:ARG:O	3:2:42:LEU:HB3	2.14	0.46
3:2:44:VAL:HG23	3:2:45:SER:N	2.24	0.46
10:B:278:A:N3	10:B:279:A:N7	2.62	0.46
10:B:301:G:N7	10:B:317:G:C6	2.82	0.46
10:B:443:A:H2	10:B:1245:G:N3	2.13	0.46
10:B:581:C:H2'	10:B:582:A:C8	2.50	0.46
10:B:621:A:H2'	10:B:622:G:O4'	2.15	0.46
10:B:959:A:O2'	10:B:960:A:H5'	2.15	0.46
10:B:1278:C:O2'	10:B:1279:G:H5'	2.15	0.46
10:B:1637:A:H2'	10:B:1638:C:H6	1.80	0.46
10:B:2617:U:O2'	10:B:2618:G:H5'	2.15	0.46
10:B:2752:C:H2'	10:B:2753:A:O4'	2.15	0.46
11:C:229:HIS:O	11:C:231:HIS:N	2.39	0.46
11:C:262:THR:O	11:C:262:THR:HG23	2.14	0.46
12:D:15:PHE:HB3	12:D:18:ASP:CB	2.45	0.46
12:D:22:ILE:O	12:D:23:PRO:O	2.32	0.46
16:H:121:VAL:HG21	16:H:128:HIS:HE2	1.78	0.46
17:I:54:ILE:HG21	17:I:70:THR:CG2	2.45	0.46
21:M:41:LEU:HB2	21:M:93:VAL:CG2	2.43	0.46
21:M:64:TRP:HB3	21:M:102:LEU:HB2	1.96	0.46
29:U:10:VAL:HG21	29:U:25:LYS:NZ	2.31	0.46
29:U:43:LYS:O	29:U:44:HIS:HB2	2.16	0.46
30:V:53:LYS:HD2	30:V:54:ALA:N	2.29	0.46
2:1:10:LEU:HD21	2:1:34:GLU:HG3	1.97	0.46
9:A:100:G:H5''	10:B:915:C:O2'	2.15	0.46
9:A:114:C:H2'	9:A:115:A:H8	1.80	0.46
10:B:295:G:O6	10:B:344:A:N6	2.48	0.46
10:B:317:G:C2	10:B:318:C:C2	3.03	0.46
10:B:350:G:C6	10:B:351:C:C4	3.02	0.46
10:B:350:G:H8	10:B:350:G:O5'	1.98	0.46
10:B:834:G:H4'	20:L:59:ARG:HH22	1.80	0.46
10:B:904:G:H2'	10:B:905:A:H8	1.81	0.46
10:B:1190:G:OP1	20:L:41:ARG:HG2	2.15	0.46
10:B:1352:U:O2'	10:B:1353:A:H5'	2.16	0.46
10:B:1526:C:C2'	10:B:1527:G:H5'	2.45	0.46
10:B:2223:G:H2'	10:B:2224:G:H5'	1.96	0.46
10:B:2728:U:H2'	10:B:2729:G:C8	2.50	0.46
10:B:2743:U:H3'	10:B:2744:G:H5''	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:D:138:LEU:O	12:D:142:VAL:HG22	2.16	0.46
12:D:178:VAL:O	12:D:179:ARG:HG3	2.15	0.46
14:F:136:ILE:C	14:F:138:PRO:HD3	2.36	0.46
14:F:171:ALA:N	14:F:173:ASP:OD1	2.48	0.46
18:J:125:TYR:OH	18:J:133:ALA:HB3	2.15	0.46
20:L:13:LYS:CG	20:L:14:LYS:H	2.28	0.46
20:L:19:LEU:N	20:L:19:LEU:HD22	2.30	0.46
21:M:42:THR:HG23	21:M:45:GLN:N	2.30	0.46
28:T:91:GLN:HG3	28:T:91:GLN:O	2.15	0.46
29:U:10:VAL:O	29:U:11:ILE:HD13	2.15	0.46
29:U:58:VAL:HG12	29:U:59:GLU:N	2.30	0.46
29:U:81:ARG:HA	29:U:81:ARG:HH11	1.81	0.46
29:U:84:PHE:HA	29:U:94:PHE:HD1	1.79	0.46
32:X:9:LYS:HE3	32:X:11:VAL:HG13	1.97	0.46
10:B:131:A:O2'	10:B:132:G:H5'	2.15	0.46
10:B:308:G:C2'	10:B:329:G:N2	2.79	0.46
10:B:312:G:N3	10:B:312:G:C2'	2.76	0.46
10:B:535:G:H3'	36:B:3318:HOH:O	2.15	0.46
10:B:633:A:H2'	10:B:634:C:H5'	1.98	0.46
10:B:917:A:H2'	10:B:918:A:O4'	2.14	0.46
10:B:976:G:H5'	10:B:1156:A:N6	2.30	0.46
10:B:1069:A:C8	10:B:1073:A:N6	2.83	0.46
10:B:1184:U:H2'	10:B:1185:G:H8	1.80	0.46
10:B:1531:C:N4	10:B:1532:A:N6	2.62	0.46
10:B:2438:U:O2'	10:B:2439:A:H5''	2.15	0.46
11:C:258:SER:HB2	11:C:261:ARG:NH1	2.30	0.46
12:D:184:ARG:O	12:D:184:ARG:HG3	2.14	0.46
13:E:121:VAL:HG12	13:E:122:GLU:N	2.30	0.46
13:E:178:VAL:HG23	13:E:179:SER:N	2.31	0.46
18:J:34:ARG:CG	18:J:39:LYS:HD2	2.44	0.46
20:L:51:GLU:O	20:L:51:GLU:HG3	2.15	0.46
20:L:92:LEU:HD21	20:L:96:LYS:NZ	2.30	0.46
22:N:1:MET:CE	22:N:2:ARG:HB2	2.45	0.46
25:Q:89:ILE:HG12	25:Q:89:ILE:O	2.14	0.46
25:Q:90:ASP:OD2	26:R:54:VAL:HG11	2.15	0.46
26:R:53:PHE:HB3	26:R:55:ASP:CB	2.43	0.46
28:T:35:ALA:O	28:T:81:LYS:HD3	2.15	0.46
28:T:96:VAL:CG2	28:T:97:GLY:H	2.19	0.46
29:U:35:VAL:C	29:U:36:GLU:HG2	2.34	0.46
29:U:43:LYS:NZ	29:U:44:HIS:CA	2.76	0.46
10:B:26:G:H1'	10:B:514:A:H61	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:38:A:C4'	13:E:46:GLN:HG3	2.45	0.46
10:B:139:U:C4	28:T:1:MET:HB2	2.50	0.46
10:B:314:C:C2'	10:B:315:G:H8	2.07	0.46
10:B:711:G:H2'	10:B:712:G:O4'	2.15	0.46
10:B:871:U:H2'	10:B:872:U:C6	2.51	0.46
10:B:992:C:H2'	10:B:993:G:C8	2.46	0.46
10:B:1059:G:H5'	17:I:117:THR:CB	2.28	0.46
10:B:1540:G:C2'	10:B:1541:C:H5''	2.45	0.46
10:B:1568:G:H5'	11:C:60:ALA:HB3	1.97	0.46
10:B:2053:G:H5'	12:D:151:THR:O	2.14	0.46
10:B:2261:C:OP2	31:W:13:ARG:HB2	2.14	0.46
10:B:2266:A:C4'	10:B:2267:A:N7	2.78	0.46
10:B:2305:U:O4	14:F:37:MET:HA	2.16	0.46
10:B:2773:C:O2'	10:B:2774:C:H5'	2.15	0.46
10:B:2800:A:C4	10:B:2801:G:H1'	2.50	0.46
10:B:2811:G:H5'	12:D:62:LYS:HD2	1.98	0.46
11:C:140:VAL:HA	11:C:191:LEU:HA	1.95	0.46
11:C:160:TYR:HA	11:C:193:GLU:CG	2.45	0.46
11:C:212:TRP:C	11:C:214:GLY:H	2.18	0.46
13:E:147:LEU:HB3	13:E:183:PHE:CD2	2.50	0.46
16:H:5:LEU:O	16:H:6:LEU:HB3	2.16	0.46
19:K:62:VAL:HA	19:K:83:ALA:O	2.15	0.46
20:L:95:LEU:H	20:L:95:LEU:CD1	2.27	0.46
21:M:23:GLY:H	21:M:96:ILE:HD12	1.75	0.46
21:M:36:VAL:CG1	21:M:125:PRO:HD2	2.45	0.46
22:N:73:ASN:N	22:N:73:ASN:ND2	2.62	0.46
23:O:53:THR:O	23:O:54:VAL:C	2.52	0.46
24:P:13:LYS:NZ	24:P:15:ASP:HB2	2.31	0.46
28:T:3:ARG:HH21	28:T:8:LEU:HD22	1.80	0.46
30:V:80:HIS:HD2	30:V:83:LYS:H	1.58	0.46
34:Z:49:ARG:C	34:Z:51:VAL:N	2.69	0.46
2:1:46:VAL:HG22	2:1:47:ILE:N	2.28	0.46
3:2:13:ASN:OD1	3:2:18:PHE:HB3	2.16	0.46
4:3:48:MET:SD	4:3:51:LYS:HE3	2.55	0.46
9:A:25:U:H5''	9:A:26:C:OP1	2.15	0.46
10:B:308:G:C2'	10:B:329:G:H22	2.28	0.46
10:B:337:C:OP1	29:U:3:LYS:HD2	2.16	0.46
10:B:663:G:C5'	20:L:25:SER:HB2	2.35	0.46
10:B:702:U:H2'	10:B:703:U:C6	2.51	0.46
10:B:840:C:O2'	10:B:841:G:H5'	2.15	0.46
10:B:1099:G:C2	10:B:1100:C:C4	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1189:A:H2'	10:B:1190:G:O4'	2.15	0.46
10:B:1527:G:H22	10:B:1543:G:H2'	1.80	0.46
10:B:1594:U:H2'	10:B:1595:C:H6	1.75	0.46
10:B:1917:U:C2'	10:B:1918:A:H5'	2.45	0.46
10:B:2771:C:H2'	10:B:2772:C:H6	1.81	0.46
10:B:2868:A:H2'	10:B:2869:G:C8	2.50	0.46
11:C:140:VAL:C	11:C:193:GLU:HB2	2.36	0.46
11:C:207:ALA:HA	11:C:211:ARG:HB2	1.98	0.46
12:D:154:LYS:NZ	18:J:81:ILE:HD13	2.29	0.46
13:E:144:GLU:C	13:E:146:VAL:H	2.18	0.46
13:E:148:ILE:H	13:E:183:PHE:HB3	1.81	0.46
13:E:177:PRO:HA	13:E:180:LEU:HD12	1.97	0.46
14:F:165:GLY:HA2	14:F:168:LEU:CG	2.46	0.46
17:I:116:MET:SD	17:I:124:MET:HB2	2.56	0.46
18:J:122:LEU:HD12	18:J:123:LYS:N	2.30	0.46
20:L:91:ASP:HB2	20:L:123:ARG:HD2	1.97	0.46
20:L:110:VAL:HB	20:L:126:ARG:CZ	2.46	0.46
21:M:119:LEU:N	21:M:119:LEU:HD22	2.30	0.46
24:P:57:ALA:C	24:P:59:THR:H	2.18	0.46
25:Q:78:PHE:CE1	25:Q:82:LEU:HD21	2.51	0.46
27:S:76:VAL:HG12	27:S:103:ILE:HA	1.97	0.46
28:T:20:ALA:C	28:T:22:THR:H	2.19	0.46
28:T:89:GLU:N	28:T:89:GLU:CD	2.69	0.46
31:W:16:GLU:O	31:W:18:LYS:HD2	2.15	0.46
34:Z:58:ASP:HB3	34:Z:59:ARG:H	1.27	0.46
8:7:119:G:H21	8:7:152:A:H62	1.63	0.46
9:A:10:G:H2'	9:A:11:C:O4'	2.16	0.46
9:A:54:G:O2'	9:A:55:U:H5'	2.16	0.46
10:B:24:G:O2'	10:B:25:U:H5'	2.16	0.46
10:B:198:C:O2'	10:B:199:A:H5''	2.16	0.46
10:B:288:U:C2	10:B:352:A:N1	2.83	0.46
10:B:324:A:N6	10:B:339:U:O4'	2.48	0.46
10:B:499:U:H4'	29:U:43:LYS:HB2	1.98	0.46
10:B:1082:U:C2	10:B:1086:A:N6	2.84	0.46
10:B:1195:G:N3	10:B:1226:A:H2	2.14	0.46
10:B:1300:G:H5'	10:B:1301:A:N3	2.31	0.46
10:B:2028:U:H2'	10:B:2029:G:C8	2.51	0.46
10:B:2568:U:H2'	10:B:2569:G:O4'	2.15	0.46
10:B:2828:G:O2'	10:B:2829:A:H5'	2.14	0.46
10:B:2881:U:H4'	22:N:120:GLU:H	1.81	0.46
11:C:230:PRO:O	11:C:231:HIS:HB3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:E:117:ARG:HA	13:E:188:MET:SD	2.56	0.46
15:G:23:ILE:HG13	15:G:24:THR:N	2.30	0.46
18:J:124:VAL:HG12	18:J:125:TYR:O	2.16	0.46
19:K:10:VAL:HG11	19:K:15:GLY:O	2.15	0.46
19:K:108:ARG:HE	24:P:36:LYS:HB2	1.81	0.46
21:M:62:LYS:HB2	21:M:104:GLU:HB2	1.97	0.46
24:P:13:LYS:CE	24:P:77:SER:HB3	2.46	0.46
25:Q:79:ILE:HA	25:Q:82:LEU:HD12	1.96	0.46
29:U:39:ASN:HD21	29:U:60:LYS:HB3	1.80	0.46
29:U:57:ILE:HG23	29:U:58:VAL:HG23	1.96	0.46
34:Z:30:HIS:O	34:Z:48:GLN:NE2	2.49	0.46
1:0:51:ARG:HH21	22:N:125:ALA:CB	2.04	0.46
4:3:14:LYS:O	4:3:21:PHE:HB3	2.16	0.46
6:5:372:VAL:O	6:5:376:MET:HG3	2.16	0.46
10:B:27:G:H1'	10:B:513:A:H61	1.79	0.46
10:B:288:U:H3	10:B:352:A:N6	2.13	0.46
10:B:295:G:H2'	10:B:296:U:H5'	1.98	0.46
10:B:297:G:H2'	10:B:298:G:N9	2.31	0.46
10:B:943:A:OP2	20:L:42:SER:HB3	2.15	0.46
10:B:995:C:O2	18:J:3:THR:HG23	2.16	0.46
10:B:1041:G:N1	10:B:1115:G:C6	2.84	0.46
10:B:1433:A:H2'	10:B:1434:A:O4'	2.15	0.46
10:B:1524:G:C6	10:B:1525:A:C5	3.04	0.46
10:B:1789:A:H2'	10:B:1790:C:C6	2.51	0.46
10:B:1846:G:H2'	10:B:1847:A:O4'	2.15	0.46
10:B:2250:G:H8	10:B:2250:G:O5'	1.98	0.46
10:B:2877:G:H2'	10:B:2878:U:C6	2.51	0.46
10:B:2880:C:O2	22:N:93:GLY:HA3	2.15	0.46
11:C:46:GLY:O	11:C:47:ARG:CB	2.64	0.46
11:C:49:THR:O	11:C:50:THR:HB	2.15	0.46
11:C:63:ILE:HG21	11:C:90:ILE:CD1	2.46	0.46
11:C:156:SER:O	11:C:157:ALA:C	2.54	0.46
11:C:220:ARG:HA	11:C:220:ARG:CZ	2.45	0.46
12:D:5:VAL:HG11	12:D:28:GLU:CA	2.40	0.46
12:D:170:VAL:CG1	12:D:194:PRO:HG2	2.46	0.46
15:G:40:VAL:HG22	15:G:53:PRO:HA	1.98	0.46
16:H:3:VAL:CB	16:H:37:VAL:HB	2.32	0.46
16:H:29:PHE:N	16:H:32:PRO:CG	2.79	0.46
18:J:43:GLU:O	18:J:45:THR:N	2.48	0.46
19:K:108:ARG:HH21	24:P:36:LYS:CB	2.29	0.46
21:M:67:VAL:HB	21:M:100:LYS:CG	2.39	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:M:96:ILE:HD13	21:M:97:GLN:N	2.31	0.46
26:R:43:ASN:C	26:R:45:GLU:N	2.67	0.46
31:W:36:ILE:HD12	31:W:70:VAL:CG2	2.46	0.46
34:Z:31:ASP:O	34:Z:32:LEU:HB3	2.15	0.46
1:O:18:HIS:NE2	10:B:2623:G:N2	2.63	0.46
10:B:292:U:C2	10:B:348:A:C2	3.02	0.46
10:B:308:G:H2'	10:B:329:G:N2	2.30	0.46
10:B:317:G:C5	10:B:318:C:C5	3.04	0.46
10:B:572:A:H5''	10:B:573:U:OP2	2.15	0.46
10:B:729:G:H4'	10:B:763:G:C5'	2.46	0.46
10:B:967:U:H2'	10:B:968:C:H6	1.80	0.46
10:B:1067:A:C6	10:B:1068:G:C6	3.04	0.46
10:B:1080:A:C2	10:B:1081:U:C2	3.03	0.46
10:B:1203:U:O2'	20:L:14:LYS:HE2	2.16	0.46
10:B:1295:C:H2'	10:B:1296:G:H8	1.81	0.46
10:B:1476:U:C2	10:B:1516:G:N7	2.82	0.46
10:B:1480:C:H2'	10:B:1481:U:C6	2.50	0.46
10:B:1501:G:O2'	10:B:1502:A:H5'	2.15	0.46
10:B:1516:G:N2	10:B:1517:G:N9	2.63	0.46
10:B:1538:G:C4	10:B:1539:U:C6	3.03	0.46
10:B:1710:G:H2'	10:B:1711:A:H8	1.81	0.46
10:B:2220:U:O2'	10:B:2221:G:H5'	2.15	0.46
10:B:2226:C:H2'	10:B:2227:A:O4'	2.15	0.46
10:B:2393:U:O2'	10:B:2394:C:H5'	2.16	0.46
10:B:2751:G:N2	15:G:1:SER:HB3	2.31	0.46
10:B:2776:A:H4'	10:B:2777:G:H5''	1.97	0.46
11:C:21:PRO:HG2	11:C:202:ARG:HH11	1.81	0.46
12:D:3:GLY:CA	12:D:49:GLN:HE22	2.28	0.46
12:D:98:VAL:HA	12:D:101:PHE:HE2	1.80	0.46
12:D:130:GLN:HG2	12:D:138:LEU:CD1	2.45	0.46
14:F:103:ILE:HA	14:F:107:VAL:HG21	1.98	0.46
14:F:135:ILE:HD12	14:F:140:ILE:HD12	1.98	0.46
17:I:12:VAL:HG23	17:I:41:PHE:CZ	2.50	0.46
17:I:83:ALA:CA	17:I:100:ILE:HD11	2.46	0.46
19:K:63:VAL:HB	19:K:83:ALA:HB1	1.98	0.46
19:K:119:ALA:N	19:K:120:PRO:HD3	2.31	0.46
20:L:116:VAL:HG12	20:L:117:THR:HG23	1.96	0.46
21:M:42:THR:HG22	21:M:45:GLN:HG2	1.96	0.46
28:T:6:ARG:C	28:T:8:LEU:N	2.68	0.46
30:V:2:PHE:HB2	30:V:61:LEU:HD22	1.97	0.46
1:O:31:LYS:NZ	1:O:49:ARG:HA	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:18:U:O2	10:B:554:U:H5''	2.16	0.46
10:B:55:G:H2'	10:B:56:A:C8	2.51	0.46
10:B:144:A:O2'	10:B:145:C:H5'	2.15	0.46
10:B:170:U:O2'	10:B:171:U:H5'	2.16	0.46
10:B:264:C:C2'	10:B:265:A:H5''	2.46	0.46
10:B:311:A:N6	10:B:328:U:N1	2.64	0.46
10:B:311:A:H61	10:B:328:U:C2'	2.29	0.46
10:B:442:G:N2	13:E:46:GLN:HE21	2.10	0.46
10:B:1038:G:N2	10:B:1039:A:C2	2.84	0.46
10:B:1077:A:C4'	17:I:93:ASN:OD1	2.54	0.46
10:B:1528:A:H2'	10:B:1529:G:C4'	2.45	0.46
10:B:1606:C:H5''	10:B:1607:C:OP1	2.16	0.46
10:B:1739:A:H2'	10:B:1740:G:H8	1.81	0.46
10:B:2230:G:H1'	34:Z:30:HIS:HD2	1.80	0.46
10:B:2896:C:H2'	10:B:2897:U:H6	1.81	0.46
11:C:70:LYS:HE3	11:C:99:GLU:HG2	1.97	0.46
11:C:137:GLY:C	11:C:139:THR:N	2.69	0.46
11:C:208:GLY:O	11:C:210:ALA:N	2.48	0.46
12:D:13:ARG:O	12:D:15:PHE:N	2.49	0.46
12:D:172:VAL:O	12:D:173:GLN:HB2	2.16	0.46
14:F:56:LEU:HD13	14:F:86:CYS:HB3	1.98	0.46
14:F:67:THR:O	14:F:83:PRO:HA	2.15	0.46
14:F:82:TYR:HB3	14:F:83:PRO:HD2	1.97	0.46
15:G:51:PHE:CD1	15:G:64:ALA:HA	2.51	0.46
15:G:89:VAL:HG21	15:G:162:ARG:NE	2.30	0.46
16:H:128:HIS:HB3	16:H:144:VAL:CB	2.42	0.46
17:I:79:LEU:CD1	17:I:131:THR:OG1	2.64	0.46
18:J:19:ASP:C	18:J:21:THR:H	2.19	0.46
18:J:74:TYR:O	18:J:87:ALA:HA	2.15	0.46
18:J:78:THR:C	18:J:80:HIS:H	2.19	0.46
19:K:8:LEU:O	19:K:19:VAL:HG23	2.16	0.46
20:L:77:ILE:HG21	20:L:92:LEU:HD13	1.98	0.46
20:L:117:THR:C	20:L:118:THR:HG22	2.36	0.46
21:M:3:GLN:HE22	21:M:5:LYS:HB2	1.81	0.46
24:P:24:THR:O	24:P:26:GLU:N	2.49	0.46
26:R:62:GLU:N	26:R:62:GLU:OE1	2.49	0.46
30:V:44:HIS:O	30:V:46:LYS:N	2.49	0.46
31:W:16:GLU:CG	31:W:37:VAL:HG22	2.39	0.46
31:W:48:ALA:HA	31:W:54:ARG:HA	1.98	0.46
1:0:28:SER:O	1:0:29:VAL:HB	2.16	0.46
1:0:53:VAL:HG22	22:N:112:TYR:HE2	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:3:7:ARG:CZ	4:3:11:LYS:HZ1	2.28	0.46
10:B:48:G:H4'	10:B:52:A:O4'	2.16	0.46
10:B:64:A:N6	10:B:91:A:H61	2.14	0.46
10:B:282:A:C5	10:B:283:G:N7	2.83	0.46
10:B:282:A:C2	10:B:283:G:N7	2.84	0.46
10:B:287:G:C2	10:B:288:U:C5	3.04	0.46
10:B:301:G:N3	10:B:302:C:N3	2.64	0.46
10:B:306:U:H2'	10:B:307:G:O4'	2.16	0.46
10:B:622:G:H2'	10:B:623:C:C6	2.50	0.46
10:B:711:G:O2'	10:B:712:G:H5'	2.16	0.46
10:B:812:C:H2'	10:B:813:U:H6	1.81	0.46
10:B:850:U:H2'	10:B:851:C:C6	2.51	0.46
10:B:1260:A:O2'	10:B:1261:C:H5'	2.15	0.46
10:B:1550:C:H2'	10:B:1551:A:H8	1.79	0.46
10:B:1724:G:H2'	10:B:1725:U:C6	2.50	0.46
10:B:1790:C:H4'	11:C:207:ALA:CB	2.45	0.46
10:B:1853:A:N1	10:B:2087:G:H1'	2.31	0.46
10:B:2567:G:H2'	10:B:2568:U:C6	2.51	0.46
10:B:2643:G:H2'	10:B:2644:G:O4'	2.16	0.46
10:B:2886:A:C2	10:B:2887:A:N7	2.84	0.46
12:D:49:GLN:O	12:D:78:GLY:HA2	2.15	0.46
12:D:141:ARG:HH11	12:D:141:ARG:CG	2.29	0.46
12:D:175:LEU:CD2	12:D:190:LYS:HB3	2.45	0.46
13:E:128:ALA:O	13:E:157:LEU:HB2	2.15	0.46
14:F:87:LYS:O	14:F:88:VAL:HB	2.15	0.46
16:H:103:VAL:HG21	16:H:110:VAL:HG13	1.97	0.46
18:J:100:VAL:O	18:J:102:GLU:N	2.48	0.46
21:M:3:GLN:CB	21:M:46:ILE:HB	2.46	0.46
25:Q:53:LYS:H	25:Q:53:LYS:HD2	1.80	0.46
26:R:14:VAL:HG12	26:R:15:SER:N	2.31	0.46
26:R:22:LEU:O	26:R:96:VAL:HG13	2.16	0.46
27:S:17:VAL:HG21	27:S:101:SER:OG	2.15	0.46
28:T:15:HIS:HB2	28:T:31:VAL:HB	1.98	0.46
28:T:26:LYS:HD2	28:T:27:SER:HB2	1.97	0.46
28:T:53:VAL:HG12	28:T:91:GLN:HE22	1.81	0.46
28:T:80:TRP:HB3	28:T:81:LYS:H	1.51	0.46
31:W:40:ARG:NH1	31:W:68:PHE:CA	2.75	0.46
34:Z:41:HIS:CB	34:Z:42:PRO:HD2	2.27	0.46
1:0:39:ARG:O	22:N:99:LYS:HE2	2.16	0.45
3:2:11:LYS:HD3	10:B:770:G:P	2.56	0.45
4:3:57:VAL:HG13	4:3:58:ILE:N	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:A:74:U:H2'	9:A:75:G:C8	2.51	0.45
10:B:188:G:OP1	34:Z:11:GLU:HA	2.16	0.45
10:B:291:G:C1'	10:B:350:G:N2	2.79	0.45
10:B:444:C:H5''	13:E:44:ARG:HH11	1.82	0.45
10:B:872:U:H1'	21:M:68:PHE:CZ	2.51	0.45
10:B:988:A:H4'	10:B:1155:A:N1	2.31	0.45
10:B:1017:G:H2'	10:B:1018:U:C6	2.52	0.45
10:B:1040:A:H2	10:B:1115:G:C2	2.34	0.45
10:B:1131:G:C1'	18:J:85:LYS:HZ2	2.29	0.45
10:B:1347:A:H2'	10:B:1348:C:O4'	2.17	0.45
10:B:1735:A:H2'	10:B:1736:U:C6	2.51	0.45
10:B:2105:U:H2'	10:B:2106:U:C6	2.51	0.45
10:B:2152:G:H2'	10:B:2153:C:H6	1.81	0.45
10:B:2183:A:H2'	10:B:2184:A:C8	2.52	0.45
10:B:2489:U:O2'	10:B:2490:G:H5'	2.16	0.45
11:C:139:THR:HG22	11:C:193:GLU:HB3	1.98	0.45
14:F:2:LYS:O	14:F:3:LEU:CB	2.64	0.45
14:F:38:GLY:O	14:F:39:VAL:C	2.54	0.45
15:G:97:VAL:HG11	15:G:122:ALA:O	2.16	0.45
16:H:130:VAL:HG21	16:H:144:VAL:HG23	1.98	0.45
20:L:51:GLU:O	20:L:52:GLY:C	2.55	0.45
21:M:43:ALA:C	21:M:45:GLN:N	2.68	0.45
21:M:124:LEU:N	21:M:124:LEU:HD23	2.31	0.45
25:Q:21:LYS:HD2	25:Q:23:TYR:HE1	1.81	0.45
29:U:13:LEU:O	29:U:15:GLY:N	2.49	0.45
34:Z:59:ARG:HG3	34:Z:62:LYS:HG3	1.97	0.45
3:2:13:ASN:O	3:2:16:HIS:N	2.50	0.45
4:3:59:ALA:O	4:3:60:CYS:HB2	2.17	0.45
6:5:335:LEU:O	6:5:335:LEU:HD23	2.16	0.45
9:A:63:C:H2'	9:A:64:G:C8	2.49	0.45
10:B:116:C:H2'	10:B:117:G:H8	1.79	0.45
10:B:129:C:H2'	10:B:130:C:C6	2.51	0.45
10:B:215:G:H4'	10:B:216:A:OP1	2.16	0.45
10:B:278:A:N3	10:B:278:A:H2'	2.30	0.45
10:B:332:A:C5	10:B:335:C:N3	2.84	0.45
10:B:533:G:H2'	10:B:534:U:C6	2.51	0.45
10:B:843:G:H2'	10:B:844:A:C8	2.52	0.45
10:B:1035:U:O2'	10:B:1036:G:H8	1.98	0.45
10:B:1050:A:C5	10:B:2751:G:C5	2.98	0.45
10:B:1061:U:N3	17:I:9:LYS:HD2	2.30	0.45
10:B:1173:U:O2	10:B:1177:G:C2	2.69	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1184:U:H2'	10:B:1185:G:C8	2.51	0.45
10:B:1432:G:O2'	10:B:1433:A:H5'	2.16	0.45
10:B:1512:C:C4	10:B:1513:U:C4	3.04	0.45
10:B:1544:A:C2	10:B:1545:A:N3	2.84	0.45
10:B:1745:A:H2'	10:B:1746:A:C8	2.51	0.45
10:B:1804:C:O2'	10:B:1805:A:H5'	2.15	0.45
10:B:1854:A:H2'	10:B:1855:U:O4'	2.16	0.45
10:B:2747:G:H2'	10:B:2748:A:C8	2.51	0.45
10:B:2750:A:H3'	15:G:3:VAL:CG2	2.47	0.45
11:C:78:GLU:HB3	11:C:92:LEU:HD23	1.99	0.45
11:C:128:THR:HA	11:C:190:THR:CA	2.43	0.45
11:C:229:HIS:ND1	11:C:230:PRO:CD	2.79	0.45
11:C:251:THR:O	11:C:252:LYS:HB2	2.16	0.45
12:D:20:VAL:HG23	12:D:21:SER:H	1.81	0.45
13:E:149:ILE:HG13	13:E:149:ILE:O	2.16	0.45
16:H:19:VAL:O	16:H:20:ASN:C	2.54	0.45
16:H:130:VAL:O	16:H:142:VAL:N	2.45	0.45
18:J:25:LEU:HB2	18:J:26:GLY:H	1.34	0.45
18:J:124:VAL:O	18:J:125:TYR:HB2	2.16	0.45
20:L:13:LYS:HG3	20:L:14:LYS:H	1.80	0.45
21:M:73:ILE:HD13	21:M:90:GLU:OE2	2.15	0.45
21:M:133:LYS:HZ1	30:V:77:VAL:HG12	1.81	0.45
22:N:113:ILE:CG2	22:N:114:GLU:N	2.79	0.45
24:P:31:VAL:HA	24:P:81:ASP:HB3	1.97	0.45
27:S:103:ILE:HG23	27:S:104:THR:H	1.81	0.45
29:U:42:LYS:HE3	29:U:42:LYS:CA	2.46	0.45
31:W:42:THR:HB	31:W:66:VAL:H	1.81	0.45
4:3:16:THR:HB	10:B:650:C:O3'	2.16	0.45
4:3:54:LEU:HD23	4:3:54:LEU:HA	1.86	0.45
6:5:425:ARG:HH21	10:B:490:C:H5	1.62	0.45
10:B:271:G:N1	10:B:366:C:H2'	2.30	0.45
10:B:301:G:H1'	10:B:302:C:O4'	2.17	0.45
10:B:514:A:O2'	10:B:515:A:H5'	2.16	0.45
10:B:829:A:H4'	36:B:3222:HOH:O	2.17	0.45
10:B:1042:G:N2	10:B:1043:C:C2	2.85	0.45
10:B:1190:G:OP1	20:L:41:ARG:CD	2.64	0.45
10:B:1275:A:H2	10:B:1645:G:H21	1.64	0.45
10:B:1532:A:OP2	10:B:1532:A:H8	2.00	0.45
10:B:1979:U:C2'	10:B:1980:G:H5'	2.46	0.45
10:B:2261:C:O2'	10:B:2262:U:H5'	2.15	0.45
10:B:2650:U:H2'	10:B:2651:C:H6	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2673:G:H2'	10:B:2674:G:C8	2.51	0.45
10:B:2675:A:N1	10:B:2732:G:O6	2.49	0.45
10:B:2881:U:H5''	22:N:121:LYS:H	1.81	0.45
11:C:140:VAL:CG2	11:C:141:HIS:H	2.28	0.45
11:C:242:HIS:N	11:C:243:PRO:HD3	2.30	0.45
12:D:170:VAL:CG2	12:D:194:PRO:HG2	2.44	0.45
13:E:85:PHE:O	13:E:86:ALA:C	2.55	0.45
13:E:119:ILE:HG23	13:E:189:THR:O	2.15	0.45
15:G:89:VAL:HB	15:G:160:GLY:H	1.82	0.45
16:H:89:LYS:HZ3	16:H:90:LEU:H	1.64	0.45
18:J:50:THR:OG1	18:J:51:GLY:N	2.47	0.45
20:L:30:THR:HA	20:L:36:LYS:HZ2	1.80	0.45
20:L:30:THR:CB	20:L:36:LYS:HB2	2.44	0.45
22:N:65:LEU:HD23	22:N:69:ARG:HG3	1.99	0.45
22:N:116:VAL:HG13	22:N:117:ASP:OD1	2.16	0.45
26:R:68:ARG:HD2	26:R:70:GLU:CD	2.37	0.45
28:T:16:VAL:O	28:T:16:VAL:HG22	2.17	0.45
28:T:93:LEU:HD12	28:T:99:ALA:C	2.37	0.45
30:V:4:ILE:N	30:V:62:THR:O	2.50	0.45
31:W:44:PHE:O	31:W:76:ARG:CA	2.63	0.45
2:1:9:LYS:HD2	2:1:9:LYS:H	1.81	0.45
4:3:24:LYS:HZ3	4:3:29:ARG:NH2	2.07	0.45
4:3:54:LEU:HD12	20:L:59:ARG:HE	1.81	0.45
10:B:198:C:H2'	10:B:199:A:H5''	1.97	0.45
10:B:199:A:N6	10:B:2433:A:H2'	2.31	0.45
10:B:233:A:H61	10:B:428:A:N6	2.13	0.45
10:B:282:A:C4	10:B:359:G:N2	2.85	0.45
10:B:360:U:H3'	10:B:361:G:C5	2.51	0.45
10:B:425:G:H2'	10:B:426:C:H6	1.82	0.45
10:B:527:C:C5'	10:B:2779:U:H3	2.29	0.45
10:B:533:G:H5'	25:Q:23:TYR:CD1	2.52	0.45
10:B:704:G:O2'	10:B:727:A:N6	2.49	0.45
10:B:908:C:O2'	10:B:909:A:H5'	2.16	0.45
10:B:954:G:P	21:M:17:ASN:HB2	2.56	0.45
10:B:1035:U:H2'	10:B:1036:G:C8	2.51	0.45
10:B:1043:C:O2'	10:B:1044:C:H5'	2.17	0.45
10:B:1097:U:H6	10:B:1097:U:H5''	1.82	0.45
10:B:1353:A:H2'	10:B:1354:A:C8	2.52	0.45
10:B:1376:C:H5''	36:B:3402:HOH:O	2.16	0.45
10:B:1515:A:H2'	10:B:1516:G:O4'	2.17	0.45
10:B:1530:G:C6	10:B:1541:C:N3	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1716:U:H2'	10:B:1717:A:H8	1.81	0.45
10:B:1796:U:O2'	11:C:251:THR:HA	2.16	0.45
10:B:1881:C:H2'	10:B:1882:U:O4'	2.16	0.45
10:B:2263:C:H2'	10:B:2264:C:C6	2.52	0.45
10:B:2319:G:H3'	10:B:2319:G:N3	2.32	0.45
10:B:2467:C:C1'	21:M:118:LYS:HG2	2.47	0.45
10:B:2647:U:O2'	10:B:2648:G:H5'	2.17	0.45
10:B:2673:G:H2'	10:B:2674:G:H8	1.81	0.45
10:B:2783:U:H2'	10:B:2784:U:H6	1.79	0.45
11:C:32:LEU:HA	11:C:81:GLU:OE2	2.17	0.45
11:C:53:ILE:HG21	11:C:218:THR:CG2	2.45	0.45
12:D:154:LYS:NZ	12:D:157:LYS:N	2.57	0.45
14:F:3:LEU:HA	14:F:6:TYR:CD2	2.51	0.45
15:G:17:LYS:HD2	15:G:24:THR:HG22	1.98	0.45
21:M:24:THR:HG23	21:M:25:ASP:OD1	2.16	0.45
21:M:31:PHE:HE2	21:M:110:GLU:HG2	1.81	0.45
21:M:71:LYS:HG2	21:M:92:TRP:O	2.17	0.45
22:N:38:LEU:HG	22:N:109:PRO:HB2	1.99	0.45
24:P:59:THR:HG23	24:P:76:HIS:CE1	2.51	0.45
25:Q:32:ARG:HD2	25:Q:32:ARG:C	2.36	0.45
26:R:41:ILE:O	26:R:54:VAL:HA	2.17	0.45
30:V:81:PRO:HB2	30:V:82:TYR:HD1	1.81	0.45
10:B:154:U:H2'	10:B:155:A:H8	1.81	0.45
10:B:175:G:H2'	10:B:176:A:C8	2.52	0.45
10:B:256:A:H2'	10:B:257:C:H6	1.80	0.45
10:B:325:G:O2'	10:B:326:G:H5'	2.17	0.45
10:B:522:A:H2'	10:B:523:C:C6	2.52	0.45
10:B:704:G:C2'	10:B:726:G:H22	2.20	0.45
10:B:729:G:H2'	10:B:1775:U:H1'	1.98	0.45
10:B:1373:A:OP1	10:B:2213:U:O4	2.35	0.45
10:B:1511:G:H2'	10:B:1512:C:H6	1.81	0.45
10:B:1541:C:H5'	10:B:1541:C:H6	1.81	0.45
10:B:1727:C:H2'	10:B:1728:C:H6	1.81	0.45
10:B:2071:A:H2'	10:B:2072:C:C6	2.51	0.45
10:B:2693:G:O2'	10:B:2694:G:H5'	2.16	0.45
10:B:2742:G:O2'	10:B:2743:U:H5'	2.17	0.45
10:B:2811:G:O2'	10:B:2812:G:H5'	2.16	0.45
11:C:28:PRO:HD2	11:C:79:ARG:HH22	1.81	0.45
11:C:141:HIS:ND1	11:C:142:ASN:N	2.64	0.45
13:E:87:ALA:O	13:E:88:ARG:HG3	2.16	0.45
14:F:99:PHE:C	14:F:101:ARG:N	2.69	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:F:107:VAL:HB	14:F:108:PRO:CD	2.46	0.45
15:G:71:LEU:HD12	15:G:74:MET:HE3	1.98	0.45
15:G:84:LYS:HA	15:G:84:LYS:HZ3	1.80	0.45
15:G:130:ILE:HG21	15:G:147:LEU:HD13	1.97	0.45
16:H:116:ARG:O	16:H:117:LEU:HG	2.16	0.45
17:I:12:VAL:HG23	17:I:41:PHE:CE2	2.51	0.45
17:I:27:LEU:O	17:I:30:GLN:HB2	2.17	0.45
20:L:76:GLU:HA	20:L:109:LYS:O	2.17	0.45
20:L:78:ARG:HG2	20:L:99:ASN:CB	2.35	0.45
20:L:81:ASP:O	20:L:82:LEU:C	2.54	0.45
21:M:31:PHE:HA	21:M:128:THR:CG2	2.47	0.45
24:P:93:LYS:CB	24:P:96:LEU:HD12	2.47	0.45
25:Q:33:VAL:CG1	25:Q:34:ALA:H	2.18	0.45
27:S:3:THR:CG2	27:S:107:VAL:HG23	2.47	0.45
34:Z:3:LYS:CG	34:Z:8:LYS:HA	2.44	0.45
4:3:27:ASN:OD1	4:3:28:LEU:N	2.49	0.45
10:B:69:C:O2'	10:B:70:G:H5'	2.17	0.45
10:B:144:A:H8	10:B:144:A:OP2	2.00	0.45
10:B:287:G:C4	10:B:288:U:C5	3.04	0.45
10:B:289:G:C2	10:B:290:U:C2	3.04	0.45
10:B:295:G:O2'	10:B:296:U:H5'	2.17	0.45
10:B:336:C:OP1	29:U:81:ARG:NE	2.48	0.45
10:B:466:A:H2	10:B:795:C:O2	1.99	0.45
10:B:822:G:H2'	10:B:823:C:C6	2.52	0.45
10:B:968:C:H4'	33:Y:16:LEU:HD23	1.98	0.45
10:B:1057:A:C2'	10:B:1058:U:H5'	2.47	0.45
10:B:1394:U:O2'	10:B:1395:A:H5'	2.16	0.45
10:B:1530:G:C2	10:B:1531:C:C2	3.04	0.45
10:B:1538:G:C2	10:B:1539:U:H1'	2.51	0.45
10:B:1710:G:H2'	10:B:1711:A:C8	2.51	0.45
10:B:1733:G:H2'	10:B:1734:G:H8	1.82	0.45
10:B:1921:G:O2'	10:B:1922:G:H5'	2.16	0.45
10:B:1946:U:H2'	10:B:1947:C:C6	2.52	0.45
10:B:2063:C:O2	10:B:2450:A:N1	2.49	0.45
10:B:2291:U:H5''	10:B:2380:C:H1'	1.98	0.45
10:B:2574:G:O2'	12:D:151:THR:HG21	2.15	0.45
10:B:2799:A:H4'	10:B:2800:A:C8	2.52	0.45
12:D:47:ALA:HB3	12:D:81:GLU:HB2	1.99	0.45
12:D:120:GLY:H	12:D:123:LYS:HB2	1.82	0.45
13:E:120:VAL:HG12	13:E:121:VAL:HG23	1.99	0.45
13:E:153:LEU:HA	13:E:171:ASP:O	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:G:136:ASP:OD1	15:G:138:GLN:HB3	2.17	0.45
16:H:4:ILE:H	16:H:37:VAL:CB	2.25	0.45
17:I:92:PRO:O	17:I:93:ASN:HB2	2.16	0.45
19:K:58:LEU:CB	19:K:89:ASN:HD21	2.28	0.45
20:L:67:THR:OG1	20:L:68:SER:N	2.47	0.45
20:L:78:ARG:CZ	20:L:110:VAL:HG11	2.46	0.45
21:M:114:ARG:HH21	21:M:125:PRO:HA	1.81	0.45
24:P:77:SER:H	24:P:78:PRO:HD2	1.81	0.45
24:P:93:LYS:HD2	24:P:96:LEU:HD12	1.99	0.45
25:Q:107:ALA:O	26:R:52:PRO:HG3	2.17	0.45
31:W:11:ASN:OD1	31:W:12:GLY:N	2.45	0.45
6:5:334:PHE:HA	6:5:337:GLN:NE2	2.32	0.45
9:A:76:G:H2'	9:A:77:U:H6	1.82	0.45
10:B:222:A:N1	10:B:233:A:H5''	2.32	0.45
10:B:231:A:H3'	10:B:232:G:C8	2.52	0.45
10:B:291:G:C4	10:B:350:G:C5	3.04	0.45
10:B:744:U:OP1	12:D:136:ASN:O	2.35	0.45
10:B:765:C:H2'	10:B:766:U:H6	1.82	0.45
10:B:936:A:H2'	10:B:937:C:H6	1.81	0.45
10:B:1254:A:H2'	13:E:69:ARG:NH1	2.32	0.45
10:B:1525:A:H2'	10:B:1526:C:C5'	2.44	0.45
10:B:1538:G:C2	10:B:1539:U:C6	3.05	0.45
10:B:1616:A:H4'	10:B:1617:C:OP2	2.17	0.45
10:B:1733:G:H2'	10:B:1734:G:C8	2.51	0.45
10:B:1774:C:H2'	10:B:1774:C:O2	2.16	0.45
10:B:1864:U:O2'	10:B:1865:U:H5'	2.17	0.45
10:B:2354:C:O3'	31:W:30:VAL:HG13	2.16	0.45
10:B:2619:C:H2'	10:B:2620:C:C6	2.52	0.45
10:B:2653:U:HO2'	15:G:109:SER:CB	2.30	0.45
10:B:2733:A:C8	10:B:2733:A:H3'	2.51	0.45
10:B:2759:G:H4'	15:G:34:ARG:HH22	1.81	0.45
11:C:155:ARG:O	11:C:155:ARG:NE	2.50	0.45
12:D:172:VAL:HG23	12:D:173:GLN:N	2.32	0.45
13:E:73:ILE:C	13:E:75:SER:N	2.61	0.45
13:E:113:VAL:HG13	13:E:114:ARG:H	1.81	0.45
14:F:110:ILE:HG22	14:F:111:ARG:N	2.32	0.45
16:H:4:ILE:HD11	16:H:39:ALA:HA	1.97	0.45
20:L:21:ARG:HB3	20:L:21:ARG:CZ	2.47	0.45
27:S:79:GLY:O	27:S:80:PRO:C	2.54	0.45
29:U:23:LYS:H	29:U:36:GLU:HG3	1.81	0.45
29:U:25:LYS:HA	29:U:35:VAL:N	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1:29:LYS:O	2:1:30:PRO:C	2.55	0.45
4:3:28:LEU:HB2	4:3:32:LEU:O	2.17	0.45
6:5:335:LEU:HD23	6:5:335:LEU:C	2.38	0.45
6:5:425:ARG:HE	10:B:490:C:N4	2.14	0.45
9:A:26:C:H2'	9:A:27:C:C6	2.50	0.45
10:B:37:C:C2	13:E:46:GLN:OE1	2.70	0.45
10:B:279:A:C8	10:B:279:A:P	3.10	0.45
10:B:349:U:O2'	10:B:350:G:H5'	2.17	0.45
10:B:581:C:H2'	10:B:582:A:H8	1.81	0.45
10:B:1042:G:C6	10:B:1043:C:N4	2.85	0.45
10:B:1152:C:H3'	36:B:3142:HOH:O	2.15	0.45
10:B:1313:U:O2	10:B:1313:U:H2'	2.16	0.45
10:B:1513:U:H2'	10:B:1514:G:H5''	1.99	0.45
10:B:1704:C:O2'	10:B:1705:A:H5'	2.16	0.45
10:B:2307:G:H4'	10:B:2311:A:N6	2.29	0.45
10:B:2468:A:H2'	10:B:2476:A:C6	2.52	0.45
10:B:2677:G:H2'	10:B:2678:C:C6	2.51	0.45
11:C:70:LYS:HG2	11:C:71:ASP:N	2.32	0.45
11:C:79:ARG:HG3	11:C:79:ARG:HH11	1.82	0.45
11:C:217:PRO:C	11:C:219:VAL:H	2.20	0.45
11:C:258:SER:HB2	11:C:261:ARG:HH12	1.82	0.45
13:E:145:ASP:C	13:E:147:LEU:H	2.20	0.45
14:F:4:HIS:HB2	14:F:96:TRP:CD1	2.51	0.45
16:H:128:HIS:CG	16:H:144:VAL:HB	2.51	0.45
18:J:11:VAL:HG22	18:J:12:LYS:N	2.32	0.45
20:L:38:GLN:HA	20:L:41:ARG:CZ	2.47	0.45
20:L:85:VAL:O	20:L:85:VAL:HG13	2.15	0.45
21:M:67:VAL:HG13	21:M:67:VAL:O	2.15	0.45
24:P:102:ARG:H	24:P:102:ARG:HG3	1.35	0.45
26:R:88:GLY:O	26:R:89:HIS:HB2	2.17	0.45
28:T:88:LYS:CG	28:T:89:GLU:H	2.20	0.45
30:V:4:ILE:O	30:V:63:ILE:HA	2.16	0.45
30:V:30:ILE:O	30:V:37:PRO:HA	2.17	0.45
31:W:74:LYS:O	31:W:75:ASN:CB	2.64	0.45
34:Z:65:ASN:O	34:Z:69:SER:HB2	2.16	0.45
3:2:42:LEU:HG	3:2:43:THR:N	2.31	0.45
6:5:428:LYS:NZ	10:B:1283:G:OP2	2.46	0.45
9:A:102:G:O2'	9:A:103:U:H5'	2.17	0.45
10:B:12:U:O2	10:B:2626:C:H4'	2.17	0.45
10:B:103:A:H2'	10:B:104:A:O4'	2.17	0.45
10:B:221:A:H2'	10:B:266:G:N7	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:246:C:H2'	10:B:247:G:H5'	1.99	0.45
10:B:300:A:C2	10:B:319:G:H1'	2.51	0.45
10:B:310:A:C2	10:B:312:G:N9	2.85	0.45
10:B:438:G:H2'	10:B:439:A:H8	1.82	0.45
10:B:550:C:O2	10:B:550:C:H2'	2.16	0.45
10:B:622:G:H2'	10:B:623:C:H6	1.82	0.45
10:B:743:A:C2'	10:B:744:U:H5'	2.46	0.45
10:B:780:G:H21	10:B:783:A:H62	1.64	0.45
10:B:962:G:H21	10:B:2250:G:H1	1.65	0.45
10:B:977:G:C2'	10:B:978:G:H5'	2.47	0.45
10:B:1179:G:O2'	10:B:1180:U:H5'	2.17	0.45
10:B:1456:G:O2'	10:B:1457:U:H5'	2.16	0.45
10:B:1783:A:H5'	10:B:2608:G:H4'	1.99	0.45
10:B:1973:G:H2'	10:B:1974:C:H6	1.80	0.45
10:B:2572:A:C8	12:D:150:GLN:O	2.70	0.45
14:F:103:ILE:HA	14:F:107:VAL:CG2	2.47	0.45
15:G:108:PHE:CE1	15:G:151:ARG:HD2	2.52	0.45
17:I:14:ALA:HA	17:I:45:THR:CG2	2.42	0.45
18:J:24:THR:O	18:J:25:LEU:HD22	2.17	0.45
20:L:103:ILE:HD11	20:L:105:ILE:HD13	1.99	0.45
22:N:75:ILE:HD13	22:N:75:ILE:C	2.38	0.45
24:P:92:ARG:NE	24:P:110:LYS:HB3	2.32	0.45
25:Q:80:ASN:HD22	25:Q:80:ASN:HA	1.52	0.45
27:S:56:ALA:C	27:S:58:ALA:N	2.70	0.45
3:2:12:ARG:O	3:2:18:PHE:CG	2.70	0.45
5:4:3:VAL:HG11	5:4:35:GLN:HG2	1.98	0.45
6:5:365:LYS:NZ	7:6:456:ALA:HB1	2.32	0.45
6:5:416:LEU:HD23	6:5:416:LEU:C	2.37	0.45
9:A:100:G:N2	10:B:863:A:O3'	2.50	0.45
10:B:28:A:H1'	10:B:513:A:C2	2.52	0.45
10:B:129:C:H2'	10:B:130:C:H6	1.81	0.45
10:B:276:U:H2'	10:B:277:G:C5'	2.42	0.45
10:B:295:G:C6	10:B:296:U:C4	3.04	0.45
10:B:295:G:C6	10:B:296:U:O4	2.70	0.45
10:B:309:A:C8	10:B:309:A:OP2	2.71	0.45
10:B:348:A:H2'	10:B:349:U:C1'	2.47	0.45
10:B:729:G:H4'	10:B:763:G:H5'	1.98	0.45
10:B:1090:A:C5	10:B:1102:C:O2	2.70	0.45
10:B:1259:G:O2'	10:B:1260:A:H5'	2.17	0.45
10:B:1750:G:O2'	10:B:1751:U:H5'	2.17	0.45
10:B:1750:G:O2'	10:B:2860:A:H2	2.00	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2099:U:H2'	10:B:2100:G:H8	1.81	0.45
10:B:2876:G:H4'	24:P:2:ASN:HA	1.98	0.45
10:B:2881:U:C1'	22:N:120:GLU:CD	2.79	0.45
11:C:171:VAL:HA	11:C:183:VAL:O	2.17	0.45
12:D:157:LYS:HG3	12:D:157:LYS:O	2.15	0.45
13:E:145:ASP:C	13:E:147:LEU:N	2.70	0.45
16:H:5:LEU:O	16:H:6:LEU:CB	2.65	0.45
16:H:50:ARG:CB	16:H:51:ARG:HA	2.46	0.45
18:J:25:LEU:HD23	18:J:64:VAL:HA	1.98	0.45
19:K:9:ASN:ND2	19:K:9:ASN:H	2.15	0.45
20:L:40:SER:O	20:L:41:ARG:HB2	2.17	0.45
20:L:82:LEU:O	20:L:83:ALA:HB3	2.17	0.45
20:L:92:LEU:CG	20:L:96:LYS:HZ3	2.29	0.45
23:O:76:LYS:CG	23:O:110:ALA:HB2	2.46	0.45
25:Q:34:ALA:O	25:Q:38:VAL:HG12	2.16	0.45
25:Q:47:ARG:HH22	25:Q:50:ARG:CG	2.29	0.45
25:Q:92:LYS:O	25:Q:93:ILE:HG22	2.16	0.45
26:R:47:VAL:HG22	26:R:48:LYS:HG2	1.97	0.45
27:S:90:LYS:N	27:S:90:LYS:CE	2.80	0.45
28:T:57:VAL:HG12	28:T:58:VAL:H	1.82	0.45
28:T:71:GLY:C	28:T:72:GLN:HG3	2.37	0.45
28:T:93:LEU:CD1	28:T:99:ALA:C	2.86	0.45
29:U:44:HIS:CE1	29:U:47:PRO:CG	2.86	0.45
33:Y:47:ILE:HG23	33:Y:54:VAL:HG11	1.98	0.45
5:4:8:LYS:HB3	10:B:1032:A:OP1	2.17	0.44
10:B:226:A:H2'	10:B:227:A:C8	2.52	0.44
10:B:273:G:O6	10:B:365:U:C4	2.71	0.44
10:B:278:A:C2	10:B:362:A:C1'	3.00	0.44
10:B:280:U:H3'	10:B:280:U:H6	1.81	0.44
10:B:285:G:O6	10:B:356:G:C2	2.70	0.44
10:B:285:G:C5	10:B:356:G:C2	3.05	0.44
10:B:292:U:O2	10:B:348:A:C2	2.70	0.44
10:B:295:G:O6	10:B:344:A:C6	2.71	0.44
10:B:490:C:H4'	10:B:491:G:OP2	2.17	0.44
10:B:870:U:O2'	21:M:8:LYS:HB3	2.17	0.44
10:B:878:A:OP1	10:B:899:A:N6	2.47	0.44
10:B:1042:G:H3'	10:B:1043:C:H5	1.82	0.44
10:B:1044:C:C6	10:B:1044:C:O5'	2.70	0.44
10:B:1063:G:O2'	17:I:135:MET:HB2	2.13	0.44
10:B:1256:G:H21	13:E:77:ILE:CG2	2.29	0.44
10:B:1328:A:H2'	10:B:1330:C:C4	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1396:U:O2	10:B:1396:U:O4'	2.34	0.44
10:B:1409:U:O2'	10:B:1410:G:H5'	2.16	0.44
10:B:1671:U:H2'	10:B:1673:G:OP2	2.17	0.44
10:B:1764:C:H2'	10:B:1765:U:C6	2.52	0.44
10:B:2093:G:H2'	10:B:2094:A:H8	1.82	0.44
10:B:2227:A:O3'	11:C:258:SER:HA	2.16	0.44
10:B:2316:G:H2'	10:B:2317:A:H8	1.81	0.44
10:B:2633:G:H2'	10:B:2634:A:O4'	2.16	0.44
11:C:141:HIS:CG	11:C:142:ASN:H	2.34	0.44
11:C:259:ASN:O	11:C:260:LYS:HB2	2.17	0.44
14:F:7:TYR:OH	14:F:29:ARG:HA	2.17	0.44
15:G:90:GLY:HA3	15:G:93:TYR:CD2	2.51	0.44
15:G:93:TYR:N	15:G:93:TYR:CD1	2.84	0.44
16:H:62:LEU:HG	16:H:137:GLU:HG2	1.99	0.44
17:I:37:PHE:CZ	17:I:58:ILE:HD11	2.52	0.44
18:J:81:ILE:CG1	18:J:82:GLY:N	2.80	0.44
19:K:23:LYS:HG3	19:K:24:VAL:N	2.32	0.44
19:K:108:ARG:HG3	19:K:108:ARG:O	2.17	0.44
21:M:73:ILE:HD11	21:M:92:TRP:CB	2.46	0.44
22:N:37:THR:HB	22:N:39:PRO:HD2	1.99	0.44
23:O:17:LYS:HE3	23:O:43:ASN:CB	2.44	0.44
24:P:36:LYS:HD3	24:P:37:LYS:H	1.82	0.44
24:P:78:PRO:C	24:P:79:VAL:HG23	2.36	0.44
25:Q:40:LYS:HA	25:Q:43:GLN:HE21	1.82	0.44
25:Q:102:LYS:H	25:Q:102:LYS:CD	2.29	0.44
26:R:20:VAL:HG13	26:R:97:LYS:HZ2	1.82	0.44
26:R:41:ILE:O	26:R:41:ILE:HD12	2.17	0.44
27:S:33:LEU:HD12	27:S:37:THR:HB	1.99	0.44
29:U:48:VAL:CB	29:U:54:PRO:CD	2.87	0.44
1:0:27:LEU:O	1:0:36:LYS:HB3	2.16	0.44
6:5:343:ASN:C	6:5:345:GLY:H	2.19	0.44
6:5:380:ILE:HA	6:5:383:MET:SD	2.57	0.44
10:B:67:U:C4	10:B:68:G:N7	2.86	0.44
10:B:278:A:C2	10:B:362:A:N9	2.84	0.44
10:B:305:C:C2	10:B:306:U:C4	3.05	0.44
10:B:311:A:C8	10:B:332:A:C4	2.96	0.44
10:B:325:G:O6	10:B:338:G:C2	2.70	0.44
10:B:335:C:C5	10:B:335:C:OP1	2.70	0.44
10:B:359:G:C4	10:B:360:U:C5	3.05	0.44
10:B:360:U:C5	10:B:361:G:O6	2.70	0.44
10:B:1228:G:H2'	10:B:1229:C:C6	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1522:A:O4'	10:B:1524:G:C8	2.70	0.44
10:B:1791:A:C4'	11:C:207:ALA:H	2.30	0.44
10:B:1813:G:N2	11:C:51:ARG:HG2	2.27	0.44
10:B:1857:G:HO2'	10:B:1858:A:H8	1.65	0.44
10:B:1971:U:H1'	11:C:238:ASN:HD22	1.81	0.44
10:B:2248:C:C2'	10:B:2249:U:H5'	2.47	0.44
10:B:2423:U:H3	31:W:1:ALA:HB2	1.82	0.44
10:B:2576:G:OP2	12:D:149:ASN:HB2	2.17	0.44
10:B:2714:G:O2'	10:B:2715:C:H5'	2.18	0.44
10:B:2722:G:O2'	10:B:2723:C:H5'	2.18	0.44
10:B:2848:G:N9	24:P:96:LEU:HD23	2.32	0.44
11:C:53:ILE:CD1	11:C:218:THR:HG23	2.45	0.44
15:G:71:LEU:HA	15:G:74:MET:CG	2.46	0.44
18:J:92:MET:O	18:J:95:ARG:HG3	2.17	0.44
19:K:102:PRO:HA	19:K:121:GLU:CB	2.46	0.44
20:L:78:ARG:HD3	20:L:81:ASP:HB2	2.00	0.44
20:L:91:ASP:CB	20:L:123:ARG:HD2	2.47	0.44
22:N:34:ILE:N	22:N:34:ILE:CD1	2.81	0.44
22:N:103:ARG:HB2	22:N:110:MET:SD	2.57	0.44
23:O:8:ILE:C	23:O:10:ARG:N	2.71	0.44
32:X:14:LEU:HD12	32:X:14:LEU:N	2.33	0.44
32:X:24:GLU:HG3	32:X:43:LEU:HD11	1.97	0.44
34:Z:3:LYS:HD2	34:Z:6:HIS:HB3	1.98	0.44
34:Z:29:GLY:C	34:Z:30:HIS:CG	2.91	0.44
2:1:5:ARG:HB3	2:1:5:ARG:HH11	1.82	0.44
6:5:385:MET:HE2	6:5:388:ARG:HD2	1.99	0.44
6:5:409:GLN:HB2	6:5:412:ASP:OD1	2.18	0.44
9:A:24:G:N7	9:A:56:G:H2'	2.32	0.44
10:B:283:G:C2	10:B:358:U:O2	2.70	0.44
10:B:397:U:OP1	34:Z:29:GLY:HA2	2.18	0.44
10:B:559:G:H2'	10:B:560:C:O4'	2.18	0.44
10:B:670:A:P	20:L:47:ARG:HD3	2.57	0.44
10:B:1007:C:H5''	18:J:37:ARG:HH21	1.82	0.44
10:B:1094:U:C2	10:B:1096:A:OP2	2.70	0.44
10:B:1095:A:N1	17:I:26:ALA:O	2.51	0.44
10:B:1116:G:N2	10:B:1117:C:C6	2.86	0.44
10:B:1239:G:H2'	10:B:1240:U:C6	2.52	0.44
10:B:1444:G:N2	10:B:1548:A:C4	2.85	0.44
10:B:1511:G:H2'	10:B:1512:C:C6	2.53	0.44
10:B:1530:G:C2	10:B:1542:U:O2	2.71	0.44
10:B:1567:G:H5''	11:C:84:PRO:HG3	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2147:A:C5'	10:B:2148:G:H5'	2.44	0.44
10:B:2348:U:O2'	10:B:2349:G:H5'	2.16	0.44
10:B:2379:G:H2'	10:B:2380:C:H6	1.82	0.44
10:B:2576:G:P	12:D:149:ASN:HB2	2.57	0.44
10:B:2700:A:H2'	10:B:2701:U:C6	2.52	0.44
10:B:2795:C:O5'	10:B:2795:C:H6	2.00	0.44
10:B:2812:G:H2'	10:B:2813:A:O4'	2.17	0.44
11:C:19:VAL:CG1	11:C:20:ASN:H	2.17	0.44
11:C:59:GLN:HB3	11:C:60:ALA:H	1.30	0.44
11:C:131:MET:HE1	11:C:143:VAL:HG11	1.99	0.44
11:C:225:ASN:H	11:C:226:PRO:HD3	1.82	0.44
11:C:231:HIS:CD2	11:C:242:HIS:HB3	2.53	0.44
14:F:56:LEU:HA	14:F:59:ILE:CG2	2.48	0.44
16:H:65:ALA:O	16:H:138:VAL:HG21	2.17	0.44
19:K:10:VAL:HG13	19:K:19:VAL:HG21	1.99	0.44
19:K:25:LEU:O	19:K:30:ARG:HG3	2.17	0.44
19:K:99:ILE:CG2	19:K:119:ALA:HB2	2.46	0.44
20:L:85:VAL:HG13	20:L:86:GLU:HG2	1.99	0.44
22:N:87:PHE:HB2	22:N:94:TYR:OH	2.16	0.44
22:N:115:LEU:N	22:N:115:LEU:CD2	2.80	0.44
24:P:31:VAL:HB	24:P:43:GLU:O	2.17	0.44
25:Q:33:VAL:O	25:Q:34:ALA:C	2.55	0.44
27:S:80:PRO:O	27:S:100:THR:HG22	2.18	0.44
28:T:57:VAL:HG12	28:T:58:VAL:N	2.32	0.44
32:X:46:VAL:HG13	32:X:47:ARG:N	2.32	0.44
4:3:11:LYS:HZ2	20:L:63:LYS:CB	2.27	0.44
10:B:132:G:H2'	10:B:133:U:C6	2.53	0.44
10:B:303:G:C6	10:B:315:G:C6	3.05	0.44
10:B:310:A:C5	10:B:312:G:C4	3.06	0.44
10:B:327:G:O2'	10:B:328:U:C5	2.71	0.44
10:B:359:G:C6	10:B:360:U:N3	2.86	0.44
10:B:673:C:O2'	10:B:674:G:H5'	2.17	0.44
10:B:873:C:H2'	10:B:874:G:H8	1.82	0.44
10:B:1038:G:C2	10:B:1117:C:O2	2.70	0.44
10:B:1196:C:H2'	10:B:1197:G:H8	1.82	0.44
10:B:1534:U:O2	10:B:1538:G:C2	2.71	0.44
10:B:1538:G:C5	10:B:1539:U:C6	3.06	0.44
10:B:1550:C:O4'	10:B:1741:C:O2'	2.25	0.44
10:B:1585:C:H2'	10:B:1586:A:O4'	2.17	0.44
10:B:1664:A:H1'	10:B:2726:A:N1	2.33	0.44
10:B:1704:C:H2'	10:B:1705:A:C8	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1739:A:H2'	10:B:1740:G:O4'	2.16	0.44
10:B:1745:A:H2'	10:B:1746:A:H8	1.83	0.44
10:B:2443:C:H2'	10:B:2444:G:H8	1.81	0.44
10:B:2720:U:H2'	10:B:2721:A:C8	2.53	0.44
11:C:242:HIS:N	11:C:242:HIS:HD1	2.15	0.44
12:D:4:LEU:O	12:D:5:VAL:HG13	2.16	0.44
12:D:205:PRO:O	12:D:206:ALA:HB2	2.17	0.44
13:E:72:SER:C	13:E:73:ILE:HD13	2.38	0.44
15:G:21:GLN:HG2	15:G:38:ASP:HA	2.00	0.44
15:G:25:ILE:HG21	15:G:74:MET:HB3	1.98	0.44
15:G:71:LEU:HA	15:G:74:MET:HG3	1.98	0.44
17:I:7:TYR:CB	17:I:59:THR:HA	2.48	0.44
19:K:23:LYS:HG3	19:K:24:VAL:H	1.81	0.44
20:L:55:MET:O	20:L:56:PRO:O	2.36	0.44
21:M:42:THR:O	21:M:43:ALA:HB3	2.16	0.44
21:M:98:PRO:HG2	21:M:99:GLY:H	1.82	0.44
21:M:126:ILE:O	21:M:127:LYS:HB2	2.18	0.44
24:P:18:SER:OG	24:P:21:PRO:HD3	2.17	0.44
24:P:84:SER:O	24:P:85:VAL:C	2.53	0.44
25:Q:16:ILE:CD1	25:Q:34:ALA:HB2	2.39	0.44
27:S:32:ALA:HA	27:S:51:LEU:CD1	2.48	0.44
28:T:6:ARG:C	28:T:8:LEU:H	2.21	0.44
30:V:2:PHE:HB3	30:V:3:THR:H	1.60	0.44
30:V:80:HIS:HB3	30:V:83:LYS:O	2.17	0.44
1:O:27:LEU:C	1:O:36:LYS:HD3	2.38	0.44
10:B:287:G:C6	10:B:288:U:O4	2.71	0.44
10:B:291:G:H2'	10:B:292:U:H5'	1.98	0.44
10:B:294:A:H5'	10:B:295:G:OP2	2.17	0.44
10:B:299:A:C6	10:B:322:A:C4	3.06	0.44
10:B:300:A:OP2	10:B:300:A:C8	2.70	0.44
10:B:310:A:N9	10:B:312:G:C8	2.71	0.44
10:B:345:A:P	10:B:345:A:C3'	3.05	0.44
10:B:361:G:O2'	10:B:362:A:C8	2.71	0.44
10:B:458:G:H1'	10:B:459:U:H5	1.83	0.44
10:B:1034:G:O6	10:B:1035:U:N3	2.49	0.44
10:B:1039:A:C2	10:B:1040:A:N1	2.86	0.44
10:B:1050:A:O4'	10:B:2751:G:C2	2.71	0.44
10:B:1272:A:N7	10:B:1618:A:H1'	2.32	0.44
10:B:1459:G:C2'	10:B:1460:U:H5'	2.47	0.44
10:B:1824:G:OP1	11:C:52:HIS:CE1	2.70	0.44
10:B:2885:G:H2'	10:B:2886:A:O4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:C:65:ASP:OD2	11:C:101:ARG:HB3	2.18	0.44
14:F:135:ILE:O	14:F:136:ILE:HB	2.17	0.44
16:H:81:ALA:HA	16:H:147:VAL:H	1.83	0.44
17:I:96:LYS:HG3	17:I:138:VAL:HG23	1.99	0.44
21:M:97:GLN:H	21:M:98:PRO:CD	2.31	0.44
23:O:1:MET:CG	23:O:3:LYS:HE3	2.47	0.44
