



# Full wwPDB X-ray Structure Validation Report ⓘ

Feb 15, 2017 – 07:30 am GMT

PDB ID : 3DLL  
Title : The oxazolidinone antibiotics perturb the ribosomal peptidyl-transferase center and effect tRNA positioning  
Authors : Wilson, D.N.; Schlutzen, F.; Harms, J.M.; Starosta, A.L.; Connell, S.R.; Fucini, P.  
Deposited on : 2008-06-27  
Resolution : 3.50 Å(reported)

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

We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)

A user guide is available at

<http://wwpdb.org/validation/2016/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

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

MolProbity	:	4.02b-467
Mogul	:	1.7.2 (RC1), CSD as538be (2017)
Xtriage (Phenix)	:	1.9-1692
EDS	:	trunk28620
Percentile statistics	:	20161228.v01 (using entries in the PDB archive December 28th 2016)
Refmac	:	5.8.0135
CCP4	:	6.5.0
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	recalc28949

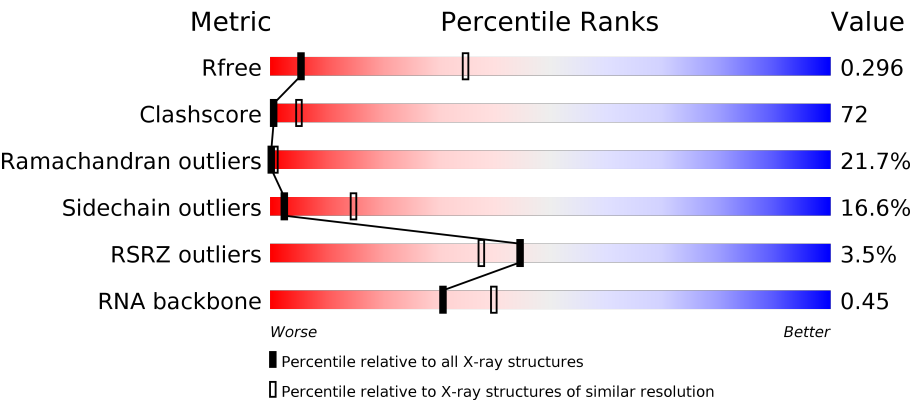
# 1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 3.50 Å.

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




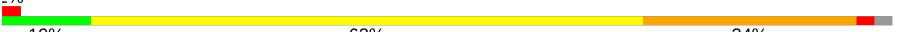

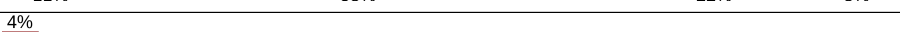
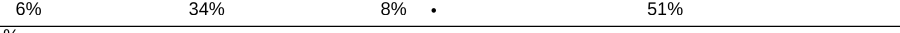

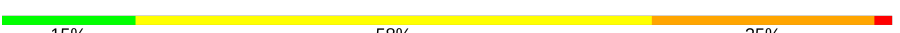


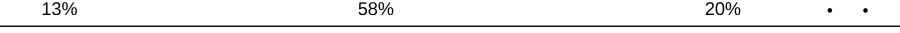
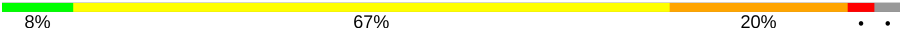
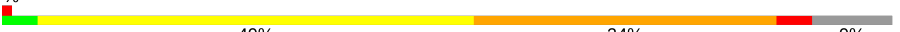

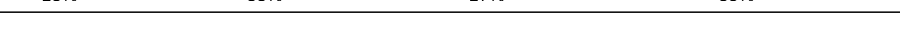

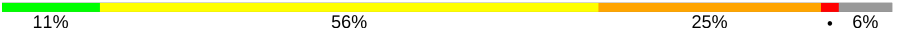
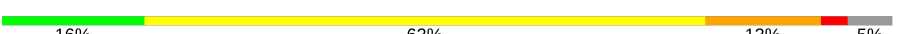




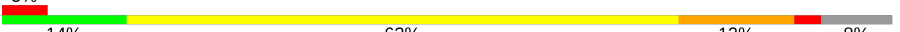



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R <sub>free</sub>	100719	1195 (3.60-3.40)
Clashscore	112137	1322 (3.60-3.40)
Ramachandran outliers	110173	1283 (3.60-3.40)
Sidechain outliers	110143	1284 (3.60-3.40)
RSRZ outliers	101464	1226 (3.60-3.40)
RNA backbone	2435	1024 (4.10-2.86)

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

Mol	Chain	Length	Quality of chain
1	X	2880	<div><div>2%</div><div>12%55%21%6%7%</div></div>
2	Z	123	<div><div>2%</div><div>21%57%20%..</div></div>
3	A	274	<div><div>6%</div><div>46%24%.20%</div></div>
4	B	211	<div><div>19%</div><div>57%18%..</div></div>


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Mol	Chain	Length	Quality of chain
5	C	205	
6	D	180	
7	E	185	
8	F	144	
9	G	174	
10	H	134	
11	I	156	
12	J	142	
13	K	116	
14	L	114	
15	M	166	
16	N	118	
17	O	100	
18	P	134	
19	Q	95	
20	R	115	
21	S	237	
22	T	91	
23	U	81	
24	V	67	
25	W	55	
26	Y	60	
27	1	55	
28	2	47	
29	3	66	

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Mol	Chain	Length	Quality of chain
30	4	37	

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
32	MG	M	167	-	-	-	X
32	MG	X	2885	-	-	-	X
32	MG	X	2889	-	-	-	X
32	MG	X	2896	-	-	-	X
32	MG	X	2899	-	-	-	X
32	MG	X	2903	-	-	-	X
32	MG	X	2907	-	-	-	X
32	MG	X	2909	-	-	-	X
33	ZLD	X	2911	-	-	X	X

## 2 Entry composition

There are 33 unique types of molecules in this entry. The entry contains 83657 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a RNA chain called rRNA-23S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	X	2686	Total	C	N	O	P	0	0	0
			57651	25718	10642	18606	2685			

- Molecule 2 is a RNA chain called rRNA-5S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	Z	122	Total	C	N	O	P	0	0	0
			2598	1161	476	840	121			

- Molecule 3 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	A	218	Total	C	N	O	S	0	0	0
			1637	1017	326	292	2			

- Molecule 4 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	B	205	Total	C	N	O	S	0	0	0
			1539	965	295	271	8			

- Molecule 5 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	C	197	Total	C	N	O	S	0	0	0
			1506	935	287	282	2			

- Molecule 6 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	D	177	Total	C	N	O	S	0	0	0
			1400	892	247	254	7			

- Molecule 7 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	E	171	Total	C	N	O	S	0	0	0
			1286	812	237	236	1			

- Molecule 8 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	F	70	Total	C	N	O	S	0	0	0
			504	314	90	97	3			

- Molecule 9 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	G	142	Total	C	N	O	S	0	0	0
			1114	704	209	198	3			

- Molecule 10 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	H	134	Total	C	N	O	S	0	0	0
			997	614	198	180	5			

- Molecule 11 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	I	141	Total	C	N	O		0	0	0
			1067	655	216	196				

- Molecule 12 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	J	136	Total	C	N	O	S	0	0	0
			1090	696	202	185	7			

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
J	1	MET	-	INITIATING METHIONINE	UNP Q9RXJ5

- Molecule 13 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	K	113	Total	C	N	O	S	0	0	0
			878	541	178	157	2			

- Molecule 14 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	L	104	Total	C	N	O		0	0	0
			779	476	161	142				

- Molecule 15 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	M	108	Total	C	N	O		0	0	0
			871	543	172	156				

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	N	117	Total	C	N	O	S	0	0	0
			978	608	210	159	1			

- Molecule 17 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	O	94	Total	C	N	O		0	0	0
			741	465	139	137				

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	P	127	Total	C	N	O	S	0	0	0
			1014	639	199	174	2			

- Molecule 19 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	Q	93	Total	C	N	O	S	0	0	0
			726	458	136	130	2			

- Molecule 20 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	R	110	Total	C	N	O	S	0	0	0
			825	513	160	151	1			

- Molecule 21 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	S	175	Total	C	N	O	S	0	0	0
			1345	849	236	254	6			

- Molecule 22 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	T	84	Total	C	N	O	S	0	0	0
			625	393	122	109	1			

- Molecule 23 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	U	72	Total	C	N	O	S	0	0	0
			552	341	116	95				

- Molecule 24 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	V	66	Total	C	N	O	S	0	0	0
			533	327	107	96	3			

- Molecule 25 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	W	55	Total	C	N	O	S	0	0	0
			424	264	82	76	2			

- Molecule 26 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	Y	58	Total	C	N	O	S	0	0	0
			457	281	94	77	5			

- Molecule 27 is a protein called 50S ribosomal protein L33.



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
27	1	53	Total C 53 53	0	0	53

- Molecule 28 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
28	2	46	Total C 46 46	0	0	46

- Molecule 29 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
29	3	63	Total C 63 63	0	0	63

- Molecule 30 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
30	4	37	Total C N O S 297 179 66 47 5	0	0	0

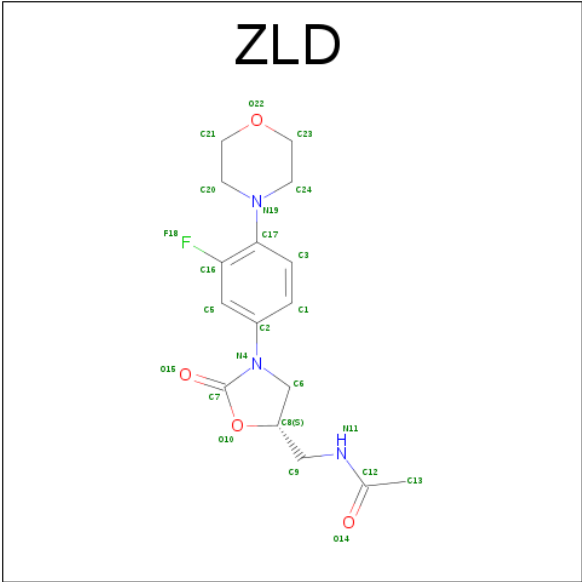
- Molecule 31 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
31	Y	1	Total Zn 1 1	0	0
31	4	1	Total Zn 1 1	0	0

- Molecule 32 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
32	X	30	Total Mg 30 30	0	0
32	Z	4	Total Mg 4 4	0	0
32	M	1	Total Mg 1 1	0	0

- Molecule 33 is N-{[(5S)-3-(3-FLUORO-4-MORPHOLIN-4-YLPHENYL)-2-OXO-1,3-OXAZOLIDIN-5-YL]METHYL}ACETAMIDE (three-letter code: ZLD) (formula: C<sub>16</sub>H<sub>20</sub>FN<sub>3</sub>O<sub>4</sub>).

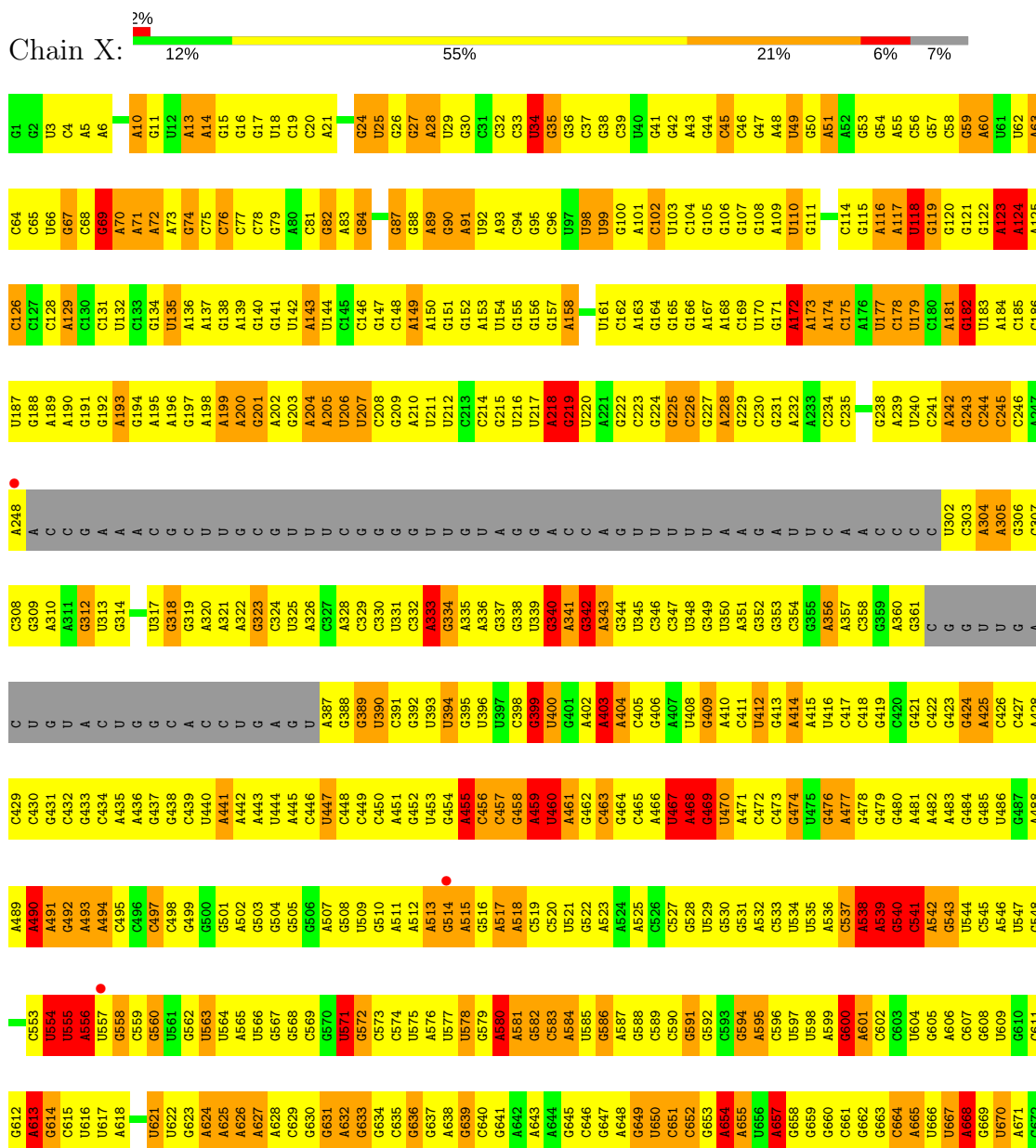


Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
33	X	1	Total	C	F	N	O	0	0
			24	16	1	3	4		

### 3 Residue-property plots

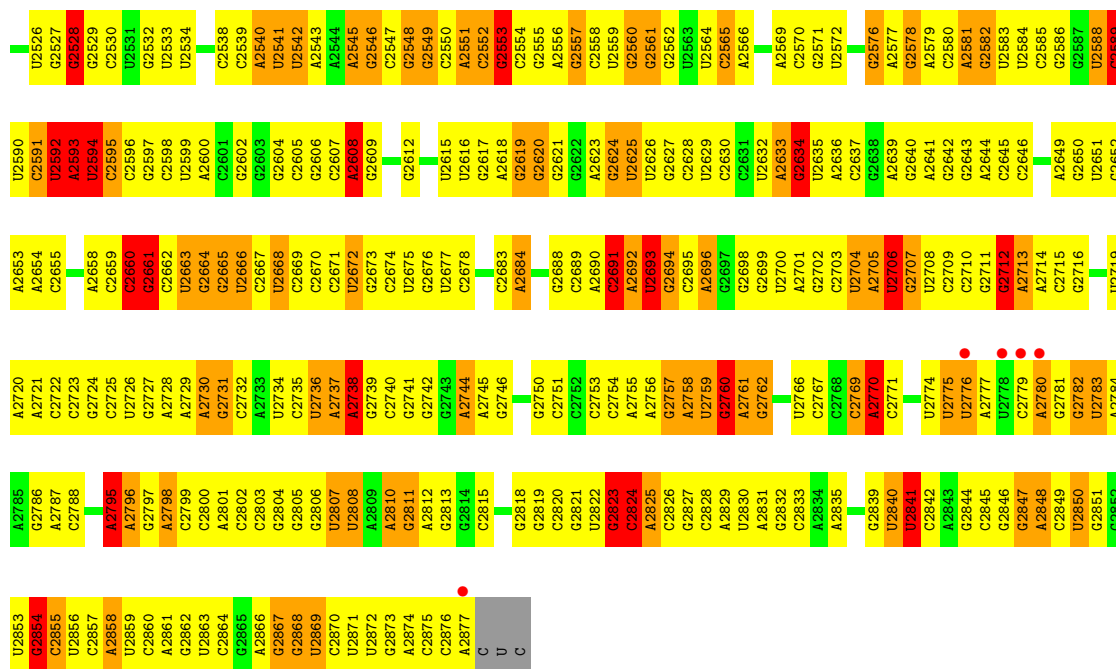
These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are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

- Molecule 1: rRNA-23S ribosomal RNA

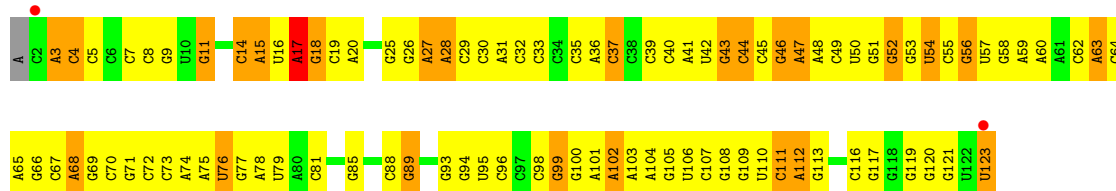


A1534	A1474	A1409	C1348	U1286	A1224	G1104	A1043	C982	A921	U860	A797	G735	G673
A1538	U1475	U1410	A1349	A1287	G1225	U1105	U1044	G983	A922	C861	G796	G736	U674
U1539	G1476	C1411	G1350	A1288	A1226	A1106	G1045	G984	A923	A862	C799	G737	G676
G1540	A1477	C1412	G1351	A1289	A1227	A1107	U1046	G985	C924	C863	U799	G738	G677
G1541	G1478	U1413	G1352	A1290	G1228	U1108	U1047	A986	U925	C864	A801	G739	G678
G1542	G1479	G1414	A1353	G1291	C1229	C1169	C1049	G987	C926	A865	A802	A740	G679
G1543	U1480	C1415	A1354	A1292	G1330	U1170	G1050	G988	C927	U866	C903	G741	C679
A1544	U1481	A1416	A1355	U1295	A1231	A1171	U1051	G989	G928	C867	C804	G742	U680
A1545	U1482	C1417	G1356	U1296	U1232	U1172	C1052	A990	A929	U868	G905	A743	A681
G1546	G1483	G1418	U1357	A1297	C1233	G1173	C1053	A991	G930	C869	A807	G746	A683
G1547	G1484	C1419	C1358	A1298	C1234	G1174	C1054	A992	A931	C870	C908	A747	C684
U1548	U1485	A1420	G1359	G1298	C1235	A1175	C1055	A993	G932	U871	C909	A748	U685
U1549	A1486	U1421	G1360	A1299	G1236	U1176	U1056	A994	G933	C872	C910	C749	C686
C1550	C1487	C1422	G1361	A1300	G1237	U1177	A1057	A995	C934	U873	U910	C750	C687
U1551	G1488	A1423	C1362	U1301	A1238	C1178	U1058	C996	C935	A874	G911	C751	A688
C1552	U1490	U1424	G1363	C1302	G1239	U1179	A1059	U999	A936	G875	G912	G752	A689
G1553	G1491	G1425	C1364	U1303	G1240	A1180	C1060	G1000	C937	A876	G813	U753	A690
G1554	A1492	G1426	U1365	U1304	C1241	C1181	A1061	A1001	C938	C877	A815	G754	C691
A1555	A1493	A1430	A1366	U1307	A1242	U1182	C1062	C1002	C939	C878	U816	C755	C692
A1556	G1494	U1431	A1367	C1308	U1243	C1183	C1063	C1003	G940	A879	U817	C756	A693
G1557	G1495	G1309	G1368	U1309	G1184	U1124	C1064	C1004	U941	C882	G918	U757	G694
C1558	G1496	G1310	G1369	C1310	C1185	G1125	A1065	U1005	U942	A883	C919	U758	G695
G1559	U1497	U1434	U1370	C1311	G1186	A1126	G1066	U1006	U943	C884	U820	C759	U696
U1560	G1498	G1435	A1371	G1312	A1187	G1127	G1067	C1008	G944	A885	A821	U760	G697
A1561	A1499	G1436	G1372	U1313	A1188	C1128	U1068	A1007	G945	A886	G922	G761	A698
G1562	U1500	A1437	G1373	U1314	G1189	A1129	C1069	C1008	U946	C887	G923	A762	G699
U1563	C1501	G1438	C1375	A1315	C1190	U1130	U1070	C1009	C947	G888	U924	A763	C700
U1564	G1502	G1439	C1376	A1316	G1191	C1131	U1071	U1010	C948	A889	C925	A764	U701
G1565	G1503	G1440	G1377	G1317	C1192	C1132	U1072	A1011	U949	C890	U826	C765	A702
U1566	U1504	A1441	A1378	A1318	G1193	G1133	G1073	A1012	A952	U890	C927	A766	G703
U1505	U1505	A1442	A1379	C1319	U1195	C1135	G1074	G1013	G953	A891	C928	A767	G704
G1506	G1506	G1443	C1380	C1320	G1196	G1136	U1075	G1014	C954	G	C929	U768	C705
A1507	A1507	C1444	G1381	A1321	U1197	A1137	U1077	C1016	G955	G	C930	C769	A706
G1508	G1508	A1445	G1382	G1322	C1198	A1138	A1078	C1017	A956	G	G831	U770	C771
A1509	A1509	U1446	C1383	G1323	U1199	A1139	G1079	C1018	G957	G	A832	C771	G708
G1571	U1510	U1447	G1384	G1324	G1200	A1140	A1080	U1019	G958	C	A833	G772	A709
A1511	A1511	A1448	C1385	U1325	G1201	U1141	A1081	A1020	C959	C	A834	G773	C710
A1512	A1512	C1449	C1386	U1326	U1202	G1142	G1082	A1021	U960	U	U835	A774	C711
U1513	U1513	G1450	G1387	C1327	G1203	A1143	C1083	A1022	G961	A	G836	A775	A712
C1514	C1514	A1451	G1388	C1328	G1204	U1144	A1084	U1023	C962	C	U837	U776	G713
U1515	U1515	U1452	G1389	U1329	G1205	C1145	G1085	G1024	G963	C	A838	A777	G714
A1516	A1516	A1453	A1391	G1330	G1206	G1146	C1086	A1025	A964	A	U839	G778	U715
C1517	C1517	U1454	U1392	G1331	G1207	G1147	C1087	U1026	G965	C	U840	U779	U716
C1518	C1518	G1393	G1393	G1332	C1270	G1148	A1088	C1027	A966	C	G841	U780	G717
U1519	U1519	C1394	G1394	G1333	G1271	G1149	C1089	G1028	C967	U	A842	A718	A719
G1520	G1520	A1395	A1395	C1334	G1272	C1150	C1090	C1029	C968	U	G843	U784	A720
U1521	U1521	C1461	C1396	A1335	C1273	U1151	C1091	U1030	U969	A	G844	U785	C721
C1522	C1522	C1462	G1397	G1336	C1274	G1152	U1092	C1031	A970	C	C847	U786	C725
A1523	A1523	A1463	G1398	G1337	A1275	U1153	U1093	A1032	A971	C	A848	A787	G726
C1524	C1524	A1464	C1399	G1338	U1276	A1154	C1094	G1033	C972	A911	C849	G788	G727
A1525	A1525	G1465	A1400	U1339	G1214	G1155	A1095	U1034	U973	A912	G849	G789	U727
U1526	U1526	G1466	G1401	C1340	A1215	U1156	A1096	G1035	U974	G913	U852	A790	G728
G1527	G1527	U1467	G1402	G1341	G1216	G1157	A1097	G1036	C975	C914	C853	G791	G729
C1528	C1528	U1468	U1403	U1342	G1217	A1158	G1098	U1037	C976	C915	C854	U792	C730
U1529	U1529	A1469	C1404	C1343	C1218	U1159	A1099	U1038	G977	U916	C855	U793	A731
U1530	U1530	G1470	A1405	C1344	G1220	C1160	G1100	A1039	U978	U917	A856	G793	G732
C1531	C1531	G1471	G1406	G1345	C1221	U1161	U1101	A1040	A979	U918	U857	A794	G733
U1532	U1532	G1472	G1407	C1346	G1222	A1162	G1102	G1041	A980	U919	G858	A795	G734
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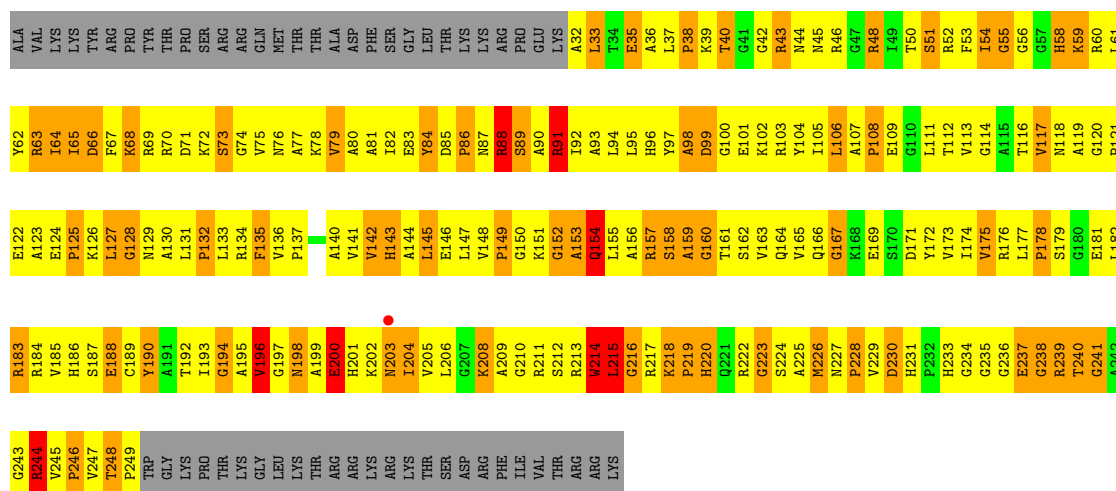
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A2407	A2408	G2217	G2344	G2283	G2217	A	U	A2035	U1974	G1913	G1854	U1789	C1729	C1664	C1598
G2468	G2469	G2218	A2345	U2284	C	A	A	G2036	G1975	U1914	G1855	G1790	C1730	C1665	G1599
G2470	U2471	U2219	G2346	U2285	C	G	G	A2037	U1976	A1915	U1856	C1791	U1731	U1600	U1601
A2411	A2412	G2220	G2347	U2286	A	A	A	C2038	C1977	G1916	U1857	C1792	U1732	G1668	G1602
A2413	A2414	G2221	A2348	G2287	C	U	U	A2039	C1978	G1917	C1858	A1793	U1733	A1669	A1603
A2415	G2416	G2222	G2349	A2288	C	A	A	G2040	A1980	A1918	C1859	A1794	C1734	G1670	A1604
U2417	A2418	U2223	G2350	U2289	C	A	A	A2041	A1981	A1919	A1860	G1735	U1735	A1671	A1605
A2419	A2420	G2224	G2351	A2290	U	G	G	A2042	C1982	A1920	G1861	G1737	C1736	A1672	C1606
C2421	C2422	G2225	A2352	U2291	G	G	G	A2043	G1983	A1921	U1862	G1738	C1737	A1673	A1607
G2423	G2424	G2226	C2292	C2292	U	U	U	G2044	G1984	U1922	U1863	C1801	U1739	C1674	U1608
G2425	G2426	C2227	A2293	C2227	G	G	G	G2045	A1985	U1923	U1864	A1802	G1740	C1675	G1609
G2427	G2428	U2228	U2294	U2228	G	G	G	A2046	G1986	C1924	G1864	G1741	U1676	U1676	
A2429	A2430	G2229	A2356	G2229	G	G	G	C2047	U1987	C1925	G1865	U1742	G1742	U1679	C1615
C2421	C2422	G2230	A2357	U2230	A	A	A	C2048	G1988	U1926	G1866	U1804	G1743	U1680	G1616
G2423	G2424	G2231	G2359	G2231	U	U	U	C2049	A1989	G1927	A1867	G1743	U1748	U1681	G1617
G2425	G2426	G2232	U2171	U2171	C	C	C	G2050	C1990	U1928	A1868	G1744	C1745	U1682	U1618
G2427	G2428	G2233	G2172	G2172	C	C	C	G2051	G1991	C1929	A1869	C1808	C1746	A1619	C1620
G2429	G2430	U2234	G2173	G2173	U	U	U	G2052	C1992	C1930	U1870	G1809	A1747	G1683	G1621
G2431	G2432	U2235	A2175	A2175	G	G	G	U2053	G1993	G1931	G1871	U1810	C1748	A1685	C1622
G2433	G2434	G2236	G2176	G2176	C	C	C	C2054	U1994	G1932	A1872	U1811	U1749	C1686	C1623
G2435	G2436	U2237	U2177	U2177	G	G	G	G2055	G1995	A1935	A1873	G1812	C1750	C1687	A1624
G2437	G2438	G2238	U2178	U2178	A	A	A	C2056	A1996	U1936	C1875	G1813	A1751	U1688	A1625
G2439	G2440	U2239	G2179	G2179	C	C	C	U2057	A1997	G1937	C1876	G1814	U1752	U1689	A1626
G2441	G2442	G2240	U2180	U2180	A	A	A	G2058	U1998	U1938	C1877	G1815	A1753	U1690	C1627
G2443	G2444	U2241	A2181	A2181	C	C	C	U2059	A1999	U1939	C1878	U1816	G1754	G1691	C1628
G2445	G2446	G2242	G2182	G2182	U	U	U	C2060	U2000	C1940	G1879	U1817	G1755	C1692	G1629
G2447	G2448	U2243	C2183	C2183	G	G	G	G2070	G2001	G1941	C1880	U1818	C1756	A1630	C1631
A2449	A2450	G2244	U2185	U2185	C	C	C	U2071	A2002	G1942	U1881	G1820	C1757	A1694	
G2451	G2452	U2245	G2186	G2186	U	U	U	C2072	A2003	A1943	A1882	A1821	C1758	U1697	A1632
G2453	G2454	G2246	A2187	A2187	C	C	C	G2073	U2004	C1944	A1883	C1822	A1759	A1633	G1635
G2455	G2456	U2247	G2188	G2188	U	U	U	U2074	G2005	C1945	A1884	G1823	G1760	U1705	U1639
G2457	G2458	G2248	A2189	A2189	U	U	U	U2075	G2006	U1946	C1885	G1824	G1761	C1640	C1641
G2459	G2460	U2249	U2190	U2190	G	G	G	G2076	G2007	G1947	G1886	C1825	C1762	G1706	C1642
A2461	A2462	G2250	G2191	G2191	U	U	U	G2077	C2008	C1948	G1887	U1826	G1763	G1703	U1643
G2463	G2464	U2251	U2192	U2192	C	C	C	U2078	U2009	A1949	C1888	G1827	A1764	G1704	G1644
G2465	G2466	G2252	G2193	G2193	G	G	G	G2079	G2010	C1950	G	C1828	C1765	U1705	U1645
G2467	G2468	U2253	A2194	A2194	U	U	U	U2080	U2011	G1951	G	C1829	U1766	A1706	G1646
G2469	G2470	G2254	G2195	G2195	C	C	C	G2081	A2012	A1952	C	C1830	G1767	A1707	C1647
U2471	U2472	U2255	U2196	U2196	G	G	G	G2082	A2013	A1953	U	G1831	U1768	C1708	A1643
A2473	A2474	G2256	U2197	U2197	U	U	U	G2083	A2014	A1954	U	G1832	U1769	U1709	G1644
A2475	A2476	U2257	G2198	G2198	G	G	G	G2084	G2015	G1955	A	U1833	U1770	U1710	U1645
A2477	A2478	G2258	U2199	U2199	U	U	U	G2085	A2016	G1956	A	G1834	A1771	C1711	G1646
A2479	A2480	U2259	G2200	G2200	C	C	C	G2086	U2017	C1957	A	C1835	C1772	G1712	U1647
A2481	A2482	G2260	G2201	G2201	G	G	G	U2087	G2018	G1958	C	C1836	C1773	G1713	C1648
A2483	A2484	U2261	G2202	G2202	A	A	A	G2088	C2019	U1959	U	G1837	A1774	A1714	A1649
A2485	A2486	G2262	G2203	G2203	G	G	G	G2089	G2020	A1960	A	G1838	A1775	A1715	A1650
A2487	A2488	U2263	A2204	A2204	C	C	C	G2090	G2021	A1961	U	A1839	A1776	U1651	U1651
A2489	A2490	G2264	C2205	C2205	A	A	A	G2091	C2022	C1962	A	A1840	A1777	G1652	G1652
A2491	A2492	U2265	G2206	G2206	C	C	C	U2092	G2023	G1963	A	G1841	U1778	C1653	C1653
A2493	A2494	G2266	G2207	G2207	A	A	A	G2093	U2024	U1964	C	G1842	C1779	A1654	A1654
A2495	A2496	U2267	U2208	U2208	C	C	C	U2094	A2025	A1965	G	U1843	A1780	C1655	C1655
A2497	A2498	G2268	G2209	G2209	G	G	G	G2095	C2026	C1966	U	C1844	C1781	U1656	U1656
A2499	A2500	U2269	C2210	C2210	U	U	U	U2096	C2027	U1967	C	A1845	A1782	G1721	A1657
A2501	A2502	G2270	U2211	U2211	G	G	G	C	C2028	G1968	C	A1846	U1783	U1723	A1658
A2503	A2504	U2271	U2212	U2212	A	A	A	U	U2029	G1969	C	C1847	C1784	G1659	G1659
A2505	A2506	G2272	G2213	G2213	G	G	G	C	U2030	U1970	U	U1848	C1725	G1660	G1660
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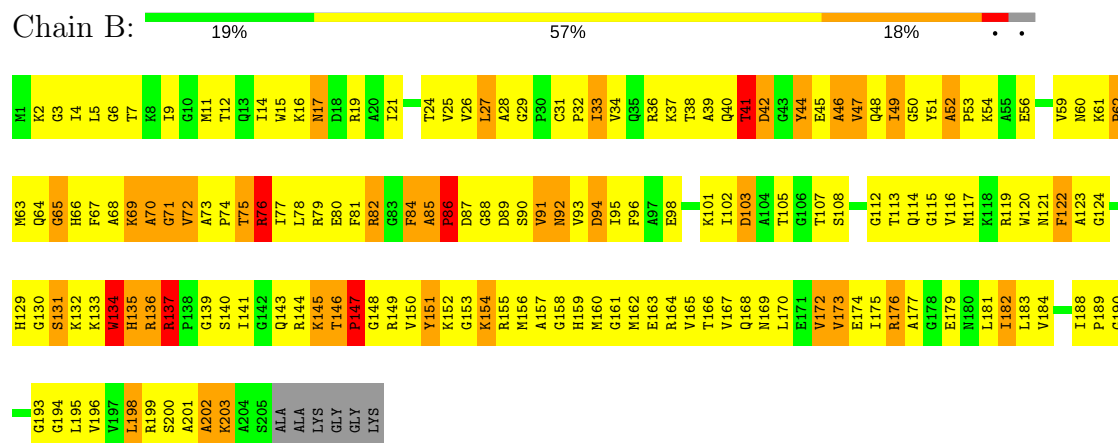
• Molecule 2: rRNA-5S ribosomal RNA



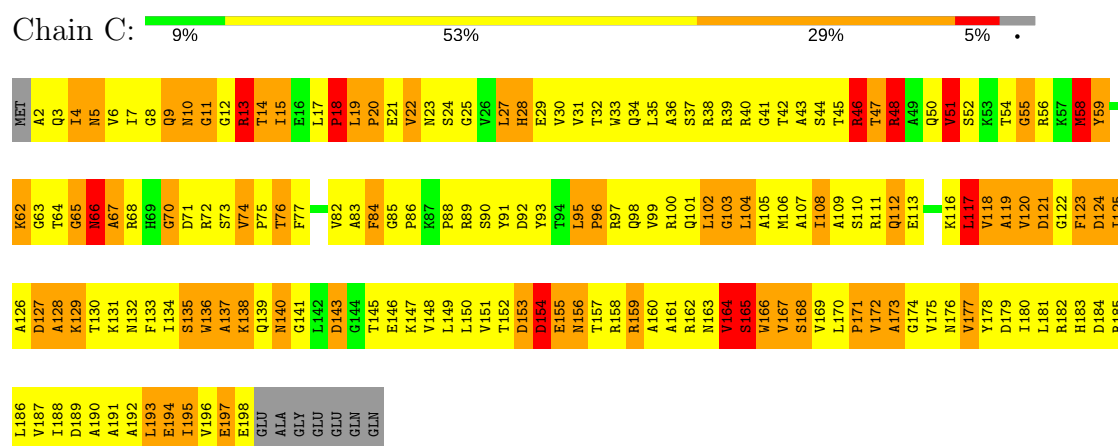
• Molecule 3: 50S ribosomal protein L2



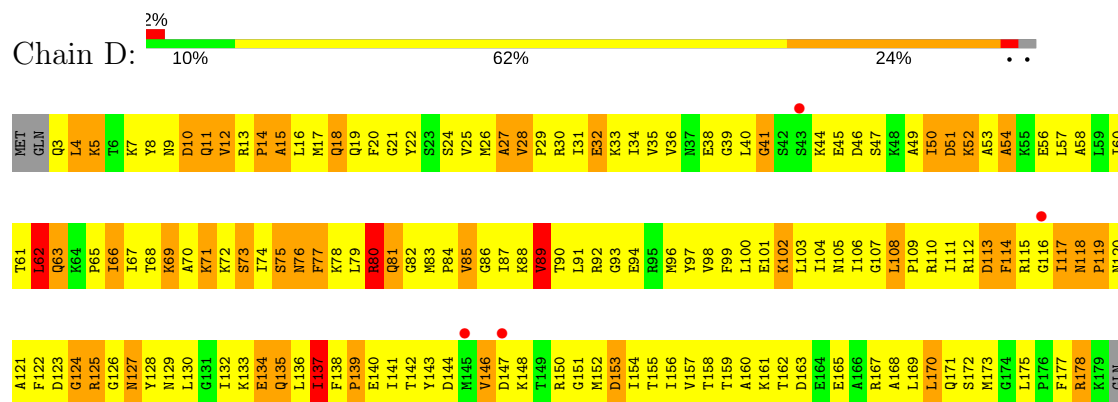
• Molecule 4: 50S ribosomal protein L3



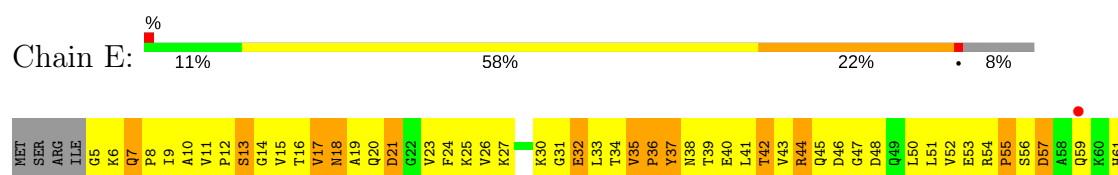
• Molecule 5: 50S ribosomal protein L4

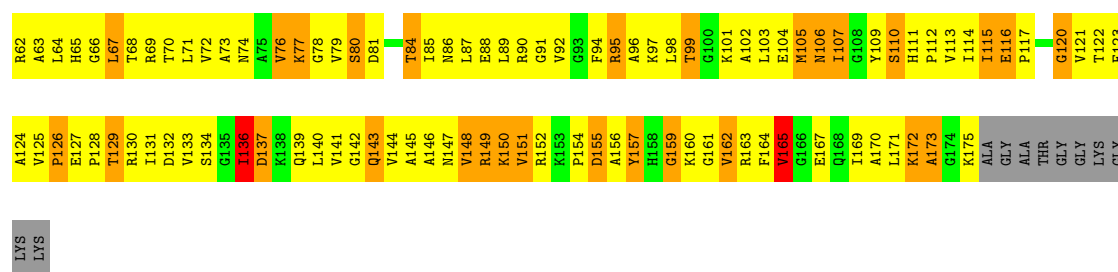


• Molecule 6: 50S ribosomal protein L5

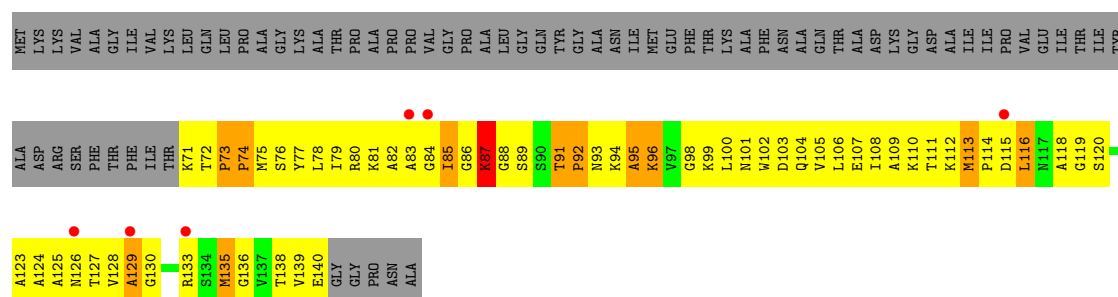
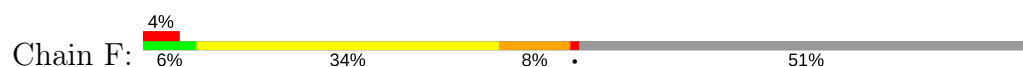


• Molecule 7: 50S ribosomal protein L6

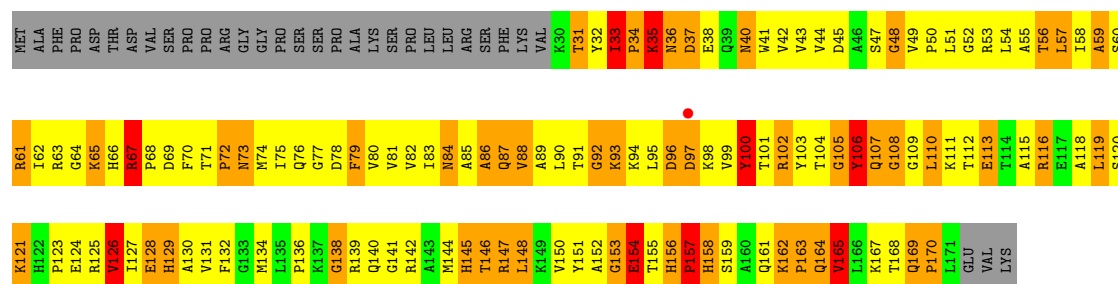




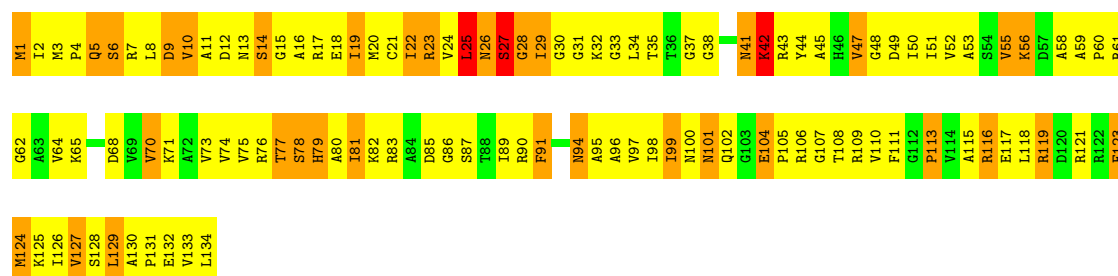
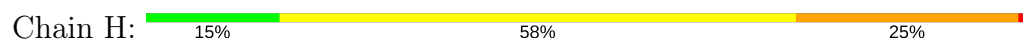
• Molecule 8: 50S ribosomal protein L11



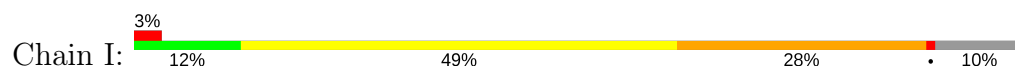
• Molecule 9: 50S ribosomal protein L13



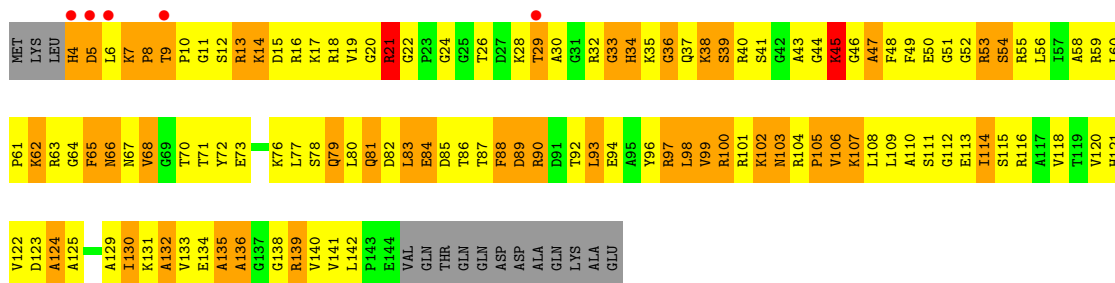
• Molecule 10: 50S ribosomal protein L14



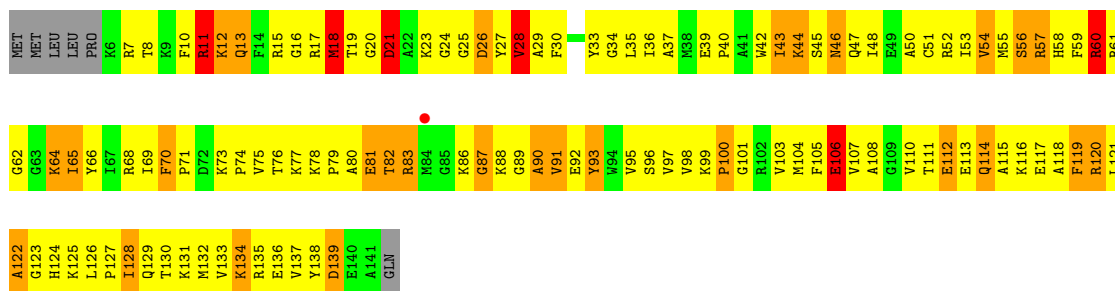
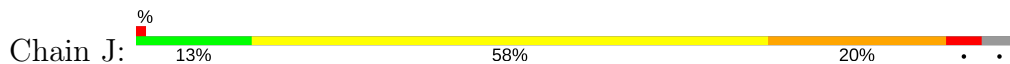
• Molecule 11: 50S ribosomal protein L15



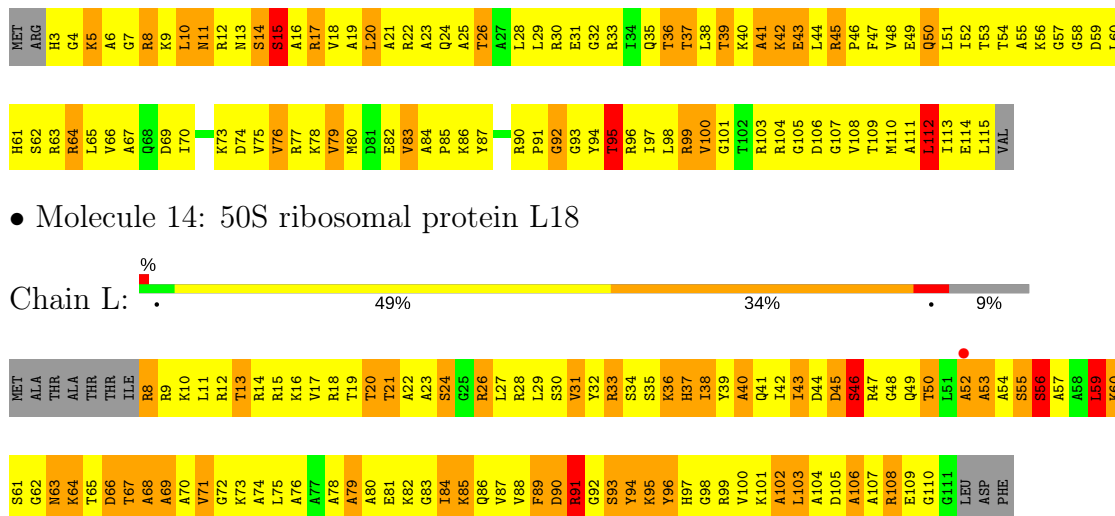
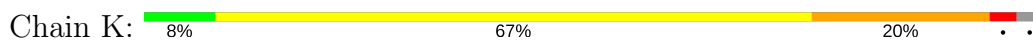




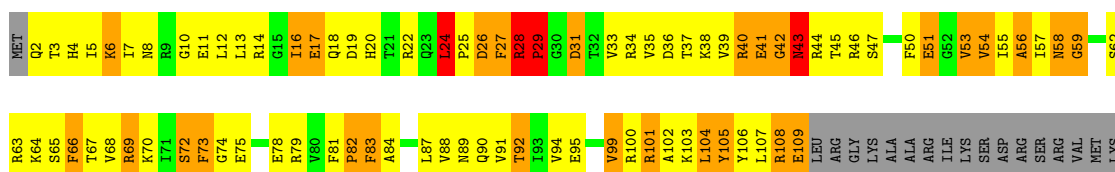
• Molecule 12: 50S ribosomal protein L16



• Molecule 13: 50S ribosomal protein L17



• Molecule 14: 50S ribosomal protein L18



ASP  
ALA  
ALA  
ARG  
ALA  
GLN  
GLN  
ASP  
LYS  
ALA  
ASN  
ALA  
SER  
ALA  
SER  
GLN  
ALA  
ALA  
ALA  
GLN  
ALA  
ALA  
GLU  
VAL  
THR  
VAL  
ILE  
SER  
ALA  
ALA  
ALA  
PRO  
GLU  
VAL  
ALA  
PRO  
THR  
GLN  
GLY  
GLU

• Molecule 16: 50S ribosomal protein L20

Chain N: 9% 56% 31% • •

MET  
F2  
R3  
A4  
K5  
T6  
G7  
I8  
V9  
R10  
R11  
R12  
R13  
H14  
K15  
Y16  
S17  
T18  
L19  
R20  
A21  
K22  
G23  
F24  
K25  
G26  
S27  
R28  
S29  
K30  
Q31  
Y32  
R33  
V34  
A35  
F36  
Q37  
T38  
L39  
L40  
M41  
E102  
A43  
T44  
A45  
E46  
Y47  
K107  
R48  
D49  
V50  
R51  
N52  
K53  
R114  
N115  
S56  
F57  
R58  
R59  
L60

• Molecule 17: 50S ribosomal protein L21

Chain O: 11% 56% 25% • 6%

MET  
PHE  
ALA  
ILE  
I5  
Q6  
T7  
G8  
G9  
K10  
Y11  
Y12  
R13  
V14  
S15  
E16  
G17  
T20  
R21  
V22  
G23  
S24  
L25  
Q26  
G27  
E28  
A29  
G30  
D31  
K32  
V33  
E34  
L35  
K36  
A37  
L38  
F39  
V40  
G41  
G42  
E43  
Q44  
T45  
V46  
F47  
G48  
E49  
D50  
A51  
G52  
K53  
Y54  
T55  
V56  
Q57  
A58  
E59  
H63

• Molecule 18: 50S ribosomal protein L22

Chain P: 16% 63% 13% • 5%

MET  
THR  
ALA  
PRO  
GLU  
GLN  
THR  
F8  
R9  
N10  
K11  
Q12  
Q13  
R14  
K15  
Q16  
Q17  
V18  
R19  
R20  
L21  
K22  
M23  
G24  
E25  
A26  
V27  
A28  
K29  
Y30  
V31  
R32  
K33  
S34  
P35  
R36  
K37  
V38  
R39  
V41  
V42  
D43  
V44  
T45  
R46  
G47  
K48  
S49  
V50  
Q51  
D52  
A53  
E54  
T55  
D56  
S57  
L58  
R59  
I127

• Molecule 19: 50S ribosomal protein L23

Chain Q: 9% 52% 33% • •

MET  
S2  
R3  
Y4  
D5  
I6  
L7  
Q8  
A9  
P10  
V11  
I12  
S13  
E14  
K15  
A16  
A19  
M20  
E21  
R22  
G23  
V24  
Y25  
S26  
F27  
W28  
R29  
S30  
P31  
V32  
K33  
A34  
T35  
K36  
E37  
I38  
K39  
D40  
A41  
T42  
Q43  
Q44  
A45  
P46  
G47  
V48  
R49  
V50  
T51  
G52  
I53  
S54  
T55  
M56  
N57  
V58  
P59  
K61

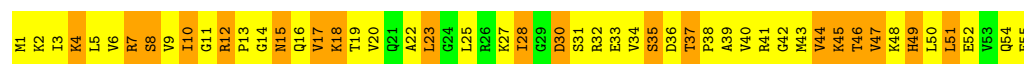
• Molecule 20: 50S ribosomal protein L24

Chain R: 5% 53% 32% 5% •

MET  
PRO  
ARG  
P4  
S5  
A6  
G7  
S8  
H9  
H10  
R11  
D12  
K13  
L14  
H15  
F16  
K17  
R18  
G19  
D20  
T21  
V22  
I23  
V24  
L25  
S26  
G27  
K28  
H29  
K30  
G31  
Q32  
T33  
G34  
K35  
V36  
L37  
L38  
A39  
L40  
P41  
D42  
D43  
Q44  
K45  
V46  
V47  
V48  
E49  
G50  
V51  
N52  
V53  
I54  
T55  
K56  
N57  
V58  
K59  
P60



Chain W: 



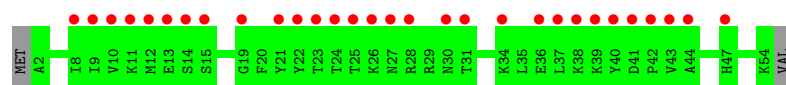
- Molecule 26: 50S ribosomal protein L32

Chain Y: 




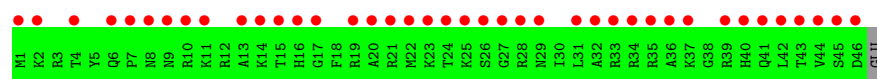
- Molecule 27: 50S ribosomal protein L33

Chain 1: 

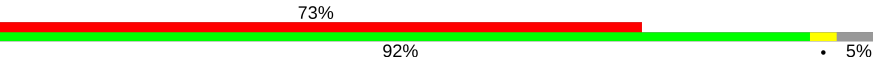


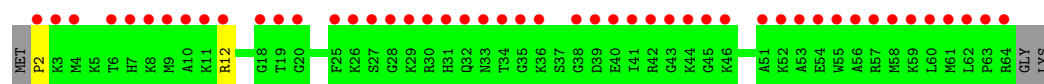
- Molecule 28: 50S ribosomal protein L34

Chain 2: 

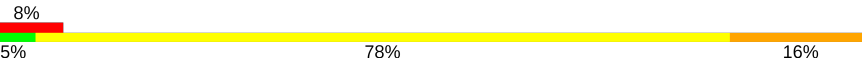


- Molecule 29: 50S ribosomal protein L35

Chain 3: 



- Molecule 30: 50S ribosomal protein L36

Chain 4: 



## 4 Data and refinement statistics

Property	Value	Source
Space group	I 2 2 2	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	169.70Å 410.00Å 695.00Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	29.98 – 3.50 30.06 – 3.30	Depositor EDS
% Data completeness (in resolution range)	90.5 (29.98-3.50) 85.7 (30.06-3.30)	Depositor EDS
$R_{merge}$	(Not available)	Depositor
$R_{sym}$	0.13	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.84 (at 3.31Å)	Xtriage
Refinement program	CNS 1.1	Depositor
R, $R_{free}$	0.259 , 0.280 0.250 , 0.296	Depositor DCC
$R_{free}$ test set	13552 reflections (5.22%)	DCC
Wilson B-factor (Å <sup>2</sup> )	68.5	Xtriage
Anisotropy	0.152	Xtriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.14 , 37.6	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.42$ , $\langle L^2 \rangle = 0.24$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
$F_o, F_c$ correlation	0.86	EDS
Total number of atoms	83657	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	40.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.47% of the height of the origin peak. No significant pseudotranslation is detected.*

<sup>1</sup>Intensities estimated from amplitudes.

<sup>2</sup>Theoretical values of  $\langle |L| \rangle$ ,  $\langle L^2 \rangle$  for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

## 5 Model quality ⓘ

### 5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: ZLD, ZN, 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	X	0.83	19/64561 (0.0%)	0.93	192/100708 (0.2%)
2	Z	0.56	0/2904	0.78	0/4525
3	A	0.62	0/1669	0.95	1/2254 (0.0%)
4	B	0.76	0/1567	0.99	1/2105 (0.0%)
5	C	0.62	0/1529	0.92	1/2070 (0.0%)
6	D	0.50	0/1419	0.79	0/1903
7	E	0.49	0/1308	0.80	0/1771
8	F	0.51	0/510	0.82	0/688
9	G	0.62	0/1138	0.95	2/1539 (0.1%)
10	H	0.75	0/1007	0.99	2/1352 (0.1%)
11	I	0.66	1/1081 (0.1%)	0.98	0/1448
12	J	0.68	1/1113 (0.1%)	0.87	0/1486
13	K	0.90	0/886	1.07	1/1188 (0.1%)
14	L	0.53	0/785	0.84	0/1048
15	M	0.76	0/884	1.24	5/1186 (0.4%)
16	N	0.64	0/994	0.84	0/1323
17	O	0.60	0/750	0.92	1/1000 (0.1%)
18	P	0.76	0/1027	0.99	1/1373 (0.1%)
19	Q	0.62	0/737	0.93	2/988 (0.2%)
20	R	0.53	0/835	0.91	3/1121 (0.3%)
21	S	0.51	0/1370	0.82	0/1862
22	T	0.59	0/633	0.89	0/838
23	U	0.57	0/556	0.92	0/741
24	V	0.51	0/537	0.82	0/714
25	W	0.54	0/426	0.86	0/568
26	Y	0.71	0/469	1.01	0/629
30	4	0.48	0/298	0.77	0/390
All	All	0.78	21/90993 (0.0%)	0.92	212/136818 (0.2%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected

by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	X	0	228
2	Z	0	4
9	G	0	1
17	O	0	1
All	All	0	234

All (21) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	X	2594	U	P-OP2	17.32	1.78	1.49
1	X	2594	U	P-OP1	-13.28	1.26	1.49
1	X	2592	U	P-OP2	-12.20	1.28	1.49
1	X	28	A	C5-C6	-6.98	1.34	1.41
1	X	1333	G	N9-C4	-6.33	1.32	1.38
1	X	1632	A	C5-C6	-6.32	1.35	1.41
1	X	1668	G	C5-C6	-6.19	1.36	1.42
1	X	1336	G	C5-C6	-5.94	1.36	1.42
1	X	586	G	C5-C6	-5.94	1.36	1.42
1	X	1273	G	C5-C6	-5.85	1.36	1.42
1	X	2018	G	C5-C6	-5.81	1.36	1.42
1	X	1963	G	C5-C6	-5.73	1.36	1.42
11	I	29	THR	CA-CB	5.65	1.68	1.53
1	X	461	A	C5-C6	-5.58	1.36	1.41
1	X	2591	C	N1-C2	-5.51	1.34	1.40
12	J	18	MET	CG-SD	5.46	1.95	1.81
1	X	2592	U	P-OP1	5.34	1.58	1.49
1	X	1664	G	N9-C4	-5.24	1.33	1.38
1	X	1344	C	N3-C4	-5.18	1.30	1.33
1	X	1278	A	C5-C6	-5.14	1.36	1.41
1	X	699	G	N9-C4	-5.13	1.33	1.38

All (212) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	M	28	ARG	C-N-CD	-19.65	77.37	120.60
1	X	2594	U	O5'-P-OP2	-18.88	88.04	110.70
1	X	2592	U	O5'-P-OP2	-15.03	92.18	105.70
1	X	2592	U	N1-C1'-C2'	14.74	133.17	114.00
1	X	2592	U	C1'-O4'-C4'	-12.24	100.11	109.90
1	X	2560	G	N9-C1'-C2'	11.44	128.87	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	X	123	A	N9-C1'-C2'	11.30	128.69	114.00
1	X	2854	G	N9-C1'-C2'	11.15	128.49	114.00
1	X	2593	A	OP1-P-O3'	10.51	128.31	105.20
1	X	1353	A	N9-C1'-C2'	10.26	127.34	114.00
1	X	2428	U	N1-C1'-C2'	9.92	126.89	114.00
1	X	1342	U	N1-C1'-C2'	9.65	126.55	114.00
1	X	1278	A	N9-C1'-C2'	9.24	126.02	114.00
1	X	2823	G	N9-C1'-C2'	9.07	125.79	114.00
1	X	460	U	N1-C1'-C2'	9.01	125.72	114.00
1	X	1285	A	N9-C1'-C2'	9.00	125.70	114.00
1	X	824	U	N1-C1'-C2'	8.78	125.41	114.00
1	X	2313	G	N9-C1'-C2'	8.67	125.27	114.00
15	M	28	ARG	C-N-CA	8.63	158.25	122.00
1	X	1260	A	N9-C1'-C2'	8.62	125.21	114.00
1	X	2589	C	N1-C1'-C2'	8.38	124.89	114.00
1	X	218	A	N9-C1'-C2'	8.38	124.89	114.00
1	X	1723	U	N1-C1'-C2'	8.17	124.62	114.00
1	X	2592	U	C6-N1-C1'	-8.02	109.97	121.20
1	X	1153	A	C2'-C3'-O3'	7.96	127.02	109.50
1	X	1975	G	C2'-C3'-O3'	7.87	126.81	109.50
1	X	968	C	N1-C1'-C2'	7.84	124.20	114.00
1	X	2592	U	C2-N1-C1'	7.80	127.07	117.70
1	X	1979	C	C2'-C3'-O3'	7.74	126.53	109.50
1	X	2592	U	C3'-C2'-C1'	-7.69	95.35	101.50
1	X	2795	A	N9-C1'-C2'	7.67	123.97	114.00
1	X	1278	A	O4'-C1'-N9	7.57	114.26	108.20
1	X	2760	G	N9-C1'-C2'	7.57	123.84	114.00
13	K	112	LEU	CA-CB-CG	7.54	132.63	115.30
1	X	1278	A	C1'-O4'-C4'	-7.51	103.89	109.90
1	X	2591	C	OP2-P-O3'	7.50	121.69	105.20
1	X	2496	C	C2'-C3'-O3'	7.43	125.85	109.50
1	X	2034	A	N9-C1'-C2'	7.42	123.65	114.00
1	X	459	A	N9-C1'-C2'	7.39	123.61	114.00
9	G	108	GLY	N-CA-C	-7.39	94.63	113.10
1	X	1142	G	N9-C1'-C2'	7.34	123.54	114.00
1	X	2363	G	N9-C1'-C2'	7.34	123.54	114.00
1	X	2370	G	N9-C1'-C2'	7.34	123.54	114.00
1	X	2841	U	C2'-C3'-O3'	7.31	125.58	109.50
1	X	801	A	N9-C1'-C2'	7.29	123.47	114.00
1	X	1033	G	N9-C1'-C2'	7.27	123.45	114.00
1	X	1265	G	N9-C1'-C2'	7.27	123.45	114.00
1	X	2841	U	N1-C1'-C2'	7.25	123.43	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	X	1791	C	N1-C1'-C2'	7.25	123.42	114.00
4	B	146	THR	C-N-CD	-7.24	104.66	120.60
1	X	172	A	O4'-C1'-N9	7.22	113.98	108.20
1	X	804	C	N1-C1'-C2'	7.19	123.35	114.00
1	X	580	A	N9-C1'-C2'	7.18	123.34	114.00
1	X	2044	G	N9-C1'-C2'	7.17	123.33	114.00
1	X	1771	A	N9-C1'-C2'	7.14	123.29	114.00
1	X	1357	U	N1-C1'-C2'	7.07	123.19	114.00
1	X	2712	G	N9-C1'-C2'	7.04	123.16	114.00
1	X	2551	A	N9-C1'-C2'	7.04	123.15	114.00
1	X	985	G	N9-C1'-C2'	7.03	123.13	114.00
1	X	2592	U	O4'-C1'-N1	7.00	113.80	108.20
1	X	683	A	N9-C1'-C2'	6.99	123.09	114.00
1	X	1710	U	N1-C1'-C2'	6.98	123.07	114.00
1	X	1337	G	N9-C1'-C2'	6.95	123.04	114.00
1	X	2217	G	N9-C1'-C2'	6.92	123.00	114.00
1	X	777	A	C2'-C3'-O3'	6.87	124.69	113.70
1	X	2660	C	N1-C1'-C2'	6.81	122.86	114.00
1	X	1279	G	N9-C1'-C2'	-6.67	104.67	112.00
1	X	2706	U	N1-C1'-C2'	6.63	122.62	114.00
1	X	2706	U	C2'-C3'-O3'	6.60	124.26	113.70
1	X	2254	C	N1-C1'-C2'	6.58	122.55	114.00
20	R	28	LYS	N-CA-C	-6.58	93.24	111.00
1	X	2324	G	N9-C1'-C2'	6.57	122.54	114.00
1	X	2592	U	O4'-C1'-C2'	-6.57	99.23	105.80
1	X	312	G	N9-C1'-C2'	6.55	122.52	114.00
18	P	56	LEU	N-CA-C	-6.53	93.37	111.00
1	X	555	U	N1-C1'-C2'	6.50	122.46	114.00
1	X	1313	U	O4'-C1'-N1	6.50	113.40	108.20
1	X	1807	A	N9-C1'-C2'	6.47	122.41	114.00
1	X	2497	A	N9-C1'-C2'	6.47	122.41	114.00
1	X	804	C	C4'-C3'-O3'	-6.46	95.83	109.40
1	X	2693	U	N1-C1'-C2'	6.43	122.36	114.00
1	X	1975	G	N9-C1'-C2'	6.41	122.33	114.00
1	X	1926	U	N1-C1'-C2'	6.37	122.28	114.00
1	X	2476	A	N9-C1'-C2'	6.32	122.21	114.00
1	X	554	U	N1-C1'-C2'	6.30	122.20	114.00
1	X	1289	A	O5'-P-OP2	-6.26	100.06	105.70
1	X	2592	U	N1-C2-N3	-6.26	111.15	114.90
1	X	1632	A	N9-C1'-C2'	6.24	122.12	114.00
1	X	940	G	N9-C1'-C2'	6.22	122.09	114.00
1	X	2589	C	OP1-P-O3'	6.22	118.88	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	X	995	A	N9-C1'-C2'	6.19	122.05	114.00
1	X	1152	C	N1-C1'-C2'	6.19	122.05	114.00
17	O	11	GLN	N-CA-C	6.14	127.58	111.00
1	X	571	U	N1-C1'-C2'	6.03	121.84	114.00
1	X	513	A	N9-C1'-C2'	6.00	121.79	114.00
1	X	2854	G	C4'-C3'-O3'	-5.97	96.86	109.40
1	X	2593	A	N9-C1'-C2'	5.96	121.75	114.00
1	X	1664	G	N9-C1'-C2'	5.96	121.75	114.00
1	X	1624	A	N9-C1'-C2'	5.96	121.75	114.00
1	X	1749	G	O4'-C1'-N9	5.94	112.95	108.20
1	X	1345	G	N9-C1'-C2'	5.94	121.72	114.00
1	X	1326	U	N1-C1'-C2'	5.94	121.72	114.00
1	X	1775	A	C2'-C3'-O3'	5.93	123.19	113.70
1	X	1000	G	N9-C1'-C2'	5.92	121.70	114.00
1	X	182	G	N9-C1'-C2'	5.92	121.69	114.00
1	X	2592	U	OP1-P-OP2	5.91	128.46	119.60
1	X	1301	U	N1-C1'-C2'	5.88	121.65	114.00
1	X	1772	C	N1-C1'-C2'	5.85	121.60	114.00
1	X	1439	G	C2'-C3'-O3'	5.85	123.06	113.70
15	M	29	PRO	CA-N-CD	-5.83	103.33	111.50
1	X	613	A	N9-C1'-C2'	5.83	121.58	114.00
1	X	333	A	N9-C1'-C2'	5.81	121.56	114.00
1	X	2050	G	C5'-C4'-O4'	-5.79	102.15	109.10
1	X	1651	U	N1-C1'-C2'	5.76	121.49	114.00
1	X	1409	U	N1-C1'-C2'	5.76	121.49	114.00
1	X	555	U	C5'-C4'-C3'	5.75	125.20	116.00
9	G	35	LYS	N-CA-C	-5.75	95.48	111.00
1	X	1266	G	C1'-O4'-C4'	-5.72	105.32	109.90
1	X	1142	G	C4'-C3'-O3'	-5.70	97.44	109.40
1	X	1314	A	N9-C1'-C2'	5.70	121.41	114.00
1	X	1357	U	C2'-C3'-O3'	5.69	122.80	113.70
1	X	469	G	N9-C1'-C2'	5.69	121.39	114.00
1	X	688	A	N9-C1'-C2'	5.68	121.39	114.00
1	X	747	A	C5'-C4'-C3'	5.68	125.09	116.00
1	X	1264	C	N1-C1'-C2'	5.68	121.38	114.00
3	A	88	ARG	N-CA-C	5.67	126.29	111.00
1	X	1071	U	N1-C1'-C2'	5.66	121.36	114.00
1	X	814	G	OP1-P-O3'	5.66	117.65	105.20
19	Q	61	LYS	N-CA-C	5.66	126.28	111.00
1	X	2482	A	N9-C1'-C2'	5.66	121.35	114.00
1	X	2409	A	N9-C1'-C2'	5.65	121.35	114.00
1	X	2594	U	OP2-P-O3'	5.64	117.61	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	X	2521	A	N9-C1'-C2'	5.63	121.32	114.00
20	R	98	ILE	N-CA-C	-5.63	95.80	111.00
1	X	842	A	N9-C1'-C2'	5.60	121.28	114.00
1	X	2437	G	N9-C1'-C2'	5.60	121.28	114.00
10	H	25	LEU	CA-CB-CG	5.58	128.12	115.30
1	X	467	U	N1-C1'-C2'	5.57	121.25	114.00
1	X	2824	C	N1-C1'-C2'	5.57	121.24	114.00
1	X	468	A	N9-C1'-C2'	5.55	121.22	114.00
1	X	182	G	C1'-O4'-C4'	-5.54	105.47	109.90
1	X	657	A	N9-C1'-C2'	5.54	121.20	114.00
1	X	1153	A	O4'-C1'-N9	-5.53	103.78	108.20
1	X	1019	U	N1-C1'-C2'	5.53	121.19	114.00
1	X	1315	A	C5'-C4'-O4'	-5.53	102.47	109.10
5	C	58	MET	N-CA-C	5.53	125.92	111.00
1	X	399	G	N9-C1'-C2'	5.49	121.14	114.00
1	X	172	A	C1'-O4'-C4'	-5.49	105.51	109.90
1	X	2608	A	C2'-C3'-O3'	5.47	122.45	113.70
1	X	668	A	N9-C1'-C2'	5.46	121.10	114.00
1	X	2634	G	O4'-C1'-N9	5.46	112.57	108.20
1	X	2480	C	N1-C1'-C2'	5.45	121.08	114.00
20	R	25	LEU	CA-CB-CG	5.44	127.81	115.30
1	X	2769	C	O4'-C1'-N1	5.43	112.54	108.20
1	X	2528	G	OP1-P-O3'	5.42	117.13	105.20
1	X	684	C	C5'-C4'-C3'	-5.42	107.34	116.00
1	X	2199	C	C5'-C4'-O4'	5.41	115.59	109.10
1	X	2770	A	C2'-C3'-O3'	5.41	122.35	113.70
1	X	1373	G	C5-C6-O6	-5.40	125.36	128.60
1	X	2661	G	O5'-P-OP1	-5.39	100.84	105.70
1	X	814	G	N9-C1'-C2'	5.38	121.00	114.00
1	X	1812	U	N1-C1'-C2'	5.37	120.99	114.00
1	X	1715	A	N9-C1'-C2'	5.37	120.98	114.00
1	X	1467	U	O4'-C1'-N1	-5.36	103.91	108.20
1	X	490	A	N9-C1'-C2'	5.36	120.97	114.00
1	X	1398	G	O4'-C1'-N9	5.36	112.49	108.20
1	X	2770	A	N9-C1'-C2'	5.36	120.97	114.00
1	X	118	U	N1-C1'-C2'	5.36	120.97	114.00
1	X	1633	C	N1-C1'-C2'	5.35	120.95	114.00
1	X	2017	U	N1-C1'-C2'	5.34	120.94	114.00
1	X	1279	G	O4'-C1'-N9	5.33	112.46	108.20
1	X	1313	U	C5'-C4'-C3'	5.33	124.52	116.00
1	X	742	G	N9-C1'-C2'	5.32	120.92	114.00
1	X	154	U	N1-C1'-C2'	5.29	120.88	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	X	1052	C	N1-C1'-C2'	5.29	120.88	114.00
1	X	2848	A	N9-C1'-C2'	5.29	120.87	114.00
15	M	59	GLY	N-CA-C	5.28	126.30	113.10
1	X	2592	U	C5-C6-N1	5.27	125.33	122.70
1	X	182	G	O4'-C1'-N9	5.26	112.41	108.20
19	Q	60	GLY	N-CA-C	5.26	126.24	113.10
1	X	1410	U	N1-C1'-C2'	5.25	120.82	114.00
1	X	1777	A	O4'-C1'-N9	5.24	112.39	108.20
1	X	843	G	N9-C1'-C2'	5.23	120.80	114.00
1	X	1250	A	N9-C1'-C2'	5.23	120.80	114.00
1	X	2634	G	C1'-O4'-C4'	-5.23	105.72	109.90
15	M	88	VAL	CB-CA-C	-5.22	101.48	111.40
10	H	9	ASP	CB-CG-OD1	-5.21	113.61	118.30
1	X	972	C	O4'-C1'-N1	5.21	112.36	108.20
1	X	1266	G	N9-C1'-C2'	5.19	120.75	114.00
1	X	340	G	O4'-C1'-N9	5.19	112.35	108.20
1	X	2447	G	N9-C1'-C2'	5.18	120.74	114.00
1	X	172	A	C8-N9-C1'	5.17	137.01	127.70
1	X	538	A	C2'-C3'-O3'	5.17	121.97	113.70
1	X	814	G	C2'-C3'-O3'	5.17	121.97	113.70
1	X	172	A	C4-N9-C1'	-5.16	117.01	126.30
1	X	600	G	N9-C1'-C2'	5.15	120.70	114.00
1	X	541	C	N1-C1'-C2'	5.15	120.70	114.00
1	X	2405	A	N9-C1'-C2'	5.13	120.67	114.00
1	X	2738	A	N9-C1'-C2'	-5.11	106.38	112.00
1	X	69	G	O4'-C1'-N9	5.11	112.29	108.20
1	X	1685	A	C4'-C3'-C2'	5.11	107.71	102.60
1	X	1036	G	C2'-C3'-O3'	5.09	121.85	113.70
1	X	1712	G	N9-C1'-C2'	5.09	120.61	114.00
1	X	1633	C	C5'-C4'-O4'	5.09	115.20	109.10
1	X	1923	U	N1-C1'-C2'	5.08	120.61	114.00
1	X	1632	A	C4'-C3'-O3'	-5.08	98.74	109.40
1	X	2427	A	OP1-P-O3'	5.05	116.31	105.20
1	X	1338	G	N9-C1'-C2'	5.04	120.55	114.00
1	X	1562	G	N9-C1'-C2'	5.04	120.55	114.00
1	X	2016	A	N9-C1'-C2'	5.03	120.54	114.00
1	X	1363	C	N1-C1'-C2'	-5.03	106.47	112.00
1	X	2075	U	C2'-C3'-O3'	5.01	121.72	113.70

There are no chirality outliers.

All (234) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
9	G	106	TYR	Sidechain
17	O	80	TYR	Sidechain
1	X	10	A	Sidechain
1	X	1000	G	Sidechain
1	X	1005	U	Sidechain
1	X	1006	C	Sidechain
1	X	1010	U	Sidechain
1	X	1016	C	Sidechain
1	X	1030	U	Sidechain
1	X	1136	G	Sidechain
1	X	1141	U	Sidechain
1	X	1143	A	Sidechain
1	X	1152	C	Sidechain
1	X	1153	A	Sidechain
1	X	1155	G	Sidechain
1	X	118	U	Sidechain
1	X	1206	G	Sidechain
1	X	1210	C	Sidechain
1	X	1212	U	Sidechain
1	X	122	G	Sidechain
1	X	1228	G	Sidechain
1	X	123	A	Sidechain
1	X	1236	G	Sidechain
1	X	124	A	Sidechain
1	X	1242	A	Sidechain
1	X	1247	U	Sidechain
1	X	1250	A	Sidechain
1	X	1251	G	Sidechain
1	X	126	C	Sidechain
1	X	1260	A	Sidechain
1	X	1281	A	Sidechain
1	X	1285	A	Sidechain
1	X	1296	G	Sidechain
1	X	1301	U	Sidechain
1	X	1314	A	Sidechain
1	X	1322	G	Sidechain
1	X	1325	U	Sidechain
1	X	1326	U	Sidechain
1	X	1342	U	Sidechain
1	X	1353	A	Sidechain
1	X	1373	G	Sidechain
1	X	1393	G	Sidechain
1	X	1398	G	Sidechain

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Mol	Chain	Res	Type	Group
1	X	1403	U	Sidechain
1	X	1408	A	Sidechain
1	X	1413	U	Sidechain
1	X	1429	A	Sidechain
1	X	1441	A	Sidechain
1	X	1442	C	Sidechain
1	X	1459	U	Sidechain
1	X	1469	U	Sidechain
1	X	1473	U	Sidechain
1	X	149	A	Sidechain
1	X	1510	A	Sidechain
1	X	1562	G	Sidechain
1	X	1574	A	Sidechain
1	X	1575	C	Sidechain
1	X	1623	C	Sidechain
1	X	1629	G	Sidechain
1	X	1635	G	Sidechain
1	X	1647	U	Sidechain
1	X	165	G	Sidechain
1	X	1651	U	Sidechain
1	X	1654	A	Sidechain
1	X	1661	C	Sidechain
1	X	1664	G	Sidechain
1	X	1665	C	Sidechain
1	X	1673	C	Sidechain
1	X	1682	A	Sidechain
1	X	1688	U	Sidechain
1	X	1692	C	Sidechain
1	X	1697	U	Sidechain
1	X	1707	A	Sidechain
1	X	1709	U	Sidechain
1	X	1710	U	Sidechain
1	X	1711	C	Sidechain
1	X	172	A	Sidechain
1	X	1723	U	Sidechain
1	X	1746	A	Sidechain
1	X	1747	G	Sidechain
1	X	1748	U	Sidechain
1	X	1749	G	Sidechain
1	X	175	C	Sidechain
1	X	1759	A	Sidechain
1	X	1762	C	Sidechain

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Mol	Chain	Res	Type	Group
1	X	1766	U	Sidechain
1	X	177	U	Sidechain
1	X	1771	A	Sidechain
1	X	1777	A	Sidechain
1	X	1778	U	Sidechain
1	X	178	C	Sidechain
1	X	1789	U	Sidechain
1	X	179	U	Sidechain
1	X	1814	G	Sidechain
1	X	1923	U	Sidechain
1	X	1938	U	Sidechain
1	X	1947	G	Sidechain
1	X	1965	U	Sidechain
1	X	1974	U	Sidechain
1	X	1975	G	Sidechain
1	X	1980	A	Sidechain
1	X	1994	U	Sidechain
1	X	1996	A	Sidechain
1	X	1999	U	Sidechain
1	X	2004	U	Sidechain
1	X	201	G	Sidechain
1	X	2013	A	Sidechain
1	X	2016	A	Sidechain
1	X	2039	G	Sidechain
1	X	2045	A	Sidechain
1	X	2061	C	Sidechain
1	X	2064	U	Sidechain
1	X	207	U	Sidechain
1	X	218	A	Sidechain
1	X	2189	A	Sidechain
1	X	219	G	Sidechain
1	X	2192	U	Sidechain
1	X	2216	G	Sidechain
1	X	2258	G	Sidechain
1	X	226	C	Sidechain
1	X	2311	U	Sidechain
1	X	2313	G	Sidechain
1	X	2324	G	Sidechain
1	X	2352	A	Sidechain
1	X	2385	U	Sidechain
1	X	24	G	Sidechain
1	X	2410	U	Sidechain

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Mol	Chain	Res	Type	Group
1	X	2412	A	Sidechain
1	X	2419	C	Sidechain
1	X	2426	G	Sidechain
1	X	2428	U	Sidechain
1	X	2431	C	Sidechain
1	X	2434	G	Sidechain
1	X	2472	U	Sidechain
1	X	2479	U	Sidechain
1	X	2487	G	Sidechain
1	X	2493	U	Sidechain
1	X	2498	U	Sidechain
1	X	25	U	Sidechain
1	X	2508	G	Sidechain
1	X	2510	A	Sidechain
1	X	2528	G	Sidechain
1	X	2540	A	Sidechain
1	X	2541	U	Sidechain
1	X	2542	U	Sidechain
1	X	2548	G	Sidechain
1	X	2549	G	Sidechain
1	X	2553	G	Sidechain
1	X	2557	G	Sidechain
1	X	2576	G	Sidechain
1	X	2588	U	Sidechain
1	X	2592	U	Sidechain
1	X	2620	G	Sidechain
1	X	2663	U	Sidechain
1	X	2664	G	Sidechain
1	X	2665	G	Sidechain
1	X	2666	U	Sidechain
1	X	2672	U	Sidechain
1	X	2684	A	Sidechain
1	X	2691	C	Sidechain
1	X	2696	A	Sidechain
1	X	2704	U	Sidechain
1	X	2738	A	Sidechain
1	X	2760	G	Sidechain
1	X	2823	G	Sidechain
1	X	2824	C	Sidechain
1	X	2841	U	Sidechain
1	X	2854	G	Sidechain
1	X	34	U	Sidechain

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Mol	Chain	Res	Type	Group
1	X	340	G	Sidechain
1	X	342	G	Sidechain
1	X	356	A	Sidechain
1	X	389	G	Sidechain
1	X	390	U	Sidechain
1	X	394	U	Sidechain
1	X	396	U	Sidechain
1	X	403	A	Sidechain
1	X	455	A	Sidechain
1	X	457	C	Sidechain
1	X	459	A	Sidechain
1	X	460	U	Sidechain
1	X	462	G	Sidechain
1	X	467	U	Sidechain
1	X	469	G	Sidechain
1	X	474	G	Sidechain
1	X	476	G	Sidechain
1	X	477	A	Sidechain
1	X	518	A	Sidechain
1	X	539	A	Sidechain
1	X	540	G	Sidechain
1	X	541	C	Sidechain
1	X	555	U	Sidechain
1	X	556	A	Sidechain
1	X	563	U	Sidechain
1	X	571	U	Sidechain
1	X	578	U	Sidechain
1	X	591	G	Sidechain
1	X	594	G	Sidechain
1	X	600	G	Sidechain
1	X	613	A	Sidechain
1	X	621	U	Sidechain
1	X	650	U	Sidechain
1	X	654	A	Sidechain
1	X	670	U	Sidechain
1	X	681	A	Sidechain
1	X	683	A	Sidechain
1	X	684	C	Sidechain
1	X	685	U	Sidechain
1	X	707	U	Sidechain
1	X	708	G	Sidechain
1	X	713	G	Sidechain

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Mol	Chain	Res	Type	Group
1	X	715	U	Sidechain
1	X	752	G	Sidechain
1	X	757	U	Sidechain
1	X	758	G	Sidechain
1	X	760	U	Sidechain
1	X	761	G	Sidechain
1	X	768	U	Sidechain
1	X	771	C	Sidechain
1	X	774	A	Sidechain
1	X	792	U	Sidechain
1	X	814	G	Sidechain
1	X	815	A	Sidechain
1	X	824	U	Sidechain
1	X	872	G	Sidechain
1	X	873	U	Sidechain
1	X	956	A	Sidechain
1	X	974	U	Sidechain
1	X	98	U	Sidechain
1	X	993	C	Sidechain
2	Z	11	G	Sidechain
2	Z	17	A	Sidechain
2	Z	52	G	Sidechain
2	Z	89	G	Sidechain

## 5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	X	57651	0	29049	4430	0
2	Z	2598	0	1328	213	0
3	A	1637	0	1673	471	0
4	B	1539	0	1600	358	0
5	C	1506	0	1525	400	0
6	D	1400	0	1481	437	0
7	E	1286	0	1336	330	0
8	F	504	0	530	125	0
9	G	1114	0	1144	371	0
10	H	997	0	1046	213	1

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
11	I	1067	0	1103	324	0
12	J	1090	0	1125	259	0
13	K	878	0	930	165	1
14	L	779	0	820	275	0
15	M	871	0	894	204	0
16	N	978	0	1020	288	0
17	O	741	0	756	242	0
18	P	1014	0	1096	191	0
19	Q	726	0	753	197	0
20	R	825	0	881	271	0
21	S	1345	0	1372	323	0
22	T	625	0	655	144	0
23	U	552	0	604	192	0
24	V	533	0	558	133	0
25	W	424	0	470	103	0
26	Y	457	0	462	86	0
27	1	53	0	0	0	0
28	2	46	0	0	0	0
29	3	63	0	0	2	0
30	4	297	0	329	83	0
31	4	1	0	0	0	0
31	Y	1	0	0	0	0
32	M	1	0	0	0	0
32	X	30	0	0	0	0
32	Z	4	0	0	0	0
33	X	24	0	19	22	0
All	All	83657	0	54559	9938	1

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 72.

All (9938) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1281:A:H1'	1:X:2592:U:C5	1.68	1.26
1:X:2198:U:H3'	1:X:2199:C:C4'	1.66	1.24
1:X:2198:U:C3'	1:X:2199:C:H4'	1.68	1.23
1:X:1781:C:OP1	3:A:219:PRO:HB2	1.41	1.20
1:X:1281:A:C1'	1:X:2592:U:H5	1.55	1.20
1:X:2712:G:H3'	1:X:2713:A:H5'	1.21	1.20
16:N:51:ARG:HH11	16:N:51:ARG:HB3	1.04	1.17

