



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 6, 2026 – 09:55 AM UTC

PDB ID : 1SM1 / pdb_00001sm1
Title : COMPLEX OF THE LARGE RIBOSOMAL SUBUNIT FROM DEINOCOC-
CUS RADIODURANS WITH QUINUPRISTIN AND DALFOPRISTIN
Authors : Harms, J.M.; Schlutzen, F.; Fucini, P.; Bartels, H.; Yonath, A.
Deposited on : 2004-03-08
Resolution : 3.42 Å(reported)

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

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	NOT EXECUTED
EDS	:	NOT EXECUTED
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

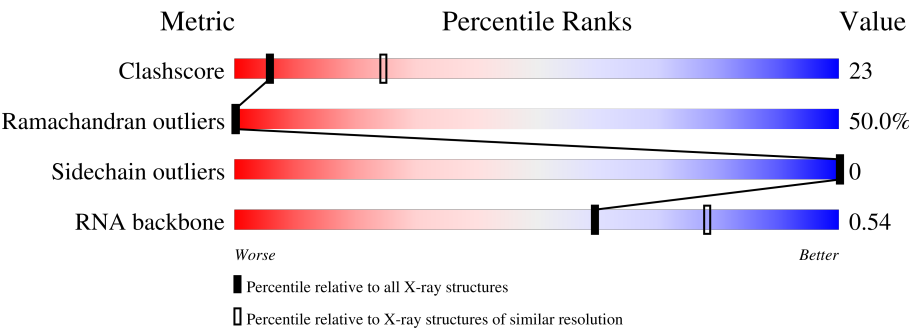
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.42 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
Clashscore	190562	1234 (3.48-3.36)
Ramachandran outliers	187476	1222 (3.48-3.36)
Sidechain outliers	187428	1222 (3.48-3.36)
RNA backbone	3983	1162 (3.84-3.00)

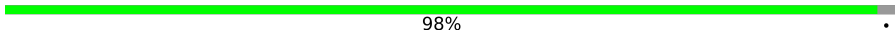
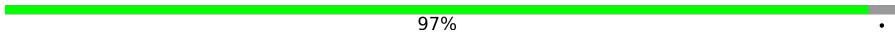
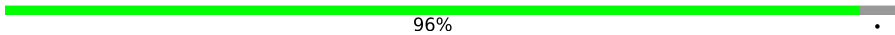
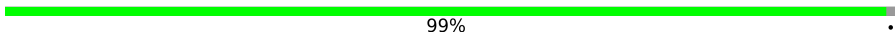
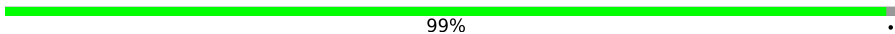
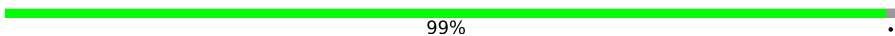
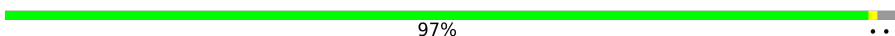
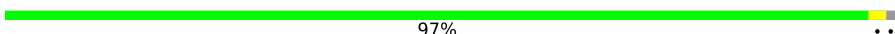
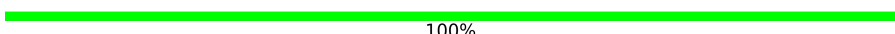
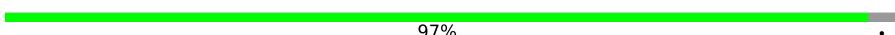
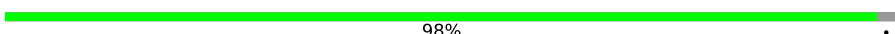
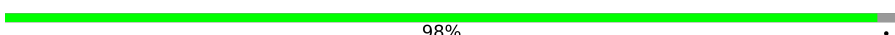
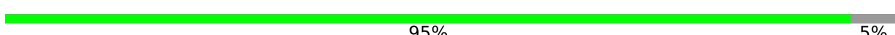
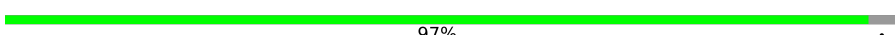
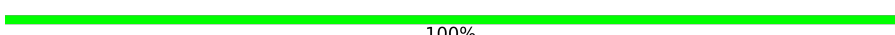
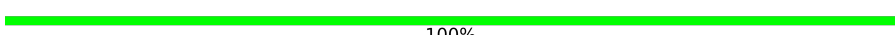
The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively.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

Note EDS was not executed.

Mol	Chain	Length	Quality of chain
1	0	2880	29% 52% 13% . .
2	1	82	65% 35%
3	2	47	98% .
4	3	66	95% 5%
5	4	37	95% 5%
6	5	8	25% 50% 12% 12%

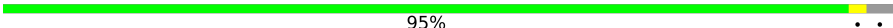
Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
7	9	124	 36% 54% 5% 5%
8	A	275	 98%
9	B	211	 97%
10	C	205	 96%
11	D	180	 99%
12	E	212	 83% 17%
13	F	146	 36% 64%
14	G	144	 99%
15	H	174	 82% 18%
16	I	134	 99%
17	J	156	 90% 10%
18	K	142	 87% 13%
19	L	116	 97% ..
20	M	114	 97%
21	N	166	 75% 25%
22	O	118	 97% ..
23	P	100	 100%
24	Q	134	 97%
25	R	95	 98%
26	S	115	 98%
27	T	253	 88% 12%
28	U	91	 95% 5%
29	W	67	 97%
30	X	55	 100%
31	Y	73	 100%

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
32	Z	60	 95%

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
33	DOL	0	2882	X	-	-	-
6	DBB	5	3	-	-	X	-

2 Entry composition

There are 33 unique types of molecules in this entry. The entry contains 65418 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	0	2766	Total	C	N	O	P	0	0	0
			59359	26479	10949	19166	2765			

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
2	1	53	Total	C	0	0	53
			53	53			

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
3	2	46	Total	C	0	0	46
			46	46			

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
4	3	63	Total	C	0	0	63
			63	63			

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
5	4	35	Total	C	0	0	35
			35	35			

- Molecule 6 is a protein called QUINUPRISTIN.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	5	8	Total	C	N	O	S	0	0	0
			73	53	9	10	1			

- Molecule 7 is a RNA chain called 5S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	9	118	Total	C	N	O	P	0	0	0
			2516	1124	464	811	117			

- Molecule 8 is a protein called 50S RIBOSOMAL PROTEIN L2.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
8	A	270	Total	C	0	0	270
			270	270			

- Molecule 9 is a protein called 50S RIBOSOMAL PROTEIN L3.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
9	B	205	Total	C	0	0	205
			205	205			

- Molecule 10 is a protein called 50S RIBOSOMAL PROTEIN L4.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
10	C	197	Total	C	0	0	197
			197	197			

- Molecule 11 is a protein called 50S RIBOSOMAL PROTEIN L5.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
11	D	178	Total	C	0	0	178
			178	178			

- Molecule 12 is a protein called 50S RIBOSOMAL PROTEIN L6.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
12	E	177	Total	C	0	0	177
			177	177			

- Molecule 13 is a protein called 50S RIBOSOMAL PROTEIN L9.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
13	F	52	Total	C	0	0	52
			52	52			

- Molecule 14 is a protein called 50S RIBOSOMAL PROTEIN L11.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
14	G	143	Total C 143 143	0	0	143

- Molecule 15 is a protein called 50S RIBOSOMAL PROTEIN L13.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
15	H	143	Total C 143 143	0	0	143

- Molecule 16 is a protein called 50S RIBOSOMAL PROTEIN L14.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
16	I	132	Total C 132 132	0	0	132

- Molecule 17 is a protein called 50S RIBOSOMAL PROTEIN L15.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
17	J	141	Total C 141 141	0	0	141

- Molecule 18 is a protein called 50S RIBOSOMAL PROTEIN L16.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
18	K	124	Total C 124 124	0	0	124

- Molecule 19 is a protein called 50S RIBOSOMAL PROTEIN L17.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
19	L	114	Total C 114 114	0	0	114

- Molecule 20 is a protein called 50S RIBOSOMAL PROTEIN L18.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
20	M	111	Total C 111 111	8	0	111

- Molecule 21 is a protein called 50S RIBOSOMAL PROTEIN L19.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
21	N	125	Total 125	C 125	0	0	125

- Molecule 22 is a protein called 50S RIBOSOMAL PROTEIN L20.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
22	O	117	Total 117	C 117	16	0	117

- Molecule 23 is a protein called 50S RIBOSOMAL PROTEIN L21.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
23	P	100	Total 100	C 100	0	0	100

- Molecule 24 is a protein called 50S RIBOSOMAL PROTEIN L22.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
24	Q	130	Total 130	C 130	0	0	130

- Molecule 25 is a protein called 50S RIBOSOMAL PROTEIN L23.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
25	R	93	Total 93	C 93	0	0	93

- Molecule 26 is a protein called 50S RIBOSOMAL PROTEIN L24.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
26	S	113	Total 113	C 113	0	0	113

- Molecule 27 is a protein called GENERAL STRESS PROTEIN CTC.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
27	T	223	Total 223	C 223	43	0	223

- Molecule 28 is a protein called 50S RIBOSOMAL PROTEIN L27.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
28	U	86	Total C 86 86	0	0	86

- Molecule 29 is a protein called 50S RIBOSOMAL PROTEIN L29.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
29	W	65	Total C 65 65	0	0	65

- Molecule 30 is a protein called 50S RIBOSOMAL PROTEIN L30.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
30	X	55	Total C 55 55	4	0	55

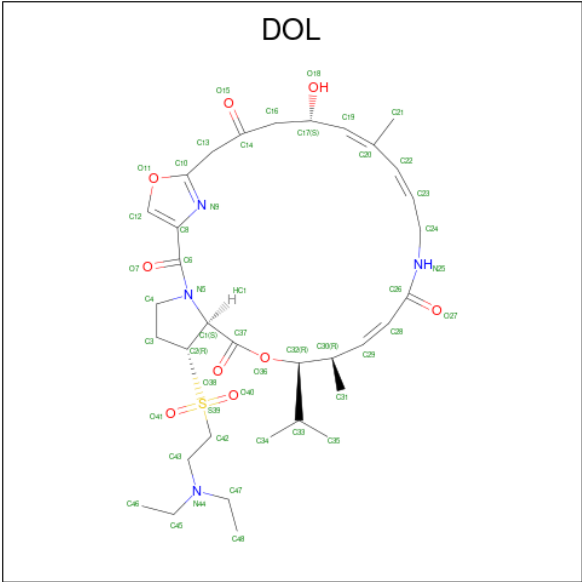
- Molecule 31 is a protein called 50S RIBOSOMAL PROTEIN L31.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
31	Y	73	Total C 73 73	0	0	73

- Molecule 32 is a protein called 50S RIBOSOMAL PROTEIN L32.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
32	Z	58	Total C 58 58	0	0	58

- Molecule 33 is 5-(2-DIETHYLAMINO-ETHANESULFONYL)-21-HYDROXY-10-ISOPROPYL-11,19-DIMETHYL-9,26-DIOXA-3,15,28-TRIAZA-TRICYCLO[23.2.1.00,255]OCTACOSA-1(27),12,17,19,25(28)-PENTAENE-2,8,14,23-TETRAONE (CCD ID: DOL) (formula: $C_{34}H_{50}N_4O_9S$).



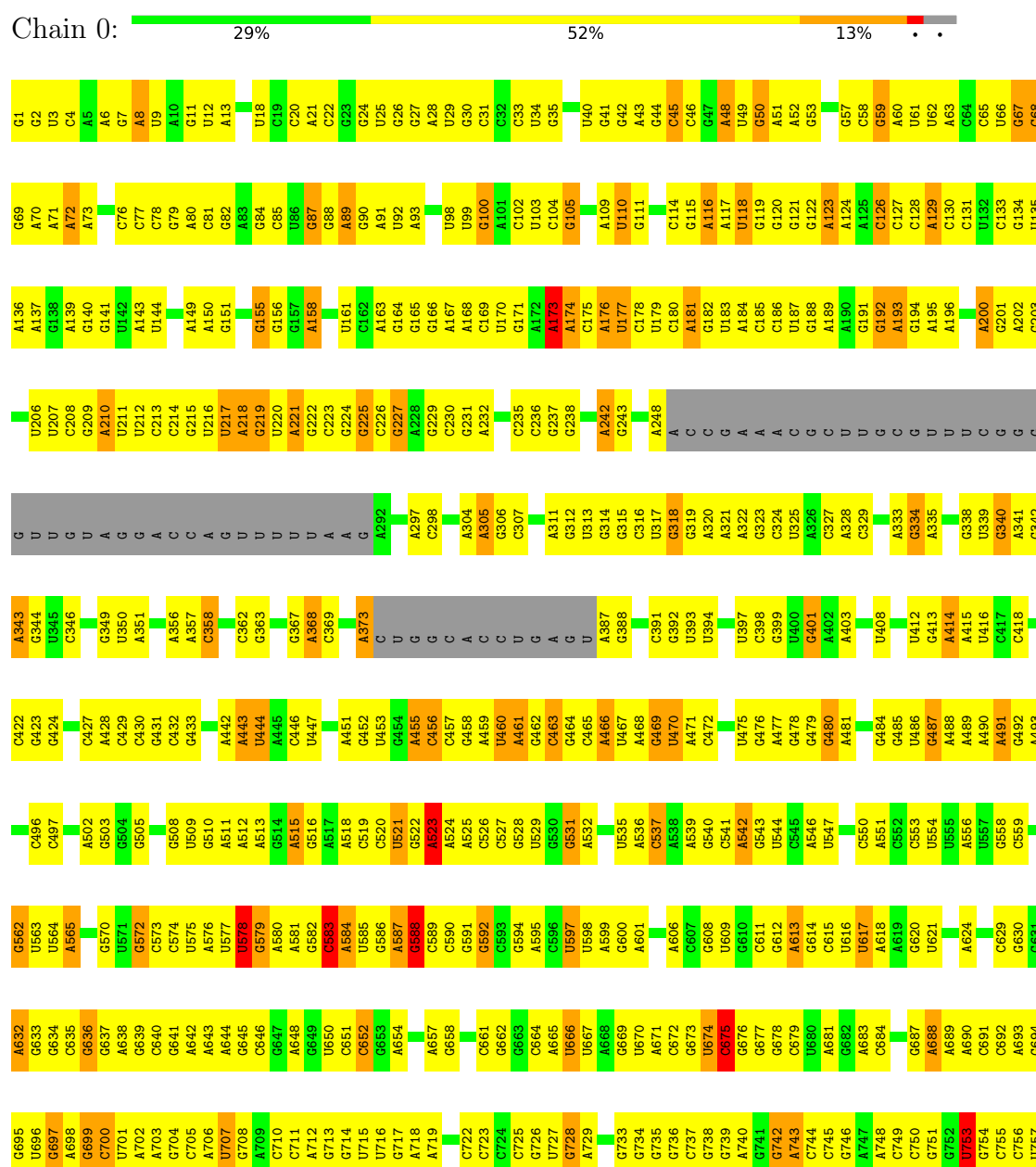
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
33	0	1	Total	C	N	O	S	0	0
			48	34	4	9	1		

3 Residue-property plots

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. 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. 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.

Note EDS was not executed.

• Molecule 1: 23S RIBOSOMAL RNA

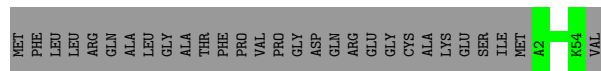


G1767	U1695	A1634	C1549	U1467	A1395	U1329	G1285	U1197	U1124	C1016	G955	U890	C819	G758
U1768	C1696	G1635	C1552	A1468	C1396	G1330	G1266	C1198	G1125	C1017	A956	A891	U820	C759
U1769	U1697	U1636	C1552	A1469	A1397	G1331	U1287	U1199	A1126	C1018	G957	G	A821	U760
C1698	U1770	U1637	C1558	G1470	G1398	G1332	U1288	G1200	G958	G	G	G	G822	G761
A1699	A1699	U1638	G1559	G1471	C1399	G1333	G1289	G1201	G1131	A1022	U960	G	U823	A762
	C1702	U1639	A1560	G1472	A1400	A1334	C1270	U1202	G1132	U1023	U961	G	U824	A763
		C1640	A1561	U1473	G1401		G1271	A1203	G1133	G1024	G961	C	C825	A764
	A1706	C1641	A1562	A1474	G1402	G1338	G1272	G1204		A1025	G962	C	U826	C765
A1707	C1708	G1642	U1475	U1476	U1403	U1339	G1273	G1205	G1136	U1026	G963	C	C827	A766
U1778	U1708	U1643	U1563	G1476	A1406	G1340	C1274	G1206		C1027	G964	U	C828	
C1779	U1709	U1644	U1564		A1407	G1341	A1275	G1207	A1137	G1028	G965	A	C829	
		G1646	G1565		G1408	U1342	U1276	A1208	A1139	C1029	A966	C	C830	
	U1710	U1647	U1566	G1479	A1409	C1343	U1277	G1209	A1140	U1030	G967	C	G831	
A1782	C1711	U1648	A1567	U1481	U1410	C1344	A1278		U1141	C1031	C968	A	A832	C771
G1783	G1712	C1648		U1482	U1409	C1345	G1279		G1142	C1032	U969	G	A833	C772
C1784	G1713	A1649	G1571	G1483		C1346	U1280	U1212	A1143	G1033	A970	C	A774	C773
A1785	A1714	A1650	U1572	G1484	G1414	C1347	A1281	U1213	U1144	U1034	U971	U	U775	C774
G1786	A1715	U1651	G1573	U1485		C1348	A1282	C1214	C1145	G1035	C972	U	U776	C775
U1787	G1716	G1652	A1574	A1486	C1417	A1349	C1283	A1215	G1146	G1036	U973	A	A777	C776
C1788	A1717	C1653		U1487	C1418		G1284	C1218	G1147	U1037	U974	C	A778	C777
U1789	A1718	A1654	G1577	G1488		G1352	A1285	C1219	G1148	U1038	C975		U779	C778
C1790	G1719	C1655		C1489	U1426	A1353	A1286		G1149	A1039	C976		U840	C779
C1791	G1720	U1656	A1583	U1490	G1427	A1354	A1287	G1222	C1150	A1040	G977	G	U841	C780
C1792	G1721	A1657	A1584		G1428	A1355	A1288	G1223	U1151	G1041	C978		A842	C781
A1793	G1722	U1658	G1585	A1493	A1429	G1356	A1289	A1224	C1152		A979	C	U843	C782
A1794	U1723	A1586	A1586		G1430	U1357	A1290	G1225	A1153	U1044	G980		C844	C783
C1795	C1724	G1660	A1587	G1496	U1431	C1358	G1291	A1226	A1154	G1045	C981		U845	C784
A1796	C1725	C1661	U1588		G1432	G1359	A1292	A1227	G1155	U1046	C982		U846	C785
C1797	G1726	G1662	U1590	U1500	A1433	G1360	A1293	G1228		G1047	G983		C847	C786
G1798	C1727	C1663	C1593	G1501	U1434		G1294	C1229	A1158		A984		A848	C787
A1799	A1799	G1664		G1502	G1435	C1363		G1230	U1159	C1052	G985			C788
A1800	G1730	C1665	A1596	G1503	U1436	C1364	A1299	A1231	C1160	G1053	A986		U852	C789
C1801	C1731	U1666	A1597	G1504	A1437	U1365	A1300	U1232	U1161	C1054	G987		C853	C790
A1802		A1667	C1598	U1505	G1438	A1366	U1301	A1233	C1162	A1055	G988		G854	C791
G1803	C1736	G1668	G1599			A1367		C1234	C1163	U1056			G855	C792
U1804	G1737	A1669		G1508	A1441	G1368	U1304	C1235	G1164	A1057	A991		A856	C793
G1805		C1670	A1604	A1509	C1442	G1369	C1305		G1165	G1058	A992		U857	C794
C1806	G1744	A1671	A1605	A1510	G1443	U1370	U1306	G1241	A1166	A1059	C993		A795	C795
A1807	C1745	A1672		A1511	C1444	A1371	U1307	A1242	A1167		A994		U858	C796
C1808	U1746	C1673	G1613	A1512	A1445	G1372	G1308	G1243	G1174	G1066	A995		U859	C797
G1809	G1747		C1614	U1513	U1446	A1373	C1310	U1244	U1172	U1067	C996		C864	C798
U1810	U1748	U1676	C1615	C1514	U1447	G1374	G1311			A1068	C997		U860	C799
A1811	G1749	G1677	G1616	U1515	A1448			U1247	G1173	G1069	C998		A865	C800
U1812	A1750	U1678	G1617	A1516	C1449		G1312		G1174		C999		A866	C801
A1813	A1751	U1679	U1618		G1450	A1378	U1313	G1248	A1175	G1073	G1000		U867	C802
	U1752	U1680	A1619	G1520		A1379	U1313	G1249	U1176	G1074	A1001		C867	C803
	A1753	A1681	C1620		A1453	C1380	A1314	A1250	U1177		C999		U868	C804
C1816	G1753	C1681	C1621	C1524	U1454	G1381	A1315	G1251	U1178	C1002	A1002		G869	C805
U1817	U1754	A1682	G1622		C1455	G1382	G1316	G1252	A1179	A1081	C1003		C870	C806
G1818	G1755	G1683	C1623	G1527	C1456	C1383	G1317	G1253	G1180	G1082	A1004		U871	C807
U1819	C1756	G1684	G1623	C1528	A1457	G1384	A1318	G1254	C1181		U1005		G872	C808
G1820	C1757	A1685	A1624	C1529	A1458	C1385	C1319	A1255	C1182	C1086	C1006		U873	C809
A1821	C1758	U1686	A1625	U1530	U1459	A1386	A1320	G1256	U1182	C1087	A1007		A874	U810
C1822	U1759	C1687	A1626	G1530	G1460	G1387	A1321	U1257	C1183		C996		G875	G811
G1823	G1760	U1688	C1627		C1461	C1388	G1322	G1258	G1184	C1090	C1008		A876	C812
C1824	G1761	U1689	G1628	G1541	A1461	C1389	G1323	A1259	C1185	C1091	C1009		G877	C813
U1825	C1762	U1690	G1629	G1542	C1462	G1390	G1324	A1260	G1186	U1092	A1011			
U1826	G1763	G1691	A1630	G1543	A1463	A1391	U1325	G1261	A1187		A1012		A883	C814
	A1764	C1692	C1631	A1544	A1464	U1392	U1326	U1262	A1188	A1099	G1013		C884	A815
	C1765	A1693	G1632		G1465	U1393	C1327	G1263			G1014			U816
G1831		A1694	C1633	U1548	C1466	G1394	C1328	C1264	G1196	G1123	U1015		C889	G818

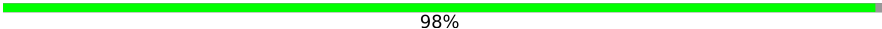
C820	A2756	A2692	G2503	A2432	G2362	G2286	U2219	G	A2060	A1996	A1936	G1837
G2821	G2757	U2693	G2504	G2433	G2363	G2287	A2220	C	C2061	A1997	G1937	G1838
U2822	G2694	G2694	G2505	G2434	U2365	A2288	G2221	A	U2062	A1998	U1938	G1854
G2823	G2695	G2695	G2506	C2435	U2366	G2293	G2222	A	A2063	U1999	U1939	G1855
C2824	A2696	A2696	U2507	C2436	U2367	U2294	U2223	C	U2064	U2000	C1940	U1856
A2825	G2760	A2633	G2508	G2437	U2368	G2295	U2224	G	U2067	A2003	G1941	G1854
C2826	G2761	U2633	A2509	A2438	G2368	G2226	G2225	U	C2068	U2004	G1942	U1856
G2827	U2762	G2698	A2510	U2441	U2369	U2298	A2226	C	G2071	U2005	A1943	A1860
C2828	U2763	U2700	A2511	C2442	G2370	A2299	G2229	G	G2071	U2006	U1944	G1861
A2829	U2764	U2701	A2512	C2443	A2371	A2300	G2230	A	G2071	G2007	U1945	C1862
U2830	U2765	G2702	U2515	C2444	U2376	A2306	G2231	A	G2076	U2008	G1947	U1863
A2831	G2767	C2703	U2516	C2445	U2377	A2307	G2232	A	G2076	U2009	C1948	G1864
G2832	U2704	U2704	C2517	C2446	G2378	A2307	G2233	C	G2076	G2010	A1949	U1865
C2833	A2705	G2705	C2518	G2447	G2379	A2308	G2234	U	G2077	G2011	C1950	G1866
A2834	U2706	U2706	C2519	U2448	U2380	G2309	U2235	C	A2079	U2012	G1951	A1860
U2835	G2707	C2520	C2520	A2449	U2381	G2310	U2236	A	U2080	A2013	U1952	C1862
G2836	U2708	A2521	U2521	G2450	A2385	U2311	G2237	C	G2077	A2014	A1953	U1869
U2837	C2709	G2522	G2522	G2451	U2386	U2312	G2238	A	G2077	G2015	A1954	U1870
U2838	C2710	G2523	G2523	A2455	G2389	G2313	G2239	C	G2077	A2016	G1955	U1870
G2839	G2711	G2524	G2524	U2456	U2390	G2314	U2240	C	G2077	A2016	G1956	U1881
U2840	A2712	U2525	U2525	G2457	A2391	A2315	U2241	C	G2077	C2019	C1957	G1882
A2841	A2713	U2526	U2526	U2458	A2392	G2316	G2242	A	G2077	G2020	G1958	A1883
C2842	G2714	U2527	U2527	G2459	G2393	U2317	G2243	C	G2077	G2021	U1959	A1884
A2843	C2715	G2528	G2528	U2460	G2394	G2318	G2244	C	G2077	G2022	A1960	C1885
G2844	G2716	U2529	U2529	G2461	C2395	G2319	A2245	C	G2077	G2023	G1886	G1887
C2845	G2717	C2530	C2530	U2462	C2396	G2320	A2246	C	G2077	G2024	A1961	G1887
G2846	U2718	U2531	U2531	A2463	C2397	G2321	A2247	C	G2077	U2025	G1962	C1888
U2847	A2719	U2532	U2532	U2464	U2398	G2322	G2248	C	G2077	A2026	A1963	G1889
A2848	U2720	G2533	G2533	U2465	A2401	G2323	U2249	C	G2077	C2027	A1964	A1901
C2849	C2721	U2534	U2534	U2471	U2402	G2324	U2251	C	G2077	G2028	G1966	A1902
U2850	G2722	C2535	C2535	G2474	U2403	A2325	A2252	C	G2077	G2029	U1967	G1905
G2851	U2723	G2536	G2536	U2475	C2403	G2326	A2253	C	G2077	U2030	G1968	U1906
C2852	A2724	U2537	U2537	U2476	A2404	U2327	G2254	C	G2077	A2031	G1969	U1907
U2853	G2725	C2538	C2538	U2477	A2405	G2328	G2255	C	G2077	G2032	G1970	C1907
C2854	U2726	U2539	U2539	U2478	C2406	C2329	G2256	C	G2077	C2033	C1971	U1908
U2855	G2727	G2540	G2540	U2479	G2407	G2330	A2257	C	G2077	A2034	G1972	U1909
C2856	A2728	U2541	U2541	C2480	G2408	A2331	G2258	C	G2077	G2035	C1973	A1910
G2857	U2729	U2542	U2542	U2481	U2410	G2332	G2261	C	G2077	G2036	U1974	A1911
C2858	G2730	A2543	A2543	U2482	U2411	C2333	G2262	C	G2077	A2037	G1975	G1912
U2859	A2731	G2544	G2544	U2483	A2412	U2334	G2263	C	G2077	G2038	U1976	G1913
C2860	C2732	U2545	U2545	U2484	A2413	G2335	G2264	C	G2077	A2040	U1977	U1914
U2861	U2733	A2546	A2546	U2485	A2414	A2336	A2265	C	G2077	A2041	U1978	A1915
G2862	G2734	G2547	G2547	U2486	G2415	G2337	A2266	C	G2077	G2042	C1979	G1916
C2863	U2735	U2548	U2548	U2487	A2416	C2338	A2267	C	G2077	G2043	A1980	C1917
U2864	A2736	G2549	G2549	U2488	A2417	U2339	G2268	C	G2077	G2044	A1981	G1918
C2865	U2737	U2550	U2550	U2489	A2418	C2340	G2269	C	G2077	A2045	C1982	A1919
G2866	G2738	A2551	A2551	U2490	A2419	G2341	U2270	C	G2077	G2046	A1983	A1920
U2867	A2739	G2552	G2552	U2491	C2420	U2342	G2271	C	G2077	C2047	A1984	A1921
C2868	U2740	U2553	U2553	U2492	C2421	G2343	A2272	C	G2077	G2048	G1985	U1922
U2869	G2741	G2554	G2554	U2493	C2422	U2344	G2273	C	G2077	G2049	G1986	U1923
G2870	A2742	U2555	U2555	U2494	G2423	A2345	G2274	C	G2077	G2050	G1987	C1924
C2871	U2743	A2556	A2556	U2495	G2424	G2346	U2275	C	G2077	U2051	U1988	U1925
U2872	G2744	U2557	U2557	U2496	G2425	G2347	G2276	C	G2077	G2052	C1989	C1926
G2873	A2745	G2558	G2558	U2497	G2426	U2348	A2277	C	G2077	G2053	U1990	U1927
C2874	U2746	U2559	U2559	U2498	A2427	A2355	A2278	C	G2077	G2054	C1991	G1928
U2875	G2747	G2560	G2560	U2499	U2428	A2356	G2279	C	G2077	G2055	G1992	U1929
C2876	A2748	U2561	U2561	U2500	A2429	A2357	A2280	C	G2077	G2056	G1993	C1930
G2877	U2749	G2562	G2562	U2501	A2430	C2358	U2285	C	G2077	U2057	U1994	G1931
U2878	G2750	U2563	U2563	U2502	G2431	G2359	U2286	C	G2077	G2058	G1995	G1932

- Molecule 2: 50S RIBOSOMAL PROTEIN L33

Chain 1: 

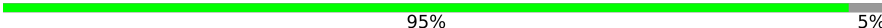


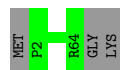
- Molecule 3: 50S RIBOSOMAL PROTEIN L34

Chain 2: 

