



# Full wwPDB X-ray Structure Validation Report ⓘ

Jan 31, 2016 – 11:33 PM GMT

PDB ID : 1XBP  
Title : Inhibition of peptide bond formation by pleuromutilins: The structure of the 50S ribosomal subunit from *Deinococcus radiodurans* in complex with Tiamulin  
Authors : Schluenzen, F.; Pyetan, E.; Fucini, P.; Yonath, A.; Harms, J.M.  
Deposited on : 2004-08-31  
Resolution : 3.50 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.  
We welcome your comments at [validation@mail.wwpdb.org](mailto: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.

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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

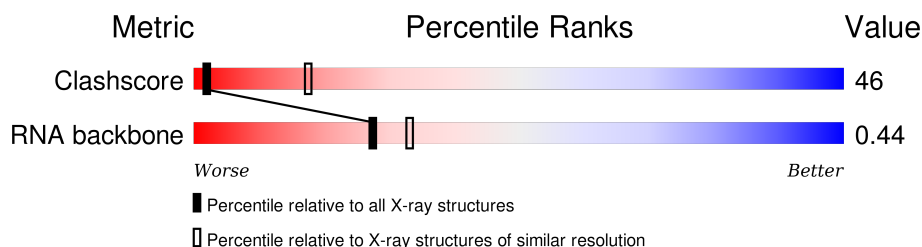
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

## *X-RAY DIFFRACTION*

The reported resolution of this entry is 3.50 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
Clashscore	102246	1157 (3.60-3.40)
RNA backbone	2183	1050 (4.20-2.80)



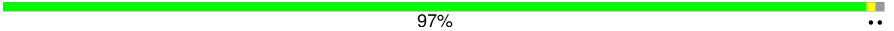


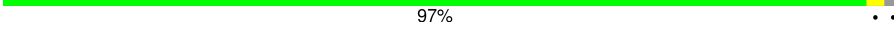
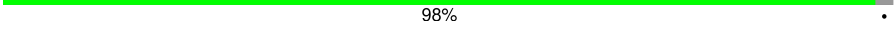

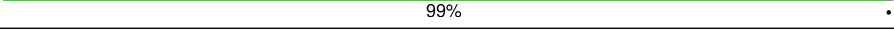
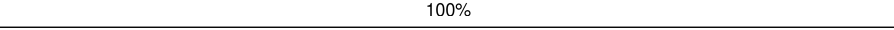
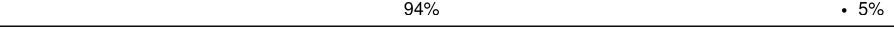
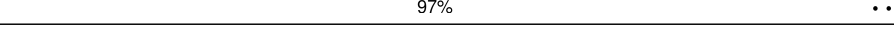
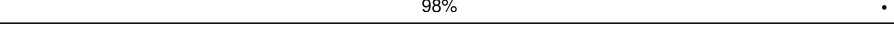
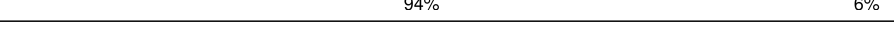
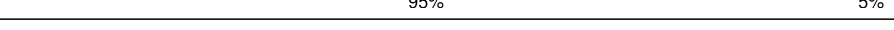
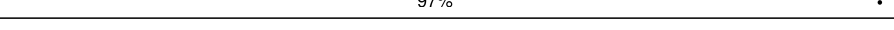
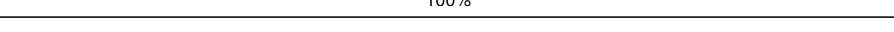
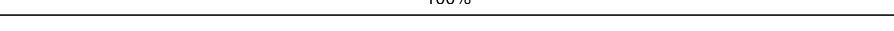
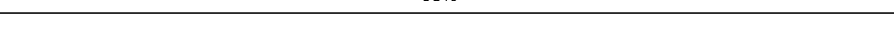


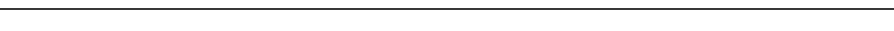

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria. 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	
2	9	124	
3	A	274	
4	B	211	
5	C	204	
6	D	180	
7	E	185	
8	F	146	

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Mol	Chain	Length	Quality of chain
9	G	144	 99%
10	H	174	 82% 18%
11	I	134	 97%
12	J	156	 90% 10%
13	K	141	 87% 12%
14	L	116	 97%
15	M	113	 98%
16	N	166	 75% 25%
17	O	118	 99%
18	P	100	 100%
19	Q	134	 94% 5%
20	R	94	 97%
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	 98%
28	1	55	 96%
29	2	47	 98%
30	3	65	 97%
31	4	37	 95% 5%

## 2 Entry composition

There are 32 unique types of molecules in this entry. The entry contains 65328 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
			2516	1124	464	811	117			

- Molecule 3 is a protein called 50S 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 50S 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 50S 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 50S 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 50S 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 50S 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 50S 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 50S 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 50S 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 50S 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 50S 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 50S ribosomal protein L18.

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

- Molecule 16 is a protein called 50S 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 50S ribosomal protein L20.

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

- Molecule 18 is a protein called 50S 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 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
19	Q	127	Total	C	0	0	127
			127	127			

- Molecule 20 is a protein called 50S 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 50S 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 50S ribosomal protein L25.

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

- Molecule 23 is a protein called 50S 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 50S 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 50S ribosomal protein L30.

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

- Molecule 26 is a protein called 50S 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 50S 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 50S 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 50S ribosomal protein L34.

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

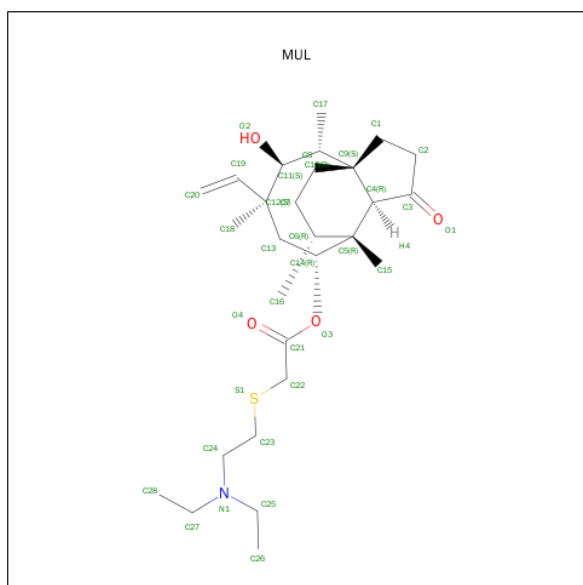
- Molecule 30 is a protein called 50S ribosomal protein L35.

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

- Molecule 31 is a protein called 50S ribosomal protein L36.

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

- Molecule 32 is TIAMULIN (three-letter code: MUL) (formula: C<sub>28</sub>H<sub>47</sub>NO<sub>4</sub>S).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
32	0	1	Total C N O S 34 28 1 4 1	0	0

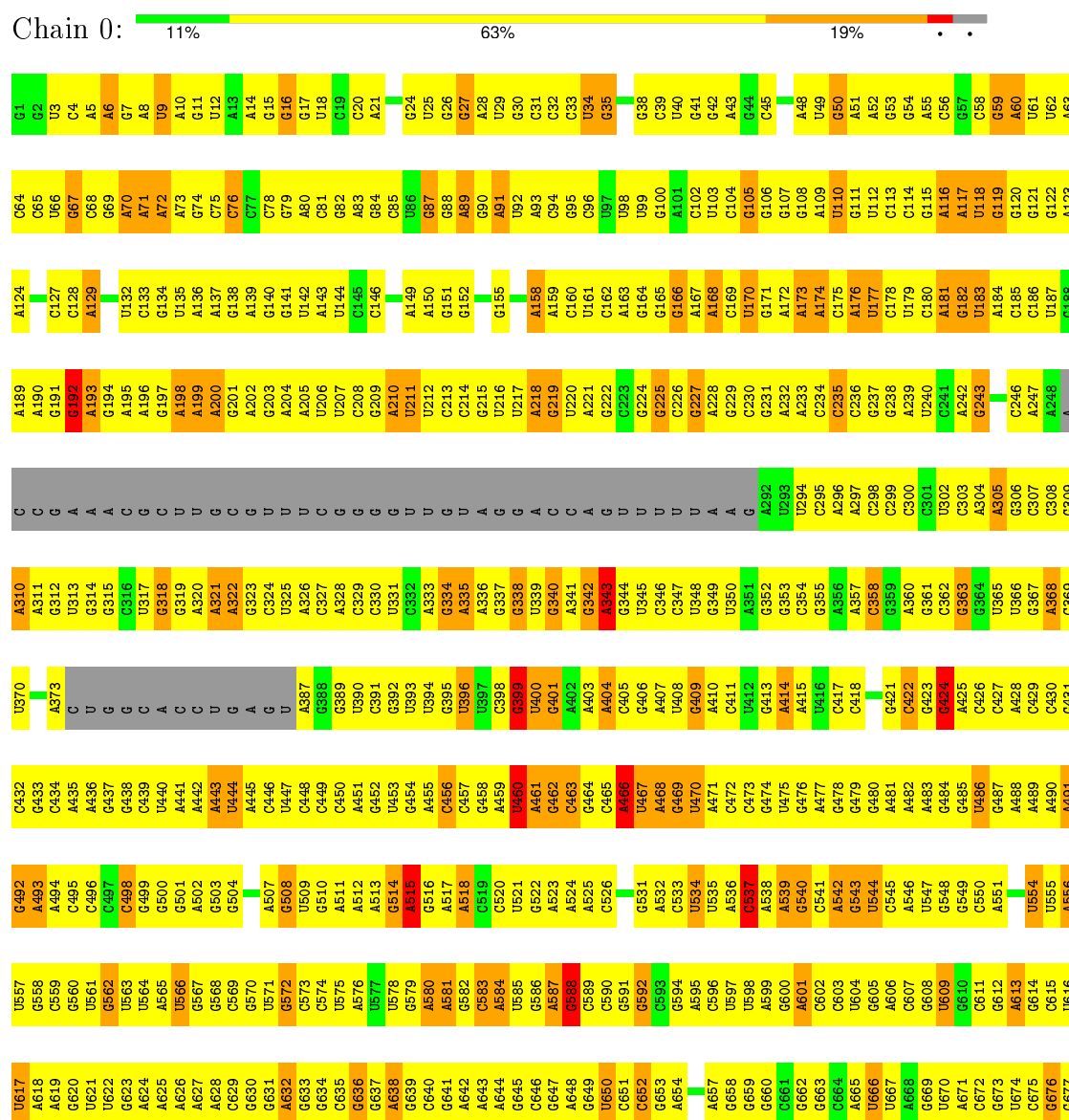


### 3 Residue-property plots

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.

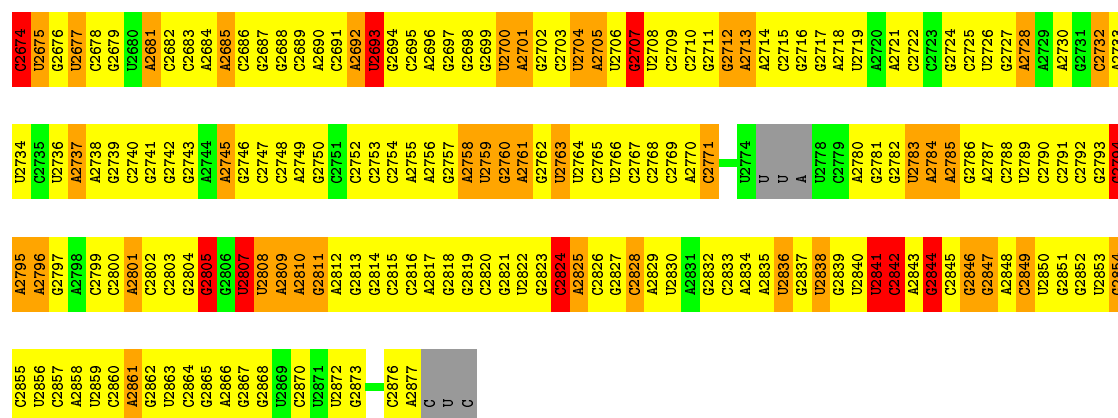
Note EDS was not executed.

#### • Molecule 1: 23S RIBOSOMAL RNA



A1610	G1545	U1481	A1416	G1356	G1296	C1234	U1172	G1110	U1044	G983	A922	G861	A801	A740	G678
U1611	C1546	U1482	C1417	U1357	A1297	C1235	G1173	C1111	G1045	A984	A923	A862	A802	G741	C679
U1612	U1547	G1483	U1483	G1358	G1298	G1236	G1174	U1112	U1046	G985	C924	C863	C803	G742	U680
G1613	U1548	G1484	U1424	G1359	A1299	U1236	A1175	C1113	G1047	A986	U925	C864	C804	A743	A681
C1549	C1549	U1485	G1425	G1360	A1301	A1239	U1176	A1114	U1048	G987	C926	A865	A805	C744	G682
C1582	C1582	A1486	G1426	G1361	A1302	G1241	U1177	C1115	U1049	G988	C927	U866	A806	C745	A683
G1583	G1583	C1487	G1427	A1362	G1302	G1242	U1178	U1116	C1052	G989	C928	C867	A807	G746	C684
U1614	U1584	G1488	G1428	C1363	U1303	A1242	C1181	G1117	U1053	A990	A929	U868	C808	A747	U685
U1615	A1585	C1489	G1429	G1364	U1304	A1243	U1182	G1118	G1053	A991	A930	C869	C809	A748	G686
C1616	U1556	U1490	C1430	U1365	C1305	U1244	C1183	U1119	C1054	A992	C931	C870	U810	C749	G687
C1617	C1557	A1491	U1431	A1366	U1306	G1245	C1184	C1120	A1055	C993	C932	U871	G811	C750	A688
G1622	G1558	A1492	G1432	A1367	U1307	U1246	C1185	G1121	U1056	A994	C933	G872	G812	G751	A689
C1623	G1559	U1493	A1433	G1368	C1308	G1248	G1186	U1125	U1057	A995	C934	U873	G813	G752	A690
A1624	U1560	G1496	G1434	G1369	G1309	G1249	A1187	G1126	G1058	C996	C935	A874	G614	U753	C691
A1625	A1561	C1497	G1435	U1370	C1310	A1250	A1188	C1127	A1059	C997	A936	G875	A815	G754	C692
A1626	U1562	G1498	A1436	G1371	C1311	G1251	G1189	C1128	C1060	C998	C937	A876	U816	G755	A693
C1627	U1563	A1499	A1437	A1372	G1312	C1252	C1190	G1129	U1061	A999	U942	G877	A817	C756	G694
U1628	C1564	U1500	G1438	G1373	U1313	G1253	A1191	A1130	C1062	A1001	U943	C878	G818	C757	G695
C1629	U1565	C1501	G1439	C1374	A1314	G1254	A1192	U1131	A1064	G1000	U944	A879	C819	G758	U696
A1630	G1566	G1502	G1440	C1375	A1315	A1255	G1193	G1132	A1065	C1003	U945	C880	A820	C759	G697
C1631	U1567	G1503	A1441	G1376	G1316	C1256	U1194	C1133	G1066	C1004	U946	U881	A821	U760	A698
A1632	A1568	U1504	G1442	G1377	G1317	U1257	U1195	G1134	G1067	A1005	C945	C882	U822	G761	G700
C1633	U1569	U1505	G1443	A1378	G1318	G1258	G1196	C1135	A1068	U1006	U946	U883	U823	A762	C701
A1634	C1572	G1506	G1444	A1379	C1319	A1259	U1197	G1136	G1069	C1007	C947	A886	U824	A763	U701
G1635	U1573	A1507	A1445	C1380	A1320	A1260	C1198	G1137	U1072	A1007	C947	C887	C825	A764	A702
U1636	G1574	G1508	U1446	G1381	A1321	G1261	U1199	A1137	G1073	G1008	C948	C888	U826	C765	A703
U1637	A1575	A1509	U1447	C1382	G1322	U1262	G1200	A1138	G1074	C1009	C949	G889	C827	A766	G704
G1638	U1576	C1510	A1448	G1383	G1323	C1263	G1201	U1139	G1075	U1010	C950	C890	C828	C767	C705
U1639	C1577	A1511	C1449	U1384	G1324	C1264	U1202	A1140	C1076	A1011	C951	U890	C829	U768	A706
C1640	U1578	A1512	G1450	C1385	G1325	G1265	A1203	U1141	U1076	A1012	A952	A891	C830	U770	U707
G1641	U1579	U1513	C1451	A1386	U1326	G1266	G1204	A1142	U1077	G1013	C953	G	C831	C771	G708
C1642	C1584	C1514	U1452	G1387	C1327	A1267	G1205	A1143	A1078	G1014	U954	G	A832	C772	A709
U1643	U1580	U1515	A1453	C1388	G1328	U1268	G1206	U1144	G1079	U1015	C955	G	A833	C773	C710
G1644	C1581	C1517	G1454	U1389	G1329	G1269	A1207	C1145	A1081	C1017	C957	G	A834	A774	C711
U1645	U1582	A1516	C1455	G1390	G1330	C1270	A1208	G1146	G1082	G1018	C958	C	C836	U775	A712
U1646	A1583	C1518	A1456	A1391	G1331	C1271	G1209	G1147	C1083	U1019	C959	C	U837	A776	G713
U1647	G1584	G1520	A1458	G1393	G1332	G1272	C1210	G1148	A1084	A1020	U960	U	A838	A777	G714
C1648	A1585	U1521	U1459	G1394	G1333	G1273	G1211	G1149	G1085	A1021	C961	A	U839	C778	U715
A1649	U1586	C1522	G1460	A1395	A1335	C1274	U1212	C1150	C1086	A1022	C962	C	U840	U779	U716
U1650	A1587	A1523	C1461	G1396	G1336	U1275	U1213	U1151	C1087	C1022	C963	C	A841	U780	G717
U1651	U1588	C1524	C1462	A1397	G1337	G1276	C1214	C1152	A1088	U1023	A964	A	A842	G781	A718
G1652	C1591	U1527	A1463	G1398	G1338	A1278	A1215	A1153	C1089	G1024	C965	G	C843	U782	A719
C1653	U1592	C1528	G1464	C1399	U1339	G1279	G1216	G1154	C1090	A1025	C966	C	C844	G783	A720
U1654	U1593	U1529	G1465	G1401	C1340	U1280	U1217	U1155	C1091	U1026	C967	U	C845	U784	C721
U1655	C1594	U1530	C1466	G1402	G1341	A1281	C1218	G1156	C1092	C1027	C968	U	U846	U785	C722
A1595	U1594	U1531	U1467	U1342	U1342	A1282	C1219	G1157	C1094	G1028	C969	A	A847	U786	U726
A1657	C1595	C1532	U1468	U1403	C1343	C1283	G1220	U1158	A1095	C1029	C970	C	A848	A787	G727
A1658	G1598	G1532	U1469	C1404	C1344	G1284	C1221	U1159	A1096	U1030	A971	C	C849	G788	G728
G1659	C1599	G1533	G1470	A1405	G1345	A1285	G1223	U1161	A1097	A1032	C972	A911	C850	A790	C730
G1660	C1599	U1536	G1471	G1406	C1346	U1286	A1224	A1162	G1098	G1033	U973	A912	C851	G791	A729
C1661	U1602	U1537	G1472	U1407	C1347	A1287	G1225	C1163	C1099	U1034	U974	A913	U852	U792	C731
C1662	C1603	C1538	C1348	C1349	A1288	A1288	A1226	C1164	G1102	G1035	C975	C914	C853	G793	G733
G1663	U1604	U1539	U1473	U1408	A1289	A1289	G1228	G1165	G1103	C976	C976	C915	C854	A794	G734
C1664	A1605	C1540	U1475	U1410	A1290	A1290	G1229	A1166	U1037	G1038	C977	U916	C855	A795	G735
C1665	U1606	C1541	G1476	C1411	G1351	G1291	C1229	A1167	G1104	U1038	U978	U917	C856	A796	G736
G1666	C1542	C1412	C1477	C1412	G1352	A1292	C1230	G1168	U1105	A1039	A979	A918	U857	A797	G737
A1667	U1607	U1543	U1478	U1413	A1353	A1293	A1231	U1169	U1106	A1040	C980	U919	C858	G798	G738
G1668	C1543	G1479	G1479	G1414	A1354	G1294	U1232	U1170	A1107	G1041	C982	G920	U859	C799	G739
A1669	G1609	A1544	G1480	C1415	A1355	U1295	A1233	A1171				A921	U860	U800	G739

G2612	A2429	G2368	A2308	C2243	U2178	G	G2053	G1983	U1856	C1792	C1731	G1670
A2613	A2430	U2369	G2309	C2244	U2179	C	A2054	U1994	G1857	A1793	U1732	A1671
A2614	G2431	G2370	G2310	A2245	A2181	G	G2055	U1995	A1858	A1794	C1734	A1672
G2615	A2432	A2371	U2311	A2246	A2182	A2117	C2056	A1996	A1859	C1795	C1735	C1673
G2616	G2433	A2372	A2312	A2247	C2183	A2118	U2057	A1997	A1860	A1796	G1736	C1674
G2617	G2434	C2373	G2313	A2248	C2184	A2119	U2058	A1998	G1861	G1797	C1737	C1675
A2618	G2435	C2374	A2314	U2249	U2185	U	U2059	U1999	C1862	G1798	U1676	U1676
G2619	U2436	G2375	A2315	G2250	G2186	G2122	A2060	U1999	U1863	A1799	U1738	C1677
G2620	G2437	G2376	G2316	U2251	U2186	G2123	C2061	G2001	G1864	A1800	G1739	G1678
G2621	U2438	U2377	G2317	A2191	A2191	C2124	U2062	G2002	C1865	C1801	G1740	U1679
G2622	U2439	G2378	U2318	A2252	A2192	C2125	A2063	A2003	G1866	A1802	G1741	U1680
G2623	G2440	G2379	G2319	A2253	C2193	U	U2064	A1943	A1867	U	G1742	A1681
G2624	U2441	U2380	G2320	G2254	C2194	U	A2065	U2005	A1868	G1805	G1743	A1682
U2625	C2442	A2381	C2321	G2256	C2195	U	G2066	C1945	A1869	G1806	G1744	G1683
U2626	C2443	C2382	U2322	G2259	U2196	U	U2067	U1946	U1870	A1807	C1745	G1684
G2627	C2444	C2383	U2323	G2260	U2197	G	C2068	G1947	A1871	C1808	A1746	A1685
G2628	C2445	G2384	G2324	C2261	U2198	G	U2069	U1948	U2009	G1809	G1747	A1686
G2629	C2446	U2385	A2325	C2262	C2199	G2132	G2070	A1949	C1876	U1810	U1748	C1687
C2630	G2447	G2386	C2326	C2263	G2200	G2133	G2071	U2011	C1877	A1811	G1749	U1688
U2631	A2448	U2387	U2327	G2264	G2201	U2138	C2072	A2012	C1878	U1812	A1750	U1689
G2632	G2449	G2388	G2328	C2271	G2202	A2139	A2079	C2019	U1886	A1813	A1751	U1690
G2633	U2450	G2389	C2329	A2266	G2203	G2139	G2080	G2020	G1887	G1820	G1760	C1691
G2634	G2451	A2390	G2330	A2267	A2204	G2140	U2075	U2081	C1888	A1821	C1761	A1699
G2635	G2452	A2391	A2331	C2268	C2205	A	U2076	G2015	G1882	G1814	U1752	G1692
C2636	C2453	G2392	G2332	G2269	C2206	G	G2077	A2016	A1883	G1815	A1753	C1693
G2637	U2454	G2393	A2333	U2270	G2207	G	G2078	U2017	A1884	U1816	G1754	A1694
G2638	G2455	G2394	A2334	C2271	U2208	C	G2079	G2018	C1885	G1817	G1755	U1695
A2639	U2456	C2395	U2335	C2272	U2209	C	A2080	U2019	G1886	U1818	C1756	U1696
G2640	A2457	G2396	G2336	C2273	G2210	A	G2081	C2021	G1887	U1819	C1757	C1697
A2641	U2458	A2397	A2337	U2274	C2211	C	U2082	G2022	C1889	G1820	G1760	C1698
G2642	G2459	U2398	G2338	C2275	U2212	A	G2083	C2023	C1892	A1822	C1762	C1700
G2643	C2460	G2400	A2339	A2276	G2213	G	U2084	U2024	U1900	G1823	G1763	C1701
A2644	U2461	U2401	C2340	C2277	U2214	U	G2085	A2025	A1764	C1824	U1764	G1702
G2645	G2462	G2402	G2341	G2279	C2215	C	G2086	C2026	U1901	U1826	C1765	C1703
C2646	G2463	U2403	C2342	C2280	G2216	A	U2087	C2027	G1901	G1827	U1766	G1704
A2649	U2464	A2404	G2343	C2281	G2217	A	U2088	C2028	G1902	C1828	G1767	U1705
G2650	A2465	A2405	A2344	C2282	U2219	U	U2089	G2029	C1908	C1829	U1768	A1706
U2651	G2466	U2406	G2345	G2283	A2220	A	C2091	U2030	U1909	C1830	U1769	A1707
G2652	U2467	G2407	G2346	U2284	G2221	A	U2092	A2031	A1910	G1831	U1770	C1708
A2653	U2470	G2408	C2347	U2285	U2222	C2157	G2093	G1972	A1911	G1832	A1771	U1709
G2654	U2471	A2409	A2348	G2286	U2223	C2158	C2094	C2033	G1912	U1833	C1772	U1710
C2655	U2472	U2410	G2349	G2287	U2224	A2159	G2095	U1974	G1913	C1773	C1773	C1711
G2656	G2473	G2411	G2350	A2288	G2225	C2160	U2096	G2035	U1914	U1774	A1774	G1712
G2657	U2474	A2411	G2351	A2289	A2226	C2161	A2097	U1976	A1915	G1837	G1775	G1713
A2658	C2475	A2412	A2352	U2290	C2227	C2162	G	C1977	G1916	A1838	A1776	A1714
C2659	A2476	A2413	G2353	C2292	U2228	A	U2098	U1978	C1917	A1839	U1777	A1715
G2660	C2477	A2414	G2354	G2293	G2229	A	A	C2039	G1918	A1840	U1778	G1716
C2661	U2478	G2415	A2355	U2294	G2230	A	U	A1980	A1919	G1841	C1779	A1717
U2662	U2479	U2416	A2356	G2295	G2231	A	A	A1921	A1920	G1842	C1780	A1718
G2663	G2480	U2417	A2357	G2297	G2232	A2167	G2103	C1982	A1921	C1844	C1781	G1719
U2664	A2481	C2419	C2358	U2298	G2233	A2168	G2104	G1983	U1922	A1845	A1782	G1720
G2665	A2482	C2420	U2359	A2299	C2234	A2169	U2105	A1984	U1923	G1846	G1783	G1721
U2666	U2483	C2421	G2360	G2300	G2235	C2170	G2106	G1985	G1924	G1847	C1784	G1722
C2667	G2484	C2422	G2361	A2301	U2236	U2171	G2107	G1986	C1925	U1848	U1785	U1723
G2668	U2485	G2423	G2362	G2302	G2237	G2108	C2047	G1987	U1926	C1786	C1724	G1724
C2669	U2486	G2424	G2363	C2303	G2238	G2173	A2109	A1988	U1927	A1851	U1787	C1725
G2670	G2487	U2425	C2364	G2304	C2239	G2174	G2110	C1989	G1928	G1852	C1788	C1726
U2671	U2488	G2426	U2365	C2305	C2240	A2175	C	U1990	U1929	G1853	C1789	C1727
C2672	A2489	A2427	U2366	C2306	U2241	U2176	C	G1930	G1930	G1854	U1789	G1730
G2673	U2490	U2428	A2367	A2307	C2242	U2177	U	G1992	G1931	G1855	C1791	G1730



### • Molecule 2: 5S RIBOSOMAL RNA

Chain 9: 13% 69% 14% 5%



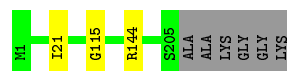
### • Molecule 3: 50S ribosomal protein L2

Chain A: 98% ..



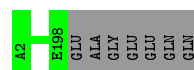
### • Molecule 4: 50S ribosomal protein L3

Chain B: 96% ..



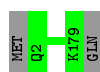
### • Molecule 5: 50S ribosomal protein L4

Chain C: 97% .



### • Molecule 6: 50S ribosomal protein L5

Chain D: 99% .



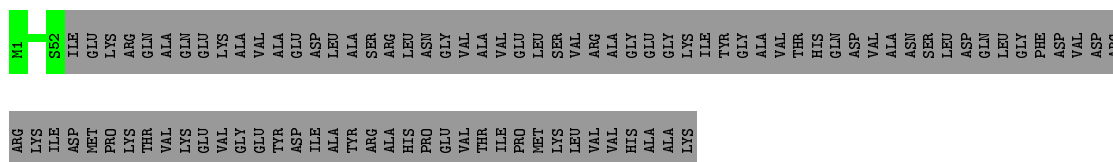
- Molecule 7: 50S ribosomal protein L6

Chain E: 95%



- Molecule 8: 50S ribosomal protein L9

Chain F: 36% 64%



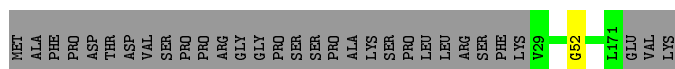
- Molecule 9: 50S ribosomal protein L11

Chain G: 99%



- Molecule 10: 50S ribosomal protein L13

Chain H: 82% 18%



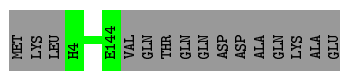
- Molecule 11: 50S ribosomal protein L14

Chain I: 97%



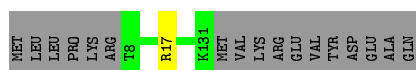
- Molecule 12: 50S ribosomal protein L15

Chain J: 90% 10%



- Molecule 13: ribosomal protein L16

Chain K: 87% 12%



- Molecule 14: 50S ribosomal protein L17

Chain L: 97%



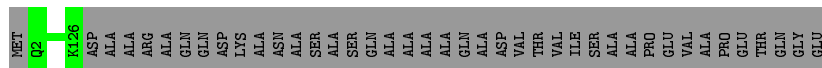
- Molecule 15: 50S ribosomal protein L18

Chain M: 98%



- Molecule 16: 50S ribosomal protein L19

Chain N: 75%



- Molecule 17: 50S ribosomal protein L20

Chain O: 99%



- Molecule 18: 50S ribosomal protein L21

Chain P: 100%

There are no outlier residues recorded for this chain.

- Molecule 19: 50S ribosomal protein L22

Chain Q: 94%



- Molecule 20: 50S ribosomal protein L23

Chain R: 97%



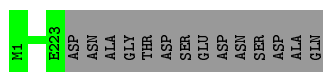
- Molecule 21: 50S ribosomal protein L24

Chain S:  98% .



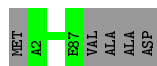
- Molecule 22: 50S ribosomal protein L25

Chain T:  94% 6%



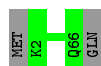
- Molecule 23: 50S ribosomal protein L27

Chain U:  95% 5%



- Molecule 24: 50S ribosomal protein L29

Chain W:  97% .



- Molecule 25: 50S ribosomal protein L30

Chain X:  100%

There are no outlier residues recorded for this chain.

- Molecule 26: 50S ribosomal protein L31

Chain Y:  100%

There are no outlier residues recorded for this chain.

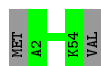
- Molecule 27: 50S ribosomal protein L32

Chain Z:  98% .



- Molecule 28: 50S ribosomal protein L33

Chain 1:  96% .



- Molecule 29: 50S ribosomal protein L34

Chain 2:  98% .



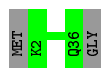
- Molecule 30: 50S ribosomal protein L35

Chain 3:  97% .



- Molecule 31: 50S ribosomal protein L36

Chain 4:  95% 5%





## 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, $\alpha$ , $\beta$ , $\gamma$	168.70 Å   405.00 Å   693.00 Å 90.00°   90.00°   90.00°	Depositor
Resolution (Å)	15.00 – 3.50	Depositor
% Data completeness (in resolution range)	88.3 (15.00-3.50)	Depositor
$R_{merge}$	(Not available)	Depositor
$R_{sym}$	0.14	Depositor
Refinement program	CNS 1.0	Depositor
R, $R_{free}$	0.290 , 0.360	Depositor
Estimated twinning fraction	No twinning to report.	Xtriage
Total number of atoms	65328	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	40.0	wwPDB-VP

## 5 Model quality ⓘ

### 5.1 Standard geometry ⓘ

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

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	0.79	21/66467 (0.0%)	0.82	43/103673 (0.0%)
2	9	0.44	0/2813	0.73	0/4384
All	All	0.78	21/69280 (0.0%)	0.82	43/108057 (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	260

All (21) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	0	1646	G	C5-C6	-7.94	1.34	1.42
1	0	2570	C	N1-C2	6.85	1.47	1.40
1	0	2801	A	C5-C6	-6.62	1.35	1.41
1	0	2673	G	C5-C6	-6.49	1.35	1.42
1	0	2222	U	N3-C4	-6.45	1.32	1.38
1	0	833	A	C5-C6	-6.24	1.35	1.41
1	0	754	G	C5-C6	-6.18	1.36	1.42
1	0	2574	G	C5-C6	-6.17	1.36	1.42
1	0	1410	U	N1-C2	6.01	1.44	1.38
1	0	2492	G	C5-C6	-6.00	1.36	1.42
1	0	803	C	N1-C2	5.69	1.45	1.40
1	0	1686	A	C5-C6	-5.66	1.35	1.41
1	0	1340	C	N1-C2	5.60	1.45	1.40
1	0	2664	G	C5-C6	-5.54	1.36	1.42
1	0	1160	C	N1-C2	5.40	1.45	1.40
1	0	2807	U	N1-C2	5.39	1.43	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	0	2218	G	C5-C6	-5.37	1.36	1.42
1	0	1993	G	C5-C6	-5.06	1.37	1.42
1	0	537	C	N1-C2	5.06	1.45	1.40
1	0	1672	A	C5-C6	-5.04	1.36	1.41
1	0	689	A	C5-C6	-5.03	1.36	1.41

All (43) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	0	2482	A	N9-C1'-C2'	8.75	125.37	114.00
1	0	460	U	N1-C1'-C2'	7.48	123.72	114.00
1	0	859	U	N1-C1'-C2'	-7.43	103.83	112.00
1	0	1710	U	N1-C1'-C2'	7.14	123.28	114.00
1	0	1266	G	N9-C1'-C2'	6.48	122.43	114.00
1	0	1281	A	N9-C1'-C2'	-6.39	104.97	112.00
1	0	1715	A	N9-C1'-C2'	6.36	122.27	114.00
1	0	2427	A	O4'-C4'-C3'	-6.32	97.69	104.00
1	0	2044	G	N9-C1'-C2'	6.18	122.04	114.00
1	0	993	C	N1-C1'-C2'	6.11	121.94	114.00
1	0	468	A	N9-C1'-C2'	6.07	121.89	114.00
1	0	1634	A	N9-C1'-C2'	5.98	121.77	114.00
1	0	1337	G	N9-C1'-C2'	5.89	121.66	114.00
1	0	2521	A	N9-C1'-C2'	5.87	121.64	114.00
1	0	1775	A	N9-C1'-C2'	5.83	121.58	114.00
1	0	918	A	N9-C1'-C2'	-5.77	105.65	112.00
1	0	860	U	N1-C1'-C2'	5.73	121.45	114.00
1	0	869	C	N1-C1'-C2'	5.69	121.39	114.00
1	0	1313	U	C2'-C3'-O3'	5.64	122.72	113.70
1	0	2805	G	C5'-C4'-C3'	-5.55	107.12	116.00
1	0	1749	G	O4'-C1'-N9	5.54	112.63	108.20
1	0	1685	A	C5'-C4'-O4'	5.54	115.74	109.10
1	0	804	C	N1-C1'-C2'	5.53	121.18	114.00
1	0	2560	G	N9-C1'-C2'	5.51	121.16	114.00
1	0	1333	G	N9-C1'-C2'	5.49	121.14	114.00
1	0	955	G	N9-C1'-C2'	-5.46	106.00	112.00
1	0	700	C	N1-C1'-C2'	5.42	121.05	114.00
1	0	2794	G	C5'-C4'-C3'	-5.42	107.33	116.00
1	0	1264	C	N1-C1'-C2'	5.41	121.04	114.00
1	0	562	G	OP2-P-O3'	5.36	117.00	105.20
1	0	2093	G	C2'-C3'-O3'	5.33	122.23	113.70
1	0	2674	C	N1-C1'-C2'	-5.31	106.16	112.00
1	0	1141	U	OP1-P-O3'	5.31	116.88	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	0	1698	C	N1-C1'-C2'	5.30	120.89	114.00
1	0	192	G	C2'-C3'-O3'	5.23	122.06	113.70
1	0	1137	A	N9-C1'-C2'	5.13	120.67	114.00
1	0	972	C	OP1-P-O3'	5.09	116.41	105.20
1	0	1652	G	C5'-C4'-O4'	5.09	115.21	109.10
1	0	2592	U	O4'-C1'-N1	-5.07	104.14	108.20
1	0	1335	A	N9-C1'-C2'	-5.04	106.46	112.00
1	0	518	A	N9-C1'-C2'	5.04	120.55	114.00
1	0	2707	G	O4'-C1'-N9	5.01	112.21	108.20
1	0	815	A	OP1-P-O3'	5.00	116.20	105.20

There are no chirality outliers.

All (260) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	0	1005	U	Sidechain
1	0	1011	A	Sidechain
1	0	1018	C	Sidechain
1	0	1077	U	Sidechain
1	0	1137	A	Sidechain
1	0	1139	A	Sidechain
1	0	1142	G	Sidechain
1	0	1145	C	Sidechain
1	0	1151	U	Sidechain
1	0	1168	G	Sidechain
1	0	1176	U	Sidechain
1	0	1199	U	Sidechain
1	0	1203	A	Sidechain
1	0	1209	G	Sidechain
1	0	1262	U	Sidechain
1	0	1263	G	Sidechain
1	0	1264	C	Sidechain
1	0	1266	G	Sidechain
1	0	1275	A	Sidechain
1	0	1278	A	Sidechain
1	0	1294	G	Sidechain
1	0	1299	A	Sidechain
1	0	1304	U	Sidechain
1	0	1307	U	Sidechain
1	0	1310	C	Sidechain
1	0	1312	G	Sidechain
1	0	1325	U	Sidechain

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Mol	Chain	Res	Type	Group
1	0	1333	G	Sidechain
1	0	1335	A	Sidechain
1	0	1342	U	Sidechain
1	0	1343	C	Sidechain
1	0	1345	G	Sidechain
1	0	1346	C	Sidechain
1	0	1355	A	Sidechain
1	0	1366	A	Sidechain
1	0	1410	U	Sidechain
1	0	1448	A	Sidechain
1	0	1459	U	Sidechain
1	0	1471	G	Sidechain
1	0	1482	U	Sidechain
1	0	1490	U	Sidechain
1	0	1509	A	Sidechain
1	0	1521	U	Sidechain
1	0	1563	U	Sidechain
1	0	16	G	Sidechain
1	0	1619	A	Sidechain
1	0	1625	A	Sidechain
1	0	1626	A	Sidechain
1	0	1631	C	Sidechain
1	0	1632	A	Sidechain
1	0	1633	C	Sidechain
1	0	1647	U	Sidechain
1	0	1649	A	Sidechain
1	0	166	G	Sidechain
1	0	1663	C	Sidechain
1	0	1671	A	Sidechain
1	0	1673	C	Sidechain
1	0	1674	C	Sidechain
1	0	1678	G	Sidechain
1	0	1680	U	Sidechain
1	0	1688	U	Sidechain
1	0	170	U	Sidechain
1	0	1707	A	Sidechain
1	0	1710	U	Sidechain
1	0	1720	G	Sidechain
1	0	1723	U	Sidechain
1	0	1733	U	Sidechain
1	0	1745	C	Sidechain
1	0	1752	U	Sidechain

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Mol	Chain	Res	Type	Group
1	0	1766	U	Sidechain
1	0	1767	G	Sidechain
1	0	1769	U	Sidechain
1	0	1812	U	Sidechain
1	0	1819	U	Sidechain
1	0	183	U	Sidechain
1	0	1832	G	Sidechain
1	0	1887	G	Sidechain
1	0	1916	G	Sidechain
1	0	1922	U	Sidechain
1	0	1926	U	Sidechain
1	0	1934	U	Sidechain
1	0	1935	A	Sidechain
1	0	1936	A	Sidechain
1	0	1938	U	Sidechain
1	0	1945	C	Sidechain
1	0	1951	G	Sidechain
1	0	1953	A	Sidechain
1	0	1955	G	Sidechain
1	0	1956	G	Sidechain
1	0	1969	G	Sidechain
1	0	1976	U	Sidechain
1	0	1980	A	Sidechain
1	0	1992	G	Sidechain
1	0	2004	U	Sidechain
1	0	2018	G	Sidechain
1	0	2020	G	Sidechain
1	0	2033	C	Sidechain
1	0	2034	A	Sidechain
1	0	2038	C	Sidechain
1	0	2039	G	Sidechain
1	0	2046	C	Sidechain
1	0	2059	U	Sidechain
1	0	2066	G	Sidechain
1	0	2074	U	Sidechain
1	0	211	U	Sidechain
1	0	2207	G	Sidechain
1	0	2211	U	Sidechain
1	0	2216	G	Sidechain
1	0	2219	U	Sidechain
1	0	2222	U	Sidechain
1	0	2229	G	Sidechain

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Mol	Chain	Res	Type	Group
1	0	2230	G	Sidechain
1	0	2251	U	Sidechain
1	0	2255	G	Sidechain
1	0	2261	G	Sidechain
1	0	2280	A	Sidechain
1	0	2297	G	Sidechain
1	0	2302	G	Sidechain
1	0	2306	A	Sidechain
1	0	2317	G	Sidechain
1	0	2334	C	Sidechain
1	0	2342	U	Sidechain
1	0	235	C	Sidechain
1	0	2356	A	Sidechain
1	0	2365	U	Sidechain
1	0	2371	A	Sidechain
1	0	2375	G	Sidechain
1	0	2376	G	Sidechain
1	0	2377	U	Sidechain
1	0	2392	G	Sidechain
1	0	2412	A	Sidechain
1	0	2428	U	Sidechain
1	0	2430	A	Sidechain
1	0	2447	G	Sidechain
1	0	2459	C	Sidechain
1	0	2480	C	Sidechain
1	0	2483	U	Sidechain
1	0	2485	U	Sidechain
1	0	2492	G	Sidechain
1	0	2493	U	Sidechain
1	0	2498	U	Sidechain
1	0	2513	A	Sidechain
1	0	2520	A	Sidechain
1	0	2524	G	Sidechain
1	0	2525	U	Sidechain
1	0	2548	G	Sidechain
1	0	2549	G	Sidechain
1	0	2551	A	Sidechain
1	0	2553	G	Sidechain
1	0	2554	C	Sidechain
1	0	2573	C	Sidechain
1	0	2583	U	Sidechain
1	0	2585	C	Sidechain

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Mol	Chain	Res	Type	Group
1	0	2587	G	Sidechain
1	0	2599	U	Sidechain
1	0	2603	G	Sidechain
1	0	2609	G	Sidechain
1	0	2610	G	Sidechain
1	0	2625	U	Sidechain
1	0	2627	G	Sidechain
1	0	2655	C	Sidechain
1	0	2674	C	Sidechain
1	0	2675	U	Sidechain
1	0	2677	U	Sidechain
1	0	2685	A	Sidechain
1	0	2693	U	Sidechain
1	0	27	G	Sidechain
1	0	2700	U	Sidechain
1	0	2701	A	Sidechain
1	0	2704	U	Sidechain
1	0	2705	A	Sidechain
1	0	2763	U	Sidechain
1	0	2794	G	Sidechain
1	0	2796	A	Sidechain
1	0	2824	C	Sidechain
1	0	2828	C	Sidechain
1	0	2836	U	Sidechain
1	0	2838	U	Sidechain
1	0	2841	U	Sidechain
1	0	2842	C	Sidechain
1	0	2844	G	Sidechain
1	0	2846	G	Sidechain
1	0	310	A	Sidechain
1	0	338	G	Sidechain
1	0	342	G	Sidechain
1	0	343	A	Sidechain
1	0	396	U	Sidechain
1	0	399	G	Sidechain
1	0	400	U	Sidechain
1	0	422	C	Sidechain
1	0	424	G	Sidechain
1	0	444	U	Sidechain
1	0	460	U	Sidechain
1	0	462	G	Sidechain
1	0	466	A	Sidechain

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Mol	Chain	Res	Type	Group
1	0	469	G	Sidechain
1	0	470	U	Sidechain
1	0	493	A	Sidechain
1	0	498	C	Sidechain
1	0	508	G	Sidechain
1	0	515	A	Sidechain
1	0	534	U	Sidechain
1	0	535	U	Sidechain
1	0	544	U	Sidechain
1	0	566	U	Sidechain
1	0	578	U	Sidechain
1	0	580	A	Sidechain
1	0	581	A	Sidechain
1	0	588	G	Sidechain
1	0	592	G	Sidechain
1	0	596	C	Sidechain
1	0	6	A	Sidechain
1	0	609	U	Sidechain
1	0	631	G	Sidechain
1	0	650	U	Sidechain
1	0	67	G	Sidechain
1	0	676	G	Sidechain
1	0	680	U	Sidechain
1	0	685	U	Sidechain
1	0	689	A	Sidechain
1	0	696	U	Sidechain
1	0	707	U	Sidechain
1	0	743	A	Sidechain
1	0	756	C	Sidechain
1	0	757	U	Sidechain
1	0	759	C	Sidechain
1	0	761	G	Sidechain
1	0	767	G	Sidechain
1	0	775	U	Sidechain
1	0	788	G	Sidechain
1	0	789	G	Sidechain
1	0	793	G	Sidechain
1	0	795	A	Sidechain
1	0	798	G	Sidechain
1	0	804	C	Sidechain
1	0	806	A	Sidechain
1	0	815	A	Sidechain

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Mol	Chain	Res	Type	Group
1	0	822	G	Sidechain
1	0	823	U	Sidechain
1	0	824	U	Sidechain
1	0	826	U	Sidechain
1	0	831	G	Sidechain
1	0	832	A	Sidechain
1	0	839	U	Sidechain
1	0	840	U	Sidechain
1	0	845	U	Sidechain
1	0	859	U	Sidechain
1	0	863	C	Sidechain
1	0	886	A	Sidechain
1	0	9	U	Sidechain
1	0	918	A	Sidechain
1	0	919	U	Sidechain
1	0	941	U	Sidechain
1	0	946	U	Sidechain
1	0	954	U	Sidechain
1	0	969	U	Sidechain
1	0	972	C	Sidechain
1	0	986	A	Sidechain
1	0	993	C	Sidechain
1	0	994	A	Sidechain

## 5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	0	59359	0	29916	4247	0
2	9	2516	0	1286	144	0
3	A	270	0	0	2	0
4	B	205	0	0	3	0
5	C	197	0	0	0	0
6	D	178	0	0	0	0
7	E	177	0	0	1	0
8	F	52	0	0	0	0
9	G	143	0	0	0	0
10	H	143	0	0	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
11	I	132	0	0	2	0
12	J	141	0	0	0	0
13	K	124	0	0	1	0
14	L	114	0	0	3	0
15	M	111	0	0	0	0
16	N	125	0	0	0	0
17	O	117	0	0	0	0
18	P	100	0	0	0	0
19	Q	127	0	0	1	0
20	R	93	0	0	1	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	0	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	34	0	47	4	0
All	All	65328	0	31249	4383	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 46.