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:71:PRO:HA	12:J:96:SER:HB2	1.23	1.17
16:N:51:ARG:HH11	16:N:51:ARG:CB	1.57	1.16
11:I:85:ASP:HA	11:I:116:ARG:HH12	1.04	1.16
5:C:48:ARG:HB2	5:C:51:VAL:HG22	1.23	1.16
9:G:100:TYR:HB2	9:G:116:ARG:HH12	1.11	1.16
1:X:504:G:H4'	18:P:27:VAL:HG13	1.28	1.15
14:L:63:ASN:HB3	14:L:66:ASP:HB2	1.26	1.15
25:W:25:LEU:HD22	25:W:30:ASP:HB3	1.28	1.14
21:S:54:ILE:HG13	21:S:62:PHE:HB2	1.19	1.14
23:U:51:ILE:HG12	23:U:59:THR:HB	1.16	1.14
1:X:871:U:O2'	1:X:2247:A:H2'	1.46	1.13
1:X:1151:U:H5'	1:X:1153:A:H5'	1.16	1.13
5:C:18:PRO:HG2	5:C:105:ALA:HB1	1.30	1.13
13:K:3:HIS:ND1	13:K:5:LYS:HE3	1.61	1.13
1:X:2225:G:H2'	1:X:2226:A:H8	1.14	1.13
3:A:247:VAL:HG23	3:A:248:THR:HG23	1.13	1.13
9:G:100:TYR:HB2	9:G:116:ARG:NH1	1.61	1.13
5:C:7:ILE:HB	5:C:120:VAL:H	1.04	1.12
1:X:666:U:H2'	1:X:667:U:H4'	1.15	1.12
23:U:41:VAL:HG23	23:U:42:GLN:H	0.97	1.12
1:X:542:A:H5''	16:N:28:ARG:HH21	0.96	1.12
3:A:93:ALA:HB2	3:A:107:ALA:HB2	1.15	1.12
19:Q:35:LYS:HE2	19:Q:53:ILE:HG23	1.26	1.12
1:X:1314:A:O2'	1:X:1315:A:H3'	1.49	1.11
1:X:653:G:H2'	1:X:654:A:H5''	1.20	1.11
6:D:39:GLY:HA2	6:D:86:GLY:HA2	1.33	1.11
14:L:85:LYS:HG2	14:L:86:GLN:HE21	1.15	1.11
11:I:85:ASP:HA	11:I:116:ARG:NH1	1.66	1.11
20:R:51:VAL:HG21	20:R:76:LEU:HD21	1.25	1.10
1:X:1508:G:H5'	1:X:1509:A:H5''	1.12	1.10
1:X:332:C:H1'	5:C:159:ARG:HE	1.16	1.10
8:F:75:MET:HA	8:F:78:LEU:HB3	1.32	1.10
16:N:66:ASN:HB3	16:N:76:TYR:HB2	1.32	1.10
1:X:2616:U:H5''	4:B:82:ARG:HH21	0.98	1.10
16:N:85:ARG:HB3	16:N:116:ALA:HB1	1.18	1.10
6:D:60:ILE:HG13	6:D:61:THR:H	1.15	1.10
14:L:30:SER:H	14:L:43:ILE:HD11	1.03	1.10
6:D:132:ILE:HB	6:D:152:MET:HB2	1.28	1.10
18:P:109:ARG:HD2	18:P:115:ASN:HD21	1.17	1.10
14:L:64:LYS:HE2	14:L:64:LYS:N	1.66	1.10
6:D:69:LYS:HE2	6:D:84:PRO:HG3	1.25	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:N:66:ASN:HB2	16:N:70:ARG:HH12	1.14	1.09
10:H:23:ARG:HH12	10:H:25:LEU:HG	1.07	1.09
19:Q:12:ILE:HD12	19:Q:13:SER:H	1.16	1.09
1:X:623:G:H3'	1:X:624:A:H5''	1.21	1.09
1:X:1128:G:H2'	1:X:1129:A:H5''	1.25	1.09
1:X:2394:G:H3'	11:I:63:ARG:HH11	1.03	1.09
2:Z:46:G:H5'	6:D:92:ARG:HH12	1.18	1.09
14:L:40:ALA:HB2	14:L:103:LEU:HD11	1.24	1.09
5:C:149:LEU:HD11	5:C:170:LEU:HB2	1.28	1.08
14:L:64:LYS:H	14:L:64:LYS:HE2	0.94	1.08
1:X:2056:C:H2'	1:X:2057:U:H5''	1.35	1.08
1:X:2672:U:H2'	1:X:2673:G:H8	1.19	1.08
1:X:451:A:H2'	1:X:452:G:H8	1.14	1.08
14:L:31:VAL:HB	14:L:38:ILE:HD11	1.34	1.08
30:4:18:ARG:HD3	30:4:23:VAL:HG22	1.33	1.07
3:A:69:ARG:HD2	3:A:130:ALA:HB2	1.32	1.07
9:G:33:ILE:HB	9:G:34:PRO:HD2	1.09	1.07
1:X:317:U:H2'	1:X:318:G:H5''	1.31	1.07
7:E:16:THR:HG22	7:E:18:ASN:HD21	1.18	1.07
1:X:82:G:H22	1:X:100:G:H2'	1.16	1.07
14:L:30:SER:N	14:L:43:ILE:HD11	1.69	1.07
15:M:33:VAL:HG22	15:M:51:GLU:HB2	1.13	1.07
23:U:28:GLY:HA3	23:U:32:ARG:HB3	1.30	1.06
1:X:1167:A:N6	16:N:48:ARG:HG2	1.70	1.06
30:4:15:LYS:HB2	30:4:26:ILE:HG13	1.34	1.06
10:H:27:SER:HB3	10:H:50:ILE:HG13	1.35	1.06
11:I:73:GLU:HB2	11:I:106:VAL:HA	1.30	1.06
17:O:12:TYR:HB2	17:O:39:PHE:HB2	1.38	1.06
1:X:1914:U:H6	1:X:1914:U:H5'	1.20	1.06
1:X:2056:C:C2'	1:X:2057:U:H5''	1.85	1.06
11:I:60:LEU:HD12	11:I:61:PRO:HD2	1.11	1.06
1:X:29:U:C4'	16:N:11:ARG:HH12	1.69	1.06
1:X:1474:A:O2'	1:X:1475:U:H5'	1.54	1.06
1:X:88:G:H3'	1:X:89:A:H5''	1.37	1.06
1:X:1095:A:H2'	1:X:1096:A:H5''	1.37	1.05
7:E:97:LYS:HE3	7:E:104:GLU:HG3	1.39	1.05
4:B:85:ALA:H	4:B:86:PRO:HD2	1.21	1.05
10:H:81:ILE:HG13	10:H:117:GLU:OE1	1.56	1.05
14:L:42:ILE:HB	14:L:52:ALA:HB3	1.37	1.05
5:C:176:ASN:HD21	5:C:178:TYR:HB3	0.95	1.04
11:I:108:LEU:HB2	11:I:122:VAL:HG11	1.35	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1690:U:H2'	1:X:1691:G:H5''	1.38	1.04
25:W:5:LEU:HB2	25:W:25:LEU:HD13	1.36	1.04
11:I:72:TYR:HB2	11:I:107:LYS:HE2	1.37	1.04
21:S:3:LEU:HD21	21:S:32:PHE:HB3	1.38	1.04
9:G:67:ARG:HB2	9:G:70:PHE:HA	1.37	1.04
3:A:231:HIS:CD2	3:A:233:HIS:H	1.75	1.04
21:S:123:VAL:N	21:S:161:ALA:HB2	1.73	1.04
4:B:38:THR:HG22	4:B:40:GLN:H	1.18	1.03
24:V:38:ALA:O	24:V:40:PRO:HD3	1.58	1.03
1:X:2212:U:H2'	1:X:2213:G:C8	1.94	1.03
17:O:36:LYS:HE3	17:O:56:VAL:HG13	1.39	1.03
16:N:66:ASN:CB	16:N:70:ARG:HH12	1.72	1.03
1:X:2225:G:H2'	1:X:2226:A:C8	1.93	1.03
21:S:172:LEU:HD23	21:S:173:PRO:HD2	1.39	1.03
1:X:1525:A:H3'	1:X:1526:U:C6	1.93	1.03
16:N:10:ARG:HG2	16:N:13:ARG:HH22	1.16	1.03
1:X:336:A:H2'	1:X:337:G:H8	1.20	1.03
11:I:72:TYR:HB3	11:I:107:LYS:HB2	1.36	1.03
1:X:1173:G:H1'	17:O:21:ARG:HH21	1.22	1.03
1:X:1095:A:C2'	1:X:1096:A:H5''	1.89	1.03
19:Q:3:HIS:CE1	19:Q:44:GLN:HG3	1.94	1.02
1:X:1141:U:C4	4:B:147:PRO:HD3	1.93	1.02
3:A:173:VAL:HG12	3:A:174:ILE:H	1.24	1.02
13:K:100:VAL:HG12	13:K:101:GLY:H	1.23	1.02
1:X:1348:C:H2'	1:X:1349:A:H8	1.24	1.02
1:X:333:A:C5'	5:C:162:ARG:HD2	1.89	1.01
1:X:1023:U:H3	9:G:53:ARG:HD2	1.25	1.01
6:D:40:LEU:HG	6:D:150:ARG:HE	1.19	1.01
1:X:1508:G:H5'	1:X:1509:A:C5'	1.90	1.01
1:X:2713:A:H61	4:B:203:LYS:HE3	1.24	1.01
5:C:176:ASN:ND2	5:C:178:TYR:HB3	1.74	1.01
9:G:67:ARG:HD3	9:G:70:PHE:CA	1.90	1.01
22:T:25:LYS:HG2	22:T:37:LEU:HA	1.36	1.01
1:X:1333:G:N2	1:X:1344:C:H41	1.59	1.01
22:T:45:PHE:HA	22:T:77:ARG:HB2	1.42	1.01
1:X:983:G:H3'	1:X:984:A:H5''	1.40	1.01
23:U:41:VAL:HG23	23:U:42:GLN:N	1.74	1.01
20:R:48:VAL:HG12	20:R:50:GLY:H	1.25	1.01
1:X:1673:C:C5'	4:B:136:ARG:HD3	1.91	1.01
1:X:2222:U:H2'	1:X:2223:U:H6	1.26	1.00
4:B:116:VAL:HG22	4:B:136:ARG:HE	1.17	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:116:ARG:HD2	9:G:119:LEU:HD12	1.43	1.00
13:K:79:VAL:HA	13:K:83:VAL:CG2	1.89	1.00
21:S:123:VAL:H	21:S:161:ALA:HB2	0.88	1.00
14:L:52:ALA:HB1	14:L:75:LEU:HD11	1.40	1.00
1:X:1574:A:O2'	1:X:1575:C:H3'	1.61	1.00
4:B:116:VAL:HG22	4:B:136:ARG:NE	1.76	1.00
1:X:538:A:H5'	9:G:142:ARG:NH2	1.75	1.00
20:R:97:GLN:HB2	20:R:101:GLY:HA2	1.42	1.00
1:X:313:U:H2'	1:X:314:G:H8	1.24	1.00
1:X:451:A:H2'	1:X:452:G:C8	1.96	1.00
21:S:3:LEU:HD13	21:S:4:THR:H	1.25	1.00
1:X:542:A:C2	1:X:2004:U:H2'	1.97	1.00
2:Z:46:G:C5'	6:D:92:ARG:HH12	1.74	1.00
5:C:47:THR:HA	5:C:82:VAL:HB	1.41	1.00
1:X:988:G:H5'	16:N:55:ARG:HH12	1.25	1.00
1:X:333:A:H5''	5:C:162:ARG:CD	1.91	1.00
8:F:105:VAL:HG13	8:F:128:VAL:HG11	1.44	1.00
13:K:11:ASN:HD21	13:K:17:ARG:NH1	1.60	1.00
15:M:99:VAL:HG21	15:M:104:LEU:HD21	1.42	1.00
9:G:66:HIS:HA	16:N:67:ALA:HB1	1.39	1.00
10:H:13:ASN:ND2	10:H:109:ARG:HG2	1.77	0.99
11:I:88:PHE:HB2	11:I:93:LEU:HD12	1.41	0.99
1:X:1281:A:H1'	1:X:2592:U:H5	1.05	0.99
3:A:133:LEU:HB2	3:A:187:SER:HA	1.43	0.99
19:Q:43:GLN:HG2	19:Q:48:VAL:O	1.62	0.99
1:X:663:G:H3'	1:X:664:C:H4'	1.44	0.99
4:B:33:ILE:H	4:B:33:ILE:HD12	1.26	0.99
1:X:400:U:H5	23:U:23:LYS:HD3	1.27	0.99
1:X:1061:A:H2'	1:X:1062:G:H8	1.27	0.99
1:X:1128:G:C2'	1:X:1129:A:H5''	1.91	0.99
24:V:4:SER:HB3	24:V:7:ARG:HH21	1.27	0.99
3:A:91:ARG:HD2	3:A:198:ASN:HA	1.45	0.99
5:C:39:ARG:HH21	5:C:91:TYR:HB2	1.27	0.99
1:X:1698:C:O2'	1:X:1753:A:H2'	1.61	0.99
1:X:2581:A:H3'	1:X:2582:G:H5''	1.42	0.99
3:A:48:ARG:H	3:A:48:ARG:HD2	1.22	0.99
12:J:27:TYR:HB2	12:J:137:VAL:HG11	1.45	0.99
15:M:66:PHE:HE2	15:M:81:PHE:HB2	1.23	0.99
1:X:2197:U:H2'	1:X:2198:U:C5	1.98	0.99
5:C:164:VAL:HB	5:C:166:TRP:CZ3	1.97	0.98
9:G:65:LYS:CG	9:G:66:HIS:H	1.75	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:46:GLN:HB3	21:S:50:GLY:HA3	1.42	0.98
1:X:2291:U:H5'	6:D:85:VAL:HG21	1.43	0.98
21:S:49:THR:HG21	21:S:96:VAL:HG22	1.44	0.98
6:D:71:LYS:HD2	6:D:73:SER:OG	1.63	0.98
11:I:94:GLU:HB3	11:I:97:ARG:HE	1.24	0.98
11:I:72:TYR:HA	11:I:105:PRO:HG2	1.40	0.98
1:X:1448:A:H61	1:X:1574:A:H61	1.05	0.98
1:X:2394:G:H3'	11:I:63:ARG:NH1	1.77	0.98
13:K:100:VAL:HG23	13:K:112:LEU:HD22	1.46	0.98
1:X:2616:U:H5''	4:B:82:ARG:NH2	1.76	0.98
1:X:2617:G:HO2'	1:X:2618:A:H8	1.00	0.98
1:X:1075:C:H5''	8:F:85:ILE:HG21	1.45	0.98
1:X:2271:C:P	14:L:18:ARG:HH22	1.86	0.98
20:R:94:VAL:HB	20:R:107:ALA:HB3	1.44	0.98
1:X:2787:A:H2'	1:X:2788:C:H6	1.24	0.98
11:I:122:VAL:HG21	11:I:125:ALA:HB2	1.46	0.98
12:J:15:ARG:HD2	12:J:73:LYS:HG3	1.44	0.97
2:Z:46:G:H5'	6:D:92:ARG:NH1	1.80	0.97
30:4:9:LYS:HE2	30:4:16:VAL:HG21	1.46	0.97
30:4:18:ARG:HG2	30:4:23:VAL:HA	1.43	0.97
3:A:211:ARG:O	3:A:214:TRP:HB2	1.63	0.97
6:D:74:ILE:HG12	6:D:80:ARG:HA	1.47	0.97
15:M:69:ARG:HH11	15:M:69:ARG:HG3	1.25	0.97
5:C:109:ALA:O	5:C:113:GLU:HG3	1.64	0.97
9:G:87:GLN:H	9:G:87:GLN:HE21	1.11	0.97
5:C:170:LEU:HD21	5:C:175:VAL:HA	1.43	0.97
6:D:111:ILE:HB	6:D:114:PHE:HB2	1.46	0.97
1:X:2482:A:H1'	33:X:2911:ZLD:H13B	1.47	0.97
17:O:10:LYS:HG3	17:O:11:GLN:HE21	1.29	0.97
1:X:332:C:C1'	5:C:159:ARG:HE	1.78	0.97
14:L:28:ARG:HG3	14:L:43:ILE:HD13	1.46	0.96
1:X:29:U:H4'	16:N:11:ARG:HH12	1.24	0.96
19:Q:52:GLY:O	19:Q:80:VAL:HG23	1.65	0.96
23:U:20:ARG:HB2	23:U:43:ARG:HD2	1.43	0.96
9:G:103:TYR:CE2	9:G:111:LYS:HA	1.98	0.96
9:G:123:PRO:O	9:G:126:VAL:HG23	1.63	0.96
21:S:3:LEU:HA	21:S:34:LEU:HB3	1.46	0.96
12:J:23:LYS:HA	21:S:73:LYS:NZ	1.80	0.96
5:C:119:ALA:HB3	5:C:189:ASP:HA	1.45	0.96
23:U:41:VAL:CG2	23:U:42:GLN:H	1.77	0.96
1:X:1086:C:H2'	1:X:1087:C:H5''	1.43	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:75:THR:O	4:B:76:ARG:HB3	1.65	0.96
19:Q:7:LEU:HD11	24:V:30:PHE:CE2	1.99	0.96
23:U:51:ILE:CG1	23:U:59:THR:HB	1.94	0.96
5:C:7:ILE:HB	5:C:120:VAL:N	1.80	0.96
12:J:57:ARG:HH11	12:J:57:ARG:HG2	1.29	0.96
24:V:3:PRO:O	24:V:6:MET:HB3	1.65	0.96
1:X:1949:A:O2'	1:X:2572:U:H5'	1.66	0.96
1:X:2222:U:H2'	1:X:2223:U:C6	1.99	0.96
1:X:984:A:H1'	1:X:1202:U:C6	1.99	0.96
1:X:2551:A:C8	4:B:144:ARG:HD3	2.00	0.96
21:S:95:SER:HA	21:S:121:GLN:HA	1.43	0.96
1:X:517:A:H5''	1:X:518:A:H5'	1.43	0.96
1:X:958:G:H2'	1:X:959:C:C6	2.00	0.96
1:X:538:A:H5'	9:G:142:ARG:HH21	1.28	0.96
13:K:33:ARG:HG3	13:K:114:GLU:HB3	1.48	0.96
17:O:25:LEU:HB2	17:O:32:LYS:HE2	1.46	0.96
1:X:1525:A:H3'	1:X:1526:U:H6	1.26	0.96
1:X:2498:U:H4'	1:X:2499:C:OP1	1.64	0.96
1:X:333:A:H3'	5:C:162:ARG:CZ	1.96	0.95
20:R:60:PRO:HA	20:R:65:PRO:HA	1.47	0.95
1:X:2188:A:H2'	1:X:2189:A:N7	1.79	0.95
9:G:65:LYS:HG3	9:G:66:HIS:H	1.32	0.95
1:X:1517:C:H4'	3:A:96:HIS:NE2	1.79	0.95
1:X:1919:A:H2	1:X:1926:U:H3	0.97	0.95
7:E:127:GLU:HG3	7:E:129:THR:H	1.29	0.95
12:J:27:TYR:HB3	12:J:137:VAL:HG21	1.46	0.95
14:L:33:ARG:NH1	14:L:100:VAL:HA	1.79	0.95
1:X:1122:A:C2	1:X:1123:G:H1'	2.01	0.95
1:X:336:A:H2'	1:X:337:G:C8	2.00	0.95
6:D:100:LEU:O	6:D:104:ILE:HG13	1.67	0.95
6:D:4:LEU:HA	6:D:7:LYS:HB2	1.44	0.95
15:M:104:LEU:HD13	15:M:106:TYR:CE2	1.99	0.95
1:X:2375:G:H4'	23:U:32:ARG:O	1.66	0.95
25:W:28:ILE:H	25:W:28:ILE:HD13	1.29	0.95
1:X:958:G:H2'	1:X:959:C:H6	1.30	0.95
4:B:85:ALA:N	4:B:86:PRO:HD2	1.78	0.95
9:G:121:LYS:O	9:G:123:PRO:HD3	1.65	0.95
1:X:1926:U:H4'	1:X:1927:U:H3'	1.47	0.95
1:X:2708:U:H2'	1:X:2709:C:C6	2.02	0.95
16:N:51:ARG:NH1	16:N:51:ARG:HB3	1.82	0.95
11:I:62:LYS:HE2	11:I:64:GLY:HA3	1.45	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:35:LEU:HD12	12:J:131:LYS:O	1.67	0.95
13:K:99:ARG:HG2	13:K:99:ARG:HH11	1.31	0.95
18:P:44:VAL:HG23	18:P:45:ILE:H	1.30	0.95
1:X:542:A:H5''	16:N:28:ARG:NH2	1.81	0.95
1:X:971:A:H61	12:J:83:ARG:HH22	1.16	0.94
1:X:504:G:H4'	18:P:27:VAL:CG1	1.97	0.94
1:X:128:C:H2'	1:X:129:A:H5''	1.46	0.94
1:X:1524:C:H5''	1:X:1525:A:H8	1.27	0.94
18:P:89:ARG:HD3	18:P:132:GLY:H	1.29	0.94
1:X:2759:U:H4'	1:X:2760:G:H5''	1.48	0.94
1:X:1586:A:H5'	3:A:38:PRO:HG3	1.47	0.94
5:C:13:ARG:NE	5:C:13:ARG:H	1.65	0.94
6:D:13:ARG:HB3	6:D:14:PRO:HD3	1.48	0.94
20:R:98:ILE:HG22	20:R:99:VAL:H	1.33	0.94
1:X:2620:G:H5''	9:G:104:THR:HG21	1.47	0.94
25:W:3:ILE:HG22	25:W:4:LYS:H	1.31	0.94
1:X:1587:A:H2'	1:X:1588:A:C8	2.02	0.94
1:X:1095:A:C3'	1:X:1096:A:H5''	1.97	0.94
1:X:1122:A:H2'	1:X:1123:G:H4'	1.46	0.94
1:X:1668:G:H5'	13:K:39:THR:HG21	1.50	0.94
12:J:44:LYS:HB2	12:J:47:GLN:HG3	1.50	0.94
1:X:1292:A:H4'	13:K:31:GLU:OE1	1.68	0.94
21:S:97:PRO:HA	21:S:119:ASN:HA	1.47	0.94
13:K:100:VAL:HG12	13:K:101:GLY:N	1.79	0.94
1:X:1185:C:H2'	1:X:1186:G:H3'	1.46	0.94
1:X:1673:C:H5'	4:B:136:ARG:HD3	1.50	0.94
7:E:43:VAL:HG23	7:E:52:VAL:HG22	1.50	0.94
9:G:33:ILE:HB	9:G:34:PRO:CD	1.96	0.94
1:X:1348:C:H2'	1:X:1349:A:C8	2.01	0.94
1:X:797:A:C5	3:A:229:VAL:HG21	2.03	0.94
3:A:142:VAL:HG12	3:A:193:ILE:HA	1.47	0.93
14:L:8:ARG:HH11	14:L:8:ARG:HB2	1.32	0.93
2:Z:64:C:H2'	2:Z:65:A:H8	1.32	0.93
9:G:47:SER:O	9:G:49:VAL:N	2.01	0.93
18:P:41:VAL:O	18:P:43:ASP:N	2.02	0.93
1:X:1333:G:H21	1:X:1344:C:H41	0.98	0.93
1:X:2736:U:O2'	1:X:2737:A:H5''	1.69	0.93
1:X:333:A:H5''	5:C:162:ARG:HD2	0.95	0.93
17:O:78:VAL:O	17:O:78:VAL:HG22	1.67	0.93
4:B:119:ARG:HH11	4:B:119:ARG:HG3	1.30	0.93
15:M:103:LYS:O	15:M:104:LEU:HB2	1.65	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1563:U:H2'	1:X:1564:U:C6	2.03	0.93
1:X:169:C:H2'	1:X:170:U:H5'	1.47	0.93
1:X:731:A:H2'	1:X:732:G:H5'	1.50	0.93
1:X:833:A:H1'	1:X:954:U:H1'	1.47	0.93
1:X:2218:G:H5'	3:A:249:PRO:HB3	1.47	0.93
5:C:166:TRP:N	5:C:166:TRP:HE3	1.65	0.93
1:X:1808:C:H5''	3:A:39:LYS:NZ	1.84	0.93
1:X:48:A:H4'	1:X:49:U:H5'	1.47	0.93
1:X:1563:U:H2'	1:X:1564:U:H6	1.34	0.93
1:X:728:G:H3'	1:X:730:C:OP2	1.69	0.93
1:X:1122:A:C2'	1:X:1123:G:H4'	1.98	0.92
21:S:123:VAL:H	21:S:161:ALA:CB	1.80	0.92
3:A:63:ARG:HD2	3:A:85:ASP:HB3	1.52	0.92
15:M:66:PHE:CE2	15:M:81:PHE:HB2	2.04	0.92
2:Z:17:A:OP2	2:Z:110:U:H2'	1.68	0.92
22:T:40:GLN:HE22	22:T:43:THR:HA	1.30	0.92
1:X:556:A:H1'	1:X:558:G:H21	1.33	0.92
3:A:231:HIS:HD2	3:A:233:HIS:H	1.10	0.92
2:Z:45:C:H2'	6:D:92:ARG:NE	1.85	0.92
14:L:33:ARG:HH12	14:L:103:LEU:HB3	1.30	0.92
2:Z:30:C:OP1	14:L:37:HIS:HB3	1.70	0.92
4:B:4:ILE:HD13	4:B:28:ALA:HB1	1.51	0.92
5:C:176:ASN:HD22	5:C:179:ASP:H	1.14	0.92
11:I:78:SER:HB3	11:I:112:GLY:HA3	1.52	0.92
13:K:82:GLU:O	13:K:86:LYS:HG3	1.68	0.92
16:N:74:MET:HE2	16:N:79:PHE:HA	1.51	0.92
21:S:94:VAL:HB	21:S:125:PRO:HB3	1.50	0.92
1:X:1218:C:H2'	1:X:1219:C:H6	1.33	0.92
1:X:1710:U:H5'	1:X:1711:C:C5	2.04	0.92
30:4:7:VAL:HG13	30:4:34:GLN:HE21	1.35	0.92
3:A:35:GLU:O	3:A:64:ILE:HD11	1.69	0.92
13:K:24:GLN:HB3	13:K:44:LEU:HD22	1.52	0.92
1:X:2074:U:H3'	1:X:2075:U:H5''	1.47	0.92
1:X:2240:C:O2'	1:X:2241:U:H5'	1.69	0.92
1:X:1087:C:OP1	8:F:94:LYS:HE3	1.70	0.91
24:V:13:ASP:HA	24:V:16:LYS:HD3	1.51	0.91
3:A:67:PHE:HB3	3:A:153:ALA:H	1.33	0.91
11:I:77:LEU:HB2	11:I:111:SER:H	1.33	0.91
12:J:44:LYS:HD3	12:J:47:GLN:NE2	1.85	0.91
14:L:54:ALA:H	14:L:75:LEU:HD13	1.35	0.91
22:T:40:GLN:NE2	22:T:43:THR:HA	1.84	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:W:51:LEU:H	25:W:51:LEU:HD23	1.34	0.91
1:X:169:C:C2'	1:X:170:U:H5'	1.99	0.91
1:X:1953:A:H5'	1:X:1954:A:OP1	1.69	0.91
1:X:2020:G:H2'	1:X:2021:G:C8	2.05	0.91
16:N:66:ASN:HB2	16:N:70:ARG:NH1	1.84	0.91
23:U:51:ILE:HG23	23:U:59:THR:HA	1.48	0.91
1:X:1171:A:H2'	1:X:1172:U:H6	1.35	0.91
1:X:1074:G:H21	8:F:91:THR:HA	1.36	0.91
20:R:54:ILE:HG12	20:R:71:GLN:HG2	1.53	0.91
1:X:2198:U:H3'	1:X:2199:C:H4'	0.92	0.91
1:X:788:G:H5'	1:X:790:A:H1'	1.52	0.91
7:E:105:MET:HB2	7:E:113:VAL:HB	1.53	0.91
1:X:1928:G:H2'	1:X:1929:U:C6	2.06	0.91
14:L:8:ARG:NH1	14:L:8:ARG:HB2	1.85	0.91
17:O:56:VAL:HA	17:O:97:GLY:HA3	1.52	0.91
21:S:36:ARG:HE	21:S:37:LYS:N	1.68	0.91
1:X:1838:G:H2'	1:X:1839:A:O4'	1.70	0.91
7:E:90:ARG:HH21	7:E:163:ARG:HH12	1.19	0.91
7:E:136:ILE:H	7:E:136:ILE:HD12	1.34	0.91
1:X:1242:A:H2'	1:X:1243:G:H8	1.36	0.91
1:X:1595:A:H2'	1:X:1596:A:O4'	1.70	0.91
1:X:173:A:H61	1:X:844:G:H21	1.13	0.91
1:X:482:A:H2'	1:X:483:A:O4'	1.71	0.91
1:X:1091:C:H1'	8:F:127:THR:HA	1.53	0.90
1:X:634:G:H2'	1:X:635:C:H6	1.35	0.90
1:X:663:G:H3'	1:X:664:C:C4'	2.01	0.90
26:Y:32:GLU:HG2	26:Y:37:HIS:O	1.71	0.90
2:Z:32:C:H1'	2:Z:59:A:H61	1.35	0.90
2:Z:53:G:H5'	14:L:64:LYS:HZ2	1.35	0.90
20:R:108:VAL:HG22	20:R:109:ALA:H	1.33	0.90
20:R:92:THR:HB	20:R:95:ARG:HH22	1.34	0.90
23:U:10:LYS:HD3	23:U:11:LYS:N	1.87	0.90
3:A:131:LEU:HD23	3:A:131:LEU:H	1.34	0.90
1:X:1108:U:H2'	1:X:1109:A:O4'	1.70	0.90
1:X:168:A:H2'	1:X:169:C:H6	1.35	0.90
1:X:651:C:H2'	1:X:652:C:H5''	1.51	0.90
1:X:1333:G:H22	1:X:1344:C:H5	1.19	0.90
11:I:76:LYS:HB3	11:I:79:GLN:CG	2.00	0.90
2:Z:39:C:H5''	2:Z:40:C:C5	2.06	0.90
9:G:61:ARG:HE	9:G:65:LYS:HE2	1.36	0.90
9:G:67:ARG:HD3	9:G:70:PHE:HA	1.53	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:W:2:LYS:HB3	25:W:54:GLN:HB3	1.51	0.90
1:X:557:U:H4'	1:X:558:G:O4'	1.71	0.90
13:K:3:HIS:ND1	13:K:5:LYS:CE	2.34	0.90
1:X:82:G:N2	1:X:100:G:H2'	1.86	0.90
2:Z:72:C:H2'	2:Z:73:C:C6	2.06	0.90
1:X:2272:A:P	14:L:15:ARG:HH21	1.95	0.89
3:A:244:ARG:N	3:A:244:ARG:HD3	1.86	0.89
3:A:62:TYR:HE1	3:A:88:ARG:HH22	1.17	0.89
21:S:3:LEU:HD21	21:S:33:ALA:H	1.37	0.89
1:X:2199:C:H2'	1:X:2200:G:C8	2.07	0.89
1:X:2476:A:H1'	1:X:2477:C:H5	1.35	0.89
1:X:2594:U:H6	1:X:2594:U:H5'	1.37	0.89
17:O:29:ALA:HA	17:O:59:GLU:HB3	1.54	0.89
24:V:7:ARG:HD2	24:V:8:ASN:N	1.88	0.89
1:X:1263:G:H5''	16:N:6:THR:HG22	1.54	0.89
1:X:1349:A:H2'	1:X:1350:G:H8	1.37	0.89
5:C:176:ASN:HD21	5:C:178:TYR:CB	1.85	0.89
7:E:84:THR:HA	7:E:134:SER:HA	1.50	0.89
9:G:33:ILE:CB	9:G:34:PRO:HD2	1.99	0.89
4:B:31:CYS:HB3	4:B:49:ILE:CG1	2.03	0.89
1:X:317:U:H2'	1:X:318:G:C5'	2.03	0.89
6:D:15:ALA:O	6:D:18:GLN:HB2	1.73	0.89
9:G:158:HIS:HA	9:G:161:GLN:HB2	1.53	0.89
21:S:2:GLU:HG2	21:S:55:THR:HB	1.52	0.89
22:T:3:HIS:CG	22:T:4:LYS:H	1.88	0.89
2:Z:42:U:H1'	2:Z:47:A:N6	1.87	0.89
30:4:15:LYS:CB	30:4:26:ILE:HG13	2.03	0.89
10:H:116:ARG:HB2	10:H:116:ARG:HH11	1.38	0.89
11:I:85:ASP:CA	11:I:116:ARG:HH12	1.85	0.89
16:N:88:ILE:HG13	17:O:49:GLU:HB2	1.53	0.89
22:T:32:LYS:HG2	22:T:33:ALA:H	1.37	0.89
4:B:154:LYS:O	4:B:156:MET:HG3	1.73	0.89
7:E:6:LYS:HB3	7:E:69:ARG:CZ	2.03	0.89
19:Q:26:SER:HB3	19:Q:79:ILE:HG13	1.52	0.89
25:W:25:LEU:CD2	25:W:30:ASP:HB3	2.02	0.89
1:X:2850:U:H5'	1:X:2850:U:H6	1.37	0.89
7:E:124:ALA:O	7:E:131:ILE:HG23	1.73	0.88
1:X:173:A:OP2	11:I:53:ARG:HD2	1.72	0.88
1:X:2422:C:O2'	1:X:2423:G:H5'	1.72	0.88
1:X:635:C:H2'	1:X:636:G:H5''	1.56	0.88
1:X:841:G:H2'	1:X:842:A:C8	2.07	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:172:TYR:CD2	3:A:186:HIS:HB3	2.07	0.88
18:P:89:ARG:CD	18:P:132:GLY:H	1.87	0.88
1:X:1466:C:H2'	1:X:1467:U:O4'	1.73	0.88
1:X:1448:A:H61	1:X:1574:A:N6	1.72	0.88
1:X:1729:C:H2'	1:X:1730:G:H8	1.35	0.88
21:S:89:GLY:O	21:S:127:PRO:HG3	1.73	0.88
1:X:1148:G:H21	9:G:134:MET:HE1	1.38	0.88
1:X:356:A:H2'	1:X:357:A:H8	1.37	0.88
10:H:116:ARG:HD2	15:M:38:LYS:NZ	1.87	0.88
21:S:100:THR:HG23	21:S:138:VAL:HG11	1.55	0.88
1:X:988:G:H5'	16:N:55:ARG:NH1	1.87	0.88
14:L:60:LYS:HE3	14:L:62:GLY:HA2	1.54	0.88
25:W:3:ILE:HG22	25:W:4:LYS:N	1.89	0.88
1:X:2261:G:H4'	1:X:2262:C:OP2	1.72	0.88
1:X:623:G:C3'	1:X:624:A:H5''	2.03	0.88
1:X:775:U:H4'	1:X:776:G:O5'	1.73	0.88
7:E:44:ARG:O	7:E:50:LEU:HG	1.72	0.88
8:F:118:ALA:HB1	8:F:123:ALA:HB1	1.54	0.88
20:R:38:LEU:HD23	20:R:39:ALA:N	1.89	0.88
1:X:538:A:N3	1:X:538:A:H3'	1.89	0.88
1:X:663:G:H3'	1:X:664:C:C5'	2.03	0.88
3:A:172:TYR:HB3	3:A:184:ARG:HG2	1.56	0.88
11:I:94:GLU:CB	11:I:97:ARG:HE	1.87	0.88
12:J:15:ARG:HD3	12:J:73:LYS:NZ	1.88	0.88
20:R:59:LYS:N	20:R:60:PRO:HD3	1.88	0.88
1:X:2170:C:H3'	1:X:2171:U:H5''	1.55	0.88
1:X:2447:G:HO2'	1:X:2448:A:H8	1.22	0.88
9:G:87:GLN:N	9:G:87:GLN:HE21	1.71	0.87
1:X:313:U:H2'	1:X:314:G:C8	2.10	0.87
1:X:732:G:H2'	1:X:733:G:C8	2.08	0.87
22:T:25:LYS:HE2	22:T:36:ILE:O	1.73	0.87
1:X:1914:U:C6	1:X:1914:U:H5'	2.09	0.87
1:X:554:U:O2'	1:X:555:U:H1'	1.73	0.87
11:I:94:GLU:HB3	11:I:97:ARG:NE	1.89	0.87
15:M:99:VAL:HG22	15:M:100:ARG:H	1.39	0.87
23:U:20:ARG:HD2	23:U:43:ARG:CZ	2.03	0.87
1:X:946:U:H2'	1:X:947:C:H6	1.38	0.87
7:E:149:ARG:HA	7:E:162:VAL:HG11	1.54	0.87
9:G:164:GLN:O	9:G:165:VAL:HG13	1.75	0.87
18:P:89:ARG:HD3	18:P:132:GLY:N	1.90	0.87
24:V:10:GLN:HB2	24:V:12:THR:HG23	1.56	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2726:U:H1'	7:E:139:GLN:NE2	1.89	0.87
4:B:174:GLU:HB3	4:B:183:LEU:HD12	1.57	0.87
5:C:39:ARG:NH2	5:C:91:TYR:HB2	1.90	0.87
14:L:73:LYS:HE3	14:L:109:GLU:HG2	1.55	0.87
1:X:1859:A:H2'	1:X:1860:A:H8	1.38	0.87
1:X:402:A:C8	1:X:2392:G:H4'	2.09	0.87
1:X:921:A:H2'	1:X:924:C:C5	2.10	0.87
18:P:50:VAL:HB	18:P:90:LEU:O	1.74	0.87
1:X:1218:C:H2'	1:X:1219:C:C6	2.10	0.87
1:X:2807:U:H5'	1:X:2807:U:H6	1.37	0.87
1:X:2856:U:H2'	1:X:2857:C:H6	1.39	0.87
4:B:28:ALA:HB3	4:B:92:ASN:HD22	1.38	0.87
7:E:9:ILE:HG13	7:E:50:LEU:HD23	1.57	0.87
12:J:12:LYS:O	12:J:13:GLN:HB2	1.74	0.87
18:P:64:ALA:O	18:P:67:PRO:HD2	1.75	0.87
19:Q:7:LEU:HD11	24:V:30:PHE:HE2	1.38	0.87
1:X:98:U:H5''	1:X:99:U:H5''	1.54	0.87
9:G:144:MET:O	9:G:146:THR:N	2.08	0.87
17:O:36:LYS:HE3	17:O:56:VAL:CG1	2.05	0.87
25:W:38:PRO:HB3	25:W:41:ARG:NH2	1.89	0.87
1:X:2482:A:O2'	33:X:2911:ZLD:C13	2.23	0.87
1:X:76:C:H6	1:X:76:C:H5'	1.40	0.87
3:A:102:LYS:O	3:A:103:ARG:HG3	1.74	0.86
6:D:57:LEU:HA	6:D:60:ILE:HD11	1.55	0.86
18:P:89:ARG:NH2	18:P:132:GLY:HA2	1.89	0.86
9:G:156:HIS:HB2	9:G:157:PRO:HD3	1.55	0.86
1:X:1512:A:H2'	1:X:1514:C:C5	2.09	0.86
4:B:91:VAL:HG12	4:B:92:ASN:H	1.40	0.86
14:L:33:ARG:HH11	14:L:100:VAL:HA	1.36	0.86
1:X:2672:U:H2'	1:X:2673:G:C8	2.10	0.86
1:X:303:C:H6	1:X:303:C:O5'	1.58	0.86
2:Z:45:C:H2'	6:D:92:ARG:CZ	2.06	0.86
3:A:93:ALA:CB	3:A:107:ALA:HB2	2.04	0.86
3:A:165:VAL:O	3:A:166:GLN:HG3	1.74	0.86
20:R:97:GLN:CB	20:R:101:GLY:HA2	2.06	0.86
1:X:2482:A:C8	33:X:2911:ZLD:C13	2.57	0.86
26:Y:16:ARG:HH11	26:Y:20:ARG:HH12	1.23	0.86
1:X:1812:U:H3	3:A:200:GLU:HA	1.40	0.86
1:X:2308:A:H2'	1:X:2309:G:C8	2.10	0.86
1:X:2757:G:H5''	1:X:2758:A:H5''	1.57	0.86
1:X:2796:A:OP2	13:K:3:HIS:CE1	2.28	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:653:G:C2'	1:X:654:A:H5''	2.02	0.86
17:O:12:TYR:HB2	17:O:39:PHE:CB	2.05	0.86
21:S:154:LEU:HD21	21:S:160:LEU:HG	1.56	0.86
1:X:1587:A:H2'	1:X:1588:A:H8	1.39	0.86
11:I:94:GLU:HA	11:I:97:ARG:HG3	1.58	0.86
14:L:91:ARG:CD	14:L:91:ARG:H	1.89	0.86
21:S:36:ARG:HH11	21:S:37:LYS:HB2	1.39	0.86
6:D:100:LEU:HG	6:D:104:ILE:HD11	1.56	0.86
6:D:69:LYS:HA	6:D:84:PRO:HA	1.57	0.86
6:D:72:LYS:HA	6:D:81:GLN:HA	1.58	0.86
15:M:102:ALA:O	15:M:103:LYS:HD2	1.75	0.86
1:X:317:U:C2'	1:X:318:G:H5''	2.06	0.86
8:F:77:TYR:HE1	8:F:80:ARG:HH21	1.21	0.86
1:X:2218:G:O4'	3:A:249:PRO:HG3	1.74	0.86
1:X:597:U:H2'	1:X:598:U:C6	2.11	0.86
2:Z:67:C:H2'	2:Z:111:C:H42	1.41	0.86
2:Z:30:C:H42	2:Z:58:G:H1	1.19	0.86
5:C:166:TRP:CE3	5:C:166:TRP:N	2.43	0.85
15:M:28:ARG:CB	15:M:29:PRO:HD3	2.00	0.85
19:Q:6:ILE:HG22	19:Q:7:LEU:N	1.91	0.85
19:Q:62:ARG:O	19:Q:70:GLY:HA3	1.76	0.85
15:M:33:VAL:HG22	15:M:51:GLU:CB	2.05	0.85
17:O:47:PHE:O	17:O:50:ASP:HB3	1.76	0.85
1:X:1949:A:C2	1:X:2572:U:H1'	2.11	0.85
1:X:2199:C:H2'	1:X:2200:G:H8	1.41	0.85
1:X:1004:A:H2	17:O:21:ARG:HH22	1.19	0.85
7:E:97:LYS:H	7:E:104:GLU:HB3	1.41	0.85
1:X:137:A:C5	1:X:138:G:H1'	2.11	0.85
1:X:537:C:H5	1:X:2759:U:H3'	1.40	0.85
6:D:137:ILE:HG13	6:D:138:PHE:CE1	2.12	0.85
16:N:56:ASP:O	16:N:59:ARG:N	2.08	0.85
1:X:1380:C:H2'	1:X:1381:G:H5'	1.58	0.85
1:X:1692:C:O2'	1:X:1693:A:H5'	1.76	0.85
1:X:83:A:C2	1:X:98:U:H1'	2.11	0.85
4:B:27:LEU:HD23	4:B:27:LEU:O	1.76	0.85
4:B:176:ARG:NH2	15:M:16:ILE:HA	1.92	0.85
1:X:2482:A:C8	33:X:2911:ZLD:H13	2.12	0.85
1:X:1281:A:C1'	1:X:2592:U:C5	2.41	0.85
26:Y:42:SER:O	26:Y:43:HIS:HB2	1.77	0.85
5:C:102:LEU:O	5:C:102:LEU:HD23	1.77	0.85
6:D:65:PRO:HA	6:D:89:VAL:HG13	1.58	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:211:ARG:HA	3:A:214:TRP:CD1	2.12	0.85
4:B:136:ARG:HG2	4:B:137:ARG:H	1.42	0.85
24:V:56:VAL:HA	24:V:59:GLU:OE1	1.76	0.85
1:X:1729:C:H2'	1:X:1730:G:C8	2.12	0.85
1:X:2482:A:H4'	1:X:2483:U:OP1	1.76	0.85
3:A:212:SER:O	3:A:215:LEU:HD12	1.76	0.85
3:A:93:ALA:HB2	3:A:107:ALA:CB	2.03	0.85
5:C:132:ASN:O	5:C:135:SER:HB3	1.77	0.85
9:G:132:PHE:HB2	9:G:145:HIS:CE1	2.12	0.85
14:L:33:ARG:NH2	14:L:103:LEU:HB2	1.90	0.85
10:H:19:ILE:HD13	10:H:19:ILE:H	1.40	0.85
10:H:23:ARG:NH1	10:H:25:LEU:HG	1.92	0.85
1:X:1200:G:N2	1:X:1201:G:H1'	1.92	0.85
1:X:1323:G:H3'	1:X:1324:G:N2	1.92	0.85
2:Z:15:A:O2'	2:Z:16:U:H5''	1.76	0.85
14:L:63:ASN:HB3	14:L:66:ASP:CB	2.06	0.84
22:T:25:LYS:HA	22:T:29:GLU:OE1	1.75	0.84
24:V:2:LYS:HA	24:V:6:MET:HE2	1.59	0.84
4:B:16:LYS:O	4:B:17:ASN:HB2	1.76	0.84
5:C:176:ASN:ND2	5:C:179:ASP:H	1.74	0.84
21:S:42:ALA:HA	21:S:45:GLN:HE21	1.42	0.84
21:S:105:GLN:HE22	21:S:139:THR:HG22	1.41	0.84
24:V:14:PHE:CD2	24:V:57:LYS:HB2	2.11	0.84
1:X:1838:G:H3'	1:X:1839:A:H8	1.43	0.84
1:X:27:G:N2	1:X:522:G:O2'	2.09	0.84
5:C:112:GLN:OE1	5:C:116:LYS:HD2	1.77	0.84
1:X:969:U:C2	12:J:17:ARG:HD2	2.13	0.84
21:S:91:PRO:HG2	21:S:92:VAL:H	1.43	0.84
1:X:1060:C:O2	1:X:1124:U:H4'	1.77	0.84
1:X:542:A:H2	1:X:2004:U:H2'	1.37	0.84
1:X:2710:C:O2'	1:X:2711:G:H5'	1.77	0.84
9:G:63:ARG:HG3	9:G:64:GLY:H	1.41	0.84
24:V:4:SER:C	24:V:6:MET:H	1.76	0.84
6:D:46:ASP:HB3	6:D:49:ALA:HB3	1.59	0.84
11:I:76:LYS:HD3	11:I:79:GLN:NE2	1.93	0.84
1:X:1286:U:H4'	1:X:1288:A:OP2	1.76	0.84
1:X:542:A:C5'	16:N:28:ARG:HH21	1.86	0.84
1:X:1503:G:H2'	1:X:1504:G:H8	1.43	0.84
9:G:104:THR:OG1	9:G:110:LEU:HB3	1.76	0.84
1:X:969:U:C4	12:J:17:ARG:HB2	2.13	0.84
20:R:51:VAL:HG21	20:R:76:LEU:CD2	2.08	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:149:ALA:HB3	21:S:164:PRO:HA	1.59	0.84
23:U:45:ASN:O	23:U:46:LEU:HG	1.77	0.84
16:N:30:LYS:HZ2	16:N:30:LYS:HB3	1.43	0.84
21:S:16:GLU:O	21:S:18:MET:HG2	1.77	0.84
1:X:1053:G:H2'	1:X:1054:C:H6	1.42	0.84
1:X:1928:G:H2'	1:X:1929:U:H6	1.43	0.84
1:X:2180:U:H2'	1:X:2203:G:H22	1.42	0.84
1:X:2404:A:H4'	1:X:2405:A:C5'	2.07	0.84
1:X:70:A:H4'	1:X:71:A:O5'	1.75	0.84
1:X:726:G:H2'	1:X:727:U:C2	2.12	0.84
1:X:1003:C:H4'	17:O:71:ILE:HD13	1.57	0.84
1:X:1690:U:C2'	1:X:1691:G:H5''	2.06	0.84
1:X:1710:U:H5'	1:X:1711:C:H5	1.42	0.84
23:U:50:ALA:C	23:U:52:ARG:HH22	1.81	0.83
1:X:1673:C:H5'	4:B:136:ARG:HH11	1.43	0.83
1:X:575:U:H2'	1:X:576:A:H8	1.43	0.83
3:A:217:ARG:HG2	3:A:218:LYS:HG3	1.60	0.83
5:C:95:LEU:HD23	5:C:96:PRO:HD2	1.60	0.83
14:L:85:LYS:HG2	14:L:86:GLN:NE2	1.93	0.83
10:H:116:ARG:HH11	15:M:38:LYS:HZ2	1.24	0.83
16:N:51:ARG:HD2	16:N:51:ARG:H	1.43	0.83
16:N:91:ASN:O	16:N:93:LYS:HG3	1.77	0.83
17:O:12:TYR:O	17:O:13:ARG:HG2	1.77	0.83
2:Z:106:U:O2'	21:S:67:LYS:HG2	1.78	0.83
23:U:28:GLY:HA3	23:U:32:ARG:CB	2.08	0.83
1:X:1452:U:O2'	1:X:1453:A:H5'	1.78	0.83
1:X:886:A:H1'	12:J:30:PHE:CE1	2.13	0.83
6:D:80:ARG:HD3	6:D:83:MET:HB2	1.58	0.83
13:K:84:ALA:HB3	13:K:85:PRO:HD3	1.60	0.83
17:O:15:SER:HA	17:O:95:ILE:HB	1.60	0.83
23:U:48:LYS:HG2	23:U:49:LYS:N	1.94	0.83
1:X:2712:G:H3'	1:X:2713:A:C5'	2.08	0.83
1:X:648:A:H4'	1:X:649:G:C5'	2.08	0.83
5:C:39:ARG:HH21	5:C:91:TYR:CB	1.91	0.83
16:N:5:LYS:C	16:N:7:GLY:H	1.80	0.83
1:X:455:A:H1'	1:X:1215:A:O4'	1.78	0.83
2:Z:64:C:H2'	2:Z:65:A:C8	2.13	0.83
3:A:206:LEU:O	3:A:211:ARG:HD2	1.77	0.83
5:C:48:ARG:CB	5:C:51:VAL:HG22	2.07	0.83
7:E:140:LEU:O	7:E:144:VAL:HG23	1.78	0.83
12:J:15:ARG:HD3	12:J:73:LYS:HZ2	1.43	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:32:ARG:NH1	18:P:119:LYS:HB3	1.93	0.83
19:Q:25:TYR:OH	19:Q:87:SER:HA	1.79	0.83
1:X:2811:G:H2'	1:X:2812:A:C8	2.14	0.83
3:A:72:LYS:HE2	3:A:97:TYR:CD2	2.14	0.83
4:B:195:LEU:HB2	15:M:3:THR:CG2	2.09	0.83
6:D:153:ASP:C	6:D:154:ILE:HD12	1.99	0.83
16:N:93:LYS:HZ3	17:O:5:ILE:HG22	1.43	0.83
19:Q:20:MET:O	19:Q:22:ARG:N	2.11	0.83
22:T:53:MET:CE	22:T:59:LEU:HD11	2.07	0.83
24:V:46:LEU:O	24:V:50:VAL:HG23	1.78	0.83
6:D:10:ASP:C	6:D:12:VAL:H	1.82	0.83
6:D:132:ILE:HG13	6:D:154:ILE:HD13	1.61	0.83
7:E:103:LEU:HD12	7:E:104:GLU:H	1.44	0.83
1:X:1264:C:C5'	16:N:13:ARG:NH1	2.41	0.83
20:R:14:LEU:HD22	20:R:41:PRO:HA	1.58	0.83
1:X:1673:C:H5''	4:B:136:ARG:HB3	1.58	0.83
7:E:130:ARG:O	7:E:131:ILE:HD13	1.78	0.83
13:K:49:GLU:OE1	13:K:95:THR:HB	1.78	0.83
9:G:70:PHE:HB2	16:N:64:ARG:NE	1.94	0.83
19:Q:77:LYS:HG2	19:Q:79:ILE:HD11	1.61	0.83
21:S:102:GLY:O	21:S:138:VAL:HG21	1.79	0.83
21:S:112:LEU:HD12	21:S:113:VAL:N	1.93	0.83
21:S:168:VAL:HG12	21:S:169:VAL:HG22	1.60	0.83
9:G:105:GLY:O	9:G:106:TYR:C	2.17	0.82
10:H:64:VAL:HG22	10:H:106:ARG:NH2	1.94	0.82
15:M:55:ILE:O	15:M:56:ALA:HB2	1.78	0.82
16:N:91:ASN:O	16:N:93:LYS:N	2.12	0.82
17:O:10:LYS:HB2	17:O:37:ALA:H	1.44	0.82
1:X:1815:G:H2'	1:X:1816:G:H8	1.44	0.82
1:X:1956:G:H2'	1:X:1957:C:H6	1.44	0.82
8:F:72:THR:N	8:F:73:PRO:HD3	1.95	0.82
1:X:1630:A:N1	18:P:114:ALA:HB2	1.94	0.82
20:R:14:LEU:H	20:R:14:LEU:HD23	1.45	0.82
8:F:77:TYR:HB2	8:F:112:LYS:NZ	1.93	0.82
16:N:85:ARG:CB	16:N:116:ALA:HB1	2.07	0.82
23:U:71:SER:C	23:U:72:LYS:HE2	1.99	0.82
2:Z:53:G:H5'	14:L:64:LYS:NZ	1.95	0.82
5:C:24:SER:HA	5:C:27:LEU:HD23	1.60	0.82
6:D:98:VAL:HG12	6:D:102:LYS:HE3	1.59	0.82
14:L:75:LEU:O	14:L:78:ALA:HB3	1.80	0.82
21:S:112:LEU:HD12	21:S:113:VAL:H	1.44	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1045:G:H2'	1:X:1046:U:C6	2.14	0.82
26:Y:47:PRO:HG2	26:Y:48:ASN:H	1.44	0.82
6:D:35:VAL:HG22	6:D:90:THR:HA	1.60	0.82
10:H:62:GLY:O	10:H:65:LYS:HE3	1.78	0.82
19:Q:74:ASP:O	19:Q:75:ARG:HG3	1.79	0.82
1:X:1416:A:H2'	1:X:1417:C:C6	2.13	0.82
1:X:512:A:H4'	18:P:15:LYS:HB3	1.60	0.82
3:A:84:TYR:HE2	3:A:91:ARG:HG2	1.45	0.82
14:L:33:ARG:NH1	14:L:103:LEU:HB3	1.93	0.82
16:N:39:LEU:O	16:N:42:ALA:N	2.11	0.82
1:X:1744:G:N2	1:X:1746:A:H3'	1.94	0.82
1:X:2272:A:H5''	14:L:15:ARG:NH2	1.94	0.82
1:X:2331:A:C2	22:T:33:ALA:HB1	2.14	0.82
5:C:123:PHE:O	5:C:125:ILE:N	2.13	0.82
7:E:56:SER:HB2	7:E:61:HIS:CG	2.15	0.82
16:N:16:LYS:O	16:N:20:ARG:HG3	1.78	0.82
1:X:2372:A:H2'	1:X:2373:C:H6	1.44	0.82
1:X:667:U:O2	1:X:667:U:H2'	1.78	0.82
1:X:787:A:H5''	3:A:48:ARG:HH22	1.42	0.82
3:A:36:ALA:HB1	3:A:63:ARG:HA	1.62	0.82
10:H:3:MET:O	10:H:6:SER:HB2	1.80	0.82
16:N:10:ARG:HG2	16:N:13:ARG:NH2	1.94	0.82
21:S:54:ILE:HB	21:S:62:PHE:N	1.94	0.82
1:X:1373:G:N2	1:X:1374:G:H1'	1.93	0.82
1:X:742:G:N1	3:A:208:LYS:HD3	1.93	0.82
3:A:119:ALA:HB1	3:A:130:ALA:HB3	1.59	0.82
10:H:116:ARG:HD3	15:M:40:ARG:HB3	1.61	0.82
12:J:15:ARG:HB3	12:J:73:LYS:HZ2	1.42	0.82
12:J:8:THR:HG22	12:J:70:PHE:CZ	2.14	0.82
17:O:10:LYS:CD	17:O:37:ALA:HB3	2.08	0.82
1:X:2779:C:H2'	1:X:2780:A:O4'	1.78	0.82
1:X:216:U:H5''	1:X:601:A:H62	1.45	0.82
3:A:173:VAL:HG12	3:A:174:ILE:N	1.94	0.82
8:F:77:TYR:HB2	8:F:112:LYS:HZ1	1.45	0.82
18:P:9:ARG:HB3	18:P:13:GLN:HG3	1.62	0.82
23:U:9:GLY:H	23:U:14:VAL:HG22	1.44	0.82
23:U:50:ALA:CB	23:U:52:ARG:HH22	1.93	0.82
1:X:1219:C:H5'	11:I:7:LYS:O	1.80	0.82
1:X:148:C:H3'	1:X:149:A:C8	2.14	0.82
1:X:2722:C:H2'	1:X:2723:C:H6	1.44	0.82
1:X:536:A:H5'	1:X:537:C:OP1	1.80	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:67:G:H2'	1:X:68:C:C6	2.15	0.82
1:X:1673:C:H5''	4:B:136:ARG:HD3	1.61	0.81
8:F:116:LEU:HD22	8:F:118:ALA:HB3	1.60	0.81
1:X:173:A:N6	1:X:844:G:H21	1.78	0.81
1:X:1816:G:O2'	1:X:1817:U:H5'	1.79	0.81
1:X:836:G:H2'	1:X:837:U:H6	1.45	0.81
1:X:2037:A:H2'	26:Y:8:LYS:HE3	1.61	0.81
11:I:30:ALA:HB2	11:I:34:HIS:CE1	2.15	0.81
13:K:14:SER:OG	13:K:15:SER:N	2.08	0.81
17:O:26:GLN:HG2	17:O:27:GLY:H	1.45	0.81
2:Z:32:C:H2'	2:Z:33:C:H5'	1.61	0.81
4:B:167:VAL:HG13	4:B:170:LEU:HD11	1.63	0.81
5:C:125:ILE:HD12	5:C:133:PHE:HA	1.62	0.81
11:I:72:TYR:CB	11:I:107:LYS:HB2	2.08	0.81
11:I:32:ARG:HD3	11:I:32:ARG:O	1.79	0.81
1:X:1822:C:H6	1:X:1822:C:O5'	1.62	0.81
1:X:2482:A:C1'	33:X:2911:ZLD:H13B	2.10	0.81
1:X:3:U:H2'	1:X:4:C:H6	1.46	0.81
30:4:9:LYS:HB3	30:4:14:CYS:SG	2.21	0.81
3:A:238:GLY:O	3:A:239:ARG:HG3	1.79	0.81
1:X:1524:C:H5''	1:X:1525:A:C8	2.15	0.81
1:X:693:A:H2'	1:X:694:G:C8	2.15	0.81
3:A:134:ARG:HG3	3:A:135:PHE:CD2	2.15	0.81
4:B:134:TRP:H	4:B:134:TRP:HD1	1.27	0.81
9:G:151:TYR:HB3	9:G:157:PRO:HG3	1.62	0.81
14:L:43:ILE:HD12	14:L:43:ILE:H	1.46	0.81
19:Q:39:LYS:O	19:Q:43:GLN:HB2	1.81	0.81
20:R:108:VAL:HG22	20:R:109:ALA:N	1.94	0.81
12:J:23:LYS:HA	21:S:73:LYS:HZ1	1.45	0.81
22:T:66:LYS:O	22:T:68:VAL:HG23	1.81	0.81
1:X:38:G:H1	1:X:453:U:H3	1.25	0.81
3:A:200:GLU:HG3	3:A:202:LYS:HB2	1.59	0.81
5:C:4:ILE:HA	5:C:13:ARG:HH22	1.45	0.81
1:X:228:A:H5'	11:I:53:ARG:HG2	1.62	0.81
23:U:32:ARG:HD2	23:U:34:THR:H	1.45	0.81
1:X:1253:C:H2'	1:X:1254:G:H5'	1.63	0.81
1:X:813:A:H4'	1:X:814:G:O5'	1.81	0.81
4:B:146:THR:HB	4:B:147:PRO:HD2	1.62	0.81
7:E:16:THR:HG22	7:E:18:ASN:ND2	1.95	0.81
9:G:105:GLY:N	9:G:110:LEU:HD12	1.95	0.81
9:G:32:TYR:OH	9:G:35:LYS:HE2	1.81	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:29:LEU:HB3	14:L:89:PHE:HA	1.61	0.81
1:X:1264:C:H5''	16:N:13:ARG:NH1	1.95	0.81
18:P:87:GLU:HA	18:P:90:LEU:HD11	1.61	0.81
19:Q:20:MET:O	19:Q:23:GLY:N	2.14	0.81
21:S:24:TYR:HB3	21:S:29:ASN:OD1	1.79	0.81
23:U:54:ASN:C	23:U:56:GLN:H	1.80	0.81
24:V:4:SER:HB3	24:V:7:ARG:NH2	1.95	0.81
1:X:1919:A:H2	1:X:1926:U:N3	1.78	0.81
1:X:1956:G:H2'	1:X:1957:C:C6	2.15	0.81
1:X:2005:U:H4'	1:X:2006:G:OP1	1.81	0.81
3:A:243:GLY:C	3:A:244:ARG:HD3	2.00	0.81
6:D:69:LYS:CE	6:D:84:PRO:HG3	2.10	0.81
11:I:94:GLU:HB3	11:I:97:ARG:HH11	1.46	0.81
11:I:33:GLY:HA2	17:O:79:GLN:HG3	1.61	0.81
22:T:53:MET:HE3	22:T:59:LEU:HD11	1.62	0.81
2:Z:30:C:N4	2:Z:58:G:H1	1.78	0.81
1:X:1517:C:H4'	3:A:96:HIS:CE1	2.15	0.81
14:L:67:THR:O	14:L:71:VAL:HG12	1.81	0.81
15:M:29:PRO:HA	15:M:54:VAL:HG12	1.62	0.81
18:P:109:ARG:HD2	18:P:115:ASN:ND2	1.95	0.81
23:U:28:GLY:CA	23:U:32:ARG:HB3	2.10	0.81
23:U:53:GLU:HB2	23:U:56:GLN:O	1.80	0.81
1:X:2311:U:C4'	1:X:2315:A:H62	1.94	0.81
1:X:2564:U:H3	33:X:2911:ZLD:C21	1.93	0.81
1:X:491:A:H5''	20:R:74:LEU:HD11	1.63	0.81
3:A:33:LEU:HD21	3:A:63:ARG:NH2	1.95	0.81
5:C:125:ILE:CD1	5:C:133:PHE:HA	2.11	0.81
6:D:132:ILE:CB	6:D:152:MET:HB2	2.07	0.81
17:O:39:PHE:CE1	17:O:46:VAL:HG21	2.15	0.81
23:U:48:LYS:CG	23:U:49:LYS:H	1.94	0.81
6:D:167:ARG:HG3	6:D:177:PHE:HE2	1.44	0.81
10:H:75:VAL:HG12	10:H:118:LEU:HD11	1.61	0.81
1:X:1349:A:H2'	1:X:1350:G:C8	2.16	0.81
1:X:1859:A:H2'	1:X:1860:A:C8	2.16	0.81
1:X:2759:U:H5''	1:X:2760:G:OP1	1.81	0.81
1:X:788:G:H5'	1:X:790:A:C1'	2.11	0.81
4:B:65:GLY:HA2	4:B:68:ALA:HB3	1.62	0.80
9:G:84:ASN:HA	9:G:153:GLY:O	1.80	0.80
25:W:39:ALA:O	25:W:43:MET:HG2	1.80	0.80
1:X:1151:U:H5'	1:X:1153:A:C5'	2.08	0.80
5:C:128:ALA:HB2	5:C:159:ARG:CZ	2.11	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:333:A:H3'	5:C:162:ARG:NH1	1.96	0.80
10:H:19:ILE:HG22	10:H:55:VAL:HA	1.62	0.80
1:X:2528:G:H2'	1:X:2529:G:H8	1.46	0.80
1:X:2856:U:H2'	1:X:2857:C:C6	2.16	0.80
1:X:2871:U:H2'	1:X:2872:U:H6	1.45	0.80
3:A:108:PRO:HB3	3:A:143:HIS:CE1	2.17	0.80
4:B:115:GLY:HA3	4:B:136:ARG:HD2	1.63	0.80
7:E:103:LEU:HB2	7:E:123:PHE:CE2	2.15	0.80
9:G:103:TYR:HB3	9:G:107:GLN:HE21	1.45	0.80
11:I:77:LEU:HB3	11:I:112:GLY:N	1.97	0.80
16:N:88:ILE:HG12	17:O:48:GLY:C	2.02	0.80
21:S:117:VAL:CG2	21:S:168:VAL:HG13	2.12	0.80
1:X:2871:U:H2'	1:X:2872:U:C6	2.16	0.80
1:X:403:A:OP2	1:X:403:A:H3'	1.81	0.80
5:C:7:ILE:CB	5:C:120:VAL:H	1.92	0.80
16:N:74:MET:O	16:N:75:ASN:HB3	1.78	0.80
21:S:51:LEU:HD23	21:S:65:LEU:HD13	1.61	0.80
25:W:50:LEU:HB2	25:W:51:LEU:HD23	1.64	0.80
1:X:1122:A:H2	1:X:1123:G:H1'	1.45	0.80
1:X:1122:A:O2'	1:X:1123:G:H4'	1.80	0.80
1:X:1151:U:C5'	1:X:1153:A:H5'	2.05	0.80
1:X:2418:A:H4'	1:X:2419:C:O5'	1.80	0.80
6:D:113:ASP:HB3	6:D:115:ARG:NH1	1.97	0.80
21:S:42:ALA:CA	21:S:45:GLN:HE21	1.94	0.80
25:W:54:GLN:HG2	25:W:55:GLU:CD	2.02	0.80
1:X:1135:C:H2'	1:X:1136:G:H8	1.47	0.80
1:X:1595:A:O5'	1:X:1595:A:H8	1.65	0.80
3:A:43:ARG:HH21	3:A:54:ILE:HG13	1.46	0.80
6:D:60:ILE:HG13	6:D:61:THR:N	1.95	0.80
11:I:30:ALA:H	11:I:34:HIS:CG	1.98	0.80
1:X:1219:C:H4'	11:I:7:LYS:H	1.47	0.80
14:L:32:TYR:H	14:L:38:ILE:HD12	1.47	0.80
16:N:29:SER:O	16:N:30:LYS:HD2	1.81	0.80
17:O:10:LYS:HG3	17:O:11:GLN:N	1.97	0.80
17:O:23:GLU:CG	17:O:91:THR:HG21	2.11	0.80
20:R:37:LEU:HD21	20:R:49:GLU:HG3	1.63	0.80
21:S:148:THR:HA	21:S:166:LEU:O	1.80	0.80
21:S:3:LEU:HD13	21:S:4:THR:N	1.94	0.80
1:X:128:C:C2'	1:X:129:A:H5''	2.11	0.80
1:X:1644:G:O2'	1:X:1645:U:H5'	1.81	0.80
1:X:2397:A:H2'	1:X:2398:U:O4'	1.82	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:72:VAL:HG12	4:B:73:ALA:N	1.96	0.80
5:C:122:GLY:HA3	5:C:136:TRP:CZ3	2.17	0.80
1:X:2728:A:O2'	7:E:66:GLY:HA3	1.80	0.80
1:X:2490:U:H2'	1:X:2491:C:C6	2.15	0.80
1:X:2728:A:H2'	1:X:2729:A:H8	1.46	0.80
3:A:75:VAL:HG12	3:A:76:ASN:O	1.82	0.80
11:I:11:GLY:H	11:I:14:LYS:CB	1.95	0.80
21:S:36:ARG:HE	21:S:37:LYS:H	1.28	0.80
1:X:530:G:H2'	1:X:531:G:H8	1.46	0.80
6:D:82:GLY:O	6:D:83:MET:HG3	1.82	0.80
7:E:101:LYS:HD2	7:E:117:PRO:HG2	1.64	0.80
19:Q:61:LYS:H	19:Q:72:ARG:HD3	1.45	0.80
1:X:16:G:O2'	1:X:17:G:H5'	1.82	0.80
1:X:631:G:H5'	1:X:632:A:OP1	1.81	0.80
4:B:117:MET:HA	4:B:121:ASN:O	1.81	0.80
5:C:130:THR:O	5:C:133:PHE:HB3	1.82	0.80
14:L:99:ARG:HG3	14:L:100:VAL:N	1.95	0.80
19:Q:24:VAL:HG22	19:Q:81:ARG:HB2	1.62	0.80
1:X:1416:A:H2'	1:X:1417:C:H6	1.46	0.79
1:X:840:U:H4'	1:X:841:G:C2	2.16	0.79
16:N:94:VAL:O	16:N:96:ALA:N	2.14	0.79
20:R:107:ALA:HB1	20:R:111:GLY:HA2	1.62	0.79
1:X:1167:A:H61	16:N:48:ARG:HG2	1.43	0.79
1:X:687:G:C2'	1:X:688:A:H5'	2.13	0.79
8:F:129:ALA:HB1	8:F:133:ARG:CZ	2.13	0.79
11:I:121:HIS:HA	11:I:141:VAL:HB	1.62	0.79
11:I:32:ARG:NH2	17:O:79:GLN:HA	1.98	0.79
19:Q:53:ILE:HD13	19:Q:80:VAL:HB	1.64	0.79
21:S:127:PRO:O	21:S:128:ARG:HG2	1.82	0.79
1:X:1034:U:H2'	1:X:1035:G:H5'	1.63	0.79
3:A:79:VAL:O	3:A:114:GLY:HA2	1.83	0.79
10:H:25:LEU:HD11	10:H:52:VAL:HG23	1.64	0.79
14:L:63:ASN:CB	14:L:66:ASP:HB2	2.10	0.79
1:X:148:C:H3'	1:X:149:A:H8	1.46	0.79
1:X:2020:G:H2'	1:X:2021:G:H8	1.44	0.79
1:X:57:G:H2'	1:X:58:C:C6	2.16	0.79
7:E:45:GLN:HA	7:E:50:LEU:HA	1.64	0.79
17:O:26:GLN:HG3	17:O:63:HIS:CD2	2.18	0.79
1:X:33:C:O2'	1:X:34:U:H5''	1.81	0.79
1:X:403:A:H4'	1:X:404:A:O5'	1.81	0.79
7:E:136:ILE:HG22	7:E:137:ASP:H	1.45	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:124:GLU:N	9:G:124:GLU:OE1	2.15	0.79
9:G:72:PRO:O	9:G:74:MET:N	2.16	0.79
16:N:32:TYR:O	16:N:35:ALA:HB3	1.83	0.79
18:P:90:LEU:HA	18:P:129:ALA:O	1.81	0.79
1:X:921:A:H2'	1:X:924:C:H5	1.48	0.79
14:L:15:ARG:HH11	14:L:15:ARG:HG2	1.48	0.79
1:X:1336:G:OP1	18:P:105:ARG:NH1	2.16	0.79
1:X:356:A:H2'	1:X:357:A:C8	2.17	0.79
3:A:184:ARG:HG3	3:A:184:ARG:HH11	1.48	0.79
8:F:81:LYS:HZ1	8:F:84:GLY:HA3	1.48	0.79
11:I:90:ARG:O	11:I:121:HIS:HB2	1.82	0.79
16:N:91:ASN:HA	17:O:10:LYS:NZ	1.96	0.79
17:O:36:LYS:HD2	17:O:55:THR:CA	2.13	0.79
1:X:2604:G:H2'	1:X:2605:C:C6	2.18	0.79
4:B:136:ARG:O	4:B:137:ARG:HB2	1.82	0.79
5:C:7:ILE:O	5:C:120:VAL:HB	1.82	0.79
5:C:176:ASN:HD22	5:C:179:ASP:N	1.81	0.79
10:H:55:VAL:HG12	10:H:55:VAL:O	1.80	0.79
11:I:72:TYR:HB3	11:I:107:LYS:CB	2.13	0.79
12:J:98:VAL:HG12	12:J:99:LYS:N	1.98	0.79
21:S:3:LEU:CD2	21:S:32:PHE:HB3	2.13	0.79
21:S:3:LEU:CD2	21:S:33:ALA:H	1.95	0.79
8:F:101:ASN:O	8:F:104:GLN:HG2	1.82	0.79
20:R:5:SER:O	20:R:6:ALA:HB2	1.81	0.79
23:U:49:LYS:HB3	23:U:61:TRP:CD2	2.18	0.79
1:X:1445:A:H2'	1:X:1446:U:H6	1.48	0.79
1:X:2787:A:H2'	1:X:2788:C:C6	2.15	0.79
1:X:414:A:H5'	1:X:414:A:H8	1.48	0.79
2:Z:36:A:H4'	2:Z:37:C:C5	2.18	0.79
24:V:10:GLN:HG3	24:V:12:THR:OG1	1.82	0.78
1:X:1914:U:C5'	1:X:1914:U:H6	1.94	0.78
1:X:2175:A:H2'	1:X:2176:U:H6	1.48	0.78
1:X:41:G:O2'	1:X:42:G:H5'	1.82	0.78
5:C:5:ASN:HA	5:C:118:VAL:CG2	2.13	0.78
10:H:9:ASP:HB2	10:H:95:ALA:CB	2.14	0.78
12:J:44:LYS:HD3	12:J:47:GLN:CD	2.02	0.78
1:X:2245:A:H4'	1:X:2246:A:N3	1.97	0.78
6:D:132:ILE:HB	6:D:152:MET:CB	2.12	0.78
10:H:116:ARG:HB2	10:H:116:ARG:NH1	1.98	0.78
14:L:27:LEU:HD23	14:L:44:ASP:HB2	1.66	0.78
18:P:45:ILE:O	18:P:48:LYS:HG2	1.83	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1277:G:OP1	26:Y:19:ARG:NH2	2.14	0.78
1:X:2447:G:O2'	1:X:2448:A:H8	1.65	0.78
1:X:332:C:H1'	5:C:159:ARG:NE	1.98	0.78
1:X:421:G:H2'	1:X:422:C:H6	1.49	0.78
1:X:704:G:H2'	1:X:705:C:H6	1.48	0.78
6:D:10:ASP:N	6:D:14:PRO:HD2	1.98	0.78
11:I:72:TYR:CB	11:I:107:LYS:HE2	2.11	0.78
11:I:80:LEU:O	11:I:84:GLU:HB3	1.84	0.78
19:Q:3:HIS:ND1	19:Q:41:ALA:HA	1.99	0.78
1:X:1086:C:C2'	1:X:1087:C:H5''	2.13	0.78
1:X:1912:G:O2'	1:X:1913:G:H5'	1.84	0.78
1:X:2200:G:H2'	1:X:2201:G:C8	2.19	0.78
1:X:2426:G:H4'	1:X:2427:A:O5'	1.83	0.78
1:X:2867:G:H4'	1:X:2868:G:O5'	1.80	0.78
7:E:137:ASP:HB3	7:E:140:LEU:HB2	1.65	0.78
20:R:10:HIS:HB2	20:R:44:GLN:HE22	1.49	0.78
1:X:2047:C:H1'	1:X:2429:A:C6	2.17	0.78
1:X:807:A:H2'	1:X:808:C:C6	2.17	0.78
3:A:76:ASN:HA	3:A:118:ASN:HA	1.65	0.78
4:B:152:LYS:HD2	9:G:106:TYR:H	1.48	0.78
7:E:131:ILE:HG22	7:E:132:ASP:N	1.99	0.78
8:F:109:ALA:O	8:F:113:MET:HG3	1.84	0.78
10:H:78:SER:HB2	10:H:94:ASN:OD1	1.83	0.78
1:X:2372:A:H2'	1:X:2373:C:C6	2.18	0.78
1:X:2379:G:O2'	1:X:2380:U:H5'	1.83	0.78
1:X:955:G:H5'	1:X:956:A:H5''	1.63	0.78
1:X:1043:A:H5''	30:4:9:LYS:NZ	1.99	0.78
7:E:136:ILE:N	7:E:136:ILE:HD12	1.98	0.78
17:O:20:ILE:HD12	17:O:21:ARG:N	1.99	0.78
18:P:57:LEU:CD1	18:P:69:ALA:HA	2.14	0.78
1:X:1188:A:H3'	1:X:1189:G:C8	2.17	0.78
5:C:164:VAL:O	5:C:166:TRP:N	2.16	0.78
5:C:151:VAL:HG11	5:C:175:VAL:HG13	1.65	0.78
6:D:111:ILE:CB	6:D:114:PHE:HB2	2.12	0.78
12:J:86:LYS:O	12:J:88:LYS:HG3	1.83	0.78
1:X:400:U:C5	23:U:23:LYS:HD3	2.15	0.78
1:X:2018:G:H4'	1:X:2019:C:OP2	1.82	0.78
14:L:64:LYS:H	14:L:64:LYS:CE	1.88	0.78
14:L:67:THR:O	14:L:70:ALA:HB3	1.83	0.78
14:L:73:LYS:HG3	14:L:110:GLY:CA	2.14	0.78
1:X:2289:A:H2	6:D:79:LEU:HD21	1.49	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:54:ILE:CG1	21:S:62:PHE:HB2	2.09	0.78
1:X:2781:G:C2'	1:X:2782:G:H5''	2.14	0.78
5:C:147:LYS:HB3	5:C:183:HIS:HB3	1.65	0.77
7:E:67:LEU:O	7:E:71:LEU:HD23	1.84	0.77
13:K:74:ASP:HA	13:K:77:ARG:NH1	1.98	0.77
1:X:1003:C:O2'	17:O:71:ILE:HD11	1.84	0.77
17:O:23:GLU:HG3	17:O:91:THR:HG21	1.66	0.77
1:X:732:G:H2'	1:X:733:G:H8	1.48	0.77
4:B:60:ASN:HB3	4:B:62:PRO:HD2	1.66	0.77
9:G:67:ARG:CB	9:G:70:PHE:HA	2.14	0.77
1:X:1467:U:H3'	1:X:1468:A:H5'	1.64	0.77
1:X:1781:C:P	3:A:219:PRO:HB2	2.24	0.77
1:X:2408:G:H5'	1:X:2409:A:OP2	1.84	0.77
1:X:33:C:N4	1:X:458:G:O2'	2.16	0.77
26:Y:35:GLN:O	26:Y:37:HIS:N	2.17	0.77
3:A:82:ILE:HD12	3:A:82:ILE:N	1.99	0.77
6:D:69:LYS:HE2	6:D:84:PRO:CG	2.10	0.77
7:E:127:GLU:HG3	7:E:129:THR:N	1.99	0.77
12:J:65:ILE:HA	12:J:107:VAL:HG12	1.66	0.77
16:N:62:ILE:HG23	16:N:76:TYR:CD1	2.19	0.77
1:X:1623:C:H4'	1:X:1624:A:O5'	1.84	0.77
1:X:683:A:H5''	11:I:45:LYS:H	1.49	0.77
4:B:9:ILE:HD11	4:B:27:LEU:HB3	1.65	0.77
11:I:77:LEU:HB3	11:I:112:GLY:H	1.50	0.77
13:K:87:TYR:CE1	13:K:94:TYR:HD2	2.02	0.77
20:R:37:LEU:HB2	20:R:47:VAL:O	1.83	0.77
1:X:1385:C:H1'	1:X:2192:U:C5	2.19	0.77
1:X:1043:A:H5''	30:4:9:LYS:HZ1	1.48	0.77
3:A:62:TYR:HE1	3:A:88:ARG:NH2	1.81	0.77
9:G:157:PRO:C	9:G:161:GLN:HE21	1.88	0.77
10:H:100:ASN:O	10:H:102:GLN:N	2.17	0.77
21:S:98:VAL:HG12	21:S:118:HIS:O	1.83	0.77
1:X:2016:A:OP2	1:X:2016:A:O4'	2.03	0.77
1:X:683:A:H5''	11:I:45:LYS:N	1.99	0.77
1:X:717:G:H2'	1:X:739:G:H22	1.50	0.77
1:X:836:G:H2'	1:X:837:U:C6	2.19	0.77
2:Z:107:C:H2'	2:Z:108:G:H5'	1.65	0.77
3:A:43:ARG:N	3:A:43:ARG:HD2	1.98	0.77
3:A:97:TYR:HB2	3:A:101:GLU:OE1	1.84	0.77
10:H:9:ASP:HB2	10:H:95:ALA:HB2	1.65	0.77
21:S:71:MET:HA	21:S:78:PRO:HA	1.67	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1012:A:H2'	1:X:1013:G:O4'	1.85	0.77
1:X:1467:U:H3'	1:X:1467:U:H6	1.48	0.77
1:X:1882:G:O2'	1:X:1883:A:H5''	1.85	0.77
1:X:94:C:O2'	24:V:40:PRO:HD2	1.85	0.77
6:D:135:GLN:HG2	6:D:152:MET:SD	2.25	0.77
7:E:24:PHE:HB2	7:E:35:VAL:O	1.84	0.77
9:G:107:GLN:HA	9:G:110:LEU:HG	1.66	0.77
18:P:42:VAL:HG12	18:P:42:VAL:O	1.85	0.77
1:X:34:U:H1'	20:R:4:PRO:HA	1.65	0.77
1:X:635:C:C2'	1:X:636:G:H5''	2.14	0.77
10:H:29:ILE:HD12	10:H:30:GLY:H	1.47	0.77
11:I:88:PHE:HB3	11:I:90:ARG:CD	2.15	0.77
1:X:1468:A:O5'	1:X:1468:A:C8	2.38	0.77
1:X:2082:C:H2'	1:X:2083:G:H5''	1.66	0.77
1:X:2206:C:H2'	1:X:2207:G:O4'	1.85	0.77
1:X:2236:U:H2'	1:X:2237:C:C6	2.20	0.77
1:X:2324:G:N3	1:X:2360:C:H2'	2.00	0.77
1:X:2781:G:H2'	1:X:2782:G:H5''	1.67	0.77
1:X:682:G:H4'	1:X:683:A:OP1	1.83	0.77
4:B:119:ARG:HA	4:B:160:MET:CE	2.15	0.77
15:M:5:ILE:HD12	15:M:5:ILE:O	1.84	0.77
23:U:50:ALA:HB3	23:U:52:ARG:HH12	1.48	0.77
1:X:1958:G:H2'	1:X:1959:U:C6	2.19	0.77
1:X:1675:C:OP1	4:B:134:TRP:NE1	2.18	0.77
4:B:91:VAL:HB	4:B:93:VAL:HG12	1.65	0.77
7:E:154:PRO:HA	7:E:160:LYS:O	1.84	0.77
11:I:85:ASP:HA	11:I:116:ARG:CZ	2.15	0.77
14:L:41:GLN:HA	14:L:53:ALA:HA	1.66	0.77
14:L:68:ALA:O	14:L:71:VAL:HG13	1.83	0.77
15:M:31:ASP:OD1	15:M:95:GLU:HG2	1.85	0.77
15:M:69:ARG:HH11	15:M:69:ARG:CG	1.98	0.77
21:S:115:ILE:HA	21:S:169:VAL:HG12	1.65	0.77
23:U:19:ILE:HA	23:U:42:GLN:HA	1.64	0.77
1:X:871:U:HO2'	1:X:2247:A:H2'	1.49	0.77
9:G:159:SER:C	9:G:161:GLN:H	1.84	0.76
1:X:542:A:H3'	16:N:28:ARG:HE	1.50	0.76
21:S:59:GLY:O	21:S:60:GLU:HG3	1.84	0.76
1:X:1749:G:H5'	1:X:1750:A:OP2	1.84	0.76
1:X:2236:U:H2'	1:X:2237:C:H6	1.49	0.76
1:X:352:G:O2'	1:X:353:G:H5'	1.83	0.76
1:X:760:U:C6	26:Y:3:LYS:HE2	2.20	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:155:THR:HG23	9:G:156:HIS:H	1.50	0.76
10:H:29:ILE:HG13	10:H:30:GLY:N	1.98	0.76
20:R:10:HIS:CB	20:R:44:GLN:HE22	1.99	0.76
20:R:93:ARG:NH1	20:R:108:VAL:HG23	2.00	0.76
23:U:52:ARG:HH21	23:U:52:ARG:HG2	1.49	0.76
1:X:1770:U:H5	1:X:1775:A:N7	1.82	0.76
1:X:2036:G:O2'	1:X:2037:A:H5'	1.84	0.76
1:X:2209:G:H4'	23:U:46:LEU:C	2.05	0.76
1:X:452:G:N2	5:C:40:ARG:HH22	1.83	0.76
2:Z:36:A:H4'	2:Z:37:C:H5	1.48	0.76
2:Z:63:A:H2'	2:Z:64:C:C6	2.20	0.76
3:A:165:VAL:HG12	3:A:166:GLN:H	1.49	0.76
5:C:170:LEU:HD23	5:C:175:VAL:HG12	1.65	0.76
5:C:45:THR:HG21	5:C:85:GLY:HA3	1.66	0.76
1:X:2272:A:H5''	14:L:15:ARG:HH22	1.51	0.76
16:N:68:GLY:O	16:N:71:LEU:HB3	1.85	0.76
1:X:1787:U:H2'	1:X:1788:C:H6	1.50	0.76
10:H:16:ALA:HA	10:H:58:ALA:CB	2.14	0.76
11:I:47:ALA:C	11:I:49:PHE:H	1.88	0.76
14:L:91:ARG:H	14:L:91:ARG:HD2	1.49	0.76
15:M:34:ARG:NH2	15:M:66:PHE:CZ	2.53	0.76
1:X:1128:G:C3'	1:X:1129:A:H5''	2.15	0.76
1:X:604:U:H2'	1:X:605:G:C8	2.19	0.76
18:P:62:ARG:NH2	26:Y:25:LEU:HD11	2.00	0.76
3:A:43:ARG:CZ	3:A:55:GLY:HA2	2.14	0.76
4:B:31:CYS:HB3	4:B:49:ILE:HD11	1.66	0.76
5:C:112:GLN:HA	5:C:116:LYS:HD3	1.67	0.76
6:D:94:GLU:HA	6:D:97:TYR:HB2	1.68	0.76
14:L:42:ILE:HB	14:L:52:ALA:CB	2.13	0.76
15:M:28:ARG:CB	15:M:29:PRO:CD	2.64	0.76
1:X:1437:A:H2'	1:X:1438:G:H8	1.51	0.76
4:B:31:CYS:HB3	4:B:49:ILE:CD1	2.15	0.76
7:E:127:GLU:C	7:E:129:THR:H	1.89	0.76
22:T:70:ILE:HB	22:T:78:PHE:HB2	1.67	0.76
25:W:38:PRO:HA	25:W:41:ARG:CZ	2.14	0.76
1:X:2644:A:O2'	1:X:2645:C:H5'	1.85	0.76
1:X:632:A:H2'	1:X:633:G:H5'	1.66	0.76
5:C:3:GLN:HG2	5:C:118:VAL:HG13	1.67	0.76
6:D:124:GLY:HA2	6:D:163:ASP:OD2	1.85	0.76
6:D:38:GLU:HB3	6:D:87:ILE:HB	1.67	0.76
16:N:31:GLN:O	16:N:35:ALA:HB2	1.85	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:37:LYS:HG2	21:S:38:ALA:N	1.99	0.76
22:T:30:VAL:HG13	22:T:65:GLY:O	1.85	0.76
23:U:72:LYS:N	23:U:72:LYS:HE2	2.01	0.76
1:X:1445:A:H2'	1:X:1446:U:C6	2.21	0.76
1:X:177:U:H2'	1:X:178:C:O4'	1.85	0.76
1:X:2824:C:H2'	1:X:2824:C:O2	1.84	0.76
6:D:101:GLU:HA	6:D:104:ILE:HD12	1.66	0.76
7:E:104:GLU:HA	7:E:104:GLU:OE2	1.85	0.76
13:K:97:ILE:N	13:K:97:ILE:HD12	2.01	0.76
1:X:1006:C:N3	9:G:31:THR:OG1	2.18	0.76
1:X:155:G:O2'	1:X:156:G:H5'	1.86	0.76
1:X:2284:U:H3'	1:X:2285:U:H5''	1.67	0.76
3:A:146:GLU:HG3	3:A:152:GLY:O	1.86	0.76
4:B:2:LYS:HD3	4:B:95:ILE:HG13	1.68	0.76
2:Z:46:G:H5'	6:D:92:ARG:NH2	2.00	0.76
7:E:87:LEU:N	7:E:131:ILE:O	2.18	0.76
8:F:116:LEU:HD11	8:F:127:THR:HB	1.68	0.76
10:H:1:MET:HA	10:H:45:ALA:O	1.86	0.76
13:K:33:ARG:HD3	13:K:112:LEU:HD12	1.67	0.76
14:L:97:HIS:O	14:L:101:LYS:HB2	1.85	0.76
16:N:47:TYR:CE2	16:N:51:ARG:NH2	2.53	0.76
16:N:51:ARG:CG	16:N:51:ARG:HH11	1.99	0.76
1:X:450:C:H2'	1:X:451:A:C8	2.21	0.76
1:X:693:A:H2'	1:X:694:G:H8	1.48	0.76
9:G:65:LYS:HG3	9:G:66:HIS:N	1.99	0.76
17:O:10:LYS:CG	17:O:11:GLN:HE21	1.99	0.76
17:O:10:LYS:HD2	17:O:37:ALA:HB3	1.68	0.76
1:X:43:A:H2'	1:X:44:G:H8	1.50	0.76
1:X:627:A:H2'	1:X:628:A:H8	1.49	0.76
1:X:1885:C:H5'	3:A:244:ARG:HD2	1.67	0.75
4:B:31:CYS:HB3	4:B:49:ILE:HG13	1.66	0.75
16:N:47:TYR:O	16:N:51:ARG:HD3	1.87	0.75
18:P:36:ARG:NH2	26:Y:20:ARG:NH2	2.33	0.75
20:R:22:VAL:HG11	20:R:80:LYS:CE	2.16	0.75
24:V:31:GLN:HB3	24:V:37:LEU:HB2	1.66	0.75
3:A:36:ALA:CB	3:A:63:ARG:HA	2.16	0.75
5:C:112:GLN:HB3	5:C:116:LYS:HD3	1.66	0.75
5:C:44:SER:HB3	5:C:88:PRO:HD3	1.68	0.75
7:E:90:ARG:HH21	7:E:163:ARG:NH1	1.83	0.75
12:J:106:GLU:N	12:J:106:GLU:OE1	2.18	0.75
12:J:36:ILE:HG21	12:J:131:LYS:HE2	1.67	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:M:50:PHE:CE1	15:M:79:ARG:HG3	2.21	0.75
17:O:33:VAL:HG12	17:O:57:GLN:HG2	1.66	0.75
1:X:1673:C:H2'	1:X:1674:C:H6	1.50	0.75
1:X:796:A:H8	1:X:797:A:H4'	1.52	0.75
3:A:208:LYS:HE3	3:A:208:LYS:HA	1.68	0.75
5:C:155:GLU:O	5:C:157:THR:N	2.18	0.75
7:E:125:VAL:HG13	7:E:131:ILE:HD11	1.68	0.75
11:I:62:LYS:CE	11:I:64:GLY:HA3	2.16	0.75
20:R:96:LYS:NZ	20:R:105:ARG:HG3	2.01	0.75
1:X:2178:U:H2'	1:X:2179:C:H6	1.50	0.75
1:X:459:A:C2	1:X:466:A:C8	2.74	0.75
1:X:512:A:H2'	1:X:513:A:H5'	1.68	0.75
1:X:640:C:H4'	1:X:660:G:H21	1.51	0.75
16:N:25:TRP:O	16:N:28:ARG:HB2	1.86	0.75
19:Q:12:ILE:HD12	19:Q:13:SER:N	1.98	0.75
1:X:824:U:O2	1:X:1263:G:H3'	1.85	0.75
1:X:1736:C:H2'	1:X:1737:G:H8	1.51	0.75
1:X:178:C:H2'	1:X:178:C:O2	1.85	0.75
1:X:2282:G:H4'	6:D:122:PHE:HA	1.67	0.75
3:A:104:TYR:C	3:A:105:ILE:HD12	2.07	0.75
3:A:39:LYS:HD3	3:A:62:TYR:HB2	1.67	0.75
6:D:46:ASP:CB	6:D:49:ALA:HB3	2.16	0.75
20:R:84:VAL:HA	20:R:90:LYS:HE2	1.66	0.75
21:S:147:ILE:HB	21:S:169:VAL:HG23	1.67	0.75
23:U:20:ARG:HG2	23:U:39:LYS:HE3	1.69	0.75
24:V:42:ARG:NH1	24:V:45:GLN:HE22	1.84	0.75
1:X:1607:A:H2'	1:X:1608:U:H6	1.51	0.75
1:X:439:C:H2'	1:X:440:U:C6	2.22	0.75
1:X:1142:G:H4'	9:G:103:TYR:CE2	2.22	0.75
9:G:35:LYS:HB3	9:G:69:ASP:OD2	1.87	0.75
1:X:2355:A:H2	14:L:89:PHE:CZ	2.03	0.75
21:S:42:ALA:HA	21:S:45:GLN:NE2	2.01	0.75
23:U:27:ASP:HA	23:U:32:ARG:NH1	2.01	0.75
1:X:1670:G:H4'	1:X:1671:A:OP1	1.87	0.75
1:X:177:U:O4	1:X:225:G:C2	2.39	0.75
1:X:1805:G:N3	3:A:50:THR:HG21	2.01	0.75
1:X:2691:C:O2'	1:X:2692:A:O5'	2.05	0.75
1:X:211:U:H3	1:X:442:A:H61	1.35	0.75
1:X:48:A:H1'	1:X:50:G:C2	2.22	0.75
2:Z:39:C:H5''	2:Z:40:C:H5	1.48	0.75
6:D:41:GLY:HA2	6:D:44:LYS:O	1.86	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:43:VAL:CG2	7:E:52:VAL:HG22	2.16	0.75
10:H:64:VAL:HG22	10:H:106:ARG:HH21	1.52	0.75
11:I:62:LYS:HD3	29:3:12:ARG:CA	2.16	0.75
11:I:89:ASP:HB3	11:I:120:VAL:HG13	1.69	0.75
24:V:7:ARG:HD2	24:V:7:ARG:C	2.06	0.75
1:X:2197:U:H2'	1:X:2198:U:C6	2.20	0.75
1:X:2526:U:H2'	1:X:2527:G:H8	1.50	0.75
1:X:482:A:O2'	1:X:483:A:H5'	1.86	0.75
1:X:634:G:H2'	1:X:635:C:C6	2.20	0.75
26:Y:6:VAL:HG22	26:Y:7:PRO:HD2	1.68	0.75
15:M:39:VAL:O	15:M:41:GLU:N	2.20	0.75
21:S:79:ILE:O	21:S:79:ILE:HD13	1.86	0.75
23:U:32:ARG:HG2	23:U:33:LYS:H	1.52	0.75
24:V:25:LEU:HD21	24:V:47:ARG:HD2	1.69	0.75
24:V:14:PHE:HD2	24:V:57:LYS:HB2	1.52	0.75
1:X:1069:G:H3'	1:X:1070:G:H5''	1.69	0.75
1:X:24:G:H2'	1:X:25:U:O4'	1.84	0.75
3:A:231:HIS:HD2	3:A:233:HIS:N	1.83	0.75
5:C:62:LYS:HD3	5:C:63:GLY:N	2.01	0.75
10:H:24:VAL:CG1	10:H:42:LYS:HG2	2.17	0.75
14:L:37:HIS:NE2	14:L:39:TYR:CZ	2.55	0.75
20:R:85:ASP:H	20:R:86:PRO:CD	1.99	0.75
1:X:2496:C:O2'	1:X:2497:A:H3'	1.86	0.75
1:X:531:G:H2'	1:X:532:A:H8	1.51	0.75
1:X:862:A:H2'	1:X:863:C:C6	2.21	0.75
1:X:1790:G:O6	3:A:178:PRO:HG2	1.86	0.74
14:L:54:ALA:O	14:L:71:VAL:HG23	1.87	0.74
1:X:1189:G:O5'	1:X:1189:G:H8	1.70	0.74
1:X:1871:G:N3	1:X:1871:G:H3'	2.02	0.74
1:X:503:G:H2'	1:X:504:G:O4'	1.85	0.74
2:Z:46:G:H5'	6:D:92:ARG:HH22	1.48	0.74
1:X:1675:C:OP1	4:B:134:TRP:CE2	2.40	0.74
9:G:169:GLN:HB2	9:G:170:PRO:HD2	1.69	0.74
11:I:94:GLU:C	11:I:96:TYR:H	1.90	0.74
23:U:48:LYS:CG	23:U:49:LYS:N	2.50	0.74
25:W:54:GLN:HG2	25:W:55:GLU:OE1	1.87	0.74
1:X:1136:G:C6	1:X:1137:A:N6	2.56	0.74
1:X:2482:A:O2'	33:X:2911:ZLD:H13A	1.86	0.74
1:X:859:U:O2	1:X:859:U:H2'	1.85	0.74
1:X:88:G:C3'	1:X:89:A:H5''	2.14	0.74
1:X:2457:A:H5'	30:4:31:LYS:HG2	1.69	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:93:VAL:O	4:B:94:ASP:HB2	1.84	0.74
6:D:160:ALA:HB1	6:D:165:GLU:HB2	1.68	0.74
8:F:85:ILE:HD13	8:F:89:SER:H	1.52	0.74
1:X:2178:U:O2'	1:X:2179:C:H5'	1.86	0.74
2:Z:43:G:H5'	2:Z:44:C:H5'	1.68	0.74
6:D:128:TYR:HB3	6:D:156:ILE:HB	1.69	0.74
8:F:75:MET:O	8:F:79:ILE:HG12	1.87	0.74
4:B:152:LYS:HB2	9:G:106:TYR:HB3	1.69	0.74
9:G:45:ASP:HB2	9:G:83:ILE:HD11	1.67	0.74
1:X:173:A:P	11:I:53:ARG:HH21	2.11	0.74
1:X:1741:G:O2'	1:X:1742:G:H5'	1.87	0.74
1:X:1947:G:H4'	1:X:1948:C:OP2	1.88	0.74
1:X:57:G:H2'	1:X:58:C:H6	1.52	0.74
5:C:54:THR:HG22	5:C:55:GLY:O	1.88	0.74
20:R:54:ILE:HG12	20:R:71:GLN:CG	2.17	0.74
20:R:96:LYS:HE2	20:R:97:GLN:O	1.87	0.74
22:T:21:LEU:HD11	22:T:41:ARG:NE	2.00	0.74
1:X:116:A:H5'	1:X:117:A:C8	2.23	0.74
1:X:1223:G:H5''	1:X:1224:A:H5'	1.68	0.74
1:X:168:A:H2'	1:X:169:C:C6	2.21	0.74
1:X:2082:C:H2'	1:X:2083:G:C5'	2.17	0.74
1:X:2556:A:H5''	1:X:2557:G:H5'	1.67	0.74
1:X:476:G:H2'	1:X:477:A:C8	2.23	0.74
16:N:95:LEU:HA	16:N:98:ILE:HG13	1.69	0.74
25:W:3:ILE:CG2	25:W:4:LYS:H	1.99	0.74
1:X:1755:G:N2	1:X:1756:C:C2	2.56	0.74
1:X:1996:A:H2'	1:X:1997:A:H5'	1.70	0.74
7:E:39:THR:C	7:E:41:LEU:H	1.89	0.74
9:G:103:TYR:CE2	9:G:111:LYS:CA	2.70	0.74
19:Q:63:LYS:HE2	19:Q:65:VAL:CA	2.17	0.74
20:R:59:LYS:O	20:R:62:MET:HB2	1.88	0.74
1:X:556:A:H1'	1:X:558:G:N2	2.03	0.74
6:D:167:ARG:HG3	6:D:177:PHE:CE2	2.22	0.74
8:F:79:ILE:HA	8:F:82:ALA:HB2	1.70	0.74
9:G:154:GLU:N	9:G:154:GLU:OE1	2.21	0.74
10:H:97:VAL:HG11	10:H:126:ILE:HD13	1.69	0.74
13:K:41:ALA:O	13:K:43:GLU:N	2.21	0.74
14:L:82:LYS:HB3	14:L:84:ILE:HG13	1.70	0.74
16:N:51:ARG:NH1	16:N:51:ARG:CB	2.42	0.74
21:S:3:LEU:HD11	21:S:32:PHE:HA	1.67	0.74
1:X:2048:C:H2'	1:X:2049:C:H6	1.51	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2691:C:O2'	1:X:2692:A:H8	1.69	0.74
1:X:322:A:O2'	1:X:343:A:H4'	1.87	0.74
30:4:10:MET:HB2	30:4:32:HIS:CD2	2.23	0.74
3:A:187:SER:C	3:A:189:CYS:H	1.91	0.74
6:D:136:LEU:HD23	6:D:141:ILE:HG22	1.69	0.74
7:E:44:ARG:NH2	7:E:46:ASP:HB2	2.03	0.74
13:K:74:ASP:HA	13:K:77:ARG:HH12	1.53	0.74
16:N:30:LYS:HB3	16:N:30:LYS:NZ	2.01	0.74
23:U:20:ARG:HB2	23:U:43:ARG:CD	2.17	0.74
25:W:38:PRO:N	25:W:41:ARG:NH1	2.35	0.74
1:X:117:A:H5'	1:X:118:U:OP1	1.86	0.74
1:X:29:U:C4'	16:N:11:ARG:NH1	2.50	0.74
1:X:556:A:O2'	1:X:558:G:H1'	1.87	0.74
4:B:19:ARG:HE	4:B:21:ILE:HD11	1.53	0.74
5:C:74:VAL:HG23	5:C:76:THR:H	1.51	0.74
6:D:133:LYS:O	6:D:151:GLY:HA2	1.87	0.74
7:E:126:PRO:HD2	7:E:130:ARG:O	1.88	0.74
8:F:96:LYS:HB3	8:F:99:LYS:HE2	1.69	0.74
1:X:1017:C:H1'	9:G:134:MET:CE	2.17	0.74
12:J:106:GLU:CD	12:J:106:GLU:N	2.41	0.74
14:L:33:ARG:HH22	14:L:103:LEU:HB2	1.52	0.74
21:S:54:ILE:HG21	21:S:62:PHE:CD1	2.22	0.74
23:U:49:LYS:HB3	23:U:61:TRP:CE3	2.22	0.74
1:X:1736:C:H2'	1:X:1737:G:C8	2.23	0.74
1:X:2799:C:H2'	1:X:2800:C:O4'	1.86	0.74
1:X:439:C:H2'	1:X:440:U:H6	1.53	0.74
30:4:18:ARG:HA	30:4:22:ARG:O	1.88	0.73
1:X:1517:C:P	3:A:102:LYS:HZ1	2.11	0.73
6:D:47:SER:HA	6:D:50:ILE:HG13	1.68	0.73
1:X:2289:A:C2	6:D:79:LEU:HD21	2.23	0.73
12:J:75:VAL:HG12	12:J:76:THR:H	1.52	0.73
12:J:98:VAL:HG12	12:J:99:LYS:H	1.53	0.73
14:L:29:LEU:HD23	14:L:89:PHE:HB3	1.70	0.73
1:X:1045:G:H2'	1:X:1046:U:H6	1.52	0.73
1:X:1686:A:H5''	1:X:1687:C:OP2	1.88	0.73
1:X:244:C:H3'	1:X:245:C:H5''	1.68	0.73
1:X:2751:C:C5'	4:B:203:LYS:HD3	2.18	0.73
1:X:651:C:C2'	1:X:652:C:H5''	2.18	0.73
6:D:135:GLN:O	6:D:141:ILE:HG13	1.88	0.73
16:N:70:ARG:HH11	16:N:70:ARG:HG3	1.53	0.73
19:Q:61:LYS:H	19:Q:72:ARG:HA	1.53	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1503:G:H2'	1:X:1504:G:C8	2.23	0.73
1:X:1512:A:H2'	1:X:1514:C:H5	1.53	0.73
1:X:936:A:O2'	1:X:937:C:H5'	1.87	0.73
2:Z:46:G:H5'	6:D:92:ARG:CZ	2.18	0.73
7:E:50:LEU:HG	7:E:51:LEU:H	1.53	0.73
11:I:106:VAL:HG23	11:I:123:ASP:HB2	1.71	0.73
10:H:83:ARG:HH11	15:M:40:ARG:HG3	1.51	0.73
16:N:101:ARG:C	16:N:103:PRO:HD3	2.09	0.73
1:X:1078:A:OP1	1:X:1078:A:H3'	1.89	0.73
1:X:2212:U:H2'	1:X:2213:G:H8	1.49	0.73
1:X:2620:G:H5''	9:G:104:THR:CG2	2.19	0.73
1:X:333:A:OP1	5:C:162:ARG:HB2	1.86	0.73
1:X:889:C:H2'	1:X:890:U:C6	2.24	0.73
5:C:22:VAL:HA	5:C:106:MET:SD	2.28	0.73
5:C:5:ASN:HA	5:C:118:VAL:HG21	1.68	0.73
15:M:24:LEU:HD13	15:M:91:VAL:HG21	1.68	0.73
18:P:27:VAL:CB	18:P:125:THR:HG22	2.18	0.73
1:X:320:A:O3'	20:R:27:GLY:HA2	1.87	0.73
1:X:2484:G:OP2	33:X:2911:ZLD:H9	1.89	0.73
2:Z:88:C:O2'	2:Z:89:G:H5'	1.87	0.73
3:A:236:GLY:O	3:A:237:GLU:HB2	1.87	0.73
10:H:19:ILE:HD13	10:H:19:ILE:N	2.01	0.73
11:I:99:VAL:O	11:I:101:ARG:HG2	1.87	0.73
12:J:36:ILE:CG2	12:J:131:LYS:HE2	2.19	0.73
15:M:14:ARG:HH22	15:M:18:GLN:NE2	1.86	0.73
16:N:51:ARG:H	16:N:51:ARG:CD	2.00	0.73
19:Q:60:GLY:H	19:Q:72:ARG:HH11	1.35	0.73
23:U:64:ALA:O	23:U:67:LEU:HB3	1.88	0.73
1:X:1060:C:H1'	1:X:1124:U:O2'	1.88	0.73
1:X:1071:U:H5''	1:X:1072:U:OP1	1.88	0.73
1:X:1313:U:H4'	1:X:1314:A:O5'	1.89	0.73
1:X:2307:A:H2'	1:X:2308:A:C8	2.24	0.73
1:X:404:A:H1'	1:X:424:G:H1'	1.69	0.73
1:X:469:G:N2	1:X:480:G:H2'	2.03	0.73
1:X:648:A:H4'	1:X:649:G:H5'	1.70	0.73
6:D:38:GLU:O	6:D:40:LEU:HD12	1.89	0.73
10:H:116:ARG:HD2	15:M:38:LYS:HZ2	1.51	0.73
11:I:44:GLY:O	11:I:45:LYS:HB3	1.87	0.73
20:R:11:ASN:HD22	20:R:11:ASN:C	1.92	0.73
21:S:6:LYS:HD2	21:S:31:SER:HB2	1.69	0.73
24:V:62:ARG:HH11	24:V:62:ARG:CB	2.00	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1333:G:N2	1:X:1344:C:N4	2.35	0.73
1:X:2077:G:H22	1:X:2179:C:H1'	1.54	0.73
1:X:919:U:OP1	12:J:26:ASP:HB2	1.88	0.73
30:4:30:VAL:C	30:4:32:HIS:H	1.91	0.73
1:X:2570:C:P	3:A:239:ARG:HH11	2.11	0.73
10:H:28:GLY:O	10:H:35:THR:HG23	1.89	0.73
1:X:2824:C:P	15:M:100:ARG:HH11	2.12	0.73
21:S:6:LYS:HB2	21:S:31:SER:CB	2.19	0.73
22:T:3:HIS:HB2	22:T:5:LYS:HD3	1.69	0.73
23:U:17:SER:HB2	23:U:44:ALA:HA	1.70	0.73
1:X:1231:A:H2'	1:X:1232:U:C6	2.24	0.73
1:X:1919:A:H5''	1:X:1920:A:O4'	1.89	0.73
1:X:2395:C:O2'	1:X:2396:C:H5''	1.87	0.73
3:A:142:VAL:O	3:A:163:VAL:HG12	1.88	0.73
9:G:93:LYS:HB3	9:G:96:ASP:OD1	1.89	0.73
11:I:88:PHE:HB3	11:I:90:ARG:HD2	1.71	0.73
16:N:104:GLU:O	16:N:107:LYS:HB3	1.88	0.73
17:O:75:LYS:HB2	17:O:80:TYR:HB3	1.70	0.73
1:X:2326:C:H2'	1:X:2327:U:C6	2.24	0.73
1:X:686:C:O2'	1:X:687:G:H5'	1.87	0.73
3:A:48:ARG:N	3:A:48:ARG:HD2	2.02	0.73
5:C:22:VAL:HG22	5:C:106:MET:HG3	1.71	0.73
9:G:33:ILE:HD13	9:G:33:ILE:H	1.51	0.73
24:V:55:THR:O	24:V:58:ALA:HB3	1.88	0.73
1:X:1056:U:OP1	1:X:1058:G:H4'	1.89	0.73
1:X:1173:G:H4'	17:O:22:VAL:HG23	1.70	0.73
1:X:1519:G:H2'	1:X:1520:G:H8	1.52	0.73
1:X:48:A:H1'	1:X:50:G:N3	2.04	0.73
3:A:217:ARG:HG2	3:A:218:LYS:N	2.03	0.73
6:D:175:LEU:HD23	6:D:177:PHE:HE1	1.52	0.73
11:I:11:GLY:O	11:I:14:LYS:N	2.22	0.73
12:J:15:ARG:CD	12:J:73:LYS:HG3	2.19	0.73
14:L:99:ARG:CG	14:L:100:VAL:H	2.02	0.73
17:O:20:ILE:HD12	17:O:21:ARG:H	1.54	0.73
1:X:1657:A:H2'	1:X:1658:A:O4'	1.89	0.73
1:X:2307:A:H2'	1:X:2308:A:H8	1.53	0.73
1:X:2404:A:H4'	1:X:2405:A:H5''	1.71	0.73
1:X:2484:G:OP2	33:X:2911:ZLD:C9	2.37	0.73
3:A:95:LEU:HB2	3:A:105:ILE:HD11	1.70	0.72
3:A:96:HIS:HE1	3:A:100:GLY:HA2	1.53	0.72
6:D:111:ILE:HA	6:D:137:ILE:HG22	1.70	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:I:94:GLU:HB3	11:I:97:ARG:NH1	2.03	0.72
13:K:98:LEU:HD22	26:Y:56:GLN:HG2	1.71	0.72
14:L:37:HIS:NE2	14:L:39:TYR:OH	2.22	0.72
14:L:42:ILE:CB	14:L:52:ALA:HB3	2.17	0.72
22:T:4:LYS:NZ	22:T:4:LYS:HB3	2.03	0.72
1:X:1575:C:H4'	1:X:1576:G:OP1	1.89	0.72
2:Z:104:A:H2'	2:Z:105:G:O4'	1.88	0.72
30:4:18:ARG:HG2	30:4:23:VAL:CA	2.18	0.72
3:A:105:ILE:HD12	3:A:105:ILE:N	2.04	0.72
3:A:77:ALA:HB2	3:A:97:TYR:HA	1.69	0.72
1:X:2015:G:H2'	4:B:145:LYS:NZ	2.05	0.72
1:X:2615:U:C5'	4:B:80:GLU:HG3	2.17	0.72
6:D:74:ILE:HA	6:D:79:LEU:HB2	1.70	0.72
13:K:46:PRO:O	13:K:50:GLN:HB2	1.89	0.72
19:Q:88:ILE:O	19:Q:92:ALA:HB2	1.89	0.72
1:X:1885:C:C4'	3:A:244:ARG:HD2	2.19	0.72
1:X:2541:U:H4'	10:H:23:ARG:HH11	1.54	0.72
1:X:2642:G:O2'	1:X:2643:G:H5'	1.88	0.72
1:X:2737:A:N3	1:X:2737:A:H2'	2.03	0.72
3:A:247:VAL:CG2	3:A:248:THR:HG23	2.08	0.72
1:X:886:A:H1'	12:J:30:PHE:HE1	1.52	0.72
13:K:79:VAL:HA	13:K:83:VAL:HG22	1.69	0.72
17:O:10:LYS:HG3	17:O:11:GLN:H	1.54	0.72
23:U:20:ARG:HD2	23:U:43:ARG:NH2	2.04	0.72
1:X:1171:A:H2'	1:X:1172:U:C6	2.22	0.72
1:X:1519:G:H2'	1:X:1520:G:C8	2.24	0.72
1:X:2284:U:C3'	1:X:2285:U:H5''	2.18	0.72
1:X:2501:U:O2'	1:X:2626:U:H5''	1.89	0.72
1:X:3:U:H2'	1:X:4:C:C6	2.24	0.72
30:4:27:CYS:HB3	30:4:32:HIS:HB3	1.70	0.72
4:B:60:ASN:O	4:B:64:GLN:HG3	1.89	0.72
5:C:107:ALA:HB1	5:C:180:ILE:HD13	1.70	0.72
13:K:52:ILE:HG13	13:K:53:THR:N	2.03	0.72
14:L:73:LYS:HG3	14:L:110:GLY:HA3	1.72	0.72
16:N:7:GLY:O	16:N:9:VAL:HG23	1.89	0.72
20:R:48:VAL:HG12	20:R:50:GLY:N	2.04	0.72
23:U:48:LYS:HG2	23:U:49:LYS:H	1.51	0.72
1:X:2035:G:O2'	1:X:2036:G:H5'	1.89	0.72
1:X:2728:A:H2'	1:X:2729:A:C8	2.24	0.72
1:X:638:A:O2'	1:X:639:G:O4'	2.06	0.72
1:X:840:U:H2'	1:X:2051:U:C2	2.24	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:986:A:H4'	16:N:48:ARG:NH1	2.02	0.72
3:A:75:VAL:HG11	3:A:98:ALA:HB3	1.71	0.72
5:C:104:LEU:O	5:C:107:ALA:N	2.23	0.72
6:D:113:ASP:HB3	6:D:115:ARG:HH12	1.53	0.72
6:D:39:GLY:HA2	6:D:86:GLY:CA	2.16	0.72
9:G:61:ARG:HE	9:G:65:LYS:CE	2.02	0.72
10:H:13:ASN:HD22	10:H:109:ARG:HG2	1.52	0.72
14:L:10:LYS:O	14:L:14:ARG:HB2	1.90	0.72
16:N:26:GLY:O	16:N:30:LYS:HG2	1.89	0.72
17:O:13:ARG:HB3	17:O:16:GLU:OE2	1.89	0.72
21:S:54:ILE:HB	21:S:62:PHE:H	1.53	0.72
1:X:2264:C:H5'	1:X:2267:A:N6	2.05	0.72
1:X:2777:A:N7	18:P:134:LYS:HD3	2.03	0.72
26:Y:56:GLN:HE21	26:Y:56:GLN:H	1.37	0.72
3:A:172:TYR:HD2	3:A:186:HIS:HB3	1.55	0.72
1:X:1017:C:H1'	9:G:134:MET:HE3	1.71	0.72
17:O:71:ILE:N	17:O:84:THR:O	2.21	0.72
24:V:1:MET:SD	24:V:2:LYS:HG2	2.29	0.72
1:X:427:C:H1'	1:X:1856:U:H1'	1.71	0.72
1:X:2691:C:H5''	1:X:2694:G:H5''	1.71	0.72
1:X:663:G:C3'	1:X:664:C:H4'	2.19	0.72
3:A:133:LEU:HD23	3:A:189:CYS:O	1.89	0.72
7:E:97:LYS:HE3	7:E:104:GLU:CG	2.19	0.72
11:I:124:ALA:HA	11:I:142:LEU:HD21	1.71	0.72
11:I:47:ALA:C	11:I:49:PHE:N	2.38	0.72
1:X:2394:G:C3'	11:I:63:ARG:HH11	1.93	0.72
19:Q:12:ILE:CD1	19:Q:13:SER:H	1.98	0.72
23:U:50:ALA:CB	23:U:52:ARG:HH12	2.02	0.72
1:X:1949:A:H1'	1:X:2572:U:H4'	1.71	0.72
1:X:2807:U:C6	1:X:2807:U:H5'	2.23	0.72
1:X:2825:A:H2'	1:X:2826:C:H6	1.54	0.72
2:Z:3:A:H2'	2:Z:4:C:C5'	2.20	0.72
2:Z:42:U:H1'	2:Z:47:A:H61	1.53	0.72
10:H:47:VAL:HG21	10:H:115:ALA:CB	2.19	0.72
13:K:33:ARG:CG	13:K:114:GLU:HB3	2.19	0.72
20:R:23:ILE:H	20:R:23:ILE:HD13	1.54	0.72
20:R:44:GLN:HB3	20:R:77:HIS:HD1	1.55	0.72
1:X:1088:A:H2'	1:X:1089:C:O4'	1.89	0.72
1:X:559:C:H2'	1:X:560:G:C4'	2.19	0.72
3:A:126:LYS:O	3:A:128:GLY:N	2.23	0.72
3:A:134:ARG:HG3	3:A:135:PHE:HD2	1.53	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:120:TRP:O	4:B:121:ASN:HB2	1.88	0.72
1:X:2751:C:H5''	4:B:203:LYS:HD3	1.71	0.72
4:B:21:ILE:HD12	4:B:21:ILE:N	2.05	0.72
7:E:88:GLU:HB3	7:E:163:ARG:HB2	1.72	0.72
1:X:1148:G:H21	9:G:134:MET:CE	2.02	0.72
9:G:158:HIS:CA	9:G:161:GLN:HB2	2.20	0.72
1:X:2722:C:H2'	1:X:2723:C:C6	2.24	0.72
1:X:2825:A:H2'	1:X:2826:C:C6	2.25	0.72
5:C:13:ARG:NE	5:C:13:ARG:N	2.38	0.72
7:E:155:ASP:OD1	7:E:157:TYR:HB2	1.90	0.72
8:F:76:SER:HB3	8:F:111:THR:HB	1.72	0.72
1:X:2331:A:H2	22:T:33:ALA:HB1	1.54	0.72
1:X:149:A:H2'	1:X:150:A:C8	2.25	0.72
1:X:173:A:H5'	1:X:174:A:OP2	1.90	0.72
1:X:1783:G:P	3:A:206:LEU:HD12	2.30	0.72
1:X:640:C:H4'	1:X:660:G:N2	2.04	0.72
3:A:213:ARG:C	3:A:215:LEU:H	1.92	0.71
9:G:98:LYS:HB3	9:G:116:ARG:HB2	1.71	0.71
1:X:1128:G:H2'	1:X:1129:A:C5'	2.13	0.71
1:X:1391:A:O2'	1:X:1392:U:C6	2.42	0.71
1:X:43:A:H2'	1:X:44:G:C8	2.24	0.71
1:X:633:G:O2'	1:X:634:G:H5'	1.89	0.71
3:A:92:ILE:CD1	3:A:104:TYR:HB3	2.19	0.71
6:D:132:ILE:HG21	6:D:138:PHE:HZ	1.54	0.71
6:D:65:PRO:HA	6:D:89:VAL:CG1	2.21	0.71
8:F:101:ASN:HB3	8:F:104:GLN:HG2	1.70	0.71
8:F:81:LYS:NZ	8:F:84:GLY:HA3	2.04	0.71
9:G:110:LEU:N	9:G:110:LEU:HD23	2.05	0.71
12:J:70:PHE:CD2	12:J:70:PHE:C	2.64	0.71
14:L:101:LYS:HG2	14:L:105:ASP:OD2	1.90	0.71
20:R:59:LYS:N	20:R:60:PRO:CD	2.51	0.71
24:V:52:GLN:C	24:V:54:ASN:H	1.93	0.71
25:W:37:THR:HG22	25:W:38:PRO:HD2	1.72	0.71
1:X:1180:A:H8	1:X:1180:A:O5'	1.72	0.71
1:X:1508:G:C5'	1:X:1509:A:H5''	2.06	0.71
1:X:712:A:H2'	1:X:713:G:O4'	1.90	0.71
4:B:72:VAL:HG12	4:B:73:ALA:H	1.53	0.71
5:C:24:SER:O	5:C:27:LEU:N	2.23	0.71
5:C:68:ARG:O	5:C:68:ARG:HG2	1.88	0.71
10:H:10:VAL:HG21	10:H:16:ALA:O	1.90	0.71
1:X:2209:G:H4'	23:U:46:LEU:O	1.90	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:589:C:H5''	16:N:31:GLN:HE22	1.55	0.71
1:X:577:U:C5'	1:X:956:A:H62	2.03	0.71
9:G:158:HIS:HA	9:G:161:GLN:CB	2.20	0.71
15:M:5:ILE:HD13	15:M:7:ILE:CG1	2.20	0.71
1:X:1173:G:C1'	17:O:21:ARG:HH21	1.99	0.71
19:Q:7:LEU:C	19:Q:7:LEU:HD13	2.10	0.71
21:S:44:ARG:HB3	21:S:45:GLN:HE22	1.55	0.71
25:W:25:LEU:HD22	25:W:30:ASP:CB	2.16	0.71
1:X:1193:G:H2'	1:X:1194:U:H5''	1.71	0.71
1:X:2175:A:H2'	1:X:2176:U:C6	2.26	0.71
26:Y:16:ARG:HH11	26:Y:20:ARG:NH1	1.88	0.71
3:A:43:ARG:H	3:A:43:ARG:HD2	1.55	0.71
6:D:105:ASN:HA	6:D:109:PRO:HG2	1.72	0.71
7:E:127:GLU:OE2	7:E:130:ARG:HB2	1.90	0.71
8:F:99:LYS:HA	8:F:138:THR:OG1	1.89	0.71
8:F:73:PRO:HD2	8:F:76:SER:OG	1.91	0.71
11:I:97:ARG:O	11:I:98:LEU:HB2	1.89	0.71
14:L:39:TYR:O	14:L:41:GLN:N	2.22	0.71
17:O:25:LEU:HB2	17:O:32:LYS:CE	2.20	0.71
17:O:36:LYS:CE	17:O:56:VAL:HG13	2.20	0.71
1:X:1051:U:H2'	1:X:1052:C:O4'	1.90	0.71
1:X:1554:G:O2'	1:X:1555:A:H5'	1.90	0.71
1:X:1625:A:H1'	1:X:1632:A:O2'	1.90	0.71
1:X:1850:G:H1	1:X:1867:A:H2'	1.53	0.71
1:X:2208:U:H2'	1:X:2209:G:H8	1.55	0.71
1:X:1727:C:H4'	1:X:2833:C:O2	1.91	0.71
1:X:2482:A:O2'	33:X:2911:ZLD:H13B	1.90	0.71
4:B:144:ARG:O	4:B:146:THR:O	2.08	0.71
4:B:170:LEU:HB3	4:B:184:VAL:CG1	2.21	0.71
5:C:22:VAL:HG13	5:C:27:LEU:HD21	1.73	0.71
7:E:7:GLN:CA	7:E:69:ARG:HE	2.03	0.71
9:G:119:LEU:HD12	9:G:126:VAL:HG13	1.72	0.71
13:K:17:ARG:NH1	13:K:20:LEU:HD22	2.04	0.71
13:K:91:PRO:O	13:K:92:GLY:O	2.09	0.71
17:O:39:PHE:CD1	17:O:46:VAL:HG21	2.25	0.71
1:X:1053:G:H2'	1:X:1054:C:C6	2.25	0.71
1:X:1766:U:H2'	1:X:1767:G:H5'	1.71	0.71
1:X:2078:G:H2'	1:X:2079:A:C8	2.25	0.71
1:X:2708:U:H2'	1:X:2709:C:H6	1.55	0.71
1:X:623:G:H3'	1:X:624:A:C5'	2.12	0.71
1:X:840:U:H2'	1:X:2051:U:O2	1.90	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Y:56:GLN:HE21	26:Y:56:GLN:N	1.88	0.71
3:A:125:PRO:HB3	3:A:193:ILE:HD11	1.72	0.71
4:B:165:VAL:HG12	4:B:189:PRO:HG2	1.70	0.71
5:C:112:GLN:CB	5:C:116:LYS:HD3	2.21	0.71
5:C:133:PHE:HD2	5:C:134:ILE:HD13	1.54	0.71
9:G:108:GLY:H	9:G:110:LEU:HD21	1.54	0.71
9:G:157:PRO:C	9:G:159:SER:H	1.94	0.71
11:I:107:LYS:HG2	11:I:109:LEU:HD21	1.72	0.71
14:L:33:ARG:HH12	14:L:103:LEU:CB	2.04	0.71
1:X:2355:A:C2	14:L:89:PHE:CZ	2.78	0.71
20:R:22:VAL:HG11	20:R:80:LYS:NZ	2.06	0.71
23:U:22:GLY:HA3	23:U:39:LYS:HE2	1.71	0.71
1:X:1061:A:H2'	1:X:1062:G:C8	2.19	0.71
1:X:139:A:H2'	1:X:140:G:H8	1.56	0.71
1:X:2538:C:O2'	1:X:2539:C:H5'	1.91	0.71
4:B:49:ILE:HD13	4:B:50:GLY:N	2.05	0.71
7:E:155:ASP:OD2	7:E:156:ALA:N	2.24	0.71
9:G:155:THR:C	9:G:157:PRO:HD2	2.11	0.71
11:I:52:GLY:O	11:I:55:ARG:HB2	1.90	0.71
11:I:56:LEU:C	11:I:56:LEU:HD13	2.11	0.71
2:Z:53:G:OP2	14:L:64:LYS:HE3	1.90	0.71
15:M:44:ARG:NH1	15:M:46:ARG:HH22	1.88	0.71
16:N:69:ALA:HB2	16:N:79:PHE:HD1	1.55	0.71
16:N:86:ALA:C	16:N:88:ILE:H	1.93	0.71
1:X:1495:G:H5'	1:X:1574:A:C2	2.25	0.71
1:X:208:C:H2'	1:X:209:G:O4'	1.91	0.71
1:X:621:U:H2'	1:X:622:U:C6	2.26	0.71
1:X:647:G:O2'	1:X:649:G:H4'	1.91	0.71
30:4:18:ARG:CD	30:4:23:VAL:HG22	2.16	0.71
5:C:122:GLY:HA3	5:C:136:TRP:HZ3	1.55	0.71
5:C:173:ALA:HB1	5:C:193:LEU:HD13	1.73	0.71
4:B:149:ARG:HH12	9:G:106:TYR:HD1	1.38	0.71
12:J:66:TYR:O	12:J:106:GLU:OE1	2.09	0.71
16:N:47:TYR:HE1	17:O:73:LYS:HZ3	1.37	0.71
1:X:169:C:H2'	1:X:170:U:C5'	2.20	0.71
1:X:2071:G:N2	1:X:2072:C:H1'	2.05	0.71
1:X:2796:A:H2'	1:X:2797:G:C8	2.25	0.71
1:X:704:G:H2'	1:X:705:C:C6	2.26	0.71
1:X:758:G:H2'	1:X:759:C:H5'	1.73	0.71
7:E:38:ASN:HB2	7:E:41:LEU:HD22	1.73	0.71
10:H:29:ILE:CG1	10:H:30:GLY:N	2.54	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:I:30:ALA:CB	11:I:34:HIS:CE1	2.74	0.71
16:N:47:TYR:CE2	16:N:51:ARG:NE	2.58	0.71
20:R:14:LEU:HD23	20:R:14:LEU:N	2.06	0.71
23:U:22:GLY:CA	23:U:39:LYS:HE2	2.21	0.71
1:X:107:G:N2	1:X:108:G:H1'	2.06	0.71
1:X:2271:C:OP1	14:L:18:ARG:NH2	2.24	0.71
1:X:2355:A:C2	14:L:89:PHE:CE1	2.79	0.71
1:X:789:G:C5	1:X:806:A:N7	2.59	0.71
5:C:9:GLN:HG2	5:C:120:VAL:HG21	1.73	0.70
5:C:30:VAL:HG11	5:C:177:VAL:HG21	1.73	0.70
14:L:70:ALA:O	14:L:74:ALA:HB2	1.91	0.70
15:M:104:LEU:HD13	15:M:106:TYR:CZ	2.24	0.70
15:M:43:ASN:C	15:M:43:ASN:HD22	1.94	0.70
16:N:85:ARG:HG2	16:N:116:ALA:O	1.90	0.70
21:S:56:VAL:HG12	21:S:57:GLU:H	1.56	0.70
12:J:23:LYS:HA	21:S:73:LYS:HZ3	1.53	0.70
1:X:1075:C:H5''	8:F:85:ILE:CG2	2.21	0.70
1:X:50:G:H1'	1:X:116:A:H61	1.56	0.70
1:X:2048:C:H2'	1:X:2049:C:C6	2.26	0.70
1:X:81:C:H2'	1:X:82:G:O4'	1.91	0.70
3:A:210:GLY:HA2	3:A:213:ARG:HG2	1.73	0.70
8:F:110:LYS:HA	8:F:113:MET:HE1	1.73	0.70
10:H:47:VAL:HG21	10:H:115:ALA:HB3	1.72	0.70
13:K:28:LEU:C	13:K:28:LEU:HD23	2.12	0.70
1:X:460:U:O4	1:X:592:G:H1'	1.92	0.70
2:Z:70:C:H2'	2:Z:71:G:O4'	1.91	0.70
6:D:47:SER:HA	6:D:50:ILE:CD1	2.22	0.70
6:D:5:LYS:H	6:D:7:LYS:H	1.39	0.70
9:G:61:ARG:HH22	9:G:78:ASP:HB2	1.56	0.70
15:M:104:LEU:O	15:M:107:LEU:N	2.19	0.70
17:O:58:ALA:HB1	17:O:94:LYS:O	1.92	0.70
23:U:22:GLY:H	23:U:39:LYS:CG	2.03	0.70
1:X:1517:C:H4'	3:A:96:HIS:CD2	2.27	0.70
1:X:554:U:HO2'	1:X:555:U:H1'	1.55	0.70
4:B:3:GLY:HA3	4:B:81:PHE:HE1	1.57	0.70
6:D:72:LYS:CA	6:D:81:GLN:HA	2.21	0.70
1:X:2795:A:H4'	13:K:5:LYS:HG2	1.72	0.70
16:N:28:ARG:HG2	16:N:38:THR:OG1	1.91	0.70
20:R:56:LYS:HA	20:R:68:GLY:O	1.91	0.70
21:S:3:LEU:HD11	21:S:32:PHE:CA	2.21	0.70
1:X:1070:G:H5'	1:X:1071:U:H3'	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2042:A:O2'	5:C:62:LYS:HE2	1.91	0.70
1:X:29:U:H4'	16:N:11:ARG:NH1	2.03	0.70
1:X:568:G:O2'	1:X:569:C:H5'	1.92	0.70
1:X:635:C:H2'	1:X:636:G:C5'	2.20	0.70
5:C:192:ALA:O	5:C:195:ILE:HG13	1.91	0.70
1:X:1091:C:H1'	8:F:127:THR:CA	2.21	0.70
16:N:40:LEU:HD23	16:N:40:LEU:H	1.57	0.70
22:T:25:LYS:CG	22:T:37:LEU:HA	2.19	0.70
24:V:17:GLU:OE2	24:V:17:GLU:HA	1.90	0.70
1:X:1080:A:H4'	1:X:1081:A:C8	2.26	0.70
1:X:1625:A:H1'	1:X:1632:A:H1'	1.72	0.70
1:X:1752:U:H5''	1:X:1753:A:OP2	1.92	0.70
1:X:2299:A:N6	1:X:2312:A:H2'	2.05	0.70
1:X:882:C:H2'	1:X:883:A:H8	1.57	0.70
2:Z:56:G:H2'	2:Z:57:U:C6	2.26	0.70
1:X:2506:C:H5''	30:4:30:VAL:HB	1.74	0.70
4:B:133:LYS:O	4:B:134:TRP:O	2.09	0.70
5:C:117:LEU:CD2	5:C:187:VAL:HA	2.21	0.70
6:D:22:TYR:CZ	6:D:29:PRO:HD3	2.26	0.70
7:E:101:LYS:O	7:E:123:PHE:CD1	2.44	0.70
12:J:76:THR:HB	12:J:88:LYS:O	1.91	0.70
17:O:11:GLN:HA	17:O:38:LEU:O	1.90	0.70
19:Q:60:GLY:N	19:Q:72:ARG:HH11	1.88	0.70
21:S:4:THR:O	21:S:5:ALA:O	2.10	0.70
21:S:93:GLU:O	21:S:94:VAL:HG23	1.91	0.70
1:X:1175:A:O2'	1:X:1176:U:H5'	1.91	0.70
1:X:1939:U:H2'	1:X:1939:U:O2	1.91	0.70
1:X:2034:A:OP1	4:B:137:ARG:NH2	2.25	0.70
1:X:2041:A:O5'	1:X:2041:A:H8	1.75	0.70
1:X:2285:U:H5'	1:X:2286:G:C1'	2.21	0.70
1:X:2821:G:H2'	1:X:2822:U:C6	2.26	0.70
1:X:879:A:C2	1:X:926:C:H5''	2.26	0.70
26:Y:16:ARG:HD3	26:Y:20:ARG:NH2	2.06	0.70
1:X:2737:A:OP2	30:4:19:ARG:HA	1.91	0.70
4:B:119:ARG:HA	4:B:160:MET:HE1	1.72	0.70
1:X:2713:A:N6	4:B:203:LYS:HE3	2.01	0.70
5:C:14:THR:HG22	5:C:15:ILE:H	1.57	0.70
6:D:99:PHE:HA	6:D:102:LYS:HD2	1.74	0.70
9:G:108:GLY:N	9:G:110:LEU:CD2	2.54	0.70
16:N:50:ARG:C	16:N:52:ASN:H	1.93	0.70
1:X:1055:A:C2'	1:X:1056:U:H5''	2.21	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1253:C:H2'	1:X:1254:G:C5'	2.21	0.70
1:X:1996:A:C2'	1:X:1997:A:H5'	2.22	0.70
1:X:2269:G:N2	1:X:2322:U:H1'	2.07	0.70
1:X:48:A:C4'	1:X:49:U:H5'	2.20	0.70
1:X:537:C:C5	1:X:2759:U:H3'	2.23	0.70
1:X:847:C:C2	1:X:848:A:C8	2.79	0.70
1:X:1808:C:H5''	3:A:39:LYS:HZ3	1.55	0.70
4:B:37:LYS:HA	4:B:42:ASP:OD2	1.91	0.70
6:D:143:TYR:HE1	6:D:148:LYS:HA	1.57	0.70
10:H:16:ALA:HA	10:H:58:ALA:HB2	1.73	0.70
14:L:37:HIS:NE2	14:L:39:TYR:CE1	2.60	0.70
1:X:2581:A:H5'	1:X:2582:G:OP2	1.92	0.70
1:X:538:A:N6	1:X:2025:A:H2'	2.06	0.70
1:X:999:A:N7	25:W:10:ILE:HG21	2.06	0.70
3:A:147:LEU:CD2	3:A:155:LEU:HD11	2.22	0.70
5:C:22:VAL:HG21	5:C:110:SER:OG	1.91	0.70
6:D:73:SER:O	6:D:80:ARG:N	2.25	0.70
9:G:85:ALA:O	9:G:87:GLN:N	2.24	0.70
12:J:134:LYS:HD2	12:J:134:LYS:N	2.07	0.70
12:J:27:TYR:CB	12:J:137:VAL:HG11	2.21	0.70
13:K:99:ARG:CG	13:K:99:ARG:HH11	2.05	0.70
20:R:54:ILE:HA	20:R:71:GLN:HA	1.73	0.70
23:U:31:GLY:HA2	23:U:32:ARG:CZ	2.22	0.70
1:X:304:A:H2'	1:X:305:A:H5''	1.73	0.70
1:X:741:G:N2	1:X:743:A:H1'	2.07	0.70
7:E:107:ILE:H	7:E:107:ILE:HD13	1.56	0.69
7:E:161:GLY:O	7:E:163:ARG:HG3	1.91	0.69
9:G:123:PRO:HD2	9:G:124:GLU:OE1	1.92	0.69
12:J:61:ARG:HH12	21:S:175:ARG:HD2	1.57	0.69
17:O:36:LYS:HB3	17:O:39:PHE:CE2	2.27	0.69
20:R:18:LYS:HD3	20:R:19:GLY:N	2.07	0.69
21:S:103:ARG:O	21:S:139:THR:HA	1.92	0.69
21:S:24:TYR:HA	21:S:28:ASN:O	1.91	0.69
1:X:2409:A:C2	11:I:54:SER:HB3	2.27	0.69
1:X:404:A:C1'	1:X:424:G:H1'	2.22	0.69
1:X:436:A:H5''	1:X:437:G:H5'	1.73	0.69
1:X:638:A:O2'	1:X:639:G:C8	2.42	0.69
1:X:879:A:H2'	1:X:879:A:N3	2.06	0.69
2:Z:3:A:H2'	2:Z:4:C:H5'	1.73	0.69
4:B:67:PHE:CD2	4:B:74:PRO:HA	2.27	0.69
5:C:128:ALA:HB2	5:C:159:ARG:NH2	2.07	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:57:LEU:HA	6:D:60:ILE:CD1	2.22	0.69
9:G:65:LYS:CG	9:G:66:HIS:N	2.46	0.69
16:N:33:ARG:O	16:N:34:ASN:C	2.29	0.69
16:N:62:ILE:HG22	16:N:66:ASN:HD22	1.57	0.69
18:P:107:ILE:O	18:P:107:ILE:HG23	1.91	0.69
19:Q:34:THR:HG23	19:Q:37:GLU:HB2	1.74	0.69
21:S:105:GLN:HE22	21:S:139:THR:CG2	2.04	0.69
21:S:138:VAL:HG23	21:S:139:THR:N	2.05	0.69
22:T:5:LYS:HD2	22:T:5:LYS:N	2.07	0.69
1:X:173:A:H61	1:X:844:G:N2	1.88	0.69
1:X:2310:G:N2	1:X:2364:C:C4	2.60	0.69
1:X:2839:G:H2'	1:X:2840:U:C6	2.27	0.69
1:X:833:A:N3	1:X:954:U:O2'	2.25	0.69
1:X:925:U:H4'	1:X:926:C:OP1	1.92	0.69
3:A:143:HIS:C	3:A:145:LEU:N	2.45	0.69
10:H:29:ILE:CD1	10:H:30:GLY:H	2.06	0.69
11:I:114:ILE:HD13	11:I:114:ILE:O	1.92	0.69
11:I:56:LEU:O	11:I:56:LEU:HD13	1.91	0.69
11:I:76:LYS:HB3	11:I:79:GLN:HG2	1.74	0.69
12:J:23:LYS:C	12:J:25:GLY:H	1.94	0.69
14:L:99:ARG:CG	14:L:100:VAL:N	2.53	0.69
14:L:8:ARG:HH11	14:L:8:ARG:CB	2.05	0.69
17:O:79:GLN:O	17:O:80:TYR:CB	2.39	0.69
1:X:1354:A:O2'	19:Q:54:SER:HB3	1.92	0.69
21:S:117:VAL:HG22	21:S:168:VAL:HG13	1.74	0.69
21:S:42:ALA:C	21:S:45:GLN:HE21	1.96	0.69
1:X:2332:G:H4'	22:T:32:LYS:HE2	1.74	0.69
1:X:198:A:H5''	1:X:199:A:H5'	1.74	0.69
1:X:2057:U:H5'	1:X:2057:U:C6	2.27	0.69
1:X:2594:U:H2'	1:X:2595:C:C6	2.28	0.69
1:X:2594:U:H2'	1:X:2595:C:H6	1.56	0.69
1:X:67:G:H2'	1:X:68:C:H6	1.53	0.69
6:D:119:PRO:HG2	6:D:120:ASN:H	1.57	0.69
6:D:96:MET:O	6:D:100:LEU:HB2	1.91	0.69
17:O:14:VAL:HG12	17:O:14:VAL:O	1.92	0.69
24:V:64:GLY:C	24:V:66:GLN:H	1.96	0.69
1:X:1118:G:H2'	1:X:1119:U:H5''	1.72	0.69
1:X:2194:A:H2'	1:X:2195:C:O4'	1.93	0.69
1:X:2498:U:C4'	1:X:2499:C:OP1	2.39	0.69
1:X:2756:A:O2'	1:X:2757:G:OP2	2.10	0.69
1:X:1517:C:H5'	3:A:102:LYS:HZ3	1.56	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:186:HIS:NE2	3:A:188:GLU:HB2	2.07	0.69
7:E:27:LYS:HG2	7:E:32:GLU:HB2	1.74	0.69
12:J:33:TYR:O	12:J:106:GLU:HA	1.92	0.69
15:M:44:ARG:NH1	15:M:46:ARG:NH2	2.41	0.69
18:P:80:LEU:CD2	18:P:87:GLU:HB3	2.21	0.69
19:Q:30:SER:O	19:Q:76:LYS:HD3	1.92	0.69
20:R:8:SER:O	20:R:10:HIS:N	2.26	0.69
23:U:50:ALA:C	23:U:52:ARG:NH2	2.45	0.69
1:X:1505:U:H2'	1:X:1506:C:H5''	1.74	0.69
1:X:1830:C:N4	1:X:1881:U:H3'	2.06	0.69
1:X:2417:U:O2'	1:X:2419:C:OP1	2.10	0.69
1:X:666:U:C2'	1:X:667:U:H4'	2.08	0.69
1:X:613:A:H5''	1:X:668:A:N6	2.07	0.69
1:X:920:G:P	12:J:24:GLY:HA3	2.32	0.69
3:A:91:ARG:HD2	3:A:198:ASN:CA	2.21	0.69
5:C:112:GLN:CA	5:C:116:LYS:HD3	2.22	0.69
5:C:41:GLY:HA3	5:C:89:ARG:O	1.93	0.69
6:D:45:GLU:HB2	6:D:78:LYS:HZ3	1.58	0.69
12:J:15:ARG:HB3	12:J:73:LYS:NZ	2.06	0.69
18:P:34:SER:O	18:P:37:LYS:HB3	1.93	0.69
18:P:46:ARG:HA	18:P:92:VAL:HG11	1.73	0.69
22:T:58:THR:C	22:T:59:LEU:HD22	2.13	0.69
25:W:28:ILE:N	25:W:28:ILE:HD13	2.07	0.69
1:X:1051:U:H3'	1:X:1051:U:H6	1.57	0.69
1:X:1281:A:H1'	1:X:2592:U:C4	2.25	0.69
1:X:1323:G:H3'	1:X:1324:G:H21	1.57	0.69
1:X:1757:C:O2'	1:X:1758:C:H5'	1.91	0.69
1:X:1997:A:H2'	1:X:1998:A:C8	2.27	0.69
30:4:30:VAL:HG23	30:4:31:LYS:HD3	1.75	0.69
6:D:60:ILE:CG1	6:D:61:THR:H	1.99	0.69
6:D:4:LEU:HA	6:D:7:LYS:CB	2.21	0.69
11:I:7:LYS:O	11:I:9:THR:HG23	1.92	0.69
13:K:44:LEU:HD12	13:K:44:LEU:O	1.93	0.69
14:L:32:TYR:O	14:L:34:SER:N	2.25	0.69
18:P:45:ILE:HG22	18:P:46:ARG:N	2.06	0.69
19:Q:68:PHE:N	19:Q:68:PHE:CD2	2.60	0.69
23:U:54:ASN:O	23:U:56:GLN:N	2.26	0.69
24:V:2:LYS:H	24:V:3:PRO:HD3	1.57	0.69
1:X:1431:U:H4'	1:X:1604:A:C4'	2.22	0.69
1:X:1440:G:H3'	1:X:1441:A:H5''	1.75	0.69
1:X:1621:C:H5'	1:X:1626:A:N6	2.07	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:43:ARG:NH2	3:A:55:GLY:HA2	2.07	0.69
4:B:115:GLY:CA	4:B:136:ARG:HD2	2.22	0.69
1:X:2750:G:O2'	4:B:203:LYS:HE2	1.93	0.69
6:D:22:TYR:HD2	6:D:27:ALA:HB3	1.57	0.69
6:D:60:ILE:HD12	6:D:61:THR:HG23	1.75	0.69
7:E:104:GLU:OE2	7:E:114:ILE:HG12	1.92	0.69
9:G:108:GLY:C	9:G:110:LEU:HD23	2.13	0.69
9:G:146:THR:O	9:G:148:LEU:N	2.26	0.69
12:J:35:LEU:HD11	12:J:130:THR:OG1	1.92	0.69
15:M:104:LEU:HD12	15:M:107:LEU:HD22	1.75	0.69
15:M:50:PHE:CE1	15:M:79:ARG:CG	2.75	0.69
1:X:1003:C:H4'	17:O:71:ILE:CD1	2.21	0.69
1:X:1513:U:H5''	1:X:1514:C:OP2	1.92	0.69
1:X:1713:G:C6	1:X:1714:A:C5	2.81	0.69
1:X:2294:U:O2'	6:D:125:ARG:HG3	1.92	0.69
3:A:90:ALA:O	3:A:92:ILE:N	2.26	0.69
7:E:101:LYS:HG3	7:E:117:PRO:HD2	1.74	0.69
18:P:71:VAL:HG12	18:P:126:ILE:HG22	1.74	0.69
19:Q:74:ASP:O	19:Q:75:ARG:NH1	2.25	0.69
20:R:25:LEU:O	20:R:26:SER:HB3	1.92	0.69
20:R:51:VAL:CG2	20:R:76:LEU:HD11	2.23	0.69
21:S:46:GLN:CB	21:S:50:GLY:HA3	2.22	0.69
1:X:1923:U:H4'	1:X:1924:C:O5'	1.93	0.69
1:X:328:A:H2'	1:X:329:C:C6	2.28	0.69
3:A:143:HIS:C	3:A:145:LEU:H	1.95	0.69
5:C:149:LEU:CD1	5:C:170:LEU:HB2	2.17	0.69
6:D:30:ARG:HB2	6:D:159:THR:CG2	2.23	0.69
6:D:38:GLU:HG3	6:D:40:LEU:HD11	1.73	0.69
9:G:61:ARG:NE	9:G:65:LYS:HE2	2.08	0.69
22:T:3:HIS:CG	22:T:4:LYS:N	2.61	0.69
1:X:2343:C:OP1	22:T:55:ARG:NE	2.24	0.69
25:W:23:LEU:HD13	25:W:51:LEU:HD11	1.74	0.69
1:X:1044:U:H5	30:4:16:VAL:O	1.76	0.69
1:X:2042:A:OP1	5:C:66:ASN:ND2	2.26	0.69
1:X:2329:C:H2'	1:X:2330:G:O4'	1.93	0.69
1:X:455:A:H2	1:X:1258:G:N3	1.91	0.69
1:X:59:G:H1'	1:X:73:A:C2	2.28	0.69
30:4:18:ARG:HG2	30:4:23:VAL:HG13	1.75	0.69
11:I:54:SER:OG	11:I:59:ARG:NH1	2.26	0.69
14:L:33:ARG:HG3	14:L:38:ILE:HB	1.74	0.69
21:S:56:VAL:HG12	21:S:57:GLU:N	2.07	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:143:A:H2'	1:X:144:U:H6	1.57	0.69
1:X:1971:C:O2'	1:X:1972:G:H5'	1.92	0.69
1:X:2532:G:C2	1:X:2533:U:H1'	2.27	0.69
1:X:2798:A:H2'	1:X:2799:C:H5'	1.74	0.69
1:X:755:C:H2'	1:X:756:C:C6	2.28	0.69
1:X:857:U:H3'	1:X:858:G:C8	2.28	0.69
26:Y:11:THR:O	26:Y:12:SER:O	2.10	0.69
2:Z:45:C:H2'	6:D:92:ARG:HE	1.58	0.69
5:C:130:THR:HA	5:C:160:ALA:HB1	1.73	0.68
7:E:84:THR:HB	7:E:134:SER:CB	2.23	0.68
10:H:23:ARG:CZ	10:H:23:ARG:HB3	2.21	0.68
10:H:71:LYS:O	10:H:99:ILE:HG12	1.92	0.68
11:I:89:ASP:OD2	11:I:120:VAL:HG22	1.93	0.68
14:L:37:HIS:CG	14:L:37:HIS:O	2.45	0.68
17:O:10:LYS:HD3	17:O:37:ALA:HB3	1.74	0.68
1:X:1069:G:C3'	1:X:1070:G:H5''	2.22	0.68
1:X:1747:G:H4'	1:X:1749:G:H1'	1.75	0.68
1:X:2787:A:O2'	1:X:2788:C:H5'	1.92	0.68
1:X:492:G:H1'	1:X:516:G:N2	2.08	0.68
7:E:137:ASP:HB3	7:E:140:LEU:HD12	1.76	0.68
9:G:127:ILE:HG22	9:G:128:GLU:N	2.06	0.68
9:G:141:GLY:O	9:G:144:MET:HB2	1.93	0.68
10:H:100:ASN:HD21	10:H:104:GLU:HG3	1.58	0.68
1:X:964:A:OP1	12:J:18:MET:SD	2.51	0.68
25:W:13:PRO:HD2	25:W:16:GLN:NE2	2.09	0.68
1:X:2637:C:N4	1:X:2643:G:N2	2.40	0.68
1:X:779:U:O2'	1:X:780:U:H5'	1.93	0.68
4:B:151:TYR:HB3	9:G:106:TYR:CD2	2.28	0.68
5:C:14:THR:HG21	5:C:195:ILE:HG22	1.76	0.68
5:C:158:ARG:HB2	5:C:169:VAL:HG11	1.74	0.68
1:X:811:G:OP2	5:C:56:ARG:HG3	1.92	0.68
7:E:105:MET:CB	7:E:113:VAL:HB	2.24	0.68
7:E:105:MET:CE	7:E:105:MET:HA	2.24	0.68
7:E:44:ARG:O	7:E:51:LEU:N	2.25	0.68
4:B:15:TRP:CZ3	15:M:84:ALA:HB3	2.29	0.68
16:N:93:LYS:O	16:N:94:VAL:HG23	1.94	0.68
1:X:1372:A:C5	1:X:1373:G:N7	2.61	0.68
1:X:627:A:H2'	1:X:628:A:C8	2.29	0.68
1:X:751:G:H1'	1:X:772:G:N2	2.08	0.68
3:A:217:ARG:O	3:A:219:PRO:N	2.27	0.68
4:B:61:LYS:HB3	4:B:62:PRO:HD3	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:9:ILE:HD13	15:M:12:LEU:HD13	1.75	0.68
10:H:116:ARG:NH1	15:M:38:LYS:HZ2	1.90	0.68
15:M:17:GLU:HG3	15:M:62:SER:HB3	1.75	0.68
20:R:40:LEU:HB2	20:R:45:LYS:H	1.59	0.68
20:R:96:LYS:HG2	20:R:97:GLN:N	2.08	0.68
21:S:45:GLN:N	21:S:45:GLN:CD	2.45	0.68
21:S:6:LYS:HB2	21:S:31:SER:HB3	1.74	0.68
23:U:22:GLY:H	23:U:39:LYS:HG3	1.59	0.68
23:U:32:ARG:CG	23:U:33:LYS:H	2.06	0.68
23:U:51:ILE:O	23:U:52:ARG:HD3	1.93	0.68
24:V:42:ARG:CZ	24:V:45:GLN:HE22	2.06	0.68
25:W:14:GLY:HA2	25:W:17:VAL:HG23	1.75	0.68
1:X:1339:U:H5''	1:X:1994:U:H1'	1.76	0.68
1:X:2433:G:O2'	1:X:2434:G:H5'	1.93	0.68
1:X:242:A:O2'	1:X:243:G:H4'	1.92	0.68
1:X:2598:C:O2'	1:X:2599:U:H5'	1.93	0.68
3:A:173:VAL:CG1	3:A:174:ILE:H	2.05	0.68
8:F:101:ASN:HB3	8:F:104:GLN:CG	2.23	0.68
9:G:131:VAL:HG11	9:G:148:LEU:HD13	1.75	0.68
10:H:23:ARG:HH21	10:H:23:ARG:CG	2.06	0.68
14:L:38:ILE:HG13	14:L:39:TYR:N	2.08	0.68
15:M:89:ASN:ND2	15:M:90:GLN:NE2	2.42	0.68
18:P:17:GLN:HG2	18:P:18:VAL:HG23	1.73	0.68
18:P:35:PRO:O	18:P:38:VAL:N	2.26	0.68
21:S:113:VAL:HG22	21:S:171:VAL:HG22	1.74	0.68
1:X:1138:A:H2'	1:X:1139:A:H5''	1.75	0.68
1:X:1745:C:H2'	1:X:1746:A:O4'	1.92	0.68
1:X:218:A:H1'	1:X:220:U:C5	2.28	0.68
1:X:2265:A:H4'	1:X:2266:A:O4'	1.93	0.68
1:X:2658:A:O2'	1:X:2659:C:H5'	1.93	0.68
1:X:403:A:H5''	1:X:404:A:OP1	1.93	0.68
1:X:546:A:H2'	1:X:547:U:C6	2.28	0.68
1:X:575:U:H2'	1:X:576:A:C8	2.29	0.68
1:X:604:U:H2'	1:X:605:G:H8	1.57	0.68
5:C:151:VAL:N	5:C:187:VAL:O	2.26	0.68
11:I:108:LEU:CB	11:I:122:VAL:HG11	2.18	0.68
20:R:92:THR:CB	20:R:95:ARG:HH22	2.06	0.68
1:X:135:U:H2'	1:X:136:A:C4	2.29	0.68
1:X:670:U:H2'	1:X:671:A:C8	2.28	0.68
1:X:2291:U:C5'	6:D:85:VAL:HG21	2.21	0.68
7:E:136:ILE:H	7:E:136:ILE:CD1	2.06	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:M:89:ASN:ND2	15:M:90:GLN:HE22	1.92	0.68
17:O:36:LYS:HD2	17:O:55:THR:HA	1.75	0.68
1:X:1430:G:H2'	1:X:1431:U:O4'	1.93	0.68
1:X:1459:U:H4'	1:X:1460:G:OP1	1.92	0.68
1:X:192:G:H4'	1:X:193:A:O5'	1.94	0.68
1:X:760:U:O2'	18:P:109:ARG:HD3	1.92	0.68
3:A:78:LYS:HD3	3:A:116:THR:HB	1.74	0.68
3:A:200:GLU:CG	3:A:202:LYS:HB2	2.23	0.68
10:H:23:ARG:HH21	10:H:23:ARG:HG2	1.59	0.68
11:I:72:TYR:CD2	11:I:105:PRO:HB2	2.29	0.68
1:X:2340:C:H2'	1:X:2341:G:O4'	1.94	0.68
1:X:2546:G:H2'	1:X:2547:C:H6	1.59	0.68
1:X:2701:A:H2'	1:X:2702:G:H8	1.58	0.68
1:X:2802:C:H2'	1:X:2803:C:H6	1.58	0.68
5:C:44:SER:HB3	5:C:88:PRO:CD	2.23	0.68
7:E:150:LYS:O	7:E:152:ARG:N	2.27	0.68
9:G:33:ILE:HD13	9:G:33:ILE:N	2.08	0.68
12:J:100:PRO:HB3	21:S:74:ARG:HG3	1.76	0.68
12:J:28:VAL:HG21	12:J:134:LYS:O	1.94	0.68
13:K:18:VAL:HG12	13:K:22:ARG:HD2	1.75	0.68
14:L:12:ARG:HH21	14:L:13:THR:HG23	1.58	0.68
15:M:34:ARG:NH2	15:M:66:PHE:CE2	2.62	0.68
1:X:124:A:C2	1:X:125:A:C2	2.82	0.68
1:X:1287:A:N3	1:X:1310:C:H1'	2.09	0.68
1:X:2306:A:H2'	1:X:2307:A:C8	2.29	0.68
1:X:2379:G:C2'	1:X:2380:U:H5'	2.24	0.68
1:X:304:A:H4'	1:X:304:A:OP1	1.93	0.68
3:A:212:SER:O	3:A:215:LEU:N	2.27	0.68
6:D:40:LEU:HA	6:D:150:ARG:HH21	1.59	0.68
7:E:137:ASP:OD1	7:E:140:LEU:N	2.22	0.68
7:E:144:VAL:O	7:E:147:ASN:HB2	1.94	0.68
9:G:47:SER:C	9:G:49:VAL:H	1.97	0.68
9:G:51:LEU:CD1	9:G:88:VAL:HG21	2.24	0.68
10:H:116:ARG:HD3	15:M:40:ARG:CB	2.23	0.68
12:J:136:GLU:HA	12:J:138:TYR:HE2	1.58	0.68
16:N:88:ILE:HG13	17:O:49:GLU:CB	2.24	0.68
1:X:63:A:O3'	19:Q:71:GLN:HB2	1.95	0.68
22:T:53:MET:SD	22:T:57:HIS:HA	2.34	0.68
1:X:1715:A:H4'	1:X:1716:G:O5'	1.94	0.68
1:X:706:A:O2'	1:X:707:U:H5'	1.95	0.68
5:C:165:SER:C	5:C:166:TRP:HE3	1.95	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:15:ILE:HG22	5:C:17:LEU:HD22	1.76	0.67
6:D:85:VAL:HG23	6:D:86:GLY:H	1.59	0.67
7:E:102:ALA:HB2	7:E:116:GLU:HA	1.76	0.67
8:F:85:ILE:HG22	8:F:86:GLY:N	2.09	0.67
10:H:99:ILE:HG22	10:H:105:PRO:HA	1.76	0.67
11:I:54:SER:OG	11:I:59:ARG:CZ	2.41	0.67
20:R:37:LEU:HD21	20:R:49:GLU:CG	2.24	0.67
20:R:71:GLN:O	20:R:72:ARG:HG3	1.94	0.67
20:R:97:GLN:HA	20:R:103:LYS:O	1.94	0.67
24:V:2:LYS:HA	24:V:6:MET:CE	2.24	0.67
1:X:1450:G:H2'	1:X:1451:C:O4'	1.94	0.67
1:X:442:A:H2'	1:X:443:A:C8	2.29	0.67
2:Z:17:A:OP2	2:Z:110:U:C2'	2.42	0.67
4:B:116:VAL:HG13	4:B:136:ARG:HH21	1.59	0.67
6:D:35:VAL:O	6:D:154:ILE:HG23	1.93	0.67
9:G:140:GLN:HG2	9:G:144:MET:HE3	1.74	0.67
14:L:32:TYR:C	14:L:34:SER:H	1.96	0.67
16:N:29:SER:C	16:N:30:LYS:HD2	2.14	0.67
24:V:4:SER:C	24:V:6:MET:N	2.47	0.67
25:W:28:ILE:CD1	25:W:28:ILE:H	2.04	0.67
1:X:1018:C:H3'	1:X:1019:U:C5'	2.24	0.67
1:X:1118:G:C2'	1:X:1119:U:H5''	2.24	0.67
1:X:1514:C:O4'	1:X:1593:C:H5'	1.93	0.67
1:X:2270:U:O2'	1:X:2271:C:H5'	1.93	0.67
1:X:321:A:OP1	20:R:27:GLY:N	2.15	0.67
2:Z:46:G:H1'	2:Z:49:C:N4	2.09	0.67
5:C:185:ARG:HG2	5:C:185:ARG:HH21	1.60	0.67
5:C:194:GLU:O	5:C:195:ILE:HG23	1.93	0.67
6:D:136:LEU:C	6:D:137:ILE:HG12	2.14	0.67
7:E:9:ILE:O	7:E:11:VAL:HG23	1.94	0.67
11:I:94:GLU:HB3	11:I:97:ARG:CZ	2.25	0.67
12:J:113:GLU:HA	12:J:116:LYS:CB	2.24	0.67
1:X:2313:G:N2	14:L:17:VAL:HB	2.10	0.67
1:X:1264:C:P	16:N:13:ARG:HH12	2.18	0.67
1:X:1168:G:O2'	25:W:28:ILE:HD11	1.95	0.67
1:X:1095:A:H3'	1:X:1096:A:H5''	1.75	0.67
1:X:805:G:N7	1:X:2419:C:H1'	2.10	0.67
1:X:698:A:H1'	1:X:701:U:O4	1.94	0.67
26:Y:33:CYS:O	26:Y:37:HIS:HA	1.95	0.67
2:Z:45:C:H2'	6:D:92:ARG:NH1	2.08	0.67
30:4:25:VAL:HB	30:4:34:GLN:H	1.59	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:52:ARG:CZ	3:A:247:VAL:HG11	2.24	0.67
9:G:93:LYS:HD3	9:G:93:LYS:N	2.08	0.67
12:J:64:LYS:HD2	12:J:64:LYS:H	1.59	0.67
17:O:38:LEU:HD13	17:O:39:PHE:N	2.10	0.67
19:Q:79:ILE:HD12	19:Q:79:ILE:N	2.09	0.67
20:R:96:LYS:HZ2	20:R:105:ARG:HG3	1.60	0.67
23:U:15:VAL:O	23:U:16:ASN:HB2	1.94	0.67
23:U:63:SER:HB3	23:U:66:ALA:HB2	1.76	0.67
1:X:1441:A:C2	1:X:1586:A:OP2	2.48	0.67
1:X:1931:G:O2'	1:X:1932:G:H5'	1.95	0.67
1:X:2689:C:O2'	1:X:2690:A:H5'	1.95	0.67
1:X:437:G:O2'	1:X:438:G:H5'	1.95	0.67
1:X:957:G:H2'	1:X:958:G:H8	1.60	0.67
1:X:972:C:H5'	1:X:973:U:OP2	1.95	0.67
1:X:1816:G:OP1	3:A:52:ARG:HG3	1.95	0.67
5:C:110:SER:HA	5:C:113:GLU:OE1	1.95	0.67
7:E:84:THR:HB	7:E:134:SER:HB2	1.75	0.67
9:G:105:GLY:CA	9:G:110:LEU:HD12	2.25	0.67
9:G:162:LYS:H	9:G:163:PRO:HD2	1.59	0.67
12:J:35:LEU:HD23	12:J:105:PHE:HD2	1.58	0.67
14:L:41:GLN:OE1	14:L:50:THR:HG21	1.95	0.67
23:U:33:LYS:O	23:U:34:THR:HB	1.95	0.67
1:X:178:C:OP2	23:U:40:ARG:HD2	1.94	0.67
23:U:51:ILE:HG23	23:U:59:THR:CA	2.20	0.67
1:X:1909:U:H5'	1:X:1911:A:OP2	1.94	0.67
1:X:20:C:H2'	1:X:21:A:H8	1.60	0.67
1:X:2811:G:H2'	1:X:2812:A:H8	1.59	0.67
1:X:580:A:O2'	1:X:582:G:OP2	2.12	0.67
3:A:162:SER:HB3	3:A:195:ALA:HB2	1.75	0.67
11:I:11:GLY:H	11:I:14:LYS:HB2	1.60	0.67
14:L:33:ARG:NH1	14:L:103:LEU:CB	2.58	0.67
2:Z:53:G:C5'	14:L:64:LYS:HD2	2.24	0.67
15:M:89:ASN:HD22	15:M:90:GLN:NE2	1.92	0.67
23:U:26:ALA:HB2	23:U:35:THR:HG23	1.75	0.67
24:V:48:ARG:C	24:V:50:VAL:H	1.96	0.67
1:X:1090:C:H2'	1:X:1091:C:H6	1.59	0.67
1:X:1135:C:H2'	1:X:1136:G:C8	2.28	0.67
1:X:1461:C:H2'	1:X:1462:C:H6	1.59	0.67
1:X:1493:A:H2'	1:X:1494:G:O4'	1.94	0.67
1:X:13:A:O2'	1:X:15:G:N7	2.25	0.67
1:X:1753:A:O5'	1:X:1753:A:H8	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1281:A:C2'	1:X:2592:U:H5	2.06	0.67
1:X:350:U:O5'	1:X:350:U:H6	1.76	0.67
1:X:492:G:H1'	1:X:516:G:H21	1.58	0.67
4:B:19:ARG:HG3	4:B:21:ILE:HD11	1.77	0.67
5:C:180:ILE:HG13	5:C:186:LEU:HD22	1.76	0.67
6:D:88:LYS:O	6:D:89:VAL:HG22	1.94	0.67
9:G:66:HIS:O	9:G:70:PHE:CE1	2.48	0.67
14:L:60:LYS:HA	14:L:67:THR:HG21	1.75	0.67
15:M:28:ARG:HB3	15:M:29:PRO:HD3	1.76	0.67
16:N:66:ASN:CB	16:N:76:TYR:HB2	2.18	0.67
17:O:28:GLU:O	17:O:29:ALA:HB3	1.95	0.67
20:R:16:PHE:CD2	20:R:16:PHE:N	2.61	0.67
22:T:25:LYS:CA	22:T:29:GLU:OE1	2.42	0.67
1:X:1739:G:H2'	1:X:1740:G:C8	2.30	0.67
1:X:1781:C:OP1	3:A:219:PRO:CB	2.32	0.67
1:X:2176:U:H2'	1:X:2177:U:O4'	1.94	0.67
1:X:394:U:H2'	1:X:395:G:C8	2.30	0.67
1:X:626:A:O2'	5:C:176:ASN:HB2	1.94	0.67
1:X:999:A:C5	25:W:10:ILE:HG21	2.30	0.67
3:A:132:PRO:HA	3:A:190:TYR:HA	1.76	0.67
3:A:246:PRO:O	3:A:248:THR:O	2.13	0.67
10:H:25:LEU:CD1	10:H:52:VAL:HG23	2.25	0.67
11:I:94:GLU:HA	11:I:97:ARG:CG	2.24	0.67
12:J:8:THR:HG22	12:J:70:PHE:HZ	1.60	0.67
13:K:41:ALA:O	13:K:44:LEU:N	2.24	0.67
16:N:79:PHE:HE1	16:N:106:PHE:CE1	2.13	0.67
19:Q:63:LYS:HE2	19:Q:65:VAL:N	2.10	0.67
20:R:92:THR:C	20:R:95:ARG:NH2	2.48	0.67
1:X:1095:A:H2'	1:X:1096:A:C5'	2.19	0.67
1:X:1211:G:C4	1:X:1212:U:C5	2.82	0.67
1:X:199:A:N6	1:X:209:G:H1'	2.10	0.67
1:X:2437:G:H2'	1:X:2469:G:H1	1.59	0.67
7:E:136:ILE:HG22	7:E:137:ASP:N	2.10	0.67
9:G:67:ARG:CD	9:G:70:PHE:HA	2.23	0.67
12:J:78:LYS:HE3	12:J:80:ALA:C	2.14	0.67
22:T:27:GLY:HA2	22:T:67:VAL:O	1.94	0.67
23:U:14:VAL:O	23:U:15:VAL:HG22	1.95	0.67
1:X:1055:A:H2'	1:X:1056:U:H5''	1.75	0.67
1:X:1539:U:H2'	1:X:1540:C:H6	1.60	0.67
1:X:227:G:O2'	11:I:53:ARG:NE	2.28	0.67
1:X:2467:A:O2'	1:X:2468:G:H5'	1.95	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2827:G:H2'	1:X:2828:C:H6	1.60	0.67
1:X:647:G:H4'	1:X:649:G:O3'	1.95	0.67
1:X:774:A:H8	1:X:774:A:H3'	1.59	0.67
1:X:864:C:O2'	1:X:865:A:H5'	1.94	0.67
2:Z:107:C:H5''	21:S:84:TYR:CE1	2.30	0.67
9:G:96:ASP:O	9:G:98:LYS:N	2.28	0.67
16:N:70:ARG:NH1	16:N:70:ARG:HG3	2.10	0.67
18:P:24:GLY:O	18:P:127:ILE:HA	1.94	0.67
20:R:11:ASN:ND2	20:R:11:ASN:O	2.27	0.67
21:S:152:ILE:CD1	21:S:152:ILE:H	2.07	0.67
24:V:56:VAL:HA	24:V:59:GLU:CD	2.15	0.67
1:X:1278:A:O2'	1:X:1279:G:O5'	2.10	0.67
1:X:1966:C:O2'	1:X:1967:U:H5'	1.94	0.67
1:X:2302:G:H1	1:X:2311:U:H5	1.42	0.67
1:X:2827:G:H2'	1:X:2828:C:C6	2.30	0.67
1:X:741:G:H21	1:X:743:A:H1'	1.60	0.67
3:A:84:TYR:CE2	3:A:91:ARG:HG2	2.29	0.66
1:X:2767:C:H1'	4:B:62:PRO:HG3	1.77	0.66
5:C:5:ASN:N	5:C:5:ASN:HD22	1.92	0.66
6:D:53:ALA:HB1	6:D:57:LEU:HD21	1.76	0.66
6:D:73:SER:O	6:D:79:LEU:HB3	1.95	0.66
7:E:42:THR:O	7:E:53:GLU:N	2.21	0.66
8:F:125:ALA:O	8:F:128:VAL:HB	1.95	0.66
9:G:157:PRO:O	9:G:159:SER:N	2.26	0.66
10:H:97:VAL:O	10:H:97:VAL:HG12	1.94	0.66
12:J:136:GLU:HA	12:J:138:TYR:CE2	2.30	0.66
16:N:86:ALA:C	16:N:88:ILE:N	2.48	0.66
18:P:44:VAL:HG23	18:P:45:ILE:N	2.08	0.66
20:R:93:ARG:HH12	20:R:108:VAL:HG23	1.59	0.66
21:S:112:LEU:O	21:S:172:LEU:N	2.28	0.66
1:X:125:A:H5''	1:X:126:C:O4'	1.95	0.66
1:X:1281:A:H2'	1:X:1282:A:H8	1.60	0.66
1:X:1605:A:O2'	1:X:1606:C:H5'	1.94	0.66
1:X:1977:C:O2'	1:X:1978:U:H5'	1.94	0.66
1:X:2286:G:C6	1:X:2287:G:H1'	2.30	0.66
1:X:622:U:H2'	1:X:623:G:O4'	1.96	0.66
1:X:801:A:O2'	1:X:802:A:OP2	2.08	0.66
3:A:70:ARG:C	3:A:72:LYS:H	1.97	0.66
6:D:5:LYS:O	6:D:8:TYR:HB3	1.94	0.66
6:D:63:GLN:OE1	6:D:89:VAL:HG12	1.95	0.66
6:D:80:ARG:HD3	6:D:83:MET:SD	2.35	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:75:ILE:HG13	9:G:140:GLN:CG	2.24	0.66
10:H:116:ARG:HD2	15:M:38:LYS:HZ3	1.59	0.66
1:X:1615:C:OP1	19:Q:35:LYS:N	2.26	0.66
20:R:59:LYS:H	20:R:60:PRO:HD3	1.60	0.66
21:S:53:ASP:HB3	21:S:61:THR:HG23	1.76	0.66
22:T:42:GLY:O	22:T:57:HIS:HB3	1.96	0.66
1:X:574:C:H4'	1:X:1266:G:O6	1.95	0.66
1:X:820:U:H2'	1:X:821:A:H8	1.60	0.66
2:Z:107:C:C2'	2:Z:108:G:H5'	2.26	0.66
5:C:44:SER:CB	5:C:88:PRO:HD3	2.25	0.66
10:H:4:PRO:O	10:H:5:GLN:HB2	1.93	0.66
21:S:103:ARG:NH2	21:S:107:GLU:HG2	2.10	0.66
1:X:1392:U:H5''	1:X:1393:G:OP2	1.95	0.66
1:X:1507:A:H5'	3:A:99:ASP:OD1	1.96	0.66
1:X:1625:A:C4	1:X:1632:A:N3	2.63	0.66
1:X:2471:U:O2'	1:X:2472:U:H5'	1.95	0.66
4:B:182:ILE:O	4:B:183:LEU:HD23	1.96	0.66
5:C:35:LEU:O	5:C:38:ARG:N	2.27	0.66
7:E:109:TYR:HE1	7:E:152:ARG:NH2	1.92	0.66
1:X:596:C:N4	11:I:36:GLY:HA3	2.11	0.66
14:L:69:ALA:HB2	14:L:102:ALA:HB1	1.78	0.66
17:O:93:ILE:O	17:O:93:ILE:HG13	1.94	0.66
18:P:50:VAL:HG11	18:P:90:LEU:HB2	1.77	0.66
20:R:15:HIS:C	20:R:16:PHE:HD2	1.97	0.66
20:R:23:ILE:HD11	20:R:81:VAL:HB	1.78	0.66
1:X:1919:A:H1'	1:X:1923:U:N3	2.11	0.66
1:X:2185:U:H2'	1:X:2186:G:C8	2.31	0.66
1:X:2625:U:H2'	1:X:2626:U:O4'	1.95	0.66
1:X:60:A:OP1	1:X:60:A:H8	1.79	0.66
1:X:741:G:C2	1:X:743:A:C4	2.83	0.66
1:X:1885:C:C5'	3:A:244:ARG:HD2	2.25	0.66
9:G:82:VAL:HB	9:G:150:VAL:HG13	1.76	0.66
10:H:83:ARG:NH1	15:M:40:ARG:HG3	2.11	0.66
12:J:64:LYS:HD3	12:J:108:ALA:O	1.95	0.66
12:J:36:ILE:HD12	12:J:131:LYS:HE3	1.77	0.66
12:J:36:ILE:HD11	12:J:103:VAL:HG22	1.76	0.66
14:L:27:LEU:HB2	14:L:87:VAL:HG22	1.77	0.66
14:L:38:ILE:CD1	14:L:39:TYR:H	2.08	0.66
17:O:56:VAL:CA	17:O:97:GLY:HA3	2.26	0.66
19:Q:63:LYS:HE2	19:Q:65:VAL:HA	1.78	0.66
19:Q:50:VAL:HG13	19:Q:80:VAL:CG2	2.26	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:148:THR:O	21:S:150:GLY:N	2.28	0.66
1:X:139:A:H2'	1:X:140:G:C8	2.30	0.66
1:X:1524:C:H3'	1:X:1525:A:H5''	1.77	0.66
1:X:2332:G:O2'	22:T:35:ASN:ND2	2.29	0.66
1:X:2404:A:H1'	1:X:2406:C:C4	2.31	0.66
1:X:530:G:H2'	1:X:531:G:C8	2.30	0.66
1:X:1276:U:C1'	26:Y:10:LYS:HG3	2.24	0.66
2:Z:47:A:H5'	2:Z:48:A:OP2	1.95	0.66
1:X:1790:G:N2	3:A:155:LEU:HA	2.10	0.66
1:X:1812:U:C2	3:A:159:ALA:HB1	2.31	0.66
5:C:112:GLN:CD	5:C:116:LYS:HB2	2.16	0.66
6:D:45:GLU:HB2	6:D:78:LYS:NZ	2.09	0.66
7:E:7:GLN:N	7:E:69:ARG:HE	1.94	0.66
14:L:60:LYS:O	14:L:61:SER:OG	2.14	0.66
16:N:40:LEU:N	16:N:40:LEU:HD23	2.11	0.66
17:O:64:GLY:O	17:O:89:ASN:HA	1.96	0.66
18:P:89:ARG:HH21	18:P:132:GLY:HA2	1.61	0.66
1:X:1071:U:H1'	1:X:1073:G:H5'	1.78	0.66
1:X:1231:A:H2'	1:X:1232:U:H6	1.61	0.66
1:X:124:A:H2'	1:X:125:A:C8	2.30	0.66
1:X:2247:A:H5''	1:X:2247:A:H8	1.61	0.66
1:X:2272:A:C5'	14:L:15:ARG:NH2	2.58	0.66
1:X:224:G:H4'	1:X:399:G:C5	2.30	0.66
1:X:589:C:H4'	16:N:31:GLN:OE1	1.94	0.66
3:A:227:ASN:O	3:A:228:PRO:C	2.33	0.66
9:G:159:SER:C	9:G:161:GLN:N	2.49	0.66
12:J:113:GLU:C	12:J:115:ALA:H	1.99	0.66
12:J:15:ARG:CD	12:J:73:LYS:HZ2	2.09	0.66
13:K:24:GLN:HB3	13:K:44:LEU:CD2	2.25	0.66
18:P:32:ARG:HH12	18:P:119:LYS:HB3	1.60	0.66
1:X:1066:G:H2'	1:X:1067:G:C8	2.31	0.66
1:X:1539:U:H2'	1:X:1540:C:C6	2.30	0.66
1:X:199:A:H61	1:X:209:G:H1'	1.59	0.66
1:X:2585:C:O2'	1:X:2586:G:H5'	1.96	0.66
1:X:343:A:H1'	1:X:346:C:N4	2.10	0.66
1:X:469:G:O2'	1:X:470:U:OP2	2.14	0.66
4:B:119:ARG:HG3	4:B:119:ARG:NH1	2.07	0.66
4:B:176:ARG:HH21	15:M:16:ILE:HA	1.58	0.66
8:F:101:ASN:HB3	8:F:104:GLN:CD	2.15	0.66
9:G:115:ALA:O	9:G:118:ALA:HB3	1.95	0.66
10:H:25:LEU:HD11	10:H:52:VAL:CG2	2.24	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:N:64:ARG:O	16:N:66:ASN:N	2.29	0.66
20:R:24:VAL:HB	20:R:29:HIS:O	1.96	0.66
21:S:123:VAL:HG23	21:S:161:ALA:HB1	1.77	0.66
21:S:54:ILE:HG22	21:S:54:ILE:O	1.95	0.66
25:W:38:PRO:CA	25:W:41:ARG:CZ	2.74	0.66
1:X:1463:A:O2'	1:X:1464:A:H5'	1.96	0.66
1:X:1811:A:H8	1:X:1811:A:OP2	1.77	0.66
1:X:540:G:O2'	1:X:542:A:C2	2.44	0.66
1:X:774:A:C8	1:X:774:A:H3'	2.31	0.66
2:Z:123:U:H2'	2:Z:123:U:O2	1.95	0.66
2:Z:76:U:H2'	2:Z:77:G:O4'	1.95	0.66
3:A:96:HIS:CE1	3:A:100:GLY:HA2	2.31	0.66
5:C:7:ILE:CG1	5:C:119:ALA:HB1	2.26	0.66
9:G:51:LEU:HD12	9:G:88:VAL:HG21	1.78	0.66
17:O:10:LYS:CG	17:O:11:GLN:H	2.07	0.66
20:R:10:HIS:HB2	20:R:44:GLN:NE2	2.10	0.66
1:X:888:G:H4'	21:S:167:THR:OG1	1.95	0.66
25:W:38:PRO:HB3	25:W:41:ARG:HH22	1.61	0.66
1:X:1513:U:OP2	1:X:1513:U:H3'	1.95	0.66
1:X:2185:U:H2'	1:X:2186:G:H8	1.60	0.66
1:X:2407:G:H5''	1:X:2408:G:OP1	1.95	0.66
2:Z:19:C:H2'	2:Z:20:A:O4'	1.95	0.66
6:D:126:GLY:O	6:D:127:ASN:O	2.14	0.66
8:F:118:ALA:HB1	8:F:123:ALA:CB	2.26	0.66
9:G:67:ARG:HD3	9:G:70:PHE:CB	2.25	0.66
10:H:124:MET:O	10:H:127:VAL:HG12	1.96	0.66
14:L:33:ARG:HH22	14:L:103:LEU:H	1.42	0.66
14:L:99:ARG:HG3	14:L:100:VAL:H	1.60	0.66
15:M:99:VAL:O	15:M:100:ARG:HG2	1.96	0.66
15:M:104:LEU:HA	15:M:106:TYR:CE2	2.31	0.66
18:P:37:LYS:NZ	18:P:64:ALA:N	2.44	0.66
21:S:142:ASN:O	21:S:171:VAL:HB	1.95	0.66
1:X:2240:C:H3'	22:T:17:ASN:OD1	1.96	0.66
22:T:74:LYS:O	22:T:76:ALA:N	2.29	0.66
22:T:51:VAL:HG23	22:T:81:ILE:HD11	1.78	0.66
1:X:1467:U:C4	1:X:1473:U:N3	2.64	0.66
1:X:1674:C:H2'	1:X:1675:C:C6	2.30	0.66
1:X:1838:G:H3'	1:X:1839:A:C8	2.27	0.66
4:B:136:ARG:HG2	4:B:137:ARG:N	2.10	0.65
4:B:141:ILE:CG2	4:B:150:VAL:HB	2.26	0.65
6:D:169:LEU:HA	6:D:172:SER:OG	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:F:75:MET:HA	8:F:78:LEU:CB	2.20	0.65
9:G:34:PRO:O	9:G:69:ASP:OD1	2.14	0.65
14:L:31:VAL:HG23	14:L:32:TYR:N	2.10	0.65
19:Q:66:GLY:C	19:Q:68:PHE:H	1.97	0.65
21:S:30:VAL:HG12	21:S:31:SER:N	2.10	0.65
1:X:393:U:O2'	1:X:394:U:H5'	1.95	0.65
1:X:872:G:H2'	1:X:928:G:C6	2.31	0.65
1:X:83:A:H2	1:X:98:U:H1'	1.60	0.65
6:D:132:ILE:HG13	6:D:154:ILE:CD1	2.26	0.65
6:D:88:LYS:HG2	6:D:89:VAL:N	2.11	0.65
7:E:131:ILE:HG22	7:E:132:ASP:H	1.61	0.65
9:G:84:ASN:HB3	9:G:87:GLN:HE22	1.61	0.65
14:L:60:LYS:HG2	14:L:62:GLY:H	1.61	0.65
21:S:21:ALA:HA	21:S:81:VAL:O	1.95	0.65
25:W:20:VAL:HA	25:W:23:LEU:HD12	1.78	0.65
1:X:1056:U:H4'	1:X:1058:G:H1'	1.78	0.65
1:X:1069:G:H2'	1:X:1070:G:O4'	1.96	0.65
1:X:1137:A:H4'	1:X:1138:A:H5''	1.77	0.65
1:X:1193:G:H2'	1:X:1194:U:O4'	1.96	0.65
1:X:1218:C:O2'	11:I:8:PRO:HA	1.94	0.65
1:X:1415:C:O2'	1:X:1416:A:H5'	1.95	0.65
3:A:91:ARG:CD	3:A:198:ASN:HA	2.25	0.65
4:B:2:LYS:HG2	4:B:84:PHE:CE1	2.31	0.65
1:X:2617:G:P	4:B:82:ARG:HH22	2.20	0.65
5:C:7:ILE:HG12	5:C:119:ALA:HB1	1.78	0.65
6:D:71:LYS:O	6:D:72:LYS:HB2	1.97	0.65
10:H:24:VAL:HG12	10:H:42:LYS:HG2	1.76	0.65
11:I:76:LYS:HB3	11:I:79:GLN:CD	2.16	0.65
12:J:70:PHE:HD2	12:J:70:PHE:C	1.99	0.65
16:N:106:PHE:HA	16:N:109:LEU:HD12	1.79	0.65
1:X:589:C:H4'	16:N:31:GLN:CD	2.17	0.65
21:S:154:LEU:HD13	21:S:158:CYS:O	1.97	0.65
21:S:54:ILE:HG21	21:S:62:PHE:HD1	1.62	0.65
25:W:38:PRO:CB	25:W:41:ARG:NH2	2.59	0.65
1:X:1422:C:H2'	1:X:1423:A:C8	2.31	0.65
1:X:1716:G:O3'	1:X:1717:A:H4'	1.96	0.65
1:X:2527:G:C6	1:X:2540:A:N1	2.63	0.65
1:X:650:U:H2'	1:X:651:C:C6	2.31	0.65
4:B:24:THR:HG21	4:B:188:ILE:HD13	1.78	0.65
4:B:69:LYS:HD2	4:B:69:LYS:O	1.97	0.65
6:D:132:ILE:HG21	6:D:138:PHE:CZ	2.31	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:171:GLN:HE22	6:D:177:PHE:HB2	1.60	0.65
9:G:44:VAL:O	9:G:83:ILE:HG12	1.97	0.65
14:L:69:ALA:HB1	14:L:106:ALA:HB2	1.78	0.65
16:N:33:ARG:HG3	16:N:33:ARG:HH11	1.61	0.65
17:O:36:LYS:HZ1	17:O:55:THR:C	1.99	0.65
1:X:1354:A:OP1	1:X:1618:U:H2'	1.97	0.65
1:X:1409:U:H5''	1:X:1410:U:OP2	1.96	0.65
1:X:1515:U:H2'	1:X:1516:A:H8	1.61	0.65
1:X:1739:G:H2'	1:X:1740:G:H8	1.61	0.65
1:X:2197:U:H2'	1:X:2198:U:H5	1.58	0.65
1:X:2394:G:H5''	11:I:63:ARG:NE	2.10	0.65
1:X:2796:A:C2	1:X:2797:G:C4	2.85	0.65
1:X:766:A:O2'	1:X:767:G:H5'	1.97	0.65
26:Y:6:VAL:CG2	26:Y:7:PRO:HD2	2.26	0.65
30:4:1:MET:HE1	30:4:34:GLN:C	2.17	0.65
30:4:1:MET:HE1	30:4:34:GLN:HA	1.79	0.65
6:D:34:ILE:HB	6:D:91:LEU:HB2	1.79	0.65
6:D:80:ARG:HD3	6:D:83:MET:CB	2.27	0.65
10:H:3:MET:HB2	10:H:4:PRO:HD2	1.78	0.65
1:X:2654:A:H5'	10:H:41:ASN:HB2	1.79	0.65
11:I:86:THR:OG1	11:I:118:VAL:HG12	1.97	0.65
15:M:43:ASN:ND2	15:M:43:ASN:O	2.21	0.65
15:M:34:ARG:NH1	15:M:81:PHE:HB3	2.11	0.65
17:O:36:LYS:HB3	17:O:39:PHE:HE2	1.60	0.65
1:X:1211:G:H2'	1:X:1212:U:H6	1.61	0.65
1:X:1517:C:H2'	1:X:1518:C:H6	1.61	0.65
1:X:2451:G:H2'	1:X:2454:C:H42	1.62	0.65
1:X:2761:A:H5''	1:X:2762:G:H5'	1.78	0.65
1:X:497:C:C6	1:X:497:C:H5'	2.32	0.65
1:X:617:U:H3'	1:X:617:U:O2	1.97	0.65
1:X:687:G:O2'	1:X:688:A:H5'	1.94	0.65
2:Z:95:U:H2'	2:Z:96:C:C6	2.32	0.65
30:4:11:CYS:HB3	30:4:32:HIS:CE1	2.31	0.65
6:D:60:ILE:CD1	6:D:61:THR:HG23	2.27	0.65
9:G:70:PHE:HB2	16:N:64:ARG:CD	2.27	0.65
11:I:7:LYS:C	11:I:9:THR:H	2.00	0.65
14:L:20:THR:HG23	14:L:23:ALA:HB3	1.76	0.65
20:R:75:ALA:C	20:R:76:LEU:HD23	2.17	0.65
24:V:32:ALA:C	24:V:34:ALA:H	2.00	0.65
1:X:1840:A:H2'	1:X:1841:G:O4'	1.97	0.65
1:X:983:G:H3'	1:X:984:A:C5'	2.21	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:579:G:H5'	1:X:994:A:H2	1.61	0.65
3:A:213:ARG:C	3:A:215:LEU:N	2.49	0.65
3:A:89:SER:HB2	3:A:201:HIS:CE1	2.31	0.65
4:B:165:VAL:CG1	4:B:189:PRO:HG2	2.27	0.65
4:B:91:VAL:HG12	4:B:92:ASN:N	2.11	0.65
6:D:36:VAL:HG21	6:D:61:THR:HG21	1.79	0.65
4:B:152:LYS:CB	9:G:106:TYR:HB3	2.26	0.65
1:X:1935:A:C2	10:H:22:ILE:HD11	2.31	0.65
11:I:82:ASP:H	11:I:114:ILE:HG21	1.62	0.65
15:M:44:ARG:HD2	15:M:46:ARG:HH21	1.62	0.65
17:O:7:THR:O	17:O:8:GLY:C	2.33	0.65
24:V:31:GLN:OE1	24:V:37:LEU:HA	1.96	0.65
1:X:2262:C:C2'	1:X:2263:C:H5'	2.26	0.65
1:X:48:A:C5'	1:X:49:U:H5'	2.26	0.65
1:X:538:A:C2	1:X:2025:A:C6	2.85	0.65
18:P:36:ARG:HH22	26:Y:20:ARG:NH2	1.94	0.65
4:B:40:GLN:O	4:B:41:THR:HG23	1.97	0.65
5:C:172:VAL:O	5:C:174:GLY:N	2.29	0.65
6:D:34:ILE:O	6:D:91:LEU:N	2.28	0.65
7:E:17:VAL:O	7:E:26:VAL:HA	1.95	0.65
9:G:75:ILE:HG13	9:G:140:GLN:HG3	1.77	0.65
13:K:79:VAL:HA	13:K:83:VAL:HG23	1.78	0.65
2:Z:29:C:O3'	14:L:37:HIS:CD2	2.50	0.65
16:N:17:VAL:HG11	16:N:36:PHE:HB2	1.79	0.65
21:S:67:LYS:CE	21:S:84:TYR:HB2	2.27	0.65
21:S:91:PRO:O	21:S:92:VAL:HG13	1.97	0.65
1:X:2331:A:C2	22:T:33:ALA:O	2.49	0.65
22:T:53:MET:HG3	22:T:58:THR:O	1.97	0.65
23:U:27:ASP:C	23:U:32:ARG:NE	2.50	0.65
24:V:51:ALA:O	24:V:54:ASN:HB2	1.96	0.65
1:X:1125:G:O2'	1:X:1126:A:H5'	1.96	0.65
1:X:542:A:N6	1:X:2003:A:N3	2.45	0.65
1:X:2018:G:O2'	1:X:2019:C:OP1	2.15	0.65
1:X:2394:G:OP1	11:I:63:ARG:HD2	1.96	0.65
1:X:2394:G:H2'	1:X:2395:C:C6	2.31	0.65
1:X:2551:A:O2'	1:X:2552:C:OP2	2.14	0.65
4:B:48:GLN:O	4:B:48:GLN:HG2	1.96	0.65
5:C:117:LEU:HD23	5:C:117:LEU:C	2.18	0.65
5:C:46:ARG:HG2	5:C:46:ARG:HH11	1.62	0.65
2:Z:46:G:C4'	6:D:92:ARG:HH12	2.09	0.65
7:E:109:TYR:O	7:E:111:HIS:N	2.29	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:I:94:GLU:CA	11:I:97:ARG:HE	2.09	0.65
12:J:113:GLU:HA	12:J:116:LYS:HB2	1.77	0.65
12:J:36:ILE:HB	12:J:131:LYS:HG2	1.77	0.65
14:L:38:ILE:HD12	14:L:39:TYR:H	1.61	0.65
16:N:64:ARG:O	16:N:67:ALA:N	2.29	0.65
18:P:38:VAL:HG13	18:P:64:ALA:HB1	1.78	0.65
20:R:98:ILE:C	20:R:100:ASP:N	2.49	0.65
20:R:105:ARG:HH12	20:R:113:THR:H	1.45	0.65
20:R:93:ARG:HG2	20:R:108:VAL:HA	1.79	0.65
22:T:23:VAL:HG13	22:T:38:VAL:HG22	1.79	0.65
22:T:43:THR:HG22	22:T:46:LYS:HD2	1.79	0.65
24:V:14:PHE:CE2	24:V:57:LYS:HB2	2.32	0.65
1:X:1242:A:H2'	1:X:1243:G:C8	2.27	0.65
1:X:1444:C:H2'	1:X:1445:A:H8	1.62	0.65
1:X:1724:C:O2'	1:X:1725:C:H5'	1.96	0.65
1:X:1800:A:C6	1:X:1802:A:C6	2.85	0.65
1:X:1783:G:OP1	3:A:206:LEU:HD12	1.97	0.65
5:C:58:MET:HG3	5:C:59:TYR:N	2.12	0.65
6:D:10:ASP:C	6:D:12:VAL:N	2.50	0.65
9:G:65:LYS:HE3	9:G:66:HIS:HD2	1.61	0.65
17:O:10:LYS:HG3	17:O:11:GLN:NE2	2.08	0.65
1:X:1186:G:H4'	1:X:1187:A:O5'	1.96	0.65
1:X:2039:G:N2	26:Y:4:HIS:O	2.30	0.65
3:A:101:GLU:OE2	3:A:102:LYS:N	2.31	0.64
3:A:91:ARG:O	3:A:107:ALA:HB3	1.97	0.64
5:C:158:ARG:NH2	5:C:171:PRO:HA	2.12	0.64
6:D:97:TYR:HD2	6:D:100:LEU:HD23	1.63	0.64
9:G:101:THR:HA	9:G:113:GLU:HB3	1.79	0.64
16:N:52:ASN:C	16:N:54:LYS:N	2.48	0.64
19:Q:55:THR:HG22	19:Q:78:ALA:HA	1.78	0.64
1:X:1354:A:H4'	19:Q:56:MET:HG2	1.78	0.64
20:R:22:VAL:O	20:R:33:THR:OG1	2.13	0.64
21:S:42:ALA:O	21:S:45:GLN:HG2	1.96	0.64
1:X:118:U:H1'	1:X:143:A:C8	2.33	0.64
1:X:1442:C:N4	1:X:1585:A:H5'	2.12	0.64
1:X:1880:G:H2'	1:X:1881:U:H6	1.62	0.64
1:X:2078:G:H2'	1:X:2079:A:H8	1.62	0.64
1:X:2170:C:C3'	1:X:2171:U:H5''	2.26	0.64
1:X:2285:U:H5'	1:X:2286:G:O4'	1.97	0.64
1:X:403:A:P	1:X:403:A:H3'	2.37	0.64
1:X:498:C:O2	18:P:74:SER:HB2	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:830:C:O2'	1:X:852:U:H5''	1.97	0.64
3:A:140:ALA:O	3:A:142:VAL:HG13	1.97	0.64
4:B:56:GLU:O	4:B:59:VAL:HG23	1.97	0.64
5:C:162:ARG:O	5:C:162:ARG:HG2	1.95	0.64
1:X:673:G:H5'	5:C:93:TYR:CE1	2.32	0.64
6:D:111:ILE:HB	6:D:114:PHE:CB	2.23	0.64
7:E:54:ARG:HG3	7:E:57:ASP:OD2	1.97	0.64
9:G:161:GLN:O	9:G:162:LYS:HG3	1.98	0.64
11:I:11:GLY:H	11:I:14:LYS:HB3	1.61	0.64
11:I:132:ALA:O	11:I:136:ALA:HB3	1.97	0.64
13:K:11:ASN:ND2	13:K:17:ARG:NH1	2.39	0.64
14:L:54:ALA:HB3	14:L:75:LEU:HB2	1.80	0.64
18:P:66:GLU:O	18:P:67:PRO:C	2.34	0.64
21:S:3:LEU:HD11	21:S:33:ALA:N	2.13	0.64
1:X:1039:A:C5	1:X:1136:G:N2	2.64	0.64
1:X:2633:A:H4'	1:X:2634:G:OP1	1.96	0.64
3:A:108:PRO:HB3	3:A:143:HIS:HE1	1.60	0.64
3:A:145:LEU:O	3:A:153:ALA:HA	1.97	0.64
3:A:95:LEU:HD12	3:A:105:ILE:HG12	1.80	0.64
10:H:4:PRO:O	10:H:5:GLN:CB	2.45	0.64
12:J:116:LYS:HD3	12:J:116:LYS:O	1.98	0.64
12:J:92:GLU:O	12:J:93:TYR:HB3	1.96	0.64
14:L:62:GLY:O	14:L:64:LYS:NZ	2.28	0.64
14:L:80:ALA:C	14:L:82:LYS:H	1.99	0.64
17:O:33:VAL:CG1	17:O:57:GLN:HG2	2.27	0.64
20:R:98:ILE:HG22	20:R:99:VAL:N	2.09	0.64
21:S:117:VAL:HG23	21:S:117:VAL:O	1.97	0.64
24:V:7:ARG:O	24:V:9:LEU:N	2.30	0.64
1:X:1018:C:C5	1:X:1019:U:H5	2.15	0.64
1:X:2196:U:H2'	1:X:2197:U:N1	2.12	0.64
1:X:449:C:O2	1:X:449:C:H2'	1.98	0.64
1:X:490:A:N6	1:X:492:G:C2	2.66	0.64
4:B:9:ILE:HD11	4:B:27:LEU:HD22	1.80	0.64
6:D:34:ILE:HA	6:D:155:THR:O	1.98	0.64
6:D:65:PRO:HB2	6:D:87:ILE:CG2	2.28	0.64
7:E:35:VAL:HB	7:E:37:TYR:CE1	2.32	0.64
1:X:1142:G:H4'	9:G:103:TYR:HE2	1.62	0.64
12:J:36:ILE:CB	12:J:131:LYS:HE2	2.27	0.64
13:K:14:SER:O	13:K:15:SER:C	2.35	0.64
13:K:31:GLU:O	13:K:33:ARG:N	2.27	0.64
16:N:82:GLY:O	16:N:116:ALA:HB3	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:Q:42:ILE:HD13	19:Q:42:ILE:C	2.18	0.64
1:X:2571:G:N1	1:X:2582:G:C6	2.65	0.64
1:X:333:A:C3'	5:C:162:ARG:NH1	2.59	0.64
1:X:91:A:OP2	1:X:91:A:H3'	1.97	0.64
6:D:4:LEU:CA	6:D:7:LYS:HB2	2.25	0.64
6:D:7:LYS:O	6:D:12:VAL:HG21	1.98	0.64
16:N:61:TRP:HZ3	16:N:94:VAL:H	1.43	0.64
19:Q:71:GLN:O	19:Q:73:ASN:OD1	2.15	0.64
20:R:41:PRO:HG2	20:R:42:ARG:H	1.62	0.64
20:R:70:GLU:OE2	20:R:72:ARG:HD2	1.97	0.64
21:S:61:THR:O	21:S:61:THR:HG22	1.97	0.64
24:V:37:LEU:CD2	24:V:39:GLN:H	2.10	0.64
1:X:1865:C:H2'	1:X:1866:G:O4'	1.96	0.64
1:X:1943:A:H2'	1:X:1944:C:O4'	1.97	0.64
1:X:88:G:H3'	1:X:89:A:C5'	2.23	0.64
1:X:925:U:O2'	1:X:926:C:H5'	1.98	0.64
26:Y:16:ARG:NH1	26:Y:20:ARG:HH12	1.93	0.64
3:A:202:LYS:C	3:A:204:ILE:H	2.00	0.64
4:B:68:ALA:O	4:B:70:ALA:N	2.24	0.64
5:C:151:VAL:HG11	5:C:175:VAL:CG1	2.27	0.64
6:D:10:ASP:O	6:D:14:PRO:HD2	1.97	0.64
6:D:127:ASN:HA	6:D:158:THR:HG23	1.79	0.64
10:H:25:LEU:HD12	10:H:25:LEU:H	1.63	0.64
12:J:68:ARG:HH11	12:J:68:ARG:HB3	1.61	0.64
1:X:1004:A:OP1	16:N:50:ARG:NH1	2.31	0.64
18:P:76:LYS:O	18:P:80:LEU:HG	1.98	0.64