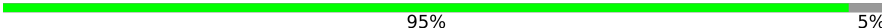


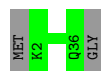
- Molecule 4: 50S RIBOSOMAL PROTEIN L35

Chain 3: 

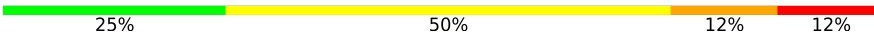


- Molecule 5: 50S RIBOSOMAL PROTEIN L36

Chain 4: 

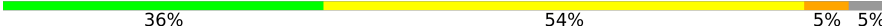


- Molecule 6: QUINUPRISTIN

Chain 5: 



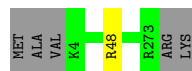
- Molecule 7: 5S RIBOSOMAL RNA

Chain 9: 

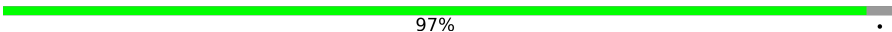


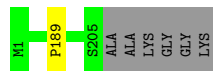
- Molecule 8: 50S RIBOSOMAL PROTEIN L2

Chain A: 

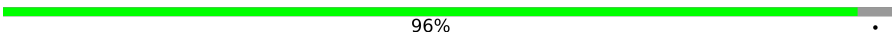


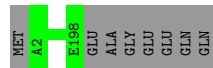
- Molecule 9: 50S RIBOSOMAL PROTEIN L3

Chain B:  97%

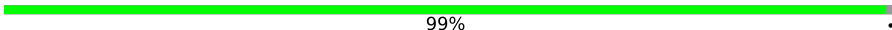


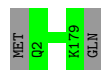
- Molecule 10: 50S RIBOSOMAL PROTEIN L4

Chain C:  96%



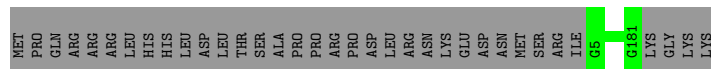
- Molecule 11: 50S RIBOSOMAL PROTEIN L5

Chain D:  99%

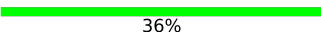


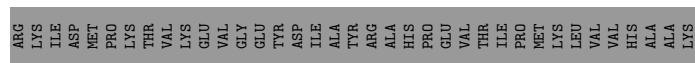
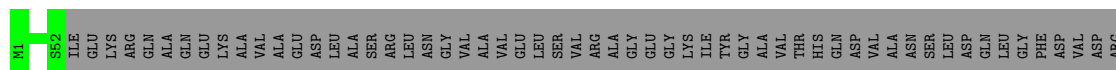
- Molecule 12: 50S RIBOSOMAL PROTEIN L6

Chain E:  83%  17%

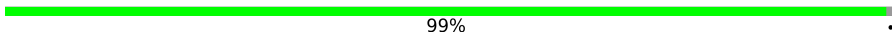


- Molecule 13: 50S RIBOSOMAL PROTEIN L9

Chain F:  36%  64%

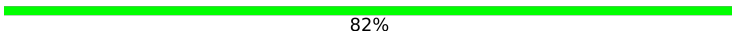


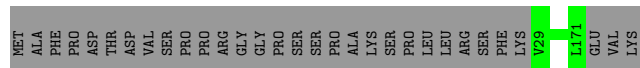
- Molecule 14: 50S RIBOSOMAL PROTEIN L11

Chain G:  99%

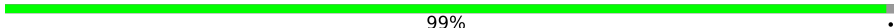
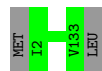


- Molecule 15: 50S RIBOSOMAL PROTEIN L13

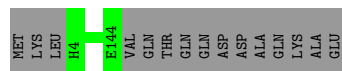
Chain H:  82%  18%



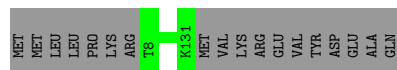
● Molecule 16: 50S RIBOSOMAL PROTEIN L14

Chain I:  99%

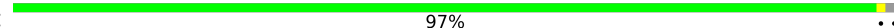
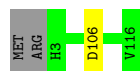
● Molecule 17: 50S RIBOSOMAL PROTEIN L15

Chain J:  90% 10%

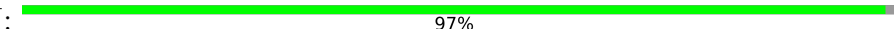
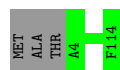
● Molecule 18: 50S RIBOSOMAL PROTEIN L16

Chain K:  87% 13%

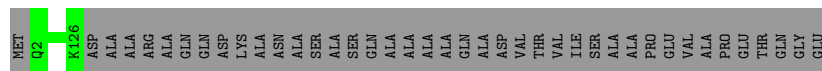
● Molecule 19: 50S RIBOSOMAL PROTEIN L17

Chain L:  97% ..

● Molecule 20: 50S RIBOSOMAL PROTEIN L18

Chain M:  97% .

● Molecule 21: 50S RIBOSOMAL PROTEIN L19

Chain N:  75% 25%

● Molecule 22: 50S RIBOSOMAL PROTEIN L20

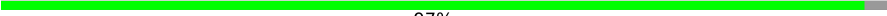
Chain O:  97% ..

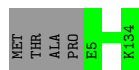
● Molecule 23: 50S RIBOSOMAL PROTEIN L21

Chain P:  100%

There are no outlier residues recorded for this chain.

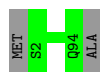
- Molecule 24: 50S RIBOSOMAL PROTEIN L22

Chain Q:  97%



- Molecule 25: 50S RIBOSOMAL PROTEIN L23

Chain R:  98%



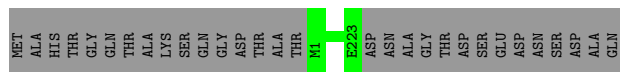
- Molecule 26: 50S RIBOSOMAL PROTEIN L24

Chain S:  98%



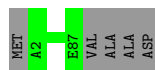
- Molecule 27: GENERAL STRESS PROTEIN CTC

Chain T:  88% 12%



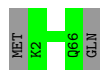
- Molecule 28: 50S RIBOSOMAL PROTEIN L27

Chain U:  95% 5%



- Molecule 29: 50S RIBOSOMAL PROTEIN L29

Chain W:  97%



- Molecule 30: 50S RIBOSOMAL PROTEIN L30

Chain X:  100%

There are no outlier residues recorded for this chain.

- Molecule 31: 50S RIBOSOMAL PROTEIN L31

Chain Y:  100%

There are no outlier residues recorded for this chain.

- Molecule 32: 50S RIBOSOMAL PROTEIN L32

Chain Z:  95% ..



4 Data and refinement statistics

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

Property	Value	Source
Space group	I 2 2 2	Depositor
Cell constants a, b, c, α , β , γ	168.50 Å 406.00 Å 693.00 Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	15.00 – 3.42	Depositor
% Data completeness (in resolution range)	(Not available) (15.00-3.42)	Depositor
R_{merge}	(Not available)	Depositor
R_{sym}	0.16	Depositor
Refinement program	CNS	Depositor
R, R_{free}	0.278 , 0.348	Depositor
Estimated twinning fraction	No twinning to report.	Xtriage
Total number of atoms	65418	wwPDB-VP
Average B, all atoms (Å ²)	80.0	wwPDB-VP

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: DBB, MHV, DOL, MHU, 004, MHT, MHW

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	0	0.49	0/66467	0.77	55/103673 (0.1%)
6	5	0.88	0/13	0.98	0/15
7	9	0.40	0/2813	0.67	0/4384
All	All	0.49	0/69293	0.77	55/108072 (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
1	0	0	146
6	5	1	1
7	9	0	1
All	All	1	148

There are no bond length outliers.

All (55) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	0	173	A	C2'-C3'-O3'	8.53	122.30	109.50
1	0	2668	U	C4'-C3'-O3'	-7.76	101.35	113.00
1	0	1264	C	C2'-C3'-O3'	-7.40	102.60	113.70
1	0	586	G	C4'-C3'-O3'	-7.16	102.26	113.00
1	0	1263	G	C2'-C3'-O3'	7.07	120.10	109.50
1	0	583	C	C2'-C3'-O3'	6.83	119.74	109.50
1	0	466	A	C4'-C3'-O3'	-6.24	103.64	113.00
1	0	1285	A	C2'-C3'-O3'	-6.18	104.43	113.70
1	0	2560	G	C4'-C3'-O3'	-6.13	103.80	113.00
1	0	1938	U	C2'-C3'-O3'	6.13	122.90	113.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	0	675	C	C1'-C2'-O2'	6.07	117.50	108.40
1	0	523	A	C4'-C3'-O3'	-6.04	103.93	113.00
1	0	2696	A	C2'-C3'-O3'	-5.96	104.76	113.70
1	0	1332	G	C4'-C3'-O3'	-5.92	104.12	113.00
1	0	823	U	N1-C1'-C2'	5.85	120.78	112.00
1	0	2848	A	C4'-C3'-O3'	-5.84	104.24	113.00
1	0	993	C	C2'-C3'-O3'	-5.79	105.01	113.70
1	0	577	U	C2'-C3'-O3'	-5.77	105.05	113.70
1	0	1820	G	C2'-C3'-O3'	5.73	122.30	113.70
1	0	2557	G	C4'-C3'-O3'	-5.72	104.42	113.00
1	0	2044	G	N9-C1'-C2'	5.69	120.54	112.00
1	0	2255	G	C3'-C2'-O2'	5.68	119.23	110.70
1	0	487	G	C2'-C3'-O3'	-5.63	105.25	113.70
1	0	578	U	C4'-C3'-O3'	-5.59	104.61	113.00
1	0	768	U	C3'-C2'-O2'	5.56	119.04	110.70
1	0	1280	U	C2'-C3'-O3'	-5.48	105.47	113.70
1	0	2482	A	C4'-C3'-O3'	-5.46	104.81	113.00
1	0	984	A	C2'-C3'-O3'	-5.43	105.55	113.70
1	0	1466	C	C4'-C3'-O3'	-5.43	104.86	113.00
1	0	1823	G	C3'-C2'-O2'	5.36	118.73	110.70
1	0	995	A	C4'-C3'-O3'	-5.31	105.03	113.00
1	0	1293	A	C1'-C2'-O2'	5.29	116.33	108.40
1	0	1710	U	N1-C1'-C2'	5.29	119.93	112.00
1	0	2056	C	C3'-C2'-O2'	5.29	118.63	110.70
1	0	1691	G	C5'-C4'-C3'	-5.24	108.14	116.00
1	0	1141	U	C2'-C3'-O3'	5.24	117.36	109.50
1	0	2660	C	C4'-C3'-O3'	-5.22	105.16	113.00
1	0	2705	A	N9-C1'-C2'	5.22	119.83	112.00
1	0	1249	G	C4'-C3'-O3'	-5.21	105.19	113.00
1	0	2834	A	C3'-C2'-O2'	5.21	118.51	110.70
1	0	570	G	C3'-C2'-O2'	5.18	118.47	110.70
1	0	688	A	C3'-C2'-O2'	5.17	118.45	110.70
1	0	2759	U	C2'-C3'-O3'	-5.15	105.97	113.70
1	0	954	U	C2'-C3'-O3'	-5.14	105.98	113.70
1	0	2858	A	C2'-C3'-O3'	-5.14	105.99	113.70
1	0	2016	A	C3'-C2'-O2'	5.12	118.39	110.70
1	0	531	G	C3'-C2'-O2'	5.10	118.35	110.70
1	0	2821	G	C4'-C3'-O3'	-5.10	105.36	113.00
1	0	1378	A	C4'-C3'-O3'	-5.08	105.38	113.00
1	0	2481	G	N9-C1'-C2'	5.07	119.61	112.00
1	0	2591	C	N1-C1'-C2'	5.05	119.58	112.00
1	0	2039	G	C3'-C2'-O2'	5.04	118.25	110.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	0	801	A	C3'-C2'-O2'	5.03	118.24	110.70
1	0	588	G	N9-C1'-C2'	5.00	119.51	112.00
1	0	2825	A	C4'-C3'-O3'	-5.00	105.49	113.00

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
6	5	8	MHT	C3

All (148) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	0	1004	A	Sidechain
1	0	1133	G	Sidechain
1	0	1139	A	Sidechain
1	0	1141	U	Sidechain
1	0	1146	G	Sidechain
1	0	1197	U	Sidechain
1	0	1199	U	Sidechain
1	0	1201	G	Sidechain
1	0	1209	G	Sidechain
1	0	1222	G	Sidechain
1	0	1226	A	Sidechain
1	0	1232	U	Sidechain
1	0	1253	C	Sidechain
1	0	1257	U	Sidechain
1	0	126	C	Sidechain
1	0	1262	U	Sidechain
1	0	1263	G	Sidechain
1	0	1268	U	Sidechain
1	0	1269	G	Sidechain
1	0	1277	G	Sidechain
1	0	1280	U	Sidechain
1	0	1301	U	Sidechain
1	0	1326	U	Sidechain
1	0	1341	G	Sidechain
1	0	1467	U	Sidechain
1	0	1470	G	Sidechain
1	0	1629	G	Sidechain
1	0	1631	C	Sidechain
1	0	1637	U	Sidechain
1	0	1658	A	Sidechain

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
1	0	1664	G	Sidechain
1	0	1666	G	Sidechain
1	0	1680	U	Sidechain
1	0	1685	A	Sidechain
1	0	1706	A	Sidechain
1	0	1709	U	Sidechain
1	0	1710	U	Sidechain
1	0	1712	G	Sidechain
1	0	1720	G	Sidechain
1	0	174	A	Sidechain
1	0	1761	G	Sidechain
1	0	1922	U	Sidechain
1	0	1923	U	Sidechain
1	0	1947	G	Sidechain
1	0	1974	U	Sidechain
1	0	1977	C	Sidechain
1	0	1978	U	Sidechain
1	0	1980	A	Sidechain
1	0	1983	G	Sidechain
1	0	1989	C	Sidechain
1	0	1990	U	Sidechain
1	0	1996	A	Sidechain
1	0	2000	U	Sidechain
1	0	2003	A	Sidechain
1	0	2033	C	Sidechain
1	0	2038	C	Sidechain
1	0	2039	G	Sidechain
1	0	2044	G	Sidechain
1	0	2047	C	Sidechain
1	0	2050	G	Sidechain
1	0	2059	U	Sidechain
1	0	211	U	Sidechain
1	0	217	U	Sidechain
1	0	2241	U	Sidechain
1	0	2253	A	Sidechain
1	0	2255	G	Sidechain
1	0	2366	U	Sidechain
1	0	2369	U	Sidechain
1	0	2398	U	Sidechain
1	0	2428	U	Sidechain
1	0	2431	C	Sidechain
1	0	2432	A	Sidechain

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
1	0	2441	U	Sidechain
1	0	2479	U	Sidechain
1	0	2492	G	Sidechain
1	0	2512	A	Sidechain
1	0	2516	U	Sidechain
1	0	2526	U	Sidechain
1	0	2541	U	Sidechain
1	0	2549	G	Sidechain
1	0	2556	A	Sidechain
1	0	2566	A	Sidechain
1	0	2570	C	Sidechain
1	0	2572	U	Sidechain
1	0	2581	A	Sidechain
1	0	2592	U	Sidechain
1	0	2594	U	Sidechain
1	0	2599	U	Sidechain
1	0	2606	G	Sidechain
1	0	2614	A	Sidechain
1	0	2626	U	Sidechain
1	0	2629	U	Sidechain
1	0	2666	U	Sidechain
1	0	2677	U	Sidechain
1	0	2681	A	Sidechain
1	0	2687	G	Sidechain
1	0	2704	U	Sidechain
1	0	2786	G	Sidechain
1	0	2799	C	Sidechain
1	0	2822	U	Sidechain
1	0	2830	U	Sidechain
1	0	2840	U	Sidechain
1	0	2872	U	Sidechain
1	0	33	C	Sidechain
1	0	444	U	Sidechain
1	0	470	U	Sidechain
1	0	480	G	Sidechain
1	0	521	U	Sidechain
1	0	535	U	Sidechain
1	0	562	G	Sidechain
1	0	565	A	Sidechain
1	0	578	U	Sidechain
1	0	579	G	Sidechain
1	0	587	A	Sidechain

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
1	0	588	G	Sidechain
1	0	592	G	Sidechain
1	0	597	U	Sidechain
1	0	674	U	Sidechain
1	0	675	C	Sidechain
1	0	707	U	Sidechain
1	0	743	A	Sidechain
1	0	753	U	Sidechain
1	0	759	C	Sidechain
1	0	760	U	Sidechain
1	0	773	G	Sidechain
1	0	777	A	Sidechain
1	0	780	U	Sidechain
1	0	790	A	Sidechain
1	0	794	A	Sidechain
1	0	8	A	Sidechain
1	0	800	U	Sidechain
1	0	804	C	Sidechain
1	0	818	G	Sidechain
1	0	820	U	Sidechain
1	0	823	U	Sidechain
1	0	839	U	Sidechain
1	0	845	U	Sidechain
1	0	847	C	Sidechain
1	0	864	C	Sidechain
1	0	871	U	Sidechain
1	0	917	U	Sidechain
1	0	957	G	Sidechain
1	0	960	U	Sidechain
1	0	983	G	Sidechain
1	0	993	C	Sidechain
1	0	994	A	Sidechain
6	5	1	MHW	Peptide
7	9	94	G	Sidechain

5.2 Too-close contacts ⓘ

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	59359	0	29917	2133	0
2	1	53	0	0	0	0
3	2	46	0	0	0	0
4	3	63	0	0	0	0
5	4	35	0	0	0	0
6	5	73	0	64	6	0
7	9	2516	0	1286	66	0
8	A	270	0	0	1	0
9	B	205	0	0	1	0
10	C	197	0	0	0	0
11	D	178	0	0	0	0
12	E	177	0	0	0	0
13	F	52	0	0	0	0
14	G	143	0	0	0	0
15	H	143	0	0	0	0
16	I	132	0	0	0	0
17	J	141	0	0	0	0
18	K	124	0	0	0	0
19	L	114	0	0	1	0
20	M	111	0	0	0	0
21	N	125	0	0	0	0
22	O	117	0	0	2	0
23	P	100	0	0	0	0
24	Q	130	0	0	0	0
25	R	93	0	0	0	0
26	S	113	0	0	0	0
27	T	223	0	0	0	0
28	U	86	0	0	0	0
29	W	65	0	0	0	0
30	X	55	0	0	0	0
31	Y	73	0	0	0	0
32	Z	58	0	0	2	0
33	0	48	0	47	16	0
All	All	65418	0	31314	2208	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 23.

All (2208) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1463:A:H1'	1:0:1543:G:H22	1.05	1.14

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:128:C:H2'	1:0:129:A:H5''	1.19	1.10
1:0:1656:U:H2'	1:0:1657:A:H5''	1.34	1.10
1:0:940:G:H3'	1:0:941:U:H5''	1.23	1.09
1:0:2607:C:H3'	1:0:2608:A:H5'	1.10	1.08
1:0:2548:G:H2'	1:0:2549:G:H5''	1.37	1.07
1:0:1572:C:H2'	1:0:1573:G:H5''	1.31	1.06
1:0:1747:G:H4'	1:0:1749:G:H1'	1.39	1.05
1:0:170:U:H2'	1:0:171:G:H8	1.20	1.04
1:0:58:C:H3'	1:0:59:G:H5''	1.39	1.03
1:0:104:C:H2'	1:0:105:G:H5''	1.36	1.03
1:0:1312:G:H5''	1:0:1313:U:H5'	1.04	1.02
1:0:1055:A:H4'	1:0:1058:G:H4'	1.41	1.01
1:0:1953:A:H1'	1:0:1955:G:H1'	1.39	1.00
1:0:1312:G:C5'	1:0:1313:U:H5'	1.91	0.99
1:0:2548:G:C2'	1:0:2549:G:H5''	1.92	0.99
1:0:1749:G:O6	1:0:2674:C:H4'	1.65	0.97
1:0:1289:A:H62	1:0:1662:G:H1	1.13	0.96
1:0:1312:G:H5''	1:0:1313:U:C5'	1.94	0.96
1:0:1250:A:O2'	1:0:1251:G:H4'	1.65	0.96
1:0:1888:C:H5''	1:0:1889:G:H5''	1.45	0.95
1:0:587:A:H2	1:0:1266:G:H21	1.14	0.95
1:0:2607:C:H3'	1:0:2608:A:C5'	1.96	0.94
1:0:579:G:H2'	1:0:2013:A:N6	1.82	0.94
1:0:763:A:C2	1:0:766:A:H1'	2.02	0.94
1:0:1018:C:H1'	1:0:1147:G:N2	1.83	0.93
1:0:2783:U:H2'	1:0:2784:A:H4'	1.47	0.93
1:0:128:C:C2'	1:0:129:A:H5''	1.98	0.93
1:0:708:G:H1	1:0:780:U:H3	1.13	0.92
1:0:2809:A:N6	1:0:2854:G:H1'	1.83	0.92
1:0:1921:A:H2'	1:0:1922:U:H5''	1.51	0.92
1:0:1791:C:H2'	1:0:1792:C:H5''	1.51	0.92
1:0:1572:C:C2'	1:0:1573:G:H5''	1.99	0.92
1:0:1621:C:H2'	1:0:1622:G:O4'	1.72	0.90
1:0:867:G:H2'	1:0:868:U:H6	1.36	0.90
1:0:940:G:C3'	1:0:941:U:H5''	2.02	0.89
1:0:1242:A:H2'	1:0:1243:G:H8	1.37	0.89
1:0:2561:G:H8	1:0:2561:G:OP1	1.55	0.88
1:0:2012:A:N7	1:0:2014:A:H5'	1.87	0.88
1:0:1938:U:C2'	1:0:1939:U:H5'	2.03	0.88
1:0:1989:C:O5'	1:0:1989:C:H6	1.57	0.88
1:0:1408:A:H1'	1:0:1410:U:H5	1.38	0.87

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1252:C:C2'	1:0:1253:C:H5''	2.04	0.87
1:0:1656:U:C2'	1:0:1657:A:H5''	2.04	0.87
1:0:941:U:H2'	1:0:942:U:O4'	1.75	0.87
1:0:176:A:H5''	1:0:177:U:H5	1.40	0.86
1:0:929:A:H3'	1:0:930:A:H5''	1.56	0.86
1:0:1818:G:H2'	1:0:1819:U:C6	2.09	0.86
1:0:1463:A:H1'	1:0:1543:G:N2	1.90	0.85
1:0:942:U:O2'	1:0:943:U:H5'	1.76	0.85
1:0:579:G:H2'	1:0:2013:A:H62	1.38	0.85
1:0:918:A:H2'	1:0:919:U:H5''	1.56	0.85
1:0:805:G:H2'	1:0:2419:C:N3	1.91	0.85
1:0:1715:A:H1'	1:0:1717:A:O4'	1.76	0.84
1:0:2526:U:C5	1:0:2545:A:N7	2.45	0.84
1:0:1791:C:H1'	1:0:1793:A:H5'	1.56	0.84
1:0:1458:A:H3'	1:0:1459:U:C5'	2.07	0.84
1:0:2033:C:H2'	1:0:2034:A:O4'	1.78	0.84
1:0:703:A:H2'	1:0:704:G:H8	1.42	0.83
1:0:392:G:H22	1:0:408:U:H3	1.23	0.83
1:0:796:A:H2	1:0:1770:U:O4'	1.62	0.83
1:0:2691:C:H3'	1:0:2692:A:H5''	1.58	0.83
1:0:951:G:H2'	1:0:952:A:H5''	1.59	0.83
1:0:170:U:H2'	1:0:171:G:C8	2.12	0.83
1:0:2447:G:O2'	1:0:2448:A:H5''	1.78	0.83
1:0:1917:C:H2'	1:0:1918:G:O4'	1.79	0.83
1:0:2595:C:H2'	1:0:2596:C:C6	2.13	0.83
1:0:1455:C:H2'	1:0:1456:C:H6	1.44	0.82
1:0:871:U:O2	1:0:2247:A:H2'	1.78	0.82
1:0:1252:C:H2'	1:0:1253:C:H5''	1.62	0.82
1:0:2633:A:H4'	1:0:2634:G:H4'	1.59	0.82
1:0:1971:C:H2'	1:0:1972:G:H8	1.43	0.82
1:0:1938:U:H2'	1:0:1939:U:H5'	1.60	0.82
1:0:2319:G:H2'	1:0:2320:G:C8	2.15	0.82
1:0:2409:A:H2'	1:0:2410:U:H5'	1.61	0.81
1:0:2713:A:H2'	1:0:2714:A:H8	1.45	0.81
1:0:2503:G:H2'	1:0:2504:G:H5''	1.63	0.81
1:0:976:C:H5'	1:0:2252:A:H1'	1.62	0.81
1:0:1908:C:H2'	1:0:1909:U:H4'	1.61	0.81
1:0:109:A:H3'	1:0:110:U:H5''	1.63	0.80
1:0:1971:C:H2'	1:0:1972:G:C8	2.15	0.80
1:0:2433:G:O2'	1:0:2434:G:H5'	1.81	0.80
1:0:2841:U:O2	1:0:2843:A:H1'	1.81	0.80

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1018:C:H1'	1:0:1147:G:H22	1.44	0.80
1:0:1289:A:O2'	1:0:1290:A:H5'	1.82	0.80
1:0:2594:U:H6	1:0:2594:U:H5'	1.46	0.80
1:0:2607:C:C3'	1:0:2608:A:H5'	2.05	0.80
1:0:2721:A:H62	1:0:2743:G:H21	1.30	0.80
1:0:1242:A:H2'	1:0:1243:G:C8	2.17	0.80
1:0:727:U:H2'	1:0:728:G:H5''	1.61	0.80
1:0:1414:G:H21	1:0:1484:G:H21	1.28	0.79
1:0:1692:C:O2'	1:0:1693:A:H5'	1.82	0.79
1:0:104:C:C2'	1:0:105:G:H5''	2.13	0.79
1:0:1692:C:C2'	1:0:1693:A:H5'	2.13	0.79
1:0:357:A:H3'	1:0:358:C:H5'	1.63	0.79
1:0:2548:G:H2'	1:0:2549:G:C5'	2.12	0.79
1:0:1964:A:H3'	1:0:1965:U:H5'	1.66	0.78
1:0:2058:U:H3'	1:0:2217:G:N1	1.98	0.78
1:0:2839:G:H2'	1:0:2840:U:O4'	1.83	0.78
1:0:2431:C:O2'	1:0:2432:A:H5'	1.83	0.78
1:0:317:U:H3'	1:0:318:G:H5''	1.64	0.78
1:0:195:A:H61	1:0:212:U:H4'	1.49	0.78
1:0:317:U:H3	1:0:321:A:N6	1.81	0.78
33:0:2882:DOL:H463	33:0:2882:DOL:H421	1.66	0.78
1:0:195:A:H2'	1:0:196:A:O4'	1.84	0.77
1:0:1924:C:H2'	1:0:1925:C:O4'	1.84	0.77
1:0:2257:A:O2'	1:0:2258:G:H5'	1.84	0.77
1:0:1804:U:H2'	1:0:1805:G:H8	1.48	0.77
1:0:175:C:H1'	1:0:2413:A:H61	1.49	0.77
1:0:573:C:H2'	1:0:574:C:O4'	1.85	0.77
1:0:1922:U:O2	1:0:2571:G:H5'	1.85	0.77
1:0:317:U:H3	1:0:321:A:H62	1.33	0.77
1:0:455:A:H4'	1:0:1214:C:O2'	1.83	0.77
1:0:1964:A:C3'	1:0:1965:U:H5'	2.16	0.76
7:9:92:G:H2'	7:9:93:G:H5'	1.66	0.76
1:0:24:G:H2'	1:0:25:U:C6	2.21	0.76
1:0:2642:G:H2'	1:0:2643:G:O4'	1.84	0.76
1:0:216:U:H2'	1:0:217:U:O4'	1.85	0.76
1:0:2270:U:O2'	1:0:2353:G:H1'	1.84	0.76
1:0:2230:G:H1'	1:0:2429:A:O4'	1.85	0.76
1:0:2788:C:O2'	1:0:2789:U:H5'	1.85	0.76
1:0:590:C:H2'	1:0:591:G:H8	1.50	0.76
1:0:601:A:H61	1:0:633:G:N2	1.83	0.76
1:0:706:A:H2'	1:0:707:U:C6	2.20	0.76

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:753:U:H2'	1:0:754:G:H5'	1.66	0.75
1:0:1944:C:H2'	1:0:1945:C:O4'	1.86	0.75
1:0:88:G:H3'	1:0:89:A:H5''	1.69	0.75
1:0:940:G:H3'	1:0:941:U:C5'	2.09	0.75
1:0:703:A:H2'	1:0:704:G:C8	2.20	0.75
1:0:1458:A:H3'	1:0:1459:U:H5''	1.67	0.75
1:0:2468:G:H2'	1:0:2469:G:O4'	1.87	0.75
1:0:1640:C:H2'	1:0:1641:C:H6	1.52	0.75
1:0:2199:C:H2'	1:0:2200:G:C8	2.22	0.75
1:0:2523:G:O2'	1:0:2524:G:H5'	1.87	0.74
1:0:1818:G:H2'	1:0:1819:U:H6	1.49	0.74
1:0:2658:A:H2'	1:0:2659:C:H6	1.52	0.74
1:0:688:A:O2'	1:0:2422:C:H4'	1.87	0.74
1:0:2505:G:H5'	1:0:2722:C:O2'	1.86	0.74
1:0:2822:U:H2'	1:0:2823:G:H5'	1.69	0.74
1:0:867:G:H2'	1:0:868:U:C6	2.20	0.74
1:0:2484:G:H4'	33:0:2882:DOL:O15	1.86	0.74
1:0:2811:G:H2'	1:0:2812:A:C8	2.23	0.74
1:0:608:G:O2'	1:0:609:U:H5'	1.87	0.73
1:0:1254:G:H2'	1:0:1255:A:H8	1.51	0.73
1:0:1619:A:H2	1:0:1620:C:C5	2.07	0.73
1:0:1763:G:H2'	1:0:1764:A:H4'	1.70	0.73
1:0:1953:A:H1'	1:0:1955:G:C1'	2.16	0.73
1:0:1974:U:H2'	1:0:1975:G:H5''	1.70	0.73
1:0:831:G:C2'	1:0:832:A:H5''	2.18	0.73
7:9:88:C:H2'	7:9:89:G:H8	1.52	0.73
1:0:161:U:H5'	1:0:193:A:H2	1.53	0.73
1:0:2058:U:H3'	1:0:2217:G:H1	1.54	0.73
1:0:2498:U:H2'	1:0:2520:A:N1	2.03	0.73
1:0:2464:G:O2'	1:0:2465:G:H5'	1.89	0.73
1:0:2691:C:H3'	1:0:2692:A:C5'	2.19	0.73
7:9:7:C:H2'	7:9:8:C:H6	1.54	0.73
1:0:304:A:H2'	1:0:305:A:H5''	1.69	0.73
1:0:1392:U:H2'	1:0:1393:G:H5'	1.70	0.73
1:0:2557:G:H2'	1:0:2558:C:C6	2.24	0.73
1:0:2872:U:H2'	1:0:2873:G:C8	2.23	0.73
7:9:45:C:H3'	7:9:46:G:H5'	1.70	0.73
1:0:2660:C:O2'	1:0:2661:G:H5'	1.89	0.73
1:0:688:A:H1'	1:0:2422:C:O2'	1.88	0.72
1:0:1086:C:H2'	1:0:1087:C:H5''	1.69	0.72
33:0:2882:DOL:H463	33:0:2882:DOL:C42	2.19	0.72

