



Full wwPDB EM Validation Report ⓘ

Mar 8, 2026 – 09:06 AM UTC

PDB ID : 5AKA / pdb_00005aka
EMDB ID : EMD-2917
Title : EM structure of ribosome-SRP-FtsY complex in closed state
Authors : von Loeffelholz, O.; Jiang, Q.; Ariosa, A.; Karuppasamy, M.; Huard, K.;
Berger, I.; Shan, S.; Schaffitzel, C.
Deposited on : 2015-03-03
Resolution : 5.70 Å(reported)

This is a Full wwPDB EM Validation Report for a publicly released PDB entry.

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

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

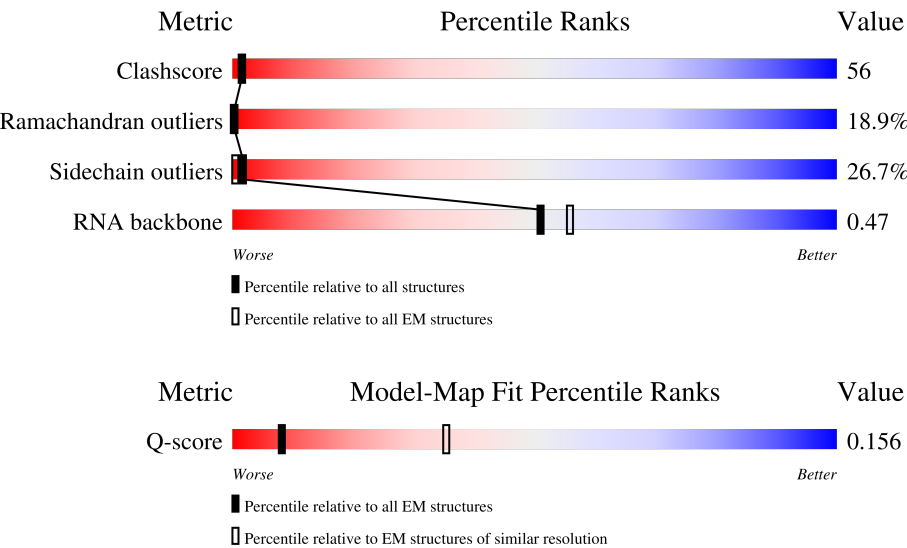
EMDB validation analysis : 0.0.1.dev132
MolProbity : 4-5-2 with Phenix2.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.49

1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 5.70 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	503 (5.20 - 6.20)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion $< 40\%$). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	0	56	
2	1	54	
3	2	46	

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Mol	Chain	Length	Quality of chain
4	3	64	
5	4	38	
6	5	109	
7	6	8	
8	7	74	
9	A	120	
10	B	2904	
11	C	273	
12	D	209	
13	E	201	
14	F	178	
15	G	176	
16	H	149	
17	I	141	
18	J	142	
19	K	123	
20	L	144	
21	M	136	
22	N	127	
23	O	117	
24	P	114	
25	Q	117	
26	R	103	
27	S	110	
28	T	100	

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Mol	Chain	Length	Quality of chain
29	U	103	
30	V	94	
31	W	84	
32	X	63	
33	Y	58	
34	Z	70	

2 Entry composition

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

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

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

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

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

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

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

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

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

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

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

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

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

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

There is a discrepancy between the modelled and reference sequences:

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

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

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

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

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

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

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

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

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

There are 2 discrepancies between the modelled and reference sequences:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- Molecule 35 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

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

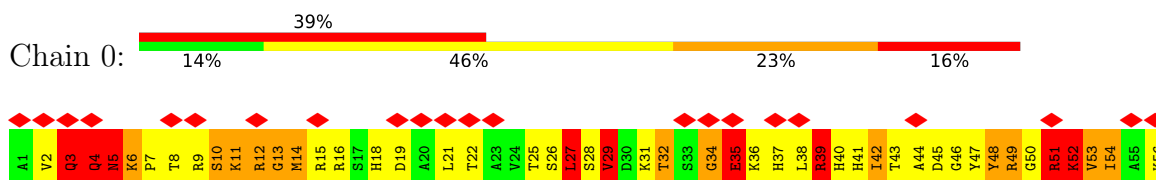
- Molecule 36 is water.

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

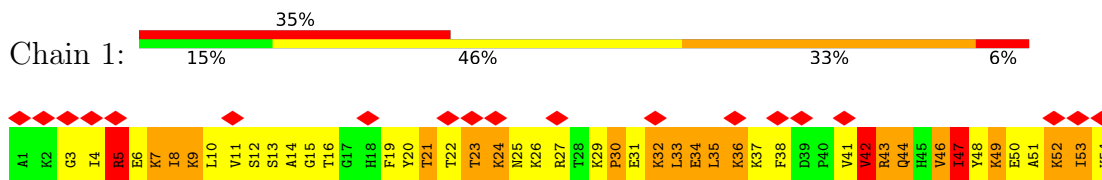
3 Residue-property plots [i](#)

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

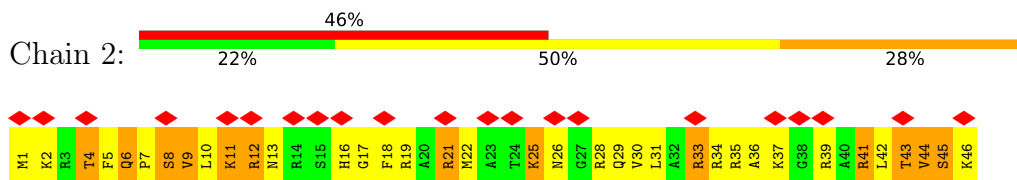
- Molecule 1: 50S RIBOSOMAL PROTEIN L32



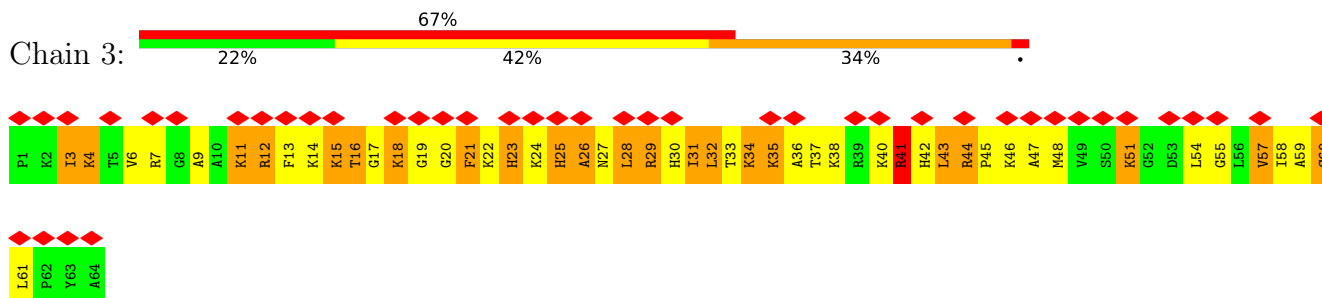
- Molecule 2: 50S RIBOSOMAL PROTEIN L33



- Molecule 3: 50S RIBOSOMAL PROTEIN L34



- Molecule 4: 50S RIBOSOMAL PROTEIN L35

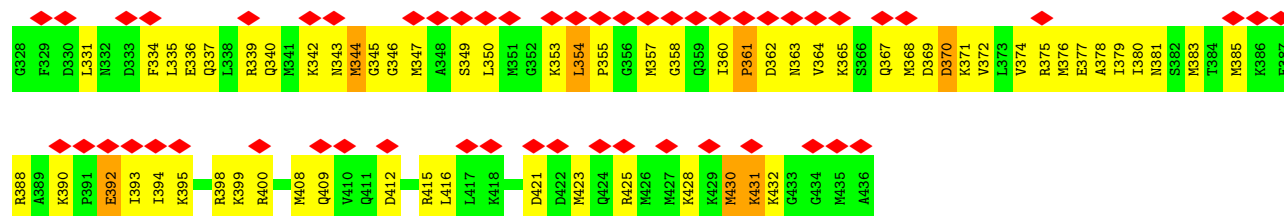


- Molecule 5: 50S RIBOSOMAL PROTEIN L36

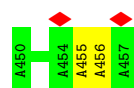
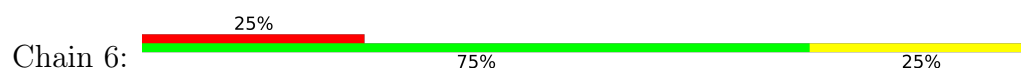




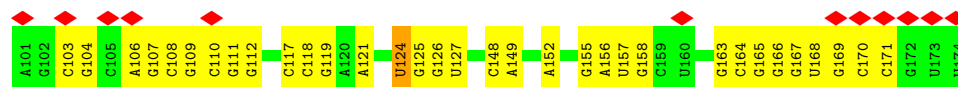
• Molecule 6: SIGNAL RECOGNITION PARTICLE PROTEIN



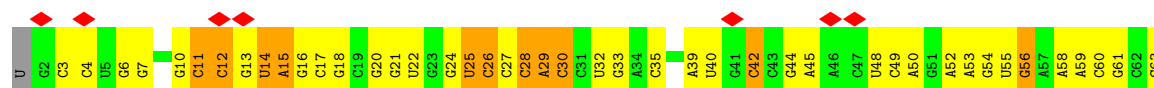
• Molecule 7: ALA-ALA-ALA-ALA-ALA-ALA-ALA-ALA



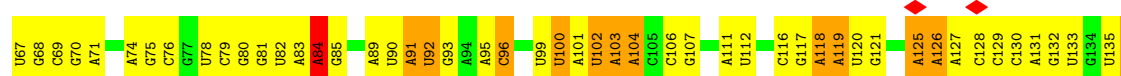
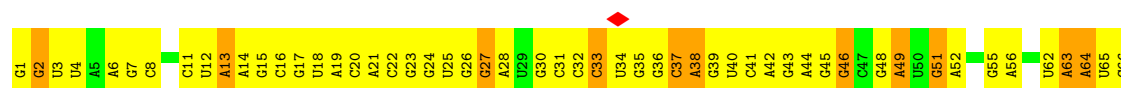
• Molecule 8: 4.5S ribosomal RNA

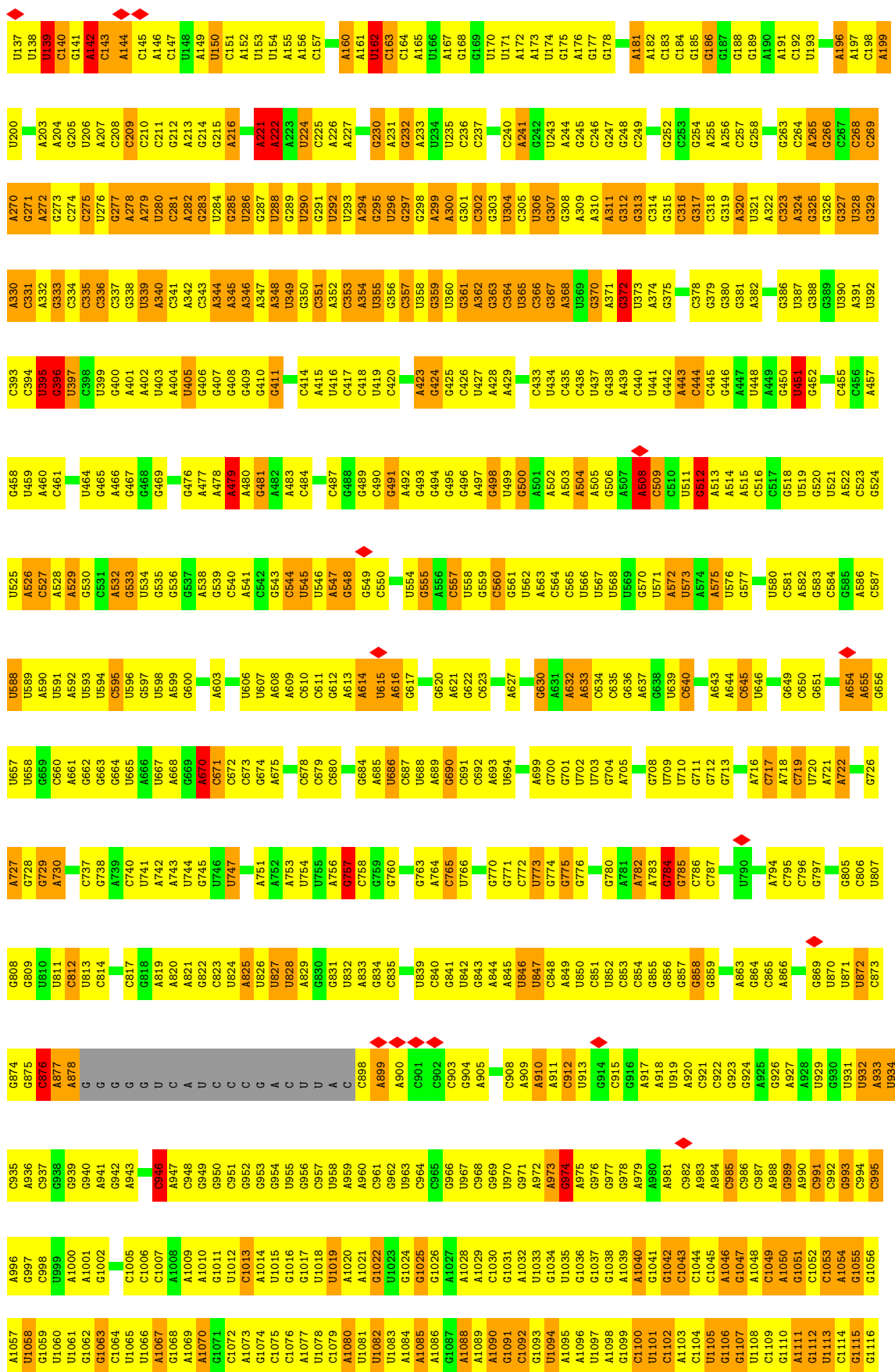


• Molecule 9: 5S ribosomal RNA

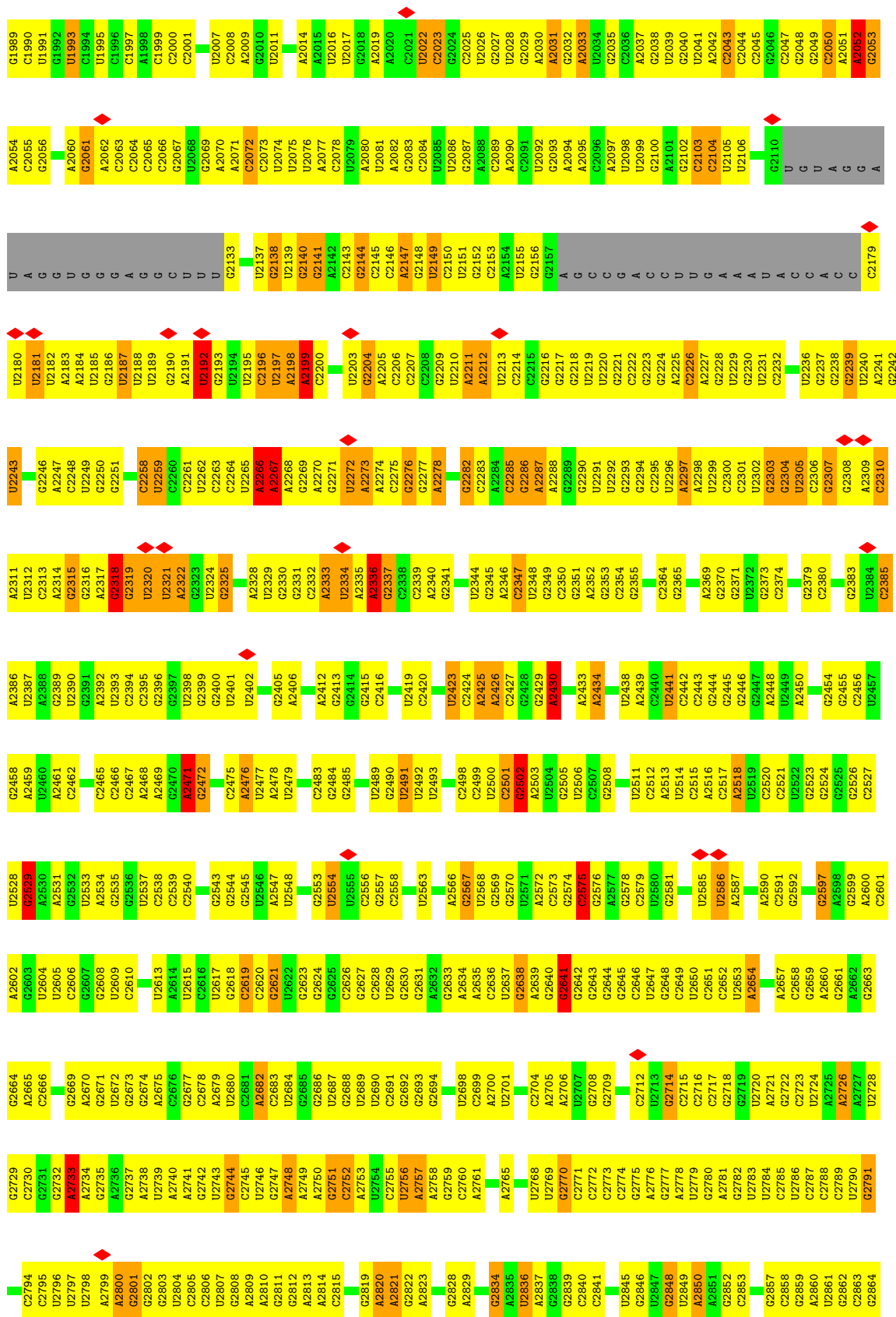


• Molecule 10: 23S ribosomal RNA



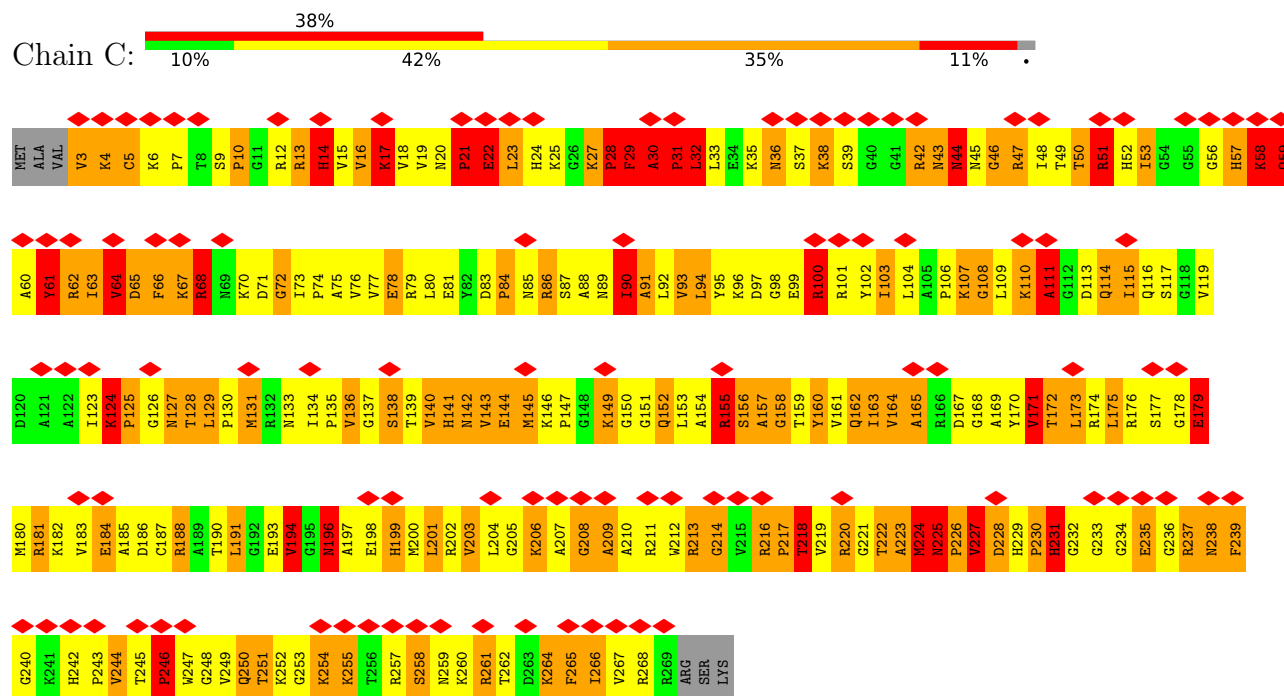


A1918	G1842	U1775	A1711	G1645	G1573	U1513	C1447	G1381	G1311	A1245	U1181	G1117
A1919	C1843	G1776	U1712	C1646	C1574	G1514	G1448	G1382	U1312	A1247	U1182	C1118
C1920	C1844		U1713	U1647	U1578	A1516	G1449	A1383	U1313	U1248	U1183	U1119
G1921	G1845	U1779	U1714	U1648	U1579	G1515	G1450	A1384	C1314	U1249	U1184	G1249
G1922	G1846	A1780	G1715	G1649	A1580	U1517	C1451	A1385	U1315	G1250	G1185	C1121
U1923	A1847	U1781	U1716			U1518	G1452	C1386	U1316	C1251	G1186	G1122
C1924	A1848	U1782	U1717	A1652	A1581	G1519	A1453	A1387	U1317	G1252	G1187	C1123
		A1783	G1718	G1653	U1584	U1520	C1454	G1388	U1318	U1253	U1188	G1124
		A1784	G1719	U1654	U1585	G1521	G1455	A1389	C1319	A1254	U1189	G1255
		A1785	U1720	A1655	C1586	A1522	U1456	U1390	U1320	U1255	G1190	A1126
		A1786	G1721	C1656	A1586	U1523	U1457	A1391	A1321	G1256	G1191	
		A1787	A1722	U1657	G1587	G1524	U1458	U1392	A1322	C1257	G1192	U1130
		C1788	G1723	U1658	U1588	A1525	U1459	U1393	C1323	U1257	G1193	G1131
		A1789	G1724		U1589	C1526	U1460	U1394	A1324	U1258	U1194	U1132
		A1790		G1661	A1590	G1527	C1461	U1395	U1325	G1259	U1195	A1133
		A1791	U1725	U1662	A1591	A1528	G1462	U1396	U1326	C1261	C1196	A1134
		A1792	U1726	G1663	C1592	G1529	G1463	C1399	A1327		G1197	C1135
		A1793	C1727	A1664	A1593	U1530	G1464	U1400	A1328	U1267	U1198	G1136
		A1794	G1728	U1665	U1594	A1531	G1465	G1401	U1329	U1268	U1199	G1137
		C1795	C1730	G1666	C1595	A1532		U1402	C1330	A1269		G1138
		U1796	G1731	G1667	A1596	U1533		A1403	G1331	U1270	U1201	G1139
		G1797	C1732	A1668	A1597	A1534	A1470	U1404	G1332	G1271	U1202	C1140
		U1798	G1733	U1669	A1598	U1535	G1471	U1405	G1333	G1271	U1203	U1141
		G1799	G1734	C1670	U1599	G1536	G1472	U1406	G1334	A1272	A1204	A1143
		C1800	A1735	U1671	C1600	G1537	U1473	G1407	A1335	U1273	A1205	A1144
		A1801	U1736	A1672	G1601	G1538	U1474	G1408	A1336	A1274	G1206	C1145
		A1802	U1737	G1673	U1602	U1539	G1475	U1409	G1337	A1275	C1207	
		A1803	G1738	G1674	A1603	G1540	U1476	G1410				
		C1804	A1739	C1675		C1541	G1477	U1411	G1341	G1276		G1149
		A1805	G1740	A1676		U1542	G1478	U1412	C1345	G1278	C1210	C1150
			C1741	A1677		G1543	G1479	A1413	A1346	G1279	G1211	A1151
			U1742			A1544	C1480	C1414	A1347	G1280	G1212	C1152
			G1743			U1545	U1481	U1415	G1348	G1281		C1153
			A1744	G1681	A1609	A1546	G1482	G1416	G1349	G1282	G1215	G1154
			U1745	U1682	C1610	C1547	G1483		C1350	U1217	G1216	A1155
			A1746	G1683	C1611	U1548	U1484		C1351	G1218	U1219	A1156
			U1747	C1685	G1612	A1549	U1485	A1419	A1284	U1286	G1220	G1157
			C1748	C1686	G1613	C1550	U1486	A1420	A1285	U1287	G1221	C1158
			A1749	U1687	A1616	A1551	U1487		A1286	G1288	G1161	G1160
			G1750	G1688	C1617	U1552	C1488	G1424	A1353	U1289	G1162	G1163
			U1751	A1689	A1618	A1553	C1489	G1425	A1354	C1290	G1225	C1164
			C1752	A1690	G1619	U1554	A1490	A1426		C1291	A1226	C1165
			G1753	C1691		G1555		G1428	A1359	G1292	G1227	A1165
			A1754	U1692	G1622	C1556	C1493	G1429	G1360	G1293	G1228	G1166
			U1755	U1693	G1623	C1557	A1494	G1430	G1361	U1294	C1229	C1167
			G1756	C1694	U1624	U1558	A1495	A1431	C1362	C1295	A1230	G1168
			A1757	G1695		G1559	A1496	A1432	G1363	G1296	U1231	G1169
			U1758	G1696	U1629	G1560		A1433	A1365	C1297	G1232	A1170
			A1759			C1561	G1501	A1434		C1298	G1233	
				A1700	G1633	U1562	A1502		G1368	G1299		G1171
			U1760	U1701	A1634	U1563	A1503	C1437		G1300	G1236	A1172
			G1702	A1635	A1634	C1564	A1504	U1438		A1301	A1237	U1173
			U1703	U1636	U1635	C1565	A1505	A1439	A1373	A1302	G1238	U1174
			G1704	A1637	U1506	U1566	U1507	G1441	G1374	G1303	G1239	A1175
			A1705	C1638	C1507	G1567	C1508	U1442	U1375	C1304	U1241	U1176
			U1706	C1639	U1568	A1569	A1509	U1443	G1377	C1305	G1177	G1177
			G1707	A1640	U1569	A1570	A1508	G1444	A1378	G1309	U1242	G1178
			U1708	U1641	G1642	A1571	G1510	G1445	U1379	G1310	A1243	G1179
			U1709	G1642		A1572	C1512	G1446	G1380		A1244	G1245

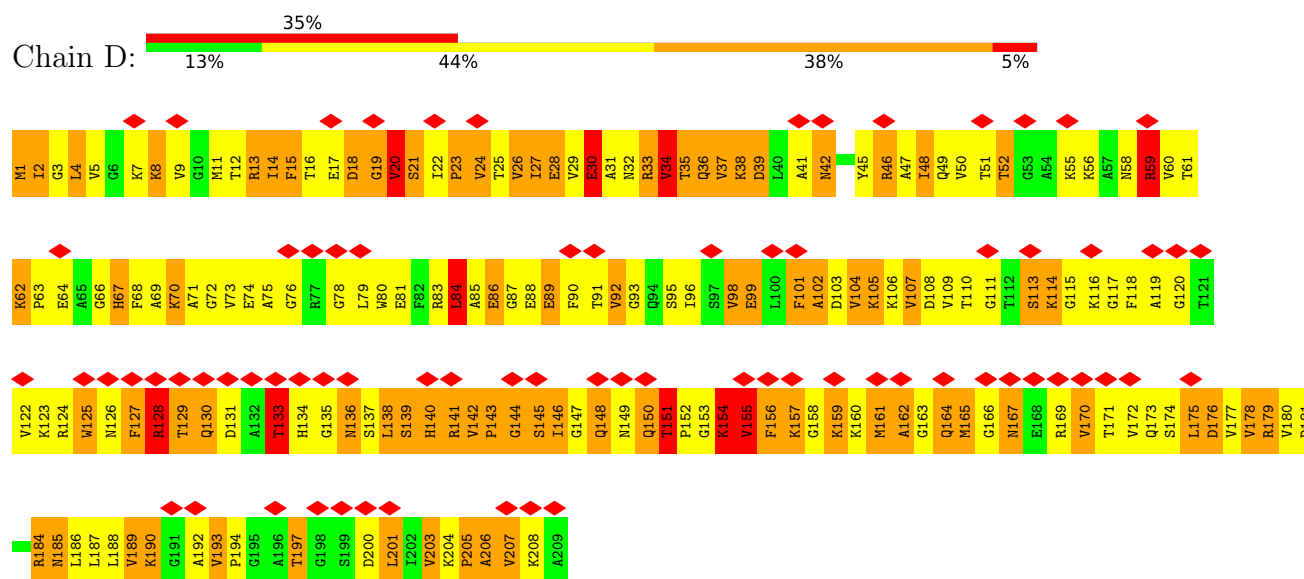




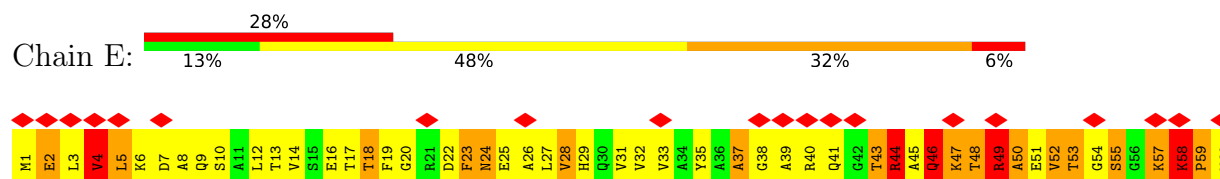
• Molecule 11: 50S RIBOSOMAL PROTEIN L2

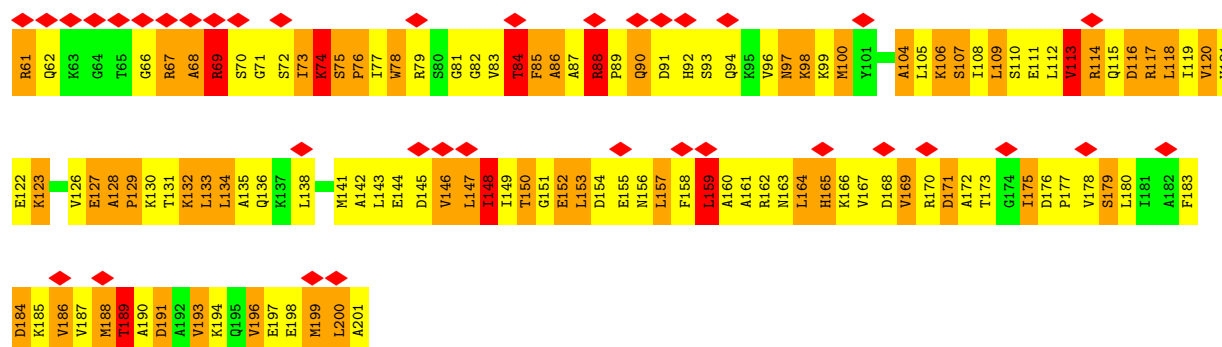


• Molecule 12: 50S RIBOSOMAL PROTEIN L3

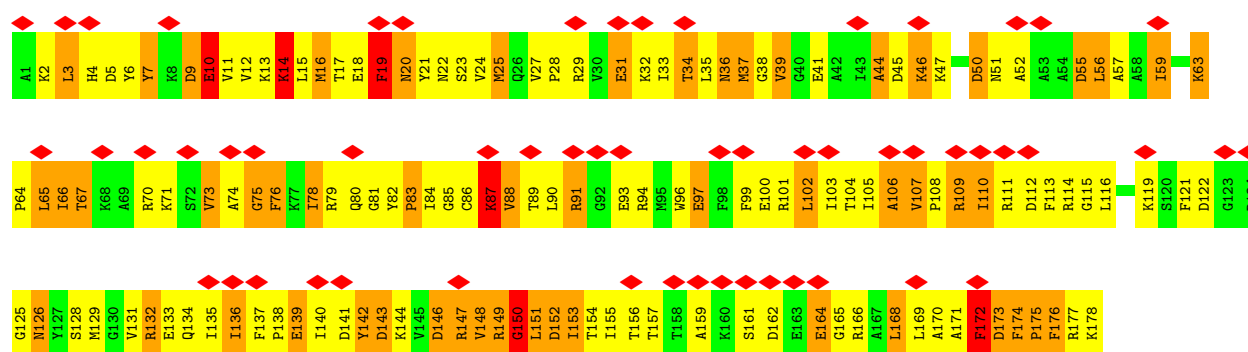
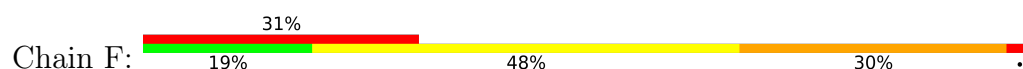


• Molecule 13: 50S RIBOSOMAL PROTEIN L4

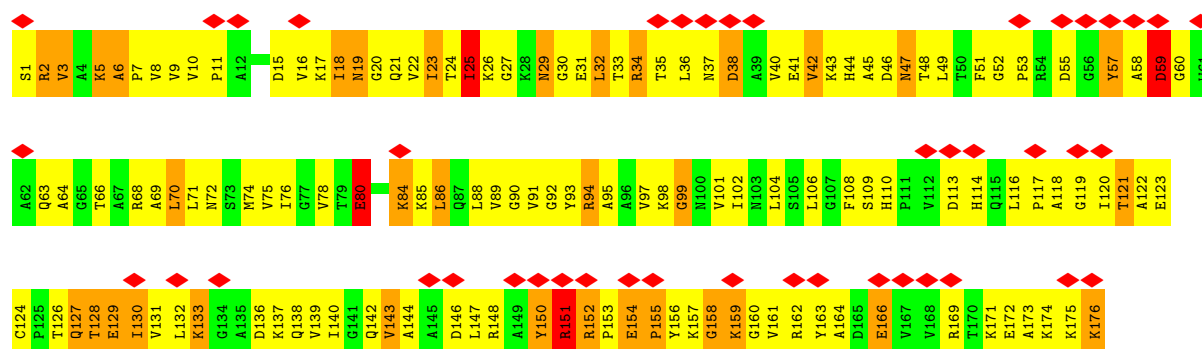




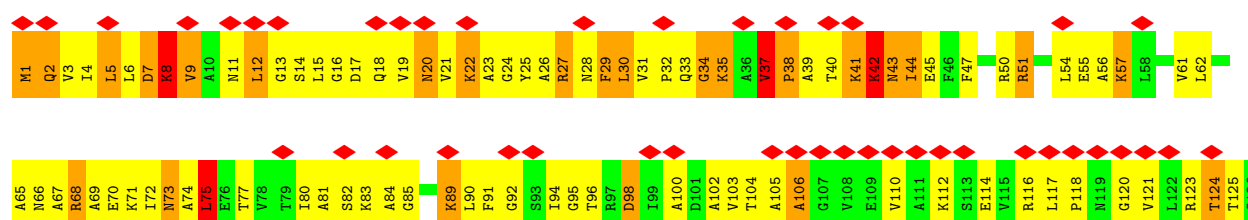
• Molecule 14: 50S RIBOSOMAL PROTEIN L5

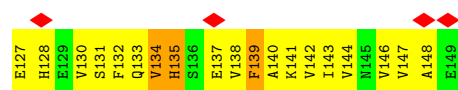


• Molecule 15: 50S RIBOSOMAL PROTEIN L6



• Molecule 16: 50S RIBOSOMAL PROTEIN L9

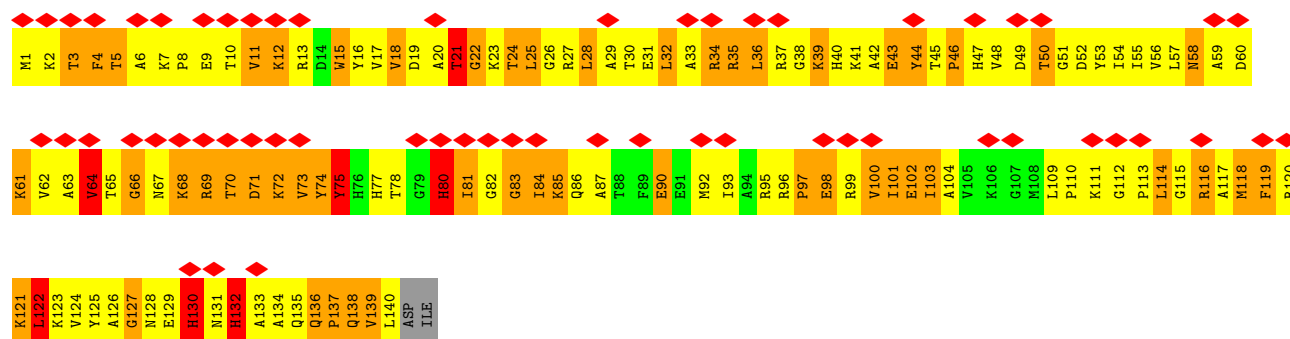




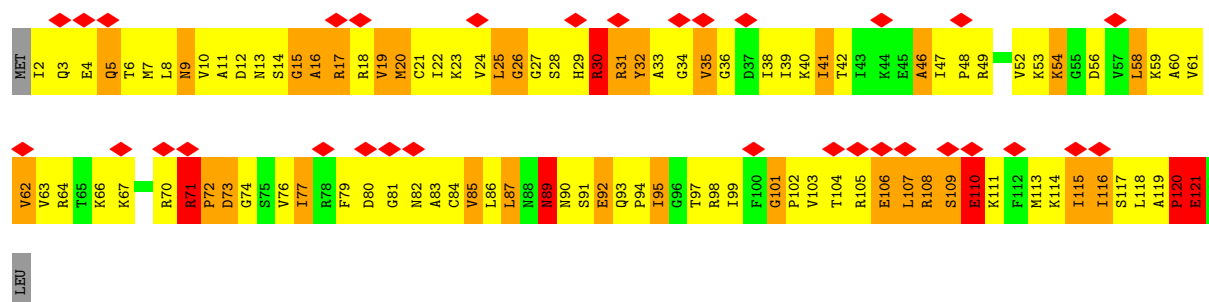
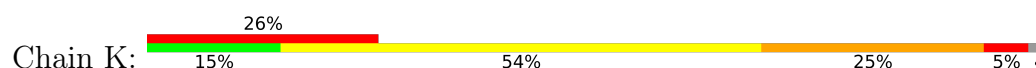
• Molecule 17: 50S RIBOSOMAL PROTEIN L11



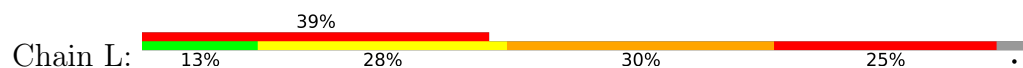
• Molecule 18: 50S RIBOSOMAL PROTEIN L13

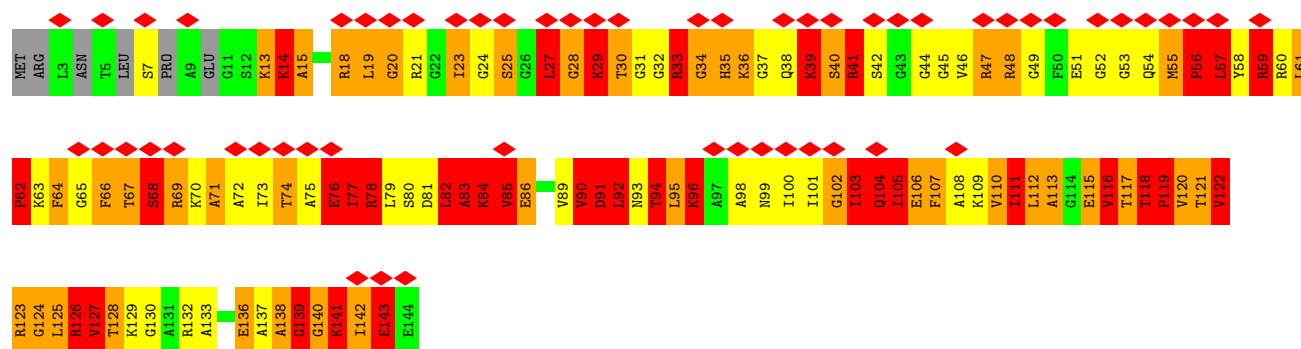


• Molecule 19: 50S RIBOSOMAL PROTEIN L14

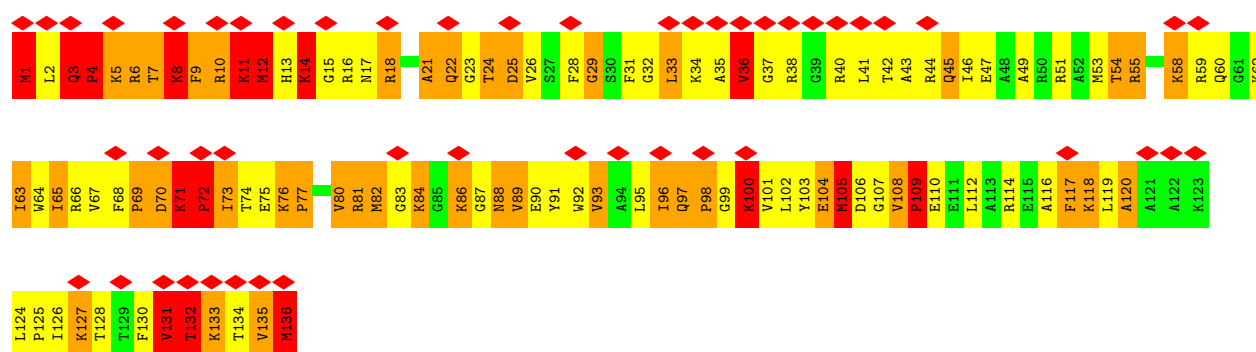
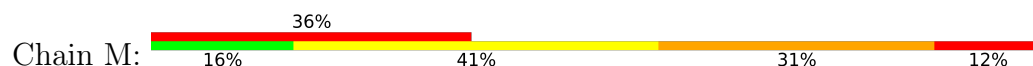


• Molecule 20: 50S RIBOSOMAL PROTEIN L15

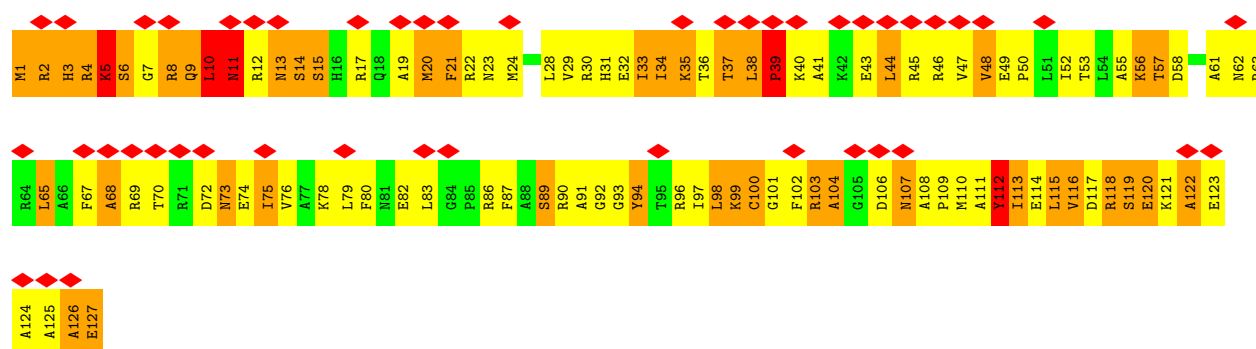
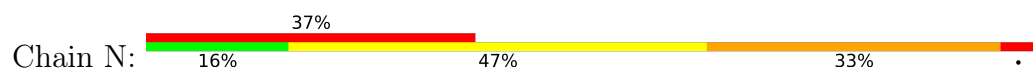




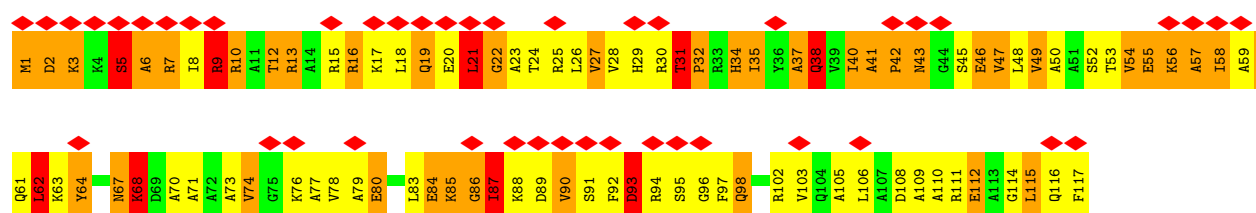
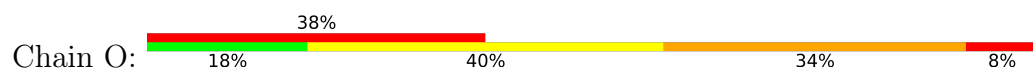
• Molecule 21: 50S RIBOSOMAL PROTEIN L16



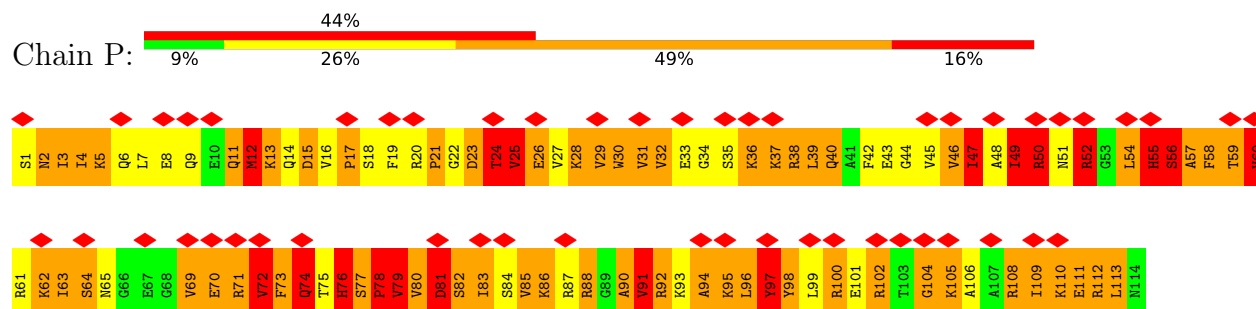
• Molecule 22: 50S RIBOSOMAL PROTEIN L17



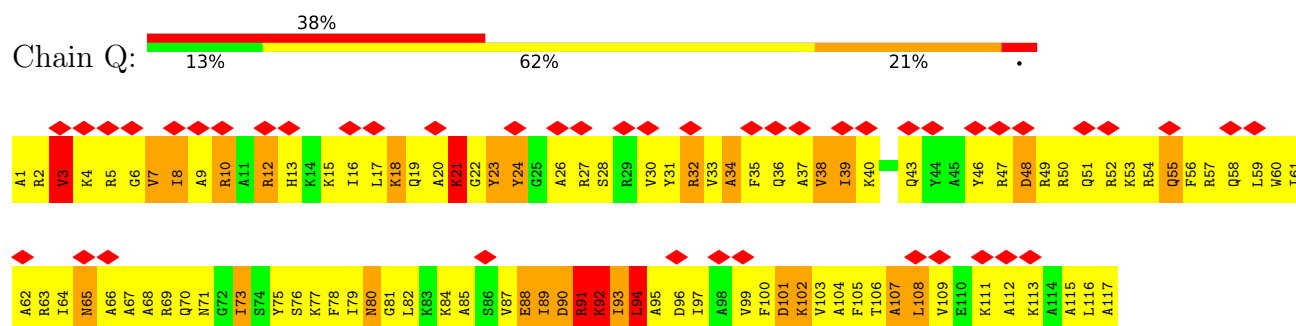
• Molecule 23: 50S RIBOSOMAL PROTEIN L18



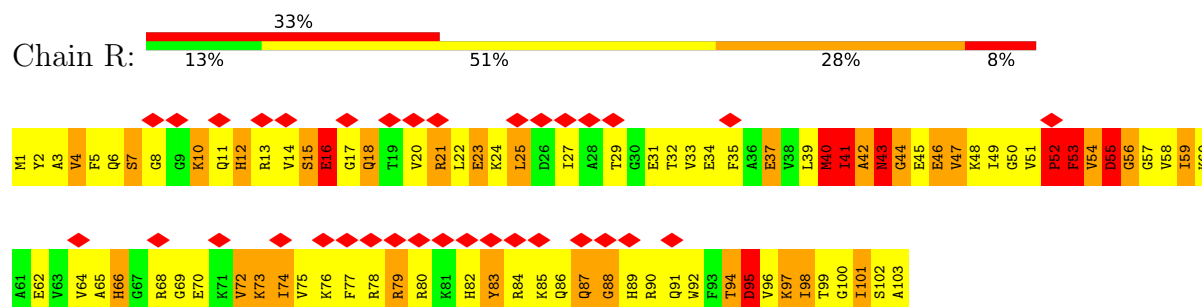
• Molecule 24: 50S RIBOSOMAL PROTEIN L19



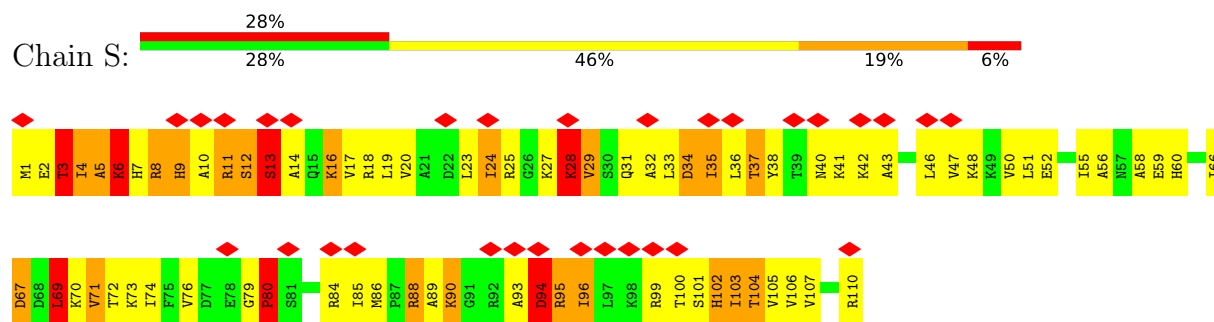
• Molecule 25: 50S RIBOSOMAL PROTEIN L20



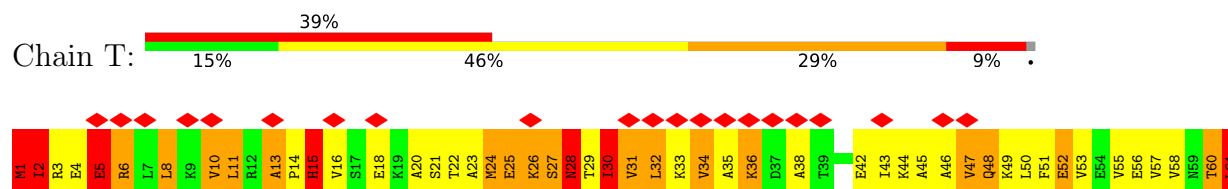
• Molecule 26: 50S RIBOSOMAL PROTEIN L21



• Molecule 27: 50S RIBOSOMAL PROTEIN L22

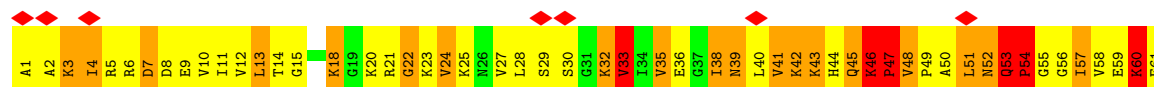
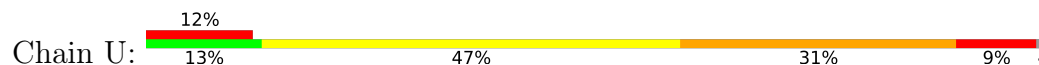


• Molecule 28: 50S RIBOSOMAL PROTEIN L23

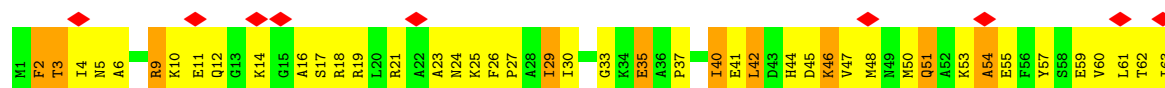




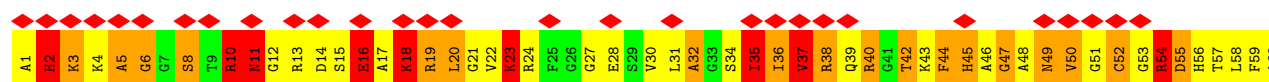
• Molecule 29: 50S RIBOSOMAL PROTEIN L24



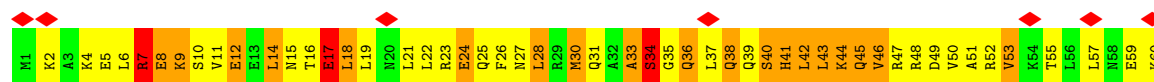
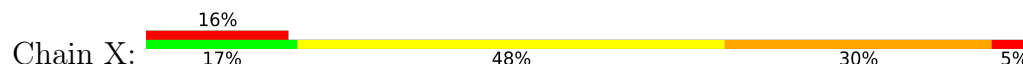
• Molecule 30: 50S RIBOSOMAL PROTEIN L25



• Molecule 31: 50S RIBOSOMAL PROTEIN L27



• Molecule 32: 50S RIBOSOMAL PROTEIN L29

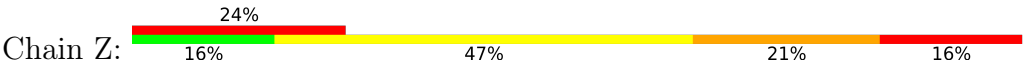


• Molecule 33: 50S RIBOSOMAL PROTEIN L30





● Molecule 34: 50S RIBOSOMAL PROTEIN L31



4 Experimental information

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

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# $ Z > 5$	RMSZ	# $ Z > 5$
1	0	0.79	1/450 (0.2%)	1.63	17/599 (2.8%)
2	1	0.42	0/448	0.92	2/594 (0.3%)
3	2	0.41	0/380	0.97	2/498 (0.4%)
4	3	0.57	0/513	1.15	4/676 (0.6%)
5	4	0.54	1/303 (0.3%)	1.10	3/397 (0.8%)
6	5	0.27	0/855	0.67	0/1124
7	6	0.43	0/40	0.78	0/53
8	7	0.25	0/1781	0.48	0/2779
9	A	0.28	0/2803	0.62	0/4371
10	B	0.30	4/68314 (0.0%)	0.67	93/106569 (0.1%)
11	C	0.51	0/2092	1.23	25/2813 (0.9%)
12	D	0.52	0/1586	1.17	16/2134 (0.7%)
13	E	0.55	2/1571 (0.1%)	1.40	24/2113 (1.1%)
14	F	0.41	0/1444	1.36	31/1937 (1.6%)
15	G	0.39	0/1343	1.00	7/1816 (0.4%)
16	H	0.33	0/1122	0.90	4/1515 (0.3%)
17	I	0.34	0/1046	1.00	8/1410 (0.6%)
18	J	0.43	0/1135	1.06	11/1529 (0.7%)
19	K	0.44	0/939	1.46	20/1258 (1.6%)
20	L	0.97	5/1006 (0.5%)	2.33	62/1331 (4.7%)
21	M	0.68	2/1093 (0.2%)	1.43	24/1460 (1.6%)
22	N	0.42	0/1021	1.11	13/1364 (1.0%)
23	O	0.36	0/910	1.08	11/1219 (0.9%)
24	P	0.79	1/929 (0.1%)	2.00	43/1242 (3.5%)
25	Q	0.53	1/960 (0.1%)	1.25	8/1278 (0.6%)
26	R	1.37	7/829 (0.8%)	1.74	24/1107 (2.2%)
27	S	0.35	0/864	0.93	4/1156 (0.3%)
28	T	0.53	1/784 (0.1%)	1.04	9/1048 (0.9%)
29	U	0.50	3/787 (0.4%)	1.08	12/1051 (1.1%)
30	V	0.39	0/766	0.82	1/1025 (0.1%)
31	W	0.44	0/642	1.34	15/848 (1.8%)
32	X	0.36	0/509	1.10	4/674 (0.6%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
33	Y	0.41	0/453	0.84	1/605 (0.2%)
34	Z	0.57	0/559	1.51	10/745 (1.3%)
All	All	0.39	28/100277 (0.0%)	0.86	508/150338 (0.3%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
10	B	0	55
11	C	0	3
18	J	0	2
20	L	0	1
24	P	0	1
25	Q	0	1
26	R	0	1
All	All	0	64

All (28) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	R	54	VAL	N-CA	-18.62	1.23	1.46
26	R	54	VAL	CA-CB	17.38	1.78	1.54
26	R	54	VAL	CA-C	14.98	1.71	1.52
26	R	53	PHE	CB-CG	13.47	1.81	1.50
26	R	53	PHE	CA-CB	11.06	1.70	1.53
1	0	52	LYS	N-CA	8.58	1.56	1.46
10	B	2196	C	O3'-P	8.13	1.73	1.61
21	M	136	MET	SD-CE	7.99	1.99	1.79
20	L	84	LYS	CA-C	7.44	1.62	1.52
28	T	2	ILE	N-CA	-7.40	1.37	1.46
13	E	46	GLN	CB-CG	7.29	1.74	1.52
26	R	53	PHE	C-N	-7.25	1.23	1.33
24	P	25	VAL	CA-CB	-6.98	1.45	1.54
26	R	55	ASP	N-CA	6.39	1.54	1.46
10	B	2191	A	O3'-P	-5.90	1.52	1.61
21	M	8	LYS	CA-C	-5.85	1.46	1.53
10	B	2052	A	C4'-C3'	-5.64	1.44	1.52
13	E	100	MET	SD-CE	-5.57	1.65	1.79
25	Q	3	VAL	CA-C	-5.49	1.46	1.52
5	4	1	MET	SD-CE	-5.49	1.65	1.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
20	L	15	ALA	CA-CB	-5.34	1.46	1.53
10	B	1248	G	C4'-C3'	5.31	1.61	1.53
20	L	84	LYS	N-CA	5.29	1.53	1.46
20	L	118	THR	CA-CB	5.22	1.61	1.53
20	L	85	VAL	N-CA	5.10	1.52	1.46
29	U	47	PRO	N-CD	5.07	1.54	1.47
29	U	54	PRO	N-CD	5.02	1.54	1.47
29	U	49	PRO	N-CD	5.01	1.54	1.47

All (508) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
13	E	73	ILE	N-CA-C	20.84	131.61	112.43
13	E	74	LYS	N-CA-C	-19.19	90.85	112.72
26	R	54	VAL	CB-CA-C	17.58	140.12	111.29
24	P	40	GLN	N-CA-C	-16.77	89.15	112.13
26	R	54	VAL	N-CA-C	-16.53	74.96	109.34
20	L	105	ILE	N-CA-C	16.52	134.01	108.89
20	L	76	GLU	N-CA-C	-13.57	92.23	110.55
20	L	103	ILE	N-CA-C	13.54	127.75	107.99
24	P	72	VAL	N-CA-C	13.42	137.26	109.34
25	Q	3	VAL	CB-CA-C	-13.31	94.58	112.02
26	R	54	VAL	N-CA-CB	-13.30	89.29	111.23
20	L	18	ARG	N-CA-C	13.22	128.66	108.96
20	L	118	THR	CA-C-N	12.85	135.91	119.84
20	L	118	THR	C-N-CA	12.85	135.91	119.84
10	B	2052	A	C5'-C4'-C3'	-12.84	96.75	116.00
20	L	39	LYS	N-CA-C	-12.41	94.66	111.54
20	L	112	LEU	N-CA-C	-12.31	90.03	109.72
26	R	53	PHE	CA-C-O	12.21	136.01	121.36
24	P	70	GLU	N-CA-C	12.19	128.05	107.93
24	P	14	GLN	N-CA-C	-12.10	93.50	112.99
26	R	43	ASN	N-CA-C	-11.80	97.16	113.56
21	M	5	LYS	N-CA-C	-11.63	86.03	110.80
26	R	46	GLU	N-CA-C	11.61	130.85	107.41
26	R	40	MET	N-CA-C	-11.32	99.47	113.28
26	R	50	GLY	N-CA-C	-11.12	95.47	111.03
25	Q	3	VAL	N-CA-C	-11.04	100.16	110.53
11	C	238	ASN	N-CA-C	11.02	127.50	111.96
20	L	59	ARG	N-CA-C	-10.96	100.45	114.04
14	F	106	ALA	N-CA-C	10.89	126.27	111.90
18	J	115	GLY	N-CA-C	-10.88	98.84	112.77

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	P	28	LYS	N-CA-C	-10.84	91.73	108.96
3	2	41	ARG	N-CA-C	-10.82	99.27	111.82
24	P	79	VAL	N-CA-C	10.81	131.84	109.34
34	Z	20	ASN	N-CA-C	10.74	124.68	108.46
12	D	146	ILE	N-CA-C	10.70	123.15	108.17
10	B	2791	G	O5'-P-OP1	-10.59	76.22	108.00
13	E	84	THR	N-CA-C	10.51	133.18	110.80
20	L	86	GLU	N-CA-C	-10.50	98.75	112.41
10	B	37	C	C4'-C3'-O3'	10.43	128.64	113.00
24	P	71	ARG	N-CA-C	10.41	132.98	110.80
20	L	25	SER	N-CA-C	-10.33	100.02	111.28
19	K	90	ASN	N-CA-C	10.29	123.75	111.82
18	J	80	HIS	N-CA-C	10.27	127.06	113.30
21	M	6	ARG	N-CA-C	-10.25	95.11	110.28
12	D	133	THR	N-CA-C	10.25	122.03	111.07
26	R	54	VAL	CG1-CB-CG2	-10.24	88.26	110.80
12	D	19	GLY	N-CA-C	-10.16	101.11	115.43
20	L	85	VAL	N-CA-C	-10.16	88.21	109.34
14	F	50	ASP	N-CA-C	-10.13	101.04	113.50
20	L	89	VAL	N-CA-C	-10.13	103.48	113.20
19	K	13	ASN	N-CA-C	9.99	121.87	108.38
1	0	52	LYS	CB-CA-C	-9.99	92.82	109.80
25	Q	8	ILE	N-CA-C	-9.96	103.77	113.53
12	D	143	PRO	N-CA-C	-9.90	99.45	113.81
21	M	132	THR	N-CA-C	9.87	131.83	110.80
25	Q	7	VAL	N-CA-C	9.81	121.81	110.62
26	R	44	GLY	N-CA-C	-9.80	100.85	114.67
26	R	53	PHE	N-CA-CB	9.79	126.36	110.41
13	E	88	ARG	CA-C-N	9.71	129.83	119.05
13	E	88	ARG	C-N-CA	9.71	129.83	119.05
24	P	54	LEU	N-CA-C	9.71	126.61	108.65
14	F	107	VAL	N-CA-C	-9.67	98.59	112.61
14	F	74	ALA	N-CA-C	9.64	124.41	110.24
29	U	33	VAL	N-CA-C	9.63	116.52	106.21
20	L	68	SER	N-CA-C	9.58	131.20	110.80
12	D	151	THR	N-CA-C	9.56	119.34	108.25
10	B	2790	U	OP1-P-O3'	9.51	136.52	108.00
20	L	102	GLY	CA-C-N	-9.45	110.80	122.90
20	L	102	GLY	C-N-CA	-9.45	110.80	122.90
24	P	29	VAL	N-CA-C	-9.34	93.89	107.98
20	L	105	ILE	CA-C-N	9.28	133.69	120.79
20	L	105	ILE	C-N-CA	9.28	133.69	120.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
20	L	138	ALA	N-CA-C	9.21	122.89	108.79
21	M	25	ASP	N-CA-C	9.14	122.58	108.96
24	P	51	ASN	N-CA-C	9.14	122.56	108.30
1	0	51	ARG	CA-C-N	9.11	137.74	121.89
1	0	51	ARG	C-N-CA	9.11	137.74	121.89
20	L	126	ARG	N-CA-C	9.06	130.09	110.80
20	L	20	GLY	N-CA-C	9.04	128.83	112.02
19	K	91	SER	N-CA-C	-9.03	91.90	108.24
27	S	41	LYS	N-CA-C	-9.02	93.94	108.55
13	E	88	ARG	N-CA-C	9.00	116.23	108.13
15	G	158	GLY	N-CA-C	-8.99	103.23	114.92
10	B	479	A	C4'-C3'-O3'	-8.96	95.95	109.40
11	C	30	ALA	CA-C-N	-8.95	108.66	119.84
11	C	30	ALA	C-N-CA	-8.95	108.66	119.84
20	L	28	GLY	N-CA-C	-8.94	103.60	115.40
12	D	136	ASN	N-CA-C	-8.90	102.01	112.86
20	L	137	ALA	N-CA-C	-8.90	102.33	113.01
31	W	11	ASN	N-CA-C	8.87	129.70	110.80
34	Z	43	PHE	N-CA-C	-8.86	95.32	109.59
10	B	139	U	N1-C1'-C2'	-8.77	100.85	114.00
11	C	264	LYS	N-CA-C	8.76	123.31	109.65
11	C	138	SER	N-CA-C	-8.58	102.71	113.01
14	F	51	ASN	N-CA-C	-8.50	102.61	113.16
20	L	14	LYS	N-CA-C	-8.47	92.75	110.80
20	L	77	ILE	N-CA-C	-8.47	91.72	109.34
10	B	773	U	C5'-C4'-C3'	-8.44	103.34	116.00
1	0	52	LYS	N-CA-CB	8.42	124.69	110.71
20	L	78	ARG	N-CA-C	8.41	128.72	110.80
10	B	1350	C	C5'-C4'-C3'	-8.40	103.39	116.00
29	U	33	VAL	CB-CA-C	-8.40	103.81	113.22
13	E	107	SER	N-CA-C	-8.35	103.09	113.20
32	X	33	ALA	N-CA-C	8.35	128.58	110.80
1	0	4	GLN	N-CA-C	-8.33	97.96	108.45
11	C	83	ASP	CA-C-N	8.27	130.18	119.84
11	C	83	ASP	C-N-CA	8.27	130.18	119.84
4	3	34	LYS	N-CA-C	-8.27	103.10	113.02
11	C	32	LEU	N-CA-C	8.27	128.41	110.80
23	O	6	ALA	N-CA-C	-8.26	104.35	114.75
21	M	3	GLN	CA-C-N	8.21	130.11	119.84
21	M	3	GLN	C-N-CA	8.21	130.11	119.84
31	W	10	ARG	N-CA-C	8.20	128.26	110.80
10	B	2791	G	O5'-P-OP2	8.20	132.59	108.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
18	J	71	ASP	N-CA-C	8.16	116.58	108.75
20	L	92	LEU	N-CA-C	8.12	128.10	110.80
22	N	5	LYS	N-CA-C	8.10	128.06	110.80
26	R	53	PHE	O-C-N	8.08	132.11	123.06
20	L	67	THR	N-CA-C	8.06	127.98	110.80
34	Z	41	HIS	CA-C-N	8.05	129.90	119.84
34	Z	41	HIS	C-N-CA	8.05	129.90	119.84
20	L	118	THR	C-N-CD	-8.02	92.14	125.00
12	D	144	GLY	N-CA-C	-8.00	103.71	115.63
13	E	85	PHE	N-CA-C	-7.93	99.60	111.81
20	L	125	LEU	N-CA-C	-7.92	93.94	110.80
10	B	670	A	C4'-C3'-O3'	7.92	121.28	109.40
16	H	120	GLY	N-CA-C	-7.90	102.43	112.54
16	H	105	ALA	N-CA-C	-7.86	103.70	113.20
12	D	154	LYS	N-CA-C	-7.84	94.10	110.80
22	N	15	SER	N-CA-C	-7.82	102.38	112.23
24	P	6	GLN	N-CA-C	-7.82	103.89	113.19
10	B	825	A	C5'-C4'-C3'	-7.79	104.32	116.00
26	R	53	PHE	N-CA-C	-7.76	97.97	110.32
34	Z	51	VAL	N-CA-C	-7.75	105.14	111.81
10	B	38	A	C5'-C4'-C3'	-7.73	104.40	116.00
1	O	52	LYS	N-CA-C	-7.71	94.60	108.48
17	I	65	SER	N-CA-C	-7.71	100.59	110.53
21	M	29	GLY	N-CA-C	7.70	117.21	110.21
21	M	65	ILE	N-CA-C	-7.62	97.48	108.53
21	M	8	LYS	N-CA-C	-7.57	95.35	108.52
20	L	86	GLU	CB-CG-CD	7.56	125.45	112.60
10	B	2052	A	O4'-C4'-C3'	7.55	111.55	104.00
24	P	78	PRO	N-CA-C	7.53	127.97	112.47
25	Q	94	LEU	N-CA-C	-7.52	103.98	113.01
22	N	6	SER	N-CA-C	-7.52	97.63	108.60
14	F	47	LYS	N-CA-C	-7.51	103.03	111.14
24	P	82	SER	N-CA-C	7.50	126.78	110.80
24	P	81	ASP	N-CA-C	-7.48	94.86	110.80
14	F	150	GLY	N-CA-C	7.46	130.87	113.18
34	Z	68	GLY	N-CA-C	-7.46	95.49	113.18
28	T	28	ASN	N-CA-C	-7.46	100.21	110.35
20	L	127	VAL	N-CA-C	7.39	124.72	109.34
22	N	2	ARG	N-CA-C	-7.37	95.09	110.80
13	E	75	SER	CA-C-N	7.37	129.05	119.84
13	E	75	SER	C-N-CA	7.37	129.05	119.84
22	N	4	ARG	N-CA-C	7.37	126.49	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
14	F	73	VAL	N-CA-C	7.34	124.62	109.34
10	B	2790	U	O3'-P-O5'	-7.32	93.02	104.00
10	B	1818	U	C4'-C3'-O3'	-7.31	102.04	113.00
24	P	71	ARG	CA-C-N	7.31	135.13	121.97
24	P	71	ARG	C-N-CA	7.31	135.13	121.97
24	P	74	GLN	N-CA-C	-7.29	98.76	109.11
5	4	34	LYS	N-CA-C	-7.28	104.37	113.55
19	K	89	ASN	N-CA-C	7.28	126.31	110.80
21	M	131	VAL	N-CA-C	7.27	124.47	109.34
34	Z	42	PRO	N-CA-C	7.25	127.42	112.47
1	0	5	ASN	N-CA-C	7.24	126.23	110.80
20	L	71	ALA	N-CA-C	-7.24	99.73	110.23
31	W	10	ARG	CA-C-N	7.24	135.36	121.54
31	W	10	ARG	C-N-CA	7.24	135.36	121.54
14	F	164	GLU	N-CA-C	-7.24	103.39	111.71
19	K	71	ARG	CA-C-N	-7.22	110.82	119.84
19	K	71	ARG	C-N-CA	-7.22	110.82	119.84
1	0	27	LEU	N-CA-C	7.22	121.55	110.36
10	B	2259	U	C5'-C4'-C3'	-7.21	105.18	116.00
14	F	14	LYS	N-CA-C	-7.20	95.46	110.80
15	G	80	GLU	N-CA-C	7.20	119.13	111.28
22	N	100	CYS	N-CA-C	-7.19	95.49	110.80
23	O	86	GLY	N-CA-C	7.18	123.18	113.99
34	Z	26	SER	N-CA-C	7.16	126.06	110.80
21	M	3	GLN	C-N-CD	-7.15	95.70	125.00
1	0	6	LYS	CA-C-N	7.14	128.76	119.84
1	0	6	LYS	C-N-CA	7.14	128.76	119.84
11	C	28	PRO	CA-C-N	7.13	135.16	121.54
11	C	28	PRO	C-N-CA	7.13	135.16	121.54
19	K	101	GLY	CA-C-N	7.13	127.58	120.52
19	K	101	GLY	C-N-CA	7.13	127.58	120.52
1	0	52	LYS	CA-CB-CG	7.11	128.33	114.10
31	W	14	ASP	N-CA-C	7.09	119.46	110.24
11	C	28	PRO	N-CA-C	7.08	127.06	112.47
20	L	86	GLU	N-CA-CB	-7.05	99.58	111.20
14	F	20	ASN	N-CA-C	7.03	125.78	110.80
18	J	4	PHE	N-CA-C	-7.01	95.86	110.80
18	J	32	LEU	N-CA-C	-7.00	105.26	113.88
23	O	93	ASP	N-CA-C	-7.00	97.48	108.90
19	K	30	ARG	N-CA-C	-6.99	99.54	109.96
23	O	58	ILE	N-CA-C	-6.98	106.11	111.62
13	E	48	THR	N-CA-C	6.96	116.50	108.49

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	B	1125	G	C4'-C3'-O3'	-6.96	102.56	113.00
10	B	1250	G	C4'-C3'-O3'	6.94	119.81	109.40
20	L	83	ALA	N-CA-C	-6.93	96.03	110.80
20	L	77	ILE	CA-C-N	-6.93	108.31	121.54
20	L	77	ILE	C-N-CA	-6.93	108.31	121.54
32	X	17	GLU	N-CA-C	-6.92	104.65	113.23
29	U	32	LYS	N-CA-C	6.92	120.68	109.40
24	P	50	ARG	N-CA-C	-6.91	96.08	110.80
5	4	18	LYS	N-CA-C	6.89	121.67	112.30
20	L	94	THR	N-CA-C	6.87	125.43	110.80
19	K	54	LYS	N-CA-C	6.83	119.66	108.52
23	O	5	SER	N-CA-C	6.83	117.50	107.88
13	E	50	ALA	N-CA-C	-6.82	104.95	113.20
13	E	159	LEU	N-CA-C	-6.80	105.06	113.15
23	O	16	ARG	N-CA-C	-6.80	104.96	113.18
24	P	58	PHE	N-CA-C	-6.79	102.03	111.81
24	P	73	PHE	N-CA-C	-6.79	98.65	109.59
19	K	21	CYS	N-CA-C	-6.79	98.97	109.76
28	T	76	ARG	N-CA-C	6.77	116.98	108.45
10	B	2266	A	C4'-C3'-O3'	-6.76	99.25	109.40
20	L	129	LYS	N-CA-C	-6.75	103.99	111.82
26	R	53	PHE	CA-C-N	6.72	134.07	121.97
26	R	53	PHE	C-N-CA	6.72	134.07	121.97
17	I	89	SER	N-CA-C	6.72	118.61	111.28
11	C	25	LYS	N-CA-C	-6.71	104.04	111.36
24	P	109	ILE	N-CA-C	-6.71	95.37	109.34
10	B	2501	C	C4'-C3'-O3'	-6.71	102.93	113.00
31	W	16	GLU	N-CA-C	6.71	125.09	110.80
14	F	44	ALA	N-CA-C	6.71	121.17	113.19
31	W	74	LYS	CB-CA-C	-6.70	107.81	115.79
13	E	46	GLN	CB-CG-CD	6.66	123.93	112.60
21	M	82	MET	N-CA-C	-6.63	105.06	113.02
28	T	62	VAL	N-CA-C	6.63	123.13	109.34
25	Q	48	ASP	N-CA-C	6.62	118.50	111.28
1	0	13	GLY	N-CA-C	-6.61	107.06	114.40
20	L	139	GLY	N-CA-C	6.61	128.85	113.18
31	W	3	LYS	N-CA-C	-6.60	101.86	111.30
20	L	111	ILE	N-CA-C	-6.59	95.62	109.34
18	J	5	THR	N-CA-C	-6.58	100.74	110.48
16	H	37	VAL	N-CA-C	6.58	123.09	108.88
28	T	2	ILE	CB-CA-C	6.58	122.08	111.29
22	N	14	SER	N-CA-C	-6.55	105.27	113.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	D	13	ARG	N-CA-C	-6.54	100.57	109.54
10	B	745	G	C5'-C4'-C3'	-6.54	106.19	116.00
21	M	4	PRO	N-CA-C	-6.53	99.02	112.47
24	P	5	LYS	N-CA-C	-6.53	104.96	113.12
10	B	2575	C	C2'-C3'-O3'	-6.50	103.95	113.70
19	K	79	PHE	N-CA-C	-6.50	98.31	108.90
12	D	20	VAL	N-CA-C	-6.48	103.55	110.36
24	P	80	VAL	N-CA-C	6.48	122.82	109.34
26	R	52	PRO	CA-C-N	-6.48	110.99	122.07
26	R	52	PRO	C-N-CA	-6.48	110.99	122.07
24	P	47	ILE	N-CA-C	6.48	122.81	109.34
10	B	37	C	C3'-C2'-O2'	-6.45	101.02	110.70
28	T	2	ILE	N-CA-C	-6.45	95.92	109.34
24	P	36	LYS	N-CA-C	6.45	119.23	109.95
15	G	38	ASP	N-CA-C	6.44	117.97	111.07
24	P	77	SER	CA-C-N	6.44	127.90	119.84
24	P	77	SER	C-N-CA	6.44	127.90	119.84
1	0	22	THR	N-CA-C	6.44	119.20	109.41
13	E	46	GLN	CA-CB-CG	6.44	126.98	114.10
10	B	2336	A	C2'-C3'-O3'	6.41	119.11	109.50
10	B	675	A	C4'-C3'-O3'	-6.41	103.39	113.00
10	B	38	A	N9-C1'-C2'	6.40	121.60	112.00
10	B	268	C	C5'-C4'-C3'	-6.39	106.41	116.00
10	B	1236	G	C4'-C3'-O3'	-6.37	103.45	113.00
24	P	95	LYS	N-CA-C	-6.37	103.59	112.25
10	B	2641	G	N9-C1'-C2'	-6.35	102.48	112.00
2	1	47	ILE	N-CA-C	6.34	122.53	109.34
12	D	179	ARG	N-CA-C	6.34	116.44	108.45
12	D	15	PHE	N-CA-C	-6.33	102.14	110.43
26	R	53	PHE	CA-CB-CG	6.33	120.13	113.80
24	P	49	ILE	N-CA-C	6.31	122.46	109.34
17	I	91	LYS	CA-C-N	6.30	126.33	119.90
17	I	91	LYS	C-N-CA	6.30	126.33	119.90
24	P	33	GLU	CB-CA-C	-6.30	109.32	116.63
10	B	2619	C	C5'-C4'-C3'	-6.30	106.55	116.00
20	L	123	ARG	N-CA-C	-6.30	97.39	110.80
26	R	54	VAL	CA-C-N	6.29	133.56	121.54
26	R	54	VAL	C-N-CA	6.29	133.56	121.54
13	E	58	LYS	N-CA-C	6.29	123.71	109.81
10	B	690	G	C5'-C4'-C3'	-6.28	106.58	116.00
1	0	51	ARG	CA-C-O	-6.27	111.55	120.51
19	K	81	GLY	N-CA-C	-6.22	102.03	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	C	31	PRO	N-CA-C	6.21	125.25	112.47
14	F	91	ARG	N-CA-C	-6.20	106.69	114.56
34	Z	60	PHE	N-CA-C	-6.20	97.60	110.80
21	M	11	LYS	N-CA-C	6.19	123.98	110.80
14	F	172	PHE	N-CA-C	-6.17	97.65	110.80
20	L	130	GLY	N-CA-C	-6.13	105.38	112.73
10	B	1251	C	C5'-C4'-C3'	6.12	124.39	115.20
20	L	41	ARG	N-CA-C	6.12	123.84	110.80
15	G	109	SER	N-CA-C	-6.12	101.36	110.23
24	P	63	ILE	N-CA-C	-6.11	100.90	109.21
11	C	64	VAL	N-CA-C	6.09	122.01	109.34
31	W	11	ASN	N-CA-CB	-6.08	100.22	110.49
13	E	116	ASP	N-CA-C	6.05	118.77	108.90
11	C	21	PRO	N-CA-C	6.05	124.94	112.47
14	F	119	LYS	N-CA-C	6.05	119.00	109.39
26	R	88	GLY	N-CA-C	-6.04	98.85	113.18
31	W	2	HIS	N-CA-C	6.04	123.67	110.80
28	T	2	ILE	N-CA-CB	-6.03	101.29	111.23
10	B	2282	G	C4'-C3'-O3'	6.02	118.43	109.40
10	B	784	G	C4'-C3'-O3'	-6.02	103.97	113.00
10	B	1250	G	C4'-C3'-C2'	6.01	108.61	102.60
10	B	37	C	C2'-C3'-O3'	-6.00	104.69	113.70
11	C	100	ARG	N-CA-C	6.00	118.59	107.60
10	B	395	U	C4'-C3'-O3'	-6.00	104.00	113.00
5	4	2	LYS	N-CA-C	-5.97	104.89	111.82
21	M	24	THR	N-CA-C	5.96	119.69	111.71
14	F	19	PHE	N-CA-C	-5.94	98.14	110.80
15	G	129	GLU	N-CA-C	5.91	118.87	109.65
11	C	179	GLU	CB-CA-C	-5.90	109.75	116.54
13	E	189	THR	CB-CA-C	-5.90	109.75	116.54
26	R	16	GLU	N-CA-C	-5.89	104.21	111.40
32	X	34	SER	N-CA-C	-5.89	98.25	110.80
14	F	107	VAL	N-CA-CB	5.89	114.21	110.50
23	O	41	ALA	N-CA-C	-5.88	101.97	110.08
24	P	57	ALA	N-CA-C	-5.88	98.28	110.80
24	P	64	SER	N-CA-C	5.88	118.31	108.02
20	L	122	VAL	N-CA-C	5.86	116.84	108.93
20	L	124	GLY	N-CA-C	-5.85	107.10	115.64
10	B	2903	U	C4'-C3'-O3'	5.85	121.78	113.00
10	B	150	U	C5'-C4'-C3'	-5.84	107.23	116.00
10	B	1363	C	C5'-C4'-C3'	-5.84	107.24	116.00
19	K	77	ILE	CB-CA-C	-5.84	103.08	111.19

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	B	2050	C	C4'-C3'-O3'	-5.83	104.25	113.00
27	S	24	ILE	N-CA-C	5.83	116.26	107.75
10	B	848	C	C5'-C4'-C3'	-5.83	107.25	116.00
24	P	52	ARG	N-CA-C	-5.83	98.38	110.80
24	P	91	VAL	N-CA-C	5.82	121.45	109.34
31	W	54	ARG	N-CA-C	5.82	117.72	110.91
1	O	54	ILE	N-CA-C	5.81	116.24	107.75
18	J	75	TYR	N-CA-C	-5.81	99.87	108.99
10	B	2103	C	C4'-C3'-O3'	-5.81	104.29	113.00
21	M	100	LYS	N-CA-C	5.81	117.51	107.93
10	B	403	U	C4'-C3'-O3'	-5.80	104.29	113.00
20	L	127	VAL	CA-C-N	5.80	132.62	121.54
20	L	127	VAL	C-N-CA	5.80	132.62	121.54
10	B	1397	U	C5'-C4'-C3'	-5.80	106.50	115.20
10	B	2430	A	C4'-C3'-O3'	-5.79	104.31	113.00
31	W	15	SER	N-CA-C	5.79	116.72	108.74
33	Y	20	LYS	N-CA-C	-5.76	105.08	111.36
13	E	44	ARG	N-CA-C	5.76	123.07	110.80
14	F	146	ASP	N-CA-C	-5.76	103.53	110.44
20	L	45	GLY	CA-C-N	-5.75	117.33	122.97
20	L	45	GLY	C-N-CA	-5.75	117.33	122.97
25	Q	107	ALA	N-CA-C	-5.75	106.22	113.18
20	L	84	LYS	N-CA-C	5.75	123.05	110.80
19	K	117	SER	N-CA-C	-5.75	106.12	113.02
24	P	104	GLY	N-CA-C	5.75	126.80	113.18
10	B	1240	U	C4'-C3'-O3'	-5.73	104.41	113.00
21	M	7	THR	N-CA-C	-5.72	102.97	110.53
10	B	2575	C	C5'-C4'-C3'	5.72	124.58	116.00
4	3	41	ARG	N-CA-C	-5.72	98.57	108.69
18	J	122	LEU	N-CA-C	-5.71	105.96	114.64
23	O	46	GLU	N-CA-C	-5.71	106.16	113.01
20	L	65	GLY	N-CA-C	-5.71	102.72	112.30
24	P	72	VAL	CB-CA-C	-5.70	101.94	111.29
10	B	508	A	C4'-C3'-O3'	-5.70	104.46	113.00
20	L	62	PRO	CA-N-CD	-5.69	104.04	112.00
14	F	25	MET	N-CA-C	-5.68	106.02	113.12
10	B	614	A	C4'-C3'-O3'	-5.67	100.89	109.40
3	2	4	THR	N-CA-C	5.67	122.88	110.80
10	B	2192	U	C5'-C4'-C3'	-5.67	107.49	116.00
10	B	1210	G	C4'-C3'-O3'	5.65	117.87	109.40
10	B	375	G	C5'-C4'-C3'	-5.65	107.53	116.00
20	L	119	PRO	CA-N-CD	-5.64	104.11	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	M	108	VAL	CA-C-N	5.64	126.89	119.84
21	M	108	VAL	C-N-CA	5.64	126.89	119.84
1	O	48	TYR	N-CA-C	-5.63	105.52	112.90
29	U	99	SER	CB-CA-C	-5.63	108.25	116.53
14	F	110	ILE	N-CA-C	5.63	117.69	108.97
10	B	2471	A	C4'-C3'-O3'	5.62	117.84	109.40
14	F	10	GLU	N-CA-C	5.62	122.78	110.80
10	B	1237	A	N9-C1'-C2'	5.62	120.42	112.00
28	T	1	MET	N-CA-C	-5.61	95.29	111.00
10	B	2733	A	N9-C1'-C2'	-5.61	103.59	112.00
20	L	96	LYS	N-CA-C	5.60	118.69	109.72
10	B	2430	A	N9-C1'-C2'	5.60	120.40	112.00
13	E	94	GLN	N-CA-C	-5.60	101.42	110.32
19	K	16	ALA	N-CA-C	5.58	122.68	110.80
13	E	146	VAL	N-CA-C	-5.58	105.68	112.76
26	R	42	ALA	N-CA-C	-5.58	105.62	113.20
24	P	86	LYS	N-CA-C	5.57	117.78	109.25
31	W	72	GLY	CA-C-N	5.57	126.81	119.84
31	W	72	GLY	C-N-CA	5.57	126.81	119.84
10	B	2053	G	C4'-C3'-O3'	5.57	121.35	113.00
4	3	11	LYS	N-CA-C	5.57	117.21	111.03
10	B	1600	C	C5'-C4'-C3'	-5.55	107.67	116.00
21	M	10	ARG	N-CA-C	5.54	122.61	110.80
23	O	43	ASN	N-CA-C	-5.54	107.77	114.75
19	K	106	GLU	N-CA-C	-5.53	106.37	113.23
11	C	48	ILE	N-CA-C	5.53	120.84	109.34
26	R	56	GLY	N-CA-C	-5.53	100.07	113.18
10	B	1664	A	C5'-C4'-C3'	-5.53	107.71	116.00
10	B	372	G	C4'-C3'-O3'	-5.51	101.14	109.40
11	C	111	ALA	N-CA-C	5.49	122.49	110.80
14	F	65	LEU	N-CA-C	-5.48	107.14	113.88
10	B	2502	G	C4'-C3'-O3'	-5.48	104.79	113.00
10	B	560	C	C5'-C4'-C3'	-5.47	107.79	116.00
28	T	27	SER	N-CA-C	5.47	117.55	108.13
18	J	21	THR	N-CA-C	-5.46	106.69	113.19
10	B	139	U	C1'-C2'-O2'	-5.46	103.61	111.80
10	B	2790	U	C4'-C3'-O3'	-5.46	104.81	113.00
10	B	2052	A	C4'-C3'-C2'	-5.46	97.14	102.60
14	F	78	ILE	N-CA-C	-5.46	100.35	107.88
11	C	44	ASN	N-CA-C	-5.45	99.19	110.80
14	F	106	ALA	CA-C-N	-5.45	116.81	120.24
14	F	106	ALA	C-N-CA	-5.45	116.81	120.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	B	974	G	C4'-C3'-O3'	-5.44	101.24	109.40
4	3	61	LEU	N-CA-C	-5.44	103.22	110.07
14	F	109	ARG	N-CA-C	5.44	119.08	112.23
24	P	37	LYS	N-CA-C	-5.43	99.23	110.80
22	N	44	LEU	N-CA-C	5.43	116.88	111.07
10	B	1254	A	C4'-C3'-O3'	-5.42	104.86	113.00
10	B	1237	A	C4'-C3'-O3'	-5.42	104.87	113.00
18	J	71	ASP	CB-CA-C	-5.42	108.57	116.53
10	B	931	U	C4'-C3'-O3'	-5.42	104.88	113.00
20	L	19	LEU	N-CA-C	5.40	118.31	107.41
15	G	154	GLU	CA-C-N	5.39	126.58	119.84
15	G	154	GLU	C-N-CA	5.39	126.58	119.84
17	I	18	ASN	CA-C-N	-5.36	114.26	119.78
17	I	18	ASN	C-N-CA	-5.36	114.26	119.78
11	C	89	ASN	CB-CA-C	-5.35	109.42	115.79
2	1	3	GLY	N-CA-C	-5.34	102.17	111.62
22	N	10	LEU	N-CA-C	-5.34	100.96	109.07
13	E	73	ILE	CA-C-N	5.32	131.29	122.73
13	E	73	ILE	C-N-CA	5.32	131.29	122.73
34	Z	22	MET	N-CA-C	-5.32	105.02	112.25
19	K	5	GLN	N-CA-C	-5.31	99.48	110.80
17	I	64	ARG	N-CA-C	-5.31	107.16	113.38
14	F	132	ARG	N-CA-C	5.30	119.98	112.93
21	M	135	VAL	N-CA-C	5.29	115.52	108.11
27	S	35	ILE	N-CA-C	-5.29	106.37	112.98
20	L	49	GLY	N-CA-C	-5.29	106.73	114.61
10	B	557	C	C3'-C2'-O2'	5.29	118.63	110.70
13	E	73	ILE	CA-C-O	5.28	124.77	119.97
25	Q	3	VAL	N-CA-CB	5.28	117.32	110.57
10	B	1419	A	C4'-C3'-O3'	-5.27	105.09	113.00
10	B	876	C	C4'-C3'-O3'	5.27	120.91	113.00
10	B	1818	U	N1-C1'-C2'	5.27	119.91	112.00
23	O	12	THR	N-CA-C	5.27	117.44	111.11
19	K	92	GLU	N-CA-C	5.27	117.67	110.24
24	P	62	LYS	N-CA-C	-5.27	99.58	110.80
21	M	1	MET	CG-SD-CE	5.26	112.48	100.90
12	D	145	SER	N-CA-CB	-5.26	101.60	110.49
20	L	115	GLU	N-CA-C	5.26	118.12	109.76
16	H	106	ALA	N-CA-C	-5.25	108.63	114.62
10	B	1250	G	C5'-C4'-C3'	-5.23	107.35	115.20
10	B	1294	U	C5'-C4'-C3'	-5.23	108.15	116.00
10	B	595	C	C5'-C4'-C3'	-5.23	108.15	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	B	2199	A	C5'-C4'-C3'	-5.23	108.16	116.00
11	C	123	ILE	N-CA-C	5.22	111.80	106.21
12	D	144	GLY	CA-C-O	5.20	124.15	118.95
12	D	151	THR	CA-C-N	-5.20	113.35	119.84
12	D	151	THR	C-N-CA	-5.20	113.35	119.84
29	U	53	GLN	CA-C-N	-5.19	113.35	119.84
29	U	53	GLN	C-N-CA	-5.19	113.35	119.84
29	U	48	VAL	CA-C-N	-5.19	113.35	119.84
29	U	48	VAL	C-N-CA	-5.19	113.35	119.84
24	P	13	LYS	N-CA-C	-5.19	100.06	108.41
10	B	2267	A	C4'-C3'-O3'	-5.19	105.22	113.00
20	L	77	ILE	O-C-N	-5.18	116.09	122.57
10	B	162	U	C4'-C3'-O3'	5.18	117.17	109.40
29	U	46	LYS	CA-C-N	-5.18	113.37	119.84
29	U	46	LYS	C-N-CA	-5.18	113.37	119.84
21	M	8	LYS	CA-C-O	-5.18	116.15	122.41
10	B	989	G	C4'-C3'-O3'	-5.17	105.24	113.00
24	P	31	VAL	N-CA-C	-5.16	100.94	108.17
22	N	4	ARG	CA-C-N	5.16	131.40	121.54
22	N	4	ARG	C-N-CA	5.16	131.40	121.54
14	F	71	LYS	N-CA-C	5.16	117.65	109.24
14	F	107	VAL	CB-CA-C	-5.16	108.88	114.35
24	P	30	TRP	N-CA-C	-5.15	102.58	110.30
11	C	90	ILE	N-CA-C	5.14	120.04	109.34
28	T	24	MET	N-CA-C	5.14	118.02	107.69
27	S	94	ASP	N-CA-C	5.13	116.68	107.80
10	B	84	A	C4'-C3'-O3'	-5.13	101.71	109.40
10	B	27	G	C4'-C3'-O3'	-5.12	105.32	113.00
10	B	451	U	C4'-C3'-O3'	-5.11	105.34	113.00
10	B	380	G	C5'-C4'-C3'	-5.10	108.35	116.00
10	B	2197	U	C4'-C3'-O3'	-5.10	101.75	109.40
14	F	79	ARG	N-CA-C	5.09	117.40	110.88
30	V	2	PHE	CB-CA-C	-5.09	109.17	115.89
19	K	121	GLU	N-CA-C	5.09	121.64	110.80
31	W	37	VAL	N-CA-C	5.09	119.93	109.34
10	B	512	G	C4'-C3'-O3'	-5.08	105.37	113.00
11	C	57	HIS	N-CA-C	5.08	116.52	109.31
23	O	62	LEU	N-CA-C	-5.07	104.98	110.91
20	L	116	VAL	N-CA-C	5.07	119.88	109.34
11	C	42	ARG	N-CA-C	5.06	117.81	110.17
22	N	38	LEU	N-CA-C	-5.06	105.97	113.16
22	N	68	ALA	N-CA-C	5.06	118.90	112.12

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	M	71	LYS	N-CA-C	5.04	120.96	109.81
20	L	69	ARG	N-CA-C	-5.04	102.73	110.30
10	B	443	A	C4'-C3'-O3'	-5.04	105.44	113.00
1	0	3	GLN	N-CA-C	-5.04	101.79	109.65
32	X	7	ARG	N-CA-C	5.03	121.52	110.80
18	J	102	GLU	N-CA-C	-5.03	105.25	111.33
10	B	1251	C	C4'-C3'-O3'	-5.03	101.86	109.40
14	F	143	ASP	N-CA-C	-5.03	100.10	110.80
10	B	2471	A	C5'-C4'-C3'	-5.02	107.67	115.20
10	B	2529	G	C4'-C3'-O3'	-5.02	105.47	113.00
10	B	2303	G	C5'-C4'-C3'	-5.01	108.49	116.00
10	B	1419	A	N9-C1'-C2'	5.01	119.51	112.00
17	I	63	ASP	N-CA-C	-5.01	107.00	113.01
29	U	32	LYS	CA-C-N	5.01	126.36	121.65
29	U	32	LYS	C-N-CA	5.01	126.36	121.65
20	L	82	LEU	N-CA-C	5.00	121.46	110.80

There are no chirality outliers.

All (64) planarity outliers are listed below:

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

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Mol	Chain	Res	Type	Group
10	B	2052	A	Sidechain
10	B	2138	G	Sidechain
10	B	221	A	Sidechain
10	B	222	A	Sidechain
10	B	2267	A	Sidechain
10	B	2272	U	Sidechain
10	B	2285	C	Sidechain
10	B	2318	G	Sidechain
10	B	232	G	Sidechain
10	B	2471	A	Sidechain
10	B	2508	G	Sidechain
10	B	2575	C	Sidechain
10	B	2638	G	Sidechain
10	B	2641	G	Sidechain
10	B	2733	A	Sidechain
10	B	2770	G	Sidechain
10	B	2834	G	Sidechain
10	B	2848	G	Sidechain
10	B	2857	G	Sidechain
10	B	2868	A	Sidechain
10	B	2883	A	Sidechain
10	B	370	G	Sidechain
10	B	396	G	Sidechain
10	B	487	C	Sidechain
10	B	500	G	Sidechain
10	B	51	G	Sidechain
10	B	526	A	Sidechain
10	B	630	G	Sidechain
10	B	633	A	Sidechain
10	B	727	A	Sidechain
10	B	729	G	Sidechain
10	B	757	G	Sidechain
10	B	942	G	Sidechain
10	B	946	C	Sidechain
11	C	160	TYR	Sidechain
11	C	29	PHE	Sidechain
11	C	61	TYR	Sidechain
18	J	75	TYR	Sidechain
18	J	80	HIS	Sidechain
20	L	66	PHE	Sidechain
24	P	97	TYR	Sidechain
25	Q	46	TYR	Sidechain

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Mol	Chain	Res	Type	Group
26	R	53	PHE	Mainchain

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	0	444	0	461	108	0
2	1	441	0	485	68	0
3	2	377	0	418	54	0
4	3	504	0	574	111	0
5	4	302	0	343	44	0
6	5	850	0	897	99	0
7	6	41	0	39	2	0
8	7	1591	0	806	24	0
9	A	2507	0	1270	86	0
10	B	60995	0	30659	4158	0
11	C	2053	0	2122	453	0
12	D	1565	0	1616	391	0
13	E	1552	0	1617	301	0
14	F	1420	0	1460	177	0
15	G	1323	0	1374	173	0
16	H	1111	0	1148	198	0
17	I	1032	0	1088	207	0
18	J	1112	0	1147	230	0
19	K	930	0	1000	125	0
20	L	1002	0	1070	298	0
21	M	1074	0	1157	257	0
22	N	1008	0	1036	236	0
23	O	900	0	935	141	0
24	P	917	0	965	213	0
25	Q	947	0	1022	181	0
26	R	816	0	839	172	0
27	S	857	0	922	123	0
28	T	777	0	840	138	0
29	U	779	0	831	264	0
30	V	753	0	780	109	0
31	W	634	0	656	163	0
32	X	509	0	541	71	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
33	Y	449	0	491	64	0
34	Z	549	0	552	120	0
35	B	110	0	0	0	0
36	B	497	0	0	17	0
36	C	1	0	0	0	0
36	E	5	0	0	0	0
36	L	2	0	0	0	0
36	N	1	0	0	0	0
All	All	92737	0	61161	8592	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 56.