25:W:47:VAL:CG2	25:W:51:LEU:HD21	2.28	0.64
1:X:1016:C:H2'	1:X:1017:C:C6	2.31	0.64
1:X:1118:G:H2'	1:X:1119:U:C5'	2.28	0.64
1:X:1314:A:C2'	1:X:1315:A:H3'	2.28	0.64
1:X:2037:A:C2	1:X:2595:C:N3	2.66	0.64
1:X:428:A:H2'	1:X:429:C:C6	2.32	0.64
1:X:490:A:HO2'	1:X:491:A:P	2.20	0.64
1:X:53:G:H2'	1:X:54:G:O5'	1.98	0.64
1:X:718:A:H62	1:X:739:G:H1'	1.61	0.64
1:X:1812:U:H3	3:A:200:GLU:CA	2.09	0.64
7:E:107:ILE:O	7:E:107:ILE:HG12	1.97	0.64
10:H:99:ILE:O	10:H:106:ARG:HG3	1.97	0.64
1:X:2256:G:OP2	12:J:86:LYS:HD2	1.97	0.64
13:K:11:ASN:HD21	13:K:17:ARG:HH12	1.45	0.64
13:K:30:ARG:HG2	13:K:31:GLU:HG3	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:N:75:ASN:HD21	16:N:77:SER:HB3	1.63	0.64
22:T:3:HIS:HD2	22:T:5:LYS:HB2	1.63	0.64
22:T:72:LYS:HG3	22:T:78:PHE:CE1	2.32	0.64
24:V:10:GLN:O	24:V:13:ASP:N	2.29	0.64
24:V:16:LYS:O	24:V:20:ALA:HB2	1.97	0.64
1:X:1104:G:H1'	1:X:1110:G:N2	2.12	0.64
1:X:1656:U:O2'	1:X:1657:A:H5''	1.98	0.64
1:X:215:G:N2	1:X:216:U:H1'	2.12	0.64
1:X:2509:A:C3'	1:X:2510:A:H5''	2.27	0.64
1:X:308:C:O2'	1:X:309:G:H5'	1.98	0.64
4:B:4:ILE:HG12	4:B:5:LEU:N	2.12	0.64
8:F:91:THR:O	8:F:94:LYS:NZ	2.30	0.64
10:H:9:ASP:O	10:H:96:ALA:N	2.27	0.64
16:N:88:ILE:CG1	17:O:49:GLU:HB2	2.25	0.64
20:R:17:LYS:HB2	20:R:20:ASP:OD1	1.98	0.64
20:R:35:LYS:NZ	20:R:35:LYS:HB3	2.12	0.64
21:S:64:ALA:HA	21:S:85:MET:HA	1.78	0.64
25:W:14:GLY:HA2	25:W:17:VAL:CG2	2.28	0.64
1:X:1217:U:O2'	1:X:1218:C:H5'	1.98	0.64
1:X:1225:G:H2'	1:X:1249:G:N2	2.13	0.64
1:X:1591:U:H2'	1:X:1592:U:O4'	1.98	0.64
1:X:1597:A:H2'	1:X:1598:C:C6	2.33	0.64
1:X:542:A:N1	1:X:2004:U:H2'	2.13	0.64
1:X:223:C:H2'	1:X:224:G:H5'	1.80	0.64
1:X:2570:C:O2'	1:X:2571:G:H5'	1.98	0.64
1:X:482:A:C2'	1:X:483:A:H5'	2.27	0.64
1:X:583:C:H4'	1:X:584:A:O5'	1.96	0.64
1:X:691:C:O2'	1:X:692:C:H5'	1.97	0.64
3:A:169:GLU:O	3:A:171:ASP:N	2.31	0.64
4:B:134:TRP:O	4:B:135:HIS:O	2.15	0.64
6:D:40:LEU:CG	6:D:150:ARG:HE	2.03	0.64
14:L:14:ARG:O	14:L:17:VAL:HG12	1.98	0.64
16:N:56:ASP:O	16:N:57:PHE:C	2.34	0.64
18:P:74:SER:HA	18:P:77:ALA:HB3	1.79	0.64
19:Q:29:VAL:HG23	19:Q:30:SER:N	2.11	0.64
19:Q:6:ILE:CG2	19:Q:7:LEU:N	2.61	0.64
1:X:1026:U:O2'	1:X:1027:C:H5'	1.98	0.64
1:X:1071:U:C1'	1:X:1073:G:H5'	2.27	0.64
1:X:1467:U:C6	1:X:1467:U:H3'	2.32	0.64
1:X:1812:U:N3	3:A:200:GLU:HA	2.11	0.64
1:X:1830:C:H41	1:X:1881:U:H3'	1.62	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:328:A:H2'	1:X:329:C:H6	1.61	0.64
1:X:664:C:O5'	1:X:666:U:OP2	2.16	0.64
1:X:734:G:H2'	1:X:735:G:C8	2.33	0.64
4:B:121:ASN:O	4:B:122:PHE:O	2.16	0.64
4:B:84:PHE:CD1	4:B:86:PRO:HD2	2.33	0.64
1:X:2294:U:H4'	6:D:127:ASN:ND2	2.13	0.64
9:G:118:ALA:C	9:G:120:SER:H	2.00	0.64
11:I:86:THR:C	11:I:88:PHE:H	2.01	0.64
1:X:1090:C:H2'	1:X:1091:C:C6	2.33	0.64
1:X:1760:G:O2'	1:X:1761:G:H5'	1.98	0.64
1:X:2564:U:H3	33:X:2911:ZLD:H21A	1.63	0.64
1:X:389:G:H2'	1:X:390:U:C6	2.32	0.64
1:X:704:G:O2'	1:X:705:C:H5'	1.98	0.64
2:Z:116:C:H2'	2:Z:117:G:O4'	1.98	0.64
30:4:18:ARG:CG	30:4:23:VAL:HG13	2.28	0.63
3:A:133:LEU:O	3:A:136:VAL:HB	1.98	0.63
5:C:176:ASN:O	5:C:180:ILE:HG22	1.98	0.63
5:C:150:LEU:HA	5:C:187:VAL:HB	1.79	0.63
6:D:5:LYS:C	6:D:8:TYR:H	2.01	0.63
7:E:44:ARG:NH2	7:E:51:LEU:HB3	2.13	0.63
1:X:954:U:OP2	11:I:38:LYS:NZ	2.28	0.63
13:K:16:ALA:O	13:K:18:VAL:N	2.31	0.63
14:L:86:GLN:O	14:L:87:VAL:HG23	1.98	0.63
16:N:5:LYS:C	16:N:7:GLY:N	2.47	0.63
18:P:107:ILE:CG2	18:P:107:ILE:O	2.46	0.63
20:R:105:ARG:HH22	20:R:112:LYS:CA	2.10	0.63
1:X:1018:C:H3'	1:X:1019:U:H5''	1.80	0.63
1:X:1340:C:H2'	1:X:1341:G:O4'	1.98	0.63
1:X:1465:G:H2'	1:X:1466:C:C6	2.34	0.63
1:X:219:G:N2	1:X:231:G:H2'	2.12	0.63
1:X:2227:C:H5''	1:X:2228:U:OP2	1.98	0.63
1:X:814:G:O2'	1:X:815:A:OP1	2.16	0.63
2:Z:31:A:H1'	2:Z:60:A:H61	1.61	0.63
3:A:143:HIS:CD2	3:A:192:THR:HB	2.33	0.63
3:A:224:SER:OG	3:A:225:ALA:N	2.30	0.63
5:C:28:HIS:HA	11:I:15:ASP:OD2	1.99	0.63
13:K:55:ALA:C	13:K:57:GLY:H	2.00	0.63
15:M:50:PHE:HE2	15:M:70:LYS:HB2	1.62	0.63
16:N:74:MET:SD	16:N:110:VAL:HG13	2.38	0.63
16:N:71:LEU:HG	16:N:72:HIS:ND1	2.12	0.63
16:N:88:ILE:HG23	17:O:48:GLY:HA3	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:111:GLY:C	20:R:112:LYS:HD2	2.19	0.63
1:X:1122:A:H2'	1:X:1123:G:C4'	2.23	0.63
1:X:1453:A:H2'	1:X:1454:U:O4'	1.98	0.63
1:X:171:G:N2	1:X:179:U:H1'	2.14	0.63
1:X:2284:U:H2'	1:X:2285:U:C4'	2.27	0.63
1:X:2299:A:H4'	1:X:2300:G:C2	2.33	0.63
1:X:2271:C:H4'	1:X:2354:G:O4'	1.97	0.63
1:X:2753:C:O2'	1:X:2754:C:H5'	1.98	0.63
1:X:492:G:H2'	1:X:517:A:N1	2.13	0.63
1:X:589:C:H4'	16:N:31:GLN:NE2	2.12	0.63
1:X:946:U:C2	1:X:947:C:C6	2.86	0.63
4:B:101:LYS:HE3	4:B:169:ASN:O	1.98	0.63
5:C:153:ASP:C	5:C:154:ASP:OD1	2.37	0.63
6:D:74:ILE:CA	6:D:79:LEU:HB2	2.29	0.63
7:E:72:VAL:O	7:E:76:VAL:HG23	1.97	0.63
13:K:100:VAL:CG2	13:K:112:LEU:HD22	2.26	0.63
17:O:16:GLU:H	17:O:95:ILE:HB	1.63	0.63
17:O:40:VAL:O	17:O:43:GLU:N	2.31	0.63
20:R:105:ARG:HH22	20:R:112:LYS:N	1.95	0.63
23:U:50:ALA:HB3	23:U:52:ARG:NH1	2.13	0.63
25:W:14:GLY:CA	25:W:17:VAL:HG23	2.27	0.63
1:X:114:C:H2'	1:X:115:G:C8	2.33	0.63
1:X:1437:A:H2'	1:X:1438:G:C8	2.32	0.63
1:X:1501:C:H2'	1:X:1502:G:O4'	1.98	0.63
1:X:1560:A:C6	1:X:1561:A:C6	2.86	0.63
1:X:1812:U:N3	3:A:200:GLU:HB2	2.12	0.63
1:X:2180:U:H2'	1:X:2203:G:N2	2.12	0.63
1:X:2291:U:OP1	6:D:71:LYS:HB2	1.98	0.63
1:X:2395:C:C2'	1:X:2396:C:H5''	2.27	0.63
1:X:638:A:H4'	1:X:639:G:OP1	1.97	0.63
1:X:613:A:H5''	1:X:668:A:H61	1.62	0.63
1:X:844:G:O3'	11:I:41:SER:OG	2.12	0.63
26:Y:45:ILE:HD13	26:Y:57:VAL:HG22	1.80	0.63
5:C:98:GLN:HA	5:C:101:GLN:HG3	1.80	0.63
1:X:331:U:O2'	5:C:162:ARG:HD3	1.98	0.63
6:D:70:ALA:C	6:D:72:LYS:H	2.01	0.63
19:Q:40:ASP:O	19:Q:44:GLN:HG2	1.99	0.63
22:T:53:MET:HE2	22:T:59:LEU:HD11	1.81	0.63
1:X:1193:G:C2'	1:X:1194:U:H5''	2.29	0.63
1:X:1217:U:O2'	11:I:13:ARG:NE	2.28	0.63
1:X:1789:U:C4	1:X:1811:A:C2	2.86	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2336:G:N2	1:X:2339:A:OP2	2.25	0.63
2:Z:28:A:N7	2:Z:29:C:N3	2.47	0.63
2:Z:35:C:H2'	2:Z:36:A:H8	1.63	0.63
4:B:33:ILE:HG21	4:B:47:VAL:HG11	1.79	0.63
4:B:37:LYS:HD2	4:B:42:ASP:OD2	1.98	0.63
5:C:124:ASP:OD2	5:C:136:TRP:HE3	1.80	0.63
5:C:45:THR:C	5:C:47:THR:H	2.02	0.63
6:D:100:LEU:C	6:D:104:ILE:HG13	2.18	0.63
6:D:75:SER:H	6:D:79:LEU:HD22	1.63	0.63
7:E:37:TYR:CD2	7:E:68:THR:HG23	2.33	0.63
8:F:116:LEU:HD22	8:F:118:ALA:CB	2.28	0.63
10:H:100:ASN:OD1	10:H:100:ASN:O	2.17	0.63
14:L:32:TYR:H	14:L:38:ILE:CD1	2.12	0.63
16:N:24:PHE:CE2	16:N:39:LEU:HD21	2.33	0.63
19:Q:38:ILE:O	19:Q:42:ILE:HG22	1.98	0.63
19:Q:55:THR:CG2	19:Q:78:ALA:HA	2.28	0.63
23:U:34:THR:CG2	23:U:35:THR:N	2.61	0.63
1:X:1175:A:C2	1:X:1176:U:C2	2.86	0.63
1:X:134:G:H2'	1:X:135:U:H5'	1.80	0.63
1:X:2546:G:H2'	1:X:2547:C:C6	2.33	0.63
10:H:16:ALA:HA	10:H:58:ALA:HB1	1.81	0.63
15:M:36:ASP:HB2	15:M:87:LEU:O	1.98	0.63
19:Q:63:LYS:HB2	19:Q:70:GLY:CA	2.29	0.63
21:S:15:ASP:HB2	21:S:16:GLU:OE2	1.97	0.63
21:S:4:THR:OG1	21:S:5:ALA:N	2.31	0.63
1:X:1389:C:O2'	1:X:1390:G:H5'	1.98	0.63
1:X:1442:C:H41	1:X:1585:A:H5'	1.63	0.63
1:X:1741:G:C2'	1:X:1742:G:H5'	2.28	0.63
1:X:1850:G:H1	1:X:1867:A:C2'	2.11	0.63
1:X:625:A:H2'	1:X:625:A:N3	2.14	0.63
6:D:47:SER:HA	6:D:50:ILE:CG1	2.29	0.63
7:E:6:LYS:HB3	7:E:69:ARG:NH2	2.14	0.63
12:J:39:GLU:OE2	12:J:129:GLN:N	2.31	0.63
12:J:70:PHE:CE2	12:J:71:PRO:O	2.52	0.63
13:K:100:VAL:CG1	13:K:101:GLY:H	2.03	0.63
1:X:2796:A:OP2	13:K:3:HIS:HE1	1.80	0.63
16:N:75:ASN:OD1	16:N:78:THR:HB	1.99	0.63
16:N:93:LYS:NZ	17:O:5:ILE:HG22	2.12	0.63
20:R:108:VAL:C	20:R:110:SER:H	2.00	0.63
1:X:1303:U:H2'	1:X:1304:U:H6	1.63	0.63
1:X:1385:C:H2'	1:X:1386:A:O4'	1.97	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1452:U:C2'	1:X:1453:A:H5'	2.28	0.63
1:X:1953:A:C5'	1:X:1954:A:OP1	2.45	0.63
1:X:2375:G:H2'	1:X:2376:G:H8	1.63	0.63
1:X:2761:A:H5''	1:X:2762:G:C5'	2.29	0.63
1:X:2847:G:H2'	1:X:2848:A:C8	2.34	0.63
1:X:2858:A:H3'	1:X:2859:U:H5'	1.81	0.63
4:B:60:ASN:HB2	4:B:63:MET:HB2	1.81	0.63
5:C:7:ILE:HG21	5:C:121:ASP:C	2.19	0.63
5:C:46:ARG:O	5:C:51:VAL:HG23	1.99	0.63
6:D:94:GLU:O	6:D:98:VAL:HG23	1.99	0.63
10:H:133:VAL:HG12	10:H:133:VAL:O	1.98	0.63
11:I:81:GLN:HB3	11:I:114:ILE:HG22	1.81	0.63
12:J:66:TYR:HB2	12:J:106:GLU:O	1.99	0.63
16:N:92:ARG:HD3	16:N:92:ARG:H	1.64	0.63
23:U:78:ILE:O	23:U:79:GLU:O	2.17	0.63
1:X:1135:C:C2	1:X:1136:G:C8	2.87	0.63
1:X:1404:C:H5'	1:X:1405:A:OP2	1.99	0.63
1:X:1673:C:OP1	4:B:136:ARG:HD2	1.98	0.63
1:X:2247:A:H5''	1:X:2247:A:C8	2.33	0.63
1:X:2795:A:N1	15:M:2:GLN:N	2.46	0.63
1:X:308:C:H2'	1:X:309:G:O4'	1.99	0.63
1:X:764:A:C4	1:X:802:A:C2	2.87	0.63
1:X:831:G:H5'	1:X:852:U:OP1	1.99	0.63
26:Y:9:LYS:O	26:Y:10:LYS:C	2.36	0.63
2:Z:17:A:H1'	2:Z:112:A:C8	2.34	0.63
30:4:24:LEU:HD12	30:4:24:LEU:H	1.63	0.63
30:4:3:VAL:HG22	30:4:35:ARG:HB3	1.81	0.63
3:A:142:VAL:HA	3:A:194:GLY:N	2.14	0.63
3:A:33:LEU:HD21	3:A:63:ARG:CZ	2.29	0.63
4:B:141:ILE:HG21	4:B:150:VAL:HB	1.80	0.63
5:C:128:ALA:O	5:C:130:THR:N	2.32	0.63
11:I:94:GLU:HA	11:I:97:ARG:HE	1.64	0.63
12:J:44:LYS:HB2	12:J:47:GLN:CG	2.26	0.63
13:K:10:LEU:HD12	13:K:17:ARG:HG2	1.81	0.63
16:N:60:LEU:HD21	16:N:64:ARG:NE	2.13	0.63
21:S:20:ALA:CB	21:S:80:HIS:ND1	2.62	0.63
21:S:94:VAL:CB	21:S:125:PRO:HB3	2.25	0.63
23:U:62:LEU:HD21	23:U:67:LEU:HA	1.80	0.63
1:X:1107:A:H3'	1:X:1108:U:H5''	1.79	0.63
1:X:1233:A:O2'	1:X:1234:C:OP1	2.15	0.63
1:X:2394:G:H2'	1:X:2395:C:H6	1.64	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Y:35:GLN:C	26:Y:37:HIS:H	2.01	0.63
7:E:167:GLU:HG3	7:E:169:ILE:HG13	1.81	0.62
12:J:12:LYS:O	12:J:13:GLN:CB	2.46	0.62
13:K:33:ARG:HA	13:K:114:GLU:HA	1.81	0.62
14:L:68:ALA:O	14:L:71:VAL:CG1	2.46	0.62
15:M:55:ILE:O	15:M:56:ALA:CB	2.43	0.62
18:P:38:VAL:O	18:P:39:ARG:C	2.37	0.62
19:Q:5:ASP:OD2	19:Q:5:ASP:N	2.31	0.62
20:R:23:ILE:H	20:R:23:ILE:CD1	2.10	0.62
20:R:93:ARG:HG2	20:R:93:ARG:HH11	1.64	0.62
23:U:50:ALA:HB3	23:U:52:ARG:HH22	1.63	0.62
1:X:143:A:H2'	1:X:144:U:C6	2.34	0.62
1:X:2074:U:H1'	23:U:48:LYS:HE3	1.80	0.62
1:X:2082:C:C2'	1:X:2083:G:H5''	2.28	0.62
1:X:2617:G:O2'	1:X:2618:A:H8	1.76	0.62
1:X:493:A:H4'	20:R:56:LYS:HD2	1.81	0.62
1:X:777:A:O2'	1:X:778:G:OP1	2.16	0.62
6:D:106:ILE:HG21	6:D:139:PRO:HB3	1.81	0.62
7:E:107:ILE:N	7:E:107:ILE:HD13	2.15	0.62
11:I:73:GLU:HG3	11:I:101:ARG:HG3	1.81	0.62
11:I:85:ASP:HA	11:I:116:ARG:NH2	2.13	0.62
15:M:50:PHE:CD1	15:M:79:ARG:HG3	2.32	0.62
1:X:986:A:O3'	16:N:48:ARG:NH1	2.33	0.62
17:O:56:VAL:O	17:O:57:GLN:HG3	1.98	0.62
17:O:26:GLN:HG3	17:O:63:HIS:NE2	2.14	0.62
20:R:40:LEU:HB3	20:R:43:ASP:HB2	1.80	0.62
1:X:594:G:H2'	1:X:1264:C:H42	1.63	0.62
1:X:1380:C:C2'	1:X:1381:G:H5'	2.29	0.62
1:X:166:G:H1	1:X:182:G:HO2'	1.46	0.62
1:X:2219:U:O2'	1:X:2220:A:H5'	1.99	0.62
1:X:2661:G:O6	1:X:2708:U:H1'	1.99	0.62
1:X:683:A:C5'	11:I:45:LYS:H	2.11	0.62
1:X:822:G:H2'	1:X:823:U:O4'	1.99	0.62
3:A:217:ARG:CG	3:A:218:LYS:HG3	2.29	0.62
4:B:21:ILE:CD1	4:B:21:ILE:N	2.62	0.62
6:D:69:LYS:HG2	6:D:84:PRO:HA	1.80	0.62
9:G:97:ASP:O	9:G:99:VAL:HG23	2.00	0.62
2:Z:29:C:O3'	14:L:37:HIS:HD2	1.81	0.62
16:N:80:ILE:O	16:N:84:LYS:N	2.30	0.62
18:P:80:LEU:HD21	18:P:87:GLU:HB3	1.81	0.62
20:R:5:SER:O	20:R:6:ALA:CB	2.47	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:W:14:GLY:O	25:W:15:ASN:C	2.38	0.62
1:X:1233:A:H4'	1:X:1234:C:OP2	1.98	0.62
1:X:1255:A:C6	1:X:1256:C:N4	2.67	0.62
1:X:2665:G:H2'	1:X:2666:U:H6	1.64	0.62
1:X:800:U:H3'	1:X:804:C:H41	1.64	0.62
1:X:1790:G:H21	3:A:155:LEU:HD23	1.63	0.62
3:A:165:VAL:HG12	3:A:166:GLN:N	2.14	0.62
4:B:38:THR:HG22	4:B:40:GLN:N	2.03	0.62
5:C:147:LYS:HB3	5:C:183:HIS:CB	2.29	0.62
6:D:29:PRO:HB3	6:D:160:ALA:HB2	1.80	0.62
9:G:90:LEU:HD23	9:G:94:LYS:CB	2.28	0.62
9:G:90:LEU:HD23	9:G:94:LYS:HB2	1.81	0.62
10:H:23:ARG:C	10:H:23:ARG:NH2	2.52	0.62
10:H:23:ARG:HB3	10:H:23:ARG:NH2	2.13	0.62
14:L:37:HIS:CE1	14:L:57:ALA:HB2	2.34	0.62
14:L:68:ALA:O	14:L:71:VAL:N	2.32	0.62
15:M:28:ARG:HB2	15:M:29:PRO:CD	2.28	0.62
16:N:10:ARG:CG	16:N:13:ARG:HH22	2.01	0.62
17:O:78:VAL:O	17:O:78:VAL:CG2	2.40	0.62
25:W:2:LYS:HD2	25:W:32:ARG:O	1.99	0.62
1:X:1068:A:H62	1:X:1098:G:P	2.22	0.62
1:X:1778:U:H2'	1:X:1779:C:C6	2.33	0.62
1:X:2409:A:H4'	1:X:2410:U:OP2	1.99	0.62
5:C:112:GLN:HA	5:C:116:LYS:HB3	1.80	0.62
5:C:107:ALA:CB	5:C:180:ILE:HD13	2.30	0.62
6:D:50:ILE:C	6:D:52:LYS:H	2.03	0.62
7:E:7:GLN:N	7:E:69:ARG:NE	2.47	0.62
11:I:62:LYS:HE2	11:I:64:GLY:CA	2.24	0.62
13:K:3:HIS:ND1	13:K:5:LYS:CD	2.63	0.62
1:X:2355:A:H2	14:L:89:PHE:CE1	2.16	0.62
16:N:86:ALA:O	16:N:88:ILE:N	2.33	0.62
17:O:36:LYS:HD3	17:O:54:TYR:HB2	1.82	0.62
21:S:31:SER:C	21:S:32:PHE:HD2	2.02	0.62
24:V:1:MET:SD	24:V:2:LYS:HE2	2.38	0.62
24:V:48:ARG:C	24:V:50:VAL:N	2.52	0.62
1:X:1775:A:H4'	1:X:1776:A:O5'	2.00	0.62
1:X:1777:A:H5''	1:X:1778:U:OP2	2.00	0.62
1:X:1919:A:H62	1:X:1946:U:H3	1.45	0.62
1:X:2736:U:O2'	1:X:2737:A:C5'	2.46	0.62
1:X:2777:A:C6	18:P:134:LYS:HB2	2.35	0.62
1:X:663:G:H3'	1:X:664:C:H5''	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:774:A:C8	1:X:774:A:O5'	2.52	0.62
2:Z:15:A:C2'	2:Z:16:U:H5''	2.29	0.62
3:A:46:ARG:O	3:A:46:ARG:HD3	1.99	0.62
3:A:54:ILE:HD12	3:A:55:GLY:N	2.14	0.62
6:D:34:ILE:HG22	6:D:91:LEU:HD12	1.80	0.62
7:E:154:PRO:HG3	7:E:162:VAL:O	1.99	0.62
13:K:16:ALA:O	13:K:17:ARG:C	2.37	0.62
15:M:22:ARG:HH11	15:M:22:ARG:HG2	1.65	0.62
1:X:592:G:P	16:N:10:ARG:NH1	2.72	0.62
17:O:29:ALA:O	17:O:30:GLY:C	2.37	0.62
20:R:22:VAL:HG12	20:R:23:ILE:N	2.14	0.62
20:R:84:VAL:HG22	20:R:88:THR:O	1.99	0.62
21:S:103:ARG:HH11	21:S:108:VAL:CG2	2.13	0.62
23:U:53:GLU:CD	23:U:57:VAL:HA	2.19	0.62
25:W:4:LYS:HG2	25:W:52:GLU:O	1.99	0.62
1:X:102:C:H2'	1:X:103:U:C6	2.35	0.62
1:X:1177:U:H2'	1:X:1178:C:C6	2.35	0.62
1:X:1416:A:C2	1:X:1417:C:C2	2.87	0.62
1:X:1420:A:H2'	1:X:1421:U:C6	2.34	0.62
1:X:1468:A:O5'	1:X:1468:A:H8	1.82	0.62
1:X:1971:C:C2'	1:X:1972:G:H5'	2.30	0.62
1:X:421:G:H2'	1:X:422:C:C6	2.32	0.62
2:Z:66:G:H2'	2:Z:67:C:O4'	1.99	0.62
3:A:173:VAL:O	3:A:174:ILE:HD13	1.99	0.62
3:A:99:ASP:N	3:A:99:ASP:OD2	2.30	0.62
6:D:34:ILE:HG23	6:D:155:THR:O	2.00	0.62
9:G:72:PRO:C	9:G:74:MET:N	2.53	0.62
12:J:69:ILE:HD13	12:J:104:MET:HG3	1.80	0.62
12:J:117:GLU:C	12:J:119:PHE:H	2.03	0.62
14:L:9:ARG:O	14:L:12:ARG:N	2.33	0.62
16:N:17:VAL:HA	16:N:20:ARG:HD2	1.81	0.62
20:R:22:VAL:HG13	20:R:81:VAL:O	2.00	0.62
23:U:9:GLY:H	23:U:14:VAL:CG2	2.12	0.62
1:X:1036:G:O2'	1:X:1037:U:OP2	2.14	0.62
1:X:1658:A:N6	1:X:1659:G:C2	2.68	0.62
1:X:956:A:C2	1:X:2427:A:N3	2.67	0.62
33:X:2911:ZLD:F18	33:X:2911:ZLD:H20	1.90	0.62
1:X:562:G:H2'	1:X:563:U:O4'	1.99	0.62
1:X:719:A:H2'	1:X:720:A:O4'	2.00	0.62
1:X:765:C:H4'	1:X:766:A:O5'	2.00	0.62
3:A:92:ILE:HD11	3:A:104:TYR:HB3	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:167:VAL:CG1	4:B:170:LEU:HD11	2.29	0.62
6:D:66:ILE:O	6:D:66:ILE:HG23	1.99	0.62
11:I:135:ALA:O	11:I:136:ALA:HB2	1.99	0.62
12:J:57:ARG:HH11	12:J:57:ARG:CG	2.06	0.62
16:N:30:LYS:CB	16:N:30:LYS:NZ	2.63	0.62
16:N:52:ASN:C	16:N:54:LYS:H	2.01	0.62
1:X:827:C:OP1	17:O:82:ARG:HA	1.98	0.62
19:Q:61:LYS:N	19:Q:72:ARG:HD3	2.13	0.62
21:S:103:ARG:CZ	21:S:107:GLU:HB3	2.30	0.62
1:X:1074:G:H4'	8:F:135:MET:SD	2.39	0.62
1:X:1671:A:O2'	1:X:1672:A:H5'	1.99	0.62
1:X:17:G:H2'	1:X:18:U:C6	2.35	0.62
1:X:1873:A:N7	1:X:1874:G:C8	2.68	0.62
1:X:19:C:H2'	1:X:20:C:H6	1.65	0.62
1:X:2035:G:H4'	4:B:143:GLN:O	2.00	0.62
1:X:2271:C:P	14:L:18:ARG:NH2	2.68	0.62
1:X:356:A:C2'	1:X:357:A:H8	2.09	0.62
4:B:75:THR:HG23	4:B:76:ARG:H	1.65	0.62
5:C:110:SER:HA	5:C:113:GLU:CD	2.20	0.62
9:G:48:GLY:HA2	9:G:89:ALA:HB2	1.82	0.62
14:L:104:ALA:O	14:L:108:ARG:HB2	1.99	0.62
2:Z:53:G:H5''	14:L:64:LYS:HD2	1.79	0.62
15:M:57:ILE:HG13	15:M:57:ILE:O	1.98	0.62
22:T:30:VAL:HA	22:T:65:GLY:O	2.00	0.62
1:X:2043:A:H62	5:C:68:ARG:HH12	1.48	0.62
1:X:223:C:O2'	1:X:398:C:H5'	2.00	0.62
3:A:72:LYS:HE2	3:A:97:TYR:CG	2.34	0.62
7:E:84:THR:OG1	7:E:132:ASP:OD2	2.16	0.62
9:G:84:ASN:O	9:G:152:ALA:O	2.18	0.62
15:M:104:LEU:O	15:M:106:TYR:N	2.33	0.62
15:M:5:ILE:HD13	15:M:7:ILE:HB	1.82	0.62
17:O:35:LEU:HD22	17:O:36:LYS:N	2.15	0.62
25:W:12:ARG:HG2	25:W:12:ARG:HH11	1.64	0.62
1:X:2299:A:H5'	1:X:2300:G:C5	2.35	0.62
1:X:2326:C:H2'	1:X:2327:U:H6	1.64	0.62
1:X:2726:U:C4'	7:E:139:GLN:HG2	2.30	0.62
1:X:497:C:H6	1:X:497:C:H5'	1.63	0.62
1:X:216:U:H5''	1:X:601:A:N6	2.14	0.62
1:X:761:G:C8	18:P:110:ALA:HB1	2.35	0.62
30:4:1:MET:SD	30:4:2:LYS:C	2.78	0.61
6:D:171:GLN:C	6:D:173:MET:H	2.03	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:162:LYS:N	9:G:163:PRO:HD2	2.14	0.61
9:G:47:SER:O	9:G:49:VAL:HG23	2.00	0.61
10:H:97:VAL:O	10:H:99:ILE:HG23	2.00	0.61
14:L:92:GLY:O	14:L:93:SER:OG	2.12	0.61
16:N:82:GLY:HA3	16:N:117:ARG:HB2	1.82	0.61
16:N:56:ASP:OD2	16:N:56:ASP:N	2.31	0.61
18:P:27:VAL:HB	18:P:125:THR:HG22	1.82	0.61
22:T:43:THR:HB	22:T:46:LYS:NZ	2.15	0.61
24:V:29:ARG:O	24:V:32:ALA:HB3	2.00	0.61
1:X:1071:U:N1	1:X:1073:G:H5'	2.15	0.61
1:X:1431:U:H4'	1:X:1604:A:H4'	1.82	0.61
1:X:2396:C:H6	1:X:2396:C:H5'	1.64	0.61
1:X:322:A:O2'	1:X:343:A:C4'	2.48	0.61
1:X:360:A:H3'	1:X:361:G:C8	2.35	0.61
1:X:474:G:C6	1:X:478:G:O6	2.53	0.61
1:X:983:G:H5''	1:X:984:A:H5'	1.82	0.61
4:B:4:ILE:CD1	4:B:28:ALA:HB1	2.27	0.61
5:C:112:GLN:NE2	5:C:116:LYS:HB2	2.15	0.61
5:C:7:ILE:HG12	5:C:119:ALA:CB	2.30	0.61
6:D:16:LEU:O	6:D:20:PHE:N	2.33	0.61
2:Z:46:G:H4'	6:D:92:ARG:HH12	1.65	0.61
8:F:106:LEU:O	8:F:110:LYS:HG3	1.99	0.61
12:J:133:VAL:C	12:J:134:LYS:HD2	2.21	0.61
13:K:49:GLU:O	13:K:52:ILE:HG12	2.01	0.61
19:Q:88:ILE:O	19:Q:89:GLU:O	2.17	0.61
21:S:133:GLU:OE2	21:S:135:VAL:HG23	1.99	0.61
23:U:54:ASN:C	23:U:56:GLN:N	2.53	0.61
1:X:1492:A:N1	1:X:1531:C:C5	2.68	0.61
1:X:1674:C:H2'	1:X:1675:C:H6	1.64	0.61
1:X:1764:A:H2'	1:X:1765:C:H5'	1.82	0.61
1:X:1804:U:H2'	1:X:1805:G:H8	1.63	0.61
1:X:2060:A:H1'	1:X:2414:A:O4'	2.00	0.61
1:X:402:A:H8	1:X:2392:G:H4'	1.64	0.61
1:X:2780:A:H2'	1:X:2781:G:C8	2.35	0.61
1:X:870:C:H5'	22:T:69:PHE:CE2	2.35	0.61
1:X:917:U:C2'	1:X:918:A:H5'	2.30	0.61
26:Y:32:GLU:CG	26:Y:37:HIS:O	2.47	0.61
2:Z:18:G:H2'	2:Z:19:C:H6	1.65	0.61
1:X:1582:A:OP1	3:A:211:ARG:NH2	2.33	0.61
4:B:119:ARG:HH11	4:B:119:ARG:CG	2.07	0.61
6:D:22:TYR:HD2	6:D:27:ALA:CB	2.13	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:151:TYR:CB	9:G:157:PRO:HB3	2.31	0.61
9:G:158:HIS:HA	9:G:161:GLN:CG	2.31	0.61
10:H:119:ARG:NH2	15:M:41:GLU:OE2	2.33	0.61
11:I:18:ARG:HB2	11:I:21:ARG:HB2	1.81	0.61
11:I:65:PHE:CG	11:I:65:PHE:O	2.52	0.61
12:J:27:TYR:HA	12:J:103:VAL:HG21	1.81	0.61
16:N:60:LEU:HD21	16:N:64:ARG:HE	1.64	0.61
16:N:62:ILE:O	16:N:66:ASN:ND2	2.32	0.61
22:T:3:HIS:HB2	22:T:5:LYS:CD	2.30	0.61
1:X:1494:G:O2'	1:X:1574:A:H2	1.83	0.61
1:X:1345:G:C5	1:X:1625:A:C5	2.88	0.61
1:X:2058:U:H2'	1:X:2217:G:N2	2.15	0.61
1:X:2442:C:H2'	1:X:2443:C:H6	1.65	0.61
1:X:2594:U:H5'	1:X:2594:U:C6	2.28	0.61
1:X:951:G:H3'	1:X:952:A:H5''	1.81	0.61
3:A:54:ILE:HD12	3:A:55:GLY:H	1.65	0.61
3:A:68:LYS:HG2	3:A:69:ARG:N	2.15	0.61
8:F:76:SER:HB2	8:F:112:LYS:HG2	1.81	0.61
10:H:5:GLN:HG3	10:H:20:MET:HE2	1.81	0.61
11:I:77:LEU:HD23	11:I:112:GLY:O	1.99	0.61
1:X:1219:C:H4'	11:I:7:LYS:N	2.15	0.61
12:J:36:ILE:HB	12:J:131:LYS:CG	2.30	0.61
18:P:106:LEU:CD1	18:P:116:ILE:HG12	2.29	0.61
21:S:36:ARG:O	21:S:39:PHE:N	2.32	0.61
1:X:1329:U:H2'	1:X:1330:G:H8	1.65	0.61
1:X:1538:A:H2'	1:X:1539:U:C6	2.34	0.61
1:X:2571:G:C2	1:X:2582:G:N1	2.68	0.61
1:X:2827:G:C6	1:X:2828:C:C4	2.89	0.61
1:X:333:A:C8	5:C:162:ARG:NH1	2.68	0.61
6:D:79:LEU:O	6:D:80:ARG:HB3	1.99	0.61
7:E:125:VAL:HG22	7:E:131:ILE:HD12	1.81	0.61
9:G:105:GLY:O	9:G:110:LEU:HG	2.00	0.61
9:G:156:HIS:HB2	9:G:157:PRO:CD	2.30	0.61
9:G:155:THR:O	9:G:157:PRO:N	2.33	0.61
10:H:15:GLY:O	10:H:58:ALA:HB1	2.00	0.61
10:H:83:ARG:HD2	10:H:89:ILE:HD11	1.83	0.61
11:I:90:ARG:HA	11:I:121:HIS:CE1	2.35	0.61
19:Q:78:ALA:C	19:Q:79:ILE:HD12	2.20	0.61
21:S:65:LEU:O	21:S:84:TYR:N	2.30	0.61
22:T:5:LYS:H	22:T:5:LYS:HD2	1.63	0.61
1:X:1077:U:H2'	1:X:1079:G:OP2	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1467:U:C3'	1:X:1467:U:C6	2.84	0.61
1:X:1539:U:O2'	1:X:1540:C:H5'	2.00	0.61
1:X:2053:G:C2	1:X:2054:A:C4	2.89	0.61
1:X:2228:U:H5''	1:X:2229:G:OP2	2.00	0.61
1:X:2526:U:H2'	1:X:2527:G:C8	2.35	0.61
1:X:824:U:H1'	1:X:1264:C:C1'	2.30	0.61
26:Y:15:LYS:HA	26:Y:18:MET:HG2	1.82	0.61
26:Y:51:TYR:CD2	26:Y:54:GLY:O	2.54	0.61
2:Z:43:G:H5''	6:D:66:ILE:CD1	2.30	0.61
2:Z:58:G:H5'	6:D:24:SER:OG	2.00	0.61
3:A:128:GLY:H	3:A:193:ILE:HB	1.66	0.61
6:D:14:PRO:O	6:D:17:MET:N	2.33	0.61
9:G:155:THR:HG23	9:G:156:HIS:N	2.15	0.61
11:I:11:GLY:N	11:I:14:LYS:HB3	2.16	0.61
12:J:50:ALA:O	12:J:54:VAL:HG23	2.00	0.61
13:K:100:VAL:CG1	13:K:101:GLY:N	2.54	0.61
15:M:99:VAL:HG13	15:M:100:ARG:N	2.14	0.61
19:Q:15:LYS:O	19:Q:19:ALA:HB2	2.01	0.61
1:X:1075:C:H2'	1:X:1076:U:H5'	1.81	0.61
1:X:1162:A:H2'	1:X:1163:C:C6	2.35	0.61
1:X:1202:U:H2'	1:X:1203:A:H8	1.65	0.61
1:X:171:G:C2	1:X:179:U:H1'	2.35	0.61
1:X:1781:C:H2'	1:X:1782:A:C5	2.35	0.61
1:X:2509:A:H2'	1:X:2510:A:H5''	1.82	0.61
1:X:55:A:H2'	1:X:56:C:H6	1.65	0.61
1:X:654:A:N3	1:X:655:A:H5''	2.15	0.61
1:X:698:A:H2'	1:X:786:U:O4	2.01	0.61
1:X:787:A:H5''	3:A:48:ARG:NH2	2.14	0.61
4:B:168:GLN:NE2	4:B:202:ALA:HB3	2.16	0.61
1:X:2766:U:OP1	4:B:69:LYS:NZ	2.32	0.61
5:C:172:VAL:O	5:C:173:ALA:C	2.38	0.61
10:H:109:ARG:HA	10:H:129:LEU:HD12	1.81	0.61
12:J:98:VAL:CG1	12:J:99:LYS:H	2.13	0.61
21:S:113:VAL:HA	21:S:171:VAL:HA	1.82	0.61
23:U:20:ARG:CB	23:U:43:ARG:HD2	2.23	0.61
1:X:1061:A:O2'	1:X:1062:G:H5'	2.01	0.61
1:X:1141:U:O2	4:B:149:ARG:NH2	2.34	0.61
1:X:2021:G:H2'	1:X:2022:C:H6	1.65	0.61
1:X:2356:A:H2'	1:X:2357:A:C8	2.36	0.61
3:A:146:GLU:CD	3:A:150:GLY:O	2.39	0.61
5:C:3:GLN:OE1	5:C:116:LYS:HG3	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:16:THR:CG2	7:E:18:ASN:HD21	2.06	0.61
7:E:55:PRO:O	7:E:57:ASP:OD1	2.19	0.61
9:G:151:TYR:HB3	9:G:157:PRO:CG	2.30	0.61
12:J:66:TYR:O	12:J:106:GLU:CD	2.39	0.61
13:K:103:ARG:HD3	13:K:110:MET:SD	2.41	0.61
13:K:14:SER:O	13:K:16:ALA:N	2.33	0.61
15:M:35:VAL:CG2	15:M:90:GLN:HG2	2.31	0.61
18:P:107:ILE:HD13	18:P:108:PRO:HD2	1.81	0.61
20:R:105:ARG:HH22	20:R:111:GLY:C	2.03	0.61
24:V:7:ARG:HH11	24:V:8:ASN:HA	1.66	0.61
1:X:1096:A:H4'	1:X:1097:A:OP1	1.98	0.61
1:X:1109:A:H2'	1:X:1110:G:H5'	1.83	0.61
1:X:2366:U:C1'	22:T:41:ARG:NH1	2.64	0.61
1:X:1281:A:O2'	1:X:2592:U:C5	2.51	0.61
1:X:2482:A:C1'	33:X:2911:ZLD:C13	2.79	0.61
1:X:224:G:H4'	1:X:399:G:C6	2.35	0.61
1:X:5:A:H2'	1:X:6:A:C8	2.35	0.61
1:X:813:A:C2	1:X:815:A:C8	2.89	0.61
1:X:579:G:H5'	1:X:994:A:C2	2.35	0.61
30:4:1:MET:HE1	30:4:34:GLN:CA	2.31	0.61
3:A:243:GLY:HA2	3:A:244:ARG:NH1	2.15	0.61
6:D:80:ARG:O	6:D:80:ARG:HD2	2.01	0.61
9:G:49:VAL:HG11	9:G:54:LEU:HD13	1.81	0.61
13:K:55:ALA:O	13:K:57:GLY:N	2.33	0.61
14:L:35:SER:OG	14:L:36:LYS:N	2.33	0.61
14:L:54:ALA:N	14:L:75:LEU:HD13	2.12	0.61
16:N:52:ASN:O	16:N:56:ASP:OD2	2.18	0.61
21:S:154:LEU:HD22	21:S:158:CYS:HB2	1.82	0.61
21:S:19:ILE:HG23	21:S:79:ILE:C	2.21	0.61
1:X:1125:G:H2'	1:X:1126:A:H8	1.66	0.61
1:X:469:G:O2'	1:X:470:U:P	2.59	0.61
1:X:490:A:O2'	1:X:491:A:H5'	2.00	0.61
1:X:737:C:O5'	1:X:737:C:H6	1.82	0.61
2:Z:35:C:H2'	2:Z:36:A:C8	2.36	0.61
4:B:103:ASP:OD2	4:B:202:ALA:HB3	2.01	0.61
4:B:116:VAL:N	4:B:136:ARG:HE	1.99	0.61
4:B:37:LYS:HA	4:B:42:ASP:CG	2.21	0.61
6:D:100:LEU:HG	6:D:104:ILE:CD1	2.28	0.61
1:X:2655:C:P	10:H:43:ARG:HH12	2.24	0.61
11:I:94:GLU:CB	11:I:97:ARG:HH11	2.13	0.61
1:X:971:A:N6	12:J:83:ARG:HH22	1.94	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:Q:69:ILE:O	19:Q:69:ILE:HD12	2.01	0.61
20:R:53:VAL:HG21	20:R:74:LEU:HD22	1.83	0.61
21:S:54:ILE:HD12	21:S:85:MET:HE1	1.82	0.61
21:S:93:GLU:OE2	21:S:123:VAL:HG22	2.01	0.61
1:X:1113:C:H2'	1:X:1114:A:H8	1.64	0.61
1:X:1301:U:C2'	1:X:1302:C:OP1	2.47	0.61
1:X:1744:G:O6	1:X:1747:G:C6	2.53	0.61
1:X:216:U:H2'	1:X:217:U:C6	2.35	0.61
1:X:677:G:O2'	1:X:678:G:H5'	2.01	0.61
8:F:105:VAL:CG1	8:F:128:VAL:HG11	2.26	0.60
11:I:88:PHE:CG	11:I:90:ARG:HD2	2.36	0.60
4:B:181:LEU:HD13	15:M:16:ILE:HD11	1.82	0.60
17:O:40:VAL:HG23	17:O:40:VAL:O	1.98	0.60
17:O:57:GLN:O	17:O:58:ALA:HB2	2.00	0.60
17:O:93:ILE:HG13	17:O:95:ILE:CD1	2.31	0.60
20:R:28:LYS:O	20:R:29:HIS:HB2	1.99	0.60
21:S:20:ALA:HB3	21:S:80:HIS:CB	2.31	0.60
1:X:1288:A:HO2'	1:X:1289:A:C4'	2.14	0.60
1:X:1333:G:N2	1:X:1344:C:C5	2.67	0.60
1:X:1448:A:C2	1:X:1449:C:C2	2.89	0.60
1:X:322:A:HO2'	1:X:323:G:P	2.24	0.60
1:X:433:G:N2	1:X:434:C:H1'	2.16	0.60
2:Z:57:U:O2'	6:D:24:SER:HB3	2.01	0.60
7:E:121:VAL:HG12	7:E:122:THR:N	2.16	0.60
7:E:37:TYR:CD2	7:E:68:THR:HA	2.36	0.60
9:G:108:GLY:N	9:G:110:LEU:HD21	2.16	0.60
11:I:80:LEU:HA	11:I:84:GLU:HB3	1.83	0.60
12:J:77:LYS:HG3	12:J:78:LYS:H	1.66	0.60
17:O:16:GLU:N	17:O:95:ILE:HB	2.17	0.60
20:R:57:ASN:ND2	20:R:59:LYS:HG3	2.15	0.60
22:T:80:SER:O	22:T:81:ILE:HD13	2.00	0.60
24:V:9:LEU:HD22	24:V:13:ASP:OD2	2.01	0.60
1:X:1115:C:O2'	1:X:1116:U:H5'	2.01	0.60
1:X:1255:A:H2'	1:X:1256:C:C6	2.36	0.60
1:X:1691:G:H21	1:X:1694:A:H61	1.49	0.60
1:X:1698:C:O2'	1:X:1753:A:C2'	2.43	0.60
1:X:1778:U:H2'	1:X:1779:C:H6	1.65	0.60
1:X:2294:U:H2'	1:X:2295:C:C6	2.36	0.60
1:X:2528:G:H2'	1:X:2529:G:C8	2.34	0.60
1:X:425:A:H3'	1:X:426:C:C6	2.35	0.60
1:X:698:A:H4'	1:X:699:G:O5'	2.00	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:39:C:H5'	2:Z:40:C:OP2	2.01	0.60
3:A:50:THR:HG22	3:A:51:SER:N	2.16	0.60
4:B:147:PRO:C	4:B:149:ARG:H	2.05	0.60
4:B:163:GLU:HG3	4:B:164:ARG:H	1.66	0.60
4:B:38:THR:N	4:B:42:ASP:OD1	2.23	0.60
4:B:88:GLY:O	4:B:89:ASP:CG	2.40	0.60
5:C:131:LYS:O	5:C:134:ILE:HG12	2.01	0.60
5:C:74:VAL:HG23	5:C:75:PRO:N	2.16	0.60
9:G:33:ILE:H	9:G:33:ILE:CD1	2.14	0.60
12:J:53:ILE:O	12:J:57:ARG:HG3	2.01	0.60
12:J:15:ARG:CB	12:J:73:LYS:HZ2	2.14	0.60
19:Q:28:TRP:CE3	19:Q:75:ARG:HD2	2.36	0.60
20:R:86:PRO:HD3	20:R:90:LYS:HZ3	1.64	0.60
1:X:1188:A:H3'	1:X:1189:G:N7	2.16	0.60
1:X:1468:A:H8	1:X:1468:A:P	2.24	0.60
1:X:1516:A:O2'	3:A:102:LYS:HE2	2.01	0.60
1:X:1725:C:H2'	1:X:1726:C:H6	1.66	0.60
1:X:1923:U:H1'	1:X:1924:C:H5	1.66	0.60
1:X:2217:G:H5''	1:X:2218:G:OP1	2.02	0.60
1:X:2238:G:OP2	22:T:14:ARG:NH2	2.34	0.60
1:X:2580:C:H4'	1:X:2581:A:OP1	2.01	0.60
1:X:2615:U:OP1	4:B:80:GLU:N	2.32	0.60
1:X:632:A:C2	1:X:633:G:C8	2.89	0.60
1:X:683:A:O5'	11:I:45:LYS:HA	2.01	0.60
1:X:758:G:C2'	1:X:759:C:H5'	2.29	0.60
4:B:49:ILE:HD13	4:B:49:ILE:C	2.20	0.60
8:F:110:LYS:HA	8:F:113:MET:CE	2.30	0.60
11:I:80:LEU:HA	11:I:84:GLU:CB	2.31	0.60
11:I:93:LEU:O	11:I:97:ARG:HG3	2.00	0.60
13:K:45:ARG:HD3	13:K:97:ILE:HD11	1.83	0.60
18:P:64:ALA:C	18:P:67:PRO:HD2	2.21	0.60
20:R:57:ASN:N	20:R:68:GLY:O	2.33	0.60
23:U:32:ARG:NE	23:U:32:ARG:N	2.49	0.60
1:X:118:U:O2	1:X:118:U:H2'	2.02	0.60
1:X:1193:G:C3'	1:X:1194:U:H5''	2.30	0.60
1:X:1662:G:H5''	1:X:1663:C:H5'	1.83	0.60
1:X:177:U:O2	1:X:178:C:H1'	2.02	0.60
1:X:2219:U:C2	1:X:2220:A:C8	2.89	0.60
1:X:2698:G:O6	1:X:2699:G:C6	2.54	0.60
1:X:347:C:H4'	20:R:15:HIS:CD2	2.36	0.60
1:X:566:U:O2'	1:X:567:G:H5'	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Y:49:CYS:SG	26:Y:51:TYR:HB2	2.40	0.60
4:B:26:VAL:HG12	4:B:27:LEU:N	2.16	0.60
5:C:173:ALA:CB	5:C:193:LEU:HD13	2.30	0.60
6:D:106:ILE:O	6:D:110:ARG:HB2	2.01	0.60
6:D:74:ILE:O	6:D:75:SER:O	2.19	0.60
7:E:126:PRO:HD2	7:E:131:ILE:HD13	1.84	0.60
7:E:141:VAL:O	7:E:145:ALA:N	2.28	0.60
7:E:25:LYS:HG2	7:E:27:LYS:HE3	1.82	0.60
8:F:113:MET:N	8:F:114:PRO:HD2	2.15	0.60
9:G:108:GLY:N	9:G:110:LEU:HD23	2.15	0.60
9:G:33:ILE:O	9:G:69:ASP:OD1	2.20	0.60
11:I:53:ARG:C	11:I:55:ARG:H	2.02	0.60
14:L:55:SER:O	14:L:56:SER:HB2	2.02	0.60
4:B:12:THR:OG1	15:M:17:GLU:OE1	2.19	0.60
15:M:51:GLU:O	15:M:51:GLU:HG3	2.00	0.60
1:X:1167:A:H62	16:N:48:ARG:HG2	1.63	0.60
20:R:14:LEU:CD2	20:R:41:PRO:HA	2.30	0.60
20:R:63:THR:HG22	20:R:64:ASN:HD22	1.65	0.60
21:S:103:ARG:HH11	21:S:108:VAL:HG23	1.67	0.60
21:S:41:ARG:O	21:S:45:GLN:NE2	2.35	0.60
21:S:88:TYR:O	21:S:127:PRO:HB3	2.00	0.60
25:W:36:ASP:O	25:W:41:ARG:NH1	2.34	0.60
1:X:2395:C:H2'	1:X:2396:C:C5'	2.31	0.60
1:X:2422:C:C2'	1:X:2423:G:H5'	2.31	0.60
1:X:2804:G:H4'	15:M:4:HIS:CE1	2.36	0.60
1:X:632:A:H2'	1:X:633:G:C5'	2.30	0.60
1:X:5:A:H2'	1:X:6:A:H8	1.67	0.60
1:X:877:G:H21	1:X:879:A:H61	1.49	0.60
1:X:915:C:H2'	1:X:916:U:C6	2.36	0.60
30:4:27:CYS:SG	30:4:28:SER:N	2.74	0.60
4:B:112:GLY:O	4:B:159:HIS:HA	2.01	0.60
7:E:95:ARG:HA	7:E:128:PRO:O	2.01	0.60
7:E:85:ILE:HD12	7:E:141:VAL:HG12	1.83	0.60
11:I:62:LYS:HG2	11:I:63:ARG:N	2.16	0.60
12:J:19:THR:HG22	12:J:99:LYS:NZ	2.16	0.60
16:N:79:PHE:CD2	16:N:79:PHE:C	2.74	0.60
17:O:54:TYR:N	17:O:54:TYR:CD1	2.68	0.60
21:S:137:ASP:CG	21:S:138:VAL:N	2.54	0.60
21:S:5:ALA:O	21:S:6:LYS:HB3	2.02	0.60
22:T:31:VAL:O	22:T:32:LYS:HB2	2.01	0.60
23:U:10:LYS:C	23:U:10:LYS:HD3	2.22	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:115:G:C6	1:X:117:A:N6	2.69	0.60
1:X:1263:G:H5''	16:N:6:THR:CG2	2.30	0.60
1:X:2056:C:O2'	1:X:2057:U:H5''	1.99	0.60
1:X:2781:G:O2'	1:X:2782:G:H5''	2.02	0.60
1:X:977:G:O2'	1:X:978:U:H5'	2.02	0.60
6:D:10:ASP:N	6:D:14:PRO:CD	2.64	0.60
9:G:169:GLN:HB2	9:G:170:PRO:CD	2.31	0.60
1:X:954:U:OP2	11:I:38:LYS:HG3	2.02	0.60
16:N:85:ARG:HB3	16:N:116:ALA:CB	2.12	0.60
18:P:72:LEU:HD13	18:P:126:ILE:HD13	1.84	0.60
19:Q:20:MET:HA	19:Q:24:VAL:O	2.02	0.60
20:R:105:ARG:HH12	20:R:113:THR:N	1.99	0.60
21:S:66:VAL:HG13	21:S:81:VAL:CG1	2.32	0.60
1:X:1162:A:H2'	1:X:1163:C:H6	1.67	0.60
1:X:1504:G:H2'	1:X:1505:U:O2	2.02	0.60
1:X:2189:A:H2'	1:X:2190:A:H8	1.66	0.60
1:X:2708:U:H2'	1:X:2709:C:C5	2.37	0.60
1:X:2726:U:H2'	1:X:2727:G:H5'	1.82	0.60
1:X:559:C:H2'	1:X:560:G:C5'	2.32	0.60
1:X:789:G:H4'	1:X:790:A:O5'	2.01	0.60
1:X:862:A:H2'	1:X:863:C:H6	1.66	0.60
26:Y:56:GLN:NE2	26:Y:56:GLN:N	2.48	0.60
3:A:93:ALA:N	3:A:105:ILE:O	2.25	0.60
3:A:76:ASN:HA	3:A:117:VAL:O	2.01	0.60
4:B:116:VAL:H	4:B:136:ARG:CD	2.13	0.60
4:B:103:ASP:OD2	4:B:168:GLN:HG2	2.02	0.60
4:B:176:ARG:O	4:B:179:GLU:HB3	2.02	0.60
6:D:143:TYR:CE1	6:D:148:LYS:HA	2.37	0.60
11:I:30:ALA:HB3	11:I:34:HIS:ND1	2.17	0.60
12:J:8:THR:HG22	12:J:70:PHE:CE2	2.37	0.60
14:L:73:LYS:CE	14:L:109:GLU:HG2	2.30	0.60
14:L:68:ALA:O	14:L:70:ALA:N	2.34	0.60
17:O:15:SER:HA	17:O:95:ILE:CB	2.29	0.60
19:Q:76:LYS:HG2	19:Q:76:LYS:O	2.01	0.60
24:V:55:THR:O	24:V:59:GLU:HG3	2.01	0.60
25:W:12:ARG:HH11	25:W:12:ARG:CG	2.15	0.60
1:X:2043:A:OP2	5:C:65:GLY:HA2	2.01	0.60
1:X:2395:C:H2'	1:X:2396:C:H5'	1.83	0.60
1:X:2625:U:O5'	1:X:2625:U:H6	1.85	0.60
1:X:717:G:C2'	1:X:739:G:H22	2.13	0.60
1:X:872:G:H2'	1:X:928:G:N1	2.17	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:983:G:H5''	1:X:984:A:C5'	2.32	0.60
3:A:65:ILE:HG23	3:A:92:ILE:HD11	1.83	0.60
4:B:121:ASN:O	4:B:122:PHE:C	2.39	0.60
4:B:177:ALA:C	4:B:179:GLU:N	2.53	0.60
1:X:627:A:OP1	5:C:34:GLN:HG2	2.02	0.60
11:I:11:GLY:N	11:I:14:LYS:CB	2.65	0.60
1:X:2851:G:OP1	15:M:8:ASN:HA	2.02	0.60
16:N:47:TYR:O	16:N:49:ASP:N	2.35	0.60
19:Q:38:ILE:O	19:Q:39:LYS:C	2.38	0.60
1:X:594:G:H2'	1:X:1264:C:N4	2.17	0.60
1:X:1770:U:C5	1:X:1775:A:N7	2.69	0.60
1:X:2262:C:O2'	1:X:2263:C:H5'	2.02	0.60
1:X:2414:A:C2	1:X:2415:G:C4	2.89	0.60
1:X:2526:U:C4	1:X:2545:A:N7	2.69	0.60
1:X:2823:G:O2'	1:X:2824:C:H6	1.85	0.60
1:X:490:A:O2'	1:X:491:A:C5'	2.49	0.60
26:Y:52:TYR:O	26:Y:53:ASP:HB2	2.01	0.60
3:A:92:ILE:HD13	3:A:104:TYR:HB3	1.83	0.60
6:D:133:LYS:O	6:D:135:GLN:N	2.35	0.60
2:Z:46:G:H4'	6:D:92:ARG:NH1	2.16	0.60
6:D:31:ILE:HD12	6:D:97:TYR:OH	2.02	0.60
7:E:9:ILE:HB	7:E:50:LEU:HB3	1.82	0.60
9:G:49:VAL:HG22	9:G:170:PRO:HG2	1.84	0.60
10:H:119:ARG:HH11	10:H:119:ARG:HG3	1.66	0.60
11:I:102:LYS:O	11:I:104:ARG:N	2.34	0.60
14:L:33:ARG:CZ	14:L:103:LEU:HB2	2.32	0.60
14:L:90:ASP:O	14:L:91:ARG:O	2.20	0.60
15:M:34:ARG:HD2	15:M:81:PHE:CZ	2.36	0.60
16:N:51:ARG:CG	16:N:51:ARG:NH1	2.60	0.60
1:X:1699:A:H61	1:X:1723:U:H3	1.49	0.60
1:X:199:A:H5''	1:X:200:A:OP2	2.01	0.60
1:X:2284:U:H2'	1:X:2285:U:O4'	2.01	0.60
1:X:2306:A:H2'	1:X:2307:A:O4'	2.02	0.60
1:X:446:C:H2'	1:X:447:U:O4'	2.02	0.60
1:X:450:C:H2'	1:X:451:A:H8	1.65	0.60
1:X:875:G:H2'	1:X:876:A:O4'	2.02	0.60
3:A:184:ARG:CG	3:A:184:ARG:HH11	2.15	0.59
4:B:84:PHE:CD1	4:B:86:PRO:CD	2.85	0.59
7:E:127:GLU:HG2	7:E:130:ARG:HB3	1.84	0.59
7:E:98:LEU:HG	7:E:99:THR:N	2.16	0.59
10:H:7:ARG:NH1	10:H:20:MET:HE3	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:H:55:VAL:HG23	10:H:68:ASP:O	2.01	0.59
13:K:91:PRO:O	13:K:92:GLY:C	2.40	0.59
14:L:12:ARG:O	14:L:16:LYS:HB2	2.02	0.59
16:N:110:VAL:O	16:N:113:SER:HB3	2.01	0.59
17:O:56:VAL:C	17:O:57:GLN:HG3	2.23	0.59
1:X:1238:A:H5'	17:O:85:GLY:H	1.67	0.59
20:R:22:VAL:HG11	20:R:80:LYS:HZ1	1.67	0.59
21:S:101:THR:O	21:S:138:VAL:HG22	2.02	0.59
21:S:138:VAL:CG2	21:S:139:THR:N	2.65	0.59
1:X:1608:U:H2'	1:X:1609:G:C8	2.37	0.59
1:X:2081:U:H2'	1:X:2082:C:C6	2.37	0.59
1:X:2294:U:H2'	1:X:2295:C:H6	1.66	0.59
1:X:2650:G:H2'	1:X:2651:U:H6	1.66	0.59
1:X:2726:U:C2'	1:X:2727:G:H5'	2.32	0.59
1:X:467:U:O2'	1:X:468:A:OP1	2.19	0.59
1:X:494:A:O2'	20:R:68:GLY:HA3	2.01	0.59
1:X:1276:U:O4'	26:Y:10:LYS:HG3	2.02	0.59
3:A:202:LYS:O	3:A:204:ILE:N	2.36	0.59
3:A:76:ASN:OD1	3:A:118:ASN:HB2	2.03	0.59
4:B:202:ALA:O	4:B:203:LYS:CB	2.49	0.59
4:B:24:THR:CG2	4:B:188:ILE:HD13	2.32	0.59
6:D:143:TYR:HE1	6:D:148:LYS:CA	2.16	0.59
9:G:103:TYR:CD2	9:G:111:LYS:HA	2.36	0.59
9:G:116:ARG:HD2	9:G:119:LEU:CD1	2.24	0.59
10:H:85:ASP:OD2	10:H:87:SER:N	2.27	0.59
1:X:596:C:H41	11:I:36:GLY:HA3	1.66	0.59
15:M:39:VAL:HG12	15:M:45:THR:OG1	2.02	0.59
15:M:55:ILE:HG12	15:M:67:THR:HG22	1.84	0.59
17:O:36:LYS:NZ	17:O:98:ILE:H	1.99	0.59
20:R:10:HIS:CD2	20:R:44:GLN:HE21	2.20	0.59
22:T:37:LEU:HD11	22:T:61:ALA:HB2	1.85	0.59
24:V:32:ALA:O	24:V:34:ALA:N	2.35	0.59
25:W:47:VAL:HG23	25:W:51:LEU:HD21	1.84	0.59
1:X:1200:G:H2'	1:X:1201:G:H8	1.66	0.59
1:X:1288:A:O2'	1:X:1289:A:O4'	2.20	0.59
1:X:1324:G:H4'	1:X:1325:U:OP1	2.01	0.59
1:X:1484:G:H2'	1:X:1485:U:C6	2.37	0.59
1:X:1822:C:O2'	1:X:1823:G:H5'	2.02	0.59
1:X:1834:G:H2'	1:X:1835:C:C6	2.37	0.59
1:X:1886:G:H2'	1:X:1887:G:H8	1.67	0.59
1:X:2171:U:H4'	1:X:2171:U:OP1	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2807:U:H4'	1:X:2808:U:H5''	1.83	0.59
1:X:547:U:H2'	1:X:548:G:C8	2.37	0.59
1:X:55:A:H2'	1:X:56:C:C6	2.37	0.59
1:X:574:C:H4'	1:X:1266:G:C6	2.37	0.59
1:X:67:G:N2	1:X:73:A:C4	2.70	0.59
1:X:2594:U:C2	26:Y:7:PRO:HA	2.37	0.59
3:A:111:LEU:CD2	3:A:127:LEU:HB3	2.32	0.59
7:E:90:ARG:NH2	7:E:163:ARG:HH12	1.95	0.59
11:I:108:LEU:H	11:I:125:ALA:HA	1.67	0.59
16:N:30:LYS:HZ3	16:N:30:LYS:HA	1.65	0.59
18:P:62:ARG:HG3	18:P:62:ARG:NH1	2.17	0.59
20:R:84:VAL:CG1	20:R:88:THR:N	2.65	0.59
21:S:23:ALA:N	21:S:32:PHE:CE1	2.70	0.59
24:V:62:ARG:CG	24:V:62:ARG:HH11	2.14	0.59
1:X:1004:A:H2	17:O:21:ARG:NH2	1.95	0.59
1:X:1142:G:OP1	9:G:107:GLN:O	2.20	0.59
1:X:1437:A:O2'	1:X:1438:G:H5'	2.02	0.59
1:X:1770:U:C2	1:X:1774:A:N7	2.69	0.59
1:X:2223:U:O2'	1:X:2224:U:H5'	2.02	0.59
1:X:460:U:C4	1:X:592:G:H1'	2.37	0.59
1:X:822:G:C2'	1:X:823:U:H5'	2.32	0.59
1:X:847:C:H2'	1:X:848:A:H8	1.67	0.59
1:X:878:C:O2'	1:X:879:A:H5''	2.02	0.59
4:B:60:ASN:O	4:B:61:LYS:C	2.40	0.59
5:C:33:TRP:O	5:C:36:ALA:HB3	2.02	0.59
12:J:36:ILE:HB	12:J:131:LYS:HE2	1.84	0.59
13:K:106:ASP:OD1	13:K:108:VAL:HB	2.02	0.59
14:L:20:THR:HG22	14:L:24:SER:OG	2.01	0.59
16:N:66:ASN:O	16:N:70:ARG:NH1	2.36	0.59
21:S:115:ILE:HA	21:S:169:VAL:CG1	2.31	0.59
21:S:67:LYS:HE3	21:S:84:TYR:HB2	1.85	0.59
1:X:1461:C:H2'	1:X:1462:C:C6	2.37	0.59
1:X:1841:G:H2'	1:X:1842:G:H5'	1.85	0.59
1:X:2035:G:H21	1:X:2036:G:H1'	1.67	0.59
1:X:2042:A:H5''	5:C:65:GLY:CA	2.32	0.59
1:X:2073:A:C6	1:X:2074:U:C4	2.91	0.59
1:X:2350:G:C6	1:X:2351:G:N7	2.71	0.59
1:X:580:A:N7	1:X:584:A:C6	2.70	0.59
1:X:852:U:H2'	1:X:853:C:C6	2.38	0.59
1:X:876:A:P	12:J:23:LYS:HD3	2.43	0.59
2:Z:111:C:H6	2:Z:111:C:H5'	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:117:MET:SD	4:B:124:GLY:HA3	2.42	0.59
7:E:10:ALA:O	7:E:12:PRO:HD2	2.02	0.59
8:F:73:PRO:CB	8:F:74:PRO:HD2	2.32	0.59
8:F:73:PRO:HB2	8:F:74:PRO:HD2	1.84	0.59
9:G:61:ARG:HG2	9:G:65:LYS:NZ	2.18	0.59
13:K:75:VAL:O	13:K:78:LYS:N	2.35	0.59
14:L:52:ALA:O	14:L:53:ALA:CB	2.50	0.59
14:L:64:LYS:N	14:L:64:LYS:CE	2.54	0.59
14:L:94:TYR:HB3	14:L:99:ARG:HH21	1.65	0.59
17:O:10:LYS:HE3	17:O:11:GLN:NE2	2.16	0.59
18:P:105:ARG:O	18:P:116:ILE:HG23	2.02	0.59
20:R:84:VAL:CA	20:R:90:LYS:HE2	2.32	0.59
21:S:100:THR:CG2	21:S:138:VAL:HG11	2.31	0.59
21:S:147:ILE:CB	21:S:169:VAL:HG23	2.31	0.59
21:S:152:ILE:HD12	21:S:152:ILE:N	2.16	0.59
1:X:11:G:O5'	1:X:11:G:H8	1.85	0.59
1:X:1314:A:C8	1:X:1316:G:C8	2.91	0.59
1:X:1949:A:C2	1:X:2572:U:C1'	2.84	0.59
1:X:2052:G:N1	1:X:2422:C:C4	2.70	0.59
1:X:2198:U:O3'	1:X:2199:C:H4'	1.99	0.59
1:X:2441:U:H2'	1:X:2442:C:C6	2.37	0.59
1:X:2508:G:OP2	7:E:172:LYS:HE2	2.02	0.59
1:X:687:G:H2'	1:X:688:A:H5'	1.84	0.59
3:A:202:LYS:C	3:A:204:ILE:N	2.56	0.59
4:B:198:LEU:C	4:B:199:ARG:HG3	2.21	0.59
4:B:32:PRO:O	4:B:49:ILE:HA	2.02	0.59
5:C:34:GLN:O	5:C:38:ARG:HG3	2.02	0.59
6:D:9:ASN:O	6:D:12:VAL:HG23	2.02	0.59
6:D:30:ARG:N	6:D:159:THR:OG1	2.35	0.59
7:E:20:GLN:O	7:E:21:ASP:HB2	2.02	0.59
9:G:106:TYR:OH	9:G:108:GLY:HA2	2.02	0.59
10:H:3:MET:HB2	10:H:4:PRO:CD	2.33	0.59
12:J:36:ILE:HD12	12:J:131:LYS:CE	2.31	0.59
13:K:3:HIS:ND1	13:K:5:LYS:HD2	2.16	0.59
1:X:2847:G:H4'	13:K:8:ARG:NH2	2.17	0.59
14:L:43:ILE:HD12	14:L:43:ILE:N	2.17	0.59
14:L:98:GLY:O	14:L:99:ARG:C	2.40	0.59
17:O:23:GLU:O	17:O:25:LEU:N	2.36	0.59
20:R:18:LYS:HD3	20:R:19:GLY:H	1.66	0.59
1:X:1412:C:H2'	1:X:1413:U:H6	1.67	0.59
1:X:1467:U:C3'	1:X:1467:U:H6	2.16	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1607:A:H2'	1:X:1608:U:C6	2.34	0.59
1:X:2189:A:H2'	1:X:2190:A:C8	2.38	0.59
1:X:2620:G:P	9:G:102:ARG:NH2	2.76	0.59
1:X:2741:G:O2'	1:X:2742:G:H5'	2.02	0.59
1:X:965:G:C2	1:X:975:C:O2	2.55	0.59
18:P:36:ARG:NH2	26:Y:20:ARG:CZ	2.66	0.59
3:A:217:ARG:NH2	3:A:218:LYS:HE2	2.18	0.59
5:C:12:GLY:O	5:C:14:THR:N	2.36	0.59
6:D:44:LYS:HB3	6:D:46:ASP:OD2	2.03	0.59
11:I:77:LEU:CB	11:I:111:SER:H	2.11	0.59
11:I:67:ASN:O	11:I:68:VAL:HB	2.03	0.59
12:J:98:VAL:CG1	12:J:99:LYS:N	2.64	0.59
13:K:24:GLN:CB	13:K:44:LEU:HD22	2.30	0.59
1:X:1007:A:H1'	17:O:6:GLN:HG3	1.84	0.59
17:O:57:GLN:O	17:O:96:LEU:O	2.21	0.59
19:Q:3:HIS:CD2	19:Q:44:GLN:HB2	2.37	0.59
21:S:23:ALA:HB3	21:S:32:PHE:HZ	1.68	0.59
22:T:45:PHE:CZ	22:T:77:ARG:NH1	2.70	0.59
25:W:17:VAL:O	25:W:19:THR:N	2.35	0.59
1:X:1016:C:OP1	1:X:1016:C:H6	1.86	0.59
1:X:1466:C:H2'	1:X:1467:U:C1'	2.33	0.59
1:X:1432:G:H2'	1:X:1594:U:O4	2.03	0.59
1:X:1774:A:C2	1:X:2566:A:C5	2.90	0.59
1:X:19:C:H2'	1:X:20:C:C6	2.37	0.59
1:X:2262:C:H2'	1:X:2263:C:C5'	2.32	0.59
1:X:229:G:O2'	1:X:230:C:H5'	2.02	0.59
1:X:2578:G:O2'	1:X:2579:A:H5'	2.03	0.59
1:X:2727:G:O6	1:X:2735:C:H5''	2.03	0.59
1:X:492:G:HO2'	1:X:493:A:P	2.26	0.59
1:X:571:U:O2	1:X:581:A:C4	2.56	0.59
1:X:839:U:OP1	1:X:2408:G:OP2	2.20	0.59
2:Z:32:C:H2'	2:Z:33:C:C5'	2.30	0.59
3:A:238:GLY:O	3:A:239:ARG:CG	2.50	0.59
6:D:14:PRO:O	6:D:16:LEU:N	2.36	0.59
7:E:163:ARG:NE	7:E:169:ILE:HD12	2.17	0.59
7:E:94:PHE:O	7:E:95:ARG:HB3	2.02	0.59
12:J:119:PHE:O	12:J:120:ARG:C	2.39	0.59
1:X:2815:C:H4'	13:K:92:GLY:HA3	1.83	0.59
14:L:38:ILE:CG1	14:L:39:TYR:N	2.65	0.59
1:X:1171:A:H1'	17:O:6:GLN:OE1	2.03	0.59
17:O:76:SER:O	17:O:78:VAL:HG12	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:44:VAL:O	18:P:45:ILE:C	2.40	0.59
21:S:25:ASN:O	21:S:26:LYS:HB2	2.03	0.59
1:X:1442:C:O2'	1:X:1443:G:OP1	2.20	0.59
1:X:2170:C:H2'	1:X:2171:U:C4'	2.32	0.59
1:X:2484:G:O2'	1:X:2485:U:H5'	2.01	0.59
1:X:2501:U:H5'	1:X:2502:G:OP2	2.02	0.59
1:X:2695:C:H2'	1:X:2696:A:H8	1.67	0.59
1:X:688:A:C2	1:X:689:A:N7	2.70	0.59
1:X:764:A:H2	1:X:802:A:H2'	1.68	0.59
1:X:945:G:O2'	1:X:946:U:H5'	2.01	0.59
4:B:119:ARG:HA	4:B:160:MET:HE3	1.84	0.59
4:B:116:VAL:CG2	4:B:136:ARG:HE	2.04	0.59
5:C:22:VAL:HA	5:C:106:MET:CE	2.33	0.59
6:D:106:ILE:HG22	6:D:139:PRO:HD3	1.84	0.59
7:E:97:LYS:N	7:E:104:GLU:HB3	2.15	0.59
7:E:131:ILE:CG2	7:E:132:ASP:N	2.65	0.59
9:G:67:ARG:HD3	9:G:70:PHE:C	2.22	0.59
9:G:67:ARG:HD3	9:G:70:PHE:HB3	1.85	0.59
12:J:35:LEU:HD23	12:J:105:PHE:CD2	2.38	0.59
16:N:60:LEU:HD13	16:N:60:LEU:C	2.23	0.59
21:S:102:GLY:O	21:S:138:VAL:CG2	2.50	0.59
21:S:16:GLU:CD	21:S:16:GLU:N	2.57	0.59
25:W:44:VAL:O	25:W:45:LYS:C	2.39	0.59
1:X:1087:C:H4'	8:F:94:LYS:NZ	2.18	0.59
1:X:1373:G:N2	1:X:1374:G:C1'	2.65	0.59
1:X:2021:G:H2'	1:X:2022:C:C6	2.38	0.59
1:X:2032:G:N2	1:X:2599:U:C2	2.70	0.59
1:X:2522:G:H8	1:X:2522:G:H5'	1.68	0.59
1:X:2532:G:H1'	1:X:2561:G:N3	2.17	0.59
1:X:2856:U:O2'	1:X:2857:C:H5'	2.02	0.59
1:X:395:G:H1	1:X:404:A:N6	2.00	0.59
1:X:505:G:OP1	18:P:22:LYS:HE3	2.02	0.59
1:X:686:C:H5''	5:C:74:VAL:HB	1.85	0.59
1:X:731:A:C2'	1:X:732:G:H5'	2.30	0.59
6:D:31:ILE:HG22	6:D:31:ILE:O	2.02	0.59
10:H:116:ARG:CZ	15:M:38:LYS:HD2	2.31	0.59
11:I:51:GLY:O	11:I:55:ARG:NH1	2.35	0.59
12:J:28:VAL:CG2	12:J:134:LYS:O	2.51	0.59
13:K:5:LYS:HD3	13:K:5:LYS:N	2.17	0.59
21:S:44:ARG:HB3	21:S:45:GLN:NE2	2.18	0.59
1:X:1212:U:H2'	1:X:1213:U:C6	2.38	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1248:G:N7	1:X:1249:G:C6	2.71	0.59
1:X:1545:G:C6	1:X:1559:G:N2	2.71	0.59
1:X:1621:C:C2'	1:X:1622:G:H5'	2.32	0.59
1:X:170:U:O2	1:X:170:U:H2'	2.02	0.59
30:4:1:MET:HA	30:4:1:MET:HE2	1.84	0.58
3:A:197:GLY:C	3:A:199:ALA:N	2.55	0.58
3:A:53:PHE:O	3:A:54:ILE:HG22	2.03	0.58
4:B:60:ASN:C	4:B:64:GLN:HG3	2.22	0.58
5:C:153:ASP:O	5:C:154:ASP:CG	2.42	0.58
12:J:36:ILE:HG12	12:J:103:VAL:HA	1.85	0.58
13:K:3:HIS:CG	13:K:5:LYS:HE3	2.34	0.58
16:N:101:ARG:O	16:N:103:PRO:HD3	2.02	0.58
17:O:15:SER:HB3	17:O:95:ILE:O	2.03	0.58
17:O:56:VAL:HA	17:O:97:GLY:CA	2.28	0.58
17:O:76:SER:O	17:O:78:VAL:N	2.35	0.58
18:P:89:ARG:O	18:P:90:LEU:HD23	2.02	0.58
20:R:93:ARG:NH1	20:R:93:ARG:HG2	2.18	0.58
23:U:46:LEU:O	23:U:47:HIS:ND1	2.35	0.58
1:X:116:A:N7	1:X:117:A:C4	2.71	0.58
1:X:1216:G:O2'	1:X:1217:U:H5'	2.03	0.58
1:X:1822:C:C2'	1:X:1823:G:H5'	2.33	0.58
1:X:1931:G:C6	1:X:1942:G:C6	2.91	0.58
1:X:2001:G:H2'	1:X:2002:A:O4'	2.03	0.58
1:X:2491:C:H5''	1:X:2492:G:OP2	2.02	0.58
1:X:2533:U:H2'	1:X:2534:U:C6	2.38	0.58
1:X:868:U:H2'	1:X:869:C:C6	2.37	0.58
1:X:964:A:O2'	1:X:965:G:H5'	2.02	0.58
2:Z:29:C:C5	2:Z:30:C:C5	2.91	0.58
3:A:109:GLU:HB2	3:A:196:VAL:O	2.03	0.58
4:B:172:VAL:O	4:B:172:VAL:HG12	2.03	0.58
5:C:153:ASP:OD2	5:C:172:VAL:HG13	2.03	0.58
2:Z:44:C:O2'	6:D:63:GLN:HG2	2.03	0.58
7:E:43:VAL:HB	7:E:52:VAL:HG13	1.84	0.58
7:E:44:ARG:CZ	7:E:46:ASP:HB2	2.33	0.58
11:I:77:LEU:HD22	11:I:110:ALA:HA	1.85	0.58
11:I:123:ASP:O	11:I:124:ALA:CB	2.51	0.58
13:K:10:LEU:HD21	13:K:14:SER:H	1.69	0.58
16:N:47:TYR:CE2	16:N:51:ARG:CZ	2.86	0.58
19:Q:11:VAL:HG21	19:Q:77:LYS:HG3	1.84	0.58
20:R:90:LYS:HD2	20:R:108:VAL:HG11	1.84	0.58
24:V:14:PHE:O	24:V:18:ILE:HG12	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1226:A:C8	1:X:1250:A:C2	2.91	0.58
1:X:1252:C:O2'	1:X:1253:C:H5''	2.03	0.58
1:X:1264:C:OP1	16:N:13:ARG:NH1	2.36	0.58
1:X:1533:G:H2'	1:X:1534:A:H8	1.68	0.58
1:X:1547:U:H2'	1:X:1548:U:C6	2.38	0.58
1:X:1782:A:N6	1:X:1820:G:O2'	2.35	0.58
1:X:172:A:N1	1:X:178:C:C2	2.71	0.58
1:X:1954:A:O2'	3:A:239:ARG:HB3	2.02	0.58
1:X:2437:G:C2'	1:X:2469:G:H1	2.16	0.58
1:X:248:A:O5'	1:X:248:A:H8	1.85	0.58
1:X:2859:U:H2'	1:X:2860:C:H5'	1.85	0.58
1:X:645:G:H2'	1:X:646:C:C6	2.38	0.58
3:A:124:GLU:O	3:A:126:LYS:N	2.36	0.58
3:A:89:SER:HB2	3:A:201:HIS:NE2	2.18	0.58
6:D:113:ASP:HB3	6:D:115:ARG:CZ	2.33	0.58
6:D:53:ALA:C	6:D:57:LEU:HG	2.23	0.58
6:D:35:VAL:CG2	6:D:90:THR:HG23	2.34	0.58
7:E:69:ARG:O	7:E:72:VAL:HB	2.03	0.58
9:G:59:ALA:O	9:G:62:ILE:N	2.35	0.58
1:X:2661:G:H4'	15:M:63:ARG:HD3	1.85	0.58
24:V:62:ARG:HH11	24:V:62:ARG:HB3	1.68	0.58
1:X:1250:A:O2'	1:X:1251:G:O4'	2.22	0.58
1:X:2175:A:O2'	1:X:2176:U:H5'	2.04	0.58
1:X:2262:C:H2'	1:X:2263:C:H5'	1.84	0.58
1:X:2301:A:C6	1:X:2312:A:N6	2.71	0.58
1:X:2417:U:O2'	1:X:2418:A:H5''	2.03	0.58
1:X:2582:G:H2'	1:X:2583:U:O4'	2.02	0.58
1:X:2804:G:H2'	1:X:2805:G:H8	1.68	0.58
1:X:5:A:O2'	1:X:6:A:H5'	2.02	0.58
1:X:611:C:H6	1:X:611:C:H5''	1.68	0.58
1:X:917:U:H2'	1:X:918:A:H5'	1.85	0.58
26:Y:35:GLN:C	26:Y:37:HIS:N	2.55	0.58
6:D:30:ARG:HB2	6:D:159:THR:HG23	1.84	0.58
6:D:56:GLU:O	6:D:60:ILE:HG12	2.03	0.58
7:E:136:ILE:CG2	7:E:137:ASP:H	2.10	0.58
8:F:85:ILE:HG23	8:F:88:GLY:H	1.69	0.58
9:G:102:ARG:CZ	9:G:112:THR:HG21	2.33	0.58
12:J:81:GLU:HG2	12:J:82:THR:HG23	1.84	0.58
1:X:1466:C:C2'	1:X:1467:U:O4'	2.50	0.58
1:X:1922:U:H1'	1:X:2570:C:O2'	2.04	0.58
1:X:2386:G:H2'	1:X:2387:U:C6	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2571:G:C2	1:X:2582:G:C2	2.92	0.58
1:X:2875:C:O2'	1:X:2876:C:H5'	2.02	0.58
1:X:324:C:C2'	1:X:325:U:H5'	2.33	0.58
1:X:63:A:N3	1:X:63:A:H2'	2.19	0.58
2:Z:43:G:H8	6:D:66:ILE:CD1	2.16	0.58
9:G:36:ASN:O	9:G:38:GLU:N	2.37	0.58
10:H:23:ARG:CB	10:H:23:ARG:NH2	2.65	0.58
14:L:26:ARG:HH11	14:L:88:VAL:HG22	1.69	0.58
15:M:22:ARG:HD3	15:M:83:PHE:O	2.02	0.58
18:P:9:ARG:CB	18:P:13:GLN:HG3	2.31	0.58
19:Q:68:PHE:H	19:Q:68:PHE:HD2	1.49	0.58
20:R:98:ILE:C	20:R:100:ASP:H	2.04	0.58
20:R:108:VAL:CG2	20:R:109:ALA:H	2.06	0.58
1:X:1354:A:O2'	1:X:1355:A:OP1	2.19	0.58
1:X:553:C:H4'	1:X:554:U:O5'	2.03	0.58
1:X:600:G:C6	1:X:602:C:C4	2.92	0.58
1:X:621:U:H2'	1:X:622:U:H6	1.67	0.58
1:X:941:U:H2'	1:X:942:U:O4'	2.04	0.58
1:X:1516:A:N3	3:A:100:GLY:HA3	2.19	0.58
4:B:4:ILE:CG1	4:B:5:LEU:N	2.66	0.58
4:B:152:LYS:H	9:G:106:TYR:HB3	1.69	0.58
14:L:28:ARG:CG	14:L:43:ILE:HD13	2.27	0.58
16:N:50:ARG:O	16:N:53:LYS:HG2	2.04	0.58
20:R:93:ARG:O	20:R:95:ARG:HD2	2.02	0.58
21:S:91:PRO:CG	21:S:92:VAL:H	2.13	0.58
23:U:52:ARG:HG2	23:U:52:ARG:NH2	2.18	0.58
1:X:1496:G:C2'	1:X:1497:C:O5'	2.51	0.58
1:X:1960:A:C2'	1:X:1961:A:H5'	2.32	0.58
1:X:2036:G:C2'	1:X:2037:A:H5'	2.34	0.58
1:X:2048:C:H1'	1:X:2428:U:H3	1.69	0.58
1:X:2576:G:O5'	1:X:2576:G:H8	1.87	0.58
1:X:389:G:H2'	1:X:390:U:H6	1.69	0.58
1:X:48:A:H4'	1:X:49:U:C5'	2.28	0.58
1:X:735:G:H2'	1:X:736:G:H5'	1.86	0.58
1:X:89:A:O2'	1:X:90:G:H5''	2.02	0.58
2:Z:103:A:N6	2:Z:104:A:C6	2.72	0.58
3:A:67:PHE:HB3	3:A:153:ALA:N	2.11	0.58
4:B:116:VAL:H	4:B:136:ARG:NE	2.01	0.58
6:D:17:MET:HA	6:D:21:GLY:HA2	1.86	0.58
9:G:101:THR:OG1	9:G:103:TYR:HE1	1.86	0.58
9:G:144:MET:C	9:G:146:THR:N	2.56	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:I:134:GLU:HG2	11:I:139:ARG:HA	1.85	0.58
11:I:30:ALA:CB	11:I:34:HIS:ND1	2.66	0.58
17:O:12:TYR:C	17:O:13:ARG:HG2	2.23	0.58
17:O:14:VAL:O	17:O:15:SER:HB2	2.03	0.58
1:X:1004:A:N3	17:O:88:GLN:NE2	2.52	0.58
18:P:57:LEU:HD12	18:P:69:ALA:HA	1.85	0.58
20:R:10:HIS:CB	20:R:44:GLN:NE2	2.66	0.58
20:R:25:LEU:HD12	20:R:80:LYS:CA	2.34	0.58
25:W:6:VAL:O	25:W:7:ARG:HG2	2.04	0.58
1:X:1595:A:O5'	1:X:1595:A:C8	2.52	0.58
1:X:171:G:O2'	1:X:172:A:H5'	2.04	0.58
1:X:2027:C:O2'	1:X:2028:C:H5'	2.03	0.58
1:X:2057:U:C5'	1:X:2057:U:C6	2.86	0.58
1:X:424:G:H3'	1:X:2385:U:O4	2.03	0.58
1:X:2431:C:C4	1:X:2432:A:C6	2.91	0.58
1:X:34:U:C2	20:R:4:PRO:HB3	2.39	0.58
1:X:746:G:N7	1:X:774:A:C6	2.71	0.58
3:A:217:ARG:HG2	3:A:218:LYS:H	1.69	0.58
1:X:1517:C:C4'	3:A:96:HIS:CE1	2.86	0.58
4:B:65:GLY:CA	4:B:68:ALA:HB3	2.34	0.58
5:C:37:SER:HB2	5:C:92:ASP:OD2	2.03	0.58
5:C:50:GLN:O	5:C:52:SER:N	2.35	0.58
6:D:53:ALA:O	6:D:57:LEU:HG	2.03	0.58
9:G:163:PRO:O	9:G:165:VAL:HG22	2.03	0.58
11:I:106:VAL:HG12	11:I:106:VAL:O	2.04	0.58
14:L:17:VAL:HG13	14:L:18:ARG:N	2.19	0.58
14:L:38:ILE:CG1	14:L:39:TYR:H	2.16	0.58
14:L:12:ARG:HG3	14:L:92:GLY:O	2.02	0.58
1:X:1051:U:C6	1:X:1051:U:H3'	2.38	0.58
1:X:1359:G:O2'	1:X:1360:G:H5'	2.04	0.58
1:X:1572:C:O2'	1:X:1573:G:H5'	2.04	0.58
1:X:742:G:H2'	1:X:1766:U:H1'	1.86	0.58
1:X:2240:C:C2'	1:X:2241:U:H5'	2.34	0.58
1:X:240:U:H2'	1:X:241:C:O4'	2.04	0.58
1:X:2618:A:H1'	1:X:2758:A:C2	2.39	0.58
1:X:2796:A:C2	1:X:2797:G:C5	2.91	0.58
1:X:760:U:O5'	1:X:760:U:H6	1.86	0.58
1:X:939:C:H5''	1:X:940:G:OP2	2.04	0.58
3:A:217:ARG:HG2	3:A:218:LYS:CG	2.33	0.58
4:B:133:LYS:C	4:B:134:TRP:O	2.40	0.58
5:C:111:ARG:C	5:C:113:GLU:H	2.07	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:83:ALA:O	5:C:85:GLY:N	2.37	0.58
5:C:97:ARG:O	5:C:101:GLN:HG2	2.04	0.58
6:D:96:MET:O	6:D:100:LEU:CB	2.52	0.58
6:D:13:ARG:HB3	6:D:14:PRO:CD	2.26	0.58
7:E:86:ASN:N	7:E:132:ASP:OD2	2.37	0.58
9:G:75:ILE:HD11	9:G:144:MET:HG3	1.85	0.58
18:P:107:ILE:HB	18:P:117:ILE:HD12	1.86	0.58
18:P:25:PHE:CD2	18:P:25:PHE:C	2.76	0.58
20:R:84:VAL:HG13	20:R:88:THR:O	2.03	0.58
21:S:123:VAL:O	21:S:124:ALA:HB3	2.03	0.58
22:T:37:LEU:HD12	22:T:37:LEU:H	1.67	0.58
1:X:1128:G:H3'	1:X:1129:A:H5''	1.85	0.58
1:X:1295:U:H2'	1:X:1296:G:O4'	2.03	0.58
1:X:1278:A:H2	1:X:1997:A:H62	1.52	0.58
1:X:2661:G:C2	1:X:2662:C:C6	2.91	0.58
1:X:2804:G:H2'	1:X:2805:G:C8	2.39	0.58
1:X:2564:U:N3	33:X:2911:ZLD:H21A	2.19	0.58
1:X:322:A:O2'	1:X:323:G:P	2.61	0.58
1:X:742:G:C6	3:A:208:LYS:HD3	2.39	0.58
1:X:955:G:H5'	1:X:956:A:C5'	2.33	0.58
1:X:980:G:O3'	25:W:11:GLY:HA2	2.04	0.58
4:B:52:ALA:O	4:B:75:THR:O	2.21	0.58
4:B:85:ALA:O	4:B:86:PRO:O	2.21	0.58
6:D:66:ILE:HG22	6:D:88:LYS:O	2.03	0.58
8:F:85:ILE:HA	8:F:88:GLY:HA3	1.86	0.58
9:G:102:ARG:NH2	9:G:112:THR:HG21	2.18	0.58
10:H:65:LYS:N	10:H:68:ASP:OD2	2.31	0.58
1:X:2394:G:O5'	11:I:63:ARG:CZ	2.51	0.58
12:J:28:VAL:HG23	12:J:137:VAL:HG21	1.85	0.58
17:O:50:ASP:O	17:O:53:LYS:HB2	2.04	0.58
1:X:1617:G:OP2	19:Q:56:MET:HE1	2.04	0.58
20:R:18:LYS:O	20:R:36:VAL:HB	2.03	0.58
1:X:1004:A:C5	1:X:1005:U:H5	2.21	0.58
1:X:1440:G:H8	1:X:1440:G:O5'	1.87	0.58
1:X:2074:U:C3'	1:X:2075:U:H5''	2.27	0.58
1:X:805:G:N7	1:X:2419:C:C1'	2.67	0.58
1:X:739:G:HO2'	1:X:740:A:P	2.27	0.58
1:X:76:C:H5'	1:X:76:C:C6	2.29	0.58
1:X:911:A:H2'	1:X:912:A:H8	1.68	0.58
2:Z:4:C:H2'	2:Z:5:C:O4'	2.04	0.58
3:A:78:LYS:O	3:A:80:ALA:N	2.36	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:116:VAL:N	4:B:136:ARG:NE	2.52	0.57
5:C:146:GLU:HB3	5:C:184:ASP:CB	2.34	0.57
7:E:77:LYS:C	7:E:80:SER:HB3	2.24	0.57
11:I:73:GLU:OE2	11:I:104:ARG:CB	2.52	0.57
11:I:108:LEU:HB2	11:I:122:VAL:CG1	2.22	0.57
11:I:30:ALA:N	11:I:34:HIS:ND1	2.51	0.57
12:J:113:GLU:O	12:J:115:ALA:N	2.36	0.57
17:O:35:LEU:O	17:O:36:LYS:HG3	2.03	0.57
17:O:15:SER:OG	17:O:96:LEU:HA	2.04	0.57
18:P:50:VAL:CG1	18:P:90:LEU:HB2	2.34	0.57
23:U:27:ASP:O	23:U:32:ARG:HG3	2.04	0.57
24:V:31:GLN:HB3	24:V:37:LEU:CB	2.34	0.57
1:X:1018:C:C5	1:X:1019:U:C5	2.92	0.57
1:X:1808:C:H5''	3:A:39:LYS:CE	2.34	0.57
1:X:1863:U:H2'	1:X:1864:G:C8	2.39	0.57
1:X:2725:C:H5'	7:E:146:ALA:HB2	1.84	0.57
1:X:466:A:H4'	1:X:467:U:O5'	2.03	0.57
1:X:494:A:H3'	1:X:495:C:H6	1.68	0.57
1:X:566:U:H2'	1:X:567:G:H8	1.69	0.57
1:X:815:A:C2	1:X:816:U:C2	2.92	0.57
1:X:2569:A:O3'	3:A:239:ARG:NH1	2.37	0.57
4:B:136:ARG:NH2	4:B:157:ALA:HB2	2.18	0.57
1:X:2551:A:N7	4:B:144:ARG:HD3	2.19	0.57
5:C:153:ASP:OD2	5:C:172:VAL:HG22	2.04	0.57
6:D:143:TYR:HA	6:D:146:VAL:HG21	1.85	0.57
6:D:167:ARG:CG	6:D:177:PHE:HE2	2.16	0.57
7:E:73:ALA:O	7:E:77:LYS:HG2	2.04	0.57
11:I:14:LYS:HA	11:I:14:LYS:HE3	1.85	0.57
12:J:70:PHE:HE2	12:J:71:PRO:O	1.86	0.57
14:L:76:ALA:HB2	14:L:107:ALA:HA	1.86	0.57
17:O:76:SER:C	17:O:78:VAL:H	2.07	0.57
20:R:110:SER:OG	20:R:111:GLY:N	2.36	0.57
1:X:1138:A:C2'	1:X:1139:A:H5''	2.33	0.57
1:X:2570:C:OP1	3:A:239:ARG:NH1	2.34	0.57
1:X:2692:A:H5''	1:X:2693:U:OP2	2.04	0.57
1:X:2710:C:C2'	1:X:2711:G:H5'	2.34	0.57
1:X:541:C:O2'	1:X:542:A:P	2.61	0.57
1:X:605:G:H2'	1:X:606:A:H8	1.70	0.57
1:X:65:C:O2'	1:X:66:U:H5'	2.04	0.57
1:X:867:G:H2'	1:X:868:U:O4'	2.04	0.57
1:X:94:C:HO2'	24:V:40:PRO:HD2	1.68	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:47:A:H2'	2:Z:47:A:N3	2.19	0.57
3:A:244:ARG:N	3:A:244:ARG:CD	2.59	0.57
4:B:33:ILE:HG22	4:B:47:VAL:HG12	1.85	0.57
6:D:80:ARG:CD	6:D:83:MET:HB2	2.33	0.57
9:G:155:THR:O	9:G:156:HIS:C	2.42	0.57
9:G:151:TYR:HB2	9:G:157:PRO:HB3	1.86	0.57
9:G:164:GLN:C	9:G:165:VAL:HG22	2.24	0.57
10:H:100:ASN:C	10:H:102:GLN:H	2.08	0.57
11:I:32:ARG:CZ	17:O:81:ARG:NH2	2.67	0.57
14:L:59:LEU:HD22	14:L:61:SER:H	1.70	0.57
18:P:62:ARG:HG3	18:P:62:ARG:HH11	1.69	0.57
22:T:46:LYS:HD3	22:T:76:ALA:CB	2.34	0.57
23:U:43:ARG:HH21	23:U:43:ARG:HG2	1.69	0.57
1:X:1063:C:H2'	1:X:1064:C:C5	2.39	0.57
1:X:1086:C:C3'	1:X:1087:C:H5''	2.35	0.57
1:X:116:A:H5'	1:X:117:A:H8	1.67	0.57
1:X:1200:G:H2'	1:X:1201:G:C8	2.39	0.57
1:X:2367:A:N7	1:X:2368:G:C5	2.73	0.57
1:X:2751:C:H5'	4:B:203:LYS:HD3	1.85	0.57
1:X:2876:C:H2'	1:X:2877:A:C8	2.38	0.57
1:X:678:G:O2'	1:X:679:C:H5'	2.05	0.57
2:Z:4:C:H6	2:Z:4:C:H5'	1.69	0.57
30:4:22:ARG:CZ	30:4:37:GLY:HA3	2.35	0.57
1:X:1517:C:C4'	3:A:96:HIS:NE2	2.61	0.57
4:B:179:GLU:C	4:B:181:LEU:N	2.58	0.57
8:F:107:GLU:HA	8:F:110:LYS:HB2	1.85	0.57
10:H:115:ALA:HA	10:H:134:LEU:OXT	2.05	0.57
11:I:77:LEU:CG	11:I:112:GLY:O	2.53	0.57
20:R:105:ARG:NH2	20:R:111:GLY:C	2.58	0.57
20:R:108:VAL:HG13	20:R:109:ALA:N	2.19	0.57
22:T:35:ASN:HD22	22:T:35:ASN:N	2.03	0.57
1:X:2366:U:H1'	22:T:41:ARG:NH1	2.19	0.57
1:X:94:C:H1'	24:V:40:PRO:HG2	1.86	0.57
1:X:1253:C:C2'	1:X:1254:G:H5'	2.33	0.57
1:X:1385:C:O2'	1:X:1386:A:H5'	2.04	0.57
1:X:1807:A:H1'	1:X:1809:G:C8	2.40	0.57
1:X:1850:G:C6	1:X:1868:A:N7	2.72	0.57
1:X:2047:C:O2	1:X:2429:A:N6	2.37	0.57
1:X:2482:A:C2'	33:X:2911:ZLD:C13	2.82	0.57
1:X:2624:G:H3'	1:X:2625:U:H5'	1.87	0.57
1:X:2691:C:O2'	1:X:2692:A:C8	2.55	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2737:A:H61	7:E:67:LEU:HD11	1.69	0.57
1:X:29:U:O4'	16:N:11:ARG:NH1	2.37	0.57
1:X:586:G:C6	1:X:587:A:C6	2.91	0.57
1:X:82:G:N2	1:X:100:G:C2'	2.65	0.57
1:X:90:G:H5'	1:X:91:A:C8	2.38	0.57
2:Z:78:A:O2'	2:Z:79:U:H5'	2.05	0.57
30:4:25:VAL:CG2	30:4:34:GLN:HB2	2.34	0.57
30:4:8:LYS:C	30:4:9:LYS:HE3	2.25	0.57
1:X:1810:U:OP1	3:A:158:SER:HB3	2.04	0.57
5:C:181:LEU:O	5:C:181:LEU:HD12	2.04	0.57
6:D:133:LYS:C	6:D:151:GLY:HA2	2.24	0.57
6:D:33:LYS:HD2	6:D:90:THR:CG2	2.33	0.57
7:E:86:ASN:HA	7:E:132:ASP:HB2	1.87	0.57
10:H:108:THR:O	10:H:109:ARG:HB3	2.05	0.57
13:K:3:HIS:CE1	13:K:5:LYS:HD2	2.40	0.57
15:M:50:PHE:HD2	15:M:51:GLU:H	1.53	0.57
17:O:26:GLN:CG	17:O:27:GLY:H	2.15	0.57
18:P:29:LYS:O	18:P:30:TYR:HB2	2.05	0.57
19:Q:28:TRP:CE3	19:Q:75:ARG:HB3	2.40	0.57
21:S:114:ASP:OD1	21:S:115:ILE:N	2.37	0.57
2:Z:14:C:H5	22:T:72:LYS:HD2	1.68	0.57
1:X:1359:G:H2'	1:X:1360:G:O4'	2.05	0.57
1:X:1552:C:O2	1:X:1553:G:C2	2.58	0.57
1:X:174:A:N1	1:X:840:U:O4	2.37	0.57
1:X:1918:G:H3'	1:X:1945:C:H42	1.68	0.57
1:X:2070:G:O2'	1:X:2071:G:H5'	2.03	0.57
1:X:2308:A:H2'	1:X:2309:G:H8	1.65	0.57
1:X:2316:G:H2'	1:X:2317:G:H8	1.68	0.57
1:X:2698:G:C6	1:X:2699:G:C5	2.93	0.57
1:X:686:C:C2'	1:X:687:G:H5'	2.34	0.57
1:X:690:A:H2'	1:X:691:C:H6	1.69	0.57
1:X:734:G:H2'	1:X:735:G:H8	1.70	0.57
1:X:889:C:H2'	1:X:890:U:H6	1.67	0.57
1:X:922:A:C2	1:X:923:A:C2	2.92	0.57
2:Z:15:A:C6	2:Z:72:C:H5'	2.39	0.57
1:X:793:G:H1	3:A:230:ASP:CG	2.08	0.57
6:D:123:ASP:OD1	6:D:125:ARG:HG2	2.05	0.57
6:D:35:VAL:HG22	6:D:90:THR:HG23	1.86	0.57
7:E:90:ARG:HD3	7:E:163:ARG:HH11	1.68	0.57
10:H:10:VAL:CG1	10:H:98:ILE:HG13	2.34	0.57
14:L:15:ARG:NH1	14:L:15:ARG:HG2	2.12	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:O:36:LYS:HD2	17:O:55:THR:N	2.19	0.57
18:P:27:VAL:HG23	18:P:125:THR:HG22	1.86	0.57
20:R:11:ASN:O	20:R:12:ASP:C	2.43	0.57
21:S:20:ALA:HB1	21:S:80:HIS:ND1	2.20	0.57
23:U:33:LYS:HD3	23:U:33:LYS:N	2.20	0.57
1:X:1469:U:OP1	1:X:1471:G:OP2	2.22	0.57
1:X:1510:A:H2'	1:X:1511:A:H8	1.68	0.57
1:X:2015:G:H2'	4:B:145:LYS:CE	2.35	0.57
1:X:2213:G:C2	1:X:2214:G:C8	2.92	0.57
1:X:2694:G:OP1	1:X:2694:G:H8	1.88	0.57
1:X:2824:C:OP1	15:M:100:ARG:NH1	2.38	0.57
1:X:541:C:H4'	1:X:542:A:O5'	2.04	0.57
1:X:709:A:C2	1:X:710:C:C2	2.93	0.57
1:X:978:U:H2'	1:X:979:A:C8	2.40	0.57
2:Z:63:A:H2'	2:Z:64:C:H6	1.69	0.57
3:A:218:LYS:O	3:A:219:PRO:C	2.42	0.57
5:C:17:LEU:HD12	5:C:109:ALA:HB2	1.85	0.57
5:C:179:ASP:O	5:C:182:ARG:HB3	2.04	0.57
5:C:24:SER:HA	5:C:27:LEU:CD2	2.31	0.57
5:C:48:ARG:H	5:C:48:ARG:HD2	1.69	0.57
5:C:55:GLY:O	5:C:56:ARG:HG2	2.03	0.57
7:E:127:GLU:C	7:E:129:THR:N	2.57	0.57
7:E:35:VAL:HB	7:E:37:TYR:HE1	1.69	0.57
9:G:111:LYS:O	9:G:113:GLU:HG3	2.05	0.57
9:G:125:ARG:NH1	9:G:128:GLU:OE1	2.38	0.57
9:G:44:VAL:HG12	9:G:45:ASP:N	2.17	0.57
9:G:63:ARG:HG3	9:G:64:GLY:N	2.16	0.57
13:K:51:LEU:O	13:K:54:THR:N	2.37	0.57
14:L:34:SER:HB2	14:L:94:TYR:OH	2.05	0.57
18:P:45:ILE:O	18:P:46:ARG:C	2.43	0.57
19:Q:24:VAL:HG12	19:Q:25:TYR:N	2.19	0.57
1:X:34:U:N1	20:R:4:PRO:HB3	2.19	0.57
1:X:412:U:H5	23:U:68:ARG:NH1	2.01	0.57
1:X:1443:G:H2'	1:X:1444:C:C6	2.39	0.57
1:X:1641:C:H2'	1:X:1642:G:H5'	1.85	0.57
1:X:2225:G:C2	1:X:2405:A:H1'	2.40	0.57
1:X:2500:C:H2'	1:X:2501:U:C6	2.40	0.57
1:X:2526:U:C2	1:X:2545:A:N6	2.72	0.57
1:X:353:G:H2'	1:X:354:C:O4'	2.05	0.57
1:X:618:A:C2	1:X:632:A:N7	2.72	0.57
1:X:577:U:H5'	1:X:956:A:H62	1.70	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:143:HIS:O	3:A:145:LEU:N	2.38	0.57
5:C:104:LEU:O	5:C:108:ILE:HG12	2.05	0.57
5:C:158:ARG:HG3	5:C:159:ARG:N	2.20	0.57
6:D:12:VAL:O	6:D:13:ARG:C	2.43	0.57
6:D:22:TYR:HB3	6:D:24:SER:O	2.04	0.57
6:D:17:MET:CE	6:D:25:VAL:HG12	2.35	0.57
6:D:22:TYR:CD2	6:D:27:ALA:HB3	2.40	0.57
6:D:75:SER:N	6:D:79:LEU:HD22	2.19	0.57
7:E:163:ARG:HE	7:E:169:ILE:HD12	1.68	0.57
8:F:85:ILE:HD13	8:F:89:SER:N	2.19	0.57
1:X:1075:C:OP1	8:F:85:ILE:HG13	2.05	0.57
11:I:39:SER:O	11:I:40:ARG:HB2	2.05	0.57
12:J:75:VAL:HG12	12:J:76:THR:N	2.19	0.57
18:P:85:MET:CE	18:P:130:GLU:HG3	2.33	0.57
21:S:117:VAL:HG21	21:S:168:VAL:HG22	1.87	0.57
22:T:31:VAL:HG11	22:T:37:LEU:HD21	1.87	0.57
1:X:1107:A:C3'	1:X:1108:U:H5''	2.35	0.57
1:X:118:U:O2'	1:X:119:G:OP2	2.21	0.57
1:X:1258:G:OP2	11:I:17:LYS:NZ	2.32	0.57
1:X:1510:A:C8	1:X:1511:A:N7	2.72	0.57
1:X:1710:U:O2'	1:X:1711:C:OP1	2.23	0.57
1:X:742:G:C4	1:X:1766:U:C2	2.92	0.57
1:X:1766:U:H2'	1:X:1767:G:C5'	2.35	0.57
1:X:1810:U:C5	3:A:157:ARG:NH1	2.72	0.57
1:X:1882:G:N2	1:X:1885:C:H41	2.02	0.57
1:X:2180:U:O2'	1:X:2181:A:N7	2.35	0.57
1:X:53:G:C2'	1:X:54:G:O5'	2.53	0.57
1:X:1885:C:H4'	3:A:244:ARG:HD2	1.87	0.57
4:B:26:VAL:CG1	4:B:27:LEU:N	2.68	0.57
5:C:125:ILE:HD12	5:C:133:PHE:CA	2.34	0.57
7:E:51:LEU:HD12	7:E:52:VAL:N	2.20	0.57
7:E:97:LYS:HB2	7:E:104:GLU:HG2	1.87	0.57
9:G:132:PHE:CD1	9:G:145:HIS:CG	2.92	0.57
11:I:7:LYS:O	11:I:7:LYS:HG2	2.04	0.57
20:R:51:VAL:CG2	20:R:76:LEU:HD21	2.18	0.57
25:W:45:LYS:HA	25:W:45:LYS:HE3	1.85	0.57
25:W:4:LYS:O	25:W:6:VAL:HG13	2.04	0.57
1:X:1075:C:C2'	1:X:1076:U:H5'	2.35	0.57
1:X:1313:U:O2'	1:X:1314:A:P	2.62	0.57
1:X:137:A:C6	1:X:138:G:H1'	2.39	0.57
1:X:1496:G:H2'	1:X:1497:C:O5'	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1524:C:C3'	1:X:1525:A:H5''	2.33	0.57
1:X:1787:U:H2'	1:X:1788:C:C6	2.37	0.57
1:X:1923:U:H1'	1:X:1924:C:C5	2.40	0.57
1:X:2043:A:OP1	5:C:63:GLY:N	2.30	0.57
1:X:2390:A:H2'	1:X:2391:A:C8	2.39	0.57
1:X:2701:A:H2'	1:X:2702:G:C8	2.39	0.57
1:X:2856:U:C2	1:X:2857:C:C5	2.93	0.57
1:X:882:C:H2'	1:X:883:A:C8	2.39	0.57
4:B:117:MET:O	4:B:121:ASN:HA	2.03	0.57
4:B:98:GLU:HA	4:B:172:VAL:HG12	1.87	0.57
15:M:18:GLN:HG3	15:M:18:GLN:O	2.05	0.57
23:U:63:SER:HB3	23:U:66:ALA:CB	2.35	0.57
24:V:13:ASP:OD1	24:V:16:LYS:NZ	2.36	0.57
1:X:1092:U:H4'	8:F:118:ALA:HB2	1.87	0.57
1:X:1328:C:O2'	1:X:1329:U:H5'	2.05	0.57
1:X:1368:G:O2'	1:X:1369:G:H5'	2.04	0.57
1:X:155:G:C2'	1:X:156:G:H5'	2.34	0.57
1:X:1431:U:H5''	1:X:1604:A:H1'	1.87	0.57
1:X:1693:A:C2	1:X:1694:A:C4	2.93	0.57
1:X:1766:U:C2'	1:X:1767:G:H5'	2.35	0.57
1:X:1789:U:O2'	1:X:1793:A:H1'	2.05	0.57
1:X:1984:A:H4'	1:X:2668:U:H2'	1.86	0.57
1:X:2623:A:H8	1:X:2623:A:O5'	1.87	0.57
1:X:492:G:O2'	1:X:493:A:P	2.63	0.57
1:X:640:C:C4	1:X:641:G:N7	2.73	0.57
1:X:914:C:H2'	1:X:915:C:C6	2.40	0.57
2:Z:42:U:O2'	2:Z:47:A:N6	2.38	0.57
30:4:1:MET:HE1	30:4:35:ARG:N	2.20	0.56
3:A:222:ARG:O	3:A:224:SER:N	2.37	0.56
3:A:95:LEU:HB2	3:A:105:ILE:CD1	2.35	0.56
7:E:96:ALA:HA	7:E:104:GLU:O	2.04	0.56
9:G:84:ASN:C	9:G:86:ALA:H	2.08	0.56
10:H:27:SER:CB	10:H:50:ILE:HG13	2.23	0.56
11:I:90:ARG:HA	11:I:121:HIS:ND1	2.20	0.56
11:I:73:GLU:N	11:I:73:GLU:OE1	2.38	0.56
11:I:84:GLU:O	11:I:116:ARG:NH2	2.38	0.56
11:I:85:ASP:HA	11:I:116:ARG:HH22	1.69	0.56
14:L:79:ALA:O	14:L:82:LYS:HB2	2.05	0.56
19:Q:26:SER:HB3	19:Q:79:ILE:CG1	2.31	0.56
21:S:152:ILE:CD1	21:S:152:ILE:N	2.67	0.56
21:S:23:ALA:HA	21:S:83:PHE:O	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:V:4:SER:HB3	24:V:7:ARG:HE	1.70	0.56
1:X:1329:U:H2'	1:X:1330:G:C8	2.40	0.56
1:X:1343:C:O2	1:X:1344:C:C6	2.57	0.56
1:X:1431:U:C5'	1:X:1604:A:H1'	2.35	0.56
1:X:1793:A:C2	1:X:1794:A:C2	2.93	0.56
1:X:1937:G:O2'	1:X:1939:U:C5	2.58	0.56
1:X:2410:U:O2	1:X:2412:A:C8	2.58	0.56
1:X:595:A:O5'	1:X:595:A:H8	1.88	0.56
1:X:665:A:H2	1:X:666:U:C6	2.22	0.56
1:X:788:G:C5'	1:X:790:A:H1'	2.31	0.56
26:Y:51:TYR:HA	26:Y:54:GLY:O	2.05	0.56
30:4:1:MET:SD	30:4:2:LYS:N	2.78	0.56
3:A:80:ALA:HB3	3:A:94:LEU:HD23	1.87	0.56
4:B:120:TRP:O	4:B:121:ASN:CB	2.52	0.56
4:B:72:VAL:CG1	4:B:73:ALA:H	2.11	0.56
5:C:9:GLN:HE21	5:C:120:VAL:HG21	1.70	0.56
5:C:3:GLN:NE2	5:C:4:ILE:O	2.37	0.56
6:D:112:ARG:O	6:D:113:ASP:HB2	2.05	0.56
6:D:58:ALA:O	6:D:62:LEU:HA	2.05	0.56
7:E:131:ILE:CG2	7:E:132:ASP:H	2.17	0.56
12:J:15:ARG:HD3	12:J:73:LYS:HZ3	1.67	0.56
16:N:21:ALA:HA	16:N:24:PHE:CE2	2.40	0.56
17:O:17:GLY:HA2	17:O:93:ILE:O	2.04	0.56
17:O:5:ILE:HD13	17:O:5:ILE:N	2.19	0.56
19:Q:42:ILE:HG23	19:Q:43:GLN:N	2.20	0.56
21:S:42:ALA:HA	21:S:45:GLN:HG2	1.86	0.56
22:T:3:HIS:CD2	22:T:5:LYS:H	2.23	0.56
1:X:1664:G:H5''	1:X:1665:C:OP1	2.04	0.56
1:X:1880:G:H2'	1:X:1881:U:C6	2.41	0.56
1:X:2615:U:P	4:B:80:GLU:HG2	2.45	0.56
1:X:2482:A:C8	33:X:2911:ZLD:H13B	2.41	0.56
1:X:615:C:H4'	1:X:669:G:N2	2.20	0.56
30:4:18:ARG:NH1	30:4:21:GLY:HA2	2.20	0.56
3:A:187:SER:C	3:A:189:CYS:N	2.56	0.56
5:C:31:VAL:O	5:C:35:LEU:HG	2.06	0.56
6:D:122:PHE:HB3	6:D:129:ASN:HD22	1.70	0.56
1:X:2727:G:H4'	7:E:71:LEU:HD21	1.87	0.56
11:I:56:LEU:O	11:I:58:ALA:O	2.22	0.56
18:P:52:ASP:O	18:P:53:ALA:C	2.44	0.56
24:V:6:MET:HE2	24:V:56:VAL:HG21	1.87	0.56
1:X:1087:C:O4'	8:F:91:THR:HB	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1469:U:P	1:X:1471:G:OP2	2.64	0.56
1:X:177:U:O4	1:X:225:G:N1	2.39	0.56
1:X:2284:U:C2'	1:X:2285:U:H5''	2.35	0.56
1:X:2509:A:C2'	1:X:2510:A:H5''	2.36	0.56
1:X:357:A:N3	1:X:357:A:H2'	2.20	0.56
1:X:556:A:H2'	1:X:557:U:C2	2.40	0.56
1:X:2722:C:OP1	30:4:35:ARG:HD2	2.05	0.56
3:A:111:LEU:HD22	3:A:127:LEU:HB3	1.87	0.56
1:X:2186:G:H4'	3:A:151:LYS:HE3	1.87	0.56
3:A:208:LYS:CE	3:A:208:LYS:HA	2.35	0.56
7:E:139:GLN:O	7:E:142:GLY:N	2.39	0.56
7:E:84:THR:HB	7:E:134:SER:OG	2.06	0.56
8:F:118:ALA:O	8:F:120:SER:N	2.39	0.56
9:G:132:PHE:HD1	9:G:145:HIS:CG	2.24	0.56
10:H:13:ASN:HD21	10:H:109:ARG:HG2	1.66	0.56
10:H:20:MET:HG2	10:H:21:CYS:O	2.04	0.56
10:H:22:ILE:HG22	10:H:52:VAL:C	2.26	0.56
11:I:78:SER:CB	11:I:112:GLY:HA3	2.29	0.56
1:X:1218:C:O4'	11:I:13:ARG:CD	2.53	0.56
11:I:88:PHE:CB	11:I:90:ARG:HD2	2.34	0.56
12:J:51:CYS:SG	12:J:122:ALA:O	2.58	0.56
17:O:12:TYR:CD2	17:O:40:VAL:HG22	2.40	0.56
19:Q:35:LYS:HE2	19:Q:53:ILE:CG2	2.19	0.56
21:S:13:LYS:O	21:S:16:GLU:O	2.23	0.56
23:U:10:LYS:HD3	23:U:11:LYS:HB2	1.87	0.56
24:V:6:MET:CE	24:V:56:VAL:HG21	2.35	0.56
25:W:47:VAL:O	25:W:47:VAL:HG23	2.04	0.56
1:X:1088:A:H2	1:X:1099:A:N3	2.03	0.56
1:X:1804:U:H2'	1:X:1805:G:C8	2.40	0.56
1:X:1837:G:H2'	1:X:1838:G:H8	1.71	0.56
1:X:2198:U:H5''	1:X:2199:C:OP2	2.06	0.56
1:X:2352:A:H2'	1:X:2353:G:C8	2.40	0.56
1:X:2437:G:H2'	1:X:2469:G:O6	2.06	0.56
1:X:2473:G:H2'	1:X:2474:G:H8	1.69	0.56
1:X:2726:U:H4'	7:E:139:GLN:HG2	1.87	0.56
1:X:2777:A:C5	18:P:134:LYS:HB2	2.40	0.56
1:X:2807:U:C5'	1:X:2807:U:H6	2.13	0.56
1:X:661:C:H2'	1:X:662:G:H8	1.70	0.56
4:B:33:ILE:HA	4:B:49:ILE:HA	1.87	0.56
10:H:29:ILE:HB	10:H:123:PHE:HE2	1.70	0.56
12:J:16:GLY:H	12:J:73:LYS:HZ1	1.53	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:M:26:ASP:O	15:M:27:PHE:CG	2.59	0.56
15:M:99:VAL:HG22	15:M:100:ARG:N	2.17	0.56
18:P:13:GLN:O	18:P:16:GLN:N	2.29	0.56
21:S:139:THR:O	21:S:140:LYS:C	2.43	0.56
23:U:15:VAL:O	23:U:16:ASN:CB	2.52	0.56
24:V:52:GLN:O	24:V:54:ASN:N	2.39	0.56
1:X:1158:A:O2'	1:X:1159:U:H5'	2.05	0.56
1:X:1256:C:H2'	1:X:1257:U:O4'	2.04	0.56
1:X:1391:A:O2'	1:X:1392:U:P	2.64	0.56
1:X:1851:A:H8	1:X:1851:A:O5'	1.88	0.56
1:X:201:G:H2'	1:X:202:A:H8	1.69	0.56
1:X:2235:G:H2'	1:X:2236:U:H5'	1.87	0.56
1:X:2484:G:OP2	33:X:2911:ZLD:H9A	2.04	0.56
1:X:2725:C:H4'	7:E:142:GLY:CA	2.35	0.56
1:X:414:A:C2	1:X:415:A:C4	2.93	0.56
1:X:789:G:C5	1:X:806:A:C8	2.94	0.56
1:X:822:G:O2'	1:X:823:U:H5'	2.06	0.56
1:X:833:A:H1'	1:X:954:U:C1'	2.28	0.56
1:X:2590:U:HO2'	26:Y:2:ALA:N	2.03	0.56
1:X:930:A:H5''	2:Z:100:G:O2'	2.06	0.56
2:Z:108:G:H5''	21:S:26:LYS:HE3	1.88	0.56
3:A:135:PHE:N	3:A:135:PHE:CD2	2.74	0.56
6:D:134:GLU:O	6:D:137:ILE:HG12	2.06	0.56
6:D:35:VAL:HG12	6:D:36:VAL:N	2.20	0.56
11:I:44:GLY:O	11:I:45:LYS:CB	2.51	0.56
11:I:62:LYS:HG2	11:I:64:GLY:N	2.21	0.56
14:L:27:LEU:HD23	14:L:44:ASP:CB	2.35	0.56
14:L:95:LYS:O	14:L:96:TYR:C	2.43	0.56
20:R:24:VAL:HG11	20:R:29:HIS:HB2	1.86	0.56
20:R:93:ARG:O	20:R:95:ARG:NE	2.38	0.56
21:S:74:ARG:HB3	21:S:75:LYS:HE3	1.88	0.56
22:T:37:LEU:HD11	22:T:61:ALA:N	2.20	0.56
22:T:73:GLY:O	22:T:74:LYS:HB2	2.06	0.56
25:W:4:LYS:HA	25:W:30:ASP:O	2.05	0.56
1:X:1160:C:H2'	1:X:1161:U:O4'	2.05	0.56
1:X:1542:G:N2	1:X:1562:G:H22	2.03	0.56
1:X:1731:C:H3'	1:X:1732:U:C5'	2.35	0.56
1:X:1745:C:OP1	15:M:101:ARG:HD2	2.04	0.56
1:X:2198:U:H3'	1:X:2199:C:C5'	2.35	0.56
1:X:2527:G:C6	1:X:2540:A:C2	2.93	0.56
1:X:357:A:H3'	1:X:358:C:O4'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:452:G:H2'	1:X:453:U:C6	2.41	0.56
3:A:240:THR:OG1	3:A:241:GLY:N	2.39	0.56
6:D:111:ILE:O	6:D:114:PHE:HB2	2.06	0.56
6:D:66:ILE:N	6:D:88:LYS:O	2.27	0.56
11:I:72:TYR:HA	11:I:105:PRO:CG	2.26	0.56
16:N:33:ARG:NH1	16:N:33:ARG:HG3	2.20	0.56
20:R:106:VAL:HG23	20:R:113:THR:OG1	2.05	0.56
1:X:120:G:O2'	1:X:121:G:H5'	2.05	0.56
1:X:125:A:H5''	1:X:126:C:C6	2.41	0.56
1:X:765:C:C5	1:X:1772:C:C2	2.93	0.56
1:X:166:G:N1	1:X:182:G:O2'	2.35	0.56
1:X:2000:U:O2'	26:Y:9:LYS:HA	2.05	0.56
1:X:2240:C:O2'	1:X:2241:U:C5'	2.49	0.56
1:X:46:C:O2'	1:X:47:G:H5'	2.06	0.56
1:X:751:G:H1'	1:X:772:G:H22	1.71	0.56
1:X:789:G:C6	1:X:806:A:N7	2.73	0.56
1:X:867:G:H2'	1:X:868:U:C6	2.41	0.56
3:A:223:GLY:O	3:A:233:HIS:HB2	2.05	0.56
4:B:154:LYS:O	4:B:155:ARG:C	2.42	0.56
4:B:28:ALA:HB3	4:B:92:ASN:ND2	2.15	0.56
9:G:62:ILE:HG22	9:G:62:ILE:O	2.06	0.56
13:K:28:LEU:HD21	13:K:115:LEU:HD23	1.86	0.56
13:K:75:VAL:O	13:K:78:LYS:HB3	2.05	0.56
14:L:79:ALA:HA	14:L:82:LYS:HB2	1.87	0.56
18:P:11:LYS:HG3	18:P:12:LYS:H	1.70	0.56
19:Q:43:GLN:OE1	19:Q:49:ARG:HA	2.06	0.56
19:Q:4:TYR:CD2	24:V:23:LYS:HB2	2.40	0.56
20:R:15:HIS:C	20:R:16:PHE:CD2	2.79	0.56
20:R:92:THR:C	20:R:95:ARG:HH22	2.09	0.56
21:S:95:SER:HB3	21:S:119:ASN:HD21	1.71	0.56
1:X:2334:C:O3'	22:T:24:LYS:NZ	2.39	0.56
22:T:4:LYS:HB3	22:T:4:LYS:HZ3	1.70	0.56
1:X:823:U:OP1	1:X:1266:G:N7	2.39	0.56
1:X:1710:U:C5'	1:X:1711:C:C5	2.85	0.56
1:X:1790:G:H21	3:A:155:LEU:HA	1.71	0.56
1:X:2218:G:H5'	3:A:249:PRO:CB	2.29	0.56
1:X:2270:U:H2'	1:X:2271:C:C6	2.40	0.56
1:X:2395:C:C2'	1:X:2396:C:C5'	2.83	0.56
1:X:244:C:H2'	1:X:245:C:O4'	2.06	0.56
1:X:2564:U:H5''	1:X:2565:C:OP1	2.05	0.56
1:X:633:G:H2'	1:X:634:G:H8	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:657:A:H2	1:X:658:G:C4	2.22	0.56
4:B:60:ASN:O	4:B:64:GLN:N	2.39	0.56
4:B:77:ILE:HD13	4:B:195:LEU:HD22	1.88	0.56
6:D:169:LEU:O	6:D:171:GLN:N	2.38	0.56
8:F:75:MET:SD	8:F:78:LEU:HD23	2.46	0.56
9:G:79:PHE:CE2	9:G:147:ARG:HG2	2.41	0.56
10:H:119:ARG:CZ	15:M:41:GLU:HG2	2.36	0.56
10:H:5:GLN:HA	10:H:20:MET:HE2	1.87	0.56
14:L:73:LYS:HB2	14:L:106:ALA:HB1	1.88	0.56
14:L:94:TYR:O	14:L:96:TYR:N	2.32	0.56
15:M:53:VAL:HG12	15:M:54:VAL:N	2.20	0.56
17:O:34:GLU:O	17:O:35:LEU:O	2.24	0.56
17:O:5:ILE:HG13	17:O:9:GLY:CA	2.36	0.56
19:Q:66:GLY:C	19:Q:68:PHE:N	2.58	0.56
19:Q:6:ILE:HG22	19:Q:7:LEU:H	1.66	0.56
1:X:1174:G:C2	1:X:1175:A:N7	2.74	0.56
1:X:1392:U:O2	1:X:1392:U:H2'	2.06	0.56
1:X:1515:U:O2'	1:X:1516:A:H5'	2.04	0.56
1:X:1597:A:H2'	1:X:1598:C:H6	1.71	0.56
1:X:1744:G:H2'	1:X:1746:A:OP2	2.04	0.56
1:X:1817:U:H2'	1:X:1818:G:O4'	2.06	0.56
1:X:2228:U:H4'	1:X:2229:G:OP2	2.03	0.56
1:X:2661:G:O2'	1:X:2662:C:H5'	2.06	0.56
1:X:2795:A:H4'	13:K:5:LYS:CG	2.36	0.56
1:X:408:U:H2'	1:X:409:G:C8	2.41	0.56
1:X:424:G:H3'	1:X:2385:U:C4	2.41	0.56
1:X:613:A:N3	1:X:668:A:C2	2.74	0.56
1:X:663:G:O5'	1:X:664:C:H5''	2.05	0.56
3:A:143:HIS:HD2	3:A:192:THR:HB	1.70	0.56
1:X:1092:U:H4'	8:F:118:ALA:CB	2.35	0.56
9:G:67:ARG:NH1	9:G:70:PHE:O	2.39	0.56
10:H:19:ILE:N	10:H:19:ILE:CD1	2.68	0.56
17:O:11:GLN:HE22	17:O:38:LEU:HB3	1.69	0.56
18:P:107:ILE:HD13	18:P:108:PRO:CD	2.36	0.56
18:P:46:ARG:HA	18:P:92:VAL:CG1	2.36	0.56
19:Q:47:GLY:O	19:Q:48:VAL:HB	2.05	0.56
23:U:20:ARG:HG2	23:U:39:LYS:CE	2.34	0.56
23:U:75:TYR:N	23:U:75:TYR:CD1	2.73	0.56
24:V:62:ARG:O	24:V:66:GLN:HA	2.06	0.56
1:X:1225:G:H2'	1:X:1249:G:H22	1.70	0.56
1:X:1594:U:H2'	1:X:1595:A:C8	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1655:C:H4'	1:X:2689:C:O2	2.06	0.56
1:X:1842:G:O2'	1:X:1843:U:H5'	2.05	0.56
1:X:201:G:N7	1:X:433:G:H4'	2.20	0.56
26:Y:36:CYS:HB3	26:Y:49:CYS:HB3	1.88	0.56
2:Z:109:G:P	21:S:26:LYS:HE2	2.46	0.56
1:X:1781:C:H4'	3:A:209:ALA:CB	2.36	0.56
5:C:34:GLN:OE1	5:C:176:ASN:OD1	2.24	0.56
1:X:2383:C:H4'	11:I:67:ASN:HD21	1.71	0.56
12:J:119:PHE:CE1	12:J:132:MET:HG3	2.41	0.56
13:K:11:ASN:OD1	13:K:17:ARG:CZ	2.54	0.56
15:M:26:ASP:CG	15:M:27:PHE:H	2.07	0.56
15:M:29:PRO:CA	15:M:54:VAL:HG12	2.33	0.56
16:N:75:ASN:ND2	16:N:77:SER:HB3	2.20	0.56
20:R:51:VAL:HG21	20:R:76:LEU:HD11	1.87	0.56
21:S:32:PHE:CD2	21:S:32:PHE:N	2.73	0.56
21:S:66:VAL:HA	21:S:82:ASP:O	2.06	0.56
23:U:31:GLY:HA2	23:U:32:ARG:NH1	2.20	0.56
25:W:12:ARG:HD2	25:W:13:PRO:HD3	1.88	0.56
1:X:1034:U:C2'	1:X:1035:G:H5'	2.35	0.56
1:X:1394:G:O2'	1:X:1395:A:H5'	2.06	0.56
1:X:1525:A:H2'	1:X:1526:U:O4'	2.05	0.56
1:X:1448:A:N6	1:X:1574:A:H61	1.89	0.56
1:X:2375:G:H2'	1:X:2376:G:C8	2.39	0.56
1:X:2483:U:H6	1:X:2483:U:O5'	1.89	0.56
1:X:2620:G:OP1	9:G:102:ARG:NH2	2.39	0.56
1:X:402:A:C8	1:X:2392:G:C4'	2.87	0.56
1:X:513:A:C6	1:X:516:G:C6	2.94	0.56
1:X:636:G:H8	1:X:636:G:H5'	1.71	0.56
1:X:695:G:O2'	1:X:696:U:H5'	2.06	0.56
2:Z:3:A:H2'	2:Z:4:C:H5''	1.87	0.56
6:D:69:LYS:C	6:D:85:VAL:HG22	2.26	0.55
7:E:142:GLY:C	7:E:144:VAL:H	2.10	0.55
9:G:99:VAL:O	9:G:101:THR:N	2.39	0.55
9:G:37:ASP:O	9:G:38:GLU:HB3	2.07	0.55
13:K:48:VAL:HG13	13:K:49:GLU:N	2.21	0.55
14:L:33:ARG:NH1	14:L:100:VAL:CA	2.64	0.55
15:M:69:ARG:HG2	15:M:78:GLU:HG2	1.88	0.55
16:N:69:ALA:HB2	16:N:79:PHE:CD1	2.40	0.55
16:N:93:LYS:NZ	17:O:5:ILE:CG2	2.69	0.55
17:O:15:SER:CA	17:O:95:ILE:HB	2.33	0.55
21:S:149:ALA:HB3	21:S:164:PRO:CA	2.32	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:T:16:SER:C	22:T:17:ASN:HD22	2.08	0.55
25:W:9:VAL:O	25:W:12:ARG:HB2	2.05	0.55
1:X:1135:C:O2'	1:X:1136:G:H5'	2.05	0.55
1:X:118:U:C2'	1:X:119:G:OP2	2.54	0.55
1:X:1361:G:H2'	1:X:1362:A:H8	1.71	0.55
1:X:1917:C:O2'	1:X:1918:G:H5'	2.05	0.55
1:X:2440:C:H2'	1:X:2441:U:C6	2.41	0.55
1:X:2581:A:H3'	1:X:2582:G:C5'	2.27	0.55
1:X:343:A:H1'	1:X:346:C:H42	1.71	0.55
1:X:590:C:OP2	16:N:33:ARG:NH1	2.38	0.55
2:Z:16:U:HO2'	2:Z:110:U:C2'	2.19	0.55
3:A:131:LEU:HD23	3:A:131:LEU:N	2.11	0.55
3:A:213:ARG:O	3:A:215:LEU:N	2.39	0.55
3:A:39:LYS:O	3:A:40:THR:HB	2.06	0.55
6:D:22:TYR:C	6:D:24:SER:N	2.58	0.55
7:E:120:GLY:O	7:E:136:ILE:HD13	2.06	0.55
9:G:103:TYR:CE2	9:G:111:LYS:CB	2.89	0.55
9:G:61:ARG:NH1	9:G:78:ASP:OD2	2.38	0.55
11:I:94:GLU:C	11:I:96:TYR:N	2.59	0.55
19:Q:16:ALA:O	19:Q:19:ALA:N	2.37	0.55
19:Q:48:VAL:HG22	19:Q:49:ARG:N	2.21	0.55
24:V:52:GLN:C	24:V:54:ASN:N	2.60	0.55
1:X:1263:G:O2'	1:X:1264:C:H5'	2.06	0.55
1:X:1987:G:C5	1:X:1988:A:C8	2.94	0.55
1:X:2057:U:C5'	1:X:2057:U:H6	2.19	0.55
1:X:219:G:C2'	1:X:220:U:OP2	2.54	0.55
1:X:2272:A:P	14:L:15:ARG:NH2	2.74	0.55
1:X:2014:A:C6	1:X:2477:C:H1'	2.40	0.55
1:X:2484:G:O2'	1:X:2485:U:C5'	2.54	0.55
1:X:2662:C:H2'	1:X:2663:U:H6	1.71	0.55
1:X:2875:C:C2'	1:X:2876:C:H5'	2.37	0.55
1:X:463:C:H42	1:X:467:U:H5	1.55	0.55
2:Z:43:G:H5''	6:D:66:ILE:HD13	1.88	0.55
3:A:70:ARG:NH2	3:A:190:TYR:CD2	2.74	0.55
5:C:117:LEU:HD22	5:C:187:VAL:HA	1.86	0.55
5:C:194:GLU:C	5:C:195:ILE:HG12	2.25	0.55
6:D:32:GLU:N	6:D:157:VAL:O	2.39	0.55
11:I:114:ILE:HD13	11:I:114:ILE:C	2.27	0.55
1:X:2463:G:H1'	12:J:125:LYS:HD2	1.87	0.55
16:N:78:THR:HG23	16:N:117:ARG:HD2	1.86	0.55
18:P:14:ARG:HA	18:P:17:GLN:HB3	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:54:ILE:HG13	21:S:62:PHE:CB	2.13	0.55
1:X:1698:C:H2'	1:X:1753:A:N3	2.22	0.55
1:X:1873:A:C8	1:X:1874:G:C8	2.94	0.55
1:X:2053:G:H2'	1:X:2054:A:C8	2.40	0.55
1:X:2071:G:H21	1:X:2072:C:H1'	1.71	0.55
1:X:2311:U:H4'	1:X:2315:A:H62	1.72	0.55
1:X:2445:C:OP1	30:4:4:ARG:HB3	2.06	0.55
1:X:2457:A:H5'	30:4:31:LYS:CG	2.36	0.55
1:X:2486:C:C2	1:X:2562:G:C2	2.94	0.55
1:X:2709:C:H2'	1:X:2710:C:C6	2.41	0.55
1:X:2736:U:H4'	1:X:2737:A:OP1	2.05	0.55
3:A:145:LEU:HD22	3:A:163:VAL:HG21	1.88	0.55
3:A:160:GLY:HA2	3:A:196:VAL:HB	1.88	0.55
3:A:43:ARG:O	3:A:44:ASN:HB3	2.06	0.55
5:C:129:LYS:O	5:C:130:THR:HB	2.05	0.55
5:C:152:THR:OG1	5:C:154:ASP:OD1	2.23	0.55
5:C:72:ARG:HG3	5:C:77:PHE:CE2	2.41	0.55
11:I:106:VAL:HB	11:I:123:ASP:H	1.70	0.55
11:I:64:GLY:O	11:I:65:PHE:HB2	2.06	0.55
14:L:73:LYS:H	14:L:106:ALA:HB1	1.72	0.55
14:L:28:ARG:HA	14:L:88:VAL:O	2.06	0.55
15:M:104:LEU:O	15:M:105:TYR:C	2.44	0.55
17:O:10:LYS:CG	17:O:11:GLN:N	2.60	0.55
21:S:137:ASP:CG	21:S:138:VAL:H	2.10	0.55
21:S:3:LEU:HD11	21:S:32:PHE:C	2.27	0.55
21:S:20:ALA:HB3	21:S:80:HIS:HB2	1.87	0.55
21:S:64:ALA:CB	21:S:85:MET:HA	2.36	0.55
24:V:2:LYS:H	24:V:3:PRO:CD	2.20	0.55
1:X:1113:C:H2'	1:X:1114:A:C8	2.41	0.55
1:X:1129:A:H8	1:X:1129:A:H5'	1.72	0.55
1:X:1276:U:H1'	26:Y:10:LYS:HG3	1.87	0.55
1:X:1324:G:OP2	1:X:1324:G:N2	2.36	0.55
1:X:1810:U:O2'	1:X:1811:A:P	2.64	0.55
1:X:1870:U:H6	1:X:1870:U:O5'	1.89	0.55
1:X:1922:U:O2'	1:X:2571:G:H1'	2.07	0.55
1:X:2188:A:C2	1:X:2189:A:N6	2.75	0.55
1:X:522:G:O2'	1:X:523:A:OP2	2.16	0.55
2:Z:72:C:H2'	2:Z:73:C:H6	1.66	0.55
3:A:97:TYR:O	3:A:99:ASP:N	2.40	0.55
4:B:146:THR:CB	4:B:147:PRO:HD2	2.29	0.55
4:B:165:VAL:CG1	4:B:166:THR:N	2.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:163:ASN:ND2	5:C:166:TRP:CD1	2.75	0.55
5:C:22:VAL:HG13	5:C:106:MET:HG2	1.87	0.55
5:C:48:ARG:C	5:C:50:GLN:H	2.08	0.55
5:C:45:THR:N	5:C:86:PRO:O	2.39	0.55
8:F:92:PRO:HG3	8:F:135:MET:C	2.27	0.55
9:G:83:ILE:O	9:G:84:ASN:HB2	2.06	0.55
10:H:27:SER:HA	10:H:50:ILE:HD12	1.87	0.55
11:I:47:ALA:O	11:I:49:PHE:N	2.40	0.55
1:X:2357:A:H1'	14:L:88:VAL:HG11	1.89	0.55
15:M:50:PHE:CE2	15:M:70:LYS:HD2	2.42	0.55
1:X:2776:U:O2	18:P:134:LYS:HD2	2.06	0.55
18:P:72:LEU:O	18:P:75:ALA:N	2.30	0.55
19:Q:51:ILE:CG1	19:Q:83:ALA:HA	2.36	0.55
20:R:98:ILE:HG22	20:R:99:VAL:HG22	1.88	0.55
1:X:1045:G:H2'	1:X:1046:U:O4'	2.06	0.55
1:X:1211:G:O2'	1:X:1212:U:H5'	2.06	0.55
1:X:1263:G:H8	1:X:1263:G:OP2	1.90	0.55
1:X:1715:A:C8	1:X:1717:A:O4'	2.60	0.55
1:X:2306:A:C6	1:X:2307:A:C6	2.94	0.55
1:X:1936:A:H2	1:X:2528:G:N3	2.05	0.55
1:X:2796:A:O2'	1:X:2801:A:N1	2.37	0.55
1:X:2824:C:O2	1:X:2824:C:C2'	2.55	0.55
3:A:77:ALA:HB1	3:A:96:HIS:C	2.27	0.55
4:B:149:ARG:HG3	4:B:150:VAL:N	2.21	0.55
4:B:45:GLU:O	4:B:46:ALA:HB2	2.04	0.55
4:B:9:ILE:HD11	4:B:27:LEU:CB	2.35	0.55
5:C:28:HIS:O	5:C:29:GLU:C	2.43	0.55
6:D:10:ASP:O	6:D:14:PRO:HB2	2.07	0.55
8:F:81:LYS:NZ	8:F:84:GLY:CA	2.70	0.55
16:N:24:PHE:HE2	16:N:39:LEU:HD21	1.71	0.55
17:O:5:ILE:HG12	17:O:6:GLN:N	2.21	0.55
17:O:23:GLU:HG2	17:O:91:THR:CB	2.36	0.55
18:P:34:SER:O	18:P:35:PRO:C	2.43	0.55
20:R:96:LYS:O	20:R:104:VAL:HA	2.06	0.55
20:R:48:VAL:C	20:R:50:GLY:H	2.10	0.55
20:R:64:ASN:HB3	20:R:66:GLN:HB3	1.88	0.55
21:S:39:PHE:HE1	21:S:83:PHE:HZ	1.53	0.55
24:V:25:LEU:HD21	24:V:47:ARG:CD	2.36	0.55
1:X:1096:A:H2'	1:X:1097:A:C4	2.41	0.55
1:X:1082:G:H1'	1:X:1100:G:C4	2.41	0.55
1:X:1343:C:H2'	1:X:1343:C:O2	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1517:C:H5'	3:A:102:LYS:NZ	2.22	0.55
1:X:1698:C:HO2'	1:X:1753:A:H2'	1.70	0.55
1:X:2189:A:H8	1:X:2189:A:O5'	1.88	0.55
1:X:2357:A:H2'	1:X:2358:C:H5'	1.88	0.55
1:X:2729:A:H3'	1:X:2730:A:C5'	2.36	0.55
1:X:2870:C:H2'	1:X:2871:U:H6	1.71	0.55
1:X:436:A:H5''	1:X:437:G:C5'	2.35	0.55
1:X:577:U:C5'	1:X:956:A:N6	2.70	0.55
1:X:960:U:H2'	1:X:961:G:C8	2.41	0.55
26:Y:47:PRO:HG2	26:Y:48:ASN:N	2.18	0.55
30:4:11:CYS:HB3	30:4:32:HIS:HE1	1.71	0.55
3:A:121:PRO:C	3:A:123:ALA:H	2.10	0.55
3:A:205:VAL:O	3:A:206:LEU:HB2	2.07	0.55
3:A:222:ARG:C	3:A:224:SER:H	2.10	0.55
3:A:36:ALA:HB1	3:A:62:TYR:O	2.07	0.55
1:X:333:A:C2'	5:C:162:ARG:NH1	2.70	0.55
6:D:108:LEU:O	6:D:111:ILE:HG13	2.06	0.55
6:D:16:LEU:HA	6:D:20:PHE:CD1	2.41	0.55
4:B:151:TYR:HB3	9:G:106:TYR:CE2	2.41	0.55
9:G:110:LEU:CD2	9:G:110:LEU:N	2.70	0.55
11:I:54:SER:O	11:I:59:ARG:HD3	2.06	0.55
15:M:11:GLU:OE2	15:M:14:ARG:NH1	2.38	0.55
16:N:60:LEU:HD13	16:N:61:TRP:N	2.22	0.55
17:O:6:GLN:O	17:O:7:THR:CB	2.55	0.55
18:P:106:LEU:HD13	18:P:116:ILE:HG12	1.89	0.55
18:P:28:ALA:HB3	18:P:124:ILE:HG12	1.89	0.55
18:P:89:ARG:O	18:P:130:GLU:HA	2.06	0.55
20:R:35:LYS:HZ2	20:R:35:LYS:HB3	1.71	0.55
21:S:113:VAL:HG13	21:S:171:VAL:HG22	1.88	0.55
24:V:18:ILE:HD13	24:V:53:LEU:HD13	1.88	0.55
1:X:1685:A:N7	1:X:1691:G:C6	2.75	0.55
1:X:1842:G:H2'	1:X:1843:U:H6	1.71	0.55
1:X:1997:A:C2	1:X:1998:A:N1	2.75	0.55
1:X:1845:A:N1	1:X:2070:G:H1'	2.21	0.55
1:X:2728:A:H5'	7:E:6:LYS:NZ	2.22	0.55
1:X:540:G:N2	1:X:2005:U:OP1	2.39	0.55
1:X:559:C:H2'	1:X:560:G:O4'	2.04	0.55
1:X:987:G:C2	1:X:988:G:N7	2.75	0.55
3:A:44:ASN:HB2	3:A:48:ARG:O	2.07	0.55
5:C:12:GLY:HA3	5:C:13:ARG:NH2	2.22	0.55
9:G:108:GLY:H	9:G:110:LEU:CD2	2.12	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:34:PRO:C	9:G:69:ASP:OD2	2.45	0.55
9:G:87:GLN:NE2	9:G:87:GLN:N	2.51	0.55
10:H:53:ALA:N	10:H:70:VAL:O	2.40	0.55
12:J:99:LYS:CD	12:J:100:PRO:HD2	2.37	0.55
15:M:35:VAL:HG22	15:M:90:GLN:HG2	1.89	0.55
17:O:11:GLN:HA	17:O:11:GLN:NE2	2.22	0.55
17:O:79:GLN:O	17:O:80:TYR:HB2	2.04	0.55
18:P:71:VAL:O	18:P:72:LEU:C	2.43	0.55
18:P:8:PHE:CG	18:P:9:ARG:N	2.74	0.55
23:U:26:ALA:O	23:U:27:ASP:O	2.24	0.55
1:X:1101:U:H2'	1:X:1102:G:C8	2.42	0.55
1:X:1163:C:O2'	1:X:1164:C:H5'	2.07	0.55
1:X:1656:U:H4'	1:X:2678:C:H4'	1.89	0.55
1:X:1687:C:O2	4:B:129:HIS:HE1	1.89	0.55
1:X:242:A:C2'	1:X:243:G:H4'	2.37	0.55
1:X:529:U:H2'	1:X:530:G:H8	1.71	0.55
2:Z:16:U:O2'	2:Z:110:U:H1'	2.06	0.55
2:Z:41:A:O2'	2:Z:48:A:C2	2.60	0.55
4:B:147:PRO:O	4:B:149:ARG:N	2.38	0.55
5:C:45:THR:HG21	5:C:82:VAL:HG11	1.87	0.55
6:D:75:SER:O	6:D:79:LEU:HD13	2.07	0.55
7:E:109:TYR:HE1	7:E:152:ARG:HH21	1.54	0.55
7:E:85:ILE:N	7:E:132:ASP:OD1	2.40	0.55
8:F:87:LYS:HE3	8:F:87:LYS:HA	1.88	0.55
2:Z:93:G:OP1	12:J:19:THR:HB	2.07	0.55
12:J:92:GLU:OE1	12:J:92:GLU:HA	2.06	0.55
15:M:24:LEU:HD13	15:M:91:VAL:CG2	2.36	0.55
20:R:32:GLN:HG2	20:R:33:THR:N	2.22	0.55
20:R:98:ILE:CG2	20:R:99:VAL:H	2.15	0.55
21:S:23:ALA:HB3	21:S:32:PHE:CZ	2.42	0.55
24:V:38:ALA:C	24:V:40:PRO:HD3	2.26	0.55
1:X:1056:U:H4'	1:X:1058:G:C1'	2.35	0.55
1:X:1088:A:O2'	1:X:1089:C:H5'	2.07	0.55
1:X:1166:A:C2'	1:X:1167:A:H5''	2.36	0.55
1:X:1236:G:C2	1:X:1240:G:C2	2.95	0.55
1:X:1354:A:C5'	19:Q:56:MET:HG3	2.36	0.55
1:X:1397:A:C2'	1:X:1398:G:H5''	2.37	0.55
1:X:1555:A:H2'	1:X:1556:A:C8	2.42	0.55
1:X:2015:G:H2'	4:B:145:LYS:HZ1	1.68	0.55
1:X:2705:A:O2'	1:X:2706:U:O5'	2.25	0.55
1:X:2861:A:H2'	1:X:2862:G:O4'	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:547:U:H2'	1:X:548:G:H8	1.72	0.55
1:X:683:A:O2'	1:X:684:C:P	2.64	0.55
2:Z:27:A:N1	2:Z:55:C:H5''	2.21	0.55
3:A:129:ASN:O	3:A:131:LEU:HD23	2.07	0.55
3:A:165:VAL:HA	3:A:175:VAL:HG12	1.87	0.55
3:A:88:ARG:O	3:A:89:SER:CB	2.55	0.55
5:C:98:GLN:HA	5:C:101:GLN:CG	2.37	0.55
5:C:136:TRP:CD1	5:C:137:ALA:N	2.75	0.55
6:D:17:MET:O	6:D:21:GLY:HA2	2.06	0.55
6:D:35:VAL:HG11	6:D:88:LYS:HG3	1.89	0.55
7:E:26:VAL:C	7:E:27:LYS:HG3	2.26	0.55
8:F:85:ILE:CD1	8:F:89:SER:H	2.19	0.55
9:G:118:ALA:O	9:G:120:SER:N	2.40	0.55
11:I:90:ARG:HA	11:I:121:HIS:CG	2.42	0.55
14:L:33:ARG:HD3	14:L:100:VAL:CA	2.37	0.55
16:N:42:ALA:O	16:N:45:TYR:HB2	2.07	0.55
20:R:37:LEU:N	20:R:47:VAL:O	2.40	0.55
21:S:138:VAL:HA	21:S:141:MET:HE1	1.88	0.55
21:S:143:ILE:O	21:S:143:ILE:HD12	2.07	0.55
1:X:1404:C:C2	1:X:1406:A:N7	2.74	0.55
1:X:1559:G:C8	1:X:1559:G:H3'	2.42	0.55
1:X:2362:G:H2'	1:X:2363:G:C8	2.42	0.55
1:X:612:G:H2'	1:X:668:A:N6	2.21	0.55
1:X:75:C:H5''	24:V:48:ARG:HG3	1.89	0.55
1:X:810:U:H2'	1:X:811:G:H8	1.72	0.55
26:Y:4:HIS:CB	26:Y:5:PRO:HD3	2.37	0.55
6:D:143:TYR:HA	6:D:146:VAL:CG2	2.37	0.54
6:D:96:MET:CG	6:D:97:TYR:N	2.70	0.54
6:D:93:GLY:O	6:D:97:TYR:CD1	2.60	0.54
11:I:120:VAL:O	11:I:140:VAL:HA	2.07	0.54
1:X:820:U:OP2	11:I:40:ARG:HD2	2.07	0.54
1:X:2383:C:H1'	11:I:65:PHE:HZ	1.71	0.54
13:K:52:ILE:CG1	13:K:53:THR:N	2.71	0.54
19:Q:8:GLN:HB2	19:Q:28:TRP:O	2.06	0.54
20:R:93:ARG:O	20:R:95:ARG:CD	2.55	0.54
23:U:29:GLY:N	23:U:32:ARG:HB3	2.22	0.54
25:W:44:VAL:O	25:W:46:THR:N	2.40	0.54
1:X:105:G:O2'	1:X:106:G:H5'	2.07	0.54
1:X:1374:G:C2	1:X:1375:C:C6	2.94	0.54
1:X:1439:G:H2'	1:X:1440:G:C8	2.42	0.54
1:X:1507:A:O4'	3:A:99:ASP:HB3	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1625:A:O2'	1:X:1632:A:H4'	2.07	0.54
1:X:1791:C:O2	1:X:1791:C:H2'	2.07	0.54
1:X:2179:C:H2'	1:X:2180:U:O4'	2.07	0.54
1:X:2371:A:C4	1:X:2408:G:C6	2.95	0.54
1:X:334:G:H5'	5:C:162:ARG:NE	2.23	0.54
1:X:334:G:N7	5:C:164:VAL:HG22	2.22	0.54
1:X:358:C:H6	1:X:358:C:O5'	1.90	0.54
1:X:392:G:N2	1:X:409:G:C4	2.74	0.54
1:X:649:G:C5	1:X:650:U:C5	2.95	0.54
30:4:25:VAL:HG21	30:4:34:GLN:HB2	1.89	0.54
5:C:95:LEU:CD2	5:C:96:PRO:HD2	2.36	0.54
6:D:70:ALA:O	6:D:72:LYS:N	2.40	0.54
6:D:77:PHE:CD1	6:D:77:PHE:N	2.75	0.54
7:E:109:TYR:CE1	7:E:152:ARG:NH2	2.73	0.54
8:F:81:LYS:C	8:F:83:ALA:N	2.58	0.54
12:J:121:LEU:O	12:J:123:GLY:N	2.41	0.54
12:J:77:LYS:H	12:J:89:GLY:HA3	1.70	0.54
13:K:33:ARG:HG3	13:K:114:GLU:CB	2.31	0.54
1:X:2273:C:OP1	14:L:11:LEU:HD11	2.06	0.54
10:H:85:ASP:HB3	15:M:87:LEU:HD12	1.89	0.54
16:N:25:TRP:CE3	16:N:26:GLY:N	2.76	0.54
21:S:32:PHE:O	21:S:33:ALA:HB2	2.07	0.54
1:X:214:C:H2'	1:X:215:G:H8	1.71	0.54
1:X:2226:A:C2	1:X:2227:C:C4	2.94	0.54
1:X:2342:U:O2'	1:X:2343:C:H5'	2.08	0.54
1:X:2815:C:C4'	13:K:92:GLY:HA3	2.37	0.54
1:X:2872:U:O2'	1:X:2873:G:H5'	2.07	0.54
2:Z:16:U:H1'	2:Z:109:G:H21	1.71	0.54
2:Z:71:G:N3	2:Z:71:G:H2'	2.21	0.54
6:D:14:PRO:O	6:D:15:ALA:C	2.46	0.54
6:D:40:LEU:HG	6:D:150:ARG:NE	2.04	0.54
9:G:106:TYR:O	9:G:110:LEU:HG	2.06	0.54
10:H:110:VAL:HG12	10:H:111:PHE:N	2.21	0.54
11:I:80:LEU:HD22	11:I:84:GLU:OE1	2.06	0.54
12:J:59:PHE:O	12:J:60:ARG:C	2.45	0.54
14:L:36:LYS:HE3	14:L:36:LYS:HA	1.89	0.54
14:L:33:ARG:CZ	14:L:99:ARG:O	2.56	0.54
15:M:28:ARG:HB2	15:M:29:PRO:HD2	1.90	0.54
1:X:512:A:O2'	18:P:15:LYS:HD3	2.07	0.54
19:Q:53:ILE:HD12	19:Q:54:SER:H	1.72	0.54
20:R:10:HIS:O	20:R:11:ASN:C	2.45	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:60:GLU:HB3	21:S:62:PHE:CZ	2.43	0.54
23:U:26:ALA:CB	23:U:35:THR:HG23	2.38	0.54
23:U:20:ARG:HG2	23:U:39:LYS:CD	2.38	0.54
1:X:412:U:C5	23:U:68:ARG:NH1	2.75	0.54
1:X:1367:A:C8	1:X:1368:G:C8	2.95	0.54
1:X:1374:G:C2	1:X:1375:C:C5	2.95	0.54
1:X:1468:A:P	1:X:1468:A:C8	3.01	0.54
1:X:1576:G:C6	1:X:1577:G:N7	2.75	0.54
1:X:1947:G:C2	1:X:1950:C:C5	2.95	0.54
1:X:1826:U:O4'	1:X:1952:A:C2	2.60	0.54
1:X:2245:A:C2	1:X:2251:U:C5	2.96	0.54
1:X:226:C:OP2	1:X:2373:C:O2'	2.25	0.54
1:X:2345:A:H2'	1:X:2346:G:O4'	2.08	0.54
1:X:2347:C:O2'	1:X:2348:A:H5'	2.08	0.54
1:X:2404:A:OP2	1:X:2406:C:H5'	2.07	0.54
1:X:2777:A:N7	18:P:134:LYS:CD	2.70	0.54
1:X:29:U:O2'	16:N:8:ILE:HG22	2.08	0.54
1:X:303:C:H3'	1:X:304:A:H5''	1.89	0.54
1:X:340:G:H5'	1:X:341:A:OP2	2.07	0.54
1:X:664:C:H5'	1:X:664:C:H6	1.72	0.54
1:X:749:C:O2'	1:X:750:C:H5'	2.08	0.54
4:B:116:VAL:HG22	4:B:136:ARG:CG	2.37	0.54
5:C:135:SER:O	5:C:136:TRP:C	2.45	0.54
6:D:57:LEU:HA	6:D:60:ILE:CG1	2.38	0.54
7:E:127:GLU:O	7:E:129:THR:N	2.40	0.54
9:G:132:PHE:HB2	9:G:145:HIS:NE2	2.22	0.54
10:H:73:VAL:HG21	10:H:123:PHE:CE1	2.43	0.54
14:L:45:ASP:CG	14:L:46:SER:H	2.10	0.54
15:M:42:GLY:O	15:M:44:ARG:N	2.41	0.54
1:X:590:C:OP1	16:N:33:ARG:HG2	2.06	0.54
17:O:93:ILE:HG13	17:O:95:ILE:HD13	1.88	0.54
18:P:27:VAL:CG2	18:P:28:ALA:N	2.70	0.54
18:P:50:VAL:O	18:P:54:GLU:HB2	2.08	0.54
19:Q:53:ILE:CD1	19:Q:80:VAL:HB	2.36	0.54
20:R:80:LYS:HE3	20:R:80:LYS:C	2.28	0.54
21:S:95:SER:HA	21:S:121:GLN:CA	2.27	0.54
24:V:21:ARG:O	24:V:24:GLU:HB3	2.06	0.54
1:X:14:A:N7	1:X:15:G:C4	2.75	0.54
1:X:211:U:H3	1:X:442:A:N6	2.05	0.54
1:X:2504:G:N2	1:X:2518:C:C2	2.75	0.54
1:X:2595:C:O2'	1:X:2596:C:H5'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2615:U:H5'	4:B:80:GLU:HG3	1.89	0.54
1:X:320:A:O2'	1:X:340:G:H2'	2.08	0.54
1:X:565:A:H2'	1:X:566:U:C6	2.43	0.54
1:X:674:U:H2'	1:X:675:C:O4'	2.07	0.54
1:X:754:G:O2'	1:X:755:C:H5'	2.06	0.54
1:X:765:C:O2'	1:X:766:A:OP2	2.22	0.54
1:X:986:A:H4'	16:N:48:ARG:HH11	1.73	0.54
2:Z:30:C:P	14:L:37:HIS:HB3	2.46	0.54
30:4:7:VAL:HG13	30:4:34:GLN:NE2	2.15	0.54
3:A:129:ASN:HB2	3:A:131:LEU:HD22	1.90	0.54
3:A:82:ILE:CD1	3:A:82:ILE:N	2.70	0.54
4:B:38:THR:O	4:B:40:GLN:N	2.41	0.54
4:B:59:VAL:CG1	4:B:64:GLN:HG2	2.37	0.54
5:C:108:ILE:O	5:C:112:GLN:HG2	2.07	0.54
6:D:97:TYR:CD2	6:D:100:LEU:HD23	2.41	0.54
7:E:7:GLN:H	7:E:8:PRO:CD	2.19	0.54
1:X:2541:U:H4'	10:H:23:ARG:NH1	2.22	0.54
10:H:2:ILE:HG23	10:H:6:SER:HB3	1.89	0.54
12:J:128:ILE:H	12:J:128:ILE:HD13	1.72	0.54
12:J:29:ALA:O	12:J:30:PHE:HB2	2.06	0.54
1:X:970:A:H62	12:J:83:ARG:HH21	1.54	0.54
13:K:29:LEU:HD22	13:K:79:VAL:HG23	1.87	0.54
14:L:102:ALA:O	14:L:105:ASP:N	2.40	0.54
14:L:97:HIS:CG	14:L:98:GLY:N	2.74	0.54
18:P:27:VAL:CG2	18:P:125:THR:HG22	2.37	0.54
18:P:35:PRO:O	18:P:36:ARG:C	2.46	0.54
19:Q:24:VAL:HG13	19:Q:80:VAL:O	2.07	0.54
20:R:46:VAL:H	20:R:75:ALA:HB1	1.73	0.54
1:X:1174:G:C2	1:X:1175:A:C8	2.96	0.54
1:X:1385:C:C2'	1:X:1386:A:H5'	2.37	0.54
1:X:1541:G:H2'	1:X:1542:G:O4'	2.08	0.54
1:X:1929:U:H2'	1:X:1930:C:C6	2.42	0.54
1:X:1948:C:C4	1:X:1949:A:C5	2.95	0.54
1:X:2405:A:C8	1:X:2405:A:OP1	2.61	0.54
1:X:2674:C:H2'	1:X:2675:U:H6	1.72	0.54
1:X:398:C:O2'	1:X:399:G:OP2	2.23	0.54
1:X:686:C:N4	1:X:821:A:C6	2.76	0.54
1:X:872:G:OP2	1:X:872:G:H8	1.91	0.54
26:Y:8:LYS:O	26:Y:9:LYS:HG2	2.07	0.54
4:B:85:ALA:N	4:B:86:PRO:CD	2.62	0.54
1:X:332:C:H4'	5:C:159:ARG:HG2	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:170:LEU:CD2	5:C:175:VAL:HA	2.28	0.54
6:D:171:GLN:NE2	6:D:177:PHE:HB2	2.22	0.54
9:G:35:LYS:N	9:G:69:ASP:OD2	2.41	0.54
11:I:73:GLU:OE2	11:I:104:ARG:HB3	2.08	0.54
14:L:33:ARG:CZ	14:L:100:VAL:HA	2.37	0.54
14:L:89:PHE:CD2	14:L:108:ARG:NH1	2.76	0.54
15:M:26:ASP:O	15:M:27:PHE:CD2	2.61	0.54
17:O:95:ILE:N	17:O:95:ILE:HD13	2.21	0.54
19:Q:10:PRO:HD3	24:V:30:PHE:CE2	2.42	0.54
1:X:2366:U:H1'	22:T:41:ARG:HH11	1.72	0.54
22:T:59:LEU:HD22	22:T:59:LEU:N	2.22	0.54
24:V:18:ILE:C	24:V:20:ALA:H	2.10	0.54
1:X:986:A:C6	1:X:1001:A:C8	2.95	0.54
1:X:1006:C:H4'	1:X:1007:A:OP1	2.06	0.54
1:X:1341:G:H2'	1:X:1343:C:C5	2.43	0.54
1:X:1373:G:H21	1:X:1374:G:H1'	1.71	0.54
1:X:1494:G:HO2'	1:X:1574:A:H2	1.53	0.54
1:X:1623:C:O2'	1:X:1624:A:OP2	2.24	0.54
1:X:2035:G:N2	1:X:2036:G:H1'	2.23	0.54
1:X:2196:U:H2'	1:X:2197:U:C1'	2.38	0.54
1:X:222:G:O2'	1:X:223:C:H5'	2.08	0.54
1:X:2306:A:H2'	1:X:2307:A:N9	2.23	0.54
1:X:2311:U:H3'	1:X:2311:U:O2	2.06	0.54
1:X:2437:G:H2'	1:X:2469:G:N1	2.22	0.54
1:X:2451:G:C2'	1:X:2454:C:H42	2.20	0.54
1:X:2541:U:O2'	1:X:2542:U:H5'	2.08	0.54
1:X:2664:G:O2'	1:X:2665:G:H5'	2.08	0.54
1:X:59:G:H1'	1:X:73:A:H2	1.72	0.54
2:Z:27:A:N6	2:Z:55:C:O3'	2.41	0.54
30:4:17:VAL:HG12	30:4:18:ARG:N	2.22	0.54
3:A:117:VAL:HG22	3:A:129:ASN:OD1	2.07	0.54
3:A:175:VAL:O	3:A:182:LEU:HA	2.06	0.54
4:B:170:LEU:HB3	4:B:184:VAL:HG11	1.88	0.54
5:C:9:GLN:NE2	5:C:120:VAL:HG21	2.22	0.54
5:C:74:VAL:CG2	5:C:76:THR:H	2.21	0.54
9:G:128:GLU:O	9:G:130:ALA:N	2.33	0.54
12:J:36:ILE:CD1	12:J:103:VAL:HG22	2.37	0.54
12:J:23:LYS:C	12:J:25:GLY:N	2.61	0.54
13:K:29:LEU:CD1	13:K:70:ILE:HD11	2.38	0.54
15:M:50:PHE:CE1	15:M:79:ARG:HG2	2.42	0.54
15:M:34:ARG:HH21	15:M:91:VAL:HG21	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:N:28:ARG:HA	16:N:34:ASN:HB3	1.90	0.54
19:Q:59:PRO:HB2	19:Q:72:ARG:NH1	2.22	0.54
20:R:38:LEU:HD23	20:R:39:ALA:H	1.69	0.54
23:U:41:VAL:O	23:U:42:GLN:HB2	2.07	0.54
1:X:1086:C:H3'	1:X:1087:C:C5'	2.38	0.54
1:X:1141:U:O2'	1:X:1142:G:O5'	2.25	0.54
1:X:1301:U:O2'	1:X:1302:C:P	2.66	0.54
1:X:1347:C:H6	1:X:1347:C:O5'	1.90	0.54
1:X:1364:C:O2'	1:X:1587:A:H1'	2.08	0.54
1:X:1672:A:H3'	1:X:1673:C:C6	2.43	0.54
1:X:1873:A:H8	1:X:1873:A:H3'	1.72	0.54
1:X:2005:U:C4'	1:X:2006:G:OP1	2.54	0.54
1:X:2307:A:OP2	1:X:2307:A:H8	1.91	0.54
1:X:538:A:N3	1:X:538:A:C3'	2.67	0.54
1:X:557:U:C4'	1:X:558:G:O4'	2.50	0.54
1:X:62:U:H5''	1:X:63:A:OP1	2.08	0.54
1:X:754:G:C6	1:X:770:U:O2	2.61	0.54
1:X:930:A:H3'	1:X:930:A:C8	2.42	0.54
2:Z:66:G:O2'	2:Z:67:C:H5'	2.07	0.54
2:Z:77:G:H1'	21:S:22:VAL:HG11	1.89	0.54
4:B:119:ARG:HG2	4:B:120:TRP:NE1	2.23	0.54
5:C:153:ASP:HA	5:C:158:ARG:HH21	1.73	0.54
6:D:156:ILE:HD12	6:D:156:ILE:N	2.23	0.54
1:X:2726:U:H1'	7:E:139:GLN:CD	2.27	0.54
1:X:2726:U:C2'	7:E:139:GLN:HE21	2.21	0.54
7:E:88:GLU:N	7:E:163:ARG:O	2.40	0.54
7:E:172:LYS:O	7:E:173:ALA:HB2	2.05	0.54
9:G:69:ASP:O	9:G:70:PHE:HB2	2.07	0.54
11:I:72:TYR:CE2	11:I:105:PRO:HB2	2.43	0.54
11:I:38:LYS:O	11:I:39:SER:HB2	2.07	0.54
14:L:39:TYR:O	14:L:40:ALA:C	2.47	0.54
14:L:45:ASP:O	14:L:46:SER:O	2.25	0.54
15:M:59:GLY:HA3	15:M:64:LYS:HA	1.89	0.54
1:X:1201:G:H5''	17:O:80:TYR:HE2	1.73	0.54
18:P:31:VAL:HG21	18:P:124:ILE:HG12	1.90	0.54
20:R:96:LYS:H	20:R:105:ARG:H	1.56	0.54
21:S:152:ILE:HG12	21:S:168:VAL:HG21	1.90	0.54
23:U:20:ARG:C	23:U:39:LYS:HD2	2.28	0.54
1:X:999:A:OP1	25:W:7:ARG:HD3	2.08	0.54
1:X:104:C:O2'	1:X:105:G:H5'	2.08	0.54
1:X:110:U:C5	1:X:111:G:C5	2.95	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1182:U:H2'	1:X:1183:C:O4'	2.08	0.54
1:X:182:G:O2'	1:X:183:U:OP2	2.21	0.54
1:X:2240:C:HO2'	1:X:2241:U:H5'	1.69	0.54
1:X:2275:U:H4'	1:X:2276:C:H5'	1.90	0.54
1:X:2333:A:N6	1:X:2343:C:N4	2.55	0.54
1:X:242:A:N6	1:X:440:U:O2'	2.41	0.54
1:X:26:G:C6	1:X:27:G:N1	2.76	0.54
1:X:2812:A:C4	1:X:2813:G:C8	2.96	0.54
1:X:532:A:C2	1:X:533:C:C2	2.95	0.54
1:X:641:G:H4'	1:X:651:C:O2'	2.08	0.54
1:X:76:C:OP1	24:V:52:GLN:NE2	2.41	0.54
3:A:147:LEU:O	3:A:148:VAL:HG23	2.08	0.54
5:C:116:LYS:O	5:C:117:LEU:CB	2.56	0.54
5:C:118:VAL:O	5:C:119:ALA:HB2	2.07	0.54
2:Z:46:G:C5'	6:D:92:ARG:HH22	2.18	0.54
7:E:101:LYS:O	7:E:123:PHE:HD1	1.91	0.54
1:X:2725:C:H4'	7:E:142:GLY:C	2.28	0.54
7:E:149:ARG:HA	7:E:162:VAL:HG21	1.90	0.54
9:G:67:ARG:CZ	9:G:70:PHE:O	2.56	0.54
10:H:81:ILE:O	10:H:81:ILE:HD13	2.08	0.54
11:I:104:ARG:HB3	11:I:105:PRO:HD2	1.89	0.54
16:N:74:MET:O	16:N:75:ASN:CB	2.53	0.54
20:R:22:VAL:HG12	20:R:23:ILE:H	1.73	0.54
20:R:40:LEU:O	20:R:44:GLN:HA	2.08	0.54
23:U:19:ILE:HG13	23:U:20:ARG:N	2.23	0.54
1:X:1272:G:O2'	1:X:1273:G:H5'	2.08	0.54
1:X:1323:G:H3'	1:X:1324:G:C2	2.43	0.54
1:X:1354:A:H2'	1:X:1410:U:O2'	2.07	0.54
1:X:1431:U:O3'	1:X:1604:A:H4'	2.08	0.54
1:X:1725:C:O2'	1:X:1726:C:H5'	2.07	0.54
1:X:187:U:H2'	1:X:188:G:H8	1.73	0.54
1:X:1922:U:H4'	1:X:1923:U:OP2	2.08	0.54
1:X:2064:U:P	23:U:39:LYS:HZ2	2.30	0.54
1:X:2181:A:O2'	1:X:2182:A:H5'	2.07	0.54
1:X:2344:G:OP1	22:T:55:ARG:N	2.35	0.54
1:X:2616:U:O2	1:X:2762:G:C2	2.61	0.54
1:X:511:A:H8	1:X:511:A:OP1	1.91	0.54
1:X:554:U:H2'	1:X:554:U:O2	2.08	0.54
1:X:568:G:C2'	1:X:569:C:H5'	2.38	0.54
2:Z:107:C:H5''	21:S:84:TYR:CD1	2.43	0.54
4:B:116:VAL:CG2	4:B:136:ARG:HG2	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:136:TRP:HD1	5:C:137:ALA:N	2.06	0.54
5:C:34:GLN:HE22	5:C:177:VAL:HB	1.72	0.54
12:J:99:LYS:HG3	12:J:100:PRO:HD2	1.90	0.54
14:L:91:ARG:H	14:L:91:ARG:NE	2.06	0.54
16:N:42:ALA:O	16:N:46:GLU:HG3	2.08	0.54
16:N:79:PHE:CE2	16:N:83:LEU:HD22	2.43	0.54
18:P:42:VAL:O	18:P:43:ASP:OD2	2.26	0.54
18:P:89:ARG:NE	18:P:132:GLY:H	2.06	0.54
21:S:20:ALA:O	21:S:80:HIS:HA	2.07	0.54
21:S:34:LEU:C	21:S:34:LEU:HD12	2.29	0.54
1:X:1209:G:O2'	1:X:1210:C:H5'	2.08	0.54
1:X:1278:A:O2'	1:X:1279:G:P	2.66	0.54
1:X:1438:G:H2'	1:X:1439:G:C8	2.43	0.54
1:X:1658:A:N7	1:X:1659:G:C5	2.76	0.54
1:X:1713:G:O6	1:X:1714:A:C6	2.61	0.54
1:X:1714:A:C5'	1:X:1715:A:H3'	2.38	0.54
1:X:1742:G:C6	1:X:1743:C:N4	2.76	0.54
1:X:1873:A:H3'	1:X:1873:A:C8	2.43	0.54
1:X:1838:G:N2	1:X:1878:C:C2	2.76	0.54
1:X:2245:A:O2'	1:X:2246:A:OP2	2.23	0.54
1:X:2306:A:H2'	1:X:2307:A:C1'	2.37	0.54
1:X:2585:C:C2'	1:X:2586:G:H5'	2.38	0.54
1:X:306:G:C6	1:X:307:C:N4	2.76	0.54
1:X:448:C:H2'	1:X:449:C:H5'	1.90	0.54
1:X:613:A:O2'	1:X:614:G:P	2.66	0.54
1:X:63:A:H5'	19:Q:71:GLN:HB3	1.89	0.54
1:X:877:G:H21	1:X:879:A:N6	2.05	0.54
3:A:172:TYR:HA	3:A:185:VAL:O	2.08	0.53
3:A:32:ALA:O	3:A:33:LEU:O	2.26	0.53
4:B:44:TYR:OH	4:B:80:GLU:OE2	2.26	0.53
5:C:158:ARG:O	5:C:160:ALA:N	2.42	0.53
9:G:71:THR:HA	16:N:64:ARG:HH11	1.73	0.53
10:H:7:ARG:NH1	10:H:20:MET:CE	2.71	0.53
11:I:88:PHE:CB	11:I:93:LEU:HD12	2.25	0.53
13:K:97:ILE:N	13:K:97:ILE:CD1	2.72	0.53
15:M:34:ARG:NH1	15:M:81:PHE:CD2	2.76	0.53
4:B:15:TRP:CH2	15:M:84:ALA:HB3	2.42	0.53
19:Q:5:ASP:O	19:Q:7:LEU:N	2.41	0.53
21:S:100:THR:HG23	21:S:138:VAL:CG1	2.34	0.53
21:S:2:GLU:HG2	21:S:55:THR:CB	2.32	0.53
23:U:28:GLY:O	23:U:30:VAL:N	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1080:A:H4'	1:X:1081:A:N7	2.23	0.53
1:X:1314:A:HO2'	1:X:1315:A:H3'	1.66	0.53
1:X:1479:G:O2'	1:X:1480:G:H5'	2.08	0.53
1:X:1854:G:H2'	1:X:1855:G:H8	1.73	0.53
1:X:1937:G:O2'	1:X:1939:U:H5	1.92	0.53
1:X:196:A:H2'	1:X:197:G:H5'	1.89	0.53
1:X:2204:A:O2'	1:X:2205:C:OP2	2.21	0.53
1:X:2225:G:C4	1:X:2226:A:N7	2.76	0.53
1:X:2672:U:O2'	1:X:2673:G:H5'	2.09	0.53
1:X:2840:U:OP2	1:X:2841:U:H2'	2.09	0.53
1:X:2867:G:H8	1:X:2867:G:OP2	1.90	0.53
1:X:398:C:C2'	1:X:399:G:OP2	2.56	0.53
1:X:425:A:H2'	1:X:425:A:N3	2.22	0.53
1:X:820:U:H2'	1:X:821:A:C8	2.43	0.53
1:X:931:G:C6	1:X:932:G:C5	2.95	0.53
26:Y:58:LEU:HD12	26:Y:58:LEU:H	1.73	0.53
2:Z:15:A:C2	2:Z:71:G:H2'	2.44	0.53
2:Z:30:C:H2'	2:Z:31:A:H5'	1.90	0.53
2:Z:70:C:H2'	2:Z:71:G:C8	2.43	0.53
3:A:186:HIS:CD2	3:A:188:GLU:HB2	2.42	0.53
5:C:47:THR:O	5:C:48:ARG:C	2.47	0.53
6:D:10:ASP:O	6:D:12:VAL:N	2.41	0.53
8:F:112:LYS:O	8:F:113:MET:HB2	2.08	0.53
13:K:64:ARG:O	13:K:67:ALA:HB3	2.08	0.53
15:M:5:ILE:HD13	15:M:7:ILE:CB	2.38	0.53
17:O:28:GLU:O	17:O:29:ALA:CB	2.56	0.53
20:R:107:ALA:CB	20:R:111:GLY:HA2	2.34	0.53
20:R:60:PRO:CA	20:R:65:PRO:HA	2.31	0.53
21:S:11:LYS:O	21:S:13:LYS:N	2.40	0.53
21:S:123:VAL:HG23	21:S:161:ALA:CB	2.38	0.53
1:X:1071:U:H4'	1:X:1072:U:O5'	2.08	0.53
1:X:1781:C:O2'	3:A:209:ALA:HB2	2.08	0.53
1:X:1965:U:C2	1:X:1966:C:C5	2.96	0.53
1:X:2198:U:P	1:X:2199:C:H5''	2.48	0.53
1:X:2379:G:H2'	1:X:2380:U:H5'	1.89	0.53
1:X:2496:C:H2'	1:X:2521:A:H62	1.73	0.53
1:X:38:G:N3	5:C:42:THR:HB	2.23	0.53
1:X:573:C:H5''	17:O:74:TYR:OH	2.09	0.53
1:X:665:A:H2	1:X:666:U:H6	1.56	0.53
1:X:763:A:H2'	1:X:764:A:H5''	1.89	0.53
1:X:807:A:O2'	1:X:808:C:H5'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:7:C:H2'	2:Z:8:C:C6	2.43	0.53
30:4:10:MET:HE3	30:4:32:HIS:HA	1.91	0.53
3:A:217:ARG:CD	3:A:218:LYS:HG3	2.39	0.53
3:A:70:ARG:O	3:A:72:LYS:N	2.41	0.53
6:D:135:GLN:C	6:D:141:ILE:HG21	2.29	0.53
6:D:17:MET:HE3	6:D:25:VAL:HG12	1.90	0.53
7:E:44:ARG:HD2	7:E:45:GLN:N	2.24	0.53
9:G:107:GLN:C	9:G:109:GLY:N	2.62	0.53
9:G:162:LYS:H	9:G:163:PRO:CD	2.21	0.53
10:H:11:ALA:HB3	10:H:110:VAL:HG13	1.89	0.53
1:X:1218:C:O4'	11:I:13:ARG:HD3	2.08	0.53
12:J:78:LYS:HE3	12:J:80:ALA:O	2.08	0.53
15:M:54:VAL:HG12	15:M:54:VAL:O	2.08	0.53
16:N:62:ILE:HG23	16:N:76:TYR:CE1	2.44	0.53
1:X:1171:A:C1'	17:O:6:GLN:OE1	2.56	0.53
18:P:39:ARG:O	18:P:43:ASP:CG	2.47	0.53
18:P:87:GLU:HA	18:P:90:LEU:CD1	2.36	0.53
19:Q:28:TRP:CZ3	19:Q:75:ARG:HD2	2.42	0.53
19:Q:63:LYS:HB2	19:Q:70:GLY:H	1.73	0.53
21:S:32:PHE:HD2	21:S:32:PHE:N	2.06	0.53
25:W:38:PRO:CA	25:W:41:ARG:NH2	2.71	0.53
1:X:1430:G:C2	1:X:1431:U:C2	2.96	0.53
1:X:1502:G:O2'	1:X:1503:G:H5'	2.07	0.53
1:X:171:G:C6	1:X:179:U:O2	2.61	0.53
1:X:1769:U:C5	1:X:1775:A:C4	2.97	0.53
1:X:177:U:C4	1:X:225:G:C2	2.96	0.53
1:X:717:G:C2'	1:X:739:G:N2	2.72	0.53
1:X:819:C:OP2	11:I:41:SER:HA	2.08	0.53
1:X:946:U:H2'	1:X:947:C:C6	2.30	0.53
2:Z:67:C:C2'	2:Z:111:C:H42	2.18	0.53
2:Z:3:A:C2'	2:Z:4:C:H5''	2.37	0.53
2:Z:7:C:H2'	2:Z:8:C:H6	1.74	0.53
4:B:68:ALA:O	4:B:71:GLY:N	2.37	0.53
5:C:127:ASP:O	5:C:129:LYS:N	2.42	0.53
7:E:137:ASP:HB3	7:E:140:LEU:CB	2.38	0.53
8:F:116:LEU:HG	8:F:127:THR:HG21	1.90	0.53
8:F:71:LYS:C	8:F:73:PRO:HD3	2.28	0.53
9:G:65:LYS:HB2	9:G:66:HIS:CD2	2.43	0.53
12:J:77:LYS:HG3	12:J:78:LYS:N	2.23	0.53
14:L:59:LEU:HD23	14:L:60:LYS:H	1.74	0.53
19:Q:8:GLN:O	19:Q:9:ALA:HB2	2.06	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:85:ASP:H	20:R:86:PRO:HD3	1.71	0.53
23:U:22:GLY:N	23:U:39:LYS:HE2	2.24	0.53
1:X:1242:A:O2'	1:X:1243:G:H5'	2.08	0.53
1:X:1288:A:O2'	1:X:1289:A:P	2.67	0.53
1:X:1757:C:N3	1:X:1970:G:C6	2.76	0.53
1:X:2380:U:C4	1:X:2381:A:H2	2.26	0.53
1:X:2508:G:O5'	1:X:2509:A:H5''	2.07	0.53
1:X:2740:C:C2'	1:X:2741:G:H5'	2.38	0.53
1:X:2862:G:O2'	1:X:2863:U:H5'	2.08	0.53
1:X:700:C:H2'	1:X:701:U:O4'	2.09	0.53
1:X:828:C:C2	1:X:1207:G:C2	2.97	0.53
1:X:874:A:C4	1:X:929:A:C6	2.97	0.53
1:X:933:G:O2'	1:X:934:G:H5'	2.08	0.53
4:B:96:PHE:CE2	4:B:102:ILE:HG21	2.42	0.53
6:D:132:ILE:H	6:D:153:ASP:HA	1.74	0.53
6:D:94:GLU:O	6:D:98:VAL:N	2.41	0.53
7:E:43:VAL:CG2	7:E:50:LEU:HD21	2.38	0.53
7:E:8:PRO:HD2	7:E:69:ARG:HH11	1.72	0.53
9:G:132:PHE:CD1	9:G:145:HIS:HB2	2.43	0.53
10:H:41:ASN:O	10:H:42:LYS:O	2.26	0.53
12:J:40:PRO:HB3	12:J:99:LYS:HZ2	1.73	0.53
13:K:63:ARG:CZ	13:K:80:MET:HG2	2.38	0.53
13:K:99:ARG:CG	13:K:99:ARG:NH1	2.68	0.53
16:N:32:TYR:CE1	16:N:36:PHE:HB2	2.43	0.53
17:O:32:LYS:O	17:O:57:GLN:HA	2.08	0.53
19:Q:60:GLY:H	19:Q:72:ARG:CD	2.21	0.53
20:R:71:GLN:C	20:R:71:GLN:OE1	2.46	0.53
20:R:94:VAL:O	20:R:95:ARG:NH1	2.40	0.53
20:R:96:LYS:HZ3	20:R:105:ARG:HG3	1.74	0.53
23:U:49:LYS:HA	23:U:62:LEU:H	1.72	0.53
25:W:34:VAL:HG22	25:W:40:VAL:HG13	1.91	0.53
1:X:984:A:H1'	1:X:1202:U:N1	2.22	0.53
1:X:1235:C:C2	1:X:1241:G:N2	2.77	0.53
1:X:1542:G:H22	1:X:1562:G:H22	1.56	0.53
1:X:2468:G:H2'	1:X:2469:G:O4'	2.09	0.53
1:X:2629:U:H2'	1:X:2630:C:H6	1.73	0.53
1:X:2676:G:H2'	1:X:2677:U:C6	2.43	0.53
1:X:389:G:C4	1:X:390:U:C5	2.97	0.53
1:X:453:U:O2'	5:C:40:ARG:NH1	2.42	0.53
1:X:691:C:H2'	1:X:692:C:H6	1.73	0.53
1:X:90:G:H5'	1:X:91:A:H8	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:93:A:O2'	1:X:94:C:H5'	2.08	0.53
1:X:960:U:H2'	1:X:961:G:H8	1.73	0.53
1:X:984:A:C4	1:X:1202:U:C4	2.97	0.53
30:4:13:ASN:O	30:4:15:LYS:HG2	2.09	0.53
3:A:197:GLY:O	3:A:199:ALA:N	2.41	0.53
4:B:107:THR:HA	4:B:163:GLU:O	2.09	0.53
4:B:54:LYS:HB2	4:B:75:THR:O	2.08	0.53
8:F:72:THR:HG23	8:F:77:TYR:CD2	2.44	0.53
8:F:85:ILE:CD1	8:F:89:SER:N	2.71	0.53
10:H:125:LYS:O	10:H:129:LEU:HD23	2.09	0.53
12:J:113:GLU:C	12:J:115:ALA:N	2.60	0.53
13:K:16:ALA:C	13:K:18:VAL:N	2.59	0.53
13:K:57:GLY:O	13:K:59:ASP:N	2.39	0.53
14:L:31:VAL:HB	14:L:38:ILE:CD1	2.21	0.53
14:L:60:LYS:C	14:L:62:GLY:H	2.12	0.53
14:L:89:PHE:HD1	14:L:91:ARG:HH12	1.57	0.53
9:G:32:TYR:HD2	16:N:100:ALA:HB1	1.74	0.53
16:N:75:ASN:O	16:N:79:PHE:HB3	2.09	0.53
1:X:574:C:P	17:O:77:GLY:HA2	2.48	0.53
19:Q:63:LYS:HD2	19:Q:64:ARG:H	1.73	0.53
19:Q:26:SER:HA	19:Q:78:ALA:O	2.09	0.53
20:R:8:SER:O	20:R:11:ASN:N	2.42	0.53
20:R:25:LEU:HD12	20:R:80:LYS:HA	1.89	0.53
20:R:45:LYS:HB3	20:R:75:ALA:HB1	1.91	0.53
20:R:84:VAL:HG11	20:R:88:THR:N	2.24	0.53
24:V:10:GLN:C	24:V:12:THR:N	2.60	0.53
1:X:143:A:O2'	1:X:144:U:H5'	2.08	0.53
1:X:1510:A:H2'	1:X:1511:A:C8	2.43	0.53
1:X:1548:U:H2'	1:X:1549:C:C6	2.43	0.53
1:X:1753:A:O5'	1:X:1753:A:C8	2.60	0.53
1:X:1960:A:H8	1:X:1960:A:O5'	1.92	0.53
1:X:2189:A:C8	1:X:2189:A:O5'	2.62	0.53
1:X:2522:G:H2'	1:X:2523:G:O4'	2.09	0.53
1:X:2714:A:H2'	1:X:2715:C:O4'	2.08	0.53
1:X:2796:A:H2'	1:X:2797:G:H8	1.70	0.53
1:X:715:U:O2'	1:X:716:U:H5'	2.08	0.53
1:X:71:A:N6	1:X:110:U:H5''	2.24	0.53
1:X:919:U:H2'	1:X:920:G:H8	1.74	0.53
1:X:955:G:N3	1:X:955:G:H3'	2.23	0.53
1:X:578:U:O2'	1:X:994:A:N1	2.40	0.53
1:X:1585:A:H4'	3:A:59:LYS:NZ	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:119:ARG:CG	4:B:119:ARG:NH1	2.68	0.53
4:B:9:ILE:CD1	4:B:27:LEU:HB3	2.38	0.53
5:C:4:ILE:HA	5:C:13:ARG:NH2	2.18	0.53
5:C:8:GLY:O	5:C:9:GLN:HB3	2.09	0.53
6:D:69:LYS:HG2	6:D:84:PRO:CA	2.39	0.53
1:X:1935:A:N3	10:H:22:ILE:HD11	2.23	0.53
10:H:23:ARG:CG	10:H:23:ARG:NH2	2.69	0.53
14:L:70:ALA:O	14:L:74:ALA:CB	2.57	0.53
11:I:32:ARG:NH2	17:O:81:ARG:NE	2.56	0.53
22:T:22:GLY:O	22:T:39:ARG:O	2.27	0.53
24:V:7:ARG:NH1	24:V:8:ASN:HA	2.23	0.53
1:X:1325:U:O2'	1:X:1327:C:C5	2.61	0.53
1:X:1656:U:C2'	1:X:1657:A:H5''	2.39	0.53
1:X:1703:C:H2'	1:X:1704:G:O4'	2.09	0.53
1:X:2069:U:H2'	1:X:2070:G:C8	2.44	0.53
1:X:2489:C:C4	1:X:2490:U:C5	2.97	0.53
1:X:2581:A:C5'	1:X:2582:G:OP2	2.57	0.53
1:X:2738:A:C2'	1:X:2739:G:H5'	2.39	0.53
1:X:2482:A:C2'	33:X:2911:ZLD:H13B	2.39	0.53
1:X:617:U:C5	1:X:632:A:N1	2.76	0.53
1:X:699:G:H4'	1:X:700:C:OP2	2.07	0.53
2:Z:3:A:C2'	2:Z:4:C:C5'	2.86	0.53
3:A:116:THR:OG1	3:A:117:VAL:N	2.41	0.53
3:A:187:SER:O	3:A:189:CYS:N	2.42	0.53
5:C:18:PRO:HG2	5:C:105:ALA:CB	2.22	0.53
5:C:192:ALA:O	5:C:195:ILE:CG1	2.56	0.53
6:D:143:TYR:O	6:D:146:VAL:HG22	2.08	0.53
2:Z:45:C:C2'	6:D:92:ARG:CZ	2.85	0.53
7:E:13:SER:C	7:E:15:VAL:H	2.12	0.53
7:E:90:ARG:CD	7:E:163:ARG:HH11	2.22	0.53
9:G:138:GLY:O	9:G:142:ARG:HG3	2.08	0.53
9:G:168:THR:O	9:G:169:GLN:O	2.27	0.53
15:M:10:GLY:O	15:M:13:LEU:HB2	2.09	0.53
16:N:50:ARG:C	16:N:52:ASN:N	2.61	0.53
16:N:52:ASN:O	16:N:54:LYS:N	2.42	0.53
17:O:36:LYS:NZ	17:O:55:THR:C	2.62	0.53
18:P:56:LEU:O	18:P:57:LEU:C	2.47	0.53
20:R:98:ILE:N	20:R:98:ILE:HD12	2.23	0.53
22:T:42:GLY:O	22:T:57:HIS:CB	2.56	0.53
23:U:8:THR:HA	23:U:14:VAL:HG22	1.91	0.53
1:X:1070:G:C5'	1:X:1071:U:H3'	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:831:G:C2	1:X:1204:G:O6	2.61	0.53
1:X:1264:C:C5'	16:N:13:ARG:HH12	2.21	0.53
1:X:163:A:O2'	1:X:164:G:H5'	2.08	0.53
1:X:1679:U:H2'	1:X:1680:U:O4'	2.09	0.53
1:X:1733:U:OP2	1:X:1733:U:H6	1.92	0.53
1:X:1837:G:O2'	1:X:1838:G:H5'	2.09	0.53
1:X:2615:U:O5'	4:B:80:GLU:HG3	2.08	0.53
3:A:216:GLY:O	3:A:217:ARG:HB2	2.09	0.53
3:A:239:ARG:O	3:A:240:THR:HB	2.09	0.53
3:A:70:ARG:C	3:A:72:LYS:N	2.62	0.53
2:Z:45:C:C2'	6:D:92:ARG:NH1	2.72	0.53
12:J:69:ILE:HD13	12:J:104:MET:CG	2.39	0.53
13:K:25:ALA:HB2	13:K:47:PHE:HE2	1.74	0.53
13:K:55:ALA:C	13:K:57:GLY:N	2.62	0.53
16:N:114:ARG:CZ	16:N:114:ARG:HB3	2.39	0.53
20:R:89:GLY:O	20:R:90:LYS:HB3	2.09	0.53
21:S:64:ALA:HA	21:S:86:VAL:H	1.73	0.53
22:T:41:ARG:HA	22:T:41:ARG:HE	1.74	0.53
23:U:29:GLY:H	23:U:32:ARG:HB3	1.73	0.53
23:U:50:ALA:CB	23:U:52:ARG:NH2	2.68	0.53
1:X:1074:G:H2'	1:X:1075:C:C6	2.44	0.53
1:X:1103:C:N4	1:X:1111:C:H42	2.07	0.53
1:X:1301:U:H6	1:X:1301:U:OP2	1.92	0.53
1:X:1505:U:H1'	1:X:1506:C:C5	2.44	0.53
1:X:1511:A:H2'	1:X:1512:A:O4'	2.08	0.53
1:X:1526:U:H2'	1:X:1527:G:H5'	1.91	0.53
1:X:1514:C:O4'	1:X:1593:C:C5'	2.57	0.53
1:X:1790:G:C8	1:X:1811:A:N6	2.77	0.53
1:X:1877:C:H2'	1:X:1878:C:C6	2.44	0.53
1:X:2082:C:H2'	1:X:2083:G:H5'	1.91	0.53
1:X:2284:U:H3'	1:X:2284:U:C6	2.44	0.53
1:X:2467:A:H8	1:X:2467:A:O5'	1.92	0.53
1:X:2700:U:C2	1:X:2701:A:C8	2.96	0.53
1:X:572:G:N7	1:X:2001:G:C6	2.77	0.53
1:X:717:G:H2'	1:X:739:G:N2	2.21	0.53
1:X:824:U:H1'	1:X:1264:C:O4'	2.09	0.53
1:X:1275:A:N3	26:Y:10:LYS:HE2	2.24	0.53
26:Y:42:SER:O	26:Y:43:HIS:CB	2.51	0.53
3:A:154:GLN:O	3:A:155:LEU:HD23	2.09	0.53
4:B:67:PHE:CE1	4:B:75:THR:HG22	2.44	0.53
9:G:123:PRO:CD	9:G:124:GLU:OE1	2.57	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:I:11:GLY:C	11:I:13:ARG:N	2.61	0.53
11:I:62:LYS:CE	11:I:64:GLY:CA	2.84	0.53
18:P:8:PHE:CD2	18:P:9:ARG:N	2.74	0.53
20:R:97:GLN:HB2	20:R:101:GLY:CA	2.28	0.53
21:S:72:ASP:OD1	21:S:75:LYS:CG	2.57	0.53
23:U:43:ARG:NH2	23:U:43:ARG:HG2	2.24	0.53
1:X:10:A:N1	1:X:2608:A:C2	2.77	0.53
1:X:1219:C:H4'	11:I:7:LYS:HD3	1.91	0.53
1:X:1369:G:H2'	1:X:1370:U:O4'	2.09	0.53
1:X:1625:A:C5	1:X:1632:A:C2	2.97	0.53
1:X:1644:G:H2'	1:X:1645:U:H6	1.72	0.53
1:X:1781:C:H4'	3:A:209:ALA:HB2	1.90	0.53
1:X:2039:G:H2'	1:X:2039:G:N3	2.23	0.53
1:X:2055:G:N1	1:X:2417:U:C2	2.77	0.53
1:X:2201:G:C2	1:X:2202:G:C8	2.97	0.53
1:X:2228:U:C5'	1:X:2229:G:OP2	2.57	0.53
1:X:2437:G:O2'	1:X:2439:U:O4	2.24	0.53
1:X:2604:G:H2'	1:X:2605:C:H6	1.74	0.53
1:X:554:U:O3'	1:X:555:U:C4'	2.57	0.53
1:X:576:A:C2	1:X:577:U:H1'	2.44	0.53
1:X:689:A:C2	1:X:690:A:C8	2.96	0.53
1:X:841:G:N7	1:X:842:A:N6	2.56	0.53
2:Z:46:G:H1'	2:Z:49:C:H42	1.72	0.53
2:Z:70:C:H2'	2:Z:71:G:H8	1.74	0.53
4:B:152:LYS:H	9:G:106:TYR:HD2	1.57	0.52
4:B:33:ILE:HG21	4:B:47:VAL:CG1	2.38	0.52
5:C:104:LEU:O	5:C:105:ALA:C	2.47	0.52
5:C:137:ALA:O	5:C:138:LYS:C	2.47	0.52
5:C:34:GLN:NE2	5:C:177:VAL:HB	2.24	0.52
6:D:14:PRO:HA	6:D:17:MET:SD	2.48	0.52
6:D:70:ALA:N	6:D:85:VAL:HG22	2.23	0.52
9:G:66:HIS:O	9:G:67:ARG:O	2.27	0.52
9:G:72:PRO:O	9:G:73:ASN:C	2.48	0.52
11:I:73:GLU:OE1	11:I:105:PRO:HG2	2.08	0.52
11:I:64:GLY:O	11:I:65:PHE:CB	2.57	0.52
12:J:51:CYS:O	12:J:55:MET:HE2	2.09	0.52
14:L:33:ARG:CD	14:L:100:VAL:HA	2.39	0.52
14:L:60:LYS:CA	14:L:67:THR:HG21	2.39	0.52
15:M:102:ALA:C	15:M:103:LYS:HD2	2.29	0.52
17:O:20:ILE:CD1	17:O:21:ARG:N	2.70	0.52
18:P:42:VAL:CG1	18:P:42:VAL:O	2.55	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:Q:12:ILE:O	19:Q:13:SER:O	2.27	0.52
21:S:43:PHE:CE1	21:S:47:SER:HA	2.44	0.52
23:U:17:SER:OG	23:U:45:ASN:HB2	2.08	0.52
23:U:53:GLU:O	23:U:78:ILE:HG23	2.09	0.52
1:X:1018:C:C6	1:X:1019:U:H5	2.27	0.52
1:X:1032:A:H8	1:X:1032:A:H3'	1.73	0.52
