



Full wwPDB X-ray Structure Validation Report ⓘ

May 27, 2020 – 07:04 pm BST

PDB ID : 1Z58
Title : Crystal structure of a complex of the ribosome large subunit with rapamycin
Authors : Amit, M.; Berisio, R.; Baram, D.; Harms, J.; Bashan, A.; Yonath, A.
Deposited on : 2005-03-17
Resolution : 3.80 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 following versions of software and data (see [references ⓘ](#)) were used in the production of this report:

MolProbity : 4.02b-467
Mogul : 1.8.5 (274361), CSD as541be (2020)
Xtrriage (Phenix) : **NOT EXECUTED**
EDS : **NOT EXECUTED**
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.11

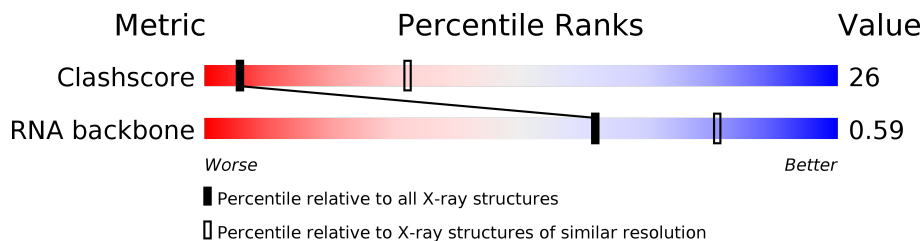
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.80 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
Clashscore	141614	1288 (4.00-3.60)
RNA backbone	3102	1036 (4.60-3.00)

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 on 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	2	2880	

2 Entry composition [i](#)

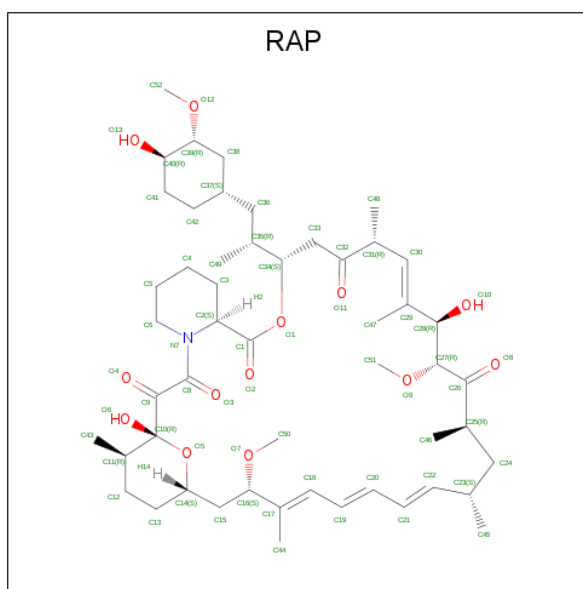
There are 2 unique types of molecules in this entry. The entry contains 59424 atoms, of which 0 are hydrogens and 0 are deuteriums.

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
			Total	C	N	O	P			
1	2	2766	59359	26479	10949	19166	2765	0	0	0

- Molecule 2 is RAPAMYCIN IMMUNOSUPPRESSANT DRUG (three-letter code: RAP) (formula: C₅₁H₇₉NO₁₃).



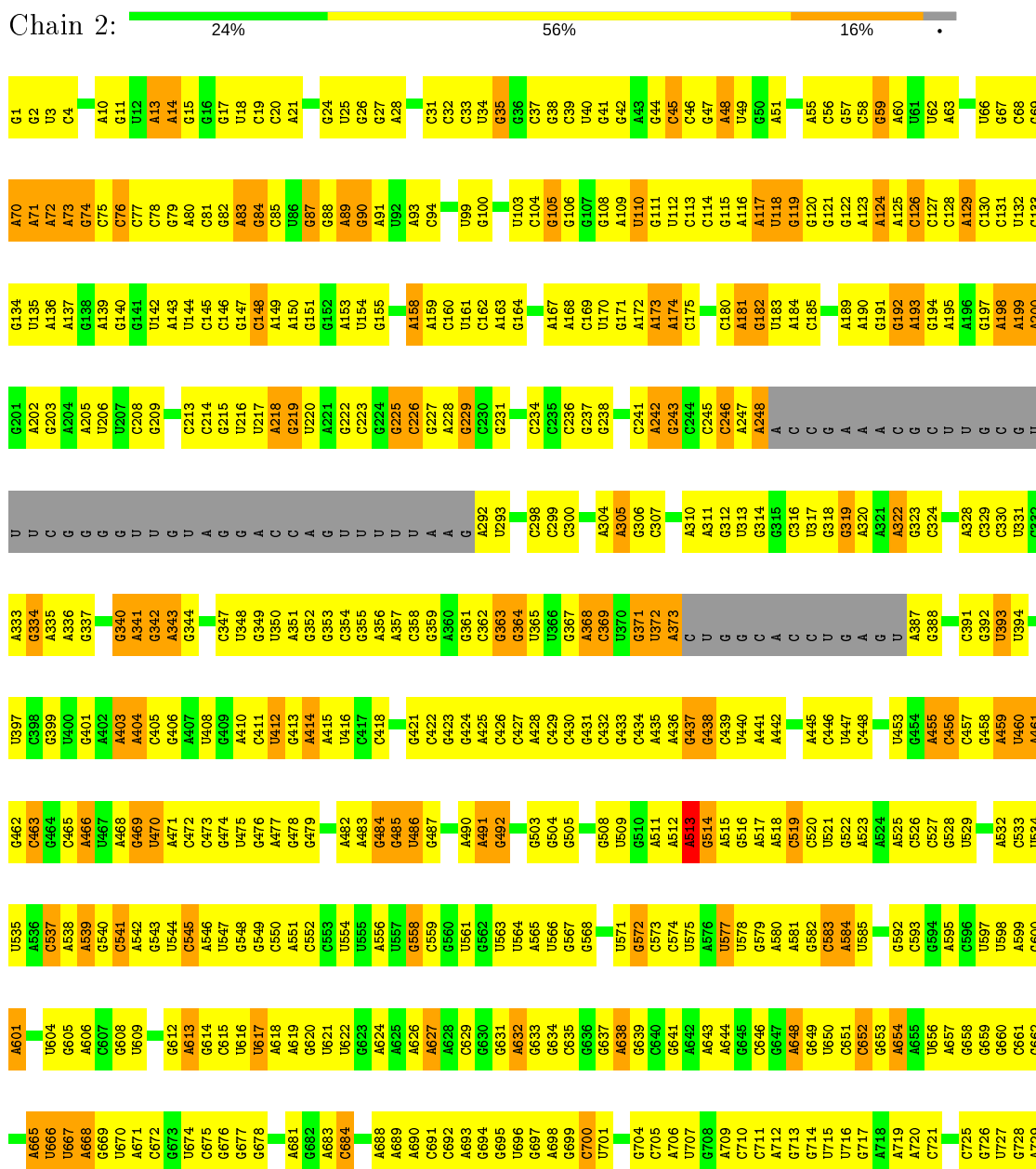
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
			Total	C	N	O		
2	2	1	65	51	1	13	0	0

3 Residue-property plots

These plots are drawn for all protein, RNA and DNA 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



C1677	A1538	U1409	G1341	A1278	C1210	A1139	G1067	C996	G932	U868	A806	G736
G1678	U1539	U1410	U1342	G1279	U1211	A1140	A1068	C997	G933	C869	A807	C737
U1679	C1540	C1411	C1343	U1280	G1212	U1141	G1069	C998	G934	C870	C808	G738
A1681	G1541	C1412	C1344	A1281	U1213	A1142	G1073	A999	C935	U871	C809	G739
G1683	A1544	U1413	G1345	A1282	U1214	U1143	G1074	A1001	C936	U872	U810	G740
G1684	G1545	G1414	C1346	C1283	C1215	U1144	G1075	G1002	C937	U873	G811	G741
A1685	C1546	C1415	C1347	G1284	A1215	C1145	G1079	C1003	C938	U874	G812	G742
C1686	U1481	C1416	C1348	A1285	U1216	G1146	G1080	C1004	C939	U875	A813	A743
A1687	C1417	A1349	A1349	U1286	G1217	G1147	A1081	A1004	G940	U876	G814	G744
C1688	G1483	G1418	G1350	A1287	C1218	C1150	A1082	U1095	U941	G877	A815	G745
U1688	C1550	G1419	G1351	A1288	C1219	U1151	G1083	A1007	U942	U878	U816	A747
A1689	U1551	A1420	G1352	A1289	G1220	U1152	A1084	A1008	U943	A879	A817	
U1690	C1486	A1421	A1353	A1290	C1221	C1153	G1085	C1009	C944	G880	G818	
G1691	G1487	C1422	A1354	G1291	G1222	A1153	C1086	C1009	G945	U881	C819	G754
A1694	G1488	A1423	A1355	A1292	G1223	U1154	C1087	G1014	U946	C882	U820	G755
U1695	C1558	G1427	G1356	A1293	A1224	G1155	C1087	U1015	A821	A821	G821	C756
C1696	G1428	U1429	U1357	G1294	G1225	A1160	A1088	U1016	A885	G822	G822	C757
C1697	A1429	G1430	C1358	U1295	A1226	U1161	C1089	C1018	U886	U824	C824	C758
A1698	G1431	G1431	U1359	G1296	A1227	A1162	C1090	U1019	G888	C825	C825	C759
A1699	G1432	G1432	C1364	A1298	A1233	A1163	C1091	G1028	U889	C826	C826	C760
C1700	A1433	A1433	U1365	A1299	C1234	U1164	U1092	U1023	C899	U826	U826	C761
C1701	U1500	U1434	A1365	A1300	C1235	A1166	U1093	U1023	U890	C827	C827	C762
U1705	G1435	U1435	A1366	U1301	G1236	A1167	C1094	G1024	U891	A891	C828	A763
A1706	G1436	G1436	U1370	C1302	G1243	A1168	A1095	A1025	G	G	C829	A764
C1707	A1437	G1437	U1371	U1303	U1244	C1169	A1096	U1026	C	C	C830	C765
C1708	G1438	G1438	G1372	C1304	U1245	U1174	A1097	C1027	G	G	C831	A766
U1709	U1506	G1439	A1372	U1305	G1246	G1174	G1100	G1028	G	G	A832	C767
G1710	C1506	G1440	G1373	A1306	U1247	U1175	U1101	U1030	U960	G	A833	C768
A1643	A1507	G1441	G1374	U1307	U1248	U1176	G1102	C1031	G	C	A834	G772
G1644	C1442	C1442	C1375	C1308	G1249	U1177	A1106	A1032	U	U	U837	G773
U1645	G1443	C1443	C1376	G1309	U1249	U1178	A1107	G1033	A	A	A838	A774
C1646	A1444	C1444	U1377	C1310	U1250	U1179	A1107	U1034	C	C	U839	U775
U1647	U1446	U1446	A1378	C1311	G1251	A1180	A1108	G1035	C	C	U840	G776
C1648	G1450	G1450	A1379	U1313	G1252	C1181	A1109	U1036	A	A	G841	A777
U1651	C1451	C1451	C1380	U1314	G1253	U1182	G1110	U1037	G	G	A842	G778
G1652	U1515	U1515	G1381	A1315	U1254	C1183	G1111	U1038	C	C	G843	U779
C1653	C1516	C1516	C1382	A1316	A1255	G1184	U1112	A1039	U	U	U844	U780
A1654	U1517	U1517	G1383	G1317	U1256	C1186	C1115	A1040	U	U	U845	G781
C1655	A1518	U1454	G1384	U1317	U1257	C1187	U1116	G1041	C	C	C847	U782
U1656	C1519	C1455	C1385	A1321	U1258	A1188	G1117	U1042	C	C	U848	U785
A1588	G1520	C1456	G1386	G1322	U1259	A1189	G1117	A1043	U	U	U851	U786
C1725	U1521	A1457	C1387	U1323	G1261	C1190	G1121	U1044	A	A	U852	A787
U1658	C1522	A1458	C1388	G1324	U1262	A1192	A1122	G1047	U	U	U853	G788
C1727	A1523	U1459	G1389	U1325	G1263	G1192	G1123	U1048	C	C	G854	A790
A1728	C1524	G1460	A1391	U1326	G1264	G1193	G1123	C1049	C	C	U855	G791
C1729	U1524	C1461	A1391	C1327	U1265	U1194	G1125	G1050	U	U	A856	G791
G1730	A1525	C1461	U1392	C1328	G1266	U1195	A1126	U1051	A	A	U857	A795
C1731	U1526	C1462	U1392	U1329	A1267	G1196	C1127	C1052	U	U	U858	A796
U1732	G1527	A1463	A1397	U1329	U1268	U1197	U1130	G1053	A	A	G859	A797
C1727	C1528	A1464	G1398	G1332	G1269	C1198	U1130	C1054	U	U	U859	A797
A1728	U1529	G1465	C1399	U1333	G1270	U1199	G1131	A1055	U	U	U859	A797
C1729	A1530	A1466	A1400	A1334	C1271	U1200	C1132	U1056	C	C	U860	G798
G1730	C1531	U1467	G1401	A1335	G1272	G1201	G1133	A1057	C	C	A861	C799
C1731	A1532	G1468	G1402	A1336	G1273	U1202	C1134	A1058	U	U	U862	U800
U1732	C1533	U1469	U1403	G1337	C1274	A1203	G1135	G1058	U	U	C863	A801
C1733	A1534	G1470	U1403	U1338	U1275	G1204	G1136	C1059	C	C	C864	A802
G1744	U1537	C1471	G1407	U1339	U1276	U1205	A1137	A1060	U	U	A865	C803
C1745	C1472	C1472	A1408	C1340	G1277	G1206	A1138	G1066	U	U	U866	C804
											G867	G805

C2747	G2811
C2748	A2812
A2749	G2813
G2750	
C2751	A2817
C2752	G2818
C2753	G2819
C2754	C2820
A2755	G2821
A2756	U2822
G2757	G2823
A2758	C2824
U2759	A2825
G2760	C2826
A2761	G2827
G2762	C2828
	A2829
C2765	U2830
U2766	A2831
C2767	
C2768	U2836
C2769	G2837
A2770	U2838
C2771	G2839
U2772	U2840
G2773	U2841
U2774	C2842
U	A2843
U	G2844
A	C2845
	G2846
U2778	G2847
C2779	A2848
A2780	C2849
G2781	
G2782	
U2783	G2854
A2784	
A2785	A2858
G2786	U2859
A2787	C2860
C2788	A2861
U2789	G2862
C2790	U2863
C2791	C2864
C2792	G2865
G2793	A2866
G2794	G2867
A2795	G2868
A2796	U2869
G2797	C2870
C2800	A2874
A2801	C2875
	C2876
G2805	A2877
G2806	C
U2807	U
U2808	C
A2809	
A2810	

4 Data and refinement statistics

Xtrriage (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	168.50Å 404.00Å 689.00Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	8.00 – 3.80	Depositor
% Data completeness (in resolution range)	(Not available) (8.00-3.80)	Depositor
R_{merge}	0.16	Depositor
R_{sym}	(Not available)	Depositor
Refinement program	CNS	Depositor
R, R_{free}	0.273 , 0.368	Depositor
Estimated twinning fraction	No twinning to report.	Xtrriage
Total number of atoms	59424	wwPDB-VP
Average B, all atoms (Å ²)	58.0	wwPDB-VP

5 Model quality [i](#)

5.1 Standard geometry [i](#)

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

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	2	0.15	0/66467	0.63	1/103673 (0.0%)

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed($^{\circ}$)	Ideal($^{\circ}$)
1	2	513	A	C2'-C3'-O3'	6.09	123.44	113.70

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	2	59359	0	29917	2275	0
2	2	65	0	79	20	0
All	All	59424	0	29996	2275	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 26.

All (2275) 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)
1:2:1773:C:H41	2:2:2881:RAP:C15	1.42	1.32
1:2:1773:C:N4	2:2:2881:RAP:H151	1.54	1.20
1:2:700:C:H42	1:2:800:U:H4'	1.11	1.15
1:2:1663:C:H5'	1:2:1664:G:H5''	1.32	1.08
1:2:940:G:H3'	1:2:941:U:H5''	1.36	1.08
1:2:824:U:H4'	1:2:1264:C:H1'	1.31	1.06
1:2:1773:C:H41	2:2:2881:RAP:H151	1.11	1.04
1:2:2636:A:H62	1:2:2643:G:H21	1.05	1.04
1:2:1773:C:N4	2:2:2881:RAP:C15	2.15	1.03
1:2:109:A:H2'	1:2:110:U:H5''	1.40	1.02
1:2:462:G:H2'	1:2:463:C:H5''	1.43	1.01
1:2:619:A:H61	1:2:629:C:H42	1.07	1.01
1:2:665:A:H3'	1:2:666:U:H5''	1.43	0.98
1:2:2476:A:O2'	1:2:2477:C:H5'	1.63	0.98
1:2:1327:C:H42	1:2:1351:G:H1	1.11	0.97
1:2:2082:C:H42	1:2:2173:G:H1	1.14	0.94
1:2:1715:A:H2'	1:2:1716:G:H5''	1.50	0.93
1:2:1468:A:H3'	1:2:1469:U:H5''	1.51	0.93
1:2:1572:C:H2'	1:2:1573:G:H5''	1.51	0.93
1:2:2380:U:H2'	1:2:2381:A:H5'	1.50	0.93
1:2:890:U:H3'	1:2:891:A:H5''	1.48	0.92
1:2:2194:A:H2'	1:2:2195:C:H5''	1.49	0.92
1:2:1773:C:H5	2:2:2881:RAP:O7	1.53	0.92
1:2:2081:U:H2'	1:2:2082:C:H5''	1.47	0.92
1:2:1617:G:H2'	1:2:1618:U:H5'	1.49	0.91
1:2:362:C:H2'	1:2:363:G:H4'	1.51	0.91
1:2:1432:G:H21	1:2:1596:A:H62	1.19	0.90
1:2:1438:G:H2'	1:2:1439:G:H5'	1.54	0.90
1:2:88:G:H3'	1:2:89:A:H5''	1.51	0.90
1:2:1908:C:H2'	1:2:1909:U:H4'	1.53	0.89
1:2:1715:A:C2'	1:2:1716:G:H5''	2.01	0.89
1:2:2:G:H1	1:2:2875:C:H42	1.21	0.89
1:2:1773:C:N4	2:2:2881:RAP:C14	2.35	0.89
1:2:1773:C:H41	2:2:2881:RAP:C14	1.86	0.88
1:2:2038:C:H2'	1:2:2483:U:H4'	1.54	0.88
1:2:2809:A:N6	1:2:2854:G:H1'	1.89	0.88
1:2:1442:C:H41	1:2:1585:A:H5''	1.39	0.87
1:2:1616:C:H2'	1:2:1617:G:H8	1.38	0.87
1:2:2281:C:H42	1:2:2293:G:H22	1.17	0.87
1:2:2299:A:H1'	1:2:2312:A:H62	1.39	0.87
1:2:545:C:H42	1:2:567:G:H1	1.18	0.87
1:2:2198:U:H3'	1:2:2199:C:H5''	1.53	0.87

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:436:A:H5'	1:2:437:G:H5''	1.53	0.87
1:2:1268:U:H5'	1:2:1269:G:H5''	1.58	0.86
1:2:1333:G:N2	1:2:1346:C:H42	1.73	0.86
1:2:58:C:H3'	1:2:59:G:H5''	1.58	0.86
1:2:13:A:H5''	1:2:14:A:OP1	1.75	0.86
1:2:1549:C:H2'	1:2:1550:C:H5'	1.58	0.85
1:2:821:A:O2'	1:2:1267:A:H4'	1.77	0.85
1:2:174:A:H4'	1:2:2051:U:H2'	1.56	0.85
1:2:1336:G:H2'	1:2:1337:G:H5''	1.58	0.85
1:2:2727:G:H2'	1:2:2728:A:H5''	1.58	0.85
1:2:1656:U:H2'	1:2:1657:A:H5''	1.57	0.84
1:2:468:A:O2'	1:2:469:G:H4'	1.76	0.84
1:2:492:G:H22	1:2:519:C:H42	1.24	0.84
1:2:1621:C:H4'	1:2:1626:A:N6	1.93	0.84
1:2:2404:A:H4'	1:2:2405:A:O5'	1.75	0.84
1:2:1854:G:H22	1:2:1863:U:H3	1.25	0.84
1:2:1773:C:C5	2:2:2881:RAP:O7	2.30	0.84
1:2:391:C:H42	1:2:410:A:H61	1.25	0.84
1:2:1466:C:H2'	1:2:1467:U:O4'	1.77	0.83
1:2:1374:G:H1	1:2:1383:C:H42	1.22	0.83
1:2:614:G:H1'	1:2:670:U:H1'	1.59	0.83
1:2:1265:G:H2'	1:2:1266:G:O4'	1.79	0.83
1:2:929:A:H3'	1:2:930:A:H5''	1.59	0.83
1:2:1036:G:H1'	1:2:1145:C:H4'	1.58	0.83
1:2:1495:G:H1	1:2:1528:C:N4	1.75	0.83
1:2:2432:A:H2'	1:2:2433:G:H8	1.42	0.82
1:2:1139:A:H1'	1:2:2495:G:O2'	1.77	0.82
1:2:1066:G:H3'	1:2:1067:G:H5''	1.60	0.82
1:2:181:A:H4'	1:2:182:G:H4'	1.61	0.82
1:2:1401:G:H1	1:2:1412:C:H42	1.26	0.82
1:2:931:G:H22	1:2:2247:A:H3'	1.45	0.82
1:2:1373:G:H22	1:2:2192:U:H3	1.27	0.81
1:2:1483:G:H1	1:2:1539:U:H3	1.28	0.81
1:2:1689:U:H2'	1:2:1690:U:H5''	1.62	0.81
1:2:700:C:N4	1:2:800:U:H4'	1.95	0.81
1:2:2727:G:C2'	1:2:2728:A:H5''	2.11	0.81
1:2:890:U:H3'	1:2:891:A:C5'	2.10	0.81
1:2:1312:G:H4'	1:2:1314:A:N3	1.96	0.80
1:2:941:U:H2'	1:2:942:U:O4'	1.80	0.80
1:2:2633:A:H5''	1:2:2634:G:OP1	1.80	0.80
1:2:666:U:H2'	1:2:668:A:OP1	1.82	0.80

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1102:G:H1	1:2:1112:U:H1'	1.46	0.79
1:2:561:U:H5'	1:2:1233:A:H1'	1.64	0.79
1:2:2194:A:C2'	1:2:2195:C:H5''	2.13	0.79
1:2:2321:C:H2'	1:2:2322:U:O4'	1.82	0.78
1:2:63:A:H61	1:2:89:A:H61	1.28	0.78
1:2:759:C:H5'	1:2:761:G:H1'	1.65	0.78
1:2:2809:A:H61	1:2:2854:G:H1'	1.48	0.78
1:2:1495:G:H1	1:2:1528:C:H42	1.31	0.78
1:2:323:G:OP2	1:2:342:G:H2'	1.84	0.78
1:2:1459:U:O2	1:2:1475:U:H2'	1.84	0.78
1:2:1974:U:C2'	1:2:1975:G:H5'	2.13	0.78
1:2:689:A:H8	1:2:2052:G:H21	1.31	0.78
1:2:2058:U:H1'	1:2:2576:G:H21	1.47	0.77
1:2:2261:G:H4'	1:2:2262:C:OP2	1.84	0.77
1:2:1354:A:O2'	1:2:1355:A:H5'	1.82	0.77
1:2:184:A:H4'	1:2:812:G:H4'	1.64	0.77
1:2:215:G:H21	1:2:632:A:H8	1.33	0.77
1:2:538:A:H2'	1:2:539:A:H5''	1.64	0.77
1:2:1304:U:H2'	1:2:1305:C:H5''	1.65	0.77
1:2:1029:C:H2'	1:2:1030:U:H5''	1.67	0.77
1:2:541:C:H2'	1:2:2002:A:H2	1.48	0.77
1:2:2378:G:H1	1:2:2396:C:H42	1.33	0.77
1:2:1807:A:H2'	1:2:1808:C:H4'	1.67	0.76
1:2:940:G:H3'	1:2:941:U:C5'	2.13	0.76
1:2:109:A:C2'	1:2:110:U:H5''	2.14	0.76
1:2:1401:G:H1	1:2:1412:C:N4	1.82	0.76
1:2:1714:A:H62	1:2:1715:A:N6	1.82	0.76
1:2:1772:C:H5''	1:2:1773:C:OP1	1.85	0.76
1:2:1102:G:N1	1:2:1112:U:H1'	2.01	0.76
1:2:1690:U:H2'	1:2:1691:G:H5'	1.68	0.76
1:2:2059:U:H5''	1:2:2217:G:H1	1.47	0.76
1:2:77:C:N4	1:2:106:G:H1	1.84	0.76
1:2:2756:A:H1'	1:2:2758:A:N7	2.00	0.76
1:2:1181:C:H2'	1:2:1182:U:H4'	1.65	0.76
1:2:1322:G:H21	1:2:1627:C:H5'	1.51	0.76
1:2:245:C:H2'	1:2:246:C:H5	1.51	0.76
1:2:698:A:H1'	1:2:701:U:O4	1.86	0.76
1:2:1291:G:H1	1:2:1305:C:H42	1.33	0.75
1:2:2418:A:O2'	1:2:2566:A:H5''	1.86	0.75
1:2:1312:G:H5''	1:2:1313:U:H5''	1.68	0.75
1:2:361:G:N2	1:2:362:C:H41	1.85	0.75

