



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 31, 2014 – 06:05 PM BST

PDB ID : 2HGP
Title : Crystal structure of the 70S *Thermus thermophilus* ribosome with translocated and rotated Shine-Dalgarno Duplex. This entry 2HGP contains 30S ribosomal subunit. The 50S ribosomal subunit can be found in PDB entry 2HGQ.
Authors : Jenner, L.; Yusupova, G.; Rees, B.; Moras, D.; Yusupov, M.
Deposited on : 2006-06-27
Resolution : 5.50 Å(reported)

This is a full wwPDB validation report for a publicly released PDB entry.
We welcome your comments at validation@mail.wwpdb.org
A user guide is available at <http://wwpdb.org/ValidationPDFNotes.html>

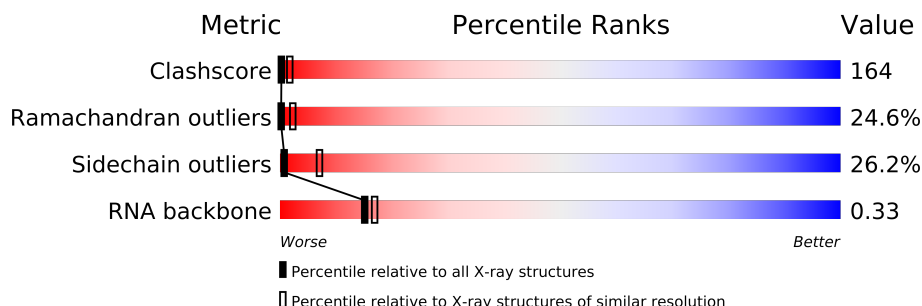
The following versions of software and data (see [references](#)) were used in the production of this report:

MolProbity : 4.02b-467
Mogul : 1.15 2013
Xtriage (Phenix) : dev-1323
EDS : **NOT EXECUTED**
Percentile statistics : 21963
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)
Validation Pipeline (wwPDB-VP) : stable23004

1 Overall quality at a glance

The reported resolution of this entry is 5.50 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
Clashscore	79885	1008 (7.40-3.52)
Ramachandran outliers	78287	1275 (7.50-3.50)
Sidechain outliers	78261	1251 (7.50-3.50)
RNA backbone	1838	1040 (7.50-2.80)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density.

Note EDS was not executed.

Mol	Chain	Length	Quality of chain
1	A	1522	
2	1	50	
3	B	76	
3	C	76	
3	D	76	
4	E	256	
5	F	239	
6	G	209	
7	H	162	
8	I	101	
9	J	156	
10	K	138	
11	L	128	
12	M	105	
13	N	129	

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Mol	Chain	Length	Quality of chain
14	O	132	
15	P	126	
16	Q	61	
17	R	89	
18	S	88	
19	T	105	
20	U	88	
21	V	93	
22	W	106	
23	X	27	

2 Entry composition

There are 23 unique types of molecules in this entry. The entry contains 57679 atoms, of which 0 are hydrogen and 0 are deuterium.

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 16S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	1515	Total	C	N	O	P	0	0	0
			32554	14490	6022	10527	1515			

- Molecule 2 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	1	50	Total	C	N	O	P	0	0	0
			1025	459	128	388	50			

- Molecule 3 is a RNA chain called tRNA PHE (unmodified bases).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	C	76	Total	C	N	O	P	0	0	0
			1623	723	290	534	76			
3	D	76	Total	C	N	O	P	0	0	0
			1623	723	290	534	76			
3	B	76	Total	C	N	O	P	0	0	0
			1623	723	290	534	76			

- Molecule 4 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	E	234	Total	C	N	O	S	0	0	0
			1900	1213	341	341	5			

- Molecule 5 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	F	206	Total	C	N	O	S	0	0	0
			1612	1016	314	281	1			

- Molecule 6 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	G	208	Total	C	N	O	S	0	0	0
			1703	1066	339	291	7			

- Molecule 7 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	H	150	Total	C	N	O	S	0	0	0
			1146	724	217	201	4			

- Molecule 8 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	I	101	Total	C	N	O	S	0	0	0
			843	531	155	154	3			

- Molecule 9 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	J	155	Total	C	N	O	S	0	0	0
			1257	781	252	218	6			

- Molecule 10 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	K	138	Total	C	N	O	S	0	0	0
			1116	705	215	193	3			

- Molecule 11 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	L	127	Total	C	N	O		0	0	0
			1010	639	197	174				

- Molecule 12 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	M	98	Total	C	N	O	S	0	0	0
			794	499	156	138	1			

- Molecule 13 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	N	119	Total	C	N	O	S	0	0	0
			885	549	168	165	3			

- Molecule 14 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	O	124	Total	C	N	O	S	0	0	0
			970	611	195	163	1			

- Molecule 15 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	P	125	Total	C	N	O	S	0	0	0
			997	617	207	171	2			

- Molecule 16 is a protein called 30S ribosomal protein S14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	Q	60	Total	C	N	O	S	0	0	0
			492	312	104	72	4			

- Molecule 17 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	R	88	Total	C	N	O	S	0	0	0
			734	459	147	126	2			

- Molecule 18 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	S	83	Total	C	N	O	S	0	0	0
			700	443	139	117	1			

- Molecule 19 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	T	104	Total	C	N	O	S	0	0	0
			857	547	161	147	2			

- Molecule 20 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
20	U	73	Total	C	N	O	0	0	0
			597	380	118	99			

- Molecule 21 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	V	80	Total	C	N	O	S	0	0	0
			647	414	119	112	2			

- Molecule 22 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	W	99	Total	C	N	O	S	0	0	0
			763	470	162	129	2			

- Molecule 23 is a protein called 30S ribosomal protein Thx.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
23	X	24	Total	C	N	O	0	0	0
			208	128	50	30			

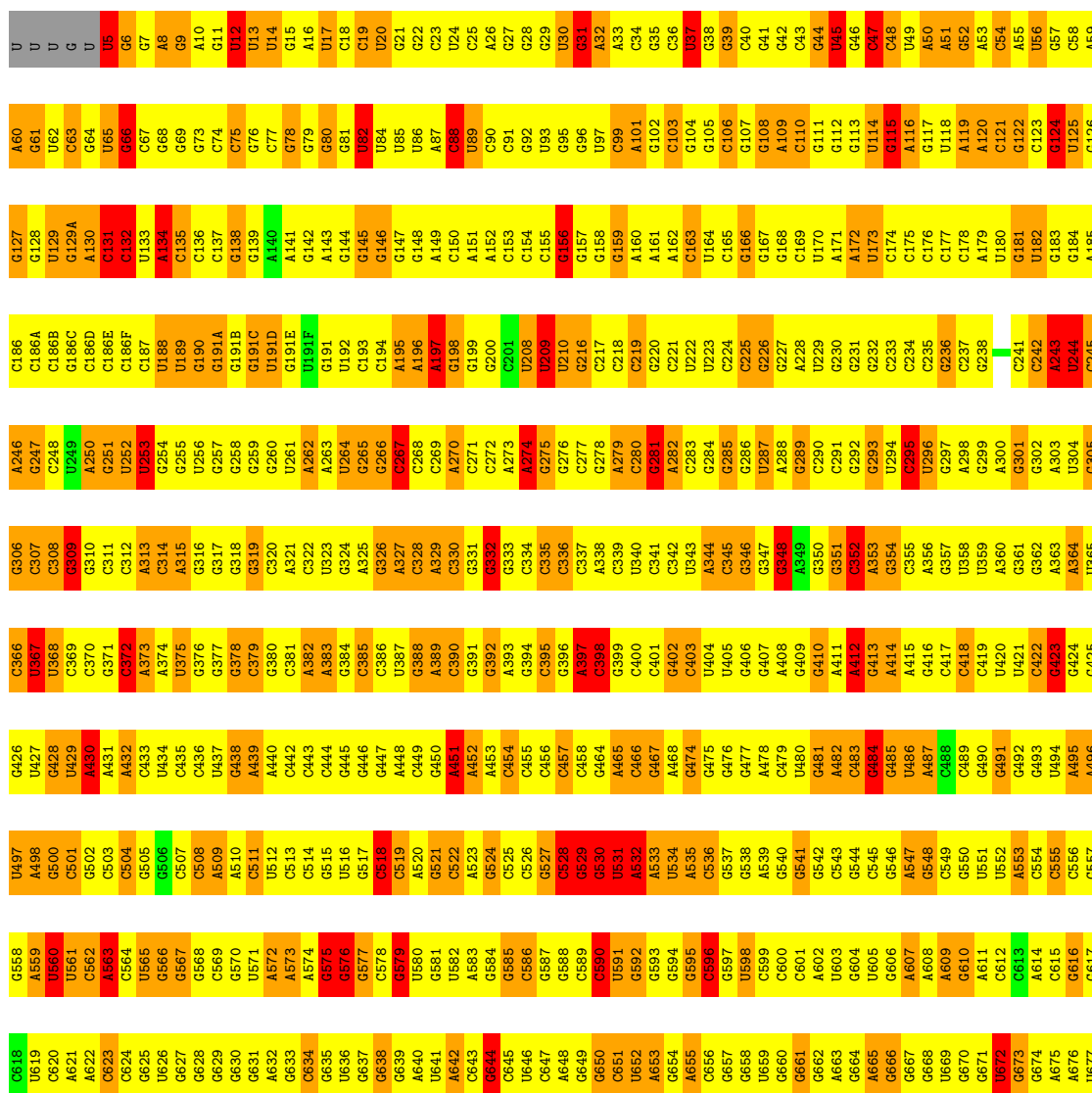
3 Residue-property plots

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

Note EDS was not executed.

- Molecule 1: 16S ribosomal RNA

Chain A:



C1524	G1464	C1399	A1340	U1159	G1099	G1039	C984	C924	A864	G798	C738	U678
G1525	C1465	C1400	U1341	G1160	C1100	U1040	C985	G925	A865	G799	C739	C679
G1526	C1466	G1401	C1342	C1161	A1101	A1041	A986	G926	A986	G800	U740	C680
C1527	G1467	C1402	G1343	C1162	A1102	G1042	G987	G927	G867	U801	G741	C681
U1528	A1468	C1403	C1344	C1163	G1103	C1043	G988	G928	C988	A802	G742	G682
G1529	C1469	C1404	U1345	G1164	G1104	A1044	G989	G929	G869	G803	U743	G683
G1530	G1470	G1405	A1346	C1165	A1105	C1045	C990	C930	U870	U804	G744	A684
A1531	G1471	A1406	A1347	C1166	G1106	A1046	U991	C931	U871	C805	C745	G685
U1532	U1472	C1407	U1348	A1167	C1107	G1047	U992	C932	A872	C806	A746	U686
A1534	A1473	A1408	A1349	C1168	G1108	G1048	G993	G933	A873	A807	G747	A687
C1535	G1474	C1409	A1350	A1169	G1109	U1049	A994	C934	G874	C808	C748	G688
C1536	G1475	G1410	U1351	G1170	A1110	G1050	C995	A935	C875	G809	G749	C689
C1537	G1476	C1411	C1352	G1171	G1111	C1051	A996	C936	G876	C810	G750	G690
U1538	C1477	C1412	G1353	G1172	C1112	U1052	U997	A937	C877	C811	U751	G691
C1539	C1478	A1413	C1354	G1173	C1113	G1053	G998	A938	G878	C812	G752	U692
C1540	G1479	G1414	G1355	G1174	C1114	C1054	G998A	A939	G879	U813	A753	G693
U1541	U1480	G1415	A1356	A1175	C1115	A1055	U999	C940	C880	A814	G754	A694
U1542	U1481	G1416	A1357	G1176	C1116	U1056	A1000	G941	G881	A815	G755	A695
C	G1482	G1417	U1358	G1177	C1117	G1057	G1001	G942	C882	A816	C756	A696
U	A1483	A1418	C1359	G1178	G1118	G1058	G1002	U943	C883	C817	U757	U697
	C1484	U1419	A1360	A1179	C1119	C1059	G1003	G944	U884	G818	G758	G698
	U1485	A1420	G1361	A1180	G1120	C1060	A1004	G945	G885	A819	A759	C699
	G1486	C1421	C1362	G1181	U1121	G1061	A1005	A946	G886	U820	G760	G700
	G1487	G1422	C1362A	G1182	U1122	U1062	C1006	G947	G887	G821	G761	C701
	G1488	G1423	A1363	A1183	A1123	G1063	C1007	C948	G888	C822	C762	A702
	G1489	C1424	U1364	C1184	G1124	G1064	C1008	A949	A889	G823	G763	G703
	C1490	U1425	G1365	C1185	U1125	U1065	G1009	U950	G890	C824	C764	A704
	G1491	C1426	U1366	G1186	U1126	C1066	G1010	G951	U891	G825	G765	U705
	A1492	U1427	C1367	G1187	G1127	A1067	G1011	U952	A892	C826	A766	A706
	A1493	A1428	G1368	C1188	C1128	G1068	U1012	G953	C893	U827	A767	C707
	G1494	C1429	C1369	C1189	G1129	G1069	G1013	G954	G894	A828	A768	C708
	U1495	C1430	G1370	G1190	A1130	U1070	A1014	U955	G895	G829	G769	G709
	C1496	C1431	G1371	A1191	A1131	C1071	A1015	U956	C896	G830	C770	G710
	G1497	G1432	U1372	G1192	G1132	G1072	A1016	U957	G897	U831	G771	G711
	U1498	A1433	G1373	C1193	G1133	U1073	G1017	A958	C898	C832	U772	A712
	A1499	A1434	A1374	U1194	G1134	G1074	C1018	A959	C899	U833	G773	G713
	A1500	G1435	A1375	C1195	G1135	C1075	C1019	U960	A900	C834	G774	G714
	C1501	U1436	U1376	U1196	U1136	C1076	U1020	U961	A901	U835	G775	A715
	A1502	C1437	A1377	G1197	C1137	G1077	G1021	C962	G902	G836	A777	C717
	A1503	G1438	C1378	G1198	G1138	U1078	G1022	G963	G903	G837	A778	G718
	G1504	C1439	G1379	U1199	G1139	G1079	G1023	A964	C904	G838	G779	C719
	G1505	C1440	U1380	C1200	G1140	A1080	C1028A	A965	U905	U841	C779	C719
	U1506	G1441	U1381	A1201	C1141	G1081	U1025	G966	G906	C942	A780	G720
	A1507	G1442	C1382	G1202	G1142	G1082	G1026	C967	A907	U843	A781	G721
	G1508	G1443	C1383	C1203	G1143	U1083	C1027	A968	A908	C848	A782	A722
	C1509	A1446	C1384	A1204	G1144	G1084	C1028	A969	A909	C949	C783	U723
	U1510	G1447	G1385	G1205	C1145	U1085	C1028A	C970	C910	U850	C784	G724
	G1511	C1448	G1386	G1206	G1146	U1086	C1028B	A971	U911	G851	G785	G725
	U1512	C1449	G1387	G1207	A1147	U1087	G1029	C972	C912	G852	G786	G726
	A1513	U1450	C1388	C1208	C1147	G1088	G1030	G973	A913	G853	A787	G727
	C1514	A1451	A1389	C1209	U1148	G1089	G1031	A974	A914	G854	U788	A728
	G1515	C1452	G1390	C1210	C1149	U1090	A1032	A975	A915	G855	A789	A729
	U1516	G1453	A1391	U1211	U1150	U1091	G1032A	G976	G916	C856	A790	G730
	G1517	G1454	A1392	U1212	A1151	U1092	G1032B	A977	G917	C857	G791	G731
	A1518	G1455	U1393	A1213	C1153	G1093	C1033	A978	A918	A858	A792	C732
	U1519	C1456	C1394	G1214	C1154	G1094	C1034	C979	A919	G859	U793	A733
	G1520	A1460	C1395	G1215	G1155	U1095	A1035	C980	U920	A860	A794	G734
	U1521	G1461	A1396	G1216	G1156	C1096	G1036	U981	U921	G861	C795	C735
	G1522	G1462	C1397	C1217	G1157	C1097	C1037	U982	G922	C862	C796	C736
	G1523	C1463	A1398	C1218	C1158	C1098	C1038	A983	A923	U863	C797	A737

• Molecule 2: mRNA

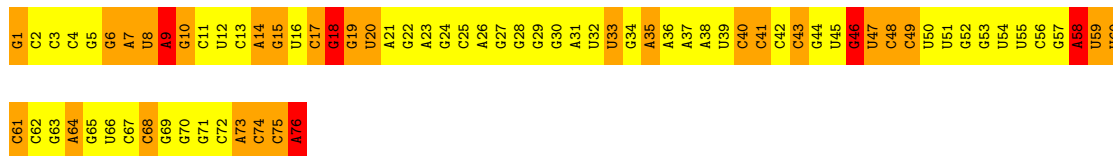
Chain 1:





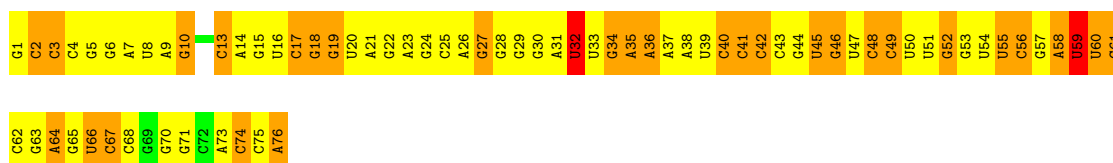
- Molecule 3: tRNA PHE (unmodified bases)

Chain C:



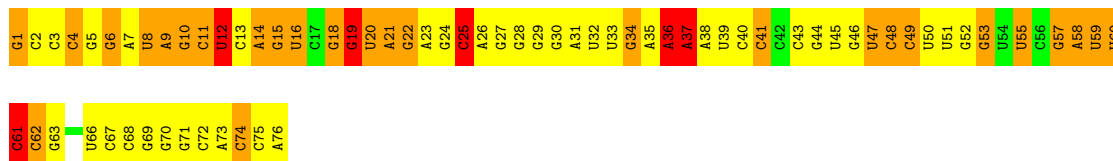
- Molecule 3: tRNA PHE (unmodified bases)

Chain D:



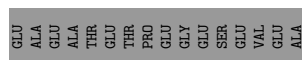
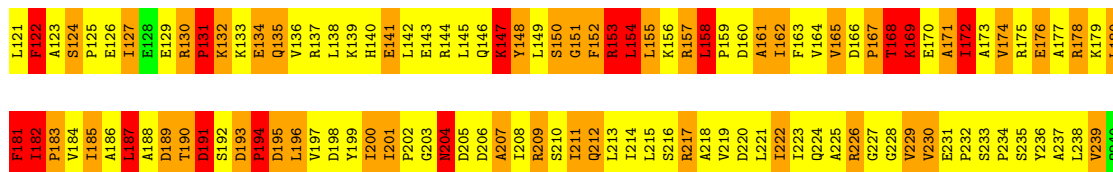
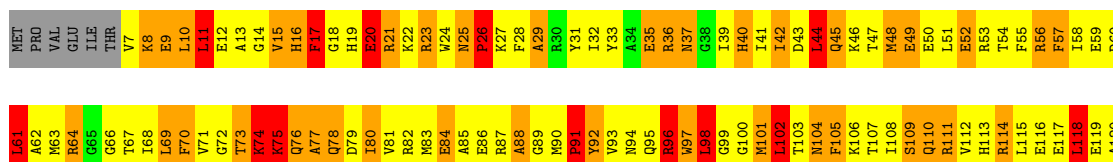
- Molecule 3: tRNA PHE (unmodified bases)

Chain B:



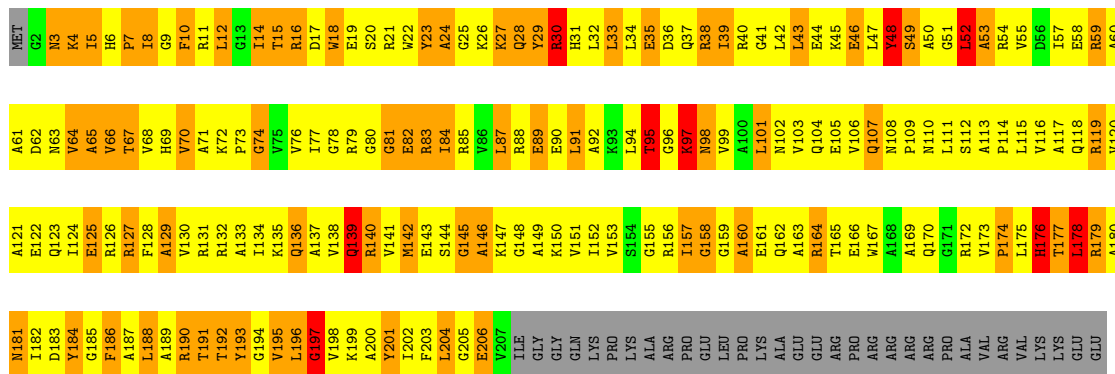
- Molecule 4: 30S ribosomal protein S2

Chain E:



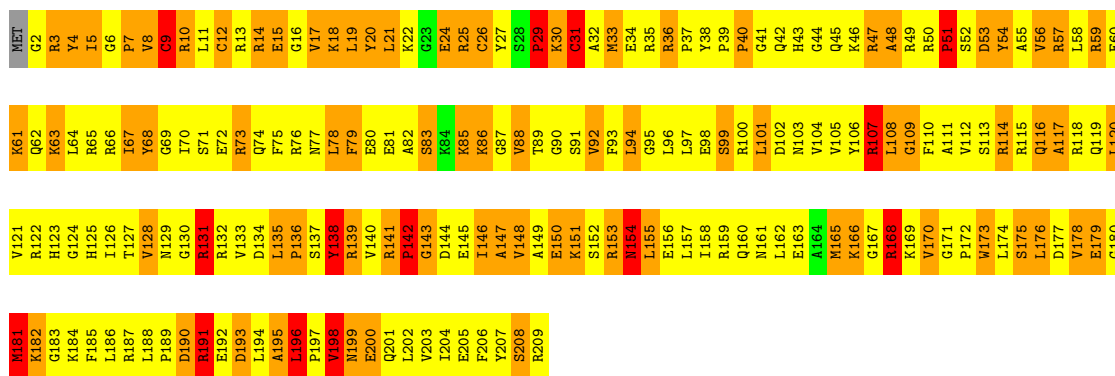
- Molecule 5: 30S ribosomal protein S3

Chain F:



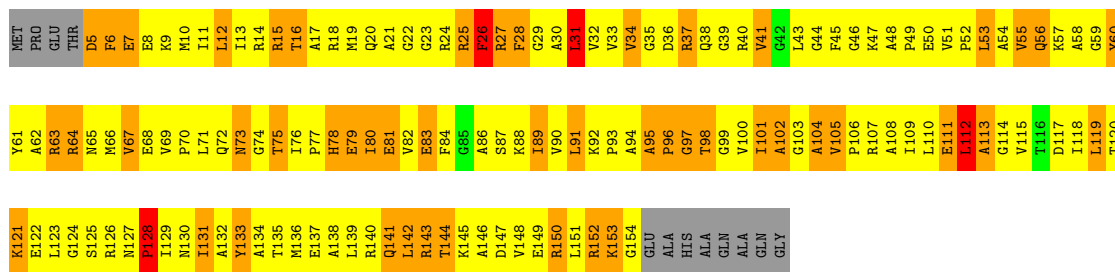
- Molecule 6: 30S ribosomal protein S4

Chain G:



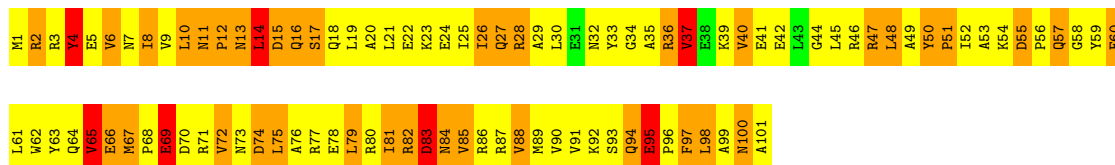
- Molecule 7: 30S ribosomal protein S5

Chain H:



- Molecule 8: 30S ribosomal protein S6

Chain I:



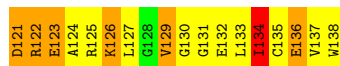
- Molecule 9: 30S ribosomal protein S7

Chain J:



- Molecule 10: 30S ribosomal protein S8

Chain K:



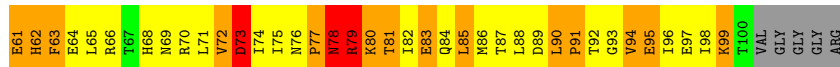
- Molecule 11: 30S ribosomal protein S9

Chain L:



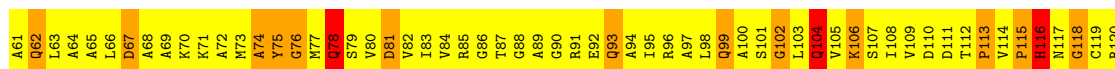
- Molecule 12: 30S ribosomal protein S10

Chain M:



- Molecule 13: 30S ribosomal protein S11

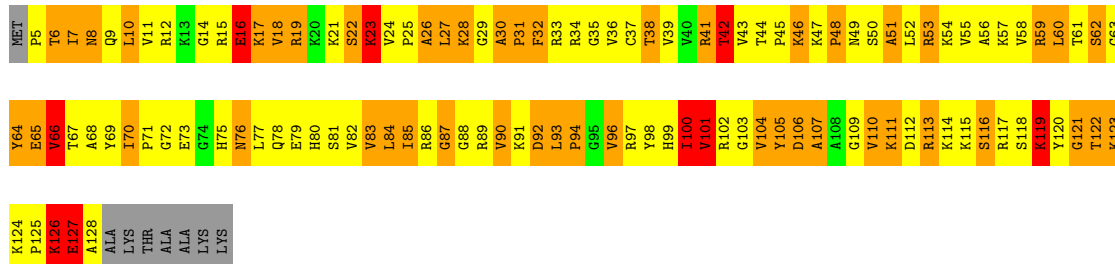
Chain N:





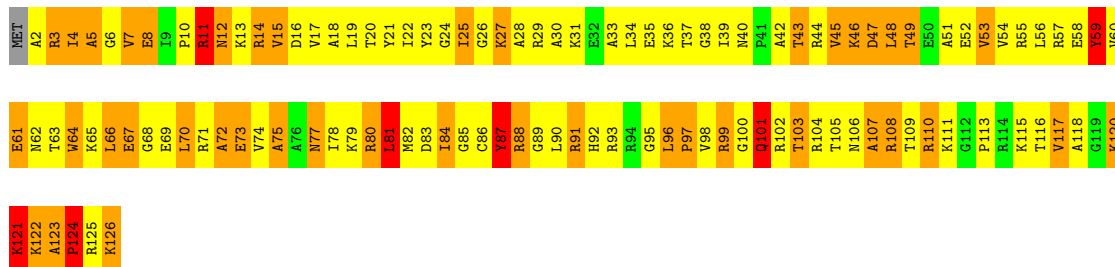
- Molecule 14: 30S ribosomal protein S12

Chain 0:



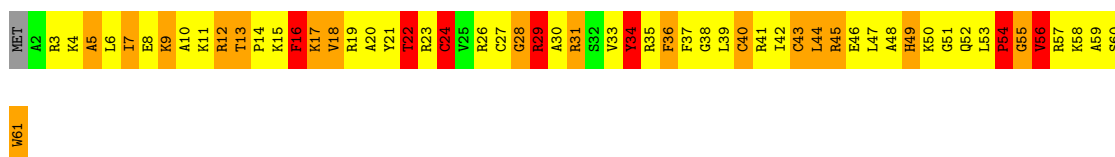
- Molecule 15: 30S ribosomal protein S13

Chain P:



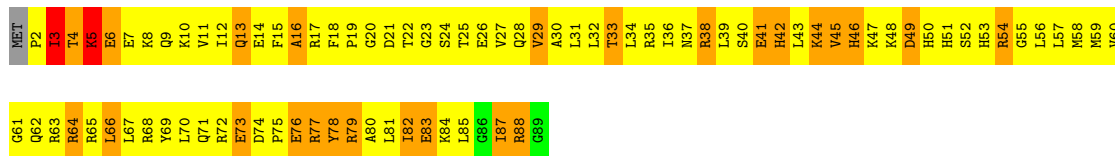
- Molecule 16: 30S ribosomal protein S14

Chain Q:



- Molecule 17: 30S ribosomal protein S15

Chain R:



- Molecule 18: 30S ribosomal protein S16

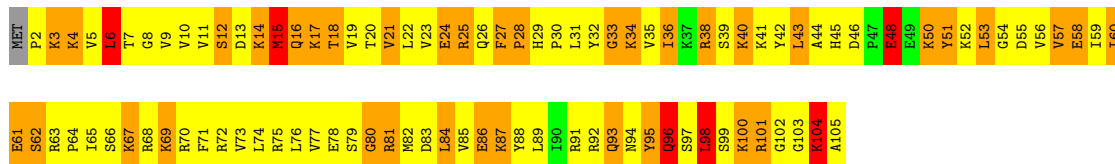
Chain S:





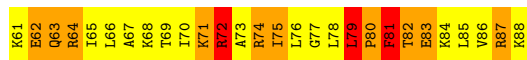
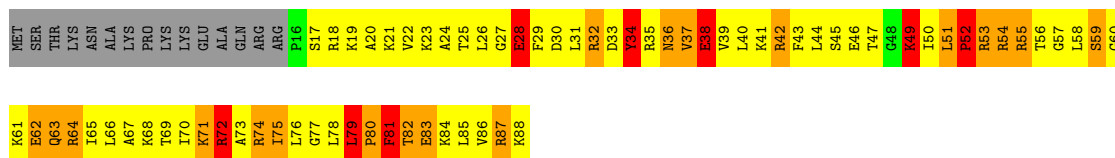
• Molecule 19: 30S ribosomal protein S17

Chain T:



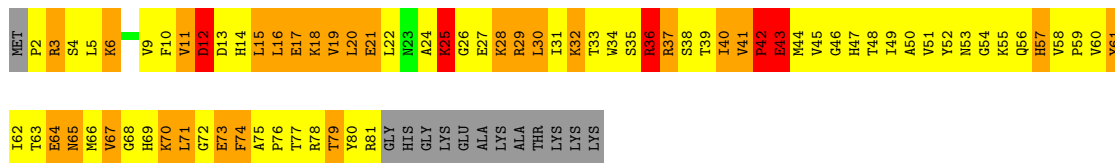
• Molecule 20: 30S ribosomal protein S18

Chain U:



• Molecule 21: 30S ribosomal protein S19

Chain V:



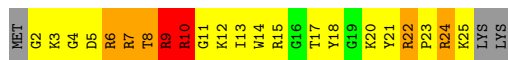
• Molecule 22: 30S ribosomal protein S20

Chain W:



• Molecule 23: 30S ribosomal protein Thx

Chain X:



4 Data and refinement statistics

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

Property	Value	Source
Space group	I 4 2 2	Depositor
Cell constants a, b, c, α , β , γ	508.54Å 508.54Å 806.29Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	300.00 – 5.50	Depositor
% Data completeness (in resolution range)	96.7 (300.00-5.50)	Depositor
R_{merge}	0.10	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	0.00 (at 4.88Å)	Xtriage
Refinement program	CNS	Depositor
R, R_{free}	0.243 , 0.326	Depositor
Wilson B-factor (Å ²)	108.9	Xtriage
Anisotropy	0.045	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning	$\langle L \rangle = 0.53$, $\langle L^2 \rangle = 0.37$	Xtriage
Outliers	1 of 226745 reflections (0.000%)	Xtriage
Total number of atoms	57679	wwPDB-VP
Average B, all atoms (Å ²)	232.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.63% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

5 Model quality

5.1 Standard geometry

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	A	0.87	32/36438 (0.1%)	1.08	147/56869 (0.3%)
2	1	0.67	1/1133 (0.1%)	0.93	2/1753 (0.1%)
3	B	0.70	1/1813 (0.1%)	1.02	9/2823 (0.3%)
3	C	0.98	2/1813 (0.1%)	0.93	2/2823 (0.1%)
3	D	0.69	1/1813 (0.1%)	0.92	2/2823 (0.1%)
4	E	0.64	0/1935	1.00	4/2609 (0.2%)
5	F	0.55	0/1636	0.92	4/2205 (0.2%)
6	G	0.64	1/1733 (0.1%)	0.98	3/2318 (0.1%)
7	H	0.63	0/1162	1.01	3/1564 (0.2%)
8	I	0.60	0/856	0.95	0/1154
9	J	0.57	0/1276	0.90	3/1709 (0.2%)
10	K	0.62	0/1136	1.01	3/1527 (0.2%)
11	L	0.54	0/1029	0.83	0/1379
12	M	0.48	0/807	0.89	1/1085 (0.1%)
13	N	0.62	0/900	0.98	0/1213
14	O	0.60	0/986	1.00	3/1320 (0.2%)
15	P	0.50	0/1008	0.91	2/1347 (0.1%)
16	Q	0.55	0/501	0.96	1/664 (0.2%)
17	R	0.62	0/745	0.95	0/992
18	S	0.62	0/716	0.95	1/963 (0.1%)
19	T	0.68	1/870 (0.1%)	0.99	2/1159 (0.2%)
20	U	0.59	0/603	1.01	1/799 (0.1%)
21	V	0.51	0/661	0.92	0/890
22	W	0.65	0/765	1.00	2/1007 (0.2%)
23	X	0.45	0/212	0.80	0/277
All	All	0.78	39/62547 (0.1%)	1.03	195/93272 (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.