1:X:1563:U:C2	1:X:1564:U:C5	2.97	0.52
1:X:2394:G:C5'	11:I:63:ARG:NE	2.71	0.52
1:X:2451:G:H2'	1:X:2508:G:H22	1.73	0.52
1:X:322:A:C2'	1:X:323:G:OP1	2.57	0.52
1:X:556:A:O2'	1:X:557:U:O4'	2.26	0.52
1:X:77:C:O2'	1:X:78:C:H5'	2.09	0.52
1:X:173:A:H2'	1:X:818:G:O6	2.09	0.52
1:X:874:A:H2'	1:X:875:G:O4'	2.09	0.52
2:Z:107:C:H2'	2:Z:108:G:C5'	2.36	0.52
4:B:170:LEU:HB3	4:B:184:VAL:HG13	1.90	0.52
1:X:2617:G:P	4:B:82:ARG:NH2	2.81	0.52
6:D:77:PHE:C	6:D:79:LEU:HD12	2.29	0.52
6:D:92:ARG:CA	6:D:96:MET:HB3	2.39	0.52
7:E:78:GLY:C	7:E:80:SER:N	2.61	0.52
9:G:110:LEU:H	9:G:110:LEU:HD23	1.72	0.52
10:H:91:PHE:CD1	10:H:91:PHE:N	2.77	0.52
12:J:123:GLY:HA2	12:J:126:LEU:HD12	1.91	0.52
12:J:66:TYR:HB2	12:J:106:GLU:HG2	1.91	0.52
13:K:112:LEU:HD21	26:Y:45:ILE:HD11	1.92	0.52
15:M:94:VAL:O	15:M:95:GLU:HB3	2.08	0.52
16:N:50:ARG:O	16:N:52:ASN:N	2.38	0.52
18:P:37:LYS:HZ3	18:P:64:ALA:N	2.07	0.52
20:R:25:LEU:HD22	20:R:25:LEU:O	2.09	0.52
20:R:85:ASP:HB3	20:R:90:LYS:NZ	2.24	0.52
1:X:1032:A:O2'	1:X:1134:C:H5''	2.10	0.52
1:X:1200:G:C2	1:X:1201:G:H1'	2.43	0.52
1:X:1332:G:C2	1:X:1347:C:N3	2.77	0.52
1:X:1533:G:O2'	1:X:1534:A:H5'	2.09	0.52
1:X:172:A:N7	1:X:175:C:H5	2.06	0.52
1:X:2199:C:C2'	1:X:2200:G:H8	2.18	0.52
1:X:388:G:N2	1:X:389:G:H1'	2.24	0.52
1:X:488:A:OP1	1:X:488:A:H8	1.92	0.52
1:X:509:U:H2'	1:X:510:G:H5'	1.90	0.52
1:X:774:A:C8	1:X:774:A:C3'	2.91	0.52
26:Y:13:LYS:HB2	26:Y:16:ARG:HH21	1.73	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:44:C:H1'	6:D:89:VAL:CG1	2.39	0.52
3:A:33:LEU:HD21	3:A:63:ARG:HH22	1.73	0.52
1:X:1141:U:O4	4:B:147:PRO:HD3	2.07	0.52
5:C:133:PHE:O	5:C:134:ILE:C	2.48	0.52
5:C:191:ALA:O	5:C:194:GLU:HB3	2.10	0.52
6:D:135:GLN:O	6:D:138:PHE:HD1	1.92	0.52
4:B:152:LYS:N	9:G:106:TYR:HB3	2.24	0.52
11:I:122:VAL:C	11:I:124:ALA:H	2.11	0.52
11:I:7:LYS:N	11:I:7:LYS:HD3	2.24	0.52
1:X:2356:A:N3	14:L:89:PHE:HE1	2.08	0.52
14:L:95:LYS:HB3	14:L:95:LYS:NZ	2.25	0.52
17:O:40:VAL:HA	17:O:44:GLN:O	2.09	0.52
22:T:43:THR:HB	22:T:46:LYS:HZ2	1.75	0.52
24:V:28:LEU:C	24:V:30:PHE:H	2.12	0.52
25:W:34:VAL:HG22	25:W:40:VAL:CG1	2.39	0.52
25:W:54:GLN:O	25:W:55:GLU:HG3	2.08	0.52
1:X:1011:A:N1	1:X:1012:A:C2	2.78	0.52
1:X:1095:A:C3'	1:X:1096:A:C5'	2.80	0.52
1:X:1176:U:O2'	1:X:1177:U:H5'	2.09	0.52
1:X:1361:G:H2'	1:X:1362:A:C8	2.44	0.52
1:X:1433:A:C8	1:X:1435:G:C6	2.97	0.52
1:X:1621:C:O2'	1:X:1622:G:H5'	2.09	0.52
1:X:171:G:H2'	1:X:172:A:O4'	2.09	0.52
1:X:2228:U:C4'	1:X:2229:G:OP2	2.57	0.52
1:X:2265:A:H5'	1:X:2266:A:OP1	2.09	0.52
1:X:2560:G:C5	1:X:2589:C:C4	2.97	0.52
1:X:2728:A:H5'	7:E:6:LYS:HZ1	1.75	0.52
1:X:2781:G:H2'	1:X:2782:G:C5'	2.39	0.52
1:X:767:G:C6	1:X:768:U:O4	2.63	0.52
3:A:112:THR:O	3:A:114:GLY:N	2.42	0.52
4:B:32:PRO:HD2	4:B:50:GLY:O	2.10	0.52
6:D:132:ILE:O	6:D:152:MET:O	2.27	0.52
7:E:70:THR:O	7:E:74:ASN:N	2.41	0.52
8:F:78:LEU:HA	8:F:81:LYS:HB2	1.91	0.52
1:X:2620:G:OP2	9:G:102:ARG:NH2	2.42	0.52
9:G:85:ALA:C	9:G:87:GLN:N	2.61	0.52
11:I:99:VAL:O	11:I:100:ARG:C	2.48	0.52
12:J:48:ILE:C	12:J:50:ALA:N	2.61	0.52
14:L:84:ILE:O	14:L:84:ILE:HG22	2.08	0.52
15:M:39:VAL:HA	15:M:45:THR:HA	1.91	0.52
16:N:61:TRP:O	16:N:65:ILE:HG13	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:70:PHE:CB	16:N:64:ARG:HG2	2.39	0.52
18:P:112:GLY:O	18:P:113:SER:C	2.48	0.52
20:R:10:HIS:CD2	20:R:44:GLN:NE2	2.77	0.52
21:S:67:LYS:NZ	21:S:84:TYR:HB2	2.23	0.52
1:X:1710:U:H4'	1:X:1711:C:OP2	2.09	0.52
1:X:1915:A:H2'	1:X:1916:G:H5'	1.92	0.52
1:X:2201:G:H2'	1:X:2202:G:H8	1.74	0.52
1:X:204:A:N7	1:X:2386:G:H5'	2.25	0.52
1:X:2821:G:C6	1:X:2846:G:N1	2.78	0.52
1:X:2827:G:C5	1:X:2828:C:C4	2.97	0.52
1:X:508:G:O2'	1:X:509:U:H5'	2.10	0.52
1:X:520:C:H2'	1:X:520:C:O2	2.08	0.52
1:X:590:C:H2'	1:X:591:G:H8	1.74	0.52
1:X:605:G:H2'	1:X:606:A:C8	2.45	0.52
1:X:669:G:H2'	1:X:670:U:O4'	2.09	0.52
1:X:887:G:N2	1:X:888:G:H1'	2.25	0.52
1:X:954:U:OP2	11:I:38:LYS:CE	2.57	0.52
1:X:983:G:C3'	1:X:984:A:H5''	2.28	0.52
1:X:760:U:C5	26:Y:3:LYS:HE2	2.45	0.52
2:Z:108:G:H2'	2:Z:109:G:H8	1.75	0.52
3:A:81:ALA:C	3:A:82:ILE:HD12	2.29	0.52
4:B:107:THR:HG23	4:B:163:GLU:O	2.10	0.52
5:C:112:GLN:OE1	5:C:116:LYS:HB2	2.09	0.52
5:C:157:THR:OG1	5:C:158:ARG:N	2.43	0.52
7:E:39:THR:C	7:E:41:LEU:N	2.61	0.52
7:E:98:LEU:HG	7:E:99:THR:H	1.73	0.52
11:I:72:TYR:HD2	11:I:107:LYS:H	1.56	0.52
12:J:47:GLN:NE2	12:J:127:PRO:HG3	2.25	0.52
14:L:79:ALA:O	14:L:83:GLY:N	2.42	0.52
15:M:5:ILE:HD13	15:M:7:ILE:HG12	1.90	0.52
9:G:70:PHE:HB3	16:N:64:ARG:HG2	1.91	0.52
19:Q:26:SER:CB	19:Q:79:ILE:HG13	2.34	0.52
21:S:147:ILE:HG22	21:S:152:ILE:CD1	2.40	0.52
21:S:54:ILE:C	21:S:61:THR:HA	2.30	0.52
23:U:46:LEU:C	23:U:47:HIS:CG	2.83	0.52
1:X:1301:U:O2'	1:X:1302:C:OP1	2.26	0.52
1:X:1404:C:C5	1:X:1407:G:C6	2.98	0.52
1:X:1615:C:P	19:Q:35:LYS:HB2	2.50	0.52
1:X:1714:A:H5''	1:X:1715:A:H3'	1.90	0.52
1:X:1808:C:C5	3:A:62:TYR:CE2	2.98	0.52
1:X:1960:A:H2'	1:X:1961:A:O4'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2015:G:O2'	1:X:2016:A:P	2.67	0.52
1:X:238:G:N1	1:X:239:A:C5	2.78	0.52
1:X:2673:G:N2	1:X:2674:C:C2	2.77	0.52
1:X:2844:G:O2'	1:X:2845:C:H5'	2.09	0.52
1:X:343:A:N3	1:X:343:A:O5'	2.43	0.52
1:X:65:C:H2'	1:X:66:U:O4'	2.08	0.52
1:X:739:G:O2'	1:X:740:A:P	2.67	0.52
3:A:135:PHE:N	3:A:135:PHE:HD2	2.08	0.52
5:C:112:GLN:HB3	5:C:116:LYS:CD	2.37	0.52
5:C:124:ASP:CG	5:C:136:TRP:HE3	2.13	0.52
5:C:7:ILE:HG21	5:C:122:GLY:N	2.24	0.52
6:D:32:GLU:HB3	6:D:157:VAL:HB	1.91	0.52
7:E:127:GLU:HG3	7:E:129:THR:CA	2.39	0.52
9:G:62:ILE:CD1	9:G:148:LEU:HB2	2.38	0.52
10:H:55:VAL:HG23	10:H:70:VAL:HG22	1.92	0.52
11:I:29:THR:HA	11:I:34:HIS:CG	2.45	0.52
11:I:77:LEU:HG	11:I:112:GLY:O	2.10	0.52
12:J:33:TYR:O	12:J:106:GLU:CA	2.58	0.52
14:L:21:THR:HG23	14:L:45:ASP:HB2	1.90	0.52
14:L:89:PHE:CD1	14:L:91:ARG:NH2	2.77	0.52
15:M:69:ARG:NH1	15:M:69:ARG:CG	2.67	0.52
15:M:89:ASN:C	15:M:90:GLN:OE1	2.48	0.52
16:N:81:ASN:O	16:N:84:LYS:N	2.42	0.52
18:P:52:ASP:O	18:P:55:ASP:N	2.37	0.52
19:Q:63:LYS:HB2	19:Q:70:GLY:HA3	1.92	0.52
19:Q:61:LYS:N	19:Q:72:ARG:HA	2.23	0.52
19:Q:7:LEU:CD1	19:Q:7:LEU:C	2.77	0.52
20:R:95:ARG:NH1	20:R:106:VAL:HA	2.25	0.52
21:S:3:LEU:CD1	21:S:4:THR:N	2.69	0.52
21:S:64:ALA:CA	21:S:85:MET:HA	2.40	0.52
22:T:46:LYS:HD3	22:T:76:ALA:HB1	1.91	0.52
23:U:22:GLY:N	23:U:39:LYS:HG3	2.23	0.52
25:W:1:MET:HB2	25:W:34:VAL:CG1	2.39	0.52
1:X:1052:C:H6	1:X:1052:C:OP2	1.92	0.52
1:X:1301:U:HO2'	1:X:1302:C:P	2.32	0.52
1:X:1463:A:C4	1:X:1479:G:N2	2.78	0.52
1:X:1811:A:C8	1:X:1811:A:OP2	2.62	0.52
1:X:2039:G:C4	1:X:2556:A:C2	2.97	0.52
1:X:2516:U:H2'	1:X:2517:C:C6	2.45	0.52
1:X:2519:C:C4	1:X:2520:A:N7	2.77	0.52
1:X:2599:U:H2'	1:X:2600:A:H8	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2695:C:H2'	1:X:2696:A:C8	2.45	0.52
1:X:2759:U:H1'	1:X:2761:A:C6	2.44	0.52
1:X:422:C:O2'	1:X:423:G:H5'	2.10	0.52
1:X:69:G:H2'	1:X:111:G:O2'	2.10	0.52
1:X:725:C:H2'	1:X:726:G:O4'	2.10	0.52
1:X:764:A:C5	1:X:802:A:C2	2.98	0.52
1:X:871:U:O2'	1:X:2247:A:C2'	2.39	0.52
26:Y:3:LYS:O	26:Y:4:HIS:C	2.48	0.52
3:A:164:GLN:HB3	3:A:176:ARG:HB3	1.91	0.52
5:C:13:ARG:HE	5:C:13:ARG:N	2.05	0.52
5:C:62:LYS:HD3	5:C:62:LYS:C	2.29	0.52
12:J:117:GLU:C	12:J:119:PHE:N	2.62	0.52
2:Z:9:G:H5'	14:L:32:TYR:CD2	2.45	0.52
15:M:17:GLU:C	15:M:19:ASP:H	2.13	0.52
15:M:33:VAL:HG23	15:M:94:VAL:CG2	2.40	0.52
15:M:33:VAL:O	15:M:92:THR:HG23	2.10	0.52
21:S:103:ARG:HG3	21:S:104:SER:N	2.25	0.52
21:S:30:VAL:CG1	21:S:31:SER:N	2.72	0.52
1:X:1089:C:H5''	1:X:1090:C:OP1	2.09	0.52
1:X:143:A:O5'	1:X:143:A:H8	1.92	0.52
1:X:1741:G:H2'	1:X:1742:G:C5'	2.40	0.52
1:X:1866:G:N2	1:X:1867:A:H2	2.08	0.52
1:X:1947:G:C2	1:X:1950:C:C6	2.98	0.52
1:X:579:G:H2'	1:X:2013:A:C5	2.45	0.52
1:X:2083:G:H2'	1:X:2084:G:C8	2.44	0.52
1:X:2363:G:H3'	1:X:2365:U:OP1	2.09	0.52
1:X:204:A:N6	1:X:2386:G:O4'	2.42	0.52
1:X:2526:U:C5	1:X:2545:A:N7	2.77	0.52
1:X:2615:U:OP1	4:B:80:GLU:HG2	2.08	0.52
1:X:2726:U:O2'	1:X:2727:G:H5'	2.09	0.52
1:X:2761:A:H5''	1:X:2762:G:O5'	2.10	0.52
1:X:332:C:C1'	5:C:159:ARG:NE	2.61	0.52
1:X:53:G:N1	1:X:54:G:C4	2.78	0.52
1:X:600:G:O6	1:X:602:C:N4	2.42	0.52
1:X:760:U:N1	26:Y:3:LYS:HE2	2.24	0.52
3:A:169:GLU:O	3:A:172:TYR:N	2.43	0.52
7:E:17:VAL:HA	7:E:26:VAL:HG13	1.91	0.52
7:E:88:GLU:OE2	7:E:90:ARG:HB2	2.10	0.52
10:H:26:ASN:HB3	10:H:38:GLY:H	1.75	0.52
12:J:43:ILE:HD13	12:J:127:PRO:HD2	1.91	0.52
13:K:47:PHE:C	13:K:47:PHE:CD2	2.83	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:N:47:TYR:CD2	16:N:51:ARG:NE	2.75	0.52
16:N:94:VAL:HG12	16:N:95:LEU:N	2.24	0.52
18:P:47:GLY:H	18:P:92:VAL:HB	1.74	0.52
20:R:45:LYS:HZ3	20:R:77:HIS:CE1	2.25	0.52
24:V:42:ARG:O	24:V:46:LEU:HG	2.09	0.52
1:X:1008:G:N2	1:X:1009:C:C2	2.77	0.52
1:X:110:U:H2'	1:X:111:G:O4'	2.10	0.52
1:X:1450:G:O2'	1:X:1451:C:H5'	2.09	0.52
1:X:2189:A:C2	1:X:2190:A:N7	2.78	0.52
1:X:1385:C:H1'	1:X:2192:U:C6	2.45	0.52
1:X:2225:G:C4	1:X:2226:A:C8	2.98	0.52
1:X:2284:U:H2'	1:X:2285:U:H5''	1.91	0.52
1:X:2440:C:H2'	1:X:2441:U:H6	1.74	0.52
1:X:701:U:H5'	1:X:1771:A:C2	2.45	0.52
1:X:788:G:O2'	1:X:789:G:OP2	2.26	0.52
1:X:942:U:O2'	25:W:22:ALA:HA	2.10	0.52
3:A:52:ARG:NH2	3:A:247:VAL:HG11	2.24	0.52
4:B:31:CYS:CB	4:B:49:ILE:HG13	2.38	0.52
6:D:9:ASN:HA	6:D:13:ARG:CB	2.39	0.52
7:E:54:ARG:HG3	7:E:57:ASP:CG	2.30	0.52
9:G:45:ASP:HA	9:G:83:ILE:CG1	2.40	0.52
9:G:97:ASP:O	9:G:99:VAL:N	2.43	0.52
1:X:954:U:P	11:I:38:LYS:HG3	2.50	0.52
13:K:84:ALA:O	13:K:87:TYR:N	2.43	0.52
15:M:107:LEU:O	15:M:109:GLU:N	2.39	0.52
16:N:5:LYS:O	16:N:7:GLY:N	2.43	0.52
17:O:16:GLU:N	17:O:16:GLU:OE1	2.43	0.52
23:U:50:ALA:HB3	23:U:52:ARG:NH2	2.25	0.52
24:V:10:GLN:O	24:V:12:THR:N	2.42	0.52
25:W:7:ARG:O	25:W:8:SER:C	2.48	0.52
1:X:1014:G:O2'	1:X:1015:U:H5'	2.10	0.52
1:X:1271:C:C2	1:X:1272:G:C8	2.98	0.52
1:X:1451:C:H2'	1:X:1452:U:C6	2.44	0.52
1:X:1560:A:N1	1:X:1561:A:C2	2.78	0.52
1:X:2395:C:OP2	11:I:63:ARG:NH1	2.43	0.52
1:X:244:C:C3'	1:X:245:C:H5''	2.37	0.52
1:X:2703:C:O2'	1:X:2704:U:H5'	2.10	0.52
1:X:502:A:H2'	1:X:503:G:O4'	2.10	0.52
1:X:516:G:O2'	1:X:517:A:P	2.68	0.52
1:X:938:G:H2'	1:X:940:G:C8	2.44	0.52
1:X:795:A:C2	3:A:226:MET:HE2	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2597:G:H21	4:B:150:VAL:HG11	1.75	0.52
5:C:176:ASN:ND2	5:C:178:TYR:CB	2.58	0.52
9:G:155:THR:O	9:G:158:HIS:N	2.39	0.52
12:J:81:GLU:O	12:J:82:THR:OG1	2.24	0.52
13:K:28:LEU:HD21	13:K:115:LEU:CD2	2.40	0.52
16:N:114:ARG:HH21	16:N:114:ARG:HG2	1.74	0.52
18:P:41:VAL:HG21	18:P:64:ALA:HB3	1.91	0.52
21:S:147:ILE:HG22	21:S:152:ILE:HD11	1.91	0.52
22:T:58:THR:HG22	22:T:59:LEU:N	2.25	0.52
22:T:58:THR:O	22:T:59:LEU:HD13	2.09	0.52
23:U:9:GLY:N	23:U:14:VAL:HG22	2.19	0.52
1:X:1139:A:O2'	1:X:1140:A:O5'	2.28	0.52
1:X:1209:G:C2	1:X:1210:C:C5	2.98	0.52
1:X:1443:G:H2'	1:X:1444:C:H6	1.74	0.52
1:X:1673:C:H2'	1:X:1674:C:C6	2.38	0.52
1:X:1733:U:N3	1:X:1734:C:C5	2.78	0.52
1:X:1850:G:N7	1:X:1868:A:N6	2.58	0.52
1:X:1861:G:O2'	1:X:1862:C:H5'	2.10	0.52
1:X:2043:A:O2'	1:X:2481:G:O4'	2.27	0.52
1:X:214:C:O2'	1:X:215:G:H5'	2.10	0.52
1:X:2246:A:H61	1:X:2251:U:H3	1.58	0.52
1:X:2270:U:OP1	1:X:2360:C:H5'	2.10	0.52
1:X:2356:A:H1'	14:L:89:PHE:CZ	2.45	0.52
1:X:324:C:H2'	1:X:325:U:H5'	1.90	0.52
1:X:330:C:H2'	1:X:331:U:H6	1.75	0.52
1:X:452:G:H21	5:C:40:ARG:HH22	1.55	0.52
1:X:490:A:O2'	1:X:491:A:H3'	2.10	0.52
1:X:516:G:O2'	1:X:517:A:OP2	2.26	0.52
1:X:873:U:H2'	1:X:874:A:O5'	2.10	0.52
2:Z:42:U:H1'	2:Z:47:A:H62	1.73	0.52
2:Z:50:U:O2'	2:Z:51:G:H5'	2.10	0.52
30:4:31:LYS:HD3	30:4:31:LYS:N	2.25	0.51
30:4:8:LYS:HA	30:4:9:LYS:HE3	1.91	0.51
3:A:166:GLN:HB2	3:A:174:ILE:O	2.09	0.51
3:A:197:GLY:C	3:A:199:ALA:H	2.12	0.51
3:A:38:PRO:HA	3:A:61:LEU:HD23	1.91	0.51
4:B:177:ALA:C	4:B:179:GLU:H	2.12	0.51
4:B:36:ARG:O	4:B:37:LYS:C	2.49	0.51
5:C:124:ASP:CG	5:C:125:ILE:H	2.13	0.51
5:C:153:ASP:C	5:C:154:ASP:CG	2.69	0.51
5:C:119:ALA:O	5:C:189:ASP:O	2.28	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:138:PHE:HB2	6:D:141:ILE:HG12	1.92	0.51
6:D:49:ALA:O	6:D:52:LYS:HB2	2.10	0.51
6:D:94:GLU:CA	6:D:97:TYR:HB2	2.39	0.51
9:G:45:ASP:HA	9:G:83:ILE:HG12	1.91	0.51
11:I:65:PHE:O	11:I:66:ASN:C	2.47	0.51
11:I:70:THR:HG22	11:I:71:THR:N	2.25	0.51
12:J:34:GLY:HA2	12:J:106:GLU:HA	1.92	0.51
13:K:33:ARG:HB2	13:K:114:GLU:HB3	1.90	0.51
15:M:50:PHE:HE2	15:M:70:LYS:CB	2.22	0.51
19:Q:28:TRP:CZ3	19:Q:75:ARG:HB3	2.44	0.51
20:R:52:ASN:O	20:R:74:LEU:HB2	2.11	0.51
21:S:104:SER:OG	21:S:107:GLU:HB2	2.10	0.51
21:S:1:MET:HE1	21:S:46:GLN:OE1	2.11	0.51
22:T:51:VAL:HG11	22:T:59:LEU:HB3	1.92	0.51
22:T:55:ARG:HH11	22:T:55:ARG:HG2	1.74	0.51
1:X:1082:G:O2'	1:X:1100:G:H3'	2.10	0.51
1:X:1103:C:H42	1:X:1111:C:N4	2.07	0.51
1:X:1058:G:H2'	1:X:1121:G:N2	2.25	0.51
1:X:1172:U:C2	1:X:1173:G:C8	2.98	0.51
1:X:1185:C:C2'	1:X:1186:G:H3'	2.31	0.51
1:X:1278:A:HO2'	1:X:1279:G:P	2.32	0.51
1:X:1469:U:C5'	1:X:1470:G:OP2	2.58	0.51
1:X:1345:G:C6	1:X:1625:A:N7	2.79	0.51
1:X:1631:C:C5	1:X:1633:C:C4	2.98	0.51
1:X:168:A:C4	1:X:169:C:C5	2.98	0.51
1:X:1758:C:C2	1:X:1759:A:C8	2.98	0.51
1:X:185:C:O2'	1:X:186:C:H5'	2.10	0.51
1:X:2196:U:C5	1:X:2197:U:C4	2.97	0.51
1:X:2271:C:OP2	14:L:18:ARG:NH2	2.43	0.51
1:X:2559:U:H3'	1:X:2560:G:C2	2.45	0.51
1:X:2661:G:N3	1:X:2662:C:C6	2.78	0.51
1:X:2849:C:H2'	1:X:2849:C:O2	2.10	0.51
1:X:463:C:O5'	5:C:46:ARG:NH1	2.43	0.51
1:X:718:A:N6	1:X:739:G:H1'	2.24	0.51
1:X:833:A:H1'	1:X:954:U:O2'	2.10	0.51
1:X:914:C:H2'	1:X:915:C:H6	1.75	0.51
2:Z:19:C:O2'	2:Z:20:A:H5'	2.10	0.51
1:X:2598:C:H4'	4:B:151:TYR:O	2.10	0.51
6:D:123:ASP:O	6:D:125:ARG:N	2.35	0.51
6:D:92:ARG:HA	6:D:96:MET:HB3	1.92	0.51
7:E:87:LEU:O	7:E:130:ARG:HA	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:157:PRO:O	9:G:161:GLN:HG3	2.11	0.51
9:G:61:ARG:HH11	9:G:65:LYS:HE2	1.75	0.51
10:H:64:VAL:O	10:H:65:LYS:HG3	2.10	0.51
11:I:134:GLU:C	11:I:136:ALA:H	2.14	0.51
12:J:136:GLU:O	12:J:136:GLU:HG3	2.10	0.51
12:J:56:SER:O	12:J:57:ARG:C	2.47	0.51
16:N:115:ASN:O	16:N:117:ARG:N	2.44	0.51
16:N:23:GLY:O	16:N:24:PHE:O	2.28	0.51
21:S:72:ASP:OD1	21:S:75:LYS:HG3	2.10	0.51
21:S:69:VAL:HG22	21:S:81:VAL:HG13	1.91	0.51
23:U:37:ILE:N	23:U:37:ILE:HD13	2.26	0.51
1:X:1060:C:C2	1:X:1124:U:H4'	2.43	0.51
1:X:1431:U:H4'	1:X:1604:A:O4'	2.11	0.51
1:X:1286:U:H5''	1:X:1663:C:N4	2.25	0.51
1:X:201:G:H2'	1:X:202:A:C8	2.45	0.51
1:X:203:G:H1'	1:X:205:A:H61	1.75	0.51
1:X:2229:G:O4'	1:X:2229:G:N3	2.42	0.51
1:X:2299:A:N3	1:X:2299:A:H2'	2.25	0.51
1:X:2494:C:H2'	1:X:2495:G:C8	2.45	0.51
1:X:317:U:C2'	1:X:318:G:C5'	2.77	0.51
1:X:469:G:H21	1:X:480:G:H2'	1.72	0.51
1:X:575:U:C2	1:X:576:A:C8	2.98	0.51
1:X:735:G:C2'	1:X:736:G:H5'	2.40	0.51
30:4:18:ARG:HD2	30:4:22:ARG:O	2.11	0.51
3:A:212:SER:C	3:A:214:TRP:N	2.62	0.51
4:B:93:VAL:O	4:B:94:ASP:CB	2.56	0.51
5:C:31:VAL:HG23	5:C:32:THR:N	2.25	0.51
6:D:38:GLU:O	6:D:40:LEU:CD1	2.58	0.51
7:E:125:VAL:HG13	7:E:131:ILE:CD1	2.39	0.51
9:G:155:THR:C	9:G:157:PRO:CD	2.78	0.51
9:G:67:ARG:O	9:G:70:PHE:CD1	2.63	0.51
9:G:35:LYS:CB	9:G:69:ASP:OD2	2.56	0.51
12:J:69:ILE:HG21	12:J:104:MET:HG3	1.92	0.51
13:K:18:VAL:O	13:K:19:ALA:C	2.48	0.51
17:O:79:GLN:OE1	17:O:79:GLN:N	2.44	0.51
24:V:64:GLY:C	24:V:66:GLN:N	2.63	0.51
1:X:1374:G:O2'	1:X:1375:C:H5'	2.10	0.51
1:X:136:A:C8	1:X:137:A:C8	2.99	0.51
1:X:1583:A:H8	1:X:1583:A:OP2	1.94	0.51
1:X:1693:A:C6	1:X:1694:A:C6	2.98	0.51
1:X:2294:U:O2	6:D:125:ARG:NH1	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2313:G:O2'	1:X:2314:A:OP1	2.26	0.51
1:X:2343:C:C2'	1:X:2344:G:H5'	2.40	0.51
1:X:2371:A:C8	1:X:2372:A:C8	2.98	0.51
1:X:2490:U:H2'	1:X:2491:C:H6	1.72	0.51
1:X:2507:U:O3'	1:X:2508:G:H8	1.94	0.51
1:X:687:G:H2'	1:X:817:A:H61	1.76	0.51
1:X:689:A:C2	1:X:815:A:N6	2.71	0.51
1:X:796:A:C8	1:X:797:A:H4'	2.40	0.51
4:B:68:ALA:C	4:B:70:ALA:H	2.13	0.51
5:C:22:VAL:HA	5:C:106:MET:CG	2.39	0.51
5:C:147:LYS:O	5:C:184:ASP:HB2	2.09	0.51
5:C:163:ASN:ND2	5:C:166:TRP:CG	2.79	0.51
6:D:111:ILE:O	6:D:114:PHE:CB	2.59	0.51
6:D:99:PHE:HA	6:D:102:LYS:CD	2.39	0.51
9:G:167:LYS:O	9:G:168:THR:HG23	2.10	0.51
10:H:24:VAL:HG11	10:H:42:LYS:HG2	1.91	0.51
13:K:96:ARG:C	13:K:97:ILE:HD12	2.31	0.51
14:L:11:LEU:HA	14:L:14:ARG:HB3	1.92	0.51
16:N:64:ARG:O	16:N:65:ILE:C	2.49	0.51
17:O:35:LEU:CD2	17:O:36:LYS:N	2.73	0.51
19:Q:19:ALA:O	19:Q:22:ARG:HG2	2.11	0.51
21:S:44:ARG:CB	21:S:45:GLN:HE22	2.21	0.51
24:V:1:MET:HG3	24:V:3:PRO:HD3	1.92	0.51
25:W:2:LYS:HB3	25:W:54:GLN:CB	2.30	0.51
1:X:1068:A:C8	1:X:1097:A:H2'	2.46	0.51
1:X:1226:A:C2	1:X:1227:A:C4	2.98	0.51
1:X:1313:U:H1'	1:X:1642:G:C2	2.46	0.51
1:X:1788:C:C2	1:X:1789:U:C5	2.98	0.51
1:X:1808:C:H5	3:A:62:TYR:CD2	2.29	0.51
1:X:166:G:N2	1:X:183:U:C5	2.79	0.51
1:X:1885:C:C5	1:X:1886:G:C8	2.99	0.51
1:X:2058:U:H2'	1:X:2217:G:H22	1.75	0.51
1:X:2311:U:H1'	1:X:2315:A:N7	2.26	0.51
1:X:26:G:N1	1:X:27:G:N2	2.58	0.51
1:X:2859:U:C5	1:X:2860:C:C2	2.98	0.51
1:X:36:G:H4'	1:X:463:C:C4	2.46	0.51
1:X:35:G:O2'	1:X:36:G:O5'	2.20	0.51
3:A:52:ARG:NH2	3:A:247:VAL:CG1	2.73	0.51
3:A:79:VAL:HA	3:A:95:LEU:HD23	1.92	0.51
1:X:2658:A:C5'	4:B:165:VAL:HG21	2.40	0.51
4:B:24:THR:HG21	4:B:188:ILE:CD1	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:59:VAL:HG12	4:B:64:GLN:HG2	1.91	0.51
5:C:107:ALA:O	5:C:108:ILE:C	2.49	0.51
7:E:8:PRO:C	7:E:9:ILE:HD13	2.31	0.51
10:H:60:PRO:O	10:H:61:ARG:HB2	2.10	0.51
11:I:77:LEU:CD2	11:I:112:GLY:O	2.59	0.51
11:I:130:ILE:HG22	11:I:131:LYS:N	2.25	0.51
11:I:29:THR:HA	11:I:34:HIS:CD2	2.44	0.51
11:I:85:ASP:CA	11:I:116:ARG:HH22	2.22	0.51
12:J:20:GLY:C	12:J:99:LYS:HE2	2.31	0.51
13:K:87:TYR:CE1	13:K:94:TYR:CD2	2.91	0.51
14:L:33:ARG:HD3	14:L:100:VAL:HA	1.92	0.51
15:M:24:LEU:CB	15:M:25:PRO:CD	2.88	0.51
16:N:32:TYR:O	16:N:33:ARG:O	2.29	0.51
20:R:49:GLU:HA	20:R:73:GLU:OE2	2.10	0.51
21:S:107:GLU:OE1	21:S:113:VAL:HG23	2.10	0.51
12:J:61:ARG:NH1	21:S:175:ARG:HD2	2.22	0.51
21:S:25:ASN:HD21	21:S:28:ASN:ND2	2.09	0.51
21:S:42:ALA:C	21:S:44:ARG:H	2.13	0.51
1:X:1032:A:C8	1:X:1032:A:H3'	2.45	0.51
1:X:1223:G:H4'	1:X:1224:A:OP2	2.11	0.51
1:X:131:C:C4	1:X:132:U:C4	2.99	0.51
1:X:1385:C:H2'	1:X:1386:A:C5'	2.41	0.51
1:X:1849:G:N2	1:X:1850:G:O6	2.43	0.51
1:X:2802:C:H2'	1:X:2803:C:C6	2.42	0.51
1:X:409:G:O2'	1:X:410:A:H5'	2.09	0.51
1:X:556:A:OP2	1:X:556:A:H8	1.94	0.51
1:X:737:C:H2'	1:X:738:G:C8	2.44	0.51
1:X:951:G:C3'	1:X:952:A:H5''	2.41	0.51
1:X:1790:G:H21	3:A:155:LEU:CD2	2.24	0.51
3:A:183:ARG:HD3	3:A:184:ARG:N	2.25	0.51
3:A:246:PRO:C	3:A:247:VAL:O	2.42	0.51
5:C:162:ARG:O	5:C:162:ARG:CG	2.57	0.51
5:C:176:ASN:O	5:C:178:TYR:N	2.44	0.51
5:C:21:GLU:O	5:C:22:VAL:O	2.29	0.51
7:E:156:ALA:O	7:E:157:TYR:CD1	2.64	0.51
8:F:116:LEU:HD13	8:F:124:ALA:HA	1.93	0.51
1:X:1074:G:N2	8:F:91:THR:HA	2.16	0.51
10:H:12:ASP:HA	10:H:109:ARG:O	2.11	0.51
10:H:11:ALA:CB	10:H:110:VAL:HG13	2.41	0.51
10:H:1:MET:N	10:H:79:HIS:HB2	2.26	0.51
12:J:75:VAL:HG21	12:J:93:TYR:CE2	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:K:19:ALA:O	13:K:23:ALA:N	2.33	0.51
15:M:103:LYS:O	15:M:104:LEU:CB	2.44	0.51
15:M:34:ARG:HD3	15:M:81:PHE:CE2	2.45	0.51
11:I:32:ARG:NH2	17:O:81:ARG:HE	2.09	0.51
22:T:56:ASP:OD1	22:T:58:THR:OG1	2.21	0.51
22:T:51:VAL:HG22	22:T:61:ALA:HA	1.93	0.51
22:T:50:GLY:O	22:T:62:LEU:HD23	2.09	0.51
24:V:41:HIS:C	24:V:43:VAL:H	2.14	0.51
1:X:1006:C:H6	1:X:1006:C:H5''	1.75	0.51
1:X:1092:U:H6	1:X:1092:U:O5'	1.93	0.51
1:X:1803:G:O2'	1:X:1804:U:H5'	2.11	0.51
1:X:2012:A:H2'	1:X:2014:A:OP1	2.09	0.51
1:X:20:C:H2'	1:X:21:A:C8	2.44	0.51
1:X:21:A:C6	1:X:530:G:C6	2.98	0.51
1:X:2269:G:H22	1:X:2322:U:H1'	1.76	0.51
1:X:2327:U:C4	1:X:2361:G:N2	2.78	0.51
1:X:2559:U:H3'	1:X:2560:G:N3	2.25	0.51
1:X:2659:C:H2'	1:X:2660:C:C6	2.46	0.51
1:X:2756:A:N6	1:X:2762:G:H1'	2.26	0.51
1:X:2776:U:C6	1:X:2776:U:H3'	2.45	0.51
1:X:2827:G:O2'	1:X:2828:C:H5'	2.10	0.51
1:X:501:G:H2'	1:X:502:A:H8	1.76	0.51
13:K:99:ARG:HG3	26:Y:44:HIS:CG	2.46	0.51
2:Z:53:G:H21	2:Z:54:U:H5	1.58	0.51
4:B:179:GLU:CG	4:B:181:LEU:HD12	2.41	0.51
5:C:129:LYS:O	5:C:131:LYS:N	2.40	0.51
6:D:116:GLY:HA3	6:D:178:ARG:HG3	1.92	0.51
6:D:10:ASP:CA	6:D:14:PRO:HD2	2.41	0.51
7:E:133:VAL:HG11	7:E:144:VAL:HG11	1.92	0.51
1:X:2510:A:N7	7:E:175:LYS:HG2	2.26	0.51
7:E:84:THR:CB	7:E:134:SER:HB2	2.39	0.51
9:G:154:GLU:OE1	9:G:156:HIS:CD2	2.64	0.51
9:G:61:ARG:NE	9:G:65:LYS:CE	2.70	0.51
11:I:32:ARG:CZ	17:O:81:ARG:CZ	2.88	0.51
11:I:73:GLU:CD	11:I:73:GLU:N	2.64	0.51
14:L:36:LYS:HE2	14:L:65:THR:HG22	1.93	0.51
16:N:39:LEU:HB3	17:O:72:ARG:HH12	1.76	0.51
17:O:11:GLN:C	17:O:39:PHE:HB3	2.31	0.51
18:P:85:MET:HE3	18:P:130:GLU:HG3	1.92	0.51
19:Q:51:ILE:HD11	19:Q:83:ALA:HA	1.93	0.51
21:S:103:ARG:HH22	21:S:107:GLU:HG2	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:V:6:MET:HG3	24:V:56:VAL:HG11	1.92	0.51
1:X:1142:G:C4'	9:G:103:TYR:CE2	2.92	0.51
1:X:1402:G:C5	1:X:1403:U:C5	2.98	0.51
1:X:1430:G:O2'	1:X:1431:U:H5'	2.11	0.51
1:X:1473:U:O2'	1:X:1474:A:P	2.68	0.51
1:X:1705:U:O4'	1:X:1718:A:N6	2.44	0.51
1:X:1975:G:N2	1:X:1979:C:O2	2.40	0.51
1:X:1982:C:H4'	1:X:2703:C:O2	2.11	0.51
1:X:1998:A:H1'	26:Y:3:LYS:HG2	1.92	0.51
1:X:2198:U:C4	1:X:2199:C:C2	2.99	0.51
1:X:218:A:N6	1:X:232:A:H5''	2.25	0.51
1:X:2594:U:H6	1:X:2594:U:C5'	2.18	0.51
1:X:2629:U:H2'	1:X:2630:C:C6	2.45	0.51
1:X:517:A:H5''	1:X:518:A:C5'	2.30	0.51
1:X:540:G:N3	1:X:2004:U:O2'	2.44	0.51
1:X:952:A:H2'	1:X:953:G:O4'	2.11	0.51
2:Z:36:A:C4'	2:Z:37:C:H5	2.20	0.51
2:Z:45:C:C3'	6:D:92:ARG:NH1	2.74	0.51
2:Z:75:A:N1	21:S:29:ASN:ND2	2.58	0.51
3:A:134:ARG:C	3:A:136:VAL:H	2.13	0.51
3:A:172:TYR:HA	3:A:186:HIS:HA	1.91	0.51
1:X:1584:G:H5''	3:A:61:LEU:HG	1.92	0.51
1:X:334:G:H5'	5:C:162:ARG:HE	1.75	0.51
5:C:54:THR:C	5:C:55:GLY:O	2.48	0.51
5:C:33:TRP:NE1	5:C:93:TYR:O	2.42	0.51
6:D:40:LEU:HD12	6:D:40:LEU:N	2.26	0.51
9:G:125:ARG:O	9:G:127:ILE:N	2.44	0.51
10:H:79:HIS:CD2	10:H:80:ALA:H	2.28	0.51
15:M:38:LYS:C	15:M:40:ARG:N	2.63	0.51
1:X:987:G:OP1	16:N:48:ARG:NH2	2.44	0.51
16:N:60:LEU:HA	16:N:63:GLN:OE1	2.11	0.51
16:N:66:ASN:CG	16:N:70:ARG:HH12	2.14	0.51
19:Q:33:ALA:O	19:Q:34:THR:C	2.48	0.51
19:Q:42:ILE:HG23	19:Q:43:GLN:H	1.74	0.51
19:Q:62:ARG:NH1	19:Q:73:ASN:ND2	2.59	0.51
19:Q:88:ILE:HD12	19:Q:88:ILE:C	2.31	0.51
20:R:86:PRO:O	20:R:87:GLU:HB2	2.11	0.51
20:R:93:ARG:CG	20:R:93:ARG:HH11	2.24	0.51
21:S:35:ASP:OD1	21:S:38:ALA:N	2.43	0.51
21:S:72:ASP:N	21:S:77:ALA:O	2.43	0.51
21:S:20:ALA:HB3	21:S:80:HIS:ND1	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:U:28:GLY:HA3	23:U:32:ARG:CG	2.41	0.51
1:X:1307:U:H5''	1:X:1307:U:H6	1.75	0.51
1:X:1393:G:C2	1:X:1394:G:C8	2.98	0.51
1:X:1448:A:H2'	1:X:1449:C:C6	2.45	0.51
1:X:1474:A:H1'	1:X:1475:U:H5''	1.93	0.51
1:X:1685:A:C2	1:X:1976:U:H1'	2.46	0.51
1:X:2263:C:H1'	1:X:2304:G:N2	2.26	0.51
1:X:2306:A:C2'	1:X:2307:A:O4'	2.59	0.51
1:X:2370:G:O2'	1:X:2403:C:N4	2.43	0.51
1:X:2460:G:C2'	1:X:2461:G:OP2	2.59	0.51
1:X:2461:G:N3	1:X:2461:G:H2'	2.25	0.51
1:X:2691:C:C2'	1:X:2692:A:O5'	2.58	0.51
1:X:313:U:C2'	1:X:314:G:H8	2.11	0.51
1:X:53:G:C6	1:X:54:G:C5	2.98	0.51
1:X:677:G:C2'	1:X:678:G:H5'	2.41	0.51
1:X:890:U:H2'	1:X:891:A:H8	1.76	0.51
26:Y:32:GLU:CG	26:Y:39:LYS:HE3	2.41	0.51
2:Z:27:A:H61	2:Z:55:C:H5''	1.76	0.51
3:A:243:GLY:CA	3:A:244:ARG:HH11	2.24	0.51
3:A:53:PHE:O	3:A:54:ILE:CG2	2.59	0.51
4:B:152:LYS:H	9:G:106:TYR:CB	2.23	0.51
4:B:175:ILE:HG22	4:B:175:ILE:O	2.10	0.51
4:B:60:ASN:HB2	4:B:63:MET:H	1.75	0.51
5:C:104:LEU:HA	5:C:107:ALA:CB	2.41	0.51
6:D:155:THR:C	6:D:156:ILE:HD12	2.32	0.51
9:G:103:TYR:CZ	9:G:111:LYS:HA	2.44	0.51
9:G:67:ARG:HD3	9:G:70:PHE:O	2.11	0.51
10:H:127:VAL:CG1	10:H:128:SER:N	2.73	0.51
12:J:52:ARG:HA	12:J:55:MET:HE3	1.93	0.51
16:N:87:ASN:O	16:N:87:ASN:ND2	2.37	0.51
16:N:94:VAL:HG11	16:N:98:ILE:HD11	1.93	0.51
18:P:27:VAL:CA	18:P:125:THR:HG22	2.40	0.51
18:P:37:LYS:NZ	18:P:64:ALA:HB2	2.26	0.51
1:X:1354:A:H4'	19:Q:56:MET:CG	2.41	0.51
20:R:16:PHE:CE2	20:R:80:LYS:NZ	2.77	0.51
20:R:93:ARG:NH2	20:R:108:VAL:HG22	2.26	0.51
21:S:39:PHE:CZ	21:S:81:VAL:HG21	2.46	0.51
23:U:28:GLY:N	23:U:32:ARG:HE	2.08	0.51
24:V:5:GLU:HA	24:V:8:ASN:CB	2.41	0.51
1:X:1128:G:C3'	1:X:1129:A:C5'	2.89	0.51
1:X:1658:A:N6	1:X:1659:G:N3	2.58	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1788:C:N3	1:X:1789:U:C5	2.79	0.51
1:X:1849:G:H2'	1:X:1850:G:H8	1.75	0.51
1:X:1928:G:C4	1:X:1929:U:C5	2.99	0.51
1:X:2048:C:H1'	1:X:2428:U:N3	2.26	0.51
1:X:2737:A:O4'	1:X:2737:A:OP1	2.29	0.51
1:X:2839:G:C4	1:X:2840:U:C5	2.99	0.51
1:X:41:G:C2	1:X:451:A:C2	2.99	0.51
1:X:813:A:C4'	1:X:814:G:O5'	2.56	0.51
1:X:938:G:H2'	1:X:940:G:H8	1.75	0.51
2:Z:35:C:O2'	2:Z:36:A:H5'	2.10	0.51
4:B:133:LYS:HG2	4:B:133:LYS:O	2.10	0.51
4:B:201:ALA:C	4:B:203:LYS:H	2.14	0.51
6:D:132:ILE:HG22	6:D:133:LYS:N	2.26	0.51
7:E:130:ARG:O	7:E:131:ILE:CD1	2.54	0.51
10:H:124:MET:O	10:H:127:VAL:N	2.44	0.51
11:I:10:PRO:HB2	11:I:14:LYS:HG2	1.93	0.51
12:J:105:PHE:C	12:J:106:GLU:CD	2.70	0.51
14:L:90:ASP:OD1	14:L:90:ASP:N	2.43	0.51
17:O:15:SER:CB	17:O:95:ILE:O	2.59	0.51
21:S:10:PRO:O	21:S:13:LYS:HG2	2.10	0.51
1:X:1068:A:N7	1:X:1097:A:H2'	2.25	0.51
1:X:1233:A:HO2'	1:X:1234:C:P	2.33	0.51
1:X:141:G:H2'	1:X:142:U:H6	1.76	0.51
1:X:1503:G:C2	1:X:1504:G:C5	2.99	0.51
1:X:1504:G:H5''	1:X:1505:U:OP2	2.11	0.51
1:X:1955:G:H2'	1:X:1956:G:H8	1.76	0.51
1:X:2083:G:H1	1:X:2172:U:H3	1.58	0.51
1:X:2235:G:C2'	1:X:2236:U:H5'	2.40	0.51
1:X:2511:G:C5	1:X:2512:A:C5	2.99	0.51
1:X:2606:G:N2	1:X:2757:G:C4	2.79	0.51
1:X:2787:A:N1	1:X:2864:C:C4	2.79	0.51
1:X:492:G:C2'	1:X:493:A:OP2	2.59	0.51
1:X:599:A:H2'	1:X:600:G:O4'	2.10	0.51
1:X:708:G:OP1	1:X:1393:G:H4'	2.10	0.51
1:X:915:C:H2'	1:X:916:U:C5	2.46	0.51
1:X:968:C:C4	1:X:970:A:C4	2.99	0.51
3:A:173:VAL:N	3:A:185:VAL:O	2.43	0.50
3:A:53:PHE:HA	3:A:217:ARG:HH21	1.76	0.50
7:E:56:SER:HB2	7:E:61:HIS:CD2	2.46	0.50
9:G:101:THR:HG1	9:G:103:TYR:HE1	1.59	0.50
9:G:58:ILE:HG21	9:G:148:LEU:CD1	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:H:116:ARG:NH1	15:M:38:LYS:CE	2.75	0.50
11:I:87:THR:O	11:I:93:LEU:HB3	2.11	0.50
17:O:23:GLU:O	17:O:24:SER:C	2.48	0.50
20:R:26:SER:OG	20:R:79:SER:HB3	2.11	0.50
20:R:54:ILE:HG23	20:R:71:GLN:HB2	1.93	0.50
21:S:136:VAL:HG12	21:S:137:ASP:N	2.24	0.50
23:U:34:THR:HG23	23:U:35:THR:H	1.76	0.50
25:W:38:PRO:CD	25:W:41:ARG:HH12	2.23	0.50
1:X:953:G:H1'	1:X:1203:A:H2	1.76	0.50
1:X:1428:G:HO2'	1:X:1429:A:H8	1.59	0.50
1:X:1451:C:H2'	1:X:1452:U:H6	1.76	0.50
1:X:1592:U:O5'	1:X:1592:U:H6	1.94	0.50
1:X:1713:G:C8	1:X:1713:G:H5''	2.46	0.50
1:X:1887:G:O2'	1:X:1888:C:H5'	2.11	0.50
1:X:2411:A:C6	1:X:2412:A:N1	2.79	0.50
1:X:2453:C:H5'	1:X:2454:C:OP2	2.10	0.50
1:X:2674:C:O2'	1:X:2675:U:H5'	2.10	0.50
1:X:2726:U:C1'	7:E:139:GLN:HG2	2.41	0.50
1:X:2870:C:H2'	1:X:2871:U:C6	2.46	0.50
1:X:426:C:O5'	1:X:426:C:H6	1.94	0.50
1:X:431:G:O2'	1:X:432:C:H5'	2.11	0.50
1:X:471:A:H3'	1:X:472:C:H6	1.75	0.50
1:X:641:G:N2	1:X:643:A:H3'	2.26	0.50
1:X:873:U:C4	1:X:2247:A:C8	2.99	0.50
30:4:1:MET:CA	30:4:1:MET:HE2	2.41	0.50
30:4:30:VAL:C	30:4:32:HIS:N	2.57	0.50
3:A:200:GLU:OE1	3:A:202:LYS:HA	2.11	0.50
3:A:48:ARG:H	3:A:48:ARG:CD	2.08	0.50
5:C:146:GLU:O	5:C:148:VAL:HG23	2.12	0.50
5:C:7:ILE:HG22	5:C:120:VAL:O	2.12	0.50
7:E:167:GLU:HG2	7:E:169:ILE:HD11	1.93	0.50
7:E:25:LYS:CG	7:E:27:LYS:HE3	2.41	0.50
8:F:92:PRO:HB3	8:F:136:GLY:HA2	1.93	0.50
9:G:106:TYR:O	9:G:110:LEU:CG	2.58	0.50
12:J:58:HIS:CD2	12:J:118:ALA:HB2	2.47	0.50
12:J:28:VAL:HG21	12:J:135:ARG:HA	1.92	0.50
12:J:59:PHE:CZ	12:J:110:VAL:HG11	2.46	0.50
14:L:54:ALA:CB	14:L:75:LEU:HD13	2.41	0.50
16:N:91:ASN:HA	17:O:10:LYS:HZ2	1.76	0.50
16:N:94:VAL:CG1	16:N:98:ILE:HD11	2.41	0.50
1:X:64:C:P	19:Q:71:GLN:HB2	2.51	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:25:ASN:HA	21:S:84:TYR:CE1	2.47	0.50
1:X:2343:C:OP1	22:T:55:ARG:NH2	2.44	0.50
23:U:8:THR:OG1	23:U:13:LEU:HD12	2.10	0.50
24:V:3:PRO:C	24:V:6:MET:HB3	2.31	0.50
1:X:101:A:H3'	1:X:102:C:C5	2.46	0.50
1:X:1524:C:H3'	1:X:1525:A:C5'	2.41	0.50
1:X:1621:C:H2'	1:X:1622:G:H5'	1.92	0.50
1:X:1939:U:O2	1:X:1939:U:C2'	2.56	0.50
1:X:1919:A:N6	1:X:1946:U:H3	2.09	0.50
1:X:2172:U:O5'	1:X:2172:U:H6	1.93	0.50
1:X:228:A:OP1	11:I:53:ARG:HB3	2.11	0.50
1:X:2847:G:C2	1:X:2848:A:N6	2.79	0.50
1:X:308:C:C2'	1:X:309:G:H5'	2.42	0.50
1:X:399:G:O2'	1:X:400:U:P	2.69	0.50
1:X:414:A:H5'	1:X:414:A:C8	2.38	0.50
1:X:887:G:O2'	1:X:888:G:H5'	2.11	0.50
1:X:982:C:H2'	1:X:983:G:O4'	2.10	0.50
2:Z:67:C:H2'	2:Z:111:C:N4	2.19	0.50
3:A:146:GLU:OE2	3:A:150:GLY:O	2.29	0.50
3:A:200:GLU:O	3:A:202:LYS:N	2.44	0.50
3:A:217:ARG:CZ	3:A:218:LYS:HE2	2.42	0.50
4:B:133:LYS:HG3	4:B:137:ARG:HB3	1.92	0.50
4:B:85:ALA:H	4:B:86:PRO:CD	2.09	0.50
5:C:5:ASN:HA	5:C:118:VAL:HG23	1.93	0.50
6:D:57:LEU:HD12	6:D:65:PRO:HG3	1.93	0.50
6:D:70:ALA:C	6:D:72:LYS:N	2.65	0.50
6:D:85:VAL:HG23	6:D:86:GLY:N	2.24	0.50
7:E:150:LYS:C	7:E:152:ARG:N	2.65	0.50
9:G:144:MET:O	9:G:145:HIS:C	2.50	0.50
11:I:134:GLU:HG2	11:I:138:GLY:O	2.12	0.50
12:J:68:ARG:HD3	12:J:103:VAL:HG12	1.91	0.50
13:K:51:LEU:O	13:K:52:ILE:C	2.50	0.50
14:L:67:THR:O	14:L:68:ALA:O	2.30	0.50
14:L:33:ARG:O	14:L:99:ARG:CZ	2.59	0.50
16:N:71:LEU:HG	16:N:72:HIS:CE1	2.46	0.50
18:P:86:LEU:HB2	18:P:130:GLU:OE1	2.11	0.50
18:P:9:ARG:CG	18:P:13:GLN:HG3	2.41	0.50
19:Q:31:PRO:O	19:Q:76:LYS:HD2	2.11	0.50
21:S:115:ILE:HG23	21:S:169:VAL:CG1	2.41	0.50
23:U:34:THR:HG23	23:U:35:THR:N	2.26	0.50
1:X:1139:A:O2'	1:X:1140:A:O4'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1265:G:O2'	1:X:1266:G:O4'	2.30	0.50
1:X:1529:C:H2'	1:X:1530:U:O4'	2.12	0.50
1:X:1682:A:H2'	1:X:1683:G:H5'	1.93	0.50
1:X:1698:C:HO2'	1:X:1753:A:C2'	2.23	0.50
1:X:1808:C:H5''	3:A:39:LYS:HZ1	1.71	0.50
1:X:1810:U:H4'	1:X:1811:A:OP2	2.11	0.50
1:X:1922:U:O2'	1:X:1923:U:P	2.70	0.50
1:X:194:G:H2'	1:X:195:A:O4'	2.10	0.50
1:X:2299:A:H61	1:X:2312:A:H3'	1.77	0.50
1:X:2312:A:H4'	1:X:2313:G:O5'	2.12	0.50
1:X:234:C:C2'	1:X:235:C:H5'	2.42	0.50
1:X:2543:A:C2	1:X:2626:U:H4'	2.46	0.50
1:X:2782:G:H2'	1:X:2783:U:O5'	2.12	0.50
1:X:29:U:H2'	1:X:30:G:C8	2.46	0.50
1:X:740:A:OP1	1:X:1445:A:O2'	2.29	0.50
1:X:755:C:H2'	1:X:756:C:H6	1.75	0.50
2:Z:58:G:H1'	2:Z:59:A:N7	2.26	0.50
3:A:72:LYS:NZ	3:A:99:ASP:OD1	2.44	0.50
4:B:162:MET:HG3	4:B:162:MET:O	2.11	0.50
4:B:4:ILE:CG1	4:B:5:LEU:H	2.23	0.50
8:F:73:PRO:CB	8:F:74:PRO:CD	2.90	0.50
11:I:67:ASN:O	11:I:68:VAL:CB	2.59	0.50
1:X:970:A:N6	12:J:83:ARG:NH2	2.60	0.50
16:N:10:ARG:CB	16:N:10:ARG:HH11	2.25	0.50
16:N:46:GLU:OE2	17:O:72:ARG:HD3	2.11	0.50
17:O:75:LYS:HB2	17:O:80:TYR:CB	2.40	0.50
21:S:148:THR:C	21:S:152:ILE:HD13	2.31	0.50
23:U:70:LEU:CD2	23:U:74:PRO:HA	2.42	0.50
24:V:5:GLU:HA	24:V:8:ASN:HB2	1.94	0.50
25:W:10:ILE:HG23	25:W:11:GLY:N	2.26	0.50
25:W:38:PRO:HD3	25:W:41:ARG:HH12	1.76	0.50
1:X:1190:C:H6	1:X:1190:C:O5'	1.95	0.50
1:X:985:G:N2	1:X:1200:G:C8	2.79	0.50
1:X:119:G:H2'	1:X:120:G:H8	1.75	0.50
1:X:1231:A:C4	1:X:1232:U:C5	3.00	0.50
1:X:1351:G:N2	1:X:1352:G:H1'	2.26	0.50
1:X:1419:G:H2'	1:X:1420:A:O4'	2.12	0.50
1:X:1526:U:H2'	1:X:1527:G:C5'	2.42	0.50
1:X:1359:G:C5	1:X:1617:G:N2	2.80	0.50
1:X:1655:C:O2	1:X:2677:U:O2'	2.27	0.50
1:X:1692:C:C2'	1:X:1693:A:H5'	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:207:U:O2'	1:X:208:C:H5'	2.11	0.50
1:X:227:G:O2'	11:I:53:ARG:CZ	2.60	0.50
1:X:2431:C:H2'	1:X:2432:A:C8	2.47	0.50
1:X:1949:A:H2	1:X:2572:U:H1'	1.73	0.50
1:X:59:G:C6	1:X:62:U:N3	2.80	0.50
1:X:709:A:H2'	1:X:710:C:O4'	2.12	0.50
1:X:946:U:C2	1:X:947:C:C5	2.99	0.50
3:A:177:LEU:HD12	3:A:181:GLU:OE1	2.12	0.50
4:B:49:ILE:CD1	4:B:50:GLY:N	2.73	0.50
5:C:44:SER:HB3	5:C:88:PRO:HG3	1.93	0.50
6:D:32:GLU:CD	6:D:157:VAL:HG11	2.31	0.50
6:D:27:ALA:O	6:D:28:VAL:O	2.30	0.50
6:D:66:ILE:HG22	6:D:88:LYS:C	2.31	0.50
6:D:73:SER:HB3	6:D:79:LEU:HD23	1.93	0.50
9:G:50:PRO:O	9:G:51:LEU:C	2.49	0.50
11:I:32:ARG:NH1	17:O:81:ARG:NH2	2.60	0.50
12:J:121:LEU:C	12:J:123:GLY:N	2.64	0.50
19:Q:63:LYS:HB2	19:Q:70:GLY:N	2.25	0.50
19:Q:63:LYS:HE2	19:Q:64:ARG:C	2.32	0.50
23:U:11:LYS:O	23:U:12:ASN:ND2	2.44	0.50
1:X:1331:G:N2	1:X:1332:G:H1'	2.26	0.50
1:X:1428:G:H2'	1:X:1428:G:N3	2.26	0.50
1:X:2570:C:H2'	1:X:2571:G:C8	2.46	0.50
1:X:2598:C:C4'	4:B:150:VAL:HG22	2.41	0.50
1:X:537:C:O2'	1:X:538:A:C4	2.65	0.50
1:X:635:C:O2'	1:X:636:G:H5''	2.11	0.50
1:X:808:C:O2'	1:X:809:C:H5'	2.11	0.50
1:X:858:G:P	1:X:858:G:H8	2.35	0.50
2:Z:32:C:H1'	2:Z:59:A:N6	2.17	0.50
30:4:1:MET:C	30:4:1:MET:SD	2.90	0.50
3:A:58:HIS:ND1	3:A:58:HIS:O	2.40	0.50
6:D:17:MET:HA	6:D:21:GLY:CA	2.42	0.50
7:E:36:PRO:C	7:E:37:TYR:CD1	2.85	0.50
7:E:84:THR:HA	7:E:134:SER:CA	2.33	0.50
9:G:42:VAL:HG12	9:G:43:VAL:N	2.26	0.50
9:G:91:THR:HG22	9:G:92:GLY:N	2.26	0.50
10:H:116:ARG:HA	10:H:133:VAL:CG1	2.41	0.50
10:H:17:ARG:HE	10:H:59:ALA:HB2	1.77	0.50
12:J:113:GLU:HA	12:J:116:LYS:HB3	1.91	0.50
12:J:57:ARG:HG2	12:J:57:ARG:NH1	2.10	0.50
13:K:48:VAL:O	13:K:49:GLU:C	2.50	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2313:G:H21	14:L:17:VAL:HB	1.77	0.50
14:L:21:THR:HG22	14:L:22:ALA:N	2.26	0.50
14:L:33:ARG:O	14:L:99:ARG:NH1	2.44	0.50
15:M:34:ARG:NH1	15:M:81:PHE:CB	2.74	0.50
16:N:14:HIS:CE1	16:N:32:TYR:CD2	3.00	0.50
16:N:69:ALA:HB1	16:N:75:ASN:H	1.76	0.50
24:V:6:MET:CG	24:V:56:VAL:HG11	2.40	0.50
1:X:1355:A:O2'	1:X:1357:U:OP2	2.20	0.50
1:X:161:U:H2'	1:X:162:C:C6	2.47	0.50
1:X:1763:G:H5''	1:X:1764:A:OP2	2.12	0.50
1:X:1809:G:H5'	3:A:88:ARG:HH12	1.76	0.50
1:X:2222:U:C2	1:X:2223:U:C5	3.00	0.50
1:X:29:U:H2'	1:X:30:G:H8	1.77	0.50
1:X:342:G:H4'	1:X:343:A:OP1	2.11	0.50
1:X:726:G:H2'	1:X:727:U:N1	2.27	0.50
2:Z:120:G:H2'	2:Z:121:G:O4'	2.11	0.50
2:Z:31:A:H2'	2:Z:32:C:O4'	2.12	0.50
2:Z:32:C:C2'	2:Z:33:C:H5'	2.38	0.50
2:Z:71:G:N2	2:Z:72:C:C1'	2.74	0.50
3:A:105:ILE:O	3:A:107:ALA:N	2.45	0.50
4:B:188:ILE:HG22	4:B:189:PRO:N	2.26	0.50
5:C:104:LEU:O	5:C:108:ILE:N	2.43	0.50
5:C:190:ALA:C	5:C:192:ALA:H	2.12	0.50
9:G:146:THR:HG22	9:G:147:ARG:N	2.26	0.50
10:H:22:ILE:O	10:H:23:ARG:HB2	2.10	0.50
11:I:92:THR:C	11:I:94:GLU:H	2.15	0.50
11:I:88:PHE:O	11:I:93:LEU:HB2	2.12	0.50
13:K:13:ASN:CG	13:K:13:ASN:O	2.48	0.50
13:K:17:ARG:NH1	13:K:20:LEU:CD2	2.74	0.50
18:P:39:ARG:O	18:P:40:LEU:C	2.50	0.50
19:Q:38:ILE:O	19:Q:41:ALA:HB3	2.12	0.50
20:R:17:LYS:O	20:R:20:ASP:OD1	2.30	0.50
23:U:20:ARG:CG	23:U:39:LYS:HE3	2.40	0.50
23:U:70:LEU:HD23	23:U:75:TYR:CD1	2.46	0.50
1:X:1223:G:H4'	1:X:1224:A:H5'	1.94	0.50
1:X:137:A:H2'	1:X:138:G:H5'	1.94	0.50
1:X:1513:U:OP2	1:X:1514:C:H5	1.95	0.50
1:X:1514:C:C6	1:X:1593:C:H4'	2.47	0.50
1:X:1685:A:H4'	1:X:1686:A:O5'	2.12	0.50
1:X:1910:A:O5'	1:X:1910:A:H8	1.95	0.50
1:X:2243:C:H2'	1:X:2244:C:O4'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2344:G:H4'	22:T:60:PHE:CE2	2.46	0.50
1:X:2650:G:O2'	1:X:2651:U:H5'	2.12	0.50
1:X:488:A:C6	1:X:489:A:C6	2.99	0.50
1:X:623:G:C2	1:X:627:A:C6	3.00	0.50
1:X:683:A:C5'	11:I:45:LYS:N	2.71	0.50
1:X:874:A:H61	1:X:928:G:H1'	1.77	0.50
1:X:968:C:N4	1:X:970:A:C4	2.80	0.50
4:B:33:ILE:HD11	4:B:88:GLY:O	2.12	0.50
5:C:48:ARG:C	5:C:50:GLN:N	2.65	0.50
1:X:687:G:H5''	5:C:70:GLY:H	1.75	0.50
6:D:11:GLN:C	6:D:15:ALA:HB2	2.32	0.50
6:D:62:LEU:O	6:D:63:GLN:HB2	2.10	0.50
11:I:129:ALA:O	11:I:130:ILE:C	2.48	0.50
12:J:111:THR:OG1	12:J:114:GLN:HB2	2.11	0.50
13:K:113:ILE:HG23	13:K:113:ILE:O	2.11	0.50
13:K:33:ARG:HB2	13:K:114:GLU:CB	2.41	0.50
13:K:25:ALA:HB2	13:K:47:PHE:CE2	2.47	0.50
14:L:46:SER:O	14:L:47:ARG:C	2.50	0.50
16:N:75:ASN:OD1	16:N:78:THR:N	2.45	0.50
16:N:88:ILE:HA	17:O:49:GLU:HG3	1.94	0.50
19:Q:61:LYS:HG2	19:Q:61:LYS:O	2.12	0.50
20:R:60:PRO:C	20:R:62:MET:H	2.14	0.50
24:V:2:LYS:N	24:V:3:PRO:HD3	2.26	0.50
24:V:7:ARG:C	24:V:9:LEU:H	2.15	0.50
1:X:1142:G:C4	1:X:1143:A:C8	3.00	0.50
1:X:1149:G:P	9:G:98:LYS:HZ3	2.35	0.50
1:X:1249:G:HO2'	1:X:1250:A:P	2.35	0.50
1:X:1572:C:C2'	1:X:1573:G:H5'	2.42	0.50
1:X:45:C:N3	1:X:157:G:C2	2.80	0.50
1:X:169:C:O2'	1:X:170:U:H5'	2.11	0.50
1:X:1831:G:C5	1:X:1832:G:N7	2.80	0.50
1:X:1856:U:O2'	1:X:1857:G:H5'	2.12	0.50
1:X:1975:G:N2	1:X:1979:C:O2'	2.45	0.50
1:X:2302:G:C6	1:X:2303:C:C4	3.00	0.50
1:X:2639:A:H2'	1:X:2640:G:O4'	2.11	0.50
1:X:2839:G:C5	1:X:2840:U:C4	3.00	0.50
1:X:332:C:OP2	5:C:130:THR:HB	2.12	0.50
1:X:481:A:N1	1:X:482:A:C2	2.79	0.50
1:X:573:C:O2'	1:X:574:C:H5'	2.12	0.50
1:X:703:A:O2'	1:X:793:G:OP1	2.24	0.50
1:X:917:U:H2'	1:X:918:A:C5'	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:969:U:C5	12:J:17:ARG:HB2	2.47	0.50
2:Z:53:G:P	14:L:64:LYS:HZ1	2.34	0.50
3:A:101:GLU:C	3:A:101:GLU:CD	2.70	0.50
1:X:1582:A:OP1	3:A:211:ARG:CZ	2.60	0.50
3:A:43:ARG:NH2	3:A:54:ILE:HG13	2.23	0.50
5:C:104:LEU:CD1	5:C:175:VAL:HG23	2.42	0.50
7:E:13:SER:O	7:E:15:VAL:N	2.45	0.50
7:E:68:THR:O	7:E:72:VAL:N	2.33	0.50
9:G:156:HIS:N	9:G:157:PRO:CD	2.74	0.50
12:J:36:ILE:HG23	12:J:101:GLY:O	2.12	0.50
12:J:112:GLU:O	12:J:116:LYS:HB2	2.11	0.50
16:N:51:ARG:HD2	16:N:51:ARG:N	2.20	0.50
20:R:105:ARG:HH22	20:R:112:LYS:HA	1.76	0.50
20:R:96:LYS:O	20:R:105:ARG:N	2.45	0.50
2:Z:75:A:N1	21:S:29:ASN:CG	2.66	0.50
22:T:21:LEU:HD11	22:T:41:ARG:HE	1.76	0.50
1:X:1007:A:C6	1:X:1171:A:N1	2.80	0.50
1:X:1287:A:C6	1:X:1315:A:C2	3.00	0.50
1:X:1359:G:C5	1:X:1617:G:C2	3.00	0.50
1:X:172:A:N7	1:X:175:C:C5	2.80	0.50
1:X:2289:A:H2	6:D:75:SER:HB2	1.76	0.50
1:X:2301:A:H2'	1:X:2302:G:O4'	2.12	0.50
1:X:2437:G:H2'	1:X:2469:G:C6	2.47	0.50
1:X:497:C:C6	1:X:497:C:H3'	2.47	0.50
1:X:624:A:N3	1:X:624:A:H5'	2.27	0.50
1:X:683:A:H4'	1:X:684:C:H5'	1.94	0.50
1:X:930:A:C3'	1:X:930:A:C8	2.94	0.50
2:Z:108:G:O2'	2:Z:109:G:H5'	2.12	0.50
2:Z:31:A:H1'	2:Z:60:A:N6	2.26	0.50
4:B:33:ILE:CG2	4:B:47:VAL:HG12	2.42	0.49
5:C:170:LEU:CD2	5:C:175:VAL:HG12	2.40	0.49
5:C:65:GLY:C	5:C:66:ASN:HD22	2.15	0.49
5:C:44:SER:HB3	5:C:88:PRO:CG	2.42	0.49
6:D:103:LEU:HA	6:D:107:GLY:H	1.77	0.49
9:G:103:TYR:CE2	9:G:111:LYS:HB3	2.47	0.49
10:H:2:ILE:HG21	10:H:8:LEU:HD11	1.93	0.49
10:H:78:SER:HA	10:H:91:PHE:O	2.12	0.49
11:I:30:ALA:HB2	11:I:34:HIS:HE1	1.70	0.49
16:N:79:PHE:HD2	16:N:79:PHE:C	2.15	0.49
19:Q:13:SER:OG	19:Q:16:ALA:CB	2.60	0.49
19:Q:57:ASN:C	19:Q:58:VAL:HG23	2.33	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:92:THR:HB	20:R:95:ARG:NH2	2.15	0.49
21:S:129:ARG:NH1	21:S:156:GLU:OE2	2.43	0.49
21:S:24:TYR:OH	21:S:82:ASP:HB3	2.12	0.49
22:T:32:LYS:HB3	22:T:35:ASN:ND2	2.27	0.49
23:U:50:ALA:CA	23:U:52:ARG:HH22	2.24	0.49
1:X:1499:A:H2'	1:X:1500:U:C6	2.46	0.49
1:X:1566:G:O2'	1:X:1567:A:H5'	2.12	0.49
1:X:1657:A:O2'	1:X:1658:A:H5'	2.12	0.49
1:X:2473:G:H2'	1:X:2474:G:C8	2.47	0.49
1:X:1949:A:HO2'	1:X:2572:U:H5'	1.75	0.49
1:X:537:C:O2'	1:X:538:A:C2	2.52	0.49
1:X:719:A:O2'	1:X:720:A:H5'	2.12	0.49
4:B:121:ASN:C	4:B:122:PHE:O	2.49	0.49
4:B:116:VAL:CG2	4:B:136:ARG:CG	2.89	0.49
4:B:179:GLU:C	4:B:181:LEU:H	2.13	0.49
4:B:19:ARG:HG3	4:B:21:ILE:CD1	2.43	0.49
6:D:49:ALA:C	6:D:52:LYS:HB2	2.32	0.49
6:D:88:LYS:HG2	6:D:89:VAL:H	1.77	0.49
7:E:37:TYR:HD2	7:E:68:THR:HA	1.76	0.49
8:F:113:MET:N	8:F:114:PRO:CD	2.75	0.49
1:X:954:U:P	11:I:38:LYS:CG	3.01	0.49
12:J:21:ASP:N	12:J:99:LYS:HE2	2.26	0.49
13:K:40:LYS:O	13:K:43:GLU:OE2	2.30	0.49
14:L:106:ALA:O	14:L:110:GLY:N	2.45	0.49
15:M:53:VAL:CG1	15:M:54:VAL:N	2.74	0.49
16:N:68:GLY:HA2	16:N:71:LEU:HB3	1.94	0.49
17:O:10:LYS:CD	17:O:11:GLN:HE21	2.25	0.49
17:O:78:VAL:C	17:O:79:GLN:O	2.48	0.49
19:Q:3:HIS:HE1	19:Q:40:ASP:OD2	1.95	0.49
19:Q:41:ALA:O	19:Q:42:ILE:C	2.50	0.49
21:S:3:LEU:CD1	21:S:33:ALA:N	2.75	0.49
21:S:74:ARG:O	21:S:76:ARG:N	2.45	0.49
24:V:56:VAL:CA	24:V:59:GLU:OE1	2.55	0.49
1:X:1022:A:N6	1:X:1162:A:N6	2.60	0.49
1:X:1734:C:C5	1:X:1735:G:H1'	2.47	0.49
1:X:1767:G:C5	1:X:1768:U:C5	3.00	0.49
1:X:1938:U:O2'	1:X:1939:U:H5'	2.12	0.49
1:X:1942:G:N2	1:X:1943:A:N3	2.59	0.49
1:X:2198:U:O5'	1:X:2199:C:H5''	2.12	0.49
1:X:2298:U:O2'	1:X:2299:A:C8	2.61	0.49
1:X:956:A:N3	1:X:2427:A:C2	2.80	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2442:C:O2'	1:X:2443:C:H5'	2.12	0.49
1:X:2496:C:C5	1:X:2521:A:C5	3.01	0.49
1:X:2698:G:C6	1:X:2699:G:C6	3.00	0.49
1:X:313:U:C2	1:X:314:G:N7	2.80	0.49
1:X:497:C:C6	1:X:497:C:C3'	2.95	0.49
1:X:517:A:C5'	1:X:518:A:H5'	2.30	0.49
1:X:649:G:O2'	1:X:650:U:H5'	2.11	0.49
1:X:809:C:H2'	1:X:810:U:C6	2.47	0.49
1:X:956:A:C2	1:X:2427:A:C2	3.00	0.49
1:X:956:A:C4	1:X:2427:A:C2	3.00	0.49
26:Y:17:ASP:C	26:Y:19:ARG:H	2.14	0.49
1:X:2861:A:O2'	26:Y:31:THR:HG23	2.12	0.49
3:A:246:PRO:O	3:A:247:VAL:C	2.50	0.49
4:B:195:LEU:HD12	4:B:196:VAL:N	2.26	0.49
4:B:76:ARG:HG2	4:B:77:ILE:HG13	1.93	0.49
1:X:332:C:C2	5:C:159:ARG:NH1	2.78	0.49
7:E:41:LEU:HD23	7:E:68:THR:OG1	2.12	0.49
9:G:85:ALA:O	9:G:88:VAL:HG12	2.12	0.49
12:J:110:VAL:CG2	12:J:115:ALA:HB2	2.42	0.49
12:J:48:ILE:C	12:J:50:ALA:H	2.15	0.49
14:L:34:SER:HA	14:L:94:TYR:CE2	2.46	0.49
14:L:91:ARG:N	14:L:91:ARG:CD	2.67	0.49
14:L:8:ARG:HG3	14:L:9:ARG:HG3	1.94	0.49
16:N:93:LYS:O	16:N:94:VAL:CG2	2.59	0.49
18:P:32:ARG:HA	18:P:121:THR:HG22	1.93	0.49
18:P:97:VAL:HG22	18:P:124:ILE:HA	1.95	0.49
18:P:31:VAL:HG21	18:P:124:ILE:CG1	2.42	0.49
21:S:101:THR:HG23	21:S:135:VAL:HG13	1.93	0.49
1:X:94:C:H1'	24:V:40:PRO:CG	2.43	0.49
1:X:1033:G:C8	9:G:93:LYS:NZ	2.74	0.49
1:X:1179:A:C2	1:X:1196:G:C2	3.00	0.49
1:X:1357:U:O2'	1:X:1358:C:OP1	2.18	0.49
1:X:1420:A:H2'	1:X:1421:U:H6	1.76	0.49
1:X:1429:A:H2'	1:X:1429:A:N3	2.26	0.49
1:X:1542:G:H22	1:X:1562:G:H1	1.59	0.49
1:X:1693:A:N1	1:X:1694:A:C2	2.80	0.49
1:X:1744:G:C6	1:X:1747:G:N1	2.80	0.49
1:X:1810:U:C6	3:A:157:ARG:HD2	2.47	0.49
1:X:2043:A:H62	5:C:68:ARG:NH1	2.10	0.49
1:X:2710:C:H4'	4:B:168:GLN:O	2.12	0.49
1:X:2725:C:H5'	7:E:146:ALA:CB	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:921:A:C2'	1:X:924:C:C5	2.91	0.49
5:C:164:VAL:C	5:C:166:TRP:H	2.13	0.49
6:D:150:ARG:HG2	6:D:151:GLY:H	1.76	0.49
11:I:132:ALA:N	11:I:135:ALA:HB3	2.27	0.49
11:I:58:ALA:O	11:I:59:ARG:HB2	2.12	0.49
11:I:7:LYS:O	11:I:9:THR:N	2.45	0.49
12:J:112:GLU:HG3	12:J:113:GLU:N	2.26	0.49
13:K:84:ALA:HB3	13:K:85:PRO:CD	2.37	0.49
15:M:5:ILE:CD1	15:M:5:ILE:O	2.58	0.49
1:X:1264:C:O5'	16:N:13:ARG:NH1	2.41	0.49
18:P:13:GLN:O	18:P:14:ARG:C	2.48	0.49
19:Q:49:ARG:O	19:Q:50:VAL:HG23	2.12	0.49
21:S:42:ALA:HA	21:S:45:GLN:CG	2.42	0.49
23:U:41:VAL:CG2	23:U:42:GLN:N	2.47	0.49
23:U:48:LYS:HG3	23:U:49:LYS:H	1.74	0.49
25:W:1:MET:HB2	25:W:34:VAL:HG12	1.94	0.49
1:X:1019:U:HO2'	1:X:1020:A:H8	1.59	0.49
1:X:116:A:C5'	1:X:117:A:H8	2.24	0.49
1:X:1211:G:H2'	1:X:1212:U:C6	2.44	0.49
1:X:1226:A:N9	1:X:1250:A:C2	2.80	0.49
1:X:1310:C:H2'	1:X:1311:C:H6	1.76	0.49
1:X:131:C:O2'	1:X:132:U:H5'	2.12	0.49
1:X:1391:A:O2'	1:X:1392:U:O5'	2.29	0.49
1:X:1560:A:N6	1:X:1561:A:C6	2.81	0.49
1:X:1607:A:C2'	1:X:1608:U:O5'	2.61	0.49
1:X:1811:A:O2'	1:X:1812:U:P	2.69	0.49
1:X:2250:G:O5'	1:X:2250:G:H8	1.95	0.49
1:X:219:G:H2'	1:X:231:G:C6	2.47	0.49
1:X:219:G:H2'	1:X:231:G:N1	2.28	0.49
1:X:2379:G:H2'	1:X:2380:U:C5'	2.41	0.49
1:X:2037:A:C2	1:X:2595:C:C2	3.00	0.49
1:X:2760:G:O6	9:G:125:ARG:NH1	2.44	0.49
1:X:2850:U:C6	1:X:2850:U:H5'	2.29	0.49
1:X:2861:A:O2'	1:X:2862:G:H5'	2.11	0.49
1:X:360:A:H3'	1:X:361:G:H8	1.77	0.49
1:X:558:G:O2'	1:X:559:C:C2	2.61	0.49
1:X:674:U:H1'	11:I:22:GLY:HA3	1.94	0.49
1:X:700:C:N3	1:X:701:U:C2	2.81	0.49
1:X:838:A:C2	1:X:839:U:C2	3.00	0.49
30:4:31:LYS:H	30:4:31:LYS:HD3	1.77	0.49
3:A:43:ARG:O	3:A:44:ASN:CB	2.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:97:TYR:CB	3:A:101:GLU:OE1	2.56	0.49
4:B:61:LYS:O	4:B:64:GLN:HB2	2.12	0.49
6:D:47:SER:CA	6:D:50:ILE:HG13	2.38	0.49
8:F:129:ALA:O	8:F:130:GLY:C	2.48	0.49
9:G:163:PRO:C	9:G:164:GLN:O	2.46	0.49
9:G:65:LYS:CB	9:G:65:LYS:NZ	2.75	0.49
10:H:124:MET:O	10:H:125:LYS:C	2.49	0.49
14:L:13:THR:O	14:L:17:VAL:HG12	2.12	0.49
14:L:75:LEU:O	14:L:78:ALA:CB	2.54	0.49
15:M:54:VAL:CG1	15:M:54:VAL:O	2.61	0.49
16:N:34:ASN:O	16:N:35:ALA:C	2.50	0.49
16:N:47:TYR:HE2	16:N:51:ARG:NH2	2.05	0.49
18:P:27:VAL:HA	18:P:125:THR:HG22	1.95	0.49
19:Q:50:VAL:HG12	19:Q:50:VAL:O	2.10	0.49
20:R:105:ARG:NE	20:R:106:VAL:O	2.46	0.49
20:R:22:VAL:HG11	20:R:80:LYS:HE3	1.92	0.49
20:R:23:ILE:O	20:R:23:ILE:HD13	2.12	0.49
20:R:96:LYS:HD3	20:R:105:ARG:HB2	1.94	0.49
21:S:146:HIS:O	21:S:147:ILE:HD13	2.11	0.49
21:S:113:VAL:CG2	21:S:171:VAL:HG22	2.40	0.49
21:S:79:ILE:C	21:S:79:ILE:HD13	2.32	0.49
25:W:23:LEU:HD13	25:W:51:LEU:CD1	2.41	0.49
1:X:1068:A:H5'	1:X:1069:G:OP2	2.12	0.49
1:X:1171:A:C5	1:X:1172:U:C5	3.00	0.49
1:X:1372:A:C4	1:X:1373:G:C8	3.01	0.49
1:X:1438:G:O2'	1:X:1439:G:H5'	2.13	0.49
1:X:1811:A:H4'	1:X:1812:U:H5''	1.94	0.49
1:X:1822:C:H2'	1:X:1823:G:H5'	1.93	0.49
1:X:2171:U:H2'	1:X:2172:U:C6	2.47	0.49
1:X:2388:G:C5	1:X:2389:G:N7	2.80	0.49
1:X:2569:A:O2'	1:X:2570:C:H5'	2.12	0.49
1:X:2873:G:H2'	1:X:2874:A:C8	2.47	0.49
1:X:331:U:H4'	1:X:333:A:N7	2.27	0.49
1:X:76:C:H6	1:X:76:C:C5'	2.19	0.49
1:X:76:C:O2'	1:X:77:C:H5'	2.12	0.49
1:X:968:C:OP1	12:J:78:LYS:HB3	2.12	0.49
2:Z:43:G:C8	6:D:66:ILE:HD11	2.48	0.49
3:A:108:PRO:CB	3:A:143:HIS:HE1	2.25	0.49
5:C:116:LYS:O	5:C:117:LEU:HB3	2.12	0.49
5:C:149:LEU:HD21	5:C:170:LEU:HD22	1.94	0.49
5:C:54:THR:O	5:C:55:GLY:O	2.29	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:7:ILE:O	5:C:120:VAL:CB	2.57	0.49
6:D:77:PHE:HD1	6:D:77:PHE:N	2.10	0.49
8:F:125:ALA:O	8:F:129:ALA:N	2.41	0.49
1:X:609:U:O2'	11:I:18:ARG:NH1	2.45	0.49
11:I:58:ALA:C	11:I:60:LEU:H	2.16	0.49
12:J:28:VAL:HG23	12:J:137:VAL:CG2	2.42	0.49
12:J:70:PHE:CD2	12:J:71:PRO:N	2.81	0.49
14:L:14:ARG:O	14:L:17:VAL:CG1	2.60	0.49
15:M:34:ARG:CD	15:M:81:PHE:CE2	2.96	0.49
16:N:75:ASN:OD1	16:N:75:ASN:O	2.31	0.49
17:O:63:HIS:CE1	17:O:91:THR:HG1	2.31	0.49
18:P:107:ILE:HB	18:P:117:ILE:CD1	2.43	0.49
25:W:3:ILE:HG21	25:W:25:LEU:HD11	1.94	0.49
1:X:1079:G:H8	1:X:1079:G:OP2	1.96	0.49
1:X:1441:A:H1'	1:X:1442:C:C4	2.47	0.49
1:X:1685:A:C8	1:X:1691:G:C6	3.01	0.49
1:X:2042:A:H5''	5:C:65:GLY:HA3	1.93	0.49
1:X:2080:U:H2'	1:X:2081:U:O4'	2.13	0.49
1:X:2225:G:N1	1:X:2405:A:H1'	2.28	0.49
1:X:2307:A:C6	1:X:2308:A:N6	2.80	0.49
1:X:2798:A:C2'	1:X:2799:C:H5'	2.42	0.49
1:X:353:G:O2'	1:X:354:C:H5'	2.13	0.49
1:X:712:A:N3	1:X:1650:A:H1'	2.28	0.49
26:Y:6:VAL:HG22	26:Y:7:PRO:CD	2.41	0.49
2:Z:74:A:H2	2:Z:107:C:H41	1.59	0.49
2:Z:112:A:H2'	2:Z:113:G:O4'	2.12	0.49
1:X:2445:C:H5''	30:4:6:SER:HB2	1.93	0.49
5:C:150:LEU:N	5:C:150:LEU:HD12	2.28	0.49
6:D:154:ILE:HD12	6:D:154:ILE:N	2.28	0.49
6:D:70:ALA:HB2	6:D:85:VAL:HG13	1.95	0.49
7:E:117:PRO:HB2	7:E:121:VAL:HB	1.95	0.49
7:E:45:GLN:CA	7:E:50:LEU:HA	2.40	0.49
7:E:9:ILE:CB	7:E:50:LEU:HB3	2.42	0.49
8:F:96:LYS:CB	8:F:99:LYS:HE2	2.40	0.49
4:B:149:ARG:NH1	9:G:106:TYR:HD1	2.07	0.49
9:G:107:GLN:O	9:G:109:GLY:N	2.43	0.49
9:G:61:ARG:HG2	9:G:65:LYS:HZ3	1.78	0.49
9:G:65:LYS:HG2	9:G:66:HIS:H	1.71	0.49
10:H:78:SER:O	10:H:79:HIS:O	2.30	0.49
12:J:11:ARG:HG3	12:J:11:ARG:NH1	2.26	0.49
12:J:59:PHE:CZ	12:J:110:VAL:HG21	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:33:ARG:NH1	14:L:100:VAL:O	2.45	0.49
15:M:50:PHE:HD2	15:M:51:GLU:N	2.11	0.49
16:N:70:ARG:HH11	16:N:70:ARG:CG	2.24	0.49
17:O:16:GLU:O	17:O:17:GLY:C	2.51	0.49
18:P:117:ILE:HG22	18:P:118:LYS:N	2.27	0.49
18:P:41:VAL:HG12	18:P:42:VAL:N	2.27	0.49
18:P:41:VAL:C	18:P:43:ASP:N	2.63	0.49
21:S:153:LYS:O	21:S:154:LEU:HG	2.13	0.49
22:T:44:LYS:O	22:T:44:LYS:HD2	2.13	0.49
1:X:1008:G:O2'	1:X:1009:C:H5'	2.11	0.49
1:X:1093:U:H2'	1:X:1094:C:O4'	2.12	0.49
1:X:1468:A:H5''	1:X:1472:C:N4	2.27	0.49
1:X:1682:A:C2'	1:X:1683:G:H5'	2.43	0.49
1:X:172:A:C2	1:X:227:G:N2	2.81	0.49
1:X:2204:A:H4'	1:X:2205:C:O5'	2.11	0.49
1:X:2264:C:H4'	1:X:2267:A:N7	2.28	0.49
1:X:2265:A:N3	1:X:2266:A:C6	2.81	0.49
1:X:2383:C:H1'	11:I:65:PHE:CZ	2.47	0.49
1:X:2823:G:O2'	1:X:2824:C:C6	2.65	0.49
1:X:2827:G:C5	1:X:2828:C:C5	3.00	0.49
1:X:304:A:C5	1:X:356:A:N6	2.80	0.49
1:X:6:A:H4'	9:G:159:SER:O	2.13	0.49
1:X:706:A:C2	1:X:707:U:O2	2.65	0.49
1:X:750:C:N3	1:X:751:G:C8	2.81	0.49
2:Z:44:C:O2	6:D:90:THR:N	2.46	0.49
3:A:125:PRO:CB	3:A:193:ILE:HD11	2.40	0.49
4:B:193:GLY:O	15:M:2:GLN:N	2.46	0.49
6:D:135:GLN:HG3	6:D:150:ARG:O	2.13	0.49
7:E:96:ALA:HB1	7:E:103:LEU:HD11	1.95	0.49
9:G:157:PRO:C	9:G:159:SER:N	2.61	0.49
9:G:34:PRO:C	9:G:69:ASP:OD1	2.51	0.49
11:I:123:ASP:O	11:I:124:ALA:HB2	2.13	0.49
12:J:68:ARG:HG2	12:J:104:MET:O	2.13	0.49
12:J:54:VAL:HG11	12:J:121:LEU:HB3	1.95	0.49
12:J:77:LYS:CG	12:J:78:LYS:H	2.25	0.49
12:J:83:ARG:HH11	12:J:83:ARG:HG2	1.77	0.49
14:L:21:THR:HG22	14:L:22:ALA:H	1.78	0.49
16:N:105:ALA:O	16:N:107:LYS:N	2.45	0.49
16:N:21:ALA:O	16:N:22:LYS:C	2.50	0.49
1:X:1630:A:N6	18:P:112:GLY:O	2.46	0.49
25:W:5:LEU:HG	25:W:28:ILE:HG22	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1016:C:H2'	1:X:1017:C:H6	1.73	0.49
1:X:1123:G:H2'	1:X:1124:U:O4'	2.12	0.49
1:X:1314:A:O2'	1:X:1315:A:C3'	2.41	0.49
1:X:1984:A:C2	1:X:1985:G:C4	3.01	0.49
1:X:2012:A:C2	1:X:2016:A:C5	3.01	0.49
1:X:2508:G:OP2	7:E:172:LYS:NZ	2.45	0.49
1:X:2612:G:O2'	4:B:63:MET:HG2	2.12	0.49
1:X:2709:C:H2'	1:X:2710:C:H6	1.77	0.49
1:X:57:G:C4	1:X:58:C:C5	3.01	0.49
1:X:848:A:C6	1:X:849:G:C5	3.01	0.49
1:X:860:U:H2'	1:X:860:U:O2	2.11	0.49
1:X:915:C:H2'	1:X:916:U:H6	1.76	0.49
3:A:149:PRO:HD3	3:A:189:CYS:SG	2.52	0.49
3:A:65:ILE:O	3:A:66:ASP:HB2	2.12	0.49
6:D:112:ARG:O	6:D:113:ASP:CB	2.60	0.49
6:D:60:ILE:O	6:D:99:PHE:CD1	2.66	0.49
7:E:103:LEU:CD1	7:E:104:GLU:H	2.19	0.49
7:E:142:GLY:O	7:E:144:VAL:N	2.46	0.49
7:E:21:ASP:C	7:E:23:VAL:H	2.15	0.49
7:E:91:GLY:HA3	7:E:94:PHE:CD2	2.47	0.49
9:G:100:TYR:C	9:G:100:TYR:CD1	2.86	0.49
10:H:2:ILE:CG2	10:H:8:LEU:HD11	2.43	0.49
14:L:69:ALA:CB	14:L:106:ALA:HB2	2.40	0.49
16:N:64:ARG:C	16:N:66:ASN:N	2.64	0.49
16:N:80:ILE:O	16:N:83:LEU:HB3	2.12	0.49
17:O:70:TYR:HA	17:O:85:GLY:HA2	1.95	0.49
1:X:2777:A:N6	18:P:134:LYS:HB2	2.27	0.49
21:S:168:VAL:O	21:S:169:VAL:HG13	2.13	0.49
23:U:22:GLY:N	23:U:39:LYS:CD	2.76	0.49
23:U:20:ARG:HB2	23:U:43:ARG:CG	2.42	0.49
1:X:1065:A:C4	1:X:1117:G:N2	2.81	0.49
1:X:1071:U:C2	1:X:1073:G:H5'	2.48	0.49
1:X:1303:U:H2'	1:X:1304:U:C6	2.45	0.49
1:X:1492:A:C6	1:X:1531:C:N4	2.81	0.49
1:X:152:G:O2'	1:X:153:A:H5'	2.13	0.49
1:X:1737:G:H2'	1:X:1738:U:C6	2.48	0.49
1:X:190:A:O2'	1:X:191:G:H5'	2.12	0.49
1:X:2247:A:H5'	1:X:2248:A:P	2.53	0.49
1:X:2529:G:C6	1:X:2538:C:N3	2.80	0.49
1:X:2490:U:O4	1:X:2554:C:N3	2.46	0.49
1:X:2619:G:C6	1:X:2755:A:C2	3.01	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:27:G:O2'	1:X:28:A:P	2.71	0.49
1:X:2819:G:C5	1:X:2820:C:C4	3.01	0.49
1:X:2867:G:C8	1:X:2867:G:OP2	2.65	0.49
1:X:589:C:C5'	16:N:31:GLN:HE22	2.22	0.49
1:X:769:C:H2'	1:X:770:U:H5'	1.95	0.49
1:X:840:U:O2'	1:X:841:G:N2	2.45	0.49
3:A:63:ARG:HD2	3:A:85:ASP:CB	2.33	0.49
3:A:72:LYS:HE2	3:A:97:TYR:CB	2.43	0.49
6:D:142:THR:HG22	6:D:144:ASP:HB2	1.95	0.49
6:D:13:ARG:CB	6:D:14:PRO:HD3	2.32	0.49
6:D:75:SER:O	6:D:76:ASN:C	2.50	0.49
7:E:137:ASP:CB	7:E:140:LEU:HD12	2.40	0.49
1:X:2725:C:H1'	7:E:143:GLN:HG3	1.95	0.49
9:G:158:HIS:N	9:G:161:GLN:HE21	2.11	0.49
10:H:73:VAL:CG2	10:H:123:PHE:HE1	2.26	0.49
11:I:9:THR:O	11:I:13:ARG:CG	2.61	0.49
12:J:128:ILE:HG12	12:J:129:GLN:N	2.27	0.49
12:J:23:LYS:O	12:J:25:GLY:N	2.45	0.49
14:L:33:ARG:HD3	14:L:99:ARG:HG3	1.95	0.49
16:N:40:LEU:HB3	17:O:74:TYR:CD1	2.48	0.49
16:N:76:TYR:O	16:N:80:ILE:HG12	2.12	0.49
18:P:97:VAL:CG1	18:P:122:SER:HB3	2.41	0.49
19:Q:20:MET:O	19:Q:21:GLU:C	2.51	0.49
2:Z:75:A:N6	21:S:29:ASN:OD1	2.41	0.49
23:U:22:GLY:N	23:U:39:LYS:CG	2.74	0.49
23:U:70:LEU:HD21	23:U:75:TYR:H	1.78	0.49
1:X:1022:A:C2	1:X:1024:G:C4	3.01	0.49
1:X:1025:A:O2'	1:X:1026:U:H5'	2.12	0.49
1:X:1211:G:C6	1:X:1212:U:O4	2.65	0.49
1:X:1313:U:O2'	1:X:1314:A:OP2	2.29	0.49
1:X:1588:A:C4	1:X:1589:G:C8	3.01	0.49
1:X:1867:A:H8	1:X:1867:A:H3'	1.78	0.49
1:X:1919:A:H1'	1:X:1923:U:C2	2.48	0.49
1:X:1684:G:O2'	1:X:1974:U:O4	2.26	0.49
1:X:2198:U:H2'	1:X:2199:C:O2'	2.12	0.49
1:X:2663:U:N3	1:X:2664:G:C8	2.81	0.49
1:X:872:G:H22	1:X:929:A:P	2.35	0.49
1:X:1811:A:C5'	3:A:161:THR:HG21	2.42	0.48
3:A:210:GLY:C	3:A:212:SER:N	2.60	0.48
4:B:37:LYS:CD	4:B:42:ASP:OD2	2.61	0.48
5:C:7:ILE:HG21	5:C:122:GLY:HA2	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:24:SER:O	5:C:25:GLY:C	2.50	0.48
5:C:96:PRO:HB2	5:C:99:VAL:CG2	2.43	0.48
6:D:33:LYS:HB2	6:D:91:LEU:O	2.13	0.48
7:E:12:PRO:O	7:E:13:SER:O	2.30	0.48
7:E:34:THR:O	7:E:36:PRO:HD3	2.12	0.48
9:G:156:HIS:O	9:G:158:HIS:N	2.45	0.48
9:G:65:LYS:HE3	9:G:66:HIS:CD2	2.46	0.48
11:I:89:ASP:CB	11:I:120:VAL:HG13	2.40	0.48
14:L:37:HIS:CE1	14:L:39:TYR:CE1	3.01	0.48
4:B:25:VAL:CG2	15:M:16:ILE:HD12	2.43	0.48
16:N:60:LEU:O	16:N:60:LEU:HD22	2.12	0.48
16:N:92:ARG:HD3	16:N:92:ARG:N	2.28	0.48
20:R:23:ILE:O	20:R:80:LYS:HA	2.13	0.48
21:S:172:LEU:CD2	21:S:173:PRO:HD2	2.27	0.48
22:T:57:HIS:ND1	22:T:57:HIS:N	2.60	0.48
23:U:14:VAL:O	23:U:16:ASN:ND2	2.46	0.48
23:U:23:LYS:HB2	23:U:35:THR:CG2	2.42	0.48
23:U:32:ARG:CG	23:U:33:LYS:N	2.74	0.48
25:W:44:VAL:O	25:W:47:VAL:HG22	2.13	0.48
1:X:1220:G:O2'	1:X:1221:C:H5'	2.13	0.48
1:X:1483:G:C2	1:X:1541:G:N3	2.81	0.48
1:X:1811:A:OP2	1:X:1811:A:O4'	2.30	0.48
1:X:1915:A:H2'	1:X:1916:G:C5'	2.43	0.48
1:X:1923:U:O2'	1:X:1924:C:P	2.71	0.48
1:X:1926:U:H5''	1:X:1927:U:OP1	2.13	0.48
1:X:2071:G:C2	1:X:2072:C:C6	3.01	0.48
1:X:330:C:C2	1:X:331:U:C6	3.01	0.48
1:X:516:G:O2'	1:X:517:A:H8	1.96	0.48
1:X:616:U:H2'	1:X:617:U:O4'	2.13	0.48
26:Y:15:LYS:NZ	26:Y:19:ARG:HH11	2.10	0.48
3:A:214:TRP:O	3:A:215:LEU:HG	2.14	0.48
3:A:247:VAL:C	3:A:248:THR:O	2.48	0.48
4:B:168:GLN:O	4:B:169:ASN:HB2	2.14	0.48
4:B:95:ILE:HG22	4:B:96:PHE:CD1	2.49	0.48
5:C:7:ILE:HG21	5:C:122:GLY:CA	2.42	0.48
5:C:14:THR:HG22	5:C:15:ILE:N	2.24	0.48
7:E:70:THR:O	7:E:73:ALA:HB3	2.14	0.48
8:F:77:TYR:HE1	8:F:80:ARG:NH2	2.01	0.48
9:G:105:GLY:O	9:G:106:TYR:O	2.31	0.48
9:G:125:ARG:O	9:G:126:VAL:C	2.51	0.48
12:J:128:ILE:HG12	12:J:129:GLN:O	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:K:33:ARG:CB	13:K:114:GLU:HB3	2.43	0.48
13:K:11:ASN:OD1	13:K:17:ARG:NH2	2.45	0.48
13:K:14:SER:O	13:K:17:ARG:N	2.46	0.48
17:O:36:LYS:HE3	17:O:56:VAL:N	2.28	0.48
18:P:34:SER:O	18:P:37:LYS:CB	2.61	0.48
19:Q:14:GLU:HG3	19:Q:15:LYS:N	2.28	0.48
19:Q:16:ALA:O	19:Q:19:ALA:HB3	2.13	0.48
20:R:53:VAL:HG21	20:R:74:LEU:HD13	1.95	0.48
21:S:38:ALA:HA	21:S:41:ARG:HB3	1.94	0.48
23:U:69:THR:HG22	23:U:75:TYR:CE1	2.48	0.48
1:X:1186:G:O5'	1:X:1187:A:OP1	2.30	0.48
1:X:1215:A:H2'	1:X:1216:G:C8	2.49	0.48
1:X:1312:G:H5''	1:X:1313:U:OP1	2.12	0.48
1:X:1322:G:O2'	1:X:1323:G:H5'	2.14	0.48
1:X:1571:G:H2'	1:X:1572:C:H6	1.77	0.48
1:X:1762:C:H2'	1:X:1763:G:C8	2.48	0.48
1:X:1954:A:H5'	1:X:1955:G:H5''	1.95	0.48
1:X:2064:U:OP1	23:U:20:ARG:CZ	2.61	0.48
1:X:2264:C:H4'	1:X:2267:A:C5	2.48	0.48
1:X:2268:G:N3	1:X:2268:G:H2'	2.29	0.48
1:X:2310:G:C6	1:X:2311:U:C5	3.00	0.48
1:X:2351:G:C2	1:X:2352:A:N7	2.81	0.48
1:X:2664:G:OP1	10:H:90:ARG:NH1	2.46	0.48
1:X:2847:G:O2'	13:K:8:ARG:NH2	2.41	0.48
1:X:490:A:O2'	1:X:492:G:H5''	2.13	0.48
1:X:873:U:C2'	1:X:874:A:O5'	2.61	0.48
2:Z:28:A:N7	2:Z:29:C:C4	2.81	0.48
3:A:146:GLU:HG2	3:A:147:LEU:N	2.29	0.48
3:A:148:VAL:O	3:A:149:PRO:C	2.51	0.48
3:A:184:ARG:CG	3:A:184:ARG:NH1	2.76	0.48
3:A:243:GLY:CA	3:A:244:ARG:NH1	2.76	0.48
5:C:176:ASN:ND2	5:C:178:TYR:H	2.12	0.48
2:Z:57:U:O2	6:D:26:MET:HG3	2.13	0.48
7:E:101:LYS:HG3	7:E:117:PRO:CD	2.41	0.48
8:F:89:SER:CB	8:F:135:MET:O	2.61	0.48
9:G:162:LYS:O	9:G:163:PRO:O	2.31	0.48
9:G:67:ARG:HB2	9:G:70:PHE:CA	2.26	0.48
9:G:84:ASN:O	9:G:86:ALA:N	2.38	0.48
1:X:609:U:H1'	11:I:18:ARG:CZ	2.43	0.48
12:J:27:TYR:OH	12:J:131:LYS:NZ	2.40	0.48
13:K:87:TYR:CZ	13:K:94:TYR:HD2	2.31	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:32:TYR:C	14:L:34:SER:N	2.65	0.48
15:M:27:PHE:CZ	15:M:66:PHE:CD1	3.00	0.48
17:O:36:LYS:NZ	17:O:98:ILE:HB	2.29	0.48
18:P:89:ARG:HD3	18:P:132:GLY:CA	2.43	0.48
19:Q:84:GLU:O	19:Q:86:GLN:N	2.46	0.48
21:S:113:VAL:HG22	21:S:171:VAL:HG13	1.94	0.48
24:V:12:THR:O	24:V:16:LYS:HB3	2.12	0.48
24:V:37:LEU:HD23	24:V:39:GLN:H	1.77	0.48
24:V:4:SER:HB3	24:V:7:ARG:NE	2.28	0.48
24:V:4:SER:O	24:V:6:MET:N	2.45	0.48
25:W:22:ALA:O	25:W:23:LEU:C	2.51	0.48
25:W:2:LYS:O	25:W:54:GLN:N	2.42	0.48
1:X:1036:G:C4	1:X:1145:C:H1'	2.48	0.48
1:X:1051:U:C6	1:X:1051:U:C3'	2.95	0.48
1:X:1474:A:C2'	1:X:1475:U:H5'	2.39	0.48
1:X:1713:G:H8	1:X:1713:G:H5''	1.76	0.48
1:X:1917:C:C2'	1:X:1918:G:H5'	2.43	0.48
1:X:18:U:O2'	1:X:19:C:H5'	2.13	0.48
1:X:2035:G:C2'	1:X:2036:G:H5'	2.43	0.48
1:X:229:G:OP1	11:I:49:PHE:CE1	2.66	0.48
1:X:2326:C:H2'	1:X:2327:U:C5	2.49	0.48
1:X:2425:G:H5''	1:X:2426:G:OP2	2.14	0.48
1:X:2541:U:C2'	1:X:2542:U:H5'	2.44	0.48
1:X:2787:A:C2	1:X:2864:C:N3	2.82	0.48
1:X:33:C:O2'	1:X:34:U:C5'	2.58	0.48
1:X:43:A:O2'	1:X:44:G:H5'	2.14	0.48
1:X:471:A:H2'	1:X:472:C:O4'	2.11	0.48
1:X:586:G:C6	1:X:587:A:N6	2.81	0.48
1:X:64:C:H1'	19:Q:68:PHE:CD1	2.48	0.48
1:X:847:C:H6	1:X:847:C:O5'	1.96	0.48
26:Y:51:TYR:HA	26:Y:55:ARG:HA	1.95	0.48
5:C:190:ALA:C	5:C:192:ALA:N	2.67	0.48
6:D:53:ALA:O	6:D:56:GLU:N	2.46	0.48
7:E:73:ALA:O	7:E:76:VAL:HB	2.12	0.48
10:H:41:ASN:HB2	10:H:42:LYS:H	1.56	0.48
11:I:102:LYS:C	11:I:104:ARG:H	2.17	0.48
11:I:45:LYS:HD3	11:I:46:GLY:N	2.26	0.48
11:I:58:ALA:C	11:I:60:LEU:N	2.66	0.48
14:L:36:LYS:HE3	14:L:36:LYS:CA	2.44	0.48
15:M:24:LEU:HB3	15:M:25:PRO:CD	2.43	0.48
15:M:34:ARG:NH2	15:M:91:VAL:HG21	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:N:71:LEU:O	16:N:71:LEU:HG	2.12	0.48
18:P:72:LEU:O	18:P:73:ASN:C	2.52	0.48
19:Q:16:ALA:C	19:Q:19:ALA:H	2.17	0.48
20:R:56:LYS:CA	20:R:68:GLY:O	2.60	0.48
22:T:46:LYS:CG	22:T:76:ALA:HB1	2.43	0.48
1:X:139:A:C2	1:X:140:G:C5	3.02	0.48
1:X:2392:G:H2'	1:X:2393:G:O4'	2.13	0.48
1:X:2441:U:H2'	1:X:2442:C:H6	1.77	0.48
1:X:2819:G:N7	1:X:2820:C:C4	2.81	0.48
1:X:807:A:H2'	1:X:808:C:H6	1.75	0.48
1:X:840:U:H4'	1:X:841:G:N2	2.28	0.48
1:X:921:A:C2'	1:X:924:C:H5	2.21	0.48
3:A:134:ARG:C	3:A:136:VAL:N	2.66	0.48
3:A:144:ALA:O	3:A:145:LEU:O	2.31	0.48
3:A:227:ASN:O	3:A:229:VAL:N	2.47	0.48
5:C:158:ARG:HB2	5:C:169:VAL:CG1	2.43	0.48
5:C:47:THR:CA	5:C:82:VAL:HB	2.29	0.48
6:D:171:GLN:HG3	6:D:175:LEU:O	2.13	0.48
8:F:108:ILE:O	8:F:112:LYS:HB2	2.13	0.48
10:H:116:ARG:NH1	15:M:38:LYS:NZ	2.60	0.48
11:I:41:SER:OG	11:I:41:SER:O	2.30	0.48
11:I:73:GLU:OE2	11:I:104:ARG:HB2	2.13	0.48
12:J:89:GLY:O	12:J:90:ALA:C	2.52	0.48
13:K:10:LEU:HG	13:K:17:ARG:HB2	1.94	0.48
13:K:28:LEU:O	13:K:28:LEU:HD23	2.13	0.48
14:L:97:HIS:O	14:L:101:LYS:CB	2.59	0.48
2:Z:53:G:H5'	14:L:64:LYS:CE	2.43	0.48
1:X:1236:G:P	17:O:87:ARG:HH11	2.36	0.48
20:R:63:THR:O	20:R:64:ASN:HB2	2.14	0.48
20:R:8:SER:C	20:R:10:HIS:H	2.17	0.48
21:S:16:GLU:CD	21:S:16:GLU:H	2.16	0.48
2:Z:108:G:O3'	21:S:26:LYS:HE2	2.13	0.48
21:S:64:ALA:HA	21:S:86:VAL:N	2.28	0.48
22:T:80:SER:C	22:T:81:ILE:HD13	2.33	0.48
23:U:23:LYS:CB	23:U:35:THR:HG22	2.44	0.48
1:X:1017:C:H1'	9:G:134:MET:HE2	1.96	0.48
1:X:1324:G:H2'	1:X:1325:U:C6	2.49	0.48
1:X:1782:A:N1	1:X:1821:A:H5'	2.29	0.48
1:X:1837:G:H2'	1:X:1838:G:C8	2.49	0.48
1:X:190:A:C2	1:X:191:G:C4	3.01	0.48
1:X:2014:A:H4'	1:X:2015:G:OP2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2042:A:O2'	5:C:62:LYS:CE	2.59	0.48
1:X:2073:A:C5	1:X:2074:U:C5	3.01	0.48
1:X:2271:C:H2'	1:X:2272:A:C8	2.48	0.48
1:X:319:G:H1'	1:X:511:A:O4'	2.14	0.48
1:X:34:U:C6	20:R:4:PRO:HB3	2.48	0.48
1:X:435:A:C2	1:X:436:A:C5	3.01	0.48
1:X:640:C:C4'	1:X:660:G:H21	2.24	0.48
1:X:741:G:C2	1:X:743:A:N9	2.82	0.48
1:X:942:U:H4'	25:W:22:ALA:O	2.14	0.48
4:B:195:LEU:HB2	15:M:3:THR:HG22	1.89	0.48
6:D:78:LYS:HG2	6:D:80:ARG:NH1	2.28	0.48
7:E:78:GLY:C	7:E:80:SER:H	2.15	0.48
7:E:97:LYS:O	7:E:98:LEU:HB2	2.13	0.48
10:H:3:MET:SD	10:H:44:TYR:HE1	2.37	0.48
11:I:30:ALA:N	11:I:34:HIS:CG	2.76	0.48
11:I:80:LEU:CA	11:I:84:GLU:HB3	2.43	0.48
16:N:91:ASN:HA	17:O:10:LYS:HZ1	1.72	0.48
20:R:108:VAL:C	20:R:110:SER:N	2.66	0.48
20:R:12:ASP:OD1	20:R:12:ASP:O	2.30	0.48
21:S:3:LEU:HD21	21:S:33:ALA:N	2.18	0.48
22:T:10:SER:O	22:T:11:LYS:HE3	2.14	0.48
22:T:40:GLN:NE2	22:T:42:GLY:O	2.47	0.48
1:X:2345:A:H4'	22:T:62:LEU:CD1	2.42	0.48
22:T:8:GLY:O	22:T:9:SER:O	2.32	0.48
23:U:20:ARG:O	23:U:39:LYS:HD2	2.14	0.48
1:X:1002:C:OP2	1:X:1200:G:OP2	2.30	0.48
1:X:1445:A:O2'	1:X:1446:U:H5'	2.13	0.48
1:X:1822:C:H2'	1:X:1823:G:C5'	2.44	0.48
1:X:1281:A:C6	1:X:1996:A:C8	3.02	0.48
1:X:1385:C:H1'	1:X:2192:U:C4	2.48	0.48
1:X:2293:G:O2'	1:X:2294:U:H5'	2.14	0.48
1:X:2320:G:H22	1:X:2353:G:H4'	1.78	0.48
1:X:689:A:C8	1:X:2422:C:H1'	2.49	0.48
1:X:2634:G:O6	10:H:32:LYS:NZ	2.43	0.48
1:X:2633:A:C4'	1:X:2634:G:OP1	2.61	0.48
1:X:2726:U:H2'	1:X:2727:G:C5'	2.43	0.48
1:X:455:A:H1'	1:X:1215:A:C4'	2.44	0.48
1:X:800:U:H3'	1:X:804:C:N4	2.28	0.48
1:X:91:A:C2	1:X:92:U:C4	3.02	0.48
3:A:75:VAL:HG12	3:A:76:ASN:N	2.29	0.48
4:B:33:ILE:CG2	4:B:47:VAL:CG1	2.92	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:45:THR:HG22	5:C:86:PRO:O	2.14	0.48
6:D:113:ASP:HB3	6:D:115:ARG:NH2	2.28	0.48
6:D:96:MET:O	6:D:100:LEU:N	2.45	0.48
7:E:11:VAL:HG12	7:E:15:VAL:HG11	1.96	0.48
7:E:30:LYS:HZ1	7:E:81:ASP:HA	1.78	0.48
9:G:107:GLN:N	9:G:107:GLN:OE1	2.46	0.48
9:G:103:TYR:OH	9:G:111:LYS:HB2	2.13	0.48
9:G:139:ARG:HG2	9:G:142:ARG:NH2	2.29	0.48
11:I:73:GLU:HG2	11:I:105:PRO:O	2.14	0.48
12:J:99:LYS:CG	12:J:100:PRO:HD2	2.44	0.48
15:M:43:ASN:C	15:M:43:ASN:ND2	2.65	0.48
16:N:31:GLN:O	16:N:35:ALA:CB	2.59	0.48
1:X:2002:A:H4'	16:N:34:ASN:HD21	1.78	0.48
16:N:3:ARG:NH2	16:N:5:LYS:NZ	2.62	0.48
17:O:12:TYR:CB	17:O:39:PHE:CB	2.87	0.48
17:O:46:VAL:CG1	17:O:51:ALA:HB2	2.43	0.48
20:R:96:LYS:HG2	20:R:97:GLN:O	2.14	0.48
21:S:1:MET:CE	21:S:46:GLN:OE1	2.62	0.48
21:S:98:VAL:HG22	21:S:99:HIS:H	1.78	0.48
24:V:64:GLY:O	24:V:65:GLU:CB	2.61	0.48
1:X:1014:G:N2	1:X:1164:C:N1	2.61	0.48
1:X:1115:C:C2'	1:X:1116:U:H5'	2.44	0.48
1:X:1223:G:H5''	1:X:1224:A:C5'	2.39	0.48
1:X:1223:G:H5'	1:X:1225:G:H1'	1.95	0.48
1:X:1373:G:H2'	1:X:1374:G:H5'	1.95	0.48
1:X:1337:G:H1'	1:X:1632:A:H62	1.78	0.48
1:X:1794:A:H2	1:X:1814:G:N3	2.11	0.48
1:X:1838:G:C2	1:X:1878:C:C2	3.02	0.48
1:X:1960:A:C8	1:X:1960:A:O5'	2.65	0.48
1:X:238:G:C2	1:X:239:A:C8	3.02	0.48
1:X:2482:A:N9	33:X:2911:ZLD:H13	2.29	0.48
1:X:698:A:H5''	1:X:699:G:H5''	1.96	0.48
1:X:717:G:HO2'	1:X:718:A:P	2.36	0.48
1:X:795:A:H2	3:A:226:MET:HE2	1.79	0.48
1:X:847:C:N3	1:X:848:A:N7	2.61	0.48
1:X:859:U:H1'	1:X:860:U:C5	2.49	0.48
1:X:859:U:O2	1:X:859:U:C2'	2.58	0.48
1:X:921:A:H3'	1:X:924:C:H41	1.79	0.48
3:A:121:PRO:HB2	3:A:135:PHE:HE1	1.78	0.48
4:B:119:ARG:HG2	4:B:120:TRP:CE2	2.48	0.48
5:C:129:LYS:HE3	5:C:132:ASN:HB2	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:17:MET:O	6:D:21:GLY:CA	2.62	0.48
6:D:80:ARG:HD3	6:D:83:MET:CG	2.43	0.48
8:F:89:SER:HB3	8:F:135:MET:O	2.14	0.48
9:G:127:ILE:O	9:G:128:GLU:C	2.52	0.48
1:X:1148:G:N2	9:G:134:MET:HE1	2.18	0.48
9:G:91:THR:O	9:G:93:LYS:N	2.46	0.48
11:I:29:THR:CA	11:I:34:HIS:CD2	2.97	0.48
12:J:19:THR:HG21	12:J:40:PRO:HB3	1.96	0.48
12:J:99:LYS:HE3	12:J:100:PRO:HD2	1.96	0.48
13:K:26:THR:HG23	13:K:70:ILE:HG23	1.96	0.48
14:L:90:ASP:C	14:L:91:ARG:O	2.48	0.48
16:N:79:PHE:HE1	16:N:106:PHE:HE1	1.57	0.48
17:O:22:VAL:HA	17:O:91:THR:OG1	2.13	0.48
17:O:7:THR:HG22	17:O:8:GLY:N	2.28	0.48
18:P:83:ASP:O	18:P:84:GLU:O	2.31	0.48
19:Q:27:PHE:N	19:Q:27:PHE:CD1	2.81	0.48
1:X:1354:A:H5'	19:Q:56:MET:HG3	1.93	0.48
19:Q:62:ARG:HH12	19:Q:73:ASN:ND2	2.11	0.48
19:Q:75:ARG:HG3	19:Q:75:ARG:HH11	1.79	0.48
21:S:95:SER:OG	21:S:121:GLN:HB2	2.12	0.48
1:X:1107:A:H3'	1:X:1108:U:C5'	2.43	0.48
1:X:1337:G:OP2	18:P:105:ARG:NH1	2.46	0.48
1:X:1428:G:H1	1:X:1602:G:P	2.37	0.48
1:X:157:G:H5'	1:X:158:A:OP1	2.13	0.48
1:X:1811:A:H5''	3:A:161:THR:HG21	1.96	0.48
1:X:188:G:C2	1:X:189:A:C5	3.02	0.48
1:X:2516:U:H2'	1:X:2517:C:H6	1.77	0.48
1:X:2850:U:H2'	1:X:2851:G:O5'	2.14	0.48
1:X:760:U:C4	26:Y:3:LYS:HG3	2.49	0.48
26:Y:11:THR:O	26:Y:12:SER:C	2.52	0.48
2:Z:18:G:C4	2:Z:19:C:C5	3.01	0.48
3:A:146:GLU:HG2	3:A:147:LEU:H	1.77	0.48
3:A:164:GLN:O	3:A:175:VAL:HG12	2.13	0.48
3:A:43:ARG:N	3:A:43:ARG:CD	2.67	0.48
3:A:90:ALA:O	3:A:91:ARG:C	2.51	0.48
1:X:2553:G:O2'	4:B:143:GLN:HB3	2.14	0.48
5:C:104:LEU:HA	5:C:107:ALA:HB3	1.96	0.48
5:C:7:ILE:HG13	5:C:136:TRP:HH2	1.78	0.48
1:X:453:U:O2	5:C:40:ARG:NH1	2.47	0.48
6:D:101:GLU:C	6:D:103:LEU:H	2.18	0.48
9:G:72:PRO:C	9:G:74:MET:H	2.16	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:110:VAL:HG21	12:J:115:ALA:HB2	1.95	0.48
12:J:121:LEU:C	12:J:123:GLY:H	2.18	0.48
14:L:33:ARG:HH22	14:L:103:LEU:CB	2.26	0.48
18:P:25:PHE:HD2	18:P:25:PHE:C	2.17	0.48
1:X:321:A:P	20:R:27:GLY:H	2.32	0.48
21:S:13:LYS:HB2	21:S:13:LYS:NZ	2.28	0.48
22:T:41:ARG:HA	22:T:41:ARG:NE	2.28	0.48
25:W:38:PRO:N	25:W:41:ARG:HH12	2.10	0.48
1:X:155:G:C4	1:X:156:G:C8	3.02	0.48
1:X:1726:C:H2'	1:X:1727:C:C6	2.49	0.48
1:X:1975:G:O2'	1:X:1976:U:OP2	2.25	0.48
1:X:2174:G:O2'	1:X:2175:A:H5'	2.13	0.48
1:X:2740:C:H1'	7:E:143:GLN:HE21	1.79	0.48
1:X:2839:G:H2'	1:X:2840:U:H6	1.78	0.48
1:X:479:G:O2'	1:X:480:G:H5'	2.13	0.48
1:X:77:C:H2'	1:X:78:C:C6	2.49	0.48
1:X:813:A:C2	1:X:815:A:H8	2.31	0.48
1:X:883:A:O2'	1:X:884:C:H5'	2.14	0.48
3:A:183:ARG:CD	3:A:184:ARG:O	2.62	0.48
6:D:36:VAL:HG22	6:D:154:ILE:HG13	1.95	0.48
7:E:137:ASP:OD1	7:E:139:GLN:HB2	2.14	0.48
4:B:149:ARG:NH1	9:G:106:TYR:CD1	2.82	0.48
4:B:152:LYS:CD	9:G:106:TYR:H	2.23	0.48
9:G:32:TYR:OH	9:G:35:LYS:CE	2.59	0.48
1:X:643:A:H4'	11:I:67:ASN:HB2	1.96	0.48
14:L:79:ALA:O	14:L:82:LYS:N	2.47	0.48
10:H:116:ARG:CD	15:M:38:LYS:HZ2	2.24	0.48
17:O:23:GLU:HB3	17:O:32:LYS:HZ3	1.78	0.48
17:O:10:LYS:CB	17:O:37:ALA:H	2.22	0.48
19:Q:57:ASN:HA	19:Q:76:LYS:HA	1.96	0.48
20:R:44:GLN:HB3	20:R:77:HIS:ND1	2.25	0.48
20:R:25:LEU:HD11	20:R:81:VAL:HG23	1.95	0.48
23:U:37:ILE:O	23:U:38:THR:HG23	2.14	0.48
23:U:51:ILE:HG23	23:U:59:THR:CB	2.44	0.48
23:U:51:ILE:O	23:U:52:ARG:CD	2.62	0.48
24:V:4:SER:HB3	24:V:7:ARG:CZ	2.43	0.48
1:X:1034:U:H2'	1:X:1035:G:C5'	2.38	0.48
1:X:1398:G:O2'	1:X:1399:C:O5'	2.32	0.48
1:X:1935:A:H2	1:X:2539:C:O2	1.97	0.48
1:X:1935:A:C6	1:X:1936:A:C6	3.02	0.48
1:X:2529:G:C6	1:X:2530:C:N4	2.82	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2532:G:N3	1:X:2533:U:H1'	2.28	0.48
1:X:2712:G:H8	1:X:2712:G:OP2	1.96	0.48
1:X:2728:A:O2'	1:X:2729:A:H5'	2.13	0.48
1:X:2826:C:H2'	1:X:2827:G:C5'	2.44	0.48
1:X:454:G:H4'	1:X:455:A:OP1	2.12	0.48
1:X:540:G:C6	1:X:2006:G:OP1	2.66	0.48
3:A:109:GLU:O	3:A:109:GLU:HG3	2.14	0.47
3:A:74:GLY:N	3:A:119:ALA:O	2.47	0.47
3:A:217:ARG:NE	3:A:218:LYS:HG3	2.29	0.47
3:A:86:PRO:O	3:A:87:ASN:HB2	2.13	0.47
5:C:9:GLN:CG	5:C:120:VAL:HG21	2.43	0.47
5:C:134:ILE:N	5:C:134:ILE:HD13	2.29	0.47
5:C:3:GLN:HE21	5:C:4:ILE:C	2.18	0.47
6:D:10:ASP:H	6:D:14:PRO:CD	2.27	0.47
6:D:132:ILE:CG2	6:D:152:MET:HB2	2.42	0.47
6:D:53:ALA:CB	6:D:57:LEU:HD11	2.43	0.47
7:E:137:ASP:O	7:E:141:VAL:HG23	2.14	0.47
9:G:104:THR:O	9:G:105:GLY:O	2.31	0.47
9:G:67:ARG:CG	9:G:70:PHE:HA	2.43	0.47
12:J:27:TYR:HA	12:J:103:VAL:CG2	2.44	0.47
1:X:884:C:H5''	12:J:70:PHE:CE1	2.48	0.47
15:M:22:ARG:NH1	15:M:24:LEU:CD2	2.77	0.47
15:M:33:VAL:HG23	15:M:51:GLU:OE2	2.13	0.47
15:M:46:ARG:CG	15:M:47:SER:H	2.26	0.47
17:O:65:ARG:HG2	17:O:65:ARG:HH11	1.78	0.47
18:P:93:LYS:HB3	18:P:127:ILE:O	2.13	0.47
18:P:80:LEU:HD22	18:P:87:GLU:HB3	1.94	0.47
20:R:93:ARG:NH2	20:R:109:ALA:N	2.62	0.47
20:R:22:VAL:HG21	20:R:80:LYS:HZ2	1.79	0.47
21:S:42:ALA:C	21:S:44:ARG:N	2.66	0.47
22:T:23:VAL:HB	22:T:26:PHE:CZ	2.49	0.47
22:T:52:GLY:N	22:T:62:LEU:HD21	2.29	0.47
23:U:53:GLU:OE2	23:U:57:VAL:HA	2.14	0.47
24:V:41:HIS:C	24:V:43:VAL:N	2.67	0.47
25:W:44:VAL:O	25:W:47:VAL:N	2.47	0.47
1:X:109:A:H2'	1:X:110:U:C5'	2.44	0.47
1:X:1339:U:OP2	1:X:1339:U:C6	2.66	0.47
1:X:1382:G:C2'	1:X:1383:C:O5'	2.61	0.47
1:X:1495:G:C2	1:X:1530:U:O2	2.67	0.47
1:X:1514:C:O2'	1:X:1515:U:H5'	2.12	0.47
1:X:1549:C:H2'	1:X:1550:C:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1759:A:C6	1:X:1760:G:N7	2.82	0.47
1:X:1920:A:N1	1:X:1950:C:H1'	2.28	0.47
1:X:2509:A:H3'	1:X:2510:A:H5''	1.96	0.47
1:X:2725:C:O3'	7:E:142:GLY:HA3	2.13	0.47
1:X:2796:A:C6	1:X:2797:G:C6	3.01	0.47
1:X:2699:G:H21	1:X:2847:G:H1	1.61	0.47
1:X:333:A:C2	1:X:351:A:C6	3.02	0.47
1:X:413:G:H3'	1:X:413:G:C8	2.49	0.47
1:X:579:G:H4'	1:X:994:A:C2	2.49	0.47
3:A:145:LEU:HG	3:A:146:GLU:N	2.29	0.47
3:A:128:GLY:N	3:A:193:ILE:HB	2.30	0.47
4:B:105:THR:HG22	4:B:166:THR:HG23	1.95	0.47
5:C:155:GLU:O	5:C:156:ASN:C	2.52	0.47
6:D:111:ILE:HB	6:D:114:PHE:CD1	2.49	0.47
6:D:171:GLN:C	6:D:173:MET:N	2.66	0.47
6:D:60:ILE:CG1	6:D:61:THR:HG23	2.44	0.47
7:E:140:LEU:HA	7:E:143:GLN:HB2	1.96	0.47
8:F:72:THR:N	8:F:73:PRO:CD	2.74	0.47
10:H:101:ASN:O	10:H:102:GLN:NE2	2.47	0.47
11:I:130:ILE:CG2	11:I:131:LYS:N	2.76	0.47
11:I:135:ALA:O	11:I:136:ALA:CB	2.62	0.47
11:I:89:ASP:HB2	11:I:120:VAL:HA	1.95	0.47
13:K:48:VAL:C	13:K:50:GLN:N	2.66	0.47
14:L:66:ASP:C	14:L:68:ALA:H	2.16	0.47
17:O:20:ILE:CG1	17:O:21:ARG:N	2.77	0.47
17:O:36:LYS:HZ3	17:O:98:ILE:N	2.11	0.47
20:R:94:VAL:C	20:R:95:ARG:HD2	2.34	0.47
21:S:74:ARG:HD3	21:S:75:LYS:NZ	2.28	0.47
24:V:1:MET:O	24:V:2:LYS:HB3	2.14	0.47
1:X:1026:U:H2'	1:X:1027:C:C6	2.49	0.47
1:X:1216:G:C2'	1:X:1217:U:H5'	2.44	0.47
1:X:1226:A:C1'	1:X:1250:A:C2	2.98	0.47
1:X:1505:U:H3'	1:X:1505:U:H6	1.80	0.47
1:X:1525:A:H3'	1:X:1526:U:C5	2.45	0.47
1:X:1582:A:C5	3:A:214:TRP:CZ2	3.02	0.47
1:X:1639:U:O2'	1:X:1640:C:H5'	2.14	0.47
1:X:1690:U:C2'	1:X:1691:G:C5'	2.88	0.47
1:X:1727:C:H6	1:X:1727:C:O5'	1.97	0.47
1:X:1856:U:OP1	1:X:2389:G:O2'	2.32	0.47
1:X:2035:G:N2	1:X:2036:G:C4	2.82	0.47
1:X:234:C:H2'	1:X:235:C:H5'	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2261:G:H21	1:X:2369:U:H3	1.60	0.47
1:X:2598:C:O4'	4:B:150:VAL:HG22	2.14	0.47
1:X:588:G:N2	1:X:1275:A:C4	2.82	0.47
1:X:689:A:C2'	1:X:690:A:H5'	2.44	0.47
1:X:717:G:O2'	1:X:718:A:P	2.72	0.47
1:X:761:G:C8	1:X:763:A:C8	3.02	0.47
1:X:968:C:N4	1:X:970:A:N3	2.62	0.47
3:A:111:LEU:HD23	3:A:111:LEU:N	2.28	0.47
4:B:134:TRP:O	4:B:135:HIS:C	2.52	0.47
4:B:78:LEU:O	4:B:79:ARG:NE	2.48	0.47
5:C:13:ARG:CD	5:C:13:ARG:H	2.26	0.47
5:C:15:ILE:HG22	5:C:17:LEU:CD2	2.42	0.47
6:D:17:MET:CA	6:D:21:GLY:HA2	2.44	0.47
7:E:149:ARG:CA	7:E:162:VAL:HG11	2.36	0.47
7:E:18:ASN:C	7:E:20:GLN:H	2.18	0.47
9:G:37:ASP:O	9:G:38:GLU:CB	2.62	0.47
11:I:83:LEU:O	11:I:84:GLU:C	2.52	0.47
11:I:89:ASP:N	11:I:89:ASP:OD1	2.44	0.47
14:L:37:HIS:CD2	14:L:39:TYR:CE1	3.02	0.47
16:N:39:LEU:O	16:N:40:LEU:C	2.50	0.47
17:O:35:LEU:HD22	17:O:36:LYS:C	2.34	0.47
21:S:89:GLY:O	21:S:127:PRO:CG	2.55	0.47
23:U:17:SER:OG	23:U:44:ALA:O	2.32	0.47
25:W:1:MET:O	25:W:33:GLU:OE2	2.32	0.47
1:X:1153:A:O2'	1:X:1154:A:C5'	2.62	0.47
1:X:1248:G:C5	1:X:1249:G:N1	2.83	0.47
1:X:1253:C:C4	1:X:1254:G:C8	3.03	0.47
1:X:1377:G:N3	1:X:1379:A:OP2	2.47	0.47
1:X:1473:U:O2'	1:X:1474:A:OP2	2.25	0.47
1:X:1652:G:H2'	1:X:1653:C:C6	2.49	0.47
1:X:1657:A:H5'	1:X:1657:A:H8	1.79	0.47
1:X:196:A:C2'	1:X:197:G:H5'	2.44	0.47
1:X:2002:A:H2'	1:X:2003:A:O5'	2.13	0.47
1:X:2026:C:N4	1:X:2757:G:C6	2.82	0.47
1:X:2090:U:C2	1:X:2166:G:C2	3.03	0.47
1:X:2402:U:H4'	1:X:2404:A:N7	2.29	0.47
1:X:2506:C:C5'	30:4:30:VAL:HB	2.42	0.47
1:X:2720:A:N6	1:X:2744:A:C8	2.82	0.47
1:X:430:C:H1'	1:X:2386:G:N2	2.29	0.47
1:X:736:G:H2'	1:X:737:C:O4'	2.13	0.47
1:X:873:U:O2'	1:X:874:A:H5'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:987:G:N3	1:X:988:G:C8	2.83	0.47
30:4:18:ARG:HG2	30:4:23:VAL:CG1	2.41	0.47
3:A:166:GLN:O	3:A:167:GLY:O	2.32	0.47
3:A:75:VAL:CG1	3:A:76:ASN:N	2.76	0.47
4:B:165:VAL:HG12	4:B:166:THR:N	2.28	0.47
4:B:61:LYS:N	4:B:62:PRO:CD	2.77	0.47
5:C:148:VAL:HG12	5:C:149:LEU:N	2.29	0.47
1:X:310:A:N1	5:C:162:ARG:NH1	2.62	0.47
6:D:118:ASN:O	6:D:122:PHE:HZ	1.97	0.47
7:E:133:VAL:O	7:E:141:VAL:HG13	2.14	0.47
9:G:162:LYS:N	9:G:163:PRO:CD	2.78	0.47
10:H:28:GLY:C	10:H:35:THR:H	2.17	0.47
12:J:51:CYS:C	12:J:55:MET:HE2	2.35	0.47
14:L:80:ALA:O	14:L:82:LYS:N	2.44	0.47
15:M:68:VAL:O	15:M:78:GLU:HA	2.14	0.47
16:N:93:LYS:HE3	17:O:10:LYS:NZ	2.29	0.47
19:Q:29:VAL:HG11	19:Q:78:ALA:CB	2.44	0.47
19:Q:45:ALA:HB3	19:Q:46:PHE:CE1	2.50	0.47
20:R:108:VAL:HG13	20:R:109:ALA:H	1.79	0.47
20:R:15:HIS:HB2	20:R:82:ALA:HB2	1.96	0.47
20:R:38:LEU:CD2	20:R:39:ALA:N	2.72	0.47
20:R:62:MET:O	20:R:63:THR:C	2.52	0.47
22:T:60:PHE:HD1	22:T:60:PHE:H	1.59	0.47
23:U:29:GLY:O	23:U:31:GLY:N	2.48	0.47
1:X:177:U:OP2	23:U:40:ARG:NH2	2.47	0.47
25:W:4:LYS:HG3	25:W:52:GLU:HB3	1.95	0.47
1:X:1234:C:H2'	1:X:1235:C:C6	2.48	0.47
1:X:1279:G:H2'	1:X:1995:G:O6	2.14	0.47
1:X:1820:G:OP2	1:X:1820:G:H8	1.97	0.47
1:X:1850:G:C8	1:X:1868:A:N6	2.82	0.47
1:X:540:G:C2	1:X:2005:U:OP1	2.67	0.47
1:X:2311:U:H5'	1:X:2315:A:N6	2.29	0.47
1:X:2319:G:H2'	1:X:2320:G:H8	1.79	0.47
1:X:2362:G:H2'	1:X:2363:G:H8	1.78	0.47
1:X:2469:G:H5''	1:X:2470:U:OP1	2.13	0.47
1:X:2620:G:P	9:G:102:ARG:HH21	2.36	0.47
1:X:726:G:N2	1:X:731:A:OP1	2.48	0.47
1:X:793:G:H2'	1:X:795:A:N7	2.29	0.47
2:Z:53:G:H5'	14:L:64:LYS:HD2	1.94	0.47
3:A:119:ALA:HB1	3:A:130:ALA:CB	2.38	0.47
4:B:144:ARG:O	4:B:146:THR:N	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:179:GLU:HG2	4:B:181:LEU:HD12	1.96	0.47
5:C:104:LEU:C	5:C:107:ALA:H	2.17	0.47
5:C:139:GLN:C	5:C:141:GLY:H	2.17	0.47
5:C:5:ASN:N	5:C:5:ASN:ND2	2.62	0.47
7:E:167:GLU:HG3	7:E:169:ILE:CG1	2.45	0.47
8:F:102:TRP:CE3	8:F:139:VAL:HG12	2.48	0.47
10:H:116:ARG:NH1	15:M:38:LYS:HE3	2.29	0.47
11:I:124:ALA:HA	11:I:142:LEU:CD2	2.42	0.47
11:I:90:ARG:NH2	11:I:93:LEU:HG	2.29	0.47
14:L:28:ARG:HG3	14:L:43:ILE:CD1	2.32	0.47
17:O:12:TYR:C	17:O:13:ARG:CG	2.83	0.47
18:P:8:PHE:O	18:P:9:ARG:HB2	2.13	0.47
20:R:105:ARG:NH2	20:R:106:VAL:O	2.47	0.47
20:R:63:THR:HG22	20:R:64:ASN:ND2	2.29	0.47
20:R:95:ARG:N	20:R:95:ARG:HD2	2.29	0.47
21:S:122:ILE:HG22	21:S:160:LEU:HA	1.95	0.47
1:X:1412:C:H6	1:X:1412:C:O5'	1.97	0.47
1:X:1442:C:HO2'	1:X:1443:G:P	2.37	0.47
1:X:1468:A:H5''	1:X:1472:C:H41	1.79	0.47
1:X:1527:G:H2'	1:X:1528:C:C1'	2.44	0.47
1:X:1658:A:C8	1:X:1659:G:C8	3.02	0.47
1:X:1684:G:H1'	1:X:1974:U:O4	2.14	0.47
1:X:1759:A:C6	1:X:1968:G:C6	3.03	0.47
1:X:1882:G:H21	1:X:1885:C:H41	1.62	0.47
1:X:2006:G:C2	1:X:2007:G:C8	3.03	0.47
1:X:2190:A:N6	1:X:2196:U:C4	2.83	0.47
1:X:2411:A:N1	23:U:37:ILE:O	2.48	0.47
1:X:242:A:H2'	1:X:243:G:O4'	2.14	0.47
1:X:2506:C:O2'	1:X:2507:U:H5'	2.14	0.47
1:X:2640:G:H2'	1:X:2641:A:C8	2.50	0.47
1:X:2026:C:N3	1:X:2757:G:C2	2.83	0.47
1:X:2787:A:C5	1:X:2788:C:C5	3.03	0.47
1:X:564:U:H2'	1:X:565:A:C8	2.50	0.47
1:X:946:U:O2'	1:X:947:C:H5'	2.13	0.47
3:A:217:ARG:C	3:A:219:PRO:N	2.68	0.47
1:X:1673:C:OP1	4:B:136:ARG:CD	2.63	0.47
4:B:179:GLU:O	4:B:181:LEU:N	2.47	0.47
4:B:51:TYR:O	4:B:75:THR:OG1	2.32	0.47
5:C:58:MET:HE3	5:C:58:MET:HA	1.97	0.47
5:C:7:ILE:CG2	5:C:122:GLY:HA2	2.45	0.47
6:D:101:GLU:HA	6:D:104:ILE:CD1	2.39	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:162:THR:N	6:D:165:GLU:OE2	2.43	0.47
7:E:150:LYS:C	7:E:152:ARG:H	2.18	0.47
9:G:41:TRP:CZ3	9:G:79:PHE:CG	3.02	0.47
10:H:131:PRO:HB2	15:M:73:PHE:CZ	2.49	0.47
18:P:45:ILE:HG13	18:P:53:ALA:HB1	1.96	0.47
18:P:64:ALA:O	18:P:68:VAL:HG23	2.14	0.47
18:P:91:PHE:CE1	18:P:129:ALA:HB3	2.49	0.47
19:Q:38:ILE:HA	19:Q:41:ALA:HB3	1.95	0.47
21:S:36:ARG:HH11	21:S:37:LYS:CB	2.19	0.47
21:S:36:ARG:O	21:S:37:LYS:C	2.52	0.47
21:S:50:GLY:O	21:S:65:LEU:CD1	2.62	0.47
22:T:32:LYS:CG	22:T:33:ALA:H	2.07	0.47
22:T:72:LYS:HG3	22:T:78:PHE:HE1	1.74	0.47
1:X:1082:G:O4'	1:X:1100:G:C5	2.68	0.47
1:X:1142:G:H8	1:X:2008:C:H4'	1.80	0.47
1:X:1258:G:P	11:I:17:LYS:HE2	2.54	0.47
1:X:1366:A:C2	1:X:1367:A:C2	3.02	0.47
1:X:1469:U:O5'	1:X:1470:G:OP2	2.33	0.47
1:X:1517:C:C2	1:X:1518:C:C5	3.03	0.47
1:X:1725:C:H2'	1:X:1726:C:C6	2.47	0.47
1:X:193:A:C4	1:X:445:A:C2	3.03	0.47
1:X:1984:A:H2'	1:X:1985:G:O4'	2.15	0.47
1:X:2348:A:O2'	1:X:2349:G:H5'	2.14	0.47
1:X:2451:G:O6	1:X:2455:A:H4'	2.15	0.47
1:X:2641:A:H2'	1:X:2642:G:O4'	2.15	0.47
1:X:2726:U:H1'	7:E:139:GLN:HE21	1.74	0.47
1:X:482:A:HO2'	1:X:483:A:H5'	1.78	0.47
1:X:53:G:C6	1:X:54:G:C8	3.03	0.47
1:X:562:G:C6	1:X:563:U:C4	3.03	0.47
1:X:19:C:H5'	1:X:563:U:OP1	2.14	0.47
1:X:870:C:O2'	1:X:871:U:H5'	2.14	0.47
1:X:932:G:H2'	1:X:933:G:H8	1.79	0.47
2:Z:116:C:H6	2:Z:116:C:O5'	1.98	0.47
2:Z:30:C:H42	2:Z:58:G:H22	1.62	0.47
2:Z:68:A:H61	2:Z:110:U:H3'	1.80	0.47
3:A:93:ALA:O	3:A:105:ILE:N	2.39	0.47
4:B:200:SER:O	4:B:201:ALA:C	2.51	0.47
5:C:50:GLN:C	5:C:52:SER:H	2.18	0.47
6:D:20:PHE:CD1	6:D:20:PHE:N	2.83	0.47
6:D:4:LEU:CD1	6:D:7:LYS:HB2	2.45	0.47
6:D:57:LEU:HD23	6:D:60:ILE:HD11	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:145:ALA:O	7:E:148:VAL:N	2.48	0.47
7:E:44:ARG:HH22	7:E:51:LEU:HB3	1.78	0.47
8:F:103:ASP:OD1	8:F:106:LEU:HD11	2.15	0.47
9:G:100:TYR:CB	9:G:116:ARG:HH12	2.02	0.47
16:N:105:ALA:O	16:N:106:PHE:C	2.53	0.47
16:N:115:ASN:O	16:N:116:ALA:C	2.53	0.47
16:N:82:GLY:CA	16:N:117:ARG:HB2	2.44	0.47
16:N:14:HIS:NE2	16:N:32:TYR:CE2	2.83	0.47
17:O:86:HIS:C	17:O:86:HIS:CD2	2.88	0.47
18:P:131:LYS:HG3	18:P:132:GLY:O	2.14	0.47
19:Q:39:LYS:O	19:Q:40:ASP:C	2.52	0.47
20:R:100:ASP:OD1	20:R:103:LYS:HG3	2.15	0.47
20:R:10:HIS:CG	20:R:44:GLN:NE2	2.83	0.47
22:T:16:SER:C	22:T:17:ASN:ND2	2.68	0.47
22:T:8:GLY:O	22:T:9:SER:C	2.52	0.47
1:X:107:G:C2	1:X:108:G:N9	2.83	0.47
1:X:1093:U:O2'	1:X:1094:C:H5'	2.14	0.47
1:X:1364:C:HO2'	1:X:1587:A:H1'	1.79	0.47
1:X:2247:A:H5'	1:X:2248:A:OP2	2.14	0.47
1:X:536:A:N6	1:X:2605:C:H4'	2.30	0.47
1:X:2665:G:C5	1:X:2666:U:C5	3.03	0.47
1:X:2725:C:H4'	7:E:142:GLY:HA3	1.95	0.47
1:X:344:G:N3	1:X:345:U:C6	2.83	0.47
1:X:648:A:H4'	1:X:649:G:C4'	2.45	0.47
1:X:654:A:H3'	1:X:655:A:H5'	1.97	0.47
2:Z:71:G:N2	2:Z:72:C:H1'	2.30	0.47
3:A:231:HIS:C	3:A:231:HIS:CD2	2.88	0.47
4:B:108:SER:OG	4:B:163:GLU:N	2.43	0.47
4:B:95:ILE:N	4:B:95:ILE:CD1	2.78	0.47
5:C:158:ARG:C	5:C:160:ALA:N	2.67	0.47
5:C:39:ARG:NH2	5:C:91:TYR:CD1	2.82	0.47
6:D:36:VAL:HG21	6:D:61:THR:CG2	2.44	0.47
7:E:142:GLY:C	7:E:144:VAL:N	2.67	0.47
7:E:149:ARG:HA	7:E:162:VAL:CG1	2.36	0.47
9:G:144:MET:C	9:G:146:THR:H	2.17	0.47
10:H:79:HIS:O	10:H:80:ALA:HB2	2.14	0.47
12:J:100:PRO:CB	21:S:74:ARG:HG3	2.44	0.47
14:L:80:ALA:C	14:L:82:LYS:N	2.67	0.47
16:N:56:ASP:O	16:N:58:ARG:N	2.47	0.47
16:N:58:ARG:O	16:N:62:ILE:HG13	2.13	0.47
16:N:93:LYS:O	16:N:94:VAL:CB	2.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:O:5:ILE:HG13	17:O:9:GLY:HA2	1.97	0.47
19:Q:34:THR:C	19:Q:36:THR:N	2.67	0.47
20:R:20:ASP:HB3	20:R:83:LEU:CD2	2.45	0.47
21:S:127:PRO:C	21:S:129:ARG:H	2.17	0.47
21:S:54:ILE:N	21:S:62:PHE:O	2.46	0.47
22:T:3:HIS:CD2	22:T:5:LYS:HB2	2.46	0.47
23:U:54:ASN:CG	23:U:55:GLY:N	2.68	0.47
24:V:4:SER:CB	24:V:7:ARG:HE	2.27	0.47
25:W:37:THR:C	25:W:41:ARG:NH1	2.68	0.47
25:W:3:ILE:CG2	25:W:25:LEU:HD11	2.45	0.47
1:X:1084:A:C5	1:X:1085:G:N7	2.82	0.47
1:X:1201:G:O5'	1:X:1201:G:C8	2.68	0.47
1:X:1326:U:O3'	1:X:1345:G:H5'	2.15	0.47
1:X:173:A:P	11:I:53:ARG:NH2	2.85	0.47
1:X:1782:A:O3'	3:A:206:LEU:HB2	2.15	0.47
1:X:1948:C:C6	1:X:1949:A:C8	3.02	0.47
1:X:177:U:C4	1:X:225:G:N2	2.83	0.47
1:X:2061:C:H1'	1:X:2413:A:N3	2.30	0.47
1:X:843:G:C6	1:X:2427:A:C8	3.03	0.47
1:X:2628:C:H2'	1:X:2629:U:H6	1.80	0.47
1:X:2674:C:H2'	1:X:2675:U:C6	2.48	0.47
1:X:2703:C:HO2'	1:X:2704:U:H5'	1.80	0.47
1:X:2736:U:H5''	30:4:19:ARG:HG2	1.97	0.47
1:X:663:G:H5''	1:X:664:C:OP2	2.14	0.47
1:X:713:G:C6	1:X:746:G:N2	2.83	0.47
1:X:754:G:C6	1:X:770:U:C2	3.03	0.47
1:X:789:G:C6	1:X:806:A:C8	3.01	0.47
1:X:999:A:C6	25:W:10:ILE:HG21	2.50	0.47
3:A:129:ASN:CB	3:A:131:LEU:HD22	2.45	0.47
3:A:77:ALA:HA	3:A:96:HIS:O	2.14	0.47
5:C:7:ILE:HG13	5:C:119:ALA:HB1	1.97	0.47
6:D:71:LYS:HD2	6:D:73:SER:HG	1.75	0.47
6:D:88:LYS:C	6:D:89:VAL:HG22	2.35	0.47
7:E:105:MET:O	7:E:106:ASN:HB2	2.14	0.47
8:F:77:TYR:HB2	8:F:112:LYS:CE	2.44	0.47
10:H:65:LYS:O	10:H:68:ASP:CG	2.54	0.47
2:Z:9:G:H5'	14:L:32:TYR:CE2	2.50	0.47
17:O:51:ALA:C	17:O:53:LYS:H	2.17	0.47
18:P:84:GLU:O	18:P:85:MET:HG3	2.14	0.47
19:Q:43:GLN:HG3	19:Q:50:VAL:HG23	1.96	0.47
19:Q:51:ILE:HD11	19:Q:83:ALA:CB	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:28:LYS:O	20:R:29:HIS:CB	2.61	0.47
20:R:95:ARG:HH12	20:R:107:ALA:H	1.62	0.47
22:T:43:THR:CG2	22:T:46:LYS:HD2	2.43	0.47
22:T:60:PHE:CD1	22:T:60:PHE:N	2.80	0.47
1:X:1163:C:H4'	16:N:77:SER:HA	1.97	0.47
1:X:1553:G:H2'	1:X:1554:G:C8	2.50	0.47
1:X:1781:C:H5'	3:A:219:PRO:CG	2.44	0.47
1:X:1910:A:C2	1:X:1911:A:C2	3.03	0.47
1:X:1929:U:C2	1:X:1930:C:C5	3.03	0.47
1:X:2209:G:C2	1:X:2210:C:C5	3.03	0.47
1:X:2550:C:N4	1:X:2553:G:C8	2.83	0.47
1:X:2849:C:H2'	1:X:2850:U:H5'	1.96	0.47
1:X:432:C:O2'	1:X:433:G:H5'	2.15	0.47
1:X:577:U:O4	1:X:984:A:OP2	2.32	0.47
1:X:580:A:C8	1:X:584:A:N6	2.83	0.47
1:X:594:G:C5	1:X:1264:C:C4	3.03	0.47
1:X:1586:A:C5'	3:A:38:PRO:HG3	2.33	0.47
3:A:64:ILE:N	3:A:64:ILE:HD12	2.30	0.47
4:B:182:ILE:C	4:B:183:LEU:HD23	2.34	0.47
4:B:81:PHE:O	4:B:82:ARG:HB2	2.15	0.47
7:E:105:MET:HE2	7:E:105:MET:HA	1.97	0.47
7:E:9:ILE:HG21	7:E:50:LEU:HD22	1.97	0.47
8:F:129:ALA:HB1	8:F:133:ARG:NE	2.29	0.47
9:G:34:PRO:C	9:G:69:ASP:CG	2.73	0.47
11:I:112:GLY:C	11:I:113:GLU:HG3	2.35	0.47
12:J:136:GLU:C	12:J:138:TYR:CE2	2.88	0.47
13:K:35:GLN:O	13:K:36:THR:HB	2.15	0.47
14:L:79:ALA:CA	14:L:82:LYS:HB2	2.45	0.47
15:M:78:GLU:OE2	15:M:108:ARG:NE	2.48	0.47
17:O:36:LYS:HZ3	17:O:98:ILE:HB	1.80	0.47
18:P:106:LEU:HD12	18:P:106:LEU:HA	1.68	0.47
20:R:58:VAL:HA	20:R:60:PRO:HD3	1.95	0.47
23:U:41:VAL:O	23:U:42:GLN:CB	2.63	0.47
1:X:1164:C:N3	1:X:1165:G:C4	2.83	0.47
1:X:1223:G:H5'	1:X:1225:G:C1'	2.45	0.47
1:X:1250:A:O2'	1:X:1251:G:C4'	2.62	0.47
1:X:1319:C:C2	1:X:1320:A:C8	3.02	0.47
1:X:1390:G:O5'	1:X:1390:G:H8	1.97	0.47
1:X:1588:A:C2	1:X:1589:G:C8	3.03	0.47
1:X:157:G:H5'	1:X:158:A:P	2.54	0.47
1:X:171:G:N1	1:X:179:U:C2	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1810:U:H5	3:A:157:ARG:NH1	2.11	0.47
1:X:1827:G:H1'	1:X:1914:U:N3	2.29	0.47
1:X:219:G:H2'	1:X:231:G:H1	1.78	0.47
1:X:2324:G:C2	1:X:2360:C:C2	3.03	0.47
1:X:2560:G:C8	1:X:2589:C:N4	2.83	0.47
1:X:2627:G:H8	1:X:2627:G:O5'	1.97	0.47
1:X:2738:A:H2'	1:X:2739:G:H5'	1.97	0.47
1:X:2776:U:O2	18:P:134:LYS:CD	2.63	0.47
1:X:2871:U:C2	1:X:2872:U:C5	3.03	0.47
1:X:60:A:OP1	1:X:60:A:C8	2.64	0.47
1:X:738:G:H8	1:X:738:G:O5'	1.97	0.47
2:Z:62:C:H2'	2:Z:63:A:C8	2.50	0.47
3:A:169:GLU:N	3:A:172:TYR:O	2.46	0.47
4:B:123:ALA:O	4:B:124:GLY:O	2.33	0.47
6:D:36:VAL:HG22	6:D:154:ILE:CG1	2.45	0.47
6:D:96:MET:HG3	6:D:97:TYR:N	2.30	0.47
7:E:125:VAL:HA	7:E:131:ILE:CD1	2.44	0.47
7:E:38:ASN:HB2	7:E:41:LEU:HB2	1.97	0.47
9:G:40:ASN:HB3	9:G:78:ASP:HB3	1.96	0.47
9:G:61:ARG:NE	9:G:65:LYS:NZ	2.63	0.47
10:H:48:GLY:HA2	10:H:118:LEU:CD2	2.45	0.47
11:I:73:GLU:OE1	11:I:105:PRO:C	2.53	0.47
13:K:46:PRO:O	13:K:50:GLN:N	2.46	0.47
1:X:1406:A:N6	19:Q:15:LYS:HG2	2.29	0.47
21:S:6:LYS:H	21:S:7:PRO:CD	2.28	0.47
22:T:37:LEU:HD23	22:T:67:VAL:HG22	1.97	0.47
23:U:71:SER:OG	23:U:72:LYS:HE2	2.14	0.47
1:X:1122:A:N3	1:X:1123:G:H1'	2.29	0.47
1:X:1185:C:H2'	1:X:1186:G:C3'	2.33	0.47
1:X:1228:G:C2'	1:X:1229:C:H5'	2.45	0.47
1:X:1382:G:H2'	1:X:1383:C:O5'	2.14	0.47
1:X:146:C:H2'	1:X:147:G:O4'	2.15	0.47
1:X:1577:G:O2'	1:X:1578:U:H5'	2.15	0.47
1:X:1669:A:N7	1:X:1670:G:C6	2.83	0.47
1:X:2344:G:H4'	22:T:60:PHE:CZ	2.50	0.47
1:X:2306:A:C6	1:X:2367:A:C2	3.03	0.47
1:X:2496:C:HO2'	1:X:2497:A:H3'	1.79	0.47
1:X:2754:C:H2'	1:X:2755:A:C8	2.50	0.47
1:X:456:C:H4'	5:C:43:ALA:CB	2.45	0.47
1:X:583:C:O2'	1:X:584:A:OP2	2.30	0.47
1:X:617:U:O2	1:X:617:U:C3'	2.61	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:613:A:C4	1:X:668:A:C2	3.03	0.47
2:Z:119:G:O2'	2:Z:120:G:H5'	2.15	0.47
4:B:70:ALA:O	4:B:72:VAL:HG23	2.15	0.46
4:B:7:THR:O	4:B:9:ILE:HG13	2.15	0.46
5:C:2:ALA:HA	5:C:13:ARG:HA	1.96	0.46
1:X:455:A:N7	5:C:39:ARG:HG3	2.30	0.46
6:D:103:LEU:C	6:D:105:ASN:N	2.66	0.46
6:D:117:ILE:O	6:D:118:ASN:HB2	2.15	0.46
1:X:954:U:OP2	11:I:38:LYS:CG	2.63	0.46
12:J:58:HIS:HD2	12:J:118:ALA:HB2	1.80	0.46
12:J:27:TYR:CB	12:J:137:VAL:HG21	2.32	0.46
12:J:15:ARG:HD2	12:J:74:PRO:HD2	1.98	0.46
1:X:2796:A:P	13:K:3:HIS:HE1	2.37	0.46
13:K:99:ARG:HG2	13:K:99:ARG:NH1	2.10	0.46
17:O:68:LYS:CE	17:O:85:GLY:HA3	2.45	0.46
18:P:57:LEU:CD1	18:P:69:ALA:CA	2.90	0.46
20:R:16:PHE:CZ	20:R:80:LYS:NZ	2.82	0.46
20:R:17:LYS:O	20:R:19:GLY:N	2.48	0.46
20:R:21:THR:HA	20:R:35:LYS:HA	1.96	0.46
20:R:58:VAL:C	20:R:60:PRO:HD3	2.36	0.46
22:T:3:HIS:O	22:T:4:LYS:HB3	2.15	0.46
22:T:50:GLY:O	22:T:62:LEU:HB2	2.14	0.46
25:W:51:LEU:CD2	25:W:51:LEU:H	2.12	0.46
1:X:1026:U:H2'	1:X:1027:C:H6	1.80	0.46
1:X:1147:G:C2	1:X:1148:G:C4	3.03	0.46
1:X:1153:A:O2'	1:X:1154:A:H5''	2.16	0.46
1:X:1354:A:H3'	1:X:1410:U:O2	2.15	0.46
1:X:1433:A:C5	1:X:1435:G:C4	3.03	0.46
1:X:1577:G:H2'	1:X:1578:U:O4'	2.15	0.46
1:X:1681:A:C6	1:X:2706:U:C5	3.02	0.46
1:X:1783:G:H1	1:X:1819:U:H3	1.63	0.46
1:X:1824:C:N4	1:X:1825:C:C4	2.83	0.46
1:X:1850:G:O2'	1:X:1851:A:O4'	2.30	0.46
1:X:192:G:C1'	1:X:193:A:H4'	2.45	0.46
1:X:1970:G:N2	1:X:1971:C:C2	2.82	0.46
1:X:2176:U:O2'	1:X:2177:U:H5'	2.15	0.46
1:X:2306:A:C5	1:X:2307:A:C6	3.03	0.46
1:X:2374:C:H6	1:X:2374:C:O5'	1.98	0.46
1:X:2519:C:C5	1:X:2520:A:N7	2.84	0.46
1:X:2646:C:N3	7:E:110:SER:OG	2.42	0.46
1:X:2859:U:H3	26:Y:52:TYR:HE1	1.60	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:39:C:O2	5:C:40:ARG:NH2	2.48	0.46
1:X:421:G:C2	1:X:433:G:C4	3.03	0.46
1:X:513:A:C6	1:X:515:A:C6	3.03	0.46
1:X:55:A:O4'	1:X:125:A:C2	2.68	0.46
1:X:667:U:O2	1:X:667:U:C2'	2.54	0.46
1:X:818:G:H5'	1:X:819:C:OP2	2.15	0.46
1:X:938:G:HO2'	1:X:939:C:P	2.37	0.46
26:Y:47:PRO:CG	26:Y:48:ASN:H	2.23	0.46
3:A:202:LYS:O	3:A:204:ILE:O	2.33	0.46
5:C:3:GLN:CG	5:C:118:VAL:HG13	2.41	0.46
6:D:13:ARG:HG2	6:D:13:ARG:HH21	1.81	0.46
7:E:127:GLU:HG3	7:E:127:GLU:O	2.14	0.46
8:F:107:GLU:CG	8:F:110:LYS:HD2	2.45	0.46
9:G:106:TYR:CD1	9:G:107:GLN:N	2.83	0.46
9:G:94:LYS:HG2	9:G:95:LEU:HD12	1.97	0.46
10:H:2:ILE:HB	10:H:45:ALA:HB3	1.98	0.46
11:I:7:LYS:HG2	11:I:9:THR:HG23	1.97	0.46
12:J:36:ILE:HB	12:J:131:LYS:CE	2.43	0.46
14:L:92:GLY:O	14:L:93:SER:CB	2.64	0.46
18:P:25:PHE:CD2	18:P:26:ALA:N	2.83	0.46
19:Q:3:HIS:C	19:Q:5:ASP:OD2	2.54	0.46
19:Q:76:LYS:CG	19:Q:76:LYS:O	2.63	0.46
19:Q:91:LEU:N	19:Q:91:LEU:HD22	2.31	0.46
21:S:129:ARG:NH2	21:S:156:GLU:OE2	2.46	0.46
21:S:110:GLY:O	21:S:174:PRO:HD3	2.16	0.46
1:X:1324:G:H2'	1:X:1325:U:H6	1.80	0.46
1:X:1404:C:O2	1:X:1406:A:N7	2.48	0.46
1:X:1421:U:O2'	1:X:1422:C:H5'	2.15	0.46
1:X:1422:C:H2'	1:X:1423:A:H8	1.80	0.46
1:X:1460:G:N3	1:X:1563:U:C2	2.83	0.46
1:X:1641:C:C2'	1:X:1642:G:H5'	2.45	0.46
1:X:1656:U:H2'	1:X:1657:A:C5'	2.45	0.46
1:X:1795:C:C4	1:X:1806:G:N2	2.83	0.46
1:X:1938:U:O3'	1:X:1939:U:H6	1.97	0.46
1:X:208:C:N4	1:X:209:G:N2	2.63	0.46
1:X:2208:U:H3'	1:X:2208:U:C6	2.50	0.46
1:X:2210:C:H2'	1:X:2211:U:O4'	2.15	0.46
1:X:2460:G:H2'	1:X:2461:G:OP2	2.16	0.46
1:X:2750:G:O2'	4:B:203:LYS:CE	2.60	0.46
1:X:2828:C:H2'	1:X:2829:A:H8	1.79	0.46
1:X:2482:A:N9	33:X:2911:ZLD:C13	2.78	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:305:A:H2'	1:X:306:G:H5'	1.97	0.46
1:X:306:G:N1	1:X:307:C:C4	2.82	0.46
1:X:333:A:OP1	5:C:162:ARG:CB	2.60	0.46
1:X:456:C:H2'	1:X:457:C:H6	1.79	0.46
1:X:556:A:OP2	1:X:556:A:H3'	2.15	0.46
1:X:601:A:H3'	1:X:602:C:H5'	1.97	0.46
30:4:10:MET:HB2	30:4:32:HIS:NE2	2.30	0.46
30:4:1:MET:CE	30:4:34:GLN:C	2.82	0.46
1:X:1517:C:OP1	3:A:102:LYS:NZ	2.49	0.46
3:A:215:LEU:HD12	3:A:215:LEU:N	2.31	0.46
6:D:16:LEU:C	6:D:18:GLN:N	2.68	0.46
6:D:5:LYS:O	6:D:8:TYR:N	2.47	0.46
6:D:88:LYS:HE2	6:D:90:THR:OG1	2.14	0.46
7:E:103:LEU:HB2	7:E:123:PHE:CD2	2.49	0.46
8:F:92:PRO:HB3	8:F:136:GLY:CA	2.46	0.46
14:L:47:ARG:O	14:L:49:GLN:N	2.48	0.46
17:O:57:GLN:C	17:O:96:LEU:O	2.53	0.46
19:Q:50:VAL:HG13	19:Q:80:VAL:HG23	1.95	0.46
20:R:37:LEU:HD13	20:R:37:LEU:HA	1.78	0.46
22:T:4:LYS:CB	22:T:4:LYS:NZ	2.76	0.46
23:U:70:LEU:HD23	23:U:75:TYR:HD1	1.79	0.46
24:V:1:MET:HG3	24:V:2:LYS:N	2.30	0.46
24:V:62:ARG:CG	24:V:62:ARG:NH1	2.76	0.46
25:W:16:GLN:O	25:W:20:VAL:HG23	2.15	0.46
1:X:1174:G:C2	1:X:1175:A:C5	3.03	0.46
1:X:953:G:O2'	1:X:1203:A:N3	2.39	0.46
1:X:1393:G:N3	1:X:1585:A:N6	2.64	0.46
1:X:1607:A:O2'	1:X:1608:U:H5'	2.16	0.46
1:X:1800:A:C5	1:X:1802:A:C6	3.03	0.46
1:X:45:C:OP2	1:X:192:G:H3'	2.16	0.46
1:X:200:A:C2	1:X:421:G:O4'	2.69	0.46
1:X:2027:C:H2'	1:X:2028:C:H6	1.81	0.46
1:X:2219:U:O2	1:X:2220:A:C8	2.68	0.46
1:X:965:G:O2'	1:X:2253:A:N1	2.42	0.46
1:X:2434:G:C6	1:X:2435:C:N4	2.83	0.46
1:X:2776:U:C6	1:X:2776:U:C3'	2.98	0.46
1:X:543:G:C6	1:X:544:U:C4	3.03	0.46
1:X:571:U:O2'	1:X:581:A:H1'	2.15	0.46
1:X:654:A:N3	1:X:654:A:H2'	2.31	0.46
1:X:613:A:N3	1:X:668:A:H2	2.13	0.46
1:X:761:G:C8	1:X:763:A:N7	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:794:A:H5''	1:X:795:A:N7	2.30	0.46
1:X:957:G:O2'	1:X:958:G:H5'	2.16	0.46
1:X:957:G:N2	1:X:983:G:H1'	2.31	0.46
2:Z:74:A:H1'	2:Z:108:G:N2	2.30	0.46
1:X:602:C:H1'	29:3:2:PRO:CA	2.45	0.46
3:A:105:ILE:CD1	3:A:105:ILE:N	2.76	0.46
3:A:172:TYR:HD2	3:A:186:HIS:CB	2.25	0.46
4:B:38:THR:C	4:B:40:GLN:N	2.68	0.46
7:E:30:LYS:CD	7:E:79:VAL:O	2.63	0.46
7:E:55:PRO:HD2	7:E:61:HIS:ND1	2.30	0.46
7:E:37:TYR:CE2	7:E:68:THR:HA	2.51	0.46
9:G:75:ILE:HD11	9:G:144:MET:CG	2.45	0.46
9:G:156:HIS:CB	9:G:157:PRO:HD3	2.35	0.46
10:H:119:ARG:NE	15:M:41:GLU:HG2	2.31	0.46
10:H:31:GLY:C	10:H:33:GLY:H	2.19	0.46
10:H:81:ILE:C	10:H:81:ILE:HD13	2.35	0.46
12:J:115:ALA:C	12:J:117:GLU:N	2.66	0.46
15:M:37:THR:O	15:M:87:LEU:HD22	2.16	0.46
15:M:22:ARG:NH2	15:M:89:ASN:O	2.48	0.46
18:P:32:ARG:O	18:P:33:MET:HG2	2.15	0.46
20:R:24:VAL:O	20:R:31:GLY:N	2.41	0.46
20:R:93:ARG:C	20:R:95:ARG:CZ	2.83	0.46
21:S:103:ARG:CZ	21:S:107:GLU:HG2	2.45	0.46
23:U:52:ARG:O	23:U:58:LYS:O	2.33	0.46
25:W:39:ALA:C	25:W:43:MET:HG2	2.36	0.46
1:X:1095:A:N3	1:X:1116:U:O2'	2.46	0.46
1:X:1182:U:N3	1:X:1183:C:C2	2.83	0.46
1:X:824:U:H1'	1:X:1264:C:H1'	1.96	0.46
1:X:1585:A:H4'	3:A:59:LYS:HZ2	1.80	0.46
1:X:1827:G:H1'	1:X:1914:U:C4	2.51	0.46
1:X:2071:G:C2	1:X:2072:C:N1	2.83	0.46
1:X:209:G:H3'	1:X:209:G:C8	2.50	0.46
1:X:219:G:H2'	1:X:231:G:O6	2.15	0.46
1:X:2608:A:N7	1:X:2869:U:C4	2.83	0.46
1:X:342:G:O2'	1:X:343:A:OP1	2.26	0.46
1:X:414:A:H2'	1:X:415:A:O4'	2.15	0.46
1:X:612:G:H2'	1:X:668:A:H61	1.81	0.46
1:X:621:U:O2'	1:X:622:U:H5'	2.15	0.46
1:X:645:G:O2'	1:X:646:C:H5'	2.15	0.46
1:X:759:C:H6	1:X:759:C:H3'	1.81	0.46
2:Z:54:U:H4'	2:Z:54:U:OP1	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1810:U:H3'	3:A:157:ARG:HG3	1.97	0.46
3:A:243:GLY:C	3:A:244:ARG:CD	2.80	0.46
5:C:136:TRP:C	5:C:136:TRP:CD1	2.88	0.46
6:D:80:ARG:CD	6:D:83:MET:SD	3.03	0.46
7:E:44:ARG:HH22	7:E:46:ASP:HB2	1.80	0.46
7:E:69:ARG:HG2	7:E:69:ARG:HH21	1.80	0.46
10:H:17:ARG:H	10:H:58:ALA:HA	1.80	0.46
12:J:11:ARG:HG3	12:J:11:ARG:HH11	1.79	0.46
12:J:138:TYR:O	12:J:139:ASP:C	2.53	0.46
13:K:48:VAL:HG13	13:K:49:GLU:H	1.80	0.46
14:L:37:HIS:O	14:L:38:ILE:O	2.33	0.46
17:O:26:GLN:HG3	17:O:63:HIS:HE2	1.81	0.46
17:O:35:LEU:O	17:O:36:LYS:CG	2.63	0.46
17:O:33:VAL:HB	17:O:56:VAL:O	2.16	0.46
18:P:18:VAL:O	18:P:18:VAL:HG12	2.14	0.46
19:Q:27:PHE:O	19:Q:29:VAL:HG13	2.16	0.46
19:Q:46:PHE:O	19:Q:47:GLY:O	2.34	0.46
19:Q:5:ASP:O	19:Q:6:ILE:C	2.54	0.46
1:X:84:G:OP2	20:R:18:LYS:HB3	2.15	0.46
20:R:35:LYS:O	20:R:37:LEU:HD22	2.15	0.46
21:S:1:MET:HE2	21:S:52:PHE:CD2	2.50	0.46
1:X:2366:U:O4'	22:T:41:ARG:NH1	2.49	0.46
1:X:1055:A:H5''	1:X:1055:A:N3	2.30	0.46
1:X:1283:C:H5''	1:X:1284:G:O5'	2.16	0.46
1:X:1320:A:O2'	1:X:1321:A:H5'	2.16	0.46
1:X:132:U:O2	1:X:140:G:C2	2.69	0.46
1:X:1542:G:H22	1:X:1562:G:N2	2.14	0.46
1:X:171:G:N2	1:X:172:A:C2	2.84	0.46
1:X:2057:U:N3	1:X:2058:U:C4	2.84	0.46
1:X:2082:C:C2'	1:X:2083:G:C5'	2.90	0.46
1:X:2219:U:H2'	1:X:2220:A:H8	1.81	0.46
1:X:2284:U:H2'	1:X:2285:U:C5'	2.45	0.46
1:X:2320:G:H2'	1:X:2321:C:C6	2.50	0.46
1:X:2330:G:H1'	1:X:2345:A:H61	1.80	0.46
1:X:2386:G:H2'	1:X:2387:U:H6	1.78	0.46
1:X:244:C:N4	1:X:245:C:C4	2.83	0.46
1:X:312:G:C6	1:X:328:A:C6	3.03	0.46
1:X:395:G:H1	1:X:404:A:H61	1.54	0.46
1:X:49:U:H6	1:X:49:U:H5''	1.81	0.46
1:X:584:A:C4	1:X:585:U:C5	3.04	0.46
1:X:67:G:O2'	1:X:68:C:O4'	2.33	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2510:A:H4'	7:E:157:TYR:CE2	2.50	0.46
7:E:159:GLY:O	7:E:163:ARG:HD2	2.16	0.46
1:X:2508:G:OP2	7:E:172:LYS:CE	2.62	0.46
7:E:52:VAL:HB	7:E:65:HIS:NE2	2.30	0.46
9:G:106:TYR:CZ	9:G:108:GLY:CA	2.98	0.46
10:H:64:VAL:C	10:H:65:LYS:HG3	2.36	0.46
10:H:85:ASP:CG	10:H:86:GLY:N	2.68	0.46
11:I:52:GLY:C	11:I:55:ARG:HB2	2.36	0.46
13:K:10:LEU:HD21	13:K:14:SER:N	2.30	0.46
14:L:96:TYR:CE1	14:L:101:LYS:HA	2.51	0.46
16:N:103:PRO:O	16:N:104:GLU:C	2.53	0.46
17:O:23:GLU:HB3	17:O:32:LYS:NZ	2.30	0.46
18:P:29:LYS:HA	18:P:123:HIS:ND1	2.29	0.46
20:R:105:ARG:NH1	20:R:113:THR:N	2.63	0.46
22:T:4:LYS:HZ2	22:T:4:LYS:HB3	1.79	0.46
1:X:1016:C:O2'	9:G:56:THR:HG21	2.16	0.46
1:X:1033:G:C6	1:X:1150:C:C4	3.03	0.46
1:X:1111:C:H2'	1:X:1112:U:H6	1.80	0.46
1:X:1236:G:OP2	17:O:87:ARG:NH1	2.44	0.46
1:X:1277:G:O5'	1:X:1277:G:H8	1.99	0.46
1:X:1487:C:H2'	1:X:1488:G:O4'	2.15	0.46
1:X:171:G:C2'	1:X:172:A:H5'	2.45	0.46
1:X:1731:C:H2'	1:X:1732:U:H5''	1.98	0.46
1:X:177:U:C5	1:X:225:G:N2	2.83	0.46
1:X:1834:G:H1	1:X:1881:U:H3	1.63	0.46
1:X:2465:G:C2	1:X:2466:G:C4	3.04	0.46
1:X:2507:U:P	30:4:30:VAL:HG21	2.55	0.46
1:X:2714:A:C6	1:X:2715:C:C2	3.04	0.46
1:X:2787:A:C2	1:X:2864:C:C2	3.04	0.46
1:X:459:A:N1	1:X:466:A:C8	2.84	0.46
1:X:577:U:O5'	1:X:956:A:N6	2.48	0.46
3:A:142:VAL:O	3:A:163:VAL:CG1	2.63	0.46
4:B:107:THR:O	4:B:190:GLY:HA2	2.16	0.46
5:C:102:LEU:O	5:C:105:ALA:HB3	2.16	0.46
5:C:22:VAL:CG2	5:C:110:SER:OG	2.60	0.46
7:E:104:GLU:OE2	7:E:104:GLU:CA	2.58	0.46
9:G:128:GLU:O	9:G:131:VAL:N	2.47	0.46
11:I:72:TYR:CG	11:I:107:LYS:HB2	2.51	0.46
11:I:9:THR:O	11:I:13:ARG:HD2	2.16	0.46
12:J:70:PHE:HA	12:J:71:PRO:HD3	1.70	0.46
13:K:59:ASP:N	13:K:59:ASP:OD2	2.47	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:10:LYS:O	14:L:14:ARG:N	2.49	0.46
14:L:43:ILE:HG23	14:L:50:THR:CG2	2.45	0.46
18:P:85:MET:HE2	18:P:130:GLU:HG3	1.98	0.46
18:P:28:ALA:HB1	18:P:31:VAL:CG2	2.46	0.46
20:R:23:ILE:HD13	20:R:81:VAL:H	1.81	0.46
20:R:84:VAL:HG13	20:R:88:THR:N	2.31	0.46
21:S:136:VAL:CG1	21:S:137:ASP:N	2.79	0.46
1:X:1415:C:C2'	1:X:1416:A:H5'	2.46	0.46
1:X:1529:C:O2'	1:X:1530:U:H5'	2.16	0.46
1:X:1731:C:C3'	1:X:1732:U:C5'	2.94	0.46
1:X:1782:A:O3'	3:A:205:VAL:O	2.34	0.46
1:X:2240:C:C2'	1:X:2241:U:C5'	2.93	0.46
1:X:2352:A:H2'	1:X:2353:G:H8	1.78	0.46
1:X:2379:G:N2	1:X:2380:U:H1'	2.30	0.46
1:X:2383:C:H2'	1:X:2384:G:O4'	2.15	0.46
1:X:2414:A:N1	1:X:2415:G:C4	2.84	0.46
1:X:2457:A:N7	1:X:2458:U:C5	2.84	0.46
1:X:2521:A:H5'	1:X:2522:G:OP1	2.16	0.46
1:X:2528:G:N3	1:X:2529:G:C8	2.84	0.46
1:X:2571:G:H2'	1:X:2572:U:O4'	2.14	0.46
1:X:2652:G:H2'	1:X:2653:A:H8	1.80	0.46
1:X:395:G:N1	1:X:404:A:N6	2.60	0.46
1:X:417:C:P	1:X:417:C:H6	2.39	0.46
1:X:433:G:H21	1:X:434:C:H1'	1.79	0.46
1:X:498:C:O4'	18:P:77:ALA:HB1	2.16	0.46
1:X:751:G:C6	1:X:752:G:C2	3.03	0.46
1:X:805:G:C8	1:X:2419:C:H1'	2.50	0.46
2:Z:101:A:H2'	2:Z:102:A:H5''	1.98	0.46
2:Z:43:G:H8	6:D:66:ILE:HD11	1.79	0.46
3:A:126:LYS:H	3:A:129:ASN:HD22	1.64	0.46
3:A:39:LYS:O	3:A:40:THR:CB	2.64	0.46
3:A:42:GLY:N	3:A:43:ARG:NH1	2.63	0.46
4:B:103:ASP:OD2	4:B:202:ALA:CB	2.63	0.46
4:B:93:VAL:HG13	4:B:93:VAL:O	2.16	0.46
5:C:131:LYS:HA	5:C:134:ILE:HG12	1.97	0.46
6:D:9:ASN:O	6:D:12:VAL:CG2	2.63	0.46
7:E:121:VAL:O	7:E:122:THR:HG23	2.16	0.46
7:E:155:ASP:OD2	7:E:157:TYR:N	2.49	0.46
7:E:50:LEU:CG	7:E:51:LEU:H	2.26	0.46
11:I:20:GLY:O	11:I:22:GLY:N	2.49	0.46
18:P:40:LEU:CD2	26:Y:25:LEU:HD13	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:25:LEU:CG	20:R:81:VAL:HG23	2.46	0.46
21:S:28:ASN:HB2	21:S:30:VAL:HG23	1.97	0.46
22:T:34:GLY:N	22:T:61:ALA:O	2.47	0.46
24:V:28:LEU:C	24:V:30:PHE:N	2.68	0.46
24:V:32:ALA:C	24:V:34:ALA:N	2.67	0.46
1:X:1004:A:C5	1:X:1005:U:C5	3.03	0.46
1:X:103:U:C5	1:X:104:C:H5	2.34	0.46
1:X:1095:A:H3'	1:X:1096:A:C5'	2.42	0.46
1:X:1121:G:OP2	1:X:1121:G:C8	2.68	0.46
1:X:1142:G:N3	9:G:103:TYR:CD1	2.84	0.46
1:X:1236:G:H2'	1:X:1238:A:OP2	2.15	0.46
1:X:1407:G:C6	1:X:1408:A:C6	3.04	0.46
1:X:1428:G:O2'	1:X:1429:A:H8	1.99	0.46
1:X:1591:U:H2'	1:X:1592:U:C6	2.51	0.46
1:X:1598:C:H2'	1:X:1599:G:O4'	2.16	0.46
1:X:1629:G:C2	1:X:1633:C:C2	3.04	0.46
1:X:1724:C:N3	1:X:1747:G:C6	2.84	0.46
1:X:1741:G:C2	1:X:1742:G:N9	2.84	0.46
1:X:2392:G:N2	1:X:2393:G:H1'	2.30	0.46
1:X:2492:G:N2	1:X:2493:U:C2	2.83	0.46
1:X:2510:A:H4'	7:E:157:TYR:CZ	2.50	0.46
1:X:2571:G:C2	1:X:2582:G:C6	3.04	0.46
1:X:387:A:C5	1:X:388:G:C8	3.04	0.46
1:X:390:U:H2'	1:X:391:C:C6	2.51	0.46
1:X:83:A:N1	1:X:98:U:O2	2.48	0.46
2:Z:65:A:H2'	2:Z:66:G:H8	1.81	0.46
4:B:116:VAL:HG22	4:B:136:ARG:CD	2.42	0.46
4:B:64:GLN:O	4:B:66:HIS:N	2.49	0.46
4:B:34:VAL:HG11	4:B:67:PHE:HD1	1.81	0.46
7:E:30:LYS:HD2	7:E:79:VAL:O	2.16	0.46
7:E:76:VAL:O	7:E:78:GLY:N	2.49	0.46
9:G:125:ARG:HD2	9:G:129:HIS:CD2	2.51	0.46
9:G:69:ASP:O	9:G:70:PHE:CD2	2.69	0.46
10:H:2:ILE:HG23	10:H:6:SER:CB	2.45	0.46
10:H:76:ARG:O	10:H:94:ASN:HA	2.16	0.46
13:K:13:ASN:O	13:K:14:SER:C	2.53	0.46
15:M:34:ARG:NH1	15:M:81:PHE:CG	2.84	0.46
16:N:77:SER:O	16:N:78:THR:C	2.53	0.46
16:N:91:ASN:O	16:N:92:ARG:C	2.54	0.46
20:R:96:LYS:CG	20:R:97:GLN:N	2.75	0.46
21:S:93:GLU:HG2	21:S:123:VAL:HA	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:W:17:VAL:C	25:W:19:THR:N	2.68	0.46
1:X:1069:G:H2'	1:X:1070:G:C4'	2.45	0.46
1:X:1226:A:H62	1:X:1249:G:H1'	1.81	0.46
1:X:1363:C:O2'	1:X:1364:C:H5'	2.16	0.46
1:X:1538:A:C5	1:X:1539:U:C4	3.03	0.46
1:X:1618:U:O4	19:Q:56:MET:SD	2.74	0.46
1:X:1634:A:O2'	1:X:1635:G:H5'	2.16	0.46
1:X:1849:G:N1	1:X:1867:A:N6	2.63	0.46
1:X:184:A:C8	1:X:185:C:C5	3.04	0.46
1:X:482:A:H2'	1:X:483:A:C5'	2.46	0.46
1:X:698:A:H4'	1:X:699:G:C5'	2.46	0.46
1:X:761:G:C8	18:P:110:ALA:CB	2.98	0.46
1:X:793:G:H2'	1:X:795:A:C5	2.50	0.46
1:X:760:U:O4	26:Y:3:LYS:HG3	2.15	0.46
2:Z:98:C:H2'	2:Z:99:G:C8	2.51	0.46
3:A:217:ARG:O	3:A:218:LYS:C	2.54	0.46
5:C:197:GLU:HG2	5:C:198:GLU:H	1.80	0.46
7:E:41:LEU:HD11	7:E:64:LEU:HB2	1.97	0.46
9:G:103:TYR:HE2	9:G:111:LYS:HB3	1.79	0.46
9:G:85:ALA:C	9:G:87:GLN:H	2.19	0.46
10:H:22:ILE:HG22	10:H:52:VAL:O	2.15	0.46
13:K:20:LEU:O	13:K:23:ALA:N	2.49	0.46
16:N:49:ASP:O	16:N:52:ASN:HB3	2.16	0.46
16:N:74:MET:HE2	16:N:79:PHE:CA	2.34	0.46
18:P:45:ILE:HG13	18:P:53:ALA:HA	1.98	0.46
21:S:24:TYR:O	21:S:25:ASN:HB3	2.16	0.46
1:X:2345:A:H5'	22:T:60:PHE:CZ	2.50	0.46
23:U:32:ARG:N	23:U:32:ARG:CD	2.78	0.46
23:U:17:SER:OG	23:U:44:ALA:C	2.54	0.46
24:V:57:LYS:HG2	24:V:57:LYS:O	2.16	0.46
1:X:1094:C:O5'	1:X:1094:C:H6	1.98	0.46
1:X:1118:G:C2'	1:X:1119:U:C5'	2.92	0.46
1:X:1128:G:H3'	1:X:1129:A:C5'	2.45	0.46
1:X:1171:A:C8	1:X:1172:U:H5	2.34	0.46
1:X:1442:C:N4	1:X:1585:A:C5'	2.79	0.46
1:X:1559:G:C8	1:X:1559:G:C3'	2.99	0.46
1:X:1710:U:O2'	1:X:1711:C:P	2.74	0.46
1:X:1741:G:C2'	1:X:1742:G:C5'	2.94	0.46
1:X:2265:A:H4'	1:X:2266:A:O5'	2.15	0.46
1:X:2281:C:C2	1:X:2282:G:C8	3.04	0.46
1:X:2300:G:H3'	1:X:2300:G:N3	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:234:C:O2'	1:X:235:C:H5'	2.16	0.46
1:X:2467:A:H2'	1:X:2468:G:O4'	2.16	0.46
1:X:303:C:H2'	1:X:304:A:H5''	1.97	0.46
1:X:405:C:C2	1:X:406:G:C8	3.04	0.46
1:X:26:G:H1'	1:X:525:A:H61	1.79	0.46
1:X:542:A:N6	1:X:2003:A:H1'	2.30	0.46
1:X:639:G:O2'	1:X:661:C:H1'	2.16	0.46
1:X:764:A:C2	1:X:802:A:C4	3.04	0.46
1:X:810:U:O2'	1:X:811:G:H5'	2.16	0.46
1:X:833:A:C2	1:X:834:A:C4	3.04	0.46
3:A:227:ASN:O	3:A:230:ASP:N	2.49	0.45
4:B:133:LYS:CG	4:B:133:LYS:O	2.64	0.45
4:B:161:GLY:O	4:B:162:MET:C	2.54	0.45
5:C:112:GLN:CD	5:C:116:LYS:CB	2.83	0.45
6:D:10:ASP:O	6:D:14:PRO:CD	2.63	0.45
6:D:142:THR:HG22	6:D:144:ASP:H	1.81	0.45
6:D:143:TYR:C	6:D:146:VAL:HG22	2.37	0.45
7:E:127:GLU:OE2	7:E:130:ARG:CB	2.63	0.45
7:E:85:ILE:C	7:E:132:ASP:CG	2.75	0.45
9:G:36:ASN:HB2	9:G:76:GLN:HE22	1.81	0.45
9:G:55:ALA:O	9:G:57:LEU:N	2.49	0.45
9:G:69:ASP:O	9:G:70:PHE:CB	2.63	0.45
9:G:69:ASP:O	9:G:70:PHE:HD2	1.99	0.45
11:I:14:LYS:CA	11:I:14:LYS:HE3	2.46	0.45
12:J:19:THR:HG23	12:J:99:LYS:HD3	1.98	0.45
14:L:52:ALA:O	14:L:53:ALA:HB3	2.15	0.45
15:M:19:ASP:HB2	15:M:20:HIS:CD2	2.51	0.45
15:M:22:ARG:NH1	15:M:24:LEU:HD23	2.30	0.45
15:M:34:ARG:HD3	15:M:81:PHE:CD2	2.51	0.45
16:N:62:ILE:O	16:N:63:GLN:C	2.54	0.45
16:N:86:ALA:HB1	16:N:88:ILE:HG22	1.98	0.45
17:O:12:TYR:CB	17:O:39:PHE:HB2	2.27	0.45
1:X:1007:A:N3	17:O:6:GLN:CD	2.69	0.45
17:O:90:PHE:CD1	17:O:90:PHE:C	2.88	0.45
21:S:60:GLU:HB3	21:S:62:PHE:CE2	2.51	0.45
22:T:31:VAL:HG13	22:T:67:VAL:CG2	2.45	0.45
22:T:52:GLY:N	22:T:62:LEU:CD2	2.79	0.45
24:V:18:ILE:O	24:V:20:ALA:N	2.40	0.45
1:X:1063:C:H2'	1:X:1064:C:C6	2.51	0.45
1:X:1373:G:C2'	1:X:1374:G:H5'	2.46	0.45
1:X:150:A:H2'	1:X:151:G:O4'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1524:C:OP2	1:X:1525:A:N7	2.49	0.45
1:X:51:A:H2	1:X:155:G:N3	2.14	0.45
1:X:1829:C:O2'	1:X:1910:A:H1'	2.17	0.45
1:X:426:C:HO2'	1:X:1863:U:HO2'	1.64	0.45
1:X:1882:G:N2	1:X:1885:C:N4	2.63	0.45
1:X:2261:G:O2'	1:X:2369:U:C5	2.69	0.45
1:X:2861:A:C4	1:X:2862:G:C8	3.04	0.45
1:X:2864:C:O2	1:X:2864:C:H2'	2.16	0.45
1:X:404:A:O4'	1:X:424:G:H1'	2.16	0.45
1:X:829:C:H2'	1:X:830:C:C6	2.51	0.45
1:X:987:G:C2	1:X:988:G:C8	3.04	0.45
26:Y:14:SER:O	26:Y:17:ASP:HB2	2.16	0.45
26:Y:45:ILE:HG21	26:Y:57:VAL:HG22	1.97	0.45
2:Z:58:G:H4'	2:Z:59:A:C8	2.51	0.45
3:A:158:SER:O	3:A:160:GLY:N	2.49	0.45
1:X:787:A:P	3:A:48:ARG:HH12	2.38	0.45
4:B:32:PRO:O	4:B:49:ILE:HG12	2.16	0.45
7:E:105:MET:HE1	7:E:105:MET:HA	1.98	0.45
7:E:137:ASP:HB3	7:E:140:LEU:CD1	2.45	0.45
9:G:50:PRO:HG2	9:G:53:ARG:HB2	1.96	0.45
10:H:132:GLU:HG2	10:H:134:LEU:HG	1.98	0.45
10:H:43:ARG:HG3	10:H:44:TYR:CD2	2.51	0.45
10:H:77:THR:C	10:H:79:HIS:N	2.67	0.45
11:I:76:LYS:HG3	11:I:111:SER:HB2	1.98	0.45
11:I:86:THR:C	11:I:88:PHE:N	2.67	0.45
12:J:27:TYR:HB2	12:J:137:VAL:CG1	2.31	0.45
12:J:68:ARG:CB	12:J:68:ARG:HH11	2.27	0.45
15:M:46:ARG:HG2	15:M:47:SER:H	1.82	0.45
16:N:79:PHE:CE1	16:N:106:PHE:CE1	3.01	0.45
16:N:24:PHE:CZ	16:N:39:LEU:HD21	2.52	0.45
16:N:3:ARG:NH2	16:N:5:LYS:HZ3	2.13	0.45
18:P:72:LEU:HD12	18:P:72:LEU:HA	1.74	0.45
20:R:85:ASP:HB3	20:R:90:LYS:HZ1	1.78	0.45
21:S:152:ILE:H	21:S:152:ILE:HD12	1.75	0.45
21:S:18:MET:HB3	21:S:34:LEU:O	2.17	0.45
21:S:41:ARG:O	21:S:41:ARG:HG2	2.15	0.45
21:S:92:VAL:O	21:S:93:GLU:HG3	2.16	0.45
1:X:2411:A:N3	23:U:25:ARG:HD2	2.32	0.45
25:W:10:ILE:CG2	25:W:11:GLY:N	2.78	0.45
1:X:1078:A:P	1:X:1078:A:H3'	2.56	0.45
1:X:1235:C:C2	1:X:1241:G:C2	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1564:U:C2	1:X:1565:G:C8	3.04	0.45
1:X:1935:A:C6	1:X:1936:A:N1	2.85	0.45
1:X:2002:A:C2'	1:X:2003:A:O5'	2.64	0.45
1:X:2033:C:N4	1:X:2034:A:N1	2.65	0.45
1:X:2225:G:N3	1:X:2226:A:C8	2.85	0.45
1:X:2397:A:C2	1:X:2398:U:H1'	2.51	0.45
1:X:344:G:C4	1:X:345:U:C5	3.04	0.45
1:X:683:A:C2'	1:X:684:C:OP2	2.64	0.45
1:X:714:G:C6	1:X:715:U:C5	3.04	0.45
1:X:796:A:N7	1:X:798:G:C8	2.84	0.45
1:X:941:U:C4	1:X:942:U:C4	3.04	0.45
1:X:969:U:O2'	1:X:970:A:P	2.74	0.45
26:Y:17:ASP:C	26:Y:19:ARG:N	2.70	0.45
2:Z:62:C:O5'	2:Z:62:C:H6	1.99	0.45
3:A:35:GLU:OE1	3:A:35:GLU:HA	2.17	0.45
4:B:116:VAL:H	4:B:136:ARG:HE	1.59	0.45
5:C:27:LEU:HD11	5:C:106:MET:HB3	1.98	0.45
5:C:58:MET:HB2	5:C:70:GLY:O	2.15	0.45
6:D:61:THR:HB	6:D:91:LEU:HD21	1.98	0.45
6:D:4:LEU:HA	6:D:7:LYS:CG	2.47	0.45
7:E:96:ALA:HB2	7:E:105:MET:CE	2.46	0.45
9:G:44:VAL:CG1	9:G:45:ASP:N	2.80	0.45
9:G:47:SER:C	9:G:49:VAL:N	2.62	0.45
11:I:35:LYS:O	11:I:36:GLY:O	2.35	0.45
1:X:2357:A:O2'	14:L:88:VAL:HG21	2.16	0.45
4:B:176:ARG:HH21	15:M:16:ILE:HG23	1.81	0.45
16:N:86:ALA:HB1	16:N:88:ILE:CG2	2.47	0.45
18:P:29:LYS:O	18:P:30:TYR:CB	2.64	0.45
2:Z:14:C:C5	22:T:72:LYS:HD2	2.50	0.45
1:X:1017:C:O2	9:G:134:MET:HE3	2.16	0.45
1:X:1029:C:O3'	1:X:1131:G:N2	2.50	0.45
1:X:1135:C:H2'	1:X:1136:G:O4'	2.15	0.45
1:X:1142:G:O2'	1:X:1143:A:P	2.75	0.45
1:X:1330:G:C6	1:X:1331:G:N7	2.84	0.45
1:X:1359:G:C2'	1:X:1360:G:H5'	2.46	0.45
1:X:1867:A:H3'	1:X:1867:A:C8	2.51	0.45
1:X:2015:G:C8	1:X:2015:G:O5'	2.69	0.45
1:X:2018:G:HO2'	1:X:2019:C:P	2.38	0.45
1:X:2236:U:C4	1:X:2237:C:N4	2.85	0.45
1:X:2282:G:HO2'	6:D:122:PHE:HD2	1.62	0.45
1:X:2391:A:H8	1:X:2391:A:O5'	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2477:C:OP2	1:X:2478:C:OP2	2.34	0.45
1:X:2728:A:OP1	7:E:70:THR:HG21	2.17	0.45
1:X:2740:C:H1'	7:E:143:GLN:NE2	2.31	0.45
1:X:2757:G:N3	1:X:2759:U:O4	2.48	0.45
1:X:2818:G:N2	1:X:2850:U:C2	2.84	0.45
1:X:2825:A:C4	1:X:2826:C:C5	3.05	0.45
1:X:2862:G:C6	1:X:2863:U:C4	3.03	0.45
1:X:35:G:HO2'	1:X:36:G:C5'	2.27	0.45
4:B:152:LYS:HD2	9:G:106:TYR:N	2.26	0.45
5:C:179:ASP:O	5:C:183:HIS:ND1	2.44	0.45
5:C:148:VAL:HG22	5:C:185:ARG:HB2	1.97	0.45
5:C:44:SER:HA	5:C:86:PRO:O	2.15	0.45
6:D:101:GLU:O	6:D:103:LEU:N	2.49	0.45
6:D:27:ALA:O	6:D:28:VAL:C	2.54	0.45
7:E:107:ILE:HG13	7:E:152:ARG:HB2	1.99	0.45
7:E:50:LEU:HG	7:E:51:LEU:N	2.26	0.45
8:F:118:ALA:O	8:F:123:ALA:HB3	2.16	0.45
9:G:91:THR:CG2	9:G:92:GLY:N	2.79	0.45
10:H:110:VAL:CG1	10:H:111:PHE:N	2.79	0.45
10:H:14:SER:OG	10:H:98:ILE:HD12	2.15	0.45
11:I:134:GLU:OE2	11:I:139:ARG:HG3	2.16	0.45
11:I:78:SER:O	11:I:82:ASP:HB3	2.15	0.45
11:I:83:LEU:O	11:I:85:ASP:N	2.48	0.45
14:L:83:GLY:O	14:L:85:LYS:N	2.43	0.45
14:L:94:TYR:CD2	14:L:99:ARG:NH2	2.84	0.45
16:N:108:ALA:O	16:N:110:VAL:N	2.49	0.45
16:N:54:LYS:O	16:N:58:ARG:HG3	2.16	0.45
16:N:86:ALA:CB	16:N:88:ILE:HG22	2.47	0.45
17:O:11:GLN:HB3	17:O:12:TYR:H	1.62	0.45
18:P:107:ILE:HG21	18:P:117:ILE:HD11	1.99	0.45
18:P:9:ARG:HG3	18:P:13:GLN:HG3	1.97	0.45
20:R:8:SER:C	20:R:10:HIS:N	2.67	0.45
23:U:26:ALA:CA	23:U:35:THR:HG23	2.46	0.45
1:X:1174:G:N3	1:X:1175:A:C8	2.85	0.45
1:X:1218:C:O2'	1:X:1219:C:H5'	2.16	0.45
1:X:1397:A:H2'	1:X:1398:G:H5''	1.97	0.45
1:X:1411:C:C2	1:X:1412:C:C5	3.04	0.45
1:X:1548:U:O5'	1:X:1548:U:H6	1.99	0.45
1:X:1629:G:H1	1:X:1633:C:H2'	1.82	0.45
1:X:167:A:C8	1:X:184:A:C6	3.05	0.45
1:X:1753:A:P	1:X:1753:A:H8	2.38	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1791:C:N3	1:X:1810:U:O2	2.49	0.45