All (4383) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:584:A:H4'	1:0:2038:C:N4	1.53	1.23
1:0:1621:C:H4'	1:0:1626:A:N6	1.57	1.19
1:0:918:A:H2'	1:0:919:U:H5''	1.24	1.18
1:0:1339:U:H5''	1:0:1994:U:H1'	1.21	1.18
1:0:1938:U:O2'	1:0:1939:U:H5'	1.42	1.18
1:0:796:A:H5''	1:0:2568:A:OP1	1.44	1.16
1:0:1313:U:H4'	1:0:1314:A:O4'	1.46	1.15
1:0:635:C:H2'	1:0:636:G:H5''	1.27	1.15
1:0:104:C:H2'	1:0:105:G:H5''	1.26	1.14
1:0:1791:C:H2'	1:0:1792:C:H5''	1.25	1.13
1:0:1921:A:H2'	1:0:1922:U:H5''	1.18	1.13

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1572:C:H2'	1:0:1573:G:H5''	1.19	1.12
1:0:1463:A:H1'	1:0:1543:G:H22	1.14	1.12
1:0:1181:C:H2'	1:0:1182:U:H5''	1.33	1.11
1:0:2691:C:H3'	1:0:2692:A:H5''	1.25	1.11
1:0:1572:C:C2'	1:0:1573:G:H5''	1.82	1.10
1:0:922:A:H2'	1:0:923:A:H8	1.11	1.10
1:0:451:A:H2'	1:0:452:G:H8	1.12	1.09
1:0:1908:C:H2'	1:0:1909:U:H4'	1.30	1.09
1:0:2078:G:H22	1:0:2178:U:H1'	1.16	1.09
1:0:940:G:H3'	1:0:941:U:C5'	1.83	1.09
1:0:2548:G:H2'	1:0:2549:G:H5''	1.36	1.08
1:0:2414:A:H2'	1:0:2415:G:H5''	1.28	1.08
1:0:2447:G:O2'	1:0:2448:A:H5''	1.54	1.08
1:0:460:U:C4	1:0:592:G:H1'	1.90	1.06
1:0:2812:A:H2'	1:0:2813:G:C8	1.91	1.06
1:0:1636:G:H2'	1:0:1637:U:C6	1.91	1.05
1:0:128:C:H2'	1:0:129:A:H5''	1.11	1.05
1:0:1976:U:H2'	1:0:1977:C:H5'	1.37	1.05
1:0:2610:G:H5'	1:0:2866:A:H1'	1.38	1.04
1:0:616:U:H2'	1:0:617:U:H5''	1.39	1.03
1:0:1339:U:H5''	1:0:1994:U:C1'	1.88	1.03
1:0:2318:U:H2'	1:0:2319:G:H8	1.21	1.03
1:0:1198:C:H5''	1:0:1199:U:H4'	1.39	1.02
1:0:941:U:H2'	1:0:942:U:O4'	1.57	1.02
1:0:2484:G:H3'	1:0:2555:G:H22	1.23	1.02
1:0:2319:G:H2'	1:0:2320:G:C8	1.94	1.02
1:0:727:U:H2'	1:0:728:G:H5''	1.42	1.02
1:0:837:U:H2'	1:0:838:A:C8	1.94	1.01
1:0:103:U:H2'	1:0:104:C:H6	1.25	1.00
1:0:451:A:H2'	1:0:452:G:C8	1.95	1.00
1:0:772:G:H2'	1:0:773:G:H8	1.26	1.00
1:0:165:G:H2'	1:0:166:G:O4'	1.60	1.00
1:0:320:A:H2	1:0:340:G:HO2'	1.03	1.00
1:0:1202:U:H2'	1:0:1203:A:C8	1.97	1.00
1:0:128:C:C2'	1:0:129:A:H5''	1.92	1.00
1:0:1587:A:H2'	1:0:1588:A:H8	1.22	1.00
1:0:1587:A:H2'	1:0:1588:A:C8	1.97	0.99
1:0:58:C:H3'	1:0:59:G:H5''	1.37	0.99
1:0:2318:U:H2'	1:0:2319:G:C8	1.95	0.99
1:0:1016:C:C6	1:0:1154:A:H1'	1.96	0.99
1:0:490:A:O2'	1:0:491:A:H5'	1.62	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:820:U:H2'	1:0:821:A:H8	1.21	0.99
1:0:2051:U:H5'	1:0:2052:G:OP1	1.61	0.98
1:0:2607:C:H3'	1:0:2608:A:H5'	1.43	0.98
1:0:584:A:H4'	1:0:2038:C:H41	1.14	0.98
1:0:940:G:H3'	1:0:941:U:H5''	1.01	0.98
1:0:1924:C:H2'	1:0:1925:C:O4'	1.64	0.98
1:0:1094:C:H2'	1:0:1096:A:OP2	1.64	0.97
1:0:525:A:H2'	1:0:526:C:H5'	1.46	0.97
1:0:922:A:H2'	1:0:923:A:C8	1.98	0.97
1:0:1323:G:H1'	1:0:1627:C:C5'	1.94	0.97
1:0:2790:C:H2'	1:0:2791:C:H6	1.29	0.97
1:0:1252:C:O2'	1:0:1253:C:H5''	1.65	0.97
1:0:2509:A:H2'	1:0:2510:A:H5''	1.43	0.96
1:0:2306:A:H2'	1:0:2307:A:C8	2.00	0.96
1:0:847:C:H41	1:0:955:G:H21	1.12	0.96
1:0:940:G:C3'	1:0:941:U:H5''	1.93	0.95
1:0:1218:C:H2'	1:0:1219:C:C6	1.99	0.95
1:0:1911:A:H2'	1:0:1912:G:H5'	1.49	0.95
1:0:929:A:H3'	1:0:930:A:H5''	1.48	0.95
1:0:1304:U:O2'	1:0:1305:C:H5'	1.66	0.95
1:0:1066:G:H2'	1:0:1067:G:H4'	1.46	0.95
1:0:2437:G:C6	1:0:2469:G:H2'	2.01	0.95
1:0:1826:U:O2'	1:0:1952:A:H2'	1.66	0.95
1:0:34:U:H2'	1:0:35:G:H5'	1.50	0.94
1:0:1212:U:H2'	1:0:1213:U:H6	1.29	0.94
1:0:50:G:H2'	1:0:117:A:C2	2.02	0.94
1:0:2437:G:N1	1:0:2469:G:H2'	1.83	0.94
1:0:984:A:H2	1:0:1200:G:H1	1.01	0.94
1:0:525:A:C2'	1:0:526:C:H5'	1.97	0.93
1:0:1012:A:H2'	1:0:1013:G:H5'	1.50	0.93
1:0:71:A:H2	1:0:75:C:H1'	1.29	0.93
1:0:1698:C:O2'	1:0:1753:A:H2'	1.69	0.93
1:0:759:C:O2	1:0:2590:U:H4'	1.67	0.93
1:0:2369:U:H2'	1:0:2370:G:C8	2.04	0.93
1:0:2378:G:H22	1:0:2397:A:H1'	1.32	0.93
1:0:831:G:H21	1:0:1203:A:H62	1.11	0.93
1:0:2468:G:H2'	1:0:2469:G:H5'	1.51	0.93
1:0:773:G:H2'	1:0:774:A:H5'	1.50	0.93
1:0:689:A:C8	1:0:2422:C:H1'	2.04	0.93
1:0:1921:A:C2'	1:0:1922:U:H5''	1.99	0.93
1:0:195:A:H2'	1:0:196:A:O4'	1.69	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2199:C:H2'	1:0:2200:G:H8	1.32	0.93
1:0:1212:U:H2'	1:0:1213:U:C6	2.04	0.92
1:0:2713:A:H2'	1:0:2714:A:H8	1.33	0.92
1:0:1250:A:O2'	1:0:1251:G:H4'	1.70	0.92
1:0:612:G:O3'	1:0:613:A:H4'	1.69	0.92
1:0:1847:G:H2'	1:0:1848:U:H6	1.34	0.92
1:0:2691:C:H3'	1:0:2692:A:C5'	1.99	0.92
1:0:701:U:H4'	1:0:1771:A:H2	1.32	0.92
1:0:2824:C:H42	1:0:2842:C:H1'	1.33	0.92
1:0:2447:G:H22	1:0:2460:G:H2'	1.34	0.92
1:0:1065:A:H2'	1:0:1066:G:H8	1.33	0.92
1:0:1800:A:H2'	1:0:1802:A:N6	1.85	0.91
1:0:1198:C:H5''	1:0:1199:U:C4'	1.99	0.91
1:0:540:G:O2'	1:0:541:C:H4'	1.70	0.91
1:0:693:A:H2'	1:0:694:G:H8	1.35	0.91
1:0:652:C:N4	1:0:657:A:H61	1.68	0.91
1:0:1339:U:C5'	1:0:1994:U:H1'	2.01	0.91
1:0:1781:C:H2'	1:0:1782:A:C8	2.05	0.91
1:0:71:A:C2	1:0:75:C:H1'	2.05	0.91
1:0:1686:A:C2'	1:0:1687:C:H5'	2.01	0.91
1:0:1254:G:H2'	1:0:1255:A:H8	1.35	0.91
1:0:1323:G:H1'	1:0:1627:C:H5''	1.52	0.91
1:0:1181:C:C2'	1:0:1182:U:H5''	2.01	0.90
1:0:2811:G:H2'	1:0:2812:A:C8	2.05	0.90
2:9:102:A:O2'	2:9:103:A:H5'	1.69	0.90
1:0:652:C:H42	1:0:657:A:N6	1.69	0.90
1:0:2636:A:H62	1:0:2643:G:H21	1.20	0.90
2:9:25:G:H2'	2:9:26:G:O4'	1.70	0.90
1:0:942:U:O2'	1:0:943:U:H5'	1.70	0.90
1:0:1142:G:O6	1:0:2008:C:H1'	1.72	0.90
1:0:759:C:H42	1:0:2591:C:P	1.93	0.90
1:0:1391:A:H2'	1:0:1392:U:C5	2.06	0.90
1:0:1391:A:H2'	1:0:1392:U:H5	1.37	0.90
1:0:159:A:H2'	1:0:160:C:C6	2.06	0.90
1:0:1392:U:H2'	1:0:1393:G:H5'	1.53	0.89
1:0:1640:C:H2'	1:0:1641:C:H6	1.36	0.89
1:0:688:A:H1'	1:0:2422:C:O2'	1.73	0.89
1:0:1453:A:H2'	1:0:1454:U:H5'	1.54	0.89
1:0:918:A:H2'	1:0:919:U:C5'	2.02	0.89
1:0:635:C:C2'	1:0:636:G:H5''	2.03	0.89
1:0:2541:U:H2'	1:0:2542:U:O4'	1.72	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2811:G:H2'	1:0:2812:A:H8	1.36	0.89
1:0:2686:C:H2'	1:0:2687:G:C8	2.08	0.89
1:0:367:G:H2'	1:0:368:A:H5''	1.55	0.89
1:0:831:G:C2'	1:0:832:A:H5''	2.02	0.89
1:0:755:C:H2'	1:0:756:C:C6	2.08	0.89
1:0:2321:C:H2'	1:0:2322:U:O4'	1.72	0.88
1:0:1953:A:H1'	1:0:1955:G:H1'	1.55	0.88
1:0:681:A:H2'	1:0:683:A:N7	1.87	0.88
1:0:2414:A:C2'	1:0:2415:G:H5''	2.02	0.88
1:0:2812:A:H2'	1:0:2813:G:H8	1.36	0.88
1:0:2759:U:H5''	1:0:2760:G:OP2	1.74	0.88
1:0:1057:A:O5'	1:0:1058:G:H5'	1.73	0.88
1:0:1135:C:H2'	1:0:1136:G:H8	1.37	0.88
2:9:67:C:H2'	2:9:68:A:H5'	1.53	0.88
1:0:1541:G:N2	1:0:1562:G:H22	1.70	0.88
1:0:2397:A:H2'	1:0:2398:U:O4'	1.74	0.88
1:0:776:G:N3	1:0:776:G:H3'	1.90	0.87
1:0:1672:A:C2	1:0:1673:C:H1'	2.10	0.87
1:0:1674:C:H2'	1:0:1675:C:C6	2.09	0.87
2:9:92:G:H2'	2:9:93:G:H5'	1.56	0.87
1:0:958:G:H2'	1:0:959:C:C6	2.08	0.87
1:0:1463:A:H1'	1:0:1543:G:N2	1.89	0.87
1:0:2686:C:H2'	1:0:2687:G:H8	1.40	0.87
1:0:103:U:H2'	1:0:104:C:C6	2.10	0.86
1:0:1147:G:O2'	1:0:1148:G:H5'	1.76	0.86
1:0:853:C:H1'	1:0:950:G:H22	1.41	0.86
1:0:792:U:O2'	1:0:793:G:H5'	1.75	0.86
1:0:1459:U:OP1	1:0:1459:U:H3'	1.74	0.86
1:0:1683:G:H2'	1:0:1684:G:H5'	1.58	0.86
1:0:831:G:H21	1:0:1203:A:N6	1.74	0.86
1:0:128:C:H2'	1:0:129:A:C5'	2.02	0.86
1:0:1514:C:H2'	1:0:1515:U:O4'	1.76	0.86
1:0:2790:C:H2'	1:0:2791:C:C6	2.11	0.85
1:0:2697:G:O2'	1:0:2698:G:H5'	1.76	0.85
1:0:2769:C:H3'	1:0:2770:A:C8	2.11	0.85
1:0:2040:A:H2'	1:0:2041:A:H8	1.40	0.85
1:0:1202:U:H2'	1:0:1203:A:H8	1.40	0.85
1:0:1640:C:H2'	1:0:1641:C:C6	2.10	0.85
1:0:523:A:H2	1:0:591:G:H4'	1.40	0.85
2:9:67:C:C2'	2:9:68:A:H5'	2.06	0.85
1:0:964:A:H2'	1:0:965:G:C8	2.11	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:701:U:H4'	1:0:1771:A:C2	2.11	0.85
1:0:2329:C:O2'	1:0:2330:G:H5'	1.76	0.85
1:0:1807:A:H1'	1:0:1809:G:H1'	1.57	0.85
1:0:1686:A:H2'	1:0:1687:C:H5'	1.57	0.85
1:0:1765:C:H4'	1:0:1962:C:O2	1.77	0.85
1:0:2813:G:H2'	1:0:2814:G:H8	1.41	0.85
1:0:2558:C:H2'	1:0:2559:U:H6	1.40	0.85
1:0:1065:A:H2'	1:0:1066:G:C8	2.12	0.85
1:0:186:C:H2'	1:0:187:U:H6	1.39	0.85
1:0:734:G:H2'	1:0:735:G:H8	1.40	0.85
1:0:2162:C:H2'	1:0:2163:U:C6	2.12	0.85
1:0:1917:C:H2'	1:0:1918:G:O4'	1.76	0.85
1:0:1073:G:H2'	1:0:1074:G:H5''	1.58	0.84
1:0:584:A:C4'	1:0:2038:C:N4	2.39	0.84
1:0:2756:A:N6	1:0:2762:G:H1'	1.92	0.84
1:0:2820:C:H2'	1:0:2821:G:H8	1.38	0.84
1:0:104:C:C2'	1:0:105:G:H5''	2.07	0.84
1:0:2241:U:H4'	1:0:2307:A:C2	2.13	0.84
1:0:159:A:H2'	1:0:160:C:H6	1.42	0.84
1:0:1226:A:N1	1:0:1250:A:H1'	1.93	0.84
1:0:58:C:H3'	1:0:59:G:C5'	2.07	0.84
2:9:102:A:C2'	2:9:103:A:H5'	2.06	0.84
1:0:1454:U:H2'	1:0:1455:C:O4'	1.77	0.84
1:0:678:G:H2'	1:0:679:C:H6	1.43	0.84
1:0:1618:U:H6	1:0:1618:U:O5'	1.61	0.84
1:0:1682:A:H61	1:0:1977:C:H42	1.23	0.84
1:0:460:U:O4	1:0:592:G:H1'	1.77	0.84
1:0:799:C:H2'	1:0:800:U:C6	2.13	0.84
1:0:773:G:C2'	1:0:774:A:H5'	2.08	0.84
1:0:60:A:H61	1:0:91:A:N6	1.74	0.84
1:0:50:G:H2'	1:0:117:A:N1	1.93	0.83
1:0:1469:U:H5'	1:0:1470:G:N7	1.92	0.83
1:0:1664:G:H4'	1:0:1665:C:OP1	1.78	0.83
1:0:689:A:H8	1:0:2422:C:H1'	1.43	0.83
1:0:2764:U:H2'	1:0:2765:C:C6	2.13	0.83
1:0:931:G:H22	1:0:2247:A:H3'	1.42	0.83
1:0:2769:C:H3'	1:0:2770:A:H8	1.41	0.83
1:0:2820:C:H2'	1:0:2821:G:C8	2.13	0.83
1:0:1621:C:C4'	1:0:1626:A:N6	2.41	0.83
1:0:2329:C:H2'	1:0:2330:G:O4'	1.77	0.83
1:0:853:C:H1'	1:0:950:G:N2	1.93	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2787:A:H2'	1:0:2788:C:H6	1.43	0.83
1:0:1284:G:C4	1:0:1633:C:H5'	2.14	0.83
1:0:2494:C:H2'	1:0:2495:G:C8	2.13	0.83
1:0:1807:A:C1'	1:0:1809:G:H1'	2.08	0.83
1:0:2038:C:H42	1:0:2479:U:H4'	1.41	0.83
2:9:7:C:O2'	2:9:8:C:H5'	1.78	0.83
1:0:677:G:H1'	1:0:951:G:H5''	1.59	0.83
2:9:31:A:H2'	2:9:32:C:H6	1.43	0.83
1:0:1293:A:O2'	1:0:1294:G:H5'	1.78	0.83
1:0:175:C:H42	1:0:225:G:H1	1.26	0.83
1:0:1469:U:H5'	1:0:1470:G:C8	2.12	0.83
1:0:1900:U:O2'	1:0:1946:U:H5'	1.77	0.83
1:0:712:A:H2'	1:0:713:G:O4'	1.79	0.83
1:0:1959:U:H2'	1:0:1960:A:C8	2.14	0.83
1:0:428:A:H2'	1:0:429:C:C6	2.14	0.83
1:0:1645:U:H2'	1:0:1646:G:C8	2.13	0.83
1:0:550:C:H2'	1:0:551:A:C8	2.14	0.83
1:0:796:A:H4'	1:0:2567:G:O3'	1.78	0.83
1:0:1791:C:C2'	1:0:1792:C:H5''	2.08	0.83
1:0:1541:G:H22	1:0:1562:G:N2	1.77	0.83
1:0:2607:C:H3'	1:0:2608:A:C5'	2.09	0.82
1:0:2628:C:H2'	1:0:2629:U:C6	2.14	0.82
1:0:1010:U:H2'	1:0:1011:A:C8	2.14	0.82
1:0:867:G:H2'	1:0:868:U:C6	2.14	0.82
1:0:1052:C:H2'	1:0:1053:G:C8	2.14	0.82
1:0:1665:C:O2'	1:0:1666:G:H5'	1.79	0.82
1:0:1976:U:C2'	1:0:1977:C:H5'	2.10	0.82
1:0:1355:A:N7	1:0:1410:U:H1'	1.93	0.82
1:0:2266:A:H2'	1:0:2268:G:C8	2.13	0.82
1:0:483:A:H2'	1:0:484:G:H5''	1.60	0.82
1:0:1174:G:O2'	1:0:1175:A:H5'	1.78	0.82
1:0:538:A:O5'	1:0:538:A:H8	1.63	0.82
1:0:820:U:H2'	1:0:821:A:C8	2.13	0.82
1:0:841:G:H2'	1:0:842:A:C8	2.14	0.82
1:0:1883:A:H1'	1:0:1953:A:H62	1.43	0.82
1:0:2824:C:N4	1:0:2842:C:H1'	1.94	0.82
1:0:524:A:O2'	1:0:525:A:H5'	1.79	0.82
1:0:1291:G:O2'	1:0:1292:A:H5'	1.80	0.82
1:0:995:A:H5''	1:0:996:C:H5	1.43	0.82
1:0:2319:G:H2'	1:0:2320:G:H8	1.40	0.82
1:0:1198:C:C5'	1:0:1199:U:H4'	2.08	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1470:G:H22	1:0:2684:A:H1'	1.45	0.81
1:0:571:U:H2'	1:0:581:A:C8	2.15	0.81
1:0:1106:A:H2'	1:0:1107:A:C8	2.15	0.81
1:0:1655:C:OP1	1:0:2690:A:H5'	1.79	0.81
1:0:2658:A:O2'	1:0:2659:C:H5'	1.79	0.81
1:0:2012:A:N7	1:0:2014:A:H5'	1.94	0.81
1:0:2396:C:O2'	1:0:2397:A:H5'	1.81	0.81
1:0:2327:U:H2'	1:0:2328:G:H8	1.42	0.81
1:0:1252:C:C2'	1:0:1253:C:H5''	2.10	0.81
1:0:2078:G:N2	1:0:2178:U:H1'	1.95	0.81
1:0:1925:C:H2'	1:0:1926:U:H5	1.46	0.81
1:0:2642:G:O2'	1:0:2643:G:H5'	1.81	0.81
1:0:584:A:C4'	1:0:2038:C:H41	1.92	0.81
1:0:478:G:H2'	1:0:479:G:H8	1.43	0.81
1:0:2199:C:H2'	1:0:2200:G:C8	2.14	0.81
1:0:2194:A:C2'	1:0:2195:C:H5''	2.11	0.81
1:0:468:A:O2'	1:0:469:G:H4'	1.81	0.81
1:0:2499:C:H41	1:0:2521:A:H2	1.26	0.81
1:0:799:C:H2'	1:0:800:U:H6	1.44	0.81
1:0:652:C:H42	1:0:657:A:H61	0.85	0.81
1:0:2788:C:O2'	1:0:2789:U:H5'	1.80	0.81
1:0:2468:G:H2'	1:0:2469:G:C5'	2.11	0.81
1:0:494:A:H2'	1:0:495:C:O4'	1.81	0.81
1:0:918:A:C2'	1:0:919:U:H5''	2.10	0.81
1:0:1935:A:H2	1:0:2539:C:O2	1.64	0.81
1:0:1068:A:H2'	1:0:1069:G:C8	2.15	0.81
1:0:1791:C:H2'	1:0:1792:C:C5'	2.11	0.80
1:0:1323:G:H1'	1:0:1627:C:H5'	1.63	0.80
1:0:1807:A:O2'	1:0:1808:C:H4'	1.81	0.80
1:0:432:C:H2'	1:0:433:G:H8	1.46	0.80
1:0:1489:C:H3'	1:0:1490:U:H5'	1.61	0.80
1:0:2040:A:H2'	1:0:2041:A:C8	2.15	0.80
1:0:2433:G:H2'	1:0:2434:G:H8	1.44	0.80
1:0:755:C:H2'	1:0:756:C:H6	1.43	0.80
1:0:313:U:H2'	1:0:314:G:C8	2.16	0.80
1:0:867:G:H2'	1:0:868:U:H6	1.45	0.80
1:0:2508:G:H5''	1:0:2509:A:H5''	1.62	0.80
2:9:92:G:C2'	2:9:93:G:H5'	2.10	0.80
1:0:1479:G:H2'	1:0:1480:G:C8	2.16	0.80
1:0:1430:G:N2	1:0:1599:G:H1'	1.96	0.80
1:0:1727:C:H4'	1:0:2833:C:O2	1.81	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2185:U:H2'	1:0:2186:G:C8	2.16	0.80
1:0:1414:G:H21	1:0:1484:G:H21	1.27	0.80
1:0:58:C:H1'	1:0:72:A:C8	2.17	0.80
1:0:2856:U:H2'	1:0:2857:C:H6	1.47	0.80
1:0:2669:C:H41	14:L:15:SER:CA	1.94	0.80
1:0:2672:U:H2'	1:0:2673:G:H8	1.47	0.80
1:0:523:A:C2	1:0:591:G:H4'	2.16	0.79
1:0:2783:U:H2'	1:0:2784:A:H4'	1.64	0.79
1:0:1621:C:H4'	1:0:1626:A:H62	1.44	0.79
1:0:170:U:O2'	1:0:171:G:H5'	1.82	0.79
1:0:1764:A:C5	1:0:1821:A:H1'	2.17	0.79
1:0:693:A:H2'	1:0:694:G:C8	2.16	0.79
2:9:4:C:H2'	2:9:5:C:C6	2.17	0.79
1:0:2758:A:H4'	1:0:2759:U:H5	1.47	0.79
1:0:870:C:H2'	1:0:871:U:H6	1.47	0.79
1:0:2012:A:C5	1:0:2014:A:H5'	2.18	0.79
1:0:512:A:H2'	1:0:513:A:H5'	1.64	0.79
1:0:1719:G:H2'	1:0:1720:G:H8	1.47	0.79
1:0:969:U:N3	2:9:92:G:H4'	1.96	0.79
1:0:1655:C:H5''	1:0:2689:C:O2'	1.82	0.79
1:0:1692:C:H2'	1:0:1693:A:C5'	2.13	0.79
1:0:1222:G:H1'	1:0:1251:G:N2	1.98	0.79
1:0:1226:A:C2	1:0:1250:A:H1'	2.16	0.79
1:0:1004:A:H2'	1:0:1005:U:H5'	1.63	0.79
1:0:369:C:H2'	1:0:370:U:C6	2.18	0.79
1:0:317:U:H3	1:0:321:A:H62	1.28	0.79
1:0:1888:C:H5''	1:0:1889:G:H5''	1.65	0.79
1:0:1847:G:H2'	1:0:1848:U:C6	2.18	0.79
1:0:218:A:O2'	1:0:219:G:H4'	1.82	0.79
1:0:2469:G:H4'	1:0:2470:U:H5	1.46	0.79
1:0:1004:A:H2'	1:0:1005:U:C5'	2.13	0.79
1:0:986:A:C8	1:0:987:G:C8	2.71	0.79
1:0:1486:A:H2'	1:0:1487:C:C6	2.17	0.79
1:0:826:U:H2'	1:0:827:C:C6	2.18	0.78
1:0:2177:U:H2'	1:0:2178:U:C6	2.18	0.78
1:0:584:A:H2'	1:0:585:U:H6	1.48	0.78
1:0:927:C:C2'	1:0:928:G:H5'	2.13	0.78
1:0:1407:G:H2'	1:0:1408:A:O4'	1.83	0.78
1:0:1026:U:H2'	1:0:1027:C:C6	2.18	0.78
1:0:1474:A:H3'	1:0:1474:A:N3	1.98	0.78
1:0:60:A:H61	1:0:91:A:H61	1.31	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:11:G:H2'	1:0:12:U:O4'	1.84	0.78
1:0:2791:C:O2'	1:0:2792:C:H5'	1.83	0.78
1:0:1621:C:H4'	1:0:1626:A:H61	1.49	0.78
1:0:956:A:C2	1:0:2427:A:O2'	2.37	0.78
1:0:1341:G:H2'	1:0:1343:C:C4	2.19	0.78
1:0:1218:C:H2'	1:0:1219:C:H6	1.43	0.78
1:0:2817:A:C2	1:0:2851:G:C2	2.72	0.78
1:0:1989:C:O2'	1:0:1990:U:H5'	1.84	0.78
1:0:2448:A:H2'	1:0:2449:G:O4'	1.84	0.78
1:0:1453:A:C2'	1:0:1454:U:H5'	2.14	0.78
1:0:1409:U:H5''	1:0:1410:U:OP2	1.84	0.78
2:9:93:G:H2'	2:9:94:G:H8	1.49	0.78
1:0:2468:G:C2'	1:0:2469:G:H5'	2.14	0.77
1:0:1636:G:H2'	1:0:1637:U:H6	1.46	0.77
1:0:677:G:C1'	1:0:951:G:H5''	2.13	0.77
2:9:58:G:H4'	2:9:59:A:H5'	1.65	0.77
1:0:1674:C:H2'	1:0:1675:C:H6	1.48	0.77
1:0:2503:G:H2'	1:0:2504:G:H5''	1.65	0.77
1:0:343:A:H2'	1:0:345:U:OP2	1.84	0.77
1:0:922:A:C2'	1:0:923:A:H8	1.94	0.77
1:0:1254:G:H2'	1:0:1255:A:C8	2.18	0.77
1:0:1572:C:H2'	1:0:1573:G:C5'	2.10	0.77
1:0:1183:C:H42	1:0:1190:C:H42	1.33	0.77
1:0:932:G:H2'	1:0:933:G:C8	2.19	0.77
1:0:1685:A:H1'	1:0:1686:A:C2	2.20	0.77
1:0:640:C:H2'	1:0:641:G:O4'	1.85	0.77
1:0:1861:G:O2'	1:0:1862:C:H5'	1.85	0.77
1:0:1666:G:H2'	1:0:1667:A:H8	1.48	0.77
1:0:2005:U:H2'	1:0:2595:C:O2'	1.84	0.77
2:9:84:G:H2'	2:9:85:G:H8	1.48	0.77
1:0:776:G:H2'	1:0:778:G:H5''	1.67	0.77
1:0:1470:G:N2	1:0:2684:A:H1'	2.00	0.77
1:0:632:A:H2'	1:0:633:G:H5'	1.66	0.77
1:0:456:C:O2'	1:0:457:C:H5'	1.85	0.77
1:0:2201:G:H2'	1:0:2202:G:H8	1.50	0.77
1:0:1280:U:C2'	1:0:1281:A:H5'	2.15	0.77
1:0:1700:C:H2'	1:0:1701:C:C6	2.20	0.76
1:0:1479:G:H2'	1:0:1480:G:H8	1.48	0.76
1:0:2539:C:H42	1:0:2540:A:N6	1.84	0.76
1:0:1280:U:H2'	1:0:1281:A:H5'	1.67	0.76
1:0:1284:G:N3	1:0:1633:C:H5'	2.00	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:958:G:H2'	1:0:959:C:H6	1.47	0.76
1:0:2233:C:H2'	1:0:2234:G:H8	1.49	0.76
1:0:1299:A:N6	1:0:1302:C:C4	2.53	0.76
1:0:2548:G:C2'	1:0:2549:G:H5''	2.15	0.76
1:0:1323:G:C1'	1:0:1627:C:H5''	2.14	0.76
1:0:1747:G:H4'	1:0:1749:G:H1'	1.68	0.76
1:0:1911:A:C2'	1:0:1912:G:H5'	2.16	0.76
1:0:951:G:H2'	1:0:952:A:H5''	1.67	0.76
1:0:2770:A:H4'	1:0:2867:G:H22	1.48	0.76
1:0:79:G:H2'	1:0:80:A:H8	1.50	0.76
1:0:186:C:H2'	1:0:187:U:C6	2.21	0.76
1:0:1383:C:H2'	1:0:1384:G:C8	2.21	0.76
1:0:2498:U:H2'	1:0:2520:A:N1	2.01	0.76
1:0:977:G:H5'	1:0:2251:U:O2	1.86	0.76
1:0:2380:U:H2'	1:0:2381:A:H5'	1.66	0.76
1:0:195:A:H61	1:0:212:U:H4'	1.50	0.76
1:0:1355:A:C8	1:0:1410:U:H1'	2.21	0.76
1:0:2019:C:O2'	1:0:2020:G:H5'	1.84	0.76
1:0:1715:A:H1'	1:0:1717:A:C4'	2.15	0.76
1:0:2209:G:H2'	1:0:2210:C:H6	1.51	0.76
1:0:590:C:H2'	1:0:591:G:C8	2.21	0.76
1:0:1586:A:H2'	1:0:1587:A:C8	2.21	0.76
1:0:575:U:H2'	1:0:576:A:C8	2.21	0.76
1:0:81:C:H4'	1:0:307:C:H5'	1.68	0.76
1:0:560:G:H21	1:0:1233:A:H2	1.32	0.76
1:0:2764:U:H2'	1:0:2765:C:H6	1.48	0.75
1:0:520:C:H2'	1:0:521:U:O4'	1.86	0.75
1:0:1363:C:O2'	1:0:1364:C:H5'	1.85	0.75
1:0:1373:G:H2'	1:0:1374:G:H5'	1.67	0.75
1:0:521:U:H5	1:0:522:G:N3	1.84	0.75
1:0:1655:C:H4'	1:0:2689:C:O2	1.86	0.75
1:0:2241:U:H4'	1:0:2307:A:H2	1.48	0.75
1:0:837:U:H2'	1:0:838:A:H8	1.48	0.75
1:0:2194:A:H2'	1:0:2195:C:H5''	1.67	0.75
1:0:1760:G:H1'	1:0:1941:C:OP1	1.86	0.75
1:0:2570:C:H2'	1:0:2571:G:C8	2.21	0.75
1:0:2756:A:C6	1:0:2762:G:H1'	2.21	0.75
1:0:79:G:O2'	1:0:80:A:H5'	1.86	0.75
1:0:391:C:O2'	1:0:392:G:H5'	1.86	0.75
1:0:543:G:H2'	1:0:544:U:C6	2.21	0.75
1:0:2378:G:N2	1:0:2397:A:H1'	2.01	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1619:A:H2	1:0:1620:C:C4	2.04	0.75
1:0:991:A:H62	1:0:992:A:N6	1.85	0.75
32:0:2881:MUL:H14	32:0:2881:MUL:H10	1.67	0.75
1:0:703:A:H2'	1:0:704:G:H8	1.49	0.75
1:0:2758:A:H4'	1:0:2759:U:C5	2.22	0.75
2:9:31:A:H2'	2:9:32:C:C6	2.22	0.75
1:0:2733:A:O2'	1:0:2734:U:H5'	1.87	0.75
1:0:1541:G:H22	1:0:1562:G:H22	1.30	0.75
1:0:1348:C:H2'	1:0:1349:A:H8	1.52	0.75
1:0:785:U:H5'	1:0:1368:G:O2'	1.86	0.75
1:0:859:U:H4'	1:0:860:U:C5	2.21	0.74
1:0:442:A:H62	1:0:443:A:N6	1.85	0.74
1:0:488:A:OP1	1:0:488:A:H8	1.69	0.74
2:9:12:C:H2'	2:9:13:C:O4'	1.87	0.74
1:0:1750:A:H1'	1:0:2690:A:C2	2.22	0.74
1:0:796:A:C5'	1:0:2568:A:OP1	2.31	0.74
1:0:836:G:H2'	1:0:837:U:H6	1.52	0.74
2:9:6:C:H2'	2:9:7:C:C6	2.22	0.74
1:0:1489:C:H3'	1:0:1490:U:C5'	2.18	0.74
1:0:1362:A:H8	1:0:1362:A:O5'	1.70	0.74
1:0:1445:A:H2'	1:0:1446:U:O4'	1.86	0.74
1:0:976:C:H5'	1:0:2252:A:H1'	1.69	0.74
1:0:2832:G:N2	1:0:2835:A:OP2	2.21	0.74
1:0:2742:G:H2'	1:0:2743:G:C8	2.22	0.74
1:0:2829:A:H2'	1:0:2830:U:O4'	1.86	0.74
1:0:107:G:C6	1:0:108:G:N7	2.55	0.74
1:0:1660:G:H2'	1:0:1661:C:O4'	1.87	0.74
1:0:1791:C:H1'	1:0:1793:A:H5'	1.68	0.74
1:0:1970:G:O2'	1:0:1971:C:H5'	1.87	0.74
1:0:88:G:H3'	1:0:89:A:H5''	1.70	0.74
1:0:2185:U:H2'	1:0:2186:G:H8	1.51	0.74
1:0:633:G:O2'	1:0:634:G:H5'	1.88	0.74
1:0:392:G:N2	1:0:408:U:H3	1.86	0.74
1:0:1999:U:H2'	1:0:2000:U:O4'	1.87	0.74
1:0:1941:C:O2'	1:0:1942:G:H5'	1.87	0.74
1:0:1271:C:H2'	1:0:1272:G:C8	2.23	0.74
1:0:167:A:H2'	1:0:168:A:C8	2.23	0.74
1:0:83:A:H2	1:0:98:U:H1'	1.50	0.74
1:0:556:A:H2'	1:0:557:U:H5'	1.70	0.74
1:0:1164:C:H2'	1:0:1165:G:C8	2.23	0.74
1:0:1083:C:H42	1:0:1103:C:H41	1.36	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:759:C:C2	1:0:2590:U:H4'	2.22	0.73
1:0:1825:C:O2'	1:0:1826:U:H5'	1.88	0.73
2:9:36:A:H2'	2:9:46:G:O6	1.88	0.73
1:0:1503:G:H2'	1:0:1504:G:C8	2.23	0.73
1:0:579:G:H2'	1:0:2013:A:N6	2.03	0.73
1:0:1463:A:C1'	1:0:1543:G:H22	1.98	0.73
1:0:1125:G:H2'	1:0:1126:A:C8	2.22	0.73
1:0:1773:C:H6	1:0:1773:C:O5'	1.72	0.73
1:0:1222:G:C1'	1:0:1251:G:N2	2.52	0.73
1:0:537:C:H1'	1:0:2759:U:O2	1.88	0.73
1:0:875:G:N2	1:0:928:G:H1'	2.03	0.73
1:0:1621:C:H2'	1:0:1622:G:O4'	1.89	0.73
1:0:1312:G:H5''	1:0:1313:U:H5''	1.70	0.73
1:0:2484:G:H3'	1:0:2555:G:N2	2.00	0.73
1:0:1459:U:H2'	1:0:1475:U:O2'	1.88	0.73
1:0:2288:A:H2'	1:0:2289:A:O4'	1.88	0.73
1:0:708:G:H1	1:0:780:U:H3	1.36	0.73
1:0:1619:A:H2	1:0:1620:C:C5	2.06	0.73
1:0:1135:C:H2'	1:0:1136:G:C8	2.22	0.73
1:0:2491:C:H2'	1:0:2492:G:O4'	1.88	0.73
1:0:1271:C:H2'	1:0:1272:G:H8	1.54	0.73
1:0:1692:C:H2'	1:0:1693:A:H5'	1.70	0.73
1:0:1938:U:C2'	1:0:1939:U:H5'	2.19	0.73
1:0:2059:U:P	1:0:2217:G:H1	2.12	0.73
1:0:2418:A:H2	1:0:2564:U:H4'	1.54	0.73
1:0:2475:C:H2'	1:0:2476:A:H5'	1.70	0.73
1:0:2177:U:H2'	1:0:2178:U:H6	1.51	0.73
1:0:616:U:C2'	1:0:617:U:H5''	2.15	0.73
1:0:651:C:H2'	1:0:652:C:H5''	1.70	0.73
1:0:759:C:N3	1:0:2590:U:O3'	2.22	0.73
1:0:831:G:H2'	1:0:832:A:H5''	1.70	0.73
1:0:2079:A:H2'	1:0:2080:U:C6	2.24	0.73
1:0:2847:G:C2	1:0:2848:A:N6	2.57	0.72
1:0:2245:A:H4'	1:0:2246:A:C5	2.23	0.72
1:0:649:G:H2'	1:0:650:U:H6	1.54	0.72
1:0:400:U:H4'	1:0:401:G:C5	2.24	0.72
1:0:1110:G:H2'	1:0:1111:C:C6	2.24	0.72
1:0:1653:C:H2'	1:0:1654:A:C8	2.24	0.72
1:0:2052:G:H2'	1:0:2053:G:H5'	1.70	0.72
1:0:704:G:H2'	1:0:705:C:H6	1.53	0.72
1:0:808:C:H2'	1:0:809:C:C6	2.24	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:836:G:O2'	1:0:837:U:H5'	1.90	0.72
1:0:1691:G:H21	1:0:1694:A:H61	1.36	0.72
1:0:687:G:O2'	1:0:688:A:H5'	1.89	0.72
1:0:704:G:O2'	1:0:705:C:H5'	1.90	0.72
1:0:2515:G:H2'	1:0:2516:U:C6	2.24	0.72
2:9:78:A:H2'	2:9:79:U:C6	2.24	0.72
1:0:2639:A:H2'	1:0:2640:G:H8	1.54	0.72
1:0:677:G:H4'	1:0:951:G:O3'	1.90	0.72
1:0:457:C:H2'	1:0:458:G:O4'	1.88	0.72
1:0:79:G:H2'	1:0:80:A:C8	2.24	0.72
1:0:2656:G:C2	1:0:2711:G:C2	2.78	0.72
1:0:313:U:H2'	1:0:314:G:H8	1.51	0.72
1:0:2672:U:H2'	1:0:2673:G:C8	2.24	0.72
1:0:1008:G:O2'	1:0:1009:C:H5'	1.89	0.72
1:0:2592:U:H3'	1:0:2592:U:H6	1.55	0.72
1:0:1125:G:H2'	1:0:1126:A:H8	1.54	0.72
1:0:2466:G:O2'	1:0:2467:A:H5'	1.89	0.72
1:0:473:C:H2'	1:0:474:G:H8	1.54	0.72
1:0:2693:U:H5''	1:0:2694:G:OP2	1.90	0.72
1:0:2262:C:H2'	1:0:2263:C:H6	1.55	0.72
1:0:2639:A:H2'	1:0:2640:G:C8	2.24	0.72
1:0:1800:A:H2'	1:0:1802:A:H62	1.55	0.72
1:0:698:A:HO2'	1:0:700:C:H5	1.37	0.72
1:0:1190:C:H2'	1:0:1191:G:C8	2.24	0.72
1:0:976:C:H2'	1:0:977:G:C8	2.25	0.72
1:0:550:C:H2'	1:0:551:A:H8	1.55	0.72
1:0:2225:G:H2'	1:0:2226:A:C8	2.25	0.72
1:0:1140:A:C2	1:0:2549:G:O4'	2.43	0.71
1:0:757:U:O2	1:0:767:G:N2	2.23	0.71
1:0:2740:C:O2'	1:0:2741:G:H5'	1.90	0.71
1:0:357:A:H3'	1:0:358:C:H5'	1.71	0.71
1:0:1287:A:C6	1:0:1315:A:C2	2.77	0.71
1:0:167:A:H3'	1:0:181:A:C2	2.25	0.71
1:0:2447:G:O2'	1:0:2448:A:C5'	2.37	0.71
1:0:930:A:C8	2:9:82:U:H4'	2.25	0.71
1:0:366:U:H2'	1:0:367:G:C8	2.25	0.71
1:0:2162:C:H2'	1:0:2163:U:H6	1.50	0.71
1:0:2808:U:H3'	1:0:2809:A:H5'	1.70	0.71
1:0:498:C:C5	1:0:499:G:N7	2.58	0.71
1:0:1641:C:H3'	1:0:1642:G:H8	1.53	0.71
2:9:28:A:C2	2:9:29:C:H1'	2.26	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:9:29:C:H2'	2:9:30:C:C6	2.26	0.71
1:0:1313:U:H4'	1:0:1314:A:C1'	2.20	0.71
1:0:1199:U:H3'	1:0:1200:G:H5''	1.72	0.71
1:0:74:G:H2'	1:0:75:C:H6	1.55	0.71
1:0:2523:G:O2'	1:0:2524:G:H5'	1.90	0.71
1:0:2367:A:N7	1:0:2368:G:C6	2.58	0.71
1:0:471:A:C2	1:0:481:A:C4	2.78	0.71
1:0:1679:U:H2'	1:0:1680:U:O4'	1.89	0.71
1:0:1780:A:O5'	1:0:1780:A:H8	1.72	0.71
1:0:1223:G:N2	1:0:1225:G:H21	1.89	0.71
1:0:1248:G:O2'	1:0:1249:G:H5'	1.91	0.71
1:0:876:A:H4'	2:9:103:A:N3	2.05	0.71
1:0:1785:A:H4'	1:0:1883:A:C2	2.25	0.71
1:0:2824:C:H1'	1:0:2843:A:N1	2.05	0.71
1:0:2650:G:O2'	1:0:2651:U:H5'	1.90	0.71
1:0:1333:G:N2	1:0:1344:C:N4	2.38	0.71
1:0:2052:G:C2'	1:0:2053:G:H5'	2.20	0.71
1:0:322:A:H1'	1:0:343:A:C5	2.26	0.71
1:0:236:C:H2'	1:0:237:G:H8	1.56	0.71
1:0:2327:U:H2'	1:0:2328:G:C8	2.25	0.71
2:9:40:C:H2'	2:9:41:A:O4'	1.90	0.71
1:0:1517:C:H2'	1:0:1518:C:C6	2.26	0.71
1:0:1572:C:C3'	1:0:1573:G:H5''	2.20	0.71
2:9:4:C:H2'	2:9:5:C:H6	1.53	0.71
1:0:852:U:H2'	1:0:853:C:C6	2.26	0.71
1:0:1855:G:H2'	1:0:1856:U:C6	2.25	0.71
1:0:1497:C:O2'	1:0:1498:G:H5'	1.90	0.71
1:0:2015:G:H22	1:0:2038:C:H1'	1.55	0.71
1:0:1624:A:H2'	1:0:1625:A:H5''	1.72	0.71
1:0:181:A:H5''	1:0:182:G:OP1	1.90	0.71
1:0:2785:A:H2'	1:0:2786:G:O4'	1.90	0.71
1:0:17:G:H2'	1:0:18:U:C6	2.26	0.71
1:0:2739:G:O2'	1:0:2740:C:H5'	1.91	0.71
1:0:2633:A:H4'	1:0:2634:G:H4'	1.72	0.71
1:0:1975:G:N2	1:0:1978:U:H5	1.89	0.70
1:0:2627:G:H21	11:I:38:GLY:CA	2.04	0.70
1:0:984:A:H2	1:0:1200:G:N1	1.83	0.70
1:0:1671:A:H2'	1:0:1672:A:H8	1.55	0.70
1:0:2856:U:C6	1:0:2857:C:H5	2.09	0.70
1:0:1519:G:O2'	1:0:1520:G:H5'	1.91	0.70
1:0:1333:G:N2	1:0:1344:C:H41	1.89	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2532:G:C2	1:0:2533:U:H1'	2.25	0.70
1:0:798:G:O2'	1:0:1770:U:H4'	1.91	0.70
1:0:191:G:O2'	1:0:192:G:H5'	1.91	0.70
1:0:2856:U:H2'	1:0:2857:C:C6	2.26	0.70
1:0:139:A:H2'	1:0:140:G:H8	1.56	0.70
1:0:461:A:C2	1:0:462:G:C4	2.79	0.70
1:0:825:C:O2'	1:0:826:U:H5'	1.91	0.70
1:0:1800:A:H2'	1:0:1802:A:C6	2.27	0.70
1:0:545:C:O2'	1:0:546:A:H5'	1.92	0.70
1:0:1990:U:C4	1:0:1991:C:N4	2.60	0.70
1:0:1939:U:H1'	1:0:2531:U:OP1	1.92	0.70
1:0:2502:G:C8	1:0:2745:A:N7	2.59	0.70
1:0:772:G:H2'	1:0:773:G:C8	2.18	0.70
1:0:2216:G:O5'	1:0:2216:G:H8	1.74	0.70
1:0:743:A:C2	1:0:744:C:C2	2.80	0.70
1:0:998:C:H2'	1:0:999:A:O4'	1.91	0.70
1:0:1816:G:O2'	1:0:1817:U:H5'	1.92	0.70
1:0:759:C:N4	1:0:2591:C:P	2.64	0.70
1:0:957:G:O2'	1:0:958:G:H5'	1.91	0.70
1:0:81:C:H2'	1:0:82:G:O4'	1.91	0.70
1:0:369:C:H2'	1:0:370:U:H6	1.56	0.70
1:0:2474:G:H2'	1:0:2475:C:O4'	1.90	0.70
1:0:2527:G:H2'	1:0:2528:G:O4'	1.92	0.70
1:0:857:U:H2'	1:0:858:G:H5'	1.73	0.70
1:0:2839:G:H2'	1:0:2840:U:O4'	1.91	0.70
1:0:2563:U:H2'	1:0:2564:U:H5''	1.72	0.70
1:0:233:A:O2'	1:0:234:C:H5'	1.91	0.70
1:0:474:G:C2	1:0:478:G:C6	2.80	0.70
1:0:1715:A:O2'	1:0:1716:G:H3'	1.91	0.70
1:0:995:A:H5''	1:0:996:C:C5	2.26	0.70
1:0:441:A:H2'	1:0:442:A:O4'	1.90	0.70
1:0:977:G:O2'	1:0:978:U:H5'	1.91	0.70
1:0:1073:G:C2'	1:0:1074:G:H5''	2.21	0.70
1:0:2225:G:H2'	1:0:2226:A:H8	1.54	0.70
1:0:1135:C:O2'	1:0:1136:G:H5'	1.92	0.70
1:0:797:A:N6	1:0:2055:G:O2'	2.25	0.70
1:0:2583:U:C2'	1:0:2584:U:H5'	2.22	0.70
1:0:941:U:O2'	1:0:942:U:H5'	1.91	0.70
1:0:1514:C:H5'	1:0:1593:C:H4'	1.73	0.70
1:0:699:G:H2'	1:0:699:G:N3	2.07	0.70
1:0:457:C:C2'	1:0:458:G:H5'	2.21	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:436:A:OP1	1:0:437:G:H5''	1.91	0.70
1:0:1656:U:O2'	1:0:1657:A:H5''	1.91	0.69
1:0:1682:A:N6	1:0:1977:C:H42	1.89	0.69
1:0:708:G:H1'	1:0:1392:U:O2	1.92	0.69
1:0:1348:C:H2'	1:0:1349:A:C8	2.27	0.69
1:0:2587:G:H8	1:0:2587:G:O5'	1.75	0.69
2:9:42:U:H2'	2:9:45:C:H41	1.57	0.69
1:0:1663:C:H6	1:0:1663:C:O5'	1.75	0.69
1:0:317:U:H3	1:0:321:A:N6	1.91	0.69
1:0:60:A:N6	1:0:91:A:H61	1.89	0.69
1:0:1370:U:O2'	1:0:1371:G:H5'	1.92	0.69
1:0:31:C:H2'	1:0:32:C:C6	2.27	0.69
1:0:2212:U:H2'	1:0:2213:G:C8	2.28	0.69
1:0:1740:G:O2'	1:0:1741:G:H5'	1.91	0.69
1:0:2585:C:H2'	1:0:2586:G:H8	1.57	0.69
1:0:912:A:H2'	1:0:913:A:H8	1.57	0.69
1:0:310:A:O2'	1:0:311:A:H5'	1.91	0.69
1:0:334:G:N3	1:0:344:G:H1'	2.07	0.69
1:0:1411:C:H2'	1:0:1412:C:H6	1.58	0.69
1:0:83:A:C2	1:0:98:U:H1'	2.27	0.69
1:0:2372:A:H2'	1:0:2373:C:O4'	1.92	0.69
1:0:2660:C:O2'	1:0:2661:G:H5'	1.92	0.69
1:0:321:A:H2'	1:0:323:G:N7	2.08	0.69
1:0:1095:A:H2'	1:0:1096:A:O4'	1.92	0.69
1:0:2450:A:H2'	1:0:2451:G:O4'	1.92	0.69
1:0:330:C:H2'	1:0:331:U:C6	2.28	0.69
1:0:792:U:C2'	1:0:793:G:H5'	2.22	0.69
1:0:337:G:H2'	1:0:338:G:H8	1.57	0.69
1:0:638:A:O2'	1:0:639:G:H5'	1.92	0.69
1:0:1933:G:O5'	1:0:1933:G:H8	1.76	0.69
1:0:29:U:H2'	1:0:30:G:C8	2.28	0.69
1:0:763:A:C2	1:0:765:C:H1'	2.28	0.69
1:0:1151:U:H5''	1:0:1153:A:H5'	1.74	0.69
1:0:446:C:H2'	1:0:447:U:O4'	1.92	0.69
1:0:2508:G:C5'	1:0:2509:A:H5''	2.22	0.69
1:0:2558:C:H2'	1:0:2559:U:C6	2.27	0.69
1:0:1040:A:H2'	1:0:1041:G:H5'	1.73	0.69
1:0:1531:C:H2'	1:0:1532:A:H5'	1.75	0.69
1:0:1657:A:O2'	1:0:1658:A:H5'	1.91	0.68
1:0:1657:A:H2'	1:0:1658:A:O4'	1.93	0.68
1:0:143:A:H2'	1:0:144:U:O4'	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:969:U:C4	2:9:92:G:H4'	2.27	0.68
1:0:495:C:H2'	1:0:496:C:C6	2.28	0.68
1:0:1373:G:C2'	1:0:1374:G:H5'	2.23	0.68
1:0:2495:G:H2'	1:0:2496:C:O4'	1.93	0.68
1:0:2657:G:O2'	1:0:2658:A:H5'	1.93	0.68
1:0:1203:A:N3	1:0:1203:A:H2'	2.08	0.68
1:0:833:A:N3	1:0:954:U:O2'	2.26	0.68
1:0:322:A:N1	1:0:341:A:P	2.66	0.68
1:0:239:A:C5'	1:0:620:G:H5'	2.23	0.68
1:0:1700:C:H2'	1:0:1701:C:H6	1.56	0.68
1:0:1457:A:O2'	1:0:1458:A:H5'	1.93	0.68
1:0:429:C:H2'	1:0:430:C:C6	2.29	0.68
1:0:1451:C:H2'	1:0:1452:U:H6	1.58	0.68
1:0:2494:C:H2'	1:0:2495:G:H8	1.58	0.68
1:0:1144:U:O2'	1:0:1145:C:H5''	1.94	0.68
1:0:1281:A:C2	1:0:1996:A:C6	2.82	0.68
1:0:1858:C:H2'	1:0:1859:A:H8	1.58	0.68
1:0:1085:G:H2'	1:0:1086:C:C6	2.28	0.68
1:0:1317:G:O2'	1:0:1318:A:H5'	1.92	0.68
1:0:827:C:H2'	1:0:828:C:C6	2.28	0.68
1:0:1823:G:H2'	1:0:1824:C:C6	2.29	0.68
1:0:2299:A:H5''	1:0:2300:G:C4	2.28	0.68
1:0:2006:G:N2	1:0:2024:U:H1'	2.08	0.68
1:0:703:A:O2'	1:0:704:G:H5'	1.93	0.68
1:0:1182:U:H2'	1:0:1183:C:H5''	1.76	0.68
1:0:239:A:H5''	1:0:620:G:H5'	1.75	0.68
1:0:314:G:H2'	1:0:315:G:C8	2.28	0.68
1:0:1598:C:H2'	1:0:1599:G:O4'	1.93	0.68
1:0:392:G:H22	1:0:408:U:H3	1.42	0.68
1:0:1605:A:O2'	1:0:1606:C:H5'	1.93	0.68
1:0:1289:A:O2'	1:0:1290:A:H5'	1.93	0.68
1:0:2006:G:H2'	1:0:2007:G:H8	1.58	0.68
1:0:2642:G:H2'	1:0:2643:G:H8	1.59	0.68
1:0:394:U:O2'	1:0:395:G:H5'	1.94	0.68
1:0:2040:A:O2'	1:0:2041:A:H5'	1.94	0.68
1:0:1692:C:H2'	1:0:1693:A:O5'	1.94	0.68
1:0:2245:A:H4'	1:0:2246:A:C6	2.29	0.68
1:0:1436:G:H2'	1:0:1437:A:C8	2.29	0.68
1:0:698:A:C1'	1:0:700:C:H41	2.06	0.68
1:0:781:G:O2'	1:0:782:U:H5'	1.94	0.68
1:0:1926:U:O5'	1:0:1926:U:H6	1.76	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:915:C:H2'	1:0:916:U:C6	2.29	0.68
1:0:1017:C:O2'	1:0:1018:C:H5'	1.93	0.68
1:0:1656:U:C2'	1:0:1657:A:H5''	2.23	0.67
1:0:68:C:H1'	1:0:72:A:H1'	1.74	0.67
1:0:853:C:C2	1:0:950:G:N1	2.62	0.67
1:0:311:A:H2	1:0:334:G:N2	1.92	0.67
1:0:216:U:H6	1:0:216:U:O5'	1.77	0.67
1:0:1685:A:N7	1:0:1691:G:C5	2.62	0.67
1:0:1715:A:H1'	1:0:1717:A:O4'	1.94	0.67
1:0:1687:C:H1'	1:0:1976:U:O2	1.95	0.67
1:0:1769:U:N3	1:0:1775:A:H1'	2.09	0.67
1:0:2585:C:H2'	1:0:2586:G:C8	2.30	0.67
1:0:2585:C:O2'	1:0:2586:G:H5'	1.94	0.67
1:0:829:C:C2	1:0:1206:G:N2	2.63	0.67
1:0:344:G:C2	1:0:345:U:C6	2.82	0.67
1:0:2839:G:H2'	1:0:2840:U:C6	2.29	0.67
1:0:357:A:H3'	1:0:358:C:C5'	2.24	0.67
1:0:362:C:H2'	1:0:363:G:H4'	1.75	0.67
1:0:1927:U:H2'	1:0:1927:U:O2	1.93	0.67
1:0:1076:U:H6	1:0:1076:U:O5'	1.78	0.67
1:0:2645:C:H2'	1:0:2646:C:H5'	1.76	0.67
1:0:2475:C:C2'	1:0:2476:A:H5'	2.24	0.67
1:0:571:U:N3	1:0:581:A:N6	2.43	0.67
1:0:2499:C:H2'	1:0:2500:C:H6	1.59	0.67
1:0:1764:A:N7	1:0:1821:A:H1'	2.08	0.67
1:0:297:A:H2'	1:0:298:C:C6	2.28	0.67
1:0:417:C:O5'	1:0:417:C:H6	1.76	0.67
1:0:1654:A:H4'	1:0:2690:A:O2'	1.94	0.67
1:0:2502:G:H1'	1:0:2745:A:C8	2.29	0.67
1:0:1000:G:P	1:0:1168:G:H4'	2.35	0.67
1:0:861:G:H22	1:0:943:U:H4'	1.59	0.67
1:0:1212:U:C2	1:0:1213:U:C5	2.83	0.67
1:0:2824:C:H42	1:0:2842:C:C1'	2.06	0.67
2:9:45:C:H42	2:9:47:A:H62	1.40	0.67
1:0:589:C:N4	1:0:590:C:N4	2.43	0.67
1:0:2583:U:O2'	1:0:2584:U:H5'	1.95	0.67
1:0:235:C:H2'	1:0:236:C:H5'	1.77	0.67
1:0:71:A:H2	1:0:75:C:C1'	2.07	0.67
1:0:872:G:O2'	1:0:2247:A:C5	2.46	0.67
1:0:1068:A:H2'	1:0:1069:G:H8	1.58	0.67
2:9:30:C:H6	2:9:30:C:O5'	1.78	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:425:A:N7	1:0:2390:A:H2	1.92	0.67
1:0:2159:A:H8	1:0:2159:A:O5'	1.78	0.67
1:0:600:G:H3'	1:0:601:A:C5'	2.25	0.67
1:0:1012:A:C2'	1:0:1013:G:H5'	2.23	0.67
1:0:516:G:O2'	1:0:517:A:C8	2.47	0.67
1:0:915:C:H2'	1:0:916:U:H6	1.59	0.67
1:0:1314:A:N6	1:0:1316:G:C4	2.63	0.67
1:0:1754:G:H4'	1:0:1754:G:OP1	1.95	0.67
1:0:322:A:OP1	1:0:322:A:H8	1.77	0.67
1:0:322:A:N1	1:0:341:A:OP1	2.27	0.67
1:0:1889:G:H1	1:0:1908:C:N4	1.93	0.67
1:0:14:A:C2	1:0:2603:G:N2	2.63	0.67
1:0:633:G:H2'	1:0:634:G:O4'	1.94	0.67
1:0:1011:A:C2	1:0:1166:A:C6	2.83	0.67
1:0:2231:G:O2'	1:0:2232:G:H5'	1.94	0.67
1:0:716:U:H2'	1:0:717:G:O4'	1.95	0.67
1:0:622:U:C2'	1:0:623:G:H5'	2.25	0.67
1:0:575:U:H2'	1:0:576:A:H8	1.60	0.66
1:0:1290:A:H2'	1:0:1291:G:C8	2.31	0.66
1:0:1715:A:H1'	1:0:1717:A:H4'	1.77	0.66
1:0:1779:C:O2'	1:0:1780:A:H5'	1.96	0.66
1:0:788:G:H2'	1:0:807:A:C5	2.29	0.66
1:0:877:G:O2'	1:0:878:C:H5'	1.93	0.66
1:0:1960:A:O2'	1:0:1961:A:H5'	1.95	0.66
1:0:1727:C:H4'	1:0:2833:C:C2	2.30	0.66
1:0:473:C:H2'	1:0:474:G:C8	2.30	0.66
1:0:545:C:O2	1:0:568:G:N2	2.27	0.66
1:0:822:G:O2'	1:0:823:U:H5'	1.95	0.66
1:0:2539:C:N4	1:0:2540:A:H62	1.93	0.66
1:0:1784:C:O2'	1:0:1785:A:H5'	1.95	0.66
1:0:1407:G:H4'	1:0:1620:C:OP1	1.94	0.66
1:0:457:C:O2'	1:0:458:G:H5'	1.95	0.66
1:0:42:G:N2	1:0:450:C:C2	2.63	0.66
1:0:854:G:H2'	1:0:855:G:C8	2.31	0.66
1:0:1755:G:H2'	1:0:1756:C:C6	2.30	0.66
1:0:2763:U:H2'	1:0:2764:U:C6	2.31	0.66
1:0:2262:C:H2'	1:0:2263:C:C6	2.30	0.66
1:0:1151:U:H5''	1:0:1153:A:C5'	2.24	0.66
1:0:1678:G:O2'	1:0:1679:U:H5'	1.95	0.66
1:0:2703:C:O2'	1:0:2704:U:H5'	1.95	0.66
1:0:1579:G:O2'	1:0:1580:C:H5'	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:9:77:G:H2'	2:9:78:A:O4'	1.96	0.66
1:0:2173:G:H2'	1:0:2174:G:O4'	1.95	0.66
1:0:2443:C:C2	1:0:2466:G:N2	2.63	0.66
1:0:1284:G:N2	1:0:1633:C:O4'	2.29	0.66
1:0:1641:C:H2'	1:0:1642:G:O4'	1.96	0.66
1:0:704:G:H2'	1:0:705:C:C6	2.30	0.66
1:0:727:U:C2'	1:0:728:G:H5''	2.23	0.66
1:0:1262:U:H6	1:0:1262:U:H3'	1.59	0.66
1:0:2713:A:H2'	1:0:2714:A:C8	2.23	0.66
1:0:2093:G:H2'	1:0:2094:C:H6	1.60	0.66
1:0:827:C:H2'	1:0:828:C:H6	1.60	0.66
1:0:186:C:O2'	1:0:187:U:H5'	1.94	0.66
1:0:1327:C:H6	1:0:1327:C:O5'	1.79	0.66
1:0:757:U:C2	1:0:767:G:N2	2.63	0.66
1:0:1585:A:H2'	1:0:1586:A:C8	2.30	0.66
1:0:2196:U:H2'	1:0:2197:U:C6	2.31	0.66
1:0:2198:U:C3'	1:0:2199:C:H5''	2.26	0.66
2:9:58:G:H4'	2:9:59:A:C5'	2.26	0.66
1:0:1466:C:H2'	1:0:1467:U:O4'	1.96	0.66
1:0:2687:G:O2'	1:0:2688:G:H5'	1.95	0.66
1:0:841:G:N2	1:0:2226:A:H4'	2.11	0.66
1:0:1658:A:C8	1:0:1659:G:N7	2.63	0.66
1:0:2660:C:N4	1:0:2704:U:C5	2.64	0.66
1:0:981:C:H2'	1:0:982:C:H6	1.61	0.66
1:0:1577:G:O2'	1:0:1578:U:H5'	1.96	0.66
1:0:486:U:C2'	1:0:487:G:H5'	2.25	0.66
1:0:1117:G:H2'	1:0:1118:G:H8	1.61	0.66
1:0:2758:A:C4'	1:0:2759:U:H5	2.08	0.66
1:0:1436:G:H2'	1:0:1437:A:H8	1.59	0.66
1:0:1928:G:N2	1:0:1929:U:C2	2.64	0.66
1:0:940:G:N7	1:0:941:U:C6	2.64	0.66
1:0:966:A:N6	1:0:967:G:C2	2.64	0.66
1:0:1429:A:H1'	1:0:1603:A:C6	2.31	0.66
1:0:632:A:C2'	1:0:633:G:H5'	2.26	0.66
1:0:1743:C:H5'	1:0:2836:U:O2'	1.96	0.66
1:0:1231:A:C4	1:0:1245:G:N2	2.64	0.66
1:0:176:A:C2	1:0:2413:A:C2	2.84	0.65
1:0:1831:G:H2'	1:0:1832:G:H5'	1.78	0.65
1:0:2539:C:N4	1:0:2540:A:N6	2.43	0.65
1:0:876:A:O2'	1:0:877:G:H5'	1.96	0.65
1:0:1698:C:O2'	1:0:1753:A:C2'	2.44	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1486:A:H2'	1:0:1487:C:H6	1.58	0.65
1:0:991:A:C8	1:0:992:A:N7	2.64	0.65
1:0:604:U:H2'	1:0:605:G:H8	1.61	0.65
2:9:65:A:H2'	2:9:66:G:C8	2.32	0.65
1:0:2708:U:C4	1:0:2709:C:N4	2.65	0.65
1:0:305:A:H2'	1:0:306:G:O4'	1.96	0.65
1:0:2447:G:H22	1:0:2460:G:C2'	2.07	0.65
1:0:927:C:O2'	1:0:928:G:H5'	1.95	0.65
1:0:366:U:H2'	1:0:367:G:H8	1.61	0.65
1:0:2038:C:H5'	1:0:2039:G:H5''	1.77	0.65
1:0:1540:C:O2'	1:0:1541:G:H5'	1.95	0.65
1:0:1741:G:O2'	1:0:1742:G:H5'	1.96	0.65
1:0:1436:G:O5'	1:0:1436:G:H8	1.80	0.65
1:0:818:G:O6	1:0:2051:U:C5'	2.45	0.65
1:0:759:C:H5''	1:0:761:G:O4'	1.97	0.65
1:0:443:A:O2'	1:0:444:U:H5'	1.97	0.65
1:0:490:A:N7	1:0:492:G:O4'	2.29	0.65
1:0:2491:C:H3'	1:0:2492:G:H5''	1.79	0.65
1:0:2082:C:C4	1:0:2174:G:N2	2.64	0.65
1:0:1312:G:H4'	1:0:1314:A:N3	2.10	0.65
1:0:1969:G:O2'	1:0:1970:G:H5'	1.97	0.65
1:0:830:C:H2'	1:0:831:G:H8	1.61	0.65
1:0:2810:A:O5'	1:0:2810:A:H8	1.79	0.65
1:0:871:U:O2	1:0:2247:A:H2'	1.97	0.65
1:0:14:A:C2	1:0:2604:G:H1'	2.32	0.65
1:0:2122:G:H2'	1:0:2123:G:C8	2.31	0.65
1:0:1581:C:N4	1:0:1583:A:H1'	2.11	0.65
1:0:847:C:H41	1:0:955:G:N2	1.91	0.65
1:0:2198:U:H3'	1:0:2199:C:H5''	1.79	0.65
1:0:2234:G:H2'	1:0:2235:G:O4'	1.97	0.65
1:0:2426:G:O5'	1:0:2480:C:H5	1.78	0.65
1:0:2048:C:O2'	1:0:2049:C:H5'	1.97	0.65
1:0:1287:A:C5	1:0:1315:A:C2	2.85	0.65
1:0:1161:U:H2'	1:0:1162:A:C8	2.31	0.65
1:0:927:C:H2'	1:0:928:G:H5'	1.77	0.65
1:0:2030:U:H2'	1:0:2031:A:H8	1.61	0.65
1:0:1280:U:O2'	1:0:1281:A:H5'	1.96	0.65