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1496:G:H1	1:2:1527:G:H1	1.34	0.75
1:2:1144:U:O2	1:2:1147:G:H5''	1.87	0.75
1:2:1982:C:H5''	1:2:2703:C:O2'	1.87	0.75
1:2:1747:G:H4'	1:2:1749:G:H1'	1.68	0.75
1:2:1440:G:H1'	1:2:1588:A:H61	1.52	0.74
1:2:684:C:H42	1:2:822:G:H1	1.34	0.74
1:2:1327:C:N4	1:2:1351:G:H1	1.85	0.74
1:2:2549:G:H2'	1:2:2550:C:O4'	1.87	0.74
1:2:1357:U:O2'	1:2:1397:A:H2'	1.87	0.74
1:2:2475:C:H2'	1:2:2476:A:O4'	1.87	0.74
1:2:2227:C:H2'	1:2:2228:U:H5'	1.69	0.74
1:2:1111:C:H2'	1:2:1112:U:H5'	1.69	0.74
1:2:1289:A:H61	1:2:1307:U:H3	1.33	0.74
1:2:2691:C:H2'	1:2:2692:A:H5''	1.68	0.74
1:2:1226:A:N6	1:2:1249:G:H1'	2.02	0.74
1:2:1627:C:OP2	1:2:1627:C:H3'	1.88	0.74
1:2:245:C:H2'	1:2:246:C:C5	2.23	0.74
1:2:63:A:H61	1:2:89:A:N6	1.86	0.73
1:2:68:C:H2'	1:2:69:G:O4'	1.88	0.73
1:2:2380:U:C2'	1:2:2381:A:H5'	2.19	0.73
1:2:1656:U:C2'	1:2:1657:A:H5''	2.18	0.73
1:2:403:A:H5''	1:2:404:A:OP1	1.88	0.73
1:2:956:A:C2	1:2:2427:A:H1'	2.23	0.73
1:2:1356:G:H3'	1:2:1356:G:OP1	1.87	0.73
1:2:1141:U:O2	1:2:2008:C:H5''	1.87	0.73
1:2:1185:C:H41	1:2:1189:G:H1	1.37	0.73
1:2:1195:U:H2'	1:2:1196:G:C8	2.24	0.73
1:2:871:U:H1'	1:2:2248:A:H4'	1.70	0.73
1:2:1572:C:C2'	1:2:1573:G:H5''	2.18	0.73
1:2:1697:U:H2'	1:2:1698:C:H5'	1.71	0.73
1:2:2299:A:H1'	1:2:2312:A:N6	2.02	0.73
1:2:1772:C:O2'	2:2:2881:RAP:H502	1.89	0.72
1:2:181:A:C4'	1:2:182:G:H4'	2.19	0.72
1:2:1811:A:H1'	1:2:1813:A:C6	2.24	0.72
1:2:1386:A:H5''	1:2:2191:A:N6	2.04	0.72
1:2:821:A:H2'	1:2:822:G:H8	1.54	0.72
1:2:1501:C:H42	1:2:1519:G:H22	1.36	0.72
1:2:1442:C:N4	1:2:1585:A:H5''	2.04	0.72
1:2:1882:G:H21	1:2:1885:C:N4	1.88	0.72
1:2:613:A:H2'	1:2:614:G:H8	1.53	0.72
1:2:715:U:H3	1:2:743:A:H61	1.37	0.72

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1183:C:N4	1:2:1191:G:H1	1.87	0.72
1:2:951:G:H2'	1:2:952:A:H5''	1.71	0.72
1:2:2783:U:H3	1:2:2866:A:H62	1.36	0.72
1:2:2429:A:OP2	1:2:2429:A:H8	1.73	0.72
1:2:1773:C:H41	2:2:2881:RAP:C16	2.03	0.71
1:2:2048:C:H1'	1:2:2428:U:O2	1.88	0.71
1:2:146:C:H2'	1:2:147:G:H8	1.55	0.71
1:2:2081:U:C2'	1:2:2082:C:H5''	2.20	0.71
1:2:1811:A:H5''	1:2:1812:U:OP1	1.91	0.71
1:2:119:G:H1	1:2:128:C:H42	1.38	0.71
1:2:1353:A:H4'	1:2:1407:G:H1'	1.72	0.71
1:2:1226:A:H62	1:2:1249:G:H1'	1.56	0.71
1:2:1458:A:H3'	1:2:1459:U:C5'	2.21	0.71
1:2:1373:G:N2	1:2:2192:U:H3	1.89	0.71
1:2:2379:G:H2'	1:2:2380:U:O4'	1.90	0.71
1:2:847:C:H41	1:2:955:G:N2	1.89	0.71
1:2:2287:G:H2'	1:2:2287:G:N3	2.06	0.70
1:2:795:A:H4'	1:2:796:A:N7	2.06	0.70
1:2:1001:A:H62	1:2:1200:G:H1'	1.56	0.70
1:2:2170:C:H2'	1:2:2171:U:H5'	1.73	0.70
1:2:1900:U:O2'	1:2:1946:U:H5'	1.92	0.70
1:2:538:A:C2'	1:2:539:A:H5''	2.20	0.70
1:2:1975:G:H1'	1:2:1977:C:H41	1.56	0.70
1:2:1541:G:H22	1:2:1561:A:H61	1.36	0.70
1:2:305:A:H2'	1:2:306:G:O4'	1.91	0.70
1:2:1181:C:H3'	1:2:1182:U:H5''	1.73	0.70
1:2:2268:G:H5''	1:2:2363:G:O2'	1.91	0.70
1:2:2810:A:H4'	1:2:2811:G:C8	2.26	0.70
1:2:821:A:H2'	1:2:822:G:C8	2.26	0.70
1:2:1055:A:N1	1:2:1122:A:H5'	2.06	0.70
1:2:2670:C:H42	1:2:2698:G:H22	1.37	0.70
1:2:1715:A:H1'	1:2:1717:A:O4'	1.92	0.70
1:2:1335:A:H2'	1:2:1336:G:H8	1.57	0.70
1:2:1947:G:H4'	1:2:1948:C:C5	2.27	0.70
1:2:2660:C:O2'	1:2:2661:G:H5'	1.91	0.70
1:2:2565:C:O2	2:2:2881:RAP:O4	2.09	0.70
1:2:2274:C:H2'	1:2:2275:U:H5'	1.74	0.70
1:2:411:C:H2'	1:2:412:U:H5''	1.74	0.69
1:2:912:A:H2'	1:2:913:A:O4'	1.92	0.69
1:2:2303:C:H5'	1:2:2304:G:H5''	1.75	0.69
1:2:1036:G:H1'	1:2:1145:C:C4'	2.22	0.69

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1440:G:H1'	1:2:1588:A:N6	2.06	0.69
1:2:1673:C:H42	1:2:1987:G:H1	1.39	0.69
1:2:1184:G:C2'	1:2:1185:C:H5''	2.23	0.69
1:2:1198:C:OP1	1:2:1199:U:H1'	1.92	0.69
1:2:1495:G:H2'	1:2:1496:G:H8	1.57	0.69
1:2:342:G:O2'	1:2:343:A:OP1	2.11	0.69
1:2:2636:A:H62	1:2:2643:G:N2	1.86	0.69
1:2:158:A:H1'	1:2:448:C:H5'	1.74	0.69
1:2:1088:A:H2'	1:2:1089:C:O4'	1.91	0.69
1:2:579:G:H2'	1:2:2013:A:N7	2.08	0.69
1:2:2795:A:N3	1:2:2795:A:H2'	2.08	0.69
1:2:55:A:N6	1:2:69:G:H1	1.91	0.69
1:2:721:C:H42	1:2:736:G:H22	1.39	0.69
1:2:2082:C:H2'	1:2:2083:G:O4'	1.92	0.69
1:2:918:A:H2'	1:2:919:U:H5''	1.73	0.69
1:2:401:G:H2'	1:2:403:A:N7	2.07	0.68
1:2:1094:C:H2'	1:2:1096:A:OP2	1.94	0.68
1:2:1814:G:H2'	1:2:1815:G:H8	1.58	0.68
1:2:616:U:H2'	1:2:617:U:H5''	1.74	0.68
1:2:688:A:N6	1:2:816:U:H3	1.91	0.68
1:2:712:A:H4'	1:2:1651:U:N3	2.07	0.68
1:2:2204:A:O2'	1:2:2205:C:OP2	2.10	0.68
1:2:2320:G:H2'	1:2:2321:C:O4'	1.92	0.68
1:2:2378:G:H1	1:2:2396:C:N4	1.92	0.68
1:2:2668:U:O2	1:2:2693:U:H1'	1.93	0.68
1:2:2756:A:N6	1:2:2762:G:H1'	2.09	0.68
1:2:2823:G:H1'	1:2:2843:A:N6	2.08	0.68
1:2:2063:A:H61	1:2:2219:U:H3	1.41	0.68
1:2:70:A:O2'	1:2:71:A:H5'	1.94	0.68
1:2:765:C:C4	1:2:1772:C:H1'	2.29	0.68
1:2:1712:G:N3	1:2:1712:G:H3'	2.09	0.68
1:2:413:G:O2'	1:2:414:A:H5''	1.94	0.68
1:2:459:A:N6	1:2:484:G:H1'	2.08	0.68
1:2:1912:G:N3	1:2:1912:G:H3'	2.09	0.68
1:2:246:C:H3'	1:2:373:A:O5'	1.93	0.68
1:2:247:A:H3'	1:2:373:A:H5''	1.76	0.68
1:2:2406:C:H4'	1:2:2408:G:N3	2.08	0.68
1:2:32:C:H5'	1:2:1251:G:OP1	1.94	0.68
1:2:169:C:H2'	1:2:170:U:H5'	1.76	0.68
1:2:47:G:H2'	1:2:48:A:H5''	1.76	0.68
1:2:129:A:H2'	1:2:130:C:O4'	1.94	0.68

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:863:C:H42	1:2:939:C:N4	1.92	0.68
1:2:572:G:H5'	1:2:581:A:H4'	1.76	0.67
1:2:1468:A:H3'	1:2:1469:U:C5'	2.23	0.67
1:2:2796:A:H2'	1:2:2797:G:H8	1.59	0.67
1:2:351:A:H2'	1:2:352:G:C8	2.30	0.67
1:2:58:C:C3'	1:2:59:G:H5''	2.24	0.67
1:2:1356:G:H5'	1:2:1614:C:OP2	1.94	0.67
1:2:2179:C:H2'	1:2:2180:U:O4'	1.94	0.67
1:2:2736:U:O2'	1:2:2737:A:H5'	1.94	0.67
1:2:487:G:H4'	1:2:512:A:N1	2.09	0.67
1:2:2503:G:H22	1:2:2721:A:H1'	1.58	0.67
1:2:614:G:H1	1:2:634:G:H1	1.40	0.67
1:2:57:G:H2'	1:2:72:A:N6	2.09	0.67
1:2:1465:G:H2'	1:2:1466:C:C6	2.30	0.67
1:2:175:C:H42	1:2:225:G:H1	1.41	0.67
1:2:840:U:H1'	1:2:2225:G:H1'	1.75	0.67
1:2:2670:C:N4	1:2:2698:G:H22	1.92	0.67
1:2:47:G:C2'	1:2:48:A:H5''	2.24	0.67
1:2:1174:G:H2'	1:2:1175:A:H8	1.59	0.67
1:2:1850:G:H22	1:2:1867:A:H1'	1.58	0.67
1:2:347:C:H2'	1:2:348:U:C6	2.29	0.67
1:2:2810:A:H5''	1:2:2811:G:OP1	1.94	0.67
1:2:318:G:N2	1:2:320:A:H3'	2.10	0.67
1:2:351:A:H2'	1:2:352:G:H8	1.60	0.67
1:2:1670:G:H21	1:2:1988:A:H62	1.40	0.67
1:2:2245:A:H5'	1:2:2246:A:C8	2.30	0.67
1:2:2281:C:N4	1:2:2293:G:H22	1.92	0.67
1:2:863:C:H42	1:2:939:C:H42	1.39	0.67
1:2:117:A:H5'	1:2:118:U:OP1	1.95	0.67
1:2:2139:G:N3	1:2:2139:G:H2'	2.10	0.67
1:2:411:C:C3'	1:2:412:U:H5''	2.25	0.67
1:2:1184:G:O2'	1:2:1185:C:H5''	1.95	0.66
1:2:1252:C:O2'	1:2:1253:C:H5''	1.95	0.66
1:2:1325:U:H1'	1:2:1326:U:C5	2.30	0.66
1:2:1338:G:H5'	1:2:1339:U:OP2	1.94	0.66
1:2:2429:A:OP2	1:2:2429:A:C8	2.47	0.66
1:2:104:C:H2'	1:2:105:G:H5'	1.75	0.66
1:2:1296:G:H1'	1:2:1342:U:H3	1.61	0.66
1:2:13:A:H4'	1:2:14:A:C5'	2.25	0.66
1:2:2168:A:H2'	1:2:2169:A:H5'	1.76	0.66
1:2:2198:U:H3'	1:2:2199:C:C5'	2.25	0.66

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:2213:G:H2'	1:2:2214:G:H8	1.60	0.66
1:2:59:G:O6	1:2:62:U:H2'	1.94	0.66
1:2:1223:G:H4'	1:2:1224:A:O5'	1.96	0.66
1:2:1926:U:O2'	1:2:1928:G:H5'	1.95	0.66
1:2:1055:A:H1'	1:2:1058:G:H1'	1.77	0.66
1:2:2122:G:H2'	1:2:2122:G:N3	2.10	0.66
1:2:462:G:C2'	1:2:463:C:H5''	2.23	0.66
1:2:13:A:H4'	1:2:14:A:H5''	1.75	0.66
1:2:2092:U:H5''	1:2:2132:G:O2'	1.94	0.66
1:2:1952:A:H5'	1:2:1953:A:H5'	1.77	0.66
1:2:2593:A:O2'	1:2:2594:U:H5'	1.96	0.66
1:2:436:A:C5'	1:2:437:G:H5''	2.25	0.66
1:2:2023:C:H2'	1:2:2024:U:O4'	1.95	0.66
1:2:2432:A:H2'	1:2:2433:G:C8	2.28	0.66
1:2:511:A:O2'	1:2:512:A:H5'	1.96	0.66
1:2:1357:U:H5'	1:2:1358:C:OP2	1.96	0.66
1:2:1353:A:O2'	1:2:1619:A:H5'	1.96	0.66
1:2:1938:U:N3	1:2:2531:U:H1'	2.10	0.66
1:2:2133:G:H2'	1:2:2134:U:C6	2.31	0.66
1:2:2602:G:H2'	1:2:2603:G:H8	1.61	0.66
1:2:653:G:H2'	1:2:654:A:H4'	1.78	0.66
1:2:2024:U:H2'	1:2:2025:A:H5'	1.77	0.65
1:2:2090:U:H3	1:2:2165:A:H2	1.43	0.65
1:2:44:G:H21	1:2:192:G:H21	1.44	0.65
1:2:545:C:N4	1:2:567:G:H1	1.94	0.65
1:2:984:A:H2	1:2:1200:G:H1	1.42	0.65
1:2:128:C:H2'	1:2:129:A:H5''	1.78	0.65
1:2:1304:U:C2'	1:2:1305:C:H5''	2.26	0.65
1:2:191:G:O2'	1:2:192:G:H5'	1.96	0.65
1:2:2286:G:N2	1:2:2290:A:H61	1.93	0.65
1:2:27:G:H1'	1:2:523:A:H62	1.61	0.65
1:2:716:U:H2'	1:2:717:G:O4'	1.96	0.65
1:2:2249:U:H2'	1:2:2250:G:O4'	1.97	0.65
1:2:1336:G:C2'	1:2:1337:G:H5''	2.27	0.65
1:2:1458:A:H3'	1:2:1459:U:H5''	1.77	0.65
1:2:245:C:H1'	1:2:438:G:C2	2.31	0.65
1:2:762:A:H61	1:2:766:A:H2	1.44	0.65
1:2:1444:C:H2'	1:2:1445:A:C8	2.32	0.65
1:2:1616:C:H2'	1:2:1617:G:C8	2.25	0.65
1:2:1689:U:C2'	1:2:1690:U:H5''	2.27	0.65
1:2:2109:A:N3	1:2:2109:A:H2'	2.12	0.65

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:2621:G:H2'	1:2:2622:G:H8	1.62	0.65
1:2:2422:C:OP1	2:2:2881:RAP:H40	1.95	0.65
1:2:1640:C:H2'	1:2:1641:C:C6	2.31	0.65
1:2:2225:G:H1	1:2:2237:C:N4	1.95	0.65
1:2:2667:C:H1'	1:2:2702:G:H1	1.62	0.65
1:2:2781:G:H2'	1:2:2782:G:O4'	1.96	0.65
1:2:490:A:O2'	1:2:491:A:H3'	1.97	0.65
1:2:942:U:O2'	1:2:943:U:H5'	1.95	0.65
1:2:1625:A:N3	1:2:1625:A:H2'	2.11	0.65
1:2:2283:G:H1	1:2:2291:U:H3	1.44	0.65
1:2:35:G:O4'	1:2:466:A:N3	2.30	0.65
1:2:1066:G:H3'	1:2:1067:G:C5'	2.26	0.65
1:2:2425:G:H4'	1:2:2427:A:H62	1.62	0.65
1:2:638:A:H2'	1:2:639:G:O4'	1.97	0.65
1:2:1414:G:H21	1:2:1484:G:H21	1.43	0.65
1:2:1835:C:H2'	1:2:1836:C:C6	2.32	0.65
1:2:2616:U:H1'	1:2:2762:G:H22	1.62	0.65
1:2:633:G:H2'	1:2:634:G:H8	1.62	0.65
1:2:790:A:H2'	1:2:791:G:H8	1.62	0.65
1:2:1974:U:O2'	1:2:1975:G:H5'	1.97	0.64
1:2:2204:A:H4'	1:2:2205:C:O5'	1.97	0.64
1:2:813:A:H1'	1:2:815:A:H5'	1.79	0.64
1:2:1333:G:H22	1:2:1346:C:H42	1.40	0.64
1:2:427:C:H1'	1:2:1856:U:H1'	1.79	0.64
1:2:1234:C:H2'	1:2:1235:C:C6	2.33	0.64
1:2:914:C:H2'	1:2:915:C:C6	2.33	0.64
1:2:1386:A:H5''	1:2:2191:A:H62	1.62	0.64
1:2:2245:A:O2'	1:2:2246:A:OP2	2.09	0.64
1:2:414:A:H2'	1:2:415:A:O4'	1.98	0.64
1:2:781:G:N2	1:2:1392:U:H1'	2.12	0.64
1:2:1039:A:H62	1:2:1136:G:H2'	1.62	0.64
1:2:1197:U:H2'	1:2:1198:C:O4'	1.97	0.64
1:2:1438:G:C2'	1:2:1439:G:H5'	2.27	0.64
1:2:2491:C:C3'	1:2:2492:G:H5''	2.28	0.64
1:2:2372:A:H2'	1:2:2373:C:C6	2.33	0.64
1:2:2692:A:H2'	1:2:2692:A:N3	2.13	0.64
1:2:44:G:H1	1:2:445:A:H61	1.46	0.64
1:2:843:G:N3	1:2:843:G:H2'	2.12	0.64
1:2:999:A:H4'	1:2:1166:A:N1	2.12	0.64
1:2:1339:U:O2'	1:2:1340:C:H5'	1.98	0.64
1:2:168:A:H2'	1:2:169:C:C6	2.32	0.64

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:2261:G:H5''	1:2:2262:C:O5'	1.98	0.64
1:2:2322:U:O2'	1:2:2323:U:H5'	1.98	0.64
1:2:879:A:H2'	1:2:880:C:H5'	1.78	0.64
1:2:2663:U:H3	1:2:2705:A:H61	1.44	0.64
1:2:860:U:H3	1:2:945:G:N2	1.96	0.64
1:2:2821:G:H2'	1:2:2822:U:C6	2.33	0.63
1:2:368:A:C2'	1:2:369:C:H5'	2.28	0.63
1:2:413:G:N3	1:2:413:G:H2'	2.12	0.63
1:2:38:G:H1	1:2:453:U:H3	1.45	0.63
1:2:1153:A:H5''	1:2:1154:A:N7	2.14	0.63
1:2:2315:A:H1'	1:2:2364:C:O4'	1.98	0.63
1:2:1151:U:H5''	1:2:1153:A:OP2	1.99	0.63
1:2:1826:U:H4'	1:2:1952:A:H2'	1.80	0.63
1:2:832:A:H2'	1:2:833:A:O4'	1.98	0.63
1:2:1486:A:H2'	1:2:1487:C:C6	2.33	0.63
1:2:1827:G:H1'	1:2:1914:U:H3	1.63	0.63
1:2:2363:G:H3'	1:2:2365:U:OP2	1.98	0.63
1:2:521:U:H4'	1:2:1248:G:H4'	1.81	0.63
1:2:1697:U:C2'	1:2:1698:C:H5'	2.29	0.63
1:2:146:C:H2'	1:2:147:G:C8	2.33	0.63
1:2:1525:A:N3	1:2:1525:A:H2'	2.13	0.63
1:2:158:A:H61	1:2:192:G:H1	1.47	0.63
1:2:1842:G:H1	1:2:1875:C:H42	1.46	0.63
1:2:108:G:H2'	1:2:109:A:O4'	1.99	0.63
1:2:1183:C:H2'	1:2:1184:G:O4'	1.98	0.63
1:2:1252:C:C2'	1:2:1253:C:H5''	2.29	0.63
1:2:2134:U:H2'	1:2:2135:C:O4'	1.99	0.63
1:2:492:G:H22	1:2:519:C:N4	1.94	0.63
1:2:143:A:H2'	1:2:144:U:O4'	1.97	0.63
1:2:2264:C:H4'	1:2:2267:A:H62	1.64	0.63
1:2:2368:G:H5''	1:2:2369:U:O4'	1.99	0.63
1:2:245:C:OP1	1:2:292:A:H5''	1.99	0.63
1:2:32:C:H2'	1:2:33:C:C6	2.33	0.63
1:2:1608:U:H2'	1:2:1609:G:C8	2.33	0.62
1:2:474:G:N2	1:2:476:G:H3'	2.14	0.62
1:2:813:A:H1'	1:2:815:A:O4'	1.99	0.62
1:2:956:A:H2	1:2:2427:A:H1'	1.64	0.62
1:2:38:G:H2'	1:2:39:C:C6	2.34	0.62
1:2:760:U:H3	1:2:1997:A:H2	1.47	0.62
1:2:777:A:N6	1:2:1766:U:H3	1.96	0.62
1:2:78:C:H42	1:2:105:G:H1	1.47	0.62

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1656:U:H4'	1:2:2678:C:H4'	1.81	0.62
1:2:759:C:N3	1:2:2590:U:H5''	2.14	0.62
1:2:1608:U:H2'	1:2:1609:G:H8	1.65	0.62
1:2:2516:U:H2'	1:2:2517:C:C6	2.35	0.62
1:2:422:C:H2'	1:2:423:G:C8	2.34	0.62
1:2:1086:C:H2'	1:2:1087:C:H5''	1.80	0.62
1:2:775:U:O2	1:2:1445:A:H5''	2.00	0.62
1:2:759:C:C5'	1:2:761:G:H1'	2.30	0.62
1:2:684:C:N4	1:2:822:G:H1	1.97	0.62
1:2:2634:G:N3	1:2:2634:G:H2'	2.14	0.62
1:2:1253:C:H2'	1:2:1254:G:O4'	1.99	0.62
1:2:129:A:H61	1:2:142:U:H3	1.47	0.62
1:2:134:G:N3	1:2:134:G:H2'	2.14	0.62
1:2:1538:A:H2'	1:2:1539:U:C6	2.35	0.62
1:2:1773:C:N4	2:2:2881:RAP:H14	2.15	0.62
1:2:1967:U:H2'	1:2:1968:G:C8	2.35	0.62
1:2:415:A:H2	1:2:435:A:H61	1.47	0.62
1:2:1814:G:H2'	1:2:1815:G:C8	2.33	0.62
1:2:583:C:O2'	1:2:584:A:OP2	2.15	0.62
1:2:1030:U:C2'	1:2:1031:C:H5'	2.29	0.61
1:2:1670:G:H21	1:2:1988:A:N6	1.98	0.61
1:2:2672:U:H2'	1:2:2673:G:H8	1.65	0.61
1:2:2063:A:N6	1:2:2219:U:H3	1.98	0.61
1:2:2602:G:H2'	1:2:2603:G:C8	2.35	0.61
1:2:1886:G:H2'	1:2:1887:G:H8	1.65	0.61
1:2:1032:A:H2'	1:2:1033:G:H4'	1.82	0.61
1:2:1994:U:H2'	1:2:1995:G:O4'	1.99	0.61
1:2:2004:U:H5'	1:2:2005:U:OP1	2.01	0.61
1:2:202:A:H2'	1:2:203:G:O4'	2.00	0.61
1:2:2371:A:N3	1:2:2371:A:H2'	2.15	0.61
1:2:391:C:H42	1:2:410:A:N6	1.97	0.61
1:2:619:A:H2'	1:2:620:G:C8	2.36	0.61
1:2:646:C:O2'	1:2:650:U:H5''	2.01	0.61
1:2:1154:A:O2'	1:2:1155:G:OP1	2.15	0.61
1:2:1323:G:H1'	1:2:1627:C:H5''	1.83	0.61
1:2:1333:G:N2	1:2:1346:C:N4	2.48	0.61
1:2:1807:A:H1'	1:2:1809:G:C8	2.36	0.61
1:2:1948:C:H2'	1:2:1949:A:C8	2.35	0.61
1:2:2860:C:H2'	1:2:2861:A:O4'	2.01	0.61
1:2:58:C:H3'	1:2:59:G:C5'	2.31	0.61
1:2:2088:U:H3	1:2:2167:A:H2	1.48	0.61

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:2404:A:O2'	1:2:2405:A:OP2	2.19	0.61
1:2:1034:U:H4'	1:2:1134:C:OP1	2.01	0.61
1:2:1456:C:H2'	1:2:1457:A:C8	2.36	0.61
1:2:411:C:C2'	1:2:412:U:H5''	2.30	0.61
1:2:1435:G:H21	1:2:1508:G:H22	1.49	0.61
1:2:2482:A:O5'	1:2:2483:U:OP1	2.19	0.61
1:2:1195:U:H2'	1:2:1196:G:H8	1.64	0.61
1:2:1923:U:H1'	1:2:1948:C:C4	2.36	0.61
1:2:334:G:N3	1:2:344:G:H1'	2.16	0.61
1:2:477:A:H2'	1:2:478:G:H5'	1.82	0.61
1:2:1510:A:H2'	1:2:1511:A:H5'	1.83	0.60
1:2:2018:G:O2'	1:2:2019:C:OP1	2.13	0.60
1:2:2491:C:H3'	1:2:2492:G:H5''	1.83	0.60
1:2:2490:U:H2'	1:2:2491:C:H6	1.66	0.60
1:2:391:C:N4	1:2:410:A:H61	1.98	0.60
1:2:979:A:H2'	1:2:980:G:C8	2.36	0.60
1:2:192:G:H4'	1:2:193:A:O5'	2.01	0.60
1:2:604:U:H2'	1:2:605:G:C8	2.36	0.60
1:2:1458:A:C3'	1:2:1459:U:H5''	2.32	0.60
1:2:2329:C:H2'	1:2:2330:G:O4'	2.01	0.60
1:2:466:A:H5'	1:2:483:A:N6	2.16	0.60
1:2:613:A:H2'	1:2:614:G:C8	2.36	0.60
1:2:1561:A:H2'	1:2:1562:G:O4'	2.01	0.60
1:2:1904:G:H2'	1:2:1905:G:O4'	2.02	0.60
1:2:538:A:N1	1:2:2025:A:H2'	2.16	0.60
1:2:2692:A:H5'	1:2:2693:U:H5'	1.83	0.60
1:2:312:G:H2'	1:2:313:U:O4'	2.02	0.60
1:2:1360:G:H2'	1:2:1361:G:H8	1.65	0.60
1:2:1456:C:H2'	1:2:1457:A:H8	1.65	0.60
1:2:1643:A:H61	1:2:1656:U:H3	1.47	0.60
1:2:2507:U:HO2'	1:2:2508:G:H8	1.47	0.60
1:2:2770:A:H5'	1:2:2867:G:N2	2.16	0.60
1:2:939:C:H2'	1:2:940:G:C8	2.37	0.60
1:2:1064:C:H42	1:2:1117:G:H1	1.48	0.60
1:2:1124:U:H2'	1:2:1125:G:H8	1.66	0.60
1:2:1290:A:H2'	1:2:1291:G:C8	2.35	0.60
1:2:153:A:O2'	1:2:154:U:H5'	2.01	0.60
1:2:2175:A:H2'	1:2:2176:U:C6	2.37	0.60
1:2:513:A:O2'	1:2:514:G:OP2	2.11	0.60
1:2:459:A:O2'	1:2:461:A:N7	2.32	0.60
1:2:1179:A:H2'	1:2:1180:A:H8	1.67	0.60