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:572:G:H1	1:0:587:A:H61	1.36	0.72
1:0:1014:G:N2	1:0:1015:U:C2	2.57	0.72
1:0:1198:C:H5''	1:0:1199:U:H4'	1.72	0.72
1:0:2678:C:O2'	1:0:2679:G:H5'	1.89	0.72
1:0:1922:U:H1'	1:0:2570:C:O2'	1.89	0.72
1:0:1401:G:O2'	1:0:1541:G:H5'	1.89	0.72
1:0:1745:C:O2	1:0:2697:G:H4'	1.90	0.72
1:0:1981:A:H4'	1:0:2704:U:O2'	1.88	0.72
1:0:2436:U:O2'	1:0:2437:G:H5'	1.89	0.72
1:0:1054:C:H2'	1:0:1055:A:H5'	1.71	0.72
1:0:1976:U:H2'	1:0:1977:C:H5'	1.71	0.72
33:0:2882:DOL:H313	6:5:3:DBB:HG1	1.72	0.72
1:0:753:U:H2'	1:0:754:G:C5'	2.20	0.72
1:0:2680:U:H3'	1:0:2681:A:H5'	1.72	0.72
1:0:2755:A:O2'	1:0:2756:A:H5'	1.89	0.72
1:0:1914:U:H3	1:0:1952:A:H62	1.37	0.71
1:0:215:G:O2'	1:0:617:U:H1'	1.89	0.71
1:0:1353:A:H4'	1:0:1410:U:H3	1.55	0.71
1:0:79:G:H2'	1:0:80:A:C8	2.24	0.71
1:0:1288:A:H2'	1:0:1289:A:O4'	1.90	0.71
1:0:236:C:H2'	1:0:237:G:H8	1.56	0.71
1:0:2818:G:N2	1:0:2850:U:C2	2.58	0.71
1:0:776:G:O2'	1:0:778:G:H5''	1.90	0.71
1:0:930:A:H5'	1:0:931:G:C8	2.26	0.71
1:0:1007:A:H2'	1:0:1008:G:H8	1.55	0.71
1:0:2217:G:H5''	1:0:2218:G:N7	2.05	0.71
1:0:2480:C:H5''	1:0:2482:A:H5'	1.71	0.71
1:0:2499:C:H41	1:0:2521:A:H2	1.38	0.71
1:0:587:A:H2	1:0:1266:G:N2	1.87	0.71
1:0:1747:G:C4'	1:0:1749:G:H1'	2.18	0.71
1:0:798:G:O2'	1:0:1770:U:H4'	1.91	0.71
1:0:1455:C:H2'	1:0:1456:C:C6	2.24	0.71
1:0:2475:C:H2'	1:0:2476:A:H5'	1.72	0.71
33:0:2882:DOL:H421	33:0:2882:DOL:C46	2.21	0.71
1:0:248:A:H62	1:0:373:A:H2'	1.56	0.71
1:0:2516:U:H2'	1:0:2517:C:C6	2.26	0.71
1:0:45:C:H2'	1:0:46:C:C6	2.26	0.70
1:0:2199:C:H2'	1:0:2200:G:H8	1.55	0.70
1:0:1715:A:H1'	1:0:1717:A:C4'	2.21	0.70
1:0:2510:A:H61	1:0:2641:A:H61	1.39	0.70
1:0:2823:G:H5''	1:0:2824:C:OP1	1.91	0.70

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:933:G:O2'	1:0:934:G:H5'	1.91	0.70
1:0:1391:A:H2'	1:0:1392:U:H5	1.54	0.70
1:0:2055:G:H2'	1:0:2056:C:O4'	1.90	0.70
1:0:464:G:H2'	1:0:465:C:C6	2.27	0.70
1:0:1692:C:H2'	1:0:1693:A:H5'	1.74	0.70
1:0:2713:A:H2'	1:0:2714:A:C8	2.27	0.70
1:0:2818:G:O2'	1:0:2819:G:H5'	1.91	0.70
1:0:1321:A:H62	1:0:1622:G:H21	1.35	0.70
1:0:515:A:H2'	1:0:516:G:H5'	1.73	0.70
1:0:984:A:H2'	1:0:1200:G:N2	2.06	0.70
1:0:1284:G:H2'	1:0:1633:C:H4'	1.73	0.70
1:0:1823:G:C6	1:0:1824:C:N4	2.60	0.70
7:9:64:C:C3'	7:9:65:A:H5''	2.22	0.70
1:0:1345:G:N2	1:0:1625:A:H2'	2.07	0.70
1:0:158:A:H2	1:0:447:U:H4'	1.56	0.70
1:0:563:U:H2'	1:0:564:U:O4'	1.92	0.69
33:0:2882:DOL:H313	6:5:3:DBB:CG	2.22	0.69
1:0:1975:G:N2	1:0:1978:U:H5	1.89	0.69
1:0:221:A:H62	1:0:231:G:H21	1.40	0.69
1:0:857:U:H2'	1:0:858:G:H5'	1.74	0.69
1:0:1277:G:N7	1:0:1278:A:N7	2.41	0.69
1:0:1450:G:H1'	1:0:1493:A:N3	2.07	0.69
1:0:2437:G:C6	1:0:2469:G:H2'	2.27	0.69
1:0:2657:G:O2'	1:0:2658:A:H5'	1.92	0.69
1:0:942:U:H2'	1:0:943:U:O4'	1.93	0.69
1:0:1643:A:H1'	1:0:1657:A:C2	2.28	0.69
7:9:64:C:H3'	7:9:65:A:H5''	1.75	0.69
1:0:706:A:H2'	1:0:707:U:H6	1.57	0.69
1:0:2319:G:H2'	1:0:2320:G:H8	1.56	0.69
1:0:2407:G:H5''	1:0:2408:G:OP1	1.93	0.69
1:0:2811:G:H2'	1:0:2812:A:H8	1.57	0.69
1:0:788:G:H5''	1:0:790:A:H1'	1.75	0.69
1:0:1066:G:H2'	1:0:1067:G:H4'	1.73	0.69
1:0:1293:A:O2'	1:0:1294:G:H5'	1.93	0.69
1:0:1560:A:H2'	1:0:1561:A:O4'	1.92	0.69
1:0:2532:G:H21	1:0:2561:G:N2	1.90	0.69
1:0:1016:C:C6	1:0:1154:A:H1'	2.28	0.69
1:0:2532:G:H21	1:0:2561:G:H21	1.40	0.69
1:0:2613:A:H2'	1:0:2614:A:H8	1.57	0.69
1:0:176:A:H5''	1:0:177:U:C5	2.27	0.69
1:0:542:A:OP2	1:0:2003:A:H1'	1.92	0.69

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:931:G:H5''	7:9:83:C:O2'	1.92	0.69
1:0:1001:A:H4'	1:0:1168:G:OP2	1.93	0.69
1:0:44:G:H21	1:0:192:G:H21	1.39	0.68
1:0:1299:A:H2'	1:0:1301:U:OP2	1.93	0.68
1:0:2570:C:H2'	1:0:2571:G:C8	2.27	0.68
1:0:763:A:H2	1:0:766:A:H1'	1.54	0.68
1:0:1664:G:H4'	1:0:1665:C:OP1	1.92	0.68
1:0:161:U:H5'	1:0:193:A:C2	2.28	0.68
1:0:191:G:O2'	1:0:192:G:H5'	1.92	0.68
1:0:590:C:H2'	1:0:591:G:C8	2.28	0.68
1:0:1618:U:O5'	1:0:1618:U:H6	1.76	0.68
1:0:651:C:H2'	1:0:652:C:H5''	1.76	0.68
1:0:788:G:N2	1:0:801:A:OP2	2.26	0.68
1:0:763:A:H2'	1:0:764:A:H5''	1.76	0.68
1:0:2299:A:H5'	1:0:2300:G:C5	2.29	0.68
1:0:2474:G:C6	1:0:2475:C:C4	2.81	0.68
1:0:2652:G:H2'	1:0:2653:A:H8	1.59	0.68
7:9:24:U:H2'	7:9:25:G:H5''	1.75	0.68
1:0:831:G:H2'	1:0:832:A:H5''	1.75	0.68
1:0:1947:G:H2'	1:0:1950:C:OP1	1.94	0.68
1:0:2261:G:H4'	1:0:2262:C:OP2	1.94	0.67
7:9:7:C:H2'	7:9:8:C:C6	2.29	0.67
1:0:581:A:C2	1:0:582:G:H1'	2.30	0.67
1:0:749:C:H2'	1:0:750:C:C6	2.29	0.67
1:0:1200:G:C2'	1:0:1201:G:H5'	2.25	0.67
1:0:2672:U:H2'	1:0:2673:G:H8	1.57	0.67
1:0:2872:U:H2'	1:0:2873:G:H8	1.59	0.67
1:0:785:U:H5'	1:0:1368:G:O2'	1.94	0.67
1:0:2052:G:O2'	1:0:2053:G:H5'	1.94	0.67
1:0:2802:C:H2'	1:0:2803:C:H6	1.59	0.67
1:0:58:C:H3'	1:0:59:G:C5'	2.20	0.67
1:0:652:C:N4	1:0:657:A:H61	1.92	0.67
1:0:1807:A:O2'	1:0:1808:C:H4'	1.94	0.67
1:0:2835:A:H8	1:0:2835:A:O5'	1.75	0.67
1:0:1800:A:H2'	1:0:1802:A:C6	2.29	0.67
1:0:1854:G:H1	1:0:1863:U:H3	1.43	0.67
1:0:2727:G:H22	1:0:2735:C:H5''	1.58	0.67
1:0:1486:A:H2'	1:0:1487:C:C6	2.30	0.67
1:0:1572:C:H2'	1:0:1573:G:C5'	2.17	0.67
1:0:1655:C:H4'	1:0:2689:C:O2	1.95	0.67
1:0:2409:A:C2'	1:0:2410:U:H5'	2.25	0.67

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:456:C:O2'	1:0:457:C:H5'	1.94	0.67
1:0:1572:C:C3'	1:0:1573:G:H5''	2.24	0.67
1:0:2076:G:H2'	1:0:2077:G:H8	1.58	0.67
1:0:2548:G:O2'	1:0:2549:G:H5''	1.94	0.67
1:0:1141:U:O2'	1:0:1142:G:P	2.52	0.67
1:0:1921:A:C2'	1:0:1922:U:H5''	2.25	0.67
1:0:1937:G:N3	1:0:2530:C:H5'	2.09	0.67
1:0:2397:A:H2'	1:0:2398:U:O4'	1.94	0.67
1:0:70:A:OP1	1:0:111:G:H4'	1.94	0.67
1:0:313:U:H2'	1:0:314:G:C8	2.29	0.67
1:0:452:G:H2'	1:0:453:U:O4'	1.95	0.67
1:0:1785:A:H4'	1:0:1883:A:C2	2.29	0.67
1:0:2451:G:H2'	1:0:2508:G:N2	2.10	0.67
1:0:1319:C:H2'	1:0:1320:A:H8	1.58	0.66
1:0:1640:C:H2'	1:0:1641:C:C6	2.29	0.66
1:0:1272:G:H2'	1:0:1273:G:C8	2.31	0.66
1:0:1558:C:H2'	1:0:1559:G:H5'	1.78	0.66
7:9:23:G:H2'	7:9:24:U:H6	1.60	0.66
1:0:852:U:H2'	1:0:853:C:H6	1.61	0.66
1:0:918:A:H2'	1:0:919:U:C5'	2.25	0.66
1:0:1437:A:H2'	1:0:1438:G:H8	1.60	0.66
1:0:2463:G:O2'	1:0:2464:G:H5'	1.95	0.66
1:0:173:A:H61	1:0:844:G:H21	1.43	0.66
1:0:342:G:H2'	1:0:343:A:H5'	1.77	0.66
1:0:1029:C:H3'	1:0:1030:U:H5''	1.78	0.66
1:0:2684:A:C8	1:0:2685:A:C8	2.84	0.66
7:9:8:C:O2'	7:9:9:G:H5'	1.96	0.66
1:0:643:A:H2'	1:0:644:A:H8	1.59	0.66
1:0:672:C:O2'	1:0:673:G:H5'	1.95	0.66
1:0:2324:G:N3	1:0:2326:C:H5	1.93	0.66
1:0:2847:G:O2'	1:0:2848:A:H5'	1.94	0.66
1:0:464:G:H2'	1:0:465:C:H6	1.58	0.66
1:0:757:U:C2'	1:0:758:G:H5'	2.26	0.66
1:0:1333:G:N2	1:0:1344:C:N4	2.44	0.66
1:0:1408:A:H1'	1:0:1410:U:C5	2.26	0.66
1:0:1619:A:C2	1:0:1620:C:C5	2.83	0.66
1:0:2194:A:H2'	1:0:2195:C:H5''	1.78	0.66
1:0:2401:A:O2'	1:0:2403:C:H5''	1.95	0.66
1:0:2475:C:C2'	1:0:2476:A:H5'	2.26	0.66
1:0:2666:U:C4	1:0:2667:C:N4	2.64	0.66
1:0:3:U:H2'	1:0:4:C:C6	2.31	0.66

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:797:A:H4'	1:0:798:G:C8	2.30	0.66
1:0:815:A:H2'	1:0:816:U:C6	2.30	0.66
1:0:951:G:C2'	1:0:952:A:H5''	2.24	0.66
1:0:1254:G:H2'	1:0:1255:A:C8	2.31	0.66
1:0:1449:C:O2'	1:0:1450:G:H5'	1.96	0.66
1:0:2809:A:H61	1:0:2854:G:H1'	1.58	0.66
1:0:367:G:H2'	1:0:368:A:H5''	1.78	0.66
1:0:584:A:O2'	1:0:585:U:H5'	1.96	0.66
1:0:1345:G:H22	1:0:1625:A:H2'	1.60	0.66
1:0:1699:A:C5	1:0:1748:U:H1'	2.31	0.66
1:0:1976:U:C2'	1:0:1977:C:H5'	2.26	0.66
1:0:163:A:H2'	1:0:164:G:H8	1.61	0.66
1:0:1312:G:H8	1:0:1312:G:O5'	1.79	0.66
1:0:1679:U:H3'	1:0:1680:U:H5''	1.78	0.66
1:0:1938:U:O2'	1:0:1939:U:H5'	1.96	0.66
1:0:2787:A:O2'	1:0:2788:C:H5'	1.96	0.66
1:0:1528:C:H2'	1:0:1529:C:H5''	1.77	0.65
1:0:2491:C:C3'	1:0:2492:G:H5''	2.26	0.65
1:0:109:A:C3'	1:0:110:U:H5''	2.25	0.65
1:0:1007:A:H2'	1:0:1008:G:C8	2.31	0.65
1:0:2053:G:C2	1:0:2054:A:C4	2.83	0.65
1:0:2324:G:H4'	1:0:2326:C:H5''	1.78	0.65
1:0:81:C:H2'	1:0:82:G:O4'	1.96	0.65
1:0:859:U:H4'	1:0:860:U:H5	1.60	0.65
1:0:2266:A:H2'	1:0:2268:G:C8	2.31	0.65
1:0:875:G:H2'	1:0:876:A:O4'	1.96	0.65
1:0:687:G:O2'	1:0:688:A:H5'	1.96	0.65
1:0:776:G:H2'	1:0:777:A:H5''	1.79	0.65
1:0:1911:A:H2'	1:0:1912:G:H5'	1.79	0.65
1:0:1227:A:H62	1:0:1248:G:H21	1.45	0.65
1:0:1690:U:H2'	1:0:1691:G:H5'	1.79	0.65
1:0:2006:G:C2	1:0:2024:U:O2	2.49	0.65
1:0:2787:A:H2'	1:0:2788:C:H6	1.61	0.65
1:0:2279:G:H2'	1:0:2280:A:H8	1.61	0.65
1:0:2437:G:N1	1:0:2469:G:H2'	2.12	0.65
1:0:2503:G:C2'	1:0:2504:G:H5''	2.27	0.65
1:0:2555:G:H3'	1:0:2555:G:OP1	1.97	0.65
1:0:652:C:H42	1:0:657:A:H61	1.45	0.64
1:0:1380:C:H2'	1:0:1381:G:H5'	1.80	0.64
1:0:521:U:C5	1:0:522:G:N3	2.65	0.64
1:0:1800:A:H2'	1:0:1802:A:N6	2.12	0.64

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1727:C:H4'	1:0:2833:C:O2	1.97	0.64
1:0:2446:C:H2'	1:0:2447:G:O4'	1.97	0.64
1:0:2593:A:H8	1:0:2593:A:H3'	1.62	0.64
1:0:1970:G:O2'	1:0:1971:C:H5'	1.97	0.64
1:0:2327:U:O5'	1:0:2327:U:H6	1.79	0.64
1:0:840:U:H4'	1:0:841:G:C2	2.32	0.64
1:0:128:C:H2'	1:0:129:A:C5'	2.12	0.64
1:0:1489:C:H3'	1:0:1490:U:H5'	1.78	0.64
1:0:26:G:C6	1:0:27:G:N1	2.66	0.64
1:0:643:A:H2'	1:0:644:A:C8	2.33	0.64
1:0:1272:G:O2'	1:0:1273:G:H5'	1.98	0.64
1:0:1352:G:H2'	1:0:1353:A:C8	2.32	0.64
1:0:2213:G:H2'	1:0:2214:G:C8	2.33	0.64
1:0:1273:G:H2'	1:0:1274:C:C6	2.33	0.64
1:0:1678:G:C4	1:0:1983:G:N2	2.66	0.64
1:0:1941:C:O2'	1:0:1942:G:H5'	1.98	0.64
1:0:614:G:H2'	1:0:615:C:C6	2.33	0.63
1:0:1041:G:O2'	1:0:2445:C:H4'	1.98	0.63
1:0:1398:G:H2'	1:0:1399:C:C6	2.32	0.63
1:0:2273:C:H2'	1:0:2274:C:C6	2.33	0.63
1:0:874:A:H62	1:0:928:G:H21	1.46	0.63
1:0:964:A:H2'	1:0:965:G:C8	2.33	0.63
7:9:64:C:H2'	7:9:65:A:H5''	1.80	0.63
1:0:579:G:O2'	1:0:580:A:H5'	1.99	0.63
1:0:1073:G:H2'	1:0:1074:G:H5''	1.80	0.63
1:0:188:G:O2'	1:0:189:A:H5'	1.98	0.63
1:0:521:U:H5	1:0:522:G:N3	1.96	0.63
1:0:1016:C:H5''	1:0:1023:U:P	2.39	0.63
1:0:1437:A:H2'	1:0:1438:G:C8	2.33	0.63
1:0:2059:U:P	1:0:2217:G:H1	2.21	0.63
1:0:1028:G:H2'	1:0:1029:C:H6	1.63	0.63
1:0:2825:A:H62	1:0:2841:U:H3	1.46	0.63
1:0:68:C:O2'	1:0:69:G:H5'	1.98	0.63
1:0:357:A:H3'	1:0:358:C:C5'	2.26	0.63
1:0:755:C:O2'	1:0:756:C:H5'	1.99	0.63
1:0:820:U:H2'	1:0:821:A:C8	2.34	0.63
1:0:1881:U:H2'	1:0:1882:G:H5'	1.79	0.63
1:0:2310:G:H2'	1:0:2311:U:H5'	1.81	0.63
1:0:536:A:O2'	1:0:2026:C:H1'	1.98	0.63
1:0:1271:C:O2'	1:0:1272:G:H5'	1.99	0.63
1:0:1496:G:H1	1:0:1527:G:H1	1.47	0.63

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1969:G:H2'	1:0:1970:G:H8	1.63	0.63
1:0:2185:U:H2'	1:0:2186:G:C8	2.33	0.63
1:0:542:A:H2'	1:0:543:G:H5'	1.81	0.63
1:0:984:A:O2'	1:0:1201:G:H1'	1.99	0.63
1:0:1175:A:H8	1:0:1175:A:O5'	1.82	0.63
1:0:1685:A:N6	1:0:1691:G:N3	2.47	0.63
1:0:1724:C:H2'	1:0:1725:C:C6	2.33	0.63
1:0:2059:U:H2'	1:0:2060:A:H5''	1.81	0.63
1:0:207:U:H2'	1:0:208:C:C6	2.34	0.62
1:0:722:C:H2'	1:0:723:C:C6	2.34	0.62
1:0:1466:C:O2'	1:0:1467:U:H5'	1.98	0.62
1:0:2627:G:H2'	1:0:2628:C:O4'	1.99	0.62
1:0:88:G:H3'	1:0:89:A:C5'	2.28	0.62
1:0:629:C:C2'	1:0:630:G:H5'	2.30	0.62
1:0:962:C:H2'	1:0:963:G:H8	1.64	0.62
1:0:2250:G:O2'	1:0:2251:U:H5'	1.99	0.62
1:0:1182:U:H3'	1:0:1183:C:H5''	1.82	0.62
1:0:1196:G:H2'	1:0:1197:U:H5'	1.80	0.62
1:0:1198:C:C5'	1:0:1199:U:H4'	2.29	0.62
1:0:2634:G:H2'	1:0:2643:G:C6	2.35	0.62
1:0:2809:A:H62	1:0:2854:G:H1'	1.63	0.62
1:0:697:G:O2'	1:0:698:A:H5'	1.99	0.62
1:0:1436:G:H1'	1:0:1508:G:H21	1.63	0.62
7:9:111:C:H5''	7:9:112:A:H5''	1.81	0.62
1:0:2308:A:H2'	1:0:2309:G:C8	2.34	0.62
1:0:12:U:H2'	1:0:13:A:O4'	2.00	0.62
1:0:831:G:H21	1:0:1203:A:H62	1.47	0.62
1:0:1457:A:O2'	1:0:1458:A:H5'	1.99	0.62
1:0:2634:G:H2'	1:0:2643:G:O6	1.99	0.62
1:0:181:A:H5'	1:0:183:U:H1'	1.82	0.62
1:0:513:A:H4'	1:0:515:A:OP1	1.99	0.62
1:0:1014:G:O2'	1:0:1015:U:H5'	2.00	0.62
1:0:1197:U:H2'	1:0:1198:C:O4'	2.00	0.62
1:0:1989:C:H1'	1:0:2798:A:O2'	1.98	0.62
1:0:2405:A:H8	1:0:2405:A:OP1	1.82	0.62
1:0:2502:G:H2'	1:0:2503:G:H8	1.64	0.62
1:0:1200:G:O2'	1:0:1201:G:H5'	1.99	0.61
1:0:2046:C:H42	1:0:2429:A:H61	1.48	0.61
1:0:1466:C:H2'	1:0:1467:U:O4'	1.99	0.61
1:0:1826:U:O2'	1:0:1952:A:H2'	2.00	0.61
1:0:1938:U:O2'	1:0:1939:U:C5'	2.48	0.61

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2313:G:H3'	1:0:2314:A:H5'	1.80	0.61
1:0:2515:G:H2'	1:0:2516:U:C6	2.34	0.61
1:0:999:A:H4'	1:0:1166:A:N1	2.16	0.61
1:0:1289:A:N7	1:0:1662:G:N2	2.48	0.61
1:0:1791:C:H2'	1:0:1792:C:C5'	2.29	0.61
1:0:1996:A:O2'	1:0:1997:A:H5'	1.99	0.61
1:0:2425:G:O2'	1:0:2426:G:H5'	1.99	0.61
1:0:2524:G:O2'	1:0:2525:U:H5'	2.01	0.61
1:0:2622:G:H2'	1:0:2623:A:C8	2.35	0.61
1:0:2861:A:H2'	1:0:2862:G:H8	1.66	0.61
1:0:2604:G:H8	1:0:2604:G:H5''	1.64	0.61
1:0:2624:G:H4'	1:0:2712:G:H2'	1.82	0.61
1:0:225:G:H5'	1:0:226:C:H5'	1.83	0.61
1:0:693:A:H2'	1:0:694:G:H8	1.64	0.61
1:0:956:A:C2	1:0:2427:A:O2'	2.54	0.61
1:0:2476:A:HO2'	1:0:2477:C:H5	1.48	0.61
1:0:2664:G:O2'	1:0:2665:G:H5'	2.01	0.61
7:9:23:G:H2'	7:9:24:U:C6	2.35	0.61
1:0:2633:A:H61	1:0:2646:C:H42	1.48	0.61
1:0:79:G:H2'	1:0:80:A:H8	1.66	0.61
1:0:222:G:O2'	1:0:223:C:H5'	2.00	0.61
1:0:616:U:H2'	1:0:617:U:H5''	1.83	0.61
1:0:675:C:H2'	1:0:676:G:C8	2.36	0.61
1:0:964:A:H2'	1:0:965:G:H8	1.64	0.61
1:0:1004:A:H2'	1:0:1005:U:H5''	1.82	0.61
1:0:1226:A:N1	1:0:1250:A:H1'	2.16	0.61
1:0:1683:G:H2'	1:0:1684:G:H5'	1.82	0.61
1:0:2321:C:H2'	1:0:2322:U:O4'	2.01	0.61
1:0:701:U:H2'	1:0:702:A:O4'	2.01	0.61
1:0:734:G:H2'	1:0:735:G:H8	1.66	0.61
1:0:946:U:H2'	1:0:947:C:H6	1.66	0.61
1:0:21:A:O2'	1:0:22:C:H5'	2.00	0.61
1:0:820:U:H2'	1:0:821:A:H8	1.64	0.61
1:0:830:C:O2'	1:0:852:U:H5''	2.00	0.61
1:0:1699:A:N7	1:0:1748:U:H1'	2.15	0.61
1:0:1719:G:H2'	1:0:1720:G:H8	1.66	0.61
1:0:2598:C:O2'	1:0:2599:U:H5'	2.01	0.61
1:0:45:C:H2'	1:0:46:C:H6	1.66	0.60
1:0:675:C:H2'	1:0:676:G:H8	1.66	0.60
1:0:765:C:C5	1:0:1772:C:H1'	2.36	0.60
1:0:790:A:C2	1:0:791:G:C4	2.89	0.60

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2008:C:O5'	1:0:2008:C:H6	1.84	0.60
1:0:2026:C:N3	1:0:2757:G:N2	2.48	0.60
1:0:2198:U:C3'	1:0:2199:C:H5''	2.31	0.60
1:0:2701:A:O2'	1:0:2702:G:H5'	2.01	0.60
7:9:88:C:H2'	7:9:89:G:C8	2.35	0.60
1:0:455:A:H5'	1:0:1215:A:H5'	1.84	0.60
1:0:959:C:O2'	1:0:960:U:H5'	2.00	0.60
1:0:2593:A:H3'	1:0:2593:A:C8	2.35	0.60
1:0:2736:U:O2'	1:0:2737:A:H5'	2.01	0.60
1:0:718:A:O2'	1:0:719:A:H5'	2.01	0.60
1:0:2096:U:H2'	1:0:2097:A:H5''	1.81	0.60
1:0:2672:U:H2'	1:0:2673:G:C8	2.36	0.60
1:0:35:G:O4'	1:0:466:A:H1'	2.01	0.60
1:0:1707:A:H2'	1:0:1708:C:H5'	1.84	0.60
1:0:2476:A:H5''	1:0:2477:C:OP1	2.02	0.60
33:0:2882:DOL:H313	6:5:3:DBB:HB3	1.84	0.60
1:0:706:A:O2'	1:0:707:U:H5'	2.01	0.60
1:0:773:G:H2'	1:0:774:A:H5'	1.82	0.60
1:0:833:A:H8	1:0:833:A:O5'	1.84	0.60
1:0:1223:G:C2	1:0:1250:A:N6	2.69	0.60
1:0:1235:C:O2	1:0:1241:G:N2	2.34	0.60
1:0:1665:C:O2'	1:0:1666:G:H5'	2.02	0.60
1:0:2012:A:C5	1:0:2014:A:H5'	2.36	0.60
1:0:2438:A:N3	1:0:2438:A:H2'	2.16	0.60
1:0:2717:G:H2'	1:0:2718:A:C8	2.37	0.60
1:0:717:G:H21	1:0:739:G:H2'	1.67	0.60
1:0:788:G:H2'	1:0:807:A:C5	2.37	0.60
1:0:1391:A:H2'	1:0:1392:U:C5	2.36	0.60
1:0:2825:A:H2'	1:0:2826:C:H6	1.65	0.60
1:0:633:G:O2'	1:0:634:G:H5'	2.01	0.60
1:0:2235:G:O2'	1:0:2236:U:H5'	2.01	0.60
1:0:2466:G:O2'	1:0:2467:A:H5'	2.02	0.60
1:0:674:U:H2'	1:0:675:C:C6	2.36	0.59
1:0:2198:U:H3'	1:0:2199:C:H5''	1.82	0.59
1:0:2605:C:H2'	1:0:2606:G:C8	2.36	0.59
1:0:2822:U:C2'	1:0:2823:G:H5'	2.31	0.59
1:0:798:G:H2'	1:0:798:G:N3	2.17	0.59
1:0:839:U:H2'	1:0:841:G:O4'	2.02	0.59
1:0:991:A:N7	1:0:1146:G:H5''	2.17	0.59
1:0:2245:A:H4'	1:0:2246:A:C5	2.37	0.59
1:0:2843:A:O2'	1:0:2844:G:H5'	2.01	0.59