1:0:2278:A:H2'	1:0:2279:G:C8	2.31	0.65
1:0:1271:C:O2'	1:0:1272:G:H5'	1.97	0.65
1:0:2015:G:N2	1:0:2038:C:H1'	2.12	0.65
1:0:1288:A:H2'	1:0:1289:A:O4'	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1992:G:O2'	1:0:1993:G:H5'	1.97	0.65
1:0:2024:U:H6	1:0:2024:U:O5'	1.78	0.65
1:0:429:C:H2'	1:0:430:C:H6	1.62	0.65
1:0:2266:A:C2	1:0:2268:G:H1'	2.32	0.65
1:0:2080:U:H2'	1:0:2081:U:C6	2.32	0.65
1:0:1299:A:N6	1:0:1302:C:C5	2.65	0.65
1:0:635:C:O2'	1:0:670:U:H5''	1.97	0.65
1:0:2755:A:O2'	1:0:2756:A:H5'	1.96	0.65
1:0:1644:G:O2'	1:0:1645:U:H5'	1.97	0.65
1:0:76:C:H6	1:0:76:C:H5'	1.62	0.65
1:0:587:A:H2'	1:0:588:G:H5''	1.79	0.64
1:0:2511:G:H2'	1:0:2512:A:O4'	1.97	0.64
1:0:1268:U:H5'	1:0:1269:G:H5''	1.78	0.64
1:0:2442:C:C2	1:0:2467:A:C2	2.84	0.64
1:0:681:A:N6	1:0:683:A:H2'	2.11	0.64
1:0:604:U:H2'	1:0:605:G:C8	2.32	0.64
1:0:2526:U:C5	1:0:2545:A:N7	2.65	0.64
1:0:868:U:H2'	1:0:869:C:C6	2.33	0.64
1:0:936:A:O2'	1:0:937:C:H5'	1.97	0.64
1:0:1673:C:H42	1:0:1987:G:H1	1.44	0.64
1:0:532:A:H2'	1:0:533:C:H6	1.60	0.64
1:0:804:C:H2'	1:0:804:C:O2	1.96	0.64
1:0:2748:C:H2'	1:0:2749:A:C8	2.31	0.64
1:0:1514:C:O5'	1:0:1514:C:H6	1.80	0.64
1:0:574:C:H2'	1:0:575:U:H6	1.61	0.64
1:0:2691:C:OP2	1:0:2691:C:H4'	1.98	0.64
1:0:335:A:H2'	1:0:336:A:H5'	1.79	0.64
1:0:2404:A:H5'	1:0:2406:C:C5'	2.28	0.64
1:0:584:A:H5'	1:0:2038:C:C5	2.33	0.64
1:0:831:G:O2'	1:0:832:A:H5''	1.98	0.64
1:0:2618:A:H1'	1:0:2758:A:C2	2.33	0.64
1:0:486:U:O2'	1:0:487:G:H5'	1.97	0.64
1:0:486:U:H2'	1:0:487:G:H5'	1.80	0.64
1:0:2809:A:H62	1:0:2854:G:H1'	1.63	0.64
1:0:622:U:H2'	1:0:623:G:O4'	1.97	0.64
1:0:1319:C:H2'	1:0:1320:A:H8	1.63	0.64
1:0:1643:A:H1'	1:0:1657:A:C2	2.33	0.64
1:0:170:U:H2'	1:0:171:G:H8	1.62	0.64
1:0:755:C:C2	1:0:756:C:C5	2.86	0.64
1:0:944:A:H2'	1:0:945:G:H8	1.61	0.64
1:0:239:A:H2'	1:0:240:U:O4'	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:9:61:A:O5'	2:9:61:A:H8	1.81	0.64
1:0:2233:C:H2'	1:0:2234:G:C8	2.32	0.64
1:0:2862:G:N2	1:0:2863:U:C2	2.66	0.64
1:0:2181:A:H2'	1:0:2182:A:H5'	1.78	0.64
1:0:972:C:N4	1:0:2014:A:N1	2.46	0.64
1:0:2447:G:O5'	1:0:2447:G:H8	1.79	0.64
1:0:620:G:O2'	1:0:621:U:H5'	1.98	0.64
1:0:487:G:H1'	1:0:515:A:C2	2.32	0.64
1:0:962:C:N3	1:0:963:G:N7	2.45	0.64
1:0:678:G:H2'	1:0:679:C:C6	2.31	0.64
1:0:429:C:O2'	1:0:430:C:H5'	1.96	0.64
1:0:622:U:H2'	1:0:623:G:H5'	1.80	0.64
1:0:28:A:H1'	1:0:523:A:N1	2.13	0.64
1:0:1687:C:O2'	1:0:1977:C:H4'	1.98	0.64
1:0:2499:C:N4	1:0:2521:A:H2	1.96	0.64
1:0:1004:A:C2'	1:0:1005:U:H5''	2.27	0.64
1:0:1004:A:C2'	1:0:1005:U:C5'	2.75	0.64
1:0:815:A:H2'	1:0:816:U:O4'	1.97	0.64
1:0:330:C:H2'	1:0:331:U:H6	1.61	0.64
1:0:595:A:H62	1:0:1264:C:H42	1.45	0.64
1:0:1193:G:H2'	1:0:1194:U:H6	1.60	0.64
1:0:1287:A:C2	1:0:1662:G:O4'	2.51	0.64
1:0:1316:G:O2'	1:0:1317:G:H5'	1.98	0.64
1:0:225:G:C5'	1:0:226:C:H5'	2.28	0.64
1:0:163:A:H2'	1:0:164:G:H8	1.61	0.64
1:0:1586:A:H2'	1:0:1587:A:H8	1.61	0.64
1:0:967:G:H21	1:0:970:A:H8	1.45	0.64
1:0:1105:U:H2'	1:0:1107:A:OP2	1.99	0.64
1:0:2201:G:H2'	1:0:2202:G:C8	2.32	0.64
1:0:555:U:OP2	1:0:1233:A:N6	2.31	0.64
1:0:478:G:O2'	1:0:479:G:H5'	1.98	0.63
1:0:573:C:H2'	1:0:574:C:O4'	1.98	0.63
1:0:1313:U:H1'	1:0:1642:G:N2	2.13	0.63
1:0:225:G:OP2	1:0:226:C:C6	2.51	0.63
1:0:1073:G:H2'	1:0:1074:G:C5'	2.28	0.63
1:0:2104:G:H2'	1:0:2105:U:C6	2.33	0.63
1:0:594:G:C6	1:0:1264:C:C5	2.87	0.63
1:0:1279:G:H1'	1:0:1995:G:O6	1.98	0.63
1:0:1706:A:C2	1:0:1707:A:C4	2.86	0.63
1:0:982:C:H4'	1:0:994:A:O2'	1.97	0.63
1:0:1900:U:H2'	1:0:1901:A:H5'	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2862:G:O2'	1:0:2863:U:H5'	1.98	0.63
1:0:953:G:C6	1:0:954:U:N3	2.66	0.63
1:0:1191:G:H2'	1:0:1192:A:C8	2.34	0.63
1:0:1458:A:H3'	1:0:1459:U:C5'	2.29	0.63
1:0:2563:U:H6	1:0:2563:U:O5'	1.82	0.63
1:0:1300:A:C2	1:0:1301:U:C2	2.86	0.63
1:0:1312:G:HO2'	1:0:1314:A:H2	1.45	0.63
1:0:798:G:N2	1:0:799:C:C1'	2.60	0.63
1:0:1888:C:H5''	1:0:1889:G:C5'	2.28	0.63
1:0:1183:C:N4	1:0:1190:C:H42	1.95	0.63
1:0:1699:A:C5	1:0:1748:U:H1'	2.34	0.63
1:0:855:G:H2'	1:0:856:A:C8	2.34	0.63
1:0:2431:C:O2'	1:0:2432:A:H5'	1.98	0.63
1:0:2813:G:O2'	1:0:2814:G:H5'	1.98	0.63
1:0:445:A:O2'	1:0:446:C:H5'	1.99	0.63
1:0:493:A:N3	1:0:516:G:N2	2.47	0.63
1:0:1618:U:O5'	1:0:1618:U:C6	2.48	0.63
1:0:2005:U:H5''	1:0:2006:G:OP1	1.98	0.63
1:0:2567:G:O6	1:0:2586:G:C2	2.52	0.63
1:0:120:G:O2'	1:0:121:G:H5'	1.99	0.63
1:0:1564:U:O2'	1:0:1565:G:H5'	1.99	0.63
1:0:1358:C:H2'	1:0:1359:G:H5''	1.81	0.63
1:0:1724:C:OP2	1:0:1724:C:H3'	1.98	0.63
1:0:139:A:H2'	1:0:140:G:C8	2.34	0.63
2:9:65:A:H2'	2:9:66:G:H8	1.64	0.63
1:0:2049:C:H2'	1:0:2050:G:H5'	1.81	0.63
1:0:2434:G:N1	1:0:2477:C:N4	2.47	0.63
1:0:473:C:O2'	1:0:474:G:H5'	1.99	0.63
1:0:342:G:C6	1:0:1222:G:N1	2.60	0.63
2:9:7:C:H2'	2:9:8:C:H6	1.64	0.63
1:0:357:A:C3'	1:0:358:C:H5'	2.29	0.63
2:9:29:C:H2'	2:9:30:C:C5	2.34	0.63
1:0:1591:U:H2'	1:0:1592:U:O4'	1.99	0.63
1:0:1737:G:H2'	1:0:1738:U:C6	2.33	0.63
1:0:1653:C:O2	1:0:1751:A:H2	1.82	0.63
1:0:1685:A:H61	1:0:1693:A:H61	1.47	0.63
1:0:955:G:H5'	1:0:956:A:H5''	1.79	0.63
1:0:929:A:H3'	1:0:930:A:C5'	2.26	0.63
1:0:1997:A:H2'	1:0:1998:A:C8	2.34	0.63
1:0:2473:G:O2'	1:0:2474:G:H5'	1.98	0.62
1:0:1994:U:H2'	1:0:1995:G:H5'	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1982:C:H4'	1:0:2703:C:O2	1.99	0.62
1:0:1764:A:O2'	1:0:1765:C:H5'	1.99	0.62
1:0:798:G:H2'	1:0:798:G:N3	2.14	0.62
1:0:2810:A:H4'	1:0:2811:G:C8	2.34	0.62
1:0:194:G:C6	1:0:444:U:O2	2.52	0.62
1:0:1800:A:C2	1:0:1802:A:N1	2.66	0.62
1:0:432:C:H2'	1:0:433:G:C8	2.31	0.62
1:0:1347:C:O2'	1:0:1348:C:H5'	1.99	0.62
1:0:2822:U:C5	1:0:2823:G:C4	2.87	0.62
1:0:665:A:H3'	1:0:666:U:C5'	2.29	0.62
1:0:2469:G:H5''	1:0:2470:U:OP1	1.99	0.62
1:0:699:G:H5'	1:0:700:C:OP2	1.98	0.62
1:0:491:A:N3	1:0:491:A:H2'	2.14	0.62
1:0:2198:U:H2'	1:0:2199:C:H5''	1.82	0.62
1:0:2824:C:O2	1:0:2843:A:C4	2.51	0.62
1:0:2721:A:H2'	1:0:2722:C:O4'	1.98	0.62
1:0:1685:A:N3	1:0:1686:A:C2	2.68	0.62
1:0:1196:G:O2'	1:0:1197:U:H5'	1.98	0.62
1:0:636:G:H2'	1:0:637:G:H5'	1.80	0.62
1:0:2034:A:H5'	1:0:2557:G:O4'	2.00	0.62
1:0:2595:C:H2'	1:0:2596:C:O4'	1.99	0.62
1:0:168:A:H2'	1:0:169:C:C6	2.34	0.62
1:0:932:G:C6	1:0:933:G:C6	2.88	0.62
1:0:2642:G:H2'	1:0:2643:G:C8	2.35	0.62
1:0:1474:A:N1	1:0:1476:G:C8	2.68	0.62
1:0:1532:A:H2'	1:0:1533:G:H8	1.64	0.62
1:0:1876:C:C5	1:0:1877:C:C5	2.87	0.62
1:0:2506:C:O2'	1:0:2507:U:H5'	1.99	0.62
1:0:2434:G:N2	1:0:2435:C:C2	2.68	0.62
1:0:1697:U:N3	1:0:1755:G:OP2	2.32	0.62
1:0:173:A:C4	1:0:818:G:N2	2.67	0.62
1:0:1541:G:N2	1:0:1562:G:N2	2.38	0.62
1:0:2787:A:H2'	1:0:2788:C:C6	2.32	0.62
1:0:2426:G:N1	1:0:2483:U:O4	2.31	0.62
1:0:414:A:H2'	1:0:415:A:O4'	2.00	0.62
1:0:2876:C:O2'	1:0:2877:A:H5'	1.99	0.62
1:0:2046:C:C2'	1:0:2047:C:O5'	2.47	0.62
1:0:2057:U:H2'	1:0:2058:U:H6	1.64	0.62
1:0:1392:U:C2'	1:0:1393:G:H5'	2.29	0.62
1:0:1281:A:C2	1:0:1996:A:N1	2.68	0.62
2:9:14:C:H4'	2:9:17:A:H61	1.63	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1276:U:H2'	1:0:1277:G:C8	2.34	0.62
1:0:2663:U:N3	1:0:2664:G:N7	2.48	0.62
1:0:2059:U:OP2	1:0:2217:G:N2	2.30	0.62
1:0:615:C:H1'	1:0:671:A:H4'	1.81	0.62
1:0:2859:U:C5	1:0:2860:C:C2	2.87	0.62
1:0:2306:A:H2'	1:0:2307:A:H8	1.63	0.62
1:0:1760:G:O2'	1:0:1761:G:H5'	2.00	0.62
1:0:311:A:C2	1:0:334:G:N2	2.67	0.62
1:0:2758:A:C5'	1:0:2759:U:H5	2.13	0.62
1:0:1147:G:H2'	1:0:1148:G:H8	1.64	0.62
1:0:581:A:C2	1:0:582:G:H1'	2.34	0.62
1:0:2534:U:C5	1:0:2535:C:C4	2.88	0.62
1:0:333:A:O2'	1:0:350:U:H2'	2.00	0.62
1:0:873:U:O5'	1:0:2247:A:C2	2.52	0.62
1:0:115:G:C6	1:0:117:A:N6	2.68	0.62
1:0:2748:C:H2'	1:0:2749:A:H8	1.64	0.62
1:0:2800:C:O2'	1:0:2801:A:H5'	2.00	0.62
1:0:1610:A:O2'	1:0:1611:U:H5'	2.00	0.62
1:0:2046:C:H2'	1:0:2047:C:O5'	2.00	0.62
1:0:2814:G:H1	1:0:2853:U:H3	1.48	0.62
1:0:1925:C:H2'	1:0:1926:U:C5	2.32	0.62
1:0:2606:G:H8	1:0:2606:G:O5'	1.83	0.62
1:0:1264:C:HO2'	1:0:1265:G:H8	1.47	0.62
1:0:1273:G:H2'	1:0:1274:C:H6	1.65	0.61
1:0:482:A:H8	1:0:482:A:O5'	1.83	0.61
1:0:689:A:C2	1:0:690:A:C8	2.88	0.61
1:0:1073:G:C3'	1:0:1074:G:H5''	2.30	0.61
1:0:1558:C:H2'	1:0:1559:G:H5'	1.82	0.61
1:0:583:C:H4'	1:0:2038:C:C5	2.35	0.61
1:0:2043:A:N3	1:0:2481:G:C2	2.67	0.61
1:0:584:A:H5'	1:0:2038:C:C4	2.35	0.61
1:0:1688:U:O2	1:0:1690:U:C6	2.53	0.61
1:0:619:A:H2'	1:0:620:G:C8	2.35	0.61
1:0:446:C:H2'	1:0:447:U:C6	2.34	0.61
1:0:367:G:C2'	1:0:368:A:H5''	2.28	0.61
1:0:200:A:C2	1:0:421:G:O4'	2.53	0.61
1:0:214:C:N4	1:0:215:G:O6	2.33	0.61
1:0:216:U:H2'	1:0:217:U:O4'	2.00	0.61
1:0:785:U:H5'	1:0:1368:G:HO2'	1.63	0.61
1:0:2418:A:C2	1:0:2564:U:H4'	2.35	0.61
1:0:985:G:N3	1:0:985:G:H5''	2.14	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:944:A:H2'	1:0:945:G:C8	2.35	0.61
1:0:1719:G:H2'	1:0:1720:G:C8	2.32	0.61
1:0:718:A:C8	1:0:740:A:C2	2.88	0.61
1:0:500:G:C5	1:0:1297:A:C2	2.88	0.61
1:0:1273:G:H2'	1:0:1274:C:C6	2.36	0.61
1:0:29:U:O2'	1:0:30:G:H5'	2.00	0.61
1:0:1141:U:OP2	1:0:2549:G:N2	2.34	0.61
1:0:2663:U:C2	1:0:2664:G:C8	2.88	0.61
1:0:797:A:H4'	1:0:798:G:N7	2.15	0.61
1:0:2682:C:C5	1:0:2683:C:C5	2.89	0.61
1:0:1153:A:C2	1:0:1155:G:C6	2.88	0.61
1:0:1299:A:C6	1:0:1302:C:C5	2.88	0.61
1:0:2230:G:H1'	1:0:2429:A:O4'	2.01	0.61
1:0:1302:C:O2'	1:0:1343:C:H4'	2.00	0.61
1:0:1499:A:H2'	1:0:1500:U:C6	2.36	0.61
1:0:1685:A:H1'	1:0:1686:A:C4	2.36	0.61
1:0:688:A:HO2'	1:0:2422:C:H4'	1.66	0.61
1:0:305:A:C2'	1:0:306:G:H5'	2.30	0.61
1:0:1441:A:H1'	1:0:1586:A:OP2	2.00	0.61
1:0:51:A:OP2	1:0:117:A:N6	2.34	0.61
1:0:1701:C:C2	1:0:1722:G:N2	2.68	0.61
1:0:1292:A:N6	1:0:1293:A:N6	2.48	0.61
1:0:2810:A:H4'	1:0:2811:G:N7	2.16	0.61
1:0:1457:A:C2	1:0:1565:G:C4	2.88	0.61
1:0:1479:G:C2	1:0:1480:G:C4	2.89	0.61
1:0:1430:G:H22	1:0:1599:G:H1'	1.65	0.61
1:0:2019:C:C2'	1:0:2020:G:H5'	2.30	0.61
1:0:1928:G:C2	1:0:1929:U:C2	2.88	0.61
1:0:1216:G:O2'	1:0:1217:U:H5'	1.99	0.61
1:0:1711:C:O5'	1:0:1711:C:H6	1.84	0.61
1:0:1270:C:N4	1:0:1271:C:H41	1.98	0.61
1:0:1680:U:O2	1:0:1981:A:C2	2.54	0.61
1:0:2544:A:H2'	1:0:2545:A:C1'	2.31	0.61
1:0:698:A:H1'	1:0:700:C:H41	1.66	0.61
1:0:2816:C:C2	1:0:2852:G:N2	2.69	0.61
1:0:781:G:H2'	1:0:782:U:C6	2.36	0.61
1:0:2032:G:N2	1:0:2599:U:C2	2.69	0.61
1:0:1280:U:H2'	1:0:1281:A:C5'	2.31	0.61
1:0:2822:U:H5	1:0:2823:G:C4	2.19	0.61
1:0:1827:G:H2'	1:0:1828:C:C6	2.36	0.61
1:0:579:G:H2'	1:0:2013:A:H62	1.64	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2046:C:N3	1:0:2430:A:C2	2.69	0.61
1:0:1658:A:C8	1:0:1659:G:C8	2.89	0.61
1:0:1994:U:H6	1:0:1994:U:O5'	1.83	0.61
1:0:1764:A:C2'	1:0:1765:C:H5'	2.31	0.61
1:0:792:U:H2'	1:0:793:G:O4'	2.00	0.61
1:0:2611:A:C2	1:0:2767:C:C2	2.89	0.61
1:0:1175:A:O5'	1:0:1175:A:H8	1.84	0.61
1:0:2090:U:H2'	1:0:2091:C:H6	1.65	0.61
1:0:1273:G:C2'	1:0:1274:C:O5'	2.49	0.60
1:0:478:G:H2'	1:0:479:G:C8	2.32	0.60
1:0:584:A:C4	1:0:585:U:C5	2.88	0.60
1:0:1683:G:N7	1:0:1684:G:N2	2.48	0.60
1:0:1982:C:H4'	1:0:2665:G:H22	1.65	0.60
1:0:179:U:O2'	1:0:180:C:H5'	2.00	0.60
1:0:2586:G:O5'	1:0:2586:G:H8	1.84	0.60
1:0:1944:C:H2'	1:0:1945:C:O4'	2.01	0.60
1:0:1256:C:H2'	1:0:1257:U:O4'	2.01	0.60
1:0:2573:C:H42	1:0:2578:G:H1	1.49	0.60
1:0:829:C:H2'	1:0:830:C:O4'	2.01	0.60
1:0:322:A:H1'	1:0:343:A:C6	2.35	0.60
1:0:537:C:C1'	1:0:2759:U:HO2'	2.14	0.60
1:0:976:C:O2'	1:0:977:G:H5'	2.01	0.60
1:0:2712:G:H5'	1:0:2713:A:C8	2.36	0.60
1:0:2489:C:C4	1:0:2490:U:C5	2.89	0.60
1:0:1383:C:H2'	1:0:1384:G:H8	1.65	0.60
1:0:688:A:O2'	1:0:2422:C:H4'	2.00	0.60
1:0:701:U:H2'	1:0:702:A:O4'	2.01	0.60
1:0:936:A:H2'	1:0:937:C:C6	2.36	0.60
1:0:2250:G:O2'	1:0:2251:U:H5'	2.01	0.60
2:9:79:U:H2'	2:9:80:A:H5'	1.83	0.60
1:0:2742:G:O2'	1:0:2743:G:H5'	2.01	0.60
1:0:2637:C:O2'	1:0:2638:G:H5'	2.01	0.60
1:0:1521:U:H2'	1:0:1522:C:C6	2.36	0.60
1:0:1704:G:O5'	1:0:1704:G:H8	1.84	0.60
1:0:1999:U:O2'	1:0:2000:U:H5'	2.02	0.60
1:0:2437:G:H2'	1:0:2469:G:N2	2.16	0.60
1:0:1312:G:H2'	1:0:1643:A:H61	1.65	0.60
1:0:2702:G:C5	1:0:2703:C:C4	2.90	0.60
1:0:2053:G:N1	1:0:2054:A:C2	2.70	0.60
1:0:2602:G:C4	1:0:2603:G:C8	2.89	0.60
1:0:951:G:H2'	1:0:952:A:C5'	2.32	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:498:C:N4	1:0:499:G:C6	2.68	0.60
1:0:2443:C:N3	1:0:2466:G:N2	2.50	0.60
1:0:2526:U:C6	1:0:2545:A:N6	2.70	0.60
1:0:173:A:H61	1:0:844:G:H21	1.50	0.60
1:0:818:G:N1	1:0:2051:U:OP1	2.33	0.60
1:0:669:G:H2'	1:0:670:U:C6	2.36	0.60
1:0:1213:U:C2	1:0:1260:A:H2	2.19	0.60
1:0:1370:U:H2'	1:0:1371:G:O4'	2.01	0.60
1:0:1436:G:O5'	1:0:1436:G:C8	2.54	0.60
1:0:2333:A:C2	1:0:2343:C:N3	2.69	0.60
1:0:1964:A:H3'	1:0:1965:U:H5'	1.83	0.60
1:0:2476:A:H5''	1:0:2477:C:OP1	2.01	0.60
1:0:2044:G:C8	1:0:2482:A:H1'	2.36	0.60
1:0:473:C:C2	1:0:474:G:C8	2.90	0.60
1:0:591:G:H2'	1:0:592:G:H8	1.66	0.60
1:0:1283:C:H5''	1:0:1284:G:O5'	2.02	0.60
1:0:1291:G:C2'	1:0:1292:A:H5'	2.32	0.60
1:0:1750:A:C4'	1:0:2694:G:H21	2.15	0.60
1:0:1004:A:O2'	1:0:1005:U:H5''	2.01	0.60
1:0:342:G:H2'	1:0:343:A:H5'	1.82	0.60
1:0:875:G:H22	1:0:928:G:H1'	1.67	0.60
1:0:1373:G:H2'	1:0:1374:G:C5'	2.31	0.60
1:0:1272:G:H2'	1:0:1273:G:H8	1.66	0.60
1:0:788:G:N2	1:0:801:A:OP2	2.33	0.60
1:0:2768:C:H4'	1:0:2785:A:H5'	1.83	0.60
1:0:1213:U:C2	1:0:1260:A:C2	2.89	0.60
1:0:2522:G:H2'	1:0:2523:G:H8	1.66	0.60
1:0:854:G:H2'	1:0:855:G:H8	1.65	0.60
1:0:1999:U:H2'	1:0:2000:U:H6	1.67	0.60
1:0:2442:C:O2'	1:0:2443:C:H5'	2.01	0.60
1:0:459:A:C2	1:0:466:A:C8	2.89	0.60
1:0:1310:C:C2	1:0:1311:C:C5	2.90	0.60
1:0:177:U:OP2	1:0:177:U:C6	2.54	0.60
1:0:734:G:H2'	1:0:735:G:C8	2.31	0.60
1:0:889:C:O2'	1:0:890:U:H5'	2.01	0.60
1:0:1273:G:O2'	1:0:1274:C:O5'	2.20	0.60
1:0:1141:U:O2'	1:0:1142:G:P	2.59	0.60
1:0:2872:U:H2'	1:0:2873:G:H8	1.65	0.60
1:0:1937:G:N2	1:0:1969:G:OP1	2.35	0.60
1:0:2053:G:C2	1:0:2054:A:N3	2.70	0.60
1:0:790:A:C2	1:0:791:G:C4	2.90	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:337:G:H2'	1:0:338:G:C8	2.37	0.60
1:0:2612:G:N2	1:0:2766:U:O2	2.34	0.60
1:0:727:U:H2'	1:0:728:G:C5'	2.27	0.60
1:0:1391:A:C2'	1:0:1392:U:H5	2.14	0.60
1:0:487:G:H1'	1:0:515:A:H2	1.67	0.60
1:0:1323:G:C1'	1:0:1627:C:C5'	2.73	0.60
1:0:2164:G:H2'	1:0:2165:A:H8	1.67	0.60
1:0:1106:A:H2'	1:0:1107:A:H8	1.65	0.60
1:0:1378:A:H2'	1:0:1379:A:C8	2.37	0.60
1:0:481:A:C6	1:0:482:A:C6	2.90	0.59
1:0:1294:G:C2	1:0:1303:U:O2	2.55	0.59
1:0:1667:A:N1	1:0:1668:G:C5	2.70	0.59
1:0:2560:G:H4'	1:0:2561:G:C8	2.37	0.59
1:0:691:C:O2'	1:0:692:C:H5'	2.03	0.59
1:0:790:A:O2'	1:0:791:G:H5'	2.02	0.59
1:0:614:G:O2'	1:0:615:C:H5'	2.02	0.59
1:0:940:G:C8	1:0:941:U:H5''	2.37	0.59
1:0:976:C:H2'	1:0:977:G:H8	1.66	0.59
2:9:78:A:H2'	2:9:79:U:H6	1.68	0.59
2:9:35:C:H2'	2:9:36:A:O4'	2.00	0.59
1:0:1856:U:O2'	1:0:1857:G:H5'	2.01	0.59
1:0:782:U:H2'	1:0:783:G:H8	1.66	0.59
1:0:678:G:O2'	1:0:679:C:H5'	2.01	0.59
1:0:1619:A:C2	1:0:1620:C:C4	2.89	0.59
1:0:991:A:N6	1:0:992:A:N6	2.49	0.59
1:0:2506:C:H2'	1:0:2507:U:C6	2.36	0.59
1:0:471:A:H2'	1:0:472:C:H5'	1.83	0.59
1:0:235:C:C2'	1:0:236:C:H5'	2.32	0.59
1:0:109:A:H3'	1:0:110:U:H5''	1.83	0.59
1:0:2246:A:N3	1:0:2246:A:H2'	2.18	0.59
1:0:1399:C:O2'	1:0:1400:A:H5'	2.01	0.59
1:0:2817:A:N1	1:0:2851:G:C6	2.70	0.59
1:0:17:G:C5	1:0:18:U:O4	2.56	0.59
1:0:1491:C:H42	1:0:1532:A:H61	1.49	0.59
1:0:600:G:O6	1:0:602:C:C4	2.55	0.59
1:0:1241:G:O2'	1:0:1242:A:H5'	2.02	0.59
1:0:1991:C:H2'	1:0:1992:G:H8	1.67	0.59
1:0:2697:G:C2	1:0:2698:G:C8	2.91	0.59
1:0:2535:C:H2'	1:0:2536:G:O4'	2.02	0.59
1:0:776:G:C2'	1:0:778:G:H5''	2.31	0.59
1:0:2756:A:O2'	1:0:2758:A:H3'	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2555:G:H3'	1:0:2555:G:OP1	2.02	0.59
1:0:751:G:H1'	1:0:772:G:N2	2.16	0.59
1:0:2558:C:H6	1:0:2558:C:O5'	1.85	0.59
1:0:2034:A:C6	1:0:2593:A:N6	2.70	0.59
1:0:565:A:C5	1:0:566:U:C4	2.90	0.59
1:0:315:G:O5'	1:0:315:G:H8	1.85	0.59
1:0:2064:U:H2'	1:0:2065:A:H8	1.67	0.59
1:0:1531:C:C2'	1:0:1532:A:H5'	2.31	0.59
1:0:2324:G:O2'	1:0:2325:A:H5''	2.02	0.59
1:0:1528:C:H2'	1:0:1529:C:H5''	1.84	0.59
1:0:2386:G:H2'	1:0:2387:U:C6	2.38	0.59
1:0:7:G:N2	1:0:2870:C:O2	2.35	0.59
1:0:1313:U:O2'	1:0:1314:A:O5'	2.20	0.59
1:0:831:G:N2	1:0:1203:A:H62	1.92	0.59
1:0:820:U:O2'	1:0:821:A:H5'	2.01	0.59
1:0:335:A:C2'	1:0:336:A:H5'	2.32	0.59
1:0:2447:G:N2	1:0:2460:G:H2'	2.12	0.59
1:0:2308:A:H2'	1:0:2309:G:C8	2.37	0.59
1:0:2370:G:H8	1:0:2370:G:O5'	1.85	0.59
2:9:25:G:H2'	2:9:26:G:C1'	2.33	0.59
1:0:2769:C:H2'	1:0:2770:A:O4'	2.02	0.59
1:0:91:A:H2'	1:0:92:U:C6	2.38	0.59
1:0:1281:A:C2	1:0:1996:A:C2	2.90	0.59
1:0:2426:G:N2	1:0:2431:C:N4	2.50	0.59
1:0:2621:G:O2'	1:0:2622:G:H5'	2.02	0.59
2:9:54:U:H2'	2:9:55:C:C6	2.38	0.59
1:0:1922:U:H1'	1:0:2570:C:O2'	2.03	0.59
1:0:836:G:C4	1:0:837:U:C5	2.90	0.59
1:0:487:G:O5'	1:0:487:G:H8	1.85	0.59
1:0:927:C:H2'	1:0:928:G:O4'	2.03	0.59
1:0:1783:G:O2'	1:0:1784:C:H5'	2.02	0.59
1:0:1213:U:N3	1:0:1260:A:C2	2.70	0.59
2:9:84:G:O2'	2:9:85:G:H5'	2.02	0.59
1:0:1966:C:C2	1:0:1967:U:C5	2.91	0.59
1:0:2434:G:C2	1:0:2435:C:C2	2.90	0.59
1:0:588:G:C2	1:0:1275:A:C6	2.91	0.59
1:0:2549:G:H2'	1:0:2550:C:H5'	1.85	0.59
1:0:1979:C:H42	1:0:2706:U:H6	1.49	0.59
1:0:1781:C:H2'	1:0:1782:A:H8	1.65	0.59
1:0:1322:G:H2'	1:0:1323:G:C8	2.38	0.59
1:0:929:A:O2'	2:9:101:A:H4'	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1672:A:C2	1:0:1673:C:C1'	2.86	0.59
1:0:2676:G:H2'	1:0:2677:U:H6	1.67	0.59
1:0:2225:G:H2'	1:0:2226:A:O4'	2.02	0.59
1:0:1040:A:C8	1:0:1041:G:C8	2.90	0.59
1:0:583:C:H4'	1:0:2038:C:C6	2.37	0.59
1:0:1299:A:H2'	1:0:1301:U:OP2	2.02	0.59
1:0:2658:A:O5'	1:0:2658:A:H8	1.85	0.59
1:0:1196:G:H2'	1:0:1197:U:O4'	2.03	0.59
1:0:758:G:O2'	1:0:761:G:H1'	2.02	0.59
1:0:776:G:N3	1:0:776:G:C3'	2.63	0.59
1:0:342:G:H2'	1:0:343:A:C5'	2.32	0.59
1:0:863:C:O2'	1:0:864:C:H5'	2.03	0.59
1:0:1147:G:H2'	1:0:1148:G:C8	2.37	0.59
2:9:71:G:N2	2:9:72:C:H1'	2.18	0.59
1:0:2228:U:H4'	1:0:2254:C:C5	2.37	0.59
1:0:1851:A:H61	1:0:1867:A:H1'	1.67	0.59
1:0:1556:A:H2'	1:0:1557:G:C8	2.38	0.59
1:0:2843:A:O2'	1:0:2844:G:H5'	2.03	0.59
2:9:62:C:N4	2:9:63:A:H62	2.01	0.59
1:0:218:A:H1'	1:0:220:U:C5	2.37	0.59
1:0:215:G:H2'	1:0:216:U:O4'	2.02	0.59
1:0:682:G:O3'	1:0:816:U:OP1	2.21	0.59
1:0:2612:G:C2	1:0:2766:U:O2	2.55	0.59
2:9:7:C:H2'	2:9:8:C:C6	2.37	0.59
1:0:2799:C:H2'	1:0:2800:C:O4'	2.03	0.59
2:9:69:G:O2'	2:9:70:C:H5'	2.03	0.59
1:0:197:G:H1	1:0:440:U:H3'	1.68	0.59
1:0:1267:A:OP2	1:0:1269:G:H8	1.85	0.58
1:0:1284:G:N3	1:0:1633:C:C5'	2.66	0.58
1:0:1284:G:N3	1:0:1633:C:C4'	2.66	0.58
1:0:1688:U:O2	1:0:1690:U:C5	2.56	0.58
1:0:1010:U:H2'	1:0:1011:A:H8	1.67	0.58
1:0:765:C:H5	1:0:1772:C:H1'	1.68	0.58
1:0:1940:C:N4	1:0:1941:C:N4	2.51	0.58
1:0:981:C:H2'	1:0:982:C:C6	2.38	0.58
1:0:306:G:H2'	1:0:307:C:H6	1.67	0.58
1:0:1181:C:C3'	1:0:1182:U:H5''	2.33	0.58
1:0:14:A:H2	1:0:2603:G:N2	1.99	0.58
1:0:1131:G:C6	1:0:1132:C:C4	2.91	0.58
1:0:971:A:H2'	1:0:973:U:OP1	2.03	0.58
1:0:1287:A:C5	1:0:1315:A:N1	2.71	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1665:C:C2	1:0:1666:G:C8	2.91	0.58
1:0:2240:C:H2'	1:0:2241:U:H5'	1.84	0.58
1:0:979:A:C2	1:0:980:G:C4	2.91	0.58
1:0:1474:A:C6	1:0:1476:G:C8	2.91	0.58
1:0:853:C:O2	1:0:950:G:C2	2.57	0.58
1:0:1809:G:P	1:0:1809:G:H8	2.25	0.58
1:0:1063:C:H2'	1:0:1064:C:C6	2.37	0.58
1:0:1038:U:H2'	1:0:1039:A:C8	2.38	0.58
1:0:2039:G:N3	1:0:2039:G:H2'	2.17	0.58
1:0:1686:A:O2'	1:0:2528:G:OP1	2.21	0.58
1:0:1981:A:H4'	1:0:2704:U:O2'	2.03	0.58
1:0:641:G:N2	1:0:644:A:OP2	2.26	0.58
1:0:2382:C:H2'	1:0:2383:C:H6	1.68	0.58
1:0:912:A:H2'	1:0:913:A:C8	2.37	0.58
1:0:1187:A:H2'	1:0:1188:A:C8	2.39	0.58
1:0:2595:C:H2'	1:0:2596:C:C6	2.38	0.58
1:0:2847:G:C2	1:0:2848:A:C6	2.91	0.58
1:0:173:A:N3	1:0:818:G:N2	2.51	0.58
1:0:1223:G:H1'	1:0:1225:G:H1'	1.85	0.58
1:0:750:C:C4	1:0:751:G:N7	2.71	0.58
1:0:649:G:H2'	1:0:650:U:C6	2.37	0.58
1:0:208:C:H2'	1:0:209:G:H5'	1.84	0.58
1:0:421:G:O2'	1:0:422:C:H5'	2.02	0.58
1:0:209:G:N2	1:0:433:G:OP1	2.35	0.58
1:0:1118:G:H2'	1:0:1119:U:C6	2.37	0.58
1:0:2333:A:H2'	1:0:2334:C:C6	2.38	0.58
1:0:1679:U:C4	1:0:1680:U:C5	2.91	0.58
1:0:1012:A:H2'	1:0:1013:G:C5'	2.26	0.58
1:0:2059:U:H2'	1:0:2060:A:H5''	1.84	0.58
1:0:2409:A:H8	1:0:2409:A:H3'	1.68	0.58
1:0:1223:G:C2	1:0:1250:A:N6	2.71	0.58
1:0:1254:G:O2'	1:0:1255:A:H5'	2.04	0.58
1:0:2397:A:C2'	1:0:2398:U:O4'	2.51	0.58
1:0:639:G:O2'	1:0:640:C:H5'	2.04	0.58
2:9:6:C:H2'	2:9:7:C:H6	1.68	0.58
1:0:2678:C:O2	1:0:2688:G:N2	2.36	0.58
1:0:681:A:C4	1:0:683:A:N7	2.71	0.58
1:0:2299:A:H5'	1:0:2300:G:C5	2.38	0.58
1:0:1468:A:C8	1:0:1468:A:OP2	2.56	0.58
1:0:483:A:H2'	1:0:484:G:C5'	2.33	0.58
1:0:1662:G:O5'	1:0:1662:G:H8	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:171:G:N1	1:0:179:U:C4	2.71	0.58
1:0:304:A:H2'	1:0:305:A:H5''	1.84	0.58
1:0:10:A:H2'	1:0:11:G:C8	2.38	0.58
1:0:1009:C:O5'	1:0:1009:C:H6	1.87	0.58
1:0:2105:U:H2'	1:0:2106:G:C8	2.38	0.58
1:0:2816:C:O2	1:0:2852:G:N2	2.37	0.58
1:0:783:G:N3	1:0:1367:A:H2	2.01	0.58
1:0:2824:C:H1'	1:0:2843:A:C2	2.38	0.58
1:0:18:U:O2'	1:0:563:U:OP1	2.22	0.58
1:0:213:C:O2'	1:0:214:C:H5'	2.02	0.58
1:0:203:G:H5'	1:0:234:C:H4'	1.85	0.58
1:0:2549:G:C2	1:0:2550:C:H1'	2.39	0.58
1:0:1003:C:H2'	1:0:1004:A:H8	1.68	0.58
1:0:830:C:O2	1:0:1205:G:N2	2.36	0.58
1:0:983:G:OP2	1:0:985:G:H5'	2.03	0.58
1:0:1884:A:O2'	1:0:1885:C:H5'	2.02	0.58
1:0:677:G:O3'	1:0:952:A:OP1	2.21	0.58
1:0:132:U:H2'	1:0:133:C:C6	2.38	0.58
1:0:717:G:C6	1:0:739:G:C2	2.91	0.58
1:0:625:A:O2'	1:0:626:A:H5'	2.04	0.58
1:0:2044:G:N2	1:0:2046:C:C4	2.71	0.58
1:0:2229:G:H4'	1:0:2229:G:OP2	2.03	0.58
1:0:574:C:H2'	1:0:575:U:C6	2.39	0.58
1:0:2024:U:O2'	1:0:2025:A:H5'	2.03	0.58
1:0:742:G:O6	1:0:1765:C:N3	2.37	0.58
1:0:698:A:O2'	1:0:700:C:H5	1.87	0.58
1:0:763:A:H2	1:0:765:C:H1'	1.67	0.58
1:0:742:G:OP1	1:0:776:G:OP2	2.22	0.58
1:0:173:A:C2	1:0:818:G:N2	2.71	0.58
1:0:944:A:O2'	1:0:945:G:H5'	2.04	0.58
1:0:944:A:H2'	1:0:945:G:O4'	2.04	0.58
2:9:100:G:H2'	2:9:101:A:O4'	2.03	0.58
1:0:1784:C:C2'	1:0:1785:A:H5'	2.33	0.58
1:0:2713:A:C5	1:0:2714:A:N7	2.72	0.58
1:0:974:U:O2'	1:0:975:C:H5'	2.03	0.58
1:0:2787:A:O2'	1:0:2788:C:H5'	2.04	0.58
1:0:1407:G:C6	1:0:1408:A:C6	2.91	0.58
1:0:2644:A:H2'	1:0:2645:C:C6	2.38	0.58
1:0:406:G:H2'	1:0:407:A:H8	1.68	0.58
1:0:225:G:H5'	1:0:226:C:H5'	1.86	0.58
1:0:1252:C:H2'	1:0:1253:C:H5''	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:927:C:H2'	1:0:928:G:C5'	2.33	0.58
1:0:1407:G:H4'	1:0:1620:C:P	2.43	0.58
1:0:1468:A:OP2	1:0:1468:A:H8	1.86	0.58
1:0:1028:G:C6	1:0:1157:G:C6	2.92	0.58
1:0:1938:U:C4	1:0:2531:U:H1'	2.39	0.57
1:0:1975:G:H2'	1:0:1980:A:N6	2.18	0.57
1:0:168:A:C2	1:0:169:C:N3	2.71	0.57
1:0:778:G:H2'	1:0:779:U:H6	1.68	0.57
1:0:2186:G:N1	1:0:2200:G:C6	2.72	0.57
1:0:1479:G:H2'	1:0:1480:G:O4'	2.03	0.57
1:0:1619:A:C2	1:0:1620:C:C5	2.90	0.57
2:9:48:A:O2'	2:9:49:C:H5'	2.04	0.57
1:0:2436:U:O2'	1:0:2437:G:H5'	2.03	0.57
1:0:568:G:O6	1:0:569:C:N3	2.38	0.57
1:0:1311:C:C2	1:0:1660:G:N2	2.72	0.57
1:0:2217:G:C2'	1:0:2217:G:N3	2.66	0.57
1:0:1701:C:O2	1:0:1722:G:N2	2.37	0.57
2:9:93:G:H2'	2:9:94:G:C8	2.36	0.57
1:0:533:C:N3	1:0:534:U:C2	2.71	0.57
1:0:2829:A:N1	1:0:2839:G:C6	2.72	0.57
1:0:2649:A:O2'	1:0:2650:G:H5'	2.04	0.57
1:0:2529:G:C5	1:0:2530:C:C5	2.92	0.57
2:9:92:G:C3'	2:9:93:G:H5'	2.33	0.57
1:0:2164:G:H2'	1:0:2165:A:C8	2.39	0.57
1:0:2514:G:H2'	1:0:2515:G:H8	1.69	0.57
1:0:600:G:H3'	1:0:601:A:H5''	1.85	0.57
1:0:229:G:H2'	1:0:230:C:H6	1.69	0.57
1:0:1843:U:H2'	1:0:1844:C:C6	2.38	0.57
1:0:2015:G:H4'	1:0:2016:A:OP1	2.02	0.57
1:0:2433:G:C4	1:0:2434:G:C8	2.92	0.57
1:0:1681:A:N1	1:0:1682:A:C4	2.73	0.57
1:0:1975:G:H2'	1:0:1980:A:H62	1.69	0.57
1:0:815:A:O2'	1:0:816:U:H5'	2.05	0.57
1:0:2642:G:C4	1:0:2643:G:C8	2.92	0.57
1:0:218:A:H1'	1:0:220:U:C4	2.39	0.57
1:0:401:G:H1'	1:0:403:A:H62	1.69	0.57
1:0:1491:C:N4	1:0:1532:A:H61	2.02	0.57
1:0:1928:G:C6	1:0:1929:U:C4	2.92	0.57
1:0:1830:C:N4	1:0:1881:U:H3'	2.19	0.57
1:0:2096:U:H2'	1:0:2097:A:H5''	1.87	0.57
1:0:544:U:H6	1:0:544:U:O5'	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1293:A:C2	1:0:1304:U:C2	2.93	0.57
1:0:1764:A:H2'	1:0:1765:C:O4'	2.05	0.57
1:0:983:G:OP2	1:0:985:G:C5'	2.53	0.57
1:0:636:G:C2'	1:0:637:G:H5'	2.34	0.57
1:0:109:A:O5'	1:0:109:A:H8	1.87	0.57
1:0:1787:U:H2'	1:0:1788:C:C6	2.39	0.57
1:0:965:G:C2'	1:0:966:A:H5'	2.34	0.57
1:0:2418:A:O2'	1:0:2566:A:H5'	2.04	0.57
1:0:2652:G:H2'	1:0:2653:A:H8	1.68	0.57
1:0:2331:A:C2'	1:0:2332:G:H5'	2.35	0.57
1:0:2341:G:O2'	1:0:2342:U:H5'	2.04	0.57
1:0:327:C:O2'	1:0:328:A:H5'	2.04	0.57
1:0:1089:C:O5'	1:0:1089:C:H6	1.87	0.57
1:0:701:U:C4'	1:0:1771:A:H2	2.10	0.57
1:0:766:A:O2'	1:0:767:G:H5'	2.03	0.57
1:0:614:G:H2'	1:0:615:C:H6	1.69	0.57
1:0:442:A:N6	1:0:443:A:N6	2.53	0.57
1:0:74:G:H2'	1:0:75:C:C6	2.39	0.57
2:9:102:A:H2'	2:9:103:A:H5'	1.85	0.57
1:0:1358:C:C2'	1:0:1359:G:H5''	2.34	0.57
1:0:1726:C:O2'	1:0:1727:C:H5'	2.05	0.57
1:0:1690:U:H2'	1:0:1691:G:H5''	1.86	0.57
1:0:778:G:H2'	1:0:779:U:C6	2.40	0.57
1:0:1248:G:C5	1:0:1249:G:N1	2.73	0.57
1:0:859:U:H4'	1:0:860:U:H5	1.66	0.57
1:0:2455:A:C2	1:0:2460:G:N2	2.73	0.57
1:0:2815:C:O2'	1:0:2816:C:H5'	2.04	0.57
1:0:159:A:C8	1:0:160:C:C5	2.93	0.57
1:0:513:A:N3	1:0:515:A:N7	2.53	0.57
1:0:1900:U:C2'	1:0:1901:A:H5'	2.35	0.57
1:0:16:G:O2'	1:0:17:G:H5'	2.04	0.57
1:0:2742:G:H2'	1:0:2743:G:H8	1.66	0.57
1:0:2592:U:C6	1:0:2592:U:C3'	2.88	0.57
1:0:805:G:H2'	1:0:2419:C:C2	2.39	0.57
1:0:2470:U:O2'	1:0:2471:U:H5'	2.05	0.57
1:0:471:A:C2'	1:0:472:C:H5'	2.34	0.57
1:0:1313:U:H5'	1:0:1314:A:N3	2.20	0.57
1:0:179:U:C2'	1:0:180:C:H5'	2.35	0.57
1:0:180:C:N3	1:0:181:A:N6	2.50	0.57
1:0:1777:A:H62	1:0:2585:C:H1'	1.68	0.57
1:0:761:G:O6	1:0:764:A:H5'	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:878:C:O2'	1:0:879:A:H8	1.88	0.57
1:0:2739:G:H8	1:0:2739:G:O5'	1.87	0.57
1:0:622:U:H2'	1:0:623:G:C5'	2.34	0.57
1:0:1608:U:H2'	1:0:1609:G:C8	2.40	0.57
1:0:150:A:H8	1:0:150:A:O5'	1.87	0.57
1:0:2434:G:H2'	1:0:2435:C:C6	2.38	0.57
1:0:539:A:N6	1:0:2024:U:H3	2.01	0.57
1:0:1198:C:H5''	1:0:1199:U:C5'	2.34	0.57
1:0:699:G:C2'	1:0:699:G:N3	2.68	0.57
1:0:2610:G:H5'	1:0:2866:A:C1'	2.25	0.57
1:0:870:C:C5	1:0:871:U:H5	2.22	0.57
1:0:679:C:H2'	1:0:680:U:H6	1.68	0.57
1:0:2426:G:O5'	1:0:2480:C:C5	2.57	0.57
1:0:2324:G:C4	1:0:2326:C:H5	2.22	0.57
1:0:464:G:C2	1:0:465:C:C4	2.92	0.57
1:0:968:C:N4	1:0:2437:G:H5''	2.19	0.57
1:0:2533:U:H2'	1:0:2534:U:C6	2.40	0.57
1:0:1208:A:O5'	1:0:1208:A:H8	1.87	0.57
1:0:2587:G:C8	1:0:2587:G:O5'	2.57	0.57
1:0:619:A:H2'	1:0:620:G:H8	1.69	0.57
1:0:870:C:C6	1:0:871:U:H5	2.22	0.57
1:0:2817:A:O2'	1:0:2818:G:H5'	2.04	0.57
1:0:533:C:H2'	1:0:534:U:O4'	2.05	0.57
1:0:1407:G:C2'	1:0:1408:A:O4'	2.51	0.57
1:0:632:A:H2'	1:0:633:G:C5'	2.33	0.57
1:0:989:G:N2	1:0:997:C:C2	2.73	0.57
1:0:1388:C:H2'	1:0:1389:C:H6	1.69	0.57
1:0:2535:C:O2'	1:0:2536:G:H5'	2.05	0.56
1:0:178:C:H2'	1:0:179:U:C6	2.40	0.56
1:0:2059:U:H5''	1:0:2217:G:C6	2.40	0.56
1:0:940:G:C8	1:0:941:U:O4'	2.58	0.56
1:0:874:A:H2'	1:0:874:A:N3	2.19	0.56
1:0:2378:G:H22	1:0:2397:A:C1'	2.13	0.56
1:0:2782:G:H3'	1:0:2783:U:C5'	2.35	0.56
1:0:1499:A:H2'	1:0:1500:U:H6	1.70	0.56
1:0:2093:G:H2'	1:0:2094:C:C6	2.40	0.56
1:0:2091:C:H2'	1:0:2092:U:H5'	1.87	0.56
1:0:1046:U:H2'	1:0:1047:G:H8	1.70	0.56
1:0:608:G:O2'	1:0:609:U:H5'	2.05	0.56
1:0:815:A:O4'	1:0:815:A:OP2	2.22	0.56
1:0:1355:A:N7	1:0:1410:U:C1'	2.68	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:531:G:O6	1:0:532:A:N6	2.38	0.56
1:0:1503:G:H2'	1:0:1504:G:H8	1.70	0.56
1:0:2429:A:OP1	1:0:2476:A:H2'	2.04	0.56
1:0:1279:G:H1	19:Q:37:LYS:CA	2.18	0.56
1:0:1310:C:H2'	1:0:1311:C:C6	2.40	0.56
1:0:2695:C:C2	1:0:2696:A:C8	2.94	0.56
1:0:1200:G:O2'	1:0:1201:G:H5'	2.04	0.56
1:0:995:A:C5'	1:0:996:C:H5	2.15	0.56
1:0:306:G:H2'	1:0:307:C:C6	2.39	0.56
1:0:749:C:H2'	1:0:750:C:C6	2.41	0.56
1:0:1955:G:H2'	1:0:1956:G:H5'	1.87	0.56
1:0:540:G:OP2	1:0:540:G:C8	2.58	0.56
1:0:2033:C:H2'	1:0:2034:A:O4'	2.05	0.56
1:0:853:C:O2	1:0:950:G:N1	2.39	0.56
1:0:967:G:N2	1:0:970:A:H8	2.03	0.56
1:0:2837:G:C8	1:0:2837:G:O5'	2.58	0.56
1:0:425:A:N7	1:0:2390:A:C2	2.73	0.56
1:0:914:C:O2'	1:0:915:C:H5'	2.05	0.56
1:0:1014:G:N3	1:0:1021:A:C2	2.73	0.56
1:0:2724:G:C2	1:0:2725:C:C4	2.92	0.56
1:0:2067:U:O5'	1:0:2067:U:H6	1.89	0.56
1:0:1272:G:H2'	1:0:1273:G:C8	2.41	0.56
1:0:28:A:H5''	1:0:460:U:C5	2.41	0.56
1:0:689:A:H2	1:0:690:A:C8	2.23	0.56
1:0:704:G:C2	1:0:705:C:C2	2.92	0.56
1:0:976:C:H5'	1:0:2252:A:C1'	2.34	0.56
1:0:930:A:H8	2:9:82:U:O2'	1.89	0.56
1:0:2198:U:C2'	1:0:2199:C:H5''	2.36	0.56
1:0:1459:U:C2'	1:0:1475:U:O2'	2.53	0.56
1:0:1473:U:H5''	1:0:1474:A:C4	2.41	0.56
1:0:560:G:C6	1:0:561:U:C4	2.94	0.56
1:0:2829:A:H2'	1:0:2830:U:H6	1.70	0.56
1:0:743:A:OP2	1:0:744:C:OP2	2.23	0.56
1:0:4:C:H2'	1:0:5:A:H8	1.71	0.56
1:0:1538:A:O2'	1:0:1539:U:H5'	2.05	0.56
1:0:570:G:H2'	1:0:571:U:H5'	1.87	0.56
1:0:1312:G:O2'	1:0:1314:A:H2	1.88	0.56
1:0:1650:A:N7	1:0:1652:G:N7	2.53	0.56
1:0:2544:A:H5''	1:0:2545:A:OP2	2.05	0.56
1:0:311:A:H2	1:0:334:G:H21	1.52	0.56
1:0:1543:G:H2'	1:0:1544:A:O4'	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2753:C:H2'	1:0:2754:C:H6	1.70	0.56
1:0:2241:U:C4'	1:0:2307:A:C2	2.86	0.56
1:0:394:U:C2'	1:0:395:G:H5'	2.36	0.56
1:0:721:C:H2'	1:0:722:C:C6	2.40	0.56
1:0:2326:C:N4	1:0:2350:G:N2	2.54	0.56
1:0:2437:G:C6	1:0:2469:G:C2'	2.85	0.56
1:0:2436:U:O2	1:0:2474:G:N2	2.39	0.56
1:0:1669:A:H2'	1:0:1670:G:H4'	1.87	0.56
1:0:2006:G:H2'	1:0:2007:G:C8	2.40	0.56
1:0:2544:A:H2'	1:0:2545:A:H1'	1.86	0.56
1:0:2710:C:O2'	1:0:2711:G:H5'	2.06	0.56
1:0:687:G:C5	1:0:817:A:N1	2.74	0.56
1:0:109:A:C3'	1:0:110:U:H5''	2.35	0.56
1:0:1825:C:C2'	1:0:1826:U:H5'	2.34	0.56
1:0:1700:C:C6	1:0:1701:C:C5	2.93	0.56
1:0:1503:G:C6	1:0:1504:G:C6	2.93	0.56
1:0:2717:G:H2'	1:0:2718:A:H8	1.70	0.56
1:0:1838:G:H2'	1:0:1839:A:H5'	1.87	0.56
1:0:2543:A:O5'	1:0:2543:A:H8	1.89	0.56
1:0:1001:A:N3	1:0:1167:A:H2	2.03	0.56
1:0:167:A:H3'	1:0:181:A:N1	2.21	0.56
1:0:2217:G:N3	1:0:2217:G:H2'	2.19	0.56
1:0:613:A:C2	1:0:614:G:C5	2.94	0.56
1:0:322:A:C2	1:0:342:G:OP2	2.59	0.56
1:0:1793:A:N6	1:0:1806:G:H2'	2.20	0.56
1:0:1392:U:OP1	1:0:1392:U:H6	1.89	0.56
1:0:1322:G:C6	1:0:1323:G:C6	2.94	0.56
1:0:676:G:H8	1:0:676:G:O5'	1.89	0.56
1:0:951:G:C2'	1:0:952:A:H5''	2.36	0.56
1:0:741:G:C4	1:0:743:A:C8	2.94	0.56
1:0:1389:C:O2'	1:0:1390:G:H5'	2.05	0.56
1:0:1615:C:H2'	1:0:1616:C:C6	2.41	0.56
1:0:525:A:H2'	1:0:526:C:C5'	2.27	0.56
1:0:971:A:C2'	1:0:973:U:OP1	2.53	0.56
1:0:1715:A:HO2'	1:0:1716:G:H3'	1.70	0.56
1:0:171:G:H2'	1:0:172:A:O4'	2.06	0.56
1:0:797:A:H4'	1:0:798:G:C8	2.40	0.56
1:0:834:A:N7	1:0:957:G:C5	2.74	0.56
1:0:1544:A:C6	1:0:1545:G:C6	2.94	0.56
1:0:859:U:H3'	1:0:859:U:C6	2.41	0.56
1:0:2612:G:H5'	1:0:2786:G:O2'	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:836:G:H8	1:0:836:G:O5'	1.87	0.56
2:9:61:A:O5'	2:9:61:A:C8	2.58	0.56
1:0:1110:G:H2'	1:0:1111:C:O4'	2.06	0.56
1:0:2546:G:H2'	1:0:2547:C:C6	2.41	0.56
1:0:591:G:H2'	1:0:592:G:C8	2.40	0.56
1:0:820:U:C2	1:0:821:A:C8	2.93	0.56
1:0:1223:G:C4	1:0:1250:A:N6	2.74	0.56
1:0:2248:A:N7	1:0:2249:U:C4	2.74	0.56
1:0:2679:G:C2	1:0:2687:G:C2	2.94	0.56
1:0:1514:C:P	1:0:1514:C:H6	2.29	0.56
1:0:1480:G:C2	1:0:1481:U:H1'	2.41	0.56
1:0:2746:G:H2'	1:0:2746:G:N3	2.21	0.56
1:0:1881:U:H2'	1:0:1882:G:H5'	1.88	0.56
1:0:78:C:H6	1:0:78:C:O5'	1.88	0.56
1:0:1288:A:H62	1:0:1309:G:C4'	2.18	0.56
1:0:1664:G:C4'	1:0:1665:C:OP1	2.54	0.56
1:0:1707:A:N7	1:0:1714:A:C2	2.74	0.56
1:0:1777:A:N6	1:0:2585:C:O4'	2.39	0.56
1:0:1789:U:C4	1:0:1811:A:C2	2.94	0.56
1:0:942:U:C2'	1:0:943:U:H5'	2.36	0.56
1:0:729:A:H2'	1:0:730:C:H6	1.71	0.56
1:0:112:U:O2'	1:0:113:C:H5'	2.04	0.56
1:0:644:A:H2'	1:0:645:G:H5'	1.88	0.56
1:0:1398:G:H2'	1:0:1399:C:C6	2.41	0.56
1:0:536:A:C2	1:0:2605:C:H1'	2.41	0.56
1:0:1046:U:H2'	1:0:1047:G:C8	2.41	0.56
1:0:1686:A:O2'	1:0:1687:C:H5'	2.06	0.55
1:0:1692:C:C2'	1:0:1693:A:H5'	2.34	0.55
1:0:1938:U:O2'	1:0:1939:U:C5'	2.35	0.55
1:0:1972:G:C2'	1:0:1973:C:H5'	2.36	0.55
1:0:2496:C:C2	1:0:2521:A:N6	2.73	0.55
1:0:1635:G:H2'	1:0:1636:G:O4'	2.06	0.55
1:0:756:C:O2'	1:0:757:U:H5'	2.06	0.55
1:0:788:G:H5''	1:0:790:A:H1'	1.88	0.55
1:0:2816:C:C2	1:0:2852:G:C2	2.94	0.55
1:0:211:U:O2'	1:0:212:U:H5'	2.06	0.55
1:0:2843:A:C6	1:0:2844:G:C2	2.94	0.55
1:0:2640:G:H2'	1:0:2641:A:C8	2.41	0.55
2:9:62:C:N3	2:9:63:A:N7	2.54	0.55
1:0:1007:A:H2'	1:0:1008:G:H8	1.71	0.55
1:0:1040:A:N7	1:0:1041:G:C8	2.74	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1452:U:C4	1:0:1568:A:C2	2.93	0.55
1:0:805:G:H5''	1:0:806:A:O5'	2.06	0.55
1:0:1014:G:O2'	1:0:1015:U:H5'	2.06	0.55
1:0:1984:A:H1'	1:0:2668:U:C4	2.41	0.55
1:0:2503:G:C2'	1:0:2504:G:H5''	2.33	0.55
1:0:2703:C:O5'	1:0:2703:C:H6	1.88	0.55
2:9:59:A:H2'	2:9:60:A:H5'	1.88	0.55
1:0:947:C:N3	1:0:948:C:C4	2.73	0.55
1:0:2044:G:C2	1:0:2046:C:C4	2.95	0.55
1:0:2472:U:C4	1:0:2473:G:N7	2.74	0.55
1:0:2007:G:O2'	1:0:2008:C:H5'	2.06	0.55
1:0:2518:C:O2'	1:0:2519:C:H5'	2.06	0.55
1:0:1011:A:C2	1:0:1012:A:C2	2.94	0.55
1:0:2766:U:O2'	1:0:2767:C:H5'	2.07	0.55
1:0:931:G:N2	1:0:2247:A:H3'	2.18	0.55
1:0:2641:A:O5'	1:0:2641:A:H8	1.89	0.55
1:0:2034:A:H2'	1:0:2035:G:C8	2.41	0.55
1:0:1517:C:H2'	1:0:1518:C:H6	1.70	0.55
1:0:1151:U:C5'	1:0:1153:A:H5'	2.36	0.55
1:0:1329:U:H5'	1:0:1405:A:H1'	1.88	0.55
2:9:114:C:O5'	2:9:114:C:H6	1.88	0.55
1:0:459:A:N1	1:0:466:A:H3'	2.22	0.55
1:0:1312:G:H2'	1:0:1643:A:N6	2.22	0.55
1:0:177:U:OP2	1:0:177:U:H6	1.90	0.55
1:0:2060:A:OP1	1:0:2061:C:OP2	2.25	0.55
1:0:2217:G:H3'	1:0:2217:G:N3	2.21	0.55
1:0:811:G:O2'	1:0:812:G:H5'	2.06	0.55
1:0:1190:C:H6	1:0:1190:C:O5'	1.88	0.55
1:0:2458:U:C4	1:0:2459:C:C4	2.94	0.55
1:0:646:C:O2	1:0:650:U:H4'	2.06	0.55
1:0:521:U:C5	1:0:522:G:N3	2.71	0.55
1:0:2656:G:H2'	1:0:2657:G:H8	1.71	0.55
1:0:176:A:H1'	1:0:2221:G:H21	1.70	0.55
1:0:2413:A:H3'	1:0:2413:A:H8	1.71	0.55
1:0:813:A:N3	1:0:813:A:H2'	2.22	0.55
1:0:2459:C:C2'	1:0:2460:G:H5'	2.37	0.55
1:0:746:G:N7	1:0:774:A:C5	2.74	0.55
1:0:976:C:O2'	1:0:977:G:C5'	2.54	0.55
1:0:2395:C:N4	1:0:2396:C:N4	2.54	0.55
1:0:215:G:N2	1:0:632:A:C8	2.75	0.55
2:9:33:C:H2'	2:9:34:C:C6	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2367:A:N7	1:0:2368:G:C5	2.75	0.55
1:0:576:A:H2	1:0:580:A:H62	1.54	0.55
1:0:584:A:H2'	1:0:585:U:C6	2.36	0.55
1:0:2051:U:H3	1:0:2409:A:H61	1.55	0.55
1:0:689:A:C2'	1:0:690:A:H5'	2.36	0.55
1:0:758:G:H2'	1:0:759:C:H5'	1.89	0.55
1:0:1485:U:H2'	1:0:1486:A:C8	2.41	0.55
2:9:89:G:C2	2:9:93:G:C2	2.94	0.55
1:0:495:C:H2'	1:0:496:C:H6	1.69	0.55
1:0:1855:G:H2'	1:0:1856:U:H6	1.72	0.55
1:0:1558:C:C2'	1:0:1559:G:H5'	2.36	0.55
1:0:2622:G:H2'	1:0:2623:A:O4'	2.07	0.55
1:0:1431:U:H2'	1:0:1432:G:O4'	2.07	0.55
1:0:28:A:H5''	1:0:460:U:H5	1.71	0.55
1:0:575:U:C2	1:0:576:A:C8	2.94	0.55
1:0:697:G:H1	1:0:807:A:H2	1.51	0.55
1:0:2813:G:C4	1:0:2814:G:C8	2.94	0.55
1:0:2753:C:O2'	1:0:2754:C:H5'	2.07	0.55
1:0:515:A:H2'	1:0:516:G:H5'	1.89	0.55
2:9:79:U:C2'	2:9:80:A:H5'	2.37	0.55
1:0:2820:C:C2	1:0:2821:G:N7	2.75	0.55
1:0:1989:C:O5'	1:0:1989:C:H6	1.89	0.55
1:0:1223:G:H1'	1:0:1225:G:C1'	2.37	0.55
1:0:2197:U:H2'	1:0:2198:U:C6	2.42	0.55
1:0:2641:A:H2'	1:0:2642:G:H5'	1.89	0.55
1:0:2181:A:C2'	1:0:2182:A:H5'	2.37	0.55
2:9:18:G:H2'	2:9:19:C:C6	2.42	0.55
1:0:1838:G:C2'	1:0:1839:A:H5'	2.37	0.55
1:0:1171:A:H8	1:0:1171:A:O5'	1.88	0.55
1:0:62:U:H2'	1:0:63:A:C8	2.42	0.55
1:0:2441:U:C2	1:0:2442:C:C6	2.94	0.55
1:0:1625:A:H1'	1:0:1632:A:H4'	1.89	0.55
1:0:1757:C:O2	1:0:1970:G:C2	2.60	0.55
1:0:2025:A:H8	1:0:2025:A:O5'	1.90	0.55
1:0:2543:A:C6	1:0:2626:U:H4'	2.41	0.55
1:0:1202:U:C2'	1:0:1203:A:H8	2.17	0.55
1:0:347:C:H2'	1:0:348:U:O4'	2.07	0.55
1:0:872:G:O6	1:0:928:G:OP2	2.25	0.55
1:0:933:G:O2'	1:0:934:G:H5'	2.07	0.55
1:0:962:C:C2	1:0:963:G:N7	2.75	0.55
1:0:1054:C:H2'	1:0:1055:A:H5'	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1618:U:OP2	1:0:1618:U:C5	2.59	0.55
1:0:1369:G:O2'	1:0:1370:U:H5'	2.06	0.55
1:0:435:A:O2'	1:0:436:A:H5'	2.06	0.55
1:0:914:C:H2'	1:0:915:C:H6	1.72	0.55
1:0:805:G:N7	1:0:2419:C:H1'	2.21	0.55
1:0:198:A:O2'	1:0:199:A:P	2.64	0.55
1:0:3:U:O5'	1:0:3:U:H6	1.90	0.55
1:0:2236:U:N3	1:0:2237:C:C5	2.75	0.55
1:0:2047:C:H3'	1:0:2047:C:H6	1.72	0.55
1:0:1341:G:H2'	1:0:1343:C:N4	2.22	0.55
1:0:2665:G:C5	1:0:2666:U:C5	2.95	0.55
1:0:1769:U:H3	1:0:1775:A:H1'	1.72	0.55