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1435:G:H21	1:2:1508:G:N2	1.99	0.60
1:2:162:C:H2'	1:2:163:A:C8	2.37	0.60
1:2:1729:C:H2'	1:2:1730:G:C8	2.37	0.60
1:2:2324:G:O2'	1:2:2325:A:OP2	2.19	0.60
1:2:889:C:H2'	1:2:890:U:C6	2.37	0.60
1:2:942:U:C2'	1:2:943:U:H5'	2.31	0.60
1:2:1773:C:H5	2:2:2881:RAP:C50	2.14	0.60
1:2:2666:U:H2'	1:2:2667:C:O4'	2.01	0.60
1:2:2841:U:H1'	1:2:2843:A:C1'	2.32	0.60
1:2:1174:G:H2'	1:2:1175:A:C8	2.35	0.59
1:2:1380:C:H2'	1:2:1381:G:H5'	1.82	0.59
1:2:1955:G:H2'	1:2:1956:G:H5'	1.82	0.59
1:2:482:A:H2'	1:2:483:A:O4'	2.00	0.59
1:2:930:A:OP1	1:2:930:A:H4'	2.02	0.59
1:2:1194:U:H2'	1:2:1195:U:C6	2.37	0.59
1:2:1495:G:H22	1:2:1528:C:H42	1.48	0.59
1:2:1532:A:H2'	1:2:1533:G:C8	2.36	0.59
1:2:2245:A:H1'	1:2:2251:U:O4	2.02	0.59
1:2:619:A:H2'	1:2:620:G:H8	1.67	0.59
1:2:1289:A:N6	1:2:1307:U:H3	2.00	0.59
1:2:1327:C:OP1	1:2:1345:G:H5'	2.02	0.59
1:2:1857:G:N2	1:2:1859:A:H3'	2.18	0.59
1:2:2588:U:O4	2:2:2881:RAP:C44	2.50	0.59
1:2:1681:A:C2	1:2:2706:U:H1'	2.37	0.59
1:2:933:G:H2'	1:2:934:G:H8	1.67	0.59
1:2:941:U:OP1	1:2:941:U:H4'	2.02	0.59
1:2:1074:G:H22	1:2:1086:C:H2'	1.67	0.59
1:2:1391:A:O2'	1:2:1392:U:C6	2.54	0.59
1:2:1641:C:H2'	1:2:1642:G:H5'	1.84	0.59
1:2:1764:A:C5	1:2:1821:A:H1'	2.36	0.59
1:2:1894:U:H3	1:2:1901:A:H61	1.50	0.59
1:2:247:A:H5''	1:2:248:A:OP2	2.01	0.59
1:2:717:G:H1'	1:2:740:A:N6	2.16	0.59
1:2:1310:C:OP1	1:2:2689:C:H4'	2.03	0.59
1:2:1437:A:C2'	1:2:1438:G:H5'	2.31	0.59
1:2:1487:C:H2'	1:2:1488:G:H8	1.67	0.59
1:2:1790:G:C8	1:2:1811:A:N6	2.71	0.59
1:2:1840:A:N3	1:2:1840:A:H2'	2.16	0.59
1:2:2442:C:H2'	1:2:2443:C:C6	2.38	0.59
1:2:248:A:H5'	1:2:373:A:N7	2.17	0.59
1:2:392:G:O2'	1:2:2211:U:H5''	2.03	0.59