28:T:60:THR:HG22	28:T:83:ALA:CB	2.47	0.44
29:U:10:VAL:HG21	29:U:25:LYS:HZ2	1.83	0.44
29:U:84:PHE:CA	29:U:94:PHE:HD1	2.30	0.44
31:W:44:PHE:HB3	31:W:76:ARG:HG3	1.99	0.44
1:0:45:ASP:HB3	1:0:54:ILE:O	2.17	0.44
6:5:400:ARG:NH1	6:5:400:ARG:HB2	2.32	0.44
10:B:84:A:H2'	29:U:5:ARG:NH1	2.32	0.44
10:B:272:A:C2	10:B:365:U:O2	2.70	0.44
10:B:279:A:C5	10:B:362:A:O4'	2.70	0.44
10:B:303:G:O2'	10:B:304:U:H5'	2.18	0.44
10:B:310:A:C5	10:B:330:A:C6	3.06	0.44
10:B:316:C:O2	10:B:317:G:C8	2.71	0.44
10:B:360:U:O3'	10:B:361:G:C8	2.70	0.44
10:B:360:U:C3'	10:B:361:G:C8	3.00	0.44
10:B:373:U:O2'	10:B:374:A:H5'	2.18	0.44
10:B:465:G:H2'	10:B:466:A:C8	2.53	0.44
10:B:656:G:H2'	10:B:657:U:C6	2.52	0.44
10:B:664:G:O2'	10:B:665:U:H5'	2.17	0.44
10:B:710:U:H2'	10:B:711:G:H8	1.82	0.44
10:B:1476:U:OP2	10:B:1514:G:C2	2.70	0.44
10:B:1561:C:H2'	10:B:1562:U:C6	2.52	0.44
10:B:2182:U:H2'	10:B:2183:A:C8	2.53	0.44
10:B:2308:G:H5'	10:B:2309:A:C5'	2.44	0.44
10:B:2659:G:N2	10:B:2661:G:H5''	2.32	0.44
10:B:2747:G:O6	10:B:2755:C:H5''	2.17	0.44
10:B:2768:U:H2'	10:B:2769:U:O4'	2.18	0.44
10:B:2893:A:H4'	10:B:2894:G:C5'	2.48	0.44
11:C:209:ALA:HA	11:C:213:ARG:NE	2.33	0.44
12:D:33:ARG:C	12:D:35:THR:H	2.21	0.44
12:D:109:VAL:HG22	12:D:203:VAL:HG22	2.00	0.44
13:E:198:GLU:C	13:E:200:LEU:N	2.69	0.44
15:G:22:VAL:HG23	15:G:33:THR:HG23	2.00	0.44
15:G:89:VAL:O	15:G:160:GLY:N	2.51	0.44
16:H:28:ASN:O	16:H:29:PHE:HB2	2.17	0.44
17:I:14:ALA:CB	17:I:50:LYS:HA	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:I:140:GLU:OE1	17:I:140:GLU:HA	2.17	0.44
19:K:17:ARG:HB3	19:K:18:ARG:H	1.31	0.44
20:L:118:THR:HG23	20:L:119:PRO:CD	2.41	0.44
21:M:1:MET:HG2	21:M:64:TRP:CD1	2.53	0.44
21:M:65:ILE:CG2	21:M:101:VAL:HA	2.44	0.44
23:O:15:ARG:HH12	23:O:17:LYS:HD3	1.83	0.44
23:O:84:GLU:OE1	23:O:85:LYS:HG3	2.17	0.44
28:T:6:ARG:HG3	28:T:10:VAL:HG13	1.99	0.44
28:T:84:TYR:O	28:T:85:VAL:O	2.36	0.44
31:W:39:GLN:HA	31:W:68:PHE:CA	2.43	0.44
33:Y:22:THR:O	33:Y:26:LEU:N	2.50	0.44
33:Y:50:VAL:CA	33:Y:53:MET:HB2	2.48	0.44
34:Z:3:LYS:HA	34:Z:47:LYS:HA	1.99	0.44
34:Z:66:ILE:O	34:Z:69:SER:O	2.35	0.44
4:3:24:LYS:HE2	4:3:25:HIS:O	2.18	0.44
5:4:11:CYS:SG	5:4:12:ARG:HD2	2.57	0.44
5:4:14:CYS:SG	5:4:27:CYS:SG	3.14	0.44
9:A:27:C:H3'	9:A:28:C:C6	2.52	0.44
10:B:6:A:O2'	10:B:7:G:H5'	2.18	0.44
10:B:277:G:C2	10:B:359:G:OP2	2.70	0.44
10:B:285:G:H8	10:B:285:G:O5'	2.01	0.44
10:B:287:G:C2	10:B:354:A:C8	3.05	0.44
10:B:295:G:H2'	10:B:296:U:C5'	2.47	0.44
10:B:295:G:H2'	10:B:296:U:O5'	2.18	0.44
10:B:319:G:C5	10:B:320:A:C5	3.06	0.44
10:B:324:A:C5	10:B:339:U:C4'	3.00	0.44
10:B:540:C:H2'	10:B:541:A:C8	2.53	0.44
10:B:968:C:O2'	33:Y:16:LEU:HD23	2.18	0.44
10:B:1514:G:O2'	10:B:1515:A:H5'	2.17	0.44
10:B:1539:U:C2	10:B:1540:G:C8	3.05	0.44
10:B:2262:U:H2'	10:B:2263:C:C6	2.52	0.44
10:B:2297:A:N6	10:B:2319:G:C5'	2.81	0.44
10:B:2628:C:O2'	10:B:2781:A:H2'	2.17	0.44
10:B:2750:A:H3'	15:G:3:VAL:HG22	1.98	0.44
10:B:2751:G:H5''	15:G:2:ARG:O	2.18	0.44
10:B:2751:G:C5'	15:G:3:VAL:HG13	2.48	0.44
11:C:10:PRO:CD	11:C:23:LEU:HD11	2.46	0.44
11:C:107:LYS:CB	11:C:194:VAL:HG11	2.27	0.44
12:D:115:GLY:HA2	12:D:165:MET:HE3	1.99	0.44
12:D:116:LYS:HG3	22:N:3:HIS:CE1	2.53	0.44
12:D:117:GLY:N	12:D:165:MET:HB3	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:D:128:ARG:HH11	12:D:144:GLY:HA2	1.83	0.44
14:F:18:GLU:HA	14:F:18:GLU:OE1	2.17	0.44
14:F:31:GLU:HB3	14:F:32:LYS:H	1.62	0.44
17:I:17:ALA:C	17:I:19:PRO:HD2	2.37	0.44
17:I:29:GLN:HA	17:I:29:GLN:HE21	1.83	0.44
19:K:5:GLN:O	19:K:6:THR:HB	2.17	0.44
21:M:36:VAL:CA	21:M:97:GLN:HG2	2.45	0.44
22:N:14:SER:HA	22:N:17:ARG:HB2	2.00	0.44
22:N:126:ALA:HB3	22:N:127:GLU:OE1	2.17	0.44
25:Q:93:ILE:C	25:Q:95:ALA:N	2.69	0.44
25:Q:95:ALA:C	25:Q:97:ILE:H	2.21	0.44
26:R:4:VAL:HG13	26:R:4:VAL:O	2.17	0.44
27:S:48:LYS:O	27:S:52:GLU:HG3	2.16	0.44
28:T:45:ALA:O	28:T:48:GLN:HB3	2.17	0.44
28:T:55:VAL:HG13	28:T:86:THR:O	2.18	0.44
28:T:66:LYS:HA	28:T:77:ARG:HA	2.00	0.44
29:U:48:VAL:CB	29:U:54:PRO:HD3	2.44	0.44
29:U:73:ASN:HB2	29:U:96:LYS:HZ3	1.83	0.44
29:U:90:LYS:HD2	29:U:91:LYS:HZ3	1.82	0.44
32:X:23:ARG:HH21	32:X:27:ASN:CG	2.20	0.44
34:Z:66:ILE:O	34:Z:68:GLY:N	2.50	0.44
1:0:37:HIS:HA	27:S:38:TYR:CZ	2.52	0.44
2:1:26:LYS:HD3	2:1:29:LYS:CD	2.48	0.44
10:B:303:G:H3'	10:B:304:U:C5	2.53	0.44
10:B:308:G:H2'	10:B:309:A:N9	2.33	0.44
10:B:361:G:C8	10:B:361:G:OP2	2.71	0.44
10:B:443:A:H5''	13:E:44:ARG:NH1	2.24	0.44
10:B:527:C:H5''	10:B:2779:U:N3	2.33	0.44
10:B:948:C:H2'	10:B:949:G:C8	2.52	0.44
10:B:1059:G:C4'	17:I:116:MET:HA	2.32	0.44
10:B:1061:U:C1'	17:I:9:LYS:HZ2	2.28	0.44
10:B:1183:U:H2'	10:B:1184:U:H6	1.77	0.44
10:B:1278:C:OP1	22:N:36:THR:HB	2.18	0.44
10:B:1801:A:H5'	10:B:2203:U:O2'	2.18	0.44
10:B:1826:G:H2'	10:B:1827:U:C6	2.53	0.44
10:B:1902:C:H2'	10:B:1903:G:H5'	2.00	0.44
10:B:2052:A:H4'	12:D:148:GLN:CG	2.43	0.44
10:B:2082:A:O2'	10:B:2083:G:H5'	2.18	0.44
10:B:2553:G:H2'	10:B:2554:U:H4'	1.99	0.44
10:B:2576:G:H22	12:D:149:ASN:HD21	1.62	0.44
10:B:2674:G:H4'	19:K:30:ARG:CG	2.42	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:C:53:ILE:CG1	11:C:218:THR:HG23	2.47	0.44
12:D:16:THR:CG2	12:D:17:GLU:H	2.22	0.44
12:D:62:LYS:CD	12:D:62:LYS:N	2.78	0.44
12:D:141:ARG:O	12:D:142:VAL:C	2.54	0.44
13:E:108:ILE:H	13:E:108:ILE:HD12	1.83	0.44
13:E:117:ARG:H	13:E:118:LEU:HD23	1.82	0.44
13:E:154:ASP:OD1	13:E:156:ASN:HB2	2.17	0.44
14:F:170:ALA:HA	14:F:173:ASP:OD2	2.18	0.44
15:G:84:LYS:HA	15:G:84:LYS:NZ	2.33	0.44
16:H:72:ILE:HG23	16:H:72:ILE:O	2.18	0.44
16:H:82:SER:O	16:H:90:LEU:HD23	2.18	0.44
17:I:121:ILE:HA	17:I:124:MET:HG2	2.00	0.44
19:K:23:LYS:CG	19:K:24:VAL:H	2.31	0.44
19:K:71:ARG:HD3	19:K:71:ARG:HA	1.86	0.44
20:L:85:VAL:HG21	20:L:98:ALA:CB	2.48	0.44
21:M:15:GLY:O	21:M:16:ARG:HB3	2.18	0.44
21:M:101:VAL:C	21:M:102:LEU:HD12	2.37	0.44
21:M:117:PHE:O	21:M:120:ALA:HB3	2.18	0.44
22:N:1:MET:CE	22:N:3:HIS:H	2.31	0.44
23:O:55:GLU:HB2	23:O:61:GLN:HA	1.99	0.44
27:S:8:ARG:HH12	27:S:79:GLY:HA2	1.82	0.44
28:T:8:LEU:HD23	28:T:8:LEU:N	2.27	0.44
32:X:6:LEU:O	32:X:8:GLU:N	2.50	0.44
32:X:11:VAL:O	32:X:11:VAL:HG22	2.17	0.44
33:Y:18:LYS:O	33:Y:21:ALA:HB3	2.17	0.44
34:Z:12:ILE:H	34:Z:12:ILE:HG13	1.27	0.44
2:1:49:LYS:HG2	2:1:50:GLU:O	2.18	0.44
4:3:21:PHE:CD1	4:3:21:PHE:N	2.84	0.44
6:5:376:MET:O	6:5:380:ILE:HG13	2.17	0.44
10:B:106:C:H2'	10:B:107:G:H8	1.82	0.44
10:B:287:G:C5	10:B:354:A:N1	2.86	0.44
10:B:311:A:C8	10:B:311:A:OP1	2.70	0.44
10:B:323:C:OP2	10:B:324:A:C8	2.70	0.44
10:B:323:C:O2	10:B:323:C:H2'	2.17	0.44
10:B:340:A:H8	10:B:341:C:C5	2.34	0.44
10:B:392:U:O2'	10:B:393:C:H5'	2.17	0.44
10:B:545:U:H2'	10:B:547:A:P	2.58	0.44
10:B:597:G:H4'	20:L:21:ARG:HD2	1.99	0.44
10:B:1541:C:H2'	10:B:1542:U:O4'	2.18	0.44
10:B:1675:C:O2	12:D:134:HIS:CG	2.71	0.44
10:B:2133:G:C2'	10:B:2133:G:N3	2.80	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2200:C:O2	10:B:2226:C:N4	2.51	0.44
10:B:2249:U:H4'	10:B:2275:C:H5	1.82	0.44
10:B:2340:A:H2'	10:B:2341:G:H8	1.82	0.44
10:B:2663:G:H2'	10:B:2664:G:C8	2.53	0.44
10:B:2772:C:H2'	10:B:2773:C:H6	1.82	0.44
11:C:170:TYR:HB3	11:C:185:ALA:HB3	2.00	0.44
12:D:17:GLU:HB2	24:P:80:VAL:CG2	2.44	0.44
12:D:52:THR:N	12:D:75:ALA:HB1	2.33	0.44
13:E:149:ILE:HA	13:E:168:ASP:O	2.18	0.44
13:E:151:GLY:O	13:E:153:LEU:HD12	2.18	0.44
14:F:15:LEU:HD22	14:F:28:PRO:HG3	1.99	0.44
14:F:107:VAL:CG1	14:F:116:LEU:HD21	2.48	0.44
14:F:177:ARG:NE	14:F:178:LYS:N	2.66	0.44
16:H:37:VAL:O	16:H:38:PRO:C	2.56	0.44
18:J:57:LEU:HD12	18:J:128:ASN:CA	2.48	0.44
18:J:60:ASP:OD1	18:J:97:PRO:HG2	2.18	0.44
18:J:114:LEU:O	18:J:117:ALA:HB3	2.18	0.44
20:L:72:ALA:HB3	20:L:106:GLU:OE2	2.17	0.44
20:L:109:LYS:H	20:L:126:ARG:HB3	1.82	0.44
22:N:4:ARG:CG	22:N:5:LYS:N	2.80	0.44
22:N:67:PHE:HD1	22:N:73:ASN:HD21	1.65	0.44
23:O:21:LEU:O	23:O:42:PRO:HB3	2.17	0.44
23:O:24:THR:HG22	23:O:41:ALA:HA	2.00	0.44
25:Q:19:GLN:O	25:Q:20:ALA:C	2.55	0.44
25:Q:58:GLN:O	25:Q:62:ALA:HB2	2.18	0.44
26:R:7:SER:CB	26:R:21:ARG:HH22	2.30	0.44
26:R:58:VAL:HG13	26:R:59:ILE:HG12	1.98	0.44
26:R:60:LYS:HD2	26:R:60:LYS:HA	1.80	0.44
29:U:71:ILE:HG23	29:U:72:PHE:N	2.32	0.44
31:W:27:GLY:HA2	31:W:60:ALA:CA	2.39	0.44
1:0:52:LYS:NZ	22:N:114:GLU:OE1	2.51	0.43
4:3:28:LEU:HG	4:3:28:LEU:H	1.45	0.43
4:3:29:ARG:NE	10:B:2393:U:OP1	2.51	0.43
8:7:163:G:H2'	8:7:164:C:O4'	2.18	0.43
10:B:7:G:H1'	18:J:135:GLN:NE2	2.32	0.43
10:B:28:A:N6	10:B:512:G:O2'	2.51	0.43
10:B:118:A:H5'	10:B:119:A:C8	2.45	0.43
10:B:409:G:O2'	10:B:410:G:H5'	2.18	0.43
10:B:570:G:C2'	10:B:571:U:H5'	2.48	0.43
10:B:971:G:H2'	10:B:972:A:O4'	2.18	0.43
10:B:995:C:C4	18:J:2:LYS:HB3	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1348:C:H2'	10:B:1349:C:H5'	2.00	0.43
10:B:2053:G:OP1	12:D:149:ASN:C	2.56	0.43
10:B:2477:U:H4'	10:B:2479:U:O4	2.18	0.43
10:B:2881:U:H5''	22:N:121:LYS:N	2.33	0.43
11:C:109:LEU:HB3	11:C:110:LYS:H	1.64	0.43
13:E:117:ARG:HA	13:E:188:MET:CE	2.48	0.43
17:I:64:ARG:HD2	17:I:64:ARG:C	2.39	0.43
18:J:52:ASP:CG	18:J:53:TYR:H	2.20	0.43
18:J:68:LYS:HA	18:J:71:ASP:OD1	2.17	0.43
22:N:75:ILE:HG23	22:N:76:VAL:N	2.33	0.43
23:O:76:LYS:NZ	23:O:79:ALA:HB3	2.33	0.43
24:P:52:ARG:HG3	24:P:54:LEU:HD12	2.00	0.43
27:S:6:LYS:CA	27:S:104:THR:HA	2.48	0.43
29:U:63:ALA:O	29:U:64:ILE:HG22	2.17	0.43
30:V:89:ILE:HD13	30:V:91:PHE:CE2	2.52	0.43
32:X:14:LEU:HD22	32:X:57:LEU:HD22	1.99	0.43
1:O:26:SER:CB	1:O:38:LEU:HD12	2.46	0.43
2:1:49:LYS:HD2	2:1:49:LYS:N	2.33	0.43
9:A:30:C:O2	9:A:30:C:H2'	2.18	0.43
9:A:48:U:H2'	9:A:49:C:H6	1.80	0.43
10:B:306:U:O2	10:B:312:G:C2	2.71	0.43
10:B:352:A:N3	10:B:353:C:C6	2.86	0.43
10:B:358:U:C4	10:B:359:G:O6	2.70	0.43
10:B:849:A:O2'	33:Y:20:LYS:HG2	2.18	0.43
10:B:957:C:OP1	21:M:76:LYS:HG2	2.18	0.43
10:B:1062:G:N3	10:B:1063:G:N7	2.66	0.43
10:B:1085:A:O2'	10:B:1086:A:H5'	2.18	0.43
10:B:1118:C:C2'	10:B:1119:U:C5'	2.95	0.43
10:B:1151:A:H2'	10:B:1152:C:C6	2.53	0.43
10:B:1315:C:H2'	10:B:1316:U:C6	2.53	0.43
10:B:1515:A:C2'	10:B:1516:G:H8	2.20	0.43
10:B:1524:G:C2	10:B:1525:A:C5	3.05	0.43
10:B:1623:G:O2'	10:B:1624:U:H5'	2.18	0.43
10:B:1820:U:C4	11:C:158:GLY:HA3	2.52	0.43
10:B:2180:U:H2'	10:B:2181:U:C5	2.53	0.43
10:B:2286:G:H2'	10:B:2287:A:OP2	2.18	0.43
10:B:2320:U:H3'	10:B:2321:U:C5'	2.48	0.43
10:B:2581:G:H2'	10:B:2581:G:N3	2.33	0.43
10:B:2805:C:O2'	10:B:2806:C:H5'	2.19	0.43
10:B:2889:C:H2'	10:B:2890:G:C8	2.52	0.43
10:B:2893:A:H4'	10:B:2894:G:O5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:D:4:LEU:O	12:D:4:LEU:HG	2.17	0.43
12:D:88:GLU:CG	12:D:89:GLU:N	2.80	0.43
13:E:68:ALA:O	13:E:69:ARG:HB3	2.18	0.43
13:E:88:ARG:HA	13:E:89:PRO:HD3	1.71	0.43
16:H:29:PHE:H	16:H:32:PRO:CD	2.31	0.43
16:H:40:THR:O	16:H:42:LYS:N	2.52	0.43
23:O:16:ARG:HA	23:O:16:ARG:HE	1.82	0.43
23:O:86:GLY:O	23:O:89:ASP:HB2	2.18	0.43
24:P:18:SER:C	24:P:20:ARG:H	2.21	0.43
25:Q:5:ARG:O	25:Q:9:ALA:HB2	2.18	0.43
27:S:29:VAL:CG2	27:S:69:LEU:HB3	2.48	0.43
27:S:34:ASP:HA	27:S:38:TYR:CD2	2.53	0.43
28:T:68:LYS:HE2	28:T:68:LYS:HB2	1.81	0.43
29:U:64:ILE:HD13	29:U:65:GLN:H	1.82	0.43
31:W:44:PHE:H	31:W:76:ARG:HG3	1.83	0.43
34:Z:58:ASP:O	34:Z:59:ARG:HD3	2.18	0.43
3:2:22:MET:SD	3:2:28:ARG:HG3	2.58	0.43
3:2:42:LEU:HD12	3:2:43:THR:H	1.83	0.43
6:5:350:LEU:HD22	6:5:350:LEU:H	1.82	0.43
6:5:425:ARG:CZ	10:B:490:C:C5	2.97	0.43
10:B:79:C:C2'	10:B:346:A:C8	2.98	0.43
10:B:102:U:H4'	10:B:103:A:OP2	2.14	0.43
10:B:275:C:O2	10:B:363:G:C6	2.71	0.43
10:B:296:U:O4	10:B:343:C:N4	2.47	0.43
10:B:297:G:C5	10:B:298:G:C5	3.06	0.43
10:B:299:A:C1'	10:B:322:A:N1	2.81	0.43
10:B:305:C:O2	10:B:313:G:C4	2.71	0.43
10:B:327:G:O2'	10:B:328:U:C6	2.70	0.43
10:B:347:A:N6	10:B:348:A:N6	2.66	0.43
10:B:476:G:N2	10:B:478:A:H3'	2.33	0.43
10:B:508:A:N3	10:B:508:A:O4'	2.51	0.43
10:B:720:U:H2'	10:B:721:A:H8	1.78	0.43
10:B:910:A:H2	10:B:2264:C:O2	2.01	0.43
10:B:1042:G:C2	10:B:1043:C:C4	3.07	0.43
10:B:1043:C:O2	10:B:1112:G:C2	2.71	0.43
10:B:1075:C:H2'	10:B:1076:C:H6	1.75	0.43
10:B:1403:A:H2'	10:B:1404:C:C6	2.53	0.43
10:B:1425:G:H2'	10:B:1426:G:C8	2.54	0.43
10:B:1463:C:H2'	10:B:1464:G:C8	2.53	0.43
10:B:1520:U:C4	10:B:1521:G:N1	2.86	0.43
10:B:2306:C:H42	14:F:38:GLY:N	2.15	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2526:G:H2'	10:B:2527:C:H6	1.81	0.43
10:B:2547:A:H2'	10:B:2548:U:H6	1.83	0.43
10:B:2772:C:H5''	12:D:171:THR:HG21	1.99	0.43
36:B:3237:HOH:O	13:E:81:GLY:HA2	2.18	0.43
11:C:144:GLU:HG2	11:C:150:GLY:HA2	2.00	0.43
12:D:31:ALA:O	12:D:32:ASN:ND2	2.51	0.43
12:D:37:VAL:HG12	12:D:38:LYS:NZ	2.34	0.43
12:D:84:LEU:O	12:D:84:LEU:HD12	2.19	0.43
12:D:115:GLY:HA2	12:D:165:MET:CE	2.48	0.43
13:E:49:ARG:HH11	13:E:49:ARG:CG	2.31	0.43
13:E:83:VAL:O	13:E:83:VAL:HG13	2.19	0.43
14:F:70:ARG:CA	14:F:80:GLN:HE21	2.32	0.43
17:I:7:TYR:CD1	17:I:7:TYR:C	2.91	0.43
20:L:67:THR:O	20:L:68:SER:HB2	2.18	0.43
27:S:72:THR:O	27:S:73:LYS:HG2	2.18	0.43
31:W:66:VAL:O	31:W:67:LYS:C	2.56	0.43
34:Z:5:ILE:HD12	34:Z:5:ILE:N	2.32	0.43
10:B:39:G:O2'	10:B:40:U:H5'	2.18	0.43
10:B:83:A:C8	29:U:90:LYS:CB	3.02	0.43
10:B:140:C:OP2	10:B:140:C:H6	2.00	0.43
10:B:264:C:O2'	10:B:265:A:H5''	2.19	0.43
10:B:279:A:N7	10:B:362:A:H1'	2.33	0.43
10:B:304:U:H2'	10:B:305:C:H6	1.78	0.43
10:B:306:U:N3	10:B:312:G:N1	2.66	0.43
10:B:390:U:H4'	10:B:391:A:H5'	2.00	0.43
10:B:576:U:H2'	10:B:577:G:C8	2.53	0.43
10:B:760:G:H4'	10:B:1776:G:OP1	2.17	0.43
10:B:1196:C:H2'	10:B:1197:G:C8	2.54	0.43
10:B:1281:G:H2'	10:B:1282:U:O4'	2.18	0.43
10:B:1526:C:H2'	10:B:1527:G:C5'	2.49	0.43
10:B:1662:U:O2	10:B:2687:U:H4'	2.18	0.43
10:B:1826:G:H2'	10:B:1827:U:H6	1.81	0.43
10:B:1843:C:H2'	10:B:1844:C:H6	1.84	0.43
10:B:1958:C:O2'	10:B:1959:G:H5'	2.18	0.43
10:B:2648:G:H2'	10:B:2649:C:H6	1.83	0.43
11:C:160:TYR:HA	11:C:193:GLU:HG2	2.00	0.43
12:D:23:PRO:HA	12:D:190:LYS:N	2.33	0.43
13:E:4:VAL:HG13	13:E:5:LEU:N	2.33	0.43
13:E:97:ASN:N	13:E:97:ASN:HD22	2.16	0.43
14:F:52:ALA:HA	14:F:148:VAL:CG1	2.49	0.43
16:H:19:VAL:HG12	16:H:20:ASN:N	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:J:63:ALA:CA	18:J:69:ARG:HD2	2.48	0.43
20:L:29:LYS:HZ3	20:L:31:GLY:HA3	1.83	0.43
20:L:91:ASP:OD1	20:L:92:LEU:N	2.51	0.43
21:M:21:ALA:O	21:M:96:ILE:HG13	2.18	0.43
21:M:127:LYS:NZ	30:V:84:PRO:HG3	2.33	0.43
22:N:70:THR:HG21	22:N:75:ILE:CG2	2.44	0.43
25:Q:22:GLY:HA2	25:Q:28:SER:HB3	1.99	0.43
27:S:28:LYS:HD3	27:S:29:VAL:H	1.83	0.43
30:V:16:ALA:O	30:V:19:ARG:HB2	2.19	0.43
30:V:51:GLN:HE21	30:V:51:GLN:HB2	1.66	0.43
32:X:36:GLN:H	32:X:36:GLN:CD	2.21	0.43
33:Y:16:LEU:CB	33:Y:17:PRO:CD	2.88	0.43
2:1:31:GLU:HB3	2:1:32:LYS:CE	2.49	0.43
5:4:2:LYS:HB3	5:4:2:LYS:HZ2	1.83	0.43
5:4:23:ILE:O	5:4:24:ARG:O	2.36	0.43
9:A:50:A:H5''	23:O:68:LYS:CD	2.47	0.43
10:B:65:U:H4'	28:T:70:HIS:CE1	2.53	0.43
10:B:273:G:C5	10:B:365:U:C2	3.07	0.43
10:B:291:G:N2	10:B:350:G:N9	2.66	0.43
10:B:298:G:H21	10:B:340:A:N6	2.13	0.43
10:B:299:A:N1	10:B:322:A:C8	2.86	0.43
10:B:340:A:N7	10:B:341:C:C2	2.86	0.43
10:B:500:G:N2	10:B:502:A:H3'	2.34	0.43
10:B:852:U:H2'	10:B:853:C:H6	1.83	0.43
10:B:1043:C:C2	10:B:1044:C:N3	2.87	0.43
10:B:1048:A:N1	10:B:1049:C:N3	2.67	0.43
10:B:1096:A:H2'	10:B:1097:U:O5'	2.19	0.43
10:B:1115:G:N1	10:B:1116:G:C6	2.87	0.43
10:B:1162:G:H4'	26:R:23:GLU:HG2	2.01	0.43
10:B:1487:U:H2'	10:B:1488:C:C6	2.52	0.43
10:B:1521:G:H2'	10:B:1522:A:OP1	2.18	0.43
10:B:1542:U:C2	10:B:1543:G:C8	3.07	0.43
10:B:2485:G:H1'	21:M:118:LYS:NZ	2.34	0.43
10:B:2531:A:H5'	15:G:156:TYR:CE2	2.54	0.43
10:B:2708:G:O2'	10:B:2709:G:H5'	2.19	0.43
10:B:2716:C:O2'	10:B:2717:C:H5'	2.18	0.43
11:C:23:LEU:HD12	11:C:23:LEU:O	2.18	0.43
11:C:115:ILE:HA	11:C:126:GLY:HA3	1.99	0.43
11:C:253:GLY:O	11:C:254:LYS:HG3	2.19	0.43
13:E:108:ILE:HD12	13:E:108:ILE:N	2.34	0.43
13:E:173:THR:HA	13:E:201:ALA:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:F:67:THR:OG1	14:F:85:GLY:HA3	2.19	0.43
15:G:102:ILE:CG2	15:G:114:HIS:HB3	2.49	0.43
18:J:98:GLU:O	18:J:100:VAL:N	2.51	0.43
21:M:105:MET:HE1	21:M:107:GLY:HA3	2.00	0.43
23:O:87:ILE:CG1	23:O:88:LYS:H	2.31	0.43
28:T:64:LYS:HD3	28:T:79:ASP:HA	2.00	0.43
28:T:84:TYR:C	28:T:85:VAL:HG13	2.39	0.43
29:U:5:ARG:O	29:U:8:ASP:HB2	2.18	0.43
30:V:54:ALA:O	30:V:57:TYR:N	2.50	0.43
31:W:28:GLU:CB	31:W:30:VAL:HG23	2.41	0.43
31:W:52:CYS:HB2	31:W:53:GLY:H	1.52	0.43
2:1:24:LYS:NZ	10:B:2285:C:N4	2.67	0.43
5:4:25:VAL:HG23	5:4:35:GLN:HB2	2.01	0.43
6:5:335:LEU:HD12	6:5:380:ILE:HG22	2.00	0.43
10:B:49:A:OP1	10:B:51:G:H5'	2.18	0.43
10:B:265:A:N6	10:B:427:U:O2'	2.52	0.43
10:B:307:G:C2	10:B:309:A:O5'	2.71	0.43
10:B:324:A:N1	10:B:325:G:C4	2.86	0.43
10:B:701:G:O2'	10:B:702:U:H5'	2.18	0.43
10:B:1114:C:O5'	10:B:1114:C:H6	2.02	0.43
10:B:1407:G:H2'	10:B:1408:G:H8	1.84	0.43
10:B:1792:G:O2'	10:B:1793:C:H5'	2.19	0.43
10:B:1987:A:H2'	10:B:1988:G:C8	2.54	0.43
10:B:2022:U:O2'	10:B:2617:U:H5'	2.19	0.43
10:B:2247:A:H2'	10:B:2248:C:H6	1.83	0.43
11:C:145:MET:O	11:C:184:GLU:HG3	2.18	0.43
12:D:108:ASP:HB2	12:D:173:GLN:HA	2.01	0.43
15:G:5:LYS:HA	15:G:5:LYS:HD2	1.71	0.43
15:G:94:ARG:HH11	15:G:94:ARG:CB	2.31	0.43
15:G:114:HIS:HB2	15:G:150:TYR:HE2	1.83	0.43
16:H:41:LYS:O	16:H:42:LYS:C	2.56	0.43
16:H:57:LYS:HD2	16:H:57:LYS:N	2.34	0.43
18:J:41:LYS:NZ	18:J:43:GLU:O	2.52	0.43
18:J:102:GLU:HG3	18:J:124:VAL:HG11	1.99	0.43
20:L:35:HIS:O	20:L:35:HIS:ND1	2.52	0.43
23:O:9:ARG:HA	23:O:12:THR:CG2	2.45	0.43
23:O:41:ALA:O	23:O:42:PRO:C	2.56	0.43
23:O:67:ASN:HA	23:O:67:ASN:HD22	1.56	0.43
25:Q:68:ALA:HB2	25:Q:105:PHE:CZ	2.54	0.43
26:R:42:ALA:HA	26:R:54:VAL:CG2	2.46	0.43
26:R:58:VAL:HG22	26:R:59:ILE:H	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:R:85:LYS:HG3	26:R:85:LYS:O	2.19	0.43
27:S:10:ALA:O	27:S:11:ARG:CB	2.62	0.43
29:U:44:HIS:CG	29:U:55:GLY:O	2.72	0.43
30:V:42:LEU:HD12	30:V:47:VAL:HG11	2.01	0.43
3:2:34:ARG:HG3	3:2:34:ARG:NH1	2.33	0.43
5:4:12:ARG:N	5:4:12:ARG:HD2	2.34	0.43
5:4:22:VAL:HG11	5:4:36:ARG:NE	2.34	0.43
6:5:416:LEU:HD23	6:5:416:LEU:O	2.19	0.43
9:A:15:A:H1'	9:A:109:A:N7	2.33	0.43
10:B:38:A:O4'	13:E:46:GLN:CG	2.52	0.43
10:B:224:U:H2'	10:B:225:C:O4'	2.18	0.43
10:B:280:U:C4	10:B:360:U:O2	2.70	0.43
10:B:283:G:N9	10:B:284:U:C6	2.83	0.43
10:B:303:G:C2	10:B:304:U:O2	2.70	0.43
10:B:347:A:N3	10:B:347:A:H2'	2.34	0.43
10:B:362:A:C2	10:B:363:G:N9	2.86	0.43
10:B:391:A:H1'	10:B:411:G:O4'	2.19	0.43
10:B:607:U:O4	10:B:620:G:H5''	2.19	0.43
10:B:1110:G:N2	10:B:1111:A:C6	2.87	0.43
10:B:1446:C:O2'	10:B:1447:C:H5'	2.19	0.43
10:B:1544:A:C5	10:B:1545:A:C5	3.06	0.43
10:B:1550:C:P	10:B:1740:G:H22	2.40	0.43
10:B:2223:G:C2'	10:B:2224:G:H5'	2.48	0.43
10:B:2241:A:H2'	10:B:2242:G:H8	1.78	0.43
10:B:2445:G:O2'	10:B:2446:G:H5'	2.19	0.43
10:B:2653:U:H2'	10:B:2654:A:C8	2.54	0.43
10:B:2845:U:O3'	24:P:54:LEU:HG	2.18	0.43
10:B:2848:G:C8	24:P:96:LEU:HD23	2.54	0.43
11:C:162:GLN:HE21	11:C:162:GLN:HB3	1.53	0.43
11:C:253:GLY:C	11:C:254:LYS:HZ3	2.21	0.43
12:D:16:THR:OG1	24:P:80:VAL:HB	2.19	0.43
12:D:67:HIS:NE2	12:D:72:GLY:N	2.67	0.43
13:E:1:MET:HG3	13:E:2:GLU:N	2.33	0.43
13:E:170:ARG:O	13:E:172:ALA:N	2.52	0.43
13:E:191:ASP:C	13:E:193:VAL:H	2.22	0.43
14:F:107:VAL:HG11	14:F:116:LEU:HD21	1.99	0.43
14:F:173:ASP:OD1	14:F:173:ASP:N	2.52	0.43
15:G:57:TYR:OH	15:G:59:ASP:HB2	2.18	0.43
15:G:122:ALA:O	15:G:123:GLU:HG3	2.19	0.43
19:K:99:ILE:HD12	19:K:99:ILE:N	2.34	0.43
21:M:58:LYS:C	21:M:60:GLN:N	2.71	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:P:29:VAL:O	24:P:30:TRP:C	2.56	0.43
24:P:60:VAL:HB	24:P:61:ARG:H	1.23	0.43
27:S:1:MET:HB3	27:S:4:ILE:HG12	1.99	0.43
34:Z:59:ARG:O	34:Z:60:PHE:CG	2.71	0.43
6:5:336:GLU:O	6:5:340:GLN:HG3	2.18	0.43
10:B:26:G:OP2	27:S:80:PRO:HG3	2.19	0.43
10:B:138:U:H2'	10:B:140:C:C2	2.53	0.43
10:B:226:A:N1	10:B:418:C:O2'	2.51	0.43
10:B:273:G:N2	10:B:274:C:N1	2.66	0.43
10:B:279:A:C2	10:B:280:U:O4'	2.72	0.43
10:B:288:U:O2	10:B:352:A:C2	2.71	0.43
10:B:302:C:C2'	10:B:303:G:H5'	2.49	0.43
10:B:310:A:C5	10:B:312:G:C8	2.98	0.43
10:B:319:G:O6	10:B:333:G:C6	2.70	0.43
10:B:438:G:H2'	10:B:439:A:C8	2.54	0.43
10:B:535:G:O2'	25:Q:52:ARG:HD3	2.18	0.43
10:B:1049:C:C2'	10:B:1050:A:H5'	2.49	0.43
10:B:1103:A:C8	10:B:1103:A:O5'	2.70	0.43
10:B:1241:A:H2'	10:B:1242:U:C5'	2.48	0.43
10:B:1515:A:O2'	10:B:1516:G:H5'	2.19	0.43
10:B:1717:A:H2'	10:B:1718:G:O4'	2.19	0.43
10:B:2243:U:O2	10:B:2434:A:C2	2.71	0.43
10:B:2291:U:H2'	10:B:2292:U:H6	1.81	0.43
10:B:2691:C:H2'	10:B:2692:G:H8	1.84	0.43
11:C:67:LYS:O	11:C:68:ARG:CB	2.67	0.43
12:D:88:GLU:C	12:D:90:PHE:H	2.22	0.43
13:E:35:TYR:CD2	13:E:178:VAL:HG21	2.54	0.43
13:E:58:LYS:HB3	13:E:71:GLY:C	2.39	0.43
14:F:12:VAL:CG1	14:F:27:VAL:HG21	2.42	0.43
15:G:94:ARG:NH1	15:G:127:GLN:HB2	2.34	0.43
18:J:25:LEU:HD12	18:J:62:VAL:CB	2.49	0.43
19:K:31:ARG:H	19:K:31:ARG:HG2	1.44	0.43
20:L:67:THR:HG23	20:L:68:SER:N	2.25	0.43
21:M:29:GLY:H	21:M:102:LEU:HG	1.84	0.43
21:M:31:PHE:CD2	21:M:109:PRO:HB2	2.53	0.43
21:M:84:LYS:H	21:M:84:LYS:HZ2	1.66	0.43
22:N:34:ILE:O	22:N:36:THR:HG22	2.18	0.43
22:N:96:ARG:HH21	22:N:118:ARG:N	2.04	0.43
24:P:59:THR:C	24:P:60:VAL:HG22	2.39	0.43
25:Q:52:ARG:HD2	25:Q:52:ARG:HA	1.74	0.43
26:R:18:GLN:HE21	26:R:99:THR:CB	2.28	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:T:48:GLN:CG	28:T:49:LYS:N	2.81	0.43
29:U:6:ARG:O	29:U:8:ASP:N	2.51	0.43
29:U:44:HIS:ND1	29:U:45:GLN:O	2.50	0.43
34:Z:6:HIS:H	34:Z:51:VAL:HG13	1.82	0.43
1:0:6:LYS:HA	1:0:6:LYS:HD3	1.82	0.43
1:0:53:VAL:HG22	22:N:112:TYR:CE2	2.54	0.43
9:A:14:U:H5''	9:A:71:C:O4'	2.18	0.43
9:A:78:A:C2	9:A:99:A:C4	3.06	0.43
10:B:68:G:H3'	10:B:69:C:H6	1.83	0.43
10:B:280:U:H2'	10:B:281:C:N1	2.34	0.43
10:B:281:C:H2'	10:B:282:A:H8	1.80	0.43
10:B:337:C:H5''	29:U:1:ALA:CA	2.39	0.43
10:B:365:U:H3'	10:B:366:C:C5	2.53	0.43
10:B:832:U:OP1	20:L:44:GLY:HA3	2.19	0.43
10:B:1042:G:C5	10:B:1043:C:C4	3.07	0.43
10:B:1075:C:C2'	10:B:1076:C:H5'	2.47	0.43
10:B:1149:G:H2'	10:B:1150:C:C6	2.54	0.43
10:B:1159:U:H2'	10:B:1160:G:C8	2.53	0.43
10:B:1341:G:H5'	28:T:61:LEU:HD22	1.99	0.43
10:B:1987:A:H2'	10:B:1988:G:H8	1.84	0.43
10:B:2236:U:O2'	10:B:2237:G:H5'	2.17	0.43
10:B:2329:U:H2'	10:B:2330:G:H8	1.84	0.43
11:C:77:VAL:HG23	11:C:115:ILE:CD1	2.48	0.43
11:C:225:ASN:HD22	11:C:225:ASN:HA	1.50	0.43
12:D:128:ARG:NH2	12:D:130:GLN:HG3	2.34	0.43
13:E:127:GLU:OE1	13:E:130:LYS:HG3	2.19	0.43
19:K:114:LYS:O	19:K:118:LEU:HD12	2.19	0.43
20:L:82:LEU:HA	20:L:86:GLU:OE1	2.19	0.43
23:O:68:LYS:H	23:O:68:LYS:CD	2.19	0.43
24:P:27:VAL:HG22	24:P:28:LYS:N	2.34	0.43
24:P:27:VAL:HG22	24:P:28:LYS:O	2.18	0.43
26:R:6:GLN:HG3	26:R:7:SER:H	1.83	0.43
27:S:31:GLN:C	27:S:33:LEU:N	2.70	0.43
27:S:86:MET:SD	27:S:96:ILE:HD11	2.59	0.43
32:X:21:LEU:O	32:X:47:ARG:NH1	2.52	0.43
3:2:13:ASN:HB2	3:2:18:PHE:CD2	2.43	0.43
4:3:15:LYS:NZ	4:3:59:ALA:HB1	2.34	0.43
4:3:27:ASN:OD1	4:3:28:LEU:HD23	2.19	0.43
5:4:25:VAL:HB	5:4:33:HIS:C	2.39	0.43
10:B:15:G:H2'	10:B:16:C:C6	2.54	0.43
10:B:81:G:H5'	10:B:294:A:C6	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:269:C:HO2'	10:B:270:A:H5'	1.78	0.43
10:B:324:A:C5	10:B:339:U:H4'	2.54	0.43
10:B:332:A:N1	10:B:335:C:N1	2.66	0.43
10:B:336:C:H5''	29:U:81:ARG:NH2	2.33	0.43
10:B:336:C:C3'	29:U:81:ARG:NH2	2.70	0.43
10:B:348:A:C2	10:B:349:U:C4	3.06	0.43
10:B:689:A:H2'	10:B:690:G:H8	1.84	0.43
10:B:963:U:H2'	10:B:964:C:C6	2.54	0.43
10:B:1250:G:H5'	25:Q:3:VAL:CG1	2.48	0.43
10:B:1260:A:H2'	10:B:1261:C:C6	2.54	0.43
10:B:1561:C:H2'	10:B:1562:U:H6	1.84	0.43
10:B:1657:U:OP1	12:D:139:SER:O	2.36	0.43
10:B:2209:G:H2'	10:B:2210:U:C5	2.54	0.43
10:B:2290:G:H2'	10:B:2291:U:C6	2.53	0.43
10:B:2578:G:N3	12:D:145:SER:HB3	2.34	0.43
10:B:2737:G:H2'	10:B:2738:A:C8	2.54	0.43
10:B:2787:C:H2'	10:B:2788:C:C6	2.53	0.43
10:B:2806:C:H2'	10:B:2807:U:O4'	2.18	0.43
11:C:153:LEU:CD1	11:C:161:VAL:HG23	2.49	0.43
13:E:18:THR:O	13:E:19:PHE:C	2.57	0.43
14:F:172:PHE:CD1	14:F:173:ASP:N	2.84	0.43
15:G:32:LEU:HD11	15:G:74:MET:SD	2.58	0.43
15:G:121:THR:HG23	15:G:133:LYS:O	2.19	0.43
16:H:142:VAL:HG12	16:H:143:ILE:H	1.83	0.43
18:J:101:ILE:HG23	18:J:102:GLU:OE1	2.18	0.43
20:L:96:LYS:HE3	20:L:96:LYS:HB2	1.80	0.43
21:M:1:MET:HA	21:M:65:ILE:O	2.19	0.43
23:O:115:LEU:HD22	23:O:117:PHE:CZ	2.54	0.43
24:P:56:SER:O	24:P:58:PHE:HD1	2.02	0.43
27:S:103:ILE:HG13	27:S:105:VAL:HG23	2.01	0.43
28:T:63:VAL:CG1	28:T:80:TRP:HB2	2.46	0.43
30:V:35:GLU:HB2	30:V:93:ARG:NH1	2.33	0.43
1:O:11:LYS:C	1:O:13:GLY:H	2.22	0.42
8:7:109:G:H2'	8:7:110:C:C6	2.54	0.42
9:A:105:G:O2'	9:A:106:G:H5'	2.19	0.42
10:B:27:G:HO2'	10:B:513:A:N6	2.16	0.42
10:B:282:A:C6	10:B:283:G:N7	2.87	0.42
10:B:291:G:N2	10:B:350:G:O4'	2.51	0.42
10:B:307:G:C2'	10:B:330:A:H62	2.32	0.42
10:B:1034:G:N7	10:B:1035:U:C4	2.86	0.42
10:B:1042:G:N1	10:B:1043:C:C4	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1043:C:C2	10:B:1112:G:N2	2.86	0.42
10:B:1063:G:OP1	17:I:74:PRO:HB3	2.19	0.42
10:B:1066:U:C2	10:B:1068:G:OP2	2.72	0.42
10:B:1439:A:N1	10:B:1552:A:N7	2.55	0.42
10:B:1473:G:N2	10:B:1519:G:C5	2.87	0.42
10:B:1814:G:C4'	11:C:51:ARG:HD2	2.48	0.42
10:B:2103:C:H3'	10:B:2104:C:O4'	2.19	0.42
10:B:2307:G:O2'	10:B:2311:A:N6	2.52	0.42
10:B:2331:G:H21	10:B:2336:A:H8	1.67	0.42
10:B:2331:G:O2'	31:W:69:GLU:CD	2.58	0.42
10:B:2355:G:O3'	31:W:20:LEU:HD22	2.19	0.42
10:B:2732:G:H5'	10:B:2733:A:O4'	2.18	0.42
11:C:42:ARG:NH1	11:C:44:ASN:OD1	2.52	0.42
11:C:57:HIS:HB3	11:C:58:LYS:H	1.63	0.42
11:C:196:ASN:O	11:C:199:HIS:HB2	2.18	0.42
14:F:176:PHE:O	14:F:177:ARG:HB3	2.17	0.42
16:H:41:LYS:HD2	16:H:41:LYS:N	2.20	0.42
18:J:38:GLY:HA2	18:J:41:LYS:HB3	2.01	0.42
19:K:7:MET:HE1	19:K:20:MET:HB2	2.01	0.42
19:K:64:ARG:H	19:K:83:ALA:CB	2.14	0.42
20:L:84:LYS:HA	20:L:84:LYS:CE	2.48	0.42
23:O:94:ARG:HG3	23:O:94:ARG:O	2.18	0.42
24:P:47:ILE:HG23	24:P:63:ILE:CB	2.49	0.42
26:R:16:GLU:O	26:R:18:GLN:N	2.51	0.42
27:S:70:LYS:O	27:S:71:VAL:CB	2.66	0.42
28:T:60:THR:HA	28:T:83:ALA:HA	2.01	0.42
30:V:2:PHE:O	30:V:3:THR:HG23	2.18	0.42
34:Z:9:TYR:CE1	34:Z:11:GLU:HB2	2.53	0.42
1:O:6:LYS:HD2	10:B:2615:U:O2'	2.19	0.42
2:1:10:LEU:HD12	2:1:10:LEU:HA	1.84	0.42
3:2:12:ARG:HG3	10:B:686:U:O4	2.19	0.42
4:3:25:HIS:HB3	4:3:26:ALA:H	1.57	0.42
5:4:31:PRO:HG2	10:B:2528:U:P	2.59	0.42
8:7:126:G:H2'	8:7:127:U:C6	2.54	0.42
10:B:18:U:O2'	10:B:19:A:H5'	2.18	0.42
10:B:80:G:O4'	10:B:346:A:C5	2.64	0.42
10:B:283:G:C2	10:B:284:U:H1'	2.54	0.42
10:B:303:G:C6	10:B:304:U:N3	2.87	0.42
10:B:308:G:H8	10:B:308:G:O5'	2.02	0.42
10:B:406:G:H2'	10:B:407:G:H8	1.85	0.42
10:B:635:C:O2'	10:B:639:U:H5''	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:743:A:H4'	12:D:136:ASN:HD22	1.84	0.42
10:B:1038:G:C2	10:B:1039:A:C4	3.05	0.42
10:B:1044:C:O5'	10:B:1044:C:H6	2.02	0.42
10:B:1161:C:O2'	26:R:22:LEU:HD13	2.19	0.42
10:B:1516:G:N2	10:B:1517:G:C4	2.87	0.42
10:B:1821:A:H2'	10:B:1822:C:H6	1.83	0.42
10:B:2038:G:H2'	10:B:2039:U:O4'	2.18	0.42
10:B:2265:U:H3'	10:B:2266:A:H5''	2.01	0.42
10:B:2370:G:H2'	10:B:2371:G:O4'	2.18	0.42
10:B:2899:A:H2'	10:B:2900:A:H8	1.84	0.42
11:C:87:SER:HG	11:C:200:MET:CG	2.33	0.42
15:G:173:ALA:C	15:G:174:LYS:HD2	2.40	0.42
16:H:11:ASN:O	16:H:13:GLY:N	2.47	0.42
19:K:24:VAL:HG22	19:K:39:ILE:HD12	2.00	0.42
19:K:87:LEU:HA	19:K:94:PRO:HA	2.00	0.42
20:L:133:ALA:C	20:L:136:GLU:HG2	2.39	0.42
22:N:33:ILE:HG22	22:N:113:ILE:O	2.18	0.42
22:N:89:SER:O	22:N:91:ALA:N	2.51	0.42
23:O:68:LYS:C	23:O:70:ALA:N	2.72	0.42
24:P:61:ARG:HB2	24:P:61:ARG:NH1	2.34	0.42
27:S:28:LYS:HB3	27:S:71:VAL:CB	2.49	0.42
28:T:15:HIS:CG	28:T:31:VAL:HG11	2.54	0.42
28:T:61:LEU:CD1	28:T:62:VAL:H	2.25	0.42
29:U:27:VAL:O	29:U:28:LEU:HG	2.18	0.42
33:Y:4:ILE:HG12	33:Y:5:LYS:HG3	2.02	0.42
33:Y:16:LEU:CB	33:Y:17:PRO:HD3	2.26	0.42
1:O:29:VAL:CB	1:O:36:LYS:HD2	2.49	0.42
8:7:110:C:H2'	8:7:111:G:H8	1.83	0.42
8:7:125:G:H2'	8:7:126:G:C8	2.54	0.42
9:A:75:G:H5''	30:V:12:GLN:OE1	2.18	0.42
9:A:78:A:H61	9:A:98:G:H1'	1.83	0.42
10:B:265:A:H2'	10:B:266:G:O4'	2.19	0.42
10:B:270:A:O2'	10:B:368:A:H1'	2.19	0.42
10:B:311:A:N9	10:B:332:A:C8	2.88	0.42
10:B:346:A:N7	10:B:347:A:H1'	2.35	0.42
10:B:408:G:O2'	10:B:409:G:H5'	2.19	0.42
10:B:687:C:H2'	10:B:688:U:O4'	2.19	0.42
10:B:730:A:H3'	36:B:3497:HOH:O	2.19	0.42
10:B:858:G:N2	10:B:2269:G:OP2	2.52	0.42
10:B:904:G:H2'	10:B:905:A:C8	2.54	0.42
10:B:919:U:O5'	10:B:919:U:H6	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1050:A:H2'	10:B:1051:G:C8	2.54	0.42
10:B:1098:A:C2'	10:B:1099:G:C5'	2.91	0.42
10:B:1420:A:N3	10:B:2211:A:N7	2.68	0.42
10:B:1566:A:N1	11:C:213:ARG:NH2	2.67	0.42
10:B:1708:C:H2'	10:B:1709:U:C6	2.52	0.42
10:B:1736:U:H2'	10:B:1737:G:C8	2.54	0.42
10:B:1791:A:N6	10:B:1828:G:H1'	2.34	0.42
10:B:1824:G:H2'	10:B:1825:U:H6	1.84	0.42
10:B:2239:G:H5'	11:C:246:PRO:CG	2.49	0.42
10:B:2277:G:N7	31:W:8:SER:O	2.52	0.42
10:B:2293:G:H2'	10:B:2294:G:O4'	2.19	0.42
10:B:2373:G:O2'	10:B:2374:C:H5'	2.20	0.42
10:B:2642:G:O2'	10:B:2643:G:H5'	2.18	0.42
10:B:2723:C:H2'	10:B:2724:U:O4'	2.19	0.42
10:B:2881:U:N1	22:N:120:GLU:CD	2.57	0.42
11:C:163:ILE:CG2	11:C:164:VAL:H	2.26	0.42
12:D:120:GLY:N	12:D:123:LYS:HG3	2.26	0.42
13:E:141:MET:HG3	13:E:143:LEU:HD13	2.00	0.42
13:E:144:GLU:C	13:E:146:VAL:N	2.71	0.42
14:F:146:ASP:O	14:F:147:ARG:C	2.57	0.42
16:H:6:LEU:HA	16:H:15:LEU:HA	2.00	0.42
16:H:32:PRO:C	16:H:34:GLY:H	2.21	0.42
19:K:61:VAL:HG23	19:K:84:CYS:O	2.19	0.42
20:L:90:VAL:HG11	20:L:120:VAL:HG23	2.01	0.42
20:L:96:LYS:HE3	20:L:100:ILE:HG13	2.02	0.42
21:M:41:LEU:C	21:M:43:ALA:H	2.21	0.42
22:N:34:ILE:HD13	22:N:34:ILE:H	1.83	0.42
24:P:22:GLY:O	24:P:90:ALA:O	2.37	0.42
24:P:96:LEU:O	24:P:97:TYR:C	2.57	0.42
25:Q:63:ARG:HB3	25:Q:63:ARG:CZ	2.48	0.42
26:R:2:TYR:HB2	26:R:44:GLY:O	2.19	0.42
26:R:78:ARG:CG	26:R:87:GLN:HA	2.49	0.42
28:T:30:ILE:HG23	28:T:32:LEU:HD13	2.01	0.42
29:U:9:GLU:CG	29:U:23:LYS:HB3	2.49	0.42
29:U:22:GLY:HA2	29:U:36:GLU:HB2	2.01	0.42
30:V:2:PHE:CG	30:V:61:LEU:HD22	2.55	0.42
34:Z:30:HIS:O	34:Z:31:ASP:HB3	2.19	0.42
10:B:36:G:C2	10:B:37:C:C2	3.07	0.42
10:B:181:A:O2'	10:B:182:A:H5'	2.19	0.42
10:B:285:G:C6	10:B:356:G:N3	2.86	0.42
10:B:317:G:C2'	10:B:318:C:C6	2.86	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:320:A:C4	13:E:132:LYS:HB3	2.54	0.42
10:B:558:U:O2'	10:B:559:G:H5'	2.19	0.42
10:B:1098:A:H2'	10:B:1099:G:C8	2.52	0.42
10:B:2047:C:H2'	10:B:2048:G:C8	2.54	0.42
10:B:2140:G:H2'	10:B:2141:G:C8	2.54	0.42
10:B:2270:A:N6	10:B:2271:G:C2	2.87	0.42
10:B:2313:C:O2'	10:B:2314:A:H5'	2.19	0.42
10:B:2659:G:C2	10:B:2661:G:H5''	2.55	0.42
11:C:61:TYR:HD2	11:C:84:PRO:HD2	1.76	0.42
11:C:78:GLU:H	11:C:93:VAL:H	1.66	0.42
15:G:155:PRO:HB2	15:G:172:GLU:HG3	2.00	0.42
16:H:3:VAL:C	16:H:4:ILE:HG13	2.39	0.42
16:H:84:ALA:CA	16:H:90:LEU:HG	2.39	0.42
18:J:138:GLN:O	18:J:139:VAL:HG13	2.19	0.42
21:M:33:LEU:HD22	21:M:124:LEU:HG	2.02	0.42
24:P:105:LYS:HB2	24:P:106:ALA:H	1.59	0.42
25:Q:52:ARG:NH1	25:Q:55:GLN:HE21	2.17	0.42
25:Q:59:LEU:CG	25:Q:63:ARG:HH21	2.32	0.42
27:S:7:HIS:CG	27:S:8:ARG:N	2.87	0.42
32:X:18:LEU:H	32:X:18:LEU:HD12	1.85	0.42
33:Y:20:LYS:HG3	33:Y:24:LEU:HD12	2.02	0.42
33:Y:28:LEU:C	33:Y:29:ARG:HG2	2.39	0.42
34:Z:68:GLY:O	34:Z:69:SER:C	2.56	0.42
1:0:28:SER:O	1:0:29:VAL:CB	2.68	0.42
3:2:21:ARG:CB	3:2:31:LEU:HD21	2.49	0.42
4:3:20:GLY:O	4:3:21:PHE:C	2.58	0.42
10:B:213:A:H2'	10:B:214:G:C8	2.54	0.42
10:B:278:A:C4	10:B:362:A:C5	3.07	0.42
10:B:279:A:C2'	10:B:280:U:C5'	2.88	0.42
10:B:301:G:C2	10:B:302:C:O2	2.72	0.42
10:B:347:A:C3'	10:B:348:A:H5'	2.49	0.42
10:B:348:A:C6	10:B:349:U:O4	2.70	0.42
10:B:360:U:H2'	10:B:361:G:C4	2.54	0.42
10:B:363:G:C2	10:B:364:C:N3	2.88	0.42
10:B:558:U:H5'	18:J:114:LEU:HD22	2.00	0.42
10:B:817:C:O2	10:B:839:U:H4'	2.20	0.42
10:B:1042:G:C8	10:B:1042:G:OP2	2.73	0.42
10:B:1313:U:O2	10:B:1313:U:C2'	2.67	0.42
10:B:1556:C:H2'	10:B:1557:C:C6	2.55	0.42
10:B:1593:A:H2'	10:B:1594:U:H6	1.83	0.42
10:B:1747:U:H2'	10:B:1748:C:H6	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1824:G:H2'	10:B:1825:U:C6	2.54	0.42
10:B:2040:G:H2'	10:B:2041:U:O4'	2.19	0.42
10:B:2047:C:H2'	10:B:2048:G:H8	1.83	0.42
10:B:2146:C:H1'	10:B:2147:A:H1'	2.01	0.42
10:B:2683:C:H2'	10:B:2684:U:H6	1.83	0.42
11:C:51:ARG:O	11:C:51:ARG:NE	2.53	0.42
11:C:107:LYS:HG3	11:C:108:GLY:N	2.34	0.42
11:C:170:TYR:C	11:C:171:VAL:HG22	2.39	0.42
11:C:226:PRO:O	11:C:227:VAL:HG23	2.19	0.42
12:D:36:GLN:HA	12:D:46:ARG:CZ	2.49	0.42
12:D:78:GLY:C	12:D:79:LEU:HD23	2.39	0.42
12:D:144:GLY:O	12:D:145:SER:HB2	2.18	0.42
13:E:115:GLN:C	13:E:185:LYS:HG2	2.39	0.42
13:E:144:GLU:HG3	13:E:145:ASP:H	1.84	0.42
14:F:121:PHE:CE2	14:F:166:ARG:N	2.87	0.42
17:I:18:ASN:N	17:I:19:PRO:CD	2.82	0.42
17:I:74:PRO:HD2	17:I:77:VAL:HG21	2.01	0.42
18:J:130:HIS:HB3	18:J:131:ASN:H	1.60	0.42
19:K:63:VAL:HG21	19:K:85:VAL:HG21	2.00	0.42
21:M:82:MET:HB2	21:M:84:LYS:CD	2.49	0.42
23:O:55:GLU:HA	23:O:62:LEU:HB2	2.01	0.42
24:P:62:LYS:NZ	24:P:102:ARG:HH22	2.17	0.42
26:R:4:VAL:HG11	26:R:42:ALA:N	2.34	0.42
26:R:33:VAL:HB	26:R:35:PHE:CE1	2.54	0.42
26:R:82:HIS:O	26:R:82:HIS:ND1	2.53	0.42
29:U:5:ARG:CG	29:U:6:ARG:N	2.83	0.42
32:X:44:LYS:O	32:X:48:ARG:HD2	2.19	0.42
34:Z:15:SER:HB2	34:Z:25:ARG:HH12	1.81	0.42
34:Z:30:HIS:C	34:Z:48:GLN:HG2	2.39	0.42
34:Z:49:ARG:HH21	34:Z:53:THR:HG21	1.85	0.42
34:Z:64:PHE:C	34:Z:66:ILE:H	2.22	0.42
2:1:8:ILE:HG21	2:1:27:ARG:NH2	2.34	0.42
2:1:25:ASN:HB3	2:1:26:LYS:H	1.61	0.42
2:1:26:LYS:HD3	2:1:29:LYS:CG	2.49	0.42
3:2:16:HIS:ND1	10:B:684:G:OP1	2.53	0.42
5:4:14:CYS:SG	5:4:25:VAL:O	2.77	0.42
6:5:368:MET:HG3	6:5:370:ASP:OD2	2.18	0.42
10:B:275:C:C2'	10:B:276:U:C6	2.86	0.42
10:B:287:G:C2	10:B:354:A:C5	3.07	0.42
10:B:527:C:H5'	36:B:3317:HOH:O	2.19	0.42
10:B:920:A:H2'	10:B:921:C:H6	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1081:U:H2'	10:B:1082:U:H5'	2.01	0.42
10:B:1153:C:H5'	25:Q:75:TYR:HE2	1.85	0.42
10:B:1183:U:C2	10:B:1184:U:C5	3.08	0.42
10:B:1588:G:H2'	10:B:1589:U:C6	2.54	0.42
10:B:1668:A:N3	10:B:1670:C:C4	2.87	0.42
10:B:1847:A:H4'	10:B:1848:A:H8	1.83	0.42
10:B:2415:G:H5''	20:L:66:PHE:H	1.84	0.42
10:B:2682:A:O2'	10:B:2683:C:H5'	2.20	0.42
10:B:2811:G:C5'	12:D:62:LYS:HD2	2.48	0.42
10:B:2893:A:H4'	10:B:2894:G:H5'	1.99	0.42
11:C:114:GLN:O	11:C:115:ILE:HB	2.20	0.42
11:C:156:SER:O	11:C:159:THR:N	2.52	0.42
11:C:255:LYS:HZ3	11:C:261:ARG:CZ	2.33	0.42
12:D:140:HIS:HB3	12:D:141:ARG:H	1.61	0.42
13:E:120:VAL:HG12	13:E:121:VAL:N	2.34	0.42
13:E:189:THR:O	13:E:190:ALA:HB3	2.20	0.42
14:F:34:THR:CG2	14:F:89:THR:HG22	2.44	0.42
14:F:103:ILE:HG13	14:F:104:THR:N	2.34	0.42
14:F:135:ILE:HG23	14:F:136:ILE:N	2.33	0.42
14:F:148:VAL:O	14:F:149:ARG:C	2.58	0.42
16:H:11:ASN:C	16:H:13:GLY:H	2.22	0.42
17:I:56:VAL:CG2	17:I:68:PHE:HB2	2.50	0.42
18:J:128:ASN:CG	18:J:129:GLU:N	2.73	0.42
20:L:55:MET:O	20:L:59:ARG:HG2	2.19	0.42
22:N:29:VAL:HG12	22:N:78:LYS:HG2	2.02	0.42
22:N:29:VAL:HG13	22:N:83:LEU:HD13	2.02	0.42
23:O:30:ARG:O	23:O:31:THR:C	2.57	0.42
24:P:24:THR:HG21	24:P:111:GLU:CG	2.38	0.42
26:R:7:SER:HB2	26:R:21:ARG:HH22	1.83	0.42
26:R:78:ARG:CD	26:R:88:GLY:N	2.82	0.42
28:T:29:THR:HB	28:T:85:VAL:O	2.20	0.42
28:T:64:LYS:HD3	28:T:64:LYS:HA	1.87	0.42
29:U:13:LEU:HG	29:U:69:VAL:CG2	2.49	0.42
34:Z:15:SER:O	34:Z:21:VAL:HB	2.19	0.42
34:Z:17:SER:OG	34:Z:18:CYS:N	2.53	0.42
2:1:35:LEU:HG	2:1:35:LEU:O	2.19	0.42
5:4:24:ARG:HD3	5:4:26:ILE:HG23	2.01	0.42
9:A:3:C:H2'	9:A:4:C:O4'	2.20	0.42
10:B:1:G:H2'	10:B:2:G:H8	1.83	0.42
10:B:37:C:H4'	10:B:451:U:P	2.60	0.42
10:B:203:A:H2'	10:B:204:A:H8	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:275:C:H3'	10:B:276:U:C5	2.54	0.42
10:B:291:G:N3	10:B:350:G:N3	2.68	0.42
10:B:346:A:C5	10:B:347:A:C1'	3.03	0.42
10:B:372:G:O2'	10:B:373:U:P	2.77	0.42
10:B:670:A:OP1	20:L:47:ARG:HD3	2.20	0.42
10:B:1524:G:N1	10:B:1525:A:C5	2.87	0.42
10:B:1534:U:C2	10:B:1538:G:C6	3.08	0.42
10:B:1636:U:O2'	10:B:1637:A:H5'	2.20	0.42
10:B:1922:G:H2'	10:B:1923:U:O4'	2.19	0.42
10:B:2185:U:H2'	10:B:2186:G:C8	2.54	0.42
10:B:2263:C:H4'	10:B:2329:U:H4'	2.01	0.42
10:B:2653:U:H5	10:B:2654:A:HO2'	1.68	0.42
10:B:2759:G:H4'	15:G:34:ARG:NH1	2.30	0.42
10:B:2849:U:O4	10:B:2867:G:C8	2.73	0.42
11:C:155:ARG:O	11:C:156:SER:C	2.57	0.42
11:C:228:ASP:OD1	11:C:228:ASP:N	2.53	0.42
14:F:7:TYR:CA	14:F:11:VAL:HB	2.41	0.42
15:G:35:THR:O	15:G:36:LEU:HD12	2.19	0.42
16:H:9:VAL:O	16:H:9:VAL:HG12	2.19	0.42
16:H:23:ALA:C	16:H:25:TYR:H	2.23	0.42
16:H:27:ARG:CB	16:H:27:ARG:HH11	2.31	0.42
16:H:66:ASN:C	16:H:68:ARG:H	2.23	0.42
17:I:46:ASP:HA	17:I:50:LYS:CG	2.49	0.42
20:L:57:LEU:HD13	20:L:58:TYR:CE2	2.54	0.42
20:L:110:VAL:O	20:L:126:ARG:NH2	2.53	0.42
25:Q:5:ARG:O	25:Q:6:GLY:C	2.57	0.42
25:Q:93:ILE:C	25:Q:95:ALA:H	2.23	0.42
29:U:84:PHE:HB3	29:U:92:VAL:O	2.20	0.42
31:W:31:LEU:O	31:W:66:VAL:HB	2.19	0.42
4:3:41:ARG:HH12	4:3:42:HIS:HB3	1.85	0.42
10:B:69:C:H2'	10:B:70:G:C8	2.55	0.42
10:B:80:G:H5''	10:B:346:A:N9	2.31	0.42
10:B:280:U:H3'	10:B:281:C:H6	1.85	0.42
10:B:293:U:C5	10:B:345:A:N6	2.88	0.42
10:B:299:A:C6	10:B:300:A:N6	2.88	0.42
10:B:303:G:N1	10:B:304:U:C2	2.87	0.42
10:B:443:A:C2	10:B:1245:G:N3	2.88	0.42
10:B:786:C:O2'	10:B:787:C:H5'	2.19	0.42
10:B:956:G:C1'	21:M:81:ARG:HH22	2.33	0.42
10:B:981:A:H3'	10:B:982:C:C5'	2.50	0.42
10:B:1054:A:C2'	10:B:1055:G:H5'	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1205:A:C4'	10:B:1206:G:OP2	2.67	0.42
10:B:1287:A:OP1	22:N:104:ALA:HB3	2.20	0.42
10:B:1447:C:H4'	10:B:1545:A:O4'	2.19	0.42
10:B:1524:G:N2	10:B:1525:A:C4	2.88	0.42
10:B:1683:U:O2'	10:B:1684:G:H5'	2.19	0.42
10:B:1789:A:H2'	10:B:1790:C:H6	1.84	0.42
10:B:2028:U:H2'	10:B:2029:G:O4'	2.19	0.42
10:B:2038:G:H2'	10:B:2039:U:C6	2.54	0.42
10:B:2645:G:H4'	10:B:2646:C:OP2	2.19	0.42
11:C:222:THR:O	11:C:224:MET:N	2.52	0.42
13:E:17:THR:C	13:E:199:MET:SD	2.98	0.42
13:E:132:LYS:HD3	13:E:133:LEU:HD23	2.00	0.42