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2749:A:O2'	1:0:2750:G:H5'	2.02	0.59
1:0:133:C:H2'	1:0:134:G:O4'	2.03	0.59
1:0:2658:A:H2'	1:0:2659:C:C6	2.35	0.59
1:0:2678:C:O2	1:0:2688:G:N2	2.36	0.59
1:0:225:G:C5'	1:0:226:C:H5'	2.33	0.59
1:0:1966:C:H4'	1:0:2585:C:H4'	1.84	0.59
1:0:2057:U:O2'	1:0:2576:G:H1'	2.02	0.59
1:0:2487:G:C2	1:0:2561:G:O6	2.56	0.59
1:0:2498:U:OP1	1:0:2498:U:H3'	2.02	0.59
1:0:2640:G:H2'	1:0:2641:A:C8	2.38	0.59
1:0:210:A:N6	1:0:442:A:H61	2.00	0.59
1:0:575:U:H2'	1:0:576:A:C8	2.38	0.59
1:0:689:A:H2'	1:0:690:A:H5'	1.85	0.59
1:0:2678:C:C2	1:0:2688:G:N2	2.71	0.59
1:0:2814:G:O2'	1:0:2815:C:H5'	2.02	0.59
1:0:693:A:H2'	1:0:694:G:C8	2.38	0.59
1:0:870:C:H2'	1:0:871:U:C6	2.38	0.59
1:0:1920:A:H2'	1:0:1921:A:C8	2.38	0.59
1:0:2757:G:OP2	1:0:2761:A:O2'	2.21	0.59
1:0:1141:U:H5''	1:0:2494:C:O2'	2.02	0.59
1:0:1352:G:H2'	1:0:1353:A:H8	1.68	0.59
1:0:1773:C:N4	1:0:2566:A:H2	2.00	0.59
1:0:1982:C:H4'	1:0:2703:C:O2	2.03	0.59
1:0:2033:C:C2'	1:0:2034:A:O4'	2.50	0.59
1:0:1321:A:H62	1:0:1622:G:N2	2.00	0.59
1:0:1997:A:H2'	1:0:1998:A:C8	2.38	0.59
1:0:2245:A:H4'	1:0:2246:A:N7	2.18	0.59
1:0:2509:A:H2'	1:0:2510:A:H5''	1.83	0.59
1:0:2782:G:H3'	1:0:2783:U:H5''	1.84	0.59
33:0:2882:DOL:H313	6:5:3:DBB:CB	2.32	0.59
1:0:24:G:H2'	1:0:25:U:H6	1.64	0.59
1:0:311:A:H2	1:0:334:G:H21	1.51	0.59
1:0:789:G:H2'	1:0:789:G:N3	2.18	0.59
1:0:1198:C:H5''	1:0:1199:U:C4'	2.33	0.59
1:0:1332:G:O2'	1:0:1333:G:H5'	2.03	0.59
1:0:1765:C:O5'	1:0:1765:C:H6	1.85	0.59
1:0:2769:C:H2'	1:0:2770:A:H5'	1.85	0.59
1:0:2827:G:H2'	1:0:2828:C:C6	2.37	0.59
1:0:202:A:H2'	1:0:203:G:O4'	2.03	0.58
1:0:698:A:H61	1:0:786:U:H3'	1.68	0.58
1:0:1300:A:H62	19:L:106:ASP:CA	2.15	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1304:U:O2'	1:0:1305:C:H5'	2.03	0.58
1:0:1672:A:H2'	1:0:1673:C:O4'	2.03	0.58
1:0:523:A:O2'	1:0:1230:C:OP1	2.21	0.58
1:0:822:G:O2'	1:0:823:U:H5'	2.02	0.58
1:0:2201:G:H2'	1:0:2202:G:H8	1.68	0.58
1:0:852:U:H2'	1:0:853:C:C6	2.37	0.58
1:0:305:A:H2'	1:0:306:G:O4'	2.03	0.58
1:0:564:U:H2'	1:0:565:A:C8	2.39	0.58
1:0:918:A:C2'	1:0:919:U:H5''	2.30	0.58
1:0:1686:A:N3	1:0:1686:A:H2'	2.18	0.58
1:0:1920:A:C2	1:0:1922:U:C5	2.91	0.58
1:0:2491:C:H3'	1:0:2492:G:H5''	1.84	0.58
1:0:2832:G:N2	1:0:2835:A:OP2	2.36	0.58
1:0:1514:C:H5'	1:0:1593:C:H4'	1.86	0.58
1:0:1952:A:H1'	1:0:1955:G:H21	1.67	0.58
1:0:2822:U:H2'	1:0:2823:G:C5'	2.33	0.58
1:0:1235:C:C2	1:0:1241:G:N2	2.72	0.58
1:0:1804:U:H2'	1:0:1805:G:C8	2.35	0.58
1:0:431:G:H2'	1:0:432:C:C6	2.39	0.58
1:0:859:U:H4'	1:0:860:U:C5	2.39	0.58
1:0:867:G:O2'	1:0:868:U:H5'	2.04	0.58
1:0:412:U:H2'	1:0:413:G:H5'	1.85	0.58
1:0:753:U:C2'	1:0:754:G:H5'	2.33	0.58
1:0:1353:A:H4'	1:0:1410:U:N3	2.17	0.58
1:0:1778:U:H2'	1:0:1779:C:O4'	2.04	0.58
1:0:2611:A:C2	1:0:2767:C:N3	2.71	0.58
1:0:493:A:N3	1:0:516:G:C2	2.72	0.58
1:0:613:A:H2'	1:0:614:G:C8	2.38	0.58
1:0:1764:A:C5	1:0:1821:A:H1'	2.39	0.58
1:0:2610:G:O2'	1:0:2785:A:C2	2.56	0.58
1:0:92:U:H2'	1:0:93:A:C8	2.38	0.58
1:0:118:U:H4'	1:0:120:G:OP2	2.03	0.58
1:0:1066:G:H3'	1:0:1067:G:H5''	1.84	0.58
1:0:1339:U:O2'	1:0:1993:G:H1'	2.03	0.58
1:0:847:C:H41	1:0:955:G:H21	1.51	0.57
1:0:951:G:C3'	1:0:952:A:H5''	2.34	0.57
1:0:2318:U:H2'	1:0:2319:G:C8	2.39	0.57
1:0:788:G:N2	1:0:801:A:P	2.78	0.57
1:0:800:U:H3'	1:0:804:C:H41	1.68	0.57
1:0:2058:U:H2'	1:0:2217:G:O6	2.04	0.57
1:0:788:G:H21	1:0:801:A:P	2.27	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2038:C:H2'	1:0:2483:U:O4'	2.03	0.57
1:0:2500:C:H4'	1:0:2544:A:O4'	2.03	0.57
1:0:2691:C:H41	1:0:2693:U:H5	1.50	0.57
1:0:2830:U:H2'	1:0:2831:A:C8	2.39	0.57
1:0:2836:U:H2'	1:0:2837:G:H8	1.69	0.57
1:0:712:A:H4'	1:0:1651:U:C4	2.38	0.57
1:0:103:U:H2'	1:0:104:C:C6	2.39	0.57
1:0:187:U:H1'	1:0:1379:A:N3	2.20	0.57
1:0:717:G:N2	1:0:739:G:H2'	2.19	0.57
1:0:749:C:O2'	1:0:750:C:H5'	2.04	0.57
1:0:870:C:H2'	1:0:871:U:H6	1.69	0.57
1:0:1881:U:C2'	1:0:1882:G:H5'	2.34	0.57
1:0:2081:U:H2'	1:0:2082:C:H5''	1.85	0.57
1:0:2299:A:H5''	1:0:2300:G:C4	2.39	0.57
1:0:2397:A:O2'	1:0:2398:U:H5'	2.04	0.57
1:0:2802:C:H2'	1:0:2803:C:C6	2.40	0.57
1:0:632:A:C2'	1:0:633:G:H5'	2.34	0.57
1:0:773:G:C2'	1:0:774:A:H5'	2.34	0.57
1:0:815:A:H2'	1:0:816:U:H6	1.69	0.57
1:0:1883:A:H1'	1:0:1953:A:H62	1.69	0.57
1:0:318:G:H21	1:0:341:A:H62	1.51	0.57
1:0:874:A:H62	1:0:928:G:N2	2.02	0.57
1:0:1052:C:H2'	1:0:1053:G:C8	2.40	0.57
1:0:1279:G:HO2'	1:0:1995:G:H1	1.53	0.57
1:0:1621:C:C4'	1:0:1626:A:H62	2.17	0.57
1:0:1947:G:H3'	1:0:1947:G:OP1	2.03	0.57
1:0:2510:A:H61	1:0:2641:A:N6	2.03	0.57
1:0:580:A:C2	1:0:582:G:N7	2.73	0.57
1:0:620:G:O2'	1:0:621:U:H5'	2.05	0.57
1:0:738:G:H2'	1:0:739:G:O4'	2.05	0.57
1:0:2493:U:H2'	1:0:2494:C:C6	2.40	0.57
1:0:2687:G:O2'	1:0:2688:G:H5'	2.04	0.57
1:0:2785:A:O2'	1:0:2786:G:H5'	2.05	0.57
1:0:2861:A:O2'	1:0:2862:G:H5'	2.05	0.57
1:0:1679:U:H2'	1:0:1680:U:C4'	2.35	0.57
1:0:2661:G:C2'	1:0:2662:C:H5'	2.34	0.57
1:0:428:A:H2'	1:0:429:C:C6	2.40	0.57
1:0:944:A:H2'	1:0:945:G:O4'	2.05	0.57
1:0:977:G:H1'	1:0:2246:A:C5	2.40	0.57
1:0:1016:C:H2'	1:0:1017:C:H6	1.70	0.57
1:0:1598:C:H2'	1:0:1599:G:O4'	2.05	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1920:A:C2	1:0:1922:U:H5	2.22	0.57
1:0:1950:C:H2'	1:0:1951:G:O4'	2.05	0.57
1:0:2425:G:H2'	1:0:2480:C:C5	2.40	0.57
1:0:181:A:H5'	1:0:183:U:C1'	2.35	0.56
1:0:327:C:O2'	1:0:328:A:H5'	2.05	0.56
1:0:524:A:O2'	1:0:525:A:H5'	2.05	0.56
1:0:582:G:H2'	1:0:583:C:H3'	1.86	0.56
1:0:876:A:O2'	1:0:877:G:H5'	2.05	0.56
1:0:1821:A:H3'	1:0:1822:C:H6	1.70	0.56
1:0:2027:C:H2'	1:0:2028:C:H6	1.70	0.56
1:0:2054:A:H2'	1:0:2055:G:H8	1.70	0.56
1:0:2277:A:H2'	1:0:2278:A:O4'	2.05	0.56
7:9:73:C:H2'	7:9:74:A:O4'	2.05	0.56
1:0:629:C:H2'	1:0:630:G:H5'	1.87	0.56
1:0:1028:G:H2'	1:0:1029:C:C6	2.40	0.56
1:0:1125:G:H2'	1:0:1126:A:H8	1.70	0.56
1:0:1399:C:O2'	1:0:1400:A:H5'	2.05	0.56
1:0:25:U:H3	1:0:525:A:N6	2.03	0.56
1:0:44:G:N2	1:0:192:G:H21	2.03	0.56
1:0:315:G:H2'	1:0:316:C:C6	2.40	0.56
1:0:515:A:C2'	1:0:516:G:H5'	2.36	0.56
1:0:597:U:H2'	1:0:598:U:C6	2.41	0.56
1:0:640:C:H2'	1:0:641:G:C8	2.40	0.56
1:0:742:G:C4	1:0:1766:U:O2	2.58	0.56
1:0:757:U:O2'	1:0:758:G:H5'	2.05	0.56
1:0:826:U:H2'	1:0:827:C:C6	2.39	0.56
1:0:1199:U:H3'	1:0:1200:G:H5''	1.88	0.56
1:0:1645:U:O2'	1:0:2677:U:H5''	2.04	0.56
1:0:1888:C:H5''	1:0:1889:G:C5'	2.30	0.56
1:0:2213:G:H2'	1:0:2214:G:H8	1.68	0.56
1:0:2490:U:O5'	1:0:2490:U:H6	1.88	0.56
1:0:2654:A:C2	1:0:2655:C:C2	2.93	0.56
1:0:2766:U:H2'	1:0:2767:C:C6	2.41	0.56
1:0:611:C:H2'	1:0:612:G:H5'	1.88	0.56
1:0:1141:U:O2'	1:0:1142:G:OP1	2.24	0.56
1:0:1621:C:C4'	1:0:1626:A:N6	2.68	0.56
1:0:1726:C:H6	1:0:1726:C:O5'	1.88	0.56
1:0:69:G:H5''	1:0:70:A:O5'	2.06	0.56
1:0:1268:U:H5'	1:0:1269:G:H5''	1.87	0.56
1:0:1668:G:C2	1:0:1990:U:C2	2.93	0.56
1:0:18:U:O2'	1:0:563:U:H5''	2.06	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1789:U:C4	1:0:1811:A:H2	2.24	0.56
1:0:1825:C:O2'	1:0:1826:U:H5'	2.06	0.56
1:0:2032:G:O2'	1:0:2033:C:H5'	2.05	0.56
1:0:831:G:H21	1:0:1203:A:N6	2.03	0.56
1:0:1125:G:H2'	1:0:1126:A:C8	2.41	0.56
1:0:1252:C:O2'	1:0:1253:C:H5''	2.05	0.56
1:0:1284:G:C2'	1:0:1633:C:H4'	2.36	0.56
1:0:1787:U:H2'	1:0:1788:C:C6	2.40	0.56
1:0:30:G:O2'	1:0:31:C:H5'	2.05	0.56
1:0:104:C:H2'	1:0:105:G:C5'	2.24	0.56
1:0:804:C:O2	1:0:804:C:H2'	2.05	0.56
1:0:822:G:C2'	1:0:823:U:H5'	2.36	0.56
1:0:1429:A:O2'	1:0:1430:G:H4'	2.05	0.56
1:0:1911:A:C2'	1:0:1912:G:H5'	2.35	0.56
1:0:2474:G:C5	1:0:2475:C:C4	2.94	0.56
1:0:825:C:O2'	1:0:826:U:H5'	2.05	0.56
1:0:1183:C:H2'	1:0:1184:G:C8	2.41	0.56
1:0:1260:A:C6	1:0:1262:U:H1'	2.41	0.56
1:0:1724:C:H2'	1:0:1725:C:H6	1.70	0.56
1:0:2257:A:C2'	1:0:2258:G:H5'	2.36	0.56
1:0:44:G:H21	1:0:192:G:N2	2.03	0.55
1:0:962:C:H2'	1:0:963:G:C8	2.41	0.55
1:0:1277:G:C8	1:0:1278:A:N7	2.74	0.55
1:0:1301:U:H3	1:0:1339:U:H3	1.54	0.55
1:0:1666:G:H2'	1:0:1667:A:H8	1.71	0.55
1:0:1697:U:O4	1:0:1755:G:OP2	2.24	0.55
1:0:2520:A:H8	1:0:2520:A:O5'	1.89	0.55
1:0:1046:U:H2'	1:0:1047:G:C8	2.42	0.55
1:0:1975:G:H1'	1:0:1977:C:H5	1.70	0.55
1:0:2433:G:C2'	1:0:2434:G:H5'	2.36	0.55
1:0:28:A:C2	1:0:523:A:C8	2.95	0.55
1:0:665:A:H3'	1:0:666:U:C5'	2.37	0.55
1:0:947:C:H2'	1:0:948:C:C6	2.42	0.55
1:0:1373:G:H2'	1:0:1374:G:H5'	1.88	0.55
1:0:1644:G:O2'	1:0:1645:U:H5'	2.06	0.55
1:0:1999:U:H2'	1:0:2000:U:O4'	2.07	0.55
1:0:2046:C:OP1	1:0:2046:C:H3'	2.06	0.55
1:0:2321:C:O2'	1:0:2353:G:H5''	2.06	0.55
1:0:2368:G:H5''	1:0:2369:U:O4'	2.06	0.55
7:9:64:C:C2'	7:9:65:A:H5''	2.35	0.55
1:0:783:G:H1'	1:0:1391:A:C2	2.41	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1474:A:H3'	1:0:1474:A:N3	2.21	0.55
1:0:2052:G:C2'	1:0:2053:G:H5'	2.36	0.55
1:0:2474:G:H2'	1:0:2475:C:O4'	2.07	0.55
1:0:2561:G:OP1	1:0:2561:G:C8	2.48	0.55
1:0:2782:G:H3'	1:0:2783:U:C5'	2.36	0.55
7:9:30:C:H2'	7:9:31:A:C8	2.41	0.55
7:9:31:A:H2'	7:9:32:C:H6	1.72	0.55
1:0:451:A:H2'	1:0:452:G:C8	2.41	0.55
1:0:651:C:C2'	1:0:652:C:H5''	2.36	0.55
1:0:964:A:H1'	1:0:2245:A:OP2	2.07	0.55
1:0:977:G:H5'	1:0:2251:U:O2	2.05	0.55
1:0:1480:G:H2'	1:0:1481:U:H5'	1.88	0.55
1:0:1783:G:O2'	1:0:1784:C:H5'	2.07	0.55
1:0:2308:A:H2'	1:0:2309:G:H8	1.70	0.55
7:9:24:U:C2'	7:9:25:G:H5''	2.36	0.55
1:0:674:U:H2'	1:0:675:C:H6	1.72	0.55
1:0:714:G:O2'	1:0:715:U:H5'	2.06	0.55
1:0:742:G:H2'	1:0:742:G:N3	2.22	0.55
1:0:1469:U:OP2	1:0:1471:G:N7	2.40	0.55
1:0:1643:A:C2	1:0:1644:G:C8	2.95	0.55
1:0:1474:A:H2'	1:0:1475:U:H5''	1.88	0.55
1:0:2038:C:H2'	1:0:2483:U:C4'	2.36	0.55
1:0:2560:G:C4	1:0:2589:C:N4	2.67	0.55
7:9:18:G:N2	7:9:71:G:H1'	2.21	0.55
1:0:362:C:H2'	1:0:363:G:H4'	1.89	0.55
1:0:412:U:C2'	1:0:413:G:H5'	2.36	0.55
1:0:521:U:OP2	1:0:522:G:C5	2.60	0.55
1:0:1346:C:H6	1:0:1346:C:O5'	1.89	0.55
1:0:940:G:H8	1:0:940:G:O5'	1.90	0.55
1:0:1653:C:H2'	1:0:1654:A:C8	2.42	0.55
1:0:1974:U:C2'	1:0:1975:G:H5''	2.37	0.55
1:0:2054:A:H2'	1:0:2055:G:C8	2.41	0.55
1:0:2491:C:H2'	1:0:2492:G:H5''	1.88	0.55
1:0:2843:A:H2'	1:0:2844:G:O4'	2.07	0.55
1:0:207:U:H2'	1:0:208:C:H6	1.70	0.54
1:0:214:C:H2'	1:0:215:G:H8	1.72	0.54
1:0:710:C:H2'	1:0:711:C:H6	1.72	0.54
1:0:979:A:H2'	1:0:980:G:C8	2.42	0.54
1:0:1018:C:C1'	1:0:1147:G:H22	2.17	0.54
1:0:1921:A:H2'	1:0:1922:U:C5'	2.33	0.54
1:0:2310:G:N2	1:0:2364:C:N3	2.54	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2592:U:H2'	1:0:2593:A:H5'	1.88	0.54
7:9:36:A:H1'	7:9:51:G:N2	2.22	0.54
1:0:98:U:OP1	1:0:100:G:H4'	2.06	0.54
1:0:644:A:H2'	1:0:645:G:H5'	1.88	0.54
1:0:998:C:H2'	1:0:999:A:O4'	2.07	0.54
1:0:1695:U:O2'	1:0:1696:C:H5'	2.07	0.54
1:0:2661:G:O2'	1:0:2662:C:H5'	2.07	0.54
1:0:2817:A:C2	1:0:2851:G:C2	2.96	0.54
1:0:883:A:H2'	1:0:884:C:O4'	2.08	0.54
1:0:1175:A:H2'	1:0:1176:U:C6	2.42	0.54
1:0:1654:A:H4'	1:0:2690:A:O2'	2.06	0.54
1:0:1768:U:O2'	1:0:1769:U:H5'	2.08	0.54
1:0:2217:G:H3'	1:0:2217:G:N3	2.22	0.54
1:0:1363:C:O2'	1:0:1364:C:H5'	2.08	0.54
1:0:2034:A:N6	1:0:2593:A:N7	2.56	0.54
1:0:2177:U:H2'	1:0:2178:U:C6	2.42	0.54
1:0:2756:A:C6	1:0:2762:G:H1'	2.42	0.54
1:0:2787:A:H2'	1:0:2788:C:C6	2.41	0.54
1:0:357:A:C3'	1:0:358:C:H5'	2.36	0.54
1:0:811:G:O2'	1:0:812:G:H5'	2.07	0.54
1:0:2526:U:C6	1:0:2545:A:N7	2.76	0.54
1:0:462:G:H2'	1:0:463:C:H5'	1.89	0.54
1:0:475:U:H1'	1:0:699:G:O6	2.06	0.54
1:0:695:G:O2'	1:0:696:U:H5'	2.08	0.54
1:0:2037:A:N6	1:0:2039:G:H1'	2.23	0.54
1:0:1141:U:H4'	1:0:2494:C:H4'	1.89	0.54
1:0:1288:A:H62	1:0:1309:G:C4'	2.20	0.54
1:0:1661:C:O2'	1:0:1662:G:H5'	2.07	0.54
1:0:1782:A:C2	1:0:1821:A:H4'	2.43	0.54
1:0:1992:G:O2'	1:0:1993:G:H5'	2.08	0.54
1:0:2279:G:H2'	1:0:2280:A:C8	2.43	0.54
1:0:2436:U:H2'	1:0:2437:G:O4'	2.08	0.54
1:0:30:G:N2	1:0:521:U:H1'	2.22	0.54
1:0:1247:U:H2'	1:0:1248:G:O4'	2.07	0.54
1:0:1317:G:O2'	1:0:1318:A:H5'	2.08	0.54
1:0:1502:G:H2'	1:0:1503:G:H8	1.72	0.54
1:0:2007:G:O2'	1:0:2008:C:H5'	2.08	0.54
1:0:2198:U:H2'	1:0:2199:C:H5''	1.89	0.54
1:0:2212:U:H2'	1:0:2213:G:C8	2.43	0.54
1:0:2396:C:H6	1:0:2396:C:H5'	1.73	0.54
1:0:2739:G:O5'	1:0:2739:G:H8	1.90	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:617:U:H2'	1:0:618:A:O4'	2.08	0.54
1:0:639:G:H2'	1:0:640:C:C6	2.43	0.54
1:0:780:U:H2'	1:0:781:G:C8	2.43	0.54
1:0:1408:A:C1'	1:0:1410:U:H5	2.15	0.54
1:0:1624:A:O2'	1:0:1625:A:H5''	2.08	0.54
1:0:1636:G:H2'	1:0:1637:U:H6	1.72	0.54
1:0:1764:A:OP1	1:0:1820:G:H3'	2.08	0.54
1:0:2220:A:O2'	1:0:2221:G:H5'	2.07	0.54
1:0:543:G:H2'	1:0:544:U:C6	2.43	0.53
1:0:713:G:O6	1:0:746:G:C2	2.61	0.53
1:0:796:A:C2	1:0:1770:U:O4'	2.53	0.53
1:0:1617:G:H2'	1:0:1618:U:H5'	1.90	0.53
1:0:2320:G:H2'	1:0:2321:C:O4'	2.08	0.53
1:0:2709:C:N4	1:0:2710:C:N4	2.56	0.53
1:0:2725:C:H2'	1:0:2726:U:C6	2.43	0.53
1:0:716:U:H2'	1:0:717:G:O4'	2.08	0.53
1:0:749:C:H2'	1:0:750:C:H6	1.73	0.53
1:0:977:G:H1'	1:0:2246:A:C4	2.43	0.53
1:0:1086:C:C2'	1:0:1087:C:H5''	2.38	0.53
1:0:1586:A:H2'	1:0:1587:A:C8	2.42	0.53
1:0:1778:U:H2'	1:0:1779:C:C6	2.42	0.53
1:0:2038:C:N4	1:0:2479:U:H4'	2.24	0.53
1:0:2222:U:H2'	1:0:2223:U:C6	2.43	0.53
1:0:2549:G:O2'	1:0:2550:C:H5'	2.08	0.53
1:0:2812:A:H2'	1:0:2813:G:H8	1.73	0.53
1:0:236:C:H2'	1:0:237:G:C8	2.39	0.53
1:0:1715:A:C8	1:0:1717:A:H1'	2.42	0.53
1:0:2038:C:H41	1:0:2479:U:H4'	1.73	0.53
1:0:2425:G:H2'	1:0:2480:C:H41	1.73	0.53
1:0:632:A:H2'	1:0:633:G:H5'	1.91	0.53
1:0:984:A:C2'	1:0:1200:G:N2	2.72	0.53
1:0:2593:A:C8	1:0:2593:A:C3'	2.92	0.53
33:0:2882:DOL:C42	33:0:2882:DOL:C46	2.83	0.53
1:0:103:U:H2'	1:0:104:C:H6	1.72	0.53
1:0:459:A:H62	1:0:484:G:H1'	1.73	0.53
1:0:1621:C:O2'	1:0:1622:G:H5'	2.08	0.53
1:0:1861:G:O2'	1:0:1862:C:H5'	2.09	0.53
1:0:2713:A:O2'	1:0:2714:A:H5'	2.07	0.53
1:0:2862:G:O2'	1:0:2863:U:H5'	2.08	0.53
1:0:591:G:H2'	1:0:592:G:H8	1.73	0.53
1:0:1226:A:C6	1:0:1250:A:H1'	2.43	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2225:G:H2'	1:0:2226:A:H8	1.73	0.53
1:0:2621:G:O2'	1:0:2622:G:H5'	2.09	0.53
1:0:181:A:O4'	1:0:183:U:C2	2.61	0.53
1:0:1010:U:O2'	1:0:1011:A:H5'	2.09	0.53
1:0:1046:U:H2'	1:0:1047:G:H8	1.73	0.53
1:0:1489:C:H3'	1:0:1490:U:C5'	2.38	0.53
1:0:1541:G:N2	1:0:1562:G:H22	2.06	0.53
1:0:2246:A:H2'	1:0:2246:A:N3	2.24	0.53
1:0:2595:C:H2'	1:0:2596:C:H6	1.69	0.53
1:0:2785:A:H62	1:0:2865:G:H21	1.57	0.53
1:0:484:G:O2'	1:0:485:G:H5'	2.09	0.53
1:0:512:A:N6	1:0:515:A:C6	2.76	0.53
1:0:616:U:H5	1:0:630:G:C4	2.27	0.53
1:0:1543:G:H2'	1:0:1544:A:O4'	2.09	0.53
1:0:1989:C:O2'	1:0:1990:U:H5'	2.09	0.53
1:0:2491:C:C2'	1:0:2492:G:H5''	2.38	0.53
1:0:2628:C:H2'	1:0:2629:U:H6	1.73	0.53
1:0:2811:G:C6	1:0:2812:A:N6	2.77	0.53
1:0:2830:U:H2'	1:0:2831:A:H8	1.73	0.53
1:0:446:C:H2'	1:0:447:U:C6	2.44	0.53
1:0:1040:A:H2'	1:0:1041:G:H5'	1.90	0.53
1:0:2051:U:H3	1:0:2409:A:H61	1.57	0.53
1:0:2785:A:H2'	1:0:2786:G:C8	2.44	0.53
1:0:2797:G:O2'	1:0:2799:C:OP2	2.25	0.53
7:9:67:C:H2'	7:9:68:A:H5'	1.91	0.53
1:0:225:G:H3'	1:0:226:C:H5'	1.90	0.53
1:0:242:A:H2'	1:0:243:G:H4'	1.89	0.53
1:0:313:U:H2'	1:0:314:G:H8	1.72	0.53
1:0:525:A:C2'	1:0:526:C:H5'	2.38	0.53
1:0:1039:A:H61	1:0:1136:G:H2'	1.74	0.53
1:0:1196:G:C2'	1:0:1197:U:H5'	2.38	0.53
1:0:1649:A:N6	1:0:1650:A:N1	2.56	0.53
1:0:2007:G:H2'	1:0:2008:C:C6	2.44	0.53
1:0:2717:G:H2'	1:0:2718:A:H8	1.73	0.53
1:0:2810:A:H5''	1:0:2811:G:OP1	2.08	0.53
1:0:701:U:O2'	1:0:702:A:H5'	2.09	0.52
1:0:980:G:C2	1:0:981:C:O2	2.62	0.52
1:0:1662:G:O5'	1:0:1662:G:H8	1.91	0.52
1:0:2266:A:N6	1:0:2323:U:H1'	2.25	0.52
1:0:2615:U:H2'	1:0:2616:U:C6	2.43	0.52
1:0:2691:C:C3'	1:0:2692:A:H5''	2.35	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2827:G:C5	1:0:2828:C:C4	2.96	0.52
1:0:591:G:H2'	1:0:592:G:C8	2.43	0.52
1:0:763:A:H2	1:0:766:A:C1'	2.19	0.52
1:0:2076:G:H2'	1:0:2077:G:C8	2.42	0.52
1:0:2829:A:H2'	1:0:2830:U:O4'	2.10	0.52
7:9:65:A:O2'	7:9:66:G:H5'	2.09	0.52
1:0:225:G:H3'	1:0:226:C:C5'	2.39	0.52
1:0:508:G:H2'	1:0:509:U:C6	2.43	0.52
1:0:984:A:H2'	1:0:1200:G:H22	1.74	0.52
1:0:2437:G:O6	1:0:2469:G:H2'	2.08	0.52
1:0:2502:G:H2'	1:0:2503:G:C8	2.43	0.52
1:0:2689:C:N4	1:0:2690:A:N6	2.57	0.52
1:0:733:G:H2'	1:0:734:G:H8	1.74	0.52
1:0:755:C:H2'	1:0:756:C:C6	2.43	0.52
1:0:2095:G:H2'	1:0:2096:U:H5''	1.91	0.52
1:0:2240:C:H2'	1:0:2241:U:H5''	1.91	0.52
1:0:2322:U:H2'	1:0:2323:U:H5'	1.90	0.52
1:0:1621:C:O4'	1:0:1626:A:N6	2.42	0.52
1:0:2797:G:O5'	1:0:2797:G:H8	1.92	0.52
7:9:51:G:H2'	7:9:52:G:H8	1.74	0.52
1:0:639:G:O2'	1:0:640:C:H5'	2.09	0.52
1:0:772:G:O2'	1:0:773:G:H5'	2.10	0.52
1:0:807:A:O2'	1:0:808:C:H5'	2.09	0.52
1:0:1218:C:H2'	1:0:1219:C:C6	2.44	0.52
1:0:2534:U:C5	1:0:2535:C:C4	2.98	0.52
1:0:2748:C:H2'	1:0:2749:A:C8	2.44	0.52
1:0:819:C:C2	1:0:820:U:C5	2.98	0.52
1:0:1886:G:H2'	1:0:1887:G:H8	1.75	0.52
1:0:2587:G:H8	1:0:2587:G:O5'	1.93	0.52
1:0:2859:U:C5	1:0:2860:C:C4	2.97	0.52
7:9:92:G:C2'	7:9:93:G:H5'	2.36	0.52
1:0:65:C:H2'	1:0:66:U:O4'	2.10	0.52
1:0:639:G:H2'	1:0:640:C:H6	1.74	0.52
1:0:953:G:C5	1:0:954:U:C4	2.98	0.52
1:0:1001:A:H4'	1:0:1168:G:P	2.50	0.52
1:0:1141:U:H3	1:0:2008:C:H5''	1.74	0.52
1:0:1242:A:O2'	1:0:1243:G:H5'	2.10	0.52
1:0:1687:C:C4	1:0:1688:U:C2	2.98	0.52
1:0:2016:A:N6	1:0:2019:C:C2	2.77	0.52
1:0:2039:G:P	1:0:2483:U:H5''	2.50	0.52
1:0:1002:C:N4	1:0:1003:C:N4	2.57	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1825:C:C2'	1:0:1826:U:H5'	2.40	0.52
1:0:2249:U:O2'	1:0:2250:G:H5'	2.10	0.52
1:0:2611:A:H2'	1:0:2612:G:H8	1.75	0.52
1:0:2661:G:H2'	1:0:2662:C:H5'	1.91	0.52
1:0:702:A:N6	1:0:703:A:C5	2.78	0.52
1:0:725:C:H2'	1:0:726:G:C8	2.45	0.52
