



Full wwPDB X-ray Structure Validation Report ⓘ

Jan 31, 2016 – 09:15 PM GMT

PDB ID : 1NWY
Title : COMPLEX OF THE LARGE RIBOSOMAL SUBUNIT FROM DEINOCOC-
CUS RADIODURANS WITH AZITHROMYCIN
Authors : Schlutzen, F.; Harms, J.; Franceschi, F.; Hansen, H.A.S.; Bartels, H.; Zari-
vach, R.; Yonath, A.
Deposited on : 2003-02-07
Resolution : 3.30 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
<http://wwpdb.org/validation/2016/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	:	1.7 (RC4), CSD as536be (2015)
Xtriage (Phenix)	:	NOT EXECUTED
EDS	:	NOT EXECUTED
Percentile statistics	:	20151230.v01 (using entries in the PDB archive December 30th 2015)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	trunk26865

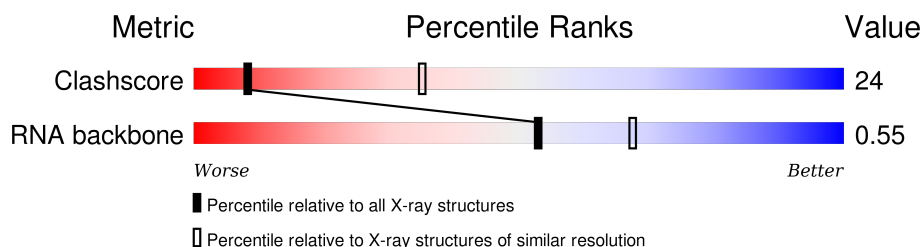
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.30 Å.

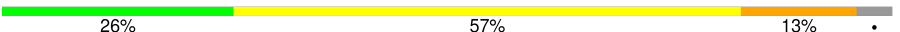
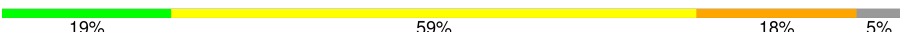
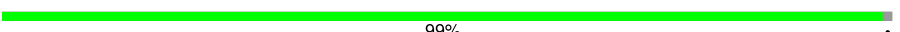
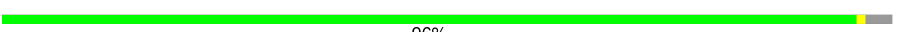



Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
Clashscore	102246	1058 (3.38-3.22)
RNA backbone	2183	1005 (3.82-2.78)



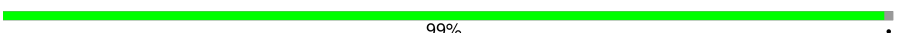









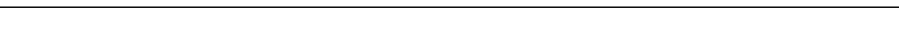

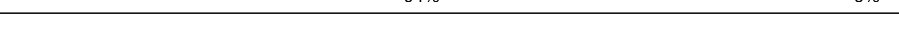
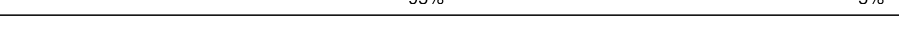
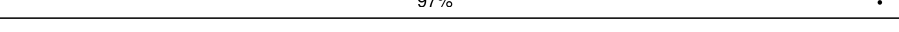
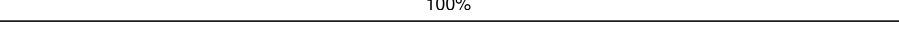
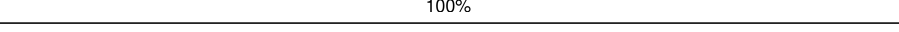
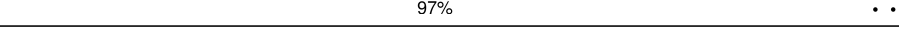
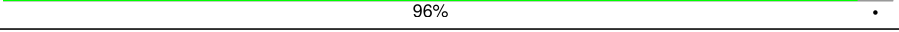
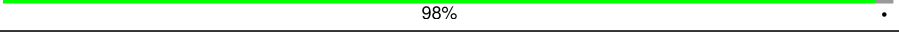
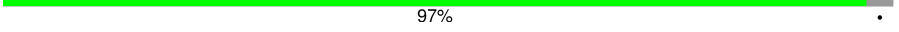
The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria. A grey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

Note EDS was not executed.

Mol	Chain	Length	Quality of chain
1	0	2880	 26% 57% 13% .
2	9	124	 19% 59% 18% 5%
3	A	274	 99% .
4	B	211	 96% . .
5	C	204	 96% .
6	D	180	 98% . .
7	E	185	 95% . .
8	F	146	 34% . 64%

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Mol	Chain	Length	Quality of chain
9	G	144	 99%
10	H	174	 82% 18%
11	I	134	 99%
12	J	156	 90% 10%
13	K	141	 87% 12%
14	L	116	 97% ..
15	M	113	 97% ..
16	N	166	 75% 25%
17	O	118	 99%
18	P	100	 100%
19	Q	134	 97% .
20	R	94	 99% .
21	S	115	 98% .
22	T	237	 94% 6%
23	U	91	 95% 5%
24	W	67	 97% .
25	X	55	 100%
26	Y	73	 100%
27	Z	59	 97% ..
28	1	55	 96% .
29	2	47	 98% .
30	3	65	 97% .
31	4	37	 95% 5%

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
32	ZIT	0	2881	-	-	X	-
32	ZIT	0	2882	-	-	X	-

2 Entry composition

There are 32 unique types of molecules in this entry. The entry contains 65404 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

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

- Molecule 2 is a RNA chain called 5S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	9	118	Total	C	N	O	P	0	0	0
			2519	1124	464	813	118			

- Molecule 3 is a protein called ribosomal protein L2.

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

- Molecule 4 is a protein called ribosomal protein L3.

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

- Molecule 5 is a protein called ribosomal protein L4.

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

- Molecule 6 is a protein called ribosomal protein L5.

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

- Molecule 7 is a protein called ribosomal protein L6.

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

- Molecule 8 is a protein called ribosomal protein L9.

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

- Molecule 9 is a protein called ribosomal protein L11.

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

- Molecule 10 is a protein called ribosomal protein L13.

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

- Molecule 11 is a protein called ribosomal protein L14.

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

- Molecule 12 is a protein called ribosomal protein L15.

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

- Molecule 13 is a protein called ribosomal protein L16.

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

- Molecule 14 is a protein called ribosomal protein L17.

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

- Molecule 15 is a protein called ribosomal protein L18.

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

- Molecule 16 is a protein called ribosomal protein L19.

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

- Molecule 17 is a protein called ribosomal protein L20.

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

- Molecule 18 is a protein called ribosomal protein L21.

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

- Molecule 19 is a protein called ribosomal protein L22.

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

- Molecule 20 is a protein called ribosomal protein L23.

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

- Molecule 21 is a protein called ribosomal protein L24.

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

- Molecule 22 is a protein called general stress protein Ctc.

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

- Molecule 23 is a protein called ribosomal protein L27.

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

- Molecule 24 is a protein called ribosomal protein L29.

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

- Molecule 25 is a protein called ribosomal protein L30.

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

- Molecule 26 is a protein called ribosomal protein L31.

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

- Molecule 27 is a protein called ribosomal protein L32.

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

- Molecule 28 is a protein called ribosomal protein L33.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
28	1	53	Total C 53 53	0	0	53

- Molecule 29 is a protein called ribosomal protein L34.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
29	2	46	Total C 46 46	0	0	46

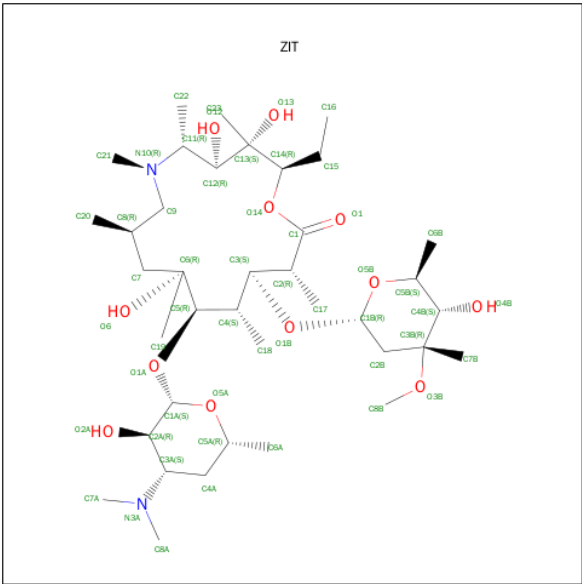
- Molecule 30 is a protein called ribosomal protein L35.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
30	3	63	Total C 63 63	0	0	63

- Molecule 31 is a protein called ribosomal protein L36.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
31	4	35	Total C 35 35	0	0	35

- Molecule 32 is AZITHROMYCIN (three-letter code: ZIT) (formula: C₃₈H₇₂N₂O₁₂).



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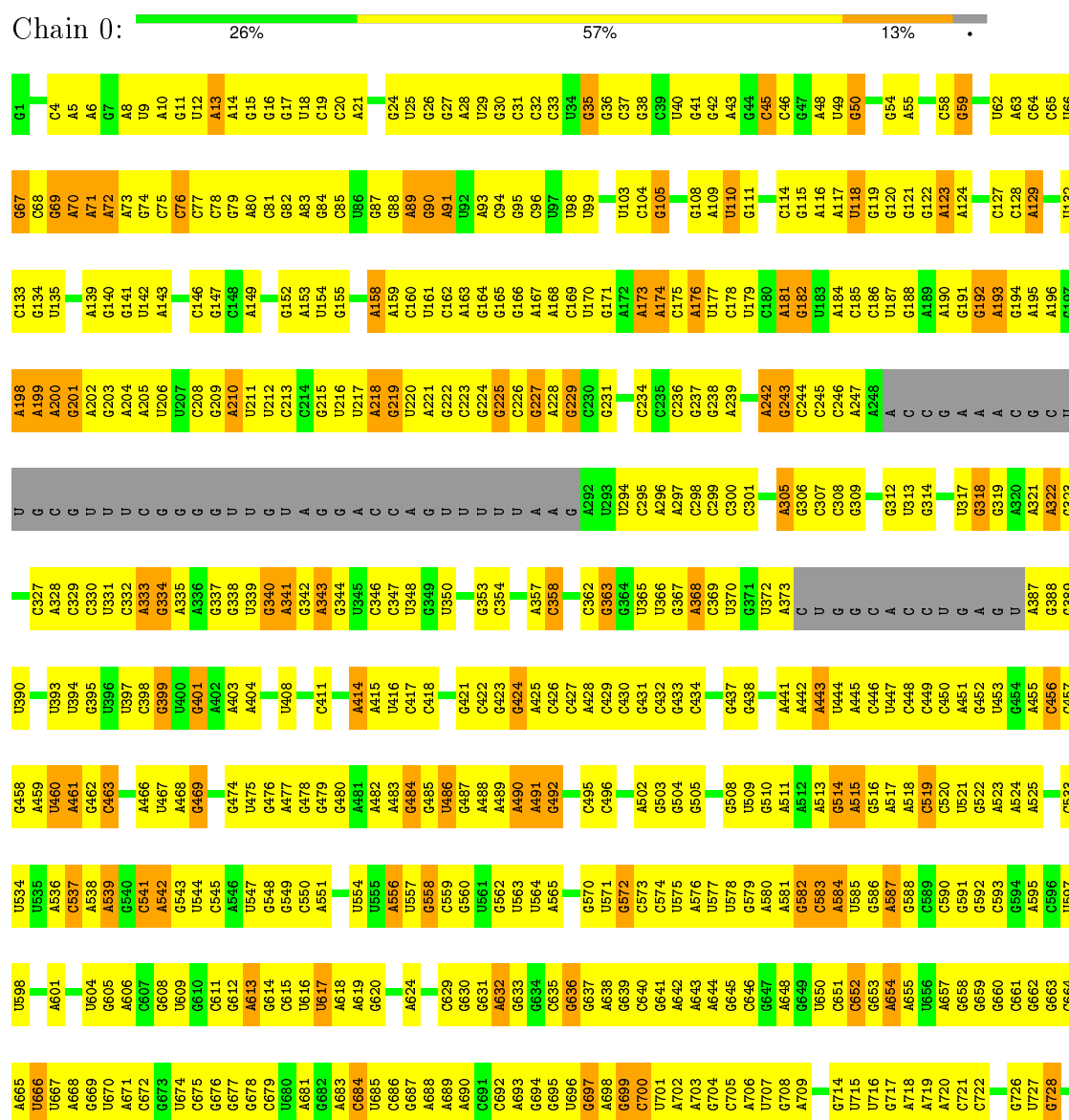
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
			Total	C	N	O		
32	0	1	52	38	2	12	0	0

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 errors displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density ($RSRZ > 2$). 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.

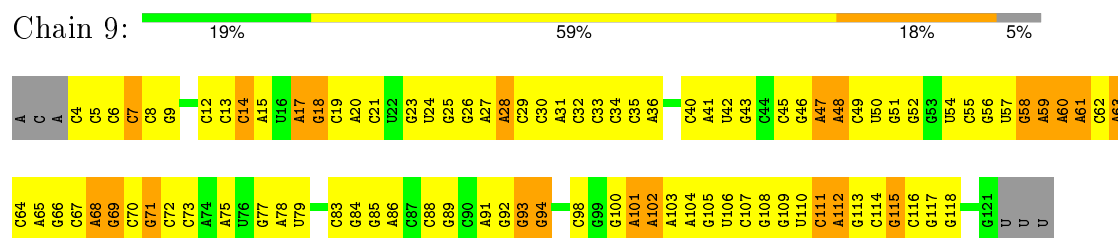
• Molecule 1: 23S RIBOSOMAL RRNA



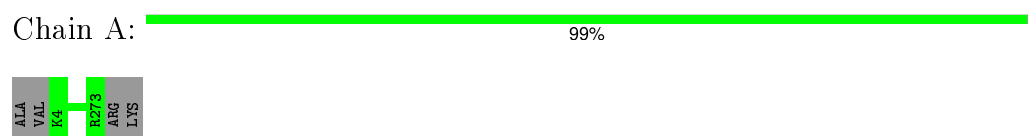
G1760	G1691	G1622	G1559	G1489	G1427	G1358	G1297	G1233	G1156	G1082	G1002	G933	C864	A794	G732
G1761	G1692	C1623	A1560	U1490	G1428	G1359	G1298	A1233	A1162	C1083	C1003	A936	C865	A795	G733
G1762	A1561	A1624	G1561	C1491	A1429	G1360	A1299	C1234	C1163	C1086	U1005	C937	A866	A796	G734
G1763	A1694	A1625	G1562	A1492	G1430	C1363	A1301	C1235	C1164	C1087	C1006	C938	U866	A797	G735
G1764	G1696	A1626	G1566	A1493	U1431	C1364	C1302	A1238	G1165	A1088	A1007	C939	U868	C799	G736
G1765	U1697	C1627	A1567	G1495	G1432	U1365	U1303	G1241	A1166	C1089	G1008	C940	C869	U800	G737
U1766	C1698	A1630	A1568	G1496	A1433	G1368	U1304	G1242	A1167	C1090	C1009	U941	C870	A801	G738
G1767	A1699	C1631	A1569	G1497	G1436	G1369	C1305	G1243	G1168	C1091	U1010	U942	U871	A802	A740
U1768	C1703	A1632	G1570	U1500	G1437	G1371	U1306	G1244	A1171	A1095	C1016	G945	A874	C803	G741
U1769	G1704	C1633	G1571	C1501	G1438	A1372	U1307	G1245	U1170	A1096	C1017	U943	A875	C804	G742
U1770	U1705	A1634	C1572	G1502	G1439	G1373	C1308	G1246	G1169	C1092	A1012	U944	A876	A805	A743
U1771	U1706	G1635	G1573	G1503	G1440	G1374	G1309	G1247	U1171	C1093	U1023	U945	A877	A806	C744
C1772	A1708	A1636	A1574	G1504	A1441	C1375	C1310	U1247	U1172	A1097	C1018	G951	A878	A807	C745
C1773	A1709	G1638	C1575	U1505	G1442	G1376	C1311	G1248	A1179	A1099	U1019	U952	A879	C808	G746
A1774	C1708	A1639	G1576	G1506	G1443	G1377	C1312	G1249	A1180	G1100	U1020	G953	A886	C809	G749
A1775	U1709	C1641	U1577	A1509	G1444	A1378	U1313	G1250	C1181	U1011	A1021	U954	C887	U810	C750
A1776	U1710	G1642	U1578	U1512	G1445	A1379	A1314	G1251	U1182	G1102	A1022	U955	C888	G811	G751
U1777	C1711	A1643	G1579	U1513	U1446	C1380	A1315	C1252	C1183	C1103	U1024	U956	C889	G812	G752
G1778	G1712	G1644	C1580	U1514	U1447	G1381	G1316	C1253	G1184	G1110	G1025	G957	U890	A813	G753
G1779	G1713	U1645	U1581	C1515	U1448	G1382	G1317	G1254	C1185	G1111	G1026	G958	G814	G815	U754
C1780	G1714	U1646	A1582	U1516	G1449	C1383	A1318	A1255	C1190	C1112	U1027	C959	U816	A816	C755
C1781	A1715	A1647	A1583	A1517	G1450	G1384	C1319	U1256	G1191	U1113	U1028	U960	G817	U817	G756
C1782	G1716	A1648	G1584	C1518	C1451	A1385	A1320	U1257	A1192	A1114	G1029	G961	G818	A817	G757
C1783	A1717	U1651	A1585	C1519	U1452	G1386	A1321	U1258	G1193	C1115	U1030	U962	C819	U820	G758
C1784	A1718	G1652	A1586	G1520	U1453	G1387	G1322	A1259	G1194	U1116	U1031	G965	C820	A821	U760
C1785	G1719	C1653	A1587	G1521	C1454	C1388	G1323	A1260	U1195	G1117	A1032	U966	C821	U824	A762
C1786	U1720	A1654	U1588	C1522	G1455	C1389	U1324	G1261	U1196	G1125	U1033	U967	C822	C825	A763
C1787	G1721	G1655	C1589	U1523	A1456	G1390	U1325	U1262	G1197	A1122	U1034	A970	C823	U826	A764
C1788	G1722	U1656	G1590	A1534	A1457	A1391	U1326	G1263	U1198	G1123	G1035	A971	C824	U827	C769
C1789	U1723	A1657	U1591	C1535	U1458	U1392	C1327	C1264	C1199	U1130	G1036	C972	C825	C830	U768
C1790	G1724	G1658	U1592	G1536	G1459	G1393	U1328	G1265	U1200	G1131	A1040	C975	A832	U831	G769
C1791	C1725	C1661	C1593	C1528	G1460	G1394	U1329	G1266	G1201	C1132	C1037	C976	C832	A832	U770
C1792	C1726	G1662	U1594	U1530	C1461	A1397	G1332	G1267	U1202	C1133	U1044	U978	C833	U837	C771
C1793	C1727	C1663	A1595	C1531	A1462	G1398	U1333	U1268	G1125	C1134	C1054	U979	C834	A838	C772
C1794	A1728	G1664	A1596	A1532	A1463	C1399	G1334	G1269	U1203	G1135	C1055	C980	A911	U839	G773
C1795	C1729	C1665	A1597	G1533	A1464	A1400	A1334	G1270	U1204	G1136	U1056	C981	A912	U840	A774
C1796	G1730	G1666	C1598	A1534	C1465	G1401	A1335	C1271	G1205	A1137	U1057	C982	A913	G841	U775
C1797	U1731	A1667	U1599	G1535	U1467	G1402	U1336	G1272	G1206	A1138	A1058	C983	C914	A842	G776
C1800	C1736	G1668	U1600	G1536	U1468	U1403	G1337	G1273	G1207	C1139	G1059	C984	C915	G843	A777
C1801	G1737	A1669	U1601	U1537	U1469	C1404	G1338	G1274	U1212	U1140	C1064	C985	U916	G844	G778
C1802	U1738	G1670	G1602	U1538	G1470	A1405	U1339	G1275	U1213	U1141	A1065	C986	U917	C847	G781
C1803	G1739	A1671	A1603	U1539	G1471	A1406	C1340	A1278	U1214	G1142	C1066	C987	A918	A848	U782
C1804	U1804	A1672	A1604	C1540	C1472	G1407	G1341	G1279	C1214	G1143	G1067	C988	U919	U849	G783
C1805	G1806	C1673	A1605	G1541	U1473	A1408	U1342	U1280	A1215	A1140	C1068	C989	U920	C850	U784
C1806	G1741	C1674	G1606	G1542	U1474	U1409	C1343	A1281	G1216	U1141	A1069	C990	C921	C851	U785
C1807	G1742	C1675	U1607	G1543	U1475	U1410	C1344	G1282	U1217	G1142	C1070	C991	C922	C852	U786
C1808	C1743	G1676	G1609	A1544	G1476	C1411	G1345	A1283	C1218	U1143	A1070	C992	C923	C853	U787
C1809	U1747	U1679	A1610	C1546	C1477	C1412	C1346	U1284	C1219	G1144	C1071	C993	C924	C854	A787
U1810	U1748	A1680	U1611	C1547	U1478	C1413	C1347	U1285	G1220	G1145	G1072	C994	C925	C855	G788
A1811	U1749	A1681	U1612	U1547	G1479	A1416	C1348	U1286	C1221	C1146	G1073	C995	C926	C856	G789
U1812	G1750	A1682	G1613	U1548	G1480	C1417	A1349	U1287	C1222	G1147	C1074	C996	C927	C857	A790
G1813	A1751	G1683	C1614	G1549	U1481	C1418	A1350	A1288	G1223	G1148	C1075	C997	C928	C858	G791
G1814	U1752	A1684	C1615	C1552	U1482	C1419	G1351	A1290	A1224	U1151	U1076	C998	C929	C859	U792
G1815	U1753	A1685	G1616	G1553	U1483	C1420	G1352	G1291	A1225	G1152	G1077	C999	C930	C860	G793
G1816	G1754	A1686	G1617	G1554	G1484	A1421	A1353	A1292	A1226	C1153	G1078	C999	C931	C861	G794
U1817	U1755	C1687	U1618	A1555	U1485	A1422	A1354	A1293	A1227	G1154	G1079	C999	C932	C862	G795
G1818	G1756	U1688	A1619	A1556	U1486	A1423	A1355	A1294	G1228	A1155	U1077	C999	C933	C863	G796
U1819	C1757	U1689	G1620	G1557	C1487	A1424	A1356	U1295	G1229	A1156	G1080	C999	C934	C864	G797
G1820	C1758	U1690	C1621	C1558	G1488	U1426	U1357	G1296	C1230	G1155	A1081	C999	C935	C865	G798

U2853	C2779	G2717	U2651	A2581	U2516	G2449	G2378	U2228	C2162	G	U2030	G1962	U1900	A1821
G2854	A2780	A2718	G2652	G2582	C2517	A2450	G2379	G2229	U2163	A	A2031	G1963	U1901	C1822
C2855	G2781		A2653	C2585	C2518		U2380	G2230	A2164	U	G2032	U1964	A1901	G1823
G2856	G2782		A2654	C2586		C2454	A2381	G2231	A2165	A		U1965	A1902	C1824
C2857	U2783	A2721	G2655	G2587	A2521	U2456	C2382	G2232	G2103		G2035	G1966	G1903	C1825
U2859	A2784	C2722	G2656	U2588	G2522	A2457	C2383	G2233	G2104		G2036	G1969	G1904	U1826
C2860	A2785	G2793	G2657	C2589	G2523	U2458	G2384	G2234	A2168		A2037	G1970	G1905	G1827
A2861	G2786	G2724	A2658	C2590	G2524	C2459	U2385	G2238	A2169		C2038	G1971	U1906	
G2862	A2787	C2725	C2659	U2591		G2460	A2391	G2239	U2171		G2039	G1972	C1907	C1830
C2863	G2788	G2726	G2660	G2592	G2461	A2461	A2392	C2240	U2172			G1973	U1908	G1831
U2864	U2789	G2727	G2661	A2593	G2462	C2462	A2393	G2241	G2173		A2043	U1974	U1909	
G2865		A2728	U2594		G2463		A2394	C2242	A2174		G2044	G1975	A1910	C1835
A2866	G2793	G2793	G2532	C2596	G2533	G2464	C2395	C2243	G2175		A2045	U1976	A1911	C1836
C2867	A2795		U2534	G2597	U2535	G2465	C2396	C2244	A2176		C2046	U1977	G1912	G1837
G2868		C2732	C2535	C2598	C2536	G2466	A2397	A2245	U2177		C2047	U1978	G1913	G1838
U2869	A2798	A2733	G2668	U2599	G2537	A2467	U2398	A2246	U2178		C2048	U1979	U1914	A1839
C2870	C2799	G2734	C2669	A2600	C2538	G2468	C2399	A2247	C2179		U2051	A1980	A1915	A1840
U2871	C2800	C2735	U2538	G2604	C2539	G2469		A2248	U2180		G2052	A1981	G1916	G1841
U2872	A2801	U2736	C2671	C2605	U2540	U2470	U2402	A2249	A2181		A2060	U1994	C1924	G1842
G2873	C2802	A2737	G2672	G2606	A2541	A2471	C2403	G2250	A2182		G2053	G1995	C1925	G1843
	G2803	A2738	G2673	C2607	U2542		A2404	U2251	A2183		A2054	A1996	U1926	U1844
C2874	G2804	G2739	C2674	C2608	U2543	G2474	A2405	U2252	C2184		G2055	C1991	A1920	A1845
		C2740	U2675	A2609	A2544	C2475	C2406	A2253	C2185		U2057	G1992	A1921	A1846
U2875		G2741	G2676	G2610	A2545	A2476	G2407	C2254	G2186		U2058	G1993	U1922	G1847
G2876	U2807	G2742	U2677		A2546	C2477	G2408	G2255	U2187		U2059	U1994	U1923	U1848
A2877	U2808	U2743	G2678		G2547	C2478	A2409	G2261	A2191		A2060	G1995	C1924	G1849
C	A2809	G2744	C2679	A2613	C2548	U2479	U2410	G2262	U2192		U2064	A1996	C1925	G1850
U	G2810	A2745	U2680	A2614	G2549	G2480	A2413	C2263	C2193		U2065	A1997	U1927	A1851
C	G2811		A2681	U2615	G2550	G2481	A2414	C2264	C2194		G2066	A1998	G1928	G1854
	G2813		C2682	G2616	C2551	U2482		A2265	C2195		U2067	U1999	U1933	G1855
G2814		C2748		G2617	A2552	U2483	U2417	A2266	U2196			U2000	G1934	U1856
		A2749		A2618	C2553	G2484	A2418	A2267	U2197			G2001	U1934	G1857
		G2750		G2619	C2554	U2485	C2419	G2268	U2198			A2002	A1935	C1858
C2820	G2821	C2752	G2686	G2620	C2554	G2486		G2269	C2199		G2071	A2003	A1936	A1859
		C2753	G2688	G2621	G2555	G2487		G2270	C2200		C2072	U2004	G1937	A1860
C2824		C2754	C2689	G2622		G2488	C2422		G2201		A2073	U2005	U1938	G1861
A2825		A2755	A2690	A2623	A2556	C2489	G2423		G2202		U2074	G2006	U1939	C1862
C2826		G2756	C2691	G2624		U2490	G2424		G2203		U2075		C1940	U1863
		A2757	U2625		U2559	C2491	G2425		G2204		G2076		C1941	G1864
A2829		G2758	G2693	U2626	G2561	G2492	G2426		C2205		G2077	G2010	A1942	C1865
U2830		U2759	G2694	G2627	G2562	U2493	A2427		C2206		G2078	U2011	A1943	G1866
A2831		G2760	C2695	C2628	U2563	G2494	U2428		C2207		U2079	A2012	C1944	A1867
G2832		A2761	U2639		U2564	A2495	A2429		U2208		U2080	A2013	C1945	A1868
C2833		G2762	C2630	G2631	C2565	G2496	A2430		G2209		U2081	A2014	U1946	A1869
		U2763			A2566	A2497	C2431		C2210		C2082	G2015	G1947	U1870
		U2764	U2632		G2567	U2498	A2432		C2211		G2083	A2016	C1948	G1871
		C2765	A2633		A2568	G2499	G2433		U2212		G2084	A1949	A1872	A1872
			G2634		A2569	C2500	G2434		G2085		U2017	G2018	C1950	A1873
			U2635		C2570	U2501	C2435		G2086		C2019	G1951	G1951	
			A2636		G2571	G2502	U2436					G2020	A1952	U1881
					U2572	G2504	A2438		U2090			G2021	A1953	G1882
			G2640		C2573				C2091			C2022	A1954	A1883
			A2641		G2574		C2443		U2092			C2023	G1955	A1884
			G2642		U2575		A2371		G2093			U2024	A1956	C1885
			G2643		G2576		A2372		C2094			A2025	G1957	G1886
			A2644		A2577				G2095			C2026	G1958	G1887
			C2645		G2578				U2096			C2027	U1959	C1888
			U2646		A2579				A2097			C2028	A1960	G1889
			G2646						G				A1961	G1890

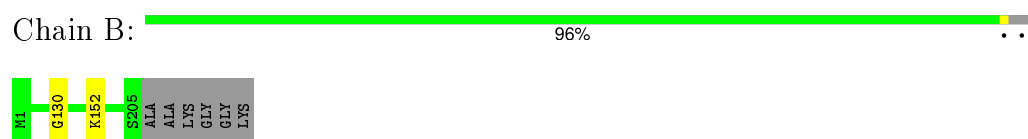
- Molecule 2: 5S RIBOSOMAL RRNA



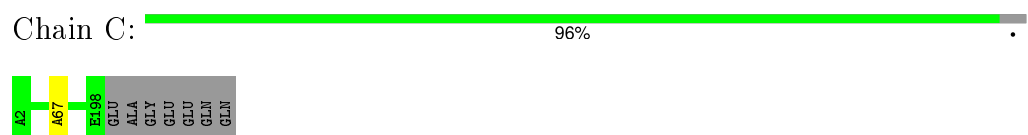
- Molecule 3: ribosomal protein L2



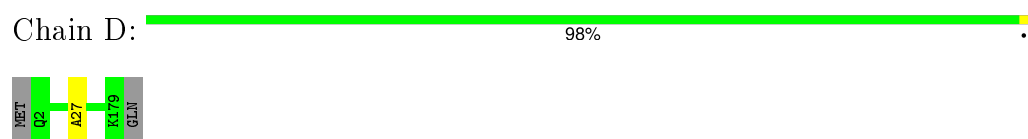
- Molecule 4: ribosomal protein L3



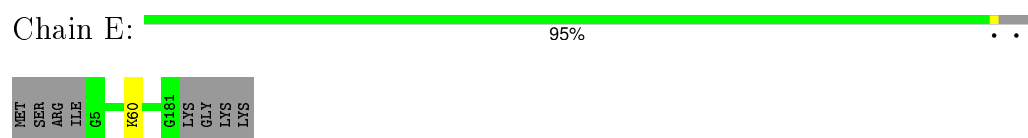
- Molecule 5: ribosomal protein L4



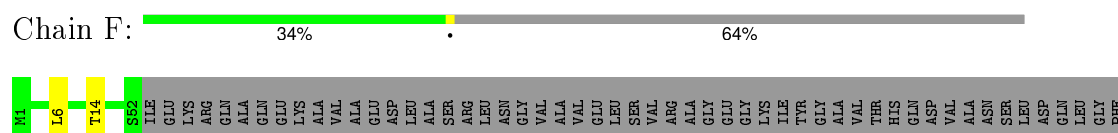
- Molecule 6: ribosomal protein L5



- Molecule 7: ribosomal protein L6



- Molecule 8: ribosomal protein L9




ASP VAL ASP ARG ARG LYS ASP MET PRO LYS THR VAL LYS GLU VAL GLY TYR ASP ILE ALA TYR ARG ALA HIS PRO GLU VAL THR ILE PRO MET LYS LEU VAL VAL HIS ALA ALA LYS

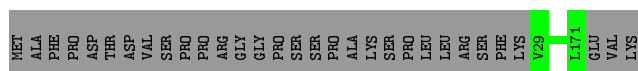
- Molecule 9: ribosomal protein L11

Chain G:  99% .