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Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	175
2	1	0	3
3	B	0	6
3	C	0	8
3	D	0	8
6	G	0	1
8	I	0	1
13	N	0	1
15	P	0	1
16	Q	0	1
All	All	0	205

All (39) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	1064	G	C5-C6	-9.61	1.32	1.42
1	A	530	G	N9-C4	-9.56	1.30	1.38
1	A	1493	A	C5-C6	8.51	1.48	1.41
1	A	1494	G	C5-C6	8.33	1.50	1.42
1	A	1492	A	N9-C4	8.30	1.42	1.37
1	A	1064	G	C2-N3	7.76	1.39	1.32
3	B	1	G	OP3-P	-7.32	1.52	1.61
1	A	974	A	C2-N3	7.28	1.40	1.33
1	A	974	A	C6-N1	7.22	1.40	1.35
3	D	1	G	OP3-P	-7.18	1.52	1.61
3	C	1	G	OP3-P	-7.07	1.52	1.61
2	1	3	U	OP3-P	-6.71	1.53	1.61
1	A	1492	A	C5-C6	6.62	1.47	1.41
1	A	37	U	C4-O4	-6.56	1.18	1.23
1	A	1493	A	C5-C4	6.45	1.43	1.38
1	A	132	C	N1-C2	-6.31	1.33	1.40
1	A	1064	G	C5-C4	-6.24	1.33	1.38
1	A	1064	G	N1-C2	6.24	1.42	1.37
1	A	397	A	C5-C6	-6.18	1.35	1.41
1	A	1494	G	C3'-O3'	6.03	1.50	1.42
1	A	974	A	N9-C4	6.02	1.41	1.37
1	A	1492	A	C5-C4	5.90	1.42	1.38
1	A	579	G	C3'-O3'	5.86	1.50	1.42
1	A	196	A	O3'-P	-5.80	1.54	1.61
19	T	21	VAL	CA-CB	-5.74	1.42	1.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	1492	A	C6-N6	5.68	1.38	1.33
1	A	579	G	O3'-P	5.67	1.68	1.61
1	A	173	U	O3'-P	5.64	1.68	1.61
1	A	37	U	C5-C6	-5.61	1.29	1.34
1	A	309	G	N9-C4	-5.59	1.33	1.38
1	A	697	U	C2-N3	5.53	1.41	1.37
1	A	1493	A	N9-C8	5.46	1.42	1.37
1	A	651	C	N1-C2	5.40	1.45	1.40
1	A	697	U	N3-C4	5.37	1.43	1.38
1	A	592	G	N9-C4	5.15	1.42	1.38
1	A	697	U	N1-C2	5.15	1.43	1.38
3	C	1	G	P-O5'	5.12	1.64	1.59
1	A	114	U	N3-C4	-5.09	1.33	1.38
6	G	12	CYS	CA-CB	5.08	1.65	1.53

All (195) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1064	G	N1-C2-N2	-71.65	51.71	116.20
1	A	1064	G	N3-C2-N2	57.72	160.30	119.90
1	A	1064	G	N1-C2-N3	-25.51	108.59	123.90
3	B	18	G	OP2-P-O3'	14.85	137.87	105.20
1	A	1064	G	C2-N3-C4	14.60	119.20	111.90
1	A	172	A	OP1-P-O3'	12.61	132.95	105.20
3	B	19	G	O3'-P-O5'	-11.58	82.00	104.00
1	A	973	G	O3'-P-O5'	11.50	125.85	104.00
1	A	1064	G	C6-N1-C2	11.38	131.93	125.10
1	A	173	U	P-O3'-C3'	11.06	132.97	119.70
1	A	88	C	O4'-C1'-N1	9.87	116.09	108.20
1	A	974	A	N9-C1'-C2'	9.78	126.72	114.00
1	A	727	G	N9-C1'-C2'	-9.48	101.57	112.00
1	A	37	U	C5-C4-O4	-9.44	120.24	125.90
3	B	18	G	OP1-P-O3'	-9.42	84.47	105.20
1	A	793	U	N1-C1'-C2'	9.36	126.17	114.00
1	A	1494	G	N9-C1'-C2'	9.29	126.08	114.00
1	A	1528	U	N1-C1'-C2'	9.21	125.97	114.00
5	F	48	TYR	N-CA-C	-9.19	86.17	111.00
3	B	18	G	P-O3'-C3'	-8.89	109.03	119.70
1	A	397	A	C4-N9-C1'	8.87	142.26	126.30
1	A	1133	G	N9-C1'-C2'	-8.74	102.38	112.00
1	A	397	A	C8-N9-C1'	-8.64	112.16	127.70
1	A	974	A	O3'-P-O5'	8.36	119.87	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	451	A	N9-C1'-C2'	8.35	124.86	114.00
15	P	81	LEU	CA-CB-CG	8.21	134.19	115.30
1	A	530	G	C4-N9-C1'	-8.07	116.01	126.50
3	B	25	C	N1-C1'-C2'	-7.91	103.30	112.00
1	A	792	A	N9-C1'-C2'	7.82	124.17	114.00
1	A	974	A	C5-C6-N6	-7.75	117.50	123.70
1	A	1166	G	N9-C1'-C2'	-7.60	103.64	112.00
1	A	1054	C	N1-C1'-C2'	-7.51	103.74	112.00
1	A	457	C	N1-C1'-C2'	-7.43	103.83	112.00
1	A	974	A	C6-N1-C2	-7.35	114.19	118.60
1	A	563	A	N9-C1'-C2'	7.28	123.46	114.00
1	A	790	A	N9-C1'-C2'	-7.26	104.01	112.00
1	A	397	A	C5-C6-N6	-7.22	117.92	123.70
3	B	36	A	N9-C1'-C2'	-7.20	104.08	112.00
22	W	36	LEU	CA-CB-CG	-7.18	98.78	115.30
1	A	367	U	N1-C1'-C2'	7.04	123.16	114.00
3	B	36	A	O4'-C1'-N9	7.00	113.80	108.20
1	A	530	G	C5'-C4'-O4'	-6.99	100.72	109.10
22	W	24	LEU	CA-CB-CG	6.92	131.21	115.30
1	A	1402	C	N1-C1'-C2'	-6.88	104.43	112.00
1	A	1393	U	N1-C1'-C2'	-6.87	104.44	112.00
1	A	1498	U	N1-C1'-C2'	6.85	122.91	114.00
1	A	1494	G	O5'-P-OP2	6.78	118.84	110.70
1	A	197	A	P-O3'-C3'	-6.78	111.56	119.70
1	A	530	G	C8-N9-C1'	6.74	135.76	127.00
1	A	885	G	N9-C1'-C2'	-6.74	104.59	112.00
1	A	1123	A	N9-C1'-C2'	6.73	122.75	114.00
1	A	813	U	N1-C1'-C2'	6.66	122.66	114.00
1	A	1279	A	N9-C1'-C2'	6.65	122.65	114.00
1	A	531	U	N1-C1'-C2'	6.65	122.64	114.00
1	A	12	U	O4'-C1'-N1	6.63	113.50	108.20
1	A	397	A	O4'-C1'-N9	-6.62	102.90	108.20
1	A	1492	A	N9-C1'-C2'	6.61	122.59	114.00
1	A	47	C	N1-C1'-C2'	6.61	122.59	114.00
3	B	19	G	OP2-P-O3'	6.61	119.73	105.20
1	A	1502	A	N9-C1'-C2'	6.59	122.57	114.00
1	A	974	A	N1-C6-N6	6.59	122.55	118.60
1	A	397	A	N9-C1'-C2'	6.57	122.54	114.00
1	A	1494	G	O4'-C1'-N9	6.54	113.43	108.20
1	A	644	G	N9-C1'-C2'	-6.54	104.81	112.00
1	A	172	A	O3'-P-O5'	-6.50	91.66	104.00
2	1	35	U	N1-C1'-C2'	-6.50	104.86	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1489	G	N9-C1'-C2'	-6.44	104.92	112.00
1	A	82	U	N3-C4-O4	-6.42	114.91	119.40
1	A	1193	G	N9-C1'-C2'	-6.40	104.96	112.00
1	A	1341	U	N1-C1'-C2'	-6.39	104.98	112.00
1	A	172	A	OP2-P-O3'	-6.38	91.17	105.20
1	A	37	U	N3-C4-O4	-6.37	114.94	119.40
1	A	818	G	N9-C1'-C2'	6.36	122.27	114.00
1	A	1100	C	N1-C1'-C2'	6.36	122.26	114.00
1	A	1492	A	C5'-C4'-O4'	6.35	116.72	109.10
3	C	1	G	OP1-P-OP2	-6.34	110.09	119.60
1	A	397	A	N1-C6-N6	6.34	122.40	118.60
1	A	974	A	C4-N9-C1'	6.31	137.66	126.30
1	A	1049	U	C2'-C3'-O3'	6.31	123.79	113.70
1	A	760	G	N9-C1'-C2'	-6.28	105.09	112.00
6	G	19	LEU	N-CA-C	-6.27	94.07	111.00
1	A	1298	C	N1-C1'-C2'	6.21	122.07	114.00
1	A	372	C	N1-C1'-C2'	6.20	122.06	114.00
1	A	528	C	N1-C1'-C2'	-6.18	105.20	112.00
3	B	18	G	O3'-P-O5'	-6.18	92.26	104.00
1	A	530	G	N3-C4-N9	-6.15	122.31	126.00
1	A	1054	C	O4'-C4'-C3'	-6.15	97.85	104.00
1	A	173	U	O3'-P-O5'	-6.12	92.36	104.00
1	A	191(B)	G	N9-C1'-C2'	-6.09	105.30	112.00
1	A	88	C	C1'-O4'-C4'	-6.09	105.03	109.90
1	A	974	A	C8-N9-C1'	-6.09	116.74	127.70
7	H	83	GLU	N-CA-C	-6.06	94.63	111.00
1	A	1481	U	O4'-C1'-N1	6.04	113.03	108.20
1	A	961	U	C5-C4-O4	-6.04	122.28	125.90
1	A	319	G	N9-C1'-C2'	-6.03	105.37	112.00
1	A	973	G	OP1-P-O3'	-6.02	91.96	105.20
1	A	397	A	C5'-C4'-C3'	-6.00	106.40	116.00
15	P	107	ALA	N-CA-C	-5.97	94.89	111.00
1	A	301	G	N9-C1'-C2'	-5.93	105.48	112.00
3	D	32	U	N1-C1'-C2'	-5.93	105.48	112.00
4	E	98	LEU	CA-CB-CG	5.92	128.91	115.30
1	A	402	G	N9-C1'-C2'	-5.91	105.50	112.00
1	A	853	G	O4'-C1'-N9	5.90	112.92	108.20
4	E	118	LEU	CA-CB-CG	5.89	128.86	115.30
1	A	484	G	C2'-C3'-O3'	5.89	123.12	113.70
1	A	1492	A	C3'-C2'-O2'	-5.88	96.25	113.30
1	A	1493	A	C4'-C3'-C2'	5.86	108.46	102.60
5	F	188	LEU	CA-CB-CG	5.85	128.76	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	M	8	LEU	CA-CB-CG	5.84	128.73	115.30
1	A	1294	G	N9-C1'-C2'	-5.83	105.59	112.00
1	A	80	G	N9-C1'-C2'	5.81	121.56	114.00
1	A	397	A	C6-N1-C2	-5.81	115.12	118.60
10	K	134	ILE	CB-CA-C	-5.81	99.99	111.60
1	A	590	C	N1-C1'-C2'	-5.79	105.63	112.00
1	A	872	A	O4'-C1'-N9	5.78	112.83	108.20
1	A	1504	G	C2'-C3'-O3'	5.78	122.95	113.70
1	A	1029	G	N9-C1'-C2'	-5.77	105.66	112.00
1	A	115	G	N9-C1'-C2'	5.73	121.45	114.00
1	A	372	C	C2'-C3'-O3'	5.72	122.86	113.70
1	A	1336	C	O4'-C1'-N1	5.72	112.77	108.20
1	A	1139	G	N9-C1'-C2'	5.70	121.41	114.00
1	A	146	G	N9-C1'-C2'	-5.70	105.73	112.00
10	K	100	ILE	N-CA-C	-5.70	95.61	111.00
7	H	31	LEU	CA-CB-CG	5.68	128.36	115.30
1	A	833	U	C2-N3-C4	-5.64	123.62	127.00
1	A	638	G	N9-C1'-C2'	-5.62	105.82	112.00
1	A	1004	A	C2'-C3'-O3'	5.62	122.69	113.70
1	A	209	U	N1-C1'-C2'	5.60	121.28	114.00
1	A	13	U	C5'-C4'-O4'	5.60	115.82	109.10
1	A	1185	G	N9-C1'-C2'	-5.59	105.85	112.00
9	J	132	GLY	N-CA-C	5.58	127.05	113.10
1	A	767	A	N9-C1'-C2'	-5.54	105.90	112.00
1	A	1028(A)	C	N1-C1'-C2'	-5.54	105.91	112.00
1	A	853	G	C5-C6-O6	5.53	131.92	128.60
1	A	723	U	N1-C1'-C2'	5.52	121.18	114.00
1	A	242	C	N1-C1'-C2'	-5.52	105.93	112.00
1	A	156	G	N9-C1'-C2'	-5.51	105.94	112.00
20	U	52	PRO	N-CA-C	5.50	126.40	112.10
1	A	833	U	N1-C2-O2	-5.50	118.95	122.80
3	C	76	A	C4'-C3'-O3'	5.50	124.00	113.00
1	A	1124	G	N9-C1'-C2'	5.50	121.15	114.00
6	G	9	CYS	CA-CB-SG	5.48	123.87	114.00
14	O	119	LYS	N-CA-C	-5.48	96.20	111.00
4	E	61	LEU	CA-CB-CG	5.48	127.90	115.30
1	A	243	A	N9-C1'-C2'	5.47	121.11	114.00
3	D	55	U	N1-C1'-C2'	-5.45	106.00	112.00
1	A	1084	G	N9-C1'-C2'	5.45	121.08	114.00
10	K	80	ILE	N-CA-C	-5.43	96.35	111.00
1	A	106	C	N1-C1'-C2'	-5.41	106.05	112.00
1	A	682	G	N9-C1'-C2'	-5.40	106.06	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	753	A	N9-C1'-C2'	5.39	121.00	114.00
1	A	88	C	C2-N1-C1'	-5.38	112.88	118.80
9	J	76	ARG	N-CA-C	-5.35	96.55	111.00
1	A	13	U	O4'-C1'-N1	-5.34	103.93	108.20
1	A	1011	G	N9-C1'-C2'	-5.33	106.14	112.00
1	A	1165	C	N1-C1'-C2'	-5.30	106.17	112.00
19	T	61	GLU	N-CA-C	-5.30	96.68	111.00
1	A	88	C	N1-C1'-C2'	5.30	120.89	114.00
5	F	52	LEU	CA-CB-CG	5.30	127.49	115.30
1	A	529	G	N9-C1'-C2'	-5.29	106.18	112.00
1	A	226	G	C1'-O4'-C4'	-5.29	105.67	109.90
1	A	37	U	N1-C1'-C2'	-5.27	106.21	112.00
18	S	16	HIS	N-CA-C	-5.25	96.83	111.00
1	A	1271	G	N9-C1'-C2'	-5.25	106.23	112.00
1	A	575	G	N9-C1'-C2'	5.25	120.82	114.00
19	T	104	LYS	N-CA-C	5.22	125.10	111.00
1	A	815	A	C1'-O4'-C4'	-5.21	105.73	109.90
1	A	5	U	OP1-P-OP2	-5.20	111.80	119.60
14	O	59	ARG	N-CA-C	-5.19	96.99	111.00
1	A	1310	G	N9-C1'-C2'	-5.18	106.30	112.00
1	A	173	U	OP1-P-O3'	5.16	116.55	105.20
1	A	307	C	O4'-C1'-N1	-5.13	104.09	108.20
1	A	1492	A	C4-N9-C1'	5.12	135.52	126.30
1	A	586	C	N1-C1'-C2'	-5.12	106.37	112.00
9	J	8	GLU	N-CA-C	5.11	124.80	111.00
4	E	187	LEU	N-CA-C	-5.11	97.20	111.00
1	A	1148	U	N1-C1'-C2'	5.11	120.64	114.00
1	A	1210	C	O4'-C1'-N1	5.09	112.27	108.20
1	A	423	G	N9-C1'-C2'	5.09	120.61	114.00
1	A	741	G	N9-C1'-C2'	-5.08	106.41	112.00
1	A	1493	A	O4'-C1'-N9	5.08	112.26	108.20
1	A	491	G	N9-C1'-C2'	-5.07	106.42	112.00
7	H	97	GLY	N-CA-C	-5.06	100.44	113.10
6	G	31	CYS	CA-CB-SG	5.06	123.11	114.00
14	O	27	LEU	CA-CB-CG	5.05	126.92	115.30
16	Q	24	CYS	CA-CB-SG	5.05	123.10	114.00
1	A	1230	C	N1-C1'-C2'	-5.05	106.45	112.00
1	A	906	G	N9-C1'-C2'	-5.04	106.46	112.00
1	A	13	U	C2-N1-C1'	5.03	123.73	117.70
1	A	226	G	N9-C1'-C2'	-5.03	106.47	112.00
5	F	197	GLY	N-CA-C	5.03	125.67	113.10
1	A	1346	A	C5'-C4'-O4'	5.03	115.13	109.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	166	G	N9-C1'-C2'	-5.02	106.48	112.00
1	A	13	U	N1-C1'-C2'	5.01	120.52	114.00
2	1	3	U	OP1-P-OP2	-5.01	112.09	119.60

There are no chirality outliers.

All (205) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	1	31	U	Sidechain
2	1	38	U	Sidechain
2	1	41	U	Sidechain
1	A	1012	U	Sidechain
1	A	1027	C	Sidechain
1	A	1028(A)	C	Sidechain
1	A	1037	C	Sidechain
1	A	1038	C	Sidechain
1	A	1039	C	Sidechain
1	A	1040	U	Sidechain
1	A	1048	G	Sidechain
1	A	1052	U	Sidechain
1	A	1054	C	Sidechain
1	A	1056	U	Sidechain
1	A	1065	U	Sidechain
1	A	1067	A	Sidechain
1	A	1073	U	Sidechain
1	A	1078	U	Sidechain
1	A	1083	U	Sidechain
1	A	1097	C	Sidechain
1	A	1100	C	Sidechain
1	A	1121	U	Sidechain
1	A	1122	U	Sidechain
1	A	1124	G	Sidechain
1	A	1128	C	Sidechain
1	A	1133	G	Sidechain
1	A	1143	G	Sidechain
1	A	115	G	Sidechain
1	A	1150	U	Sidechain
1	A	1165	C	Sidechain
1	A	1195	C	Sidechain
1	A	1199	U	Sidechain
1	A	12	U	Sidechain
1	A	1226	C	Sidechain

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Mol	Chain	Res	Type	Group
1	A	1235	U	Sidechain
1	A	124	G	Sidechain
1	A	1246	C	Sidechain
1	A	125	U	Sidechain
1	A	1263	C	Sidechain
1	A	1266	G	Sidechain
1	A	1277	C	Sidechain
1	A	1285	A	Sidechain
1	A	129	U	Sidechain
1	A	1298	C	Sidechain
1	A	1302	U	Sidechain
1	A	131	C	Sidechain
1	A	1314	C	Sidechain
1	A	132	C	Sidechain
1	A	1327	C	Sidechain
1	A	1328	C	Sidechain
1	A	1330	U	Sidechain
1	A	134	A	Sidechain
1	A	1347	G	Sidechain
1	A	135	C	Sidechain
1	A	1352	C	Sidechain
1	A	1362	C	Sidechain
1	A	1370	G	Sidechain
1	A	1377	A	Sidechain
1	A	138	G	Sidechain
1	A	1402	C	Sidechain
1	A	1404	C	Sidechain
1	A	1405	G	Sidechain
1	A	1422	G	Sidechain
1	A	1427	U	Sidechain
1	A	1442	G	Sidechain
1	A	145	G	Sidechain
1	A	146	G	Sidechain
1	A	1472	U	Sidechain
1	A	1477	C	Sidechain
1	A	1481	U	Sidechain
1	A	1489	G	Sidechain
1	A	1495	U	Sidechain
1	A	1500	A	Sidechain
1	A	1541	U	Sidechain
1	A	156	G	Sidechain
1	A	158	G	Sidechain

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Mol	Chain	Res	Type	Group
1	A	159	G	Sidechain
1	A	17	U	Sidechain
1	A	191(C)	G	Sidechain
1	A	191(D)	U	Sidechain
1	A	219	C	Sidechain
1	A	225	C	Sidechain
1	A	244	U	Sidechain
1	A	253	U	Sidechain
1	A	267	C	Sidechain
1	A	274	A	Sidechain
1	A	281	G	Sidechain
1	A	285	G	Sidechain
1	A	287	U	Sidechain
1	A	295	C	Sidechain
1	A	31	G	Sidechain
1	A	332	G	Sidechain
1	A	335	C	Sidechain
1	A	348	G	Sidechain
1	A	352	C	Sidechain
1	A	367	U	Sidechain
1	A	37	U	Sidechain
1	A	375	U	Sidechain
1	A	385	C	Sidechain
1	A	395	C	Sidechain
1	A	397	A	Sidechain
1	A	398	C	Sidechain
1	A	403	C	Sidechain
1	A	412	A	Sidechain
1	A	418	C	Sidechain
1	A	430	A	Sidechain
1	A	432	A	Sidechain
1	A	45	U	Sidechain
1	A	451	A	Sidechain
1	A	47	C	Sidechain
1	A	484	G	Sidechain
1	A	501	C	Sidechain
1	A	504	C	Sidechain
1	A	518	C	Sidechain
1	A	529	G	Sidechain
1	A	531	U	Sidechain
1	A	532	A	Sidechain
1	A	54	C	Sidechain

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Mol	Chain	Res	Type	Group
1	A	56	U	Sidechain
1	A	560	U	Sidechain
1	A	563	A	Sidechain
1	A	575	G	Sidechain
1	A	576	G	Sidechain
1	A	579	G	Sidechain
1	A	590	C	Sidechain
1	A	591	U	Sidechain
1	A	596	C	Sidechain
1	A	610	G	Sidechain
1	A	616	G	Sidechain
1	A	63	C	Sidechain
1	A	634	C	Sidechain
1	A	644	G	Sidechain
1	A	66	G	Sidechain
1	A	661	G	Sidechain
1	A	666	G	Sidechain
1	A	672	U	Sidechain
1	A	689	C	Sidechain
1	A	690	G	Sidechain
1	A	717	C	Sidechain
1	A	727	G	Sidechain
1	A	729	A	Sidechain
1	A	734	G	Sidechain
1	A	739	C	Sidechain
1	A	741	G	Sidechain
1	A	75	C	Sidechain
1	A	760	G	Sidechain
1	A	763	G	Sidechain
1	A	770	C	Sidechain
1	A	779	C	Sidechain
1	A	792	A	Sidechain
1	A	808	C	Sidechain
1	A	813	U	Sidechain
1	A	817	C	Sidechain
1	A	82	U	Sidechain
1	A	834	C	Sidechain
1	A	853	G	Sidechain
1	A	862	C	Sidechain
1	A	863	U	Sidechain
1	A	875	C	Sidechain
1	A	88	C	Sidechain

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Mol	Chain	Res	Type	Group
1	A	883	C	Sidechain
1	A	887	G	Sidechain
1	A	895	G	Sidechain
1	A	898	G	Sidechain
1	A	901	A	Sidechain
1	A	902	G	Sidechain
1	A	904	C	Sidechain
1	A	905	U	Sidechain
1	A	911	U	Sidechain
1	A	912	C	Sidechain
1	A	923	A	Sidechain
1	A	947	G	Sidechain
1	A	955	U	Sidechain
1	A	961	U	Sidechain
1	A	974	A	Sidechain
1	A	983	A	Sidechain
1	A	989	C	Sidechain
1	A	998(A)	C	Sidechain
3	B	11	C	Sidechain
3	B	12	U	Sidechain
3	B	37	A	Sidechain
3	B	53	G	Sidechain
3	B	60	U	Sidechain
3	B	61	C	Sidechain
3	C	14	A	Sidechain
3	C	18	G	Sidechain
3	C	33	U	Sidechain
3	C	35	A	Sidechain
3	C	46	G	Sidechain
3	C	58	A	Sidechain
3	C	68	C	Sidechain
3	C	9	A	Sidechain
3	D	2	C	Sidechain
3	D	3	C	Sidechain
3	D	32	U	Sidechain
3	D	59	U	Sidechain
3	D	60	U	Sidechain
3	D	64	A	Sidechain
3	D	66	U	Sidechain
3	D	67	C	Sidechain
6	G	54	TYR	Sidechain
8	I	4	TYR	Sidechain

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Mol	Chain	Res	Type	Group
13	N	75	TYR	Sidechain
15	P	59	TYR	Sidechain
16	Q	34	TYR	Sidechain

5.2 Close contacts ⓘ

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogens added by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, and the number in parentheses is this value normalized per 1000 atoms of the molecule in the chain. The Symm-Clashes column gives symmetry related clashes, in the same way as for the Clashes column.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	32554	0	16431	6696	0
2	1	1025	0	511	175	0
3	B	1623	0	821	149	0
3	C	1623	0	821	283	0
3	D	1623	0	821	235	0
4	E	1900	0	1951	1040	0
5	F	1612	0	1677	721	0
6	G	1703	0	1763	869	0
7	H	1146	0	1207	588	0
8	I	843	0	857	384	0
9	J	1257	0	1296	577	0
10	K	1116	0	1177	735	0
11	L	1010	0	1037	470	0
12	M	794	0	840	358	0
13	N	885	0	904	471	0
14	O	970	0	1057	512	0
15	P	997	0	1072	496	0
16	Q	492	0	529	278	0
17	R	734	0	771	331	0
18	S	700	0	720	353	0
19	T	857	0	930	450	0
20	U	597	0	668	369	0
21	V	647	0	673	312	0
22	W	763	0	861	374	0
23	X	208	0	221	83	0
All	All	57679	0	39616	15868	0

Clashscore is defined as the number of clashes calculated for the entry per 1000 atoms (including

hydrogens) of the entry. The overall clashscore for this entry is 164.

All (15868) close contacts within the same asymmetric unit are listed below.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:38:G:N2	1:A:397:A:H5''	1.43	1.32
9:J:78:ARG:O	9:J:84:ASN:HA	1.33	1.28
1:A:1443:G:H4'	1:A:1446:A:C5'	1.68	1.24
1:A:901:A:C2	1:A:902:G:H1'	1.74	1.22
1:A:1062:U:H2'	1:A:1063:C:C5	1.74	1.21
18:S:18:ARG:NH1	18:S:35:LYS:HB2	1.53	1.21
1:A:1261:A:H61	1:A:1274:G:H1'	1.04	1.21
1:A:449:C:C2	1:A:450:G:H1'	1.76	1.20
6:G:19:LEU:HA	6:G:21:LEU:HD12	1.20	1.19
1:A:41:G:H2'	1:A:42:G:H8	1.08	1.18
10:K:6:ILE:HG23	10:K:7:ALA:H	1.06	1.18
15:P:24:GLY:HA3	15:P:66:LEU:HB2	1.26	1.18
15:P:23:TYR:HB3	15:P:67:GLU:HA	1.27	1.17
22:W:44:ALA:HB3	22:W:91:LEU:HD12	1.19	1.17
14:O:36:VAL:O	14:O:58:VAL:HG13	1.44	1.17
1:A:1443:G:C4'	1:A:1446:A:H5'	1.73	1.17
20:U:58:LEU:HB3	20:U:62:GLU:HB3	1.27	1.17
21:V:5:LEU:HB2	21:V:9:VAL:HG22	1.17	1.16
1:A:665:A:H2'	1:A:725:G:N2	1.58	1.16
12:M:50:ILE:HA	12:M:60:ARG:HG3	1.21	1.16
10:K:84:ARG:HB3	10:K:84:ARG:HH11	1.07	1.16
6:G:59:ARG:HA	6:G:59:ARG:NH1	1.61	1.16
19:T:5:VAL:HG22	19:T:60:ILE:HA	1.18	1.16
9:J:76:ARG:HB2	9:J:156:TRP:HE1	1.01	1.16
9:J:126:ASP:HA	9:J:131:LYS:HE3	1.25	1.16
1:A:953:G:O2'	15:P:125:ARG:HA	1.46	1.15
18:S:39:TYR:HB2	18:S:49:LEU:HD13	1.17	1.15
1:A:1405:G:N2	1:A:1517:G:H22	1.41	1.15
1:A:266:G:H3'	19:T:67:LYS:HD2	1.22	1.15
1:A:764:C:H2'	1:A:765:G:C8	1.81	1.15
7:H:48:ALA:CB	7:H:53:LEU:HB3	1.77	1.15
20:U:74:ARG:HG2	20:U:81:PHE:HB3	1.25	1.15
6:G:31:CYS:SG	6:G:33:MET:SD	2.44	1.15
1:A:888:G:N2	1:A:909:A:H62	1.41	1.14
6:G:121:VAL:HB	6:G:136:PRO:HG3	1.26	1.14
7:H:31:LEU:HD12	7:H:129:ILE:HG23	1.28	1.14
22:W:87:LYS:HG3	22:W:91:LEU:HD21	1.30	1.14
14:O:117:ARG:HH21	14:O:124:LYS:HA	1.06	1.14
9:J:103:TRP:CH2	9:J:138:LYS:HA	1.81	1.14
13:N:57:THR:HG23	13:N:60:ALA:H	1.13	1.14

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:80:G:H2'	1:A:81:G:O4'	1.46	1.14
19:T:25:ARG:HH21	19:T:40:LYS:HD3	1.07	1.14
11:L:55:ALA:CB	11:L:58:HIS:CE1	2.30	1.14
21:V:53:ASN:HD21	21:V:56:GLN:HB2	1.05	1.13
6:G:55:ALA:O	6:G:59:ARG:HG2	1.48	1.13
14:O:37:CYS:HA	14:O:58:VAL:HG22	1.20	1.13
2:1:29:G:H2'	2:1:30:U:H5''	1.18	1.13
19:T:5:VAL:HG13	19:T:59:ILE:O	1.49	1.13
1:A:551:U:H2'	1:A:552:U:C6	1.84	1.13
8:I:3:ARG:HA	8:I:67:MET:HE1	1.25	1.13
1:A:599:C:H4'	10:K:130:GLY:HA3	1.17	1.12
1:A:47:C:H4'	1:A:48:C:H5''	1.30	1.12
1:A:1077:G:N2	1:A:1079:G:H3'	1.63	1.12
1:A:371:G:H2'	1:A:372:C:H5'	1.13	1.12
9:J:46:ALA:HA	9:J:49:ILE:HD13	1.29	1.12
18:S:75:ARG:HG2	18:S:80:PHE:HB3	1.30	1.12
1:A:939:G:H5''	9:J:102:ARG:NH2	1.64	1.12
13:N:61:ALA:HB1	13:N:94:ALA:HB2	1.13	1.12
15:P:48:LEU:HD21	15:P:52:GLU:HB2	1.28	1.12
5:F:126:ARG:HB3	5:F:128:PHE:HE1	1.03	1.12
1:A:408:A:H2'	1:A:409:G:C8	1.85	1.11
21:V:41:VAL:HB	21:V:42:PRO:HD2	1.24	1.11
9:J:115:ARG:HB2	9:J:118:VAL:HG23	1.26	1.11
4:E:219:VAL:HG12	4:E:223:ILE:HD11	1.25	1.11
1:A:1080:A:H5'	7:H:14:ARG:NH2	1.65	1.11
2:1:30:U:H2'	2:1:31:U:O4'	1.49	1.11
1:A:587:G:H1'	1:A:755:G:N2	1.65	1.11
3:C:40:C:H2'	3:C:41:C:H5'	1.28	1.11
14:O:56:ALA:HB3	14:O:68:ALA:O	1.45	1.11
3:D:18:G:H4'	3:D:60:U:H3	1.12	1.11
1:A:955:U:H1'	1:A:1227:A:H61	1.14	1.11
20:U:66:LEU:HD12	20:U:67:ALA:N	1.65	1.11
7:H:109:ILE:HG21	7:H:135:THR:HG21	1.18	1.11
7:H:121:LYS:NZ	7:H:122:GLU:H	1.48	1.10
7:H:144:THR:HG22	7:H:146:ALA:H	1.11	1.10
10:K:37:ARG:HD3	10:K:41:ARG:HG3	1.27	1.10
20:U:72:ARG:HA	20:U:75:ILE:HD12	1.28	1.10
10:K:22:GLU:HA	10:K:63:LEU:HD22	1.33	1.10
15:P:60:VAL:HA	15:P:63:THR:HG22	1.32	1.10
15:P:97:PRO:HG2	15:P:103:THR:HG22	1.15	1.10
6:G:101:LEU:O	6:G:104:VAL:HG22	1.49	1.10
14:O:23:LYS:HA	14:O:23:LYS:HE3	1.29	1.10

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:371:G:C2'	1:A:372:C:H5'	1.80	1.10
4:E:56:ARG:NH1	4:E:56:ARG:HB3	1.66	1.10
10:K:86:ILE:HG21	10:K:133:LEU:HB2	1.26	1.10
11:L:50:LEU:HD11	11:L:56:LEU:HA	1.32	1.10
1:A:313:A:H2'	1:A:314:C:C6	1.85	1.10
4:E:213:LEU:HD22	4:E:214:ILE:HD13	1.29	1.10
6:G:20:TYR:HA	6:G:26:CYS:SG	1.92	1.10
13:N:58:PRO:HB2	13:N:93:GLN:HB2	1.31	1.10
8:I:23:LYS:O	8:I:26:ILE:HB	1.52	1.10
22:W:50:GLU:H	22:W:99:LEU:HD12	1.03	1.10
4:E:184:VAL:O	4:E:198:ASP:HB2	1.52	1.10
4:E:88:ALA:HB2	4:E:219:VAL:HG22	1.13	1.09
1:A:684:A:H4'	13:N:12:ARG:HH22	1.13	1.09
16:Q:58:LYS:HD3	16:Q:59:ALA:N	1.67	1.09
21:V:69:HIS:HB2	21:V:74:PHE:HZ	1.17	1.09
1:A:677:U:H2'	1:A:678:U:C5	1.86	1.09
1:A:761:G:H5'	19:T:102:GLY:HA3	1.30	1.09
4:E:59:GLU:HB3	4:E:221:LEU:HD21	1.29	1.09
6:G:82:ALA:HB3	6:G:89:THR:HG23	1.34	1.09
1:A:263:A:H2'	1:A:264:U:H5''	1.19	1.09
20:U:70:ILE:HG22	20:U:74:ARG:HE	1.18	1.09
4:E:174:VAL:O	4:E:178:ARG:HG2	1.50	1.09
17:R:62:GLN:HE21	17:R:66:LEU:HD21	1.09	1.09
5:F:150:LYS:HB2	5:F:173:VAL:HG21	1.33	1.09
1:A:38:G:H22	1:A:397:A:C5'	1.66	1.09
1:A:570:G:H5'	1:A:820:U:H1'	1.33	1.09
8:I:6:VAL:HG22	8:I:8:ILE:HD11	1.33	1.09
1:A:770:C:H1'	1:A:900:A:H2	1.12	1.08
5:F:38:ARG:HB3	5:F:38:ARG:HH11	0.94	1.08
10:K:34:GLU:O	10:K:37:ARG:HB3	1.53	1.08
10:K:87:SER:HB2	10:K:92:ARG:HA	1.18	1.08
16:Q:45:ARG:HH11	16:Q:45:ARG:HB2	1.17	1.08
1:A:1107:C:H2'	1:A:1108:G:H5'	1.09	1.08
1:A:678:U:H2'	1:A:679:C:C6	1.87	1.08
3:C:6:G:H2'	3:C:7:A:H8	1.15	1.08
5:F:189:ALA:HB1	5:F:196:LEU:HG	1.17	1.08
9:J:155:ARG:HA	9:J:155:ARG:CZ	1.82	1.08
17:R:77:ARG:HH12	17:R:81:LEU:HB2	1.08	1.08
1:A:262:A:H2'	1:A:263:A:C8	1.87	1.08
1:A:558:G:H3'	1:A:559:A:H5''	1.26	1.08
13:N:48:ILE:HD12	13:N:63:LEU:HD22	1.31	1.08
1:A:815:A:H1'	1:A:817:C:N4	1.68	1.08

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1477:C:H2'	1:A:1478:C:H6	1.18	1.08
17:R:71:GLN:HG3	17:R:75:PRO:HB3	1.32	1.08
20:U:74:ARG:HB3	20:U:81:PHE:HD2	1.10	1.08
2:1:29:G:C2'	2:1:30:U:H5''	1.84	1.07
1:A:373:A:H1'	1:A:481:G:H1'	1.35	1.07
20:U:58:LEU:HB3	20:U:62:GLU:CB	1.84	1.07
6:G:43:HIS:HB3	6:G:46:LYS:HG3	1.30	1.07
11:L:85:LEU:HD23	11:L:96:LEU:HD13	1.31	1.07
14:O:86:ARG:HH12	14:O:119:LYS:HG3	1.09	1.07
20:U:46:GLU:HB3	20:U:85:LEU:HD13	1.37	1.07
4:E:50:GLU:HG3	4:E:200:ILE:O	1.52	1.07
2:1:32:U:H2'	2:1:33:U:H6	1.09	1.07
1:A:291:C:H3'	1:A:305:G:H22	1.11	1.07
1:A:43:C:H5''	18:S:12:LYS:HB3	1.09	1.07
7:H:78:HIS:HB3	10:K:107:LEU:HD21	1.31	1.07
8:I:12:PRO:HB3	8:I:58:GLY:HA2	1.31	1.07
17:R:54:ARG:HA	17:R:57:LEU:HD22	1.35	1.07
1:A:1277:C:H4'	1:A:1282:C:H1'	1.36	1.07
4:E:222:ILE:O	4:E:226:ARG:HB2	1.53	1.07
1:A:1242:C:H5''	23:X:10:ARG:HH12	1.14	1.07
1:A:558:G:C3'	1:A:559:A:H5''	1.85	1.07
1:A:559:A:C4'	1:A:560:U:H5'	1.82	1.07
5:F:182:ILE:HA	5:F:204:LEU:HG	1.37	1.07
12:M:65:LEU:HD12	16:Q:56:VAL:HG22	1.36	1.07
18:S:49:LEU:HD11	18:S:51:VAL:HG22	1.33	1.07
5:F:20:SER:HB2	5:F:40:ARG:HH22	1.13	1.07
22:W:62:LEU:HA	22:W:65:LYS:HG2	1.34	1.07
1:A:736:C:H5''	20:U:72:ARG:HH22	1.11	1.06
1:A:50:A:H5''	1:A:51:A:H5'	1.16	1.06
22:W:33:ILE:HD13	22:W:63:ILE:HA	1.34	1.06
12:M:23:ILE:HG23	12:M:85:LEU:HD23	1.37	1.06
17:R:6:GLU:HG2	17:R:7:GLU:H	1.11	1.06
22:W:12:ALA:H	22:W:13:LEU:HD12	1.10	1.06
1:A:781:A:H2'	1:A:782:A:H5'	1.35	1.06
1:A:926:G:H2'	1:A:1505:G:H21	0.99	1.06
1:A:959:A:H3'	1:A:960:U:H5''	1.37	1.06
6:G:74:GLN:HA	6:G:77:ASN:HD22	1.13	1.06
10:K:10:LEU:HD11	10:K:85:ARG:HD3	1.38	1.06
1:A:611:A:N6	1:A:629:G:H1	1.53	1.06
4:E:209:ARG:HH12	4:E:213:LEU:HD12	1.19	1.06
3:D:47:U:H2'	3:D:48:C:H5''	1.32	1.06
1:A:1156:G:H1'	1:A:1179:A:H61	1.17	1.06

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:9:G:H5''	7:H:126:ARG:HD3	1.29	1.06
5:F:91:LEU:HD21	5:F:98:ASN:HA	1.37	1.06
15:P:108:ARG:NH1	15:P:108:ARG:HA	1.68	1.06
18:S:44:THR:HG23	18:S:45:THR:H	1.09	1.06
1:A:132:C:H5'	1:A:262:A:H1'	1.38	1.06
1:A:551:U:H5'	14:O:119:LYS:NZ	1.71	1.06
4:E:42:ILE:HD11	4:E:202:PRO:HB2	1.38	1.06
12:M:45:ARG:HH11	12:M:45:ARG:HB3	1.14	1.06
18:S:20:VAL:HG22	18:S:35:LYS:HA	1.37	1.06
1:A:926:G:H2'	1:A:1505:G:N2	1.71	1.06
12:M:94:VAL:HG12	12:M:95:GLU:H	1.13	1.06
20:U:33:ASP:CG	20:U:34:TYR:H	1.57	1.06
23:X:10:ARG:O	23:X:13:ILE:HG22	1.55	1.06
6:G:107:ARG:HA	6:G:107:ARG:HH11	1.18	1.05
4:E:69:LEU:HA	4:E:91:PRO:O	1.53	1.05
15:P:57:ARG:O	15:P:61:GLU:HB2	1.54	1.05
1:A:1242:C:O2'	1:A:1303:C:H5''	1.55	1.05
1:A:1236:A:H4'	1:A:1304:G:H4'	1.38	1.05
1:A:978:A:N6	1:A:1361:G:H22	1.54	1.05
3:C:6:G:H2'	3:C:7:A:C8	1.91	1.05
11:L:9:ARG:HD2	11:L:14:VAL:HG22	1.38	1.05
19:T:43:LEU:HD22	19:T:44:ALA:N	1.71	1.05
12:M:8:LEU:HD13	12:M:94:VAL:HG11	1.36	1.05
20:U:62:GLU:O	20:U:66:LEU:HG	1.56	1.05
1:A:1004:A:H8	1:A:1036:G:O6	1.39	1.05
3:B:34:G:C2	3:B:35:A:H1'	1.92	1.05
14:O:84:LEU:HB3	14:O:104:VAL:HG11	1.30	1.05
1:A:1464:G:H2'	1:A:1465:C:C5	1.90	1.05
1:A:1417:G:H2'	1:A:1482:G:N2	1.72	1.05
1:A:389:A:H2'	1:A:390:C:H5'	1.37	1.05
1:A:932:C:H3'	9:J:3:ARG:HG3	1.31	1.05
10:K:29:SER:HB2	10:K:32:LYS:HE2	1.36	1.05
10:K:91:ARG:HG2	19:T:34:LYS:HB2	1.39	1.05
10:K:10:LEU:O	10:K:13:ILE:HB	1.56	1.05
1:A:1286:A:H5'	23:X:25:LYS:HG2	1.35	1.05
1:A:765:G:O2'	1:A:766:A:H5'	1.56	1.05
1:A:886:G:O2'	1:A:887:G:H5'	1.57	1.04
1:A:1004:A:H3'	1:A:1025:U:N3	1.71	1.04
4:E:55:PHE:HA	4:E:58:ILE:HD12	1.35	1.04
7:H:89:ILE:HG12	7:H:131:ILE:HD12	1.36	1.04
1:A:939:G:H5''	9:J:102:ARG:HH22	0.91	1.04
1:A:50:A:N6	1:A:361:G:H4'	1.70	1.04

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:571:U:C3'	1:A:572:A:H5''	1.87	1.04
1:A:64:G:H4'	1:A:65:U:H5''	1.39	1.04
1:A:946:A:H2'	1:A:947:G:C8	1.92	1.04
13:N:32:ILE:HG22	13:N:40:ILE:HD11	1.36	1.04
18:S:18:ARG:HH12	18:S:35:LYS:CB	1.70	1.04
11:L:55:ALA:HB1	11:L:58:HIS:CE1	1.90	1.04
12:M:30:SER:HB2	12:M:81:THR:HA	1.35	1.04
4:E:155:LEU:HB2	4:E:159:PRO:HG3	1.39	1.04
17:R:16:ALA:HB1	17:R:21:ASP:HB3	1.35	1.04
17:R:62:GLN:HA	17:R:65:ARG:NH2	1.72	1.04
6:G:133:VAL:HG11	6:G:138:TYR:HD1	1.21	1.04
7:H:84:PHE:CZ	7:H:133:TYR:HB3	1.93	1.04
11:L:42:ARG:HB3	11:L:74:ILE:HD13	1.33	1.04
12:M:43:ARG:O	12:M:66:ARG:HB2	1.58	1.04
14:O:93:LEU:HD12	14:O:96:VAL:HG21	1.35	1.04
16:Q:26:ARG:HD2	16:Q:47:LEU:HD12	1.40	1.04
1:A:1320:C:N4	21:V:36:ARG:HH11	1.54	1.04
1:A:754:C:H5'	1:A:755:G:C8	1.93	1.04
6:G:132:ARG:HH11	6:G:132:ARG:HG2	1.21	1.04
11:L:19:LEU:HD21	11:L:59:PHE:HB3	1.07	1.04
14:O:28:LYS:NZ	14:O:33:ARG:HH22	1.56	1.04
16:Q:29:ARG:HB3	16:Q:29:ARG:HH11	1.22	1.04
1:A:1253:G:H1	1:A:1285:A:N6	1.55	1.03
1:A:1403:C:H1'	1:A:1500:A:N6	1.72	1.03
10:K:12:ARG:HH11	10:K:27:PRO:HD3	1.21	1.03
5:F:33:LEU:HD11	16:Q:53:LEU:HA	1.38	1.03
6:G:12:CYS:HA	6:G:19:LEU:HB2	1.37	1.03
16:Q:45:ARG:HH11	16:Q:45:ARG:CB	1.71	1.03
1:A:37:U:H3'	1:A:37:U:H6	1.21	1.03
3:C:28:G:H2'	3:C:29:G:H8	1.21	1.03
5:F:38:ARG:HB3	5:F:38:ARG:NH1	1.70	1.03
9:J:35:LYS:NZ	9:J:38:LEU:HD22	1.73	1.03
1:A:962:C:H4'	1:A:1200:C:H41	1.18	1.03
1:A:82:U:H2'	1:A:85:U:H5	1.22	1.03
4:E:178:ARG:NE	4:E:196:LEU:HD13	1.73	1.03
14:O:24:VAL:HG23	14:O:97:ARG:HG2	1.38	1.03
1:A:559:A:H4'	1:A:560:U:C5'	1.87	1.03
6:G:141:ARG:HD3	6:G:142:PRO:HD2	1.40	1.03
10:K:64:LYS:HG2	10:K:79:VAL:HG21	1.36	1.03
15:P:108:ARG:CA	15:P:108:ARG:HH11	1.71	1.03
1:A:571:U:H3'	1:A:572:A:H5''	1.05	1.03
7:H:52:PRO:O	7:H:55:VAL:HB	1.59	1.03