All (8592) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1062:G:H21	17:I:134:SER:CB	1.09	1.62
10:B:1059:G:C5'	17:I:117:THR:HG23	1.22	1.60
26:R:54:VAL:CA	26:R:54:VAL:CB	1.78	1.59
26:R:53:PHE:CB	26:R:53:PHE:CG	1.81	1.58
10:B:2881:U:C6	22:N:120:GLU:CD	1.80	1.55
10:B:80:G:C5'	10:B:346:A:C8	1.88	1.53
10:B:1059:G:H5'	17:I:117:THR:CG2	1.34	1.52
10:B:2881:U:H6	22:N:120:GLU:CD	1.05	1.51
10:B:80:G:H5'	10:B:346:A:C8	0.97	1.49
10:B:1063:G:C5'	17:I:76:ALA:HB2	1.41	1.49
10:B:328:U:H4'	29:U:65:GLN:NE2	1.29	1.48
1:0:50:GLY:C	22:N:118:ARG:NH2	1.73	1.46
10:B:1473:G:N2	10:B:1518:C:N3	1.63	1.44
10:B:321:U:C5'	13:E:130:LYS:HA	1.48	1.44
10:B:1050:A:C4	10:B:2751:G:N7	1.85	1.43
10:B:1063:G:C4'	17:I:76:ALA:HB2	1.53	1.39
10:B:2881:U:C6	22:N:120:GLU:OE2	1.72	1.39
10:B:1439:A:C6	10:B:1552:A:N7	1.88	1.38
10:B:80:G:C5'	10:B:346:A:N7	1.79	1.35
10:B:96:C:OP1	32:X:39:GLN:HA	1.26	1.35
6:5:364:VAL:CG1	29:U:51:LEU:CB	1.91	1.34
10:B:1062:G:N2	17:I:134:SER:HB3	1.03	1.34
10:B:336:C:OP1	29:U:81:ARG:HD3	1.19	1.34
10:B:80:G:H5'	10:B:346:A:N7	1.04	1.34
10:B:336:C:H5''	29:U:81:ARG:NE	1.40	1.33

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2880:C:H2'	22:N:120:GLU:OE2	1.21	1.33
10:B:1050:A:C8	10:B:2751:G:C6	2.16	1.33
10:B:1063:G:O3'	17:I:76:ALA:CB	1.75	1.32
16:H:44:ILE:O	16:H:47:PHE:CD1	1.81	1.31
10:B:1050:A:N3	10:B:2751:G:N7	1.78	1.31
10:B:1439:A:N6	10:B:1552:A:N7	1.77	1.30
10:B:1050:A:C8	10:B:2751:G:O6	1.85	1.30
6:5:364:VAL:HG13	29:U:51:LEU:CB	1.26	1.29
10:B:333:G:C4	10:B:334:C:C5	2.20	1.29
10:B:346:A:C2	10:B:347:A:C8	2.20	1.29
10:B:328:U:H4'	29:U:65:GLN:CD	1.36	1.29
10:B:311:A:C8	10:B:332:A:C5	2.20	1.29
10:B:1473:G:N2	10:B:1518:C:C2	2.01	1.29
10:B:1519:G:C5	10:B:1520:U:C5	2.20	1.29
6:5:364:VAL:HG22	29:U:51:LEU:CB	1.63	1.25
10:B:1076:C:O2'	17:I:92:PRO:HB2	1.17	1.25
10:B:1076:C:O4'	17:I:92:PRO:HD2	1.14	1.24
10:B:342:A:C2	10:B:343:C:C5	2.26	1.23
10:B:1050:A:C4	10:B:2751:G:C5	2.26	1.23
10:B:1050:A:N3	10:B:2751:G:C8	2.04	1.23
16:H:44:ILE:O	16:H:47:PHE:HD1	0.96	1.23
10:B:80:G:H4'	10:B:346:A:C5	1.73	1.23
10:B:82:U:OP1	10:B:295:G:O2'	1.54	1.23
10:B:336:C:C5'	29:U:81:ARG:HE	1.50	1.23
10:B:80:G:C4'	10:B:346:A:C5	2.22	1.22
10:B:310:A:C4	10:B:312:G:C8	2.28	1.22
10:B:337:C:P	29:U:81:ARG:NH2	2.11	1.22
10:B:2881:U:C6	22:N:120:GLU:OE1	1.89	1.22
10:B:280:U:C5	10:B:281:C:C5	2.26	1.22
10:B:1474:U:O2	10:B:1517:G:O6	1.59	1.21
1:0:50:GLY:C	22:N:118:ARG:HH22	1.36	1.21
10:B:338:G:P	36:B:3141:HOH:O	1.98	1.20
10:B:1475:G:O2'	10:B:1514:G:O6	1.54	1.20
10:B:2881:U:H6	22:N:120:GLU:OE2	0.85	1.20
10:B:291:G:C5	10:B:350:G:C6	2.30	1.19
10:B:348:A:C2	10:B:349:U:C2	2.30	1.19
10:B:84:A:OP2	29:U:91:LYS:HD3	1.40	1.18
10:B:311:A:N7	10:B:332:A:N6	1.91	1.18
10:B:347:A:C2	10:B:348:A:C8	2.29	1.18
22:N:96:ARG:NH2	22:N:118:ARG:H	1.41	1.18
29:U:39:ASN:ND2	29:U:60:LYS:O	1.75	1.18

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:79:C:O2'	10:B:346:A:N7	1.73	1.18
10:B:1477:A:C4	10:B:1515:A:C2	2.23	1.18
10:B:279:A:N6	10:B:361:G:N3	1.92	1.17
10:B:1477:A:C1'	10:B:1515:A:C2	2.14	1.17
10:B:96:C:OP2	32:X:38:GLN:O	1.59	1.17
10:B:1525:A:C2	10:B:1526:C:C2	2.31	1.17
10:B:302:C:H2'	10:B:303:G:H8	1.01	1.17
1:0:50:GLY:O	22:N:118:ARG:NH2	1.68	1.16
6:5:364:VAL:CG2	29:U:51:LEU:HB2	1.53	1.16
10:B:396:G:H4'	34:Z:28:VAL:HG21	1.29	1.15
10:B:333:G:C5	10:B:334:C:C5	2.34	1.15
10:B:1063:G:C3'	17:I:76:ALA:CB	2.25	1.14
22:N:96:ARG:NH2	22:N:116:VAL:O	1.79	1.14
6:5:364:VAL:HG13	29:U:51:LEU:CA	1.76	1.14
6:5:364:VAL:CG2	29:U:51:LEU:CB	2.17	1.14
10:B:1445:G:C2	10:B:1547:C:N4	2.16	1.14
10:B:301:G:N1	10:B:317:G:N7	1.95	1.14
10:B:333:G:C4	10:B:334:C:H5	1.57	1.14
10:B:1529:G:H2'	10:B:1530:G:H8	1.12	1.14
21:M:3:GLN:N	21:M:4:PRO:HD2	1.41	1.14
10:B:1063:G:C4'	17:I:76:ALA:CB	2.26	1.13
10:B:96:C:P	32:X:39:GLN:HA	1.88	1.13
10:B:1542:U:H2'	10:B:1543:G:H8	1.09	1.13
10:B:2578:G:H1'	12:D:145:SER:HB3	1.29	1.13
10:B:80:G:C5'	10:B:346:A:C5	2.31	1.13
10:B:291:G:C6	10:B:350:G:C5	2.37	1.13
10:B:1097:U:H2'	10:B:1098:A:H5'	1.25	1.13
11:C:30:ALA:H	11:C:31:PRO:HD3	1.12	1.13
10:B:1445:G:N2	10:B:1547:C:C4	2.16	1.12
10:B:1519:G:C6	10:B:1520:U:C5	2.37	1.12
10:B:280:U:C6	10:B:281:C:C5	2.36	1.12
10:B:351:C:H2'	10:B:352:A:H8	0.99	1.11
26:R:74:ILE:HA	26:R:90:ARG:HE	1.15	1.11
10:B:1050:A:N9	10:B:2751:G:C5	2.17	1.11
10:B:328:U:C4'	29:U:65:GLN:CD	2.12	1.11
10:B:80:G:H5'	10:B:346:A:C5	1.84	1.11
10:B:341:C:H2'	10:B:342:A:H8	1.15	1.11
10:B:1050:A:H1'	10:B:2751:G:C4	1.85	1.10
10:B:1063:G:O2'	17:I:135:MET:HB3	1.51	1.10
10:B:272:A:C2	10:B:273:G:C8	2.38	1.10
10:B:2641:G:H5''	18:J:78:THR:HG21	1.30	1.10