13:E:165:HIS:C	13:E:166:LYS:HG3	2.39	0.42
13:E:193:VAL:HG12	13:E:194:LYS:N	2.34	0.42
14:F:41:GLU:OE1	14:F:45:ASP:HA	2.18	0.42
16:H:55:GLU:C	16:H:57:LYS:N	2.73	0.42
16:H:125:THR:HA	16:H:146:VAL:CB	2.46	0.42
17:I:23:VAL:CG2	17:I:24:GLY:H	2.31	0.42
19:K:24:VAL:HA	19:K:39:ILE:CD1	2.50	0.42
19:K:47:ILE:HG22	19:K:49:ARG:N	2.32	0.42
20:L:33:ARG:HH11	20:L:34:GLY:HA3	1.85	0.42
21:M:13:HIS:O	21:M:14:LYS:HD2	2.20	0.42
21:M:73:ILE:CD1	21:M:92:TRP:N	2.82	0.42
22:N:1:MET:CG	22:N:2:ARG:H	2.32	0.42
23:O:56:LYS:HE3	23:O:57:ALA:CA	2.50	0.42
24:P:23:ASP:HB3	24:P:24:THR:H	1.46	0.42
24:P:64:SER:OG	24:P:71:ARG:NH1	2.53	0.42
25:Q:57:ARG:HA	25:Q:60:TRP:CE3	2.46	0.42
29:U:47:PRO:CD	29:U:48:VAL:N	2.82	0.42
29:U:55:GLY:O	29:U:57:ILE:N	2.53	0.42
29:U:73:ASN:HB2	29:U:96:LYS:HZ2	1.83	0.42
31:W:36:ILE:O	31:W:37:VAL:HB	2.20	0.42
32:X:44:LYS:HD2	32:X:48:ARG:NE	2.34	0.42
1:0:26:SER:OG	1:0:27:LEU:N	2.52	0.42
2:1:36:LYS:HD2	2:1:36:LYS:N	2.35	0.42
5:4:27:CYS:C	5:4:29:ALA:N	2.73	0.42
6:5:395:LYS:O	6:5:399:LYS:HG3	2.20	0.42
10:B:76:C:C5'	32:X:48:ARG:NH1	2.81	0.42
10:B:137:U:H6	10:B:137:U:O5'	2.01	0.42
10:B:291:G:C4	10:B:350:G:N3	2.86	0.42
10:B:295:G:H8	10:B:295:G:O5'	2.03	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:298:G:C8	10:B:298:G:O5'	2.71	0.42
10:B:359:G:C2'	10:B:360:U:C5'	2.92	0.42
10:B:388:G:N7	10:B:390:U:H2'	2.34	0.42
10:B:526:A:N3	10:B:2044:C:H1'	2.34	0.42
10:B:535:G:H21	25:Q:52:ARG:HH22	1.67	0.42
10:B:544:C:H2'	10:B:545:U:C2	2.54	0.42
10:B:583:G:H2'	10:B:584:C:H6	1.85	0.42
10:B:972:A:OP2	10:B:974:G:H5''	2.20	0.42
10:B:1132:U:H6	18:J:85:LYS:NZ	2.18	0.42
10:B:1304:A:O2'	10:B:1305:C:H5'	2.20	0.42
10:B:1439:A:N7	10:B:1440:U:C2	2.88	0.42
10:B:1532:A:C8	10:B:1532:A:OP2	2.72	0.42
10:B:1535:A:H8	10:B:1537:G:O6	2.03	0.42
10:B:1746:A:O2'	10:B:1747:U:H5'	2.20	0.42
10:B:1867:G:O2'	10:B:1868:C:H5'	2.20	0.42
10:B:2336:A:C1'	10:B:2337:G:OP1	2.67	0.42
10:B:2523:G:O2'	10:B:2524:G:H5'	2.20	0.42
10:B:2780:G:C2	18:J:120:ARG:HG3	2.55	0.42
10:B:2801:G:H2'	10:B:2802:G:C8	2.54	0.42
11:C:130:PRO:HA	11:C:187:CYS:O	2.19	0.42
11:C:185:ALA:C	11:C:187:CYS:H	2.21	0.42
12:D:13:ARG:O	12:D:21:SER:OG	2.38	0.42
12:D:60:VAL:HB	12:D:63:PRO:CG	2.47	0.42
15:G:162:ARG:HA	15:G:166:GLU:OE1	2.20	0.42
16:H:55:GLU:C	16:H:57:LYS:H	2.23	0.42
17:I:15:GLY:O	17:I:16:MET:HB2	2.19	0.42
17:I:17:ALA:O	17:I:18:ASN:CB	2.67	0.42
18:J:55:ILE:HD13	18:J:132:HIS:NE2	2.35	0.42
20:L:38:GLN:N	20:L:41:ARG:NH1	2.64	0.42
21:M:17:ASN:ND2	21:M:18:ARG:NH2	2.67	0.42
21:M:68:PHE:HA	21:M:69:PRO:HD2	1.80	0.42
24:P:54:LEU:HB3	24:P:55:HIS:H	1.47	0.42
25:Q:91:ARG:N	25:Q:91:ARG:HD2	2.28	0.42
25:Q:92:LYS:N	25:Q:92:LYS:HD3	2.34	0.42
26:R:43:ASN:OD1	26:R:56:GLY:HA3	2.20	0.42
28:T:15:HIS:O	28:T:16:VAL:C	2.58	0.42
29:U:15:GLY:HA2	29:U:18:LYS:HE2	2.02	0.42
32:X:38:GLN:H	32:X:38:GLN:HE21	1.65	0.42
33:Y:37:ARG:NH1	33:Y:37:ARG:HG3	2.34	0.42
9:A:92:C:H2'	9:A:93:C:C6	2.55	0.42
10:B:279:A:H1'	10:B:362:A:HO2'	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:336:C:C5'	29:U:81:ARG:NE	2.34	0.42
10:B:344:A:O5'	10:B:344:A:C8	2.73	0.42
10:B:426:C:O2'	10:B:427:U:H5'	2.20	0.42
10:B:562:U:H2'	10:B:572:A:O4'	2.20	0.42
10:B:708:G:H2'	10:B:709:U:H6	1.85	0.42
10:B:764:A:N1	10:B:1789:A:O2'	2.48	0.42
10:B:952:G:C6	10:B:966:G:C6	3.07	0.42
10:B:953:G:H2'	10:B:954:G:H8	1.84	0.42
10:B:1000:A:H1'	33:Y:10:ARG:HH12	1.85	0.42
10:B:1038:G:N1	10:B:1039:A:N6	2.67	0.42
10:B:1068:G:C6	10:B:1069:A:N6	2.87	0.42
10:B:1079:C:N4	10:B:1080:A:N6	2.68	0.42
10:B:1257:C:H5'	13:E:78:TRP:CH2	2.55	0.42
10:B:1392:A:H62	28:T:18:GLU:CG	2.28	0.42
10:B:1426:G:H8	10:B:1426:G:OP2	2.01	0.42
10:B:1446:C:H2'	10:B:1447:C:C6	2.55	0.42
10:B:1506:U:H2'	10:B:1507:C:H6	1.84	0.42
10:B:1799:G:N7	11:C:178:GLY:HA3	2.34	0.42
10:B:2053:G:C2'	10:B:2054:A:H5'	2.50	0.42
10:B:2304:G:H1'	14:F:152:ASP:OD1	2.20	0.42
10:B:2678:C:O2'	10:B:2679:A:H5'	2.20	0.42
10:B:2745:C:H3'	10:B:2746:U:C6	2.55	0.42
10:B:2845:U:H4'	24:P:54:LEU:CD2	2.50	0.42
11:C:17:LYS:HZ3	11:C:17:LYS:HG3	1.70	0.42
11:C:219:VAL:O	11:C:220:ARG:NE	2.48	0.42
12:D:154:LYS:CD	12:D:157:LYS:H	2.32	0.42
13:E:118:LEU:CD1	13:E:187:VAL:HG12	2.46	0.42
13:E:149:ILE:HG23	13:E:183:PHE:CG	2.55	0.42
15:G:18:ILE:HA	15:G:23:ILE:CD1	2.50	0.42
15:G:148:ARG:HE	15:G:153:PRO:HD2	1.85	0.42
18:J:1:MET:HG2	26:R:14:VAL:CG2	2.50	0.42
22:N:78:LYS:O	22:N:82:GLU:HB2	2.19	0.42
25:Q:103:VAL:HG23	25:Q:104:ALA:N	2.35	0.42
26:R:69:GLY:C	26:R:70:GLU:HG3	2.40	0.42
27:S:12:SER:OG	27:S:16:LYS:NZ	2.53	0.42
30:V:79:ARG:NH1	30:V:86:LEU:HD11	2.35	0.42
33:Y:29:ARG:O	33:Y:30:ARG:HB2	2.20	0.42
2:1:19:PHE:HD2	2:1:20:TYR:H	1.65	0.41
10:B:281:C:C2	10:B:359:G:N2	2.80	0.41
10:B:374:A:H61	10:B:400:G:H1'	1.84	0.41
10:B:458:G:H22	10:B:469:G:H2'	1.83	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:661:A:O2'	20:L:23:ILE:HA	2.20	0.41
10:B:834:G:O2'	10:B:835:C:H5'	2.20	0.41
10:B:1056:G:H4'	10:B:1086:A:H8	1.85	0.41
10:B:1094:U:H1'	10:B:1097:U:C5	2.51	0.41
10:B:1099:G:N1	10:B:1100:C:C4	2.87	0.41
10:B:1109:C:H42	10:B:1110:G:H1	1.67	0.41
10:B:1268:A:H2'	10:B:1269:A:O4'	2.19	0.41
10:B:1428:C:H2'	10:B:1569:A:OP2	2.20	0.41
10:B:2094:A:H5'	16:H:25:TYR:CD1	2.54	0.41
10:B:2771:C:O2'	12:D:173:GLN:NE2	2.53	0.41
10:B:2784:U:O2'	10:B:2785:C:H5'	2.20	0.41
10:B:2798:U:H1'	10:B:2800:A:N6	2.35	0.41
11:C:99:GLU:HG3	11:C:100:ARG:N	2.35	0.41
12:D:13:ARG:HB2	12:D:21:SER:CB	2.50	0.41
13:E:16:GLU:CG	13:E:196:VAL:HG13	2.50	0.41
21:M:10:ARG:HB2	21:M:11:LYS:HE3	2.02	0.41
21:M:71:LYS:NZ	21:M:91:TYR:HD2	2.17	0.41
21:M:100:LYS:O	21:M:101:VAL:HG13	2.20	0.41
22:N:1:MET:SD	22:N:2:ARG:HB2	2.60	0.41
22:N:114:GLU:HG2	22:N:115:LEU:N	2.24	0.41
22:N:116:VAL:HG13	22:N:117:ASP:N	2.35	0.41
23:O:18:LEU:C	23:O:18:LEU:HD12	2.40	0.41
24:P:92:ARG:NH2	24:P:110:LYS:HB3	2.34	0.41
24:P:93:LYS:HB2	24:P:96:LEU:HD12	2.02	0.41
24:P:111:GLU:H	24:P:111:GLU:HG3	1.61	0.41
26:R:31:GLU:HB3	26:R:32:THR:H	1.62	0.41
28:T:70:HIS:ND1	28:T:74:ILE:HB	2.35	0.41
29:U:70:ALA:HB3	29:U:77:GLY:O	2.20	0.41
31:W:66:VAL:CG2	31:W:67:LYS:H	2.24	0.41
32:X:45:GLN:NE2	32:X:45:GLN:N	2.68	0.41
1:0:39:ARG:HH12	22:N:99:LYS:HE3	1.84	0.41
4:3:11:LYS:NZ	4:3:11:LYS:HB2	2.35	0.41
6:5:354:LEU:N	6:5:355:PRO:HD3	2.36	0.41
6:5:364:VAL:HG11	29:U:51:LEU:N	2.35	0.41
6:5:430:MET:N	6:5:430:MET:SD	2.93	0.41
8:7:107:G:H2'	8:7:108:C:C6	2.55	0.41
9:A:75:G:N1	9:A:102:G:N2	2.67	0.41
10:B:285:G:C6	10:B:286:U:O4	2.70	0.41
10:B:286:U:O2	10:B:354:A:C2	2.70	0.41
10:B:288:U:H3	10:B:352:A:H61	1.68	0.41
10:B:503:A:H5''	10:B:504:A:H3'	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:560:C:H3'	10:B:561:G:C8	2.55	0.41
10:B:855:G:H21	31:W:23:LYS:HB3	1.85	0.41
10:B:912:C:H2'	10:B:913:U:C6	2.54	0.41
10:B:1009:A:N3	10:B:1153:C:O2'	2.48	0.41
10:B:1139:G:H5'	18:J:104:ALA:HB1	2.02	0.41
10:B:1322:A:C2'	10:B:1323:C:H5'	2.50	0.41
10:B:1552:A:N3	10:B:1552:A:H5''	2.35	0.41
10:B:1685:C:H2'	10:B:1686:C:H6	1.85	0.41
10:B:2251:G:OP2	10:B:2251:G:H8	2.02	0.41
11:C:171:VAL:HB	11:C:182:LYS:CG	2.50	0.41
13:E:146:VAL:O	13:E:147:LEU:CB	2.63	0.41
14:F:172:PHE:O	14:F:174:PHE:N	2.53	0.41
15:G:121:THR:O	15:G:133:LYS:HD3	2.20	0.41
17:I:78:LEU:O	17:I:81:LYS:HG3	2.19	0.41
18:J:58:ASN:O	18:J:59:ALA:HB3	2.20	0.41
18:J:128:ASN:CG	18:J:129:GLU:H	2.22	0.41
19:K:9:ASN:O	19:K:84:CYS:HB2	2.20	0.41
19:K:110:GLU:HB2	19:K:111:LYS:H	1.67	0.41
19:K:119:ALA:O	19:K:121:GLU:N	2.54	0.41
20:L:106:GLU:HG2	20:L:107:PHE:N	2.32	0.41
21:M:1:MET:H3	21:M:68:PHE:HE1	1.69	0.41
21:M:71:LYS:HG2	21:M:93:VAL:HA	2.02	0.41
21:M:108:VAL:HG23	21:M:112:LEU:CD1	2.40	0.41
22:N:10:LEU:O	22:N:12:ARG:N	2.53	0.41
22:N:116:VAL:C	22:N:118:ARG:N	2.73	0.41
26:R:78:ARG:CD	26:R:87:GLN:HG2	2.50	0.41
30:V:26:PHE:HD2	30:V:44:HIS:HD1	1.65	0.41
30:V:83:LYS:O	30:V:85:LYS:N	2.53	0.41
32:X:21:LEU:HD12	32:X:21:LEU:HA	1.80	0.41
33:Y:28:LEU:HD12	33:Y:28:LEU:N	2.36	0.41
34:Z:60:PHE:HD1	34:Z:60:PHE:HA	1.69	0.41
1:0:29:VAL:HG21	1:0:41:HIS:HA	2.02	0.41
4:3:35:LYS:O	4:3:36:ALA:HB3	2.20	0.41
5:4:27:CYS:SG	5:4:33:HIS:NE2	2.93	0.41
6:5:390:LYS:HB3	6:5:392:GLU:OE1	2.20	0.41
6:5:425:ARG:HG2	6:5:425:ARG:HH11	1.85	0.41
8:7:117:C:H2'	8:7:118:C:C6	2.55	0.41
8:7:155:G:H2'	8:7:156:A:C8	2.54	0.41
9:A:83:G:H2'	9:A:84:G:O4'	2.20	0.41
10:B:161:A:H8	10:B:161:A:O5'	2.02	0.41
10:B:277:G:O2'	10:B:361:G:N1	2.48	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:297:G:C8	10:B:298:G:C5	3.08	0.41
10:B:301:G:N1	10:B:317:G:C5	2.74	0.41
10:B:320:A:C8	13:E:132:LYS:CB	3.02	0.41
10:B:372:G:N2	10:B:400:G:H2'	2.34	0.41
10:B:381:G:O2'	10:B:382:A:H5'	2.19	0.41
10:B:557:C:H2'	10:B:558:U:H6	1.84	0.41
10:B:573:U:H5'	36:B:3335:HOH:O	2.20	0.41
10:B:633:A:H2'	10:B:634:C:C5'	2.49	0.41
10:B:1039:A:C2'	10:B:1040:A:H5'	2.49	0.41
10:B:1045:C:C3'	10:B:1046:A:H5'	2.50	0.41
10:B:1061:U:H4'	10:B:1070:A:O3'	2.20	0.41
10:B:1082:U:N3	10:B:1086:A:C6	2.88	0.41
10:B:1289:C:H2'	10:B:1290:C:H6	1.83	0.41
10:B:1520:U:C2	10:B:1521:G:C4	3.08	0.41
10:B:1525:A:C2	10:B:1526:C:C6	3.07	0.41
10:B:1909:C:H2'	10:B:1910:G:C8	2.55	0.41
10:B:2653:U:H3'	10:B:2654:A:H2'	2.02	0.41
11:C:130:PRO:HA	11:C:188:ARG:HA	2.02	0.41
12:D:1:MET:HB2	12:D:84:LEU:HD22	2.01	0.41
12:D:187:LEU:O	12:D:188:LEU:HD12	2.20	0.41
13:E:6:LYS:HZ1	13:E:119:ILE:N	2.18	0.41
13:E:7:ASP:C	13:E:9:GLN:H	2.24	0.41
13:E:161:ALA:O	13:E:162:ARG:HD2	2.19	0.41
14:F:14:LYS:HG3	14:F:15:LEU:N	2.33	0.41
14:F:23:SER:C	14:F:25:MET:N	2.73	0.41
15:G:18:ILE:HA	15:G:23:ILE:HD13	2.01	0.41
15:G:40:VAL:HG11	15:G:63:GLN:NE2	2.34	0.41
15:G:89:VAL:HG12	15:G:159:LYS:HA	2.01	0.41
16:H:6:LEU:HD12	16:H:15:LEU:CA	2.47	0.41
16:H:30:LEU:CD1	16:H:35:LYS:HD3	2.49	0.41
19:K:87:LEU:CA	19:K:95:ILE:HG22	2.49	0.41
20:L:27:LEU:HB2	20:L:28:GLY:H	1.39	0.41
20:L:38:GLN:H	20:L:41:ARG:CD	2.33	0.41
20:L:40:SER:C	20:L:41:ARG:HE	2.23	0.41
21:M:12:MET:O	21:M:13:HIS:HB2	2.20	0.41
21:M:82:MET:HB2	21:M:84:LYS:HD3	2.01	0.41
24:P:52:ARG:HH11	24:P:54:LEU:HB3	1.85	0.41
24:P:91:VAL:HB	24:P:113:LEU:HB3	2.03	0.41
26:R:2:TYR:N	26:R:46:GLU:HB2	2.30	0.41
28:T:73:ARG:O	28:T:74:ILE:HD13	2.20	0.41
29:U:57:ILE:C	29:U:58:VAL:HG23	2.41	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:U:59:GLU:CD	29:U:60:LYS:N	2.73	0.41
29:U:69:VAL:O	29:U:70:ALA:C	2.58	0.41
29:U:69:VAL:CG1	29:U:77:GLY:H	2.29	0.41
30:V:62:THR:HG22	30:V:71:LYS:HG2	2.02	0.41
31:W:47:GLY:O	31:W:54:ARG:HA	2.20	0.41
1:0:4:GLN:O	1:0:6:LYS:HE2	2.20	0.41
3:2:19:ARG:HG2	10:B:126:A:O5'	2.20	0.41
10:B:80:G:C4'	10:B:346:A:N6	2.83	0.41
10:B:118:A:H1'	10:B:178:G:O4'	2.20	0.41
10:B:282:A:C2	10:B:359:G:C2	3.09	0.41
10:B:335:C:C2'	10:B:336:C:C5	2.99	0.41
10:B:515:A:H2'	10:B:516:C:O4'	2.20	0.41
10:B:820:A:H2'	10:B:821:A:O4'	2.19	0.41
10:B:863:A:O2'	10:B:864:G:H5'	2.21	0.41
10:B:939:G:O2'	10:B:940:G:H5'	2.20	0.41
10:B:994:C:OP1	25:Q:49:ARG:HG2	2.19	0.41
10:B:1076:C:H6	10:B:1076:C:O5'	2.03	0.41
10:B:1527:G:N3	10:B:1543:G:N2	2.68	0.41
10:B:1818:U:H5''	11:C:155:ARG:CB	2.50	0.41
10:B:2033:A:H1'	10:B:2035:G:OP2	2.20	0.41
10:B:2050:C:H2'	10:B:2051:A:C8	2.55	0.41
10:B:2291:U:OP1	10:B:2380:C:O2'	2.38	0.41
10:B:2751:G:N3	10:B:2751:G:H5'	2.34	0.41
12:D:55:LYS:HB2	12:D:55:LYS:NZ	2.34	0.41
12:D:142:VAL:CB	12:D:143:PRO:CD	2.98	0.41
13:E:7:ASP:O	13:E:8:ALA:HB3	2.21	0.41
13:E:189:THR:HB	13:E:190:ALA:H	1.61	0.41
14:F:24:VAL:HA	14:F:27:VAL:HG23	2.02	0.41
14:F:150:GLY:O	14:F:151:LEU:HD12	2.20	0.41
18:J:136:GLN:HE21	18:J:136:GLN:HB2	1.63	0.41
19:K:108:ARG:HG3	19:K:108:ARG:NH1	2.35	0.41
21:M:11:LYS:HE3	21:M:11:LYS:N	2.35	0.41
21:M:35:ALA:C	21:M:36:VAL:HG13	2.39	0.41
21:M:36:VAL:HG12	30:V:82:TYR:HB2	2.01	0.41
21:M:45:GLN:NE2	21:M:119:LEU:O	2.54	0.41
22:N:72:ASP:CB	22:N:74:GLU:HG3	2.48	0.41
24:P:34:GLY:C	24:P:35:SER:O	2.57	0.41
24:P:94:ALA:C	24:P:96:LEU:H	2.23	0.41
25:Q:102:LYS:HG2	25:Q:103:VAL:N	2.36	0.41
26:R:5:PHE:N	26:R:12:HIS:HB3	2.36	0.41
26:R:78:ARG:HD3	26:R:87:GLN:C	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:R:94:THR:O	26:R:95:ASP:O	2.39	0.41
27:S:6:LYS:HA	27:S:104:THR:H	1.84	0.41
27:S:102:HIS:HB2	27:S:103:ILE:H	1.51	0.41
29:U:6:ARG:C	29:U:8:ASP:N	2.71	0.41
29:U:55:GLY:C	29:U:57:ILE:N	2.73	0.41
29:U:70:ALA:O	29:U:71:ILE:C	2.59	0.41
29:U:90:LYS:CG	29:U:91:LYS:H	2.32	0.41
30:V:44:HIS:CE1	30:V:85:LYS:HB2	2.55	0.41
31:W:16:GLU:C	31:W:18:LYS:HD2	2.40	0.41
2:1:53:ILE:HD13	2:1:54:LYS:H	1.81	0.41
3:2:6:GLN:O	10:B:686:U:H1'	2.19	0.41
4:3:16:THR:C	4:3:18:LYS:N	2.73	0.41
10:B:64:A:H1'	28:T:69:ARG:HE	1.86	0.41
10:B:271:G:O2'	10:B:272:A:P	2.79	0.41
10:B:299:A:H3'	10:B:300:A:N7	2.36	0.41
10:B:527:C:H5''	10:B:2779:U:H3	1.86	0.41
10:B:567:U:H2'	10:B:568:U:O4'	2.20	0.41
10:B:654:A:H2'	10:B:655:A:C5'	2.39	0.41
10:B:1077:A:C5'	17:I:93:ASN:OD1	2.69	0.41
10:B:1140:C:OP1	18:J:64:VAL:HG13	2.20	0.41
10:B:1473:G:C2	10:B:1519:G:C5	3.08	0.41
10:B:1485:U:O2'	10:B:1486:U:H5'	2.20	0.41
10:B:1519:G:N2	10:B:1520:U:C1'	2.83	0.41
10:B:1544:A:N1	10:B:1545:A:C4	2.88	0.41
10:B:1552:A:C3'	10:B:1553:A:C5'	2.98	0.41
10:B:2089:C:C2	10:B:2090:A:C8	3.09	0.41
10:B:2389:G:H5''	10:B:2390:U:O4'	2.20	0.41
10:B:2630:G:H2'	10:B:2631:G:H8	1.84	0.41
10:B:2637:U:C2'	10:B:2638:G:H5'	2.50	0.41
10:B:2651:C:O2'	10:B:2652:C:H5'	2.20	0.41
10:B:2660:A:H2'	10:B:2661:G:O4'	2.20	0.41
10:B:2705:A:H2'	10:B:2706:A:O4'	2.20	0.41
11:C:71:ASP:HB3	11:C:72:GLY:H	1.38	0.41
11:C:140:VAL:HG22	11:C:161:VAL:O	2.20	0.41
11:C:152:GLN:HB3	11:C:153:LEU:H	1.59	0.41
11:C:159:THR:O	11:C:160:TYR:HD1	2.02	0.41
11:C:168:GLY:C	11:C:170:TYR:H	2.21	0.41
12:D:110:THR:HG22	12:D:171:THR:CA	2.44	0.41
13:E:40:ARG:HD2	13:E:43:THR:OG1	2.20	0.41
13:E:141:MET:O	13:E:142:ALA:HB3	2.21	0.41
14:F:36:ASN:HD22	14:F:87:LYS:N	2.17	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:G:33:THR:CG2	15:G:34:ARG:N	2.82	0.41
15:G:40:VAL:HB	15:G:63:GLN:HE22	1.86	0.41
15:G:42:VAL:HA	15:G:51:PHE:HA	2.02	0.41
15:G:76:ILE:O	15:G:80:GLU:HB2	2.20	0.41
15:G:94:ARG:HH12	15:G:127:GLN:CD	2.24	0.41
17:I:32:VAL:HG13	17:I:66:PHE:CD2	2.55	0.41
18:J:34:ARG:CB	18:J:39:LYS:HD2	2.49	0.41
18:J:99:ARG:NH1	18:J:99:ARG:HB3	2.36	0.41
18:J:132:HIS:C	18:J:134:ALA:N	2.72	0.41
20:L:136:GLU:C	20:L:138:ALA:N	2.73	0.41
21:M:71:LYS:HD3	21:M:92:TRP:H	1.81	0.41
21:M:105:MET:HE3	21:M:106:ASP:O	2.21	0.41
22:N:32:GLU:O	22:N:115:LEU:CD2	2.69	0.41
23:O:21:LEU:O	23:O:23:ALA:N	2.53	0.41
24:P:56:SER:OG	24:P:57:ALA:N	2.53	0.41
25:Q:47:ARG:HA	25:Q:47:ARG:HD2	1.67	0.41
25:Q:91:ARG:O	25:Q:94:LEU:HD21	2.20	0.41
26:R:18:GLN:NE2	26:R:99:THR:HB	2.31	0.41
27:S:28:LYS:HB3	27:S:71:VAL:HG21	2.01	0.41
28:T:34:VAL:HG13	28:T:43:ILE:HD11	2.01	0.41
28:T:56:GLU:HB3	28:T:57:VAL:HG23	2.01	0.41
28:T:68:LYS:C	28:T:68:LYS:HD3	2.41	0.41
29:U:43:LYS:CE	29:U:44:HIS:N	2.83	0.41
2:1:46:VAL:O	2:1:47:ILE:HG12	2.20	0.41
5:4:1:MET:HA	10:B:2527:C:H1'	2.02	0.41
9:A:76:G:H2'	9:A:77:U:C6	2.56	0.41
10:B:83:A:H2'	10:B:84:A:C8	2.55	0.41
10:B:294:A:N6	10:B:345:A:N9	2.65	0.41
10:B:322:A:O2'	10:B:323:C:P	2.79	0.41
10:B:536:G:H4'	25:Q:56:PHE:HZ	1.84	0.41
10:B:657:U:H2'	10:B:658:U:H6	1.84	0.41
10:B:1066:U:H2'	10:B:1068:G:OP2	2.21	0.41
10:B:1074:G:C2	10:B:1075:C:N3	2.88	0.41
10:B:1079:C:H5''	10:B:1079:C:H6	1.85	0.41
10:B:1315:C:H2'	10:B:1316:U:H6	1.85	0.41
10:B:1341:G:H2'	10:B:1397:U:O2'	2.21	0.41
10:B:1408:G:O2'	10:B:1409:U:H5'	2.21	0.41
10:B:1513:U:H2'	10:B:1514:G:C5'	2.51	0.41
10:B:1522:A:C8	10:B:1522:A:OP1	2.73	0.41
10:B:1534:U:C2'	10:B:1536:C:N3	2.73	0.41
10:B:1851:U:H2'	10:B:1852:U:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:C:24:HIS:CB	11:C:27:LYS:HE3	2.51	0.41
11:C:27:LYS:N	11:C:28:PRO:HD3	2.32	0.41
11:C:50:THR:O	11:C:51:ARG:C	2.59	0.41
11:C:216:ARG:HB3	11:C:216:ARG:NH1	2.26	0.41
12:D:23:PRO:HG2	12:D:178:VAL:HG21	2.02	0.41
12:D:181:ASP:OD2	12:D:186:LEU:HD23	2.21	0.41
13:E:113:VAL:C	13:E:115:GLN:H	2.24	0.41
13:E:133:LEU:HD13	13:E:133:LEU:HA	1.88	0.41
13:E:163:ASN:OD1	13:E:166:LYS:N	2.53	0.41
14:F:3:LEU:HD23	14:F:3:LEU:O	2.21	0.41
21:M:41:LEU:O	21:M:92:TRP:HA	2.21	0.41
21:M:63:ILE:HA	21:M:102:LEU:O	2.20	0.41
21:M:71:LYS:HD3	21:M:92:TRP:C	2.41	0.41
23:O:17:LYS:NZ	31:W:77:LYS:HE3	2.35	0.41
24:P:22:GLY:O	24:P:91:VAL:HA	2.20	0.41
25:Q:12:ARG:O	25:Q:15:LYS:HB3	2.21	0.41
25:Q:108:LEU:O	25:Q:108:LEU:HD13	2.21	0.41
26:R:5:PHE:HD1	26:R:40:MET:CB	2.33	0.41
27:S:1:MET:HB3	27:S:4:ILE:CG1	2.50	0.41
29:U:46:LYS:HB3	29:U:46:LYS:HZ3	1.85	0.41
31:W:47:GLY:H	31:W:67:LYS:NZ	2.18	0.41
32:X:55:THR:HG22	32:X:59:GLU:CD	2.40	0.41
34:Z:44:PHE:CD1	34:Z:44:PHE:N	2.82	0.41
10:B:27:G:HO2'	10:B:28:A:H8	1.60	0.41
10:B:36:G:H4'	10:B:451:U:N3	2.35	0.41
10:B:142:A:N3	28:T:2:ILE:HD13	2.35	0.41
10:B:311:A:C6	10:B:328:U:C6	3.08	0.41
10:B:477:A:H2'	10:B:478:A:O4'	2.20	0.41
10:B:693:A:H2'	10:B:694:U:C6	2.56	0.41
10:B:846:U:O2	10:B:846:U:H2'	2.20	0.41
10:B:1059:G:H4'	17:I:116:MET:C	2.41	0.41
10:B:1066:U:O2'	10:B:1068:G:N7	2.40	0.41
10:B:1169:A:O2'	10:B:1170:C:H5'	2.21	0.41
10:B:1201:U:H2'	10:B:1202:G:H8	1.86	0.41
10:B:1314:C:O2	10:B:1314:C:H2'	2.21	0.41
10:B:1403:A:H2'	10:B:1404:C:H6	1.86	0.41
10:B:1538:G:C6	10:B:1539:U:C6	3.08	0.41
10:B:1655:A:H2	10:B:2049:G:O3'	2.03	0.41
10:B:1901:A:H1'	11:C:250:GLN:NE2	2.35	0.41
10:B:2232:C:P	34:Z:25:ARG:HH21	2.44	0.41
10:B:2305:U:O2	14:F:132:ARG:HG2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2322:A:N6	10:B:2333:A:N6	2.69	0.41
10:B:2544:G:H2'	10:B:2545:G:H8	1.85	0.41
10:B:2590:A:H2'	10:B:2591:C:H6	1.83	0.41
10:B:2604:U:O2'	10:B:2605:U:H5'	2.20	0.41
10:B:2805:C:H2'	10:B:2806:C:H6	1.86	0.41
10:B:2821:A:H2'	10:B:2822:G:H8	1.86	0.41
11:C:38:LYS:O	11:C:39:SER:HB3	2.21	0.41
11:C:251:THR:HG22	11:C:252:LYS:N	2.35	0.41
11:C:264:LYS:O	11:C:266:ILE:HG23	2.21	0.41
12:D:2:ILE:HG22	12:D:204:LYS:CE	2.51	0.41
12:D:20:VAL:HG23	12:D:21:SER:N	2.36	0.41
13:E:115:GLN:CA	13:E:185:LYS:HE3	2.49	0.41
13:E:118:LEU:HD11	13:E:143:LEU:HD22	2.02	0.41
13:E:128:ALA:CB	13:E:129:PRO:CD	2.78	0.41
14:F:18:GLU:O	14:F:19:PHE:HB3	2.20	0.41
14:F:34:THR:HA	14:F:89:THR:HA	2.03	0.41
15:G:10:VAL:CG1	15:G:47:ASN:HA	2.50	0.41
17:I:14:ALA:CA	17:I:45:THR:HG21	2.42	0.41
17:I:79:LEU:HB3	17:I:137:LEU:HD12	2.03	0.41
20:L:78:ARG:NH1	20:L:110:VAL:HG11	2.36	0.41
20:L:82:LEU:HD12	20:L:90:VAL:CG1	2.49	0.41
21:M:96:ILE:HD13	21:M:96:ILE:C	2.41	0.41
22:N:65:LEU:HD12	22:N:65:LEU:HA	1.82	0.41
23:O:16:ARG:CG	23:O:20:GLU:HG3	2.48	0.41
26:R:47:VAL:CG2	26:R:48:LYS:H	2.17	0.41
28:T:10:VAL:CG2	28:T:46:ALA:HB2	2.51	0.41
1:0:35:GLU:C	1:0:37:HIS:N	2.72	0.41
1:0:43:THR:O	1:0:44:ALA:C	2.59	0.41
6:5:415:ARG:NH1	6:5:415:ARG:HB3	2.35	0.41
10:B:30:G:O2'	10:B:31:C:H5'	2.21	0.41
10:B:282:A:C2	10:B:283:G:C5	3.09	0.41
10:B:319:G:H2'	10:B:320:A:O4'	2.20	0.41
10:B:338:G:O2'	10:B:339:U:H5'	2.19	0.41
10:B:352:A:H5'	10:B:353:C:OP2	2.21	0.41
10:B:365:U:C4	10:B:366:C:C4	3.09	0.41
10:B:428:A:H2'	10:B:429:A:O4'	2.19	0.41
10:B:606:U:H4'	10:B:658:U:H4'	2.03	0.41
10:B:1001:A:H2'	10:B:1002:G:O4'	2.21	0.41
10:B:1057:A:O2'	10:B:1058:U:H5'	2.21	0.41
10:B:1517:G:H2'	10:B:1518:C:O5'	2.20	0.41
10:B:1936:A:N6	10:B:1963:U:N3	2.66	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2204:G:O2'	10:B:2205:A:H5'	2.21	0.41
10:B:2230:G:H2'	10:B:2231:U:C6	2.56	0.41
10:B:2466:C:O2'	10:B:2467:C:H5'	2.21	0.41
10:B:2514:U:H2'	10:B:2515:C:C6	2.56	0.41
11:C:157:ALA:C	11:C:159:THR:H	2.23	0.41
12:D:3:GLY:HA3	12:D:49:GLN:HE22	1.86	0.41
12:D:4:LEU:HD22	12:D:79:LEU:HD12	2.02	0.41
13:E:40:ARG:HD2	13:E:43:THR:HG1	1.86	0.41
13:E:48:THR:O	13:E:49:ARG:O	2.38	0.41
15:G:37:ASN:HB3	15:G:63:GLN:NE2	2.35	0.41
16:H:6:LEU:H	16:H:16:GLY:CA	2.34	0.41
17:I:75:ALA:HB2	17:I:112:LYS:HE2	2.01	0.41
17:I:100:ILE:HG22	17:I:101:SER:O	2.20	0.41
18:J:64:VAL:HB	18:J:68:LYS:HB2	2.03	0.41
19:K:32:TYR:HB3	19:K:67:LYS:NZ	2.36	0.41
19:K:35:VAL:HG23	19:K:36:GLY:N	2.27	0.41
21:M:36:VAL:HG11	21:M:125:PRO:HD2	2.02	0.41
21:M:76:LYS:HA	21:M:77:PRO:HD3	1.93	0.41
21:M:109:PRO:N	21:M:112:LEU:HD13	2.35	0.41
21:M:133:LYS:HD2	21:M:133:LYS:O	2.21	0.41
23:O:6:ALA:C	23:O:8:ILE:H	2.23	0.41
23:O:30:ARG:O	23:O:31:THR:O	2.39	0.41
25:Q:97:ILE:HA	25:Q:100:PHE:CE1	2.56	0.41
26:R:1:MET:CA	26:R:46:GLU:HB2	2.39	0.41
26:R:42:ALA:C	26:R:54:VAL:HA	2.41	0.41
28:T:47:VAL:O	28:T:50:LEU:O	2.39	0.41
34:Z:4:ASP:O	34:Z:5:ILE:C	2.59	0.41
34:Z:25:ARG:HH11	34:Z:25:ARG:CG	2.33	0.41
1:0:12:ARG:C	1:0:14:MET:N	2.74	0.41
2:1:26:LYS:HD3	2:1:29:LYS:HD3	2.03	0.41
4:3:9:ALA:O	4:3:13:PHE:HB3	2.19	0.41
4:3:38:LYS:C	4:3:40:LYS:H	2.24	0.41
4:3:41:ARG:HD2	10:B:2350:C:OP2	2.21	0.41
5:4:7:VAL:H	5:4:23:ILE:CD1	2.34	0.41
6:5:375:ARG:HD3	6:5:408:MET:SD	2.60	0.41
10:B:30:G:H2'	10:B:31:C:C6	2.56	0.41
10:B:64:A:O2'	28:T:69:ARG:HB3	2.20	0.41
10:B:80:G:P	10:B:346:A:H8	2.43	0.41
10:B:83:A:C8	29:U:90:LYS:HB2	2.56	0.41
10:B:89:A:O2'	10:B:90:U:H5'	2.21	0.41
10:B:90:U:O4	10:B:91:A:N6	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:127:A:H5''	10:B:128:C:C6	2.55	0.41
10:B:154:U:O2'	10:B:155:A:H5'	2.21	0.41
10:B:272:A:C6	10:B:366:C:C2	3.09	0.41
10:B:276:U:O4'	10:B:362:A:N6	2.54	0.41
10:B:289:G:C5	10:B:290:U:C5	3.07	0.41
10:B:295:G:N3	10:B:296:U:C6	2.89	0.41
10:B:298:G:H2'	10:B:339:U:O4	2.21	0.41
10:B:300:A:P	10:B:300:A:C8	3.13	0.41
10:B:301:G:C5	10:B:317:G:O6	2.72	0.41
10:B:305:C:C4	10:B:306:U:O4	2.74	0.41
10:B:327:G:C2	10:B:328:U:O2	2.74	0.41
10:B:332:A:C2	10:B:335:C:N1	2.89	0.41
10:B:333:G:N9	10:B:334:C:H5	2.07	0.41
10:B:346:A:C5	10:B:347:A:N9	2.89	0.41
10:B:399:U:OP2	34:Z:49:ARG:NH1	2.54	0.41
10:B:506:G:H4'	10:B:509:C:O2	2.21	0.41
10:B:678:C:H2'	10:B:679:C:H6	1.86	0.41
10:B:709:U:H2'	10:B:710:U:H6	1.85	0.41
10:B:710:U:H2'	10:B:711:G:C8	2.56	0.41
10:B:849:A:H2'	10:B:850:U:C6	2.55	0.41
10:B:873:C:OP1	21:M:1:MET:HG3	2.21	0.41
10:B:1010:A:N3	10:B:1153:C:H1'	2.36	0.41
10:B:1030:C:O2'	10:B:1031:G:H5'	2.21	0.41
10:B:1083:U:H5''	10:B:1083:U:H6	1.86	0.41
10:B:1115:G:N2	10:B:1116:G:C4	2.88	0.41
10:B:1131:G:C4'	18:J:85:LYS:HZ2	2.33	0.41
10:B:1441:G:O2'	10:B:1442:U:H5'	2.21	0.41
10:B:1528:A:C2'	10:B:1529:G:C5'	2.86	0.41
10:B:1530:G:C2	10:B:1541:C:O2	2.72	0.41
10:B:1536:C:O2'	10:B:1537:G:OP2	2.31	0.41
10:B:1540:G:N2	10:B:1541:C:C1'	2.83	0.41
10:B:1607:C:N4	10:B:1622:G:OP2	2.53	0.41
10:B:1791:A:H1'	11:C:206:LYS:HZ1	1.85	0.41
10:B:1791:A:H1'	11:C:206:LYS:HZ2	1.84	0.41
10:B:1820:U:H4'	10:B:1821:A:OP2	2.21	0.41
10:B:2092:U:H4'	10:B:2093:G:O5'	2.20	0.41
10:B:2093:G:O2'	10:B:2094:A:H5'	2.21	0.41
10:B:2143:C:H2'	10:B:2144:G:O4'	2.20	0.41
10:B:2335:A:P	23:O:9:ARG:HG3	2.61	0.41
10:B:2515:C:H2'	10:B:2516:A:H8	1.85	0.41
10:B:2520:C:O2'	10:B:2521:C:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2520:C:C6	10:B:2567:G:H1'	2.56	0.41
10:B:2575:C:H1'	12:D:147:GLY:O	2.21	0.41
10:B:2682:A:C2	12:D:22:ILE:HD11	2.56	0.41
10:B:2683:C:O3'	24:P:59:THR:HG21	2.20	0.41
10:B:2845:U:H2'	10:B:2846:G:C8	2.56	0.41
11:C:113:ASP:O	11:C:115:ILE:HD12	2.21	0.41
11:C:145:MET:H	11:C:145:MET:HG2	1.35	0.41
12:D:30:GLU:N	12:D:30:GLU:CD	2.74	0.41
12:D:103:ASP:O	12:D:104:VAL:HB	2.21	0.41
12:D:120:GLY:N	12:D:123:LYS:HB2	2.35	0.41
12:D:164:GLN:HB2	12:D:164:GLN:HE21	1.61	0.41
12:D:170:VAL:O	12:D:171:THR:HB	2.20	0.41
13:E:149:ILE:HG22	13:E:168:ASP:HB3	2.03	0.41
14:F:89:THR:C	14:F:90:LEU:HD12	2.41	0.41
14:F:108:PRO:HB3	14:F:113:PHE:CE2	2.56	0.41
14:F:135:ILE:C	14:F:137:PHE:N	2.72	0.41
14:F:135:ILE:CG2	14:F:136:ILE:N	2.83	0.41
14:F:140:ILE:HG22	14:F:141:ASP:N	2.35	0.41
14:F:164:GLU:O	14:F:168:LEU:HD21	2.21	0.41
15:G:5:LYS:HE3	15:G:69:ALA:CA	2.51	0.41
15:G:42:VAL:HG23	15:G:43:LYS:N	2.35	0.41
15:G:51:PHE:HE1	15:G:63:GLN:NE2	2.18	0.41
15:G:153:PRO:HG3	15:G:160:GLY:CA	2.51	0.41
16:H:45:GLU:OE1	16:H:45:GLU:HA	2.21	0.41
16:H:89:LYS:C	16:H:90:LEU:HD12	2.40	0.41
16:H:132:PHE:CB	16:H:140:ALA:HB3	2.39	0.41
18:J:19:ASP:O	18:J:20:ALA:HB3	2.21	0.41
18:J:85:LYS:HD3	18:J:85:LYS:HA	1.78	0.41
20:L:14:LYS:HB3	20:L:14:LYS:HZ2	1.84	0.41
20:L:33:ARG:NH1	20:L:34:GLY:HA3	2.35	0.41
20:L:38:GLN:HA	20:L:41:ARG:NH1	2.36	0.41
20:L:55:MET:N	20:L:55:MET:SD	2.82	0.41
20:L:63:LYS:O	20:L:63:LYS:HG2	2.20	0.41
20:L:121:THR:HA	20:L:139:GLY:HA3	2.03	0.41
20:L:133:ALA:HA	20:L:136:GLU:HG2	2.03	0.41
21:M:95:LEU:HD23	21:M:95:LEU:HA	1.90	0.41
21:M:103:TYR:O	21:M:105:MET:N	2.54	0.41
22:N:57:THR:CB	22:N:61:ALA:HB3	2.51	0.41
23:O:64:TYR:HD1	23:O:64:TYR:HA	1.64	0.41
24:P:32:VAL:HG22	24:P:40:GLN:HE21	1.85	0.41
25:Q:50:ARG:O	25:Q:53:LYS:HD3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Q:65:ASN:O	25:Q:69:ARG:HG2	2.21	0.41
26:R:41:ILE:HD12	26:R:43:ASN:H	1.85	0.41
27:S:71:VAL:O	27:S:71:VAL:HG12	2.21	0.41
28:T:36:LYS:O	28:T:81:LYS:HD2	2.21	0.41
29:U:78:LYS:HE2	29:U:96:LYS:HE3	2.02	0.41
30:V:79:ARG:CZ	30:V:86:LEU:HD11	2.50	0.41
31:W:21:GLY:HA3	31:W:32:ALA:HA	2.01	0.41
33:Y:9:THR:HG23	33:Y:10:ARG:H	1.86	0.41
34:Z:5:ILE:CG2	34:Z:63:ARG:HE	2.34	0.41
2:1:7:LYS:O	2:1:7:LYS:HG3	2.21	0.41
4:3:24:LYS:HZ2	20:L:63:LYS:CA	2.33	0.41
8:7:103:C:H2'	8:7:104:G:C8	2.56	0.41
9:A:73:A:N3	9:A:73:A:H2'	2.36	0.41
10:B:23:G:O2'	10:B:24:G:H5'	2.20	0.41
10:B:26:G:C1'	10:B:515:A:H61	2.34	0.41
10:B:319:G:C6	10:B:320:A:N1	2.88	0.41
10:B:396:G:O2'	34:Z:28:VAL:HG11	2.21	0.41
10:B:439:A:H2'	10:B:440:C:O4'	2.21	0.41
10:B:526:A:N6	10:B:2626:C:C4'	2.84	0.41
10:B:1155:A:H61	33:Y:10:ARG:NH2	2.19	0.41
10:B:1206:G:H2'	10:B:1207:C:H6	1.85	0.41
10:B:1401:G:H2'	10:B:1402:U:C6	2.56	0.41
10:B:1408:G:H2'	10:B:1409:U:H6	1.87	0.41
10:B:1695:G:H2'	10:B:1696:G:O4'	2.20	0.41
10:B:1913:A:C1'	10:B:1914:C:OP1	2.65	0.41
10:B:1989:G:H2'	10:B:1990:C:O4'	2.21	0.41
10:B:2007:U:H2'	10:B:2008:C:C6	2.56	0.41
10:B:2023:C:H4'	10:B:2617:U:O3'	2.21	0.41
10:B:2083:G:H2'	10:B:2084:C:H6	1.86	0.41
10:B:2133:G:N3	10:B:2133:G:H2'	2.37	0.41
10:B:2265:U:H3'	10:B:2266:A:C5'	2.50	0.41
10:B:2354:C:H4'	31:W:30:VAL:CG1	2.45	0.41
10:B:2419:U:O2'	10:B:2420:C:H5'	2.21	0.41
10:B:2718:G:H5''	24:P:100:ARG:HD2	2.02	0.41
10:B:2737:G:H2'	10:B:2738:A:O4'	2.21	0.41
10:B:2782:G:O2'	10:B:2783:U:H5'	2.21	0.41
11:C:6:LYS:HA	11:C:7:PRO:HA	1.75	0.41
11:C:153:LEU:HD13	11:C:161:VAL:HG23	2.03	0.41
12:D:83:ARG:HG2	12:D:83:ARG:NH1	2.35	0.41
12:D:129:THR:O	12:D:130:GLN:CB	2.64	0.41
17:I:75:ALA:HB3	17:I:131:THR:HG21	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:I:78:LEU:HA	17:I:81:LYS:HG2	2.03	0.41
17:I:132:ALA:HA	17:I:135:MET:HG2	2.02	0.41
17:I:138:VAL:CG1	17:I:139:VAL:N	2.83	0.41
18:J:39:LYS:HA	18:J:39:LYS:HE2	2.02	0.41
18:J:100:VAL:H	18:J:103:ILE:CG1	2.34	0.41
19:K:98:ARG:HD2	19:K:98:ARG:N	2.35	0.41
20:L:82:LEU:O	20:L:83:ALA:CB	2.69	0.41
22:N:49:GLU:O	22:N:52:ILE:HB	2.20	0.41
24:P:29:VAL:CG2	24:P:47:ILE:HD11	2.51	0.41
25:Q:35:PHE:H	25:Q:35:PHE:HD1	1.69	0.41
25:Q:78:PHE:CE2	25:Q:82:LEU:HD11	2.56	0.41
27:S:13:SER:OG	27:S:16:LYS:HB2	2.21	0.41
28:T:6:ARG:O	28:T:8:LEU:N	2.53	0.41
30:V:80:HIS:HA	30:V:87:GLN:HE22	1.86	0.41
34:Z:33:ASN:HA	34:Z:45:THR:O	2.21	0.41
1:0:42:ILE:HG21	1:0:47:TYR:CE1	2.57	0.40
1:0:47:TYR:HA	1:0:52:LYS:HB2	2.03	0.40
2:1:8:ILE:HG21	2:1:27:ARG:HH21	1.86	0.40
5:4:7:VAL:HB	5:4:35:GLN:NE2	2.36	0.40
8:7:118:C:H2'	8:7:119:G:O4'	2.21	0.40
9:A:92:C:H2'	9:A:93:C:H6	1.85	0.40
10:B:189:G:P	34:Z:12:ILE:HG21	2.62	0.40
10:B:278:A:C4	10:B:362:A:N9	2.89	0.40
10:B:315:G:H2'	10:B:316:C:O4'	2.21	0.40
10:B:340:A:H2'	10:B:341:C:H5'	1.94	0.40
10:B:346:A:C6	10:B:347:A:C5	3.09	0.40
10:B:346:A:C6	10:B:347:A:N9	2.90	0.40
10:B:440:C:H2'	10:B:441:U:C6	2.55	0.40
10:B:839:U:H1'	10:B:1191:G:H1'	2.02	0.40
10:B:841:G:O2'	10:B:842:U:H5'	2.21	0.40
10:B:1029:A:O2'	21:M:118:LYS:HE3	2.22	0.40
10:B:1039:A:C2	10:B:1116:G:N1	2.84	0.40
10:B:1068:G:O2'	10:B:1069:A:H5'	2.20	0.40
10:B:1098:A:C4	10:B:1099:G:C8	3.09	0.40
10:B:1117:C:O2'	10:B:1118:C:H5'	2.21	0.40
10:B:1477:A:C6	10:B:1515:A:C4	3.07	0.40
10:B:1526:C:C2'	10:B:1527:G:C5'	2.99	0.40
10:B:1765:U:O2'	10:B:1766:G:H5'	2.21	0.40
10:B:1820:U:H3	11:C:197:ALA:HA	1.85	0.40
10:B:2014:A:OP1	27:S:95:ARG:NE	2.48	0.40
10:B:2026:U:C2	10:B:2027:G:C8	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2031:A:O2'	10:B:2454:G:N2	2.50	0.40
10:B:2080:A:H2'	10:B:2081:U:C6	2.55	0.40
10:B:2455:G:H2'	10:B:2456:C:H6	1.85	0.40
10:B:2575:C:H4'	12:D:148:GLN:CA	2.48	0.40
10:B:2875:C:H2'	10:B:2876:G:H8	1.86	0.40
10:B:2884:U:H2'	10:B:2885:G:H8	1.86	0.40
11:C:50:THR:O	11:C:51:ARG:O	2.39	0.40
11:C:116:GLN:O	11:C:127:ASN:HB3	2.20	0.40
11:C:254:LYS:HB2	11:C:254:LYS:HE2	1.87	0.40
12:D:62:LYS:HG2	12:D:63:PRO:HD2	1.96	0.40
12:D:106:LYS:O	12:D:206:ALA:HB2	2.21	0.40
12:D:187:LEU:C	12:D:188:LEU:HD12	2.41	0.40
15:G:16:VAL:HG12	15:G:17:LYS:N	2.35	0.40
17:I:35:MET:C	17:I:35:MET:SD	3.00	0.40
17:I:62:ALA:C	17:I:64:ARG:H	2.24	0.40
18:J:10:THR:HG22	18:J:50:THR:HA	2.03	0.40
18:J:81:ILE:C	18:J:83:GLY:N	2.73	0.40
19:K:23:LYS:HE3	19:K:24:VAL:O	2.21	0.40
20:L:38:GLN:O	20:L:41:ARG:HD3	2.21	0.40
21:M:38:ARG:NH1	21:M:38:ARG:HG3	2.36	0.40
21:M:71:LYS:O	21:M:72:PRO:C	2.58	0.40
21:M:136:MET:HG2	30:V:75:GLN:HG2	2.02	0.40
22:N:98:LEU:HB2	22:N:112:TYR:HE1	1.81	0.40
24:P:50:ARG:HD2	24:P:62:LYS:HB2	2.03	0.40
27:S:2:GLU:O	27:S:4:ILE:HD13	2.21	0.40
27:S:34:ASP:CA	27:S:37:THR:HG22	2.51	0.40
28:T:34:VAL:HG11	28:T:43:ILE:HD11	2.03	0.40
28:T:50:LEU:O	28:T:52:GLU:N	2.54	0.40
28:T:70:HIS:CG	28:T:74:ILE:HB	2.56	0.40
29:U:46:LYS:HA	29:U:54:PRO:O	2.21	0.40
31:W:65:LYS:HB3	31:W:65:LYS:HE3	1.87	0.40
4:3:22:LYS:O	4:3:23:HIS:O	2.39	0.40
5:4:13:ASN:ND2	5:4:13:ASN:N	2.67	0.40
6:5:357:MET:HA	6:5:361:PRO:HG3	2.04	0.40
6:5:431:LYS:HZ1	6:5:432:LYS:HE2	1.85	0.40
8:7:106:A:H2'	8:7:107:G:O4'	2.21	0.40
10:B:32:C:H2'	10:B:33:C:H5''	2.03	0.40
10:B:275:C:C6	10:B:276:U:H5	2.30	0.40
10:B:291:G:C6	10:B:292:U:O4	2.73	0.40
10:B:489:G:C2	10:B:491:G:H1'	2.57	0.40
10:B:535:G:N3	25:Q:52:ARG:NH1	2.69	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:598:U:H5'	20:L:20:GLY:HA2	2.03	0.40
10:B:688:U:O2'	10:B:689:A:H5'	2.22	0.40
10:B:719:C:O2'	10:B:720:U:H5'	2.21	0.40
10:B:764:A:OP1	11:C:209:ALA:HB2	2.22	0.40
10:B:947:A:O2'	10:B:984:A:H2	2.04	0.40
10:B:1132:U:C2	18:J:75:TYR:CE1	3.10	0.40
10:B:1236:G:O2'	10:B:1237:A:O5'	2.40	0.40
10:B:1527:G:N2	10:B:1543:G:H2'	2.35	0.40
10:B:1558:C:H4'	10:B:1559:U:H5''	2.03	0.40
10:B:1656:C:P	12:D:141:ARG:HD3	2.61	0.40
10:B:1726:C:H2'	10:B:1727:C:C6	2.56	0.40
10:B:1821:A:H5'	11:C:155:ARG:CD	2.50	0.40
10:B:2081:U:H5''	34:Z:23:LYS:HD2	2.02	0.40
10:B:2278:A:H62	31:W:10:ARG:HG2	1.85	0.40
10:B:2605:U:H2'	10:B:2606:C:C6	2.57	0.40
10:B:2869:G:H2'	10:B:2870:C:H6	1.86	0.40
12:D:37:VAL:HB	12:D:42:ASN:ND2	2.36	0.40
12:D:46:ARG:HD2	12:D:80:TRP:CE2	2.56	0.40
15:G:58:ALA:C	15:G:60:GLY:H	2.25	0.40
16:H:8:LYS:HB2	16:H:8:LYS:HE2	1.91	0.40
16:H:9:VAL:HB	16:H:35:LYS:HZ1	1.87	0.40
16:H:40:THR:OG1	16:H:43:ASN:ND2	2.54	0.40
17:I:16:MET:N	17:I:42:ASN:OD1	2.55	0.40
20:L:47:ARG:O	20:L:47:ARG:HG3	2.21	0.40
21:M:11:LYS:C	21:M:12:MET:SD	3.00	0.40
21:M:33:LEU:H	21:M:101:VAL:HG22	1.84	0.40
21:M:96:ILE:HD13	21:M:97:GLN:CG	2.51	0.40
22:N:21:PHE:HE1	22:N:24:MET:HE1	1.87	0.40
23:O:26:LEU:O	23:O:27:VAL:HB	2.21	0.40
26:R:101:ILE:HG22	26:R:102:SER:H	1.86	0.40
28:T:25:GLU:CG	28:T:26:LYS:H	2.33	0.40
30:V:33:GLY:C	30:V:35:GLU:H	2.25	0.40
30:V:77:VAL:HG21	30:V:79:ARG:NE	2.35	0.40
31:W:75:ASN:HD22	31:W:75:ASN:HA	1.64	0.40
33:Y:6:ILE:HD13	33:Y:6:ILE:H	1.85	0.40
34:Z:35:ASP:O	34:Z:42:PRO:HB3	2.21	0.40
6:5:350:LEU:H	6:5:350:LEU:CD2	2.34	0.40
10:B:13:A:O2'	10:B:15:G:N7	2.43	0.40
10:B:19:A:OP1	25:Q:20:ALA:O	2.39	0.40
10:B:247:G:OP2	10:B:249:C:N4	2.53	0.40
10:B:326:G:N2	10:B:327:G:C4	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:362:A:C2	10:B:363:G:O4'	2.75	0.40
10:B:464:U:H2'	10:B:465:G:O4'	2.21	0.40
10:B:484:C:O4'	29:U:45:GLN:CD	2.59	0.40
10:B:503:A:H5''	10:B:504:A:H5'	2.03	0.40
10:B:592:A:H2'	10:B:593:U:C6	2.56	0.40
10:B:593:U:H2'	10:B:594:U:C6	2.57	0.40
10:B:670:A:H3'	20:L:47:ARG:HD3	2.03	0.40
10:B:756:A:H2'	10:B:757:G:O4'	2.21	0.40
10:B:855:G:N2	31:W:23:LYS:HB3	2.37	0.40
10:B:978:G:C4	10:B:979:A:N7	2.90	0.40
10:B:1093:G:H8	10:B:1093:G:O5'	2.03	0.40
10:B:1330:C:H2'	10:B:1331:G:H8	1.86	0.40
10:B:1516:G:C2	10:B:1517:G:C5	3.10	0.40
10:B:1597:A:H5''	10:B:1598:A:H5'	2.03	0.40
10:B:1784:A:H4'	10:B:1785:A:O5'	2.20	0.40
10:B:1830:C:H2'	10:B:1831:G:H8	1.86	0.40
10:B:2458:G:H8	10:B:2459:A:H62	1.67	0.40
10:B:2484:G:P	21:M:44:ARG:HD2	2.60	0.40
10:B:2733:A:C8	10:B:2733:A:C3'	3.04	0.40
11:C:63:ILE:HG22	11:C:64:VAL:N	2.35	0.40
11:C:94:LEU:HG	11:C:95:TYR:N	2.36	0.40
13:E:16:GLU:HB3	13:E:196:VAL:HA	2.04	0.40
13:E:128:ALA:O	13:E:157:LEU:HD22	2.20	0.40
14:F:12:VAL:HG13	14:F:27:VAL:CG2	2.42	0.40
14:F:33:ILE:O	14:F:34:THR:HB	2.22	0.40
15:G:26:LYS:HG2	15:G:31:GLU:HG2	2.03	0.40
16:H:5:LEU:HD12	16:H:30:LEU:HD11	2.04	0.40
16:H:67:ALA:O	16:H:71:LYS:N	2.46	0.40
16:H:147:VAL:HG12	16:H:148:ALA:N	2.35	0.40
17:I:100:ILE:CG2	17:I:104:GLN:HB2	2.51	0.40
18:J:102:GLU:HG2	18:J:103:ILE:H	1.83	0.40
20:L:95:LEU:C	20:L:96:LYS:HD3	2.42	0.40
21:M:5:LYS:O	21:M:5:LYS:CD	2.69	0.40
21:M:69:PRO:HB2	21:M:70:ASP:H	1.63	0.40
22:N:11:ASN:OD1	22:N:11:ASN:N	2.51	0.40
22:N:29:VAL:CG2	22:N:75:ILE:HD11	2.44	0.40
22:N:97:ILE:HD12	22:N:113:ILE:HG12	2.02	0.40
23:O:94:ARG:O	23:O:96:GLY:N	2.54	0.40
23:O:108:ASP:O	23:O:112:GLU:CD	2.59	0.40
24:P:29:VAL:HG23	24:P:47:ILE:HD11	2.03	0.40
25:Q:61:ILE:O	25:Q:65:ASN:HB3	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:S:1:MET:O	27:S:3:THR:N	2.55	0.40
27:S:90:LYS:HE3	27:S:90:LYS:H	1.86	0.40
28:T:62:VAL:O	28:T:63:VAL:CG1	2.67	0.40
29:U:78:LYS:HD2	29:U:78:LYS:HA	1.93	0.40
2:1:41:VAL:O	2:1:42:VAL:HG23	2.21	0.40
2:1:42:VAL:HG12	2:1:43:ARG:CG	2.51	0.40
4:3:30:HIS:O	10:B:2420:C:N4	2.54	0.40
6:5:367:GLN:HB3	6:5:371:LYS:HD2	2.02	0.40
9:A:27:C:H5'	23:O:34:HIS:HE1	1.83	0.40
10:B:80:G:H1'	10:B:346:A:H62	1.86	0.40
10:B:241:A:OP1	10:B:241:A:H8	2.03	0.40
10:B:342:A:N1	10:B:343:C:N4	2.68	0.40
10:B:588:U:O4	10:B:670:A:H1'	2.22	0.40
10:B:985:C:H2'	10:B:986:C:H6	1.86	0.40
10:B:1041:G:N2	10:B:1115:G:C4	2.89	0.40
10:B:1045:C:C3'	10:B:1046:A:C5'	2.98	0.40
10:B:1310:G:H1'	10:B:1611:C:H5'	2.03	0.40
10:B:1381:G:O2'	10:B:1382:G:H5'	2.21	0.40
10:B:1396:U:O2	10:B:1396:U:H5'	2.22	0.40
10:B:2093:G:OP1	16:H:24:GLY:HA3	2.22	0.40
10:B:2347:C:OP1	10:B:2347:C:H4'	2.21	0.40
10:B:2385:C:H2'	10:B:2386:A:C8	2.56	0.40
10:B:2469:A:C4'	21:M:55:ARG:HG3	2.46	0.40
11:C:161:VAL:HG11	11:C:173:LEU:HD22	2.03	0.40
11:C:179:GLU:CD	11:C:266:ILE:HA	2.42	0.40
11:C:245:THR:O	11:C:246:PRO:C	2.59	0.40
12:D:120:GLY:H	12:D:123:LYS:CB	2.35	0.40
13:E:16:GLU:HG2	13:E:196:VAL:HG13	2.04	0.40
13:E:148:ILE:HB	13:E:185:LYS:O	2.20	0.40
14:F:35:LEU:HG	14:F:153:ILE:HG23	2.02	0.40
14:F:90:LEU:HD23	14:F:94:ARG:HG2	2.03	0.40
15:G:148:ARG:NE	15:G:153:PRO:HD2	2.37	0.40
17:I:6:ALA:O	17:I:7:TYR:HB3	2.21	0.40
17:I:32:VAL:CG2	17:I:60:VAL:HG21	2.46	0.40
18:J:118:MET:O	18:J:121:LYS:HB2	2.20	0.40
19:K:76:VAL:HG12	19:K:77:ILE:N	2.36	0.40
20:L:41:ARG:HD3	20:L:41:ARG:N	2.37	0.40
22:N:76:VAL:O	22:N:79:LEU:HB2	2.21	0.40
23:O:53:THR:O	23:O:54:VAL:O	2.40	0.40
24:P:104:GLY:O	24:P:105:LYS:HB3	2.21	0.40
27:S:2:GLU:OE1	27:S:107:VAL:O	2.39	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:T:71:GLY:O	28:T:72:GLN:HG3	2.22	0.40
29:U:46:LYS:HB3	29:U:46:LYS:HZ2	1.83	0.40
31:W:31:LEU:CD1	31:W:66:VAL:HG23	2.51	0.40
33:Y:4:ILE:O	33:Y:4:ILE:HG23	2.21	0.40
2:1:11:VAL:HG13	2:1:12:SER:N	2.37	0.40
4:3:51:LYS:O	4:3:51:LYS:HG3	2.20	0.40
8:7:148:C:H2'	8:7:149:A:C8	2.57	0.40
10:B:197:A:N6	10:B:2430:A:H2'	2.36	0.40
10:B:303:G:C2'	10:B:304:U:H5'	2.52	0.40
10:B:309:A:C2	10:B:329:G:O2'	2.73	0.40
10:B:319:G:C6	10:B:320:A:C5	3.08	0.40
10:B:319:G:N9	10:B:333:G:N2	2.69	0.40
10:B:347:A:N1	10:B:348:A:C4	2.90	0.40
10:B:911:A:C6	21:M:13:HIS:HB3	2.56	0.40
10:B:1017:G:O2'	10:B:1018:U:H5'	2.22	0.40
10:B:1018:U:O5'	10:B:1018:U:H6	2.05	0.40
10:B:1278:C:H2'	10:B:1279:G:C8	2.57	0.40
10:B:1540:G:C2'	10:B:1541:C:H5'	2.47	0.40
10:B:1695:G:H1'	11:C:14:HIS:O	2.22	0.40
10:B:1818:U:HO2'	10:B:1819:A:P	2.43	0.40
10:B:1946:U:H2'	10:B:1947:C:H6	1.86	0.40
10:B:2052:A:H4'	12:D:148:GLN:CB	2.51	0.40
10:B:2354:C:O2'	31:W:31:LEU:CB	2.69	0.40
10:B:2373:G:H2'	10:B:2374:C:H6	1.84	0.40
10:B:2454:G:O2'	10:B:2455:G:H5'	2.21	0.40
10:B:2491:U:H5''	10:B:2570:G:H5'	2.04	0.40
10:B:2492:U:O2'	10:B:2493:U:H5'	2.21	0.40
10:B:2864:G:H2'	10:B:2865:U:C6	2.56	0.40
11:C:68:ARG:CD	11:C:127:ASN:ND2	2.85	0.40
11:C:95:TYR:HB2	11:C:99:GLU:HB3	2.03	0.40
11:C:136:VAL:O	11:C:137:GLY:C	2.59	0.40
12:D:13:ARG:HB2	12:D:21:SER:HB2	2.03	0.40
12:D:61:THR:HB	12:D:62:LYS:HE3	2.04	0.40
13:E:164:LEU:HG	13:E:165:HIS:N	2.37	0.40
14:F:32:LYS:HB3	14:F:91:ARG:HB3	2.04	0.40
14:F:32:LYS:HD2	14:F:89:THR:HB	2.04	0.40
15:G:57:TYR:CZ	15:G:59:ASP:HB2	2.56	0.40
15:G:97:VAL:CG2	15:G:124:CYS:H	2.35	0.40
15:G:129:GLU:O	15:G:130:ILE:HG13	2.22	0.40
16:H:9:VAL:HG21	16:H:35:LYS:HE2	2.04	0.40
16:H:27:ARG:HH11	16:H:27:ARG:HB2	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:K:23:LYS:CG	19:K:24:VAL:N	2.84	0.40
20:L:79:LEU:O	20:L:81:ASP:OD1	2.39	0.40
21:M:11:LYS:HZ1	21:M:12:MET:H	1.70	0.40
24:P:38:ARG:HG3	24:P:38:ARG:HH11	1.85	0.40
25:Q:34:ALA:C	25:Q:38:VAL:HG12	2.42	0.40
25:Q:78:PHE:CZ	25:Q:82:LEU:HD11	2.56	0.40
25:Q:101:ASP:O	25:Q:104:ALA:HB3	2.22	0.40
29:U:46:LYS:CB	29:U:46:LYS:NZ	2.83	0.40
29:U:71:ILE:C	29:U:71:ILE:HD13	2.42	0.40
31:W:40:ARG:CZ	31:W:68:PHE:O	2.69	0.40
31:W:42:THR:O	31:W:43:LYS:HB2	2.21	0.40
31:W:44:PHE:O	31:W:44:PHE:HD1	2.04	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 PDB entries followed by that with respect to all EM entries.