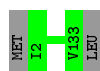
- Molecule 10: ribosomal protein L13

Chain H:  82% 18%




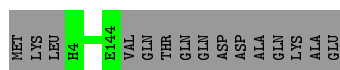
- Molecule 11: ribosomal protein L14

Chain I:  99% .




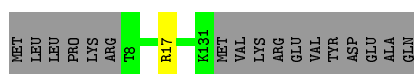
- Molecule 12: ribosomal protein L15

Chain J:  90% 10%



- Molecule 13: ribosomal protein L16

Chain K:  87% 12%



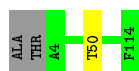
- Molecule 14: ribosomal protein L17

Chain L:  97% ..



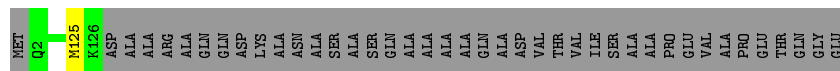
- Molecule 15: ribosomal protein L18

Chain M:  97% ..



- Molecule 16: ribosomal protein L19

Chain N:  75% 25%



- Molecule 17: ribosomal protein L20

Chain O:  99%



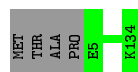
- Molecule 18: ribosomal protein L21

Chain P:  100%

There are no outlier residues recorded for this chain.

- Molecule 19: ribosomal protein L22

Chain Q:  97%



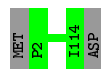
- Molecule 20: ribosomal protein L23

Chain R:  99%



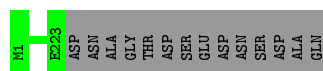
- Molecule 21: ribosomal protein L24

Chain S:  98%



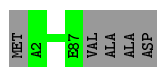
- Molecule 22: general stress protein Ctc

Chain T:  94% 6%



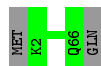
- Molecule 23: ribosomal protein L27

Chain U:  95% 5%



- Molecule 24: ribosomal protein L29

Chain W: 97% .



- Molecule 25: ribosomal protein L30

Chain X: 100%

There are no outlier residues recorded for this chain.

- Molecule 26: ribosomal protein L31

Chain Y: 100%

There are no outlier residues recorded for this chain.

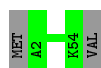
- Molecule 27: ribosomal protein L32

Chain Z: 97% ..



- Molecule 28: ribosomal protein L33

Chain 1: 96% .



- Molecule 29: ribosomal protein L34

Chain 2: 98% .



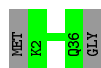
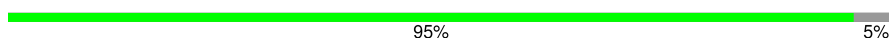
- Molecule 30: ribosomal protein L35

Chain 3: 97% .



- Molecule 31: ribosomal protein L36

Chain 4:



4 Data and refinement statistics

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

Property	Value	Source
Space group	I 2 2 2	Depositor
Cell constants a, b, c, α , β , γ	170.80 Å 409.50 Å 695.70 Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	15.00 – 3.30	Depositor
% Data completeness (in resolution range)	(Not available) (15.00-3.30)	Depositor
R_{merge}	(Not available)	Depositor
R_{sym}	0.11	Depositor
Refinement program	CNS 1.0	Depositor
R, R_{free}	0.279 , 0.304	Depositor
Estimated twinning fraction	No twinning to report.	Xtriage
Total number of atoms	65404	wwPDB-VP
Average B, all atoms (Å ²)	46.0	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: ZIT

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# $ Z > 5$	RMSZ	# $ Z > 5$
1	0	0.23	0/66467	0.67	0/103673
2	9	0.59	0/2816	0.81	1/4388 (0.0%)
All	All	0.26	0/69283	0.67	1/108061 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	0	0	1

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed($^{\circ}$)	Ideal($^{\circ}$)
2	9	94	G	N9-C1'-C2'	-6.58	104.76	112.00

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	0	1342	U	Sidechain

5.2 Too-close contacts [i](#)

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

the asymmetric unit, whereas Symm-Clashes lists symmetry related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	0	59359	0	29917	2160	0
2	9	2519	0	1285	147	0
3	A	270	0	0	0	0
4	B	205	0	0	3	0
5	C	197	0	0	1	0
6	D	178	0	0	1	0
7	E	177	0	0	1	0
8	F	52	0	0	1	0
9	G	143	0	0	0	0
10	H	143	0	0	0	0
11	I	132	0	0	0	0
12	J	141	0	0	0	0
13	K	124	0	0	1	0
14	L	114	0	0	1	0
15	M	111	0	0	1	0
16	N	125	0	0	1	0
17	O	117	0	0	0	0
18	P	100	0	0	0	0
19	Q	130	0	0	0	0
20	R	93	0	0	0	0
21	S	113	0	0	0	0
22	T	223	0	0	0	0
23	U	86	0	0	0	0
24	W	65	0	0	0	0
25	X	55	0	0	0	0
26	Y	73	0	0	0	0
27	Z	58	0	0	1	0
28	1	53	0	0	0	0
29	2	46	0	0	0	0
30	3	63	0	0	0	0
31	4	35	0	0	0	0
32	0	104	0	144	47	0
All	All	65404	0	31346	2342	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 24.