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:L:61:LEU:HB3	20:L:62:PRO:HD2	1.12	1.10
26:R:54:VAL:CB	26:R:54:VAL:N	2.15	1.10
10:B:321:U:O4'	13:E:129:PRO:HB2	1.50	1.10
10:B:327:G:N1	10:B:336:C:N3	2.00	1.10
10:B:1063:G:C3'	17:I:76:ALA:HB1	1.82	1.10
22:N:96:ARG:HD3	22:N:119:SER:C	1.46	1.10
10:B:1439:A:N6	10:B:1552:A:C8	2.18	1.10
16:H:50:ARG:HB3	16:H:51:ARG:HD3	1.29	1.10
22:N:96:ARG:NH2	22:N:118:ARG:N	1.98	1.10
6:5:421:ASP:OD2	10:B:490:C:C5	2.04	1.09
10:B:1519:G:C2	10:B:1520:U:C6	2.39	1.09
11:C:124:LYS:HB2	11:C:125:PRO:HD3	1.10	1.09
10:B:342:A:C2	10:B:343:C:C6	2.40	1.09
10:B:346:A:C2	10:B:347:A:N7	2.21	1.09
10:B:82:U:H5'	10:B:295:G:H4'	1.35	1.09
10:B:279:A:H2'	10:B:280:U:H5'	1.23	1.09
10:B:342:A:N1	10:B:343:C:C5	2.20	1.09
29:U:39:ASN:CG	29:U:60:LYS:O	1.96	1.09
1:0:52:LYS:HD2	22:N:118:ARG:CD	1.83	1.09
10:B:323:C:C4	10:B:333:G:C8	2.41	1.09
10:B:1076:C:H1'	17:I:92:PRO:HG2	1.24	1.09
10:B:1115:G:C4	10:B:1116:G:C8	2.40	1.09
10:B:295:G:C6	10:B:344:A:N1	2.20	1.09
10:B:311:A:C8	10:B:332:A:C6	2.40	1.09
10:B:1516:G:N3	10:B:1517:G:C8	2.20	1.09
11:C:20:ASN:HB3	11:C:202:ARG:HB3	1.33	1.09
10:B:283:G:C2	10:B:284:U:C2	2.41	1.08
10:B:301:G:C6	10:B:317:G:N7	2.21	1.08
10:B:1473:G:H1	10:B:1518:C:N4	1.49	1.08
10:B:80:G:H4'	10:B:346:A:C6	1.89	1.08
10:B:298:G:OP1	29:U:82:VAL:C	1.97	1.08
10:B:1516:G:H2'	10:B:1517:G:H8	1.19	1.08
22:N:32:GLU:HA	22:N:115:LEU:HD21	1.33	1.08
24:P:52:ARG:HB3	24:P:60:VAL:HG11	1.30	1.08
10:B:692:C:H5'	11:C:42:ARG:HB2	1.32	1.08
10:B:1050:A:N9	10:B:2751:G:C6	2.19	1.08
19:K:71:ARG:HB3	19:K:72:PRO:HD2	1.22	1.08
10:B:1547:C:H2'	10:B:1548:A:H8	1.15	1.07
10:B:298:G:OP1	29:U:83:GLY:N	1.86	1.07
10:B:313:G:C2	10:B:314:C:C2	2.42	1.07
10:B:314:C:H2'	10:B:315:G:H8	1.18	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:341:C:H2'	10:B:342:A:C8	1.89	1.07
10:B:288:U:H2'	10:B:289:G:C8	1.89	1.07
10:B:317:G:H2'	10:B:318:C:H6	1.12	1.07
10:B:321:U:H5''	13:E:130:LYS:HA	1.28	1.07
10:B:347:A:C6	10:B:348:A:N7	2.22	1.07
10:B:1524:G:H2'	10:B:1525:A:H8	1.14	1.07
10:B:1548:A:H2'	10:B:1549:A:C8	1.90	1.07
6:5:364:VAL:CG1	29:U:51:LEU:HB2	1.54	1.07
10:B:1528:A:N6	10:B:1543:G:O2'	1.88	1.07
11:C:107:LYS:HB2	11:C:194:VAL:HG11	1.36	1.07
10:B:1547:C:H2'	10:B:1548:A:C8	1.89	1.07
10:B:335:C:H2'	10:B:336:C:C6	1.89	1.06
10:B:327:G:N1	10:B:336:C:C4	2.22	1.06
10:B:332:A:N1	10:B:335:C:C2	2.23	1.06
13:E:48:THR:HG22	13:E:49:ARG:H	0.97	1.06
10:B:292:U:H2'	10:B:293:U:C6	1.90	1.06
10:B:1100:C:H2'	10:B:1101:U:H6	1.13	1.06
10:B:1105:U:H2'	10:B:1106:G:C8	1.90	1.06
10:B:1527:G:N2	10:B:1544:A:OP2	1.89	1.06
12:D:24:VAL:HG21	12:D:193:VAL:HG11	1.37	1.06
33:Y:16:LEU:HB2	33:Y:17:PRO:HD3	1.38	1.06
10:B:1059:G:H5''	17:I:117:THR:HG23	1.36	1.06
10:B:1118:C:OP1	30:V:84:PRO:HG2	1.56	1.06
10:B:333:G:C2	10:B:334:C:C6	2.44	1.05
10:B:1524:G:C4	10:B:1525:A:C8	2.44	1.05
31:W:24:ARG:HB2	31:W:59:PHE:HB2	1.38	1.05
10:B:302:C:H2'	10:B:303:G:C8	1.91	1.05
10:B:336:C:OP1	29:U:81:ARG:CD	2.03	1.05
10:B:364:C:H2'	10:B:365:U:C6	1.92	1.05
10:B:1524:G:N3	10:B:1525:A:C8	2.25	1.05
10:B:1529:G:H2'	10:B:1530:G:C8	1.91	1.05
20:L:55:MET:HG2	20:L:56:PRO:HD3	1.32	1.05
10:B:274:C:O2	10:B:363:G:N2	1.88	1.05
1:0:52:LYS:HA	1:0:52:LYS:HZ2	1.15	1.05
10:B:314:C:H2'	10:B:315:G:C8	1.92	1.05
10:B:321:U:C5'	13:E:130:LYS:CA	2.30	1.05
10:B:311:A:N7	10:B:332:A:C6	2.23	1.04
10:B:324:A:C4	10:B:325:G:C8	2.45	1.04
10:B:325:G:H2'	10:B:326:G:H8	1.18	1.04
10:B:355:U:H2'	10:B:356:G:C8	1.91	1.04
10:B:1048:A:C5	10:B:1111:A:C2	2.45	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1521:G:C8	10:B:1522:A:C8	2.46	1.04
1:0:51:ARG:NH2	22:N:125:ALA:HB1	1.73	1.04
6:5:364:VAL:HG22	29:U:51:LEU:HB3	1.38	1.04
10:B:338:G:H2'	10:B:339:U:H5'	1.39	1.04
10:B:1100:C:H2'	10:B:1101:U:C6	1.91	1.04
10:B:333:G:N3	10:B:334:C:C6	2.26	1.04
6:5:364:VAL:HA	29:U:51:LEU:CD2	1.58	1.04
10:B:325:G:H2'	10:B:326:G:C8	1.92	1.04
10:B:1050:A:N7	10:B:2751:G:O6	1.88	1.04
10:B:1519:G:C5	10:B:1520:U:H5	1.68	1.04
10:B:1528:A:C8	10:B:1529:G:C8	2.46	1.03
10:B:305:C:H2'	10:B:306:U:C6	1.92	1.03
10:B:1117:C:H2'	10:B:1118:C:C6	1.94	1.03
10:B:300:A:H2'	10:B:334:C:H1'	1.34	1.03
10:B:1445:G:N2	10:B:1547:C:N4	2.06	1.03
16:H:47:PHE:O	16:H:51:ARG:NH1	1.90	1.03
10:B:80:G:C4'	10:B:346:A:N7	2.19	1.03
10:B:283:G:C4	10:B:284:U:C6	2.47	1.03
10:B:285:G:C6	10:B:286:U:C4	2.46	1.03
10:B:351:C:H2'	10:B:352:A:C8	1.92	1.03
10:B:1063:G:C5'	17:I:76:ALA:CB	2.36	1.03
10:B:1477:A:O4'	10:B:1515:A:N1	1.90	1.03
10:B:1063:G:H5''	17:I:76:ALA:HB2	1.36	1.02
10:B:1474:U:O2	10:B:1517:G:C6	2.11	1.02
10:B:1548:A:H2'	10:B:1549:A:H8	1.16	1.02
10:B:324:A:H2'	10:B:325:G:H5'	1.41	1.02
10:B:1064:C:P	17:I:76:ALA:HB1	1.99	1.02
10:B:1076:C:O4'	17:I:92:PRO:CD	2.05	1.02
10:B:37:C:H2'	13:E:46:GLN:HG2	1.36	1.02
10:B:79:C:O2'	10:B:346:A:C8	2.07	1.02
18:J:11:VAL:HG13	18:J:12:LYS:H	1.24	1.02
13:E:153:LEU:HD13	13:E:193:VAL:HG21	1.38	1.02
10:B:200:U:H5''	34:Z:20:ASN:HB3	1.41	1.02
16:H:82:SER:H	16:H:146:VAL:HG13	1.25	1.02
22:N:116:VAL:HG22	22:N:117:ASP:H	1.22	1.01
10:B:315:G:H2'	10:B:316:C:C6	1.95	1.01
10:B:357:C:H2'	10:B:358:U:C6	1.95	1.01
10:B:1037:G:H2'	10:B:1038:G:H8	1.23	1.01
1:0:51:ARG:NH2	22:N:125:ALA:CB	2.24	1.01
10:B:1037:G:H2'	10:B:1038:G:C8	1.95	1.01
10:B:37:C:H2'	13:E:46:GLN:CG	1.91	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:278:A:C6	10:B:362:A:C8	2.48	1.01
10:B:285:G:N1	10:B:355:U:O2	1.94	1.01
10:B:1532:A:N1	10:B:1539:U:N3	2.08	1.01
13:E:128:ALA:HB3	13:E:129:PRO:HD3	1.39	1.01
10:B:298:G:OP1	29:U:82:VAL:CA	2.08	1.00
10:B:1063:G:O3'	17:I:76:ALA:HB1	0.83	1.00
10:B:1519:G:C4	10:B:1520:U:C6	2.48	1.00
19:K:66:LYS:HG2	19:K:80:ASP:HA	1.40	1.00
21:M:3:GLN:H	21:M:4:PRO:CD	1.74	1.00
10:B:319:G:H2'	10:B:320:A:C8	1.97	1.00
10:B:336:C:O3'	29:U:81:ARG:NH2	1.92	1.00
10:B:347:A:C5	10:B:348:A:N7	2.30	1.00
33:Y:10:ARG:HE	33:Y:31:ILE:HG13	1.22	1.00
10:B:323:C:N4	10:B:333:G:N7	2.10	1.00
10:B:1115:G:N3	10:B:1116:G:C8	2.30	1.00
10:B:303:G:N2	10:B:314:C:O2	1.94	1.00
10:B:324:A:N6	10:B:338:G:N3	2.08	1.00
10:B:356:G:C2'	10:B:357:C:H5'	1.91	1.00
12:D:154:LYS:HZ2	12:D:156:PHE:HA	1.24	1.00
26:R:53:PHE:HB3	26:R:55:ASP:N	1.76	1.00
10:B:328:U:C4'	29:U:65:GLN:NE2	2.24	1.00
10:B:1535:A:H3'	10:B:1536:C:C6	1.97	1.00
10:B:308:G:N3	10:B:329:G:N2	2.10	0.99
10:B:1438:U:O2	10:B:1553:A:N6	1.95	0.99
10:B:1090:A:H2'	10:B:1091:G:C8	1.98	0.99
10:B:2880:C:C2'	22:N:120:GLU:OE2	2.11	0.99
33:Y:9:THR:HB	33:Y:54:VAL:HA	1.45	0.99
10:B:315:G:H2'	10:B:316:C:H6	1.28	0.99
10:B:1059:G:H4'	17:I:116:MET:HA	1.44	0.99
10:B:1076:C:H1'	17:I:92:PRO:CG	1.92	0.99
22:N:44:LEU:HD23	22:N:113:ILE:HD12	1.44	0.99
10:B:1076:C:HO2'	17:I:92:PRO:HB2	1.21	0.99
10:B:1473:G:N2	10:B:1518:C:O2	1.94	0.99
21:M:3:GLN:C	21:M:5:LYS:N	2.15	0.99
10:B:304:U:O2	10:B:313:G:N1	1.94	0.98
10:B:96:C:OP2	32:X:38:GLN:C	2.06	0.98
10:B:1064:C:OP1	17:I:80:LYS:HE2	1.64	0.98
34:Z:3:LYS:HB2	34:Z:51:VAL:HG21	1.45	0.98
10:B:1519:G:H2'	10:B:1520:U:H5'	1.46	0.98
10:B:1048:A:N7	10:B:1111:A:C2	2.30	0.98
10:B:2575:C:H5''	12:D:149:ASN:CB	1.94	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:310:A:N3	10:B:312:G:C8	2.32	0.98
10:B:2575:C:H5'	12:D:149:ASN:HB2	1.46	0.98
32:X:28:LEU:HB3	32:X:34:SER:HA	1.46	0.98
10:B:290:U:O2	10:B:350:G:N1	1.96	0.98
10:B:352:A:C6	10:B:353:C:C4	2.52	0.98
15:G:157:LYS:HG3	15:G:159:LYS:HZ2	1.27	0.98
29:U:41:VAL:HG22	29:U:42:LYS:H	1.25	0.98
21:M:28:PHE:HB3	21:M:102:LEU:HD21	1.44	0.98
29:U:42:LYS:HE3	29:U:43:LYS:H	1.27	0.98
10:B:356:G:H2'	10:B:357:C:H5'	1.43	0.97
10:B:1070:A:H1'	17:I:9:LYS:NZ	1.78	0.97
10:B:270:A:N1	10:B:370:G:C5	2.32	0.97
10:B:275:C:H2'	10:B:276:U:H6	1.28	0.97
10:B:310:A:C4	10:B:312:G:N7	2.32	0.97
10:B:358:U:H2'	10:B:359:G:C8	1.98	0.97
20:L:77:ILE:HB	20:L:110:VAL:HG22	1.46	0.97
26:R:78:ARG:HB3	26:R:87:GLN:HA	1.42	0.97
10:B:285:G:O6	10:B:355:U:N3	1.96	0.97
10:B:298:G:N3	10:B:340:A:N6	2.11	0.97
24:P:25:VAL:HG13	24:P:88:ARG:H	1.25	0.97
10:B:282:A:H2'	10:B:283:G:H5'	1.46	0.97
21:M:3:GLN:C	21:M:5:LYS:H	1.58	0.97
10:B:1079:C:H2'	10:B:1080:A:H8	1.26	0.97
15:G:15:ASP:HB3	15:G:26:LYS:HB2	1.47	0.97
10:B:1531:C:H2'	10:B:1532:A:C8	1.99	0.97
10:B:271:G:H21	10:B:272:A:H1'	1.28	0.97
10:B:291:G:C6	10:B:350:G:C6	2.53	0.97
10:B:547:A:H3'	10:B:548:G:H8	1.28	0.97
19:K:64:ARG:H	19:K:83:ALA:HB3	1.27	0.97
10:B:2575:C:H4'	12:D:148:GLN:C	1.88	0.96
10:B:83:A:OP2	29:U:90:LYS:O	1.83	0.96
10:B:1541:C:H2'	10:B:1542:U:C6	2.00	0.96
10:B:1102:C:H2'	10:B:1103:A:C8	2.01	0.96
11:C:42:ARG:HG2	11:C:43:ASN:H	1.29	0.96
10:B:1477:A:C4	10:B:1515:A:N3	2.33	0.96
10:B:1474:U:C2	10:B:1517:G:O6	2.18	0.96
10:B:1542:U:H2'	10:B:1543:G:C8	2.01	0.96
10:B:299:A:H1'	10:B:322:A:N6	1.80	0.96
10:B:1097:U:C2'	10:B:1098:A:H5'	1.95	0.96
10:B:1516:G:C4	10:B:1517:G:C8	2.54	0.96
10:B:1050:A:C2	10:B:2751:G:N7	2.32	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:38:A:O4'	13:E:46:GLN:HG3	1.65	0.96
10:B:352:A:H3'	10:B:353:C:H6	1.28	0.96
10:B:338:G:O5'	36:B:3141:HOH:O	1.77	0.95
24:P:28:LYS:HD3	24:P:44:GLY:H	1.29	0.95
10:B:2333:A:H4'	10:B:2334:U:H5''	1.48	0.95
10:B:324:A:C5	10:B:325:G:N7	2.33	0.95
1:0:6:LYS:HE3	10:B:2615:U:H1'	1.47	0.95
10:B:354:A:H2'	10:B:355:U:H5''	1.47	0.95
10:B:356:G:C5	10:B:357:C:C4	2.54	0.95
32:X:36:GLN:HE22	32:X:38:GLN:HE22	1.13	0.95
10:B:276:U:C2'	10:B:277:G:H5''	1.94	0.95
4:3:34:LYS:HB3	4:3:35:LYS:HE2	1.47	0.95
16:H:3:VAL:HB	16:H:37:VAL:HB	1.45	0.95
11:C:124:LYS:HB2	11:C:125:PRO:CD	1.96	0.95
10:B:316:C:H2'	10:B:317:G:H5''	1.49	0.95
10:B:1477:A:C5	10:B:1515:A:C4	2.54	0.95
12:D:170:VAL:HG13	12:D:171:THR:H	1.26	0.95
13:E:60:TRP:HE1	13:E:73:ILE:HD11	1.31	0.95
29:U:84:PHE:HB3	29:U:92:VAL:HG22	1.49	0.94
12:D:149:ASN:HB3	12:D:150:GLN:HG2	1.49	0.94
10:B:284:U:H3	10:B:356:G:H1	1.01	0.94
10:B:313:G:C5	10:B:314:C:C4	2.54	0.94
10:B:1060:U:O4	10:B:1088:A:N6	2.00	0.94
10:B:1513:U:H3'	10:B:1514:G:H5''	1.49	0.94
10:B:1520:U:C2'	10:B:1521:G:H5'	1.97	0.94
10:B:1473:G:C2	10:B:1518:C:N3	2.35	0.94
10:B:287:G:C6	10:B:354:A:C6	2.56	0.94
16:H:83:LYS:HB3	16:H:91:PHE:HB2	1.50	0.94
1:0:52:LYS:CD	22:N:118:ARG:CD	2.46	0.94
10:B:1076:C:H2'	10:B:1077:A:C8	2.02	0.94
10:B:1076:C:C4'	17:I:92:PRO:HD2	1.97	0.94
10:B:1477:A:C1'	10:B:1515:A:H2	1.68	0.94
10:B:1526:C:C2	10:B:1527:G:C8	2.56	0.94
13:E:48:THR:HG22	13:E:49:ARG:N	1.80	0.94
6:5:425:ARG:NE	10:B:490:C:C5	2.35	0.94
10:B:1444:G:N2	10:B:1548:A:C6	2.36	0.94
10:B:1473:G:H1	10:B:1518:C:H42	1.00	0.94
10:B:1534:U:O2'	10:B:1537:G:O6	1.86	0.94
9:A:75:G:H1'	30:V:29:ILE:HD13	1.50	0.94
18:J:25:LEU:HG	18:J:64:VAL:H	1.32	0.94
10:B:305:C:H2'	10:B:306:U:C5	2.03	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:320:A:O2'	10:B:322:A:OP2	1.85	0.93
10:B:356:G:C6	10:B:357:C:N3	2.37	0.93
10:B:301:G:C2	10:B:317:G:C8	2.57	0.93
1:0:52:LYS:HD2	22:N:118:ARG:NH1	1.84	0.93
32:X:30:MET:HG3	32:X:31:GLN:H	1.33	0.93
10:B:301:G:C6	10:B:317:G:C5	2.56	0.93
25:Q:73:ILE:HG23	25:Q:77:LYS:HB2	1.47	0.93
10:B:269:C:H2'	10:B:270:A:C8	2.04	0.93
10:B:317:G:H2'	10:B:318:C:C6	2.02	0.93
10:B:1110:G:O2'	10:B:1111:A:OP2	1.86	0.93
10:B:271:G:O2'	10:B:272:A:O5'	1.86	0.93
10:B:332:A:C2	10:B:335:C:C4	2.57	0.93
10:B:2204:G:H5'	11:C:149:LYS:HE3	1.50	0.93
27:S:50:VAL:HG11	27:S:103:ILE:HG21	1.51	0.93
10:B:328:U:O2'	29:U:65:GLN:CB	2.17	0.93
10:B:1021:A:H62	10:B:1141:U:H3	1.01	0.93
10:B:1063:G:C3'	17:I:76:ALA:HB2	1.92	0.93
10:B:1040:A:C2	10:B:1115:G:N1	2.37	0.93
20:L:78:ARG:HG2	20:L:99:ASN:HB3	1.48	0.93
21:M:3:GLN:N	21:M:4:PRO:CD	2.28	0.93
1:0:50:GLY:C	22:N:118:ARG:HH21	1.68	0.92
6:5:425:ARG:HE	10:B:490:C:H5	1.08	0.92
10:B:1061:U:C4	17:I:9:LYS:HD2	2.04	0.92
13:E:48:THR:CG2	13:E:49:ARG:H	1.79	0.92
1:0:51:ARG:HH21	22:N:125:ALA:HB1	1.27	0.92
10:B:298:G:OP1	29:U:82:VAL:HA	1.68	0.92
10:B:1450:G:H21	10:B:1452:G:H1	1.14	0.92
18:J:16:TYR:HB2	18:J:54:ILE:HG22	1.48	0.92
22:N:10:LEU:H	22:N:17:ARG:HH12	1.12	0.92
10:B:1076:C:C1'	17:I:92:PRO:HD2	1.97	0.92
10:B:1528:A:C6	10:B:1544:A:C8	2.57	0.92
10:B:342:A:C6	10:B:343:C:C5	2.58	0.92
10:B:663:G:H5''	20:L:25:SER:HB2	1.51	0.92
10:B:1519:G:N3	10:B:1520:U:H6	1.68	0.92
10:B:316:C:C2'	10:B:317:G:H5''	2.00	0.92
29:U:23:LYS:HG3	29:U:24:VAL:HG23	1.50	0.92
10:B:301:G:N1	10:B:317:G:C8	2.37	0.92
10:B:361:G:O2'	10:B:362:A:OP2	1.85	0.92
31:W:35:ILE:HG23	31:W:36:ILE:H	1.34	0.92
12:D:2:ILE:HG21	12:D:204:LYS:HA	1.50	0.92
12:D:138:LEU:HD23	12:D:138:LEU:H	1.34	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:L:85:VAL:HG21	20:L:98:ALA:H	1.34	0.92
10:B:271:G:N2	10:B:272:A:H1'	1.84	0.91
10:B:280:U:C5	10:B:281:C:H5	1.76	0.91
10:B:313:G:C6	10:B:314:C:C4	2.58	0.91
10:B:1076:C:O2'	17:I:92:PRO:CB	2.13	0.91
24:P:47:ILE:HG22	24:P:48:ALA:H	1.33	0.91
29:U:46:LYS:HB3	29:U:53:GLN:HE22	1.33	0.91
10:B:80:G:H5'	10:B:346:A:N9	1.84	0.91
11:C:19:VAL:HG12	11:C:20:ASN:H	1.35	0.91
10:B:1038:G:H2'	10:B:1039:A:C8	2.04	0.91
10:B:1524:G:H2'	10:B:1525:A:C8	2.04	0.91
20:L:79:LEU:HA	20:L:113:ALA:HB3	1.50	0.91
10:B:354:A:C2'	10:B:355:U:H5''	2.00	0.91
2:1:12:SER:HA	2:1:50:GLU:HB3	1.52	0.91
10:B:96:C:OP1	32:X:39:GLN:CA	2.18	0.91
10:B:291:G:C2	10:B:350:G:C4	2.58	0.91
10:B:312:G:C2	10:B:313:G:C8	2.59	0.91
10:B:295:G:C2	10:B:296:U:C5	2.58	0.91
10:B:1064:C:OP1	17:I:80:LYS:CE	2.19	0.91
19:K:103:VAL:HB	19:K:107:LEU:HD23	1.52	0.91
10:B:1039:A:C2	10:B:1040:A:C6	2.59	0.91
10:B:1115:G:C5	10:B:1116:G:N7	2.39	0.91
10:B:1535:A:H5''	10:B:1536:C:C5	2.05	0.91
11:C:20:ASN:HB2	11:C:203:VAL:HG13	1.51	0.91
12:D:165:MET:HE3	12:D:166:GLY:H	1.36	0.91
16:H:44:ILE:C	16:H:47:PHE:HD1	1.78	0.91
10:B:923:G:H1'	31:W:23:LYS:HD3	1.50	0.90
18:J:100:VAL:HG13	18:J:101:ILE:HG22	1.49	0.90
21:M:3:GLN:O	21:M:6:ARG:N	2.04	0.90
3:2:42:LEU:HD11	3:2:44:VAL:HG13	1.53	0.90
10:B:283:G:C5	10:B:284:U:C5	2.59	0.90
10:B:1050:A:C2	10:B:2751:G:C8	2.59	0.90
10:B:1519:G:C4	10:B:1520:U:C5	2.60	0.90
10:B:362:A:C2	10:B:363:G:C8	2.60	0.90
10:B:354:A:C3'	10:B:355:U:H5''	2.02	0.90
11:C:124:LYS:CB	11:C:125:PRO:HD3	2.00	0.90
12:D:8:LYS:HB3	24:P:5:LYS:NZ	1.85	0.90
18:J:73:VAL:HB	18:J:75:TYR:CE2	2.06	0.90
20:L:61:LEU:CB	20:L:62:PRO:HD2	1.94	0.90
29:U:78:LYS:HE3	29:U:96:LYS:HB2	1.51	0.90
18:J:71:ASP:CG	18:J:72:LYS:H	1.80	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:347:A:C6	10:B:348:A:C5	2.60	0.90
15:G:26:LYS:HA	15:G:31:GLU:HG2	1.54	0.90
10:B:1076:C:H2'	10:B:1077:A:H8	1.35	0.90
25:Q:48:ASP:HA	25:Q:51:GLN:HG2	1.50	0.90
26:R:47:VAL:HG22	26:R:48:LYS:H	1.34	0.90
33:Y:6:ILE:HG22	33:Y:56:VAL:HG23	1.54	0.90
6:5:421:ASP:OD2	10:B:490:C:C4	2.24	0.89
10:B:346:A:N3	10:B:347:A:C8	2.39	0.89
10:B:1477:A:N7	10:B:1515:A:C5	2.19	0.89
18:J:7:LYS:HD2	18:J:49:ASP:HB2	1.54	0.89
1:0:52:LYS:CE	22:N:118:ARG:HD2	2.03	0.89
10:B:335:C:H2'	10:B:336:C:H6	1.30	0.89
10:B:1036:G:C6	10:B:1120:G:C6	2.60	0.89
10:B:1117:C:H2'	10:B:1118:C:C5	2.06	0.89
10:B:1518:C:H2'	10:B:1519:G:H8	1.37	0.89
25:Q:30:VAL:HG12	25:Q:32:ARG:H	1.37	0.89
10:B:273:G:C6	10:B:274:C:C4	2.61	0.89
10:B:283:G:C6	10:B:284:U:C4	2.60	0.89
10:B:310:A:N9	10:B:312:G:N7	2.20	0.89
10:B:1658:C:OP1	12:D:136:ASN:HA	1.71	0.89
12:D:16:THR:HA	24:P:79:VAL:HB	1.55	0.89
16:H:132:PHE:HB3	16:H:140:ALA:HB3	1.54	0.89
19:K:71:ARG:HB3	19:K:72:PRO:CD	2.02	0.89
10:B:337:C:P	29:U:81:ARG:HH22	1.94	0.89
20:L:111:ILE:HD13	20:L:111:ILE:H	1.38	0.89
10:B:82:U:C5'	10:B:295:G:H4'	2.01	0.89
10:B:283:G:H2'	10:B:284:U:H6	1.36	0.89
11:C:53:ILE:HG12	11:C:218:THR:HA	1.55	0.89
34:Z:36:VAL:HA	34:Z:42:PRO:HD3	1.55	0.89
10:B:1471:G:O6	10:B:1521:G:N2	2.05	0.89
19:K:26:GLY:HA3	19:K:30:ARG:HE	1.35	0.89
10:B:347:A:N3	10:B:348:A:C8	2.41	0.89
10:B:654:A:H2'	10:B:655:A:H5''	1.55	0.89
10:B:1515:A:H2'	10:B:1516:G:H8	1.38	0.89
10:B:1525:A:C2'	10:B:1526:C:H5'	2.03	0.89
10:B:271:G:N7	10:B:367:G:N3	2.20	0.89
10:B:1048:A:N7	10:B:1111:A:N1	2.21	0.89
10:B:1059:G:C5'	17:I:117:THR:CG2	2.16	0.89
15:G:29:ASN:HB2	15:G:78:VAL:HA	1.54	0.89
24:P:108:ARG:H	24:P:108:ARG:HD2	1.38	0.89
10:B:283:G:N1	10:B:357:C:O2	2.06	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:364:C:H2'	10:B:365:U:H6	1.32	0.88
10:B:1112:G:C2	10:B:1113:U:C5	2.61	0.88
10:B:1048:A:C5	10:B:1111:A:H2	1.89	0.88
10:B:347:A:C4	10:B:348:A:C8	2.62	0.88
10:B:350:G:O2'	10:B:351:C:H5'	1.73	0.88
10:B:1063:G:O2'	17:I:135:MET:CB	2.21	0.88
27:S:18:ARG:HH12	27:S:25:ARG:HH22	1.20	0.88
10:B:84:A:P	29:U:91:LYS:HD3	2.13	0.88
10:B:1532:A:C2	10:B:1539:U:N3	2.40	0.88
12:D:118:PHE:HA	12:D:164:GLN:HA	1.53	0.88
23:O:26:LEU:HB2	23:O:93:ASP:HA	1.54	0.88
6:5:431:LYS:NZ	10:B:1536:C:OP1	2.07	0.88
10:B:301:G:O2'	10:B:302:C:H5''	1.74	0.88
10:B:352:A:C2	10:B:353:C:C2	2.62	0.88
33:Y:9:THR:HA	33:Y:55:LYS:HG3	1.55	0.88
10:B:357:C:H2'	10:B:358:U:C5	2.08	0.88
10:B:1063:G:HO2'	17:I:135:MET:HB3	1.35	0.88
10:B:313:G:C6	10:B:314:C:N3	2.42	0.88
10:B:630:G:H1	20:L:69:ARG:HH22	1.22	0.88
10:B:1077:A:H4'	17:I:93:ASN:OD1	1.72	0.88
17:I:27:LEU:HD23	17:I:27:LEU:H	1.37	0.88
24:P:26:GLU:HB3	24:P:46:VAL:HG22	1.55	0.88
19:K:8:LEU:HD23	19:K:82:ASN:HB3	1.53	0.88
10:B:326:G:N1	10:B:327:G:N7	2.22	0.88
10:B:1534:U:H2'	10:B:1536:C:N3	1.89	0.88
10:B:275:C:C6	10:B:276:U:C5	2.63	0.87
10:B:289:G:O2'	10:B:290:U:H5'	1.74	0.87
10:B:1283:G:H22	10:B:1286:A:H5'	1.37	0.87
10:B:1533:C:O2'	10:B:1534:U:H5'	1.74	0.87
11:C:30:ALA:N	11:C:31:PRO:HD3	1.89	0.87
10:B:278:A:N1	10:B:362:A:C8	2.42	0.87
10:B:333:G:C5	10:B:334:C:H5	1.76	0.87
30:V:4:ILE:HB	30:V:63:ILE:HA	1.55	0.87
10:B:1444:G:C2	10:B:1548:A:N1	2.42	0.87
10:B:355:U:H2'	10:B:356:G:H8	1.39	0.87
10:B:997:G:H5'	25:Q:91:ARG:HG3	1.56	0.87
10:B:1519:G:N3	10:B:1520:U:C6	2.41	0.87
17:I:105:LEU:HD11	17:I:139:VAL:HG11	1.54	0.87
19:K:70:ARG:HB3	19:K:76:VAL:HG22	1.55	0.87
23:O:68:LYS:HD3	23:O:68:LYS:H	1.40	0.87
10:B:1540:G:C6	10:B:1541:C:C4	2.62	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:U:42:LYS:NZ	29:U:42:LYS:HA	1.88	0.87
10:B:1141:U:H4'	10:B:1142:A:O4'	1.74	0.87
10:B:1516:G:O2'	10:B:1517:G:H5'	1.74	0.87
11:C:143:VAL:HG12	11:C:144:GLU:H	1.40	0.87
31:W:42:THR:HB	31:W:65:LYS:HA	1.56	0.87
10:B:301:G:C5	10:B:317:G:C6	2.62	0.87
10:B:332:A:C2	10:B:335:C:C5	2.62	0.87
10:B:1553:A:N7	10:B:1555:G:C6	2.42	0.87
13:E:128:ALA:CB	13:E:129:PRO:HD3	2.03	0.87
25:Q:92:LYS:HA	25:Q:95:ALA:HB2	1.54	0.87
10:B:359:G:C5	10:B:360:U:C4	2.63	0.87
10:B:342:A:N1	10:B:343:C:C4	2.42	0.87
18:J:73:VAL:HB	18:J:75:TYR:HE2	1.34	0.87
25:Q:33:VAL:HG13	25:Q:34:ALA:H	1.39	0.87
4:3:12:ARG:HB3	4:3:23:HIS:HA	1.55	0.86
10:B:271:G:H1	10:B:366:C:HO2'	0.90	0.86
10:B:278:A:C6	10:B:362:A:N7	2.44	0.86
10:B:296:U:H2'	10:B:297:G:C8	2.09	0.86
10:B:325:G:N2	10:B:337:C:O2	2.07	0.86
10:B:348:A:C2	10:B:349:U:N3	2.43	0.86
10:B:350:G:H2'	10:B:351:C:C6	2.10	0.86
10:B:143:C:O2'	28:T:5:GLU:HA	1.75	0.86
10:B:299:A:N3	10:B:322:A:C5	2.43	0.86
10:B:301:G:N3	10:B:302:C:C2	2.42	0.86
10:B:352:A:H3'	10:B:353:C:C6	2.09	0.86
10:B:1544:A:O2'	10:B:1545:A:H5'	1.74	0.86
11:C:181:ARG:HH22	11:C:260:LYS:HD2	1.38	0.86
10:B:285:G:C2	10:B:286:U:C2	2.62	0.86
26:R:54:VAL:HB	26:R:54:VAL:H	1.37	0.86
10:B:277:G:H1'	10:B:361:G:O6	1.75	0.86
10:B:1039:A:O2'	10:B:1040:A:H5'	1.74	0.86
10:B:1061:U:C5	17:I:9:LYS:HD2	2.10	0.86
10:B:2502:G:H5'	10:B:2503:A:H5''	1.57	0.86
21:M:3:GLN:H	21:M:4:PRO:HD2	1.01	0.86
10:B:302:C:O2'	10:B:303:G:H5'	1.76	0.86
10:B:1050:A:C1'	10:B:2751:G:C5	2.59	0.86
10:B:1540:G:C2	10:B:1541:C:C6	2.64	0.86
23:O:8:ILE:HG22	23:O:10:ARG:HG2	1.56	0.86
22:N:96:ARG:HH22	22:N:118:ARG:H	0.87	0.86
10:B:80:G:O2'	10:B:294:A:C2	2.01	0.86
10:B:704:G:H2'	10:B:726:G:H22	1.41	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:997:G:OP1	25:Q:92:LYS:HD2	1.74	0.86
10:B:1445:G:C2	10:B:1547:C:C4	2.61	0.86
10:B:1084:A:O2'	10:B:1085:A:H5'	1.75	0.86
12:D:115:GLY:HA2	12:D:165:MET:HG3	1.58	0.86
10:B:161:A:H3'	10:B:162:U:H5''	1.56	0.86
10:B:338:G:C5'	36:B:3141:HOH:O	2.22	0.86
10:B:1079:C:O2'	10:B:1080:A:H5'	1.75	0.86
12:D:34:VAL:HG22	12:D:89:GLU:HG2	1.58	0.86
20:L:82:LEU:HD13	20:L:83:ALA:H	1.39	0.86
10:B:269:C:O2'	10:B:270:A:H5'	1.76	0.86
11:C:229:HIS:NE2	11:C:244:VAL:HG22	1.91	0.86
10:B:308:G:C6	10:B:309:A:C2	2.64	0.85
10:B:324:A:C2'	10:B:325:G:H5'	2.05	0.85
10:B:1534:U:H2'	10:B:1536:C:C2	2.11	0.85
29:U:44:HIS:HB3	29:U:56:GLY:C	2.01	0.85
4:3:11:LYS:HA	20:L:63:LYS:HG3	1.59	0.85
10:B:337:C:H5''	29:U:1:ALA:HA	1.56	0.85
10:B:1036:G:H2'	10:B:1037:G:H8	1.40	0.85
15:G:32:LEU:HD21	15:G:74:MET:HB3	1.57	0.85
10:B:278:A:C2	10:B:362:A:C8	2.63	0.85
10:B:301:G:N2	10:B:316:C:O2	2.08	0.85
10:B:1517:G:H2'	10:B:1518:C:H5'	1.57	0.85
10:B:1524:G:O2'	10:B:1525:A:H5'	1.75	0.85
29:U:46:LYS:CB	29:U:53:GLN:HE22	1.88	0.85
10:B:291:G:C6	10:B:292:U:C4	2.65	0.85
14:F:33:ILE:HG22	14:F:155:ILE:HG12	1.56	0.85
16:H:50:ARG:HB3	16:H:51:ARG:HB3	1.59	0.85
20:L:118:THR:HG23	20:L:119:PRO:HD3	1.59	0.85
4:3:7:ARG:HH21	4:3:11:LYS:HZ1	1.21	0.85
10:B:348:A:C6	10:B:349:U:C4	2.63	0.85
12:D:14:ILE:HA	12:D:19:GLY:HA2	1.58	0.85
13:E:18:THR:HG23	13:E:20:GLY:H	1.41	0.85
16:H:50:ARG:HE	16:H:54:LEU:HG	1.41	0.85
29:U:48:VAL:HB	29:U:54:PRO:CD	2.06	0.85
10:B:319:G:C2	10:B:320:A:C4	2.63	0.85
10:B:1477:A:H1'	10:B:1515:A:H2	1.39	0.85
16:H:84:ALA:HA	16:H:90:LEU:HG	1.59	0.85
24:P:24:THR:HG21	24:P:111:GLU:HG2	1.55	0.85
10:B:293:U:H3	10:B:347:A:H61	1.20	0.85
26:R:1:MET:HA	26:R:46:GLU:HB2	1.58	0.85
10:B:350:G:C5	10:B:351:C:C4	2.64	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1516:G:H2'	10:B:1517:G:C8	2.09	0.85
22:N:1:MET:HE3	22:N:3:HIS:H	1.40	0.85
10:B:285:G:H2'	10:B:286:U:H5'	1.58	0.85
10:B:528:A:N1	10:B:2042:A:H2'	1.91	0.85
10:B:1525:A:O2'	10:B:1526:C:H5'	1.76	0.85
14:F:115:GLY:HA3	14:F:177:ARG:HB2	1.58	0.85
21:M:69:PRO:HB3	21:M:93:VAL:HG12	1.58	0.85
34:Z:63:ARG:CZ	34:Z:63:ARG:HA	2.06	0.85
10:B:1063:G:O2'	10:B:1064:C:H5'	1.75	0.85
17:I:25:PRO:O	17:I:29:GLN:HG2	1.75	0.85
10:B:291:G:C5	10:B:292:U:C5	2.65	0.84
10:B:359:G:O2'	10:B:360:U:H5'	1.75	0.84
10:B:1476:U:N3	10:B:1516:G:N7	2.24	0.84
12:D:38:LYS:HG2	12:D:39:ASP:H	1.42	0.84
13:E:141:MET:SD	13:E:143:LEU:HB2	2.17	0.84
22:N:117:ASP:O	22:N:123:GLU:HB3	1.76	0.84
10:B:95:A:H4'	32:X:40:SER:HB2	1.57	0.84
10:B:297:G:H3'	10:B:298:G:C8	2.11	0.84
10:B:323:C:C5	10:B:333:G:C8	2.65	0.84
28:T:64:LYS:HB3	28:T:77:ARG:HD3	1.59	0.84
10:B:2578:G:C1'	12:D:145:SER:HB3	2.06	0.84
12:D:154:LYS:HZ3	12:D:157:LYS:H	1.24	0.84
15:G:19:ASN:HB3	15:G:22:VAL:HG13	1.59	0.84
25:Q:16:ILE:HD13	25:Q:34:ALA:HB2	1.57	0.84
10:B:27:G:H22	10:B:512:G:H2'	1.42	0.84
10:B:324:A:C6	10:B:325:G:C5	2.65	0.84
10:B:1064:C:O2'	10:B:1065:U:H5'	1.77	0.84
10:B:1075:C:O2'	10:B:1076:C:H5'	1.77	0.84
10:B:1526:C:N1	10:B:1527:G:C8	2.45	0.84
11:C:196:ASN:HB2	11:C:199:HIS:HD2	1.42	0.84
21:M:42:THR:HA	21:M:92:TRP:CD1	2.12	0.84
23:O:19:GLN:HA	31:W:76:ARG:HH22	1.42	0.84
10:B:342:A:N3	10:B:343:C:C6	2.45	0.84
10:B:855:G:N2	31:W:23:LYS:HD2	1.91	0.84
10:B:1092:C:O2'	10:B:1093:G:H5'	1.78	0.84
34:Z:32:LEU:HD11	34:Z:47:LYS:HG3	1.58	0.84
10:B:286:U:O2'	10:B:287:G:H5'	1.78	0.84
10:B:1063:G:H5''	17:I:76:ALA:CB	2.05	0.84
10:B:1113:U:OP1	15:G:2:ARG:HB2	1.76	0.84
12:D:16:THR:HG23	12:D:17:GLU:H	1.43	0.84
10:B:1530:G:N1	10:B:1541:C:N3	2.25	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:I:55:PRO:HD3	17:I:74:PRO:HD3	1.60	0.84
34:Z:41:HIS:HB2	34:Z:42:PRO:HD2	1.58	0.84
10:B:1059:G:H5'	17:I:117:THR:HG21	1.59	0.84
10:B:1639:C:H2'	10:B:1640:A:H5''	1.58	0.84
3:2:25:LYS:HD3	10:B:1368:G:H5'	1.59	0.84
12:D:62:LYS:HG2	12:D:63:PRO:HD3	1.60	0.84
10:B:278:A:C5	10:B:362:A:N7	2.46	0.84
10:B:352:A:C5	10:B:353:C:C4	2.66	0.84
10:B:1525:A:N1	10:B:1526:C:C2	2.45	0.84
12:D:8:LYS:HB3	24:P:5:LYS:HZ1	1.38	0.84
24:P:47:ILE:HG23	24:P:63:ILE:HG23	1.59	0.84
26:R:8:GLY:HA3	26:R:22:LEU:HD11	1.60	0.84
28:T:64:LYS:HE2	28:T:79:ASP:HB2	1.59	0.84
10:B:319:G:C2	10:B:320:A:N3	2.45	0.83
10:B:1062:G:H2'	10:B:1063:G:H8	1.43	0.83
12:D:119:ALA:HA	12:D:123:LYS:HE2	1.60	0.83
20:L:38:GLN:CD	20:L:39:LYS:H	1.86	0.83
10:B:84:A:OP2	29:U:91:LYS:CD	2.24	0.83
11:C:229:HIS:HE2	11:C:244:VAL:HG22	1.43	0.83
26:R:5:PHE:HA	26:R:40:MET:HG2	1.60	0.83
10:B:295:G:C6	10:B:344:A:C6	2.66	0.83
10:B:313:G:O2'	10:B:314:C:H5'	1.78	0.83
11:C:23:LEU:HD12	11:C:202:ARG:HH22	1.43	0.83
10:B:362:A:C4	10:B:363:G:C8	2.67	0.83
34:Z:33:ASN:HB2	34:Z:44:PHE:HB2	1.60	0.83
4:3:7:ARG:NH2	4:3:11:LYS:HZ1	1.76	0.83
10:B:2304:G:H22	10:B:2312:U:H3	1.25	0.83
29:U:39:ASN:ND2	29:U:60:LYS:C	2.35	0.83
31:W:28:GLU:H	31:W:61:LYS:HB2	1.44	0.83
5:4:32:LYS:HD2	10:B:2478:A:H5'	1.60	0.83
10:B:1476:U:C4	10:B:1516:G:N7	2.47	0.83
10:B:1520:U:O2'	10:B:1521:G:H5'	1.78	0.83
13:E:89:PRO:O	13:E:90:GLN:HG2	1.78	0.83
14:F:151:LEU:HD23	14:F:153:ILE:HD11	1.60	0.83
21:M:1:MET:HE3	21:M:2:LEU:HG	1.58	0.83
10:B:80:G:H2'	10:B:294:A:N3	1.92	0.83
10:B:80:G:C2'	10:B:294:A:N3	2.35	0.83
10:B:282:A:C2'	10:B:283:G:H5'	2.08	0.83
10:B:339:U:O2'	10:B:340:A:H5'	1.78	0.83
10:B:858:G:N3	10:B:2268:A:H2'	1.93	0.83
3:2:13:ASN:HA	3:2:18:PHE:HB2	1.60	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:295:G:C2	10:B:344:A:C2	2.67	0.83
10:B:299:A:C2	10:B:322:A:C8	2.67	0.83
32:X:22:LEU:HB3	32:X:26:PHE:HB2	1.61	0.83
6:5:331:LEU:HD12	6:5:388:ARG:HA	1.59	0.83
10:B:285:G:C2'	10:B:286:U:H5'	2.09	0.83
10:B:340:A:O2'	10:B:341:C:H5'	1.77	0.83
10:B:341:C:O2'	10:B:342:A:H5'	1.77	0.83
10:B:1117:C:N3	10:B:1118:C:N4	2.27	0.83
2:1:14:ALA:HA	2:1:48:TYR:HA	1.61	0.82
10:B:1036:G:O6	10:B:1120:G:O6	1.98	0.82
10:B:1104:C:O2'	10:B:1105:U:H5'	1.79	0.82
29:U:40:LEU:CD1	29:U:41:VAL:HG12	2.08	0.82
10:B:279:A:C2'	10:B:280:U:H5'	2.08	0.82
10:B:333:G:C4	10:B:334:C:C6	2.67	0.82
10:B:1063:G:H4'	17:I:76:ALA:CB	2.07	0.82
10:B:1064:C:H4'	17:I:88:GLY:H	1.44	0.82
13:E:153:LEU:H	13:E:171:ASP:HB3	1.42	0.82
20:L:29:LYS:HD2	20:L:31:GLY:H	1.42	0.82
10:B:299:A:C2	10:B:322:A:N7	2.47	0.82
10:B:320:A:H3'	13:E:132:LYS:HG2	1.61	0.82
10:B:323:C:C4	10:B:333:G:N7	2.46	0.82
10:B:2053:G:OP1	12:D:150:GLN:HA	1.77	0.82
28:T:58:VAL:HG13	28:T:85:VAL:HG12	1.61	0.82
30:V:77:VAL:HA	30:V:89:ILE:HG22	1.58	0.82
10:B:1038:G:C2	10:B:1039:A:C5	2.67	0.82
10:B:1099:G:O2'	10:B:1100:C:H5'	1.78	0.82
10:B:1444:G:C2	10:B:1548:A:C6	2.67	0.82
10:B:1454:C:H5'	22:N:63:ARG:HH21	1.41	0.82
10:B:1528:A:H2'	10:B:1529:G:H5'	1.60	0.82
28:T:96:VAL:HG22	28:T:97:GLY:H	1.41	0.82
1:0:52:LYS:CD	22:N:118:ARG:HD2	2.09	0.82
10:B:1519:G:C2'	10:B:1520:U:H5'	2.09	0.82
12:D:91:THR:HG23	12:D:92:VAL:HG12	1.61	0.82
4:3:24:LYS:HZ2	20:L:63:LYS:N	1.78	0.82
10:B:289:G:C5	10:B:290:U:C4	2.68	0.82
10:B:297:G:N2	10:B:341:C:O2	2.12	0.82
10:B:2393:U:H5''	20:L:62:PRO:HA	1.62	0.82
31:W:31:LEU:HD11	31:W:34:SER:HB2	1.62	0.82
10:B:276:U:O2'	10:B:277:G:H5''	1.80	0.82
10:B:340:A:H2'	10:B:341:C:O4'	1.80	0.82
10:B:1439:A:C6	10:B:1552:A:C8	2.62	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:R:37:GLU:HG2	26:R:62:GLU:H	1.44	0.82
1:0:52:LYS:HD2	22:N:118:ARG:HD2	1.57	0.82
10:B:1524:G:C2'	10:B:1525:A:H8	1.93	0.82
31:W:40:ARG:NH1	31:W:68:PHE:HA	1.95	0.82
6:5:360:ILE:HG13	6:5:363:ASN:HD21	1.45	0.82
10:B:299:A:C4	10:B:322:A:C6	2.67	0.82
10:B:1115:G:C4	10:B:1116:G:N7	2.47	0.82
10:B:1516:G:C2	10:B:1517:G:C8	2.67	0.82
4:3:12:ARG:NH1	4:3:12:ARG:HB2	1.95	0.82
10:B:319:G:C6	10:B:320:A:C6	2.66	0.82
10:B:662:G:H4'	20:L:24:GLY:H	1.43	0.82
10:B:2867:G:H2'	10:B:2867:G:N3	1.93	0.82
31:W:27:GLY:HA2	31:W:60:ALA:HA	1.61	0.82
16:H:5:LEU:HD22	16:H:5:LEU:H	1.44	0.81
23:O:19:GLN:H	31:W:76:ARG:HH12	1.28	0.81
26:R:65:ALA:HB3	26:R:99:THR:H	1.45	0.81
32:X:24:GLU:HA	32:X:28:LEU:HB2	1.60	0.81
10:B:1474:U:O2	10:B:1517:G:N1	2.13	0.81
15:G:20:GLY:HA2	15:G:41:GLU:HG2	1.62	0.81
1:0:52:LYS:CD	22:N:118:ARG:HD3	2.10	0.81
10:B:80:G:O2'	10:B:294:A:N3	2.06	0.81
10:B:423:A:H5'	10:B:424:G:H5''	1.62	0.81
10:B:1077:A:O2'	10:B:1078:U:H5'	1.78	0.81
10:B:1115:G:N1	10:B:1116:G:C5	2.49	0.81
10:B:1530:G:N2	10:B:1541:C:O2	2.12	0.81
10:B:2575:C:H4'	12:D:149:ASN:N	1.95	0.81
11:C:23:LEU:H	11:C:202:ARG:NH2	1.77	0.81
13:E:73:ILE:C	13:E:75:SER:H	1.88	0.81
14:F:7:TYR:HA	14:F:11:VAL:HB	1.60	0.81
22:N:96:ARG:CD	22:N:119:SER:C	2.38	0.81
23:O:1:MET:HG2	23:O:3:LYS:H	1.43	0.81
24:P:9:GLN:HB3	24:P:56:SER:HB2	1.62	0.81
10:B:444:C:O2'	13:E:47:LYS:HE2	1.81	0.81
10:B:1178:C:H2'	10:B:1179:G:C8	2.16	0.81
10:B:1533:C:O2	10:B:1538:G:N2	2.13	0.81
17:I:89:SER:HA	17:I:97:VAL:HG21	1.62	0.81
17:I:106:GLN:O	17:I:110:GLN:HG3	1.81	0.81
31:W:40:ARG:HH12	31:W:68:PHE:HA	1.44	0.81
4:3:24:LYS:HZ3	4:3:29:ARG:HH22	1.28	0.81
10:B:322:A:C2	10:B:340:A:N1	2.48	0.81
10:B:338:G:C2'	10:B:339:U:H5'	2.09	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1034:G:C6	10:B:1035:U:N3	2.49	0.81
10:B:1077:A:C2'	10:B:1078:U:H5'	2.09	0.81
16:H:3:VAL:HB	16:H:37:VAL:CB	2.10	0.81
26:R:1:MET:HA	26:R:46:GLU:CB	2.11	0.81
6:5:342:LYS:HE2	6:5:342:LYS:HA	1.62	0.81
10:B:291:G:C4	10:B:350:G:C2	2.69	0.81
10:B:1058:U:O2'	10:B:1059:G:H5'	1.78	0.81
10:B:1553:A:O2'	10:B:1554:U:C6	2.34	0.81
21:M:70:ASP:N	21:M:71:LYS:HZ2	1.77	0.81
10:B:311:A:C8	10:B:332:A:N7	2.49	0.81
11:C:30:ALA:H	11:C:31:PRO:CD	1.93	0.81
21:M:126:ILE:HG13	21:M:127:LYS:H	1.43	0.81
10:B:295:G:C4	10:B:344:A:C2	2.68	0.81
10:B:1528:A:H8	10:B:1529:G:C8	1.97	0.81
27:S:27:LYS:H	27:S:27:LYS:HD2	1.46	0.81
10:B:1525:A:C2	10:B:1526:C:N1	2.48	0.81
10:B:2572:A:N7	12:D:150:GLN:HB2	1.96	0.81
21:M:108:VAL:HG23	21:M:112:LEU:HD11	1.63	0.81
25:Q:93:ILE:HG23	25:Q:94:LEU:HD13	1.61	0.81
10:B:284:U:O2	10:B:356:G:N2	2.14	0.81
18:J:135:GLN:HG2	18:J:137:PRO:HD2	1.61	0.81
21:M:32:GLY:H	21:M:128:THR:HG22	1.44	0.81
31:W:43:LYS:HG2	31:W:76:ARG:HH21	1.44	0.81
10:B:332:A:C6	10:B:335:C:N3	2.48	0.80
10:B:1064:C:H4'	17:I:88:GLY:N	1.96	0.80
14:F:107:VAL:N	14:F:108:PRO:HD2	1.95	0.80
19:K:71:ARG:CB	19:K:72:PRO:HD2	2.10	0.80
20:L:117:THR:HG21	20:L:120:VAL:HB	1.61	0.80
25:Q:16:ILE:HD12	25:Q:17:LEU:N	1.95	0.80
29:U:45:GLN:O	29:U:47:PRO:HD3	1.81	0.80
29:U:48:VAL:HB	29:U:54:PRO:HD2	1.61	0.80
4:3:24:LYS:HA	4:3:45:PRO:HB3	1.61	0.80
10:B:1048:A:C6	10:B:1049:C:C4	2.68	0.80
12:D:120:GLY:H	12:D:123:LYS:HG3	1.47	0.80
21:M:67:VAL:HB	21:M:100:LYS:HG2	1.62	0.80
10:B:291:G:N1	10:B:350:G:C5	2.49	0.80
12:D:62:LYS:HG2	12:D:63:PRO:CD	2.10	0.80
10:B:275:C:C2'	10:B:276:U:H6	1.94	0.80
10:B:1034:G:C5	10:B:1035:U:C4	2.69	0.80
10:B:1079:C:H2'	10:B:1080:A:C8	2.15	0.80
10:B:2618:G:H21	12:D:155:VAL:HG21	1.45	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:C:155:ARG:HE	11:C:157:ALA:HB3	1.44	0.80
17:I:122:GLU:O	17:I:126:ARG:HG3	1.82	0.80
10:B:1050:A:H1'	10:B:2751:G:C5	2.17	0.80
10:B:1055:G:O2'	10:B:1056:G:H5'	1.82	0.80
10:B:1542:U:C2'	10:B:1543:G:H8	1.93	0.80
16:H:50:ARG:CB	16:H:51:ARG:HD3	2.12	0.80
23:O:49:VAL:HG22	23:O:50:ALA:H	1.47	0.80
10:B:364:C:H2'	10:B:365:U:C5	2.17	0.80
10:B:1513:U:C3'	10:B:1514:G:H5''	2.10	0.80
21:M:107:GLY:C	21:M:109:PRO:HD2	2.06	0.80
26:R:54:VAL:CB	26:R:54:VAL:H	1.87	0.80
10:B:285:G:N1	10:B:286:U:C2	2.50	0.80
10:B:286:U:H2'	10:B:287:G:H8	1.45	0.80
10:B:1526:C:H2'	10:B:1527:G:H8	1.45	0.80
29:U:42:LYS:HE3	29:U:43:LYS:N	1.96	0.80
6:5:412:ASP:HA	6:5:415:ARG:HH12	1.46	0.80
10:B:311:A:N6	10:B:328:U:H2'	1.97	0.80
10:B:332:A:C6	10:B:335:C:C2	2.69	0.80
10:B:1040:A:H2	10:B:1115:G:H1	1.23	0.80
10:B:1107:G:O2'	10:B:1108:U:H5'	1.82	0.80
14:F:34:THR:HG23	14:F:89:THR:HG22	1.63	0.80
16:H:73:ASN:N	16:H:73:ASN:HD22	1.80	0.80
16:H:128:HIS:HB3	16:H:144:VAL:HB	1.64	0.80
10:B:280:U:C6	10:B:281:C:C6	2.70	0.80
10:B:287:G:N2	10:B:353:C:O2	2.15	0.80
10:B:294:A:N6	10:B:345:A:O4'	2.15	0.80
10:B:313:G:N1	10:B:314:C:N3	2.29	0.80
11:C:77:VAL:HG21	11:C:109:LEU:HG	1.64	0.80
10:B:38:A:H2'	10:B:39:G:O4'	1.82	0.79
10:B:543:G:H2'	10:B:544:C:H5''	1.64	0.79
10:B:1093:G:O2'	10:B:1094:U:H5'	1.82	0.79
20:L:27:LEU:H	20:L:27:LEU:HD12	1.46	0.79
26:R:47:VAL:HG13	26:R:49:ILE:H	1.46	0.79
10:B:855:G:H21	31:W:23:LYS:HD2	1.45	0.79
10:B:1070:A:H1'	17:I:9:LYS:HZ1	1.46	0.79
10:B:1118:C:O2'	10:B:1119:U:H5'	1.81	0.79
10:B:1531:C:O2	10:B:1540:G:N2	2.13	0.79
23:O:50:ALA:HB2	23:O:83:LEU:HD11	1.64	0.79
27:S:89:ALA:HA	27:S:90:LYS:NZ	1.97	0.79
33:Y:15:ARG:HE	33:Y:15:ARG:N	1.79	0.79
10:B:28:A:H61	10:B:512:G:H1'	1.46	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:285:G:C5	10:B:286:U:C4	2.71	0.79
20:L:67:THR:HG23	20:L:68:SER:H	1.45	0.79
22:N:32:GLU:CA	22:N:115:LEU:HD21	2.11	0.79
4:3:11:LYS:HG2	4:3:12:ARG:HG3	1.61	0.79
5:4:3:VAL:HB	5:4:35:GLN:HA	1.62	0.79
11:C:140:VAL:O	11:C:193:GLU:HB2	1.83	0.79
23:O:64:TYR:HE2	23:O:74:VAL:HG11	1.47	0.79
10:B:304:U:H2'	10:B:305:C:C6	2.18	0.79
10:B:312:G:O2'	10:B:331:C:N4	2.15	0.79
10:B:1102:C:H2'	10:B:1103:A:H8	1.45	0.79
10:B:1131:G:H1'	10:B:1133:A:H62	1.46	0.79
10:B:1526:C:C5	10:B:1527:G:N7	2.50	0.79
26:R:53:PHE:HB3	26:R:55:ASP:H	1.47	0.79
10:B:1061:U:O4'	17:I:9:LYS:NZ	2.15	0.79
10:B:1540:G:C6	10:B:1541:C:C5	2.71	0.79
16:H:37:VAL:H	16:H:38:PRO:HD2	1.47	0.79
20:L:38:GLN:H	20:L:41:ARG:HH11	1.29	0.79
31:W:16:GLU:HG2	31:W:37:VAL:HG22	1.64	0.79
5:4:24:ARG:HG2	5:4:26:ILE:HG12	1.64	0.79
12:D:2:ILE:HG13	12:D:3:GLY:H	1.48	0.79
10:B:280:U:H2'	10:B:281:C:C6	2.18	0.79
10:B:1528:A:N1	10:B:1544:A:C8	2.50	0.79
16:H:50:ARG:HH21	16:H:54:LEU:HG	1.47	0.79
16:H:50:ARG:NE	16:H:54:LEU:HG	1.98	0.79
22:N:123:GLU:HG3	22:N:124:ALA:H	1.48	0.79
28:T:61:LEU:HD12	28:T:62:VAL:H	1.47	0.79
33:Y:7:THR:HA	33:Y:34:THR:HA	1.63	0.79
4:3:31:ILE:HG22	4:3:32:LEU:HG	1.64	0.79
10:B:2287:A:O2'	10:B:2288:A:H2'	1.83	0.79
15:G:157:LYS:HB2	15:G:159:LYS:HG2	1.64	0.79
16:H:50:ARG:HB3	16:H:51:ARG:CB	2.12	0.79
26:R:53:PHE:CB	26:R:55:ASP:H	1.96	0.79
31:W:17:ALA:HA	31:W:35:ILE:O	1.83	0.79
10:B:1528:A:C2'	10:B:1529:G:H5'	2.13	0.79
10:B:1544:A:C6	10:B:1545:A:C6	2.71	0.79
25:Q:88:GLU:HA	26:R:53:PHE:CD1	2.18	0.79
27:S:71:VAL:HA	27:S:106:VAL:O	1.82	0.79
5:4:14:CYS:HA	5:4:26:ILE:O	1.82	0.78
6:5:425:ARG:NE	10:B:490:C:H5	1.75	0.78
10:B:1073:A:C2'	10:B:1074:G:H5'	2.13	0.78
10:B:1475:G:O2'	10:B:1514:G:C6	2.37	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:D:151:THR:O	12:D:152:PRO:C	2.26	0.78
10:B:1036:G:O2'	10:B:1037:G:H5'	1.83	0.78
10:B:1524:G:C2	10:B:1525:A:N9	2.51	0.78
10:B:1535:A:O2'	10:B:1536:C:H5'	1.83	0.78
10:B:2795:C:H2'	10:B:2796:U:O4'	1.82	0.78
11:C:153:LEU:HD23	11:C:153:LEU:H	1.49	0.78
21:M:71:LYS:HD3	21:M:92:TRP:N	1.98	0.78
10:B:65:U:H4'	28:T:70:HIS:HD1	1.48	0.78
10:B:328:U:O2'	29:U:65:GLN:HB3	1.82	0.78
21:M:77:PRO:HD3	21:M:86:LYS:HD3	1.65	0.78
28:T:24:MET:HG3	28:T:28:ASN:HA	1.65	0.78
10:B:310:A:C2	10:B:312:G:H1'	2.18	0.78
10:B:997:G:H4'	25:Q:91:ARG:HE	1.47	0.78
10:B:2839:G:H21	22:N:92:GLY:HA3	1.49	0.78
15:G:71:LEU:HA	15:G:74:MET:SD	2.23	0.78
22:N:96:ARG:HH22	22:N:116:VAL:C	1.90	0.78
10:B:1073:A:H2'	10:B:1074:G:H5'	1.66	0.78
10:B:1098:A:C2'	10:B:1099:G:H5'	2.13	0.78
10:B:1117:C:C2	10:B:1118:C:C4	2.71	0.78
10:B:1524:G:H21	10:B:1525:A:H1'	1.46	0.78
13:E:120:VAL:H	13:E:189:THR:HG23	1.47	0.78
24:P:49:ILE:C	24:P:50:ARG:HG3	2.06	0.78
28:T:11:LEU:HB2	28:T:32:LEU:HD23	1.65	0.78
10:B:311:A:N1	10:B:328:U:C5	2.52	0.78
10:B:313:G:N1	10:B:314:C:C2	2.51	0.78
10:B:1524:G:C2	10:B:1525:A:C4	2.70	0.78
12:D:5:VAL:HG11	12:D:28:GLU:HA	1.64	0.78
12:D:22:ILE:N	12:D:23:PRO:HD3	1.97	0.78
13:E:84:THR:HG23	13:E:85:PHE:H	1.48	0.78
10:B:1526:C:O2'	10:B:1527:G:H5'	1.83	0.78
10:B:1062:G:H22	17:I:134:SER:HB3	1.45	0.78
10:B:1243:C:O2'	20:L:15:ALA:HB3	1.83	0.78
10:B:333:G:C6	10:B:334:C:C5	2.71	0.78
10:B:339:U:C2'	10:B:340:A:H5'	2.14	0.78
10:B:1024:G:H3'	10:B:1025:G:H5''	1.64	0.78
10:B:1115:G:C2	10:B:1116:G:C8	2.70	0.78
10:B:1174:U:H4'	10:B:1176:U:H3	1.46	0.78
23:O:67:ASN:HA	23:O:71:ALA:HB3	1.66	0.78
27:S:24:ILE:HD13	27:S:36:LEU:HD21	1.65	0.78
31:W:49:ASN:HB2	31:W:53:GLY:HA3	1.64	0.78
10:B:287:G:O2'	10:B:288:U:H5'	1.83	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:C:50:THR:HG22	11:C:51:ARG:HG3	1.63	0.78
21:M:100:LYS:HE3	21:M:100:LYS:H	1.49	0.78
10:B:270:A:N1	10:B:370:G:C6	2.42	0.77
10:B:291:G:C5	10:B:350:G:C5	2.67	0.77
10:B:327:G:O6	10:B:336:C:N4	2.16	0.77
10:B:333:G:C2	10:B:334:C:C5	2.72	0.77
10:B:1086:A:H3'	10:B:1086:A:N3	1.99	0.77
10:B:1515:A:H2'	10:B:1516:G:C8	2.19	0.77
10:B:1525:A:N1	10:B:1526:C:N3	2.31	0.77
11:C:87:SER:O	11:C:157:ALA:HB2	1.84	0.77
22:N:96:ARG:NE	22:N:118:ARG:O	2.09	0.77
24:P:13:LYS:HZ2	24:P:17:PRO:HG3	1.49	0.77
24:P:13:LYS:NZ	24:P:17:PRO:HG3	1.98	0.77
31:W:28:GLU:HB3	31:W:30:VAL:HG23	1.63	0.77
10:B:298:G:H5''	10:B:299:A:OP1	1.84	0.77
10:B:303:G:C2	10:B:304:U:C2	2.73	0.77
10:B:1098:A:O2'	10:B:1099:G:H5'	1.84	0.77
10:B:1520:U:H2'	10:B:1521:G:H5'	1.65	0.77
10:B:1533:C:H2'	10:B:1534:U:C6	2.19	0.77
18:J:7:LYS:HD3	18:J:48:VAL:HB	1.66	0.77
23:O:48:LEU:HD23	23:O:49:VAL:H	1.49	0.77
1:O:50:GLY:CA	22:N:118:ARG:HH21	1.98	0.77
10:B:319:G:N1	10:B:320:A:C2	2.52	0.77
12:D:1:MET:HE3	12:D:84:LEU:HD13	1.65	0.77
12:D:128:ARG:HD2	12:D:144:GLY:HA3	1.66	0.77
18:J:49:ASP:HA	18:J:114:LEU:HD11	1.64	0.77
20:L:56:PRO:HA	20:L:60:ARG:NH2	1.99	0.77
24:P:59:THR:HG23	24:P:76:HIS:CD2	2.19	0.77
29:U:44:HIS:HE1	29:U:47:PRO:CG	1.97	0.77
1:O:45:ASP:HB2	1:O:47:TYR:CD1	2.19	0.77
3:2:44:VAL:HG23	3:2:45:SER:H	1.49	0.77
4:3:34:LYS:HB2	10:B:2420:C:OP1	1.85	0.77
10:B:322:A:C2	10:B:340:A:C2	2.72	0.77
14:F:12:VAL:HG13	14:F:27:VAL:HG21	1.66	0.77
22:N:114:GLU:HG2	22:N:115:LEU:H	1.47	0.77
24:P:26:GLU:HA	24:P:47:ILE:H	1.49	0.77
2:1:31:GLU:HG3	2:1:32:LYS:H	1.49	0.77
10:B:972:A:H3'	10:B:973:A:H5''	1.65	0.77
2:1:53:ILE:HD13	2:1:54:LYS:N	1.99	0.77
10:B:80:G:C4'	10:B:346:A:C6	2.59	0.77
10:B:319:G:N2	10:B:320:A:N3	2.32	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:359:G:C2'	10:B:360:U:H5'	2.13	0.77
10:B:742:A:H2'	10:B:743:A:H8	1.50	0.77
17:I:27:LEU:HD12	17:I:32:VAL:HG11	1.65	0.77
26:R:74:ILE:HA	26:R:90:ARG:NE	1.97	0.77
5:4:25:VAL:HB	5:4:33:HIS:O	1.84	0.77
6:5:394:ILE:HA	6:5:398:ARG:HD2	1.64	0.77
10:B:336:C:H5''	29:U:81:ARG:CZ	2.14	0.77
10:B:1275:A:H3'	10:B:1275:A:N3	1.99	0.77
21:M:65:ILE:HG22	21:M:101:VAL:HA	1.66	0.77
22:N:19:ALA:HA	22:N:22:ARG:HG2	1.65	0.77
1:0:52:LYS:HA	1:0:52:LYS:NZ	1.98	0.77
6:5:364:VAL:HG13	29:U:51:LEU:HA	1.67	0.77
10:B:1050:A:C1'	10:B:2751:G:C4	2.66	0.77
10:B:1526:C:C2'	10:B:1527:G:H8	1.97	0.77
11:C:216:ARG:HB3	11:C:216:ARG:HH11	1.49	0.77
28:T:88:LYS:HG2	28:T:89:GLU:H	1.49	0.77
10:B:296:U:O2'	10:B:297:G:H5'	1.83	0.77
10:B:1105:U:H2'	10:B:1106:G:H8	1.46	0.77
11:C:128:THR:HA	11:C:190:THR:HA	1.67	0.77
17:I:63:ASP:O	17:I:64:ARG:HG3	1.84	0.77
10:B:333:G:N3	10:B:334:C:C5	2.50	0.77
10:B:348:A:N1	10:B:349:U:N3	2.33	0.77
10:B:443:A:H5''	13:E:44:ARG:HH12	1.50	0.77
10:B:1061:U:O4	17:I:9:LYS:HB2	1.83	0.77
12:D:138:LEU:HD23	12:D:138:LEU:N	1.99	0.77
17:I:109:ALA:HB1	17:I:124:MET:HG3	1.66	0.77
20:L:103:ILE:HD13	20:L:105:ILE:H	1.50	0.77
21:M:3:GLN:O	21:M:5:LYS:N	2.17	0.77
22:N:24:MET:HE3	22:N:44:LEU:HD22	1.66	0.77
22:N:96:ARG:HD3	22:N:120:GLU:N	1.99	0.77
5:4:24:ARG:HH12	5:4:36:ARG:HB2	1.48	0.76
10:B:269:C:H2'	10:B:270:A:H8	1.49	0.76
10:B:299:A:C4	10:B:322:A:C5	2.73	0.76
10:B:2346:A:H3'	10:B:2347:C:H5''	1.67	0.76
12:D:154:LYS:NZ	12:D:156:PHE:HA	2.00	0.76
16:H:21:VAL:HG22	16:H:22:LYS:H	1.48	0.76
10:B:283:G:C4	10:B:284:U:C5	2.72	0.76
10:B:299:A:C2	10:B:322:A:C5	2.72	0.76
10:B:1476:U:H2'	10:B:1514:G:N2	2.00	0.76
10:B:2469:A:H4'	21:M:55:ARG:HG3	1.67	0.76
10:B:2723:C:H5''	22:N:3:HIS:HB2	1.66	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:J:57:LEU:HB3	18:J:128:ASN:HA	1.68	0.76
20:L:80:SER:HB2	20:L:113:ALA:H	1.49	0.76
22:N:29:VAL:HG21	22:N:75:ILE:HD11	1.66	0.76
25:Q:93:ILE:HG23	25:Q:94:LEU:H	1.49	0.76
10:B:954:G:OP1	21:M:17:ASN:HB2	1.86	0.76
11:C:257:ARG:O	11:C:261:ARG:HG3	1.85	0.76
19:K:35:VAL:HG23	19:K:36:GLY:H	1.49	0.76
27:S:18:ARG:HH12	27:S:25:ARG:NH2	1.83	0.76
30:V:80:HIS:HD2	30:V:82:TYR:H	1.32	0.76
10:B:162:U:H4'	10:B:163:C:OP1	1.86	0.76
10:B:342:A:C6	10:B:343:C:H5	2.03	0.76
10:B:356:G:N7	10:B:357:C:N4	2.32	0.76
10:B:1063:G:C2'	10:B:1064:C:H5'	2.15	0.76
10:B:1549:A:H2'	10:B:1550:C:C6	2.20	0.76
10:B:1551:A:H5''	10:B:1552:A:OP2	1.84	0.76
24:P:52:ARG:O	24:P:60:VAL:HG21	1.85	0.76
27:S:10:ALA:O	27:S:11:ARG:HB3	1.85	0.76
5:4:4:ARG:O	5:4:4:ARG:HG2	1.85	0.76
10:B:1076:C:C1'	17:I:92:PRO:CD	2.63	0.76
21:M:70:ASP:H	21:M:71:LYS:HZ2	1.30	0.76
34:Z:5:ILE:HB	34:Z:51:VAL:CG1	2.15	0.76
10:B:288:U:H2'	10:B:289:G:H8	1.46	0.76
10:B:370:G:O2'	10:B:423:A:H3'	1.86	0.76
10:B:703:U:H2'	10:B:704:G:O4'	1.86	0.76
10:B:1034:G:C6	10:B:1035:U:C4	2.74	0.76
10:B:1039:A:N1	10:B:1040:A:C6	2.54	0.76
10:B:1041:G:N2	10:B:1114:C:O2	2.18	0.76
10:B:1177:G:H2'	10:B:1178:C:C6	2.20	0.76
10:B:1519:G:C5	10:B:1520:U:C6	2.71	0.76
18:J:101:ILE:HG23	18:J:102:GLU:H	1.50	0.76
23:O:19:GLN:HA	31:W:76:ARG:NH2	1.98	0.76
31:W:6:GLY:C	31:W:8:SER:H	1.94	0.76
33:Y:16:LEU:HB2	33:Y:17:PRO:CD	2.13	0.76
10:B:291:G:C5	10:B:292:U:C4	2.74	0.76
10:B:335:C:H2'	10:B:336:C:C5	2.20	0.76
10:B:2576:G:N2	12:D:149:ASN:HD21	1.82	0.76
10:B:2674:G:H4'	19:K:30:ARG:HG2	1.67	0.76
12:D:17:GLU:HB2	24:P:80:VAL:HG21	1.67	0.76
15:G:153:PRO:HG2	15:G:162:ARG:HB3	1.68	0.76
32:X:36:GLN:HE22	32:X:38:GLN:NE2	1.84	0.76
2:1:9:LYS:HG2	4:3:34:LYS:NZ	2.00	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:F:36:ASN:HB2	14:F:87:LYS:HA	1.66	0.76
18:J:71:ASP:CG	18:J:72:LYS:N	2.39	0.76
22:N:96:ARG:HH22	22:N:118:ARG:N	1.68	0.76
2:1:42:VAL:HG12	2:1:43:ARG:NE	2.00	0.76
10:B:299:A:H1'	10:B:322:A:C6	2.21	0.76
10:B:306:U:H2'	10:B:307:G:C8	2.21	0.76
10:B:345:A:OP1	10:B:345:A:H3'	1.86	0.76
10:B:692:C:C5'	11:C:42:ARG:HB2	2.15	0.76
10:B:1526:C:H2'	10:B:1527:G:C8	2.20	0.76
18:J:75:TYR:HA	18:J:86:GLN:O	1.84	0.76
22:N:70:THR:HG21	22:N:75:ILE:HG22	1.68	0.76
34:Z:3:LYS:HG2	34:Z:8:LYS:HA	1.68	0.76
10:B:858:G:H21	10:B:2268:A:H3'	1.51	0.76
10:B:1077:A:H2'	10:B:1078:U:H5'	1.68	0.76
10:B:1519:G:C4	10:B:1520:U:H6	1.94	0.76
10:B:2086:U:H2'	10:B:2087:G:C8	2.21	0.76
29:U:7:ASP:CA	29:U:24:VAL:HA	2.15	0.76
12:D:18:ASP:HB3	12:D:20:VAL:HG22	1.68	0.75
14:F:64:PRO:HA	14:F:88:VAL:HG22	1.68	0.75
16:H:44:ILE:HG22	16:H:47:PHE:HE1	1.50	0.75
29:U:40:LEU:HD13	29:U:41:VAL:HG12	1.68	0.75
4:3:41:ARG:HD3	4:3:43:LEU:H	1.49	0.75
10:B:324:A:N3	10:B:325:G:C8	2.54	0.75
10:B:812:C:H5'	20:L:32:GLY:HA2	1.67	0.75
10:B:919:U:H2'	10:B:920:A:C8	2.21	0.75
10:B:1062:G:N2	17:I:134:SER:CB	1.91	0.75
10:B:1524:G:N2	10:B:1525:A:H1'	2.01	0.75
11:C:224:MET:HA	11:C:232:GLY:HA2	1.68	0.75
12:D:107:VAL:HA	12:D:205:PRO:O	1.85	0.75
24:P:47:ILE:HG22	24:P:48:ALA:N	2.01	0.75
10:B:319:G:C2	10:B:320:A:C2	2.75	0.75
10:B:2239:G:H5'	11:C:246:PRO:CD	2.16	0.75
12:D:154:LYS:C	12:D:156:PHE:H	1.91	0.75
17:I:14:ALA:HA	17:I:45:THR:HG21	1.68	0.75
10:B:289:G:C2'	10:B:290:U:H5'	2.17	0.75
10:B:2563:U:H5''	19:K:27:GLY:HA2	1.68	0.75
16:H:50:ARG:NH2	16:H:54:LEU:HG	2.00	0.75
10:B:317:G:C4	10:B:318:C:C6	2.74	0.75
10:B:751:A:H5'	27:S:90:LYS:HE2	1.67	0.75
10:B:1074:G:O2'	10:B:1075:C:H5'	1.86	0.75
10:B:1113:U:O2'	10:B:1114:C:H5'	1.86	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:G:120:ILE:HG12	15:G:140:ILE:HG22	1.68	0.75
16:H:50:ARG:HH21	16:H:54:LEU:CG	1.99	0.75
17:I:89:SER:HB2	17:I:136:GLY:HA3	1.68	0.75
20:L:27:LEU:C	20:L:29:LYS:H	1.93	0.75
24:P:25:VAL:HG11	24:P:87:ARG:HA	1.68	0.75
32:X:38:GLN:NE2	32:X:38:GLN:H	1.84	0.75
10:B:742:A:H2'	10:B:743:A:C8	2.21	0.75
10:B:1048:A:C6	10:B:1111:A:C2	2.74	0.75
10:B:1064:C:H4'	17:I:88:GLY:HA3	1.69	0.75
12:D:159:LYS:HD2	12:D:161:MET:HE3	1.69	0.75
16:H:82:SER:N	16:H:146:VAL:HG13	2.00	0.75
18:J:81:ILE:HG23	18:J:82:GLY:N	1.99	0.75
20:L:61:LEU:HB3	20:L:62:PRO:CD	2.06	0.75
23:O:68:LYS:HD3	23:O:68:LYS:N	2.02	0.75
10:B:28:A:N6	10:B:512:G:H1'	2.02	0.75
10:B:140:C:H4'	10:B:141:G:H21	1.51	0.75
10:B:2052:A:H5'	12:D:148:GLN:C	2.12	0.75
11:C:179:GLU:HG3	11:C:266:ILE:HG22	1.67	0.75
13:E:59:PRO:HD2	13:E:60:TRP:NE1	2.01	0.75
21:M:23:GLY:N	21:M:96:ILE:HD12	2.00	0.75
10:B:301:G:C5	10:B:317:G:C5	2.75	0.75
10:B:479:A:O2'	10:B:481:G:H5'	1.86	0.75
10:B:508:A:H2'	10:B:509:C:H5'	1.69	0.75
10:B:1115:G:C6	10:B:1116:G:N7	2.55	0.75
22:N:116:VAL:N	22:N:119:SER:OG	2.19	0.75
26:R:53:PHE:CB	26:R:55:ASP:N	2.47	0.75
2:1:12:SER:HB2	2:1:21:THR:O	1.87	0.75
10:B:283:G:C5	10:B:284:U:C4	2.74	0.75
17:I:20:SER:HB3	17:I:21:PRO:HD3	1.67	0.75
18:J:24:THR:C	18:J:25:LEU:HD22	2.12	0.75
19:K:101:GLY:O	19:K:119:ALA:HB1	1.87	0.75
10:B:125:A:H3'	10:B:126:A:C5'	2.17	0.74
32:X:14:LEU:O	32:X:17:GLU:HB2	1.87	0.74
6:5:364:VAL:HG21	29:U:51:LEU:HB2	1.61	0.74
10:B:1549:A:O3'	10:B:1740:G:N2	2.19	0.74
10:B:1553:A:C5	10:B:1555:G:C5	2.74	0.74
11:C:127:ASN:HD22	11:C:128:THR:H	1.35	0.74
17:I:89:SER:HA	17:I:97:VAL:CG2	2.17	0.74
20:L:82:LEU:HD21	20:L:92:LEU:HD12	1.68	0.74
20:L:117:THR:HG21	20:L:120:VAL:CB	2.16	0.74
26:R:69:GLY:HA2	26:R:96:VAL:HA	1.69	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:Z:55:GLY:HA2	34:Z:63:ARG:HG3	1.69	0.74
1:O:39:ARG:HB3	1:O:39:ARG:HH11	1.52	0.74
10:B:275:C:H2'	10:B:276:U:C6	2.19	0.74
10:B:289:G:H2'	10:B:290:U:C6	2.22	0.74
10:B:1084:A:C2'	10:B:1085:A:H5'	2.17	0.74
10:B:1469:A:H2'	10:B:1470:A:C8	2.22	0.74
10:B:1521:G:H2'	10:B:1522:A:C8	2.21	0.74
16:H:50:ARG:HH21	16:H:54:LEU:CD1	2.00	0.74
18:J:39:LYS:HZ1	25:Q:69:ARG:HD2	1.51	0.74
30:V:35:GLU:HG3	30:V:93:ARG:HD3	1.69	0.74
10:B:297:G:H2'	10:B:298:G:C1'	2.17	0.74
10:B:346:A:N1	10:B:347:A:N7	2.36	0.74
10:B:1255:U:H2'	13:E:67:ARG:HB3	1.68	0.74
10:B:1477:A:O4'	10:B:1515:A:C2	2.33	0.74
12:D:110:THR:HG22	12:D:171:THR:HA	1.67	0.74
28:T:1:MET:HE3	28:T:2:ILE:HB	1.68	0.74
30:V:79:ARG:HA	30:V:86:LEU:HA	1.69	0.74
31:W:39:GLN:HA	31:W:68:PHE:HA	1.68	0.74
10:B:135:U:H2'	10:B:136:G:C8	2.23	0.74
10:B:285:G:C6	10:B:356:G:C2	2.76	0.74
10:B:298:G:N2	10:B:340:A:H62	1.85	0.74
10:B:326:G:N1	10:B:327:G:C5	2.56	0.74
10:B:1048:A:H2'	10:B:1049:C:H5'	1.70	0.74
10:B:1059:G:C4'	17:I:117:THR:H	1.99	0.74
10:B:1064:C:H4'	17:I:88:GLY:CA	2.18	0.74
10:B:1178:C:H2'	10:B:1179:G:H8	1.53	0.74
10:B:1544:A:C2	10:B:1545:A:C4	2.76	0.74
11:C:117:SER:HB3	11:C:127:ASN:CG	2.12	0.74
21:M:69:PRO:HB2	21:M:71:LYS:NZ	2.02	0.74
10:B:107:G:O2'	10:B:293:U:O2'	1.80	0.74
10:B:150:U:H2'	10:B:151:C:C6	2.23	0.74
10:B:285:G:C2	10:B:286:U:N1	2.56	0.74
10:B:322:A:N3	10:B:340:A:C2	2.56	0.74
10:B:348:A:H2'	10:B:349:U:C6	2.22	0.74
10:B:450:G:H4'	13:E:47:LYS:HZ2	1.51	0.74
10:B:1528:A:H2'	10:B:1529:G:C5'	2.16	0.74
11:C:50:THR:C	11:C:51:ARG:HG3	2.12	0.74
13:E:60:TRP:NE1	13:E:73:ILE:HD11	2.03	0.74
13:E:105:LEU:HD22	13:E:177:PRO:HG2	1.70	0.74
17:I:7:TYR:HB2	17:I:58:ILE:O	1.87	0.74
29:U:41:VAL:HG22	29:U:42:LYS:N	2.03	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:U:42:LYS:HA	29:U:42:LYS:CE	2.16	0.74
10:B:291:G:C6	10:B:350:G:N7	2.55	0.74
10:B:856:G:H21	31:W:22:VAL:HG11	1.53	0.74
28:T:30:ILE:HG23	28:T:31:VAL:N	2.01	0.74
10:B:80:G:O2'	10:B:294:A:C4	2.39	0.74
10:B:278:A:C5	10:B:362:A:C8	2.76	0.74
10:B:310:A:C5	10:B:312:G:C5	2.76	0.74
10:B:346:A:N1	10:B:347:A:C5	2.55	0.74
10:B:1076:C:O2'	10:B:1077:A:H5'	1.87	0.74
10:B:1540:G:N1	10:B:1541:C:C4	2.55	0.74
13:E:27:LEU:HD23	13:E:100:MET:HE2	1.69	0.74
16:H:50:ARG:HB3	16:H:51:ARG:CD	2.13	0.74
26:R:90:ARG:HH11	26:R:91:GLN:H	1.33	0.74
10:B:291:G:C4	10:B:292:U:C5	2.76	0.74
10:B:442:G:H1'	13:E:44:ARG:HD2	1.70	0.74
10:B:1070:A:H1'	17:I:9:LYS:HZ2	1.49	0.74
13:E:133:LEU:HD12	13:E:136:GLN:HG3	1.68	0.74
14:F:116:LEU:HG	14:F:176:PHE:HA	1.68	0.74
21:M:11:LYS:HG2	21:M:12:MET:H	1.51	0.74
21:M:96:ILE:HG23	21:M:97:GLN:H	1.53	0.74
10:B:96:C:P	32:X:39:GLN:CA	2.74	0.74
10:B:163:C:H2'	10:B:164:C:O4'	1.87	0.74
10:B:278:A:C2	10:B:279:A:N7	2.56	0.74
10:B:352:A:C6	10:B:353:C:N3	2.56	0.74
12:D:33:ARG:HG3	12:D:93:GLY:HA2	1.70	0.74
14:F:101:ARG:HD2	14:F:105:ILE:HD12	1.68	0.74
21:M:109:PRO:HA	21:M:112:LEU:HB2	1.69	0.74
10:B:271:G:H1	10:B:366:C:C2'	2.01	0.73
10:B:311:A:N7	10:B:332:A:C5	2.51	0.73
10:B:326:G:H2'	10:B:327:G:H5'	1.70	0.73
10:B:2216:G:H2'	10:B:2217:G:H8	1.52	0.73
16:H:41:LYS:H	16:H:41:LYS:HD2	1.52	0.73
4:3:7:ARG:HE	4:3:11:LYS:HZ3	1.36	0.73
12:D:154:LYS:NZ	12:D:157:LYS:H	1.86	0.73
29:U:40:LEU:HD13	29:U:41:VAL:N	2.03	0.73
31:W:66:VAL:HG22	31:W:67:LYS:N	2.03	0.73
10:B:99:U:C6	29:U:5:ARG:NH2	2.57	0.73
10:B:285:G:C5	10:B:286:U:C5	2.77	0.73
10:B:338:G:N1	10:B:339:U:C2	2.56	0.73
10:B:1076:C:C1'	17:I:92:PRO:CG	2.65	0.73
25:Q:33:VAL:HG23	25:Q:37:ALA:HB3	1.71	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:276:U:H2'	10:B:277:G:H5''	1.70	0.73
10:B:308:G:C6	10:B:309:A:N1	2.55	0.73
10:B:340:A:C8	10:B:341:C:C5	2.77	0.73
10:B:1059:G:H4'	17:I:117:THR:N	2.03	0.73
10:B:1444:G:N2	10:B:1548:A:C5	2.56	0.73
13:E:98:LYS:HG3	13:E:99:LYS:N	2.02	0.73
10:B:299:A:H1'	10:B:322:A:H61	1.51	0.73
10:B:347:A:N1	10:B:348:A:C8	2.56	0.73
10:B:1324:G:H1'	10:B:1616:A:N6	2.03	0.73
10:B:1477:A:C5	10:B:1515:A:C5	2.73	0.73
10:B:1519:G:N1	10:B:1520:U:C6	2.56	0.73
10:B:1524:G:C2'	10:B:1525:A:H5'	2.18	0.73
10:B:1526:C:N1	10:B:1527:G:H8	1.86	0.73
20:L:110:VAL:HB	20:L:126:ARG:NH2	2.02	0.73
29:U:46:LYS:NZ	29:U:54:PRO:O	2.19	0.73
30:V:80:HIS:CD2	30:V:83:LYS:H	2.05	0.73
33:Y:10:ARG:NE	33:Y:31:ILE:HG13	2.02	0.73
6:5:364:VAL:HG11	29:U:51:LEU:HB2	1.62	0.73
10:B:1524:G:C4	10:B:1525:A:N7	2.56	0.73
12:D:92:VAL:HG13	12:D:93:GLY:H	1.53	0.73
18:J:112:GLY:O	18:J:116:ARG:HB2	1.88	0.73
20:L:30:THR:HB	20:L:36:LYS:HB2	1.69	0.73
20:L:56:PRO:C	20:L:60:ARG:HB2	2.13	0.73
1:0:52:LYS:HD2	22:N:118:ARG:CZ	2.19	0.73
3:2:13:ASN:HB2	3:2:18:PHE:HD2	1.53	0.73
10:B:317:G:N2	10:B:318:C:H1'	2.03	0.73
16:H:6:LEU:HA	16:H:15:LEU:C	2.14	0.73
17:I:21:PRO:HB2	17:I:22:PRO:HD3	1.70	0.73
20:L:30:THR:HA	20:L:36:LYS:NZ	2.03	0.73
10:B:45:G:H5'	10:B:46:G:H5'	1.71	0.73
10:B:285:G:C6	10:B:286:U:N3	2.56	0.73
10:B:1059:G:H4'	17:I:117:THR:H	1.53	0.73
10:B:1526:C:C6	10:B:1527:G:C8	2.76	0.73
12:D:154:LYS:HZ3	12:D:157:LYS:N	1.86	0.73
16:H:44:ILE:C	16:H:47:PHE:CD1	2.61	0.73
22:N:28:LEU:HD11	22:N:44:LEU:HD21	1.68	0.73
22:N:100:CYS:HB3	22:N:110:MET:HB2	1.70	0.73
32:X:49:ASP:HB3	32:X:52:ARG:HH21	1.53	0.73
10:B:1553:A:N7	10:B:1555:G:C5	2.56	0.73
12:D:8:LYS:HA	12:D:197:THR:HG23	1.69	0.73
18:J:11:VAL:HG13	18:J:12:LYS:N	2.02	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:L:120:VAL:HG22	20:L:122:VAL:HG22	1.71	0.73
24:P:23:ASP:H	24:P:93:LYS:HE2	1.54	0.73
33:Y:18:LYS:NZ	33:Y:53:MET:HE2	2.04	0.73
1:O:29:VAL:HG23	1:O:36:LYS:NZ	2.02	0.73
3:2:34:ARG:HE	3:2:42:LEU:HD13	1.54	0.73
10:B:1797:G:O3'	11:C:253:GLY:HA2	1.89	0.73
10:B:2354:C:H4'	31:W:30:VAL:HG13	1.69	0.73
13:E:113:VAL:HG23	13:E:117:ARG:CZ	2.18	0.73
21:M:41:LEU:HB2	21:M:93:VAL:HG22	1.70	0.73
22:N:76:VAL:HA	22:N:79:LEU:HD12	1.71	0.73
23:O:8:ILE:HG22	23:O:10:ARG:H	1.52	0.73
26:R:4:VAL:HA	26:R:12:HIS:HB3	1.69	0.73
10:B:80:G:C5'	10:B:346:A:C4	2.71	0.72
10:B:327:G:C6	10:B:336:C:N3	2.57	0.72
10:B:811:U:H2'	20:L:31:GLY:HA3	1.71	0.72
10:B:1111:A:O3'	10:B:1112:G:O4'	2.07	0.72
10:B:1453:A:N6	22:N:74:GLU:HG2	2.04	0.72
10:B:1520:U:N3	10:B:1521:G:C2	2.54	0.72
10:B:2328:A:H2'	10:B:2329:U:C6	2.24	0.72
20:L:118:THR:CG2	20:L:119:PRO:HD3	2.19	0.72
24:P:28:LYS:HD3	24:P:44:GLY:N	2.03	0.72
10:B:275:C:C5	10:B:276:U:C5	2.77	0.72
10:B:323:C:C5	10:B:333:G:H8	2.05	0.72
10:B:445:C:OP1	25:Q:1:ALA:HB3	1.89	0.72
10:B:2471:A:O2'	10:B:2472:G:H8	1.73	0.72
14:F:133:GLU:HG2	14:F:147:ARG:HG2	1.71	0.72
22:N:116:VAL:HG22	22:N:117:ASP:N	2.03	0.72
26:R:42:ALA:HA	26:R:54:VAL:HA	1.71	0.72
30:V:24:ASN:O	30:V:44:HIS:HB2	1.89	0.72
10:B:37:C:C2'	13:E:46:GLN:HG2	2.16	0.72
10:B:271:G:O6	10:B:366:C:H2'	1.89	0.72
10:B:295:G:C5	10:B:344:A:C2	2.78	0.72
10:B:442:G:H22	13:E:46:GLN:NE2	1.87	0.72
10:B:1518:C:H2'	10:B:1519:G:C8	2.24	0.72
24:P:5:LYS:C	24:P:7:LEU:H	1.96	0.72
27:S:47:VAL:HG12	27:S:103:ILE:HD13	1.70	0.72
10:B:79:C:O3'	10:B:346:A:H8	1.72	0.72
10:B:326:G:C2	10:B:327:G:N7	2.57	0.72
10:B:1081:U:O2'	10:B:1082:U:H5'	1.90	0.72
10:B:1538:G:N2	10:B:1539:U:H1'	2.05	0.72
11:C:50:THR:O	11:C:51:ARG:HG3	1.89	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:317:G:N3	10:B:318:C:C6	2.58	0.72
10:B:1516:G:C2	10:B:1517:G:N9	2.58	0.72
10:B:1517:G:H2'	10:B:1518:C:C5'	2.19	0.72
10:B:1803:A:O3'	11:C:254:LYS:HD2	1.90	0.72
18:J:25:LEU:HD12	18:J:62:VAL:HA	1.70	0.72
31:W:24:ARG:HB3	31:W:57:THR:O	1.90	0.72
6:5:364:VAL:HA	29:U:51:LEU:HD21	1.68	0.72
10:B:80:G:H5'	10:B:346:A:C4	2.23	0.72
10:B:291:G:N1	10:B:350:G:N7	2.38	0.72
10:B:1075:C:H2'	10:B:1076:C:C6	2.25	0.72
10:B:2498:C:O2'	10:B:2499:C:H5'	1.89	0.72
20:L:85:VAL:HG11	20:L:98:ALA:HB3	1.71	0.72
21:M:73:ILE:O	21:M:74:THR:HB	1.88	0.72
10:B:295:G:N1	10:B:296:U:C4	2.57	0.72
10:B:1203:U:H3'	10:B:1204:A:H5''	1.70	0.72
10:B:1283:G:N2	10:B:1286:A:H5'	2.02	0.72
14:F:126:ASN:HD22	14:F:126:ASN:N	1.87	0.72
24:P:59:THR:HG23	24:P:76:HIS:NE2	2.04	0.72
27:S:7:HIS:HB3	27:S:102:HIS:HA	1.71	0.72
29:U:7:ASP:HA	29:U:24:VAL:HA	1.72	0.72
6:5:364:VAL:CG1	29:U:51:LEU:CA	2.50	0.72
11:C:141:HIS:CD2	11:C:193:GLU:H	2.07	0.72
13:E:146:VAL:O	13:E:147:LEU:HB2	1.88	0.72
22:N:116:VAL:HG22	22:N:123:GLU:OE1	1.90	0.72
28:T:24:MET:HE2	28:T:29:THR:H	1.54	0.72
5:4:24:ARG:HA	5:4:34:LYS:O	1.90	0.72
10:B:301:G:H1'	10:B:302:C:C6	2.25	0.72
10:B:338:G:H2'	10:B:339:U:C5'	2.18	0.72
10:B:1437:C:H2'	10:B:1438:U:C6	2.25	0.72
10:B:1524:G:C2	10:B:1525:A:C8	2.78	0.72
10:B:1526:C:C6	10:B:1527:G:N7	2.58	0.72
12:D:11:MET:HG2	12:D:12:THR:H	1.55	0.72
12:D:154:LYS:O	12:D:155:VAL:HG12	1.88	0.72
23:O:17:LYS:HE3	23:O:43:ASN:HB2	1.70	0.72
29:U:44:HIS:HE1	29:U:47:PRO:CD	2.01	0.72
1:0:36:LYS:HG3	1:0:40:HIS:O	1.88	0.72
1:0:51:ARG:C	22:N:118:ARG:CZ	2.61	0.72
10:B:310:A:C8	10:B:312:G:N7	2.58	0.72
10:B:333:G:N3	10:B:334:C:H6	1.84	0.72
10:B:1080:A:O2'	10:B:1081:U:H5'	1.89	0.72
10:B:1486:U:H2'	10:B:1487:U:C6	2.25	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1545:A:C2'	10:B:1546:G:H5'	2.20	0.72
16:H:4:ILE:H	16:H:37:VAL:HB	1.53	0.72
29:U:42:LYS:HD2	29:U:60:LYS:CB	2.18	0.72
29:U:44:HIS:HE1	29:U:47:PRO:HG3	1.54	0.72
34:Z:69:SER:O	34:Z:70:LYS:HB2	1.90	0.72
10:B:138:U:H2'	10:B:140:C:H1'	1.71	0.71
10:B:146:A:H2'	10:B:147:C:C6	2.25	0.71
10:B:283:G:C2	10:B:284:U:N1	2.57	0.71
10:B:301:G:H5'	10:B:334:C:O2	1.89	0.71
10:B:1048:A:C5	10:B:1049:C:C4	2.78	0.71
10:B:1115:G:H2'	10:B:1116:G:H8	1.54	0.71
10:B:1392:A:H62	28:T:18:GLU:HG2	1.53	0.71
12:D:21:SER:C	12:D:23:PRO:HD3	2.15	0.71
12:D:142:VAL:C	12:D:144:GLY:N	2.39	0.71
16:H:57:LYS:HG3	16:H:61:VAL:HG21	1.71	0.71
22:N:44:LEU:O	22:N:47:VAL:HG22	1.90	0.71
5:4:1:MET:HB3	10:B:2527:C:H1'	1.71	0.71
10:B:265:A:O2'	10:B:266:G:H4'	1.90	0.71
10:B:291:G:N1	10:B:350:G:C8	2.58	0.71
10:B:1050:A:C4	10:B:2751:G:C6	2.74	0.71
10:B:1113:U:OP1	15:G:2:ARG:CB	2.37	0.71
10:B:2895:G:H2'	10:B:2896:C:C6	2.25	0.71
19:K:7:MET:HE1	19:K:20:MET:HB2	1.70	0.71
20:L:82:LEU:HD13	20:L:83:ALA:N	2.06	0.71
27:S:66:ILE:H	27:S:66:ILE:HD12	1.54	0.71
29:U:42:LYS:CD	29:U:60:LYS:HG2	2.19	0.71
1:0:29:VAL:HG23	1:0:36:LYS:HZ3	1.55	0.71
10:B:84:A:H3'	29:U:5:ARG:HD2	1.71	0.71
10:B:295:G:C5	10:B:344:A:N1	2.58	0.71
10:B:312:G:H2'	10:B:312:G:N3	2.04	0.71
10:B:331:C:O2'	10:B:332:A:H5'	1.90	0.71
10:B:1036:G:H2'	10:B:1037:G:C8	2.23	0.71
14:F:107:VAL:HG21	14:F:175:PRO:HG3	1.71	0.71
29:U:11:ILE:HB	29:U:69:VAL:HB	1.72	0.71
33:Y:54:VAL:HG22	33:Y:55:LYS:H	1.55	0.71
34:Z:25:ARG:HG3	34:Z:26:SER:N	2.04	0.71
34:Z:59:ARG:HH21	34:Z:62:LYS:NZ	1.88	0.71
8:7:104:G:H1	8:7:171:C:H42	1.37	0.71
10:B:78:U:H2'	10:B:79:C:C6	2.26	0.71
10:B:300:A:H1'	10:B:319:G:O4'	1.90	0.71
10:B:1913:A:H1'	10:B:1914:C:OP1	1.90	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:C:110:LYS:HD2	11:C:111:ALA:H	1.55	0.71
12:D:187:LEU:HD23	12:D:188:LEU:N	2.05	0.71
16:H:134:VAL:HG13	16:H:135:HIS:H	1.56	0.71
21:M:100:LYS:O	21:M:100:LYS:HD2	1.90	0.71
25:Q:88:GLU:HA	26:R:53:PHE:CE1	2.25	0.71
25:Q:96:ASP:O	25:Q:99:VAL:HG22	1.90	0.71
10:B:80:G:O4'	10:B:346:A:N7	2.23	0.71
10:B:297:G:C6	10:B:298:G:C2	2.77	0.71
10:B:1095:A:H2'	10:B:1096:A:C8	2.25	0.71
22:N:127:GLU:OE1	22:N:127:GLU:N	2.23	0.71
10:B:285:G:N1	10:B:286:U:N3	2.38	0.71
10:B:332:A:C2	10:B:335:C:C6	2.77	0.71
11:C:88:ALA:HB1	11:C:156:SER:HB3	1.71	0.71
11:C:245:THR:O	11:C:247:TRP:N	2.22	0.71
21:M:9:PHE:HA	21:M:10:ARG:HH21	1.53	0.71
4:3:41:ARG:HB3	4:3:43:LEU:HD22	1.73	0.71
10:B:324:A:C5	10:B:325:G:C8	2.78	0.71
10:B:1115:G:C2	10:B:1116:G:C4	2.78	0.71
10:B:2147:A:H5'	10:B:2148:G:H5'	1.71	0.71
16:H:125:THR:HA	16:H:146:VAL:HB	1.73	0.71
10:B:324:A:H2'	10:B:325:G:C5'	2.20	0.71
13:E:131:THR:O	13:E:134:LEU:HB2	1.90	0.71
29:U:44:HIS:CE1	29:U:47:PRO:HG3	2.26	0.71
4:3:24:LYS:HD3	20:L:62:PRO:O	1.91	0.71
6:5:377:GLU:HG2	6:5:381:ASN:HD21	1.56	0.71
10:B:25:U:H5''	27:S:80:PRO:HD3	1.73	0.71
10:B:1549:A:N3	10:B:1550:C:C5	2.59	0.71
19:K:2:ILE:HG22	19:K:67:LYS:NZ	2.04	0.71
1:0:45:ASP:HB2	1:0:47:TYR:HD1	1.53	0.71
10:B:336:C:C3'	29:U:81:ARG:HH21	2.01	0.71
10:B:662:G:H4'	20:L:24:GLY:N	2.05	0.71
10:B:2880:C:O5'	22:N:121:LYS:HE2	1.90	0.71
12:D:148:GLN:HG3	12:D:151:THR:OG1	1.91	0.71
10:B:1039:A:N1	10:B:1040:A:N6	2.39	0.70
10:B:1080:A:H2'	10:B:1081:U:C6	2.25	0.70
12:D:129:THR:O	12:D:130:GLN:HB2	1.90	0.70
13:E:4:VAL:HB	13:E:117:ARG:HH21	1.56	0.70
31:W:23:LYS:HB2	31:W:23:LYS:HZ2	1.56	0.70
34:Z:59:ARG:HE	34:Z:62:LYS:HD2	1.56	0.70
10:B:38:A:C8	13:E:46:GLN:CD	2.69	0.70
10:B:324:A:H61	10:B:338:G:C2'	2.03	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:350:G:C2'	10:B:351:C:H5'	2.21	0.70
10:B:1534:U:C2	10:B:1538:G:C2	2.79	0.70
10:B:1639:C:C2'	10:B:1640:A:H5''	2.21	0.70
11:C:106:PRO:HD2	11:C:109:LEU:HD22	1.72	0.70
12:D:62:LYS:H	12:D:62:LYS:CD	2.04	0.70
13:E:31:VAL:HG22	13:E:96:VAL:HG21	1.72	0.70
14:F:63:LYS:HE2	14:F:64:PRO:HD2	1.73	0.70
20:L:120:VAL:HG12	20:L:138:ALA:HB3	1.73	0.70
26:R:78:ARG:CB	26:R:87:GLN:HA	2.20	0.70
10:B:118:A:H5'	10:B:119:A:H8	1.56	0.70
10:B:283:G:N3	10:B:284:U:N1	2.40	0.70
10:B:285:G:C4	10:B:286:U:C5	2.78	0.70
10:B:365:U:C2	10:B:366:C:C5	2.79	0.70
10:B:1115:G:C6	10:B:1116:G:C5	2.79	0.70
24:P:92:ARG:CZ	24:P:110:LYS:HB3	2.21	0.70
10:B:317:G:C2'	10:B:318:C:H6	1.99	0.70
10:B:1034:G:H2'	10:B:1035:U:H5'	1.74	0.70
20:L:142:ILE:HG13	20:L:143:GLU:H	1.56	0.70
29:U:79:ALA:O	29:U:96:LYS:HA	1.92	0.70
10:B:314:C:O2'	10:B:315:G:H5'	1.92	0.70
10:B:743:A:O2'	10:B:744:U:H5'	1.91	0.70
10:B:851:C:O2'	33:Y:45:GLY:HA3	1.92	0.70
12:D:37:VAL:HG22	12:D:46:ARG:HE	1.57	0.70
13:E:118:LEU:HD12	13:E:187:VAL:HG12	1.73	0.70
14:F:135:ILE:HD13	14:F:138:PRO:HA	1.72	0.70
16:H:3:VAL:HG22	16:H:21:VAL:HG11	1.72	0.70
20:L:94:THR:HG23	20:L:95:LEU:HD12	1.72	0.70
10:B:308:G:H3'	10:B:309:A:C8	2.26	0.70
10:B:590:A:H2'	10:B:591:U:C6	2.27	0.70
10:B:1038:G:N1	10:B:1039:A:C6	2.60	0.70
10:B:1545:A:H2'	10:B:1546:G:H5'	1.73	0.70
13:E:146:VAL:O	13:E:184:ASP:HB2	1.92	0.70
13:E:193:VAL:HG12	13:E:194:LYS:HD2	1.73	0.70
22:N:120:GLU:OE2	22:N:121:LYS:NZ	2.24	0.70
25:Q:10:ARG:HA	25:Q:10:ARG:CZ	2.22	0.70
26:R:6:GLN:HA	26:R:10:LYS:HA	1.74	0.70
31:W:66:VAL:HG13	31:W:67:LYS:H	1.56	0.70
6:5:343:ASN:O	6:5:344:MET:HG2	1.91	0.70
10:B:1109:C:C4	10:B:1110:G:C6	2.79	0.70
11:C:3:VAL:HG12	11:C:4:LYS:H	1.56	0.70
11:C:22:GLU:HA	11:C:202:ARG:CZ	2.22	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:C:107:LYS:H	11:C:194:VAL:HG21	1.55	0.70
12:D:3:GLY:HA2	12:D:49:GLN:OE1	1.91	0.70
21:M:40:ARG:HH11	21:M:92:TRP:HE3	1.40	0.70
22:N:101:GLY:HA2	22:N:109:PRO:HA	1.73	0.70
25:Q:30:VAL:O	25:Q:33:VAL:HG12	1.91	0.70
28:T:8:LEU:HD23	28:T:8:LEU:H	1.55	0.70
29:U:69:VAL:HG13	29:U:77:GLY:H	1.54	0.70
32:X:21:LEU:HD23	32:X:47:ARG:HG3	1.74	0.70
10:B:352:A:C4	10:B:353:C:C5	2.79	0.70
10:B:1476:U:H2'	10:B:1514:G:H22	1.55	0.70
10:B:1676:A:O2'	12:D:133:THR:HG23	1.92	0.70
11:C:180:MET:HB2	11:C:265:PHE:HB3	1.73	0.70
19:K:71:ARG:O	19:K:72:PRO:C	2.34	0.70
10:B:324:A:C2	10:B:325:G:C8	2.80	0.70
10:B:1476:U:OP2	10:B:1514:G:N1	2.24	0.70
10:B:1813:G:H21	11:C:51:ARG:HG2	1.55	0.70
10:B:2484:G:H1'	21:M:119:LEU:HD12	1.73	0.70
21:M:100:LYS:HE3	21:M:100:LYS:N	2.07	0.70
4:3:7:ARG:CZ	20:L:63:LYS:HD3	2.22	0.70
10:B:283:G:H2'	10:B:284:U:C6	2.23	0.70
10:B:1525:A:H2'	10:B:1526:C:H5'	1.71	0.70
10:B:2064:C:H2'	10:B:2065:C:C6	2.27	0.70
15:G:9:VAL:HG23	15:G:47:ASN:HB2	1.74	0.70
23:O:17:LYS:HE2	31:W:77:LYS:HD2	1.73	0.70
28:T:96:VAL:HG22	28:T:97:GLY:N	2.07	0.70
10:B:356:G:N7	10:B:357:C:C4	2.60	0.69
10:B:1549:A:H2'	10:B:1550:C:C5	2.27	0.69
26:R:43:ASN:C	26:R:45:GLU:H	1.98	0.69
27:S:8:ARG:CZ	27:S:102:HIS:NE2	2.55	0.69
6:5:428:LYS:NZ	10:B:1283:G:OP1	2.21	0.69
10:B:1528:A:H3'	10:B:1529:G:H8	1.57	0.69
10:B:1540:G:H2'	10:B:1541:C:C5'	2.21	0.69
10:B:1857:G:H2'	10:B:1884:G:H22	1.56	0.69
10:B:2512:C:H4'	12:D:146:ILE:HG12	1.72	0.69
18:J:77:HIS:HD2	18:J:85:LYS:H	1.40	0.69
20:L:25:SER:HB3	20:L:27:LEU:HG	1.72	0.69
25:Q:52:ARG:NH2	25:Q:55:GLN:HG2	2.07	0.69
10:B:76:C:H5'	32:X:48:ARG:HH12	1.57	0.69
10:B:287:G:O6	10:B:354:A:N6	2.25	0.69
10:B:1039:A:HO2'	10:B:1040:A:H5'	1.56	0.69
10:B:1519:G:C6	10:B:1520:U:C6	2.79	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1542:U:O2'	10:B:1543:G:H5'	1.91	0.69
12:D:106:LYS:NZ	12:D:208:LYS:HD3	2.07	0.69
31:W:43:LYS:HG2	31:W:76:ARG:NH2	2.07	0.69
10:B:283:G:N1	10:B:284:U:C2	2.60	0.69
10:B:1594:U:H2'	10:B:1595:C:C6	2.27	0.69
11:C:74:PRO:HB2	11:C:96:LYS:HE3	1.74	0.69
13:E:73:ILE:HG22	13:E:73:ILE:O	1.92	0.69
18:J:17:VAL:HG13	18:J:57:LEU:HD21	1.73	0.69
20:L:38:GLN:O	20:L:39:LYS:HG3	1.92	0.69
26:R:66:HIS:H	26:R:98:ILE:HD13	1.57	0.69
26:R:90:ARG:NH1	26:R:91:GLN:H	1.90	0.69
31:W:47:GLY:HA3	31:W:55:ASP:HB3	1.72	0.69
10:B:319:G:C5	10:B:333:G:N1	2.61	0.69
10:B:1525:A:C6	10:B:1526:C:C4	2.81	0.69
10:B:1902:C:H4'	11:C:240:GLY:O	1.92	0.69
20:L:29:LYS:HD2	20:L:30:THR:H	1.55	0.69
21:M:108:VAL:O	21:M:110:GLU:N	2.25	0.69
28:T:30:ILE:HG22	28:T:85:VAL:HG22	1.74	0.69
28:T:66:LYS:H	28:T:77:ARG:HA	1.56	0.69
34:Z:26:SER:O	34:Z:28:VAL:HG13	1.93	0.69
10:B:291:G:C5	10:B:350:G:N1	2.59	0.69
10:B:326:G:C2	10:B:327:G:C5	2.81	0.69
10:B:332:A:N3	10:B:335:C:C4	2.60	0.69
10:B:775:G:H4'	10:B:776:G:H5'	1.72	0.69
10:B:990:A:H1'	10:B:1156:A:C2	2.27	0.69
10:B:1112:G:N3	10:B:1112:G:H2'	2.07	0.69
10:B:1118:C:OP1	30:V:84:PRO:CG	2.37	0.69
10:B:1516:G:N2	10:B:1517:G:H1'	2.07	0.69
10:B:1993:U:H4'	12:D:134:HIS:HE1	1.55	0.69
10:B:2155:U:H2'	10:B:2156:G:O4'	1.91	0.69
10:B:2621:G:O2'	12:D:164:GLN:HB2	1.93	0.69
10:B:2769:U:H2'	10:B:2770:G:H8	1.58	0.69
17:I:135:MET:HG3	17:I:137:LEU:HG	1.73	0.69
29:U:44:HIS:HD1	29:U:45:GLN:N	1.90	0.69
34:Z:63:ARG:HA	34:Z:63:ARG:NE	2.08	0.69
10:B:346:A:N1	10:B:347:A:C8	2.61	0.69
10:B:1115:G:C2	10:B:1116:G:C5	2.81	0.69
10:B:1439:A:C5	10:B:1552:A:N7	2.59	0.69
11:C:127:ASN:HD22	11:C:128:THR:N	1.90	0.69
19:K:85:VAL:HG11	19:K:115:ILE:HD12	1.73	0.69
20:L:95:LEU:HD12	20:L:95:LEU:H	1.58	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:N:10:LEU:H	22:N:17:ARG:NH1	1.88	0.69
6:5:428:LYS:NZ	10:B:1283:G:P	2.66	0.69
9:A:49:C:H2'	9:A:50:A:H8	1.56	0.69
9:A:98:G:H1	30:V:14:LYS:HB2	1.57	0.69
10:B:287:G:C2'	10:B:288:U:H5'	2.23	0.69
10:B:295:G:N1	10:B:344:A:C6	2.61	0.69
10:B:319:G:C6	10:B:333:G:C6	2.80	0.69
10:B:354:A:H3'	10:B:355:U:H5''	1.75	0.69
10:B:1021:A:N6	10:B:1141:U:H3	1.82	0.69
10:B:1052:C:O2'	10:B:1053:C:H5'	1.93	0.69
10:B:1053:C:C4	10:B:1107:G:N1	2.60	0.69
10:B:1285:A:H2'	10:B:1286:A:H5''	1.75	0.69
10:B:2307:G:H4'	10:B:2311:A:H61	1.58	0.69
11:C:27:LYS:N	11:C:28:PRO:CD	2.56	0.69
11:C:155:ARG:HB3	11:C:159:THR:HG21	1.74	0.69
13:E:119:ILE:HA	13:E:189:THR:HA	1.74	0.69
16:H:81:ALA:HA	16:H:146:VAL:HA	1.75	0.69
16:H:140:ALA:C	16:H:141:LYS:HD3	2.18	0.69
20:L:78:ARG:HH21	20:L:82:LEU:HD23	1.58	0.69
21:M:108:VAL:N	21:M:109:PRO:HD2	2.06	0.69
21:M:136:MET:SD	30:V:76:ASP:HB2	2.33	0.69
10:B:278:A:H2	10:B:279:A:N7	1.91	0.69
10:B:1059:G:H4'	17:I:116:MET:CA	2.22	0.69
10:B:1110:G:HO2'	10:B:1111:A:P	2.15	0.69
10:B:1440:U:H2'	10:B:1441:G:H8	1.57	0.69
10:B:1537:G:H3'	10:B:1537:G:N3	2.07	0.69
10:B:2512:C:H1'	12:D:146:ILE:HG23	1.75	0.69
20:L:106:GLU:HG2	20:L:107:PHE:H	1.57	0.69
10:B:1799:G:H4'	10:B:1800:C:O5'	1.92	0.69
11:C:61:TYR:CD2	11:C:84:PRO:HD2	2.28	0.69
11:C:110:LYS:HD2	11:C:111:ALA:N	2.07	0.69
11:C:181:ARG:NH2	11:C:260:LYS:HD2	2.08	0.69
13:E:135:ALA:HA	13:E:138:LEU:HB2	1.74	0.69
16:H:50:ARG:CB	16:H:51:ARG:HB3	2.23	0.69
16:H:73:ASN:ND2	16:H:74:ALA:H	1.91	0.69
10:B:340:A:C2'	10:B:341:C:H5'	2.22	0.68
10:B:346:A:H2'	10:B:347:A:O4'	1.93	0.68
10:B:352:A:C5	10:B:353:C:C5	2.81	0.68
10:B:1050:A:C5	10:B:2751:G:N7	2.56	0.68
10:B:1079:C:C2'	10:B:1080:A:H5'	2.23	0.68
14:F:56:LEU:O	14:F:59:ILE:HG22	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:I:11:GLN:HA	17:I:55:PRO:HA	1.74	0.68
17:I:32:VAL:HG22	17:I:60:VAL:HG21	1.73	0.68
21:M:108:VAL:N	21:M:109:PRO:CD	2.56	0.68
29:U:43:LYS:NZ	29:U:44:HIS:HA	2.08	0.68
1:O:51:ARG:N	22:N:118:ARG:NH2	2.41	0.68
10:B:273:G:N1	10:B:274:C:C2	2.61	0.68
10:B:278:A:N1	10:B:361:G:N3	2.42	0.68
10:B:330:A:N3	10:B:330:A:H2'	2.06	0.68
10:B:336:C:H5''	29:U:81:ARG:HE	0.61	0.68
10:B:547:A:H3'	10:B:548:G:C8	2.21	0.68
10:B:1091:G:O2'	10:B:1092:C:H5'	1.92	0.68
10:B:1485:U:H2'	10:B:1486:U:C6	2.28	0.68
10:B:2052:A:H4'	12:D:148:GLN:HG2	1.73	0.68
26:R:62:GLU:HG3	26:R:103:ALA:HA	1.75	0.68
28:T:13:ALA:O	28:T:32:LEU:HA	1.92	0.68
10:B:1042:G:C4	10:B:1043:C:C5	2.81	0.68
14:F:107:VAL:N	14:F:108:PRO:CD	2.55	0.68
18:J:10:THR:HB	18:J:13:ARG:HH12	1.58	0.68
29:U:3:LYS:HE3	29:U:81:ARG:HH22	1.59	0.68
3:2:33:ARG:O	3:2:37:LYS:HB2	1.93	0.68
10:B:80:G:C5'	10:B:346:A:N9	2.49	0.68
10:B:324:A:N6	10:B:339:U:H5'	2.08	0.68
10:B:352:A:N1	10:B:353:C:C2	2.62	0.68
12:D:154:LYS:C	12:D:156:PHE:N	2.51	0.68
26:R:54:VAL:CA	26:R:54:VAL:CG1	2.69	0.68
29:U:3:LYS:HE3	29:U:81:ARG:NH2	2.07	0.68
10:B:291:G:C2	10:B:350:G:N9	2.60	0.68
10:B:1182:G:H2'	10:B:1183:U:O4'	1.93	0.68
10:B:1354:A:H2'	10:B:1355:G:O4'	1.94	0.68
10:B:1534:U:C2	10:B:1538:G:N1	2.61	0.68
10:B:1565:C:OP1	11:C:23:LEU:HD23	1.93	0.68
15:G:40:VAL:HG13	15:G:52:GLY:O	1.92	0.68
21:M:8:LYS:HD2	21:M:70:ASP:HA	1.76	0.68
1:O:31:LYS:HD3	1:O:47:TYR:HE2	1.57	0.68
10:B:271:G:N7	10:B:367:G:C4	2.62	0.68
10:B:1513:U:C4	10:B:1514:G:C8	2.82	0.68
17:I:121:ILE:HA	17:I:124:MET:HE3	1.76	0.68
21:M:4:PRO:O	21:M:5:LYS:O	2.12	0.68
34:Z:3:LYS:HE3	34:Z:8:LYS:HA	1.75	0.68
10:B:313:G:H2'	10:B:314:C:C6	2.28	0.68
10:B:956:G:N2	10:B:959:A:H3'	2.09	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1454:C:C5'	22:N:63:ARG:HH21	2.07	0.68
10:B:2786:U:H4'	12:D:66:GLY:HA2	1.74	0.68
11:C:136:VAL:HG12	11:C:165:ALA:HA	1.75	0.68
11:C:155:ARG:HH11	11:C:155:ARG:HG2	1.59	0.68
13:E:48:THR:HG23	13:E:86:ALA:HB1	1.76	0.68
18:J:43:GLU:HG3	18:J:44:TYR:H	1.58	0.68
10:B:313:G:C4	10:B:314:C:C5	2.82	0.68
10:B:352:A:N1	10:B:353:C:N3	2.42	0.68
10:B:1568:G:OP1	11:C:61:TYR:HB2	1.94	0.68
10:B:2301:C:H2'	10:B:2302:U:C6	2.28	0.68
10:B:2645:G:H3'	10:B:2646:C:H5'	1.75	0.68
18:J:58:ASN:ND2	18:J:128:ASN:HB2	2.08	0.68
23:O:55:GLU:HG3	23:O:56:LYS:H	1.58	0.68
28:T:65:GLY:O	28:T:66:LYS:HB3	1.93	0.68
29:U:46:LYS:HB3	29:U:53:GLN:NE2	2.06	0.68
34:Z:5:ILE:HD12	34:Z:5:ILE:H	1.59	0.68
6:5:346:GLY:HA3	6:5:350:LEU:HD23	1.76	0.68
10:B:27:G:N2	10:B:512:G:H2'	2.09	0.68
10:B:362:A:N3	10:B:363:G:C8	2.62	0.68
10:B:1054:A:O2'	10:B:1055:G:H5'	1.94	0.68
12:D:114:LYS:HB3	22:N:3:HIS:NE2	2.08	0.68
15:G:175:LYS:HD3	15:G:176:LYS:N	2.09	0.68
18:J:58:ASN:HA	18:J:126:ALA:HA	1.76	0.68
20:L:100:ILE:HG12	20:L:102:GLY:H	1.59	0.68
34:Z:5:ILE:HB	34:Z:51:VAL:HG12	1.74	0.68
10:B:291:G:N7	10:B:350:G:C6	2.60	0.68
10:B:362:A:C5	10:B:363:G:N7	2.61	0.68
11:C:19:VAL:HG12	11:C:20:ASN:N	2.08	0.68
11:C:22:GLU:HA	11:C:202:ARG:NE	2.09	0.68
11:C:119:VAL:HG22	11:C:133:ASN:HD21	1.57	0.68
11:C:220:ARG:NE	11:C:220:ARG:HA	2.09	0.68
14:F:33:ILE:HG13	14:F:34:THR:H	1.58	0.68
21:M:38:ARG:HG2	21:M:96:ILE:HG12	1.76	0.68
21:M:101:VAL:O	21:M:102:LEU:HD12	1.94	0.68
22:N:96:ARG:NH2	22:N:118:ARG:CA	2.38	0.68
10:B:150:U:H2'	10:B:151:C:H6	1.58	0.67
10:B:299:A:P	10:B:299:A:H8	2.17	0.67
10:B:308:G:N1	10:B:309:A:C2	2.62	0.67
10:B:337:C:H2'	10:B:338:G:O4'	1.94	0.67
10:B:348:A:C4	10:B:349:U:C6	2.82	0.67
10:B:1048:A:C6	10:B:1049:C:N3	2.62	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1048:A:C2'	10:B:1049:C:H5'	2.25	0.67
16:H:130:VAL:HB	16:H:142:VAL:HB	1.76	0.67
10:B:297:G:C6	10:B:298:G:N1	2.62	0.67
10:B:337:C:OP2	29:U:81:ARG:CZ	2.42	0.67
10:B:359:G:H2'	10:B:360:U:C6	2.29	0.67
10:B:630:G:H1	20:L:69:ARG:NH2	1.90	0.67
10:B:1542:U:O5'	10:B:1542:U:H6	1.77	0.67
10:B:1818:U:H5''	11:C:155:ARG:CG	2.24	0.67
10:B:2037:A:H2'	10:B:2038:G:C8	2.30	0.67
10:B:2784:U:H5''	12:D:41:ALA:HB1	1.75	0.67
11:C:28:PRO:HB2	11:C:79:ARG:HH21	1.58	0.67
15:G:29:ASN:HD22	15:G:29:ASN:N	1.91	0.67
18:J:67:ASN:O	18:J:70:THR:HG22	1.94	0.67
20:L:56:PRO:HA	20:L:60:ARG:CZ	2.23	0.67
24:P:45:VAL:HG13	24:P:65:ASN:HD22	1.59	0.67
24:P:77:SER:HB2	24:P:78:PRO:HD3	1.76	0.67
10:B:191:A:H2'	10:B:192:C:C6	2.29	0.67
10:B:215:G:H4'	10:B:216:A:H4'	1.77	0.67
10:B:278:A:C2	10:B:361:G:N3	2.63	0.67
10:B:346:A:N3	10:B:346:A:H3'	2.09	0.67
15:G:23:ILE:O	15:G:33:THR:HA	1.95	0.67
18:J:7:LYS:NZ	18:J:48:VAL:HB	2.09	0.67
18:J:11:VAL:HG11	18:J:44:TYR:CE1	2.30	0.67
18:J:37:ARG:HH21	18:J:110:PRO:HG3	1.58	0.67
18:J:100:VAL:HG22	18:J:101:ILE:H	1.59	0.67
23:O:9:ARG:HA	23:O:12:THR:HG23	1.76	0.67
26:R:53:PHE:CD1	26:R:54:VAL:HB	2.30	0.67
10:B:1063:G:O5'	17:I:76:ALA:HB2	1.91	0.67
10:B:2198:A:H4'	10:B:2199:A:OP1	1.95	0.67
12:D:109:VAL:HG11	12:D:193:VAL:HG23	1.76	0.67
16:H:8:LYS:HB3	16:H:14:SER:HA	1.75	0.67
20:L:85:VAL:CG2	20:L:98:ALA:H	2.05	0.67
22:N:115:LEU:N	22:N:115:LEU:HD23	2.10	0.67
23:O:10:ARG:HH11	23:O:10:ARG:HG3	1.59	0.67
24:P:22:GLY:HA3	24:P:91:VAL:HG13	1.75	0.67
29:U:44:HIS:HE1	29:U:47:PRO:HD3	1.59	0.67
10:B:300:A:N3	10:B:319:G:H1'	2.09	0.67
10:B:307:G:N2	10:B:309:A:H3'	2.10	0.67
10:B:869:G:H2'	10:B:870:U:H6	1.58	0.67
10:B:1856:U:H2'	10:B:1857:G:O4'	1.95	0.67
10:B:2723:C:OP1	22:N:3:HIS:HB3	1.93	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:D:101:PHE:O	12:D:102:ALA:HB3	1.95	0.67
22:N:73:ASN:HD22	22:N:73:ASN:N	1.91	0.67
24:P:70:GLU:HG2	24:P:71:ARG:HG2	1.75	0.67
26:R:18:GLN:HE21	26:R:99:THR:HB	1.57	0.67
10:B:317:G:C4	10:B:318:C:C5	2.82	0.67
10:B:320:A:C4'	13:E:130:LYS:NZ	2.57	0.67
10:B:2572:A:C5	12:D:150:GLN:HB2	2.30	0.67
10:B:2840:C:H5''	22:N:53:THR:HG21	1.75	0.67
11:C:140:VAL:O	11:C:141:HIS:HB2	1.93	0.67
12:D:15:PHE:HD2	12:D:18:ASP:HB2	1.58	0.67
18:J:77:HIS:CD2	18:J:84:ILE:HB	2.29	0.67
25:Q:57:ARG:HD2	25:Q:92:LYS:HZ2	1.58	0.67
25:Q:77:LYS:HB3	25:Q:116:LEU:HD11	1.75	0.67
31:W:66:VAL:HG22	31:W:67:LYS:H	1.59	0.67
10:B:335:C:O5'	10:B:335:C:H6	1.78	0.67
10:B:346:A:C4	10:B:347:A:C8	2.83	0.67
11:C:68:ARG:HH21	11:C:190:THR:HG23	1.58	0.67
16:H:26:ALA:HB1	16:H:31:VAL:HG23	1.76	0.67
23:O:15:ARG:HH22	23:O:17:LYS:HD2	1.59	0.67
29:U:48:VAL:HB	29:U:54:PRO:HD3	1.74	0.67
1:O:52:LYS:CD	22:N:118:ARG:NH1	2.58	0.67
10:B:1450:G:N2	10:B:1452:G:H1	1.91	0.67
10:B:1818:U:H2'	11:C:152:GLN:O	1.94	0.67
10:B:2239:G:H5'	11:C:246:PRO:HD2	1.77	0.67
12:D:128:ARG:HD2	12:D:144:GLY:CA	2.25	0.67
15:G:86:LEU:HB2	15:G:130:ILE:HB	1.76	0.67
16:H:82:SER:HB2	16:H:94:ILE:HD11	1.74	0.67
19:K:2:ILE:HD11	19:K:8:LEU:HD11	1.75	0.67
20:L:30:THR:HA	20:L:36:LYS:HZ1	1.60	0.67
29:U:38:ILE:HB	29:U:62:ALA:HB3	1.75	0.67
29:U:95:PHE:HD2	29:U:96:LYS:HG2	1.59	0.67
4:3:29:ARG:NH2	20:L:62:PRO:HB3	2.10	0.67
10:B:65:U:H4'	28:T:70:HIS:ND1	2.10	0.67
10:B:80:G:H5''	10:B:346:A:C8	2.23	0.67
10:B:95:A:H4'	32:X:40:SER:CB	2.24	0.67
10:B:298:G:O6	36:B:3138:HOH:O	2.13	0.67
10:B:298:G:H21	10:B:340:A:H62	1.43	0.67
10:B:1062:G:H2'	10:B:1063:G:C8	2.27	0.67
10:B:1073:A:O2'	10:B:1074:G:H5'	1.95	0.67
10:B:2324:U:H5'	10:B:2325:G:H5''	1.77	0.67
23:O:38:GLN:HA	23:O:50:ALA:HB3	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:X:30:MET:HG3	32:X:31:GLN:N	2.08	0.67
1:O:35:GLU:CD	1:O:43:THR:HG22	2.20	0.67
10:B:301:G:C4	10:B:302:C:C4	2.83	0.67
10:B:1022:G:N7	18:J:68:LYS:HE3	2.10	0.67
10:B:1523:U:O5'	10:B:1523:U:H6	1.78	0.67
10:B:2039:U:H2'	10:B:2040:G:H8	1.59	0.67
11:C:22:GLU:HA	11:C:202:ARG:NH2	2.09	0.67
11:C:144:GLU:HB2	11:C:146:LYS:O	1.94	0.67
12:D:117:GLY:O	12:D:165:MET:HB2	1.94	0.67
13:E:59:PRO:HD2	13:E:60:TRP:CE2	2.30	0.67
26:R:78:ARG:HD3	26:R:88:GLY:N	2.10	0.67
29:U:42:LYS:HD2	29:U:60:LYS:HG2	1.77	0.67
10:B:91:A:H2'	10:B:92:U:C6	2.29	0.66
10:B:273:G:C5	10:B:274:C:C4	2.82	0.66
10:B:479:A:N3	10:B:481:G:H5''	2.09	0.66
10:B:594:U:H2'	10:B:595:C:C6	2.29	0.66
10:B:1043:C:O5'	10:B:1043:C:H6	1.78	0.66
10:B:1098:A:H2'	10:B:1099:G:H5'	1.77	0.66
10:B:2336:A:H1'	10:B:2337:G:OP1	1.95	0.66
13:E:164:LEU:O	13:E:165:HIS:HB2	1.93	0.66
1:O:51:ARG:NH2	22:N:125:ALA:HB2	2.10	0.66
10:B:138:U:H2'	10:B:140:C:C1'	2.25	0.66
10:B:139:U:N3	28:T:1:MET:HB2	2.11	0.66
10:B:192:C:H2'	10:B:193:U:H5'	1.77	0.66
10:B:319:G:H2'	10:B:320:A:H8	1.59	0.66
10:B:327:G:C2	10:B:336:C:C2	2.83	0.66
10:B:442:G:N2	13:E:46:GLN:NE2	2.44	0.66
10:B:1112:G:N3	10:B:1113:U:C5	2.64	0.66
10:B:1447:C:H2'	10:B:1448:G:H8	1.60	0.66
10:B:1521:G:C8	10:B:1522:A:N7	2.64	0.66
10:B:1550:C:H5'	10:B:1741:C:O2	1.95	0.66
10:B:1844:C:OP1	11:C:252:LYS:HA	1.95	0.66
12:D:98:VAL:HA	12:D:101:PHE:CE2	2.30	0.66
13:E:149:ILE:HG13	13:E:186:VAL:HG13	1.77	0.66
14:F:174:PHE:N	14:F:175:PRO:CD	2.56	0.66
21:M:133:LYS:HG3	30:V:57:TYR:HB3	1.76	0.66
22:N:37:THR:HA	22:N:109:PRO:O	1.95	0.66
25:Q:92:LYS:HG2	25:Q:93:ILE:H	1.59	0.66
26:R:6:GLN:HB3	26:R:10:LYS:HE3	1.76	0.66
26:R:42:ALA:HA	26:R:54:VAL:HG22	1.77	0.66
32:X:55:THR:HG22	32:X:59:GLU:OE1	1.94	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1:46:VAL:HG22	2:1:47:ILE:H	1.59	0.66
9:A:114:C:O2'	23:O:49:VAL:HG21	1.95	0.66
10:B:324:A:N6	10:B:338:G:H2'	2.10	0.66
10:B:1540:G:H2'	10:B:1541:C:H5'	1.75	0.66
10:B:2339:C:H2'	10:B:2340:A:H8	1.61	0.66
11:C:163:ILE:HG22	11:C:164:VAL:H	1.59	0.66
12:D:34:VAL:HG22	12:D:89:GLU:CG	2.25	0.66
19:K:98:ARG:HA	19:K:118:LEU:HD22	1.77	0.66
21:M:69:PRO:HB2	21:M:71:LYS:HZ1	1.60	0.66
24:P:38:ARG:C	24:P:39:LEU:HD12	2.20	0.66
26:R:18:GLN:HB3	26:R:99:THR:HA	1.75	0.66
1:0:41:HIS:CG	1:0:48:TYR:HA	2.31	0.66
5:4:20:ASP:OD1	5:4:22:VAL:HG13	1.96	0.66
10:B:273:G:C6	10:B:274:C:N3	2.64	0.66
10:B:317:G:H21	10:B:318:C:H1'	1.58	0.66
10:B:1406:U:H2'	10:B:1407:G:H8	1.60	0.66
10:B:2859:G:H2'	10:B:2860:A:C8	2.31	0.66
12:D:170:VAL:HG21	12:D:194:PRO:HG2	1.77	0.66
15:G:5:LYS:HB3	15:G:68:ARG:NH2	2.10	0.66
18:J:99:ARG:HA	18:J:103:ILE:HG13	1.75	0.66
22:N:72:ASP:HB3	22:N:74:GLU:HG3	1.76	0.66
22:N:98:LEU:O	22:N:111:ALA:HA	1.94	0.66
23:O:40:ILE:HA	23:O:48:LEU:HB3	1.77	0.66
25:Q:39:ILE:O	25:Q:43:GLN:HG3	1.95	0.66
31:W:46:ALA:H	31:W:75:ASN:CG	2.02	0.66
10:B:301:G:C6	10:B:317:G:C6	2.82	0.66
10:B:309:A:H8	10:B:309:A:P	2.19	0.66
10:B:1387:A:H2'	10:B:1388:G:H8	1.61	0.66
10:B:1654:A:OP1	22:N:1:MET:HB2	1.95	0.66
10:B:2575:C:C5'	12:D:149:ASN:HB2	2.21	0.66
25:Q:33:VAL:HG13	25:Q:34:ALA:N	2.07	0.66
30:V:14:LYS:NZ	30:V:18:ARG:HD2	2.11	0.66
30:V:80:HIS:N	30:V:87:GLN:HE22	1.94	0.66
34:Z:49:ARG:C	34:Z:51:VAL:H	2.03	0.66
1:0:11:LYS:HG3	1:0:12:ARG:N	2.10	0.66
10:B:155:A:H2'	10:B:156:A:C8	2.30	0.66
10:B:281:C:H2'	10:B:282:A:C8	2.31	0.66
10:B:1459:G:O2'	10:B:1460:U:H5'	1.95	0.66
11:C:76:VAL:O	11:C:93:VAL:HA	1.96	0.66
27:S:52:GLU:HA	27:S:55:ILE:HG22	1.78	0.66
30:V:26:PHE:HE2	30:V:44:HIS:HA	1.61	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:4:14:CYS:SG	5:4:25:VAL:HG12	2.36	0.66
10:B:528:A:C2	10:B:2043:C:H4'	2.30	0.66
10:B:1528:A:H2'	10:B:1529:G:O4'	1.95	0.66
10:B:1538:G:C6	10:B:1539:U:C5	2.84	0.66
10:B:1843:C:H5''	11:C:252:LYS:NZ	2.10	0.66
13:E:44:ARG:HD3	13:E:44:ARG:H	1.60	0.66
22:N:12:ARG:HD3	22:N:20:MET:HG3	1.78	0.66
22:N:34:ILE:HD13	22:N:34:ILE:N	2.11	0.66
3:2:7:PRO:HG2	10:B:1309:G:H4'	1.78	0.66
10:B:321:U:C1'	13:E:129:PRO:HB2	2.25	0.66
10:B:441:U:H2'	10:B:442:G:H8	1.61	0.66
10:B:691:C:O2'	11:C:42:ARG:HD2	1.96	0.66
10:B:855:G:H21	31:W:23:LYS:CD	2.08	0.66
10:B:2216:G:H2'	10:B:2217:G:C8	2.30	0.66
10:B:2339:C:H2'	10:B:2340:A:C8	2.30	0.66
29:U:47:PRO:HD2	29:U:48:VAL:H	1.60	0.66
32:X:19:LEU:O	32:X:22:LEU:HB2	1.96	0.66
3:2:33:ARG:HD3	10:B:467:G:OP1	1.96	0.66
10:B:276:U:O2'	10:B:278:A:N7	2.27	0.66
10:B:293:U:H6	10:B:293:U:O5'	1.78	0.66
10:B:1015:U:H2'	10:B:1016:G:H8	1.60	0.66
17:I:20:SER:O	17:I:25:PRO:HD2	1.96	0.66
17:I:91:LYS:HB2	17:I:94:LYS:HD2	1.78	0.66
20:L:54:GLN:HB3	20:L:56:PRO:HD2	1.78	0.66
21:M:36:VAL:HA	21:M:97:GLN:HG2	1.78	0.66
9:A:60:C:H2'	9:A:61:G:C8	2.31	0.66
10:B:336:C:C4'	29:U:81:ARG:HH21	2.09	0.66
10:B:633:A:O5'	10:B:633:A:H8	1.79	0.66
10:B:968:C:H2'	10:B:969:G:H8	1.61	0.66
10:B:1866:A:H2'	10:B:1867:G:O4'	1.96	0.66
10:B:2270:A:H4'	31:W:18:LYS:CG	2.25	0.66
13:E:113:VAL:HG23	13:E:117:ARG:NH2	2.11	0.66
16:H:50:ARG:CZ	16:H:54:LEU:HG	2.25	0.66
29:U:44:HIS:CE1	29:U:47:PRO:HD3	2.31	0.66
33:Y:15:ARG:HH11	33:Y:53:MET:HE1	1.60	0.66
10:B:277:G:H1'	10:B:361:G:C6	2.31	0.65
10:B:295:G:C6	10:B:344:A:C2	2.83	0.65
10:B:301:G:C5	10:B:302:C:C4	2.84	0.65
10:B:320:A:C8	13:E:132:LYS:HB3	2.31	0.65
10:B:934:U:H2'	10:B:935:C:C6	2.31	0.65
10:B:1038:G:C2	10:B:1039:A:C6	2.83	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1484:U:H2'	10:B:1485:U:C6	2.31	0.65
12:D:170:VAL:HG13	12:D:171:THR:N	2.06	0.65
15:G:86:LEU:HD13	15:G:163:TYR:HA	1.78	0.65
24:P:38:ARG:HG3	24:P:39:LEU:H	1.61	0.65
24:P:52:ARG:HB3	24:P:60:VAL:CG1	2.18	0.65
29:U:48:VAL:O	29:U:53:GLN:HG2	1.95	0.65
10:B:341:C:O5'	10:B:341:C:H6	1.79	0.65
10:B:354:A:H2'	10:B:355:U:C5'	2.25	0.65
10:B:1064:C:P	17:I:76:ALA:CB	2.73	0.65
14:F:132:ARG:HD3	14:F:133:GLU:HB2	1.78	0.65
20:L:38:GLN:H	20:L:41:ARG:NH1	1.94	0.65
30:V:70:ILE:HG12	30:V:71:LYS:H	1.61	0.65
1:O:8:THR:HG23	1:O:9:ARG:H	1.61	0.65
10:B:394:C:H2'	10:B:395:U:O4'	1.96	0.65
10:B:1066:U:O5'	10:B:1066:U:H6	1.78	0.65
10:B:1070:A:C1'	17:I:9:LYS:NZ	2.58	0.65
10:B:1101:U:H2'	10:B:1102:C:H5'	1.78	0.65
10:B:1104:C:C2'	10:B:1105:U:H5'	2.26	0.65
10:B:1727:C:H2'	10:B:1728:C:C6	2.31	0.65
10:B:1794:A:H2'	10:B:1795:C:C6	2.31	0.65
13:E:116:ASP:HB2	13:E:185:LYS:HA	1.78	0.65
20:L:91:ASP:HB2	20:L:123:ARG:HH11	1.62	0.65
22:N:62:ASN:ND2	22:N:80:PHE:HB3	2.12	0.65
23:O:56:LYS:HE3	23:O:57:ALA:N	2.11	0.65
28:T:63:VAL:HG13	28:T:80:TRP:HB2	1.79	0.65
30:V:77:VAL:HG21	30:V:79:ARG:HH21	1.61	0.65
31:W:32:ALA:O	31:W:66:VAL:HG11	1.96	0.65
33:Y:20:LYS:HA	33:Y:24:LEU:HB2	1.77	0.65
10:B:222:A:H61	10:B:232:G:H1'	1.61	0.65
10:B:332:A:N1	10:B:335:C:N3	2.42	0.65
10:B:1059:G:H5'	17:I:117:THR:HG23	0.66	0.65
10:B:1373:A:H2'	10:B:1374:G:O4'	1.96	0.65
10:B:2025:C:H2'	10:B:2026:U:C6	2.31	0.65
10:B:2308:G:H5'	10:B:2309:A:H5''	1.77	0.65
20:L:118:THR:N	20:L:119:PRO:CD	2.56	0.65
23:O:37:ALA:O	23:O:38:GLN:HG2	1.97	0.65
10:B:362:A:C5	10:B:363:G:C8	2.85	0.65
10:B:1037:G:C2'	10:B:1038:G:H8	2.04	0.65
10:B:1508:A:H5''	10:B:1509:A:N7	2.12	0.65
10:B:1530:G:H2'	10:B:1530:G:N3	2.10	0.65
10:B:2512:C:H5''	12:D:125:TRP:HZ3	1.61	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2619:C:H4'	12:D:157:LYS:HA	1.79	0.65
11:C:16:VAL:C	11:C:17:LYS:HE2	2.22	0.65
11:C:92:LEU:O	11:C:93:VAL:HB	1.95	0.65
12:D:130:GLN:NE2	12:D:138:LEU:HD12	2.12	0.65
18:J:3:THR:HG21	25:Q:93:ILE:HG13	1.78	0.65
10:B:64:A:H2'	10:B:65:U:C6	2.31	0.65
10:B:305:C:H6	10:B:305:C:O5'	1.79	0.65
10:B:441:U:O2'	10:B:442:G:H5'	1.97	0.65
10:B:911:A:N6	21:M:13:HIS:HB3	2.12	0.65
10:B:1440:U:H2'	10:B:1441:G:C8	2.31	0.65
11:C:155:ARG:HG2	11:C:155:ARG:NH1	2.10	0.65
11:C:181:ARG:HH12	11:C:260:LYS:HZ2	1.44	0.65
16:H:50:ARG:CG	16:H:51:ARG:HB3	2.27	0.65
17:I:27:LEU:H	17:I:27:LEU:CD2	2.08	0.65
17:I:116:MET:HE1	17:I:124:MET:O	1.97	0.65
18:J:39:LYS:NZ	25:Q:69:ARG:HD2	2.11	0.65
21:M:9:PHE:CG	21:M:10:ARG:N	2.64	0.65
10:B:271:G:C8	10:B:367:G:N3	2.65	0.65
10:B:289:G:C6	10:B:290:U:C4	2.85	0.65
10:B:295:G:C2	10:B:296:U:C6	2.84	0.65
10:B:296:U:N3	10:B:343:C:N3	2.44	0.65
10:B:1118:C:O5'	10:B:1118:C:H6	1.79	0.65
10:B:2557:G:H2'	10:B:2558:C:C6	2.31	0.65
12:D:149:ASN:CB	12:D:150:GLN:HG2	2.25	0.65
18:J:10:THR:HB	18:J:13:ARG:NH1	2.11	0.65
27:S:34:ASP:H	27:S:37:THR:HG22	1.62	0.65
10:B:215:G:C4'	10:B:216:A:H4'	2.27	0.65
10:B:278:A:C5	10:B:362:A:C5	2.83	0.65
10:B:337:C:P	29:U:81:ARG:CZ	2.84	0.65
10:B:347:A:C2	10:B:348:A:N9	2.65	0.65
10:B:854:C:H2'	10:B:855:G:H8	1.61	0.65
10:B:1410:G:H2'	10:B:1411:U:C6	2.31	0.65
10:B:1516:G:C2'	10:B:1517:G:H5'	2.25	0.65
10:B:1516:G:C2'	10:B:1517:G:H8	2.02	0.65
11:C:143:VAL:O	11:C:152:GLN:HB2	1.97	0.65
12:D:23:PRO:HB3	12:D:189:VAL:N	2.11	0.65
12:D:37:VAL:HB	12:D:42:ASN:CG	2.21	0.65
16:H:3:VAL:HG22	16:H:21:VAL:HG21	1.78	0.65
20:L:30:THR:HG22	20:L:36:LYS:HZ2	1.61	0.65
21:M:12:MET:HG2	21:M:12:MET:O	1.96	0.65
21:M:67:VAL:HG21	21:M:95:LEU:HD21	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:O:40:ILE:HD13	23:O:40:ILE:H	1.62	0.65
26:R:53:PHE:O	26:R:54:VAL:O	2.15	0.65
31:W:31:LEU:HD11	31:W:34:SER:CB	2.27	0.65
10:B:21:A:O2'	10:B:22:C:H5'	1.97	0.65
10:B:340:A:N7	10:B:341:C:C4	2.65	0.65
10:B:559:G:H1'	25:Q:55:GLN:NE2	2.12	0.65
10:B:1838:C:N4	10:B:1898:U:H2'	2.11	0.65
10:B:2758:A:H2'	10:B:2759:G:O4'	1.96	0.65
12:D:83:ARG:HG2	12:D:84:LEU:H	1.62	0.65
16:H:6:LEU:HD12	16:H:15:LEU:HA	1.77	0.65
20:L:69:ARG:HG3	20:L:69:ARG:O	1.95	0.65
21:M:33:LEU:N	21:M:101:VAL:HG22	2.12	0.65
31:W:23:LYS:HE3	31:W:24:ARG:O	1.96	0.65
6:5:370:ASP:HA	6:5:374:VAL:HG23	1.79	0.65
10:B:37:C:C2	13:E:46:GLN:CD	2.75	0.65
10:B:273:G:H2'	10:B:273:G:N3	2.12	0.65
10:B:347:A:N3	10:B:348:A:H8	1.95	0.65
10:B:1132:U:H5''	18:J:85:LYS:HZ3	1.62	0.65
10:B:1521:G:H3'	10:B:1522:A:H2'	1.78	0.65
10:B:1540:G:O6	10:B:1541:C:N4	2.30	0.65
10:B:1652:A:H62	22:N:11:ASN:ND2	1.94	0.65
10:B:2039:U:H2'	10:B:2040:G:C8	2.31	0.65
10:B:2336:A:N6	31:W:69:GLU:HG3	2.12	0.65
11:C:53:ILE:HG21	11:C:218:THR:HG23	1.78	0.65
12:D:128:ARG:HH11	12:D:144:GLY:CA	2.10	0.65
13:E:128:ALA:HB3	13:E:129:PRO:CD	2.20	0.65
14:F:33:ILE:HA	14:F:155:ILE:HA	1.77	0.65
15:G:148:ARG:HH21	15:G:153:PRO:HD2	1.62	0.65
1:0:51:ARG:HD2	1:0:56:LYS:OXT	1.97	0.64
4:3:11:LYS:CA	20:L:63:LYS:HG3	2.26	0.64
10:B:281:C:O2'	10:B:282:A:H5'	1.97	0.64
10:B:292:U:N3	10:B:348:A:C2	2.64	0.64
10:B:720:U:H2'	10:B:721:A:C8	2.32	0.64
10:B:784:G:O2'	10:B:785:G:H5''	1.97	0.64
11:C:171:VAL:HB	11:C:182:LYS:HB3	1.77	0.64
13:E:43:THR:HG23	13:E:44:ARG:NE	2.12	0.64
20:L:94:THR:HB	20:L:103:ILE:HG13	1.78	0.64
21:M:70:ASP:H	21:M:71:LYS:NZ	1.95	0.64
25:Q:97:ILE:HA	25:Q:100:PHE:CZ	2.32	0.64
10:B:263:G:H2'	10:B:264:C:O4'	1.97	0.64
10:B:348:A:H2'	10:B:349:U:O4'	1.95	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:616:A:H3'	10:B:617:G:H8	1.62	0.64
10:B:811:U:C5	20:L:29:LYS:HD3	2.32	0.64
10:B:2393:U:H5'	20:L:62:PRO:HD3	1.77	0.64
11:C:127:ASN:ND2	11:C:128:THR:H	1.95	0.64
25:Q:57:ARG:HA	25:Q:60:TRP:HE3	1.61	0.64
34:Z:25:ARG:HH11	34:Z:25:ARG:HB2	1.60	0.64
10:B:299:A:N3	10:B:322:A:C6	2.66	0.64
10:B:301:G:C4	10:B:302:C:N3	2.65	0.64
10:B:784:G:H5''	11:C:225:ASN:HD21	1.60	0.64
10:B:2880:C:H1'	22:N:92:GLY:O	1.97	0.64
12:D:154:LYS:HZ1	18:J:81:ILE:HD13	1.63	0.64
13:E:115:GLN:HA	13:E:185:LYS:HE3	1.79	0.64
15:G:25:ILE:O	15:G:31:GLU:HA	1.97	0.64
18:J:7:LYS:HZ2	18:J:49:ASP:H	1.45	0.64
20:L:132:ARG:O	20:L:136:GLU:HB3	1.98	0.64
29:U:9:GLU:HA	29:U:23:LYS:HA	1.80	0.64
30:V:69:GLU:HG2	30:V:70:ILE:N	2.11	0.64
31:W:23:LYS:HB2	31:W:23:LYS:NZ	2.12	0.64
31:W:66:VAL:HG13	31:W:67:LYS:HG3	1.79	0.64
4:3:41:ARG:NH1	4:3:42:HIS:HB3	2.13	0.64
9:A:20:G:H2'	9:A:21:G:H8	1.63	0.64
10:B:143:C:H2'	10:B:144:A:C1'	2.27	0.64
10:B:172:A:H2'	10:B:173:A:C8	2.33	0.64
10:B:274:C:H6	10:B:274:C:O5'	1.79	0.64
10:B:773:U:H5'	10:B:774:G:OP2	1.97	0.64
10:B:813:U:H2'	10:B:814:C:C6	2.33	0.64
10:B:1386:C:H2'	10:B:1387:A:C8	2.32	0.64
10:B:1540:G:N1	10:B:1541:C:C5	2.65	0.64
11:C:42:ARG:HG2	11:C:43:ASN:N	2.06	0.64
12:D:128:ARG:NH1	12:D:130:GLN:NE2	2.46	0.64
17:I:100:ILE:O	17:I:139:VAL:HA	1.97	0.64
21:M:71:LYS:HE2	21:M:91:TYR:HB3	1.80	0.64
22:N:24:MET:HE1	22:N:40:LYS:HB3	1.79	0.64
22:N:49:GLU:HB2	22:N:50:PRO:HD3	1.78	0.64
26:R:37:GLU:OE1	26:R:62:GLU:HB2	1.97	0.64
31:W:44:PHE:O	31:W:76:ARG:HA	1.96	0.64
10:B:83:A:N7	29:U:90:LYS:HB3	2.11	0.64
10:B:367:G:O2'	10:B:368:A:OP2	2.12	0.64
10:B:2467:C:O4'	21:M:118:LYS:HG2	1.98	0.64
10:B:2800:A:H2'	10:B:2801:G:O4'	1.98	0.64
14:F:135:ILE:C	14:F:137:PHE:H	2.05	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:J:15:TRP:HA	18:J:53:TYR:O	1.98	0.64
18:J:18:VAL:HG22	18:J:56:VAL:HA	1.78	0.64
18:J:90:GLU:O	18:J:93:ILE:HG22	1.98	0.64
18:J:119:PHE:CG	18:J:120:ARG:N	2.63	0.64
20:L:94:THR:HA	20:L:96:LYS:HE2	1.79	0.64
21:M:4:PRO:O	21:M:5:LYS:C	2.36	0.64
25:Q:85:ALA:CB	25:Q:88:GLU:HB2	2.27	0.64
27:S:6:LYS:HB3	27:S:104:THR:HG22	1.78	0.64
4:3:7:ARG:HE	4:3:11:LYS:NZ	1.94	0.64
10:B:62:U:H3'	10:B:63:A:H8	1.62	0.64
10:B:632:A:H2'	10:B:633:A:C8	2.33	0.64
10:B:1090:A:C6	10:B:1102:C:C2	2.86	0.64
10:B:1109:C:N3	10:B:1110:G:C6	2.65	0.64
11:C:30:ALA:N	11:C:31:PRO:CD	2.53	0.64
11:C:68:ARG:NH2	11:C:127:ASN:HA	2.13	0.64
19:K:108:ARG:HA	19:K:116:ILE:HG21	1.79	0.64
20:L:14:LYS:HZ3	20:L:14:LYS:HA	1.61	0.64
21:M:33:LEU:HB2	21:M:101:VAL:CG2	2.27	0.64
10:B:309:A:N3	10:B:329:G:O2'	2.31	0.64
10:B:1090:A:H2'	10:B:1091:G:H8	1.55	0.64
10:B:1116:G:C2	10:B:1117:C:C6	2.86	0.64
10:B:1176:U:H2'	10:B:1177:G:O4'	1.98	0.64
10:B:1189:A:O3'	20:L:41:ARG:HG2	1.98	0.64
10:B:1412:U:H2'	10:B:1413:A:C8	2.33	0.64
10:B:1544:A:C2'	10:B:1545:A:H5'	2.26	0.64
11:C:119:VAL:HG22	11:C:133:ASN:ND2	2.13	0.64
12:D:5:VAL:HG11	12:D:29:VAL:H	1.63	0.64
13:E:198:GLU:C	13:E:200:LEU:H	2.05	0.64
18:J:45:THR:HG22	25:Q:63:ARG:NH2	2.13	0.64
26:R:66:HIS:N	26:R:98:ILE:HD13	2.12	0.64
32:X:12:GLU:HB2	32:X:14:LEU:CD1	2.28	0.64
10:B:2053:G:OP1	12:D:149:ASN:O	2.16	0.64
10:B:2395:C:H2'	10:B:2396:G:O4'	1.96	0.64
10:B:2881:U:C5	22:N:120:GLU:OE1	2.45	0.64
11:C:164:VAL:HB	11:C:167:ASP:OD1	1.98	0.64
12:D:60:VAL:HB	12:D:63:PRO:HG2	1.80	0.64
21:M:35:ALA:HB3	21:M:97:GLN:C	2.23	0.64
24:P:38:ARG:CG	24:P:39:LEU:H	2.09	0.64
27:S:17:VAL:HA	27:S:43:ALA:HB1	1.77	0.64
33:Y:9:THR:HB	33:Y:54:VAL:CA	2.25	0.64
34:Z:8:LYS:HD2	34:Z:9:TYR:H	1.63	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:3:24:LYS:NZ	4:3:29:ARG:HH22	1.96	0.64
10:B:295:G:C2	10:B:344:A:N3	2.66	0.64
10:B:309:A:H1'	10:B:329:G:C2	2.32	0.64
10:B:321:U:H5''	13:E:130:LYS:CA	2.09	0.64
10:B:347:A:C6	10:B:348:A:C8	2.85	0.64
10:B:794:A:H2'	10:B:795:C:C6	2.33	0.64
11:C:66:PHE:O	11:C:68:ARG:N	2.30	0.64
11:C:171:VAL:HG12	11:C:183:VAL:C	2.22	0.64
12:D:83:ARG:HG2	12:D:84:LEU:N	2.11	0.64
15:G:6:ALA:HB3	15:G:7:PRO:HD3	1.80	0.64
18:J:41:LYS:O	25:Q:66:ALA:HB1	1.98	0.64
10:B:278:A:H3'	10:B:278:A:N3	2.13	0.64
10:B:338:G:H5'	36:B:3141:HOH:O	1.93	0.64
10:B:418:C:H2'	10:B:419:U:C6	2.32	0.64
10:B:877:A:H2'	10:B:899:A:N1	2.13	0.64
10:B:1036:G:O6	10:B:1120:G:C6	2.50	0.64
10:B:1039:A:C2	10:B:1040:A:C5	2.86	0.64
10:B:1074:G:H2'	10:B:1075:C:C6	2.32	0.64
11:C:68:ARG:HD3	11:C:103:ILE:CD1	2.27	0.64
11:C:141:HIS:CB	11:C:190:THR:HB	2.28	0.64
11:C:170:TYR:O	11:C:171:VAL:HG13	1.97	0.64
12:D:37:VAL:HG12	12:D:38:LYS:HZ3	1.63	0.64
24:P:84:SER:O	24:P:86:LYS:N	2.31	0.64
29:U:78:LYS:HG3	29:U:96:LYS:HE3	1.79	0.64
30:V:14:LYS:HZ2	30:V:18:ARG:HD2	1.63	0.64
10:B:181:A:H2'	10:B:182:A:H8	1.63	0.63
10:B:321:U:O5'	13:E:130:LYS:HA	1.96	0.63
10:B:1083:U:H1'	10:B:1086:A:N6	2.12	0.63
10:B:1224:U:H4'	26:R:90:ARG:HB3	1.79	0.63
10:B:1447:C:O2'	10:B:1544:A:C2	2.50	0.63
10:B:1539:U:H3'	10:B:1540:G:H8	1.63	0.63
10:B:2331:G:H5'	31:W:70:VAL:HG13	1.79	0.63
13:E:152:GLU:HG2	13:E:153:LEU:N	2.13	0.63
14:F:35:LEU:HA	14:F:153:ILE:HA	1.78	0.63
18:J:35:ARG:HH21	18:J:40:HIS:N	1.95	0.63
20:L:122:VAL:HG23	20:L:139:GLY:O	1.98	0.63
23:O:10:ARG:HG3	23:O:10:ARG:NH1	2.13	0.63
10:B:142:A:H2'	10:B:143:C:C6	2.33	0.63
10:B:142:A:H1'	28:T:2:ILE:HG21	1.79	0.63
10:B:1049:C:O2'	10:B:1050:A:H5'	1.99	0.63
10:B:1081:U:O5'	10:B:1081:U:H6	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2354:C:H4'	31:W:30:VAL:HG22	1.79	0.63
10:B:2759:G:H4'	15:G:34:ARG:HH12	1.62	0.63
11:C:68:ARG:NH2	11:C:190:THR:HG23	2.13	0.63
13:E:147:LEU:O	13:E:148:ILE:HG13	1.98	0.63
13:E:159:LEU:HA	13:E:169:VAL:HG21	1.80	0.63
19:K:98:ARG:C	19:K:99:ILE:HD12	2.23	0.63
26:R:5:PHE:HA	26:R:40:MET:CG	2.27	0.63
6:5:431:LYS:NZ	10:B:1536:C:P	2.72	0.63
10:B:170:U:H2'	10:B:171:U:C6	2.33	0.63
10:B:291:G:C8	10:B:350:G:N1	2.67	0.63
10:B:992:C:H2'	10:B:993:G:H8	1.63	0.63
10:B:1797:G:H5'	11:C:251:THR:HA	1.79	0.63
11:C:196:ASN:HB2	11:C:199:HIS:CD2	2.30	0.63
20:L:142:ILE:HG13	20:L:143:GLU:N	2.13	0.63
21:M:35:ALA:O	21:M:36:VAL:HG22	1.98	0.63
21:M:82:MET:HB2	21:M:84:LYS:NZ	2.13	0.63
23:O:87:ILE:HG22	23:O:115:LEU:H	1.63	0.63
24:P:23:ASP:N	24:P:93:LYS:HE2	2.13	0.63
1:0:32:THR:HG23	1:0:34:GLY:H	1.63	0.63
6:5:344:MET:HG3	6:5:346:GLY:H	1.63	0.63
6:5:378:ALA:HA	6:5:381:ASN:HD22	1.63	0.63
10:B:589:U:H2'	10:B:590:A:C8	2.33	0.63
10:B:1108:U:O5'	10:B:1108:U:H6	1.80	0.63
10:B:1251:C:H6	25:Q:5:ARG:HH21	1.47	0.63
10:B:1537:G:N3	10:B:1537:G:H5''	2.13	0.63
10:B:1537:G:H2'	10:B:1538:G:C4'	2.28	0.63
10:B:1590:A:H2'	10:B:1591:A:C8	2.34	0.63
10:B:2041:U:H2'	10:B:2042:A:C8	2.34	0.63
10:B:2749:A:OP2	15:G:3:VAL:HG11	1.97	0.63
11:C:138:SER:HA	11:C:162:GLN:HG2	1.79	0.63
12:D:170:VAL:HG11	12:D:194:PRO:HG2	1.80	0.63
13:E:72:SER:O	13:E:75:SER:HB2	1.99	0.63
15:G:16:VAL:HG21	15:G:44:HIS:NE2	2.14	0.63
16:H:116:ARG:HB2	16:H:133:GLN:HB2	1.81	0.63
18:J:37:ARG:NH2	18:J:110:PRO:HG3	2.13	0.63
21:M:73:ILE:HD11	21:M:92:TRP:HB2	1.78	0.63
26:R:54:VAL:CB	26:R:54:VAL:HA	2.17	0.63
27:S:71:VAL:HG22	27:S:107:VAL:HG12	1.80	0.63
10:B:273:G:N1	10:B:274:C:N3	2.46	0.63
10:B:285:G:O2'	10:B:286:U:H5'	1.99	0.63
10:B:363:G:C2	10:B:364:C:C2	2.87	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1381:G:C2'	10:B:1382:G:H5'	2.29	0.63
10:B:2901:C:H2'	10:B:2902:C:H5'	1.80	0.63
11:C:53:ILE:HD13	11:C:218:THR:HG23	1.80	0.63
19:K:99:ILE:HG12	19:K:115:ILE:HG13	1.80	0.63
19:K:103:VAL:HB	19:K:107:LEU:CD2	2.28	0.63
26:R:53:PHE:O	26:R:54:VAL:C	2.37	0.63
27:S:28:LYS:HD3	27:S:71:VAL:HG21	1.80	0.63
8:7:164:C:H2'	8:7:165:G:H8	1.63	0.63
10:B:278:A:O3'	10:B:279:A:H8	1.81	0.63
10:B:423:A:H5'	10:B:424:G:C5'	2.28	0.63
10:B:1065:U:O5'	10:B:1065:U:H6	1.80	0.63
10:B:1083:U:H2'	10:B:1085:A:OP2	1.98	0.63
10:B:1442:U:H2'	10:B:1443:U:C6	2.34	0.63
10:B:2144:G:H22	10:B:2148:G:H1'	1.64	0.63
10:B:2722:G:H2'	10:B:2723:C:C6	2.33	0.63
10:B:2813:A:H2'	10:B:2814:A:C8	2.33	0.63
11:C:124:LYS:CB	11:C:125:PRO:CD	2.71	0.63
16:H:35:LYS:O	16:H:37:VAL:HG13	1.98	0.63
16:H:124:THR:HG22	16:H:125:THR:H	1.64	0.63
18:J:8:PRO:HB2	18:J:11:VAL:HB	1.81	0.63
20:L:78:ARG:N	20:L:110:VAL:HG13	2.13	0.63
20:L:91:ASP:HA	20:L:123:ARG:HB2	1.80	0.63
26:R:53:PHE:HB3	26:R:55:ASP:HB2	1.79	0.63
29:U:59:GLU:O	29:U:60:LYS:HB2	1.99	0.63
34:Z:32:LEU:HD22	34:Z:33:ASN:N	2.14	0.63
3:2:13:ASN:CG	10:B:125:A:H4'	2.23	0.63
10:B:7:G:H1'	18:J:135:GLN:HE21	1.63	0.63
10:B:356:G:C5	10:B:357:C:N3	2.64	0.63
10:B:607:U:OP2	13:E:98:LYS:HG2	1.97	0.63
10:B:796:C:H2'	10:B:797:G:H8	1.64	0.63
10:B:1219:U:H2'	10:B:1220:G:C8	2.33	0.63
10:B:1444:G:N1	10:B:1548:A:N6	2.47	0.63
10:B:1535:A:H3'	10:B:1536:C:H6	1.59	0.63
10:B:2008:C:H2'	10:B:2009:A:H8	1.63	0.63
10:B:2789:C:H2'	10:B:2893:A:N7	2.14	0.63
11:C:23:LEU:H	11:C:202:ARG:HH21	1.45	0.63
11:C:146:LYS:HB3	11:C:147:PRO:HD2	1.81	0.63
16:H:3:VAL:HG13	16:H:21:VAL:HG11	1.79	0.63
20:L:118:THR:CB	20:L:119:PRO:HD3	2.28	0.63
27:S:89:ALA:HA	27:S:90:LYS:HZ2	1.63	0.63
33:Y:9:THR:CB	33:Y:54:VAL:HA	2.25	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1:13:SER:N	2:1:50:GLU:HA	2.13	0.63
10:B:13:A:H61	10:B:525:U:H2'	1.63	0.63
10:B:270:A:C6	10:B:370:G:N1	2.50	0.63
10:B:283:G:N3	10:B:284:U:C6	2.67	0.63
10:B:304:U:O2'	10:B:305:C:H5'	1.98	0.63
10:B:309:A:H8	10:B:309:A:O5'	1.82	0.63
10:B:1034:G:C5	10:B:1035:U:C5	2.87	0.63
10:B:1174:U:H4'	10:B:1176:U:N3	2.13	0.63
10:B:1460:U:H5''	10:B:1461:C:C6	2.34	0.63
10:B:1484:U:H2'	10:B:1485:U:H6	1.64	0.63
10:B:1495:A:H2'	10:B:1496:A:C8	2.33	0.63
11:C:45:ASN:O	11:C:46:GLY:C	2.41	0.63
11:C:66:PHE:O	11:C:67:LYS:C	2.42	0.63
11:C:117:SER:HB3	11:C:127:ASN:ND2	2.14	0.63
11:C:231:HIS:ND1	11:C:231:HIS:O	2.31	0.63
12:D:2:ILE:HB	12:D:205:PRO:HD3	1.80	0.63
15:G:137:LYS:HA	15:G:140:ILE:HG12	1.80	0.63
19:K:102:PRO:HA	19:K:121:GLU:HB3	1.80	0.63
20:L:77:ILE:HG22	20:L:78:ARG:H	1.64	0.63
29:U:4:ILE:HG21	29:U:25:LYS:HE2	1.80	0.63
29:U:43:LYS:HD2	29:U:44:HIS:N	2.13	0.63
10:B:444:C:H5''	13:E:44:ARG:NH1	2.14	0.63
10:B:450:G:H4'	13:E:47:LYS:HG2	1.80	0.63
10:B:1210:G:H5'	10:B:1212:G:O4'	1.99	0.63
10:B:1516:G:C2	10:B:1517:G:C4	2.87	0.63
10:B:1821:A:H5'	11:C:155:ARG:HD2	1.81	0.63
10:B:1854:A:H62	10:B:1888:G:H8	1.47	0.63
10:B:2228:G:H2'	10:B:2229:U:C6	2.33	0.63
11:C:29:PHE:HB2	11:C:31:PRO:CD	2.28	0.63
11:C:224:MET:HG3	11:C:233:GLY:O	1.99	0.63
12:D:140:HIS:O	12:D:142:VAL:N	2.32	0.63
12:D:142:VAL:HB	12:D:143:PRO:HD2	1.80	0.63
25:Q:92:LYS:CG	25:Q:93:ILE:H	2.12	0.63
29:U:6:ARG:C	29:U:8:ASP:H	2.07	0.63
30:V:5:ASN:HA	30:V:64:VAL:HB	1.79	0.63
34:Z:53:THR:HA	34:Z:56:ARG:HD2	1.81	0.63
6:5:358:GLY:H	6:5:361:PRO:HG3	1.63	0.62
10:B:280:U:H2'	10:B:281:C:C1'	2.29	0.62
10:B:636:G:OP2	20:L:128:THR:HG22	1.99	0.62
10:B:1054:A:H8	10:B:1054:A:O5'	1.82	0.62
10:B:1485:U:H2'	10:B:1486:U:H6	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1517:G:C2'	10:B:1518:C:H5'	2.29	0.62
10:B:1521:G:H2'	10:B:1522:A:H8	1.63	0.62
10:B:2077:A:H2'	10:B:2078:C:C6	2.34	0.62
15:G:32:LEU:HD21	15:G:74:MET:CB	2.29	0.62
17:I:74:PRO:O	17:I:77:VAL:HG22	1.99	0.62
17:I:77:VAL:HA	17:I:80:LYS:CE	2.29	0.62
18:J:58:ASN:HA	18:J:127:GLY:N	2.14	0.62
25:Q:60:TRP:CE2	25:Q:93:ILE:HA	2.34	0.62
29:U:27:VAL:HA	29:U:32:LYS:O	1.99	0.62
34:Z:9:TYR:CZ	34:Z:11:GLU:HB2	2.34	0.62
10:B:143:C:O2	28:T:4:GLU:HG2	1.99	0.62
10:B:469:G:OP2	13:E:55:SER:HB3	1.98	0.62
10:B:596:U:H2'	10:B:597:G:C8	2.34	0.62
10:B:2814:A:H2'	10:B:2815:C:H6	1.64	0.62
10:B:2820:A:C4	22:N:4:ARG:HD3	2.34	0.62
11:C:222:THR:C	11:C:224:MET:H	2.06	0.62
12:D:167:ASN:ND2	12:D:167:ASN:H	1.96	0.62
26:R:2:TYR:H	26:R:46:GLU:HB2	1.63	0.62
29:U:45:GLN:O	29:U:55:GLY:HA2	1.99	0.62
9:A:60:C:H2'	9:A:61:G:H8	1.63	0.62
9:A:98:G:H1	30:V:14:LYS:CB	2.12	0.62
10:B:142:A:H1'	28:T:2:ILE:CG2	2.29	0.62
10:B:307:G:H22	10:B:309:A:H3'	1.63	0.62
10:B:332:A:C2	10:B:335:C:C2	2.87	0.62
10:B:946:C:H2'	10:B:947:A:C8	2.33	0.62
10:B:1533:C:C2'	10:B:1534:U:H5'	2.29	0.62
10:B:1552:A:H2'	10:B:1553:A:C5'	2.29	0.62
10:B:1790:C:H4'	11:C:207:ALA:HB2	1.81	0.62
10:B:2179:C:H2'	10:B:2180:U:C6	2.34	0.62
12:D:5:VAL:HG11	12:D:29:VAL:N	2.14	0.62
12:D:12:THR:OG1	12:D:14:ILE:HG12	2.00	0.62
16:H:125:THR:CB	16:H:146:VAL:HB	2.29	0.62
10:B:1099:G:C2'	10:B:1100:C:H5'	2.29	0.62
10:B:1791:A:H1'	11:C:206:LYS:NZ	2.14	0.62
10:B:2591:C:H2'	10:B:2592:G:C8	2.33	0.62
11:C:159:THR:C	11:C:160:TYR:HD1	2.07	0.62
13:E:127:GLU:HB2	13:E:130:LYS:HB2	1.80	0.62
24:P:1:SER:HA	24:P:4:ILE:HD12	1.79	0.62
25:Q:65:ASN:HA	25:Q:75:TYR:HB2	1.81	0.62
31:W:17:ALA:O	31:W:35:ILE:HA	2.00	0.62
1:O:51:ARG:O	22:N:118:ARG:CZ	2.47	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:181:A:H2'	10:B:182:A:C8	2.34	0.62
10:B:287:G:C6	10:B:354:A:C5	2.86	0.62
10:B:311:A:C4	10:B:332:A:N7	2.67	0.62
10:B:324:A:C6	10:B:325:G:N7	2.67	0.62
10:B:352:A:H2'	10:B:352:A:N3	2.15	0.62
10:B:2241:A:H2'	10:B:2242:G:C8	2.34	0.62
11:C:20:ASN:HD22	11:C:202:ARG:HA	1.63	0.62
13:E:150:THR:HA	13:E:187:VAL:HG23	1.81	0.62
14:F:107:VAL:H	14:F:108:PRO:HD2	1.64	0.62
16:H:69:ALA:HB2	16:H:139:PHE:O	1.98	0.62
20:L:118:THR:H	20:L:119:PRO:CD	2.11	0.62
27:S:89:ALA:HA	27:S:90:LYS:HZ1	1.64	0.62
1:O:51:ARG:C	22:N:118:ARG:NH2	2.58	0.62
10:B:359:G:H2'	10:B:360:U:H5'	1.81	0.62
10:B:395:U:H2'	10:B:396:G:N7	2.14	0.62
10:B:1445:G:N1	10:B:1547:C:N4	2.47	0.62
10:B:2405:G:H1'	10:B:2412:A:H61	1.65	0.62
10:B:2537:U:H2'	10:B:2538:C:C6	2.34	0.62
10:B:2834:G:H1'	10:B:2883:A:N6	2.14	0.62
20:L:54:GLN:C	20:L:56:PRO:HD2	2.25	0.62
26:R:39:LEU:HD12	26:R:60:LYS:HB2	1.80	0.62
28:T:28:ASN:HD22	28:T:28:ASN:N	1.95	0.62
28:T:50:LEU:C	28:T:52:GLU:H	2.08	0.62
33:Y:18:LYS:HZ1	33:Y:53:MET:HE2	1.64	0.62
10:B:306:U:O5'	10:B:306:U:H6	1.83	0.62
10:B:1040:A:N1	10:B:1116:G:C6	2.67	0.62
10:B:1053:C:N3	10:B:1107:G:N1	2.47	0.62
10:B:1553:A:O2'	10:B:1554:U:H2'	1.98	0.62
10:B:2597:G:H5''	11:C:239:PHE:O	2.00	0.62
10:B:2784:U:H2'	10:B:2785:C:H6	1.65	0.62
16:H:37:VAL:N	16:H:38:PRO:HD2	2.13	0.62
22:N:19:ALA:C	22:N:21:PHE:H	2.06	0.62
31:W:30:VAL:HG12	31:W:31:LEU:N	2.14	0.62
5:4:33:HIS:H	5:4:33:HIS:CD2	2.17	0.62
9:A:49:C:H2'	9:A:50:A:C8	2.34	0.62
10:B:280:U:C5	10:B:281:C:C4	2.87	0.62
10:B:1158:C:H5''	33:Y:30:ARG:HD3	1.82	0.62
10:B:1406:U:H2'	10:B:1407:G:C8	2.35	0.62
10:B:1794:A:H2'	10:B:1795:C:H6	1.64	0.62
11:C:103:ILE:HG22	11:C:104:LEU:N	2.15	0.62
18:J:28:LEU:HD23	18:J:29:ALA:N	2.14	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:N:98:LEU:HB2	22:N:112:TYR:CE1	2.35	0.62
22:N:116:VAL:C	22:N:118:ARG:H	2.08	0.62
10:B:27:G:HO2'	10:B:28:A:H8	1.46	0.62
10:B:704:G:H1'	10:B:727:A:N6	2.14	0.62
10:B:1091:G:C2'	10:B:1092:C:H5'	2.30	0.62
10:B:1116:G:H2'	10:B:1116:G:N3	2.15	0.62
10:B:1198:U:H2'	10:B:1199:U:C6	2.35	0.62
10:B:1429:G:H2'	10:B:1430:G:H8	1.64	0.62
10:B:1470:A:H3'	10:B:1471:G:H8	1.63	0.62
10:B:1473:G:N1	10:B:1518:C:N4	2.26	0.62
10:B:1539:U:H5'	10:B:1540:G:OP2	2.00	0.62
14:F:133:GLU:HG3	14:F:134:GLN:H	1.64	0.62
20:L:29:LYS:HD2	20:L:31:GLY:N	2.12	0.62
22:N:123:GLU:HG3	22:N:124:ALA:N	2.15	0.62
29:U:88:ASP:HB2	29:U:91:LYS:O	1.99	0.62
1:0:35:GLU:C	1:0:37:HIS:H	2.06	0.62
10:B:2405:G:H1'	10:B:2412:A:N6	2.15	0.62
10:B:2783:U:H2'	10:B:2784:U:C6	2.35	0.62
19:K:63:VAL:HB	19:K:83:ALA:CB	2.29	0.62
22:N:13:ASN:HD22	22:N:15:SER:HB2	1.65	0.62
30:V:40:ILE:HD13	30:V:40:ILE:H	1.65	0.62
32:X:22:LEU:HA	32:X:47:ARG:HH12	1.65	0.62
6:5:354:LEU:HD13	6:5:357:MET:HG2	1.80	0.61
10:B:929:U:H5'	33:Y:37:ARG:NH1	2.15	0.61
10:B:1077:A:H2'	10:B:1078:U:C5'	2.30	0.61
10:B:1175:A:H3'	10:B:1176:U:O4'	2.00	0.61
10:B:1532:A:H2	10:B:1539:U:O2	1.82	0.61
10:B:2722:G:H2'	10:B:2723:C:H6	1.64	0.61
12:D:84:LEU:HD21	12:D:86:GLU:HB2	1.82	0.61
18:J:63:ALA:HA	18:J:69:ARG:HD2	1.81	0.61
20:L:78:ARG:H	20:L:78:ARG:CZ	2.13	0.61
24:P:47:ILE:CG2	24:P:48:ALA:H	2.11	0.61
24:P:59:THR:O	24:P:60:VAL:HG13	1.99	0.61
26:R:68:ARG:HD2	26:R:70:GLU:OE1	1.99	0.61
34:Z:3:LYS:HB2	34:Z:51:VAL:CG2	2.25	0.61
34:Z:30:HIS:H	34:Z:48:GLN:CD	2.07	0.61
9:A:104:A:H2'	9:A:105:G:O4'	2.00	0.61
10:B:417:C:H2'	10:B:418:C:H6	1.65	0.61
10:B:545:U:H2'	10:B:547:A:OP2	2.00	0.61
10:B:1188:U:H4'	26:R:83:TYR:HB2	1.82	0.61
10:B:1523:U:H6	10:B:1523:U:P	2.22	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:C:143:VAL:HG11	11:C:173:LEU:HD11	1.81	0.61
12:D:157:LYS:HZ3	12:D:158:GLY:HA3	1.65	0.61
20:L:55:MET:N	20:L:56:PRO:CD	2.62	0.61
23:O:41:ALA:HB1	23:O:42:PRO:HD2	1.82	0.61
32:X:49:ASP:HB3	32:X:52:ARG:NH2	2.15	0.61
4:3:11:LYS:NZ	20:L:63:LYS:HB2	2.15	0.61
4:3:12:ARG:HB2	4:3:12:ARG:HH11	1.64	0.61
10:B:271:G:C6	10:B:366:C:H2'	2.34	0.61
10:B:279:A:H2'	10:B:280:U:C5'	2.14	0.61
10:B:324:A:C2	10:B:325:G:N9	2.68	0.61
10:B:332:A:C4	10:B:335:C:C4	2.88	0.61
10:B:564:C:O2'	10:B:565:C:H5'	2.00	0.61
10:B:580:U:H2'	10:B:581:C:C6	2.35	0.61
10:B:587:C:OP2	20:L:29:LYS:HG2	2.01	0.61
10:B:903:C:H2'	10:B:904:G:H8	1.64	0.61
10:B:1063:G:H5''	17:I:76:ALA:N	2.15	0.61
10:B:1107:G:H2'	10:B:1108:U:C6	2.34	0.61
10:B:1131:G:H1'	10:B:1133:A:N6	2.14	0.61
10:B:2267:A:N6	10:B:2272:U:C4	2.68	0.61
14:F:140:ILE:HG22	14:F:142:TYR:H	1.65	0.61
15:G:88:LEU:HD11	15:G:95:ALA:HB2	1.81	0.61
16:H:50:ARG:HG2	16:H:51:ARG:HA	1.81	0.61
18:J:11:VAL:HG11	18:J:44:TYR:CD1	2.35	0.61
18:J:81:ILE:HG12	18:J:82:GLY:H	1.65	0.61
20:L:109:LYS:HA	20:L:126:ARG:HB2	1.82	0.61
21:M:63:ILE:HD11	21:M:65:ILE:HG23	1.82	0.61
22:N:4:ARG:HG3	22:N:5:LYS:N	2.16	0.61
29:U:11:ILE:HB	29:U:69:VAL:CB	2.30	0.61
29:U:35:VAL:HG12	29:U:36:GLU:H	1.64	0.61
1:0:52:LYS:HZ2	22:N:118:ARG:NH1	1.98	0.61
10:B:316:C:H2'	10:B:317:G:C5'	2.25	0.61
10:B:854:C:H2'	10:B:855:G:C8	2.34	0.61
10:B:917:A:C2	10:B:918:A:H1'	2.36	0.61
10:B:2704:C:H2'	10:B:2705:A:O4'	1.99	0.61
11:C:229:HIS:ND1	11:C:230:PRO:HD2	2.16	0.61
12:D:157:LYS:NZ	12:D:158:GLY:HA3	2.15	0.61
14:F:41:GLU:HB2	14:F:45:ASP:N	2.15	0.61
14:F:83:PRO:HG2	14:F:84:ILE:H	1.64	0.61
17:I:11:GLN:HG3	17:I:11:GLN:O	2.01	0.61
23:O:41:ALA:HB3	23:O:45:SER:HB3	1.81	0.61
26:R:35:PHE:HB2	26:R:64:VAL:CG2	2.31	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:3:34:LYS:HE3	10:B:2420:C:OP1	1.99	0.61
10:B:301:G:C2	10:B:302:C:C2	2.88	0.61
10:B:347:A:C5	10:B:348:A:C8	2.87	0.61
10:B:350:G:N7	10:B:351:C:N4	2.48	0.61
10:B:1056:G:O2'	10:B:1086:A:H1'	2.01	0.61
10:B:1183:U:H2'	10:B:1184:U:C6	2.35	0.61
10:B:2228:G:H2'	10:B:2229:U:H6	1.66	0.61
10:B:2266:A:H4'	10:B:2267:A:N7	2.16	0.61
10:B:2287:A:HO2'	10:B:2288:A:H2'	1.64	0.61
10:B:2292:U:H2'	10:B:2293:G:H8	1.65	0.61
24:P:76:HIS:CD2	24:P:76:HIS:H	2.18	0.61
25:Q:85:ALA:HB1	25:Q:88:GLU:HB2	1.83	0.61
25:Q:94:LEU:HD13	25:Q:94:LEU:H	1.66	0.61
29:U:44:HIS:O	29:U:57:ILE:HB	2.00	0.61
30:V:21:ARG:HA	30:V:25:LYS:O	2.00	0.61
33:Y:44:ARG:HG3	33:Y:45:GLY:N	2.15	0.61
4:3:22:LYS:HZ3	10:B:650:C:H5''	1.66	0.61
10:B:328:U:C4'	29:U:65:GLN:OE1	2.47	0.61
10:B:328:U:O2'	29:U:65:GLN:HB2	2.01	0.61
10:B:608:A:H2'	10:B:609:A:C8	2.35	0.61
10:B:664:G:H2'	10:B:665:U:H6	1.65	0.61
10:B:856:G:H2'	10:B:857:G:C8	2.36	0.61
10:B:992:C:O2'	10:B:993:G:H5'	2.01	0.61
11:C:50:THR:HG22	11:C:51:ARG:CG	2.31	0.61
11:C:224:MET:HA	11:C:232:GLY:CA	2.30	0.61
14:F:34:THR:O	14:F:153:ILE:HA	2.01	0.61
15:G:10:VAL:HG12	15:G:47:ASN:O	1.99	0.61
17:I:105:LEU:HD11	17:I:139:VAL:CG1	2.28	0.61
18:J:34:ARG:HB3	18:J:39:LYS:HB2	1.83	0.61
21:M:64:TRP:O	21:M:102:LEU:HB2	2.01	0.61
1:0:8:THR:HG23	1:0:9:ARG:N	2.16	0.61
10:B:268:C:C4	10:B:269:C:N4	2.68	0.61
10:B:270:A:N1	10:B:370:G:C4	2.68	0.61
10:B:357:C:O2'	10:B:358:U:H5'	1.99	0.61
10:B:478:A:N1	10:B:500:G:H4'	2.16	0.61
10:B:764:A:OP2	11:C:213:ARG:NH2	2.33	0.61
10:B:1076:C:C1'	17:I:92:PRO:HG2	2.14	0.61
10:B:1197:G:H2'	10:B:1198:U:C6	2.35	0.61
10:B:1532:A:H2	10:B:1539:U:C2	2.18	0.61
10:B:1818:U:O3'	11:C:155:ARG:HB2	2.01	0.61
10:B:1826:G:OP2	11:C:221:GLY:HA2	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:C:209:ALA:HB1	11:C:213:ARG:NH1	2.15	0.61
13:E:151:GLY:O	13:E:190:ALA:HB2	2.00	0.61
18:J:41:LYS:NZ	18:J:46:PRO:HD3	2.15	0.61
20:L:38:GLN:C	20:L:40:SER:N	2.53	0.61
24:P:62:LYS:HE2	24:P:74:GLN:HE22	1.66	0.61
28:T:3:ARG:O	28:T:3:ARG:HG2	2.00	0.61
29:U:42:LYS:HD3	29:U:60:LYS:HG2	1.81	0.61
30:V:44:HIS:NE2	30:V:85:LYS:HB2	2.16	0.61
10:B:19:A:H2'	10:B:20:C:C6	2.36	0.61
10:B:283:G:C6	10:B:284:U:N3	2.69	0.61
10:B:333:G:C6	10:B:334:C:C4	2.89	0.61
10:B:1405:U:H2'	10:B:1406:U:C6	2.36	0.61
10:B:1519:G:N7	10:B:1520:U:H5	1.99	0.61
10:B:1534:U:O2'	10:B:1535:A:H8	1.84	0.61
10:B:2881:U:C5'	22:N:121:LYS:HD3	2.26	0.61
12:D:12:THR:HB	12:D:21:SER:O	2.01	0.61
16:H:69:ALA:HB2	16:H:140:ALA:HA	1.83	0.61
16:H:73:ASN:HD22	16:H:73:ASN:H	1.47	0.61
17:I:32:VAL:HG22	17:I:60:VAL:CG2	2.31	0.61
18:J:18:VAL:CG2	18:J:56:VAL:HA	2.30	0.61
19:K:60:ALA:HA	19:K:87:LEU:HG	1.83	0.61
19:K:119:ALA:O	19:K:120:PRO:C	2.44	0.61
23:O:48:LEU:HD23	23:O:49:VAL:N	2.16	0.61
25:Q:60:TRP:O	25:Q:63:ARG:HG2	2.00	0.61
28:T:69:ARG:H	28:T:75:GLY:HA3	1.66	0.61
29:U:52:ASN:N	29:U:52:ASN:OD1	2.33	0.61
5:4:1:MET:HA	10:B:2527:C:O2'	2.00	0.61
9:A:50:A:H5''	23:O:68:LYS:HD2	1.82	0.61
10:B:143:C:H2'	10:B:144:A:N9	2.16	0.61
10:B:196:A:H2'	10:B:196:A:N3	2.16	0.61
10:B:348:A:H2'	10:B:349:U:H6	1.64	0.61
10:B:946:C:H2'	10:B:947:A:H8	1.66	0.61
10:B:1050:A:C1'	10:B:2751:G:C6	2.84	0.61
10:B:1095:A:O2'	10:B:1096:A:H5'	2.00	0.61
10:B:1486:U:H2'	10:B:1487:U:H6	1.66	0.61
10:B:2138:G:H2'	10:B:2139:U:C6	2.36	0.61
10:B:2301:C:H2'	10:B:2302:U:H6	1.65	0.61
10:B:2621:G:HO2'	12:D:164:GLN:HB2	1.66	0.61
10:B:2852:G:H2'	10:B:2853:C:C6	2.36	0.61
10:B:2872:A:O2'	10:B:2873:A:H5''	2.01	0.61
11:C:77:VAL:HG23	11:C:115:ILE:HD11	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:F:106:ALA:CB	14:F:136:ILE:HG23	2.30	0.61
18:J:17:VAL:HG23	18:J:139:VAL:HB	1.83	0.61
24:P:5:LYS:C	24:P:7:LEU:N	2.55	0.61
24:P:27:VAL:HG21	24:P:86:LYS:HB2	1.82	0.61
25:Q:27:ARG:HA	25:Q:33:VAL:HB	1.83	0.61
26:R:47:VAL:HG22	26:R:48:LYS:N	2.14	0.61
29:U:12:VAL:HG11	29:U:18:LYS:H	1.65	0.61
1:O:52:LYS:HD2	22:N:118:ARG:NE	2.14	0.61
6:5:428:LYS:HZ3	10:B:1283:G:P	2.23	0.61
10:B:708:G:H2'	10:B:709:U:C6	2.36	0.61
10:B:2836:U:H2'	10:B:2837:A:H8	1.65	0.61
11:C:191:LEU:O	11:C:191:LEU:HD22	2.00	0.61
14:F:64:PRO:HA	14:F:88:VAL:CG2	2.29	0.61
18:J:25:LEU:HG	18:J:64:VAL:N	2.10	0.61
20:L:66:PHE:CD1	20:L:66:PHE:N	2.68	0.61
25:Q:47:ARG:HH22	25:Q:50:ARG:HG2	1.66	0.61
26:R:42:ALA:CA	26:R:54:VAL:HA	2.30	0.61
26:R:79:ARG:HD3	26:R:86:GLN:NE2	2.16	0.61
29:U:90:LYS:HD2	29:U:91:LYS:HZ3	1.65	0.61
3:2:35:ARG:HH21	10:B:55:G:P	2.23	0.60
9:A:29:A:H3'	9:A:30:C:H6	1.65	0.60
10:B:116:C:H2'	10:B:117:G:C8	2.36	0.60
10:B:275:C:O5'	10:B:275:C:H6	1.84	0.60
10:B:289:G:H8	10:B:289:G:O5'	1.83	0.60
10:B:311:A:N9	10:B:332:A:N7	2.49	0.60
10:B:336:C:P	29:U:81:ARG:HD3	2.35	0.60
10:B:414:C:H2'	10:B:415:A:C8	2.36	0.60
10:B:437:U:H2'	10:B:438:G:C8	2.36	0.60
10:B:527:C:H5''	10:B:2779:U:O2	2.00	0.60
10:B:639:U:H2'	10:B:640:C:C6	2.36	0.60
10:B:1040:A:H2	10:B:1115:G:H22	1.48	0.60
10:B:1052:C:H6	10:B:1052:C:O5'	1.84	0.60
10:B:1203:U:H3'	10:B:1204:A:C5'	2.30	0.60
10:B:1590:A:H2'	10:B:1591:A:H8	1.65	0.60
10:B:2144:G:H2'	10:B:2146:C:OP2	2.01	0.60
10:B:2461:A:H2'	10:B:2462:C:C6	2.36	0.60
10:B:2784:U:H2'	10:B:2785:C:C6	2.35	0.60
16:H:2:GLN:HE22	16:H:19:VAL:C	2.09	0.60
18:J:20:ALA:HB1	18:J:59:ALA:HA	1.83	0.60
21:M:88:ASN:O	21:M:89:VAL:HG12	2.00	0.60
22:N:1:MET:HE2	22:N:4:ARG:O	2.00	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:R:37:GLU:CG	26:R:62:GLU:H	2.13	0.60
26:R:97:LYS:O	26:R:98:ILE:HB	2.01	0.60
30:V:70:ILE:N	30:V:70:ILE:HD13	2.16	0.60
1:0:26:SER:HB2	1:0:38:LEU:HD12	1.83	0.60
1:0:52:LYS:CE	22:N:118:ARG:CD	2.75	0.60
4:3:11:LYS:HE2	20:L:60:ARG:HD3	1.84	0.60
10:B:240:C:H3'	10:B:241:A:H5''	1.83	0.60
10:B:273:G:C2	10:B:274:C:C6	2.90	0.60
10:B:327:G:C6	10:B:336:C:C4	2.89	0.60
10:B:419:U:H2'	10:B:420:C:H6	1.66	0.60
10:B:1532:A:N1	10:B:1540:G:C6	2.69	0.60
10:B:1553:A:O2'	10:B:1554:U:H6	1.80	0.60
10:B:2037:A:H2'	10:B:2038:G:H8	1.65	0.60
10:B:2579:C:O2'	12:D:138:LEU:HD13	2.01	0.60
10:B:2751:G:O5'	15:G:3:VAL:HG13	2.01	0.60
11:C:22:GLU:CD	11:C:202:ARG:HE	2.09	0.60
13:E:98:LYS:HG3	13:E:99:LYS:H	1.65	0.60
16:H:66:ASN:HA	16:H:138:VAL:HG21	1.81	0.60
16:H:121:VAL:HG21	16:H:128:HIS:NE2	2.17	0.60
20:L:55:MET:N	20:L:56:PRO:HD2	2.16	0.60
26:R:20:VAL:HG13	26:R:97:LYS:NZ	2.16	0.60
10:B:287:G:N1	10:B:288:U:C4	2.69	0.60
10:B:301:G:C4	10:B:302:C:C2	2.89	0.60
10:B:833:A:H2'	10:B:834:G:C8	2.36	0.60
10:B:1219:U:H2'	10:B:1220:G:H8	1.65	0.60
10:B:1709:U:H2'	10:B:1710:G:H8	1.66	0.60
10:B:1779:U:H5	10:B:1784:A:N7	1.99	0.60
11:C:140:VAL:HG23	11:C:193:GLU:OE2	2.01	0.60
12:D:88:GLU:CG	12:D:89:GLU:H	2.14	0.60
13:E:91:ASP:O	13:E:92:HIS:HB2	2.02	0.60
14:F:125:GLY:HA3	14:F:159:ALA:HB3	1.83	0.60
15:G:124:CYS:HB3	15:G:129:GLU:O	2.01	0.60
22:N:37:THR:HG1	22:N:40:LYS:HB2	1.65	0.60
24:P:23:ASP:HA	24:P:49:ILE:HB	1.83	0.60
25:Q:88:GLU:OE1	25:Q:111:LYS:HD2	2.00	0.60
26:R:79:ARG:HD3	26:R:86:GLN:CD	2.25	0.60
27:S:7:HIS:CG	27:S:8:ARG:H	2.19	0.60
29:U:42:LYS:HD2	29:U:60:LYS:CG	2.31	0.60
34:Z:15:SER:HB2	34:Z:25:ARG:NH1	2.15	0.60
4:3:24:LYS:HB2	20:L:64:PHE:CD2	2.36	0.60
10:B:45:G:C5'	10:B:46:G:H5'	2.32	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:286:U:H2'	10:B:287:G:C8	2.34	0.60
10:B:342:A:C2	10:B:343:C:C4	2.84	0.60
10:B:594:U:H2'	10:B:595:C:H6	1.66	0.60
10:B:598:U:H2'	10:B:599:A:H8	1.65	0.60
10:B:1050:A:C5	10:B:2751:G:O6	2.54	0.60
10:B:1050:A:H2'	10:B:1051:G:O4'	2.00	0.60
10:B:1874:C:H2'	10:B:1875:G:O4'	2.00	0.60
10:B:2575:C:H5''	12:D:149:ASN:HB3	1.80	0.60
11:C:37:SER:H	11:C:62:ARG:HB2	1.66	0.60
12:D:142:VAL:O	12:D:143:PRO:C	2.42	0.60
13:E:170:ARG:HH21	13:E:175:ILE:HD12	1.66	0.60
18:J:7:LYS:C	18:J:9:GLU:H	2.10	0.60
23:O:35:ILE:HD13	23:O:35:ILE:N	2.17	0.60
29:U:46:LYS:HB3	29:U:46:LYS:NZ	2.17	0.60
31:W:49:ASN:HB2	31:W:53:GLY:CA	2.30	0.60
31:W:66:VAL:HG13	31:W:67:LYS:N	2.16	0.60
34:Z:25:ARG:HG3	34:Z:26:SER:H	1.65	0.60
2:1:42:VAL:CG1	2:1:43:ARG:HG3	2.30	0.60
5:4:7:VAL:O	5:4:23:ILE:HG21	2.01	0.60
10:B:297:G:N7	10:B:298:G:C6	2.70	0.60
10:B:558:U:OP1	18:J:113:PRO:HG2	2.01	0.60
10:B:990:A:H1'	10:B:1156:A:H2	1.64	0.60
10:B:1015:U:H2'	10:B:1016:G:C8	2.37	0.60
10:B:1104:C:O5'	10:B:1104:C:H6	1.85	0.60
10:B:1319:C:O2'	10:B:1320:C:H5'	2.01	0.60
10:B:1528:A:C6	10:B:1544:A:N7	2.68	0.60
10:B:1552:A:H2'	10:B:1553:A:H5'	1.83	0.60
10:B:2229:U:H2'	10:B:2230:G:C8	2.37	0.60
10:B:2291:U:H2'	10:B:2292:U:C6	2.36	0.60
15:G:84:LYS:HA	15:G:84:LYS:HZ3	1.66	0.60
15:G:173:ALA:HB3	15:G:174:LYS:NZ	2.16	0.60
16:H:4:ILE:C	16:H:37:VAL:HG12	2.26	0.60
19:K:99:ILE:HD13	19:K:118:LEU:HD13	1.83	0.60
24:P:26:GLU:HA	24:P:47:ILE:N	2.15	0.60
24:P:93:LYS:HB3	24:P:96:LEU:HA	1.83	0.60
25:Q:57:ARG:HD2	25:Q:92:LYS:NZ	2.15	0.60
1:0:50:GLY:CA	22:N:118:ARG:NH2	2.56	0.60
2:1:42:VAL:HG13	2:1:43:ARG:N	2.16	0.60
9:A:48:U:H2'	9:A:49:C:C6	2.36	0.60
10:B:347:A:H2'	10:B:348:A:H5'	1.83	0.60
10:B:936:A:H2'	10:B:937:C:C6	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1070:A:N6	17:I:9:LYS:O	2.34	0.60
10:B:2000:C:O2'	10:B:2001:C:H5'	2.02	0.60
10:B:2469:A:H5''	21:M:55:ARG:HD2	1.82	0.60
10:B:2547:A:H2'	10:B:2548:U:C6	2.37	0.60
10:B:2669:G:H2'	10:B:2670:A:H8	1.66	0.60
10:B:2774:C:H2'	10:B:2775:G:O4'	2.01	0.60
13:E:9:GLN:NE2	13:E:120:VAL:HG13	2.15	0.60
17:I:37:PHE:HB2	17:I:66:PHE:CZ	2.36	0.60
17:I:85:ILE:HD13	17:I:137:LEU:HD21	1.83	0.60
18:J:102:GLU:HG2	18:J:103:ILE:N	2.15	0.60
19:K:99:ILE:HG22	19:K:119:ALA:HB2	1.84	0.60
24:P:27:VAL:HG12	24:P:47:ILE:HD11	1.82	0.60
28:T:30:ILE:O	28:T:84:TYR:HA	2.02	0.60
30:V:46:LYS:O	30:V:50:MET:HG3	2.02	0.60
31:W:40:ARG:NH1	31:W:40:ARG:N	2.50	0.60
4:3:44:ARG:HB3	4:3:45:PRO:HD2	1.84	0.60
10:B:222:A:N6	10:B:232:G:H1'	2.17	0.60
10:B:272:A:C2	10:B:273:G:H8	2.15	0.60
10:B:295:G:N1	10:B:344:A:N1	2.49	0.60
10:B:298:G:O3'	10:B:299:A:H8	1.83	0.60
10:B:704:G:H1'	10:B:727:A:H61	1.67	0.60
10:B:1519:G:H2'	10:B:1520:U:C5'	2.27	0.60
10:B:2639:A:H2'	10:B:2640:G:O4'	2.02	0.60
15:G:97:VAL:HG23	15:G:124:CYS:SG	2.41	0.60
18:J:102:GLU:HG2	18:J:103:ILE:HG12	1.81	0.60
19:K:47:ILE:HG23	19:K:48:PRO:HD2	1.82	0.60
29:U:7:ASP:N	29:U:24:VAL:HA	2.17	0.60
10:B:273:G:C2	10:B:274:C:C2	2.90	0.60
10:B:278:A:N1	10:B:362:A:H8	2.00	0.60
10:B:340:A:C8	10:B:341:C:C4	2.89	0.60
10:B:1007:C:H5''	18:J:37:ARG:NH2	2.16	0.60
10:B:1109:C:N3	10:B:1110:G:N1	2.49	0.60
10:B:1113:U:OP1	15:G:2:ARG:HG2	2.02	0.60
10:B:1381:G:H2'	10:B:1382:G:H5'	1.84	0.60
10:B:1469:A:H2'	10:B:1470:A:H8	1.66	0.60
10:B:1473:G:C2	10:B:1519:G:C6	2.90	0.60
10:B:2591:C:H2'	10:B:2592:G:H8	1.65	0.60
11:C:172:THR:O	11:C:173:LEU:HB2	2.01	0.60
12:D:175:LEU:HD11	12:D:192:ALA:HB3	1.82	0.60
14:F:9:ASP:O	14:F:10:GLU:HB2	2.00	0.60
16:H:2:GLN:N	16:H:21:VAL:HG12	2.16	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:I:130:GLY:HA2	17:I:133:ARG:HH21	1.67	0.60
22:N:28:LEU:HD12	22:N:28:LEU:H	1.66	0.60
25:Q:101:ASP:HB3	25:Q:104:ALA:HB3	1.84	0.60
33:Y:3:THR:HG21	33:Y:43:ILE:HB	1.83	0.60
10:B:19:A:H5''	25:Q:20:ALA:O	2.02	0.60
10:B:320:A:H3'	13:E:132:LYS:CG	2.31	0.60
10:B:324:A:H61	10:B:338:G:H2'	1.65	0.60
10:B:346:A:C6	10:B:347:A:C4	2.89	0.60
10:B:1063:G:HO2'	17:I:135:MET:CB	2.07	0.60
10:B:1690:A:H2'	10:B:1691:C:O4'	2.01	0.60
10:B:1790:C:P	11:C:219:VAL:HB	2.42	0.60
10:B:2500:U:H5'	10:B:2501:C:OP2	2.02	0.60
10:B:2512:C:C4'	12:D:146:ILE:HG12	2.31	0.60
10:B:2688:G:H1'	10:B:2721:A:N6	2.17	0.60
10:B:2873:A:N3	22:N:6:SER:HA	2.16	0.60
11:C:224:MET:O	11:C:225:ASN:HB2	2.01	0.60
13:E:18:THR:HG23	13:E:20:GLY:N	2.15	0.60
13:E:48:THR:CG2	13:E:86:ALA:HB1	2.32	0.60
18:J:81:ILE:HG23	18:J:82:GLY:H	1.67	0.60
20:L:27:LEU:HD12	20:L:27:LEU:N	2.16	0.60
20:L:78:ARG:NH2	20:L:82:LEU:HD23	2.16	0.60
29:U:81:ARG:HD2	29:U:81:ARG:N	2.16	0.60
1:O:2:VAL:HG22	1:O:3:GLN:H	1.67	0.60
4:3:26:ALA:HB1	4:3:29:ARG:CG	2.32	0.60
6:5:367:GLN:HB3	6:5:371:LYS:HB2	1.84	0.60
10:B:303:G:H2'	10:B:304:U:C6	2.37	0.60
10:B:304:U:H2'	10:B:305:C:C5	2.37	0.60
10:B:921:C:O2'	10:B:922:C:H5'	2.02	0.60
10:B:1042:G:C2	10:B:1043:C:C6	2.89	0.60
10:B:1070:A:C1'	17:I:9:LYS:HZ2	2.15	0.60
10:B:1722:A:N6	10:B:1738:G:H1'	2.17	0.60
10:B:1820:U:O2	11:C:200:MET:HB2	2.02	0.60
10:B:2292:U:H2'	10:B:2293:G:C8	2.37	0.60
10:B:2600:A:O2'	10:B:2601:C:H5'	2.01	0.60
10:B:2813:A:H2'	10:B:2814:A:H8	1.67	0.60
10:B:2848:G:C4	24:P:96:LEU:HD23	2.37	0.60
13:E:180:LEU:HA	13:E:186:VAL:HG21	1.84	0.60
14:F:59:ILE:HD11	14:F:137:PHE:CD2	2.37	0.60
14:F:177:ARG:HG2	14:F:178:LYS:H	1.67	0.60
18:J:17:VAL:CG1	18:J:57:LEU:HD21	2.32	0.60
22:N:7:GLY:O	22:N:8:ARG:HB2	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:52:LYS:NZ	22:N:118:ARG:HD2	2.16	0.59
2:1:24:LYS:HZ2	10:B:2285:C:H41	1.49	0.59
10:B:721:A:H2'	10:B:722:A:C8	2.37	0.59
10:B:1171:G:H2'	10:B:1172:C:O4'	2.02	0.59
10:B:1524:G:C5	10:B:1525:A:N7	2.70	0.59
10:B:1857:G:H1'	10:B:1885:A:N6	2.17	0.59
10:B:2741:A:H2'	10:B:2742:G:O4'	2.02	0.59
12:D:150:GLN:C	12:D:151:THR:CG2	2.75	0.59
19:K:25:LEU:HD12	19:K:38:ILE:HB	1.84	0.59
20:L:77:ILE:HG13	20:L:108:ALA:HB1	1.83	0.59
21:M:58:LYS:C	21:M:60:GLN:H	2.09	0.59
21:M:66:ARG:H	21:M:100:LYS:HB2	1.67	0.59
24:P:99:LEU:HD12	24:P:101:GLU:OE2	2.02	0.59
31:W:55:ASP:CG	31:W:56:HIS:N	2.59	0.59
10:B:95:A:O2'	32:X:40:SER:HB3	2.02	0.59
10:B:271:G:O2'	10:B:272:A:H8	1.85	0.59
10:B:356:G:C6	10:B:357:C:C4	2.86	0.59
10:B:458:G:N2	10:B:469:G:H2'	2.17	0.59
10:B:869:G:H2'	10:B:870:U:C6	2.37	0.59
10:B:1192:G:O2'	10:B:1193:G:H5'	2.02	0.59
10:B:1327:A:H2'	10:B:1328:A:O4'	2.02	0.59
10:B:1526:C:H2'	10:B:1527:G:O4'	2.02	0.59
14:F:36:ASN:HD22	14:F:87:LYS:H	1.47	0.59
16:H:17:ASP:OD2	16:H:21:VAL:HB	2.02	0.59
17:I:77:VAL:HA	17:I:80:LYS:HE2	1.85	0.59
18:J:80:HIS:O	18:J:81:ILE:C	2.45	0.59
24:P:31:VAL:HA	24:P:81:ASP:CB	2.31	0.59
3:2:19:ARG:HB3	10:B:126:A:O5'	2.02	0.59
10:B:283:G:N1	10:B:284:U:N3	2.50	0.59
10:B:297:G:N1	10:B:342:A:C6	2.70	0.59
10:B:322:A:H4'	10:B:340:A:O4'	2.02	0.59
10:B:340:A:H2'	10:B:341:C:C5'	2.32	0.59
10:B:1048:A:N1	10:B:1049:C:C2	2.69	0.59
10:B:1444:G:N2	10:B:1548:A:N1	2.50	0.59
10:B:1533:C:H2'	10:B:1534:U:H6	1.66	0.59
10:B:2723:C:H5''	22:N:3:HIS:CB	2.32	0.59
10:B:2769:U:H2'	10:B:2770:G:C8	2.37	0.59
11:C:10:PRO:HD2	11:C:202:ARG:HH12	1.67	0.59
11:C:220:ARG:HH11	11:C:220:ARG:HG3	1.67	0.59
12:D:34:VAL:HG23	12:D:93:GLY:HA3	1.84	0.59
15:G:159:LYS:HG3	15:G:159:LYS:O	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:J:64:VAL:HG11	18:J:68:LYS:HD2	1.84	0.59
22:N:35:LYS:HA	22:N:112:TYR:HA	1.83	0.59
1:O:52:LYS:HD2	22:N:118:ARG:HD3	1.75	0.59
10:B:198:C:C2'	10:B:199:A:H5''	2.32	0.59
10:B:291:G:N9	10:B:350:G:C2	2.70	0.59
10:B:328:U:C5'	29:U:65:GLN:OE1	2.51	0.59
10:B:347:A:C4	10:B:348:A:N7	2.68	0.59
10:B:362:A:N3	10:B:363:G:H8	2.00	0.59
19:K:11:ALA:HB3	19:K:85:VAL:CG2	2.32	0.59
20:L:47:ARG:HD2	20:L:48:ARG:N	2.16	0.59
21:M:41:LEU:HG	21:M:95:LEU:HD12	1.84	0.59
29:U:41:VAL:HG13	29:U:42:LYS:N	2.17	0.59
34:Z:66:ILE:HB	34:Z:67:PRO:HD3	1.84	0.59
10:B:99:U:H6	29:U:5:ARG:NH2	1.97	0.59
10:B:362:A:C6	10:B:363:G:C8	2.90	0.59
10:B:855:G:H21	31:W:23:LYS:CB	2.15	0.59
10:B:1062:G:C2	10:B:1063:G:C5	2.90	0.59
10:B:2053:G:OP1	12:D:150:GLN:CA	2.50	0.59
11:C:226:PRO:HD3	11:C:233:GLY:N	2.17	0.59
13:E:109:LEU:HD23	13:E:110:SER:N	2.18	0.59
15:G:126:THR:C	15:G:128:THR:H	2.11	0.59
16:H:51:ARG:O	16:H:55:GLU:N	2.36	0.59
18:J:16:TYR:O	18:J:55:ILE:HG22	2.01	0.59
21:M:31:PHE:CD2	21:M:128:THR:HG21	2.38	0.59
29:U:90:LYS:HG3	29:U:91:LYS:H	1.68	0.59
33:Y:7:THR:HB	33:Y:34:THR:HB	1.85	0.59
2:1:9:LYS:HG2	4:3:34:LYS:HZ1	1.68	0.59
3:2:12:ARG:HH21	3:2:18:PHE:H	1.50	0.59
10:B:313:G:C2'	10:B:314:C:H5'	2.32	0.59
10:B:348:A:C5	10:B:349:U:C5	2.90	0.59
10:B:967:U:H2'	10:B:968:C:C6	2.37	0.59
10:B:1048:A:C2	10:B:1049:C:C2	2.91	0.59
10:B:2386:A:H4'	31:W:38:ARG:HB2	1.84	0.59
12:D:17:GLU:CB	24:P:80:VAL:HG21	2.32	0.59
13:E:3:LEU:O	13:E:4:VAL:HG12	2.02	0.59
13:E:156:ASN:ND2	13:E:157:LEU:HG	2.17	0.59
14:F:108:PRO:HA	14:F:113:PHE:CD1	2.38	0.59
23:O:64:TYR:CE2	23:O:74:VAL:HG11	2.34	0.59
24:P:25:VAL:CG1	24:P:87:ARG:HA	2.33	0.59
24:P:52:ARG:HG2	24:P:54:LEU:HB2	1.83	0.59
29:U:94:PHE:HD2	29:U:95:PHE:H	1.50	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:Z:44:PHE:HD1	34:Z:44:PHE:H	1.50	0.59
3:2:17:GLY:HA2	3:2:21:ARG:NH1	2.17	0.59
10:B:348:A:C4	10:B:349:U:C5	2.90	0.59
10:B:1516:G:C4	10:B:1517:G:N7	2.70	0.59
10:B:1537:G:H2'	10:B:1538:G:H4'	1.84	0.59
10:B:2305:U:N3	14:F:150:GLY:HA3	2.17	0.59
11:C:29:PHE:HB2	11:C:31:PRO:HD2	1.83	0.59
11:C:198:GLU:HA	11:C:201:LEU:HB2	1.83	0.59
12:D:16:THR:CA	24:P:79:VAL:HB	2.31	0.59
13:E:132:LYS:HB2	13:E:132:LYS:HZ2	1.68	0.59
13:E:196:VAL:O	13:E:199:MET:HE2	2.03	0.59
15:G:157:LYS:HG3	15:G:159:LYS:NZ	2.11	0.59
16:H:11:ASN:ND2	16:H:12:LEU:H	2.00	0.59
16:H:116:ARG:HB3	16:H:131:SER:O	2.01	0.59
19:K:97:THR:OG1	19:K:98:ARG:HD2	2.02	0.59
26:R:69:GLY:O	26:R:70:GLU:HG3	2.02	0.59
28:T:23:ALA:O	28:T:24:MET:HE3	2.03	0.59
31:W:10:ARG:CB	31:W:10:ARG:HH11	2.16	0.59
31:W:40:ARG:NH1	31:W:40:ARG:H	2.01	0.59
32:X:36:GLN:NE2	32:X:38:GLN:HE22	1.93	0.59
32:X:44:LYS:CD	32:X:48:ARG:HE	2.16	0.59
34:Z:59:ARG:HH21	34:Z:62:LYS:HZ2	1.49	0.59
6:5:344:MET:HB2	6:5:347:MET:HG2	1.84	0.59
6:5:364:VAL:HA	29:U:51:LEU:HD22	1.73	0.59
9:A:27:C:H5'	23:O:34:HIS:CE1	2.37	0.59
10:B:36:G:H2'	10:B:37:C:O4'	2.00	0.59
10:B:295:G:N1	10:B:344:A:C2	2.71	0.59
10:B:319:G:C5	10:B:333:G:C2	2.90	0.59
10:B:340:A:N7	10:B:341:C:N3	2.51	0.59
10:B:1042:G:N3	10:B:1043:C:C5	2.71	0.59
10:B:1063:G:H4'	17:I:76:ALA:CA	2.33	0.59
10:B:1155:A:N6	33:Y:10:ARG:HH22	2.00	0.59
10:B:1187:G:H5''	26:R:84:ARG:CZ	2.33	0.59
10:B:2236:U:H2'	10:B:2237:G:O4'	2.02	0.59
10:B:2274:A:H2'	10:B:2276:G:OP1	2.02	0.59
10:B:2804:U:H2'	10:B:2805:C:H6	1.66	0.59
31:W:39:GLN:C	31:W:40:ARG:HG3	2.26	0.59
3:2:41:ARG:HE	10:B:459:U:H5'	1.68	0.59
10:B:966:G:H2'	10:B:967:U:C6	2.38	0.59
10:B:1094:U:H1'	10:B:1097:U:H5	1.67	0.59
10:B:1115:G:C2	10:B:1116:G:N9	2.71	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:C:227:VAL:HG12	11:C:228:ASP:OD1	2.03	0.59
13:E:120:VAL:H	13:E:189:THR:CG2	2.15	0.59
15:G:8:VAL:O	15:G:48:THR:HA	2.02	0.59
23:O:16:ARG:HG3	23:O:20:GLU:HG3	1.85	0.59
30:V:46:LYS:HA	30:V:46:LYS:HE3	1.85	0.59
32:X:44:LYS:HD2	32:X:48:ARG:HE	1.68	0.59
9:A:12:C:H41	31:W:50:VAL:HG23	1.67	0.59
10:B:26:G:H1'	10:B:515:A:N6	2.17	0.59
10:B:184:C:H2'	10:B:185:G:H8	1.68	0.59
10:B:417:C:H2'	10:B:418:C:C6	2.37	0.59
10:B:1038:G:H2'	10:B:1039:A:H8	1.66	0.59
10:B:1476:U:OP2	10:B:1514:G:N2	2.36	0.59
10:B:2296:U:H4'	10:B:2297:A:OP1	2.02	0.59
12:D:52:THR:HG22	12:D:75:ALA:HB1	1.84	0.59
12:D:62:LYS:H	12:D:62:LYS:HE3	1.68	0.59
12:D:138:LEU:N	12:D:138:LEU:CD2	2.66	0.59
13:E:43:THR:O	13:E:89:PRO:HA	2.02	0.59
13:E:106:LYS:HA	13:E:108:ILE:HD13	1.83	0.59
16:H:85:GLY:O	16:H:89:LYS:N	2.36	0.59
17:I:121:ILE:O	17:I:124:MET:HG2	2.03	0.59
22:N:82:GLU:O	22:N:86:ARG:HG3	2.02	0.59
29:U:73:ASN:HB2	29:U:96:LYS:NZ	2.18	0.59
29:U:85:ARG:HD3	29:U:85:ARG:N	2.18	0.59
34:Z:69:SER:C	34:Z:70:LYS:HE2	2.28	0.59
10:B:139:U:O2'	28:T:1:MET:HA	2.03	0.58
10:B:298:G:O5'	10:B:298:G:H8	1.86	0.58
10:B:1387:A:H5'	10:B:1469:A:H1'	1.84	0.58
10:B:1476:U:N3	10:B:1516:G:C8	2.71	0.58
10:B:1549:A:C4	10:B:1550:C:C5	2.91	0.58
11:C:204:LEU:HB3	11:C:210:ALA:HB1	1.85	0.58
14:F:174:PHE:N	14:F:175:PRO:HD2	2.18	0.58
16:H:40:THR:O	16:H:41:LYS:C	2.45	0.58
22:N:117:ASP:C	22:N:123:GLU:HB3	2.28	0.58
4:3:11:LYS:HZ2	20:L:63:LYS:HB2	1.67	0.58
9:A:52:A:H2'	9:A:53:A:O4'	2.03	0.58
10:B:322:A:H5'	10:B:340:A:H1'	1.84	0.58
10:B:326:G:C6	10:B:327:G:N7	2.70	0.58
10:B:956:G:H5''	21:M:76:LYS:HD3	1.84	0.58
10:B:1476:U:C6	10:B:1516:G:O6	2.56	0.58
10:B:1542:U:C2'	10:B:1543:G:H5'	2.33	0.58
10:B:2297:A:N6	10:B:2319:G:H5''	2.18	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2619:C:H1'	12:D:155:VAL:HG11	1.85	0.58
10:B:2849:U:H4'	10:B:2850:A:H5'	1.84	0.58
10:B:2895:G:H2'	10:B:2896:C:H6	1.68	0.58
11:C:75:ALA:HB1	11:C:93:VAL:HG13	1.84	0.58
11:C:139:THR:HA	11:C:193:GLU:OE1	2.03	0.58
11:C:216:ARG:HB3	11:C:217:PRO:CD	2.33	0.58
12:D:23:PRO:HB3	12:D:189:VAL:H	1.67	0.58
18:J:125:TYR:HE2	18:J:134:ALA:HB2	1.67	0.58
21:M:3:GLN:OE1	21:M:47:GLU:HB2	2.03	0.58
23:O:13:ARG:HB2	23:O:13:ARG:HH11	1.69	0.58
25:Q:102:LYS:H	25:Q:102:LYS:HD2	1.68	0.58
29:U:23:LYS:O	29:U:25:LYS:HG3	2.03	0.58
31:W:23:LYS:NZ	31:W:24:ARG:HG2	2.17	0.58
4:3:48:MET:SD	4:3:51:LYS:HG2	2.42	0.58
6:5:425:ARG:HD2	10:B:490:C:N4	2.19	0.58
10:B:95:A:H5''	32:X:37:LEU:HA	1.85	0.58
10:B:671:C:N4	20:L:39:LYS:HG2	2.18	0.58
10:B:751:A:C5'	27:S:90:LYS:HE2	2.33	0.58
10:B:811:U:H2'	20:L:31:GLY:CA	2.33	0.58
17:I:102:ARG:HD3	17:I:141:ASP:CG	2.27	0.58
19:K:80:ASP:OD1	24:P:70:GLU:HB3	2.03	0.58
20:L:117:THR:HB	20:L:119:PRO:O	2.02	0.58
20:L:119:PRO:O	20:L:120:VAL:HB	2.03	0.58
22:N:83:LEU:HA	22:N:86:ARG:HD3	1.84	0.58
23:O:16:ARG:NE	23:O:16:ARG:HA	2.18	0.58
23:O:40:ILE:HG12	23:O:41:ALA:O	2.03	0.58
23:O:98:GLN:O	23:O:103:VAL:HG21	2.04	0.58
24:P:27:VAL:HG12	24:P:47:ILE:CD1	2.34	0.58
28:T:38:ALA:O	28:T:42:GLU:HB2	2.03	0.58
30:V:80:HIS:HB2	30:V:85:LYS:HG3	1.86	0.58
9:A:86:G:H2'	9:A:87:U:O4'	2.04	0.58
10:B:319:G:H8	10:B:319:G:O5'	1.86	0.58
10:B:1538:G:H8	10:B:1538:G:O5'	1.87	0.58
10:B:1973:G:H2'	10:B:1974:C:C6	2.38	0.58
10:B:2415:G:H2'	10:B:2416:C:C6	2.38	0.58
10:B:2809:A:H2'	10:B:2810:A:C8	2.38	0.58
10:B:2840:C:H5''	22:N:53:THR:CG2	2.34	0.58
10:B:2845:U:H4'	24:P:54:LEU:HD21	1.85	0.58
11:C:37:SER:OG	11:C:38:LYS:N	2.34	0.58
15:G:42:VAL:HG12	15:G:51:PHE:HD2	1.68	0.58
15:G:148:ARG:NH2	15:G:153:PRO:HD2	2.18	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:J:19:ASP:HB2	18:J:21:THR:HG23	1.84	0.58
26:R:42:ALA:C	26:R:44:GLY:N	2.60	0.58
1:0:6:LYS:HE3	10:B:2615:U:C1'	2.28	0.58
10:B:189:G:H2'	10:B:205:G:N2	2.18	0.58
10:B:340:A:C8	10:B:341:C:C6	2.91	0.58
10:B:943:A:P	20:L:42:SER:HB3	2.43	0.58
10:B:958:U:C4	21:M:18:ARG:HB2	2.39	0.58
10:B:1068:G:H2'	10:B:1069:A:H5'	1.86	0.58
10:B:1075:C:H6	10:B:1075:C:O5'	1.86	0.58
10:B:1532:A:N1	10:B:1539:U:C4	2.70	0.58
10:B:1799:G:OP1	11:C:255:LYS:HG2	2.04	0.58
10:B:2888:C:H2'	10:B:2889:C:C6	2.39	0.58
11:C:140:VAL:HG23	11:C:141:HIS:H	1.67	0.58
11:C:164:VAL:HB	11:C:167:ASP:CG	2.29	0.58
14:F:37:MET:HE3	14:F:56:LEU:HD12	1.86	0.58
15:G:132:LEU:HD11	15:G:144:ALA:HB2	1.85	0.58
20:L:96:LYS:HD3	20:L:96:LYS:N	2.18	0.58
21:M:88:ASN:HD22	21:M:88:ASN:N	2.02	0.58
21:M:105:MET:HE3	21:M:106:ASP:C	2.29	0.58
25:Q:102:LYS:HD2	25:Q:102:LYS:N	2.17	0.58
26:R:4:VAL:CA	26:R:12:HIS:HB3	2.33	0.58
27:S:14:ALA:O	27:S:17:VAL:HG22	2.03	0.58
32:X:36:GLN:NE2	32:X:36:GLN:H	2.01	0.58
10:B:76:C:C5'	32:X:48:ARG:HH12	2.16	0.58
10:B:285:G:C4	10:B:286:U:C6	2.91	0.58
10:B:1544:A:N1	10:B:1545:A:C2	2.72	0.58
10:B:2811:G:OP1	12:D:62:LYS:HE2	2.04	0.58
12:D:45:TYR:O	12:D:46:ARG:HG2	2.04	0.58
12:D:193:VAL:HG13	12:D:193:VAL:O	2.02	0.58
18:J:41:LYS:HD2	18:J:44:TYR:O	2.03	0.58
2:1:12:SER:HA	2:1:50:GLU:CB	2.30	0.58
3:2:43:THR:O	3:2:44:VAL:C	2.47	0.58
10:B:291:G:C4	10:B:350:G:N1	2.72	0.58
10:B:586:A:H5''	13:E:85:PHE:CE2	2.39	0.58
10:B:1187:G:H5''	26:R:84:ARG:NE	2.18	0.58
10:B:2052:A:H5'	12:D:148:GLN:O	2.02	0.58
11:C:141:HIS:HB3	11:C:190:THR:HB	1.85	0.58
12:D:31:ALA:HB2	12:D:49:GLN:NE2	2.19	0.58
14:F:12:VAL:HG22	14:F:27:VAL:HG11	1.86	0.58
15:G:94:ARG:HB2	15:G:94:ARG:HH11	1.68	0.58
10:B:17:G:H2'	10:B:18:U:C6	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:327:G:N1	10:B:336:C:C2	2.69	0.58