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	0	54/56 (96%)	30 (56%)	15 (28%)	9 (17%)	0	3
2	1	52/54 (96%)	19 (36%)	23 (44%)	10 (19%)	0	2
3	2	44/46 (96%)	23 (52%)	14 (32%)	7 (16%)	0	3
4	3	62/64 (97%)	30 (48%)	25 (40%)	7 (11%)	0	7
5	4	36/38 (95%)	18 (50%)	9 (25%)	9 (25%)	0	1
6	5	107/109 (98%)	83 (78%)	19 (18%)	5 (5%)	2	21
7	6	6/8 (75%)	5 (83%)	1 (17%)	0	100	100
11	C	265/273 (97%)	103 (39%)	82 (31%)	80 (30%)	0	0
12	D	207/209 (99%)	90 (44%)	69 (33%)	48 (23%)	0	1
13	E	199/201 (99%)	98 (49%)	60 (30%)	41 (21%)	0	2

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
14	F	176/178 (99%)	95 (54%)	48 (27%)	33 (19%)	0	2
15	G	174/176 (99%)	118 (68%)	39 (22%)	17 (10%)	0	9
16	H	147/149 (99%)	85 (58%)	47 (32%)	15 (10%)	0	8
17	I	139/141 (99%)	124 (89%)	11 (8%)	4 (3%)	4	29
18	J	138/142 (97%)	67 (49%)	42 (30%)	29 (21%)	0	2
19	K	119/123 (97%)	71 (60%)	32 (27%)	16 (13%)	0	4
20	L	132/144 (92%)	55 (42%)	36 (27%)	41 (31%)	0	0
21	M	134/136 (98%)	69 (52%)	37 (28%)	28 (21%)	0	2
22	N	125/127 (98%)	71 (57%)	34 (27%)	20 (16%)	0	3
23	O	115/117 (98%)	64 (56%)	26 (23%)	25 (22%)	0	2
24	P	112/114 (98%)	39 (35%)	36 (32%)	37 (33%)	0	0
25	Q	115/117 (98%)	81 (70%)	22 (19%)	12 (10%)	0	8
26	R	101/103 (98%)	44 (44%)	31 (31%)	26 (26%)	0	1
27	S	108/110 (98%)	63 (58%)	27 (25%)	18 (17%)	0	3
28	T	97/100 (97%)	41 (42%)	39 (40%)	17 (18%)	0	3
29	U	100/103 (97%)	30 (30%)	47 (47%)	23 (23%)	0	1
30	V	92/94 (98%)	62 (67%)	22 (24%)	8 (9%)	1	11
31	W	82/84 (98%)	29 (35%)	26 (32%)	27 (33%)	0	0
32	X	60/63 (95%)	28 (47%)	20 (33%)	12 (20%)	0	2
33	Y	56/58 (97%)	29 (52%)	17 (30%)	10 (18%)	0	3
34	Z	68/70 (97%)	29 (43%)	26 (38%)	13 (19%)	0	2
All	All	3422/3507 (98%)	1793 (52%)	982 (29%)	647 (19%)	0	2