All (2342) 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)
32:0:2882:ZIT:H6A1	32:0:2882:ZIT:C6B	1.61	1.30
32:0:2881:ZIT:C6B	32:0:2881:ZIT:H6A1	1.61	1.29
1:0:1679:U:H2'	1:0:1680:U:H5''	1.27	1.16
1:0:2058:U:H1'	1:0:2576:G:H21	1.10	1.14
1:0:2548:G:H2'	1:0:2549:G:H5''	1.26	1.14
32:0:2881:ZIT:C6A	32:0:2881:ZIT:C6B	2.28	1.11
32:0:2882:ZIT:C6A	32:0:2882:ZIT:C6B	2.28	1.11
32:0:2882:ZIT:H6B1	32:0:2882:ZIT:C6A	1.82	1.10
1:0:1908:C:H2'	1:0:1909:U:H4'	1.30	1.09
1:0:1966:C:H4'	1:0:2585:C:H4'	1.22	1.09
32:0:2881:ZIT:H6B1	32:0:2881:ZIT:C6A	1.82	1.08
1:0:940:G:H3'	1:0:941:U:H5''	1.08	1.08
1:0:764:A:N1	32:0:2882:ZIT:H201	1.67	1.07
1:0:764:A:C2	32:0:2882:ZIT:H201	1.89	1.07
1:0:1747:G:H4'	1:0:1749:G:H1'	1.34	1.05
1:0:362:C:H2'	1:0:363:G:H4'	1.39	1.05
1:0:104:C:H2'	1:0:105:G:H5''	1.35	1.03
32:0:2882:ZIT:C19	32:0:2882:ZIT:O5A	2.06	1.03
1:0:940:G:H3'	1:0:941:U:C5'	1.89	1.03
32:0:2881:ZIT:O5A	32:0:2881:ZIT:C19	2.06	1.02
1:0:918:A:H2'	1:0:919:U:H5''	1.35	1.02
1:0:1458:A:H3'	1:0:1459:U:C5'	1.91	1.01
1:0:1976:U:H2'	1:0:1977:C:H5'	1.37	1.00
1:0:929:A:H3'	1:0:930:A:H5''	1.44	0.99
1:0:1280:U:H3	1:0:1996:A:H62	1.06	0.99
1:0:1073:G:H2'	1:0:1074:G:H4'	1.43	0.98
1:0:1182:U:H2'	1:0:1183:C:H5''	1.43	0.97
1:0:1900:U:O2'	1:0:1946:U:H5'	1.64	0.97
1:0:2081:U:H2'	1:0:2082:C:H5''	1.44	0.96
1:0:2299:A:H5'	1:0:2300:G:C4	2.00	0.96
1:0:688:A:H62	1:0:816:U:H3	1.13	0.96
1:0:2266:A:N6	1:0:2323:U:H1'	1.81	0.95
1:0:1679:U:C2'	1:0:1680:U:H5''	1.96	0.94
1:0:75:C:H2'	1:0:76:C:H5''	1.49	0.94
2:9:54:U:H2'	2:9:55:C:C6	2.03	0.94
1:0:1432:G:H21	1:0:1596:A:H62	1.13	0.94
1:0:2599:U:H2'	1:0:2600:A:H5''	1.47	0.94
1:0:1656:U:H2'	1:0:1657:A:H5''	1.50	0.94
1:0:2476:A:HO2'	1:0:2477:C:H5	0.95	0.93
1:0:941:U:H2'	1:0:942:U:O4'	1.69	0.93
1:0:2548:G:C2'	1:0:2549:G:H5''	1.98	0.93
1:0:2380:U:H2'	1:0:2381:A:H5'	1.49	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:58:C:H3'	1:0:59:G:H5''	1.50	0.92
2:9:25:G:H2'	2:9:26:G:O4'	1.69	0.92
32:0:2881:ZIT:C6A	32:0:2881:ZIT:H6B2	1.98	0.92
2:9:84:G:H2'	2:9:85:G:H8	1.34	0.92
1:0:508:G:H1	1:0:516:G:H22	1.18	0.91
32:0:2882:ZIT:C6A	32:0:2882:ZIT:H6B2	1.98	0.91
1:0:317:U:H2'	1:0:318:G:H5''	1.51	0.91
1:0:847:C:H41	1:0:955:G:H21	1.17	0.90
1:0:2266:A:H61	1:0:2323:U:H1'	1.32	0.90
1:0:2198:U:H3'	1:0:2199:C:H5''	1.53	0.90
1:0:716:U:H2'	1:0:717:G:O4'	1.71	0.90
32:0:2881:ZIT:H192	32:0:2881:ZIT:O5A	1.72	0.89
1:0:28:A:H61	1:0:522:G:H4'	1.37	0.89
32:0:2882:ZIT:H6B1	32:0:2882:ZIT:H6A1	0.91	0.89
2:9:100:G:H2'	2:9:101:A:O4'	1.72	0.89
32:0:2881:ZIT:H6B1	32:0:2881:ZIT:H6A1	0.90	0.89
32:0:2882:ZIT:H192	32:0:2882:ZIT:O5A	1.72	0.89
1:0:752:G:H5'	1:0:1775:A:H61	1.38	0.89
1:0:763:A:H2	1:0:765:C:H1'	1.37	0.89
2:9:67:C:H2'	2:9:68:A:H5'	1.54	0.88
2:9:42:U:H2'	2:9:45:C:H41	1.35	0.88
1:0:1791:C:H2'	1:0:1792:C:H5''	1.54	0.88
1:0:317:U:H3	1:0:321:A:H62	1.20	0.88
2:9:4:C:H2'	2:9:5:C:C6	2.08	0.88
1:0:2059:U:H2'	1:0:2060:A:H5''	1.54	0.87
1:0:2014:A:H62	1:0:2477:C:H1'	1.36	0.87
1:0:2096:U:H2'	1:0:2097:A:H5''	1.54	0.87
1:0:367:G:H2'	1:0:368:A:H5''	1.57	0.87
1:0:651:C:H2'	1:0:652:C:H5''	1.57	0.87
1:0:1312:G:H5'	1:0:1314:A:H1'	1.56	0.87
1:0:2691:C:H3'	1:0:2692:A:H5''	1.57	0.86
1:0:1748:U:H3	1:0:1753:A:H2	1.23	0.86
1:0:857:U:H2'	1:0:858:G:H5'	1.57	0.86
1:0:2636:A:H62	1:0:2643:G:H21	1.23	0.86
1:0:818:G:H22	1:0:2051:U:H5''	1.39	0.86
1:0:2014:A:N6	1:0:2477:C:H1'	1.90	0.85
1:0:2737:A:H61	7:E:60:LYS:CA	1.88	0.85
2:9:102:A:C2'	2:9:103:A:H5'	2.06	0.85
1:0:1252:C:C2'	1:0:1253:C:H5''	2.06	0.85
1:0:1621:C:H4'	1:0:1626:A:C6	2.12	0.85
1:0:1252:C:H2'	1:0:1253:C:H5''	1.59	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2510:A:H61	1:0:2641:A:H61	1.24	0.85
1:0:1900:U:H2'	1:0:1901:A:O4'	1.77	0.85
1:0:2509:A:H2'	1:0:2510:A:H5''	1.59	0.85
1:0:2598:C:H4'	4:B:152:LYS:CA	2.07	0.84
1:0:976:C:H5'	1:0:2252:A:H1'	1.57	0.84
1:0:658:G:H4'	1:0:2331:A:H5'	1.60	0.84
2:9:67:C:C2'	2:9:68:A:H5'	2.07	0.84
1:0:2324:G:H4'	1:0:2326:C:H5''	1.60	0.84
1:0:762:A:H2'	1:0:763:A:H8	1.41	0.83
1:0:616:U:H2'	1:0:617:U:H5''	1.58	0.83
1:0:2623:A:H2'	1:0:2624:G:O4'	1.76	0.83
1:0:1922:U:H1'	1:0:2570:C:O2'	1.79	0.83
1:0:1463:A:H1'	1:0:1543:G:H22	1.40	0.83
1:0:1458:A:H3'	1:0:1459:U:H5''	1.60	0.83
1:0:755:C:H5'	1:0:1692:C:O2'	1.78	0.83
1:0:1976:U:C2'	1:0:1977:C:H5'	2.07	0.83
2:9:102:A:O2'	2:9:103:A:H5'	1.77	0.83
1:0:88:G:H3'	1:0:89:A:H5''	1.61	0.83
1:0:2599:U:C2'	1:0:2600:A:H5''	2.09	0.82
2:9:93:G:H2'	2:9:94:G:H8	1.42	0.82
1:0:641:G:H4'	1:0:651:C:O2'	1.79	0.82
1:0:1922:U:O2	1:0:2571:G:H5'	1.79	0.82
1:0:929:A:H2'	1:0:930:A:H4'	1.62	0.81
1:0:2058:U:H1'	1:0:2576:G:N2	1.94	0.81
1:0:2498:U:H5''	1:0:2499:C:OP1	1.80	0.81
1:0:1181:C:H3'	1:0:1182:U:H5''	1.59	0.81
1:0:1900:U:H3'	1:0:1901:A:H8	1.43	0.81
1:0:1974:U:H2'	1:0:1975:G:H5''	1.62	0.81
1:0:1438:G:H2'	1:0:1439:G:O4'	1.81	0.81
2:9:92:G:H2'	2:9:93:G:H5'	1.62	0.81
2:9:12:C:H2'	2:9:13:C:O4'	1.81	0.81
2:9:7:C:O2'	2:9:8:C:H5'	1.80	0.81
1:0:542:A:H2'	1:0:543:G:H5'	1.63	0.81
1:0:1463:A:H1'	1:0:1543:G:N2	1.95	0.81
1:0:922:A:H2'	1:0:923:A:H8	1.46	0.81
1:0:681:A:H2'	1:0:683:A:N7	1.95	0.80
1:0:556:A:H2'	1:0:557:U:H5'	1.62	0.80
1:0:762:A:H2'	1:0:763:A:C8	2.16	0.80
1:0:798:G:H2'	1:0:799:C:H5'	1.62	0.80
1:0:70:A:O3'	1:0:71:A:H3'	1.80	0.80
1:0:2755:A:O2'	1:0:2756:A:H5'	1.80	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1804:U:H2'	1:0:1805:G:H8	1.46	0.80
1:0:1791:C:H1'	1:0:1793:A:H5'	1.64	0.80
1:0:1182:U:C2'	1:0:1183:C:H5''	2.12	0.80
1:0:1223:G:H21	1:0:1225:G:H21	1.30	0.80
1:0:2499:C:H41	1:0:2521:A:H2	1.26	0.80
1:0:1715:A:O2'	1:0:1716:G:H3'	1.82	0.80
1:0:764:A:C6	32:0:2882:ZIT:H201	2.16	0.80
1:0:168:A:H2'	1:0:169:C:C6	2.17	0.80
1:0:930:A:H3'	1:0:931:G:H8	1.46	0.79
2:9:28:A:C2	2:9:29:C:H1'	2.18	0.79
1:0:558:G:H5''	1:0:559:C:C5	2.16	0.79
1:0:1656:U:C2'	1:0:1657:A:H5''	2.12	0.79
1:0:547:U:H2'	1:0:548:G:C8	2.17	0.79
2:9:65:A:H2'	2:9:66:G:C8	2.17	0.79
1:0:873:U:C2	1:0:2246:A:H5''	2.17	0.79
1:0:2872:U:H2'	1:0:2873:G:C8	2.18	0.79
1:0:1886:G:H2'	1:0:1887:G:H8	1.46	0.79
1:0:1811:A:H1'	1:0:1813:A:C5	2.18	0.79
1:0:652:C:H42	1:0:657:A:H61	1.27	0.79
1:0:590:C:H2'	1:0:591:G:C8	2.17	0.79
1:0:873:U:H1'	1:0:2246:A:OP1	1.83	0.79
1:0:792:U:H2'	1:0:793:G:H5'	1.64	0.78
1:0:635:C:H2'	1:0:636:G:H5''	1.64	0.78
1:0:2672:U:H2'	1:0:2673:G:H8	1.47	0.78
1:0:689:A:H8	1:0:2052:G:H21	1.28	0.78
1:0:1900:U:H3'	1:0:1901:A:C8	2.19	0.78
1:0:416:U:H5''	1:0:417:C:H5'	1.65	0.78
2:9:78:A:H2'	2:9:79:U:C6	2.19	0.78
1:0:1088:A:H2'	1:0:1089:C:O4'	1.83	0.78
1:0:1807:A:O2'	1:0:1808:C:H4'	1.83	0.78
1:0:357:A:H2'	1:0:358:C:H5'	1.63	0.78
1:0:1299:A:H2'	1:0:1301:U:OP2	1.82	0.78
2:9:92:G:C2'	2:9:93:G:H5'	2.14	0.78
1:0:187:U:H2'	1:0:188:G:H8	1.49	0.78
1:0:2474:G:H2'	1:0:2475:C:O4'	1.84	0.78
2:9:58:G:H4'	2:9:59:A:H5'	1.64	0.78
1:0:1319:C:H2'	1:0:1320:A:H8	1.47	0.78
1:0:1195:U:H2'	1:0:1196:G:C8	2.19	0.78
1:0:764:A:C2	32:0:2882:ZIT:C20	2.65	0.77
1:0:1086:C:H2'	1:0:1087:C:H5''	1.64	0.77
1:0:218:A:O2'	1:0:219:G:H4'	1.84	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1697:U:H2'	1:0:1698:C:O4'	1.84	0.77
1:0:2861:A:H2'	1:0:2862:G:H8	1.49	0.77
1:0:2447:G:H22	1:0:2460:G:H2'	1.49	0.77
2:9:69:G:H2'	2:9:70:C:O4'	1.84	0.77
1:0:1032:A:H2'	1:0:1033:G:H4'	1.63	0.77
1:0:613:A:H2'	1:0:614:G:H8	1.49	0.77
1:0:2437:G:N1	1:0:2469:G:H2'	2.00	0.77
1:0:1825:C:O2'	1:0:1826:U:H5'	1.85	0.77
2:9:65:A:H2'	2:9:66:G:H8	1.50	0.77
1:0:2559:U:H5'	4:B:130:GLY:CA	2.15	0.77
1:0:918:A:C2'	1:0:919:U:H5''	2.11	0.77
1:0:75:C:C2'	1:0:76:C:H5''	2.15	0.77
1:0:2262:C:H2'	1:0:2263:C:O4'	1.85	0.77
1:0:1066:G:H2'	1:0:1067:G:H4'	1.67	0.77
1:0:1459:U:H2'	1:0:1475:U:O2'	1.84	0.76
1:0:951:G:H2'	1:0:952:A:H5''	1.65	0.76
1:0:2770:A:H4'	1:0:2867:G:H22	1.49	0.76
1:0:1911:A:H2'	1:0:1912:G:H5'	1.67	0.76
1:0:1608:U:H2'	1:0:1609:G:H8	1.51	0.76
1:0:2320:G:H2'	1:0:2321:C:O4'	1.85	0.76
1:0:103:U:H2'	1:0:104:C:C6	2.20	0.76
1:0:1242:A:H2'	1:0:1243:G:C8	2.21	0.76
2:9:77:G:H2'	2:9:78:A:O4'	1.84	0.76
1:0:2006:G:H4'	1:0:2596:C:O2'	1.86	0.76
32:0:2882:ZIT:H193	32:0:2882:ZIT:O5A	1.85	0.76
1:0:37:C:H2'	1:0:38:G:C8	2.20	0.76
1:0:169:C:H2'	1:0:170:U:H5'	1.68	0.76
1:0:2633:A:H61	1:0:2646:C:N4	1.83	0.75
1:0:37:C:H2'	1:0:38:G:H8	1.52	0.75
1:0:215:G:H21	1:0:632:A:H8	1.31	0.75
1:0:2436:U:H2'	1:0:2437:G:O4'	1.86	0.75
1:0:468:A:O2'	1:0:469:G:H4'	1.86	0.75
1:0:1763:G:H2'	1:0:1764:A:H4'	1.68	0.75
1:0:585:U:H2'	1:0:586:G:C8	2.20	0.75
1:0:1036:G:H1'	1:0:1145:C:C4'	2.16	0.75
1:0:404:A:H1'	1:0:424:G:O2'	1.85	0.75
1:0:930:A:H3'	1:0:931:G:C8	2.22	0.75
1:0:2861:A:H2'	1:0:2862:G:C8	2.22	0.75
1:0:1036:G:H1'	1:0:1145:C:H4'	1.68	0.75
1:0:547:U:H2'	1:0:548:G:H8	1.51	0.75
1:0:1440:G:H1'	1:0:1588:A:N6	2.01	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1587:A:H2'	1:0:1588:A:C8	2.22	0.75
1:0:1035:G:H21	1:0:1155:G:H4'	1.50	0.75
1:0:1055:A:C2	1:0:1121:G:H2'	2.22	0.74
1:0:2652:G:H2'	1:0:2653:A:H8	1.50	0.74
1:0:2426:G:H22	1:0:2431:C:N4	1.85	0.74
32:0:2881:ZIT:O5A	32:0:2881:ZIT:H193	1.85	0.74
1:0:104:C:C2'	1:0:105:G:H5''	2.13	0.74
1:0:727:U:H2'	1:0:728:G:H5''	1.70	0.74
1:0:797:A:C5	1:0:805:G:H1'	2.22	0.74
1:0:2498:U:OP1	1:0:2498:U:H3'	1.87	0.74
1:0:2616:U:H2'	1:0:2617:G:O4'	1.87	0.74
1:0:1223:G:N2	1:0:1225:G:H21	1.85	0.74
1:0:2270:U:O2'	1:0:2353:G:H1'	1.88	0.74
1:0:114:C:H4'	1:0:124:A:O2'	1.88	0.74
1:0:1463:A:C1'	1:0:1543:G:H22	2.01	0.74
1:0:2329:C:H2'	1:0:2330:G:O4'	1.87	0.74
1:0:28:A:N6	1:0:522:G:H4'	2.02	0.74
1:0:922:A:H2'	1:0:923:A:C8	2.22	0.74
1:0:1348:C:H2'	1:0:1349:A:C8	2.22	0.73
1:0:1750:A:H1'	1:0:2690:A:C2	2.23	0.73
1:0:2532:G:C2	1:0:2533:U:H1'	2.23	0.73
1:0:1681:A:C2	1:0:2706:U:H1'	2.23	0.73
1:0:1284:G:C4	1:0:1633:C:H5'	2.23	0.73
1:0:2299:A:H5'	1:0:2300:G:C5	2.23	0.73
2:9:31:A:H2'	2:9:32:C:O4'	1.89	0.73
1:0:1608:U:H2'	1:0:1609:G:C8	2.24	0.73
1:0:2318:U:H2'	1:0:2319:G:H8	1.51	0.73
1:0:821:A:O2'	1:0:1267:A:H4'	1.89	0.73
1:0:940:G:C3'	1:0:941:U:H5''	2.04	0.73
32:0:2882:ZIT:H162	32:0:2882:ZIT:O13	1.86	0.73
1:0:1747:G:H4'	1:0:1749:G:C1'	2.18	0.73
1:0:612:G:O3'	1:0:613:A:H4'	1.89	0.73
1:0:2268:G:H5''	1:0:2363:G:O2'	1.89	0.73
1:0:1471:G:H1	1:0:2682:C:H42	1.35	0.73
1:0:763:A:C2	1:0:765:C:H1'	2.23	0.72
2:9:48:A:O2'	2:9:49:C:H5'	1.88	0.72
1:0:2492:G:H1	1:0:2550:C:H42	1.36	0.72
1:0:1202:U:H2'	1:0:1203:A:H8	1.53	0.72
1:0:1982:C:H4'	1:0:2703:C:O2	1.88	0.72
1:0:841:G:H2'	1:0:842:A:C8	2.25	0.72
1:0:792:U:C2'	1:0:793:G:H5'	2.19	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2669:C:H41	14:L:15:SER:CA	2.03	0.72
1:0:162:C:H2'	1:0:163:A:C8	2.23	0.72
1:0:2456:U:H1'	1:0:2460:G:H22	1.54	0.72
1:0:81:C:H2'	1:0:82:G:O4'	1.90	0.72
1:0:1295:U:H2'	1:0:1296:G:H5'	1.71	0.71
1:0:1267:A:H5''	1:0:1268:U:O5'	1.88	0.71
1:0:208:C:H2'	1:0:209:G:H5'	1.69	0.71
1:0:2674:C:H2'	1:0:2675:U:H6	1.54	0.71
1:0:1445:A:H2'	1:0:1446:U:O4'	1.90	0.71
2:9:61:A:O5'	2:9:61:A:H8	1.73	0.71
1:0:2559:U:C5'	4:B:130:GLY:CA	2.68	0.71
1:0:1654:A:H4'	1:0:2690:A:O2'	1.89	0.71
1:0:2670:C:H4'	1:0:2846:G:O2'	1.91	0.71
1:0:2503:G:H2'	1:0:2504:G:H5''	1.70	0.71
1:0:1976:U:H2'	1:0:1977:C:C5'	2.17	0.71
1:0:1225:G:H2'	1:0:1249:G:H22	1.53	0.71
1:0:1040:A:H2'	1:0:1041:G:H5'	1.70	0.71
1:0:1429:A:H62	1:0:1601:U:H5''	1.55	0.71
1:0:19:C:H5'	1:0:563:U:OP1	1.90	0.71
1:0:2431:C:O2'	1:0:2485:U:H4'	1.91	0.71
1:0:58:C:H3'	1:0:59:G:C5'	2.19	0.71
1:0:651:C:C2'	1:0:652:C:H5''	2.20	0.71
1:0:2324:G:O2'	1:0:2325:A:H5''	1.90	0.71
2:9:28:A:H3'	2:9:29:C:H6	1.55	0.71
2:9:36:A:H2'	2:9:46:G:O6	1.90	0.71
1:0:331:U:H2'	1:0:332:C:H5''	1.72	0.71
1:0:2176:U:H2'	1:0:2177:U:O4'	1.91	0.71
32:0:2882:ZIT:C6B	32:0:2882:ZIT:C5A	2.69	0.71
1:0:2198:U:C3'	1:0:2199:C:H5''	2.21	0.71
1:0:2185:U:H2'	1:0:2186:G:C8	2.26	0.71
1:0:2565:C:H4'	1:0:2566:A:H5'	1.71	0.71
1:0:1466:C:H2'	1:0:1467:U:O4'	1.89	0.71
1:0:2321:C:H2'	1:0:2322:U:O4'	1.91	0.70
1:0:618:A:H2'	1:0:619:A:O4'	1.89	0.70
1:0:1479:G:H2'	1:0:1480:G:H8	1.55	0.70
1:0:460:U:N3	1:0:592:G:H1'	2.06	0.70
1:0:613:A:H2'	1:0:614:G:C8	2.26	0.70
1:0:2315:A:O2'	1:0:2364:C:H5''	1.91	0.70
1:0:162:C:H4'	1:0:195:A:H4'	1.71	0.70
1:0:760:U:O2	1:0:1997:A:H1'	1.91	0.70
1:0:953:G:H1'	1:0:1203:A:H2	1.55	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:9:71:G:N2	2:9:72:C:H1'	2.07	0.70
1:0:1854:G:H1	1:0:1863:U:H3	1.37	0.70
1:0:1284:G:N3	1:0:1633:C:H5'	2.07	0.70
32:0:2881:ZIT:C5A	32:0:2881:ZIT:C6B	2.69	0.70
1:0:1068:A:H2'	1:0:1069:G:C8	2.27	0.70
1:0:1617:G:H2'	1:0:1618:U:H5'	1.72	0.70
1:0:523:A:H4'	1:0:1230:C:H5'	1.74	0.70
1:0:2599:U:C3'	1:0:2600:A:H5''	2.22	0.70
2:9:84:G:O2'	2:9:85:G:H5'	1.91	0.70
1:0:1479:G:H2'	1:0:1480:G:C8	2.27	0.70
1:0:1436:G:H21	1:0:1514:C:H1'	1.57	0.70
1:0:1689:U:C2	1:0:2561:G:H5'	2.27	0.70
1:0:1598:C:H2'	1:0:1599:G:O4'	1.91	0.70
1:0:1789:U:H2'	1:0:1790:G:H5'	1.74	0.70
1:0:2469:G:H5''	1:0:2470:U:OP1	1.91	0.70
1:0:236:C:H2'	1:0:237:G:H8	1.57	0.70
1:0:245:C:H5'	1:0:372:U:O2'	1.91	0.70
1:0:2841:U:H1'	1:0:2843:A:H1'	1.72	0.70
1:0:2202:G:H2'	1:0:2203:G:O4'	1.92	0.70
1:0:788:G:N2	1:0:800:U:H2'	2.07	0.69
1:0:734:G:H2'	1:0:735:G:H8	1.57	0.69
2:9:4:C:H2'	2:9:5:C:H6	1.57	0.69
1:0:109:A:C3'	1:0:110:U:H5''	2.22	0.69
1:0:2836:U:H2'	1:0:2837:G:C8	2.26	0.69
1:0:486:U:H4'	1:0:520:C:H5'	1.74	0.69
1:0:652:C:H42	1:0:657:A:N6	1.89	0.69
1:0:541:C:H42	1:0:572:G:H8	1.40	0.69
1:0:109:A:H2'	1:0:110:U:H5''	1.72	0.69
1:0:1091:C:H2'	1:0:1092:U:C6	2.27	0.69
1:0:2510:A:N6	1:0:2641:A:H61	1.89	0.69
1:0:964:A:H2'	1:0:965:G:H8	1.57	0.69
1:0:1869:A:H2'	1:0:1870:U:O4'	1.92	0.69
1:0:1280:U:H3	1:0:1996:A:N6	1.85	0.69
1:0:814:G:H3'	1:0:815:A:H5'	1.73	0.69
1:0:931:G:N2	1:0:2247:A:H5''	2.08	0.69
1:0:688:A:N6	1:0:816:U:H3	1.88	0.69
2:9:6:C:H2'	2:9:7:C:C6	2.26	0.69
1:0:616:U:C2'	1:0:617:U:H5''	2.22	0.69
1:0:1653:C:H2'	1:0:1654:A:C8	2.28	0.69
1:0:2836:U:H2'	1:0:2837:G:H8	1.57	0.69
1:0:1695:U:H2'	1:0:1696:C:O4'	1.93	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2432:A:H4'	1:0:2551:A:O2'	1.93	0.69
1:0:939:C:H2'	1:0:940:G:C8	2.28	0.69
1:0:50:G:H2'	1:0:117:A:C2	2.28	0.69
1:0:69:G:H5''	1:0:70:A:OP1	1.93	0.69
1:0:462:G:H2'	1:0:463:C:C5'	2.22	0.69
1:0:1194:U:H2'	1:0:1195:U:C6	2.28	0.68
1:0:2466:G:H2'	1:0:2467:A:C8	2.28	0.68
1:0:2308:A:H2'	1:0:2309:G:C8	2.28	0.68
2:9:84:G:H2'	2:9:85:G:C8	2.22	0.68
1:0:1672:A:C2	1:0:2032:G:H4'	2.28	0.68
1:0:216:U:H5''	1:0:601:A:N6	2.08	0.68
1:0:187:U:H2'	1:0:188:G:C8	2.28	0.68
1:0:317:U:C2'	1:0:318:G:H5''	2.24	0.68
1:0:1467:U:H3'	1:0:1468:A:C5'	2.23	0.68
1:0:1325:U:H4'	1:0:1326:U:C6	2.28	0.68
1:0:77:C:H2'	1:0:78:C:C6	2.29	0.68
1:0:2757:G:H5'	1:0:2761:A:H1'	1.75	0.68
1:0:459:A:H1'	1:0:461:A:N6	2.08	0.68
1:0:1953:A:H1'	1:0:1955:G:C1'	2.23	0.68
1:0:490:A:O2'	1:0:491:A:H5'	1.93	0.68
1:0:71:A:N6	1:0:110:U:H4'	2.09	0.68
1:0:1474:A:N3	1:0:1474:A:H3'	2.09	0.68
1:0:2761:A:H5''	1:0:2762:G:H5'	1.77	0.67
1:0:1727:C:H4'	1:0:2833:C:N3	2.09	0.67
1:0:2491:C:H3'	1:0:2492:G:H5''	1.77	0.67
1:0:1966:C:H4'	1:0:2585:C:C4'	2.14	0.67
1:0:2199:C:H2'	1:0:2200:G:C8	2.29	0.67
1:0:1791:C:O2'	1:0:1793:A:H5'	1.94	0.67
1:0:1197:U:H2'	1:0:1198:C:O4'	1.94	0.67
1:0:239:A:H4'	1:0:620:G:H5'	1.75	0.67
1:0:2469:G:H4'	1:0:2470:U:C5	2.30	0.67
1:0:13:A:H1'	1:0:536:A:N6	2.08	0.67
1:0:2829:A:H2'	1:0:2830:U:O4'	1.95	0.67
1:0:1949:A:O2'	1:0:2572:U:H5'	1.95	0.67
1:0:1312:G:H5''	1:0:1313:U:C5'	2.25	0.67
1:0:1762:C:O2'	1:0:1777:A:H1'	1.95	0.67
1:0:652:C:N4	1:0:657:A:H61	1.92	0.67
1:0:951:G:C2'	1:0:952:A:H5''	2.24	0.67
1:0:1588:A:H2'	1:0:1589:G:H8	1.59	0.67
1:0:2708:U:H2'	1:0:2709:C:C6	2.30	0.67
1:0:1271:C:H2'	1:0:1272:G:C8	2.30	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2781:G:H2'	1:0:2782:G:O4'	1.94	0.67
1:0:2691:C:H3'	1:0:2692:A:C5'	2.24	0.67
1:0:820:U:H1'	1:0:2424:G:OP1	1.95	0.66
1:0:170:U:H2'	1:0:171:G:H8	1.60	0.66
1:0:1302:C:O2'	1:0:1343:C:H4'	1.94	0.66
1:0:313:U:H2'	1:0:314:G:C8	2.29	0.66
32:0:2882:ZIT:O13	32:0:2882:ZIT:C16	2.43	0.66
1:0:1763:G:N2	1:0:1765:C:H5''	2.10	0.66
2:9:29:C:H2'	2:9:30:C:C6	2.31	0.66
1:0:1547:U:H2'	1:0:1548:U:C6	2.30	0.66
1:0:951:G:C3'	1:0:952:A:H5''	2.25	0.66
1:0:999:A:H4'	1:0:1166:A:N1	2.11	0.66
1:0:118:U:H1'	1:0:143:A:C8	2.31	0.66
1:0:1325:U:H4'	1:0:1326:U:C5	2.30	0.66
1:0:2785:A:H2'	1:0:2786:G:O4'	1.96	0.66
1:0:1029:C:H3'	1:0:1030:U:H5''	1.76	0.66
1:0:2274:C:H2'	1:0:2275:U:H5''	1.75	0.66
1:0:427:C:H2'	1:0:428:A:H8	1.59	0.66
1:0:1440:G:H1'	1:0:1588:A:H61	1.59	0.66
1:0:2674:C:H2'	1:0:2675:U:C6	2.31	0.66
2:9:40:C:H2'	2:9:41:A:O4'	1.96	0.66
1:0:1371:G:H1'	1:0:1386:A:N6	2.10	0.66
1:0:930:A:H5'	1:0:931:G:N7	2.10	0.66
1:0:88:G:H3'	1:0:89:A:C5'	2.24	0.66
1:0:2523:G:H1'	1:0:2625:U:H5'	1.77	0.66
1:0:9:U:H3	1:0:2608:A:N6	1.93	0.66
1:0:2390:A:H2'	1:0:2391:A:H8	1.60	0.66
1:0:734:G:H2'	1:0:735:G:C8	2.30	0.66
1:0:699:G:H21	1:0:700:C:H5''	1.60	0.66
1:0:1452:U:H5''	1:0:1533:G:H5'	1.78	0.66
1:0:2476:A:O2'	1:0:2477:C:H5	1.73	0.66
1:0:109:A:C2'	1:0:110:U:H5''	2.26	0.66
1:0:2308:A:H2'	1:0:2309:G:H8	1.59	0.66
1:0:705:C:H2'	1:0:706:A:C8	2.31	0.66
1:0:797:A:H2'	1:0:805:G:O4'	1.95	0.66
1:0:2783:U:O2'	1:0:2784:A:H4'	1.95	0.66
1:0:2081:U:C2'	1:0:2082:C:H5''	2.21	0.66
1:0:1851:A:H61	1:0:1867:A:H1'	1.60	0.66
1:0:2811:G:H2'	1:0:2812:A:C8	2.31	0.66
1:0:942:U:C2'	1:0:943:U:H5'	2.26	0.66
2:9:62:C:N4	2:9:63:A:H62	1.93	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:564:U:H2'	1:0:565:A:C8	2.31	0.66
1:0:367:G:C2'	1:0:368:A:H5''	2.26	0.65
1:0:1301:U:H2'	1:0:1664:G:H21	1.61	0.65
1:0:2375:G:H2'	1:0:2376:G:H8	1.60	0.65
1:0:632:A:H2'	1:0:633:G:O4'	1.96	0.65
1:0:1055:A:H2	1:0:1121:G:H2'	1.60	0.65
1:0:2605:C:H2'	1:0:2606:G:O4'	1.95	0.65
1:0:694:G:H2'	1:0:695:G:H8	1.61	0.65
1:0:2158:C:H2'	1:0:2159:A:H8	1.61	0.65
1:0:2491:C:H2'	1:0:2492:G:C4'	2.26	0.65
1:0:2522:G:H21	1:0:2625:U:H5''	1.61	0.65
1:0:1811:A:H1'	1:0:1813:A:C4	2.31	0.65
1:0:2510:A:H61	1:0:2641:A:N6	1.95	0.65
1:0:1480:G:H2'	1:0:1481:U:H5'	1.78	0.65
1:0:1958:G:H2'	1:0:1959:U:C6	2.31	0.65
1:0:818:G:N2	1:0:2051:U:H5''	2.09	0.65
1:0:2199:C:H2'	1:0:2200:G:H8	1.61	0.65
1:0:2279:G:H2'	1:0:2280:A:H8	1.61	0.65
1:0:2579:A:H2'	1:0:2580:C:C6	2.30	0.65
1:0:2240:C:H2'	1:0:2241:U:H5'	1.78	0.65
1:0:2491:C:H2'	1:0:2492:G:O4'	1.97	0.65
1:0:509:U:H2'	1:0:510:G:H5'	1.77	0.65
1:0:1529:C:H2'	1:0:1530:U:O4'	1.97	0.65
1:0:190:A:H2'	1:0:191:G:C8	2.32	0.65
2:9:115:G:O2'	2:9:116:C:H5'	1.97	0.65
1:0:2122:G:H2'	1:0:2123:G:C8	2.32	0.65
1:0:669:G:H2'	1:0:670:U:C6	2.32	0.64
1:0:492:G:H22	1:0:519:C:H42	1.43	0.64
1:0:1388:C:H2'	1:0:1389:C:H6	1.62	0.64
1:0:459:A:N6	1:0:484:G:H1'	2.12	0.64
1:0:17:G:H2'	1:0:18:U:C6	2.33	0.64
1:0:995:A:H5''	1:0:996:C:H5	1.62	0.64
1:0:2609:G:H21	1:0:2866:A:H2	1.46	0.64
1:0:1181:C:C3'	1:0:1182:U:H5''	2.28	0.64
1:0:1804:U:H2'	1:0:1805:G:C8	2.31	0.64
1:0:2437:G:H2'	1:0:2469:G:N1	2.12	0.64
1:0:1561:A:H2'	1:0:1562:G:O4'	1.98	0.64
1:0:1680:U:O2'	1:0:2665:G:H4'	1.97	0.64
2:9:42:U:C2'	2:9:45:C:H41	2.08	0.64
1:0:2261:G:H4'	1:0:2262:C:OP2	1.95	0.64
1:0:1838:G:H2'	1:0:1839:A:H5'	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:414:A:H2'	1:0:415:A:O4'	1.97	0.64
1:0:840:U:H4'	1:0:841:G:C2	2.33	0.64
1:0:2273:C:H2'	1:0:2274:C:C6	2.32	0.64
1:0:114:C:O2'	1:0:124:A:H1'	1.97	0.64
1:0:509:U:H3	1:0:513:A:H62	1.44	0.64
1:0:929:A:C3'	1:0:930:A:H5''	2.26	0.64
2:9:63:A:H2'	2:9:64:C:H6	1.63	0.64
1:0:890:U:H2'	1:0:891:A:C8	2.32	0.64
1:0:820:U:H2'	1:0:821:A:H8	1.62	0.64
1:0:2158:C:H2'	1:0:2159:A:C8	2.33	0.64
1:0:1591:U:H2'	1:0:1592:U:O4'	1.98	0.64
1:0:109:A:H3'	1:0:110:U:H5''	1.78	0.64