10:B:347:A:N1	10:B:348:A:C5	2.71	0.58
10:B:484:C:O4'	29:U:45:GLN:NE2	2.31	0.58
10:B:1070:A:N7	10:B:1096:A:O2'	2.35	0.58
10:B:1476:U:C2	10:B:1516:G:C5	2.91	0.58
10:B:1505:A:H2'	10:B:1506:U:C6	2.38	0.58
10:B:1791:A:OP1	11:C:211:ARG:HG2	2.04	0.58
10:B:1802:A:H2'	10:B:1803:A:C8	2.39	0.58
10:B:2213:U:O2	10:B:2213:U:C2'	2.52	0.58
10:B:2246:G:H2'	10:B:2247:A:C8	2.38	0.58
10:B:2804:U:H2'	10:B:2805:C:C6	2.38	0.58
10:B:2814:A:H2'	10:B:2815:C:C6	2.38	0.58
10:B:2898:U:H2'	10:B:2899:A:H8	1.68	0.58
13:E:152:GLU:HB3	13:E:171:ASP:OD2	2.04	0.58
14:F:102:LEU:HD11	14:F:129:MET:HE1	1.84	0.58
17:I:10:LEU:HD12	17:I:10:LEU:O	2.04	0.58
23:O:15:ARG:NH2	23:O:17:LYS:HD2	2.19	0.58
24:P:26:GLU:CB	24:P:46:VAL:HG22	2.32	0.58
24:P:38:ARG:HH11	24:P:39:LEU:H	1.52	0.58
31:W:21:GLY:HA3	31:W:32:ALA:CB	2.34	0.58
34:Z:25:ARG:HH11	34:Z:25:ARG:CB	2.17	0.58
2:1:35:LEU:C	2:1:36:LYS:HD2	2.28	0.58
6:5:390:LYS:HB2	6:5:393:ILE:HD13	1.84	0.58
9:A:39:A:O2'	9:A:40:U:H5'	2.03	0.58
9:A:107:G:O2'	9:A:108:A:H5'	2.04	0.58
10:B:170:U:H2'	10:B:171:U:H6	1.69	0.58
10:B:291:G:N3	10:B:350:G:C4	2.71	0.58
10:B:308:G:C3'	10:B:309:A:C8	2.86	0.58
10:B:339:U:H2'	10:B:340:A:H5'	1.86	0.58
10:B:1553:A:C6	10:B:1555:G:C4	2.92	0.58
10:B:1681:G:H2'	10:B:1757:A:N1	2.19	0.58
13:E:122:GLU:HB3	13:E:152:GLU:HB2	1.85	0.58
13:E:153:LEU:HD21	13:E:201:ALA:O	2.04	0.58
17:I:79:LEU:HD23	17:I:108:ILE:CD1	2.33	0.58
17:I:85:ILE:CD1	17:I:137:LEU:HD21	2.34	0.58
18:J:139:VAL:O	18:J:140:LEU:HD23	2.03	0.58
24:P:8:GLU:HA	24:P:11:GLN:HG3	1.86	0.58
26:R:1:MET:HA	26:R:46:GLU:HB3	1.86	0.58
29:U:11:ILE:HG23	29:U:20:LYS:O	2.04	0.58
29:U:39:ASN:HD21	29:U:60:LYS:C	2.09	0.58
10:B:83:A:C5	29:U:90:LYS:HB3	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:337:C:C5'	29:U:1:ALA:HA	2.31	0.58
10:B:450:G:H4'	13:E:47:LYS:NZ	2.18	0.58
10:B:910:A:H62	21:M:15:GLY:HA3	1.68	0.58
10:B:974:G:H1'	10:B:975:A:C8	2.38	0.58
10:B:1042:G:C6	10:B:1043:C:C4	2.92	0.58
10:B:1065:U:O2'	10:B:1066:U:H5'	2.03	0.58
10:B:1204:A:N1	10:B:1241:A:N1	2.52	0.58
10:B:1520:U:O4	10:B:1521:G:N1	2.37	0.58
10:B:2578:G:N3	12:D:145:SER:HB2	2.19	0.58
10:B:2803:G:H2'	10:B:2804:U:C6	2.39	0.58
12:D:101:PHE:O	12:D:102:ALA:CB	2.51	0.58
13:E:38:GLY:C	13:E:40:ARG:H	2.12	0.58
14:F:102:LEU:O	14:F:107:VAL:HG23	2.04	0.58
14:F:161:SER:OG	14:F:164:GLU:HB2	2.03	0.58
20:L:57:LEU:C	20:L:59:ARG:H	2.11	0.58
24:P:47:ILE:HA	24:P:63:ILE:HG23	1.86	0.58
25:Q:92:LYS:O	25:Q:94:LEU:HD13	2.04	0.58
30:V:79:ARG:C	30:V:87:GLN:HE22	2.12	0.58
1:O:4:GLN:O	1:O:5:ASN:C	2.44	0.57
10:B:65:U:H2'	10:B:66:C:H6	1.69	0.57
10:B:977:G:O2'	10:B:978:G:H5'	2.04	0.57
10:B:1550:C:P	10:B:1740:G:N2	2.77	0.57
10:B:2304:G:N2	10:B:2312:U:H3	2.00	0.57
10:B:2646:C:H2'	10:B:2647:U:O4'	2.04	0.57
12:D:22:ILE:N	12:D:23:PRO:CD	2.65	0.57
13:E:142:ALA:C	13:E:143:LEU:HD12	2.29	0.57
20:L:77:ILE:HA	20:L:101:ILE:HD13	1.86	0.57
22:N:57:THR:OG1	22:N:61:ALA:HB3	2.04	0.57
29:U:5:ARG:HG2	29:U:6:ARG:H	1.67	0.57
31:W:45:HIS:ND1	31:W:45:HIS:N	2.52	0.57
10:B:286:U:O2	10:B:354:A:H2	1.87	0.57
10:B:295:G:N3	10:B:344:A:C2	2.72	0.57
10:B:419:U:H2'	10:B:420:C:C6	2.38	0.57
10:B:433:C:O2'	10:B:434:U:H5'	2.04	0.57
10:B:519:U:H5''	27:S:18:ARG:NH2	2.19	0.57
10:B:1024:G:C3'	10:B:1025:G:H5''	2.34	0.57
10:B:2278:A:C8	31:W:8:SER:HB3	2.38	0.57
10:B:2734:A:H2'	10:B:2735:G:H5'	1.86	0.57
11:C:21:PRO:O	11:C:22:GLU:HB2	2.04	0.57
11:C:23:LEU:N	11:C:202:ARG:NH2	2.51	0.57
11:C:208:GLY:C	11:C:210:ALA:H	2.12	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:H:44:ILE:HG22	16:H:47:PHE:CE1	2.37	0.57
17:I:102:ARG:HD3	17:I:141:ASP:OD1	2.04	0.57
17:I:109:ALA:HB1	17:I:124:MET:CG	2.33	0.57
22:N:37:THR:OG1	22:N:40:LYS:HB2	2.04	0.57
31:W:36:ILE:HD12	31:W:70:VAL:HG21	1.86	0.57
1:O:42:ILE:HD11	1:O:44:ALA:HB3	1.86	0.57
2:1:22:THR:O	2:1:23:THR:HG23	2.03	0.57
9:A:32:U:H2'	9:A:33:G:O4'	2.04	0.57
10:B:27:G:H1'	10:B:513:A:N6	2.19	0.57
10:B:182:A:H2'	10:B:183:C:C6	2.39	0.57
10:B:287:G:H2'	10:B:288:U:H5'	1.87	0.57
10:B:298:G:H22	10:B:341:C:H42	1.53	0.57
10:B:305:C:N3	10:B:313:G:C6	2.71	0.57
10:B:416:U:H2'	10:B:417:C:C6	2.39	0.57
10:B:784:G:H5''	11:C:225:ASN:ND2	2.19	0.57
10:B:992:C:H1'	26:R:91:GLN:HG3	1.87	0.57
10:B:997:G:C5'	25:Q:91:ARG:HG3	2.32	0.57
10:B:1092:C:H2'	10:B:1093:G:C8	2.40	0.57
10:B:1151:A:H4'	25:Q:80:ASN:OD1	2.04	0.57
10:B:1244:A:O2'	10:B:1245:G:H5'	2.04	0.57
10:B:2328:A:H2'	10:B:2329:U:H6	1.66	0.57
10:B:2749:A:P	15:G:3:VAL:HG11	2.44	0.57
11:C:12:ARG:NE	11:C:18:VAL:HG11	2.19	0.57
16:H:44:ILE:CG2	16:H:47:PHE:HE1	2.15	0.57
16:H:89:LYS:O	16:H:90:LEU:HD12	2.03	0.57
18:J:81:ILE:O	18:J:84:ILE:HG12	2.04	0.57
22:N:38:LEU:HB2	22:N:39:PRO:HD3	1.86	0.57
24:P:47:ILE:HG23	24:P:63:ILE:CG2	2.33	0.57
26:R:75:VAL:H	26:R:90:ARG:NE	2.02	0.57
27:S:86:MET:O	27:S:94:ASP:HB3	2.03	0.57
10:B:18:U:H2'	10:B:19:A:H8	1.69	0.57
10:B:280:U:O4	10:B:361:G:N2	2.37	0.57
10:B:348:A:N3	10:B:349:U:N1	2.51	0.57
10:B:359:G:C6	10:B:360:U:C4	2.92	0.57
10:B:441:U:H2'	10:B:442:G:C8	2.38	0.57
10:B:705:A:N6	10:B:726:G:H1'	2.19	0.57
10:B:729:G:H5''	10:B:730:A:H5''	1.86	0.57
10:B:1464:G:H2'	10:B:1465:G:H8	1.69	0.57
11:C:28:PRO:HB2	11:C:79:ARG:NH2	2.20	0.57
16:H:8:LYS:O	16:H:8:LYS:HD3	2.04	0.57
21:M:96:ILE:HG23	21:M:97:GLN:N	2.18	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:N:48:VAL:O	22:N:52:ILE:HG12	2.04	0.57
23:O:17:LYS:O	23:O:21:LEU:HA	2.03	0.57
23:O:108:ASP:HB3	23:O:111:ARG:NH2	2.19	0.57
30:V:63:ILE:O	30:V:65:VAL:HG22	2.03	0.57
30:V:66:ASP:HB3	30:V:68:LYS:HG2	1.85	0.57
34:Z:47:LYS:HB2	34:Z:51:VAL:HB	1.86	0.57
10:B:144:A:H2'	10:B:145:C:H6	1.69	0.57
10:B:348:A:N1	10:B:349:U:C4	2.69	0.57
10:B:448:U:H1'	13:E:79:ARG:HG3	1.85	0.57
10:B:580:U:O3'	25:Q:30:VAL:HG13	2.03	0.57
10:B:657:U:H2'	10:B:658:U:C6	2.39	0.57
10:B:1042:G:N3	10:B:1043:C:C6	2.73	0.57
10:B:1301:A:O2'	10:B:1302:A:H2'	2.05	0.57
10:B:1412:U:H2'	10:B:1413:A:H8	1.69	0.57
10:B:1529:G:N3	10:B:1530:G:C8	2.72	0.57
10:B:1544:A:H2'	10:B:1545:A:C8	2.40	0.57
10:B:2064:C:H2'	10:B:2065:C:H6	1.69	0.57
10:B:2213:U:O2	10:B:2213:U:H2'	2.04	0.57
10:B:2305:U:H1'	14:F:132:ARG:HA	1.87	0.57
10:B:2393:U:C5'	20:L:62:PRO:HA	2.31	0.57
10:B:2443:C:O2'	10:B:2444:G:H5'	2.04	0.57
11:C:225:ASN:O	11:C:227:VAL:N	2.38	0.57
12:D:16:THR:C	24:P:80:VAL:HB	2.29	0.57
14:F:70:ARG:HA	14:F:80:GLN:HG3	1.84	0.57
18:J:35:ARG:HA	18:J:35:ARG:NE	2.19	0.57
24:P:7:LEU:O	24:P:7:LEU:HD13	2.05	0.57
24:P:13:LYS:HA	24:P:15:ASP:OD1	2.04	0.57
25:Q:10:ARG:HA	25:Q:10:ARG:NE	2.19	0.57
27:S:17:VAL:HG23	27:S:76:VAL:HG11	1.85	0.57
6:5:390:LYS:O	6:5:393:ILE:HG12	2.05	0.57
9:A:63:C:H2'	9:A:64:G:H8	1.69	0.57
10:B:84:A:O5'	29:U:91:LYS:NZ	2.36	0.57
10:B:299:A:C2	10:B:300:A:C2	2.93	0.57
10:B:299:A:C6	10:B:300:A:N1	2.72	0.57
10:B:310:A:C6	10:B:330:A:N6	2.73	0.57
10:B:311:A:N6	10:B:328:U:C6	2.73	0.57
10:B:346:A:C5	10:B:347:A:H1'	2.40	0.57
10:B:364:C:C2'	10:B:365:U:H6	2.14	0.57
10:B:483:A:C2'	29:U:45:GLN:NE2	2.65	0.57
10:B:956:G:H22	10:B:959:A:H3'	1.69	0.57
10:B:1051:G:C6	10:B:1052:C:N4	2.73	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1229:C:H2'	10:B:1230:A:H8	1.68	0.57
10:B:1528:A:C2	10:B:1544:A:C4	2.92	0.57
10:B:1532:A:C2	10:B:1539:U:C2	2.92	0.57
10:B:2144:G:C4	10:B:2146:C:H5'	2.39	0.57
10:B:2218:G:H2'	10:B:2219:U:C6	2.40	0.57
10:B:2314:A:H2'	10:B:2315:G:C8	2.40	0.57
10:B:2898:U:H2'	10:B:2899:A:C8	2.40	0.57
11:C:68:ARG:HD2	11:C:127:ASN:HD21	1.68	0.57
12:D:4:LEU:HD13	12:D:79:LEU:HD11	1.87	0.57
13:E:138:LEU:HD22	13:E:144:GLU:HA	1.86	0.57
13:E:152:GLU:O	13:E:153:LEU:HB2	2.04	0.57
14:F:13:LYS:HD3	14:F:16:MET:HG3	1.85	0.57
15:G:10:VAL:HG12	15:G:47:ASN:HA	1.85	0.57
18:J:45:THR:CB	25:Q:63:ARG:HH22	2.18	0.57
23:O:8:ILE:O	23:O:10:ARG:N	2.38	0.57
27:S:88:ARG:HD2	27:S:93:ALA:HB3	1.86	0.57
27:S:103:ILE:HG23	27:S:104:THR:N	2.18	0.57
31:W:45:HIS:HA	31:W:75:ASN:CB	2.34	0.57
3:2:21:ARG:HB3	3:2:31:LEU:HD21	1.86	0.57
4:3:12:ARG:NH2	4:3:55:GLY:HA3	2.20	0.57
4:3:31:ILE:HD13	10:B:2392:A:OP2	2.03	0.57
10:B:287:G:C5	10:B:354:A:C6	2.93	0.57
10:B:319:G:N1	10:B:320:A:N1	2.52	0.57
10:B:326:G:N2	10:B:327:G:C5	2.73	0.57
10:B:342:A:C5	10:B:343:C:H5	2.23	0.57
10:B:832:U:H2'	10:B:833:A:C8	2.39	0.57
10:B:932:U:H5'	10:B:933:A:OP1	2.05	0.57
10:B:1108:U:H2'	10:B:1109:C:H6	1.68	0.57
10:B:1447:C:H2'	10:B:1448:G:C8	2.39	0.57
10:B:1534:U:O2'	10:B:1535:A:H2'	2.04	0.57
12:D:84:LEU:CD2	12:D:86:GLU:HB2	2.35	0.57
16:H:80:ILE:HD11	16:H:102:ALA:HA	1.86	0.57
18:J:41:LYS:HD2	18:J:44:TYR:HB2	1.87	0.57
18:J:61:LYS:HA	18:J:61:LYS:HE2	1.86	0.57
20:L:77:ILE:HG22	20:L:78:ARG:N	2.19	0.57
21:M:102:LEU:HB3	21:M:104:GLU:OE1	2.04	0.57
27:S:70:LYS:O	27:S:71:VAL:HB	2.04	0.57
31:W:42:THR:HG22	31:W:43:LYS:O	2.05	0.57
33:Y:16:LEU:N	33:Y:16:LEU:HD12	2.19	0.57
10:B:316:C:C3'	10:B:317:G:H5''	2.35	0.57
10:B:347:A:N6	10:B:348:A:C6	2.73	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:350:G:C5	10:B:351:C:N4	2.73	0.57
10:B:527:C:H5''	10:B:2779:U:C2	2.40	0.57
10:B:910:A:H2'	10:B:911:A:C8	2.39	0.57
10:B:1059:G:O2'	17:I:116:MET:HG2	2.04	0.57
10:B:1062:G:C4	10:B:1063:G:N7	2.73	0.57
10:B:1072:C:O5'	10:B:1072:C:H6	1.88	0.57
10:B:1166:G:H2'	10:B:1167:C:C6	2.39	0.57
10:B:1532:A:H3'	10:B:1533:C:C5	2.40	0.57
10:B:1714:U:H3'	10:B:1715:G:C5'	2.35	0.57
10:B:1818:U:C3'	11:C:155:ARG:HB2	2.34	0.57
12:D:35:THR:HG22	12:D:46:ARG:HH22	1.70	0.57
13:E:50:ALA:O	13:E:74:LYS:HB2	2.03	0.57
14:F:116:LEU:HD12	14:F:176:PHE:CD2	2.39	0.57
17:I:91:LYS:HG3	17:I:91:LYS:O	2.05	0.57
18:J:25:LEU:HD12	18:J:62:VAL:CA	2.35	0.57
20:L:55:MET:HG2	20:L:56:PRO:CD	2.22	0.57
20:L:77:ILE:HD13	20:L:92:LEU:HD13	1.87	0.57
24:P:47:ILE:CG2	24:P:63:ILE:HG23	2.34	0.57
25:Q:106:THR:O	25:Q:109:VAL:HG22	2.05	0.57
26:R:41:ILE:C	26:R:43:ASN:H	2.11	0.57
27:S:29:VAL:HG21	27:S:69:LEU:C	2.30	0.57
29:U:42:LYS:HA	29:U:42:LYS:HZ2	1.66	0.57
4:3:4:LYS:HG2	10:B:243:U:OP1	2.05	0.57
4:3:16:THR:HG21	4:3:22:LYS:NZ	2.18	0.57
9:A:26:C:H2'	9:A:27:C:O4'	2.05	0.57
10:B:141:G:O6	28:T:1:MET:HE1	2.05	0.57
10:B:287:G:N1	10:B:354:A:C5	2.73	0.57
10:B:324:A:C6	10:B:339:U:H5'	2.39	0.57
10:B:332:A:C2	10:B:335:C:N3	2.71	0.57
10:B:350:G:H2'	10:B:351:C:H6	1.67	0.57
10:B:1038:G:N2	10:B:1117:C:C2	2.73	0.57
10:B:1655:A:C2	10:B:2049:G:H5''	2.38	0.57
10:B:1676:A:H2'	10:B:1677:A:O4'	2.04	0.57
10:B:2189:U:H2'	10:B:2190:G:H8	1.70	0.57
10:B:2246:G:H2'	10:B:2247:A:H8	1.70	0.57
10:B:2617:U:C2'	10:B:2618:G:H5'	2.35	0.57
10:B:2650:U:H2'	10:B:2651:C:C6	2.40	0.57
10:B:2679:A:O2'	10:B:2680:U:H5'	2.05	0.57
12:D:4:LEU:HB2	12:D:201:LEU:O	2.05	0.57
12:D:45:TYR:CE2	12:D:83:ARG:HG3	2.40	0.57
12:D:107:VAL:HG23	12:D:204:LYS:O	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:D:115:GLY:O	22:N:3:HIS:NE2	2.37	0.57
14:F:133:GLU:OE1	14:F:147:ARG:HD3	2.05	0.57
15:G:5:LYS:HB3	15:G:68:ARG:CZ	2.35	0.57
18:J:57:LEU:HD12	18:J:128:ASN:C	2.30	0.57
18:J:73:VAL:HG23	18:J:74:TYR:H	1.69	0.57
19:K:73:ASP:OD1	19:K:74:GLY:N	2.37	0.57
21:M:127:LYS:CE	30:V:84:PRO:HG3	2.34	0.57
22:N:121:LYS:O	22:N:122:ALA:HB2	2.05	0.57
23:O:55:GLU:HB2	23:O:60:GLU:O	2.05	0.57
24:P:97:TYR:O	24:P:98:TYR:HB2	2.03	0.57
30:V:4:ILE:HD11	30:V:61:LEU:HD12	1.87	0.57
10:B:283:G:N2	10:B:284:U:C2	2.73	0.57
10:B:359:G:H2'	10:B:360:U:H6	1.67	0.57
10:B:363:G:N2	10:B:364:C:C2	2.73	0.57
10:B:1038:G:N2	10:B:1039:A:C4	2.73	0.57
10:B:1544:A:N6	10:B:1545:A:C6	2.73	0.57
10:B:2270:A:H4'	31:W:18:LYS:HG2	1.87	0.57
11:C:164:VAL:HB	11:C:167:ASP:OD2	2.05	0.57
12:D:170:VAL:HG11	12:D:194:PRO:CB	2.35	0.57
16:H:21:VAL:HG13	16:H:22:LYS:O	2.05	0.57
17:I:46:ASP:HA	17:I:50:LYS:HG3	1.87	0.57
18:J:58:ASN:O	18:J:126:ALA:HA	2.05	0.57
20:L:94:THR:HB	20:L:103:ILE:CG1	2.34	0.57
20:L:103:ILE:HD13	20:L:104:GLN:H	1.70	0.57
21:M:5:LYS:O	21:M:5:LYS:HD2	2.04	0.57
24:P:22:GLY:HA2	24:P:93:LYS:HE2	1.87	0.57
25:Q:21:LYS:C	25:Q:23:TYR:H	2.12	0.57
25:Q:27:ARG:HG3	25:Q:32:ARG:HH21	1.69	0.57
29:U:13:LEU:HG	29:U:69:VAL:HG22	1.85	0.57
2:1:42:VAL:HG12	2:1:43:ARG:HG3	1.87	0.56
4:3:16:THR:HG21	4:3:22:LYS:HZ1	1.69	0.56
10:B:244:A:H2'	10:B:245:G:O4'	2.04	0.56
10:B:360:U:H3'	10:B:361:G:C8	2.40	0.56
10:B:737:C:O2'	10:B:738:G:H5'	2.05	0.56
10:B:828:U:H4'	10:B:831:G:N1	2.20	0.56
10:B:1038:G:C6	10:B:1039:A:N6	2.73	0.56
10:B:1039:A:C6	10:B:1040:A:N6	2.73	0.56
10:B:1053:C:N4	10:B:1107:G:H1	2.03	0.56
10:B:1059:G:C4'	17:I:117:THR:N	2.67	0.56
10:B:1299:G:H4'	10:B:1301:A:H1'	1.86	0.56
10:B:2077:A:H2'	10:B:2078:C:H6	1.69	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2800:A:N3	10:B:2801:G:H1'	2.20	0.56
12:D:106:LYS:HZ1	12:D:208:LYS:HD3	1.67	0.56
14:F:33:ILE:HD11	14:F:90:LEU:HD13	1.87	0.56
15:G:17:LYS:HB3	15:G:24:THR:CG2	2.34	0.56
16:H:125:THR:CA	16:H:146:VAL:HB	2.34	0.56
17:I:122:GLU:CD	17:I:122:GLU:H	2.12	0.56
18:J:58:ASN:HA	18:J:127:GLY:H	1.70	0.56
22:N:115:LEU:O	22:N:116:VAL:HG12	2.05	0.56
25:Q:27:ARG:HG3	25:Q:32:ARG:NH2	2.19	0.56
27:S:18:ARG:NH1	27:S:25:ARG:HH22	1.97	0.56
33:Y:13:ILE:HA	33:Y:19:HIS:HE1	1.70	0.56
4:3:15:LYS:HG2	4:3:19:GLY:HA2	1.87	0.56
9:A:28:C:H5'	9:A:29:A:OP2	2.05	0.56
10:B:37:C:O2'	13:E:46:GLN:HB3	2.04	0.56
10:B:280:U:C4	10:B:361:G:N2	2.73	0.56
10:B:1099:G:C6	10:B:1100:C:N4	2.73	0.56
10:B:1444:G:H1	10:B:1548:A:N6	2.03	0.56
10:B:2008:C:H2'	10:B:2009:A:C8	2.40	0.56
10:B:2294:G:O2'	10:B:2295:C:H5'	2.06	0.56
10:B:2331:G:H2'	10:B:2332:C:C6	2.40	0.56
10:B:2680:U:H5'	12:D:194:PRO:HA	1.87	0.56
10:B:2688:G:H1'	10:B:2721:A:H61	1.69	0.56
10:B:2786:U:C4'	12:D:66:GLY:HA2	2.36	0.56
10:B:2867:G:N3	10:B:2867:G:C2'	2.67	0.56
10:B:2881:U:N1	22:N:120:GLU:CD	2.57	0.56
11:C:80:LEU:HA	11:C:91:ALA:HA	1.87	0.56
12:D:62:LYS:H	12:D:62:LYS:CE	2.17	0.56
19:K:70:ARG:CB	19:K:76:VAL:HG22	2.31	0.56
20:L:61:LEU:CB	20:L:62:PRO:CD	2.75	0.56
21:M:84:LYS:NZ	21:M:84:LYS:H	2.04	0.56
22:N:107:ASN:OD1	27:S:40:ASN:HB3	2.04	0.56
28:T:64:LYS:HB3	28:T:77:ARG:HH11	1.70	0.56
31:W:44:PHE:HB3	31:W:76:ARG:CG	2.35	0.56
2:1:31:GLU:HB3	2:1:32:LYS:HE3	1.86	0.56
4:3:11:LYS:HA	20:L:63:LYS:CG	2.32	0.56
4:3:29:ARG:HA	4:3:33:THR:CG2	2.35	0.56
9:A:113:C:H4'	23:O:47:VAL:HG12	1.87	0.56
10:B:285:G:N3	10:B:286:U:C6	2.73	0.56
10:B:319:G:C8	10:B:333:G:N2	2.73	0.56
10:B:352:A:C6	10:B:353:C:N4	2.73	0.56
10:B:972:A:C3'	10:B:973:A:H5''	2.33	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1043:C:H2'	10:B:1044:C:C6	2.41	0.56
10:B:1061:U:C4	17:I:9:LYS:HB2	2.39	0.56
10:B:1102:C:O2'	10:B:1103:A:H5'	2.05	0.56
10:B:1112:G:N2	10:B:1113:U:C6	2.73	0.56
10:B:1117:C:C2	10:B:1118:C:N4	2.73	0.56
10:B:1155:A:H61	33:Y:10:ARG:HH22	1.53	0.56
10:B:1593:A:H2'	10:B:1594:U:C6	2.39	0.56
10:B:1932:A:H2'	10:B:1933:G:O4'	2.04	0.56
10:B:2262:U:H2'	10:B:2263:C:H6	1.69	0.56
10:B:2789:C:H3'	10:B:2893:A:H62	1.70	0.56
11:C:242:HIS:N	11:C:243:PRO:CD	2.68	0.56
11:C:257:ARG:NH1	11:C:257:ARG:HA	2.21	0.56
12:D:11:MET:SD	24:P:9:GLN:HG2	2.46	0.56
12:D:52:THR:HG22	12:D:76:GLY:N	2.20	0.56
13:E:6:LYS:NZ	13:E:119:ILE:H	2.03	0.56
14:F:165:GLY:HA2	14:F:168:LEU:HD21	1.87	0.56
15:G:106:LEU:HD23	15:G:151:ARG:HB2	1.88	0.56
16:H:82:SER:HB3	16:H:90:LEU:HD23	1.86	0.56
21:M:3:GLN:HG2	21:M:47:GLU:N	2.21	0.56
21:M:8:LYS:H	21:M:8:LYS:HE2	1.70	0.56
21:M:33:LEU:HB2	21:M:101:VAL:HG21	1.87	0.56
21:M:73:ILE:HD11	21:M:92:TRP:H	1.71	0.56
23:O:54:VAL:O	23:O:62:LEU:HD23	2.06	0.56
23:O:58:ILE:HG13	23:O:59:ALA:N	2.19	0.56
25:Q:73:ILE:HG13	25:Q:77:LYS:HD2	1.88	0.56
25:Q:92:LYS:CA	25:Q:95:ALA:HB2	2.29	0.56
27:S:32:ALA:C	27:S:33:LEU:HD22	2.29	0.56
28:T:1:MET:CG	28:T:2:ILE:H	2.19	0.56
28:T:61:LEU:HD12	28:T:62:VAL:N	2.19	0.56
1:O:52:LYS:HD3	22:N:118:ARG:HD3	1.86	0.56
10:B:6:A:O2'	18:J:135:GLN:HB2	2.04	0.56
10:B:80:G:P	10:B:346:A:C8	2.99	0.56
10:B:82:U:H2'	10:B:83:A:C8	2.41	0.56
10:B:279:A:C8	10:B:362:A:H1'	2.40	0.56
10:B:299:A:N9	10:B:322:A:N1	2.54	0.56
10:B:313:G:C6	10:B:314:C:N4	2.73	0.56
10:B:347:A:N1	10:B:348:A:N7	2.54	0.56
10:B:596:U:H2'	10:B:597:G:H8	1.69	0.56
10:B:634:C:H2'	10:B:635:C:C6	2.40	0.56
10:B:634:C:H2'	10:B:635:C:H6	1.70	0.56
10:B:986:C:O2'	10:B:987:C:H5'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1054:A:H2'	10:B:1055:G:H8	1.70	0.56
10:B:1056:G:O5'	10:B:1056:G:H8	1.87	0.56
10:B:1676:A:C1'	12:D:134:HIS:HB3	2.35	0.56
10:B:1709:U:H2'	10:B:1710:G:C8	2.40	0.56
10:B:1716:U:H2'	10:B:1717:A:C8	2.41	0.56
10:B:2556:C:H2'	10:B:2557:G:O4'	2.06	0.56
10:B:2836:U:H2'	10:B:2837:A:C8	2.41	0.56
11:C:27:LYS:HB3	11:C:80:LEU:O	2.06	0.56
11:C:67:LYS:HG3	11:C:68:ARG:H	1.71	0.56
11:C:154:ALA:C	11:C:156:SER:H	2.11	0.56
12:D:118:PHE:CA	12:D:164:GLN:HG3	2.35	0.56
16:H:50:ARG:HH21	16:H:54:LEU:HD12	1.67	0.56
19:K:41:ILE:HG23	19:K:42:THR:N	2.19	0.56
21:M:14:LYS:NZ	21:M:14:LYS:HB3	2.20	0.56
26:R:90:ARG:NH2	26:R:92:TRP:HB3	2.20	0.56
29:U:25:LYS:HA	29:U:35:VAL:H	1.70	0.56
4:3:38:LYS:HD2	10:B:2351:G:O6	2.06	0.56
9:A:6:G:H2'	9:A:7:G:C8	2.40	0.56
10:B:141:G:C2	28:T:2:ILE:HG13	2.40	0.56
10:B:273:G:C4	10:B:274:C:C5	2.93	0.56
10:B:299:A:C5	10:B:300:A:N6	2.73	0.56
10:B:332:A:C4	10:B:335:C:N4	2.73	0.56
10:B:813:U:H2'	10:B:814:C:H6	1.70	0.56
10:B:1229:C:H2'	10:B:1230:A:C8	2.40	0.56
10:B:1258:U:O4'	13:E:79:ARG:HD3	2.06	0.56
10:B:1437:C:H2'	10:B:1438:U:H6	1.67	0.56
10:B:1524:G:N3	10:B:1525:A:N9	2.49	0.56
10:B:1547:C:O2'	10:B:1548:A:H5'	2.05	0.56
10:B:1570:A:H2'	10:B:1571:A:C8	2.40	0.56
10:B:1818:U:OP1	11:C:155:ARG:HA	2.06	0.56
10:B:1903:G:OP1	11:C:239:PHE:HA	2.05	0.56
10:B:2061:G:H3'	36:B:3446:HOH:O	2.05	0.56
11:C:160:TYR:O	11:C:161:VAL:HG23	2.06	0.56
19:K:47:ILE:HG22	19:K:49:ARG:H	1.68	0.56
21:M:88:ASN:N	21:M:88:ASN:ND2	2.49	0.56
4:3:26:ALA:HB1	4:3:29:ARG:HG3	1.87	0.56
10:B:315:G:C2'	10:B:316:C:H6	2.12	0.56
10:B:407:G:O2'	10:B:408:G:H5'	2.06	0.56
10:B:1519:G:C3'	10:B:1520:U:H5'	2.34	0.56
10:B:1523:U:P	10:B:1523:U:C6	2.98	0.56
10:B:1544:A:C6	10:B:1545:A:C5	2.93	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1552:A:C2'	10:B:1553:A:H5''	2.35	0.56
10:B:1700:A:H2'	10:B:1701:A:H5'	1.87	0.56
10:B:2415:G:H2'	10:B:2416:C:H6	1.68	0.56
11:C:63:ILE:HG22	11:C:64:VAL:H	1.70	0.56
13:E:106:LYS:HB2	13:E:106:LYS:NZ	2.21	0.56
14:F:99:PHE:C	14:F:101:ARG:H	2.13	0.56
15:G:97:VAL:HG21	15:G:123:GLU:HA	1.87	0.56
19:K:5:GLN:HA	19:K:20:MET:SD	2.46	0.56
20:L:77:ILE:HB	20:L:110:VAL:CG2	2.28	0.56
20:L:126:ARG:HE	20:L:127:VAL:N	2.04	0.56
23:O:21:LEU:HD13	23:O:22:GLY:N	2.21	0.56
26:R:59:ILE:HG13	26:R:59:ILE:O	2.05	0.56
29:U:47:PRO:CD	29:U:48:VAL:H	2.18	0.56
29:U:82:VAL:HB	29:U:94:PHE:CD2	2.40	0.56
9:A:20:G:H2'	9:A:21:G:C8	2.40	0.56
10:B:278:A:C4	10:B:362:A:C8	2.94	0.56
10:B:301:G:N2	10:B:317:G:C8	2.73	0.56
10:B:764:A:H5''	11:C:208:GLY:CA	2.35	0.56
10:B:1197:G:H2'	10:B:1198:U:H6	1.70	0.56
10:B:1441:G:H2'	10:B:1442:U:C6	2.41	0.56
10:B:1528:A:N6	10:B:1544:A:C8	2.73	0.56
10:B:1540:G:C6	10:B:1541:C:N4	2.73	0.56
10:B:1759:A:H4'	10:B:2715:C:O4'	2.04	0.56
10:B:2052:A:C4'	12:D:148:GLN:H	2.19	0.56
10:B:2533:U:H2'	10:B:2534:A:O4'	2.06	0.56
11:C:15:VAL:HG12	11:C:16:VAL:HG23	1.86	0.56
12:D:128:ARG:HE	12:D:128:ARG:C	2.13	0.56
13:E:194:LYS:HE3	13:E:201:ALA:HB2	1.88	0.56
15:G:116:LEU:HD21	15:G:120:ILE:HB	1.87	0.56
17:I:23:VAL:HG23	17:I:24:GLY:H	1.70	0.56
20:L:13:LYS:O	20:L:14:LYS:HB2	2.05	0.56
20:L:38:GLN:NE2	20:L:39:LYS:H	2.03	0.56
21:M:5:LYS:HD3	21:M:91:TYR:CG	2.41	0.56
21:M:116:ALA:HA	21:M:119:LEU:HD23	1.86	0.56
24:P:15:ASP:OD1	24:P:15:ASP:N	2.38	0.56
24:P:99:LEU:HD21	24:P:109:ILE:HG23	1.88	0.56
26:R:20:VAL:HB	26:R:95:ASP:HB2	1.87	0.56
26:R:47:VAL:C	26:R:49:ILE:H	2.11	0.56
27:S:9:HIS:O	27:S:10:ALA:HB3	2.05	0.56
27:S:56:ALA:C	27:S:58:ALA:H	2.11	0.56
29:U:44:HIS:ND1	29:U:55:GLY:O	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:V:42:LEU:HB2	30:V:47:VAL:HG21	1.87	0.56
31:W:19:ARG:HH22	31:W:71:LYS:HD2	1.70	0.56
31:W:58:LEU:HA	31:W:79:ILE:HG21	1.87	0.56
34:Z:5:ILE:HB	34:Z:51:VAL:HG13	1.86	0.56
1:0:6:LYS:CE	10:B:2615:U:H1'	2.29	0.56
8:7:169:G:H2'	8:7:170:C:O4'	2.06	0.56
10:B:272:A:N1	10:B:273:G:C8	2.74	0.56
10:B:312:G:N2	10:B:313:G:C8	2.73	0.56
10:B:644:A:O2'	10:B:645:C:H2'	2.05	0.56
10:B:660:C:H2'	10:B:661:A:C8	2.40	0.56
10:B:864:G:O2'	10:B:865:C:H5'	2.05	0.56
10:B:1063:G:H5''	17:I:76:ALA:CA	2.36	0.56
11:C:71:ASP:C	11:C:73:ILE:HD12	2.31	0.56
11:C:129:LEU:HD23	11:C:130:PRO:HD2	1.88	0.56
11:C:144:GLU:OE2	11:C:188:ARG:HG3	2.06	0.56
12:D:15:PHE:CD2	12:D:18:ASP:HB2	2.40	0.56
12:D:88:GLU:HG2	12:D:89:GLU:H	1.70	0.56
12:D:119:ALA:HA	12:D:123:LYS:CE	2.34	0.56
13:E:44:ARG:O	13:E:45:ALA:C	2.49	0.56
15:G:122:ALA:HA	15:G:131:VAL:O	2.05	0.56
21:M:11:LYS:HG2	21:M:12:MET:N	2.20	0.56
23:O:105:ALA:O	23:O:109:ALA:HB2	2.05	0.56
26:R:5:PHE:CG	26:R:6:GLN:N	2.74	0.56
32:X:14:LEU:HG	32:X:53:VAL:HG12	1.88	0.56
2:1:47:ILE:HG13	2:1:48:TYR:H	1.71	0.56
4:3:7:ARG:NE	4:3:11:LYS:NZ	2.53	0.56
10:B:283:G:H2'	10:B:284:U:O4'	2.06	0.56
10:B:292:U:O2'	10:B:293:U:H5'	2.06	0.56
10:B:296:U:O2	10:B:342:A:H2	1.89	0.56
10:B:299:A:N1	10:B:300:A:N1	2.54	0.56
10:B:345:A:H3'	10:B:345:A:P	2.46	0.56
10:B:348:A:N3	10:B:349:U:C2	2.73	0.56
10:B:758:C:O2	10:B:1981:A:H2	1.89	0.56
10:B:903:C:H2'	10:B:904:G:C8	2.40	0.56
10:B:1163:G:O2'	10:B:1164:C:H5'	2.06	0.56
10:B:1387:A:H2'	10:B:1388:G:C8	2.41	0.56
10:B:2230:G:H1'	34:Z:30:HIS:CD2	2.41	0.56
10:B:2528:U:O2'	10:B:2529:G:H3'	2.06	0.56
10:B:2751:G:H5''	15:G:3:VAL:HA	1.88	0.56
11:C:155:ARG:O	11:C:157:ALA:N	2.39	0.56
11:C:257:ARG:HA	11:C:257:ARG:CZ	2.36	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:D:29:VAL:HG12	12:D:185:ASN:ND2	2.21	0.56
13:E:149:ILE:HD11	13:E:180:LEU:HD23	1.87	0.56
17:I:124:MET:O	17:I:128:ILE:HG12	2.06	0.56
18:J:64:VAL:HG12	18:J:65:THR:H	1.71	0.56
20:L:95:LEU:HD12	20:L:95:LEU:N	2.21	0.56
30:V:77:VAL:HG21	30:V:79:ARG:HE	1.71	0.56
3:2:22:MET:HE2	3:2:31:LEU:HG	1.88	0.56
10:B:289:G:H2'	10:B:290:U:H6	1.67	0.56
10:B:325:G:N2	10:B:326:G:C4	2.73	0.56
10:B:1121:C:H2'	10:B:1122:G:O4'	2.05	0.56
10:B:1270:C:H5''	10:B:1271:G:O5'	2.06	0.56
10:B:1454:C:H5'	22:N:63:ARG:NH2	2.19	0.56
10:B:2335:A:OP2	23:O:9:ARG:HG3	2.06	0.56
10:B:2369:A:O2'	10:B:2370:G:H5'	2.06	0.56
10:B:2682:A:H5''	24:P:55:HIS:NE2	2.21	0.56
11:C:216:ARG:HH11	11:C:217:PRO:HD2	1.70	0.56
13:E:48:THR:HG23	13:E:87:ALA:H	1.70	0.56
14:F:23:SER:C	14:F:25:MET:H	2.14	0.56
15:G:85:LYS:HA	15:G:130:ILE:O	2.06	0.56
15:G:102:ILE:HG22	15:G:114:HIS:O	2.06	0.56
16:H:26:ALA:HA	16:H:30:LEU:HB2	1.88	0.56
16:H:83:LYS:CB	16:H:91:PHE:HB2	2.31	0.56
17:I:10:LEU:HD13	17:I:12:VAL:HG13	1.87	0.56
18:J:15:TRP:HB3	18:J:53:TYR:CD2	2.41	0.56
18:J:41:LYS:HZ3	18:J:46:PRO:HD3	1.70	0.56
18:J:46:PRO:O	18:J:47:HIS:HB2	2.05	0.56
24:P:2:ASN:HD22	24:P:2:ASN:H	1.52	0.56
29:U:43:LYS:HD2	29:U:44:HIS:H	1.69	0.56
10:B:969:G:H2'	10:B:970:U:C6	2.41	0.55
10:B:1540:G:H2'	10:B:1541:C:H5''	1.88	0.55
10:B:1819:A:OP1	11:C:153:LEU:HB2	2.05	0.55
10:B:2840:C:H2'	10:B:2841:C:H6	1.71	0.55
12:D:86:GLU:HG2	12:D:87:GLY:H	1.71	0.55
12:D:116:LYS:H	12:D:165:MET:HG3	1.71	0.55
14:F:37:MET:HG2	14:F:86:CYS:HB2	1.88	0.55
18:J:35:ARG:HE	18:J:39:LYS:HB3	1.71	0.55
24:P:7:LEU:HD13	24:P:11:GLN:HG2	1.88	0.55
24:P:96:LEU:HG	24:P:97:TYR:H	1.72	0.55
25:Q:4:LYS:O	25:Q:7:VAL:HG13	2.05	0.55
26:R:35:PHE:HB2	26:R:64:VAL:HG21	1.88	0.55
28:T:56:GLU:HB2	28:T:86:THR:OG1	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:Z:58:ASP:CG	34:Z:63:ARG:HH11	2.13	0.55
10:B:287:G:C6	10:B:354:A:N6	2.73	0.55
10:B:310:A:C2	10:B:312:G:C1'	2.88	0.55
10:B:313:G:C5	10:B:314:C:N4	2.73	0.55
10:B:1076:C:C2'	17:I:92:PRO:HB2	2.29	0.55
10:B:1181:U:H2'	10:B:1182:G:C8	2.40	0.55
10:B:1251:C:H2'	25:Q:5:ARG:NH2	2.21	0.55
10:B:1540:G:C2	10:B:1541:C:C5	2.94	0.55
10:B:2278:A:H8	31:W:8:SER:HB3	1.72	0.55
11:C:222:THR:HA	11:C:231:HIS:CE1	2.42	0.55
14:F:65:LEU:C	14:F:67:THR:H	2.12	0.55
15:G:163:TYR:HB2	15:G:166:GLU:HB2	1.89	0.55
16:H:11:ASN:HD22	16:H:12:LEU:H	1.54	0.55
20:L:82:LEU:HD22	20:L:86:GLU:OE1	2.06	0.55
22:N:33:ILE:H	22:N:33:ILE:HD13	1.71	0.55
22:N:34:ILE:O	22:N:34:ILE:HG12	2.05	0.55
28:T:62:VAL:O	28:T:63:VAL:O	2.24	0.55
1:O:10:SER:HA	10:B:16:C:O3'	2.06	0.55
10:B:143:C:H2'	10:B:144:A:C8	2.40	0.55
10:B:292:U:H2'	10:B:293:U:C5	2.39	0.55
10:B:1063:G:H4'	17:I:76:ALA:HA	1.88	0.55
10:B:1112:G:C2	10:B:1113:U:C6	2.94	0.55
10:B:1429:G:H2'	10:B:1430:G:C8	2.41	0.55
10:B:1843:C:H5''	11:C:252:LYS:HZ3	1.71	0.55
10:B:1847:A:H4'	10:B:1848:A:C8	2.42	0.55
10:B:2212:A:N7	10:B:2214:C:N4	2.54	0.55
10:B:2308:G:N3	10:B:2308:G:H5''	2.20	0.55
11:C:181:ARG:NH1	11:C:260:LYS:HZ2	2.03	0.55
12:D:206:ALA:C	12:D:208:LYS:H	2.15	0.55
13:E:1:MET:O	13:E:14:VAL:HG22	2.06	0.55
16:H:9:VAL:C	16:H:11:ASN:H	2.14	0.55
16:H:31:VAL:HG22	16:H:37:VAL:HG22	1.89	0.55
18:J:7:LYS:HD2	18:J:49:ASP:CB	2.34	0.55
19:K:2:ILE:HG23	19:K:33:ALA:O	2.06	0.55
21:M:8:LYS:O	21:M:9:PHE:C	2.47	0.55
21:M:18:ARG:HB3	21:M:40:ARG:NH2	2.22	0.55
22:N:22:ARG:HG3	22:N:23:ASN:N	2.20	0.55
23:O:49:VAL:HG22	23:O:50:ALA:N	2.19	0.55
24:P:91:VAL:HB	24:P:113:LEU:CB	2.35	0.55
29:U:29:SER:O	29:U:30:SER:HB2	2.04	0.55
3:2:5:PHE:O	10:B:686:U:HI'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:3:23:HIS:CD2	4:3:47:ALA:HA	2.41	0.55
4:3:27:ASN:HB3	4:3:28:LEU:HG	1.88	0.55
5:4:31:PRO:HB2	10:B:2527:C:H5''	1.89	0.55
6:5:412:ASP:HA	6:5:415:ARG:NH1	2.20	0.55
10:B:297:G:C3'	10:B:298:G:C8	2.86	0.55
10:B:319:G:N2	10:B:320:A:C2	2.73	0.55
10:B:320:A:H8	10:B:320:A:O5'	1.90	0.55
10:B:360:U:O3'	10:B:361:G:O4'	2.24	0.55
10:B:436:C:O2'	10:B:437:U:H5'	2.05	0.55
10:B:548:G:H5''	10:B:549:G:O4'	2.07	0.55
10:B:643:A:N6	10:B:2370:G:H1'	2.21	0.55
10:B:796:C:H2'	10:B:797:G:C8	2.41	0.55
10:B:1064:C:C4'	17:I:88:GLY:HA3	2.35	0.55
10:B:1857:G:H2'	10:B:1884:G:N2	2.20	0.55
10:B:1951:U:H2'	10:B:1953:A:OP2	2.05	0.55
10:B:2666:C:O2	10:B:2666:C:O4'	2.25	0.55
10:B:2839:G:H2'	10:B:2840:C:C6	2.42	0.55
10:B:2852:G:H2'	10:B:2853:C:H6	1.72	0.55
12:D:48:ILE:HD12	12:D:80:TRP:HE1	1.72	0.55
12:D:167:ASN:H	12:D:167:ASN:HD22	1.54	0.55
14:F:110:ILE:HG22	14:F:112:ASP:H	1.71	0.55
17:I:63:ASP:O	17:I:64:ARG:CG	2.53	0.55
18:J:57:LEU:HD12	18:J:128:ASN:HA	1.89	0.55
19:K:98:ARG:HD2	19:K:98:ARG:H	1.71	0.55
19:K:107:LEU:HD11	19:K:115:ILE:HG21	1.87	0.55
20:L:125:LEU:C	20:L:126:ARG:HG3	2.31	0.55
22:N:19:ALA:C	22:N:21:PHE:N	2.62	0.55
22:N:33:ILE:HD13	22:N:33:ILE:N	2.21	0.55
26:R:47:VAL:HG13	26:R:49:ILE:N	2.20	0.55
26:R:62:GLU:CG	26:R:103:ALA:HA	2.36	0.55
26:R:80:ARG:HG3	26:R:80:ARG:O	2.06	0.55
2:1:13:SER:H	2:1:50:GLU:HA	1.72	0.55
3:2:8:SER:OG	3:2:11:LYS:HB2	2.07	0.55
4:3:16:THR:HB	10:B:651:G:P	2.47	0.55
10:B:125:A:H3'	10:B:126:A:H5''	1.88	0.55
10:B:275:C:H2'	10:B:276:U:O4'	2.06	0.55
10:B:349:U:O2	10:B:349:U:H2'	2.07	0.55
10:B:395:U:H2'	10:B:396:G:C8	2.41	0.55
10:B:1098:A:H2'	10:B:1099:G:H8	1.70	0.55
10:B:1517:G:C2	10:B:1518:C:C6	2.95	0.55
10:B:1534:U:H4'	10:B:1535:A:OP1	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1676:A:O4'	12:D:134:HIS:HB3	2.06	0.55
10:B:1812:U:H1'	11:C:45:ASN:OD1	2.05	0.55
10:B:1878:G:H2'	10:B:1879:C:C6	2.41	0.55
11:C:37:SER:H	11:C:62:ARG:CB	2.20	0.55
12:D:1:MET:HE3	12:D:84:LEU:HB2	1.89	0.55
12:D:128:ARG:CZ	12:D:130:GLN:CD	2.80	0.55
13:E:29:HIS:O	13:E:33:VAL:HG23	2.07	0.55
14:F:121:PHE:CZ	14:F:169:LEU:HD12	2.42	0.55
16:H:44:ILE:CG2	16:H:47:PHE:CE1	2.90	0.55
16:H:50:ARG:HE	16:H:54:LEU:CG	2.17	0.55
17:I:49:GLU:CG	17:I:54:ILE:HD11	2.36	0.55
18:J:25:LEU:HD13	18:J:25:LEU:N	2.21	0.55
19:K:58:LEU:HB3	19:K:89:ASN:HD21	1.71	0.55
23:O:20:GLU:HB3	23:O:23:ALA:CB	2.37	0.55
24:P:76:HIS:CD2	24:P:76:HIS:N	2.74	0.55
28:T:77:ARG:HG2	28:T:78:SER:H	1.69	0.55
29:U:94:PHE:CZ	29:U:100:GLU:HA	2.42	0.55
31:W:6:GLY:C	31:W:8:SER:N	2.60	0.55
10:B:37:C:H2'	13:E:46:GLN:CB	2.35	0.55
10:B:352:A:C4	10:B:353:C:C6	2.95	0.55
10:B:718:A:H3'	10:B:719:C:H6	1.71	0.55
10:B:753:A:H2'	10:B:754:U:C6	2.42	0.55
10:B:1000:A:H2'	10:B:1001:A:C8	2.42	0.55
10:B:1013:C:H2'	10:B:1014:A:C8	2.40	0.55
10:B:1048:A:C5	10:B:1049:C:C5	2.95	0.55
10:B:1063:G:H2'	10:B:1064:C:H5'	1.87	0.55
10:B:1820:U:H3	11:C:197:ALA:CB	2.20	0.55
10:B:2150:C:H2'	10:B:2151:U:O4'	2.05	0.55
10:B:2218:G:H2'	10:B:2219:U:H6	1.71	0.55
10:B:2760:C:O2'	10:B:2761:A:H5'	2.07	0.55
11:C:238:ASN:HB3	11:C:242:HIS:NE2	2.21	0.55
12:D:38:LYS:HG2	12:D:39:ASP:N	2.19	0.55
12:D:109:VAL:O	12:D:172:VAL:HG22	2.06	0.55
13:E:118:LEU:N	13:E:118:LEU:HD23	2.21	0.55
14:F:41:GLU:HB3	14:F:44:ALA:HB3	1.87	0.55
19:K:76:VAL:O	24:P:73:PHE:HA	2.06	0.55
27:S:29:VAL:HG11	27:S:69:LEU:HB2	1.89	0.55
33:Y:16:LEU:HD12	33:Y:16:LEU:H	1.71	0.55
33:Y:54:VAL:HG22	33:Y:55:LYS:N	2.22	0.55
2:1:31:GLU:O	2:1:33:LEU:HG	2.05	0.55
2:1:42:VAL:HG12	2:1:43:ARG:HE	1.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:280:U:C4	10:B:281:C:N4	2.75	0.55
10:B:294:A:N6	10:B:345:A:C4	2.74	0.55
10:B:359:G:C8	10:B:360:U:C5	2.95	0.55
10:B:845:A:C2	10:B:847:U:H1'	2.42	0.55
10:B:871:U:H2'	10:B:872:U:H6	1.72	0.55
10:B:1078:U:O5'	10:B:1078:U:H6	1.90	0.55
10:B:1116:G:N2	10:B:1117:C:O4'	2.40	0.55
10:B:1130:U:O2'	10:B:1131:G:H2'	2.07	0.55
10:B:1155:A:H61	33:Y:10:ARG:HH12	1.54	0.55
10:B:2011:U:OP2	27:S:16:LYS:HE3	2.07	0.55
10:B:2184:A:H2'	10:B:2185:U:C6	2.42	0.55
10:B:2578:G:N3	12:D:145:SER:CB	2.70	0.55
11:C:128:THR:HG22	11:C:188:ARG:HB2	1.89	0.55
15:G:5:LYS:HG3	15:G:68:ARG:HB2	1.89	0.55
17:I:138:VAL:HG12	17:I:139:VAL:N	2.22	0.55
26:R:22:LEU:O	26:R:96:VAL:HG22	2.05	0.55
27:S:7:HIS:HB3	27:S:102:HIS:CA	2.36	0.55
28:T:15:HIS:ND1	28:T:31:VAL:HG11	2.21	0.55
28:T:48:GLN:HG3	28:T:49:LYS:N	2.20	0.55
10:B:414:C:H2'	10:B:415:A:H8	1.71	0.55
10:B:771:G:O2'	10:B:772:C:H5'	2.06	0.55
10:B:898:C:H2'	10:B:899:A:C8	2.41	0.55
10:B:973:A:H8	10:B:973:A:OP1	1.89	0.55
10:B:1006:C:O2'	10:B:1007:C:H5'	2.07	0.55
10:B:1520:U:H2'	10:B:1520:U:O2	2.07	0.55
10:B:1816:C:C5	11:C:62:ARG:HD2	2.42	0.55
10:B:2354:C:O2'	31:W:31:LEU:HB2	2.06	0.55
10:B:2617:U:H2'	10:B:2618:G:H5'	1.89	0.55
10:B:2678:C:H2'	10:B:2679:A:C8	2.42	0.55
11:C:27:LYS:HA	11:C:79:ARG:NH1	2.22	0.55
14:F:36:ASN:O	14:F:152:ASP:HB2	2.06	0.55
16:H:11:ASN:ND2	16:H:12:LEU:N	2.55	0.55
21:M:3:GLN:HG2	21:M:46:ILE:HB	1.89	0.55
29:U:23:LYS:O	29:U:25:LYS:N	2.39	0.55
29:U:41:VAL:CG2	29:U:42:LYS:H	2.04	0.55
32:X:45:GLN:NE2	32:X:45:GLN:H	2.05	0.55
34:Z:59:ARG:HE	34:Z:62:LYS:CD	2.18	0.55
10:B:111:A:H2'	10:B:112:U:O4'	2.06	0.55
10:B:209:C:H2'	10:B:210:C:H6	1.71	0.55
10:B:295:G:C2	10:B:296:U:C4	2.94	0.55
10:B:452:G:OP1	13:E:52:VAL:HG22	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:922:C:H2'	10:B:923:G:C8	2.42	0.55
10:B:1013:C:H2'	10:B:1014:A:H8	1.72	0.55
10:B:1109:C:N4	10:B:1110:G:C6	2.75	0.55
10:B:1512:C:C2'	10:B:1513:U:H5'	2.37	0.55
10:B:2729:G:H2'	10:B:2730:C:C6	2.41	0.55
11:C:155:ARG:HH21	11:C:157:ALA:HB2	1.70	0.55
14:F:46:LYS:O	14:F:50:ASP:HB3	2.06	0.55
20:L:92:LEU:HG	20:L:96:LYS:HZ3	1.72	0.55
23:O:24:THR:OG1	23:O:91:SER:HA	2.07	0.55
26:R:85:LYS:C	26:R:87:GLN:H	2.13	0.55
32:X:59:GLU:C	32:X:61:ALA:H	2.15	0.55
4:3:24:LYS:HD3	20:L:62:PRO:C	2.31	0.55
5:4:2:LYS:NZ	5:4:2:LYS:HB3	2.22	0.55
6:5:349:SER:O	6:5:353:LYS:HG2	2.07	0.55
10:B:275:C:C6	10:B:276:U:C6	2.95	0.55
10:B:279:A:C6	10:B:280:U:C2	2.95	0.55
10:B:342:A:C5	10:B:343:C:C5	2.95	0.55
10:B:866:A:H61	10:B:913:U:C4'	2.19	0.55
36:B:3264:HOH:O	22:N:15:SER:HB3	2.07	0.55
11:C:21:PRO:N	11:C:202:ARG:HD2	2.22	0.55
12:D:2:ILE:HG21	12:D:203:VAL:O	2.07	0.55
16:H:21:VAL:HG22	16:H:22:LYS:N	2.21	0.55
17:I:27:LEU:HD23	17:I:27:LEU:N	2.17	0.55
18:J:45:THR:HG22	25:Q:63:ARG:HH22	1.72	0.55
18:J:102:GLU:OE2	18:J:124:VAL:HG11	2.06	0.55
20:L:77:ILE:HG22	20:L:78:ARG:CZ	2.37	0.55
24:P:47:ILE:HG23	24:P:63:ILE:HA	1.88	0.55
25:Q:93:ILE:HG23	25:Q:94:LEU:N	2.19	0.55
29:U:99:SER:OG	29:U:102:ILE:HD11	2.07	0.55
31:W:44:PHE:CE2	31:W:60:ALA:HB3	2.41	0.55
4:3:22:LYS:NZ	10:B:650:C:H5''	2.22	0.54
10:B:11:C:H2'	10:B:12:U:H5'	1.88	0.54
10:B:45:G:H5'	10:B:46:G:OP1	2.06	0.54
10:B:297:G:H3'	10:B:298:G:H8	1.71	0.54
10:B:586:A:H5''	13:E:85:PHE:HE2	1.71	0.54
10:B:1101:U:H2'	10:B:1101:U:O2	2.07	0.54
10:B:1166:G:H2'	10:B:1167:C:H6	1.72	0.54
10:B:1539:U:C2	10:B:1540:G:N7	2.76	0.54
10:B:2247:A:H2'	10:B:2248:C:C6	2.41	0.54
10:B:2698:U:H2'	10:B:2699:C:C6	2.42	0.54
10:B:2849:U:N3	10:B:2867:G:H1'	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:C:68:ARG:HD3	11:C:103:ILE:HD11	1.88	0.54
11:C:235:GLU:HG3	11:C:237:ARG:HD3	1.89	0.54
18:J:18:VAL:HG22	18:J:55:ILE:O	2.07	0.54
19:K:104:THR:O	19:K:107:LEU:HB3	2.07	0.54
23:O:1:MET:HG2	23:O:2:ASP:N	2.21	0.54
23:O:40:ILE:HG22	23:O:48:LEU:O	2.06	0.54
24:P:83:ILE:HG22	24:P:85:VAL:H	1.73	0.54
25:Q:97:ILE:HD13	25:Q:100:PHE:CZ	2.42	0.54
31:W:6:GLY:O	31:W:8:SER:N	2.40	0.54
31:W:43:LYS:HA	31:W:63:ASP:OD1	2.07	0.54
34:Z:66:ILE:C	34:Z:68:GLY:H	2.13	0.54
2:1:42:VAL:O	2:1:43:ARG:HB2	2.07	0.54
9:A:90:C:H2'	9:A:91:C:O4'	2.07	0.54
10:B:142:A:H2'	10:B:143:C:C5	2.42	0.54
10:B:310:A:C2	10:B:312:G:C8	2.95	0.54
10:B:313:G:C5	10:B:314:C:C5	2.95	0.54
10:B:318:C:O2'	10:B:319:G:O5'	2.25	0.54
10:B:337:C:OP1	29:U:81:ARG:NH2	2.26	0.54
10:B:365:U:O2	10:B:365:U:H2'	2.07	0.54
10:B:1062:G:N3	10:B:1063:G:C8	2.75	0.54
10:B:1539:U:O2	10:B:1539:U:H2'	2.07	0.54
10:B:1583:A:H4'	10:B:1585:C:C4	2.42	0.54
10:B:2751:G:OP1	15:G:1:SER:HB2	2.07	0.54
12:D:62:LYS:H	12:D:62:LYS:HD3	1.71	0.54
12:D:146:ILE:N	12:D:146:ILE:HD12	2.23	0.54
12:D:151:THR:O	12:D:152:PRO:O	2.24	0.54
14:F:169:LEU:HA	14:F:172:PHE:CZ	2.42	0.54
15:G:153:PRO:HB3	15:G:158:GLY:O	2.07	0.54
18:J:43:GLU:O	18:J:44:TYR:C	2.50	0.54
18:J:81:ILE:CG1	18:J:82:GLY:H	2.19	0.54
19:K:56:ASP:O	19:K:58:LEU:HG	2.07	0.54
20:L:118:THR:N	20:L:119:PRO:HD3	2.21	0.54
21:M:3:GLN:HB3	21:M:46:ILE:HB	1.89	0.54
21:M:69:PRO:O	21:M:70:ASP:HB3	2.06	0.54
21:M:71:LYS:C	21:M:71:LYS:HD2	2.32	0.54
22:N:113:ILE:HG22	22:N:114:GLU:N	2.22	0.54
27:S:85:ILE:HG22	27:S:86:MET:N	2.23	0.54
28:T:30:ILE:HG22	28:T:84:TYR:O	2.07	0.54
28:T:62:VAL:O	28:T:63:VAL:HG12	2.06	0.54
29:U:44:HIS:HB3	29:U:57:ILE:N	2.22	0.54
29:U:56:GLY:C	29:U:58:VAL:H	2.15	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:X:41:HIS:HB2	32:X:45:GLN:OE1	2.06	0.54
34:Z:66:ILE:C	34:Z:68:GLY:N	2.64	0.54
2:1:42:VAL:CG1	2:1:43:ARG:N	2.70	0.54
3:2:25:LYS:H	3:2:25:LYS:HE3	1.73	0.54
10:B:26:G:H1'	10:B:514:A:N6	2.22	0.54
10:B:997:G:O2'	10:B:998:C:H5'	2.08	0.54
10:B:1028:A:H2'	10:B:1029:A:C8	2.43	0.54
10:B:1046:A:C3'	10:B:1047:G:H5''	2.36	0.54
10:B:1068:G:O5'	10:B:1068:G:H8	1.90	0.54
10:B:1188:U:O2'	10:B:1189:A:H5'	2.08	0.54
10:B:1506:U:H2'	10:B:1507:C:C6	2.42	0.54
10:B:1641:A:H2'	10:B:1642:G:O4'	2.07	0.54
10:B:2794:C:H2'	10:B:2795:C:C6	2.41	0.54
13:E:52:VAL:HG13	13:E:53:THR:N	2.23	0.54
14:F:173:ASP:CG	14:F:173:ASP:O	2.47	0.54
15:G:17:LYS:O	15:G:23:ILE:HD12	2.08	0.54
20:L:60:ARG:HH11	20:L:60:ARG:HA	1.72	0.54
20:L:78:ARG:NH2	20:L:110:VAL:HG11	2.22	0.54
23:O:1:MET:HE2	23:O:3:LYS:HB2	1.89	0.54
23:O:76:LYS:HB2	23:O:106:LEU:HD22	1.88	0.54
23:O:76:LYS:HG2	23:O:110:ALA:HB2	1.87	0.54
24:P:63:ILE:O	24:P:72:VAL:HG12	2.07	0.54
24:P:109:ILE:O	24:P:110:LYS:C	2.49	0.54
25:Q:4:LYS:O	25:Q:7:VAL:HG22	2.08	0.54
1:0:9:ARG:O	1:0:11:LYS:N	2.40	0.54
6:5:394:ILE:HG23	6:5:398:ARG:HB2	1.89	0.54
10:B:49:A:OP1	10:B:49:A:H4'	2.07	0.54
10:B:291:G:C4	10:B:350:G:C4	2.95	0.54
10:B:345:A:C2	10:B:347:A:N6	2.76	0.54
10:B:1034:G:C2'	10:B:1035:U:H5'	2.36	0.54
10:B:1162:G:O2'	10:B:1163:G:H5'	2.06	0.54
10:B:1252:G:O6	25:Q:35:PHE:HB2	2.08	0.54
10:B:1550:C:H2'	10:B:1551:A:C8	2.43	0.54
10:B:1724:G:H2'	10:B:1725:U:H6	1.73	0.54
10:B:1935:G:H1'	10:B:1964:G:N2	2.21	0.54
11:C:160:TYR:CG	11:C:193:GLU:HG2	2.43	0.54
16:H:50:ARG:CB	16:H:51:ARG:CA	2.86	0.54
18:J:7:LYS:HZ2	18:J:48:VAL:HB	1.71	0.54
10:B:273:G:C2	10:B:274:C:N1	2.75	0.54
10:B:283:G:N2	10:B:284:U:O2	2.41	0.54
10:B:357:C:C2	10:B:358:U:C4	2.95	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:378:C:O2'	10:B:379:G:H5'	2.08	0.54
10:B:1064:C:C2'	10:B:1065:U:H5'	2.37	0.54
10:B:1103:A:H8	10:B:1103:A:O5'	1.89	0.54
10:B:1113:U:H2'	10:B:1113:U:O2	2.07	0.54
10:B:1132:U:H5	18:J:85:LYS:HE2	1.71	0.54
10:B:1540:G:C5	10:B:1541:C:C5	2.95	0.54
10:B:2820:A:O4'	22:N:4:ARG:HB2	2.07	0.54
11:C:129:LEU:CD2	11:C:133:ASN:HB2	2.37	0.54
12:D:37:VAL:HG22	12:D:46:ARG:NE	2.21	0.54
12:D:192:ALA:O	12:D:193:VAL:HG12	2.08	0.54
13:E:141:MET:SD	13:E:143:LEU:HD22	2.48	0.54
13:E:187:VAL:HG23	13:E:187:VAL:O	2.07	0.54
14:F:66:ILE:HA	14:F:85:GLY:O	2.08	0.54
14:F:121:PHE:HE2	14:F:166:ARG:H	1.56	0.54
16:H:90:LEU:HD13	16:H:123:ARG:O	2.08	0.54
16:H:121:VAL:HG11	16:H:128:HIS:CD2	2.43	0.54
18:J:46:PRO:C	18:J:48:VAL:H	2.15	0.54
20:L:77:ILE:HG22	20:L:78:ARG:NE	2.23	0.54
20:L:123:ARG:HB3	20:L:143:GLU:OE2	2.07	0.54
22:N:32:GLU:HB3	22:N:33:ILE:HD13	1.89	0.54
23:O:16:ARG:O	23:O:20:GLU:HB2	2.07	0.54
25:Q:94:LEU:HD22	25:Q:95:ALA:N	2.23	0.54
26:R:39:LEU:HD11	26:R:57:GLY:O	2.08	0.54
10:B:342:A:C4	10:B:343:C:C5	2.96	0.54
10:B:1053:C:H2'	10:B:1054:A:C8	2.43	0.54
10:B:1067:A:O2'	10:B:1068:G:H5'	2.08	0.54
10:B:1181:U:H2'	10:B:1182:G:H8	1.72	0.54
10:B:1242:U:H2'	10:B:1243:C:C6	2.42	0.54
10:B:1535:A:C5'	10:B:1536:C:C5	2.86	0.54
11:C:20:ASN:HB2	11:C:203:VAL:CG1	2.31	0.54
11:C:21:PRO:HG2	11:C:202:ARG:NH1	2.23	0.54
12:D:58:ASN:O	12:D:59:ARG:HB2	2.06	0.54
13:E:111:GLU:C	13:E:113:VAL:H	2.16	0.54
18:J:7:LYS:CD	18:J:48:VAL:HB	2.37	0.54
22:N:118:ARG:O	22:N:118:ARG:HG2	2.07	0.54
26:R:39:LEU:HG	26:R:41:ILE:CG1	2.37	0.54
27:S:29:VAL:HG22	27:S:71:VAL:HG23	1.89	0.54
27:S:34:ASP:H	27:S:37:THR:CG2	2.20	0.54
29:U:42:LYS:CE	29:U:42:LYS:CA	2.86	0.54
1:0:11:LYS:HG3	1:0:12:ARG:H	1.72	0.54
6:5:428:LYS:HZ1	10:B:1283:G:P	2.31	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:A:99:A:N3	9:A:99:A:H2'	2.23	0.54
10:B:285:G:N2	10:B:286:U:H1'	2.22	0.54
10:B:299:A:C5	10:B:300:A:C6	2.96	0.54
10:B:306:U:H2'	10:B:307:G:H8	1.69	0.54
10:B:311:A:H1'	10:B:332:A:C8	2.42	0.54
10:B:356:G:C5	10:B:357:C:N4	2.73	0.54
10:B:362:A:H2'	10:B:363:G:H5'	1.90	0.54
10:B:770:G:O2'	10:B:771:G:H5'	2.07	0.54
10:B:1062:G:O2'	17:I:131:THR:HG22	2.08	0.54
10:B:1117:C:C4	10:B:1118:C:N4	2.76	0.54
10:B:1754:A:OP1	24:P:95:LYS:HB2	2.06	0.54
10:B:2576:G:N2	12:D:149:ASN:ND2	2.54	0.54
10:B:2618:G:O2'	12:D:154:LYS:O	2.26	0.54
12:D:118:PHE:N	12:D:164:GLN:HG3	2.23	0.54
13:E:133:LEU:HD12	13:E:136:GLN:CG	2.38	0.54
23:O:19:GLN:CA	31:W:76:ARG:HH22	2.18	0.54
25:Q:51:GLN:O	25:Q:54:ARG:HG2	2.07	0.54
29:U:25:LYS:HG2	29:U:35:VAL:HG22	1.88	0.54
30:V:40:ILE:HD13	30:V:40:ILE:N	2.23	0.54
32:X:27:ASN:O	32:X:30:MET:HG2	2.08	0.54
8:7:164:C:H2'	8:7:165:G:C8	2.42	0.54
9:A:54:G:H2'	9:A:55:U:C6	2.43	0.54
10:B:6:A:H2'	10:B:7:G:C8	2.42	0.54
10:B:313:G:N2	10:B:314:C:C2	2.73	0.54
10:B:588:U:OP1	20:L:28:GLY:HA2	2.07	0.54
10:B:620:G:H5'	10:B:620:G:N3	2.22	0.54
10:B:1332:G:H2'	10:B:1332:G:N3	2.21	0.54
10:B:2849:U:H4'	10:B:2850:A:C5'	2.38	0.54
11:C:10:PRO:HG2	11:C:23:LEU:HD11	1.89	0.54
12:D:142:VAL:HB	12:D:143:PRO:CD	2.37	0.54
16:H:66:ASN:CB	16:H:138:VAL:HG11	2.37	0.54
17:I:130:GLY:HA2	17:I:133:ARG:NH2	2.23	0.54
18:J:1:MET:SD	26:R:14:VAL:HG21	2.47	0.54
19:K:16:ALA:N	19:K:46:ALA:HA	2.23	0.54
29:U:42:LYS:CD	29:U:60:LYS:CG	2.86	0.54
33:Y:3:THR:O	33:Y:6:ILE:HG23	2.08	0.54
34:Z:17:SER:N	34:Z:21:VAL:HG23	2.23	0.54
4:3:16:THR:C	4:3:18:LYS:H	2.16	0.54
9:A:78:A:H2'	9:A:79:G:O4'	2.07	0.54
10:B:41:C:H2'	10:B:42:A:C8	2.42	0.54
10:B:272:A:N1	10:B:366:C:C2	2.76	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:273:G:C6	10:B:274:C:N4	2.76	0.54
10:B:313:G:C2	10:B:314:C:N1	2.76	0.54
10:B:396:G:H5'	34:Z:9:TYR:HB2	1.89	0.54
10:B:598:U:H2'	10:B:599:A:C8	2.42	0.54
10:B:969:G:H2'	10:B:970:U:H6	1.73	0.54
10:B:1045:C:H3'	10:B:1046:A:C5'	2.38	0.54
10:B:1084:A:H2'	10:B:1085:A:H5'	1.90	0.54
10:B:1098:A:H2'	10:B:1099:G:C5'	2.38	0.54
10:B:1101:U:C2'	10:B:1102:C:H5'	2.37	0.54
10:B:1106:G:H8	10:B:1106:G:O5'	1.91	0.54
10:B:1256:G:H21	13:E:77:ILE:HG23	1.73	0.54
10:B:1316:U:O2'	10:B:1317:G:H5'	2.08	0.54
10:B:1993:U:H4'	12:D:134:HIS:CE1	2.41	0.54
10:B:2066:C:O2'	10:B:2067:G:H5'	2.07	0.54
10:B:2206:C:O2'	10:B:2207:C:H5'	2.07	0.54
10:B:2484:G:O2'	10:B:2485:G:H5'	2.08	0.54
10:B:2893:A:H5''	10:B:2894:G:H5'	1.89	0.54
12:D:35:THR:HB	12:D:48:ILE:HB	1.88	0.54
13:E:123:LYS:HB3	13:E:126:VAL:HG23	1.90	0.54
15:G:86:LEU:HD12	15:G:161:VAL:HG12	1.88	0.54
18:J:42:ALA:HB1	25:Q:67:ALA:HB2	1.89	0.54
19:K:108:ARG:HD2	19:K:113:MET:CE	2.37	0.54
21:M:72:PRO:HB3	21:M:88:ASN:OD1	2.08	0.54
26:R:48:LYS:HG3	26:R:49:ILE:CD1	2.37	0.54
29:U:100:GLU:O	29:U:102:ILE:HG13	2.08	0.54
2:1:51:ALA:C	2:1:52:LYS:HD2	2.33	0.54
10:B:276:U:H2'	10:B:276:U:O2	2.07	0.54
10:B:278:A:N1	10:B:361:G:C4	2.76	0.54
10:B:540:C:O2'	10:B:541:A:H5'	2.08	0.54
10:B:557:C:O2'	18:J:114:LEU:HD13	2.08	0.54
10:B:1090:A:C6	10:B:1102:C:N3	2.75	0.54
10:B:1125:G:H3'	10:B:1126:A:H5''	1.88	0.54
10:B:1476:U:P	10:B:1514:G:H1	2.31	0.54
10:B:1579:A:H2'	10:B:1580:A:C8	2.43	0.54
10:B:1771:C:H2'	10:B:1772:A:H8	1.73	0.54
10:B:1771:C:H2'	10:B:1772:A:C8	2.42	0.54
10:B:1939:U:H5'	10:B:1939:U:H6	1.72	0.54
10:B:2471:A:O2'	10:B:2472:G:C8	2.55	0.54
10:B:2785:C:H2'	10:B:2786:U:C6	2.42	0.54
12:D:15:PHE:HB3	12:D:18:ASP:HB2	1.89	0.54
13:E:9:GLN:CD	13:E:120:VAL:HG13	2.33	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:E:52:VAL:HG22	13:E:53:THR:H	1.72	0.54
14:F:59:ILE:HD13	14:F:59:ILE:O	2.08	0.54
16:H:134:VAL:HG13	16:H:135:HIS:N	2.21	0.54
21:M:18:ARG:HB3	21:M:40:ARG:HH22	1.73	0.54
27:S:33:LEU:HB3	27:S:37:THR:HB	1.90	0.54
33:Y:35:VAL:CG1	33:Y:37:ARG:HH21	2.21	0.54
34:Z:29:GLY:HA3	34:Z:48:GLN:OE1	2.07	0.54
4:3:12:ARG:HB2	4:3:12:ARG:CZ	2.38	0.53
10:B:131:A:H2'	10:B:132:G:H8	1.73	0.53
10:B:172:A:H2'	10:B:173:A:H8	1.70	0.53
10:B:291:G:C2	10:B:350:G:C5	2.94	0.53
10:B:299:A:C8	10:B:322:A:C2	2.96	0.53
10:B:301:G:C1'	10:B:302:C:C6	2.92	0.53
10:B:311:A:H62	10:B:328:U:H2'	1.72	0.53
10:B:753:A:H2'	10:B:754:U:H6	1.72	0.53
10:B:926:G:H2'	10:B:927:A:H8	1.73	0.53
10:B:995:C:N4	18:J:2:LYS:HB3	2.22	0.53
10:B:1040:A:H2	10:B:1115:G:N1	1.91	0.53
10:B:1488:C:O2'	10:B:1489:C:H5'	2.08	0.53
10:B:1550:C:H2'	10:B:1550:C:O2	2.09	0.53
10:B:1742:U:H2'	10:B:1743:G:C8	2.42	0.53
10:B:1821:A:H2'	10:B:1822:C:C6	2.43	0.53
10:B:2669:G:H2'	10:B:2670:A:C8	2.43	0.53
10:B:2784:U:H4'	12:D:41:ALA:O	2.08	0.53
11:C:224:MET:HB3	11:C:233:GLY:H	1.72	0.53
12:D:170:VAL:CG1	12:D:171:THR:H	2.09	0.53
12:D:175:LEU:HD22	12:D:189:VAL:HG12	1.90	0.53
13:E:132:LYS:HB2	13:E:132:LYS:NZ	2.23	0.53
17:I:27:LEU:HB2	17:I:32:VAL:HG21	1.91	0.53
17:I:102:ARG:HD3	17:I:141:ASP:OD2	2.08	0.53
24:P:18:SER:HB2	24:P:87:ARG:NE	2.22	0.53
24:P:54:LEU:O	24:P:56:SER:N	2.41	0.53
28:T:84:TYR:O	28:T:85:VAL:HG22	2.09	0.53
30:V:89:ILE:HD12	30:V:89:ILE:O	2.08	0.53
10:B:131:A:H2'	10:B:132:G:C8	2.44	0.53
10:B:230:G:H2'	10:B:231:A:H8	1.72	0.53
10:B:271:G:C8	10:B:367:G:C2	2.95	0.53
10:B:311:A:C5	10:B:332:A:N7	2.76	0.53
10:B:315:G:C2	10:B:316:C:C2	2.96	0.53
10:B:363:G:H2'	10:B:364:C:C6	2.43	0.53
10:B:529:A:OP2	18:J:113:PRO:HD3	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:538:A:O2'	10:B:539:G:H5'	2.08	0.53
10:B:663:G:OP1	20:L:27:LEU:HD21	2.07	0.53
10:B:1061:U:C6	17:I:9:LYS:HD2	2.42	0.53
10:B:1091:G:H8	10:B:1091:G:O5'	1.91	0.53
10:B:1535:A:H3'	10:B:1536:C:C5	2.43	0.53
11:C:68:ARG:HD2	11:C:127:ASN:ND2	2.23	0.53
11:C:212:TRP:CZ3	11:C:217:PRO:HD3	2.43	0.53
11:C:247:TRP:O	11:C:247:TRP:HD1	1.92	0.53
12:D:120:GLY:H	12:D:123:LYS:CG	2.16	0.53
13:E:50:ALA:O	13:E:74:LYS:HD2	2.08	0.53
14:F:63:LYS:HE2	14:F:64:PRO:CD	2.38	0.53
15:G:137:LYS:HA	15:G:140:ILE:CG1	2.38	0.53
17:I:79:LEU:HD11	17:I:131:THR:OG1	2.08	0.53
21:M:82:MET:HB2	21:M:84:LYS:CE	2.38	0.53
24:P:52:ARG:HH11	24:P:54:LEU:CB	2.19	0.53
34:Z:35:ASP:C	34:Z:42:PRO:HB3	2.32	0.53
10:B:328:U:O2'	29:U:65:GLN:CG	2.55	0.53
10:B:366:C:H2'	10:B:366:C:O2	2.09	0.53
10:B:633:A:OP1	20:L:69:ARG:HB2	2.07	0.53
10:B:809:G:O6	20:L:39:LYS:HE3	2.09	0.53
10:B:950:G:H2'	10:B:951:C:C6	2.43	0.53
10:B:2097:A:H2'	10:B:2098:U:C6	2.43	0.53
10:B:2678:C:H2'	10:B:2679:A:H8	1.73	0.53
10:B:2787:C:O2'	10:B:2788:C:H5'	2.08	0.53
11:C:209:ALA:HA	11:C:213:ARG:CZ	2.38	0.53
17:I:18:ASN:N	17:I:19:PRO:HD2	2.23	0.53
21:M:96:ILE:HD13	21:M:97:GLN:CB	2.39	0.53
24:P:16:VAL:O	24:P:17:PRO:O	2.26	0.53
29:U:42:LYS:HD2	29:U:60:LYS:HB2	1.90	0.53
31:W:28:GLU:C	31:W:30:VAL:H	2.16	0.53
1:0:52:LYS:HE2	22:N:118:ARG:HD2	1.87	0.53
4:3:13:PHE:O	4:3:14:LYS:HG2	2.09	0.53
10:B:184:C:H2'	10:B:185:G:C8	2.43	0.53
10:B:278:A:C2	10:B:361:G:C2	2.96	0.53
10:B:297:G:C5	10:B:298:G:C6	2.96	0.53
10:B:298:G:P	29:U:83:GLY:N	2.81	0.53
10:B:319:G:C4	10:B:333:G:C2	2.97	0.53
10:B:320:A:C5'	13:E:130:LYS:NZ	2.71	0.53
10:B:1097:U:H2'	10:B:1098:A:C5'	2.18	0.53
10:B:1123:C:H2'	10:B:1124:G:H8	1.73	0.53
10:B:1259:G:H2'	10:B:1260:A:H8	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1549:A:C2	10:B:1550:C:C4	2.96	0.53
10:B:1945:G:H2'	10:B:1946:U:C6	2.44	0.53
10:B:2273:A:H2'	10:B:2274:A:C8	2.43	0.53
10:B:2881:U:C1'	22:N:120:GLU:CD	2.79	0.53
11:C:10:PRO:HD2	11:C:23:LEU:HD11	1.91	0.53
11:C:114:GLN:HB2	11:C:124:LYS:NZ	2.23	0.53
15:G:60:GLY:O	15:G:63:GLN:HG2	2.08	0.53
18:J:119:PHE:HE1	18:J:121:LYS:HD3	1.72	0.53
19:K:107:LEU:C	19:K:109:SER:H	2.15	0.53
25:Q:69:ARG:HG3	25:Q:70:GLN:N	2.23	0.53
26:R:66:HIS:HA	26:R:98:ILE:HD13	1.89	0.53
8:7:110:C:H2'	8:7:111:G:C8	2.43	0.53
10:B:18:U:H2'	10:B:19:A:C8	2.43	0.53
10:B:146:A:H2'	10:B:147:C:H6	1.72	0.53
10:B:299:A:P	10:B:299:A:C8	3.00	0.53
10:B:664:G:H2'	10:B:665:U:C6	2.42	0.53
10:B:823:C:O2'	10:B:824:U:H5'	2.09	0.53
10:B:1517:G:C2'	10:B:1518:C:C5'	2.86	0.53
10:B:1525:A:C6	10:B:1526:C:N3	2.76	0.53
10:B:1810:A:H2'	10:B:1811:G:O4'	2.08	0.53
10:B:2240:U:O2'	10:B:2241:A:H5'	2.07	0.53
10:B:2526:G:H2'	10:B:2527:C:C6	2.44	0.53
10:B:2771:C:H2'	10:B:2772:C:C6	2.43	0.53
10:B:2820:A:O5'	22:N:4:ARG:HA	2.08	0.53
14:F:33:ILE:HD11	14:F:90:LEU:HB2	1.89	0.53
15:G:27:GLY:HA3	15:G:78:VAL:HB	1.90	0.53
18:J:34:ARG:HB3	18:J:39:LYS:HD2	1.89	0.53
18:J:136:GLN:N	18:J:137:PRO:CD	2.71	0.53
19:K:102:PRO:HB3	19:K:121:GLU:OE1	2.09	0.53
24:P:8:GLU:HA	24:P:11:GLN:CG	2.37	0.53
24:P:25:VAL:HG11	24:P:86:LYS:O	2.09	0.53
25:Q:92:LYS:O	25:Q:94:LEU:N	2.42	0.53
2:1:8:ILE:HG23	2:1:27:ARG:HE	1.72	0.53
10:B:301:G:H1'	10:B:302:C:N1	2.24	0.53
10:B:313:G:H2'	10:B:314:C:H6	1.71	0.53
10:B:319:G:N3	10:B:320:A:C4	2.76	0.53
10:B:322:A:C4	10:B:340:A:C2	2.96	0.53
10:B:699:A:H2'	10:B:700:G:O4'	2.08	0.53
10:B:934:U:H2'	10:B:935:C:H6	1.71	0.53
10:B:1442:U:H2'	10:B:1443:U:H6	1.71	0.53
10:B:1789:A:OP1	11:C:219:VAL:HG12	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1904:G:H1'	10:B:1927:A:N1	2.24	0.53
10:B:2186:G:H2'	10:B:2187:U:O4'	2.09	0.53
10:B:2379:G:H2'	10:B:2380:C:C6	2.43	0.53
10:B:2590:A:H2'	10:B:2591:C:C6	2.43	0.53
10:B:2862:G:H2'	10:B:2863:C:C6	2.43	0.53
13:E:149:ILE:CG1	13:E:186:VAL:HG13	2.39	0.53
16:H:6:LEU:HA	16:H:15:LEU:CA	2.38	0.53
20:L:117:THR:CG2	20:L:120:VAL:HB	2.36	0.53
22:N:35:LYS:HA	22:N:111:ALA:O	2.09	0.53
23:O:87:ILE:HG13	23:O:88:LYS:H	1.73	0.53
1:O:2:VAL:HG22	1:O:3:GLN:N	2.23	0.53
10:B:281:C:H2'	10:B:281:C:O2	2.09	0.53
10:B:291:G:H1'	10:B:350:G:N2	2.23	0.53
10:B:340:A:C2'	10:B:341:C:C5'	2.86	0.53
10:B:404:A:H4'	10:B:405:U:H5'	1.89	0.53
10:B:498:G:O2'	10:B:499:U:H5'	2.07	0.53
10:B:857:G:O2'	10:B:858:G:H5'	2.09	0.53
10:B:1131:G:C1'	18:J:85:LYS:HZ2	2.21	0.53
10:B:1254:A:H2'	13:E:69:ARG:HH12	1.73	0.53
10:B:1518:C:C2	10:B:1519:G:C8	2.96	0.53
10:B:1658:C:OP1	12:D:136:ASN:CA	2.50	0.53
12:D:5:VAL:HB	12:D:27:ILE:O	2.09	0.53
12:D:17:GLU:CG	24:P:80:VAL:HG21	2.38	0.53
12:D:68:PHE:O	12:D:70:LYS:N	2.40	0.53
16:H:1:MET:C	16:H:21:VAL:HG12	2.34	0.53
19:K:59:LYS:HD2	19:K:92:GLU:OE2	2.08	0.53
21:M:135:VAL:HA	30:V:76:ASP:OD1	2.09	0.53
26:R:43:ASN:C	26:R:45:GLU:N	2.67	0.53
26:R:53:PHE:HB3	26:R:55:ASP:CA	2.37	0.53
27:S:32:ALA:O	27:S:33:LEU:HD13	2.08	0.53
4:3:24:LYS:HA	4:3:45:PRO:CB	2.34	0.53
9:A:42:C:H6	14:F:65:LEU:HD13	1.73	0.53
10:B:26:G:H1'	10:B:515:A:H61	1.74	0.53
10:B:136:G:H2'	10:B:137:U:C6	2.44	0.53
10:B:144:A:H2'	10:B:145:C:C6	2.43	0.53
10:B:161:A:C3'	10:B:162:U:H5'	2.34	0.53
10:B:326:G:H2'	10:B:327:G:C5'	2.36	0.53
10:B:672:C:O2'	10:B:673:C:H5'	2.09	0.53
10:B:709:U:H2'	10:B:710:U:C6	2.44	0.53
10:B:1079:C:C4	10:B:1088:A:C2	2.96	0.53
10:B:1192:G:C2'	10:B:1193:G:H5'	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1395:A:H4'	10:B:1397:U:C5	2.44	0.53
10:B:1444:G:H2'	10:B:1445:G:H8	1.74	0.53
10:B:1464:G:H2'	10:B:1465:G:C8	2.43	0.53
10:B:1509:A:H5'	10:B:1510:G:H5'	1.89	0.53
10:B:1979:U:O2'	10:B:1980:G:H5'	2.09	0.53
10:B:2539:C:O2'	10:B:2540:C:H5'	2.09	0.53
10:B:2620:C:O4'	12:D:161:MET:HG3	2.09	0.53
11:C:12:ARG:HB2	11:C:18:VAL:HG12	1.91	0.53
15:G:139:VAL:O	15:G:143:VAL:HG23	2.08	0.53
16:H:66:ASN:HB2	16:H:138:VAL:HG11	1.91	0.53
17:I:23:VAL:HG23	17:I:24:GLY:N	2.23	0.53
20:L:14:LYS:HA	20:L:14:LYS:NZ	2.24	0.53
22:N:21:PHE:CE2	22:N:43:GLU:HG2	2.44	0.53
25:Q:39:ILE:HG23	26:R:80:ARG:HD3	1.91	0.53
26:R:20:VAL:HG13	26:R:97:LYS:HZ2	1.73	0.53
26:R:85:LYS:C	26:R:87:GLN:N	2.66	0.53
27:S:29:VAL:C	27:S:31:GLN:H	2.15	0.53
32:X:8:GLU:O	32:X:10:SER:N	2.42	0.53
10:B:6:A:H2'	10:B:7:G:H8	1.74	0.53
10:B:76:C:H5'	32:X:48:ARG:NH1	2.23	0.53
10:B:142:A:N3	28:T:2:ILE:HG23	2.23	0.53
10:B:282:A:C6	10:B:359:G:N1	2.77	0.53
10:B:299:A:C1'	10:B:322:A:C6	2.90	0.53
10:B:318:C:O2	10:B:318:C:H2'	2.09	0.53
10:B:337:C:OP2	29:U:81:ARG:NH2	2.40	0.53
10:B:794:A:H2'	10:B:795:C:H6	1.74	0.53
10:B:1441:G:H2'	10:B:1442:U:H6	1.73	0.53
10:B:1739:A:H2'	10:B:1740:G:C8	2.44	0.53
10:B:1842:G:H2'	10:B:1843:C:H6	1.74	0.53
10:B:2195:U:H2'	10:B:2196:C:C6	2.44	0.53
10:B:2743:U:H2'	10:B:2744:G:O4'	2.09	0.53
10:B:2785:C:H2'	10:B:2786:U:H6	1.73	0.53
11:C:44:ASN:HA	11:C:49:THR:O	2.09	0.53
13:E:3:LEU:HB2	13:E:12:LEU:HD13	1.91	0.53
13:E:44:ARG:HG2	13:E:45:ALA:H	1.73	0.53
13:E:104:ALA:O	13:E:105:LEU:HD23	2.09	0.53
16:H:82:SER:H	16:H:146:VAL:CG1	2.10	0.53
19:K:25:LEU:C	19:K:27:GLY:H	2.16	0.53
20:L:90:VAL:HG21	20:L:121:THR:H	1.74	0.53
24:P:38:ARG:HH11	24:P:39:LEU:N	2.06	0.53
24:P:69:VAL:HG12	24:P:70:GLU:N	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:R:64:VAL:HB	26:R:98:ILE:HD12	1.90	0.53
28:T:16:VAL:HG13	28:T:16:VAL:O	2.08	0.53
28:T:24:MET:CE	28:T:29:THR:H	2.20	0.53
5:4:11:CYS:SG	5:4:12:ARG:N	2.75	0.53
9:A:91:C:O2'	9:A:92:C:H5'	2.09	0.53
10:B:37:C:C2'	13:E:46:GLN:HB3	2.38	0.53
10:B:55:G:H2'	10:B:56:A:H8	1.73	0.53
10:B:284:U:O2	10:B:284:U:H2'	2.07	0.53
10:B:321:U:P	13:E:130:LYS:HA	2.49	0.53
10:B:352:A:C2	10:B:353:C:N1	2.77	0.53
10:B:747:U:H4'	27:S:89:ALA:HB2	1.91	0.53
10:B:943:A:OP1	20:L:42:SER:HB3	2.09	0.53
10:B:988:A:H3'	33:Y:12:ALA:HB2	1.89	0.53
10:B:1450:G:N2	10:B:1452:G:N1	2.55	0.53
10:B:1474:U:H2'	10:B:1475:G:H5'	1.90	0.53
10:B:2027:G:O2'	10:B:2028:U:H5'	2.09	0.53
10:B:2298:A:H2'	10:B:2299:U:O4'	2.09	0.53
10:B:2333:A:O2'	23:O:7:ARG:HD3	2.09	0.53
10:B:2471:A:HO2'	10:B:2472:G:H8	1.52	0.53
11:C:53:ILE:HD13	11:C:218:THR:CG2	2.39	0.53
11:C:68:ARG:HD3	11:C:103:ILE:HD12	1.91	0.53
11:C:160:TYR:CD1	11:C:193:GLU:HG2	2.44	0.53
13:E:24:ASN:O	13:E:24:ASN:CG	2.52	0.53
15:G:126:THR:CG2	15:G:128:THR:HG23	2.39	0.53
18:J:7:LYS:HD3	18:J:48:VAL:CB	2.39	0.53
21:M:34:LYS:HA	21:M:99:GLY:HA3	1.92	0.53
23:O:54:VAL:HG21	23:O:78:VAL:HG11	1.91	0.53
26:R:53:PHE:CB	26:R:55:ASP:HB2	2.39	0.53
27:S:6:LYS:HA	27:S:104:THR:HA	1.91	0.53
28:T:66:LYS:N	28:T:77:ARG:HA	2.24	0.53
4:3:26:ALA:HB3	4:3:29:ARG:CZ	2.39	0.52
10:B:80:G:C1'	10:B:346:A:H62	2.22	0.52
10:B:182:A:H2'	10:B:183:C:H6	1.74	0.52
10:B:236:C:O2'	10:B:237:C:H5'	2.09	0.52
10:B:327:G:C6	10:B:336:C:N4	2.76	0.52
10:B:343:C:O2	10:B:343:C:H2'	2.09	0.52
10:B:587:C:H4'	10:B:588:U:C6	2.44	0.52
10:B:705:A:N6	10:B:726:G:O2'	2.41	0.52
10:B:1118:C:C2'	10:B:1119:U:H5'	2.39	0.52
10:B:1444:G:N1	10:B:1548:A:C6	2.77	0.52
10:B:1512:C:H2'	10:B:1513:U:H5'	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1513:U:H3'	10:B:1514:G:C5'	2.32	0.52
10:B:2104:C:H2'	10:B:2105:U:C5	2.44	0.52
10:B:2732:G:H3'	10:B:2733:A:H5'	1.92	0.52
10:B:2740:A:H2'	10:B:2741:A:C8	2.44	0.52
11:C:171:VAL:HB	11:C:182:LYS:CB	2.39	0.52
11:C:172:THR:HG22	11:C:173:LEU:H	1.74	0.52
31:W:42:THR:CB	31:W:66:VAL:H	2.22	0.52
32:X:30:MET:CG	32:X:31:GLN:H	2.11	0.52
34:Z:40:CYS:O	34:Z:41:HIS:HB3	2.08	0.52
1:O:16:ARG:HA	1:O:19:ASP:OD2	2.09	0.52
2:1:46:VAL:C	2:1:47:ILE:HG12	2.34	0.52
4:3:7:ARG:NE	4:3:11:LYS:HZ3	2.03	0.52
10:B:297:G:N7	10:B:298:G:C5	2.77	0.52
10:B:566:U:O2'	10:B:567:U:H5'	2.08	0.52
10:B:691:C:H4'	11:C:42:ARG:NE	2.24	0.52
10:B:718:A:H3'	10:B:719:C:C6	2.45	0.52
10:B:740:C:H5''	10:B:1784:A:OP1	2.09	0.52
10:B:991:C:H2'	10:B:992:C:H6	1.74	0.52
10:B:1092:C:H2'	10:B:1093:G:H8	1.74	0.52
10:B:1429:G:O2'	10:B:1430:G:H5'	2.09	0.52
10:B:2181:U:H2'	10:B:2182:U:O4'	2.10	0.52
10:B:2344:U:H4'	10:B:2345:G:OP1	2.09	0.52
10:B:2586:U:H2'	10:B:2587:A:C8	2.44	0.52
10:B:2626:C:O2'	10:B:2627:G:H5'	2.08	0.52
10:B:2834:G:H1'	10:B:2883:A:H61	1.74	0.52
12:D:26:VAL:HG23	12:D:187:LEU:HB3	1.90	0.52
14:F:78:ILE:HG23	14:F:82:TYR:HD2	1.74	0.52
14:F:102:LEU:C	14:F:107:VAL:HG23	2.35	0.52
15:G:42:VAL:HG12	15:G:51:PHE:CD2	2.44	0.52
17:I:83:ALA:N	17:I:100:ILE:HD11	2.24	0.52
18:J:13:ARG:HH11	18:J:13:ARG:HG3	1.73	0.52
18:J:99:ARG:O	18:J:100:VAL:HB	2.08	0.52
19:K:84:CYS:O	19:K:85:VAL:HB	2.10	0.52
24:P:25:VAL:HG13	24:P:88:ARG:N	2.09	0.52
31:W:42:THR:HG21	31:W:66:VAL:HG12	1.90	0.52
6:5:431:LYS:NZ	6:5:432:LYS:HE2	2.24	0.52
10:B:160:A:H2'	10:B:161:A:C8	2.45	0.52
10:B:854:C:O2'	10:B:855:G:H5'	2.09	0.52
10:B:877:A:H2	10:B:900:A:N7	2.08	0.52
10:B:1028:A:N6	10:B:1125:G:H2'	2.24	0.52
10:B:1526:C:C4	10:B:1527:G:N7	2.77	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1528:A:N6	10:B:1543:G:HO2'	2.05	0.52
10:B:2682:A:N3	12:D:22:ILE:HD11	2.24	0.52
11:C:139:THR:CG2	11:C:193:GLU:HB3	2.40	0.52
11:C:222:THR:C	11:C:224:MET:N	2.67	0.52
12:D:138:LEU:O	12:D:139:SER:C	2.53	0.52
12:D:170:VAL:HG11	12:D:194:PRO:CG	2.39	0.52
13:E:138:LEU:HD21	13:E:167:VAL:HG21	1.91	0.52
15:G:126:THR:HG23	15:G:128:THR:HG23	1.91	0.52
18:J:19:ASP:OD1	18:J:20:ALA:N	2.42	0.52
18:J:25:LEU:HD12	18:J:62:VAL:HG12	1.92	0.52
23:O:8:ILE:C	23:O:10:ARG:H	2.18	0.52
26:R:37:GLU:HG2	26:R:62:GLU:N	2.16	0.52
26:R:47:VAL:C	26:R:49:ILE:N	2.67	0.52
27:S:42:LYS:O	27:S:46:LEU:HG	2.09	0.52
30:V:63:ILE:HD11	30:V:72:VAL:HG21	1.91	0.52
31:W:44:PHE:CD1	31:W:44:PHE:C	2.88	0.52
33:Y:37:ARG:HG3	33:Y:37:ARG:HH11	1.75	0.52
2:1:33:LEU:O	2:1:34:GLU:HG2	2.10	0.52
3:2:34:ARG:HH11	3:2:34:ARG:HG3	1.74	0.52
4:3:4:LYS:NZ	4:3:59:ALA:H	2.07	0.52
8:7:104:G:H1	8:7:171:C:N4	2.05	0.52
10:B:43:G:H2'	10:B:44:A:O4'	2.10	0.52
10:B:282:A:N6	10:B:283:G:O6	2.42	0.52
10:B:283:G:N3	10:B:284:U:H1'	2.25	0.52
10:B:445:C:O2'	10:B:446:G:H5'	2.09	0.52
10:B:812:C:C5'	20:L:32:GLY:HA2	2.39	0.52
10:B:1548:A:C2	10:B:1549:A:C5	2.97	0.52
10:B:1799:G:C5	11:C:175:LEU:HD13	2.44	0.52
10:B:2074:U:H2'	10:B:2075:U:C6	2.44	0.52
10:B:2502:G:H5'	10:B:2503:A:C5'	2.33	0.52
16:H:83:LYS:HB2	16:H:92:GLY:H	1.74	0.52
22:N:22:ARG:NH1	22:N:69:ARG:HA	2.24	0.52
23:O:2:ASP:HA	23:O:5:SER:O	2.10	0.52
23:O:19:GLN:N	31:W:76:ARG:HH12	2.01	0.52
23:O:58:ILE:HG13	23:O:59:ALA:H	1.74	0.52
24:P:92:ARG:NH2	24:P:110:LYS:HE2	2.24	0.52
25:Q:68:ALA:HB2	25:Q:105:PHE:HZ	1.75	0.52
25:Q:91:ARG:HG2	26:R:10:LYS:CE	2.40	0.52
26:R:66:HIS:CA	26:R:98:ILE:HD13	2.38	0.52
26:R:78:ARG:HG2	26:R:88:GLY:H	1.74	0.52
27:S:7:HIS:CD2	27:S:8:ARG:H	2.27	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:S:34:ASP:N	27:S:37:THR:HG22	2.23	0.52
29:U:10:VAL:HG21	29:U:25:LYS:HZ2	1.74	0.52
2:1:44:GLN:OE1	2:1:46:VAL:HB	2.09	0.52
4:3:4:LYS:HE3	4:3:58:ILE:HB	1.90	0.52
6:5:421:ASP:OD2	10:B:490:C:N4	2.41	0.52
10:B:285:G:H2'	10:B:286:U:C5'	2.35	0.52
10:B:289:G:H2'	10:B:290:U:H5'	1.92	0.52
10:B:326:G:C2	10:B:327:G:C8	2.97	0.52
10:B:334:C:O2	10:B:334:C:H2'	2.09	0.52
10:B:359:G:C5	10:B:360:U:C5	2.98	0.52
10:B:365:U:H2'	10:B:366:C:C6	2.44	0.52
10:B:365:U:N3	10:B:366:C:C4	2.78	0.52
10:B:811:U:O2	10:B:1250:G:H3'	2.10	0.52
10:B:975:A:H1'	10:B:990:A:C2	2.45	0.52
10:B:1132:U:H6	18:J:85:LYS:HZ1	1.55	0.52
10:B:1187:G:H5''	26:R:84:ARG:CD	2.39	0.52
10:B:1346:G:O2'	10:B:1347:A:H5'	2.08	0.52
10:B:1553:A:C5	10:B:1555:G:C4	2.98	0.52
10:B:1750:G:H2'	10:B:1751:U:C6	2.45	0.52
10:B:2393:U:H5'	20:L:62:PRO:CD	2.39	0.52
10:B:2511:U:H4'	12:D:128:ARG:CZ	2.39	0.52
12:D:150:GLN:C	12:D:151:THR:HG22	2.34	0.52
13:E:158:PHE:C	13:E:160:ALA:H	2.17	0.52
18:J:58:ASN:C	18:J:60:ASP:H	2.18	0.52
20:L:79:LEU:CA	20:L:113:ALA:HB3	2.31	0.52
21:M:42:THR:HA	21:M:92:TRP:HD1	1.73	0.52
23:O:1:MET:HG3	23:O:3:LYS:HE3	1.89	0.52
25:Q:111:LYS:HB2	26:R:52:PRO:HB3	1.91	0.52
28:T:88:LYS:HG2	28:T:89:GLU:N	2.23	0.52
29:U:2:ALA:C	29:U:4:ILE:H	2.16	0.52
2:1:31:GLU:CG	2:1:32:LYS:H	2.20	0.52
4:3:29:ARG:HA	4:3:33:THR:HG23	1.91	0.52
10:B:291:G:C2	10:B:350:G:C8	2.97	0.52
10:B:346:A:N3	10:B:347:A:H8	2.01	0.52
10:B:362:A:C6	10:B:363:G:N7	2.78	0.52
10:B:365:U:C4	10:B:366:C:N4	2.78	0.52
10:B:494:G:O2'	10:B:495:G:H5'	2.09	0.52
10:B:950:G:H2'	10:B:951:C:H6	1.74	0.52
10:B:968:C:H2'	10:B:969:G:C8	2.42	0.52
10:B:1274:A:N3	10:B:1297:C:H1'	2.25	0.52
10:B:1444:G:H2'	10:B:1445:G:C8	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1528:A:H3'	10:B:1529:G:C8	2.40	0.52
10:B:1573:G:H2'	10:B:1574:C:H5'	1.91	0.52
10:B:1601:G:OP1	28:T:62:VAL:HG21	2.09	0.52
10:B:1736:U:H2'	10:B:1737:G:O4'	2.09	0.52
10:B:2147:A:H5'	10:B:2148:G:C5'	2.39	0.52
10:B:2210:U:N3	10:B:2212:A:N7	2.58	0.52
13:E:6:LYS:HB2	13:E:12:LEU:HD11	1.92	0.52
13:E:43:THR:O	13:E:43:THR:HG22	2.08	0.52
13:E:88:ARG:NH1	13:E:88:ARG:HB2	2.24	0.52
16:H:57:LYS:HE3	16:H:61:VAL:HG23	1.92	0.52
20:L:29:LYS:NZ	20:L:31:GLY:HA3	2.23	0.52
21:M:105:MET:HE3	21:M:107:GLY:HA3	1.92	0.52
24:P:32:VAL:HB	24:P:80:VAL:HG22	1.92	0.52
26:R:42:ALA:HB3	26:R:45:GLU:HB2	1.92	0.52
30:V:6:ALA:HB1	30:V:41:GLU:O	2.10	0.52
31:W:35:ILE:HG23	31:W:36:ILE:N	2.14	0.52
34:Z:30:HIS:HE1	34:Z:49:ARG:HB2	1.74	0.52
10:B:15:G:O2'	10:B:16:C:H5'	2.10	0.52
10:B:83:A:N7	29:U:90:LYS:CB	2.72	0.52
10:B:100:U:OP1	10:B:100:U:H2'	2.09	0.52
10:B:173:A:H2'	10:B:174:U:H6	1.75	0.52
10:B:287:G:C6	10:B:288:U:C4	2.98	0.52
10:B:299:A:N9	10:B:322:A:C6	2.77	0.52
10:B:310:A:C4	10:B:330:A:N1	2.78	0.52
10:B:311:A:H61	10:B:328:U:H2'	1.70	0.52
10:B:348:A:C5	10:B:349:U:C4	2.98	0.52
10:B:1092:C:C2'	10:B:1093:G:H5'	2.40	0.52
10:B:1096:A:H8	10:B:1096:A:O5'	1.93	0.52
10:B:1513:U:C3'	10:B:1514:G:C5'	2.87	0.52
10:B:1521:G:H8	10:B:1522:A:C8	2.21	0.52
11:C:141:HIS:CG	11:C:190:THR:HB	2.44	0.52
12:D:5:VAL:HG21	12:D:28:GLU:HA	1.92	0.52
12:D:67:HIS:O	12:D:71:ALA:HB3	2.10	0.52
12:D:142:VAL:C	12:D:144:GLY:H	2.13	0.52
13:E:44:ARG:HD3	13:E:44:ARG:N	2.24	0.52
17:I:116:MET:CE	17:I:127:SER:HB2	2.40	0.52
20:L:117:THR:HG21	20:L:120:VAL:CG1	2.38	0.52
21:M:105:MET:HE2	21:M:105:MET:O	2.09	0.52
23:O:73:ALA:HA	23:O:109:ALA:HB2	1.90	0.52
24:P:24:THR:CG2	24:P:111:GLU:HG2	2.33	0.52
24:P:108:ARG:H	24:P:108:ARG:CD	2.14	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:U:38:ILE:CB	29:U:62:ALA:HB3	2.40	0.52
10:B:203:A:H2'	10:B:204:A:C8	2.44	0.52
10:B:285:G:C2	10:B:286:U:C6	2.97	0.52
10:B:307:G:H5''	10:B:308:G:OP2	2.10	0.52
10:B:554:U:H2'	10:B:555:G:O4'	2.09	0.52
10:B:1109:C:O2	10:B:1109:C:H2'	2.09	0.52
10:B:1453:A:H61	22:N:74:GLU:HG2	1.73	0.52
10:B:1528:A:N1	10:B:1544:A:N9	2.58	0.52
10:B:2734:A:C2'	10:B:2735:G:H5'	2.39	0.52
12:D:8:LYS:HD2	24:P:5:LYS:NZ	2.24	0.52
12:D:13:ARG:HA	12:D:13:ARG:HH11	1.75	0.52
13:E:141:MET:CG	13:E:143:LEU:HB2	2.40	0.52
13:E:149:ILE:HG12	13:E:186:VAL:HG22	1.90	0.52
15:G:171:LYS:O	15:G:172:GLU:HG2	2.08	0.52
16:H:3:VAL:CG2	16:H:21:VAL:HG21	2.39	0.52
17:I:85:ILE:HD12	17:I:87:SER:O	2.10	0.52
20:L:92:LEU:HD21	20:L:96:LYS:HZ1	1.74	0.52
21:M:73:ILE:HG22	21:M:74:THR:N	2.24	0.52
21:M:96:ILE:O	21:M:97:GLN:HG3	2.10	0.52
24:P:52:ARG:CG	24:P:54:LEU:HB2	2.40	0.52
26:R:49:ILE:O	26:R:51:VAL:HG23	2.09	0.52
29:U:43:LYS:HZ1	29:U:44:HIS:HA	1.73	0.52
10:B:139:U:H5''	10:B:140:C:C5	2.45	0.52
10:B:156:A:H2'	10:B:157:C:C6	2.45	0.52
10:B:271:G:N1	10:B:366:C:C2'	2.73	0.52
10:B:273:G:C5	10:B:274:C:N4	2.78	0.52
10:B:278:A:C4	10:B:362:A:C4	2.98	0.52
10:B:301:G:C2	10:B:302:C:N3	2.78	0.52
10:B:321:U:OP2	13:E:130:LYS:CA	2.58	0.52
10:B:324:A:N6	10:B:325:G:C6	2.78	0.52
10:B:344:A:O5'	10:B:344:A:H8	1.93	0.52
10:B:362:A:N1	10:B:363:G:C8	2.78	0.52
10:B:520:G:H2'	10:B:521:U:C6	2.44	0.52
10:B:1063:G:H5''	17:I:76:ALA:H	1.74	0.52
10:B:1487:U:H2'	10:B:1488:C:H6	1.75	0.52
10:B:1521:G:C2'	10:B:1522:A:H8	2.23	0.52
10:B:1529:G:C2'	10:B:1530:G:H8	2.04	0.52
10:B:1688:U:O2	10:B:1700:A:H5'	2.09	0.52
10:B:1842:G:H2'	10:B:1843:C:C6	2.45	0.52
10:B:2305:U:H2'	10:B:2306:C:C6	2.45	0.52
10:B:2618:G:N2	12:D:155:VAL:HG21	2.22	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2848:G:O2'	24:P:96:LEU:HD22	2.10	0.52
11:C:66:PHE:O	11:C:68:ARG:HG2	2.10	0.52
12:D:1:MET:CE	12:D:84:LEU:HD13	2.39	0.52
15:G:25:ILE:O	15:G:25:ILE:HG23	2.10	0.52
22:N:96:ARG:O	22:N:113:ILE:HA	2.09	0.52
23:O:46:GLU:C	23:O:48:LEU:H	2.18	0.52
26:R:78:ARG:HB3	26:R:87:GLN:CA	2.29	0.52
27:S:90:LYS:N	27:S:90:LYS:HE3	2.25	0.52
30:V:77:VAL:CG2	30:V:79:ARG:HE	2.23	0.52
31:W:35:ILE:CG2	31:W:36:ILE:H	2.15	0.52
31:W:36:ILE:HG21	31:W:68:PHE:HD2	1.75	0.52
31:W:57:THR:O	31:W:58:LEU:HB3	2.09	0.52
32:X:22:LEU:O	32:X:23:ARG:C	2.53	0.52
34:Z:5:ILE:HD13	34:Z:47:LYS:HB3	1.92	0.52
34:Z:13:THR:HG23	34:Z:25:ARG:HB3	1.91	0.52
10:B:142:A:H8	10:B:142:A:OP2	1.93	0.52
10:B:297:G:H2'	10:B:298:G:O4'	2.09	0.52
10:B:346:A:N3	10:B:346:A:C5'	2.73	0.52
10:B:433:C:H2'	10:B:434:U:C6	2.45	0.52
10:B:575:A:O2'	10:B:576:U:H5'	2.10	0.52
10:B:1050:A:C5	10:B:2751:G:C6	2.98	0.52
10:B:1116:G:H2'	10:B:1117:C:H5'	1.91	0.52
10:B:1552:A:C5'	10:B:1552:A:N3	2.73	0.52
10:B:2188:U:H2'	10:B:2189:U:C6	2.44	0.52
10:B:2336:A:H61	31:W:69:GLU:HG3	1.74	0.52
10:B:2599:G:N7	11:C:234:GLY:HA2	2.25	0.52
11:C:131:MET:HE1	11:C:143:VAL:HG11	1.91	0.52
13:E:150:THR:HB	13:E:171:ASP:OD2	2.10	0.52
15:G:137:LYS:O	15:G:140:ILE:HG13	2.09	0.52
16:H:128:HIS:CB	16:H:144:VAL:HB	2.38	0.52
18:J:72:LYS:HB2	18:J:90:GLU:HB2	1.91	0.52
21:M:126:ILE:HG13	21:M:127:LYS:N	2.19	0.52
24:P:23:ASP:H	24:P:93:LYS:CE	2.22	0.52
25:Q:23:TYR:O	25:Q:24:TYR:HB2	2.09	0.52
32:X:14:LEU:HD21	32:X:57:LEU:HB2	1.90	0.52
6:5:423:MET:HE1	7:6:455:ALA:HA	1.92	0.51
9:A:42:C:C6	14:F:65:LEU:HD13	2.45	0.51
10:B:300:A:N3	10:B:319:G:C1'	2.73	0.51
10:B:316:C:H2'	10:B:316:C:O2	2.09	0.51
10:B:496:G:H2'	10:B:497:A:O4'	2.09	0.51
10:B:611:C:H2'	10:B:612:G:O4'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:615:U:C2	13:E:38:GLY:HA3	2.44	0.51
10:B:671:C:N4	20:L:39:LYS:HE3	2.25	0.51
10:B:1231:U:H2'	10:B:1232:G:H8	1.75	0.51
10:B:1292:G:H2'	10:B:1293:C:C6	2.45	0.51
10:B:1552:A:C2'	10:B:1553:A:C5'	2.88	0.51
10:B:1564:C:O2'	10:B:1565:C:H5'	2.10	0.51
10:B:1599:U:H2'	10:B:1600:C:C6	2.45	0.51
10:B:1681:G:N3	10:B:1762:A:H2'	2.25	0.51
10:B:1722:A:H61	10:B:1738:G:H1'	1.75	0.51
10:B:1785:A:H2'	10:B:1787:A:N7	2.24	0.51
10:B:1889:A:H2'	10:B:1890:A:C8	2.45	0.51
10:B:2307:G:H2'	10:B:2307:G:N3	2.25	0.51
10:B:2728:U:H2'	10:B:2729:G:H8	1.74	0.51
10:B:2811:G:OP1	12:D:61:THR:HB	2.09	0.51
11:C:119:VAL:HG22	11:C:130:PRO:HG2	1.92	0.51
12:D:83:ARG:HG2	12:D:83:ARG:HH11	1.76	0.51
13:E:53:THR:O	13:E:55:SER:N	2.41	0.51
14:F:106:ALA:HB3	14:F:136:ILE:HG23	1.92	0.51
14:F:107:VAL:HB	14:F:108:PRO:HD3	1.91	0.51
16:H:100:ALA:O	16:H:103:VAL:HG22	2.10	0.51
18:J:109:LEU:O	18:J:111:LYS:HG3	2.09	0.51
22:N:1:MET:HE3	22:N:3:HIS:N	2.19	0.51
23:O:43:ASN:HA	23:O:46:GLU:OE1	2.11	0.51
24:P:57:ALA:C	24:P:59:THR:H	2.18	0.51
24:P:61:ARG:NH2	24:P:75:THR:HB	2.26	0.51
24:P:77:SER:H	24:P:78:PRO:CD	2.23	0.51
27:S:8:ARG:NH1	27:S:80:PRO:HD2	2.24	0.51
34:Z:3:LYS:HG3	34:Z:3:LYS:O	2.09	0.51
2:1:34:GLU:O	2:1:35:LEU:HB3	2.09	0.51
3:2:19:ARG:NH2	10:B:125:A:OP2	2.44	0.51
4:3:41:ARG:CZ	4:3:42:HIS:H	2.22	0.51
6:5:425:ARG:CZ	10:B:490:C:H5	2.21	0.51
10:B:84:A:O5'	29:U:91:LYS:CE	2.57	0.51
10:B:185:G:H2'	10:B:186:G:O4'	2.10	0.51
10:B:307:G:C2'	10:B:330:A:N6	2.73	0.51
10:B:667:U:H2'	10:B:668:A:O4'	2.10	0.51
10:B:852:U:H2'	10:B:853:C:C6	2.45	0.51
10:B:1040:A:H2	10:B:1115:G:N2	2.08	0.51
10:B:1041:G:H5'	10:B:1042:G:OP1	2.10	0.51
10:B:1081:U:C2'	10:B:1082:U:H5'	2.40	0.51
10:B:1374:G:H2'	10:B:1375:U:C6	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1445:G:N2	10:B:1547:C:C5	2.77	0.51
10:B:2537:U:H2'	10:B:2538:C:H6	1.76	0.51
10:B:2800:A:H2'	10:B:2801:G:C1'	2.39	0.51
11:C:63:ILE:O	11:C:64:VAL:HG13	2.10	0.51
12:D:12:THR:O	12:D:13:ARG:HD2	2.11	0.51
13:E:17:THR:O	13:E:18:THR:HG22	2.10	0.51
13:E:25:GLU:O	13:E:26:ALA:C	2.53	0.51
13:E:44:ARG:C	13:E:46:GLN:N	2.68	0.51
13:E:88:ARG:HB2	13:E:88:ARG:HH11	1.75	0.51
13:E:104:ALA:C	13:E:105:LEU:HD23	2.35	0.51
18:J:34:ARG:HD3	18:J:39:LYS:HB2	1.92	0.51
22:N:125:ALA:O	22:N:126:ALA:HB2	2.09	0.51
23:O:1:MET:CG	23:O:2:ASP:N	2.73	0.51
25:Q:111:LYS:O	25:Q:115:ALA:HB2	2.10	0.51
28:T:31:VAL:O	28:T:83:ALA:O	2.28	0.51
29:U:42:LYS:HE3	29:U:42:LYS:HA	1.92	0.51
30:V:23:ALA:O	30:V:24:ASN:HB2	2.10	0.51
30:V:41:GLU:C	30:V:42:LEU:HD23	2.35	0.51
1:O:46:GLY:O	1:O:52:LYS:HB3	2.10	0.51
4:3:23:HIS:CD2	4:3:23:HIS:H	2.27	0.51
5:4:9:LYS:O	5:4:25:VAL:HG13	2.10	0.51
10:B:280:U:C4	10:B:281:C:C4	2.99	0.51
10:B:293:U:C4	10:B:345:A:C6	2.98	0.51
10:B:311:A:C6	10:B:328:U:C5	2.99	0.51
10:B:317:G:C2	10:B:318:C:N1	2.78	0.51
10:B:353:C:O2	10:B:353:C:H2'	2.09	0.51
10:B:1317:G:H2'	10:B:1318:U:O4'	2.11	0.51
10:B:1513:U:C2'	10:B:1514:G:H5''	2.40	0.51
10:B:1571:A:H2'	10:B:1572:A:C8	2.46	0.51
10:B:1682:G:H2'	10:B:1683:U:C6	2.45	0.51
10:B:1854:A:N6	10:B:1888:G:H1'	2.25	0.51
10:B:2229:U:H2'	10:B:2230:G:H8	1.75	0.51
10:B:2425:A:H5'	10:B:2427:C:O4'	2.10	0.51
10:B:2645:G:H4'	10:B:2732:G:H2'	1.92	0.51
11:C:224:MET:HE3	11:C:232:GLY:C	2.36	0.51
12:D:62:LYS:N	12:D:63:PRO:HD2	2.25	0.51
13:E:153:LEU:HD11	13:E:201:ALA:HA	1.93	0.51
14:F:59:ILE:HD11	14:F:137:PHE:CG	2.45	0.51
14:F:106:ALA:HB1	14:F:136:ILE:HG23	1.90	0.51
19:K:63:VAL:HB	19:K:83:ALA:HB3	1.91	0.51
20:L:116:VAL:HG12	20:L:117:THR:H	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:M:96:ILE:HD13	21:M:97:GLN:HB2	1.91	0.51
27:S:86:MET:HB2	27:S:96:ILE:HD11	1.92	0.51
28:T:5:GLU:CG	28:T:6:ARG:H	2.23	0.51
29:U:2:ALA:C	29:U:3:LYS:HD3	2.34	0.51
31:W:16:GLU:HA	31:W:18:LYS:HE2	1.93	0.51
34:Z:59:ARG:HG3	34:Z:62:LYS:HB2	1.91	0.51
1:0:32:THR:OG1	1:0:42:ILE:HD12	2.10	0.51
9:A:17:C:O2'	9:A:18:G:H5'	2.09	0.51
10:B:64:A:H2'	10:B:65:U:H6	1.73	0.51
10:B:65:U:H2'	10:B:66:C:C6	2.46	0.51
10:B:82:U:H5'	10:B:295:G:C4'	2.23	0.51
10:B:291:G:N2	10:B:350:G:C1'	2.73	0.51
10:B:338:G:C6	10:B:339:U:N3	2.78	0.51
10:B:365:U:C2	10:B:366:C:C6	2.99	0.51
10:B:570:G:H2'	10:B:2030:A:N7	2.25	0.51
10:B:660:C:H2'	10:B:661:A:H8	1.74	0.51
10:B:1164:C:H2'	10:B:1165:A:C8	2.46	0.51
10:B:1529:G:C2	10:B:1530:G:C5	2.99	0.51
14:F:66:ILE:HG22	14:F:83:PRO:HB2	1.91	0.51
14:F:126:ASN:ND2	14:F:157:THR:H	2.09	0.51
15:G:153:PRO:HG3	15:G:160:GLY:C	2.35	0.51
18:J:36:LEU:HD11	18:J:122:LEU:HD23	1.92	0.51
20:L:39:LYS:HB3	20:L:46:VAL:HG13	1.92	0.51
29:U:43:LYS:CD	29:U:44:HIS:N	2.73	0.51
30:V:9:ARG:HH12	30:V:27:PRO:HA	1.74	0.51
3:2:39:ARG:O	10:B:458:G:H5''	2.10	0.51
5:4:1:MET:CB	10:B:2527:C:H1'	2.40	0.51
10:B:80:G:O4'	10:B:346:A:N6	2.43	0.51
10:B:172:A:O2'	10:B:173:A:H5'	2.11	0.51
10:B:278:A:N3	10:B:278:A:C2'	2.73	0.51
10:B:283:G:N3	10:B:284:U:C1'	2.73	0.51
10:B:360:U:H3'	10:B:361:G:N7	2.25	0.51
10:B:705:A:H61	10:B:726:G:H1'	1.75	0.51
10:B:741:U:H2'	10:B:742:A:C8	2.45	0.51
10:B:1034:G:C6	10:B:1035:U:C2	2.98	0.51
10:B:1042:G:C2	10:B:1043:C:C5	2.99	0.51
10:B:1132:U:H5''	18:J:85:LYS:NZ	2.25	0.51
10:B:1220:G:H2'	10:B:1221:C:C6	2.45	0.51
10:B:1312:U:OP2	28:T:66:LYS:HG2	2.11	0.51
10:B:1313:U:H4'	10:B:1332:G:H4'	1.92	0.51
10:B:1530:G:N2	10:B:1531:C:C2	2.79	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2297:A:H61	10:B:2319:G:C3'	2.23	0.51
10:B:2491:U:H5''	10:B:2570:G:H5''	1.93	0.51
12:D:98:VAL:HA	12:D:101:PHE:CZ	2.46	0.51
12:D:118:PHE:HA	12:D:164:GLN:HG3	1.93	0.51
14:F:136:ILE:C	14:F:138:PRO:HD3	2.36	0.51
15:G:15:ASP:O	15:G:25:ILE:HA	2.11	0.51
19:K:2:ILE:HG22	19:K:67:LYS:HZ1	1.76	0.51
25:Q:92:LYS:O	25:Q:93:ILE:CG2	2.59	0.51
26:R:65:ALA:O	26:R:66:HIS:HB2	2.11	0.51
27:S:28:LYS:HB3	27:S:71:VAL:HB	1.91	0.51
29:U:94:PHE:CD2	29:U:95:PHE:N	2.78	0.51
34:Z:15:SER:CB	34:Z:23:LYS:HD3	2.41	0.51
4:3:17:GLY:HA3	10:B:651:G:H4'	1.93	0.51
10:B:362:A:C4	10:B:363:G:H8	2.21	0.51
10:B:460:A:H2'	10:B:461:C:O4'	2.10	0.51
10:B:1113:U:OP1	15:G:2:ARG:CG	2.59	0.51
10:B:1259:G:H2'	10:B:1260:A:C8	2.45	0.51
10:B:1923:U:H2'	10:B:1924:C:C6	2.45	0.51
10:B:2465:C:O2'	10:B:2466:C:H5'	2.11	0.51
10:B:2665:A:C2'	10:B:2666:C:H5'	2.40	0.51
10:B:2869:G:H2'	10:B:2870:C:C6	2.46	0.51
12:D:45:TYR:CZ	12:D:83:ARG:HG3	2.45	0.51
13:E:170:ARG:HH21	13:E:175:ILE:CD1	2.24	0.51
14:F:97:GLU:O	14:F:100:GLU:HG3	2.11	0.51
15:G:34:ARG:HG3	15:G:35:THR:N	2.25	0.51
18:J:18:VAL:O	18:J:57:LEU:HD23	2.10	0.51
18:J:84:ILE:HG22	18:J:85:LYS:N	2.26	0.51
20:L:56:PRO:O	20:L:60:ARG:N	2.44	0.51
20:L:80:SER:O	20:L:116:VAL:HA	2.10	0.51
21:M:53:MET:O	21:M:54:THR:HG23	2.10	0.51
22:N:97:ILE:CD1	22:N:113:ILE:HG12	2.41	0.51
23:O:64:TYR:CD2	23:O:74:VAL:HG21	2.45	0.51
24:P:59:THR:O	24:P:59:THR:HG22	2.10	0.51
24:P:61:ARG:CZ	24:P:61:ARG:HB2	2.41	0.51
24:P:90:ALA:HB3	24:P:112:ARG:HA	1.92	0.51
25:Q:60:TRP:O	25:Q:64:ILE:HG13	2.10	0.51
25:Q:92:LYS:O	25:Q:94:LEU:HD22	2.11	0.51
32:X:40:SER:O	32:X:42:LEU:HD12	2.09	0.51
4:3:3:ILE:HG22	10:B:254:G:O6	2.10	0.51
4:3:24:LYS:HZ3	4:3:29:ARG:NH2	2.02	0.51
6:5:343:ASN:O	6:5:345:GLY:N	2.39	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:295:G:N3	10:B:296:U:C5	2.77	0.51
10:B:313:G:C4	10:B:314:C:C4	2.98	0.51
10:B:346:A:N3	10:B:346:A:C3'	2.73	0.51
10:B:361:G:C8	10:B:361:G:P	3.03	0.51
10:B:523:C:O2'	10:B:524:G:H5'	2.10	0.51
10:B:923:G:H1'	31:W:23:LYS:CD	2.31	0.51
10:B:1068:G:C2'	10:B:1069:A:H5'	2.40	0.51
10:B:1077:A:C2'	10:B:1078:U:C5'	2.86	0.51
10:B:1086:A:N3	10:B:1086:A:C3'	2.73	0.51
10:B:1519:G:C6	10:B:1520:U:C4	2.95	0.51
10:B:1633:G:O2'	10:B:1634:A:H5''	2.10	0.51
11:C:212:TRP:C	11:C:214:GLY:H	2.18	0.51
12:D:35:THR:HG22	12:D:46:ARG:NH2	2.26	0.51
13:E:143:LEU:HD23	13:E:185:LYS:HB2	1.92	0.51
13:E:198:GLU:C	13:E:200:LEU:N	2.69	0.51
15:G:84:LYS:HB3	15:G:132:LEU:HD12	1.93	0.51
16:H:35:LYS:H	16:H:35:LYS:HD2	1.76	0.51
18:J:20:ALA:HB2	18:J:56:VAL:HG13	1.93	0.51
23:O:53:THR:O	23:O:54:VAL:C	2.52	0.51
23:O:76:LYS:HE3	23:O:80:GLU:HB2	1.91	0.51
24:P:29:VAL:O	24:P:31:VAL:HG23	2.11	0.51
24:P:61:ARG:NH2	24:P:63:ILE:HD11	2.25	0.51
26:R:39:LEU:HD12	26:R:60:LYS:N	2.26	0.51
28:T:34:VAL:CG1	28:T:43:ILE:HD11	2.40	0.51
31:W:10:ARG:HH11	31:W:10:ARG:HB3	1.75	0.51
31:W:69:GLU:O	31:W:69:GLU:HG2	2.10	0.51
34:Z:49:ARG:C	34:Z:51:VAL:N	2.69	0.51
34:Z:59:ARG:HG3	34:Z:62:LYS:CG	2.41	0.51
8:7:166:G:H2'	8:7:167:G:H5'	1.92	0.51
10:B:313:G:N2	10:B:314:C:O2	2.44	0.51
10:B:324:A:O2'	10:B:325:G:H5'	2.11	0.51
10:B:527:C:H4'	10:B:527:C:OP1	2.11	0.51
10:B:600:G:O4'	13:E:100:MET:HE3	2.10	0.51
10:B:1042:G:C2	10:B:1043:C:C2	2.99	0.51
10:B:1552:A:H2'	10:B:1553:A:H5''	1.93	0.51
10:B:1568:G:C5'	11:C:60:ALA:HB3	2.41	0.51
10:B:1737:G:H5'	10:B:1738:G:OP2	2.10	0.51
10:B:1817:G:OP1	11:C:62:ARG:NH2	2.43	0.51
10:B:2073:C:O2'	10:B:2074:U:H5'	2.11	0.51
10:B:2149:U:O2'	10:B:2150:C:H5'	2.10	0.51
10:B:2412:A:H2'	10:B:2413:G:O4'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2491:U:H5'	10:B:2570:G:C5'	2.40	0.51
10:B:2512:C:H2'	10:B:2513:A:O4'	2.11	0.51
11:C:128:THR:CA	11:C:190:THR:HA	2.39	0.51
11:C:140:VAL:C	11:C:193:GLU:HB2	2.36	0.51
11:C:220:ARG:HG3	11:C:220:ARG:NH1	2.26	0.51
12:D:124:ARG:NH2	12:D:163:GLY:HA3	2.25	0.51
15:G:102:ILE:O	15:G:113:ASP:HA	2.11	0.51
20:L:120:VAL:O	20:L:120:VAL:HG13	2.10	0.51
28:T:20:ALA:C	28:T:22:THR:H	2.19	0.51
28:T:89:GLU:N	28:T:89:GLU:CD	2.69	0.51
29:U:35:VAL:C	29:U:36:GLU:HG2	2.34	0.51
31:W:36:ILE:HG21	31:W:68:PHE:CD2	2.46	0.51
1:O:28:SER:O	1:O:32:THR:HG22	2.11	0.51
9:A:21:G:O2'	9:A:22:U:H5'	2.11	0.51
10:B:156:A:H2'	10:B:157:C:H6	1.76	0.51
10:B:280:U:C2'	10:B:281:C:C6	2.92	0.51
10:B:336:C:H2'	10:B:336:C:O2	2.09	0.51
10:B:362:A:N3	10:B:362:A:H2'	2.25	0.51
10:B:1053:C:N3	10:B:1107:G:C2	2.79	0.51
10:B:1132:U:C5	18:J:85:LYS:HE2	2.46	0.51
10:B:1180:U:O2'	10:B:1181:U:H5'	2.11	0.51
10:B:1215:G:O2'	10:B:1216:G:H5'	2.11	0.51
10:B:1479:G:N1	10:B:1513:U:C2	2.79	0.51
10:B:1821:A:H5'	11:C:155:ARG:HH11	1.75	0.51
10:B:1917:U:H2'	10:B:1918:A:H5'	1.93	0.51
10:B:1999:C:O2'	10:B:2000:C:H5'	2.11	0.51
10:B:2014:A:P	27:S:95:ARG:HH21	2.33	0.51
10:B:2297:A:N6	10:B:2319:G:H3'	2.26	0.51
10:B:2365:G:H4'	31:W:65:LYS:HD3	1.91	0.51
10:B:2600:A:H62	11:C:235:GLU:HB3	1.75	0.51
13:E:144:GLU:C	13:E:146:VAL:H	2.18	0.51
18:J:13:ARG:NH1	18:J:13:ARG:HG3	2.26	0.51
19:K:104:THR:HB	19:K:106:GLU:OE1	2.10	0.51
20:L:81:ASP:HB3	20:L:86:GLU:OE2	2.10	0.51
20:L:93:ASN:O	20:L:94:THR:HB	2.10	0.51
20:L:108:ALA:O	20:L:109:LYS:HB3	2.11	0.51
22:N:75:ILE:O	22:N:75:ILE:HD13	2.10	0.51
25:Q:27:ARG:O	25:Q:33:VAL:HG21	2.10	0.51
25:Q:48:ASP:O	25:Q:52:ARG:HB2	2.10	0.51
26:R:3:ALA:HB3	26:R:14:VAL:O	2.11	0.51
27:S:29:VAL:CG2	27:S:71:VAL:HG23	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:U:78:LYS:HB3	29:U:96:LYS:HB3	1.93	0.51
30:V:10:LYS:HG2	30:V:11:GLU:HG3	1.93	0.51
5:4:12:ARG:H	5:4:12:ARG:HD2	1.77	0.51
5:4:22:VAL:HG11	5:4:36:ARG:HE	1.75	0.51
10:B:161:A:H62	10:B:165:A:H61	1.58	0.51
10:B:283:G:C2'	10:B:284:U:H6	2.17	0.51
10:B:321:U:OP2	13:E:130:LYS:HA	2.11	0.51
10:B:1334:G:O2'	10:B:1335:C:H5'	2.11	0.51
10:B:1797:G:OP1	11:C:251:THR:HG23	2.11	0.51
10:B:2364:C:H2'	10:B:2365:G:O4'	2.11	0.51
10:B:2511:U:H2'	10:B:2512:C:O4'	2.11	0.51
10:B:2729:G:H2'	10:B:2730:C:H6	1.75	0.51
10:B:2820:A:H4'	22:N:4:ARG:H	1.76	0.51
11:C:42:ARG:CG	11:C:43:ASN:H	2.11	0.51
11:C:156:SER:O	11:C:157:ALA:C	2.54	0.51
12:D:108:ASP:CB	12:D:173:GLN:HA	2.40	0.51
13:E:143:LEU:HD21	13:E:185:LYS:HD3	1.92	0.51
15:G:10:VAL:HG13	15:G:10:VAL:O	2.11	0.51
15:G:17:LYS:HB3	15:G:24:THR:HG22	1.93	0.51
16:H:6:LEU:H	16:H:16:GLY:N	2.09	0.51
19:K:87:LEU:HA	19:K:95:ILE:H	1.75	0.51
22:N:30:ARG:HB3	22:N:31:HIS:ND1	2.26	0.51
24:P:55:HIS:O	24:P:57:ALA:N	2.44	0.51
3:2:34:ARG:HE	3:2:42:LEU:CD1	2.22	0.50
10:B:80:G:HO2'	10:B:294:A:N3	1.48	0.50
10:B:271:G:N7	10:B:367:G:C2	2.80	0.50
10:B:272:A:N3	10:B:273:G:C8	2.78	0.50
10:B:285:G:N2	10:B:286:U:C2	2.79	0.50
10:B:338:G:C2	10:B:339:U:C2	2.98	0.50
10:B:536:G:H4'	25:Q:56:PHE:CZ	2.46	0.50
10:B:582:A:H2'	10:B:583:G:H8	1.75	0.50
10:B:1289:C:H2'	10:B:1290:C:C6	2.46	0.50
10:B:1400:U:H2'	10:B:1401:G:C8	2.46	0.50
10:B:1553:A:C8	10:B:1555:G:C6	2.99	0.50
10:B:2712:C:H3'	10:B:2714:G:H5''	1.92	0.50
12:D:175:LEU:HB3	12:D:189:VAL:CG1	2.41	0.50
13:E:173:THR:O	13:E:175:ILE:HG22	2.12	0.50
19:K:108:ARG:HH21	24:P:36:LYS:HG3	1.77	0.50
20:L:111:ILE:H	20:L:111:ILE:CD1	2.12	0.50
21:M:67:VAL:CG2	21:M:95:LEU:HD21	2.41	0.50
21:M:105:MET:HE3	21:M:106:ASP:O	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:N:9:GLN:HA	22:N:17:ARG:NH1	2.27	0.50
24:P:2:ASN:HD22	24:P:2:ASN:N	2.09	0.50
24:P:91:VAL:HB	24:P:113:LEU:HB2	1.93	0.50
28:T:6:ARG:C	28:T:8:LEU:N	2.68	0.50
29:U:46:LYS:HB3	29:U:46:LYS:HZ3	1.76	0.50
31:W:45:HIS:HA	31:W:75:ASN:HB3	1.92	0.50
33:Y:9:THR:OG1	33:Y:10:ARG:N	2.42	0.50
3:2:30:VAL:O	3:2:33:ARG:HG3	2.11	0.50
4:3:11:LYS:HG2	4:3:12:ARG:CG	2.39	0.50
10:B:15:G:H2'	10:B:16:C:H6	1.76	0.50
10:B:167:A:H2'	10:B:168:G:O4'	2.10	0.50
10:B:176:A:O2'	10:B:177:G:H5'	2.10	0.50
10:B:1025:G:H8	10:B:1025:G:OP1	1.94	0.50
10:B:1034:G:N1	10:B:1035:U:C2	2.79	0.50
10:B:1519:G:C2'	10:B:1520:U:C5'	2.86	0.50
10:B:2222:C:O2'	10:B:2223:G:H5'	2.09	0.50
10:B:2305:U:H3	14:F:150:GLY:HA3	1.75	0.50
10:B:2860:A:O5'	10:B:2860:A:H8	1.93	0.50
12:D:128:ARG:HH11	12:D:144:GLY:HA3	1.75	0.50
18:J:19:ASP:C	18:J:21:THR:H	2.19	0.50
18:J:78:THR:C	18:J:80:HIS:H	2.19	0.50
20:L:117:THR:C	20:L:118:THR:HG22	2.36	0.50
22:N:52:ILE:HG21	22:N:94:TYR:CE2	2.46	0.50
24:P:8:GLU:OE1	24:P:8:GLU:N	2.45	0.50
26:R:68:ARG:HD2	26:R:70:GLU:CD	2.37	0.50
27:S:71:VAL:HG22	27:S:107:VAL:CG1	2.40	0.50
30:V:16:ALA:HA	30:V:19:ARG:HE	1.76	0.50
30:V:21:ARG:NH2	30:V:27:PRO:HG3	2.27	0.50
30:V:21:ARG:HE	30:V:87:GLN:CB	2.23	0.50
32:X:12:GLU:HB2	32:X:14:LEU:HD12	1.93	0.50
4:3:24:LYS:HZ1	4:3:29:ARG:HH12	1.57	0.50
6:5:360:ILE:O	6:5:360:ILE:HG12	2.11	0.50
9:A:113:C:H2'	9:A:114:C:O4'	2.11	0.50
10:B:62:U:H3'	10:B:63:A:C8	2.44	0.50
10:B:277:G:H4'	10:B:278:A:N6	2.27	0.50
10:B:285:G:N2	10:B:286:U:C1'	2.74	0.50
10:B:287:G:N2	10:B:288:U:C2	2.80	0.50
10:B:294:A:N7	10:B:345:A:C6	2.79	0.50
10:B:321:U:H5''	13:E:131:THR:H	1.76	0.50
10:B:443:A:OP1	13:E:44:ARG:NH2	2.44	0.50
10:B:589:U:H2'	10:B:590:A:H8	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:671:C:H42	20:L:39:LYS:HE3	1.76	0.50
10:B:948:C:H2'	10:B:949:G:H8	1.76	0.50
10:B:1444:G:N2	10:B:1548:A:C2	2.79	0.50
10:B:1747:U:H2'	10:B:1748:C:C6	2.46	0.50
10:B:1939:U:O2	10:B:1967:C:H4'	2.11	0.50
10:B:2195:U:H2'	10:B:2196:C:H6	1.76	0.50
10:B:2439:A:C8	10:B:2586:U:H4'	2.46	0.50
10:B:2516:A:O2'	10:B:2517:C:H5'	2.11	0.50
11:C:63:ILE:HG21	11:C:90:ILE:HD13	1.92	0.50
11:C:136:VAL:HA	11:C:165:ALA:HA	1.92	0.50
12:D:7:LYS:HA	12:D:26:VAL:HG12	1.92	0.50
14:F:38:GLY:O	14:F:39:VAL:C	2.54	0.50
18:J:78:THR:HB	18:J:80:HIS:HD2	1.77	0.50
20:L:77:ILE:CD1	20:L:92:LEU:HD22	2.41	0.50
22:N:117:ASP:O	22:N:118:ARG:HB2	2.12	0.50
28:T:33:LYS:HE3	28:T:80:TRP:NE1	2.26	0.50
30:V:80:HIS:CD2	30:V:81:PRO:HD2	2.46	0.50
31:W:47:GLY:HA2	31:W:67:LYS:HZ3	1.77	0.50
2:1:42:VAL:HG22	10:B:643:A:C6	2.46	0.50
10:B:224:U:O4	10:B:420:C:H5'	2.12	0.50
10:B:298:G:H22	10:B:341:C:N4	2.10	0.50
10:B:347:A:N6	10:B:348:A:C5	2.79	0.50
10:B:483:A:H2'	29:U:45:GLN:NE2	2.18	0.50
10:B:584:C:OP2	25:Q:5:ARG:HB2	2.11	0.50
10:B:988:A:OP2	33:Y:11:SER:HA	2.11	0.50
10:B:1037:G:N3	10:B:1038:G:N7	2.60	0.50
10:B:1538:G:C5	10:B:1539:U:C5	3.00	0.50
10:B:2263:C:H2'	10:B:2264:C:H6	1.77	0.50
10:B:2455:G:H2'	10:B:2456:C:C6	2.46	0.50
10:B:2839:G:H2'	10:B:2840:C:H6	1.75	0.50
10:B:2874:C:H2'	10:B:2875:C:C6	2.46	0.50
13:E:130:LYS:HA	13:E:130:LYS:HE2	1.91	0.50
14:F:126:ASN:OD1	14:F:156:THR:HG23	2.11	0.50
15:G:154:GLU:OE1	15:G:156:TYR:HB2	2.11	0.50
16:H:19:VAL:O	16:H:20:ASN:C	2.54	0.50
16:H:29:PHE:H	16:H:32:PRO:CG	2.25	0.50
20:L:51:GLU:O	20:L:52:GLY:C	2.55	0.50
20:L:82:LEU:HD21	20:L:92:LEU:CD1	2.38	0.50
21:M:42:THR:O	21:M:44:ARG:N	2.41	0.50
22:N:12:ARG:HD3	22:N:20:MET:HE3	1.94	0.50
28:T:3:ARG:HH21	28:T:8:LEU:CD2	2.24	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:2:1:MET:HE2	10:B:1619:G:O2'	2.11	0.50
5:4:24:ARG:NH1	5:4:36:ARG:HB2	2.24	0.50
10:B:866:A:H61	10:B:913:U:H4'	1.77	0.50
10:B:1540:G:C2'	10:B:1541:C:C5'	2.87	0.50
10:B:2686:G:H2'	10:B:2687:U:C6	2.46	0.50
10:B:2899:A:H2'	10:B:2900:A:C8	2.47	0.50
11:C:179:GLU:CG	11:C:266:ILE:HG22	2.40	0.50
14:F:103:ILE:HG13	14:F:104:THR:H	1.77	0.50
22:N:123:GLU:CG	22:N:124:ALA:N	2.74	0.50
25:Q:32:ARG:HD2	25:Q:32:ARG:C	2.36	0.50
26:R:18:GLN:HA	26:R:99:THR:HA	1.93	0.50
27:S:48:LYS:O	27:S:51:LEU:HB3	2.12	0.50
28:T:93:LEU:HD12	28:T:99:ALA:C	2.37	0.50
29:U:25:LYS:CG	29:U:35:VAL:HA	2.41	0.50
30:V:26:PHE:HZ	30:V:47:VAL:HB	1.77	0.50
30:V:30:ILE:HD11	30:V:63:ILE:HD12	1.94	0.50
34:Z:32:LEU:O	34:Z:46:GLY:HA2	2.12	0.50
2:1:26:LYS:HE3	10:B:2285:C:OP1	2.12	0.50
3:2:34:ARG:NE	3:2:42:LEU:HD13	2.26	0.50
6:5:346:GLY:HA2	6:5:349:SER:HB2	1.93	0.50
9:A:64:G:O2'	9:A:65:U:H5'	2.11	0.50
10:B:1527:G:H2'	10:B:1527:G:N3	2.26	0.50
10:B:1637:A:H2'	10:B:1638:C:C6	2.47	0.50
10:B:1821:A:H5'	11:C:155:ARG:NH1	2.27	0.50
10:B:2049:G:O2'	10:B:2050:C:H5'	2.11	0.50
10:B:2219:U:O2'	10:B:2220:U:H5'	2.11	0.50
10:B:2276:G:OP2	21:M:83:GLY:HA3	2.12	0.50
10:B:2336:A:HO2'	10:B:2337:G:P	2.35	0.50
11:C:163:ILE:HG22	11:C:164:VAL:N	2.27	0.50
12:D:33:ARG:HG3	12:D:93:GLY:CA	2.41	0.50
13:E:43:THR:HG1	13:E:44:ARG:HH21	1.60	0.50
13:E:85:PHE:O	13:E:86:ALA:C	2.55	0.50
15:G:85:LYS:HB2	15:G:164:ALA:HB2	1.94	0.50
16:H:3:VAL:HB	16:H:37:VAL:CG2	2.41	0.50
19:K:64:ARG:N	19:K:83:ALA:HB3	2.10	0.50
20:L:125:LEU:HA	20:L:142:ILE:O	2.11	0.50
21:M:43:ALA:C	21:M:45:GLN:N	2.68	0.50
21:M:74:THR:HA	21:M:87:GLY:O	2.12	0.50
21:M:112:LEU:HD12	21:M:112:LEU:N	2.26	0.50
27:S:29:VAL:C	27:S:31:GLN:N	2.67	0.50
27:S:86:MET:HB2	27:S:96:ILE:CD1	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:50:GLY:N	22:N:118:ARG:HH21	2.10	0.50
4:3:12:ARG:HG2	4:3:23:HIS:HB3	1.94	0.50
9:A:58:A:H2'	9:A:59:A:O4'	2.11	0.50
10:B:80:G:C1'	10:B:346:A:N6	2.75	0.50
10:B:207:A:H2'	10:B:208:C:O4'	2.12	0.50
10:B:272:A:N1	10:B:273:G:N7	2.59	0.50
10:B:275:C:N1	10:B:276:U:C6	2.80	0.50
10:B:280:U:H2'	10:B:281:C:O4'	2.11	0.50
10:B:299:A:C6	10:B:300:A:C6	3.00	0.50
10:B:712:G:H2'	10:B:713:G:O4'	2.12	0.50
10:B:956:G:H1'	21:M:81:ARG:HH22	1.76	0.50
10:B:1074:G:C6	10:B:1075:C:N4	2.79	0.50
10:B:1164:C:H2'	10:B:1165:A:H8	1.76	0.50
10:B:1373:A:H4'	10:B:2212:A:N3	2.26	0.50
10:B:1537:G:N3	10:B:1537:G:C3'	2.73	0.50
10:B:2303:G:H2'	10:B:2304:G:H5'	1.94	0.50
12:D:106:LYS:HA	12:D:176:ASP:HA	1.93	0.50
13:E:3:LEU:HB2	13:E:12:LEU:HB2	1.94	0.50
14:F:107:VAL:HG12	14:F:113:PHE:CE1	2.47	0.50
14:F:109:ARG:CB	14:F:136:ILE:HG13	2.41	0.50
15:G:104:LEU:HB3	15:G:106:LEU:HD13	1.92	0.50
22:N:87:PHE:HB2	22:N:94:TYR:CZ	2.47	0.50
24:P:83:ILE:HB	24:P:85:VAL:HG23	1.93	0.50
30:V:26:PHE:CE2	30:V:44:HIS:HA	2.44	0.50
31:W:59:PHE:HE1	31:W:81:ILE:HD13	1.76	0.50
2:1:34:GLU:N	2:1:52:LYS:O	2.45	0.50
4:3:44:ARG:HH22	10:B:649:G:N2	2.09	0.50
5:4:19:ARG:HD3	10:B:2756:U:OP2	2.12	0.50
9:A:15:A:H1'	9:A:109:A:C8	2.46	0.50
10:B:316:C:O2	10:B:317:G:H8	1.94	0.50
10:B:359:G:N7	10:B:360:U:C4	2.79	0.50
10:B:511:U:O5'	10:B:511:U:H6	1.95	0.50
10:B:1360:G:H2'	10:B:1361:G:H5'	1.93	0.50
10:B:1445:G:N3	10:B:1547:C:N3	2.60	0.50
10:B:1545:A:O2'	10:B:1546:G:H5'	2.12	0.50
10:B:1549:A:H2'	10:B:1550:C:H6	1.71	0.50
10:B:2483:C:H4'	21:M:51:ARG:HH12	1.76	0.50
10:B:2776:A:H4'	10:B:2777:G:C5'	2.42	0.50
10:B:2879:A:H4'	10:B:2880:C:OP1	2.12	0.50
12:D:74:GLU:OE1	12:D:74:GLU:HA	2.11	0.50
12:D:128:ARG:HH12	12:D:130:GLN:NE2	2.09	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:D:175:LEU:HD13	12:D:189:VAL:HG11	1.92	0.50
13:E:13:THR:HG22	13:E:119:ILE:HD12	1.94	0.50
18:J:125:TYR:CE2	18:J:134:ALA:HB2	2.45	0.50
21:M:42:THR:HG22	21:M:45:GLN:HB2	1.93	0.50
21:M:69:PRO:CB	21:M:93:VAL:HG12	2.37	0.50
27:S:24:ILE:O	27:S:74:ILE:HD12	2.11	0.50
28:T:69:ARG:N	28:T:75:GLY:HA3	2.27	0.50
31:W:49:ASN:O	31:W:50:VAL:HB	2.11	0.50
33:Y:8:GLN:O	33:Y:55:LYS:HE2	2.12	0.50
8:7:124:U:H2'	8:7:125:G:C8	2.47	0.50
9:A:29:A:H3'	9:A:30:C:C6	2.45	0.50
9:A:82:U:O2'	9:A:83:G:H5'	2.12	0.50
10:B:37:C:O2'	13:E:47:LYS:HG3	2.12	0.50
10:B:41:C:H2'	10:B:42:A:H8	1.76	0.50
10:B:282:A:C4	10:B:283:G:N7	2.79	0.50
10:B:338:G:C6	10:B:339:U:C2	3.00	0.50
10:B:367:G:O2'	10:B:368:A:P	2.70	0.50
10:B:1064:C:H2'	10:B:1065:U:C6	2.46	0.50
10:B:1074:G:C2	10:B:1075:C:C4	3.00	0.50
10:B:1676:A:H1'	12:D:134:HIS:HB3	1.94	0.50
10:B:2097:A:H2'	10:B:2098:U:H6	1.77	0.50
10:B:2196:C:O2'	10:B:2197:U:H5'	2.12	0.50
11:C:115:ILE:HA	11:C:126:GLY:CA	2.42	0.50
11:C:216:ARG:HB3	11:C:217:PRO:HD2	1.94	0.50
13:E:44:ARG:N	13:E:44:ARG:CD	2.75	0.50
14:F:99:PHE:C	14:F:101:ARG:N	2.69	0.50
14:F:128:SER:HA	14:F:154:THR:HG23	1.94	0.50
16:H:50:ARG:HG2	16:H:51:ARG:HB3	1.94	0.50
20:L:38:GLN:H	20:L:41:ARG:HD2	1.76	0.50
20:L:61:LEU:O	20:L:62:PRO:O	2.29	0.50
20:L:67:THR:O	20:L:68:SER:CB	2.59	0.50
21:M:80:VAL:HG12	21:M:81:ARG:N	2.27	0.50
28:T:28:ASN:N	28:T:28:ASN:ND2	2.58	0.50
31:W:16:GLU:N	31:W:18:LYS:NZ	2.60	0.50
10:B:92:U:H2'	10:B:93:G:O4'	2.12	0.49
10:B:208:C:H2'	10:B:209:C:C6	2.46	0.49
10:B:308:G:H2'	10:B:309:A:C8	2.47	0.49
10:B:310:A:C5	10:B:312:G:N7	2.75	0.49
10:B:532:A:H4'	10:B:533:G:C8	2.46	0.49
10:B:1073:A:H2'	10:B:1074:G:C5'	2.38	0.49
10:B:1118:C:HO2'	10:B:1119:U:H5'	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1520:U:N3	10:B:1521:G:C4	2.80	0.49
10:B:1540:G:C2	10:B:1541:C:N1	2.80	0.49
10:B:1562:U:H2'	10:B:1563:U:C6	2.46	0.49
10:B:1751:U:H2'	10:B:1752:C:C6	2.47	0.49
10:B:2192:U:H2'	10:B:2193:G:O4'	2.12	0.49
10:B:2258:C:OP2	31:W:3:LYS:HG2	2.12	0.49
10:B:2301:C:O2'	10:B:2302:U:H5'	2.11	0.49
10:B:2386:A:H2'	10:B:2387:U:C6	2.47	0.49
10:B:2400:G:O2'	10:B:2401:U:H5'	2.12	0.49
10:B:2665:A:O2'	10:B:2666:C:H5'	2.12	0.49
10:B:2712:C:H2'	10:B:2714:G:O3'	2.12	0.49
15:G:84:LYS:O	15:G:132:LEU:HG	2.12	0.49
19:K:14:SER:O	19:K:52:VAL:HB	2.11	0.49
20:L:82:LEU:HD12	20:L:90:VAL:HG13	1.93	0.49
21:M:34:LYS:O	21:M:124:LEU:HB2	2.11	0.49
24:P:77:SER:CB	24:P:78:PRO:HD3	2.42	0.49
24:P:80:VAL:HG13	24:P:80:VAL:O	2.11	0.49
27:S:79:GLY:O	27:S:80:PRO:C	2.54	0.49
2:1:29:LYS:O	2:1:30:PRO:C	2.55	0.49
10:B:189:G:H2'	10:B:205:G:H22	1.76	0.49
10:B:609:A:H2'	10:B:610:C:O4'	2.12	0.49
10:B:685:A:H1'	10:B:688:U:O4	2.12	0.49
10:B:827:U:H5'	10:B:828:U:O5'	2.12	0.49
10:B:875:G:H2'	10:B:876:C:O2	2.12	0.49
10:B:1056:G:N2	10:B:1104:C:N4	2.60	0.49
10:B:1115:G:H2'	10:B:1116:G:C8	2.40	0.49
10:B:1177:G:H2'	10:B:1178:C:H6	1.76	0.49
10:B:1909:C:H2'	10:B:1910:G:H8	1.76	0.49
10:B:2352:A:H2'	10:B:2353:G:O4'	2.11	0.49
10:B:2471:A:O2'	10:B:2472:G:O5'	2.30	0.49
10:B:2659:G:OP1	15:G:157:LYS:HE2	2.12	0.49
10:B:2684:U:OP1	24:P:59:THR:HG22	2.12	0.49
10:B:2751:G:OP2	15:G:3:VAL:HG22	2.12	0.49
10:B:2840:C:H2'	10:B:2841:C:C6	2.46	0.49
11:C:16:VAL:CA	11:C:17:LYS:HE2	2.42	0.49
11:C:130:PRO:HD2	11:C:133:ASN:HD22	1.77	0.49
12:D:38:LYS:HD3	12:D:38:LYS:N	2.27	0.49
12:D:142:VAL:O	12:D:144:GLY:N	2.44	0.49
12:D:172:VAL:HG21	12:D:175:LEU:HD12	1.95	0.49
15:G:66:THR:O	15:G:70:LEU:HB2	2.12	0.49
18:J:35:ARG:NH2	18:J:40:HIS:N	2.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:J:56:VAL:HG12	18:J:57:LEU:N	2.26	0.49
19:K:85:VAL:O	19:K:87:LEU:HD23	2.11	0.49
22:N:65:LEU:CD1	22:N:68:ALA:HB3	2.42	0.49
23:O:34:HIS:ND1	23:O:34:HIS:N	2.60	0.49
27:S:28:LYS:HB3	27:S:71:VAL:CG2	2.43	0.49
30:V:6:ALA:HB3	30:V:65:VAL:CG1	2.42	0.49
3:2:25:LYS:HE3	3:2:25:LYS:N	2.28	0.49
4:3:3:ILE:HD13	4:3:3:ILE:N	2.27	0.49
6:5:335:LEU:C	6:5:335:LEU:HD23	2.38	0.49
6:5:416:LEU:HD23	6:5:416:LEU:C	2.37	0.49
6:5:431:LYS:HZ1	6:5:432:LYS:HE2	1.76	0.49
10:B:301:G:N2	10:B:315:G:N2	2.60	0.49
10:B:310:A:C6	10:B:330:A:C6	3.00	0.49
10:B:440:C:H2'	10:B:441:U:H6	1.77	0.49
10:B:446:G:OP2	25:Q:2:ARG:HD2	2.12	0.49
10:B:557:C:H2'	10:B:558:U:C6	2.47	0.49
10:B:716:A:H2'	10:B:717:C:O4'	2.12	0.49
10:B:784:G:C5'	11:C:225:ASN:HD21	2.23	0.49
10:B:1019:U:H2'	10:B:1020:A:C8	2.47	0.49
10:B:1064:C:OP1	17:I:80:LYS:NZ	2.44	0.49
10:B:1118:C:H2'	10:B:1119:U:C5'	2.42	0.49
10:B:1424:G:H2'	10:B:1425:G:O4'	2.13	0.49
10:B:1722:A:H2'	10:B:1723:G:C8	2.47	0.49
10:B:2354:C:C4'	31:W:30:VAL:HG13	2.42	0.49
10:B:2484:G:H4'	21:M:45:GLN:OE1	2.12	0.49
10:B:2751:G:P	15:G:3:VAL:HG13	2.51	0.49
10:B:2874:C:OP1	22:N:5:LYS:HG2	2.13	0.49
11:C:107:LYS:H	11:C:194:VAL:CG2	2.21	0.49
11:C:217:PRO:C	11:C:219:VAL:H	2.20	0.49
11:C:242:HIS:N	11:C:242:HIS:ND1	2.60	0.49
15:G:26:LYS:CA	15:G:31:GLU:HG2	2.34	0.49
15:G:51:PHE:HE1	15:G:63:GLN:HE21	1.60	0.49
16:H:82:SER:HB3	16:H:90:LEU:CD2	2.42	0.49
17:I:77:VAL:HA	17:I:80:LYS:HE3	1.93	0.49
19:K:119:ALA:N	19:K:120:PRO:CD	2.76	0.49
20:L:79:LEU:HD12	20:L:79:LEU:N	2.27	0.49
21:M:42:THR:HG23	21:M:45:GLN:H	1.77	0.49
22:N:38:LEU:N	22:N:39:PRO:CD	2.75	0.49
22:N:75:ILE:HD13	22:N:75:ILE:C	2.38	0.49
24:P:84:SER:O	24:P:85:VAL:C	2.53	0.49
25:Q:92:LYS:CG	25:Q:93:ILE:N	2.75	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:S:56:ALA:C	27:S:58:ALA:N	2.70	0.49
29:U:42:LYS:HG3	29:U:43:LYS:N	2.27	0.49
30:V:17:SER:HB3	30:V:21:ARG:HH12	1.78	0.49
31:W:35:ILE:HG13	31:W:36:ILE:N	2.27	0.49
2:1:33:LEU:N	2:1:52:LYS:HB3	2.27	0.49
4:3:11:LYS:HZ2	20:L:63:LYS:CG	2.25	0.49
6:5:339:ARG:O	6:5:342:LYS:HG2	2.12	0.49
10:B:257:C:H2'	10:B:258:G:O4'	2.12	0.49
10:B:898:C:N3	10:B:899:A:N6	2.61	0.49
10:B:1048:A:C4	10:B:1049:C:C5	3.00	0.49
10:B:1062:G:C2	10:B:1063:G:N7	2.80	0.49
10:B:1079:C:HO2'	10:B:1080:A:H5'	1.77	0.49
10:B:1090:A:N6	10:B:1102:C:N3	2.60	0.49
10:B:1110:G:N2	10:B:1111:A:N6	2.60	0.49
10:B:1199:U:C1'	25:Q:2:ARG:HB2	2.42	0.49
10:B:1351:C:O2'	10:B:1571:A:H1'	2.12	0.49
10:B:1479:G:C2	10:B:1513:U:O2	2.65	0.49
10:B:1560:G:H2'	10:B:1561:C:C6	2.47	0.49
10:B:1791:A:H5'	11:C:207:ALA:HA	1.93	0.49
11:C:115:ILE:HG23	11:C:126:GLY:O	2.12	0.49
11:C:131:MET:O	11:C:134:ILE:HB	2.13	0.49
11:C:136:VAL:O	11:C:163:ILE:HB	2.12	0.49
11:C:180:MET:HB2	11:C:265:PHE:CB	2.40	0.49
12:D:13:ARG:CZ	24:P:8:GLU:HB3	2.43	0.49
13:E:6:LYS:HB2	13:E:12:LEU:CD1	2.42	0.49
14:F:109:ARG:HG2	14:F:136:ILE:HG13	1.95	0.49
16:H:83:LYS:HB2	16:H:92:GLY:N	2.27	0.49
22:N:101:GLY:H	22:N:110:MET:HB2	1.78	0.49
23:O:1:MET:HG2	23:O:2:ASP:H	1.76	0.49
27:S:28:LYS:CB	27:S:71:VAL:HB	2.42	0.49
28:T:71:GLY:C	28:T:72:GLN:HG3	2.37	0.49
28:T:93:LEU:CD1	28:T:99:ALA:C	2.86	0.49
31:W:30:VAL:CG1	31:W:31:LEU:N	2.76	0.49
1:0:29:VAL:HB	1:0:36:LYS:HD2	1.93	0.49
3:2:17:GLY:HA2	3:2:21:ARG:HH12	1.76	0.49
9:A:50:A:H5''	23:O:68:LYS:HG3	1.94	0.49
10:B:79:C:C2'	10:B:346:A:N7	2.71	0.49
10:B:235:U:H2'	10:B:236:C:C6	2.48	0.49
10:B:287:G:C2	10:B:288:U:C4	3.00	0.49
10:B:295:G:C2	10:B:344:A:C4	3.00	0.49
10:B:492:A:H2'	10:B:493:G:O4'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:565:C:O2'	10:B:566:U:H5'	2.13	0.49
10:B:962:G:N2	21:M:81:ARG:HH21	2.11	0.49
10:B:991:C:H2'	10:B:992:C:C6	2.48	0.49
10:B:1010:A:O2'	10:B:1152:C:H1'	2.12	0.49
10:B:1109:C:N3	10:B:1110:G:C2	2.81	0.49
10:B:1199:U:H1'	25:Q:2:ARG:HB2	1.95	0.49
10:B:1513:U:C4	10:B:1514:G:N7	2.80	0.49
10:B:1540:G:N2	10:B:1541:C:N1	2.60	0.49
10:B:1684:G:H2'	10:B:1685:C:C6	2.47	0.49
10:B:1708:C:H2'	10:B:1709:U:H6	1.78	0.49
10:B:2657:A:H2'	10:B:2658:C:O4'	2.13	0.49
13:E:141:MET:HG3	13:E:143:LEU:HB2	1.93	0.49
13:E:145:ASP:C	13:E:147:LEU:H	2.20	0.49
13:E:145:ASP:C	13:E:147:LEU:N	2.70	0.49
13:E:176:ASP:OD1	13:E:178:VAL:HG22	2.11	0.49
14:F:126:ASN:N	14:F:126:ASN:ND2	2.51	0.49
16:H:81:ALA:CB	16:H:147:VAL:H	2.24	0.49
16:H:147:VAL:HG12	16:H:148:ALA:H	1.77	0.49
17:I:75:ALA:CB	17:I:131:THR:HG21	2.42	0.49
18:J:103:ILE:O	18:J:103:ILE:HG22	2.12	0.49
19:K:40:LYS:HA	19:K:59:LYS:HA	1.94	0.49
21:M:95:LEU:HD22	21:M:98:PRO:HG3	1.94	0.49
22:N:45:ARG:HB2	22:N:49:GLU:OE2	2.12	0.49
24:P:61:ARG:HH22	24:P:63:ILE:HD11	1.78	0.49
24:P:78:PRO:C	24:P:79:VAL:HG23	2.36	0.49
28:T:1:MET:CE	28:T:2:ILE:HB	2.38	0.49
29:U:5:ARG:CG	29:U:6:ARG:H	2.24	0.49
29:U:38:ILE:O	29:U:39:ASN:HB2	2.12	0.49
29:U:78:LYS:CE	29:U:96:LYS:HB2	2.34	0.49
31:W:24:ARG:HD2	31:W:59:PHE:HD2	1.77	0.49
33:Y:4:ILE:O	33:Y:5:LYS:HB2	2.12	0.49
34:Z:19:GLY:O	34:Z:20:ASN:HB2	2.11	0.49
34:Z:48:GLN:H	34:Z:51:VAL:HB	1.78	0.49
34:Z:59:ARG:NE	34:Z:62:LYS:HD2	2.26	0.49
4:3:11:LYS:HZ2	20:L:63:LYS:HG3	1.77	0.49
6:5:343:ASN:C	6:5:345:GLY:H	2.19	0.49
10:B:584:C:OP2	25:Q:5:ARG:HD3	2.12	0.49
10:B:817:C:O2'	10:B:839:U:H5''	2.12	0.49
10:B:831:G:O3'	20:L:44:GLY:HA3	2.13	0.49
10:B:877:A:C2	10:B:900:A:N7	2.80	0.49
10:B:922:C:H2'	10:B:923:G:H8	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1055:G:HO2'	10:B:1085:A:H2	1.57	0.49
10:B:1060:U:C2	10:B:1088:A:N7	2.81	0.49
10:B:1521:G:C2'	10:B:1522:A:C8	2.93	0.49
10:B:1710:G:H4'	10:B:2858:C:O2	2.12	0.49
10:B:1729:U:C5	10:B:1730:C:H1'	2.48	0.49
10:B:2247:A:O2'	10:B:2248:C:H5'	2.12	0.49
11:C:172:THR:O	11:C:173:LEU:CB	2.61	0.49
11:C:266:ILE:HG13	11:C:266:ILE:O	2.13	0.49
12:D:120:GLY:HA2	12:D:162:ALA:HA	1.93	0.49
12:D:148:GLN:HB2	12:D:151:THR:HG23	1.95	0.49
21:M:29:GLY:HA3	21:M:104:GLU:OE1	2.12	0.49
21:M:73:ILE:HD11	21:M:92:TRP:N	2.28	0.49
22:N:22:ARG:HE	22:N:69:ARG:HE	1.58	0.49
23:O:8:ILE:C	23:O:10:ARG:N	2.71	0.49
25:Q:16:ILE:HD11	25:Q:31:TYR:CD1	2.47	0.49
29:U:35:VAL:HG12	29:U:36:GLU:N	2.27	0.49
31:W:65:LYS:O	31:W:66:VAL:HB	2.12	0.49
33:Y:6:ILE:HD13	33:Y:6:ILE:N	2.28	0.49
34:Z:29:GLY:C	34:Z:30:HIS:CG	2.91	0.49
1:0:28:SER:O	1:0:36:LYS:HB2	2.13	0.49
2:1:24:LYS:NZ	10:B:2285:C:H41	2.09	0.49
10:B:41:C:O2'	10:B:42:A:H5'	2.13	0.49
10:B:320:A:H4'	13:E:130:LYS:NZ	2.27	0.49
10:B:338:G:N1	10:B:339:U:O2	2.46	0.49
10:B:348:A:C2	10:B:349:U:N1	2.79	0.49
10:B:679:C:O2'	10:B:680:C:H5'	2.13	0.49
10:B:1018:U:O2'	10:B:1019:U:H5'	2.13	0.49
10:B:1060:U:OP2	17:I:115:ASP:HB3	2.12	0.49
10:B:1115:G:C2	10:B:1116:G:N7	2.80	0.49
10:B:1188:U:H4'	26:R:83:TYR:CB	2.42	0.49
10:B:1190:G:P	20:L:41:ARG:HG2	2.52	0.49
10:B:1225:G:H5''	26:R:78:ARG:HH22	1.78	0.49
10:B:1287:A:O2'	10:B:1288:G:H5'	2.12	0.49
10:B:1476:U:H1'	10:B:1515:A:C6	2.38	0.49
10:B:1494:A:H2'	10:B:1495:A:C8	2.46	0.49
10:B:1526:C:C1'	10:B:1527:G:H8	2.26	0.49
10:B:1666:G:O2'	10:B:1667:G:H5'	2.12	0.49
10:B:1719:G:O2'	10:B:1720:U:H5'	2.13	0.49
10:B:1957:C:H2'	10:B:1958:C:H6	1.77	0.49
10:B:2318:G:O2'	10:B:2319:G:C2	2.65	0.49
10:B:2623:G:O2'	10:B:2624:G:H5'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2683:C:H2'	10:B:2684:U:C6	2.47	0.49
10:B:2757:A:H2'	10:B:2757:A:N3	2.26	0.49
10:B:2888:C:H2'	10:B:2889:C:H6	1.76	0.49
12:D:2:ILE:HG13	12:D:3:GLY:N	2.23	0.49
13:E:72:SER:C	13:E:73:ILE:HD13	2.38	0.49
16:H:69:ALA:CB	16:H:140:ALA:HA	2.43	0.49
20:L:81:ASP:O	20:L:82:LEU:C	2.54	0.49
21:M:86:LYS:HD2	21:M:86:LYS:H	1.78	0.49
21:M:130:PHE:CD2	21:M:131:VAL:HG22	2.47	0.49
22:N:116:VAL:O	22:N:118:ARG:N	2.43	0.49
24:P:31:VAL:HA	24:P:81:ASP:HA	1.94	0.49
24:P:52:ARG:CB	24:P:60:VAL:HG11	2.22	0.49
25:Q:33:VAL:O	25:Q:34:ALA:C	2.55	0.49
26:R:33:VAL:O	26:R:34:GLU:HB2	2.11	0.49
30:V:60:VAL:HG13	30:V:72:VAL:O	2.12	0.49
30:V:77:VAL:HG21	30:V:79:ARG:NH2	2.27	0.49
2:1:7:LYS:HD2	2:1:8:ILE:O	2.12	0.49
3:2:13:ASN:OD1	10:B:125:A:H4'	2.13	0.49
10:B:141:G:N2	28:T:2:ILE:HG13	2.27	0.49
10:B:173:A:H2'	10:B:174:U:C6	2.48	0.49
10:B:689:A:H2'	10:B:690:G:C8	2.47	0.49
10:B:847:U:O2	10:B:847:U:O4'	2.30	0.49
10:B:1048:A:N6	10:B:1111:A:C2	2.81	0.49
10:B:1062:G:O2'	10:B:1063:G:H5'	2.12	0.49
10:B:1115:G:C6	10:B:1116:G:C6	3.01	0.49
10:B:1184:U:O2'	10:B:1185:G:H5'	2.12	0.49
10:B:1220:G:H2'	10:B:1221:C:H6	1.77	0.49
10:B:1591:A:H2'	10:B:1592:C:C6	2.47	0.49
10:B:1629:U:O2	10:B:2698:U:H5''	2.13	0.49
10:B:1645:G:H5''	10:B:1646:C:H5'	1.93	0.49
10:B:2441:U:O2'	10:B:2442:C:H5'	2.12	0.49
13:E:73:ILE:C	13:E:75:SER:N	2.61	0.49
15:G:89:VAL:HG21	15:G:162:ARG:HE	1.77	0.49
16:H:57:LYS:HG3	16:H:61:VAL:CG2	2.40	0.49
18:J:35:ARG:HH21	18:J:40:HIS:H	1.61	0.49
20:L:21:ARG:HB3	20:L:21:ARG:NH1	2.28	0.49
21:M:80:VAL:HG12	21:M:81:ARG:HG2	1.95	0.49
25:Q:112:ALA:HA	25:Q:115:ALA:HB3	1.94	0.49
26:R:39:LEU:HA	26:R:60:LYS:O	2.12	0.49
27:S:27:LYS:H	27:S:27:LYS:CD	2.22	0.49
29:U:6:ARG:C	29:U:8:ASP:N	2.71	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:X:22:LEU:CD2	32:X:25:GLN:HB3	2.43	0.49
1:O:15:ARG:HD2	10:B:2047:C:OP1	2.13	0.49
9:A:52:A:H3'	9:A:53:A:C8	2.47	0.49
10:B:7:G:H2'	10:B:8:C:O4'	2.13	0.49
10:B:121:G:H4'	10:B:149:A:H5'	1.94	0.49
10:B:279:A:H1'	10:B:362:A:O2'	2.13	0.49
10:B:295:G:N1	10:B:296:U:C5	2.78	0.49
10:B:310:A:N7	10:B:312:G:C5	2.81	0.49
10:B:333:G:N1	10:B:334:C:C5	2.81	0.49
10:B:356:G:C3'	10:B:357:C:H5'	2.41	0.49
10:B:926:G:H2'	10:B:927:A:C8	2.47	0.49
10:B:932:U:H2'	10:B:934:U:C4	2.48	0.49
10:B:1061:U:O4'	10:B:1070:A:H1'	2.13	0.49
10:B:1075:C:C4	10:B:1076:C:N4	2.81	0.49
10:B:1137:G:H2'	10:B:1138:G:O4'	2.13	0.49
10:B:1275:A:N3	10:B:1275:A:C3'	2.75	0.49
10:B:1311:G:H21	10:B:1603:A:H62	1.60	0.49
10:B:1405:U:H2'	10:B:1406:U:H6	1.75	0.49
10:B:1513:U:H2'	10:B:1514:G:C4'	2.43	0.49
10:B:1729:U:H2'	10:B:1730:C:H4'	1.95	0.49
10:B:1878:G:H2'	10:B:1879:C:H6	1.78	0.49
10:B:2803:G:H2'	10:B:2804:U:H6	1.76	0.49
11:C:4:LYS:HG3	11:C:5:CYS:SG	2.53	0.49
12:D:61:THR:H	12:D:62:LYS:HE3	1.77	0.49
12:D:170:VAL:HG22	12:D:171:THR:N	2.27	0.49
14:F:65:LEU:HD23	14:F:87:LYS:HD2	1.94	0.49
18:J:10:THR:CB	18:J:13:ARG:HH22	2.25	0.49
20:L:78:ARG:CG	20:L:99:ASN:HB3	2.33	0.49
21:M:34:LYS:HD3	21:M:98:PRO:O	2.12	0.49
21:M:97:GLN:N	21:M:98:PRO:CD	2.75	0.49
21:M:134:THR:O	30:V:77:VAL:HG13	2.13	0.49
25:Q:13:HIS:O	25:Q:17:LEU:HB2	2.13	0.49
31:W:44:PHE:CD2	31:W:60:ALA:HB3	2.48	0.49
32:X:23:ARG:HH21	32:X:27:ASN:CG	2.20	0.49
1:O:3:GLN:N	1:O:3:GLN:NE2	2.60	0.49
5:4:11:CYS:HB3	5:4:14:CYS:SG	2.52	0.49
10:B:280:U:C6	10:B:281:C:H5	2.04	0.49
10:B:319:G:N7	10:B:333:G:N1	2.60	0.49
10:B:326:G:C2'	10:B:327:G:H5'	2.41	0.49
10:B:702:U:O2'	10:B:703:U:H5'	2.12	0.49
10:B:918:A:H2'	10:B:919:U:H5'	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1011:G:H5''	25:Q:76:SER:OG	2.11	0.49
10:B:1430:G:H2'	10:B:1431:A:C8	2.48	0.49
10:B:2016:U:H2'	10:B:2017:U:C6	2.47	0.49
10:B:2053:G:O2'	10:B:2054:A:H5'	2.13	0.49
10:B:2636:C:H2'	10:B:2637:U:C6	2.47	0.49
10:B:2654:A:N1	10:B:2665:A:H5''	2.28	0.49
11:C:114:GLN:HB2	11:C:124:LYS:HZ1	1.77	0.49
11:C:179:GLU:HB2	11:C:266:ILE:HG22	1.95	0.49
12:D:24:VAL:CG2	12:D:193:VAL:HG11	2.26	0.49
12:D:170:VAL:HG11	12:D:194:PRO:HB2	1.95	0.49
18:J:15:TRP:HB3	18:J:53:TYR:CE2	2.48	0.49
20:L:85:VAL:N	20:L:86:GLU:HG3	2.28	0.49
20:L:126:ARG:O	20:L:127:VAL:HG13	2.13	0.49
21:M:2:LEU:HB3	21:M:4:PRO:HD2	1.94	0.49
26:R:72:VAL:HG23	26:R:73:LYS:N	2.27	0.49
28:T:6:ARG:C	28:T:8:LEU:H	2.21	0.49
33:Y:9:THR:HB	33:Y:53:MET:O	2.13	0.49
34:Z:49:ARG:O	34:Z:51:VAL:HG23	2.13	0.49
3:2:35:ARG:NH1	3:2:39:ARG:HA	2.28	0.48
6:5:367:GLN:HG2	29:U:51:LEU:HD21	1.95	0.48
10:B:37:C:H2'	13:E:46:GLN:HB3	1.94	0.48
10:B:162:U:O2'	10:B:163:C:H5'	2.13	0.48
10:B:200:U:C5'	34:Z:20:ASN:HB3	2.28	0.48
10:B:208:C:H2'	10:B:209:C:H6	1.78	0.48
10:B:233:A:N6	10:B:428:A:H61	2.11	0.48
10:B:268:C:N4	10:B:269:C:N4	2.60	0.48
10:B:272:A:N3	10:B:273:G:H8	2.11	0.48
10:B:299:A:C5	10:B:322:A:C4	3.01	0.48
10:B:320:A:N9	13:E:132:LYS:HB3	2.27	0.48
10:B:325:G:C2	10:B:326:G:C4	3.00	0.48
10:B:328:U:C5'	29:U:65:GLN:CD	2.85	0.48
10:B:559:G:H1'	25:Q:55:GLN:HE22	1.76	0.48
10:B:587:C:O5'	10:B:587:C:H6	1.96	0.48
10:B:727:A:OP1	10:B:1431:A:O2'	2.27	0.48
10:B:1041:G:C6	10:B:1115:G:C6	3.00	0.48
10:B:1095:A:H2	17:I:26:ALA:HA	1.78	0.48
10:B:1141:U:OP1	18:J:27:ARG:HD3	2.13	0.48
10:B:1692:U:H2'	10:B:1694:C:C5	2.47	0.48
10:B:2398:U:H2'	10:B:2399:G:C8	2.48	0.48
10:B:2578:G:H1'	12:D:145:SER:CB	2.20	0.48
10:B:2649:C:H2'	10:B:2650:U:H6	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2700:A:H2'	10:B:2701:U:H6	1.77	0.48
11:C:164:VAL:O	11:C:164:VAL:HG12	2.12	0.48
11:C:174:ARG:HG3	11:C:180:MET:SD	2.53	0.48
12:D:13:ARG:HA	12:D:13:ARG:NH1	2.28	0.48
12:D:62:LYS:HE3	12:D:62:LYS:N	2.27	0.48
13:E:43:THR:HG23	13:E:44:ARG:CZ	2.42	0.48
14:F:144:LYS:HG2	14:F:144:LYS:O	2.13	0.48
14:F:165:GLY:HA2	14:F:168:LEU:HD11	1.95	0.48
15:G:37:ASN:HB3	15:G:63:GLN:HE22	1.78	0.48
17:I:19:PRO:HB2	17:I:22:PRO:HD2	1.95	0.48
20:L:61:LEU:HD13	20:L:61:LEU:N	2.28	0.48
20:L:77:ILE:HG22	20:L:78:ARG:NH2	2.28	0.48
23:O:8:ILE:HG23	23:O:9:ARG:N	2.26	0.48
24:P:45:VAL:HG21	24:P:73:PHE:HD2	1.77	0.48
25:Q:95:ALA:C	25:Q:97:ILE:H	2.21	0.48
28:T:29:THR:HG22	28:T:86:THR:HG22	1.94	0.48
28:T:29:THR:HG22	28:T:86:THR:HA	1.94	0.48
30:V:78:GLN:HB2	30:V:88:HIS:O	2.13	0.48
32:X:45:GLN:H	32:X:45:GLN:HE21	1.61	0.48
1:0:14:MET:HE3	10:B:2045:C:H5''	1.95	0.48
2:1:15:GLY:HA3	2:1:47:ILE:HD12	1.95	0.48
10:B:84:A:O5'	29:U:91:LYS:HD3	2.13	0.48
10:B:350:G:N7	10:B:351:C:C4	2.81	0.48
10:B:1009:A:O2'	25:Q:61:ILE:HD11	2.13	0.48
10:B:1055:G:C2'	10:B:1056:G:H5'	2.43	0.48
10:B:1255:U:C2	13:E:67:ARG:HA	2.48	0.48
10:B:1300:G:H4'	10:B:1301:A:O5'	2.13	0.48
10:B:1516:G:HO2'	10:B:1517:G:H5'	1.76	0.48
10:B:1652:A:H62	22:N:11:ASN:HD21	1.61	0.48
10:B:2334:U:OP2	23:O:7:ARG:HA	2.13	0.48
10:B:2634:A:H2'	10:B:2635:A:C8	2.48	0.48
10:B:2821:A:H2'	10:B:2822:G:C8	2.48	0.48
10:B:2848:G:C5	24:P:96:LEU:HD23	2.48	0.48
11:C:16:VAL:HA	11:C:17:LYS:HE2	1.95	0.48
11:C:38:LYS:HD3	11:C:39:SER:O	2.12	0.48
11:C:168:GLY:O	11:C:169:ALA:HB3	2.14	0.48
12:D:34:VAL:CG2	12:D:93:GLY:HA3	2.42	0.48
12:D:51:THR:O	12:D:52:THR:HB	2.11	0.48
12:D:83:ARG:O	12:D:84:LEU:HB3	2.13	0.48
12:D:125:TRP:O	12:D:126:ASN:HB2	2.12	0.48
12:D:141:ARG:O	12:D:142:VAL:C	2.54	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:E:57:LYS:HA	13:E:57:LYS:HE3	1.94	0.48
15:G:136:ASP:O	15:G:140:ILE:HG23	2.13	0.48
17:I:7:TYR:HB2	17:I:59:THR:HA	1.93	0.48
17:I:17:ALA:C	17:I:19:PRO:HD2	2.37	0.48
19:K:103:VAL:HG22	19:K:121:GLU:O	2.13	0.48
21:M:101:VAL:C	21:M:102:LEU:HD12	2.37	0.48
24:P:77:SER:N	24:P:78:PRO:CD	2.76	0.48
27:S:32:ALA:HA	27:S:51:LEU:HD11	1.94	0.48
27:S:47:VAL:O	27:S:51:LEU:HB2	2.13	0.48
30:V:21:ARG:HE	30:V:87:GLN:HB3	1.78	0.48
31:W:23:LYS:HG3	31:W:24:ARG:N	2.23	0.48
31:W:40:ARG:HG3	31:W:40:ARG:HH11	1.78	0.48
32:X:38:GLN:HG2	32:X:39:GLN:N	2.29	0.48
1:0:27:LEU:C	1:0:36:LYS:HD3	2.38	0.48
1:0:32:THR:HG22	1:0:32:THR:O	2.13	0.48
10:B:38:A:H1'	13:E:44:ARG:HA	1.95	0.48
10:B:297:G:N2	10:B:342:A:C4	2.81	0.48
10:B:345:A:N3	10:B:347:A:N6	2.61	0.48
10:B:348:A:H2	10:B:349:U:C2	2.17	0.48
10:B:356:G:O2'	10:B:357:C:H5'	2.13	0.48
10:B:540:C:H2'	10:B:541:A:H8	1.77	0.48
10:B:825:A:H2'	10:B:826:U:O4'	2.12	0.48
10:B:1053:C:N4	10:B:1107:G:N1	2.61	0.48
10:B:1144:A:O2'	10:B:1145:C:H5'	2.13	0.48
10:B:1948:G:O2'	10:B:1949:G:H5'	2.13	0.48
12:D:11:MET:HE2	12:D:12:THR:O	2.13	0.48
12:D:128:ARG:NE	12:D:129:THR:O	2.46	0.48
13:E:122:GLU:OE1	13:E:152:GLU:HG3	2.14	0.48
14:F:151:LEU:CD2	14:F:153:ILE:HD11	2.37	0.48
16:H:30:LEU:HD13	16:H:35:LYS:HD3	1.94	0.48
16:H:89:LYS:HZ3	16:H:90:LEU:H	1.60	0.48
17:I:49:GLU:HG2	17:I:54:ILE:HD11	1.94	0.48
20:L:27:LEU:C	20:L:29:LYS:N	2.61	0.48
20:L:117:THR:OG1	20:L:118:THR:N	2.45	0.48
21:M:8:LYS:HE2	21:M:8:LYS:N	2.27	0.48
25:Q:19:GLN:O	25:Q:20:ALA:C	2.55	0.48
25:Q:33:VAL:CG2	25:Q:37:ALA:HB3	2.41	0.48
25:Q:93:ILE:C	25:Q:95:ALA:N	2.69	0.48
26:R:42:ALA:HA	26:R:54:VAL:HG13	1.94	0.48
27:S:6:LYS:HB3	27:S:104:THR:HA	1.96	0.48
28:T:58:VAL:HA	28:T:85:VAL:HA	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:W:2:HIS:CE1	31:W:4:LYS:HB3	2.48	0.48
31:W:44:PHE:CE2	31:W:80:SER:HA	2.49	0.48
31:W:45:HIS:CE1	31:W:64:GLY:HA3	2.49	0.48
8:7:157:U:H2'	8:7:158:G:C8	2.47	0.48
10:B:64:A:N6	10:B:91:A:N6	2.62	0.48
10:B:211:C:O2'	10:B:212:G:H5'	2.13	0.48
10:B:300:A:P	10:B:300:A:H8	2.37	0.48
10:B:301:G:N2	10:B:315:G:H22	2.11	0.48
10:B:324:A:C6	10:B:339:U:C5'	2.97	0.48
10:B:338:G:C2'	10:B:339:U:C5'	2.86	0.48
10:B:348:A:N3	10:B:349:U:C6	2.80	0.48
10:B:351:C:C2'	10:B:352:A:H8	1.94	0.48
10:B:1056:G:N2	10:B:1104:C:H42	2.11	0.48
10:B:1445:G:C2	10:B:1547:C:N3	2.81	0.48
10:B:1549:A:C2	10:B:1550:C:C5	3.01	0.48
10:B:1563:U:H2'	10:B:1564:C:C6	2.48	0.48
10:B:1957:C:H2'	10:B:1958:C:C6	2.48	0.48
10:B:2053:G:OP1	12:D:149:ASN:C	2.56	0.48
10:B:2152:G:H2'	10:B:2153:C:C6	2.49	0.48
10:B:2185:U:H2'	10:B:2186:G:H8	1.78	0.48
11:C:10:PRO:CD	11:C:202:ARG:HH12	2.27	0.48
12:D:92:VAL:HG13	12:D:93:GLY:N	2.23	0.48
16:H:1:MET:H1	16:H:23:ALA:HB2	1.78	0.48
16:H:50:ARG:CB	16:H:51:ARG:CB	2.86	0.48
17:I:64:ARG:HD2	17:I:64:ARG:C	2.39	0.48
18:J:52:ASP:CG	18:J:53:TYR:H	2.20	0.48
19:K:2:ILE:HG22	19:K:67:LYS:HZ2	1.78	0.48
20:L:124:GLY:O	20:L:125:LEU:HB2	2.13	0.48
21:M:22:GLN:HG2	21:M:23:GLY:N	2.27	0.48
21:M:65:ILE:HG22	21:M:101:VAL:HG12	1.95	0.48
24:P:7:LEU:O	24:P:11:GLN:HG2	2.13	0.48
24:P:85:VAL:O	24:P:87:ARG:NH1	2.46	0.48
29:U:5:ARG:HG2	29:U:6:ARG:N	2.28	0.48
31:W:56:HIS:CE1	31:W:58:LEU:HB2	2.48	0.48
34:Z:59:ARG:HG3	34:Z:62:LYS:CB	2.44	0.48
4:3:41:ARG:HB3	4:3:43:LEU:CD2	2.42	0.48
5:4:7:VAL:HG12	5:4:8:LYS:H	1.79	0.48
6:5:375:ARG:O	6:5:379:ILE:HG13	2.14	0.48
9:A:74:U:H2'	9:A:75:G:O4'	2.13	0.48
10:B:84:A:C3'	29:U:5:ARG:HD2	2.40	0.48
10:B:125:A:H3'	10:B:126:A:H5'	1.93	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:301:G:C2	10:B:317:G:N7	2.71	0.48
10:B:310:A:C8	10:B:312:G:C5	3.00	0.48
10:B:313:G:C4	10:B:314:C:C6	3.01	0.48
10:B:319:G:N1	10:B:320:A:C6	2.82	0.48
10:B:396:G:C4'	34:Z:28:VAL:HG21	2.22	0.48
10:B:1525:A:N3	10:B:1526:C:C6	2.82	0.48
10:B:1947:C:O2'	10:B:1948:G:H5'	2.13	0.48
11:C:141:HIS:N	11:C:193:GLU:OE2	2.46	0.48
12:D:33:ARG:C	12:D:35:THR:H	2.21	0.48
12:D:86:GLU:CG	12:D:87:GLY:H	2.27	0.48
12:D:111:GLY:HA3	12:D:194:PRO:O	2.13	0.48
12:D:113:SER:O	12:D:167:ASN:HA	2.13	0.48
12:D:135:GLY:C	12:D:137:SER:N	2.68	0.48
21:M:95:LEU:HD22	21:M:98:PRO:CG	2.44	0.48
24:P:18:SER:C	24:P:20:ARG:H	2.21	0.48
25:Q:16:ILE:HD12	25:Q:17:LEU:H	1.77	0.48
25:Q:35:PHE:HB3	25:Q:39:ILE:HD12	1.94	0.48
25:Q:105:PHE:O	25:Q:109:VAL:HG13	2.13	0.48
29:U:70:ALA:O	29:U:72:PHE:N	2.47	0.48
31:W:43:LYS:O	31:W:45:HIS:N	2.47	0.48
34:Z:59:ARG:CG	34:Z:62:LYS:HB2	2.44	0.48
1:0:35:GLU:OE1	1:0:43:THR:HG22	2.14	0.48
2:1:20:TYR:O	2:1:21:THR:HB	2.13	0.48
8:7:111:G:H2'	8:7:112:G:C8	2.49	0.48
9:A:49:C:OP2	23:O:30:ARG:NH2	2.47	0.48
10:B:189:G:OP1	34:Z:24:ILE:HD12	2.13	0.48
10:B:209:C:H2'	10:B:210:C:C6	2.49	0.48
10:B:269:C:C2	10:B:270:A:N7	2.81	0.48
10:B:347:A:C2'	10:B:348:A:H5'	2.44	0.48
10:B:639:U:H2'	10:B:640:C:H6	1.79	0.48
10:B:923:G:O2'	10:B:924:G:H5'	2.13	0.48
10:B:1091:G:H2'	10:B:1092:C:H5'	1.94	0.48
10:B:1159:U:H2'	10:B:1160:G:H8	1.78	0.48
10:B:1171:G:H2'	10:B:1172:C:C1'	2.43	0.48
10:B:1287:A:H3'	10:B:1288:G:N2	2.28	0.48
10:B:1295:C:H2'	10:B:1296:G:C8	2.49	0.48
10:B:1400:U:H2'	10:B:1401:G:H8	1.77	0.48
10:B:1528:A:O2'	10:B:1529:G:H5'	2.14	0.48
10:B:1539:U:N3	10:B:1540:G:N7	2.61	0.48
10:B:1541:C:O2'	10:B:1542:U:O4'	2.29	0.48
10:B:2379:G:H5'	23:O:20:GLU:OE1	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2461:A:H2'	10:B:2462:C:H6	1.78	0.48
10:B:2518:A:H2'	10:B:2518:A:N3	2.28	0.48
11:C:143:VAL:HG12	11:C:144:GLU:N	2.19	0.48
12:D:13:ARG:NH1	24:P:12:MET:SD	2.87	0.48
12:D:181:ASP:O	12:D:184:ARG:HB3	2.13	0.48
14:F:32:LYS:O	14:F:156:THR:N	2.42	0.48
15:G:75:VAL:HG23	15:G:76:ILE:N	2.28	0.48
16:H:37:VAL:O	16:H:38:PRO:C	2.56	0.48
17:I:7:TYR:CD1	17:I:7:TYR:C	2.91	0.48
18:J:120:ARG:O	18:J:122:LEU:N	2.37	0.48
19:K:36:GLY:HA2	19:K:62:VAL:O	2.12	0.48
25:Q:21:LYS:HB3	25:Q:23:TYR:CD1	2.48	0.48
26:R:53:PHE:HA	26:R:54:VAL:HB	1.96	0.48
26:R:58:VAL:HG22	26:R:59:ILE:N	2.28	0.48
27:S:71:VAL:CG2	27:S:107:VAL:HG12	2.44	0.48
29:U:3:LYS:NZ	29:U:3:LYS:HB2	2.27	0.48
29:U:44:HIS:ND1	29:U:45:GLN:N	2.60	0.48
29:U:78:LYS:HB3	29:U:96:LYS:CB	2.43	0.48
10:B:289:G:C4	10:B:290:U:C5	3.01	0.48
10:B:314:C:H6	10:B:314:C:O5'	1.97	0.48
10:B:321:U:H5''	13:E:131:THR:N	2.29	0.48
10:B:363:G:N2	10:B:364:C:O2	2.47	0.48
10:B:478:A:H5''	10:B:479:A:OP2	2.13	0.48
10:B:782:A:O2'	11:C:223:ALA:HB1	2.13	0.48
10:B:807:U:O2'	10:B:808:G:H5'	2.14	0.48
10:B:1094:U:H2'	10:B:1096:A:OP2	2.14	0.48
10:B:1269:A:H2'	10:B:1270:C:C6	2.48	0.48
10:B:1477:A:H1'	10:B:1515:A:C2	2.16	0.48
10:B:1477:A:H2'	10:B:1478:G:O4'	2.14	0.48
10:B:1583:A:H4'	10:B:1585:C:N3	2.29	0.48
10:B:2398:U:H2'	10:B:2399:G:H8	1.77	0.48
10:B:2512:C:O2'	12:D:146:ILE:HG21	2.13	0.48
11:C:179:GLU:OE1	11:C:267:VAL:HG22	2.14	0.48
12:D:4:LEU:HD23	12:D:49:GLN:HG2	1.96	0.48
17:I:81:LYS:HG3	17:I:82:ALA:N	2.29	0.48
19:K:11:ALA:HB3	19:K:85:VAL:HG23	1.94	0.48
20:L:96:LYS:O	20:L:100:ILE:HD12	2.14	0.48
20:L:140:GLY:O	20:L:141:LYS:O	2.32	0.48
22:N:28:LEU:HD22	22:N:48:VAL:HG11	1.95	0.48
23:O:41:ALA:CB	23:O:45:SER:HB3	2.43	0.48
26:R:39:LEU:CD1	26:R:60:LYS:HB2	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:T:31:VAL:CG1	28:T:82:LYS:HE3	2.43	0.48
29:U:44:HIS:HB3	29:U:56:GLY:O	2.13	0.48
29:U:46:LYS:HB2	29:U:53:GLN:HE22	1.75	0.48
29:U:59:GLU:OE1	29:U:60:LYS:N	2.47	0.48
29:U:73:ASN:HB2	29:U:96:LYS:HZ3	1.79	0.48
31:W:44:PHE:HB3	31:W:76:ARG:HG2	1.95	0.48
10:B:32:C:H5'	10:B:1238:G:OP1	2.14	0.48
10:B:39:G:H2'	10:B:40:U:H6	1.78	0.48
10:B:273:G:N1	10:B:274:C:C4	2.82	0.48
10:B:320:A:H5''	13:E:130:LYS:NZ	2.28	0.48
10:B:350:G:C6	10:B:351:C:N3	2.82	0.48
10:B:401:A:H2'	10:B:402:A:C8	2.49	0.48
10:B:580:U:O2'	10:B:581:C:H5'	2.14	0.48
10:B:765:C:H2'	10:B:766:U:C6	2.48	0.48
10:B:984:A:P	10:B:985:C:H41	2.37	0.48
10:B:1168:G:H2'	10:B:1169:A:O4'	2.13	0.48
10:B:1513:U:H2'	10:B:1514:G:O4'	2.14	0.48
10:B:1526:C:O2	10:B:1546:G:N2	2.46	0.48
10:B:1656:C:H2'	10:B:1657:U:H6	1.77	0.48
10:B:1661:G:O2'	10:B:1662:U:H5'	2.13	0.48
10:B:1666:G:C2'	10:B:1667:G:H5'	2.43	0.48
10:B:1818:U:H5''	11:C:155:ARG:HG2	1.95	0.48
10:B:1999:C:H5''	10:B:2723:C:O2'	2.14	0.48
10:B:2247:A:H3'	36:B:3166:HOH:O	2.12	0.48
10:B:2329:U:H2'	10:B:2330:G:C8	2.49	0.48
10:B:2692:G:O2'	10:B:2693:G:H5'	2.14	0.48
11:C:84:PRO:O	11:C:86:ARG:N	2.40	0.48
11:C:248:GLY:HA3	11:C:252:LYS:HE3	1.95	0.48
12:D:2:ILE:CG2	12:D:204:LYS:HA	2.33	0.48
12:D:16:THR:HG23	12:D:17:GLU:N	2.21	0.48
15:G:40:VAL:CG2	15:G:53:PRO:HA	2.44	0.48
16:H:4:ILE:O	16:H:37:VAL:HG12	2.14	0.48
16:H:41:LYS:O	16:H:42:LYS:C	2.56	0.48
18:J:58:ASN:HA	18:J:126:ALA:CA	2.44	0.48
19:K:20:MET:O	19:K:42:THR:N	2.47	0.48
21:M:62:LYS:CB	21:M:104:GLU:HB2	2.44	0.48
21:M:65:ILE:HA	21:M:101:VAL:HA	1.94	0.48
21:M:109:PRO:O	21:M:112:LEU:HB2	2.14	0.48
24:P:13:LYS:HE3	24:P:77:SER:HB3	1.96	0.48
24:P:62:LYS:HG2	24:P:74:GLN:OE1	2.13	0.48
25:Q:47:ARG:NE	25:Q:47:ARG:HA	2.26	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:W:46:ALA:O	31:W:55:ASP:O	2.32	0.48
31:W:66:VAL:O	31:W:67:LYS:C	2.56	0.48
32:X:43:LEU:HA	32:X:47:ARG:HB3	1.96	0.48
4:3:44:ARG:CB	4:3:45:PRO:HD2	2.43	0.48
10:B:416:U:H2'	10:B:417:C:H6	1.79	0.48
10:B:822:G:H2'	10:B:823:C:H6	1.79	0.48
10:B:1042:G:N3	10:B:1042:G:H2'	2.29	0.48
10:B:1062:G:N2	17:I:134:SER:OG	2.45	0.48
10:B:1205:A:H4'	10:B:1206:G:OP2	2.13	0.48
10:B:1230:A:H2'	10:B:1231:U:H6	1.78	0.48
10:B:1965:C:H5''	10:B:1966:A:H2'	1.96	0.48
10:B:2076:U:O4'	10:B:2076:U:O2	2.29	0.48
10:B:2331:G:H2'	10:B:2332:C:H6	1.79	0.48
10:B:2543:G:H2'	10:B:2544:G:O4'	2.14	0.48
11:C:13:ARG:O	11:C:15:VAL:HG23	2.14	0.48
11:C:27:LYS:HA	11:C:79:ARG:HH12	1.78	0.48
11:C:87:SER:O	11:C:155:ARG:NH2	2.47	0.48
11:C:205:GLY:O	11:C:206:LYS:HG2	2.14	0.48
12:D:122:VAL:HG21	12:D:141:ARG:HA	1.96	0.48
12:D:127:PHE:O	12:D:128:ARG:HB2	2.14	0.48
12:D:170:VAL:HG21	12:D:194:PRO:CG	2.42	0.48
14:F:14:LYS:O	14:F:18:GLU:HB3	2.13	0.48
14:F:75:GLY:O	14:F:76:PHE:HB2	2.13	0.48
17:I:48:ILE:O	17:I:49:GLU:HB3	2.14	0.48
20:L:82:LEU:HD22	20:L:82:LEU:HA	1.49	0.48
20:L:110:VAL:HB	20:L:126:ARG:HH22	1.77	0.48
20:L:133:ALA:C	20:L:136:GLU:HG2	2.39	0.48
22:N:8:ARG:CZ	22:N:46:ARG:HD2	2.44	0.48
22:N:29:VAL:HB	22:N:75:ILE:HG12	1.96	0.48
22:N:36:THR:O	22:N:40:LYS:HB2	2.14	0.48
23:O:41:ALA:O	23:O:42:PRO:C	2.56	0.48
27:S:3:THR:HG23	27:S:107:VAL:HG23	1.95	0.48
27:S:4:ILE:HG22	27:S:5:ALA:H	1.78	0.48
30:V:26:PHE:HB2	30:V:27:PRO:HD2	1.95	0.48
3:2:7:PRO:CG	10:B:1309:G:H4'	2.43	0.48
6:5:425:ARG:NH2	10:B:490:C:H5	2.11	0.48
8:7:156:A:H2'	8:7:157:U:O4'	2.14	0.48
10:B:230:G:H2'	10:B:231:A:C8	2.48	0.48
10:B:285:G:C5	10:B:356:G:N2	2.82	0.48
10:B:350:G:C8	10:B:351:C:C5	3.02	0.48
10:B:570:G:O2'	10:B:571:U:H5'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:757:G:H2'	10:B:758:C:H5'	1.95	0.48
10:B:1041:G:N1	10:B:1115:G:C5	2.82	0.48
10:B:1069:A:C4	10:B:1073:A:N7	2.81	0.48
10:B:1156:A:N6	25:Q:47:ARG:HD3	2.29	0.48
10:B:1359:A:H2'	10:B:1360:G:O4'	2.13	0.48
10:B:1526:C:HO2'	10:B:1527:G:H5'	1.79	0.48
10:B:1531:C:C2'	10:B:1532:A:C8	2.86	0.48
10:B:1986:C:O2'	10:B:1987:A:H5'	2.14	0.48
10:B:2147:A:H5'	10:B:2148:G:C4'	2.44	0.48
10:B:2322:A:N6	10:B:2333:A:H62	2.10	0.48
10:B:2373:G:H2'	10:B:2374:C:C6	2.49	0.48
10:B:2776:A:H4'	10:B:2777:G:O5'	2.13	0.48
11:C:16:VAL:O	11:C:16:VAL:HG12	2.14	0.48
11:C:140:VAL:HG23	11:C:141:HIS:N	2.28	0.48
12:D:61:THR:HB	12:D:62:LYS:CE	2.43	0.48
12:D:200:ASP:O	12:D:201:LEU:HB2	2.13	0.48
13:E:191:ASP:C	13:E:193:VAL:H	2.22	0.48
14:F:133:GLU:O	14:F:134:GLN:HB2	2.14	0.48
16:H:89:LYS:HE3	16:H:123:ARG:HB2	1.96	0.48
17:I:14:ALA:HB1	17:I:50:LYS:HA	1.95	0.48
21:M:64:TRP:O	21:M:102:LEU:N	2.47	0.48
22:N:17:ARG:O	22:N:21:PHE:HB2	2.14	0.48
22:N:19:ALA:O	22:N:21:PHE:N	2.47	0.48
23:O:20:GLU:HB3	23:O:23:ALA:HB2	1.96	0.48
23:O:64:TYR:CE2	23:O:74:VAL:HG21	2.49	0.48
23:O:71:ALA:O	23:O:74:VAL:HG23	2.14	0.48
24:P:29:VAL:O	24:P:30:TRP:C	2.56	0.48
25:Q:47:ARG:HH12	25:Q:50:ARG:HD2	1.79	0.48
25:Q:52:ARG:CZ	25:Q:55:GLN:HG2	2.43	0.48
29:U:44:HIS:CE1	29:U:47:PRO:CD	2.90	0.48
29:U:96:LYS:HE2	29:U:98:ASN:HB3	1.95	0.48
4:3:24:LYS:NZ	20:L:63:LYS:N	2.56	0.47
9:A:27:C:H3'	9:A:28:C:H6	1.78	0.47
9:A:112:G:O2'	9:A:113:C:H5'	2.14	0.47
10:B:19:A:H2'	10:B:20:C:H6	1.78	0.47
10:B:84:A:OP2	29:U:91:LYS:CG	2.62	0.47
10:B:299:A:C4	10:B:322:A:C4	3.01	0.47
10:B:320:A:OP2	13:E:132:LYS:CE	2.62	0.47
10:B:359:G:H2'	10:B:360:U:C5'	2.44	0.47
10:B:636:G:O6	20:L:76:GLU:HG2	2.14	0.47
10:B:1035:U:O2'	10:B:1036:G:H5'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1042:G:N2	10:B:1043:C:N1	2.62	0.47
10:B:1133:A:H4'	10:B:1134:A:H5''	1.95	0.47
10:B:1188:U:C2'	10:B:1189:A:H5'	2.44	0.47
10:B:1351:C:H4'	10:B:1572:A:O4'	2.14	0.47
10:B:1413:A:H2'	10:B:1414:C:C6	2.49	0.47
10:B:1439:A:N7	10:B:1440:U:N1	2.62	0.47
10:B:1439:A:N7	10:B:1440:U:C6	2.82	0.47
10:B:1444:G:C2	10:B:1548:A:C2	3.02	0.47
10:B:1514:G:OP1	10:B:1514:G:H4'	2.14	0.47
10:B:1528:A:H61	10:B:1543:G:HO2'	1.57	0.47
10:B:1553:A:C8	10:B:1555:G:C5	3.02	0.47
10:B:1599:U:H2'	10:B:1600:C:H6	1.78	0.47
10:B:1870:C:H3'	10:B:1871:A:C8	2.49	0.47
10:B:2648:G:H2'	10:B:2649:C:C6	2.48	0.47
11:C:24:HIS:HB2	11:C:27:LYS:HE3	1.96	0.47
11:C:137:GLY:C	11:C:139:THR:N	2.69	0.47
11:C:156:SER:O	11:C:194:VAL:O	2.32	0.47
12:D:84:LEU:O	12:D:85:ALA:HB3	2.14	0.47
12:D:154:LYS:HZ1	18:J:81:ILE:HG21	1.78	0.47
13:E:58:LYS:HB3	13:E:71:GLY:C	2.39	0.47
13:E:78:TRP:N	13:E:78:TRP:HE3	2.11	0.47
13:E:151:GLY:HA2	13:E:171:ASP:HA	1.95	0.47
16:H:98:ASP:O	16:H:102:ALA:HB2	2.13	0.47
16:H:114:GLU:O	16:H:133:GLN:HB3	2.14	0.47
20:L:38:GLN:N	20:L:41:ARG:CD	2.77	0.47
20:L:71:ALA:HB1	20:L:74:THR:OG1	2.14	0.47
20:L:94:THR:OG1	20:L:103:ILE:HB	2.14	0.47
21:M:73:ILE:CD1	21:M:92:TRP:H	2.27	0.47
21:M:133:LYS:HZ1	30:V:77:VAL:HG12	1.79	0.47
23:O:26:LEU:HD13	23:O:92:PHE:O	2.14	0.47
24:P:52:ARG:HH11	24:P:54:LEU:HB2	1.79	0.47
24:P:59:THR:HA	24:P:76:HIS:HA	1.95	0.47
24:P:59:THR:C	24:P:60:VAL:HG22	2.39	0.47
25:Q:75:TYR:CZ	25:Q:79:ILE:HD11	2.49	0.47
26:R:5:PHE:N	26:R:12:HIS:CB	2.77	0.47
27:S:20:VAL:O	27:S:23:LEU:HB2	2.14	0.47
4:3:44:ARG:HB3	4:3:45:PRO:CD	2.43	0.47
9:A:54:G:H2'	9:A:55:U:H6	1.79	0.47
10:B:39:G:H2'	10:B:40:U:C6	2.48	0.47
10:B:333:G:C5	10:B:334:C:C4	2.99	0.47
10:B:355:U:O2'	10:B:356:G:H5'	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:418:C:H2'	10:B:419:U:H6	1.75	0.47
10:B:490:C:H3'	10:B:491:G:H5''	1.96	0.47
10:B:526:A:N6	10:B:2626:C:H4'	2.29	0.47
10:B:1054:A:H2'	10:B:1055:G:C8	2.47	0.47
10:B:1104:C:H2'	10:B:1105:U:H5'	1.94	0.47
10:B:1170:C:O2'	10:B:1171:G:H5'	2.15	0.47
10:B:1172:C:H2'	10:B:1173:U:O4'	2.14	0.47
10:B:1230:A:H2'	10:B:1231:U:C6	2.49	0.47
10:B:1241:A:H2'	10:B:1242:U:H5'	1.96	0.47
10:B:2052:A:H2'	10:B:2052:A:N3	2.29	0.47
10:B:2221:G:H2'	10:B:2222:C:C6	2.50	0.47
10:B:2472:G:H2'	10:B:2475:C:H42	1.79	0.47
10:B:2553:G:H2'	10:B:2554:U:C4'	2.45	0.47
10:B:2761:A:H1'	15:G:142:GLN:NE2	2.29	0.47
12:D:38:LYS:N	12:D:38:LYS:CD	2.77	0.47
12:D:88:GLU:C	12:D:90:PHE:H	2.22	0.47
16:H:7:ASP:O	16:H:9:VAL:HG23	2.14	0.47
16:H:56:ALA:HB3	16:H:57:LYS:NZ	2.29	0.47
18:J:43:GLU:HB3	25:Q:99:VAL:HG12	1.96	0.47
19:K:33:ALA:HB3	19:K:39:ILE:HD11	1.96	0.47
20:L:133:ALA:HA	20:L:136:GLU:OE2	2.13	0.47
22:N:65:LEU:HD12	22:N:68:ALA:HB3	1.96	0.47
24:P:11:GLN:O	24:P:12:MET:HG3	2.13	0.47
25:Q:59:LEU:HD11	25:Q:63:ARG:NH2	2.29	0.47
29:U:27:VAL:HB	29:U:33:VAL:HG13	1.95	0.47
34:Z:59:ARG:HE	34:Z:62:LYS:CE	2.27	0.47
1:0:6:LYS:HA	1:0:7:PRO:HD3	1.68	0.47
1:0:11:LYS:C	1:0:13:GLY:H	2.22	0.47
1:0:35:GLU:C	1:0:37:HIS:N	2.72	0.47
1:0:39:ARG:HH12	22:N:99:LYS:CE	2.27	0.47
4:3:13:PHE:O	4:3:13:PHE:CG	2.68	0.47
5:4:25:VAL:HB	5:4:33:HIS:C	2.39	0.47
10:B:308:G:C5	10:B:309:A:C6	3.02	0.47
10:B:326:G:C2'	10:B:327:G:C5'	2.92	0.47
10:B:582:A:H2'	10:B:583:G:C8	2.49	0.47
10:B:811:U:OP2	20:L:31:GLY:HA2	2.13	0.47
10:B:1068:G:N1	10:B:1069:A:N6	2.61	0.47
10:B:1156:A:N6	25:Q:47:ARG:CD	2.77	0.47
10:B:1919:A:H2'	10:B:1920:C:H5'	1.95	0.47
10:B:2070:A:H2'	10:B:2071:A:O4'	2.14	0.47
10:B:2083:G:H2'	10:B:2084:C:C6	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2331:G:C5'	31:W:70:VAL:HG13	2.43	0.47
11:C:64:VAL:HB	11:C:65:ASP:H	1.33	0.47
11:C:227:VAL:HG12	11:C:228:ASP:N	2.29	0.47
13:E:18:THR:O	13:E:19:PHE:C	2.57	0.47
16:H:100:ALA:HB1	16:H:110:VAL:CG2	2.44	0.47
18:J:35:ARG:CZ	18:J:40:HIS:HB2	2.45	0.47
18:J:100:VAL:HG22	18:J:101:ILE:N	2.27	0.47
19:K:107:LEU:O	19:K:107:LEU:HD12	2.14	0.47
20:L:85:VAL:HG21	20:L:98:ALA:N	2.16	0.47
20:L:109:LYS:HA	20:L:126:ARG:CB	2.44	0.47
20:L:127:VAL:HB	20:L:128:THR:H	1.32	0.47
21:M:73:ILE:HD13	21:M:90:GLU:HG2	1.94	0.47
22:N:116:VAL:CG2	22:N:117:ASP:H	2.05	0.47
25:Q:101:ASP:OD2	25:Q:104:ALA:HB2	2.14	0.47
30:V:16:ALA:HA	30:V:19:ARG:NE	2.29	0.47
32:X:36:GLN:H	32:X:36:GLN:CD	2.21	0.47
3:2:35:ARG:HH12	3:2:39:ARG:HG2	1.80	0.47
4:3:24:LYS:HD2	20:L:64:PHE:H	1.78	0.47
9:A:30:C:H1'	9:A:58:A:N1	2.29	0.47
10:B:295:G:C4	10:B:296:U:C5	3.03	0.47
10:B:320:A:OP2	13:E:132:LYS:HE2	2.14	0.47
10:B:324:A:C6	10:B:339:U:C4'	2.97	0.47
10:B:356:G:H8	10:B:356:G:O5'	1.96	0.47
10:B:673:C:H5''	13:E:76:PRO:HD2	1.96	0.47
10:B:773:U:H4'	11:C:47:ARG:HA	1.95	0.47
10:B:1109:C:N4	10:B:1110:G:O6	2.48	0.47
10:B:1560:G:H2'	10:B:1561:C:H6	1.79	0.47
10:B:2070:A:H2'	10:B:2071:A:C8	2.49	0.47
13:E:44:ARG:CG	13:E:45:ALA:H	2.27	0.47
13:E:72:SER:O	13:E:73:ILE:HD13	2.14	0.47
18:J:29:ALA:O	18:J:33:ALA:N	2.44	0.47
18:J:43:GLU:CB	25:Q:99:VAL:HG12	2.45	0.47
19:K:108:ARG:HG3	19:K:108:ARG:HH11	1.79	0.47
20:L:80:SER:OG	20:L:116:VAL:HG13	2.15	0.47
20:L:117:THR:HG21	20:L:120:VAL:HG11	1.97	0.47
23:O:68:LYS:C	23:O:70:ALA:N	2.72	0.47
25:Q:97:ILE:HD13	25:Q:100:PHE:HZ	1.80	0.47
26:R:35:PHE:HB2	26:R:64:VAL:HG22	1.96	0.47
30:V:61:LEU:O	30:V:71:LYS:HA	2.15	0.47
31:W:21:GLY:HA3	31:W:32:ALA:HB1	1.96	0.47
32:X:14:LEU:CD2	32:X:57:LEU:HB2	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:Z:3:LYS:CD	34:Z:6:HIS:HB3	2.44	0.47
34:Z:5:ILE:HG23	34:Z:63:ARG:HE	1.78	0.47
34:Z:31:ASP:HA	34:Z:47:LYS:O	2.14	0.47
2:1:34:GLU:OE1	2:1:36:LYS:HE2	2.13	0.47
3:2:30:VAL:HA	3:2:33:ARG:HD2	1.96	0.47
4:3:24:LYS:HB2	20:L:64:PHE:CE2	2.50	0.47
6:5:432:LYS:HE3	10:B:1536:C:H5'	1.09	0.47
9:A:94:A:H2'	9:A:95:U:O4'	2.14	0.47
10:B:26:G:H2'	10:B:27:G:C1'	2.44	0.47
10:B:271:G:N1	10:B:366:C:O2'	2.14	0.47
10:B:273:G:N2	10:B:274:C:C1'	2.78	0.47
10:B:327:G:N2	10:B:336:C:C2	2.83	0.47
10:B:342:A:C4	10:B:343:C:C6	3.03	0.47
10:B:358:U:C2'	10:B:359:G:C8	2.86	0.47
10:B:863:A:H2'	10:B:864:G:C8	2.50	0.47
10:B:974:G:O4'	10:B:990:A:N6	2.47	0.47
10:B:1430:G:H2'	10:B:1431:A:H8	1.77	0.47
10:B:1843:C:H4'	11:C:250:GLN:HB3	1.96	0.47
10:B:2221:G:H2'	10:B:2222:C:H6	1.78	0.47
10:B:2331:G:O2'	31:W:69:GLU:CD	2.58	0.47
10:B:2395:C:O5'	10:B:2395:C:H6	1.98	0.47
10:B:2443:C:H2'	10:B:2444:G:C8	2.50	0.47
11:C:141:HIS:O	11:C:143:VAL:HG23	2.14	0.47
11:C:216:ARG:NH1	11:C:217:PRO:HD2	2.29	0.47
13:E:111:GLU:O	13:E:113:VAL:HG12	2.14	0.47
14:F:146:ASP:O	14:F:147:ARG:C	2.57	0.47
15:G:173:ALA:C	15:G:174:LYS:HD2	2.40	0.47
16:H:23:ALA:C	16:H:25:TYR:H	2.23	0.47
16:H:29:PHE:H	16:H:32:PRO:HD2	1.79	0.47
16:H:32:PRO:C	16:H:34:GLY:H	2.21	0.47
17:I:77:VAL:HG23	17:I:78:LEU:N	2.29	0.47
19:K:58:LEU:HB3	19:K:89:ASN:ND2	2.29	0.47
20:L:84:LYS:HA	20:L:84:LYS:HE3	1.97	0.47
20:L:85:VAL:CG1	20:L:86:GLU:HG2	2.44	0.47
20:L:85:VAL:HG12	20:L:86:GLU:CG	2.44	0.47
21:M:38:ARG:HA	21:M:96:ILE:O	2.14	0.47
25:Q:93:ILE:CG2	25:Q:94:LEU:HD13	2.40	0.47
27:S:6:LYS:HB2	27:S:6:LYS:NZ	2.30	0.47
27:S:88:ARG:HB3	27:S:89:ALA:H	1.50	0.47
27:S:106:VAL:HG12	27:S:107:VAL:N	2.28	0.47
28:T:50:LEU:HD22	28:T:50:LEU:N	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:V:4:ILE:HG22	30:V:63:ILE:HG23	1.96	0.47
33:Y:28:LEU:C	33:Y:29:ARG:HG2	2.39	0.47
1:0:11:LYS:O	1:0:12:ARG:HB3	2.15	0.47
2:1:15:GLY:CA	2:1:47:ILE:HD12	2.44	0.47
9:A:52:A:H3'	9:A:53:A:H8	1.80	0.47
9:A:76:G:H2'	9:A:77:U:O4'	2.13	0.47
10:B:278:A:N3	10:B:362:A:H1'	2.30	0.47
10:B:289:G:C6	10:B:290:U:N3	2.83	0.47
10:B:291:G:N7	10:B:350:G:N1	2.61	0.47
10:B:306:U:C2	10:B:312:G:N1	2.83	0.47
10:B:1524:G:N2	10:B:1525:A:C1'	2.73	0.47
10:B:1995:U:OP1	12:D:129:THR:HG22	2.15	0.47
10:B:2617:U:H2'	10:B:2618:G:C5'	2.45	0.47
11:C:103:ILE:CG2	11:C:104:LEU:N	2.78	0.47
11:C:254:LYS:HB3	11:C:255:LYS:H	1.55	0.47
12:D:17:GLU:HA	24:P:80:VAL:HG11	1.97	0.47
13:E:97:ASN:N	13:E:97:ASN:ND2	2.61	0.47
13:E:134:LEU:HD22	13:E:138:LEU:HG	1.97	0.47
14:F:6:TYR:O	14:F:11:VAL:HG23	2.15	0.47
14:F:55:ASP:OD1	14:F:148:VAL:HG11	2.15	0.47
16:H:1:MET:N	16:H:23:ALA:HB2	2.29	0.47
17:I:72:THR:HB	17:I:73:PRO:HD2	1.96	0.47
20:L:82:LEU:O	20:L:117:THR:HG22	2.15	0.47
23:O:67:ASN:CA	23:O:71:ALA:HB3	2.41	0.47
24:P:92:ARG:HH22	24:P:110:LYS:HE2	1.77	0.47
24:P:96:LEU:O	24:P:97:TYR:C	2.57	0.47
27:S:34:ASP:HA	27:S:37:THR:HG22	1.96	0.47
30:V:72:VAL:O	30:V:94:ALA:HB2	2.14	0.47
32:X:47:ARG:O	32:X:47:ARG:HG2	2.13	0.47
1:0:3:GLN:HB2	1:0:6:LYS:HE2	1.96	0.47
1:0:52:LYS:HE2	22:N:118:ARG:CD	2.45	0.47
3:2:35:ARG:O	3:2:39:ARG:HA	2.14	0.47
4:3:20:GLY:O	4:3:21:PHE:C	2.58	0.47
6:5:334:PHE:HA	6:5:337:GLN:HE21	1.78	0.47
9:A:49:C:O2'	9:A:50:A:H5'	2.14	0.47
10:B:233:A:H61	10:B:428:A:H61	1.61	0.47
10:B:277:G:H4'	10:B:278:A:C6	2.50	0.47
10:B:278:A:N3	10:B:278:A:C3'	2.77	0.47
10:B:311:A:N6	10:B:328:U:C2'	2.73	0.47
10:B:320:A:P	13:E:132:LYS:HE2	2.55	0.47
10:B:322:A:H1'	10:B:339:U:O2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:946:C:P	36:B:3290:HOH:O	2.72	0.47
10:B:1439:A:N1	10:B:1552:A:C8	2.83	0.47
10:B:1476:U:C6	10:B:1516:G:C6	3.03	0.47
10:B:1516:G:N2	10:B:1517:G:C1'	2.75	0.47
10:B:1754:A:OP2	24:P:94:ALA:HB1	2.15	0.47
10:B:1771:C:O2'	10:B:1772:A:H5'	2.15	0.47
10:B:1812:U:H2'	10:B:1813:G:H8	1.78	0.47
10:B:1938:A:O2'	10:B:1939:U:H5''	2.15	0.47
10:B:2019:A:O2'	25:Q:32:ARG:NH2	2.47	0.47
10:B:2197:U:O2'	10:B:2198:A:H2'	2.14	0.47
10:B:2213:U:H2'	10:B:2214:C:H5'	1.96	0.47
10:B:2249:U:H4'	10:B:2275:C:C5	2.50	0.47
10:B:2485:G:H1'	21:M:118:LYS:HZ3	1.79	0.47
10:B:2620:C:C4'	12:D:161:MET:HG3	2.45	0.47
10:B:2862:G:H2'	10:B:2863:C:H6	1.79	0.47
11:C:29:PHE:HB2	11:C:31:PRO:HD3	1.94	0.47
11:C:36:ASN:HB3	11:C:63:ILE:HD13	1.96	0.47
11:C:75:ALA:HB2	11:C:95:TYR:CE1	2.50	0.47
12:D:108:ASP:HB3	12:D:173:GLN:HA	1.96	0.47
12:D:130:GLN:O	12:D:140:HIS:ND1	2.48	0.47
12:D:150:GLN:O	12:D:151:THR:HG22	2.15	0.47
12:D:154:LYS:NZ	18:J:81:ILE:HG21	2.29	0.47
13:E:28:VAL:O	13:E:32:VAL:HG23	2.14	0.47
13:E:115:GLN:C	13:E:185:LYS:HG2	2.39	0.47
13:E:144:GLU:C	13:E:146:VAL:N	2.71	0.47
14:F:35:LEU:O	14:F:36:ASN:HB3	2.13	0.47
14:F:135:ILE:C	14:F:137:PHE:N	2.72	0.47
15:G:29:ASN:N	15:G:29:ASN:ND2	2.61	0.47
15:G:104:LEU:HB3	15:G:106:LEU:CD1	2.45	0.47
16:H:50:ARG:CG	16:H:51:ARG:HA	2.45	0.47
19:K:12:ASP:HB3	19:K:85:VAL:HG13	1.97	0.47
19:K:85:VAL:O	19:K:85:VAL:HG12	2.14	0.47
21:M:90:GLU:O	21:M:91:TYR:HB2	2.14	0.47
21:M:109:PRO:HA	21:M:112:LEU:HD22	1.95	0.47
21:M:131:VAL:HG23	21:M:132:THR:H	1.80	0.47
22:N:7:GLY:O	22:N:8:ARG:CB	2.63	0.47
22:N:106:ASP:O	22:N:108:ALA:N	2.48	0.47
24:P:22:GLY:CA	24:P:91:VAL:HG13	2.43	0.47
24:P:29:VAL:O	24:P:44:GLY:HA3	2.15	0.47
24:P:91:VAL:HG12	24:P:92:ARG:N	2.30	0.47
26:R:76:LYS:HE3	26:R:78:ARG:HD2	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:R:90:ARG:NH1	26:R:91:GLN:N	2.62	0.47
27:S:27:LYS:HD2	27:S:27:LYS:N	2.23	0.47
27:S:28:LYS:HA	27:S:31:GLN:HB2	1.96	0.47
28:T:84:TYR:C	28:T:85:VAL:HG13	2.39	0.47
29:U:43:LYS:HZ3	29:U:44:HIS:HA	1.79	0.47
30:V:2:PHE:CB	30:V:61:LEU:HD22	2.45	0.47
30:V:63:ILE:HG22	30:V:65:VAL:HG13	1.97	0.47
30:V:80:HIS:CD2	30:V:83:LYS:HB2	2.50	0.47
30:V:80:HIS:CA	30:V:87:GLN:HE22	2.28	0.47