1:0:818:G:O2'	1:0:844:G:H4'	2.10	0.52
1:0:1013:G:C6	1:0:1165:G:N2	2.78	0.52
1:0:1471:G:C6	1:0:1472:C:C4	2.98	0.52
1:0:1615:C:H2'	1:0:1616:C:C6	2.44	0.52
1:0:1679:U:C3'	1:0:1680:U:H5''	2.40	0.52
1:0:2030:U:H2'	1:0:2031:A:H8	1.75	0.52
1:0:2299:A:C5'	1:0:2300:G:C4	2.92	0.52
1:0:2394:G:H2'	1:0:2395:C:C6	2.45	0.52
1:0:2602:G:O2'	1:0:2603:G:H5'	2.09	0.52
7:9:24:U:C3'	7:9:25:G:H5''	2.40	0.52
7:9:117:G:H2'	7:9:118:G:C8	2.45	0.52
1:0:460:U:H3	1:0:592:G:H1'	1.75	0.51
1:0:757:U:H2'	1:0:758:G:H5'	1.92	0.51
1:0:2058:U:H4'	1:0:2575:U:O2	2.09	0.51
1:0:2071:G:N2	1:0:2211:U:H1'	2.25	0.51
1:0:2181:A:H2'	1:0:2182:A:H5'	1.91	0.51
7:9:79:U:H3	7:9:103:A:H62	1.58	0.51
1:0:67:G:H21	1:0:72:A:H2'	1.75	0.51
1:0:167:A:C2	1:0:184:A:C2	2.98	0.51
1:0:1196:G:H2'	1:0:1197:U:C5'	2.40	0.51
1:0:1445:A:H2'	1:0:1446:U:O4'	2.10	0.51
1:0:2712:G:H3'	1:0:2713:A:H5'	1.93	0.51
1:0:2769:C:H2'	1:0:2867:G:H22	1.75	0.51
1:0:193:A:N6	1:0:444:U:O2	2.43	0.51
1:0:930:A:OP1	1:0:930:A:H4'	2.10	0.51
1:0:1793:A:H62	1:0:1806:G:H2'	1.76	0.51
1:0:2262:C:C5	1:0:2263:C:C5	2.99	0.51
1:0:2570:C:H2'	1:0:2571:G:H8	1.71	0.51
1:0:2846:G:H2'	1:0:2847:G:H5''	1.92	0.51
1:0:217:U:N3	1:0:218:A:N6	2.58	0.51
1:0:342:G:H2'	1:0:343:A:C5'	2.40	0.51
1:0:644:A:C2'	1:0:645:G:H5'	2.41	0.51
1:0:722:C:H2'	1:0:723:C:H6	1.71	0.51
1:0:807:A:C6	1:0:808:C:C4	2.99	0.51
1:0:1174:G:O2'	1:0:1175:A:H5'	2.11	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1697:U:O2	1:0:1754:G:C8	2.63	0.51
1:0:1887:G:O2'	1:0:1911:A:H2	1.93	0.51
1:0:1956:G:H8	1:0:1956:G:H5'	1.75	0.51
1:0:2276:C:O2'	1:0:2277:A:H5'	2.09	0.51
1:0:2324:G:O2'	1:0:2325:A:H5''	2.11	0.51
1:0:594:G:H2'	1:0:595:A:C8	2.45	0.51
1:0:763:A:C2	1:0:766:A:C1'	2.87	0.51
1:0:1241:G:O2'	1:0:1242:A:H5'	2.10	0.51
1:0:2324:G:N3	1:0:2326:C:C5	2.76	0.51
1:0:2549:G:H2'	1:0:2550:C:C5'	2.40	0.51
1:0:187:U:H2'	1:0:188:G:C8	2.46	0.51
1:0:562:G:C6	1:0:563:U:N3	2.79	0.51
1:0:580:A:N3	1:0:582:G:N7	2.59	0.51
1:0:594:G:N2	1:0:1269:G:C6	2.79	0.51
1:0:791:G:N2	1:0:800:U:C2	2.78	0.51
1:0:956:A:N1	1:0:2427:A:O2'	2.41	0.51
1:0:1212:U:H2'	1:0:1213:U:C6	2.46	0.51
1:0:1697:U:O2	1:0:1755:G:H4'	2.11	0.51
1:0:1764:A:H2'	1:0:1765:C:H5'	1.92	0.51
1:0:1976:U:H2'	1:0:1977:C:C5'	2.40	0.51
1:0:2426:G:O6	1:0:2479:U:H2'	2.11	0.51
1:0:2825:A:H2'	1:0:2826:C:C6	2.45	0.51
1:0:334:G:N3	1:0:344:G:H1'	2.25	0.51
1:0:710:C:H2'	1:0:711:C:C6	2.46	0.51
1:0:414:A:H2'	1:0:415:A:O4'	2.10	0.51
1:0:734:G:H2'	1:0:735:G:C8	2.45	0.51
1:0:946:U:H2'	1:0:947:C:C6	2.44	0.51
1:0:1010:U:H2'	1:0:1011:A:C8	2.46	0.51
1:0:2222:U:H2'	1:0:2223:U:H6	1.74	0.51
1:0:2549:G:C2'	1:0:2550:C:H5'	2.40	0.51
1:0:2677:U:H2'	1:0:2678:C:C6	2.46	0.51
1:0:367:G:C3'	1:0:368:A:H5''	2.41	0.51
1:0:502:A:H2'	1:0:503:G:O4'	2.11	0.51
1:0:589:C:N4	1:0:590:C:N4	2.59	0.51
1:0:778:G:O2'	1:0:779:U:H5'	2.11	0.51
1:0:1200:G:H2'	1:0:1201:G:H5'	1.93	0.51
1:0:1669:A:H2'	1:0:1670:G:H4'	1.93	0.51
1:0:2610:G:HO2'	1:0:2785:A:H2	1.50	0.51
1:0:80:A:O2'	1:0:81:C:H5'	2.10	0.51
1:0:847:C:H2'	1:0:848:A:O4'	2.11	0.51
1:0:1355:A:O4'	1:0:1410:U:H4'	2.10	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1831:G:C2'	1:0:1832:G:H5'	2.41	0.51
1:0:1831:G:H2'	1:0:1832:G:H5'	1.93	0.51
1:0:2225:G:H2'	1:0:2226:A:C8	2.45	0.51
1:0:2243:C:H2'	1:0:2244:C:O4'	2.11	0.51
1:0:2340:C:C2'	1:0:2341:G:H5'	2.41	0.51
1:0:2721:A:H62	1:0:2743:G:N2	2.05	0.51
1:0:129:A:H2'	1:0:130:C:C6	2.46	0.50
1:0:691:C:O2'	1:0:692:C:H5'	2.11	0.50
1:0:1213:U:H2'	1:0:1214:C:C6	2.46	0.50
1:0:1403:U:O5'	1:0:1403:U:H6	1.93	0.50
1:0:1453:A:H2'	1:0:1454:U:H5'	1.94	0.50
1:0:1695:U:C2'	1:0:1696:C:H5'	2.40	0.50
1:0:2437:G:H1	1:0:2469:G:H2'	1.76	0.50
1:0:2628:C:H2'	1:0:2629:U:C6	2.46	0.50
1:0:2811:G:O6	1:0:2812:A:N6	2.44	0.50
1:0:323:G:H5''	1:0:342:G:O6	2.11	0.50
1:0:367:G:C2'	1:0:368:A:H5''	2.40	0.50
1:0:509:U:H2'	1:0:510:G:O4'	2.12	0.50
1:0:780:U:H2'	1:0:781:G:H8	1.76	0.50
1:0:1282:A:N6	1:0:1995:G:N2	2.59	0.50
1:0:2337:A:C6	1:0:2338:C:N3	2.79	0.50
1:0:1634:A:O2'	1:0:1635:G:OP1	2.27	0.50
1:0:2766:U:O2'	1:0:2767:C:H5'	2.12	0.50
1:0:2783:U:H2'	1:0:2784:A:C4'	2.33	0.50
7:9:56:G:H2'	7:9:57:U:C6	2.47	0.50
1:0:475:U:H1'	1:0:699:G:C6	2.46	0.50
1:0:814:G:H3'	1:0:815:A:H5'	1.94	0.50
1:0:1398:G:H2'	1:0:1399:C:H6	1.75	0.50
1:0:1577:G:H8	1:0:1577:G:O5'	1.93	0.50
1:0:1621:C:C5	1:0:1622:G:C5	3.00	0.50
1:0:1746:A:H61	1:0:2674:C:C4'	2.24	0.50
1:0:1984:A:H1'	1:0:2668:U:C4	2.46	0.50
1:0:2491:C:H2'	1:0:2492:G:C4'	2.42	0.50
1:0:2645:C:O5'	1:0:2645:C:H6	1.95	0.50
7:9:106:U:O2'	7:9:107:C:H5'	2.12	0.50
1:0:168:A:H2'	1:0:169:C:C6	2.47	0.50
1:0:427:C:H2'	1:0:428:A:C8	2.47	0.50
1:0:578:U:H1'	1:0:958:G:O4'	2.12	0.50
1:0:985:G:N3	1:0:985:G:H3'	2.27	0.50
1:0:1380:C:C2'	1:0:1381:G:H5'	2.42	0.50
1:0:2026:C:H2'	1:0:2027:C:C6	2.47	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2061:C:C4	1:0:2062:U:C5	3.00	0.50
1:0:2080:U:H2'	1:0:2081:U:C6	2.47	0.50
1:0:2185:U:H2'	1:0:2186:G:H8	1.73	0.50
1:0:2355:A:H2'	1:0:2356:A:O4'	2.11	0.50
1:0:2825:A:O2'	1:0:2826:C:H5'	2.11	0.50
7:9:37:C:H2'	7:9:38:C:H5'	1.94	0.50
1:0:139:A:H2'	1:0:140:G:C8	2.47	0.50
1:0:789:G:H1'	1:0:806:A:C8	2.46	0.50
1:0:824:U:H5''	1:0:1264:C:C2	2.47	0.50
1:0:883:A:O2'	1:0:884:C:H5'	2.11	0.50
1:0:946:U:C2	1:0:947:C:C5	2.99	0.50
1:0:997:C:N4	1:0:998:C:N4	2.59	0.50
1:0:1462:C:H1'	1:0:1561:A:H1'	1.94	0.50
1:0:1677:C:H2'	1:0:1678:G:H8	1.77	0.50
1:0:1698:C:H2'	1:0:1753:A:N3	2.26	0.50
1:0:1967:U:O2'	1:0:1968:G:H5'	2.12	0.50
1:0:1975:G:H2'	1:0:1980:A:N6	2.27	0.50
1:0:50:G:H2'	1:0:117:A:H2	1.75	0.50
1:0:175:C:H42	1:0:225:G:H1	1.60	0.50
1:0:180:C:N3	1:0:181:A:N6	2.58	0.50
1:0:218:A:H1'	1:0:220:U:C2	2.47	0.50
1:0:497:C:C2	1:0:505:G:C2	3.00	0.50
1:0:658:G:H4'	1:0:2331:A:H5'	1.94	0.50
1:0:661:C:O2'	1:0:662:G:H5'	2.12	0.50
1:0:951:G:H2'	1:0:952:A:C5'	2.38	0.50
1:0:1234:C:O2'	1:0:1235:C:H5'	2.11	0.50
1:0:1333:G:O2'	1:0:1334:A:H8	1.95	0.50
1:0:1392:U:C2'	1:0:1393:G:H5'	2.41	0.50
1:0:1459:U:O2	1:0:1476:G:OP2	2.30	0.50
1:0:1469:U:H5'	1:0:1470:G:N7	2.26	0.50
1:0:2542:U:C6	1:0:2544:A:OP2	2.65	0.50
1:0:2608:A:O2'	1:0:2609:G:H5'	2.11	0.50
1:0:2801:A:C2'	1:0:2802:C:H5'	2.41	0.50
1:0:2838:U:O2'	1:0:2839:G:H5'	2.10	0.50
1:0:343:A:H62	1:0:346:C:H5	1.59	0.50
1:0:531:G:H2'	1:0:532:A:C8	2.47	0.50
1:0:821:A:O2'	1:0:1267:A:H4'	2.11	0.50
1:0:1322:G:H2'	1:0:1323:G:C8	2.47	0.50
1:0:1356:G:H1'	1:0:1613:G:C2	2.46	0.50
1:0:1621:C:H4'	1:0:1626:A:N6	2.27	0.50
1:0:1755:G:C6	1:0:1972:G:C6	3.00	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1816:G:O2'	1:0:1817:U:H5'	2.12	0.50
1:0:1947:G:O2'	1:0:1950:C:OP2	2.26	0.50
1:0:2426:G:N2	1:0:2430:A:H62	2.10	0.50
1:0:2559:U:H3'	1:0:2560:G:C4'	2.41	0.50
1:0:67:G:N2	1:0:72:A:H2'	2.26	0.50
1:0:224:G:N7	1:0:226:C:O2	2.45	0.50
1:0:601:A:H61	1:0:633:G:H21	1.59	0.50
1:0:689:A:C2'	1:0:690:A:H5'	2.41	0.50
1:0:792:U:H2'	1:0:793:G:O4'	2.11	0.50
1:0:961:G:C6	1:0:962:C:C4	3.00	0.50
1:0:1054:C:C2'	1:0:1055:A:H5'	2.41	0.50
1:0:1182:U:C3'	1:0:1183:C:H5''	2.41	0.50
1:0:1435:G:H22	1:0:1512:A:H2	1.59	0.50
1:0:1587:A:H2'	1:0:1588:A:C8	2.47	0.50
1:0:1949:A:H1'	1:0:2572:U:H4'	1.93	0.50
1:0:2445:C:N4	1:0:2446:C:H41	2.09	0.50
1:0:525:A:H2'	1:0:526:C:H5'	1.93	0.49
1:0:635:C:H3'	1:0:636:G:H5''	1.93	0.49
1:0:979:A:H2'	1:0:980:G:H8	1.77	0.49
1:0:1141:U:HO2'	1:0:1142:G:P	2.31	0.49
1:0:1479:G:H2'	1:0:1480:G:O4'	2.12	0.49
1:0:1711:C:O5'	1:0:1711:C:H6	1.95	0.49
1:0:2806:G:H1'	1:0:2858:A:H2'	1.93	0.49
1:0:26:G:H2'	1:0:27:G:O4'	2.12	0.49
1:0:180:C:C4	1:0:181:A:C5	3.01	0.49
1:0:587:A:C2	1:0:1266:G:N2	2.75	0.49
1:0:1256:C:H2'	1:0:1257:U:O4'	2.12	0.49
1:0:2652:G:H2'	1:0:2653:A:C8	2.45	0.49
7:9:33:C:O5'	7:9:33:C:H6	1.95	0.49
1:0:1:G:H2'	1:0:2:G:C8	2.47	0.49
1:0:215:G:H2'	1:0:216:U:O4'	2.12	0.49
1:0:468:A:O2'	1:0:469:G:H4'	2.12	0.49
1:0:788:G:C5'	1:0:790:A:H1'	2.40	0.49
1:0:1323:G:H2'	1:0:1324:G:H4'	1.94	0.49
1:0:1358:C:H2'	1:0:1359:G:C5'	2.41	0.49
1:0:1479:G:H21	1:0:1543:G:N2	2.09	0.49
1:0:2235:G:N2	1:0:2254:C:C4	2.79	0.49
1:0:2418:A:H2	1:0:2564:U:H5'	1.77	0.49
1:0:2748:C:H2'	1:0:2749:A:H8	1.76	0.49
7:9:42:U:H3	7:9:45:C:H5	1.59	0.49
1:0:57:G:N2	1:0:72:A:N7	2.60	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1284:G:C4	1:0:1633:C:H5'	2.48	0.49
1:0:1757:C:O2'	1:0:1758:C:H5'	2.12	0.49
1:0:1958:G:H2'	1:0:1959:U:O4'	2.12	0.49
1:0:2560:G:H2'	1:0:2561:G:C8	2.47	0.49
1:0:324:C:O2'	1:0:325:U:H5'	2.11	0.49
1:0:460:U:C2'	1:0:461:A:OP1	2.61	0.49
1:0:490:A:O2'	1:0:491:A:H5'	2.12	0.49
1:0:675:C:O2'	1:0:676:G:H5'	2.12	0.49
1:0:701:U:H2'	1:0:702:A:H8	1.78	0.49
1:0:981:C:OP1	1:0:1000:G:N2	2.45	0.49
1:0:1010:U:H2'	1:0:1011:A:H8	1.77	0.49
1:0:1528:C:C2'	1:0:1529:C:H5''	2.42	0.49
1:0:1773:C:C4	1:0:2566:A:H2	2.31	0.49
1:0:1793:A:H2'	1:0:1794:A:C8	2.47	0.49
1:0:2633:A:H5'	1:0:2635:U:O4'	2.12	0.49
7:9:31:A:H2'	7:9:32:C:C6	2.48	0.49
7:9:42:U:N3	7:9:45:C:H5	2.10	0.49
1:0:66:U:O2	1:0:67:G:N7	2.45	0.49
1:0:166:G:H21	1:0:184:A:H62	1.60	0.49
1:0:217:U:H1'	1:0:235:C:H42	1.77	0.49
1:0:478:G:O2'	1:0:479:G:H5'	2.13	0.49
1:0:652:C:H42	1:0:657:A:N6	2.10	0.49
1:0:874:A:N6	1:0:928:G:H21	2.10	0.49
1:0:1558:C:C2'	1:0:1559:G:H5'	2.42	0.49
1:0:2034:A:N6	1:0:2593:A:H62	2.09	0.49
1:0:2079:A:H2'	1:0:2080:U:C6	2.47	0.49
1:0:2498:U:H5''	1:0:2499:C:OP1	2.12	0.49
1:0:2499:C:C2	1:0:2546:G:C8	3.00	0.49
1:0:2550:C:C5	1:0:2553:G:O4'	2.65	0.49
1:0:2824:C:H6	1:0:2824:C:O5'	1.95	0.49
7:9:80:A:H2'	7:9:81:C:O4'	2.11	0.49
1:0:171:G:C2	1:0:179:U:N3	2.80	0.49
1:0:807:A:H2'	1:0:808:C:C6	2.48	0.49
1:0:1159:U:H2'	1:0:1160:C:C6	2.47	0.49
1:0:2380:U:H2'	1:0:2381:A:H5'	1.94	0.49
1:0:2443:C:O2'	1:0:2444:C:H5'	2.13	0.49
1:0:2445:C:C4	1:0:2446:C:N4	2.80	0.49
1:0:2796:A:H8	1:0:2796:A:OP1	1.96	0.49
1:0:2836:U:H2'	1:0:2837:G:C8	2.46	0.49
1:0:443:A:O2'	1:0:444:U:H5'	2.13	0.49
1:0:947:C:N3	1:0:948:C:C4	2.80	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1139:A:H1'	1:0:2496:C:H5'	1.94	0.49
1:0:1162:A:H2'	1:0:1163:C:H6	1.77	0.49
1:0:2071:G:H22	1:0:2211:U:H1'	1.77	0.49
1:0:2198:U:C2'	1:0:2199:C:H5''	2.43	0.49
1:0:2240:C:H2'	1:0:2241:U:C5'	2.43	0.49
1:0:2377:U:H2'	1:0:2378:G:C8	2.48	0.49
1:0:2617:G:N2	1:0:2755:A:H2'	2.28	0.49
1:0:2642:G:O2'	1:0:2643:G:H5'	2.12	0.49
1:0:931:G:H2'	1:0:932:G:O4'	2.13	0.49
1:0:1809:G:P	1:0:1809:G:H8	2.36	0.49
1:0:2223:U:H2'	1:0:2224:U:O4'	2.13	0.49
1:0:2543:A:H5'	1:0:2627:G:H4'	1.94	0.49
1:0:597:U:N3	1:0:683:A:O2'	2.44	0.49
1:0:1147:G:C4'	1:0:2022:C:H5'	2.43	0.49
1:0:1263:G:O2'	1:0:1264:C:P	2.71	0.49
1:0:1364:C:C2	1:0:1394:G:C2	3.01	0.49
1:0:1696:C:H2'	1:0:1697:U:C6	2.48	0.49
1:0:2717:G:O2'	1:0:2718:A:H5'	2.13	0.49
7:9:36:A:H2'	7:9:46:G:O6	2.13	0.49
1:0:177:U:H2'	1:0:178:C:C6	2.48	0.48
1:0:677:G:C1'	1:0:951:G:H5''	2.43	0.48
1:0:1142:G:O6	1:0:2008:C:H1'	2.12	0.48
1:0:1145:C:C5	1:0:1147:G:OP2	2.66	0.48
1:0:1272:G:O2'	1:0:1273:G:C5'	2.61	0.48
1:0:1340:C:C5	1:0:1341:G:N7	2.80	0.48
1:0:1548:U:H2'	1:0:1549:C:C6	2.48	0.48
1:0:1998:A:C2	32:Z:6:VAL:CA	2.96	0.48
1:0:2611:A:H2'	1:0:2612:G:C8	2.47	0.48
1:0:2768:C:H2'	1:0:2769:C:H4'	1.95	0.48
1:0:2847:G:C6	1:0:2848:A:N6	2.81	0.48
1:0:166:G:N2	1:0:185:C:N4	2.61	0.48
1:0:210:A:H62	1:0:442:A:H61	1.61	0.48
1:0:322:A:H1'	1:0:343:A:C5	2.49	0.48
1:0:864:C:O2'	1:0:865:A:H5'	2.13	0.48
1:0:2093:G:H2'	1:0:2094:C:C6	2.48	0.48
1:0:2474:G:C5	1:0:2475:C:C5	3.01	0.48
1:0:2745:A:H2'	1:0:2745:A:N3	2.29	0.48
1:0:2788:C:O2'	1:0:2789:U:C5'	2.58	0.48
7:9:77:G:O2'	7:9:78:A:H5'	2.13	0.48
1:0:173:A:H2'	1:0:173:A:N3	2.28	0.48
1:0:546:A:H2'	1:0:547:U:C6	2.48	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:633:G:H2'	1:0:634:G:O4'	2.13	0.48
1:0:788:G:O2'	1:0:807:A:C8	2.64	0.48
1:0:1500:U:H3	1:0:1520:G:H22	1.60	0.48
1:0:1754:G:OP1	1:0:1754:G:H4'	2.13	0.48
1:0:2051:U:H3	1:0:2409:A:N6	2.10	0.48
1:0:2425:G:H2'	1:0:2480:C:N4	2.29	0.48
1:0:2821:G:H2'	1:0:2822:U:C6	2.48	0.48
7:9:102:A:H2'	7:9:103:A:H8	1.78	0.48
1:0:401:G:N3	1:0:403:A:N7	2.62	0.48
1:0:563:U:H6	1:0:563:U:O5'	1.95	0.48
1:0:599:A:H2'	1:0:600:G:H8	1.78	0.48
1:0:1187:A:H2'	1:0:1188:A:C8	2.48	0.48
1:0:1272:G:H2'	1:0:1273:G:H8	1.75	0.48
1:0:1720:G:N1	1:0:1721:G:C5	2.82	0.48
1:0:1755:G:C6	1:0:1972:G:N1	2.81	0.48
1:0:1994:U:O5'	1:0:1994:U:H6	1.96	0.48
1:0:2027:C:H2'	1:0:2028:C:C6	2.47	0.48
1:0:2403:C:H5'	1:0:2404:A:OP1	2.13	0.48
1:0:2594:U:H5'	1:0:2594:U:C6	2.37	0.48
1:0:2856:U:C4	1:0:2857:C:N4	2.82	0.48
1:0:68:C:N3	1:0:69:G:C5	2.81	0.48
1:0:338:G:O2'	1:0:339:U:H5'	2.13	0.48
1:0:701:U:H2'	1:0:702:A:C8	2.49	0.48
1:0:713:G:O2'	1:0:1649:A:N3	2.45	0.48
1:0:1791:C:C1'	1:0:1793:A:H5'	2.36	0.48
1:0:1807:A:H1'	1:0:1809:G:H1'	1.95	0.48
1:0:2209:G:C5	1:0:2210:C:C5	3.01	0.48
1:0:2470:U:C2'	1:0:2471:U:O5'	2.61	0.48
1:0:2559:U:C2'	1:0:2560:G:OP1	2.62	0.48
7:9:85:G:O2'	7:9:86:A:H5'	2.12	0.48
1:0:612:G:O3'	1:0:613:A:H4'	2.13	0.48
1:0:674:U:O2'	1:0:675:C:H5'	2.13	0.48
1:0:835:U:O2'	1:0:836:G:H5'	2.13	0.48
1:0:2812:A:H2'	1:0:2813:G:C8	2.49	0.48
33:0:2882:DOL:H463	33:0:2882:DOL:HC33	1.95	0.48
1:0:328:A:O2'	1:0:329:C:H5'	2.14	0.48
1:0:699:G:H2'	1:0:699:G:N3	2.29	0.48
1:0:992:A:H2	1:0:2010:G:N3	2.11	0.48
1:0:1253:C:H2'	1:0:1254:G:H5'	1.96	0.48
1:0:2024:U:O5'	1:0:2024:U:H6	1.96	0.48
1:0:2193:C:H2'	1:0:2194:A:O4'	2.12	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2448:A:H2'	1:0:2449:G:H5'	1.96	0.48
1:0:2470:U:H2'	1:0:2471:U:O5'	2.14	0.48
1:0:242:A:C2'	1:0:243:G:H4'	2.44	0.48
1:0:459:A:N7	1:0:484:G:N9	2.62	0.48
1:0:537:C:C2	1:0:2759:U:O2'	2.64	0.48
1:0:573:C:N4	1:0:582:G:OP1	2.47	0.48
1:0:1339:U:C5'	1:0:1994:U:H1'	2.44	0.48
1:0:2560:G:N9	1:0:2589:C:N4	2.62	0.48
1:0:2624:G:OP1	1:0:2712:G:N2	2.46	0.48
1:0:2702:G:H2'	1:0:2703:C:C6	2.48	0.48
1:0:155:G:O2'	1:0:156:G:H5'	2.14	0.48
1:0:645:G:H2'	1:0:646:C:C6	2.49	0.48
1:0:665:A:H3'	1:0:666:U:H5'	1.95	0.48
1:0:690:A:O2'	1:0:691:C:H5'	2.14	0.48
1:0:712:A:C8	1:0:713:G:C8	3.02	0.48
1:0:1283:C:H5''	1:0:1284:G:O5'	2.14	0.48
1:0:1641:C:N4	1:0:1642:G:C2	2.82	0.48
1:0:2034:A:H2'	1:0:2035:G:C8	2.49	0.48
1:0:692:C:H2'	1:0:693:A:H8	1.79	0.48
1:0:727:U:C2'	1:0:728:G:H5''	2.39	0.48
1:0:773:G:H4'	1:0:1767:G:OP1	2.13	0.48
1:0:1331:G:C6	1:0:1332:G:C6	3.01	0.48
1:0:1645:U:H2'	1:0:1646:G:C8	2.49	0.48
1:0:1666:G:O2'	1:0:1667:A:H5'	2.14	0.48
1:0:1692:C:H2'	1:0:1693:A:C5'	2.43	0.48
1:0:2555:G:H5'	1:0:2558:C:H41	1.79	0.48
1:0:306:G:O2'	1:0:307:C:H5'	2.14	0.47
1:0:1202:U:H2'	1:0:1203:A:H8	1.79	0.47
1:0:1348:C:H2'	1:0:1349:A:C8	2.49	0.47
1:0:2268:G:H5'	1:0:2363:G:O2'	2.14	0.47
1:0:2429:A:O2'	1:0:2430:A:H5'	2.13	0.47
1:0:2785:A:H2'	1:0:2786:G:O4'	2.14	0.47
1:0:2792:C:C2	1:0:2805:G:N2	2.82	0.47
1:0:320:A:H2	1:0:340:G:HO2'	1.58	0.47
1:0:349:G:H2'	1:0:350:U:C6	2.49	0.47
1:0:428:A:H2'	1:0:429:C:H6	1.79	0.47
1:0:698:A:C1'	1:0:700:C:H41	2.26	0.47
1:0:704:G:O2'	1:0:705:C:H5'	2.14	0.47
1:0:1660:G:H2'	1:0:1661:C:O4'	2.14	0.47
1:0:1666:G:O2'	1:0:1667:A:C5'	2.62	0.47
1:0:2569:A:O2'	1:0:2570:C:H5'	2.13	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2667:C:H2'	1:0:2699:G:N2	2.29	0.47
1:0:2788:C:H2'	1:0:2789:U:H6	1.79	0.47
1:0:632:A:H3'	1:0:632:A:N3	2.29	0.47
1:0:858:G:H5''	1:0:859:U:H5'	1.96	0.47
1:0:929:A:H3'	1:0:930:A:C5'	2.36	0.47
1:0:1683:G:C2'	1:0:1684:G:H5'	2.43	0.47
1:0:2014:A:C2	1:0:2435:C:H5'	2.49	0.47
1:0:2276:C:H1'	1:0:2301:A:N3	2.29	0.47
1:0:476:G:H2'	1:0:477:A:C8	2.49	0.47
1:0:550:C:O2'	1:0:551:A:H5'	2.14	0.47
1:0:728:G:H2'	1:0:729:A:O4'	2.13	0.47
1:0:958:G:H2'	1:0:959:C:H6	1.78	0.47
1:0:1502:G:O2'	1:0:1503:G:H5'	2.14	0.47
1:0:1671:A:O4'	1:0:2798:A:H5'	2.15	0.47
1:0:1722:G:O2'	1:0:1723:U:H5'	2.15	0.47
1:0:1797:C:H2'	1:0:1798:G:O4'	2.13	0.47
1:0:1905:G:H2'	1:0:1906:U:C6	2.49	0.47
1:0:2238:G:H8	1:0:2238:G:OP1	1.97	0.47
1:0:2268:G:H2'	1:0:2269:G:C8	2.50	0.47
1:0:2468:G:H2'	1:0:2469:G:C5'	2.43	0.47
1:0:2658:A:O2'	9:B:189:PRO:CA	2.63	0.47
1:0:30:G:N1	1:0:521:U:O2	2.48	0.47
1:0:163:A:H2'	1:0:164:G:C8	2.45	0.47
1:0:368:A:H2'	1:0:369:C:O4'	2.15	0.47
1:0:658:G:H1'	1:0:2330:G:OP1	2.14	0.47
1:0:929:A:HO2'	7:9:101:A:HO2'	1.59	0.47
1:0:1031:C:H4'	1:0:1032:A:C8	2.50	0.47
1:0:1314:A:N7	1:0:1316:G:N7	2.62	0.47
1:0:1341:G:N2	1:0:1343:C:O2	2.47	0.47
1:0:1676:U:O2'	1:0:1677:C:H5'	2.14	0.47
1:0:1712:G:N2	1:0:1713:G:C4	2.82	0.47
1:0:1985:G:O2'	1:0:1986:G:H5'	2.14	0.47
1:0:2240:C:C2'	1:0:2241:U:H5''	2.44	0.47
1:0:2313:G:C3'	1:0:2314:A:H5'	2.44	0.47
1:0:2335:U:O2'	1:0:2336:G:H5'	2.15	0.47
1:0:2371:A:C2	1:0:2408:G:C6	3.02	0.47
1:0:2593:A:H2'	1:0:2594:U:H5'	1.95	0.47
7:9:9:G:H2'	7:9:10:U:O4'	2.14	0.47
1:0:333:A:H1'	1:0:351:A:C1'	2.44	0.47
1:0:1141:U:O5'	1:0:1141:U:H6	1.97	0.47
1:0:1299:A:C5	1:0:1342:U:O4	2.67	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1370:U:O2'	1:0:1371:G:H5'	2.15	0.47
1:0:1789:U:C4	1:0:1811:A:C2	3.03	0.47
1:0:2231:G:O2'	1:0:2232:G:H5'	2.14	0.47
1:0:2245:A:O3'	1:0:2246:A:C8	2.67	0.47
1:0:43:A:O2'	1:0:44:G:H5'	2.15	0.47
1:0:80:A:H2'	1:0:81:C:O4'	2.15	0.47
1:0:217:U:H3	1:0:218:A:N6	2.13	0.47
1:0:415:A:H2'	1:0:416:U:H5'	1.97	0.47
1:0:459:A:C2	1:0:466:A:C8	3.02	0.47
1:0:588:G:C2	1:0:1275:A:C6	3.03	0.47
1:0:595:A:N6	1:0:1264:C:H41	2.12	0.47
1:0:762:A:H61	1:0:766:A:H2	1.63	0.47
1:0:889:C:O2'	1:0:890:U:H5'	2.15	0.47
1:0:916:U:N3	1:0:917:U:C4	2.83	0.47
1:0:985:G:N3	1:0:985:G:H5''	2.30	0.47
1:0:1348:C:H2'	1:0:1349:A:H8	1.78	0.47