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:837:U:H2'	1:2:838:A:C8	2.37	0.59
1:2:1274:C:H2'	1:2:1275:A:H8	1.68	0.59
1:2:1374:G:H1	1:2:1383:C:N4	1.95	0.59
1:2:173:A:H61	1:2:818:G:N2	2.01	0.59
1:2:1804:U:H2'	1:2:1805:G:H8	1.66	0.59
1:2:649:G:H22	1:2:661:C:H1'	1.68	0.59
1:2:1441:A:H4'	1:2:1442:C:C6	2.38	0.59
1:2:170:U:H2'	1:2:171:G:H8	1.68	0.59
1:2:2225:G:H1	1:2:2237:C:H42	1.48	0.59
1:2:352:G:H2'	1:2:353:G:H5'	1.85	0.59
1:2:660:G:H2'	1:2:661:C:O4'	2.02	0.59
1:2:1181:C:H3'	1:2:1182:U:C5'	2.33	0.59
1:2:1790:G:H1'	1:2:1791:C:C5	2.37	0.59
1:2:2220:A:H2'	1:2:2221:G:H8	1.67	0.59
1:2:2737:A:H2'	1:2:2738:A:H5'	1.84	0.59
1:2:422:C:H2'	1:2:423:G:H8	1.67	0.59
1:2:809:C:H2'	1:2:810:U:C6	2.38	0.59
1:2:1184:G:H2'	1:2:1185:C:H5''	1.85	0.58
1:2:1762:C:H2'	1:2:1763:G:C8	2.38	0.58
1:2:2110:G:H3'	1:2:2110:G:N3	2.18	0.58
1:2:1291:G:H1	1:2:1305:C:N4	2.00	0.58
1:2:167:A:H5''	1:2:181:A:N1	2.18	0.58
1:2:415:A:H2'	1:2:416:U:O4'	2.03	0.58
1:2:103:U:H2'	1:2:104:C:C6	2.38	0.58
1:2:119:G:H1'	1:2:129:A:N1	2.18	0.58
1:2:2496:C:N4	1:2:2546:G:H1	2.02	0.58
1:2:951:G:C2'	1:2:952:A:H5''	2.32	0.58
1:2:1540:C:H2'	1:2:1541:G:H8	1.69	0.58
1:2:1571:G:H2'	1:2:1572:C:C6	2.39	0.58
1:2:2169:A:O2'	1:2:2170:C:H5'	2.04	0.58
1:2:644:A:N3	1:2:2382:C:H4'	2.19	0.58
1:2:1191:G:H2'	1:2:1191:G:N3	2.18	0.58
1:2:1200:G:H2'	1:2:1201:G:O4'	2.04	0.58
1:2:132:U:H2'	1:2:133:C:C6	2.38	0.58
1:2:1359:G:N2	1:2:1617:G:H1'	2.19	0.58
1:2:2425:G:H4'	1:2:2427:A:N6	2.17	0.58
1:2:2589:C:H2'	1:2:2589:C:O2	2.03	0.58
1:2:490:A:O2'	1:2:491:A:H5'	2.03	0.58
1:2:198:A:O2'	1:2:199:A:OP2	2.21	0.58
1:2:231:G:H4'	1:2:397:U:H5'	1.85	0.58
1:2:935:C:H2'	1:2:936:A:C8	2.38	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1003:C:H2'	1:2:1004:A:C8	2.39	0.58
1:2:78:C:N4	1:2:105:G:H1	2.02	0.58
1:2:1353:A:H4'	1:2:1407:G:C1'	2.33	0.58
1:2:1716:G:O6	1:2:1754:G:H1'	2.03	0.58
1:2:208:C:H2'	1:2:209:G:O4'	2.03	0.58
1:2:2286:G:H21	1:2:2290:A:H61	1.52	0.58
1:2:367:G:H2'	1:2:368:A:H5''	1.86	0.58
1:2:60:A:N3	1:2:60:A:H2'	2.18	0.58
1:2:1459:U:OP1	1:2:1459:U:H3'	2.03	0.58
1:2:1789:U:H3	1:2:1813:A:H61	1.52	0.58
1:2:57:G:H2'	1:2:72:A:H62	1.69	0.58
1:2:584:A:O2'	1:2:585:U:H5'	2.04	0.58
1:2:181:A:H4'	1:2:182:G:C5'	2.34	0.58
1:2:2038:C:H2'	1:2:2483:U:C4'	2.29	0.58
1:2:218:A:HO2'	1:2:219:G:C4'	2.16	0.58
1:2:2607:C:H3'	1:2:2608:A:C5'	2.33	0.58
1:2:2722:C:H2'	1:2:2723:C:C6	2.39	0.58
1:2:674:U:H2'	1:2:675:C:O4'	2.03	0.58
1:2:838:A:O2'	1:2:839:U:H5'	2.04	0.58
1:2:1223:G:O2'	1:2:1224:A:OP2	2.16	0.58
1:2:1949:A:H1'	1:2:2572:U:C5'	2.34	0.58
1:2:1974:U:H2'	1:2:1975:G:H5'	1.85	0.58
1:2:2490:U:H2'	1:2:2491:C:C6	2.39	0.58
1:2:2664:G:H21	1:2:2706:U:H3	1.52	0.58
1:2:826:U:H2'	1:2:827:C:C6	2.39	0.58
1:2:1055:A:H2	1:2:1121:G:H2'	1.69	0.57
1:2:1213:U:H2'	1:2:1214:C:C6	2.39	0.57
1:2:1769:U:C2'	1:2:1770:U:H5''	2.34	0.57
1:2:879:A:H61	1:2:926:C:H1'	1.69	0.57
1:2:944:A:O2'	1:2:945:G:H5'	2.04	0.57
1:2:1066:G:H1'	1:2:1096:A:C2	2.39	0.57
1:2:1286:U:H4'	1:2:1288:A:OP1	2.03	0.57
1:2:1328:C:H42	1:2:1350:G:H1	1.52	0.57
1:2:139:A:H2'	1:2:140:G:H8	1.69	0.57
1:2:18:U:H2'	1:2:19:C:C6	2.39	0.57
1:2:1955:G:C2'	1:2:1956:G:H5'	2.33	0.57
1:2:2238:G:H4'	1:2:2407:G:OP2	2.03	0.57
1:2:1335:A:H2'	1:2:1336:G:C8	2.39	0.57
1:2:371:G:H3'	1:2:371:G:N3	2.20	0.57
1:2:667:U:H2'	1:2:668:A:H5''	1.85	0.57
1:2:885:A:H2'	1:2:886:A:H8	1.69	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:929:A:C3'	1:2:930:A:H5''	2.30	0.57
1:2:1742:G:H2'	1:2:1743:C:C6	2.39	0.57
1:2:1769:U:O4	1:2:1775:A:H1'	2.04	0.57
1:2:17:G:H2'	1:2:18:U:C6	2.39	0.57
1:2:411:C:OP1	1:2:2073:A:H1'	2.05	0.57
1:2:973:U:H2'	1:2:974:U:C6	2.39	0.57
1:2:1066:G:H2'	1:2:1067:G:H4'	1.86	0.57
1:2:2208:U:H2'	1:2:2209:G:H8	1.68	0.57
1:2:2224:U:OP1	1:2:2225:G:H5'	2.04	0.57
1:2:364:G:H2'	1:2:365:U:C6	2.39	0.57
1:2:118:U:H1'	1:2:143:A:C4	2.40	0.57
1:2:1899:A:H2'	1:2:1946:U:H1'	1.86	0.57
1:2:2070:G:H2'	1:2:2071:G:H8	1.70	0.57
1:2:2369:U:H2'	1:2:2370:G:C8	2.39	0.57
1:2:937:C:H2'	1:2:938:G:O4'	2.05	0.57
1:2:1087:C:H2'	1:2:1088:A:O4'	2.05	0.57
1:2:159:A:O2'	1:2:160:C:H5'	2.05	0.57
1:2:193:A:H2'	1:2:194:G:O4'	2.03	0.57
1:2:1973:C:H2'	1:2:1974:U:C6	2.40	0.57
1:2:2658:A:O2'	1:2:2659:C:H5'	2.04	0.57
1:2:411:C:H3'	1:2:412:U:H5''	1.85	0.57
1:2:797:A:C6	1:2:805:G:H1'	2.39	0.57
1:2:1190:C:H2'	1:2:1191:G:C8	2.39	0.57
1:2:1775:A:O2'	1:2:1776:A:OP2	2.14	0.57
1:2:213:C:H42	1:2:238:G:H22	1.51	0.57
1:2:2227:C:C2'	1:2:2228:U:H5'	2.33	0.57
1:2:387:A:H5''	1:2:436:A:H8	1.69	0.57
1:2:125:A:H5''	1:2:126:C:C6	2.40	0.57
1:2:1564:U:H2'	1:2:1565:G:O4'	2.05	0.57
1:2:2045:A:H2'	1:2:2046:C:H5'	1.87	0.57
1:2:2753:C:H2'	1:2:2754:C:C6	2.40	0.57
1:2:456:C:H2'	1:2:457:C:C6	2.40	0.57
1:2:1177:U:H3	1:2:1197:U:H1'	1.68	0.57
1:2:1355:A:N6	1:2:1358:C:N3	2.53	0.57
1:2:1750:A:H2'	1:2:1751:A:H8	1.70	0.57
1:2:1938:U:O2'	1:2:1939:U:OP1	2.16	0.57
1:2:2104:G:H2'	1:2:2105:U:C6	2.40	0.57
1:2:2183:C:H42	1:2:2202:G:H1	1.52	0.57
1:2:2866:A:H2'	1:2:2867:G:O4'	2.05	0.57
1:2:427:C:H2'	1:2:428:A:C8	2.39	0.57
1:2:856:A:H2'	1:2:857:U:O4'	2.05	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:983:G:OP2	1:2:985:G:H5''	2.04	0.57
1:2:1451:C:H2'	1:2:1452:U:C6	2.40	0.56
1:2:2492:G:H2'	1:2:2493:U:C6	2.40	0.56
1:2:197:G:N2	1:2:440:U:H2'	2.20	0.56
1:2:717:G:H1'	1:2:740:A:H61	1.70	0.56
1:2:1698:C:H4'	1:2:1754:G:C8	2.40	0.56
1:2:2132:G:H2'	1:2:2133:G:O4'	2.04	0.56
1:2:1139:A:O2'	1:2:2495:G:H4'	2.03	0.56
1:2:21:A:H61	1:2:529:U:H3	1.52	0.56
1:2:2470:U:O2'	1:2:2471:U:H5'	2.06	0.56
1:2:2667:C:H1'	1:2:2702:G:N1	2.20	0.56
1:2:2678:C:H2'	1:2:2679:G:C8	2.41	0.56
1:2:475:U:H1'	1:2:801:A:H61	1.70	0.56
1:2:1345:G:H5''	1:2:1346:C:OP2	2.04	0.56
1:2:1923:U:H1'	1:2:1948:C:N4	2.20	0.56
1:2:2307:A:H2'	1:2:2308:A:C8	2.40	0.56
1:2:2638:G:N2	1:2:2640:G:H5''	2.21	0.56
1:2:2636:A:N6	1:2:2643:G:H21	1.89	0.56
1:2:951:G:C3'	1:2:952:A:H5''	2.35	0.56
1:2:1450:G:H2'	1:2:1451:C:C6	2.41	0.56
1:2:1690:U:H2'	1:2:1691:G:C5'	2.35	0.56
1:2:2517:C:H2'	1:2:2518:C:C6	2.40	0.56
1:2:2633:A:H4'	1:2:2634:G:O5'	2.05	0.56
1:2:1715:A:H2'	1:2:1716:G:C5'	2.32	0.56
1:2:1773:C:H3'	1:2:1773:C:OP2	2.06	0.56
1:2:2034:A:H5'	1:2:2557:G:H5''	1.86	0.56
1:2:980:G:H2'	1:2:981:C:C6	2.40	0.56
1:2:200:A:C6	1:2:435:A:H1'	2.41	0.56
1:2:2824:C:H4'	1:2:2825:A:H5'	1.86	0.56
1:2:330:C:H2'	1:2:331:U:C6	2.40	0.56
1:2:546:A:H2'	1:2:547:U:C6	2.41	0.56
1:2:1001:A:N6	1:2:1200:G:H1'	2.18	0.56
1:2:1261:G:H8	1:2:1261:G:OP1	1.88	0.56
1:2:1339:U:H2'	1:2:1340:C:H6	1.71	0.56
1:2:1860:A:H2'	1:2:1861:G:O4'	2.06	0.56
1:2:2359:U:H2'	1:2:2360:C:C6	2.41	0.56
1:2:428:A:H2'	1:2:429:C:O4'	2.06	0.56
1:2:478:G:H2'	1:2:479:G:H8	1.71	0.56
1:2:918:A:C2'	1:2:919:U:H5''	2.36	0.56
1:2:1278:A:O2'	1:2:1279:G:O5'	2.19	0.56
1:2:1326:U:O2'	1:2:1345:G:H4'	2.05	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1356:G:O4'	1:2:1613:G:H2'	2.04	0.56
1:2:931:G:N2	1:2:2247:A:H5'	2.20	0.56
1:2:952:A:O2'	1:2:1204:G:H4'	2.06	0.56
1:2:981:C:O2'	1:2:995:A:H4'	2.06	0.56
1:2:1179:A:H61	1:2:1195:U:H3	1.54	0.56
1:2:1392:U:O2	1:2:1392:U:H2'	2.06	0.56
1:2:1437:A:O2'	1:2:1438:G:H5'	2.06	0.56
1:2:1694:A:H2'	1:2:1695:U:C6	2.41	0.56
1:2:2496:C:H41	1:2:2546:G:H1	1.53	0.56
1:2:405:C:H2'	1:2:406:G:H8	1.71	0.56
1:2:706:A:H2'	1:2:707:U:C6	2.40	0.56
1:2:840:U:H4'	1:2:841:G:C2	2.41	0.56
1:2:1311:C:H2'	1:2:1312:G:O4'	2.06	0.56
1:2:1480:G:H2'	1:2:1481:U:O4'	2.06	0.56
1:2:2383:C:H2'	1:2:2384:G:O4'	2.06	0.56
1:2:2014:A:H2'	1:2:2434:G:H4'	1.87	0.56
1:2:1982:C:H4'	1:2:2703:C:O2	2.06	0.56
1:2:721:C:N4	1:2:736:G:H22	2.04	0.56
1:2:1263:G:O2'	1:2:1264:C:OP1	2.24	0.55
1:2:1611:U:H2'	1:2:1612:U:O4'	2.06	0.55
1:2:781:G:H5'	1:2:1638:G:H5'	1.88	0.55
1:2:2778:U:H5''	1:2:2779:C:C5	2.41	0.55
1:2:483:A:H2'	1:2:484:G:H5'	1.88	0.55
1:2:824:U:C4'	1:2:1264:C:H1'	2.20	0.55
1:2:1398:G:H2'	1:2:1399:C:C6	2.40	0.55
1:2:192:G:O2'	1:2:193:A:OP2	2.22	0.55
1:2:2670:C:H42	1:2:2698:G:N2	2.02	0.55
1:2:616:U:C2'	1:2:617:U:H5''	2.35	0.55
1:2:688:A:H62	1:2:816:U:H3	1.53	0.55
1:2:888:G:H2'	1:2:889:C:O4'	2.06	0.55
1:2:1859:A:H2'	1:2:1860:A:H8	1.71	0.55
1:2:1654:A:H4'	1:2:2690:A:O2'	2.06	0.55
1:2:1683:G:H2'	1:2:1684:G:O4'	2.06	0.55
1:2:1859:A:H2'	1:2:1860:A:C8	2.41	0.55
1:2:2621:G:H1	1:2:2752:C:H42	1.54	0.55
1:2:328:A:H2'	1:2:329:C:C6	2.40	0.55
1:2:566:U:H2'	1:2:567:G:C8	2.42	0.55
1:2:614:G:H22	1:2:634:G:H1	1.54	0.55
1:2:789:G:C2'	1:2:790:A:OP2	2.54	0.55
1:2:677:G:H4'	1:2:951:G:O3'	2.06	0.55
1:2:1279:G:H1'	1:2:1280:U:H5	1.71	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1464:A:H2'	1:2:1465:G:C8	2.41	0.55
1:2:1537:U:H2'	1:2:1538:A:O4'	2.06	0.55
1:2:1563:U:H2'	1:2:1564:U:C6	2.42	0.55
1:2:1766:U:H2'	1:2:1767:G:O4'	2.07	0.55
1:2:2784:A:H5''	1:2:2865:G:H22	1.72	0.55
1:2:63:A:N6	1:2:89:A:H61	2.01	0.55
1:2:1018:C:H5'	1:2:1019:U:OP2	2.06	0.55
1:2:161:U:H2'	1:2:162:C:C6	2.42	0.55
1:2:2208:U:H2'	1:2:2209:G:C8	2.41	0.55
1:2:2271:C:H4'	1:2:2354:G:O4'	2.06	0.55
1:2:2705:A:C2	1:2:2706:U:H2'	2.42	0.55
1:2:245:C:H5'	1:2:292:A:H5'	1.87	0.55
1:2:1466:C:O2'	1:2:1467:U:H5'	2.06	0.55
1:2:1532:A:H2'	1:2:1533:G:H8	1.72	0.55
1:2:1727:C:H2'	1:2:1728:A:C8	2.42	0.55
1:2:1817:U:H2'	1:2:1818:G:C8	2.41	0.55
1:2:2077:G:H1	1:2:2179:C:H1'	1.71	0.55
1:2:2092:U:OP1	1:2:2133:G:H4'	2.06	0.55
1:2:2245:A:HO2'	1:2:2246:A:P	2.28	0.55
1:2:2463:G:O2'	1:2:2464:G:H5'	2.07	0.55
1:2:44:G:H1	1:2:445:A:N6	2.04	0.55
1:2:658:G:H2'	1:2:659:G:H8	1.71	0.55
1:2:77:C:H42	1:2:106:G:H1	1.52	0.55
1:2:1473:U:H4'	1:2:1474:A:C8	2.42	0.55
1:2:1894:U:H3	1:2:1901:A:N6	2.05	0.55
1:2:2057:U:H2'	1:2:2058:U:C6	2.42	0.55
1:2:614:G:N2	1:2:634:G:H1	2.05	0.55
1:2:1175:A:O2'	1:2:1176:U:H5'	2.07	0.55
1:2:712:A:H4'	1:2:1651:U:H3	1.71	0.55
1:2:2010:G:H1'	1:2:2020:G:H22	1.72	0.55
1:2:218:A:O2'	1:2:219:G:C4'	2.55	0.55
1:2:2680:U:H3'	1:2:2681:A:H5''	1.89	0.55
1:2:964:A:H2'	1:2:965:G:H8	1.70	0.55
1:2:1066:G:H1'	1:2:1096:A:N1	2.22	0.54
1:2:1772:C:H4'	1:2:1773:C:O5'	2.07	0.54
1:2:1819:U:H4'	1:2:1953:A:O2'	2.07	0.54
1:2:2213:G:H2'	1:2:2214:G:C8	2.41	0.54
1:2:2493:U:H2'	1:2:2494:C:C6	2.42	0.54
1:2:2592:U:O2'	1:2:2593:A:OP1	2.23	0.54
1:2:468:A:C2'	1:2:469:G:H4'	2.37	0.54
1:2:56:C:H2'	1:2:57:G:O4'	2.06	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:713:G:H2'	1:2:714:G:O4'	2.07	0.54
1:2:990:A:H2'	1:2:993:C:H42	1.72	0.54
1:2:1029:C:C2'	1:2:1030:U:H5''	2.35	0.54
1:2:1865:C:H2'	1:2:1866:G:O4'	2.06	0.54
1:2:2088:U:H2'	1:2:2089:C:C6	2.42	0.54
1:2:796:A:C2	1:2:798:G:H1'	2.42	0.54
1:2:952:A:H2'	1:2:953:G:C8	2.43	0.54
1:2:113:C:H2'	1:2:114:C:C6	2.42	0.54
1:2:1000:G:OP1	1:2:1168:G:H4'	2.08	0.54
1:2:1455:C:H2'	1:2:1456:C:C6	2.42	0.54
1:2:150:A:H2'	1:2:151:G:H5'	1.89	0.54
1:2:1538:A:H2'	1:2:1539:U:C5	2.42	0.54
1:2:2469:G:H5''	1:2:2470:U:OP1	2.06	0.54
1:2:2691:C:C2'	1:2:2692:A:H5''	2.35	0.54
1:2:26:G:H4'	1:2:1273:G:H4'	1.88	0.54
1:2:1079:G:H4'	1:2:1081:A:N6	2.22	0.54
1:2:216:U:H2'	1:2:217:U:C6	2.42	0.54
1:2:2082:C:N4	1:2:2173:G:H1	1.95	0.54
1:2:2217:G:H3'	1:2:2217:G:N3	2.22	0.54
1:2:2836:U:H2'	1:2:2837:G:H8	1.73	0.54
1:2:597:U:H2'	1:2:598:U:C6	2.43	0.54
1:2:632:A:H2'	1:2:633:G:H5'	1.89	0.54
1:2:1218:C:H2'	1:2:1219:C:C6	2.43	0.54
1:2:1975:G:C1'	1:2:1977:C:H41	2.20	0.54
1:2:2085:G:O2'	1:2:2086:U:H5'	2.07	0.54
1:2:2548:G:H2'	1:2:2549:G:C5'	2.38	0.54
1:2:2548:G:H2'	1:2:2549:G:H5'	1.89	0.54
1:2:2667:C:H42	1:2:2699:G:H3'	1.72	0.54
1:2:2841:U:H1'	1:2:2843:A:H1'	1.89	0.54
1:2:726:G:H2'	1:2:727:U:H5'	1.88	0.54
1:2:830:C:O2'	1:2:852:U:H5''	2.08	0.54
1:2:1259:A:O2'	1:2:1260:A:H5'	2.07	0.54
1:2:1399:C:H2'	1:2:1400:A:C8	2.42	0.54
1:2:1707:A:H2'	1:2:1708:C:O4'	2.07	0.54
1:2:2166:G:O2'	1:2:2167:A:H5'	2.07	0.54
1:2:2555:G:H3'	1:2:2555:G:N3	2.22	0.54
1:2:439:C:H2'	1:2:440:U:O4'	2.07	0.54
1:2:1007:A:H2'	1:2:1008:G:H8	1.72	0.54
1:2:1529:C:H2'	1:2:1530:U:O4'	2.08	0.54
1:2:1791:C:H1'	1:2:1793:A:O4'	2.07	0.54
1:2:190:A:H2'	1:2:191:G:C8	2.43	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:2370:G:HO2'	1:2:2371:A:P	2.31	0.54
1:2:2869:U:H2'	1:2:2870:C:C6	2.43	0.54
1:2:617:U:H2'	1:2:618:A:H8	1.72	0.54
1:2:857:U:H2'	1:2:858:G:O4'	2.08	0.54
1:2:104:C:H2'	1:2:105:G:C5'	2.37	0.54
1:2:1764:A:N7	1:2:1821:A:H1'	2.22	0.54
1:2:1980:A:H2'	1:2:1981:A:H8	1.71	0.54
1:2:203:G:H5'	1:2:234:C:H4'	1.89	0.54
1:2:27:G:H1'	1:2:523:A:N6	2.21	0.54
1:2:671:A:H2'	1:2:672:C:C6	2.42	0.54
1:2:827:C:H2'	1:2:828:C:C6	2.43	0.54
1:2:1038:U:H2'	1:2:1039:A:O4'	2.08	0.54
1:2:1132:C:H2'	1:2:1133:G:H8	1.73	0.54
1:2:1141:U:O2'	1:2:1142:G:OP1	2.20	0.54
1:2:1313:U:O2'	1:2:1314:A:P	2.66	0.54
1:2:1355:A:C1'	1:2:1410:U:H1'	2.38	0.54
1:2:2496:C:N4	1:2:2546:G:H22	2.06	0.54
1:2:2579:A:O2'	1:2:2580:C:H5'	2.07	0.54
1:2:890:U:O5'	1:2:891:A:H5''	2.08	0.54
1:2:1684:G:N2	1:2:1977:C:H42	2.06	0.54
1:2:1376:C:O2'	1:2:1800:A:H1'	2.07	0.54
1:2:323:G:OP2	1:2:343:A:H5'	2.08	0.54
1:2:677:G:O2'	1:2:678:G:H5'	2.08	0.54
1:2:1106:A:H2'	1:2:1107:A:H8	1.74	0.53
1:2:1572:C:C3'	1:2:1573:G:H5''	2.37	0.53
1:2:1787:U:H2'	1:2:1788:C:C6	2.43	0.53
1:2:192:G:C1'	1:2:193:A:H4'	2.38	0.53
1:2:1981:A:H4'	1:2:2704:U:H4'	1.89	0.53
1:2:2083:G:H2'	1:2:2084:G:H8	1.73	0.53
1:2:564:U:H2'	1:2:565:A:H8	1.73	0.53
1:2:931:G:H2'	1:2:932:G:O4'	2.08	0.53
1:2:1189:G:H2'	1:2:1190:C:C6	2.44	0.53
1:2:1355:A:HO2'	1:2:1356:G:P	2.31	0.53
1:2:158:A:H2'	1:2:159:A:O4'	2.08	0.53
1:2:218:A:H5'	1:2:220:U:H1'	1.90	0.53
1:2:2362:G:H2'	1:2:2363:G:O4'	2.08	0.53
1:2:484:G:O2'	1:2:485:G:H5'	2.09	0.53
1:2:1245:G:H2'	1:2:1246:G:H8	1.73	0.53
1:2:1665:C:H2'	1:2:1666:G:C8	2.43	0.53
1:2:1685:A:H4'	1:2:1686:A:H5'	1.90	0.53
1:2:1713:G:H2'	1:2:1714:A:O4'	2.09	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1755:G:H2'	1:2:1756:C:C6	2.44	0.53
1:2:2419:C:N3	1:2:2420:C:H1'	2.24	0.53
1:2:241:C:C2'	1:2:242:A:H5''	2.38	0.53
1:2:31:C:H2'	1:2:32:C:C6	2.43	0.53
1:2:322:A:N1	1:2:341:A:OP2	2.41	0.53
1:2:533:C:H2'	1:2:534:U:O4'	2.09	0.53
1:2:57:G:N2	1:2:69:G:N3	2.56	0.53
1:2:790:A:H2'	1:2:791:G:C8	2.42	0.53
1:2:920:G:H2'	1:2:921:A:H5''	1.90	0.53
1:2:953:G:H2'	1:2:954:U:O4'	2.08	0.53
1:2:1626:A:O2'	1:2:1627:C:OP1	2.25	0.53
1:2:1645:U:H2'	1:2:1646:G:C8	2.43	0.53
1:2:2312:A:N3	1:2:2314:A:N6	2.56	0.53
1:2:2389:G:H2'	1:2:2390:A:O5'	2.09	0.53
1:2:2459:C:C2'	1:2:2460:G:H5'	2.38	0.53
1:2:534:U:H4'	1:2:564:U:H4'	1.90	0.53
1:2:1565:G:H2'	1:2:1566:G:C8	2.43	0.53
1:2:242:A:O2'	1:2:243:G:O4'	2.24	0.53
1:2:2441:U:H2'	1:2:2442:C:C6	2.44	0.53
1:2:695:G:H2'	1:2:696:U:C6	2.43	0.53
1:2:754:G:H2'	1:2:755:C:C6	2.44	0.53
1:2:1687:C:O2'	1:2:1977:C:H4'	2.08	0.53
1:2:777:A:N6	1:2:1767:G:H1'	2.23	0.53
1:2:2170:C:C2'	1:2:2171:U:H5'	2.39	0.53
1:2:2674:C:H2'	1:2:2675:U:C6	2.44	0.53
1:2:547:U:H2'	1:2:548:G:H8	1.73	0.53
1:2:617:U:H2'	1:2:618:A:C8	2.44	0.53
1:2:889:C:H2'	1:2:890:U:H6	1.72	0.53
1:2:1654:A:H2'	1:2:1655:C:C6	2.44	0.53
1:2:2080:U:H2'	1:2:2081:U:C6	2.44	0.53
1:2:242:A:O2'	1:2:243:G:P	2.66	0.53
1:2:2793:G:H2'	1:2:2794:G:H8	1.74	0.53
1:2:364:G:H2'	1:2:365:U:C5	2.43	0.53
1:2:574:C:H2'	1:2:575:U:C6	2.44	0.53
1:2:981:C:H2'	1:2:982:C:C6	2.43	0.53
1:2:1223:G:H22	1:2:1249:G:H2'	1.74	0.53
1:2:1261:G:OP1	1:2:1261:G:C8	2.62	0.53
1:2:1312:G:H5''	1:2:1313:U:C5'	2.36	0.53
1:2:2352:A:H2'	1:2:2353:G:C8	2.43	0.53
1:2:2759:U:HO2'	1:2:2761:A:N6	2.05	0.53
1:2:26:G:H2'	1:2:27:G:O4'	2.08	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:329:C:O2'	1:2:330:C:H5'	2.09	0.53
1:2:877:G:H2'	1:2:878:C:C6	2.44	0.53
1:2:981:C:H2'	1:2:982:C:H6	1.74	0.53
1:2:1354:A:O2'	1:2:1355:A:OP1	2.19	0.53
1:2:127:C:H5''	1:2:1615:C:O2'	2.08	0.53
1:2:1651:U:H5''	1:2:1652:G:OP1	2.09	0.53
1:2:1685:A:O2'	1:2:1686:A:H3'	2.09	0.53
1:2:1806:G:P	1:2:1807:A:H5''	2.49	0.53
1:2:1967:U:H2'	1:2:1968:G:H8	1.73	0.53
1:2:2791:C:H2'	1:2:2792:C:C6	2.44	0.53
1:2:681:A:H2'	1:2:683:A:N7	2.24	0.53
1:2:738:G:H2'	1:2:739:G:O4'	2.08	0.53
1:2:1235:C:O2'	1:2:1236:G:H5'	2.09	0.53
1:2:1880:G:H2'	1:2:1881:U:C6	2.44	0.53
1:2:579:G:H2'	1:2:2013:A:C5	2.44	0.53
1:2:2745:A:H3'	1:2:2745:A:N3	2.24	0.53
1:2:2827:G:H2'	1:2:2828:C:O4'	2.08	0.53
1:2:650:U:H3	1:2:659:G:H1	1.56	0.53
1:2:868:U:H2'	1:2:869:C:C6	2.44	0.53
1:2:1303:U:H2'	1:2:1304:U:C6	2.44	0.52
1:2:1606:C:H2'	1:2:1607:A:C8	2.43	0.52
1:2:841:G:N2	1:2:2226:A:H4'	2.24	0.52
1:2:2449:G:H2'	1:2:2450:A:H8	1.73	0.52
1:2:2686:C:H2'	1:2:2687:G:H8	1.74	0.52
1:2:59:G:H2'	1:2:62:U:O4	2.08	0.52
1:2:776:G:H3'	1:2:776:G:N3	2.23	0.52
1:2:1100:G:HO2'	1:2:1101:U:H5	1.56	0.52
1:2:1685:A:C6	1:2:1691:G:H1'	2.44	0.52
1:2:1804:U:H2'	1:2:1805:G:C8	2.43	0.52
1:2:1850:G:H22	1:2:1867:A:C1'	2.22	0.52
1:2:1917:C:H2'	1:2:1918:G:C8	2.44	0.52
1:2:2466:G:H2'	1:2:2467:A:C8	2.44	0.52
1:2:2558:C:O2'	1:2:2559:U:H5'	2.09	0.52
1:2:2759:U:H4'	1:2:2761:A:C5	2.43	0.52
1:2:333:A:O2'	1:2:350:U:H2'	2.09	0.52
1:2:1407:G:H2'	1:2:1408:A:O4'	2.09	0.52
1:2:1883:A:H2	1:2:1953:A:H62	1.57	0.52
1:2:163:A:H2'	1:2:164:G:H8	1.75	0.52
1:2:1639:U:H2'	1:2:1640:C:C6	2.44	0.52
1:2:2103:G:N3	1:2:2103:G:H2'	2.23	0.52
1:2:37:C:H2'	1:2:38:G:C8	2.45	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1665:C:H2'	1:2:1666:G:H8	1.74	0.52
1:2:1842:G:H1	1:2:1875:C:N4	2.07	0.52
1:2:2237:C:C4	1:2:2405:A:H4'	2.44	0.52
1:2:2858:A:H3'	1:2:2859:U:H5'	1.90	0.52
1:2:2422:C:OP1	2:2:2881:RAP:C40	2.56	0.52
1:2:1273:G:H2'	1:2:1274:C:C6	2.45	0.52
1:2:1304:U:H2'	1:2:1305:C:C5'	2.38	0.52
1:2:1402:G:H2'	1:2:1403:U:O4'	2.09	0.52
1:2:1686:A:N3	1:2:1686:A:H2'	2.23	0.52
1:2:181:A:H4'	1:2:182:G:C4'	2.34	0.52
1:2:2006:G:O5'	1:2:2596:C:H4'	2.09	0.52
1:2:2103:G:H3'	1:2:2104:G:H5'	1.92	0.52
1:2:2194:A:C3'	1:2:2195:C:H5''	2.40	0.52
1:2:2240:C:H1'	1:2:2367:A:H1'	1.92	0.52
1:2:2343:C:H2'	1:2:2344:G:O4'	2.10	0.52
1:2:2425:G:H2'	1:2:2426:G:H4'	1.91	0.52
1:2:817:A:H2'	1:2:819:C:N4	2.23	0.52
1:2:1067:G:O5'	1:2:1068:A:H5'	2.10	0.52
1:2:762:A:H5'	1:2:1284:G:H1'	1.91	0.52
1:2:1621:C:H4'	1:2:1626:A:H62	1.70	0.52
1:2:1984:A:H2'	1:2:1985:G:C8	2.45	0.52
1:2:2422:C:H2'	1:2:2423:G:H8	1.75	0.52
1:2:2828:C:H2'	1:2:2829:A:H8	1.75	0.52
1:2:35:G:H4'	1:2:466:A:O2'	2.09	0.52
1:2:81:C:H2'	1:2:82:G:O4'	2.09	0.52