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:P:88:ARG:HG2	15:P:98:VAL:HG12	1.38	1.03
1:A:306:G:H2'	1:A:307:C:H6	1.19	1.03
4:E:95:GLN:HE21	4:E:148:TYR:HB3	1.23	1.03
1:A:355:C:H1'	1:A:388:G:H2'	1.40	1.03
6:G:148:VAL:HB	6:G:181:MET:HE3	1.37	1.03
3:D:19:G:N2	3:D:57:G:H1'	1.73	1.03
19:T:4:LYS:HD2	19:T:5:VAL:H	1.18	1.03
1:A:22:G:H2'	1:A:23:C:C6	1.93	1.03
1:A:770:C:H1'	1:A:900:A:C2	1.91	1.03
10:K:14:ARG:HB3	10:K:14:ARG:NH1	1.73	1.03
12:M:25:GLU:HA	12:M:28:ARG:HD2	1.41	1.03
21:V:18:LYS:HA	21:V:18:LYS:HE3	1.37	1.03
3:D:75:C:H3'	3:D:76:A:H4'	1.39	1.03
5:F:122:GLU:HA	5:F:125:GLU:HG2	1.36	1.02
11:L:40:LEU:HB3	11:L:42:ARG:HB2	1.38	1.02
14:O:37:CYS:CA	14:O:58:VAL:HG22	1.88	1.02
1:A:38:G:H22	1:A:397:A:H5''	0.86	1.02
6:G:50:ARG:HG2	6:G:51:PRO:HD2	1.34	1.02
20:U:36:ASN:O	20:U:40:LEU:HG	1.59	1.02
1:A:1005:A:H5''	1:A:1006:C:C5	1.95	1.02
14:O:83:VAL:HG22	14:O:84:LEU:H	1.24	1.02
1:A:1053:G:H5'	1:A:1054:C:H5'	1.40	1.02
4:E:155:LEU:CB	4:E:159:PRO:HG3	1.89	1.02
4:E:178:ARG:HD2	4:E:184:VAL:HG11	1.42	1.02
10:K:95:VAL:HG22	10:K:133:LEU:HD21	1.38	1.02
14:O:88:GLY:H	14:O:98:TYR:HA	1.20	1.02
1:A:716:A:H1'	13:N:118:GLY:HA2	1.37	1.02
4:E:163:PHE:HA	4:E:185:ILE:O	1.59	1.02
5:F:52:LEU:HA	5:F:70:VAL:HG22	1.41	1.02
8:I:52:ILE:HD13	8:I:87:ARG:NH2	1.73	1.02
13:N:50:TYR:HB3	13:N:55:LYS:HG2	1.39	1.02
19:T:59:ILE:HD11	19:T:71:PHE:HB3	1.38	1.02
1:A:570:G:H1	1:A:866:C:N4	1.55	1.02
2:1:36:U:H4'	2:1:37:U:OP2	1.59	1.02
1:A:1192:C:H3'	1:A:1192:C:H6	1.25	1.02
20:U:21:LYS:HZ1	20:U:23:LYS:HB3	1.21	1.02
1:A:1005:A:H3'	1:A:1006:C:H6	1.24	1.02
1:A:12:U:H2'	1:A:13:U:H5	1.21	1.02
1:A:1428:A:H2'	1:A:1429:C:C6	1.94	1.02
1:A:263:A:C2'	1:A:264:U:H5''	1.89	1.02
1:A:408:A:H2'	1:A:409:G:H8	1.16	1.02
5:F:59:ARG:NE	5:F:64:VAL:HA	1.74	1.02

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:93:PHE:HA	6:G:96:LEU:HD12	1.39	1.01
8:I:30:LEU:HA	8:I:75:LEU:HD11	1.37	1.01
1:A:1064:G:H1'	1:A:1066:C:C4	1.94	1.01
1:A:91:C:H2'	1:A:92:G:H8	1.23	1.01
5:F:126:ARG:HB3	5:F:128:PHE:CE1	1.95	1.01
1:A:1205:U:H4'	5:F:195:VAL:HG13	1.41	1.01
6:G:19:LEU:H	6:G:33:MET:HE1	1.23	1.01
10:K:84:ARG:NH1	10:K:84:ARG:HB3	1.75	1.01
12:M:49:VAL:HG13	16:Q:41:ARG:HD2	1.37	1.01
5:F:59:ARG:HE	5:F:64:VAL:HA	1.26	1.01
6:G:106:TYR:HA	6:G:111:ALA:HB3	1.43	1.01
20:U:61:LYS:HD2	20:U:64:ARG:HH22	1.25	1.01
22:W:43:LEU:HD12	22:W:55:ILE:HD11	1.36	1.01
4:E:84:GLU:HG2	4:E:234:PRO:HD2	1.42	1.01
7:H:48:ALA:HB3	7:H:53:LEU:HB3	1.40	1.01
19:T:89:LEU:O	19:T:92:ARG:HB3	1.60	1.01
1:A:475:G:H2'	1:A:476:G:C8	1.95	1.01
5:F:15:THR:HG21	5:F:181:ASN:HA	1.41	1.01
7:H:79:GLU:HB3	7:H:92:LYS:HA	1.39	1.01
1:A:279:A:N1	19:T:98:LEU:HG	1.75	1.01
1:A:792:A:H2'	1:A:794:A:H62	1.18	1.01
1:A:973:G:N2	1:A:974:A:N6	2.09	1.01
4:E:54:THR:HG21	4:E:201:ILE:HD11	1.42	1.01
16:Q:24:CYS:HB2	16:Q:40:CYS:N	1.76	1.01
9:J:143:ARG:HH11	9:J:144:MET:HB2	1.25	1.01
12:M:34:VAL:HG12	12:M:35:SER:H	1.23	1.01
17:R:7:GLU:O	17:R:10:LYS:HG2	1.60	1.01
1:A:232:G:H2'	1:A:233:C:C6	1.94	1.01
6:G:104:VAL:HG11	6:G:140:VAL:HG21	1.37	1.01
11:L:55:ALA:HB3	11:L:58:HIS:CE1	1.94	1.01
19:T:62:SER:HB3	19:T:72:ARG:NE	1.76	1.01
1:A:1119:C:H2'	1:A:1120:G:C8	1.96	1.01
6:G:100:ARG:O	6:G:104:VAL:HG13	1.61	1.01
19:T:88:TYR:N	19:T:91:ARG:HH21	1.56	1.01
4:E:91:PRO:HG3	4:E:154:LEU:HB3	1.40	1.00
14:O:57:LYS:HG2	14:O:67:THR:HG22	1.41	1.00
1:A:572:A:H4'	1:A:917:G:H5'	1.40	1.00
1:A:922:G:H4'	7:H:20:GLN:HA	1.37	1.00
6:G:187:ARG:NE	6:G:188:LEU:HG	1.76	1.00
8:I:47:ARG:HD3	8:I:57:GLN:HB3	1.42	1.00
1:A:684:A:H4'	13:N:12:ARG:NH2	1.75	1.00
5:F:36:ASP:O	5:F:39:ILE:HB	1.61	1.00

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:18:LYS:HG2	6:G:33:MET:HB3	1.40	1.00
1:A:1310:G:H3'	21:V:2:PRO:HD2	1.39	1.00
1:A:952:U:H5'	1:A:972:C:H41	1.23	1.00
4:E:55:PHE:HA	4:E:58:ILE:CD1	1.91	1.00
11:L:48:GLU:HB3	11:L:78:LYS:HZ3	1.24	1.00
13:N:111:ASP:OD2	13:N:113:PRO:HD3	1.61	1.00
15:P:104:ARG:HG2	15:P:105:THR:HG23	1.38	1.00
15:P:78:ILE:HA	15:P:81:LEU:HD13	1.41	1.00
17:R:62:GLN:NE2	17:R:66:LEU:HD21	1.76	1.00
1:A:1288:A:H2'	1:A:1289:A:H8	1.27	1.00
1:A:291:C:H3'	1:A:305:G:N2	1.76	1.00
7:H:76:ILE:HD13	7:H:142:LEU:HB2	1.41	1.00
9:J:69:VAL:HG21	9:J:104:LEU:HD21	1.43	1.00
16:Q:54:PRO:O	16:Q:56:VAL:HG23	1.60	1.00
19:T:62:SER:OG	19:T:72:ARG:HG2	1.61	1.00
3:D:8:U:H3	3:D:14:A:N6	1.59	1.00
6:G:24:GLU:O	6:G:27:TYR:HB3	1.62	1.00
17:R:60:VAL:O	17:R:63:ARG:HG3	1.60	1.00
4:E:187:LEU:HA	4:E:201:ILE:O	1.59	1.00
5:F:30:ARG:HG2	5:F:31:HIS:H	1.27	1.00
6:G:20:TYR:HD1	6:G:21:LEU:N	1.58	1.00
7:H:78:HIS:ND1	10:K:107:LEU:HD11	1.76	1.00
9:J:140:ASP:HA	9:J:143:ARG:CZ	1.91	1.00
10:K:68:ARG:HD3	10:K:69:ARG:H	1.26	1.00
5:F:33:LEU:HD11	16:Q:54:PRO:HD2	1.38	1.00
19:T:18:THR:HG22	19:T:43:LEU:HD21	1.42	1.00
10:K:80:ILE:H	10:K:80:ILE:HD12	1.25	0.99
15:P:48:LEU:CD2	15:P:52:GLU:HB2	1.91	0.99
1:A:112:G:H5'	1:A:389:A:H4'	1.41	0.99
1:A:1137:C:H4'	1:A:1138:G:C2	1.98	0.99
1:A:1405:G:H21	1:A:1517:G:N2	1.57	0.99
1:A:791:G:H22	1:A:1498:U:P	1.84	0.99
5:F:69:HIS:ND1	5:F:104:GLN:HB2	1.77	0.99
8:I:14:LEU:CD1	8:I:15:ASP:H	1.75	0.99
15:P:82:MET:HE1	15:P:93:ARG:HA	1.40	0.99
1:A:191:G:H1'	22:W:105:SER:HA	1.43	0.99
1:A:1327:C:H5''	23:X:20:LYS:HD3	1.41	0.99
1:A:174:C:H2'	1:A:175:C:H6	1.27	0.99
4:E:178:ARG:HH21	4:E:196:LEU:HB2	1.22	0.99
7:H:12:LEU:HB3	7:H:31:LEU:HB3	1.44	0.99
20:U:21:LYS:NZ	20:U:23:LYS:HB3	1.77	0.99
1:A:1234:C:H5'	1:A:1364:U:O2'	1.63	0.99

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:95:GLN:HG3	4:E:148:TYR:HB3	1.39	0.99
12:M:30:SER:HB2	12:M:81:THR:CA	1.91	0.99
1:A:1256:A:O3'	1:A:1257:U:H4'	1.62	0.99
1:A:902:G:O2'	1:A:903:G:H5'	1.62	0.99
4:E:222:ILE:HB	4:E:226:ARG:NH2	1.77	0.99
10:K:29:SER:HB2	10:K:32:LYS:CE	1.91	0.99
1:A:164:U:H2'	1:A:165:C:C5	1.97	0.99
1:A:1197:G:H3'	1:A:1197:G:OP1	1.62	0.99
1:A:983:A:H1'	1:A:1201:A:N7	1.77	0.99
4:E:161:ALA:HA	4:E:183:PRO:HB2	1.42	0.99
9:J:69:VAL:HG22	9:J:135:VAL:HG22	1.39	0.99
1:A:723:U:H5	2:1:30:U:HO2'	1.01	0.99
1:A:37:U:H3'	1:A:37:U:C6	1.96	0.99
1:A:37:U:OP1	14:O:123:LYS:HB3	1.63	0.99
1:A:8:A:H1'	7:H:102:ALA:O	1.61	0.99
12:M:18:ALA:HB3	12:M:91:PRO:HB3	1.41	0.99
1:A:781:A:H2'	1:A:782:A:C5'	1.92	0.98
1:A:1413:A:N6	1:A:1488:G:C6	2.31	0.98
6:G:60:GLU:OE2	6:G:199:ASN:HB3	1.61	0.98
1:A:1077:G:H22	1:A:1079:G:H3'	1.21	0.98
1:A:475:G:H2'	1:A:476:G:H8	1.26	0.98
1:A:888:G:H21	1:A:909:A:N6	1.60	0.98
10:K:100:ILE:H	10:K:100:ILE:HD12	1.27	0.98
10:K:129:VAL:HG22	10:K:130:GLY:H	1.26	0.98
15:P:74:VAL:HG12	15:P:78:ILE:HD11	1.45	0.98
21:V:69:HIS:HB2	21:V:74:PHE:CZ	1.96	0.98
1:A:186(B):C:H4'	22:W:89:ARG:HH12	1.27	0.98
1:A:1241:G:H2'	1:A:1242:C:C6	1.98	0.98
1:A:1206:G:H5'	5:F:194:GLY:HA2	1.45	0.98
19:T:82:MET:O	19:T:85:VAL:HB	1.61	0.98
14:O:60:LEU:H	14:O:60:LEU:HD13	1.25	0.98
1:A:1323:G:H2'	1:A:1324:A:H8	1.27	0.98
1:A:1339:A:H2'	1:A:1340:A:H5'	1.44	0.98
1:A:169:C:H2'	1:A:170:U:C6	1.98	0.98
1:A:384:G:H2'	1:A:385:C:C6	1.98	0.98
2:1:30:U:H6	2:1:30:U:H5'	1.26	0.98
1:A:1066:C:H3'	1:A:1067:A:H8	1.27	0.98
10:K:38:ILE:HG13	10:K:118:VAL:HG11	1.43	0.98
15:P:56:LEU:O	15:P:59:TYR:HB3	1.64	0.98
1:A:1349:A:OP2	11:L:118:LYS:HD2	1.62	0.98
1:A:22:G:H2'	1:A:23:C:H6	1.22	0.98
6:G:53:ASP:O	6:G:56:VAL:HB	1.60	0.98

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:P:108:ARG:HH11	15:P:108:ARG:HA	0.82	0.98
1:A:259:G:H2'	1:A:260:G:C8	1.99	0.98
4:E:111:ARG:HA	4:E:111:ARG:HH11	1.25	0.98
4:E:47:THR:O	4:E:51:LEU:HG	1.64	0.98
10:K:26:VAL:HG22	10:K:27:PRO:HD2	1.42	0.98
11:L:47:LEU:HD12	11:L:51:ARG:HH22	1.24	0.98
1:A:50:A:C5'	1:A:51:A:H5'	1.93	0.98
4:E:217:ARG:HA	4:E:220:ASP:OD2	1.64	0.98
6:G:11:LEU:O	6:G:19:LEU:HD12	1.64	0.98
9:J:5:ARG:HD2	9:J:7:ALA:H	1.29	0.98
1:A:1080:A:H5'	7:H:14:ARG:HH21	1.24	0.97
7:H:152:ARG:CZ	10:K:43:GLY:HA3	1.93	0.97
7:H:51:VAL:HB	7:H:52:PRO:HD3	1.45	0.97
18:S:4:ILE:HG23	18:S:21:VAL:CG1	1.93	0.97
18:S:60:LEU:HA	18:S:64:ALA:HB3	1.46	0.97
1:A:1477:C:H2'	1:A:1478:C:C6	1.97	0.97
1:A:495:A:H1'	1:A:496:A:C8	1.98	0.97
1:A:528:C:N4	14:O:49:ASN:HD21	1.62	0.97
6:G:20:TYR:HA	6:G:26:CYS:O	1.61	0.97
1:A:129(A):G:H2'	1:A:189:U:C6	1.98	0.97
4:E:166:ASP:O	4:E:169:LYS:HB3	1.64	0.97
9:J:155:ARG:NH1	9:J:156:TRP:H	1.62	0.97
20:U:74:ARG:HB3	20:U:81:PHE:CD2	1.98	0.97
1:A:1314:C:H3'	21:V:6:LYS:HD3	1.47	0.97
1:A:863:U:O2	1:A:863:U:H2'	1.64	0.97
1:A:962:C:H4'	1:A:1200:C:N4	1.78	0.97
4:E:102:LEU:H	4:E:102:LEU:CD1	1.77	0.97
12:M:7:LYS:O	12:M:97:GLU:HB2	1.64	0.97
1:A:1241:G:H2'	1:A:1242:C:H6	1.29	0.97
1:A:279:A:H5'	1:A:280:C:H3'	1.47	0.97
6:G:36:ARG:HB3	6:G:38:TYR:CZ	1.98	0.97
9:J:31:MET:HG2	9:J:32:ARG:N	1.77	0.97
1:A:979:C:H5''	1:A:1222:G:O6	1.63	0.97
1:A:781:A:H4'	1:A:1522:U:O2'	1.64	0.97
1:A:625:G:OP1	18:S:9:PHE:HB3	1.65	0.97
8:I:76:ALA:HB1	8:I:80:ARG:HH12	1.25	0.97
9:J:113:GLU:HG3	9:J:118:VAL:HB	1.42	0.97
11:L:79:LEU:HD13	11:L:101:PHE:HB3	1.47	0.97
20:U:43:PHE:O	20:U:51:LEU:HD13	1.64	0.97
1:A:265:G:O2'	1:A:266:G:H5'	1.65	0.97
10:K:98:LYS:N	10:K:98:LYS:HZ2	1.62	0.97
19:T:59:ILE:HD12	19:T:60:ILE:H	1.28	0.97

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:665:A:H2'	1:A:725:G:H22	1.22	0.97
4:E:20:GLU:HA	4:E:21:ARG:HH21	1.29	0.97
6:G:162:LEU:HD13	6:G:181:MET:HG2	1.42	0.97
12:M:23:ILE:HG13	12:M:85:LEU:HB3	1.45	0.97
1:A:587:G:H1'	1:A:755:G:H22	1.29	0.97
17:R:62:GLN:O	17:R:66:LEU:HD23	1.65	0.97
3:C:9:A:H1'	3:C:46:G:H1'	1.42	0.97
4:E:144:ARG:HA	4:E:147:LYS:HB2	1.47	0.97
10:K:46:LYS:HE3	10:K:64:LYS:HG3	1.44	0.97
10:K:87:SER:CB	10:K:92:ARG:HA	1.95	0.97
14:O:101:VAL:O	14:O:104:VAL:HG23	1.64	0.97
1:A:1180:A:OP1	11:L:102:LEU:HD12	1.65	0.96
9:J:143:ARG:NH1	9:J:144:MET:HB2	1.79	0.96
9:J:87:VAL:HG13	9:J:152:ALA:HA	1.44	0.96
10:K:36:LEU:HD23	10:K:36:LEU:H	1.30	0.96
10:K:64:LYS:HD3	10:K:79:VAL:HG11	1.47	0.96
20:U:41:LYS:O	20:U:44:LEU:HG	1.63	0.96
22:W:51:GLU:HA	22:W:54:LYS:CD	1.95	0.96
1:A:194:C:H2'	1:A:195:A:H5''	1.47	0.96
10:K:45:ILE:CD1	10:K:48:TYR:HB3	1.94	0.96
21:V:27:GLU:HG2	21:V:29:ARG:H	1.29	0.96
1:A:1004:A:H3'	1:A:1025:U:C4	2.01	0.96
1:A:265:G:H2'	1:A:267:C:H5	1.27	0.96
14:O:28:LYS:HZ1	14:O:33:ARG:HH22	1.08	0.96
1:A:1329:A:OP1	15:P:29:ARG:HG2	1.64	0.96
4:E:81:VAL:HG12	4:E:92:TYR:HD1	1.27	0.96
12:M:63:PHE:HB3	16:Q:58:LYS:HA	1.47	0.96
19:T:59:ILE:CD1	19:T:71:PHE:HB3	1.95	0.96
1:A:41:G:H2'	1:A:42:G:C8	1.98	0.96
4:E:78:GLN:HG3	4:E:94:ASN:HB3	1.45	0.96
10:K:12:ARG:NH1	10:K:27:PRO:HD3	1.80	0.96
14:O:39:VAL:HB	14:O:57:LYS:HB2	1.47	0.96
17:R:54:ARG:O	17:R:57:LEU:HB2	1.63	0.96
17:R:80:ALA:O	17:R:83:GLU:HB3	1.63	0.96
18:S:21:VAL:HG21	18:S:59:TRP:NE1	1.80	0.96
1:A:1129:C:H5'	1:A:1130:A:OP1	1.64	0.96
4:E:187:LEU:HD22	4:E:188:ALA:H	1.31	0.96
5:F:108:ASN:HD21	5:F:110:ASN:HB2	1.27	0.96
5:F:189:ALA:CB	5:F:196:LEU:HG	1.96	0.96
6:G:147:ALA:HB2	6:G:182:LYS:HA	1.46	0.96
11:L:47:LEU:HD13	11:L:50:LEU:HB3	1.44	0.96
14:O:126:LYS:N	14:O:126:LYS:HE3	1.80	0.96

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:296:U:H1'	1:A:302:G:N2	1.81	0.96
1:A:1342:C:H1'	11:L:124:GLN:OE1	1.65	0.96
10:K:82:HIS:O	10:K:137:VAL:HA	1.64	0.96
11:L:48:GLU:HB3	11:L:78:LYS:NZ	1.81	0.96
14:O:85:ILE:HD11	14:O:99:HIS:N	1.80	0.96
4:E:150:SER:HA	4:E:153:ARG:HB2	1.48	0.96
8:I:48:LEU:HB3	20:U:78:LEU:HD23	1.45	0.96
9:J:49:ILE:HG21	9:J:121:ALA:HB1	1.48	0.96
1:A:1464:G:H2'	1:A:1465:C:H5	1.25	0.96
13:N:61:ALA:HB1	13:N:94:ALA:CB	1.95	0.96
15:P:66:LEU:HA	15:P:70:LEU:HD12	1.47	0.96
1:A:1128:C:H1'	1:A:1146:A:H61	1.29	0.95
17:R:5:LYS:O	17:R:8:LYS:HB3	1.66	0.95
18:S:6:LEU:HD13	18:S:6:LEU:H	1.29	0.95
22:W:87:LYS:HE3	22:W:87:LYS:HA	1.46	0.95
5:F:12:LEU:HD21	16:Q:57:ARG:HG3	1.48	0.95
6:G:148:VAL:HG21	6:G:162:LEU:HD11	1.49	0.95
15:P:8:GLU:HG3	15:P:22:ILE:HG12	1.47	0.95
20:U:45:SER:CB	20:U:51:LEU:HD11	1.95	0.95
1:A:101:A:H2'	1:A:102:G:H8	1.30	0.95
1:A:778:G:O2'	1:A:779:C:H5'	1.67	0.95
5:F:189:ALA:HB3	5:F:196:LEU:H	1.29	0.95
9:J:76:ARG:HB2	9:J:156:TRP:NE1	1.81	0.95
15:P:97:PRO:HB2	15:P:101:GLN:HB2	1.48	0.95
19:T:68:ARG:H	19:T:70:ARG:NH2	1.62	0.95
2:1:43:U:H2'	2:1:44:U:C5	2.01	0.95
1:A:678:U:H2'	1:A:679:C:H6	1.26	0.95
4:E:184:VAL:HB	4:E:198:ASP:OD1	1.65	0.95
7:H:33:VAL:HG22	7:H:43:LEU:HD12	1.49	0.95
3:D:19:G:H21	3:D:57:G:H1'	1.32	0.95
1:A:1143:G:H2'	1:A:1144:G:H8	1.27	0.95
1:A:1179:A:H4'	11:L:103:THR:OG1	1.67	0.95
12:M:15:THR:OG1	12:M:94:VAL:HG23	1.66	0.95
1:A:1239:A:H4'	1:A:1240:U:H5''	1.47	0.95
1:A:523:A:H61	14:O:53:ARG:NH2	1.65	0.95
1:A:1204:A:C2	5:F:195:VAL:HG21	2.02	0.95
7:H:11:ILE:HG22	7:H:12:LEU:H	1.29	0.95
8:I:97:PHE:HD2	20:U:31:LEU:HD13	1.32	0.95
10:K:7:ALA:HA	10:K:10:LEU:HD12	1.49	0.95
10:K:87:SER:HB2	10:K:92:ARG:CA	1.97	0.95
11:L:103:THR:HG22	11:L:104:ARG:H	1.32	0.95
1:A:1425:U:H2'	1:A:1426:C:H6	1.31	0.95

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:82:ALA:CB	6:G:89:THR:HG23	1.97	0.95
21:V:32:LYS:HA	21:V:50:ALA:HB3	1.48	0.95
1:A:1010:G:N2	1:A:1020:U:H1'	1.81	0.95
3:D:34:G:H3'	3:D:35:A:C5'	1.97	0.95
10:K:18:ARG:HA	10:K:18:ARG:NH1	1.82	0.95
10:K:90:GLY:O	14:O:7:ILE:HG21	1.65	0.95
17:R:70:LEU:HG	17:R:78:TYR:CG	2.02	0.95
1:A:375:U:O3'	18:S:6:LEU:HD21	1.67	0.95
1:A:416:G:H2'	1:A:417:C:C6	2.01	0.94
1:A:736:C:H5''	20:U:72:ARG:NH2	1.82	0.94
7:H:145:LYS:O	7:H:148:VAL:HB	1.65	0.94
10:K:33:GLU:HG2	10:K:59:LEU:HD11	1.49	0.94
11:L:19:LEU:CD2	11:L:59:PHE:HB3	1.96	0.94
22:W:49:ALA:HA	22:W:92:LEU:HD22	1.47	0.94
6:G:47:ARG:NH1	6:G:47:ARG:HB2	1.81	0.94
1:A:12:U:H2'	1:A:13:U:C5	2.00	0.94
1:A:520:A:H62	1:A:529:G:H21	1.02	0.94
9:J:145:ALA:O	9:J:146:GLU:HB3	1.66	0.94
10:K:102:ARG:CZ	10:K:102:ARG:HB3	1.93	0.94
11:L:78:LYS:HZ2	11:L:101:PHE:HE2	1.14	0.94
6:G:143:GLY:HA2	6:G:185:PHE:HB3	1.50	0.94
8:I:23:LYS:HA	8:I:26:ILE:CD1	1.97	0.94
8:I:72:VAL:HG23	8:I:73:ASN:H	1.32	0.94
9:J:86:GLN:HB2	9:J:148:ASN:ND2	1.81	0.94
11:L:97:LYS:HZ1	11:L:102:LEU:HD13	1.32	0.94
17:R:77:ARG:HH12	17:R:81:LEU:CB	1.79	0.94
1:A:564:C:C4	19:T:31:LEU:HD11	2.02	0.94
1:A:1261:A:N6	1:A:1274:G:H1'	1.83	0.94
6:G:57:ARG:HB3	6:G:206:PHE:HB2	1.47	0.94
1:A:1226:C:C4	15:P:104:ARG:HG3	2.02	0.94
22:W:45:GLN:HE21	22:W:91:LEU:HD13	1.32	0.94
1:A:781:A:C2'	1:A:782:A:H5'	1.98	0.94
4:E:23:ARG:HH11	4:E:24:TRP:N	1.65	0.94
15:P:64:TRP:O	15:P:65:LYS:HD2	1.68	0.94
1:A:345:C:H4'	1:A:346:G:O5'	1.66	0.94
1:A:1375:A:H2'	1:A:1376:U:C6	2.02	0.94
1:A:7:G:H21	7:H:121:LYS:HG3	1.32	0.94
1:A:923:A:H2'	1:A:924:C:C6	2.01	0.94
4:E:178:ARG:HE	4:E:196:LEU:HD13	1.25	0.94
5:F:116:VAL:O	5:F:119:ARG:HB3	1.67	0.94
10:K:13:ILE:HG22	10:K:14:ARG:N	1.81	0.94
13:N:65:ALA:HB1	13:N:98:LEU:HD23	1.48	0.94

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:S:4:ILE:HG23	18:S:21:VAL:HG12	1.50	0.94
2:1:32:U:H2'	2:1:33:U:C6	2.01	0.94
1:A:1124:G:N2	1:A:1126:U:H3	1.64	0.94
1:A:866:C:C5	1:A:867:G:H1'	2.03	0.94
3:B:38:A:H2'	3:B:39:U:H5	1.32	0.94
4:E:14:GLY:HA3	4:E:209:ARG:HH21	1.33	0.94
6:G:105:VAL:HG21	6:G:121:VAL:HG22	1.47	0.94
12:M:15:THR:HG23	12:M:16:LEU:HD22	1.47	0.94
13:N:121:PRO:HG2	13:N:126:ARG:HG2	1.48	0.94
15:P:16:ASP:HA	15:P:19:LEU:HG	1.47	0.94
20:U:79:LEU:O	20:U:79:LEU:HD13	1.68	0.94
3:B:70:G:H2'	3:B:71:G:H8	1.32	0.94
1:A:186(A):C:H1'	22:W:104:LEU:CD2	1.96	0.94
15:P:24:GLY:HA3	15:P:66:LEU:CB	1.97	0.94
21:V:53:ASN:ND2	21:V:56:GLN:HB2	1.83	0.94
1:A:7:G:H1'	1:A:298:A:C8	2.02	0.94
1:A:858:G:H22	1:A:869:G:C3'	1.81	0.94
1:A:1226:C:C5	15:P:104:ARG:HA	2.03	0.94
15:P:108:ARG:NH1	15:P:111:LYS:HB3	1.82	0.94
22:W:11:SER:HA	22:W:13:LEU:HD11	1.48	0.94
3:D:8:U:H3	3:D:14:A:H62	1.01	0.94
1:A:1107:C:C2'	1:A:1108:G:H5'	1.98	0.93
1:A:553:A:H2'	1:A:554:C:C6	2.03	0.93
4:E:17:PHE:HD1	4:E:18:GLY:N	1.66	0.93
11:L:116:LYS:HB3	11:L:122:ALA:HA	1.46	0.93
13:N:58:PRO:HB3	13:N:90:GLY:HA3	1.50	0.93
1:A:538:G:O3'	14:O:114:LYS:HD3	1.68	0.93
1:A:1159:U:H5'	1:A:1160:G:OP1	1.68	0.93
1:A:817:C:O2'	1:A:818:G:H5''	1.69	0.93
9:J:74:GLU:HG2	9:J:75:VAL:H	1.30	0.93
12:M:65:LEU:HB2	16:Q:56:VAL:HG13	1.50	0.93
18:S:75:ARG:CG	18:S:80:PHE:HB3	1.97	0.93
1:A:1271:G:OP1	1:A:1314:C:H5''	1.68	0.93
5:F:85:ARG:HH21	5:F:89:GLU:HB2	1.33	0.93
6:G:20:TYR:CA	6:G:26:CYS:SG	2.56	0.93
17:R:70:LEU:HG	17:R:78:TYR:CD1	2.02	0.93
22:W:13:LEU:H	22:W:13:LEU:HD12	1.30	0.93
1:A:1504:G:OP1	1:A:1507:A:H4'	1.67	0.93
1:A:449:C:H2'	1:A:450:G:O4'	1.68	0.93
4:E:193:ASP:OD2	4:E:196:LEU:HD11	1.68	0.93
15:P:14:ARG:HG3	15:P:17:VAL:HG23	1.46	0.93
4:E:42:ILE:CD1	4:E:202:PRO:HB2	1.97	0.93

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:939:G:C5'	9:J:102:ARG:HH22	1.80	0.93
19:T:92:ARG:O	19:T:95:TYR:HB2	1.69	0.93
2:1:6:U:H2'	2:1:7:U:C5	2.03	0.93
1:A:1394:A:N7	1:A:1501:C:H1'	1.82	0.93
1:A:169:C:H2'	1:A:170:U:H6	1.31	0.93
1:A:950:U:H5''	15:P:102:ARG:HH22	1.33	0.93
6:G:170:VAL:H	6:G:176:LEU:HD22	1.34	0.93
6:G:98:GLU:HA	6:G:103:ASN:ND2	1.84	0.93
8:I:33:TYR:CD1	8:I:75:LEU:HG	2.01	0.93
10:K:98:LYS:HZ2	10:K:98:LYS:H	1.03	0.93
20:U:72:ARG:O	20:U:75:ILE:HB	1.68	0.93
1:A:761:G:H5'	19:T:102:GLY:CA	1.99	0.93
1:A:1100:C:H2'	4:E:98:LEU:CD1	1.98	0.93
7:H:100:VAL:HG11	7:H:107:ARG:HG3	1.48	0.93
12:M:30:SER:CB	12:M:81:THR:HA	1.99	0.93
22:W:63:ILE:CD1	22:W:80:ARG:HB3	1.98	0.93
1:A:1135:U:H4'	1:A:1136:U:H5	1.33	0.93
1:A:1229:A:H2'	1:A:1230:C:H6	1.33	0.93
1:A:1338:G:N2	3:C:41:C:H1'	1.84	0.93
1:A:1099:G:O2'	1:A:1542:U:H4'	1.68	0.93
1:A:198:G:H8	1:A:198:G:OP2	1.52	0.93
1:A:329:A:H4'	1:A:330:C:OP1	1.65	0.93
1:A:620:C:C2	6:G:135:LEU:HD13	2.04	0.93
1:A:273:A:C2	1:A:274:A:H1'	2.04	0.93
1:A:362:G:H8	14:O:34:ARG:HH22	0.98	0.93
6:G:173:TRP:NE1	6:G:189:PRO:HB3	1.83	0.93
8:I:14:LEU:HD11	8:I:19:LEU:N	1.84	0.93
1:A:1048:G:H5''	16:Q:3:ARG:HH11	1.34	0.93
1:A:1084:G:C4	1:A:1085:U:H5	1.87	0.93
1:A:1153:C:H2'	1:A:1154:G:C8	2.04	0.93
1:A:275:G:O3'	19:T:14:LYS:HD3	1.69	0.93
1:A:306:G:H2'	1:A:307:C:C6	2.03	0.93
1:A:764:C:H2'	1:A:765:G:N7	1.84	0.93
4:E:31:TYR:CE2	4:E:200:ILE:HG21	2.03	0.93
8:I:75:LEU:HD22	8:I:79:LEU:HD21	1.47	0.93
21:V:22:LEU:HG	21:V:25:LYS:HZ1	1.33	0.93
5:F:29:TYR:CZ	16:Q:54:PRO:HB2	2.03	0.92
8:I:3:ARG:HA	8:I:67:MET:CE	1.98	0.92
9:J:72:ARG:HH11	9:J:72:ARG:HB3	1.32	0.92
15:P:52:GLU:O	15:P:56:LEU:HG	1.69	0.92
1:A:1278:U:H4'	1:A:1279:A:O4'	1.69	0.92
1:A:720:C:C5	1:A:721:G:H2'	2.04	0.92

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:827:U:H4'	10:K:19:VAL:HG21	1.51	0.92
17:R:77:ARG:NH1	17:R:81:LEU:HB2	1.82	0.92
13:N:84:VAL:HG21	20:U:88:LYS:HD3	1.51	0.92
22:W:73:HIS:H	22:W:76:ALA:CB	1.82	0.92
1:A:944:G:H21	1:A:1339:A:H62	1.01	0.92
4:E:115:LEU:HD12	4:E:118:LEU:HD13	1.50	0.92
5:F:91:LEU:CD2	5:F:98:ASN:HA	1.99	0.92
10:K:24:THR:HG22	10:K:61:VAL:O	1.68	0.92
15:P:88:ARG:O	15:P:91:ARG:HB2	1.67	0.92
19:T:10:VAL:HG23	19:T:55:ASP:O	1.70	0.92
22:W:50:GLU:N	22:W:99:LEU:HD12	1.83	0.92
1:A:1104:G:H4'	4:E:111:ARG:HE	1.35	0.92
4:E:69:LEU:O	4:E:162:ILE:HA	1.69	0.92
6:G:100:ARG:HH22	6:G:137:SER:HA	1.34	0.92
10:K:14:ARG:HB3	10:K:14:ARG:HH11	1.32	0.92
13:N:58:PRO:O	13:N:61:ALA:HB3	1.68	0.92
15:P:48:LEU:HD11	15:P:56:LEU:HD12	1.50	0.92
19:T:7:THR:CG2	19:T:56:VAL:HG12	1.98	0.92
1:A:1229:A:H2'	1:A:1230:C:C6	2.04	0.92
1:A:1263:C:H2'	1:A:1264:C:H6	1.34	0.92
1:A:1433:A:N6	1:A:1467:G:H21	1.67	0.92
1:A:828:A:N1	1:A:859:A:O4'	2.02	0.92
10:K:25:ASP:HB3	10:K:58:TYR:HB3	1.51	0.92
1:A:1230:C:H1'	15:P:126:LYS:HG3	1.49	0.92
1:A:20:U:H5'	1:A:572:A:N6	1.84	0.92
9:J:69:VAL:CG2	9:J:104:LEU:HD21	1.98	0.92
9:J:122:HIS:O	9:J:125:MET:HG3	1.69	0.92
1:A:1054:C:H2'	1:A:1055:A:H5''	1.50	0.92
1:A:1180:A:H2'	1:A:1181:G:H5'	1.51	0.92
6:G:155:LEU:HB2	6:G:158:ILE:HG12	1.47	0.92
7:H:94:ALA:HB1	7:H:98:THR:HG21	1.52	0.92
8:I:6:VAL:CG2	8:I:8:ILE:HD11	1.99	0.92
10:K:120:THR:O	10:K:123:GLU:HB3	1.69	0.92
11:L:16:ARG:HG2	11:L:18:PHE:CE1	2.05	0.92
1:A:529:G:H1	14:O:49:ASN:HB3	1.35	0.92
14:O:85:ILE:HD11	14:O:98:TYR:CB	1.99	0.92
21:V:62:ILE:HD11	21:V:67:VAL:HA	1.50	0.92
5:F:14:ILE:HG21	5:F:179:ARG:HA	1.49	0.92
1:A:237:C:H5''	19:T:25:ARG:CZ	1.99	0.92
1:A:994:A:N7	1:A:1216:G:H4'	1.84	0.92
1:A:186(D):C:H2'	1:A:186(E):C:C6	2.05	0.92
1:A:191:G:C4	22:W:105:SER:HB3	2.04	0.92