1:X:1848:U:H6	1:X:1848:U:O5'	1.99	0.45
1:X:1850:G:H1	1:X:1867:A:C1'	2.29	0.45
1:X:1930:C:N3	1:X:1943:A:C2	2.84	0.45
1:X:2074:U:H4'	23:U:67:LEU:HD22	1.99	0.45
1:X:2080:U:H2'	1:X:2081:U:C6	2.51	0.45
1:X:2246:A:N6	1:X:2251:U:H3	2.14	0.45
1:X:2262:C:H2'	1:X:2263:C:O4'	2.17	0.45
1:X:2271:C:H2'	1:X:2272:A:H8	1.82	0.45
1:X:2274:C:C2'	1:X:2275:U:O5'	2.65	0.45
1:X:2299:A:C4	1:X:2312:A:C6	3.05	0.45
1:X:2549:G:O2'	1:X:2550:C:H5'	2.15	0.45
1:X:2571:G:C5	1:X:2572:U:C4	3.04	0.45
1:X:2775:U:P	1:X:2777:A:OP2	2.74	0.45
1:X:449:C:O2	1:X:449:C:C2'	2.64	0.45
1:X:614:G:C5	1:X:615:C:C5	3.05	0.45
1:X:783:G:C6	1:X:784:U:C4	3.04	0.45
1:X:174:A:C6	1:X:840:U:O4	2.70	0.45
1:X:843:G:H1'	1:X:2427:A:N6	2.32	0.45
30:4:18:ARG:HH12	30:4:21:GLY:HA2	1.81	0.45
3:A:172:TYR:HE2	3:A:186:HIS:HD1	1.64	0.45
1:X:1812:U:C2	3:A:200:GLU:HA	2.52	0.45
1:X:456:C:H5''	5:C:43:ALA:HB2	1.99	0.45
6:D:60:ILE:HG13	6:D:61:THR:HG23	1.98	0.45
7:E:13:SER:O	7:E:15:VAL:HG13	2.17	0.45
7:E:87:LEU:HD23	7:E:164:PHE:HA	1.99	0.45
7:E:30:LYS:NZ	7:E:81:ASP:HA	2.32	0.45
9:G:131:VAL:O	9:G:132:PHE:C	2.55	0.45
10:H:55:VAL:O	10:H:56:LYS:C	2.55	0.45
11:I:51:GLY:O	11:I:55:ARG:CZ	2.64	0.45
12:J:47:GLN:NE2	12:J:127:PRO:CG	2.79	0.45
14:L:33:ARG:NH2	14:L:68:ALA:HB1	2.31	0.45
16:N:105:ALA:C	16:N:107:LYS:N	2.69	0.45
16:N:99:ALA:HB2	16:N:106:PHE:CD1	2.52	0.45
17:O:36:LYS:HE3	17:O:56:VAL:CA	2.46	0.45
18:P:27:VAL:HG22	18:P:28:ALA:N	2.32	0.45
19:Q:3:HIS:CE1	19:Q:44:GLN:CG	2.82	0.45
21:S:13:LYS:HB2	21:S:18:MET:HB2	1.99	0.45
21:S:41:ARG:NH2	21:S:42:ALA:HB2	2.31	0.45
21:S:53:ASP:OD2	21:S:53:ASP:N	2.50	0.45
21:S:91:PRO:CG	21:S:92:VAL:N	2.79	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:92:VAL:C	21:S:93:GLU:HG3	2.37	0.45
25:W:3:ILE:HG23	25:W:51:LEU:HB2	1.98	0.45
1:X:1023:U:C5	9:G:56:THR:HG21	2.52	0.45
1:X:1059:A:OP2	1:X:1059:A:H8	1.99	0.45
1:X:1448:A:N6	1:X:1574:A:N6	2.54	0.45
1:X:1885:C:H5'	3:A:244:ARG:CD	2.43	0.45
1:X:2201:G:N3	1:X:2202:G:C8	2.85	0.45
1:X:2426:G:H4'	1:X:2427:A:C5'	2.47	0.45
1:X:2564:U:C2	33:X:2911:ZLD:H21A	2.51	0.45
1:X:304:A:H61	1:X:357:A:H62	1.64	0.45
1:X:334:G:H8	5:C:164:VAL:HG13	1.81	0.45
1:X:541:C:HO2'	1:X:542:A:P	2.39	0.45
1:X:556:A:O2'	1:X:558:G:N3	2.35	0.45
1:X:703:A:H5''	1:X:703:A:H8	1.81	0.45
1:X:774:A:H8	1:X:774:A:O5'	1.97	0.45
1:X:843:G:H1'	1:X:2427:A:C6	2.51	0.45
1:X:977:G:H5'	1:X:2251:U:O2	2.16	0.45
30:4:20:HIS:O	30:4:21:GLY:C	2.55	0.45
3:A:141:VAL:O	3:A:194:GLY:N	2.47	0.45
1:X:1809:G:C5'	3:A:88:ARG:NH1	2.79	0.45
4:B:141:ILE:HG22	4:B:150:VAL:HB	1.97	0.45
5:C:131:LYS:CA	5:C:134:ILE:HG12	2.47	0.45
5:C:176:ASN:ND2	5:C:179:ASP:N	2.50	0.45
6:D:119:PRO:O	6:D:120:ASN:C	2.55	0.45
6:D:88:LYS:C	6:D:89:VAL:CG2	2.84	0.45
10:H:116:ARG:NH2	15:M:41:GLU:OE2	2.48	0.45
10:H:17:ARG:NE	10:H:59:ALA:HB2	2.31	0.45
10:H:29:ILE:HA	10:H:34:LEU:HD23	1.98	0.45
10:H:90:ARG:HG3	10:H:90:ARG:O	2.16	0.45
11:I:102:LYS:C	11:I:104:ARG:N	2.70	0.45
11:I:134:GLU:HG2	11:I:138:GLY:C	2.37	0.45
12:J:75:VAL:HB	12:J:93:TYR:CE2	2.52	0.45
13:K:20:LEU:O	13:K:21:ALA:C	2.54	0.45
13:K:43:GLU:C	13:K:43:GLU:CD	2.75	0.45
15:M:40:ARG:O	15:M:41:GLU:CG	2.65	0.45
16:N:18:LEU:O	16:N:21:ALA:HB3	2.16	0.45
16:N:43:ALA:O	16:N:45:TYR:N	2.49	0.45
17:O:46:VAL:HG12	17:O:51:ALA:HB2	1.98	0.45
19:Q:12:ILE:CD1	19:Q:13:SER:N	2.72	0.45
19:Q:4:TYR:CZ	24:V:23:LYS:HG3	2.52	0.45
20:R:23:ILE:CD1	20:R:81:VAL:H	2.29	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:3:LEU:HD22	21:S:34:LEU:HB3	1.98	0.45
2:Z:108:G:OP1	21:S:84:TYR:OH	2.35	0.45
1:X:1361:G:O2'	1:X:1362:A:H5'	2.17	0.45
1:X:1423:A:C2	1:X:1609:G:C2	3.04	0.45
1:X:151:G:O2'	1:X:152:G:H5'	2.17	0.45
1:X:1524:C:C5'	1:X:1525:A:H5''	2.47	0.45
1:X:1710:U:HO2'	1:X:1711:C:P	2.39	0.45
1:X:1713:G:C5	1:X:1714:A:N7	2.84	0.45
1:X:1849:G:H1	1:X:1867:A:N6	2.14	0.45
1:X:1942:G:C2	1:X:1943:A:C4	3.05	0.45
1:X:1996:A:C2	1:X:1997:A:C4	3.05	0.45
1:X:2008:C:OP1	4:B:149:ARG:NH2	2.37	0.45
1:X:2337:A:H2'	1:X:2338:C:O4'	2.17	0.45
1:X:2388:G:C6	1:X:2389:G:N7	2.85	0.45
1:X:2735:C:H6	1:X:2735:C:O5'	1.99	0.45
1:X:513:A:O2'	1:X:514:G:H5''	2.16	0.45
1:X:558:G:O2'	1:X:559:C:N1	2.45	0.45
1:X:615:C:C4'	1:X:669:G:N2	2.79	0.45
1:X:66:U:O2	1:X:87:G:C2	2.69	0.45
1:X:695:G:N2	1:X:696:U:C2	2.85	0.45
1:X:734:G:C2	1:X:735:G:C5	3.05	0.45
1:X:73:A:H4'	1:X:74:G:O5'	2.15	0.45
1:X:917:U:O2'	1:X:918:A:H5'	2.16	0.45
1:X:919:U:O3'	12:J:24:GLY:HA3	2.17	0.45
5:C:154:ASP:OD2	5:C:157:THR:HG21	2.17	0.45
5:C:45:THR:CG2	5:C:82:VAL:HG11	2.46	0.45
8:F:81:LYS:HZ2	8:F:84:GLY:CA	2.30	0.45
9:G:156:HIS:N	9:G:157:PRO:HD2	2.31	0.45
9:G:51:LEU:HD13	9:G:88:VAL:HG21	1.95	0.45
10:H:27:SER:OG	10:H:49:ASP:HA	2.17	0.45
12:J:62:GLY:HA3	12:J:64:LYS:HE3	1.98	0.45
14:L:63:ASN:O	14:L:67:THR:N	2.48	0.45
16:N:78:THR:HG23	16:N:117:ARG:CD	2.46	0.45
16:N:40:LEU:HB3	17:O:74:TYR:CE1	2.51	0.45
17:O:14:VAL:H	17:O:16:GLU:CD	2.20	0.45
17:O:14:VAL:CG1	17:O:14:VAL:O	2.62	0.45
17:O:31:ASP:OD1	17:O:59:GLU:HG2	2.17	0.45
17:O:39:PHE:O	17:O:46:VAL:CG2	2.65	0.45
18:P:74:SER:HA	18:P:77:ALA:CB	2.46	0.45
18:P:8:PHE:O	18:P:9:ARG:CB	2.64	0.45
19:Q:7:LEU:HD11	24:V:30:PHE:CZ	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:22:VAL:CG1	20:R:80:LYS:HZ1	2.28	0.45
20:R:23:ILE:N	20:R:23:ILE:CD1	2.75	0.45
20:R:48:VAL:C	20:R:50:GLY:N	2.70	0.45
21:S:51:LEU:CD2	21:S:65:LEU:HD13	2.40	0.45
21:S:74:ARG:CG	21:S:75:LYS:HE3	2.47	0.45
23:U:48:LYS:O	23:U:62:LEU:O	2.35	0.45
23:U:62:LEU:CD2	23:U:67:LEU:HD12	2.47	0.45
1:X:1281:A:H2'	1:X:1282:A:C8	2.47	0.45
1:X:1598:C:H2'	1:X:1599:G:C8	2.52	0.45
1:X:167:A:N6	1:X:184:A:H1'	2.31	0.45
1:X:1847:G:N1	1:X:1871:G:C8	2.85	0.45
1:X:1850:G:H22	1:X:1867:A:C2'	2.29	0.45
1:X:1886:G:H2'	1:X:1887:G:C8	2.49	0.45
1:X:1997:A:C2	1:X:1998:A:C2	3.04	0.45
1:X:2070:G:C4	1:X:2071:G:C8	3.05	0.45
1:X:2411:A:C5	1:X:2412:A:C6	3.04	0.45
1:X:2615:U:O5'	4:B:80:GLU:CG	2.64	0.45
1:X:1681:A:C6	1:X:2706:U:C4	3.04	0.45
1:X:589:C:O2'	1:X:590:C:H5'	2.17	0.45
1:X:607:C:H2'	1:X:608:G:O4'	2.16	0.45
1:X:648:A:H5'	1:X:649:G:OP1	2.17	0.45
1:X:5:A:C6	1:X:6:A:C6	3.05	0.45
1:X:874:A:N9	1:X:929:A:N6	2.65	0.45
1:X:1275:A:C2	26:Y:10:LYS:HE2	2.52	0.45
2:Z:44:C:H1'	6:D:89:VAL:HG12	1.99	0.45
2:Z:46:G:H1'	2:Z:48:A:H62	1.81	0.45
5:C:101:GLN:O	5:C:103:GLY:N	2.50	0.45
5:C:23:ASN:N	5:C:106:MET:SD	2.90	0.45
5:C:96:PRO:HB2	5:C:99:VAL:HG23	1.97	0.45
6:D:108:LEU:O	6:D:109:PRO:C	2.55	0.45
6:D:137:ILE:HG13	6:D:138:PHE:HE1	1.76	0.45
6:D:50:ILE:C	6:D:52:LYS:N	2.68	0.45
8:F:71:LYS:CG	8:F:114:PRO:HG2	2.47	0.45
1:X:1075:C:C5'	8:F:85:ILE:HG13	2.47	0.45
1:X:2621:G:OP1	9:G:110:LEU:HD13	2.16	0.45
11:I:106:VAL:CG2	11:I:123:ASP:HB2	2.44	0.45
11:I:11:GLY:O	11:I:13:ARG:N	2.49	0.45
12:J:28:VAL:HG11	12:J:135:ARG:HA	1.98	0.45
12:J:78:LYS:HD2	12:J:81:GLU:HA	1.99	0.45
15:M:42:GLY:C	15:M:44:ARG:N	2.70	0.45
15:M:66:PHE:HE2	15:M:81:PHE:CB	2.12	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:25:LEU:HG	20:R:81:VAL:CG2	2.47	0.45
20:R:86:PRO:O	20:R:87:GLU:CB	2.64	0.45
23:U:24:ALA:N	23:U:36:GLY:O	2.47	0.45
23:U:20:ARG:O	23:U:39:LYS:HB3	2.17	0.45
23:U:70:LEU:HA	23:U:70:LEU:HD23	1.77	0.45
1:X:105:G:C2'	1:X:106:G:H5'	2.47	0.45
1:X:109:A:H2'	1:X:110:U:H5''	1.99	0.45
1:X:1203:A:N3	1:X:1203:A:H2'	2.30	0.45
1:X:1373:G:H21	1:X:1374:G:C1'	2.29	0.45
1:X:1749:G:C5'	1:X:1750:A:OP2	2.60	0.45
1:X:1757:C:HO2'	1:X:1758:C:H5'	1.80	0.45
1:X:1842:G:C5	1:X:1843:U:C5	3.05	0.45
1:X:2514:G:C2	1:X:2515:G:C8	3.05	0.45
1:X:4:C:O2'	1:X:5:A:H5'	2.17	0.45
1:X:776:G:C2	1:X:778:G:C4	3.05	0.45
3:A:106:LEU:O	3:A:107:ALA:C	2.55	0.45
3:A:172:TYR:HE2	3:A:186:HIS:ND1	2.14	0.45
5:C:164:VAL:HB	5:C:166:TRP:CH2	2.47	0.45
5:C:163:ASN:O	5:C:167:VAL:HG22	2.16	0.45
5:C:22:VAL:CG1	5:C:27:LEU:HD21	2.44	0.45
1:X:38:G:H21	5:C:42:THR:HG21	1.82	0.45
6:D:73:SER:HB3	6:D:79:LEU:CD2	2.47	0.45
7:E:170:ALA:C	7:E:171:LEU:HD12	2.37	0.45
9:G:155:THR:CG2	9:G:156:HIS:H	2.24	0.45
10:H:85:ASP:CG	10:H:87:SER:H	2.15	0.45
11:I:53:ARG:C	11:I:55:ARG:N	2.70	0.45
11:I:62:LYS:CG	11:I:63:ARG:N	2.79	0.45
14:L:11:LEU:HA	14:L:14:ARG:CB	2.46	0.45
17:O:10:LYS:HG3	17:O:11:GLN:HG2	1.98	0.45
20:R:108:VAL:CG2	20:R:109:ALA:N	2.65	0.45
1:X:84:G:O3'	20:R:41:PRO:HG3	2.17	0.45
21:S:17:SER:O	21:S:18:MET:SD	2.75	0.45
21:S:98:VAL:HG22	21:S:99:HIS:N	2.32	0.45
23:U:27:ASP:CA	23:U:32:ARG:CZ	2.95	0.45
25:W:5:LEU:HA	25:W:51:LEU:HA	1.98	0.45
1:X:1062:G:C2	1:X:1063:C:C2	3.04	0.45
1:X:1201:G:H8	1:X:1201:G:O5'	1.99	0.45
1:X:1332:G:N2	1:X:1347:C:C2	2.84	0.45
1:X:1557:G:O2'	1:X:1558:C:H5'	2.16	0.45
1:X:1758:C:O2'	1:X:1759:A:H5'	2.17	0.45
1:X:1816:G:OP2	3:A:220:HIS:CE1	2.70	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2317:G:C2	1:X:2318:U:C6	3.04	0.45
1:X:2319:G:O2'	1:X:2320:G:H5'	2.17	0.45
1:X:2676:G:C6	1:X:2690:A:N1	2.85	0.45
1:X:2850:U:C2'	1:X:2851:G:O5'	2.65	0.45
1:X:2875:C:H2'	1:X:2876:C:H5'	1.99	0.45
1:X:589:C:H4'	16:N:31:GLN:HE22	1.81	0.45
1:X:689:A:H2'	1:X:690:A:H5'	1.99	0.45
1:X:732:G:O5'	1:X:732:G:H8	2.00	0.45
1:X:825:C:C2	1:X:1263:G:N1	2.84	0.45
1:X:832:A:OP2	1:X:1201:G:N2	2.46	0.45
1:X:911:A:H2'	1:X:912:A:C8	2.51	0.45
1:X:999:A:H3'	25:W:8:SER:HB2	1.98	0.45
26:Y:13:LYS:O	26:Y:17:ASP:OD1	2.35	0.45
2:Z:65:A:O2'	2:Z:66:G:H5'	2.16	0.45
30:4:19:ARG:HH11	30:4:19:ARG:HG3	1.82	0.45
30:4:17:VAL:HG21	30:4:26:ILE:CD1	2.47	0.45
30:4:3:VAL:HG21	30:4:37:GLY:O	2.17	0.45
3:A:101:GLU:C	3:A:101:GLU:OE2	2.55	0.45
3:A:143:HIS:C	3:A:143:HIS:CD2	2.88	0.45
4:B:102:ILE:HB	4:B:199:ARG:O	2.17	0.45
4:B:107:THR:HG21	4:B:162:MET:CE	2.48	0.45
6:D:11:GLN:O	6:D:15:ALA:HB2	2.17	0.45
6:D:112:ARG:NH1	6:D:134:GLU:OE2	2.50	0.45
6:D:10:ASP:HA	6:D:14:PRO:HG2	1.99	0.45
6:D:18:GLN:C	6:D:20:PHE:N	2.70	0.45
7:E:103:LEU:HD12	7:E:104:GLU:N	2.23	0.45
7:E:139:GLN:CB	7:E:143:GLN:OE1	2.65	0.45
12:J:36:ILE:CG1	12:J:103:VAL:HG22	2.47	0.45
12:J:54:VAL:HB	12:J:55:MET:H	1.65	0.45
14:L:83:GLY:C	14:L:85:LYS:H	2.19	0.45
15:M:104:LEU:CD1	15:M:106:TYR:CZ	2.98	0.45
17:O:15:SER:HA	17:O:95:ILE:CG2	2.47	0.45
17:O:33:VAL:CG2	17:O:33:VAL:O	2.64	0.45
17:O:5:ILE:N	17:O:5:ILE:CD1	2.80	0.45
21:S:51:LEU:HD23	21:S:65:LEU:CD1	2.41	0.45
21:S:56:VAL:CG1	21:S:57:GLU:N	2.76	0.45
23:U:49:LYS:HB3	23:U:61:TRP:CE2	2.51	0.45
23:U:52:ARG:O	23:U:53:GLU:HB3	2.17	0.45
24:V:25:LEU:HD11	24:V:47:ARG:CD	2.47	0.45
1:X:1023:U:H4'	1:X:1023:U:OP2	2.17	0.45
1:X:1136:G:C5	1:X:1137:A:N6	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1243:G:N2	1:X:1244:U:C2	2.85	0.45
1:X:1272:G:H2'	1:X:1273:G:H8	1.82	0.45
1:X:1444:C:H2'	1:X:1445:A:C8	2.46	0.45
1:X:1494:G:O2'	1:X:1574:A:C2	2.68	0.45
1:X:2010:G:C6	1:X:2011:U:N3	2.85	0.45
1:X:2067:U:H2'	1:X:2068:C:C6	2.51	0.45
1:X:2624:G:OP2	1:X:2624:G:H8	2.00	0.45
1:X:2810:A:N6	1:X:2853:U:H2'	2.31	0.45
1:X:387:A:C4	1:X:388:G:C8	3.05	0.45
1:X:429:C:H2'	1:X:430:C:H6	1.82	0.45
1:X:66:U:C2'	1:X:67:G:O5'	2.65	0.45
2:Z:26:G:H4'	2:Z:27:A:O5'	2.17	0.45
2:Z:56:G:H2'	2:Z:57:U:H6	1.81	0.45
3:A:145:LEU:HG	3:A:146:GLU:H	1.82	0.44
3:A:200:GLU:OE2	3:A:201:HIS:O	2.35	0.44
3:A:236:GLY:O	3:A:237:GLU:CB	2.60	0.44
4:B:113:THR:HA	4:B:158:GLY:O	2.18	0.44
4:B:133:LYS:O	4:B:134:TRP:C	2.54	0.44
6:D:135:GLN:HG2	6:D:152:MET:CG	2.46	0.44
6:D:49:ALA:CA	6:D:52:LYS:HB2	2.48	0.44
6:D:53:ALA:HB1	6:D:57:LEU:CD2	2.44	0.44
6:D:68:THR:O	6:D:85:VAL:HG23	2.17	0.44
7:E:121:VAL:CG1	7:E:122:THR:N	2.79	0.44
8:F:79:ILE:HG22	8:F:108:ILE:HD11	1.98	0.44
12:J:19:THR:HG22	12:J:99:LYS:HZ2	1.82	0.44
13:K:39:THR:O	13:K:42:LYS:HB2	2.17	0.44
19:Q:29:VAL:CG1	19:Q:78:ALA:CB	2.95	0.44
19:Q:58:VAL:HA	19:Q:59:PRO:HD2	1.66	0.44
20:R:33:THR:OG1	20:R:34:GLY:N	2.50	0.44
20:R:18:LYS:HA	20:R:36:VAL:HG11	1.99	0.44
20:R:46:VAL:O	20:R:46:VAL:HG12	2.17	0.44
24:V:4:SER:HA	24:V:7:ARG:HG3	1.99	0.44
1:X:1004:A:C4	1:X:1005:U:H5	2.34	0.44
1:X:1332:G:C2	1:X:1347:C:C2	3.05	0.44
1:X:1373:G:O6	1:X:1385:C:C4	2.70	0.44
1:X:1484:G:H2'	1:X:1485:U:H6	1.82	0.44
1:X:1571:G:OP2	1:X:1571:G:C8	2.69	0.44
1:X:1674:C:C2	1:X:1675:C:C5	3.05	0.44
1:X:1815:G:H2'	1:X:1816:G:C8	2.36	0.44
1:X:1822:C:C6	1:X:1822:C:O5'	2.54	0.44
1:X:1825:C:H2'	1:X:1952:A:C2	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1910:A:N1	1:X:1911:A:C2	2.85	0.44
1:X:2040:A:H2	26:Y:2:ALA:HB3	1.81	0.44
1:X:2235:G:N2	1:X:2254:C:C4	2.85	0.44
1:X:2273:C:P	14:L:11:LEU:HD11	2.57	0.44
1:X:218:A:H61	1:X:232:A:H5''	1.80	0.44
1:X:2338:C:H2'	1:X:2339:A:C8	2.52	0.44
1:X:2421:C:N4	1:X:2422:C:H41	2.15	0.44
1:X:2052:G:C6	1:X:2422:C:N4	2.85	0.44
1:X:198:A:C5	1:X:243:G:C5	3.05	0.44
1:X:2451:G:C4	1:X:2454:C:N3	2.85	0.44
1:X:2497:A:H5''	1:X:2498:U:OP2	2.17	0.44
1:X:2629:U:C2	1:X:2630:C:C5	3.05	0.44
1:X:2740:C:O2'	1:X:2741:G:H5'	2.17	0.44
1:X:2769:C:H2'	1:X:2770:A:C8	2.51	0.44
1:X:2780:A:H2'	1:X:2781:G:H8	1.79	0.44
1:X:37:C:H2'	1:X:38:G:C8	2.51	0.44
1:X:395:G:C6	1:X:404:A:N6	2.85	0.44
1:X:405:C:C4	1:X:406:G:N7	2.85	0.44
1:X:53:G:C6	1:X:54:G:N7	2.85	0.44
1:X:719:A:O5'	1:X:719:A:H8	1.99	0.44
1:X:834:A:H62	1:X:983:G:H21	1.65	0.44
1:X:994:A:N7	1:X:995:A:C5	2.86	0.44
30:4:8:LYS:N	30:4:34:GLN:HE22	2.14	0.44
4:B:50:GLY:HA3	4:B:75:THR:HG21	1.99	0.44
5:C:58:MET:CE	5:C:58:MET:HA	2.46	0.44
6:D:4:LEU:HD12	6:D:7:LYS:HB2	1.98	0.44
6:D:78:LYS:HG2	6:D:80:ARG:HH11	1.83	0.44
7:E:37:TYR:N	7:E:37:TYR:CD1	2.85	0.44
7:E:6:LYS:O	7:E:7:GLN:HG3	2.17	0.44
7:E:90:ARG:CD	7:E:163:ARG:NH1	2.79	0.44
8:F:98:GLY:O	8:F:138:THR:HG23	2.17	0.44
9:G:70:PHE:CD2	16:N:64:ARG:HD3	2.53	0.44
9:G:78:ASP:O	9:G:79:PHE:C	2.55	0.44
10:H:3:MET:SD	10:H:44:TYR:CE1	3.10	0.44
12:J:116:LYS:HA	12:J:132:MET:CE	2.47	0.44
13:K:45:ARG:CD	13:K:97:ILE:HD11	2.48	0.44
16:N:39:LEU:O	16:N:42:ALA:HB3	2.17	0.44
17:O:36:LYS:O	17:O:51:ALA:CB	2.65	0.44
25:W:42:GLY:O	25:W:43:MET:C	2.56	0.44
1:X:1270:C:H4'	5:C:77:PHE:CE1	2.52	0.44
1:X:1343:C:N3	1:X:1344:C:C5	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1391:A:N7	1:X:1393:G:C5	2.85	0.44
1:X:1474:A:H4'	1:X:1475:U:O5'	2.17	0.44
1:X:1567:A:N6	1:X:1568:A:C6	2.86	0.44
1:X:1785:A:O2'	1:X:1883:A:H2'	2.17	0.44
1:X:1960:A:H2'	1:X:1961:A:H5'	2.00	0.44
1:X:201:G:O6	1:X:433:G:H5'	2.17	0.44
1:X:224:G:C6	1:X:229:G:O6	2.71	0.44
1:X:242:A:H2'	1:X:243:G:C4'	2.46	0.44
1:X:2448:A:C2	1:X:2461:G:C8	3.06	0.44
1:X:2659:C:C2	1:X:2660:C:C5	3.05	0.44
1:X:2872:U:O2	1:X:2873:G:C8	2.70	0.44
1:X:303:C:C3'	1:X:304:A:H5''	2.47	0.44
1:X:512:A:C2'	1:X:513:A:H5'	2.41	0.44
1:X:5:A:C2	1:X:6:A:C4	3.05	0.44
1:X:768:U:H2'	1:X:769:C:C6	2.52	0.44
1:X:930:A:H8	1:X:930:A:O5'	2.00	0.44
26:Y:51:TYR:CA	26:Y:54:GLY:O	2.64	0.44
2:Z:123:U:O2	2:Z:123:U:C2'	2.65	0.44
3:A:65:ILE:HD11	3:A:88:ARG:CZ	2.47	0.44
4:B:102:ILE:HD13	4:B:172:VAL:HG23	1.99	0.44
4:B:2:LYS:HE2	4:B:84:PHE:HE1	1.82	0.44
1:X:2767:C:H4'	4:B:61:LYS:HG2	2.00	0.44
5:C:10:ASN:O	5:C:11:GLY:O	2.35	0.44
5:C:14:THR:HG21	5:C:195:ILE:CG2	2.47	0.44
5:C:164:VAL:C	5:C:166:TRP:CE3	2.90	0.44
6:D:100:LEU:HG	6:D:104:ILE:CG1	2.47	0.44
2:Z:57:U:H1'	6:D:26:MET:HG2	1.98	0.44
7:E:56:SER:O	7:E:61:HIS:HB2	2.17	0.44
7:E:98:LEU:CG	7:E:99:THR:N	2.80	0.44
9:G:84:ASN:C	9:G:86:ALA:N	2.70	0.44
10:H:18:GLU:HG2	10:H:19:ILE:N	2.32	0.44
11:I:73:GLU:HG3	11:I:101:ARG:CG	2.47	0.44
11:I:121:HIS:CD2	11:I:121:HIS:N	2.84	0.44
13:K:82:GLU:O	13:K:86:LYS:CG	2.54	0.44
14:L:38:ILE:HG13	14:L:39:TYR:H	1.73	0.44
16:N:17:VAL:O	16:N:20:ARG:HB2	2.18	0.44
17:O:36:LYS:HZ3	17:O:98:ILE:H	1.66	0.44
20:R:35:LYS:HG2	20:R:36:VAL:O	2.16	0.44
20:R:60:PRO:C	20:R:62:MET:N	2.71	0.44
22:T:31:VAL:HG11	22:T:37:LEU:CD2	2.47	0.44
22:T:30:VAL:O	22:T:31:VAL:O	2.35	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:134:G:C2'	1:X:135:U:H5'	2.45	0.44
1:X:138:G:C2	1:X:139:A:C8	3.06	0.44
1:X:1463:A:C2'	1:X:1464:A:H5'	2.48	0.44
1:X:1574:A:H2'	1:X:1575:C:H5''	1.98	0.44
1:X:1345:G:C4	1:X:1625:A:C6	3.06	0.44
1:X:1731:C:C3'	1:X:1732:U:H5''	2.48	0.44
1:X:1809:G:H2'	1:X:1809:G:N3	2.33	0.44
1:X:1914:U:C6	1:X:1914:U:C5'	2.84	0.44
1:X:1997:A:O2'	1:X:1998:A:O4'	2.28	0.44
1:X:2031:A:H2'	1:X:2032:G:O4'	2.17	0.44
1:X:203:G:N2	1:X:204:A:H2	2.14	0.44
1:X:2083:G:H5'	1:X:2083:G:H8	1.82	0.44
1:X:2245:A:H4'	1:X:2246:A:C2	2.51	0.44
1:X:2468:G:C6	1:X:2469:G:C6	3.06	0.44
1:X:248:A:O5'	1:X:248:A:C8	2.68	0.44
1:X:2596:C:O2'	1:X:2597:G:H5'	2.17	0.44
1:X:2787:A:O2'	1:X:2788:C:C5'	2.64	0.44
1:X:2804:G:C4'	15:M:4:HIS:CE1	2.99	0.44
1:X:2819:G:C8	1:X:2820:C:C5	3.05	0.44
1:X:590:C:H2'	1:X:591:G:C8	2.52	0.44
1:X:629:C:H2'	1:X:630:G:O4'	2.17	0.44
1:X:678:G:O3'	11:I:50:GLU:OE1	2.35	0.44
1:X:55:A:N6	1:X:69:G:C6	2.86	0.44
1:X:708:G:OP1	1:X:1393:G:O2'	2.29	0.44
1:X:720:A:H2'	1:X:721:C:C6	2.53	0.44
1:X:945:G:C6	1:X:946:U:C4	3.05	0.44
1:X:972:C:C5'	1:X:973:U:OP2	2.65	0.44
2:Z:51:G:H5'	14:L:97:HIS:CD2	2.52	0.44
3:A:228:PRO:HD3	3:A:235:GLY:N	2.33	0.44
4:B:5:LEU:CD1	4:B:5:LEU:N	2.80	0.44
5:C:143:ASP:OD1	5:C:143:ASP:N	2.50	0.44
6:D:111:ILE:HB	6:D:114:PHE:CG	2.52	0.44
6:D:161:LYS:HB3	6:D:165:GLU:OE2	2.16	0.44
6:D:60:ILE:CG1	6:D:61:THR:N	2.68	0.44
6:D:73:SER:CB	6:D:79:LEU:HD23	2.48	0.44
7:E:127:GLU:CG	7:E:127:GLU:O	2.66	0.44
7:E:86:ASN:HA	7:E:131:ILE:O	2.18	0.44
11:I:94:GLU:HA	11:I:97:ARG:NE	2.32	0.44
12:J:112:GLU:OE1	12:J:112:GLU:C	2.55	0.44
12:J:57:ARG:CG	12:J:57:ARG:NH1	2.72	0.44
13:K:75:VAL:O	13:K:76:VAL:C	2.55	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:38:ILE:HG13	14:L:40:ALA:H	1.83	0.44
16:N:40:LEU:O	16:N:43:ALA:HB3	2.18	0.44
16:N:93:LYS:HZ3	16:N:93:LYS:HB2	1.83	0.44
22:T:59:LEU:HA	22:T:59:LEU:HD13	1.72	0.44
22:T:73:GLY:O	22:T:74:LYS:CB	2.66	0.44
23:U:78:ILE:C	23:U:78:ILE:HD13	2.37	0.44
24:V:6:MET:O	24:V:14:PHE:HE1	2.00	0.44
1:X:1022:A:C6	1:X:1162:A:N6	2.86	0.44
1:X:1056:U:O2	1:X:1058:G:N2	2.50	0.44
1:X:1123:G:C6	1:X:1124:U:N3	2.86	0.44
1:X:1243:G:C2	1:X:1244:U:C2	3.05	0.44
1:X:1801:C:N4	23:U:49:LYS:NZ	2.66	0.44
1:X:1811:A:O5'	3:A:161:THR:HG21	2.18	0.44
1:X:1845:A:C5	1:X:1872:A:C6	3.05	0.44
1:X:2042:A:H5''	5:C:65:GLY:HA2	1.99	0.44
1:X:211:U:C5	1:X:212:U:C5	3.05	0.44
1:X:2231:G:O5'	1:X:2231:G:H8	1.99	0.44
1:X:2775:U:OP2	1:X:2776:U:C5	2.70	0.44
1:X:339:U:O4	1:X:343:A:C8	2.71	0.44
1:X:343:A:H2'	1:X:345:U:OP2	2.18	0.44
1:X:388:G:C2	1:X:389:G:C8	3.05	0.44
1:X:482:A:C2'	1:X:483:A:C5'	2.93	0.44
1:X:631:G:C5'	1:X:632:A:OP1	2.60	0.44
1:X:699:G:C4'	1:X:700:C:OP2	2.66	0.44
1:X:760:U:C4	1:X:2592:U:O2	2.70	0.44
1:X:795:A:H5''	1:X:796:A:OP1	2.18	0.44
26:Y:16:ARG:CD	26:Y:20:ARG:NH2	2.79	0.44
2:Z:30:C:N4	2:Z:58:G:H22	2.16	0.44
2:Z:63:A:C6	2:Z:64:C:N4	2.86	0.44
3:A:208:LYS:O	3:A:209:ALA:C	2.55	0.44
3:A:219:PRO:O	3:A:220:HIS:O	2.35	0.44
3:A:63:ARG:HD3	3:A:85:ASP:CG	2.38	0.44
4:B:11:MET:HA	4:B:24:THR:HA	1.98	0.44
4:B:177:ALA:O	4:B:179:GLU:N	2.51	0.44
4:B:38:THR:C	4:B:40:GLN:H	2.21	0.44
5:C:153:ASP:CG	5:C:172:VAL:HA	2.37	0.44
6:D:169:LEU:C	6:D:171:GLN:N	2.71	0.44
7:E:171:LEU:N	7:E:171:LEU:HD12	2.32	0.44
1:X:1091:C:O2	8:F:127:THR:HG23	2.18	0.44
9:G:169:GLN:O	9:G:170:PRO:O	2.36	0.44
9:G:55:ALA:O	9:G:58:ILE:N	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:H:25:LEU:HD21	10:H:71:LYS:HE2	1.99	0.44
10:H:76:ARG:NH1	10:H:113:PRO:O	2.51	0.44
12:J:132:MET:O	12:J:133:VAL:HG13	2.17	0.44
12:J:28:VAL:HG11	12:J:134:LYS:O	2.18	0.44
12:J:47:GLN:HE22	12:J:127:PRO:HG3	1.82	0.44
13:K:61:HIS:O	13:K:62:SER:C	2.55	0.44
14:L:96:TYR:CZ	14:L:101:LYS:HG3	2.52	0.44
16:N:74:MET:CE	16:N:79:PHE:HA	2.34	0.44
17:O:6:GLN:O	17:O:7:THR:HB	2.17	0.44
17:O:80:TYR:C	17:O:81:ARG:HG3	2.36	0.44
18:P:51:GLN:HA	18:P:54:GLU:HB2	2.00	0.44
23:U:12:ASN:O	23:U:13:LEU:O	2.35	0.44
23:U:49:LYS:O	23:U:50:ALA:HB2	2.17	0.44
24:V:59:GLU:HG3	24:V:59:GLU:H	1.49	0.44
1:X:1060:C:N4	1:X:1061:A:N6	2.66	0.44
1:X:1325:U:HO2'	1:X:1327:C:H5	1.62	0.44
1:X:1569:A:H2'	1:X:1571:G:N7	2.33	0.44
1:X:2033:C:C5	1:X:2034:A:C5	3.06	0.44
1:X:218:A:H1'	1:X:220:U:C6	2.52	0.44
1:X:2320:G:N2	1:X:2353:G:H4'	2.33	0.44
1:X:24:G:N2	1:X:527:C:C2	2.85	0.44
1:X:2550:C:O2'	4:B:146:THR:OG1	2.13	0.44
1:X:469:G:O2'	1:X:480:G:N1	2.47	0.44
1:X:959:C:O2'	1:X:960:U:H5'	2.18	0.44
26:Y:4:HIS:HB3	26:Y:5:PRO:HD3	2.00	0.44
3:A:142:VAL:HB	3:A:192:THR:O	2.17	0.44
3:A:175:VAL:O	3:A:182:LEU:HD23	2.18	0.44
3:A:64:ILE:H	3:A:64:ILE:HD12	1.83	0.44
5:C:101:GLN:C	5:C:103:GLY:N	2.70	0.44
5:C:117:LEU:HD21	5:C:187:VAL:HG22	1.98	0.44
5:C:3:GLN:NE2	5:C:4:ILE:N	2.65	0.44
5:C:72:ARG:HG3	5:C:77:PHE:CD2	2.53	0.44
7:E:50:LEU:CG	7:E:51:LEU:N	2.81	0.44
7:E:89:LEU:O	7:E:129:THR:HG22	2.18	0.44
9:G:105:GLY:O	9:G:110:LEU:CG	2.65	0.44
9:G:128:GLU:C	9:G:130:ALA:H	2.15	0.44
9:G:45:ASP:CB	9:G:83:ILE:HD11	2.44	0.44
10:H:104:GLU:H	10:H:104:GLU:HG2	1.18	0.44
11:I:134:GLU:CG	11:I:139:ARG:HA	2.47	0.44
11:I:16:ARG:HB3	11:I:17:LYS:H	1.57	0.44
11:I:52:GLY:HA3	11:I:55:ARG:HB2	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:117:GLU:OE1	12:J:120:ARG:HD3	2.17	0.44
15:M:31:ASP:O	15:M:94:VAL:HB	2.17	0.44
19:Q:25:TYR:CD2	19:Q:25:TYR:N	2.86	0.44
19:Q:58:VAL:O	19:Q:74:ASP:HA	2.17	0.44
1:X:338:G:H1'	20:R:10:HIS:HE1	1.83	0.44
20:R:25:LEU:HG	20:R:81:VAL:HG23	1.98	0.44
21:S:142:ASN:N	21:S:145:ASP:OD1	2.50	0.44
21:S:149:ALA:O	21:S:152:ILE:HB	2.17	0.44
22:T:10:SER:HB2	22:T:11:LYS:HE2	2.00	0.44
24:V:64:GLY:O	24:V:65:GLU:HB3	2.16	0.44
1:X:1061:A:N1	1:X:2731:G:C6	2.86	0.44
1:X:1171:A:H1'	17:O:6:GLN:HB3	1.99	0.44
1:X:1331:G:N3	1:X:1331:G:H2'	2.32	0.44
1:X:1344:C:C4	1:X:1346:C:C2	3.05	0.44
1:X:1483:G:N2	1:X:1541:G:H1'	2.33	0.44
1:X:1528:C:H6	1:X:1528:C:OP2	2.01	0.44
1:X:2032:G:C2	1:X:2599:U:N3	2.85	0.44
1:X:2033:C:N4	1:X:2034:A:C6	2.86	0.44
1:X:2198:U:H6	1:X:2198:U:O5'	2.00	0.44
1:X:2432:A:H2'	1:X:2433:G:C8	2.52	0.44
1:X:2440:C:C2	1:X:2441:U:C5	3.06	0.44
1:X:2463:G:O2'	1:X:2464:G:H5'	2.18	0.44
1:X:2636:A:H2'	1:X:2637:C:O4'	2.18	0.44
1:X:2775:U:O5'	1:X:2777:A:OP2	2.36	0.44
1:X:2797:G:H2'	1:X:2798:A:H5''	1.99	0.44
1:X:306:G:C2	1:X:307:C:C4	3.06	0.44
1:X:497:C:H3'	1:X:497:C:H6	1.81	0.44
1:X:606:A:C6	1:X:607:C:C4	3.05	0.44
1:X:626:A:O4'	1:X:626:A:OP1	2.36	0.44
1:X:647:G:O6	11:I:107:LYS:HE3	2.17	0.44
1:X:746:G:O6	1:X:774:A:C8	2.71	0.44
26:Y:16:ARG:HD3	26:Y:20:ARG:HH22	1.82	0.44
2:Z:74:A:C2	2:Z:107:C:N4	2.86	0.44
5:C:97:ARG:O	5:C:100:ARG:N	2.51	0.44
6:D:136:LEU:HD23	6:D:141:ILE:CG2	2.45	0.44
6:D:52:LYS:HD3	6:D:56:GLU:OE2	2.17	0.44
7:E:20:GLN:H	7:E:20:GLN:HG3	1.43	0.44
7:E:33:LEU:CD2	7:E:35:VAL:HG13	2.46	0.44
7:E:89:LEU:HD11	7:E:95:ARG:O	2.17	0.44
9:G:153:GLY:O	9:G:154:GLU:HG3	2.17	0.44
10:H:8:LEU:N	10:H:8:LEU:HD12	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:I:11:GLY:N	11:I:14:LYS:HB2	2.28	0.44
13:K:28:LEU:CD2	13:K:28:LEU:C	2.83	0.44
14:L:10:LYS:O	14:L:14:ARG:CB	2.64	0.44
17:O:36:LYS:HZ1	17:O:98:ILE:H	1.64	0.44
19:Q:76:LYS:O	19:Q:77:LYS:C	2.55	0.44
21:S:19:ILE:HG22	21:S:20:ALA:O	2.18	0.44
25:W:38:PRO:HA	25:W:41:ARG:NH2	2.32	0.44
1:X:1153:A:O2'	1:X:1154:A:O5'	2.36	0.44
1:X:1201:G:H5''	17:O:80:TYR:CE2	2.52	0.44
1:X:1325:U:O2'	1:X:1327:C:C4	2.70	0.44
1:X:1479:G:H2'	1:X:1480:G:C8	2.53	0.44
1:X:166:G:H1	1:X:182:G:C2'	2.28	0.44
1:X:1672:A:H3'	1:X:1673:C:C5	2.53	0.44
1:X:1811:A:O2'	1:X:1812:U:OP2	2.31	0.44
1:X:1873:A:C8	1:X:1873:A:C3'	3.00	0.44
1:X:2190:A:H2'	1:X:2190:A:N3	2.33	0.44
1:X:2029:G:C2	1:X:2602:G:C2	3.05	0.44
1:X:2691:C:O2	1:X:2692:A:C8	2.70	0.44
1:X:2775:U:H5'	1:X:2776:U:C5'	2.47	0.44
1:X:2839:G:C4	1:X:2840:U:C4	3.06	0.44
1:X:318:G:H8	1:X:318:G:H5'	1.83	0.44
1:X:441:A:N7	1:X:442:A:C5	2.86	0.44
1:X:71:A:O2'	1:X:72:A:OP1	2.27	0.44
1:X:795:A:C2	3:A:226:MET:CE	3.00	0.44
1:X:947:C:N3	1:X:948:C:C4	2.86	0.44
1:X:957:G:H22	1:X:983:G:H1'	1.81	0.44
1:X:961:G:H2'	1:X:962:C:O4'	2.17	0.44
26:Y:33:CYS:HA	26:Y:34:PRO:HD3	1.71	0.44
2:Z:11:G:OP2	14:L:16:LYS:NZ	2.44	0.44
2:Z:36:A:H5''	2:Z:37:C:OP1	2.17	0.44
30:4:27:CYS:SG	30:4:32:HIS:ND1	2.89	0.44
1:X:1517:C:C5'	3:A:102:LYS:HZ3	2.29	0.44
4:B:134:TRP:CD1	4:B:134:TRP:N	2.69	0.44
4:B:114:GLN:N	4:B:158:GLY:O	2.43	0.44
4:B:15:TRP:CZ3	15:M:84:ALA:CB	3.01	0.44
5:C:130:THR:O	5:C:133:PHE:N	2.50	0.44
1:X:1261:G:OP2	5:C:86:PRO:HB3	2.18	0.44
6:D:9:ASN:HA	6:D:13:ARG:HB2	2.00	0.44
7:E:139:GLN:O	7:E:140:LEU:C	2.55	0.44
8:F:126:ASN:HA	8:F:129:ALA:CB	2.47	0.44
9:G:127:ILE:O	9:G:130:ALA:HB3	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:72:GLY:C	14:L:74:ALA:H	2.22	0.44
16:N:20:ARG:NH1	17:O:83:ARG:NH2	2.65	0.44
16:N:87:ASN:C	16:N:87:ASN:HD22	2.17	0.44
17:O:25:LEU:CB	17:O:32:LYS:HE2	2.34	0.44
17:O:38:LEU:HD13	17:O:38:LEU:C	2.39	0.44
1:X:1337:G:OP2	18:P:105:ARG:CZ	2.65	0.44
18:P:117:ILE:CG2	18:P:118:LYS:N	2.80	0.44
19:Q:13:SER:OG	19:Q:16:ALA:HB3	2.18	0.44
19:Q:58:VAL:O	19:Q:59:PRO:O	2.36	0.44
20:R:14:LEU:H	20:R:14:LEU:CD2	2.16	0.44
20:R:54:ILE:HG23	20:R:71:GLN:CA	2.48	0.44
21:S:96:VAL:N	21:S:120:LEU:O	2.30	0.44
21:S:42:ALA:CA	21:S:45:GLN:HG2	2.48	0.44
23:U:26:ALA:HB2	23:U:35:THR:CG2	2.45	0.44
19:Q:10:PRO:HD3	24:V:30:PHE:CD2	2.53	0.44
24:V:30:PHE:C	24:V:32:ALA:N	2.67	0.44
24:V:4:SER:O	24:V:7:ARG:NE	2.51	0.44
24:V:9:LEU:HD13	24:V:13:ASP:CG	2.38	0.44
1:X:1006:C:C2	9:G:31:THR:OG1	2.69	0.44
1:X:1086:C:C3'	1:X:1087:C:C5'	2.94	0.44
1:X:1092:U:C4'	8:F:118:ALA:HB2	2.48	0.44
1:X:1379:A:C5	1:X:1380:C:C4	3.06	0.44
1:X:1756:C:O2'	1:X:1757:C:H5'	2.18	0.44
1:X:2040:A:H2'	1:X:2041:A:C8	2.53	0.44
1:X:209:G:H3'	1:X:209:G:H8	1.83	0.44
1:X:2184:C:H2'	1:X:2185:U:C6	2.53	0.44
1:X:177:U:O4	1:X:225:G:N2	2.49	0.44
1:X:2538:C:C2'	1:X:2539:C:H5'	2.47	0.44
1:X:1774:A:N1	1:X:2566:A:C4	2.86	0.44
1:X:2665:G:H2'	1:X:2666:U:C6	2.48	0.44
1:X:2664:G:C6	1:X:2705:A:C6	3.05	0.44
1:X:2784:A:C6	1:X:2866:A:C8	3.06	0.44
1:X:304:A:N7	1:X:356:A:N6	2.66	0.44
1:X:36:G:H4'	1:X:463:C:C5	2.53	0.44
1:X:633:G:H2'	1:X:634:G:C8	2.52	0.44
1:X:665:A:N3	1:X:665:A:H2'	2.33	0.44
30:4:1:MET:SD	30:4:35:ARG:HB2	2.58	0.44
3:A:37:LEU:O	3:A:62:TYR:N	2.51	0.44
3:A:96:HIS:HE1	3:A:100:GLY:CA	2.28	0.44
4:B:163:GLU:CG	4:B:164:ARG:N	2.81	0.44
4:B:25:VAL:HA	4:B:183:LEU:HD22	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:25:VAL:HG21	15:M:16:ILE:HD12	2.00	0.44
4:B:36:ARG:HG2	4:B:36:ARG:NH1	2.32	0.44
5:C:130:THR:O	5:C:131:LYS:C	2.56	0.44
5:C:130:THR:O	5:C:134:ILE:HG12	2.17	0.44
6:D:170:LEU:O	6:D:175:LEU:HD22	2.18	0.44
6:D:32:GLU:HB3	6:D:157:VAL:CB	2.48	0.44
6:D:52:LYS:C	6:D:52:LYS:HD3	2.38	0.44
7:E:133:VAL:HG11	7:E:144:VAL:CG1	2.47	0.44
1:X:548:G:H4'	9:G:34:PRO:HG3	1.99	0.44
1:X:574:C:H5''	11:I:32:ARG:HH12	1.83	0.44
1:X:574:C:H5''	11:I:32:ARG:NH1	2.32	0.44
14:L:37:HIS:CD2	14:L:39:TYR:HE1	2.36	0.44
15:M:65:SER:HB2	15:M:81:PHE:O	2.17	0.44
17:O:10:LYS:CD	17:O:11:GLN:NE2	2.81	0.44
19:Q:55:THR:HG22	19:Q:78:ALA:CA	2.47	0.44
24:V:9:LEU:HB3	24:V:13:ASP:HB2	2.00	0.44
1:X:1067:G:HO2'	1:X:1097:A:H8	1.64	0.44
1:X:1134:C:O2'	1:X:1135:C:H5'	2.18	0.44
1:X:1168:G:C2	1:X:1169:C:C2	3.06	0.44
1:X:1234:C:H2'	1:X:1235:C:H6	1.83	0.44
1:X:1272:G:H2'	1:X:1273:G:C8	2.53	0.44
1:X:1312:G:N7	1:X:1656:U:H5	2.16	0.44
1:X:1331:G:C6	1:X:1348:C:N4	2.86	0.44
1:X:1502:G:H2'	1:X:1503:G:H8	1.83	0.44
1:X:1509:A:H2'	1:X:1510:A:H5'	1.99	0.44
1:X:1567:A:C5	1:X:1568:A:N7	2.86	0.44
1:X:1625:A:C2	1:X:1632:A:C4	3.06	0.44
1:X:1625:A:N3	1:X:1632:A:C4	2.86	0.44
1:X:1816:G:C2'	1:X:1817:U:H5'	2.46	0.44
1:X:1882:G:O2'	1:X:1883:A:C5'	2.61	0.44
1:X:1948:C:C5	1:X:1949:A:C8	3.05	0.44
1:X:2046:C:O2	1:X:2430:A:C2	2.70	0.44
1:X:2084:G:P	1:X:2084:G:H8	2.40	0.44
1:X:2225:G:C2'	1:X:2226:A:H8	2.05	0.44
1:X:2286:G:H21	1:X:2290:A:N6	2.16	0.44
1:X:2294:U:H4'	6:D:127:ASN:HD22	1.81	0.44
1:X:2343:C:H2'	1:X:2344:G:H5'	1.99	0.44
1:X:2527:G:C2	1:X:2528:G:C8	3.06	0.44
1:X:2495:G:C4	1:X:2548:G:N2	2.85	0.44
1:X:2832:G:N2	1:X:2835:A:OP2	2.51	0.44
1:X:28:A:H1'	1:X:523:A:C2	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:457:C:O2'	1:X:458:G:H5'	2.17	0.44
1:X:499:G:C2	1:X:503:G:O6	2.71	0.44
1:X:492:G:O2'	1:X:517:A:N6	2.51	0.44
1:X:661:C:C2	1:X:662:G:C8	3.06	0.44
1:X:661:C:H2'	1:X:662:G:C8	2.53	0.44
1:X:677:G:H2'	1:X:678:G:C5'	2.48	0.44
1:X:76:C:N4	1:X:108:G:C6	2.86	0.44
3:A:124:GLU:HA	3:A:125:PRO:HD2	1.74	0.43
3:A:134:ARG:O	3:A:136:VAL:N	2.51	0.43
3:A:172:TYR:CD1	3:A:184:ARG:HD2	2.53	0.43
1:X:2557:G:N9	4:B:139:GLY:O	2.51	0.43
4:B:163:GLU:CG	4:B:164:ARG:H	2.30	0.43
1:X:2786:G:OP1	4:B:62:PRO:HD3	2.18	0.43
5:C:167:VAL:O	5:C:168:SER:HB2	2.18	0.43
5:C:46:ARG:O	5:C:47:THR:C	2.56	0.43
5:C:67:ALA:O	5:C:68:ARG:HB3	2.18	0.43
6:D:126:GLY:O	6:D:127:ASN:C	2.56	0.43
6:D:22:TYR:OH	6:D:29:PRO:HD3	2.18	0.43
7:E:21:ASP:C	7:E:23:VAL:N	2.70	0.43
7:E:57:ASP:N	7:E:57:ASP:OD1	2.51	0.43
7:E:6:LYS:C	7:E:69:ARG:NE	2.71	0.43
10:H:24:VAL:HA	10:H:51:ILE:HG22	1.99	0.43
10:H:73:VAL:HG21	10:H:123:PHE:CD1	2.53	0.43
10:H:76:ARG:NE	15:M:75:GLU:HG3	2.31	0.43
12:J:97:VAL:HG23	12:J:97:VAL:O	2.18	0.43
14:L:11:LEU:O	14:L:14:ARG:HB3	2.18	0.43
14:L:84:ILE:O	14:L:86:GLN:N	2.51	0.43
15:M:40:ARG:O	15:M:41:GLU:HG3	2.18	0.43
16:N:10:ARG:O	16:N:11:ARG:C	2.55	0.43
17:O:23:GLU:HG2	17:O:91:THR:HB	1.99	0.43
18:P:80:LEU:O	18:P:84:GLU:N	2.50	0.43
18:P:91:PHE:N	18:P:91:PHE:CD1	2.86	0.43
18:P:91:PHE:N	18:P:91:PHE:HD1	2.16	0.43
19:Q:30:SER:HA	19:Q:31:PRO:HD3	1.86	0.43
19:Q:61:LYS:HB2	19:Q:72:ARG:NE	2.33	0.43
2:Z:106:U:O2'	21:S:24:TYR:CZ	2.68	0.43
1:X:1107:A:H2'	1:X:1108:U:H5''	1.99	0.43
1:X:115:G:N1	1:X:117:A:N6	2.66	0.43
1:X:1164:C:H2'	1:X:1165:G:O4'	2.18	0.43
1:X:1288:A:N6	1:X:1309:G:H4'	2.33	0.43
1:X:1345:G:C5	1:X:1625:A:C6	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1440:G:H3'	1:X:1441:A:C5'	2.47	0.43
1:X:1526:U:H3'	1:X:1527:G:C8	2.52	0.43
1:X:1720:G:C2	1:X:1721:G:C4	3.05	0.43
1:X:1758:C:N3	1:X:1759:A:C8	2.86	0.43
1:X:1849:G:O5'	1:X:1849:G:H8	2.01	0.43
1:X:789:G:O6	1:X:2055:G:OP1	2.36	0.43
1:X:2302:G:H2'	1:X:2303:C:O4'	2.17	0.43
1:X:2388:G:C6	1:X:2389:G:C5	3.06	0.43
1:X:2670:C:C2	1:X:2671:C:C5	3.06	0.43
1:X:26:G:C2	1:X:27:G:N2	2.86	0.43
1:X:320:A:N3	1:X:340:G:O2'	2.27	0.43
1:X:713:G:H2'	1:X:714:G:O4'	2.18	0.43
1:X:812:G:C4	1:X:813:A:N7	2.86	0.43
26:Y:36:CYS:C	26:Y:38:GLY:H	2.21	0.43
2:Z:62:C:H2'	2:Z:63:A:O4'	2.18	0.43
30:4:18:ARG:CA	30:4:22:ARG:O	2.62	0.43
3:A:177:LEU:O	3:A:179:SER:N	2.51	0.43
3:A:70:ARG:HH21	3:A:190:TYR:H	1.65	0.43
3:A:37:LEU:HB3	3:A:38:PRO:HD2	2.00	0.43
3:A:83:GLU:O	3:A:92:ILE:HG22	2.18	0.43
4:B:147:PRO:C	4:B:149:ARG:N	2.71	0.43
4:B:194:GLY:HA2	15:M:2:GLN:HB3	2.00	0.43
1:X:310:A:N1	5:C:162:ARG:NH2	2.65	0.43
1:X:2294:U:H1'	6:D:123:ASP:OD2	2.18	0.43
6:D:49:ALA:HA	6:D:52:LYS:HB2	2.01	0.43
8:F:105:VAL:O	8:F:109:ALA:N	2.35	0.43
8:F:94:LYS:HB2	8:F:94:LYS:HE2	1.85	0.43
9:G:106:TYR:CZ	9:G:108:GLY:HA2	2.53	0.43
9:G:48:GLY:CA	9:G:89:ALA:HB2	2.45	0.43
10:H:2:ILE:CG2	10:H:6:SER:HB3	2.47	0.43
10:H:81:ILE:HD12	10:H:89:ILE:HD12	1.99	0.43
11:I:89:ASP:O	11:I:90:ARG:C	2.57	0.43
15:M:104:LEU:HA	15:M:106:TYR:CD2	2.53	0.43
16:N:37:GLN:O	16:N:40:LEU:HG	2.18	0.43
16:N:49:ASP:O	16:N:53:LYS:N	2.42	0.43
17:O:93:ILE:O	17:O:93:ILE:CG1	2.66	0.43
19:Q:62:ARG:HG3	19:Q:63:LYS:N	2.33	0.43
20:R:93:ARG:HH21	20:R:109:ALA:HA	1.84	0.43
21:S:168:VAL:CG1	21:S:168:VAL:O	2.67	0.43
21:S:77:ALA:HA	21:S:78:PRO:HD3	1.89	0.43
22:T:16:SER:HB3	22:T:17:ASN:H	1.60	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:T:38:VAL:HG21	22:T:79:ILE:CD1	2.48	0.43
24:V:4:SER:O	24:V:8:ASN:N	2.44	0.43
25:W:1:MET:HA	25:W:55:GLU:O	2.18	0.43
1:X:107:G:C2	1:X:108:G:C8	3.06	0.43
1:X:1124:U:C2	1:X:1125:G:C8	3.06	0.43
1:X:1255:A:H2'	1:X:1256:C:H6	1.81	0.43
1:X:148:C:H6	1:X:148:C:OP1	2.01	0.43
1:X:1494:G:C4	1:X:1495:G:C8	3.06	0.43
1:X:1556:A:H2'	1:X:1557:G:C8	2.53	0.43
1:X:1764:A:C2'	1:X:1765:C:H5'	2.47	0.43
1:X:1790:G:N2	3:A:155:LEU:CD2	2.81	0.43
1:X:1830:C:N4	1:X:1881:U:C3'	2.78	0.43
1:X:1866:G:N2	1:X:1867:A:C2	2.86	0.43
1:X:198:A:H4'	1:X:199:A:OP2	2.19	0.43
1:X:2204:A:H5'	1:X:2205:C:O4'	2.18	0.43
1:X:2343:C:H5'	22:T:56:ASP:OD2	2.18	0.43
1:X:2447:G:O2'	1:X:2448:A:C8	2.50	0.43
1:X:1996:A:N6	1:X:2592:U:C5	2.86	0.43
1:X:2722:C:O2'	1:X:2723:C:H5'	2.18	0.43
1:X:394:U:H2'	1:X:395:G:H8	1.80	0.43
1:X:546:A:H2'	1:X:547:U:H6	1.80	0.43
1:X:583:C:C6	1:X:2038:C:H5''	2.54	0.43
1:X:810:U:H2'	1:X:811:G:C8	2.52	0.43
1:X:815:A:C4	1:X:816:U:C5	3.07	0.43
1:X:832:A:H2	1:X:953:G:N3	2.15	0.43
30:4:15:LYS:HB3	30:4:26:ILE:HG13	1.97	0.43
30:4:30:VAL:HG12	30:4:33:LYS:HE3	2.01	0.43
3:A:146:GLU:HG2	3:A:148:VAL:H	1.83	0.43
3:A:147:LEU:HD21	3:A:155:LEU:HD11	1.97	0.43
3:A:212:SER:OG	3:A:213:ARG:N	2.51	0.43
3:A:214:TRP:C	3:A:215:LEU:HG	2.38	0.43
3:A:222:ARG:C	3:A:224:SER:N	2.69	0.43
4:B:107:THR:CG2	4:B:162:MET:HE3	2.47	0.43
5:C:50:GLN:C	5:C:52:SER:N	2.70	0.43
6:D:34:ILE:C	6:D:91:LEU:HB2	2.39	0.43
7:E:24:PHE:CE1	7:E:37:TYR:O	2.71	0.43
9:G:108:GLY:C	9:G:110:LEU:CD2	2.84	0.43
9:G:61:ARG:HE	9:G:65:LYS:NZ	2.14	0.43
9:G:85:ALA:O	9:G:86:ALA:C	2.57	0.43
10:H:116:ARG:HH11	15:M:38:LYS:NZ	2.04	0.43
10:H:23:ARG:HH21	10:H:24:VAL:N	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:I:11:GLY:O	11:I:12:SER:C	2.57	0.43
13:K:10:LEU:HD12	13:K:17:ARG:CG	2.48	0.43
15:M:33:VAL:HG23	15:M:94:VAL:HG21	2.00	0.43
15:M:37:THR:CG2	15:M:38:LYS:N	2.82	0.43
16:N:20:ARG:C	16:N:22:LYS:H	2.21	0.43
16:N:57:PHE:O	16:N:58:ARG:C	2.57	0.43
17:O:78:VAL:O	17:O:79:GLN:C	2.56	0.43
19:Q:73:ASN:O	19:Q:74:ASP:HB2	2.18	0.43
25:W:34:VAL:O	25:W:35:SER:O	2.36	0.43
1:X:1163:C:O3'	16:N:76:TYR:HE2	2.01	0.43
1:X:1310:C:C2	1:X:1311:C:C5	3.06	0.43
1:X:1515:U:C2	1:X:1516:A:C8	3.07	0.43
1:X:1659:G:O2'	1:X:1660:G:H5'	2.19	0.43
1:X:1745:C:OP1	15:M:101:ARG:CD	2.67	0.43
1:X:1851:A:C6	1:X:1867:A:H1'	2.53	0.43
1:X:2075:U:O2'	1:X:2076:G:P	2.76	0.43
1:X:2511:G:H2'	1:X:2512:A:C8	2.53	0.43
1:X:2034:A:C5	1:X:2593:A:C5	3.07	0.43
1:X:473:C:H6	1:X:473:C:H3'	1.82	0.43
1:X:565:A:O5'	1:X:565:A:H8	2.00	0.43
1:X:856:A:H2'	1:X:857:U:O4'	2.18	0.43
1:X:95:G:N2	1:X:96:C:C2	2.86	0.43
2:Z:49:C:H2'	2:Z:50:U:H5'	1.99	0.43
2:Z:51:G:O2'	2:Z:52:G:H5'	2.18	0.43
3:A:120:GLY:O	3:A:123:ALA:HB2	2.18	0.43
3:A:158:SER:O	3:A:159:ALA:HB3	2.17	0.43
4:B:116:VAL:HG22	4:B:136:ARG:HG2	1.98	0.43
1:X:2786:G:OP1	4:B:62:PRO:CD	2.67	0.43
5:C:108:ILE:HG12	5:C:108:ILE:H	1.49	0.43
6:D:134:GLU:O	6:D:136:LEU:N	2.52	0.43
1:X:2289:A:C2	6:D:75:SER:HB2	2.54	0.43
7:E:9:ILE:CG2	7:E:50:LEU:HB3	2.49	0.43
8:F:116:LEU:CG	8:F:127:THR:HG21	2.48	0.43
9:G:116:ARG:HD2	9:G:126:VAL:HG13	2.00	0.43
9:G:84:ASN:ND2	9:G:154:GLU:HB3	2.32	0.43
9:G:65:LYS:HG3	9:G:66:HIS:CD2	2.53	0.43
10:H:25:LEU:HD12	10:H:25:LEU:N	2.29	0.43
11:I:43:ALA:O	11:I:44:GLY:C	2.56	0.43
12:J:115:ALA:C	12:J:117:GLU:H	2.21	0.43
12:J:136:GLU:CA	12:J:138:TYR:CE2	2.98	0.43
12:J:39:GLU:OE2	12:J:128:ILE:HB	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:K:43:GLU:OE2	13:K:44:LEU:N	2.51	0.43
14:L:91:ARG:N	14:L:91:ARG:HD2	2.24	0.43
15:M:28:ARG:HE	15:M:28:ARG:HB3	1.69	0.43
15:M:91:VAL:HG12	15:M:92:THR:N	2.33	0.43
16:N:65:ILE:HG21	16:N:80:ILE:HD11	2.00	0.43
17:O:12:TYR:HB2	17:O:39:PHE:CA	2.47	0.43
17:O:23:GLU:HG2	17:O:91:THR:HG21	1.95	0.43
21:S:25:ASN:ND2	21:S:28:ASN:ND2	2.66	0.43
1:X:1107:A:C2'	1:X:1108:U:H5''	2.47	0.43
1:X:1153:A:N3	1:X:1155:G:C8	2.86	0.43
1:X:1216:G:O5'	1:X:1216:G:H8	2.01	0.43
1:X:1288:A:O2'	1:X:1289:A:O5'	2.36	0.43
1:X:1479:G:H2'	1:X:1480:G:H8	1.83	0.43
1:X:155:G:H2'	1:X:156:G:O4'	2.18	0.43
1:X:1791:C:HO2'	1:X:1792:C:P	2.41	0.43
1:X:1830:C:H41	1:X:1882:G:P	2.41	0.43
1:X:1926:U:H4'	1:X:1927:U:C3'	2.34	0.43
1:X:2015:G:H8	1:X:2015:G:O5'	2.02	0.43
1:X:199:A:O2'	1:X:201:G:O4'	2.35	0.43
1:X:205:A:H2'	1:X:206:U:H5'	2.00	0.43
1:X:2364:C:H2'	1:X:2365:U:C6	2.54	0.43
1:X:2384:G:N2	1:X:2390:A:N7	2.66	0.43
1:X:2590:U:O2	1:X:2590:U:H2'	2.16	0.43
1:X:2737:A:C2'	1:X:2737:A:N3	2.78	0.43
1:X:2787:A:C4	1:X:2788:C:C5	3.06	0.43
1:X:317:U:C3'	1:X:318:G:C5'	2.97	0.43
1:X:48:A:H1'	1:X:50:G:C4	2.54	0.43
1:X:491:A:H5''	20:R:74:LEU:CD1	2.43	0.43
1:X:647:G:C6	11:I:109:LEU:HD11	2.53	0.43
1:X:689:A:O2'	1:X:690:A:H5'	2.18	0.43
1:X:708:G:C2	1:X:709:A:C8	3.05	0.43
1:X:754:G:H2'	1:X:755:C:H6	1.83	0.43
1:X:75:C:H2'	1:X:76:C:C5'	2.48	0.43
1:X:78:C:H2'	1:X:79:G:O4'	2.17	0.43
1:X:873:U:O4	1:X:929:A:N7	2.52	0.43
3:A:137:PRO:HB2	3:A:140:ALA:HB2	2.01	0.43
3:A:36:ALA:O	3:A:37:LEU:HD23	2.19	0.43
1:X:456:C:C5'	5:C:43:ALA:HB2	2.48	0.43
6:D:136:LEU:O	6:D:137:ILE:HG12	2.18	0.43
6:D:137:ILE:HG13	6:D:138:PHE:CD1	2.53	0.43
6:D:31:ILE:HD11	6:D:173:MET:HE2	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:85:VAL:CG2	6:D:86:GLY:H	2.24	0.43
6:D:34:ILE:HD12	6:D:96:MET:HB2	2.00	0.43
8:F:81:LYS:HZ2	8:F:84:GLY:HA2	1.84	0.43
8:F:92:PRO:O	8:F:93:ASN:CB	2.67	0.43
1:X:1142:G:O5'	9:G:107:GLN:HB3	2.19	0.43
9:G:51:LEU:O	9:G:52:GLY:C	2.57	0.43
9:G:51:LEU:O	9:G:54:LEU:HB3	2.19	0.43
1:X:609:U:H1'	11:I:18:ARG:NH2	2.33	0.43
11:I:84:GLU:OE2	11:I:89:ASP:OD1	2.36	0.43
12:J:121:LEU:O	12:J:124:HIS:N	2.51	0.43
12:J:119:PHE:HE1	12:J:132:MET:HG3	1.82	0.43
12:J:136:GLU:OE1	12:J:138:TYR:HE2	2.02	0.43
12:J:40:PRO:CB	12:J:99:LYS:HZ2	2.32	0.43
14:L:37:HIS:CE1	14:L:39:TYR:CZ	3.06	0.43
15:M:4:HIS:N	15:M:4:HIS:CD2	2.86	0.43
17:O:11:GLN:CA	17:O:11:GLN:NE2	2.81	0.43
17:O:48:GLY:O	17:O:49:GLU:C	2.56	0.43
1:X:1087:C:H4'	8:F:94:LYS:HE3	2.01	0.43
1:X:1153:A:H3'	1:X:1153:A:OP2	2.19	0.43
1:X:1165:G:H8	1:X:1165:G:O5'	2.00	0.43
1:X:1260:A:C6	1:X:1262:U:C2	3.07	0.43
1:X:1288:A:H4'	1:X:1289:A:OP1	2.18	0.43
1:X:1492:A:C6	1:X:1531:C:C5	3.06	0.43
1:X:1585:A:N6	1:X:1586:A:C6	2.86	0.43
1:X:1644:G:H2'	1:X:1645:U:C6	2.52	0.43
1:X:1687:C:OP2	1:X:2529:G:OP1	2.36	0.43
1:X:584:A:OP2	1:X:2038:C:N4	2.51	0.43
1:X:2332:G:H1'	22:T:33:ALA:O	2.18	0.43
1:X:1949:A:N3	1:X:2572:U:O4'	2.50	0.43
1:X:2607:C:H1'	1:X:2761:A:N3	2.33	0.43
1:X:2776:U:H5''	1:X:2776:U:H6	1.83	0.43
1:X:2855:C:O2'	13:K:90:ARG:HD3	2.18	0.43
1:X:346:C:H2'	1:X:347:C:H6	1.84	0.43
1:X:67:G:O2'	1:X:68:C:O5'	2.36	0.43
1:X:706:A:H2'	1:X:707:U:O4'	2.19	0.43
1:X:754:G:C4	1:X:755:C:C5	3.07	0.43
1:X:689:A:H2	1:X:815:A:H61	1.56	0.43
1:X:981:C:O2'	1:X:982:C:H5'	2.19	0.43
2:Z:47:A:H8	6:D:92:ARG:NE	2.17	0.43
30:4:8:LYS:CA	30:4:9:LYS:HE3	2.48	0.43
3:A:124:GLU:HG3	3:A:126:LYS:HG3	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:67:PHE:CD2	3:A:153:ALA:HB3	2.53	0.43
4:B:182:ILE:C	4:B:182:ILE:HD13	2.38	0.43
6:D:28:VAL:HA	6:D:29:PRO:HD3	1.95	0.43
1:X:2726:U:C1'	7:E:139:GLN:NE2	2.72	0.43
7:E:7:GLN:HA	7:E:69:ARG:HE	1.83	0.43
7:E:9:ILE:HG13	7:E:50:LEU:CD2	2.36	0.43
9:G:125:ARG:NH1	9:G:128:GLU:CD	2.72	0.43
10:H:27:SER:OG	10:H:121:ARG:NH2	2.52	0.43
10:H:23:ARG:HH12	10:H:25:LEU:CG	2.01	0.43
11:I:73:GLU:HG3	11:I:101:ARG:CB	2.48	0.43
11:I:20:GLY:C	11:I:22:GLY:N	2.72	0.43
12:J:135:ARG:HB3	12:J:136:GLU:H	1.52	0.43
13:K:38:LEU:HA	13:K:38:LEU:HD12	1.68	0.43
15:M:68:VAL:O	15:M:68:VAL:HG23	2.17	0.43
17:O:5:ILE:HG12	17:O:7:THR:N	2.33	0.43
21:S:157:GLY:O	21:S:158:CYS:C	2.57	0.43
21:S:72:ASP:C	21:S:73:LYS:O	2.57	0.43
21:S:67:LYS:N	21:S:82:ASP:O	2.43	0.43
23:U:23:LYS:HB3	23:U:35:THR:HG22	2.00	0.43
1:X:1153:A:C4	1:X:1155:G:N7	2.86	0.43
1:X:1219:C:H5''	11:I:7:LYS:HE2	2.01	0.43
1:X:1287:A:N1	1:X:1661:C:O2'	2.39	0.43
1:X:1467:U:H3'	1:X:1468:A:C5'	2.40	0.43
1:X:148:C:H2'	1:X:149:A:O4'	2.18	0.43
1:X:1631:C:C4	1:X:1633:C:C2	3.07	0.43
1:X:712:A:C2	1:X:1650:A:H1'	2.52	0.43
1:X:1685:A:C6	1:X:1976:U:C6	3.06	0.43
1:X:169:C:H2'	1:X:170:U:O4'	2.18	0.43
1:X:1963:G:O3'	1:X:1965:U:OP2	2.37	0.43
1:X:2024:U:H2'	1:X:2025:A:O4'	2.19	0.43
1:X:2043:A:O2'	1:X:2044:G:P	2.76	0.43
1:X:215:G:H2'	1:X:216:U:O4'	2.18	0.43
1:X:2320:G:H2'	1:X:2321:C:H6	1.84	0.43
1:X:2445:C:OP1	30:4:5:SER:N	2.50	0.43
1:X:2490:U:H1'	4:B:139:GLY:HA3	2.00	0.43
1:X:2527:G:C5	1:X:2540:A:C2	3.07	0.43
1:X:2576:G:C6	1:X:2577:A:N6	2.87	0.43
1:X:538:A:H5''	1:X:538:A:N3	2.33	0.43
1:X:649:G:N1	1:X:660:G:C6	2.85	0.43
1:X:688:A:C6	1:X:689:A:N6	2.87	0.43
1:X:776:G:H3'	1:X:776:G:H8	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:972:C:C4'	1:X:973:U:OP2	2.66	0.43
2:Z:32:C:O5'	2:Z:32:C:H6	2.01	0.43
4:B:19:ARG:NE	4:B:21:ILE:HD11	2.28	0.43
5:C:64:THR:O	5:C:65:GLY:O	2.36	0.43
5:C:30:VAL:HA	5:C:95:LEU:HD11	2.00	0.43
6:D:108:LEU:CB	6:D:109:PRO:HD3	2.48	0.43
6:D:119:PRO:CG	6:D:120:ASN:H	2.28	0.43
6:D:19:GLN:HB3	6:D:20:PHE:CD1	2.53	0.43
7:E:137:ASP:OD1	7:E:139:GLN:N	2.51	0.43
8:F:95:ALA:O	8:F:96:LYS:C	2.56	0.43
9:G:101:THR:OG1	9:G:103:TYR:CE1	2.68	0.43
9:G:104:THR:HB	9:G:105:GLY:H	1.43	0.43
9:G:107:GLN:HA	9:G:110:LEU:CG	2.43	0.43
9:G:98:LYS:HA	9:G:98:LYS:HD2	1.64	0.43
10:H:1:MET:HE3	10:H:44:TYR:CE1	2.54	0.43
12:J:59:PHE:CE2	12:J:110:VAL:HG11	2.54	0.43
12:J:55:MET:O	12:J:56:SER:O	2.36	0.43
1:X:970:A:H62	12:J:83:ARG:NH2	2.14	0.43
13:K:15:SER:OG	13:K:16:ALA:N	2.52	0.43
13:K:60:LEU:O	13:K:61:HIS:C	2.54	0.43
14:L:33:ARG:HH22	14:L:103:LEU:N	2.13	0.43
16:N:75:ASN:OD1	16:N:75:ASN:C	2.57	0.43
16:N:75:ASN:O	16:N:79:PHE:CB	2.66	0.43
18:P:44:VAL:HG23	18:P:45:ILE:HD13	2.01	0.43
18:P:69:ALA:O	18:P:71:VAL:N	2.51	0.43
20:R:71:GLN:OE1	20:R:72:ARG:N	2.52	0.43
21:S:43:PHE:CG	21:S:43:PHE:O	2.72	0.43
21:S:43:PHE:CD1	21:S:47:SER:HA	2.53	0.43
12:J:131:LYS:HD2	21:S:76:ARG:HE	1.84	0.43
21:S:89:GLY:HA2	21:S:127:PRO:CG	2.48	0.43
25:W:17:VAL:HB	25:W:18:LYS:H	1.49	0.43
25:W:5:LEU:HB2	25:W:25:LEU:CD1	2.25	0.43
1:X:1076:U:H3	1:X:1084:A:H61	1.66	0.43
1:X:1120:C:N4	1:X:1121:G:N2	2.67	0.43
1:X:1182:U:H5'	1:X:1182:U:H6	1.83	0.43
1:X:1296:G:H2'	1:X:1298:G:OP2	2.19	0.43
1:X:1376:C:O2'	1:X:1377:G:H5'	2.19	0.43
1:X:1439:G:O5'	1:X:1439:G:H8	2.02	0.43
1:X:1469:U:OP2	1:X:1471:G:OP2	2.37	0.43
1:X:1930:C:H2'	1:X:1931:G:H8	1.83	0.43
1:X:1935:A:C5	1:X:1936:A:C6	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2198:U:C6	1:X:2199:C:H1'	2.53	0.43
1:X:230:C:O2'	1:X:231:G:H5'	2.18	0.43
1:X:2737:A:OP2	30:4:19:ARG:CA	2.63	0.43
1:X:2776:U:H3'	1:X:2776:U:H6	1.83	0.43
1:X:342:G:O2'	1:X:343:A:P	2.77	0.43
1:X:488:A:H2'	1:X:489:A:O4'	2.19	0.43
1:X:615:C:H4'	1:X:669:G:H22	1.82	0.43
1:X:932:G:H2'	1:X:933:G:C8	2.54	0.43
3:A:53:PHE:CD2	3:A:220:HIS:CD2	3.07	0.43
5:C:134:ILE:HD13	5:C:134:ILE:H	1.83	0.43
5:C:136:TRP:CD1	5:C:140:ASN:ND2	2.86	0.43
5:C:19:LEU:H	5:C:19:LEU:HG	1.49	0.43
6:D:111:ILE:O	6:D:114:PHE:N	2.51	0.43
6:D:138:PHE:N	6:D:138:PHE:CD1	2.87	0.43
6:D:35:VAL:HG11	6:D:88:LYS:CG	2.49	0.43
8:F:86:GLY:O	8:F:87:LYS:CB	2.66	0.43
9:G:84:ASN:O	9:G:152:ALA:HA	2.19	0.43
9:G:48:GLY:O	9:G:89:ALA:HB3	2.19	0.43
10:H:109:ARG:HA	10:H:129:LEU:CD1	2.49	0.43
10:H:29:ILE:CB	10:H:123:PHE:HE2	2.31	0.43
11:I:78:SER:H	11:I:112:GLY:HA3	1.83	0.43
12:J:117:GLU:O	12:J:119:PHE:N	2.51	0.43
13:K:20:LEU:O	13:K:22:ARG:N	2.52	0.43
14:L:33:ARG:HH21	14:L:68:ALA:HB1	1.84	0.43
14:L:75:LEU:O	14:L:78:ALA:N	2.51	0.43
14:L:79:ALA:O	14:L:80:ALA:C	2.56	0.43
17:O:47:PHE:O	17:O:48:GLY:O	2.36	0.43
18:P:80:LEU:HD21	18:P:87:GLU:CB	2.47	0.43
21:S:103:ARG:O	21:S:139:THR:CA	2.61	0.43
21:S:140:LYS:HG3	21:S:141:MET:N	2.34	0.43
25:W:47:VAL:O	25:W:50:LEU:HD12	2.19	0.43
1:X:1103:C:H42	1:X:1111:C:H42	1.63	0.43
1:X:1133:G:C2	1:X:1134:C:C5	3.07	0.43
1:X:1542:G:O2'	1:X:1543:G:H5'	2.18	0.43
1:X:1564:U:H2'	1:X:1565:G:H8	1.83	0.43
1:X:1567:A:C6	1:X:1568:A:C5	3.07	0.43
1:X:1573:G:H3'	1:X:1574:A:H5''	2.01	0.43
1:X:1579:G:H2'	1:X:1580:C:H6	1.84	0.43
1:X:1641:C:H2'	1:X:1642:G:C5'	2.48	0.43
1:X:172:A:C8	1:X:175:C:N4	2.84	0.43
1:X:1786:C:H2'	1:X:1787:U:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1815:G:O2'	1:X:1816:G:H5'	2.18	0.43
1:X:1863:U:H2'	1:X:1864:G:H8	1.82	0.43
1:X:1142:G:C8	1:X:2008:C:H4'	2.54	0.43
1:X:2019:C:O2'	1:X:2020:G:H5'	2.19	0.43
1:X:2088:U:HO2'	1:X:2089:C:P	2.42	0.43
1:X:2059:U:O5'	1:X:2217:G:N2	2.52	0.43
1:X:2299:A:C5'	1:X:2300:G:C4	3.02	0.43
1:X:198:A:C4	1:X:243:G:C8	3.06	0.43
1:X:2445:C:H5'	30:4:5:SER:HB3	1.99	0.43
1:X:2627:G:O2'	1:X:2628:C:H5'	2.19	0.43
1:X:2673:G:C2	1:X:2674:C:C2	3.07	0.43
1:X:2676:G:C2	1:X:2690:A:C2	3.07	0.43
1:X:2872:U:H2'	1:X:2873:G:C8	2.53	0.43
1:X:318:G:H4'	1:X:1224:A:OP1	2.19	0.43
1:X:510:G:C5	1:X:512:A:OP2	2.72	0.43
1:X:623:G:H5'	1:X:624:A:OP2	2.18	0.43
1:X:659:G:H2'	1:X:660:G:O4'	2.19	0.43
1:X:67:G:HO2'	1:X:68:C:C4'	2.32	0.43
1:X:794:A:P	3:A:218:LYS:HD2	2.58	0.43
1:X:805:G:H2'	1:X:2419:C:N3	2.33	0.43
1:X:857:U:H2'	1:X:858:G:O4'	2.18	0.43
1:X:867:G:C5	1:X:868:U:C4	3.06	0.43
1:X:1804:U:O2'	3:A:45:ASN:HB3	2.19	0.43
3:A:76:ASN:HA	3:A:118:ASN:CA	2.42	0.43
4:B:202:ALA:O	4:B:203:LYS:HB3	2.18	0.43
5:C:163:ASN:O	5:C:164:VAL:O	2.37	0.43
6:D:103:LEU:O	6:D:104:ILE:C	2.57	0.43
6:D:107:GLY:HA2	6:D:137:ILE:O	2.19	0.43
6:D:150:ARG:NH1	6:D:150:ARG:HG3	2.34	0.43
6:D:150:ARG:HH11	6:D:150:ARG:HG3	1.83	0.43
6:D:22:TYR:CD2	6:D:28:VAL:N	2.86	0.43
7:E:33:LEU:HD23	7:E:35:VAL:CG2	2.49	0.43
8:F:85:ILE:HG22	8:F:86:GLY:H	1.80	0.43
10:H:8:LEU:O	10:H:18:GLU:HG3	2.18	0.43
11:I:32:ARG:HD2	17:O:81:ARG:HD2	2.01	0.43
11:I:56:LEU:HD22	11:I:56:LEU:O	2.18	0.43
11:I:4:HIS:HB2	11:I:5:ASP:H	1.50	0.43
12:J:15:ARG:HB3	12:J:16:GLY:H	1.51	0.43
12:J:19:THR:HG21	12:J:40:PRO:CB	2.48	0.43
13:K:85:PRO:O	13:K:86:LYS:C	2.57	0.43
14:L:19:THR:O	14:L:21:THR:N	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:68:ALA:C	14:L:70:ALA:N	2.71	0.43
9:G:66:HIS:CA	16:N:67:ALA:HB1	2.30	0.43
17:O:43:GLU:O	17:O:44:GLN:C	2.56	0.43
1:X:574:C:OP2	17:O:77:GLY:N	2.52	0.43
19:Q:39:LYS:HE3	19:Q:50:VAL:CG1	2.49	0.43
19:Q:68:PHE:HD2	19:Q:68:PHE:N	2.07	0.43
20:R:29:HIS:CE1	20:R:51:VAL:HA	2.53	0.43
21:S:30:VAL:CG1	21:S:31:SER:H	2.31	0.43
23:U:27:ASP:CA	23:U:32:ARG:NH1	2.78	0.43
24:V:8:ASN:O	24:V:8:ASN:CG	2.57	0.43
1:X:1062:G:N2	1:X:1063:C:C2	2.87	0.43
1:X:1033:G:C6	1:X:1151:U:C5	3.06	0.43
1:X:1469:U:P	1:X:1470:G:OP2	2.76	0.43
1:X:1574:A:HO2'	1:X:1575:C:H3'	1.77	0.43
1:X:163:A:H2'	1:X:164:G:H8	1.84	0.43
1:X:171:G:C6	1:X:179:U:C2	3.07	0.43
1:X:1741:G:H2'	1:X:1742:G:H5'	1.96	0.43
1:X:174:A:C2	1:X:840:U:O4	2.72	0.43
1:X:1767:G:C6	1:X:1768:U:C5	3.07	0.43
1:X:1770:U:H5	1:X:1775:A:C8	2.37	0.43
1:X:1831:G:C6	1:X:1832:G:N7	2.87	0.43
1:X:1915:A:C2'	1:X:1916:G:H5'	2.48	0.43
1:X:1973:C:H2'	1:X:1974:U:C6	2.53	0.43
1:X:1975:G:C4	1:X:1980:A:N6	2.86	0.43
1:X:1987:G:H2'	1:X:1988:A:H5'	2.00	0.43
1:X:2170:C:H3'	1:X:2171:U:C5'	2.36	0.43
1:X:2447:G:C8	1:X:2455:A:C2	3.07	0.43
1:X:2034:A:N7	1:X:2593:A:N7	2.67	0.43
1:X:2659:C:H2'	1:X:2660:C:H6	1.84	0.43
1:X:2721:A:H2'	1:X:2722:C:H5'	2.01	0.43
1:X:2728:A:C4	1:X:2729:A:C8	3.07	0.43
1:X:338:G:O6	1:X:343:A:C8	2.72	0.43
1:X:41:G:N1	1:X:451:A:C6	2.86	0.43
1:X:476:G:C6	1:X:477:A:N6	2.87	0.43
1:X:556:A:H8	1:X:556:A:H3'	1.83	0.43
1:X:557:U:O2'	1:X:558:G:C8	2.70	0.43
1:X:592:G:P	16:N:10:ARG:HH12	2.40	0.43
1:X:676:G:C6	1:X:677:G:C5	3.07	0.43
1:X:697:G:C2	1:X:807:A:C2	3.07	0.43
1:X:972:C:H4'	1:X:973:U:OP2	2.19	0.43
26:Y:58:LEU:CD1	26:Y:58:LEU:H	2.31	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:4:18:ARG:HG3	30:4:23:VAL:HG13	2.01	0.43
3:A:33:LEU:CD2	3:A:63:ARG:NH1	2.82	0.43
3:A:83:GLU:OE1	3:A:104:TYR:CE2	2.72	0.43
4:B:131:SER:C	4:B:132:LYS:CG	2.87	0.43
1:X:687:G:H5''	5:C:70:GLY:N	2.33	0.43
6:D:38:GLU:N	6:D:87:ILE:O	2.36	0.43
11:I:7:LYS:C	11:I:9:THR:N	2.71	0.43
12:J:119:PHE:O	12:J:123:GLY:N	2.51	0.43
12:J:66:TYR:O	12:J:106:GLU:OE2	2.37	0.43
13:K:10:LEU:CD2	13:K:14:SER:H	2.32	0.43
16:N:43:ALA:O	16:N:44:THR:C	2.57	0.43
16:N:7:GLY:O	16:N:8:ILE:HG12	2.19	0.43
17:O:33:VAL:O	17:O:33:VAL:HG23	2.17	0.43
19:Q:90:ALA:C	19:Q:92:ALA:H	2.21	0.43
21:S:64:ALA:HB2	21:S:85:MET:SD	2.59	0.43
1:X:1032:A:C8	1:X:1032:A:C3'	3.01	0.43
1:X:1162:A:C6	1:X:1163:C:C4	3.07	0.43
1:X:116:A:H8	1:X:116:A:H3'	1.83	0.43
1:X:1216:G:HO2'	5:C:178:TYR:HH	1.64	0.43
1:X:1228:G:O2'	1:X:1229:C:H5'	2.19	0.43
1:X:1288:A:O2'	1:X:1289:A:C4'	2.66	0.43
1:X:1358:C:C3'	1:X:1359:G:C5'	2.96	0.43
1:X:1372:A:N7	1:X:1386:A:N1	2.66	0.43
1:X:1462:C:C2	1:X:1463:A:C8	3.06	0.43
1:X:1645:U:H2'	1:X:1646:G:O4'	2.19	0.43
1:X:1692:C:C2	4:B:129:HIS:CD2	3.07	0.43
1:X:1713:G:H8	1:X:1713:G:C5'	2.32	0.43
1:X:1783:G:OP1	3:A:205:VAL:O	2.37	0.43
1:X:1982:C:OP1	1:X:2703:C:O2'	2.35	0.43
1:X:538:A:H62	1:X:2025:A:H2'	1.82	0.43
1:X:202:A:H2'	1:X:203:G:O4'	2.19	0.43
1:X:689:A:H8	1:X:2052:G:H21	1.66	0.43
1:X:2178:U:H2'	1:X:2179:C:C6	2.41	0.43
1:X:2319:G:C2	1:X:2320:G:N7	2.87	0.43
1:X:2334:C:O2'	22:T:24:LYS:HE3	2.18	0.43
1:X:2379:G:N1	1:X:2380:U:C2	2.87	0.43
1:X:244:C:C4	1:X:245:C:C5	3.07	0.43
1:X:2436:U:O2	1:X:2474:G:C2	2.72	0.43
1:X:2522:G:C8	1:X:2522:G:H5'	2.53	0.43
1:X:2692:A:C5'	1:X:2693:U:OP2	2.67	0.43
1:X:2820:C:H6	1:X:2820:C:O5'	2.02	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2875:C:H2'	1:X:2876:C:C5'	2.49	0.43
1:X:421:G:H8	1:X:421:G:O5'	2.02	0.43
1:X:577:U:H4'	1:X:956:A:N6	2.34	0.43
1:X:791:G:C6	1:X:792:U:C2	3.06	0.43
2:Z:57:U:H1'	6:D:26:MET:CG	2.49	0.43
6:D:123:ASP:C	6:D:125:ARG:H	2.21	0.42
7:E:107:ILE:N	7:E:107:ILE:CD1	2.81	0.42
7:E:137:ASP:C	7:E:137:ASP:OD1	2.58	0.42
7:E:18:ASN:O	7:E:20:GLN:HG3	2.19	0.42
7:E:7:GLN:N	7:E:7:GLN:OE1	2.52	0.42
9:G:67:ARG:O	9:G:70:PHE:CE1	2.72	0.42
11:I:10:PRO:HA	11:I:14:LYS:HB2	2.01	0.42
11:I:70:THR:CG2	11:I:71:THR:N	2.81	0.42
1:X:1219:C:C5'	11:I:7:LYS:O	2.61	0.42
12:J:77:LYS:CG	12:J:78:LYS:N	2.82	0.42
12:J:80:ALA:O	12:J:81:GLU:HB3	2.19	0.42
17:O:35:LEU:O	17:O:36:LYS:CB	2.67	0.42
17:O:9:GLY:O	17:O:10:LYS:HB3	2.19	0.42
19:Q:74:ASP:O	19:Q:75:ARG:CG	2.61	0.42
19:Q:55:THR:HB	19:Q:78:ALA:HA	2.01	0.42
20:R:105:ARG:CZ	20:R:106:VAL:O	2.67	0.42
20:R:76:LEU:HD23	20:R:76:LEU:N	2.33	0.42
21:S:39:PHE:CE2	21:S:43:PHE:HB2	2.54	0.42
21:S:56:VAL:CG1	21:S:57:GLU:H	2.27	0.42
21:S:75:LYS:H	21:S:75:LYS:CE	2.32	0.42
22:T:72:LYS:O	22:T:74:LYS:O	2.37	0.42
24:V:10:GLN:C	24:V:12:THR:H	2.21	0.42
1:X:1017:C:C2	1:X:1148:G:N2	2.87	0.42
1:X:1210:C:O2'	1:X:1211:G:H5'	2.19	0.42
1:X:1211:G:C4	1:X:1212:U:H5	2.33	0.42
1:X:1441:A:O2'	1:X:1442:C:P	2.76	0.42
1:X:1524:C:H6	1:X:1525:A:C8	2.36	0.42
1:X:1775:A:O2'	1:X:1776:A:OP2	2.33	0.42
1:X:1805:G:H21	3:A:50:THR:CG2	2.32	0.42
1:X:1861:G:H2'	1:X:1862:C:O4'	2.19	0.42
1:X:203:G:C2	1:X:204:A:C2	3.07	0.42
1:X:222:G:H2'	1:X:223:C:H6	1.84	0.42
1:X:2245:A:C4'	1:X:2246:A:C2	3.02	0.42
1:X:2465:G:N2	1:X:2466:G:C4	2.87	0.42
1:X:2548:G:O2'	1:X:2549:G:H5'	2.19	0.42
1:X:2740:C:H2'	1:X:2741:G:H5'	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:510:G:N2	1:X:512:A:H3'	2.34	0.42
1:X:617:U:H5''	1:X:617:U:O2	2.18	0.42
1:X:674:U:O2'	1:X:675:C:H5'	2.19	0.42
1:X:748:A:H3'	1:X:749:C:C6	2.55	0.42
1:X:764:A:C2	1:X:802:A:H2'	2.51	0.42
1:X:965:G:C6	1:X:966:A:C5	3.07	0.42
1:X:985:G:O2'	1:X:986:A:P	2.77	0.42
3:A:54:ILE:N	3:A:217:ARG:HB3	2.34	0.42
4:B:79:ARG:NH1	4:B:195:LEU:HD21	2.34	0.42
6:D:134:GLU:HG2	6:D:134:GLU:O	2.18	0.42
6:D:22:TYR:C	6:D:24:SER:H	2.21	0.42
6:D:99:PHE:HD1	6:D:102:LYS:HD2	1.85	0.42
7:E:148:VAL:O	7:E:151:VAL:HG23	2.19	0.42
7:E:20:GLN:O	7:E:21:ASP:CB	2.67	0.42
7:E:33:LEU:HD23	7:E:35:VAL:CG1	2.49	0.42
7:E:69:ARG:HG2	7:E:69:ARG:NH2	2.34	0.42
9:G:79:PHE:CZ	9:G:147:ARG:NE	2.87	0.42
9:G:71:THR:HB	16:N:64:ARG:NH1	2.34	0.42
10:H:23:ARG:HH21	10:H:23:ARG:CB	2.29	0.42
12:J:68:ARG:CB	12:J:68:ARG:NH1	2.82	0.42
12:J:86:LYS:O	12:J:87:GLY:C	2.58	0.42
14:L:11:LEU:HD23	14:L:11:LEU:O	2.18	0.42
14:L:78:ALA:O	14:L:80:ALA:N	2.52	0.42
17:O:40:VAL:O	17:O:42:GLY:N	2.52	0.42
17:O:46:VAL:O	17:O:47:PHE:CD1	2.72	0.42
17:O:71:ILE:HB	17:O:84:THR:O	2.18	0.42
18:P:45:ILE:HD11	18:P:56:LEU:HB2	2.00	0.42
20:R:40:LEU:O	20:R:44:GLN:CA	2.66	0.42
21:S:45:GLN:NE2	21:S:45:GLN:N	2.66	0.42
23:U:62:LEU:HD23	23:U:67:LEU:CD1	2.49	0.42
24:V:41:HIS:O	24:V:43:VAL:N	2.53	0.42
25:W:2:LYS:HE2	25:W:31:SER:HB2	2.00	0.42
1:X:1016:C:H5'	1:X:1023:U:OP2	2.20	0.42
1:X:1082:G:O5'	1:X:1082:G:C8	2.71	0.42
1:X:1181:C:H2'	1:X:1182:U:C5'	2.49	0.42
1:X:1223:G:C5'	1:X:1224:A:H5'	2.42	0.42
1:X:136:A:C8	1:X:137:A:N7	2.88	0.42
1:X:1572:C:H2'	1:X:1573:G:H5'	2.01	0.42
1:X:1759:A:N1	1:X:1760:G:C5	2.87	0.42
1:X:1843:U:N3	1:X:1844:C:C5	2.87	0.42
1:X:1886:G:N3	1:X:1887:G:C8	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1925:C:H2'	1:X:1926:U:C5	2.54	0.42
1:X:1929:U:N3	1:X:1930:C:C4	2.87	0.42
1:X:1825:C:H2'	1:X:1952:A:H2	1.84	0.42
1:X:204:A:N6	1:X:2386:G:C8	2.87	0.42
1:X:2228:U:H2'	1:X:2231:G:OP2	2.19	0.42
1:X:923:A:H2	1:X:2256:G:N3	2.17	0.42
1:X:2351:G:N3	1:X:2351:G:H2'	2.34	0.42
1:X:2352:A:C2	1:X:2353:G:C5	3.07	0.42
1:X:2800:C:C5	1:X:2801:A:N7	2.87	0.42
1:X:2827:G:H2'	1:X:2828:C:O4'	2.19	0.42
1:X:2860:C:H2'	1:X:2861:A:O5'	2.19	0.42
1:X:27:G:C2'	1:X:28:A:OP2	2.67	0.42
1:X:302:U:C4	1:X:361:G:N2	2.87	0.42
1:X:405:C:O2'	1:X:406:G:H5'	2.18	0.42
1:X:632:A:H3'	1:X:632:A:N3	2.34	0.42
1:X:683:A:O5'	11:I:45:LYS:CA	2.66	0.42
1:X:70:A:H4'	1:X:71:A:H3'	2.01	0.42
1:X:698:A:C8	1:X:786:U:O4	2.72	0.42
1:X:793:G:C2	1:X:795:A:C2	3.07	0.42
1:X:812:G:C8	1:X:813:A:C8	3.07	0.42
1:X:919:U:H2'	1:X:920:G:C8	2.54	0.42
3:A:133:LEU:CB	3:A:187:SER:HA	2.31	0.42
3:A:227:ASN:C	3:A:229:VAL:N	2.68	0.42
4:B:11:MET:O	4:B:12:THR:HB	2.19	0.42
4:B:49:ILE:CG1	4:B:50:GLY:N	2.82	0.42
5:C:158:ARG:HG3	5:C:159:ARG:H	1.83	0.42
5:C:65:GLY:C	5:C:66:ASN:ND2	2.72	0.42
5:C:73:SER:O	5:C:74:VAL:O	2.37	0.42
6:D:10:ASP:OD1	6:D:10:ASP:N	2.53	0.42
6:D:138:PHE:O	6:D:140:GLU:N	2.47	0.42
7:E:17:VAL:C	7:E:18:ASN:CG	2.77	0.42
7:E:45:GLN:NE2	7:E:48:ASP:O	2.51	0.42
9:G:158:HIS:C	9:G:161:GLN:HB2	2.40	0.42
9:G:32:TYR:O	9:G:33:ILE:O	2.37	0.42
10:H:100:ASN:ND2	10:H:104:GLU:HG3	2.29	0.42
10:H:26:ASN:HD22	10:H:26:ASN:HA	1.51	0.42
10:H:31:GLY:C	10:H:33:GLY:N	2.72	0.42
10:H:47:VAL:HG21	10:H:115:ALA:HB2	1.99	0.42
11:I:7:LYS:HG2	11:I:9:THR:CG2	2.49	0.42
12:J:20:GLY:CA	12:J:99:LYS:HE2	2.49	0.42
12:J:54:VAL:CG1	12:J:121:LEU:HB3	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:55:SER:O	14:L:56:SER:CB	2.67	0.42
15:M:39:VAL:C	15:M:41:GLU:N	2.72	0.42
16:N:110:VAL:O	16:N:111:ASP:C	2.56	0.42
16:N:24:PHE:HB2	16:N:29:SER:HB2	2.02	0.42
16:N:47:TYR:C	16:N:49:ASP:H	2.22	0.42
19:Q:34:THR:C	19:Q:36:THR:H	2.22	0.42
19:Q:6:ILE:O	19:Q:7:LEU:C	2.57	0.42
21:S:9:THR:HG23	21:S:10:PRO:HD2	2.01	0.42
23:U:29:GLY:O	23:U:30:VAL:C	2.58	0.42
23:U:70:LEU:CD2	23:U:75:TYR:HD1	2.31	0.42
24:V:25:LEU:HD11	24:V:47:ARG:HG2	2.01	0.42
1:X:1056:U:H1'	1:X:1058:G:N3	2.33	0.42
1:X:1173:G:C4	1:X:1174:G:C8	3.07	0.42
1:X:1189:G:H2'	1:X:1190:C:O4'	2.20	0.42
1:X:1198:C:O5'	1:X:1198:C:H6	2.02	0.42
1:X:118:U:O2'	1:X:119:G:C5'	2.68	0.42
1:X:168:A:N3	1:X:169:C:C5	2.88	0.42
1:X:572:G:C6	1:X:2001:G:C5	3.07	0.42
1:X:2073:A:N6	1:X:2074:U:O4	2.51	0.42
1:X:215:G:H21	1:X:216:U:H1'	1.84	0.42
1:X:2208:U:C6	1:X:2208:U:C3'	3.02	0.42
1:X:2557:G:N2	1:X:2558:C:C2	2.87	0.42
1:X:2606:G:C5	1:X:2607:C:C4	3.07	0.42
1:X:2712:G:OP2	1:X:2712:G:C8	2.73	0.42
1:X:2862:G:N2	1:X:2863:U:C2	2.87	0.42
1:X:313:U:C2	1:X:314:G:C8	3.08	0.42
1:X:404:A:C6	1:X:405:C:N3	2.86	0.42
1:X:554:U:O2	1:X:554:U:C2'	2.67	0.42
1:X:554:U:O3'	1:X:555:U:H4'	2.19	0.42
1:X:640:C:H4'	1:X:660:G:C2	2.54	0.42
1:X:64:C:H1'	19:Q:68:PHE:HD1	1.84	0.42
1:X:653:G:H3'	1:X:653:G:H8	1.84	0.42
1:X:859:U:H1'	1:X:860:U:C4	2.54	0.42
2:Z:58:G:H4'	2:Z:59:A:H8	1.83	0.42
3:A:155:LEU:O	3:A:156:ALA:C	2.58	0.42
3:A:166:GLN:HB2	3:A:174:ILE:HG22	2.00	0.42
4:B:133:LYS:HG3	4:B:137:ARG:CB	2.48	0.42
5:C:192:ALA:O	5:C:193:LEU:C	2.57	0.42
5:C:193:LEU:C	5:C:195:ILE:H	2.21	0.42
5:C:31:VAL:O	5:C:32:THR:C	2.56	0.42
6:D:135:GLN:HG2	6:D:152:MET:HG2	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:75:SER:HB2	6:D:79:LEU:CD1	2.48	0.42
7:E:155:ASP:OD2	7:E:155:ASP:C	2.58	0.42
7:E:155:ASP:CG	7:E:157:TYR:HB2	2.38	0.42
8:F:109:ALA:O	8:F:112:LYS:C	2.58	0.42
9:G:80:VAL:HG12	9:G:81:VAL:N	2.34	0.42
10:H:23:ARG:NH2	10:H:24:VAL:N	2.67	0.42
10:H:73:VAL:O	10:H:73:VAL:HG13	2.20	0.42
10:H:97:VAL:O	10:H:98:ILE:C	2.57	0.42
11:I:77:LEU:HD22	11:I:110:ALA:CA	2.50	0.42
11:I:89:ASP:OD2	11:I:120:VAL:HG13	2.19	0.42
12:J:106:GLU:OE1	12:J:106:GLU:O	2.37	0.42
15:M:89:ASN:CG	15:M:90:GLN:OE1	2.58	0.42
16:N:71:LEU:O	16:N:71:LEU:CG	2.67	0.42
17:O:76:SER:C	17:O:78:VAL:N	2.72	0.42
18:P:100:GLY:N	18:P:121:THR:O	2.52	0.42
19:Q:63:LYS:HE3	19:Q:68:PHE:O	2.19	0.42
20:R:52:ASN:OD1	20:R:53:VAL:N	2.53	0.42
20:R:56:LYS:HB3	20:R:56:LYS:HE2	1.70	0.42
21:S:34:LEU:HD13	21:S:35:ASP:O	2.19	0.42
21:S:36:ARG:NE	21:S:37:LYS:H	2.05	0.42
21:S:91:PRO:HG3	21:S:125:PRO:HG3	2.02	0.42
22:T:26:PHE:N	22:T:26:PHE:CD1	2.87	0.42
1:X:1018:C:C4	1:X:1019:U:H5	2.36	0.42
1:X:1210:C:C2	1:X:1211:G:C8	3.07	0.42
1:X:1248:G:C6	1:X:1249:G:N1	2.87	0.42
1:X:1356:G:N3	1:X:1397:A:H2	2.17	0.42
1:X:1359:G:C4	1:X:1617:G:N2	2.87	0.42
1:X:1361:G:O6	1:X:1615:C:N4	2.53	0.42
1:X:1503:G:C4	1:X:1504:G:N7	2.88	0.42
1:X:1690:U:H2'	1:X:1691:G:C5'	2.27	0.42
1:X:1719:G:O2'	1:X:1720:G:H5'	2.20	0.42
1:X:1730:G:C6	1:X:1731:C:C4	3.07	0.42
1:X:1774:A:C2	1:X:2566:A:C4	3.07	0.42
1:X:1791:C:C2	1:X:1810:U:O2	2.72	0.42
1:X:1935:A:N3	1:X:2539:C:O2'	2.33	0.42
1:X:1918:G:C5	1:X:1945:C:C5	3.08	0.42
1:X:2010:G:C6	1:X:2011:U:C4	3.08	0.42
1:X:2070:G:H2'	1:X:2071:G:H8	1.85	0.42
1:X:2286:G:H21	1:X:2290:A:H62	1.66	0.42
1:X:2299:A:H5'	1:X:2300:G:C4	2.53	0.42
1:X:2807:U:HO2'	1:X:2808:U:P	2.42	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:330:C:H2'	1:X:331:U:C6	2.55	0.42
1:X:322:A:HO2'	1:X:343:A:H5'	1.84	0.42
1:X:471:A:H3'	1:X:472:C:C6	2.54	0.42
1:X:649:G:N1	1:X:660:G:N1	2.66	0.42
1:X:831:G:C2	1:X:1204:G:C6	3.08	0.42
1:X:861:G:C4	1:X:862:A:C8	3.07	0.42
1:X:870:C:H5'	22:T:69:PHE:CD2	2.54	0.42
1:X:872:G:H2'	1:X:928:G:O6	2.19	0.42
26:Y:15:LYS:C	26:Y:17:ASP:N	2.71	0.42
2:Z:54:U:H2'	2:Z:55:C:O4'	2.18	0.42
30:4:1:MET:SD	30:4:35:ARG:CB	3.08	0.42
3:A:165:VAL:CG1	3:A:166:GLN:H	2.27	0.42
4:B:188:ILE:N	4:B:188:ILE:HD12	2.34	0.42
4:B:70:ALA:O	4:B:71:GLY:C	2.58	0.42
5:C:112:GLN:OE1	5:C:116:LYS:CD	2.58	0.42
5:C:134:ILE:O	5:C:137:ALA:HB3	2.19	0.42
1:X:456:C:C4'	5:C:43:ALA:HB2	2.50	0.42
5:C:45:THR:HB	5:C:86:PRO:HD2	2.01	0.42
6:D:9:ASN:HB2	6:D:10:ASP:OD1	2.19	0.42
6:D:53:ALA:O	6:D:56:GLU:HB2	2.19	0.42
6:D:66:ILE:CG2	6:D:66:ILE:O	2.67	0.42
1:X:2726:U:C1'	7:E:139:GLN:HE21	2.33	0.42
7:E:33:LEU:HD23	7:E:35:VAL:HG13	2.01	0.42
10:H:127:VAL:HG12	10:H:128:SER:N	2.35	0.42
10:H:81:ILE:HD11	10:H:83:ARG:HG2	2.01	0.42
11:I:72:TYR:CD2	11:I:107:LYS:HB2	2.55	0.42
11:I:89:ASP:O	11:I:94:GLU:OE1	2.38	0.42
11:I:92:THR:O	11:I:94:GLU:N	2.52	0.42
12:J:139:ASP:OD1	21:S:71:MET:HE1	2.19	0.42
12:J:36:ILE:HG22	12:J:37:ALA:O	2.19	0.42
12:J:42:TRP:CE3	12:J:95:VAL:HG21	2.55	0.42
16:N:65:ILE:HD13	16:N:95:LEU:HD23	2.01	0.42
20:R:81:VAL:HG11	20:R:90:LYS:H	1.85	0.42
21:S:146:HIS:HA	21:S:170:SER:HB2	2.00	0.42
22:T:31:VAL:HB	22:T:32:LYS:H	1.63	0.42
22:T:34:GLY:HA2	22:T:61:ALA:O	2.20	0.42
25:W:34:VAL:CG2	25:W:40:VAL:HG13	2.49	0.42
1:X:1513:U:H4'	1:X:1514:C:OP1	2.18	0.42
1:X:1515:U:H2'	1:X:1516:A:C8	2.46	0.42
1:X:1939:U:C4	1:X:1940:C:C5	3.07	0.42
1:X:2010:G:H2'	1:X:2011:U:O4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2043:A:O2'	1:X:2044:G:OP2	2.32	0.42
1:X:207:U:H2'	1:X:208:C:O4'	2.20	0.42
1:X:2170:C:H2'	1:X:2171:U:H4'	2.01	0.42
1:X:2177:U:O2'	1:X:2178:U:H5'	2.19	0.42
1:X:2240:C:H2'	1:X:2241:U:O5'	2.19	0.42
1:X:2299:A:H61	1:X:2312:A:C3'	2.31	0.42
1:X:2325:A:HO2'	1:X:2326:C:P	2.42	0.42
1:X:2445:C:N3	1:X:2464:G:C2	2.88	0.42
1:X:2507:U:H2'	1:X:2509:A:O5'	2.18	0.42
1:X:2759:U:H4'	1:X:2760:G:C5'	2.35	0.42
1:X:429:C:O5'	1:X:429:C:H6	2.03	0.42
1:X:473:C:C6	1:X:473:C:H3'	2.54	0.42
1:X:531:G:N3	1:X:532:A:C8	2.87	0.42
1:X:565:A:H2'	1:X:566:U:H6	1.84	0.42
3:A:46:ARG:CG	3:A:46:ARG:O	2.66	0.42
4:B:36:ARG:HG2	4:B:36:ARG:HH11	1.83	0.42
5:C:10:ASN:O	5:C:10:ASN:OD1	2.37	0.42
5:C:158:ARG:O	5:C:159:ARG:C	2.57	0.42
6:D:101:GLU:C	6:D:103:LEU:N	2.72	0.42
6:D:128:TYR:N	6:D:156:ILE:O	2.44	0.42
6:D:30:ARG:O	6:D:158:THR:HA	2.20	0.42
6:D:18:GLN:C	6:D:20:PHE:H	2.22	0.42
7:E:85:ILE:C	7:E:132:ASP:OD2	2.58	0.42
9:G:100:TYR:O	9:G:100:TYR:CD1	2.72	0.42
11:I:121:HIS:CA	11:I:141:VAL:HB	2.40	0.42
11:I:49:PHE:O	11:I:50:GLU:HG2	2.19	0.42
1:X:228:A:C5'	11:I:53:ARG:HG2	2.43	0.42
12:J:55:MET:O	12:J:56:SER:C	2.58	0.42
13:K:11:ASN:ND2	13:K:12:ARG:HE	2.18	0.42
15:M:24:LEU:HB3	15:M:25:PRO:HD2	2.02	0.42
17:O:79:GLN:OE1	17:O:79:GLN:CA	2.67	0.42
19:Q:40:ASP:O	19:Q:41:ALA:O	2.36	0.42
20:R:40:LEU:O	20:R:44:GLN:N	2.53	0.42
20:R:92:THR:O	20:R:95:ARG:NH2	2.53	0.42
20:R:93:ARG:N	20:R:95:ARG:NH2	2.68	0.42
21:S:127:PRO:O	21:S:129:ARG:N	2.41	0.42
21:S:66:VAL:HG13	21:S:81:VAL:HG13	2.00	0.42
23:U:27:ASP:C	23:U:32:ARG:CZ	2.88	0.42
24:V:18:ILE:C	24:V:20:ALA:N	2.73	0.42
1:X:1247:U:O4	1:X:1248:G:N1	2.53	0.42
1:X:1279:G:C8	1:X:1279:G:H3'	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1343:C:C2'	1:X:1343:C:O2	2.68	0.42
1:X:13:A:N3	1:X:15:G:C6	2.87	0.42
1:X:1501:C:O2'	1:X:1502:G:H5'	2.19	0.42
1:X:1741:G:C2	1:X:1742:G:C8	3.07	0.42
1:X:1744:G:C6	1:X:1747:G:C2	3.07	0.42
1:X:1807:A:O2'	1:X:1808:C:H4'	2.20	0.42
1:X:1823:G:C6	1:X:1824:C:N4	2.88	0.42
1:X:540:G:C6	1:X:2005:U:H5''	2.55	0.42
1:X:2015:G:HO2'	1:X:2016:A:P	2.42	0.42
1:X:202:A:O2'	1:X:234:C:H4'	2.19	0.42
1:X:2086:U:H2'	1:X:2087:U:C6	2.55	0.42
1:X:2225:G:N2	1:X:2405:A:O2'	2.52	0.42
1:X:2484:G:O6	1:X:2555:G:H2'	2.20	0.42
1:X:2661:G:H2'	1:X:2662:C:H6	1.85	0.42
1:X:2775:U:OP2	1:X:2776:U:H5	2.03	0.42
1:X:2863:U:H2'	1:X:2864:C:H6	1.84	0.42
1:X:59:G:O6	1:X:62:U:C2	2.72	0.42
1:X:75:C:H2'	1:X:76:C:H5''	2.02	0.42
1:X:75:C:C2'	1:X:76:C:H5''	2.49	0.42
2:Z:8:C:H2'	2:Z:9:G:C8	2.54	0.42
3:A:140:ALA:O	3:A:141:VAL:C	2.57	0.42
3:A:145:LEU:CG	3:A:146:GLU:H	2.32	0.42
3:A:91:ARG:HG3	3:A:198:ASN:OD1	2.19	0.42
5:C:45:THR:C	5:C:47:THR:N	2.72	0.42
5:C:55:GLY:C	5:C:56:ARG:HG2	2.40	0.42
6:D:142:THR:O	6:D:146:VAL:CG1	2.67	0.42
6:D:71:LYS:O	6:D:72:LYS:CB	2.65	0.42
7:E:132:ASP:OD1	7:E:134:SER:N	2.52	0.42
7:E:140:LEU:N	7:E:143:GLN:OE1	2.52	0.42
8:F:94:LYS:O	8:F:95:ALA:HB2	2.19	0.42
1:X:885:A:H2	12:J:30:PHE:HZ	1.68	0.42
15:M:50:PHE:CD2	15:M:51:GLU:N	2.87	0.42
15:M:72:SER:O	15:M:73:PHE:HB2	2.20	0.42
16:N:68:GLY:O	16:N:71:LEU:N	2.52	0.42
17:O:26:GLN:CG	17:O:27:GLY:N	2.83	0.42
18:P:27:VAL:HG23	18:P:125:THR:CG2	2.49	0.42
18:P:74:SER:O	18:P:74:SER:OG	2.34	0.42
20:R:22:VAL:CG1	20:R:23:ILE:N	2.83	0.42
20:R:25:LEU:HD13	20:R:79:SER:O	2.18	0.42
21:S:103:ARG:O	21:S:138:VAL:HG23	2.19	0.42
21:S:34:LEU:CD1	21:S:34:LEU:C	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2241:U:H5	22:T:17:ASN:ND2	2.17	0.42
22:T:42:GLY:O	22:T:57:HIS:CD2	2.73	0.42
23:U:37:ILE:O	23:U:38:THR:CG2	2.68	0.42
1:X:1040:A:C8	1:X:1041:G:C8	3.08	0.42
1:X:1313:U:HO2'	1:X:1314:A:P	2.42	0.42
1:X:140:G:N1	1:X:141:G:C5	2.88	0.42
1:X:1658:A:N7	1:X:1659:G:C4	2.88	0.42
1:X:1918:G:C6	1:X:1945:C:C5	3.08	0.42
1:X:1920:A:C5	1:X:1922:U:C5	3.08	0.42
1:X:201:G:C2	1:X:202:A:C5	3.08	0.42
1:X:2184:C:C4	1:X:2185:U:C4	3.07	0.42
1:X:2272:A:C6	1:X:2319:G:C6	3.07	0.42
1:X:2528:G:C2	1:X:2529:G:N7	2.87	0.42
1:X:2626:U:H6	1:X:2626:U:O5'	2.02	0.42
1:X:2734:U:H2'	1:X:2736:U:OP2	2.20	0.42
1:X:2724:G:N7	1:X:2735:C:H1'	2.35	0.42
1:X:2859:U:H5	1:X:2860:C:C4	2.37	0.42
1:X:318:G:N2	1:X:320:A:H3'	2.35	0.42
1:X:32:C:N4	1:X:33:C:N4	2.67	0.42
1:X:824:U:O2'	1:X:1264:C:C4'	2.67	0.42
2:Z:27:A:C2	2:Z:55:C:OP1	2.73	0.42
2:Z:30:C:H2'	2:Z:31:A:C5'	2.49	0.42
2:Z:48:A:C5	2:Z:49:C:C4	3.07	0.42
30:4:11:CYS:SG	30:4:27:CYS:SG	3.17	0.42
3:A:134:ARG:H	3:A:187:SER:HB2	1.83	0.42
1:X:797:A:C6	3:A:229:VAL:HG21	2.49	0.42
4:B:51:TYR:O	4:B:52:ALA:HB3	2.20	0.42
7:E:144:VAL:O	7:E:145:ALA:C	2.56	0.42
9:G:61:ARG:NH1	9:G:65:LYS:HE2	2.34	0.42
10:H:23:ARG:HH22	10:H:25:LEU:N	2.17	0.42
11:I:107:LYS:HA	11:I:124:ALA:O	2.19	0.42
11:I:9:THR:C	11:I:13:ARG:HH21	2.20	0.42
1:X:678:G:H4'	11:I:50:GLU:OE1	2.19	0.42
1:X:173:A:OP1	11:I:53:ARG:NH2	2.53	0.42
11:I:76:LYS:CB	11:I:79:GLN:HG2	2.45	0.42
11:I:88:PHE:HB3	11:I:90:ARG:HD3	1.95	0.42
16:N:48:ARG:O	16:N:52:ASN:HB2	2.20	0.42
19:Q:55:THR:CB	19:Q:78:ALA:HA	2.50	0.42
21:S:148:THR:O	21:S:149:ALA:C	2.58	0.42
21:S:113:VAL:CG1	21:S:171:VAL:HG22	2.49	0.42
21:S:74:ARG:HD3	21:S:75:LYS:HE3	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:U:54:ASN:OD1	23:U:55:GLY:N	2.52	0.42
1:X:102:C:H2'	1:X:103:U:O4'	2.20	0.42
1:X:1171:A:C4	1:X:1172:U:C5	3.08	0.42
1:X:1171:A:N3	17:O:6:GLN:HG2	2.35	0.42
1:X:1208:A:C2	1:X:1209:G:C4	3.08	0.42
1:X:1217:U:H6	1:X:1217:U:O5'	2.02	0.42
1:X:525:A:H2	1:X:1273:G:N3	2.18	0.42
1:X:1333:G:N2	1:X:1344:C:C4	2.86	0.42
1:X:1359:G:C6	1:X:1617:G:N1	2.88	0.42
1:X:1484:G:N2	1:X:1539:U:O2	2.52	0.42
1:X:1621:C:H2'	1:X:1622:G:C5'	2.49	0.42
1:X:162:C:H2'	1:X:163:A:H8	1.84	0.42
1:X:1713:G:C4	1:X:1714:A:C8	3.08	0.42
1:X:1926:U:C1'	1:X:1928:G:H5'	2.49	0.42
1:X:1919:A:C2	1:X:1928:G:C8	3.08	0.42
1:X:2090:U:H1'	1:X:2166:G:N2	2.35	0.42
1:X:2338:C:H2'	1:X:2339:A:H8	1.85	0.42
1:X:2401:A:C2	1:X:2403:C:N3	2.87	0.42
1:X:2484:G:C2'	1:X:2485:U:H5'	2.49	0.42
1:X:2642:G:H2'	1:X:2643:G:O5'	2.20	0.42
1:X:350:U:C6	1:X:350:U:O5'	2.65	0.42
1:X:444:U:O2'	1:X:445:A:H5'	2.19	0.42
1:X:521:U:H5''	1:X:522:G:OP2	2.20	0.42
1:X:534:U:H2'	1:X:535:U:C6	2.55	0.42
1:X:580:A:O2'	1:X:581:A:O5'	2.38	0.42
1:X:637:G:H8	1:X:637:G:O5'	2.03	0.42
1:X:776:G:C2	1:X:778:G:N3	2.88	0.42
26:Y:58:LEU:O	26:Y:59:ALA:C	2.58	0.42
2:Z:44:C:H1'	6:D:89:VAL:HG13	2.01	0.42
3:A:120:GLY:O	3:A:123:ALA:CB	2.68	0.42
3:A:67:PHE:CB	3:A:153:ALA:H	2.18	0.42
3:A:212:SER:O	3:A:213:ARG:C	2.59	0.42
3:A:72:LYS:O	3:A:73:SER:C	2.59	0.42
4:B:14:ILE:HG22	4:B:15:TRP:N	2.35	0.42
4:B:153:GLY:O	4:B:154:LYS:C	2.56	0.42
5:C:193:LEU:O	5:C:195:ILE:N	2.42	0.42
5:C:35:LEU:O	5:C:36:ALA:C	2.57	0.42
1:X:2507:U:P	7:E:172:LYS:HZ1	2.42	0.42
7:E:16:THR:HB	7:E:27:LYS:O	2.19	0.42
8:F:139:VAL:HG12	8:F:140:GLU:H	1.85	0.42
8:F:92:PRO:O	8:F:93:ASN:HB2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:119:LEU:C	9:G:121:LYS:N	2.72	0.42
9:G:34:PRO:HA	9:G:69:ASP:CG	2.40	0.42
9:G:65:LYS:HZ2	9:G:65:LYS:CB	2.33	0.42
10:H:81:ILE:HG12	10:H:82:LYS:N	2.34	0.42
12:J:36:ILE:HG12	12:J:103:VAL:HG22	2.02	0.42
13:K:73:LYS:O	13:K:74:ASP:C	2.56	0.42
14:L:101:LYS:O	14:L:104:ALA:HB3	2.19	0.42
14:L:32:TYR:HB3	14:L:39:TYR:CD1	2.55	0.42
1:X:2355:A:N1	14:L:91:ARG:NH2	2.67	0.42
15:M:57:ILE:HG22	15:M:66:PHE:CB	2.50	0.42
17:O:40:VAL:O	17:O:41:GLY:C	2.58	0.42
18:P:107:ILE:HA	18:P:108:PRO:HD2	1.73	0.42
18:P:48:LYS:O	18:P:92:VAL:HG23	2.20	0.42
19:Q:34:THR:O	19:Q:36:THR:N	2.53	0.42
20:R:17:LYS:O	20:R:18:LYS:C	2.58	0.42
20:R:23:ILE:HD13	20:R:23:ILE:N	2.22	0.42
20:R:24:VAL:HG11	20:R:29:HIS:CB	2.50	0.42
20:R:48:VAL:O	20:R:50:GLY:N	2.52	0.42
21:S:117:VAL:O	21:S:118:HIS:C	2.58	0.42
1:X:1056:U:C4'	1:X:1058:G:H1'	2.48	0.42
1:X:1087:C:H4'	8:F:94:LYS:CE	2.50	0.42
1:X:1271:C:H2'	1:X:1272:G:O5'	2.19	0.42
1:X:1355:A:H2'	1:X:1357:U:OP2	2.20	0.42
1:X:1359:G:C6	1:X:1617:G:C2	3.08	0.42
1:X:1375:C:C2	1:X:1376:C:C6	3.07	0.42
1:X:1397:A:H2'	1:X:1398:G:C5'	2.49	0.42
1:X:1622:G:H4'	1:X:1624:A:C2	2.55	0.42
1:X:15:G:C6	1:X:16:G:N7	2.88	0.42
1:X:1713:G:C6	1:X:1714:A:C6	3.08	0.42
1:X:2640:G:O2'	1:X:2641:A:H5'	2.20	0.42
1:X:2826:C:O2'	1:X:2827:G:H5'	2.20	0.42
1:X:200:A:C8	1:X:435:A:O4'	2.73	0.42
1:X:541:C:O2'	1:X:542:A:OP2	2.38	0.42
1:X:584:A:C2	1:X:585:U:C5	3.07	0.42
1:X:668:A:O2'	1:X:669:G:O4'	2.36	0.42
1:X:689:A:H2	1:X:690:A:C8	2.37	0.42
1:X:742:G:C5	3:A:208:LYS:HB3	2.54	0.42
1:X:937:C:O2'	1:X:938:G:H5'	2.19	0.42
1:X:945:G:C5	1:X:946:U:C5	3.07	0.42
2:Z:101:A:H8	2:Z:101:A:O5'	2.02	0.42
3:A:119:ALA:CB	3:A:130:ALA:HB3	2.40	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:183:ARG:HD3	3:A:184:ARG:H	1.84	0.42
1:X:1809:G:H5''	3:A:88:ARG:NH1	2.35	0.42
4:B:31:CYS:HA	4:B:32:PRO:HD3	1.69	0.42
4:B:64:GLN:C	4:B:66:HIS:N	2.73	0.42
5:C:124:ASP:OD2	5:C:136:TRP:CE3	2.69	0.42
5:C:6:VAL:HG12	5:C:7:ILE:HD13	2.02	0.42
6:D:16:LEU:HD13	6:D:29:PRO:HD2	2.02	0.42
6:D:67:ILE:HA	6:D:87:ILE:HA	2.02	0.42
7:E:137:ASP:HB3	7:E:140:LEU:CG	2.49	0.42
7:E:148:VAL:O	7:E:149:ARG:C	2.56	0.42
7:E:164:PHE:O	7:E:165:VAL:C	2.58	0.42
8:F:100:LEU:N	8:F:138:THR:OG1	2.51	0.42
8:F:139:VAL:HG12	8:F:140:GLU:N	2.33	0.42
10:H:55:VAL:CG1	10:H:55:VAL:O	2.54	0.42
11:I:80:LEU:C	11:I:84:GLU:HB3	2.40	0.42
14:L:33:ARG:CZ	14:L:103:LEU:CB	2.97	0.42
14:L:60:LYS:HG2	14:L:62:GLY:N	2.30	0.42
14:L:82:LYS:HB3	14:L:84:ILE:CG1	2.46	0.42
15:M:44:ARG:HH11	15:M:46:ARG:NH2	2.14	0.42
16:N:63:GLN:HA	16:N:66:ASN:HD21	1.85	0.42
20:R:51:VAL:HG21	20:R:76:LEU:CD1	2.50	0.42
20:R:53:VAL:O	20:R:72:ARG:O	2.37	0.42
22:T:3:HIS:CD2	22:T:5:LYS:N	2.88	0.42
22:T:3:HIS:ND1	22:T:3:HIS:N	2.68	0.42
23:U:10:LYS:CD	23:U:11:LYS:HB2	2.48	0.42
23:U:50:ALA:CB	23:U:52:ARG:NH1	2.74	0.42
24:V:17:GLU:OE2	24:V:17:GLU:CA	2.64	0.42
25:W:38:PRO:N	25:W:41:ARG:CZ	2.83	0.42
1:X:51:A:C2	1:X:155:G:N3	2.88	0.42
1:X:1443:G:C5	1:X:1584:G:C6	3.07	0.42
1:X:1675:C:H2'	1:X:1676:U:H6	1.85	0.42
1:X:1682:A:N6	1:X:1683:G:C5	2.87	0.42
1:X:1914:U:C6	1:X:1914:U:C4'	3.03	0.42
1:X:2055:G:C6	1:X:2417:U:N3	2.87	0.42
1:X:2190:A:C4'	1:X:2190:A:OP1	2.68	0.42
1:X:2266:A:C2	1:X:2325:A:N7	2.88	0.42
1:X:2387:U:O2'	1:X:2388:G:H5'	2.20	0.42
1:X:2476:A:H1'	1:X:2477:C:C5	2.28	0.42
1:X:2043:A:C2	1:X:2481:G:C6	3.08	0.42
1:X:2548:G:C2'	1:X:2549:G:H5'	2.50	0.42
1:X:2634:G:O2'	1:X:2635:U:OP2	2.31	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2670:C:N3	1:X:2671:C:C5	2.88	0.42
1:X:2727:G:H4'	7:E:71:LEU:CD2	2.50	0.42
1:X:2784:A:N6	1:X:2866:A:C8	2.87	0.42
1:X:441:A:N7	1:X:442:A:N7	2.68	0.42
1:X:459:A:C2	1:X:466:A:H8	2.30	0.42
1:X:540:G:O6	1:X:2006:G:P	2.78	0.42
1:X:67:G:C2	1:X:73:A:C8	3.07	0.42
1:X:841:G:O6	1:X:2226:A:H1'	2.20	0.42
1:X:91:A:H2'	1:X:92:U:C6	2.54	0.42
1:X:973:U:H4'	1:X:2475:C:O2'	2.20	0.42
18:P:59:PHE:CD1	26:Y:30:LEU:HD11	2.55	0.42
30:4:17:VAL:HG23	30:4:26:ILE:HG12	2.02	0.41
3:A:145:LEU:CG	3:A:146:GLU:N	2.83	0.41
4:B:181:LEU:HA	4:B:181:LEU:HD23	1.68	0.41
5:C:72:ARG:HG3	5:C:77:PHE:HE2	1.84	0.41
6:D:108:LEU:HB2	6:D:109:PRO:HD3	2.02	0.41
6:D:136:LEU:O	6:D:137:ILE:HG23	2.20	0.41
6:D:152:MET:O	6:D:153:ASP:HB2	2.20	0.41
6:D:53:ALA:HB1	6:D:57:LEU:CG	2.50	0.41
8:F:103:ASP:HB3	8:F:106:LEU:HD12	2.01	0.41
8:F:116:LEU:CD1	8:F:124:ALA:HA	2.50	0.41
1:X:1148:G:O2'	9:G:130:ALA:O	2.37	0.41
11:I:89:ASP:CB	11:I:120:VAL:HA	2.50	0.41
1:X:609:U:H5'	11:I:18:ARG:HD3	2.01	0.41
13:K:48:VAL:O	13:K:50:GLN:N	2.53	0.41
14:L:102:ALA:O	14:L:104:ALA:N	2.53	0.41
14:L:32:TYR:O	14:L:32:TYR:CG	2.73	0.41
14:L:26:ARG:NH1	14:L:88:VAL:HG22	2.35	0.41
15:M:101:ARG:HB3	15:M:101:ARG:HE	1.09	0.41
17:O:70:TYR:CD2	17:O:83:ARG:NH1	2.88	0.41
19:Q:16:ALA:HA	19:Q:19:ALA:HB3	2.02	0.41
20:R:51:VAL:HG12	20:R:52:ASN:N	2.34	0.41
20:R:64:ASN:C	20:R:66:GLN:N	2.73	0.41
20:R:81:VAL:O	20:R:83:LEU:N	2.53	0.41
21:S:168:VAL:C	21:S:169:VAL:HG22	2.39	0.41
22:T:55:ARG:NH1	22:T:55:ARG:HG2	2.34	0.41
1:X:1071:U:C5'	1:X:1072:U:OP1	2.64	0.41
1:X:1158:A:H2'	1:X:1159:U:H6	1.84	0.41
1:X:1235:C:H2'	1:X:1236:G:O4'	2.20	0.41
1:X:1372:A:C5	1:X:1373:G:C8	3.08	0.41
1:X:1385:C:N3	1:X:1386:A:C8	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1399:C:O2'	1:X:1400:A:H5'	2.20	0.41
1:X:1423:A:H2'	1:X:1424:U:H6	1.84	0.41
1:X:1617:G:N7	1:X:1618:U:C4	2.88	0.41
1:X:1969:G:C2	1:X:1970:G:C8	3.08	0.41
1:X:2438:A:N6	1:X:2473:G:C6	2.88	0.41
1:X:2628:C:H6	1:X:2628:C:O5'	2.02	0.41
1:X:2839:G:C6	1:X:2840:U:O4	2.73	0.41
1:X:2847:G:H4'	13:K:8:ARG:HH21	1.84	0.41
1:X:314:G:C6	1:X:326:A:C2	3.08	0.41
1:X:348:U:O3'	20:R:13:LYS:NZ	2.52	0.41
1:X:349:G:P	20:R:13:LYS:NZ	2.93	0.41
1:X:404:A:H2'	1:X:405:C:O4'	2.20	0.41
1:X:454:G:N2	1:X:456:C:C2	2.88	0.41
1:X:536:A:N6	1:X:2605:C:C4'	2.83	0.41
1:X:605:G:C2	1:X:606:A:C5	3.08	0.41
1:X:757:U:C2'	1:X:758:G:H5'	2.50	0.41
1:X:964:A:C2'	1:X:965:G:H5'	2.50	0.41
1:X:978:U:H2'	1:X:979:A:H8	1.82	0.41
4:B:107:THR:CG2	4:B:163:GLU:O	2.68	0.41
5:C:145:THR:HG22	5:C:146:GLU:OE2	2.20	0.41
5:C:35:LEU:O	5:C:38:ARG:HB2	2.21	0.41
6:D:10:ASP:C	6:D:14:PRO:HD2	2.40	0.41
6:D:61:THR:HA	6:D:99:PHE:CD1	2.54	0.41
6:D:67:ILE:HG23	6:D:87:ILE:HG12	2.02	0.41
7:E:33:LEU:HD23	7:E:35:VAL:HG22	2.02	0.41
7:E:76:VAL:C	7:E:78:GLY:N	2.72	0.41
8:F:85:ILE:HG22	8:F:87:LYS:H	1.84	0.41
9:G:108:GLY:O	9:G:110:LEU:CD2	2.68	0.41
9:G:158:HIS:HA	9:G:161:GLN:CD	2.41	0.41
14:L:63:ASN:HA	14:L:66:ASP:OD2	2.20	0.41
14:L:68:ALA:O	14:L:69:ALA:C	2.59	0.41
10:H:116:ARG:NE	15:M:38:LYS:HD2	2.34	0.41
15:M:99:VAL:O	15:M:100:ARG:CG	2.65	0.41
16:N:79:PHE:O	16:N:80:ILE:C	2.57	0.41
17:O:39:PHE:CE2	17:O:51:ALA:HB1	2.55	0.41
19:Q:40:ASP:O	19:Q:41:ALA:C	2.58	0.41
21:S:140:LYS:HG3	21:S:141:MET:H	1.85	0.41
22:T:50:GLY:O	22:T:62:LEU:CD2	2.68	0.41
24:V:42:ARG:HD2	24:V:45:GLN:OE1	2.21	0.41
25:W:16:GLN:OE1	25:W:49:HIS:NE2	2.52	0.41
1:X:1166:A:O2'	1:X:1167:A:H5''	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:118:U:O2'	1:X:119:G:P	2.79	0.41
1:X:1231:A:C5	1:X:1232:U:C4	3.09	0.41
1:X:1476:G:C5	1:X:1477:C:C4	3.08	0.41
1:X:1484:G:H1	1:X:1539:U:H3	1.68	0.41
1:X:1699:A:C8	1:X:1748:U:C4	3.07	0.41
1:X:1874:G:C6	1:X:1875:C:N3	2.88	0.41
1:X:2056:C:C3'	1:X:2057:U:H5''	2.47	0.41
1:X:2085:G:O2'	1:X:2086:U:H5'	2.20	0.41
1:X:2264:C:C5'	1:X:2267:A:N6	2.79	0.41
1:X:234:C:H2'	1:X:235:C:C5'	2.50	0.41
1:X:239:A:C8	1:X:240:U:C5	3.08	0.41
1:X:2452:U:C5	1:X:2453:C:C4	3.08	0.41
1:X:2540:A:C2'	1:X:2541:U:O5'	2.68	0.41
1:X:2691:C:O2'	1:X:2692:A:P	2.78	0.41
1:X:2757:G:H1'	1:X:2759:U:H5	1.84	0.41
1:X:2759:U:C5'	1:X:2760:G:OP1	2.58	0.41
1:X:2777:A:N3	1:X:2777:A:H2'	2.35	0.41
1:X:32:C:C4	1:X:33:C:N4	2.88	0.41
1:X:463:C:C2	1:X:465:C:C5	3.08	0.41
1:X:501:G:H2'	1:X:502:A:C8	2.53	0.41
1:X:556:A:OP2	1:X:556:A:C8	2.72	0.41
1:X:647:G:C5	11:I:109:LEU:HD11	2.55	0.41
1:X:668:A:OP2	1:X:668:A:H4'	2.19	0.41
1:X:670:U:H2'	1:X:671:A:H8	1.81	0.41
1:X:683:A:O2'	1:X:684:C:OP2	2.38	0.41
1:X:873:U:H3	1:X:929:A:H62	1.64	0.41
1:X:992:A:C6	1:X:2011:U:H4'	2.55	0.41
3:A:163:VAL:O	3:A:163:VAL:HG13	2.19	0.41
3:A:62:TYR:CE1	3:A:88:ARG:NH2	2.72	0.41
5:C:176:ASN:ND2	5:C:178:TYR:N	2.68	0.41
5:C:147:LYS:C	5:C:183:HIS:HB3	2.40	0.41
6:D:31:ILE:HG22	6:D:96:MET:SD	2.61	0.41
6:D:34:ILE:HG22	6:D:91:LEU:CD1	2.48	0.41
9:G:62:ILE:CG2	9:G:62:ILE:O	2.68	0.41
11:I:105:PRO:C	11:I:106:VAL:CG2	2.88	0.41
13:K:65:LEU:HA	13:K:65:LEU:HD23	1.70	0.41
13:K:90:ARG:HA	13:K:91:PRO:HD3	1.72	0.41
14:L:38:ILE:HD12	14:L:39:TYR:N	2.34	0.41
15:M:58:ASN:OD1	15:M:58:ASN:N	2.53	0.41
15:M:6:LYS:O	15:M:7:ILE:HG12	2.20	0.41
16:N:43:ALA:C	16:N:45:TYR:N	2.71	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:O:13:ARG:HB3	17:O:16:GLU:CD	2.40	0.41
17:O:23:GLU:CG	17:O:91:THR:CG2	2.92	0.41
18:P:28:ALA:O	18:P:31:VAL:HG23	2.21	0.41
1:X:2331:A:N1	22:T:33:ALA:O	2.53	0.41
23:U:34:THR:HG22	23:U:35:THR:N	2.35	0.41
23:U:51:ILE:C	23:U:52:ARG:HH21	2.22	0.41
24:V:31:GLN:O	24:V:35:GLY:N	2.53	0.41
24:V:3:PRO:HB2	24:V:4:SER:H	1.53	0.41
25:W:12:ARG:HA	25:W:13:PRO:HD3	1.80	0.41
1:X:1088:A:C2'	1:X:1089:C:H5'	2.50	0.41
1:X:1330:G:C4	1:X:1331:G:C8	3.07	0.41
1:X:1505:U:H3'	1:X:1505:U:C6	2.55	0.41
1:X:1517:C:H2'	1:X:1518:C:C6	2.50	0.41
1:X:1533:G:C6	1:X:1534:A:N7	2.88	0.41
1:X:1811:A:H4'	1:X:1812:U:C5'	2.50	0.41
1:X:1820:G:O2'	1:X:1821:A:C5'	2.68	0.41
1:X:1851:A:N6	1:X:1867:A:N3	2.68	0.41
1:X:2037:A:N1	1:X:2595:C:C4	2.88	0.41
1:X:2174:G:C6	1:X:2175:A:C5	3.09	0.41
1:X:219:G:H2'	1:X:220:U:OP2	2.20	0.41
1:X:2403:C:H2'	1:X:2408:G:O2'	2.21	0.41
1:X:2055:G:C2	1:X:2417:U:O2	2.73	0.41
1:X:2526:U:C5	1:X:2545:A:C5	3.07	0.41
1:X:2557:G:N7	4:B:140:SER:CB	2.83	0.41
1:X:2644:A:C2'	1:X:2645:C:H5'	2.49	0.41
1:X:2705:A:O2'	1:X:2706:U:P	2.78	0.41
1:X:2720:A:N7	1:X:2744:A:N7	2.68	0.41
1:X:320:A:C2'	1:X:340:G:H2'	2.50	0.41
1:X:601:A:H3'	1:X:602:C:C5'	2.51	0.41
1:X:677:G:H2'	1:X:678:G:H5'	2.02	0.41
1:X:691:C:N3	1:X:692:C:C5	2.88	0.41
1:X:741:G:H4'	1:X:742:G:OP2	2.19	0.41
1:X:867:G:C6	1:X:868:U:N3	2.88	0.41
1:X:873:U:H2'	1:X:874:A:H8	1.86	0.41
2:Z:41:A:O5'	2:Z:41:A:H8	2.04	0.41
2:Z:44:C:H2'	2:Z:45:C:O4'	2.20	0.41
3:A:126:LYS:HE2	3:A:126:LYS:HB3	1.93	0.41
3:A:46:ARG:O	3:A:46:ARG:CD	2.68	0.41
1:X:2658:A:H5'	4:B:165:VAL:HG21	2.02	0.41
5:C:154:ASP:HB2	5:C:157:THR:CG2	2.50	0.41
5:C:185:ARG:NH2	5:C:185:ARG:HG2	2.30	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:119:PRO:HG2	6:D:120:ASN:N	2.28	0.41
10:H:89:ILE:HG22	10:H:90:ARG:N	2.35	0.41
1:X:969:U:N1	12:J:17:ARG:HD2	2.34	0.41
12:J:46:ASN:O	12:J:50:ALA:N	2.53	0.41
12:J:95:VAL:HG23	12:J:96:SER:N	2.35	0.41
13:K:57:GLY:C	13:K:59:ASP:H	2.20	0.41
15:M:104:LEU:C	15:M:106:TYR:N	2.73	0.41
4:B:183:LEU:HD21	15:M:16:ILE:HD13	2.02	0.41
16:N:117:ARG:HG3	16:N:117:ARG:HH21	1.84	0.41
18:P:44:VAL:O	18:P:48:LYS:HD3	2.20	0.41
18:P:45:ILE:HG13	18:P:53:ALA:CB	2.49	0.41
19:Q:40:ASP:OD1	19:Q:44:GLN:CD	2.58	0.41
19:Q:42:ILE:O	19:Q:46:PHE:HD1	2.04	0.41
19:Q:89:GLU:HB3	19:Q:90:ALA:H	1.63	0.41
20:R:60:PRO:O	20:R:65:PRO:HA	2.19	0.41
1:X:2237:C:H5'	22:T:14:ARG:CD	2.50	0.41
23:U:21:ARG:CA	23:U:39:LYS:HD2	2.50	0.41
25:W:12:ARG:CG	25:W:12:ARG:NH1	2.78	0.41
25:W:27:LYS:O	25:W:30:ASP:HB2	2.19	0.41
1:X:1022:A:C6	1:X:1162:A:C6	3.08	0.41
1:X:1091:C:O2	8:F:127:THR:HA	2.21	0.41
1:X:1049:C:C2	1:X:1129:A:C2	3.07	0.41
1:X:1355:A:C2'	1:X:1357:U:OP2	2.67	0.41
1:X:1546:C:H2'	1:X:1547:U:H6	1.86	0.41
1:X:1686:A:H5''	1:X:2529:G:OP1	2.19	0.41
1:X:15:G:C5	1:X:16:G:N7	2.89	0.41
1:X:1838:G:C2	1:X:1878:C:N3	2.88	0.41
1:X:1940:C:O2'	1:X:1941:C:H5'	2.21	0.41
1:X:1918:G:C4	1:X:1945:C:C4	3.09	0.41
1:X:2035:G:HO2'	1:X:2036:G:H5'	1.82	0.41
1:X:2245:A:N3	1:X:2251:U:C5	2.89	0.41
1:X:2306:A:C5	1:X:2367:A:N1	2.88	0.41
1:X:2343:C:O2'	1:X:2344:G:H5'	2.20	0.41
1:X:2517:C:H2'	1:X:2518:C:H6	1.84	0.41
1:X:2602:G:H4'	1:X:2800:C:O2	2.20	0.41
1:X:2632:U:H2'	1:X:2633:A:C8	2.55	0.41
1:X:357:A:C5	1:X:358:C:H1'	2.55	0.41
1:X:441:A:C8	1:X:442:A:N7	2.88	0.41
1:X:521:U:O4	1:X:522:G:N2	2.52	0.41
1:X:594:G:H2'	1:X:595:A:N7	2.34	0.41
1:X:679:C:H2'	1:X:680:U:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:720:A:C5	1:X:721:C:C4	3.09	0.41
1:X:779:U:O2'	1:X:780:U:C5'	2.65	0.41
1:X:579:G:C5'	1:X:994:A:C2	3.02	0.41
4:B:24:THR:CG2	4:B:188:ILE:CD1	2.97	0.41
4:B:6:GLY:CA	4:B:27:LEU:O	2.68	0.41
4:B:7:THR:HG23	4:B:194:GLY:O	2.21	0.41
5:C:128:ALA:O	5:C:160:ALA:HB2	2.21	0.41
6:D:53:ALA:HB1	6:D:57:LEU:HD11	2.02	0.41
7:E:102:ALA:HB1	7:E:115:ILE:C	2.40	0.41
8:F:112:LYS:HB3	8:F:113:MET:H	1.69	0.41
9:G:100:TYR:OH	9:G:129:HIS:CE1	2.74	0.41
1:X:1018:C:O4'	9:G:134:MET:O	2.38	0.41
1:X:1023:U:H3	9:G:53:ARG:HH21	1.67	0.41
9:G:65:LYS:HB3	9:G:65:LYS:NZ	2.36	0.41
11:I:122:VAL:HG22	11:I:140:VAL:CG1	2.51	0.41
11:I:54:SER:C	11:I:56:LEU:H	2.24	0.41
12:J:119:PHE:CD1	12:J:132:MET:SD	3.14	0.41
1:X:1300:A:N7	13:K:105:GLY:HA3	2.35	0.41
13:K:37:THR:N	13:K:110:MET:HE3	2.35	0.41
17:O:36:LYS:O	17:O:51:ALA:HB1	2.19	0.41
19:Q:24:VAL:CG1	19:Q:25:TYR:N	2.84	0.41
21:S:44:ARG:CB	21:S:45:GLN:NE2	2.81	0.41
21:S:75:LYS:H	21:S:75:LYS:HE3	1.85	0.41
24:V:29:ARG:C	24:V:32:ALA:HB3	2.40	0.41
24:V:48:ARG:O	24:V:48:ARG:HG2	2.17	0.41
24:V:17:GLU:HB3	24:V:53:LEU:HD11	2.02	0.41
1:X:1111:C:H2'	1:X:1112:U:C6	2.56	0.41
1:X:1028:G:C6	1:X:1157:G:C6	3.08	0.41
1:X:1174:G:N2	1:X:1175:A:C4	2.88	0.41
1:X:1249:G:O2'	1:X:1250:A:P	2.78	0.41
1:X:1467:U:N3	1:X:1473:U:O2	2.54	0.41
1:X:1482:U:H2'	1:X:1483:G:C8	2.55	0.41
1:X:1504:G:N3	1:X:1505:U:O2	2.53	0.41
1:X:1554:G:C2	1:X:1555:A:C4	3.08	0.41
1:X:181:A:C4	1:X:183:U:O4	2.74	0.41
1:X:1930:C:C2	1:X:1931:G:C8	3.08	0.41
1:X:197:G:H1	1:X:440:U:H3'	1.85	0.41
1:X:1996:A:H2'	1:X:1997:A:C5'	2.46	0.41
1:X:2036:G:H2'	1:X:2037:A:H5'	2.02	0.41
1:X:2270:U:HO2'	1:X:2271:C:H5'	1.86	0.41
1:X:246:C:C4	1:X:437:G:C6	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2683:C:C5	1:X:2684:A:N7	2.88	0.41
1:X:2621:G:N2	1:X:2753:C:C2	2.89	0.41
1:X:2775:U:H5'	1:X:2776:U:H5'	2.01	0.41
1:X:312:G:O2'	1:X:313:U:O5'	2.37	0.41
1:X:347:C:N3	1:X:348:U:C4	2.89	0.41
1:X:464:G:C6	1:X:465:C:N4	2.89	0.41
1:X:489:A:N6	1:X:491:A:C6	2.88	0.41
2:Z:100:G:H2'	2:Z:101:A:O4'	2.19	0.41
2:Z:3:A:C6	2:Z:4:C:C4	3.08	0.41
2:Z:25:G:C6	2:Z:63:A:N1	2.88	0.41
1:X:742:G:C2	3:A:208:LYS:HD3	2.54	0.41
3:A:211:ARG:HA	3:A:214:TRP:CG	2.54	0.41
3:A:79:VAL:CG2	3:A:95:LEU:HD21	2.50	0.41
1:X:2033:C:H1'	4:B:156:MET:HE1	2.01	0.41
4:B:201:ALA:O	4:B:203:LYS:N	2.54	0.41
4:B:68:ALA:C	4:B:70:ALA:N	2.72	0.41
5:C:82:VAL:HG11	5:C:85:GLY:HA3	2.02	0.41
6:D:124:GLY:O	6:D:125:ARG:HD3	2.20	0.41
7:E:120:GLY:O	7:E:121:VAL:HG23	2.21	0.41
7:E:139:GLN:O	7:E:141:VAL:N	2.54	0.41
7:E:54:ARG:HE	7:E:62:ARG:HG2	1.86	0.41
8:F:112:LYS:O	8:F:113:MET:CB	2.68	0.41
9:G:69:ASP:O	16:N:64:ARG:CZ	2.68	0.41
10:H:53:ALA:O	10:H:70:VAL:N	2.37	0.41
10:H:9:ASP:H	10:H:95:ALA:HA	1.85	0.41
12:J:64:LYS:CD	12:J:64:LYS:H	2.26	0.41
13:K:66:VAL:O	13:K:67:ALA:C	2.59	0.41
14:L:41:GLN:CD	14:L:50:THR:HG21	2.40	0.41
14:L:98:GLY:O	14:L:101:LYS:N	2.54	0.41
15:M:46:ARG:CG	15:M:47:SER:N	2.83	0.41
15:M:6:LYS:O	15:M:7:ILE:HD13	2.21	0.41
16:N:54:LYS:O	16:N:55:ARG:C	2.57	0.41
16:N:60:LEU:O	16:N:63:GLN:HB2	2.21	0.41
19:Q:34:THR:OG1	19:Q:37:GLU:N	2.47	0.41
19:Q:57:ASN:C	19:Q:58:VAL:CG2	2.88	0.41
19:Q:60:GLY:H	19:Q:72:ARG:HD3	1.85	0.41
20:R:58:VAL:CA	20:R:60:PRO:HD3	2.51	0.41
20:R:60:PRO:O	20:R:62:MET:N	2.53	0.41
20:R:93:ARG:NH2	20:R:109:ALA:CA	2.84	0.41
23:U:11:LYS:C	23:U:12:ASN:CG	2.79	0.41
1:X:1137:A:H4'	1:X:1138:A:C5'	2.48	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1285:A:O2'	1:X:1286:U:OP1	2.36	0.41
1:X:1355:A:C5	1:X:1358:C:N4	2.88	0.41
1:X:1625:A:C6	1:X:1632:A:C2	3.09	0.41
1:X:1646:G:C5	1:X:1647:U:C4	3.08	0.41
1:X:2035:G:C2	1:X:2036:G:N9	2.88	0.41
1:X:2298:U:O2'	1:X:2299:A:O4'	2.38	0.41
1:X:2404:A:O2'	1:X:2405:A:P	2.79	0.41
1:X:2561:G:N2	1:X:2562:G:H1'	2.35	0.41
1:X:2636:A:C8	1:X:2637:C:C5	3.08	0.41
1:X:529:U:H2'	1:X:530:G:C8	2.53	0.41
1:X:540:G:O6	1:X:2006:G:OP1	2.38	0.41
1:X:759:C:C3'	1:X:759:C:C6	3.04	0.41
1:X:958:G:C4	1:X:959:C:C5	3.09	0.41
1:X:988:G:H2'	1:X:988:G:N3	2.35	0.41
1:X:98:U:O5'	1:X:98:U:C6	2.73	0.41
30:4:1:MET:CE	30:4:35:ARG:HB2	2.50	0.41
3:A:160:GLY:HA2	3:A:196:VAL:CB	2.50	0.41
3:A:210:GLY:HA2	3:A:213:ARG:CG	2.47	0.41
3:A:212:SER:O	3:A:214:TRP:N	2.53	0.41
3:A:79:VAL:HG22	3:A:95:LEU:HD21	2.03	0.41
4:B:123:ALA:C	4:B:124:GLY:O	2.56	0.41
6:D:108:LEU:HA	6:D:111:ILE:CD1	2.50	0.41
6:D:136:LEU:N	6:D:141:ILE:HG21	2.35	0.41
6:D:4:LEU:HD12	6:D:5:LYS:N	2.35	0.41
7:E:45:GLN:CD	7:E:47:GLY:O	2.59	0.41
7:E:54:ARG:NE	7:E:57:ASP:OD2	2.54	0.41
7:E:30:LYS:HE3	7:E:79:VAL:O	2.20	0.41
8:F:77:TYR:O	8:F:81:LYS:HB2	2.21	0.41
9:G:105:GLY:O	9:G:110:LEU:CD1	2.68	0.41
9:G:158:HIS:HA	9:G:161:GLN:NE2	2.36	0.41
9:G:71:THR:HA	9:G:72:PRO:HD3	1.82	0.41
10:H:101:ASN:C	10:H:102:GLN:HE21	2.24	0.41
1:X:1218:C:H1'	11:I:8:PRO:O	2.20	0.41
12:J:47:GLN:HE22	12:J:127:PRO:CG	2.34	0.41
12:J:62:GLY:HA3	12:J:64:LYS:NZ	2.36	0.41
1:X:970:A:N6	12:J:83:ARG:HH21	2.17	0.41
14:L:45:ASP:N	14:L:45:ASP:OD1	2.54	0.41
15:M:38:LYS:C	15:M:40:ARG:H	2.23	0.41
15:M:39:VAL:CG1	15:M:45:THR:HG23	2.50	0.41
15:M:89:ASN:ND2	15:M:90:GLN:CD	2.73	0.41
15:M:99:VAL:HG22	15:M:101:ARG:HG2	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:N:112:ALA:O	16:N:113:SER:C	2.59	0.41
9:G:71:THR:CA	16:N:64:ARG:HH11	2.34	0.41
18:P:36:ARG:HH22	26:Y:20:ARG:HH21	1.68	0.41
19:Q:40:ASP:HA	19:Q:43:GLN:HE21	1.85	0.41
19:Q:53:ILE:C	19:Q:54:SER:OG	2.59	0.41
21:S:30:VAL:HG12	21:S:31:SER:H	1.82	0.41
21:S:87:THR:O	21:S:88:TYR:CB	2.69	0.41
22:T:70:ILE:HD12	22:T:78:PHE:HB3	2.03	0.41
1:X:1004:A:C4	1:X:1005:U:C5	3.08	0.41
1:X:1014:G:C6	1:X:1015:U:C4	3.09	0.41
1:X:103:U:O5'	1:X:103:U:H6	2.03	0.41
1:X:1134:C:N3	1:X:1135:C:C5	2.89	0.41
1:X:116:A:C8	1:X:116:A:H3'	2.56	0.41
1:X:1273:G:H2'	1:X:1274:C:C6	2.55	0.41
1:X:1366:A:N1	1:X:1367:A:C2	2.89	0.41
1:X:1528:C:H5'	1:X:1529:C:OP2	2.21	0.41
1:X:1596:A:N6	1:X:1597:A:C6	2.89	0.41
1:X:1634:A:O2'	1:X:1635:G:OP1	2.27	0.41
1:X:1672:A:H3'	1:X:1673:C:H6	1.84	0.41
1:X:1790:G:HO2'	1:X:1791:C:P	2.42	0.41
1:X:2015:G:H2'	4:B:145:LYS:HE2	2.03	0.41
1:X:2072:C:C2	1:X:2073:A:C8	3.09	0.41
1:X:2074:U:H1'	23:U:48:LYS:CE	2.49	0.41
1:X:2077:G:N1	1:X:2179:C:C2	2.89	0.41
1:X:2222:U:H2'	1:X:2223:U:C5	2.48	0.41
1:X:2519:C:C4	1:X:2520:A:C5	3.09	0.41
1:X:2665:G:H2'	1:X:2666:U:O4'	2.20	0.41
1:X:2725:C:H2'	1:X:2726:U:C6	2.56	0.41
1:X:2826:C:C2'	1:X:2827:G:H5'	2.50	0.41
1:X:2821:G:C6	1:X:2846:G:C2	3.09	0.41
1:X:344:G:C2	1:X:345:U:C6	3.08	0.41
1:X:54:G:C2	1:X:55:A:C8	3.09	0.41
1:X:592:G:OP2	16:N:10:ARG:NH1	2.54	0.41
1:X:825:C:H1'	1:X:1263:G:C2	2.56	0.41
2:Z:30:C:C2'	2:Z:31:A:H5'	2.49	0.41
30:4:3:VAL:HG13	30:4:37:GLY:H	1.85	0.41
3:A:141:VAL:HG23	3:A:194:GLY:HA2	2.03	0.41
3:A:147:LEU:HD23	3:A:147:LEU:HA	1.72	0.41
3:A:218:LYS:N	3:A:219:PRO:CD	2.84	0.41
5:C:101:GLN:HB2	5:C:102:LEU:H	1.76	0.41
6:D:22:TYR:O	6:D:24:SER:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:53:ALA:O	6:D:54:ALA:C	2.59	0.41
6:D:92:ARG:HG3	6:D:92:ARG:HH21	1.85	0.41
7:E:24:PHE:CB	7:E:35:VAL:O	2.61	0.41
8:F:91:THR:O	8:F:91:THR:OG1	2.27	0.41
8:F:92:PRO:C	8:F:93:ASN:OD1	2.59	0.41
9:G:156:HIS:C	9:G:158:HIS:H	2.24	0.41
9:G:168:THR:C	9:G:169:GLN:O	2.57	0.41
9:G:169:GLN:CB	9:G:170:PRO:CD	2.96	0.41
9:G:36:ASN:OD1	9:G:37:ASP:N	2.54	0.41
9:G:65:LYS:HB2	9:G:65:LYS:HZ2	1.85	0.41
9:G:64:GLY:HA3	9:G:67:ARG:HE	1.86	0.41
11:I:73:GLU:CG	11:I:105:PRO:O	2.68	0.41
12:J:75:VAL:HG23	12:J:93:TYR:O	2.20	0.41
12:J:42:TRP:HE3	12:J:95:VAL:HG11	1.85	0.41
13:K:66:VAL:O	13:K:69:ASP:N	2.33	0.41
14:L:103:LEU:HD23	14:L:103:LEU:O	2.21	0.41
14:L:15:ARG:HD3	14:L:15:ARG:HA	1.92	0.41
15:M:22:ARG:HH11	15:M:24:LEU:HD23	1.85	0.41
17:O:36:LYS:CE	17:O:56:VAL:N	2.84	0.41
17:O:57:GLN:O	17:O:96:LEU:C	2.59	0.41
18:P:28:ALA:N	18:P:124:ILE:O	2.54	0.41
19:Q:47:GLY:O	19:Q:48:VAL:CB	2.68	0.41
20:R:93:ARG:NH1	20:R:108:VAL:CG2	2.77	0.41
21:S:103:ARG:HH11	21:S:108:VAL:HG22	1.84	0.41
21:S:26:LYS:HB2	21:S:26:LYS:HE3	1.85	0.41
21:S:6:LYS:HB2	21:S:31:SER:C	2.41	0.41
22:T:19:LYS:O	22:T:20:TYR:CB	2.68	0.41
1:X:2344:G:P	22:T:55:ARG:H	2.40	0.41
1:X:1011:A:N6	1:X:1166:A:C8	2.89	0.41
1:X:1035:G:P	1:X:1036:G:O3'	2.79	0.41
1:X:1063:C:H2'	1:X:1064:C:H5	1.82	0.41
1:X:1265:G:H1	16:N:37:GLN:NE2	2.18	0.41
1:X:1271:C:O2'	1:X:1272:G:H5'	2.21	0.41
1:X:1401:G:O2'	1:X:1402:G:H5'	2.20	0.41
1:X:1546:C:H2'	1:X:1547:U:C6	2.56	0.41
1:X:1782:A:H61	1:X:1820:G:C2'	2.34	0.41
1:X:1850:G:C6	1:X:1867:A:C4	3.09	0.41
1:X:2035:G:N2	1:X:2036:G:C1'	2.83	0.41
1:X:2306:A:C5	1:X:2367:A:C2	3.09	0.41
1:X:2329:C:O2'	1:X:2330:G:H5'	2.20	0.41
1:X:2483:U:C6	1:X:2483:U:O5'	2.71	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2634:G:HO2'	1:X:2643:G:H1	1.69	0.41
1:X:2661:G:C2	1:X:2662:C:N1	2.88	0.41
1:X:393:U:HO2'	1:X:394:U:H5'	1.84	0.41
1:X:200:A:C5	1:X:435:A:C8	3.09	0.41
1:X:459:A:C4	1:X:484:G:C8	3.09	0.41
1:X:544:U:H2'	1:X:545:C:C6	2.56	0.41
1:X:579:G:H2'	1:X:2013:A:C6	2.56	0.41
1:X:632:A:C2'	1:X:633:G:H5'	2.44	0.41
1:X:765:C:HO2'	1:X:766:A:P	2.40	0.41
1:X:776:G:C8	1:X:776:G:H3'	2.56	0.41
1:X:785:U:H2'	1:X:786:U:H6	1.85	0.41
1:X:814:G:O6	5:C:48:ARG:HA	2.21	0.41
1:X:982:C:C4	1:X:983:G:C5	3.08	0.41
2:Z:25:G:C6	2:Z:63:A:C6	3.09	0.41
2:Z:75:A:N6	2:Z:76:U:C2	2.88	0.41
1:X:1043:A:C5'	30:4:9:LYS:HZ1	2.27	0.41
3:A:53:PHE:O	3:A:54:ILE:O	2.39	0.41
5:C:17:LEU:HD13	5:C:17:LEU:HA	1.94	0.41
5:C:29:GLU:O	5:C:32:THR:HB	2.21	0.41
7:E:164:PHE:O	7:E:167:GLU:HB2	2.21	0.41
7:E:24:PHE:O	7:E:35:VAL:O	2.38	0.41
9:G:154:GLU:CD	9:G:155:THR:H	2.24	0.41
10:H:1:MET:HG2	10:H:79:HIS:ND1	2.35	0.41
10:H:9:ASP:HB2	10:H:95:ALA:HB1	1.98	0.41
11:I:78:SER:N	11:I:112:GLY:HA3	2.35	0.41
12:J:59:PHE:HE2	12:J:114:GLN:O	2.03	0.41
12:J:36:ILE:CG2	12:J:101:GLY:O	2.68	0.41
13:K:45:ARG:CB	13:K:46:PRO:CD	2.99	0.41
15:M:39:VAL:HG12	15:M:45:THR:HG23	2.02	0.41
10:H:89:ILE:HG12	15:M:79:ARG:CD	2.50	0.41
15:M:82:PRO:O	15:M:84:ALA:N	2.54	0.41
18:P:42:VAL:C	18:P:43:ASP:OD2	2.60	0.41
19:Q:29:VAL:HG11	19:Q:78:ALA:HB2	2.03	0.41
23:U:28:GLY:CA	23:U:32:ARG:HE	2.34	0.41
23:U:20:ARG:CD	23:U:43:ARG:NH2	2.78	0.41
24:V:16:LYS:HG2	24:V:17:GLU:N	2.36	0.41
24:V:30:PHE:O	24:V:31:GLN:C	2.57	0.41
1:X:1391:A:N7	1:X:1393:G:C6	2.89	0.41
1:X:1443:G:OP2	1:X:1443:G:H3'	2.21	0.41
1:X:1461:C:C2	1:X:1462:C:C5	3.09	0.41
1:X:1513:U:P	1:X:1513:U:H3'	2.61	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1693:A:C2	1:X:1694:A:N3	2.89	0.41
1:X:701:U:C5'	1:X:1771:A:C2	3.04	0.41
1:X:205:A:N3	1:X:207:U:H1'	2.35	0.41
1:X:2089:C:C4	1:X:2090:U:C5	3.09	0.41
1:X:209:G:C3'	1:X:209:G:C8	3.04	0.41
1:X:228:A:H2'	1:X:229:G:H5'	2.03	0.41
1:X:2241:U:H4'	1:X:2307:A:H2	1.85	0.41
1:X:2477:C:O2'	1:X:2478:C:H5'	2.21	0.41
1:X:2499:C:C4	1:X:2546:G:C8	3.09	0.41
1:X:2577:A:H5''	3:A:235:GLY:HA3	2.01	0.41
1:X:2724:G:C2	1:X:2741:G:C4	3.09	0.41
1:X:2781:G:H8	1:X:2781:G:O5'	2.04	0.41
1:X:2796:A:N1	1:X:2797:G:C6	2.88	0.41
1:X:2802:C:C2	1:X:2803:C:C5	3.09	0.41
1:X:2806:G:O4'	1:X:2858:A:C2	2.74	0.41
1:X:2859:U:H5	1:X:2860:C:C2	2.39	0.41
1:X:341:A:O2'	1:X:342:G:OP1	2.35	0.41
1:X:410:A:H2'	1:X:411:C:O4'	2.21	0.41
1:X:425:A:H3'	1:X:426:C:C5	2.55	0.41
1:X:507:A:H2'	1:X:508:G:C8	2.55	0.41
1:X:53:G:C5	1:X:54:G:C8	3.09	0.41
1:X:572:G:C6	1:X:2001:G:C4	3.09	0.41
1:X:609:U:C1'	11:I:18:ARG:CZ	2.99	0.41
1:X:653:G:H3'	1:X:653:G:C8	2.56	0.41
1:X:966:A:C2	1:X:974:U:C2	3.08	0.41
18:P:62:ARG:CZ	26:Y:25:LEU:HD11	2.50	0.41
2:Z:42:U:C1'	2:Z:47:A:H61	2.29	0.41
2:Z:93:G:N2	2:Z:94:G:H1'	2.36	0.41
3:A:210:GLY:O	3:A:214:TRP:N	2.53	0.41
4:B:96:PHE:CE2	4:B:102:ILE:CG2	3.04	0.41
4:B:116:VAL:O	4:B:117:MET:C	2.56	0.41
4:B:48:GLN:O	4:B:48:GLN:CG	2.62	0.41
6:D:69:LYS:HA	6:D:85:VAL:H	1.86	0.41
7:E:85:ILE:O	7:E:132:ASP:HA	2.20	0.41
7:E:132:ASP:OD1	7:E:133:VAL:N	2.54	0.41
7:E:103:LEU:HD23	7:E:148:VAL:HG22	2.03	0.41
7:E:5:GLY:O	7:E:6:LYS:HG3	2.20	0.41
9:G:116:ARG:C	9:G:118:ALA:N	2.74	0.41
9:G:40:ASN:CB	9:G:78:ASP:HB3	2.51	0.41
10:H:130:ALA:HA	10:H:131:PRO:HD2	1.88	0.41
12:J:59:PHE:CE1	12:J:110:VAL:HG11	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:923:A:C5	12:J:12:LYS:HE3	2.56	0.41
12:J:39:GLU:HA	12:J:40:PRO:HD3	1.73	0.41
12:J:81:GLU:HG2	12:J:82:THR:N	2.36	0.41
13:K:37:THR:O	13:K:38:LEU:C	2.58	0.41
14:L:15:ARG:CG	14:L:15:ARG:NH1	2.81	0.41
14:L:87:VAL:CG1	14:L:88:VAL:N	2.84	0.41
17:O:40:VAL:O	17:O:40:VAL:CG2	2.68	0.41
20:R:100:ASP:OD1	20:R:102:LYS:C	2.60	0.41
21:S:98:VAL:HG13	21:S:115:ILE:HG21	2.03	0.41
21:S:36:ARG:HE	21:S:37:LYS:CA	2.31	0.41
21:S:70:GLN:HE21	21:S:71:MET:HE2	1.85	0.41
21:S:92:VAL:HG23	21:S:93:GLU:H	1.85	0.41
22:T:43:THR:HB	22:T:46:LYS:HZ1	1.84	0.41
23:U:22:GLY:H	23:U:39:LYS:CB	2.34	0.41
24:V:24:GLU:OE2	24:V:46:LEU:CD1	2.69	0.41
1:X:942:U:P	25:W:32:ARG:HH12	2.43	0.41
1:X:1018:C:C4	1:X:1019:U:C5	3.09	0.41
1:X:1068:A:H2'	1:X:1068:A:N3	2.35	0.41
1:X:1028:G:C6	1:X:1157:G:O6	2.73	0.41
1:X:1188:A:O5'	1:X:1188:A:H8	2.04	0.41
1:X:1373:G:O6	1:X:1385:C:N3	2.54	0.41
1:X:1463:A:C6	1:X:1479:G:N1	2.89	0.41
1:X:1483:G:C4	1:X:1541:G:N2	2.89	0.41
1:X:1600:U:H5'	1:X:1601:U:OP1	2.21	0.41
1:X:1625:A:N3	1:X:1632:A:N3	2.69	0.41
1:X:1741:G:N2	1:X:1742:G:H1'	2.36	0.41
1:X:1969:G:N3	1:X:1970:G:C8	2.89	0.41
1:X:1668:G:C2	1:X:1990:U:C2	3.09	0.41
1:X:2190:A:H2	1:X:2194:A:N1	2.19	0.41
1:X:2339:A:C2	1:X:2340:C:H1'	2.55	0.41
1:X:2388:G:C5	1:X:2389:G:C8	3.09	0.41
1:X:2411:A:C6	1:X:2412:A:C6	3.09	0.41
1:X:2433:G:H2'	1:X:2434:G:H8	1.86	0.41
1:X:2491:C:N3	1:X:2492:G:C8	2.88	0.41
1:X:2715:C:H2'	1:X:2716:G:O4'	2.21	0.41
1:X:2800:C:C5	1:X:2801:A:C8	3.09	0.41
1:X:2829:A:C2	1:X:2830:U:C2	3.09	0.41
1:X:333:A:H3'	5:C:162:ARG:NE	2.33	0.41
1:X:924:C:C2	1:X:925:U:C5	3.09	0.41
26:Y:9:LYS:O	26:Y:11:THR:N	2.53	0.41
2:Z:75:A:N3	2:Z:75:A:H2'	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:131:LEU:CD2	3:A:131:LEU:N	2.79	0.41
3:A:147:LEU:HG	3:A:155:LEU:HD11	2.02	0.41
3:A:182:LEU:HA	3:A:182:LEU:HD23	1.88	0.41
3:A:200:GLU:OE1	3:A:202:LYS:CA	2.69	0.41
3:A:88:ARG:O	3:A:89:SER:OG	2.36	0.41
3:A:75:VAL:CG1	3:A:98:ALA:HB3	2.48	0.41
1:X:814:G:P	5:C:50:GLN:NE2	2.94	0.41
5:C:56:ARG:HA	5:C:71:ASP:OD2	2.21	0.41
6:D:150:ARG:CG	6:D:151:GLY:H	2.33	0.41
6:D:151:GLY:O	6:D:152:MET:SD	2.79	0.41
6:D:65:PRO:HB3	6:D:89:VAL:HG21	2.02	0.41
7:E:42:THR:HB	7:E:53:GLU:HB2	2.03	0.41
8:F:101:ASN:C	8:F:104:GLN:HG2	2.40	0.41
8:F:81:LYS:HD2	8:F:81:LYS:HA	1.79	0.41
11:I:105:PRO:O	11:I:106:VAL:HG22	2.21	0.41
11:I:30:ALA:N	11:I:34:HIS:CE1	2.88	0.41
12:J:83:ARG:HG2	12:J:83:ARG:NH1	2.35	0.41
14:L:9:ARG:O	14:L:10:LYS:C	2.59	0.41
15:M:34:ARG:HD2	15:M:81:PHE:CE1	2.56	0.41
15:M:82:PRO:O	15:M:83:PHE:C	2.60	0.41
17:O:38:LEU:O	17:O:39:PHE:HB3	2.20	0.41
18:P:66:GLU:HB3	18:P:67:PRO:HD3	2.02	0.41
19:Q:69:ILE:C	19:Q:69:ILE:HD12	2.41	0.41
19:Q:55:THR:HB	19:Q:77:LYS:O	2.20	0.41
20:R:35:LYS:NZ	20:R:35:LYS:CB	2.84	0.41
21:S:160:LEU:HD22	21:S:162:ALA:HB3	2.04	0.41
23:U:10:LYS:HD3	23:U:11:LYS:CB	2.51	0.41
23:U:20:ARG:CG	23:U:43:ARG:HD2	2.51	0.41
24:V:25:LEU:HD11	24:V:47:ARG:HD3	2.03	0.41
1:X:1017:C:O2'	1:X:1018:C:H5'	2.21	0.41
1:X:1016:C:H4'	1:X:1023:U:O4'	2.21	0.41
1:X:1067:G:N2	1:X:1114:A:H62	2.19	0.41
1:X:1317:G:O2'	1:X:1318:A:H5'	2.21	0.41
1:X:1324:G:H1'	1:X:1326:U:O4	2.21	0.41
1:X:1398:G:C2	1:X:1416:A:C4	3.09	0.41
1:X:1512:A:H1'	1:X:1593:C:O2'	2.21	0.41
1:X:1789:U:N3	1:X:1811:A:C2	2.89	0.41
1:X:1858:C:N3	1:X:1859:A:C5	2.89	0.41
1:X:188:G:H2'	1:X:189:A:C8	2.56	0.41
1:X:1956:G:C4	1:X:1957:C:C5	3.09	0.41
1:X:196:A:H2'	1:X:197:G:C5'	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1973:C:O2'	1:X:1974:U:O4'	2.38	0.41
1:X:2007:G:O2'	1:X:2008:C:H5'	2.21	0.41
1:X:2189:A:C4	1:X:2190:A:N7	2.89	0.41
1:X:2248:A:C6	1:X:2249:U:C4	3.09	0.41
1:X:2262:C:C2'	1:X:2263:C:C5'	2.94	0.41
1:X:2284:U:C3'	1:X:2285:U:C5'	2.96	0.41
1:X:204:A:N7	1:X:2386:G:C4'	2.84	0.41
1:X:1281:A:C2'	1:X:2592:U:C5	2.92	0.41
1:X:2034:A:C8	1:X:2593:A:N6	2.89	0.41
1:X:2707:G:H2'	1:X:2708:U:H6	1.86	0.41
1:X:2779:C:C6	1:X:2780:A:C8	3.09	0.41
1:X:2801:A:C6	1:X:2802:C:C4	3.09	0.41
1:X:33:C:O2'	1:X:34:U:OP1	2.31	0.41
1:X:527:C:O2'	18:P:39:ARG:NH2	2.51	0.41
1:X:528:G:C6	1:X:529:U:O4	2.74	0.41
1:X:13:A:N1	1:X:535:U:C2	2.89	0.41
1:X:546:A:C6	1:X:547:U:C4	3.09	0.41
1:X:677:G:H2'	1:X:678:G:O5'	2.21	0.41
1:X:739:G:O2'	1:X:740:A:H8	2.04	0.41
1:X:825:C:C4	1:X:1263:G:O6	2.74	0.41
1:X:938:G:C2'	1:X:939:C:OP2	2.69	0.41
2:Z:32:C:C5	2:Z:33:C:C5	3.08	0.41
2:Z:39:C:H2'	2:Z:39:C:O2	2.21	0.41
2:Z:39:C:H3'	2:Z:40:C:C6	2.56	0.41
2:Z:18:G:N2	2:Z:71:G:H1'	2.36	0.41
2:Z:81:C:H6	2:Z:81:C:O5'	2.04	0.41
3:A:173:VAL:CG1	3:A:174:ILE:N	2.65	0.40
1:X:452:G:H22	5:C:40:ARG:HH22	1.65	0.40
5:C:82:VAL:CG1	5:C:85:GLY:HA3	2.51	0.40
5:C:44:SER:HB2	5:C:88:PRO:HD3	2.02	0.40
6:D:36:VAL:O	6:D:36:VAL:HG12	2.19	0.40
6:D:5:LYS:C	6:D:7:LYS:N	2.69	0.40
6:D:71:LYS:O	6:D:71:LYS:HD3	2.21	0.40
7:E:6:LYS:C	7:E:7:GLN:HG3	2.40	0.40
7:E:30:LYS:NZ	7:E:80:SER:O	2.46	0.40
7:E:89:LEU:CD2	7:E:94:PHE:HB3	2.51	0.40
11:I:114:ILE:O	11:I:115:SER:HB3	2.20	0.40
13:K:115:LEU:HD23	13:K:115:LEU:HA	1.60	0.40
13:K:18:VAL:CG1	13:K:22:ARG:HD2	2.47	0.40
13:K:98:LEU:HD11	13:K:114:GLU:OE1	2.21	0.40
14:L:21:THR:CG2	14:L:22:ALA:H	2.33	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:N:14:HIS:O	16:N:17:VAL:N	2.54	0.40
16:N:88:ILE:HG12	17:O:48:GLY:CA	2.51	0.40
1:X:760:U:H2'	18:P:109:ARG:HE	1.86	0.40
18:P:86:LEU:C	18:P:88:ASP:N	2.73	0.40
18:P:47:GLY:N	18:P:92:VAL:HB	2.36	0.40
20:R:38:LEU:HD23	20:R:38:LEU:C	2.40	0.40
24:V:20:ALA:O	24:V:23:LYS:HB3	2.21	0.40
1:X:1016:C:H2'	1:X:1017:C:C5	2.55	0.40
1:X:1020:A:H2'	1:X:1164:C:O2'	2.21	0.40
1:X:1086:C:H2'	1:X:1086:C:O2	2.21	0.40
1:X:1188:A:P	1:X:1188:A:H8	2.44	0.40
1:X:1204:G:H2'	1:X:1205:G:C8	2.56	0.40
1:X:1236:G:N2	1:X:1240:G:C4	2.89	0.40
1:X:1286:U:C6	1:X:1986:G:H4'	2.55	0.40
1:X:155:G:C2'	1:X:156:G:C5'	3.00	0.40
1:X:1621:C:H5'	1:X:1626:A:C6	2.56	0.40
1:X:1656:U:C2'	1:X:1657:A:C5'	2.99	0.40
1:X:15:G:C6	1:X:16:G:C5	3.09	0.40
1:X:1842:G:H2'	1:X:1843:U:O4'	2.21	0.40
1:X:2042:A:C5	1:X:2482:A:C2	3.08	0.40
1:X:2202:G:H2'	1:X:2203:G:H8	1.87	0.40
1:X:228:A:H2'	1:X:229:G:O4'	2.21	0.40
1:X:2667:C:C5	1:X:2699:G:C5	3.09	0.40
1:X:2824:C:O2'	1:X:2825:A:P	2.79	0.40
1:X:34:U:H1'	20:R:4:PRO:CA	2.42	0.40
1:X:399:G:O2'	1:X:400:U:OP1	2.37	0.40
1:X:429:C:H2'	1:X:430:C:O4'	2.21	0.40
1:X:539:A:C2	1:X:2006:G:C8	3.09	0.40
1:X:649:G:C2	1:X:661:C:C2	3.09	0.40
1:X:613:A:O4'	1:X:668:A:N1	2.54	0.40
1:X:696:U:C2'	1:X:697:G:O5'	2.69	0.40
1:X:741:G:N2	1:X:743:A:C1'	2.82	0.40
1:X:825:C:H1'	1:X:1263:G:N2	2.36	0.40
1:X:83:A:O3'	1:X:84:G:O4'	2.39	0.40
2:Z:85:G:H5''	25:W:49:HIS:CD2	2.56	0.40
1:X:1517:C:C5'	3:A:102:LYS:NZ	2.85	0.40
3:A:121:PRO:C	3:A:123:ALA:N	2.75	0.40
3:A:183:ARG:HD2	3:A:184:ARG:O	2.21	0.40
3:A:197:GLY:O	3:A:198:ASN:C	2.59	0.40
1:X:787:A:C5'	3:A:48:ARG:HH22	2.24	0.40
5:C:102:LEU:C	5:C:102:LEU:HD23	2.38	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:22:VAL:HA	5:C:106:MET:HG3	2.03	0.40
1:X:456:C:H4'	5:C:43:ALA:HB2	2.03	0.40
5:C:83:ALA:O	5:C:84:PHE:C	2.60	0.40
5:C:9:GLN:HE21	5:C:120:VAL:HG11	1.87	0.40
6:D:105:ASN:CA	6:D:109:PRO:HG2	2.48	0.40
6:D:13:ARG:NH1	6:D:14:PRO:HG3	2.36	0.40
6:D:38:GLU:C	6:D:87:ILE:H	2.24	0.40
7:E:68:THR:O	7:E:72:VAL:HG23	2.21	0.40
8:F:101:ASN:CB	8:F:104:GLN:HG2	2.46	0.40
9:G:156:HIS:CB	9:G:157:PRO:CD	2.95	0.40
10:H:118:LEU:HD23	10:H:118:LEU:HA	1.68	0.40
10:H:22:ILE:O	10:H:23:ARG:CB	2.69	0.40
10:H:74:VAL:HA	10:H:96:ALA:HB2	2.02	0.40
11:I:45:LYS:HG2	11:I:46:GLY:H	1.86	0.40
11:I:97:ARG:O	11:I:98:LEU:CB	2.64	0.40
12:J:112:GLU:OE1	12:J:116:LYS:HB2	2.21	0.40
12:J:79:PRO:O	12:J:80:ALA:HB3	2.21	0.40
1:X:1291:G:OP1	13:K:36:THR:HB	2.21	0.40
13:K:94:TYR:HE1	13:K:96:ARG:NH1	2.18	0.40
14:L:59:LEU:CD2	14:L:61:SER:H	2.32	0.40
15:M:69:ARG:CG	15:M:78:GLU:HG2	2.51	0.40
16:N:86:ALA:O	16:N:89:ASP:N	2.30	0.40
17:O:33:VAL:HG12	17:O:57:GLN:CG	2.45	0.40
17:O:38:LEU:CD2	17:O:46:VAL:O	2.70	0.40
17:O:50:ASP:O	17:O:53:LYS:CB	2.70	0.40
19:Q:79:ILE:CD1	19:Q:79:ILE:N	2.80	0.40
19:Q:51:ILE:CD1	19:Q:83:ALA:HA	2.52	0.40
21:S:4:THR:N	21:S:33:ALA:O	2.51	0.40
22:T:37:LEU:HD12	22:T:37:LEU:N	2.33	0.40
23:U:10:LYS:HD3	23:U:11:LYS:CA	2.48	0.40
1:X:1038:U:O2	1:X:2466:G:O3'	2.40	0.40
1:X:1075:C:H5'	8:F:85:ILE:HG13	2.04	0.40
1:X:118:U:O2	1:X:118:U:C2'	2.68	0.40
1:X:1193:G:C5	1:X:1194:U:C5	3.10	0.40
1:X:1197:U:O2'	1:X:1198:C:H5'	2.21	0.40
1:X:1285:A:HO2'	1:X:1286:U:P	2.44	0.40
1:X:1330:G:C6	1:X:1349:A:N6	2.89	0.40
1:X:1476:G:H2'	1:X:1477:C:O4'	2.22	0.40
1:X:1780:A:C5	1:X:1781:C:C4	3.09	0.40
1:X:1811:A:H3'	3:A:178:PRO:HB2	2.02	0.40
1:X:1989:C:O5'	1:X:1989:C:H6	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2060:A:C4	1:X:2414:A:C8	3.09	0.40
1:X:2239:C:H2'	1:X:2240:C:H6	1.86	0.40
1:X:2311:U:C3'	1:X:2311:U:O2	2.70	0.40
1:X:2431:C:N4	1:X:2432:A:C6	2.90	0.40
1:X:2450:A:N6	1:X:2451:G:C2	2.88	0.40
1:X:2661:G:C2'	1:X:2662:C:H5'	2.51	0.40
1:X:2688:G:C6	1:X:2689:C:N3	2.89	0.40
1:X:2757:G:C1'	1:X:2759:U:H5	2.33	0.40
1:X:2866:A:C6	1:X:2867:G:C2	3.09	0.40
1:X:427:C:H2'	1:X:428:A:C8	2.56	0.40
1:X:537:C:O2'	1:X:538:A:C6	2.74	0.40
1:X:556:A:H1'	1:X:558:G:C2	2.55	0.40
1:X:643:A:H4'	11:I:67:ASN:CB	2.51	0.40
1:X:683:A:HO2'	1:X:684:C:P	2.42	0.40
1:X:858:G:OP2	1:X:858:G:C8	2.74	0.40
1:X:989:G:H2'	1:X:990:A:O4'	2.21	0.40
2:Z:53:G:H5'	14:L:64:LYS:CD	2.51	0.40
3:A:78:LYS:CD	3:A:116:THR:HB	2.47	0.40
3:A:245:VAL:HB	3:A:246:PRO:HD2	2.02	0.40
4:B:56:GLU:C	4:B:59:VAL:HG23	2.41	0.40
5:C:111:ARG:C	5:C:113:GLU:N	2.73	0.40
6:D:7:LYS:HD3	6:D:7:LYS:HA	1.91	0.40
9:G:59:ALA:O	9:G:60:SER:C	2.59	0.40
9:G:59:ALA:O	9:G:62:ILE:HB	2.21	0.40
10:H:29:ILE:HA	10:H:34:LEU:HA	2.03	0.40
11:I:47:ALA:O	11:I:48:PHE:C	2.56	0.40
13:K:45:ARG:HD3	13:K:95:THR:CG2	2.51	0.40
1:X:2355:A:N1	14:L:91:ARG:CZ	2.84	0.40
18:P:57:LEU:O	18:P:59:PHE:N	2.54	0.40
19:Q:53:ILE:HG13	19:Q:54:SER:N	2.36	0.40
19:Q:62:ARG:O	19:Q:63:LYS:CB	2.69	0.40
19:Q:63:LYS:CE	19:Q:65:VAL:HA	2.50	0.40
21:S:168:VAL:HG12	21:S:168:VAL:O	2.21	0.40
1:X:2237:C:H5'	22:T:14:ARG:HD3	2.03	0.40
22:T:3:HIS:O	22:T:4:LYS:CB	2.69	0.40
23:U:23:LYS:HB2	23:U:35:THR:HG21	2.02	0.40
1:X:1801:C:N4	23:U:49:LYS:HZ3	2.18	0.40
23:U:53:GLU:O	23:U:78:ILE:CG2	2.69	0.40
1:X:1075:C:H4'	8:F:89:SER:O	2.21	0.40
1:X:1212:U:H2'	1:X:1213:U:H6	1.86	0.40
1:X:1295:U:C4	1:X:1296:G:C5	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1371:G:N7	1:X:1384:G:C6	2.89	0.40
1:X:1408:A:C5	1:X:1411:C:C4	3.09	0.40
1:X:1474:A:H2'	1:X:1474:A:N3	2.36	0.40
1:X:1483:G:C2	1:X:1541:G:C2	3.10	0.40
1:X:1564:U:H2'	1:X:1565:G:C8	2.57	0.40
1:X:1625:A:C4	1:X:1632:A:C2	3.09	0.40
1:X:1675:C:H2'	1:X:1676:U:C6	2.56	0.40
1:X:224:G:C5	1:X:229:G:O6	2.75	0.40
1:X:2314:A:C4	1:X:2316:G:C8	3.10	0.40
1:X:2334:C:H5'	22:T:25:LYS:NZ	2.36	0.40
1:X:2425:G:C2	1:X:2480:C:C5	3.09	0.40
1:X:2501:U:O2	1:X:2501:U:H2'	2.22	0.40
1:X:2546:G:C4	1:X:2547:C:C5	3.09	0.40
1:X:2695:C:O2'	1:X:2696:A:H5'	2.21	0.40
1:X:2831:A:N6	1:X:2832:G:C6	2.90	0.40
1:X:33:C:C2'	1:X:34:U:H5''	2.52	0.40
1:X:467:U:HO2'	1:X:468:A:P	2.44	0.40
1:X:513:A:C6	1:X:515:A:N6	2.89	0.40
1:X:627:A:O2'	1:X:628:A:O4'	2.37	0.40
1:X:698:A:C2	1:X:702:A:C6	3.09	0.40
1:X:859:U:C1'	1:X:860:U:C5	3.05	0.40
3:A:193:ILE:HA	3:A:193:ILE:HD13	1.96	0.40
3:A:206:LEU:HD23	3:A:211:ARG:HG2	2.03	0.40
1:X:797:A:N7	3:A:229:VAL:HG21	2.35	0.40
4:B:16:LYS:HD2	4:B:173:VAL:HG13	2.03	0.40
4:B:202:ALA:O	4:B:203:LYS:HB2	2.21	0.40
7:E:104:GLU:OE2	7:E:114:ILE:CG1	2.67	0.40
9:G:103:TYR:CZ	9:G:111:LYS:CA	3.05	0.40
9:G:42:VAL:O	9:G:81:VAL:N	2.55	0.40
12:J:40:PRO:HB3	12:J:99:LYS:HD2	2.03	0.40
1:X:1992:G:H1'	13:K:107:GLY:HA3	2.02	0.40
13:K:45:ARG:O	13:K:46:PRO:C	2.59	0.40
13:K:45:ARG:O	13:K:48:VAL:HG12	2.22	0.40
14:L:35:SER:C	14:L:36:LYS:HE3	2.41	0.40
18:P:10:ASN:O	18:P:11:LYS:C	2.59	0.40
18:P:33:MET:HE2	18:P:37:LYS:HD2	2.03	0.40
19:Q:90:ALA:C	19:Q:92:ALA:N	2.74	0.40
20:R:52:ASN:O	20:R:53:VAL:HB	2.22	0.40
21:S:107:GLU:OE1	21:S:112:LEU:HA	2.21	0.40
21:S:84:TYR:O	21:S:85:MET:C	2.58	0.40
22:T:2:ALA:O	22:T:3:HIS:HB3	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:U:29:GLY:C	23:U:31:GLY:N	2.74	0.40
23:U:51:ILE:N	23:U:52:ARG:NH2	2.69	0.40
23:U:75:TYR:O	23:U:77:GLY:N	2.44	0.40
25:W:2:LYS:CD	25:W:32:ARG:O	2.68	0.40
1:X:1006:C:C6	1:X:1006:C:H5''	2.55	0.40
1:X:1043:A:H2'	1:X:1044:U:H5'	2.03	0.40
1:X:107:G:C2	1:X:108:G:H1'	2.56	0.40
1:X:1109:A:C2'	1:X:1110:G:H5'	2.49	0.40
1:X:1149:G:P	9:G:98:LYS:NZ	2.94	0.40
1:X:1164:C:H2'	1:X:1164:C:O2	2.21	0.40
1:X:119:G:H4'	1:X:143:A:H5'	2.02	0.40
1:X:1234:C:C2	1:X:1235:C:C5	3.10	0.40
1:X:1336:G:O6	1:X:1337:G:C6	2.75	0.40
1:X:1571:G:H2'	1:X:1572:C:C6	2.55	0.40
1:X:1624:A:C5	1:X:1627:C:C4	3.09	0.40
1:X:1755:G:C2	1:X:1756:C:C6	3.09	0.40
1:X:1769:U:H5	1:X:1775:A:C2	2.39	0.40
1:X:1820:G:C8	1:X:1820:G:OP2	2.74	0.40
1:X:1826:U:H2'	1:X:1826:U:O2	2.21	0.40
1:X:205:A:H1'	1:X:207:U:O4'	2.21	0.40
1:X:2088:U:O2'	1:X:2089:C:OP1	2.32	0.40
1:X:219:G:HO2'	1:X:231:G:H1	1.70	0.40
1:X:2241:U:H2'	1:X:2242:C:H6	1.87	0.40
1:X:2245:A:C4'	1:X:2246:A:N3	2.75	0.40
1:X:2412:A:H8	1:X:2412:A:O5'	2.04	0.40
1:X:2451:G:H22	1:X:2456:U:H5''	1.87	0.40
1:X:2522:G:C6	1:X:2523:G:C6	3.10	0.40
1:X:490:A:O2'	1:X:491:A:O5'	2.39	0.40
1:X:498:C:O2	18:P:74:SER:CB	2.68	0.40
1:X:501:G:H2'	1:X:502:A:O4'	2.21	0.40
1:X:64:C:C1'	19:Q:68:PHE:HD1	2.34	0.40
1:X:665:A:C2	1:X:666:U:C6	3.07	0.40
1:X:684:C:H2'	1:X:685:U:C6	2.56	0.40
1:X:938:G:O2'	1:X:939:C:H6	2.05	0.40
1:X:994:A:N7	1:X:995:A:C6	2.89	0.40
2:Z:30:C:H42	2:Z:58:G:N2	2.19	0.40
3:A:176:ARG:HA	3:A:181:GLU:O	2.22	0.40
3:A:36:ALA:HB1	3:A:63:ARG:CA	2.44	0.40
4:B:44:TYR:O	4:B:45:GLU:C	2.60	0.40
4:B:45:GLU:O	4:B:46:ALA:CB	2.68	0.40
4:B:4:ILE:HD11	4:B:29:GLY:O	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:6:GLY:HA2	4:B:27:LEU:O	2.21	0.40
5:C:7:ILE:CG2	5:C:120:VAL:O	2.69	0.40
5:C:74:VAL:CG2	5:C:76:THR:HG23	2.52	0.40
6:D:111:ILE:HG12	6:D:137:ILE:CG2	2.51	0.40
6:D:142:THR:O	6:D:146:VAL:HG11	2.21	0.40
6:D:16:LEU:O	6:D:20:PHE:HB2	2.22	0.40
9:G:119:LEU:HD13	9:G:126:VAL:HG22	2.02	0.40
12:J:120:ARG:O	12:J:123:GLY:N	2.48	0.40
13:K:100:VAL:H	13:K:111:ALA:HA	1.86	0.40
14:L:20:THR:CG2	14:L:23:ALA:HB3	2.45	0.40
19:Q:54:SER:C	19:Q:55:THR:CG2	2.90	0.40
21:S:103:ARG:NH1	21:S:107:GLU:HB3	2.35	0.40
21:S:16:GLU:O	21:S:18:MET:N	2.54	0.40
21:S:24:TYR:N	21:S:24:TYR:CD1	2.89	0.40
23:U:15:VAL:HG23	23:U:16:ASN:N	2.36	0.40
23:U:32:ARG:HE	23:U:32:ARG:H	1.69	0.40
23:U:41:VAL:O	23:U:42:GLN:OE1	2.39	0.40
23:U:49:LYS:HB3	23:U:61:TRP:CZ3	2.55	0.40
1:X:1023:U:H5	9:G:56:THR:HG21	1.87	0.40
1:X:118:U:H4'	1:X:119:G:H5''	2.03	0.40
1:X:1249:G:O2'	1:X:1250:A:O5'	2.35	0.40
1:X:1281:A:C5	1:X:1996:A:N7	2.89	0.40
1:X:1385:C:C2'	1:X:1386:A:C5'	2.98	0.40
1:X:1460:G:N3	1:X:1460:G:H2'	2.37	0.40
1:X:1526:U:H3'	1:X:1527:G:H8	1.85	0.40
1:X:1584:G:H4'	3:A:59:LYS:O	2.22	0.40
1:X:162:C:O2'	1:X:163:A:H5'	2.21	0.40
1:X:1784:C:H2'	1:X:1785:A:O4'	2.22	0.40
1:X:178:C:C2'	1:X:178:C:O2	2.49	0.40
1:X:1887:G:C2	1:X:1888:C:C6	3.09	0.40
1:X:188:G:H2'	1:X:189:A:H8	1.87	0.40
1:X:1925:C:H2'	1:X:1926:U:C6	2.56	0.40
1:X:2071:G:N2	1:X:2072:C:C1'	2.80	0.40
1:X:218:A:C4	1:X:220:U:C4	3.09	0.40
1:X:2216:G:H5''	1:X:2217:G:OP1	2.22	0.40
1:X:2311:U:C5'	1:X:2315:A:H62	2.33	0.40
1:X:2388:G:C4	1:X:2389:G:C8	3.09	0.40
1:X:2571:G:H2'	1:X:2572:U:C6	2.56	0.40
1:X:2569:A:C2	1:X:2584:U:C2	3.10	0.40
1:X:2044:G:O6	33:X:2911:ZLD:H6	2.21	0.40
1:X:469:G:C2'	1:X:470:U:OP2	2.68	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:696:U:H2'	1:X:697:G:O5'	2.22	0.40
1:X:788:G:H4'	1:X:789:G:O5'	2.21	0.40
1:X:824:U:HO2'	1:X:825:C:P	2.44	0.40
1:X:88:G:N1	1:X:89:A:C6	2.89	0.40
1:X:938:G:H2'	1:X:939:C:OP2	2.21	0.40
1:X:951:G:H2'	1:X:952:A:C4'	2.51	0.40
1:X:981:C:H2'	1:X:982:C:O5'	2.20	0.40
1:X:994:A:N6	1:X:995:A:C2	2.89	0.40
26:Y:51:TYR:CD2	26:Y:54:GLY:C	2.95	0.40