1:0:2051:U:H3	1:0:2409:A:N6	2.05	0.55
1:0:2409:A:H2'	1:0:2410:U:H5'	1.88	0.55
1:0:102:C:O2'	1:0:103:U:H5'	2.07	0.55
1:0:868:U:H2'	1:0:869:C:H6	1.71	0.55
1:0:2610:G:C5'	1:0:2866:A:H1'	2.24	0.55
1:0:2792:C:C2	1:0:2805:G:N2	2.75	0.55
1:0:977:G:H1'	1:0:2246:A:C5	2.42	0.55
1:0:678:G:C4	1:0:679:C:C5	2.95	0.55
1:0:677:G:C2	1:0:678:G:C5	2.95	0.55
1:0:951:G:H2'	1:0:952:A:C4'	2.37	0.55
1:0:562:G:H2'	1:0:563:U:O4'	2.06	0.55
1:0:1150:C:O2'	1:0:1153:A:H4'	2.06	0.55
1:0:1235:C:O2'	1:0:1236:G:H5'	2.07	0.55
1:0:1552:C:C2'	1:0:1553:G:H5'	2.37	0.55
1:0:703:A:H2'	1:0:704:G:C8	2.37	0.54
1:0:983:G:O6	1:0:984:A:N6	2.40	0.54
1:0:870:C:H2'	1:0:871:U:C6	2.37	0.54
1:0:632:A:C2	1:0:633:G:C5	2.95	0.54
1:0:1017:C:O2	1:0:1018:C:C1'	2.54	0.54
1:0:2090:U:H2'	1:0:2091:C:C6	2.42	0.54
1:0:136:A:H2'	1:0:137:A:O4'	2.07	0.54
1:0:569:C:O2'	1:0:570:G:H5'	2.08	0.54
1:0:1990:U:O4	1:0:1991:C:N4	2.41	0.54
1:0:1141:U:O2'	1:0:1142:G:OP1	2.23	0.54
1:0:1685:A:H2	1:0:1976:U:C2	2.25	0.54
1:0:1197:U:O5'	1:0:1197:U:H6	1.91	0.54
1:0:2059:U:C3'	1:0:2217:G:O6	2.55	0.54
1:0:2583:U:H2'	1:0:2584:U:H5'	1.89	0.54
1:0:798:G:N2	1:0:799:C:O4'	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:321:A:C2	1:0:323:G:H1'	2.42	0.54
1:0:2555:G:H2'	1:0:2555:G:N3	2.22	0.54
1:0:74:G:O2'	1:0:75:C:H5'	2.06	0.54
1:0:2641:A:C2'	1:0:2642:G:H5'	2.37	0.54
1:0:1356:G:OP2	1:0:1357:U:OP2	2.26	0.54
1:0:2174:G:H2'	1:0:2175:A:H8	1.73	0.54
2:9:20:A:O2'	2:9:21:C:H5'	2.07	0.54
1:0:1735:G:H2'	1:0:1736:C:H6	1.71	0.54
1:0:2697:G:N2	1:0:2698:G:C4	2.75	0.54
1:0:1755:G:C2	1:0:1756:C:C2	2.96	0.54
1:0:956:A:H2'	1:0:957:G:O5'	2.08	0.54
1:0:958:G:C6	1:0:982:C:N3	2.76	0.54
1:0:2618:A:H2'	1:0:2619:G:O4'	2.08	0.54
1:0:2761:A:H8	1:0:2761:A:O5'	1.89	0.54
1:0:2640:G:C6	1:0:2641:A:C6	2.95	0.54
1:0:565:A:C6	1:0:566:U:C4	2.96	0.54
1:0:2404:A:P	1:0:2406:C:H5'	2.47	0.54
1:0:1797:C:H2'	1:0:1798:G:O4'	2.07	0.54
1:0:1077:U:H2'	1:0:1079:G:OP2	2.07	0.54
1:0:2554:C:C6	1:0:2554:C:H3'	2.43	0.54
1:0:584:A:C5'	1:0:2038:C:N4	2.70	0.54
1:0:1934:U:O2	1:0:1936:A:H8	1.90	0.54
1:0:2540:A:H2'	1:0:2541:U:O5'	2.06	0.54
1:0:1002:C:C6	1:0:1198:C:N3	2.75	0.54
1:0:759:C:N4	1:0:2591:C:OP1	2.34	0.54
1:0:322:A:N1	1:0:341:A:OP2	2.41	0.54
1:0:2077:G:O2'	1:0:2078:G:H5'	2.07	0.54
1:0:43:A:H2	1:0:448:C:N4	2.05	0.54
1:0:874:A:C2	1:0:875:G:H1'	2.42	0.54
1:0:1787:U:O5'	1:0:1787:U:H6	1.89	0.54
1:0:2600:A:C2'	1:0:2601:C:H5'	2.37	0.54
1:0:533:C:H1'	1:0:563:U:O2'	2.07	0.54
1:0:1411:C:O2'	1:0:1412:C:H5'	2.08	0.54
1:0:2207:G:O2'	1:0:2208:U:H5'	2.07	0.54
1:0:2299:A:C5'	1:0:2300:G:C4	2.91	0.54
1:0:1090:C:O2'	1:0:1091:C:H5'	2.07	0.54
1:0:2441:U:H2'	1:0:2442:C:H6	1.72	0.54
1:0:485:G:O6	1:0:520:C:C4	2.61	0.54
1:0:971:A:O2'	1:0:973:U:OP1	2.21	0.54
1:0:2058:U:H3'	1:0:2217:G:N1	2.23	0.54
1:0:224:G:C8	1:0:226:C:H1'	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:701:U:C5'	1:0:1771:A:H2	2.20	0.54
1:0:2459:C:H2'	1:0:2460:G:H5'	1.90	0.54
1:0:1262:U:C6	1:0:1262:U:H3'	2.41	0.54
1:0:494:A:OP2	1:0:495:C:H5	1.91	0.54
1:0:622:U:O2'	1:0:623:G:H5'	2.07	0.54
1:0:1805:G:H1'	3:A:46:ARG:CA	2.38	0.54
1:0:580:A:N7	1:0:584:A:N6	2.56	0.54
1:0:1339:U:O2'	1:0:1993:G:H1'	2.06	0.54
1:0:1692:C:O2'	1:0:1693:A:H5'	2.08	0.54
1:0:2709:C:C4	1:0:2710:C:N4	2.75	0.54
1:0:987:G:H4'	1:0:1167:A:N7	2.23	0.54
1:0:1197:U:H2'	1:0:1198:C:O4'	2.08	0.54
1:0:1782:A:C2	1:0:1821:A:H4'	2.43	0.54
1:0:798:G:N2	1:0:799:C:H1'	2.23	0.54
1:0:729:A:O2'	1:0:730:C:H5'	2.08	0.54
1:0:512:A:C2'	1:0:513:A:H5'	2.35	0.54
1:0:2404:A:H4'	1:0:2405:A:O5'	2.07	0.54
2:9:84:G:H2'	2:9:85:G:C8	2.36	0.54
1:0:31:C:H2'	1:0:32:C:H6	1.71	0.54
1:0:312:G:N2	1:0:328:A:C1'	2.71	0.54
1:0:1432:G:C2	1:0:1594:U:C5	2.95	0.54
1:0:1049:C:C2	1:0:1129:A:C2	2.95	0.54
1:0:2359:U:N3	1:0:2360:C:C5	2.76	0.54
1:0:1072:U:O5'	1:0:1072:U:H6	1.91	0.54
1:0:2474:G:O2'	1:0:2475:C:H5'	2.08	0.54
1:0:968:C:C2	1:0:2438:A:H5'	2.43	0.54
1:0:1972:G:H2'	1:0:1973:C:O4'	2.07	0.54
1:0:1976:U:H2'	1:0:1977:C:C5'	2.26	0.54
1:0:539:A:C6	1:0:2025:A:C2	2.95	0.54
1:0:1761:G:O2'	1:0:1762:C:H5'	2.08	0.54
1:0:1779:C:H6	1:0:1779:C:O5'	1.91	0.54
1:0:677:G:N2	1:0:678:G:C4	2.75	0.54
1:0:140:G:H2'	1:0:141:G:H8	1.73	0.54
1:0:1236:G:N2	1:0:1240:G:C4	2.76	0.54
1:0:1276:U:H2'	1:0:1277:G:O4'	2.08	0.54
1:0:1312:G:H2'	1:0:1656:U:O4	2.08	0.54
1:0:1668:G:C2	1:0:1990:U:O2	2.61	0.54
1:0:1141:U:H3	1:0:2008:C:H5''	1.73	0.54
1:0:2022:C:C4	1:0:2023:C:C4	2.96	0.54
1:0:2707:G:O2'	1:0:2708:U:H5'	2.07	0.54
1:0:2409:A:C8	1:0:2409:A:H3'	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:748:A:N7	1:0:749:C:N3	2.56	0.54
1:0:158:A:H2	1:0:447:U:H4'	1.72	0.54
1:0:931:G:O2'	1:0:932:G:H5'	2.07	0.54
2:9:100:G:C2	2:9:101:A:H1'	2.42	0.54
1:0:2397:A:H2'	1:0:2398:U:C6	2.43	0.54
1:0:1375:C:C4	1:0:1376:C:C5	2.96	0.54
1:0:1645:U:H2'	1:0:1646:G:H8	1.69	0.54
1:0:1851:A:O5'	1:0:1851:A:H8	1.91	0.54
1:0:1886:G:H2'	1:0:1887:G:H8	1.73	0.54
1:0:546:A:H2'	1:0:547:U:C6	2.43	0.54
1:0:1683:G:C2'	1:0:1684:G:H5'	2.32	0.54
1:0:2709:C:N4	1:0:2710:C:N4	2.56	0.54
1:0:1004:A:C6	1:0:1005:U:C5	2.95	0.54
1:0:2222:U:H2'	1:0:2223:U:C6	2.43	0.54
1:0:1789:U:O2'	1:0:1793:A:H1'	2.07	0.54
1:0:1365:U:O2'	1:0:1366:A:H5'	2.08	0.54
1:0:66:U:C2	1:0:67:G:N7	2.75	0.54
1:0:931:G:H2'	1:0:932:G:O4'	2.07	0.54
1:0:114:C:O2'	1:0:115:G:H5'	2.08	0.54
1:0:2395:C:N4	1:0:2396:C:H41	2.05	0.54
1:0:1459:U:O2	1:0:1475:U:O3'	2.25	0.54
1:0:532:A:H2'	1:0:533:C:C6	2.41	0.54
1:0:2266:A:H2'	1:0:2268:G:N7	2.22	0.54
1:0:2674:C:H2'	1:0:2675:U:C6	2.43	0.54
1:0:1385:C:H2'	1:0:1386:A:H8	1.72	0.54
1:0:784:U:O2'	1:0:785:U:H5'	2.08	0.54
1:0:2371:A:H3'	1:0:2371:A:N3	2.22	0.54
1:0:2373:C:C5	1:0:2374:C:C5	2.96	0.54
1:0:2279:G:H2'	1:0:2280:A:C8	2.42	0.54
1:0:229:G:H2'	1:0:230:C:C6	2.43	0.54
1:0:2331:A:H2'	1:0:2332:G:H5'	1.90	0.54
1:0:1746:A:H2	1:0:2696:A:H1'	1.73	0.54
1:0:1767:G:N2	1:0:1768:U:H1'	2.22	0.54
1:0:475:U:O4	1:0:476:G:N1	2.41	0.54
1:0:1920:A:C2	1:0:1922:U:C5	2.96	0.54
1:0:128:C:C2'	1:0:129:A:C5'	2.74	0.54
1:0:1619:A:H2	1:0:1620:C:C6	2.26	0.54
1:0:11:G:H8	1:0:11:G:O5'	1.90	0.54
1:0:1532:A:H2'	1:0:1533:G:C8	2.43	0.54
1:0:1117:G:H2'	1:0:1118:G:C8	2.42	0.54
1:0:1193:G:O2'	1:0:1194:U:H5'	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1140:A:H2	1:0:2548:G:HO2'	1.56	0.53
1:0:815:A:H2'	1:0:816:U:C6	2.43	0.53
1:0:941:U:C2'	1:0:942:U:H5'	2.38	0.53
1:0:2713:A:N6	1:0:2714:A:N6	2.56	0.53
2:9:34:C:O2'	2:9:35:C:H5'	2.08	0.53
1:0:2739:G:H2'	1:0:2740:C:O4'	2.08	0.53
1:0:2623:A:N6	1:0:2624:G:N1	2.56	0.53
1:0:2443:C:H2'	1:0:2444:C:O4'	2.09	0.53
1:0:175:C:N3	1:0:225:G:N2	2.56	0.53
1:0:175:C:O2'	1:0:176:A:C8	2.53	0.53
1:0:845:U:P	1:0:955:G:O6	2.67	0.53
1:0:2816:C:O2	1:0:2852:G:C2	2.61	0.53
1:0:121:G:O2'	1:0:122:G:H5'	2.08	0.53
1:0:2756:A:N7	1:0:2762:G:C8	2.77	0.53
1:0:2318:U:C2'	1:0:2319:G:H8	2.08	0.53
1:0:2376:G:C6	1:0:2399:C:N3	2.76	0.53
1:0:1438:G:C2	1:0:1591:U:C2	2.96	0.53
1:0:2718:A:H2	1:0:2746:G:H1	1.57	0.53
1:0:2375:G:C2	1:0:2400:G:C2	2.96	0.53
1:0:1948:C:C2	1:0:1949:A:N7	2.75	0.53
1:0:1496:G:H1	1:0:1527:G:H1	1.57	0.53
1:0:2437:G:N7	1:0:2469:G:C5	2.76	0.53
1:0:1692:C:C2'	1:0:1693:A:O5'	2.56	0.53
1:0:1935:A:C2	1:0:1936:A:C2	2.97	0.53
1:0:2542:U:H2'	1:0:2544:A:OP2	2.09	0.53
1:0:2661:G:C2	4:B:21:ILE:CA	2.91	0.53
1:0:691:C:C2	1:0:692:C:C5	2.96	0.53
1:0:701:U:O2'	1:0:702:A:H5'	2.09	0.53
1:0:814:G:H3'	1:0:815:A:H5'	1.91	0.53
1:0:835:U:C4	1:0:849:G:C2	2.96	0.53
1:0:1574:A:OP1	1:0:1574:A:O4'	2.25	0.53
1:0:58:C:C1'	1:0:72:A:C8	2.89	0.53
1:0:2266:A:N3	1:0:2268:G:H1'	2.22	0.53
1:0:1966:C:H2'	1:0:1967:U:H6	1.73	0.53
1:0:1379:A:H2'	1:0:1380:C:C6	2.44	0.53
1:0:2625:U:H6	1:0:2625:U:O5'	1.89	0.53
1:0:1656:U:H2'	1:0:1657:A:C5'	2.38	0.53
1:0:1678:G:C2	1:0:1983:G:N3	2.77	0.53
1:0:2052:G:H2'	1:0:2053:G:C5'	2.39	0.53
1:0:829:C:N3	1:0:1206:G:N1	2.57	0.53
1:0:629:C:C2'	1:0:630:G:H5'	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:709:A:O2'	1:0:1639:U:H4'	2.07	0.53
1:0:2199:C:O2'	1:0:2200:G:H5'	2.09	0.53
2:9:9:G:H2'	2:9:10:U:C6	2.43	0.53
1:0:315:G:N2	1:0:325:U:O2	2.41	0.53
1:0:2856:U:C5	1:0:2857:C:H5	2.27	0.53
1:0:401:G:N3	1:0:403:A:N6	2.56	0.53
1:0:1451:C:O2'	1:0:1452:U:H5'	2.08	0.53
2:9:18:G:H2'	2:9:19:C:H6	1.74	0.53
2:9:56:G:H2'	2:9:57:U:O4'	2.09	0.53
1:0:353:G:H2'	1:0:354:C:H6	1.73	0.53
1:0:1098:G:C5	1:0:1114:A:C2	2.96	0.53
1:0:525:A:O2'	1:0:526:C:H5'	2.06	0.53
1:0:1641:C:H3'	1:0:1642:G:C8	2.39	0.53
1:0:1935:A:C2	1:0:2539:C:O2	2.55	0.53
1:0:796:A:C2	1:0:1770:U:H5'	2.43	0.53
1:0:2053:G:C2	1:0:2054:A:C4	2.97	0.53
1:0:305:A:H2'	1:0:306:G:C5'	2.39	0.53
1:0:1811:A:H1'	1:0:1813:A:C4	2.44	0.53
1:0:1055:A:C2	1:0:1121:G:H2'	2.44	0.53
1:0:1372:A:C8	1:0:1373:G:C8	2.97	0.53
1:0:991:A:N7	1:0:992:A:N7	2.57	0.53
1:0:2839:G:H2'	1:0:2840:U:H6	1.72	0.53
1:0:2064:U:O4	1:0:2216:G:C2	2.60	0.53
1:0:2622:G:N2	1:0:2752:C:C2	2.77	0.53
2:9:116:C:H2'	2:9:117:G:O4'	2.09	0.53
1:0:2047:C:C6	1:0:2047:C:H3'	2.43	0.53
1:0:471:A:H2'	1:0:472:C:O4'	2.09	0.53
1:0:545:C:H2'	1:0:546:A:C8	2.44	0.53
1:0:2007:G:H2'	1:0:2008:C:C6	2.44	0.53
1:0:2499:C:H2'	1:0:2500:C:C6	2.41	0.53
1:0:2701:A:N1	1:0:2848:A:C6	2.76	0.53
1:0:1248:G:N7	1:0:1249:G:C6	2.77	0.53
1:0:448:C:C5	1:0:449:C:C5	2.96	0.53
1:0:873:U:C3'	1:0:874:A:H5'	2.39	0.53
1:0:2748:C:H2'	1:0:2749:A:O4'	2.09	0.53
1:0:2347:C:H41	1:0:2361:G:H1	1.57	0.53
1:0:1277:G:C6	1:0:1278:A:N6	2.77	0.53
1:0:1993:G:H2'	1:0:1994:U:C6	2.43	0.53
1:0:1970:G:H2'	1:0:1971:C:C6	2.44	0.53
1:0:1976:U:H2'	1:0:1976:U:O2	2.09	0.53
1:0:2663:U:N3	1:0:2664:G:C5	2.77	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1002:C:N3	1:0:1003:C:C5	2.77	0.53
1:0:689:A:O2'	1:0:690:A:H5'	2.07	0.53
1:0:2763:U:O2'	1:0:2764:U:H5'	2.08	0.53
1:0:67:G:N3	1:0:73:A:C8	2.76	0.53
2:9:8:C:OP1	2:9:63:A:H5'	2.09	0.53
1:0:421:G:H2'	1:0:422:C:H6	1.72	0.53
1:0:1125:G:O2'	1:0:1126:A:H5'	2.08	0.53
1:0:2107:G:H2'	1:0:2108:G:O4'	2.07	0.53
1:0:543:G:H2'	1:0:544:U:C5	2.43	0.53
1:0:1756:C:O5'	1:0:1756:C:H6	1.91	0.53
1:0:2036:G:O2'	1:0:2037:A:H5'	2.08	0.53
1:0:537:C:O2	1:0:2759:U:O2	2.27	0.53
1:0:932:G:H2'	1:0:933:G:H8	1.70	0.53
1:0:1385:C:H1'	1:0:2192:U:C6	2.44	0.53
1:0:2431:C:H2'	1:0:2432:A:O4'	2.08	0.53
1:0:38:G:H1	1:0:453:U:H3	1.56	0.53
1:0:2795:A:H2'	1:0:2795:A:N3	2.23	0.53
1:0:1695:U:H2'	1:0:1696:C:O4'	2.09	0.53
1:0:763:A:H2'	1:0:764:A:H5''	1.90	0.53
1:0:1576:G:C2	1:0:1577:G:C4	2.97	0.53
1:0:2446:C:H2'	1:0:2447:G:O4'	2.08	0.53
1:0:237:G:N2	1:0:238:G:H1'	2.24	0.53
1:0:88:G:H3'	1:0:89:A:C5'	2.38	0.53
1:0:1066:G:H3'	1:0:1067:G:H5''	1.90	0.53
1:0:2377:U:H4'	1:0:2378:G:OP1	2.09	0.53
1:0:2713:A:C4	1:0:2714:A:N7	2.77	0.53
1:0:2491:C:H2'	1:0:2492:G:C4'	2.39	0.53
1:0:965:G:O2'	1:0:966:A:H5'	2.08	0.53
1:0:565:A:C6	1:0:566:U:N3	2.77	0.53
1:0:1352:G:N1	1:0:1353:A:N6	2.57	0.53
2:9:42:U:O5'	2:9:42:U:H6	1.92	0.53
1:0:1666:G:H2'	1:0:1667:A:C8	2.37	0.53
1:0:305:A:H2'	1:0:306:G:H5'	1.89	0.53
1:0:121:G:H2'	1:0:122:G:O4'	2.09	0.53
1:0:2825:A:O2'	1:0:2826:C:H5'	2.09	0.53
1:0:2030:U:H2'	1:0:2031:A:C8	2.43	0.53
1:0:357:A:H2'	1:0:358:C:H5'	1.90	0.53
1:0:1256:C:H2'	1:0:1257:U:C6	2.44	0.53
1:0:1974:U:H2'	1:0:1975:G:H5''	1.90	0.52
1:0:228:A:O5'	1:0:228:A:H8	1.92	0.52
1:0:749:C:O2'	1:0:750:C:H5'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:163:A:H2'	1:0:164:G:C8	2.43	0.52
1:0:1952:A:O3'	1:0:1953:A:O4'	2.27	0.52
1:0:1721:G:O2'	1:0:1722:G:H5'	2.09	0.52
1:0:2679:G:N2	1:0:2687:G:C4	2.77	0.52
1:0:1055:A:OP1	1:0:1057:A:H5'	2.09	0.52
1:0:1235:C:C2	1:0:1241:G:N2	2.77	0.52
1:0:1325:U:H5'	1:0:1326:U:C4	2.44	0.52
1:0:2442:C:N3	1:0:2467:A:C2	2.77	0.52
1:0:1302:C:C4	1:0:1303:U:C4	2.97	0.52
1:0:1333:G:N7	1:0:1342:U:H5'	2.25	0.52
1:0:1685:A:H1'	1:0:1686:A:N3	2.24	0.52
1:0:2497:A:OP2	1:0:2498:U:OP2	2.27	0.52
1:0:2594:U:C2	1:0:2595:C:C5	2.97	0.52
1:0:1002:C:C5	1:0:1198:C:N3	2.78	0.52
1:0:2413:A:C8	1:0:2413:A:H3'	2.44	0.52
1:0:475:U:C4	1:0:476:G:C6	2.97	0.52
1:0:745:C:H2'	1:0:746:G:H5'	1.90	0.52
1:0:748:A:N7	1:0:749:C:C2	2.77	0.52
1:0:2686:C:O2'	1:0:2687:G:H5'	2.09	0.52
1:0:1356:G:C4'	1:0:1613:G:H2'	2.40	0.52
1:0:966:A:N6	1:0:967:G:C4	2.77	0.52
1:0:1727:C:H4'	1:0:2833:C:N3	2.24	0.52
1:0:632:A:H3'	1:0:632:A:N3	2.24	0.52
1:0:1230:C:H2'	1:0:1231:A:H8	1.73	0.52
1:0:2725:C:H2'	1:0:2726:U:C6	2.43	0.52
1:0:1288:A:N6	1:0:1309:G:H5'	2.25	0.52
1:0:1656:U:H2'	1:0:1657:A:H5''	1.92	0.52
1:0:1655:C:H5''	1:0:2689:C:C2'	2.39	0.52
1:0:759:C:N3	1:0:2590:U:H4'	2.24	0.52
1:0:688:A:O5'	1:0:688:A:H8	1.92	0.52
1:0:758:G:C2'	1:0:759:C:H5'	2.40	0.52
1:0:848:A:O2'	1:0:849:G:H5'	2.09	0.52
1:0:161:U:C4	1:0:162:C:N4	2.77	0.52
1:0:781:G:O5'	1:0:781:G:H8	1.92	0.52
1:0:929:A:H2	2:9:81:C:O2	1.92	0.52
1:0:2324:G:H4'	1:0:2326:C:H5''	1.91	0.52
1:0:502:A:H2'	1:0:503:G:H5'	1.90	0.52
1:0:2441:U:N3	1:0:2442:C:C5	2.78	0.52
1:0:1222:G:H1'	1:0:1251:G:H21	1.75	0.52
1:0:1888:C:C5'	1:0:1889:G:H5''	2.38	0.52
1:0:1440:G:H3'	1:0:1441:A:H5'	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1456:C:O2'	1:0:1457:A:H5'	2.09	0.52
1:0:215:G:N2	1:0:632:A:H8	2.06	0.52
1:0:2062:U:H2'	1:0:2063:A:O4'	2.10	0.52
1:0:201:G:O2'	1:0:202:A:H5'	2.09	0.52
1:0:2026:C:O2'	1:0:2027:C:H5'	2.10	0.52
1:0:2623:A:H2'	1:0:2624:G:O4'	2.09	0.52
1:0:1131:G:O2'	1:0:1132:C:H5'	2.09	0.52
1:0:26:G:C6	1:0:27:G:N1	2.77	0.52
1:0:575:U:N3	1:0:576:A:C5	2.78	0.52
1:0:1780:A:O5'	1:0:1780:A:C8	2.57	0.52
1:0:2059:U:OP2	1:0:2217:G:N1	2.41	0.52
1:0:808:C:H2'	1:0:809:C:H6	1.72	0.52
1:0:834:A:C8	1:0:957:G:N7	2.77	0.52
1:0:350:U:H6	1:0:350:U:O5'	1.92	0.52
1:0:941:U:H2'	1:0:942:U:C4'	2.39	0.52
1:0:2760:G:C2'	1:0:2761:A:OP1	2.58	0.52
1:0:932:G:N2	1:0:2248:A:OP2	2.42	0.52
1:0:33:C:O2	1:0:34:U:C4	2.62	0.52
1:0:2642:G:C5	1:0:2643:G:C5	2.98	0.52
1:0:2669:C:N4	14:L:15:SER:CA	2.69	0.52
1:0:1017:C:O2'	1:0:1018:C:C5'	2.58	0.52
1:0:2467:A:H8	1:0:2467:A:O5'	1.93	0.52
1:0:1304:U:C2'	1:0:1305:C:H5'	2.40	0.52
1:0:1318:A:C6	1:0:1319:C:C4	2.98	0.52
1:0:1339:U:H6	1:0:1339:U:P	2.33	0.52
1:0:1696:C:C6	1:0:1697:U:C5	2.97	0.52
1:0:1162:A:O2'	1:0:1163:C:H5'	2.10	0.52
1:0:486:U:H2'	1:0:487:G:C5'	2.40	0.52
2:9:77:G:O2'	2:9:78:A:H5'	2.10	0.52
1:0:2843:A:N1	1:0:2844:G:C2	2.77	0.52
1:0:1409:U:OP1	1:0:1409:U:H6	1.91	0.52
1:0:1478:U:H2'	1:0:1479:G:H8	1.74	0.52
1:0:1932:G:H2'	1:0:1933:G:C8	2.45	0.52
1:0:1388:C:H2'	1:0:1389:C:C6	2.45	0.52
1:0:1442:C:H2'	1:0:1443:G:OP1	2.08	0.52
1:0:1530:U:O5'	1:0:1530:U:H6	1.92	0.52
1:0:691:C:C2	1:0:692:C:C6	2.98	0.52
1:0:2759:U:C5'	1:0:2760:G:OP2	2.54	0.52
1:0:930:A:OP1	1:0:930:A:H4'	2.08	0.52
1:0:2872:U:H2'	1:0:2873:G:C8	2.43	0.52
1:0:1536:G:O2'	1:0:1537:U:H5'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2124:C:O2'	1:0:2125:C:H5'	2.10	0.52
1:0:25:U:H3	1:0:525:A:N6	2.08	0.52
1:0:1331:G:C6	1:0:1332:G:N7	2.78	0.52
1:0:2493:U:O2'	1:0:2494:C:H5'	2.10	0.52
1:0:171:G:O2'	1:0:172:A:H5'	2.09	0.52
1:0:174:A:H4'	1:0:2052:G:OP2	2.10	0.52
1:0:702:A:N3	1:0:792:U:HI'	2.25	0.52
1:0:994:A:N7	1:0:995:A:N3	2.57	0.52
1:0:861:G:H21	1:0:944:A:CI'	2.22	0.52
1:0:944:A:C2	1:0:945:G:H1'	2.45	0.52
1:0:1926:U:O5'	1:0:1926:U:C6	2.61	0.52
1:0:873:U:C4	1:0:930:A:N6	2.78	0.52
1:0:979:A:C6	1:0:980:G:C6	2.98	0.52
1:0:639:G:O5'	1:0:639:G:H8	1.93	0.52
1:0:1007:A:H2'	1:0:1008:G:C8	2.45	0.52
1:0:2511:G:C4	1:0:2512:A:C8	2.98	0.52
1:0:1536:G:C8	1:0:1537:U:C5	2.98	0.52
1:0:714:G:C6	1:0:715:U:C4	2.98	0.52
1:0:1312:G:H4'	1:0:1313:U:H5'	1.91	0.52
1:0:2705:A:O2'	1:0:2706:U:C5	2.58	0.52
1:0:2589:C:O2'	1:0:2590:U:C5	2.56	0.52
1:0:843:G:N3	1:0:2427:A:N6	2.57	0.52
1:0:309:G:HO2'	1:0:333:A:H2	1.58	0.52
1:0:349:G:H2'	1:0:350:U:C6	2.45	0.52
1:0:119:G:HI'	1:0:129:A:C2	2.45	0.52
1:0:1392:U:OP1	1:0:1392:U:C6	2.63	0.52
1:0:541:C:C6	1:0:541:C:H3'	2.44	0.52
1:0:741:G:C5	1:0:743:A:N7	2.78	0.52
1:0:1089:C:O2	1:0:1099:A:H5'	2.10	0.52
1:0:2635:U:H6	1:0:2635:U:O5'	1.93	0.52
1:0:1999:U:H2'	1:0:2000:U:C6	2.45	0.52
1:0:931:G:C2'	1:0:932:G:H5'	2.39	0.52
1:0:652:C:H2'	1:0:653:G:O4'	2.10	0.52
1:0:15:G:H2'	1:0:16:G:C5'	2.40	0.52
1:0:1997:A:C2	1:0:1998:A:C5	2.97	0.52
1:0:401:G:C4	1:0:403:A:N7	2.78	0.52
1:0:2862:G:O2'	1:0:2863:U:C5'	2.57	0.52
1:0:2800:C:H2'	1:0:2801:A:O4'	2.09	0.52
1:0:56:C:H6	1:0:56:C:O5'	1.92	0.52
1:0:2436:U:H2'	1:0:2437:G:O4'	2.09	0.51
1:0:2442:C:C2	1:0:2467:A:H2	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:28:A:H1'	1:0:523:A:C6	2.44	0.51
1:0:1683:G:N7	1:0:1684:G:C2	2.77	0.51
1:0:2656:G:N3	1:0:2711:G:C2	2.78	0.51
1:0:1766:U:H2'	1:0:1767:G:O4'	2.10	0.51
1:0:82:G:H21	1:0:102:C:N4	2.08	0.51
1:0:2571:G:C2	1:0:2582:G:N1	2.78	0.51
1:0:1544:A:N6	1:0:1545:G:C6	2.78	0.51
1:0:2618:A:C5	1:0:2619:G:H1'	2.45	0.51
1:0:2249:U:O2'	1:0:2250:G:H5'	2.09	0.51
1:0:2713:A:O2'	1:0:2714:A:H5'	2.11	0.51
1:0:1375:C:N4	1:0:1376:C:C4	2.79	0.51
1:0:1458:A:H3'	1:0:1459:U:H5''	1.91	0.51
1:0:2601:C:H2'	1:0:2602:G:O5'	2.10	0.51
1:0:2676:G:H2'	1:0:2677:U:C6	2.45	0.51
1:0:2728:A:C2	1:0:2736:U:H1'	2.45	0.51
1:0:1029:C:H3'	1:0:1030:U:H5''	1.92	0.51
1:0:502:A:C2'	1:0:503:G:H5'	2.40	0.51
1:0:1718:A:OP1	1:0:1754:G:N1	2.43	0.51
1:0:1004:A:H2'	1:0:1005:U:H5''	1.85	0.51
1:0:1198:C:H5''	1:0:1199:U:H5''	1.92	0.51
1:0:700:C:O2'	1:0:701:U:H5'	2.09	0.51
1:0:2376:G:N1	1:0:2399:C:C2	2.78	0.51
2:9:9:G:H2'	2:9:10:U:O4'	2.10	0.51
1:0:1471:G:O6	1:0:1472:C:C4	2.64	0.51
1:0:2599:U:H6	1:0:2599:U:O5'	1.94	0.51
1:0:494:A:H62	1:0:507:A:H2	1.54	0.51
1:0:1856:U:OP1	1:0:2389:G:O2'	2.29	0.51
1:0:1151:U:OP1	1:0:1153:A:P	2.69	0.51
1:0:1858:C:H2'	1:0:1859:A:C8	2.42	0.51
1:0:2026:C:OP1	1:0:2757:G:O2'	2.27	0.51
1:0:26:G:C5	1:0:27:G:C2	2.98	0.51
1:0:585:U:H4'	1:0:2481:G:C8	2.46	0.51
1:0:1278:A:O2'	1:0:1279:G:P	2.68	0.51
1:0:1293:A:C2	1:0:1304:U:N3	2.77	0.51
1:0:2665:G:C6	1:0:2666:U:C4	2.97	0.51
1:0:982:C:O2'	1:0:983:G:H5'	2.10	0.51
1:0:451:A:O2'	1:0:452:G:H5'	2.09	0.51
1:0:861:G:N2	1:0:943:U:O2'	2.44	0.51
1:0:2813:G:H2'	1:0:2814:G:C8	2.33	0.51
1:0:2814:G:N2	1:0:2815:C:C2	2.78	0.51
1:0:162:C:H2'	1:0:163:A:C8	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1066:G:C2'	1:0:1067:G:H4'	2.30	0.51
1:0:1566:G:O2'	1:0:1567:A:H5'	2.09	0.51
1:0:1581:C:H41	1:0:1583:A:H1'	1.75	0.51
1:0:1708:C:O2'	1:0:1709:U:H5'	2.09	0.51
1:0:1270:C:N4	1:0:1271:C:N4	2.58	0.51
1:0:471:A:H2'	1:0:472:C:C5'	2.40	0.51
1:0:460:U:N3	1:0:592:G:H1'	2.23	0.51
1:0:224:G:N7	1:0:226:C:O2	2.44	0.51
1:0:1920:A:OP2	1:0:1921:A:OP2	2.29	0.51
1:0:977:G:H1'	1:0:2246:A:C4	2.45	0.51
1:0:2379:G:H2'	1:0:2380:U:O4'	2.10	0.51
1:0:1353:A:N1	1:0:1619:A:N7	2.59	0.51
1:0:1364:C:O5'	1:0:1364:C:H6	1.92	0.51
1:0:393:U:N3	1:0:394:U:C4	2.78	0.51
1:0:2738:A:H2'	1:0:2739:G:H5'	1.92	0.51
1:0:2276:C:O2'	1:0:2277:A:H5'	2.11	0.51
1:0:1972:G:O2'	1:0:1973:C:H5'	2.11	0.51
1:0:538:A:O5'	1:0:538:A:C8	2.53	0.51
1:0:1012:A:H62	1:0:1165:G:H21	1.59	0.51
1:0:828:C:C2	1:0:1207:G:N2	2.79	0.51
1:0:984:A:O2'	1:0:1201:G:H1'	2.10	0.51
1:0:2764:U:H2'	1:0:2765:C:C5	2.46	0.51
1:0:644:A:N6	1:0:651:C:OP1	2.43	0.51
1:0:2033:C:C4	1:0:2034:A:C2	2.99	0.51
1:0:633:G:HO2'	1:0:634:G:H5'	1.76	0.51
1:0:1110:G:H2'	1:0:1111:C:H6	1.73	0.51
1:0:916:U:N3	1:0:917:U:C4	2.79	0.51
1:0:2623:A:C6	1:0:2624:G:C2	2.98	0.51
1:0:611:C:C6	1:0:611:C:H3'	2.46	0.51
1:0:471:A:C2	1:0:481:A:C5	2.99	0.51
1:0:1141:U:O5'	1:0:1141:U:H6	1.93	0.51
1:0:1684:G:H2'	1:0:1974:U:O4	2.10	0.51
1:0:1697:U:O2	1:0:1754:G:C8	2.63	0.51
1:0:1922:U:O2'	1:0:2571:G:H1'	2.10	0.51
1:0:944:A:C4	1:0:945:G:C8	2.99	0.51
1:0:837:U:N3	1:0:838:A:C5	2.78	0.51
1:0:1800:A:C2	1:0:1802:A:C2	2.99	0.51
1:0:91:A:H2'	1:0:92:U:H6	1.73	0.51
1:0:1175:A:H2'	1:0:1176:U:C6	2.44	0.51
1:0:389:G:H2'	1:0:390:U:C6	2.45	0.51
1:0:1368:G:O2'	1:0:1369:G:H5'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2837:G:H8	1:0:2837:G:O5'	1.94	0.51
2:9:30:C:O5'	2:9:30:C:C6	2.61	0.51
1:0:1500:U:O2'	1:0:1501:C:H5'	2.09	0.51
1:0:719:A:H2'	1:0:720:A:O4'	2.10	0.51
1:0:737:C:O5'	1:0:737:C:H6	1.93	0.51
1:0:2227:C:H2'	1:0:2228:U:H5'	1.91	0.51
2:9:75:A:N6	2:9:106:U:C4	2.79	0.51
1:0:588:G:N3	1:0:1275:A:N1	2.59	0.51
1:0:1625:A:O2'	1:0:1632:A:H5'	2.10	0.51
1:0:1287:A:N1	1:0:1661:C:O2'	2.24	0.51
1:0:705:C:OP1	3:A:57:GLY:CA	2.59	0.51
1:0:2261:G:H5''	1:0:2262:C:O5'	2.10	0.51
1:0:71:A:N6	1:0:110:U:H1'	2.26	0.51
1:0:50:G:C4	1:0:117:A:H2	2.29	0.51
1:0:55:A:C2	1:0:113:C:O2	2.64	0.51
1:0:1471:G:O6	1:0:1472:C:N4	2.44	0.51
1:0:15:G:O2'	1:0:16:G:H5'	2.11	0.51
1:0:1362:A:OP1	1:0:1363:C:H5''	2.10	0.51
1:0:1385:C:C2	1:0:1386:A:C8	2.98	0.51
1:0:1827:G:H2'	1:0:1828:C:H6	1.74	0.51
1:0:4:C:H2'	1:0:5:A:C8	2.46	0.51
1:0:1442:C:H3'	1:0:1442:C:H6	1.76	0.51
1:0:423:G:N3	1:0:431:G:N2	2.59	0.51
1:0:1780:A:H2'	1:0:1781:C:H6	1.76	0.51
1:0:2568:A:C2	1:0:2585:C:N3	2.79	0.51
1:0:2586:G:O5'	1:0:2586:G:C8	2.64	0.51
1:0:698:A:H61	1:0:786:U:H3'	1.74	0.51
1:0:755:C:C4	1:0:756:C:N4	2.79	0.51
1:0:1791:C:O2'	1:0:1793:A:H5'	2.11	0.51
1:0:1951:G:OP1	1:0:2571:G:OP1	2.28	0.51
1:0:782:U:H2'	1:0:783:G:C8	2.45	0.51
1:0:541:C:H6	1:0:541:C:H3'	1.75	0.51
1:0:1147:G:C2	1:0:1148:G:C4	2.99	0.51
1:0:1083:C:H42	1:0:1103:C:N4	2.05	0.51
1:0:2523:G:H2'	1:0:2524:G:O4'	2.11	0.51
1:0:1500:U:H3	1:0:1520:G:H22	1.58	0.51
1:0:2027:C:H2'	1:0:2028:C:O4'	2.11	0.51
1:0:2090:U:C2	1:0:2166:G:N1	2.79	0.51
1:0:1683:G:O6	1:0:1977:C:N4	2.44	0.51
1:0:1690:U:C2'	1:0:1691:G:H5''	2.41	0.51
1:0:1683:G:O2'	11:I:6:SER:CA	2.59	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:972:C:N4	1:0:2014:A:C6	2.79	0.51
1:0:815:A:H2'	1:0:816:U:H6	1.75	0.51
1:0:2760:G:H2'	1:0:2761:A:OP1	2.11	0.51
1:0:2309:G:H1	1:0:2364:C:H42	1.58	0.51
1:0:65:C:O5'	1:0:65:C:H6	1.94	0.51
1:0:2394:G:O2'	1:0:2395:C:H5'	2.10	0.51
1:0:2276:C:O5'	1:0:2276:C:H6	1.94	0.51
1:0:805:G:H2'	1:0:2419:C:O2	2.11	0.51
1:0:501:G:H2'	1:0:502:A:C8	2.46	0.51
1:0:1548:U:H2'	1:0:1549:C:C6	2.45	0.51
1:0:1892:C:O5'	1:0:1892:C:H6	1.94	0.51
1:0:1852:G:N2	1:0:1853:C:C2	2.78	0.51
1:0:459:A:C2	1:0:466:A:H8	2.29	0.51
1:0:1658:A:N7	1:0:1659:G:C5	2.79	0.51
1:0:2498:U:H5''	1:0:2499:C:OP1	2.11	0.51
1:0:824:U:H2'	1:0:825:C:H5'	1.92	0.51
1:0:81:C:H4'	1:0:307:C:C5'	2.40	0.51
1:0:751:G:C6	1:0:772:G:O6	2.63	0.51
1:0:1355:A:C8	1:0:1410:U:C1'	2.94	0.51
1:0:677:G:O4'	1:0:951:G:H5''	2.11	0.51
1:0:2817:A:C2	1:0:2851:G:N3	2.79	0.51
1:0:2194:A:H2'	1:0:2195:C:C5'	2.40	0.51
1:0:1350:G:H2'	1:0:1351:G:H8	1.75	0.51
2:9:72:C:O2'	2:9:73:C:H5'	2.10	0.51
1:0:127:C:H5''	1:0:1615:C:O2'	2.11	0.51
1:0:1735:G:H2'	1:0:1736:C:C6	2.45	0.51
1:0:300:C:H6	1:0:300:C:P	2.34	0.51
1:0:2312:A:C2	1:0:2314:A:C6	2.99	0.51
1:0:2475:C:C3'	1:0:2476:A:H5'	2.41	0.50
1:0:1656:U:C2'	1:0:1657:A:C5'	2.89	0.50
1:0:1678:G:N2	1:0:1983:G:H1'	2.26	0.50
1:0:2535:C:C2'	1:0:2536:G:H5'	2.41	0.50
1:0:1768:U:H2'	1:0:1769:U:H6	1.75	0.50
1:0:790:A:C2	1:0:791:G:N9	2.79	0.50
1:0:1791:C:C1'	1:0:1793:A:H5'	2.38	0.50
1:0:617:U:H2'	1:0:618:A:O4'	2.11	0.50
1:0:962:C:H2'	1:0:963:G:H8	1.77	0.50
1:0:2593:A:H3'	1:0:2593:A:H8	1.76	0.50
2:9:91:A:H8	2:9:91:A:O5'	1.94	0.50
1:0:2829:A:H2'	1:0:2830:U:C6	2.46	0.50
1:0:1256:C:C5	1:0:1257:U:C4	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:9:115:G:O2'	2:9:116:C:H5'	2.11	0.50
1:0:1333:G:N2	1:0:1344:C:C5	2.79	0.50
1:0:2520:A:O5'	1:0:2520:A:H8	1.94	0.50
1:0:167:A:C8	1:0:168:A:N7	2.80	0.50
1:0:846:A:H2'	1:0:847:C:C6	2.47	0.50
1:0:984:A:C2	1:0:1200:G:N1	2.68	0.50
1:0:193:A:N7	1:0:444:U:C4	2.79	0.50
1:0:1825:C:H2'	1:0:1826:U:O4'	2.12	0.50
1:0:2404:A:H5'	1:0:2406:C:O5'	2.10	0.50
1:0:2857:C:H2'	1:0:2857:C:O2	2.10	0.50
1:0:1373:G:O2'	1:0:1374:G:H5'	2.11	0.50
1:0:409:G:O2'	1:0:410:A:H5'	2.11	0.50
1:0:2838:U:N3	1:0:2839:G:N7	2.58	0.50
1:0:2354:G:N2	1:0:2357:A:OP2	2.44	0.50
1:0:1271:C:C2	1:0:1272:G:N7	2.80	0.50
1:0:2041:A:C6	1:0:2042:A:N1	2.79	0.50
1:0:1937:G:N3	1:0:2530:C:H5''	2.26	0.50
1:0:2530:C:O2'	1:0:2531:U:H5'	2.12	0.50
1:0:765:C:O2'	1:0:766:A:O4'	2.28	0.50
1:0:669:G:H2'	1:0:670:U:H6	1.75	0.50
1:0:1913:G:N3	1:0:1951:G:O6	2.43	0.50
1:0:861:G:H22	1:0:943:U:C4'	2.24	0.50
1:0:2459:C:N4	1:0:2460:G:C2	2.80	0.50
1:0:2611:A:H2	1:0:2767:C:C2	2.28	0.50
1:0:2617:G:N2	1:0:2755:A:H2'	2.26	0.50
1:0:2761:A:O5'	1:0:2761:A:C8	2.64	0.50
1:0:2508:G:H5''	1:0:2509:A:C5'	2.39	0.50
1:0:1471:G:C6	1:0:1472:C:C4	3.00	0.50
1:0:1541:G:H2'	1:0:1542:G:O4'	2.11	0.50
1:0:2593:A:C8	1:0:2593:A:H3'	2.46	0.50
1:0:2836:U:H2'	1:0:2837:G:H8	1.75	0.50
1:0:2043:A:C2	1:0:2481:G:C2	3.00	0.50
1:0:2487:G:C2	1:0:2561:G:O6	2.63	0.50
1:0:702:A:N6	1:0:703:A:C6	2.80	0.50
1:0:755:C:C2	1:0:756:C:C6	2.99	0.50
1:0:922:A:H62	13:K:17:ARG:CA	2.24	0.50
1:0:41:G:N1	1:0:451:A:C6	2.80	0.50
1:0:874:A:C2	1:0:875:G:C1'	2.94	0.50
1:0:117:A:OP1	1:0:118:U:H5	1.95	0.50
1:0:2770:A:C4'	1:0:2867:G:H22	2.19	0.50
1:0:551:A:N3	1:0:562:G:C2	2.79	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:297:A:H2'	1:0:298:C:H6	1.73	0.50
1:0:1216:G:H2'	1:0:1217:U:O4'	2.12	0.50
1:0:2170:C:H2'	1:0:2171:U:O4'	2.12	0.50
1:0:1287:A:N7	1:0:1315:A:N1	2.60	0.50
1:0:1662:G:OP1	1:0:1663:C:H5'	2.11	0.50
1:0:761:G:C2	1:0:763:A:C6	2.99	0.50
1:0:2618:A:C1'	1:0:2758:A:C2	2.95	0.50
1:0:1366:A:C2	1:0:1391:A:N1	2.80	0.50
1:0:929:A:H8	1:0:929:A:H5''	1.75	0.50
2:9:62:C:C4	2:9:63:A:N7	2.80	0.50
1:0:839:U:N3	1:0:841:G:H1'	2.26	0.50
1:0:1386:A:H2'	1:0:1387:G:O4'	2.11	0.50
1:0:1168:G:C6	1:0:1169:C:C4	2.99	0.50
1:0:1782:A:N6	1:0:1820:G:H2'	2.27	0.50
1:0:321:A:C2	1:0:341:A:C2	2.99	0.50
1:0:1577:G:H2'	1:0:1578:U:H6	1.76	0.50
1:0:2363:G:H5''	1:0:2365:U:OP1	2.11	0.50
1:0:445:A:C2'	1:0:446:C:H5'	2.41	0.50
1:0:2329:C:C2'	1:0:2330:G:H5'	2.41	0.50
1:0:1514:C:C6	1:0:1514:C:O5'	2.63	0.50
1:0:2232:G:C5	1:0:2233:C:C5	3.00	0.50
1:0:400:U:H4'	1:0:401:G:C4	2.47	0.50
1:0:2445:C:C2	1:0:2464:G:N2	2.80	0.50
1:0:2073:A:C6	1:0:2074:U:O4	2.65	0.50
1:0:1427:G:N7	1:0:1428:G:N3	2.59	0.50
1:0:8:A:O2'	1:0:9:U:H5'	2.12	0.50
1:0:9:U:O5'	1:0:9:U:H6	1.95	0.50
1:0:585:U:H4'	1:0:2481:G:N7	2.26	0.50
1:0:483:A:C2'	1:0:484:G:H5''	2.35	0.50
1:0:1680:U:C2	1:0:1981:A:C2	3.00	0.50
1:0:2487:G:H4'	1:0:2533:U:O2'	2.10	0.50
1:0:539:A:N1	1:0:2025:A:C2	2.79	0.50
1:0:171:G:H21	1:0:228:A:H2	1.58	0.50
1:0:1920:A:H2'	1:0:1921:A:C8	2.46	0.50
1:0:745:C:H2'	1:0:746:G:C5'	2.42	0.50
1:0:70:A:O2'	1:0:72:A:OP2	2.23	0.50
1:0:875:G:C6	1:0:928:G:N2	2.80	0.50
1:0:2642:G:H2'	1:0:2643:G:O4'	2.11	0.50
2:9:23:G:H2'	2:9:24:U:C6	2.46	0.50
1:0:1672:A:O2'	4:B:115:GLY:CA	2.60	0.50
1:0:633:G:H2'	1:0:634:G:C8	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2645:C:H6	1:0:2645:C:O5'	1.94	0.50
1:0:1242:A:O2'	1:0:1243:G:H5'	2.11	0.50
1:0:2795:A:OP2	1:0:2796:A:N6	2.40	0.50
1:0:542:A:OP2	1:0:2003:A:H1'	2.12	0.50
1:0:1990:U:O5'	1:0:1990:U:H6	1.93	0.50
1:0:1777:A:N6	1:0:2585:C:C1'	2.75	0.50
1:0:2586:G:H2'	1:0:2587:G:O4'	2.11	0.50
1:0:845:U:C5	1:0:955:G:C6	3.00	0.50
1:0:845:U:O5'	1:0:955:G:O6	2.30	0.50
1:0:636:G:H2'	1:0:637:G:C5'	2.40	0.50
1:0:1787:U:H2'	1:0:1788:C:H6	1.75	0.50
1:0:541:C:C3'	1:0:541:C:C6	2.95	0.50
1:0:2299:A:C5'	1:0:2300:G:C5	2.95	0.50
1:0:1737:G:O5'	1:0:1737:G:H8	1.94	0.50
1:0:1380:C:H6	1:0:1380:C:O5'	1.95	0.50
1:0:222:G:N2	1:0:231:G:H1'	2.27	0.50
1:0:946:U:C2	1:0:947:C:C5	2.99	0.50
1:0:2470:U:O5'	1:0:2470:U:H6	1.95	0.50
1:0:462:G:H2'	1:0:463:C:H5'	1.93	0.50
1:0:568:G:C6	1:0:569:C:N3	2.80	0.50
1:0:569:C:H2'	1:0:570:G:C8	2.47	0.50
1:0:2549:G:C2'	1:0:2550:C:H5'	2.41	0.50
1:0:1003:C:H2'	1:0:1004:A:C8	2.45	0.50
1:0:742:G:H2'	1:0:1766:U:O2	2.12	0.50
1:0:317:U:H3'	1:0:318:G:H5''	1.92	0.50
1:0:1579:G:H2'	1:0:1580:C:H6	1.77	0.50
1:0:1016:C:C2	1:0:1154:A:N3	2.80	0.50
1:0:1466:C:O2'	1:0:1467:U:H5'	2.12	0.50
1:0:2600:A:O2'	1:0:2601:C:H5'	2.12	0.50
1:0:2737:A:H2'	1:0:2738:A:H5'	1.93	0.50
1:0:2425:G:H2'	1:0:2480:C:C5	2.46	0.50
2:9:104:A:C2	2:9:105:G:H1'	2.47	0.50
1:0:24:G:H2'	1:0:25:U:C6	2.46	0.49
1:0:1338:G:OP2	1:0:1632:A:H2'	2.12	0.49
1:0:1331:G:C6	1:0:1332:G:C5	3.00	0.49
1:0:2693:U:C5	1:0:2695:C:OP2	2.65	0.49
1:0:2531:U:C6	1:0:2533:U:OP2	2.65	0.49
1:0:1628:C:C2	1:0:1636:G:N2	2.80	0.49
1:0:705:C:N4	1:0:706:A:N6	2.59	0.49
1:0:835:U:OP2	1:0:957:G:OP2	2.30	0.49
1:0:2571:G:N1	1:0:2582:G:C6	2.80	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1573:G:N7	1:0:1574:A:N7	2.60	0.49
1:0:864:C:O2'	1:0:865:A:H5'	2.12	0.49
1:0:2338:C:H2'	1:0:2339:A:C8	2.47	0.49
1:0:1067:G:H21	1:0:1115:C:N4	2.10	0.49
1:0:1476:G:N2	1:0:1477:C:H1'	2.27	0.49
1:0:2770:A:H4'	1:0:2867:G:N2	2.21	0.49
1:0:1618:U:H5	1:0:1618:U:OP2	1.95	0.49
1:0:76:C:C6	1:0:76:C:H5'	2.44	0.49
1:0:406:G:H2'	1:0:407:A:C8	2.47	0.49
1:0:39:C:H6	1:0:39:C:O5'	1.95	0.49
1:0:1209:G:O2'	1:0:1210:C:H5'	2.11	0.49
1:0:881:U:O2	1:0:924:C:H1'	2.10	0.49
1:0:1133:G:O2'	1:0:1134:C:H5'	2.12	0.49
1:0:576:A:N1	1:0:580:A:N7	2.60	0.49
1:0:1310:C:N3	1:0:1311:C:N4	2.59	0.49
1:0:1767:G:N2	1:0:1768:U:C1'	2.75	0.49
1:0:180:C:C4	1:0:181:A:N6	2.80	0.49
1:0:695:G:N2	1:0:809:C:O2	2.45	0.49
1:0:322:A:OP1	1:0:322:A:C8	2.63	0.49
1:0:320:A:N7	1:0:341:A:N6	2.60	0.49
1:0:344:G:N3	1:0:345:U:C6	2.80	0.49
1:0:2414:A:C3'	1:0:2415:G:H5''	2.41	0.49
1:0:2376:G:C2	1:0:2399:C:O2	2.65	0.49
1:0:1465:G:H2'	1:0:1466:C:O4'	2.12	0.49
1:0:15:G:C2'	1:0:16:G:H5'	2.42	0.49
1:0:992:A:H5''	1:0:993:C:OP2	2.12	0.49
1:0:1348:C:O2'	1:0:1349:A:H5'	2.11	0.49
1:0:1737:G:H2'	1:0:1738:U:H6	1.77	0.49
1:0:1339:U:H6	1:0:1339:U:OP2	1.95	0.49
1:0:1937:G:N3	1:0:2530:C:C5'	2.75	0.49
1:0:2847:G:N1	1:0:2848:A:N6	2.60	0.49
1:0:1003:C:O2'	1:0:1004:A:H5'	2.12	0.49
1:0:2055:G:H2'	1:0:2056:C:O4'	2.12	0.49
1:0:845:U:OP2	1:0:955:G:O6	2.30	0.49
1:0:317:U:O5'	1:0:317:U:H6	1.96	0.49
1:0:339:U:O4	1:0:342:G:OP1	2.31	0.49
1:0:158:A:OP2	1:0:159:A:OP2	2.30	0.49
1:0:113:C:N4	1:0:114:C:H41	2.11	0.49
1:0:2818:G:O2'	1:0:2819:G:H5'	2.12	0.49
1:0:2225:G:O2'	1:0:2226:A:H5'	2.13	0.49
1:0:839:U:H2'	1:0:841:G:O4'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1726:C:O2'	1:0:2834:A:N3	2.37	0.49
1:0:1364:C:C2	1:0:1394:G:C2	3.00	0.49
1:0:991:A:C2	1:0:1146:G:H4'	2.47	0.49
2:9:28:A:H3'	2:9:29:C:H6	1.77	0.49
1:0:2279:G:H8	1:0:2279:G:O5'	1.94	0.49
1:0:1966:C:H2'	1:0:1967:U:C6	2.47	0.49
2:9:20:A:N1	2:9:69:G:O6	2.45	0.49
2:9:69:G:H2'	2:9:70:C:O4'	2.12	0.49
1:0:2478:C:H6	1:0:2478:C:O5'	1.94	0.49
1:0:2007:G:O2'	1:0:2008:C:O4'	2.28	0.49
1:0:1556:A:H2'	1:0:1557:G:H8	1.75	0.49
1:0:2812:A:C2	1:0:2813:G:C5	3.01	0.49
1:0:2484:G:O2'	1:0:2485:U:H5''	2.13	0.49
1:0:837:U:C2	1:0:838:A:C5	3.00	0.49
1:0:931:G:H21	1:0:2247:A:H5''	1.77	0.49
1:0:639:G:H2'	1:0:640:C:H6	1.77	0.49
1:0:839:U:OP1	1:0:2408:G:OP2	2.30	0.49
1:0:2592:U:H6	1:0:2592:U:C3'	2.18	0.49
1:0:2736:U:O2'	1:0:2737:A:H5'	2.11	0.49
1:0:1041:G:O2'	1:0:2445:C:H4'	2.12	0.49
1:0:2182:A:H2'	1:0:2183:C:O4'	2.12	0.49
1:0:2293:G:O2'	1:0:2294:U:H5'	2.12	0.49
1:0:2203:G:O5'	1:0:2203:G:H8	1.94	0.49
1:0:2797:G:O5'	1:0:2797:G:H8	1.95	0.49
1:0:2476:A:O2'	1:0:2477:C:H5	1.96	0.49
1:0:484:G:O2'	1:0:485:G:H5'	2.12	0.49
1:0:588:G:N2	1:0:589:C:C2	2.81	0.49
1:0:1288:A:N6	1:0:1309:G:C4'	2.75	0.49
1:0:1294:G:H1	1:0:1302:C:H42	1.60	0.49
1:0:1689:U:C4	1:0:1690:U:C4	3.00	0.49
1:0:941:U:H2'	1:0:942:U:C5'	2.42	0.49
1:0:837:U:H1'	1:0:2337:A:N7	2.27	0.49
1:0:2712:G:H3'	1:0:2713:A:H5'	1.93	0.49
2:9:67:C:C3'	2:9:68:A:H5'	2.42	0.49
1:0:2029:G:H2'	1:0:2030:U:H6	1.77	0.49
1:0:2558:C:O2'	1:0:2559:U:H5'	2.12	0.49
1:0:964:A:H2'	1:0:965:G:H8	1.70	0.49
1:0:2083:G:H2'	1:0:2084:G:C8	2.48	0.49
1:0:1852:G:C2	1:0:1853:C:C2	3.00	0.49
1:0:1210:C:H1'	1:0:1239:A:C4	2.47	0.49
1:0:2298:U:H3	2:9:15:A:N6	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2467:A:C5	1:0:2468:G:N7	2.80	0.49
1:0:2474:G:N7	1:0:2475:C:C5	2.81	0.49
1:0:1975:G:N2	1:0:1978:U:C5	2.77	0.49
1:0:959:C:H5'	1:0:972:C:O2'	2.12	0.49
1:0:994:A:N7	1:0:995:A:C4	2.81	0.49
1:0:940:G:H8	1:0:940:G:O5'	1.95	0.49
1:0:1476:G:O2'	1:0:2682:C:H1'	2.12	0.49
1:0:1356:G:O4'	1:0:1613:G:H2'	2.12	0.49
1:0:1359:G:H2'	1:0:1360:G:O4'	2.12	0.49
1:0:2670:C:H4'	1:0:2846:G:O2'	2.13	0.49
1:0:314:G:O2'	1:0:315:G:H5'	2.12	0.49
1:0:2856:U:O2'	1:0:2857:C:H5'	2.13	0.49
1:0:2174:G:H2'	1:0:2175:A:C8	2.47	0.49
1:0:889:C:C2'	1:0:890:U:H5'	2.42	0.49
1:0:1842:G:H2'	1:0:1843:U:C6	2.48	0.49
1:0:2532:G:N2	1:0:2533:U:H1'	2.27	0.49
1:0:2665:G:C6	1:0:2666:U:N3	2.80	0.49
1:0:1760:G:H2'	1:0:1761:G:H8	1.77	0.49
1:0:866:U:O5'	1:0:866:U:H6	1.95	0.49
1:0:537:C:C2	1:0:2759:U:H2'	2.47	0.49
1:0:65:C:H2'	1:0:66:U:O4'	2.12	0.49
1:0:1016:C:C5	1:0:1154:A:H1'	2.46	0.49
1:0:873:U:H3'	1:0:874:A:C5'	2.43	0.49
1:0:1484:G:O2'	1:0:1485:U:H5'	2.12	0.49
1:0:1674:C:C6	1:0:1987:G:N2	2.80	0.49
1:0:2867:G:N3	1:0:2867:G:H2'	2.26	0.49
1:0:2225:G:N2	1:0:2405:A:O2'	2.45	0.49
1:0:2674:C:C2	1:0:2675:U:C5	3.01	0.49
1:0:2800:C:C2'	1:0:2801:A:H5'	2.42	0.49
1:0:2401:A:H8	1:0:2401:A:O5'	1.95	0.49
1:0:1333:G:C5	1:0:1342:U:H5'	2.48	0.49
1:0:2664:G:C2	1:0:2705:A:C2	3.01	0.49
1:0:1768:U:H2'	1:0:1769:U:C6	2.47	0.49
1:0:861:G:N3	1:0:944:A:H1'	2.28	0.49
1:0:2261:G:H4'	1:0:2262:C:OP2	2.12	0.49
1:0:2713:A:C4	1:0:2714:A:C8	3.00	0.49
1:0:1563:U:N3	1:0:1564:U:C4	2.80	0.49
1:0:1671:A:O2'	1:0:1672:A:H5'	2.12	0.49
1:0:2861:A:H2'	1:0:2862:G:H8	1.78	0.49
1:0:2326:C:N4	1:0:2350:G:C2	2.81	0.49
1:0:1064:C:H6	1:0:1064:C:O5'	1.96	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2419:C:C4	1:0:2420:C:H1'	2.48	0.49
1:0:753:U:H6	1:0:753:U:O5'	1.96	0.49
1:0:2468:G:O2'	1:0:2469:G:H5'	2.13	0.49
1:0:1761:G:O5'	1:0:1761:G:H8	1.95	0.49
1:0:956:A:H2	1:0:2427:A:O2'	1.90	0.49
1:0:2567:G:C6	1:0:2586:G:C2	3.01	0.49
1:0:691:C:N3	1:0:692:C:C5	2.81	0.49
1:0:704:G:N2	1:0:705:C:C2	2.81	0.49
1:0:338:G:O2'	1:0:339:U:H5'	2.12	0.49
1:0:858:G:H5''	1:0:859:U:H5'	1.94	0.49
1:0:2714:A:O2'	1:0:2715:C:H5'	2.13	0.49
1:0:2270:U:O2'	1:0:2353:G:H1'	2.13	0.49
1:0:1354:A:O2'	1:0:1355:A:OP1	2.27	0.49
1:0:2490:U:C4	1:0:2491:C:C4	3.01	0.49
1:0:313:U:O2'	1:0:314:G:H5'	2.12	0.49
1:0:1126:A:C6	1:0:1127:C:C4	3.01	0.49
1:0:403:A:H5''	1:0:404:A:OP1	2.12	0.49
1:0:357:A:C2'	1:0:358:C:H5'	2.42	0.49
1:0:2644:A:H2'	1:0:2645:C:H6	1.77	0.49
1:0:20:C:C4	1:0:21:A:N7	2.80	0.49
1:0:523:A:O2'	1:0:524:A:H5'	2.13	0.49
1:0:1011:A:N1	1:0:1166:A:C5	2.81	0.49
1:0:2764:U:C2	1:0:2765:C:C5	3.01	0.49
1:0:2396:C:H2'	1:0:2397:A:O4'	2.13	0.49
1:0:1375:C:N4	1:0:1376:C:C5	2.80	0.49
1:0:1355:A:O4'	1:0:1410:U:H4'	2.13	0.49
1:0:1540:C:HO2'	1:0:1541:G:H5'	1.78	0.49
2:9:92:G:H2'	2:9:93:G:C5'	2.37	0.49
1:0:1645:U:O2'	1:0:2677:U:H5''	2.13	0.49
1:0:2737:A:H61	7:E:60:LYS:CA	2.26	0.49
1:0:7:G:H8	1:0:7:G:O5'	1.96	0.49
1:0:2622:G:C2	1:0:2752:C:N3	2.81	0.49
1:0:312:G:N2	1:0:328:A:H1'	2.27	0.49
1:0:2793:G:C4	1:0:2804:G:N1	2.80	0.49
1:0:26:G:H2'	1:0:27:G:O4'	2.13	0.48
1:0:1668:G:O2'	1:0:1669:A:H5'	2.13	0.48
1:0:1716:G:O4'	1:0:1716:G:OP1	2.31	0.48
1:0:2502:G:N9	1:0:2745:A:N7	2.61	0.48
1:0:742:G:C4	1:0:1766:U:C2	3.01	0.48
1:0:757:U:H2'	1:0:758:G:O4'	2.13	0.48
1:0:820:U:O2'	1:0:821:A:C5'	2.61	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:837:U:C4	1:0:838:A:N6	2.81	0.48
1:0:1260:A:N6	1:0:1262:U:H1'	2.27	0.48
1:0:1466:C:N4	1:0:1476:G:O6	2.34	0.48
1:0:15:G:H2'	1:0:16:G:H5'	1.94	0.48
1:0:720:A:N6	1:0:721:C:N4	2.61	0.48
1:0:150:A:H2'	1:0:151:G:O4'	2.13	0.48
1:0:887:G:O2'	1:0:888:G:H5'	2.12	0.48
1:0:2504:G:N1	1:0:2518:C:C4	2.81	0.48
1:0:1761:G:O5'	1:0:1761:G:C8	2.66	0.48
1:0:2422:C:N3	1:0:2423:G:N7	2.61	0.48
1:0:765:C:O2'	1:0:766:A:C8	2.66	0.48
1:0:817:A:H2'	1:0:819:C:N4	2.27	0.48
1:0:953:G:C5	1:0:954:U:N3	2.81	0.48
1:0:958:G:O6	1:0:982:C:N4	2.46	0.48
1:0:343:A:N6	1:0:346:C:C5	2.81	0.48
1:0:963:G:C6	1:0:977:G:N1	2.81	0.48
1:0:951:G:C3'	1:0:952:A:H5''	2.43	0.48
1:0:2163:U:H2'	1:0:2164:G:C8	2.48	0.48
1:0:840:U:C5	1:0:2405:A:H2	2.32	0.48
1:0:1407:G:O2'	1:0:1408:A:H5'	2.14	0.48
1:0:2742:G:H2'	1:0:2743:G:O4'	2.13	0.48
2:9:34:C:C2'	2:9:35:C:H5'	2.43	0.48
1:0:404:A:C2	1:0:424:G:N2	2.80	0.48
1:0:1282:A:H8	1:0:1282:A:O5'	1.96	0.48
1:0:1302:C:N4	1:0:1303:U:C4	2.82	0.48
1:0:1668:G:C6	1:0:1669:A:C6	3.01	0.48
1:0:1773:C:C6	1:0:1773:C:O5'	2.60	0.48
1:0:487:G:C5	1:0:489:A:OP2	2.67	0.48
1:0:875:G:H2'	1:0:876:A:O4'	2.13	0.48
2:9:101:A:C2	2:9:102:A:N6	2.82	0.48
2:9:58:G:O2'	2:9:59:A:OP2	2.25	0.48