30:V:82:TYR:N	30:V:82:TYR:CD1	2.83	0.47
31:W:19:ARG:NH2	31:W:71:LYS:HD2	2.30	0.47
34:Z:30:HIS:C	34:Z:48:GLN:HG2	2.39	0.47
34:Z:68:GLY:O	34:Z:69:SER:C	2.56	0.47
2:1:37:LYS:NZ	2:1:46:VAL:HA	2.29	0.47
6:5:350:LEU:HD22	6:5:350:LEU:N	2.29	0.47
6:5:360:ILE:O	6:5:360:ILE:HG23	2.15	0.47
10:B:28:A:O2'	10:B:583:G:H5'	2.14	0.47
10:B:79:C:O3'	10:B:346:A:C8	2.59	0.47
10:B:246:C:C2'	10:B:247:G:H5'	2.45	0.47
10:B:297:G:O6	10:B:298:G:N1	2.48	0.47
10:B:352:A:N6	10:B:353:C:N4	2.63	0.47
10:B:543:G:C2'	10:B:544:C:H5''	2.39	0.47
10:B:832:U:O2'	20:L:53:GLY:HA3	2.15	0.47
10:B:993:G:O2'	10:B:994:C:H5'	2.15	0.47
10:B:1022:G:N2	10:B:1142:A:C2	2.81	0.47
10:B:1410:G:H2'	10:B:1411:U:H6	1.79	0.47
10:B:1526:C:C2'	10:B:1527:G:C8	2.86	0.47
10:B:1531:C:C4	10:B:1532:A:N6	2.83	0.47
10:B:1548:A:C4	10:B:1549:A:N7	2.83	0.47
10:B:1692:U:H2'	10:B:1694:C:C4	2.49	0.47
10:B:1789:A:H5'	11:C:220:ARG:HH21	1.78	0.47
10:B:1936:A:H2	10:B:1943:U:C5	2.32	0.47
10:B:2299:U:H2'	10:B:2300:C:C6	2.50	0.47
10:B:2543:G:H5'	10:B:2543:G:H8	1.79	0.47
10:B:2645:G:H3'	10:B:2646:C:C5'	2.42	0.47
10:B:2819:G:H2'	10:B:2821:A:N7	2.29	0.47
10:B:2860:A:H2'	10:B:2861:U:O4'	2.14	0.47
10:B:2896:C:H2'	10:B:2897:U:C6	2.50	0.47
11:C:78:GLU:CB	11:C:92:LEU:HD23	2.45	0.47
11:C:204:LEU:HD12	11:C:211:ARG:HD3	1.97	0.47
12:D:4:LEU:CD2	12:D:49:GLN:HG2	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:F:107:VAL:HG11	14:F:175:PRO:HB2	1.95	0.47
14:F:148:VAL:O	14:F:149:ARG:C	2.58	0.47
16:H:1:MET:HA	16:H:21:VAL:O	2.15	0.47
16:H:11:ASN:C	16:H:13:GLY:H	2.22	0.47
18:J:5:THR:HB	18:J:45:THR:HG23	1.96	0.47
18:J:41:LYS:HG2	18:J:42:ALA:N	2.30	0.47
18:J:45:THR:CG2	25:Q:63:ARG:HH22	2.28	0.47
18:J:55:ILE:HA	18:J:122:LEU:O	2.14	0.47
18:J:128:ASN:CG	18:J:129:GLU:N	2.73	0.47
19:K:26:GLY:HA3	19:K:30:ARG:NE	2.17	0.47
21:M:6:ARG:HG3	21:M:7:THR:O	2.15	0.47
21:M:33:LEU:CD2	21:M:124:LEU:HG	2.45	0.47
21:M:36:VAL:HG12	30:V:82:TYR:CB	2.45	0.47
21:M:117:PHE:HB2	21:M:124:LEU:HD21	1.97	0.47
22:N:1:MET:SD	22:N:2:ARG:HD3	2.54	0.47
22:N:46:ARG:O	22:N:50:PRO:HG2	2.14	0.47
22:N:57:THR:HG23	22:N:58:ASP:H	1.80	0.47
23:O:30:ARG:O	23:O:31:THR:C	2.57	0.47
24:P:47:ILE:CA	24:P:63:ILE:HG23	2.45	0.47
26:R:23:GLU:HA	26:R:96:VAL:HG13	1.97	0.47
30:V:44:HIS:O	30:V:48:MET:HB3	2.14	0.47
34:Z:8:LYS:HD2	34:Z:9:TYR:N	2.29	0.47
34:Z:59:ARG:HH21	34:Z:62:LYS:HZ1	1.62	0.47
34:Z:64:PHE:C	34:Z:66:ILE:H	2.22	0.47
1:O:42:ILE:HD13	1:O:47:TYR:CE1	2.50	0.47
10:B:137:U:H2'	10:B:138:U:O4'	2.15	0.47
10:B:152:A:H2'	10:B:153:U:C6	2.49	0.47
10:B:291:G:C4	10:B:350:G:C6	2.96	0.47
10:B:296:U:N3	10:B:343:C:C4	2.74	0.47
10:B:309:A:C8	10:B:309:A:P	3.05	0.47
10:B:354:A:C3'	10:B:355:U:C5'	2.86	0.47
10:B:1090:A:C2	10:B:1091:G:C6	3.03	0.47
10:B:2309:A:C5	10:B:2310:C:N3	2.83	0.47
10:B:2671:G:H2'	10:B:2672:U:C6	2.49	0.47
11:C:81:GLU:O	11:C:90:ILE:HG22	2.15	0.47
11:C:155:ARG:O	11:C:156:SER:C	2.57	0.47
11:C:155:ARG:NE	11:C:157:ALA:HB3	2.23	0.47
14:F:33:ILE:HG13	14:F:34:THR:N	2.27	0.47
16:H:66:ASN:C	16:H:68:ARG:H	2.23	0.47
16:H:68:ARG:O	16:H:72:ILE:HG22	2.15	0.47
18:J:93:ILE:CD1	18:J:100:VAL:HG11	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:L:39:LYS:HB2	20:L:46:VAL:HG22	1.97	0.47
20:L:103:ILE:CD1	20:L:105:ILE:H	2.24	0.47
22:N:1:MET:CE	22:N:2:ARG:HB2	2.45	0.47
23:O:8:ILE:CG2	23:O:9:ARG:N	2.77	0.47
24:P:23:ASP:O	24:P:25:VAL:N	2.48	0.47
24:P:62:LYS:HE2	24:P:74:GLN:NE2	2.30	0.47
25:Q:5:ARG:O	25:Q:6:GLY:C	2.57	0.47
25:Q:93:ILE:C	25:Q:95:ALA:H	2.23	0.47
26:R:58:VAL:HG22	26:R:59:ILE:HG23	1.96	0.47
27:S:33:LEU:O	27:S:35:ILE:N	2.45	0.47
28:T:30:ILE:CG2	28:T:32:LEU:HD13	2.45	0.47
31:W:64:GLY:O	31:W:65:LYS:O	2.33	0.47
34:Z:24:ILE:HG12	34:Z:25:ARG:N	2.28	0.47
9:A:50:A:H5''	23:O:68:LYS:CG	2.45	0.47
9:A:86:G:H3'	9:A:87:U:H6	1.80	0.47
9:A:89:U:O2	10:B:958:U:H2'	2.15	0.47
10:B:144:A:H2'	10:B:145:C:O4'	2.15	0.47
10:B:295:G:C4	10:B:344:A:H2	2.29	0.47
10:B:323:C:OP2	10:B:324:A:H8	1.98	0.47
10:B:340:A:H2'	10:B:341:C:C6	2.50	0.47
10:B:978:G:H2'	10:B:979:A:H8	1.80	0.47
10:B:1079:C:H2'	10:B:1080:A:H5'	1.97	0.47
10:B:1255:U:C2'	13:E:67:ARG:HB3	2.40	0.47
10:B:1399:C:H2'	10:B:1400:U:C6	2.50	0.47
10:B:1592:C:H2'	10:B:1593:A:H8	1.80	0.47
10:B:1714:U:H3'	10:B:1715:G:H5'	1.95	0.47
10:B:2425:A:H5''	10:B:2426:A:H3'	1.97	0.47
10:B:2788:C:H2'	10:B:2789:C:C6	2.50	0.47
10:B:2881:U:C5	22:N:120:GLU:OE2	2.52	0.47
11:C:46:GLY:O	11:C:47:ARG:HB2	2.14	0.47
11:C:170:TYR:C	11:C:171:VAL:HG22	2.39	0.47
12:D:13:ARG:NH1	24:P:8:GLU:HB3	2.30	0.47
13:E:17:THR:C	13:E:199:MET:SD	2.98	0.47
14:F:70:ARG:HA	14:F:80:GLN:HE21	1.80	0.47
16:H:50:ARG:HB3	16:H:51:ARG:CA	2.45	0.47
18:J:7:LYS:CE	18:J:48:VAL:HB	2.45	0.47
23:O:30:ARG:NH2	23:O:102:ARG:HD2	2.29	0.47
23:O:76:LYS:HB2	23:O:106:LEU:HD13	1.97	0.47
26:R:31:GLU:O	26:R:32:THR:HB	2.15	0.47
27:S:29:VAL:HG21	27:S:70:LYS:N	2.30	0.47
28:T:85:VAL:O	28:T:85:VAL:CG2	2.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Y:50:VAL:O	33:Y:53:MET:HB2	2.15	0.47
34:Z:15:SER:HB3	34:Z:23:LYS:HD3	1.97	0.47
2:1:9:LYS:HD2	2:1:9:LYS:N	2.31	0.46
3:2:41:ARG:O	3:2:42:LEU:HB3	2.14	0.46
3:2:44:VAL:HG23	3:2:45:SER:N	2.24	0.46
10:B:278:A:N3	10:B:279:A:N7	2.62	0.46
10:B:301:G:N7	10:B:317:G:C6	2.82	0.46
10:B:443:A:H2	10:B:1245:G:N3	2.13	0.46
10:B:581:C:H2'	10:B:582:A:C8	2.50	0.46
10:B:621:A:H2'	10:B:622:G:O4'	2.15	0.46
10:B:959:A:O2'	10:B:960:A:H5'	2.15	0.46
10:B:1278:C:O2'	10:B:1279:G:H5'	2.15	0.46
10:B:1637:A:H2'	10:B:1638:C:H6	1.80	0.46
10:B:2617:U:O2'	10:B:2618:G:H5'	2.15	0.46
10:B:2752:C:H2'	10:B:2753:A:O4'	2.15	0.46
11:C:185:ALA:C	11:C:187:CYS:H	2.21	0.46
11:C:229:HIS:O	11:C:231:HIS:N	2.39	0.46
11:C:262:THR:O	11:C:262:THR:HG23	2.14	0.46
12:D:15:PHE:HB3	12:D:18:ASP:CB	2.45	0.46
12:D:22:ILE:O	12:D:23:PRO:O	2.32	0.46
12:D:78:GLY:C	12:D:79:LEU:HD23	2.39	0.46
13:E:165:HIS:C	13:E:166:LYS:HG3	2.39	0.46
15:G:84:LYS:HZ2	15:G:85:LYS:N	2.12	0.46
16:H:55:GLU:C	16:H:57:LYS:H	2.23	0.46
17:I:54:ILE:HG21	17:I:70:THR:CG2	2.45	0.46
21:M:41:LEU:HB2	21:M:93:VAL:CG2	2.43	0.46
21:M:58:LYS:C	21:M:60:GLN:N	2.71	0.46
21:M:64:TRP:HB3	21:M:102:LEU:HB2	1.96	0.46
28:T:15:HIS:O	28:T:16:VAL:C	2.58	0.46
29:U:10:VAL:HG21	29:U:25:LYS:NZ	2.31	0.46
30:V:53:LYS:HD2	30:V:54:ALA:N	2.29	0.46
2:1:10:LEU:HD21	2:1:34:GLU:HG3	1.97	0.46
9:A:100:G:H5''	10:B:915:C:O2'	2.15	0.46
9:A:114:C:H2'	9:A:115:A:H8	1.80	0.46
10:B:270:A:O2'	10:B:368:A:N3	2.32	0.46
10:B:295:G:O6	10:B:344:A:N6	2.48	0.46
10:B:317:G:C2	10:B:318:C:C2	3.03	0.46
10:B:350:G:C6	10:B:351:C:C4	3.02	0.46
10:B:350:G:H8	10:B:350:G:O5'	1.98	0.46
10:B:834:G:H4'	20:L:59:ARG:HH22	1.80	0.46
10:B:904:G:H2'	10:B:905:A:H8	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1190:G:OP1	20:L:41:ARG:HG2	2.15	0.46
10:B:1352:U:O2'	10:B:1353:A:H5'	2.16	0.46
10:B:1526:C:C2'	10:B:1527:G:H5'	2.45	0.46
10:B:2223:G:H2'	10:B:2224:G:H5'	1.96	0.46
10:B:2728:U:H2'	10:B:2729:G:C8	2.50	0.46
10:B:2743:U:H3'	10:B:2744:G:H5''	1.96	0.46
12:D:138:LEU:O	12:D:142:VAL:HG22	2.16	0.46
12:D:178:VAL:O	12:D:179:ARG:HG3	2.15	0.46
14:F:171:ALA:N	14:F:173:ASP:OD1	2.48	0.46
16:H:3:VAL:C	16:H:4:ILE:HG13	2.39	0.46
18:J:125:TYR:OH	18:J:133:ALA:HB3	2.15	0.46
20:L:13:LYS:CG	20:L:14:LYS:H	2.28	0.46
20:L:19:LEU:N	20:L:19:LEU:HD22	2.30	0.46
21:M:42:THR:HG23	21:M:45:GLN:N	2.30	0.46
26:R:69:GLY:C	26:R:70:GLU:HG3	2.40	0.46
28:T:91:GLN:HG3	28:T:91:GLN:O	2.15	0.46
29:U:10:VAL:O	29:U:11:ILE:HD13	2.15	0.46
29:U:58:VAL:HG12	29:U:59:GLU:N	2.30	0.46
29:U:81:ARG:HA	29:U:81:ARG:HH11	1.81	0.46
29:U:84:PHE:HA	29:U:94:PHE:HD1	1.79	0.46
32:X:9:LYS:HE3	32:X:11:VAL:HG13	1.97	0.46
10:B:131:A:O2'	10:B:132:G:H5'	2.15	0.46
10:B:308:G:C2'	10:B:329:G:N2	2.79	0.46
10:B:312:G:N3	10:B:312:G:C2'	2.76	0.46
10:B:535:G:H3'	36:B:3318:HOH:O	2.15	0.46
10:B:633:A:H2'	10:B:634:C:H5'	1.98	0.46
10:B:917:A:H2'	10:B:918:A:O4'	2.14	0.46
10:B:976:G:H5'	10:B:1156:A:N6	2.30	0.46
10:B:1069:A:C8	10:B:1073:A:N6	2.83	0.46
10:B:1184:U:H2'	10:B:1185:G:H8	1.80	0.46
10:B:1531:C:N4	10:B:1532:A:N6	2.62	0.46
10:B:2438:U:O2'	10:B:2439:A:H5''	2.15	0.46
11:C:258:SER:HB2	11:C:261:ARG:NH1	2.30	0.46
12:D:184:ARG:O	12:D:184:ARG:HG3	2.14	0.46
13:E:121:VAL:HG12	13:E:122:GLU:N	2.30	0.46
13:E:178:VAL:HG23	13:E:179:SER:N	2.31	0.46
18:J:34:ARG:CG	18:J:39:LYS:HD2	2.44	0.46
20:L:51:GLU:O	20:L:51:GLU:HG3	2.15	0.46
20:L:92:LEU:HD21	20:L:96:LYS:NZ	2.30	0.46
25:Q:89:ILE:HG12	25:Q:89:ILE:O	2.14	0.46
25:Q:90:ASP:OD2	26:R:54:VAL:HG11	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:R:53:PHE:HB3	26:R:55:ASP:CB	2.43	0.46
28:T:35:ALA:O	28:T:81:LYS:HD3	2.15	0.46
28:T:96:VAL:CG2	28:T:97:GLY:H	2.19	0.46
29:U:43:LYS:NZ	29:U:44:HIS:CA	2.76	0.46
10:B:26:G:H1'	10:B:514:A:H61	1.80	0.46
10:B:38:A:C4'	13:E:46:GLN:HG3	2.45	0.46
10:B:139:U:C4	28:T:1:MET:HB2	2.50	0.46
10:B:314:C:C2'	10:B:315:G:H8	2.07	0.46
10:B:711:G:H2'	10:B:712:G:O4'	2.15	0.46
10:B:871:U:H2'	10:B:872:U:C6	2.51	0.46
10:B:992:C:H2'	10:B:993:G:C8	2.46	0.46
10:B:1059:G:H5'	17:I:117:THR:CB	2.28	0.46
10:B:1540:G:C2'	10:B:1541:C:H5''	2.45	0.46
10:B:1568:G:H5'	11:C:60:ALA:HB3	1.97	0.46
10:B:2053:G:H5'	12:D:151:THR:O	2.14	0.46
10:B:2261:C:OP2	31:W:13:ARG:HB2	2.14	0.46
10:B:2266:A:C4'	10:B:2267:A:N7	2.78	0.46
10:B:2305:U:O4	14:F:37:MET:HA	2.16	0.46
10:B:2773:C:O2'	10:B:2774:C:H5'	2.15	0.46
10:B:2800:A:C4	10:B:2801:G:H1'	2.50	0.46
10:B:2811:G:H5'	12:D:62:LYS:HD2	1.98	0.46
11:C:140:VAL:HA	11:C:191:LEU:HA	1.95	0.46
11:C:160:TYR:HA	11:C:193:GLU:CG	2.45	0.46
13:E:147:LEU:HB3	13:E:183:PHE:CD2	2.50	0.46
16:H:5:LEU:O	16:H:6:LEU:HB3	2.16	0.46
18:J:128:ASN:CG	18:J:129:GLU:H	2.22	0.46
19:K:62:VAL:HA	19:K:83:ALA:O	2.15	0.46
20:L:95:LEU:H	20:L:95:LEU:CD1	2.27	0.46
21:M:23:GLY:H	21:M:96:ILE:HD12	1.75	0.46
21:M:36:VAL:CG1	21:M:125:PRO:HD2	2.45	0.46
21:M:41:LEU:C	21:M:43:ALA:H	2.21	0.46
24:P:13:LYS:NZ	24:P:15:ASP:HB2	2.31	0.46
28:T:3:ARG:HH21	28:T:8:LEU:HD22	1.80	0.46
30:V:80:HIS:HD2	30:V:83:LYS:H	1.58	0.46
2:1:46:VAL:HG22	2:1:47:ILE:N	2.28	0.46
3:2:13:ASN:OD1	3:2:18:PHE:HB3	2.16	0.46
4:3:48:MET:SD	4:3:51:LYS:HE3	2.55	0.46
9:A:25:U:H5''	9:A:26:C:OP1	2.15	0.46
10:B:308:G:C2'	10:B:329:G:H22	2.28	0.46
10:B:337:C:OP1	29:U:3:LYS:HD2	2.16	0.46
10:B:663:G:C5'	20:L:25:SER:HB2	2.35	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:702:U:H2'	10:B:703:U:C6	2.51	0.46
10:B:840:C:O2'	10:B:841:G:H5'	2.15	0.46
10:B:1099:G:C2	10:B:1100:C:C4	3.03	0.46
10:B:1189:A:H2'	10:B:1190:G:O4'	2.15	0.46
10:B:1527:G:H22	10:B:1543:G:H2'	1.80	0.46
10:B:1594:U:H2'	10:B:1595:C:H6	1.75	0.46
10:B:1917:U:C2'	10:B:1918:A:H5'	2.45	0.46
10:B:2771:C:H2'	10:B:2772:C:H6	1.81	0.46
10:B:2868:A:H2'	10:B:2869:G:C8	2.50	0.46
11:C:207:ALA:HA	11:C:211:ARG:HB2	1.98	0.46
12:D:154:LYS:NZ	18:J:81:ILE:HD13	2.29	0.46
13:E:148:ILE:H	13:E:183:PHE:HB3	1.81	0.46
13:E:177:PRO:HA	13:E:180:LEU:HD12	1.97	0.46
14:F:23:SER:C	14:F:25:MET:N	2.73	0.46
14:F:165:GLY:HA2	14:F:168:LEU:CG	2.46	0.46
17:I:116:MET:SD	17:I:124:MET:HB2	2.56	0.46
18:J:49:ASP:O	18:J:50:THR:HB	2.14	0.46
18:J:122:LEU:HD12	18:J:123:LYS:N	2.30	0.46
20:L:91:ASP:HB2	20:L:123:ARG:HD2	1.97	0.46
20:L:110:VAL:HB	20:L:126:ARG:CZ	2.46	0.46
21:M:119:LEU:N	21:M:119:LEU:HD22	2.30	0.46
24:P:34:GLY:C	24:P:35:SER:O	2.57	0.46
25:Q:78:PHE:CE1	25:Q:82:LEU:HD21	2.51	0.46
26:R:78:ARG:HD3	26:R:87:GLN:C	2.39	0.46
27:S:76:VAL:HG12	27:S:103:ILE:HA	1.97	0.46
29:U:57:ILE:C	29:U:58:VAL:HG23	2.41	0.46
29:U:59:GLU:CD	29:U:60:LYS:N	2.73	0.46
29:U:69:VAL:O	29:U:70:ALA:C	2.58	0.46
31:W:16:GLU:O	31:W:18:LYS:HD2	2.15	0.46
34:Z:58:ASP:HB3	34:Z:59:ARG:H	1.27	0.46
8:7:119:G:H21	8:7:152:A:H62	1.63	0.46
9:A:10:G:H2'	9:A:11:C:O4'	2.16	0.46
9:A:54:G:O2'	9:A:55:U:H5'	2.16	0.46
10:B:24:G:O2'	10:B:25:U:H5'	2.16	0.46
10:B:198:C:O2'	10:B:199:A:H5''	2.16	0.46
10:B:288:U:C2	10:B:352:A:N1	2.83	0.46
10:B:324:A:N6	10:B:339:U:O4'	2.48	0.46
10:B:499:U:H4'	29:U:43:LYS:HB2	1.98	0.46
10:B:1082:U:C2	10:B:1086:A:N6	2.84	0.46
10:B:1195:G:N3	10:B:1226:A:H2	2.14	0.46
10:B:1300:G:H5'	10:B:1301:A:N3	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2028:U:H2'	10:B:2029:G:C8	2.51	0.46
10:B:2568:U:H2'	10:B:2569:G:O4'	2.15	0.46
10:B:2828:G:O2'	10:B:2829:A:H5'	2.14	0.46
10:B:2881:U:H4'	22:N:120:GLU:H	1.81	0.46
11:C:230:PRO:O	11:C:231:HIS:HB3	2.15	0.46
13:E:6:LYS:HZ1	13:E:119:ILE:N	2.13	0.46
13:E:117:ARG:HA	13:E:188:MET:SD	2.56	0.46
15:G:23:ILE:HG13	15:G:24:THR:N	2.30	0.46
18:J:124:VAL:HG12	18:J:125:TYR:O	2.16	0.46
18:J:132:HIS:C	18:J:134:ALA:N	2.72	0.46
19:K:10:VAL:HG11	19:K:15:GLY:O	2.15	0.46
19:K:108:ARG:HE	24:P:36:LYS:HB2	1.81	0.46
20:L:40:SER:C	20:L:41:ARG:HE	2.23	0.46
21:M:62:LYS:HB2	21:M:104:GLU:HB2	1.97	0.46
23:O:18:LEU:C	23:O:18:LEU:HD12	2.40	0.46
24:P:13:LYS:CE	24:P:77:SER:HB3	2.46	0.46
24:P:94:ALA:C	24:P:96:LEU:H	2.23	0.46
25:Q:79:ILE:HA	25:Q:82:LEU:HD12	1.96	0.46
29:U:39:ASN:HD21	29:U:60:LYS:HB3	1.80	0.46
29:U:57:ILE:HG23	29:U:58:VAL:HG23	1.96	0.46
29:U:70:ALA:O	29:U:71:ILE:C	2.59	0.46
31:W:16:GLU:C	31:W:18:LYS:HD2	2.40	0.46
34:Z:30:HIS:O	34:Z:48:GLN:NE2	2.49	0.46
1:0:51:ARG:HH21	22:N:125:ALA:CB	2.04	0.46
4:3:14:LYS:O	4:3:21:PHE:HB3	2.16	0.46
4:3:16:THR:C	4:3:18:LYS:N	2.73	0.46
6:5:372:VAL:O	6:5:376:MET:HG3	2.16	0.46
10:B:27:G:H1'	10:B:513:A:H61	1.79	0.46
10:B:288:U:H3	10:B:352:A:N6	2.13	0.46
10:B:295:G:H2'	10:B:296:U:H5'	1.98	0.46
10:B:297:G:H2'	10:B:298:G:N9	2.31	0.46
10:B:943:A:OP2	20:L:42:SER:HB3	2.15	0.46
10:B:995:C:O2	18:J:3:THR:HG23	2.16	0.46
10:B:1041:G:N1	10:B:1115:G:C6	2.84	0.46
10:B:1433:A:H2'	10:B:1434:A:O4'	2.15	0.46
10:B:1524:G:C6	10:B:1525:A:C5	3.04	0.46
10:B:1789:A:H2'	10:B:1790:C:C6	2.51	0.46
10:B:1846:G:H2'	10:B:1847:A:O4'	2.15	0.46
10:B:2250:G:H8	10:B:2250:G:O5'	1.98	0.46
10:B:2877:G:H2'	10:B:2878:U:C6	2.51	0.46
10:B:2880:C:O2	22:N:93:GLY:HA3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:C:46:GLY:O	11:C:47:ARG:CB	2.64	0.46
11:C:49:THR:O	11:C:50:THR:HB	2.15	0.46
11:C:63:ILE:HG21	11:C:90:ILE:CD1	2.46	0.46
11:C:220:ARG:HA	11:C:220:ARG:CZ	2.45	0.46
12:D:5:VAL:HG11	12:D:28:GLU:CA	2.40	0.46
12:D:170:VAL:CG1	12:D:194:PRO:HG2	2.46	0.46
13:E:7:ASP:C	13:E:9:GLN:H	2.24	0.46
15:G:40:VAL:HG22	15:G:53:PRO:HA	1.98	0.46
15:G:94:ARG:HH12	15:G:127:GLN:CD	2.24	0.46
16:H:3:VAL:CB	16:H:37:VAL:HB	2.32	0.46
16:H:29:PHE:N	16:H:32:PRO:CG	2.79	0.46
18:J:43:GLU:O	18:J:45:THR:N	2.48	0.46
19:K:108:ARG:HH21	24:P:36:LYS:CB	2.29	0.46
21:M:67:VAL:HB	21:M:100:LYS:CG	2.39	0.46
21:M:96:ILE:HD13	21:M:97:GLN:N	2.31	0.46
22:N:73:ASN:N	22:N:73:ASN:ND2	2.62	0.46
31:W:36:ILE:HD12	31:W:70:VAL:CG2	2.46	0.46
32:X:55:THR:HG22	32:X:59:GLU:CD	2.40	0.46
1:O:18:HIS:NE2	10:B:2623:G:N2	2.63	0.46
10:B:141:G:C6	28:T:1:MET:HE1	2.51	0.46
10:B:292:U:C2	10:B:348:A:C2	3.02	0.46
10:B:308:G:H2'	10:B:329:G:N2	2.30	0.46
10:B:317:G:C5	10:B:318:C:C5	3.04	0.46
10:B:572:A:H5''	10:B:573:U:OP2	2.15	0.46
10:B:729:G:H4'	10:B:763:G:C5'	2.46	0.46
10:B:967:U:H2'	10:B:968:C:H6	1.80	0.46
10:B:1067:A:C6	10:B:1068:G:C6	3.04	0.46
10:B:1080:A:C2	10:B:1081:U:C2	3.03	0.46
10:B:1203:U:O2'	20:L:14:LYS:HE2	2.16	0.46
10:B:1295:C:H2'	10:B:1296:G:H8	1.81	0.46
10:B:1476:U:C2	10:B:1516:G:N7	2.82	0.46
10:B:1480:C:H2'	10:B:1481:U:C6	2.50	0.46
10:B:1501:G:O2'	10:B:1502:A:H5'	2.15	0.46
10:B:1516:G:N2	10:B:1517:G:N9	2.63	0.46
10:B:1538:G:C4	10:B:1539:U:C6	3.03	0.46
10:B:1710:G:H2'	10:B:1711:A:H8	1.81	0.46
10:B:2220:U:O2'	10:B:2221:G:H5'	2.15	0.46
10:B:2226:C:H2'	10:B:2227:A:O4'	2.15	0.46
10:B:2393:U:O2'	10:B:2394:C:H5'	2.16	0.46
10:B:2751:G:N2	15:G:1:SER:HB3	2.31	0.46
10:B:2776:A:H4'	10:B:2777:G:H5''	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:C:21:PRO:HG2	11:C:202:ARG:HH11	1.81	0.46
11:C:50:THR:O	11:C:51:ARG:C	2.59	0.46
11:C:168:GLY:C	11:C:170:TYR:H	2.21	0.46
12:D:3:GLY:CA	12:D:49:GLN:HE22	2.28	0.46
12:D:98:VAL:HA	12:D:101:PHE:HE2	1.80	0.46
12:D:130:GLN:HG2	12:D:138:LEU:CD1	2.45	0.46
13:E:113:VAL:C	13:E:115:GLN:H	2.24	0.46
14:F:103:ILE:HA	14:F:107:VAL:HG21	1.98	0.46
14:F:135:ILE:HD12	14:F:140:ILE:HD12	1.98	0.46
17:I:12:VAL:HG23	17:I:41:PHE:CZ	2.50	0.46
17:I:83:ALA:CA	17:I:100:ILE:HD11	2.46	0.46
19:K:63:VAL:HB	19:K:83:ALA:HB1	1.98	0.46
19:K:119:ALA:N	19:K:120:PRO:HD3	2.31	0.46
20:L:116:VAL:HG12	20:L:117:THR:HG23	1.96	0.46
21:M:35:ALA:C	21:M:36:VAL:HG13	2.39	0.46
21:M:42:THR:HG22	21:M:45:GLN:HG2	1.96	0.46
21:M:71:LYS:HD3	21:M:92:TRP:C	2.41	0.46
28:T:68:LYS:C	28:T:68:LYS:HD3	2.41	0.46
30:V:2:PHE:HB2	30:V:61:LEU:HD22	1.97	0.46
1:O:31:LYS:NZ	1:O:49:ARG:HA	2.31	0.46
10:B:18:U:O2	10:B:554:U:H5''	2.16	0.46
10:B:55:G:H2'	10:B:56:A:C8	2.51	0.46
10:B:144:A:O2'	10:B:145:C:H5'	2.15	0.46
10:B:170:U:O2'	10:B:171:U:H5'	2.16	0.46
10:B:264:C:C2'	10:B:265:A:H5''	2.46	0.46
10:B:311:A:N6	10:B:328:U:N1	2.64	0.46
10:B:311:A:H61	10:B:328:U:C2'	2.29	0.46
10:B:442:G:N2	13:E:46:GLN:HE21	2.10	0.46
10:B:764:A:N1	10:B:1789:A:O2'	2.48	0.46
10:B:1038:G:N2	10:B:1039:A:C2	2.84	0.46
10:B:1059:G:H4'	17:I:116:MET:C	2.41	0.46
10:B:1077:A:C4'	17:I:93:ASN:OD1	2.54	0.46
10:B:1528:A:H2'	10:B:1529:G:C4'	2.45	0.46
10:B:1606:C:H5''	10:B:1607:C:OP1	2.16	0.46
10:B:1739:A:H2'	10:B:1740:G:H8	1.81	0.46
10:B:2230:G:H1'	34:Z:30:HIS:HD2	1.80	0.46
10:B:2896:C:H2'	10:B:2897:U:H6	1.81	0.46
11:C:59:GLN:O	11:C:60:ALA:HB3	2.14	0.46
11:C:70:LYS:HE3	11:C:99:GLU:HG2	1.97	0.46
11:C:208:GLY:O	11:C:210:ALA:N	2.48	0.46
12:D:13:ARG:O	12:D:15:PHE:N	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:D:172:VAL:O	12:D:173:GLN:HB2	2.16	0.46
12:D:187:LEU:C	12:D:188:LEU:HD12	2.41	0.46
14:F:56:LEU:HD13	14:F:86:CYS:HB3	1.98	0.46
14:F:67:THR:O	14:F:83:PRO:HA	2.15	0.46
14:F:82:TYR:HB3	14:F:83:PRO:HD2	1.97	0.46
15:G:51:PHE:CD1	15:G:64:ALA:HA	2.51	0.46
15:G:89:VAL:HG21	15:G:162:ARG:NE	2.30	0.46
16:H:128:HIS:HB3	16:H:144:VAL:CB	2.42	0.46
17:I:79:LEU:CD1	17:I:131:THR:OG1	2.64	0.46
18:J:74:TYR:O	18:J:87:ALA:HA	2.15	0.46
19:K:8:LEU:O	19:K:19:VAL:HG23	2.16	0.46
20:L:77:ILE:HG21	20:L:92:LEU:HD13	1.98	0.46
21:M:3:GLN:HE22	21:M:5:LYS:HB2	1.81	0.46
21:M:96:ILE:HD13	21:M:96:ILE:C	2.41	0.46
22:N:116:VAL:C	22:N:118:ARG:N	2.73	0.46
24:P:24:THR:O	24:P:26:GLU:N	2.49	0.46
26:R:62:GLU:N	26:R:62:GLU:OE1	2.49	0.46
30:V:44:HIS:O	30:V:46:LYS:N	2.49	0.46
31:W:16:GLU:O	31:W:16:GLU:HG3	2.14	0.46
31:W:16:GLU:CG	31:W:37:VAL:HG22	2.39	0.46
31:W:48:ALA:HA	31:W:54:ARG:HA	1.98	0.46
33:Y:18:LYS:HZ2	33:Y:53:MET:HE2	1.77	0.46
34:Z:31:ASP:O	34:Z:32:LEU:HB3	2.15	0.46
1:0:28:SER:O	1:0:29:VAL:HB	2.16	0.46
1:0:43:THR:O	1:0:44:ALA:C	2.59	0.46
1:0:53:VAL:HG22	22:N:112:TYR:HE2	1.80	0.46
4:3:7:ARG:CZ	4:3:11:LYS:HZ1	2.28	0.46
10:B:48:G:H4'	10:B:52:A:O4'	2.16	0.46
10:B:64:A:N6	10:B:91:A:H61	2.14	0.46
10:B:282:A:C5	10:B:283:G:N7	2.83	0.46
10:B:282:A:C2	10:B:283:G:N7	2.84	0.46
10:B:287:G:C2	10:B:288:U:C5	3.04	0.46
10:B:301:G:N3	10:B:302:C:N3	2.64	0.46
10:B:306:U:H2'	10:B:307:G:O4'	2.16	0.46
10:B:622:G:H2'	10:B:623:C:C6	2.50	0.46
10:B:711:G:O2'	10:B:712:G:H5'	2.16	0.46
10:B:812:C:H2'	10:B:813:U:H6	1.81	0.46
10:B:850:U:H2'	10:B:851:C:C6	2.51	0.46
10:B:1260:A:O2'	10:B:1261:C:H5'	2.15	0.46
10:B:1550:C:H2'	10:B:1551:A:H8	1.79	0.46
10:B:1724:G:H2'	10:B:1725:U:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1790:C:H4'	11:C:207:ALA:CB	2.45	0.46
10:B:1853:A:N1	10:B:2087:G:H1'	2.31	0.46
10:B:2567:G:H2'	10:B:2568:U:C6	2.51	0.46
10:B:2643:G:H2'	10:B:2644:G:O4'	2.16	0.46
10:B:2886:A:C2	10:B:2887:A:N7	2.84	0.46
11:C:157:ALA:C	11:C:159:THR:H	2.23	0.46
11:C:198:GLU:C	11:C:200:MET:H	2.24	0.46
12:D:30:GLU:CD	12:D:30:GLU:N	2.74	0.46
12:D:49:GLN:O	12:D:78:GLY:HA2	2.15	0.46
12:D:141:ARG:HH11	12:D:141:ARG:CG	2.29	0.46
12:D:175:LEU:CD2	12:D:190:LYS:HB3	2.45	0.46
13:E:128:ALA:O	13:E:157:LEU:HB2	2.15	0.46
14:F:87:LYS:O	14:F:88:VAL:HB	2.15	0.46
16:H:89:LYS:C	16:H:90:LEU:HD12	2.40	0.46
16:H:103:VAL:HG21	16:H:110:VAL:HG13	1.97	0.46
18:J:100:VAL:O	18:J:102:GLU:N	2.48	0.46
21:M:3:GLN:CB	21:M:46:ILE:HB	2.46	0.46
23:O:6:ALA:C	23:O:8:ILE:H	2.23	0.46
25:Q:53:LYS:H	25:Q:53:LYS:HD2	1.80	0.46
26:R:14:VAL:HG12	26:R:15:SER:N	2.31	0.46
26:R:22:LEU:O	26:R:96:VAL:HG13	2.16	0.46
26:R:42:ALA:C	26:R:54:VAL:HA	2.41	0.46
27:S:17:VAL:HG21	27:S:101:SER:OG	2.15	0.46
27:S:31:GLN:C	27:S:33:LEU:N	2.70	0.46
28:T:15:HIS:HB2	28:T:31:VAL:HB	1.98	0.46
28:T:26:LYS:HD2	28:T:27:SER:HB2	1.97	0.46
28:T:53:VAL:HG12	28:T:91:GLN:HE22	1.81	0.46
28:T:80:TRP:HB3	28:T:81:LYS:H	1.51	0.46
31:W:40:ARG:NH1	31:W:68:PHE:CA	2.75	0.46
34:Z:4:ASP:O	34:Z:5:ILE:C	2.59	0.46
34:Z:41:HIS:CB	34:Z:42:PRO:HD2	2.27	0.46
1:0:12:ARG:C	1:0:14:MET:N	2.74	0.45
1:0:39:ARG:O	22:N:99:LYS:HE2	2.16	0.45
3:2:11:LYS:HD3	10:B:770:G:P	2.56	0.45
4:3:38:LYS:C	4:3:40:LYS:H	2.24	0.45
4:3:57:VAL:HG13	4:3:58:ILE:N	2.31	0.45
9:A:74:U:H2'	9:A:75:G:C8	2.51	0.45
10:B:188:G:OP1	34:Z:11:GLU:HA	2.16	0.45
10:B:291:G:C1'	10:B:350:G:N2	2.79	0.45
10:B:444:C:H5''	13:E:44:ARG:HH11	1.82	0.45
10:B:872:U:H1'	21:M:68:PHE:CZ	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:988:A:H4'	10:B:1155:A:N1	2.31	0.45
10:B:1017:G:H2'	10:B:1018:U:C6	2.52	0.45
10:B:1035:U:O2'	10:B:1036:G:H8	1.98	0.45
10:B:1040:A:H2	10:B:1115:G:C2	2.34	0.45
10:B:1347:A:H2'	10:B:1348:C:O4'	2.17	0.45
10:B:1735:A:H2'	10:B:1736:U:C6	2.51	0.45
10:B:2105:U:H2'	10:B:2106:U:C6	2.51	0.45
10:B:2152:G:H2'	10:B:2153:C:H6	1.81	0.45
10:B:2183:A:H2'	10:B:2184:A:C8	2.52	0.45
10:B:2489:U:O2'	10:B:2490:G:H5'	2.16	0.45
11:C:139:THR:HG22	11:C:193:GLU:HB3	1.98	0.45
13:E:27:LEU:CD2	13:E:100:MET:HE2	2.44	0.45
14:F:2:LYS:O	14:F:3:LEU:CB	2.64	0.45
15:G:97:VAL:HG11	15:G:122:ALA:O	2.16	0.45
16:H:130:VAL:HG21	16:H:144:VAL:HG23	1.98	0.45
17:I:62:ALA:C	17:I:64:ARG:H	2.24	0.45
21:M:124:LEU:N	21:M:124:LEU:HD23	2.31	0.45
25:Q:21:LYS:HD2	25:Q:23:TYR:HE1	1.81	0.45
29:U:13:LEU:O	29:U:15:GLY:N	2.49	0.45
34:Z:59:ARG:HG3	34:Z:62:LYS:HG3	1.97	0.45
3:2:13:ASN:O	3:2:16:HIS:N	2.50	0.45
4:3:59:ALA:O	4:3:60:CYS:HB2	2.17	0.45
6:5:335:LEU:HD23	6:5:335:LEU:O	2.16	0.45
9:A:63:C:H2'	9:A:64:G:C8	2.49	0.45
10:B:116:C:H2'	10:B:117:G:H8	1.79	0.45
10:B:129:C:H2'	10:B:130:C:C6	2.51	0.45
10:B:215:G:H4'	10:B:216:A:OP1	2.16	0.45
10:B:278:A:N3	10:B:278:A:H2'	2.30	0.45
10:B:332:A:C5	10:B:335:C:N3	2.84	0.45
10:B:533:G:H2'	10:B:534:U:C6	2.51	0.45
10:B:843:G:H2'	10:B:844:A:C8	2.52	0.45
10:B:1050:A:C5	10:B:2751:G:C5	2.98	0.45
10:B:1061:U:N3	17:I:9:LYS:HD2	2.30	0.45
10:B:1173:U:O2	10:B:1177:G:C2	2.69	0.45
10:B:1184:U:H2'	10:B:1185:G:C8	2.51	0.45
10:B:1432:G:O2'	10:B:1433:A:H5'	2.16	0.45
10:B:1512:C:C4	10:B:1513:U:C4	3.04	0.45
10:B:1544:A:C2	10:B:1545:A:N3	2.84	0.45
10:B:1745:A:H2'	10:B:1746:A:C8	2.51	0.45
10:B:1804:C:O2'	10:B:1805:A:H5'	2.15	0.45
10:B:1854:A:H2'	10:B:1855:U:O4'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2747:G:H2'	10:B:2748:A:C8	2.51	0.45
10:B:2750:A:H3'	15:G:3:VAL:CG2	2.47	0.45
11:C:78:GLU:HB3	11:C:92:LEU:HD23	1.99	0.45
11:C:128:THR:HA	11:C:190:THR:CA	2.43	0.45
11:C:229:HIS:ND1	11:C:230:PRO:CD	2.79	0.45
11:C:250:GLN:O	11:C:251:THR:HB	2.15	0.45
11:C:251:THR:O	11:C:252:LYS:HB2	2.16	0.45
12:D:20:VAL:HG23	12:D:21:SER:H	1.81	0.45
13:E:149:ILE:HG13	13:E:149:ILE:O	2.16	0.45
14:F:37:MET:HB3	14:F:37:MET:HE2	1.77	0.45
14:F:89:THR:C	14:F:90:LEU:HD12	2.41	0.45
16:H:130:VAL:O	16:H:142:VAL:N	2.45	0.45
18:J:25:LEU:HB2	18:J:26:GLY:H	1.34	0.45
18:J:124:VAL:O	18:J:125:TYR:HB2	2.16	0.45
20:L:13:LYS:HG3	20:L:14:LYS:H	1.80	0.45
21:M:73:ILE:HD13	21:M:90:GLU:OE2	2.15	0.45
22:N:113:ILE:CG2	22:N:114:GLU:N	2.79	0.45
24:P:31:VAL:HA	24:P:81:ASP:HB3	1.97	0.45
27:S:103:ILE:HG23	27:S:104:THR:H	1.81	0.45
29:U:42:LYS:HE3	29:U:42:LYS:CA	2.46	0.45
31:W:42:THR:HB	31:W:66:VAL:H	1.81	0.45
4:3:16:THR:HB	10:B:650:C:O3'	2.16	0.45
4:3:54:LEU:HD23	4:3:54:LEU:HA	1.86	0.45
6:5:425:ARG:HH21	10:B:490:C:H5	1.62	0.45
10:B:271:G:N1	10:B:366:C:H2'	2.30	0.45
10:B:301:G:H1'	10:B:302:C:O4'	2.17	0.45
10:B:514:A:O2'	10:B:515:A:H5'	2.16	0.45
10:B:829:A:H4'	36:B:3222:HOH:O	2.17	0.45
10:B:1042:G:N2	10:B:1043:C:C2	2.85	0.45
10:B:1190:G:OP1	20:L:41:ARG:CD	2.64	0.45
10:B:1275:A:H2	10:B:1645:G:H21	1.64	0.45
10:B:1532:A:OP2	10:B:1532:A:H8	2.00	0.45
10:B:1979:U:C2'	10:B:1980:G:H5'	2.46	0.45
10:B:2261:C:O2'	10:B:2262:U:H5'	2.15	0.45
10:B:2650:U:H2'	10:B:2651:C:H6	1.81	0.45
10:B:2673:G:H2'	10:B:2674:G:C8	2.51	0.45
10:B:2675:A:N1	10:B:2732:G:O6	2.49	0.45
10:B:2881:U:H5''	22:N:121:LYS:H	1.81	0.45
11:C:140:VAL:CG2	11:C:141:HIS:H	2.28	0.45
11:C:242:HIS:N	11:C:243:PRO:HD3	2.30	0.45
12:D:170:VAL:CG2	12:D:194:PRO:HG2	2.44	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:E:119:ILE:HG23	13:E:189:THR:O	2.15	0.45
15:G:89:VAL:HB	15:G:160:GLY:H	1.82	0.45
18:J:50:THR:OG1	18:J:51:GLY:N	2.47	0.45
20:L:30:THR:CB	20:L:36:LYS:HB2	2.44	0.45
22:N:65:LEU:HD23	22:N:69:ARG:HG3	1.99	0.45
22:N:116:VAL:HG13	22:N:117:ASP:OD1	2.16	0.45
28:T:16:VAL:O	28:T:16:VAL:HG22	2.17	0.45
30:V:4:ILE:N	30:V:62:THR:O	2.50	0.45
31:W:44:PHE:O	31:W:76:ARG:CA	2.63	0.45
2:1:9:LYS:HD2	2:1:9:LYS:H	1.81	0.45
4:3:54:LEU:HD12	20:L:59:ARG:HE	1.81	0.45
10:B:198:C:H2'	10:B:199:A:H5''	1.97	0.45
10:B:199:A:N6	10:B:2433:A:H2'	2.31	0.45
10:B:233:A:H61	10:B:428:A:N6	2.13	0.45
10:B:282:A:C4	10:B:359:G:N2	2.85	0.45
10:B:360:U:H3'	10:B:361:G:C5	2.51	0.45
10:B:425:G:H2'	10:B:426:C:H6	1.82	0.45
10:B:527:C:C5'	10:B:2779:U:H3	2.29	0.45
10:B:533:G:H5'	25:Q:23:TYR:CD1	2.52	0.45
10:B:704:G:O2'	10:B:727:A:N6	2.49	0.45
10:B:908:C:O2'	10:B:909:A:H5'	2.16	0.45
10:B:954:G:P	21:M:17:ASN:HB2	2.56	0.45
10:B:1035:U:H2'	10:B:1036:G:C8	2.51	0.45
10:B:1043:C:O2'	10:B:1044:C:H5'	2.17	0.45
10:B:1097:U:H6	10:B:1097:U:H5''	1.82	0.45
10:B:1353:A:H2'	10:B:1354:A:C8	2.52	0.45
10:B:1376:C:H5''	36:B:3402:HOH:O	2.16	0.45
10:B:1515:A:H2'	10:B:1516:G:O4'	2.17	0.45
10:B:1530:G:C6	10:B:1541:C:N3	2.85	0.45
10:B:1716:U:H2'	10:B:1717:A:H8	1.81	0.45
10:B:1796:U:O2'	11:C:251:THR:HA	2.16	0.45
10:B:1881:C:H2'	10:B:1882:U:O4'	2.16	0.45
10:B:2263:C:H2'	10:B:2264:C:C6	2.52	0.45
10:B:2319:G:H3'	10:B:2319:G:N3	2.32	0.45
10:B:2467:C:C1'	21:M:118:LYS:HG2	2.47	0.45
10:B:2647:U:O2'	10:B:2648:G:H5'	2.17	0.45
10:B:2673:G:H2'	10:B:2674:G:H8	1.81	0.45
10:B:2783:U:H2'	10:B:2784:U:H6	1.79	0.45
11:C:32:LEU:HA	11:C:81:GLU:OE2	2.17	0.45
11:C:53:ILE:HG21	11:C:218:THR:CG2	2.45	0.45
12:D:154:LYS:NZ	12:D:157:LYS:N	2.57	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:F:3:LEU:HA	14:F:6:TYR:CD2	2.51	0.45
15:G:17:LYS:HD2	15:G:24:THR:HG22	1.98	0.45
18:J:81:ILE:C	18:J:83:GLY:N	2.73	0.45
21:M:24:THR:HG23	21:M:25:ASP:OD1	2.16	0.45
21:M:31:PHE:HE2	21:M:110:GLU:HG2	1.81	0.45
21:M:71:LYS:HG2	21:M:92:TRP:O	2.17	0.45
22:N:38:LEU:HG	22:N:109:PRO:HB2	1.99	0.45
24:P:59:THR:HG23	24:P:76:HIS:CE1	2.51	0.45
26:R:41:ILE:O	26:R:54:VAL:HA	2.17	0.45
30:V:81:PRO:HB2	30:V:82:TYR:HD1	1.81	0.45
10:B:154:U:H2'	10:B:155:A:H8	1.81	0.45
10:B:175:G:H2'	10:B:176:A:C8	2.52	0.45
10:B:256:A:H2'	10:B:257:C:H6	1.80	0.45
10:B:325:G:O2'	10:B:326:G:H5'	2.17	0.45
10:B:522:A:H2'	10:B:523:C:C6	2.52	0.45
10:B:704:G:C2'	10:B:726:G:H22	2.20	0.45
10:B:729:G:H2'	10:B:1775:U:H1'	1.98	0.45
10:B:1373:A:OP1	10:B:2213:U:O4	2.35	0.45
10:B:1511:G:H2'	10:B:1512:C:H6	1.81	0.45
10:B:1541:C:H5'	10:B:1541:C:H6	1.81	0.45
10:B:1727:C:H2'	10:B:1728:C:H6	1.81	0.45
10:B:2071:A:H2'	10:B:2072:C:C6	2.51	0.45
10:B:2693:G:O2'	10:B:2694:G:H5'	2.16	0.45
10:B:2742:G:O2'	10:B:2743:U:H5'	2.17	0.45
10:B:2811:G:O2'	10:B:2812:G:H5'	2.16	0.45
11:C:28:PRO:HD2	11:C:79:ARG:HH22	1.81	0.45
11:C:141:HIS:ND1	11:C:142:ASN:N	2.64	0.45
13:E:87:ALA:O	13:E:88:ARG:HG3	2.16	0.45
14:F:107:VAL:HB	14:F:108:PRO:CD	2.46	0.45
15:G:58:ALA:C	15:G:60:GLY:H	2.25	0.45
15:G:130:ILE:HG21	15:G:147:LEU:HD13	1.97	0.45
16:H:116:ARG:O	16:H:117:LEU:HG	2.16	0.45
17:I:12:VAL:HG23	17:I:41:PHE:CE2	2.51	0.45
17:I:27:LEU:O	17:I:30:GLN:HB2	2.17	0.45
20:L:76:GLU:HA	20:L:109:LYS:O	2.17	0.45
20:L:78:ARG:HG2	20:L:99:ASN:CB	2.35	0.45
21:M:11:LYS:C	21:M:12:MET:SD	3.00	0.45
21:M:31:PHE:HA	21:M:128:THR:CG2	2.47	0.45
21:M:71:LYS:O	21:M:72:PRO:C	2.58	0.45
23:O:108:ASP:O	23:O:112:GLU:CD	2.59	0.45
24:P:93:LYS:CB	24:P:96:LEU:HD12	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Q:33:VAL:CG1	25:Q:34:ALA:H	2.18	0.45
27:S:3:THR:CG2	27:S:107:VAL:HG23	2.47	0.45
34:Z:3:LYS:CG	34:Z:8:LYS:HA	2.44	0.45
4:3:27:ASN:OD1	4:3:28:LEU:N	2.49	0.45
10:B:69:C:O2'	10:B:70:G:H5'	2.17	0.45
10:B:144:A:H8	10:B:144:A:OP2	2.00	0.45
10:B:287:G:C4	10:B:288:U:C5	3.04	0.45
10:B:289:G:C2	10:B:290:U:C2	3.04	0.45
10:B:295:G:O2'	10:B:296:U:H5'	2.17	0.45
10:B:336:C:OP1	29:U:81:ARG:NE	2.48	0.45
10:B:466:A:H2	10:B:795:C:O2	1.99	0.45
10:B:822:G:H2'	10:B:823:C:C6	2.52	0.45
10:B:968:C:H4'	33:Y:16:LEU:HD23	1.98	0.45
10:B:1057:A:C2'	10:B:1058:U:H5'	2.47	0.45
10:B:1394:U:O2'	10:B:1395:A:H5'	2.16	0.45
10:B:1530:G:C2	10:B:1531:C:C2	3.04	0.45
10:B:1538:G:C2	10:B:1539:U:H1'	2.51	0.45
10:B:1710:G:H2'	10:B:1711:A:C8	2.51	0.45
10:B:1733:G:H2'	10:B:1734:G:H8	1.82	0.45
10:B:1921:G:O2'	10:B:1922:G:H5'	2.16	0.45
10:B:1946:U:H2'	10:B:1947:C:C6	2.52	0.45
10:B:2063:C:O2	10:B:2450:A:N1	2.49	0.45
10:B:2291:U:H5''	10:B:2380:C:H1'	1.98	0.45
10:B:2574:G:O2'	12:D:151:THR:HG21	2.15	0.45
10:B:2799:A:H4'	10:B:2800:A:C8	2.52	0.45
11:C:253:GLY:C	11:C:254:LYS:HZ3	2.24	0.45
12:D:47:ALA:HB3	12:D:81:GLU:HB2	1.99	0.45
12:D:120:GLY:H	12:D:123:LYS:HB2	1.82	0.45
13:E:120:VAL:HG12	13:E:121:VAL:HG23	1.99	0.45
13:E:153:LEU:HA	13:E:171:ASP:O	2.15	0.45
15:G:136:ASP:OD1	15:G:138:GLN:HB3	2.17	0.45
16:H:4:ILE:H	16:H:37:VAL:CB	2.25	0.45
17:I:35:MET:SD	17:I:35:MET:C	3.00	0.45
17:I:92:PRO:O	17:I:93:ASN:HB2	2.16	0.45
19:K:58:LEU:CB	19:K:89:ASN:HD21	2.28	0.45
20:L:67:THR:OG1	20:L:68:SER:N	2.47	0.45
20:L:78:ARG:CZ	20:L:110:VAL:HG11	2.46	0.45
21:M:114:ARG:HH21	21:M:125:PRO:HA	1.81	0.45
24:P:77:SER:H	24:P:78:PRO:HD2	1.81	0.45
24:P:93:LYS:HD2	24:P:96:LEU:HD12	1.99	0.45
25:Q:107:ALA:O	26:R:52:PRO:HG3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:U:55:GLY:C	29:U:57:ILE:N	2.73	0.45
30:V:33:GLY:C	30:V:35:GLU:H	2.25	0.45
31:W:11:ASN:OD1	31:W:12:GLY:N	2.45	0.45
6:5:334:PHE:HA	6:5:337:GLN:NE2	2.32	0.45
6:5:385:MET:HE1	6:5:388:ARG:NH1	2.31	0.45
9:A:76:G:H2'	9:A:77:U:H6	1.82	0.45
10:B:222:A:N1	10:B:233:A:H5''	2.32	0.45
10:B:231:A:H3'	10:B:232:G:C8	2.52	0.45
10:B:291:G:C4	10:B:350:G:C5	3.04	0.45
10:B:744:U:OP1	12:D:136:ASN:O	2.35	0.45
10:B:765:C:H2'	10:B:766:U:H6	1.82	0.45
10:B:936:A:H2'	10:B:937:C:H6	1.81	0.45
10:B:1131:G:H1'	18:J:85:LYS:HZ2	1.81	0.45
10:B:1254:A:H2'	13:E:69:ARG:NH1	2.32	0.45
10:B:1525:A:H2'	10:B:1526:C:C5'	2.44	0.45
10:B:1538:G:C2	10:B:1539:U:C6	3.05	0.45
10:B:1616:A:H4'	10:B:1617:C:OP2	2.17	0.45
10:B:1733:G:H2'	10:B:1734:G:C8	2.51	0.45
10:B:1774:C:H2'	10:B:1774:C:O2	2.16	0.45
10:B:1864:U:O2'	10:B:1865:U:H5'	2.17	0.45
10:B:2354:C:O3'	31:W:30:VAL:HG13	2.16	0.45
10:B:2619:C:H2'	10:B:2620:C:C6	2.52	0.45
10:B:2733:A:C8	10:B:2733:A:H3'	2.51	0.45
10:B:2759:G:H4'	15:G:34:ARG:HH22	1.81	0.45
11:C:155:ARG:O	11:C:155:ARG:NE	2.50	0.45
11:C:245:THR:O	11:C:246:PRO:C	2.59	0.45
12:D:172:VAL:HG23	12:D:173:GLN:N	2.32	0.45
13:E:113:VAL:HG13	13:E:114:ARG:H	1.81	0.45
14:F:110:ILE:HG22	14:F:111:ARG:N	2.32	0.45
16:H:4:ILE:HD11	16:H:39:ALA:HA	1.97	0.45
20:L:21:ARG:HB3	20:L:21:ARG:CZ	2.47	0.45
25:Q:92:LYS:C	25:Q:92:LYS:HD3	2.41	0.45
29:U:23:LYS:H	29:U:36:GLU:HG3	1.81	0.45
29:U:25:LYS:HA	29:U:35:VAL:N	2.31	0.45
4:3:28:LEU:HB2	4:3:32:LEU:O	2.17	0.45
6:5:425:ARG:HE	10:B:490:C:N4	2.14	0.45
9:A:26:C:H2'	9:A:27:C:C6	2.50	0.45
10:B:37:C:C2	13:E:46:GLN:OE1	2.70	0.45
10:B:279:A:C8	10:B:279:A:P	3.10	0.45
10:B:349:U:O2'	10:B:350:G:H5'	2.17	0.45
10:B:484:C:O4'	29:U:45:GLN:CD	2.59	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:581:C:H2'	10:B:582:A:H8	1.81	0.45
10:B:1042:G:C6	10:B:1043:C:N4	2.85	0.45
10:B:1152:C:H3'	36:B:3142:HOH:O	2.15	0.45
10:B:1313:U:O2	10:B:1313:U:H2'	2.16	0.45
10:B:1513:U:H2'	10:B:1514:G:H5''	1.99	0.45
10:B:1704:C:O2'	10:B:1705:A:H5'	2.16	0.45
10:B:2307:G:H4'	10:B:2311:A:N6	2.29	0.45
10:B:2468:A:H2'	10:B:2476:A:C6	2.52	0.45
10:B:2677:G:H2'	10:B:2678:C:C6	2.51	0.45
11:C:70:LYS:HG2	11:C:71:ASP:N	2.32	0.45
11:C:79:ARG:HG3	11:C:79:ARG:HH11	1.82	0.45
11:C:136:VAL:O	11:C:137:GLY:C	2.59	0.45
11:C:258:SER:HB2	11:C:261:ARG:HH12	1.82	0.45
14:F:4:HIS:HB2	14:F:96:TRP:CD1	2.51	0.45
16:H:128:HIS:CG	16:H:144:VAL:HB	2.51	0.45
18:J:11:VAL:HG22	18:J:12:LYS:N	2.32	0.45
20:L:38:GLN:HA	20:L:41:ARG:CZ	2.47	0.45
21:M:67:VAL:HG13	21:M:67:VAL:O	2.15	0.45
24:P:102:ARG:H	24:P:102:ARG:HG3	1.35	0.45
25:Q:34:ALA:C	25:Q:38:VAL:HG12	2.42	0.45
26:R:88:GLY:O	26:R:89:HIS:HB2	2.17	0.45
28:T:88:LYS:CG	28:T:89:GLU:H	2.20	0.45
30:V:4:ILE:O	30:V:63:ILE:HA	2.16	0.45
30:V:30:ILE:O	30:V:37:PRO:HA	2.17	0.45
31:W:74:LYS:O	31:W:75:ASN:CB	2.64	0.45
34:Z:65:ASN:O	34:Z:69:SER:HB2	2.16	0.45
3:2:42:LEU:HG	3:2:43:THR:N	2.31	0.45
5:4:27:CYS:C	5:4:29:ALA:N	2.73	0.45
6:5:428:LYS:NZ	10:B:1283:G:OP2	2.46	0.45
9:A:102:G:O2'	9:A:103:U:H5'	2.17	0.45
10:B:12:U:O2	10:B:2626:C:H4'	2.17	0.45
10:B:103:A:H2'	10:B:104:A:O4'	2.17	0.45
10:B:221:A:H2'	10:B:266:G:N7	2.32	0.45
10:B:246:C:H2'	10:B:247:G:H5'	1.99	0.45
10:B:300:A:C2	10:B:319:G:H1'	2.51	0.45
10:B:310:A:C2	10:B:312:G:N9	2.85	0.45
10:B:438:G:H2'	10:B:439:A:H8	1.82	0.45
10:B:550:C:O2	10:B:550:C:H2'	2.16	0.45
10:B:622:G:H2'	10:B:623:C:H6	1.82	0.45
10:B:743:A:C2'	10:B:744:U:H5'	2.46	0.45
10:B:780:G:H21	10:B:783:A:H62	1.64	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:962:G:H21	10:B:2250:G:H1	1.65	0.45
10:B:977:G:C2'	10:B:978:G:H5'	2.47	0.45
10:B:1179:G:O2'	10:B:1180:U:H5'	2.17	0.45
10:B:1456:G:O2'	10:B:1457:U:H5'	2.16	0.45
10:B:1783:A:H5'	10:B:2608:G:H4'	1.99	0.45
10:B:1973:G:H2'	10:B:1974:C:H6	1.80	0.45
10:B:2572:A:C8	12:D:150:GLN:O	2.70	0.45
11:C:244:VAL:O	11:C:245:THR:C	2.58	0.45
14:F:103:ILE:HA	14:F:107:VAL:CG2	2.47	0.45
15:G:108:PHE:CE1	15:G:151:ARG:HD2	2.52	0.45
17:I:14:ALA:HA	17:I:45:THR:CG2	2.42	0.45
18:J:24:THR:O	18:J:25:LEU:HD22	2.17	0.45
19:K:5:GLN:NE2	19:K:20:MET:HE1	2.32	0.45
20:L:71:ALA:O	20:L:72:ALA:C	2.59	0.45
20:L:85:VAL:O	20:L:85:VAL:HG13	2.15	0.45
20:L:103:ILE:HD11	20:L:105:ILE:HD13	1.99	0.45
24:P:92:ARG:NE	24:P:110:LYS:HB3	2.32	0.45
25:Q:80:ASN:HD22	25:Q:80:ASN:HA	1.52	0.45
29:U:71:ILE:C	29:U:71:ILE:HD13	2.42	0.45
32:X:51:ALA:O	32:X:52:ARG:C	2.60	0.45
3:2:12:ARG:O	3:2:18:PHE:CG	2.70	0.45
5:4:3:VAL:HG11	5:4:35:GLN:HG2	1.98	0.45
6:5:365:LYS:NZ	7:6:456:ALA:HB1	2.32	0.45
9:A:100:G:N2	10:B:863:A:O3'	2.50	0.45
10:B:28:A:H1'	10:B:513:A:C2	2.52	0.45
10:B:129:C:H2'	10:B:130:C:H6	1.81	0.45
10:B:276:U:H2'	10:B:277:G:C5'	2.42	0.45
10:B:295:G:C6	10:B:296:U:C4	3.04	0.45
10:B:295:G:C6	10:B:296:U:O4	2.70	0.45
10:B:305:C:O2'	10:B:306:U:O5'	2.29	0.45
10:B:309:A:C8	10:B:309:A:OP2	2.71	0.45
10:B:348:A:H2'	10:B:349:U:C1'	2.47	0.45
10:B:729:G:H4'	10:B:763:G:H5'	1.98	0.45
10:B:1090:A:C5	10:B:1102:C:O2	2.70	0.45
10:B:1259:G:O2'	10:B:1260:A:H5'	2.17	0.45
10:B:1550:C:O4'	10:B:1741:C:O2'	2.25	0.45
10:B:1750:G:O2'	10:B:1751:U:H5'	2.17	0.45
10:B:1750:G:O2'	10:B:2860:A:H2	2.00	0.45
10:B:2099:U:H2'	10:B:2100:G:H8	1.81	0.45
10:B:2876:G:H4'	24:P:2:ASN:HA	1.98	0.45
11:C:171:VAL:HA	11:C:183:VAL:O	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:D:157:LYS:O	12:D:157:LYS:HG3	2.15	0.45
13:E:6:LYS:HZ1	13:E:119:ILE:H	1.64	0.45
16:H:5:LEU:O	16:H:6:LEU:CB	2.65	0.45
16:H:50:ARG:CB	16:H:51:ARG:HA	2.46	0.45
18:J:25:LEU:HD23	18:J:64:VAL:HA	1.98	0.45
19:K:9:ASN:ND2	19:K:9:ASN:H	2.15	0.45
20:L:40:SER:O	20:L:41:ARG:HB2	2.17	0.45
20:L:82:LEU:O	20:L:83:ALA:HB3	2.17	0.45
21:M:81:ARG:C	21:M:83:GLY:H	2.24	0.45
23:O:76:LYS:CG	23:O:110:ALA:HB2	2.46	0.45
25:Q:34:ALA:O	25:Q:38:VAL:HG12	2.16	0.45
25:Q:47:ARG:HH22	25:Q:50:ARG:CG	2.29	0.45
25:Q:92:LYS:O	25:Q:93:ILE:HG22	2.16	0.45
26:R:42:ALA:C	26:R:44:GLY:H	2.22	0.45
26:R:47:VAL:HG22	26:R:48:LYS:HG2	1.97	0.45
27:S:90:LYS:N	27:S:90:LYS:CE	2.80	0.45
28:T:57:VAL:HG12	28:T:58:VAL:H	1.82	0.45
29:U:44:HIS:CE1	29:U:47:PRO:CG	2.86	0.45
33:Y:47:ILE:HG23	33:Y:54:VAL:HG11	1.98	0.45
5:4:8:LYS:HB3	10:B:1032:A:OP1	2.17	0.44
10:B:226:A:H2'	10:B:227:A:C8	2.52	0.44
10:B:273:G:O6	10:B:365:U:C4	2.71	0.44
10:B:278:A:C2	10:B:362:A:C1'	3.00	0.44
10:B:280:U:H3'	10:B:280:U:H6	1.81	0.44
10:B:285:G:O6	10:B:356:G:C2	2.70	0.44
10:B:285:G:C5	10:B:356:G:C2	3.05	0.44
10:B:292:U:O2	10:B:348:A:C2	2.70	0.44
10:B:295:G:O6	10:B:344:A:C6	2.71	0.44
10:B:490:C:H4'	10:B:491:G:OP2	2.17	0.44
10:B:870:U:O2'	21:M:8:LYS:HB3	2.17	0.44
10:B:878:A:OP1	10:B:899:A:N6	2.47	0.44
10:B:1042:G:H3'	10:B:1043:C:H5	1.82	0.44
10:B:1044:C:C6	10:B:1044:C:O5'	2.70	0.44
10:B:1063:G:O2'	17:I:135:MET:HB2	2.13	0.44
10:B:1256:G:H21	13:E:77:ILE:CG2	2.29	0.44
10:B:1328:A:H2'	10:B:1330:C:C4	2.52	0.44
10:B:1396:U:O2	10:B:1396:U:O4'	2.34	0.44
10:B:1409:U:O2'	10:B:1410:G:H5'	2.16	0.44
10:B:1671:U:H2'	10:B:1673:G:OP2	2.17	0.44
10:B:1764:C:H2'	10:B:1765:U:C6	2.52	0.44
10:B:2093:G:H2'	10:B:2094:A:H8	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2227:A:O3'	11:C:258:SER:HA	2.16	0.44
10:B:2316:G:H2'	10:B:2317:A:H8	1.81	0.44
10:B:2633:G:H2'	10:B:2634:A:O4'	2.16	0.44
11:C:141:HIS:CG	11:C:142:ASN:H	2.34	0.44
11:C:206:LYS:O	11:C:207:ALA:C	2.58	0.44
11:C:259:ASN:O	11:C:260:LYS:HB2	2.17	0.44
14:F:7:TYR:OH	14:F:29:ARG:HA	2.17	0.44
15:G:90:GLY:HA3	15:G:93:TYR:CD2	2.51	0.44
15:G:93:TYR:N	15:G:93:TYR:CD1	2.84	0.44
16:H:62:LEU:HG	16:H:137:GLU:HG2	1.99	0.44
17:I:37:PHE:CZ	17:I:58:ILE:HD11	2.52	0.44
18:J:81:ILE:CG1	18:J:82:GLY:N	2.80	0.44
19:K:23:LYS:HG3	19:K:24:VAL:N	2.32	0.44
20:L:136:GLU:C	20:L:138:ALA:N	2.73	0.44
21:M:73:ILE:HD11	21:M:92:TRP:CB	2.46	0.44
22:N:37:THR:HB	22:N:39:PRO:HD2	1.99	0.44
23:O:17:LYS:HE3	23:O:43:ASN:CB	2.44	0.44
24:P:36:LYS:HD3	24:P:37:LYS:H	1.82	0.44
25:Q:40:LYS:HA	25:Q:43:GLN:HE21	1.82	0.44
25:Q:102:LYS:H	25:Q:102:LYS:CD	2.29	0.44
26:R:41:ILE:O	26:R:41:ILE:HD12	2.17	0.44
27:S:33:LEU:HD12	27:S:37:THR:HB	1.99	0.44
29:U:43:LYS:O	29:U:44:HIS:HB2	2.16	0.44
29:U:48:VAL:CB	29:U:54:PRO:CD	2.87	0.44
29:U:101:THR:C	29:U:102:ILE:HG13	2.41	0.44
1:0:27:LEU:O	1:0:36:LYS:HB3	2.16	0.44
6:5:380:ILE:HA	6:5:383:MET:SD	2.57	0.44
10:B:67:U:C4	10:B:68:G:N7	2.86	0.44
10:B:278:A:C2	10:B:362:A:N9	2.84	0.44
10:B:305:C:C2	10:B:306:U:C4	3.05	0.44
10:B:311:A:C8	10:B:332:A:C4	2.96	0.44
10:B:325:G:O6	10:B:338:G:C2	2.70	0.44
10:B:335:C:C5	10:B:335:C:OP1	2.70	0.44
10:B:359:G:C4	10:B:360:U:C5	3.05	0.44
10:B:360:U:C5	10:B:361:G:O6	2.70	0.44
10:B:1228:G:H2'	10:B:1229:C:C6	2.53	0.44
10:B:1522:A:O4'	10:B:1524:G:C8	2.70	0.44
10:B:1791:A:C4'	11:C:207:ALA:H	2.30	0.44
10:B:1813:G:N2	11:C:51:ARG:HG2	2.27	0.44
10:B:1857:G:HO2'	10:B:1858:A:H8	1.65	0.44
10:B:1971:U:H1'	11:C:238:ASN:HD22	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2248:C:C2'	10:B:2249:U:H5'	2.47	0.44
10:B:2423:U:H3	31:W:1:ALA:HB2	1.82	0.44
10:B:2576:G:OP2	12:D:149:ASN:HB2	2.17	0.44
10:B:2714:G:O2'	10:B:2715:C:H5'	2.18	0.44
10:B:2722:G:O2'	10:B:2723:C:H5'	2.18	0.44
10:B:2848:G:N9	24:P:96:LEU:HD23	2.32	0.44
11:C:53:ILE:CD1	11:C:218:THR:HG23	2.45	0.44
15:G:35:THR:C	15:G:36:LEU:HD12	2.41	0.44
15:G:71:LEU:HA	15:G:74:MET:CG	2.46	0.44
15:G:126:THR:C	15:G:128:THR:N	2.75	0.44
18:J:92:MET:O	18:J:95:ARG:HG3	2.17	0.44
19:K:102:PRO:HA	19:K:121:GLU:CB	2.46	0.44
20:L:57:LEU:C	20:L:59:ARG:N	2.75	0.44
20:L:78:ARG:HD3	20:L:81:ASP:HB2	2.00	0.44
20:L:91:ASP:CB	20:L:123:ARG:HD2	2.47	0.44
20:L:95:LEU:C	20:L:96:LYS:HD3	2.42	0.44
21:M:21:ALA:C	21:M:96:ILE:HG13	2.42	0.44
22:N:34:ILE:N	22:N:34:ILE:CD1	2.81	0.44
22:N:103:ARG:HB2	22:N:110:MET:SD	2.57	0.44
32:X:14:LEU:HD12	32:X:14:LEU:N	2.33	0.44
32:X:24:GLU:HG3	32:X:43:LEU:HD11	1.97	0.44
34:Z:3:LYS:HD2	34:Z:6:HIS:HB3	1.98	0.44
2:1:5:ARG:HB3	2:1:5:ARG:HH11	1.82	0.44
6:5:409:GLN:HB2	6:5:412:ASP:OD1	2.18	0.44
9:A:24:G:N7	9:A:56:G:H2'	2.32	0.44
10:B:283:G:C2	10:B:358:U:O2	2.70	0.44
10:B:397:U:OP1	34:Z:29:GLY:HA2	2.18	0.44
10:B:559:G:H2'	10:B:560:C:O4'	2.18	0.44
10:B:670:A:P	20:L:47:ARG:HD3	2.57	0.44
10:B:1007:C:H5''	18:J:37:ARG:HH21	1.82	0.44
10:B:1094:U:C2	10:B:1096:A:OP2	2.70	0.44
10:B:1095:A:N1	17:I:26:ALA:O	2.51	0.44
10:B:1116:G:N2	10:B:1117:C:C6	2.86	0.44
10:B:1239:G:H2'	10:B:1240:U:C6	2.52	0.44
10:B:1444:G:N2	10:B:1548:A:C4	2.85	0.44
10:B:1511:G:H2'	10:B:1512:C:C6	2.53	0.44
10:B:1530:G:C2	10:B:1542:U:O2	2.71	0.44
10:B:1567:G:H5''	11:C:84:PRO:HG3	1.99	0.44
10:B:2147:A:C5'	10:B:2148:G:H5'	2.44	0.44
10:B:2348:U:O2'	10:B:2349:G:H5'	2.16	0.44
10:B:2379:G:H2'	10:B:2380:C:H6	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2576:G:P	12:D:149:ASN:HB2	2.57	0.44
10:B:2700:A:H2'	10:B:2701:U:C6	2.52	0.44
10:B:2795:C:O5'	10:B:2795:C:H6	2.00	0.44
10:B:2812:G:H2'	10:B:2813:A:O4'	2.17	0.44
11:C:19:VAL:CG1	11:C:20:ASN:H	2.17	0.44
11:C:59:GLN:HB3	11:C:60:ALA:H	1.30	0.44
11:C:209:ALA:C	11:C:213:ARG:HD2	2.42	0.44
11:C:225:ASN:H	11:C:226:PRO:HD3	1.82	0.44
11:C:231:HIS:CD2	11:C:242:HIS:HB3	2.53	0.44
11:C:255:LYS:HZ2	11:C:261:ARG:CZ	2.30	0.44
14:F:56:LEU:HA	14:F:59:ILE:CG2	2.48	0.44
14:F:173:ASP:C	14:F:175:PRO:HD2	2.42	0.44
16:H:65:ALA:O	16:H:138:VAL:HG21	2.17	0.44
18:J:66:GLY:C	18:J:68:LYS:H	2.25	0.44
19:K:10:VAL:HG13	19:K:19:VAL:HG21	1.99	0.44
19:K:25:LEU:O	19:K:30:ARG:HG3	2.17	0.44
19:K:99:ILE:CG2	19:K:119:ALA:HB2	2.46	0.44
20:L:85:VAL:HG13	20:L:86:GLU:HG2	1.99	0.44
22:N:87:PHE:HB2	22:N:94:TYR:OH	2.16	0.44
22:N:114:GLU:C	22:N:115:LEU:HD23	2.42	0.44
22:N:115:LEU:N	22:N:115:LEU:CD2	2.80	0.44
24:P:31:VAL:HB	24:P:43:GLU:O	2.17	0.44
27:S:80:PRO:O	27:S:100:THR:HG22	2.18	0.44
28:T:57:VAL:HG12	28:T:58:VAL:N	2.32	0.44
29:U:62:ALA:O	29:U:63:ALA:C	2.60	0.44
32:X:46:VAL:HG13	32:X:47:ARG:N	2.32	0.44
4:3:11:LYS:HZ2	20:L:63:LYS:CB	2.27	0.44
10:B:132:G:H2'	10:B:133:U:C6	2.53	0.44
10:B:303:G:C6	10:B:315:G:C6	3.05	0.44
10:B:310:A:C5	10:B:312:G:C4	3.06	0.44
10:B:327:G:O2'	10:B:328:U:C5	2.71	0.44
10:B:359:G:C6	10:B:360:U:N3	2.86	0.44
10:B:673:C:O2'	10:B:674:G:H5'	2.17	0.44
10:B:873:C:H2'	10:B:874:G:H8	1.82	0.44
10:B:1038:G:C2	10:B:1117:C:O2	2.70	0.44
10:B:1196:C:H2'	10:B:1197:G:H8	1.82	0.44
10:B:1534:U:O2	10:B:1538:G:C2	2.71	0.44
10:B:1538:G:C5	10:B:1539:U:C6	3.06	0.44
10:B:1585:C:H2'	10:B:1586:A:O4'	2.17	0.44
10:B:1664:A:H1'	10:B:2726:A:N1	2.33	0.44
10:B:1704:C:H2'	10:B:1705:A:C8	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1739:A:H2'	10:B:1740:G:O4'	2.16	0.44
10:B:1745:A:H2'	10:B:1746:A:H8	1.83	0.44
10:B:1843:C:H5''	11:C:252:LYS:HZ1	1.81	0.44
10:B:2443:C:H2'	10:B:2444:G:H8	1.81	0.44
10:B:2720:U:H2'	10:B:2721:A:C8	2.53	0.44
11:C:179:GLU:CD	11:C:266:ILE:HA	2.42	0.44
11:C:242:HIS:N	11:C:242:HIS:HD1	2.15	0.44
12:D:4:LEU:O	12:D:5:VAL:HG13	2.16	0.44
12:D:205:PRO:O	12:D:206:ALA:HB2	2.17	0.44
15:G:20:GLY:O	15:G:21:GLN:C	2.60	0.44
15:G:21:GLN:HG2	15:G:38:ASP:HA	2.00	0.44
15:G:25:ILE:HG21	15:G:74:MET:HB3	1.98	0.44
15:G:71:LEU:HA	15:G:74:MET:HG3	1.98	0.44
17:I:7:TYR:CB	17:I:59:THR:HA	2.48	0.44
19:K:23:LYS:HG3	19:K:24:VAL:H	1.81	0.44
19:K:28:SER:O	19:K:29:HIS:HB2	2.15	0.44
20:L:55:MET:O	20:L:56:PRO:O	2.36	0.44
20:L:92:LEU:CG	20:L:96:LYS:HZ3	2.29	0.44
21:M:42:THR:O	21:M:43:ALA:HB3	2.16	0.44
21:M:98:PRO:HG2	21:M:99:GLY:H	1.82	0.44
21:M:126:ILE:O	21:M:127:LYS:HB2	2.18	0.44
22:N:41:ALA:C	22:N:43:GLU:N	2.75	0.44
24:P:18:SER:OG	24:P:21:PRO:HD3	2.17	0.44
25:Q:16:ILE:CD1	25:Q:34:ALA:HB2	2.39	0.44
25:Q:89:ILE:O	25:Q:90:ASP:C	2.61	0.44
27:S:32:ALA:HA	27:S:51:LEU:CD1	2.48	0.44
29:U:76:THR:O	29:U:77:GLY:C	2.60	0.44
30:V:2:PHE:HB3	30:V:3:THR:H	1.60	0.44
30:V:66:ASP:C	30:V:68:LYS:H	2.25	0.44
30:V:80:HIS:HB3	30:V:83:LYS:O	2.17	0.44
4:3:19:GLY:O	4:3:20:GLY:C	2.60	0.44
10:B:287:G:C6	10:B:288:U:O4	2.71	0.44
10:B:291:G:H2'	10:B:292:U:H5'	1.98	0.44
10:B:294:A:H5'	10:B:295:G:OP2	2.17	0.44
10:B:299:A:C6	10:B:322:A:C4	3.06	0.44
10:B:300:A:OP2	10:B:300:A:C8	2.70	0.44
10:B:310:A:N9	10:B:312:G:C8	2.71	0.44
10:B:345:A:P	10:B:345:A:C3'	3.05	0.44
10:B:361:G:O2'	10:B:362:A:C8	2.71	0.44
10:B:458:G:H1'	10:B:459:U:H5	1.83	0.44
10:B:1034:G:O6	10:B:1035:U:N3	2.49	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1039:A:C2	10:B:1040:A:N1	2.86	0.44
10:B:1050:A:O4'	10:B:2751:G:C2	2.71	0.44
10:B:1272:A:N7	10:B:1618:A:H1'	2.32	0.44
10:B:1459:G:C2'	10:B:1460:U:H5'	2.47	0.44
10:B:1824:G:OP1	11:C:52:HIS:CE1	2.70	0.44
10:B:2885:G:H2'	10:B:2886:A:O4'	2.17	0.44
11:C:65:ASP:OD2	11:C:101:ARG:HB3	2.18	0.44
11:C:207:ALA:O	11:C:208:GLY:C	2.59	0.44
14:F:135:ILE:O	14:F:136:ILE:HB	2.17	0.44
16:H:81:ALA:HA	16:H:147:VAL:H	1.83	0.44
17:I:96:LYS:HG3	17:I:138:VAL:HG23	1.99	0.44
21:M:97:GLN:H	21:M:98:PRO:CD	2.31	0.44
21:M:133:LYS:O	21:M:134:THR:C	2.59	0.44
23:O:1:MET:CG	23:O:3:LYS:HE3	2.47	0.44
28:T:60:THR:HG22	28:T:83:ALA:CB	2.47	0.44
29:U:55:GLY:C	29:U:57:ILE:H	2.25	0.44
29:U:84:PHE:CA	29:U:94:PHE:HD1	2.30	0.44
31:W:44:PHE:HB3	31:W:76:ARG:HG3	1.99	0.44
1:0:45:ASP:HB3	1:0:54:ILE:O	2.17	0.44
5:4:31:PRO:O	5:4:32:LYS:C	2.60	0.44
6:5:400:ARG:NH1	6:5:400:ARG:HB2	2.32	0.44
10:B:84:A:H2'	29:U:5:ARG:NH1	2.32	0.44
10:B:272:A:C2	10:B:365:U:O2	2.70	0.44
10:B:279:A:C5	10:B:362:A:O4'	2.70	0.44
10:B:303:G:O2'	10:B:304:U:H5'	2.18	0.44
10:B:310:A:C5	10:B:330:A:C6	3.06	0.44
10:B:316:C:O2	10:B:317:G:C8	2.71	0.44
10:B:360:U:O3'	10:B:361:G:C8	2.70	0.44
10:B:360:U:C3'	10:B:361:G:C8	3.00	0.44
10:B:373:U:O2'	10:B:374:A:H5'	2.18	0.44
10:B:465:G:H2'	10:B:466:A:C8	2.53	0.44
10:B:656:G:H2'	10:B:657:U:C6	2.52	0.44
10:B:664:G:O2'	10:B:665:U:H5'	2.17	0.44
10:B:710:U:H2'	10:B:711:G:H8	1.82	0.44
10:B:1476:U:OP2	10:B:1514:G:C2	2.70	0.44
10:B:1561:C:H2'	10:B:1562:U:C6	2.52	0.44
10:B:2182:U:H2'	10:B:2183:A:C8	2.53	0.44
10:B:2308:G:H5'	10:B:2309:A:C5'	2.44	0.44
10:B:2659:G:N2	10:B:2661:G:H5''	2.32	0.44
10:B:2747:G:O6	10:B:2755:C:H5''	2.17	0.44
10:B:2768:U:H2'	10:B:2769:U:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2893:A:H4'	10:B:2894:G:C5'	2.48	0.44
11:C:209:ALA:HA	11:C:213:ARG:NE	2.33	0.44
12:D:109:VAL:HG22	12:D:203:VAL:HG22	2.00	0.44
15:G:22:VAL:HG23	15:G:33:THR:HG23	2.00	0.44
15:G:26:LYS:HG2	15:G:31:GLU:CD	2.42	0.44
15:G:89:VAL:O	15:G:160:GLY:N	2.51	0.44
16:H:28:ASN:O	16:H:29:PHE:HB2	2.17	0.44
17:I:14:ALA:CB	17:I:50:LYS:HA	2.47	0.44
17:I:140:GLU:OE1	17:I:140:GLU:HA	2.17	0.44
19:K:17:ARG:HB3	19:K:18:ARG:H	1.31	0.44
19:K:47:ILE:O	19:K:48:PRO:C	2.60	0.44
20:L:118:THR:HG23	20:L:119:PRO:CD	2.41	0.44
21:M:1:MET:HG2	21:M:64:TRP:CD1	2.53	0.44
21:M:65:ILE:CG2	21:M:101:VAL:HA	2.44	0.44
23:O:15:ARG:HH12	23:O:17:LYS:HD3	1.83	0.44
23:O:84:GLU:OE1	23:O:85:LYS:HG3	2.17	0.44
24:P:13:LYS:HZ2	24:P:15:ASP:HB2	1.83	0.44
28:T:6:ARG:HG3	28:T:10:VAL:HG13	1.99	0.44
28:T:84:TYR:O	28:T:85:VAL:O	2.36	0.44
29:U:92:VAL:O	29:U:93:ARG:C	2.60	0.44
31:W:23:LYS:HZ2	31:W:24:ARG:HG2	1.82	0.44
31:W:39:GLN:HA	31:W:68:PHE:CA	2.43	0.44
33:Y:22:THR:O	33:Y:26:LEU:N	2.50	0.44
33:Y:50:VAL:CA	33:Y:53:MET:HB2	2.48	0.44
34:Z:3:LYS:HA	34:Z:47:LYS:HA	1.99	0.44
34:Z:66:ILE:O	34:Z:69:SER:O	2.35	0.44
4:3:24:LYS:HE2	4:3:25:HIS:O	2.18	0.44
5:4:11:CYS:SG	5:4:12:ARG:HD2	2.57	0.44
5:4:14:CYS:SG	5:4:27:CYS:SG	3.14	0.44
9:A:27:C:H3'	9:A:28:C:C6	2.52	0.44
10:B:6:A:O2'	10:B:7:G:H5'	2.18	0.44
10:B:277:G:C2	10:B:359:G:OP2	2.70	0.44
10:B:285:G:H8	10:B:285:G:O5'	2.01	0.44
10:B:287:G:C2	10:B:354:A:C8	3.05	0.44
10:B:295:G:H2'	10:B:296:U:C5'	2.47	0.44
10:B:295:G:H2'	10:B:296:U:O5'	2.18	0.44
10:B:319:G:C5	10:B:320:A:C5	3.06	0.44
10:B:324:A:C5	10:B:339:U:C4'	3.00	0.44
10:B:540:C:H2'	10:B:541:A:C8	2.53	0.44
10:B:968:C:O2'	33:Y:16:LEU:HD23	2.18	0.44
10:B:1514:G:O2'	10:B:1515:A:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1539:U:C2	10:B:1540:G:C8	3.05	0.44
10:B:2262:U:H2'	10:B:2263:C:C6	2.52	0.44
10:B:2297:A:N6	10:B:2319:G:C5'	2.81	0.44
10:B:2628:C:O2'	10:B:2781:A:H2'	2.17	0.44
10:B:2750:A:H3'	15:G:3:VAL:HG22	1.98	0.44
10:B:2751:G:H5''	15:G:2:ARG:O	2.18	0.44
10:B:2751:G:C5'	15:G:3:VAL:HG13	2.48	0.44
11:C:10:PRO:CD	11:C:23:LEU:HD11	2.46	0.44
11:C:107:LYS:CB	11:C:194:VAL:HG11	2.27	0.44
11:C:253:GLY:C	11:C:254:LYS:NZ	2.75	0.44
12:D:116:LYS:HG3	22:N:3:HIS:CE1	2.53	0.44
12:D:117:GLY:N	12:D:165:MET:HB3	2.32	0.44
12:D:128:ARG:HH11	12:D:144:GLY:HA2	1.83	0.44
14:F:18:GLU:HA	14:F:18:GLU:OE1	2.17	0.44
14:F:31:GLU:HB3	14:F:32:LYS:H	1.62	0.44
17:I:29:GLN:HA	17:I:29:GLN:HE21	1.83	0.44
18:J:118:MET:O	18:J:119:PHE:C	2.61	0.44
19:K:5:GLN:O	19:K:6:THR:HB	2.17	0.44
21:M:36:VAL:CA	21:M:97:GLN:HG2	2.45	0.44
22:N:14:SER:HA	22:N:17:ARG:HB2	2.00	0.44
22:N:126:ALA:HB3	22:N:127:GLU:OE1	2.17	0.44
24:P:59:THR:HG1	24:P:76:HIS:CG	2.35	0.44
26:R:4:VAL:HG13	26:R:4:VAL:O	2.17	0.44
27:S:48:LYS:O	27:S:52:GLU:HG3	2.16	0.44
28:T:45:ALA:O	28:T:48:GLN:HB3	2.17	0.44
28:T:55:VAL:HG13	28:T:86:THR:O	2.18	0.44
28:T:66:LYS:HA	28:T:77:ARG:HA	2.00	0.44
29:U:48:VAL:CB	29:U:54:PRO:HD3	2.44	0.44
34:Z:66:ILE:O	34:Z:68:GLY:N	2.50	0.44
1:0:37:HIS:HA	27:S:38:TYR:CZ	2.52	0.44
2:1:26:LYS:HD3	2:1:29:LYS:CD	2.48	0.44
3:2:9:VAL:O	3:2:10:LEU:C	2.61	0.44
4:3:11:LYS:C	4:3:12:ARG:HG3	2.41	0.44
10:B:303:G:H3'	10:B:304:U:C5	2.53	0.44
10:B:308:G:H2'	10:B:309:A:N9	2.33	0.44
10:B:361:G:C8	10:B:361:G:OP2	2.71	0.44
10:B:443:A:H5''	13:E:44:ARG:NH1	2.24	0.44
10:B:527:C:H5''	10:B:2779:U:N3	2.33	0.44
10:B:948:C:H2'	10:B:949:G:C8	2.52	0.44
10:B:1059:G:C4'	17:I:116:MET:HA	2.32	0.44
10:B:1061:U:C1'	17:I:9:LYS:HZ2	2.28	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1183:U:H2'	10:B:1184:U:H6	1.77	0.44
10:B:1278:C:OP1	22:N:36:THR:HB	2.18	0.44
10:B:1801:A:H5'	10:B:2203:U:O2'	2.18	0.44
10:B:1826:G:H2'	10:B:1827:U:C6	2.53	0.44
10:B:1902:C:H2'	10:B:1903:G:H5'	2.00	0.44
10:B:2052:A:H4'	12:D:148:GLN:CG	2.43	0.44
10:B:2082:A:O2'	10:B:2083:G:H5'	2.18	0.44
10:B:2553:G:H2'	10:B:2554:U:H4'	1.99	0.44
10:B:2576:G:H22	12:D:149:ASN:HD21	1.62	0.44
10:B:2674:G:H4'	19:K:30:ARG:CG	2.42	0.44
11:C:53:ILE:CG1	11:C:218:THR:HG23	2.47	0.44
12:D:16:THR:CG2	12:D:17:GLU:H	2.22	0.44
12:D:62:LYS:CD	12:D:62:LYS:N	2.78	0.44
13:E:108:ILE:H	13:E:108:ILE:HD12	1.83	0.44
13:E:117:ARG:H	13:E:118:LEU:HD23	1.82	0.44
13:E:154:ASP:OD1	13:E:156:ASN:HB2	2.17	0.44
14:F:170:ALA:HA	14:F:173:ASP:OD2	2.18	0.44
15:G:84:LYS:HA	15:G:84:LYS:NZ	2.33	0.44
16:H:72:ILE:HG23	16:H:72:ILE:O	2.18	0.44
16:H:82:SER:O	16:H:90:LEU:HD23	2.18	0.44
17:I:121:ILE:HA	17:I:124:MET:HG2	2.00	0.44
18:J:7:LYS:C	18:J:9:GLU:N	2.75	0.44
19:K:23:LYS:CG	19:K:24:VAL:H	2.31	0.44
19:K:71:ARG:HD3	19:K:71:ARG:HA	1.86	0.44
20:L:85:VAL:HG21	20:L:98:ALA:CB	2.48	0.44
21:M:15:GLY:O	21:M:16:ARG:HB3	2.18	0.44
21:M:117:PHE:O	21:M:120:ALA:HB3	2.18	0.44
23:O:55:GLU:HB2	23:O:61:GLN:HA	1.99	0.44
26:R:18:GLN:CD	26:R:18:GLN:N	2.74	0.44
27:S:8:ARG:HH12	27:S:79:GLY:HA2	1.82	0.44
28:T:8:LEU:HD23	28:T:8:LEU:N	2.27	0.44
29:U:73:ASN:CG	29:U:96:LYS:HD3	2.43	0.44
31:W:37:VAL:O	31:W:38:ARG:C	2.61	0.44
32:X:6:LEU:O	32:X:8:GLU:N	2.50	0.44
32:X:11:VAL:O	32:X:11:VAL:HG22	2.17	0.44
33:Y:18:LYS:O	33:Y:21:ALA:HB3	2.17	0.44
33:Y:31:ILE:C	33:Y:33:HIS:H	2.26	0.44
34:Z:12:ILE:H	34:Z:12:ILE:HG13	1.27	0.44
2:1:49:LYS:HG2	2:1:50:GLU:O	2.18	0.44
4:3:21:PHE:CD1	4:3:21:PHE:N	2.84	0.44
6:5:376:MET:O	6:5:380:ILE:HG13	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:106:C:H2'	10:B:107:G:H8	1.82	0.44
10:B:287:G:C5	10:B:354:A:N1	2.86	0.44
10:B:311:A:C8	10:B:311:A:OP1	2.70	0.44
10:B:323:C:OP2	10:B:324:A:C8	2.70	0.44
10:B:323:C:O2	10:B:323:C:H2'	2.17	0.44
10:B:340:A:H8	10:B:341:C:C5	2.34	0.44
10:B:392:U:O2'	10:B:393:C:H5'	2.17	0.44
10:B:545:U:H2'	10:B:547:A:P	2.58	0.44
10:B:597:G:H4'	20:L:21:ARG:HD2	1.99	0.44
10:B:1541:C:H2'	10:B:1542:U:O4'	2.18	0.44
10:B:1675:C:O2	12:D:134:HIS:CG	2.71	0.44
10:B:2133:G:C2'	10:B:2133:G:N3	2.80	0.44
10:B:2200:C:O2	10:B:2226:C:N4	2.51	0.44
10:B:2249:U:H4'	10:B:2275:C:H5	1.82	0.44
10:B:2340:A:H2'	10:B:2341:G:H8	1.82	0.44
10:B:2663:G:H2'	10:B:2664:G:C8	2.53	0.44
10:B:2772:C:H2'	10:B:2773:C:H6	1.82	0.44
11:C:17:LYS:HZ3	11:C:17:LYS:HG3	1.59	0.44
11:C:170:TYR:HB3	11:C:185:ALA:HB3	2.00	0.44
12:D:17:GLU:HB2	24:P:80:VAL:CG2	2.44	0.44
12:D:52:THR:N	12:D:75:ALA:HB1	2.33	0.44
12:D:152:PRO:C	12:D:153:GLY:O	2.59	0.44
13:E:149:ILE:HA	13:E:168:ASP:O	2.18	0.44
13:E:151:GLY:O	13:E:153:LEU:HD12	2.18	0.44
14:F:15:LEU:HD22	14:F:28:PRO:HG3	1.99	0.44
14:F:107:VAL:CG1	14:F:116:LEU:HD21	2.48	0.44
14:F:177:ARG:NE	14:F:178:LYS:N	2.66	0.44
16:H:55:GLU:C	16:H:57:LYS:N	2.73	0.44
18:J:57:LEU:HD12	18:J:128:ASN:CA	2.48	0.44
18:J:60:ASP:OD1	18:J:97:PRO:HG2	2.18	0.44
18:J:114:LEU:O	18:J:117:ALA:HB3	2.18	0.44
20:L:72:ALA:HB3	20:L:106:GLU:OE2	2.17	0.44
20:L:109:LYS:H	20:L:126:ARG:HB3	1.82	0.44
22:N:4:ARG:CG	22:N:5:LYS:N	2.80	0.44
22:N:67:PHE:HD1	22:N:73:ASN:HD21	1.65	0.44
23:O:21:LEU:O	23:O:42:PRO:HB3	2.17	0.44
23:O:24:THR:HG22	23:O:41:ALA:HA	2.00	0.44
25:Q:58:GLN:O	25:Q:62:ALA:HB2	2.18	0.44
26:R:7:SER:CB	26:R:21:ARG:HH22	2.30	0.44
26:R:58:VAL:HG13	26:R:59:ILE:HG12	1.98	0.44
26:R:60:LYS:HD2	26:R:60:LYS:HA	1.80	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:U:71:ILE:HG23	29:U:72:PHE:N	2.32	0.44
31:W:27:GLY:HA2	31:W:60:ALA:CA	2.39	0.44
1:0:3:GLN:N	1:0:3:GLN:CD	2.76	0.43
4:3:28:LEU:HG	4:3:28:LEU:H	1.45	0.43
4:3:29:ARG:NE	10:B:2393:U:OP1	2.51	0.43
8:7:163:G:H2'	8:7:164:C:O4'	2.18	0.43
10:B:7:G:H1'	18:J:135:GLN:NE2	2.32	0.43
10:B:28:A:N6	10:B:512:G:O2'	2.51	0.43
10:B:118:A:H5'	10:B:119:A:C8	2.45	0.43
10:B:409:G:O2'	10:B:410:G:H5'	2.18	0.43
10:B:570:G:C2'	10:B:571:U:H5'	2.48	0.43
10:B:971:G:H2'	10:B:972:A:O4'	2.18	0.43
10:B:995:C:C4	18:J:2:LYS:HB3	2.53	0.43
10:B:1348:C:H2'	10:B:1349:C:H5'	2.00	0.43
10:B:2477:U:H4'	10:B:2479:U:O4	2.18	0.43
10:B:2881:U:H5''	22:N:121:LYS:N	2.33	0.43
11:C:109:LEU:HB3	11:C:110:LYS:H	1.64	0.43
11:C:183:VAL:O	11:C:184:GLU:C	2.61	0.43
13:E:117:ARG:HA	13:E:188:MET:CE	2.48	0.43
15:G:117:PRO:O	15:G:118:ALA:C	2.61	0.43
17:I:92:PRO:C	17:I:94:LYS:H	2.26	0.43
18:J:20:ALA:C	18:J:22:GLY:H	2.24	0.43
18:J:68:LYS:HA	18:J:71:ASP:OD1	2.17	0.43
22:N:75:ILE:HG23	22:N:76:VAL:N	2.33	0.43
23:O:76:LYS:NZ	23:O:79:ALA:HB3	2.33	0.43
24:P:52:ARG:HG3	24:P:54:LEU:HD12	2.00	0.43
25:Q:16:ILE:C	25:Q:18:LYS:N	2.75	0.43
27:S:6:LYS:CA	27:S:104:THR:HA	2.48	0.43
29:U:63:ALA:O	29:U:64:ILE:HG22	2.17	0.43
30:V:89:ILE:HD13	30:V:91:PHE:CE2	2.52	0.43
31:W:16:GLU:N	31:W:18:LYS:HZ1	2.16	0.43
32:X:14:LEU:HD22	32:X:57:LEU:HD22	1.99	0.43
1:0:26:SER:CB	1:0:38:LEU:HD12	2.46	0.43
2:1:49:LYS:HD2	2:1:49:LYS:N	2.33	0.43
6:5:430:MET:HE2	6:5:430:MET:H	1.83	0.43
9:A:30:C:O2	9:A:30:C:H2'	2.18	0.43
9:A:48:U:H2'	9:A:49:C:H6	1.80	0.43
10:B:306:U:O2	10:B:312:G:C2	2.71	0.43
10:B:352:A:N3	10:B:353:C:C6	2.86	0.43
10:B:358:U:C4	10:B:359:G:O6	2.70	0.43
10:B:849:A:O2'	33:Y:20:LYS:HG2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:957:C:OP1	21:M:76:LYS:HG2	2.18	0.43
10:B:1062:G:N3	10:B:1063:G:N7	2.66	0.43
10:B:1085:A:O2'	10:B:1086:A:H5'	2.18	0.43
10:B:1118:C:C2'	10:B:1119:U:C5'	2.95	0.43
10:B:1151:A:H2'	10:B:1152:C:C6	2.53	0.43
10:B:1315:C:H2'	10:B:1316:U:C6	2.53	0.43
10:B:1515:A:C2'	10:B:1516:G:H8	2.20	0.43
10:B:1524:G:C2	10:B:1525:A:C5	3.05	0.43
10:B:1623:G:O2'	10:B:1624:U:H5'	2.18	0.43
10:B:1820:U:C4	11:C:158:GLY:HA3	2.52	0.43
10:B:2180:U:H2'	10:B:2181:U:C5	2.53	0.43
10:B:2286:G:H2'	10:B:2287:A:OP2	2.18	0.43
10:B:2320:U:H3'	10:B:2321:U:C5'	2.48	0.43
10:B:2581:G:H2'	10:B:2581:G:N3	2.33	0.43
10:B:2805:C:O2'	10:B:2806:C:H5'	2.19	0.43
10:B:2889:C:H2'	10:B:2890:G:C8	2.52	0.43
10:B:2893:A:H4'	10:B:2894:G:O5'	2.18	0.43
12:D:4:LEU:O	12:D:4:LEU:HG	2.17	0.43
12:D:88:GLU:CG	12:D:89:GLU:N	2.80	0.43
12:D:117:GLY:O	12:D:118:PHE:C	2.60	0.43
13:E:68:ALA:O	13:E:69:ARG:HB3	2.18	0.43
13:E:88:ARG:HA	13:E:89:PRO:HD3	1.71	0.43
16:H:29:PHE:H	16:H:32:PRO:CD	2.31	0.43
16:H:40:THR:O	16:H:42:LYS:N	2.52	0.43
21:M:43:ALA:C	21:M:45:GLN:H	2.26	0.43
23:O:16:ARG:HA	23:O:16:ARG:HE	1.82	0.43
23:O:20:GLU:O	23:O:21:LEU:C	2.61	0.43
23:O:86:GLY:O	23:O:89:ASP:HB2	2.18	0.43
25:Q:5:ARG:O	25:Q:9:ALA:HB2	2.18	0.43
27:S:29:VAL:CG2	27:S:69:LEU:HB3	2.48	0.43
27:S:34:ASP:HA	27:S:38:TYR:CD2	2.53	0.43
28:T:32:LEU:C	28:T:34:VAL:H	2.25	0.43
28:T:68:LYS:HE2	28:T:68:LYS:HB2	1.81	0.43
29:U:64:ILE:HD13	29:U:65:GLN:H	1.82	0.43
31:W:44:PHE:H	31:W:76:ARG:HG3	1.83	0.43
33:Y:50:VAL:C	33:Y:53:MET:HB2	2.43	0.43
34:Z:58:ASP:O	34:Z:59:ARG:HD3	2.18	0.43
3:2:22:MET:SD	3:2:28:ARG:HG3	2.58	0.43
3:2:42:LEU:HD12	3:2:43:THR:H	1.83	0.43
6:5:350:LEU:HD22	6:5:350:LEU:H	1.82	0.43
6:5:425:ARG:CZ	10:B:490:C:C5	2.97	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:79:C:C2'	10:B:346:A:C8	2.98	0.43
10:B:102:U:H4'	10:B:103:A:OP2	2.14	0.43
10:B:275:C:O2	10:B:363:G:C6	2.71	0.43
10:B:296:U:O4	10:B:343:C:N4	2.47	0.43
10:B:297:G:C5	10:B:298:G:C5	3.06	0.43
10:B:299:A:C1'	10:B:322:A:N1	2.81	0.43
10:B:305:C:O2	10:B:313:G:C4	2.71	0.43
10:B:327:G:O2'	10:B:328:U:C6	2.70	0.43
10:B:347:A:N6	10:B:348:A:N6	2.66	0.43
10:B:476:G:N2	10:B:478:A:H3'	2.33	0.43
10:B:508:A:N3	10:B:508:A:O4'	2.51	0.43
10:B:720:U:H2'	10:B:721:A:H8	1.78	0.43
10:B:910:A:H2	10:B:2264:C:O2	2.01	0.43
10:B:1042:G:C2	10:B:1043:C:C4	3.07	0.43
10:B:1043:C:O2	10:B:1112:G:C2	2.71	0.43
10:B:1075:C:H2'	10:B:1076:C:H6	1.75	0.43
10:B:1403:A:H2'	10:B:1404:C:C6	2.53	0.43
10:B:1425:G:H2'	10:B:1426:G:C8	2.54	0.43
10:B:1463:C:H2'	10:B:1464:G:C8	2.53	0.43
10:B:1520:U:C4	10:B:1521:G:N1	2.86	0.43
10:B:2306:C:H42	14:F:38:GLY:N	2.15	0.43
10:B:2526:G:H2'	10:B:2527:C:H6	1.81	0.43
10:B:2547:A:H2'	10:B:2548:U:H6	1.83	0.43
10:B:2772:C:H5''	12:D:171:THR:HG21	1.99	0.43
36:B:3237:HOH:O	13:E:81:GLY:HA2	2.18	0.43
11:C:144:GLU:HG2	11:C:150:GLY:HA2	2.00	0.43
12:D:31:ALA:O	12:D:32:ASN:ND2	2.51	0.43
12:D:84:LEU:O	12:D:84:LEU:HD12	2.19	0.43
12:D:115:GLY:HA2	12:D:165:MET:CE	2.48	0.43
13:E:49:ARG:HH11	13:E:49:ARG:CG	2.31	0.43
13:E:83:VAL:O	13:E:83:VAL:HG13	2.19	0.43
14:F:70:ARG:CA	14:F:80:GLN:HE21	2.32	0.43
20:L:67:THR:O	20:L:68:SER:HB2	2.18	0.43
27:S:72:THR:O	27:S:73:LYS:HG2	2.18	0.43
34:Z:5:ILE:HD12	34:Z:5:ILE:N	2.32	0.43
10:B:39:G:O2'	10:B:40:U:H5'	2.18	0.43
10:B:83:A:C8	29:U:90:LYS:CB	3.02	0.43
10:B:140:C:OP2	10:B:140:C:H6	2.00	0.43
10:B:264:C:O2'	10:B:265:A:H5''	2.19	0.43
10:B:279:A:N7	10:B:362:A:H1'	2.33	0.43
10:B:304:U:H2'	10:B:305:C:H6	1.78	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:306:U:N3	10:B:312:G:N1	2.66	0.43
10:B:390:U:H4'	10:B:391:A:H5'	2.00	0.43
10:B:576:U:H2'	10:B:577:G:C8	2.53	0.43
10:B:760:G:H4'	10:B:1776:G:OP1	2.17	0.43
10:B:1196:C:H2'	10:B:1197:G:C8	2.54	0.43
10:B:1281:G:H2'	10:B:1282:U:O4'	2.18	0.43
10:B:1526:C:H2'	10:B:1527:G:C5'	2.49	0.43
10:B:1662:U:O2	10:B:2687:U:H4'	2.18	0.43
10:B:1791:A:H1'	11:C:206:LYS:HZ2	1.81	0.43
10:B:1826:G:H2'	10:B:1827:U:H6	1.81	0.43
10:B:1843:C:H2'	10:B:1844:C:H6	1.84	0.43
10:B:1958:C:O2'	10:B:1959:G:H5'	2.18	0.43
10:B:2648:G:H2'	10:B:2649:C:H6	1.83	0.43
11:C:160:TYR:HA	11:C:193:GLU:HG2	2.00	0.43
12:D:1:MET:HE2	12:D:1:MET:HB2	1.87	0.43
12:D:23:PRO:HA	12:D:190:LYS:N	2.33	0.43
13:E:4:VAL:HG13	13:E:5:LEU:N	2.33	0.43
13:E:97:ASN:N	13:E:97:ASN:HD22	2.16	0.43
14:F:52:ALA:HA	14:F:148:VAL:CG1	2.49	0.43
16:H:19:VAL:HG12	16:H:20:ASN:N	2.33	0.43
18:J:63:ALA:CA	18:J:69:ARG:HD2	2.48	0.43
20:L:91:ASP:OD1	20:L:92:LEU:N	2.51	0.43
21:M:21:ALA:O	21:M:96:ILE:HG13	2.18	0.43
21:M:127:LYS:NZ	30:V:84:PRO:HG3	2.33	0.43
22:N:70:THR:HG21	22:N:75:ILE:CG2	2.44	0.43
25:Q:22:GLY:HA2	25:Q:28:SER:HB3	1.99	0.43
27:S:28:LYS:HD3	27:S:29:VAL:H	1.83	0.43
30:V:16:ALA:O	30:V:19:ARG:HB2	2.19	0.43
30:V:51:GLN:HE21	30:V:51:GLN:HB2	1.66	0.43
33:Y:16:LEU:CB	33:Y:17:PRO:CD	2.88	0.43
33:Y:53:MET:HE3	33:Y:53:MET:HB3	1.89	0.43
2:1:31:GLU:HB3	2:1:32:LYS:CE	2.49	0.43
5:4:23:ILE:O	5:4:24:ARG:O	2.36	0.43
9:A:50:A:H5''	23:O:68:LYS:CD	2.47	0.43
10:B:65:U:H4'	28:T:70:HIS:CE1	2.53	0.43
10:B:205:G:HO2'	10:B:206:U:P	2.41	0.43
10:B:273:G:C5	10:B:365:U:C2	3.07	0.43
10:B:291:G:N2	10:B:350:G:N9	2.66	0.43
10:B:298:G:H21	10:B:340:A:N6	2.13	0.43
10:B:299:A:N1	10:B:322:A:C8	2.86	0.43
10:B:340:A:N7	10:B:341:C:C2	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:500:G:N2	10:B:502:A:H3'	2.34	0.43
10:B:852:U:H2'	10:B:853:C:H6	1.83	0.43
10:B:1043:C:C2	10:B:1044:C:N3	2.87	0.43
10:B:1048:A:N1	10:B:1049:C:N3	2.67	0.43
10:B:1096:A:H2'	10:B:1097:U:O5'	2.19	0.43
10:B:1115:G:N1	10:B:1116:G:C6	2.87	0.43
10:B:1162:G:H4'	26:R:23:GLU:HG2	2.01	0.43
10:B:1487:U:H2'	10:B:1488:C:C6	2.52	0.43
10:B:1521:G:H2'	10:B:1522:A:OP1	2.18	0.43
10:B:1542:U:C2	10:B:1543:G:C8	3.07	0.43
10:B:2485:G:H1'	21:M:118:LYS:NZ	2.34	0.43
10:B:2531:A:H5'	15:G:156:TYR:CE2	2.54	0.43
10:B:2708:G:O2'	10:B:2709:G:H5'	2.19	0.43
10:B:2716:C:O2'	10:B:2717:C:H5'	2.18	0.43
11:C:23:LEU:HD12	11:C:23:LEU:O	2.18	0.43
11:C:115:ILE:HA	11:C:126:GLY:HA3	1.99	0.43
11:C:253:GLY:O	11:C:254:LYS:HG3	2.19	0.43
13:E:23:PHE:O	13:E:24:ASN:C	2.62	0.43
13:E:108:ILE:HD12	13:E:108:ILE:N	2.34	0.43
13:E:173:THR:HA	13:E:201:ALA:O	2.18	0.43
14:F:67:THR:OG1	14:F:85:GLY:HA3	2.19	0.43
15:G:102:ILE:CG2	15:G:114:HIS:HB3	2.49	0.43
16:H:5:LEU:C	16:H:7:ASP:H	2.26	0.43
18:J:98:GLU:O	18:J:100:VAL:N	2.51	0.43
19:K:34:GLY:O	19:K:35:VAL:C	2.62	0.43
20:L:84:LYS:C	20:L:86:GLU:HG3	2.43	0.43
23:O:87:ILE:CG1	23:O:88:LYS:H	2.31	0.43
28:T:64:LYS:HD3	28:T:79:ASP:HA	2.00	0.43
29:U:5:ARG:O	29:U:8:ASP:HB2	2.18	0.43
30:V:54:ALA:O	30:V:57:TYR:N	2.50	0.43
31:W:28:GLU:CB	31:W:30:VAL:HG23	2.41	0.43
31:W:52:CYS:HB2	31:W:53:GLY:H	1.52	0.43
2:1:24:LYS:NZ	10:B:2285:C:N4	2.67	0.43
4:3:42:HIS:ND1	4:3:42:HIS:C	2.76	0.43
5:4:25:VAL:HG23	5:4:35:GLN:HB2	2.01	0.43
6:5:335:LEU:HD12	6:5:380:ILE:HG22	2.00	0.43
10:B:49:A:OP1	10:B:51:G:H5'	2.18	0.43
10:B:265:A:N6	10:B:427:U:O2'	2.52	0.43
10:B:307:G:C2	10:B:309:A:O5'	2.71	0.43
10:B:324:A:N1	10:B:325:G:C4	2.86	0.43
10:B:701:G:O2'	10:B:702:U:H5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1114:C:O5'	10:B:1114:C:H6	2.02	0.43
10:B:1407:G:H2'	10:B:1408:G:H8	1.84	0.43
10:B:1792:G:O2'	10:B:1793:C:H5'	2.19	0.43
10:B:1987:A:H2'	10:B:1988:G:C8	2.54	0.43
10:B:2022:U:O2'	10:B:2617:U:H5'	2.19	0.43
10:B:2247:A:H2'	10:B:2248:C:H6	1.83	0.43
11:C:145:MET:O	11:C:184:GLU:HG3	2.18	0.43
12:D:108:ASP:HB2	12:D:173:GLN:HA	2.01	0.43
15:G:5:LYS:HA	15:G:5:LYS:HD2	1.71	0.43
15:G:94:ARG:HH11	15:G:94:ARG:CB	2.31	0.43
15:G:114:HIS:HB2	15:G:150:TYR:HE2	1.83	0.43
16:H:57:LYS:N	16:H:57:LYS:HD2	2.34	0.43
18:J:41:LYS:NZ	18:J:43:GLU:O	2.52	0.43
18:J:102:GLU:HG3	18:J:124:VAL:HG11	1.99	0.43
20:L:35:HIS:O	20:L:35:HIS:ND1	2.52	0.43
23:O:9:ARG:HA	23:O:12:THR:CG2	2.45	0.43
23:O:67:ASN:HA	23:O:67:ASN:HD22	1.56	0.43
23:O:88:LYS:C	23:O:90:VAL:H	2.27	0.43
25:Q:68:ALA:HB2	25:Q:105:PHE:CZ	2.54	0.43
26:R:42:ALA:HA	26:R:54:VAL:CG2	2.46	0.43
26:R:58:VAL:HG22	26:R:59:ILE:H	1.83	0.43
26:R:85:LYS:HG3	26:R:85:LYS:O	2.19	0.43
27:S:10:ALA:O	27:S:11:ARG:CB	2.62	0.43
29:U:44:HIS:CG	29:U:55:GLY:O	2.72	0.43
30:V:42:LEU:HD12	30:V:47:VAL:HG11	2.01	0.43
34:Z:32:LEU:C	34:Z:33:ASN:OD1	2.62	0.43
3:2:34:ARG:HG3	3:2:34:ARG:NH1	2.33	0.43
5:4:12:ARG:N	5:4:12:ARG:HD2	2.34	0.43
5:4:22:VAL:HG11	5:4:36:ARG:NE	2.34	0.43
6:5:416:LEU:HD23	6:5:416:LEU:O	2.19	0.43
9:A:15:A:H1'	9:A:109:A:N7	2.33	0.43
10:B:38:A:O4'	13:E:46:GLN:CG	2.52	0.43
10:B:224:U:H2'	10:B:225:C:O4'	2.18	0.43
10:B:280:U:C4	10:B:360:U:O2	2.70	0.43
10:B:283:G:N9	10:B:284:U:C6	2.83	0.43
10:B:303:G:C2	10:B:304:U:O2	2.70	0.43
10:B:347:A:N3	10:B:347:A:H2'	2.34	0.43
10:B:362:A:C2	10:B:363:G:N9	2.86	0.43
10:B:391:A:H1'	10:B:411:G:O4'	2.19	0.43
10:B:607:U:O4	10:B:620:G:H5''	2.19	0.43
10:B:1110:G:N2	10:B:1111:A:C6	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1446:C:O2'	10:B:1447:C:H5'	2.19	0.43
10:B:1544:A:C5	10:B:1545:A:C5	3.06	0.43
10:B:1550:C:P	10:B:1740:G:H22	2.40	0.43
10:B:2223:G:C2'	10:B:2224:G:H5'	2.48	0.43
10:B:2241:A:H2'	10:B:2242:G:H8	1.78	0.43
10:B:2445:G:O2'	10:B:2446:G:H5'	2.19	0.43
10:B:2653:U:H2'	10:B:2654:A:C8	2.54	0.43
10:B:2845:U:O3'	24:P:54:LEU:HG	2.18	0.43
10:B:2848:G:C8	24:P:96:LEU:HD23	2.54	0.43
11:C:162:GLN:HE21	11:C:162:GLN:HB3	1.53	0.43
11:C:198:GLU:C	11:C:200:MET:N	2.77	0.43
12:D:16:THR:OG1	24:P:80:VAL:HB	2.19	0.43
12:D:67:HIS:NE2	12:D:72:GLY:N	2.67	0.43
13:E:1:MET:HG3	13:E:2:GLU:N	2.33	0.43
13:E:49:ARG:C	13:E:51:GLU:H	2.27	0.43
13:E:66:GLY:O	13:E:67:ARG:C	2.60	0.43
13:E:170:ARG:O	13:E:172:ALA:N	2.52	0.43
14:F:107:VAL:HG11	14:F:116:LEU:HD21	1.99	0.43
14:F:173:ASP:OD1	14:F:173:ASP:N	2.52	0.43
15:G:57:TYR:OH	15:G:59:ASP:HB2	2.18	0.43
15:G:122:ALA:O	15:G:123:GLU:HG3	2.19	0.43
19:K:99:ILE:HD12	19:K:99:ILE:N	2.34	0.43
23:O:45:SER:C	23:O:47:VAL:H	2.26	0.43
23:O:114:GLY:O	23:O:115:LEU:C	2.61	0.43
24:P:60:VAL:HB	24:P:61:ARG:H	1.23	0.43
25:Q:8:ILE:O	25:Q:9:ALA:C	2.62	0.43
26:R:51:VAL:O	26:R:52:PRO:C	2.61	0.43
27:S:1:MET:HB3	27:S:4:ILE:HG12	1.99	0.43
34:Z:59:ARG:O	34:Z:60:PHE:CG	2.71	0.43
6:5:336:GLU:O	6:5:340:GLN:HG3	2.18	0.43
10:B:26:G:OP2	27:S:80:PRO:HG3	2.19	0.43
10:B:138:U:H2'	10:B:140:C:C2	2.53	0.43
10:B:226:A:N1	10:B:418:C:O2'	2.51	0.43
10:B:273:G:N2	10:B:274:C:N1	2.66	0.43
10:B:279:A:C2	10:B:280:U:O4'	2.72	0.43
10:B:288:U:O2	10:B:352:A:C2	2.71	0.43
10:B:302:C:C2'	10:B:303:G:H5'	2.49	0.43
10:B:310:A:C5	10:B:312:G:C8	2.98	0.43
10:B:319:G:O6	10:B:333:G:C6	2.70	0.43
10:B:438:G:H2'	10:B:439:A:C8	2.54	0.43
10:B:535:G:O2'	25:Q:52:ARG:HD3	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1049:C:C2'	10:B:1050:A:H5'	2.49	0.43
10:B:1103:A:C8	10:B:1103:A:O5'	2.70	0.43
10:B:1241:A:H2'	10:B:1242:U:C5'	2.48	0.43
10:B:1515:A:O2'	10:B:1516:G:H5'	2.19	0.43
10:B:1717:A:H2'	10:B:1718:G:O4'	2.19	0.43
10:B:2243:U:O2	10:B:2434:A:C2	2.71	0.43
10:B:2291:U:H2'	10:B:2292:U:H6	1.81	0.43
10:B:2691:C:H2'	10:B:2692:G:H8	1.84	0.43
11:C:67:LYS:O	11:C:68:ARG:CB	2.67	0.43
13:E:35:TYR:CD2	13:E:178:VAL:HG21	2.54	0.43
14:F:12:VAL:CG1	14:F:27:VAL:HG21	2.42	0.43
15:G:94:ARG:NH1	15:G:127:GLN:HB2	2.34	0.43
16:H:9:VAL:C	16:H:11:ASN:N	2.75	0.43
18:J:25:LEU:HD12	18:J:62:VAL:CB	2.49	0.43
18:J:63:ALA:C	18:J:64:VAL:HG23	2.44	0.43
19:K:31:ARG:H	19:K:31:ARG:HG2	1.44	0.43
20:L:53:GLY:O	20:L:54:GLN:C	2.61	0.43
20:L:67:THR:HG23	20:L:68:SER:N	2.25	0.43
21:M:29:GLY:H	21:M:102:LEU:HG	1.84	0.43
21:M:31:PHE:CD2	21:M:109:PRO:HB2	2.53	0.43
21:M:84:LYS:H	21:M:84:LYS:HZ2	1.66	0.43
22:N:34:ILE:O	22:N:36:THR:HG22	2.18	0.43
22:N:96:ARG:HH21	22:N:118:ARG:N	2.04	0.43
25:Q:52:ARG:HD2	25:Q:52:ARG:HA	1.74	0.43
26:R:18:GLN:HE21	26:R:99:THR:CB	2.28	0.43
28:T:48:GLN:CG	28:T:49:LYS:N	2.81	0.43
28:T:50:LEU:C	28:T:52:GLU:N	2.75	0.43
28:T:88:LYS:HZ3	28:T:90:GLY:H	1.66	0.43
29:U:6:ARG:O	29:U:8:ASP:N	2.51	0.43
29:U:44:HIS:ND1	29:U:45:GLN:O	2.50	0.43
29:U:50:ALA:C	29:U:52:ASN:N	2.76	0.43
34:Z:6:HIS:H	34:Z:51:VAL:HG13	1.82	0.43
1:0:6:LYS:HA	1:0:6:LYS:HD3	1.82	0.43
1:0:53:VAL:HG22	22:N:112:TYR:CE2	2.54	0.43
9:A:14:U:H5''	9:A:71:C:O4'	2.18	0.43
9:A:78:A:C2	9:A:99:A:C4	3.06	0.43
10:B:68:G:H3'	10:B:69:C:H6	1.83	0.43
10:B:280:U:H2'	10:B:281:C:N1	2.34	0.43
10:B:281:C:H2'	10:B:282:A:H8	1.80	0.43
10:B:337:C:H5''	29:U:1:ALA:CA	2.39	0.43
10:B:365:U:H3'	10:B:366:C:C5	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:832:U:OP1	20:L:44:GLY:HA3	2.19	0.43
10:B:1042:G:C5	10:B:1043:C:C4	3.07	0.43
10:B:1075:C:C2'	10:B:1076:C:H5'	2.47	0.43
10:B:1149:G:H2'	10:B:1150:C:C6	2.54	0.43
10:B:1159:U:H2'	10:B:1160:G:C8	2.53	0.43
10:B:1341:G:H5'	28:T:61:LEU:HD22	1.99	0.43
10:B:1987:A:H2'	10:B:1988:G:H8	1.84	0.43
10:B:2236:U:O2'	10:B:2237:G:H5'	2.17	0.43
10:B:2329:U:H2'	10:B:2330:G:H8	1.84	0.43
11:C:77:VAL:HG23	11:C:115:ILE:CD1	2.48	0.43
11:C:225:ASN:HD22	11:C:225:ASN:HA	1.50	0.43
12:D:128:ARG:NH2	12:D:130:GLN:HG3	2.34	0.43
13:E:127:GLU:OE1	13:E:130:LYS:HG3	2.19	0.43
16:H:14:SER:C	16:H:16:GLY:N	2.74	0.43
19:K:114:LYS:O	19:K:118:LEU:HD12	2.19	0.43
20:L:82:LEU:HA	20:L:86:GLU:OE1	2.19	0.43
23:O:68:LYS:H	23:O:68:LYS:CD	2.19	0.43
24:P:27:VAL:HG22	24:P:28:LYS:N	2.34	0.43
24:P:27:VAL:HG22	24:P:28:LYS:O	2.18	0.43
26:R:6:GLN:HG3	26:R:7:SER:H	1.83	0.43
26:R:40:MET:O	26:R:41:ILE:C	2.60	0.43
27:S:86:MET:SD	27:S:96:ILE:HD11	2.59	0.43
31:W:74:LYS:O	31:W:75:ASN:CG	2.61	0.43
32:X:21:LEU:O	32:X:47:ARG:NH1	2.52	0.43
34:Z:2:LYS:C	34:Z:4:ASP:N	2.75	0.43
3:2:13:ASN:HB2	3:2:18:PHE:CD2	2.43	0.43
4:3:15:LYS:NZ	4:3:59:ALA:HB1	2.34	0.43
4:3:27:ASN:OD1	4:3:28:LEU:HD23	2.19	0.43
10:B:15:G:H2'	10:B:16:C:C6	2.54	0.43
10:B:81:G:H5'	10:B:294:A:C6	2.01	0.43
10:B:324:A:C5	10:B:339:U:H4'	2.54	0.43
10:B:332:A:N1	10:B:335:C:N1	2.66	0.43
10:B:336:C:H5''	29:U:81:ARG:NH2	2.33	0.43
10:B:336:C:C3'	29:U:81:ARG:NH2	2.70	0.43
10:B:348:A:C2	10:B:349:U:C4	3.06	0.43
10:B:689:A:H2'	10:B:690:G:H8	1.84	0.43
10:B:963:U:H2'	10:B:964:C:C6	2.54	0.43
10:B:1250:G:H5'	25:Q:3:VAL:CG1	2.48	0.43
10:B:1260:A:H2'	10:B:1261:C:C6	2.54	0.43
10:B:1561:C:H2'	10:B:1562:U:H6	1.84	0.43
10:B:1657:U:OP1	12:D:139:SER:O	2.36	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2209:G:H2'	10:B:2210:U:C5	2.54	0.43
10:B:2290:G:H2'	10:B:2291:U:C6	2.53	0.43
10:B:2578:G:N3	12:D:145:SER:HB3	2.34	0.43
10:B:2737:G:H2'	10:B:2738:A:C8	2.54	0.43
10:B:2787:C:H2'	10:B:2788:C:C6	2.53	0.43
10:B:2806:C:H2'	10:B:2807:U:O4'	2.18	0.43
11:C:153:LEU:CD1	11:C:161:VAL:HG23	2.49	0.43
11:C:208:GLY:C	11:C:210:ALA:N	2.77	0.43
14:F:172:PHE:CD1	14:F:173:ASP:N	2.84	0.43
15:G:32:LEU:HD11	15:G:74:MET:SD	2.58	0.43
15:G:99:GLY:C	15:G:101:VAL:H	2.27	0.43
15:G:121:THR:HG23	15:G:133:LYS:O	2.19	0.43
16:H:142:VAL:HG12	16:H:143:ILE:H	1.83	0.43
18:J:101:ILE:HG23	18:J:102:GLU:OE1	2.18	0.43
20:L:96:LYS:HE3	20:L:96:LYS:HB2	1.80	0.43
21:M:1:MET:HA	21:M:65:ILE:O	2.19	0.43
23:O:115:LEU:HD22	23:O:117:PHE:CZ	2.54	0.43
24:P:56:SER:O	24:P:58:PHE:HD1	2.02	0.43
27:S:103:ILE:HG13	27:S:105:VAL:HG23	2.01	0.43
28:T:63:VAL:CG1	28:T:80:TRP:HB2	2.46	0.43
29:U:27:VAL:HA	29:U:32:LYS:C	2.44	0.43
30:V:35:GLU:HB2	30:V:93:ARG:NH1	2.33	0.43
8:7:109:G:H2'	8:7:110:C:C6	2.54	0.42
9:A:105:G:O2'	9:A:106:G:H5'	2.19	0.42
10:B:282:A:C6	10:B:283:G:N7	2.87	0.42
10:B:291:G:N2	10:B:350:G:O4'	2.51	0.42
10:B:307:G:C2'	10:B:330:A:H62	2.32	0.42
10:B:1034:G:N7	10:B:1035:U:C4	2.86	0.42
10:B:1042:G:N1	10:B:1043:C:C4	2.87	0.42
10:B:1043:C:C2	10:B:1112:G:N2	2.86	0.42
10:B:1063:G:OP1	17:I:74:PRO:HB3	2.19	0.42
10:B:1066:U:C2	10:B:1068:G:OP2	2.72	0.42
10:B:1439:A:N1	10:B:1552:A:N7	2.55	0.42
10:B:1473:G:N2	10:B:1519:G:C5	2.87	0.42
10:B:1814:G:C4'	11:C:51:ARG:HD2	2.48	0.42
10:B:2103:C:H3'	10:B:2104:C:O4'	2.19	0.42
10:B:2307:G:O2'	10:B:2311:A:N6	2.52	0.42
10:B:2331:G:H21	10:B:2336:A:H8	1.67	0.42
10:B:2355:G:O3'	31:W:20:LEU:HD22	2.19	0.42
10:B:2732:G:H5'	10:B:2733:A:O4'	2.18	0.42
11:C:42:ARG:NH1	11:C:44:ASN:OD1	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:C:57:HIS:HB3	11:C:58:LYS:H	1.63	0.42
11:C:196:ASN:O	11:C:199:HIS:HB2	2.18	0.42
12:D:13:ARG:O	12:D:14:ILE:C	2.62	0.42
14:F:55:ASP:CG	14:F:148:VAL:HG11	2.44	0.42
14:F:176:PHE:O	14:F:177:ARG:HB3	2.17	0.42
16:H:41:LYS:HD2	16:H:41:LYS:N	2.20	0.42
18:J:38:GLY:HA2	18:J:41:LYS:HB3	2.01	0.42
19:K:64:ARG:H	19:K:83:ALA:CB	2.14	0.42
19:K:108:ARG:HD2	19:K:113:MET:HE3	2.00	0.42
20:L:84:LYS:HA	20:L:84:LYS:CE	2.48	0.42
23:O:68:LYS:C	23:O:70:ALA:H	2.25	0.42
23:O:94:ARG:HG3	23:O:94:ARG:O	2.18	0.42
24:P:47:ILE:HG23	24:P:63:ILE:CB	2.49	0.42
26:R:16:GLU:O	26:R:18:GLN:N	2.51	0.42
27:S:70:LYS:O	27:S:71:VAL:CB	2.66	0.42
28:T:60:THR:HA	28:T:83:ALA:HA	2.01	0.42
30:V:2:PHE:O	30:V:3:THR:HG23	2.18	0.42
34:Z:9:TYR:CE1	34:Z:11:GLU:HB2	2.53	0.42
1:O:6:LYS:HD2	10:B:2615:U:O2'	2.19	0.42
2:1:10:LEU:HD12	2:1:10:LEU:HA	1.84	0.42
3:2:12:ARG:HG3	10:B:686:U:O4	2.19	0.42
4:3:25:HIS:HB3	4:3:26:ALA:H	1.57	0.42
5:4:31:PRO:HG2	10:B:2528:U:P	2.59	0.42
8:7:126:G:H2'	8:7:127:U:C6	2.54	0.42
10:B:18:U:O2'	10:B:19:A:H5'	2.18	0.42
10:B:80:G:O4'	10:B:346:A:C5	2.64	0.42
10:B:283:G:C2	10:B:284:U:H1'	2.54	0.42
10:B:303:G:C6	10:B:304:U:N3	2.87	0.42
10:B:308:G:H8	10:B:308:G:O5'	2.02	0.42
10:B:406:G:H2'	10:B:407:G:H8	1.85	0.42
10:B:635:C:O2'	10:B:639:U:H5''	2.19	0.42
10:B:743:A:H4'	12:D:136:ASN:HD22	1.84	0.42
10:B:1038:G:C2	10:B:1039:A:C4	3.05	0.42
10:B:1044:C:O5'	10:B:1044:C:H6	2.02	0.42
10:B:1161:C:O2'	26:R:22:LEU:HD13	2.19	0.42
10:B:1516:G:N2	10:B:1517:G:C4	2.87	0.42
10:B:1821:A:H2'	10:B:1822:C:H6	1.83	0.42
10:B:2038:G:H2'	10:B:2039:U:O4'	2.18	0.42
10:B:2265:U:H3'	10:B:2266:A:H5''	2.01	0.42
10:B:2370:G:H2'	10:B:2371:G:O4'	2.18	0.42
10:B:2899:A:H2'	10:B:2900:A:H8	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:G:30:GLY:C	15:G:31:GLU:HG3	2.44	0.42
16:H:9:VAL:HG23	16:H:35:LYS:HZ3	1.83	0.42
16:H:11:ASN:O	16:H:13:GLY:N	2.47	0.42
19:K:24:VAL:HG22	19:K:39:ILE:HD12	2.00	0.42
19:K:87:LEU:HA	19:K:94:PRO:HA	2.00	0.42
20:L:13:LYS:C	20:L:15:ALA:N	2.77	0.42
21:M:42:THR:C	21:M:44:ARG:N	2.76	0.42
21:M:71:LYS:NZ	21:M:91:TYR:HD2	2.17	0.42
22:N:33:ILE:HG22	22:N:113:ILE:O	2.18	0.42
22:N:89:SER:O	22:N:91:ALA:N	2.51	0.42
24:P:61:ARG:HB2	24:P:61:ARG:NH1	2.34	0.42
27:S:9:HIS:C	27:S:11:ARG:H	2.27	0.42
27:S:28:LYS:HB3	27:S:71:VAL:CB	2.49	0.42
28:T:15:HIS:CG	28:T:31:VAL:HG11	2.54	0.42
28:T:61:LEU:CD1	28:T:62:VAL:H	2.25	0.42
29:U:27:VAL:O	29:U:28:LEU:HG	2.18	0.42
33:Y:4:ILE:HG12	33:Y:5:LYS:HG3	2.02	0.42
33:Y:16:LEU:CB	33:Y:17:PRO:HD3	2.26	0.42
34:Z:62:LYS:C	34:Z:64:PHE:H	2.26	0.42
1:0:29:VAL:HG23	1:0:36:LYS:HZ2	1.82	0.42
1:0:29:VAL:CB	1:0:36:LYS:HD2	2.49	0.42
6:5:367:GLN:C	6:5:369:ASP:H	2.25	0.42
8:7:110:C:H2'	8:7:111:G:H8	1.83	0.42
8:7:125:G:H2'	8:7:126:G:C8	2.54	0.42
9:A:75:G:H5''	30:V:12:GLN:OE1	2.18	0.42
9:A:78:A:H61	9:A:98:G:H1'	1.83	0.42
10:B:265:A:H2'	10:B:266:G:O4'	2.19	0.42
10:B:270:A:O2'	10:B:368:A:H1'	2.19	0.42
10:B:311:A:N9	10:B:332:A:C8	2.88	0.42
10:B:346:A:N7	10:B:347:A:H1'	2.35	0.42
10:B:408:G:O2'	10:B:409:G:H5'	2.19	0.42
10:B:687:C:H2'	10:B:688:U:O4'	2.19	0.42
10:B:730:A:H3'	36:B:3497:HOH:O	2.19	0.42
10:B:858:G:N2	10:B:2269:G:OP2	2.52	0.42
10:B:904:G:H2'	10:B:905:A:C8	2.54	0.42
10:B:919:U:O5'	10:B:919:U:H6	2.02	0.42
10:B:1050:A:H2'	10:B:1051:G:C8	2.54	0.42
10:B:1098:A:C2'	10:B:1099:G:C5'	2.91	0.42
10:B:1420:A:N3	10:B:2211:A:N7	2.68	0.42
10:B:1566:A:N1	11:C:213:ARG:NH2	2.67	0.42
10:B:1708:C:H2'	10:B:1709:U:C6	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1736:U:H2'	10:B:1737:G:C8	2.54	0.42
10:B:1791:A:N6	10:B:1828:G:H1'	2.34	0.42
10:B:1824:G:H2'	10:B:1825:U:H6	1.84	0.42
10:B:2239:G:H5'	11:C:246:PRO:CG	2.49	0.42
10:B:2277:G:N7	31:W:8:SER:O	2.52	0.42
10:B:2293:G:H2'	10:B:2294:G:O4'	2.19	0.42
10:B:2373:G:O2'	10:B:2374:C:H5'	2.20	0.42
10:B:2642:G:O2'	10:B:2643:G:H5'	2.18	0.42
10:B:2723:C:H2'	10:B:2724:U:O4'	2.19	0.42
11:C:163:ILE:CG2	11:C:164:VAL:H	2.26	0.42
12:D:120:GLY:N	12:D:123:LYS:HG3	2.26	0.42
12:D:148:GLN:N	12:D:148:GLN:CD	2.78	0.42
13:E:46:GLN:O	13:E:47:LYS:C	2.63	0.42
13:E:141:MET:HG3	13:E:143:LEU:HD13	2.00	0.42
15:G:151:ARG:O	15:G:152:ARG:C	2.62	0.42
16:H:6:LEU:HA	16:H:15:LEU:HA	2.00	0.42
19:K:61:VAL:HG23	19:K:84:CYS:O	2.19	0.42
20:L:90:VAL:HG11	20:L:120:VAL:HG23	2.01	0.42
20:L:96:LYS:HE3	20:L:100:ILE:HG13	2.02	0.42
21:M:87:GLY:C	21:M:88:ASN:HD22	2.27	0.42
22:N:34:ILE:HD13	22:N:34:ILE:H	1.83	0.42
24:P:22:GLY:O	24:P:90:ALA:O	2.37	0.42
25:Q:63:ARG:HB3	25:Q:63:ARG:CZ	2.48	0.42
26:R:2:TYR:HB2	26:R:44:GLY:O	2.19	0.42
26:R:78:ARG:CG	26:R:87:GLN:HA	2.49	0.42
28:T:30:ILE:HG23	28:T:32:LEU:HD13	2.01	0.42
29:U:9:GLU:CG	29:U:23:LYS:HB3	2.49	0.42
29:U:22:GLY:HA2	29:U:36:GLU:HB2	2.01	0.42
30:V:2:PHE:CG	30:V:61:LEU:HD22	2.55	0.42
34:Z:30:HIS:O	34:Z:31:ASP:HB3	2.19	0.42
10:B:36:G:C2	10:B:37:C:C2	3.07	0.42
10:B:181:A:O2'	10:B:182:A:H5'	2.19	0.42
10:B:285:G:C6	10:B:356:G:N3	2.86	0.42
10:B:317:G:C2'	10:B:318:C:C6	2.86	0.42
10:B:320:A:C4	13:E:132:LYS:HB3	2.54	0.42
10:B:558:U:O2'	10:B:559:G:H5'	2.19	0.42
10:B:1098:A:H2'	10:B:1099:G:C8	2.52	0.42
10:B:2047:C:H2'	10:B:2048:G:C8	2.54	0.42
10:B:2140:G:H2'	10:B:2141:G:C8	2.54	0.42
10:B:2270:A:N6	10:B:2271:G:C2	2.87	0.42
10:B:2313:C:O2'	10:B:2314:A:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2659:G:C2	10:B:2661:G:H5''	2.55	0.42
11:C:61:TYR:HD2	11:C:84:PRO:HD2	1.76	0.42
11:C:78:GLU:H	11:C:93:VAL:H	1.66	0.42
11:C:237:ARG:HE	11:C:237:ARG:C	2.27	0.42
13:E:177:PRO:O	13:E:178:VAL:C	2.62	0.42
15:G:155:PRO:HB2	15:G:172:GLU:HG3	2.00	0.42
16:H:84:ALA:CA	16:H:90:LEU:HG	2.39	0.42
18:J:138:GLN:O	18:J:139:VAL:HG13	2.19	0.42
21:M:33:LEU:HD22	21:M:124:LEU:HG	2.02	0.42
21:M:70:ASP:C	21:M:71:LYS:HG3	2.44	0.42
23:O:76:LYS:O	23:O:77:ALA:C	2.62	0.42
24:P:2:ASN:C	24:P:3:ILE:HG13	2.44	0.42
24:P:105:LYS:HB2	24:P:106:ALA:H	1.59	0.42
25:Q:52:ARG:NH1	25:Q:55:GLN:HE21	2.17	0.42
25:Q:59:LEU:CG	25:Q:63:ARG:HH21	2.32	0.42
27:S:7:HIS:CG	27:S:8:ARG:N	2.87	0.42
32:X:18:LEU:H	32:X:18:LEU:HD12	1.85	0.42
33:Y:20:LYS:HG3	33:Y:24:LEU:HD12	2.02	0.42
1:O:28:SER:O	1:O:29:VAL:CB	2.68	0.42
3:2:21:ARG:CB	3:2:31:LEU:HD21	2.49	0.42
10:B:213:A:H2'	10:B:214:G:C8	2.54	0.42
10:B:278:A:C4	10:B:362:A:C5	3.07	0.42
10:B:279:A:C2'	10:B:280:U:C5'	2.88	0.42
10:B:301:G:C2	10:B:302:C:O2	2.72	0.42
10:B:347:A:C3'	10:B:348:A:H5'	2.49	0.42
10:B:348:A:C6	10:B:349:U:O4	2.70	0.42
10:B:360:U:H2'	10:B:361:G:C4	2.54	0.42
10:B:363:G:C2	10:B:364:C:N3	2.88	0.42
10:B:558:U:H5'	18:J:114:LEU:HD22	2.00	0.42
10:B:817:C:O2	10:B:839:U:H4'	2.20	0.42
10:B:1042:G:C8	10:B:1042:G:OP2	2.73	0.42
10:B:1313:U:O2	10:B:1313:U:C2'	2.67	0.42
10:B:1556:C:H2'	10:B:1557:C:C6	2.55	0.42
10:B:1593:A:H2'	10:B:1594:U:H6	1.83	0.42
10:B:1747:U:H2'	10:B:1748:C:H6	1.85	0.42
10:B:1824:G:H2'	10:B:1825:U:C6	2.54	0.42
10:B:2040:G:H2'	10:B:2041:U:O4'	2.19	0.42
10:B:2047:C:H2'	10:B:2048:G:H8	1.83	0.42
10:B:2146:C:H1'	10:B:2147:A:H1'	2.01	0.42
10:B:2683:C:H2'	10:B:2684:U:H6	1.83	0.42
11:C:21:PRO:C	11:C:202:ARG:HD2	2.44	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:C:51:ARG:O	11:C:51:ARG:NE	2.53	0.42
11:C:107:LYS:HG3	11:C:108:GLY:N	2.34	0.42
11:C:226:PRO:O	11:C:227:VAL:HG23	2.19	0.42
12:D:36:GLN:HA	12:D:46:ARG:CZ	2.49	0.42
12:D:144:GLY:O	12:D:145:SER:HB2	2.18	0.42
13:E:144:GLU:HG3	13:E:145:ASP:H	1.84	0.42
13:E:169:VAL:C	13:E:171:ASP:N	2.76	0.42
13:E:176:ASP:CG	13:E:177:PRO:HD2	2.44	0.42
14:F:121:PHE:CE2	14:F:166:ARG:N	2.87	0.42
16:H:128:HIS:C	16:H:128:HIS:HD1	2.27	0.42
17:I:18:ASN:N	17:I:19:PRO:CD	2.82	0.42
17:I:74:PRO:HD2	17:I:77:VAL:HG21	2.01	0.42
18:J:130:HIS:HB3	18:J:131:ASN:H	1.60	0.42
19:K:63:VAL:HG21	19:K:85:VAL:HG21	2.00	0.42
19:K:107:LEU:C	19:K:109:SER:N	2.76	0.42
20:L:29:LYS:HZ3	20:L:31:GLY:HA3	1.84	0.42
20:L:56:PRO:O	20:L:57:LEU:C	2.62	0.42
21:M:82:MET:HB2	21:M:84:LYS:CD	2.49	0.42
23:O:55:GLU:HA	23:O:62:LEU:HB2	2.01	0.42
24:P:62:LYS:NZ	24:P:102:ARG:HH22	2.17	0.42
26:R:4:VAL:HG11	26:R:42:ALA:N	2.34	0.42
26:R:33:VAL:HB	26:R:35:PHE:CE1	2.54	0.42
26:R:82:HIS:O	26:R:82:HIS:ND1	2.53	0.42
29:U:5:ARG:CG	29:U:6:ARG:N	2.83	0.42
32:X:27:ASN:O	32:X:28:LEU:C	2.62	0.42
32:X:44:LYS:O	32:X:48:ARG:HD2	2.19	0.42
34:Z:15:SER:HB2	34:Z:25:ARG:HH12	1.81	0.42
34:Z:49:ARG:HH21	34:Z:53:THR:HG21	1.85	0.42
1:0:32:THR:C	1:0:34:GLY:H	2.27	0.42
2:1:8:ILE:HG21	2:1:27:ARG:NH2	2.34	0.42
2:1:25:ASN:HB3	2:1:26:LYS:H	1.61	0.42
2:1:26:LYS:HD3	2:1:29:LYS:CG	2.49	0.42
3:2:16:HIS:ND1	10:B:684:G:OP1	2.53	0.42
5:4:14:CYS:SG	5:4:25:VAL:O	2.77	0.42
6:5:368:MET:HG3	6:5:370:ASP:OD2	2.18	0.42
6:5:392:GLU:H	6:5:392:GLU:CD	2.27	0.42
10:B:275:C:C2'	10:B:276:U:C6	2.86	0.42
10:B:287:G:C2	10:B:354:A:C5	3.07	0.42
10:B:527:C:H5'	36:B:3317:HOH:O	2.19	0.42
10:B:920:A:H2'	10:B:921:C:H6	1.83	0.42
10:B:1081:U:H2'	10:B:1082:U:H5'	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1153:C:H5'	25:Q:75:TYR:HE2	1.85	0.42
10:B:1183:U:C2	10:B:1184:U:C5	3.08	0.42
10:B:1588:G:H2'	10:B:1589:U:C6	2.54	0.42
10:B:1668:A:N3	10:B:1670:C:C4	2.87	0.42
10:B:1847:A:H4'	10:B:1848:A:H8	1.83	0.42
10:B:2415:G:H5''	20:L:66:PHE:H	1.84	0.42
10:B:2682:A:O2'	10:B:2683:C:H5'	2.20	0.42
10:B:2811:G:C5'	12:D:62:LYS:HD2	2.48	0.42
10:B:2893:A:H4'	10:B:2894:G:H5'	1.99	0.42
11:C:114:GLN:O	11:C:115:ILE:HB	2.20	0.42
11:C:156:SER:O	11:C:159:THR:N	2.52	0.42
12:D:140:HIS:HB3	12:D:141:ARG:H	1.61	0.42
13:E:120:VAL:HG12	13:E:121:VAL:N	2.34	0.42
13:E:189:THR:O	13:E:190:ALA:HB3	2.20	0.42
14:F:34:THR:CG2	14:F:89:THR:HG22	2.44	0.42
14:F:103:ILE:HG13	14:F:104:THR:N	2.34	0.42
14:F:135:ILE:HG23	14:F:136:ILE:N	2.33	0.42
16:H:26:ALA:O	16:H:27:ARG:C	2.63	0.42
17:I:56:VAL:CG2	17:I:68:PHE:HB2	2.50	0.42
20:L:55:MET:O	20:L:59:ARG:HG2	2.19	0.42
20:L:92:LEU:HD23	20:L:92:LEU:C	2.44	0.42
21:M:9:PHE:C	21:M:10:ARG:NE	2.78	0.42
22:N:29:VAL:HG12	22:N:78:LYS:HG2	2.02	0.42
22:N:29:VAL:HG13	22:N:83:LEU:HD13	2.02	0.42
24:P:24:THR:HG21	24:P:111:GLU:CG	2.38	0.42
26:R:7:SER:HB2	26:R:21:ARG:HH22	1.83	0.42
26:R:78:ARG:CD	26:R:88:GLY:N	2.82	0.42
28:T:29:THR:HB	28:T:85:VAL:O	2.20	0.42
28:T:64:LYS:HD3	28:T:64:LYS:HA	1.87	0.42
29:U:13:LEU:HG	29:U:69:VAL:CG2	2.49	0.42
32:X:42:LEU:C	32:X:45:GLN:HE21	2.27	0.42
34:Z:15:SER:O	34:Z:21:VAL:HB	2.19	0.42
34:Z:17:SER:OG	34:Z:18:CYS:N	2.53	0.42
2:1:35:LEU:HG	2:1:35:LEU:O	2.19	0.42
5:4:24:ARG:HD3	5:4:26:ILE:HG23	2.01	0.42
9:A:3:C:H2'	9:A:4:C:O4'	2.20	0.42
10:B:1:G:H2'	10:B:2:G:H8	1.83	0.42
10:B:37:C:H4'	10:B:451:U:P	2.60	0.42
10:B:203:A:H2'	10:B:204:A:H8	1.83	0.42
10:B:275:C:H3'	10:B:276:U:C5	2.54	0.42
10:B:291:G:N3	10:B:350:G:N3	2.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:346:A:C5	10:B:347:A:C1'	3.03	0.42
10:B:372:G:O2'	10:B:373:U:P	2.77	0.42
10:B:670:A:OP1	20:L:47:ARG:HD3	2.20	0.42
10:B:1055:G:O2'	10:B:1085:A:C2	2.70	0.42
10:B:1065:U:OP1	17:I:87:SER:OG	2.31	0.42
10:B:1524:G:N1	10:B:1525:A:C5	2.87	0.42
10:B:1534:U:C2	10:B:1538:G:C6	3.08	0.42
10:B:1636:U:O2'	10:B:1637:A:H5'	2.20	0.42
10:B:1922:G:H2'	10:B:1923:U:O4'	2.19	0.42
10:B:2185:U:H2'	10:B:2186:G:C8	2.54	0.42
10:B:2263:C:H4'	10:B:2329:U:H4'	2.01	0.42
10:B:2759:G:H4'	15:G:34:ARG:NH1	2.30	0.42
10:B:2849:U:O4	10:B:2867:G:C8	2.73	0.42
11:C:228:ASP:OD1	11:C:228:ASP:N	2.53	0.42
12:D:187:LEU:HD23	12:D:187:LEU:C	2.44	0.42
14:F:7:TYR:CA	14:F:11:VAL:HB	2.41	0.42
15:G:35:THR:O	15:G:36:LEU:HD12	2.19	0.42
16:H:9:VAL:O	16:H:9:VAL:HG12	2.19	0.42
16:H:27:ARG:CB	16:H:27:ARG:HH11	2.31	0.42
17:I:46:ASP:HA	17:I:50:LYS:CG	2.49	0.42
17:I:89:SER:C	17:I:91:LYS:H	2.27	0.42
20:L:57:LEU:HD13	20:L:58:TYR:CE2	2.54	0.42
20:L:110:VAL:O	20:L:126:ARG:NH2	2.53	0.42
28:T:1:MET:C	28:T:3:ARG:H	2.28	0.42
29:U:84:PHE:HB3	29:U:92:VAL:O	2.20	0.42
31:W:31:LEU:O	31:W:66:VAL:HB	2.19	0.42
4:3:41:ARG:HH12	4:3:42:HIS:HB3	1.85	0.42
10:B:69:C:H2'	10:B:70:G:C8	2.55	0.42
10:B:80:G:H5''	10:B:346:A:N9	2.31	0.42
10:B:280:U:H3'	10:B:281:C:H6	1.85	0.42
10:B:293:U:C5	10:B:345:A:N6	2.88	0.42
10:B:299:A:C6	10:B:300:A:N6	2.88	0.42
10:B:303:G:N1	10:B:304:U:C2	2.87	0.42
10:B:443:A:C2	10:B:1245:G:N3	2.88	0.42
10:B:786:C:O2'	10:B:787:C:H5'	2.19	0.42
10:B:956:G:C1'	21:M:81:ARG:HH22	2.33	0.42
10:B:981:A:H3'	10:B:982:C:C5'	2.50	0.42
10:B:1054:A:C2'	10:B:1055:G:H5'	2.50	0.42
10:B:1205:A:C4'	10:B:1206:G:OP2	2.67	0.42
10:B:1287:A:OP1	22:N:104:ALA:HB3	2.20	0.42
10:B:1447:C:H4'	10:B:1545:A:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1524:G:N2	10:B:1525:A:C4	2.88	0.42
10:B:1683:U:O2'	10:B:1684:G:H5'	2.19	0.42
10:B:1789:A:H2'	10:B:1790:C:H6	1.84	0.42
10:B:2028:U:H2'	10:B:2029:G:O4'	2.19	0.42
10:B:2038:G:H2'	10:B:2039:U:C6	2.54	0.42
10:B:2645:G:H4'	10:B:2646:C:OP2	2.19	0.42
11:C:137:GLY:C	11:C:139:THR:H	2.26	0.42
11:C:222:THR:O	11:C:224:MET:N	2.52	0.42
12:D:157:LYS:HZ2	12:D:157:LYS:C	2.27	0.42
13:E:132:LYS:HD3	13:E:133:LEU:HD23	2.00	0.42
13:E:193:VAL:HG12	13:E:194:LYS:N	2.34	0.42
14:F:41:GLU:OE1	14:F:45:ASP:HA	2.18	0.42
16:H:125:THR:HA	16:H:146:VAL:CB	2.46	0.42
17:I:23:VAL:CG2	17:I:24:GLY:H	2.31	0.42
17:I:135:MET:HE2	17:I:137:LEU:CD1	2.50	0.42
19:K:24:VAL:HA	19:K:39:ILE:CD1	2.50	0.42
19:K:47:ILE:HG22	19:K:49:ARG:N	2.32	0.42
20:L:33:ARG:HH11	20:L:34:GLY:HA3	1.85	0.42
21:M:11:LYS:O	21:M:12:MET:C	2.62	0.42
21:M:13:HIS:O	21:M:14:LYS:HD2	2.20	0.42
21:M:73:ILE:CD1	21:M:92:TRP:N	2.82	0.42
22:N:1:MET:CG	22:N:2:ARG:H	2.32	0.42
23:O:56:LYS:HE3	23:O:57:ALA:CA	2.50	0.42
24:P:1:SER:O	24:P:2:ASN:C	2.63	0.42
24:P:23:ASP:HB3	24:P:24:THR:H	1.46	0.42
24:P:64:SER:OG	24:P:71:ARG:NH1	2.53	0.42
25:Q:57:ARG:HA	25:Q:60:TRP:CE3	2.46	0.42
26:R:41:ILE:C	26:R:43:ASN:N	2.76	0.42
29:U:47:PRO:CD	29:U:48:VAL:N	2.82	0.42
29:U:55:GLY:O	29:U:57:ILE:N	2.53	0.42
30:V:85:LYS:C	30:V:86:LEU:HD12	2.44	0.42
31:W:36:ILE:O	31:W:37:VAL:HB	2.20	0.42
32:X:44:LYS:HD2	32:X:48:ARG:NE	2.34	0.42
1:O:26:SER:OG	1:O:27:LEU:N	2.52	0.42
2:1:36:LYS:HD2	2:1:36:LYS:N	2.35	0.42
6:5:395:LYS:O	6:5:399:LYS:HG3	2.20	0.42
10:B:76:C:C5'	32:X:48:ARG:NH1	2.81	0.42
10:B:137:U:H6	10:B:137:U:O5'	2.01	0.42
10:B:279:A:H1'	10:B:362:A:HO2'	1.85	0.42
10:B:291:G:C4	10:B:350:G:N3	2.86	0.42
10:B:295:G:H8	10:B:295:G:O5'	2.03	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:298:G:C8	10:B:298:G:O5'	2.71	0.42
10:B:359:G:C2'	10:B:360:U:C5'	2.92	0.42
10:B:388:G:N7	10:B:390:U:H2'	2.34	0.42
10:B:526:A:N3	10:B:2044:C:H1'	2.34	0.42
10:B:535:G:H21	25:Q:52:ARG:HH22	1.67	0.42
10:B:544:C:H2'	10:B:545:U:C2	2.54	0.42
10:B:583:G:H2'	10:B:584:C:H6	1.85	0.42
10:B:972:A:OP2	10:B:974:G:H5''	2.20	0.42
10:B:1132:U:H6	18:J:85:LYS:NZ	2.18	0.42
10:B:1304:A:O2'	10:B:1305:C:H5'	2.20	0.42
10:B:1439:A:N7	10:B:1440:U:C2	2.88	0.42
10:B:1532:A:C8	10:B:1532:A:OP2	2.72	0.42
10:B:1535:A:H8	10:B:1537:G:O6	2.03	0.42
10:B:1746:A:O2'	10:B:1747:U:H5'	2.20	0.42
10:B:1867:G:O2'	10:B:1868:C:H5'	2.20	0.42
10:B:2336:A:C1'	10:B:2337:G:OP1	2.67	0.42
10:B:2523:G:O2'	10:B:2524:G:H5'	2.20	0.42
10:B:2780:G:C2	18:J:120:ARG:HG3	2.55	0.42
10:B:2801:G:H2'	10:B:2802:G:C8	2.54	0.42
11:C:130:PRO:HA	11:C:187:CYS:O	2.19	0.42
12:D:13:ARG:O	12:D:21:SER:OG	2.38	0.42
12:D:60:VAL:HB	12:D:63:PRO:CG	2.47	0.42
15:G:162:ARG:HA	15:G:166:GLU:OE1	2.20	0.42
17:I:15:GLY:O	17:I:16:MET:HB2	2.19	0.42
17:I:17:ALA:O	17:I:18:ASN:CB	2.67	0.42
18:J:55:ILE:HD13	18:J:132:HIS:NE2	2.35	0.42
19:K:25:LEU:C	19:K:27:GLY:N	2.77	0.42
20:L:38:GLN:N	20:L:41:ARG:NH1	2.64	0.42
21:M:17:ASN:ND2	21:M:18:ARG:NH2	2.67	0.42
21:M:68:PHE:HA	21:M:69:PRO:HD2	1.80	0.42
24:P:54:LEU:HB3	24:P:55:HIS:H	1.47	0.42
24:P:60:VAL:C	24:P:61:ARG:HG3	2.44	0.42
25:Q:91:ARG:N	25:Q:91:ARG:HD2	2.28	0.42
25:Q:92:LYS:HD3	25:Q:92:LYS:N	2.34	0.42
26:R:43:ASN:OD1	26:R:56:GLY:HA3	2.20	0.42
27:S:5:ALA:C	27:S:6:LYS:HG2	2.43	0.42
29:U:15:GLY:HA2	29:U:18:LYS:HE2	2.02	0.42
29:U:57:ILE:C	29:U:58:VAL:CG2	2.93	0.42
32:X:38:GLN:H	32:X:38:GLN:HE21	1.65	0.42
33:Y:37:ARG:NH1	33:Y:37:ARG:HG3	2.34	0.42
1:O:11:LYS:C	1:O:13:GLY:N	2.78	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:A:92:C:H2'	9:A:93:C:C6	2.55	0.42
10:B:336:C:C5'	29:U:81:ARG:NE	2.34	0.42
10:B:344:A:O5'	10:B:344:A:C8	2.73	0.42
10:B:426:C:O2'	10:B:427:U:H5'	2.20	0.42
10:B:562:U:H2'	10:B:572:A:O4'	2.20	0.42
10:B:708:G:H2'	10:B:709:U:H6	1.85	0.42
10:B:952:G:C6	10:B:966:G:C6	3.07	0.42
10:B:953:G:H2'	10:B:954:G:H8	1.84	0.42
10:B:1000:A:H1'	33:Y:10:ARG:HH12	1.85	0.42
10:B:1038:G:N1	10:B:1039:A:N6	2.67	0.42
10:B:1068:G:C6	10:B:1069:A:N6	2.87	0.42
10:B:1079:C:N4	10:B:1080:A:N6	2.68	0.42
10:B:1257:C:H5'	13:E:78:TRP:CH2	2.55	0.42
10:B:1392:A:H62	28:T:18:GLU:CG	2.28	0.42
10:B:1426:G:H8	10:B:1426:G:OP2	2.01	0.42
10:B:1446:C:H2'	10:B:1447:C:C6	2.55	0.42
10:B:1506:U:H2'	10:B:1507:C:H6	1.84	0.42
10:B:1799:G:N7	11:C:178:GLY:HA3	2.34	0.42
10:B:2053:G:C2'	10:B:2054:A:H5'	2.50	0.42
10:B:2304:G:H1'	14:F:152:ASP:OD1	2.20	0.42
10:B:2678:C:O2'	10:B:2679:A:H5'	2.20	0.42
10:B:2745:C:H3'	10:B:2746:U:C6	2.55	0.42
10:B:2845:U:H4'	24:P:54:LEU:CD2	2.50	0.42
11:C:219:VAL:O	11:C:220:ARG:NE	2.48	0.42
12:D:154:LYS:CD	12:D:157:LYS:H	2.32	0.42
13:E:106:LYS:C	13:E:108:ILE:H	2.22	0.42
13:E:118:LEU:CD1	13:E:187:VAL:HG12	2.46	0.42
13:E:149:ILE:HG23	13:E:183:PHE:CG	2.55	0.42
15:G:18:ILE:HA	15:G:23:ILE:CD1	2.50	0.42
15:G:148:ARG:HE	15:G:153:PRO:HD2	1.85	0.42
17:I:135:MET:HE2	17:I:137:LEU:HD11	2.02	0.42
18:J:1:MET:HG2	26:R:14:VAL:CG2	2.50	0.42
18:J:30:THR:C	18:J:32:LEU:H	2.28	0.42
22:N:78:LYS:O	22:N:82:GLU:HB2	2.19	0.42
23:O:21:LEU:C	23:O:23:ALA:N	2.76	0.42
24:P:93:LYS:NZ	24:P:97:TYR:CZ	2.85	0.42
24:P:108:ARG:C	24:P:110:LYS:H	2.28	0.42
25:Q:103:VAL:HG23	25:Q:104:ALA:N	2.35	0.42
27:S:12:SER:OG	27:S:16:LYS:NZ	2.53	0.42
30:V:79:ARG:NH1	30:V:86:LEU:HD11	2.35	0.42
33:Y:29:ARG:O	33:Y:30:ARG:HB2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1:19:PHE:HD2	2:1:20:TYR:H	1.65	0.41
10:B:281:C:C2	10:B:359:G:N2	2.80	0.41
10:B:374:A:H61	10:B:400:G:H1'	1.84	0.41
10:B:458:G:H22	10:B:469:G:H2'	1.83	0.41
10:B:661:A:O2'	20:L:23:ILE:HA	2.20	0.41
10:B:834:G:O2'	10:B:835:C:H5'	2.20	0.41
10:B:1056:G:H4'	10:B:1086:A:H8	1.85	0.41
10:B:1094:U:H1'	10:B:1097:U:C5	2.51	0.41
10:B:1099:G:N1	10:B:1100:C:C4	2.87	0.41
10:B:1109:C:H42	10:B:1110:G:H1	1.67	0.41
10:B:1268:A:H2'	10:B:1269:A:O4'	2.19	0.41
10:B:1428:C:H2'	10:B:1569:A:OP2	2.20	0.41
10:B:2094:A:H5'	16:H:25:TYR:CD1	2.54	0.41
10:B:2771:C:O2'	12:D:173:GLN:NE2	2.53	0.41
10:B:2784:U:O2'	10:B:2785:C:H5'	2.20	0.41
10:B:2798:U:H1'	10:B:2800:A:N6	2.35	0.41
11:C:99:GLU:HG3	11:C:100:ARG:N	2.35	0.41
11:C:145:MET:HE1	11:C:152:GLN:NE2	2.35	0.41
12:D:13:ARG:HB2	12:D:21:SER:CB	2.50	0.41
12:D:36:GLN:C	12:D:36:GLN:CD	2.88	0.41
12:D:131:ASP:CG	12:D:134:HIS:NE2	2.78	0.41
13:E:16:GLU:CG	13:E:196:VAL:HG13	2.50	0.41
18:J:90:GLU:OE1	18:J:90:GLU:C	2.63	0.41
20:L:78:ARG:C	20:L:80:SER:H	2.28	0.41
21:M:10:ARG:HB2	21:M:11:LYS:HE3	2.02	0.41
21:M:100:LYS:O	21:M:101:VAL:HG13	2.20	0.41
22:N:1:MET:SD	22:N:2:ARG:HB2	2.60	0.41
22:N:55:ALA:O	22:N:56:LYS:C	2.63	0.41
22:N:114:GLU:HG2	22:N:115:LEU:N	2.24	0.41
22:N:116:VAL:HG13	22:N:117:ASP:N	2.35	0.41
24:P:49:ILE:C	24:P:50:ARG:CG	2.87	0.41
24:P:92:ARG:NH2	24:P:110:LYS:HB3	2.34	0.41
24:P:93:LYS:HB2	24:P:96:LEU:HD12	2.02	0.41
24:P:111:GLU:H	24:P:111:GLU:HG3	1.61	0.41
26:R:31:GLU:HB3	26:R:32:THR:H	1.62	0.41
28:T:70:HIS:ND1	28:T:74:ILE:HB	2.35	0.41
29:U:70:ALA:HB3	29:U:77:GLY:O	2.20	0.41
31:W:5:ALA:O	31:W:6:GLY:C	2.63	0.41
31:W:44:PHE:C	31:W:44:PHE:HD1	2.27	0.41
31:W:66:VAL:CG2	31:W:67:LYS:H	2.24	0.41
32:X:45:GLN:NE2	32:X:45:GLN:N	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:Z:62:LYS:C	34:Z:64:PHE:N	2.77	0.41
1:0:39:ARG:HH12	22:N:99:LYS:HE3	1.84	0.41
4:3:11:LYS:NZ	4:3:11:LYS:HB2	2.35	0.41
5:4:27:CYS:SG	5:4:33:HIS:NE2	2.93	0.41
6:5:354:LEU:N	6:5:355:PRO:HD3	2.36	0.41
6:5:364:VAL:HG11	29:U:51:LEU:N	2.35	0.41
6:5:430:MET:N	6:5:430:MET:SD	2.93	0.41
8:7:107:G:H2'	8:7:108:C:C6	2.55	0.41
9:A:75:G:N1	9:A:102:G:N2	2.67	0.41
10:B:285:G:C6	10:B:286:U:O4	2.70	0.41
10:B:286:U:O2	10:B:354:A:C2	2.70	0.41
10:B:288:U:H3	10:B:352:A:H61	1.68	0.41
10:B:503:A:H5''	10:B:504:A:H3'	2.01	0.41
10:B:560:C:H3'	10:B:561:G:C8	2.55	0.41
10:B:855:G:H21	31:W:23:LYS:HB3	1.85	0.41
10:B:912:C:H2'	10:B:913:U:C6	2.54	0.41
10:B:1009:A:N3	10:B:1153:C:O2'	2.48	0.41
10:B:1139:G:H5'	18:J:104:ALA:HB1	2.02	0.41
10:B:1322:A:C2'	10:B:1323:C:H5'	2.50	0.41
10:B:1552:A:N3	10:B:1552:A:H5''	2.35	0.41
10:B:1685:C:H2'	10:B:1686:C:H6	1.85	0.41
10:B:2251:G:OP2	10:B:2251:G:H8	2.02	0.41
10:B:2291:U:OP1	10:B:2380:C:O2'	2.38	0.41
11:C:171:VAL:HB	11:C:182:LYS:CG	2.50	0.41
13:E:146:VAL:O	13:E:147:LEU:CB	2.63	0.41
14:F:172:PHE:O	14:F:174:PHE:N	2.53	0.41
15:G:121:THR:O	15:G:133:LYS:HD3	2.20	0.41
16:H:7:ASP:O	16:H:8:LYS:C	2.63	0.41
17:I:78:LEU:O	17:I:81:LYS:HG3	2.19	0.41
18:J:58:ASN:O	18:J:59:ALA:HB3	2.20	0.41
19:K:9:ASN:O	19:K:84:CYS:HB2	2.20	0.41
19:K:110:GLU:HB2	19:K:111:LYS:H	1.67	0.41
19:K:119:ALA:O	19:K:121:GLU:N	2.54	0.41
20:L:34:GLY:O	20:L:35:HIS:C	2.62	0.41
20:L:106:GLU:HG2	20:L:107:PHE:N	2.32	0.41
21:M:71:LYS:HG2	21:M:93:VAL:HA	2.02	0.41
21:M:108:VAL:HG23	21:M:112:LEU:CD1	2.40	0.41
22:N:10:LEU:O	22:N:12:ARG:N	2.53	0.41
26:R:78:ARG:CD	26:R:87:GLN:HG2	2.50	0.41
30:V:26:PHE:HD2	30:V:44:HIS:HD1	1.65	0.41
30:V:83:LYS:O	30:V:85:LYS:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:X:21:LEU:HD12	32:X:21:LEU:HA	1.80	0.41
33:Y:28:LEU:HD12	33:Y:28:LEU:N	2.36	0.41
34:Z:60:PHE:HD1	34:Z:60:PHE:HA	1.69	0.41
1:0:29:VAL:HG21	1:0:41:HIS:HA	2.02	0.41
4:3:35:LYS:O	4:3:36:ALA:HB3	2.20	0.41
6:5:390:LYS:HB3	6:5:392:GLU:OE1	2.20	0.41
6:5:425:ARG:HG2	6:5:425:ARG:HH11	1.85	0.41
8:7:117:C:H2'	8:7:118:C:C6	2.55	0.41
8:7:155:G:H2'	8:7:156:A:C8	2.54	0.41
9:A:83:G:H2'	9:A:84:G:O4'	2.20	0.41
10:B:161:A:H8	10:B:161:A:O5'	2.02	0.41
10:B:277:G:O2'	10:B:361:G:N1	2.48	0.41
10:B:297:G:C8	10:B:298:G:C5	3.08	0.41
10:B:301:G:N1	10:B:317:G:C5	2.74	0.41
10:B:320:A:C8	13:E:132:LYS:CB	3.02	0.41
10:B:372:G:N2	10:B:400:G:H2'	2.34	0.41
10:B:381:G:O2'	10:B:382:A:H5'	2.19	0.41
10:B:557:C:H2'	10:B:558:U:H6	1.84	0.41
10:B:573:U:H5'	36:B:3335:HOH:O	2.20	0.41
10:B:633:A:H2'	10:B:634:C:C5'	2.49	0.41
10:B:1039:A:C2'	10:B:1040:A:H5'	2.49	0.41
10:B:1045:C:C3'	10:B:1046:A:H5'	2.50	0.41
10:B:1061:U:H4'	10:B:1070:A:O3'	2.20	0.41
10:B:1082:U:N3	10:B:1086:A:C6	2.88	0.41
10:B:1289:C:H2'	10:B:1290:C:H6	1.83	0.41
10:B:1520:U:C2	10:B:1521:G:C4	3.08	0.41
10:B:1525:A:C2	10:B:1526:C:C6	3.07	0.41
10:B:1909:C:H2'	10:B:1910:G:C8	2.55	0.41
10:B:2653:U:H3'	10:B:2654:A:H2'	2.02	0.41
11:C:130:PRO:HA	11:C:188:ARG:HA	2.02	0.41
12:D:1:MET:HB2	12:D:84:LEU:HD22	2.01	0.41
12:D:187:LEU:O	12:D:188:LEU:HD12	2.20	0.41
13:E:38:GLY:C	13:E:40:ARG:N	2.78	0.41
13:E:119:ILE:HG23	13:E:189:THR:C	2.45	0.41
13:E:161:ALA:O	13:E:162:ARG:HD2	2.19	0.41
14:F:14:LYS:HG3	14:F:15:LEU:N	2.33	0.41
15:G:18:ILE:HA	15:G:23:ILE:HD13	2.01	0.41
15:G:40:VAL:HG11	15:G:63:GLN:NE2	2.34	0.41
15:G:89:VAL:HG12	15:G:159:LYS:HA	2.01	0.41
15:G:169:ARG:C	15:G:171:LYS:N	2.77	0.41
16:H:6:LEU:HD12	16:H:15:LEU:CA	2.47	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:H:30:LEU:CD1	16:H:35:LYS:HD3	2.49	0.41
19:K:87:LEU:CA	19:K:95:ILE:HG22	2.49	0.41
20:L:27:LEU:HB2	20:L:28:GLY:H	1.39	0.41
20:L:38:GLN:H	20:L:41:ARG:CD	2.33	0.41
21:M:12:MET:O	21:M:13:HIS:HB2	2.20	0.41
21:M:74:THR:C	21:M:75:GLU:HG3	2.46	0.41
21:M:82:MET:HB2	21:M:84:LYS:HD3	2.01	0.41
24:P:36:LYS:O	24:P:37:LYS:C	2.62	0.41
24:P:52:ARG:HH11	24:P:54:LEU:HB3	1.85	0.41
24:P:91:VAL:HB	24:P:113:LEU:HB3	2.03	0.41
26:R:2:TYR:N	26:R:46:GLU:HB2	2.30	0.41
28:T:73:ARG:O	28:T:74:ILE:HD13	2.20	0.41
29:U:65:GLN:C	29:U:67:SER:N	2.77	0.41
29:U:69:VAL:CG1	29:U:77:GLY:H	2.29	0.41
30:V:62:THR:HG22	30:V:71:LYS:HG2	2.02	0.41
31:W:47:GLY:O	31:W:54:ARG:HA	2.20	0.41
1:0:4:GLN:O	1:0:6:LYS:HE2	2.20	0.41
3:2:19:ARG:HG2	10:B:126:A:O5'	2.20	0.41
10:B:80:G:C4'	10:B:346:A:N6	2.83	0.41
10:B:118:A:H1'	10:B:178:G:O4'	2.20	0.41
10:B:282:A:C2	10:B:359:G:C2	3.09	0.41
10:B:335:C:C2'	10:B:336:C:C5	2.99	0.41
10:B:515:A:H2'	10:B:516:C:O4'	2.20	0.41
10:B:820:A:H2'	10:B:821:A:O4'	2.19	0.41
10:B:863:A:O2'	10:B:864:G:H5'	2.21	0.41
10:B:939:G:O2'	10:B:940:G:H5'	2.20	0.41
10:B:994:C:OP1	25:Q:49:ARG:HG2	2.19	0.41
10:B:1076:C:H6	10:B:1076:C:O5'	2.03	0.41
10:B:1527:G:N3	10:B:1543:G:N2	2.68	0.41
10:B:1818:U:H5''	11:C:155:ARG:CB	2.50	0.41
10:B:2033:A:H1'	10:B:2035:G:OP2	2.20	0.41
10:B:2050:C:H2'	10:B:2051:A:C8	2.55	0.41
10:B:2751:G:N3	10:B:2751:G:H5'	2.34	0.41
12:D:26:VAL:O	12:D:27:ILE:C	2.62	0.41
12:D:55:LYS:HB2	12:D:55:LYS:NZ	2.34	0.41
12:D:142:VAL:CB	12:D:143:PRO:CD	2.98	0.41
13:E:7:ASP:O	13:E:8:ALA:HB3	2.21	0.41
13:E:189:THR:HB	13:E:190:ALA:H	1.61	0.41
14:F:24:VAL:HA	14:F:27:VAL:HG23	2.02	0.41
14:F:150:GLY:O	14:F:151:LEU:HD12	2.20	0.41
18:J:46:PRO:C	18:J:48:VAL:N	2.78	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:J:136:GLN:HE21	18:J:136:GLN:HB2	1.63	0.41
19:K:108:ARG:HG3	19:K:108:ARG:NH1	2.35	0.41
21:M:11:LYS:HE3	21:M:11:LYS:N	2.35	0.41
21:M:36:VAL:HG12	30:V:82:TYR:HB2	2.01	0.41
21:M:45:GLN:NE2	21:M:119:LEU:O	2.54	0.41
22:N:72:ASP:CB	22:N:74:GLU:HG3	2.48	0.41
24:P:26:GLU:CD	24:P:46:VAL:HG13	2.46	0.41
25:Q:102:LYS:HG2	25:Q:103:VAL:N	2.36	0.41
26:R:5:PHE:N	26:R:12:HIS:HB3	2.36	0.41
26:R:94:THR:O	26:R:95:ASP:O	2.39	0.41
27:S:6:LYS:HA	27:S:104:THR:H	1.84	0.41
27:S:102:HIS:HB2	27:S:103:ILE:H	1.51	0.41
29:U:90:LYS:CG	29:U:91:LYS:H	2.32	0.41
30:V:44:HIS:CE1	30:V:85:LYS:HB2	2.55	0.41
2:1:53:ILE:HD13	2:1:54:LYS:H	1.81	0.41
3:2:6:GLN:O	10:B:686:U:H1'	2.19	0.41
6:5:367:GLN:C	6:5:369:ASP:N	2.79	0.41
10:B:64:A:H1'	28:T:69:ARG:HE	1.86	0.41
10:B:271:G:O2'	10:B:272:A:P	2.79	0.41
10:B:299:A:H3'	10:B:300:A:N7	2.36	0.41
10:B:527:C:H5''	10:B:2779:U:H3	1.86	0.41
10:B:567:U:H2'	10:B:568:U:O4'	2.20	0.41
10:B:654:A:H2'	10:B:655:A:C5'	2.39	0.41
10:B:1077:A:C5'	17:I:93:ASN:OD1	2.69	0.41
10:B:1140:C:OP1	18:J:64:VAL:HG13	2.20	0.41
10:B:1473:G:C2	10:B:1519:G:C5	3.08	0.41
10:B:1485:U:O2'	10:B:1486:U:H5'	2.20	0.41
10:B:1519:G:N2	10:B:1520:U:C1'	2.83	0.41
10:B:1544:A:N1	10:B:1545:A:C4	2.88	0.41
10:B:1552:A:C3'	10:B:1553:A:C5'	2.98	0.41
10:B:2089:C:C2	10:B:2090:A:C8	3.09	0.41
10:B:2389:G:H5''	10:B:2390:U:O4'	2.20	0.41
10:B:2630:G:H2'	10:B:2631:G:H8	1.84	0.41
10:B:2637:U:C2'	10:B:2638:G:H5'	2.50	0.41
10:B:2651:C:O2'	10:B:2652:C:H5'	2.20	0.41
10:B:2660:A:H2'	10:B:2661:G:O4'	2.20	0.41
10:B:2705:A:H2'	10:B:2706:A:O4'	2.20	0.41
11:C:62:ARG:C	11:C:63:ILE:HG12	2.46	0.41
11:C:71:ASP:HB3	11:C:72:GLY:H	1.38	0.41
11:C:140:VAL:HG22	11:C:161:VAL:O	2.20	0.41
11:C:152:GLN:HB3	11:C:153:LEU:H	1.59	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:C:159:THR:O	11:C:160:TYR:HD1	2.02	0.41
11:C:247:TRP:CD1	11:C:247:TRP:C	2.98	0.41
12:D:110:THR:HG22	12:D:171:THR:CA	2.44	0.41
13:E:40:ARG:HD2	13:E:43:THR:OG1	2.20	0.41
13:E:141:MET:O	13:E:142:ALA:HB3	2.21	0.41
14:F:36:ASN:HD22	14:F:87:LYS:N	2.17	0.41
14:F:133:GLU:CD	14:F:147:ARG:HD3	2.45	0.41
15:G:33:THR:CG2	15:G:34:ARG:N	2.82	0.41
15:G:40:VAL:HB	15:G:63:GLN:HE22	1.86	0.41
15:G:42:VAL:HA	15:G:51:PHE:HA	2.02	0.41
15:G:76:ILE:O	15:G:80:GLU:HB2	2.20	0.41
17:I:32:VAL:HG13	17:I:66:PHE:CD2	2.55	0.41
18:J:34:ARG:CB	18:J:39:LYS:HD2	2.49	0.41
18:J:99:ARG:NH1	18:J:99:ARG:HB3	2.36	0.41
21:M:71:LYS:HD3	21:M:92:TRP:H	1.81	0.41
22:N:32:GLU:O	22:N:115:LEU:CD2	2.69	0.41
23:O:21:LEU:O	23:O:23:ALA:N	2.53	0.41
24:P:56:SER:OG	24:P:57:ALA:N	2.53	0.41
25:Q:47:ARG:HA	25:Q:47:ARG:HD2	1.67	0.41
25:Q:91:ARG:O	25:Q:94:LEU:HD21	2.20	0.41
26:R:18:GLN:NE2	26:R:99:THR:HB	2.31	0.41
27:S:28:LYS:HB3	27:S:71:VAL:HG21	2.01	0.41
28:T:34:VAL:HG13	28:T:43:ILE:HD11	2.01	0.41
28:T:56:GLU:HB3	28:T:57:VAL:HG23	2.01	0.41
29:U:43:LYS:CE	29:U:44:HIS:N	2.83	0.41
2:1:46:VAL:O	2:1:47:ILE:HG12	2.20	0.41
5:4:1:MET:HA	10:B:2527:C:H1'	2.02	0.41
9:A:76:G:H2'	9:A:77:U:C6	2.56	0.41
10:B:83:A:H2'	10:B:84:A:C8	2.55	0.41
10:B:294:A:N6	10:B:345:A:N9	2.65	0.41
10:B:322:A:O2'	10:B:323:C:P	2.79	0.41
10:B:536:G:H4'	25:Q:56:PHE:HZ	1.84	0.41
10:B:657:U:H2'	10:B:658:U:H6	1.84	0.41
10:B:1066:U:H2'	10:B:1068:G:OP2	2.21	0.41
10:B:1074:G:C2	10:B:1075:C:N3	2.88	0.41
10:B:1079:C:H5''	10:B:1079:C:H6	1.85	0.41
10:B:1315:C:H2'	10:B:1316:U:H6	1.85	0.41
10:B:1341:G:H2'	10:B:1397:U:O2'	2.21	0.41
10:B:1408:G:O2'	10:B:1409:U:H5'	2.21	0.41
10:B:1513:U:H2'	10:B:1514:G:C5'	2.51	0.41
10:B:1522:A:C8	10:B:1522:A:OP1	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1534:U:C2'	10:B:1536:C:N3	2.73	0.41
10:B:1851:U:H2'	10:B:1852:U:C6	2.55	0.41
11:C:24:HIS:CB	11:C:27:LYS:HE3	2.51	0.41
11:C:27:LYS:N	11:C:28:PRO:HD3	2.32	0.41
11:C:161:VAL:H	11:C:193:GLU:CD	2.29	0.41
11:C:216:ARG:HB3	11:C:216:ARG:NH1	2.26	0.41
12:D:23:PRO:HG2	12:D:178:VAL:HG21	2.02	0.41
12:D:103:ASP:C	12:D:105:LYS:H	2.28	0.41
12:D:181:ASP:OD2	12:D:186:LEU:HD23	2.21	0.41
13:E:133:LEU:HD13	13:E:133:LEU:HA	1.88	0.41
13:E:163:ASN:OD1	13:E:166:LYS:N	2.53	0.41
14:F:3:LEU:HD23	14:F:3:LEU:O	2.21	0.41
14:F:18:GLU:C	14:F:20:ASN:H	2.29	0.41
16:H:104:THR:C	16:H:106:ALA:H	2.27	0.41
18:J:56:VAL:C	18:J:57:LEU:HD22	2.46	0.41
20:L:124:GLY:C	20:L:126:ARG:HG3	2.46	0.41
21:M:41:LEU:O	21:M:92:TRP:HA	2.21	0.41
21:M:63:ILE:HA	21:M:102:LEU:O	2.20	0.41
21:M:109:PRO:O	21:M:110:GLU:C	2.64	0.41
23:O:17:LYS:NZ	31:W:77:LYS:HE3	2.35	0.41
24:P:22:GLY:O	24:P:91:VAL:HA	2.20	0.41
25:Q:12:ARG:O	25:Q:15:LYS:HB3	2.21	0.41
25:Q:21:LYS:C	25:Q:23:TYR:N	2.78	0.41
25:Q:108:LEU:O	25:Q:108:LEU:HD13	2.21	0.41
26:R:5:PHE:HD1	26:R:40:MET:CB	2.33	0.41
27:S:1:MET:HB3	27:S:4:ILE:CG1	2.50	0.41
30:V:6:ALA:C	30:V:65:VAL:HG12	2.46	0.41
31:W:47:GLY:H	31:W:67:LYS:NZ	2.18	0.41
34:Z:44:PHE:CD1	34:Z:44:PHE:N	2.82	0.41
3:2:12:ARG:C	3:2:16:HIS:O	2.64	0.41
4:3:15:LYS:C	4:3:16:THR:O	2.63	0.41
10:B:36:G:H4'	10:B:451:U:N3	2.35	0.41
10:B:142:A:N3	28:T:2:ILE:HD13	2.35	0.41
10:B:311:A:C6	10:B:328:U:C6	3.08	0.41
10:B:477:A:H2'	10:B:478:A:O4'	2.20	0.41
10:B:693:A:H2'	10:B:694:U:C6	2.56	0.41
10:B:846:U:O2	10:B:846:U:H2'	2.20	0.41
10:B:1169:A:O2'	10:B:1170:C:H5'	2.21	0.41
10:B:1201:U:H2'	10:B:1202:G:H8	1.86	0.41
10:B:1314:C:O2	10:B:1314:C:H2'	2.21	0.41
10:B:1403:A:H2'	10:B:1404:C:H6	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1538:G:C6	10:B:1539:U:C6	3.08	0.41
10:B:1655:A:H2	10:B:2049:G:O3'	2.03	0.41
10:B:1901:A:H1'	11:C:250:GLN:NE2	2.35	0.41
10:B:2232:C:P	34:Z:25:ARG:HH21	2.44	0.41
10:B:2305:U:O2	14:F:132:ARG:HG2	2.21	0.41
10:B:2322:A:N6	10:B:2333:A:N6	2.69	0.41
10:B:2544:G:H2'	10:B:2545:G:H8	1.85	0.41
10:B:2590:A:H2'	10:B:2591:C:H6	1.83	0.41
10:B:2604:U:O2'	10:B:2605:U:H5'	2.20	0.41
10:B:2805:C:H2'	10:B:2806:C:H6	1.86	0.41
10:B:2821:A:H2'	10:B:2822:G:H8	1.86	0.41
11:C:38:LYS:O	11:C:39:SER:HB3	2.21	0.41
11:C:245:THR:C	11:C:247:TRP:N	2.78	0.41
11:C:251:THR:HG22	11:C:252:LYS:N	2.35	0.41
11:C:264:LYS:O	11:C:266:ILE:HG23	2.21	0.41
12:D:2:ILE:HG22	12:D:204:LYS:CE	2.51	0.41
12:D:20:VAL:HG23	12:D:21:SER:N	2.36	0.41
12:D:159:LYS:HD3	12:D:159:LYS:C	2.46	0.41
13:E:115:GLN:CA	13:E:185:LYS:HE3	2.49	0.41
13:E:118:LEU:HD11	13:E:143:LEU:HD22	2.02	0.41
13:E:128:ALA:CB	13:E:129:PRO:CD	2.78	0.41
14:F:18:GLU:O	14:F:19:PHE:HB3	2.20	0.41
14:F:34:THR:HA	14:F:89:THR:HA	2.03	0.41
15:G:10:VAL:CG1	15:G:47:ASN:HA	2.50	0.41
17:I:14:ALA:CA	17:I:45:THR:HG21	2.42	0.41
17:I:79:LEU:HB3	17:I:137:LEU:HD12	2.03	0.41
20:L:75:ALA:C	20:L:76:GLU:O	2.56	0.41
20:L:78:ARG:NH1	20:L:110:VAL:HG11	2.36	0.41
20:L:82:LEU:HD12	20:L:90:VAL:CG1	2.49	0.41
22:N:65:LEU:HD12	22:N:65:LEU:HA	1.82	0.41
23:O:16:ARG:CG	23:O:20:GLU:HG3	2.48	0.41
23:O:45:SER:C	23:O:47:VAL:N	2.75	0.41
26:R:47:VAL:CG2	26:R:48:LYS:H	2.17	0.41
28:T:10:VAL:CG2	28:T:46:ALA:HB2	2.51	0.41
1:0:52:LYS:NZ	22:N:114:GLU:OE1	2.51	0.41
6:5:415:ARG:NH1	6:5:415:ARG:HB3	2.35	0.41
10:B:30:G:O2'	10:B:31:C:H5'	2.21	0.41
10:B:282:A:C2	10:B:283:G:C5	3.09	0.41
10:B:319:G:H2'	10:B:320:A:O4'	2.20	0.41
10:B:338:G:O2'	10:B:339:U:H5'	2.19	0.41
10:B:352:A:H5'	10:B:353:C:OP2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:365:U:C4	10:B:366:C:C4	3.09	0.41
10:B:428:A:H2'	10:B:429:A:O4'	2.19	0.41
10:B:606:U:H4'	10:B:658:U:H4'	2.03	0.41
10:B:1001:A:H2'	10:B:1002:G:O4'	2.21	0.41
10:B:1057:A:O2'	10:B:1058:U:H5'	2.21	0.41
10:B:1517:G:H2'	10:B:1518:C:O5'	2.20	0.41
10:B:1936:A:N6	10:B:1963:U:N3	2.66	0.41
10:B:2204:G:O2'	10:B:2205:A:H5'	2.21	0.41
10:B:2230:G:H2'	10:B:2231:U:C6	2.56	0.41
10:B:2466:C:O2'	10:B:2467:C:H5'	2.21	0.41
10:B:2514:U:H2'	10:B:2515:C:C6	2.56	0.41
11:C:163:ILE:C	11:C:164:VAL:HG23	2.45	0.41
11:C:222:THR:HG21	11:C:224:MET:HE1	2.03	0.41
12:D:3:GLY:HA3	12:D:49:GLN:HE22	1.86	0.41
12:D:4:LEU:HD22	12:D:79:LEU:HD12	2.02	0.41
13:E:40:ARG:HD2	13:E:43:THR:HG1	1.86	0.41
13:E:48:THR:O	13:E:49:ARG:O	2.38	0.41
13:E:153:LEU:HD11	13:E:201:ALA:C	2.45	0.41
15:G:37:ASN:HB3	15:G:63:GLN:NE2	2.35	0.41
16:H:6:LEU:H	16:H:16:GLY:CA	2.34	0.41
17:I:75:ALA:HB2	17:I:112:LYS:HE2	2.01	0.41
17:I:100:ILE:HG22	17:I:101:SER:O	2.20	0.41
18:J:64:VAL:HB	18:J:68:LYS:HB2	2.03	0.41
19:K:32:TYR:HB3	19:K:67:LYS:NZ	2.36	0.41
19:K:35:VAL:HG23	19:K:36:GLY:N	2.27	0.41
21:M:36:VAL:HG11	21:M:125:PRO:HD2	2.02	0.41
21:M:76:LYS:HA	21:M:77:PRO:HD3	1.93	0.41
21:M:109:PRO:N	21:M:112:LEU:HD13	2.35	0.41
21:M:133:LYS:O	21:M:133:LYS:HD2	2.21	0.41
23:O:30:ARG:O	23:O:31:THR:O	2.39	0.41
23:O:54:VAL:O	23:O:55:GLU:C	2.64	0.41
24:P:13:LYS:HZ1	24:P:17:PRO:HG3	1.84	0.41
25:Q:97:ILE:HA	25:Q:100:PHE:CE1	2.56	0.41
26:R:1:MET:CA	26:R:46:GLU:HB2	2.39	0.41
27:S:31:GLN:C	27:S:33:LEU:H	2.29	0.41
28:T:47:VAL:O	28:T:50:LEU:O	2.39	0.41
34:Z:25:ARG:HH11	34:Z:25:ARG:CG	2.33	0.41
2:1:26:LYS:HD3	2:1:29:LYS:HD3	2.03	0.41
4:3:9:ALA:O	4:3:13:PHE:HB3	2.19	0.41
4:3:14:LYS:C	4:3:21:PHE:HB3	2.45	0.41
4:3:41:ARG:HD2	10:B:2350:C:OP2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:4:7:VAL:H	5:4:23:ILE:CD1	2.34	0.41
6:5:375:ARG:HD3	6:5:408:MET:SD	2.60	0.41
10:B:30:G:H2'	10:B:31:C:C6	2.56	0.41
10:B:64:A:O2'	28:T:69:ARG:HB3	2.20	0.41
10:B:80:G:P	10:B:346:A:H8	2.43	0.41
10:B:83:A:C8	29:U:90:LYS:HB2	2.56	0.41
10:B:89:A:O2'	10:B:90:U:H5'	2.21	0.41
10:B:90:U:O4	10:B:91:A:N6	2.53	0.41
10:B:127:A:H5''	10:B:128:C:C6	2.55	0.41
10:B:154:U:O2'	10:B:155:A:H5'	2.21	0.41
10:B:272:A:C6	10:B:366:C:C2	3.09	0.41
10:B:276:U:O4'	10:B:362:A:N6	2.54	0.41
10:B:289:G:C5	10:B:290:U:C5	3.07	0.41
10:B:295:G:N3	10:B:296:U:C6	2.89	0.41
10:B:298:G:H2'	10:B:339:U:O4	2.21	0.41
10:B:300:A:P	10:B:300:A:C8	3.13	0.41
10:B:301:G:C5	10:B:317:G:O6	2.72	0.41
10:B:301:G:O5'	10:B:334:C:O2'	2.32	0.41
10:B:305:C:C4	10:B:306:U:O4	2.74	0.41
10:B:327:G:C2	10:B:328:U:O2	2.74	0.41
10:B:332:A:C2	10:B:335:C:N1	2.89	0.41
10:B:333:G:N9	10:B:334:C:H5	2.07	0.41
10:B:346:A:C5	10:B:347:A:N9	2.89	0.41
10:B:399:U:OP2	34:Z:49:ARG:NH1	2.54	0.41
10:B:506:G:H4'	10:B:509:C:O2	2.21	0.41
10:B:678:C:H2'	10:B:679:C:H6	1.86	0.41
10:B:709:U:H2'	10:B:710:U:H6	1.85	0.41
10:B:710:U:H2'	10:B:711:G:C8	2.56	0.41
10:B:849:A:H2'	10:B:850:U:C6	2.55	0.41
10:B:873:C:OP1	21:M:1:MET:HG3	2.21	0.41
10:B:1010:A:N3	10:B:1153:C:H1'	2.36	0.41
10:B:1030:C:O2'	10:B:1031:G:H5'	2.21	0.41
10:B:1083:U:H5''	10:B:1083:U:H6	1.86	0.41
10:B:1115:G:N2	10:B:1116:G:C4	2.88	0.41
10:B:1441:G:O2'	10:B:1442:U:H5'	2.21	0.41
10:B:1528:A:C2'	10:B:1529:G:C5'	2.86	0.41
10:B:1530:G:C2	10:B:1541:C:O2	2.72	0.41
10:B:1536:C:O2'	10:B:1537:G:OP2	2.31	0.41
10:B:1540:G:N2	10:B:1541:C:C1'	2.83	0.41
10:B:1607:C:N4	10:B:1622:G:OP2	2.53	0.41
10:B:1820:U:H4'	10:B:1821:A:OP2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2092:U:H4'	10:B:2093:G:O5'	2.20	0.41
10:B:2093:G:O2'	10:B:2094:A:H5'	2.21	0.41
10:B:2143:C:H2'	10:B:2144:G:O4'	2.20	0.41
10:B:2335:A:P	23:O:9:ARG:HG3	2.61	0.41
10:B:2515:C:H2'	10:B:2516:A:H8	1.85	0.41
10:B:2520:C:O2'	10:B:2521:C:H5'	2.21	0.41
10:B:2520:C:C6	10:B:2567:G:H1'	2.56	0.41
10:B:2575:C:H1'	12:D:147:GLY:O	2.21	0.41
10:B:2682:A:C2	12:D:22:ILE:HD11	2.56	0.41
10:B:2683:C:O3'	24:P:59:THR:HG21	2.20	0.41
10:B:2845:U:H2'	10:B:2846:G:C8	2.56	0.41
11:C:113:ASP:O	11:C:115:ILE:HD12	2.21	0.41
11:C:145:MET:H	11:C:145:MET:HG2	1.35	0.41
12:D:103:ASP:O	12:D:104:VAL:HB	2.21	0.41
12:D:120:GLY:N	12:D:123:LYS:HB2	2.35	0.41
12:D:164:GLN:HB2	12:D:164:GLN:HE21	1.61	0.41
12:D:170:VAL:O	12:D:171:THR:HB	2.20	0.41
13:E:27:LEU:HD13	13:E:27:LEU:C	2.46	0.41
13:E:149:ILE:HG22	13:E:168:ASP:HB3	2.03	0.41
14:F:108:PRO:HB3	14:F:113:PHE:CE2	2.56	0.41
14:F:135:ILE:CG2	14:F:136:ILE:N	2.83	0.41
14:F:140:ILE:HG22	14:F:141:ASP:N	2.35	0.41
14:F:164:GLU:O	14:F:168:LEU:HD21	2.21	0.41
15:G:5:LYS:HE3	15:G:69:ALA:CA	2.51	0.41
15:G:42:VAL:HG23	15:G:43:LYS:N	2.35	0.41
15:G:51:PHE:HE1	15:G:63:GLN:NE2	2.18	0.41
15:G:119:GLY:C	15:G:120:ILE:HD12	2.46	0.41
15:G:153:PRO:HG3	15:G:160:GLY:CA	2.51	0.41
16:H:45:GLU:OE1	16:H:45:GLU:HA	2.21	0.41
16:H:132:PHE:CB	16:H:140:ALA:HB3	2.39	0.41
18:J:20:ALA:C	18:J:22:GLY:N	2.79	0.41
18:J:85:LYS:HD3	18:J:85:LYS:HA	1.78	0.41
18:J:132:HIS:C	18:J:134:ALA:H	2.28	0.41
19:K:108:ARG:HG3	19:K:108:ARG:O	2.17	0.41
20:L:14:LYS:HB3	20:L:14:LYS:HZ2	1.84	0.41
20:L:33:ARG:NH1	20:L:34:GLY:HA3	2.35	0.41
20:L:38:GLN:HA	20:L:41:ARG:NH1	2.36	0.41
20:L:55:MET:N	20:L:55:MET:SD	2.82	0.41
20:L:63:LYS:O	20:L:63:LYS:HG2	2.20	0.41
20:L:72:ALA:H	20:L:106:GLU:CD	2.29	0.41
20:L:78:ARG:C	20:L:78:ARG:HH11	2.28	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:L:121:THR:HA	20:L:139:GLY:HA3	2.03	0.41
20:L:133:ALA:HA	20:L:136:GLU:HG2	2.03	0.41
21:M:42:THR:C	21:M:44:ARG:H	2.28	0.41
21:M:95:LEU:HD23	21:M:95:LEU:HA	1.90	0.41
21:M:103:TYR:O	21:M:105:MET:N	2.54	0.41
22:N:57:THR:CB	22:N:61:ALA:HB3	2.51	0.41
23:O:64:TYR:HD1	23:O:64:TYR:HA	1.64	0.41
24:P:32:VAL:HG22	24:P:40:GLN:HE21	1.85	0.41
25:Q:50:ARG:O	25:Q:53:LYS:HD3	2.21	0.41
25:Q:65:ASN:O	25:Q:69:ARG:HG2	2.21	0.41
25:Q:81:GLY:O	25:Q:82:LEU:C	2.63	0.41
26:R:41:ILE:HD12	26:R:43:ASN:H	1.85	0.41
27:S:71:VAL:O	27:S:71:VAL:HG12	2.21	0.41
28:T:36:LYS:O	28:T:81:LYS:HD2	2.21	0.41
28:T:51:PHE:C	28:T:52:GLU:HG3	2.46	0.41
29:U:44:HIS:CB	29:U:56:GLY:C	2.86	0.41
29:U:78:LYS:HE2	29:U:96:LYS:HE3	2.02	0.41
30:V:79:ARG:CZ	30:V:86:LEU:HD11	2.50	0.41
31:W:21:GLY:HA3	31:W:32:ALA:HA	2.01	0.41
33:Y:9:THR:HG23	33:Y:10:ARG:H	1.86	0.41
34:Z:5:ILE:CG2	34:Z:63:ARG:HE	2.34	0.41
2:1:7:LYS:O	2:1:7:LYS:HG3	2.21	0.41
8:7:103:C:H2'	8:7:104:G:C8	2.56	0.41
9:A:73:A:N3	9:A:73:A:H2'	2.36	0.41
10:B:23:G:O2'	10:B:24:G:H5'	2.20	0.41
10:B:26:G:C1'	10:B:515:A:H61	2.34	0.41
10:B:319:G:C6	10:B:320:A:N1	2.88	0.41
10:B:396:G:O2'	34:Z:28:VAL:HG11	2.21	0.41
10:B:439:A:H2'	10:B:440:C:O4'	2.21	0.41
10:B:526:A:N6	10:B:2626:C:C4'	2.84	0.41
10:B:1155:A:H61	33:Y:10:ARG:NH2	2.19	0.41
10:B:1206:G:H2'	10:B:1207:C:H6	1.85	0.41
10:B:1401:G:H2'	10:B:1402:U:C6	2.56	0.41
10:B:1408:G:H2'	10:B:1409:U:H6	1.87	0.41
10:B:1524:G:HO2'	10:B:1525:A:H5'	1.84	0.41
10:B:1695:G:H2'	10:B:1696:G:O4'	2.20	0.41
10:B:1913:A:C1'	10:B:1914:C:OP1	2.65	0.41
10:B:1989:G:H2'	10:B:1990:C:O4'	2.21	0.41
10:B:2007:U:H2'	10:B:2008:C:C6	2.56	0.41
10:B:2023:C:H4'	10:B:2617:U:O3'	2.21	0.41
10:B:2083:G:H2'	10:B:2084:C:H6	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2133:G:N3	10:B:2133:G:H2'	2.37	0.41
10:B:2265:U:H3'	10:B:2266:A:C5'	2.50	0.41
10:B:2354:C:H4'	31:W:30:VAL:CG1	2.45	0.41
10:B:2419:U:O2'	10:B:2420:C:H5'	2.21	0.41
10:B:2718:G:H5''	24:P:100:ARG:HD2	2.02	0.41
10:B:2737:G:H2'	10:B:2738:A:O4'	2.21	0.41
10:B:2782:G:O2'	10:B:2783:U:H5'	2.21	0.41
11:C:6:LYS:HA	11:C:7:PRO:HA	1.75	0.41
11:C:153:LEU:HD13	11:C:161:VAL:HG23	2.03	0.41
11:C:211:ARG:O	11:C:212:TRP:C	2.62	0.41
12:D:83:ARG:HG2	12:D:83:ARG:NH1	2.35	0.41
12:D:129:THR:O	12:D:130:GLN:CB	2.64	0.41
16:H:14:SER:C	16:H:16:GLY:H	2.29	0.41
17:I:62:ALA:C	17:I:64:ARG:N	2.78	0.41
17:I:75:ALA:HB3	17:I:131:THR:HG21	2.03	0.41
17:I:78:LEU:HA	17:I:81:LYS:HG2	2.03	0.41
17:I:132:ALA:HA	17:I:135:MET:HG2	2.02	0.41
17:I:138:VAL:CG1	17:I:139:VAL:N	2.83	0.41
18:J:19:ASP:O	18:J:20:ALA:HB3	2.21	0.41
18:J:39:LYS:HA	18:J:39:LYS:HE2	2.02	0.41
18:J:100:VAL:H	18:J:103:ILE:CG1	2.34	0.41
19:K:98:ARG:HD2	19:K:98:ARG:N	2.35	0.41
20:L:82:LEU:O	20:L:83:ALA:CB	2.69	0.41
21:M:133:LYS:HZ3	30:V:75:GLN:C	2.29	0.41
22:N:49:GLU:O	22:N:52:ILE:HB	2.20	0.41
23:O:21:LEU:O	23:O:22:GLY:C	2.64	0.41
24:P:29:VAL:CG2	24:P:47:ILE:HD11	2.51	0.41
25:Q:20:ALA:O	25:Q:21:LYS:C	2.64	0.41
25:Q:35:PHE:H	25:Q:35:PHE:HD1	1.69	0.41
25:Q:78:PHE:CE2	25:Q:82:LEU:HD11	2.56	0.41
27:S:13:SER:OG	27:S:16:LYS:HB2	2.21	0.41
28:T:6:ARG:O	28:T:8:LEU:N	2.53	0.41
30:V:80:HIS:HA	30:V:87:GLN:HE22	1.86	0.41
31:W:54:ARG:C	31:W:55:ASP:O	2.59	0.41
34:Z:33:ASN:HA	34:Z:45:THR:O	2.21	0.41
1:0:42:ILE:HG21	1:0:47:TYR:CE1	2.57	0.40
1:0:47:TYR:HA	1:0:52:LYS:HB2	2.03	0.40
2:1:8:ILE:HG21	2:1:27:ARG:HH21	1.86	0.40
5:4:7:VAL:HB	5:4:35:GLN:NE2	2.36	0.40
8:7:118:C:H2'	8:7:119:G:O4'	2.21	0.40
9:A:92:C:H2'	9:A:93:C:H6	1.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:189:G:P	34:Z:12:ILE:HG21	2.62	0.40
10:B:278:A:C4	10:B:362:A:N9	2.89	0.40
10:B:315:G:H2'	10:B:316:C:O4'	2.21	0.40
10:B:340:A:H2'	10:B:341:C:H5'	1.94	0.40
10:B:346:A:C6	10:B:347:A:C5	3.09	0.40
10:B:346:A:C6	10:B:347:A:N9	2.90	0.40
10:B:440:C:H2'	10:B:441:U:C6	2.55	0.40
10:B:839:U:H1'	10:B:1191:G:H1'	2.02	0.40
10:B:841:G:O2'	10:B:842:U:H5'	2.21	0.40
10:B:1029:A:O2'	21:M:118:LYS:HE3	2.22	0.40
10:B:1039:A:C2	10:B:1116:G:N1	2.84	0.40
10:B:1068:G:O2'	10:B:1069:A:H5'	2.20	0.40
10:B:1098:A:C4	10:B:1099:G:C8	3.09	0.40
10:B:1117:C:O2'	10:B:1118:C:H5'	2.21	0.40
10:B:1477:A:C6	10:B:1515:A:C4	3.07	0.40
10:B:1526:C:C2'	10:B:1527:G:C5'	2.99	0.40
10:B:1765:U:O2'	10:B:1766:G:H5'	2.21	0.40
10:B:1820:U:H3	11:C:197:ALA:HA	1.85	0.40
10:B:2014:A:OP1	27:S:95:ARG:NE	2.48	0.40
10:B:2026:U:C2	10:B:2027:G:C8	3.09	0.40
10:B:2031:A:O2'	10:B:2454:G:N2	2.50	0.40
10:B:2080:A:H2'	10:B:2081:U:C6	2.55	0.40
10:B:2455:G:H2'	10:B:2456:C:H6	1.85	0.40
10:B:2575:C:H4'	12:D:148:GLN:CA	2.48	0.40
10:B:2875:C:H2'	10:B:2876:G:H8	1.86	0.40
10:B:2884:U:H2'	10:B:2885:G:H8	1.86	0.40
11:C:50:THR:O	11:C:51:ARG:O	2.39	0.40
11:C:116:GLN:O	11:C:127:ASN:HB3	2.20	0.40
11:C:177:SER:C	11:C:179:GLU:H	2.27	0.40
11:C:254:LYS:HB2	11:C:254:LYS:HE2	1.87	0.40
12:D:62:LYS:HG2	12:D:63:PRO:HD2	1.96	0.40
12:D:106:LYS:O	12:D:206:ALA:HB2	2.21	0.40
12:D:115:GLY:C	22:N:3:HIS:NE2	2.80	0.40
13:E:35:TYR:C	13:E:37:ALA:H	2.30	0.40
14:F:65:LEU:C	14:F:67:THR:N	2.78	0.40
16:H:73:ASN:CG	16:H:74:ALA:N	2.79	0.40
18:J:9:GLU:O	18:J:10:THR:C	2.63	0.40
18:J:10:THR:HG22	18:J:50:THR:HA	2.03	0.40
19:K:23:LYS:HE3	19:K:24:VAL:O	2.21	0.40
20:L:38:GLN:O	20:L:41:ARG:HD3	2.21	0.40
21:M:38:ARG:NH1	21:M:38:ARG:HG3	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:M:136:MET:HG2	30:V:75:GLN:HG2	2.02	0.40
22:N:98:LEU:HB2	22:N:112:TYR:HE1	1.81	0.40
24:P:50:ARG:HD2	24:P:62:LYS:HB2	2.03	0.40
27:S:2:GLU:O	27:S:4:ILE:HD13	2.21	0.40
27:S:34:ASP:CA	27:S:37:THR:HG22	2.51	0.40
28:T:34:VAL:HG11	28:T:43:ILE:HD11	2.03	0.40
28:T:50:LEU:O	28:T:52:GLU:N	2.54	0.40
28:T:70:HIS:CG	28:T:74:ILE:HB	2.56	0.40
29:U:13:LEU:HD12	29:U:68:ASN:C	2.46	0.40
29:U:46:LYS:HA	29:U:54:PRO:O	2.21	0.40
31:W:65:LYS:HB3	31:W:65:LYS:HE3	1.87	0.40
4:3:22:LYS:O	4:3:23:HIS:O	2.39	0.40
5:4:13:ASN:ND2	5:4:13:ASN:N	2.67	0.40
6:5:357:MET:HA	6:5:361:PRO:HG3	2.04	0.40
8:7:106:A:H2'	8:7:107:G:O4'	2.21	0.40
10:B:32:C:H2'	10:B:33:C:H5''	2.03	0.40
10:B:275:C:C6	10:B:276:U:H5	2.30	0.40
10:B:291:G:C6	10:B:292:U:O4	2.73	0.40
10:B:489:G:C2	10:B:491:G:H1'	2.57	0.40
10:B:535:G:N3	25:Q:52:ARG:NH1	2.69	0.40
10:B:598:U:H5'	20:L:20:GLY:HA2	2.03	0.40
10:B:688:U:O2'	10:B:689:A:H5'	2.22	0.40
10:B:719:C:O2'	10:B:720:U:H5'	2.21	0.40
10:B:764:A:OP1	11:C:209:ALA:HB2	2.22	0.40
10:B:947:A:O2'	10:B:984:A:H2	2.04	0.40
10:B:1132:U:C2	18:J:75:TYR:CE1	3.10	0.40
10:B:1236:G:O2'	10:B:1237:A:O5'	2.40	0.40
10:B:1527:G:N2	10:B:1543:G:H2'	2.35	0.40
10:B:1558:C:H4'	10:B:1559:U:H5''	2.03	0.40
10:B:1656:C:P	12:D:141:ARG:HD3	2.61	0.40
10:B:1726:C:H2'	10:B:1727:C:C6	2.56	0.40
10:B:1821:A:H5'	11:C:155:ARG:CD	2.50	0.40
10:B:2081:U:H5''	34:Z:23:LYS:HD2	2.02	0.40
10:B:2278:A:H62	31:W:10:ARG:HG2	1.85	0.40
10:B:2605:U:H2'	10:B:2606:C:C6	2.57	0.40
10:B:2869:G:H2'	10:B:2870:C:H6	1.86	0.40
12:D:37:VAL:HB	12:D:42:ASN:ND2	2.36	0.40
12:D:46:ARG:HD2	12:D:80:TRP:CE2	2.56	0.40
12:D:135:GLY:C	12:D:137:SER:H	2.27	0.40
13:E:106:LYS:C	13:E:108:ILE:N	2.77	0.40
14:F:132:ARG:HD3	14:F:132:ARG:C	2.46	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:H:8:LYS:HB2	16:H:8:LYS:HE2	1.91	0.40
16:H:40:THR:OG1	16:H:43:ASN:ND2	2.54	0.40
16:H:66:ASN:C	16:H:68:ARG:N	2.78	0.40
17:I:16:MET:N	17:I:42:ASN:OD1	2.55	0.40
20:L:47:ARG:O	20:L:47:ARG:HG3	2.21	0.40
21:M:33:LEU:H	21:M:101:VAL:HG22	1.84	0.40
21:M:49:ALA:O	21:M:53:MET:HE3	2.21	0.40
21:M:96:ILE:HD13	21:M:97:GLN:CG	2.51	0.40
23:O:26:LEU:O	23:O:27:VAL:HB	2.21	0.40
23:O:106:LEU:HD13	23:O:106:LEU:C	2.46	0.40
25:Q:116:LEU:O	25:Q:117:ALA:C	2.63	0.40
26:R:101:ILE:HG22	26:R:102:SER:H	1.86	0.40
28:T:25:GLU:CG	28:T:26:LYS:H	2.33	0.40
28:T:88:LYS:HG2	28:T:89:GLU:CD	2.46	0.40
30:V:77:VAL:HG21	30:V:79:ARG:NE	2.35	0.40
31:W:75:ASN:HD22	31:W:75:ASN:HA	1.64	0.40
33:Y:6:ILE:HD13	33:Y:6:ILE:H	1.85	0.40
34:Z:35:ASP:O	34:Z:42:PRO:HB3	2.21	0.40
34:Z:37:CYS:O	34:Z:38:SER:C	2.64	0.40
1:0:12:ARG:C	1:0:14:MET:H	2.30	0.40
6:5:350:LEU:H	6:5:350:LEU:CD2	2.34	0.40
10:B:19:A:OP1	25:Q:20:ALA:O	2.39	0.40
10:B:247:G:OP2	10:B:249:C:N4	2.53	0.40
10:B:326:G:N2	10:B:327:G:C4	2.89	0.40
10:B:362:A:C2	10:B:363:G:O4'	2.75	0.40
10:B:464:U:H2'	10:B:465:G:O4'	2.21	0.40
10:B:503:A:H5''	10:B:504:A:H5'	2.03	0.40
10:B:592:A:H2'	10:B:593:U:C6	2.56	0.40
10:B:593:U:H2'	10:B:594:U:C6	2.57	0.40
10:B:670:A:H3'	20:L:47:ARG:HD3	2.03	0.40
10:B:756:A:H2'	10:B:757:G:O4'	2.21	0.40
10:B:855:G:N2	31:W:23:LYS:HB3	2.37	0.40
10:B:978:G:C4	10:B:979:A:N7	2.90	0.40
10:B:1093:G:H8	10:B:1093:G:O5'	2.03	0.40
10:B:1330:C:H2'	10:B:1331:G:H8	1.86	0.40
10:B:1516:G:C2	10:B:1517:G:C5	3.10	0.40
10:B:1597:A:H5''	10:B:1598:A:H5'	2.03	0.40
10:B:1784:A:H4'	10:B:1785:A:O5'	2.20	0.40
10:B:1830:C:H2'	10:B:1831:G:H8	1.86	0.40
10:B:2458:G:H8	10:B:2459:A:H62	1.67	0.40
10:B:2484:G:P	21:M:44:ARG:HD2	2.60	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2733:A:C8	10:B:2733:A:C3'	3.04	0.40
11:C:63:ILE:HG22	11:C:64:VAL:N	2.35	0.40
11:C:94:LEU:HG	11:C:95:TYR:N	2.36	0.40
13:E:16:GLU:HB3	13:E:196:VAL:HA	2.04	0.40
13:E:117:ARG:HA	13:E:188:MET:HE1	2.04	0.40
13:E:128:ALA:O	13:E:157:LEU:HD22	2.20	0.40
14:F:12:VAL:HG13	14:F:27:VAL:CG2	2.42	0.40
14:F:16:MET:HE1	14:F:22:ASN:CA	2.52	0.40
14:F:33:ILE:O	14:F:34:THR:HB	2.22	0.40
15:G:16:VAL:HG12	15:G:17:LYS:N	2.35	0.40
15:G:26:LYS:HG2	15:G:31:GLU:HG2	2.03	0.40
16:H:5:LEU:HD12	16:H:30:LEU:HD11	2.04	0.40
16:H:67:ALA:O	16:H:71:LYS:N	2.46	0.40
16:H:73:ASN:C	16:H:75:LEU:H	2.28	0.40
16:H:147:VAL:HG12	16:H:148:ALA:N	2.35	0.40
17:I:100:ILE:CG2	17:I:104:GLN:HB2	2.51	0.40
18:J:72:LYS:NZ	18:J:74:TYR:OH	2.51	0.40
18:J:102:GLU:HG2	18:J:103:ILE:H	1.83	0.40
21:M:5:LYS:O	21:M:5:LYS:CD	2.69	0.40
21:M:69:PRO:HB2	21:M:70:ASP:H	1.63	0.40
22:N:29:VAL:CG2	22:N:75:ILE:HD11	2.44	0.40
22:N:97:ILE:HD12	22:N:113:ILE:HG12	2.02	0.40
23:O:94:ARG:O	23:O:96:GLY:N	2.54	0.40
24:P:29:VAL:HG23	24:P:47:ILE:HD11	2.03	0.40
25:Q:61:ILE:O	25:Q:65:ASN:HB3	2.22	0.40
27:S:1:MET:O	27:S:3:THR:N	2.55	0.40
27:S:90:LYS:HE3	27:S:90:LYS:H	1.86	0.40
28:T:62:VAL:O	28:T:63:VAL:CG1	2.67	0.40
29:U:78:LYS:HD2	29:U:78:LYS:HA	1.93	0.40
2:1:41:VAL:O	2:1:42:VAL:HG23	2.21	0.40
2:1:42:VAL:HG12	2:1:43:ARG:CG	2.51	0.40
4:3:30:HIS:O	10:B:2420:C:N4	2.54	0.40
6:5:367:GLN:HB3	6:5:371:LYS:HD2	2.02	0.40
9:A:27:C:H5'	23:O:34:HIS:HE1	1.83	0.40
10:B:80:G:H1'	10:B:346:A:H62	1.86	0.40
10:B:241:A:OP1	10:B:241:A:H8	2.03	0.40
10:B:342:A:N1	10:B:343:C:N4	2.68	0.40
10:B:588:U:O4	10:B:670:A:H1'	2.22	0.40
10:B:985:C:H2'	10:B:986:C:H6	1.86	0.40
10:B:1041:G:N2	10:B:1115:G:C4	2.89	0.40
10:B:1045:C:C3'	10:B:1046:A:C5'	2.98	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1310:G:H1'	10:B:1611:C:H5'	2.03	0.40
10:B:1381:G:O2'	10:B:1382:G:H5'	2.21	0.40
10:B:1396:U:O2	10:B:1396:U:H5'	2.22	0.40
10:B:2047:C:O2'	10:B:2823:A:N1	2.54	0.40
10:B:2093:G:OP1	16:H:24:GLY:HA3	2.22	0.40
10:B:2347:C:OP1	10:B:2347:C:H4'	2.21	0.40
10:B:2385:C:H2'	10:B:2386:A:C8	2.56	0.40
10:B:2469:A:C4'	21:M:55:ARG:HG3	2.46	0.40
11:C:161:VAL:HG11	11:C:173:LEU:HD22	2.03	0.40
12:D:120:GLY:H	12:D:123:LYS:CB	2.35	0.40
12:D:166:GLY:O	12:D:167:ASN:C	2.64	0.40
13:E:16:GLU:HG2	13:E:196:VAL:HG13	2.04	0.40
13:E:148:ILE:HB	13:E:185:LYS:O	2.20	0.40
14:F:35:LEU:HG	14:F:153:ILE:HG23	2.02	0.40
14:F:90:LEU:HD23	14:F:94:ARG:HG2	2.03	0.40
15:G:148:ARG:NE	15:G:153:PRO:HD2	2.37	0.40
17:I:6:ALA:O	17:I:7:TYR:HB3	2.21	0.40
17:I:32:VAL:CG2	17:I:60:VAL:HG21	2.46	0.40
18:J:118:MET:O	18:J:121:LYS:HB2	2.20	0.40
19:K:76:VAL:HG12	19:K:77:ILE:N	2.36	0.40
19:K:105:ARG:HG2	19:K:106:GLU:CD	2.47	0.40
20:L:41:ARG:HD3	20:L:41:ARG:N	2.37	0.40
20:L:136:GLU:C	20:L:138:ALA:H	2.29	0.40
22:N:76:VAL:O	22:N:79:LEU:HB2	2.21	0.40
23:O:53:THR:O	23:O:54:VAL:O	2.40	0.40
24:P:104:GLY:O	24:P:105:LYS:HB3	2.21	0.40
27:S:2:GLU:OE1	27:S:107:VAL:O	2.39	0.40
28:T:33:LYS:O	28:T:34:VAL:C	2.64	0.40
28:T:71:GLY:O	28:T:72:GLN:HG3	2.22	0.40
31:W:31:LEU:CD1	31:W:66:VAL:HG23	2.51	0.40
33:Y:4:ILE:O	33:Y:4:ILE:HG23	2.21	0.40
34:Z:64:PHE:C	34:Z:66:ILE:N	2.80	0.40
2:1:11:VAL:HG13	2:1:12:SER:N	2.37	0.40
8:7:148:C:H2'	8:7:149:A:C8	2.57	0.40
10:B:197:A:N6	10:B:2430:A:H2'	2.36	0.40
10:B:303:G:C2'	10:B:304:U:H5'	2.52	0.40
10:B:309:A:C2	10:B:329:G:O2'	2.73	0.40
10:B:319:G:C6	10:B:320:A:C5	3.08	0.40
10:B:319:G:N9	10:B:333:G:N2	2.69	0.40
10:B:347:A:N1	10:B:348:A:C4	2.90	0.40
10:B:911:A:C6	21:M:13:HIS:HB3	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1017:G:O2'	10:B:1018:U:H5'	2.22	0.40
10:B:1018:U:O5'	10:B:1018:U:H6	2.05	0.40
10:B:1278:C:H2'	10:B:1279:G:C8	2.57	0.40
10:B:1540:G:C2'	10:B:1541:C:H5'	2.47	0.40
10:B:1695:G:H1'	11:C:14:HIS:O	2.22	0.40
10:B:1818:U:HO2'	10:B:1819:A:P	2.43	0.40
10:B:1946:U:H2'	10:B:1947:C:H6	1.86	0.40
10:B:2052:A:H4'	12:D:148:GLN:CB	2.51	0.40
10:B:2354:C:O2'	31:W:31:LEU:CB	2.69	0.40
10:B:2373:G:H2'	10:B:2374:C:H6	1.84	0.40
10:B:2454:G:O2'	10:B:2455:G:H5'	2.21	0.40
10:B:2491:U:H5''	10:B:2570:G:H5'	2.04	0.40
10:B:2492:U:O2'	10:B:2493:U:H5'	2.21	0.40
10:B:2864:G:H2'	10:B:2865:U:C6	2.56	0.40
11:C:68:ARG:CD	11:C:127:ASN:ND2	2.85	0.40
11:C:95:TYR:HB2	11:C:99:GLU:HB3	2.03	0.40
12:D:13:ARG:HB2	12:D:21:SER:HB2	2.03	0.40
12:D:61:THR:HB	12:D:62:LYS:HE3	2.04	0.40
13:E:164:LEU:HG	13:E:165:HIS:N	2.37	0.40
13:E:186:VAL:O	13:E:188:MET:HE3	2.21	0.40
14:F:32:LYS:HB3	14:F:91:ARG:HB3	2.04	0.40
14:F:32:LYS:HD2	14:F:89:THR:HB	2.04	0.40
14:F:50:ASP:C	14:F:52:ALA:H	2.30	0.40
15:G:57:TYR:CZ	15:G:59:ASP:HB2	2.56	0.40
15:G:97:VAL:CG2	15:G:124:CYS:H	2.35	0.40
15:G:129:GLU:O	15:G:130:ILE:HG13	2.22	0.40
16:H:9:VAL:HG21	16:H:35:LYS:HE2	2.04	0.40
16:H:27:ARG:HH11	16:H:27:ARG:HB2	1.86	0.40
16:H:89:LYS:NZ	16:H:90:LEU:HB2	2.36	0.40
19:K:23:LYS:CG	19:K:24:VAL:N	2.84	0.40
20:L:79:LEU:O	20:L:81:ASP:OD1	2.39	0.40
24:P:38:ARG:HG3	24:P:38:ARG:HH11	1.85	0.40
25:Q:78:PHE:CZ	25:Q:82:LEU:HD11	2.56	0.40
25:Q:101:ASP:O	25:Q:104:ALA:HB3	2.22	0.40
29:U:46:LYS:CB	29:U:46:LYS:NZ	2.83	0.40
30:V:66:ASP:CG	30:V:68:LYS:HE3	2.47	0.40
31:W:40:ARG:CZ	31:W:68:PHE:O	2.69	0.40
31:W:42:THR:O	31:W:43:LYS:HB2	2.21	0.40
31:W:44:PHE:O	31:W:44:PHE:HD1	2.04	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	0	54/56 (96%)	30 (56%)	15 (28%)	9 (17%)	0	2
2	1	52/54 (96%)	19 (36%)	23 (44%)	10 (19%)	0	2
3	2	44/46 (96%)	23 (52%)	14 (32%)	7 (16%)	0	2
4	3	62/64 (97%)	30 (48%)	25 (40%)	7 (11%)	0	5
5	4	36/38 (95%)	18 (50%)	9 (25%)	9 (25%)	0	1
6	5	107/109 (98%)	83 (78%)	19 (18%)	5 (5%)	2	16
7	6	6/8 (75%)	5 (83%)	1 (17%)	0	100	100
11	C	265/273 (97%)	103 (39%)	82 (31%)	80 (30%)	0	0
12	D	207/209 (99%)	90 (44%)	69 (33%)	48 (23%)	0	1
13	E	199/201 (99%)	98 (49%)	60 (30%)	41 (21%)	0	2
14	F	176/178 (99%)	95 (54%)	48 (27%)	33 (19%)	0	2
15	G	174/176 (99%)	118 (68%)	39 (22%)	17 (10%)	0	7
16	H	147/149 (99%)	85 (58%)	47 (32%)	15 (10%)	0	6
17	I	139/141 (99%)	124 (89%)	11 (8%)	4 (3%)	3	23
18	J	138/142 (97%)	67 (49%)	42 (30%)	29 (21%)	0	2
19	K	119/123 (97%)	71 (60%)	32 (27%)	16 (13%)	0	3
20	L	132/144 (92%)	55 (42%)	36 (27%)	41 (31%)	0	0
21	M	134/136 (98%)	69 (52%)	37 (28%)	28 (21%)	0	2
22	N	125/127 (98%)	71 (57%)	34 (27%)	20 (16%)	0	2
23	O	115/117 (98%)	64 (56%)	26 (23%)	25 (22%)	0	2
24	P	112/114 (98%)	39 (35%)	36 (32%)	37 (33%)	0	0
25	Q	115/117 (98%)	81 (70%)	22 (19%)	12 (10%)	0	6
26	R	101/103 (98%)	44 (44%)	31 (31%)	26 (26%)	0	1
27	S	108/110 (98%)	63 (58%)	27 (25%)	18 (17%)	0	2
28	T	97/100 (97%)	41 (42%)	39 (40%)	17 (18%)	0	2