All (647) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	0	10	SER
1	0	29	VAL
1	0	35	GLU
2	1	46	VAL
3	2	4	THR
3	2	44	VAL
4	3	15	LYS
4	3	23	HIS
4	3	31	ILE

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Mol	Chain	Res	Type
4	3	57	VAL
4	3	60	CYS
5	4	5	ALA
5	4	22	VAL
5	4	24	ARG
5	4	29	ALA
11	C	21	PRO
11	C	22	GLU
11	C	28	PRO
11	C	29	PHE
11	C	31	PRO
11	C	32	LEU
11	C	47	ARG
11	C	63	ILE
11	C	64	VAL
11	C	67	LYS
11	C	68	ARG
11	C	97	ASP
11	C	103	ILE
11	C	111	ALA
11	C	114	GLN
11	C	124	LYS
11	C	125	PRO
11	C	135	PRO
11	C	141	HIS
11	C	149	LYS
11	C	156	SER
11	C	176	ARG
11	C	209	ALA
11	C	226	PRO
11	C	227	VAL
11	C	239	PHE
11	C	246	PRO
11	C	258	SER
11	C	266	ILE
12	D	9	VAL
12	D	14	ILE
12	D	18	ASP
12	D	23	PRO
12	D	27	ILE
12	D	30	GLU
12	D	33	ARG