2:9:6:C:H2'	2:9:7:C:C5	2.48	0.48
1:0:2231:G:N7	1:0:2232:G:N7	2.62	0.48
1:0:138:G:H2'	1:0:139:A:C8	2.48	0.48
1:0:2645:C:C5	1:0:2646:C:C5	3.01	0.48
1:0:2613:A:O2'	1:0:2614:A:H5'	2.14	0.48
1:0:1038:U:H2'	1:0:1039:A:H8	1.77	0.48
1:0:1038:U:H5	1:0:1137:A:C2	2.31	0.48
1:0:2039:G:C2	1:0:2040:A:C8	3.01	0.48
1:0:26:G:N7	1:0:27:G:C6	2.81	0.48
1:0:1315:A:H5''	1:0:1316:G:OP1	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1340:C:C6	1:0:1341:G:N7	2.81	0.48
1:0:1650:A:N7	1:0:1652:G:C5	2.81	0.48
1:0:2691:C:O5'	1:0:2694:G:H4'	2.14	0.48
1:0:2695:C:H2'	1:0:2696:A:H8	1.78	0.48
1:0:1000:G:OP1	1:0:1168:G:O3'	2.32	0.48
1:0:2587:G:H8	1:0:2587:G:P	2.36	0.48
1:0:692:C:C2'	1:0:693:A:O5'	2.62	0.48
1:0:635:C:H2'	1:0:636:G:C5'	2.19	0.48
1:0:1223:G:N3	1:0:1250:A:N6	2.61	0.48
1:0:923:A:N3	1:0:923:A:H2'	2.29	0.48
1:0:513:A:C4	1:0:515:A:N7	2.81	0.48
1:0:640:C:O2'	1:0:641:G:H5'	2.13	0.48
1:0:2030:U:C2	1:0:2031:A:C8	3.01	0.48
1:0:207:U:H2'	1:0:208:C:H6	1.78	0.48
1:0:2173:G:C5	1:0:2174:G:C5	3.01	0.48
1:0:1438:G:H2'	1:0:1439:G:O4'	2.13	0.48
1:0:1256:C:C5	1:0:1257:U:C5	3.01	0.48
1:0:300:C:H6	1:0:300:C:O5'	1.97	0.48
1:0:2205:C:C5	1:0:2206:C:C5	3.01	0.48
1:0:1869:A:N7	1:0:1870:U:C4	2.81	0.48
1:0:2018:G:O5'	1:0:2018:G:H8	1.96	0.48
1:0:2229:G:H2'	1:0:2475:C:OP1	2.13	0.48
1:0:2529:G:C4	1:0:2530:C:C5	3.01	0.48
1:0:1001:A:N6	1:0:1200:G:O2'	2.45	0.48
1:0:1779:C:HO2'	1:0:1780:A:H5'	1.77	0.48
1:0:1780:A:C5	1:0:1781:C:C5	3.01	0.48
1:0:2054:A:H2'	1:0:2055:G:H8	1.77	0.48
1:0:742:G:H3'	1:0:742:G:N3	2.28	0.48
1:0:791:G:C6	1:0:792:U:C4	3.01	0.48
1:0:824:U:H2'	1:0:825:C:C5'	2.44	0.48
1:0:2241:U:H1'	1:0:2307:A:H1'	1.94	0.48
1:0:750:C:C2'	1:0:751:G:H5'	2.43	0.48
1:0:191:G:O2'	1:0:194:G:OP1	2.31	0.48
1:0:488:A:OP1	1:0:488:A:C8	2.59	0.48
1:0:2379:G:C2	1:0:2380:U:H1'	2.48	0.48
1:0:645:G:H2'	1:0:646:C:C6	2.48	0.48
2:9:23:G:H2'	2:9:24:U:H6	1.78	0.48
1:0:1474:A:N3	1:0:1474:A:C3'	2.75	0.48
1:0:1486:A:H2'	1:0:1487:C:C5	2.48	0.48
1:0:531:G:O2'	1:0:532:A:H5'	2.14	0.48
1:0:2209:G:H2'	1:0:2210:C:C6	2.40	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1362:A:OP2	1:0:1363:C:C5	2.67	0.48
1:0:1153:A:C2	1:0:1155:G:O6	2.65	0.48
1:0:2347:C:H2'	1:0:2348:A:C8	2.49	0.48
1:0:5:A:H2'	1:0:6:A:H8	1.78	0.48
1:0:1552:C:H2'	1:0:1553:G:H5'	1.95	0.48
1:0:1730:G:H2'	1:0:1731:C:C6	2.49	0.48
1:0:1381:G:N2	1:0:1382:G:C4	2.81	0.48
1:0:1818:G:H2'	1:0:1819:U:C6	2.49	0.48
1:0:971:A:H1'	1:0:2435:C:O2'	2.13	0.48
1:0:1633:C:H6	1:0:1633:C:O5'	1.96	0.48
1:0:1284:G:C2	1:0:1633:C:O4'	2.67	0.48
1:0:2696:A:C2	1:0:2697:G:C8	3.02	0.48
1:0:1934:U:O2	1:0:1936:A:C8	2.66	0.48
1:0:2025:A:C8	1:0:2025:A:H3'	2.48	0.48
1:0:1767:G:N1	1:0:1768:U:C2	2.81	0.48
1:0:105:G:H2'	1:0:106:G:O4'	2.14	0.48
1:0:344:G:N2	1:0:345:U:N1	2.61	0.48
1:0:2570:C:H2'	1:0:2571:G:H8	1.74	0.48
1:0:120:G:C2	1:0:121:G:C4	3.02	0.48
1:0:977:G:H4'	1:0:2246:A:C2	2.48	0.48
1:0:2824:C:C2'	1:0:2825:A:OP2	2.62	0.48
1:0:2642:G:C6	1:0:2643:G:C5	3.02	0.48
1:0:17:G:H2'	1:0:18:U:C5	2.48	0.48
1:0:549:G:C6	1:0:550:C:C4	3.02	0.48
1:0:1429:A:H1'	1:0:1603:A:N6	2.29	0.48
1:0:2020:G:H2'	1:0:2021:G:O4'	2.14	0.48
1:0:2464:G:O2'	1:0:2465:G:H5'	2.13	0.48
1:0:2094:C:N4	1:0:2103:G:N3	2.61	0.48
1:0:600:G:H2'	1:0:601:A:OP1	2.13	0.48
1:0:2046:C:N3	1:0:2430:A:H2	2.12	0.48
1:0:2047:C:C6	1:0:2047:C:C3'	2.97	0.48
1:0:2626:U:H2'	1:0:2627:G:C8	2.48	0.48
1:0:957:G:H22	1:0:983:G:H1'	1.78	0.48
1:0:2245:A:O2'	1:0:2246:A:C4	2.67	0.48
1:0:1469:U:OP2	1:0:1471:G:N7	2.47	0.48
1:0:1355:A:OP2	1:0:1355:A:H3'	2.14	0.48
1:0:1416:A:O2'	1:0:1417:C:H5'	2.13	0.48
1:0:1073:G:H3'	1:0:1074:G:H5''	1.95	0.48
1:0:633:G:H8	1:0:633:G:O5'	1.97	0.48
1:0:2207:G:C5	1:0:2208:U:C4	3.02	0.48
1:0:2334:C:O5'	1:0:2334:C:H6	1.97	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1131:G:C2	1:0:1132:C:C2	3.01	0.48
1:0:2442:C:H2'	1:0:2443:C:H6	1.77	0.48
1:0:1038:U:H3	1:0:2466:G:HO2'	1.60	0.48
1:0:2468:G:N3	1:0:2469:G:O4'	2.47	0.48
1:0:477:A:O5'	1:0:477:A:H8	1.96	0.48
1:0:1683:G:N2	1:0:1686:A:N7	2.61	0.48
1:0:2059:U:H5''	1:0:2217:G:N1	2.28	0.48
1:0:849:G:C8	1:0:850:C:C5	3.01	0.48
1:0:635:C:C3'	1:0:636:G:H5''	2.43	0.48
1:0:867:G:O2'	1:0:868:U:H5'	2.14	0.48
1:0:67:G:C5	1:0:72:A:C2	3.01	0.48
1:0:1262:U:C6	1:0:1262:U:C3'	2.96	0.48
1:0:1470:G:C2	1:0:2684:A:N3	2.82	0.48
1:0:1358:C:C3'	1:0:1359:G:H5''	2.44	0.48
1:0:1401:G:O2'	1:0:1541:G:H5'	2.13	0.48
1:0:2193:C:C2	1:0:2194:A:C8	3.02	0.48
1:0:2673:G:C2	1:0:2674:C:C6	3.02	0.48
1:0:1801:C:H1'	1:0:2208:U:H5'	1.95	0.48
1:0:2450:A:O2'	1:0:2451:G:H5'	2.13	0.48
1:0:2822:U:H5	1:0:2823:G:C5	2.31	0.48
1:0:666:U:O5'	1:0:666:U:H6	1.95	0.48
1:0:2326:C:H42	1:0:2349:G:H1	1.62	0.48
1:0:2243:C:H2'	1:0:2244:C:H5'	1.96	0.48
1:0:1507:A:H4'	1:0:1510:A:OP1	2.13	0.48
1:0:1660:G:H8	1:0:1660:G:O5'	1.97	0.48
1:0:1250:A:C2'	1:0:1251:G:H4'	2.44	0.48
1:0:1373:G:H1	1:0:2192:U:H3	1.62	0.48
1:0:600:G:C2'	1:0:601:A:OP1	2.61	0.48
1:0:1242:A:H8	1:0:1242:A:O5'	1.97	0.48
1:0:642:A:H2'	1:0:643:A:C8	2.49	0.48
1:0:1270:C:C4	1:0:1271:C:N4	2.82	0.48
1:0:459:A:N6	1:0:466:A:H2'	2.28	0.48
1:0:685:U:C2	1:0:822:G:N2	2.81	0.48
1:0:918:A:C2'	1:0:919:U:C5'	2.83	0.48
1:0:1313:U:H6	1:0:1313:U:O5'	1.97	0.48
1:0:2665:G:C5	1:0:2666:U:C4	3.01	0.48
1:0:2036:G:OP1	4:B:144:ARG:CA	2.62	0.48
1:0:2217:G:C3'	1:0:2217:G:N3	2.77	0.48
1:0:762:A:C6	1:0:1634:A:C2	3.02	0.48
1:0:815:A:H8	1:0:815:A:P	2.36	0.48
1:0:333:A:HO2'	1:0:350:U:H2'	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1811:A:H1'	1:0:1813:A:C5	2.48	0.48
1:0:859:U:H6	1:0:859:U:O5'	1.97	0.48
1:0:780:U:H2'	1:0:781:G:C8	2.48	0.48
1:0:2376:G:C2	1:0:2399:C:C2	3.02	0.48
1:0:2321:C:O2'	1:0:2353:G:H5''	2.14	0.48
1:0:1117:G:C5	1:0:1118:G:N7	2.82	0.48
1:0:606:A:C2	1:0:607:C:C2	3.02	0.48
1:0:2324:G:N7	1:0:2351:G:C2	2.82	0.48
1:0:439:C:H2'	1:0:440:U:O4'	2.14	0.48
1:0:714:G:O2'	1:0:715:U:H5'	2.14	0.48
1:0:2243:C:N4	1:0:2244:C:C4	2.82	0.48
1:0:2443:C:O2'	1:0:2444:C:H5'	2.14	0.47
1:0:2697:G:O2'	1:0:2698:G:C5'	2.54	0.47
1:0:2657:G:H2'	1:0:2658:A:C8	2.49	0.47
1:0:167:A:C5'	1:0:181:A:H2	2.27	0.47
1:0:189:A:O2'	1:0:190:A:H5'	2.14	0.47
1:0:980:G:H8	1:0:980:G:O5'	1.97	0.47
1:0:1473:U:C5'	1:0:1474:A:C5	2.97	0.47
1:0:1619:A:C2	1:0:1620:C:C6	3.02	0.47
1:0:2234:G:H3'	1:0:2235:G:H8	1.79	0.47
1:0:2209:G:C5	1:0:2210:C:C5	3.02	0.47
1:0:803:C:H5''	1:0:804:C:OP2	2.14	0.47
1:0:2236:U:N3	1:0:2237:C:C4	2.82	0.47
1:0:2292:C:C2	1:0:2293:G:C8	3.02	0.47
1:0:1449:C:H2'	1:0:1450:G:H8	1.78	0.47
1:0:525:A:C8	1:0:526:C:C6	3.03	0.47
1:0:1302:C:N4	1:0:1303:U:O4	2.47	0.47
1:0:1287:A:C6	1:0:1315:A:H2	2.30	0.47
1:0:1764:A:N7	1:0:1821:A:C1'	2.77	0.47
1:0:859:U:C6	1:0:859:U:C3'	2.96	0.47
1:0:513:A:H2'	1:0:516:G:N7	2.29	0.47
1:0:51:A:H2'	1:0:52:A:O4'	2.14	0.47
1:0:1355:A:C5	1:0:1410:U:O4'	2.67	0.47
1:0:1997:A:N1	1:0:1998:A:C6	2.82	0.47
1:0:737:C:H2'	1:0:738:G:O4'	2.14	0.47
1:0:1153:A:N3	1:0:1155:G:C6	2.82	0.47
1:0:1263:G:O2'	1:0:1264:C:P	2.72	0.47
1:0:1193:G:H2'	1:0:1194:U:C6	2.45	0.47
2:9:71:G:N2	2:9:72:C:C1'	2.77	0.47
1:0:1389:C:C2'	1:0:1390:G:H5'	2.44	0.47
1:0:1685:A:O2'	1:0:1686:A:H3'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2493:U:O2	1:0:2549:G:O6	2.31	0.47
1:0:2708:U:N3	1:0:2709:C:N3	2.62	0.47
1:0:831:G:OP2	1:0:1199:U:C5	2.68	0.47
1:0:689:A:C2	1:0:690:A:N9	2.83	0.47
2:9:78:A:H2'	2:9:79:U:C5	2.48	0.47
1:0:1561:A:H2'	1:0:1562:G:O4'	2.15	0.47
1:0:2834:A:H8	1:0:2834:A:O5'	1.98	0.47
1:0:1353:A:C6	1:0:1619:A:C8	3.02	0.47
1:0:1610:A:H2'	1:0:1611:U:H6	1.79	0.47
1:0:2554:C:C6	1:0:2554:C:C3'	2.97	0.47
1:0:2442:C:H42	1:0:2466:G:H1	1.61	0.47
1:0:1681:A:N1	1:0:1682:A:N3	2.62	0.47
1:0:168:A:O2'	1:0:169:C:O4'	2.26	0.47
1:0:827:C:C2	1:0:828:C:C5	3.02	0.47
1:0:311:A:H2'	1:0:345:U:O2'	2.15	0.47
1:0:2859:U:H5	1:0:2860:C:C2	2.33	0.47
1:0:711:C:H4'	1:0:748:A:C2	2.49	0.47
1:0:1823:G:H2'	1:0:1824:C:H6	1.74	0.47
1:0:1748:U:N3	1:0:1753:A:H2	2.12	0.47
1:0:2844:G:O2'	1:0:2845:C:H5'	2.14	0.47
1:0:1800:A:N3	1:0:1802:A:N1	2.62	0.47
1:0:1674:C:C2	1:0:1675:C:C5	3.03	0.47
1:0:2163:U:H2'	1:0:2164:G:H8	1.78	0.47
1:0:314:G:N1	1:0:326:A:C6	2.83	0.47
1:0:1412:C:C2	1:0:1413:U:C5	3.03	0.47
1:0:202:A:H2'	1:0:203:G:O4'	2.14	0.47
1:0:2279:G:O2'	1:0:2280:A:H5'	2.14	0.47
1:0:1215:A:O2'	1:0:1216:G:H5'	2.15	0.47
1:0:2324:G:N2	1:0:2361:G:C4	2.82	0.47
1:0:2298:U:O4	2:9:15:A:N6	2.47	0.47
1:0:2434:G:C6	1:0:2477:C:N4	2.80	0.47
1:0:1333:G:N2	1:0:1344:C:C4	2.81	0.47
1:0:1666:G:N3	1:0:1667:A:C8	2.83	0.47
1:0:2702:G:C6	1:0:2703:C:C4	3.03	0.47
1:0:2502:G:C1'	1:0:2745:A:C8	2.97	0.47
1:0:2221:G:C2'	1:0:2222:U:O5'	2.62	0.47
1:0:225:G:N2	1:0:2410:U:H1'	2.28	0.47
1:0:336:A:H61	1:0:348:U:H3	1.62	0.47
1:0:2817:A:C6	1:0:2851:G:C6	3.03	0.47
1:0:551:A:C2	1:0:562:G:C2	3.02	0.47
2:9:110:U:O2'	2:9:111:C:H5'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:722:C:N4	1:0:723:C:N4	2.62	0.47
1:0:1257:U:H2'	1:0:1258:G:C8	2.50	0.47
1:0:1984:A:C6	1:0:1985:G:C5	3.02	0.47
1:0:93:A:O2'	1:0:94:C:H5'	2.14	0.47
1:0:246:C:H42	1:0:247:A:H62	1.63	0.47
1:0:544:U:H2'	1:0:545:C:O4'	2.15	0.47
1:0:587:A:H2'	1:0:588:G:C5'	2.44	0.47
1:0:1331:G:C5	1:0:1332:G:N7	2.82	0.47
1:0:2496:C:H2'	1:0:2521:A:H62	1.79	0.47
1:0:178:C:O2'	1:0:179:U:H5'	2.15	0.47
1:0:818:G:C6	1:0:2051:U:OP1	2.68	0.47
1:0:2409:A:C8	1:0:2409:A:C3'	2.97	0.47
1:0:701:U:C4	1:0:702:A:C5	3.03	0.47
1:0:2177:U:O2'	1:0:2178:U:H5'	2.14	0.47
1:0:58:C:C5	1:0:59:G:O4'	2.67	0.47
2:9:31:A:H2'	2:9:32:C:O4'	2.15	0.47
1:0:324:C:H2'	1:0:325:U:O4'	2.15	0.47
1:0:1347:C:C2'	1:0:1348:C:H5'	2.44	0.47
1:0:2840:U:N3	1:0:2841:U:O4	2.48	0.47
1:0:2633:A:H5''	1:0:2634:G:OP1	2.14	0.47
1:0:2717:G:H2'	1:0:2718:A:C8	2.49	0.47
1:0:2718:A:N1	1:0:2719:U:C5	2.83	0.47
1:0:2749:A:C6	1:0:2750:G:C6	3.03	0.47
1:0:2227:C:C2'	1:0:2228:U:H5'	2.45	0.47
1:0:714:G:C5	1:0:715:U:C5	3.02	0.47
1:0:8:A:H2'	1:0:9:U:C6	2.50	0.47
1:0:303:C:C2	1:0:360:A:C2	3.03	0.47
1:0:1035:G:O6	1:0:1036:G:O6	2.32	0.47
1:0:481:A:N6	1:0:482:A:N6	2.62	0.47
1:0:1650:A:C8	1:0:1652:G:N7	2.82	0.47
1:0:178:C:H2'	1:0:179:U:H6	1.77	0.47
1:0:225:G:O5'	1:0:226:C:H5'	2.15	0.47
1:0:1771:A:C8	1:0:1772:C:H5	2.32	0.47
1:0:807:A:C5	1:0:808:C:C4	3.02	0.47
1:0:1578:U:O4	1:0:1579:G:O6	2.32	0.47
1:0:941:U:C4	1:0:942:U:C2	3.03	0.47
1:0:192:G:H4'	1:0:193:A:O5'	2.15	0.47
1:0:69:G:H5''	1:0:70:A:OP1	2.15	0.47
1:0:1323:G:H2'	1:0:1324:G:H4'	1.97	0.47
1:0:2376:G:H2'	1:0:2377:U:C6	2.50	0.47
1:0:1415:C:O2'	1:0:1416:A:H5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:974:U:H2'	1:0:975:C:H6	1.80	0.47
1:0:1408:A:C2	1:0:1411:C:C4	3.03	0.47
1:0:79:G:HO2'	1:0:80:A:H5'	1.77	0.47
1:0:2082:C:H2'	1:0:2083:G:O4'	2.15	0.47
1:0:2173:G:O2'	1:0:2174:G:H5'	2.15	0.47
1:0:1933:G:O5'	1:0:1933:G:C8	2.63	0.47
1:0:1151:U:OP1	1:0:1153:A:OP2	2.32	0.47
1:0:2721:A:C8	1:0:2722:C:C6	3.03	0.47
1:0:2091:C:H2'	1:0:2092:U:C5'	2.45	0.47
1:0:2203:G:H4'	1:0:2204:A:H5'	1.96	0.47
1:0:1434:U:H6	1:0:1434:U:O5'	1.97	0.47
1:0:1424:U:H2'	1:0:1425:G:C8	2.50	0.47
1:0:1649:A:H8	1:0:1649:A:O5'	1.98	0.47
1:0:28:A:H61	1:0:522:G:H4'	1.80	0.47
1:0:1982:C:O2'	1:0:1983:G:H5'	2.14	0.47
1:0:2705:A:H8	1:0:2705:A:H5''	1.79	0.47
1:0:1011:A:C2	1:0:1166:A:C5	3.02	0.47
1:0:1168:G:C2	1:0:1169:C:C2	3.03	0.47
1:0:167:A:H2'	1:0:168:A:H8	1.76	0.47
1:0:755:C:N3	1:0:756:C:C4	2.83	0.47
1:0:810:U:O2'	1:0:811:G:H5'	2.15	0.47
1:0:537:C:O4'	1:0:2759:U:O2'	2.32	0.47
1:0:1375:C:N4	1:0:1376:C:N4	2.63	0.47
1:0:676:G:C6	1:0:677:G:N7	2.82	0.47
1:0:717:G:H1'	1:0:740:A:N6	2.30	0.47
1:0:2721:A:C5	1:0:2722:C:C2	3.03	0.47
1:0:353:G:O2'	1:0:354:C:H5'	2.15	0.47
1:0:611:C:C6	1:0:611:C:C3'	2.98	0.47
1:0:1689:U:C4	1:0:1690:U:O4	2.68	0.47
1:0:1578:U:N3	1:0:1579:G:C5	2.83	0.47
1:0:2762:G:C6	1:0:2763:U:C5	3.03	0.47
1:0:1918:G:O5'	1:0:1918:G:H8	1.97	0.47
1:0:839:U:C4	1:0:841:G:H1'	2.50	0.47
1:0:992:A:C2	1:0:2011:U:O4'	2.67	0.47
1:0:2440:C:N3	1:0:2441:U:C5	2.83	0.47
1:0:26:G:C5	1:0:27:G:N1	2.83	0.47
1:0:570:G:H2'	1:0:571:U:C5'	2.45	0.47
1:0:1629:G:C6	1:0:1633:C:N4	2.83	0.47
1:0:1744:G:H2'	1:0:1746:A:OP2	2.15	0.47
1:0:1974:U:O5'	1:0:1974:U:H6	1.97	0.47
1:0:2540:A:C2'	1:0:2541:U:O5'	2.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2539:C:C4	1:0:2540:A:N7	2.83	0.47
1:0:1778:U:O2'	1:0:1779:C:H5'	2.14	0.47
1:0:698:A:C4	1:0:787:A:C2	3.03	0.47
1:0:318:G:H22	1:0:321:A:C5'	2.28	0.47
1:0:861:G:H21	1:0:944:A:H1'	1.79	0.47
1:0:447:U:O2'	1:0:448:C:C6	2.66	0.47
1:0:931:G:C6	1:0:932:G:C4	3.03	0.47
1:0:429:C:H2'	1:0:430:C:O4'	2.14	0.47
1:0:218:A:N1	1:0:232:A:H5''	2.30	0.47
1:0:1102:G:H2'	1:0:1103:C:H6	1.80	0.47
1:0:1831:G:C2'	1:0:1832:G:H5'	2.45	0.47
1:0:2347:C:N4	1:0:2361:G:H1	2.12	0.47
1:0:1172:U:H2'	1:0:1173:G:H8	1.79	0.47
1:0:184:A:H2'	1:0:185:C:O4'	2.15	0.47
1:0:1833:U:H6	1:0:1833:U:O5'	1.98	0.47
1:0:1039:A:C5	1:0:1136:G:N2	2.83	0.46
1:0:2469:G:H4'	1:0:2470:U:C5	2.37	0.46
1:0:581:A:H2'	1:0:581:A:N3	2.30	0.46
1:0:2494:C:O2	1:0:2549:G:C5	2.68	0.46
1:0:860:U:H3	1:0:945:G:N2	2.13	0.46
1:0:773:G:C3'	1:0:774:A:H5'	2.44	0.46
1:0:162:C:H2'	1:0:163:A:H8	1.79	0.46
1:0:2825:A:H2'	1:0:2826:C:C6	2.51	0.46
1:0:1959:U:C2'	1:0:1960:A:C8	2.93	0.46
1:0:208:C:C2'	1:0:209:G:H5'	2.45	0.46
1:0:556:A:C2'	1:0:557:U:H5'	2.42	0.46
1:0:1231:A:H3'	1:0:1232:U:C6	2.49	0.46
1:0:1876:C:H2'	1:0:1877:C:H5'	1.97	0.46
1:0:2506:C:H2'	1:0:2507:U:H6	1.79	0.46
1:0:1536:G:C8	1:0:1537:U:H5	2.33	0.46
1:0:2171:U:O5'	1:0:2171:U:H6	1.99	0.46
1:0:1869:A:H2'	1:0:1870:U:C6	2.50	0.46
1:0:2002:A:N1	1:0:2003:A:C5	2.83	0.46
1:0:584:A:H5'	1:0:2038:C:N4	2.30	0.46
1:0:2044:G:N2	1:0:2046:C:C5	2.83	0.46
1:0:29:U:H2'	1:0:30:G:H8	1.77	0.46
1:0:542:A:H2'	1:0:543:G:H5'	1.97	0.46
1:0:1292:A:H2'	1:0:1293:A:H8	1.81	0.46
1:0:1314:A:N7	1:0:1316:G:N7	2.63	0.46
1:0:2007:G:C2	1:0:2023:C:O2	2.68	0.46
1:0:831:G:O2'	1:0:832:A:C4'	2.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:348:U:C5	1:0:349:G:C8	3.04	0.46
1:0:2078:G:N1	1:0:2178:U:C2	2.83	0.46
1:0:712:A:C8	1:0:713:G:C8	3.03	0.46
1:0:165:G:O6	1:0:166:G:C2	2.68	0.46
1:0:509:U:H3'	1:0:510:G:H8	1.80	0.46
1:0:1783:G:N2	1:0:1784:C:H1'	2.30	0.46
1:0:2491:C:C3'	1:0:2492:G:H5''	2.45	0.46
1:0:852:U:O2	1:0:951:G:C2	2.69	0.46
1:0:391:C:H2'	1:0:392:G:C8	2.51	0.46
1:0:2383:C:H2'	1:0:2384:G:O4'	2.15	0.46
1:0:600:G:H3'	1:0:601:A:H5'	1.97	0.46
1:0:2359:U:C4	1:0:2360:C:H5	2.33	0.46
1:0:2125:C:O5'	1:0:2125:C:H6	1.98	0.46
32:0:2881:MUL:H14	32:0:2881:MUL:C10	2.42	0.46
1:0:1657:A:N7	1:0:1658:A:C5	2.84	0.46
1:0:809:C:H2'	1:0:810:U:C6	2.50	0.46
1:0:844:G:N1	1:0:845:U:C2	2.83	0.46
1:0:2678:C:O2'	1:0:2679:G:H5'	2.15	0.46
1:0:2030:U:C2	1:0:2031:A:N7	2.84	0.46
1:0:314:G:H2'	1:0:315:G:H8	1.77	0.46
1:0:2276:C:H2'	1:0:2277:A:O4'	2.14	0.46
1:0:605:G:H2'	1:0:606:A:H8	1.81	0.46
1:0:1496:G:H8	1:0:1496:G:O5'	1.98	0.46
1:0:1031:C:H4'	1:0:1032:A:C8	2.50	0.46
1:0:319:G:C2	1:0:511:A:C4	3.04	0.46
1:0:2626:U:H6	1:0:2626:U:O5'	1.99	0.46
1:0:2656:G:N3	1:0:2711:G:N2	2.63	0.46
1:0:173:A:N3	1:0:173:A:H2'	2.30	0.46
1:0:698:A:C6	1:0:786:U:C6	3.03	0.46
1:0:981:C:C5	1:0:982:C:C5	3.03	0.46
1:0:318:G:N2	1:0:321:A:O4'	2.48	0.46
1:0:629:C:O2'	1:0:630:G:H5'	2.15	0.46
1:0:1457:A:C2'	1:0:1458:A:H5'	2.44	0.46
2:9:94:G:N3	2:9:94:G:H2'	2.31	0.46
1:0:1945:C:O2'	1:0:1946:U:H5	1.98	0.46
1:0:839:U:H5''	1:0:2408:G:OP2	2.15	0.46
1:0:1281:A:H2	1:0:1996:A:C2	2.32	0.46
1:0:2651:U:H2'	1:0:2652:G:C8	2.51	0.46
1:0:1018:C:H3'	1:0:1018:C:C6	2.49	0.46
1:0:1379:A:N7	1:0:1380:C:N4	2.63	0.46
1:0:2726:U:H2'	1:0:2727:G:O4'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2554:C:H6	1:0:2554:C:O5'	1.99	0.46
1:0:20:C:O2'	1:0:21:A:H5'	2.16	0.46
1:0:1569:A:H8	1:0:1569:A:O5'	1.97	0.46
1:0:2013:A:H1'	1:0:2478:C:H5'	1.97	0.46
1:0:2012:A:C6	1:0:2014:A:H5'	2.50	0.46
1:0:348:U:O4	1:0:349:G:C5	2.69	0.46
1:0:348:U:C4	1:0:349:G:C5	3.04	0.46
1:0:2617:G:H22	1:0:2755:A:H2'	1.80	0.46
1:0:2309:G:H1	1:0:2364:C:N4	2.14	0.46
1:0:836:G:C2	1:0:837:U:C5	3.04	0.46
1:0:836:G:H2'	1:0:837:U:C6	2.41	0.46
1:0:513:A:H4'	1:0:515:A:H5'	1.97	0.46
1:0:873:U:H2'	1:0:874:A:H5'	1.96	0.46
1:0:873:U:P	1:0:2247:A:C2	3.08	0.46
1:0:658:G:H1'	1:0:2330:G:H5''	1.98	0.46
1:0:1429:A:O2'	1:0:1430:G:H4'	2.14	0.46
1:0:1996:A:O2'	1:0:1997:A:H5'	2.15	0.46
1:0:133:C:H2'	1:0:134:G:O4'	2.16	0.46
1:0:740:A:N6	1:0:741:G:C2	2.84	0.46
1:0:2300:G:N3	1:0:2300:G:H3'	2.31	0.46
1:0:2026:C:O2'	1:0:2027:C:C5'	2.64	0.46
1:0:2637:C:H2'	1:0:2638:G:C8	2.51	0.46
1:0:2726:U:H6	1:0:2726:U:O5'	1.99	0.46
1:0:2429:A:OP1	1:0:2476:A:C8	2.69	0.46
1:0:1289:A:N1	1:0:1290:A:C5	2.83	0.46
1:0:1309:G:C6	1:0:1310:C:C4	3.04	0.46
1:0:1683:G:N7	1:0:1684:G:N3	2.63	0.46
1:0:1690:U:H2'	1:0:1691:G:C5'	2.45	0.46
1:0:1979:C:H2'	1:0:1980:A:H4'	1.98	0.46
1:0:2549:G:N2	1:0:2550:C:H1'	2.31	0.46
1:0:792:U:C2'	1:0:793:G:C5'	2.92	0.46
1:0:2762:G:C5	1:0:2763:U:C5	3.03	0.46
1:0:951:G:H2'	1:0:952:A:O4'	2.15	0.46
1:0:314:G:C2	1:0:326:A:C2	3.03	0.46
1:0:1997:A:C2	1:0:1998:A:C6	3.03	0.46
1:0:2106:G:H2'	1:0:2107:G:C8	2.51	0.46
1:0:1468:A:P	1:0:1468:A:H8	2.37	0.46
1:0:1549:C:H6	1:0:1549:C:O5'	1.98	0.46
1:0:1220:G:H2'	1:0:1221:C:H6	1.80	0.46
1:0:470:U:O4	1:0:471:A:C6	2.69	0.46
1:0:1161:U:H2'	1:0:1162:A:H8	1.76	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1789:U:C4	1:0:1811:A:H2	2.32	0.46
1:0:2176:U:H2'	1:0:2177:U:O4'	2.15	0.46
1:0:863:C:H2'	1:0:864:C:O4'	2.15	0.46
1:0:866:U:O2'	1:0:867:G:H5'	2.15	0.46
1:0:728:G:H2'	1:0:729:A:O4'	2.16	0.46
1:0:2825:A:N7	1:0:2843:A:H2	2.14	0.46
1:0:681:A:C6	1:0:683:A:H2'	2.51	0.46
2:9:89:G:N2	2:9:91:A:C8	2.84	0.46
1:0:1264:C:C2'	1:0:1265:G:O5'	2.63	0.46
1:0:1985:G:H2'	1:0:1986:G:H8	1.81	0.46
1:0:1090:C:C2'	1:0:1091:C:H5'	2.46	0.46
1:0:2086:U:H2'	1:0:2087:U:C6	2.50	0.46
1:0:587:A:H5''	1:0:1268:U:O3'	2.16	0.46
1:0:485:G:O6	1:0:520:C:N4	2.48	0.46
1:0:1668:G:O6	1:0:1669:A:N6	2.49	0.46
1:0:2815:C:C2'	1:0:2816:C:H5'	2.45	0.46
1:0:2815:C:C4	1:0:2816:C:C5	3.04	0.46
1:0:2756:A:N6	1:0:2762:G:C1'	2.73	0.46
1:0:2785:A:H2'	1:0:2786:G:C8	2.51	0.46
1:0:621:U:H3	1:0:628:A:H61	1.64	0.46
1:0:751:G:C4	1:0:772:G:N1	2.83	0.46
1:0:65:C:C2	1:0:88:G:N2	2.84	0.46
1:0:1748:U:N3	1:0:1753:A:C2	2.84	0.46
1:0:646:C:H2'	1:0:647:G:H8	1.80	0.46
1:0:1398:G:N1	1:0:1416:A:C5	2.84	0.46
1:0:507:A:H2'	1:0:508:G:O4'	2.15	0.46
2:9:108:G:H8	2:9:108:G:O5'	1.99	0.46
1:0:299:C:H2'	1:0:300:C:C5	2.51	0.46
1:0:588:G:C8	1:0:2000:U:O4	2.69	0.46
1:0:1311:C:N3	1:0:1660:G:C2	2.84	0.46
1:0:2628:C:H2'	1:0:2629:U:C5	2.48	0.46
1:0:1768:U:O5'	1:0:1768:U:H6	1.99	0.46
1:0:2262:C:C2'	1:0:2263:C:H6	2.27	0.46
1:0:751:G:H2'	1:0:752:G:O4'	2.15	0.46
1:0:66:U:H6	1:0:66:U:O5'	1.99	0.46
1:0:34:U:C2'	1:0:35:G:H5'	2.34	0.46
1:0:54:G:O6	1:0:55:A:N6	2.49	0.46
1:0:195:A:H61	1:0:212:U:C4'	2.23	0.46
1:0:640:C:C2	1:0:641:G:C8	3.03	0.46
2:9:5:C:H2'	2:9:6:C:O4'	2.16	0.46
1:0:1456:C:O2	1:0:1566:G:C2	2.69	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1398:G:C6	1:0:1416:A:C5	3.04	0.46
1:0:1461:C:H2'	1:0:1462:C:H6	1.81	0.46
1:0:1945:C:O2'	1:0:1946:U:C5	2.68	0.46
1:0:427:C:O2'	1:0:428:A:H5'	2.15	0.46
1:0:1479:G:C4	1:0:1480:G:C8	3.04	0.46
1:0:220:U:O4	1:0:232:A:C8	2.69	0.46
1:0:394:U:H6	1:0:394:U:O5'	1.99	0.46
1:0:2384:G:H21	1:0:2391:A:H62	1.63	0.46
1:0:2091:C:H2'	1:0:2092:U:O4'	2.16	0.46
1:0:1830:C:H42	1:0:1881:U:H3'	1.81	0.46
1:0:1837:G:O2'	1:0:1838:G:H5'	2.16	0.46
1:0:1708:C:H2'	1:0:1709:U:O4'	2.15	0.46
1:0:2356:A:O2'	1:0:2357:A:H5'	2.15	0.46
1:0:598:U:H2'	1:0:599:A:C8	2.51	0.46
2:9:95:U:H2'	2:9:96:C:H6	1.80	0.46
1:0:459:A:H1'	1:0:461:A:N6	2.31	0.46
1:0:477:A:H2'	1:0:478:G:H5'	1.98	0.46
1:0:1682:A:N6	1:0:1977:C:N4	2.62	0.46
1:0:1975:G:C6	1:0:1980:A:C2	3.04	0.46
1:0:2543:A:C6	1:0:2544:A:N1	2.84	0.46
1:0:2549:G:H2'	1:0:2550:C:C5'	2.46	0.46
1:0:1777:A:N6	1:0:2585:C:H1'	2.32	0.46
1:0:942:U:H2'	1:0:943:U:C5'	2.45	0.46
1:0:70:A:P	1:0:111:G:H4'	2.56	0.46
1:0:117:A:OP1	1:0:118:U:C5	2.69	0.46
1:0:1145:C:C5	1:0:1147:G:OP2	2.69	0.46
1:0:464:G:H2'	1:0:465:C:C6	2.51	0.46
1:0:302:U:C2	1:0:361:G:N2	2.84	0.46
1:0:95:G:C2	1:0:96:C:C2	3.03	0.46
1:0:294:U:H2'	1:0:295:C:H6	1.81	0.46
1:0:1038:U:O2	1:0:2466:G:H4'	2.16	0.45
1:0:2472:U:C5	1:0:2473:G:N7	2.84	0.45
1:0:2474:G:C5	1:0:2475:C:C4	3.03	0.45
1:0:472:C:N4	1:0:473:C:H41	2.13	0.45
1:0:1300:A:N1	1:0:1666:G:H1'	2.30	0.45
1:0:1715:A:C8	1:0:1717:A:H1'	2.50	0.45
1:0:809:C:H2'	1:0:810:U:H6	1.80	0.45
1:0:921:A:O2'	1:0:923:A:OP2	2.21	0.45
1:0:2319:G:C2'	1:0:2320:G:H8	2.21	0.45
1:0:2238:G:O2'	1:0:2239:C:H5'	2.16	0.45
1:0:1213:U:H2'	1:0:1214:C:C6	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1987:G:C5	1:0:1988:A:C8	3.04	0.45
1:0:533:C:C2	1:0:534:U:C2	3.04	0.45
1:0:2856:U:C2	1:0:2857:C:C5	3.04	0.45
1:0:1111:C:C5	1:0:1112:U:H5	2.34	0.45
1:0:1020:A:O5'	1:0:1020:A:H8	1.99	0.45
1:0:184:A:H2'	1:0:185:C:C6	2.51	0.45
1:0:1402:G:H3'	1:0:1403:U:H6	1.81	0.45
1:0:2433:G:N1	1:0:2478:C:N4	2.65	0.45
1:0:1625:A:H1'	1:0:1632:A:C4'	2.47	0.45
1:0:1681:A:C2	1:0:1682:A:C4	3.04	0.45
1:0:1715:A:O2'	1:0:1716:G:H8	1.99	0.45
1:0:1717:A:N7	1:0:1718:A:C5	2.84	0.45
1:0:693:A:O2'	1:0:694:G:H5'	2.17	0.45
1:0:1574:A:C2	1:0:1576:G:C8	3.04	0.45
1:0:941:U:C2'	1:0:942:U:C5'	2.93	0.45
1:0:2756:A:C6	1:0:2762:G:C1'	2.98	0.45
1:0:751:G:C2	1:0:772:G:C6	3.04	0.45
1:0:978:U:H2'	1:0:979:A:C8	2.50	0.45
1:0:2379:G:C2	1:0:2396:C:N3	2.84	0.45
1:0:1453:A:C3'	1:0:1454:U:H5'	2.46	0.45
1:0:1174:G:C2'	1:0:1175:A:H5'	2.45	0.45
1:0:2079:A:H2'	1:0:2080:U:H6	1.77	0.45
1:0:393:U:H2'	1:0:394:U:C6	2.52	0.45
1:0:404:A:N7	1:0:405:C:C4	2.85	0.45
1:0:2382:C:C4	1:0:2383:C:C5	3.05	0.45
1:0:387:A:N6	1:0:413:G:O2'	2.49	0.45
1:0:1488:G:C2	1:0:1536:G:C2	3.04	0.45
1:0:1425:G:H2'	1:0:1426:U:O4'	2.16	0.45
1:0:319:G:O5'	1:0:319:G:H8	2.00	0.45
1:0:2069:U:H6	1:0:2069:U:O5'	1.99	0.45
1:0:25:U:O4	1:0:26:G:C2	2.69	0.45
1:0:26:G:C6	1:0:27:G:C2	3.04	0.45
1:0:481:A:N6	1:0:482:A:C6	2.85	0.45
1:0:1769:U:O2	1:0:1770:U:C5	2.69	0.45
1:0:224:G:H4'	1:0:399:G:C6	2.50	0.45
1:0:754:G:C6	1:0:755:C:C5	3.04	0.45
1:0:697:G:N1	1:0:807:A:C2	2.78	0.45
1:0:957:G:N2	1:0:983:G:H1'	2.32	0.45
1:0:2318:U:O5'	1:0:2318:U:H6	1.98	0.45
1:0:838:A:H4'	1:0:2407:G:C5	2.51	0.45
1:0:710:C:C4	1:0:711:C:N4	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2457:A:C8	1:0:2508:G:C6	3.05	0.45
1:0:1416:A:C2	1:0:1417:C:C2	3.04	0.45
1:0:974:U:H2'	1:0:975:C:C6	2.52	0.45
1:0:1407:G:O2'	1:0:1408:A:O4'	2.33	0.45
2:9:85:G:O2'	2:9:86:A:H5'	2.17	0.45
1:0:392:G:H4'	1:0:2211:U:H5''	1.98	0.45
1:0:408:U:O4	1:0:409:G:O6	2.34	0.45
1:0:203:G:O2'	1:0:204:A:H5'	2.17	0.45
1:0:2645:C:C6	1:0:2645:C:O5'	2.69	0.45
1:0:1735:G:O2'	1:0:1736:C:H5'	2.17	0.45
1:0:1442:C:C6	1:0:1442:C:H3'	2.51	0.45
1:0:1449:C:O2'	1:0:1450:G:H5'	2.16	0.45
1:0:1396:C:H6	1:0:1396:C:O5'	1.99	0.45
1:0:1631:C:C5	1:0:1633:C:C4	3.03	0.45
1:0:2705:A:N7	1:0:2707:G:N7	2.64	0.45
1:0:475:U:C2	1:0:801:A:C6	3.05	0.45
1:0:813:A:O2'	1:0:814:G:C8	2.69	0.45
1:0:956:A:C2'	1:0:957:G:O5'	2.63	0.45
1:0:1950:C:H2'	1:0:1951:G:O4'	2.17	0.45
1:0:977:G:C5'	1:0:2251:U:O2	2.59	0.45
1:0:1398:G:C2	1:0:1416:A:C4	3.05	0.45
1:0:1483:G:H2'	1:0:1484:G:O5'	2.16	0.45
1:0:1672:A:C2	1:0:2032:G:H5''	2.51	0.45
1:0:679:C:H2'	1:0:680:U:C6	2.48	0.45
1:0:966:A:N7	1:0:967:G:N7	2.64	0.45
1:0:2522:G:H2'	1:0:2523:G:C8	2.51	0.45
1:0:2391:A:C8	1:0:2391:A:O5'	2.70	0.45
1:0:2347:C:H2'	1:0:2348:A:H8	1.82	0.45
1:0:149:A:O2'	1:0:150:A:H5'	2.17	0.45
1:0:2236:U:C2	1:0:2237:C:C6	3.05	0.45
1:0:482:A:C2'	1:0:483:A:H5'	2.46	0.45
1:0:1289:A:C2	1:0:1290:A:C5	3.04	0.45
1:0:1339:U:C6	1:0:1339:U:OP2	2.69	0.45
1:0:1774:A:H2	1:0:2567:G:C8	2.34	0.45
1:0:1793:A:O2'	1:0:1794:A:H5'	2.17	0.45
1:0:2616:U:H2'	1:0:2617:G:O4'	2.16	0.45
1:0:873:U:O5'	1:0:2247:A:H2	1.96	0.45
1:0:926:C:H6	1:0:926:C:O5'	2.00	0.45
1:0:1915:A:C2	1:0:1952:A:C2	3.04	0.45
1:0:2396:C:HO2'	1:0:2397:A:H5'	1.78	0.45
1:0:649:G:O2'	1:0:650:U:H5'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2490:U:O4	1:0:2553:G:O6	2.35	0.45
1:0:2266:A:C2'	1:0:2268:G:C8	2.94	0.45
1:0:840:U:C4	1:0:2405:A:H2	2.33	0.45
1:0:2232:G:H2'	1:0:2233:C:H6	1.81	0.45
1:0:2514:G:H2'	1:0:2515:G:C8	2.51	0.45
1:0:603:C:H2'	1:0:604:U:C6	2.51	0.45
1:0:2432:A:H2	1:0:2483:U:O2	2.00	0.45
1:0:387:A:H1'	1:0:414:A:C6	2.51	0.45
1:0:611:C:H6	1:0:611:C:H3'	1.81	0.45
1:0:2205:C:H5	1:0:2206:C:C5	2.33	0.45
1:0:1228:G:C6	1:0:1229:C:C4	3.05	0.45
1:0:2689:C:N4	1:0:2690:A:N6	2.65	0.45
1:0:1692:C:C2'	1:0:1693:A:C5'	2.88	0.45
1:0:1694:A:H2'	1:0:1695:U:C5'	2.46	0.45
1:0:1973:C:H6	1:0:1973:C:O5'	2.00	0.45
1:0:1199:U:C3'	1:0:1200:G:H5''	2.44	0.45
1:0:2059:U:H3'	1:0:2217:G:O6	2.17	0.45
1:0:321:A:N1	1:0:323:G:H1'	2.32	0.45
1:0:1791:C:O2	1:0:1793:A:O4'	2.34	0.45
1:0:865:A:H2'	1:0:866:U:O5'	2.16	0.45
1:0:873:U:C3'	1:0:874:A:C5'	2.95	0.45
1:0:2825:A:O5'	1:0:2825:A:H8	2.00	0.45
1:0:1358:C:H6	1:0:1358:C:O5'	1.99	0.45
1:0:1175:A:H2'	1:0:1176:U:H6	1.81	0.45
1:0:1503:G:C2	1:0:1504:G:C4	3.05	0.45
1:0:720:A:N1	1:0:738:G:H1'	2.32	0.45
1:0:1605:A:H2'	1:0:1606:C:H6	1.82	0.45
1:0:2091:C:C2'	1:0:2092:U:H5'	2.46	0.45
1:0:1967:U:O2'	1:0:1968:G:H5'	2.17	0.45
1:0:1171:A:C5	1:0:1172:U:H5	2.34	0.45
1:0:2085:G:H1	1:0:2171:U:H1'	1.82	0.45
1:0:1865:C:H2'	1:0:1866:G:O4'	2.16	0.45
2:9:38:C:O2'	2:9:39:C:H5'	2.17	0.45
2:9:50:U:H2'	2:9:51:G:C8	2.51	0.45
1:0:146:C:N3	1:0:152:G:N2	2.65	0.45
1:0:580:A:C4	1:0:2013:A:C6	3.04	0.45
1:0:2039:G:N2	1:0:2040:A:C1'	2.80	0.45
1:0:25:U:C4	1:0:26:G:C2	3.04	0.45
1:0:1291:G:C2'	1:0:1292:A:C5'	2.95	0.45
1:0:2538:C:O2'	1:0:2539:C:H5'	2.17	0.45
1:0:1634:A:O2'	1:0:1635:G:H5'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:818:G:O6	1:0:2051:U:H5'	2.17	0.45
1:0:174:A:O2'	1:0:2223:U:OP1	2.35	0.45
1:0:867:G:C6	1:0:936:A:N1	2.85	0.45
1:0:490:A:N7	1:0:492:G:C1'	2.80	0.45
1:0:2792:C:N3	1:0:2805:G:C2	2.85	0.45
1:0:1457:A:N6	1:0:1458:A:N6	2.65	0.45
1:0:1460:G:C2	1:0:1461:C:C2	3.04	0.45
1:0:2033:C:N3	1:0:2034:A:C2	2.85	0.45
1:0:548:G:C2	1:0:549:G:C5	3.04	0.45
1:0:2674:C:H2'	1:0:2675:U:H6	1.81	0.45
1:0:1280:U:C2'	1:0:1281:A:C5'	2.90	0.45
1:0:132:U:H2'	1:0:133:C:H6	1.80	0.45
1:0:2027:C:O2'	1:0:2028:C:H5'	2.17	0.45
1:0:1020:A:O2'	1:0:1021:A:H5'	2.17	0.45
1:0:2359:U:C2	1:0:2360:C:C5	3.04	0.45
1:0:1818:G:H2'	1:0:1819:U:H6	1.82	0.45
1:0:1295:U:H2'	1:0:1296:G:H5'	1.97	0.45
1:0:459:A:C6	1:0:466:A:H2'	2.52	0.45
1:0:1294:G:C2	1:0:1303:U:C2	3.05	0.45
1:0:1336:G:C2'	1:0:1337:G:H5'	2.47	0.45
1:0:1717:A:H2'	1:0:1718:A:O4'	2.17	0.45
1:0:2549:G:C2	1:0:2550:C:C1'	3.00	0.45
1:0:701:U:H5''	1:0:1771:A:H2	1.82	0.45
1:0:814:G:H8	1:0:814:G:O5'	2.00	0.45
1:0:835:U:C5	1:0:849:G:N2	2.85	0.45
1:0:636:G:H2'	1:0:637:G:O4'	2.16	0.45
1:0:2608:A:O2'	1:0:2609:G:H5'	2.16	0.45
1:0:2245:A:O2'	1:0:2246:A:N3	2.50	0.45
1:0:1800:A:H2'	1:0:1802:A:C5	2.52	0.45
1:0:1429:A:H61	1:0:1602:G:H5'	1.82	0.45
1:0:1385:C:H2'	1:0:1386:A:C8	2.50	0.45
1:0:1531:C:H2'	1:0:1532:A:C5'	2.46	0.45
1:0:2279:G:H2'	1:0:2280:A:H8	1.81	0.45
1:0:1059:A:C6	1:0:1060:C:N4	2.85	0.45
1:0:2849:C:C2	1:0:2850:U:C5	3.05	0.45
1:0:2132:G:H2'	1:0:2133:G:C8	2.52	0.45
1:0:1034:U:H4'	1:0:1134:C:OP1	2.17	0.45
1:0:2047:C:H1'	1:0:2429:A:C2	2.52	0.45
1:0:470:U:C5	1:0:480:G:N2	2.85	0.45
1:0:1755:G:H2'	1:0:1756:C:H6	1.76	0.45
1:0:2596:C:C4	1:0:2597:G:N7	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1164:C:H2'	1:0:1165:G:O4'	2.16	0.45
1:0:1940:C:C4	1:0:1941:C:N4	2.84	0.45
1:0:810:U:O5'	1:0:810:U:H6	2.00	0.45
1:0:813:A:O2'	1:0:814:G:H8	2.00	0.45
1:0:1226:A:N6	1:0:1249:G:H1'	2.32	0.45
1:0:941:U:OP1	1:0:941:U:H4'	2.17	0.45
1:0:2447:G:N2	1:0:2460:G:C2'	2.76	0.45
1:0:2310:G:N2	1:0:2364:C:C4	2.83	0.45
1:0:770:U:C2	1:0:771:C:C5	3.04	0.45
1:0:210:A:H62	1:0:442:A:H61	1.65	0.45
1:0:2843:A:H2'	1:0:2844:G:O4'	2.17	0.45
1:0:1560:A:H2'	1:0:1561:A:O4'	2.17	0.45
1:0:1242:A:H2'	1:0:1243:G:C8	2.52	0.45
2:9:73:C:O2	2:9:109:G:C2	2.70	0.45
1:0:328:A:N1	1:0:329:C:C4	2.85	0.45
1:0:2071:G:H2'	1:0:2072:C:H6	1.82	0.45
1:0:466:A:O2'	1:0:467:U:OP2	2.32	0.45
1:0:1934:U:C2	1:0:1937:G:N7	2.85	0.45
1:0:2487:G:C2	1:0:2561:G:C6	3.05	0.45
1:0:2520:A:C2	1:0:2745:A:N6	2.83	0.45
1:0:2528:G:C2	1:0:2529:G:N7	2.84	0.45
1:0:2544:A:C3'	1:0:2545:A:O4'	2.64	0.45
1:0:1163:C:H2'	1:0:1164:C:C6	2.52	0.45
1:0:1762:C:O2'	1:0:1777:A:H1'	2.17	0.45
1:0:1930:C:C4	1:0:1931:G:N7	2.85	0.45
1:0:1774:A:C2	1:0:2567:G:O4'	2.70	0.45
1:0:860:U:N3	1:0:945:G:N2	2.65	0.45
1:0:2318:U:C2'	1:0:2319:G:C8	2.82	0.45
1:0:708:G:C2	1:0:781:G:C2	3.05	0.45
2:9:62:C:N4	2:9:63:A:N6	2.64	0.45
2:9:89:G:N1	2:9:93:G:C6	2.85	0.45
1:0:60:A:O2'	1:0:61:U:H5'	2.17	0.45
1:0:2404:A:H5'	1:0:2406:C:O4'	2.16	0.45
1:0:2404:A:O4'	1:0:2406:C:C6	2.70	0.45
1:0:760:U:O2	1:0:1997:A:H1'	2.16	0.45
1:0:1859:A:C2	1:0:1860:A:C4	3.05	0.45
1:0:1075:C:H2'	1:0:1076:U:O4'	2.17	0.45
1:0:2800:C:H2'	1:0:2801:A:C5'	2.47	0.45
1:0:2546:G:C2	1:0:2547:C:C2	3.05	0.45
1:0:2042:A:N3	1:0:2482:A:N6	2.65	0.44
1:0:574:C:N4	1:0:582:G:OP1	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1975:G:C5	1:0:1980:A:C6	3.06	0.44
1:0:2496:C:C6	1:0:2521:A:N7	2.85	0.44
1:0:1000:G:OP1	1:0:1168:G:H4'	2.17	0.44
1:0:1207:G:C6	1:0:1208:A:C6	3.05	0.44
1:0:789:G:O2'	1:0:790:A:OP2	2.31	0.44
1:0:792:U:H2'	1:0:793:G:C5'	2.46	0.44
1:0:834:A:H5'	1:0:835:U:C6	2.52	0.44
1:0:1248:G:N1	1:0:1249:G:N2	2.64	0.44
1:0:1920:A:C2	1:0:1922:U:O4	2.70	0.44
1:0:73:A:N6	1:0:87:G:C8	2.86	0.44
1:0:65:C:O2	1:0:88:G:N2	2.50	0.44
1:0:491:A:N6	1:0:510:G:H5'	2.32	0.44
1:0:646:C:H2'	1:0:647:G:C8	2.52	0.44
1:0:1400:A:H2'	1:0:1401:G:O4'	2.17	0.44
1:0:548:G:N3	1:0:549:G:C8	2.86	0.44
1:0:319:G:H1'	1:0:511:A:O4'	2.17	0.44
1:0:2441:U:C2	1:0:2442:C:C5	3.06	0.44
1:0:482:A:H2'	1:0:483:A:O4'	2.17	0.44
1:0:1685:A:H2'	1:0:1686:A:OP2	2.17	0.44
1:0:2701:A:C2	1:0:2848:A:C6	3.06	0.44
1:0:1760:G:H2'	1:0:1761:G:C8	2.52	0.44
1:0:754:G:C2	1:0:755:C:C5	3.05	0.44
1:0:807:A:C5	1:0:808:C:C5	3.05	0.44
1:0:830:C:C4	1:0:831:G:N7	2.85	0.44
1:0:1248:G:C6	1:0:1249:G:N1	2.85	0.44
1:0:713:G:O6	1:0:746:G:C2	2.70	0.44
1:0:1391:A:H2'	1:0:1392:U:C6	2.49	0.44
1:0:931:G:H2'	1:0:932:G:C5'	2.47	0.44
1:0:1462:C:H1'	1:0:1561:A:H1'	2.00	0.44
1:0:2489:C:H2'	1:0:2490:U:H5'	1.98	0.44
1:0:91:A:C6	1:0:92:U:C4	3.06	0.44
1:0:1407:G:H4'	1:0:1619:A:O3'	2.17	0.44
1:0:1171:A:C5	1:0:1172:U:C5	3.05	0.44
1:0:2071:G:H2'	1:0:2072:C:C6	2.51	0.44
2:9:98:C:H3'	2:9:98:C:C6	2.51	0.44
1:0:520:C:N3	1:0:521:U:C2	2.85	0.44
1:0:170:U:H4'	1:0:816:U:O2'	2.18	0.44
1:0:2056:C:H2'	1:0:2057:U:H6	1.81	0.44
1:0:796:A:C5	1:0:798:G:C5	3.05	0.44
1:0:105:G:O6	1:0:106:G:C6	2.70	0.44
1:0:942:U:C2'	1:0:943:U:C5'	2.96	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:490:A:C2'	1:0:491:A:H5'	2.46	0.44
1:0:2380:U:C2'	1:0:2381:A:H5'	2.40	0.44
1:0:2843:A:N6	1:0:2844:G:N1	2.65	0.44
1:0:1460:G:N2	1:0:1461:C:O2	2.50	0.44
1:0:1673:C:C4	1:0:1674:C:C5	3.06	0.44
1:0:2490:U:C4	1:0:2491:C:C5	3.05	0.44
1:0:1801:C:H1'	1:0:2208:U:C5'	2.47	0.44
1:0:2062:U:H3	1:0:2220:A:H61	1.66	0.44
1:0:2026:C:O2'	1:0:2027:C:O5'	2.34	0.44
1:0:423:G:C2	1:0:431:G:C2	3.05	0.44
1:0:2574:G:H8	1:0:2574:G:O5'	1.99	0.44
1:0:478:G:O2'	1:0:479:G:C5'	2.64	0.44
1:0:1301:U:C5	1:0:1340:C:C2	3.05	0.44
1:0:1311:C:N3	1:0:1660:G:N2	2.65	0.44
1:0:1655:C:C5'	1:0:2689:C:O2'	2.60	0.44
1:0:796:A:C8	1:0:798:G:N7	2.86	0.44
1:0:825:C:H2'	1:0:826:U:O5'	2.17	0.44
1:0:834:A:H5'	1:0:835:U:H6	1.82	0.44
1:0:1579:G:H2'	1:0:1580:C:C6	2.53	0.44
1:0:1544:A:N6	1:0:1545:G:O6	2.49	0.44
1:0:2363:G:C5'	1:0:2365:U:OP1	2.66	0.44
1:0:58:C:O2	1:0:72:A:H2'	2.17	0.44
1:0:564:U:H2'	1:0:565:A:C8	2.51	0.44
1:0:1724:C:N3	1:0:1747:G:C6	2.85	0.44
1:0:2839:G:C8	1:0:2840:U:C5	3.06	0.44
1:0:1491:C:H42	1:0:1532:A:N6	2.13	0.44
1:0:1676:U:C2	1:0:1985:G:N2	2.85	0.44
1:0:1948:C:N3	1:0:1949:A:N7	2.66	0.44
1:0:1869:A:H2'	1:0:1870:U:O4'	2.17	0.44
2:9:107:C:H3'	2:9:107:C:C6	2.52	0.44
1:0:674:U:O2'	1:0:675:C:H5'	2.16	0.44
1:0:1271:C:O2'	1:0:1272:G:C5'	2.64	0.44
1:0:2433:G:C5	1:0:2434:G:N7	2.85	0.44
1:0:2493:U:O5'	1:0:2493:U:H6	2.00	0.44
1:0:2656:G:H2'	1:0:2657:G:C8	2.52	0.44
1:0:1004:A:N6	1:0:1005:U:O4	2.50	0.44
1:0:1004:A:C2'	1:0:1005:U:H5'	2.38	0.44
1:0:615:C:C1'	1:0:671:A:H4'	2.45	0.44
1:0:1546:C:H2'	1:0:1547:U:C6	2.52	0.44
1:0:1182:U:O4	1:0:1192:A:N1	2.50	0.44
1:0:2811:G:C6	1:0:2858:A:C6	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2270:U:H2'	1:0:2271:C:C6	2.53	0.44
1:0:2489:C:C2'	1:0:2490:U:H5'	2.47	0.44
1:0:733:G:H2'	1:0:734:G:C8	2.53	0.44
1:0:394:U:H2'	1:0:395:G:H5'	1.99	0.44
1:0:854:G:C2	1:0:949:G:C2	3.06	0.44
1:0:1263:G:O2'	1:0:1264:C:O5'	2.30	0.44
1:0:2324:G:N3	1:0:2326:C:H5	2.16	0.44
1:0:197:G:N1	1:0:440:U:H3'	2.31	0.44
1:0:947:C:O2'	1:0:948:C:H5'	2.17	0.44
1:0:1730:G:O5'	1:0:1730:G:H8	2.01	0.44
1:0:1078:A:N6	1:0:1079:G:C6	2.85	0.44
1:0:1548:U:C4	1:0:1549:C:N4	2.86	0.44
1:0:1220:G:N2	1:0:1221:C:C2	2.86	0.44
1:0:24:G:H2'	1:0:25:U:H6	1.82	0.44
1:0:1332:G:O2'	1:0:1333:G:H5'	2.16	0.44
1:0:1652:G:C5	1:0:1653:C:C4	3.05	0.44
1:0:2526:U:N3	1:0:2527:G:C5	2.86	0.44
1:0:692:C:H2'	1:0:693:A:H8	1.83	0.44
1:0:1222:G:C1'	1:0:1251:G:H22	2.26	0.44
1:0:305:A:H2'	1:0:306:G:C4'	2.47	0.44
1:0:1792:C:O5'	1:0:1792:C:H6	2.01	0.44
1:0:944:A:C6	1:0:945:G:C5	3.06	0.44
1:0:2813:G:C5	1:0:2814:G:N7	2.86	0.44
1:0:238:G:O4'	1:0:618:A:H2	2.00	0.44
1:0:837:U:C2	1:0:838:A:N7	2.86	0.44
1:0:1638:G:C2	1:0:1639:U:C2	3.06	0.44
1:0:117:A:O3'	1:0:118:U:H3'	2.18	0.44
1:0:2193:C:H2'	1:0:2194:A:C8	2.52	0.44
1:0:2209:G:C4	1:0:2210:C:C5	3.05	0.44
1:0:2718:A:C2	1:0:2719:U:C6	3.06	0.44
1:0:1014:G:N3	1:0:1021:A:H2	2.16	0.44
1:0:1647:U:H2'	1:0:1649:A:OP2	2.18	0.44
1:0:26:G:H4'	1:0:1273:G:O2'	2.17	0.44
1:0:28:A:N3	1:0:523:A:C5	2.86	0.44
1:0:542:A:H2	1:0:572:G:HO2'	1.64	0.44
1:0:588:G:O2'	1:0:2002:A:OP1	2.35	0.44
1:0:829:C:C2	1:0:1206:G:C2	3.06	0.44
1:0:1941:C:C2'	1:0:1942:G:H5'	2.47	0.44
1:0:2052:G:O2'	1:0:2053:G:H5'	2.18	0.44
1:0:175:C:N4	1:0:225:G:H1	2.04	0.44
1:0:691:C:N3	1:0:692:C:C4	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:761:G:H2'	1:0:762:A:C8	2.53	0.44
1:0:832:A:N6	1:0:833:A:C6	2.85	0.44
1:0:1223:G:C8	1:0:1223:G:OP2	2.71	0.44
1:0:2259:G:H4'	1:0:2306:A:H5'	1.99	0.44
1:0:509:U:H6	1:0:509:U:O5'	2.01	0.44
1:0:929:A:C2	2:9:81:C:O2	2.70	0.44
1:0:1785:A:O2'	1:0:1786:C:H5'	2.18	0.44
1:0:1560:A:H2'	1:0:1561:A:C8	2.53	0.44
1:0:133:C:C4	1:0:134:G:C4	3.05	0.44
1:0:1153:A:O2'	1:0:1155:G:C8	2.64	0.44
1:0:805:G:H2'	1:0:2419:C:N3	2.33	0.44
1:0:2301:A:H8	1:0:2301:A:H5''	1.82	0.44
1:0:2864:C:N4	1:0:2865:G:C2	2.86	0.44
1:0:1134:C:C2	1:0:1135:C:C5	3.06	0.44
1:0:1694:A:O2'	1:0:1695:U:H5'	2.17	0.44
1:0:986:A:H2	1:0:1001:A:C8	2.35	0.44
1:0:1001:A:N3	1:0:1167:A:C2	2.85	0.44
1:0:757:U:O2	1:0:767:G:C2	2.70	0.44
1:0:487:G:N2	1:0:490:A:C4	2.85	0.44
1:0:926:C:H2'	1:0:927:C:H5'	1.99	0.44
1:0:1212:U:C2'	1:0:1213:U:H6	2.16	0.44
1:0:1753:A:C8	1:0:1753:A:H3'	2.53	0.44
1:0:2636:A:O5'	1:0:2636:A:H8	2.01	0.44
1:0:1542:G:H8	1:0:1542:G:O5'	2.01	0.44
1:0:2029:G:H2'	1:0:2030:U:C6	2.53	0.44
1:0:1807:A:H1'	1:0:1809:G:C1'	2.38	0.44
1:0:1411:C:H2'	1:0:1412:C:O4'	2.18	0.44
1:0:2231:G:HO2'	1:0:2232:G:H5'	1.83	0.44
1:0:1446:U:C4	1:0:1447:U:C4	3.05	0.44
1:0:1610:A:C5	1:0:1611:U:C5	3.06	0.44
1:0:2452:U:C4	1:0:2453:C:C5	3.05	0.44
1:0:584:A:H4'	1:0:2038:C:H42	1.68	0.44
1:0:586:G:N2	1:0:1266:G:C2	2.86	0.44
1:0:1332:G:N1	1:0:1333:G:C2	2.86	0.44
1:0:1685:A:N7	1:0:1691:G:C6	2.86	0.44
1:0:1002:C:C2	1:0:1003:C:C6	3.05	0.44
1:0:178:C:H2'	1:0:179:U:C5	2.53	0.44
1:0:227:G:C2	1:0:228:A:C4	3.05	0.44
1:0:2238:G:H2'	1:0:2239:C:C6	2.53	0.44
1:0:748:A:N6	1:0:749:C:O2	2.51	0.44
1:0:1587:A:C2	1:0:1588:A:C5	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:487:G:C1'	1:0:515:A:C2	3.01	0.44
1:0:597:U:N3	1:0:683:A:O2'	2.31	0.44
1:0:548:G:H2'	1:0:549:G:H8	1.83	0.44
1:0:1347:C:C6	1:0:1347:C:H3'	2.52	0.44
1:0:2006:G:C2	1:0:2024:U:O2	2.71	0.43
1:0:689:A:H2'	1:0:690:A:O4'	2.17	0.43
1:0:322:A:H2	1:0:342:G:P	2.41	0.43
1:0:1080:A:C6	1:0:1084:A:N6	2.86	0.43
1:0:2762:G:C6	1:0:2763:U:C4	3.06	0.43
2:9:63:A:O2'	2:9:64:C:H5'	2.18	0.43
1:0:1398:G:C6	1:0:1416:A:C6	3.06	0.43
1:0:839:U:C2	1:0:841:G:H1'	2.53	0.43