All (1) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:H:107:GLY:O	13:K:86:LYS:NZ[8_555]	2.03	0.17

## 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 X-ray entries followed by that with respect to entries of similar resolution.

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
3	A	216/274 (79%)	109 (50%)	52 (24%)	55 (26%)	0	0
4	B	203/211 (96%)	124 (61%)	47 (23%)	32 (16%)	0	3
5	C	195/205 (95%)	92 (47%)	46 (24%)	57 (29%)	0	0
6	D	175/180 (97%)	78 (45%)	54 (31%)	43 (25%)	0	1
7	E	169/185 (91%)	91 (54%)	42 (25%)	36 (21%)	0	1
8	F	68/144 (47%)	37 (54%)	21 (31%)	10 (15%)	0	3
9	G	140/174 (80%)	66 (47%)	32 (23%)	42 (30%)	0	0
10	H	132/134 (98%)	91 (69%)	26 (20%)	15 (11%)	0	6
11	I	139/156 (89%)	51 (37%)	50 (36%)	38 (27%)	0	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
12	J	134/142 (94%)	63 (47%)	46 (34%)	25 (19%)	0	2
13	K	111/116 (96%)	61 (55%)	31 (28%)	19 (17%)	0	2
14	L	102/114 (90%)	48 (47%)	25 (24%)	29 (28%)	0	0
15	M	106/166 (64%)	68 (64%)	17 (16%)	21 (20%)	0	1
16	N	115/118 (98%)	56 (49%)	30 (26%)	29 (25%)	0	0
17	O	92/100 (92%)	52 (56%)	19 (21%)	21 (23%)	0	1
18	P	125/134 (93%)	75 (60%)	35 (28%)	15 (12%)	0	6
19	Q	91/95 (96%)	44 (48%)	23 (25%)	24 (26%)	0	0
20	R	108/115 (94%)	63 (58%)	17 (16%)	28 (26%)	0	0
21	S	173/237 (73%)	97 (56%)	40 (23%)	36 (21%)	0	1
22	T	82/91 (90%)	51 (62%)	16 (20%)	15 (18%)	0	2
23	U	70/81 (86%)	39 (56%)	15 (21%)	16 (23%)	0	1
24	V	64/67 (96%)	32 (50%)	19 (30%)	13 (20%)	0	1
25	W	53/55 (96%)	22 (42%)	18 (34%)	13 (24%)	0	1
26	Y	56/60 (93%)	31 (55%)	17 (30%)	8 (14%)	0	3
30	4	35/37 (95%)	22 (63%)	11 (31%)	2 (6%)	2	21
All	All	2954/3391 (87%)	1563 (53%)	749 (25%)	642 (22%)	0	1