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Mol	Chain	Res	Type
12	D	42	ASN
12	D	59	ARG
12	D	84	LEU
12	D	92	VAL
12	D	102	ALA
12	D	114	LYS
12	D	128	ARG
12	D	130	GLN
12	D	139	SER
12	D	141	ARG
12	D	154	LYS
12	D	170	VAL
13	E	4	VAL
13	E	37	ALA
13	E	44	ARG
13	E	46	GLN
13	E	49	ARG
13	E	59	PRO
13	E	84	THR
13	E	86	ALA
13	E	117	ARG
13	E	129	PRO
13	E	147	LEU
13	E	148	ILE
13	E	165	HIS
13	E	196	VAL
14	F	66	ILE
14	F	73	VAL
14	F	76	PHE
14	F	131	VAL
14	F	139	GLU
14	F	149	ARG
14	F	173	ASP
15	G	6	ALA
15	G	19	ASN
15	G	91	VAL
16	H	29	PHE
16	H	38	PRO
16	H	41	LYS
17	I	18	ASN
18	J	43	GLU
18	J	44	TYR

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Mol	Chain	Res	Type
18	J	64	VAL
18	J	74	TYR
18	J	100	VAL
18	J	101	ILE
18	J	119	PHE
19	K	35	VAL
19	K	46	ALA
19	K	53	LYS
19	K	71	ARG
19	K	72	PRO
19	K	85	VAL
19	K	89	ASN
19	K	110	GLU
19	K	120	PRO
20	L	40	SER
20	L	56	PRO
20	L	62	PRO
20	L	68	SER
20	L	73	ILE
20	L	85	VAL
20	L	90	VAL
20	L	117	THR
20	L	118	THR
20	L	119	PRO
20	L	120	VAL
20	L	126	ARG
20	L	127	VAL
20	L	141	LYS
21	M	4	PRO
21	M	14	LYS
21	M	69	PRO
21	M	77	PRO
21	M	80	VAL
21	M	98	PRO
21	M	109	PRO
22	N	37	THR
22	N	89	SER
22	N	94	TYR
22	N	107	ASN
22	N	113	ILE
22	N	116	VAL
22	N	118	ARG

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Mol	Chain	Res	Type
23	O	37	ALA
23	O	42	PRO
23	O	54	VAL
24	P	17	PRO
24	P	23	ASP
24	P	24	THR
24	P	52	ARG
24	P	55	HIS
24	P	60	VAL
24	P	72	VAL
24	P	76	HIS
24	P	85	VAL
24	P	90	ALA
24	P	94	ALA
25	Q	34	ALA
25	Q	91	ARG
26	R	11	GLN
26	R	15	SER
26	R	17	GLY
26	R	24	LYS
26	R	47	VAL
26	R	59	ILE
26	R	74	ILE
26	R	95	ASP
26	R	101	ILE
27	S	3	THR
27	S	6	LYS
27	S	67	ASP
27	S	96	ILE
27	S	103	ILE
28	T	5	GLU
28	T	34	VAL
29	U	24	VAL
29	U	41	VAL
29	U	63	ALA
29	U	71	ILE
29	U	92	VAL
31	W	11	ASN
31	W	16	GLU
31	W	18	LYS
31	W	32	ALA
31	W	44	PHE

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Mol	Chain	Res	Type
31	W	66	VAL
31	W	75	ASN
31	W	81	ILE
32	X	7	ARG
32	X	9	LYS
32	X	33	ALA
33	Y	9	THR
33	Y	51	SER
34	Z	7	PRO
34	Z	8	LYS
34	Z	40	CYS
34	Z	58	ASP
34	Z	60	PHE
1	0	39	ARG
1	0	51	ARG
2	1	5	ARG
2	1	35	LEU
3	2	43	THR
4	3	16	THR
5	4	3	VAL
5	4	17	VAL
6	5	370	ASP
11	C	53	ILE
11	C	72	GLY
11	C	90	ILE
11	C	98	GLY
11	C	107	LYS
11	C	140	VAL
11	C	143	VAL
11	C	157	ALA
11	C	163	ILE
11	C	194	VAL
11	C	196	ASN
11	C	208	GLY
11	C	255	LYS
12	D	2	ILE
12	D	34	VAL
12	D	104	VAL
12	D	129	THR
12	D	155	VAL
12	D	162	ALA
12	D	180	VAL

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Mol	Chain	Res	Type
12	D	206	ALA
12	D	207	VAL
13	E	23	PHE
13	E	52	VAL
13	E	61	ARG
13	E	62	GLN
13	E	82	GLY
13	E	90	GLN
13	E	104	ALA
13	E	120	VAL
13	E	128	ALA
13	E	171	ASP
13	E	186	VAL
14	F	3	LEU
14	F	7	TYR
14	F	19	PHE
14	F	31	GLU
14	F	46	LYS
14	F	57	ALA
14	F	67	THR
14	F	75	GLY
14	F	122	ASP
14	F	136	ILE
14	F	148	VAL
14	F	150	GLY
14	F	153	ILE
14	F	162	ASP
14	F	176	PHE
15	G	25	ILE
15	G	151	ARG
15	G	159	LYS
15	G	166	GLU
16	H	8	LYS
18	J	4	PHE
18	J	6	ALA
18	J	50	THR
18	J	73	VAL
18	J	81	ILE
18	J	83	GLY
18	J	130	HIS
18	J	137	PRO
19	K	25	LEU

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Mol	Chain	Res	Type
19	K	73	ASP
20	L	29	LYS
20	L	34	GLY
20	L	48	ARG
20	L	57	LEU
20	L	77	ILE
20	L	95	LEU
20	L	128	THR
20	L	140	GLY
21	M	11	LYS
21	M	36	VAL
21	M	58	LYS
21	M	86	LYS
21	M	104	GLU
22	N	5	LYS
22	N	8	ARG
22	N	11	ASN
22	N	90	ARG
22	N	112	TYR
22	N	119	SER
22	N	126	ALA
23	O	9	ARG
23	O	21	LEU
23	O	28	VAL
23	O	32	PRO
23	O	47	VAL
23	O	49	VAL
23	O	63	LYS
23	O	95	SER
23	O	115	LEU
24	P	49	ILE
24	P	78	PRO
24	P	82	SER
24	P	83	ILE
24	P	91	VAL
24	P	97	TYR
24	P	102	ARG
24	P	112	ARG
26	R	25	LEU
26	R	87	GLN
26	R	97	LYS
26	R	100	GLY

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Mol	Chain	Res	Type
27	S	5	ALA
27	S	8	ARG
27	S	29	VAL
28	T	14	PRO
28	T	30	ILE
28	T	32	LEU
28	T	63	VAL
28	T	65	GLY
28	T	81	LYS
28	T	85	VAL
29	U	21	ARG
29	U	22	GLY
29	U	64	ILE
29	U	77	GLY
30	V	45	ASP
30	V	64	VAL
30	V	71	LYS
31	W	2	HIS
31	W	23	LYS
31	W	37	VAL
31	W	42	THR
31	W	47	GLY
31	W	49	ASN
31	W	50	VAL
31	W	52	CYS
31	W	63	ASP
31	W	65	LYS
31	W	67	LYS
31	W	68	PHE
31	W	72	GLY
32	X	16	THR
32	X	30	MET
32	X	40	SER
32	X	46	VAL
34	Z	4	ASP
34	Z	9	TYR
34	Z	26	SER
34	Z	30	HIS
34	Z	32	LEU
34	Z	39	LYS
2	1	16	THR
2	1	43	ARG

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Mol	Chain	Res	Type
2	1	47	ILE
4	3	26	ALA
6	5	362	ASP
11	C	4	LYS
11	C	51	ARG
11	C	56	GLY
11	C	58	LYS
11	C	59	GLN
11	C	65	ASP
11	C	91	ALA
11	C	93	VAL
11	C	142	ASN
11	C	151	GLY
11	C	164	VAL
11	C	165	ALA
11	C	173	LEU
11	C	214	GLY
12	D	69	ALA
12	D	99	GLU
12	D	140	HIS
12	D	156	PHE
12	D	169	ARG
12	D	174	SER
12	D	185	ASN
12	D	190	LYS
12	D	193	VAL
12	D	205	PRO
13	E	54	GLY
13	E	68	ALA
13	E	69	ARG
13	E	93	SER
13	E	127	GLU
13	E	191	ASP
14	F	10	GLU
14	F	14	LYS
14	F	81	GLY
14	F	83	PRO
14	F	87	LYS
14	F	114	ARG
15	G	45	ALA
15	G	127	GLN
16	H	20	ASN

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Mol	Chain	Res	Type
16	H	37	VAL
16	H	44	ILE
16	H	127	GLU
17	I	23	VAL
18	J	46	PRO
18	J	121	LYS
18	J	127	GLY
18	J	138	GLN
19	K	3	GLN
19	K	121	GLU
20	L	27	LEU
20	L	64	PHE
20	L	82	LEU
20	L	84	LYS
20	L	91	ASP
20	L	94	THR
20	L	143	GLU
21	M	12	MET
21	M	72	PRO
21	M	81	ARG
21	M	97	GLN
21	M	105	MET
21	M	131	VAL
22	N	104	ALA
23	O	7	ARG
23	O	38	GLN
23	O	57	ALA
23	O	68	LYS
24	P	12	MET
24	P	25	VAL
24	P	39	LEU
24	P	56	SER
24	P	81	ASP
24	P	105	LYS
25	Q	23	TYR
25	Q	26	ALA
25	Q	73	ILE
25	Q	88	GLU
25	Q	92	LYS
26	R	7	SER
26	R	10	LYS
26	R	29	THR