1:0:1386:A:H2'	1:0:1387:G:O4'	2.14	0.47
1:0:1596:A:H2'	1:0:1597:A:O4'	2.15	0.47
1:0:1683:G:N7	1:0:1684:G:N2	2.62	0.47
1:0:1981:A:O2'	1:0:1982:C:H5'	2.14	0.47
1:0:2006:G:N2	1:0:2024:U:O2	2.47	0.47
1:0:2034:A:C2	1:0:2035:G:O6	2.68	0.47
1:0:2039:G:OP2	1:0:2483:U:H5''	2.14	0.47
1:0:2194:A:C2'	1:0:2195:C:H5''	2.44	0.47
1:0:2262:C:C4	1:0:2368:G:C2	3.03	0.47
1:0:2610:G:O2'	1:0:2785:A:H2	1.96	0.47
1:0:2624:G:H4'	1:0:2712:G:C2'	2.44	0.47
1:0:2633:A:H5''	1:0:2634:G:OP1	2.14	0.47
1:0:579:G:N2	1:0:2013:A:O4'	2.48	0.47
1:0:761:G:C2	1:0:763:A:N6	2.82	0.47
1:0:958:G:H2'	1:0:959:C:C6	2.50	0.47
1:0:2181:A:C2'	1:0:2182:A:H5'	2.44	0.47
1:0:2565:C:N3	6:5:2:THR:HB	2.29	0.47
1:0:158:A:C2	1:0:447:U:H4'	2.44	0.47
1:0:974:U:O2'	1:0:975:C:H5'	2.15	0.47
1:0:1002:C:C6	1:0:1198:C:N3	2.83	0.47
1:0:1073:G:C3'	1:0:1074:G:H5''	2.45	0.47
1:0:1333:G:HO2'	1:0:1334:A:H8	1.63	0.47
1:0:1782:A:N6	1:0:1820:G:H2'	2.30	0.47
1:0:2019:C:N3	1:0:2020:G:N7	2.63	0.47
1:0:2408:G:H3'	1:0:2409:A:C5'	2.45	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2559:U:H3'	1:0:2560:G:H4'	1.96	0.47
1:0:469:G:H2'	1:0:480:G:C6	2.50	0.47
1:0:520:C:O2	1:0:520:C:H2'	2.13	0.47
1:0:528:G:O2'	1:0:529:U:H5'	2.15	0.47
1:0:669:G:H2'	1:0:670:U:C6	2.50	0.47
1:0:1004:A:C2'	1:0:1005:U:H5''	2.44	0.47
1:0:1273:G:H2'	1:0:1274:C:H6	1.78	0.47
1:0:1736:C:H2'	1:0:1737:G:C8	2.50	0.47
1:0:1939:U:O2	1:0:1968:G:H4'	2.15	0.47
1:0:2038:C:N4	1:0:2479:U:C4'	2.78	0.47
1:0:2331:A:C5	1:0:2345:A:N1	2.83	0.47
1:0:2497:A:N6	1:0:2547:C:H1'	2.30	0.47
1:0:2664:G:C2'	1:0:2665:G:H5'	2.44	0.47
7:9:7:C:O2'	7:9:8:C:H5'	2.15	0.47
1:0:115:G:C2	1:0:117:A:N6	2.83	0.46
1:0:140:G:H2'	1:0:141:G:C8	2.50	0.46
1:0:333:A:O2'	1:0:350:U:H2'	2.15	0.46
1:0:1269:G:C6	1:0:1270:C:C4	3.03	0.46
1:0:1690:U:C2'	1:0:1691:G:H5'	2.44	0.46
1:0:2394:G:H2'	1:0:2395:C:H6	1.79	0.46
1:0:2688:G:O2'	1:0:2689:C:H5'	2.14	0.46
1:0:2815:C:H2'	1:0:2816:C:O4'	2.15	0.46
33:0:2882:DOL:C46	33:0:2882:DOL:HC33	2.45	0.46
1:0:119:G:H1'	1:0:129:A:C2	2.50	0.46
1:0:841:G:H2'	1:0:842:A:C8	2.50	0.46
1:0:1073:G:C2'	1:0:1074:G:H5''	2.44	0.46
1:0:1202:U:C2	1:0:1203:A:C8	3.03	0.46
1:0:1407:G:O2'	1:0:1408:A:H5'	2.15	0.46
1:0:2550:C:C6	1:0:2553:G:O4'	2.68	0.46
1:0:2564:U:H3'	1:0:2565:C:H5''	1.98	0.46
1:0:597:U:H3	1:0:683:A:C2'	2.28	0.46
1:0:613:A:H2'	1:0:614:G:H8	1.79	0.46
1:0:617:U:O2'	1:0:618:A:H5'	2.16	0.46
1:0:1008:G:O2'	1:0:1009:C:H5'	2.13	0.46
1:0:1385:C:C2	1:0:1386:A:C8	3.03	0.46
1:0:1666:G:H2'	1:0:1667:A:C8	2.49	0.46
1:0:1764:A:H2	1:0:1960:A:N1	2.14	0.46
1:0:1816:G:H2'	1:0:1817:U:C6	2.50	0.46
1:0:1860:A:H2'	1:0:1861:G:O4'	2.16	0.46
1:0:2322:U:C2'	1:0:2323:U:H5'	2.46	0.46
1:0:2340:C:H2'	1:0:2341:G:O4'	2.15	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2611:A:C2	1:0:2767:C:C2	3.03	0.46
1:0:12:U:H3	1:0:536:A:H62	1.63	0.46
1:0:43:A:H8	1:0:43:A:O5'	1.97	0.46
1:0:712:A:N7	1:0:713:G:C5	2.83	0.46
1:0:813:A:H2'	1:0:813:A:N3	2.30	0.46
1:0:835:U:OP2	1:0:957:G:OP2	2.34	0.46
1:0:1311:C:H4'	1:0:1315:A:C6	2.50	0.46
1:0:1328:C:H4'	1:0:1406:A:C4'	2.45	0.46
1:0:1460:G:O2'	1:0:1461:C:H5'	2.15	0.46
1:0:1646:G:C4'	1:0:2677:U:OP1	2.64	0.46
1:0:1652:G:C2	1:0:1653:C:C2	3.04	0.46
1:0:1720:G:O2'	1:0:1721:G:H5'	2.16	0.46
1:0:1969:G:H2'	1:0:1970:G:C8	2.47	0.46
1:0:2006:G:H2'	1:0:2007:G:C8	2.50	0.46
1:0:2217:G:N3	1:0:2217:G:C2'	2.79	0.46
1:0:2503:G:C3'	1:0:2504:G:H5''	2.46	0.46
1:0:2544:A:H2'	1:0:2545:A:O4'	2.15	0.46
1:0:20:C:O2'	1:0:21:A:H5'	2.15	0.46
1:0:460:U:H2'	1:0:461:A:OP1	2.15	0.46
1:0:736:G:O2'	1:0:737:C:H5'	2.15	0.46
1:0:977:G:O2'	1:0:978:U:H5'	2.15	0.46
1:0:1016:C:H6	1:0:1154:A:H1'	1.75	0.46
1:0:1482:U:O2	1:0:1541:G:N2	2.49	0.46
1:0:1865:C:H2'	1:0:1866:G:O4'	2.15	0.46
1:0:2058:U:H1'	1:0:2576:G:H21	1.81	0.46
1:0:2560:G:H2'	1:0:2561:G:N7	2.30	0.46
7:9:16:U:O2'	7:9:110:U:H1'	2.16	0.46
1:0:170:U:O2'	1:0:171:G:H5'	2.16	0.46
1:0:468:A:H1'	1:0:470:U:C2	2.51	0.46
1:0:856:A:H2'	1:0:857:U:O4'	2.16	0.46
1:0:859:U:H2'	1:0:860:U:OP2	2.15	0.46
1:0:997:C:N4	1:0:998:C:H41	2.13	0.46
1:0:1312:G:O4'	1:0:1314:A:H2	1.99	0.46
1:0:1453:A:C2'	1:0:1454:U:H5'	2.46	0.46
1:0:1679:U:H2'	1:0:1680:U:O4'	2.16	0.46
1:0:2063:A:C2	1:0:2064:U:C2	3.04	0.46
1:0:2495:G:C2	1:0:2548:G:C2	3.04	0.46
1:0:2541:U:H2'	1:0:2542:U:O4'	2.15	0.46
1:0:2627:G:O2'	1:0:2628:C:H5'	2.16	0.46
1:0:2791:C:O2'	1:0:2792:C:H5'	2.15	0.46
1:0:34:U:H2'	1:0:35:G:H5'	1.98	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:693:A:O2'	1:0:694:G:H5'	2.15	0.46
1:0:953:G:H2'	1:0:954:U:C6	2.51	0.46
1:0:987:G:H2'	1:0:988:G:H8	1.81	0.46
1:0:1686:A:O2'	1:0:2528:G:OP1	2.27	0.46
1:0:1837:G:O2'	1:0:1838:G:H5'	2.15	0.46
1:0:1947:G:OP1	1:0:1947:G:H8	1.99	0.46
1:0:2427:A:O5'	1:0:2477:C:OP2	2.34	0.46
1:0:2495:G:H2'	1:0:2496:C:O4'	2.15	0.46
1:0:2586:G:H8	1:0:2586:G:O5'	1.99	0.46
1:0:2762:G:C2	1:0:2763:U:C2	3.03	0.46
1:0:2764:U:O2'	1:0:2765:C:H5'	2.16	0.46
1:0:8:A:H2'	1:0:9:U:C6	2.51	0.46
1:0:62:U:H2'	1:0:63:A:C8	2.51	0.46
1:0:526:C:H1'	1:0:1274:C:O2'	2.16	0.46
1:0:1199:U:O5'	1:0:1200:G:H5'	2.16	0.46
1:0:1509:A:O2'	1:0:1510:A:H5'	2.16	0.46
1:0:2468:G:C2'	1:0:2469:G:H5'	2.46	0.46
1:0:2510:A:N6	1:0:2641:A:H61	2.09	0.46
1:0:2658:A:C5	1:0:2659:C:C5	3.04	0.46
33:0:2882:DOL:C46	33:0:2882:DOL:H311	2.45	0.46
1:0:6:A:H2'	1:0:7:G:C8	2.50	0.46
1:0:201:G:H2'	1:0:202:A:C8	2.51	0.46
1:0:733:G:H2'	1:0:734:G:C8	2.51	0.46
1:0:941:U:O2'	1:0:942:U:H5'	2.15	0.46
1:0:1225:G:H2'	1:0:1249:G:N2	2.31	0.46
1:0:1343:C:H2'	1:0:1344:C:H6	1.80	0.46
1:0:1665:C:H2'	1:0:1666:G:H8	1.80	0.46
1:0:1970:G:C2	1:0:1971:C:C2	3.03	0.46
1:0:2046:C:H1'	33:0:2882:DOL:HC32	1.97	0.46
1:0:2740:C:O2'	1:0:2741:G:H5'	2.16	0.46
1:0:136:A:N6	1:0:137:A:C2	2.84	0.46
1:0:193:A:N7	1:0:444:U:C4	2.84	0.46
1:0:391:C:H2'	1:0:392:G:C8	2.51	0.46
1:0:692:C:H2'	1:0:693:A:C8	2.51	0.46
1:0:742:G:C1'	1:0:777:A:OP1	2.64	0.46
1:0:1178:C:O2'	1:0:1179:A:H5'	2.16	0.46
1:0:1206:G:O2'	1:0:1207:G:H5'	2.16	0.46
1:0:1319:C:H2'	1:0:1320:A:C8	2.46	0.46
1:0:1359:G:O2'	1:0:1360:G:H5'	2.16	0.46
1:0:2006:G:O2'	1:0:2007:G:H5'	2.15	0.46
1:0:2230:G:O4'	1:0:2429:A:H5'	2.16	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2549:G:H2'	1:0:2550:C:H5'	1.97	0.46
7:9:65:A:H2'	7:9:66:G:O4'	2.16	0.46
1:0:3:U:H2'	1:0:4:C:H6	1.77	0.45
1:0:67:G:C4	1:0:73:A:H8	2.34	0.45
1:0:165:G:H2'	1:0:166:G:O4'	2.16	0.45
1:0:459:A:N3	1:0:466:A:C8	2.85	0.45
1:0:587:A:H2'	1:0:588:G:H5''	1.98	0.45
1:0:936:A:H2'	1:0:937:C:O4'	2.16	0.45
1:0:976:C:C5'	1:0:2252:A:H1'	2.41	0.45
1:0:1159:U:H2'	1:0:1160:C:H6	1.81	0.45
1:0:1448:A:H2'	1:0:1449:C:C6	2.51	0.45
1:0:1635:G:C2'	1:0:1636:G:H5'	2.46	0.45
1:0:1635:G:O2'	1:0:1636:G:H5'	2.15	0.45
1:0:1749:G:O6	1:0:2674:C:C4'	2.51	0.45
1:0:1936:A:H2'	1:0:1937:G:H5'	1.98	0.45
1:0:2012:A:C8	1:0:2014:A:OP1	2.69	0.45
1:0:2015:G:O2'	1:0:2016:A:OP1	2.25	0.45
1:0:2333:A:C6	1:0:2343:C:N4	2.84	0.45
1:0:2498:U:H2'	1:0:2520:A:C6	2.50	0.45
1:0:477:A:H2'	1:0:478:G:H5'	1.99	0.45
1:0:800:U:H3'	1:0:804:C:N4	2.31	0.45
1:0:931:G:N2	1:0:932:G:H1'	2.30	0.45
1:0:935:C:O2'	1:0:936:A:H5'	2.16	0.45
1:0:966:A:N6	1:0:967:G:C2	2.84	0.45
1:0:1313:U:P	1:0:1313:U:H6	2.39	0.45
1:0:1856:U:OP1	1:0:2389:G:O2'	2.34	0.45
1:0:2475:C:C3'	1:0:2476:A:H5'	2.46	0.45
1:0:2559:U:O2'	1:0:2560:G:OP1	2.28	0.45
1:0:2589:C:H5''	1:0:2590:U:H5''	1.97	0.45
1:0:2825:A:C2	1:0:2844:G:O2'	2.63	0.45
1:0:41:G:O2'	1:0:42:G:H5'	2.16	0.45
1:0:126:C:H2'	1:0:127:C:C6	2.52	0.45
1:0:218:A:O2'	1:0:219:G:H4'	2.16	0.45
1:0:297:A:H2'	1:0:298:C:C6	2.52	0.45
1:0:319:G:H1'	1:0:511:A:O4'	2.16	0.45
1:0:393:U:H2'	1:0:394:U:C6	2.51	0.45
1:0:594:G:H1'	1:0:1267:A:H61	1.82	0.45
1:0:636:G:H2'	1:0:637:G:H5'	1.98	0.45
1:0:791:G:H2'	1:0:792:U:O4'	2.16	0.45
1:0:1329:U:H2'	1:0:1330:G:H8	1.81	0.45
1:0:1470:G:C6	1:0:2684:A:C2	3.04	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1749:G:O6	1:0:2674:C:O3'	2.33	0.45
1:0:2499:C:N4	1:0:2521:A:H2	2.11	0.45
1:0:2563:U:N3	33:0:2882:DOL:H471	2.30	0.45
1:0:59:G:N2	1:0:87:G:N7	2.65	0.45
1:0:651:C:C3'	1:0:652:C:H5''	2.45	0.45
1:0:783:G:H1'	1:0:1391:A:H2	1.81	0.45
1:0:931:G:C2	1:0:932:G:H1'	2.52	0.45
1:0:947:C:O2'	1:0:948:C:H5'	2.16	0.45
1:0:1794:A:C2'	1:0:1795:C:H5'	2.46	0.45
1:0:2701:A:HO2'	1:0:2702:G:H5'	1.81	0.45
1:0:2820:C:H2'	1:0:2821:G:C8	2.51	0.45
1:0:167:A:C2	1:0:184:A:H2	2.34	0.45
1:0:195:A:H3'	1:0:196:A:C8	2.52	0.45
1:0:327:C:C2'	1:0:328:A:H5'	2.47	0.45
1:0:471:A:H2'	1:0:472:C:H5'	1.97	0.45
1:0:526:C:H2'	1:0:527:C:C6	2.52	0.45
1:0:822:G:H2'	1:0:823:U:O4'	2.17	0.45
1:0:860:U:H3	1:0:945:G:N2	2.14	0.45
1:0:873:U:H3'	1:0:874:A:C5'	2.45	0.45
1:0:883:A:H2'	1:0:884:C:C6	2.51	0.45
1:0:1436:G:H21	1:0:1514:C:H1'	1.82	0.45
1:0:1974:U:C3'	1:0:1975:G:C5'	2.94	0.45
1:0:1980:A:O2'	1:0:1981:A:H5'	2.17	0.45
1:0:2026:C:C4	1:0:2757:G:N3	2.85	0.45
1:0:2506:C:H2'	1:0:2507:U:C6	2.52	0.45
1:0:914:C:O2'	1:0:915:C:H5'	2.17	0.45
1:0:1228:G:C6	1:0:1229:C:C4	3.04	0.45
1:0:1243:G:C6	1:0:1244:U:C4	3.04	0.45
1:0:1467:U:O2'	1:0:2681:A:N7	2.50	0.45
1:0:1502:G:H2'	1:0:1503:G:C8	2.51	0.45
1:0:1563:U:H2'	1:0:1564:U:C6	2.52	0.45
1:0:173:A:C2	1:0:818:G:N2	2.84	0.45
1:0:839:U:OP1	1:0:2408:G:OP2	2.35	0.45
1:0:980:G:C2	1:0:981:C:C2	3.05	0.45
1:0:1068:A:H2'	1:0:1069:G:C8	2.52	0.45
1:0:1131:G:C6	1:0:1132:C:N4	2.85	0.45
1:0:1282:A:C6	1:0:1283:C:N4	2.85	0.45
1:0:1329:U:N3	1:0:1330:G:N7	2.64	0.45
1:0:1459:U:C2	1:0:1476:G:OP2	2.70	0.45
1:0:1686:A:N3	1:0:1686:A:C2'	2.80	0.45
1:0:1961:A:O2'	1:0:1962:C:H5'	2.16	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2325:A:O4'	1:0:2362:G:H1'	2.16	0.45
1:0:2875:C:H2'	1:0:2876:C:C6	2.51	0.45
1:0:562:G:C6	1:0:563:U:C2	3.05	0.45
1:0:829:C:H2'	1:0:830:C:C6	2.51	0.45
1:0:1248:G:C6	1:0:1249:G:N1	2.85	0.45
1:0:1652:G:H8	1:0:1652:G:OP1	2.00	0.45
1:0:1677:C:N3	1:0:1984:A:N1	2.65	0.45
1:0:1884:A:O2'	1:0:1885:C:H5'	2.16	0.45
1:0:2057:U:HO2'	1:0:2576:G:H1'	1.82	0.45
1:0:2502:G:C1'	1:0:2745:A:N7	2.79	0.45
1:0:2702:G:C5	1:0:2703:C:C4	3.04	0.45
1:0:2817:A:C2	1:0:2851:G:C4	3.05	0.45
1:0:26:G:C5	1:0:27:G:C6	3.05	0.45
1:0:40:U:H2'	1:0:41:G:C8	2.51	0.45
1:0:455:A:H5'	1:0:1215:A:C5'	2.47	0.45
1:0:763:A:H5''	1:0:1631:C:H41	1.82	0.45
1:0:830:C:H2'	1:0:831:G:O4'	2.17	0.45
1:0:831:G:O2'	1:0:832:A:H5''	2.17	0.45
1:0:931:G:O2'	1:0:932:G:H5'	2.17	0.45
1:0:1144:U:H6	1:0:1144:U:O5'	2.00	0.45
1:0:1280:U:H3	1:0:1996:A:N6	2.14	0.45
1:0:1322:G:C6	1:0:1323:G:C6	3.05	0.45
1:0:1566:G:O2'	1:0:1567:A:H5'	2.17	0.45
1:0:1586:A:H2'	1:0:1587:A:H8	1.82	0.45
1:0:1811:A:H1'	1:0:1813:A:C5	2.52	0.45
1:0:2093:G:H2'	1:0:2094:C:H6	1.81	0.45
1:0:2817:A:C2	1:0:2851:G:N3	2.85	0.45
1:0:168:A:OP2	1:0:181:A:N1	2.50	0.45
1:0:214:C:H2'	1:0:215:G:C8	2.52	0.45
1:0:977:G:H4'	1:0:2246:A:C2	2.52	0.45
1:0:1713:G:O6	1:0:1714:A:C6	2.70	0.45
1:0:2030:U:H2'	1:0:2031:A:C8	2.52	0.45
1:0:2105:U:H2'	1:0:2106:G:C8	2.52	0.45
1:0:2694:G:C6	1:0:2695:C:C4	3.05	0.45
1:0:2756:A:N6	1:0:2762:G:N3	2.65	0.45
1:0:2786:G:O2'	1:0:2787:A:H5'	2.18	0.45
1:0:2861:A:H2'	1:0:2862:G:C8	2.49	0.45
1:0:180:C:O5'	1:0:180:C:H6	2.00	0.44
1:0:334:G:C2	1:0:344:G:H1'	2.52	0.44
1:0:1131:G:C6	1:0:1132:C:C4	3.05	0.44
1:0:1352:G:N2	1:0:1619:A:C8	2.85	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2053:G:N2	1:0:2054:A:N3	2.64	0.44
1:0:2268:G:H2'	1:0:2269:G:H8	1.81	0.44
1:0:2542:U:H2'	1:0:2544:A:OP2	2.17	0.44
1:0:2764:U:H2'	1:0:2765:C:C6	2.52	0.44
6:5:1:MHW:C	6:5:3:DBB:N	2.79	0.44
7:9:30:C:H2'	7:9:31:A:H8	1.81	0.44
7:9:113:G:H2'	7:9:114:C:C6	2.52	0.44
1:0:123:A:H3'	1:0:124:A:C5'	2.47	0.44
1:0:525:A:H2'	1:0:526:C:C5'	2.47	0.44
1:0:805:G:H4'	1:0:806:A:OP2	2.18	0.44
1:0:980:G:N2	1:0:981:C:O2	2.50	0.44
1:0:1644:G:C2	1:0:1645:U:C2	3.06	0.44
1:0:1944:C:O2'	1:0:1945:C:H5'	2.17	0.44
1:0:1972:G:C2'	1:0:1973:C:H5'	2.46	0.44
1:0:2324:G:C4	1:0:2326:C:C5	3.05	0.44
1:0:2331:A:C6	1:0:2345:A:C2	3.05	0.44
1:0:2502:G:C4	1:0:2745:A:N6	2.85	0.44
1:0:2655:C:O2'	1:0:2656:G:H5'	2.17	0.44
7:9:45:C:H3'	7:9:46:G:C5'	2.45	0.44
7:9:117:G:H2'	7:9:118:G:H8	1.82	0.44
1:0:401:G:H2'	1:0:403:A:N7	2.33	0.44
1:0:736:G:H2'	1:0:737:C:O4'	2.17	0.44
1:0:1091:C:O2'	1:0:1092:U:H5'	2.17	0.44
1:0:1278:A:HO2'	1:0:1279:G:P	2.41	0.44
1:0:1340:C:N4	1:0:1341:G:C6	2.85	0.44
1:0:1504:G:H1	1:0:1516:A:H61	1.65	0.44
1:0:1614:C:H2'	1:0:1615:C:C6	2.52	0.44
1:0:1655:C:H5''	1:0:2689:C:O2'	2.17	0.44
1:0:1682:A:H61	1:0:1977:C:H42	1.66	0.44
1:0:1715:A:O2'	1:0:1716:G:H3'	2.17	0.44
1:0:1763:G:H2'	1:0:1764:A:C4'	2.41	0.44
1:0:1811:A:O2'	1:0:1813:A:N7	2.46	0.44
1:0:1936:A:C2'	1:0:1937:G:H5'	2.47	0.44
1:0:2173:G:H2'	1:0:2174:G:O4'	2.17	0.44
1:0:2184:C:H2'	1:0:2185:U:C6	2.52	0.44
1:0:2491:C:H2'	1:0:2492:G:C5'	2.47	0.44
1:0:2661:G:H2'	1:0:2662:C:C5'	2.48	0.44
1:0:48:A:H2	1:0:118:U:O4	2.00	0.44
1:0:180:C:C4	1:0:181:A:C6	3.05	0.44
1:0:356:A:H2'	1:0:357:A:C8	2.52	0.44
1:0:775:U:N3	1:0:1446:U:OP1	2.47	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:800:U:C6	1:0:804:C:N4	2.85	0.44
1:0:805:G:C5	1:0:2419:C:H1'	2.52	0.44
1:0:1793:A:C8	1:0:1806:G:N2	2.85	0.44
1:0:2019:C:C2	1:0:2020:G:N7	2.85	0.44
1:0:488:A:H2'	1:0:489:A:C8	2.53	0.44
1:0:531:G:O2'	1:0:532:A:H5'	2.16	0.44
1:0:646:C:O2'	1:0:650:U:H5''	2.18	0.44
1:0:703:A:C2	1:0:704:G:C5	3.06	0.44
1:0:748:A:C6	1:0:749:C:O2	2.71	0.44
1:0:992:A:H1'	1:0:2020:G:H1'	2.00	0.44
1:0:1355:A:C1'	1:0:1410:U:H4'	2.47	0.44
1:0:1883:A:H1'	1:0:1953:A:N6	2.32	0.44
1:0:1956:G:H2'	1:0:1957:C:O4'	2.17	0.44
1:0:2033:C:C4	1:0:2034:A:C2	3.05	0.44
1:0:2033:C:N3	1:0:2034:A:C2	2.86	0.44
1:0:2407:G:H4'	1:0:2408:G:C8	2.53	0.44
1:0:2523:G:H2'	1:0:2524:G:H8	1.83	0.44
1:0:2649:A:O2'	1:0:2650:G:H5'	2.18	0.44
1:0:2769:C:HO2'	1:0:2784:A:H2	1.63	0.44
1:0:635:C:H2'	1:0:636:G:H5''	1.98	0.44
1:0:642:A:N1	1:0:643:A:C2	2.86	0.44
1:0:796:A:H2'	1:0:797:A:H5'	2.00	0.44
1:0:929:A:C2	1:0:930:A:H1'	2.52	0.44
1:0:1671:A:N1	1:0:2031:A:O2'	2.51	0.44
1:0:1821:A:H3'	1:0:1822:C:C6	2.51	0.44
1:0:1998:A:H2	32:Z:6:VAL:CA	2.31	0.44
1:0:2494:C:H2'	1:0:2495:G:C8	2.53	0.44
1:0:2534:U:C4	1:0:2535:C:C2	3.05	0.44
1:0:2613:A:H2'	1:0:2614:A:C8	2.45	0.44
1:0:2618:A:N7	1:0:2758:A:C6	2.86	0.44
1:0:443:A:H3'	1:0:443:A:OP2	2.18	0.44
1:0:1068:A:H2'	1:0:1069:G:H8	1.81	0.44
1:0:2225:G:H2'	1:0:2226:A:O4'	2.17	0.44
1:0:2714:A:H2'	1:0:2715:C:O4'	2.18	0.44
1:0:2817:A:N1	1:0:2851:G:C6	2.86	0.44
1:0:2855:C:O2'	1:0:2856:U:H5'	2.17	0.44
1:0:2856:U:C4	1:0:2857:C:C4	3.05	0.44
1:0:213:C:H42	1:0:238:G:H22	1.66	0.44
1:0:597:U:H2'	1:0:598:U:H6	1.81	0.44
1:0:599:A:H2'	1:0:600:G:C8	2.53	0.44
1:0:635:C:C3'	1:0:636:G:H5''	2.48	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:702:A:N6	1:0:703:A:C6	2.86	0.44
1:0:876:A:H4'	7:9:103:A:N3	2.33	0.44
1:0:1381:G:O2'	1:0:1382:G:H5'	2.18	0.44
1:0:2196:U:H2'	1:0:2197:U:C6	2.52	0.44
1:0:2768:C:O5'	1:0:2768:C:H6	2.01	0.44
1:0:2817:A:C6	1:0:2851:G:C6	3.06	0.44
1:0:114:C:H2'	1:0:115:G:O4'	2.18	0.44
1:0:575:U:O2'	1:0:576:A:H5'	2.17	0.44
1:0:708:G:H1'	1:0:1392:U:O2	2.17	0.44
1:0:818:G:N1	1:0:2051:U:OP1	2.51	0.44
1:0:1010:U:O2'	1:0:1011:A:C5'	2.66	0.44
1:0:1289:A:N6	1:0:1662:G:H1	1.97	0.44
1:0:1325:U:H5''	1:0:1326:U:C4	2.53	0.44
1:0:1342:U:OP2	1:0:1343:C:N4	2.51	0.44
1:0:1358:C:H2'	1:0:1359:G:H5'	1.99	0.44
1:0:1358:C:H2'	1:0:1359:G:H5''	2.00	0.44
1:0:1715:A:H1'	1:0:1717:A:H4'	2.00	0.44
1:0:1722:G:H2'	1:0:1723:U:C6	2.53	0.44
1:0:2445:C:H2'	1:0:2446:C:C6	2.53	0.44
1:0:2451:G:H2'	1:0:2508:G:H21	1.81	0.44
1:0:2594:U:H2'	1:0:2595:C:O4'	2.18	0.44
1:0:717:G:O2'	1:0:740:A:N6	2.51	0.43
1:0:867:G:H2'	1:0:868:U:O4'	2.17	0.43
1:0:1200:G:H2'	1:0:1201:G:O4'	2.18	0.43
1:0:1379:A:C8	1:0:1380:C:C5	3.06	0.43
1:0:1480:G:C2'	1:0:1481:U:H5'	2.48	0.43
1:0:1529:C:H2'	1:0:1530:U:O4'	2.18	0.43
1:0:2318:U:H2'	1:0:2319:G:H8	1.81	0.43
1:0:2658:A:O2'	1:0:2659:C:H5'	2.18	0.43
1:0:2785:A:N6	1:0:2865:G:H21	2.14	0.43
1:0:181:A:H4'	1:0:183:U:C6	2.53	0.43
1:0:614:G:H2'	1:0:615:C:H6	1.82	0.43
1:0:706:A:H2'	1:0:707:U:O4'	2.18	0.43
1:0:742:G:H4'	1:0:776:G:H5'	1.99	0.43
1:0:952:A:O2'	1:0:1204:G:H4'	2.17	0.43
1:0:1142:G:O6	1:0:2008:C:C1'	2.66	0.43
1:0:1328:C:H4'	1:0:1406:A:O4'	2.18	0.43
1:0:1621:C:C2'	1:0:1622:G:O4'	2.56	0.43
1:0:1794:A:H2'	1:0:1795:C:O4'	2.18	0.43
1:0:2307:A:H2'	1:0:2308:A:C8	2.53	0.43
1:0:2333:A:N1	1:0:2343:C:C4	2.86	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2610:G:H5'	1:0:2866:A:H1'	2.00	0.43
1:0:2813:G:O6	1:0:2814:G:C6	2.71	0.43
1:0:40:U:H2'	1:0:41:G:H8	1.83	0.43
1:0:223:C:H4'	1:0:398:C:H1'	2.00	0.43
1:0:1215:A:N3	1:0:1258:G:C2	2.86	0.43
1:0:1668:G:C2	1:0:1990:U:O2	2.71	0.43
1:0:1697:U:C2	1:0:1755:G:H4'	2.53	0.43
1:0:1707:A:C2'	1:0:1708:C:H5'	2.47	0.43
1:0:2006:G:H2'	1:0:2007:G:H8	1.83	0.43
1:0:2015:G:O2'	1:0:2016:A:H5'	2.18	0.43
1:0:2185:U:H3	1:0:2200:G:H1	1.67	0.43
1:0:2414:A:H2'	1:0:2415:G:H5''	2.00	0.43
1:0:2493:U:H2'	1:0:2494:C:H6	1.83	0.43
1:0:2566:A:H61	1:0:2587:G:H1'	1.84	0.43
7:9:42:U:C2	7:9:45:C:H5	2.36	0.43
1:0:588:G:C4	1:0:1275:A:N1	2.87	0.43
1:0:640:C:H2'	1:0:641:G:H8	1.81	0.43
1:0:677:G:H1'	1:0:951:G:H5''	2.00	0.43
1:0:695:G:N2	1:0:809:C:O2	2.52	0.43
1:0:799:C:H2'	1:0:800:U:C6	2.54	0.43
1:0:1528:C:C3'	1:0:1529:C:H5''	2.48	0.43
1:0:1774:A:O5'	1:0:1774:A:H8	2.00	0.43
1:0:1807:A:C1'	1:0:1809:G:H1'	2.48	0.43
1:0:1973:C:O5'	1:0:1973:C:H6	2.01	0.43
1:0:2067:U:H2'	1:0:2068:C:C6	2.52	0.43