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:C:58:A:H2'	3:C:61:C:H41	1.33	0.92
14:O:59:ARG:HA	14:O:64:TYR:O	1.68	0.92
5:F:60:ALA:HB2	12:M:92:THR:OG1	1.70	0.92
1:A:1180:A:C2'	1:A:1181:G:H5'	2.01	0.92
1:A:703:G:H4'	1:A:704:A:O5'	1.70	0.92
1:A:96:G:H2'	1:A:97:U:C6	2.05	0.92
5:F:38:ARG:HH11	5:F:38:ARG:CB	1.82	0.92
8:I:10:LEU:H	8:I:10:LEU:HD23	1.33	0.92
10:K:5:PRO:O	10:K:8:ASP:HB3	1.70	0.92
12:M:50:ILE:CA	12:M:60:ARG:HG3	2.00	0.92
14:O:60:LEU:N	14:O:60:LEU:HD13	1.80	0.92
15:P:52:GLU:HA	15:P:55:ARG:NE	1.85	0.92
1:A:979:C:N4	16:Q:18:VAL:HB	1.85	0.92
1:A:410:G:H1'	1:A:432:A:H61	1.33	0.91
1:A:783:C:O2'	1:A:784:C:H5'	1.69	0.91
1:A:911:U:H2'	1:A:912:C:H6	1.31	0.91
7:H:121:LYS:HZ2	7:H:122:GLU:N	1.67	0.91
7:H:9:LYS:HB2	7:H:33:VAL:HB	1.51	0.91
7:H:43:LEU:H	7:H:65:ASN:HD22	1.03	0.91
10:K:70:GLN:NE2	10:K:72:PRO:HD2	1.85	0.91
10:K:85:ARG:HG2	10:K:85:ARG:HH11	1.35	0.91
14:O:83:VAL:HG23	14:O:104:VAL:HB	1.53	0.91
19:T:88:TYR:O	19:T:92:ARG:HB2	1.71	0.91
22:W:50:GLU:HG3	22:W:54:LYS:HE3	1.51	0.91
1:A:599:C:C4'	10:K:130:GLY:HA3	2.01	0.91
1:A:356:A:O3'	1:A:367:U:H2'	1.70	0.91
4:E:118:LEU:HD21	4:E:142:LEU:HB2	1.52	0.91
7:H:70:PRO:HB2	7:H:143:ARG:HA	1.52	0.91
11:L:55:ALA:HB3	11:L:58:HIS:HE1	1.31	0.91
1:A:628:G:H2'	1:A:629:G:C8	2.06	0.91
1:A:942:G:H21	11:L:124:GLN:HE22	1.12	0.91
7:H:71:LEU:HD11	7:H:74:GLY:HA2	1.52	0.91
9:J:69:VAL:HG21	9:J:104:LEU:CD2	1.99	0.91
14:O:58:VAL:O	14:O:65:GLU:HA	1.70	0.91
1:A:600:C:OP1	10:K:97:VAL:N	2.04	0.91
1:A:777:A:H2'	1:A:778:G:H8	1.36	0.91
1:A:1191:A:OP1	5:F:4:LYS:HG2	1.69	0.91
5:F:33:LEU:CD1	16:Q:54:PRO:HD2	1.99	0.91
1:A:828:A:H2'	1:A:829:G:O4'	1.71	0.91
1:A:975:A:O2'	1:A:1358:U:H1'	1.71	0.91
7:H:109:ILE:HD13	7:H:135:THR:HB	1.53	0.91
12:M:24:VAL:HG22	12:M:72:VAL:HG13	1.52	0.91

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:363:A:OP2	14:O:34:ARG:HB3	1.70	0.91
18:S:19:ILE:HB	18:S:37:GLY:O	1.69	0.91
22:W:73:HIS:H	22:W:76:ALA:HB3	1.36	0.91
1:A:509:A:H2'	1:A:510:A:C8	2.05	0.91
5:F:67:THR:HG22	5:F:104:GLN:HG2	1.49	0.91
6:G:121:VAL:HA	6:G:126:ILE:HD11	1.52	0.91
7:H:48:ALA:HB1	7:H:53:LEU:HB3	1.51	0.91
9:J:111:ARG:NH1	9:J:112:PRO:HD2	1.85	0.91
10:K:46:LYS:HZ2	10:K:64:LYS:HA	1.34	0.91
2:I:52:U:H4'	6:G:50:ARG:HA	1.50	0.91
1:A:776:G:H5''	1:A:777:A:OP1	1.70	0.91
1:A:974:A:OP2	16:Q:31:ARG:HG2	1.70	0.91
3:B:38:A:H2'	3:B:39:U:C5	2.06	0.91
4:E:82:ARG:HD2	4:E:92:TYR:OH	1.70	0.91
6:G:94:LEU:HA	6:G:97:LEU:CD1	2.00	0.91
17:R:62:GLN:HA	17:R:65:ARG:HH22	1.31	0.91
12:M:79:ARG:HD3	12:M:79:ARG:C	1.91	0.91
23:X:14:TRP:HZ3	23:X:15:ARG:CZ	1.83	0.91
1:A:191(C):G:H2'	1:A:191(D):U:C6	2.06	0.91
1:A:911:U:H2'	1:A:912:C:C6	2.06	0.91
8:I:23:LYS:HA	8:I:26:ILE:HD12	1.53	0.91
18:S:23:ASP:OD2	18:S:33:ILE:HD11	1.71	0.91
1:A:1200:C:H3'	1:A:1201:A:H5'	1.50	0.90
1:A:1403:C:H1'	1:A:1500:A:H61	1.31	0.90
6:G:100:ARG:NH2	6:G:137:SER:HA	1.86	0.90
9:J:98:SER:O	9:J:101:LEU:HB3	1.71	0.90
15:P:22:ILE:HB	15:P:25:ILE:CD1	2.01	0.90
22:W:13:LEU:HB2	22:W:17:ARG:HH21	1.33	0.90
1:A:43:C:H5''	18:S:12:LYS:CB	2.01	0.90
1:A:858:G:H22	1:A:869:G:H3'	1.32	0.90
3:D:34:G:H3'	3:D:35:A:H5''	1.52	0.90
5:F:108:ASN:HD22	5:F:111:LEU:HD13	1.36	0.90
1:A:1408:A:C2	1:A:1495:U:C5	2.58	0.90
1:A:272:C:H2'	1:A:273:A:H8	1.36	0.90
1:A:376:G:H2'	1:A:377:G:H8	1.33	0.90
1:A:384:G:H2'	1:A:385:C:H6	1.34	0.90
1:A:692:U:O2	1:A:694:A:H3'	1.72	0.90
4:E:160:ASP:HB3	4:E:182:ILE:HG21	1.50	0.90
4:E:48:MET:SD	4:E:48:MET:N	2.44	0.90
9:J:69:VAL:HG22	9:J:135:VAL:CG2	2.00	0.90
10:K:83:ILE:HA	10:K:137:VAL:HG22	1.54	0.90
13:N:82:VAL:HB	13:N:108:ILE:HG12	1.53	0.90

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1433:A:H62	1:A:1467:G:N2	1.67	0.90
4:E:77:ALA:HA	4:E:208:ILE:HD11	1.50	0.90
6:G:59:ARG:HH11	6:G:59:ARG:HA	1.35	0.90
14:O:85:ILE:HG13	14:O:87:GLY:H	1.35	0.90
20:U:18:ARG:HH21	20:U:21:LYS:HB2	1.36	0.90
1:A:1062:U:H2'	1:A:1063:C:C6	2.04	0.90
4:E:75:LYS:HZ3	4:E:75:LYS:HA	1.36	0.90
1:A:275:G:H5'	19:T:14:LYS:NZ	1.86	0.90
20:U:74:ARG:HG3	20:U:79:LEU:HD22	1.52	0.90
3:B:71:G:N2	3:B:72:C:H1'	1.86	0.90
1:A:508:C:HO2'	1:A:509:A:H8	0.94	0.90
1:A:857:C:H2'	1:A:858:G:O4'	1.71	0.90
1:A:961:U:O2'	1:A:962:C:H5'	1.70	0.90
4:E:102:LEU:HD22	4:E:176:GLU:HB3	1.51	0.90
4:E:118:LEU:HD13	4:E:142:LEU:HD12	1.52	0.90
5:F:30:ARG:HB3	16:Q:36:PHE:O	1.71	0.90
1:A:1348:U:H4'	11:L:120:ARG:NH1	1.85	0.90
22:W:12:ALA:N	22:W:13:LEU:HD12	1.86	0.90
1:A:449:C:N3	1:A:450:G:H1'	1.86	0.90
1:A:697:U:H2'	1:A:698:G:C8	2.06	0.90
4:E:102:LEU:HB2	4:E:176:GLU:OE1	1.69	0.90
5:F:134:ILE:O	5:F:138:VAL:HG23	1.71	0.90
8:I:8:ILE:CG2	8:I:88:VAL:HA	2.00	0.90
10:K:104:ARG:HH11	10:K:104:ARG:HG2	1.36	0.90
11:L:55:ALA:CB	11:L:58:HIS:HE1	1.79	0.90
21:V:45:VAL:HG22	21:V:67:VAL:HG21	1.53	0.90
1:A:1198:G:H2'	1:A:1199:U:O4'	1.72	0.90
4:E:139:LYS:HG3	4:E:140:HIS:N	1.87	0.90
7:H:23:GLY:HA3	7:H:25:ARG:NH1	1.86	0.90
8:I:76:ALA:HB3	8:I:80:ARG:HH22	1.35	0.90
9:J:111:ARG:HB2	9:J:119:ARG:HG2	1.51	0.90
15:P:67:GLU:CG	15:P:68:GLY:H	1.85	0.90
17:R:75:PRO:HA	17:R:78:TYR:HB3	1.53	0.90
2:1:6:U:H2'	2:1:7:U:H5	1.33	0.90
1:A:707:C:O2'	1:A:708:C:H5'	1.72	0.90
4:E:80:ILE:HD12	4:E:208:ILE:HG12	1.53	0.90
8:I:26:ILE:O	8:I:30:LEU:HG	1.72	0.90
9:J:50:ILE:O	9:J:54:THR:HG23	1.70	0.90
1:A:1321:C:H4'	15:P:87:TYR:OH	1.72	0.90
17:R:36:ILE:HD11	17:R:60:VAL:HG13	1.52	0.90
1:A:1048:G:H5''	16:Q:3:ARG:NH1	1.87	0.90
1:A:1204:A:H2	5:F:195:VAL:HG21	1.32	0.90

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:82:ARG:N	4:E:94:ASN:HD21	1.70	0.90
6:G:125:HIS:HB3	6:G:152:SER:HB2	1.52	0.90
7:H:51:VAL:O	7:H:55:VAL:HG23	1.71	0.90
9:J:125:MET:HG3	9:J:126:ASP:H	1.35	0.90
21:V:20:LEU:O	21:V:22:LEU:N	2.05	0.90
1:A:1521:G:H2'	1:A:1522:U:H6	1.34	0.89
1:A:790:A:N6	1:A:791:G:C2	2.40	0.89
4:E:95:GLN:HG3	4:E:148:TYR:CB	2.02	0.89
1:A:1253:G:N1	1:A:1285:A:N6	2.17	0.89
4:E:130:ARG:HB3	4:E:131:PRO:HD2	1.53	0.89
6:G:191:ARG:HD3	6:G:192:GLU:N	1.86	0.89
10:K:32:LYS:HG2	10:K:33:GLU:H	1.37	0.89
12:M:68:HIS:HB3	12:M:70:ARG:HH21	1.35	0.89
14:O:54:LYS:HB3	14:O:70:ILE:HB	1.54	0.89
14:O:84:LEU:CB	14:O:104:VAL:HG11	2.02	0.89
20:U:74:ARG:HA	20:U:79:LEU:CD1	2.01	0.89
1:A:1245:A:H2'	1:A:1246:C:C6	2.06	0.89
4:E:61:LEU:HD11	4:E:68:ILE:CD1	2.02	0.89
8:I:33:TYR:CG	8:I:75:LEU:HG	2.06	0.89
15:P:55:ARG:NH2	15:P:56:LEU:HD21	1.87	0.89
17:R:34:LEU:HG	17:R:35:ARG:H	1.37	0.89
1:A:1107:C:H2'	1:A:1108:G:C5'	2.02	0.89
1:A:255:G:H4'	19:T:16:GLN:O	1.71	0.89
1:A:307:C:C4	1:A:308:C:H5	1.89	0.89
22:W:13:LEU:N	22:W:13:LEU:HD12	1.84	0.89
22:W:44:ALA:CB	22:W:91:LEU:HD12	2.02	0.89
1:A:346:G:H2'	1:A:347:G:O4'	1.72	0.89
1:A:105:G:H2'	1:A:106:C:C6	2.08	0.89
1:A:1339:A:C2'	1:A:1340:A:H5'	2.03	0.89
13:N:68:ALA:HA	13:N:71:LYS:HD2	1.55	0.89
15:P:72:ALA:O	15:P:75:ALA:HB3	1.73	0.89
19:T:5:VAL:HG22	19:T:60:ILE:CA	2.00	0.89
19:T:75:ARG:HH22	19:T:77:VAL:HG22	1.35	0.89
22:W:85:MET:HB2	22:W:104:LEU:HD21	1.52	0.89
1:A:266:G:H8	19:T:67:LYS:HZ3	0.92	0.89
1:A:789:U:C6	1:A:790:A:H5''	2.07	0.89
5:F:11:ARG:HD3	5:F:15:THR:HG23	1.53	0.89
9:J:135:VAL:O	9:J:138:LYS:HB3	1.71	0.89
1:A:468:A:H4'	18:S:82:GLN:HB3	1.53	0.89
22:W:72:LEU:HD13	22:W:77:ALA:HB2	1.54	0.89
6:G:20:TYR:HD1	6:G:21:LEU:H	1.08	0.89
11:L:74:ILE:HA	11:L:77:ILE:HD12	1.51	0.89

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:S:39:TYR:CZ	18:S:41:PRO:HG3	2.08	0.89
4:E:219:VAL:HG12	4:E:223:ILE:CD1	2.03	0.89
10:K:51:VAL:HG21	10:K:60:ARG:HH21	1.37	0.89
1:A:1238:A:H62	1:A:1301:U:H3	1.21	0.89
1:A:1261:A:H61	1:A:1274:G:C1'	1.85	0.89
1:A:429:U:H4'	1:A:430:A:O5'	1.71	0.89
4:E:69:LEU:HD13	4:E:92:TYR:HA	1.53	0.89
6:G:91:SER:HA	6:G:94:LEU:HD12	1.53	0.89
7:H:43:LEU:HD23	7:H:44:GLY:N	1.88	0.89
1:A:108:G:H5''	1:A:109:A:H5''	1.51	0.89
1:A:1111:A:H2'	1:A:1112:C:C6	2.07	0.89
1:A:1188:A:H5'	12:M:61:GLU:OE2	1.73	0.89
1:A:322:C:O2'	1:A:323:U:H5'	1.73	0.89
1:A:571:U:H3'	1:A:572:A:C5'	1.99	0.89
6:G:20:TYR:O	6:G:22:LYS:N	2.05	0.89
17:R:7:GLU:HA	17:R:10:LYS:HD3	1.54	0.89
3:D:22:G:H2'	3:D:23:A:C8	2.08	0.89
1:A:1158:C:C4	1:A:1160:G:H1'	2.07	0.88
4:E:56:ARG:HH11	4:E:56:ARG:HB3	1.34	0.88
4:E:97:TRP:HZ2	4:E:102:LEU:HD13	1.38	0.88
6:G:20:TYR:N	6:G:33:MET:SD	2.47	0.88
8:I:76:ALA:HB1	8:I:80:ARG:NH1	1.87	0.88
10:K:86:ILE:CG2	10:K:133:LEU:HB2	2.04	0.88
16:Q:45:ARG:NH1	16:Q:45:ARG:HB2	1.86	0.88
1:A:287:U:H2'	1:A:287:U:O2	1.74	0.88
1:A:61:G:H2'	1:A:62:U:C6	2.08	0.88
1:A:633:G:H2'	1:A:634:C:H6	1.34	0.88
4:E:39:ILE:HG23	4:E:41:ILE:HD11	1.55	0.88
14:O:86:ARG:NH1	14:O:119:LYS:HG3	1.88	0.88
20:U:58:LEU:HD22	20:U:62:GLU:HG3	1.56	0.88
1:A:1028:C:H2'	1:A:1028(A):C:C6	2.08	0.88
1:A:1066:C:H3'	1:A:1067:A:C8	2.08	0.88
1:A:1425:U:H2'	1:A:1426:C:C6	2.08	0.88
1:A:650:G:O2'	1:A:651:C:H5'	1.74	0.88
5:F:83:ARG:HG3	5:F:87:LEU:HD11	1.55	0.88
5:F:38:ARG:HB2	5:F:94:LEU:HD11	1.52	0.88
8:I:81:ILE:HG22	8:I:82:ARG:N	1.87	0.88
12:M:79:ARG:HH22	12:M:82:ILE:HD12	1.37	0.88
1:A:1228:C:H4'	15:P:116:THR:HA	1.52	0.88
1:A:256:U:H2'	1:A:257:G:O4'	1.73	0.88
1:A:414:A:H2'	1:A:415:A:H8	1.37	0.88
1:A:576:G:N7	1:A:881:G:H1'	1.89	0.88

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:108:ASN:ND2	5:F:110:ASN:HB2	1.87	0.88
4:E:186:ALA:O	4:E:201:ILE:HB	1.74	0.88
5:F:53:ALA:HB2	5:F:115:LEU:HD21	1.56	0.88
6:G:13:ARG:HH21	6:G:40:PRO:HA	1.39	0.88
10:K:12:ARG:HD3	10:K:26:VAL:CG2	2.04	0.88
11:L:26:VAL:O	11:L:32:ASP:HA	1.72	0.88
1:A:1404:C:H1'	1:A:1499:A:C2	2.08	0.88
1:A:573:A:H2'	1:A:574:A:C8	2.07	0.88
5:F:67:THR:HA	5:F:102:ASN:HB2	1.56	0.88
6:G:11:LEU:HA	6:G:14:ARG:HB3	1.53	0.88
7:H:147:ASP:HA	7:H:150:ARG:HB2	1.56	0.88
1:A:1346:A:C2	9:J:10:ARG:HD3	2.08	0.88
1:A:979:C:H42	16:Q:18:VAL:HB	1.39	0.88
18:S:3:LYS:HE2	18:S:24:ALA:HB2	1.52	0.88
3:D:9:A:H62	3:D:23:A:H62	1.16	0.88
1:A:279:A:H1'	1:A:281:G:C2	2.08	0.88
1:A:64:G:H4'	1:A:65:U:C5'	2.02	0.88
4:E:146:GLN:NE2	4:E:150:SER:HB2	1.89	0.88
12:M:50:ILE:HB	16:Q:41:ARG:NE	1.88	0.88
17:R:28:GLN:O	17:R:32:LEU:HD23	1.72	0.88
19:T:43:LEU:C	19:T:43:LEU:HD13	1.94	0.88
1:A:1338:G:H2'	1:A:1339:A:C8	2.08	0.88
1:A:7:G:N2	7:H:121:LYS:HG3	1.88	0.88
5:F:38:ARG:HB2	5:F:94:LEU:HD21	1.55	0.88
7:H:144:THR:HG22	7:H:146:ALA:N	1.88	0.88
7:H:43:LEU:H	7:H:65:ASN:ND2	1.72	0.88
1:A:942:G:H21	11:L:124:GLN:NE2	1.71	0.88
16:Q:58:LYS:HD3	16:Q:59:ALA:H	1.33	0.88
4:E:135:GLN:C	4:E:139:LYS:HZ2	1.76	0.88
4:E:15:VAL:HG22	4:E:209:ARG:NE	1.88	0.88
6:G:78:LEU:HD22	6:G:96:LEU:HD13	1.56	0.88
15:P:23:TYR:O	15:P:66:LEU:HD12	1.74	0.88
18:S:20:VAL:HG13	18:S:34:GLU:O	1.74	0.88
19:T:86:GLU:OE2	19:T:89:LEU:HD12	1.74	0.88
1:A:496:A:H4'	1:A:497:U:OP1	1.74	0.88
1:A:533:A:H2'	1:A:535:A:OP2	1.74	0.88
1:A:545:C:O2'	1:A:546:G:H5'	1.74	0.88
1:A:27:G:N2	1:A:557:G:H1'	1.89	0.88
3:C:40:C:H2'	3:C:41:C:C5'	2.04	0.88
4:E:115:LEU:HD13	4:E:145:LEU:HB3	1.56	0.88
9:J:63:LYS:HA	9:J:63:LYS:HE2	1.54	0.88
1:A:1346:A:H4'	1:A:1347:G:O5'	1.72	0.87

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:21:G:H2'	1:A:22:G:H8	1.38	0.87
1:A:448:A:H2'	1:A:449:C:H6	1.39	0.87
1:A:655:A:H2'	1:A:656:C:C6	2.09	0.87
4:E:42:ILE:HG12	4:E:43:ASP:H	1.38	0.87
7:H:102:ALA:HB2	7:H:120:THR:HG22	1.54	0.87
7:H:121:LYS:NZ	7:H:122:GLU:N	2.19	0.87
10:K:14:ARG:O	10:K:17:THR:HB	1.73	0.87
10:K:6:ILE:HG23	10:K:7:ALA:N	1.86	0.87
1:A:1244:C:OP2	23:X:9:ARG:HD3	1.74	0.87
1:A:1137:C:H4'	1:A:1138:G:N2	1.89	0.87
1:A:787:A:H2'	1:A:788:U:H5'	1.54	0.87
1:A:598:U:H4'	10:K:94:TYR:HD2	1.37	0.87
14:O:117:ARG:HG3	14:O:117:ARG:HH11	1.37	0.87
18:S:6:LEU:HD23	18:S:17:TYR:HD2	1.37	0.87
22:W:72:LEU:HD22	22:W:77:ALA:N	1.89	0.87
1:A:118:U:O4	1:A:288:A:H2'	1.74	0.87
1:A:1263:C:H2'	1:A:1264:C:C6	2.09	0.87
1:A:611:A:H61	1:A:629:G:H1	0.88	0.87
3:C:20:U:O2	3:C:20:U:H2'	1.72	0.87
4:E:20:GLU:CD	4:E:189:ASP:OD2	2.13	0.87
4:E:212:GLN:HB3	4:E:235:SER:OG	1.74	0.87
7:H:89:ILE:HG12	7:H:131:ILE:CD1	2.03	0.87
15:P:52:GLU:HA	15:P:55:ARG:CD	2.04	0.87
1:A:1274:G:N2	1:A:1275:A:H62	1.71	0.87
1:A:770:C:C1'	1:A:900:A:H2	1.87	0.87
4:E:71:VAL:HG13	4:E:93:VAL:O	1.71	0.87
6:G:191:ARG:NH2	6:G:194:LEU:O	2.07	0.87
9:J:115:ARG:HB2	9:J:118:VAL:CG2	2.04	0.87
10:K:46:LYS:NZ	10:K:64:LYS:HA	1.88	0.87
15:P:67:GLU:CD	15:P:68:GLY:H	1.77	0.87
2:1:22:C:H2'	2:1:23:A:C8	2.08	0.87
1:A:1390:U:H2'	1:A:1391:U:C6	2.08	0.87
1:A:1413:A:O2'	1:A:1414:U:H5'	1.74	0.87
1:A:1417:G:H2'	1:A:1482:G:H22	1.32	0.87
1:A:938:A:O2'	1:A:939:G:H5'	1.75	0.87
7:H:50:GLU:O	7:H:53:LEU:HB2	1.74	0.87
9:J:138:LYS:HE2	9:J:142:GLU:OE1	1.75	0.87
14:O:71:PRO:HD2	14:O:100:ILE:HG12	1.56	0.87
15:P:48:LEU:HD21	15:P:52:GLU:CB	2.05	0.87
17:R:51:HIS:O	17:R:54:ARG:HB3	1.74	0.87
20:U:74:ARG:N	20:U:79:LEU:HD21	1.89	0.87
1:A:1258:G:H2'	1:A:1259:C:C6	2.09	0.87

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:819:A:H5''	1:A:820:U:OP2	1.74	0.87
4:E:115:LEU:HD22	4:E:149:LEU:HD13	1.56	0.87
4:E:223:ILE:O	4:E:226:ARG:HB3	1.74	0.87
6:G:105:VAL:HG21	6:G:121:VAL:CG2	2.03	0.87
9:J:69:VAL:CG2	9:J:104:LEU:HD11	2.04	0.87
10:K:38:ILE:HG13	10:K:118:VAL:CG1	2.03	0.87
10:K:45:ILE:HD11	10:K:48:TYR:HB3	1.55	0.87
11:L:106:ALA:O	11:L:107:ARG:HG3	1.75	0.87
1:A:1509:C:O2'	1:A:1510:U:H5'	1.73	0.87
3:C:28:G:H2'	3:C:29:G:C8	2.10	0.87
4:E:213:LEU:HD22	4:E:214:ILE:CD1	2.04	0.87
6:G:31:CYS:O	6:G:31:CYS:SG	2.32	0.87
6:G:58:LEU:HD13	6:G:59:ARG:HH11	1.38	0.87
8:I:10:LEU:N	8:I:10:LEU:HD23	1.89	0.87
14:O:117:ARG:NH2	14:O:124:LYS:HA	1.90	0.87
17:R:29:VAL:HG21	17:R:81:LEU:HD11	1.55	0.87
18:S:9:PHE:CZ	18:S:18:ARG:HG3	2.09	0.87
1:A:1313:U:C5	21:V:4:SER:HB2	2.09	0.87
1:A:1401:G:H2'	1:A:1402:C:O4'	1.74	0.87
1:A:1408:A:C2	1:A:1495:U:H5	1.93	0.87
1:A:735:C:H2'	1:A:736:C:H6	1.37	0.87
1:A:955:U:H1'	1:A:1227:A:N6	1.90	0.87
5:F:40:ARG:HA	5:F:43:LEU:HD13	1.55	0.87
7:H:109:ILE:CG2	7:H:135:THR:HG21	2.04	0.87
10:K:14:ARG:HA	10:K:17:THR:OG1	1.72	0.87
15:P:88:ARG:HG2	15:P:98:VAL:CG1	2.05	0.87
19:T:59:ILE:HD12	19:T:72:ARG:O	1.74	0.87
1:A:1160:G:N3	1:A:1160:G:H2'	1.89	0.87
1:A:1399:C:N4	1:A:1502:A:N7	2.22	0.87
1:A:299:G:H2'	1:A:300:A:N7	1.89	0.87
1:A:713:G:H21	1:A:777:A:C1'	1.88	0.87
1:A:944:G:H21	1:A:1339:A:N6	1.72	0.87
3:C:60:U:H5'	3:C:61:C:OP2	1.75	0.87
5:F:156:ARG:HB3	5:F:193:TYR:HD1	1.39	0.87
10:K:37:ARG:HD2	10:K:38:ILE:HD13	1.55	0.87
15:P:97:PRO:CG	15:P:103:THR:HG22	2.03	0.87
1:A:66:G:H4'	1:A:173:U:C5	2.10	0.86
1:A:197:A:N6	1:A:221:C:H5'	1.90	0.86
1:A:520:A:N6	1:A:529:G:H21	1.73	0.86
1:A:551:U:H5'	14:O:119:LYS:HZ1	1.36	0.86
4:E:219:VAL:O	4:E:223:ILE:HG13	1.75	0.86
1:A:598:U:H4'	10:K:94:TYR:CD2	2.09	0.86

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:L:50:LEU:HD22	11:L:51:ARG:HH12	1.40	0.86
13:N:95:ILE:HA	13:N:98:LEU:HG	1.54	0.86
1:A:164:U:H2'	1:A:165:C:H5	1.38	0.86
1:A:1163:C:O2'	1:A:1164:G:H5'	1.75	0.86
1:A:1192:C:H3'	1:A:1192:C:C6	2.09	0.86
1:A:1454:G:H2'	1:A:1455:G:H8	1.37	0.86
1:A:21:G:H2'	1:A:22:G:C8	2.10	0.86
1:A:309:G:O2'	1:A:310:G:H5'	1.75	0.86
1:A:47:C:H4'	1:A:48:C:C5'	2.04	0.86
1:A:557:G:H3'	1:A:558:G:C8	2.09	0.86
1:A:851:G:N2	1:A:852:G:H1'	1.90	0.86
1:A:975:A:O2'	1:A:976:G:OP2	1.91	0.86
1:A:878:G:C5'	10:K:89:PRO:HG2	2.04	0.86
11:L:55:ALA:HB1	11:L:58:HIS:ND1	1.90	0.86
13:N:99:GLN:HB3	13:N:105:VAL:HG11	1.56	0.86
19:T:45:HIS:O	19:T:73:VAL:HG23	1.75	0.86
1:A:1336:C:H4'	1:A:1337:G:C2	2.10	0.86
1:A:731:G:H2'	1:A:732:C:H6	1.39	0.86
1:A:797:C:O2'	1:A:798:G:H5'	1.76	0.86
3:B:33:U:C2	3:B:35:A:H5''	2.09	0.86
4:E:134:GLU:O	4:E:138:LEU:HG	1.74	0.86
6:G:26:CYS:O	6:G:33:MET:HG3	1.75	0.86
7:H:78:HIS:CB	10:K:107:LEU:HD21	2.04	0.86
16:Q:26:ARG:HB2	16:Q:43:CYS:HB2	1.54	0.86
1:A:1342:C:H4'	11:L:125:TYR:HB2	1.57	0.86
1:A:1400:C:H4'	1:A:1401:G:OP2	1.75	0.86
4:E:74:LYS:CE	4:E:76:GLN:HB2	2.04	0.86
11:L:25:LYS:O	11:L:61:ALA:HB3	1.73	0.86
1:A:43:C:C5'	18:S:12:LYS:HB3	2.01	0.86
20:U:73:ALA:O	20:U:79:LEU:HD11	1.73	0.86
1:A:907:A:H2'	1:A:908:A:H8	1.40	0.86
4:E:115:LEU:HD23	4:E:149:LEU:HD22	1.56	0.86
1:A:6:G:H1	7:H:96:PRO:HG2	1.38	0.86
8:I:95:GLU:H	8:I:96:PRO:CD	1.88	0.86
9:J:29:LYS:HD2	9:J:101:LEU:HD22	1.57	0.86
9:J:31:MET:HG2	9:J:32:ARG:H	1.40	0.86
11:L:4:TYR:HE1	11:L:59:PHE:HE2	1.22	0.86
22:W:83:ARG:O	22:W:86:ARG:HG2	1.75	0.86
3:D:23:A:H2'	3:D:24:G:H8	1.39	0.86
1:A:1068:G:O2'	1:A:1069:C:H5'	1.75	0.86
8:I:7:ASN:ND2	8:I:62:TRP:HD1	1.73	0.86
13:N:80:VAL:O	13:N:106:LYS:HB3	1.75	0.86

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:W:56:MET:HG2	22:W:88:VAL:HG21	1.55	0.86
22:W:89:ARG:O	22:W:93:GLU:HG3	1.74	0.86
3:D:18:G:H4'	3:D:60:U:N3	1.90	0.86
1:A:38:G:N2	1:A:397:A:C5	2.43	0.86
1:A:65:U:H4'	1:A:66:G:C5'	2.06	0.86
4:E:145:LEU:O	4:E:149:LEU:HB2	1.75	0.86
10:K:111:ILE:N	10:K:111:ILE:HD12	1.91	0.86
18:S:35:LYS:NZ	18:S:37:GLY:H	1.73	0.86
20:U:70:ILE:HG22	20:U:74:ARG:NE	1.89	0.86
1:A:1226:C:C6	15:P:104:ARG:HA	2.11	0.86
1:A:1516:G:H22	1:A:1518:A:H3'	1.41	0.86
1:A:266:G:H2'	19:T:67:LYS:NZ	1.91	0.86
1:A:761:G:H5'	19:T:103:GLY:H	1.41	0.86
4:E:82:ARG:HA	4:E:92:TYR:CE1	2.11	0.86
7:H:105:VAL:HG11	7:H:131:ILE:HG22	1.58	0.86
9:J:15:ASP:CG	9:J:23:VAL:HG11	1.96	0.86
9:J:99:LEU:O	9:J:103:TRP:HB2	1.76	0.86
13:N:110:ASP:HB2	20:U:88:LYS:CB	2.05	0.86
20:U:45:SER:HB3	20:U:51:LEU:HD11	1.56	0.86
21:V:16:LEU:HD12	21:V:44:MET:HE1	1.56	0.86
3:D:23:A:H2'	3:D:24:G:C8	2.10	0.86
3:D:58:A:H2'	3:D:61:C:C4	2.11	0.86
1:A:1490:C:C2'	1:A:1491:G:H5'	2.05	0.86
1:A:20:U:H5'	1:A:572:A:H61	1.38	0.86
1:A:37:U:OP2	14:O:123:LYS:HD2	1.76	0.86
9:J:45:ASP:HA	9:J:48:LYS:NZ	1.90	0.86
1:A:800:G:H8	1:A:800:G:O5'	1.59	0.86
1:A:1073:U:H2'	1:A:1074:G:H8	1.41	0.86
1:A:529:G:C8	1:A:529:G:H3'	2.10	0.86
1:A:684:A:H2'	1:A:685:G:C8	2.11	0.86
1:A:713:G:H2'	1:A:714:G:C8	2.11	0.86
4:E:46:LYS:HA	4:E:46:LYS:HE2	1.56	0.86
6:G:59:ARG:C	6:G:63:LYS:HZ2	1.79	0.86
10:K:97:VAL:HG22	10:K:98:LYS:H	1.41	0.86
1:A:1058:G:H2'	1:A:1059:C:O4'	1.76	0.85
1:A:1251:A:H2'	1:A:1252:A:C8	2.11	0.85
1:A:607:A:H2'	1:A:608:A:O4'	1.75	0.85
4:E:187:LEU:HD21	4:E:203:GLY:O	1.76	0.85
4:E:61:LEU:HD23	4:E:62:ALA:N	1.91	0.85
9:J:74:GLU:O	9:J:88:PRO:HA	1.75	0.85
10:K:26:VAL:HG22	10:K:27:PRO:CD	2.06	0.85
13:N:110:ASP:HB2	20:U:88:LYS:HB2	1.56	0.85

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:562:C:O2'	14:O:15:ARG:HD3	1.76	0.85
17:R:53:HIS:O	17:R:57:LEU:HD13	1.76	0.85
19:T:43:LEU:O	19:T:43:LEU:HD13	1.75	0.85
20:U:68:LYS:O	20:U:71:LYS:HB2	1.74	0.85
1:A:722:A:H2'	1:A:724:G:C8	2.10	0.85
1:A:728:A:H8	17:R:54:ARG:CZ	1.88	0.85
1:A:854:G:H3'	1:A:871:U:O4	1.76	0.85
10:K:103:VAL:HB	10:K:108:GLY:HA3	1.58	0.85
10:K:12:ARG:HD3	10:K:26:VAL:HG22	1.57	0.85
18:S:55:ARG:HE	18:S:55:ARG:HA	1.41	0.85
21:V:11:VAL:HG22	21:V:39:THR:HB	1.58	0.85
1:A:522:C:H5''	14:O:120:TYR:OH	1.76	0.85
1:A:901:A:C2	1:A:902:G:C1'	2.57	0.85
5:F:191:THR:OG1	5:F:196:LEU:HD11	1.75	0.85
3:D:58:A:H2'	3:D:61:C:C5	2.11	0.85
1:A:1516:G:N2	1:A:1518:A:H3'	1.92	0.85
10:K:88:LYS:HZ2	10:K:88:LYS:H	1.23	0.85
1:A:363:A:N7	14:O:30:ALA:HB1	1.91	0.85
21:V:5:LEU:CD1	21:V:9:VAL:HG13	2.07	0.85
1:A:1163:C:C2'	1:A:1164:G:H5'	2.07	0.85
1:A:389:A:C6	1:A:390:C:H1'	2.10	0.85
4:E:167:PRO:O	4:E:169:LYS:N	2.09	0.85
4:E:217:ARG:O	4:E:220:ASP:HB2	1.76	0.85
4:E:95:GLN:NE2	4:E:148:TYR:HB3	1.91	0.85
22:W:63:ILE:HD13	22:W:80:ARG:HB3	1.56	0.85
1:A:1286:A:H5'	23:X:25:LYS:CG	2.06	0.85
23:X:9:ARG:HH12	23:X:21:TYR:HD2	1.21	0.85
3:D:40:C:C3'	3:D:41:C:H5''	2.05	0.85
1:A:1101:A:H4'	1:A:1102:A:O5'	1.73	0.85
1:A:1510:U:H2'	1:A:1511:G:C8	2.12	0.85
7:H:11:ILE:HB	7:H:31:LEU:HD22	1.58	0.85
10:K:95:VAL:CG2	10:K:133:LEU:HD21	2.07	0.85
1:A:1118:C:H5'	11:L:103:THR:HG23	1.56	0.85
12:M:24:VAL:HA	12:M:34:VAL:HG21	1.59	0.85
13:N:78:GLN:O	13:N:104:GLN:HB3	1.76	0.85
5:F:12:LEU:CD2	16:Q:57:ARG:HG3	2.05	0.85
18:S:3:LYS:HB3	18:S:3:LYS:HZ2	1.38	0.85
18:S:3:LYS:NZ	18:S:3:LYS:HB3	1.91	0.85
19:T:62:SER:HB3	19:T:72:ARG:HE	1.40	0.85
21:V:30:LEU:HA	21:V:49:ILE:HA	1.58	0.85
22:W:25:ARG:HG2	22:W:29:LYS:HE3	1.59	0.85
1:A:1378:C:N3	1:A:1379:G:H1'	1.91	0.85