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
29	U	100/103 (97%)	30 (30%)	47 (47%)	23 (23%)	0	1
30	V	92/94 (98%)	62 (67%)	22 (24%)	8 (9%)	0	8
31	W	82/84 (98%)	29 (35%)	26 (32%)	27 (33%)	0	0
32	X	60/63 (95%)	28 (47%)	20 (33%)	12 (20%)	0	2
33	Y	56/58 (97%)	29 (52%)	17 (30%)	10 (18%)	0	2
34	Z	68/70 (97%)	29 (43%)	26 (38%)	13 (19%)	0	2
All	All	3422/3507 (98%)	1793 (52%)	982 (29%)	647 (19%)	0	2

All (647) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	0	10	SER
1	0	29	VAL
1	0	35	GLU
2	1	46	VAL
3	2	4	THR
3	2	44	VAL
4	3	15	LYS
4	3	23	HIS
4	3	31	ILE
4	3	57	VAL
4	3	60	CYS
5	4	5	ALA
5	4	22	VAL
5	4	24	ARG
5	4	29	ALA
11	C	21	PRO
11	C	22	GLU
11	C	28	PRO
11	C	29	PHE
11	C	31	PRO
11	C	32	LEU
11	C	47	ARG
11	C	63	ILE
11	C	64	VAL
11	C	67	LYS
11	C	68	ARG
11	C	97	ASP
11	C	103	ILE
11	C	111	ALA