1:0:2480:C:C5'	1:0:2482:A:H5'	2.43	0.43
1:0:2859:U:C4	1:0:2860:C:C2	3.06	0.43
1:0:343:A:N6	1:0:346:C:C5	2.85	0.43
1:0:422:C:H2'	1:0:423:G:C8	2.53	0.43
1:0:459:A:N7	1:0:484:G:C4	2.86	0.43
1:0:485:G:O6	1:0:520:C:C4	2.72	0.43
1:0:742:G:H1'	1:0:777:A:OP1	2.18	0.43
1:0:953:G:C6	1:0:954:U:N3	2.87	0.43
1:0:1172:U:H2'	1:0:1173:G:H8	1.83	0.43
1:0:1417:C:O2'	1:0:1418:C:H5'	2.18	0.43
1:0:1463:A:C1'	1:0:1543:G:H22	1.98	0.43
1:0:1469:U:OP2	1:0:1472:C:N4	2.50	0.43
1:0:2564:U:H3'	1:0:2565:C:C5'	2.49	0.43
1:0:2573:C:O5'	1:0:2573:C:H6	2.01	0.43
1:0:2800:C:O5'	1:0:2800:C:H6	2.01	0.43
7:9:31:A:C4	7:9:58:G:N2	2.87	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:230:C:H2'	1:0:231:G:O4'	2.19	0.43
1:0:802:A:H8	1:0:802:A:O5'	2.00	0.43
1:0:1312:G:O4'	1:0:1314:A:C2	2.72	0.43
1:0:1639:U:H2'	1:0:1640:C:H6	1.83	0.43
1:0:1665:C:C2	1:0:1666:G:C8	3.07	0.43
1:0:1677:C:N4	1:0:1984:A:H61	2.16	0.43
1:0:1751:A:H4'	1:0:2691:C:OP1	2.19	0.43
1:0:2106:G:H2'	1:0:2107:G:C8	2.53	0.43
1:0:2241:U:H5'	1:0:2241:U:H6	1.83	0.43
1:0:2271:C:P	1:0:2353:G:H21	2.42	0.43
1:0:2597:G:C2	1:0:2598:C:C2	3.06	0.43
1:0:2785:A:H62	1:0:2865:G:N2	2.15	0.43
1:0:150:A:C2'	1:0:151:G:H5'	2.48	0.43
1:0:1636:G:C5	1:0:1637:U:C5	3.06	0.43
1:0:1802:A:O2'	1:0:1803:G:H5'	2.19	0.43
1:0:1928:G:C2	1:0:1929:U:C2	3.07	0.43
1:0:1953:A:C1'	1:0:1955:G:H1'	2.30	0.43
1:0:2329:C:O2'	1:0:2330:G:H5'	2.18	0.43
1:0:2490:U:H2'	1:0:2491:C:H6	1.84	0.43
1:0:317:U:H3'	1:0:318:G:C5'	2.41	0.43
1:0:457:C:O2'	1:0:458:G:H5'	2.19	0.43
1:0:575:U:C4	1:0:576:A:C6	3.07	0.43
1:0:588:G:H2'	1:0:589:C:C6	2.53	0.43
1:0:702:A:C6	1:0:703:A:C5	3.07	0.43
1:0:787:A:H2'	1:0:788:G:C8	2.53	0.43
1:0:958:G:C2	1:0:982:C:C2	3.07	0.43
1:0:1640:C:C2	1:0:1641:C:C5	3.07	0.43
1:0:2230:G:C1'	1:0:2429:A:O4'	2.62	0.43
1:0:2543:A:C6	1:0:2626:U:H4'	2.54	0.43
1:0:2555:G:OP1	1:0:2555:G:C3'	2.66	0.43
1:0:2636:A:H62	1:0:2643:G:H21	1.67	0.43
1:0:2769:C:H2'	1:0:2867:G:N2	2.34	0.43
1:0:2788:C:HO2'	1:0:2789:U:H5'	1.80	0.43
1:0:2813:G:C6	1:0:2814:G:C5	3.07	0.43
1:0:139:A:H2'	1:0:140:G:H8	1.84	0.43
1:0:343:A:N6	1:0:346:C:H5	2.17	0.43
1:0:646:C:O2	1:0:650:U:H4'	2.18	0.43
1:0:786:U:H4'	8:A:48:ARG:CA	2.49	0.43
1:0:1267:A:OP2	1:0:1269:G:H5''	2.18	0.43
1:0:1300:A:C2	1:0:1301:U:C2	3.06	0.43
1:0:1460:G:C6	1:0:1461:C:C4	3.07	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1686:A:H2'	1:0:1687:C:H5'	2.00	0.43
1:0:1773:C:O5'	1:0:1773:C:H6	2.00	0.43
1:0:2432:A:H4'	1:0:2551:A:O3'	2.19	0.43
1:0:2442:C:C2	1:0:2467:A:C2	3.07	0.43
1:0:2474:G:C6	1:0:2475:C:N3	2.87	0.43
1:0:2564:U:H3	1:0:2568:A:H62	1.65	0.43
1:0:2645:C:OP2	1:0:2646:C:N4	2.51	0.43
1:0:2709:C:C4	1:0:2710:C:C4	3.06	0.43
1:0:165:G:N2	1:0:186:C:C2	2.87	0.43
1:0:521:U:C5	1:0:522:G:C4	3.06	0.43
1:0:562:G:H2'	1:0:563:U:O4'	2.18	0.43
1:0:681:A:C4	1:0:683:A:N7	2.87	0.43
1:0:1016:C:H2'	1:0:1017:C:C6	2.53	0.43
1:0:1147:G:O4'	1:0:2022:C:H5'	2.19	0.43
1:0:1306:U:H2'	1:0:1307:U:O5'	2.19	0.43
1:0:1339:U:O5'	1:0:1339:U:H6	2.02	0.43
1:0:1679:U:C4	1:0:1680:U:C6	3.06	0.43
1:0:1793:A:N6	1:0:1806:G:H2'	2.34	0.43
1:0:1975:G:H2'	1:0:1980:A:H62	1.81	0.43
1:0:2005:U:O5'	1:0:2005:U:H6	2.01	0.43
1:0:2378:G:O2'	1:0:2379:G:H5'	2.19	0.43
1:0:2686:C:O2'	1:0:2687:G:H5'	2.19	0.43
7:9:37:C:C2'	7:9:38:C:H5'	2.48	0.43
1:0:367:G:H3'	1:0:368:A:H5''	2.01	0.42
1:0:542:A:OP2	1:0:2003:A:C1'	2.65	0.42
1:0:1312:G:C4'	1:0:1313:U:H5'	2.45	0.42
1:0:1414:G:N2	1:0:1484:G:H21	2.05	0.42
1:0:1974:U:H3'	1:0:1975:G:C5'	2.49	0.42
1:0:2082:C:C4	1:0:2174:G:N2	2.87	0.42
1:0:2422:C:O2'	1:0:2423:G:H5'	2.19	0.42
1:0:2563:U:C4	33:0:2882:DOL:H471	2.53	0.42
1:0:2663:U:C4	1:0:2664:G:N7	2.87	0.42
1:0:446:C:H2'	1:0:447:U:O4'	2.19	0.42
1:0:471:A:C2	1:0:481:A:C5	3.07	0.42
1:0:575:U:H2'	1:0:576:A:O4'	2.19	0.42
1:0:742:G:O4'	1:0:777:A:OP1	2.37	0.42
1:0:1281:A:N6	1:0:1282:A:C6	2.88	0.42
1:0:1379:A:C5	1:0:1380:C:C4	3.06	0.42
1:0:1888:C:C5'	1:0:1889:G:H5''	2.32	0.42
1:0:2022:C:N4	1:0:2023:C:N4	2.68	0.42
1:0:2727:G:O5'	1:0:2727:G:H8	2.02	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2816:C:C2	1:0:2852:G:N2	2.87	0.42
1:0:2858:A:H3'	1:0:2859:U:H5'	2.01	0.42
1:0:25:U:H3	1:0:525:A:H61	1.66	0.42
1:0:180:C:C4	1:0:181:A:N7	2.87	0.42
1:0:180:C:N4	1:0:181:A:C6	2.86	0.42
1:0:304:A:C2'	1:0:305:A:H5''	2.45	0.42
1:0:643:A:O2'	1:0:644:A:H5'	2.19	0.42
1:0:867:G:C8	1:0:868:U:C5	3.07	0.42
1:0:1778:U:H2'	1:0:1779:C:H6	1.83	0.42
1:0:1787:U:H2'	1:0:1788:C:H6	1.84	0.42
1:0:1791:C:O2'	1:0:1793:A:H5'	2.18	0.42
1:0:1931:G:N2	1:0:1942:G:C4	2.87	0.42
1:0:2468:G:O2'	1:0:2469:G:H5'	2.19	0.42
1:0:2818:G:C2	1:0:2850:U:C2	3.06	0.42
1:0:576:A:H2	1:0:580:A:H62	1.67	0.42
1:0:594:G:H2'	1:0:595:A:N7	2.34	0.42
1:0:717:G:H1'	1:0:740:A:H62	1.84	0.42
1:0:771:C:H2'	1:0:772:G:H8	1.83	0.42
1:0:954:U:H6	1:0:954:U:O5'	2.01	0.42
1:0:1025:A:H2'	1:0:1026:U:C6	2.53	0.42
1:0:1309:G:H2'	1:0:1310:C:C6	2.55	0.42
1:0:2169:A:O2'	1:0:2170:C:H5'	2.19	0.42
1:0:2357:A:H2'	1:0:2358:C:H5'	2.01	0.42
1:0:2677:U:H2'	1:0:2678:C:H6	1.81	0.42
1:0:51:A:N6	1:0:116:A:N7	2.67	0.42
1:0:52:A:C2'	1:0:53:G:H5'	2.49	0.42
1:0:221:A:H62	1:0:231:G:N2	2.14	0.42
1:0:575:U:O4	1:0:576:A:C6	2.73	0.42
1:0:575:U:O4	1:0:576:A:N6	2.53	0.42
1:0:1367:A:H62	1:0:1390:G:H21	1.68	0.42
1:0:2570:C:N4	1:0:2571:G:O6	2.52	0.42
1:0:2700:U:O5'	1:0:2700:U:H6	2.03	0.42
7:9:71:G:N2	7:9:72:C:H1'	2.35	0.42
1:0:225:G:C3'	1:0:226:C:H5'	2.50	0.42
1:0:340:G:C4	1:0:488:A:C2	3.07	0.42
1:0:696:U:O5'	1:0:696:U:H6	2.02	0.42
1:0:839:U:C5	1:0:841:G:H1'	2.54	0.42
1:0:940:G:C3'	1:0:941:U:C5'	2.83	0.42
1:0:1012:A:H2'	1:0:1013:G:O4'	2.20	0.42
1:0:1327:C:O5'	1:0:1327:C:H6	2.02	0.42
1:0:1624:A:C2'	1:0:1625:A:H5''	2.49	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1744:G:N1	1:0:1747:G:C6	2.88	0.42
1:0:1956:G:O2'	1:0:1957:C:H5'	2.19	0.42
1:0:2006:G:H5'	1:0:2596:C:H4'	2.02	0.42
1:0:2219:U:C6	1:0:2219:U:H3'	2.55	0.42
1:0:2249:U:C2'	1:0:2250:G:H5'	2.50	0.42
1:0:2447:G:C2'	1:0:2448:A:H5''	2.50	0.42
1:0:2751:C:H2'	1:0:2752:C:C6	2.55	0.42
1:0:24:G:C4	1:0:25:U:C5	3.07	0.42
1:0:102:C:H2'	1:0:103:U:O4'	2.20	0.42
1:0:140:G:O2'	1:0:141:G:H5'	2.19	0.42
1:0:149:A:O2'	1:0:150:A:H5'	2.20	0.42
1:0:664:C:H2'	1:0:665:A:C8	2.54	0.42
1:0:778:G:H2'	1:0:779:U:C6	2.55	0.42
1:0:943:U:H6	1:0:943:U:O5'	2.03	0.42
1:0:999:A:H1'	1:0:1166:A:H2	1.85	0.42
1:0:2817:A:N1	1:0:2851:G:C5	2.87	0.42
7:9:9:G:C2	7:9:117:G:C2	3.07	0.42
7:9:108:G:O2'	7:9:109:G:H5'	2.20	0.42
1:0:24:G:H2'	1:0:25:U:C5	2.53	0.42
1:0:80:A:H2'	1:0:81:C:C6	2.55	0.42
1:0:525:A:O2'	1:0:526:C:H5'	2.19	0.42
1:0:573:C:C4	1:0:574:C:C5	3.07	0.42
1:0:745:C:H2'	1:0:746:G:H5'	2.02	0.42
1:0:938:G:C2	1:0:939:C:C4	3.07	0.42
1:0:1287:A:N1	1:0:1661:C:O2'	2.41	0.42
1:0:2394:G:H2'	1:0:2395:C:O4'	2.19	0.42
1:0:2818:G:C2'	1:0:2819:G:H5'	2.49	0.42
1:0:59:G:N7	1:0:61:U:H5	2.18	0.42
1:0:616:U:H5	1:0:630:G:C5	2.38	0.42
1:0:763:A:H5''	1:0:1631:C:N4	2.35	0.42
1:0:1198:C:O5'	1:0:1199:U:H4'	2.20	0.42
1:0:1319:C:O2'	1:0:1320:A:H5'	2.20	0.42
1:0:1339:U:H5''	1:0:1994:U:H1'	2.01	0.42
1:0:1730:G:H2'	1:0:1731:C:C6	2.55	0.42
1:0:2699:G:H2'	1:0:2700:U:H5	1.85	0.42
1:0:2714:A:O2'	1:0:2715:C:H5'	2.20	0.42
1:0:339:U:H3'	1:0:340:G:C5'	2.50	0.42
1:0:387:A:H2'	1:0:388:G:O4'	2.19	0.42
1:0:940:G:N7	1:0:941:U:C6	2.88	0.42
1:0:942:U:C2'	1:0:943:U:H5'	2.48	0.42
1:0:1223:G:H1'	1:0:1225:G:O4'	2.19	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1333:G:N2	1:0:1344:C:H41	2.18	0.42
1:0:1628:C:C2	1:0:1636:G:N2	2.88	0.42
1:0:1775:A:P	1:0:1775:A:C8	3.13	0.42
1:0:2499:C:C2'	1:0:2500:C:O5'	2.68	0.42
1:0:2586:G:C6	1:0:2587:G:C6	3.08	0.42
1:0:2813:G:C6	1:0:2814:G:C6	3.08	0.42
7:9:26:G:C4	7:9:58:G:C6	3.08	0.42
7:9:77:G:H1	7:9:105:G:H22	1.68	0.42
1:0:140:G:H2'	1:0:141:G:H8	1.84	0.41
1:0:177:U:O5'	1:0:177:U:H6	2.03	0.41
1:0:191:G:O2'	1:0:194:G:OP1	2.38	0.41
1:0:581:A:N3	1:0:581:A:H2'	2.35	0.41
1:0:615:C:H1'	1:0:671:A:H4'	2.01	0.41
1:0:762:A:C8	1:0:1634:A:N6	2.88	0.41
1:0:960:U:H2'	1:0:961:G:H8	1.84	0.41
1:0:1333:G:O6	1:0:1342:U:H5'	2.19	0.41
1:0:1343:C:H2'	1:0:1344:C:C6	2.54	0.41
1:0:1358:C:C2'	1:0:1359:G:H5''	2.49	0.41
1:0:1389:C:H2'	1:0:1390:G:O4'	2.20	0.41
1:0:1619:A:C2	1:0:1620:C:C6	3.08	0.41
1:0:1677:C:H2'	1:0:1678:G:C8	2.55	0.41
1:0:1953:A:H2'	1:0:1954:A:OP2	2.20	0.41
1:0:2239:C:O2'	1:0:2240:C:H5'	2.19	0.41
1:0:2629:U:O2'	1:0:2630:C:H5'	2.20	0.41
1:0:69:G:H5''	1:0:70:A:P	2.60	0.41
1:0:226:C:H4'	1:0:227:G:C8	2.55	0.41
1:0:692:C:O2'	1:0:693:A:H5'	2.19	0.41
1:0:742:G:N3	1:0:742:G:C2'	2.83	0.41
1:0:860:U:N3	1:0:945:G:N2	2.68	0.41
1:0:1248:G:N1	1:0:1249:G:N2	2.68	0.41
1:0:1284:G:C5	1:0:1633:C:H5'	2.55	0.41
1:0:1288:A:O2'	1:0:1289:A:H5'	2.20	0.41
1:0:1364:C:H2'	1:0:1365:U:C6	2.54	0.41
1:0:1396:C:O5'	1:0:1396:C:H6	2.03	0.41
1:0:1455:C:O2'	1:0:1644:G:H5''	2.20	0.41
1:0:1463:A:H2'	1:0:1464:A:C8	2.55	0.41
1:0:1666:G:C6	1:0:1992:G:O6	2.74	0.41
1:0:1982:C:O2'	1:0:1983:G:H5'	2.21	0.41
1:0:2266:A:N6	1:0:2323:U:C1'	2.83	0.41
1:0:429:C:H2'	1:0:430:C:C6	2.54	0.41
1:0:1352:G:N2	1:0:1619:A:H1'	2.35	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1511:A:H2'	1:0:1512:A:O4'	2.20	0.41
1:0:1901:A:H2'	1:0:1902:A:O4'	2.20	0.41
1:0:1981:A:H2'	1:0:1982:C:C6	2.55	0.41
1:0:2840:U:C4	1:0:2841:U:C5	3.08	0.41
1:0:11:G:O2'	1:0:12:U:H5'	2.20	0.41
1:0:476:G:N2	1:0:697:G:N2	2.68	0.41
1:0:600:G:H2'	1:0:601:A:OP1	2.19	0.41
1:0:854:G:H2'	1:0:855:G:C8	2.56	0.41
1:0:1034:U:H2'	1:0:1035:G:H5'	2.02	0.41
1:0:1073:G:H2'	1:0:1074:G:C5'	2.49	0.41
1:0:1281:A:C2	1:0:1996:A:C2	3.08	0.41
1:0:1291:G:H2'	1:0:1292:A:H8	1.85	0.41
1:0:1987:G:H2'	1:0:1988:A:H5'	2.01	0.41
1:0:2058:U:O2	1:0:2414:A:C2	2.73	0.41
1:0:2299:A:C5'	1:0:2300:G:C5	3.03	0.41
1:0:2431:C:O2'	1:0:2432:A:C5'	2.63	0.41
1:0:543:G:H2'	1:0:544:U:H6	1.84	0.41
1:0:597:U:H3	1:0:683:A:HO2'	1.61	0.41
1:0:692:C:N4	1:0:693:A:H62	2.18	0.41
1:0:695:G:N2	1:0:809:C:C2	2.88	0.41
1:0:738:G:O5'	1:0:738:G:H8	2.04	0.41
1:0:839:U:H5'	1:0:2407:G:H2'	2.00	0.41
1:0:864:C:H3'	1:0:864:C:H6	1.86	0.41
1:0:1223:G:N3	1:0:1250:A:N6	2.69	0.41
1:0:1393:G:O5'	1:0:1393:G:H8	2.03	0.41
1:0:1431:U:H2'	1:0:1432:G:O4'	2.21	0.41
1:0:1543:G:H8	1:0:1543:G:O5'	2.04	0.41
1:0:1869:A:H2'	1:0:1870:U:O4'	2.20	0.41
1:0:2426:G:N7	1:0:2479:U:C6	2.88	0.41
1:0:2591:C:O2'	1:0:2592:U:H5'	2.21	0.41
7:9:88:C:H2'	7:9:89:G:O4'	2.21	0.41
1:0:50:G:H2'	1:0:117:A:C2	2.56	0.41
1:0:84:G:O2'	1:0:85:C:H5'	2.21	0.41
1:0:130:C:H2'	1:0:131:C:C6	2.55	0.41
1:0:143:A:H2'	1:0:144:U:O4'	2.20	0.41
1:0:238:G:O4'	1:0:618:A:H2	2.03	0.41
1:0:443:A:H3'	1:0:443:A:P	2.60	0.41
1:0:713:G:H2'	1:0:714:G:O4'	2.21	0.41
1:0:774:A:H8	1:0:774:A:O5'	2.03	0.41
1:0:1125:G:O2'	1:0:1126:A:H5'	2.21	0.41
1:0:1253:C:H2'	1:0:1254:G:C5'	2.51	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1656:U:H2'	1:0:1657:A:C5'	2.26	0.41
1:0:1702:C:C2	1:0:1721:G:C2	3.09	0.41
1:0:1760:G:O2'	1:0:1761:G:H5'	2.20	0.41
1:0:1798:G:O5'	1:0:1798:G:H8	2.04	0.41
1:0:2379:G:H2'	1:0:2380:U:O4'	2.20	0.41
1:0:2466:G:H2'	1:0:2467:A:H8	1.85	0.41
1:0:2597:G:O2'	1:0:2598:C:H5'	2.21	0.41
1:0:2800:C:C2'	1:0:2801:A:H5'	2.51	0.41
1:0:2829:A:C2	1:0:2839:G:C2	3.08	0.41
1:0:29:U:H5''	22:O:7:GLY:CA	2.50	0.41
1:0:232:A:H1'	1:0:397:U:C6	2.55	0.41
1:0:242:A:H2'	1:0:243:G:C4'	2.50	0.41
1:0:496:C:O2'	1:0:497:C:H5'	2.21	0.41
1:0:525:A:C8	1:0:526:C:C6	3.09	0.41
1:0:936:A:O2'	1:0:937:C:H5'	2.21	0.41
1:0:1333:G:C6	1:0:1342:U:H5'	2.55	0.41
1:0:1566:G:H2'	1:0:1567:A:H8	1.85	0.41
1:0:1761:G:O5'	1:0:1761:G:H8	2.02	0.41
1:0:1919:A:H5''	1:0:1920:A:O5'	2.21	0.41
1:0:1972:G:H2'	1:0:1973:C:H5'	2.02	0.41
1:0:1993:G:H2'	1:0:1994:U:C6	2.55	0.41
1:0:2058:U:C5	1:0:2217:G:C4	3.09	0.41
1:0:2091:C:H2'	1:0:2092:U:O4'	2.21	0.41
1:0:2158:C:H2'	1:0:2159:A:C8	2.55	0.41
1:0:2201:G:H2'	1:0:2202:G:C8	2.51	0.41
1:0:2218:G:H8	1:0:2218:G:O5'	2.03	0.41
7:9:77:G:H1	7:9:105:G:N2	2.19	0.41
1:0:200:A:H1'	1:0:433:G:H21	1.86	0.41
1:0:218:A:H8	1:0:218:A:OP1	2.03	0.41
1:0:616:U:H5''	1:0:630:G:O6	2.21	0.41
1:0:845:U:OP2	1:0:955:G:O6	2.39	0.41
1:0:1181:C:H2'	1:0:1182:U:H5''	2.02	0.41
1:0:1280:U:O2'	1:0:1281:A:H5'	2.20	0.41
1:0:1333:G:N2	1:0:1346:C:C2	2.89	0.41
1:0:1445:A:H2'	1:0:1446:U:H6	1.85	0.41
1:0:1604:A:H2'	1:0:1605:A:O4'	2.21	0.41
1:0:2164:G:H2'	1:0:2165:A:C8	2.56	0.41
1:0:2817:A:O2'	1:0:2818:G:H5'	2.21	0.41
7:9:59:A:H2'	7:9:60:A:H5'	2.02	0.41
7:9:118:G:O2'	7:9:119:G:H5'	2.21	0.41
1:0:9:U:H3	1:0:2608:A:H62	1.69	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:165:G:O6	1:0:166:G:C2	2.73	0.41
1:0:401:G:C2'	1:0:403:A:N7	2.84	0.41
1:0:475:U:H1'	1:0:699:G:N1	2.35	0.41
1:0:575:U:C4	1:0:576:A:C5	3.09	0.41
1:0:606:A:C2	1:0:675:C:C2	3.08	0.41
1:0:789:G:N3	1:0:806:A:N7	2.69	0.41
1:0:837:U:H2'	1:0:838:A:O4'	2.21	0.41
1:0:873:U:C3'	1:0:874:A:H5'	2.51	0.41
1:0:1027:C:H42	1:0:1158:A:N6	2.19	0.41
1:0:1151:U:H5''	1:0:1153:A:OP1	2.20	0.41
1:0:1200:G:H2'	1:0:1201:G:C5'	2.51	0.41
1:0:1286:U:O3'	1:0:1288:A:OP1	2.39	0.41
1:0:1307:U:H2'	1:0:1308:C:O4'	2.21	0.41
1:0:1312:G:H4'	1:0:1314:A:N3	2.36	0.41
1:0:1313:U:O2'	1:0:1314:A:O5'	2.30	0.41
1:0:1383:C:H2'	1:0:1384:G:H8	1.86	0.41
1:0:1794:A:H2'	1:0:1795:C:H5'	2.03	0.41
1:0:1984:A:O2'	1:0:1985:G:H5'	2.21	0.41
1:0:2015:G:O6	1:0:2038:C:O2	2.39	0.41
1:0:2333:A:N1	1:0:2343:C:N4	2.69	0.41
1:0:2340:C:H2'	1:0:2341:G:H5'	2.03	0.41
1:0:2430:A:C5	33:0:2882:DOL:HC12	2.56	0.41
1:0:2814:G:H2'	1:0:2815:C:C6	2.56	0.41
7:9:40:C:H2'	7:9:41:A:H5'	2.03	0.41
1:0:77:C:H2'	1:0:78:C:C6	2.55	0.41
1:0:121:G:H2'	1:0:122:G:O4'	2.21	0.41
1:0:422:C:H2'	1:0:423:G:H8	1.86	0.41
1:0:583:C:O2'	1:0:584:A:P	2.79	0.41
1:0:750:C:H2'	1:0:751:G:O4'	2.21	0.41
1:0:1232:U:H6	1:0:1232:U:O5'	2.04	0.41
1:0:2271:C:N4	1:0:2272:A:N6	2.69	0.41
1:0:2651:U:O2'	1:0:2652:G:H5'	2.21	0.41
1:0:2668:U:P	1:0:2699:G:H22	2.43	0.41
1:0:2679:G:C2	1:0:2687:G:C2	3.08	0.41
1:0:2696:A:O2'	1:0:2697:G:H5'	2.21	0.41
1:0:24:G:C6	1:0:25:U:O4	2.74	0.40
1:0:356:A:H2'	1:0:357:A:H8	1.86	0.40
1:0:488:A:H8	1:0:488:A:O5'	2.04	0.40
1:0:589:C:C4	1:0:590:C:N4	2.89	0.40
1:0:742:G:OP2	1:0:776:G:OP2	2.38	0.40
1:0:938:G:N2	1:0:939:C:C4	2.90	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1624:A:H2'	1:0:1625:A:H5'	2.03	0.40
1:0:1949:A:H1'	1:0:2572:U:C5'	2.51	0.40
1:0:1984:A:H2'	1:0:1985:G:H8	1.85	0.40
1:0:2516:U:O5'	1:0:2516:U:H6	2.05	0.40
1:0:2578:G:H2'	1:0:2579:A:O4'	2.21	0.40
1:0:2676:G:C5	1:0:2677:U:C4	3.10	0.40
1:0:2808:U:H3'	1:0:2809:A:H5'	2.03	0.40
7:9:23:G:C6	7:9:24:U:C4	3.09	0.40
1:0:92:U:H2'	1:0:93:A:H8	1.83	0.40
1:0:797:A:H4'	1:0:798:G:H8	1.79	0.40
1:0:1013:G:C6	1:0:1014:G:C5	3.09	0.40
1:0:1287:A:H1'	1:0:1310:C:O2'	2.21	0.40
1:0:1486:A:H2'	1:0:1487:C:H6	1.82	0.40
1:0:1672:A:C2	1:0:2032:G:H5''	2.56	0.40
1:0:1702:C:C2	1:0:1721:G:N2	2.89	0.40
1:0:2036:G:O2'	1:0:2037:A:H5'	2.21	0.40
1:0:2518:C:N3	1:0:2519:C:C4	2.89	0.40
1:0:2695:C:H2'	1:0:2696:A:H8	1.87	0.40
1:0:180:C:C4	1:0:181:A:N6	2.89	0.40
1:0:208:C:H2'	1:0:209:G:H5'	2.03	0.40
1:0:322:A:N6	1:0:339:U:H3	2.19	0.40
1:0:333:A:H2'	1:0:350:U:O2	2.20	0.40
1:0:744:C:C2	1:0:745:C:C5	3.09	0.40
1:0:788:G:N2	1:0:800:U:O3'	2.54	0.40
1:0:953:G:H8	1:0:953:G:O5'	2.04	0.40
1:0:1016:C:N4	1:0:1149:G:N2	2.69	0.40
1:0:1426:U:H2'	1:0:1427:G:O4'	2.21	0.40
1:0:1446:U:H2'	1:0:1447:U:C6	2.56	0.40
1:0:1587:A:H2'	1:0:1588:A:H8	1.86	0.40
1:0:2219:U:C6	1:0:2219:U:C3'	3.05	0.40
1:0:2238:G:OP1	1:0:2238:G:C8	2.74	0.40
1:0:2293:G:O2'	1:0:2294:U:H5'	2.21	0.40
1:0:2369:U:H2'	1:0:2370:G:C8	2.56	0.40
1:0:2376:G:H2'	1:0:2377:U:C6	2.56	0.40
1:0:2391:A:H2'	1:0:2392:G:O4'	2.22	0.40
1:0:2490:U:H2'	1:0:2491:C:C6	2.57	0.40
1:0:2579:A:C5	1:0:2580:C:C5	3.09	0.40
1:0:2800:C:H2'	1:0:2801:A:H5'	2.03	0.40
1:0:213:C:N4	1:0:238:G:H22	2.19	0.40
1:0:324:C:H2'	1:0:325:U:O4'	2.22	0.40
1:0:540:G:N2	1:0:2005:U:H5''	2.36	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:543:G:OP1	22:O:24:PHE:CA	2.69	0.40
1:0:814:G:H8	1:0:814:G:O5'	2.05	0.40
1:0:831:G:O2'	1:0:832:A:C4'	2.70	0.40
1:0:852:U:O2'	1:0:853:C:H5'	2.21	0.40
1:0:976:C:O2'	1:0:977:G:H5'	2.22	0.40
1:0:991:A:C8	1:0:1146:G:H5''	2.56	0.40
1:0:1005:U:H3	1:0:1007:A:H62	1.68	0.40
1:0:1223:G:H1'	1:0:1225:G:C1'	2.51	0.40
1:0:1347:C:H6	1:0:1347:C:O5'	2.05	0.40
1:0:1887:G:O2'	1:0:1888:C:H5'	2.22	0.40
1:0:1916:G:O5'	1:0:1916:G:H8	2.05	0.40
1:0:1928:G:H2'	1:0:1929:U:C6	2.57	0.40
1:0:2019:C:H2'	1:0:2020:G:H8	1.86	0.40
1:0:2391:A:N6	1:0:2392:G:C2	2.89	0.40
1:0:2538:C:O2'	1:0:2539:C:H5'	2.21	0.40
1:0:2753:C:N4	1:0:2754:C:N4	2.69	0.40
1:0:2762:G:N2	1:0:2763:U:H1'	2.37	0.40
1:0:51:A:OP2	1:0:117:A:N1	2.55	0.40
1:0:168:A:O2'	1:0:169:C:H5'	2.21	0.40
1:0:678:G:H2'	1:0:679:C:H6	1.85	0.40
1:0:827:C:O2'	1:0:828:C:H5'	2.21	0.40
1:0:933:G:HO2'	1:0:934:G:H5'	1.83	0.40
1:0:1339:U:C4	1:0:1340:C:N4	2.89	0.40
1:0:1624:A:N6	1:0:1627:C:H1'	2.37	0.40
1:0:1864:G:H2'	1:0:1865:C:C6	2.56	0.40
1:0:2026:C:N3	1:0:2757:G:C2	2.90	0.40
1:0:2039:G:P	1:0:2483:U:C5'	3.09	0.40
1:0:2040:A:C2'	1:0:2041:A:H5'	2.51	0.40
1:0:2054:A:H8	1:0:2054:A:O5'	2.04	0.40
1:0:2218:G:C6	1:0:2219:U:N3	2.90	0.40
1:0:2218:G:C2	1:0:2219:U:C2	3.10	0.40
1:0:2605:C:N4	1:0:2606:G:O6	2.55	0.40
1:0:2700:U:C2'	1:0:2701:A:H5'	2.52	0.40
7:9:36:A:H1'	7:9:51:G:H22	1.86	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
6	5	2/8 (25%)	1 (50%)	0	1 (50%)	0 0