1:0:2630:C:O2	1:0:2649:A:C2	2.71	0.43
1:0:2103:G:O2'	1:0:2104:G:H5'	2.18	0.43
1:0:5:A:H2'	1:0:6:A:C8	2.53	0.43
1:0:1984:A:C2	1:0:1985:G:C4	3.06	0.43
1:0:1170:U:O2'	1:0:1171:A:H5'	2.17	0.43
1:0:2335:U:H6	1:0:2335:U:O5'	2.01	0.43
1:0:662:G:O2'	1:0:663:G:H5'	2.17	0.43
1:0:2436:U:H1'	1:0:2474:G:N2	2.33	0.43
1:0:1300:A:C2	1:0:1301:U:N3	2.86	0.43
1:0:2695:C:N3	1:0:2696:A:N7	2.66	0.43
1:0:1140:A:C2	1:0:2549:G:C1'	3.01	0.43
1:0:1821:A:H2'	1:0:1821:A:N3	2.32	0.43
1:0:2056:C:O2'	1:0:2057:U:H5'	2.18	0.43
1:0:761:G:N3	1:0:763:A:N6	2.67	0.43
1:0:341:A:H2	1:0:1223:G:N7	2.16	0.43
1:0:344:G:H21	1:0:345:U:H1'	1.82	0.43
1:0:861:G:H2'	1:0:862:A:C8	2.52	0.43
1:0:2238:G:H2'	1:0:2239:C:H6	1.83	0.43
1:0:445:A:H2'	1:0:446:C:O4'	2.18	0.43
1:0:1391:A:C2	1:0:1392:U:O4	2.72	0.43
1:0:2249:U:C2'	1:0:2250:G:H5'	2.48	0.43
1:0:1914:U:O2'	1:0:1915:A:H5'	2.17	0.43
1:0:1476:G:H21	1:0:1477:C:H1'	1.83	0.43
1:0:2819:G:C8	1:0:2820:C:C5	3.06	0.43
1:0:2787:A:C5	1:0:2788:C:C5	3.06	0.43
1:0:1236:G:C2	1:0:1240:G:C2	3.06	0.43
1:0:1731:C:H6	1:0:1731:C:O5'	2.01	0.43
1:0:2281:C:O5'	1:0:2281:C:H6	2.01	0.43
1:0:1745:C:O2	1:0:1745:C:H2'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2046:C:O2'	1:0:2047:C:H5'	2.17	0.43
1:0:968:C:N3	1:0:2438:A:OP1	2.50	0.43
1:0:1284:G:N3	1:0:1633:C:O4'	2.52	0.43
1:0:1301:U:C5	1:0:1340:C:N3	2.86	0.43
1:0:1310:C:H2'	1:0:1311:C:H6	1.83	0.43
1:0:1657:A:N6	1:0:1658:A:C2	2.87	0.43
1:0:1666:G:O2'	1:0:1667:A:H5'	2.18	0.43
1:0:2307:A:N1	1:0:2308:A:C6	2.87	0.43
1:0:836:G:O2'	1:0:837:U:C5'	2.64	0.43
2:9:101:A:H2	2:9:102:A:N6	2.16	0.43
1:0:1564:U:C2'	1:0:1565:G:H5'	2.48	0.43
1:0:365:U:H2'	1:0:366:U:C6	2.53	0.43
1:0:1358:C:H1'	1:0:1409:U:H3	1.82	0.43
1:0:1145:C:C6	1:0:1147:G:OP2	2.71	0.43
1:0:2651:U:O2'	1:0:2652:G:H5'	2.18	0.43
1:0:2426:G:O4'	1:0:2480:C:C4	2.71	0.43
1:0:2794:G:C2	1:0:2803:C:C2	3.06	0.43
1:0:354:C:H2'	1:0:355:G:O4'	2.19	0.43
1:0:2793:G:C6	1:0:2804:G:O6	2.71	0.43
1:0:971:A:N1	1:0:2475:C:H1'	2.33	0.43
1:0:567:G:O2'	1:0:568:G:H5'	2.18	0.43
1:0:1342:U:H5''	1:0:1343:C:H5	1.84	0.43
1:0:1686:A:H5''	1:0:2529:G:OP1	2.18	0.43
1:0:2657:G:C2	1:0:2658:A:C4	3.07	0.43
1:0:956:A:C6	1:0:2427:A:N3	2.86	0.43
1:0:757:U:O2'	1:0:758:G:H5'	2.18	0.43
1:0:959:C:H2'	1:0:960:U:C6	2.53	0.43
1:0:2078:G:N1	1:0:2178:U:O2	2.51	0.43
1:0:862:A:O2'	1:0:863:C:H5'	2.18	0.43
1:0:2224:U:O2	1:0:2414:A:H3'	2.18	0.43
1:0:2815:C:O5'	1:0:2815:C:H6	2.02	0.43
1:0:750:C:H2'	1:0:751:G:O4'	2.17	0.43
1:0:873:U:C2'	1:0:874:A:H5'	2.49	0.43
1:0:1846:A:H2'	1:0:1847:G:C5'	2.49	0.43
1:0:2824:C:O2	1:0:2843:A:N3	2.51	0.43
1:0:1672:A:C6	1:0:1673:C:C2	3.07	0.43
1:0:428:A:H2'	1:0:429:C:H6	1.74	0.43
1:0:218:A:H4'	1:0:220:U:C1'	2.48	0.43
1:0:2736:U:H3'	1:0:2736:U:H6	1.83	0.43
1:0:600:G:C3'	1:0:601:A:C5'	2.95	0.43
1:0:603:C:H2'	1:0:604:U:H6	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2750:G:O5'	1:0:2750:G:H8	2.00	0.43
1:0:2726:U:H3'	1:0:2727:G:H8	1.83	0.43
1:0:353:G:H2'	1:0:354:C:C6	2.53	0.43
1:0:2068:C:H2'	1:0:2069:U:O4'	2.17	0.43
1:0:514:G:H2'	1:0:514:G:N3	2.33	0.43
1:0:546:A:H2'	1:0:547:U:O4'	2.19	0.43
1:0:587:A:C6	1:0:2001:G:O4'	2.71	0.43
1:0:1652:G:C5	1:0:1653:C:C5	3.06	0.43
1:0:2532:G:C2	1:0:2533:U:C1'	2.99	0.43
1:0:2705:A:N6	1:0:2707:G:C4	2.87	0.43
1:0:1002:C:N4	1:0:1003:C:N4	2.66	0.43
1:0:796:A:H2	1:0:1770:U:H5'	1.83	0.43
1:0:1776:A:N6	1:0:1778:U:H1'	2.33	0.43
1:0:688:A:O2'	1:0:689:A:H5'	2.18	0.43
1:0:831:G:O2'	1:0:832:A:C5'	2.65	0.43
1:0:322:A:H2	1:0:342:G:OP1	2.00	0.43
1:0:1922:U:O2	1:0:2571:G:C4'	2.65	0.43
1:0:2754:C:N4	1:0:2755:A:C6	2.86	0.43
1:0:2756:A:N6	1:0:2762:G:N3	2.62	0.43
1:0:110:U:C5	1:0:111:G:C4	3.05	0.43
1:0:1924:C:C5	1:0:1925:C:C4	3.06	0.43
1:0:1323:G:O5'	1:0:1323:G:H8	2.02	0.43
1:0:34:U:H2'	1:0:35:G:C5'	2.35	0.43
1:0:112:U:H2'	1:0:113:C:O4'	2.19	0.43
1:0:2394:G:H2'	1:0:2395:C:C6	2.53	0.43
1:0:195:A:N6	1:0:212:U:H4'	2.24	0.43
1:0:2032:G:O2'	1:0:2033:C:H5'	2.19	0.43
1:0:1959:U:H2'	1:0:1960:A:H8	1.77	0.43
2:9:17:A:H1'	2:9:112:A:C8	2.53	0.43
1:0:2605:C:H2'	1:0:2606:G:C8	2.53	0.43
1:0:2721:A:N7	1:0:2722:C:C2	2.87	0.43
1:0:1379:A:C5	1:0:1380:C:C4	3.07	0.43
1:0:1236:G:N2	1:0:1240:G:N3	2.66	0.43
1:0:1389:C:N4	1:0:1390:G:C6	2.86	0.43
1:0:1886:G:O2'	1:0:1887:G:H5'	2.19	0.43
1:0:411:C:H4'	1:0:2072:C:O2'	2.18	0.43
1:0:1244:U:H3'	1:0:1244:U:H6	1.84	0.43
1:0:1289:A:C2	1:0:1290:A:C8	3.07	0.43
1:0:1291:G:H2'	1:0:1292:A:C5'	2.49	0.43
1:0:1652:G:C6	1:0:1653:C:C4	3.07	0.43
1:0:1995:G:O5'	1:0:1995:G:H8	2.02	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1226:A:C4	1:0:1250:A:N3	2.86	0.43
1:0:322:A:C2	1:0:342:G:P	3.12	0.43
1:0:922:A:C4	1:0:923:A:C8	3.07	0.43
1:0:1391:A:C2'	1:0:1392:U:OP1	2.66	0.43
1:0:491:A:N1	1:0:509:U:H2'	2.34	0.43
1:0:1783:G:H1'	1:0:1822:C:OP1	2.18	0.43
1:0:1473:U:H5'	1:0:1474:A:C5	2.54	0.43
1:0:2600:A:C2	1:0:2601:C:C2	3.06	0.43
1:0:2601:C:C2'	1:0:2602:G:O5'	2.65	0.43
1:0:2404:A:O2'	1:0:2405:A:OP2	2.33	0.43
1:0:217:U:H6	1:0:217:U:O5'	2.02	0.43
1:0:632:A:C2	1:0:633:G:C8	3.07	0.43
1:0:1855:G:H4'	1:0:2390:A:H4'	2.01	0.43
1:0:1215:A:N3	1:0:1258:G:C2	2.86	0.43
1:0:2091:C:H3'	1:0:2092:U:H6	1.83	0.43
1:0:1426:U:H6	1:0:1426:U:O5'	2.02	0.43
1:0:883:A:C6	1:0:920:G:C6	3.06	0.43
1:0:2433:G:C6	1:0:2478:C:N4	2.86	0.43
1:0:2435:C:O2'	1:0:2436:U:H5'	2.19	0.43
1:0:2441:U:O2'	1:0:2442:C:H5'	2.19	0.43
1:0:460:U:O2'	1:0:461:A:OP1	2.30	0.43
1:0:466:A:C2'	1:0:467:U:OP2	2.66	0.43
1:0:1010:U:C2	1:0:1168:G:N2	2.87	0.43
1:0:174:A:O4'	1:0:2051:U:H2'	2.18	0.43
1:0:699:G:C5'	1:0:700:C:OP2	2.65	0.43
1:0:831:G:O6	1:0:1202:U:OP2	2.36	0.43
1:0:492:G:H2'	1:0:517:A:C2	2.52	0.43
1:0:1786:C:O4'	1:0:1884:A:OP2	2.37	0.43
1:0:659:G:C6	1:0:660:G:C6	3.06	0.43
1:0:681:A:C5	1:0:683:A:C8	3.07	0.43
1:0:2327:U:O5'	1:0:2327:U:H6	2.01	0.43
1:0:2391:A:H8	1:0:2391:A:O5'	2.01	0.43
1:0:437:G:O2'	1:0:438:G:H5'	2.18	0.43
1:0:1435:G:H2'	1:0:1436:G:C8	2.53	0.43
1:0:1583:A:H8	1:0:1583:A:O5'	2.01	0.43
1:0:1711:C:C6	1:0:1711:C:O5'	2.69	0.43
1:0:63:A:C8	1:0:64:C:H5	2.36	0.43
1:0:462:G:H2'	1:0:463:C:C5'	2.48	0.43
1:0:1994:U:C6	1:0:1994:U:O5'	2.69	0.43
1:0:2529:G:C5	1:0:2530:C:H5	2.36	0.43
1:0:1930:C:H42	1:0:1942:G:H1	1.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:813:A:HO2'	1:0:814:G:H8	1.64	0.43
1:0:986:A:N7	1:0:987:G:C8	2.86	0.43
1:0:671:A:H2'	1:0:672:C:C6	2.54	0.43
1:0:672:C:O2'	1:0:673:G:H5'	2.19	0.43
1:0:2571:G:C5	1:0:2572:U:C4	3.06	0.43
1:0:866:U:H2'	1:0:867:G:C8	2.53	0.43
1:0:537:C:C6	1:0:2759:U:O2'	2.66	0.43
1:0:771:C:O2'	1:0:772:G:H5'	2.19	0.43
1:0:977:G:O2'	1:0:978:U:C5'	2.66	0.43
1:0:14:A:H2	1:0:2603:G:H21	1.59	0.43
1:0:2817:A:C2	1:0:2851:G:C4	3.07	0.43
1:0:2833:C:OP1	1:0:2833:C:H6	2.01	0.43
1:0:2010:G:H2'	1:0:2011:U:C6	2.54	0.43
1:0:395:G:H2'	1:0:396:U:O4'	2.18	0.43
1:0:396:U:H3'	1:0:398:C:OP2	2.18	0.43
1:0:2653:A:N6	1:0:2654:A:C6	2.87	0.43
1:0:2216:G:C8	1:0:2216:G:O5'	2.63	0.43
1:0:1928:G:N1	1:0:1929:U:C4	2.86	0.43
1:0:1928:G:N1	1:0:1929:U:N3	2.67	0.43
1:0:2331:A:N7	1:0:2345:A:N1	2.66	0.43
1:0:1984:A:H2'	1:0:1985:G:C8	2.54	0.43
1:0:1077:U:C2	1:0:1079:G:OP2	2.72	0.43
1:0:2313:G:C2'	1:0:2314:A:OP1	2.66	0.43
1:0:1402:G:H3'	1:0:1403:U:C6	2.54	0.43
1:0:1159:U:H2'	1:0:1160:C:C6	2.53	0.43
20:R:57:ASN:CA	20:R:76:LYS:CA	2.96	0.43
1:0:2022:C:H2'	1:0:2023:C:C6	2.54	0.43
1:0:2024:U:C6	1:0:2024:U:O5'	2.65	0.43
1:0:2527:G:C5	1:0:2528:G:C8	3.07	0.43
1:0:2701:A:C6	1:0:2848:A:N6	2.87	0.43
1:0:1760:G:C2'	1:0:1761:G:H5'	2.48	0.43
1:0:981:C:C5	1:0:982:C:H5	2.37	0.43
1:0:669:G:H2'	1:0:670:U:O4'	2.19	0.43
1:0:342:G:N7	1:0:1222:G:N2	2.62	0.43
1:0:346:C:O2'	1:0:347:C:H5'	2.18	0.43
1:0:940:G:N7	1:0:941:U:O4'	2.52	0.43
1:0:944:A:C6	1:0:945:G:C4	3.07	0.43
1:0:1095:A:H2	1:0:1116:U:H1'	1.84	0.43
1:0:681:A:N9	1:0:683:A:N7	2.67	0.43
1:0:1672:A:H2'	1:0:1673:C:O4'	2.19	0.43
1:0:2031:A:H2'	1:0:2032:G:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2676:G:C8	1:0:2677:U:C5	3.07	0.43
1:0:548:G:C2	1:0:549:G:N7	2.87	0.43
1:0:2835:A:O5'	1:0:2835:A:H8	2.01	0.43
1:0:1964:A:C3'	1:0:1965:U:H5'	2.47	0.43
1:0:38:G:O2'	1:0:39:C:H5'	2.19	0.43
1:0:2015:G:H22	1:0:2038:C:C1'	2.27	0.43
1:0:1277:G:O6	1:0:1278:A:N6	2.52	0.43
1:0:1665:C:H2'	1:0:1666:G:H8	1.84	0.43
1:0:2696:A:C2	1:0:2697:G:N7	2.87	0.43
1:0:1682:A:C5	1:0:1683:G:N7	2.87	0.43
1:0:1972:G:H2'	1:0:1973:C:C5'	2.49	0.43
1:0:2008:C:H6	1:0:2008:C:O5'	2.02	0.43
1:0:167:A:H5''	1:0:181:A:C2	2.54	0.43
1:0:2610:G:O6	1:0:2611:A:C6	2.71	0.43
1:0:2768:C:H6	1:0:2768:C:O5'	2.01	0.43
1:0:65:C:C2'	1:0:66:U:H5'	2.48	0.43
1:0:931:G:C6	1:0:932:G:C5	3.06	0.43
1:0:1753:A:H8	1:0:1753:A:H3'	1.84	0.43
1:0:2642:G:C5	1:0:2643:G:N7	2.87	0.43
1:0:1675:C:O5'	1:0:1675:C:H6	2.01	0.43
1:0:966:A:C6	1:0:967:G:C4	3.07	0.43
1:0:2404:A:C5'	1:0:2406:C:H5'	2.49	0.43
1:0:200:A:OP2	1:0:434:C:H4'	2.19	0.43
1:0:220:U:O4	1:0:232:A:N7	2.51	0.43
1:0:2523:G:O2'	1:0:2524:G:C5'	2.63	0.43
1:0:2649:A:H2'	1:0:2650:G:H8	1.84	0.43
1:0:140:G:H2'	1:0:141:G:C8	2.53	0.43
1:0:1040:A:C2'	1:0:1041:G:H5'	2.47	0.43
1:0:1014:G:C2	1:0:1015:U:C6	3.06	0.43
1:0:2314:A:N7	1:0:2316:G:C5	2.87	0.43
1:0:2204:A:H4'	1:0:2205:C:C4	2.54	0.43
1:0:1814:G:H2'	1:0:1815:G:H8	1.83	0.43
1:0:2434:G:N2	1:0:2435:C:O2	2.52	0.42
1:0:2434:G:C2	1:0:2477:C:N4	2.86	0.42
1:0:544:U:O2'	1:0:545:C:H5'	2.18	0.42
1:0:1332:G:C6	1:0:1333:G:C2	3.07	0.42
1:0:1686:A:HO2'	1:0:1687:C:H5'	1.83	0.42
1:0:1982:C:OP1	1:0:2704:U:H5'	2.19	0.42
1:0:2703:C:HO2'	1:0:2704:U:H5'	1.82	0.42
1:0:776:G:O2'	1:0:778:G:H5''	2.19	0.42
1:0:173:A:N6	1:0:844:G:H21	2.14	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:847:C:H2'	1:0:848:A:C8	2.54	0.42
1:0:322:A:C6	1:0:341:A:OP2	2.72	0.42
1:0:344:G:C2	1:0:345:U:C5	3.07	0.42
1:0:944:A:C2'	1:0:945:G:H8	2.31	0.42
2:9:76:U:O2'	2:9:77:G:H5'	2.19	0.42
1:0:91:A:C6	1:0:92:U:O4	2.71	0.42
1:0:426:C:H4'	1:0:1863:U:O2'	2.18	0.42
1:0:1030:U:C4	1:0:1153:A:N1	2.87	0.42
1:0:1040:A:C8	1:0:1040:A:H3'	2.53	0.42
1:0:1927:U:C2'	1:0:1927:U:O2	2.65	0.42
1:0:2106:G:C2	1:0:2159:A:C2	3.07	0.42
1:0:606:A:C6	1:0:607:C:C4	3.07	0.42
1:0:2747:C:O2'	1:0:2748:C:H5'	2.19	0.42
1:0:1172:U:H2'	1:0:1173:G:C8	2.54	0.42
1:0:502:A:H2'	1:0:503:G:C5'	2.48	0.42
1:0:319:G:N2	1:0:511:A:C5	2.87	0.42
1:0:1199:U:C6	1:0:1200:G:N7	2.88	0.42
1:0:705:C:N4	1:0:706:A:H62	2.17	0.42
1:0:2811:G:C6	1:0:2812:A:N6	2.87	0.42
1:0:772:G:C4	1:0:773:G:C8	3.07	0.42
1:0:962:C:C2	1:0:963:G:C8	3.07	0.42
2:9:77:G:C2'	2:9:78:A:H5'	2.50	0.42
1:0:2396:C:C2'	1:0:2397:A:H5'	2.49	0.42
1:0:659:G:O2'	1:0:660:G:H5'	2.19	0.42
1:0:1807:A:O4'	1:0:1809:G:H1'	2.19	0.42
1:0:433:G:N2	1:0:434:C:H1'	2.34	0.42
1:0:1362:A:C8	1:0:1362:A:O5'	2.61	0.42
1:0:1008:G:N2	1:0:1009:C:C2	2.87	0.42
1:0:2384:G:N2	1:0:2390:A:N7	2.67	0.42
1:0:2091:C:H3'	1:0:2092:U:C6	2.54	0.42
2:9:70:C:O5'	2:9:70:C:H6	2.01	0.42
1:0:2047:C:O2	1:0:2429:A:C6	2.72	0.42
1:0:591:G:C2	1:0:1272:G:C2	3.07	0.42
1:0:1622:G:H4'	1:0:1624:A:C4	2.54	0.42
1:0:1312:G:C2'	1:0:1643:A:N6	2.82	0.42
1:0:2498:U:C4	1:0:2521:A:C8	3.08	0.42
1:0:1766:U:C2'	1:0:1767:G:H5'	2.50	0.42
1:0:796:A:H2'	1:0:797:A:H5'	2.01	0.42
1:0:984:A:C8	1:0:1202:U:C4	3.08	0.42
1:0:119:G:H2'	1:0:120:G:H8	1.84	0.42
1:0:709:A:C6	1:0:710:C:C4	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:931:G:H4'	2:9:83:C:H4'	2.01	0.42
1:0:1953:A:H2'	1:0:1954:A:OP2	2.19	0.42
1:0:1476:G:N2	1:0:1477:C:C2	2.88	0.42
1:0:1358:C:C6	1:0:1358:C:OP1	2.72	0.42
1:0:1483:G:N1	1:0:1484:G:C5	2.87	0.42
1:0:1230:C:H2'	1:0:1231:A:C8	2.54	0.42
1:0:2801:A:N1	1:0:2802:C:O2	2.52	0.42
1:0:1130:U:H2'	1:0:1131:G:C8	2.54	0.42
1:0:2793:G:C6	1:0:2804:G:C6	3.08	0.42
2:9:51:G:O2'	2:9:52:G:H5'	2.20	0.42
1:0:2284:U:H5	1:0:2286:G:C5	2.37	0.42
1:0:2780:A:H2'	1:0:2781:G:C8	2.54	0.42
1:0:1795:C:O5'	1:0:1795:C:H6	2.02	0.42
1:0:968:C:H41	1:0:2437:G:H5''	1.83	0.42
1:0:29:U:H3'	1:0:29:U:H6	1.83	0.42
1:0:1746:A:C8	1:0:1746:A:H3'	2.54	0.42
1:0:1993:G:H2'	1:0:1994:U:H6	1.83	0.42
1:0:2500:C:O2'	1:0:2543:A:H2'	2.20	0.42
1:0:1199:U:O5'	1:0:1200:G:H5''	2.19	0.42
1:0:1764:A:H2'	1:0:1765:C:C5'	2.49	0.42
1:0:690:A:C6	1:0:691:C:C5	3.08	0.42
1:0:692:C:O2'	1:0:693:A:H5'	2.20	0.42
1:0:1248:G:C2	1:0:1249:G:N2	2.88	0.42
1:0:1889:G:OP2	1:0:1913:G:O6	2.37	0.42
1:0:936:A:H2'	1:0:937:C:H6	1.81	0.42
1:0:2337:A:H2'	1:0:2338:C:C6	2.55	0.42
1:0:446:C:H2'	1:0:447:U:H6	1.80	0.42
1:0:873:U:H5''	1:0:874:A:C8	2.54	0.42
1:0:1066:G:H3'	1:0:1067:G:C5'	2.49	0.42
1:0:2713:A:H8	1:0:2713:A:O5'	2.01	0.42
1:0:2825:A:C2'	1:0:2826:C:O5'	2.67	0.42
1:0:1375:C:O2'	1:0:1802:A:H4'	2.19	0.42
1:0:639:G:H2'	1:0:640:C:C6	2.55	0.42
1:0:2678:C:O2	1:0:2688:G:C2	2.72	0.42
1:0:2557:G:N2	1:0:2558:C:C2	2.88	0.42
1:0:17:G:C5	1:0:18:U:C4	3.07	0.42
1:0:736:G:C6	1:0:737:C:N3	2.87	0.42
1:0:738:G:H2'	1:0:739:G:O4'	2.18	0.42
2:9:42:U:H1'	2:9:48:A:N1	2.34	0.42
1:0:2351:G:N2	1:0:2352:A:C4	2.87	0.42
2:9:108:G:H2'	2:9:109:G:H8	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2725:C:H2'	1:0:2726:U:C5	2.54	0.42
1:0:2827:G:C2	1:0:2828:C:C2	3.07	0.42
1:0:1266:G:H3'	1:0:1267:A:C5'	2.46	0.42
1:0:1339:U:H5''	1:0:1994:U:O4'	2.19	0.42
1:0:2696:A:N3	1:0:2697:G:C8	2.87	0.42
1:0:701:U:C2	1:0:702:A:C8	3.07	0.42
1:0:74:G:C8	1:0:74:G:H3'	2.54	0.42
1:0:931:G:O6	1:0:932:G:C6	2.73	0.42
1:0:50:G:C2'	1:0:117:A:C2	2.89	0.42
1:0:2270:U:O2'	1:0:2353:G:N3	2.48	0.42
1:0:1674:C:C2	1:0:1675:C:C6	3.08	0.42
1:0:1348:C:H6	1:0:1348:C:O5'	2.02	0.42
1:0:1102:G:H2'	1:0:1103:C:C6	2.54	0.42
1:0:197:G:H2'	1:0:440:U:O4	2.19	0.42
1:0:8:A:H2'	1:0:9:U:O4'	2.20	0.42
1:0:1220:G:H2'	1:0:1221:C:C6	2.54	0.42
1:0:1087:C:N4	1:0:1088:A:C2	2.87	0.42
1:0:1999:U:C2'	1:0:2000:U:H5'	2.49	0.42
1:0:2047:C:H1'	1:0:2429:A:N1	2.34	0.42
1:0:545:C:H2'	1:0:546:A:H8	1.83	0.42
1:0:2494:C:O2'	1:0:2495:G:H5'	2.19	0.42
1:0:2627:G:C6	1:0:2628:C:C2	3.08	0.42
1:0:1545:G:H2'	1:0:1546:C:O4'	2.19	0.42
1:0:2447:G:P	1:0:2447:G:H8	2.43	0.42
1:0:164:G:N1	1:0:165:G:C5	2.87	0.42
1:0:192:G:C1'	1:0:193:A:H4'	2.49	0.42
1:0:487:G:C1'	1:0:515:A:H2	2.32	0.42
1:0:1260:A:C6	1:0:1262:U:H1'	2.55	0.42
1:0:644:A:C2'	1:0:645:G:H5'	2.50	0.42
1:0:2321:C:H2'	1:0:2322:U:C4'	2.50	0.42
1:0:632:A:C2	1:0:633:G:N7	2.88	0.42
1:0:498:C:N4	1:0:499:G:C5	2.87	0.42
1:0:2390:A:H2'	1:0:2391:A:H8	1.85	0.42
1:0:133:C:C4	1:0:134:G:C5	3.07	0.42
1:0:1438:G:N2	1:0:1591:U:C2	2.87	0.42
1:0:2718:A:C2	1:0:2719:U:C5	3.07	0.42
1:0:1877:C:O2'	1:0:1878:C:H5'	2.19	0.42
1:0:2203:G:C4'	1:0:2204:A:H5'	2.50	0.42
1:0:2301:A:H2'	1:0:2302:G:H5'	2.01	0.42
1:0:1271:C:O2	1:0:1272:G:C8	2.73	0.42
1:0:2046:C:C2	1:0:2430:A:H2	2.38	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:0:2881:MUL:H231	32:0:2881:MUL:H252	1.75	0.42
1:0:1666:G:O2'	1:0:1667:A:C5'	2.67	0.42
1:0:2502:G:C2	1:0:2503:G:C8	3.07	0.42
1:0:1937:G:H1'	1:0:2530:C:C4'	2.49	0.42
1:0:690:A:C2	1:0:691:C:C6	3.08	0.42
1:0:705:C:H2'	1:0:706:A:C8	2.55	0.42
1:0:755:C:C4	1:0:756:C:C4	3.08	0.42
1:0:777:A:N6	1:0:1767:G:H1'	2.34	0.42
1:0:2758:A:H5''	1:0:2759:U:H5	1.83	0.42
1:0:748:A:C5	1:0:749:C:C2	3.07	0.42
2:9:80:A:H2'	2:9:81:C:O4'	2.20	0.42
1:0:1566:G:C5'	1:0:1733:U:O4	2.67	0.42
1:0:1355:A:O2'	1:0:1357:U:OP2	2.31	0.42
1:0:1514:C:C6	1:0:1514:C:P	3.11	0.42
1:0:1900:U:O2'	1:0:1946:U:OP1	2.36	0.42
1:0:215:G:H2'	1:0:216:U:C6	2.54	0.42
1:0:409:G:H2'	1:0:410:A:C8	2.55	0.42
1:0:2738:A:C8	1:0:2738:A:H3'	2.54	0.42
1:0:715:U:O5'	1:0:715:U:H6	2.02	0.42
1:0:1377:G:N1	1:0:1381:G:C6	2.87	0.42
1:0:1220:G:O2'	1:0:1221:C:H5'	2.20	0.42
1:0:1622:G:H4'	1:0:1624:A:N3	2.34	0.42
1:0:2696:A:H2'	1:0:2697:G:H8	1.84	0.42
1:0:2543:A:C6	1:0:2626:U:C4'	3.02	0.42
1:0:1010:U:O2	1:0:1168:G:N2	2.53	0.42
1:0:1767:G:H2'	1:0:1767:G:N3	2.35	0.42
1:0:177:U:P	1:0:177:U:H6	2.43	0.42
1:0:171:G:C6	1:0:179:U:C4	3.07	0.42
1:0:224:G:H4'	1:0:399:G:C5	2.55	0.42
1:0:688:A:N6	1:0:816:U:H3	2.17	0.42
1:0:815:A:C2'	1:0:816:U:O4'	2.67	0.42
1:0:687:G:N7	1:0:817:A:N1	2.68	0.42
1:0:1222:G:N9	1:0:1251:G:N2	2.68	0.42
1:0:1577:G:C2'	1:0:1578:U:H5'	2.49	0.42
1:0:866:U:H2'	1:0:867:G:H8	1.85	0.42
1:0:2762:G:C2'	1:0:2763:U:H5'	2.49	0.42
1:0:88:G:H8	1:0:88:G:O5'	2.03	0.42
1:0:513:A:C2'	1:0:516:G:N7	2.82	0.42
1:0:1702:C:N3	1:0:1703:C:C5	2.88	0.42
1:0:647:G:H1'	1:0:649:G:O2'	2.20	0.42
1:0:2642:G:O2'	1:0:2643:G:C5'	2.62	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:9:24:U:O2'	2:9:25:G:H5'	2.20	0.42
1:0:1674:C:O2	1:0:1675:C:C6	2.73	0.42
1:0:2194:A:O2'	1:0:2195:C:H5''	2.19	0.42
1:0:2783:U:C6	1:0:2783:U:H3'	2.55	0.42
1:0:390:U:C4	1:0:391:C:C4	3.08	0.42
1:0:2633:A:H8	1:0:2633:A:OP1	2.02	0.42
1:0:718:A:O2'	1:0:719:A:H5'	2.19	0.42
1:0:1151:U:OP1	1:0:1153:A:OP1	2.38	0.42
1:0:2746:G:C6	1:0:2747:C:C4	3.07	0.42
1:0:594:G:C4	1:0:1264:C:N4	2.88	0.42
1:0:665:A:H3'	1:0:666:U:H5'	2.02	0.42
1:0:1215:A:C2	1:0:1258:G:C6	3.08	0.42
1:0:2668:U:O2	1:0:2668:U:C2'	2.67	0.42
1:0:1425:G:H2'	1:0:1426:U:C6	2.55	0.42
2:9:95:U:H2'	2:9:96:C:C6	2.55	0.42
1:0:2274:C:H2'	1:0:2275:U:H5'	2.02	0.42
1:0:2442:C:H2'	1:0:2443:C:C6	2.53	0.42
1:0:461:A:C6	1:0:462:G:C6	3.08	0.42
1:0:1981:A:H2'	1:0:1982:C:O4'	2.20	0.42
1:0:2025:A:C8	1:0:2025:A:C3'	3.03	0.42
1:0:2422:C:C2	1:0:2423:G:C8	3.08	0.42
1:0:399:G:N3	1:0:399:G:H2'	2.34	0.42
1:0:1226:A:H2	1:0:1250:A:HO2'	1.66	0.42
1:0:1573:G:C8	1:0:1574:A:N7	2.88	0.42
1:0:1578:U:N3	1:0:1579:G:N7	2.68	0.42
1:0:837:U:N3	1:0:838:A:C6	2.87	0.42
1:0:2252:A:H2'	1:0:2253:A:O4'	2.20	0.42
1:0:115:G:N1	1:0:117:A:N6	2.67	0.42
2:9:23:G:C6	2:9:24:U:C4	3.08	0.42
1:0:1459:U:H6	1:0:1459:U:P	2.42	0.42
1:0:2593:A:C8	1:0:2593:A:C3'	3.03	0.42
2:9:89:G:C2	2:9:93:G:N1	2.87	0.42
1:0:852:U:O2	1:0:951:G:N2	2.53	0.42
1:0:1618:U:P	1:0:1618:U:H6	2.42	0.42
1:0:427:C:H42	1:0:2388:G:H1	1.68	0.42
1:0:457:C:H2'	1:0:458:G:C5'	2.50	0.42
1:0:2565:C:H2'	1:0:2566:A:C8	2.55	0.42
1:0:1435:G:H22	1:0:1512:A:H2	1.67	0.42
1:0:1075:C:H3'	1:0:1076:U:C6	2.55	0.42
1:0:604:U:C2	1:0:605:G:N7	2.88	0.42
1:0:2333:A:C2	1:0:2343:C:C2	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2267:A:C2	1:0:2304:G:O4'	2.72	0.42
1:0:1612:U:O5'	1:0:1612:U:H6	2.03	0.42
1:0:459:A:N6	1:0:484:G:H1'	2.34	0.42
1:0:572:G:OP2	1:0:581:A:C8	2.72	0.42
1:0:1319:C:H2'	1:0:1320:A:C8	2.48	0.42
1:0:538:A:N6	1:0:2025:A:C2	2.88	0.42
1:0:181:A:O4'	1:0:183:U:C2	2.72	0.42
1:0:1942:G:C6	1:0:1943:A:C6	3.08	0.42
1:0:687:G:C6	1:0:820:U:O4	2.72	0.42
1:0:344:G:N2	1:0:345:U:C2	2.88	0.42
1:0:710:C:O2'	1:0:711:C:H5'	2.19	0.42
1:0:165:G:C5	1:0:166:G:C4	3.07	0.42
1:0:962:C:H6	1:0:962:C:O5'	2.03	0.42
1:0:1826:U:HO2'	1:0:1952:A:H2'	1.79	0.42
1:0:2684:A:C8	1:0:2685:A:C8	3.08	0.42
1:0:2489:C:H2'	1:0:2490:U:C5'	2.49	0.42
1:0:1175:A:O5'	1:0:1175:A:C8	2.67	0.42
1:0:1327:C:P	1:0:1345:G:H5'	2.60	0.42
1:0:2359:U:C4	1:0:2360:C:C5	3.08	0.42
1:0:2316:G:C6	1:0:2317:G:C5	3.08	0.42
1:0:2203:G:H5''	1:0:2204:A:H5'	2.02	0.42
1:0:2138:U:H2'	1:0:2139:G:H5'	2.01	0.42
1:0:822:G:H5'	1:0:1267:A:H4'	2.01	0.41
1:0:1685:A:H61	1:0:1693:A:N6	2.13	0.41
1:0:1001:A:OP2	1:0:1200:G:OP1	2.38	0.41
1:0:687:G:HO2'	1:0:688:A:H5'	1.80	0.41
1:0:788:G:H2'	1:0:807:A:N7	2.34	0.41
1:0:958:G:C6	1:0:982:C:C4	3.08	0.41
1:0:1791:C:C2'	1:0:1793:A:H5'	2.50	0.41
1:0:940:G:N7	1:0:941:U:H6	2.17	0.41
1:0:2858:A:H3'	1:0:2859:U:H5'	2.02	0.41
1:0:627:A:N6	1:0:628:A:N6	2.67	0.41
1:0:2262:C:H2'	1:0:2263:C:O4'	2.20	0.41
1:0:2337:A:H2'	1:0:2338:C:H6	1.84	0.41
1:0:709:A:N6	1:0:710:C:N4	2.68	0.41
1:0:2792:C:C2	1:0:2805:G:C2	3.08	0.41
1:0:1471:G:N2	1:0:2683:C:C2	2.88	0.41
1:0:2687:G:H8	1:0:2687:G:O5'	2.03	0.41
1:0:1671:A:C5	1:0:1672:A:N7	2.88	0.41
1:0:2821:G:C6	1:0:2846:G:N1	2.88	0.41
1:0:2208:U:O2'	1:0:2209:G:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1502:G:O2'	1:0:1503:G:H5'	2.19	0.41
2:9:71:G:N3	2:9:71:G:H2'	2.35	0.41
1:0:198:A:HO2'	1:0:199:A:P	2.43	0.41
1:0:2267:A:H2	1:0:2304:G:O4'	2.03	0.41
1:0:84:G:O2'	1:0:85:C:H5'	2.20	0.41
1:0:1871:G:H2'	1:0:1871:G:N3	2.35	0.41
1:0:1271:C:C2	1:0:1272:G:C8	3.09	0.41
1:0:2469:G:C5'	1:0:2470:U:OP1	2.66	0.41
1:0:1277:G:C8	1:0:1278:A:N7	2.88	0.41
1:0:1655:C:C4	1:0:1656:U:C5	3.07	0.41
1:0:1667:A:C2	1:0:1668:G:C8	3.08	0.41
1:0:2701:A:H2'	1:0:2702:G:O4'	2.19	0.41
1:0:2847:G:N2	1:0:2848:A:N1	2.69	0.41
1:0:1012:A:C8	1:0:1013:G:O4'	2.73	0.41
1:0:167:A:C2'	1:0:168:A:O5'	2.68	0.41
1:0:1770:U:O2	1:0:1774:A:C6	2.74	0.41
1:0:224:G:H2'	1:0:226:C:O4'	2.20	0.41
1:0:224:G:N7	1:0:226:C:H1'	2.35	0.41
1:0:941:U:C2	1:0:942:U:C1'	3.03	0.41
1:0:618:A:N6	1:0:619:A:C2	2.88	0.41
1:0:712:A:N7	1:0:713:G:C4	2.88	0.41
1:0:1393:G:H8	1:0:1393:G:O5'	2.03	0.41
1:0:873:U:C6	1:0:874:A:O4'	2.73	0.41
1:0:658:G:C1'	1:0:2330:G:H5''	2.50	0.41
1:0:141:G:N2	1:0:142:U:C2	2.89	0.41
1:0:736:G:C6	1:0:737:C:C2	3.08	0.41
2:9:42:U:C2'	2:9:45:C:H41	2.28	0.41
1:0:362:C:C2'	1:0:363:G:H4'	2.47	0.41
1:0:243:G:OP2	1:0:243:G:O4'	2.39	0.41
1:0:462:G:O5'	1:0:462:G:H8	2.03	0.41
1:0:573:C:N4	1:0:582:G:OP1	2.53	0.41
1:0:1750:A:O2'	1:0:1751:A:H5'	2.20	0.41
1:0:183:U:H6	1:0:183:U:O5'	2.03	0.41
1:0:2053:G:N2	1:0:2054:A:N3	2.68	0.41
1:0:1225:G:H2'	1:0:1249:G:N2	2.34	0.41
1:0:1252:C:HO2'	1:0:1253:C:H5''	1.80	0.41
1:0:2765:C:H2'	1:0:2766:U:C6	2.55	0.41
1:0:210:A:N6	1:0:442:A:H61	2.17	0.41
1:0:1366:A:O2'	1:0:1367:A:H5'	2.20	0.41
1:0:1784:C:O5'	1:0:1784:C:H6	2.03	0.41
1:0:540:G:HO2'	1:0:541:C:H4'	1.77	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1414:G:H2'	1:0:1415:C:O4'	2.20	0.41
1:0:203:G:H5'	1:0:234:C:C4'	2.50	0.41
1:0:1451:C:H2'	1:0:1452:U:C6	2.47	0.41
1:0:1928:G:N3	1:0:1928:G:H2'	2.35	0.41
1:0:1046:U:O2'	1:0:1047:G:H5'	2.19	0.41
1:0:1442:C:C3'	1:0:1442:C:C6	3.03	0.41
1:0:1395:A:H3'	1:0:1396:C:C6	2.54	0.41
1:0:2437:G:N7	1:0:2469:G:C4	2.88	0.41
1:0:2437:G:C8	1:0:2469:G:C2	3.08	0.41
1:0:1715:A:N7	1:0:1717:A:N3	2.68	0.41
1:0:2532:G:H2'	1:0:2533:U:O5'	2.20	0.41
1:0:1001:A:H4'	1:0:1168:G:P	2.60	0.41
1:0:1166:A:C3'	1:0:1167:A:H5''	2.49	0.41
1:0:1177:U:O4	1:0:1196:G:O6	2.38	0.41
1:0:1773:C:H2'	1:0:2587:G:O2'	2.20	0.41
1:0:1940:C:N4	1:0:1941:C:H41	2.16	0.41
1:0:174:A:C2	1:0:2223:U:H4'	2.55	0.41
1:0:40:U:H2'	1:0:41:G:O4'	2.21	0.41
1:0:867:G:O2'	1:0:868:U:C5'	2.68	0.41
1:0:940:G:C8	1:0:941:U:C5'	3.03	0.41
1:0:2812:A:C2	1:0:2813:G:C4	3.08	0.41
1:0:2815:C:H2'	1:0:2816:C:C5'	2.51	0.41
1:0:2245:A:O2'	1:0:2246:A:C2	2.74	0.41
1:0:2676:G:H2'	1:0:2677:U:O4'	2.20	0.41
1:0:562:G:C6	1:0:563:U:N3	2.88	0.41
1:0:207:U:H2'	1:0:208:C:C6	2.55	0.41
1:0:2771:C:C4	1:0:2782:G:N2	2.89	0.41
1:0:2838:U:C4	1:0:2839:G:N7	2.88	0.41
1:0:2081:U:H2'	1:0:2082:C:C5'	2.51	0.41
1:0:2654:A:H8	1:0:2654:A:O5'	2.03	0.41
1:0:2445:C:C2	1:0:2464:G:C2	3.08	0.41
1:0:604:U:O2	1:0:605:G:C8	2.74	0.41
1:0:231:G:O5'	1:0:231:G:H8	2.04	0.41
1:0:502:A:H2'	1:0:503:G:O4'	2.20	0.41
1:0:1211:G:H8	1:0:1211:G:O5'	2.03	0.41
1:0:2046:C:N3	1:0:2430:A:N1	2.68	0.41
1:0:2429:A:H5''	1:0:2476:A:C5	2.55	0.41
1:0:1278:A:HO2'	1:0:1279:G:P	2.42	0.41
1:0:1286:U:O2	1:0:2692:A:C2	2.74	0.41
1:0:1292:A:C6	1:0:1293:A:C5	3.08	0.41
1:0:1336:G:H2'	1:0:1337:G:H5'	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2697:G:C2	1:0:2698:G:C4	3.08	0.41
1:0:2697:G:N1	1:0:2698:G:C5	2.89	0.41
1:0:1685:A:C2	1:0:1976:U:C2	3.06	0.41
1:0:765:C:C5	1:0:1772:C:H1'	2.51	0.41
1:0:2223:U:O5'	1:0:2223:U:H6	2.03	0.41
1:0:754:G:C5	1:0:755:C:H5	2.39	0.41
1:0:2241:U:C4'	1:0:2307:A:N3	2.83	0.41
1:0:446:C:C2'	1:0:447:U:O4'	2.65	0.41
1:0:2790:C:C2	1:0:2791:C:C5	3.08	0.41
1:0:118:U:H1'	1:0:143:A:C8	2.55	0.41
1:0:91:A:C5	1:0:92:U:C5	3.08	0.41
1:0:494:A:C8	1:0:495:C:C5	3.09	0.41
1:0:1429:A:C2	1:0:1603:A:C8	3.08	0.41
1:0:391:C:H2'	1:0:392:G:H8	1.86	0.41
1:0:2592:U:H3'	1:0:2592:U:C6	2.42	0.41
1:0:1854:G:H1	1:0:1863:U:H3	1.68	0.41
1:0:601:A:H8	1:0:601:A:O5'	2.04	0.41
1:0:1379:A:N7	1:0:1380:C:C4	2.88	0.41
1:0:230:C:N4	1:0:231:G:C6	2.88	0.41
2:9:113:G:H2'	2:9:114:C:C6	2.55	0.41
1:0:2203:G:C5'	1:0:2204:A:H5'	2.50	0.41
1:0:2437:G:O6	1:0:2469:G:H3'	2.20	0.41
1:0:2482:A:H2	32:0:2881:MUL:C20	2.33	0.41
1:0:588:G:H4'	1:0:2001:G:H5''	2.03	0.41
1:0:1318:A:N6	1:0:1319:C:N4	2.68	0.41
1:0:1656:U:H2'	1:0:1657:A:H5'	2.02	0.41
1:0:2665:G:C4	1:0:2666:U:C6	3.08	0.41
1:0:1002:C:C4	1:0:1003:C:C5	3.08	0.41
1:0:831:G:N2	1:0:1203:A:N6	2.55	0.41
1:0:2059:U:C5'	1:0:2217:G:O6	2.69	0.41
1:0:2413:A:C8	1:0:2413:A:C3'	3.02	0.41
1:0:2052:G:N2	1:0:2422:C:C6	2.88	0.41
1:0:2238:G:H4'	1:0:2407:G:OP2	2.19	0.41
1:0:159:A:N1	1:0:192:G:N2	2.67	0.41
1:0:159:A:H2'	1:0:160:C:O4'	2.21	0.41
1:0:53:G:C6	1:0:54:G:C5	3.09	0.41
1:0:2489:C:O2'	1:0:2490:U:H5'	2.21	0.41
1:0:2819:G:N7	1:0:2820:C:C4	2.88	0.41
1:0:1713:G:N2	1:0:1960:A:O2'	2.54	0.41
1:0:1644:G:HO2'	1:0:1645:U:H5'	1.85	0.41
1:0:2645:C:C2'	1:0:2646:C:H5'	2.48	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1965:U:C4	1:0:1966:C:C5	3.09	0.41
1:0:423:G:O5'	1:0:423:G:H8	2.03	0.41
1:0:1335:A:C2	1:0:1346:C:O2'	2.73	0.41
1:0:1284:G:C2'	1:0:1633:C:H4'	2.50	0.41
1:0:1666:G:N2	1:0:1667:A:C4	2.89	0.41
1:0:1697:U:H2'	1:0:1754:G:N7	2.36	0.41
1:0:1981:A:O2'	1:0:2704:U:H1'	2.21	0.41
1:0:2548:G:C2	1:0:2549:G:C8	3.08	0.41
1:0:1778:U:H4'	1:0:2568:A:H4'	2.03	0.41
1:0:789:G:C2'	1:0:790:A:OP2	2.69	0.41
1:0:307:C:H2'	1:0:308:C:C6	2.56	0.41
1:0:1889:G:N1	1:0:1908:C:N4	2.66	0.41
1:0:1182:U:C2'	1:0:1183:C:H5''	2.46	0.41
1:0:2810:A:O5'	1:0:2810:A:C8	2.67	0.41
1:0:836:G:N3	1:0:837:U:C5	2.89	0.41
1:0:750:C:O2'	1:0:751:G:H5'	2.20	0.41
1:0:1700:C:C5	1:0:1701:C:C5	3.09	0.41
1:0:2844:G:C2'	1:0:2845:C:H5'	2.51	0.41
2:9:26:G:N7	2:9:58:G:C4	2.89	0.41
1:0:1054:C:H2'	1:0:1055:A:C5'	2.51	0.41
1:0:1354:A:HO2'	1:0:1355:A:P	2.44	0.41
1:0:2603:G:O6	1:0:2604:G:C6	2.74	0.41
1:0:1407:G:O5'	1:0:1407:G:H8	2.04	0.41
1:0:425:A:H2'	1:0:426:C:O4'	2.21	0.41
1:0:625:A:H2'	1:0:626:A:O4'	2.20	0.41
1:0:1830:C:C6	1:0:1882:G:C6	3.09	0.41
1:0:1594:U:O4	1:0:1595:A:N6	2.53	0.41
1:0:1442:C:C2'	1:0:1443:G:OP1	2.68	0.41
1:0:1427:G:N7	1:0:1428:G:C2	2.89	0.41
1:0:1555:A:H8	1:0:1555:A:O5'	2.02	0.41
1:0:1038:U:H5	1:0:1137:A:C4	2.39	0.41
1:0:575:U:H2'	1:0:576:A:O4'	2.21	0.41
1:0:585:U:O2'	1:0:2481:G:O6	2.38	0.41
1:0:1640:C:H6	1:0:1640:C:O5'	2.03	0.41
1:0:1972:G:H2'	1:0:1973:C:H5'	2.02	0.41
1:0:2535:C:C6	1:0:2536:G:C8	3.08	0.41
1:0:2627:G:C2'	1:0:2628:C:H5'	2.51	0.41
1:0:1206:G:O2'	1:0:1207:G:H5'	2.20	0.41
1:0:168:A:C6	1:0:169:C:N4	2.89	0.41
1:0:1248:G:C5	1:0:1249:G:C2	3.09	0.41
1:0:308:C:C2'	1:0:309:G:H5'	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:348:U:C5	1:0:349:G:N7	2.88	0.41
1:0:237:G:C6	1:0:238:G:C5	3.09	0.41
1:0:239:A:H4'	1:0:620:G:H5'	2.02	0.41
1:0:1212:U:H2'	1:0:1213:U:C5	2.49	0.41
1:0:657:A:N3	1:0:2329:C:O2'	2.44	0.41
1:0:2270:U:O5'	1:0:2270:U:H6	2.04	0.41
1:0:1483:G:C2'	1:0:1484:G:O5'	2.69	0.41
1:0:840:U:C5	1:0:2405:A:C2	3.08	0.41
1:0:1351:G:O2'	1:0:1352:G:H5'	2.21	0.41
1:0:554:U:O2'	1:0:555:U:H4'	2.21	0.41
2:9:111:C:O5'	2:9:111:C:H6	2.03	0.41
1:0:2082:C:N4	1:0:2174:G:N2	2.68	0.41
1:0:2514:G:N3	1:0:2515:G:N7	2.69	0.41
1:0:1150:C:OP1	10:H:52:GLY:CA	2.69	0.41
1:0:2276:C:O5'	1:0:2276:C:C6	2.73	0.41
1:0:2512:A:OP1	1:0:2644:A:H1'	2.20	0.41
1:0:2749:A:C2	1:0:2750:G:C4	3.08	0.41
1:0:1089:C:O5'	1:0:1089:C:C6	2.69	0.41
1:0:1709:U:H6	1:0:1709:U:O5'	2.04	0.41
1:0:2316:G:OP2	1:0:2317:G:OP2	2.39	0.41
1:0:2243:C:C2'	1:0:2244:C:H5'	2.51	0.41
1:0:246:C:N3	1:0:247:A:N7	2.69	0.41
1:0:2452:U:C4	1:0:2453:C:C4	3.09	0.41
1:0:2336:G:O5'	1:0:2336:G:H8	2.04	0.41
1:0:473:C:N3	1:0:474:G:C5	2.89	0.41
1:0:2436:U:C4	1:0:2437:G:C6	3.09	0.41
1:0:461:A:N3	1:0:462:G:C8	2.89	0.41
1:0:1746:A:C2	1:0:2696:A:H1'	2.54	0.41
1:0:1992:G:H1'	14:L:106:ASP:CA	2.50	0.41
1:0:2655:C:O2'	1:0:2656:G:H5'	2.20	0.41
1:0:1767:G:C6	1:0:1768:U:C4	3.09	0.41
1:0:1773:C:H2'	1:0:1774:A:H5'	2.03	0.41
1:0:177:U:H2'	1:0:178:C:O4'	2.20	0.41
1:0:776:G:N3	1:0:776:G:C2'	2.84	0.41
1:0:830:C:C2	1:0:1205:G:N2	2.89	0.41
1:0:106:G:H2'	1:0:107:G:H8	1.85	0.41
1:0:1251:G:C5	1:0:1252:C:C4	3.09	0.41
1:0:82:G:H21	1:0:102:C:H41	1.68	0.41
1:0:105:G:C6	1:0:106:G:C6	3.09	0.41
1:0:1251:G:C6	1:0:1252:C:N3	2.89	0.41
1:0:2572:U:H3'	1:0:2572:U:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:865:A:C5	1:0:866:U:C4	3.09	0.41
1:0:1084:A:H4'	1:0:2454:C:OP1	2.21	0.41
1:0:2454:C:H5''	1:0:2455:A:OP2	2.21	0.41
1:0:746:G:O6	1:0:774:A:C8	2.74	0.41
1:0:488:A:C2	1:0:489:A:C2	3.09	0.41
1:0:2033:C:N4	1:0:2034:A:N1	2.69	0.41
2:9:88:C:C2	2:9:89:G:C8	3.08	0.41
2:9:88:C:H2'	2:9:89:G:H8	1.85	0.41
1:0:965:G:N2	1:0:975:C:O2	2.54	0.41
1:0:1073:G:H2'	1:0:1074:G:C4'	2.51	0.41
1:0:1960:A:C2'	1:0:1961:A:H5'	2.51	0.41
1:0:369:C:H2'	1:0:370:U:O4'	2.21	0.41
1:0:1352:G:C6	1:0:1353:A:N6	2.78	0.41
1:0:454:G:C6	1:0:456:C:N4	2.89	0.41
1:0:2019:C:H2'	1:0:2020:G:C5'	2.51	0.41
1:0:2837:G:N2	1:0:2838:U:C2	2.89	0.41
1:0:2839:G:C2'	1:0:2840:U:C6	3.02	0.41
1:0:1008:G:O5'	1:0:1008:G:H8	2.04	0.41
1:0:2736:U:C2'	1:0:2737:A:H5'	2.51	0.41
1:0:2063:A:C2	1:0:2064:U:C2	3.09	0.41
1:0:594:G:C6	1:0:1264:C:C4	3.09	0.41
1:0:2090:U:N3	1:0:2166:G:N1	2.68	0.41
2:9:20:A:C2	2:9:69:G:C6	3.09	0.41
1:0:1089:C:C2	1:0:1099:A:H4'	2.56	0.41
1:0:947:C:O2'	1:0:948:C:C5'	2.69	0.41
1:0:198:A:O2'	1:0:199:A:OP2	2.37	0.41
1:0:1377:G:N2	1:0:1381:G:C4	2.89	0.41
1:0:246:C:C2	1:0:247:A:N7	2.89	0.41
2:9:98:C:C3'	2:9:98:C:C6	3.04	0.41
1:0:1024:G:N1	1:0:1025:A:C6	2.88	0.41
1:0:2161:C:O5'	1:0:2161:C:H6	2.04	0.41
1:0:1668:G:C6	1:0:1669:A:N6	2.89	0.41
1:0:1682:A:N7	1:0:1684:G:N2	2.69	0.41
1:0:1764:A:C5	1:0:1821:A:C1'	2.97	0.41
1:0:693:A:C6	1:0:811:G:C6	3.09	0.41
1:0:831:G:O2'	1:0:832:A:O4'	2.35	0.41
1:0:304:A:C2'	1:0:305:A:H5''	2.50	0.41
1:0:344:G:N3	1:0:344:G:H2'	2.35	0.41
1:0:1888:C:H2'	1:0:1913:G:C2	2.56	0.41
1:0:1183:C:N3	1:0:1184:G:C6	2.89	0.41
1:0:711:C:H4'	1:0:748:A:H2	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:75:C:O2	1:0:109:A:C2	2.74	0.41
1:0:2248:A:N7	1:0:2249:U:O4	2.53	0.41
1:0:1699:A:N7	1:0:1700:C:N3	2.69	0.41
1:0:2408:G:O4'	1:0:2408:G:OP1	2.38	0.41
1:0:2807:U:H1'	1:0:2809:A:C2	2.56	0.41
1:0:1740:G:C2'	1:0:1741:G:H5'	2.51	0.41
1:0:2159:A:H2'	1:0:2160:C:O4'	2.21	0.41
1:0:500:G:C6	1:0:1297:A:C2	3.10	0.41
1:0:1157:G:O6	1:0:1158:A:N6	2.54	0.41
1:0:2419:C:H2'	1:0:2420:C:H4'	2.03	0.41
1:0:2355:A:N6	1:0:2356:A:C2	2.88	0.41
1:0:2281:C:H2'	1:0:2282:G:H8	1.85	0.41
1:0:2392:G:H2'	1:0:2393:G:O4'	2.20	0.41
1:0:1712:G:H3'	1:0:1712:G:N3	2.36	0.41
1:0:1657:A:N6	1:0:1658:A:N1	2.69	0.40
1:0:1718:A:P	1:0:1754:G:H1	2.44	0.40
1:0:2503:G:C3'	1:0:2504:G:H5''	2.51	0.40
1:0:2529:G:C6	1:0:2530:C:C5	3.08	0.40
1:0:2707:G:O2'	1:0:2708:U:C5'	2.69	0.40
1:0:2709:C:C4	1:0:2710:C:C4	3.09	0.40
1:0:1012:A:H62	1:0:1165:G:N2	2.19	0.40
1:0:1769:U:O2	1:0:1770:U:H5	2.04	0.40
1:0:476:G:N2	1:0:697:G:N2	2.69	0.40
1:0:704:G:H2'	1:0:705:C:O4'	2.21	0.40
1:0:778:G:O2'	1:0:779:U:H5'	2.22	0.40
1:0:828:C:H2'	1:0:829:C:C6	2.56	0.40
1:0:981:C:C6	1:0:982:C:C5	3.09	0.40
1:0:1254:G:C4	1:0:1255:A:N7	2.89	0.40
1:0:2455:A:C5	1:0:2456:U:C5	3.09	0.40
1:0:2859:U:H5	1:0:2860:C:N3	2.19	0.40
1:0:2241:U:H2'	1:0:2242:C:O4'	2.20	0.40
1:0:165:G:C8	1:0:166:G:C8	3.09	0.40
1:0:2184:C:H2'	1:0:2185:U:C6	2.56	0.40
2:9:60:A:H2'	2:9:61:A:H8	1.85	0.40
1:0:2686:C:O2'	1:0:2687:G:C5'	2.69	0.40
1:0:1673:C:N3	1:0:1674:C:C5	2.89	0.40
1:0:221:A:C2	1:0:232:A:C6	3.09	0.40
1:0:1404:C:N4	1:0:1407:G:N7	2.66	0.40
1:0:390:U:O4	1:0:391:C:N4	2.54	0.40
1:0:2652:G:O2'	1:0:2653:A:H5'	2.20	0.40
1:0:1491:C:H2'	1:0:1492:A:C5'	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2049:C:C2'	1:0:2050:G:H5'	2.50	0.40
1:0:1256:C:C6	1:0:1257:U:C5	3.08	0.40
1:0:2243:C:N4	1:0:2244:C:N3	2.69	0.40
1:0:1038:U:C5	1:0:1137:A:C2	3.09	0.40
1:0:1662:G:H5''	1:0:1663:C:O4'	2.20	0.40
1:0:1980:A:C2'	1:0:1981:A:H5'	2.52	0.40
1:0:2594:U:O2'	1:0:2595:C:H5'	2.21	0.40
1:0:2221:G:H2'	1:0:2222:U:O5'	2.20	0.40
1:0:475:U:C4	1:0:476:G:N1	2.89	0.40
1:0:695:G:N2	1:0:809:C:C2	2.89	0.40
1:0:1249:G:O2'	1:0:1250:A:P	2.80	0.40
1:0:1253:C:H2'	1:0:1254:G:H5'	2.02	0.40
1:0:337:G:O2'	1:0:338:G:H5'	2.21	0.40
1:0:1183:C:H2'	1:0:1184:G:O4'	2.21	0.40
1:0:2447:G:O5'	1:0:2447:G:C8	2.67	0.40
1:0:2241:U:H4'	1:0:2307:A:N3	2.34	0.40
1:0:837:U:C4	1:0:838:A:C6	3.09	0.40
1:0:1365:U:H1'	1:0:1586:A:H2	1.86	0.40
1:0:876:A:O3'	2:9:103:A:C2	2.75	0.40
1:0:1786:C:N3	1:0:1787:U:C2	2.89	0.40
1:0:2715:C:H2'	1:0:2716:G:O4'	2.21	0.40
1:0:1846:A:H2'	1:0:1847:G:H5'	2.03	0.40
1:0:1846:A:N7	1:0:1847:G:C5	2.89	0.40
1:0:2329:C:C2'	1:0:2330:G:C5'	2.99	0.40
1:0:851:C:H2'	1:0:852:U:C6	2.57	0.40
1:0:2817:A:N1	1:0:2851:G:C5	2.89	0.40
1:0:1603:A:C2	1:0:1604:A:C4	3.09	0.40
1:0:1603:A:H2'	1:0:1604:A:C8	2.56	0.40
1:0:1437:A:O2'	1:0:1438:G:H5'	2.21	0.40
1:0:2426:G:O4'	1:0:2480:C:N4	2.54	0.40
1:0:2236:U:H2'	1:0:2237:C:O4'	2.22	0.40
1:0:2576:G:O2'	1:0:2577:A:H5'	2.22	0.40
1:0:2470:U:O2'	1:0:2471:U:C5'	2.69	0.40
1:0:545:C:N4	1:0:546:A:N6	2.70	0.40
1:0:1696:C:C5	1:0:1697:U:C4	3.10	0.40
1:0:1970:G:O2'	1:0:1971:C:C5'	2.65	0.40
1:0:2537:C:H2'	1:0:2538:C:O4'	2.21	0.40
1:0:613:A:C2	1:0:614:G:C6	3.09	0.40
1:0:2571:G:C5	1:0:2572:U:O4	2.74	0.40
1:0:2762:G:H2'	1:0:2763:U:H5'	2.04	0.40
1:0:616:U:C5	1:0:630:G:C2	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2484:G:H2'	1:0:2485:U:H5'	2.04	0.40
1:0:210:A:N6	1:0:442:A:N6	2.69	0.40
1:0:1094:C:C2	1:0:1096:A:OP2	2.74	0.40
1:0:1702:C:C2	1:0:1721:G:N2	2.89	0.40
1:0:2641:A:H2'	1:0:2642:G:O4'	2.21	0.40
1:0:1733:U:H5''	1:0:1733:U:H6	1.85	0.40
1:0:2321:C:O2'	1:0:2322:U:H5'	2.21	0.40
1:0:1407:G:H2'	1:0:1408:A:C8	2.57	0.40
2:9:111:C:H5''	2:9:112:A:H4'	2.03	0.40
1:0:1151:U:H5''	1:0:1153:A:OP1	2.22	0.40
1:0:2445:C:N3	1:0:2464:G:C2	2.89	0.40
1:0:2644:A:C2	1:0:2645:C:C4	3.10	0.40
1:0:296:A:N6	1:0:297:A:N6	2.70	0.40
1:0:988:G:O2'	1:0:989:G:H5'	2.22	0.40
1:0:946:U:H2'	1:0:947:C:H6	1.86	0.40
2:9:105:G:C2	2:9:106:U:C4	3.09	0.40
1:0:2441:U:H2'	1:0:2442:C:C6	2.55	0.40
1:0:484:G:H2'	1:0:485:G:O4'	2.21	0.40
1:0:525:A:C8	1:0:526:C:C5	3.10	0.40
1:0:685:U:C2	1:0:822:G:C2	3.09	0.40
1:0:1283:C:H2'	1:0:1665:C:H5''	2.03	0.40
1:0:1989:C:C2'	1:0:1990:U:H5'	2.51	0.40
1:0:1979:C:H6	1:0:1979:C:H5''	1.87	0.40
1:0:1010:U:C4	1:0:1011:A:N6	2.90	0.40
1:0:2611:A:C2	1:0:2767:C:N3	2.89	0.40
1:0:2307:A:C6	1:0:2308:A:C6	3.09	0.40
1:0:190:A:C2	1:0:191:G:C2	3.10	0.40
1:0:446:C:C4	1:0:447:U:C4	3.09	0.40
1:0:1753:A:C8	1:0:1753:A:C3'	3.04	0.40
2:9:8:C:O2'	2:9:9:G:H5'	2.21	0.40
1:0:1459:U:C2	1:0:1475:U:O2'	2.69	0.40
1:0:2685:A:C2	1:0:2686:C:C2	3.09	0.40
1:0:2788:C:H2'	1:0:2789:U:H6	1.87	0.40
1:0:2676:G:C5	1:0:2677:U:C5	3.09	0.40
1:0:324:C:C4	1:0:325:U:C4	3.09	0.40
1:0:1411:C:C2'	1:0:1412:C:H5'	2.52	0.40
1:0:2019:C:H2'	1:0:2020:G:H5'	2.00	0.40
1:0:1386:A:N6	1:0:1387:G:C6	2.89	0.40
1:0:2371:A:C2'	1:0:2372:A:H5'	2.52	0.40
1:0:1491:C:H2'	1:0:1492:A:H5'	2.03	0.40
1:0:2160:C:O5'	1:0:2160:C:H6	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2801:A:C6	1:0:2802:C:C2	3.09	0.40
1:0:2802:C:O2'	1:0:2803:C:H5'	2.20	0.40
1:0:2794:G:C2	1:0:2803:C:N3	2.89	0.40
1:0:2243:C:O2	1:0:2256:G:C2	2.74	0.40
1:0:1402:G:H2'	1:0:1403:U:O4'	2.21	0.40
1:0:2468:G:C2	1:0:2469:G:O4'	2.74	0.40
1:0:521:U:H5''	1:0:522:G:OP2	2.22	0.40
1:0:568:G:C6	1:0:569:C:C2	3.09	0.40
1:0:748:A:N7	1:0:749:C:C4	2.89	0.40
1:0:160:C:H2'	1:0:161:U:H5'	2.04	0.40
1:0:116:A:OP2	1:0:117:A:H5''	2.21	0.40
1:0:2185:U:O5'	1:0:2185:U:H6	2.04	0.40
1:0:1476:G:N3	1:0:2681:A:C2	2.90	0.40
1:0:1355:A:C1'	1:0:1410:U:H4'	2.52	0.40
2:9:89:G:C6	2:9:93:G:C6	3.10	0.40
1:0:1998:A:O5'	1:0:1998:A:H8	2.04	0.40
1:0:991:A:C4	1:0:1146:G:O4'	2.74	0.40
1:0:2732:C:C5	1:0:2733:A:N7	2.90	0.40
1:0:395:G:O6	1:0:404:A:N6	2.54	0.40
1:0:721:C:N3	1:0:737:C:O2	2.53	0.40
1:0:738:G:O5'	1:0:738:G:H8	2.04	0.40
1:0:1452:U:H5'	1:0:1532:A:O2'	2.21	0.40
1:0:2048:C:H6	1:0:2048:C:O5'	2.03	0.40
1:0:2718:A:N1	1:0:2746:G:O6	2.54	0.40
1:0:352:G:H2'	1:0:353:G:O4'	2.21	0.40
1:0:503:G:H2'	1:0:504:G:O4'	2.22	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 ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	0	2757/2880 (95%)	512 (18%)	39 (1%)
2	9	117/124 (94%)	17 (14%)	1 (0%)
All	All	2874/3004 (95%)	529 (18%)	40 (1%)