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Mol	Chain	Res	Type
11	C	114	GLN
11	C	124	LYS
11	C	125	PRO
11	C	135	PRO
11	C	141	HIS
11	C	149	LYS
11	C	156	SER
11	C	176	ARG
11	C	209	ALA
11	C	226	PRO
11	C	227	VAL
11	C	239	PHE
11	C	246	PRO
11	C	258	SER
11	C	266	ILE
12	D	9	VAL
12	D	14	ILE
12	D	18	ASP
12	D	23	PRO
12	D	27	ILE
12	D	30	GLU
12	D	33	ARG
12	D	42	ASN
12	D	59	ARG
12	D	84	LEU
12	D	92	VAL
12	D	102	ALA
12	D	114	LYS
12	D	128	ARG
12	D	130	GLN
12	D	139	SER
12	D	141	ARG
12	D	154	LYS
12	D	170	VAL
13	E	4	VAL
13	E	37	ALA
13	E	44	ARG
13	E	46	GLN
13	E	49	ARG
13	E	59	PRO
13	E	84	THR
13	E	86	ALA

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Mol	Chain	Res	Type
13	E	117	ARG
13	E	129	PRO
13	E	147	LEU
13	E	148	ILE
13	E	165	HIS
13	E	196	VAL
14	F	66	ILE
14	F	73	VAL
14	F	76	PHE
14	F	131	VAL
14	F	139	GLU
14	F	149	ARG
14	F	173	ASP
15	G	6	ALA
15	G	19	ASN
15	G	91	VAL
16	H	29	PHE
16	H	38	PRO
16	H	41	LYS
17	I	18	ASN
18	J	43	GLU
18	J	44	TYR
18	J	64	VAL
18	J	74	TYR
18	J	100	VAL
18	J	101	ILE
18	J	119	PHE
19	K	35	VAL
19	K	46	ALA
19	K	53	LYS
19	K	71	ARG
19	K	72	PRO
19	K	85	VAL
19	K	89	ASN
19	K	110	GLU
19	K	120	PRO
20	L	40	SER
20	L	56	PRO
20	L	62	PRO
20	L	68	SER
20	L	73	ILE
20	L	85	VAL