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
6	5	2	THR

5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
6	5	2/2 (100%)	2 (100%)	0	100 100

There are no protein residues with a non-rotameric sidechain to report.

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. There are no such sidechains identified.

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	0	2757/2880 (95%)	433 (15%)	19 (0%)
7	9	117/124 (94%)	12 (10%)	0
All	All	2874/3004 (95%)	445 (15%)	19 (0%)

All (445) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	0	45	C
1	0	48	A
1	0	49	U
1	0	50	G
1	0	59	G
1	0	60	A
1	0	67	G
1	0	68	C
1	0	71	A
1	0	72	A
1	0	76	C
1	0	87	G
1	0	89	A
1	0	90	G
1	0	91	A
1	0	99	U
1	0	100	G
1	0	105	G
1	0	110	U
1	0	116	A
1	0	118	U
1	0	123	A
1	0	129	A
1	0	135	U
1	0	155	G
1	0	158	A
1	0	173	A
1	0	174	A
1	0	176	A
1	0	177	U
1	0	181	A
1	0	182	G
1	0	193	A
1	0	200	A
1	0	206	U
1	0	210	A
1	0	218	A
1	0	219	G
1	0	221	A
1	0	225	G
1	0	227	G
1	0	229	G
1	0	242	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	0	305	A
1	0	312	G
1	0	318	G
1	0	334	G
1	0	335	A
1	0	340	G
1	0	343	A
1	0	358	C
1	0	368	A
1	0	373	A
1	0	399	G
1	0	401	G
1	0	414	A
1	0	418	C
1	0	424	G
1	0	443	A
1	0	455	A
1	0	456	C
1	0	460	U
1	0	461	A
1	0	463	C
1	0	467	U
1	0	469	G
1	0	486	U
1	0	487	G
1	0	491	A
1	0	492	G
1	0	515	A
1	0	518	A
1	0	519	C
1	0	523	A
1	0	537	C
1	0	539	A
1	0	541	C
1	0	542	A
1	0	553	C
1	0	554	U
1	0	556	A
1	0	558	G
1	0	559	C
1	0	572	G
1	0	584	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	0	613	A
1	0	617	U
1	0	624	A
1	0	632	A
1	0	636	G
1	0	638	A
1	0	648	A
1	0	652	C
1	0	654	A
1	0	666	U
1	0	667	U
1	0	684	C
1	0	697	G
1	0	699	G
1	0	700	C
1	0	728	G
1	0	742	G
1	0	743	A
1	0	753	U
1	0	760	U
1	0	761	G
1	0	778	G
1	0	789	G
1	0	794	A
1	0	795	A
1	0	796	A
1	0	797	A
1	0	798	G
1	0	806	A
1	0	813	A
1	0	815	A
1	0	818	G
1	0	819	C
1	0	825	C
1	0	832	A
1	0	840	U
1	0	841	G
1	0	844	G
1	0	860	U
1	0	873	U
1	0	874	A
1	0	919	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	0	922	A
1	0	926	C
1	0	930	A
1	0	931	G
1	0	941	U
1	0	944	A
1	0	952	A
1	0	955	G
1	0	957	G
1	0	968	C
1	0	969	U
1	0	970	A
1	0	972	C
1	0	973	U
1	0	984	A
1	0	994	A
1	0	996	C
1	0	1000	G
1	0	1005	U
1	0	1006	C
1	0	1022	A
1	0	1023	U
1	0	1024	G
1	0	1030	U
1	0	1032	A
1	0	1033	G
1	0	1036	G
1	0	1037	U
1	0	1044	U
1	0	1055	A
1	0	1056	U
1	0	1057	A
1	0	1059	A
1	0	1067	G
1	0	1073	G
1	0	1074	G
1	0	1081	A
1	0	1082	G
1	0	1087	C
1	0	1090	C
1	0	1099	A
1	0	1123	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	0	1137	A
1	0	1138	A
1	0	1142	G
1	0	1145	C
1	0	1146	G
1	0	1152	C
1	0	1155	G
1	0	1167	A
1	0	1182	U
1	0	1183	C
1	0	1185	C
1	0	1199	U
1	0	1200	G
1	0	1233	A
1	0	1250	A
1	0	1253	C
1	0	1262	U
1	0	1264	C
1	0	1266	G
1	0	1267	A
1	0	1268	U
1	0	1269	G
1	0	1271	C
1	0	1278	A
1	0	1279	G
1	0	1284	G
1	0	1285	A
1	0	1288	A
1	0	1313	U
1	0	1314	A
1	0	1324	G
1	0	1327	C
1	0	1334	A
1	0	1338	G
1	0	1342	U
1	0	1343	C
1	0	1346	C
1	0	1355	A
1	0	1356	G
1	0	1359	G
1	0	1391	A
1	0	1392	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	0	1398	G
1	0	1433	A
1	0	1441	A
1	0	1442	C
1	0	1443	G
1	0	1459	U
1	0	1468	A
1	0	1469	U
1	0	1470	G
1	0	1475	U
1	0	1482	U
1	0	1490	U
1	0	1505	U
1	0	1508	G
1	0	1509	A
1	0	1513	U
1	0	1524	C
1	0	1529	C
1	0	1552	C
1	0	1571	G
1	0	1573	G
1	0	1574	A
1	0	1583	A
1	0	1585	A
1	0	1618	U
1	0	1623	C
1	0	1624	A
1	0	1625	A
1	0	1626	A
1	0	1635	G
1	0	1648	C
1	0	1651	U
1	0	1652	G
1	0	1657	A
1	0	1664	G
1	0	1665	C
1	0	1671	A
1	0	1680	U
1	0	1681	A
1	0	1685	A
1	0	1686	A
1	0	1691	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	0	1712	G
1	0	1717	A
1	0	1724	C
1	0	1748	U
1	0	1749	G
1	0	1750	A
1	0	1754	G
1	0	1755	G
1	0	1764	A
1	0	1771	A
1	0	1773	C
1	0	1775	A
1	0	1778	U
1	0	1793	A
1	0	1800	A
1	0	1801	C
1	0	1802	A
1	0	1807	A
1	0	1808	C
1	0	1821	A
1	0	1831	G
1	0	1884	A
1	0	1889	G
1	0	1909	U
1	0	1920	A
1	0	1922	U
1	0	1924	C
1	0	1926	U
1	0	1927	U
1	0	1928	G
1	0	1938	U
1	0	1939	U
1	0	1949	A
1	0	1950	C
1	0	1953	A
1	0	1954	A
1	0	1955	G
1	0	1956	G
1	0	1964	A
1	0	1966	C
1	0	1976	U
1	0	1979	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	0	1980	A
1	0	2004	U
1	0	2015	G
1	0	2016	A
1	0	2019	C
1	0	2038	C
1	0	2044	G
1	0	2045	A
1	0	2047	C
1	0	2051	U
1	0	2052	G
1	0	2060	A
1	0	2063	A
1	0	2076	G
1	0	2082	C
1	0	2094	C
1	0	2096	U
1	0	2118	A
1	0	2119	A
1	0	2140	G
1	0	2168	A
1	0	2181	A
1	0	2191	A
1	0	2192	U
1	0	2195	C
1	0	2199	C
1	0	2218	G
1	0	2229	G
1	0	2241	U
1	0	2245	A
1	0	2246	A
1	0	2247	A
1	0	2255	G
1	0	2262	C
1	0	2267	A
1	0	2268	G
1	0	2285	U
1	0	2286	G
1	0	2287	G
1	0	2288	A
1	0	2298	U
1	0	2299	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	0	2300	G
1	0	2301	A
1	0	2306	A
1	0	2314	A
1	0	2316	G
1	0	2325	A
1	0	2326	C
1	0	2362	G
1	0	2364	C
1	0	2378	G
1	0	2385	U
1	0	2396	C
1	0	2403	C
1	0	2405	A
1	0	2406	C
1	0	2407	G
1	0	2408	G
1	0	2409	A
1	0	2414	A
1	0	2415	G
1	0	2419	C
1	0	2420	C
1	0	2427	A
1	0	2428	U
1	0	2448	A
1	0	2455	A
1	0	2470	U
1	0	2471	U
1	0	2477	C
1	0	2481	G
1	0	2482	A
1	0	2483	U
1	0	2484	G
1	0	2485	U
1	0	2492	G
1	0	2499	C
1	0	2500	C
1	0	2504	G
1	0	2522	G
1	0	2545	A
1	0	2546	G
1	0	2549	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	0	2559	U
1	0	2560	G
1	0	2561	G
1	0	2564	U
1	0	2565	C
1	0	2578	G
1	0	2581	A
1	0	2582	G
1	0	2588	U
1	0	2589	C
1	0	2590	U
1	0	2591	C
1	0	2593	A
1	0	2594	U
1	0	2608	A
1	0	2609	G
1	0	2625	U
1	0	2632	U
1	0	2633	A
1	0	2634	G
1	0	2661	G
1	0	2668	U
1	0	2670	C
1	0	2681	A
1	0	2692	A
1	0	2693	U
1	0	2700	U
1	0	2707	G
1	0	2712	G
1	0	2713	A
1	0	2728	A
1	0	2730	A
1	0	2732	C
1	0	2737	A
1	0	2745	A
1	0	2760	G
1	0	2761	A
1	0	2770	A
1	0	2771	C
1	0	2783	U
1	0	2784	A
1	0	2785	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	0	2795	A
1	0	2807	U
1	0	2808	U
1	0	2809	A
1	0	2811	G
1	0	2823	G
1	0	2841	U
1	0	2842	C
1	0	2847	G
1	0	2849	C
1	0	2854	G
1	0	2859	U
7	9	16	U
7	9	17	A
7	9	18	G
7	9	25	G
7	9	27	A
7	9	47	A
7	9	54	U
7	9	55	C
7	9	59	A
7	9	65	A
7	9	84	G
7	9	112	A

All (19) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	0	173	A
1	0	192	G
1	0	583	C
1	0	805	G
1	0	1141	U
1	0	1249	G
1	0	1263	G
1	0	1313	U
1	0	1354	A
1	0	1634	A
1	0	1664	G
1	0	1685	A
1	0	1820	G
1	0	1938	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	0	2015	G
1	0	2093	G
1	0	2261	G
1	0	2377	U
1	0	2404	A

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

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

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z > 2$	Counts	RMSZ	$\# Z > 2$
6	MHV	5	6	6	7,9,10	0.62	0	8,11,13	1.39	2 (25%)
6	004	5	7	6	9,10,11	1.86	3 (33%)	9,12,14	1.27	1 (11%)
6	MHU	5	5	6	14,15,16	1.20	1 (7%)	18,19,21	1.16	1 (5%)
6	DBB	5	3	6	4,5,6	0.60	0	1,5,7	0.04	0
6	MHW	5	1	6	9,9,10	0.81	0	10,11,13	1.29	1 (10%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
6	MHV	5	6	6	-	0/1/12/14	0/1/1/1
6	004	5	7	6	-	0/4/6/8	0/1/1/1
6	MHU	5	5	6	-	2/9/12/14	0/1/1/1
6	DBB	5	3	6	-	1/3/4/6	-
6	MHW	5	1	6	-	2/2/2/4	0/1/1/1

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	5	7	004	CB-CA	3.27	1.55	1.52
6	5	7	004	CG2-CB	-2.85	1.34	1.39
6	5	5	MHU	CZ1-NZ	-2.71	1.39	1.45
6	5	7	004	CD2-CE	-2.38	1.33	1.38

All (5) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	5	1	MHW	O-C-CA	-3.29	120.24	124.37
6	5	5	MHU	O-C-CA	-2.88	117.37	124.77
6	5	6	MHV	CE-CD2-CG	2.48	117.29	111.81
6	5	7	004	CG2-CB-CA	2.41	124.38	120.64
6	5	6	MHV	CB-CA-N	-2.02	108.33	112.50

There are no chirality outliers.

All (5) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
6	5	1	MHW	O-C-CA-N
6	5	1	MHW	O-C-CA-CB
6	5	3	DBB	O-C-CA-CB
6	5	5	MHU	N-CA-CB-CG
6	5	5	MHU	C-CA-CB-CG

There are no ring outliers.

2 monomers are involved in 5 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
6	5	3	DBB	5	0
6	5	1	MHW	1	0

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

1 ligand is modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
33	DOL	0	2882	-	47,50,50	4.58	14 (29%)	57,70,70	3.87	24 (42%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
33	DOL	0	2882	-	2/2/14/20	22/64/77/77	0/2/3/3

All (14) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
33	0	2882	DOL	O40-S39	19.25	1.77	1.44
33	0	2882	DOL	O41-S39	19.04	1.76	1.44
33	0	2882	DOL	C28-C29	-9.26	1.11	1.32
33	0	2882	DOL	C1-C37	4.47	1.62	1.52
33	0	2882	DOL	C28-C26	4.46	1.57	1.48
33	0	2882	DOL	C8-C6	-4.44	1.42	1.49
33	0	2882	DOL	C30-C29	4.02	1.60	1.51
33	0	2882	DOL	C3-C2	-3.91	1.48	1.54
33	0	2882	DOL	C1-N5	3.74	1.50	1.46
33	0	2882	DOL	O36-C32	3.20	1.49	1.44
33	0	2882	DOL	C30-C32	2.89	1.61	1.54
33	0	2882	DOL	C22-C23	2.40	1.38	1.32
33	0	2882	DOL	C6-N5	-2.22	1.31	1.34
33	0	2882	DOL	C13-C10	-2.03	1.48	1.50

All (24) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
33	0	2882	DOL	C4-N5-C1	-15.46	94.37	112.51
33	0	2882	DOL	O18-C17-C16	13.82	145.78	109.24
33	0	2882	DOL	C28-C26-N25	-8.11	97.30	115.07
33	0	2882	DOL	O40-S39-O41	-7.21	109.95	118.13
33	0	2882	DOL	O27-C26-C28	6.54	138.02	122.95

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
33	0	2882	DOL	C30-C29-C28	4.93	139.36	126.30
33	0	2882	DOL	C23-C22-C20	-4.90	118.48	125.89
33	0	2882	DOL	O36-C32-C30	4.77	115.00	107.12
33	0	2882	DOL	C3-C4-N5	4.43	108.08	103.22
33	0	2882	DOL	C12-C8-N9	4.42	112.44	109.15
33	0	2882	DOL	O15-C14-C13	-3.52	115.75	121.20
33	0	2882	DOL	C17-C16-C14	-3.43	106.71	113.90
33	0	2882	DOL	O11-C12-C8	-3.35	105.64	108.12
33	0	2882	DOL	O41-S39-C2	-3.13	105.49	108.50
33	0	2882	DOL	O36-C32-C33	-3.08	101.99	107.31
33	0	2882	DOL	C4-N5-C6	-3.00	114.60	126.27
33	0	2882	DOL	C2-C1-C37	2.65	122.61	113.62
33	0	2882	DOL	O7-C6-N5	-2.60	117.08	122.17
33	0	2882	DOL	O11-C10-C13	2.58	120.09	117.70
33	0	2882	DOL	C42-C43-N44	-2.49	102.94	112.36
33	0	2882	DOL	O7-C6-C8	2.42	122.41	118.65
33	0	2882	DOL	C31-C30-C32	-2.39	106.90	111.11
33	0	2882	DOL	C1-N5-C6	-2.23	112.43	120.65
33	0	2882	DOL	C43-N44-C45	2.15	120.88	111.79

All (2) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
33	0	2882	DOL	C2
33	0	2882	DOL	C17

All (22) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
33	0	2882	DOL	O7-C6-N5-C1
33	0	2882	DOL	C8-C6-N5-C1
33	0	2882	DOL	C1-C2-S39-O40
33	0	2882	DOL	C1-C2-S39-C42
33	0	2882	DOL	C43-C42-S39-O41
33	0	2882	DOL	C43-C42-S39-O40
33	0	2882	DOL	N25-C26-C28-C29
33	0	2882	DOL	O27-C26-C28-C29
33	0	2882	DOL	C48-C47-N44-C43
33	0	2882	DOL	C46-C45-N44-C47
33	0	2882	DOL	N9-C10-C13-C14
33	0	2882	DOL	C1-C2-S39-O41
33	0	2882	DOL	C43-C42-S39-C2

Continued on next page...

Continued from previous page...

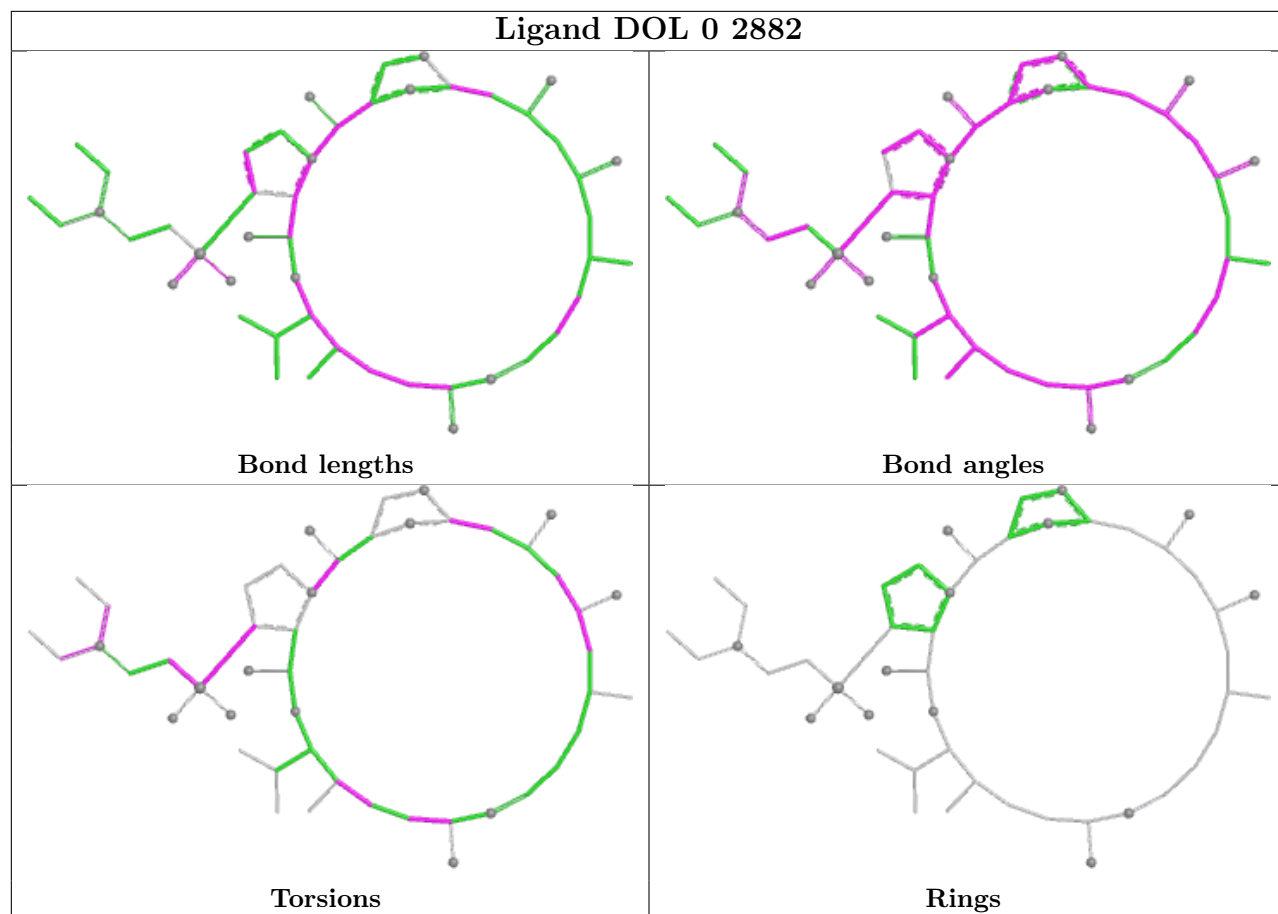
Mol	Chain	Res	Type	Atoms
33	0	2882	DOL	O7-C6-N5-C4
33	0	2882	DOL	O11-C10-C13-C14
33	0	2882	DOL	C28-C29-C30-C31
33	0	2882	DOL	C3-C2-S39-O41
33	0	2882	DOL	C3-C2-S39-O40
33	0	2882	DOL	O18-C17-C19-C20
33	0	2882	DOL	C14-C16-C17-C19
33	0	2882	DOL	C3-C2-S39-C42
33	0	2882	DOL	C8-C6-N5-C4

There are no ring outliers.

1 monomer is involved in 16 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
33	0	2882	DOL	16	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.



5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

EDS was not executed - this section is therefore empty.

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

EDS was not executed - this section is therefore empty.

6.3 Carbohydrates ⓘ

EDS was not executed - this section is therefore empty.

6.4 Ligands ⓘ

EDS was not executed - this section is therefore empty.

6.5 Other polymers ⓘ

EDS was not executed - this section is therefore empty.