1:2:2205:C:H2'	1:2:2206:C:O4'	2.10	0.52
1:2:1749:G:O6	1:2:2674:C:H4'	2.10	0.52
1:2:2787:A:O2'	1:2:2788:C:H5'	2.10	0.52
1:2:323:G:H4'	1:2:342:G:C6	2.45	0.52
1:2:964:A:H61	1:2:976:C:N4	2.07	0.52
1:2:577:U:H5'	1:2:956:A:H62	1.74	0.52
1:2:986:A:H61	1:2:1000:G:H1'	1.75	0.52
1:2:1274:C:H2'	1:2:1275:A:C8	2.45	0.52
1:2:1327:C:P	1:2:1345:G:H5'	2.50	0.52
1:2:1760:G:H2'	1:2:1761:G:H8	1.74	0.52
1:2:175:C:N4	1:2:225:G:H1	2.06	0.52
1:2:415:A:O2'	1:2:416:U:H5'	2.10	0.52
1:2:796:A:N3	1:2:798:G:H1'	2.25	0.52
1:2:1092:U:H2'	1:2:1093:U:C6	2.45	0.51
1:2:1145:C:H5'	1:2:1146:G:OP2	2.10	0.51
1:2:1221:C:H2'	1:2:1222:G:H8	1.75	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1454:U:H2'	1:2:1455:C:C6	2.44	0.51
1:2:1466:C:C2'	1:2:1467:U:H5'	2.40	0.51
1:2:2375:G:H2'	1:2:2376:G:H8	1.75	0.51
1:2:2649:A:H2'	1:2:2650:G:H8	1.76	0.51
1:2:575:U:H4'	1:2:822:G:OP2	2.10	0.51
1:2:621:U:H2'	1:2:622:U:C6	2.45	0.51
1:2:990:A:H3'	1:2:991:A:C5'	2.40	0.51
1:2:1278:A:O2'	1:2:1279:G:P	2.68	0.51
1:2:2510:A:H61	1:2:2641:A:N6	2.08	0.51
1:2:2723:C:O2'	1:2:2724:G:H5'	2.11	0.51
1:2:34:U:H6	1:2:466:A:C2	2.28	0.51
1:2:471:A:H2'	1:2:472:C:O4'	2.10	0.51
1:2:540:G:C2'	1:2:541:C:H5'	2.40	0.51
1:2:135:U:H2'	1:2:136:A:C8	2.45	0.51
1:2:1474:A:N3	1:2:1474:A:H3'	2.25	0.51
1:2:1429:A:N6	1:2:1600:U:H4'	2.25	0.51
1:2:1686:A:H2'	1:2:1687:C:H5'	1.91	0.51
1:2:2266:A:H61	1:2:2323:U:H1'	1.75	0.51
1:2:2633:A:C2	1:2:2644:A:H5''	2.44	0.51
1:2:2791:C:H2'	1:2:2792:C:H6	1.75	0.51
1:2:2838:U:H2'	1:2:2839:G:H8	1.76	0.51
1:2:336:A:N6	1:2:349:G:H21	2.09	0.51
1:2:367:G:C3'	1:2:368:A:H5''	2.39	0.51
1:2:3:U:H2'	1:2:4:C:C6	2.45	0.51
1:2:670:U:H2'	1:2:671:A:C8	2.45	0.51
1:2:1314:A:H5''	1:2:1623:C:N4	2.25	0.51
1:2:160:C:H42	1:2:190:A:H61	1.59	0.51
1:2:1882:G:H21	1:2:1885:C:H42	1.59	0.51
1:2:2212:U:H2'	1:2:2213:G:C8	2.46	0.51
1:2:2228:U:H5''	1:2:2229:G:OP1	2.10	0.51
1:2:2437:G:H2'	1:2:2469:G:H22	1.75	0.51
1:2:2732:C:H3'	1:2:2733:A:H8	1.75	0.51
1:2:387:A:H2'	1:2:387:A:N3	2.24	0.51
1:2:641:G:H4'	1:2:651:C:O2'	2.11	0.51
1:2:578:U:H1'	1:2:958:G:O4'	2.10	0.51
1:2:1136:G:O6	1:2:1137:A:N6	2.44	0.51
1:2:1214:C:H2'	1:2:1215:A:H8	1.74	0.51
1:2:1279:G:C2'	1:2:1280:U:OP2	2.59	0.51
1:2:1380:C:C2'	1:2:1381:G:H5'	2.40	0.51
1:2:19:C:H2'	1:2:20:C:C6	2.46	0.51
1:2:2220:A:H2'	1:2:2221:G:C8	2.46	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:2584:U:H2'	1:2:2585:C:C6	2.45	0.51
1:2:2668:U:O2'	1:2:2669:C:P	2.68	0.51
1:2:1030:U:H2'	1:2:1031:C:H5'	1.93	0.51
1:2:55:A:H61	1:2:112:U:H3	1.57	0.51
1:2:1699:A:H61	1:2:1723:U:H3	1.59	0.51
1:2:304:A:H62	1:2:355:G:N2	2.09	0.51
1:2:509:U:H3	1:2:513:A:H62	1.58	0.51
1:2:763:A:H2	1:2:765:C:H4'	1.76	0.51
1:2:787:A:H2'	1:2:788:G:C5	2.45	0.51
1:2:1714:A:H62	1:2:1715:A:H61	1.56	0.51
1:2:2812:A:H2'	1:2:2813:G:C8	2.46	0.51
1:2:469:G:C2'	1:2:470:U:OP2	2.58	0.51
1:2:564:U:H2'	1:2:565:A:C8	2.45	0.51
1:2:1294:G:H1	1:2:1302:C:N4	2.09	0.51
1:2:1422:C:H2'	1:2:1423:A:C8	2.46	0.51
1:2:1854:G:N2	1:2:1863:U:H3	2.02	0.51
1:2:2239:C:H2'	1:2:2240:C:C6	2.45	0.51
1:2:2780:A:H2'	1:2:2781:G:C8	2.46	0.51
1:2:55:A:H2'	1:2:56:C:O4'	2.11	0.51
1:2:73:A:O2'	1:2:74:G:O5'	2.28	0.51
1:2:964:A:N6	1:2:976:C:H42	2.09	0.51
1:2:1026:U:H2'	1:2:1027:C:C6	2.45	0.51
1:2:132:U:H2'	1:2:133:C:C5	2.45	0.51
1:2:1505:U:H2'	1:2:1507:A:OP1	2.11	0.51
1:2:707:U:OP1	1:2:1585:A:H1'	2.11	0.51
1:2:1825:C:H2'	1:2:1826:U:O4'	2.11	0.51
1:2:2218:G:N2	1:2:2219:U:H1'	2.26	0.51
1:2:2263:C:H2'	1:2:2264:C:O4'	2.11	0.51
1:2:2471:U:H2'	1:2:2472:U:C6	2.46	0.51
1:2:2006:G:P	1:2:2596:C:H4'	2.51	0.51
1:2:785:U:H2'	1:2:786:U:C6	2.46	0.51
1:2:1714:A:N6	1:2:1715:A:N6	2.54	0.51
1:2:1843:U:H2'	1:2:1844:C:C6	2.46	0.51
1:2:1849:G:H21	1:2:1868:A:N6	2.08	0.51
1:2:2013:A:C2'	1:2:2014:A:OP2	2.59	0.51
1:2:2070:G:H2'	1:2:2071:G:C8	2.45	0.51
1:2:2225:G:H22	1:2:2237:C:H42	1.58	0.51
1:2:228:A:C5	1:2:229:G:H1'	2.46	0.51
1:2:2811:G:H2'	1:2:2812:A:C8	2.46	0.51
1:2:403:A:H5'	1:2:425:A:H4'	1.91	0.51
1:2:755:C:H2'	1:2:756:C:O4'	2.11	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:788:G:H5'	1:2:790:A:H1'	1.92	0.51
1:2:1296:G:H1'	1:2:1342:U:N3	2.24	0.50
1:2:1293:A:H2'	1:2:1294:G:H8	1.75	0.50
1:2:1342:U:H5'	1:2:1343:C:H5	1.76	0.50
1:2:1430:G:H2'	1:2:1431:U:C6	2.47	0.50
1:2:2395:C:H2'	1:2:2396:C:H5'	1.94	0.50
1:2:306:G:O2'	1:2:307:C:H5'	2.11	0.50
1:2:543:G:H2'	1:2:544:U:O4'	2.12	0.50
1:2:653:G:H21	1:2:657:A:H61	1.57	0.50
1:2:788:G:H21	1:2:800:U:H2'	1.76	0.50
1:2:933:G:H2'	1:2:934:G:C8	2.47	0.50
1:2:959:C:H2'	1:2:960:U:C6	2.46	0.50
1:2:1050:G:H1	1:2:1127:C:H42	1.59	0.50
1:2:1737:G:H2'	1:2:1738:U:C6	2.46	0.50
1:2:1953:A:O4'	1:2:1955:G:H1'	2.11	0.50
1:2:2688:G:H2'	1:2:2689:C:C6	2.46	0.50
1:2:490:A:N6	1:2:492:G:N3	2.59	0.50
1:2:580:A:H1'	1:2:582:G:N7	2.26	0.50
1:2:808:C:H2'	1:2:809:C:C6	2.46	0.50
1:2:985:G:H1'	1:2:1001:A:N6	2.26	0.50
1:2:1495:G:N2	1:2:1528:C:H42	2.09	0.50
1:2:1677:C:H2'	1:2:1678:G:C8	2.47	0.50
1:2:1980:A:H2'	1:2:1981:A:C8	2.46	0.50
1:2:218:A:O2'	1:2:219:G:O4'	2.29	0.50
1:2:2313:G:O2'	1:2:2314:A:OP1	2.20	0.50
1:2:2517:C:H2'	1:2:2518:C:H6	1.76	0.50
1:2:1033:G:O2'	1:2:1034:U:C6	2.64	0.50
1:2:1144:U:H2'	1:2:1147:G:OP1	2.12	0.50
1:2:1621:C:C4'	1:2:1626:A:N6	2.71	0.50
1:2:1820:G:OP1	1:2:1955:G:H5'	2.11	0.50
1:2:2217:G:H5'	1:2:2218:G:N7	2.25	0.50
1:2:2496:C:O2	1:2:2497:A:N3	2.44	0.50
1:2:2766:U:O2'	1:2:2767:C:H5'	2.12	0.50
1:2:368:A:H2'	1:2:369:C:H5'	1.94	0.50
1:2:1325:U:C2'	1:2:1326:U:OP2	2.59	0.50
1:2:1441:A:H2'	1:2:1441:A:N3	2.27	0.50
1:2:1591:U:H2'	1:2:1592:U:O4'	2.11	0.50
1:2:2173:G:O2'	1:2:2174:G:H5'	2.11	0.50
1:2:1510:A:C2'	1:2:1511:A:H5'	2.41	0.50
1:2:2001:G:H2'	1:2:2002:A:C8	2.47	0.50
1:2:336:A:H2'	1:2:337:G:C8	2.47	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:45:C:H2'	1:2:46:C:C6	2.46	0.50
1:2:470:U:H2'	1:2:471:A:C8	2.47	0.50
1:2:615:C:H2'	1:2:616:U:O4'	2.11	0.50
1:2:1343:C:H2'	1:2:1344:C:C6	2.46	0.50
1:2:781:G:H21	1:2:1392:U:H1'	1.77	0.50
1:2:181:A:H5''	1:2:182:G:OP1	2.12	0.50
1:2:1855:G:O2'	1:2:2389:G:N2	2.44	0.50
1:2:1901:A:N3	1:2:1901:A:H3'	2.27	0.50
1:2:2299:A:H5'	1:2:2300:G:C5	2.46	0.50
1:2:2320:G:H22	1:2:2353:G:H4'	1.77	0.50
1:2:2629:U:H2'	1:2:2630:C:C6	2.47	0.50
1:2:1263:G:O2'	1:2:1264:C:P	2.69	0.50
1:2:1314:A:H5''	1:2:1623:C:H42	1.77	0.50
1:2:1408:A:H2	1:2:1411:C:C2	2.29	0.50
1:2:1677:C:H2'	1:2:1678:G:H8	1.76	0.50
1:2:1926:U:HO2'	1:2:1927:U:P	2.34	0.50
1:2:2060:A:P	1:2:2060:A:H3'	2.52	0.50
1:2:2230:G:H2'	1:2:2231:G:C8	2.46	0.50
1:2:2389:G:C2'	1:2:2390:A:O5'	2.60	0.50
1:2:2491:C:H2'	1:2:2492:G:H5''	1.93	0.50
1:2:864:C:H2'	1:2:865:A:C8	2.47	0.50
1:2:87:G:H2'	1:2:87:G:N3	2.27	0.50
1:2:918:A:C3'	1:2:919:U:H5''	2.42	0.50
1:2:991:A:N6	1:2:2020:G:H21	2.10	0.50
1:2:1790:G:N2	1:2:1811:A:OP2	2.45	0.49
1:2:2086:U:H2'	1:2:2087:U:C6	2.47	0.49
1:2:218:A:H5'	1:2:220:U:C1'	2.41	0.49
1:2:2038:C:C2'	1:2:2483:U:H4'	2.36	0.49
1:2:2701:A:H1'	1:2:2849:C:H5'	1.94	0.49
1:2:2772:U:H3	1:2:2780:A:H61	1.59	0.49
1:2:827:C:H2'	1:2:828:C:H6	1.76	0.49
1:2:1278:A:H4'	1:2:1279:G:O5'	2.11	0.49
1:2:1308:C:H2'	1:2:1309:G:C8	2.47	0.49
1:2:1663:C:H5'	1:2:1664:G:C5'	2.23	0.49
1:2:1790:G:C2'	1:2:1791:C:OP2	2.60	0.49
1:2:2140:G:N3	1:2:2140:G:H3'	2.27	0.49
1:2:2618:A:H1'	1:2:2758:A:C2	2.45	0.49
1:2:864:C:H2'	1:2:865:A:H8	1.77	0.49
1:2:1205:G:H2'	1:2:1206:G:C8	2.47	0.49
1:2:1223:G:H1'	1:2:1225:G:N3	2.27	0.49
1:2:1364:C:H2'	1:2:1365:U:C6	2.47	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1435:G:N2	1:2:1514:C:N3	2.60	0.49
1:2:174:A:C4'	1:2:2051:U:H2'	2.36	0.49
1:2:2399:C:O2'	1:2:2400:G:H5'	2.13	0.49
1:2:25:U:H2'	1:2:26:G:O4'	2.11	0.49
1:2:2841:U:O2	1:2:2843:A:H1'	2.12	0.49
1:2:551:A:H2'	1:2:552:C:H6	1.78	0.49
1:2:541:C:N4	1:2:572:G:H4'	2.28	0.49
1:2:598:U:H2'	1:2:599:A:C8	2.47	0.49
1:2:692:C:H2'	1:2:693:A:C8	2.47	0.49
1:2:808:C:H2'	1:2:809:C:H6	1.77	0.49
1:2:841:G:H3'	1:2:841:G:N3	2.27	0.49
1:2:10:A:H2'	1:2:11:G:O4'	2.12	0.49
1:2:1194:U:H2'	1:2:1195:U:H6	1.77	0.49
1:2:1328:C:H2'	1:2:1329:U:C6	2.47	0.49
1:2:136:A:H2'	1:2:137:A:H5'	1.94	0.49
1:2:1619:A:N3	1:2:1619:A:O5'	2.45	0.49
1:2:225:G:O5'	1:2:226:C:H5''	2.12	0.49
1:2:2510:A:H61	1:2:2641:A:H61	1.60	0.49
1:2:1245:G:H2'	1:2:1246:G:C8	2.48	0.49
1:2:131:C:H2'	1:2:132:U:C6	2.47	0.49
1:2:135:U:H2'	1:2:136:A:H8	1.77	0.49
1:2:134:G:H21	1:2:136:A:P	2.35	0.49
1:2:1454:U:H3	1:2:1567:A:H61	1.60	0.49
1:2:1569:A:HO2'	1:2:1570:C:H5	1.60	0.49
1:2:1610:A:H2'	1:2:1611:U:C6	2.47	0.49
1:2:198:A:H5''	1:2:199:A:H4'	1.93	0.49
1:2:2009:U:H2'	1:2:2010:G:H8	1.78	0.49
1:2:2264:C:H1'	1:2:2363:G:N2	2.27	0.49
1:2:2468:G:H2'	1:2:2469:G:O4'	2.11	0.49
1:2:2638:G:N2	1:2:2640:G:H3'	2.26	0.49
1:2:632:A:H2'	1:2:633:G:C5'	2.42	0.49
1:2:632:A:C2'	1:2:633:G:H5'	2.43	0.49
1:2:839:U:H5''	1:2:2408:G:OP2	2.11	0.49
1:2:978:U:H2'	1:2:979:A:C8	2.48	0.49
1:2:1196:G:O2'	1:2:1197:U:H5'	2.11	0.49
1:2:147:G:C6	1:2:148:C:H1'	2.48	0.49
1:2:2269:G:H4'	1:2:2360:C:O2'	2.13	0.49
1:2:197:G:H22	1:2:440:U:H2'	1.77	0.49
1:2:986:A:N6	1:2:1000:G:H1'	2.27	0.49
1:2:1058:G:H2'	1:2:1121:G:C6	2.47	0.49
1:2:130:C:H2'	1:2:131:C:C6	2.48	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1391:A:O2'	1:2:1392:U:O5'	2.31	0.49
1:2:1495:G:O2'	1:2:1496:G:P	2.71	0.49
1:2:1496:G:N1	1:2:1527:G:N1	2.57	0.49
1:2:1622:G:H5''	1:2:1624:A:O4'	2.13	0.49
1:2:1856:U:H2'	1:2:1857:G:C8	2.47	0.49
1:2:2015:G:O2'	1:2:2016:A:P	2.71	0.49
1:2:2677:U:H2'	1:2:2678:C:C6	2.48	0.49
1:2:70:A:C2'	1:2:71:A:OP2	2.60	0.49
1:2:837:U:H2'	1:2:838:A:H8	1.75	0.49
1:2:1541:G:H22	1:2:1561:A:N6	2.08	0.49
1:2:1915:A:H2'	1:2:1916:G:O4'	2.12	0.49
1:2:2010:G:N2	1:2:2019:C:N3	2.60	0.49
1:2:2390:A:H2'	1:2:2391:A:C8	2.47	0.49
1:2:1938:U:H3'	1:2:2530:C:O2'	2.12	0.49
1:2:2667:C:O2'	1:2:2701:A:N6	2.46	0.49
1:2:485:G:O2'	1:2:486:U:P	2.70	0.49
1:2:1047:G:H22	1:2:1130:U:H3	1.60	0.49
1:2:1194:U:O2'	1:2:1195:U:P	2.71	0.49
1:2:1214:C:H2'	1:2:1215:A:C8	2.48	0.49
1:2:1257:U:H2'	1:2:1258:G:C8	2.48	0.49
1:2:1312:G:N2	1:2:1657:A:H5'	2.28	0.49
1:2:1332:G:H2'	1:2:1333:G:O4'	2.13	0.49
1:2:1487:C:H2'	1:2:1488:G:C8	2.46	0.49
1:2:1452:U:H5''	1:2:1533:G:H5'	1.95	0.49
1:2:1861:G:O2'	1:2:1862:C:H5'	2.11	0.49
1:2:2708:U:H2'	1:2:2709:C:C6	2.47	0.49
1:2:2811:G:H2'	1:2:2812:A:H8	1.78	0.49
1:2:875:G:H2'	1:2:876:A:O4'	2.13	0.49
1:2:88:G:H3'	1:2:89:A:C5'	2.35	0.49
1:2:1286:U:H4'	1:2:1288:A:P	2.53	0.49
1:2:2009:U:H2'	1:2:2010:G:C8	2.47	0.49
1:2:991:A:H61	1:2:2020:G:H21	1.60	0.49
1:2:363:G:H2'	1:2:363:G:N3	2.28	0.49
1:2:719:A:H2'	1:2:720:A:O4'	2.13	0.49
1:2:762:A:H2'	1:2:763:A:H8	1.77	0.49
1:2:1680:U:O2'	1:2:2665:G:H4'	2.12	0.48
1:2:1686:A:C2	1:2:1977:C:H1'	2.48	0.48
1:2:170:U:H2'	1:2:171:G:C8	2.47	0.48
1:2:1923:U:O2'	1:2:1924:C:H5	1.95	0.48
1:2:1993:G:H2'	1:2:1994:U:C6	2.48	0.48
1:2:2204:A:H4'	1:2:2205:C:H6	1.78	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:2571:G:H2'	1:2:2572:U:O4'	2.12	0.48
1:2:706:A:H4'	1:2:1366:A:O2'	2.14	0.48
1:2:853:C:H2'	1:2:854:G:C8	2.48	0.48
1:2:1681:A:H2'	1:2:1681:A:N3	2.28	0.48
1:2:1694:A:H2'	1:2:1695:U:H6	1.78	0.48
1:2:1849:G:H2'	1:2:1850:G:C8	2.48	0.48
1:2:2184:C:C2'	1:2:2185:U:H5'	2.43	0.48
1:2:2225:G:N1	1:2:2405:A:H1'	2.29	0.48
1:2:2358:C:H2'	1:2:2359:U:C6	2.49	0.48
1:2:2417:U:O3'	1:2:2419:C:OP1	2.30	0.48
1:2:2638:G:C2	1:2:2640:G:H5''	2.48	0.48
1:2:485:G:HO2'	1:2:486:U:P	2.36	0.48
1:2:688:A:N6	1:2:816:U:N3	2.61	0.48
1:2:1270:C:H2'	1:2:1271:C:C6	2.48	0.48
1:2:427:C:H4'	1:2:1862:C:O2	2.12	0.48
1:2:2783:U:H2'	1:2:2784:A:O4'	2.13	0.48
1:2:525:A:H2'	1:2:525:A:N3	2.28	0.48
1:2:720:A:H2'	1:2:721:C:C6	2.48	0.48
1:2:1100:G:O2'	1:2:1101:U:H5	1.95	0.48
1:2:1143:A:H2'	1:2:1144:U:C6	2.49	0.48
1:2:1333:G:H22	1:2:1346:C:N4	2.08	0.48
1:2:1790:G:O2'	1:2:1791:C:P	2.71	0.48
1:2:550:C:H2'	1:2:551:A:C8	2.48	0.48
1:2:726:G:C2'	1:2:727:U:H5'	2.43	0.48
1:2:1160:C:H2'	1:2:1161:U:C6	2.48	0.48
1:2:121:G:O2'	1:2:122:G:H5'	2.13	0.48
1:2:1358:C:H1'	1:2:1409:U:H3	1.78	0.48
1:2:1533:G:H2'	1:2:1534:A:H8	1.78	0.48
1:2:2828:C:H2'	1:2:2829:A:C8	2.48	0.48
1:2:485:G:O2'	1:2:486:U:OP1	2.28	0.48
1:2:74:G:H22	1:2:110:U:H3	1.62	0.48
1:2:1455:C:H2'	1:2:1456:C:H6	1.79	0.48
1:2:1549:C:C2'	1:2:1550:C:H5'	2.37	0.48
1:2:1948:C:H2'	1:2:1949:A:N7	2.28	0.48
1:2:1672:A:C2	1:2:2032:G:H5''	2.48	0.48
1:2:2786:G:H2'	1:2:2787:A:C8	2.49	0.48
1:2:1257:U:H2'	1:2:1258:G:H8	1.77	0.48
1:2:1326:U:O3'	1:2:1345:G:H5'	2.13	0.48
1:2:1322:G:N2	1:2:1627:C:H5'	2.26	0.48
1:2:2627:G:H2'	1:2:2628:C:O4'	2.13	0.48
1:2:1655:C:H5''	1:2:2689:C:O2'	2.12	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:2793:G:H2'	1:2:2794:G:C8	2.48	0.48
1:2:1:G:H2'	1:2:2:G:C8	2.49	0.48
1:2:508:G:H22	1:2:516:G:H1	1.61	0.48
1:2:608:G:H2'	1:2:609:U:C6	2.48	0.48
1:2:616:U:H2'	1:2:617:U:C5'	2.41	0.48
1:2:1251:G:H2'	1:2:1252:C:O4'	2.14	0.48
1:2:1252:C:H2'	1:2:1253:C:H5''	1.96	0.48
1:2:1386:A:H2'	1:2:1387:G:O4'	2.14	0.48
1:2:1490:U:OP1	1:2:1490:U:H3'	2.13	0.48
1:2:2228:U:H4'	1:2:2254:C:N4	2.29	0.48
1:2:2459:C:H2'	1:2:2460:G:H5'	1.94	0.48
1:2:2560:G:H2'	1:2:2560:G:N3	2.28	0.48
1:2:2838:U:H2'	1:2:2839:G:C8	2.48	0.48
1:2:648:A:H4'	1:2:649:G:O4'	2.13	0.48
1:2:704:G:H2'	1:2:705:C:C6	2.49	0.48
1:2:964:A:H2'	1:2:965:G:C8	2.48	0.48
1:2:139:A:H2'	1:2:140:G:C8	2.48	0.48
1:2:1728:A:H2'	1:2:1729:C:C6	2.49	0.48
1:2:1785:A:H2'	1:2:1786:C:C6	2.49	0.48
1:2:1828:C:H42	1:2:1887:G:H1	1.60	0.48
1:2:1917:C:H2'	1:2:1918:G:H8	1.78	0.48
1:2:2225:G:O2'	1:2:2226:A:H5'	2.13	0.48
1:2:333:A:H1'	1:2:351:A:C8	2.48	0.48
1:2:534:U:H2'	1:2:535:U:C6	2.49	0.48
1:2:852:U:H2'	1:2:853:C:C6	2.48	0.48
1:2:1196:G:H2'	1:2:1197:U:O4'	2.14	0.48
1:2:121:G:H1	1:2:126:C:N4	2.12	0.48
1:2:128:C:C2'	1:2:129:A:H5''	2.44	0.48
1:2:1308:C:H2'	1:2:1309:G:H8	1.77	0.48
1:2:1743:C:H2'	1:2:1744:G:C8	2.48	0.48
1:2:2048:C:H2'	1:2:2049:C:H6	1.79	0.48
1:2:2265:A:OP1	1:2:2266:A:H5'	2.14	0.48
1:2:2312:A:H1'	1:2:2314:A:C5	2.49	0.48
1:2:2476:A:O2'	1:2:2477:C:C6	2.63	0.48
1:2:37:C:H4'	1:2:463:C:OP1	2.14	0.48
1:2:516:G:O2'	1:2:517:A:O4'	2.31	0.48
1:2:532:A:H2'	1:2:533:C:C6	2.49	0.48
1:2:592:G:H2'	1:2:593:C:C6	2.49	0.48
1:2:1168:G:H2'	1:2:1169:C:C6	2.48	0.47
1:2:1283:C:H4'	1:2:1284:G:C8	2.49	0.47
1:2:1460:G:O2'	1:2:1461:C:H5'	2.14	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1699:A:H2'	1:2:1700:C:C6	2.49	0.47
1:2:2491:C:C2'	1:2:2492:G:H5''	2.44	0.47
1:2:24:G:N2	1:2:526:C:O2	2.46	0.47
1:2:2559:U:O2'	1:2:2560:G:H5'	2.14	0.47
1:2:1949:A:H1'	1:2:2572:U:H5'	1.95	0.47
1:2:2641:A:H2'	1:2:2642:G:O4'	2.14	0.47
1:2:429:C:H2'	1:2:430:C:C6	2.48	0.47
1:2:637:G:H5'	1:2:668:A:O2'	2.13	0.47
1:2:811:G:H2'	1:2:812:G:C8	2.49	0.47
1:2:1446:U:H3	1:2:1577:G:H1	1.60	0.47
1:2:1500:U:H2'	1:2:1501:C:C6	2.49	0.47
1:2:1768:U:H2'	1:2:1769:U:C6	2.49	0.47
1:2:2054:A:H2'	1:2:2055:G:H8	1.78	0.47
1:2:2083:G:H2'	1:2:2084:G:C8	2.49	0.47
1:2:2122:G:C2'	1:2:2122:G:N3	2.75	0.47
1:2:2422:C:H2'	1:2:2423:G:C8	2.50	0.47
1:2:246:C:C2	1:2:373:A:H4'	2.49	0.47
1:2:1939:U:H1'	1:2:2531:U:OP1	2.14	0.47
1:2:2618:A:C2	1:2:2619:G:H1'	2.49	0.47
1:2:2621:G:H2'	1:2:2622:G:C8	2.47	0.47
1:2:2790:C:H2'	1:2:2791:C:C6	2.48	0.47
1:2:581:A:C2	1:2:582:G:H1'	2.49	0.47
1:2:618:A:H2'	1:2:619:A:H5'	1.95	0.47
1:2:631:G:H4'	1:2:632:A:C2	2.50	0.47
1:2:990:A:H3'	1:2:991:A:H5''	1.95	0.47
1:2:1438:G:H2'	1:2:1439:G:C5'	2.34	0.47
1:2:1498:G:O2'	1:2:1499:A:H5'	2.14	0.47
1:2:1625:A:N3	1:2:1632:A:O4'	2.47	0.47
1:2:1685:A:C2'	1:2:1686:A:OP2	2.62	0.47
1:2:777:A:N6	1:2:1766:U:N3	2.61	0.47
1:2:1888:C:H2'	1:2:1913:G:C6	2.50	0.47
1:2:2324:G:O2'	1:2:2325:A:P	2.72	0.47
1:2:2484:G:O2'	1:2:2485:U:H5'	2.14	0.47
1:2:2712:G:H5'	1:2:2713:A:C8	2.49	0.47
1:2:2:G:H2'	1:2:3:U:C6	2.50	0.47
1:2:367:G:H3'	1:2:368:A:H5''	1.95	0.47
1:2:247:A:C8	1:2:373:A:H5'	2.49	0.47
1:2:571:U:H2'	1:2:581:A:H1'	1.95	0.47
1:2:804:C:O2	1:2:806:A:O2'	2.33	0.47
1:2:1030:U:O2'	1:2:1031:C:H5'	2.14	0.47
1:2:118:U:H1'	1:2:143:A:N9	2.29	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1355:A:O2'	1:2:1356:G:P	2.71	0.47
1:2:2552:C:OP1	1:2:2553:G:H5''	2.15	0.47
1:2:2563:U:O2'	1:2:2564:U:H5'	2.14	0.47
1:2:2633:A:H2	1:2:2644:A:H5''	1.78	0.47
1:2:465:C:H4'	1:2:468:A:N6	2.29	0.47
1:2:696:U:H2'	1:2:697:G:C8	2.49	0.47
1:2:1205:G:H2'	1:2:1206:G:H8	1.78	0.47
1:2:1471:G:O2'	1:2:1472:C:H5'	2.15	0.47
1:2:1722:G:H2'	1:2:1723:U:C6	2.49	0.47
1:2:1846:A:H2'	1:2:1847:G:O4'	2.15	0.47
1:2:2245:A:H4'	1:2:2246:A:O5'	2.15	0.47
1:2:2262:C:C5	1:2:2368:G:H2'	2.50	0.47
1:2:2769:C:H2'	1:2:2770:A:H5'	1.95	0.47
1:2:40:U:H2'	1:2:41:G:C8	2.49	0.47
1:2:28:A:N6	1:2:522:G:H1'	2.29	0.47
1:2:736:G:H2'	1:2:737:C:O4'	2.14	0.47
1:2:73:A:O2'	1:2:74:G:P	2.72	0.47
1:2:1004:A:H2'	1:2:1005:U:H5''	1.96	0.47
1:2:1349:A:H2'	1:2:1350:G:C8	2.49	0.47
1:2:1357:U:HO2'	1:2:1397:A:H2'	1.78	0.47
1:2:1880:G:H2'	1:2:1881:U:H6	1.79	0.47
1:2:1776:A:H4'	1:2:1965:U:O2'	2.15	0.47
1:2:2032:G:H2'	1:2:2033:C:C6	2.50	0.47
1:2:2299:A:C1'	1:2:2312:A:H62	2.18	0.47
1:2:544:U:H2'	1:2:545:C:C6	2.49	0.47
1:2:725:C:H2'	1:2:726:G:C8	2.50	0.47
1:2:1106:A:H2'	1:2:1107:A:C8	2.49	0.47
1:2:1605:A:O2'	1:2:1606:C:H5'	2.15	0.47
1:2:1724:C:H2'	1:2:1725:C:C6	2.50	0.47
1:2:1747:G:H1'	1:2:1749:G:N3	2.30	0.47
1:2:1807:A:C2'	1:2:1808:C:H4'	2.41	0.47
1:2:1861:G:H2'	1:2:1862:C:C6	2.50	0.47
1:2:2230:G:H2'	1:2:2231:G:H8	1.79	0.47
1:2:643:A:N3	1:2:2382:C:H1'	2.30	0.47
1:2:2408:G:O4'	1:2:2408:G:OP1	2.32	0.47
1:2:2042:A:N3	1:2:2482:A:N6	2.63	0.47
1:2:298:C:H42	1:2:364:G:H1	1.62	0.47
1:2:387:A:H5''	1:2:436:A:C8	2.48	0.47
1:2:1183:C:N4	1:2:1191:G:N1	2.60	0.47
1:2:1388:C:H2'	1:2:1389:C:C6	2.50	0.47
1:2:1501:C:H2'	1:2:1502:G:O4'	2.14	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1609:G:O2'	1:2:1610:A:H5'	2.15	0.47
1:2:1782:A:H2'	1:2:1783:G:O5'	2.15	0.47
1:2:1783:G:H2'	1:2:1784:C:O4'	2.14	0.47
1:2:181:A:H4'	1:2:182:G:OP1	2.14	0.47
1:2:2034:A:N3	1:2:2035:G:N7	2.62	0.47
1:2:2270:U:O2'	1:2:2353:G:H1'	2.15	0.47
1:2:2325:A:H4'	1:2:2362:G:O4'	2.15	0.47
1:2:2520:A:H4'	1:2:2744:A:N1	2.30	0.47
1:2:2616:U:H1'	1:2:2762:G:N2	2.27	0.47
1:2:2680:U:H3'	1:2:2681:A:C5'	2.44	0.47
1:2:2800:C:H2'	1:2:2801:A:O4'	2.15	0.47