1:0:987:G:H5'	1:0:1167:A:N6	2.13	0.64
1:0:1495:G:H2'	1:0:1496:G:C8	2.32	0.64
1:0:1502:G:O2'	1:0:1503:G:H5'	1.98	0.64
1:0:2478:C:H2'	1:0:2479:U:H5'	1.80	0.63
1:0:2082:C:H2'	1:0:2083:G:O4'	1.98	0.63
1:0:1029:C:C3'	1:0:1030:U:H5''	2.28	0.63
1:0:968:C:H41	1:0:970:A:H1'	1.63	0.63
1:0:2395:C:H2'	1:0:2396:C:H5''	1.80	0.63
1:0:520:C:O2'	1:0:1249:G:H5'	1.99	0.63
1:0:2480:C:H4'	1:0:2482:A:C4'	2.29	0.63
1:0:1073:G:H3'	1:0:1074:G:H5''	1.81	0.63
1:0:2507:U:O2'	1:0:2508:G:H3'	1.98	0.63
1:0:208:C:C2'	1:0:209:G:H5'	2.28	0.63
1:0:168:A:H2'	1:0:169:C:H6	1.63	0.63
1:0:2770:A:C4'	1:0:2867:G:H22	2.12	0.63
1:0:2866:A:H2'	1:0:2867:G:O4'	1.99	0.63
1:0:427:C:H2'	1:0:428:A:C8	2.33	0.63
1:0:824:U:H4'	1:0:1264:C:H1'	1.80	0.63
1:0:1139:A:O2'	1:0:2495:G:H4'	1.98	0.63
1:0:792:U:H2'	1:0:793:G:C5'	2.26	0.63
1:0:1587:A:H2'	1:0:1588:A:H8	1.63	0.63
1:0:2380:U:C2'	1:0:2381:A:H5'	2.26	0.63
1:0:1974:U:C2'	1:0:1975:G:H5''	2.29	0.63
1:0:1911:A:C2'	1:0:1912:G:H5'	2.29	0.63
1:0:1004:A:H2'	1:0:1005:U:H5''	1.80	0.63
1:0:139:A:H2'	1:0:140:G:H8	1.64	0.63
1:0:2057:U:H2'	1:0:2058:U:C6	2.34	0.63
1:0:174:A:C4'	1:0:2051:U:H2'	2.29	0.63
1:0:1918:G:H1'	1:0:1947:G:C2	2.33	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:163:A:H2'	1:0:164:G:H8	1.64	0.63
1:0:165:G:H2'	1:0:166:G:O4'	1.99	0.63
1:0:2787:A:O2'	1:0:2788:C:H5'	1.99	0.63
1:0:1268:U:H5'	1:0:1269:G:H5''	1.81	0.63
1:0:1641:C:H2'	1:0:1642:G:O4'	1.99	0.63
1:0:2456:U:H1'	1:0:2460:G:N2	2.13	0.63
1:0:2781:G:H2'	1:0:2782:G:C1'	2.29	0.63
1:0:441:A:H2'	1:0:442:A:O4'	1.99	0.63
1:0:1376:C:H2'	1:0:1377:G:O4'	1.99	0.63
1:0:2633:A:H2	1:0:2644:A:H5''	1.64	0.62
1:0:401:G:H2'	1:0:403:A:N7	2.14	0.62
1:0:184:A:H4'	1:0:812:G:H4'	1.81	0.62
1:0:2012:A:C5	1:0:2014:A:H5'	2.35	0.62
1:0:1473:U:H4'	1:0:1474:A:C5	2.34	0.62
1:0:1972:G:H2'	1:0:1973:C:O4'	1.99	0.62
1:0:2085:G:H2'	1:0:2086:U:C6	2.34	0.62
2:9:30:C:O5'	2:9:30:C:H6	1.80	0.62
2:9:18:G:H2'	2:9:19:C:H6	1.63	0.62
1:0:1789:U:O2'	1:0:1793:A:H1'	2.00	0.62
1:0:2521:A:H5'	1:0:2522:G:OP1	1.98	0.62
1:0:2839:G:H2'	1:0:2840:U:C6	2.33	0.62
1:0:1054:C:H2'	1:0:1055:A:H5'	1.81	0.62
1:0:2495:G:H2'	1:0:2496:C:C6	2.35	0.62
1:0:1743:C:H41	16:N:125:MET:CA	2.11	0.62
1:0:1329:U:H5'	1:0:1405:A:H1'	1.80	0.62
1:0:2475:C:H2'	1:0:2476:A:O4'	1.99	0.62
1:0:1313:U:H1'	1:0:1642:G:N2	2.14	0.62
1:0:1204:G:H2'	1:0:1205:G:C8	2.34	0.62
1:0:2273:C:H2'	1:0:2274:C:H6	1.65	0.62
1:0:5:A:H2'	1:0:6:A:H8	1.63	0.62
1:0:644:A:H2'	1:0:645:G:H5'	1.81	0.62
1:0:1707:A:N7	1:0:1714:A:H2	1.98	0.62
1:0:2672:U:H2'	1:0:2673:G:C8	2.33	0.62
1:0:1319:C:H2'	1:0:1320:A:C8	2.32	0.62
1:0:223:C:H4'	1:0:398:C:H1'	1.81	0.62
1:0:338:G:C2'	1:0:339:U:H5'	2.29	0.62
1:0:1257:U:H2'	1:0:1258:G:C8	2.35	0.62
1:0:2770:A:C5'	1:0:2867:G:H1	2.13	0.62
1:0:2011:U:H2'	1:0:2012:A:C8	2.35	0.62
1:0:1560:A:H2'	1:0:1561:A:O4'	2.00	0.62
1:0:927:C:H2'	1:0:928:G:O4'	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2377:U:H2'	1:0:2378:G:C8	2.34	0.62
1:0:782:U:H2'	1:0:783:G:C8	2.35	0.62
2:9:114:C:O5'	2:9:114:C:H6	1.82	0.62
1:0:942:U:O2'	1:0:943:U:H5'	2.00	0.61
1:0:1429:A:N6	1:0:1602:G:H5'	2.15	0.61
1:0:1528:C:H2'	1:0:1529:C:H5''	1.82	0.61
1:0:888:G:H2'	1:0:889:C:O4'	2.00	0.61
1:0:210:A:N6	1:0:442:A:H61	1.97	0.61
1:0:2001:G:H2'	1:0:2002:A:C8	2.35	0.61
1:0:1191:G:H2'	1:0:1192:A:H8	1.65	0.61
32:0:2881:ZIT:C6A	32:0:2881:ZIT:H193	2.30	0.61
1:0:2598:C:H2'	1:0:2599:U:C6	2.35	0.61
1:0:460:U:H3	1:0:592:G:H1'	1.64	0.61
2:9:56:G:H2'	2:9:57:U:O4'	1.99	0.61
1:0:1352:G:H2'	1:0:1353:A:C8	2.35	0.61
1:0:550:C:H2'	1:0:551:A:C8	2.36	0.61
1:0:1690:U:H2'	1:0:1691:G:H5'	1.81	0.61
1:0:321:A:H2'	1:0:323:G:N7	2.15	0.61
1:0:1760:G:O2'	1:0:1761:G:H5'	2.01	0.61
1:0:1730:G:H2'	1:0:1731:C:C6	2.35	0.61
1:0:483:A:H2'	1:0:484:G:H5'	1.82	0.61
1:0:614:G:H2'	1:0:615:C:H6	1.64	0.61
32:0:2882:ZIT:H6B2	32:0:2882:ZIT:C5A	2.30	0.61
32:0:2881:ZIT:C5A	32:0:2881:ZIT:H6B2	2.30	0.61
1:0:929:A:H2'	1:0:930:A:C4'	2.31	0.61
1:0:683:A:H5''	1:0:684:C:OP1	2.01	0.61
1:0:1057:A:H3'	1:0:1058:G:C5'	2.31	0.61
1:0:2764:U:H2'	1:0:2765:C:C6	2.36	0.61
1:0:1717:A:H2'	1:0:1718:A:H5'	1.81	0.61
1:0:141:G:H2'	1:0:142:U:C6	2.36	0.61
1:0:857:U:C2'	1:0:858:G:H5'	2.31	0.61
1:0:1921:A:H2'	1:0:1922:U:H5''	1.81	0.61
1:0:2686:C:H2'	1:0:2687:G:C8	2.35	0.61
1:0:870:C:H2'	1:0:871:U:C6	2.36	0.61
2:9:62:C:N4	2:9:63:A:N6	2.48	0.61
1:0:1196:G:C2'	1:0:1197:U:H5'	2.30	0.61
1:0:2721:A:H2'	1:0:2722:C:O4'	2.01	0.61
1:0:697:G:H1	1:0:807:A:H2	1.47	0.61
2:9:14:C:H4'	2:9:17:A:H61	1.65	0.61
1:0:1937:G:N3	1:0:2530:C:H5'	2.16	0.61
1:0:657:A:H2'	1:0:658:G:C8	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2713:A:H2'	1:0:2714:A:C8	2.36	0.61
1:0:1194:U:H2'	1:0:1195:U:C5	2.35	0.61
1:0:1588:A:H2'	1:0:1589:G:C8	2.36	0.61
1:0:775:U:O2	1:0:1445:A:H5''	2.00	0.61
1:0:202:A:H2'	1:0:203:G:O4'	2.01	0.61
1:0:574:C:H4'	1:0:1266:G:O6	2.01	0.61
2:9:58:G:H4'	2:9:59:A:C5'	2.29	0.60
1:0:1225:G:H2'	1:0:1249:G:N2	2.16	0.60
1:0:1514:C:H5'	1:0:1593:C:C5'	2.31	0.60
1:0:2872:U:H2'	1:0:2873:G:H8	1.63	0.60
1:0:2437:G:H1	1:0:2469:G:H2'	1.64	0.60
1:0:1710:U:H3	1:0:1821:A:H61	1.48	0.60
1:0:146:C:H2'	1:0:147:G:C8	2.36	0.60
1:0:798:G:C2'	1:0:799:C:H5'	2.30	0.60
1:0:2633:A:H5''	1:0:2634:G:OP1	2.02	0.60
1:0:639:G:H2'	1:0:640:C:C6	2.36	0.60
1:0:976:C:H5'	1:0:2252:A:C1'	2.31	0.60
1:0:2463:G:O2'	1:0:2464:G:H5'	2.01	0.60
1:0:62:U:H2'	1:0:63:A:C8	2.36	0.60
32:0:2882:ZIT:C6A	32:0:2882:ZIT:H193	2.30	0.60
32:0:2881:ZIT:H5A1	32:0:2881:ZIT:H6B2	1.83	0.60
1:0:2177:U:H2'	1:0:2178:U:C6	2.35	0.60
2:9:113:G:H2'	2:9:114:C:C6	2.36	0.60
1:0:973:U:H4'	1:0:2475:C:O2'	2.01	0.60
1:0:2617:G:H21	1:0:2758:A:H62	1.48	0.60
1:0:2770:A:H5'	1:0:2867:G:H1	1.66	0.60
1:0:330:C:O2'	1:0:331:U:H5'	2.00	0.60
1:0:1889:G:H2'	1:0:1890:G:C8	2.37	0.60
1:0:2713:A:H2'	1:0:2714:A:H8	1.67	0.60
1:0:542:A:C2'	1:0:543:G:H5'	2.32	0.60
2:9:42:U:O5'	2:9:42:U:H6	1.83	0.60
1:0:1295:U:C2'	1:0:1296:G:H5'	2.31	0.60
1:0:538:A:H2'	1:0:539:A:H5''	1.82	0.60
1:0:2194:A:C2'	1:0:2195:C:H5''	2.32	0.60
1:0:2754:C:H2'	1:0:2755:A:C8	2.36	0.60
1:0:1086:C:C2'	1:0:1087:C:H5''	2.29	0.60
1:0:1782:A:H62	1:0:1820:G:H2'	1.67	0.60
1:0:2398:U:H2'	1:0:2399:C:C6	2.36	0.60
1:0:108:G:H2'	1:0:109:A:C8	2.37	0.60
1:0:2768:C:H1'	1:0:2784:A:N7	2.17	0.60
1:0:2173:G:H2'	1:0:2174:G:O4'	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1184:G:H2'	1:0:1185:C:H5''	1.83	0.60
1:0:797:A:C4	1:0:805:G:H1'	2.36	0.60
1:0:174:A:O4'	1:0:2051:U:H2'	2.01	0.59
1:0:2096:U:C2'	1:0:2097:A:H5''	2.28	0.59
1:0:2691:C:C3'	1:0:2692:A:H5''	2.31	0.59
1:0:2736:U:O2'	1:0:2737:A:H5'	2.02	0.59
1:0:2307:A:H2'	1:0:2308:A:C8	2.36	0.59
1:0:411:C:OP1	1:0:2073:A:H1'	2.02	0.59
1:0:761:G:O6	1:0:764:A:H4'	2.03	0.59
2:9:102:A:H2'	2:9:103:A:H5'	1.84	0.59
1:0:2240:C:H2'	1:0:2241:U:C5'	2.31	0.59
1:0:1540:C:H2'	1:0:1541:G:O4'	2.02	0.59
32:0:2882:ZIT:H5A1	32:0:2882:ZIT:H6B2	1.83	0.59
1:0:1517:C:H2'	1:0:1518:C:C6	2.37	0.59
1:0:1312:G:H4'	1:0:1314:A:C4	2.37	0.59
1:0:1067:G:H21	1:0:1115:C:N4	2.00	0.59
1:0:2800:C:H2'	1:0:2801:A:O4'	2.02	0.59
1:0:2119:A:O2'	1:0:2120:C:H5'	2.01	0.59
1:0:2083:G:H2'	1:0:2084:G:C8	2.37	0.59
1:0:1790:G:H4'	1:0:1791:C:C5	2.38	0.59
1:0:1672:A:C2	1:0:1673:C:H1'	2.38	0.59
1:0:837:U:H1'	1:0:2337:A:N7	2.17	0.59
1:0:694:G:H2'	1:0:695:G:C8	2.37	0.59
1:0:1604:A:H2'	1:0:1605:A:O4'	2.02	0.59
1:0:1055:A:OP1	1:0:1057:A:H5'	2.03	0.59
1:0:2274:C:H2'	1:0:2275:U:C5'	2.32	0.59
2:9:55:C:O5'	2:9:55:C:H6	1.85	0.59
1:0:1707:A:H2'	1:0:1708:C:H5'	1.84	0.59
1:0:451:A:H2'	1:0:452:G:C8	2.38	0.59
1:0:1837:G:H2'	1:0:1838:G:H8	1.67	0.59
1:0:1259:A:O2'	1:0:1260:A:H5'	2.03	0.59
1:0:843:G:O2'	1:0:844:G:OP1	2.21	0.59
1:0:2299:A:H5''	1:0:2300:G:O5'	2.03	0.59
1:0:581:A:C2	1:0:582:G:H1'	2.38	0.59
2:9:78:A:H2'	2:9:79:U:C5	2.38	0.59
1:0:2163:U:H2'	1:0:2164:G:C8	2.38	0.59
1:0:2678:C:H2'	1:0:2679:G:C8	2.38	0.59
1:0:340:G:H1'	1:0:488:A:H1'	1.84	0.59
1:0:775:U:H4'	1:0:776:G:C8	2.38	0.59
1:0:1259:A:C2'	1:0:1260:A:H5'	2.32	0.59
1:0:2422:C:H2'	1:0:2423:G:H8	1.68	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:770:U:O2'	1:0:771:C:H5'	2.02	0.59
1:0:1245:G:H2'	1:0:1246:G:H8	1.67	0.59
1:0:1312:G:C5'	1:0:1314:A:H1'	2.30	0.58
1:0:313:U:H2'	1:0:314:G:H8	1.68	0.58
1:0:646:C:O2	1:0:650:U:H4'	2.03	0.58
1:0:979:A:H2'	1:0:980:G:O4'	2.03	0.58
1:0:982:C:H4'	1:0:994:A:O2'	2.02	0.58
1:0:1679:U:C3'	1:0:1680:U:H5''	2.33	0.58
1:0:66:U:H2'	1:0:67:G:C8	2.38	0.58
1:0:752:G:H5'	1:0:1775:A:N6	2.16	0.58
1:0:681:A:C6	1:0:683:A:H2'	2.39	0.58
1:0:1065:A:H2'	1:0:1066:G:H8	1.67	0.58
1:0:2466:G:H2'	1:0:2467:A:H8	1.67	0.58
2:9:111:C:H5''	2:9:112:A:O5'	2.03	0.58
1:0:1644:G:O2'	1:0:1645:U:H5'	2.04	0.58
1:0:1691:G:H21	1:0:1694:A:H61	1.51	0.58
1:0:1252:C:O2'	1:0:1253:C:H5''	2.03	0.58
1:0:2478:C:C2'	1:0:2479:U:H5'	2.34	0.58
1:0:76:C:H6	1:0:76:C:H5'	1.68	0.58
1:0:1949:A:H1'	1:0:2572:U:H4'	1.86	0.58
1:0:705:C:H2'	1:0:706:A:H8	1.68	0.58
1:0:1004:A:H2'	1:0:1005:U:C5'	2.32	0.58
1:0:2437:G:H2'	1:0:2469:G:H1	1.67	0.58
2:9:20:A:O2'	2:9:21:C:H5'	2.03	0.58
1:0:1304:U:O2'	1:0:1305:C:H5'	2.02	0.58
1:0:1217:U:H2'	1:0:1218:C:C6	2.37	0.58
1:0:425:A:H2'	1:0:426:C:O4'	2.02	0.58
1:0:2660:C:O2'	1:0:2661:G:H5'	2.04	0.58
1:0:1436:G:N2	1:0:1514:C:H1'	2.19	0.58
2:9:18:G:H2'	2:9:19:C:C6	2.38	0.58
1:0:2779:C:H2'	1:0:2780:A:C8	2.39	0.58
1:0:1253:C:H2'	1:0:1254:G:O4'	2.03	0.58
1:0:1336:G:H2'	1:0:1337:G:H5'	1.86	0.58
1:0:1975:G:N2	1:0:1978:U:H5	2.00	0.58
1:0:357:A:H3'	1:0:358:C:O4'	2.04	0.58
1:0:114:C:H2'	1:0:115:G:C8	2.39	0.58
1:0:595:A:H62	1:0:1264:C:H42	1.52	0.58
1:0:1537:U:H2'	1:0:1538:A:C8	2.39	0.58
1:0:445:A:O2'	1:0:446:C:H5'	2.04	0.58
1:0:1699:A:N6	1:0:1723:U:H3	2.02	0.58
1:0:616:U:C3'	1:0:617:U:H5''	2.34	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2318:U:H2'	1:0:2319:G:C8	2.36	0.58
1:0:2164:G:H2'	1:0:2165:A:H8	1.69	0.58
1:0:754:G:N2	1:0:770:U:H1'	2.18	0.58
1:0:133:C:H2'	1:0:134:G:O4'	2.03	0.58
1:0:1991:C:H2'	1:0:1992:G:H8	1.68	0.58
1:0:764:A:H2'	1:0:764:A:N3	2.19	0.58
1:0:1196:G:H2'	1:0:1197:U:O4'	2.03	0.58
1:0:462:G:H2'	1:0:463:C:H5''	1.84	0.58
32:0:2882:ZIT:H5A1	32:0:2882:ZIT:C6B	2.34	0.58
1:0:871:U:H1'	1:0:2248:A:H5''	1.85	0.58
1:0:459:A:H1'	1:0:461:A:H62	1.67	0.58
1:0:2470:U:H2'	1:0:2471:U:H6	1.68	0.58
1:0:1057:A:H3'	1:0:1058:G:H5''	1.86	0.58
1:0:226:C:H4'	1:0:227:G:C8	2.38	0.58
1:0:312:G:OP1	1:0:312:G:H4'	2.03	0.58
32:0:2881:ZIT:H5A1	32:0:2881:ZIT:C6B	2.34	0.57
1:0:487:G:H1'	1:0:515:A:C2	2.39	0.57
1:0:1791:C:H1'	1:0:1793:A:C5'	2.33	0.57
1:0:2194:A:H2'	1:0:2195:C:H5''	1.86	0.57
1:0:944:A:H2'	1:0:945:G:O4'	2.04	0.57
1:0:1346:C:P	1:0:1346:C:H6	2.27	0.57
1:0:1994:U:H2'	1:0:1995:G:H5'	1.86	0.57
1:0:1830:C:H42	1:0:1881:U:H3'	1.69	0.57
1:0:663:G:H2'	1:0:664:C:O4'	2.03	0.57
1:0:175:C:H1'	1:0:2413:A:H61	1.69	0.57
1:0:2737:A:H2'	1:0:2738:A:H5'	1.85	0.57
1:0:1480:G:C2'	1:0:1481:U:H5'	2.34	0.57
1:0:2782:G:H3'	1:0:2783:U:H5''	1.86	0.57
1:0:2788:C:O2'	1:0:2789:U:H5'	2.04	0.57
1:0:1333:G:C6	1:0:1342:U:H5'	2.38	0.57
1:0:2020:G:H2'	1:0:2021:G:C8	2.39	0.57
1:0:2727:G:C2'	1:0:2728:A:H5''	2.34	0.57
1:0:1195:U:H2'	1:0:1196:G:H8	1.69	0.57
1:0:1763:G:H2'	1:0:1764:A:C4'	2.34	0.57
1:0:2390:A:H2'	1:0:2391:A:C8	2.39	0.57
1:0:1278:A:H4'	1:0:1279:G:O5'	2.04	0.57
1:0:369:C:H2'	1:0:370:U:O4'	2.04	0.57
1:0:1621:C:H2'	1:0:1622:G:O4'	2.05	0.57
1:0:2488:G:H2'	1:0:2489:C:C6	2.39	0.57
1:0:2799:C:H2'	1:0:2800:C:O4'	2.04	0.57
1:0:1583:A:H8	1:0:1583:A:O5'	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1785:A:H2'	1:0:1786:C:C6	2.39	0.57
1:0:1418:C:H2'	1:0:1419:G:H8	1.69	0.57
1:0:1558:C:C2'	1:0:1559:G:H5'	2.34	0.57
1:0:2044:G:H21	1:0:2045:A:H62	1.52	0.57
1:0:2589:C:H1'	32:0:2881:ZIT:H7B2	1.86	0.57
1:0:1313:U:C4	1:0:1651:U:H5'	2.40	0.57
1:0:777:A:H62	1:0:1767:G:H1'	1.69	0.57
1:0:1816:G:O2'	1:0:1817:U:H5'	2.05	0.57
1:0:941:U:OP1	1:0:941:U:H4'	2.04	0.57
1:0:203:G:O2'	1:0:204:A:H5'	2.04	0.57
1:0:2243:C:H2'	1:0:2244:C:O4'	2.04	0.57
1:0:1290:A:H2'	1:0:1291:G:C8	2.40	0.57
1:0:1664:G:O5'	1:0:1665:C:OP1	2.22	0.57
1:0:2005:U:H5''	1:0:2006:G:OP1	2.03	0.57
1:0:165:G:H4'	1:0:1378:A:C2	2.39	0.57
1:0:54:G:H2'	1:0:55:A:H8	1.70	0.57
1:0:936:A:H2'	1:0:937:C:C6	2.40	0.57
1:0:2492:G:H2'	1:0:2493:U:H6	1.70	0.57
1:0:2633:A:C2	1:0:2644:A:H5''	2.39	0.57
1:0:185:C:O2'	1:0:186:C:H5'	2.04	0.57
1:0:2841:U:H1'	1:0:2843:A:C1'	2.35	0.57
1:0:1271:C:H2'	1:0:1272:G:H8	1.68	0.57
1:0:659:G:H2'	1:0:660:G:C8	2.40	0.57
1:0:1736:C:H2'	1:0:1737:G:C8	2.39	0.57
1:0:1312:G:H4'	1:0:1314:A:N3	2.20	0.57
1:0:2756:A:C6	1:0:2762:G:H1'	2.39	0.57
1:0:2607:C:H3'	1:0:2608:A:H5'	1.86	0.57
1:0:36:G:H1'	1:0:462:G:H21	1.69	0.57
1:0:2503:G:C2'	1:0:2504:G:H5''	2.34	0.57
1:0:1392:U:H2'	1:0:1393:G:H5'	1.87	0.57
1:0:1729:C:H2'	1:0:1730:G:C8	2.40	0.57
1:0:958:G:H2'	1:0:959:C:C6	2.40	0.57
1:0:334:G:N3	1:0:344:G:H1'	2.20	0.57
2:9:102:A:OP2	2:9:102:A:H8	1.88	0.57
1:0:1336:G:C2'	1:0:1337:G:H5'	2.35	0.57
1:0:1958:G:H2'	1:0:1959:U:H6	1.70	0.57
1:0:1311:C:H5'	1:0:1315:A:N6	2.20	0.57
1:0:758:G:N2	1:0:765:C:O2	2.38	0.56
1:0:1182:U:C3'	1:0:1183:C:H5''	2.34	0.56
1:0:1825:C:C2'	1:0:1826:U:H5'	2.35	0.56
1:0:1727:C:H4'	1:0:2833:C:C2	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:929:A:O2'	2:9:101:A:H4'	2.05	0.56
1:0:2261:G:H5''	1:0:2262:C:O5'	2.04	0.56
1:0:2769:C:H2'	1:0:2770:A:H5'	1.86	0.56
1:0:195:A:N1	1:0:212:U:H4'	2.20	0.56
2:9:34:C:C2'	2:9:35:C:H5'	2.35	0.56
1:0:2422:C:H2'	1:0:2423:G:C8	2.40	0.56
1:0:128:C:H2'	1:0:129:A:C4'	2.35	0.56
1:0:2266:A:C2	1:0:2268:G:H1'	2.40	0.56
1:0:1698:C:O2'	1:0:1753:A:H2'	2.06	0.56
2:9:93:G:H2'	2:9:94:G:C8	2.32	0.56
1:0:1039:A:H61	1:0:1136:G:H2'	1.70	0.56
1:0:978:U:H2'	1:0:979:A:C8	2.40	0.56
1:0:831:G:C2'	1:0:832:A:H5''	2.36	0.56
1:0:1322:G:H21	1:0:1627:C:H5'	1.70	0.56
1:0:475:U:H2'	1:0:476:G:O4'	2.05	0.56
1:0:577:U:H2'	1:0:579:G:OP2	2.05	0.56
1:0:1677:C:O2'	1:0:1678:G:H5'	2.04	0.56
1:0:604:U:H2'	1:0:605:G:C8	2.40	0.56
1:0:1313:U:H4'	1:0:1314:A:O5'	2.05	0.56
1:0:2642:G:O2'	1:0:2643:G:H5'	2.06	0.56
1:0:572:G:OP2	1:0:581:A:H5'	2.06	0.56
1:0:1196:G:H2'	1:0:1197:U:H5'	1.87	0.56
1:0:1441:A:N3	1:0:1441:A:H2'	2.21	0.56
1:0:2686:C:H2'	1:0:2687:G:H8	1.70	0.56
1:0:1374:G:O2'	1:0:2193:C:H1'	2.06	0.56
1:0:703:A:O2'	1:0:704:G:H5'	2.05	0.56
1:0:2490:U:H2'	1:0:2491:C:C6	2.40	0.56
1:0:452:G:H2'	1:0:453:U:O4'	2.06	0.56
2:9:34:C:H2'	2:9:35:C:O4'	2.05	0.56
1:0:2495:G:H2'	1:0:2496:C:O4'	2.06	0.56
1:0:178:C:H2'	1:0:179:U:C6	2.40	0.56
1:0:2538:C:O2'	1:0:2539:C:H5'	2.06	0.56
1:0:1790:G:HO2'	1:0:1791:C:H5	1.52	0.56
1:0:2633:A:N6	1:0:2646:C:H42	2.04	0.56
1:0:1826:U:O2'	1:0:1952:A:H2'	2.05	0.56
1:0:2489:C:H41	1:0:2554:C:H42	1.54	0.56
1:0:12:U:H2'	1:0:13:A:O4'	2.05	0.56
1:0:1430:G:H22	1:0:1599:G:H1'	1.71	0.56
1:0:1333:G:N2	1:0:1344:C:H41	2.04	0.56
1:0:308:C:H2'	1:0:309:G:O4'	2.06	0.56
1:0:653:G:H2'	1:0:654:A:H4'	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1095:A:H2'	1:0:1096:A:O4'	2.05	0.56
1:0:2549:G:N2	1:0:2550:C:H1'	2.21	0.56
2:9:59:A:H2'	2:9:60:A:H5'	1.87	0.56
1:0:847:C:H2'	1:0:848:A:C8	2.40	0.56
2:9:62:C:C4	2:9:63:A:N7	2.74	0.56
1:0:1312:G:H5''	1:0:1313:U:H5'	1.86	0.56
1:0:1300:A:C2	1:0:1666:G:H4'	2.41	0.56
1:0:1288:A:H62	1:0:1309:G:C4'	2.19	0.56
1:0:746:G:O6	1:0:774:A:H2'	2.05	0.56
1:0:1356:G:H5''	1:0:1614:C:OP2	2.05	0.56
1:0:2105:U:H2'	1:0:2106:G:C8	2.41	0.56
1:0:2425:G:H2'	1:0:2480:C:N4	2.20	0.56
1:0:931:G:O2'	1:0:932:G:H5'	2.06	0.56
1:0:753:U:H5'	1:0:1775:A:H62	1.69	0.56
1:0:1683:G:C2'	1:0:1684:G:H5'	2.35	0.56
1:0:191:G:O2'	1:0:192:G:H5'	2.06	0.56
1:0:2162:C:H2'	1:0:2163:U:C6	2.41	0.56
1:0:692:C:H2'	1:0:693:A:H8	1.71	0.56
1:0:692:C:H2'	1:0:693:A:C8	2.40	0.56
1:0:719:A:H2'	1:0:720:A:O4'	2.06	0.56
1:0:24:G:H2'	1:0:25:U:C6	2.40	0.56
1:0:871:U:H1'	1:0:2248:A:C5'	2.36	0.56
1:0:2080:U:H2'	1:0:2081:U:C6	2.41	0.56
1:0:346:C:O2'	1:0:347:C:H5'	2.05	0.56
1:0:953:G:H2'	1:0:954:U:C6	2.41	0.56
1:0:1764:A:C2'	1:0:1765:C:H5'	2.35	0.56
1:0:223:C:O2'	1:0:398:C:H4'	2.06	0.56
1:0:1323:G:H1'	1:0:1627:C:H5''	1.87	0.56
1:0:1843:U:H2'	1:0:1844:C:C6	2.41	0.56
2:9:101:A:H2'	2:9:102:A:C8	2.41	0.56
1:0:2429:A:H5''	1:0:2476:A:C6	2.41	0.56
1:0:1953:A:H1'	1:0:1955:G:H1'	1.87	0.56
1:0:1763:G:H21	1:0:1765:C:H5''	1.71	0.56
1:0:2811:G:H2'	1:0:2812:A:H8	1.71	0.56
2:9:17:A:H1'	2:9:112:A:C8	2.40	0.56
1:0:2678:C:H2'	1:0:2679:G:H8	1.69	0.56
1:0:1245:G:H2'	1:0:1246:G:C8	2.40	0.56
1:0:1333:G:HO2'	1:0:1334:A:H8	1.52	0.56
1:0:1594:U:H2'	1:0:1595:A:H8	1.71	0.56
1:0:1162:A:H2'	1:0:1163:C:O4'	2.06	0.56
1:0:2210:C:H2'	1:0:2211:U:O4'	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1226:A:C2	1:0:1250:A:H1'	2.41	0.55
1:0:1439:G:N2	1:0:1590:C:H42	2.04	0.55
1:0:1467:U:H3'	1:0:1468:A:H5'	1.88	0.55
1:0:738:G:H2'	1:0:739:G:O4'	2.06	0.55
1:0:337:G:H2'	1:0:338:G:H8	1.71	0.55
1:0:1865:C:H2'	1:0:1866:G:O4'	2.06	0.55
1:0:1021:A:H1'	1:0:1164:C:H1'	1.88	0.55
1:0:2426:G:O6	1:0:2479:U:H2'	2.06	0.55
2:9:32:C:H4'	2:9:60:A:H2	1.70	0.55
1:0:1348:C:H2'	1:0:1349:A:H8	1.68	0.55
1:0:1949:A:H1'	1:0:2572:U:C4'	2.36	0.55
1:0:1010:U:H2'	1:0:1011:A:C8	2.41	0.55
1:0:868:U:H2'	1:0:869:C:C6	2.41	0.55
1:0:2870:C:H2'	1:0:2871:U:H6	1.71	0.55
1:0:1920:A:C4	1:0:1922:U:H5	2.25	0.55
1:0:2618:A:C6	1:0:2619:G:H1'	2.41	0.55
1:0:1038:U:H2'	1:0:1039:A:H8	1.70	0.55
1:0:826:U:O2'	1:0:1238:A:H1'	2.06	0.55
1:0:153:A:H2'	1:0:154:U:C6	2.41	0.55
1:0:990:A:H3'	1:0:991:A:C5'	2.36	0.55
1:0:10:A:H2'	1:0:11:G:C8	2.42	0.55
1:0:929:A:H3'	1:0:930:A:C5'	2.30	0.55
1:0:216:U:H2'	1:0:217:U:O4'	2.06	0.55
1:0:1782:A:N6	1:0:1820:G:H2'	2.21	0.55
1:0:839:U:C4	1:0:841:G:H1'	2.41	0.55
1:0:831:G:H2'	1:0:832:A:H5''	1.87	0.55
1:0:2803:C:O2'	1:0:2804:G:H5'	2.06	0.55
1:0:813:A:O2'	1:0:815:A:H5'	2.06	0.55
1:0:1436:G:H2'	1:0:1437:A:C8	2.42	0.55
1:0:2177:U:H2'	1:0:2178:U:H6	1.71	0.55
1:0:1785:A:H2'	1:0:1786:C:H6	1.71	0.55
1:0:1164:C:H2'	1:0:1165:G:O4'	2.07	0.55
1:0:820:U:H2'	1:0:821:A:C8	2.41	0.55
1:0:2636:A:H62	1:0:2643:G:N2	1.99	0.55
1:0:2404:A:P	1:0:2406:C:H5'	2.47	0.55
1:0:1789:U:C2'	1:0:1790:G:H5'	2.37	0.55
1:0:677:G:H4'	1:0:952:A:P	2.46	0.55
1:0:1821:A:H3'	1:0:1822:C:H6	1.72	0.55
1:0:2058:U:H4'	1:0:2575:U:O2	2.07	0.55
1:0:243:G:H2'	1:0:244:C:O4'	2.07	0.55
1:0:2276:C:O2'	1:0:2277:A:H5'	2.05	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2642:G:H2'	1:0:2643:G:O4'	2.05	0.55
1:0:38:G:H1	1:0:453:U:H3	1.53	0.55
1:0:788:G:C2	1:0:800:U:H2'	2.42	0.55
1:0:1943:A:H2'	1:0:1944:C:H5'	1.88	0.55
2:9:42:U:H2'	2:9:45:C:N4	2.16	0.55
1:0:2770:A:H4'	1:0:2867:G:N2	2.21	0.55
1:0:162:C:H2'	1:0:163:A:H8	1.69	0.55
1:0:192:G:C1'	1:0:193:A:H4'	2.37	0.55
1:0:330:C:C2'	1:0:331:U:H5'	2.36	0.55
1:0:824:U:H2'	1:0:825:C:H5''	1.89	0.55
1:0:1861:G:O2'	1:0:1862:C:H5'	2.07	0.55
1:0:1500:U:H3	1:0:1520:G:H22	1.55	0.55
1:0:514:G:N3	1:0:514:G:H2'	2.22	0.55
1:0:1251:G:H2'	1:0:1252:C:O4'	2.07	0.54
1:0:2756:A:N6	1:0:2762:G:H1'	2.21	0.54
1:0:591:G:H2'	1:0:592:G:H8	1.71	0.54
1:0:1101:U:N3	1:0:1113:C:H1'	2.23	0.54
1:0:785:U:H5'	1:0:1368:G:O2'	2.07	0.54
1:0:932:G:H2'	1:0:933:G:C8	2.42	0.54
1:0:2083:G:H2'	1:0:2084:G:H8	1.73	0.54
1:0:1312:G:H5''	1:0:1313:U:H5''	1.88	0.54
1:0:1040:A:C2'	1:0:1041:G:H5'	2.36	0.54
1:0:2841:U:O2	1:0:2843:A:H1'	2.06	0.54
1:0:2830:U:H2'	1:0:2831:A:H8	1.73	0.54
1:0:1352:G:H2'	1:0:1353:A:H8	1.70	0.54
1:0:2195:C:H2'	1:0:2196:U:H5'	1.87	0.54
1:0:225:G:C5'	1:0:226:C:H5'	2.37	0.54
1:0:1116:U:H2'	1:0:1117:G:C8	2.42	0.54
1:0:437:G:O2'	1:0:438:G:H5'	2.06	0.54