All (642) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	A	33	LEU
3	A	58	HIS
3	A	66	ASP
3	A	91	ARG
3	A	98	ALA
3	A	108	PRO
3	A	113	VAL
3	A	125	PRO
3	A	127	LEU
3	A	145	LEU
3	A	154	GLN
3	A	167	GLY
3	A	190	TYR
3	A	218	LYS
3	A	219	PRO

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Mol	Chain	Res	Type
3	A	220	HIS
3	A	237	GLU
3	A	240	THR
4	B	17	ASN
4	B	41	THR
4	B	70	ALA
4	B	86	PRO
4	B	90	SER
4	B	122	PHE
4	B	134	TRP
4	B	135	HIS
4	B	137	ARG
4	B	147	PRO
4	B	203	LYS
5	C	13	ARG
5	C	22	VAL
5	C	47	THR
5	C	58	MET
5	C	67	ALA
5	C	84	PHE
5	C	123	PHE
5	C	124	ASP
5	C	154	ASP
5	C	155	GLU
5	C	156	ASN
5	C	164	VAL
5	C	165	SER
5	C	167	VAL
5	C	168	SER
5	C	172	VAL
5	C	173	ALA
5	C	196	VAL
6	D	4	LEU
6	D	15	ALA
6	D	28	VAL
6	D	69	LYS
6	D	75	SER
6	D	114	PHE
6	D	121	ALA
6	D	127	ASN
6	D	134	GLU
6	D	137	ILE