1:2:2863:U:H2'	1:2:2864:C:C6	2.49	0.47
1:2:940:G:C3'	1:2:941:U:H5''	2.26	0.47
1:2:1110:G:H2'	1:2:1111:C:C6	2.49	0.47
1:2:1151:U:H5''	1:2:1153:A:P	2.55	0.47
1:2:1314:A:N6	1:2:1316:G:C5	2.83	0.47
1:2:1818:G:H2'	1:2:1819:U:C6	2.50	0.47
1:2:1871:G:H2'	1:2:1871:G:N3	2.28	0.47
1:2:2370:G:C2'	1:2:2371:A:OP2	2.61	0.47
1:2:238:G:H4'	1:2:618:A:C2	2.50	0.47
1:2:2786:G:H2'	1:2:2787:A:H8	1.80	0.47
1:2:367:G:C2'	1:2:368:A:H5''	2.44	0.47
1:2:403:A:H4'	1:2:404:A:O5'	2.14	0.47
1:2:1039:A:H2'	1:2:1040:A:C8	2.49	0.47
1:2:1246:G:O2'	1:2:1247:U:H5'	2.14	0.47
1:2:1258:G:H2'	1:2:1259:A:C8	2.50	0.47
1:2:1398:G:H2'	1:2:1399:C:O4'	2.15	0.47
1:2:1452:U:H5'	1:2:1532:A:O2'	2.13	0.47
1:2:1944:C:H2'	1:2:1945:C:O4'	2.14	0.47
1:2:1975:G:H1'	1:2:1977:C:C5	2.50	0.47
1:2:198:A:O2'	1:2:199:A:P	2.73	0.47
1:2:2048:C:H2'	1:2:2049:C:C6	2.50	0.47
1:2:2705:A:N6	1:2:2707:G:H1'	2.30	0.47
1:2:2812:A:H2'	1:2:2813:G:H8	1.79	0.47
1:2:298:C:H2'	1:2:299:C:O4'	2.14	0.47
1:2:352:G:C2'	1:2:353:G:H5'	2.45	0.47
1:2:421:G:H2'	1:2:422:C:C6	2.50	0.47
1:2:66:U:H2'	1:2:67:G:H8	1.79	0.47
1:2:1161:U:H2'	1:2:1162:A:H8	1.80	0.47
1:2:1482:U:H2'	1:2:1483:G:H8	1.79	0.47
1:2:172:A:OP2	1:2:173:A:O2'	2.33	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:2058:U:H1'	1:2:2576:G:N2	2.24	0.47
1:2:2379:G:C2	1:2:2380:U:H1'	2.50	0.47
1:2:2500:C:H2'	1:2:2501:U:C6	2.50	0.47
1:2:328:A:H2'	1:2:329:C:H6	1.80	0.47
1:2:39:C:H2'	1:2:40:U:C6	2.49	0.47
1:2:577:U:H5'	1:2:956:A:N6	2.29	0.47
1:2:715:U:H3	1:2:743:A:N6	2.10	0.47
1:2:797:A:C5	1:2:805:G:H1'	2.50	0.47
1:2:840:U:H5'	1:2:841:G:O5'	2.15	0.47
1:2:885:A:H2'	1:2:886:A:C8	2.47	0.47
1:2:1321:A:H2'	1:2:1322:G:O4'	2.15	0.46
1:2:1416:A:O2'	1:2:1417:C:H5'	2.14	0.46
1:2:1557:G:H2'	1:2:1558:C:C6	2.50	0.46
1:2:1821:A:H3'	1:2:1822:C:C6	2.50	0.46
1:2:2280:A:H2'	1:2:2281:C:C6	2.50	0.46
1:2:2447:G:N2	1:2:2461:G:OP2	2.47	0.46
1:2:2605:C:O2'	1:2:2606:G:H5'	2.15	0.46
1:2:93:A:H2'	1:2:94:C:C6	2.50	0.46
1:2:1086:C:C2'	1:2:1087:C:H5''	2.45	0.46
1:2:117:A:O5'	1:2:118:U:H5	1.98	0.46
1:2:1325:U:H2'	1:2:1326:U:OP2	2.15	0.46
1:2:162:C:H2'	1:2:163:A:H8	1.79	0.46
1:2:1763:G:H2'	1:2:1764:A:H4'	1.98	0.46
1:2:1811:A:H1'	1:2:1813:A:C5	2.50	0.46
1:2:1821:A:H3'	1:2:1822:C:H6	1.80	0.46
1:2:2817:A:H2'	1:2:2818:G:C8	2.51	0.46
1:2:2844:G:H2'	1:2:2845:C:O4'	2.15	0.46
1:2:356:A:H2'	1:2:357:A:C8	2.50	0.46
1:2:550:C:H2'	1:2:551:A:H8	1.80	0.46
1:2:653:G:H21	1:2:657:A:N6	2.14	0.46
1:2:1087:C:H2'	1:2:1088:A:C8	2.51	0.46
1:2:1326:U:O2'	1:2:1345:G:C4'	2.64	0.46
1:2:2312:A:H1'	1:2:2314:A:C6	2.49	0.46
1:2:2342:U:H2'	1:2:2343:C:C6	2.49	0.46
1:2:2686:C:H2'	1:2:2687:G:C8	2.50	0.46
1:2:310:A:N6	1:2:311:A:N6	2.63	0.46
1:2:632:A:H2'	1:2:633:G:O4'	2.15	0.46
1:2:1161:U:H2'	1:2:1162:A:C8	2.50	0.46
1:2:144:U:H2'	1:2:145:C:C6	2.50	0.46
1:2:1452:U:C5'	1:2:1533:G:H5'	2.46	0.46
1:2:1686:A:C2'	1:2:1686:A:N3	2.77	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1820:G:O2'	1:2:1821:A:P	2.74	0.46
1:2:2044:G:C8	1:2:2480:C:O2'	2.68	0.46
1:2:2074:U:H3'	1:2:2075:U:C5'	2.44	0.46
1:2:2340:C:H2'	1:2:2341:G:H5'	1.97	0.46
1:2:2370:G:H2'	1:2:2371:A:OP2	2.15	0.46
1:2:2644:A:H2'	1:2:2645:C:C6	2.51	0.46
1:2:470:U:H2'	1:2:471:A:H8	1.81	0.46
1:2:714:G:O2'	1:2:715:U:H5'	2.15	0.46
1:2:83:A:O3'	1:2:84:G:O4'	2.33	0.46
1:2:857:U:C2'	1:2:858:G:H5'	2.46	0.46
1:2:1316:G:H1'	1:2:1658:A:N1	2.31	0.46
1:2:1698:C:H2'	1:2:1753:A:H2'	1.98	0.46
1:2:2406:C:O2'	1:2:2408:G:N2	2.49	0.46
1:2:225:G:N3	1:2:2410:U:H4'	2.30	0.46
1:2:681:A:C2'	1:2:683:A:H62	2.28	0.46
1:2:988:G:O2'	1:2:989:G:H5'	2.16	0.46
1:2:1223:G:N3	1:2:1225:G:N3	2.63	0.46
1:2:1294:G:N1	1:2:1302:C:N4	2.62	0.46
1:2:1413:U:H2'	1:2:1414:G:H8	1.80	0.46
1:2:1414:G:H2'	1:2:1415:C:O4'	2.16	0.46
1:2:129:A:N6	1:2:142:U:H3	2.12	0.46
1:2:1466:C:H2'	1:2:1467:U:C4'	2.46	0.46
1:2:1541:G:N2	1:2:1562:G:N2	2.64	0.46
1:2:2225:G:N2	1:2:2237:C:H42	2.13	0.46
1:2:2270:U:H2'	1:2:2271:C:C6	2.51	0.46
1:2:2356:A:O2'	1:2:2357:A:H5'	2.16	0.46
1:2:1041:G:O2'	1:2:2445:C:H4'	2.16	0.46
1:2:2702:G:H2'	1:2:2703:C:C6	2.51	0.46
1:2:2721:A:H2'	1:2:2722:C:O4'	2.15	0.46
1:2:558:G:OP2	1:2:558:G:H3'	2.15	0.46
1:2:1008:G:H2'	1:2:1009:C:C6	2.50	0.46
1:2:1182:U:O2	1:2:1192:A:N1	2.48	0.46
1:2:1621:C:H2'	1:2:1622:G:O4'	2.16	0.46
1:2:1302:C:H5''	1:2:1664:G:N2	2.30	0.46
1:2:1849:G:H21	1:2:1868:A:H62	1.64	0.46
1:2:2526:U:C2	1:2:2545:A:N6	2.83	0.46
1:2:1124:U:H5''	1:2:2730:A:H5'	1.98	0.46
1:2:551:A:H2'	1:2:552:C:C6	2.51	0.46
1:2:643:A:H2'	1:2:644:A:C8	2.51	0.46
1:2:926:C:H2'	1:2:927:C:H5'	1.97	0.46
1:2:926:C:OP2	1:2:927:C:H5	1.99	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1139:A:H1'	1:2:2495:G:HO2'	1.77	0.46
1:2:1602:G:O3'	1:2:1603:A:H8	1.99	0.46
1:2:1685:A:H2'	1:2:1686:A:OP2	2.16	0.46
1:2:1758:C:H2'	1:2:1759:A:C8	2.50	0.46
1:2:2096:U:C4	1:2:2104:G:H4'	2.51	0.46
1:2:1778:U:H4'	1:2:2568:A:H4'	1.97	0.46
1:2:2697:G:H2'	1:2:2698:G:O4'	2.16	0.46
1:2:2810:A:H4'	1:2:2811:G:H8	1.75	0.46
1:2:2045:A:C2	2:2:2881:RAP:H41	2.51	0.46
1:2:460:U:O2'	1:2:461:A:P	2.73	0.46
1:2:558:G:H2'	1:2:558:G:N3	2.31	0.46
1:2:1587:A:H2'	1:2:1588:A:C8	2.51	0.46
1:2:2005:U:H4'	1:2:2017:U:O2	2.16	0.46
1:2:2015:G:O2'	1:2:2016:A:OP1	2.34	0.46
1:2:216:U:H5''	1:2:601:A:H62	1.79	0.46
1:2:2274:C:C2'	1:2:2275:U:H5'	2.42	0.46
1:2:2305:C:N3	1:2:2367:A:N6	2.64	0.46
1:2:2370:G:N2	1:2:2403:C:C5	2.84	0.46
1:2:2692:A:OP1	1:2:2692:A:O4'	2.34	0.46
1:2:1033:G:C2'	1:2:1034:U:OP2	2.64	0.46
1:2:1166:A:C2'	1:2:1167:A:H5''	2.45	0.46
1:2:117:A:O5'	1:2:118:U:C5	2.69	0.46
1:2:1347:C:H2'	1:2:1348:C:C6	2.51	0.46
1:2:1375:C:H42	1:2:1382:G:H1	1.64	0.46
1:2:1468:A:N3	1:2:1468:A:H2'	2.30	0.46
1:2:1462:C:O2'	1:2:1560:A:H1'	2.15	0.46
1:2:1985:G:H2'	1:2:1986:G:H8	1.80	0.46
1:2:2215:C:H2'	1:2:2216:G:O4'	2.16	0.46
1:2:2522:G:H2'	1:2:2523:G:C8	2.52	0.46
1:2:2569:A:H2'	1:2:2570:C:C6	2.50	0.46
1:2:2604:G:H2'	1:2:2605:C:O4'	2.15	0.46
1:2:2874:A:H2'	1:2:2875:C:C6	2.51	0.46
1:2:319:G:O4'	1:2:511:A:O4'	2.34	0.46
1:2:405:C:H2'	1:2:406:G:C8	2.50	0.46
1:2:781:G:H2'	1:2:782:U:C6	2.51	0.46
1:2:935:C:H2'	1:2:936:A:H8	1.81	0.46
1:2:1655:C:H2'	1:2:1656:U:O4'	2.15	0.45
1:2:1878:C:H2'	1:2:1879:G:C8	2.51	0.45
1:2:2056:C:O2'	1:2:2057:U:H5'	2.16	0.45
1:2:2485:U:O2'	1:2:2486:C:H5'	2.16	0.45
1:2:2495:G:H2'	1:2:2496:C:C6	2.51	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:2058:U:H5'	1:2:2576:G:H1'	1.98	0.45
1:2:2819:G:H2'	1:2:2820:C:O4'	2.15	0.45
1:2:393:U:H2'	1:2:394:U:C6	2.51	0.45
1:2:1456:C:H42	1:2:1565:G:H22	1.65	0.45
1:2:1775:A:HO2'	1:2:1776:A:P	2.34	0.45
1:2:1939:U:H2'	1:2:1940:C:O4'	2.16	0.45
1:2:198:A:H4'	1:2:199:A:O4'	2.15	0.45
1:2:1280:U:H3	1:2:1996:A:H62	1.63	0.45
1:2:2805:G:H2'	1:2:2806:G:O4'	2.15	0.45
1:2:567:G:H2'	1:2:568:G:C8	2.50	0.45
1:2:612:G:O3'	1:2:613:A:H4'	2.16	0.45
1:2:618:A:C2'	1:2:619:A:H5'	2.46	0.45
1:2:658:G:H2'	1:2:659:G:C8	2.50	0.45
1:2:757:U:H5''	1:2:1675:C:H5''	1.97	0.45
1:2:1437:A:H2'	1:2:1438:G:H5'	1.97	0.45
1:2:1782:A:OP2	1:2:1820:G:N2	2.49	0.45
1:2:1962:C:O2'	1:2:1963:G:H5'	2.16	0.45
1:2:215:G:H2'	1:2:216:U:O4'	2.16	0.45
1:2:2289:A:H2'	1:2:2290:A:H5'	1.99	0.45
1:2:2342:U:H2'	1:2:2343:C:H6	1.80	0.45
1:2:2013:A:N3	1:2:2478:C:H4'	2.31	0.45
1:2:2524:G:O2'	1:2:2525:U:H5'	2.16	0.45
1:2:2633:A:N6	1:2:2646:C:N4	2.64	0.45
1:2:403:A:OP1	1:2:404:A:OP1	2.35	0.45
1:2:1210:C:H2'	1:2:1211:G:C8	2.52	0.45
1:2:1294:G:H22	1:2:1299:A:N6	2.13	0.45
1:2:1820:G:H4'	1:2:1821:A:OP1	2.16	0.45
1:2:1886:G:H2'	1:2:1887:G:C8	2.50	0.45
1:2:690:A:H4'	1:2:2053:G:O2'	2.17	0.45
1:2:2166:G:C2'	1:2:2167:A:H5'	2.46	0.45
1:2:2210:C:H2'	1:2:2211:U:O4'	2.16	0.45
1:2:2438:A:N3	1:2:2438:A:H2'	2.30	0.45
1:2:2449:G:H2'	1:2:2450:A:C8	2.51	0.45
1:2:2459:C:H2'	1:2:2460:G:O4'	2.16	0.45
1:2:1689:U:H4'	1:2:2532:G:O3'	2.15	0.45
1:2:73:A:N3	1:2:73:A:H2'	2.32	0.45
1:2:787:A:O5'	1:2:787:A:H8	1.99	0.45
1:2:799:C:H2'	1:2:800:U:C6	2.51	0.45
1:2:697:G:C6	1:2:807:A:N6	2.85	0.45
1:2:1043:A:H2'	1:2:1044:U:H5'	1.97	0.45
1:2:1215:A:O2'	1:2:1216:G:H5'	2.16	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1312:G:O2'	1:2:1314:A:H2	1.99	0.45
1:2:1316:G:H5'	1:2:1659:G:H21	1.81	0.45
1:2:1333:G:N2	1:2:1344:C:N4	2.64	0.45
1:2:1399:C:H2'	1:2:1400:A:H8	1.81	0.45
1:2:1420:A:H2'	1:2:1421:U:C6	2.52	0.45
1:2:1495:G:H2'	1:2:1496:G:C8	2.44	0.45
1:2:1502:G:O2'	1:2:1503:G:H5'	2.17	0.45
1:2:1522:C:H2'	1:2:1523:A:O4'	2.16	0.45
1:2:1569:A:O2'	1:2:1570:C:H5	1.99	0.45
1:2:2036:G:O2'	1:2:2037:A:H5'	2.16	0.45
1:2:2406:C:H4'	1:2:2408:G:C2	2.50	0.45
1:2:2498:U:H5''	1:2:2499:C:OP1	2.17	0.45
1:2:2785:A:H2'	1:2:2786:G:O4'	2.16	0.45
1:2:300:C:N4	1:2:363:G:N2	2.64	0.45
1:2:44:G:H22	1:2:445:A:H61	1.65	0.45
1:2:473:C:H2'	1:2:474:G:H8	1.82	0.45
1:2:491:A:H2	1:2:509:U:O2	1.99	0.45
1:2:931:G:O2'	1:2:932:G:H5'	2.16	0.45
1:2:1166:A:C3'	1:2:1167:A:H5''	2.46	0.45
1:2:119:G:H2'	1:2:120:G:H8	1.80	0.45
1:2:1444:C:H2'	1:2:1445:A:H8	1.78	0.45
1:2:1715:A:O2'	1:2:1717:A:H4'	2.16	0.45
1:2:1975:G:H1'	1:2:1977:C:N4	2.27	0.45
1:2:2019:C:OP2	1:2:2020:G:OP2	2.35	0.45
1:2:222:G:H2'	1:2:223:C:C6	2.52	0.45
1:2:2258:G:O2'	1:2:2306:A:H4'	2.17	0.45
1:2:2541:U:O2'	1:2:2542:U:H5'	2.16	0.45
1:2:2633:A:H5'	1:2:2635:U:O4'	2.16	0.45
1:2:2691:C:C5	1:2:2693:U:H5''	2.51	0.45
1:2:82:G:O2'	1:2:83:A:H5'	2.16	0.45
1:2:84:G:O2'	1:2:85:C:H5'	2.16	0.45
1:2:89:A:O2'	1:2:90:G:C8	2.69	0.45
1:2:1132:C:H2'	1:2:1133:G:C8	2.52	0.45
1:2:1187:A:H2'	1:2:1188:A:H8	1.82	0.45
1:2:1298:G:N2	1:2:1341:G:H5''	2.31	0.45
1:2:1336:G:C3'	1:2:1337:G:H5''	2.46	0.45
1:2:1632:A:O2'	1:2:1633:C:OP1	2.27	0.45
1:2:1764:A:H2'	1:2:1765:C:H5'	1.98	0.45
1:2:1856:U:H5'	1:2:2389:G:N3	2.32	0.45
1:2:192:G:O2'	1:2:193:A:P	2.75	0.45
1:2:2124:C:H2'	1:2:2125:C:C6	2.52	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:2572:U:H2'	1:2:2573:C:C6	2.52	0.45
1:2:2772:U:H3	1:2:2780:A:N6	2.15	0.45
1:2:2782:G:H3'	1:2:2783:U:C5'	2.46	0.45
1:2:657:A:O2'	1:2:658:G:H5'	2.16	0.45
1:2:806:A:O2'	1:2:807:A:H5''	2.17	0.45
1:2:984:A:H1'	1:2:1202:U:C6	2.52	0.45
1:2:70:A:OP1	1:2:111:G:H4'	2.16	0.45
1:2:1699:A:H5'	1:2:1753:A:O2'	2.17	0.45
1:2:171:G:H2'	1:2:172:A:O4'	2.17	0.45
1:2:1899:A:C2'	1:2:1946:U:H1'	2.47	0.45
1:2:2239:C:H2'	1:2:2240:C:H6	1.80	0.45
1:2:2297:G:O2'	1:2:2300:G:N7	2.50	0.45
1:2:2469:G:H4'	1:2:2470:U:C5	2.52	0.45
1:2:1470:G:O6	1:2:2684:A:H2	2.00	0.45
1:2:2705:A:H2'	1:2:2706:U:O5'	2.17	0.45
1:2:423:G:H1	1:2:430:C:H42	1.64	0.45
1:2:539:A:H2'	1:2:540:G:OP2	2.16	0.45
1:2:558:G:H5''	1:2:559:C:C5	2.52	0.45
1:2:608:G:H2'	1:2:609:U:H6	1.82	0.45
1:2:661:C:H2'	1:2:662:G:C8	2.52	0.45
1:2:676:G:H2'	1:2:677:G:O4'	2.17	0.45
1:2:1115:C:O5'	1:2:1115:C:H6	2.00	0.45
1:2:1474:A:H2'	1:2:1475:U:C5'	2.47	0.45
1:2:709:A:O2'	1:2:1639:U:H5''	2.17	0.45
1:2:1773:C:C5	2:2:2881:RAP:H442	2.52	0.45
1:2:1853:C:H2'	1:2:1854:G:C8	2.52	0.45
1:2:1886:G:O2'	1:2:1887:G:H5'	2.16	0.45
1:2:2343:C:O2'	1:2:2344:G:H5'	2.17	0.45
1:2:2488:G:H2'	1:2:2489:C:C6	2.51	0.45
1:2:2605:C:H2'	1:2:2606:G:C8	2.52	0.45
1:2:520:C:H6	1:2:520:C:O5'	2.00	0.45
1:2:991:A:H2'	1:2:992:A:O5'	2.17	0.45
1:2:1166:A:H2'	1:2:1167:A:H5''	1.99	0.45
1:2:2326:C:H2'	1:2:2327:U:C6	2.52	0.45
1:2:2355:A:H2'	1:2:2356:A:O4'	2.17	0.45
1:2:2425:G:C2'	1:2:2426:G:H4'	2.47	0.45
1:2:2432:A:H4'	1:2:2551:A:O2'	2.17	0.45
1:2:2578:G:H2'	1:2:2579:A:O4'	2.17	0.45
1:2:2667:C:N3	1:2:2700:U:OP2	2.50	0.45
1:2:34:U:H5'	1:2:35:G:OP2	2.17	0.45
1:2:1313:U:H4'	1:2:1314:A:O4'	2.16	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:781:G:H5'	1:2:1638:G:C5'	2.47	0.44
1:2:1821:A:H5''	1:2:1822:C:H5	1.82	0.44
1:2:1856:U:H2'	1:2:1857:G:H8	1.81	0.44
1:2:2206:C:H2'	1:2:2207:G:O4'	2.17	0.44
1:2:2352:A:H2'	1:2:2353:G:H8	1.82	0.44
1:2:238:G:H4'	1:2:618:A:N1	2.32	0.44
1:2:2442:C:H2'	1:2:2443:C:H6	1.81	0.44
1:2:2675:U:H2'	1:2:2676:G:H8	1.82	0.44
1:2:2861:A:H2'	1:2:2862:G:C8	2.53	0.44
1:2:391:C:N3	1:2:410:A:N1	2.65	0.44
1:2:997:C:H2'	1:2:998:C:C6	2.52	0.44
1:2:1180:A:O2'	1:2:1181:C:H5'	2.17	0.44
1:2:1194:U:O2'	1:2:1195:U:OP1	2.35	0.44
1:2:1281:A:H2'	1:2:1282:A:O4'	2.17	0.44
1:2:2299:A:H5'	1:2:2300:G:C8	2.52	0.44
1:2:689:A:H61	1:2:815:A:H61	1.66	0.44
1:2:1052:C:H2'	1:2:1053:G:C8	2.52	0.44
1:2:1337:G:H1'	1:2:1632:A:N6	2.32	0.44
1:2:1519:G:O2'	1:2:1520:G:H5'	2.18	0.44
1:2:1790:G:H1'	1:2:1791:C:H5	1.80	0.44
1:2:1819:U:H2'	1:2:1820:G:O4'	2.16	0.44
1:2:2020:G:H2'	1:2:2021:G:C8	2.52	0.44
1:2:2033:C:H2'	1:2:2034:A:O4'	2.17	0.44
1:2:2396:C:O2'	1:2:2397:A:H5'	2.17	0.44
1:2:574:C:H2'	1:2:575:U:O4'	2.18	0.44
1:2:727:U:HO2'	1:2:729:A:H62	1.65	0.44
1:2:982:C:H2'	1:2:983:G:O4'	2.17	0.44
1:2:1008:G:H2'	1:2:1009:C:H6	1.83	0.44
1:2:1033:G:H22	1:2:1150:C:H2'	1.81	0.44
1:2:1054:C:H2'	1:2:1055:A:H5'	1.98	0.44
1:2:1196:G:C2'	1:2:1197:U:H5'	2.47	0.44
1:2:1365:U:H1'	1:2:1586:A:C2	2.52	0.44
1:2:172:A:H3'	1:2:173:A:H4'	2.00	0.44
1:2:2013:A:H2'	1:2:2014:A:OP2	2.18	0.44
1:2:2105:U:H2'	1:2:2106:G:H8	1.82	0.44
1:2:2241:U:O2'	1:2:2307:A:H1'	2.18	0.44
1:2:2617:G:N2	1:2:2756:A:O4'	2.49	0.44
1:2:1681:A:N1	1:2:2706:U:H1'	2.31	0.44
1:2:772:G:H2'	1:2:773:G:H8	1.82	0.44
1:2:789:G:O2'	1:2:790:A:OP2	2.31	0.44
1:2:115:G:H4'	1:2:124:A:C2	2.52	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1227:A:H5'	1:2:1252:C:H4'	2.00	0.44
1:2:1294:G:H1	1:2:1302:C:H42	1.62	0.44
1:2:1381:G:O2'	1:2:1382:G:H5'	2.17	0.44
1:2:1476:G:H3'	1:2:1476:G:OP2	2.17	0.44
1:2:1573:G:N7	1:2:1574:A:C6	2.86	0.44
1:2:1364:C:O2'	1:2:1587:A:H1'	2.18	0.44
1:2:1865:C:C2'	1:2:1866:G:H5'	2.47	0.44
1:2:2021:G:H2'	1:2:2022:C:C6	2.52	0.44
1:2:213:C:H2'	1:2:214:C:C6	2.52	0.44
1:2:248:A:HO3'	1:2:373:A:P	2.40	0.44
1:2:2492:G:H2'	1:2:2493:U:O4'	2.17	0.44
1:2:2691:C:H5''	1:2:2694:G:C5'	2.47	0.44
1:2:2713:A:H2'	1:2:2714:A:C8	2.51	0.44
1:2:547:U:H2'	1:2:548:G:C8	2.53	0.44
1:2:665:A:H3'	1:2:666:U:C5'	2.31	0.44
1:2:688:A:H1'	1:2:2423:G:H5'	1.99	0.44
1:2:70:A:O2'	1:2:71:A:C5'	2.64	0.44
1:2:728:G:H2'	1:2:729:A:H5'	2.00	0.44
1:2:831:G:H5'	1:2:852:U:OP1	2.17	0.44
1:2:1357:U:C5'	1:2:1358:C:OP2	2.63	0.44
1:2:1370:U:H2'	1:2:1371:G:O4'	2.18	0.44
1:2:1432:G:O6	1:2:1594:U:H5''	2.18	0.44
1:2:1501:C:N4	1:2:1519:G:H22	2.11	0.44
1:2:1622:G:H4'	1:2:1624:A:C4	2.52	0.44
1:2:164:G:H21	1:2:1378:A:H2	1.66	0.44
1:2:192:G:O2'	1:2:193:A:C5'	2.65	0.44
1:2:2310:G:H2'	1:2:2311:U:C6	2.52	0.44
1:2:2739:G:H2'	1:2:2740:C:C6	2.52	0.44
1:2:316:C:H2'	1:2:317:U:C6	2.53	0.44
1:2:320:A:N3	1:2:340:G:H2'	2.32	0.44
1:2:33:C:H2'	1:2:34:U:O5'	2.18	0.44
1:2:44:G:H2'	1:2:192:G:H2'	2.00	0.44
1:2:525:A:H2	1:2:526:C:C1'	2.31	0.44
1:2:605:G:H2'	1:2:606:A:H8	1.83	0.44
1:2:170:U:H5'	1:2:815:A:H2	1.82	0.44
1:2:1323:G:N2	1:2:1326:U:H3	2.16	0.44
1:2:1778:U:H2'	1:2:1779:C:C6	2.53	0.44
1:2:1985:G:H2'	1:2:1986:G:C8	2.52	0.44
1:2:2029:G:O2'	1:2:2030:U:H5'	2.17	0.44
1:2:2139:G:N3	1:2:2139:G:C2'	2.80	0.44
1:2:2559:U:C2'	1:2:2560:G:H5'	2.47	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:521:U:O3'	1:2:1248:G:H4'	2.18	0.44
1:2:881:U:H2'	1:2:882:C:C6	2.52	0.44
1:2:1033:G:H1'	1:2:1034:U:H5	1.81	0.44
1:2:1345:G:H5''	1:2:1346:C:P	2.57	0.44
1:2:1427:G:C2'	1:2:1428:G:H5'	2.48	0.44
1:2:1443:G:H2'	1:2:1444:C:C6	2.53	0.44
1:2:1452:U:H4'	1:2:1532:A:O3'	2.18	0.44
1:2:1617:G:H2'	1:2:1618:U:C5'	2.35	0.44
1:2:1769:U:H2'	1:2:1770:U:H5''	1.99	0.44
1:2:1972:G:H2'	1:2:1973:C:C6	2.53	0.44
1:2:2252:A:H2'	1:2:2253:A:C8	2.53	0.44
1:2:1750:A:H1'	1:2:2690:A:C2	2.52	0.44
1:2:599:A:H2'	1:2:600:G:C8	2.52	0.44
1:2:841:G:C2	1:2:2226:A:H4'	2.53	0.44
1:2:51:A:N7	1:2:117:A:N6	2.66	0.44
1:2:1202:U:H2'	1:2:1203:A:H8	1.82	0.44
1:2:1249:G:O2'	1:2:1250:A:O5'	2.35	0.44
1:2:150:A:C2'	1:2:151:G:H5'	2.48	0.44
1:2:1639:U:H2'	1:2:1640:C:H6	1.83	0.44
1:2:1775:A:H4'	1:2:1776:A:O5'	2.18	0.44
1:2:1878:C:H2'	1:2:1879:G:H8	1.83	0.44
1:2:1922:U:H1'	1:2:2570:C:O2'	2.18	0.44
1:2:2404:A:C4'	1:2:2405:A:O5'	2.58	0.44
1:2:2454:C:H42	1:2:2508:G:H22	1.66	0.44
1:2:2861:A:H2'	1:2:2862:G:H8	1.83	0.44
1:2:311:A:O4'	1:2:330:C:H4'	2.18	0.44
1:2:539:A:C2'	1:2:540:G:OP2	2.66	0.44
1:2:540:G:H2'	1:2:541:C:H5'	1.99	0.44
1:2:460:U:O4	1:2:592:G:H1'	2.18	0.44
1:2:648:A:H5'	1:2:649:G:O5'	2.18	0.44
1:2:701:U:H6	1:2:701:U:O5'	2.01	0.44
1:2:929:A:H5''	1:2:2247:A:H61	1.83	0.44
1:2:930:A:H2'	1:2:931:G:H5'	1.98	0.44
1:2:1482:U:H2'	1:2:1483:G:C8	2.53	0.43
1:2:1502:G:H2'	1:2:1503:G:H8	1.83	0.43
1:2:1632:A:H4'	1:2:1633:C:OP1	2.18	0.43
1:2:1638:G:H2'	1:2:1639:U:C6	2.53	0.43
1:2:1302:C:H5''	1:2:1664:G:H22	1.81	0.43
1:2:1715:A:C3'	1:2:1716:G:H5''	2.47	0.43
1:2:1964:A:H3'	1:2:1965:U:H5'	1.99	0.43
1:2:1757:C:H1'	1:2:1970:G:N2	2.33	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:2201:G:H2'	1:2:2202:G:H8	1.83	0.43
1:2:2225:G:C2	1:2:2405:A:H1'	2.53	0.43
1:2:2301:A:H2'	1:2:2302:G:O4'	2.18	0.43
1:2:2491:C:H2'	1:2:2492:G:C4'	2.48	0.43
1:2:2560:G:H2'	1:2:2561:G:OP2	2.18	0.43
1:2:2586:G:O2'	1:2:2587:G:H5'	2.17	0.43
1:2:2668:U:O2'	1:2:2669:C:O5'	2.34	0.43
1:2:604:U:H2'	1:2:605:G:H8	1.81	0.43
1:2:865:A:H2'	1:2:866:U:C6	2.53	0.43
1:2:874:A:H2'	1:2:875:G:O4'	2.18	0.43
1:2:77:C:H42	1:2:106:G:H22	1.66	0.43
1:2:1279:G:H2'	1:2:1280:U:OP2	2.17	0.43
1:2:1333:G:C6	1:2:1342:U:H5'	2.54	0.43
1:2:1374:G:N2	1:2:1384:G:H1'	2.33	0.43
1:2:149:A:H2'	1:2:150:A:C8	2.52	0.43
1:2:1643:A:H1'	1:2:1657:A:C2	2.53	0.43
1:2:1772:C:O2'	2:2:2881:RAP:C50	2.64	0.43
1:2:1927:U:H3'	1:2:1928:G:C5'	2.48	0.43
1:2:1681:A:N6	1:2:1979:C:H42	2.17	0.43
1:2:2508:G:H5''	1:2:2509:A:H5''	2.00	0.43
1:2:44:G:H22	1:2:445:A:N6	2.15	0.43
1:2:845:U:H2'	1:2:846:A:C8	2.53	0.43
1:2:1004:A:H2'	1:2:1005:U:C5'	2.48	0.43
1:2:1750:A:H2'	1:2:1751:A:C8	2.52	0.43
1:2:2134:U:H2'	1:2:2135:C:C6	2.53	0.43
1:2:1094:C:H2'	1:2:1095:A:H3'	2.01	0.43
1:2:109:A:C3'	1:2:110:U:H5''	2.48	0.43
1:2:411:C:H4'	1:2:2072:C:O2'	2.17	0.43
1:2:2315:A:O2'	1:2:2364:C:H5''	2.18	0.43
1:2:27:G:H22	1:2:522:G:C2'	2.31	0.43
1:2:563:U:H2'	1:2:564:U:C6	2.54	0.43
1:2:707:U:H5''	1:2:1585:A:C4	2.54	0.43
1:2:839:U:OP1	1:2:2408:G:OP2	2.37	0.43
1:2:831:G:O2'	1:2:851:C:H4'	2.18	0.43
1:2:128:C:H2'	1:2:129:A:C5'	2.48	0.43
1:2:1326:U:H4'	1:2:1346:C:OP1	2.19	0.43