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Mol	Chain	Res	Type
26	R	37	GLU
26	R	41	ILE
26	R	72	VAL
26	R	73	LYS
26	R	98	ILE
27	S	11	ARG
27	S	12	SER
27	S	104	THR
28	T	13	ALA
28	T	15	HIS
28	T	74	ILE
28	T	94	ASP
28	T	98	GLY
29	U	14	THR
29	U	35	VAL
29	U	39	ASN
29	U	47	PRO
29	U	54	PRO
29	U	72	PHE
30	V	54	ALA
31	W	77	LYS
32	X	4	LYS
32	X	28	LEU
33	Y	2	LYS
33	Y	10	ARG
33	Y	12	ALA
33	Y	14	GLY
33	Y	16	LEU
33	Y	57	GLU
1	0	53	VAL
2	1	21	THR
3	2	36	ALA
5	4	7	VAL
5	4	20	ASP
11	C	61	TYR
11	C	66	PHE
11	C	224	MET
11	C	230	PRO
11	C	231	HIS
11	C	251	THR
11	C	265	PHE
12	D	73	VAL

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Mol	Chain	Res	Type
12	D	125	TRP
12	D	201	LEU
13	E	39	ALA
13	E	53	THR
13	E	112	LEU
13	E	123	LYS
13	E	153	LEU
14	F	175	PRO
15	G	11	PRO
15	G	155	PRO
16	H	12	LEU
16	H	42	LYS
16	H	118	PRO
17	I	49	GLU
18	J	11	VAL
18	J	85	LYS
20	L	23	ILE
20	L	30	THR
20	L	33	ARG
20	L	35	HIS
21	M	3	GLN
21	M	21	ALA
21	M	59	ARG
21	M	70	ASP
21	M	71	LYS
21	M	120	ALA
21	M	127	LYS
22	N	20	MET
23	O	19	GLN
23	O	55	GLU
23	O	80	GLU
24	P	26	GLU
24	P	79	VAL
24	P	96	LEU
24	P	98	TYR
25	Q	21	LYS
25	Q	24	TYR
26	R	21	ARG
26	R	55	ASP
27	S	13	SER
27	S	28	LYS
27	S	34	ASP

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Mol	Chain	Res	Type
27	S	71	VAL
27	S	80	PRO
28	T	61	LEU
28	T	66	LYS
29	U	7	ASP
29	U	18	LYS
29	U	57	ILE
31	W	5	ALA
31	W	6	GLY
31	W	38	ARG
32	X	24	GLU
34	Z	42	PRO
1	0	5	ASN
3	2	8	SER
6	5	344	MET
6	5	361	PRO
6	5	431	LYS
11	C	50	THR
11	C	85	ASN
11	C	115	ILE
11	C	218	THR
11	C	225	ASN
11	C	236	GLY
12	D	52	THR
12	D	95	SER
12	D	101	PHE
12	D	189	VAL
14	F	34	THR
14	F	36	ASN
14	F	88	VAL
15	G	42	VAL
17	I	14	ALA
18	J	72	LYS
18	J	97	PRO
18	J	132	HIS
20	L	83	ALA
20	L	92	LEU
20	L	104	GLN
20	L	113	ALA
20	L	136	GLU
22	N	56	LYS
22	N	102	PHE

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Mol	Chain	Res	Type
22	N	122	ALA
23	O	52	SER
23	O	90	VAL
24	P	3	ILE
24	P	19	PHE
24	P	59	THR
24	P	92	ARG
24	P	110	LYS
25	Q	93	ILE
26	R	77	PHE
27	S	69	LEU
27	S	99	ARG
29	U	60	LYS
29	U	84	PHE
30	V	55	GLU
32	X	35	GLY
32	X	43	LEU
33	Y	17	PRO
33	Y	53	MET
34	Z	66	ILE
2	1	38	PHE
3	2	6	GLN
11	C	14	HIS
11	C	17	LYS
11	C	30	ALA
11	C	155	ARG
11	C	223	ALA
12	D	175	LEU
13	E	24	ASN
13	E	199	MET
15	G	32	LEU
15	G	59	ASP
16	H	75	LEU
18	J	84	ILE
20	L	37	GLY
25	Q	18	LYS
26	R	4	VAL
28	T	96	VAL
3	2	9	VAL
11	C	16	VAL
13	E	113	VAL
15	G	99	GLY

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Mol	Chain	Res	Type
21	M	26	VAL
21	M	89	VAL
22	N	39	PRO
24	P	21	PRO
24	P	69	VAL
25	Q	89	ILE
30	V	72	VAL
30	V	84	PRO
2	1	30	PRO
5	4	25	VAL
11	C	158	GLY
18	J	18	VAL
18	J	22	GLY
18	J	103	ILE
19	K	26	GLY
20	L	139	GLY
20	L	142	ILE
23	O	27	VAL
23	O	31	THR
29	U	53	GLN
11	C	46	GLY
11	C	108	GLY
11	C	171	VAL
11	C	217	PRO
12	D	98	VAL
14	F	39	VAL
16	H	34	GLY
16	H	95	GLY
18	J	66	GLY
19	K	115	ILE
21	M	37	GLY
23	O	87	ILE
29	U	4	ILE
29	U	46	LYS
31	W	35	ILE
1	0	34	GLY
2	1	42	VAL
12	D	203	VAL
13	E	76	PRO
13	E	175	ILE
15	G	130	ILE
16	H	9	VAL

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Mol	Chain	Res	Type
26	R	27	ILE
31	W	51	GLY
1	0	42	ILE
15	G	92	GLY
19	K	15	GLY
23	O	22	GLY
24	P	4	ILE
30	V	70	ILE

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 PDB entries followed by that with respect to all EM entries.

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	0	47/47 (100%)	31 (66%)	16 (34%)	0	1
2	1	48/48 (100%)	33 (69%)	15 (31%)	0	2
3	2	38/38 (100%)	27 (71%)	11 (29%)	0	2
4	3	51/51 (100%)	33 (65%)	18 (35%)	0	1
5	4	34/34 (100%)	22 (65%)	12 (35%)	0	1
6	5	92/92 (100%)	89 (97%)	3 (3%)	38	61
11	C	213/218 (98%)	145 (68%)	68 (32%)	0	2
12	D	164/164 (100%)	112 (68%)	52 (32%)	0	2
13	E	165/165 (100%)	115 (70%)	50 (30%)	0	2
14	F	149/149 (100%)	119 (80%)	30 (20%)	1	7
15	G	137/137 (100%)	105 (77%)	32 (23%)	1	4
16	H	114/114 (100%)	87 (76%)	27 (24%)	1	4
17	I	109/109 (100%)	106 (97%)	3 (3%)	43	64
18	J	114/116 (98%)	84 (74%)	30 (26%)	0	3
19	K	102/104 (98%)	78 (76%)	24 (24%)	1	4
20	L	97/103 (94%)	57 (59%)	40 (41%)	0	0
21	M	109/109 (100%)	77 (71%)	32 (29%)	0	2

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
22	N	103/103 (100%)	78 (76%)	25 (24%)	0	4
23	O	87/87 (100%)	58 (67%)	29 (33%)	0	2
24	P	99/99 (100%)	77 (78%)	22 (22%)	1	6
25	Q	89/89 (100%)	66 (74%)	23 (26%)	0	3
26	R	84/84 (100%)	68 (81%)	16 (19%)	1	8
27	S	93/93 (100%)	72 (77%)	21 (23%)	1	5
28	T	83/84 (99%)	60 (72%)	23 (28%)	0	3
29	U	83/84 (99%)	58 (70%)	25 (30%)	0	2
30	V	78/78 (100%)	66 (85%)	12 (15%)	2	14
31	W	62/62 (100%)	46 (74%)	16 (26%)	0	3
32	X	55/55 (100%)	40 (73%)	15 (27%)	0	3
33	Y	48/48 (100%)	36 (75%)	12 (25%)	0	3
34	Z	62/62 (100%)	43 (69%)	19 (31%)	0	2
All	All	2809/2826 (99%)	2088 (74%)	721 (26%)	2	3

All (721) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	0	3	GLN
1	0	4	GLN
1	0	5	ASN
1	0	11	LYS
1	0	12	ARG
1	0	14	MET
1	0	16	ARG
1	0	21	LEU
1	0	25	THR
1	0	27	LEU
1	0	29	VAL
1	0	32	THR
1	0	35	GLU
1	0	39	ARG
1	0	51	ARG
1	0	52	LYS
2	1	4	ILE
2	1	5	ARG
2	1	6	GLU

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Mol	Chain	Res	Type
2	1	7	LYS
2	1	9	LYS
2	1	23	THR
2	1	24	LYS
2	1	32	LYS
2	1	33	LEU
2	1	34	GLU
2	1	36	LYS
2	1	44	GLN
2	1	49	LYS
2	1	52	LYS
2	1	53	ILE
3	2	12	ARG
3	2	18	PHE
3	2	19	ARG
3	2	21	ARG
3	2	25	LYS
3	2	26	ASN
3	2	29	GLN
3	2	33	ARG
3	2	41	ARG
3	2	45	SER
3	2	46	LYS
4	3	3	ILE
4	3	4	LYS
4	3	6	VAL
4	3	11	LYS
4	3	12	ARG
4	3	18	LYS
4	3	21	PHE
4	3	25	HIS
4	3	28	LEU
4	3	29	ARG
4	3	30	HIS
4	3	32	LEU
4	3	35	LYS
4	3	37	THR
4	3	41	ARG
4	3	44	ARG
4	3	46	LYS
4	3	51	LYS
5	4	2	LYS

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Mol	Chain	Res	Type
5	4	4	ARG
5	4	8	LYS
5	4	9	LYS
5	4	12	ARG
5	4	18	LYS
5	4	19	ARG
5	4	20	ASP
5	4	23	ILE
5	4	33	HIS
5	4	36	ARG
5	4	37	GLN
6	5	354	LEU
6	5	392	GLU
6	5	430	MET
11	C	5	CYS
11	C	9	SER
11	C	10	PRO
11	C	13	ARG
11	C	14	HIS
11	C	17	LYS
11	C	22	GLU
11	C	23	LEU
11	C	27	LYS
11	C	28	PRO
11	C	32	LEU
11	C	33	LEU
11	C	35	LYS
11	C	36	ASN
11	C	38	LYS
11	C	44	ASN
11	C	51	ARG
11	C	58	LYS
11	C	59	GLN
11	C	62	ARG
11	C	64	VAL
11	C	78	GLU
11	C	84	PRO
11	C	86	ARG
11	C	94	LEU
11	C	100	ARG
11	C	102	TYR
11	C	110	LYS

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Mol	Chain	Res	Type
11	C	113	ASP
11	C	124	LYS
11	C	127	ASN
11	C	128	THR
11	C	129	LEU
11	C	131	MET
11	C	144	GLU
11	C	145	MET
11	C	152	GLN
11	C	155	ARG
11	C	162	GLN
11	C	171	VAL
11	C	172	THR
11	C	175	LEU
11	C	179	GLU
11	C	180	MET
11	C	181	ARG
11	C	184	GLU
11	C	186	ASP
11	C	188	ARG
11	C	194	VAL
11	C	196	ASN
11	C	201	LEU
11	C	203	VAL
11	C	206	LYS
11	C	213	ARG
11	C	216	ARG
11	C	218	THR
11	C	220	ARG
11	C	222	THR
11	C	224	MET
11	C	225	ASN
11	C	227	VAL
11	C	231	HIS
11	C	235	GLU
11	C	237	ARG
11	C	246	PRO
11	C	250	GLN
11	C	254	LYS
11	C	261	ARG
12	D	1	MET
12	D	4	LEU

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Mol	Chain	Res	Type
12	D	8	LYS
12	D	20	VAL
12	D	25	THR
12	D	26	VAL
12	D	30	GLU
12	D	34	VAL
12	D	35	THR
12	D	36	GLN
12	D	37	VAL
12	D	38	LYS
12	D	39	ASP
12	D	48	ILE
12	D	50	VAL
12	D	56	LYS
12	D	59	ARG
12	D	62	LYS
12	D	64	GLU
12	D	67	HIS
12	D	70	LYS
12	D	82	PHE
12	D	84	LEU
12	D	86	GLU
12	D	89	GLU
12	D	90	PHE
12	D	96	ILE
12	D	99	GLU
12	D	103	ASP
12	D	105	LYS
12	D	113	SER
12	D	127	PHE
12	D	128	ARG
12	D	133	THR
12	D	138	LEU
12	D	142	VAL
12	D	148	GLN
12	D	150	GLN
12	D	151	THR
12	D	154	LYS
12	D	155	VAL
12	D	157	LYS
12	D	159	LYS
12	D	160	LYS

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Mol	Chain	Res	Type
12	D	161	MET
12	D	164	GLN
12	D	165	MET
12	D	167	ASN
12	D	176	ASP
12	D	177	VAL
12	D	197	THR
12	D	207	VAL
13	E	1	MET
13	E	2	GLU
13	E	4	VAL
13	E	5	LEU
13	E	10	SER
13	E	18	THR
13	E	22	ASP
13	E	41	GLN
13	E	43	THR
13	E	44	ARG
13	E	46	GLN
13	E	47	LYS
13	E	49	ARG
13	E	55	SER
13	E	57	LYS
13	E	58	LYS
13	E	61	ARG
13	E	67	ARG
13	E	69	ARG
13	E	70	SER
13	E	74	LYS
13	E	78	TRP
13	E	85	PHE
13	E	98	LYS
13	E	106	LYS
13	E	107	SER
13	E	109	LEU
13	E	114	ARG
13	E	118	LEU
13	E	129	PRO
13	E	132	LYS
13	E	134	LEU
13	E	139	LYS
13	E	148	ILE

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Mol	Chain	Res	Type
13	E	150	THR
13	E	152	GLU
13	E	153	LEU
13	E	155	GLU
13	E	159	LEU
13	E	162	ARG
13	E	164	LEU
13	E	169	VAL
13	E	179	SER
13	E	184	ASP
13	E	188	MET
13	E	189	THR
13	E	193	VAL
13	E	197	GLU
13	E	199	MET
13	E	200	LEU
14	F	5	ASP
14	F	9	ASP
14	F	10	GLU
14	F	14	LYS
14	F	16	MET
14	F	21	TYR
14	F	37	MET
14	F	55	ASP
14	F	56	LEU
14	F	59	ILE
14	F	63	LYS
14	F	87	LYS
14	F	91	ARG
14	F	93	GLU
14	F	97	GLU
14	F	102	LEU
14	F	122	ASP
14	F	126	ASN
14	F	132	ARG
14	F	139	GLU
14	F	142	TYR
14	F	143	ASP
14	F	147	ARG
14	F	149	ARG
14	F	151	LEU
14	F	152	ASP

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Mol	Chain	Res	Type
14	F	168	LEU
14	F	172	PHE
14	F	174	PHE
14	F	177	ARG
15	G	2	ARG
15	G	3	VAL
15	G	17	LYS
15	G	18	ILE
15	G	23	ILE
15	G	25	ILE
15	G	29	ASN
15	G	34	ARG
15	G	46	ASP
15	G	47	ASN
15	G	49	LEU
15	G	55	ASP
15	G	57	TYR
15	G	59	ASP
15	G	70	LEU
15	G	72	ASN
15	G	80	GLU
15	G	86	LEU
15	G	94	ARG
15	G	98	LYS
15	G	113	ASP
15	G	121	THR
15	G	128	THR
15	G	133	LYS
15	G	143	VAL
15	G	146	ASP
15	G	150	TYR
15	G	151	ARG
15	G	152	ARG
15	G	169	ARG
15	G	174	LYS
15	G	176	LYS
16	H	1	MET
16	H	2	GLN
16	H	5	LEU
16	H	7	ASP
16	H	8	LYS
16	H	18	GLN

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Mol	Chain	Res	Type
16	H	22	LYS
16	H	27	ARG
16	H	28	ASN
16	H	30	LEU
16	H	33	GLN
16	H	35	LYS
16	H	42	LYS
16	H	51	ARG
16	H	57	LYS
16	H	68	ARG
16	H	70	GLU
16	H	73	ASN
16	H	75	LEU
16	H	77	THR
16	H	89	LYS
16	H	98	ASP
16	H	112	LYS
16	H	124	THR
16	H	132	PHE
16	H	135	HIS
16	H	139	PHE
17	I	2	LYS
17	I	96	LYS
17	I	141	ASP
18	J	3	THR
18	J	12	LYS
18	J	15	TRP
18	J	21	THR
18	J	23	LYS
18	J	24	THR
18	J	25	LEU
18	J	28	LEU
18	J	31	GLU
18	J	34	ARG
18	J	35	ARG
18	J	37	ARG
18	J	39	LYS
18	J	49	ASP
18	J	58	ASN
18	J	61	LYS
18	J	69	ARG
18	J	70	THR

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Mol	Chain	Res	Type
18	J	75	TYR
18	J	90	GLU
18	J	96	ARG
18	J	98	GLU
18	J	102	GLU
18	J	114	LEU
18	J	116	ARG
18	J	118	MET
18	J	119	PHE
18	J	122	LEU
18	J	136	GLN
18	J	139	VAL
19	K	4	GLU
19	K	9	ASN
19	K	17	ARG
19	K	20	MET
19	K	21	CYS
19	K	30	ARG
19	K	31	ARG
19	K	32	TYR
19	K	54	LYS
19	K	58	LEU
19	K	62	VAL
19	K	64	ARG
19	K	71	ARG
19	K	78	ARG
19	K	86	LEU
19	K	87	LEU
19	K	93	GLN
19	K	95	ILE
19	K	98	ARG
19	K	108	ARG
19	K	109	SER
19	K	110	GLU
19	K	116	ILE
19	K	120	PRO
20	L	13	LYS
20	L	14	LYS
20	L	18	ARG
20	L	27	LEU
20	L	29	LYS
20	L	33	ARG

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Mol	Chain	Res	Type
20	L	36	LYS
20	L	39	LYS
20	L	41	ARG
20	L	47	ARG
20	L	55	MET
20	L	56	PRO
20	L	57	LEU
20	L	59	ARG
20	L	60	ARG
20	L	61	LEU
20	L	70	LYS
20	L	76	GLU
20	L	78	ARG
20	L	82	LEU
20	L	84	LYS
20	L	90	VAL
20	L	91	ASP
20	L	92	LEU
20	L	96	LYS
20	L	103	ILE
20	L	104	GLN
20	L	105	ILE
20	L	106	GLU
20	L	107	PHE
20	L	111	ILE
20	L	112	LEU
20	L	115	GLU
20	L	116	VAL
20	L	118	THR
20	L	121	THR
20	L	122	VAL
20	L	126	ARG
20	L	127	VAL
20	L	143	GLU
21	M	1	MET
21	M	3	GLN
21	M	5	LYS
21	M	8	LYS
21	M	9	PHE
21	M	11	LYS
21	M	12	MET
21	M	14	LYS

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Mol	Chain	Res	Type
21	M	18	ARG
21	M	22	GLN
21	M	28	PHE
21	M	33	LEU
21	M	36	VAL
21	M	45	GLN
21	M	54	THR
21	M	55	ARG
21	M	63	ILE
21	M	71	LYS
21	M	76	LYS
21	M	86	LYS
21	M	88	ASN
21	M	96	ILE
21	M	100	LYS
21	M	104	GLU
21	M	105	MET
21	M	109	PRO
21	M	117	PHE
21	M	118	LYS
21	M	124	LEU
21	M	132	THR
21	M	133	LYS
21	M	136	MET
22	N	1	MET
22	N	3	HIS
22	N	9	GLN
22	N	10	LEU
22	N	11	ASN
22	N	13	ASN
22	N	21	PHE
22	N	22	ARG
22	N	33	ILE
22	N	34	ILE
22	N	35	LYS
22	N	45	ARG
22	N	48	VAL
22	N	57	THR
22	N	65	LEU
22	N	73	ASN
22	N	75	ILE
22	N	87	PHE

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Mol	Chain	Res	Type
22	N	94	TYR
22	N	98	LEU
22	N	99	LYS
22	N	103	ARG
22	N	112	TYR
22	N	115	LEU
22	N	120	GLU
23	O	1	MET
23	O	2	ASP
23	O	3	LYS
23	O	5	SER
23	O	9	ARG
23	O	10	ARG
23	O	13	ARG
23	O	15	ARG
23	O	25	ARG
23	O	31	THR
23	O	32	PRO
23	O	34	HIS
23	O	35	ILE
23	O	38	GLN
23	O	40	ILE
23	O	56	LYS
23	O	60	GLU
23	O	62	LEU
23	O	64	TYR
23	O	67	ASN
23	O	68	LYS
23	O	69	ASP
23	O	74	VAL
23	O	84	GLU
23	O	85	LYS
23	O	93	ASP
23	O	97	PHE
23	O	112	GLU
23	O	116	GLN
24	P	2	ASN
24	P	11	GLN
24	P	15	ASP
24	P	24	THR
24	P	38	ARG
24	P	42	PHE

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Mol	Chain	Res	Type
24	P	46	VAL
24	P	47	ILE
24	P	50	ARG
24	P	52	ARG
24	P	55	HIS
24	P	56	SER
24	P	60	VAL
24	P	73	PHE
24	P	74	GLN
24	P	79	VAL
24	P	87	ARG
24	P	88	ARG
24	P	100	ARG
24	P	108	ARG
24	P	111	GLU
24	P	113	LEU
25	Q	10	ARG
25	Q	12	ARG
25	Q	21	LYS
25	Q	32	ARG
25	Q	36	GLN
25	Q	38	VAL
25	Q	39	ILE
25	Q	47	ARG
25	Q	53	LYS
25	Q	55	GLN
25	Q	65	ASN
25	Q	71	ASN
25	Q	80	ASN
25	Q	84	LYS
25	Q	87	VAL
25	Q	90	ASP
25	Q	91	ARG
25	Q	92	LYS
25	Q	94	LEU
25	Q	96	ASP
25	Q	101	ASP
25	Q	102	LYS
25	Q	108	LEU
26	R	12	HIS
26	R	13	ARG
26	R	16	GLU

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Mol	Chain	Res	Type
26	R	18	GLN
26	R	25	LEU
26	R	39	LEU
26	R	40	MET
26	R	43	ASN
26	R	52	PRO
26	R	53	PHE
26	R	55	ASP
26	R	66	HIS
26	R	79	ARG
26	R	83	TYR
26	R	94	THR
26	R	95	ASP
27	S	3	THR
27	S	4	ILE
27	S	6	LYS
27	S	8	ARG
27	S	9	HIS
27	S	13	SER
27	S	16	LYS
27	S	28	LYS
27	S	36	LEU
27	S	37	THR
27	S	60	HIS
27	S	67	ASP
27	S	69	LEU
27	S	77	ASP
27	S	80	PRO
27	S	88	ARG
27	S	90	LYS
27	S	94	ASP
27	S	95	ARG
27	S	102	HIS
27	S	110	ARG
28	T	1	MET
28	T	5	GLU
28	T	6	ARG
28	T	8	LEU
28	T	10	VAL
28	T	11	LEU
28	T	15	HIS
28	T	21	SER

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Mol	Chain	Res	Type
28	T	24	MET
28	T	28	ASN
28	T	30	ILE
28	T	31	VAL
28	T	44	LYS
28	T	47	VAL
28	T	52	GLU
28	T	66	LYS
28	T	68	LYS
28	T	69	ARG
28	T	79	ASP
28	T	85	VAL
28	T	89	GLU
28	T	91	GLN
28	T	94	ASP
29	U	3	LYS
29	U	6	ARG
29	U	33	VAL
29	U	38	ILE
29	U	42	LYS
29	U	43	LYS
29	U	46	LYS
29	U	51	LEU
29	U	52	ASN
29	U	53	GLN
29	U	60	LYS
29	U	61	GLU
29	U	64	ILE
29	U	66	VAL
29	U	68	ASN
29	U	71	ILE
29	U	72	PHE
29	U	80	ASP
29	U	81	ARG
29	U	85	ARG
29	U	88	ASP
29	U	90	LYS
29	U	93	ARG
29	U	95	PHE
29	U	100	GLU
30	V	3	THR
30	V	9	ARG

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Mol	Chain	Res	Type
30	V	35	GLU
30	V	40	ILE
30	V	42	LEU
30	V	46	LYS
30	V	51	GLN
30	V	59	GLU
30	V	70	ILE
30	V	73	LYS
30	V	82	TYR
30	V	87	GLN
31	W	2	HIS
31	W	8	SER
31	W	10	ARG
31	W	18	LYS
31	W	19	ARG
31	W	20	LEU
31	W	23	LYS
31	W	40	ARG
31	W	44	PHE
31	W	45	HIS
31	W	54	ARG
31	W	55	ASP
31	W	65	LYS
31	W	69	GLU
31	W	81	ILE
31	W	84	GLU
32	X	2	LYS
32	X	5	GLU
32	X	7	ARG
32	X	8	GLU
32	X	12	GLU
32	X	15	ASN
32	X	17	GLU
32	X	18	LEU
32	X	34	SER
32	X	36	GLN
32	X	38	GLN
32	X	41	HIS
32	X	44	LYS
32	X	45	GLN
32	X	53	VAL
33	Y	6	ILE

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Mol	Chain	Res	Type
33	Y	7	THR
33	Y	8	GLN
33	Y	9	THR
33	Y	10	ARG
33	Y	15	ARG
33	Y	16	LEU
33	Y	19	HIS
33	Y	20	LYS
33	Y	31	ILE
33	Y	37	ARG
33	Y	39	ASP
34	Z	4	ASP
34	Z	6	HIS
34	Z	8	LYS
34	Z	13	THR
34	Z	15	SER
34	Z	18	CYS
34	Z	24	ILE
34	Z	25	ARG
34	Z	30	HIS
34	Z	32	LEU
34	Z	33	ASN
34	Z	35	ASP
34	Z	40	CYS
34	Z	49	ARG
34	Z	58	ASP
34	Z	63	ARG
34	Z	65	ASN
34	Z	66	ILE
34	Z	70	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (102) such sidechains are listed below:

Mol	Chain	Res	Type
1	0	3	GLN
2	1	25	ASN
4	3	23	HIS
5	4	13	ASN
5	4	35	GLN
6	5	337	GLN
6	5	343	ASN
6	5	381	ASN

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Mol	Chain	Res	Type
11	C	20	ASN
11	C	36	ASN
11	C	43	ASN
11	C	52	HIS
11	C	89	ASN
11	C	127	ASN
11	C	133	ASN
11	C	162	GLN
11	C	225	ASN
11	C	250	GLN
12	D	32	ASN
12	D	58	ASN
12	D	130	GLN
12	D	134	HIS
12	D	149	ASN
12	D	164	GLN
12	D	167	ASN
12	D	173	GLN
12	D	185	ASN
13	E	29	HIS
13	E	46	GLN
13	E	92	HIS
13	E	97	ASN
13	E	136	GLN
13	E	156	ASN
13	E	195	GLN
14	F	26	GLN
14	F	36	ASN
14	F	80	GLN
14	F	126	ASN
15	G	19	ASN
15	G	21	GLN
15	G	29	ASN
15	G	142	GLN
16	H	2	GLN
16	H	11	ASN
16	H	43	ASN
16	H	73	ASN
17	I	11	GLN
17	I	29	GLN
17	I	33	ASN
18	J	40	HIS

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Mol	Chain	Res	Type
18	J	77	HIS
18	J	80	HIS
18	J	131	ASN
18	J	135	GLN
18	J	136	GLN
19	K	5	GLN
19	K	9	ASN
19	K	82	ASN
19	K	88	ASN
20	L	38	GLN
20	L	99	ASN
21	M	3	GLN
21	M	17	ASN
22	N	9	GLN
22	N	13	ASN
22	N	73	ASN
22	N	81	ASN
23	O	38	GLN
23	O	67	ASN
23	O	98	GLN
23	O	104	GLN
24	P	2	ASN
24	P	11	GLN
24	P	40	GLN
25	Q	43	GLN
25	Q	51	GLN
25	Q	55	GLN
25	Q	58	GLN
25	Q	80	ASN
26	R	18	GLN
26	R	87	GLN
27	S	9	HIS
27	S	57	ASN
28	T	28	ASN
29	U	39	ASN
29	U	53	GLN
29	U	68	ASN
30	V	51	GLN
30	V	80	HIS
30	V	88	HIS
31	W	2	HIS
31	W	49	ASN

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Mol	Chain	Res	Type
31	W	56	HIS
32	X	31	GLN
32	X	36	GLN
32	X	38	GLN
32	X	45	GLN
33	Y	8	GLN
33	Y	19	HIS
34	Z	30	HIS
34	Z	41	HIS
34	Z	65	ASN

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
10	B	2837/2904 (97%)	552 (19%)	19 (0%)
8	7	73/74 (98%)	3 (4%)	0
9	A	116/120 (96%)	23 (19%)	0
All	All	3026/3098 (97%)	578 (19%)	19 (0%)

All (578) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
8	7	121	A
8	7	124	U
8	7	168	U
9	A	11	C
9	A	12	C
9	A	13	G
9	A	14	U
9	A	15	A
9	A	16	G
9	A	25	U
9	A	26	C
9	A	28	C
9	A	29	A
9	A	30	C
9	A	35	C
9	A	42	C
9	A	44	G
9	A	45	A
9	A	56	G

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Mol	Chain	Res	Type
9	A	66	A
9	A	67	G
9	A	84	G
9	A	90	C
9	A	99	A
9	A	108	A
9	A	109	A
10	B	2	G
10	B	3	U
10	B	4	U
10	B	13	A
10	B	14	A
10	B	33	C
10	B	34	U
10	B	35	G
10	B	46	G
10	B	49	A
10	B	63	A
10	B	64	A
10	B	71	A
10	B	74	A
10	B	75	G
10	B	84	A
10	B	85	G
10	B	91	A
10	B	92	U
10	B	96	C
10	B	100	U
10	B	101	A
10	B	102	U
10	B	103	A
10	B	104	A
10	B	118	A
10	B	119	A
10	B	120	U
10	B	125	A
10	B	126	A
10	B	140	C
10	B	142	A
10	B	144	A
10	B	160	A
10	B	162	U

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Mol	Chain	Res	Type
10	B	163	C
10	B	181	A
10	B	186	G
10	B	196	A
10	B	199	A
10	B	209	C
10	B	216	A
10	B	221	A
10	B	222	A
10	B	224	U
10	B	230	G
10	B	241	A
10	B	248	G
10	B	252	G
10	B	255	A
10	B	265	A
10	B	266	G
10	B	269	C
10	B	270	A
10	B	271	G
10	B	272	A
10	B	275	C
10	B	277	G
10	B	278	A
10	B	279	A
10	B	280	U
10	B	281	C
10	B	282	A
10	B	283	G
10	B	285	G
10	B	286	U
10	B	288	U
10	B	290	U
10	B	292	U
10	B	294	A
10	B	295	G
10	B	296	U
10	B	297	G
10	B	299	A
10	B	300	A
10	B	302	C
10	B	304	U

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Mol	Chain	Res	Type
10	B	306	U
10	B	307	G
10	B	311	A
10	B	312	G
10	B	313	G
10	B	316	C
10	B	317	G
10	B	320	A
10	B	323	C
10	B	324	A
10	B	325	G
10	B	327	G
10	B	328	U
10	B	329	G
10	B	330	A
10	B	331	C
10	B	333	G
10	B	335	C
10	B	336	C
10	B	339	U
10	B	340	A
10	B	344	A
10	B	345	A
10	B	346	A
10	B	348	A
10	B	349	U
10	B	351	C
10	B	353	C
10	B	354	A
10	B	355	U
10	B	357	C
10	B	359	G
10	B	361	G
10	B	362	A
10	B	363	G
10	B	364	C
10	B	365	U
10	B	366	C
10	B	367	G
10	B	368	A
10	B	371	A
10	B	372	G

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Mol	Chain	Res	Type
10	B	386	G
10	B	387	U
10	B	395	U
10	B	396	G
10	B	397	U
10	B	405	U
10	B	411	G
10	B	423	A
10	B	424	G
10	B	435	C
10	B	444	C
10	B	451	U
10	B	455	C
10	B	457	A
10	B	479	A
10	B	480	A
10	B	481	G
10	B	491	G
10	B	498	G
10	B	504	A
10	B	505	A
10	B	508	A
10	B	509	C
10	B	512	G
10	B	518	G
10	B	527	C
10	B	530	G
10	B	532	A
10	B	533	G
10	B	544	C
10	B	545	U
10	B	546	U
10	B	547	A
10	B	548	G
10	B	555	G
10	B	563	A
10	B	572	A
10	B	573	U
10	B	575	A
10	B	588	U
10	B	603	A
10	B	613	A

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Mol	Chain	Res	Type
10	B	614	A
10	B	615	U
10	B	616	A
10	B	627	A
10	B	632	A
10	B	637	A
10	B	640	C
10	B	645	C
10	B	646	U
10	B	654	A
10	B	655	A
10	B	671	C
10	B	686	U
10	B	717	C
10	B	719	C
10	B	722	A
10	B	728	G
10	B	730	A
10	B	747	U
10	B	757	G
10	B	765	C
10	B	775	G
10	B	782	A
10	B	784	G
10	B	785	G
10	B	805	G
10	B	806	C
10	B	812	C
10	B	819	A
10	B	827	U
10	B	828	U
10	B	846	U
10	B	847	U
10	B	859	G
10	B	872	U
10	B	876	C
10	B	877	A
10	B	878	A
10	B	899	A
10	B	910	A
10	B	912	C
10	B	932	U

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Mol	Chain	Res	Type
10	B	933	A
10	B	934	U
10	B	941	A
10	B	946	C
10	B	955	U
10	B	961	C
10	B	973	A
10	B	974	G
10	B	983	A
10	B	985	C
10	B	989	G
10	B	991	C
10	B	993	G
10	B	995	C
10	B	996	A
10	B	1005	C
10	B	1012	U
10	B	1013	C
10	B	1019	U
10	B	1022	G
10	B	1025	G
10	B	1026	G
10	B	1033	U
10	B	1040	A
10	B	1042	G
10	B	1043	C
10	B	1046	A
10	B	1047	G
10	B	1049	C
10	B	1050	A
10	B	1051	G
10	B	1053	C
10	B	1054	A
10	B	1055	G
10	B	1058	U
10	B	1063	G
10	B	1067	A
10	B	1070	A
10	B	1080	A
10	B	1082	U
10	B	1085	A
10	B	1088	A

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Mol	Chain	Res	Type
10	B	1089	A
10	B	1090	A
10	B	1091	G
10	B	1092	C
10	B	1094	U
10	B	1100	C
10	B	1101	U
10	B	1102	C
10	B	1105	U
10	B	1106	G
10	B	1107	G
10	B	1111	A
10	B	1112	G
10	B	1113	U
10	B	1115	G
10	B	1117	C
10	B	1122	G
10	B	1126	A
10	B	1132	U
10	B	1133	A
10	B	1134	A
10	B	1135	C
10	B	1136	G
10	B	1139	G
10	B	1142	A
10	B	1156	A
10	B	1157	G
10	B	1172	C
10	B	1174	U
10	B	1176	U
10	B	1179	G
10	B	1195	G
10	B	1205	A
10	B	1206	G
10	B	1211	C
10	B	1212	G
10	B	1218	G
10	B	1237	A
10	B	1247	A
10	B	1248	G
10	B	1251	C
10	B	1253	A

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Mol	Chain	Res	Type
10	B	1256	G
10	B	1266	G
10	B	1271	G
10	B	1272	A
10	B	1273	U
10	B	1275	A
10	B	1276	A
10	B	1301	A
10	B	1302	A
10	B	1312	U
10	B	1325	U
10	B	1330	C
10	B	1337	G
10	B	1341	G
10	B	1345	C
10	B	1352	U
10	B	1365	A
10	B	1368	G
10	B	1379	U
10	B	1383	A
10	B	1384	A
10	B	1396	U
10	B	1397	U
10	B	1416	G
10	B	1419	A
10	B	1420	A
10	B	1427	A
10	B	1428	C
10	B	1434	A
10	B	1450	G
10	B	1451	C
10	B	1453	A
10	B	1454	C
10	B	1455	G
10	B	1459	G
10	B	1460	U
10	B	1461	C
10	B	1476	U
10	B	1477	A
10	B	1478	G
10	B	1482	G
10	B	1490	A