1:0:2855:C:O2'	1:0:2856:U:H5'	2.07	0.54
1:0:929:A:HO2'	2:9:101:A:H4'	1.73	0.54
1:0:2633:A:H61	1:0:2646:C:H42	1.55	0.54
1:0:213:C:H42	1:0:238:G:H1	1.54	0.54
1:0:2544:A:H2'	1:0:2545:A:H1'	1.89	0.54
32:0:2881:ZIT:H6B2	32:0:2881:ZIT:H6A3	1.87	0.54
1:0:1250:A:O2'	1:0:1251:G:H4'	2.07	0.54
1:0:964:A:H2'	1:0:965:G:C8	2.40	0.54
1:0:1065:A:H2'	1:0:1066:G:C8	2.42	0.54
1:0:536:A:C2	1:0:2605:C:H1'	2.42	0.54
1:0:2565:C:H4'	1:0:2566:A:C5'	2.38	0.54
1:0:2315:A:HO2'	1:0:2364:C:H5''	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1837:G:H2'	1:0:1838:G:C8	2.42	0.54
1:0:1291:G:O2'	1:0:1292:A:H5'	2.07	0.54
1:0:1125:G:O2'	1:0:1126:A:H5'	2.07	0.54
1:0:477:A:H2'	1:0:478:G:H5'	1.90	0.54
2:9:62:C:N3	2:9:63:A:N7	2.55	0.54
2:9:71:G:N2	2:9:72:C:C1'	2.70	0.54
1:0:1124:U:H2'	1:0:1125:G:H8	1.73	0.54
1:0:2369:U:H2'	1:0:2370:G:C8	2.43	0.54
1:0:1531:C:H2'	1:0:1532:A:H5'	1.89	0.54
1:0:2618:A:C2	1:0:2619:G:H1'	2.43	0.54
1:0:671:A:H2'	1:0:672:C:C6	2.43	0.54
1:0:1242:A:H2'	1:0:1243:G:H8	1.72	0.54
1:0:36:G:C1'	1:0:462:G:H21	2.20	0.54
1:0:319:G:H1'	1:0:511:A:O4'	2.07	0.54
1:0:2535:C:H2'	1:0:2536:G:O4'	2.08	0.54
1:0:575:U:H2'	1:0:576:A:C8	2.43	0.54
1:0:616:U:H2'	1:0:617:U:C5'	2.34	0.54
1:0:2447:G:N2	1:0:2460:G:H2'	2.20	0.54
1:0:1451:C:H2'	1:0:1452:U:C6	2.43	0.54
1:0:338:G:O2'	1:0:339:U:H5'	2.08	0.54
1:0:2015:G:N3	1:0:2015:G:H2'	2.21	0.54
1:0:1854:G:H2'	1:0:1855:G:H8	1.72	0.54
1:0:659:G:H2'	1:0:660:G:H8	1.72	0.54
1:0:504:G:O2'	1:0:505:G:H5'	2.08	0.54
1:0:1998:A:H2'	1:0:1999:U:H5'	1.88	0.54
1:0:2759:U:O5'	1:0:2759:U:H6	1.90	0.54
1:0:1685:A:H1'	1:0:1686:A:C2	2.43	0.54
1:0:687:G:O2'	1:0:688:A:H5'	2.07	0.54
1:0:1440:G:H3'	1:0:1441:A:H5'	1.90	0.54
1:0:2783:U:H2'	1:0:2784:A:O4'	2.08	0.54
1:0:1482:U:H2'	1:0:1483:G:H8	1.73	0.54
1:0:1392:U:C2'	1:0:1393:G:H5'	2.38	0.54
1:0:2685:A:H4'	1:0:2826:C:H4'	1.90	0.54
1:0:1223:G:H21	1:0:1225:G:N2	2.04	0.54
1:0:586:G:OP1	1:0:2481:G:H2'	2.08	0.54
1:0:328:A:O2'	1:0:329:C:H5'	2.07	0.54
1:0:1374:G:N2	1:0:1384:G:H1'	2.23	0.54
1:0:2426:G:H22	1:0:2431:C:H41	1.53	0.53
1:0:1602:G:O3'	1:0:1603:A:H8	1.91	0.53
1:0:153:A:H2'	1:0:154:U:C5	2.44	0.53
1:0:66:U:H2'	1:0:67:G:H8	1.72	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1748:U:N3	1:0:1753:A:H2	2.01	0.53
1:0:635:C:C2'	1:0:636:G:H5''	2.36	0.53
1:0:2321:C:C2'	1:0:2322:U:H5'	2.38	0.53
1:0:215:G:N2	1:0:632:A:H8	2.04	0.53
1:0:239:A:C2	1:0:443:A:H1'	2.43	0.53
1:0:968:C:N4	1:0:970:A:H1'	2.24	0.53
1:0:1962:C:O2'	1:0:1963:G:H5'	2.07	0.53
1:0:1075:C:H2'	1:0:1076:U:O4'	2.09	0.53
1:0:755:C:H1'	1:0:1693:A:H4'	1.90	0.53
1:0:2640:G:H2'	1:0:2641:A:C8	2.44	0.53
1:0:1915:A:H2'	1:0:1916:G:O4'	2.09	0.53
1:0:2395:C:C2'	1:0:2396:C:H5''	2.39	0.53
1:0:139:A:H2'	1:0:140:G:C8	2.43	0.53
1:0:242:A:O2'	1:0:243:G:O4'	2.27	0.53
1:0:2343:C:H2'	1:0:2344:G:O4'	2.08	0.53
1:0:94:C:H2'	1:0:95:G:O4'	2.09	0.53
1:0:1739:G:H2'	1:0:1740:G:H8	1.74	0.53
1:0:1337:G:H1'	1:0:1632:A:N6	2.24	0.53
1:0:1684:G:H2'	1:0:1974:U:O4	2.07	0.53
1:0:2607:C:H3'	1:0:2608:A:C5'	2.38	0.53
1:0:15:G:N2	1:0:2027:C:O2'	2.41	0.53
1:0:202:A:O2'	1:0:234:C:H4'	2.09	0.53
1:0:2546:G:H2'	1:0:2547:C:C6	2.43	0.53
1:0:1669:A:N6	1:0:1670:G:H21	2.05	0.53
1:0:2634:G:H2'	1:0:2643:G:O6	2.09	0.53
1:0:1196:G:H2'	1:0:1197:U:C4'	2.38	0.53
1:0:2026:C:H2'	1:0:2027:C:H6	1.73	0.53
1:0:1333:G:C5	1:0:1342:U:H5'	2.44	0.53
1:0:159:A:O2'	1:0:160:C:H5'	2.08	0.53
1:0:2461:G:H2'	1:0:2462:C:O4'	2.08	0.53
1:0:1683:G:H2'	1:0:1684:G:H5'	1.91	0.53
1:0:13:A:H1'	1:0:536:A:H62	1.72	0.53
1:0:475:U:O4	1:0:801:A:C5	2.62	0.53
1:0:1137:A:H5''	1:0:1138:A:OP1	2.09	0.53
1:0:2592:U:H2'	1:0:2593:A:H5'	1.90	0.53
1:0:1871:G:H2'	1:0:1871:G:N3	2.24	0.53
2:9:85:G:C2'	2:9:86:A:H5'	2.38	0.53
1:0:651:C:C3'	1:0:652:C:H5''	2.39	0.53
1:0:1196:G:H2'	1:0:1197:U:C5'	2.38	0.53
1:0:1914:U:O2'	1:0:1915:A:H5'	2.09	0.53
1:0:1323:G:H1'	1:0:1627:C:C5'	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1373:G:H1	1:0:2192:U:H3	1.56	0.53
1:0:2324:G:C4'	1:0:2326:C:H5''	2.37	0.53
1:0:1514:C:H5'	1:0:1593:C:H5''	1.91	0.53
1:0:584:A:O2'	1:0:585:U:H5'	2.08	0.53
1:0:1418:C:H2'	1:0:1419:G:C8	2.43	0.53
1:0:1943:A:C2'	1:0:1944:C:H5'	2.39	0.53
1:0:1741:G:O2'	1:0:1742:G:H5'	2.09	0.53
1:0:1380:C:C2'	1:0:1381:G:H5'	2.39	0.53
1:0:2733:A:O2'	1:0:2734:U:H5'	2.09	0.53
1:0:1823:G:H2'	1:0:1824:C:C6	2.44	0.53
1:0:1268:U:C5	5:C:67:ALA:CA	2.92	0.53
1:0:1917:C:H2'	1:0:1918:G:O4'	2.09	0.53
1:0:586:G:H5'	1:0:2481:G:C2	2.44	0.53
1:0:2407:G:H5'	1:0:2408:G:C2	2.44	0.53
1:0:1429:A:N6	1:0:1601:U:H5''	2.23	0.53
1:0:2383:C:H2'	1:0:2384:G:O4'	2.09	0.53
1:0:1830:C:N4	1:0:1881:U:H3'	2.24	0.53
1:0:1872:A:H1'	1:0:2070:G:H5'	1.91	0.53
1:0:1102:G:H2'	1:0:1103:C:H6	1.74	0.53
1:0:1459:U:O5'	1:0:1459:U:H6	1.91	0.52
2:9:23:G:C6	2:9:24:U:C4	2.98	0.52
1:0:1811:A:O2'	1:0:1812:U:H5''	2.09	0.52
1:0:9:U:H3	1:0:2608:A:H62	1.57	0.52
1:0:193:A:H2'	1:0:194:G:O4'	2.09	0.52
1:0:2026:C:H2'	1:0:2027:C:C6	2.44	0.52
1:0:2377:U:H2'	1:0:2378:G:H8	1.74	0.52
1:0:2021:G:H2'	1:0:2022:C:C6	2.43	0.52
1:0:1999:U:H2'	1:0:2000:U:O4'	2.09	0.52
1:0:2627:G:H2'	1:0:2628:C:O4'	2.09	0.52
1:0:1571:G:OP2	1:0:1571:G:H3'	2.08	0.52
1:0:294:U:H2'	1:0:295:C:C6	2.44	0.52
1:0:2662:C:H42	1:0:2707:G:H21	1.56	0.52
1:0:1680:U:O2'	1:0:1681:A:H5''	2.09	0.52
1:0:876:A:H4'	2:9:103:A:N3	2.24	0.52
1:0:76:C:H2'	1:0:77:C:C6	2.43	0.52
1:0:543:G:H2'	1:0:544:U:C6	2.45	0.52
1:0:726:G:H2'	1:0:727:U:O4'	2.08	0.52
2:9:72:C:H2'	2:9:73:C:O4'	2.10	0.52
1:0:1558:C:H2'	1:0:1559:G:H5'	1.90	0.52
1:0:852:U:H6	1:0:852:U:O5'	1.92	0.52
1:0:246:C:H42	1:0:247:A:H62	1.56	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1814:G:H2'	1:0:1815:G:C8	2.45	0.52
1:0:932:G:H2'	1:0:933:G:O4'	2.08	0.52
1:0:167:A:N6	1:0:812:G:O2'	2.35	0.52
1:0:2617:G:HO2'	1:0:2618:A:H8	1.55	0.52
1:0:1886:G:H2'	1:0:1887:G:C8	2.36	0.52
1:0:1371:G:H1'	1:0:1386:A:H62	1.74	0.52
1:0:2825:A:H2'	1:0:2826:C:C6	2.45	0.52
1:0:2029:G:H2'	1:0:2030:U:C6	2.43	0.52
1:0:1313:U:H5'	1:0:1314:A:N3	2.25	0.52
1:0:2633:A:N6	1:0:2646:C:N4	2.55	0.52
1:0:1166:A:C3'	1:0:1167:A:H5''	2.40	0.52
1:0:1316:G:OP2	1:0:1316:G:H8	1.93	0.52
1:0:2424:G:H2'	1:0:2425:G:O4'	2.10	0.52
1:0:2327:U:H2'	1:0:2328:G:H8	1.74	0.52
2:9:41:A:H8	2:9:41:A:O5'	1.93	0.52
1:0:887:G:O2'	1:0:888:G:H5'	2.10	0.52
1:0:837:U:H2'	1:0:838:A:C8	2.45	0.52
1:0:1661:C:H2'	1:0:1662:G:C8	2.44	0.52
1:0:2599:U:H2'	1:0:2600:A:C5'	2.30	0.52
1:0:2429:A:OP1	1:0:2476:A:H2'	2.09	0.52
1:0:2633:A:H4'	1:0:2634:G:O5'	2.09	0.52
1:0:482:A:O2'	1:0:483:A:H5'	2.10	0.52
1:0:1204:G:H2'	1:0:1205:G:H8	1.74	0.52
1:0:8:A:H2'	1:0:9:U:C6	2.44	0.52
1:0:1994:U:C2'	1:0:1995:G:H5'	2.40	0.52
1:0:10:A:H2'	1:0:11:G:H8	1.74	0.52
1:0:1835:C:H2'	1:0:1836:C:C6	2.45	0.52
1:0:2324:G:N2	1:0:2361:G:C4	2.78	0.52
1:0:2756:A:H4'	1:0:2758:A:OP1	2.09	0.52
1:0:2487:G:O3'	1:0:2534:U:H5'	2.09	0.52
1:0:2375:G:H2'	1:0:2376:G:C8	2.44	0.52
1:0:93:A:O2'	1:0:94:C:H5'	2.09	0.52
1:0:2705:A:O2'	1:0:2706:U:C6	2.60	0.52
1:0:929:A:H8	1:0:2247:A:H61	1.56	0.52
1:0:2363:G:H5''	1:0:2365:U:OP1	2.10	0.52
1:0:5:A:H2'	1:0:6:A:C8	2.43	0.52
1:0:152:G:H2'	1:0:153:A:O4'	2.09	0.52
1:0:2169:A:O2'	1:0:2170:C:H5'	2.10	0.52
1:0:2169:A:C2'	1:0:2170:C:H5'	2.40	0.52
1:0:1556:A:H2'	1:0:1557:G:H8	1.75	0.52
1:0:847:C:H2'	1:0:848:A:H8	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1036:G:H1'	1:0:1145:C:O4'	2.09	0.52
1:0:2394:G:H2'	1:0:2395:C:C6	2.45	0.52
1:0:2809:A:O2'	1:0:2810:A:H5'	2.10	0.52
1:0:696:U:H6	1:0:696:U:O5'	1.93	0.52
1:0:362:C:C4	1:0:363:G:H1'	2.45	0.52
1:0:174:A:H4'	1:0:2052:G:OP2	2.10	0.52
1:0:2324:G:N3	1:0:2326:C:H5	2.08	0.52
1:0:1912:G:H3'	1:0:1912:G:N3	2.25	0.52
1:0:1039:A:N6	1:0:1136:G:H2'	2.25	0.52
1:0:202:A:C2	1:0:203:G:H1'	2.45	0.52
1:0:1288:A:H62	1:0:1309:G:H4'	1.75	0.52
1:0:41:G:H2'	1:0:42:G:H8	1.75	0.52
1:0:2492:G:H1	1:0:2550:C:N4	2.04	0.51
1:0:1996:A:O2'	1:0:1997:A:H5'	2.09	0.51
1:0:2265:A:H5''	1:0:2266:A:O4'	2.10	0.51
1:0:1843:U:H2'	1:0:1844:C:H6	1.74	0.51
1:0:1083:C:H42	1:0:1103:C:H41	1.56	0.51
1:0:1491:C:H2'	1:0:1492:A:H8	1.75	0.51
1:0:1416:A:O2'	1:0:1417:C:H5'	2.10	0.51
1:0:608:G:H2'	1:0:609:U:C6	2.45	0.51
1:0:1151:U:H5''	1:0:1153:A:OP1	2.10	0.51
1:0:1485:U:H2'	1:0:1486:A:C8	2.45	0.51
1:0:389:G:H2'	1:0:390:U:C6	2.44	0.51
1:0:922:A:H62	13:K:17:ARG:CA	2.24	0.51
1:0:35:G:O4'	1:0:466:A:H1'	2.10	0.51
1:0:2353:G:H2'	1:0:2354:G:C8	2.46	0.51
1:0:1272:G:H2'	1:0:1273:G:H8	1.76	0.51
2:9:116:C:H2'	2:9:117:G:O4'	2.10	0.51
1:0:978:U:H2'	1:0:979:A:H8	1.76	0.51
1:0:2035:G:H2'	1:0:2036:G:C8	2.46	0.51
1:0:174:A:C2	1:0:2413:A:N6	2.78	0.51
1:0:1621:C:H4'	1:0:1626:A:N6	2.24	0.51
1:0:2560:G:H2'	1:0:2561:G:C8	2.45	0.51
1:0:583:C:O2'	1:0:584:A:OP2	2.27	0.51
1:0:1944:C:H2'	1:0:1945:C:O4'	2.10	0.51
1:0:2541:U:H2'	1:0:2542:U:O4'	2.10	0.51
1:0:95:G:H2'	1:0:96:C:C6	2.46	0.51
1:0:1293:A:O2'	1:0:1294:G:H5'	2.10	0.51
1:0:430:C:H2'	1:0:431:G:C8	2.45	0.51
1:0:604:U:H2'	1:0:605:G:H8	1.74	0.51
1:0:1662:G:H5''	1:0:1663:C:O4'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2717:G:H2'	1:0:2718:A:H8	1.75	0.51
1:0:1692:C:H2'	1:0:1693:A:H5'	1.91	0.51
1:0:484:G:O2'	1:0:485:G:H5'	2.11	0.51
2:9:78:A:H2'	2:9:79:U:H6	1.73	0.51
1:0:706:A:H2'	1:0:707:U:C6	2.46	0.51
1:0:782:U:H2'	1:0:783:G:H8	1.72	0.51
1:0:119:G:H1'	1:0:129:A:C2	2.45	0.51
1:0:1010:U:H2'	1:0:1011:A:H8	1.76	0.51
1:0:2035:G:H2'	1:0:2036:G:H8	1.75	0.51
1:0:678:G:O2'	1:0:679:C:H5'	2.11	0.51
1:0:300:C:H2'	1:0:301:C:H5'	1.92	0.51
1:0:2301:A:H2'	1:0:2302:G:O4'	2.11	0.51
1:0:859:U:H4'	1:0:860:U:C5	2.46	0.51
1:0:931:G:C2'	1:0:932:G:H5'	2.40	0.51
1:0:2633:A:H5'	1:0:2635:U:O4'	2.11	0.51
1:0:1714:A:H3'	1:0:1715:A:C8	2.45	0.51
1:0:1241:G:O2'	1:0:1242:A:H5'	2.10	0.51
1:0:2503:G:C3'	1:0:2504:G:H5''	2.40	0.51
1:0:2658:A:O2'	1:0:2659:C:H5'	2.11	0.51
1:0:103:U:H2'	1:0:104:C:H6	1.72	0.51
2:9:42:U:C2	2:9:45:C:C5	2.99	0.51
1:0:984:A:H2	1:0:1200:G:H1	1.57	0.51
1:0:15:G:H2'	1:0:16:G:H5'	1.93	0.51
1:0:1540:C:O2'	1:0:1541:G:H5'	2.10	0.51
1:0:886:A:H2'	1:0:887:G:O4'	2.11	0.51
1:0:781:G:H5'	1:0:1638:G:H4'	1.93	0.51
1:0:837:U:H2'	1:0:838:A:O4'	2.10	0.51
1:0:830:C:H2'	1:0:831:G:H8	1.76	0.51
1:0:579:G:H2'	1:0:2013:A:N7	2.25	0.51
1:0:773:G:C2'	1:0:774:A:H5'	2.41	0.51
1:0:1856:U:H2'	1:0:1857:G:O4'	2.11	0.51
1:0:1579:G:H2'	1:0:1580:C:C6	2.45	0.51
1:0:29:U:H2'	1:0:30:G:C8	2.46	0.51
1:0:2613:A:O2'	1:0:2614:A:H5'	2.10	0.51
1:0:1818:G:H2'	1:0:1819:U:C6	2.46	0.51
1:0:2053:G:H2'	1:0:2054:A:C8	2.46	0.51
2:9:26:G:N7	2:9:58:G:C4	2.78	0.51
1:0:1227:A:H4'	1:0:1252:C:H4'	1.93	0.51
1:0:1790:G:C8	1:0:1811:A:N6	2.79	0.51
2:9:6:C:H2'	2:9:7:C:H6	1.72	0.51
1:0:1590:C:H6	1:0:1590:C:O5'	1.94	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:952:A:O2'	1:0:1204:G:H4'	2.11	0.51
1:0:2487:G:H2'	1:0:2488:G:C8	2.45	0.51
1:0:2408:G:H3'	1:0:2409:A:C5'	2.41	0.51
2:9:71:G:C2'	2:9:72:C:H5'	2.41	0.51
1:0:1218:C:H2'	1:0:1219:C:O4'	2.10	0.51
1:0:1611:U:H2'	1:0:1612:U:O4'	2.10	0.51
1:0:2076:G:H2'	1:0:2077:G:C8	2.46	0.51
2:9:4:C:H2'	2:9:5:C:C5	2.43	0.51
1:0:2246:A:H2'	1:0:2246:A:N3	2.26	0.51
1:0:612:G:H4'	1:0:613:A:O2'	2.10	0.51
1:0:1838:G:C2'	1:0:1839:A:H5'	2.39	0.51
1:0:1592:U:O5'	1:0:1592:U:H6	1.94	0.51
1:0:1424:U:H2'	1:0:1425:G:C8	2.45	0.51
1:0:2870:C:H2'	1:0:2871:U:C6	2.46	0.51
32:0:2882:ZIT:H6B2	32:0:2882:ZIT:H6A3	1.88	0.50
1:0:2425:G:HO2'	1:0:2428:U:H5	1.57	0.50
1:0:1457:A:O2'	1:0:1458:A:H5'	2.11	0.50
1:0:974:U:H5'	1:0:2476:A:OP1	2.11	0.50
1:0:753:U:H5'	1:0:1775:A:N6	2.26	0.50
1:0:1179:A:H2'	1:0:1180:A:C8	2.45	0.50
1:0:1000:G:P	1:0:1168:G:H4'	2.51	0.50
1:0:1132:C:H2'	1:0:1133:G:O4'	2.10	0.50
1:0:1226:A:H2'	1:0:1227:A:C8	2.46	0.50
1:0:520:C:H2'	1:0:521:U:O4'	2.11	0.50
1:0:1066:G:H3'	1:0:1067:G:H5''	1.93	0.50
2:9:50:U:H2'	2:9:51:G:C8	2.45	0.50
1:0:636:G:H2'	1:0:637:G:H5'	1.94	0.50
1:0:37:C:H4'	1:0:463:C:OP1	2.12	0.50
1:0:2651:U:O2'	1:0:2652:G:H5'	2.12	0.50
1:0:534:U:H4'	1:0:564:U:H4'	1.92	0.50
1:0:1770:U:H2'	1:0:1774:A:H62	1.77	0.50
1:0:2160:C:H2'	1:0:2161:C:C6	2.47	0.50
1:0:2751:C:H2'	1:0:2752:C:H6	1.75	0.50
1:0:322:A:H2'	1:0:322:A:N3	2.26	0.50
1:0:1624:A:H2'	1:0:1625:A:H5'	1.94	0.50
1:0:357:A:C2'	1:0:358:C:H5'	2.37	0.50
1:0:2770:A:C5'	1:0:2867:G:H22	2.25	0.50
1:0:790:A:O2'	1:0:791:G:H5'	2.10	0.50
1:0:644:A:C2'	1:0:645:G:H5'	2.41	0.50
1:0:685:U:O2'	1:0:686:C:H5'	2.11	0.50
1:0:1411:C:H2'	1:0:1412:C:H6	1.75	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:502:A:H2'	1:0:503:G:H5'	1.93	0.50
1:0:2772:U:O2'	1:0:2773:G:H5'	2.11	0.50
1:0:923:A:N3	1:0:923:A:H2'	2.26	0.50
1:0:630:G:H8	1:0:630:G:O5'	1.94	0.50
2:9:111:C:H5''	2:9:112:A:H4'	1.93	0.50
1:0:2238:G:H1'	1:0:2406:C:C2	2.47	0.50
1:0:1101:U:H3	1:0:1113:C:H1'	1.77	0.50
1:0:2546:G:H2'	1:0:2547:C:H6	1.76	0.50
1:0:2458:U:OP1	1:0:2516:U:H1'	2.12	0.50
1:0:1848:U:H2'	1:0:1849:G:O4'	2.12	0.50
1:0:1572:C:H2'	1:0:1573:G:C5'	2.42	0.50
1:0:860:U:O2	1:0:860:U:H2'	2.11	0.50
1:0:174:A:H4'	1:0:2051:U:H2'	1.93	0.50
1:0:1625:A:C8	1:0:1632:A:H1'	2.46	0.50
2:9:29:C:H2'	2:9:30:C:C5	2.45	0.50
1:0:1090:C:O2'	1:0:1091:C:H5'	2.11	0.50
1:0:2104:G:H2'	1:0:2105:U:C6	2.47	0.50
1:0:2717:G:H2'	1:0:2718:A:C8	2.46	0.50
1:0:1411:C:H2'	1:0:1412:C:C6	2.47	0.50
1:0:75:C:H2'	1:0:76:C:C5'	2.33	0.50
1:0:1313:U:H4'	1:0:1314:A:O4'	2.11	0.50
1:0:1514:C:H2'	1:0:1515:U:O4'	2.11	0.50
1:0:1199:U:H3'	1:0:1200:G:H5''	1.93	0.50
1:0:2609:G:N2	1:0:2866:A:H2	2.09	0.50
1:0:1229:C:H2'	1:0:1230:C:H6	1.77	0.50
1:0:1430:G:H2'	1:0:1431:U:C6	2.47	0.50
1:0:1594:U:H2'	1:0:1595:A:C8	2.47	0.50
1:0:1287:A:N1	1:0:1661:C:O2'	2.40	0.50
1:0:41:G:O2'	1:0:42:G:H5'	2.12	0.50
1:0:2341:G:O2'	1:0:2342:U:H5'	2.12	0.50
1:0:456:C:H2'	1:0:457:C:H6	1.77	0.50
1:0:1440:G:H3'	1:0:1441:A:C5'	2.41	0.50
1:0:1038:U:N3	1:0:2467:A:H5'	2.25	0.50
1:0:14:A:C2	1:0:2604:G:O2'	2.65	0.50
1:0:509:U:H3	1:0:513:A:N6	2.09	0.50
1:0:2170:C:H2'	1:0:2171:U:O4'	2.12	0.50
1:0:1026:U:H2'	1:0:1027:C:C6	2.47	0.50
1:0:73:A:N3	1:0:73:A:H5''	2.26	0.50
1:0:597:U:H2'	1:0:598:U:C6	2.46	0.50
2:9:105:G:C2	2:9:106:U:C4	2.99	0.50
1:0:611:C:O2'	1:0:614:G:H5''	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1982:C:H5''	1:0:2703:C:O2'	2.12	0.50
1:0:1429:A:H1'	1:0:1603:A:C6	2.46	0.50
1:0:18:U:O2'	1:0:563:U:H5''	2.12	0.50
1:0:2396:C:C2'	1:0:2397:A:H5'	2.41	0.50
1:0:1333:G:O2'	1:0:1334:A:H8	1.95	0.50
1:0:1399:C:H2'	1:0:1400:A:C8	2.47	0.50
1:0:765:C:O2'	1:0:766:A:O4'	2.30	0.49
1:0:221:A:H2'	1:0:222:G:H5'	1.94	0.49
1:0:2709:C:H2'	1:0:2710:C:C6	2.47	0.49
1:0:337:G:H2'	1:0:338:G:C8	2.47	0.49
1:0:1353:A:H5''	1:0:1354:A:N7	2.26	0.49
1:0:1310:C:OP1	1:0:2689:C:H4'	2.11	0.49
1:0:1315:A:H5''	1:0:1316:G:OP1	2.11	0.49
1:0:2052:G:O2'	1:0:2053:G:H5'	2.12	0.49
1:0:541:C:N4	1:0:572:G:H8	2.06	0.49
1:0:681:A:N6	1:0:683:A:H2'	2.27	0.49
1:0:1058:G:H2'	1:0:1121:G:H1	1.77	0.49
1:0:2195:C:C2'	1:0:2196:U:H5'	2.42	0.49
1:0:2680:U:H3'	1:0:2681:A:H5'	1.95	0.49
1:0:1872:A:H2'	1:0:1873:A:H8	1.77	0.49
1:0:956:A:C6	1:0:2427:A:H1'	2.47	0.49
2:9:104:A:C2	2:9:105:G:H1'	2.47	0.49
1:0:1001:A:C3'	1:0:1002:C:H5''	2.42	0.49
1:0:2608:A:O2'	1:0:2609:G:H5'	2.11	0.49
1:0:329:C:O2'	1:0:330:C:H5'	2.11	0.49
1:0:2544:A:H5''	1:0:2545:A:OP2	2.12	0.49
1:0:2733:A:H2'	1:0:2734:U:O4'	2.11	0.49
1:0:2598:C:H2'	1:0:2599:U:H6	1.77	0.49
1:0:212:U:O2'	1:0:213:C:H5'	2.12	0.49
1:0:2395:C:H2'	1:0:2396:C:C5'	2.43	0.49
2:9:111:C:H5''	2:9:112:A:C5'	2.42	0.49
1:0:2764:U:H2'	1:0:2765:C:H6	1.75	0.49
1:0:1345:G:H5''	1:0:1346:C:OP1	2.12	0.49
1:0:2212:U:H2'	1:0:2213:G:C8	2.47	0.49
1:0:1284:G:C2	1:0:1633:C:H5'	2.47	0.49
1:0:1073:G:H2'	1:0:1074:G:C4'	2.29	0.49
1:0:701:U:O2'	1:0:702:A:H5'	2.13	0.49
1:0:1807:A:H1'	1:0:1809:G:N7	2.27	0.49
1:0:242:A:N6	1:0:441:A:N7	2.60	0.49
1:0:2196:U:H2'	1:0:2197:U:C6	2.47	0.49
1:0:474:G:N2	1:0:476:G:H3'	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:298:C:H2'	1:0:299:C:H6	1.78	0.49
1:0:228:A:C5	1:0:229:G:H1'	2.47	0.49
1:0:1703:C:H2'	1:0:1704:G:O4'	2.12	0.49
1:0:1979:C:H6	1:0:1979:C:OP1	1.95	0.49
1:0:2431:C:O2'	1:0:2432:A:H5'	2.12	0.49
1:0:1479:G:N2	1:0:1543:G:H21	2.11	0.49
1:0:1166:A:C2'	1:0:1167:A:H5''	2.42	0.49
1:0:338:G:H2'	1:0:339:U:H5'	1.94	0.49
1:0:2544:A:H2'	1:0:2545:A:C1'	2.42	0.49
1:0:1380:C:H2'	1:0:1381:G:H5'	1.95	0.49
1:0:298:C:H2'	1:0:299:C:C6	2.46	0.49
1:0:2655:C:O2'	1:0:2656:G:H5'	2.11	0.49
1:0:1534:A:O2'	1:0:1535:C:H5'	2.12	0.49
2:9:59:A:C4	6:D:27:ALA:CA	2.94	0.49
1:0:1821:A:H5''	1:0:1822:C:C5	2.47	0.49
1:0:79:G:H2'	1:0:80:A:C8	2.46	0.49
1:0:443:A:O2'	1:0:444:U:H5'	2.12	0.49
2:9:116:C:O2'	15:M:50:THR:CA	2.60	0.49
1:0:1730:G:H2'	1:0:1731:C:H6	1.76	0.49
1:0:1936:A:O2'	1:0:2538:C:H1'	2.13	0.49
1:0:29:U:O5'	1:0:29:U:H6	1.96	0.49
1:0:956:A:N7	1:0:2427:A:C2	2.81	0.49
1:0:1212:U:H2'	1:0:1213:U:C6	2.48	0.49
1:0:1980:A:O2'	1:0:1981:A:H5'	2.13	0.49
1:0:749:C:H2'	1:0:750:C:O4'	2.12	0.49
1:0:45:C:H2'	1:0:46:C:C6	2.48	0.49
1:0:1687:C:H1'	1:0:1976:U:O2	2.13	0.49
1:0:2754:C:H2'	1:0:2755:A:H8	1.77	0.49
2:9:28:A:OP2	2:9:29:C:H5	1.95	0.49
1:0:585:U:O2'	1:0:2481:G:C6	2.65	0.49
1:0:2122:G:H2'	1:0:2123:G:H8	1.77	0.49
1:0:782:U:HO2'	1:0:1392:U:H5	1.60	0.49
1:0:132:U:H2'	1:0:133:C:C6	2.48	0.49
1:0:478:G:O2'	1:0:479:G:H5'	2.13	0.49
1:0:931:G:C5'	2:9:83:C:H1'	2.43	0.49
2:9:23:G:C2	2:9:24:U:C2	3.01	0.49
1:0:1811:A:N3	1:0:1811:A:H2'	2.27	0.49
1:0:2523:G:H1'	1:0:2625:U:C5'	2.42	0.49
2:9:28:A:H3'	2:9:29:C:C6	2.43	0.49
1:0:583:C:O2'	1:0:584:A:P	2.71	0.49
1:0:1429:A:H61	1:0:1602:G:H5'	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:605:G:H2'	1:0:606:A:C8	2.48	0.49
1:0:1888:C:H2'	1:0:1913:G:C5	2.48	0.49
1:0:2371:A:H2'	1:0:2372:A:O4'	2.12	0.49
1:0:2742:G:O2'	1:0:2743:G:H5'	2.13	0.49
1:0:333:A:O2'	1:0:350:U:H2'	2.12	0.49
1:0:1073:G:C2'	1:0:1074:G:H4'	2.30	0.49
1:0:2010:G:H2'	1:0:2011:U:C6	2.48	0.49
1:0:1341:G:H2'	1:0:1343:C:C5	2.48	0.49
2:9:36:A:H8	2:9:36:A:O5'	1.96	0.49
1:0:446:C:H2'	1:0:447:U:O4'	2.13	0.49
1:0:1288:A:H2'	1:0:1289:A:O4'	2.13	0.49
2:9:67:C:C3'	2:9:68:A:H5'	2.43	0.48
1:0:1947:G:H2'	1:0:1950:C:OP1	2.13	0.48
2:9:92:G:C3'	2:9:93:G:H5'	2.42	0.48
1:0:220:U:H2'	1:0:221:A:H8	1.78	0.48
1:0:2565:C:H4'	1:0:2566:A:OP1	2.12	0.48
1:0:1482:U:H2'	1:0:1483:G:C8	2.48	0.48
1:0:764:A:N6	32:0:2882:ZIT:H92	2.28	0.48
1:0:870:C:H2'	1:0:871:U:H6	1.77	0.48
1:0:2761:A:C5'	1:0:2762:G:H5'	2.44	0.48
1:0:1347:C:O2'	1:0:1348:C:H5'	2.12	0.48
2:9:71:G:H2'	2:9:72:C:H5'	1.95	0.48
1:0:2572:U:H2'	1:0:2573:C:H6	1.78	0.48
2:9:89:G:N2	2:9:91:A:C8	2.81	0.48
1:0:1686:A:H2'	1:0:1687:C:H5'	1.96	0.48
1:0:65:C:H2'	1:0:66:U:O4'	2.13	0.48
1:0:612:G:H4'	1:0:613:A:H4'	1.94	0.48
1:0:956:A:C5	1:0:2427:A:N3	2.82	0.48
1:0:1940:C:H2'	1:0:1941:C:C6	2.48	0.48
1:0:974:U:H2'	1:0:975:C:C6	2.47	0.48
1:0:1791:C:H2'	1:0:1792:C:C5'	2.37	0.48
2:9:63:A:H2'	2:9:64:C:C6	2.47	0.48
1:0:2059:U:H2'	1:0:2060:A:C5'	2.36	0.48
1:0:1622:G:H4'	1:0:1624:A:N3	2.29	0.48
1:0:2671:C:O2'	1:0:2672:U:H5'	2.13	0.48
1:0:1087:C:H2'	1:0:1088:A:O4'	2.13	0.48
1:0:80:A:H2'	1:0:81:C:C6	2.48	0.48
1:0:777:A:N6	1:0:1767:G:H1'	2.27	0.48
1:0:2225:G:H2'	1:0:2226:A:H8	1.79	0.48
1:0:388:G:O2'	1:0:389:G:H5'	2.13	0.48
1:0:2117:A:H62	1:0:2139:G:H21	1.61	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:9:107:C:C6	2:9:107:C:H3'	2.47	0.48
1:0:805:G:N7	1:0:2419:C:H1'	2.29	0.48
1:0:814:G:H3'	1:0:815:A:C5'	2.43	0.48
1:0:2508:G:H5''	1:0:2509:A:H5''	1.95	0.48
1:0:2459:C:H2'	1:0:2460:G:H5'	1.95	0.48
1:0:837:U:H2'	1:0:838:A:H8	1.77	0.48
1:0:1424:U:H2'	1:0:1425:G:H8	1.78	0.48