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1388:C:H2'	1:A:1389:C:H6	1.42	0.85
1:A:310:G:H2'	1:A:311:C:C6	2.12	0.85
1:A:610:G:O2'	1:A:611:A:H5'	1.76	0.85
4:E:176:GLU:O	4:E:180:LEU:HG	1.76	0.85
4:E:54:THR:O	4:E:58:ILE:HG13	1.76	0.85
6:G:60:GLU:CD	6:G:202:LEU:HD12	1.95	0.85
11:L:49:PRO:HD3	11:L:78:LYS:HG2	1.56	0.85
12:M:10:GLY:HA3	12:M:94:VAL:HG22	1.57	0.85
1:A:186(A):C:H1'	22:W:104:LEU:HD23	1.59	0.85
1:A:1064:G:H1'	1:A:1066:C:N3	1.91	0.85
1:A:1129:C:N4	1:A:1139:G:C6	2.45	0.85
1:A:1143:G:H2'	1:A:1144:G:C8	2.11	0.85
1:A:1490:C:O2'	1:A:1491:G:H5'	1.77	0.85
4:E:78:GLN:HE22	4:E:96:ARG:HH12	1.25	0.85
9:J:29:LYS:HZ3	9:J:102:ARG:HB2	1.42	0.85
1:A:1298:C:C5	9:J:114:ARG:HD3	2.11	0.85
9:J:69:VAL:HG21	9:J:104:LEU:HD11	1.58	0.85
10:K:18:ARG:HG3	10:K:18:ARG:HH11	1.41	0.85
1:A:684:A:C4'	13:N:12:ARG:HH22	1.89	0.85
1:A:691:G:O6	13:N:55:LYS:HE2	1.75	0.85
15:P:23:TYR:CE2	15:P:70:LEU:HD22	2.12	0.85
15:P:14:ARG:HA	15:P:44:ARG:HA	1.57	0.85
1:A:668:G:H4'	17:R:48:LYS:O	1.77	0.85
18:S:8:ARG:HH12	18:S:11:SER:N	1.75	0.85
19:T:91:ARG:HA	19:T:94:ASN:HD22	1.40	0.85
1:A:1247:U:H2'	1:A:1248:A:H8	1.42	0.85
1:A:1347:G:H8	11:L:107:ARG:HB3	1.42	0.85
1:A:559:A:H4'	1:A:560:U:H5'	0.92	0.85
1:A:952:U:C5'	1:A:972:C:H41	1.88	0.85
1:A:983:A:N3	1:A:983:A:H3'	1.91	0.85
4:E:69:LEU:HB3	4:E:162:ILE:HG22	1.56	0.85
13:N:58:PRO:HB3	13:N:90:GLY:CA	2.06	0.85
4:E:115:LEU:CD2	4:E:149:LEU:HD13	2.06	0.85
5:F:11:ARG:HG3	5:F:16:ARG:HH21	1.40	0.85
5:F:150:LYS:HA	5:F:169:ALA:HB2	1.58	0.85
5:F:33:LEU:O	5:F:36:ASP:HB3	1.77	0.85
6:G:18:LYS:HA	6:G:33:MET:HE2	1.58	0.85
8:I:98:LEU:HD22	8:I:101:ALA:HB2	1.57	0.85
9:J:69:VAL:HG11	9:J:104:LEU:HG	1.58	0.85
10:K:126:LYS:NZ	10:K:127:LEU:HD23	1.91	0.85
11:L:19:LEU:HD21	11:L:59:PHE:CB	2.01	0.85
21:V:5:LEU:CB	21:V:9:VAL:HG22	2.04	0.85

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:186(B):C:H4'	22:W:89:ARG:NH1	1.92	0.85
1:A:595:G:C8	1:A:641:U:C4	2.64	0.84
4:E:91:PRO:HB3	4:E:152:PHE:CD1	2.12	0.84
6:G:126:ILE:O	6:G:149:ALA:HB2	1.76	0.84
6:G:57:ARG:HG3	6:G:202:LEU:O	1.77	0.84
7:H:102:ALA:CB	7:H:106:PRO:HB2	2.07	0.84
8:I:50:TYR:OH	20:U:77:GLY:HA2	1.77	0.84
9:J:23:VAL:HG13	9:J:43:PHE:CZ	2.12	0.84
12:M:30:SER:HB3	12:M:80:LYS:HG3	1.59	0.84
21:V:13:ASP:HA	21:V:16:LEU:HB2	1.59	0.84
3:B:55:U:O2	3:B:55:U:H2'	1.77	0.84
1:A:327:A:H4'	1:A:328:C:OP1	1.77	0.84
1:A:628:G:H2'	1:A:629:G:H8	1.42	0.84
4:E:7:VAL:HG23	4:E:8:LYS:H	1.42	0.84
5:F:84:ILE:HG13	5:F:101:LEU:HD22	1.59	0.84
6:G:70:ILE:HD12	6:G:100:ARG:HH21	1.41	0.84
13:N:84:VAL:HG22	13:N:109:VAL:O	1.77	0.84
18:S:4:ILE:N	18:S:4:ILE:HD13	1.92	0.84
18:S:53:VAL:O	18:S:56:ALA:HB3	1.77	0.84
2:1:38:U:H2'	2:1:39:U:C6	2.11	0.84
6:G:133:VAL:HG11	6:G:138:TYR:CD1	2.11	0.84
6:G:145:GLU:HB3	6:G:184:LYS:HG2	1.57	0.84
13:N:58:PRO:HB2	13:N:93:GLN:CB	2.07	0.84
15:P:11:ARG:HG3	15:P:11:ARG:HH11	1.43	0.84
1:A:854:G:H5''	1:A:871:U:H3	1.42	0.84
1:A:939:G:H2'	1:A:940:C:C6	2.11	0.84
4:E:213:LEU:CD2	4:E:214:ILE:HD13	2.08	0.84
4:E:74:LYS:HE2	4:E:76:GLN:HB2	1.59	0.84
5:F:21:ARG:HB2	5:F:58:GLU:HG2	1.59	0.84
6:G:18:LYS:HA	6:G:33:MET:CE	2.07	0.84
7:H:32:VAL:O	7:H:43:LEU:HG	1.77	0.84
11:L:8:GLY:O	11:L:76:ALA:HB1	1.77	0.84
14:O:88:GLY:HA3	14:O:99:HIS:NE2	1.92	0.84
5:F:12:LEU:CG	16:Q:57:ARG:HG3	2.08	0.84
1:A:1342:C:O2'	11:L:124:GLN:HB2	1.77	0.84
1:A:453:A:C6	1:A:454:C:N4	2.45	0.84
4:E:80:ILE:CD1	4:E:208:ILE:HG23	2.08	0.84
9:J:155:ARG:NH1	9:J:155:ARG:HA	1.93	0.84
12:M:60:ARG:HH11	12:M:60:ARG:N	1.76	0.84
18:S:39:TYR:CB	18:S:49:LEU:HD13	2.04	0.84
22:W:40:ALA:HA	22:W:55:ILE:CD1	2.06	0.84
23:X:18:TYR:HB3	23:X:22:ARG:O	1.76	0.84

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:1:29:G:H2'	2:1:30:U:C5'	2.05	0.84
1:A:524:G:H2'	1:A:525:C:C6	2.13	0.84
10:K:21:LYS:O	10:K:63:LEU:HB3	1.76	0.84
13:N:126:ARG:HB3	13:N:126:ARG:NH1	1.93	0.84
13:N:95:ILE:HA	13:N:98:LEU:CD1	2.08	0.84
17:R:36:ILE:CD1	17:R:63:ARG:HD3	2.07	0.84
17:R:39:LEU:CD2	17:R:56:LEU:HD22	2.08	0.84
17:R:64:ARG:HA	17:R:67:LEU:HD12	1.58	0.84
19:T:19:VAL:HG21	19:T:46:ASP:HB2	1.57	0.84
1:A:1327:C:OP1	23:X:20:LYS:HB3	1.76	0.84
1:A:233:C:O2'	1:A:234:C:H5'	1.78	0.84
1:A:1483:A:H8	1:A:1483:A:O5'	1.61	0.84
1:A:734:G:H2'	1:A:735:C:C6	2.13	0.84
1:A:866:C:H5	1:A:867:G:H1'	1.38	0.84
4:E:200:ILE:O	4:E:202:PRO:HD3	1.75	0.84
4:E:219:VAL:HG13	4:E:222:ILE:HD11	1.60	0.84
4:E:222:ILE:HB	4:E:226:ARG:HH21	1.42	0.84
6:G:31:CYS:O	6:G:33:MET:HG2	1.78	0.84
7:H:94:ALA:CB	7:H:98:THR:HG21	2.08	0.84
10:K:18:ARG:HA	10:K:18:ARG:HH11	1.40	0.84
14:O:83:VAL:CG2	14:O:104:VAL:HB	2.07	0.84
15:P:81:LEU:HD11	15:P:88:ARG:HH22	1.42	0.84
18:S:21:VAL:HG13	18:S:36:ILE:CD1	2.07	0.84
22:W:43:LEU:HD22	22:W:48:LYS:HB2	1.58	0.84
1:A:163:C:H2'	1:A:164:U:O4'	1.77	0.84
1:A:1109:C:H2'	1:A:1110:A:O4'	1.76	0.84
1:A:1128:C:O2	1:A:1130:A:N6	2.08	0.84
1:A:1350:A:OP2	11:L:118:LYS:HG3	1.76	0.84
1:A:859:A:H2'	1:A:860:A:O4'	1.77	0.84
1:A:872:A:O2'	1:A:873:A:H5''	1.76	0.84
4:E:71:VAL:HG22	4:E:93:VAL:HB	1.59	0.84
6:G:197:PRO:O	6:G:198:VAL:HG13	1.78	0.84
6:G:20:TYR:CD1	6:G:21:LEU:N	2.45	0.84
6:G:7:PRO:O	6:G:10:ARG:HB3	1.77	0.84
10:K:103:VAL:HB	10:K:108:GLY:CA	2.08	0.84
10:K:50:ARG:HH11	10:K:50:ARG:HG2	1.39	0.84
1:A:1231:G:OP1	11:L:127:LYS:HG2	1.78	0.84
19:T:44:ALA:HB1	19:T:72:ARG:HA	1.57	0.84
1:A:1327:C:H5''	23:X:20:LYS:CD	2.07	0.84
3:D:28:G:H2'	3:D:29:G:H8	1.43	0.84
1:A:1085:U:H5'	1:A:1094:G:N2	1.93	0.84
1:A:1100:C:O2	1:A:1102:A:H5'	1.76	0.84

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:363:A:O2'	1:A:364:A:H5'	1.76	0.84
5:F:11:ARG:HB3	5:F:15:THR:O	1.78	0.84
10:K:18:ARG:CA	10:K:18:ARG:HH11	1.90	0.84
15:P:48:LEU:HD22	15:P:53:VAL:HG23	1.58	0.84
1:A:1288:A:N1	1:A:1371:G:H1'	1.92	0.84
1:A:713:G:N2	1:A:777:A:H1'	1.93	0.84
4:E:215:LEU:O	4:E:218:ALA:HB3	1.78	0.84
8:I:3:ARG:HG3	8:I:65:VAL:O	1.78	0.84
10:K:28:ALA:C	10:K:32:LYS:HD2	1.97	0.84
11:L:63:ILE:N	11:L:63:ILE:HD12	1.92	0.84
13:N:40:ILE:HD13	13:N:40:ILE:N	1.93	0.84
20:U:53:ARG:HA	20:U:63:GLN:NE2	1.92	0.84
18:S:44:THR:HG23	18:S:45:THR:N	1.93	0.84
1:A:133:U:H3	1:A:229:U:H3	1.26	0.83
1:A:1472:U:O2'	1:A:1473:A:H5'	1.78	0.83
1:A:451:A:N6	1:A:480:U:H2'	1.92	0.83
1:A:1344:C:H4'	11:L:120:ARG:HB3	1.59	0.83
1:A:1348:U:H4'	11:L:120:ARG:HH11	1.43	0.83
12:M:27:ALA:HB2	12:M:85:LEU:CG	2.08	0.83
1:A:761:G:C5'	19:T:102:GLY:HA3	2.07	0.83
1:A:1075:C:H4'	1:A:1101:A:N6	1.93	0.83
1:A:1151:A:N3	12:M:39:PRO:HG3	1.92	0.83
1:A:1293:G:H2'	1:A:1294:G:H8	1.41	0.83
6:G:127:THR:C	6:G:146:ILE:HG22	1.98	0.83
11:L:47:LEU:HD12	11:L:51:ARG:NH2	1.93	0.83
12:M:61:GLU:HG2	12:M:62:HIS:H	1.42	0.83
5:F:12:LEU:HD21	16:Q:57:ARG:CG	2.07	0.83
17:R:62:GLN:HA	17:R:65:ARG:CZ	2.07	0.83
20:U:76:LEU:H	20:U:76:LEU:HD22	1.41	0.83
1:A:1135:U:H4'	1:A:1136:U:C5	2.13	0.83
1:A:570:G:N1	1:A:866:C:N4	2.26	0.83
1:A:817:C:O2'	1:A:818:G:C5'	2.25	0.83
3:C:15:G:H22	3:C:48:C:H42	1.25	0.83
5:F:73:PRO:HB3	5:F:105:GLU:OE1	1.78	0.83
9:J:111:ARG:HD2	9:J:123:GLU:HB2	1.59	0.83
11:L:98:PRO:C	11:L:100:GLY:H	1.79	0.83
12:M:34:VAL:HA	12:M:74:ILE:HG12	1.59	0.83
19:T:76:LEU:HD11	19:T:79:SER:OG	1.77	0.83
22:W:75:ASN:O	22:W:78:ALA:HB3	1.78	0.83
1:A:754:C:H3'	1:A:754:C:O2	1.78	0.83
4:E:168:THR:OG1	4:E:192:SER:HA	1.79	0.83
4:E:209:ARG:NH1	4:E:213:LEU:HD12	1.94	0.83

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:20:TYR:CA	6:G:33:MET:SD	2.66	0.83
9:J:64:GLN:HG3	9:J:128:ALA:O	1.77	0.83
10:K:36:LEU:HD12	10:K:48:TYR:HB2	1.60	0.83
15:P:34:LEU:HD23	15:P:39:ILE:HG13	1.59	0.83
1:A:1202:G:C4	16:Q:42:ILE:HD13	2.13	0.83
1:A:1481:U:H2'	1:A:1482:G:C8	2.13	0.83
1:A:218:C:H5'	1:A:466:C:N4	1.94	0.83
4:E:82:ARG:HB2	4:E:94:ASN:ND2	1.94	0.83
6:G:13:ARG:NH2	6:G:40:PRO:HA	1.92	0.83
13:N:33:THR:HA	13:N:39:PRO:HA	1.58	0.83
13:N:41:THR:OG1	13:N:71:LYS:HD3	1.78	0.83
15:P:78:ILE:HA	15:P:81:LEU:CD1	2.07	0.83
17:R:56:LEU:O	17:R:60:VAL:HG23	1.77	0.83
19:T:66:SER:CB	19:T:69:LYS:HZ3	1.90	0.83
22:W:58:LYS:O	22:W:61:SER:OG	1.97	0.83
3:D:17:C:H3'	3:D:18:G:H8	1.43	0.83
1:A:910:C:O2'	1:A:911:U:H5'	1.78	0.83
19:T:4:LYS:HE2	19:T:5:VAL:O	1.78	0.83
1:A:317:G:O2'	1:A:318:G:H5'	1.78	0.83
1:A:34:C:O2'	1:A:35:G:H5'	1.77	0.83
14:O:28:LYS:HE3	14:O:33:ARG:HH12	1.43	0.83
14:O:93:LEU:CD1	14:O:96:VAL:HG21	2.08	0.83
15:P:60:VAL:HA	15:P:63:THR:CG2	2.08	0.83
16:Q:13:THR:HG22	16:Q:15:LYS:HB2	1.59	0.83
3:C:72:C:H2'	3:C:73:A:C8	2.14	0.83
1:A:1100:C:H2'	4:E:98:LEU:HD11	1.59	0.83
10:K:75:ARG:HB2	10:K:75:ARG:CZ	2.07	0.83
1:A:564:C:C5	19:T:31:LEU:HD21	2.14	0.83
1:A:1507:A:O2'	1:A:1508:G:H5'	1.79	0.83
1:A:246:A:O2'	1:A:247:G:O4'	1.97	0.83
1:A:265:G:H2'	1:A:267:C:C5	2.14	0.83
1:A:279:A:C5'	1:A:280:C:H3'	2.08	0.83
1:A:296:U:H2'	1:A:297:G:C8	2.13	0.83
1:A:399:G:H2'	1:A:400:C:H6	1.41	0.83
1:A:55:A:C2'	1:A:56:U:H5'	2.09	0.83
1:A:659:U:H2'	1:A:660:G:H8	1.42	0.83
1:A:677:U:H2'	1:A:678:U:C6	2.14	0.83
1:A:762:C:H2'	1:A:763:G:C8	2.13	0.83
4:E:223:ILE:CG2	4:E:229:VAL:HA	2.08	0.83
5:F:84:ILE:HA	5:F:87:LEU:HD12	1.59	0.83
7:H:107:ARG:O	7:H:111:GLU:HG3	1.76	0.83
18:S:72:ARG:HH21	18:S:73:LEU:HD23	1.43	0.83

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:128:G:H5''	19:T:2:PRO:HA	1.61	0.83
22:W:77:ALA:O	22:W:80:ARG:HB2	1.79	0.83
1:A:1005:A:H5''	1:A:1006:C:C6	2.13	0.83
1:A:562:C:HO2'	14:O:15:ARG:HD3	1.42	0.83
4:E:102:LEU:HD12	4:E:102:LEU:H	1.43	0.83
8:I:85:VAL:HG11	8:I:88:VAL:HG13	1.58	0.83
9:J:69:VAL:HG21	9:J:104:LEU:CD1	2.09	0.83
7:H:151:LEU:HD21	10:K:67:PRO:HG3	1.59	0.83
15:P:59:TYR:CZ	15:P:63:THR:HG21	2.14	0.83
17:R:33:THR:O	17:R:36:ILE:HG22	1.79	0.83
20:U:74:ARG:HG2	20:U:74:ARG:HH11	1.43	0.83
1:A:37:U:C3'	1:A:37:U:C6	2.59	0.82
1:A:482:A:H2'	1:A:482:A:N3	1.93	0.82
1:A:52:G:H2'	1:A:53:A:H8	1.43	0.82
1:A:570:G:HO2'	1:A:819:A:H8	1.25	0.82
4:E:180:LEU:O	4:E:181:PHE:HB2	1.78	0.82
10:K:22:GLU:O	10:K:62:TYR:HA	1.79	0.82
13:N:80:VAL:H	13:N:104:GLN:NE2	1.77	0.82
17:R:67:LEU:O	17:R:70:LEU:HB3	1.79	0.82
1:A:1045:C:H2'	1:A:1046:A:H8	1.43	0.82
1:A:319:G:O2'	1:A:320:C:H5'	1.79	0.82
1:A:50:A:H5''	1:A:51:A:C5'	2.06	0.82
3:C:38:A:H2'	3:C:39:U:O4'	1.79	0.82
4:E:81:VAL:HG12	4:E:92:TYR:CD1	2.13	0.82
5:F:3:ASN:ND2	5:F:4:LYS:H	1.77	0.82
14:O:32:PHE:HB2	14:O:84:LEU:HD11	1.61	0.82
17:R:31:LEU:HA	17:R:34:LEU:CD2	2.09	0.82
17:R:17:ARG:NH1	17:R:77:ARG:HD3	1.94	0.82
18:S:26:ARG:HD2	18:S:31:LYS:N	1.94	0.82
19:T:75:ARG:NH2	19:T:77:VAL:HG22	1.94	0.82
20:U:53:ARG:HH22	20:U:60:GLY:N	1.76	0.82
3:B:14:A:N6	3:B:22:G:H1'	1.94	0.82
1:A:1269:A:H2'	1:A:1270:C:C4'	2.09	0.82
5:F:48:TYR:HA	5:F:52:LEU:HD22	1.59	0.82
6:G:155:LEU:HD23	6:G:158:ILE:HD11	1.61	0.82
8:I:48:LEU:N	8:I:48:LEU:HD23	1.94	0.82
18:S:20:VAL:HA	18:S:36:ILE:CG1	2.08	0.82
12:M:96:ILE:O	12:M:96:ILE:HG13	1.79	0.82
1:A:1327:C:C5'	23:X:20:LYS:HD3	2.08	0.82
1:A:1405:G:N2	1:A:1517:G:N2	2.22	0.82
1:A:582:U:H5'	17:R:64:ARG:HH21	1.43	0.82
1:A:944:G:C3'	1:A:945:G:H5''	2.08	0.82

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:26:CYS:HA	6:G:31:CYS:HB3	1.61	0.82
6:G:29:PRO:HA	6:G:34:GLU:HG2	1.59	0.82
7:H:109:ILE:HD13	7:H:135:THR:CG2	2.09	0.82
7:H:31:LEU:HD12	7:H:129:ILE:CG2	2.07	0.82
15:P:23:TYR:HE2	15:P:70:LEU:HD22	1.42	0.82
18:S:74:LEU:O	18:S:77:ALA:HB3	1.77	0.82
1:A:1037:C:H2'	1:A:1038:C:H6	1.45	0.82
1:A:1338:G:H21	3:C:41:C:H1'	1.43	0.82
1:A:186(D):C:H2'	1:A:186(E):C:H6	1.43	0.82
1:A:558:G:H3'	1:A:559:A:C5'	2.09	0.82
1:A:764:C:C2'	1:A:765:G:C8	2.61	0.82
4:E:88:ALA:CB	4:E:219:VAL:HG22	2.05	0.82
9:J:106:GLN:HA	9:J:106:GLN:HE21	1.45	0.82
1:A:551:U:H5'	14:O:119:LYS:HZ3	1.44	0.82
14:O:84:LEU:HB3	14:O:104:VAL:CG1	2.10	0.82
15:P:27:LYS:HD2	15:P:31:LYS:NZ	1.93	0.82
1:A:1114:C:H1'	16:Q:60:SER:HB3	1.61	0.82
19:T:31:LEU:O	19:T:32:TYR:HD2	1.62	0.82
1:A:915:A:C2'	1:A:916:G:H5'	2.08	0.82
4:E:104:ASN:OD1	4:E:108:ILE:HG12	1.80	0.82
6:G:129:ASN:OD1	6:G:144:ASP:HB3	1.79	0.82
14:O:60:LEU:CD1	14:O:60:LEU:N	2.42	0.82
14:O:8:ASN:H	14:O:8:ASN:ND2	1.77	0.82
15:P:81:LEU:HD22	15:P:82:MET:HG2	1.61	0.82
20:U:47:THR:H	20:U:49:LYS:HZ3	1.26	0.82
20:U:74:ARG:HG2	20:U:74:ARG:NH1	1.94	0.82
1:A:1044:A:H2'	1:A:1045:C:H5'	1.62	0.82
1:A:166:G:O2'	1:A:167:G:H5'	1.80	0.82
1:A:370:C:O2'	1:A:371:G:H5'	1.78	0.82
1:A:573:A:N3	1:A:883:C:O2'	2.13	0.82
4:E:17:PHE:O	4:E:42:ILE:HG22	1.79	0.82
5:F:10:PHE:HD1	5:F:178:LEU:HD22	1.44	0.82
6:G:194:LEU:HD22	6:G:194:LEU:N	1.95	0.82
1:A:9:G:H5''	7:H:126:ARG:CD	2.10	0.82
15:P:90:LEU:HD23	15:P:93:ARG:HD2	1.61	0.82
19:T:8:GLY:O	19:T:56:VAL:HG13	1.80	0.82
5:F:120:VAL:O	5:F:123:GLN:HB2	1.79	0.82
5:F:55:VAL:HG22	5:F:68:VAL:HG13	1.62	0.82
10:K:40:ALA:CA	10:K:45:ILE:HG23	2.08	0.82
19:T:29:HIS:ND1	19:T:31:LEU:N	2.27	0.82
19:T:4:LYS:HD2	19:T:5:VAL:N	1.95	0.82
8:I:97:PHE:CD2	20:U:31:LEU:HD13	2.13	0.82

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:I:89:MET:HB2	20:U:76:LEU:HD11	1.60	0.82
20:U:78:LEU:C	20:U:79:LEU:HD12	2.00	0.82
1:A:1315:U:O2'	1:A:1360:A:C4	2.32	0.82
1:A:1237:C:O2	1:A:1335:C:H5'	1.80	0.82
1:A:1514:C:H2'	1:A:1515:C:C6	2.15	0.82
1:A:179:A:H3'	1:A:180:U:C5	2.13	0.82
4:E:16:HIS:O	4:E:204:ASN:HB2	1.79	0.82
10:K:41:ARG:NH1	10:K:41:ARG:HB3	1.93	0.82
12:M:9:ARG:O	12:M:94:VAL:HG13	1.79	0.82
14:O:86:ARG:HH12	14:O:119:LYS:CG	1.90	0.82
17:R:49:ASP:O	17:R:49:ASP:CG	2.18	0.82
18:S:44:THR:CG2	18:S:45:THR:H	1.90	0.82
1:A:789:U:H6	1:A:790:A:H5''	1.43	0.82
1:A:872:A:C2'	1:A:873:A:H5''	2.08	0.82
1:A:959:A:H2'	1:A:960:U:H4'	1.59	0.82
4:E:134:GLU:HG3	4:E:138:LEU:HD11	1.62	0.82
4:E:188:ALA:HB1	4:E:192:SER:OG	1.78	0.82
5:F:182:ILE:HG23	5:F:202:ILE:O	1.79	0.82
6:G:135:LEU:O	6:G:137:SER:N	2.11	0.82
7:H:91:LEU:HD23	7:H:91:LEU:O	1.80	0.82
12:M:72:VAL:O	12:M:73:ASP:HB2	1.78	0.82
13:N:84:VAL:HG21	13:N:110:ASP:HA	1.61	0.82
1:A:1312:G:O2'	1:A:1313:U:H5'	1.79	0.81
1:A:264:U:H2'	1:A:264:U:O2	1.78	0.81
1:A:42:G:H2'	1:A:43:C:C6	2.14	0.81
1:A:474:G:H5'	18:S:81:ARG:HG3	1.60	0.81
1:A:87:A:N7	1:A:88:C:C4	2.48	0.81
1:A:915:A:H2'	1:A:916:G:H5'	1.59	0.81
1:A:988:G:H2'	1:A:989:C:O4'	1.80	0.81
4:E:165:VAL:HG23	4:E:166:ASP:H	1.43	0.81
7:H:72:GLN:NE2	7:H:144:THR:HG23	1.93	0.81
10:K:18:ARG:CA	10:K:18:ARG:NH1	2.43	0.81
3:D:22:G:H2'	3:D:23:A:H8	1.45	0.81
1:A:1156:G:H1'	1:A:1179:A:N6	1.94	0.81
1:A:1226:C:H5''	15:P:103:THR:O	1.78	0.81
1:A:29:G:H5'	1:A:296:U:OP1	1.80	0.81
1:A:867:G:H2'	1:A:868:C:C6	2.16	0.81
1:A:917:G:O2'	1:A:918:A:H5'	1.80	0.81
5:F:190:ARG:HE	5:F:190:ARG:HA	1.43	0.81
9:J:109:ASN:O	9:J:119:ARG:CZ	2.28	0.81
10:K:82:HIS:O	10:K:137:VAL:HG13	1.80	0.81
14:O:12:ARG:NH1	14:O:12:ARG:HB3	1.95	0.81

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:O:27:LEU:O	14:O:29:GLY:N	2.12	0.81
3:D:21:A:H2'	3:D:22:G:O4'	1.79	0.81
1:A:657:G:H2'	1:A:658:G:H5'	1.61	0.81
3:C:17:C:H5''	3:C:19:G:OP2	1.79	0.81
3:C:40:C:C2'	3:C:41:C:H5'	2.08	0.81
4:E:16:HIS:HA	4:E:204:ASN:HB2	1.62	0.81
6:G:12:CYS:HB3	6:G:33:MET:HE3	1.62	0.81
6:G:168:ARG:CD	6:G:168:ARG:H	1.94	0.81
4:E:181:PHE:CD1	10:K:71:GLY:HA3	2.15	0.81
13:N:95:ILE:HA	13:N:98:LEU:CG	2.09	0.81
1:A:523:A:H61	14:O:53:ARG:HH22	1.23	0.81
18:S:56:ALA:HB3	18:S:79:VAL:HG11	1.61	0.81
19:T:4:LYS:CD	19:T:5:VAL:H	1.94	0.81
20:U:45:SER:OG	20:U:51:LEU:HD11	1.80	0.81
20:U:74:ARG:CG	20:U:81:PHE:HB3	2.09	0.81
1:A:958:A:C2	21:V:55:LYS:HB2	2.16	0.81
22:W:51:GLU:HB3	22:W:54:LYS:NZ	1.95	0.81
22:W:64:ASP:O	22:W:67:ALA:N	2.12	0.81
1:A:620:C:H2'	1:A:621:A:O4'	1.81	0.81
3:C:50:U:H2'	3:C:51:U:O4'	1.79	0.81
4:E:61:LEU:HA	4:E:64:ARG:HD3	1.61	0.81
6:G:30:LYS:N	6:G:34:GLU:HB3	1.95	0.81
12:M:94:VAL:HG12	12:M:95:GLU:N	1.93	0.81
1:A:228:A:H2'	1:A:229:U:H5'	1.61	0.81
4:E:102:LEU:CD2	4:E:176:GLU:HB3	2.09	0.81
6:G:21:LEU:HD13	6:G:67:ILE:HG22	1.62	0.81
9:J:29:LYS:HE3	9:J:101:LEU:HD13	1.61	0.81
19:T:97:SER:O	19:T:98:LEU:HD22	1.80	0.81
1:A:1037:C:H2'	1:A:1038:C:C6	2.16	0.81
1:A:1145:C:H1'	1:A:1146:A:C8	2.15	0.81
1:A:1202:G:H2'	1:A:1203:C:C6	2.15	0.81
1:A:1323:G:H2'	1:A:1324:A:C8	2.15	0.81
1:A:174:C:H2'	1:A:175:C:C6	2.14	0.81
1:A:129(A):G:N2	1:A:191(A):G:C5	2.49	0.81
1:A:423:G:H2'	1:A:424:G:O4'	1.80	0.81
4:E:150:SER:HA	4:E:153:ARG:CB	2.09	0.81
5:F:46:GLU:HB3	5:F:47:LEU:HD22	1.62	0.81
6:G:155:LEU:H	6:G:158:ILE:HG13	1.45	0.81
7:H:115:VAL:HG21	7:H:118:ILE:HD12	1.61	0.81
9:J:35:LYS:HZ1	9:J:38:LEU:HD22	1.43	0.81
11:L:97:LYS:NZ	11:L:102:LEU:HD13	1.95	0.81
11:L:19:LEU:HD23	11:L:60:ASP:O	1.81	0.81

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:761:G:H5'	19:T:103:GLY:N	1.96	0.81
20:U:55:ARG:HH11	20:U:55:ARG:HB3	1.44	0.81
22:W:85:MET:HA	22:W:88:VAL:HG23	1.63	0.81
1:A:114:U:H2'	1:A:115:G:C8	2.15	0.81
1:A:1395:C:OP2	1:A:1395:C:H3'	1.81	0.81
1:A:410:G:N3	1:A:432:A:N6	2.28	0.81
7:H:29:GLY:HA2	7:H:46:GLY:O	1.80	0.81
8:I:48:LEU:HD12	8:I:50:TYR:O	1.79	0.81
10:K:33:GLU:HA	10:K:36:LEU:HD21	1.61	0.81
13:N:54:ARG:HG3	13:N:54:ARG:HH11	1.44	0.81
22:W:11:SER:HA	22:W:13:LEU:CD1	2.11	0.81
1:A:1433:A:H2'	1:A:1434:A:O4'	1.81	0.81
1:A:132:C:H5'	1:A:262:A:C1'	2.10	0.81
4:E:150:SER:CA	4:E:153:ARG:HB2	2.09	0.81
11:L:6:GLY:HA3	11:L:80:GLY:O	1.79	0.81
15:P:77:ASN:O	15:P:80:ARG:HG3	1.80	0.81
17:R:6:GLU:HG2	17:R:7:GLU:N	1.94	0.81
22:W:19:SER:O	22:W:23:ARG:HB3	1.81	0.81
1:A:1104:G:H4'	4:E:111:ARG:NE	1.95	0.81
1:A:451:A:H1'	1:A:452:A:C4	2.15	0.81
1:A:558:G:H2'	1:A:559:A:H2	1.45	0.81
4:E:10:LEU:HD23	4:E:11:LEU:CD2	2.11	0.81
6:G:13:ARG:HE	6:G:40:PRO:HB3	1.45	0.81
6:G:166:LYS:HE2	6:G:178:VAL:HG12	1.62	0.81
8:I:80:ARG:HG2	8:I:88:VAL:HG21	1.62	0.81
1:A:1347:G:H8	11:L:107:ARG:CB	1.93	0.81
15:P:70:LEU:O	15:P:74:VAL:HG23	1.81	0.81
16:Q:24:CYS:HB2	16:Q:39:LEU:C	2.01	0.81
1:A:582:U:H5'	17:R:64:ARG:NH2	1.96	0.81
1:A:1068:G:N7	1:A:1094:G:C8	2.49	0.81
1:A:477:G:H2'	1:A:478:A:C8	2.16	0.81
1:A:859:A:O2'	1:A:860:A:H5'	1.81	0.81
3:D:34:G:O5'	3:D:35:A:H5'	1.80	0.81
4:E:97:TRP:HH2	4:E:176:GLU:CD	1.84	0.81
4:E:187:LEU:HD22	4:E:188:ALA:N	1.95	0.81
5:F:58:GLU:H	5:F:65:ALA:HB3	1.46	0.81
9:J:115:ARG:CB	9:J:118:VAL:HG23	2.11	0.81
9:J:45:ASP:HA	9:J:48:LYS:HZ3	1.45	0.81
1:A:1118:C:OP1	11:L:104:ARG:HG3	1.81	0.81
13:N:84:VAL:CG2	13:N:110:ASP:HA	2.11	0.81
14:O:9:GLN:HA	14:O:12:ARG:HH12	1.46	0.81
19:T:12:SER:N	19:T:20:THR:OG1	2.14	0.81

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:V:41:VAL:HB	21:V:42:PRO:CD	2.07	0.81
3:B:52:G:H2'	3:B:53:G:C8	2.16	0.81
3:B:4:C:H2'	3:B:5:G:H8	1.44	0.81
2:1:28:G:O2'	2:1:29:G:H5'	1.81	0.81
1:A:1256:A:N1	1:A:1278:U:O2'	2.14	0.81
1:A:1507:A:H2'	1:A:1508:G:O4'	1.81	0.81
1:A:399:G:H2'	1:A:400:C:C6	2.15	0.81
1:A:722:A:H2'	1:A:724:G:H8	1.45	0.81
1:A:91:C:H2'	1:A:92:G:C8	2.13	0.81
4:E:234:PRO:HA	4:E:238:LEU:HD13	1.61	0.81
6:G:61:LYS:HG3	6:G:207:TYR:HE1	1.46	0.81
6:G:88:VAL:HG22	7:H:97:GLY:N	1.96	0.81
8:I:65:VAL:HG23	8:I:66:GLU:N	1.96	0.81
9:J:137:LYS:HA	9:J:140:ASP:OD2	1.81	0.81
10:K:109:ILE:HG12	10:K:137:VAL:O	1.81	0.81
12:M:8:LEU:HD13	12:M:16:LEU:HD13	1.61	0.81
1:A:994:A:C2	16:Q:5:ALA:HA	2.16	0.81
17:R:60:VAL:HA	17:R:63:ARG:HD3	1.62	0.81
20:U:49:LYS:H	20:U:49:LYS:HE3	1.43	0.81
20:U:70:ILE:O	20:U:74:ARG:HD2	1.81	0.81
1:A:263:A:H2'	1:A:264:U:C5'	2.07	0.80
1:A:551:U:H2'	1:A:552:U:C5	2.16	0.80
1:A:952:U:O2'	1:A:965:A:N6	2.14	0.80
1:A:1104:G:C4'	4:E:111:ARG:HE	1.93	0.80
4:E:157:ARG:C	4:E:158:LEU:HD23	2.02	0.80
4:E:84:GLU:CG	4:E:234:PRO:HD2	2.10	0.80
5:F:20:SER:HB2	5:F:40:ARG:NH2	1.95	0.80
6:G:200:GLU:O	6:G:204:ILE:HD12	1.80	0.80
7:H:136:MET:O	7:H:139:LEU:HB2	1.79	0.80
7:H:78:HIS:CD2	7:H:78:HIS:H	1.99	0.80
9:J:28:ASN:O	9:J:31:MET:HB3	1.80	0.80
10:K:80:ILE:H	10:K:80:ILE:CD1	1.94	0.80
15:P:51:ALA:O	15:P:55:ARG:HG3	1.81	0.80
19:T:10:VAL:HG21	19:T:55:ASP:HB2	1.61	0.80
1:A:1035:A:H2'	1:A:1036:G:H5'	1.63	0.80
4:E:60:ASP:HB3	4:E:64:ARG:HH12	1.47	0.80
5:F:48:TYR:HA	5:F:52:LEU:CD2	2.11	0.80
11:L:97:LYS:HB3	11:L:98:PRO:HD3	1.62	0.80
19:T:11:VAL:HG23	19:T:21:VAL:HA	1.63	0.80
22:W:62:LEU:HA	22:W:65:LYS:CG	2.10	0.80
1:A:1239:A:H4'	1:A:1240:U:C5'	2.11	0.80
1:A:477:G:H2'	1:A:478:A:H8	1.45	0.80

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:L:101:PHE:C	11:L:102:LEU:HD23	2.01	0.80
11:L:52:ALA:O	11:L:95:LYS:HD2	1.80	0.80
14:O:24:VAL:HG22	14:O:98:TYR:CZ	2.17	0.80
5:F:8:ILE:HG21	16:Q:50:LYS:O	1.81	0.80
17:R:36:ILE:HG13	17:R:59:MET:HE1	1.62	0.80
18:S:14:ASN:HA	18:S:42:ARG:CZ	2.10	0.80
13:N:84:VAL:HG21	20:U:88:LYS:CD	2.11	0.80
1:A:333:G:H4'	22:W:16:HIS:CD2	2.16	0.80
1:A:1145:C:H1'	1:A:1146:A:N7	1.95	0.80
1:A:270:A:H2'	1:A:271:C:H6	1.45	0.80
1:A:449:C:O2	18:S:42:ARG:HG2	1.81	0.80
1:A:775:G:N3	1:A:776:G:N7	2.29	0.80
1:A:858:G:H1	1:A:869:G:H3'	1.44	0.80
3:C:21:A:N6	3:C:46:G:N2	2.30	0.80
4:E:101:MET:HA	4:E:108:ILE:HG13	1.64	0.80
4:E:47:THR:OG1	4:E:202:PRO:HG2	1.82	0.80
4:E:224:GLN:HG2	4:E:229:VAL:HG21	1.61	0.80
10:K:14:ARG:HG2	10:K:18:ARG:HE	1.46	0.80
22:W:51:GLU:HA	22:W:54:LYS:HD2	1.61	0.80
1:A:1003:G:C5	1:A:1004:A:H1'	2.15	0.80
1:A:1126:U:H5'	1:A:1281:U:O4'	1.81	0.80
1:A:389:A:H2'	1:A:390:C:C5'	2.10	0.80
3:C:19:G:H21	3:C:57:G:H1'	1.46	0.80
5:F:24:ALA:HB1	5:F:28:GLN:OE1	1.80	0.80
1:A:1189:C:H5''	5:F:5:ILE:HG12	1.63	0.80
8:I:6:VAL:HG22	8:I:8:ILE:CD1	2.11	0.80
8:I:75:LEU:HD22	8:I:79:LEU:CD2	2.11	0.80
1:A:1240:U:H2'	9:J:32:ARG:HH21	1.46	0.80
10:K:68:ARG:HD3	10:K:69:ARG:N	1.96	0.80
15:P:11:ARG:O	15:P:45:VAL:HB	1.80	0.80
12:M:49:VAL:HG13	16:Q:41:ARG:CD	2.11	0.80
1:A:232:G:H2'	1:A:233:C:C5	2.15	0.80
1:A:450:G:O6	1:A:481:G:H2'	1.81	0.80
4:E:16:HIS:C	4:E:204:ASN:HB2	2.02	0.80
4:E:80:ILE:HD12	4:E:208:ILE:CG1	2.11	0.80
13:N:57:THR:HG23	13:N:60:ALA:N	1.95	0.80
15:P:91:ARG:HB3	15:P:98:VAL:HG22	1.62	0.80
18:S:21:VAL:HG21	18:S:59:TRP:HE1	1.43	0.80
1:A:474:G:C5'	18:S:81:ARG:HG3	2.12	0.80
19:T:65:ILE:HG23	19:T:69:LYS:HD2	1.64	0.80
22:W:23:ARG:HA	22:W:26:ASN:OD1	1.81	0.80
1:A:270:A:O2'	1:A:271:C:H5'	1.82	0.80