1:2:1333:G:O6	1:2:1342:U:H5'	2.18	0.43
1:2:1441:A:H4'	1:2:1442:C:C5	2.53	0.43
1:2:1779:C:H2'	1:2:1780:A:O4'	2.18	0.43
1:2:1947:G:H4'	1:2:1948:C:H5	1.79	0.43
1:2:2455:A:N3	1:2:2455:A:H2'	2.33	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:2767:C:H2'	1:2:2768:C:C6	2.53	0.43
1:2:27:G:H8	1:2:27:G:O5'	2.01	0.43
1:2:2824:C:C2'	1:2:2825:A:OP2	2.67	0.43
1:2:353:G:H2'	1:2:354:C:C6	2.54	0.43
1:2:649:G:H2'	1:2:650:U:H6	1.84	0.43
1:2:657:A:C2'	1:2:658:G:H5'	2.49	0.43
1:2:813:A:C2'	1:2:814:G:OP2	2.65	0.43
1:2:1162:A:O2'	1:2:1163:C:H5'	2.18	0.43
1:2:1260:A:HO2'	1:2:1261:G:P	2.42	0.43
1:2:1870:U:O5'	1:2:1870:U:H6	2.01	0.43
1:2:1922:U:O2	1:2:1922:U:H2'	2.19	0.43
1:2:2014:A:N7	1:2:2477:C:O2	2.51	0.43
1:2:931:G:N2	1:2:2247:A:H3'	2.24	0.43
1:2:2496:C:C5	1:2:2521:A:N6	2.86	0.43
1:2:2547:C:H2'	1:2:2548:G:O4'	2.18	0.43
1:2:2717:G:H1	1:2:2747:C:H42	1.65	0.43
1:2:469:G:H2'	1:2:470:U:OP2	2.18	0.43
1:2:1496:G:H2'	1:2:1497:C:H5''	2.00	0.43
1:2:1908:C:H2'	1:2:1909:U:C4'	2.37	0.43
1:2:162:C:O4'	1:2:195:A:H4'	2.17	0.43
1:2:1981:A:O2'	1:2:1982:C:H5'	2.19	0.43
1:2:2207:G:H2'	1:2:2208:U:O4'	2.18	0.43
1:2:1936:A:H4'	1:2:2539:C:H5'	1.99	0.43
1:2:2625:U:H2'	1:2:2626:U:O4'	2.18	0.43
1:2:2676:G:H2'	1:2:2677:U:C6	2.53	0.43
1:2:2688:G:H2'	1:2:2689:C:H6	1.84	0.43
1:2:2713:A:H2'	1:2:2714:A:H8	1.84	0.43
1:2:2795:A:N3	1:2:2795:A:C2'	2.78	0.43
1:2:2822:U:H2'	1:2:2823:G:O4'	2.17	0.43
1:2:491:A:OP2	1:2:492:G:H5'	2.19	0.43
1:2:526:C:H2'	1:2:527:C:C6	2.54	0.43
1:2:693:A:H2'	1:2:694:G:C8	2.54	0.43
1:2:709:A:H61	1:2:779:U:H3	1.66	0.43
1:2:108:G:H2'	1:2:109:A:C8	2.54	0.43
1:2:119:G:H2'	1:2:120:G:C8	2.53	0.43
1:2:1514:C:O4'	1:2:1593:C:H5'	2.18	0.43
1:2:2316:G:H8	1:2:2316:G:O5'	2.02	0.43
1:2:2437:G:O2'	1:2:2438:A:C8	2.68	0.43
1:2:2661:G:H2'	1:2:2662:C:H5'	2.00	0.43
1:2:2717:G:H2'	1:2:2718:A:C8	2.53	0.43
1:2:490:A:O2'	1:2:491:A:C5'	2.67	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:614:G:O2'	1:2:615:C:H5'	2.18	0.43
1:2:657:A:H2'	1:2:657:A:N3	2.34	0.43
1:2:690:A:H2'	1:2:691:C:H6	1.83	0.43
1:2:810:U:H2'	1:2:811:G:O4'	2.18	0.43
1:2:575:U:H4'	1:2:822:G:P	2.59	0.43
1:2:930:A:H3'	1:2:931:G:C8	2.54	0.43
1:2:1125:G:O2'	1:2:1126:A:H5'	2.19	0.43
1:2:1217:U:H2'	1:2:1218:C:C6	2.52	0.43
1:2:1355:A:N3	1:2:1410:U:O4'	2.52	0.43
1:2:1912:G:N3	1:2:1912:G:C3'	2.81	0.43
1:2:2500:C:H4'	1:2:2544:A:C4'	2.49	0.43
1:2:2679:G:H2'	1:2:2680:U:C6	2.53	0.43
1:2:2780:A:H2'	1:2:2781:G:N7	2.34	0.43
1:2:323:G:O2'	1:2:324:C:H5'	2.19	0.43
1:2:246:C:H2'	1:2:373:A:H5'	2.01	0.43
1:2:413:G:C2'	1:2:414:A:H5''	2.48	0.43
1:2:635:C:O2'	1:2:670:U:H5''	2.18	0.43
1:2:1233:A:C2'	1:2:1234:C:OP1	2.67	0.43
1:2:1379:A:H2'	1:2:1380:C:O4'	2.18	0.43
1:2:1440:G:H3'	1:2:1441:A:C5'	2.47	0.43
1:2:1871:G:C2'	1:2:1871:G:N3	2.81	0.43
1:2:2371:A:N3	1:2:2371:A:C2'	2.80	0.43
1:2:2554:C:H2'	1:2:2557:G:O6	2.19	0.43
1:2:2597:G:H2'	1:2:2598:C:O4'	2.18	0.43
1:2:537:C:O5'	1:2:2759:U:O2	2.37	0.43
1:2:757:U:H2'	1:2:758:G:O4'	2.19	0.43
1:2:876:A:H2'	1:2:877:G:C8	2.54	0.43
1:2:947:C:H2'	1:2:948:C:C6	2.54	0.43
1:2:1014:G:O2'	1:2:1015:U:H5'	2.19	0.42
1:2:116:A:OP2	1:2:117:A:H8	2.02	0.42
1:2:1233:A:H2'	1:2:1234:C:OP1	2.20	0.42
1:2:595:A:H62	1:2:1264:C:H42	1.65	0.42
1:2:1313:U:H4'	1:2:1314:A:O5'	2.18	0.42
1:2:1453:A:H2'	1:2:1454:U:H5'	2.01	0.42
1:2:1756:C:O2'	1:2:1757:C:H5'	2.19	0.42
1:2:1913:G:H2'	1:2:1914:U:OP2	2.19	0.42
1:2:1976:U:O2'	1:2:1977:C:H5'	2.19	0.42
1:2:2390:A:H2'	1:2:2391:A:H8	1.84	0.42
1:2:2429:A:H5''	1:2:2476:A:C6	2.54	0.42
1:2:2507:U:O2'	1:2:2508:G:H3'	2.19	0.42
1:2:403:A:H5''	1:2:404:A:H5'	2.01	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:430:C:H2'	1:2:431:G:C8	2.55	0.42
1:2:1222:G:H4'	1:2:1225:G:H4'	2.00	0.42
1:2:1407:G:H1	1:2:1411:C:C1'	2.31	0.42
1:2:1479:G:H2'	1:2:1480:G:C8	2.55	0.42
1:2:1973:C:H2'	1:2:1974:U:O4'	2.19	0.42
1:2:197:G:C2	1:2:440:U:H2'	2.54	0.42
1:2:2178:U:H2'	1:2:2179:C:H6	1.84	0.42
1:2:2300:G:H3'	1:2:2300:G:N3	2.33	0.42
1:2:2512:A:H2'	1:2:2513:A:O4'	2.18	0.42
1:2:2695:C:H2'	1:2:2696:A:H8	1.83	0.42
1:2:2740:C:O2'	1:2:2741:G:H5'	2.19	0.42
1:2:2830:U:H2'	1:2:2831:A:H8	1.85	0.42
1:2:761:G:OP1	1:2:2591:C:N4	2.50	0.42
1:2:824:U:H2'	1:2:825:C:H5'	2.01	0.42
1:2:843:G:H1'	1:2:2427:A:C2	2.54	0.42
1:2:867:G:H2'	1:2:868:U:C6	2.55	0.42
1:2:577:U:O3'	1:2:956:A:N6	2.52	0.42
1:2:1243:G:H2'	1:2:1244:U:C6	2.54	0.42
1:2:1674:C:H2'	1:2:1675:C:C6	2.54	0.42
1:2:1720:G:H2'	1:2:1721:G:C8	2.54	0.42
1:2:1934:U:H2'	1:2:1936:A:OP2	2.18	0.42
1:2:2076:G:H1'	1:2:2181:A:H61	1.84	0.42
1:2:2493:U:H2'	1:2:2494:C:H6	1.83	0.42
1:2:2657:G:H2'	1:2:2658:A:O4'	2.19	0.42
1:2:2663:U:H3	1:2:2705:A:N6	2.14	0.42
1:2:2691:C:C3'	1:2:2692:A:H5''	2.48	0.42
1:2:2749:A:O2'	1:2:2750:G:H5'	2.19	0.42
1:2:2765:C:H2'	1:2:2766:U:O4'	2.18	0.42
1:2:2867:G:O2'	1:2:2868:G:O4'	2.37	0.42
1:2:460:U:C4	1:2:592:G:H1'	2.54	0.42
1:2:460:U:C2'	1:2:461:A:OP1	2.67	0.42
1:2:468:A:H1'	1:2:470:U:C1'	2.48	0.42
1:2:522:G:C2'	1:2:523:A:OP2	2.67	0.42
1:2:597:U:H2'	1:2:598:U:H6	1.84	0.42
1:2:622:U:O2	1:2:626:A:N6	2.50	0.42
1:2:2340:C:C2'	1:2:2341:G:H5'	2.49	0.42
1:2:2238:G:O4'	1:2:2406:C:H2'	2.19	0.42
1:2:2446:C:H2'	1:2:2447:G:O4'	2.20	0.42
1:2:2578:G:O2'	1:2:2579:A:H5'	2.20	0.42
1:2:73:A:H4'	1:2:74:G:C4'	2.50	0.42
1:2:80:A:O2'	1:2:81:C:H5'	2.20	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1313:U:O2'	1:2:1314:A:OP2	2.38	0.42
1:2:1708:C:O2'	1:2:1709:U:H5'	2.19	0.42
1:2:1712:G:N3	1:2:1712:G:C3'	2.81	0.42
1:2:1820:G:HO2'	1:2:1821:A:P	2.43	0.42
1:2:1879:G:H2'	1:2:1880:G:O4'	2.20	0.42
1:2:2022:C:H2'	1:2:2023:C:C6	2.54	0.42
1:2:2093:G:H2'	1:2:2094:C:O5'	2.20	0.42
1:2:2514:G:H2'	1:2:2515:G:H8	1.85	0.42
1:2:2522:G:O2'	1:2:2523:G:H5'	2.19	0.42
1:2:2770:A:H5'	1:2:2867:G:H21	1.83	0.42
1:2:1029:C:C3'	1:2:1030:U:H5''	2.50	0.42
1:2:455:A:H4'	1:2:1214:C:O2'	2.20	0.42
1:2:1776:A:HO2'	1:2:1777:A:H8	1.67	0.42
1:2:872:G:O2'	1:2:2247:A:H1'	2.19	0.42
1:2:2498:U:H4'	1:2:2499:C:OP1	2.17	0.42
1:2:2526:U:H2'	1:2:2527:G:C8	2.54	0.42
1:2:2005:U:C2	1:2:2595:C:H1'	2.55	0.42
1:2:2605:C:H2'	1:2:2606:G:H8	1.83	0.42
1:2:2716:G:H2'	1:2:2717:G:H8	1.84	0.42
1:2:2788:C:O2'	1:2:2789:U:H5'	2.18	0.42
1:2:2823:G:O2'	1:2:2824:C:O4'	2.35	0.42
1:2:313:U:H2'	1:2:314:G:C8	2.54	0.42
1:2:340:G:H5'	1:2:341:A:P	2.59	0.42
1:2:834:A:H3'	1:2:957:G:C8	2.55	0.42
1:2:1343:C:H2'	1:2:1344:C:H6	1.85	0.42
1:2:1377:G:H21	1:2:1380:C:H5	1.67	0.42
1:2:1408:A:H2	1:2:1411:C:N3	2.18	0.42
1:2:1607:A:H2'	1:2:1608:U:C6	2.54	0.42
1:2:1784:C:H2'	1:2:1785:A:C8	2.54	0.42
1:2:1956:G:H2'	1:2:1957:C:O4'	2.20	0.42
1:2:2235:G:O2'	1:2:2236:U:H5'	2.19	0.42
1:2:2287:G:N3	1:2:2287:G:C2'	2.80	0.42
1:2:2324:G:O2'	1:2:2325:A:H5''	2.18	0.42
1:2:2435:C:O2'	1:2:2436:U:H5'	2.19	0.42
1:2:242:A:O2'	1:2:243:G:O5'	2.37	0.42
1:2:2705:A:C2'	1:2:2706:U:O5'	2.66	0.42
1:2:34:U:C6	1:2:466:A:C2	3.07	0.42
1:2:433:G:N2	1:2:434:C:H1'	2.34	0.42
1:2:503:G:O2'	1:2:504:G:H5'	2.20	0.42
1:2:605:G:H2'	1:2:606:A:C8	2.55	0.42
1:2:68:C:O2'	1:2:69:G:H5'	2.19	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:694:G:H2'	1:2:695:G:C8	2.55	0.42
1:2:70:A:H2'	1:2:71:A:OP2	2.20	0.42
1:2:963:G:O2'	1:2:2246:A:H1'	2.18	0.42
1:2:983:G:OP2	1:2:985:G:N2	2.46	0.42
1:2:1545:G:H2'	1:2:1546:C:C6	2.55	0.42
1:2:1720:G:H2'	1:2:1721:G:H8	1.84	0.42
1:2:1911:A:H2'	1:2:1912:G:H5'	2.02	0.42
1:2:1984:A:H2'	1:2:1985:G:H8	1.83	0.42
1:2:838:A:H4'	1:2:2407:G:N7	2.34	0.42
1:2:2427:A:OP2	1:2:2478:C:OP1	2.38	0.42
1:2:2467:A:H2'	1:2:2468:G:H8	1.85	0.42
1:2:2524:G:H2'	1:2:2525:U:O4'	2.20	0.42
1:2:2610:G:H4'	1:2:2866:A:H5'	2.02	0.42
1:2:1773:C:C5	2:2:2881:RAP:C50	3.00	0.42
1:2:690:A:O2'	1:2:691:C:H5'	2.20	0.42
1:2:1033:G:O2'	1:2:1034:U:P	2.78	0.42
1:2:1313:U:O2'	1:2:1314:A:O5'	2.36	0.42
1:2:1302:C:O2'	1:2:1343:C:H4'	2.19	0.42
1:2:1417:C:H2'	1:2:1418:C:C6	2.55	0.42
1:2:182:G:O2'	1:2:183:U:H5	2.03	0.42
1:2:2007:G:O2'	1:2:2008:C:H5'	2.19	0.42
1:2:2875:C:H2'	1:2:2876:C:O4'	2.20	0.42
1:2:403:A:H4'	1:2:404:A:H8	1.84	0.42
1:2:446:C:H2'	1:2:447:U:O4'	2.20	0.42
1:2:574:C:O2'	1:2:575:U:H5'	2.20	0.42
1:2:622:U:H3	1:2:627:A:H2	1.68	0.42
1:2:746:G:N2	1:2:747:A:H62	2.18	0.42
1:2:952:A:H1'	1:2:1204:G:O2'	2.20	0.42
1:2:1496:G:H1	1:2:1527:G:N2	2.17	0.42
1:2:1730:G:H2'	1:2:1731:C:O4'	2.20	0.42
1:2:1833:U:H2'	1:2:1834:G:H8	1.83	0.42
1:2:1870:U:N3	1:2:1871:G:N7	2.68	0.42
1:2:2038:C:H4'	1:2:2039:G:H5''	2.02	0.42
1:2:2481:G:H5''	1:2:2482:A:H5''	2.01	0.42
1:2:2589:C:C2'	1:2:2589:C:O2	2.65	0.42
1:2:447:U:O2'	1:2:448:C:H6	2.03	0.42
1:2:958:G:H2'	1:2:959:C:C6	2.55	0.42
1:2:973:U:H2'	1:2:974:U:H6	1.85	0.42
1:2:1181:C:C2'	1:2:1182:U:H4'	2.43	0.41
1:2:1341:G:H2'	1:2:1343:C:C4	2.54	0.41
1:2:1436:G:O2'	1:2:1515:U:H1'	2.19	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1526:U:H2'	1:2:1527:G:O4'	2.20	0.41
1:2:1544:A:H2'	1:2:1545:G:C8	2.55	0.41
1:2:1762:C:H2'	1:2:1763:G:H8	1.82	0.41
1:2:2246:A:H3'	1:2:2246:A:N3	2.35	0.41
1:2:2434:G:H2'	1:2:2435:C:C6	2.55	0.41
1:2:2498:U:C4'	1:2:2499:C:OP1	2.68	0.41
1:2:2770:A:N3	1:2:2770:A:H3'	2.35	0.41
1:2:431:G:H2'	1:2:432:C:C6	2.54	0.41
1:2:665:A:C3'	1:2:666:U:H5''	2.30	0.41
1:2:1249:G:HO2'	1:2:1250:A:P	2.42	0.41
1:2:1442:C:N4	1:2:1585:A:C8	2.88	0.41
1:2:1782:A:C2'	1:2:1783:G:O5'	2.68	0.41
1:2:2039:G:N3	1:2:2039:G:H2'	2.36	0.41
1:2:2228:U:H4'	1:2:2254:C:H41	1.85	0.41
1:2:2293:G:H2'	1:2:2294:U:C6	2.54	0.41
1:2:2396:C:H2'	1:2:2397:A:O4'	2.20	0.41
1:2:2555:G:H5'	1:2:2557:G:N7	2.36	0.41
1:2:2672:U:H2'	1:2:2673:G:C8	2.50	0.41
1:2:2725:C:H2'	1:2:2726:U:C6	2.55	0.41
1:2:522:G:H2'	1:2:523:A:OP2	2.19	0.41
1:2:592:G:C6	1:2:593:C:N4	2.88	0.41
1:2:914:C:H2'	1:2:915:C:C5	2.54	0.41
1:2:1451:C:H2'	1:2:1452:U:H6	1.85	0.41
1:2:1763:G:N2	1:2:1765:C:H5''	2.35	0.41
1:2:2067:U:H2'	1:2:2068:C:C6	2.55	0.41
1:2:236:C:H2'	1:2:237:G:H8	1.84	0.41
1:2:2058:U:C1'	1:2:2576:G:H21	2.26	0.41
1:2:457:C:C2'	1:2:458:G:H5'	2.50	0.41
1:2:490:A:C6	1:2:492:G:H1'	2.55	0.41
1:2:857:U:H2'	1:2:858:G:H5'	2.02	0.41
1:2:920:G:H2'	1:2:921:A:C5'	2.50	0.41
1:2:935:C:O2'	1:2:936:A:H5'	2.20	0.41
1:2:1141:U:O5'	1:2:1141:U:H6	2.03	0.41
1:2:1455:C:H4'	1:2:1644:G:OP1	2.20	0.41
1:2:2437:G:C2'	1:2:2438:A:OP2	2.68	0.41
1:2:2675:U:H2'	1:2:2676:G:C8	2.55	0.41
1:2:490:A:H1'	1:2:491:A:C5	2.55	0.41
1:2:528:G:H2'	1:2:529:U:C6	2.55	0.41
1:2:651:C:N4	1:2:652:C:H41	2.19	0.41
1:2:1255:A:H2'	1:2:1256:C:C6	2.55	0.41
1:2:1325:U:O2'	1:2:1326:U:P	2.78	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1415:C:H2'	1:2:1416:A:H8	1.84	0.41
1:2:1513:U:OP2	1:2:1514:C:OP2	2.38	0.41
1:2:1684:G:N2	1:2:1977:C:N4	2.69	0.41
1:2:1722:G:H2'	1:2:1723:U:H6	1.84	0.41
1:2:871:U:O2	1:2:2248:A:H5'	2.20	0.41
1:2:41:G:O2'	1:2:42:G:H5'	2.20	0.41
1:2:459:A:C5	1:2:466:A:N7	2.89	0.41
1:2:584:A:H4'	1:2:2479:U:H4'	2.03	0.41
1:2:757:U:O2'	1:2:758:G:H5'	2.21	0.41
1:2:767:G:H2'	1:2:768:U:C6	2.55	0.41
1:2:838:A:H2'	1:2:839:U:C6	2.54	0.41
1:2:1188:A:H62	1:2:1189:G:N2	2.18	0.41
1:2:1280:U:O2'	1:2:1281:A:H5'	2.20	0.41
1:2:1496:G:H2'	1:2:1497:C:C5'	2.50	0.41
1:2:1501:C:O2'	1:2:1502:G:H5'	2.20	0.41
1:2:1689:U:C3'	1:2:1690:U:H5''	2.51	0.41
1:2:1688:U:N3	1:2:1691:G:OP2	2.44	0.41
1:2:1833:U:H2'	1:2:1834:G:C8	2.56	0.41
1:2:1829:C:H2'	1:2:1882:G:O6	2.21	0.41
1:2:1897:C:H2'	1:2:1898:U:C6	2.55	0.41
1:2:192:G:C4'	1:2:193:A:H4'	2.51	0.41
1:2:2074:U:H3'	1:2:2075:U:H5''	2.01	0.41
1:2:2125:C:O2	1:2:2132:G:H5''	2.20	0.41
1:2:1984:A:O4'	1:2:2668:U:H5	2.04	0.41
1:2:2705:A:N3	1:2:2706:U:C2	2.88	0.41
1:2:2713:A:O2'	1:2:2714:A:H5'	2.20	0.41
1:2:2825:A:H2'	1:2:2826:C:C6	2.56	0.41
1:2:2824:C:H1'	1:2:2843:A:C4	2.55	0.41
1:2:469:G:O2'	1:2:470:U:P	2.78	0.41
1:2:513:A:H1'	1:2:516:G:OP2	2.20	0.41
1:2:540:G:O2'	1:2:541:C:H5'	2.19	0.41
1:2:755:C:O2'	1:2:756:C:H5'	2.21	0.41
1:2:800:U:H5''	1:2:801:A:H5'	2.03	0.41
1:2:1251:G:O2'	1:2:1252:C:H5'	2.21	0.41
1:2:1302:C:OP2	1:2:1302:C:H6	2.04	0.41
1:2:1316:G:H2'	1:2:1317:G:O4'	2.21	0.41
1:2:1458:A:H5''	1:2:1459:U:OP2	2.21	0.41
1:2:1517:C:H2'	1:2:1518:C:C6	2.55	0.41
1:2:1655:C:H2'	1:2:1656:U:C6	2.55	0.41
1:2:241:C:O2'	1:2:242:A:H5''	2.20	0.41
1:2:2710:C:O2'	1:2:2711:G:H5'	2.21	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:2824:C:O2'	1:2:2825:A:O5'	2.39	0.41
1:2:247:A:OP2	1:2:372:U:H5'	2.20	0.41
1:2:482:A:C2'	1:2:483:A:H5'	2.51	0.41
1:2:58:C:N4	1:2:73:A:H62	2.19	0.41
1:2:742:G:N3	1:2:742:G:H3'	2.35	0.41
1:2:79:G:H2'	1:2:80:A:C8	2.56	0.41
1:2:1033:G:O2'	1:2:1034:U:H6	2.02	0.41
1:2:1178:C:O2	1:2:1196:G:N2	2.54	0.41
1:2:521:U:C4'	1:2:1248:G:H4'	2.47	0.41
1:2:1277:G:C6	1:2:1278:A:N6	2.88	0.41
1:2:128:C:C3'	1:2:129:A:H5''	2.51	0.41
1:2:1310:C:P	1:2:2689:C:H4'	2.61	0.41
1:2:1408:A:O4'	1:2:1410:U:O4	2.38	0.41
1:2:1700:C:H2'	1:2:1701:C:C6	2.56	0.41
1:2:1787:U:H2'	1:2:1788:C:H6	1.85	0.41
1:2:1935:A:C6	1:2:1936:A:N1	2.89	0.41
1:2:2093:G:HO2'	1:2:2094:C:P	2.44	0.41
1:2:1937:G:N3	1:2:2530:C:H5'	2.35	0.41
1:2:2660:C:C2'	1:2:2661:G:OP2	2.69	0.41
1:2:710:C:H2'	1:2:711:C:C6	2.55	0.41
1:2:788:G:N2	1:2:800:U:H2'	2.35	0.41
1:2:1050:G:H1	1:2:1127:C:N4	2.18	0.41
1:2:1069:G:N2	1:2:1091:C:N4	2.68	0.41
1:2:1300:A:H61	1:2:1339:U:H3	1.69	0.41
1:2:1305:C:H2'	1:2:1306:U:O4'	2.21	0.41
1:2:1663:C:C5'	1:2:1664:G:H5''	2.24	0.41
1:2:1676:U:H2'	1:2:1677:C:C6	2.56	0.41
1:2:1764:A:OP1	1:2:1820:G:H3'	2.20	0.41
1:2:184:A:H2'	1:2:185:C:O4'	2.21	0.41
1:2:2548:G:C2'	1:2:2549:G:H5''	2.50	0.41
1:2:2660:C:H2'	1:2:2661:G:OP2	2.21	0.41
1:2:2723:C:OP2	1:2:2735:C:N4	2.54	0.41
1:2:2863:U:H2'	1:2:2864:C:H6	1.86	0.41
1:2:436:A:C3'	1:2:437:G:H5''	2.51	0.41
1:2:638:A:O2'	1:2:639:G:H5'	2.21	0.41
1:2:75:C:H2'	1:2:76:C:H5''	2.03	0.41
1:2:773:G:H2'	1:2:774:A:O4'	2.21	0.41
1:2:1047:G:H2'	1:2:1048:U:C6	2.56	0.41
1:2:104:C:C2'	1:2:105:G:C5'	2.99	0.41
1:2:1427:G:H2'	1:2:1428:G:H5'	2.03	0.41
1:2:1458:A:C3'	1:2:1459:U:C5'	2.94	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1626:A:HO2'	1:2:1627:C:P	2.43	0.41
1:2:2204:A:H5''	1:2:2205:C:H5'	2.03	0.41
1:2:2680:U:O5'	1:2:2681:A:H5''	2.21	0.41
1:2:2736:U:HO2'	1:2:2737:A:H5'	1.85	0.41
1:2:306:G:H2'	1:2:307:C:O4'	2.21	0.41
1:2:573:C:H2'	1:2:574:C:O4'	2.20	0.41
1:2:690:A:H2'	1:2:691:C:C6	2.55	0.41
1:2:720:A:C6	1:2:721:C:N4	2.89	0.41
1:2:807:A:H2'	1:2:808:C:O5'	2.21	0.41
1:2:847:C:H2'	1:2:848:A:C8	2.56	0.41
1:2:1151:U:H4'	1:2:1153:A:OP1	2.21	0.41
1:2:1336:G:C2	1:2:1346:C:H1'	2.56	0.41
1:2:1496:G:H1	1:2:1527:G:H22	1.68	0.41
1:2:1488:G:H1	1:2:1534:A:H61	1.69	0.41
1:2:1563:U:H2'	1:2:1564:U:C5	2.57	0.41
1:2:1579:G:H2'	1:2:1580:C:C6	2.55	0.41
1:2:189:A:O2'	1:2:190:A:H5'	2.21	0.41
1:2:2010:G:H2'	1:2:2011:U:C6	2.56	0.41
1:2:2084:G:HO2'	1:2:2085:G:H8	1.62	0.41
1:2:2308:A:N1	1:2:2365:U:O4	2.54	0.41
1:2:2466:G:H2'	1:2:2467:A:H8	1.83	0.41
1:2:2633:A:C5'	1:2:2634:G:OP1	2.61	0.41
1:2:548:G:O2'	1:2:549:G:H5'	2.21	0.41
1:2:573:C:H1'	1:2:1266:G:H22	1.86	0.41
1:2:721:C:H42	1:2:736:G:N2	2.14	0.41
1:2:789:G:N3	1:2:806:A:N6	2.69	0.41
1:2:1218:C:H2'	1:2:1219:C:H6	1.85	0.40
1:2:1311:C:H5'	1:2:1315:A:N6	2.37	0.40
1:2:1744:G:N2	1:2:1746:A:H3'	2.36	0.40
1:2:1697:U:O2	1:2:1755:G:H4'	2.21	0.40
1:2:1845:A:N6	1:2:1871:G:O2'	2.54	0.40
1:2:1991:C:H2'	1:2:1992:G:C8	2.55	0.40
1:2:2010:G:O2'	1:2:2011:U:H5'	2.21	0.40
1:2:215:G:O2'	1:2:617:U:H1'	2.20	0.40
1:2:248:A:OP2	1:2:373:A:OP1	2.39	0.40
1:2:2511:G:N2	1:2:2642:G:H1'	2.35	0.40
1:2:2691:C:H41	1:2:2693:U:H6	1.67	0.40
1:2:2876:C:H2'	1:2:2877:A:C8	2.56	0.40
1:2:462:G:H2'	1:2:463:C:C5'	2.31	0.40
1:2:813:A:O2'	1:2:814:G:H3'	2.21	0.40
1:2:877:G:H2'	1:2:878:C:H6	1.84	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:986:A:H2'	1:2:987:G:O4'	2.20	0.40
1:2:1258:G:H2'	1:2:1259:A:H8	1.85	0.40
1:2:14:A:N7	1:2:15:G:H1'	2.35	0.40
1:2:1565:G:H2'	1:2:1566:G:H8	1.86	0.40
1:2:1583:A:H4'	1:2:1584:G:C4	2.56	0.40
1:2:1705:U:O2'	1:2:1717:A:N7	2.52	0.40
1:2:1941:C:O2'	1:2:1942:G:H5'	2.20	0.40
1:2:1996:A:H2'	1:2:1997:A:C8	2.56	0.40
1:2:2026:C:H42	1:2:2604:G:H1	1.68	0.40
1:2:2062:U:H2'	1:2:2063:A:O4'	2.21	0.40
1:2:2420:C:H2'	1:2:2421:C:C6	2.56	0.40
1:2:2482:A:O5'	1:2:2483:U:P	2.79	0.40
1:2:2573:C:N4	1:2:2574:G:O6	2.55	0.40
1:2:425:A:H2'	1:2:426:C:O4'	2.21	0.40
1:2:839:U:H2'	1:2:841:G:O4'	2.21	0.40
1:2:959:C:H5''	1:2:972:C:O2'	2.21	0.40
1:2:1293:A:H2'	1:2:1294:G:C8	2.56	0.40
1:2:1849:G:N2	1:2:1868:A:H62	2.19	0.40
1:2:216:U:H5''	1:2:601:A:N6	2.36	0.40
1:2:2398:U:H2'	1:2:2399:C:C6	2.56	0.40
1:2:2548:G:C2'	1:2:2549:G:C5'	3.00	0.40
1:2:2598:C:H2'	1:2:2599:U:C6	2.56	0.40
1:2:2652:G:H2'	1:2:2653:A:C8	2.56	0.40
1:2:551:A:O2'	1:2:552:C:H5'	2.22	0.40
1:2:1087:C:O2'	1:2:1088:A:H5'	2.22	0.40
1:2:1268:U:H5'	1:2:1269:G:C5'	2.39	0.40
1:2:1272:G:H2'	1:2:1273:G:C8	2.56	0.40
1:2:1356:G:OP1	1:2:1357:U:OP2	2.39	0.40
1:2:1428:G:H2'	1:2:1602:G:H21	1.85	0.40
1:2:180:C:H5''	1:2:181:A:OP2	2.22	0.40
1:2:2010:G:H2'	1:2:2011:U:H6	1.86	0.40
1:2:2018:G:O2'	1:2:2019:C:P	2.79	0.40
1:2:2060:A:OP2	1:2:2060:A:H3'	2.22	0.40
1:2:2178:U:H2'	1:2:2179:C:C6	2.57	0.40
1:2:2695:C:H2'	1:2:2696:A:C8	2.55	0.40
1:2:28:A:H1'	1:2:523:A:C2	2.56	0.40
1:2:248:A:O5'	1:2:373:A:OP1	2.40	0.40
1:2:491:A:N3	1:2:491:A:H2'	2.36	0.40
1:2:683:A:H5''	1:2:684:C:OP1	2.21	0.40
1:2:70:A:P	1:2:111:G:H4'	2.62	0.40
1:2:73:A:H4'	1:2:74:G:H4'	2.03	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:813:A:C1'	1:2:815:A:O4'	2.69	0.40
1:2:964:A:H61	1:2:976:C:H42	1.66	0.40
1:2:1096:A:H2'	1:2:1097:A:O4'	2.22	0.40
1:2:1302:C:C6	1:2:1302:C:OP2	2.75	0.40
1:2:1358:C:C4	1:2:1359:G:N7	2.90	0.40
1:2:1443:G:H2'	1:2:1444:C:H6	1.86	0.40
1:2:1495:G:O2'	1:2:1496:G:OP1	2.37	0.40
1:2:1966:C:H4'	1:2:2585:C:H4'	2.02	0.40
1:2:2065:A:H2'	1:2:2066:G:O4'	2.21	0.40
1:2:2109:A:C2'	1:2:2109:A:N3	2.83	0.40
1:2:2077:G:N1	1:2:2179:C:H1'	2.35	0.40
1:2:2299:A:H5'	1:2:2300:G:N7	2.36	0.40
1:2:2674:C:H2'	1:2:2675:U:C5	2.56	0.40
1:2:2692:A:H5'	1:2:2693:U:C5'	2.50	0.40
1:2:2830:U:H2'	1:2:2831:A:C8	2.56	0.40
1:2:414:A:H2'	1:2:415:A:C8	2.57	0.40
1:2:504:G:O2'	1:2:505:G:H5'	2.21	0.40
1:2:79:G:H2'	1:2:80:A:H8	1.86	0.40
1:2:862:A:H2'	1:2:863:C:C6	2.57	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