All (529) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	0	34	U
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	60	A
1	0	70	A
1	0	71	A
1	0	72	A
1	0	76	C
1	0	87	G
1	0	89	A
1	0	90	G
1	0	91	A
1	0	99	U
1	0	100	G
1	0	105	G
1	0	110	U
1	0	116	A
1	0	117	A
1	0	118	U
1	0	119	G
1	0	123	A
1	0	124	A
1	0	129	A
1	0	135	U
1	0	155	G
1	0	158	A
1	0	168	A
1	0	173	A
1	0	174	A
1	0	176	A

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Mol	Chain	Res	Type
1	0	177	U
1	0	181	A
1	0	182	G
1	0	193	A
1	0	199	A
1	0	200	A
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	242	A
1	0	243	G
1	0	305	A
1	0	318	G
1	0	321	A
1	0	322	A
1	0	334	G
1	0	335	A
1	0	340	G
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	404	A
1	0	409	G
1	0	414	A
1	0	418	C
1	0	424	G
1	0	443	A
1	0	455	A
1	0	456	C
1	0	460	U
1	0	461	A
1	0	463	C
1	0	467	U
1	0	486	U

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Mol	Chain	Res	Type
1	0	491	A
1	0	492	G
1	0	514	G
1	0	515	A
1	0	518	A
1	0	537	C
1	0	539	A
1	0	540	G
1	0	542	A
1	0	543	G
1	0	554	U
1	0	556	A
1	0	558	G
1	0	559	C
1	0	572	G
1	0	583	C
1	0	584	A
1	0	587	A
1	0	588	G
1	0	601	A
1	0	613	A
1	0	617	U
1	0	624	A
1	0	632	A
1	0	636	G
1	0	638	A
1	0	648	A
1	0	652	C
1	0	654	A
1	0	666	U
1	0	667	U
1	0	684	C
1	0	697	G
1	0	699	G
1	0	700	C
1	0	726	G
1	0	728	G
1	0	742	G
1	0	743	A
1	0	745	C
1	0	753	U
1	0	761	G