1:0:2217:G:H3'	1:0:2217:G:N3	2.28	0.48
1:0:1432:G:N2	1:0:1596:A:H62	1.95	0.48
2:9:85:G:O2'	2:9:86:A:H5'	2.13	0.48
1:0:322:A:H1'	1:0:343:A:C5	2.49	0.48
1:0:347:C:H2'	1:0:348:U:O4'	2.14	0.48
1:0:1626:A:OP2	1:0:1626:A:C8	2.66	0.48
1:0:2712:G:H5'	1:0:2713:A:C8	2.49	0.48
1:0:702:A:N3	1:0:792:U:H1'	2.28	0.48
1:0:1339:U:O4	1:0:1664:G:H1'	2.14	0.48
1:0:2468:G:H2'	1:0:2469:G:O4'	2.14	0.48
1:0:2469:G:H4'	1:0:2470:U:H5	1.77	0.48
1:0:1955:G:H2'	1:0:1956:G:H5'	1.94	0.48
1:0:117:A:H5'	1:0:118:U:O5'	2.14	0.48
1:0:1038:U:H2'	1:0:1039:A:C8	2.47	0.48
1:0:843:G:H8	1:0:843:G:OP1	1.96	0.48
1:0:990:A:H3'	1:0:991:A:H5''	1.96	0.48
1:0:1023:U:H1'	1:0:1154:A:C8	2.48	0.48
1:0:1402:G:H2'	1:0:1403:U:O4'	2.13	0.48
1:0:2795:A:H2'	1:0:2795:A:N3	2.28	0.48
1:0:2011:U:H2'	1:0:2012:A:H8	1.79	0.48
2:9:32:C:H4'	2:9:60:A:C2	2.47	0.48
1:0:717:G:H1'	1:0:740:A:H61	1.79	0.48
1:0:2447:G:O5'	1:0:2447:G:H8	1.96	0.48
1:0:1001:A:H62	1:0:1200:G:H1'	1.79	0.48
1:0:195:A:H2'	1:0:196:A:O4'	2.14	0.48
1:0:539:A:H62	1:0:2024:U:H3	1.61	0.48
1:0:1307:U:H2'	1:0:1308:C:O4'	2.13	0.48
2:9:91:A:O5'	2:9:91:A:H8	1.97	0.48
1:0:1442:C:N4	1:0:1585:A:C8	2.82	0.48
1:0:2093:G:H2'	1:0:2094:C:C6	2.49	0.48
1:0:2820:C:H2'	1:0:2821:G:H8	1.78	0.48
1:0:860:U:H2'	1:0:861:G:H5'	1.95	0.48
1:0:942:U:H2'	1:0:943:U:O4'	2.14	0.48
1:0:1458:A:C3'	1:0:1459:U:H5''	2.38	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:486:U:C4'	1:0:520:C:H5'	2.43	0.48
1:0:657:A:H8	1:0:657:A:O5'	1.96	0.48
1:0:581:A:N3	1:0:582:G:H1'	2.28	0.48
1:0:1461:C:H2'	1:0:1462:C:C6	2.49	0.48
1:0:1541:G:H22	1:0:1561:A:N6	2.11	0.48
1:0:242:A:O2'	1:0:243:G:P	2.72	0.48
1:0:781:G:H2'	1:0:782:U:O4'	2.13	0.48
1:0:1327:C:OP1	1:0:1345:G:H5'	2.14	0.48
1:0:1756:C:H2'	1:0:1757:C:C6	2.49	0.48
1:0:2426:G:N2	1:0:2431:C:H41	2.11	0.48
1:0:1226:A:N1	1:0:1250:A:H1'	2.29	0.48
1:0:614:G:H2'	1:0:615:C:C6	2.47	0.48
1:0:13:A:O2'	1:0:14:A:C2	2.67	0.48
1:0:788:G:H5''	1:0:790:A:H1'	1.95	0.48
1:0:788:G:H5'	1:0:790:A:N3	2.29	0.48
1:0:995:A:H5''	1:0:996:C:C5	2.47	0.48
1:0:1740:G:O2'	1:0:1741:G:H5'	2.14	0.48
1:0:2810:A:H2	1:0:2853:U:C5	2.31	0.48
1:0:2117:A:N6	1:0:2139:G:H21	2.11	0.48
1:0:1969:G:O2'	1:0:1970:G:H5'	2.14	0.48
1:0:2311:U:HO2'	1:0:2312:A:H8	1.60	0.48
1:0:2480:C:H4'	1:0:2482:A:H4'	1.94	0.48
1:0:2665:G:H2'	1:0:2666:U:O4'	2.14	0.48
2:9:42:U:H3'	2:9:43:G:H5''	1.96	0.48
1:0:1066:G:H3'	1:0:1067:G:C5'	2.44	0.48
1:0:953:G:H1'	1:0:1203:A:C2	2.42	0.48
1:0:585:U:H2'	1:0:586:G:H8	1.76	0.48
1:0:15:G:C2'	1:0:16:G:H5'	2.44	0.48
1:0:562:G:H2'	1:0:563:U:O4'	2.14	0.48
1:0:1139:A:H1'	1:0:2496:C:H5'	1.96	0.48
1:0:1425:G:H2'	1:0:1426:U:C6	2.49	0.48
1:0:1162:A:O2'	1:0:1163:C:H5'	2.13	0.48
1:0:1858:C:H2'	1:0:1859:A:H8	1.79	0.48
1:0:2038:C:H5'	1:0:2039:G:H5''	1.96	0.48
1:0:353:G:H2'	1:0:354:C:C6	2.48	0.48
1:0:1906:U:H2'	1:0:1907:C:C6	2.49	0.48
1:0:1721:G:O2'	1:0:1722:G:H5'	2.13	0.48
1:0:915:C:H2'	1:0:916:U:C6	2.49	0.48
1:0:521:U:H5''	1:0:1248:G:H4'	1.96	0.47
1:0:633:G:H8	1:0:633:G:O5'	1.97	0.47
1:0:839:U:H5'	1:0:2407:G:H2'	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:735:G:O2'	1:0:736:G:H5'	2.14	0.47
1:0:736:G:H2'	1:0:737:C:C6	2.49	0.47
1:0:968:C:C2	1:0:2438:A:H5'	2.49	0.47
1:0:824:U:H2'	1:0:825:C:C5'	2.43	0.47
1:0:2800:C:O2'	1:0:2801:A:H5'	2.14	0.47
1:0:537:C:C6	1:0:2759:U:H2'	2.48	0.47
1:0:2070:G:H2'	1:0:2071:G:O4'	2.14	0.47
1:0:1630:A:H8	1:0:1630:A:OP2	1.97	0.47
1:0:1764:A:H2'	1:0:1765:C:H5'	1.94	0.47
1:0:1783:G:O6	1:0:1820:G:H1'	2.14	0.47
1:0:1750:A:H4'	1:0:2695:C:O4'	2.14	0.47
1:0:2396:C:O2'	1:0:2397:A:H5'	2.14	0.47
1:0:1257:U:H2'	1:0:1258:G:H8	1.77	0.47
1:0:297:A:H2'	1:0:298:C:C6	2.49	0.47
1:0:1007:A:H2'	1:0:1008:G:H8	1.79	0.47
1:0:365:U:H2'	1:0:366:U:C6	2.49	0.47
1:0:964:A:H1'	1:0:2245:A:OP2	2.14	0.47
1:0:592:G:H2'	1:0:593:C:C6	2.49	0.47
1:0:1301:U:H5''	1:0:1302:C:OP1	2.14	0.47
1:0:1666:G:H2'	1:0:1667:A:H8	1.77	0.47
1:0:1032:A:C2'	1:0:1033:G:H4'	2.39	0.47
1:0:1959:U:H2'	1:0:1960:A:C8	2.49	0.47
2:9:35:C:H2'	2:9:36:A:O4'	2.14	0.47
1:0:524:A:O2'	1:0:525:A:H5'	2.13	0.47
1:0:2396:C:H2'	1:0:2397:A:H5'	1.96	0.47
1:0:926:C:H2'	1:0:927:C:H5'	1.96	0.47
1:0:147:G:O5'	1:0:147:G:H8	1.97	0.47
1:0:2658:A:H2'	1:0:2659:C:O4'	2.14	0.47
1:0:2182:A:H2'	1:0:2183:C:O4'	2.14	0.47
1:0:587:A:OP2	1:0:587:A:H8	1.98	0.47
1:0:1141:U:O5'	1:0:1141:U:H6	1.98	0.47
1:0:1456:C:O2'	1:0:1457:A:H5'	2.14	0.47
2:9:8:C:O2'	2:9:9:G:H5'	2.14	0.47
1:0:2459:C:C2'	1:0:2460:G:H5'	2.45	0.47
1:0:1956:G:H2'	1:0:1957:C:C6	2.49	0.47
1:0:1166:A:H2'	1:0:1167:A:H5''	1.95	0.47
1:0:195:A:C2'	1:0:196:A:H5'	2.44	0.47
1:0:236:C:H2'	1:0:237:G:C8	2.43	0.47
2:9:117:G:O2'	2:9:118:G:H5'	2.14	0.47
1:0:2814:G:H1	1:0:2853:U:H3	1.62	0.47
1:0:305:A:H2'	1:0:306:G:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:192:G:H4'	1:0:193:A:O5'	2.14	0.47
2:9:34:C:H6	2:9:34:C:O5'	1.98	0.47
1:0:2094:C:C4	1:0:2103:G:H1'	2.50	0.47
1:0:1141:U:O2'	1:0:1142:G:OP1	2.28	0.47
1:0:1141:U:OP2	1:0:2549:G:N2	2.47	0.47
1:0:457:C:O2'	1:0:458:G:H5'	2.13	0.47
1:0:482:A:C2'	1:0:483:A:H5'	2.45	0.47
1:0:1915:A:N1	1:0:1956:G:H1'	2.29	0.47
1:0:1184:G:C2'	1:0:1185:C:H5''	2.44	0.47
1:0:1102:G:H2'	1:0:1103:C:C6	2.48	0.47
1:0:1857:G:H2'	1:0:1859:A:OP2	2.14	0.47
1:0:1407:G:H2'	1:0:1408:A:C8	2.49	0.47
1:0:1719:G:O2'	1:0:1720:G:H5'	2.14	0.47
1:0:1253:C:H2'	1:0:1254:G:H5'	1.96	0.47
1:0:657:A:H2'	1:0:658:G:H8	1.78	0.47
1:0:2727:G:H2'	1:0:2728:A:H5''	1.96	0.47
1:0:1437:A:O2'	1:0:1438:G:H5'	2.14	0.47
1:0:2617:G:O2'	1:0:2618:A:H8	1.97	0.47
1:0:2245:A:C2'	1:0:2246:A:OP2	2.62	0.47
1:0:2862:G:O2'	1:0:2863:U:H5'	2.15	0.47
1:0:1957:C:O2'	1:0:1958:G:H5'	2.14	0.47
2:9:108:G:H2'	2:9:109:G:H8	1.79	0.47
1:0:2384:G:H2'	1:0:2390:A:H62	1.80	0.47
1:0:428:A:H2'	1:0:429:C:H6	1.79	0.47
1:0:640:C:H5''	1:0:660:G:O2'	2.13	0.47
1:0:1322:G:N2	1:0:1627:C:H5'	2.28	0.47
1:0:605:G:H2'	1:0:606:A:H8	1.80	0.47
1:0:1487:C:H2'	1:0:1488:G:H8	1.80	0.47
1:0:578:U:OP1	1:0:956:A:N6	2.48	0.47
2:9:88:C:H2'	2:9:89:G:O4'	2.15	0.47
1:0:1365:U:H1'	1:0:1586:A:H2	1.79	0.47
1:0:2433:G:H2'	1:0:2434:G:H8	1.80	0.47
1:0:1787:U:H2'	1:0:1788:C:C6	2.50	0.47
1:0:2739:G:H2'	1:0:2740:C:O4'	2.15	0.47
1:0:805:G:N2	1:0:2056:C:H4'	2.29	0.47
2:9:24:U:H2'	2:9:25:G:O5'	2.14	0.47
1:0:1253:C:C2'	1:0:1254:G:H5'	2.44	0.47
1:0:2560:G:H2'	1:0:2561:G:H8	1.80	0.47
1:0:397:U:H2'	1:0:398:C:H6	1.79	0.47
1:0:785:U:O2'	1:0:786:U:H5'	2.15	0.47
1:0:1668:G:O2'	1:0:1669:A:H5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:305:A:C2'	1:0:306:G:H5'	2.45	0.47
1:0:1317:G:O2'	1:0:1318:A:H5'	2.14	0.47
1:0:2204:A:H1'	1:0:2205:C:C5	2.49	0.47
1:0:538:A:C2'	1:0:539:A:H5''	2.43	0.47
1:0:4:C:H2'	1:0:5:A:C8	2.50	0.47
1:0:1373:G:H2'	1:0:1374:G:H5'	1.97	0.47
2:9:42:U:O4	2:9:45:C:OP2	2.33	0.47
1:0:2446:C:H2'	1:0:2447:G:C8	2.50	0.47
1:0:2470:U:H2'	1:0:2471:U:C6	2.50	0.47
1:0:1066:G:C2'	1:0:1067:G:H4'	2.43	0.47
1:0:550:C:H2'	1:0:551:A:H8	1.80	0.47
1:0:2404:A:O2'	1:0:2405:A:OP2	2.28	0.47
1:0:1940:C:H2'	1:0:1941:C:H6	1.80	0.47
1:0:422:C:H2'	1:0:423:G:O4'	2.15	0.47
1:0:1802:A:H2'	1:0:1803:G:O4'	2.15	0.47
1:0:181:A:H5''	1:0:182:G:OP1	2.14	0.47
1:0:912:A:H2'	1:0:913:A:H8	1.80	0.47
1:0:2483:U:H1'	1:0:2551:A:C2	2.50	0.46
1:0:2484:G:C6	32:0:2881:ZIT:H7B1	2.50	0.46
1:0:1680:U:H6	1:0:1680:U:H5'	1.80	0.46
1:0:2490:U:H2'	1:0:2491:C:H6	1.79	0.46
2:9:68:A:C2	2:9:110:U:C4	3.03	0.46
1:0:2624:G:H4'	1:0:2712:G:O2'	2.15	0.46
1:0:2617:G:N2	1:0:2755:A:H2'	2.30	0.46
1:0:461:A:N3	1:0:461:A:H2'	2.30	0.46
1:0:450:C:H2'	1:0:451:A:C8	2.51	0.46
1:0:211:U:O2'	1:0:212:U:H5'	2.15	0.46
1:0:786:U:H2'	1:0:787:A:H5'	1.96	0.46
1:0:1871:G:C2'	1:0:1871:G:N3	2.78	0.46
1:0:1970:G:O2'	1:0:1971:C:H5'	2.15	0.46
1:0:2204:A:O2'	1:0:2205:C:OP2	2.30	0.46
1:0:2286:G:H21	1:0:2290:A:H62	1.63	0.46
1:0:2588:U:O2'	1:0:2589:C:OP1	2.32	0.46
2:9:45:C:H42	2:9:47:A:H62	1.63	0.46
1:0:1793:A:H2'	1:0:1794:A:C8	2.50	0.46
1:0:1621:C:O2'	1:0:1626:A:N7	2.45	0.46
1:0:2488:G:H2'	1:0:2489:C:H6	1.79	0.46
1:0:538:A:C3'	1:0:539:A:H5''	2.45	0.46
1:0:2830:U:H2'	1:0:2831:A:C8	2.51	0.46
1:0:2785:A:H62	1:0:2865:G:H21	1.63	0.46
1:0:429:C:H2'	1:0:430:C:O4'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2396:C:H6	1:0:2396:C:H5'	1.80	0.46
1:0:246:C:N4	1:0:247:A:H62	2.13	0.46
1:0:1442:C:N4	1:0:1585:A:H8	2.13	0.46
1:0:83:A:N1	1:0:98:U:H1'	2.31	0.46
1:0:433:G:N2	1:0:434:C:H1'	2.30	0.46
1:0:2227:C:H2'	1:0:2228:U:H5'	1.97	0.46
1:0:815:A:H2'	1:0:816:U:O4'	2.14	0.46
1:0:31:C:H5''	1:0:1252:C:OP1	2.14	0.46
1:0:487:G:H1'	1:0:515:A:H2	1.79	0.46
1:0:612:G:O3'	1:0:613:A:C4'	2.59	0.46
1:0:631:G:H5''	1:0:632:A:OP1	2.16	0.46
1:0:2566:A:H2'	1:0:2567:G:H5'	1.96	0.46
1:0:1139:A:H1'	1:0:2495:G:O2'	2.15	0.46
1:0:2425:G:H2'	1:0:2480:C:H41	1.80	0.46
2:9:5:C:H2'	2:9:6:C:O4'	2.15	0.46
1:0:1715:A:H1'	1:0:1717:A:O4'	2.15	0.46
2:9:30:C:O5'	2:9:30:C:C6	2.64	0.46
1:0:225:G:H5'	1:0:226:C:H5'	1.97	0.46
1:0:2225:G:C2	1:0:2405:A:H1'	2.50	0.46
1:0:2402:U:H5'	1:0:2404:A:C5	2.51	0.46
1:0:514:G:C2'	1:0:514:G:N3	2.78	0.46
1:0:2858:A:H3'	1:0:2859:U:H5'	1.97	0.46
1:0:732:G:O5'	1:0:732:G:H8	1.99	0.46
1:0:65:C:C2'	1:0:66:U:H5'	2.45	0.46
1:0:1337:G:H4'	1:0:1632:A:N7	2.31	0.46
1:0:2523:G:H2'	1:0:2524:G:O4'	2.16	0.46
1:0:69:G:H4'	1:0:70:A:O5'	2.16	0.46
1:0:2015:G:O2'	1:0:2016:A:OP1	2.27	0.46
1:0:2533:U:H2'	1:0:2534:U:C6	2.51	0.46
1:0:619:A:H2'	1:0:620:G:C8	2.50	0.46
1:0:488:A:H2'	1:0:489:A:C8	2.51	0.46
1:0:1206:G:H2'	1:0:1207:G:H8	1.80	0.46
1:0:393:U:H2'	1:0:394:U:H6	1.80	0.46
1:0:170:U:H2'	1:0:171:G:C8	2.45	0.46
1:0:2599:U:H3'	1:0:2600:A:H5''	1.95	0.46
1:0:515:A:C2'	1:0:516:G:H5'	2.46	0.46
1:0:591:G:H2'	1:0:592:G:C8	2.49	0.46
1:0:1472:C:HO2'	1:0:1474:A:H8	1.62	0.46
1:0:2407:G:H5''	1:0:2408:G:OP1	2.15	0.46
1:0:788:G:N2	1:0:800:U:C2'	2.78	0.46
1:0:1496:G:H1	1:0:1527:G:H1	1.64	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:646:C:O2'	1:0:650:U:H5''	2.16	0.46
1:0:1669:A:H2'	1:0:1670:G:H4'	1.97	0.46
1:0:84:G:O2'	1:0:85:C:H5'	2.15	0.46
1:0:1671:A:O4'	1:0:2798:A:H5'	2.16	0.46
1:0:1964:A:OP1	1:0:1965:U:OP2	2.33	0.46
1:0:931:G:H2'	1:0:932:G:C5'	2.46	0.46
2:9:23:G:H2'	2:9:24:U:C6	2.51	0.46
1:0:1624:A:C2'	1:0:1625:A:H5'	2.44	0.46
1:0:482:A:H2'	1:0:483:A:O4'	2.16	0.46
1:0:2559:U:H5	1:0:2560:G:H21	1.63	0.46
1:0:1002:C:O5'	1:0:1002:C:H6	1.99	0.46
1:0:984:A:H1'	1:0:1202:U:C5	2.51	0.46
1:0:221:A:N6	1:0:231:G:H21	2.14	0.46
1:0:1216:G:H2'	1:0:1217:U:O4'	2.16	0.46
1:0:299:C:H2'	1:0:300:C:C5	2.51	0.46
2:9:51:G:O2'	2:9:52:G:H5'	2.15	0.46
1:0:1221:C:H6	1:0:1221:C:O5'	1.99	0.46
1:0:764:A:N3	1:0:764:A:C2'	2.79	0.46
1:0:872:G:O2'	1:0:2247:A:C4	2.69	0.46
1:0:1277:G:H2'	1:0:1997:A:N6	2.31	0.46
1:0:1478:U:H2'	1:0:1479:G:C8	2.51	0.46
1:0:1714:A:C5	1:0:1715:A:N6	2.79	0.46
1:0:635:C:O2	1:0:670:U:H4'	2.16	0.46
1:0:1034:U:H4'	1:0:1134:C:OP1	2.15	0.46
1:0:839:U:H5''	1:0:2408:G:P	2.55	0.46
1:0:788:G:H5''	1:0:789:G:OP1	2.15	0.46
1:0:643:A:O2'	1:0:644:A:H5'	2.15	0.46
1:0:40:U:H2'	1:0:41:G:C8	2.51	0.46
1:0:394:U:O2'	1:0:395:G:H5'	2.16	0.46
1:0:1447:U:H1'	1:0:1577:G:H22	1.79	0.46
1:0:974:U:H2'	1:0:975:C:O4'	2.16	0.46
1:0:2511:G:N2	1:0:2642:G:O2'	2.49	0.46
1:0:1918:G:H4'	1:0:1920:A:C2	2.51	0.46
1:0:1715:A:HO2'	1:0:1716:G:H8	1.64	0.46
1:0:2245:A:H2'	1:0:2246:A:OP2	2.16	0.46
1:0:458:G:H4'	1:0:461:A:C4	2.51	0.46
1:0:1827:G:H1'	1:0:1914:U:N3	2.31	0.46
1:0:1001:A:H3'	1:0:1002:C:H5''	1.98	0.46
1:0:115:G:C6	1:0:117:A:N6	2.84	0.46
1:0:490:A:N7	1:0:492:G:H1'	2.31	0.46
1:0:1494:G:H2'	1:0:1495:G:O4'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2397:A:H2'	1:0:2398:U:O4'	2.16	0.46
1:0:642:A:H2'	1:0:643:A:C8	2.51	0.46
1:0:2687:G:O2'	1:0:2688:G:H5'	2.16	0.46
1:0:745:C:C2'	1:0:746:G:H5'	2.46	0.46
1:0:1356:G:H1'	1:0:1613:G:C2	2.51	0.46
1:0:2751:C:H2'	1:0:2752:C:C6	2.50	0.46
1:0:750:C:H2'	1:0:751:G:C8	2.49	0.46
1:0:2093:G:H2'	1:0:2094:C:H6	1.80	0.46
1:0:2047:C:H42	1:0:2425:G:H22	1.63	0.46
1:0:2417:U:H1'	1:0:2419:C:N4	2.31	0.46
1:0:2264:C:H2'	1:0:2265:A:H5'	1.98	0.46
1:0:1226:A:H2'	1:0:1227:A:H8	1.80	0.46
1:0:367:G:C3'	1:0:368:A:H5''	2.46	0.46
2:9:94:G:N3	2:9:94:G:H2'	2.30	0.46
1:0:544:U:H2'	1:0:545:C:O4'	2.16	0.46
1:0:2321:C:O2'	1:0:2353:G:H5''	2.16	0.46
1:0:840:U:H4'	1:0:841:G:N2	2.30	0.46
1:0:1784:C:O2'	1:0:1785:A:H5'	2.16	0.46
1:0:1322:G:O2'	1:0:1323:G:H5'	2.16	0.46
1:0:1356:G:H4'	1:0:1613:G:H2'	1.98	0.46
1:0:2225:G:O2'	1:0:2226:A:H5'	2.16	0.46
1:0:2592:U:C2'	1:0:2593:A:H5'	2.45	0.46
1:0:2045:A:H61	32:0:2881:ZIT:H6A2	1.82	0.45
1:0:1685:A:N6	1:0:1691:G:N3	2.64	0.45
1:0:1790:G:O3'	1:0:1791:C:H6	1.99	0.45
1:0:2753:C:H2'	1:0:2754:C:H6	1.79	0.45
1:0:1952:A:O2'	1:0:1955:G:N2	2.49	0.45
1:0:141:G:H2'	1:0:142:U:H6	1.81	0.45
1:0:455:A:H4'	1:0:1214:C:O2'	2.15	0.45
1:0:20:C:H2'	1:0:21:A:H8	1.81	0.45
1:0:942:U:H2'	1:0:943:U:C4'	2.46	0.45
1:0:1001:A:H5'	1:0:1168:G:OP1	2.17	0.45
1:0:677:G:H4'	1:0:951:G:O3'	2.16	0.45
1:0:462:G:H2'	1:0:463:C:H5'	1.98	0.45
1:0:239:A:C5'	1:0:620:G:H5'	2.46	0.45
1:0:1855:G:H4'	1:0:2390:A:H4'	1.98	0.45
1:0:981:C:H2'	1:0:982:C:C6	2.51	0.45
1:0:1333:G:N2	1:0:1344:C:N4	2.64	0.45
1:0:1787:U:H2'	1:0:1788:C:H6	1.81	0.45
1:0:871:U:O2	1:0:2247:A:H2'	2.16	0.45
1:0:2053:G:H2'	1:0:2054:A:H8	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2028:C:O2'	1:0:2029:G:H5'	2.16	0.45
1:0:2511:G:H2'	1:0:2512:A:O4'	2.17	0.45
1:0:2324:G:HO2'	1:0:2325:A:H5''	1.81	0.45
1:0:1923:U:H2'	1:0:1923:U:O2	2.17	0.45
2:9:92:G:H2'	2:9:93:G:C5'	2.39	0.45
1:0:2617:G:H22	1:0:2755:A:H2'	1.82	0.45
1:0:674:U:H2'	1:0:675:C:C6	2.52	0.45
1:0:583:C:C4	1:0:2016:A:H4'	2.52	0.45
1:0:190:A:H2'	1:0:191:G:H8	1.81	0.45
1:0:733:G:O2'	1:0:734:G:H5'	2.17	0.45
1:0:2307:A:H2'	1:0:2308:A:H8	1.79	0.45
2:9:112:A:H2'	2:9:113:G:C8	2.51	0.45
1:0:745:C:H2'	1:0:746:G:H5'	1.99	0.45
1:0:718:A:O2'	1:0:719:A:H5'	2.14	0.45
1:0:1739:G:H2'	1:0:1740:G:C8	2.51	0.45
1:0:1147:G:O2'	1:0:1148:G:H5'	2.16	0.45
1:0:810:U:H2'	1:0:811:G:C8	2.51	0.45
1:0:1715:A:HO2'	1:0:1716:G:H3'	1.81	0.45
1:0:669:G:H2'	1:0:670:U:H6	1.80	0.45
1:0:986:A:H2'	1:0:987:G:H5'	1.98	0.45
1:0:2652:G:H2'	1:0:2653:A:C8	2.40	0.45
1:0:50:G:H2'	1:0:117:A:N1	2.30	0.45
1:0:2396:C:H2'	1:0:2397:A:C5'	2.46	0.45
1:0:305:A:H2'	1:0:306:G:H5'	1.97	0.45
1:0:1171:A:H2'	1:0:1172:U:C6	2.52	0.45
1:0:2713:A:O2'	1:0:2714:A:H5'	2.16	0.45
1:0:2459:C:H2'	1:0:2460:G:O4'	2.17	0.45
1:0:195:A:H2'	1:0:196:A:H5'	1.98	0.45
1:0:2504:G:O4'	1:0:2721:A:H2	1.99	0.45
1:0:745:C:H2'	1:0:746:G:C5'	2.47	0.45
1:0:2039:G:N2	27:Z:5:PRO:CA	2.79	0.45
1:0:2019:C:H5'	1:0:2019:C:H6	1.82	0.45
1:0:757:U:O2'	1:0:758:G:H5'	2.16	0.45
1:0:1947:G:H5''	1:0:1948:C:OP1	2.16	0.45
1:0:1479:G:N2	1:0:1543:G:N2	2.64	0.45
1:0:675:C:H2'	1:0:676:G:H8	1.82	0.45
1:0:1821:A:H3'	1:0:1822:C:C6	2.52	0.45
1:0:1473:U:H4'	1:0:1474:A:C8	2.52	0.45
1:0:1482:U:H1'	1:0:1562:G:N2	2.31	0.45
1:0:1538:A:O2'	1:0:1539:U:H5'	2.17	0.45
1:0:1278:A:O2'	1:0:1279:G:P	2.75	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:20:C:O2'	1:0:21:A:H5'	2.15	0.45
1:0:721:C:H2'	1:0:722:C:C6	2.52	0.45
1:0:362:C:C2'	1:0:363:G:H4'	2.27	0.45
1:0:930:A:H4'	1:0:930:A:OP1	2.15	0.45
1:0:931:G:H2'	1:0:932:G:H5'	1.99	0.45
1:0:1789:U:O2	1:0:1793:A:H2	1.99	0.45
1:0:1950:C:H2'	1:0:1951:G:O4'	2.16	0.45
1:0:70:A:OP2	1:0:111:G:O5'	2.34	0.45
1:0:2407:G:H4'	1:0:2408:G:C5	2.52	0.45
1:0:1854:G:O2'	1:0:1855:G:H5'	2.16	0.45
1:0:2274:C:C2'	1:0:2275:U:H5''	2.46	0.45
1:0:1388:C:H2'	1:0:1389:C:C6	2.47	0.45
2:9:114:C:O5'	2:9:114:C:C6	2.67	0.45
1:0:1766:U:H2'	1:0:1767:G:O4'	2.17	0.45
1:0:2249:U:H2'	1:0:2250:G:H5'	1.99	0.45
1:0:1227:A:C4'	1:0:1252:C:H4'	2.47	0.45
1:0:341:A:H1'	1:0:1223:G:O6	2.17	0.45
1:0:322:A:H2	1:0:342:G:OP2	2.00	0.45
1:0:2523:G:H2'	1:0:2524:G:H8	1.82	0.45
1:0:1666:G:H2'	1:0:1667:A:C8	2.52	0.45
1:0:1429:A:C6	1:0:1602:G:H5'	2.50	0.45
1:0:889:C:O2'	1:0:890:U:H5'	2.17	0.45
1:0:824:U:O2'	1:0:1264:C:O4'	2.34	0.45
1:0:957:G:N2	1:0:983:G:H1'	2.32	0.45
1:0:1356:G:C4'	1:0:1613:G:H2'	2.47	0.45
1:0:1849:G:O5'	1:0:1849:G:H8	2.00	0.45
1:0:393:U:O2'	1:0:394:U:H5'	2.17	0.45
1:0:665:A:H3'	1:0:666:U:H5''	1.97	0.45
2:9:104:A:C8	2:9:105:G:N7	2.85	0.45
1:0:486:U:H2'	1:0:487:G:H5'	1.99	0.45
1:0:1699:A:C6	1:0:1748:U:H1'	2.52	0.45
1:0:1706:A:N6	1:0:1714:A:H2'	2.32	0.45
1:0:403:A:H5''	1:0:404:A:OP1	2.17	0.45
1:0:843:G:HO2'	1:0:844:G:P	2.39	0.45
1:0:2104:G:H2'	1:0:2105:U:H6	1.81	0.45
1:0:560:G:H21	1:0:1233:A:H2	1.65	0.45
1:0:1933:G:H8	1:0:1933:G:O5'	2.00	0.45
1:0:2046:C:O2'	1:0:2564:U:H1'	2.16	0.45
1:0:1846:A:H2'	1:0:1847:G:O4'	2.17	0.45
1:0:2044:G:H21	1:0:2045:A:N6	2.14	0.45
1:0:2478:C:H2'	1:0:2479:U:C5'	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2841:U:O2'	1:0:2842:C:H5'	2.17	0.45
1:0:807:A:H2'	1:0:808:C:C6	2.52	0.45
1:0:1449:C:O2'	1:0:1450:G:H5'	2.17	0.45
1:0:2410:U:H6	1:0:2410:U:O5'	2.00	0.45
1:0:930:A:H5'	1:0:931:G:C8	2.52	0.44
1:0:343:A:N6	1:0:346:C:C5	2.85	0.44
1:0:2633:A:H4'	1:0:2634:G:H4'	1.98	0.44
1:0:2454:C:H42	1:0:2508:G:H22	1.65	0.44
1:0:115:G:H8	1:0:115:G:O5'	2.00	0.44
1:0:2024:U:H2'	1:0:2025:A:C8	2.52	0.44
1:0:2163:U:H2'	1:0:2164:G:H8	1.82	0.44
1:0:750:C:H2'	1:0:751:G:H8	1.82	0.44
1:0:1008:G:O2'	1:0:1009:C:H5'	2.17	0.44
1:0:127:C:H5''	1:0:1615:C:O2'	2.16	0.44
1:0:2347:C:H2'	1:0:2348:A:C8	2.52	0.44
1:0:1884:A:O2'	1:0:1885:C:H5'	2.17	0.44
1:0:1363:C:H2'	1:0:1364:C:O4'	2.17	0.44
1:0:2480:C:H5''	1:0:2482:A:H5'	1.98	0.44
1:0:2483:U:H2'	1:0:2484:G:H5'	1.98	0.44
1:0:1685:A:H2	1:0:1687:C:C2	2.35	0.44
1:0:1064:C:H2'	1:0:1065:A:C8	2.52	0.44
1:0:2487:G:H2'	1:0:2488:G:H8	1.82	0.44
1:0:1540:C:H2'	1:0:1541:G:H8	1.83	0.44
1:0:225:G:H3'	1:0:226:C:H5'	2.00	0.44
1:0:1802:A:O2'	1:0:1803:G:H5'	2.16	0.44
1:0:2748:C:H2'	1:0:2749:A:O4'	2.18	0.44
1:0:1512:A:O5'	1:0:1512:A:H8	1.99	0.44
1:0:1459:U:H2'	1:0:1475:U:HO2'	1.80	0.44
2:9:64:C:N4	2:9:65:A:C6	2.86	0.44
1:0:416:U:C5'	1:0:417:C:H5'	2.42	0.44
1:0:424:G:N7	1:0:2385:U:N3	2.65	0.44
1:0:839:U:OP1	1:0:2408:G:OP2	2.35	0.44
1:0:81:C:H4'	1:0:307:C:H5'	1.98	0.44
2:9:33:C:H2'	2:9:34:C:C6	2.52	0.44
2:9:73:C:O2	2:9:109:G:C2	2.70	0.44
1:0:2784:A:H3'	1:0:2785:A:H8	1.82	0.44
1:0:2002:A:C2	1:0:2003:A:H1'	2.53	0.44
1:0:1426:U:H2'	1:0:1427:G:O4'	2.17	0.44
1:0:1132:C:O2'	1:0:1133:G:H5'	2.18	0.44
1:0:2039:G:C2	1:0:2556:A:H1'	2.52	0.44
1:0:83:A:H8	1:0:83:A:O5'	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:758:G:O2'	1:0:761:G:O2'	2.34	0.44
1:0:859:U:H4'	1:0:860:U:H5	1.82	0.44
1:0:2569:A:H2'	1:0:2570:C:O4'	2.18	0.44
1:0:538:A:N1	1:0:2026:C:H5''	2.32	0.44
1:0:1672:A:C2	1:0:2032:G:H5''	2.53	0.44
1:0:1462:C:O2'	1:0:1560:A:H1'	2.17	0.44
1:0:1541:G:N2	1:0:1562:G:N2	2.65	0.44
1:0:1937:G:H21	1:0:2530:C:H5''	1.82	0.44
1:0:960:U:H2'	1:0:961:G:C8	2.52	0.44
1:0:1840:A:H2'	1:0:1841:G:H5'	1.99	0.44
1:0:1223:G:N1	1:0:1250:A:N7	2.66	0.44
1:0:1748:U:N3	1:0:1753:A:C2	2.75	0.44
1:0:187:U:H1'	1:0:1379:A:C2	2.53	0.44
1:0:2770:A:H5''	1:0:2867:G:H1	1.81	0.44
1:0:118:U:H5''	1:0:120:G:OP2	2.17	0.44
1:0:1750:A:C8	1:0:2675:U:H1'	2.53	0.44
1:0:161:U:H5'	1:0:193:A:N1	2.33	0.44
2:9:61:A:O5'	2:9:61:A:C8	2.60	0.44
1:0:2177:U:O2'	1:0:2178:U:H5'	2.18	0.44
1:0:2202:G:H3'	1:0:2203:G:C8	2.53	0.44
1:0:1872:A:H2'	1:0:1873:A:C8	2.52	0.44
1:0:608:G:O2'	1:0:609:U:H5'	2.18	0.44
1:0:2136:G:H2'	1:0:2137:G:C8	2.53	0.44
1:0:2215:C:H2'	1:0:2216:G:O4'	2.18	0.44
1:0:570:G:C2'	1:0:571:U:H5''	2.48	0.44
2:9:104:A:C4	2:9:105:G:C8	3.06	0.44
1:0:323:G:OP2	1:0:343:A:H5'	2.18	0.44
1:0:1792:C:O5'	1:0:1792:C:H6	2.00	0.44