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:495:A:H1'	1:A:496:A:N7	1.97	0.80
1:A:518:C:O2'	1:A:519:C:OP2	2.00	0.80
1:A:552:U:O2'	1:A:553:A:H5'	1.82	0.80
4:E:59:GLU:CB	4:E:221:LEU:HD21	2.09	0.80
4:E:97:TRP:HZ2	4:E:102:LEU:CD1	1.94	0.80
11:L:42:ARG:HB3	11:L:74:ILE:CD1	2.11	0.80
17:R:36:ILE:HD12	17:R:63:ARG:HD3	1.63	0.80
18:S:6:LEU:HD23	18:S:17:TYR:CD2	2.17	0.80
1:A:1196:U:H5'	1:A:1197:G:H5'	1.64	0.80
1:A:1206:G:H2'	1:A:1207:G:O4'	1.82	0.80
1:A:1245:A:H2'	1:A:1246:C:H6	1.47	0.80
1:A:1414:U:H2'	1:A:1415:G:H8	1.44	0.80
4:E:208:ILE:HA	4:E:211:ILE:HB	1.63	0.80
4:E:97:TRP:CH2	4:E:176:GLU:HG3	2.15	0.80
7:H:12:LEU:HG	7:H:129:ILE:CD1	2.12	0.80
9:J:72:ARG:HH22	9:J:138:LYS:HZ3	1.28	0.80
11:L:29:ASN:OD1	11:L:64:THR:HA	1.82	0.80
11:L:27:THR:HB	11:L:62:TYR:CD1	2.17	0.80
12:M:6:ILE:CG2	12:M:98:ILE:HG13	2.11	0.80
17:R:75:PRO:C	17:R:78:TYR:HB3	2.02	0.80
20:U:55:ARG:NH1	20:U:55:ARG:HB3	1.96	0.80
1:A:1135:U:H2'	1:A:1137:C:C6	2.16	0.80
1:A:1277:C:H4'	1:A:1282:C:C1'	2.11	0.80
1:A:11:G:H2'	1:A:12:U:O4'	1.81	0.80
4:E:90:MET:SD	4:E:91:PRO:HD2	2.21	0.80
5:F:15:THR:HG21	5:F:181:ASN:CA	2.12	0.80
6:G:55:ALA:O	6:G:59:ARG:CG	2.28	0.80
6:G:94:LEU:HA	6:G:97:LEU:HD12	1.64	0.80
7:H:109:ILE:HD13	7:H:135:THR:CB	2.11	0.80
8:I:30:LEU:HA	8:I:75:LEU:CD1	2.12	0.80
11:L:47:LEU:HD11	11:L:56:LEU:HG	1.62	0.80
13:N:87:THR:HA	13:N:91:ARG:NH1	1.96	0.80
14:O:77:LEU:HD11	14:O:107:ALA:HB2	1.61	0.80
17:R:75:PRO:CA	17:R:78:TYR:HB3	2.11	0.80
1:A:112:G:O2'	1:A:113:G:H5'	1.81	0.80
1:A:1224:G:H1	1:A:1362(A):C:N4	1.80	0.80
1:A:1394:A:O2'	1:A:1395:C:OP1	2.00	0.80
1:A:412:A:O2'	1:A:413:G:H5''	1.82	0.80
1:A:655:A:H2'	1:A:656:C:H6	1.46	0.80
1:A:907:A:H2'	1:A:908:A:C8	2.17	0.80
1:A:913:A:O2'	1:A:914:A:O4'	1.98	0.80
7:H:60:TYR:O	7:H:64:ARG:HG2	1.82	0.80

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:I:46:ARG:HH22	20:U:37:VAL:CG2	1.94	0.80
10:K:14:ARG:CB	10:K:14:ARG:HH11	1.94	0.80
15:P:98:VAL:HG23	15:P:110:ARG:HH21	1.47	0.80
20:U:21:LYS:HD2	20:U:22:VAL:H	1.47	0.80
1:A:232:G:H2'	1:A:233:C:H6	1.45	0.80
1:A:1005:A:H3'	1:A:1006:C:C6	2.14	0.79
1:A:1347:G:H4'	1:A:1348:U:O5'	1.82	0.79
1:A:37:U:O4	1:A:38:G:C4	2.34	0.79
1:A:55:A:O2'	1:A:56:U:H5'	1.81	0.79
1:A:819:A:C6	1:A:1529:G:N7	2.51	0.79
4:E:196:LEU:HD12	4:E:197:VAL:N	1.97	0.79
7:H:121:LYS:HZ2	7:H:122:GLU:H	0.82	0.79
10:K:86:ILE:HB	10:K:133:LEU:O	1.82	0.79
13:N:91:ARG:O	13:N:95:ILE:HG13	1.82	0.79
15:P:48:LEU:HD13	15:P:53:VAL:HG22	1.64	0.79
17:R:65:ARG:O	17:R:68:ARG:HB3	1.80	0.79
18:S:6:LEU:HD13	18:S:6:LEU:N	1.96	0.79
1:A:225:C:H2'	1:A:226:G:C5'	2.13	0.79
1:A:82:U:H2'	1:A:85:U:C5	2.13	0.79
1:A:932:C:C3'	9:J:3:ARG:HG3	2.10	0.79
6:G:170:VAL:HG23	6:G:176:LEU:HD22	1.64	0.79
11:L:16:ARG:NE	11:L:18:PHE:HZ	1.80	0.79
1:A:953:G:N7	15:P:104:ARG:NH2	2.30	0.79
15:P:78:ILE:CA	15:P:81:LEU:HD13	2.12	0.79
17:R:42:HIS:CG	17:R:43:LEU:N	2.48	0.79
19:T:25:ARG:NH2	19:T:40:LYS:HD3	1.92	0.79
23:X:6:ARG:HB3	23:X:15:ARG:HH21	1.46	0.79
1:A:1255:G:H21	1:A:1276:G:N2	1.79	0.79
1:A:1510:U:H2'	1:A:1511:G:H8	1.46	0.79
1:A:541:G:H4'	6:G:42:GLN:HB2	1.63	0.79
1:A:708:C:O2'	1:A:709:G:H5'	1.83	0.79
11:L:9:ARG:O	11:L:104:ARG:HG2	1.81	0.79
16:Q:39:LEU:HD13	16:Q:44:LEU:HA	1.62	0.79
17:R:6:GLU:CG	17:R:7:GLU:H	1.94	0.79
3:D:18:G:H2'	3:D:19:G:O5'	1.81	0.79
1:A:1244:C:H2'	1:A:1245:A:H8	1.46	0.79
1:A:1406:U:O2	1:A:1406:U:H2'	1.80	0.79
1:A:225:C:H2'	1:A:226:G:H5'	1.65	0.79
1:A:520:A:H62	1:A:529:G:N2	1.79	0.79
1:A:657:G:C2'	1:A:658:G:H5'	2.13	0.79
4:E:167:PRO:HG2	4:E:168:THR:H	1.46	0.79
9:J:5:ARG:HB3	9:J:5:ARG:NH1	1.97	0.79

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:J:75:VAL:HG13	9:J:87:VAL:O	1.82	0.79
15:P:16:ASP:HA	15:P:19:LEU:CG	2.13	0.79
17:R:31:LEU:HA	17:R:34:LEU:HD23	1.65	0.79
22:W:62:LEU:CA	22:W:65:LYS:HG2	2.12	0.79
14:O:126:LYS:NZ	14:O:128:ALA:H	1.80	0.79
1:A:727:G:C8	1:A:727:G:H3'	2.17	0.79
1:A:1296:C:H1'	1:A:1302:U:O4	1.82	0.79
1:A:280:C:H5''	1:A:281:G:OP2	1.81	0.79
1:A:303:A:H2'	1:A:304:U:O4'	1.83	0.79
1:A:313:A:H2'	1:A:314:C:C5	2.17	0.79
1:A:692:U:H1'	1:A:694:A:C8	2.17	0.79
6:G:173:TRP:CD1	6:G:189:PRO:HB3	2.18	0.79
7:H:91:LEU:C	7:H:91:LEU:HD23	2.03	0.79
12:M:30:SER:CB	12:M:80:LYS:HG3	2.12	0.79
14:O:41:ARG:HB3	14:O:41:ARG:NH1	1.97	0.79
18:S:39:TYR:HB2	18:S:49:LEU:CD1	2.08	0.79
20:U:33:ASP:CG	20:U:34:TYR:N	2.33	0.79
3:D:18:G:H21	3:D:58:A:C5'	1.95	0.79
1:A:161:A:H2'	1:A:162:A:O4'	1.83	0.79
2:1:25:G:H2'	2:1:26:G:O4'	1.81	0.79
1:A:1178:G:H2'	1:A:1180:A:OP2	1.82	0.79
1:A:1242:C:H5''	23:X:10:ARG:NH1	1.95	0.79
1:A:124:G:H2'	1:A:125:U:C6	2.18	0.79
1:A:858:G:N2	1:A:869:G:H3'	1.98	0.79
4:E:164:VAL:HG12	4:E:186:ALA:HB2	1.64	0.79
5:F:181:ASN:ND2	5:F:206:GLU:HG2	1.96	0.79
2:1:52:U:H4'	6:G:50:ARG:CA	2.12	0.79
7:H:13:ILE:HD12	7:H:13:ILE:N	1.96	0.79
10:K:9:MET:HG2	10:K:13:ILE:HD11	1.64	0.79
10:K:91:ARG:HG2	19:T:34:LYS:CB	2.12	0.79
13:N:18:ARG:HA	13:N:80:VAL:HG23	1.63	0.79
1:A:1226:C:N4	15:P:104:ARG:HG3	1.98	0.79
19:T:80:GLY:O	19:T:82:MET:HG2	1.81	0.79
18:S:67:THR:O	18:S:70:ALA:HB3	1.82	0.79
1:A:1408:A:H2	1:A:1494:G:HO2'	1.29	0.79
1:A:279:A:H1'	1:A:281:G:C4	2.17	0.79
1:A:600:C:O2'	1:A:601:C:H5'	1.83	0.79
1:A:607:A:C2	1:A:608:A:H1'	2.17	0.79
4:E:18:GLY:O	4:E:19:HIS:ND1	2.15	0.79
5:F:152:ILE:HG22	5:F:167:TRP:CB	2.13	0.79
6:G:74:GLN:CA	6:G:77:ASN:HD22	1.96	0.79
10:K:9:MET:HG3	10:K:26:VAL:HG11	1.65	0.79

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:T:7:THR:HG23	19:T:57:VAL:O	1.81	0.79
20:U:74:ARG:HA	20:U:79:LEU:HD11	1.65	0.79
21:V:62:ILE:HG12	21:V:67:VAL:HG22	1.64	0.79
1:A:1234:C:H4'	1:A:1364:U:H1'	1.65	0.79
1:A:1519:A:H2'	1:A:1520:G:H5'	1.65	0.79
1:A:154:C:O2'	1:A:155:C:H5'	1.83	0.79
1:A:132:C:C2	1:A:231:G:N2	2.51	0.79
1:A:375:U:H4'	18:S:17:TYR:CE2	2.17	0.79
1:A:397:A:H2	1:A:548:G:O6	1.66	0.79
12:M:49:VAL:HG12	16:Q:45:ARG:HD2	1.64	0.79
21:V:3:ARG:NH2	21:V:69:HIS:ND1	2.29	0.79
3:B:70:G:H2'	3:B:71:G:C8	2.18	0.79
1:A:1053:G:C6	1:A:1199:U:H2'	2.18	0.79
1:A:179:A:H3'	1:A:180:U:H5	1.48	0.79
1:A:243:A:H61	1:A:283:C:H41	1.30	0.79
1:A:731:G:H2'	1:A:732:C:C6	2.18	0.79
1:A:654:G:N2	1:A:753:A:H1'	1.98	0.79
4:E:208:ILE:HG21	4:E:239:VAL:HG11	1.65	0.79
6:G:127:THR:O	6:G:146:ILE:HA	1.81	0.79
6:G:59:ARG:HH22	6:G:66:ARG:HH12	1.31	0.79
10:K:109:ILE:HD11	10:K:137:VAL:HB	1.64	0.79
14:O:33:ARG:O	14:O:84:LEU:HG	1.82	0.79
15:P:13:LYS:HB3	15:P:17:VAL:CG1	2.13	0.79
5:F:12:LEU:HD21	16:Q:58:LYS:H	1.48	0.79
19:T:43:LEU:HD22	19:T:44:ALA:H	1.48	0.79
22:W:21:LYS:HA	22:W:24:LEU:HD12	1.63	0.79
23:X:24:ARG:O	23:X:25:LYS:HB2	1.83	0.79
3:D:58:A:O2'	3:D:59:U:OP1	2.00	0.79
1:A:1154:G:H2'	1:A:1155:G:H8	1.48	0.79
1:A:1376:U:H2'	1:A:1377:A:C8	2.18	0.79
1:A:1465:C:O2	1:A:1465:C:H2'	1.82	0.79
1:A:1480:G:O2'	1:A:1481:U:H5'	1.81	0.79
1:A:261:U:H2'	1:A:263:A:OP2	1.83	0.79
1:A:619:U:O2	6:G:135:LEU:HD11	1.82	0.79
4:E:101:MET:CB	4:E:108:ILE:HG13	2.13	0.79
7:H:11:ILE:HG22	7:H:12:LEU:N	1.97	0.79
8:I:53:ALA:HB1	8:I:86:ARG:NH1	1.98	0.79
11:L:117:HIS:O	11:L:119:ALA:N	2.12	0.79
1:A:718:G:H4'	13:N:117:ASN:HD21	1.48	0.79
14:O:87:GLY:HA2	14:O:98:TYR:HB3	1.64	0.79
1:A:1227:A:C8	15:P:117:VAL:HG21	2.18	0.79
1:A:1216:G:H5''	16:Q:5:ALA:HB1	1.64	0.78

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:674:G:H2'	1:A:675:A:C8	2.17	0.78
1:A:781:A:N6	1:A:802:A:C4	2.51	0.78
4:E:47:THR:HG23	4:E:202:PRO:HD2	1.63	0.78
4:E:78:GLN:NE2	4:E:96:ARG:HH22	1.79	0.78
5:F:15:THR:O	5:F:16:ARG:HB3	1.79	0.78
8:I:14:LEU:HD13	8:I:18:GLN:HB3	1.63	0.78
9:J:126:ASP:HB3	9:J:131:LYS:O	1.83	0.78
11:L:79:LEU:CD1	11:L:101:PHE:HB3	2.14	0.78
11:L:37:PHE:HE1	11:L:74:ILE:HG23	1.47	0.78
14:O:6:THR:O	14:O:10:LEU:HB2	1.83	0.78
1:A:1308:U:H5'	15:P:110:ARG:HH12	1.45	0.78
1:A:120:A:H2'	1:A:122:G:N7	1.98	0.78
1:A:1316:G:H2'	1:A:1318:A:OP2	1.82	0.78
1:A:332:G:H2'	1:A:333:G:H8	1.48	0.78
1:A:52:G:H2'	1:A:53:A:C8	2.18	0.78
1:A:834:C:O2'	1:A:835:U:H5'	1.83	0.78
5:F:116:VAL:HG11	5:F:141:VAL:HG21	1.64	0.78
5:F:205:GLY:O	5:F:206:GLU:HB2	1.82	0.78
6:G:141:ARG:CD	6:G:142:PRO:HD2	2.12	0.78
1:A:10:A:OP2	7:H:126:ARG:HD2	1.83	0.78
7:H:43:LEU:N	7:H:65:ASN:HD22	1.81	0.78
10:K:18:ARG:CG	10:K:18:ARG:HH11	1.95	0.78
10:K:39:LEU:HB3	10:K:45:ILE:HG21	1.65	0.78
14:O:92:ASP:C	14:O:93:LEU:HD23	2.04	0.78
15:P:24:GLY:O	15:P:29:ARG:HD2	1.84	0.78
1:A:280:C:H1'	19:T:38:ARG:NE	1.98	0.78
1:A:277:C:H5''	19:T:68:ARG:HH12	1.49	0.78
22:W:13:LEU:HB2	22:W:17:ARG:NH2	1.97	0.78
7:H:153:LYS:HG2	7:H:154:GLY:H	1.48	0.78
1:A:1074:G:H4'	4:E:103:THR:O	1.82	0.78
1:A:1389:C:C2'	1:A:1390:U:H5'	2.13	0.78
1:A:251:G:H22	1:A:272:C:N4	1.80	0.78
1:A:520:A:H3'	1:A:521:G:H5''	1.64	0.78
1:A:594:G:N7	1:A:595:G:N2	2.32	0.78
1:A:704:A:H2'	1:A:705:U:C6	2.18	0.78
1:A:944:G:H3'	1:A:945:G:H5''	1.63	0.78
6:G:15:GLU:HG2	6:G:63:LYS:HB3	1.64	0.78
9:J:35:LYS:HZ3	9:J:38:LEU:HD22	1.46	0.78
1:A:973:G:H1'	12:M:55:LYS:H	1.47	0.78
14:O:47:LYS:N	14:O:48:PRO:HD3	1.98	0.78
22:W:21:LYS:O	22:W:24:LEU:HB2	1.83	0.78
1:A:1378:C:O2	1:A:1378:C:H2'	1.82	0.78

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1521:G:H2'	1:A:1522:U:C6	2.18	0.78
1:A:67:C:H5'	1:A:172:A:O2'	1.84	0.78
1:A:633:G:H2'	1:A:634:C:C6	2.18	0.78
1:A:872:A:H2'	1:A:873:A:H5''	1.65	0.78
4:E:162:ILE:HD13	4:E:183:PRO:O	1.84	0.78
4:E:44:LEU:O	4:E:48:MET:SD	2.41	0.78
5:F:159:GLY:N	5:F:193:TYR:HE1	1.81	0.78
5:F:31:HIS:ND1	5:F:34:LEU:HD13	1.99	0.78
5:F:84:ILE:HG13	5:F:101:LEU:HD13	1.66	0.78
7:H:16:THR:HG23	7:H:28:PHE:HA	1.65	0.78
8:I:76:ALA:HB3	8:I:80:ARG:NH2	1.98	0.78
9:J:104:LEU:HD23	9:J:134:ALA:CB	2.13	0.78
1:A:589:C:OP1	10:K:5:PRO:HG2	1.82	0.78
10:K:65:TYR:O	10:K:67:PRO:HD3	1.81	0.78
10:K:82:HIS:NE2	10:K:84:ARG:HG3	1.99	0.78
13:N:73:MET:HG2	13:N:103:LEU:HD13	1.65	0.78
18:S:8:ARG:HH12	18:S:11:SER:H	1.30	0.78
19:T:36:ILE:HD13	19:T:36:ILE:N	1.99	0.78
1:A:1461:G:H2'	1:A:1462:G:H8	1.48	0.78
1:A:174:C:C2	1:A:175:C:C5	2.71	0.78
3:C:47:U:O4	3:C:49:C:H4'	1.83	0.78
4:E:147:LYS:HE2	4:E:147:LYS:HA	1.65	0.78
4:E:95:GLN:CG	4:E:148:TYR:HB3	2.13	0.78
4:E:24:TRP:CH2	4:E:26:PRO:HA	2.18	0.78
8:I:78:GLU:O	8:I:81:ILE:HB	1.83	0.78
1:A:1320:C:H42	21:V:36:ARG:HH11	1.29	0.78
1:A:1375:A:C2	1:A:1376:U:C2	2.71	0.78
4:E:16:HIS:CE1	4:E:210:SER:HA	2.19	0.78
4:E:192:SER:C	4:E:194:PRO:HD3	2.03	0.78
5:F:11:ARG:HH22	5:F:179:ARG:H	1.30	0.78
1:A:1057:G:H4'	5:F:197:GLY:H	1.49	0.78
6:G:38:TYR:HB2	6:G:39:PRO:HD2	1.63	0.78
7:H:78:HIS:CB	10:K:104:ARG:HD3	2.14	0.78
11:L:50:LEU:HD13	11:L:56:LEU:HG	1.64	0.78
12:M:24:VAL:HG22	12:M:34:VAL:HG11	1.65	0.78
13:N:46:GLY:CA	13:N:55:LYS:HD2	2.13	0.78
1:A:1318:A:H4'	21:V:10:PHE:CD2	2.19	0.78
22:W:29:LYS:O	22:W:32:ALA:HB3	1.84	0.78
22:W:66:ALA:HB3	22:W:72:LEU:HD12	1.64	0.78
1:A:262:A:H2'	1:A:263:A:N7	1.97	0.78
1:A:748:C:C6	1:A:748:C:O5'	2.36	0.78
9:J:36:LYS:NZ	9:J:36:LYS:HA	1.98	0.78

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:K:115:SER:C	10:K:116:LYS:HD2	2.04	0.78
10:K:88:LYS:NZ	10:K:88:LYS:H	1.81	0.78
15:P:55:ARG:HH21	15:P:56:LEU:HD21	1.45	0.78
17:R:32:LEU:O	17:R:36:ILE:HB	1.83	0.78
19:T:5:VAL:HG12	19:T:6:LEU:N	1.98	0.78
20:U:67:ALA:HA	20:U:70:ILE:HD12	1.64	0.78
1:A:279:A:H1'	1:A:281:G:N3	1.98	0.78
1:A:331:G:OP1	1:A:332:G:H8	1.67	0.78
1:A:486:U:H2'	1:A:487:A:O5'	1.84	0.78
1:A:501:C:H1'	1:A:549:C:H1'	1.66	0.78
1:A:751:U:H4'	17:R:24:SER:OG	1.83	0.78
6:G:198:VAL:HG23	6:G:199:ASN:H	1.48	0.78
6:G:12:CYS:CA	6:G:19:LEU:HB2	2.13	0.78
6:G:205:GLU:OE2	7:H:100:VAL:HB	1.82	0.78
7:H:48:ALA:HB1	7:H:53:LEU:HD12	1.66	0.78
9:J:143:ARG:HD2	9:J:144:MET:H	1.49	0.78
12:M:25:GLU:O	12:M:28:ARG:HB2	1.84	0.78
19:T:5:VAL:CG1	19:T:59:ILE:O	2.31	0.78
1:A:1313:U:H5	21:V:4:SER:HB2	1.46	0.78
1:A:192:U:H1'	22:W:103:GLY:HA2	1.66	0.78
1:A:404:U:C4'	6:G:122:ARG:HH11	1.96	0.78
1:A:872:A:O2'	1:A:873:A:OP1	2.01	0.78
1:A:759:A:H4'	1:A:881:G:OP1	1.84	0.78
1:A:947:G:O2'	1:A:948:C:H5'	1.82	0.78
4:E:88:ALA:HA	4:E:219:VAL:HG13	1.66	0.78
9:J:106:GLN:CA	9:J:106:GLN:HE21	1.95	0.78
9:J:78:ARG:HB2	9:J:156:TRP:CH2	2.19	0.78
7:H:152:ARG:NH2	10:K:43:GLY:HA3	1.97	0.78
12:M:22:LYS:HZ2	12:M:90:LEU:HD12	1.48	0.78
14:O:84:LEU:HG	14:O:85:ILE:H	1.48	0.78
15:P:14:ARG:HG2	15:P:44:ARG:NH1	1.99	0.78
1:A:1329:A:H5'	15:P:29:ARG:NE	1.98	0.78
17:R:39:LEU:HD22	17:R:56:LEU:HD22	1.66	0.78
18:S:31:LYS:HB3	18:S:31:LYS:NZ	1.98	0.78
19:T:19:VAL:CG2	19:T:46:ASP:HB2	2.13	0.78
22:W:40:ALA:HA	22:W:55:ILE:HD12	1.66	0.78
3:C:44:G:C2	3:C:45:U:H1'	2.18	0.78
1:A:225:C:C2'	1:A:226:G:H5'	2.14	0.78
1:A:520:A:N6	1:A:529:G:N2	2.32	0.78
1:A:751:U:H2'	1:A:752:G:O4'	1.82	0.78
3:C:24:G:H2'	3:C:25:C:H6	1.49	0.78
4:E:102:LEU:HD22	4:E:176:GLU:CB	2.13	0.78

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:53:ARG:HH12	4:E:200:ILE:HD12	1.47	0.78
5:F:17:ASP:HB3	5:F:18:TRP:HE3	1.49	0.78
5:F:36:ASP:HA	5:F:39:ILE:HD12	1.66	0.78
14:O:5:PRO:HB3	14:O:10:LEU:HD11	1.66	0.78
14:O:35:GLY:O	14:O:82:VAL:HG13	1.82	0.78
20:U:69:THR:HA	20:U:72:ARG:HG3	1.66	0.78
1:A:339:C:H2'	1:A:340:U:H6	1.48	0.78
1:A:1493:A:N6	3:B:37:A:H5'	1.98	0.77
1:A:67:C:H4'	1:A:172:A:O4'	1.84	0.77
1:A:130:A:C5	1:A:264:U:H1'	2.18	0.77
3:C:31:A:H5'	3:C:32:U:OP2	1.83	0.77
7:H:100:VAL:CG1	7:H:107:ARG:HG3	2.14	0.77
7:H:59:GLY:O	7:H:62:ALA:HB3	1.85	0.77
13:N:104:GLN:HE22	13:N:106:LYS:H	1.31	0.77
13:N:61:ALA:CB	13:N:94:ALA:HB2	2.07	0.77
17:R:6:GLU:OE2	17:R:6:GLU:N	2.16	0.77
20:U:37:VAL:HG12	20:U:41:LYS:CE	2.14	0.77
1:A:1144:G:H22	1:A:1146:A:H62	1.29	0.77
1:A:22:G:H5'	1:A:885:G:O4'	1.83	0.77
4:E:145:LEU:O	4:E:149:LEU:CB	2.32	0.77
6:G:10:ARG:HD3	6:G:10:ARG:C	2.05	0.77
14:O:41:ARG:HG2	14:O:42:THR:N	1.99	0.77
8:I:98:LEU:HG	20:U:28:GLU:CG	2.14	0.77
20:U:67:ALA:HA	20:U:70:ILE:CD1	2.13	0.77
22:W:54:LYS:O	22:W:57:ARG:HB2	1.84	0.77
23:X:14:TRP:CZ3	23:X:15:ARG:CZ	2.67	0.77
1:A:113:G:H2'	1:A:114:U:C6	2.18	0.77
1:A:1181:G:N7	1:A:1182:G:N3	2.32	0.77
1:A:1393:U:H4'	1:A:1501:C:O2'	1.84	0.77
1:A:714:G:H1'	1:A:777:A:N7	2.00	0.77
1:A:663:A:H5'	1:A:836:G:OP1	1.83	0.77
1:A:923:A:P	7:H:21:ALA:HB2	2.25	0.77
4:E:17:PHE:HD1	4:E:18:GLY:H	1.29	0.77
4:E:213:LEU:O	4:E:217:ARG:HD3	1.85	0.77
5:F:34:LEU:HD23	5:F:35:GLU:N	1.99	0.77
6:G:78:LEU:HD13	6:G:96:LEU:HB3	1.65	0.77
7:H:118:ILE:C	7:H:119:LEU:HD23	2.03	0.77
10:K:123:GLU:CD	10:K:124:ALA:N	2.38	0.77
10:K:32:LYS:HG2	10:K:33:GLU:N	1.97	0.77
11:L:34:ASN:OD1	11:L:43:ALA:HB2	1.84	0.77
12:M:8:LEU:CD1	12:M:16:LEU:HD13	2.15	0.77
15:P:23:TYR:O	15:P:67:GLU:N	2.17	0.77

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:U:66:LEU:HD12	20:U:67:ALA:H	1.49	0.77
1:A:1005:A:H5''	1:A:1006:C:H5	1.48	0.77
1:A:1210:C:H4'	1:A:1214:C:N3	1.98	0.77
1:A:290:C:O5'	1:A:290:C:H6	1.66	0.77
4:E:173:ALA:HA	4:E:176:GLU:HB2	1.66	0.77
5:F:91:LEU:HD11	5:F:99:VAL:N	1.99	0.77
6:G:74:GLN:O	6:G:77:ASN:HB2	1.84	0.77
8:I:65:VAL:HG23	8:I:66:GLU:O	1.84	0.77
18:S:8:ARG:HD3	18:S:15:PRO:HA	1.66	0.77
21:V:36:ARG:O	21:V:71:LEU:HB2	1.83	0.77
22:W:63:ILE:O	22:W:72:LEU:HD12	1.84	0.77
1:A:1089:G:H2'	1:A:1090:U:H5'	1.65	0.77
1:A:1453:G:H2'	1:A:1454:G:O4'	1.85	0.77
1:A:1488:G:C2	1:A:1489:G:C8	2.73	0.77
1:A:979:C:H2'	1:A:980:C:H5'	1.65	0.77
1:A:991:U:HO2'	1:A:993:G:H8	1.30	0.77
11:L:10:ARG:HA	11:L:104:ARG:NE	1.98	0.77
1:A:1372:U:OP2	11:L:11:LYS:HE2	1.85	0.77
18:S:56:ALA:CB	18:S:79:VAL:HG11	2.13	0.77
19:T:28:PRO:HA	19:T:35:VAL:HA	1.65	0.77
19:T:31:LEU:O	19:T:31:LEU:HG	1.84	0.77
1:A:1464:G:C2'	1:A:1465:C:H5	1.97	0.77
1:A:194:C:C2'	1:A:195:A:H5''	2.14	0.77
1:A:225:C:O2'	1:A:226:G:H5'	1.85	0.77
1:A:735:C:O2'	1:A:736:C:H5'	1.84	0.77
1:A:761:G:C5'	19:T:103:GLY:H	1.96	0.77
4:E:132:LYS:H	4:E:132:LYS:HE2	1.48	0.77
5:F:150:LYS:HB2	5:F:173:VAL:CG2	2.14	0.77
5:F:156:ARG:HD2	5:F:163:ALA:HB2	1.63	0.77
5:F:19:GLU:HB2	16:Q:52:GLN:HG2	1.65	0.77
9:J:126:ASP:HA	9:J:131:LYS:CE	2.10	0.77
9:J:88:PRO:HG2	9:J:152:ALA:HB2	1.67	0.77
11:L:3:GLN:HA	11:L:20:ARG:HG2	1.65	0.77
11:L:4:TYR:HE1	11:L:59:PHE:CE2	2.02	0.77
13:N:42:TRP:HE3	13:N:43:SER:HA	1.48	0.77
15:P:37:THR:HB	15:P:59:TYR:CD2	2.20	0.77
17:R:39:LEU:HD13	17:R:56:LEU:HD13	1.65	0.77
17:R:77:ARG:NH2	17:R:78:TYR:HA	1.98	0.77
21:V:38:SER:HB3	21:V:71:LEU:CD1	2.15	0.77
1:A:1259:C:O2	1:A:1283:G:H1'	1.85	0.77
1:A:1407:C:C2'	1:A:1408:A:H5'	2.14	0.77
1:A:1431:C:H2'	1:A:1432:G:O4'	1.85	0.77

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:599:C:H4'	10:K:130:GLY:CA	2.08	0.77
1:A:65:U:H4'	1:A:66:G:H5''	1.65	0.77
1:A:687:A:N6	1:A:703:G:H1'	2.00	0.77
1:A:768:A:H8	1:A:768:A:O5'	1.67	0.77
1:A:789:U:C2	1:A:791:G:OP2	2.38	0.77
1:A:842:C:H4'	1:A:848:C:C2	2.20	0.77
6:G:134:ASP:O	6:G:136:PRO:HD3	1.85	0.77
8:I:96:PRO:O	8:I:97:PHE:HB2	1.84	0.77
9:J:106:GLN:HA	9:J:109:ASN:HD22	1.46	0.77
10:K:45:ILE:HD12	10:K:48:TYR:HB3	1.67	0.77
11:L:49:PRO:HB3	11:L:82:ALA:HB2	1.65	0.77
11:L:53:VAL:HG21	11:L:92:TYR:CE1	2.20	0.77
12:M:34:VAL:HG12	12:M:35:SER:N	1.99	0.77
12:M:7:LYS:HG3	12:M:71:LEU:CD1	2.15	0.77
13:N:22:HIS:HB2	13:N:85:ARG:HB2	1.66	0.77
16:Q:60:SER:O	16:Q:61:TRP:HB3	1.83	0.77
18:S:6:LEU:HA	18:S:18:ARG:O	1.84	0.77
19:T:6:LEU:HD13	19:T:23:VAL:HG21	1.67	0.77
19:T:50:LYS:HD2	19:T:51:TYR:CE1	2.19	0.77
19:T:66:SER:HB2	19:T:69:LYS:HZ3	1.48	0.77
20:U:61:LYS:O	20:U:65:ILE:HG12	1.85	0.77
21:V:41:VAL:CB	21:V:42:PRO:HD2	2.11	0.77
1:A:1196:U:H5'	1:A:1197:G:C5'	2.15	0.77
1:A:1521:G:O2'	1:A:1522:U:H5'	1.84	0.77
1:A:49:U:N3	1:A:364:A:N7	2.33	0.77
4:E:136:VAL:O	4:E:139:LYS:HG2	1.85	0.77
4:E:25:ASN:HB3	4:E:191:ASP:HA	1.67	0.77
4:E:69:LEU:HD22	4:E:91:PRO:C	2.05	0.77
5:F:150:LYS:HA	5:F:169:ALA:CB	2.15	0.77
5:F:38:ARG:CB	5:F:94:LEU:HD11	2.15	0.77
8:I:76:ALA:HA	8:I:79:LEU:CD1	2.15	0.77
12:M:87:THR:O	12:M:88:LEU:HD23	1.84	0.77
17:R:10:LYS:O	17:R:13:GLN:HB2	1.85	0.77
21:V:16:LEU:O	21:V:19:VAL:HG12	1.84	0.77
21:V:25:LYS:C	21:V:25:LYS:HD2	2.06	0.77
21:V:62:ILE:HD11	21:V:67:VAL:CA	2.14	0.77
1:A:1075:C:H4'	1:A:1101:A:H62	1.50	0.77
1:A:110:C:H2'	1:A:111:G:O4'	1.85	0.77
1:A:1237:C:O2'	1:A:1300:G:N2	2.17	0.77
1:A:1289:A:N6	1:A:1371:G:O2'	2.18	0.77
1:A:1516:G:N3	1:A:1518:A:OP2	2.18	0.77
1:A:665:A:C2'	1:A:725:G:N2	2.46	0.77