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Mol	Chain	Res	Type
10	B	1493	C
10	B	1494	A
10	B	1504	A
10	B	1508	A
10	B	1509	A
10	B	1510	G
10	B	1513	U
10	B	1514	G
10	B	1515	A
10	B	1518	C
10	B	1520	U
10	B	1522	A
10	B	1524	G
10	B	1525	A
10	B	1528	A
10	B	1530	G
10	B	1531	C
10	B	1532	A
10	B	1533	C
10	B	1534	U
10	B	1535	A
10	B	1536	C
10	B	1537	G
10	B	1538	G
10	B	1540	G
10	B	1541	C
10	B	1543	G
10	B	1544	A
10	B	1547	C
10	B	1549	A
10	B	1550	C
10	B	1551	A
10	B	1552	A
10	B	1553	A
10	B	1558	C
10	B	1559	U
10	B	1567	G
10	B	1569	A
10	B	1578	U
10	B	1583	A
10	B	1585	C
10	B	1608	A

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Mol	Chain	Res	Type
10	B	1610	A
10	B	1613	G
10	B	1634	A
10	B	1635	A
10	B	1640	A
10	B	1647	U
10	B	1648	U
10	B	1649	G
10	B	1674	G
10	B	1700	A
10	B	1701	A
10	B	1703	G
10	B	1706	C
10	B	1707	G
10	B	1713	A
10	B	1715	G
10	B	1716	U
10	B	1723	G
10	B	1729	U
10	B	1730	C
10	B	1731	G
10	B	1733	G
10	B	1738	G
10	B	1756	G
10	B	1758	U
10	B	1764	C
10	B	1773	A
10	B	1776	G
10	B	1781	U
10	B	1786	A
10	B	1791	A
10	B	1800	C
10	B	1801	A
10	B	1816	C
10	B	1829	A
10	B	1833	C
10	B	1870	C
10	B	1873	G
10	B	1876	A
10	B	1884	G
10	B	1906	G
10	B	1914	C

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Mol	Chain	Res	Type
10	B	1927	A
10	B	1929	G
10	B	1930	G
10	B	1937	A
10	B	1938	A
10	B	1939	U
10	B	1940	U
10	B	1955	U
10	B	1967	C
10	B	1970	A
10	B	1971	U
10	B	1972	G
10	B	1991	U
10	B	1993	U
10	B	1997	C
10	B	2022	U
10	B	2023	C
10	B	2031	A
10	B	2032	G
10	B	2033	A
10	B	2043	C
10	B	2052	A
10	B	2055	C
10	B	2056	G
10	B	2060	A
10	B	2061	G
10	B	2062	A
10	B	2069	G
10	B	2072	C
10	B	2095	A
10	B	2102	G
10	B	2104	C
10	B	2137	U
10	B	2140	G
10	B	2141	G
10	B	2144	G
10	B	2145	C
10	B	2147	A
10	B	2149	U
10	B	2181	U
10	B	2187	U
10	B	2192	U

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Mol	Chain	Res	Type
10	B	2199	A
10	B	2204	G
10	B	2211	A
10	B	2212	A
10	B	2225	A
10	B	2226	C
10	B	2238	G
10	B	2239	G
10	B	2243	U
10	B	2259	U
10	B	2266	A
10	B	2273	A
10	B	2276	G
10	B	2278	A
10	B	2283	C
10	B	2286	G
10	B	2287	A
10	B	2297	A
10	B	2304	G
10	B	2305	U
10	B	2307	G
10	B	2310	C
10	B	2315	G
10	B	2318	G
10	B	2319	G
10	B	2320	U
10	B	2321	U
10	B	2322	A
10	B	2325	G
10	B	2333	A
10	B	2334	U
10	B	2336	A
10	B	2337	G
10	B	2347	C
10	B	2383	G
10	B	2385	C
10	B	2402	U
10	B	2406	A
10	B	2423	U
10	B	2424	C
10	B	2426	A
10	B	2429	G

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Mol	Chain	Res	Type
10	B	2430	A
10	B	2434	A
10	B	2441	U
10	B	2448	A
10	B	2472	G
10	B	2476	A
10	B	2491	U
10	B	2502	G
10	B	2505	G
10	B	2506	U
10	B	2518	A
10	B	2529	G
10	B	2535	G
10	B	2554	U
10	B	2566	A
10	B	2567	G
10	B	2573	C
10	B	2585	U
10	B	2586	U
10	B	2597	G
10	B	2602	A
10	B	2609	U
10	B	2610	C
10	B	2613	U
10	B	2621	G
10	B	2629	U
10	B	2654	A
10	B	2682	A
10	B	2689	U
10	B	2690	U
10	B	2714	G
10	B	2726	A
10	B	2739	U
10	B	2744	G
10	B	2748	A
10	B	2751	G
10	B	2752	C
10	B	2757	A
10	B	2765	A
10	B	2778	A
10	B	2791	G
10	B	2797	U

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Mol	Chain	Res	Type
10	B	2800	A
10	B	2801	G
10	B	2808	G
10	B	2820	A
10	B	2821	A
10	B	2836	U
10	B	2850	A
10	B	2866	U
10	B	2867	G
10	B	2872	A
10	B	2873	A
10	B	2883	A
10	B	2903	U

All (19) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
10	B	63	A
10	B	102	U
10	B	162	U
10	B	529	A
10	B	670	A
10	B	858	G
10	B	1205	A
10	B	1210	G
10	B	1236	G
10	B	1250	G
10	B	1301	A
10	B	1534	U
10	B	1913	A
10	B	2198	A
10	B	2258	C
10	B	2282	G
10	B	2336	A
10	B	2425	A
10	B	2756	U

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 110 ligands modelled in this entry, 110 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
32	X	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	X	1:MET	C	2:LYS	N	3.26

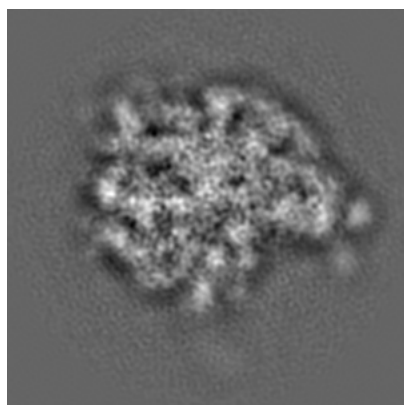
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-2917. These allow visual inspection of the internal detail of the map and identification of artifacts.

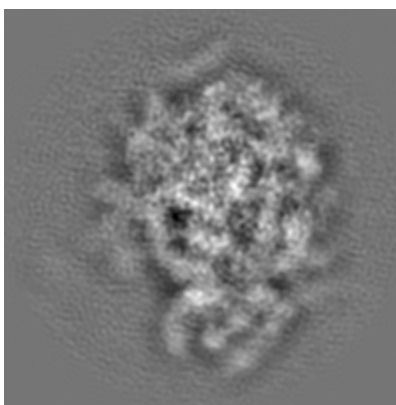
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

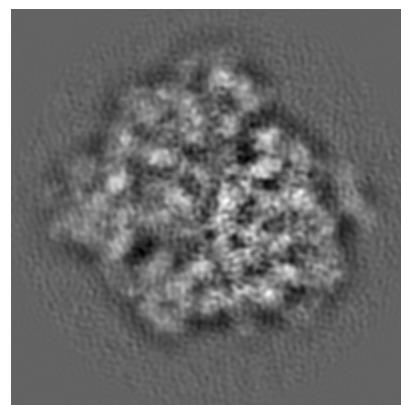
6.1.1 Primary map



X



Y

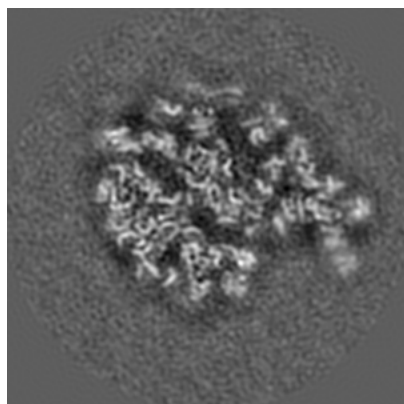


Z

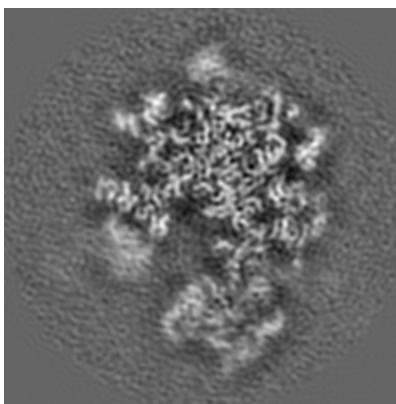
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

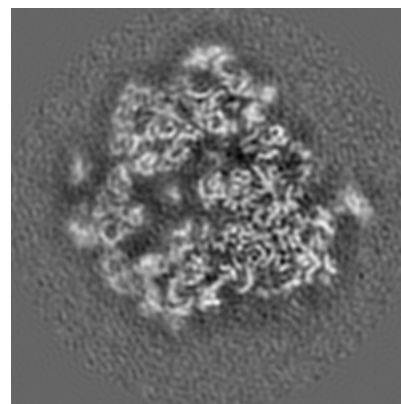
6.2.1 Primary map



X Index: 90



Y Index: 90

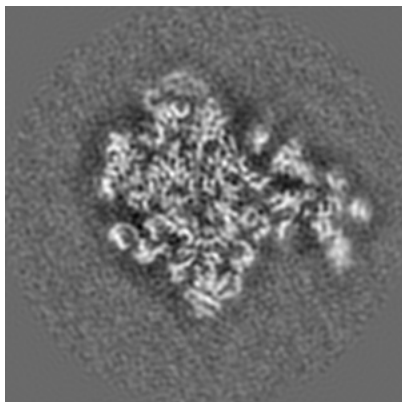


Z Index: 90

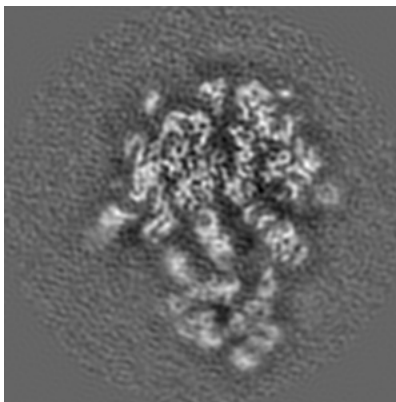
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

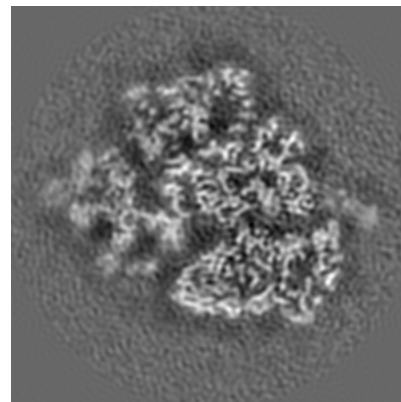
6.3.1 Primary map



X Index: 95



Y Index: 79



Z Index: 98

The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal surface views [i](#)

6.4.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.02. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

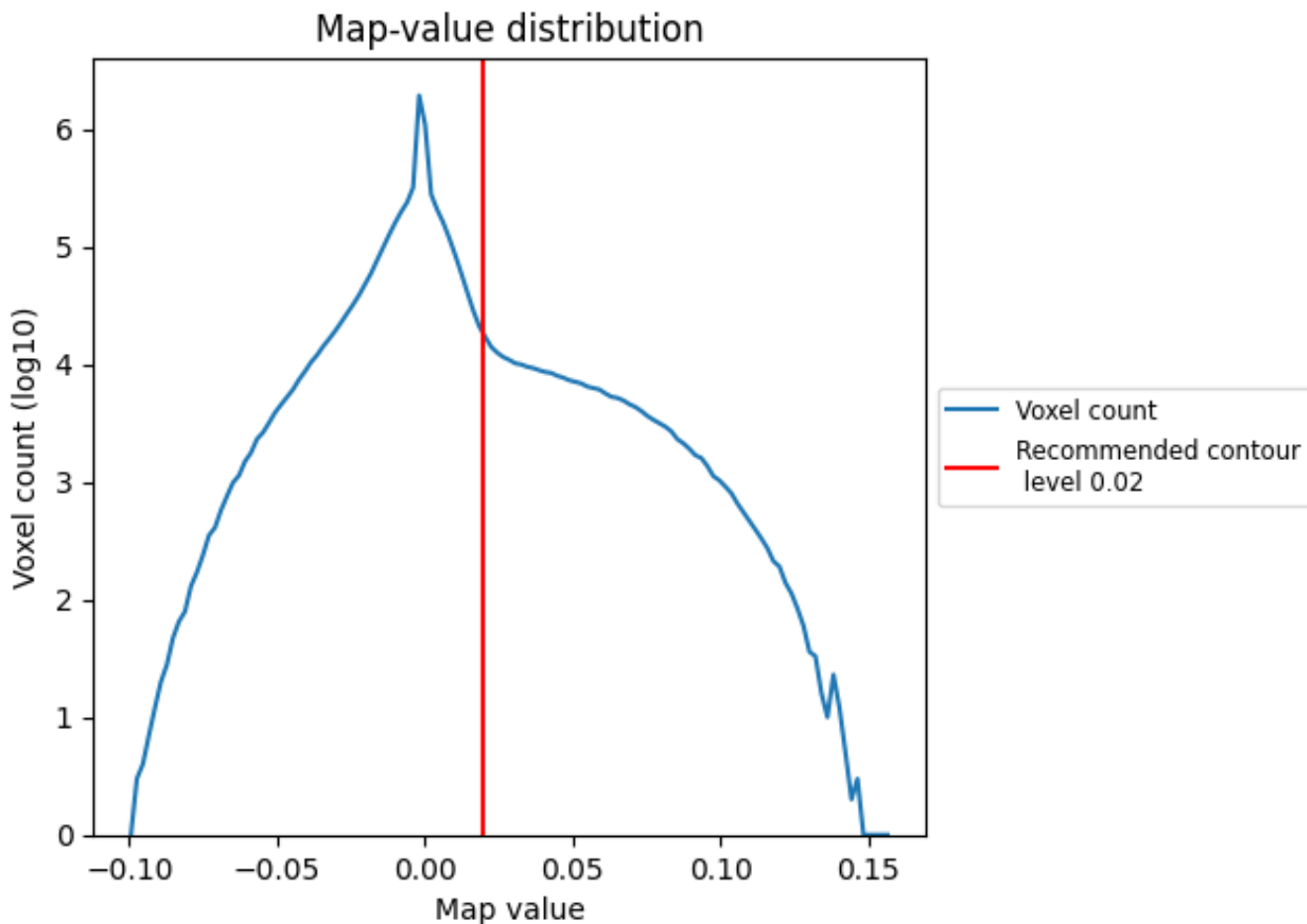
6.5 Mask visualisation

This section was not generated. No masks/segmentation were deposited.

7 Map analysis [i](#)

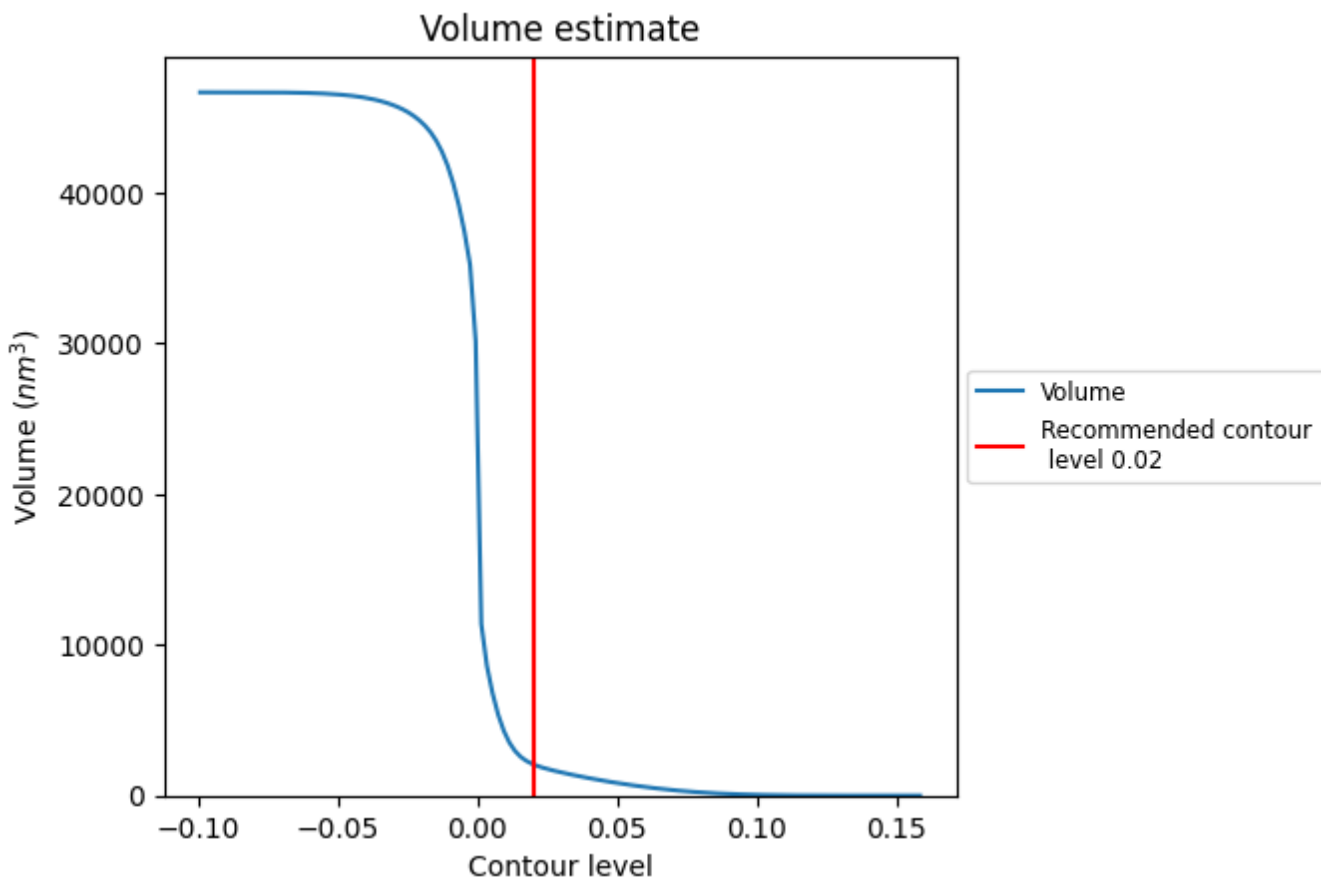
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

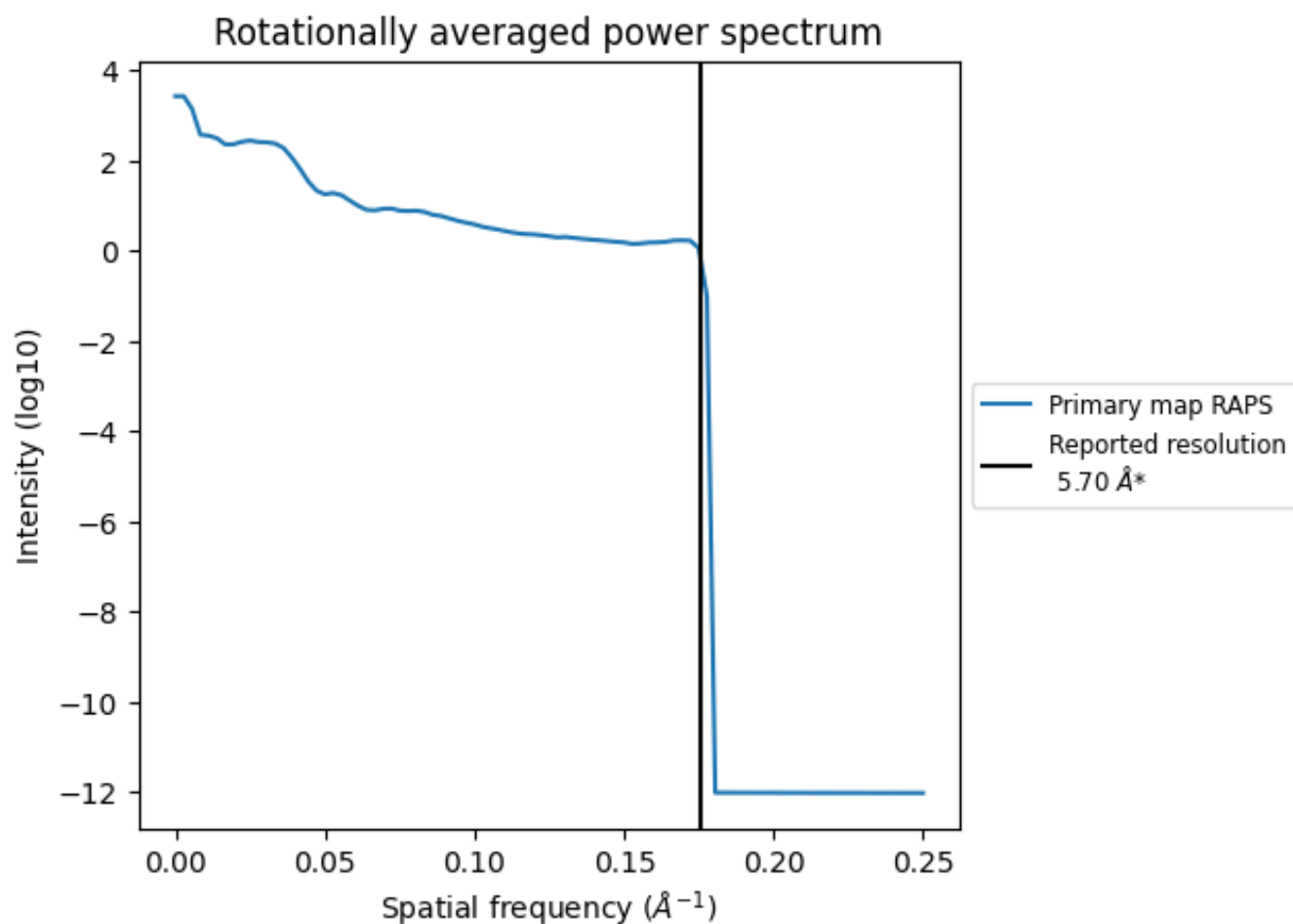
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 2076 nm³; this corresponds to an approximate mass of 1875 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum [\(i\)](#)

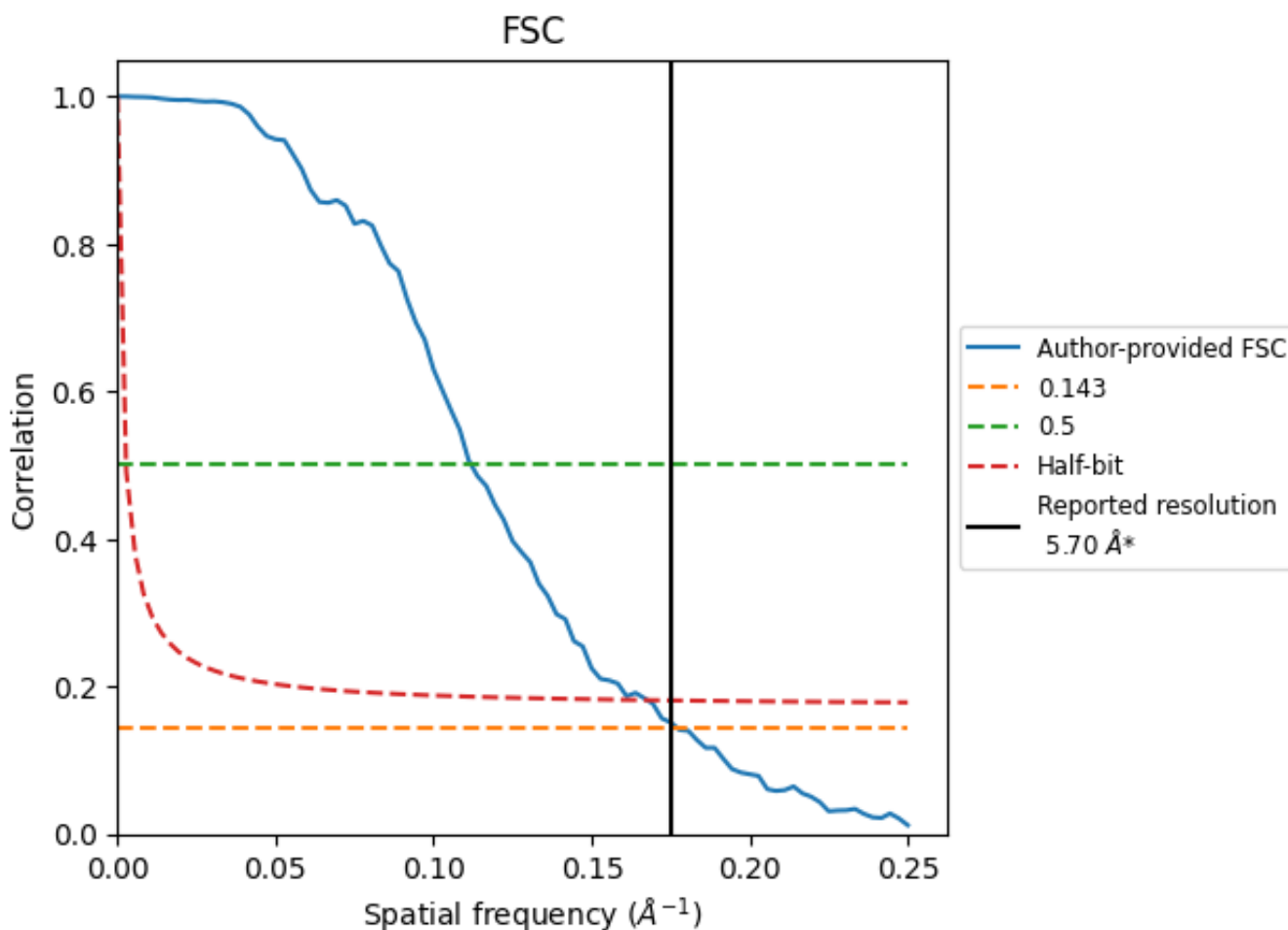


*Reported resolution corresponds to spatial frequency of 0.175 Å⁻¹

8 Fourier-Shell correlation [i](#)

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.175 Å⁻¹

8.2 Resolution estimates [i](#)

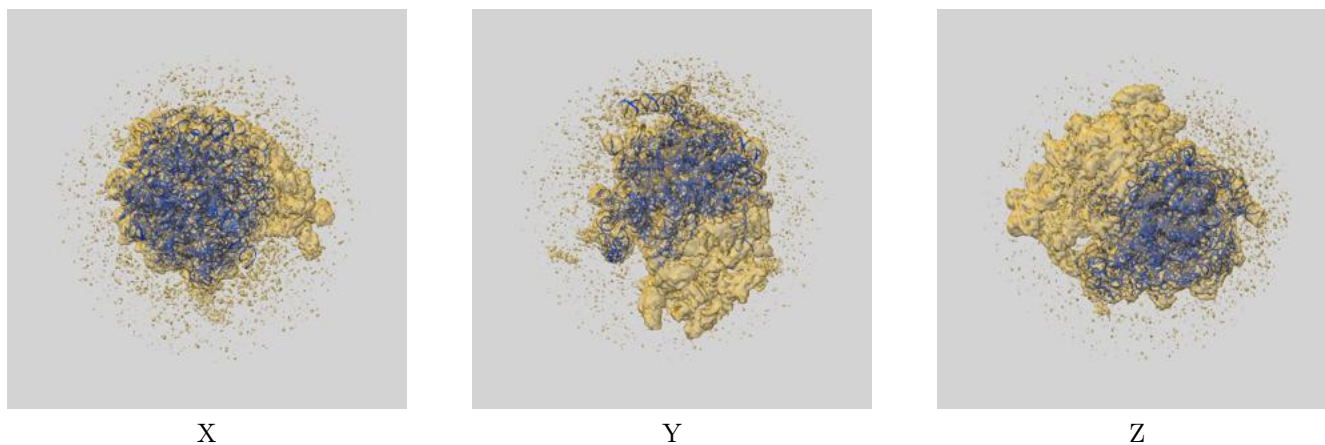
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	-	-	-
Author-provided FSC curve	5.64	8.93	5.97
Unmasked-calculated*	-	-	-

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps.

9 Map-model fit [i](#)

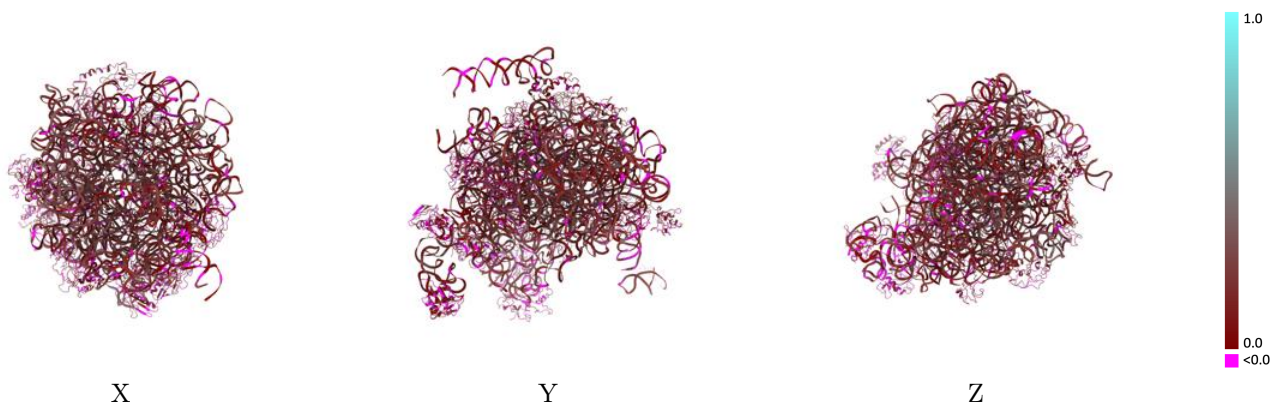
This section contains information regarding the fit between EMDB map EMD-2917 and PDB model 5AKA. Per-residue inclusion information can be found in section [3](#) on page [11](#).

9.1 Map-model overlay [i](#)



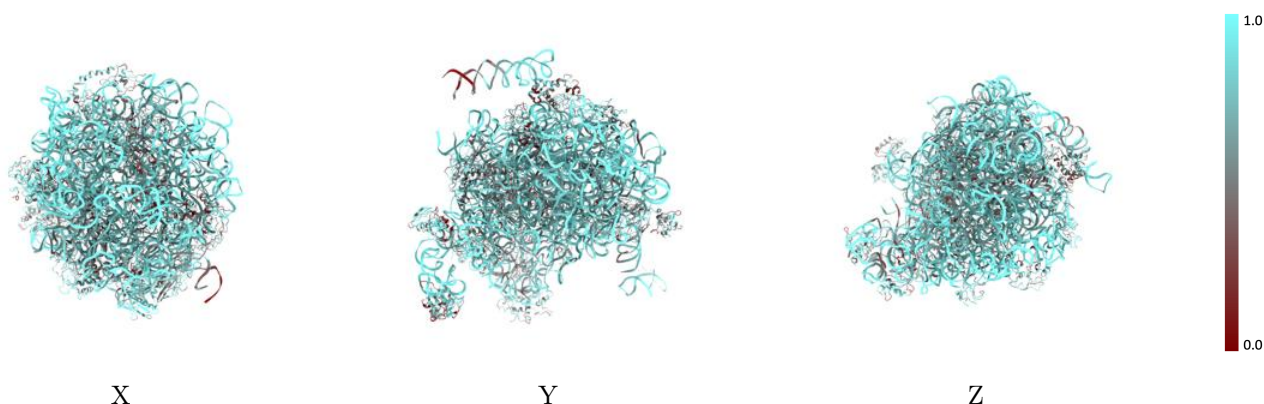
The images above show the 3D surface view of the map at the recommended contour level 0.02 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model [i](#)



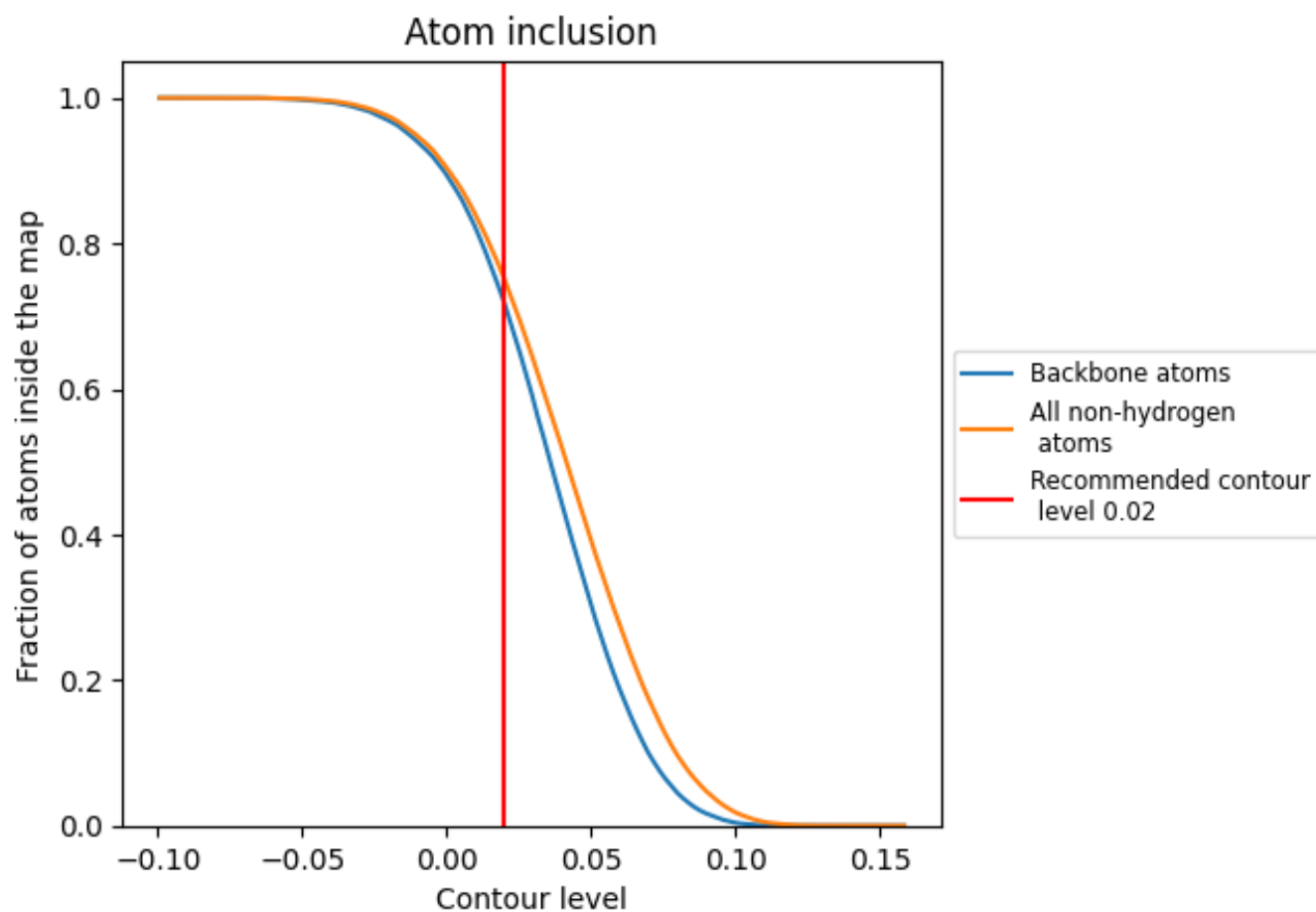
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

9.3 Atom inclusion mapped to coordinate model [i](#)



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.02).







































































9.4 Atom inclusion [i](#)



At the recommended contour level, 72% of all backbone atoms, 75% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.02) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.7515	 0.1560
0	 0.5397	 0.1450
1	 0.5497	 0.0750
2	 0.4197	 0.1470
3	 0.3116	 0.1210
4	 0.4384	 0.0500
5	 0.4329	 0.1280
6	 0.6585	 0.3100
7	 0.7373	 0.0860
A	 0.7894	 0.1070
B	 0.8416	 0.1890
C	 0.5048	 0.0930
D	 0.5273	 0.0790
E	 0.5941	 0.1120
F	 0.6182	 0.0300
G	 0.6461	 0.0400
H	 0.5766	 0.1080
I	 0.5861	 0.0720
J	 0.5014	 0.0970
K	 0.5713	 0.1020
L	 0.4923	 0.0690
M	 0.5096	 0.0930
N	 0.5258	 0.1220
O	 0.5304	 0.0150
P	 0.4707	 0.0770
Q	 0.5374	 0.0980
R	 0.5847	 0.0930
S	 0.5287	 0.1330
T	 0.4915	 0.1170
U	 0.7497	 0.1510
V	 0.6978	 0.0690
W	 0.4466	 0.0640
X	 0.6740	 0.1360
Y	 0.6133	 0.1120
Z	 0.5446	 0.0960