There are no protein molecules in this entry.

5.3.2 Protein sidechains [i](#)

There are no protein molecules in this entry.

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	2	2757/2880 (95%)	529 (19%)	65 (2%)

All (529) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	2	14	A
1	2	35	G
1	2	45	C
1	2	48	A
1	2	49	U
1	2	59	G
1	2	70	A
1	2	71	A
1	2	72	A
1	2	73	A
1	2	74	G
1	2	76	C
1	2	83	A
1	2	84	G
1	2	87	G
1	2	89	A
1	2	90	G
1	2	91	A
1	2	99	U
1	2	100	G
1	2	105	G
1	2	110	U
1	2	117	A
1	2	118	U
1	2	119	G
1	2	123	A
1	2	124	A
1	2	126	C
1	2	129	A
1	2	148	C
1	2	155	G
1	2	158	A
1	2	173	A
1	2	174	A
1	2	182	G
1	2	193	A
1	2	199	A
1	2	200	A
1	2	205	A
1	2	206	U
1	2	218	A
1	2	219	G
1	2	225	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	2	226	C
1	2	227	G
1	2	229	G
1	2	242	A
1	2	243	G
1	2	246	C
1	2	248	A
1	2	293	U
1	2	305	A
1	2	319	G
1	2	322	A
1	2	334	G
1	2	335	A
1	2	340	G
1	2	341	A
1	2	342	G
1	2	343	A
1	2	358	C
1	2	359	G
1	2	363	G
1	2	364	G
1	2	368	A
1	2	369	C
1	2	371	G
1	2	372	U
1	2	373	A
1	2	388	G
1	2	393	U
1	2	399	G
1	2	403	A
1	2	404	A
1	2	408	U
1	2	412	U
1	2	414	A
1	2	418	C
1	2	424	G
1	2	437	G
1	2	438	G
1	2	441	A
1	2	442	A
1	2	455	A
1	2	456	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	2	459	A
1	2	461	A
1	2	463	C
1	2	466	A
1	2	469	G
1	2	470	U
1	2	484	G
1	2	486	U
1	2	491	A
1	2	492	G
1	2	514	G
1	2	515	A
1	2	518	A
1	2	519	C
1	2	537	C
1	2	539	A
1	2	541	C
1	2	542	A
1	2	545	C
1	2	554	U
1	2	556	A
1	2	558	G
1	2	572	G
1	2	577	U
1	2	583	C
1	2	584	A
1	2	601	A
1	2	613	A
1	2	617	U
1	2	624	A
1	2	627	A
1	2	632	A
1	2	638	A
1	2	648	A
1	2	652	C
1	2	654	A
1	2	656	U
1	2	665	A
1	2	666	U
1	2	667	U
1	2	668	A
1	2	669	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	2	684	C
1	2	699	G
1	2	700	C
1	2	742	G
1	2	743	A
1	2	760	U
1	2	761	G
1	2	775	U
1	2	778	G
1	2	789	G
1	2	790	A
1	2	795	A
1	2	796	A
1	2	797	A
1	2	798	G
1	2	803	C
1	2	807	A
1	2	808	C
1	2	813	A
1	2	814	G
1	2	818	G
1	2	819	C
1	2	825	C
1	2	832	A
1	2	840	U
1	2	841	G
1	2	844	G
1	2	859	U
1	2	873	U
1	2	891	A
1	2	919	U
1	2	921	A
1	2	922	A
1	2	926	C
1	2	930	A
1	2	931	G
1	2	941	U
1	2	943	U
1	2	944	A
1	2	952	A
1	2	956	A
1	2	957	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	2	969	U
1	2	970	A
1	2	972	C
1	2	973	U
1	2	984	A
1	2	985	G
1	2	988	G
1	2	992	A
1	2	994	A
1	2	996	C
1	2	1005	U
1	2	1006	C
1	2	1007	A
1	2	1019	U
1	2	1023	U
1	2	1024	G
1	2	1030	U
1	2	1032	A
1	2	1033	G
1	2	1034	U
1	2	1036	G
1	2	1037	U
1	2	1044	U
1	2	1055	A
1	2	1056	U
1	2	1057	A
1	2	1067	G
1	2	1073	G
1	2	1074	G
1	2	1081	A
1	2	1082	G
1	2	1084	A
1	2	1087	C
1	2	1090	C
1	2	1094	C
1	2	1095	A
1	2	1102	G
1	2	1108	U
1	2	1112	U
1	2	1137	A
1	2	1138	A
1	2	1139	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	2	1142	G
1	2	1145	C
1	2	1146	G
1	2	1152	C
1	2	1153	A
1	2	1154	A
1	2	1155	G
1	2	1167	A
1	2	1168	G
1	2	1182	U
1	2	1183	C
1	2	1185	C
1	2	1186	G
1	2	1195	U
1	2	1199	U
1	2	1200	G
1	2	1224	A
1	2	1225	G
1	2	1233	A
1	2	1234	C
1	2	1250	A
1	2	1253	C
1	2	1261	G
1	2	1262	U
1	2	1264	C
1	2	1268	U
1	2	1269	G
1	2	1278	A
1	2	1279	G
1	2	1280	U
1	2	1284	G
1	2	1285	A
1	2	1288	A
1	2	1289	A
1	2	1302	C
1	2	1305	C
1	2	1314	A
1	2	1324	G
1	2	1326	U
1	2	1327	C
1	2	1334	A
1	2	1337	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	2	1338	G
1	2	1342	U
1	2	1343	C
1	2	1346	C
1	2	1354	A
1	2	1355	A
1	2	1356	G
1	2	1358	C
1	2	1359	G
1	2	1391	A
1	2	1392	U
1	2	1397	A
1	2	1398	G
1	2	1411	C
1	2	1429	A
1	2	1433	A
1	2	1438	G
1	2	1441	A
1	2	1442	C
1	2	1443	G
1	2	1459	U
1	2	1468	A
1	2	1469	U
1	2	1470	G
1	2	1473	U
1	2	1475	U
1	2	1476	G
1	2	1482	U
1	2	1489	C
1	2	1496	G
1	2	1497	C
1	2	1505	U
1	2	1506	C
1	2	1508	G
1	2	1510	A
1	2	1514	C
1	2	1524	C
1	2	1526	U
1	2	1550	C
1	2	1551	U
1	2	1552	C
1	2	1571	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	2	1573	G
1	2	1574	A
1	2	1583	A
1	2	1585	A
1	2	1601	U
1	2	1618	U
1	2	1623	C
1	2	1624	A
1	2	1625	A
1	2	1626	A
1	2	1627	C
1	2	1632	A
1	2	1633	C
1	2	1635	G
1	2	1648	C
1	2	1652	G
1	2	1657	A
1	2	1664	G
1	2	1665	C
1	2	1670	G
1	2	1685	A
1	2	1686	A
1	2	1690	U
1	2	1691	G
1	2	1711	C
1	2	1712	G
1	2	1715	A
1	2	1716	G
1	2	1717	A
1	2	1724	C
1	2	1732	U
1	2	1748	U
1	2	1749	G
1	2	1750	A
1	2	1755	G
1	2	1764	A
1	2	1770	U
1	2	1771	A
1	2	1772	C
1	2	1773	C
1	2	1774	A
1	2	1776	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	2	1778	U
1	2	1783	G
1	2	1791	C
1	2	1792	C
1	2	1801	C
1	2	1802	A
1	2	1807	A
1	2	1808	C
1	2	1812	U
1	2	1821	A
1	2	1827	G
1	2	1831	G
1	2	1840	A
1	2	1863	U
1	2	1867	A
1	2	1889	G
1	2	1909	U
1	2	1913	G
1	2	1919	A
1	2	1920	A
1	2	1922	U
1	2	1924	C
1	2	1926	U
1	2	1927	U
1	2	1938	U
1	2	1939	U
1	2	1946	U
1	2	1948	C
1	2	1950	C
1	2	1952	A
1	2	1954	A
1	2	1955	G
1	2	1956	G
1	2	1964	A
1	2	1975	G
1	2	1976	U
1	2	1979	C
1	2	2004	U
1	2	2005	U
1	2	2006	G
1	2	2013	A
1	2	2014	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	2	2015	G
1	2	2016	A
1	2	2019	C
1	2	2025	A
1	2	2026	C
1	2	2038	C
1	2	2039	G
1	2	2044	G
1	2	2050	G
1	2	2051	U
1	2	2052	G
1	2	2060	A
1	2	2075	U
1	2	2076	G
1	2	2082	C
1	2	2094	C
1	2	2095	G
1	2	2096	U
1	2	2097	A
1	2	2104	G
1	2	2109	A
1	2	2118	A
1	2	2137	G
1	2	2139	G
1	2	2140	G
1	2	2159	A
1	2	2162	C
1	2	2165	A
1	2	2168	A
1	2	2189	A
1	2	2190	A
1	2	2191	A
1	2	2192	U
1	2	2195	C
1	2	2199	C
1	2	2205	C
1	2	2218	G
1	2	2225	G
1	2	2229	G
1	2	2242	C
1	2	2245	A
1	2	2246	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	2	2247	A
1	2	2255	G
1	2	2262	C
1	2	2265	A
1	2	2268	G
1	2	2284	U
1	2	2285	U
1	2	2286	G
1	2	2287	G
1	2	2288	A
1	2	2298	U
1	2	2300	G
1	2	2301	A
1	2	2306	A
1	2	2312	A
1	2	2313	G
1	2	2314	A
1	2	2315	A
1	2	2325	A
1	2	2326	C
1	2	2358	C
1	2	2362	G
1	2	2364	C
1	2	2371	A
1	2	2386	G
1	2	2390	A
1	2	2396	C
1	2	2402	U
1	2	2405	A
1	2	2406	C
1	2	2407	G
1	2	2408	G
1	2	2419	C
1	2	2420	C
1	2	2426	G
1	2	2427	A
1	2	2428	U
1	2	2429	A
1	2	2438	A
1	2	2455	A
1	2	2470	U
1	2	2477	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	2	2480	C
1	2	2481	G
1	2	2482	A
1	2	2483	U
1	2	2484	G
1	2	2485	U
1	2	2492	G
1	2	2498	U
1	2	2499	C
1	2	2508	G
1	2	2522	G
1	2	2546	G
1	2	2548	G
1	2	2549	G
1	2	2557	G
1	2	2561	G
1	2	2564	U
1	2	2565	C
1	2	2581	A
1	2	2582	G
1	2	2588	U
1	2	2589	C
1	2	2591	C
1	2	2593	A
1	2	2594	U
1	2	2608	A
1	2	2609	G
1	2	2617	G
1	2	2619	G
1	2	2624	G
1	2	2625	U
1	2	2633	A
1	2	2634	G
1	2	2661	G
1	2	2669	C
1	2	2670	C
1	2	2691	C
1	2	2692	A
1	2	2693	U
1	2	2694	G
1	2	2706	U
1	2	2712	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	2	2713	A
1	2	2728	A
1	2	2729	A
1	2	2730	A
1	2	2732	C
1	2	2737	A
1	2	2745	A
1	2	2758	A
1	2	2771	C
1	2	2773	G
1	2	2774	U
1	2	2779	C
1	2	2783	U
1	2	2795	A
1	2	2808	U
1	2	2809	A
1	2	2811	G
1	2	2825	A
1	2	2841	U
1	2	2842	C
1	2	2847	G
1	2	2854	G
1	2	2858	A
1	2	2868	G

All (65) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	2	13	A
1	2	70	A
1	2	73	A
1	2	117	A
1	2	181	A
1	2	192	G
1	2	198	A
1	2	242	A
1	2	342	G
1	2	372	U
1	2	403	A
1	2	460	U
1	2	469	G
1	2	485	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	2	513	A
1	2	583	C
1	2	789	G
1	2	813	A
1	2	1033	G
1	2	1141	U
1	2	1154	A
1	2	1194	U
1	2	1223	G
1	2	1249	G
1	2	1260	A
1	2	1263	G
1	2	1278	A
1	2	1279	G
1	2	1313	U
1	2	1325	U
1	2	1345	G
1	2	1354	A
1	2	1355	A
1	2	1410	U
1	2	1495	G
1	2	1626	A
1	2	1632	A
1	2	1685	A
1	2	1772	C
1	2	1775	A
1	2	1790	G
1	2	1820	G
1	2	1926	U
1	2	1938	U
1	2	2013	A
1	2	2015	G
1	2	2018	G
1	2	2093	G
1	2	2204	A
1	2	2245	A
1	2	2261	G
1	2	2313	G
1	2	2324	G
1	2	2370	G
1	2	2389	G
1	2	2404	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	2	2437	G
1	2	2498	U
1	2	2560	G
1	2	2592	U
1	2	2633	A
1	2	2668	U
1	2	2705	A
1	2	2824	C
1	2	2867	G

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

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

5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

5.6 Ligand geometry [i](#)

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
2	RAP	2	2881	-	65,68,68	1.88	13 (20%)	73,96,96	1.45	8 (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
2	RAP	2	2881	-	-	3/81/124/124	0/3/4/4

All (13) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	2	2881	RAP	C8-C9	-8.41	1.42	1.53
2	2	2881	RAP	C40-C39	4.46	1.60	1.52
2	2	2881	RAP	O1-C1	3.86	1.43	1.34
2	2	2881	RAP	O1-C34	-3.40	1.40	1.46
2	2	2881	RAP	C44-C17	2.99	1.56	1.50
2	2	2881	RAP	C41-C40	2.97	1.56	1.52
2	2	2881	RAP	C35-C34	2.89	1.56	1.53
2	2	2881	RAP	O6-C10	2.85	1.44	1.39
2	2	2881	RAP	C27-C28	2.75	1.58	1.52
2	2	2881	RAP	C38-C39	2.64	1.57	1.52
2	2	2881	RAP	C2-N7	2.60	1.50	1.47
2	2	2881	RAP	C6-N7	2.13	1.50	1.47
2	2	2881	RAP	C31-C30	2.11	1.54	1.51

All (8) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	2	2881	RAP	O1-C1-C2	4.99	121.78	110.78
2	2	2881	RAP	C34-O1-C1	4.47	124.60	117.89
2	2	2881	RAP	C9-C8-N7	3.91	123.72	119.25
2	2	2881	RAP	O1-C1-O2	-3.05	118.24	123.94
2	2	2881	RAP	C3-C2-N7	-2.91	106.49	110.53
2	2	2881	RAP	C52-O12-C39	2.32	120.27	114.03
2	2	2881	RAP	C12-C13-C14	2.16	114.14	110.82
2	2	2881	RAP	O2-C1-C2	-2.00	119.98	124.49

There are no chirality outliers.

All (3) torsion outliers are listed below:

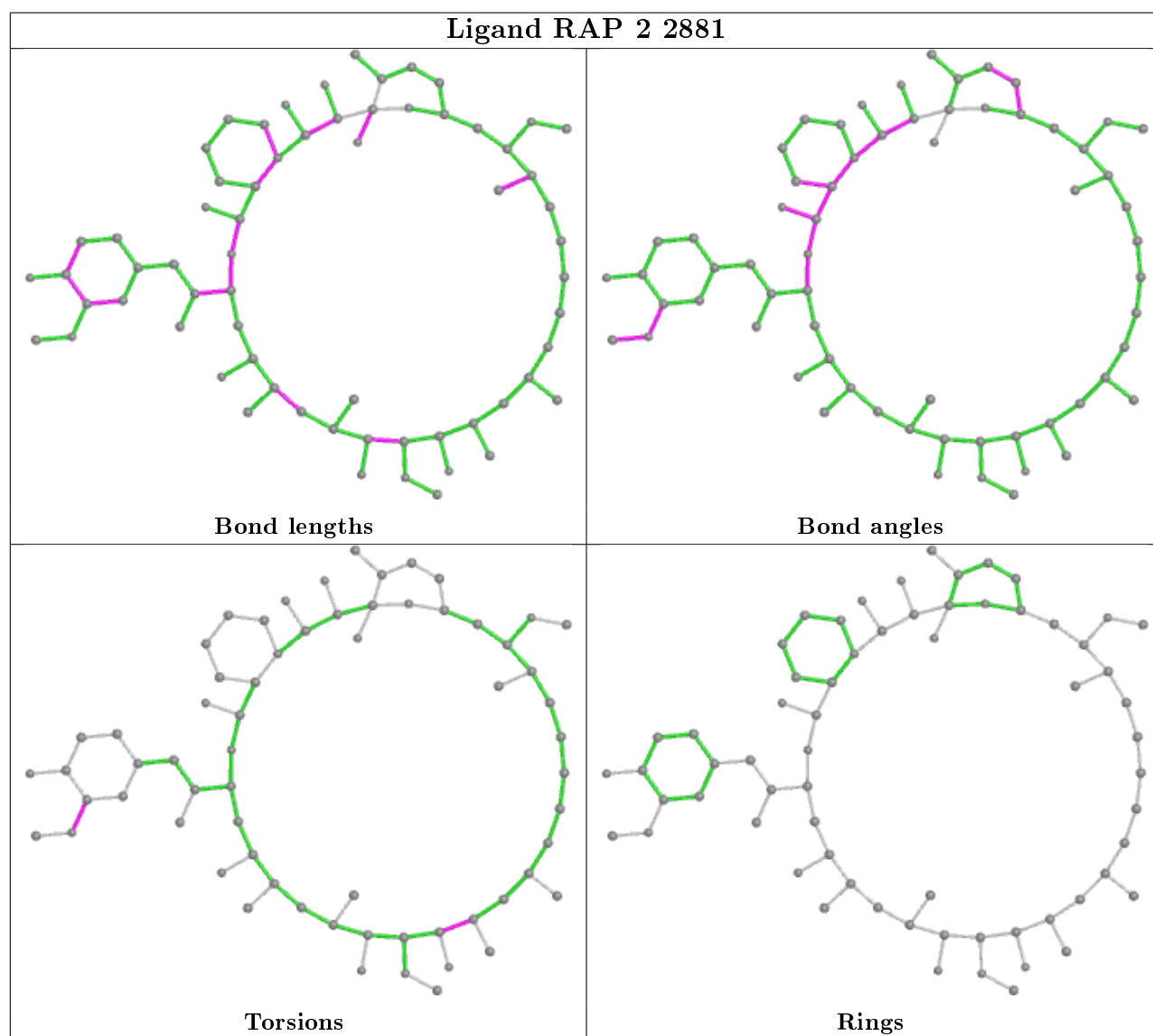
Mol	Chain	Res	Type	Atoms
2	2	2881	RAP	C46-C25-C26-O8
2	2	2881	RAP	C40-C39-O12-C52
2	2	2881	RAP	C24-C25-C26-O8

There are no ring outliers.

1 monomer is involved in 20 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	2	2881	RAP	20	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

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.