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:737:A:OP1	8:I:91:VAL:HA	1.84	0.77
6:G:203:VAL:O	6:G:206:PHE:HB3	1.85	0.77
11:L:48:GLU:OE1	11:L:48:GLU:HA	1.85	0.77
15:P:10:PRO:CB	15:P:18:ALA:HA	2.14	0.77
18:S:19:ILE:HG13	18:S:38:TYR:HA	1.66	0.77
19:T:40:LYS:HZ3	19:T:40:LYS:HB3	1.48	0.77
19:T:91:ARG:HA	19:T:94:ASN:ND2	1.99	0.77
1:A:1267:C:H2'	1:A:1267:C:O2	1.84	0.77
1:A:570:G:C2	1:A:873:A:N1	2.53	0.77
4:E:144:ARG:HA	4:E:147:LYS:CB	2.15	0.77
5:F:122:GLU:CA	5:F:125:GLU:HG2	2.15	0.77
6:G:135:LEU:HD12	6:G:138:TYR:HB2	1.65	0.77
7:H:79:GLU:HG3	7:H:93:PRO:HD2	1.66	0.77
11:L:16:ARG:HE	11:L:18:PHE:HZ	1.33	0.77
17:R:26:GLU:O	17:R:29:VAL:HB	1.84	0.77
22:W:33:ILE:HD13	22:W:63:ILE:CA	2.13	0.77
3:B:60:U:H5''	3:B:61:C:OP2	1.85	0.77
1:A:1320:C:C4	21:V:72:GLY:HA3	2.19	0.76
1:A:20:U:H2'	1:A:21:G:O4'	1.84	0.76
4:E:15:VAL:HG11	4:E:209:ARG:HB3	1.65	0.76
4:E:19:HIS:HA	4:E:39:ILE:HD11	1.67	0.76
4:E:67:THR:HB	4:E:155:LEU:HD21	1.65	0.76
5:F:50:ALA:O	5:F:72:LYS:HD2	1.84	0.76
6:G:154:ASN:ND2	6:G:155:LEU:HD22	2.00	0.76
6:G:83:SER:HA	6:G:89:THR:OG1	1.85	0.76
7:H:74:GLY:C	7:H:115:VAL:HG12	2.04	0.76
9:J:65:ALA:O	9:J:69:VAL:HG23	1.85	0.76
9:J:76:ARG:NH1	9:J:89:MET:HG3	1.99	0.76
11:L:16:ARG:HG2	11:L:18:PHE:CZ	2.20	0.76
11:L:45:ALA:O	11:L:78:LYS:HB2	1.85	0.76
14:O:85:ILE:HD11	14:O:98:TYR:HB2	1.63	0.76
15:P:40:ASN:OD1	15:P:42:ALA:HB3	1.84	0.76
17:R:49:ASP:OD2	17:R:52:SER:HB2	1.85	0.76
1:A:392:G:H5'	18:S:12:LYS:NZ	1.99	0.76
4:E:139:LYS:HG3	4:E:140:HIS:H	1.50	0.76
4:E:32:ILE:HD11	4:E:40:HIS:HD2	1.50	0.76
4:E:82:ARG:HA	4:E:92:TYR:HE1	1.47	0.76
6:G:63:LYS:HA	6:G:66:ARG:HD2	1.67	0.76
9:J:40:ALA:O	9:J:43:PHE:HB3	1.86	0.76
9:J:51:GLN:HE22	9:J:58:PRO:HG3	1.48	0.76
10:K:24:THR:O	10:K:60:ARG:HA	1.84	0.76
13:N:87:THR:HG22	13:N:91:ARG:HH22	1.51	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:R:7:GLU:HB3	17:R:10:LYS:HE3	1.66	0.76
1:A:1202:G:H2'	1:A:1203:C:H6	1.50	0.76
1:A:540:G:H21	6:G:42:GLN:NE2	1.81	0.76
3:D:37:A:H2'	3:D:38:A:O4'	1.85	0.76
4:E:71:VAL:O	4:E:164:VAL:HG23	1.85	0.76
5:F:142:MET:HB3	5:F:170:GLN:NE2	2.00	0.76
5:F:172:ARG:HH22	5:F:174:PRO:HG3	1.49	0.76
5:F:88:ARG:HB2	5:F:101:LEU:HB2	1.67	0.76
6:G:145:GLU:O	6:G:146:ILE:HG23	1.85	0.76
7:H:17:ALA:HA	7:H:26:PHE:HB3	1.67	0.76
8:I:11:ASN:HD22	8:I:86:ARG:NH2	1.83	0.76
9:J:69:VAL:CG2	9:J:135:VAL:HG22	2.15	0.76
3:D:37:A:N6	9:J:79:ARG:HH22	1.84	0.76
11:L:108:VAL:O	11:L:110:GLU:N	2.17	0.76
12:M:23:ILE:HG22	12:M:72:VAL:HG11	1.67	0.76
13:N:48:ILE:HG23	13:N:63:LEU:HD13	1.66	0.76
17:R:36:ILE:HD11	17:R:60:VAL:HG22	1.66	0.76
18:S:35:LYS:HD2	18:S:36:ILE:N	2.00	0.76
19:T:21:VAL:HG23	19:T:42:TYR:O	1.85	0.76
1:A:342:C:H2'	1:A:343:U:C6	2.21	0.76
1:A:1262:C:H2'	1:A:1263:C:C6	2.19	0.76
1:A:186(B):C:O2'	1:A:186(C):G:H5'	1.85	0.76
1:A:397:A:O2'	1:A:398:C:H3'	1.84	0.76
1:A:961:U:H1'	1:A:1201:A:H61	1.49	0.76
3:C:67:C:H2'	3:C:68:C:H6	1.51	0.76
4:E:71:VAL:CG2	4:E:93:VAL:HB	2.14	0.76
5:F:22:TRP:CB	5:F:59:ARG:HB3	2.16	0.76
6:G:143:GLY:HA2	6:G:185:PHE:CB	2.14	0.76
9:J:45:ASP:O	9:J:48:LYS:HB2	1.85	0.76
14:O:113:ARG:NH2	14:O:115:LYS:O	2.18	0.76
14:O:32:PHE:CB	14:O:84:LEU:HD21	2.16	0.76
1:A:236:G:H5'	19:T:42:TYR:OH	1.86	0.76
19:T:59:ILE:HD12	19:T:60:ILE:N	1.98	0.76
20:U:37:VAL:HG12	20:U:41:LYS:NZ	2.00	0.76
1:A:1239:A:H2'	1:A:1239:A:N3	1.99	0.76
1:A:1403:C:H1'	1:A:1500:A:C6	2.20	0.76
1:A:544:G:H2'	1:A:545:C:C6	2.20	0.76
1:A:960:U:N3	1:A:1225:A:N7	2.33	0.76
7:H:79:GLU:HG3	7:H:93:PRO:CD	2.16	0.76
11:L:112:LYS:HG3	11:L:117:HIS:HA	1.68	0.76
11:L:66:ARG:HG2	11:L:67:GLY:H	1.49	0.76
11:L:49:PRO:HG3	11:L:78:LYS:O	1.86	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:P:90:LEU:HA	15:P:93:ARG:HB2	1.67	0.76
1:A:124:G:H2'	1:A:125:U:O4'	1.85	0.76
1:A:1405:G:H21	1:A:1517:G:H22	0.77	0.76
1:A:1408:A:N1	1:A:1494:G:H1'	2.01	0.76
1:A:1416:G:H2'	1:A:1417:G:C8	2.21	0.76
1:A:153:C:H2'	1:A:154:C:H6	1.50	0.76
1:A:435:C:O2'	1:A:436:C:H5'	1.86	0.76
1:A:43:C:H2'	1:A:44:G:H8	1.50	0.76
1:A:778:G:H2'	1:A:779:C:H6	1.49	0.76
1:A:84:U:H2'	1:A:85:U:O4'	1.85	0.76
1:A:865:A:H5'	1:A:1078:U:O4	1.86	0.76
4:E:212:GLN:O	4:E:216:SER:HB2	1.85	0.76
4:E:73:THR:HG21	4:E:95:GLN:O	1.84	0.76
5:F:108:ASN:HD22	5:F:111:LEU:CD1	1.99	0.76
5:F:11:ARG:HG3	5:F:16:ARG:HE	1.50	0.76
5:F:190:ARG:HE	5:F:190:ARG:CA	1.99	0.76
6:G:18:LYS:CG	6:G:33:MET:HB3	2.16	0.76
8:I:68:PRO:HB2	8:I:71:ARG:CG	2.15	0.76
13:N:19:ALA:HB2	13:N:80:VAL:HG21	1.68	0.76
14:O:25:PRO:C	14:O:27:LEU:H	1.84	0.76
14:O:85:ILE:HG23	14:O:85:ILE:O	1.84	0.76
19:T:10:VAL:CG1	19:T:54:GLY:H	1.99	0.76
1:A:1192:C:C5	1:A:1193:G:C8	2.74	0.76
1:A:962:C:H1'	1:A:1201:A:N1	1.99	0.76
1:A:1247:U:H2'	1:A:1248:A:C8	2.21	0.76
1:A:1528:U:O2'	1:A:1529:G:H3'	1.86	0.76
1:A:601:C:H2'	1:A:602:A:H8	1.51	0.76
4:E:10:LEU:HD23	4:E:11:LEU:HD23	1.68	0.76
4:E:130:ARG:HA	4:E:130:ARG:NE	1.99	0.76
4:E:130:ARG:HD3	4:E:131:PRO:HD3	1.66	0.76
4:E:149:LEU:CD2	4:E:153:ARG:HG2	2.16	0.76
4:E:78:GLN:HE22	4:E:96:ARG:NH1	1.83	0.76
9:J:15:ASP:OD1	9:J:18:TYR:HB2	1.85	0.76
12:M:12:ASP:OD1	12:M:14:LYS:N	2.19	0.76
12:M:45:ARG:NH1	12:M:45:ARG:HB3	1.98	0.76
12:M:6:ILE:HG22	12:M:98:ILE:HG13	1.66	0.76
13:N:78:GLN:HB2	13:N:103:LEU:O	1.85	0.76
15:P:10:PRO:HG3	15:P:18:ALA:HB1	1.68	0.76
17:R:42:HIS:NE2	17:R:43:LEU:HD23	1.99	0.76
17:R:7:GLU:HA	17:R:10:LYS:CD	2.15	0.76
18:S:49:LEU:HD22	18:S:73:LEU:HD21	1.67	0.76
1:A:1156:G:C1'	1:A:1179:A:H61	1.96	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:307:C:N4	1:A:308:C:H41	1.84	0.76
1:A:66:G:H5'	1:A:173:U:O4	1.86	0.76
1:A:828:A:O4'	1:A:859:A:C2	2.39	0.76
4:E:178:ARG:HA	4:E:184:VAL:HG21	1.67	0.76
4:E:77:ALA:HB2	4:E:211:ILE:HD13	1.67	0.76
1:A:1057:G:H4'	5:F:197:GLY:N	2.01	0.76
6:G:108:LEU:HD23	6:G:174:LEU:HD13	1.66	0.76
6:G:147:ALA:HB1	6:G:181:MET:O	1.85	0.76
6:G:170:VAL:HG23	6:G:176:LEU:HB3	1.68	0.76
7:H:79:GLU:H	7:H:79:GLU:CD	1.88	0.76
8:I:33:TYR:HE2	8:I:74:ASP:HB2	1.50	0.76
9:J:86:GLN:O	9:J:148:ASN:HB3	1.84	0.76
10:K:110:ALA:HA	10:K:136:GLU:HB2	1.66	0.76
11:L:11:LYS:N	11:L:104:ARG:HH21	1.83	0.76
11:L:51:ARG:HA	11:L:51:ARG:HH11	1.50	0.76
14:O:117:ARG:HH22	14:O:124:LYS:HG3	1.51	0.76
18:S:6:LEU:HB2	18:S:17:TYR:HB3	1.67	0.76
19:T:10:VAL:HG12	19:T:54:GLY:H	1.51	0.76
22:W:56:MET:O	22:W:59:ALA:HB3	1.86	0.76
1:A:337:C:H2'	1:A:338:A:C8	2.20	0.76
1:A:511:C:HO2'	1:A:512:U:H6	1.30	0.76
1:A:129(A):G:H4'	1:A:130:A:O5'	1.85	0.76
1:A:1363:A:H5''	1:A:1364:U:OP1	1.86	0.76
1:A:228:A:C2'	1:A:229:U:H5'	2.16	0.76
1:A:301:G:H21	1:A:302:G:H1'	1.49	0.76
1:A:522:C:N4	1:A:523:A:N6	2.33	0.76
1:A:529:G:H8	1:A:529:G:H3'	1.48	0.76
3:C:19:G:H3'	3:C:20:U:C5	2.21	0.76
3:C:58:A:H2'	3:C:61:C:N4	2.01	0.76
4:E:222:ILE:HD13	4:E:226:ARG:HH21	1.51	0.76
5:F:35:GLU:HA	5:F:38:ARG:CG	2.16	0.76
1:A:404:U:H4'	6:G:122:ARG:HH11	1.49	0.76
6:G:144:ASP:HA	6:G:184:LYS:NZ	2.00	0.76
10:K:70:GLN:HE21	10:K:71:GLY:N	1.84	0.76
1:A:1202:G:C1'	16:Q:29:ARG:HE	1.99	0.76
22:W:72:LEU:HD13	22:W:77:ALA:CB	2.15	0.76
1:A:1265:G:H2'	1:A:1266:G:H5'	1.68	0.76
1:A:448:A:H2'	1:A:449:C:C6	2.21	0.76
1:A:482:A:H2	1:A:483:C:O4'	1.67	0.76
1:A:562:C:H5''	1:A:563:A:OP1	1.85	0.76
1:A:766:A:H2'	1:A:767:A:C8	2.20	0.76
1:A:918:A:H2'	1:A:919:A:C8	2.21	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:C:8:U:O4'	3:C:48:C:O2'	2.03	0.76
5:F:67:THR:CG2	5:F:104:GLN:HG2	2.16	0.76
5:F:137:ALA:O	5:F:141:VAL:HG23	1.86	0.76
6:G:110:PHE:HE1	6:G:148:VAL:HG23	1.49	0.76
10:K:103:VAL:HB	10:K:108:GLY:C	2.06	0.76
12:M:30:SER:HB2	12:M:81:THR:N	2.00	0.76
1:A:1492:A:N6	14:O:50:SER:HB2	2.00	0.76
15:P:14:ARG:H	15:P:44:ARG:CD	1.99	0.76
23:X:7:ARG:HG3	23:X:8:THR:H	1.51	0.76
3:D:55:U:C2'	3:D:57:G:N7	2.49	0.76
1:A:1314:C:H3'	21:V:6:LYS:CD	2.16	0.75
1:A:1347:G:O2'	1:A:1348:U:OP2	2.04	0.75
1:A:498:A:H4'	1:A:500:G:OP1	1.85	0.75
1:A:578:C:N4	1:A:579:G:O6	2.19	0.75
1:A:601:C:C2	1:A:602:A:C8	2.74	0.75
1:A:888:G:N2	1:A:909:A:N6	2.24	0.75
3:C:34:G:O2'	3:C:35:A:H5'	1.86	0.75
4:E:119:GLU:HA	4:E:142:LEU:HD13	1.67	0.75
4:E:48:MET:HA	4:E:51:LEU:HD12	1.68	0.75
4:E:69:LEU:O	4:E:162:ILE:CA	2.34	0.75
4:E:95:GLN:HE21	4:E:148:TYR:CB	1.98	0.75
5:F:40:ARG:O	5:F:43:LEU:HB3	1.86	0.75
12:M:60:ARG:H	12:M:60:ARG:HD3	1.51	0.75
15:P:90:LEU:HD23	15:P:93:ARG:CD	2.16	0.75
22:W:57:ARG:NH2	22:W:100:ILE:HB	2.01	0.75
1:A:1104:G:O2'	1:A:1105:A:H5'	1.86	0.75
1:A:115:G:O2'	1:A:116:A:OP2	2.04	0.75
1:A:1287:A:H2'	1:A:1288:A:C8	2.20	0.75
1:A:1314:C:H2'	1:A:1315:U:C5	2.20	0.75
1:A:1318:A:O2'	21:V:37:ARG:HB3	1.86	0.75
1:A:482:A:C2	1:A:483:C:O4'	2.38	0.75
1:A:49:U:C2	1:A:364:A:N6	2.48	0.75
1:A:539:A:OP2	14:O:115:LYS:HE3	1.87	0.75
1:A:889:A:H4'	1:A:890:G:O5'	1.85	0.75
5:F:130:VAL:O	5:F:133:ALA:HB3	1.86	0.75
5:F:177:THR:HG23	5:F:180:ALA:HB2	1.68	0.75
6:G:79:PHE:HB2	6:G:93:PHE:CE1	2.21	0.75
9:J:113:GLU:OE2	9:J:119:ARG:HG3	1.86	0.75
11:L:116:LYS:HB3	11:L:122:ALA:CA	2.16	0.75
14:O:60:LEU:HD22	14:O:60:LEU:C	2.07	0.75
14:O:82:VAL:HG12	14:O:83:VAL:H	1.50	0.75
18:S:8:ARG:NH1	18:S:11:SER:H	1.82	0.75

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:T:59:ILE:HD11	19:T:71:PHE:CB	2.15	0.75
1:A:1239:A:H1'	1:A:1241:G:C4	2.21	0.75
1:A:22:G:H2'	1:A:23:C:O4'	1.87	0.75
1:A:243:A:N6	1:A:283:C:H41	1.83	0.75
1:A:745:C:OP1	1:A:851:G:O2'	2.04	0.75
3:C:66:U:H3'	3:C:67:C:C6	2.20	0.75
4:E:53:ARG:HE	4:E:199:TYR:HE2	1.34	0.75
1:A:8:A:N6	6:G:209:ARG:HH12	1.84	0.75
8:I:35:ALA:O	8:I:36:ARG:HG3	1.86	0.75
11:L:103:THR:HG22	11:L:104:ARG:N	2.00	0.75
13:N:20:TYR:CE2	13:N:83:ILE:HG12	2.19	0.75
13:N:18:ARG:HD3	13:N:34:ASP:O	1.87	0.75
1:A:489:C:H2'	1:A:490:G:H8	1.51	0.75
1:A:1292:U:H2'	1:A:1293:G:C8	2.20	0.75
1:A:1506:U:H5''	1:A:1507:A:OP2	1.86	0.75
1:A:50:A:O2'	1:A:52:G:N7	2.20	0.75
1:A:520:A:N7	1:A:521:G:C8	2.54	0.75
1:A:586:C:OP1	19:T:34:LYS:NZ	2.18	0.75
1:A:640:A:H2'	1:A:641:U:O4'	1.85	0.75
1:A:673:G:H2'	1:A:674:G:C8	2.21	0.75
1:A:761:G:C4'	19:T:103:GLY:H	2.00	0.75
1:A:90:C:O2'	1:A:91:C:H5'	1.85	0.75
1:A:9:G:OP2	7:H:121:LYS:HD2	1.86	0.75
3:C:62:C:O2'	3:C:63:G:H5'	1.86	0.75
4:E:178:ARG:HA	4:E:178:ARG:HH11	1.51	0.75
4:E:221:LEU:HD13	4:E:221:LEU:C	2.06	0.75
8:I:22:GLU:OE2	8:I:82:ARG:HD2	1.85	0.75
10:K:114:THR:HG23	10:K:119:LEU:HD23	1.66	0.75
10:K:22:GLU:CA	10:K:63:LEU:HD22	2.14	0.75
10:K:46:LYS:CE	10:K:64:LYS:HA	2.16	0.75
1:A:1180:A:OP1	11:L:102:LEU:HB2	1.86	0.75
11:L:9:ARG:HD2	11:L:14:VAL:CG2	2.15	0.75
14:O:56:ALA:HB2	14:O:70:ILE:CG1	2.16	0.75
15:P:82:MET:CE	15:P:93:ARG:HA	2.16	0.75
16:Q:41:ARG:O	16:Q:45:ARG:HG2	1.86	0.75
19:T:63:ARG:HG2	19:T:64:PRO:HD2	1.67	0.75
1:A:1065:U:O2	1:A:1065:U:H2'	1.85	0.75
1:A:1095:U:OP2	1:A:1108:G:N1	2.19	0.75
1:A:1124:G:H21	1:A:1126:U:H3	0.81	0.75
1:A:1363:A:N3	1:A:1365:G:C6	2.55	0.75
1:A:283:C:O2	1:A:283:C:H2'	1.85	0.75
1:A:568:G:H21	1:A:574:A:H2	1.31	0.75

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:792:A:H2'	1:A:794:A:N6	2.00	0.75
1:A:889:A:H5'	1:A:891:U:O4'	1.86	0.75
4:E:17:PHE:CD1	4:E:18:GLY:N	2.54	0.75
6:G:132:ARG:HG2	6:G:132:ARG:NH1	1.92	0.75
6:G:31:CYS:O	6:G:33:MET:HE3	1.86	0.75
9:J:74:GLU:HG2	9:J:75:VAL:N	2.02	0.75
10:K:101:PRO:O	10:K:102:ARG:HB2	1.87	0.75
14:O:85:ILE:CD1	14:O:99:HIS:N	2.50	0.75
21:V:32:LYS:CA	21:V:50:ALA:HB3	2.17	0.75
22:W:72:LEU:HD23	22:W:76:ALA:HB1	1.68	0.75
1:A:1035:A:C2'	1:A:1036:G:H5'	2.17	0.75
1:A:994:A:N1	1:A:1047:G:H4'	2.02	0.75
1:A:1148:U:O2	1:A:1149:C:C6	2.40	0.75
1:A:148:G:H1	1:A:174:C:H42	1.32	0.75
1:A:440:A:N6	1:A:494:U:C5	2.55	0.75
1:A:973:G:C2	1:A:974:A:C6	2.75	0.75
1:A:620:C:N1	6:G:135:LEU:HD13	2.00	0.75
6:G:50:ARG:NH1	6:G:52:SER:HA	2.01	0.75
9:J:113:GLU:CG	9:J:118:VAL:HB	2.17	0.75
10:K:4:ASP:HB2	10:K:6:ILE:HG22	1.67	0.75
19:T:40:LYS:HB3	19:T:40:LYS:NZ	2.01	0.75
19:T:7:THR:CG2	19:T:8:GLY:N	2.50	0.75
20:U:70:ILE:O	20:U:73:ALA:HB3	1.86	0.75
22:W:23:ARG:O	22:W:26:ASN:ND2	2.20	0.75
3:B:13:C:H2'	3:B:14:A:H5''	1.67	0.75
1:A:274:A:O2'	1:A:275:G:C1'	2.35	0.75
1:A:284:G:O2'	1:A:285:G:H5'	1.86	0.75
1:A:754:C:H2'	1:A:755:G:OP1	1.87	0.75
4:E:178:ARG:HA	4:E:178:ARG:NH1	2.01	0.75
6:G:108:LEU:HD21	6:G:174:LEU:HB3	1.67	0.75
9:J:72:ARG:CZ	9:J:142:GLU:OE1	2.35	0.75
1:A:932:C:OP1	9:J:3:ARG:HB3	1.87	0.75
10:K:119:LEU:HD22	10:K:119:LEU:N	2.01	0.75
11:L:47:LEU:O	11:L:47:LEU:HD13	1.86	0.75
12:M:24:VAL:HG21	12:M:37:PRO:HD3	1.67	0.75
13:N:101:SER:O	13:N:103:LEU:HG	1.86	0.75
14:O:5:PRO:O	14:O:6:THR:HG23	1.87	0.75
6:G:43:HIS:HB3	6:G:46:LYS:CG	2.15	0.75
1:A:1320:C:N4	21:V:36:ARG:NH1	2.33	0.75
1:A:66:G:H4'	1:A:173:U:C4	2.21	0.75
1:A:748:C:H3'	1:A:748:C:C6	2.22	0.75
1:A:894:G:O2'	1:A:895:G:H5'	1.86	0.75