1:0:2569:A:H2'	1:0:2570:C:C6	2.52	0.44
1:0:1707:A:C2'	1:0:1708:C:H5'	2.48	0.44
1:0:1295:U:H2'	1:0:1296:G:C5'	2.43	0.44
1:0:533:C:H2'	1:0:534:U:O4'	2.18	0.44
1:0:128:C:H2'	1:0:129:A:H5''	2.00	0.44
1:0:1849:G:H21	1:0:1868:A:H62	1.65	0.44
1:0:768:U:H5'	1:0:1285:A:N1	2.33	0.44
1:0:484:G:H2'	1:0:485:G:O4'	2.17	0.44
1:0:221:A:C2'	1:0:222:G:H5'	2.47	0.44
1:0:2695:C:H2'	1:0:2696:A:C8	2.52	0.44
1:0:1040:A:H2'	1:0:1041:G:C5'	2.43	0.44
1:0:789:G:H4'	1:0:790:A:C8	2.52	0.44
1:0:2783:U:H2'	1:0:2784:A:C4'	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:957:G:O2'	1:0:958:G:H5'	2.17	0.44
1:0:2535:C:C2'	1:0:2536:G:H5'	2.47	0.44
1:0:2685:A:H5''	1:0:2826:C:H5''	2.00	0.44
1:0:1669:A:H61	1:0:1670:G:H21	1.66	0.44
1:0:2182:A:H3'	1:0:2183:C:C6	2.53	0.44
1:0:1363:C:H2'	1:0:1364:C:C6	2.53	0.44
1:0:2166:G:O2'	1:0:2167:A:H5'	2.17	0.44
1:0:2725:C:H2'	1:0:2726:U:C6	2.53	0.44
1:0:32:C:H2'	1:0:33:C:C6	2.53	0.44
1:0:1938:U:O2'	1:0:1939:U:H5'	2.18	0.44
1:0:940:G:C3'	1:0:941:U:C5'	2.79	0.44
1:0:2054:A:H2'	1:0:2055:G:H8	1.81	0.44
1:0:1947:G:P	1:0:1947:G:H8	2.40	0.44
1:0:2321:C:H2'	1:0:2322:U:H5'	1.99	0.44
1:0:1135:C:H2'	1:0:1136:G:H8	1.83	0.44
1:0:1229:C:H2'	1:0:1230:C:C6	2.53	0.44
1:0:2070:G:H2'	1:0:2071:G:C8	2.52	0.44
1:0:2064:U:H2'	1:0:2065:A:H8	1.83	0.44
1:0:2090:U:H2'	1:0:2091:C:H6	1.83	0.44
1:0:1680:U:HO2'	1:0:2665:G:H4'	1.82	0.44
1:0:1724:C:H1'	1:0:1747:G:C4	2.53	0.44
1:0:2474:G:O5'	1:0:2474:G:H8	2.01	0.44
1:0:486:U:C2'	1:0:487:G:H5'	2.48	0.44
1:0:2327:U:H2'	1:0:2328:G:C8	2.53	0.44
1:0:2610:G:H5'	1:0:2866:A:H4'	1.99	0.44
1:0:1710:U:O5'	1:0:1710:U:H6	2.00	0.44
1:0:222:G:O2'	1:0:223:C:H5'	2.18	0.44
1:0:1654:A:H4'	1:0:2690:A:HO2'	1.80	0.44
1:0:26:G:H1'	1:0:525:A:H61	1.83	0.44
1:0:1310:C:P	1:0:2689:C:H4'	2.58	0.44
1:0:1962:C:C2'	1:0:1963:G:H5'	2.47	0.44
1:0:158:A:H2'	1:0:159:A:C8	2.52	0.44
32:0:2881:ZIT:H6A2	32:0:2881:ZIT:H193	2.00	0.43
1:0:1685:A:C2	1:0:1976:U:C2	3.06	0.43
1:0:508:G:H22	1:0:516:G:N2	2.16	0.43
1:0:27:G:HO2'	1:0:28:A:H8	1.65	0.43
1:0:1622:G:H5''	1:0:1624:A:O4'	2.18	0.43
1:0:2712:G:H3'	1:0:2713:A:H5'	1.99	0.43
1:0:541:C:H2'	1:0:541:C:O2	2.18	0.43
1:0:1000:G:OP1	1:0:1168:G:H4'	2.18	0.43
1:0:697:G:O2'	1:0:698:A:H5'	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1012:A:H61	1:0:1165:G:H1'	1.82	0.43
1:0:2070:G:H2'	1:0:2071:G:H8	1.83	0.43
1:0:1485:U:H2'	1:0:1486:A:H8	1.82	0.43
1:0:758:G:N2	1:0:766:A:C5	2.86	0.43
1:0:929:A:C3'	1:0:930:A:C5'	2.95	0.43
1:0:2079:A:H2'	1:0:2080:U:C6	2.53	0.43
1:0:2633:A:OP1	1:0:2635:U:H1'	2.18	0.43
1:0:630:G:H5''	1:0:631:G:OP2	2.18	0.43
1:0:632:A:H3'	1:0:632:A:N3	2.33	0.43
1:0:1781:C:H2'	1:0:1782:A:C8	2.53	0.43
1:0:2695:C:H2'	1:0:2696:A:H8	1.83	0.43
1:0:968:C:H41	1:0:970:A:C1'	2.30	0.43
1:0:1263:G:O2'	1:0:1264:C:P	2.76	0.43
1:0:83:A:H5''	1:0:84:G:OP1	2.18	0.43
32:0:2882:ZIT:H192	32:0:2882:ZIT:C1A	2.49	0.43
1:0:1908:C:H2'	1:0:1909:U:C4'	2.22	0.43
1:0:1685:A:H61	1:0:1693:A:N6	2.16	0.43
1:0:1974:U:H2'	1:0:1975:G:C5'	2.42	0.43
1:0:951:G:H3'	1:0:952:A:H5''	1.99	0.43
1:0:629:C:C2'	1:0:630:G:H5'	2.48	0.43
1:0:1528:C:C2'	1:0:1529:C:H5''	2.47	0.43
1:0:2106:G:H2'	1:0:2107:G:C8	2.53	0.43
1:0:1011:A:N6	1:0:1165:G:H2'	2.33	0.43
1:0:1572:C:H2'	1:0:1573:G:H5''	1.99	0.43
1:0:2219:U:O2'	1:0:2220:A:H5'	2.19	0.43
1:0:1801:C:H1'	1:0:2207:G:O2'	2.17	0.43
1:0:1226:A:C4	1:0:1250:A:N3	2.86	0.43
1:0:2324:G:N7	1:0:2351:G:C2	2.86	0.43
1:0:1300:A:H2	1:0:1666:G:H4'	1.80	0.43
1:0:1783:G:H1'	1:0:1822:C:P	2.59	0.43
2:9:48:A:C5	2:9:49:C:C5	3.06	0.43
1:0:163:A:H2'	1:0:164:G:C8	2.50	0.43
1:0:698:A:C1'	1:0:700:C:H41	2.30	0.43
1:0:2433:G:O2'	1:0:2434:G:H5'	2.19	0.43
1:0:2214:G:O2'	1:0:2215:C:H5'	2.19	0.43
1:0:2055:G:O2'	1:0:2056:C:H5'	2.18	0.43
1:0:2095:G:H2'	1:0:2096:U:H5''	2.01	0.43
1:0:2252:A:H2'	1:0:2253:A:C8	2.54	0.43
1:0:2319:G:H2'	1:0:2320:G:C8	2.54	0.43
1:0:1764:A:H62	1:0:1821:A:H1'	1.83	0.43
1:0:192:G:O2'	1:0:193:A:OP2	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:737:C:H2'	1:0:738:G:O4'	2.18	0.43
1:0:784:U:H2'	1:0:785:U:C6	2.54	0.43
1:0:1572:C:C2'	1:0:1573:G:H5''	2.48	0.43
2:9:88:C:H2'	2:9:89:G:C8	2.53	0.43
1:0:2335:U:H2'	1:0:2336:G:O4'	2.19	0.43
2:9:59:A:H2'	2:9:60:A:C5'	2.48	0.43
1:0:1699:A:H61	1:0:1723:U:H3	1.65	0.43
1:0:1625:A:H2'	1:0:1625:A:N3	2.33	0.43
1:0:873:U:N3	1:0:2246:A:H5''	2.34	0.43
1:0:2448:A:H2'	1:0:2449:G:O4'	2.19	0.43
1:0:1155:G:H2'	1:0:1156:U:O4'	2.19	0.43
1:0:431:G:H2'	1:0:432:C:C6	2.54	0.43
1:0:1256:C:H2'	1:0:1257:U:C6	2.54	0.43
1:0:1558:C:H2'	1:0:1559:G:C5'	2.49	0.43
1:0:1558:C:H2'	1:0:1559:G:O4'	2.19	0.43
1:0:746:G:N7	1:0:774:A:C5	2.86	0.43
1:0:158:A:H2'	1:0:159:A:O4'	2.19	0.43
1:0:295:C:N4	1:0:296:A:N6	2.67	0.43
1:0:1981:A:H4'	1:0:2704:U:O2'	2.18	0.43
1:0:305:A:H2'	1:0:306:G:C5'	2.48	0.43
1:0:1422:C:H2'	1:0:1423:A:C8	2.54	0.43
1:0:714:G:O2'	1:0:715:U:H5'	2.18	0.43
1:0:1554:G:H2'	1:0:1555:A:C8	2.53	0.43
1:0:65:C:O2'	1:0:66:U:H5'	2.19	0.43
1:0:2621:G:O2'	1:0:2622:G:H5'	2.19	0.43
1:0:580:A:N3	1:0:582:G:N7	2.66	0.43
1:0:2863:U:H2'	1:0:2864:C:H6	1.84	0.43
1:0:1820:G:H4'	1:0:1821:A:OP1	2.18	0.43
1:0:1296:G:H2'	1:0:1298:G:OP2	2.19	0.43
1:0:203:G:H4'	1:0:234:C:O2'	2.18	0.43
1:0:2066:G:H2'	1:0:2067:U:O4'	2.19	0.43
1:0:2345:A:H2'	1:0:2346:G:H5'	2.01	0.43
1:0:2876:C:H2'	1:0:2877:A:O4'	2.19	0.43
1:0:1455:C:H2'	1:0:1456:C:C6	2.54	0.43
1:0:2727:G:O2'	1:0:2728:A:H5''	2.19	0.43
1:0:2618:A:N1	1:0:2619:G:H1'	2.34	0.43
1:0:456:C:O2'	1:0:457:C:H5'	2.18	0.43
1:0:1086:C:C3'	1:0:1087:C:H5''	2.48	0.43
1:0:41:G:H2'	1:0:42:G:C8	2.53	0.43
1:0:2655:C:H2'	1:0:2656:G:O4'	2.19	0.43
1:0:353:G:H2'	1:0:354:C:H6	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2205:C:O2'	1:0:2206:C:H5'	2.18	0.43
1:0:1448:A:H2'	1:0:1449:C:C6	2.54	0.43
1:0:1776:A:N6	1:0:1778:U:H1'	2.33	0.43
1:0:2449:G:H2'	1:0:2450:A:H8	1.83	0.43
1:0:952:A:H2'	1:0:953:G:O4'	2.19	0.43
1:0:2306:A:H2'	1:0:2307:A:C8	2.54	0.43
1:0:2800:C:O5'	1:0:2800:C:H6	2.02	0.43
1:0:426:C:H6	1:0:426:C:O5'	2.01	0.43
1:0:1020:A:H2'	1:0:1021:A:C8	2.54	0.43
1:0:1350:G:H2'	1:0:1351:G:H8	1.84	0.43
1:0:757:U:H3	1:0:766:A:H61	1.67	0.43
1:0:2491:C:H2'	1:0:2492:G:H4'	1.98	0.43
1:0:2651:U:H2'	1:0:2652:G:O4'	2.19	0.43
1:0:192:G:O2'	1:0:193:A:C5'	2.67	0.43
2:9:108:G:H8	2:9:108:G:O5'	2.01	0.43
1:0:1091:C:H2'	1:0:1092:U:H6	1.79	0.43
1:0:2783:U:OP1	1:0:2783:U:O4'	2.37	0.43
1:0:1021:A:O5'	1:0:1021:A:H8	2.02	0.43
1:0:708:G:H2'	1:0:709:A:H8	1.84	0.43
1:0:2124:C:O2'	1:0:2125:C:H5'	2.18	0.43
1:0:763:A:C5'	1:0:1631:C:H42	2.32	0.42
1:0:798:G:OP2	1:0:805:G:H5''	2.19	0.42
2:9:7:C:H2'	2:9:8:C:C6	2.54	0.42
1:0:1543:G:H2'	1:0:1544:A:C5'	2.49	0.42
1:0:556:A:C2'	1:0:557:U:H5'	2.40	0.42
1:0:1302:C:C6	1:0:1302:C:OP1	2.71	0.42
1:0:1474:A:H2'	1:0:1476:G:OP1	2.19	0.42
1:0:81:C:H4'	1:0:307:C:C5'	2.48	0.42
1:0:14:A:N6	1:0:15:G:C2	2.86	0.42
2:9:72:C:O2'	2:9:73:C:H5'	2.19	0.42
1:0:428:A:H2'	1:0:429:C:C6	2.54	0.42
1:0:699:G:H5'	1:0:700:C:OP2	2.18	0.42
1:0:2302:G:N2	1:0:2314:A:H2	2.16	0.42
1:0:2585:C:H2'	1:0:2586:G:C8	2.54	0.42
1:0:812:G:H2'	1:0:813:A:C8	2.54	0.42
1:0:975:C:O5'	1:0:975:C:H6	2.02	0.42
1:0:977:G:H5''	1:0:2251:U:O2	2.19	0.42
2:9:108:G:H2'	2:9:109:G:C8	2.55	0.42
1:0:781:G:H5'	1:0:1638:G:C4'	2.49	0.42
1:0:708:G:H2'	1:0:709:A:C8	2.54	0.42
1:0:864:C:O2'	1:0:865:A:H5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1725:C:O2'	1:0:1726:C:H5'	2.20	0.42
1:0:1790:G:O2'	1:0:1791:C:H5	2.00	0.42
1:0:548:G:O2'	1:0:549:G:H5'	2.19	0.42
1:0:1302:C:P	1:0:1302:C:H6	2.41	0.42
1:0:1168:G:H2'	1:0:1169:C:C6	2.54	0.42
1:0:2770:A:H5'	1:0:2867:G:H22	1.84	0.42
1:0:26:G:O3'	1:0:1273:G:H4'	2.19	0.42
1:0:2788:C:H2'	1:0:2789:U:H6	1.84	0.42
1:0:1258:G:H2'	1:0:1259:A:C8	2.54	0.42
1:0:2677:U:O2'	1:0:2678:C:H5'	2.20	0.42
1:0:1934:U:O2	1:0:1936:A:H8	2.01	0.42
1:0:2759:U:H4'	1:0:2760:G:O5'	2.19	0.42
1:0:1859:A:H2'	1:0:1860:A:C8	2.53	0.42
1:0:2205:C:C2'	1:0:2206:C:H5'	2.50	0.42
1:0:1801:C:H1'	1:0:2208:U:H5'	2.01	0.42
1:0:1769:U:H3	1:0:1778:U:H3	1.65	0.42
1:0:2501:U:O2'	1:0:2626:U:H5''	2.19	0.42
1:0:1552:C:H2'	1:0:1553:G:O4'	2.20	0.42
1:0:759:C:C1'	1:0:761:G:H21	2.33	0.42
1:0:689:A:C2'	1:0:690:A:H5'	2.50	0.42
1:0:515:A:H2'	1:0:516:G:H5'	2.01	0.42
1:0:27:G:O2'	1:0:28:A:O4'	2.35	0.42
1:0:2562:G:H2'	1:0:2563:U:O4'	2.19	0.42
1:0:1028:G:H2'	1:0:1029:C:O4'	2.19	0.42
1:0:825:C:O2'	1:0:826:U:H5'	2.20	0.42
1:0:1123:G:O2'	1:0:1124:U:H5'	2.20	0.42
1:0:1398:G:O2'	1:0:1399:C:H5'	2.19	0.42
1:0:421:G:O2'	1:0:422:C:H5'	2.20	0.42
1:0:2233:C:O2'	1:0:2234:G:H5'	2.19	0.42
1:0:2517:C:O2'	1:0:2518:C:H5'	2.19	0.42
1:0:661:C:O2'	1:0:662:G:H5'	2.20	0.42
32:0:2881:ZIT:H192	32:0:2881:ZIT:C1A	2.48	0.42
1:0:1679:U:H2'	1:0:1680:U:C5'	2.20	0.42
1:0:1455:C:H2'	1:0:1456:C:H6	1.85	0.42
1:0:2475:C:H2'	1:0:2476:A:C4'	2.50	0.42
1:0:2059:U:C2'	1:0:2060:A:H5''	2.38	0.42
1:0:460:U:H5'	1:0:461:A:OP2	2.19	0.42
1:0:1001:A:N6	1:0:1200:G:H1'	2.34	0.42
1:0:1135:C:H2'	1:0:1136:G:C8	2.54	0.42
1:0:1972:G:O2'	1:0:1973:C:H5'	2.19	0.42
1:0:537:C:N1	1:0:2759:U:H2'	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2662:C:N4	1:0:2707:G:H21	2.16	0.42
2:9:107:C:C6	2:9:107:C:C3'	3.03	0.42
1:0:1110:G:H2'	1:0:1111:C:C6	2.53	0.42
1:0:1566:G:O2'	1:0:1567:A:H5'	2.20	0.42
32:0:2882:ZIT:H6A2	32:0:2882:ZIT:H193	2.00	0.42
32:0:2882:ZIT:H5B1	32:0:2882:ZIT:H5A1	2.02	0.42
2:9:104:A:C8	2:9:105:G:C8	3.07	0.42
1:0:798:G:H2'	1:0:799:C:C5'	2.41	0.42
1:0:1920:A:N6	1:0:1923:U:C6	2.87	0.42
1:0:1921:A:C2'	1:0:1922:U:H5''	2.46	0.42
1:0:186:C:H2'	1:0:187:U:O4'	2.20	0.42
1:0:1821:A:H5''	1:0:1822:C:H5	1.82	0.42
1:0:2710:C:O2'	1:0:2711:G:H5'	2.20	0.42
1:0:1259:A:H2'	1:0:1260:A:H5'	2.00	0.42
1:0:63:A:O2'	1:0:64:C:H5'	2.19	0.42
1:0:1310:C:O2'	1:0:1315:A:N1	2.49	0.42
1:0:2075:U:H1'	1:0:2204:A:C2	2.55	0.42
1:0:421:G:H2'	1:0:422:C:C6	2.55	0.42
1:0:2724:G:O2'	1:0:2725:C:H5'	2.20	0.42
1:0:1938:U:O2'	1:0:1939:U:OP1	2.31	0.42
8:F:6:LEU:CA	8:F:14:THR:CA	2.98	0.42
1:0:173:A:H2'	1:0:173:A:N3	2.35	0.42
1:0:759:C:H1'	1:0:761:G:H21	1.85	0.42
1:0:1223:G:O2'	1:0:1224:A:OP2	2.35	0.42
1:0:459:A:C4	1:0:466:A:N7	2.88	0.42
1:0:1806:G:C5	1:0:1807:A:N7	2.88	0.42
1:0:192:G:C4'	1:0:193:A:H4'	2.49	0.42
1:0:445:A:C2'	1:0:446:C:H5'	2.49	0.42
1:0:1308:C:H2'	1:0:1309:G:C8	2.54	0.42
1:0:333:A:HO2'	1:0:350:U:H2'	1.83	0.42
1:0:2630:C:H2'	1:0:2631:C:C6	2.55	0.42
1:0:1714:A:H5''	1:0:1715:A:H8	1.85	0.42
1:0:670:U:O2'	1:0:671:A:H5'	2.20	0.42
1:0:2321:C:H2'	1:0:2322:U:C5'	2.50	0.42
1:0:1653:C:O2	1:0:1751:A:H2	2.03	0.42
1:0:1937:G:N3	1:0:2530:C:C5'	2.81	0.42
1:0:226:C:H4'	1:0:227:G:H8	1.83	0.42
1:0:2402:U:H5'	1:0:2404:A:N7	2.34	0.42
1:0:597:U:H2'	1:0:598:U:H6	1.82	0.42
1:0:1619:A:N3	1:0:1619:A:O5'	2.52	0.42
1:0:2048:C:H1'	1:0:2428:U:C2	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1870:U:O5'	1:0:1870:U:H6	2.02	0.42
1:0:1851:A:N6	1:0:1867:A:H1'	2.31	0.42
1:0:2302:G:C2'	1:0:2303:C:H5'	2.50	0.42
2:9:88:C:H2'	2:9:89:G:H8	1.84	0.42
1:0:90:G:H3'	1:0:91:A:C5'	2.50	0.42
1:0:690:A:H4'	1:0:2053:G:O2'	2.20	0.42
1:0:688:A:O2'	1:0:689:A:H5'	2.20	0.42
2:9:42:U:H3'	2:9:43:G:C5'	2.50	0.42
1:0:1791:C:C1'	1:0:1793:A:H5'	2.43	0.42
1:0:651:C:C3'	1:0:652:C:C5'	2.98	0.42
1:0:2561:G:H2'	1:0:2562:G:C8	2.55	0.42
1:0:1167:A:H5'	1:0:1168:G:N7	2.34	0.42
1:0:161:U:H2'	1:0:162:C:C6	2.54	0.42
1:0:1029:C:H2'	1:0:1030:U:H5''	2.02	0.42
1:0:698:A:H1'	1:0:700:C:H41	1.85	0.42
1:0:573:C:O2'	1:0:574:C:H5'	2.20	0.42
1:0:1332:G:O2'	1:0:1333:G:H5'	2.20	0.42
1:0:777:A:N6	1:0:1766:U:N3	2.68	0.42
1:0:1814:G:H2'	1:0:1815:G:H8	1.84	0.42
1:0:1491:C:H2'	1:0:1492:A:C8	2.53	0.42
1:0:570:G:H2'	1:0:571:U:H5''	2.02	0.42
1:0:176:A:H3'	1:0:177:U:C5	2.55	0.42
1:0:1545:G:O2'	1:0:1546:C:H5'	2.19	0.42
32:0:2882:ZIT:C5B	32:0:2882:ZIT:H5A1	2.50	0.41
1:0:1459:U:H3'	1:0:1459:U:OP1	2.19	0.41
1:0:167:A:H2'	1:0:168:A:O4'	2.19	0.41
1:0:1253:C:H2'	1:0:1254:G:C5'	2.50	0.41
1:0:717:G:H1'	1:0:740:A:N6	2.35	0.41
1:0:658:G:H4'	1:0:2331:A:C5'	2.39	0.41
1:0:1921:A:C3'	1:0:1922:U:H5''	2.50	0.41
1:0:792:U:O2'	1:0:793:G:H5'	2.20	0.41
1:0:2565:C:O5'	1:0:2566:A:OP1	2.38	0.41
1:0:2627:G:O2'	1:0:2628:C:H5'	2.20	0.41
1:0:1023:U:H1'	1:0:1154:A:N7	2.35	0.41
1:0:393:U:H2'	1:0:394:U:O4'	2.19	0.41
1:0:1725:C:H2'	1:0:1726:C:H6	1.85	0.41
1:0:495:C:H2'	1:0:496:C:C6	2.55	0.41
1:0:224:G:H4'	1:0:399:G:C5	2.55	0.41
1:0:2425:G:O2'	1:0:2426:G:H5'	2.20	0.41
1:0:66:U:C2	1:0:67:G:N7	2.89	0.41
1:0:58:C:H1'	1:0:72:A:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2245:A:C4	1:0:2251:U:O4	2.73	0.41
1:0:953:G:H2'	1:0:954:U:H6	1.85	0.41
1:0:430:C:H2'	1:0:431:G:O4'	2.20	0.41
1:0:1991:C:H2'	1:0:1992:G:C8	2.51	0.41
1:0:1025:A:O2'	1:0:1026:U:H5'	2.20	0.41
1:0:1904:G:O2'	1:0:1905:G:H5'	2.19	0.41
1:0:198:A:O2'	1:0:199:A:OP2	2.36	0.41
1:0:480:G:O5'	1:0:480:G:H8	2.03	0.41
1:0:758:G:H2'	1:0:759:C:H5'	2.02	0.41
1:0:2054:A:H61	1:0:2417:U:H3	1.67	0.41
1:0:1960:A:H2'	1:0:1961:A:C8	2.55	0.41
1:0:327:C:O2'	1:0:328:A:H5'	2.20	0.41
1:0:2178:U:H2'	1:0:2179:C:C6	2.55	0.41
1:0:1727:C:H4'	1:0:2833:C:O2	2.20	0.41
1:0:1003:C:O2'	1:0:1004:A:H5'	2.20	0.41
1:0:1581:C:N4	1:0:1583:A:H1'	2.36	0.41
1:0:1487:C:H2'	1:0:1488:G:C8	2.54	0.41
1:0:181:A:H4'	1:0:182:G:OP1	2.18	0.41
1:0:2630:C:H2'	1:0:2631:C:H6	1.85	0.41
1:0:2230:G:H2'	1:0:2231:G:C8	2.56	0.41
1:0:2700:U:H2'	1:0:2701:A:H8	1.85	0.41
1:0:1797:C:H2'	1:0:1798:G:O4'	2.20	0.41
1:0:2574:G:N2	1:0:2577:A:OP2	2.53	0.41
1:0:2362:G:C2'	1:0:2363:G:O5'	2.69	0.41
1:0:2572:U:H2'	1:0:2573:C:C6	2.56	0.41
1:0:573:C:H2'	1:0:574:C:O4'	2.20	0.41
1:0:2162:C:H2'	1:0:2163:U:H6	1.85	0.41
1:0:646:C:HO2'	1:0:650:U:H5''	1.84	0.41
1:0:1721:G:H2'	1:0:1722:G:O4'	2.21	0.41
1:0:1009:C:O5'	1:0:1009:C:H6	2.02	0.41
1:0:666:U:H2'	1:0:668:A:P	2.60	0.41
1:0:854:G:H2'	1:0:855:G:C8	2.55	0.41
1:0:2490:U:O4	1:0:2553:G:O6	2.39	0.41
1:0:1976:U:H2'	1:0:1976:U:O2	2.19	0.41
2:9:63:A:O2'	2:9:64:C:H5'	2.19	0.41
1:0:1699:A:C5	1:0:1748:U:H1'	2.55	0.41
1:0:612:G:C4'	1:0:613:A:H4'	2.51	0.41
1:0:2778:U:O2'	1:0:2779:C:H5'	2.21	0.41
1:0:128:C:H2'	1:0:129:A:C5'	2.50	0.41
1:0:1612:U:H2'	1:0:1613:G:C8	2.55	0.41
1:0:2824:C:C2'	1:0:2825:A:OP2	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:365:U:H2'	1:0:366:U:H6	1.85	0.41
32:0:2881:ZIT:H5A1	32:0:2881:ZIT:C5B	2.50	0.41
1:0:929:A:C2	1:0:930:A:H1'	2.56	0.41
2:9:100:G:C2'	2:9:101:A:H5'	2.51	0.41
2:9:8:C:OP1	2:9:63:A:H5'	2.21	0.41
1:0:2636:A:N6	1:0:2643:G:H21	2.03	0.41
1:0:541:C:HO2'	1:0:542:A:P	2.44	0.41
2:9:28:A:N3	2:9:28:A:H2'	2.35	0.41
1:0:357:A:H2'	1:0:357:A:N3	2.34	0.41
1:0:1664:G:OP2	1:0:1664:G:H3'	2.20	0.41
1:0:2447:G:C8	1:0:2455:A:N6	2.81	0.41
1:0:1783:G:C6	1:0:1820:G:H1'	2.56	0.41
1:0:1471:G:H1	1:0:2682:C:N4	2.10	0.41
1:0:1016:C:H2'	1:0:1017:C:C6	2.56	0.41
1:0:762:A:O2'	1:0:1633:C:H1'	2.21	0.41
2:9:75:A:N6	2:9:106:U:C4	2.88	0.41
1:0:2229:G:H2'	1:0:2475:C:OP1	2.21	0.41
2:9:6:C:C4	2:9:7:C:N4	2.88	0.41
1:0:1923:U:H4'	1:0:1948:C:N4	2.36	0.41
1:0:1714:A:H5'	1:0:1715:A:O5'	2.21	0.41
1:0:1034:U:H2'	1:0:1035:G:O4'	2.20	0.41
1:0:2592:U:H5''	1:0:2593:A:C2	2.55	0.41
1:0:1572:C:H2'	1:0:1573:G:H5'	2.03	0.41
1:0:1756:C:H2'	1:0:1757:C:H6	1.85	0.41
1:0:2443:C:H2'	1:0:2444:C:C6	2.56	0.41
32:0:2881:ZIT:H5A1	32:0:2881:ZIT:H5B1	2.02	0.41
1:0:35:G:O4'	1:0:466:A:C1'	2.69	0.41
1:0:1883:A:C2	1:0:1953:A:N6	2.89	0.41
1:0:221:A:H2'	1:0:222:G:C5'	2.50	0.41
1:0:1751:A:H2'	1:0:1752:U:O4'	2.21	0.41
1:0:2024:U:H6	1:0:2024:U:O5'	2.04	0.41
1:0:492:G:H2'	1:0:517:A:C2	2.56	0.41
1:0:2279:G:H2'	1:0:2280:A:C8	2.48	0.41
1:0:996:C:H2'	1:0:997:C:C6	2.55	0.41
1:0:1328:C:O2'	1:0:1329:U:H5'	2.21	0.41
1:0:4:C:O2'	1:0:5:A:H5'	2.20	0.41
1:0:639:G:H2'	1:0:640:C:H6	1.82	0.41
1:0:1556:A:H2'	1:0:1557:G:C8	2.54	0.41
1:0:42:G:H2'	1:0:43:A:O4'	2.20	0.41
1:0:2204:A:O2'	1:0:2205:C:P	2.79	0.41
1:0:2249:U:C2'	1:0:2250:G:H5'	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:763:A:H5'	1:0:1631:C:H42	1.86	0.41
1:0:2058:U:H5'	1:0:2576:G:H1'	2.03	0.41
2:9:103:A:N7	2:9:104:A:N7	2.69	0.41
2:9:23:G:H2'	2:9:24:U:O4'	2.21	0.41
1:0:2728:A:C2	1:0:2736:U:H1'	2.56	0.41
1:0:2622:G:O2'	1:0:2623:A:H5'	2.20	0.41
1:0:1665:C:H2'	1:0:1666:G:O4'	2.21	0.41
1:0:218:A:O2'	1:0:219:G:C4'	2.64	0.41
1:0:2455:A:C2'	1:0:2456:U:H5'	2.50	0.41
1:0:676:G:O2'	1:0:951:G:H4'	2.20	0.41
1:0:629:C:O2'	1:0:630:G:H5'	2.21	0.41
1:0:1440:G:C3'	1:0:1441:A:C5'	2.99	0.41
1:0:1471:G:O2'	1:0:1472:C:H5'	2.21	0.41
1:0:80:A:O2'	1:0:81:C:H5'	2.21	0.41
1:0:16:G:O2'	1:0:17:G:H5'	2.21	0.41
1:0:2784:A:H3'	1:0:2785:A:C8	2.56	0.41
1:0:1990:U:H4'	1:0:2799:C:H4'	2.02	0.41
1:0:1661:C:H2'	1:0:1662:G:H8	1.86	0.41
1:0:1486:A:H2'	1:0:1487:C:C6	2.55	0.41
1:0:2302:G:H2'	1:0:2303:C:H5'	2.02	0.41
1:0:353:G:O2'	1:0:354:C:H5'	2.21	0.41
1:0:1903:C:H2'	1:0:1904:G:C8	2.55	0.41
1:0:448:C:H2'	1:0:449:C:H5'	2.02	0.41
1:0:1234:C:O2'	1:0:1235:C:H5'	2.20	0.41
1:0:1625:A:N3	1:0:1625:A:C2'	2.84	0.41
1:0:1714:A:H3'	1:0:1715:A:N7	2.36	0.41
1:0:2449:G:O6	1:0:2455:A:H2	2.04	0.41
1:0:2006:G:H2'	1:0:2007:G:H8	1.86	0.41
1:0:1645:U:O2	1:0:2677:U:H4'	2.21	0.41
1:0:744:C:N4	1:0:745:C:H41	2.19	0.41
1:0:2813:G:O2'	1:0:2814:G:H5'	2.21	0.41
1:0:2313:G:H2'	1:0:2314:A:H5'	2.03	0.41
1:0:1459:U:P	1:0:1459:U:H6	2.44	0.40
1:0:67:G:C6	1:0:72:A:C2	3.08	0.40
1:0:727:U:C2'	1:0:728:G:H5''	2.46	0.40
1:0:2668:U:H5'	1:0:2669:C:H5'	2.02	0.40
1:0:2841:U:O2'	1:0:2842:C:C5'	2.69	0.40
1:0:2394:G:H2'	1:0:2395:C:H6	1.84	0.40
1:0:474:G:H22	1:0:476:G:H3'	1.85	0.40
1:0:2227:C:C2'	1:0:2228:U:H5'	2.51	0.40
1:0:2869:U:O5'	1:0:2869:U:H6	2.05	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1789:U:HO2'	1:0:1793:A:H1'	1.84	0.40
1:0:509:U:C2'	1:0:510:G:H5'	2.50	0.40
1:0:121:G:O3'	1:0:1389:C:H4'	2.21	0.40
1:0:771:C:O2'	1:0:772:G:H5'	2.21	0.40
1:0:867:G:H2'	1:0:868:U:C6	2.56	0.40
1:0:2542:U:H2'	1:0:2544:A:OP2	2.22	0.40
1:0:2181:A:H2'	1:0:2182:A:H5'	2.02	0.40
1:0:1221:C:H2'	1:0:1222:G:C8	2.56	0.40
1:0:1576:G:H2'	1:0:1577:G:O4'	2.22	0.40
1:0:861:G:N2	1:0:943:U:O2'	2.54	0.40
1:0:1073:G:H3'	1:0:1074:G:C5'	2.51	0.40
1:0:68:C:C2	1:0:72:A:N3	2.89	0.40
1:0:68:C:O2	1:0:68:C:H2'	2.21	0.40
1:0:317:U:C3'	1:0:318:G:H5''	2.51	0.40
1:0:1791:C:H1'	1:0:1793:A:O4'	2.21	0.40
1:0:1715:A:C2	1:0:1717:A:C8	3.09	0.40
1:0:1528:C:C3'	1:0:1529:C:H5''	2.51	0.40
1:0:340:G:C1'	1:0:488:A:H1'	2.51	0.40
1:0:1383:C:O2'	1:0:1384:G:H5'	2.21	0.40
1:0:1569:A:C6	1:0:1571:G:H1'	2.57	0.40
1:0:73:A:H4'	1:0:74:G:C1'	2.51	0.40
1:0:2204:A:H4'	1:0:2205:C:O4'	2.21	0.40
32:0:2882:ZIT:H162	32:0:2882:ZIT:HO13	1.83	0.40
1:0:931:G:H5'	2:9:83:C:H1'	2.03	0.40
1:0:1791:C:C2'	1:0:1792:C:H5''	2.39	0.40
1:0:616:U:H3'	1:0:617:U:H5''	2.03	0.40
1:0:451:A:H2'	1:0:452:G:H8	1.83	0.40
1:0:398:C:O2'	1:0:401:G:N2	2.54	0.40
1:0:1190:C:H2'	1:0:1191:G:C8	2.57	0.40
1:0:201:G:C2	1:0:202:A:C4	3.10	0.40
1:0:829:C:O2'	1:0:830:C:H5'	2.21	0.40
1:0:831:G:H5'	1:0:852:U:OP1	2.21	0.40
1:0:1323:G:C1'	1:0:1627:C:H5''	2.52	0.40
1:0:1519:G:O2'	1:0:1520:G:H5'	2.21	0.40
1:0:1281:A:H4'	1:0:2592:U:O2	2.21	0.40
1:0:122:G:C2'	1:0:123:A:H5''	2.52	0.40
1:0:200:A:N6	1:0:387:A:O2'	2.54	0.40
1:0:1358:C:H2'	1:0:1359:G:H5'	2.03	0.40
1:0:2570:C:H2'	1:0:2571:G:C8	2.57	0.40
2:9:12:C:H3'	2:9:13:C:H6	1.85	0.40
1:0:215:G:H2'	1:0:216:U:C6	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1473:U:H4'	1:0:1474:A:C4	2.56	0.40
1:0:2240:C:C2'	1:0:2241:U:C5'	2.97	0.40
1:0:2138:U:H2'	1:0:2139:G:H5'	2.04	0.40
1:0:1403:U:O2	1:0:1408:A:N6	2.54	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