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Mol	Chain	Res	Type
20	L	90	VAL
20	L	117	THR
20	L	118	THR
20	L	119	PRO
20	L	120	VAL
20	L	126	ARG
20	L	127	VAL
20	L	141	LYS
21	M	4	PRO
21	M	14	LYS
21	M	69	PRO
21	M	77	PRO
21	M	80	VAL
21	M	98	PRO
21	M	109	PRO
22	N	37	THR
22	N	89	SER
22	N	94	TYR
22	N	107	ASN
22	N	113	ILE
22	N	116	VAL
22	N	118	ARG
23	O	37	ALA
23	O	42	PRO
23	O	54	VAL
24	P	17	PRO
24	P	23	ASP
24	P	24	THR
24	P	52	ARG
24	P	55	HIS
24	P	60	VAL
24	P	72	VAL
24	P	76	HIS
24	P	85	VAL
24	P	90	ALA
24	P	94	ALA
25	Q	34	ALA
25	Q	91	ARG
26	R	11	GLN
26	R	15	SER
26	R	17	GLY
26	R	24	LYS

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Mol	Chain	Res	Type
26	R	47	VAL
26	R	59	ILE
26	R	74	ILE
26	R	95	ASP
26	R	101	ILE
27	S	3	THR
27	S	6	LYS
27	S	67	ASP
27	S	96	ILE
27	S	103	ILE
28	T	5	GLU
28	T	34	VAL
29	U	24	VAL
29	U	41	VAL
29	U	63	ALA
29	U	71	ILE
29	U	92	VAL
31	W	11	ASN
31	W	16	GLU
31	W	18	LYS
31	W	32	ALA
31	W	44	PHE
31	W	66	VAL
31	W	75	ASN
31	W	81	ILE
32	X	7	ARG
32	X	9	LYS
32	X	33	ALA
33	Y	9	THR
33	Y	51	SER
34	Z	7	PRO
34	Z	8	LYS
34	Z	40	CYS
34	Z	58	ASP
34	Z	60	PHE
1	0	39	ARG
1	0	51	ARG
2	1	5	ARG
2	1	35	LEU
3	2	43	THR
4	3	16	THR
5	4	3	VAL

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Mol	Chain	Res	Type
5	4	17	VAL
6	5	370	ASP
11	C	53	ILE
11	C	72	GLY
11	C	90	ILE
11	C	98	GLY
11	C	107	LYS
11	C	140	VAL
11	C	143	VAL
11	C	157	ALA
11	C	163	ILE
11	C	194	VAL
11	C	196	ASN
11	C	208	GLY
11	C	255	LYS
12	D	2	ILE
12	D	34	VAL
12	D	104	VAL
12	D	129	THR
12	D	155	VAL
12	D	162	ALA
12	D	180	VAL
12	D	206	ALA
12	D	207	VAL
13	E	23	PHE
13	E	52	VAL
13	E	61	ARG
13	E	62	GLN
13	E	82	GLY
13	E	90	GLN
13	E	104	ALA
13	E	120	VAL
13	E	128	ALA
13	E	171	ASP
13	E	186	VAL
14	F	3	LEU
14	F	7	TYR
14	F	19	PHE
14	F	31	GLU
14	F	46	LYS
14	F	57	ALA
14	F	67	THR

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Mol	Chain	Res	Type
14	F	75	GLY
14	F	122	ASP
14	F	136	ILE
14	F	148	VAL
14	F	150	GLY
14	F	153	ILE
14	F	162	ASP
14	F	176	PHE
15	G	25	ILE
15	G	151	ARG
15	G	159	LYS
15	G	166	GLU
16	H	8	LYS
18	J	4	PHE
18	J	6	ALA
18	J	50	THR
18	J	73	VAL
18	J	81	ILE
18	J	83	GLY
18	J	130	HIS
18	J	137	PRO
19	K	25	LEU
19	K	73	ASP
20	L	29	LYS
20	L	34	GLY
20	L	48	ARG
20	L	57	LEU
20	L	77	ILE
20	L	95	LEU
20	L	128	THR
20	L	140	GLY
21	M	11	LYS
21	M	36	VAL
21	M	58	LYS
21	M	86	LYS
21	M	104	GLU
22	N	5	LYS
22	N	8	ARG
22	N	11	ASN
22	N	90	ARG
22	N	112	TYR
22	N	119	SER

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Mol	Chain	Res	Type
22	N	126	ALA
23	O	9	ARG
23	O	21	LEU
23	O	28	VAL
23	O	32	PRO
23	O	47	VAL
23	O	49	VAL
23	O	63	LYS
23	O	95	SER
23	O	115	LEU
24	P	49	ILE
24	P	78	PRO
24	P	82	SER
24	P	83	ILE
24	P	91	VAL
24	P	97	TYR
24	P	102	ARG
24	P	112	ARG
26	R	25	LEU
26	R	87	GLN
26	R	97	LYS
26	R	100	GLY
27	S	5	ALA
27	S	8	ARG
27	S	29	VAL
28	T	14	PRO
28	T	30	ILE
28	T	32	LEU
28	T	63	VAL
28	T	65	GLY
28	T	81	LYS
28	T	85	VAL
29	U	21	ARG
29	U	22	GLY
29	U	64	ILE
29	U	77	GLY
30	V	45	ASP
30	V	64	VAL
30	V	71	LYS
31	W	2	HIS
31	W	23	LYS
31	W	37	VAL

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Mol	Chain	Res	Type
31	W	42	THR
31	W	47	GLY
31	W	49	ASN
31	W	50	VAL
31	W	52	CYS
31	W	63	ASP
31	W	65	LYS
31	W	67	LYS
31	W	68	PHE
31	W	72	GLY
32	X	16	THR
32	X	30	MET
32	X	40	SER
32	X	46	VAL
34	Z	4	ASP
34	Z	9	TYR
34	Z	26	SER
34	Z	30	HIS
34	Z	32	LEU
34	Z	39	LYS
2	1	16	THR
2	1	43	ARG
2	1	47	ILE
4	3	26	ALA
6	5	362	ASP
11	C	4	LYS
11	C	51	ARG
11	C	56	GLY
11	C	58	LYS
11	C	59	GLN
11	C	65	ASP
11	C	91	ALA
11	C	93	VAL
11	C	142	ASN
11	C	151	GLY
11	C	164	VAL
11	C	165	ALA
11	C	173	LEU
11	C	214	GLY
12	D	69	ALA
12	D	99	GLU
12	D	140	HIS

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Mol	Chain	Res	Type
12	D	156	PHE
12	D	169	ARG
12	D	174	SER
12	D	185	ASN
12	D	190	LYS
12	D	193	VAL
12	D	205	PRO
13	E	54	GLY
13	E	68	ALA
13	E	69	ARG
13	E	93	SER
13	E	127	GLU
13	E	191	ASP
14	F	10	GLU
14	F	14	LYS
14	F	81	GLY
14	F	83	PRO
14	F	87	LYS
14	F	114	ARG
15	G	45	ALA
15	G	127	GLN
16	H	20	ASN
16	H	37	VAL
16	H	44	ILE
16	H	127	GLU
17	I	23	VAL
18	J	46	PRO
18	J	121	LYS
18	J	127	GLY
18	J	138	GLN
19	K	3	GLN
19	K	121	GLU
20	L	27	LEU
20	L	64	PHE
20	L	82	LEU
20	L	84	LYS
20	L	91	ASP
20	L	94	THR
20	L	143	GLU
21	M	12	MET
21	M	72	PRO
21	M	81	ARG

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Mol	Chain	Res	Type
21	M	97	GLN
21	M	105	MET
21	M	131	VAL
22	N	104	ALA
23	O	7	ARG
23	O	38	GLN
23	O	57	ALA
23	O	68	LYS
24	P	12	MET
24	P	25	VAL
24	P	39	LEU
24	P	56	SER
24	P	81	ASP
24	P	105	LYS
25	Q	23	TYR
25	Q	26	ALA
25	Q	73	ILE
25	Q	88	GLU
25	Q	92	LYS
26	R	7	SER
26	R	10	LYS
26	R	29	THR
26	R	37	GLU
26	R	41	ILE
26	R	72	VAL
26	R	73	LYS
26	R	98	ILE
27	S	11	ARG
27	S	12	SER
27	S	104	THR
28	T	13	ALA
28	T	15	HIS
28	T	74	ILE
28	T	94	ASP
28	T	98	GLY
29	U	14	THR
29	U	35	VAL
29	U	39	ASN
29	U	47	PRO
29	U	54	PRO
29	U	72	PHE
30	V	54	ALA

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Mol	Chain	Res	Type
31	W	77	LYS
32	X	4	LYS
32	X	28	LEU
33	Y	2	LYS
33	Y	10	ARG
33	Y	12	ALA
33	Y	14	GLY
33	Y	16	LEU
33	Y	57	GLU
1	0	53	VAL
2	1	21	THR
3	2	36	ALA
5	4	7	VAL
5	4	20	ASP
11	C	61	TYR
11	C	66	PHE
11	C	224	MET
11	C	230	PRO
11	C	231	HIS
11	C	251	THR
11	C	265	PHE
12	D	73	VAL
12	D	125	TRP
12	D	201	LEU
13	E	39	ALA
13	E	53	THR
13	E	112	LEU
13	E	123	LYS
13	E	153	LEU
14	F	175	PRO
15	G	11	PRO
15	G	155	PRO
16	H	12	LEU
16	H	42	LYS
16	H	118	PRO
17	I	49	GLU
18	J	11	VAL
18	J	85	LYS
20	L	23	ILE
20	L	30	THR
20	L	33	ARG
20	L	35	HIS

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Mol	Chain	Res	Type
21	M	3	GLN
21	M	21	ALA
21	M	59	ARG
21	M	70	ASP
21	M	71	LYS
21	M	120	ALA
21	M	127	LYS
22	N	20	MET
23	O	19	GLN
23	O	55	GLU
23	O	80	GLU
24	P	26	GLU
24	P	79	VAL
24	P	96	LEU
24	P	98	TYR
25	Q	21	LYS
25	Q	24	TYR
26	R	21	ARG
26	R	55	ASP
27	S	13	SER
27	S	28	LYS
27	S	34	ASP
27	S	71	VAL
27	S	80	PRO
28	T	61	LEU
28	T	66	LYS
29	U	7	ASP
29	U	18	LYS
29	U	57	ILE
31	W	5	ALA
31	W	6	GLY
31	W	38	ARG
32	X	24	GLU
34	Z	42	PRO
1	0	5	ASN
3	2	8	SER
6	5	344	MET
6	5	361	PRO
6	5	431	LYS
11	C	50	THR
11	C	85	ASN
11	C	115	ILE

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Mol	Chain	Res	Type
11	C	218	THR
11	C	225	ASN
11	C	236	GLY
12	D	52	THR
12	D	95	SER
12	D	101	PHE
12	D	189	VAL
14	F	34	THR
14	F	36	ASN
14	F	88	VAL
15	G	42	VAL
17	I	14	ALA
18	J	72	LYS
18	J	97	PRO
18	J	132	HIS
20	L	83	ALA
20	L	92	LEU
20	L	104	GLN
20	L	113	ALA
20	L	136	GLU
22	N	56	LYS
22	N	102	PHE
22	N	122	ALA
23	O	52	SER
23	O	90	VAL
24	P	3	ILE
24	P	19	PHE
24	P	59	THR
24	P	92	ARG
24	P	110	LYS
25	Q	93	ILE
26	R	77	PHE
27	S	69	LEU
27	S	99	ARG
29	U	60	LYS
29	U	84	PHE
30	V	55	GLU
32	X	35	GLY
32	X	43	LEU
33	Y	17	PRO
33	Y	53	MET
34	Z	66	ILE

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Mol	Chain	Res	Type
2	1	38	PHE
3	2	6	GLN
11	C	14	HIS
11	C	17	LYS
11	C	30	ALA
11	C	155	ARG
11	C	223	ALA
12	D	175	LEU
13	E	24	ASN
13	E	199	MET
15	G	32	LEU
15	G	59	ASP
16	H	75	LEU
18	J	84	ILE
20	L	37	GLY
25	Q	18	LYS
26	R	4	VAL
28	T	96	VAL
3	2	9	VAL
11	C	16	VAL
13	E	113	VAL
15	G	99	GLY
21	M	26	VAL
21	M	89	VAL
22	N	39	PRO
24	P	21	PRO
24	P	69	VAL
25	Q	89	ILE
30	V	72	VAL
30	V	84	PRO
2	1	30	PRO
5	4	25	VAL
11	C	158	GLY
18	J	18	VAL
18	J	22	GLY
18	J	103	ILE
19	K	26	GLY
20	L	139	GLY
20	L	142	ILE
23	O	27	VAL
23	O	31	THR
29	U	53	GLN

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Mol	Chain	Res	Type
11	C	46	GLY
11	C	108	GLY
11	C	171	VAL
11	C	217	PRO
12	D	98	VAL
14	F	39	VAL
16	H	34	GLY
16	H	95	GLY
18	J	66	GLY
19	K	115	ILE
21	M	37	GLY
23	O	87	ILE
29	U	4	ILE
29	U	46	LYS
31	W	35	ILE
1	0	34	GLY
2	1	42	VAL
12	D	203	VAL
13	E	76	PRO
13	E	175	ILE
15	G	130	ILE
16	H	9	VAL
26	R	27	ILE
31	W	51	GLY
1	0	42	ILE
15	G	92	GLY
19	K	15	GLY
23	O	22	GLY
24	P	4	ILE
30	V	70	ILE

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	0	47/47 (100%)	31 (66%)	16 (34%)	0 1

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	1	48/48 (100%)	30 (62%)	18 (38%)	0	1
3	2	38/38 (100%)	28 (74%)	10 (26%)	0	3
4	3	51/51 (100%)	34 (67%)	17 (33%)	0	2
5	4	34/34 (100%)	21 (62%)	13 (38%)	0	1
6	5	92/92 (100%)	89 (97%)	3 (3%)	33	54
11	C	213/218 (98%)	137 (64%)	76 (36%)	0	1
12	D	164/164 (100%)	108 (66%)	56 (34%)	0	1
13	E	165/165 (100%)	116 (70%)	49 (30%)	0	2
14	F	149/149 (100%)	123 (83%)	26 (17%)	2	10
15	G	137/137 (100%)	106 (77%)	31 (23%)	1	6
16	H	114/114 (100%)	86 (75%)	28 (25%)	1	4
17	I	109/109 (100%)	106 (97%)	3 (3%)	38	59
18	J	114/116 (98%)	83 (73%)	31 (27%)	0	3
19	K	102/104 (98%)	78 (76%)	24 (24%)	1	5
20	L	97/103 (94%)	53 (55%)	44 (45%)	0	0
21	M	109/109 (100%)	78 (72%)	31 (28%)	0	3
22	N	103/103 (100%)	80 (78%)	23 (22%)	1	6
23	O	87/87 (100%)	56 (64%)	31 (36%)	0	1
24	P	99/99 (100%)	76 (77%)	23 (23%)	1	5
25	Q	89/89 (100%)	67 (75%)	22 (25%)	1	4
26	R	84/84 (100%)	68 (81%)	16 (19%)	1	8
27	S	93/93 (100%)	72 (77%)	21 (23%)	1	6
28	T	83/84 (99%)	54 (65%)	29 (35%)	0	1
29	U	83/84 (99%)	57 (69%)	26 (31%)	0	2
30	V	78/78 (100%)	63 (81%)	15 (19%)	1	8
31	W	62/62 (100%)	44 (71%)	18 (29%)	0	2
32	X	55/55 (100%)	36 (66%)	19 (34%)	0	1
33	Y	48/48 (100%)	37 (77%)	11 (23%)	1	6
34	Z	62/62 (100%)	43 (69%)	19 (31%)	0	2
All	All	2809/2826 (99%)	2060 (73%)	749 (27%)	2	3

All (749) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	0	3	GLN
1	0	4	GLN
1	0	5	ASN
1	0	11	LYS
1	0	12	ARG
1	0	14	MET
1	0	21	LEU
1	0	25	THR
1	0	27	LEU
1	0	29	VAL
1	0	32	THR
1	0	35	GLU
1	0	39	ARG
1	0	49	ARG
1	0	51	ARG
1	0	52	LYS
2	1	4	ILE
2	1	5	ARG
2	1	6	GLU
2	1	7	LYS
2	1	8	ILE
2	1	9	LYS
2	1	23	THR
2	1	24	LYS
2	1	32	LYS
2	1	33	LEU
2	1	34	GLU
2	1	36	LYS
2	1	42	VAL
2	1	44	GLN
2	1	47	ILE
2	1	49	LYS
2	1	52	LYS
2	1	53	ILE
3	2	2	LYS
3	2	11	LYS
3	2	12	ARG
3	2	21	ARG
3	2	25	LYS
3	2	26	ASN
3	2	29	GLN
3	2	33	ARG
3	2	45	SER

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Mol	Chain	Res	Type
3	2	46	LYS
4	3	3	ILE
4	3	4	LYS
4	3	6	VAL
4	3	12	ARG
4	3	18	LYS
4	3	21	PHE
4	3	25	HIS
4	3	28	LEU
4	3	29	ARG
4	3	32	LEU
4	3	35	LYS
4	3	37	THR
4	3	41	ARG
4	3	43	LEU
4	3	44	ARG
4	3	46	LYS
4	3	51	LYS
5	4	2	LYS
5	4	4	ARG
5	4	8	LYS
5	4	9	LYS
5	4	10	LEU
5	4	12	ARG
5	4	16	ILE
5	4	19	ARG
5	4	20	ASP
5	4	23	ILE
5	4	33	HIS
5	4	36	ARG
5	4	37	GLN
6	5	354	LEU
6	5	392	GLU
6	5	430	MET
11	C	3	VAL
11	C	5	CYS
11	C	9	SER
11	C	10	PRO
11	C	13	ARG
11	C	14	HIS
11	C	17	LYS
11	C	22	GLU

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Mol	Chain	Res	Type
11	C	23	LEU
11	C	27	LYS
11	C	28	PRO
11	C	32	LEU
11	C	33	LEU
11	C	35	LYS
11	C	36	ASN
11	C	38	LYS
11	C	43	ASN
11	C	44	ASN
11	C	51	ARG
11	C	58	LYS
11	C	59	GLN
11	C	62	ARG
11	C	64	VAL
11	C	68	ARG
11	C	78	GLU
11	C	84	PRO
11	C	86	ARG
11	C	94	LEU
11	C	100	ARG
11	C	102	TYR
11	C	110	LYS
11	C	124	LYS
11	C	127	ASN
11	C	128	THR
11	C	129	LEU
11	C	131	MET
11	C	136	VAL
11	C	144	GLU
11	C	145	MET
11	C	152	GLN
11	C	155	ARG
11	C	162	GLN
11	C	171	VAL
11	C	172	THR
11	C	175	LEU
11	C	179	GLU
11	C	181	ARG
11	C	184	GLU
11	C	186	ASP
11	C	188	ARG

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Mol	Chain	Res	Type
11	C	191	LEU
11	C	194	VAL
11	C	196	ASN
11	C	199	HIS
11	C	201	LEU
11	C	203	VAL
11	C	206	LYS
11	C	213	ARG
11	C	216	ARG
11	C	218	THR
11	C	220	ARG
11	C	222	THR
11	C	224	MET
11	C	225	ASN
11	C	227	VAL
11	C	228	ASP
11	C	231	HIS
11	C	235	GLU
11	C	237	ARG
11	C	244	VAL
11	C	246	PRO
11	C	249	VAL
11	C	250	GLN
11	C	254	LYS
11	C	261	ARG
11	C	268	ARG
12	D	1	MET
12	D	4	LEU
12	D	8	LYS
12	D	20	VAL
12	D	21	SER
12	D	24	VAL
12	D	25	THR
12	D	26	VAL
12	D	28	GLU
12	D	30	GLU
12	D	34	VAL
12	D	35	THR
12	D	36	GLN
12	D	37	VAL
12	D	38	LYS
12	D	39	ASP

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Mol	Chain	Res	Type
12	D	46	ARG
12	D	48	ILE
12	D	50	VAL
12	D	56	LYS
12	D	59	ARG
12	D	62	LYS
12	D	64	GLU
12	D	67	HIS
12	D	70	LYS
12	D	84	LEU
12	D	86	GLU
12	D	89	GLU
12	D	96	ILE
12	D	99	GLU
12	D	105	LYS
12	D	107	VAL
12	D	113	SER
12	D	127	PHE
12	D	128	ARG
12	D	133	THR
12	D	138	LEU
12	D	142	VAL
12	D	148	GLN
12	D	150	GLN
12	D	151	THR
12	D	154	LYS
12	D	155	VAL
12	D	157	LYS
12	D	159	LYS
12	D	160	LYS
12	D	161	MET
12	D	164	GLN
12	D	165	MET
12	D	167	ASN
12	D	176	ASP
12	D	177	VAL
12	D	178	VAL
12	D	184	ARG
12	D	197	THR
12	D	207	VAL
13	E	2	GLU
13	E	4	VAL

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Mol	Chain	Res	Type
13	E	5	LEU
13	E	10	SER
13	E	18	THR
13	E	22	ASP
13	E	28	VAL
13	E	41	GLN
13	E	43	THR
13	E	44	ARG
13	E	46	GLN
13	E	47	LYS
13	E	49	ARG
13	E	55	SER
13	E	57	LYS
13	E	58	LYS
13	E	61	ARG
13	E	67	ARG
13	E	69	ARG
13	E	70	SER
13	E	74	LYS
13	E	78	TRP
13	E	88	ARG
13	E	97	ASN
13	E	98	LYS
13	E	106	LYS
13	E	107	SER
13	E	109	LEU
13	E	113	VAL
13	E	114	ARG
13	E	118	LEU
13	E	132	LYS
13	E	133	LEU
13	E	134	LEU
13	E	148	ILE
13	E	150	THR
13	E	152	GLU
13	E	155	GLU
13	E	157	LEU
13	E	159	LEU
13	E	164	LEU
13	E	169	VAL
13	E	179	SER
13	E	184	ASP

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Mol	Chain	Res	Type
13	E	188	MET
13	E	189	THR
13	E	193	VAL
13	E	197	GLU
13	E	200	LEU
14	F	5	ASP
14	F	9	ASP
14	F	10	GLU
14	F	14	LYS
14	F	16	MET
14	F	17	THR
14	F	21	TYR
14	F	37	MET
14	F	55	ASP
14	F	56	LEU
14	F	59	ILE
14	F	63	LYS
14	F	87	LYS
14	F	93	GLU
14	F	97	GLU
14	F	102	LEU
14	F	126	ASN
14	F	139	GLU
14	F	142	TYR
14	F	143	ASP
14	F	147	ARG
14	F	151	LEU
14	F	152	ASP
14	F	168	LEU
14	F	172	PHE
14	F	174	PHE
15	G	2	ARG
15	G	3	VAL
15	G	5	LYS
15	G	18	ILE
15	G	23	ILE
15	G	25	ILE
15	G	29	ASN
15	G	34	ARG
15	G	46	ASP
15	G	47	ASN
15	G	49	LEU

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Mol	Chain	Res	Type
15	G	55	ASP
15	G	57	TYR
15	G	59	ASP
15	G	70	LEU
15	G	72	ASN
15	G	80	GLU
15	G	84	LYS
15	G	86	LEU
15	G	94	ARG
15	G	98	LYS
15	G	110	HIS
15	G	121	THR
15	G	128	THR
15	G	133	LYS
15	G	143	VAL
15	G	146	ASP
15	G	150	TYR
15	G	151	ARG
15	G	152	ARG
15	G	176	LYS
16	H	1	MET
16	H	2	GLN
16	H	5	LEU
16	H	7	ASP
16	H	8	LYS
16	H	18	GLN
16	H	22	LYS
16	H	27	ARG
16	H	30	LEU
16	H	33	GLN
16	H	35	LYS
16	H	42	LYS
16	H	43	ASN
16	H	51	ARG
16	H	57	LYS
16	H	68	ARG
16	H	70	GLU
16	H	73	ASN
16	H	75	LEU
16	H	77	THR
16	H	89	LYS
16	H	96	THR

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Mol	Chain	Res	Type
16	H	98	ASP
16	H	112	LYS
16	H	124	THR
16	H	134	VAL
16	H	135	HIS
16	H	139	PHE
17	I	2	LYS
17	I	33	ASN
17	I	141	ASP
18	J	3	THR
18	J	12	LYS
18	J	15	TRP
18	J	21	THR
18	J	23	LYS
18	J	24	THR
18	J	25	LEU
18	J	28	LEU
18	J	31	GLU
18	J	34	ARG
18	J	35	ARG
18	J	36	LEU
18	J	39	LYS
18	J	58	ASN
18	J	61	LYS
18	J	64	VAL
18	J	68	LYS
18	J	69	ARG
18	J	70	THR
18	J	75	TYR
18	J	90	GLU
18	J	96	ARG
18	J	98	GLU
18	J	114	LEU
18	J	116	ARG
18	J	118	MET
18	J	122	LEU
18	J	130	HIS
18	J	132	HIS
18	J	136	GLN
18	J	139	VAL
19	K	4	GLU
19	K	9	ASN

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Mol	Chain	Res	Type
19	K	17	ARG
19	K	19	VAL
19	K	20	MET
19	K	22	ILE
19	K	30	ARG
19	K	31	ARG
19	K	32	TYR
19	K	41	ILE
19	K	54	LYS
19	K	58	LEU
19	K	62	VAL
19	K	71	ARG
19	K	86	LEU
19	K	87	LEU
19	K	93	GLN
19	K	95	ILE
19	K	107	LEU
19	K	108	ARG
19	K	109	SER
19	K	110	GLU
19	K	116	ILE
19	K	120	PRO
20	L	7	SER
20	L	13	LYS
20	L	14	LYS
20	L	18	ARG
20	L	27	LEU
20	L	29	LYS
20	L	33	ARG
20	L	36	LYS
20	L	39	LYS
20	L	41	ARG
20	L	47	ARG
20	L	55	MET
20	L	56	PRO
20	L	57	LEU
20	L	59	ARG
20	L	61	LEU
20	L	70	LYS
20	L	74	THR
20	L	76	GLU
20	L	77	ILE

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Mol	Chain	Res	Type
20	L	78	ARG
20	L	82	LEU
20	L	84	LYS
20	L	90	VAL
20	L	91	ASP
20	L	92	LEU
20	L	96	LYS
20	L	103	ILE
20	L	104	GLN
20	L	105	ILE
20	L	106	GLU
20	L	107	PHE
20	L	110	VAL
20	L	111	ILE
20	L	112	LEU
20	L	115	GLU
20	L	116	VAL
20	L	118	THR
20	L	121	THR
20	L	122	VAL
20	L	126	ARG
20	L	127	VAL
20	L	141	LYS
20	L	143	GLU
21	M	1	MET
21	M	3	GLN
21	M	8	LYS
21	M	9	PHE
21	M	11	LYS
21	M	12	MET
21	M	14	LYS
21	M	18	ARG
21	M	22	GLN
21	M	33	LEU
21	M	36	VAL
21	M	45	GLN
21	M	54	THR
21	M	55	ARG
21	M	63	ILE
21	M	71	LYS
21	M	72	PRO
21	M	73	ILE

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Mol	Chain	Res	Type
21	M	76	LYS
21	M	84	LYS
21	M	88	ASN
21	M	93	VAL
21	M	96	ILE
21	M	100	LYS
21	M	105	MET
21	M	109	PRO
21	M	117	PHE
21	M	118	LYS
21	M	132	THR
21	M	133	LYS
21	M	136	MET
22	N	1	MET
22	N	3	HIS
22	N	9	GLN
22	N	10	LEU
22	N	11	ASN
22	N	13	ASN
22	N	21	PHE
22	N	33	ILE
22	N	34	ILE
22	N	35	LYS
22	N	39	PRO
22	N	48	VAL
22	N	57	THR
22	N	65	LEU
22	N	73	ASN
22	N	75	ILE
22	N	98	LEU
22	N	99	LYS
22	N	103	ARG
22	N	112	TYR
22	N	115	LEU
22	N	120	GLU
22	N	127	GLU
23	O	1	MET
23	O	2	ASP
23	O	3	LYS
23	O	5	SER
23	O	9	ARG
23	O	10	ARG

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Mol	Chain	Res	Type
23	O	13	ARG
23	O	21	LEU
23	O	25	ARG
23	O	29	HIS
23	O	31	THR
23	O	32	PRO
23	O	34	HIS
23	O	35	ILE
23	O	38	GLN
23	O	40	ILE
23	O	56	LYS
23	O	60	GLU
23	O	62	LEU
23	O	64	TYR
23	O	67	ASN
23	O	68	LYS
23	O	74	VAL
23	O	84	GLU
23	O	85	LYS
23	O	87	ILE
23	O	93	ASP
23	O	97	PHE
23	O	98	GLN
23	O	112	GLU
23	O	116	GLN
24	P	2	ASN
24	P	11	GLN
24	P	12	MET
24	P	15	ASP
24	P	24	THR
24	P	32	VAL
24	P	38	ARG
24	P	42	PHE
24	P	46	VAL
24	P	47	ILE
24	P	50	ARG
24	P	52	ARG
24	P	55	HIS
24	P	56	SER
24	P	60	VAL
24	P	74	GLN
24	P	76	HIS

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Mol	Chain	Res	Type
24	P	79	VAL
24	P	88	ARG
24	P	100	ARG
24	P	108	ARG
24	P	111	GLU
24	P	113	LEU
25	Q	3	VAL
25	Q	10	ARG
25	Q	12	ARG
25	Q	21	LYS
25	Q	32	ARG
25	Q	36	GLN
25	Q	38	VAL
25	Q	39	ILE
25	Q	55	GLN
25	Q	65	ASN
25	Q	71	ASN
25	Q	80	ASN
25	Q	84	LYS
25	Q	87	VAL
25	Q	90	ASP
25	Q	91	ARG
25	Q	92	LYS
25	Q	94	LEU
25	Q	101	ASP
25	Q	102	LYS
25	Q	108	LEU
25	Q	113	LYS
26	R	12	HIS
26	R	13	ARG
26	R	16	GLU
26	R	18	GLN
26	R	23	GLU
26	R	25	LEU
26	R	40	MET
26	R	41	ILE
26	R	43	ASN
26	R	52	PRO
26	R	53	PHE
26	R	66	HIS
26	R	79	ARG
26	R	83	TYR

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Mol	Chain	Res	Type
26	R	94	THR
26	R	95	ASP
27	S	3	THR
27	S	4	ILE
27	S	6	LYS
27	S	9	HIS
27	S	13	SER
27	S	16	LYS
27	S	19	LEU
27	S	28	LYS
27	S	37	THR
27	S	59	GLU
27	S	60	HIS
27	S	67	ASP
27	S	69	LEU
27	S	80	PRO
27	S	84	ARG
27	S	88	ARG
27	S	90	LYS
27	S	94	ASP
27	S	95	ARG
27	S	102	HIS
27	S	110	ARG
28	T	1	MET
28	T	2	ILE
28	T	5	GLU
28	T	6	ARG
28	T	8	LEU
28	T	10	VAL
28	T	11	LEU
28	T	15	HIS
28	T	21	SER
28	T	25	GLU
28	T	26	LYS
28	T	28	ASN
28	T	30	ILE
28	T	31	VAL
28	T	36	LYS
28	T	44	LYS
28	T	47	VAL
28	T	48	GLN
28	T	52	GLU

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Mol	Chain	Res	Type
28	T	60	THR
28	T	61	LEU
28	T	66	LYS
28	T	68	LYS
28	T	69	ARG
28	T	79	ASP
28	T	85	VAL
28	T	89	GLU
28	T	91	GLN
28	T	93	LEU
29	U	3	LYS
29	U	13	LEU
29	U	33	VAL
29	U	38	ILE
29	U	42	LYS
29	U	43	LYS
29	U	45	GLN
29	U	46	LYS
29	U	51	LEU
29	U	52	ASN
29	U	53	GLN
29	U	60	LYS
29	U	61	GLU
29	U	64	ILE
29	U	66	VAL
29	U	68	ASN
29	U	71	ILE
29	U	72	PHE
29	U	80	ASP
29	U	81	ARG
29	U	85	ARG
29	U	88	ASP
29	U	90	LYS
29	U	93	ARG
29	U	95	PHE
29	U	100	GLU
30	V	3	THR
30	V	9	ARG
30	V	29	ILE
30	V	35	GLU
30	V	40	ILE
30	V	42	LEU

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Mol	Chain	Res	Type
30	V	46	LYS
30	V	51	GLN
30	V	59	GLU
30	V	69	GLU
30	V	70	ILE
30	V	73	LYS
30	V	77	VAL
30	V	87	GLN
30	V	89	ILE
31	W	2	HIS
31	W	8	SER
31	W	10	ARG
31	W	18	LYS
31	W	19	ARG
31	W	20	LEU
31	W	23	LYS
31	W	35	ILE
31	W	36	ILE
31	W	40	ARG
31	W	45	HIS
31	W	54	ARG
31	W	55	ASP
31	W	65	LYS
31	W	69	GLU
31	W	76	ARG
31	W	81	ILE
31	W	84	GLU
32	X	2	LYS
32	X	5	GLU
32	X	7	ARG
32	X	8	GLU
32	X	12	GLU
32	X	14	LEU
32	X	15	ASN
32	X	17	GLU
32	X	18	LEU
32	X	34	SER
32	X	36	GLN
32	X	38	GLN
32	X	41	HIS
32	X	42	LEU
32	X	44	LYS

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Mol	Chain	Res	Type
32	X	45	GLN
32	X	50	VAL
32	X	53	VAL
32	X	60	LYS
33	Y	6	ILE
33	Y	7	THR
33	Y	8	GLN
33	Y	9	THR
33	Y	10	ARG
33	Y	15	ARG
33	Y	16	LEU
33	Y	20	LYS
33	Y	31	ILE
33	Y	37	ARG
33	Y	39	ASP
34	Z	4	ASP
34	Z	6	HIS
34	Z	8	LYS
34	Z	12	ILE
34	Z	13	THR
34	Z	15	SER
34	Z	18	CYS
34	Z	24	ILE
34	Z	25	ARG
34	Z	30	HIS
34	Z	32	LEU
34	Z	33	ASN
34	Z	35	ASP
34	Z	40	CYS
34	Z	49	ARG
34	Z	51	VAL
34	Z	58	ASP
34	Z	66	ILE
34	Z	70	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (113) such sidechains are listed below:

Mol	Chain	Res	Type
1	0	3	GLN
1	0	4	GLN
2	1	25	ASN
4	3	23	HIS

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Mol	Chain	Res	Type
5	4	13	ASN
5	4	35	GLN
6	5	337	GLN
6	5	343	ASN
6	5	381	ASN
11	C	20	ASN
11	C	36	ASN
11	C	52	HIS
11	C	89	ASN
11	C	127	ASN
11	C	133	ASN
11	C	141	HIS
11	C	162	GLN
11	C	225	ASN
11	C	250	GLN
12	D	32	ASN
12	D	42	ASN
12	D	49	GLN
12	D	130	GLN
12	D	134	HIS
12	D	148	GLN
12	D	149	ASN
12	D	164	GLN
12	D	167	ASN
12	D	173	GLN
12	D	185	ASN
13	E	29	HIS
13	E	46	GLN
13	E	92	HIS
13	E	97	ASN
13	E	136	GLN
13	E	156	ASN
13	E	195	GLN
14	F	26	GLN
14	F	36	ASN
14	F	80	GLN
14	F	126	ASN
15	G	19	ASN
15	G	21	GLN
15	G	29	ASN
15	G	63	GLN
15	G	142	GLN

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Mol	Chain	Res	Type
16	H	2	GLN
16	H	11	ASN
16	H	43	ASN
16	H	73	ASN
16	H	145	ASN
17	I	11	GLN
17	I	29	GLN
17	I	30	GLN
17	I	33	ASN
18	J	40	HIS
18	J	77	HIS
18	J	80	HIS
18	J	131	ASN
18	J	135	GLN
18	J	136	GLN
19	K	5	GLN
19	K	9	ASN
19	K	82	ASN
19	K	88	ASN
20	L	38	GLN
20	L	54	GLN
20	L	99	ASN
21	M	3	GLN
21	M	17	ASN
21	M	22	GLN
22	N	9	GLN
22	N	13	ASN
22	N	16	HIS
22	N	73	ASN
22	N	81	ASN
23	O	19	GLN
23	O	38	GLN
23	O	67	ASN
23	O	98	GLN
23	O	104	GLN
24	P	2	ASN
24	P	40	GLN
24	P	74	GLN
25	Q	43	GLN
25	Q	51	GLN
25	Q	55	GLN
25	Q	58	GLN

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Mol	Chain	Res	Type
25	Q	80	ASN
26	R	11	GLN
26	R	18	GLN
26	R	86	GLN
27	S	9	HIS
27	S	57	ASN
28	T	28	ASN
28	T	59	ASN
29	U	39	ASN
29	U	53	GLN
29	U	68	ASN
30	V	51	GLN
30	V	80	HIS
30	V	88	HIS
31	W	2	HIS
31	W	56	HIS
32	X	31	GLN
32	X	36	GLN
32	X	38	GLN
32	X	45	GLN
33	Y	8	GLN
33	Y	19	HIS
34	Z	30	HIS
34	Z	41	HIS
34	Z	65	ASN

5.3.3 RNA ⓘ

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

All (578) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
8	7	121	A
8	7	124	U
8	7	168	U
9	A	11	C

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Mol	Chain	Res	Type
9	A	12	C
9	A	13	G
9	A	14	U
9	A	15	A
9	A	16	G
9	A	25	U
9	A	26	C
9	A	28	C
9	A	29	A
9	A	30	C
9	A	35	C
9	A	42	C
9	A	44	G
9	A	45	A
9	A	56	G
9	A	66	A
9	A	67	G
9	A	84	G
9	A	90	C
9	A	99	A
9	A	108	A
9	A	109	A
10	B	2	G
10	B	3	U
10	B	4	U
10	B	13	A
10	B	14	A
10	B	33	C
10	B	34	U
10	B	35	G
10	B	46	G
10	B	49	A
10	B	63	A
10	B	64	A
10	B	71	A
10	B	74	A
10	B	75	G
10	B	84	A
10	B	85	G
10	B	91	A
10	B	92	U
10	B	96	C

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Mol	Chain	Res	Type
10	B	100	U
10	B	101	A
10	B	102	U
10	B	103	A
10	B	104	A
10	B	118	A
10	B	119	A
10	B	120	U
10	B	125	A
10	B	126	A
10	B	140	C
10	B	142	A
10	B	144	A
10	B	160	A
10	B	162	U
10	B	163	C
10	B	181	A
10	B	186	G
10	B	196	A
10	B	199	A
10	B	209	C
10	B	216	A
10	B	221	A
10	B	222	A
10	B	224	U
10	B	230	G
10	B	241	A
10	B	248	G
10	B	252	G
10	B	255	A
10	B	265	A
10	B	266	G
10	B	269	C
10	B	270	A
10	B	271	G
10	B	272	A
10	B	275	C
10	B	277	G
10	B	278	A
10	B	279	A
10	B	280	U
10	B	281	C

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Mol	Chain	Res	Type
10	B	282	A
10	B	283	G
10	B	285	G
10	B	286	U
10	B	288	U
10	B	290	U
10	B	292	U
10	B	294	A
10	B	295	G
10	B	296	U
10	B	297	G
10	B	299	A
10	B	300	A
10	B	302	C
10	B	304	U
10	B	306	U
10	B	307	G
10	B	311	A
10	B	312	G
10	B	313	G
10	B	316	C
10	B	317	G
10	B	320	A
10	B	323	C
10	B	324	A
10	B	325	G
10	B	327	G
10	B	328	U
10	B	329	G
10	B	330	A
10	B	331	C
10	B	333	G
10	B	335	C
10	B	336	C
10	B	339	U
10	B	340	A
10	B	344	A
10	B	345	A
10	B	346	A
10	B	348	A
10	B	349	U
10	B	351	C

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Mol	Chain	Res	Type
10	B	353	C
10	B	354	A
10	B	355	U
10	B	357	C
10	B	359	G
10	B	361	G
10	B	362	A
10	B	363	G
10	B	364	C
10	B	365	U
10	B	366	C
10	B	367	G
10	B	368	A
10	B	371	A
10	B	372	G
10	B	386	G
10	B	387	U
10	B	395	U
10	B	396	G
10	B	397	U
10	B	405	U
10	B	411	G
10	B	423	A
10	B	424	G
10	B	435	C
10	B	444	C
10	B	451	U
10	B	455	C
10	B	457	A
10	B	479	A
10	B	480	A
10	B	481	G
10	B	491	G
10	B	498	G
10	B	504	A
10	B	505	A
10	B	508	A
10	B	509	C
10	B	512	G
10	B	518	G
10	B	527	C
10	B	530	G

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Mol	Chain	Res	Type
10	B	532	A
10	B	533	G
10	B	544	C
10	B	545	U
10	B	546	U
10	B	547	A
10	B	548	G
10	B	555	G
10	B	563	A
10	B	572	A
10	B	573	U
10	B	575	A
10	B	588	U
10	B	603	A
10	B	613	A
10	B	614	A
10	B	615	U
10	B	616	A
10	B	627	A
10	B	632	A
10	B	637	A
10	B	640	C
10	B	645	C
10	B	646	U
10	B	654	A
10	B	655	A
10	B	671	C
10	B	686	U
10	B	717	C
10	B	719	C
10	B	722	A
10	B	728	G
10	B	730	A
10	B	747	U
10	B	757	G
10	B	765	C
10	B	775	G
10	B	782	A
10	B	784	G
10	B	785	G
10	B	805	G
10	B	806	C

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Mol	Chain	Res	Type
10	B	812	C
10	B	819	A
10	B	827	U
10	B	828	U
10	B	846	U
10	B	847	U
10	B	859	G
10	B	872	U
10	B	876	C
10	B	877	A
10	B	878	A
10	B	899	A
10	B	910	A
10	B	912	C
10	B	932	U
10	B	933	A
10	B	934	U
10	B	941	A
10	B	946	C
10	B	955	U
10	B	961	C
10	B	973	A
10	B	974	G
10	B	983	A
10	B	985	C
10	B	989	G
10	B	991	C
10	B	993	G
10	B	995	C
10	B	996	A
10	B	1005	C
10	B	1012	U
10	B	1013	C
10	B	1019	U
10	B	1022	G
10	B	1025	G
10	B	1026	G
10	B	1033	U
10	B	1040	A
10	B	1042	G
10	B	1043	C
10	B	1046	A

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Mol	Chain	Res	Type
10	B	1047	G
10	B	1049	C
10	B	1050	A
10	B	1051	G
10	B	1053	C
10	B	1054	A
10	B	1055	G
10	B	1058	U
10	B	1063	G
10	B	1067	A
10	B	1070	A
10	B	1080	A
10	B	1082	U
10	B	1085	A
10	B	1088	A
10	B	1089	A
10	B	1090	A
10	B	1091	G
10	B	1092	C
10	B	1094	U
10	B	1100	C
10	B	1101	U
10	B	1102	C
10	B	1105	U
10	B	1106	G
10	B	1107	G
10	B	1111	A
10	B	1112	G
10	B	1113	U
10	B	1115	G
10	B	1117	C
10	B	1122	G
10	B	1126	A
10	B	1132	U
10	B	1133	A
10	B	1134	A
10	B	1135	C
10	B	1136	G
10	B	1139	G
10	B	1142	A
10	B	1156	A
10	B	1157	G

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Mol	Chain	Res	Type
10	B	1172	C
10	B	1174	U
10	B	1176	U
10	B	1179	G
10	B	1195	G
10	B	1205	A
10	B	1206	G
10	B	1211	C
10	B	1212	G
10	B	1218	G
10	B	1237	A
10	B	1247	A
10	B	1248	G
10	B	1251	C
10	B	1253	A
10	B	1256	G
10	B	1266	G
10	B	1271	G
10	B	1272	A
10	B	1273	U
10	B	1275	A
10	B	1276	A
10	B	1301	A
10	B	1302	A
10	B	1312	U
10	B	1325	U
10	B	1330	C
10	B	1337	G
10	B	1341	G
10	B	1345	C
10	B	1352	U
10	B	1365	A
10	B	1368	G
10	B	1379	U
10	B	1383	A
10	B	1384	A
10	B	1396	U
10	B	1397	U
10	B	1416	G
10	B	1419	A
10	B	1420	A
10	B	1427	A

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Mol	Chain	Res	Type
10	B	1428	C
10	B	1434	A
10	B	1450	G
10	B	1451	C
10	B	1453	A
10	B	1454	C
10	B	1455	G
10	B	1459	G
10	B	1460	U
10	B	1461	C
10	B	1476	U
10	B	1477	A
10	B	1478	G
10	B	1482	G
10	B	1490	A
10	B	1493	C
10	B	1494	A
10	B	1504	A
10	B	1508	A
10	B	1509	A
10	B	1510	G
10	B	1513	U
10	B	1514	G
10	B	1515	A
10	B	1518	C
10	B	1520	U
10	B	1522	A
10	B	1524	G
10	B	1525	A
10	B	1528	A
10	B	1530	G
10	B	1531	C
10	B	1532	A
10	B	1533	C
10	B	1534	U
10	B	1535	A
10	B	1536	C
10	B	1537	G
10	B	1538	G
10	B	1540	G
10	B	1541	C
10	B	1543	G

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Mol	Chain	Res	Type
10	B	1544	A
10	B	1547	C
10	B	1549	A
10	B	1550	C
10	B	1551	A
10	B	1552	A
10	B	1553	A
10	B	1558	C
10	B	1559	U
10	B	1567	G
10	B	1569	A
10	B	1578	U
10	B	1583	A
10	B	1585	C
10	B	1608	A
10	B	1610	A
10	B	1613	G
10	B	1634	A
10	B	1635	A
10	B	1640	A
10	B	1647	U
10	B	1648	U
10	B	1649	G
10	B	1674	G
10	B	1700	A
10	B	1701	A
10	B	1703	G
10	B	1706	C
10	B	1707	G
10	B	1713	A
10	B	1715	G
10	B	1716	U
10	B	1723	G
10	B	1729	U
10	B	1730	C
10	B	1731	G
10	B	1733	G
10	B	1738	G
10	B	1756	G
10	B	1758	U
10	B	1764	C
10	B	1773	A

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Mol	Chain	Res	Type
10	B	1776	G
10	B	1781	U
10	B	1786	A
10	B	1791	A
10	B	1800	C
10	B	1801	A
10	B	1816	C
10	B	1829	A
10	B	1833	C
10	B	1870	C
10	B	1873	G
10	B	1876	A
10	B	1884	G
10	B	1906	G
10	B	1914	C
10	B	1927	A
10	B	1929	G
10	B	1930	G
10	B	1937	A
10	B	1938	A
10	B	1939	U
10	B	1940	U
10	B	1955	U
10	B	1967	C
10	B	1970	A
10	B	1971	U
10	B	1972	G
10	B	1991	U
10	B	1993	U
10	B	1997	C
10	B	2022	U
10	B	2023	C
10	B	2031	A
10	B	2032	G
10	B	2033	A
10	B	2043	C
10	B	2052	A
10	B	2055	C
10	B	2056	G
10	B	2060	A
10	B	2061	G
10	B	2062	A

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Mol	Chain	Res	Type
10	B	2069	G
10	B	2072	C
10	B	2095	A
10	B	2102	G
10	B	2104	C
10	B	2137	U
10	B	2140	G
10	B	2141	G
10	B	2144	G
10	B	2145	C
10	B	2147	A
10	B	2149	U
10	B	2181	U
10	B	2187	U
10	B	2192	U
10	B	2199	A
10	B	2204	G
10	B	2211	A
10	B	2212	A
10	B	2225	A
10	B	2226	C
10	B	2238	G
10	B	2239	G
10	B	2243	U
10	B	2259	U
10	B	2266	A
10	B	2273	A
10	B	2276	G
10	B	2278	A
10	B	2283	C
10	B	2286	G
10	B	2287	A
10	B	2297	A
10	B	2304	G
10	B	2305	U
10	B	2307	G
10	B	2310	C
10	B	2315	G
10	B	2318	G
10	B	2319	G
10	B	2320	U
10	B	2321	U

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Mol	Chain	Res	Type
10	B	2322	A
10	B	2325	G
10	B	2333	A
10	B	2334	U
10	B	2336	A
10	B	2337	G
10	B	2347	C
10	B	2383	G
10	B	2385	C
10	B	2402	U
10	B	2406	A
10	B	2423	U
10	B	2424	C
10	B	2426	A
10	B	2429	G
10	B	2430	A
10	B	2434	A
10	B	2441	U
10	B	2448	A
10	B	2472	G
10	B	2476	A
10	B	2491	U
10	B	2502	G
10	B	2505	G
10	B	2506	U
10	B	2518	A
10	B	2529	G
10	B	2535	G
10	B	2554	U
10	B	2566	A
10	B	2567	G
10	B	2573	C
10	B	2585	U
10	B	2586	U
10	B	2597	G
10	B	2602	A
10	B	2609	U
10	B	2610	C
10	B	2613	U
10	B	2621	G
10	B	2629	U
10	B	2654	A

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Mol	Chain	Res	Type
10	B	2682	A
10	B	2689	U
10	B	2690	U
10	B	2714	G
10	B	2726	A
10	B	2739	U
10	B	2744	G
10	B	2748	A
10	B	2751	G
10	B	2752	C
10	B	2757	A
10	B	2765	A
10	B	2778	A
10	B	2791	G
10	B	2797	U
10	B	2800	A
10	B	2801	G
10	B	2808	G
10	B	2820	A
10	B	2821	A
10	B	2836	U
10	B	2850	A
10	B	2866	U
10	B	2867	G
10	B	2872	A
10	B	2873	A
10	B	2883	A
10	B	2903	U

All (19) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
10	B	63	A
10	B	102	U
10	B	162	U
10	B	529	A
10	B	670	A
10	B	858	G
10	B	1205	A
10	B	1210	G
10	B	1236	G
10	B	1250	G

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Mol	Chain	Res	Type
10	B	1301	A
10	B	1534	U
10	B	1913	A
10	B	2198	A
10	B	2258	C
10	B	2282	G
10	B	2336	A
10	B	2425	A
10	B	2756	U

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

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

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
32	X	1

All chain breaks are listed below:

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

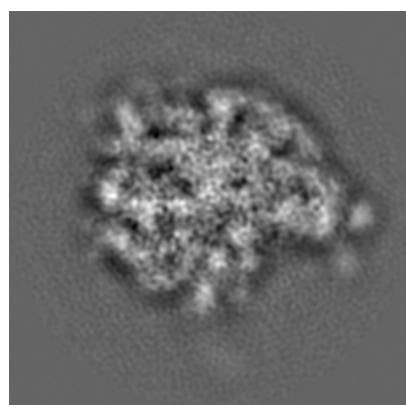
6 Map visualisation [i](#)

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

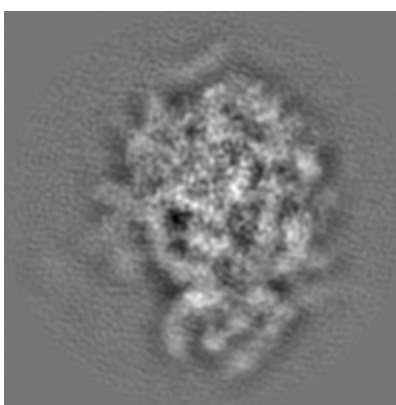
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

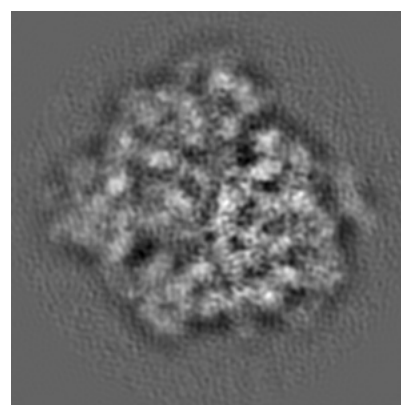
6.1.1 Primary map



X



Y

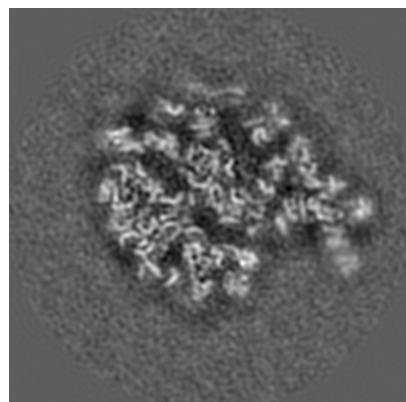


Z

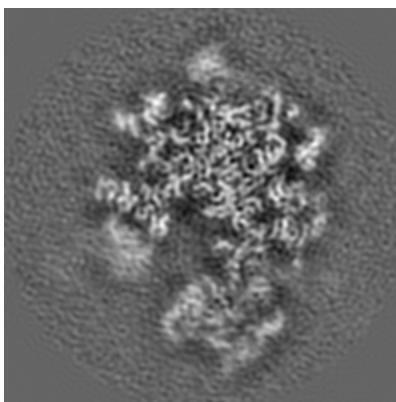
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

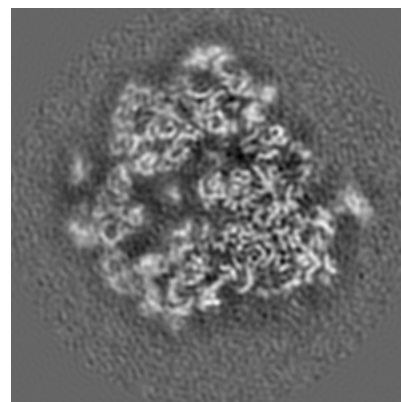
6.2.1 Primary map



X Index: 90



Y Index: 90

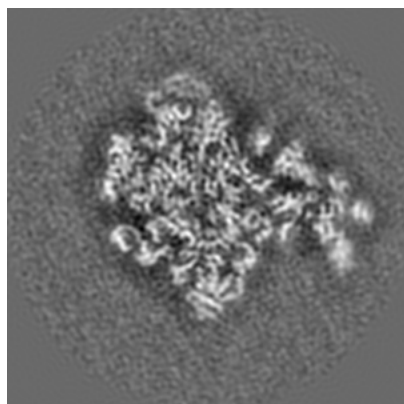


Z Index: 90

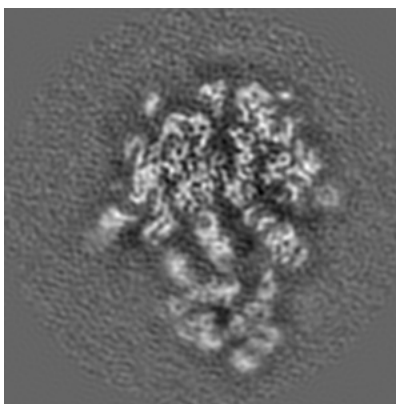
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

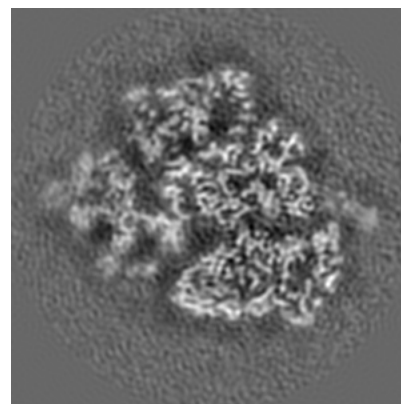
6.3.1 Primary map



X Index: 95



Y Index: 79

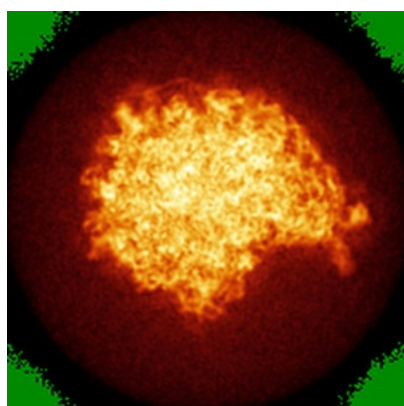


Z Index: 98

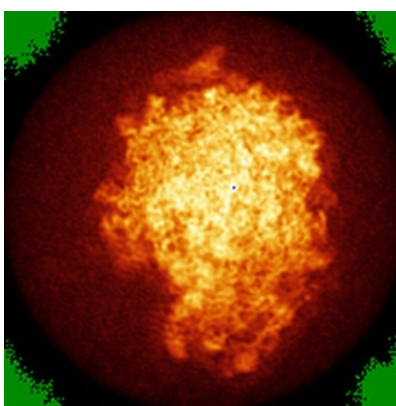
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) [i](#)

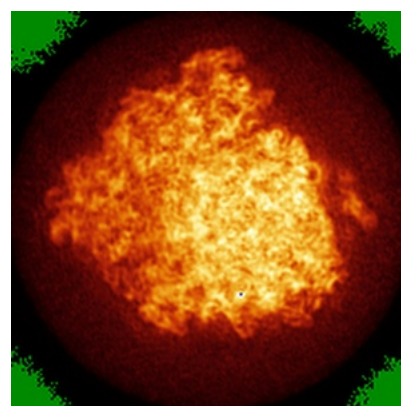
6.4.1 Primary map



X



Y



Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



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

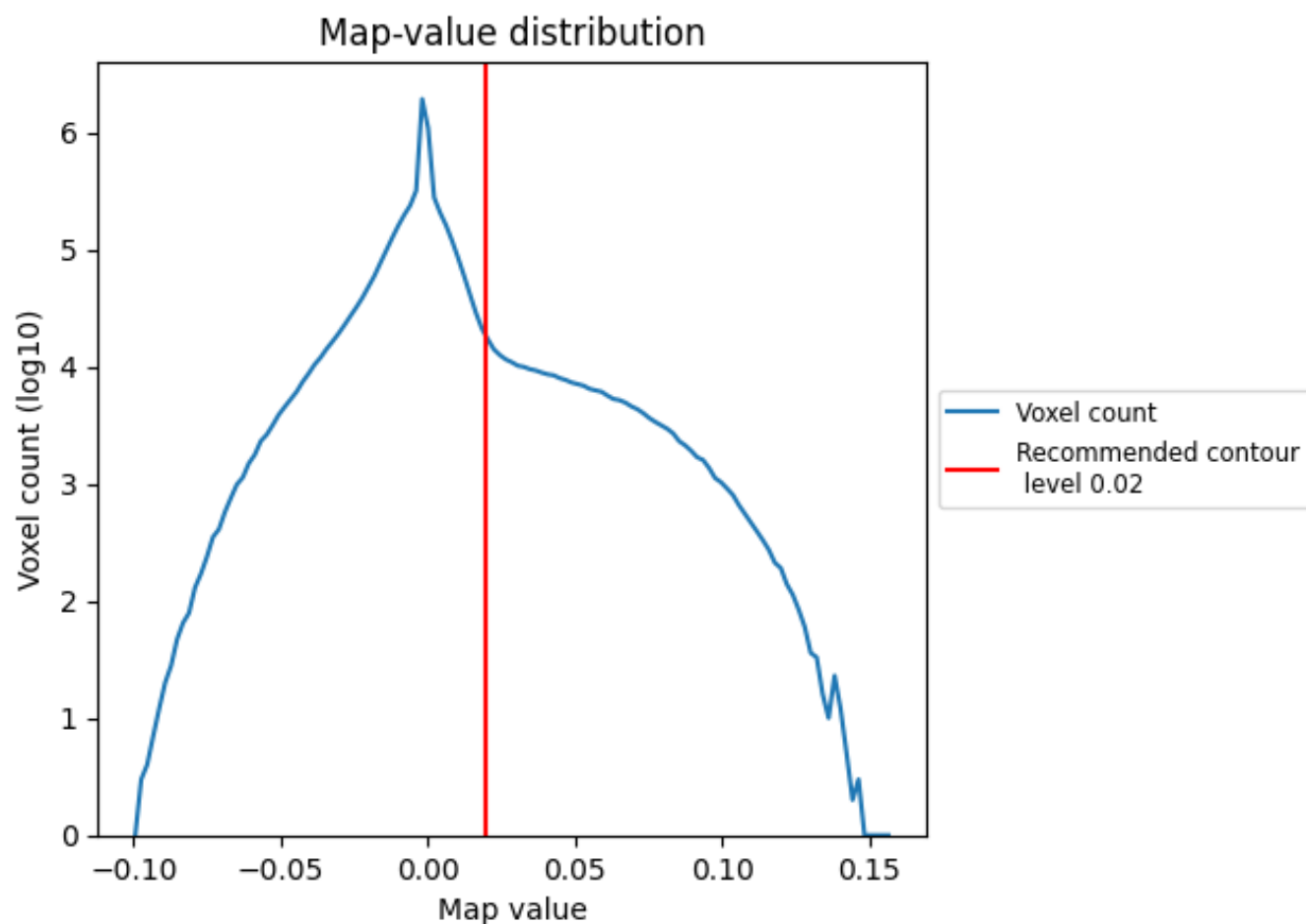
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

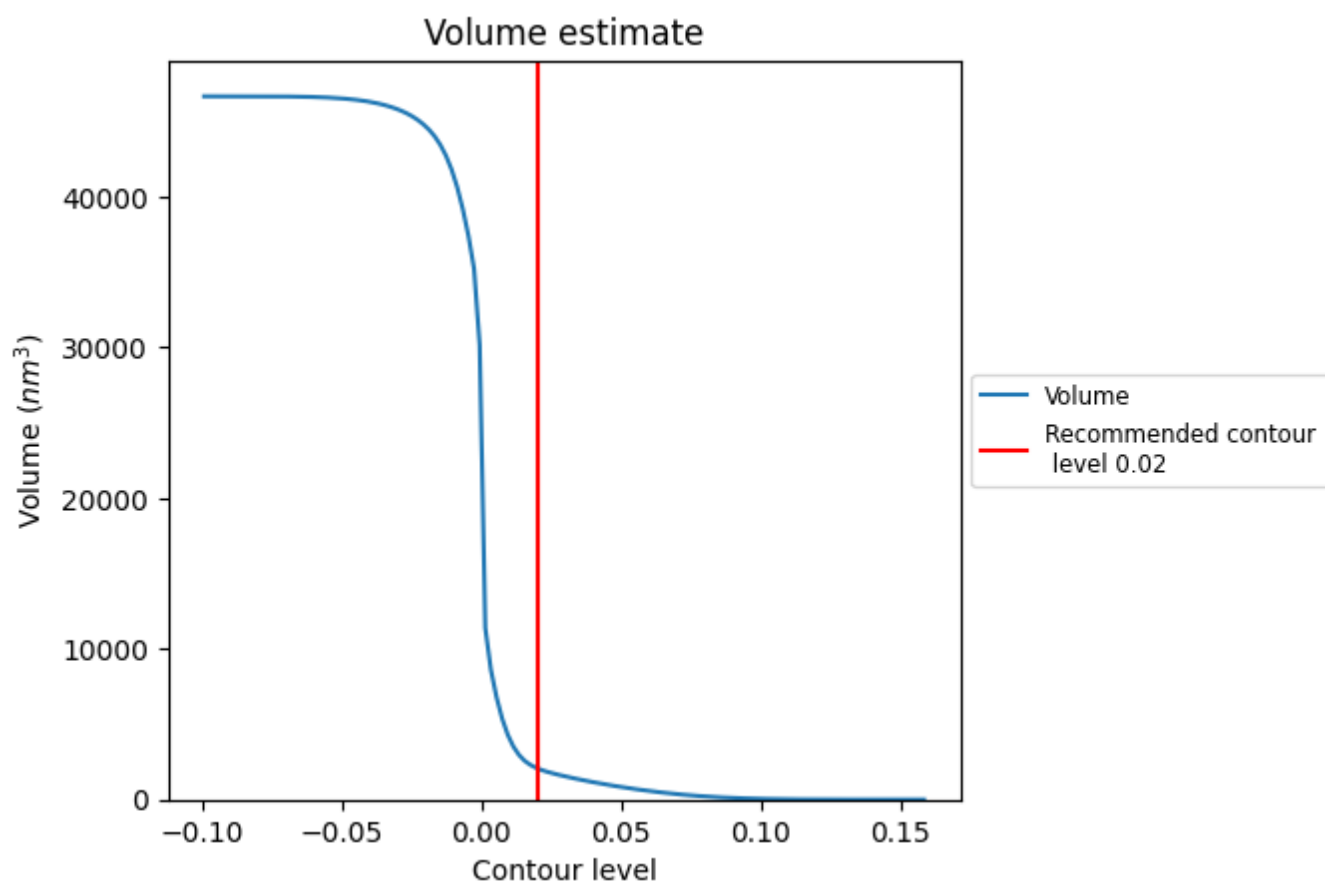
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

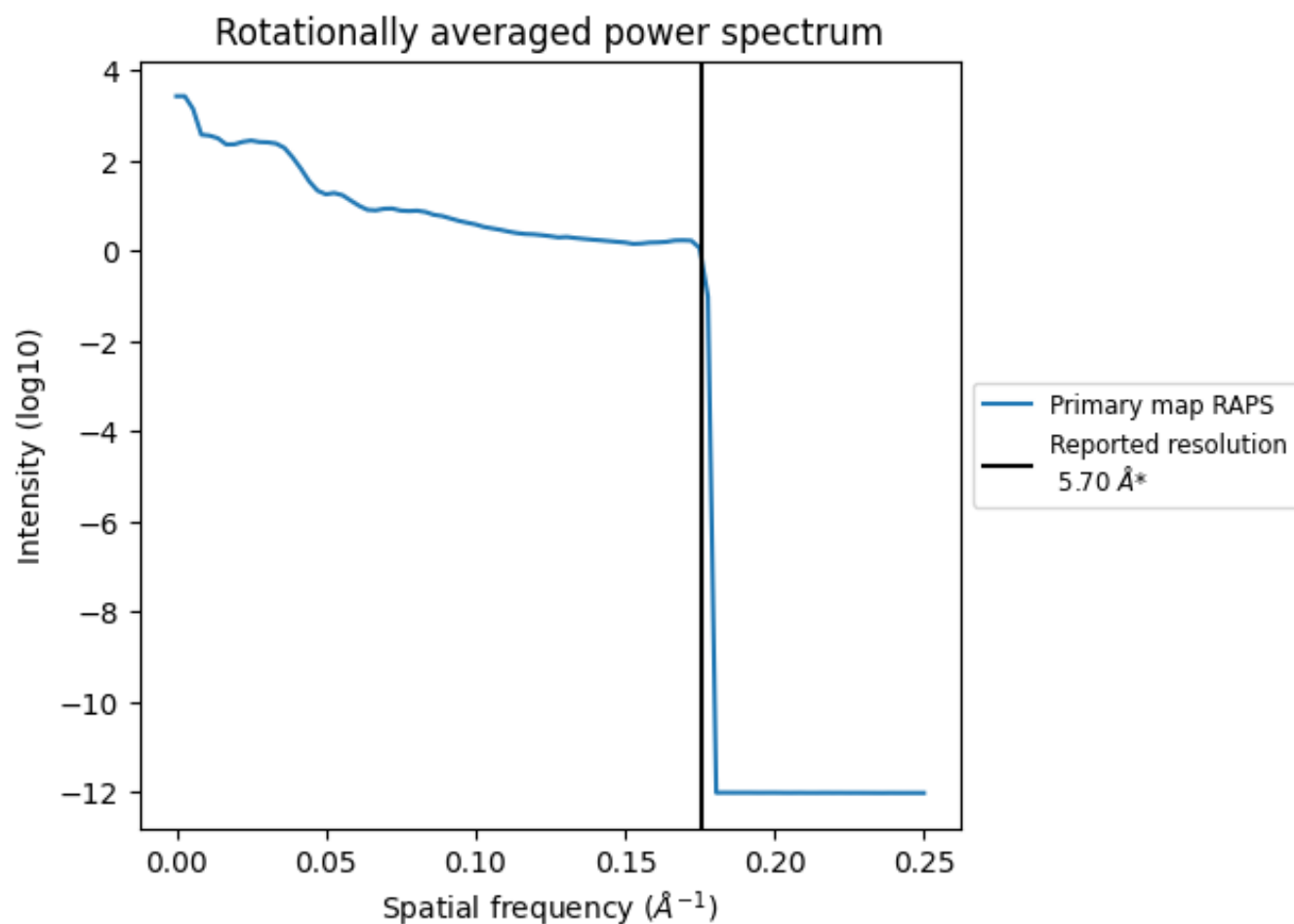
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 2076 nm^3 ; this corresponds to an approximate mass of 1875 kDa.

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

7.3 Rotationally averaged power spectrum ⓘ

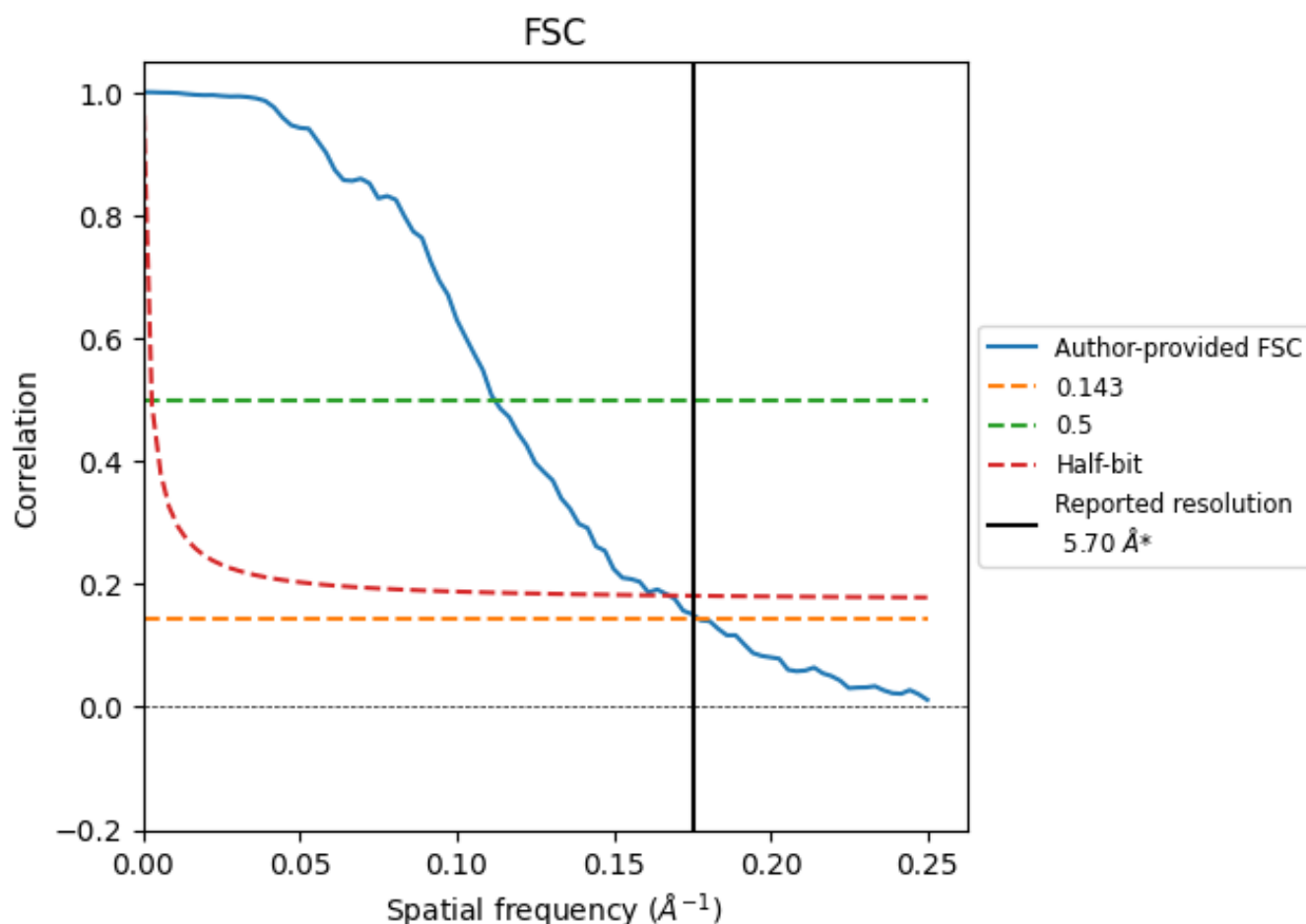


*Reported resolution corresponds to spatial frequency of 0.175 $\text{\AA}^{-1}$

8 Fourier-Shell correlation [i](#)

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

8.1 FSC [i](#)



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

8.2 Resolution estimates [i](#)

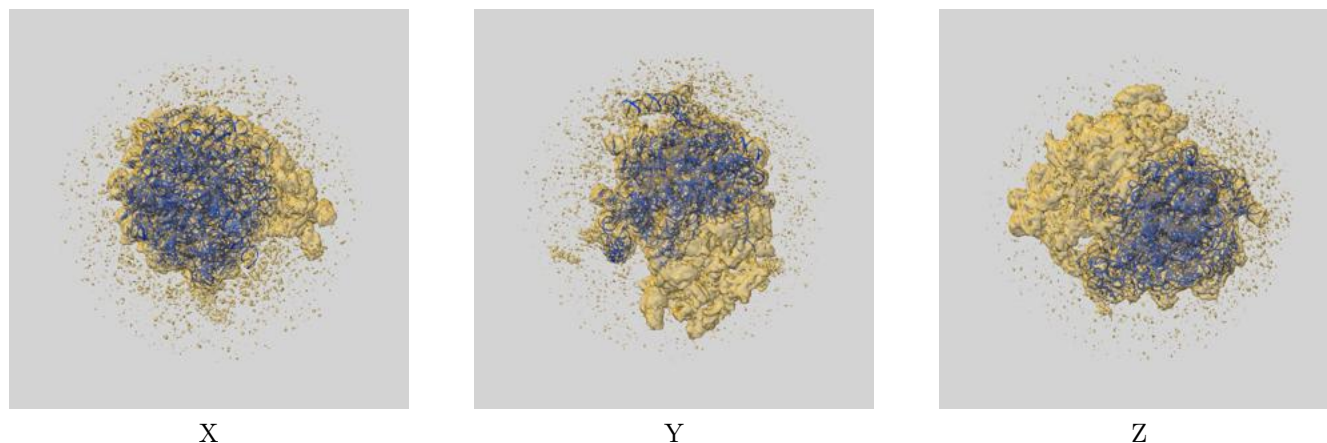
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	-	-	-
Author-provided FSC curve	5.64	8.93	5.97
Unmasked-calculated*	-	-	-

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

9 Map-model fit [i](#)

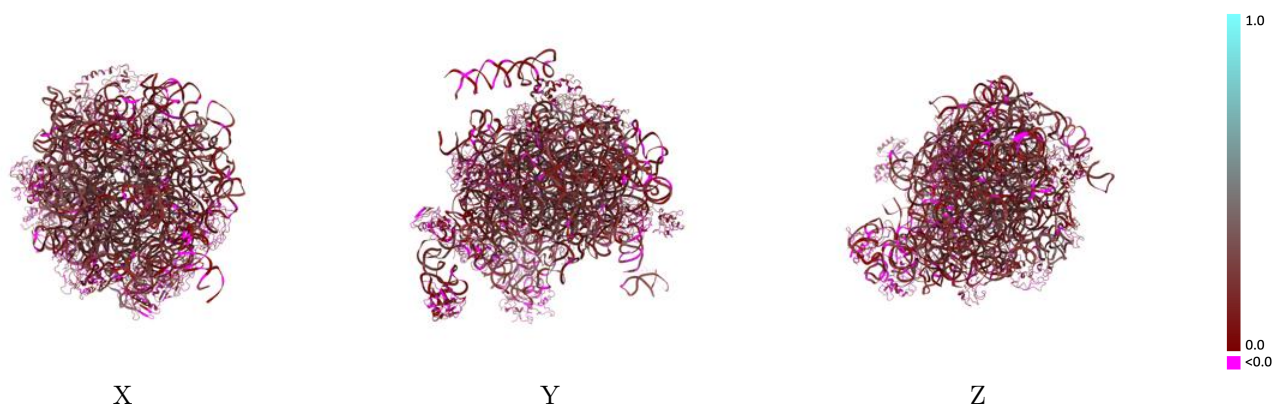
This section contains information regarding the fit between EMDB map EMD-2917 and PDB model 5AKA. Per-residue inclusion information can be found in section [3](#) on page [11](#).

9.1 Map-model overlay [i](#)



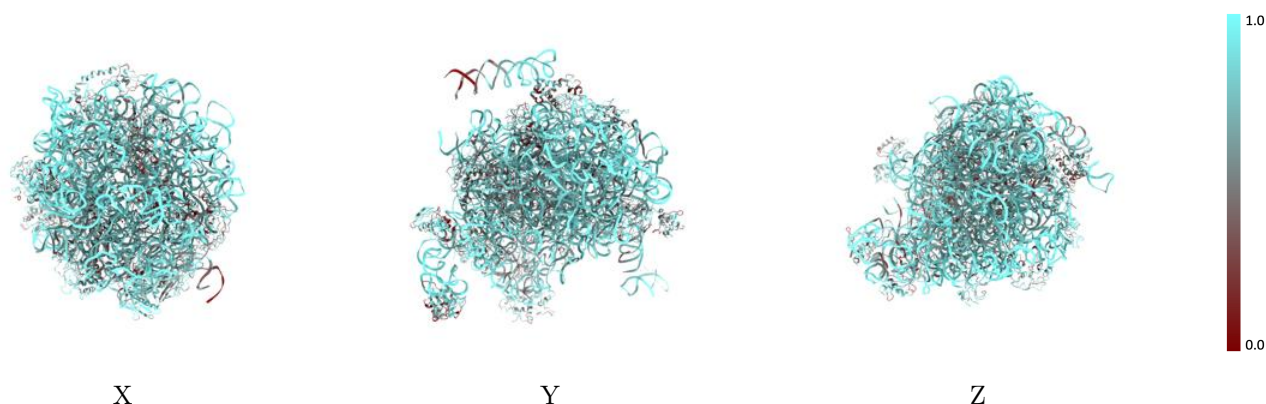
The images above show the 3D surface view of the map at the recommended contour level 0.02 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



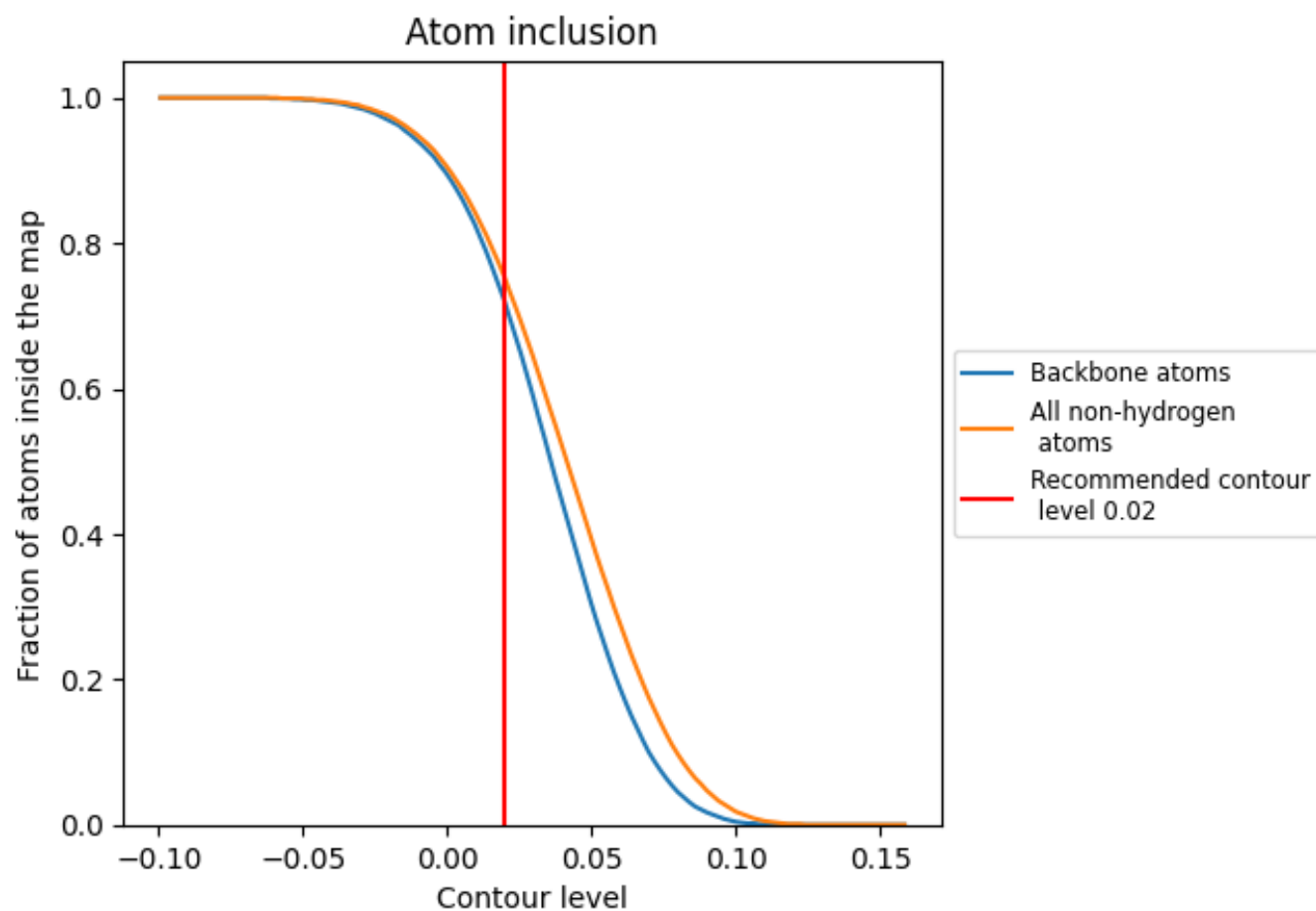
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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



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

9.4 Atom inclusion [i](#)



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

9.5 Map-model fit summary

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

Chain	Atom inclusion	Q-score
All	 0.7520	 0.1560
0	 0.5400	 0.1450
1	 0.5500	 0.0750
2	 0.4200	 0.1470
3	 0.3120	 0.1210
4	 0.4380	 0.0500
5	 0.4330	 0.1280
6	 0.6580	 0.3100
7	 0.7370	 0.0860
A	 0.7890	 0.1070
B	 0.8420	 0.1890
C	 0.5050	 0.0930
D	 0.5270	 0.0790
E	 0.5940	 0.1120
F	 0.6180	 0.0300
G	 0.6460	 0.0390
H	 0.5770	 0.1080
I	 0.5860	 0.0720
J	 0.5010	 0.0970
K	 0.5710	 0.1020
L	 0.4920	 0.0690
M	 0.5100	 0.0930
N	 0.5260	 0.1220
O	 0.5300	 0.0150
P	 0.4710	 0.0770
Q	 0.5370	 0.0980
R	 0.5850	 0.0930
S	 0.5290	 0.1330
T	 0.4910	 0.1170
U	 0.7500	 0.1510
V	 0.6980	 0.0690
W	 0.4470	 0.0640
X	 0.6740	 0.1360
Y	 0.6130	 0.1120
Z	 0.5450	 0.0960