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Mol	Chain	Res	Type
7	E	7	GLN
7	E	13	SER
7	E	17	VAL
7	E	55	PRO
7	E	105	MET
7	E	110	SER
7	E	126	PRO
7	E	136	ILE
7	E	151	VAL
7	E	172	LYS
8	F	85	ILE
8	F	87	LYS
8	F	92	PRO
8	F	95	ALA
8	F	113	MET
8	F	119	GLY
9	G	33	ILE
9	G	35	LYS
9	G	37	ASP
9	G	48	GLY
9	G	67	ARG
9	G	68	PRO
9	G	73	ASN
9	G	86	ALA
9	G	92	GLY
9	G	97	ASP
9	G	100	TYR
9	G	145	HIS
9	G	147	ARG
9	G	162	LYS
9	G	165	VAL
9	G	170	PRO
10	H	27	SER
10	H	79	HIS
10	H	101	ASN
11	I	9	THR
11	I	36	GLY
11	I	39	SER
11	I	45	LYS
11	I	62	LYS
11	I	65	PHE
11	I	84	GLU

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Mol	Chain	Res	Type
11	I	98	LEU
11	I	103	ASN
11	I	105	PRO
11	I	124	ALA
11	I	136	ALA
12	J	21	ASP
12	J	28	VAL
12	J	56	SER
12	J	60	ARG
12	J	83	ARG
12	J	90	ALA
12	J	91	VAL
12	J	112	GLU
13	K	6	ALA
13	K	9	LYS
13	K	15	SER
13	K	20	LEU
13	K	32	GLY
13	K	42	LYS
13	K	45	ARG
13	K	92	GLY
13	K	100	VAL
14	L	21	THR
14	L	33	ARG
14	L	38	ILE
14	L	40	ALA
14	L	45	ASP
14	L	46	SER
14	L	53	ALA
14	L	55	SER
14	L	56	SER
14	L	68	ALA
14	L	91	ARG
14	L	93	SER
14	L	95	LYS
15	M	29	PRO
15	M	53	VAL
15	M	105	TYR
16	N	22	LYS
16	N	24	PHE
16	N	33	ARG
16	N	35	ALA

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Mol	Chain	Res	Type
16	N	47	TYR
16	N	48	ARG
16	N	56	ASP
16	N	75	ASN
16	N	77	SER
16	N	92	ARG
16	N	94	VAL
16	N	95	LEU
16	N	107	LYS
16	N	115	ASN
17	O	10	LYS
17	O	24	SER
17	O	35	LEU
17	O	36	LYS
17	O	48	GLY
17	O	80	TYR
18	P	9	ARG
18	P	42	VAL
18	P	45	ILE
18	P	112	GLY
19	Q	5	ASP
19	Q	6	ILE
19	Q	13	SER
19	Q	21	GLU
19	Q	41	ALA
19	Q	48	VAL
19	Q	59	PRO
19	Q	61	LYS
19	Q	87	SER
19	Q	89	GLU
20	R	6	ALA
20	R	9	HIS
20	R	26	SER
20	R	53	VAL
20	R	66	GLN
20	R	82	ALA
20	R	85	ASP
20	R	87	GLU
21	S	5	ALA
21	S	6	LYS
21	S	11	LYS
21	S	12	GLN

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Mol	Chain	Res	Type
21	S	17	SER
21	S	26	LYS
21	S	30	VAL
21	S	33	ALA
21	S	37	LYS
21	S	75	LYS
21	S	88	TYR
21	S	91	PRO
21	S	92	VAL
21	S	118	HIS
21	S	125	PRO
21	S	149	ALA
22	T	3	HIS
22	T	4	LYS
22	T	7	VAL
22	T	9	SER
22	T	19	LYS
22	T	20	TYR
22	T	27	GLY
22	T	31	VAL
23	U	13	LEU
23	U	15	VAL
23	U	27	ASP
23	U	32	ARG
23	U	34	THR
23	U	56	GLN
23	U	60	VAL
24	V	2	LYS
24	V	3	PRO
24	V	8	ASN
24	V	33	ALA
25	W	4	LYS
25	W	17	VAL
25	W	18	LYS
25	W	35	SER
25	W	45	LYS
25	W	49	HIS
26	Y	12	SER
26	Y	36	CYS
3	A	54	ILE
3	A	56	GLY
3	A	73	SER

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Mol	Chain	Res	Type
3	A	89	SER
3	A	106	LEU
3	A	152	GLY
3	A	188	GLU
3	A	194	GLY
3	A	216	GLY
3	A	223	GLY
3	A	234	GLY
3	A	244	ARG
3	A	248	THR
4	B	46	ALA
4	B	71	GLY
4	B	76	ARG
4	B	130	GLY
4	B	136	ARG
4	B	145	LYS
4	B	154	LYS
4	B	202	ALA
5	C	9	GLN
5	C	11	GLY
5	C	14	THR
5	C	15	ILE
5	C	28	HIS
5	C	51	VAL
5	C	65	GLY
5	C	103	GLY
5	C	117	LEU
5	C	125	ILE
5	C	127	ASP
5	C	128	ALA
5	C	159	ARG
5	C	171	PRO
5	C	177	VAL
5	C	194	GLU
6	D	5	LYS
6	D	71	LYS
6	D	89	VAL
6	D	124	GLY
6	D	135	GLN
6	D	153	ASP
6	D	170	LEU
7	E	14	GLY

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Mol	Chain	Res	Type
7	E	19	ALA
7	E	77	LYS
7	E	95	ARG
7	E	106	ASN
7	E	120	GLY
7	E	137	ASP
7	E	143	GLN
7	E	150	LYS
7	E	159	GLY
7	E	165	VAL
8	F	74	PRO
9	G	34	PRO
9	G	59	ALA
9	G	72	PRO
9	G	77	GLY
9	G	79	PHE
9	G	88	VAL
9	G	105	GLY
9	G	128	GLU
9	G	129	HIS
9	G	138	GLY
9	G	146	THR
9	G	153	GLY
9	G	154	GLU
9	G	158	HIS
9	G	163	PRO
10	H	14	SER
10	H	28	GLY
10	H	37	GLY
10	H	113	PRO
10	H	124	MET
11	I	6	LEU
11	I	47	ALA
11	I	68	VAL
11	I	90	ARG
11	I	97	ARG
11	I	132	ALA
11	I	133	VAL
12	J	11	ARG
12	J	13	GLN
12	J	44	LYS
12	J	46	ASN

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Mol	Chain	Res	Type
12	J	54	VAL
12	J	87	GLY
12	J	114	GLN
13	K	7	GLY
13	K	14	SER
13	K	58	GLY
14	L	20	THR
14	L	48	GLY
14	L	52	ALA
14	L	69	ALA
14	L	84	ILE
14	L	85	LYS
14	L	102	ALA
15	M	40	ARG
15	M	43	ASN
15	M	56	ALA
15	M	108	ARG
16	N	51	ARG
16	N	65	ILE
16	N	79	PHE
16	N	87	ASN
16	N	116	ALA
17	O	7	THR
17	O	8	GLY
17	O	17	GLY
17	O	26	GLN
17	O	41	GLY
17	O	77	GLY
18	P	41	VAL
18	P	58	ARG
18	P	70	LYS
18	P	84	GLU
19	Q	47	GLY
19	Q	60	GLY
19	Q	62	ARG
19	Q	70	GLY
19	Q	77	LYS
19	Q	86	GLN
21	S	13	LYS
21	S	25	ASN
21	S	60	GLU
21	S	63	PRO

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Mol	Chain	Res	Type
21	S	73	LYS
21	S	94	VAL
21	S	158	CYS
22	T	15	ASP
22	T	32	LYS
22	T	73	GLY
22	T	74	LYS
22	T	75	GLY
23	U	26	ALA
23	U	29	GLY
23	U	42	GLN
24	V	32	ALA
24	V	53	LEU
25	W	44	VAL
25	W	46	THR
3	A	40	THR
3	A	59	LYS
3	A	65	ILE
3	A	71	ASP
3	A	79	VAL
3	A	132	PRO
3	A	149	PRO
3	A	153	ALA
3	A	203	ASN
3	A	215	LEU
3	A	238	GLY
4	B	39	ALA
4	B	72	VAL
5	C	18	PRO
5	C	48	ARG
5	C	102	LEU
5	C	112	GLN
5	C	135	SER
5	C	140	ASN
6	D	11	GLN
6	D	52	LYS
6	D	62	LEU
6	D	63	GLN
6	D	81	GLN
6	D	85	VAL
6	D	102	LYS
6	D	113	ASP

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Mol	Chain	Res	Type
6	D	119	PRO
6	D	139	PRO
6	D	168	ALA
6	D	178	ARG
7	E	59	GLN
7	E	173	ALA
8	F	96	LYS
9	G	56	THR
9	G	96	ASP
9	G	107	GLN
9	G	119	LEU
9	G	126	VAL
10	H	123	PHE
11	I	21	ARG
11	I	24	GLY
11	I	33	GLY
11	I	37	GLN
11	I	66	ASN
11	I	79	GLN
11	I	81	GLN
11	I	93	LEU
11	I	99	VAL
11	I	100	ARG
11	I	107	LYS
11	I	135	ALA
12	J	26	ASP
12	J	82	THR
12	J	106	GLU
12	J	120	ARG
12	J	122	ALA
12	J	139	ASP
13	K	39	THR
13	K	56	LYS
13	K	93	GLY
13	K	95	THR
14	L	79	ALA
14	L	96	TYR
14	L	106	ALA
15	M	24	LEU
15	M	74	GLY
15	M	104	LEU
16	N	109	LEU

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Mol	Chain	Res	Type
17	O	44	GLN
17	O	49	GLU
17	O	96	LEU
18	P	35	PRO
18	P	40	LEU
18	P	89	ARG
19	Q	34	THR
19	Q	63	LYS
19	Q	92	ALA
20	R	15	HIS
20	R	18	LYS
20	R	49	GLU
20	R	90	LYS
20	R	91	ALA
21	S	127	PRO
21	S	128	ARG
21	S	156	GLU
21	S	174	PRO
22	T	63	SER
23	U	40	ARG
23	U	50	ALA
23	U	55	GLY
25	W	48	LYS
26	Y	37	HIS
26	Y	53	ASP
3	A	55	GLY
3	A	128	GLY
3	A	159	ALA
3	A	196	VAL
3	A	198	ASN
3	A	200	GLU
4	B	52	ALA
4	B	69	LYS
4	B	82	ARG
4	B	94	ASP
4	B	151	TYR
5	C	20	PRO
5	C	66	ASN
5	C	70	GLY
5	C	121	ASP
5	C	126	ALA
5	C	129	LYS

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Mol	Chain	Res	Type
5	C	161	ALA
6	D	14	PRO
6	D	27	ALA
6	D	32	GLU
6	D	51	ASP
6	D	54	ALA
6	D	146	VAL
7	E	63	ALA
7	E	80	SER
7	E	99	THR
7	E	149	ARG
7	E	162	VAL
8	F	73	PRO
9	G	84	ASN
9	G	121	LYS
10	H	5	GLN
10	H	42	LYS
11	I	5	ASP
11	I	102	LYS
12	J	12	LYS
12	J	18	MET
12	J	45	SER
13	K	4	GLY
14	L	26	ARG
14	L	37	HIS
14	L	81	GLU
14	L	103	LEU
15	M	17	GLU
15	M	26	ASP
15	M	27	PHE
15	M	41	GLU
15	M	83	PHE
16	N	106	PHE
16	N	117	ARG
18	P	44	VAL
18	P	81	HIS
18	P	111	ARG
20	R	12	ASP
20	R	64	ASN
20	R	108	VAL
20	R	109	ALA
20	R	110	SER

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Mol	Chain	Res	Type
21	S	4	THR
21	S	87	THR
21	S	110	GLY
21	S	126	GLY
23	U	41	VAL
24	V	5	GLU
24	V	11	ALA
24	V	36	GLN
24	V	63	LYS
25	W	8	SER
25	W	47	VAL
26	Y	5	PRO
26	Y	21	SER
26	Y	43	HIS
30	4	14	CYS
3	A	86	PRO
3	A	178	PRO
3	A	214	TRP
4	B	85	ALA
4	B	148	GLY
5	C	10	ASN
5	C	46	ARG
5	C	74	VAL
5	C	137	ALA
5	C	197	GLU
6	D	18	GLN
6	D	73	SER
6	D	76	ASN
6	D	80	ARG
6	D	118	ASN
7	E	31	GLY
7	E	32	GLU
7	E	40	GLU
7	E	76	VAL
8	F	129	ALA
9	G	156	HIS
9	G	157	PRO
10	H	56	LYS
11	I	19	VAL
11	I	106	VAL
11	I	139	ARG
13	K	36	THR

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Mol	Chain	Res	Type
13	K	41	ALA
14	L	31	VAL
14	L	59	LEU
15	M	16	ILE
15	M	42	GLY
15	M	73	PHE
16	N	6	THR
16	N	11	ARG
16	N	43	ALA
16	N	57	PHE
17	O	29	ALA
17	O	39	PHE
17	O	58	ALA
17	O	79	GLN
18	P	91	PHE
19	Q	75	ARG
20	R	32	GLN
20	R	61	SER
20	R	89	GLY
21	S	10	PRO
21	S	130	ILE
25	W	7	ARG
26	Y	4	HIS
3	A	38	PRO
3	A	241	GLY
4	B	65	GLY
5	C	119	ALA
5	C	120	VAL
5	C	138	LYS
6	D	12	VAL
7	E	112	PRO
7	E	157	TYR
9	G	169	GLN
11	I	8	PRO
11	I	83	LEU
16	N	8	ILE
16	N	21	ALA
16	N	44	THR
19	Q	23	GLY
19	Q	39	LYS
19	Q	42	ILE
19	Q	50	VAL

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Mol	Chain	Res	Type
20	R	11	ASN
20	R	59	LYS
20	R	63	THR
20	R	111	GLY
22	T	13	GLY
23	U	16	ASN
24	V	19	ASP
24	V	42	ARG
25	W	23	LEU
6	D	41	GLY
10	H	55	VAL
20	R	60	PRO
20	R	98	ILE
4	B	173	VAL
10	H	99	ILE
15	M	28	ARG
21	S	79	ILE
21	S	89	GLY
21	S	98	VAL
24	V	56	VAL
3	A	142	VAL
4	B	91	VAL
5	C	55	GLY
9	G	136	PRO
10	H	29	ILE
17	O	14	VAL
5	C	118	VAL
6	D	50	ILE
7	E	36	PRO
7	E	92	VAL
15	M	82	PRO
15	M	99	VAL
20	R	41	PRO
23	U	18	VAL
3	A	160	GLY
4	B	62	PRO
12	J	100	PRO
17	O	40	VAL
30	4	21	GLY

### 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 X-ray entries followed by that with respect to entries of similar resolution.

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
3	A	164/215 (76%)	130 (79%)	34 (21%)	1	7
4	B	155/157 (99%)	132 (85%)	23 (15%)	3	20
5	C	157/163 (96%)	126 (80%)	31 (20%)	1	8
6	D	153/156 (98%)	139 (91%)	14 (9%)	11	41
7	E	136/144 (94%)	119 (88%)	17 (12%)	5	26
8	F	53/107 (50%)	48 (91%)	5 (9%)	10	40
9	G	118/146 (81%)	96 (81%)	22 (19%)	2	10
10	H	103/103 (100%)	80 (78%)	23 (22%)	1	5
11	I	108/121 (89%)	91 (84%)	17 (16%)	3	18
12	J	110/116 (95%)	92 (84%)	18 (16%)	2	15
13	K	90/93 (97%)	71 (79%)	19 (21%)	1	7
14	L	74/82 (90%)	54 (73%)	20 (27%)	0	3
15	M	94/134 (70%)	81 (86%)	13 (14%)	4	23
16	N	96/97 (99%)	80 (83%)	16 (17%)	2	14
17	O	75/79 (95%)	69 (92%)	6 (8%)	14	48
18	P	109/115 (95%)	92 (84%)	17 (16%)	3	18
19	Q	75/76 (99%)	62 (83%)	13 (17%)	2	13
20	R	91/96 (95%)	70 (77%)	21 (23%)	1	5
21	S	149/192 (78%)	123 (83%)	26 (17%)	2	13
22	T	62/67 (92%)	53 (86%)	9 (14%)	4	21
23	U	57/66 (86%)	46 (81%)	11 (19%)	1	9
24	V	54/55 (98%)	45 (83%)	9 (17%)	2	14
25	W	48/48 (100%)	41 (85%)	7 (15%)	3	20
26	Y	51/53 (96%)	45 (88%)	6 (12%)	6	29
30	4	35/35 (100%)	30 (86%)	5 (14%)	4	22
All	All	2417/2716 (89%)	2015 (83%)	402 (17%)	2	15



All (402) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
3	A	35	GLU
3	A	43	ARG
3	A	48	ARG
3	A	51	SER
3	A	60	ARG
3	A	63	ARG
3	A	64	ILE
3	A	68	LYS
3	A	84	TYR
3	A	88	ARG
3	A	91	ARG
3	A	99	ASP
3	A	117	VAL
3	A	122	GLU
3	A	135	PHE
3	A	143	HIS
3	A	154	GLN
3	A	157	ARG
3	A	158	SER
3	A	175	VAL
3	A	183	ARG
3	A	196	VAL
3	A	200	GLU
3	A	203	ASN
3	A	204	ILE
3	A	208	LYS
3	A	214	TRP
3	A	215	LEU
3	A	226	MET
3	A	228	PRO
3	A	230	ASP
3	A	239	ARG
3	A	244	ARG
3	A	246	PRO
4	B	27	LEU
4	B	33	ILE
4	B	41	THR
4	B	42	ASP
4	B	44	TYR
4	B	47	VAL
4	B	49	ILE
4	B	53	PRO

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Mol	Chain	Res	Type
4	B	75	THR
4	B	76	ARG
4	B	84	PHE
4	B	86	PRO
4	B	87	ASP
4	B	92	ASN
4	B	103	ASP
4	B	131	SER
4	B	134	TRP
4	B	137	ARG
4	B	147	PRO
4	B	172	VAL
4	B	176	ARG
4	B	182	ILE
4	B	198	LEU
5	C	4	ILE
5	C	5	ASN
5	C	13	ARG
5	C	18	PRO
5	C	19	LEU
5	C	20	PRO
5	C	27	LEU
5	C	46	ARG
5	C	48	ARG
5	C	51	VAL
5	C	58	MET
5	C	59	TYR
5	C	62	LYS
5	C	66	ASN
5	C	76	THR
5	C	90	SER
5	C	95	LEU
5	C	96	PRO
5	C	104	LEU
5	C	108	ILE
5	C	117	LEU
5	C	136	TRP
5	C	143	ASP
5	C	153	ASP
5	C	154	ASP
5	C	164	VAL
5	C	165	SER

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Mol	Chain	Res	Type
5	C	166	TRP
5	C	188	ILE
5	C	193	LEU
5	C	195	ILE
6	D	3	GLN
6	D	10	ASP
6	D	51	ASP
6	D	62	LEU
6	D	66	ILE
6	D	77	PHE
6	D	80	ARG
6	D	89	VAL
6	D	108	LEU
6	D	117	ILE
6	D	125	ARG
6	D	130	LEU
6	D	137	ILE
6	D	147	ASP
7	E	18	ASN
7	E	21	ASP
7	E	35	VAL
7	E	37	TYR
7	E	42	THR
7	E	44	ARG
7	E	57	ASP
7	E	67	LEU
7	E	84	THR
7	E	107	ILE
7	E	115	ILE
7	E	116	GLU
7	E	129	THR
7	E	136	ILE
7	E	148	VAL
7	E	155	ASP
7	E	165	VAL
8	F	87	LYS
8	F	91	THR
8	F	115	ASP
8	F	116	LEU
8	F	135	MET
9	G	31	THR
9	G	33	ILE

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Mol	Chain	Res	Type
9	G	36	ASN
9	G	40	ASN
9	G	57	LEU
9	G	61	ARG
9	G	65	LYS
9	G	67	ARG
9	G	87	GLN
9	G	93	LYS
9	G	100	TYR
9	G	102	ARG
9	G	106	TYR
9	G	110	LEU
9	G	113	GLU
9	G	116	ARG
9	G	126	VAL
9	G	148	LEU
9	G	154	GLU
9	G	157	PRO
9	G	164	GLN
9	G	165	VAL
10	H	1	MET
10	H	6	SER
10	H	10	VAL
10	H	19	ILE
10	H	22	ILE
10	H	23	ARG
10	H	25	LEU
10	H	26	ASN
10	H	27	SER
10	H	41	ASN
10	H	42	LYS
10	H	47	VAL
10	H	70	VAL
10	H	77	THR
10	H	78	SER
10	H	81	ILE
10	H	91	PHE
10	H	94	ASN
10	H	104	GLU
10	H	116	ARG
10	H	119	ARG
10	H	127	VAL

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Mol	Chain	Res	Type
10	H	129	LEU
11	I	4	HIS
11	I	7	LYS
11	I	13	ARG
11	I	14	LYS
11	I	21	ARG
11	I	26	THR
11	I	28	LYS
11	I	34	HIS
11	I	38	LYS
11	I	45	LYS
11	I	53	ARG
11	I	54	SER
11	I	88	PHE
11	I	89	ASP
11	I	103	ASN
11	I	114	ILE
11	I	130	ILE
12	J	7	ARG
12	J	10	PHE
12	J	11	ARG
12	J	21	ASP
12	J	28	VAL
12	J	43	ILE
12	J	57	ARG
12	J	60	ARG
12	J	64	LYS
12	J	65	ILE
12	J	70	PHE
12	J	81	GLU
12	J	91	VAL
12	J	93	TYR
12	J	106	GLU
12	J	119	PHE
12	J	128	ILE
12	J	134	LYS
13	K	5	LYS
13	K	8	ARG
13	K	10	LEU
13	K	11	ASN
13	K	15	SER
13	K	17	ARG

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Mol	Chain	Res	Type
13	K	26	THR
13	K	37	THR
13	K	43	GLU
13	K	50	GLN
13	K	64	ARG
13	K	76	VAL
13	K	79	VAL
13	K	83	VAL
13	K	95	THR
13	K	99	ARG
13	K	104	ARG
13	K	109	THR
13	K	112	LEU
14	L	8	ARG
14	L	13	THR
14	L	24	SER
14	L	36	LYS
14	L	43	ILE
14	L	46	SER
14	L	50	THR
14	L	56	SER
14	L	59	LEU
14	L	60	LYS
14	L	63	ASN
14	L	64	LYS
14	L	66	ASP
14	L	67	THR
14	L	71	VAL
14	L	89	PHE
14	L	90	ASP
14	L	91	ARG
14	L	94	TYR
14	L	108	ARG
15	M	6	LYS
15	M	24	LEU
15	M	31	ASP
15	M	43	ASN
15	M	51	GLU
15	M	54	VAL
15	M	58	ASN
15	M	66	PHE
15	M	69	ARG

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Mol	Chain	Res	Type
15	M	72	SER
15	M	92	THR
15	M	101	ARG
15	M	109	GLU
16	N	10	ARG
16	N	18	LEU
16	N	28	ARG
16	N	30	LYS
16	N	40	LEU
16	N	49	ASP
16	N	51	ARG
16	N	56	ASP
16	N	60	LEU
16	N	79	PHE
16	N	85	ARG
16	N	87	ASN
16	N	88	ILE
16	N	93	LYS
16	N	97	ASP
16	N	111	ASP
17	O	5	ILE
17	O	20	ILE
17	O	22	VAL
17	O	35	LEU
17	O	54	TYR
17	O	84	THR
18	P	9	ARG
18	P	11	LYS
18	P	16	GLN
18	P	17	GLN
18	P	20	LEU
18	P	25	PHE
18	P	32	ARG
18	P	35	PRO
18	P	40	LEU
18	P	48	LYS
18	P	54	GLU
18	P	65	SER
18	P	87	GLU
18	P	91	PHE
18	P	101	PRO
18	P	107	ILE

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Mol	Chain	Res	Type
18	P	124	ILE
19	Q	14	GLU
19	Q	26	SER
19	Q	31	PRO
19	Q	34	THR
19	Q	38	ILE
19	Q	40	ASP
19	Q	42	ILE
19	Q	43	GLN
19	Q	44	GLN
19	Q	54	SER
19	Q	68	PHE
19	Q	73	ASN
19	Q	81	ARG
20	R	10	HIS
20	R	11	ASN
20	R	14	LEU
20	R	15	HIS
20	R	16	PHE
20	R	18	LYS
20	R	20	ASP
20	R	23	ILE
20	R	25	LEU
20	R	35	LYS
20	R	44	GLN
20	R	71	GLN
20	R	76	LEU
20	R	80	LYS
20	R	85	ASP
20	R	93	ARG
20	R	95	ARG
20	R	96	LYS
20	R	105	ARG
20	R	106	VAL
20	R	112	LYS
21	S	3	LEU
21	S	13	LYS
21	S	24	TYR
21	S	28	ASN
21	S	32	PHE
21	S	34	LEU
21	S	35	ASP

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Mol	Chain	Res	Type
21	S	45	GLN
21	S	52	PHE
21	S	53	ASP
21	S	71	MET
21	S	75	LYS
21	S	76	ARG
21	S	79	ILE
21	S	92	VAL
21	S	99	HIS
21	S	100	THR
21	S	105	GLN
21	S	107	GLU
21	S	120	LEU
21	S	122	ILE
21	S	133	GLU
21	S	143	ILE
21	S	158	CYS
21	S	169	VAL
21	S	172	LEU
22	T	3	HIS
22	T	4	LYS
22	T	14	ARG
22	T	16	SER
22	T	20	TYR
22	T	35	ASN
22	T	40	GLN
22	T	60	PHE
22	T	64	ASP
23	U	10	LYS
23	U	12	ASN
23	U	32	ARG
23	U	34	THR
23	U	37	ILE
23	U	42	GLN
23	U	45	ASN
23	U	61	TRP
23	U	72	LYS
23	U	75	TYR
23	U	78	ILE
24	V	1	MET
24	V	10	GLN
24	V	13	ASP

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Mol	Chain	Res	Type
24	V	21	ARG
24	V	28	LEU
24	V	37	LEU
24	V	53	LEU
24	V	62	ARG
24	V	65	GLU
25	W	10	ILE
25	W	12	ARG
25	W	15	ASN
25	W	28	ILE
25	W	30	ASP
25	W	37	THR
25	W	51	LEU
26	Y	4	HIS
26	Y	17	ASP
26	Y	25	LEU
26	Y	32	GLU
26	Y	46	CYS
26	Y	56	GLN
30	4	1	MET
30	4	9	LYS
30	4	12	ASP
30	4	18	ARG
30	4	35	ARG

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (82) such sidechains are listed below:

Mol	Chain	Res	Type
3	A	143	HIS
3	A	220	HIS
3	A	231	HIS
4	B	35	GLN
4	B	60	ASN
4	B	129	HIS
4	B	168	GLN
4	B	180	ASN
5	C	5	ASN
5	C	9	GLN
5	C	50	GLN
5	C	61	GLN
5	C	66	ASN
5	C	132	ASN

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Mol	Chain	Res	Type
5	C	140	ASN
5	C	176	ASN
6	D	11	GLN
6	D	129	ASN
6	D	171	GLN
7	E	18	ASN
7	E	20	GLN
7	E	106	ASN
7	E	111	HIS
7	E	139	GLN
9	G	66	HIS
9	G	84	ASN
9	G	87	GLN
9	G	129	HIS
9	G	158	HIS
9	G	161	GLN
9	G	164	GLN
10	H	26	ASN
10	H	79	HIS
10	H	102	GLN
11	I	37	GLN
11	I	67	ASN
11	I	79	GLN
11	I	121	HIS
12	J	13	GLN
12	J	58	HIS
14	L	49	GLN
14	L	86	GLN
15	M	2	GLN
15	M	4	HIS
15	M	18	GLN
15	M	48	GLN
15	M	89	ASN
16	N	31	GLN
16	N	34	ASN
16	N	37	GLN
16	N	66	ASN
16	N	81	ASN
17	O	11	GLN
17	O	63	HIS
17	O	88	GLN
18	P	16	GLN

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Mol	Chain	Res	Type
18	P	17	GLN
18	P	81	HIS
18	P	115	ASN
19	Q	73	ASN
20	R	11	ASN
20	R	44	GLN
20	R	57	ASN
20	R	64	ASN
21	S	28	ASN
21	S	45	GLN
21	S	70	GLN
21	S	119	ASN
21	S	146	HIS
22	T	3	HIS
22	T	17	ASN
22	T	57	HIS
23	U	12	ASN
23	U	16	ASN
24	V	10	GLN
24	V	36	GLN
24	V	45	GLN
26	Y	29	ASN
26	Y	43	HIS
26	Y	44	HIS
26	Y	56	GLN
30	4	34	GLN

### 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	X	2680/2880 (93%)	678 (25%)	0
2	Z	121/123 (98%)	24 (19%)	0
All	All	2801/3003 (93%)	702 (25%)	0

All (702) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	X	13	A
1	X	14	A
1	X	27	G
1	X	34	U

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Mol	Chain	Res	Type
1	X	35	G
1	X	45	C
1	X	49	U
1	X	51	A
1	X	59	G
1	X	60	A
1	X	63	A
1	X	67	G
1	X	69	G
1	X	70	A
1	X	71	A
1	X	72	A
1	X	74	G
1	X	76	C
1	X	82	G
1	X	84	G
1	X	87	G
1	X	89	A
1	X	90	G
1	X	91	A
1	X	99	U
1	X	102	C
1	X	110	U
1	X	116	A
1	X	117	A
1	X	118	U
1	X	119	G
1	X	123	A
1	X	124	A
1	X	129	A
1	X	135	U
1	X	143	A
1	X	158	A
1	X	173	A
1	X	174	A
1	X	181	A
1	X	182	G
1	X	193	A
1	X	199	A
1	X	200	A
1	X	204	A
1	X	205	A

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Mol	Chain	Res	Type
1	X	206	U
1	X	210	A
1	X	218	A
1	X	219	G
1	X	225	G
1	X	228	A
1	X	242	A
1	X	243	G
1	X	244	C
1	X	245	C
1	X	304	A
1	X	305	A
1	X	318	G
1	X	323	G
1	X	333	A
1	X	334	G
1	X	335	A
1	X	340	G
1	X	341	A
1	X	342	G
1	X	343	A
1	X	399	G
1	X	400	U
1	X	403	A
1	X	404	A
1	X	409	G
1	X	412	U
1	X	414	A
1	X	416	U
1	X	418	C
1	X	419	G
1	X	424	G
1	X	425	A
1	X	441	A
1	X	447	U
1	X	455	A
1	X	456	C
1	X	458	G
1	X	459	A
1	X	460	U
1	X	461	A
1	X	463	C

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Mol	Chain	Res	Type
1	X	467	U
1	X	468	A
1	X	470	U
1	X	485	G
1	X	486	U
1	X	490	A
1	X	491	A
1	X	492	G
1	X	493	A
1	X	494	A
1	X	497	C
1	X	514	G
1	X	515	A
1	X	517	A
1	X	519	C
1	X	537	C
1	X	538	A
1	X	539	A
1	X	540	G
1	X	541	C
1	X	542	A
1	X	543	G
1	X	554	U
1	X	555	U
1	X	556	A
1	X	558	G
1	X	560	G
1	X	571	U
1	X	572	G
1	X	580	A
1	X	581	A
1	X	582	G
1	X	583	C
1	X	584	A
1	X	595	A
1	X	601	A
1	X	613	A
1	X	614	G
1	X	624	A
1	X	625	A
1	X	626	A
1	X	627	A

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Mol	Chain	Res	Type
1	X	631	G
1	X	632	A
1	X	633	G
1	X	636	G
1	X	639	G
1	X	649	G
1	X	651	C
1	X	652	C
1	X	654	A
1	X	655	A
1	X	657	A
1	X	664	C
1	X	665	A
1	X	667	U
1	X	668	A
1	X	683	A
1	X	684	C
1	X	690	A
1	X	699	G
1	X	700	C
1	X	718	A
1	X	728	G
1	X	730	C
1	X	732	G
1	X	740	A
1	X	742	G
1	X	743	A
1	X	751	G
1	X	752	G
1	X	753	U
1	X	760	U
1	X	766	A
1	X	776	G
1	X	777	A
1	X	778	G
1	X	789	G
1	X	790	A
1	X	795	A
1	X	796	A
1	X	797	A
1	X	798	G
1	X	802	A

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Mol	Chain	Res	Type
1	X	803	C
1	X	804	C
1	X	805	G
1	X	806	A
1	X	813	A
1	X	814	G
1	X	815	A
1	X	818	G
1	X	819	C
1	X	825	C
1	X	832	A
1	X	840	U
1	X	841	G
1	X	843	G
1	X	844	G
1	X	859	U
1	X	871	U
1	X	872	G
1	X	873	U
1	X	874	A
1	X	879	A
1	X	922	A
1	X	926	C
1	X	927	C
1	X	931	G
1	X	939	C
1	X	940	G
1	X	943	U
1	X	952	A
1	X	956	A
1	X	957	G
1	X	964	A
1	X	968	C
1	X	969	U
1	X	970	A
1	X	972	C
1	X	973	U
1	X	983	G
1	X	984	A
1	X	985	G
1	X	986	A
1	X	994	A

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Mol	Chain	Res	Type
1	X	995	A
1	X	996	C
1	X	1006	C
1	X	1007	A
1	X	1014	G
1	X	1016	C
1	X	1017	C
1	X	1019	U
1	X	1021	A
1	X	1022	A
1	X	1023	U
1	X	1024	G
1	X	1032	A
1	X	1033	G
1	X	1034	U
1	X	1036	G
1	X	1037	U
1	X	1044	U
1	X	1050	G
1	X	1051	U
1	X	1053	G
1	X	1056	U
1	X	1057	A
1	X	1058	G
1	X	1059	A
1	X	1068	A
1	X	1070	G
1	X	1071	U
1	X	1072	U
1	X	1073	G
1	X	1077	U
1	X	1078	A
1	X	1079	G
1	X	1081	A
1	X	1082	G
1	X	1086	C
1	X	1087	C
1	X	1090	C
1	X	1096	A
1	X	1097	A
1	X	1098	G
1	X	1099	A

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Mol	Chain	Res	Type
1	X	1100	G
1	X	1108	U
1	X	1119	U
1	X	1122	A
1	X	1123	G
1	X	1129	A
1	X	1137	A
1	X	1138	A
1	X	1139	A
1	X	1140	A
1	X	1141	U
1	X	1142	G
1	X	1143	A
1	X	1145	C
1	X	1146	G
1	X	1152	C
1	X	1153	A
1	X	1154	A
1	X	1155	G
1	X	1161	U
1	X	1167	A
1	X	1168	G
1	X	1182	U
1	X	1185	C
1	X	1186	G
1	X	1187	A
1	X	1189	G
1	X	1192	A
1	X	1194	U
1	X	1200	G
1	X	1220	G
1	X	1224	A
1	X	1233	A
1	X	1234	C
1	X	1240	G
1	X	1250	A
1	X	1251	G
1	X	1253	C
1	X	1260	A
1	X	1261	G
1	X	1262	U
1	X	1263	G

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Mol	Chain	Res	Type
1	X	1264	C
1	X	1265	G
1	X	1266	G
1	X	1269	G
1	X	1278	A
1	X	1279	G
1	X	1284	G
1	X	1285	A
1	X	1288	A
1	X	1289	A
1	X	1300	A
1	X	1301	U
1	X	1302	C
1	X	1313	U
1	X	1314	A
1	X	1315	A
1	X	1316	G
1	X	1324	G
1	X	1325	U
1	X	1326	U
1	X	1333	G
1	X	1334	A
1	X	1338	G
1	X	1339	U
1	X	1342	U
1	X	1343	C
1	X	1346	C
1	X	1354	A
1	X	1355	A
1	X	1356	G
1	X	1358	C
1	X	1359	G
1	X	1365	U
1	X	1370	U
1	X	1378	A
1	X	1392	U
1	X	1398	G
1	X	1399	C
1	X	1405	A
1	X	1410	U
1	X	1411	C
1	X	1428	G

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Mol	Chain	Res	Type
1	X	1429	A
1	X	1430	G
1	X	1432	G
1	X	1433	A
1	X	1434	U
1	X	1435	G
1	X	1440	G
1	X	1441	A
1	X	1442	C
1	X	1443	G
1	X	1454	U
1	X	1460	G
1	X	1464	A
1	X	1467	U
1	X	1468	A
1	X	1469	U
1	X	1470	G
1	X	1474	A
1	X	1475	U
1	X	1476	G
1	X	1482	U
1	X	1490	U
1	X	1497	C
1	X	1498	G
1	X	1505	U
1	X	1506	C
1	X	1513	U
1	X	1514	C
1	X	1524	C
1	X	1525	A
1	X	1527	G
1	X	1528	C
1	X	1531	C
1	X	1551	U
1	X	1553	G
1	X	1554	G
1	X	1562	G
1	X	1570	C
1	X	1571	G
1	X	1574	A
1	X	1575	C
1	X	1576	G

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Mol	Chain	Res	Type
1	X	1582	A
1	X	1583	A
1	X	1585	A
1	X	1594	U
1	X	1601	U
1	X	1602	G
1	X	1603	A
1	X	1608	U
1	X	1609	G
1	X	1618	U
1	X	1619	A
1	X	1624	A
1	X	1625	A
1	X	1626	A
1	X	1627	C
1	X	1631	C
1	X	1632	A
1	X	1633	C
1	X	1635	G
1	X	1648	C
1	X	1651	U
1	X	1652	G
1	X	1657	A
1	X	1663	C
1	X	1664	G
1	X	1665	C
1	X	1670	G
1	X	1671	A
1	X	1685	A
1	X	1686	A
1	X	1692	C
1	X	1698	C
1	X	1699	A
1	X	1710	U
1	X	1711	C
1	X	1713	G
1	X	1715	A
1	X	1716	G
1	X	1717	A
1	X	1718	A
1	X	1724	C
1	X	1732	U

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Mol	Chain	Res	Type
1	X	1733	U
1	X	1747	G
1	X	1749	G
1	X	1750	A
1	X	1752	U
1	X	1754	G
1	X	1755	G
1	X	1758	C
1	X	1764	A
1	X	1771	A
1	X	1772	C
1	X	1773	C
1	X	1776	A
1	X	1778	U
1	X	1782	A
1	X	1790	G
1	X	1791	C
1	X	1792	C
1	X	1793	A
1	X	1800	A
1	X	1801	C
1	X	1802	A
1	X	1807	A
1	X	1808	C
1	X	1811	A
1	X	1812	U
1	X	1813	A
1	X	1820	G
1	X	1821	A
1	X	1825	C
1	X	1830	C
1	X	1831	G
1	X	1842	G
1	X	1864	G
1	X	1883	A
1	X	1910	A
1	X	1912	G
1	X	1914	U
1	X	1919	A
1	X	1920	A
1	X	1922	U
1	X	1923	U

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Mol	Chain	Res	Type
1	X	1924	C
1	X	1925	C
1	X	1926	U
1	X	1927	U
1	X	1928	G
1	X	1937	G
1	X	1938	U
1	X	1939	U
1	X	1946	U
1	X	1947	G
1	X	1948	C
1	X	1949	A
1	X	1950	C
1	X	1953	A
1	X	1954	A
1	X	1955	G
1	X	1961	A
1	X	1964	A
1	X	1974	U
1	X	1976	U
1	X	1979	C
1	X	1980	A
1	X	1996	A
1	X	2003	A
1	X	2004	U
1	X	2005	U
1	X	2006	G
1	X	2014	A
1	X	2015	G
1	X	2016	A
1	X	2019	C
1	X	2026	C
1	X	2034	A
1	X	2035	G
1	X	2038	C
1	X	2039	G
1	X	2044	G
1	X	2045	A
1	X	2046	C
1	X	2050	G
1	X	2051	U
1	X	2052	G

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Mol	Chain	Res	Type
1	X	2057	U
1	X	2073	A
1	X	2075	U
1	X	2076	G
1	X	2083	G
1	X	2089	C
1	X	2171	U
1	X	2181	A
1	X	2189	A
1	X	2190	A
1	X	2191	A
1	X	2192	U
1	X	2199	C
1	X	2204	A
1	X	2205	C
1	X	2217	G
1	X	2218	G
1	X	2229	G
1	X	2230	G
1	X	2238	G
1	X	2241	U
1	X	2245	A
1	X	2246	A
1	X	2247	A
1	X	2262	C
1	X	2266	A
1	X	2267	A
1	X	2268	G
1	X	2275	U
1	X	2276	C
1	X	2285	U
1	X	2286	G
1	X	2287	G
1	X	2288	A
1	X	2291	U
1	X	2298	U
1	X	2300	G
1	X	2301	A
1	X	2307	A
1	X	2313	G
1	X	2314	A
1	X	2315	A

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Mol	Chain	Res	Type
1	X	2316	G
1	X	2323	U
1	X	2324	G
1	X	2325	A
1	X	2326	C
1	X	2356	A
1	X	2362	G
1	X	2364	C
1	X	2369	U
1	X	2381	A
1	X	2382	C
1	X	2386	G
1	X	2396	C
1	X	2402	U
1	X	2403	C
1	X	2405	A
1	X	2406	C
1	X	2408	G
1	X	2410	U
1	X	2414	A
1	X	2418	A
1	X	2419	C
1	X	2420	C
1	X	2427	A
1	X	2428	U
1	X	2437	G
1	X	2438	A
1	X	2452	U
1	X	2455	A
1	X	2470	U
1	X	2476	A
1	X	2477	C
1	X	2481	G
1	X	2482	A
1	X	2483	U
1	X	2484	G
1	X	2485	U
1	X	2486	C
1	X	2492	G
1	X	2497	A
1	X	2498	U
1	X	2499	C

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Mol	Chain	Res	Type
1	X	2501	U
1	X	2508	G
1	X	2521	A
1	X	2522	G
1	X	2545	A
1	X	2546	G
1	X	2552	C
1	X	2553	G
1	X	2561	G
1	X	2565	C
1	X	2578	G
1	X	2581	A
1	X	2582	G
1	X	2588	U
1	X	2589	C
1	X	2591	C
1	X	2592	U
1	X	2593	A
1	X	2594	U
1	X	2595	C
1	X	2608	A
1	X	2609	G
1	X	2619	G
1	X	2624	G
1	X	2625	U
1	X	2633	A
1	X	2634	G
1	X	2649	A
1	X	2660	C
1	X	2661	G
1	X	2668	U
1	X	2669	C
1	X	2691	C
1	X	2692	A
1	X	2693	U
1	X	2694	G
1	X	2705	A
1	X	2706	U
1	X	2707	G
1	X	2712	G
1	X	2713	A
1	X	2719	U

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Mol	Chain	Res	Type
1	X	2730	A
1	X	2731	G
1	X	2732	C
1	X	2736	U
1	X	2737	A
1	X	2738	A
1	X	2744	A
1	X	2745	A
1	X	2746	G
1	X	2757	G
1	X	2758	A
1	X	2759	U
1	X	2760	G
1	X	2761	A
1	X	2762	G
1	X	2770	A
1	X	2771	C
1	X	2774	U
1	X	2775	U
1	X	2776	U
1	X	2780	A
1	X	2782	G
1	X	2783	U
1	X	2795	A
1	X	2796	A
1	X	2798	A
1	X	2807	U
1	X	2808	U
1	X	2810	A
1	X	2811	G
1	X	2823	G
1	X	2824	C
1	X	2825	A
1	X	2840	U
1	X	2841	U
1	X	2842	C
1	X	2847	G
1	X	2850	U
1	X	2854	G
1	X	2855	C
1	X	2858	A
1	X	2867	G

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Mol	Chain	Res	Type
1	X	2868	G
1	X	2869	U
2	Z	3	A
2	Z	4	C
2	Z	14	C
2	Z	15	A
2	Z	17	A
2	Z	18	G
2	Z	27	A
2	Z	28	A
2	Z	37	C
2	Z	43	G
2	Z	44	C
2	Z	46	G
2	Z	47	A
2	Z	54	U
2	Z	56	G
2	Z	63	A
2	Z	68	A
2	Z	69	G
2	Z	76	U
2	Z	99	G
2	Z	102	A
2	Z	111	C
2	Z	112	A
2	Z	123	U

There are no RNA pucker outliers to report.

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

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

## 5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

## 5.6 Ligand geometry [i](#)

Of 38 ligands modelled in this entry, 37 are monoatomic - leaving 1 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# $ Z  > 2$	Counts	RMSZ	# $ Z  > 2$
33	ZLD	X	2911	-	26,26,26	1.24	2 (7%)	35,36,36	2.15	8 (22%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
33	ZLD	X	2911	-	-	0/13/33/33	0/3/3/3

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
33	X	2911	ZLD	C5-C16	2.10	1.41	1.37
33	X	2911	ZLD	O10-C7	3.39	1.40	1.35

All (8) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
33	X	2911	ZLD	C2-N4-C7	-5.66	119.25	125.86
33	X	2911	ZLD	O10-C7-N4	-5.37	106.55	109.97
33	X	2911	ZLD	C5-C16-C17	-4.15	119.97	123.37
33	X	2911	ZLD	C5-C2-N4	2.16	122.59	119.93
33	X	2911	ZLD	F18-C16-C17	2.43	120.61	118.40
33	X	2911	ZLD	O10-C8-C9	2.63	117.90	109.33
33	X	2911	ZLD	C6-N4-C7	4.73	113.89	111.24
33	X	2911	ZLD	O15-C7-N4	4.82	132.83	129.01

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

1 monomer is involved in 22 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
33	X	2911	ZLD	22	0

## 5.7 Other polymers [i](#)

There are no such residues in this entry.

## 5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

## 6 Fit of model and data ⓘ

### 6.1 Protein, DNA and RNA chains ⓘ

In the following table, the column labelled ‘#RSRZ> 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95<sup>th</sup> percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q< 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
1	X	2686/2880 (93%)	-0.46	54 (2%) 65 57	1, 35, 97, 115	0
2	Z	122/123 (99%)	0.01	2 (1%) 72 64	28, 74, 94, 101	0
3	A	218/274 (79%)	-0.53	1 (0%) 90 86	8, 44, 57, 63	0
4	B	205/211 (97%)	-0.88	0 100 100	1, 12, 35, 53	0
5	C	197/205 (96%)	-0.55	0 100 100	2, 45, 62, 78	0
6	D	177/180 (98%)	-0.12	4 (2%) 61 51	54, 65, 73, 76	0
7	E	171/185 (92%)	-0.48	1 (0%) 89 84	38, 59, 72, 76	0
8	F	70/144 (48%)	0.70	6 (8%) 11 11	62, 71, 75, 76	0
9	G	142/174 (81%)	-0.62	1 (0%) 87 82	19, 37, 53, 57	0
10	H	134/134 (100%)	-0.91	0 100 100	1, 8, 30, 42	0
11	I	141/156 (90%)	-0.08	5 (3%) 44 38	10, 54, 69, 84	0
12	J	136/142 (95%)	-0.52	1 (0%) 87 82	25, 44, 59, 66	0
13	K	113/116 (97%)	-0.91	0 100 100	1, 2, 13, 23	0
14	L	104/114 (91%)	-0.27	1 (0%) 82 75	38, 54, 61, 67	0
15	M	108/166 (65%)	-0.95	0 100 100	1, 11, 40, 46	0
16	N	117/118 (99%)	-0.76	0 100 100	2, 33, 55, 64	0
17	O	94/100 (94%)	-0.69	0 100 100	13, 46, 63, 66	0
18	P	127/134 (94%)	-0.88	0 100 100	1, 10, 40, 57	0
19	Q	93/95 (97%)	-0.62	0 100 100	23, 36, 60, 63	0
20	R	110/115 (95%)	-0.55	0 100 100	32, 44, 66, 70	0
21	S	175/237 (73%)	-0.13	5 (2%) 52 43	53, 62, 72, 79	0
22	T	84/91 (92%)	-0.04	5 (5%) 23 19	23, 47, 66, 69	0
23	U	72/81 (88%)	-0.37	0 100 100	39, 52, 63, 64	0
24	V	66/67 (98%)	-0.76	0 100 100	34, 52, 72, 76	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2		OWAB(Å <sup>2</sup> )	Q<0.9	
25	W	55/55 (100%)	-0.67	0	100	100	32, 41, 57, 66	0
26	Y	58/60 (96%)	-0.81	0	100	100	1, 7, 32, 34	0
27	1	53/55 (96%)	2.49	30 (56%)	0	0	33, 47, 62, 65	0
28	2	46/47 (97%)	3.36	40 (86%)	0	0	1, 12, 25, 35	0
29	3	63/66 (95%)	3.45	48 (76%)	0	0	23, 34, 43, 50	0
30	4	37/37 (100%)	0.50	3 (8%)	13	12	52, 65, 72, 73	0
All	All	5974/6562 (91%)	-0.38	207 (3%)	44	38	1, 41, 84, 115	0

All (207) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
29	3	34	THR	8.7
29	3	33	ASN	8.6
27	1	40	TYR	8.4
29	3	39	ASP	7.8
29	3	32	GLN	7.3
29	3	35	GLY	6.9
29	3	40	GLU	6.9
28	2	36	ALA	6.9
29	3	41	ILE	6.3
29	3	42	ARG	6.2
29	3	8	LYS	6.2
28	2	29	ASN	6.1
29	3	31	HIS	6.0
27	1	23	THR	5.5
27	1	25	THR	5.4
29	3	7	HIS	5.4
1	X	1104	G	5.3
1	X	1522	C	5.2
29	3	38	GLY	5.2
28	2	7	PRO	5.1
29	3	36	LYS	5.1
8	F	126	ASN	5.1
28	2	26	SER	5.0
1	X	727	U	5.0
29	3	30	ARG	4.9
28	2	8	ASN	4.8
27	1	34	LYS	4.8
28	2	43	THR	4.7
27	1	43	VAL	4.7

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Mol	Chain	Res	Type	RSRZ
29	3	29	LYS	4.7
27	1	27	ASN	4.7
3	A	203	ASN	4.6
28	2	24	THR	4.6
27	1	41	ASP	4.5
2	Z	2	C	4.5
28	2	25	LYS	4.5
29	3	63	PRO	4.5
1	X	1069	G	4.4
28	2	35	ARG	4.4
29	3	28	GLY	4.4
29	3	45	GLY	4.3
29	3	6	THR	4.3
28	2	20	ALA	4.3
1	X	730	C	4.3
27	1	24	THR	4.3
27	1	42	PRO	4.3
27	1	26	LYS	4.2
27	1	39	LYS	4.1
28	2	23	LYS	4.1
1	X	891	A	4.0
1	X	2778	U	4.0
28	2	16	HIS	3.9
30	4	37	GLY	3.9
28	2	42	LEU	3.9
27	1	44	ALA	3.8
29	3	44	LYS	3.8
29	3	43	GLY	3.8
28	2	9	ASN	3.8
1	X	731	A	3.8
1	X	1099	A	3.8
29	3	10	ALA	3.7
27	1	9	ILE	3.7
1	X	1085	G	3.7
1	X	1523	A	3.7
28	2	46	ASP	3.7
28	2	39	ARG	3.6
28	2	11	LYS	3.6
28	2	4	THR	3.6
28	2	28	ARG	3.6
1	X	2088	U	3.6
28	2	15	THR	3.6

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Mol	Chain	Res	Type	RSRZ
27	1	30	ASN	3.6
28	2	27	GLY	3.5
27	1	47	HIS	3.5
1	X	1086	C	3.5
21	S	91	PRO	3.5
29	3	11	LYS	3.4
1	X	1187	A	3.4
1	X	1090	C	3.4
28	2	14	LYS	3.4
29	3	4	MET	3.4
1	X	1068	A	3.4
29	3	27	SER	3.3
29	3	58	MET	3.3
29	3	18	GLY	3.3
29	3	12	ARG	3.3
2	Z	123	U	3.3
29	3	51	ALA	3.3
28	2	34	ARG	3.3
1	X	2776	U	3.3
28	2	19	ARG	3.3
1	X	726	G	3.2
28	2	41	GLN	3.2
27	1	21	TYR	3.2
28	2	40	HIS	3.2
22	T	15	ASP	3.2
29	3	64	ARG	3.2
28	2	32	ALA	3.2
27	1	14	SER	3.2
28	2	1	MET	3.2
11	I	5	ASP	3.2
1	X	1083	C	3.1
28	2	13	ALA	3.1
29	3	2	PRO	3.1
6	D	147	ASP	3.1
8	F	84	GLY	3.1
8	F	129	ALA	3.1
1	X	2289	A	3.1
29	3	56	ALA	3.1
29	3	46	LYS	3.0
28	2	6	GLN	3.0
29	3	60	LEU	3.0
1	X	1524	C	3.0

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Mol	Chain	Res	Type	RSRZ
29	3	61	MET	3.0
28	2	10	ARG	3.0
29	3	25	PHE	3.0
1	X	514	G	2.9
29	3	62	LEU	2.9
1	X	2779	C	2.9
28	2	37	LYS	2.9
1	X	1189	G	2.9
27	1	31	THR	2.9
1	X	1100	G	2.9
1	X	1734	C	2.9
11	I	9	THR	2.9
29	3	52	LYS	2.8
1	X	1073	G	2.8
27	1	28	ARG	2.8
29	3	9	MET	2.8
1	X	2409	A	2.8
11	I	6	LEU	2.7
8	F	115	ASP	2.7
28	2	17	GLY	2.7
28	2	45	SER	2.7
1	X	1053	G	2.7
1	X	1094	C	2.7
1	X	1093	U	2.7
11	I	4	HIS	2.7
22	T	7	VAL	2.7
27	1	12	MET	2.7
21	S	93	GLU	2.7
21	S	123	VAL	2.7
1	X	2290	A	2.7
28	2	33	ARG	2.6
27	1	10	VAL	2.6
28	2	44	VAL	2.6
29	3	54	GLU	2.6
28	2	21	ARG	2.6
1	X	1082	G	2.6
1	X	1105	U	2.6
27	1	38	LYS	2.6
1	X	248	A	2.5
22	T	9	SER	2.5
1	X	1553	G	2.5
1	X	729	A	2.5

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Mol	Chain	Res	Type	RSRZ
29	3	19	THR	2.5
1	X	2780	A	2.5
1	X	557	U	2.5
28	2	2	LYS	2.5
8	F	83	ALA	2.5
1	X	1186	G	2.4
27	1	11	LYS	2.4
21	S	92	VAL	2.4
22	T	8	GLY	2.4
28	2	22	MET	2.4
1	X	728	G	2.4
27	1	15	SER	2.4
1	X	1081	A	2.4
1	X	2165	A	2.4
27	1	36	GLU	2.4
22	T	6	GLY	2.4
1	X	2173	G	2.4
28	2	31	LEU	2.4
27	1	22	TYR	2.3
27	1	37	LEU	2.3
9	G	97	ASP	2.3
6	D	43	SER	2.3
27	1	19	GLY	2.3
29	3	20	GLY	2.2
29	3	26	LYS	2.2
1	X	2169	A	2.2
29	3	59	LYS	2.2
6	D	145	MET	2.2
7	E	59	GLN	2.2
8	F	133	ARG	2.1
30	4	20	HIS	2.1
1	X	1070	G	2.1
12	J	84	MET	2.1
29	3	57	ARG	2.1
29	3	53	ALA	2.1
27	1	13	GLU	2.1
29	3	55	TRP	2.1
30	4	19	ARG	2.1
1	X	1506	C	2.1
1	X	1095	A	2.1
6	D	116	GLY	2.1
1	X	1121	G	2.1

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Mol	Chain	Res	Type	RSRZ
14	L	52	ALA	2.1
1	X	1525	A	2.0
1	X	1098	G	2.0
1	X	2175	A	2.0
11	I	29	THR	2.0
29	3	3	LYS	2.0
27	1	8	ILE	2.0
21	S	90	GLU	2.0
1	X	2877	A	2.0
1	X	1188	A	2.0

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

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

## 6.3 Carbohydrates [i](#)

There are no carbohydrates in this entry.

## 6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 95<sup>th</sup> percentile and maximum values of B factors of atoms in the group. The column labelled 'Q < 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å <sup>2</sup> )	Q<0.9
32	MG	X	2907	1/1	0.97	0.62	47.48	1,1,1,1	0
32	MG	X	2899	1/1	0.99	0.53	45.13	1,1,1,1	0
32	MG	M	167	1/1	0.98	0.55	19.63	1,1,1,1	0
32	MG	X	2889	1/1	0.95	0.43	12.66	1,1,1,1	0
32	MG	X	2909	1/1	0.98	0.36	12.09	1,1,1,1	0
32	MG	X	2903	1/1	0.93	0.31	11.39	1,1,1,1	0
33	ZLD	X	2911	24/24	0.90	0.48	8.50	28,31,37,37	0
32	MG	X	2896	1/1	0.99	0.28	5.66	1,1,1,1	0
32	MG	X	2885	1/1	0.88	0.21	2.47	45,45,45,45	0
32	MG	X	2883	1/1	0.97	0.19	1.61	1,1,1,1	0
31	ZN	Y	61	1/1	0.98	0.13	-0.27	89,89,89,89	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
31	ZN	4	38	1/1	0.98	0.03	-1.94	78,78,78,78	0
32	MG	X	2887	1/1	0.96	0.17	-	37,37,37,37	0
32	MG	X	2888	1/1	0.99	0.38	-	1,1,1,1	0
32	MG	Z	125	1/1	0.98	0.17	-	1,1,1,1	0
32	MG	X	2884	1/1	0.97	0.23	-	19,19,19,19	0
32	MG	X	2900	1/1	0.92	0.52	-	1,1,1,1	0
32	MG	X	2901	1/1	0.98	0.35	-	1,1,1,1	0
32	MG	X	2895	1/1	0.98	0.31	-	1,1,1,1	0
32	MG	Z	127	1/1	0.97	0.20	-	3,3,3,3	0
32	MG	X	2893	1/1	0.95	0.20	-	3,3,3,3	0
32	MG	X	2902	1/1	0.97	0.80	-	61,61,61,61	0
32	MG	X	2881	1/1	0.95	0.50	-	10,10,10,10	0
32	MG	X	2886	1/1	0.96	0.25	-	15,15,15,15	0
32	MG	X	2905	1/1	0.96	0.36	-	18,18,18,18	0
32	MG	X	2882	1/1	0.96	0.38	-	49,49,49,49	0
32	MG	Z	126	1/1	0.95	0.13	-	12,12,12,12	0
32	MG	X	2892	1/1	0.98	0.19	-	1,1,1,1	0
32	MG	X	2897	1/1	0.90	0.27	-	1,1,1,1	0
32	MG	X	2908	1/1	0.96	0.46	-	48,48,48,48	0
32	MG	Z	124	1/1	0.90	0.19	-	11,11,11,11	0
32	MG	X	2891	1/1	0.94	0.11	-	23,23,23,23	0
32	MG	X	2904	1/1	0.94	0.40	-	1,1,1,1	0
32	MG	X	2906	1/1	0.99	0.09	-	40,40,40,40	0
32	MG	X	2890	1/1	0.95	0.65	-	1,1,1,1	0
32	MG	X	2910	1/1	0.94	0.26	-	14,14,14,14	0
32	MG	X	2898	1/1	0.97	0.40	-	1,1,1,1	0
32	MG	X	2894	1/1	0.94	0.36	-	2,2,2,2	0

## 6.5 Other polymers [i](#)

There are no such residues in this entry.