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Mol	Chain	Res	Type
1	0	765	C
1	0	766	A
1	0	775	U
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	801	A
1	0	802	A
1	0	803	C
1	0	804	C
1	0	806	A
1	0	807	A
1	0	813	A
1	0	815	A
1	0	818	G
1	0	819	C
1	0	825	C
1	0	832	A
1	0	834	A
1	0	840	U
1	0	841	G
1	0	843	G
1	0	844	G
1	0	860	U
1	0	869	C
1	0	873	U
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	955	G
1	0	957	G

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Mol	Chain	Res	Type
1	0	968	C
1	0	969	U
1	0	970	A
1	0	971	A
1	0	972	C
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	1007	A
1	0	1016	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	1045	G
1	0	1055	A
1	0	1056	U
1	0	1057	A
1	0	1059	A
1	0	1067	G
1	0	1073	G
1	0	1074	G
1	0	1081	A
1	0	1082	G
1	0	1087	C
1	0	1090	C
1	0	1099	A
1	0	1130	U
1	0	1135	C
1	0	1137	A
1	0	1138	A
1	0	1141	U

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Mol	Chain	Res	Type
1	0	1142	G
1	0	1145	C
1	0	1146	G
1	0	1152	C
1	0	1155	G
1	0	1167	A
1	0	1168	G
1	0	1182	U
1	0	1183	C
1	0	1185	C
1	0	1199	U
1	0	1200	G
1	0	1223	G
1	0	1224	A
1	0	1234	C
1	0	1250	A
1	0	1251	G
1	0	1253	C
1	0	1262	U
1	0	1264	C
1	0	1265	G
1	0	1266	G
1	0	1267	A
1	0	1268	U
1	0	1269	G
1	0	1274	C
1	0	1278	A
1	0	1279	G
1	0	1280	U
1	0	1284	G
1	0	1285	A
1	0	1286	U
1	0	1288	A
1	0	1302	C
1	0	1313	U
1	0	1314	A
1	0	1316	G
1	0	1324	G
1	0	1326	U
1	0	1327	C
1	0	1334	A
1	0	1338	G

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Mol	Chain	Res	Type
1	0	1339	U
1	0	1342	U
1	0	1343	C
1	0	1353	A
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	1410	U
1	0	1411	C
1	0	1433	A
1	0	1441	A
1	0	1442	C
1	0	1443	G
1	0	1446	U
1	0	1459	U
1	0	1468	A
1	0	1469	U
1	0	1470	G
1	0	1475	U
1	0	1482	U
1	0	1489	C
1	0	1490	U
1	0	1505	U
1	0	1508	G
1	0	1509	A
1	0	1513	U
1	0	1524	C
1	0	1529	C
1	0	1552	C
1	0	1573	G
1	0	1574	A
1	0	1582	A
1	0	1583	A
1	0	1585	A
1	0	1602	G
1	0	1618	U
1	0	1623	C

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Mol	Chain	Res	Type
1	0	1624	A
1	0	1625	A
1	0	1626	A
1	0	1627	C
1	0	1634	A
1	0	1635	G
1	0	1636	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	1688	U
1	0	1691	G
1	0	1693	A
1	0	1699	A
1	0	1711	C
1	0	1712	G
1	0	1715	A
1	0	1716	G
1	0	1717	A
1	0	1718	A
1	0	1724	C
1	0	1747	G
1	0	1748	U
1	0	1749	G
1	0	1750	A
1	0	1754	G
1	0	1755	G
1	0	1764	A
1	0	1771	A
1	0	1772	C
1	0	1773	C
1	0	1776	A
1	0	1778	U
1	0	1791	C

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Mol	Chain	Res	Type
1	0	1799	A
1	0	1801	C
1	0	1802	A
1	0	1807	A
1	0	1808	C
1	0	1811	A
1	0	1821	A
1	0	1826	U
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	1927	U
1	0	1928	G
1	0	1930	C
1	0	1938	U
1	0	1939	U
1	0	1949	A
1	0	1950	C
1	0	1953	A
1	0	1954	A
1	0	1955	G
1	0	1956	G
1	0	1964	A
1	0	1974	U
1	0	1976	U
1	0	1979	C
1	0	1980	A
1	0	1989	C
1	0	2004	U
1	0	2006	G
1	0	2008	C
1	0	2015	G
1	0	2016	A
1	0	2019	C
1	0	2038	C
1	0	2044	G
1	0	2045	A
1	0	2047	C

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Mol	Chain	Res	Type
1	0	2051	U
1	0	2052	G
1	0	2060	A
1	0	2063	A
1	0	2075	U
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	2204	A
1	0	2218	G
1	0	2229	G
1	0	2241	U
1	0	2245	A
1	0	2246	A
1	0	2247	A
1	0	2255	G
1	0	2262	C
1	0	2267	A
1	0	2268	G
1	0	2269	G
1	0	2285	U
1	0	2286	G
1	0	2287	G
1	0	2288	A
1	0	2297	G
1	0	2298	U
1	0	2299	A
1	0	2300	G
1	0	2301	A
1	0	2306	A
1	0	2314	A
1	0	2316	G

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Mol	Chain	Res	Type
1	0	2325	A
1	0	2326	C
1	0	2362	G
1	0	2364	C
1	0	2378	G
1	0	2385	U
1	0	2396	C
1	0	2403	C
1	0	2404	A
1	0	2405	A
1	0	2406	C
1	0	2407	G
1	0	2408	G
1	0	2409	A
1	0	2415	G
1	0	2420	C
1	0	2427	A
1	0	2428	U
1	0	2435	C
1	0	2448	A
1	0	2455	A
1	0	2469	G
1	0	2470	U
1	0	2471	U
1	0	2476	A
1	0	2477	C
1	0	2481	G
1	0	2482	A
1	0	2483	U
1	0	2484	G
1	0	2485	U
1	0	2492	G
1	0	2496	C
1	0	2499	C
1	0	2504	G
1	0	2508	G
1	0	2509	A
1	0	2521	A
1	0	2522	G
1	0	2528	G
1	0	2545	A
1	0	2546	G

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Mol	Chain	Res	Type
1	0	2549	G
1	0	2552	C
1	0	2561	G
1	0	2564	U
1	0	2565	C
1	0	2578	G
1	0	2581	A
1	0	2582	G
1	0	2588	U
1	0	2591	C
1	0	2593	A
1	0	2594	U
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	2668	U
1	0	2669	C
1	0	2670	C
1	0	2681	A
1	0	2692	A
1	0	2693	U
1	0	2699	G
1	0	2700	U
1	0	2707	G
1	0	2712	G
1	0	2713	A
1	0	2728	A
1	0	2730	A
1	0	2732	C
1	0	2737	A
1	0	2745	A
1	0	2758	A
1	0	2759	U
1	0	2760	G
1	0	2761	A
1	0	2771	C
1	0	2783	U
1	0	2784	A
1	0	2785	A

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Mol	Chain	Res	Type
1	0	2795	A
1	0	2805	G
1	0	2807	U
1	0	2808	U
1	0	2809	A
1	0	2811	G
1	0	2825	A
1	0	2841	U
1	0	2842	C
1	0	2844	G
1	0	2847	G
1	0	2849	C
1	0	2854	G
1	0	2855	C
1	0	2861	A
1	0	2868	G
2	9	14	C
2	9	15	A
2	9	17	A
2	9	18	G
2	9	27	A
2	9	46	G
2	9	47	A
2	9	48	A
2	9	59	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	102	A
2	9	112	A

All (40) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	0	173	A
1	0	192	G
1	0	198	A
1	0	460	U
1	0	466	A

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Mol	Chain	Res	Type
1	0	491	A
1	0	583	C
1	0	765	C
1	0	789	G
1	0	801	A
1	0	805	G
1	0	1141	U
1	0	1249	G
1	0	1263	G
1	0	1265	G
1	0	1278	A
1	0	1313	U
1	0	1354	A
1	0	1634	A
1	0	1651	U
1	0	1664	G
1	0	1685	A
1	0	1698	C
1	0	1820	G
1	0	1919	A
1	0	1938	U
1	0	1975	G
1	0	2015	G
1	0	2016	A
1	0	2044	G
1	0	2046	C
1	0	2093	G
1	0	2161	C
1	0	2261	G
1	0	2377	U
1	0	2404	A
1	0	2482	A
1	0	2810	A
1	0	2824	C
2	9	58	G

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

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

## 5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

## 5.6 Ligand geometry [i](#)

1 ligand is modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z  > 2$	Counts	RMSZ	$\# Z  > 2$
32	MUL	0	2881	-	31,36,36	0.83	1 (3%)	28,55,55	1.18	3 (10%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
32	MUL	0	2881	-	-	0/16/79/79	0/1/3/3

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
32	0	2881	MUL	O3-C14	2.21	1.50	1.46

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	0	2881	MUL	C16-C6-C7	-2.77	105.97	110.44
32	0	2881	MUL	C7-C8-C9	2.05	117.00	112.92
32	0	2881	MUL	O3-C21-C22	3.23	119.56	111.10

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

1 monomer is involved in 4 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
32	0	2881	MUL	4	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 [i](#)

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

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

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

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

### 6.3 Carbohydrates [i](#)

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

### 6.4 Ligands [i](#)

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

### 6.5 Other polymers [i](#)

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