There are no protein backbone outliers to report in this entry.

5.3.2 Protein sidechains [i](#)

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

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	0	2757/2880 (95%)	485 (17%)	43 (1%)
2	9	117/124 (94%)	23 (19%)	1 (0%)
All	All	2874/3004 (95%)	508 (17%)	44 (1%)

All (508) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	0	13	A
1	0	35	G
1	0	45	C
1	0	48	A
1	0	49	U
1	0	50	G
1	0	59	G
1	0	67	G
1	0	70	A
1	0	71	A
1	0	72	A
1	0	76	C

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Mol	Chain	Res	Type
1	0	87	G
1	0	89	A
1	0	90	G
1	0	91	A
1	0	99	U
1	0	105	G
1	0	110	U
1	0	116	A
1	0	118	U
1	0	123	A
1	0	129	A
1	0	135	U
1	0	149	A
1	0	155	G
1	0	158	A
1	0	173	A
1	0	174	A
1	0	176	A
1	0	181	A
1	0	182	G
1	0	193	A
1	0	199	A
1	0	200	A
1	0	201	G
1	0	205	A
1	0	206	U
1	0	210	A
1	0	218	A
1	0	219	G
1	0	225	G
1	0	227	G
1	0	229	G
1	0	242	A
1	0	243	G
1	0	305	A
1	0	318	G
1	0	322	A
1	0	333	A
1	0	334	G
1	0	335	A
1	0	340	G
1	0	341	A

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Mol	Chain	Res	Type
1	0	343	A
1	0	358	C
1	0	363	G
1	0	368	A
1	0	373	A
1	0	399	G
1	0	401	G
1	0	408	U
1	0	414	A
1	0	418	C
1	0	424	G
1	0	443	A
1	0	456	C
1	0	460	U
1	0	461	A
1	0	463	C
1	0	467	U
1	0	469	G
1	0	484	G
1	0	486	U
1	0	490	A
1	0	491	A
1	0	492	G
1	0	514	G
1	0	515	A
1	0	518	A
1	0	519	C
1	0	537	C
1	0	539	A
1	0	541	C
1	0	542	A
1	0	554	U
1	0	556	A
1	0	558	G
1	0	572	G
1	0	582	G
1	0	583	C
1	0	584	A
1	0	587	A
1	0	588	G
1	0	613	A
1	0	617	U

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Mol	Chain	Res	Type
1	0	624	A
1	0	632	A
1	0	636	G
1	0	638	A
1	0	648	A
1	0	652	C
1	0	654	A
1	0	655	A
1	0	666	U
1	0	667	U
1	0	684	C
1	0	697	G
1	0	699	G
1	0	700	C
1	0	728	G
1	0	740	A
1	0	742	G
1	0	743	A
1	0	760	U
1	0	765	C
1	0	766	A
1	0	776	G
1	0	778	G
1	0	789	G
1	0	790	A
1	0	794	A
1	0	796	A
1	0	797	A
1	0	798	G
1	0	803	C
1	0	804	C
1	0	805	G
1	0	806	A
1	0	807	A
1	0	813	A
1	0	815	A
1	0	818	G
1	0	825	C
1	0	832	A
1	0	840	U
1	0	841	G
1	0	843	G

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Mol	Chain	Res	Type
1	0	844	G
1	0	859	U
1	0	873	U
1	0	874	A
1	0	919	U
1	0	922	A
1	0	926	C
1	0	930	A
1	0	931	G
1	0	941	U
1	0	943	U
1	0	944	A
1	0	952	A
1	0	957	G
1	0	968	C
1	0	969	U
1	0	970	A
1	0	972	C
1	0	973	U
1	0	984	A
1	0	985	G
1	0	994	A
1	0	996	C
1	0	1002	C
1	0	1005	U
1	0	1006	C
1	0	1019	U
1	0	1022	A
1	0	1023	U
1	0	1024	G
1	0	1030	U
1	0	1032	A
1	0	1033	G
1	0	1036	G
1	0	1037	U
1	0	1044	U
1	0	1055	A
1	0	1056	U
1	0	1057	A
1	0	1067	G
1	0	1073	G
1	0	1074	G

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Mol	Chain	Res	Type
1	0	1075	C
1	0	1081	A
1	0	1082	G
1	0	1083	C
1	0	1087	C
1	0	1090	C
1	0	1099	A
1	0	1130	U
1	0	1137	A
1	0	1138	A
1	0	1142	G
1	0	1145	C
1	0	1146	G
1	0	1155	G
1	0	1166	A
1	0	1167	A
1	0	1168	G
1	0	1182	U
1	0	1183	C
1	0	1185	C
1	0	1194	U
1	0	1195	U
1	0	1199	U
1	0	1200	G
1	0	1224	A
1	0	1225	G
1	0	1234	C
1	0	1253	C
1	0	1261	G
1	0	1262	U
1	0	1264	C
1	0	1266	G
1	0	1267	A
1	0	1268	U
1	0	1269	G
1	0	1278	A
1	0	1279	G
1	0	1284	G
1	0	1285	A
1	0	1286	U
1	0	1288	A
1	0	1289	A

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Mol	Chain	Res	Type
1	0	1302	C
1	0	1314	A
1	0	1316	G
1	0	1324	G
1	0	1327	C
1	0	1334	A
1	0	1338	G
1	0	1339	U
1	0	1342	U
1	0	1343	C
1	0	1346	C
1	0	1354	A
1	0	1355	A
1	0	1356	G
1	0	1359	G
1	0	1391	A
1	0	1392	U
1	0	1397	A
1	0	1398	G
1	0	1411	C
1	0	1430	G
1	0	1433	A
1	0	1441	A
1	0	1442	C
1	0	1443	G
1	0	1459	U
1	0	1465	G
1	0	1466	C
1	0	1468	A
1	0	1469	U
1	0	1470	G
1	0	1473	U
1	0	1474	A
1	0	1475	U
1	0	1476	G
1	0	1482	U
1	0	1490	U
1	0	1496	G
1	0	1505	U
1	0	1509	A
1	0	1513	U
1	0	1524	C

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Mol	Chain	Res	Type
1	0	1529	C
1	0	1544	A
1	0	1552	C
1	0	1571	G
1	0	1573	G
1	0	1574	A
1	0	1583	A
1	0	1585	A
1	0	1618	U
1	0	1623	C
1	0	1624	A
1	0	1625	A
1	0	1626	A
1	0	1631	C
1	0	1635	G
1	0	1648	C
1	0	1652	G
1	0	1657	A
1	0	1664	G
1	0	1665	C
1	0	1670	G
1	0	1671	A
1	0	1680	U
1	0	1681	A
1	0	1685	A
1	0	1686	A
1	0	1691	G
1	0	1692	C
1	0	1699	A
1	0	1710	U
1	0	1712	G
1	0	1713	G
1	0	1715	A
1	0	1717	A
1	0	1718	A
1	0	1724	C
1	0	1748	U
1	0	1749	G
1	0	1750	A
1	0	1754	G
1	0	1755	G
1	0	1764	A

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Mol	Chain	Res	Type
1	0	1771	A
1	0	1772	C
1	0	1773	C
1	0	1778	U
1	0	1791	C
1	0	1792	C
1	0	1800	A
1	0	1801	C
1	0	1802	A
1	0	1807	A
1	0	1808	C
1	0	1811	A
1	0	1813	A
1	0	1821	A
1	0	1831	G
1	0	1840	A
1	0	1884	A
1	0	1889	G
1	0	1909	U
1	0	1920	A
1	0	1922	U
1	0	1924	C
1	0	1926	U
1	0	1927	U
1	0	1928	G
1	0	1938	U
1	0	1939	U
1	0	1948	C
1	0	1949	A
1	0	1950	C
1	0	1954	A
1	0	1955	G
1	0	1956	G
1	0	1964	A
1	0	1974	U
1	0	1976	U
1	0	1979	C
1	0	2003	A
1	0	2004	U
1	0	2006	G
1	0	2014	A
1	0	2015	G

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Mol	Chain	Res	Type
1	0	2016	A
1	0	2019	C
1	0	2038	C
1	0	2043	A
1	0	2044	G
1	0	2051	U
1	0	2052	G
1	0	2060	A
1	0	2076	G
1	0	2082	C
1	0	2094	C
1	0	2096	U
1	0	2118	A
1	0	2119	A
1	0	2140	G
1	0	2162	C
1	0	2168	A
1	0	2181	A
1	0	2191	A
1	0	2195	C
1	0	2199	C
1	0	2205	C
1	0	2218	G
1	0	2229	G
1	0	2230	G
1	0	2238	G
1	0	2241	U
1	0	2245	A
1	0	2246	A
1	0	2247	A
1	0	2255	G
1	0	2262	C
1	0	2265	A
1	0	2268	G
1	0	2285	U
1	0	2286	G
1	0	2287	G
1	0	2288	A
1	0	2298	U
1	0	2299	A
1	0	2300	G
1	0	2301	A

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Mol	Chain	Res	Type
1	0	2313	G
1	0	2314	A
1	0	2315	A
1	0	2316	G
1	0	2325	A
1	0	2326	C
1	0	2362	G
1	0	2364	C
1	0	2369	U
1	0	2378	G
1	0	2385	U
1	0	2396	C
1	0	2402	U
1	0	2403	C
1	0	2405	A
1	0	2406	C
1	0	2407	G
1	0	2408	G
1	0	2409	A
1	0	2414	A
1	0	2427	A
1	0	2428	U
1	0	2438	A
1	0	2448	A
1	0	2455	A
1	0	2457	A
1	0	2470	U
1	0	2476	A
1	0	2477	C
1	0	2482	A
1	0	2484	G
1	0	2492	G
1	0	2499	C
1	0	2504	G
1	0	2508	G
1	0	2522	G
1	0	2533	U
1	0	2545	A
1	0	2546	G
1	0	2549	G
1	0	2560	G
1	0	2561	G

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Mol	Chain	Res	Type
1	0	2565	C
1	0	2566	A
1	0	2578	G
1	0	2581	A
1	0	2582	G
1	0	2588	U
1	0	2589	C
1	0	2590	U
1	0	2591	C
1	0	2600	A
1	0	2608	A
1	0	2609	G
1	0	2625	U
1	0	2633	A
1	0	2634	G
1	0	2661	G
1	0	2670	C
1	0	2681	A
1	0	2692	A
1	0	2693	U
1	0	2707	G
1	0	2712	G
1	0	2713	A
1	0	2728	A
1	0	2730	A
1	0	2732	C
1	0	2737	A
1	0	2745	A
1	0	2756	A
1	0	2757	G
1	0	2758	A
1	0	2760	G
1	0	2770	A
1	0	2771	C
1	0	2774	U
1	0	2782	G
1	0	2783	U
1	0	2785	A
1	0	2793	G
1	0	2795	A
1	0	2807	U
1	0	2808	U

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Mol	Chain	Res	Type
1	0	2809	A
1	0	2810	A
1	0	2825	A
1	0	2841	U
1	0	2842	C
1	0	2847	G
1	0	2849	C
1	0	2854	G
1	0	2855	C
1	0	2867	G
1	0	2868	G
2	9	7	C
2	9	14	C
2	9	15	A
2	9	17	A
2	9	18	G
2	9	27	A
2	9	28	A
2	9	47	A
2	9	48	A
2	9	59	A
2	9	60	A
2	9	61	A
2	9	63	A
2	9	68	A
2	9	69	G
2	9	71	G
2	9	93	G
2	9	98	C
2	9	101	A
2	9	102	A
2	9	111	C
2	9	112	A
2	9	115	G

All (44) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	0	69	G
1	0	71	A
1	0	173	A
1	0	181	A

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Mol	Chain	Res	Type
1	0	192	G
1	0	198	A
1	0	242	A
1	0	541	C
1	0	583	C
1	0	765	C
1	0	843	G
1	0	1141	U
1	0	1193	G
1	0	1194	U
1	0	1223	G
1	0	1263	G
1	0	1278	A
1	0	1313	U
1	0	1354	A
1	0	1410	U
1	0	1495	G
1	0	1634	A
1	0	1651	U
1	0	1664	G
1	0	1685	A
1	0	1820	G
1	0	1938	U
1	0	1975	G
1	0	2015	G
1	0	2018	G
1	0	2093	G
1	0	2161	C
1	0	2204	A
1	0	2245	A
1	0	2261	G
1	0	2377	U
1	0	2404	A
1	0	2560	G
1	0	2565	C
1	0	2588	U
1	0	2633	A
1	0	2759	U
1	0	2824	C
2	9	58	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](#)

2 ligands are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# $ Z > 2$	Counts	RMSZ	# $ Z > 2$
32	ZIT	0	2881	-	54,54,54	0.82	1 (1%)	76,83,83	1.30	6 (7%)
32	ZIT	0	2882	-	54,54,54	0.82	1 (1%)	76,83,83	1.30	6 (7%)

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
32	ZIT	0	2881	-	-	0/72/107/107	0/3/3/3
32	ZIT	0	2882	-	-	0/72/107/107	0/3/3/3

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
32	0	2881	ZIT	C3A-N3A	-2.26	1.42	1.48
32	0	2882	ZIT	C3A-N3A	-2.17	1.42	1.48

All (12) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed($^{\circ}$)	Ideal($^{\circ}$)
32	0	2882	ZIT	C1A-O1A-C5	-6.96	103.82	116.30
32	0	2881	ZIT	C1A-O1A-C5	-6.89	103.94	116.30
32	0	2881	ZIT	C4A-C3A-C2A	-3.17	105.42	110.03
32	0	2882	ZIT	C4A-C3A-C2A	-3.13	105.47	110.03
32	0	2882	ZIT	C2A-C3A-N3A	2.01	116.25	110.62
32	0	2881	ZIT	C2A-C3A-N3A	2.01	116.25	110.62
32	0	2881	ZIT	C5A-C4A-C3A	2.01	114.14	110.42
32	0	2882	ZIT	C5A-C4A-C3A	2.08	114.27	110.42
32	0	2881	ZIT	C17-C2-C3	2.09	117.62	112.97
32	0	2882	ZIT	C17-C2-C3	2.10	117.62	112.97
32	0	2881	ZIT	O1B-C3-C4	2.50	111.34	108.19
32	0	2882	ZIT	O1B-C3-C4	2.59	111.45	108.19

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

2 monomers are involved in 47 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
32	0	2881	ZIT	21	0
32	0	2882	ZIT	26	0

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

EDS was not executed - this section will therefore be empty.

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

EDS was not executed - this section will therefore be empty.

6.3 Carbohydrates

EDS was not executed - this section will therefore be empty.

6.4 Ligands

EDS was not executed - this section will therefore be empty.

6.5 Other polymers

EDS was not executed - this section will therefore be empty.