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:888:G:H21	1:A:909:A:H62	0.75	0.75
5:F:71:ALA:HA	5:F:105:GLU:HG3	1.69	0.75
6:G:147:ALA:CB	6:G:182:LYS:HA	2.16	0.75
10:K:126:LYS:HD2	10:K:127:LEU:N	2.02	0.75
11:L:40:LEU:C	11:L:42:ARG:H	1.90	0.75
20:U:38:GLU:H	20:U:38:GLU:CD	1.89	0.75
1:A:342:C:H2'	1:A:343:U:H6	1.52	0.75
1:A:186(A):C:H2'	1:A:186(B):C:O4'	1.87	0.75
1:A:55:A:H2'	1:A:56:U:O4'	1.87	0.75
1:A:973:G:C2	1:A:974:A:C5	2.74	0.75
5:F:157:ILE:HG13	5:F:164:ARG:CG	2.16	0.75
5:F:83:ARG:O	5:F:87:LEU:HG	1.87	0.75
5:F:85:ARG:NH2	5:F:89:GLU:HB2	2.01	0.75
6:G:13:ARG:HG2	6:G:32:ALA:HB2	1.68	0.75
6:G:18:LYS:HE3	6:G:33:MET:HB2	1.69	0.75
8:I:76:ALA:CB	8:I:80:ARG:HH22	1.99	0.75
9:J:62:PHE:O	9:J:66:VAL:HG23	1.86	0.75
10:K:123:GLU:O	10:K:126:LYS:HG3	1.86	0.75
10:K:65:TYR:C	10:K:67:PRO:HD3	2.06	0.75
12:M:82:ILE:O	12:M:86:MET:HB3	1.87	0.75
13:N:48:ILE:HD11	13:N:64:ALA:HB2	1.67	0.75
13:N:44:SER:O	13:N:48:ILE:HG12	1.87	0.75
14:O:37:CYS:HA	14:O:58:VAL:CG2	2.10	0.75
15:P:13:LYS:HD3	15:P:21:TYR:OH	1.86	0.75
17:R:31:LEU:O	17:R:34:LEU:HG	1.86	0.75
1:A:986:A:H4'	21:V:55:LYS:HG3	1.68	0.75
22:W:51:GLU:HA	22:W:54:LYS:CE	2.17	0.75
1:A:1288:A:H2'	1:A:1289:A:C8	2.18	0.74
1:A:1462:G:O2'	1:A:1463:C:H5'	1.87	0.74
1:A:274:A:HO2'	1:A:275:G:C1'	2.00	0.74
1:A:408:A:H5'	6:G:116:GLN:HG2	1.66	0.74
1:A:687:A:O2'	1:A:688:G:O4'	2.04	0.74
4:E:16:HIS:CE1	4:E:213:LEU:HD13	2.21	0.74
9:J:38:LEU:O	9:J:41:ARG:HB2	1.87	0.74
11:L:37:PHE:CE1	11:L:74:ILE:HG23	2.22	0.74
11:L:58:HIS:CD2	11:L:59:PHE:CD1	2.75	0.74
18:S:8:ARG:NH1	18:S:11:SER:N	2.35	0.74
3:D:40:C:C2'	3:D:41:C:H5''	2.17	0.74
1:A:1063:C:C4	1:A:1064:G:N7	2.55	0.74
1:A:1208:C:H2'	1:A:1209:C:H6	1.51	0.74
1:A:1517:G:N2	1:A:1518:A:H1'	2.02	0.74
1:A:440:A:H3'	1:A:442:C:C6	2.21	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:714:G:H1'	1:A:777:A:C8	2.22	0.74
1:A:898:G:H2'	1:A:900:A:OP2	1.86	0.74
1:A:978:A:H61	1:A:1361:G:H22	1.28	0.74
7:H:143:ARG:O	7:H:147:ASP:HB2	1.87	0.74
8:I:14:LEU:HD12	8:I:15:ASP:H	1.50	0.74
8:I:47:ARG:CD	8:I:57:GLN:HB3	2.17	0.74
8:I:64:GLN:O	8:I:65:VAL:HG12	1.85	0.74
9:J:62:PHE:HA	9:J:124:LEU:HD21	1.68	0.74
12:M:22:LYS:NZ	12:M:90:LEU:HD12	2.01	0.74
15:P:104:ARG:CG	15:P:105:THR:HG23	2.17	0.74
15:P:25:ILE:HA	15:P:29:ARG:HG3	1.66	0.74
17:R:33:THR:HG23	17:R:87:ILE:CD1	2.17	0.74
18:S:35:LYS:HZ1	18:S:37:GLY:H	1.35	0.74
19:T:33:GLY:O	19:T:34:LYS:O	2.05	0.74
19:T:57:VAL:HB	19:T:75:ARG:O	1.87	0.74
22:W:90:GLN:HA	22:W:93:GLU:OE1	1.86	0.74
18:S:67:THR:HB	18:S:70:ALA:HB2	1.68	0.74
1:A:1056:U:O2	5:F:195:VAL:HG23	1.87	0.74
1:A:1302:U:C2'	1:A:1303:C:H5'	2.17	0.74
1:A:1312:G:N7	21:V:2:PRO:O	2.19	0.74
1:A:1494:G:HO2'	1:A:1495:U:H5	1.32	0.74
1:A:1500:A:H5''	1:A:1508:G:H5''	1.70	0.74
1:A:735:C:H5'	20:U:71:LYS:HD3	1.69	0.74
1:A:965:A:C8	1:A:969:A:C4	2.75	0.74
3:C:14:A:H2'	3:C:15:G:H8	1.52	0.74
4:E:222:ILE:CD1	4:E:226:ARG:HH21	1.99	0.74
5:F:140:ARG:NH1	5:F:140:ARG:HB3	2.02	0.74
5:F:20:SER:CB	5:F:40:ARG:HH22	1.97	0.74
7:H:81:GLU:HA	7:H:90:VAL:HG22	1.67	0.74
10:K:92:ARG:HH11	10:K:92:ARG:HG2	1.51	0.74
19:T:11:VAL:HB	19:T:20:THR:OG1	1.86	0.74
1:A:10:A:O2'	1:A:11:G:H5'	1.86	0.74
1:A:198:G:C8	1:A:198:G:OP2	2.38	0.74
1:A:355:C:N4	1:A:356:A:H62	1.84	0.74
1:A:475:G:C2'	1:A:476:G:H8	2.00	0.74
1:A:508:C:O2'	1:A:509:A:H8	1.69	0.74
1:A:519:C:H2'	1:A:520:A:H5'	1.67	0.74
1:A:675:A:H2'	1:A:676:A:C8	2.23	0.74
1:A:915:A:H2'	1:A:916:G:C5'	2.17	0.74
7:H:108:ALA:O	7:H:112:LEU:HB2	1.87	0.74
8:I:14:LEU:HD13	8:I:15:ASP:H	1.52	0.74
9:J:46:ALA:CA	9:J:49:ILE:HD13	2.16	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:M:49:VAL:CG1	16:Q:45:ARG:HD2	2.16	0.74
2:1:48:U:H2'	2:1:49:U:C5	2.21	0.74
1:A:1026:G:H2'	1:A:1027:C:H5'	1.69	0.74
1:A:1064:G:OP1	1:A:1386:G:H4'	1.86	0.74
1:A:1144:G:N2	1:A:1146:A:H62	1.84	0.74
1:A:1236:A:H5''	1:A:1304:G:H5''	1.70	0.74
1:A:1316:G:H4'	16:Q:17:LYS:HD2	1.69	0.74
1:A:1360:A:N3	1:A:1360:A:H2'	2.01	0.74
1:A:371:G:C2'	1:A:372:C:C5'	2.63	0.74
1:A:738:C:H2'	1:A:739:C:H6	1.52	0.74
4:E:103:THR:OG1	4:E:180:LEU:HD21	1.86	0.74
4:E:84:GLU:OE2	4:E:219:VAL:HG21	1.87	0.74
5:F:131:ARG:HG3	5:F:166:GLU:OE2	1.85	0.74
7:H:80:ILE:O	7:H:90:VAL:HA	1.87	0.74
8:I:28:ARG:HH11	8:I:28:ARG:HG2	1.52	0.74
1:A:1240:U:C2'	9:J:32:ARG:HH21	2.00	0.74
9:J:75:VAL:HG22	9:J:88:PRO:CA	2.17	0.74
12:M:51:ARG:HB2	12:M:59:SER:O	1.87	0.74
12:M:5:ARG:HB2	12:M:5:ARG:CZ	2.17	0.74
13:N:69:ALA:HB1	13:N:103:LEU:HD12	1.68	0.74
13:N:87:THR:HG22	13:N:91:ARG:HH12	1.50	0.74
14:O:41:ARG:NH1	14:O:55:VAL:HG11	2.02	0.74
14:O:8:ASN:H	14:O:8:ASN:HD22	1.35	0.74
16:Q:27:CYS:O	16:Q:29:ARG:HG3	1.86	0.74
18:S:3:LYS:CE	18:S:24:ALA:HB2	2.17	0.74
18:S:44:THR:HG23	18:S:45:THR:HG23	1.70	0.74
1:A:101:A:H2'	1:A:102:G:C8	2.19	0.74
1:A:1150:U:H5'	1:A:1280:A:C2	2.22	0.74
1:A:1319:A:H4'	21:V:70:LYS:NZ	2.01	0.74
1:A:1435:G:H2'	1:A:1436:U:C5	2.23	0.74
1:A:17:U:H2'	1:A:18:C:H6	1.53	0.74
1:A:301:G:N2	1:A:302:G:H1'	2.02	0.74
4:E:74:LYS:NZ	4:E:76:GLN:HB2	2.03	0.74
6:G:118:ARG:NH2	6:G:136:PRO:HB2	2.02	0.74
7:H:72:GLN:HE22	7:H:145:LYS:H	1.33	0.74
10:K:11:THR:HA	10:K:14:ARG:NH1	2.03	0.74
15:P:60:VAL:CA	15:P:63:THR:HG22	2.15	0.74
20:U:29:PHE:CE2	20:U:39:VAL:HG11	2.23	0.74
1:A:1239:A:H1'	1:A:1241:G:C8	2.22	0.74
1:A:137:C:H2'	1:A:138:G:O5'	1.86	0.74
1:A:728:A:C8	17:R:54:ARG:CZ	2.71	0.74
4:E:178:ARG:NH2	4:E:196:LEU:HB2	2.01	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:20:GLU:O	4:E:39:ILE:HG13	1.86	0.74
5:F:83:ARG:O	5:F:85:ARG:N	2.19	0.74
9:J:121:ALA:O	9:J:125:MET:HG2	1.87	0.74
10:K:104:ARG:O	10:K:106:GLY:N	2.20	0.74
10:K:107:LEU:H	10:K:107:LEU:HD23	1.50	0.74
1:A:590:C:OP1	10:K:29:SER:HB3	1.88	0.74
15:P:19:LEU:HD11	15:P:30:ALA:HB2	1.69	0.74
18:S:20:VAL:CG1	18:S:21:VAL:N	2.51	0.74
1:A:1004:A:C8	1:A:1036:G:O6	2.32	0.74
1:A:1057:G:H2'	1:A:1058:G:H8	1.51	0.74
1:A:1408:A:H2	1:A:1494:G:O2'	1.70	0.74
6:G:64:LEU:HD13	6:G:65:ARG:N	2.03	0.74
8:I:73:ASN:O	8:I:76:ALA:HB3	1.88	0.74
8:I:77:ARG:HA	8:I:80:ARG:NE	2.03	0.74
10:K:7:ALA:HA	10:K:10:LEU:CD1	2.17	0.74
10:K:112:LEU:HA	10:K:134:ILE:HG13	1.69	0.74
10:K:55:GLY:O	10:K:57:PRO:HD3	1.88	0.74
10:K:86:ILE:HG21	10:K:133:LEU:CB	2.15	0.74
10:K:5:PRO:HA	10:K:8:ASP:HB3	1.69	0.74
11:L:74:ILE:O	11:L:77:ILE:HB	1.88	0.74
13:N:102:GLY:C	13:N:104:GLN:N	2.40	0.74
13:N:121:PRO:O	13:N:126:ARG:HD2	1.88	0.74
15:P:22:ILE:O	15:P:25:ILE:HG13	1.86	0.74
15:P:29:ARG:HD3	15:P:64:TRP:CZ2	2.23	0.74
15:P:87:TYR:CB	21:V:73:GLU:HB2	2.17	0.74
17:R:5:LYS:HB2	17:R:5:LYS:NZ	2.03	0.74
1:A:1206:G:H4'	5:F:192:THR:O	1.87	0.74
1:A:1273:G:H3'	1:A:1274:G:C8	2.23	0.74
1:A:1284:C:H2'	1:A:1285:A:N7	2.02	0.74
1:A:1323:G:H4'	1:A:1362(A):C:C4	2.23	0.74
1:A:236:G:H3'	1:A:237:C:H6	1.52	0.74
1:A:894:G:C4	1:A:895:G:C8	2.76	0.74
3:C:16:U:H4'	3:C:18:G:H5''	1.68	0.74
7:H:81:GLU:HB3	7:H:90:VAL:HG22	1.70	0.74
8:I:99:ALA:HB2	20:U:31:LEU:HD11	1.68	0.74
9:J:107:ALA:O	9:J:110:GLN:HB2	1.88	0.74
9:J:155:ARG:HA	9:J:155:ARG:NE	2.02	0.74
1:A:1290:G:H4'	9:J:37:ASN:ND2	2.03	0.74
10:K:29:SER:N	10:K:32:LYS:HD2	2.03	0.74
13:N:57:THR:CG2	13:N:60:ALA:H	1.97	0.74
14:O:83:VAL:HG22	14:O:84:LEU:N	2.02	0.74
15:P:29:ARG:HH12	15:P:66:LEU:HB3	1.53	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:S:23:ASP:O	18:S:25:ARG:N	2.21	0.74
1:A:474:G:P	18:S:81:ARG:HA	2.27	0.74
21:V:22:LEU:CG	21:V:25:LYS:HZ1	1.99	0.74
21:V:11:VAL:HG11	21:V:41:VAL:HG22	1.70	0.74
22:W:40:ALA:HB2	22:W:55:ILE:CG2	2.18	0.74
2:I:34:U:H2'	2:I:35:U:C6	2.22	0.74
1:A:110:C:O2'	1:A:111:G:H5'	1.88	0.74
1:A:1479:C:O2'	1:A:1480:G:H5'	1.87	0.74
1:A:438:G:N2	1:A:495:A:H8	1.86	0.74
1:A:517:G:O2'	1:A:530:G:H4'	1.87	0.74
1:A:52:G:H2'	1:A:53:A:O4'	1.87	0.74
1:A:949:A:H1'	1:A:1364:U:H3	1.51	0.74
4:E:91:PRO:HD3	4:E:154:LEU:HD13	1.70	0.74
4:E:82:ARG:H	4:E:94:ASN:HD21	1.35	0.74
5:F:186:PHE:HA	5:F:198:VAL:O	1.88	0.74
6:G:8:VAL:O	6:G:11:LEU:N	2.21	0.74
6:G:194:LEU:HB3	6:G:196:LEU:HD11	1.70	0.74
6:G:200:GLU:HG3	6:G:201:GLN:N	2.01	0.74
8:I:6:VAL:HG12	8:I:63:TYR:O	1.87	0.74
9:J:51:GLN:OE1	9:J:58:PRO:HD3	1.88	0.74
1:A:1151:A:OP1	12:M:41:PRO:HA	1.87	0.74
12:M:23:ILE:CG1	12:M:85:LEU:HB3	2.18	0.74
18:S:35:LYS:NZ	18:S:37:GLY:N	2.36	0.74
18:S:73:LEU:HD13	18:S:73:LEU:C	2.07	0.74
20:U:56:THR:HB	20:U:58:LEU:HD12	1.69	0.74
1:A:1346:A:N6	1:A:1374:A:H3'	2.03	0.73
1:A:479:C:H6	1:A:479:C:O5'	1.71	0.73
1:A:88:C:O2'	1:A:89:U:C6	2.41	0.73
1:A:92:G:H2'	1:A:93:U:O4'	1.87	0.73
1:A:93:U:H2'	1:A:95:G:C8	2.22	0.73
3:C:21:A:N6	3:C:46:G:H22	1.85	0.73
4:E:15:VAL:HG23	4:E:16:HIS:ND1	2.03	0.73
6:G:152:SER:O	6:G:154:ASN:N	2.20	0.73
7:H:11:ILE:CG2	7:H:12:LEU:H	2.01	0.73
10:K:61:VAL:HG12	10:K:62:TYR:N	2.02	0.73
11:L:19:LEU:HD22	11:L:59:PHE:HD2	1.51	0.73
11:L:85:LEU:HD23	11:L:96:LEU:CD1	2.15	0.73
12:M:50:ILE:HA	12:M:60:ARG:CG	2.11	0.73
13:N:110:ASP:OD1	20:U:85:LEU:HB3	1.87	0.73
14:O:41:ARG:HB3	14:O:41:ARG:HH11	1.53	0.73
16:Q:15:LYS:O	16:Q:16:PHE:HB2	1.87	0.73
21:V:15:LEU:HG	21:V:16:LEU:H	1.51	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:V:45:VAL:HA	21:V:67:VAL:HG21	1.70	0.73
22:W:72:LEU:CD2	22:W:76:ALA:HB1	2.18	0.73
22:W:44:ALA:HB1	22:W:91:LEU:HB2	1.70	0.73
3:B:62:C:H2'	3:B:63:G:H8	1.51	0.73
1:A:1382:C:H2'	1:A:1383:C:C6	2.23	0.73
1:A:1064:G:N3	1:A:1066:C:N3	2.36	0.73
1:A:1364:U:O2'	1:A:1365:G:OP1	2.06	0.73
1:A:49:U:C5	1:A:361:G:N2	2.56	0.73
1:A:50:A:N6	1:A:361:G:C4'	2.50	0.73
4:E:171:ALA:HA	4:E:174:VAL:HB	1.70	0.73
9:J:105:VAL:O	9:J:108:ALA:HB3	1.88	0.73
11:L:58:HIS:CD2	11:L:59:PHE:HD1	2.06	0.73
15:P:13:LYS:HB3	15:P:17:VAL:HG11	1.69	0.73
16:Q:29:ARG:HB3	16:Q:29:ARG:NH1	2.02	0.73
19:T:34:LYS:HE2	19:T:35:VAL:O	1.89	0.73
21:V:22:LEU:O	21:V:22:LEU:HD23	1.87	0.73
22:W:87:LYS:CE	22:W:87:LYS:HA	2.18	0.73
3:D:15:G:C6	3:D:48:C:N4	2.55	0.73
12:M:3:LYS:HE3	12:M:77:PRO:HD3	1.69	0.73
1:A:1142:G:H2'	1:A:1143:G:H8	1.53	0.73
1:A:1049:U:H1'	1:A:1201:A:O4'	1.87	0.73
1:A:1048:G:O4'	1:A:1215:G:H4'	1.87	0.73
1:A:122:G:N2	1:A:123:C:H1'	2.04	0.73
1:A:1468:A:H2'	1:A:1469:G:C5'	2.18	0.73
1:A:1520:G:HO2'	1:A:1521:G:H8	1.36	0.73
1:A:362:G:H8	14:O:34:ARG:NH2	1.80	0.73
1:A:510:A:N3	1:A:543:C:H1'	2.03	0.73
1:A:553:A:H2'	1:A:554:C:H6	1.51	0.73
1:A:582:U:H5''	17:R:68:ARG:HH12	1.52	0.73
1:A:652:U:H4'	1:A:653:A:OP1	1.87	0.73
4:E:102:LEU:HD12	4:E:102:LEU:N	2.01	0.73
4:E:14:GLY:O	4:E:15:VAL:HG13	1.88	0.73
4:E:80:ILE:HD11	4:E:208:ILE:HG23	1.68	0.73
5:F:152:ILE:HG22	5:F:167:TRP:HB2	1.70	0.73
5:F:76:VAL:O	5:F:83:ARG:HG2	1.88	0.73
8:I:41:GLU:HB3	8:I:62:TRP:HE3	1.50	0.73
9:J:87:VAL:HG22	9:J:151:TYR:HB3	1.68	0.73
10:K:93:VAL:O	10:K:133:LEU:HG	1.89	0.73
11:L:73:GLN:O	11:L:77:ILE:HG13	1.88	0.73
12:M:8:LEU:CD1	12:M:94:VAL:HG11	2.18	0.73
13:N:67:ASP:O	13:N:71:LYS:HG2	1.86	0.73
17:R:71:GLN:HB2	17:R:78:TYR:CE1	2.24	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:T:28:PRO:HB2	19:T:33:GLY:O	1.88	0.73
20:U:18:ARG:NH2	20:U:21:LYS:HB2	2.02	0.73
3:D:9:A:C2	3:D:46:G:H1'	2.23	0.73
1:A:1011:G:H2'	1:A:1012:U:H5'	1.69	0.73
1:A:174:C:O2'	1:A:175:C:H5'	1.88	0.73
1:A:410:G:H1'	1:A:432:A:N6	2.02	0.73
1:A:610:G:C2'	1:A:611:A:H5'	2.18	0.73
1:A:967:C:H2'	1:A:968:A:N7	2.03	0.73
3:C:17:C:H5'	3:C:18:G:O5'	1.87	0.73
5:F:125:GLU:OE1	5:F:190:ARG:HB2	1.87	0.73
8:I:98:LEU:CD2	8:I:101:ALA:HB2	2.17	0.73
15:P:59:TYR:CE2	15:P:60:VAL:HG23	2.24	0.73
1:A:1148:U:H2'	1:A:1148:U:O2	1.87	0.73
1:A:526:C:H42	1:A:535:A:H2	1.35	0.73
1:A:749:C:H2'	1:A:749:C:O2	1.86	0.73
4:E:77:ALA:HB2	4:E:211:ILE:CD1	2.19	0.73
4:E:42:ILE:HD11	4:E:202:PRO:CB	2.17	0.73
4:E:75:LYS:NZ	4:E:75:LYS:HA	2.03	0.73
7:H:63:ARG:HA	7:H:66:MET:HG2	1.68	0.73
9:J:27:ILE:HG12	9:J:43:PHE:CD1	2.23	0.73
9:J:47:CYS:HA	9:J:50:ILE:CD1	2.18	0.73
13:N:32:ILE:HD11	13:N:68:ALA:O	1.88	0.73
14:O:24:VAL:CG2	14:O:97:ARG:HG2	2.17	0.73
15:P:27:LYS:HD2	15:P:31:LYS:HZ3	1.52	0.73
21:V:33:THR:HG21	21:V:49:ILE:HD12	1.69	0.73
22:W:64:ASP:O	22:W:67:ALA:HB3	1.88	0.73
1:A:195:A:H4'	22:W:68:LYS:HZ3	1.52	0.73
3:D:41:C:H5'	3:D:41:C:H6	1.54	0.73
1:A:1005:A:H2'	1:A:1006:C:H5'	1.70	0.73
1:A:266:G:H2'	19:T:67:LYS:HZ2	1.50	0.73
1:A:730:G:N7	1:A:731:G:H1'	2.03	0.73
1:A:923:A:OP1	7:H:21:ALA:HB2	1.88	0.73
4:E:31:TYR:HE2	4:E:200:ILE:HG21	1.54	0.73
4:E:56:ARG:CB	4:E:56:ARG:HH11	2.01	0.73
4:E:84:GLU:HG2	4:E:234:PRO:CD	2.16	0.73
5:F:84:ILE:CG1	5:F:101:LEU:HD22	2.18	0.73
5:F:88:ARG:O	5:F:91:LEU:HB3	1.89	0.73
5:F:85:ARG:HH21	5:F:89:GLU:CB	2.01	0.73
6:G:173:TRP:HA	6:G:186:LEU:HD12	1.70	0.73
6:G:82:ALA:HB3	6:G:89:THR:CG2	2.17	0.73
7:H:81:GLU:N	7:H:81:GLU:CD	2.41	0.73
8:I:14:LEU:CD1	8:I:18:GLN:HB3	2.18	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:K:8:ASP:O	10:K:12:ARG:HG3	1.89	0.73
1:A:598:U:O2'	10:K:94:TYR:HB3	1.87	0.73
12:M:45:ARG:HH11	12:M:45:ARG:CB	1.98	0.73
12:M:65:LEU:HD12	16:Q:56:VAL:CG2	2.15	0.73
14:O:104:VAL:HG12	14:O:105:TYR:CD1	2.24	0.73
1:A:1047:G:H5''	16:Q:4:LYS:HD3	1.70	0.73
17:R:15:PHE:O	17:R:17:ARG:N	2.21	0.73
18:S:54:GLU:CD	18:S:54:GLU:C	2.46	0.73
1:A:116:A:OP2	1:A:289:G:H5''	1.88	0.73
1:A:38:G:N3	1:A:397:A:N6	2.35	0.73
1:A:873:A:H5'	1:A:874:G:OP2	1.89	0.73
1:A:886:G:C2'	1:A:887:G:H5'	2.18	0.73
1:A:8:A:H4'	1:A:9:G:OP1	1.88	0.73
1:A:953:G:H2'	1:A:954:G:H8	1.53	0.73
1:A:959:A:H1'	1:A:985:C:H1'	1.70	0.73
4:E:72:GLY:HA3	4:E:81:VAL:HG21	1.71	0.73
8:I:53:ALA:HB1	8:I:86:ARG:HH11	1.52	0.73
8:I:95:GLU:OE2	8:I:96:PRO:HD3	1.88	0.73
10:K:104:ARG:NE	10:K:138:TRP:CZ3	2.57	0.73
11:L:115:GLY:O	11:L:117:HIS:N	2.21	0.73
1:A:950:U:H5''	15:P:102:ARG:NH2	2.01	0.73
19:T:58:GLU:O	19:T:58:GLU:OE1	2.07	0.73
21:V:62:ILE:HD11	21:V:67:VAL:HG13	1.70	0.73
2:1:20:G:C2'	2:1:21:G:H5'	2.19	0.73
3:D:39:U:H2'	3:D:40:C:C6	2.23	0.73
1:A:1055:A:H2'	1:A:1055:A:N3	2.03	0.73
1:A:1317:C:H6	1:A:1317:C:O5'	1.72	0.73
1:A:270:A:H2'	1:A:271:C:C6	2.23	0.73
1:A:109:A:N7	1:A:326:G:N3	2.37	0.73
1:A:541:G:C4'	6:G:42:GLN:HB2	2.18	0.73
1:A:936:C:O2'	1:A:937:A:H5'	1.87	0.73
5:F:3:ASN:CG	5:F:4:LYS:H	1.89	0.73
7:H:86:ALA:HB3	7:H:130:ASN:ND2	2.03	0.73
7:H:145:LYS:HA	7:H:148:VAL:CG2	2.19	0.73
10:K:95:VAL:HB	10:K:99:GLU:OE1	1.87	0.73
22:W:49:ALA:HB3	22:W:99:LEU:CD1	2.19	0.73
1:A:1269:A:H2'	1:A:1270:C:H4'	1.70	0.73
1:A:1310:G:C8	21:V:2:PRO:HD3	2.24	0.73
1:A:1413:A:O2'	1:A:1414:U:C5'	2.36	0.73
1:A:440:A:H3'	1:A:442:C:H6	1.53	0.73
1:A:716:A:C1'	13:N:118:GLY:HA2	2.15	0.73
4:E:71:VAL:CG1	4:E:73:THR:HG23	2.19	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:120:VAL:HG21	5:F:137:ALA:CB	2.18	0.73
5:F:156:ARG:HB3	5:F:193:TYR:CD1	2.24	0.73
11:L:79:LEU:HD13	11:L:101:PHE:CB	2.18	0.73
13:N:85:ARG:HG3	13:N:85:ARG:HH11	1.53	0.73
22:W:17:ARG:O	22:W:20:LEU:HB2	1.89	0.73
3:D:47:U:C2'	3:D:48:C:H5''	2.15	0.73
15:P:120:LYS:O	15:P:121:LYS:HB2	1.88	0.73
1:A:1068:G:N7	1:A:1094:G:N7	2.36	0.73
1:A:1126:U:H2'	1:A:1127:G:H8	1.54	0.73
1:A:191(C):G:H2'	1:A:191(D):U:H6	1.54	0.73
1:A:254:G:O2'	1:A:255:G:H5'	1.89	0.73
1:A:1493:A:N1	3:B:36:A:O2'	2.22	0.73
3:C:11:C:H2'	3:C:12:U:C6	2.24	0.73
4:E:115:LEU:HD13	4:E:145:LEU:CB	2.19	0.73
5:F:120:VAL:CG1	5:F:133:ALA:HB1	2.19	0.73
5:F:31:HIS:O	5:F:34:LEU:HB3	1.89	0.73
6:G:12:CYS:HB3	6:G:33:MET:CE	2.18	0.73
6:G:152:SER:O	6:G:155:LEU:HD22	1.89	0.73
6:G:200:GLU:CG	6:G:201:GLN:HE21	2.02	0.73
6:G:59:ARG:HA	6:G:59:ARG:CZ	2.18	0.73
7:H:109:ILE:HG23	7:H:110:LEU:HD23	1.71	0.73
7:H:28:PHE:O	7:H:47:LYS:HA	1.89	0.73
7:H:7:GLU:HG2	7:H:112:LEU:HD21	1.71	0.73
7:H:82:VAL:HG21	7:H:137:GLU:HB3	1.70	0.73
8:I:26:ILE:HG22	8:I:30:LEU:HD11	1.70	0.73
8:I:37:VAL:HA	8:I:65:VAL:CG1	2.19	0.73
9:J:50:ILE:HG21	9:J:58:PRO:HA	1.71	0.73
13:N:21:ILE:HA	13:N:30:VAL:HG22	1.71	0.73
15:P:14:ARG:CG	15:P:17:VAL:HG23	2.19	0.73
15:P:19:LEU:HD12	15:P:20:THR:N	2.03	0.73
16:Q:26:ARG:CB	16:Q:43:CYS:HB2	2.18	0.73
12:M:11:PHE:CE1	16:Q:55:GLY:HA3	2.24	0.73
21:V:15:LEU:HG	21:V:16:LEU:HD13	1.71	0.73
1:A:1431:C:N4	1:A:1469:G:H1	1.86	0.72
1:A:449:C:C2	1:A:450:G:C1'	2.65	0.72
1:A:777:A:H2'	1:A:778:G:C8	2.23	0.72
1:A:986:A:H1'	21:V:54:GLY:O	1.89	0.72
5:F:38:ARG:CB	5:F:94:LEU:HD21	2.19	0.72
7:H:125:SER:C	7:H:127:ASN:H	1.92	0.72
7:H:89:ILE:CG1	7:H:131:ILE:HD12	2.17	0.72
8:I:23:LYS:O	8:I:26:ILE:CB	2.36	0.72
13:N:95:ILE:HG23	13:N:98:LEU:HD12	1.70	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:842:C:H4'	1:A:848:C:N3	2.05	0.72
1:A:959:A:H3'	1:A:960:U:C5'	2.19	0.72
4:E:101:MET:CA	4:E:108:ILE:HG13	2.18	0.72
4:E:144:ARG:O	4:E:147:LYS:HB3	1.89	0.72
5:F:15:THR:CG2	5:F:181:ASN:HA	2.16	0.72
8:I:24:GLU:O	8:I:27:GLN:HB2	1.88	0.72
10:K:114:THR:HA	10:K:131:GLY:HA3	1.72	0.72
14:O:93:LEU:O	14:O:96:VAL:HG23	1.88	0.72
18:S:6:LEU:CD2	18:S:17:TYR:HD2	2.03	0.72
20:U:53:ARG:HG2	20:U:63:GLN:HE21	1.53	0.72
22:W:51:GLU:HB3	22:W:54:LYS:HZ2	1.52	0.72
22:W:87:LYS:HE3	22:W:87:LYS:CA	2.19	0.72
3:D:52:G:N2	3:D:53:G:H1'	2.04	0.72
9:J:132:GLY:O	9:J:136:LYS:CB	2.38	0.72
1:A:1113:C:H6	1:A:1113:C:O5'	1.72	0.72
1:A:1253:G:H21	1:A:1254:C:H1'	1.55	0.72
1:A:1441:G:H1'	1:A:1461:G:H22	1.54	0.72
1:A:1512:U:H2'	1:A:1513:A:C8	2.23	0.72
1:A:819:A:C2	1:A:1529:G:O6	2.42	0.72
1:A:283:C:N3	1:A:284:G:C8	2.57	0.72
1:A:507:C:H2'	1:A:508:C:H5	1.54	0.72
4:E:171:ALA:O	4:E:174:VAL:HB	1.88	0.72
4:E:220:ASP:O	4:E:224:GLN:HG3	1.89	0.72
5:F:140:ARG:HA	5:F:143:GLU:HB2	1.71	0.72
6:G:58:LEU:HD13	6:G:59:ARG:NH1	2.04	0.72
7:H:63:ARG:O	7:H:66:MET:HG2	1.88	0.72
10:K:36:LEU:HD12	10:K:48:TYR:CB	2.19	0.72
11:L:96:LEU:O	11:L:100:GLY:HA3	1.88	0.72
1:A:964:A:H1'	12:M:55:LYS:NZ	2.04	0.72
18:S:41:PRO:O	18:S:43:LYS:HD2	1.88	0.72
20:U:53:ARG:HA	20:U:63:GLN:HE21	1.53	0.72
21:V:5:LEU:HD13	21:V:9:VAL:HG13	1.71	0.72
22:W:43:LEU:CD1	22:W:55:ILE:HD11	2.19	0.72
3:D:17:C:H3'	3:D:18:G:C8	2.24	0.72
2:1:30:U:C6	2:1:30:U:H5'	2.18	0.72
1:A:1066:C:C6	1:A:1067:A:N7	2.58	0.72
1:A:1227:A:H8	1:A:1228:C:O4'	1.72	0.72
1:A:1321:C:H6	1:A:1321:C:O5'	1.71	0.72
1:A:37:U:C3'	1:A:37:U:H6	1.94	0.72
1:A:936:C:C2'	1:A:937:A:H5'	2.19	0.72
4:E:82:ARG:CA	4:E:94:ASN:HD21	2.03	0.72
5:F:11:ARG:CG	5:F:16:ARG:HH21	2.02	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:25:ARG:C	6:G:27:TYR:H	1.89	0.72
1:A:921:U:O2'	7:H:19:MET:O	2.07	0.72
8:I:68:PRO:HB2	8:I:71:ARG:HG3	1.71	0.72
10:K:113:SER:HA	10:K:117:GLY:O	1.90	0.72
10:K:122:ARG:HA	10:K:125:ARG:NH1	2.03	0.72
10:K:29:SER:CB	10:K:32:LYS:HZ3	2.01	0.72
21:V:5:LEU:HD12	21:V:9:VAL:HG13	1.70	0.72
2:1:43:U:H2'	2:1:44:U:H5	1.49	0.72
1:A:1512:U:H2'	1:A:1513:A:H8	1.54	0.72
1:A:595:G:C8	1:A:641:U:N3	2.57	0.72
1:A:81:G:O6	1:A:87:A:N6	2.23	0.72
3:C:51:U:H2'	3:C:52:G:H8	1.55	0.72
4:E:162:ILE:H	4:E:162:ILE:HD13	1.55	0.72
6:G:148:VAL:HG21	6:G:162:LEU:CD1	2.20	0.72
6:G:61:LYS:HG3	6:G:207:TYR:CE1	2.23	0.72
6:G:82:ALA:HB1	6:G:92:VAL:HB	1.70	0.72
7:H:114:GLY:O	7:H:115:VAL:HG13	1.89	0.72
9:J:71:PRO:HG2	9:J:96:GLN:HG3	1.72	0.72
13:N:16:SER:O	13:N:35:PRO:HG3	1.90	0.72
13:N:71:LYS:O	13:N:74:ALA:HB3	1.90	0.72
13:N:97:ALA:O	13:N:100:ALA:HB3	1.89	0.72
1:A:528:C:N4	14:O:49:ASN:ND2	2.35	0.72
15:P:98:VAL:H	15:P:110:ARG:NH2	1.86	0.72
17:R:63:ARG:HH22	17:R:87:ILE:HG21	1.53	0.72
18:S:18:ARG:HH12	18:S:35:LYS:HB2	0.74	0.72
18:S:21:VAL:HG13	18:S:36:ILE:HD11	1.70	0.72
19:T:61:GLU:HA	19:T:71:PHE:CE2	2.25	0.72
8:I:46:ARG:HH22	20:U:37:VAL:CG1	2.03	0.72
20:U:86:VAL:O	20:U:87:ARG:HB2	1.88	0.72
3:B:55:U:C2	3:B:57:G:H5''	2.25	0.72
1:A:1417:G:N2	1:A:1482:G:H2'	2.05	0.72
1:A:281:G:H4'	1:A:282:A:H5'	1.70	0.72
1:A:410:G:C1'	1:A:432:A:H61	2.03	0.72
1:A:671:G:N3	1:A:672:U:H1'	2.04	0.72
1:A:697:U:O5'	1:A:697:U:H6	1.72	0.72
1:A:854:G:C5'	1:A:871:U:H3	2.01	0.72
4:E:115:LEU:O	4:E:118:LEU:HB3	1.88	0.72
6:G:180:GLY:O	6:G:182:LYS:HG2	1.89	0.72
7:H:106:PRO:O	7:H:109:ILE:HG22	1.89	0.72
7:H:37:ARG:HA	7:H:112:LEU:O	1.89	0.72
8:I:1:MET:CE	8:I:68:PRO:HG3	2.20	0.72
9:J:149:ARG:HB3	13:N:59:TYR:CZ	2.22	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:K:85:ARG:HG2	10:K:85:ARG:NH1	2.04	0.72
11:L:71:SER:HA	11:L:74:ILE:HD12	1.72	0.72
13:N:42:TRP:HE3	13:N:43:SER:CA	2.03	0.72
15:P:37:THR:OG1	15:P:56:LEU:HA	1.89	0.72
15:P:92:HIS:CG	15:P:98:VAL:HG21	2.23	0.72
3:D:56:C:H3'	3:D:57:G:C8	2.25	0.72
1:A:1125:U:H5	12:M:5:ARG:HH22	1.35	0.72
1:A:272:C:H2'	1:A:273:A:C8	2.23	0.72
1:A:890:G:H2'	1:A:906:G:O6	1.90	0.72
1:A:973:G:N2	1:A:974:A:C6	2.58	0.72
4:E:184:VAL:C	4:E:198:ASP:HB2	2.09	0.72
4:E:184:VAL:H	4:E:198:ASP:CG	1.92	0.72
5:F:47:LEU:CD1	5:F:83:ARG:HH21	2.01	0.72
6:G:20:TYR:HA	6:G:33:MET:SD	2.30	0.72
9:J:153:HIS:HE1	13:N:58:PRO:HD2	1.53	0.72
11:L:111:ARG:O	11:L:119:ALA:HB2	1.90	0.72
15:P:29:ARG:NH1	15:P:66:LEU:HB3	2.05	0.72
18:S:33:ILE:O	18:S:34:GLU:HB2	1.89	0.72
20:U:63:GLN:OE1	20:U:66:LEU:HD21	1.90	0.72
9:J:132:GLY:O	9:J:136:LYS:HB3	1.90	0.72
1:A:1416:G:H2'	1:A:1417:G:H8	1.55	0.72
1:A:411:A:C4	1:A:413:G:H1'	2.25	0.72
1:A:674:G:H2'	1:A:675:A:H8	1.54	0.72
1:A:576:G:N7	1:A:881:G:C1'	2.52	0.72
1:A:989:C:C2'	1:A:990:C:H5'	2.20	0.72
6:G:101:LEU:HB2	6:G:138:TYR:O	1.89	0.72
6:G:106:TYR:HD2	6:G:114:ARG:HG2	1.54	0.72
6:G:169:LYS:HG2	6:G:176:LEU:HD21	1.72	0.72
6:G:61:LYS:CG	6:G:203:VAL:HG13	2.19	0.72
10:K:11:THR:HA	10:K:14:ARG:CZ	2.20	0.72
10:K:40:ALA:O	10:K:43:GLY:N	2.22	0.72
1:A:1250:A:H4'	11:L:67:GLY:C	2.10	0.72
13:N:25:TYR:HD1	13:N:89:ALA:HB2	1.54	0.72
14:O:25:PRO:C	14:O:27:LEU:N	2.42	0.72
15:P:16:ASP:CA	15:P:19:LEU:HG	2.20	0.72
1:A:474:G:H5'	18:S:81:ARG:NE	2.04	0.72
19:T:7:THR:O	19:T:23:VAL:HG23	1.90	0.72
21:V:80:TYR:CZ	21:V:81:ARG:HG3	2.25	0.72
22:W:44:ALA:HA	22:W:92:LEU:HD21	1.72	0.72
6:G:156:GLU:O	6:G:159:ARG:HB3	1.90	0.72
1:A:1036:G:C8	1:A:1037:C:C5	2.78	0.72
1:A:1345:U:C2	1:A:1377:A:N6	2.57	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1358:U:OP2	1:A:1359:C:H5	1.73	0.72
1:A:309:G:O2'	1:A:310:G:C5'	2.37	0.72
1:A:708:C:H4'	13:N:37:GLY:HA3	1.71	0.72
1:A:927:G:O5'	1:A:1503:A:N6	2.23	0.72
4:E:189:ASP:HB2	4:E:205:ASP:HB3	1.69	0.72
6:G:15:GLU:HG2	6:G:63:LYS:CB	2.20	0.72
6:G:70:ILE:HD12	6:G:100:ARG:NH2	2.04	0.72
7:H:102:ALA:HB1	7:H:106:PRO:HB2	1.69	0.72
8:I:49:ALA:HB1	20:U:80:PRO:HD3	1.71	0.72
9:J:54:THR:OG1	9:J:56:GLN:HG2	1.90	0.72
13:N:51:LYS:HD3	13:N:52:GLY:H	1.55	0.72
14:O:84:LEU:HG	14:O:85:ILE:N	2.04	0.72
1:A:468:A:C4'	18:S:82:GLN:HB3	2.18	0.72
1:A:1172:C:O2'	1:A:1173:G:H5'	1.89	0.72
1:A:1293:G:H2'	1:A:1294:G:C8	2.22	0.72
1:A:299:G:H2'	1:A:300:A:C8	2.24	0.72
1:A:310:G:H2'	1:A:311:C:H6	1.54	0.72
1:A:524:G:O2'	1:A:525:C:H5'	1.90	0.72
4:E:111:ARG:CA	4:E:111:ARG:HH11	2.01	0.72
6:G:127:THR:O	6:G:146:ILE:HG22	1.90	0.72
8:I:33:TYR:HE2	8:I:74:ASP:CB	2.03	0.72
9:J:106:GLN:O	9:J:109:ASN:HB2	1.89	0.72
21:V:42:PRO:O	21:V:45:VAL:HG23	1.89	0.72
22:W:100:ILE:O	22:W:102:GLY:N	2.20	0.72
3:D:14:A:N3	3:D:14:A:H2'	2.05	0.72
15:P:3:ARG:HG3	15:P:7:VAL:HG12	1.70	0.72
2:1:38:U:OP2	2:1:38:U:H6	1.73	0.71
1:A:1116:C:H2'	1:A:1117:G:H8	1.54	0.71
1:A:961:U:H1'	1:A:1201:A:N6	2.04	0.71
1:A:1349:A:H2'	1:A:1350:A:H8	1.55	0.71
1:A:1422:G:H2'	1:A:1423:G:H8	1.55	0.71
1:A:1484:C:O2'	1:A:1485:U:H5'	1.90	0.71
1:A:359:U:H2'	1:A:360:A:H8	1.54	0.71
1:A:657:G:N2	17:R:22:THR:O	2.21	0.71
1:A:713:G:N2	1:A:777:A:C1'	2.51	0.71
1:A:95:G:C2	1:A:96:G:H1'	2.25	0.71
3:C:24:G:H2'	3:C:25:C:C6	2.25	0.71
4:E:9:GLU:HG2	4:E:10:LEU:H	1.55	0.71
4:E:134:GLU:HA	4:E:134:GLU:OE1	1.89	0.71
4:E:223:ILE:HG22	4:E:229:VAL:HA	1.70	0.71
5:F:22:TRP:CZ3	5:F:32:LEU:HB3	2.25	0.71
6:G:52:SER:C	6:G:54:TYR:N	2.40	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:37:A:H61	9:J:79:ARG:HH22	1.37	0.71
10:K:27:PRO:O	10:K:32:LYS:HD3	1.90	0.71
10:K:40:ALA:HB2	10:K:45:ILE:HG12	1.72	0.71
10:K:78:GLN:HG3	10:K:80:ILE:O	1.89	0.71
15:P:29:ARG:CZ	15:P:64:TRP:HE1	2.03	0.71
15:P:74:VAL:O	15:P:78:ILE:HG13	1.90	0.71
17:R:54:ARG:HA	17:R:57:LEU:CD2	2.17	0.71
18:S:6:LEU:O	18:S:6:LEU:HD22	1.90	0.71
20:U:18:ARG:NH2	20:U:21:LYS:HD3	2.05	0.71
1:A:192:U:C1'	22:W:103:GLY:HA2	2.20	0.71
1:A:1142:G:O2'	1:A:1143:G:H5'	1.90	0.71
1:A:1200:C:H3'	1:A:1201:A:C5'	2.19	0.71
1:A:1200:C:H5''	1:A:1201:A:O3'	1.90	0.71
1:A:1277:C:C4'	1:A:1282:C:H1'	2.17	0.71
1:A:968:A:H4'	1:A:969:A:OP2	1.89	0.71
4:E:132:LYS:O	4:E:135:GLN:HB2	1.90	0.71
4:E:16:HIS:HA	4:E:204:ASN:CB	2.21	0.71
5:F:159:GLY:H	5:F:193:TYR:HE1	1.35	0.71
5:F:29:TYR:O	5:F:32:LEU:HB2	1.89	0.71
6:G:19:LEU:H	6:G:33:MET:CE	2.01	0.71
10:K:64:LYS:CG	10:K:79:VAL:HG21	2.19	0.71
9:J:150:ALA:HA	13:N:59:TYR:CG	2.25	0.71
13:N:58:PRO:CB	13:N:90:GLY:HA3	2.20	0.71
13:N:95:ILE:O	13:N:98:LEU:HB2	1.89	0.71
14:O:101:VAL:HG23	14:O:104:VAL:HG21	1.72	0.71
14:O:46:LYS:HE3	14:O:47:LYS:NZ	2.04	0.71
14:O:27:LEU:HB2	14:O:64:TYR:OH	1.90	0.71
16:Q:26:ARG:HE	16:Q:43:CYS:CA	2.02	0.71
21:V:30:LEU:HG	21:V:50:ALA:N	2.04	0.71
1:A:160:A:H2'	1:A:161:A:O4'	1.90	0.71
1:A:1063:C:H5''	1:A:1064:G:OP2	1.91	0.71
1:A:1192:C:C3'	1:A:1192:C:C6	2.69	0.71
1:A:1318:A:H4'	21:V:10:PHE:HD2	1.55	0.71
1:A:1333:A:O2'	1:A:1334:G:H5'	1.91	0.71
1:A:769:G:H5'	1:A:1513:A:H4'	1.71	0.71
1:A:323:U:H5	1:A:324:G:C4	2.09	0.71
1:A:34:C:H2'	1:A:35:G:H8	1.55	0.71
1:A:112:G:C5'	1:A:389:A:H4'	2.16	0.71
1:A:517:G:HO2'	1:A:530:G:H4'	1.54	0.71
1:A:578:C:O2'	1:A:728:A:N3	2.22	0.71
4:E:187:LEU:HD13	4:E:187:LEU:C	2.10	0.71
4:E:208:ILE:CG1	4:E:211:ILE:HD12	2.19	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:23:ARG:NH1	4:E:24:TRP:N	2.37	0.71
5:F:146:ALA:O	5:F:147:LYS:HD2	1.91	0.71
5:F:201:TYR:CD1	5:F:201:TYR:N	2.55	0.71
5:F:28:GLN:HA	5:F:30:ARG:CZ	2.21	0.71
6:G:13:ARG:HH11	6:G:36:ARG:HB2	1.56	0.71
10:K:129:VAL:HG22	10:K:130:GLY:N	2.04	0.71
13:N:122:LYS:C	13:N:126:ARG:HG3	2.10	0.71
14:O:36:VAL:C	14:O:58:VAL:HG13	2.09	0.71
14:O:61:THR:O	14:O:62:SER:OG	2.09	0.71
14:O:68:ALA:HB1	14:O:98:TYR:O	1.90	0.71
15:P:108:ARG:NH2	15:P:111:LYS:HD3	2.05	0.71
15:P:81:LEU:HD22	15:P:82:MET:N	2.05	0.71
17:R:75:PRO:HA	17:R:78:TYR:CB	2.18	0.71
1:A:266:G:C3'	19:T:67:LYS:HD2	2.13	0.71
20:U:36:ASN:HB3	20:U:40:LEU:CG	2.20	0.71
20:U:40:LEU:O	20:U:43:PHE:HD1	1.73	0.71
21:V:15:LEU:HD21	21:V:38:SER:HB2	1.71	0.71
21:V:58:VAL:HG23	21:V:60:VAL:HG23	1.72	0.71
1:A:1084:G:H2'	1:A:1085:U:C6	2.25	0.71
1:A:1224:G:H1	1:A:1362(A):C:H42	1.38	0.71
1:A:1412:C:H2'	1:A:1413:A:C8	2.25	0.71
1:A:1488:G:O2'	1:A:1489:G:H5'	1.89	0.71
1:A:193:C:H2'	1:A:194:C:C6	2.24	0.71
1:A:367:U:H4'	1:A:368:U:OP1	1.85	0.71
5:F:182:ILE:HG23	5:F:203:PHE:HA	1.71	0.71
5:F:42:LEU:HD12	5:F:94:LEU:HD12	1.72	0.71
6:G:93:PHE:O	6:G:94:LEU:C	2.29	0.71
9:J:15:ASP:H	9:J:20:ASP:H	1.37	0.71
10:K:112:LEU:HB2	10:K:133:LEU:HA	1.72	0.71
10:K:14:ARG:HD2	10:K:15:ASN:N	2.05	0.71
10:K:36:LEU:HD12	10:K:48:TYR:CG	2.24	0.71
11:L:19:LEU:HD23	11:L:20:ARG:H	1.55	0.71
13:N:13:GLN:HB3	13:N:76:GLY:HA3	1.71	0.71
1:A:519:C:OP2	14:O:50:SER:O	2.08	0.71
1:A:1231:G:H5'	15:P:126:LYS:HZ3	1.55	0.71
17:R:36:ILE:CD1	17:R:60:VAL:HG13	2.20	0.71
19:T:17:LYS:HE3	19:T:48:GLU:HA	1.71	0.71
20:U:76:LEU:N	20:U:76:LEU:HD22	2.05	0.71
21:V:11:VAL:O	21:V:11:VAL:HG12	1.89	0.71
21:V:19:VAL:HG22	21:V:43:GLU:OE1	1.89	0.71
21:V:40:ILE:O	21:V:68:GLY:HA2	1.90	0.71
22:W:50:GLU:H	22:W:99:LEU:CD1	1.92	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:18:G:H21	3:D:58:A:H5''	1.55	0.71
1:A:1015:A:H2'	1:A:1016:A:C8	2.24	0.71
2:1:50:U:OP2	7:H:15:ARG:HG3	1.89	0.71
1:A:1246:C:O2'	1:A:1247:U:H5'	1.90	0.71
1:A:1268:A:C2	1:A:1311:G:N2	2.58	0.71
1:A:66:G:C4'	1:A:173:U:C4	2.73	0.71
1:A:266:G:H8	19:T:67:LYS:NZ	1.80	0.71
1:A:275:G:H5'	19:T:14:LYS:HZ3	1.54	0.71
4:E:12:GLU:O	4:E:14:GLY:N	2.22	0.71
4:E:175:ARG:HA	4:E:178:ARG:CG	2.21	0.71
7:H:145:LYS:HA	7:H:148:VAL:HG23	1.73	0.71
8:I:8:ILE:HG22	8:I:88:VAL:HA	1.70	0.71
9:J:72:ARG:HG3	9:J:73:MET:H	1.56	0.71
12:M:39:PRO:O	12:M:40:LEU:HB2	1.90	0.71
12:M:68:HIS:HB3	12:M:70:ARG:NH2	2.05	0.71
12:M:31:GLY:HA3	12:M:74:ILE:HG21	1.72	0.71
18:S:57:ARG:O	18:S:60:LEU:HB2	1.91	0.71
18:S:72:ARG:NH2	18:S:73:LEU:HB2	2.04	0.71
19:T:104:LYS:HD3	19:T:105:ALA:N	2.06	0.71
3:D:21:A:N6	3:D:48:C:C6	2.59	0.71
2:1:29:G:C3'	2:1:30:U:H5''	2.19	0.71
1:A:1216:G:H2'	1:A:1217:C:H6	1.55	0.71
1:A:122:G:O2'	1:A:123:C:H5'	1.89	0.71
1:A:1260:C:H4'	1:A:1284:C:H5''	1.72	0.71
1:A:1405:G:O4'	1:A:1519:A:H4'	1.89	0.71
1:A:1516:G:N2	1:A:1518:A:O5'	2.23	0.71
1:A:192:U:H2'	1:A:193:C:C6	2.25	0.71
1:A:397:A:C2	1:A:548:G:O6	2.43	0.71
1:A:484:G:C8	1:A:486:U:N3	2.59	0.71
1:A:517:G:H22	1:A:533:A:P	2.13	0.71
1:A:575:G:N1	1:A:821:G:C8	2.59	0.71
1:A:646:U:O2'	1:A:647:C:H5'	1.90	0.71
1:A:692:U:H2'	1:A:694:A:OP2	1.91	0.71
4:E:21:ARG:O	4:E:23:ARG:N	2.24	0.71
5:F:47:LEU:O	5:F:52:LEU:HD22	1.90	0.71
9:J:69:VAL:HG11	9:J:104:LEU:CG	2.20	0.71
9:J:66:VAL:HG12	9:J:70:LYS:HE2	1.71	0.71
10:K:43:GLY:O	10:K:44:PHE:HB2	1.88	0.71
10:K:80:ILE:N	10:K:80:ILE:HD12	2.03	0.71
13:N:86:GLY:HA2	13:N:112:THR:HG23	1.72	0.71
15:P:91:ARG:HH12	15:P:103:THR:HG21	1.55	0.71
12:M:11:PHE:CD1	16:Q:55:GLY:HA3	2.25	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:T:63:ARG:HG2	19:T:64:PRO:CD	2.20	0.71
8:I:98:LEU:HG	20:U:28:GLU:HG3	1.73	0.71
1:A:1016:A:H2'	1:A:1017:G:O4'	1.89	0.71
1:A:1043:C:H2'	1:A:1044:A:O4'	1.91	0.71
1:A:1443:G:O2'	1:A:1446:A:H4'	1.91	0.71
1:A:427:U:O5'	1:A:427:U:H6	1.74	0.71
1:A:453:A:N6	1:A:480:U:H3	1.88	0.71
1:A:51:A:C6	1:A:353:A:C2	2.79	0.71
1:A:563:A:H1'	1:A:566:G:O2'	1.89	0.71
1:A:687:A:H61	1:A:703:G:H1'	1.54	0.71
1:A:878:G:H5''	10:K:89:PRO:HG2	1.73	0.71
4:E:31:TYR:CE2	4:E:200:ILE:CG2	2.74	0.71
4:E:47:THR:HG22	4:E:51:LEU:HD11	1.73	0.71
5:F:50:ALA:C	5:F:72:LYS:HD2	2.10	0.71
5:F:87:LEU:HB2	5:F:101:LEU:CD1	2.20	0.71
6:G:107:ARG:HA	6:G:107:ARG:NH1	2.00	0.71
7:H:16:THR:O	7:H:26:PHE:HB2	1.90	0.71
8:I:52:ILE:HG22	8:I:53:ALA:N	2.05	0.71
9:J:76:ARG:CB	9:J:156:TRP:HE1	1.93	0.71
13:N:22:HIS:ND1	13:N:29:ILE:HD11	2.05	0.71
13:N:84:VAL:HG23	13:N:111:ASP:H	1.54	0.71
15:P:24:GLY:O	15:P:66:LEU:HD13	1.91	0.71
15:P:67:GLU:CG	15:P:68:GLY:N	2.53	0.71
17:R:63:ARG:HH22	17:R:87:ILE:HD13	1.56	0.71
19:T:75:ARG:HH12	19:T:77:VAL:HG22	1.55	0.71
22:W:57:ARG:HH21	22:W:100:ILE:HB	1.53	0.71
1:A:1261:A:N6	1:A:1274:G:C1'	2.50	0.71
1:A:1276:G:H2'	1:A:1277:C:O4'	1.90	0.71
1:A:1394:A:N7	1:A:1501:C:C1'	2.54	0.71
1:A:452:A:H2'	1:A:453:A:C8	2.26	0.71
1:A:577:G:H21	1:A:578:C:H1'	1.55	0.71
1:A:762:C:H2'	1:A:763:G:H8	1.53	0.71
1:A:959:A:C3'	1:A:960:U:H5''	2.18	0.71
4:E:61:LEU:HD11	4:E:68:ILE:HD11	1.73	0.71
6:G:106:TYR:HB3	6:G:114:ARG:HE	1.53	0.71
7:H:35:GLY:HA3	7:H:41:VAL:CG1	2.20	0.71
8:I:68:PRO:O	8:I:71:ARG:HG2	1.90	0.71
10:K:104:ARG:NH1	10:K:104:ARG:HG2	2.04	0.71
11:L:6:GLY:HA2	11:L:83:ARG:HB3	1.71	0.71
12:M:79:ARG:HH22	12:M:82:ILE:CD1	2.02	0.71
17:R:36:ILE:HG22	17:R:37:ASN:ND2	2.06	0.71
18:S:56:ALA:O	18:S:60:LEU:HG	1.90	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:S:8:ARG:C	18:S:9:PHE:HD2	1.93	0.71
19:T:94:ASN:OD1	19:T:104:LYS:HD2	1.91	0.71
19:T:8:GLY:O	19:T:56:VAL:HA	1.91	0.71
1:A:1327:C:H5'	23:X:20:LYS:CE	2.19	0.71
1:A:1037:C:N4	1:A:1038:C:N4	2.39	0.71
1:A:120:A:N7	1:A:122:G:C6	2.58	0.71
1:A:1283:G:O2'	1:A:1284:C:H5'	1.91	0.71
1:A:1465:C:O2	1:A:1466:C:O4'	2.08	0.71
1:A:14:U:H2'	1:A:16:A:OP2	1.89	0.71
1:A:267:C:C4	1:A:268:C:N4	2.59	0.71
1:A:447:G:H8	1:A:447:G:O5'	1.74	0.71
1:A:484:G:H5'	1:A:486:U:H1'	1.70	0.71
1:A:716:A:O2'	1:A:717:C:H5'	1.91	0.71
6:G:191:ARG:HH11	6:G:192:GLU:HA	1.54	0.71
8:I:30:LEU:HB3	8:I:35:ALA:HB3	1.72	0.71
10:K:14:ARG:O	10:K:18:ARG:NE	2.24	0.71
10:K:70:GLN:NE2	10:K:71:GLY:H	1.87	0.71
14:O:72:GLY:HA3	14:O:102:ARG:HD2	1.72	0.71
1:A:582:U:C5'	17:R:64:ARG:HH21	2.02	0.71
18:S:20:VAL:HA	18:S:36:ILE:HG12	1.72	0.71
1:A:760:G:O2'	19:T:103:GLY:HA3	1.91	0.71
19:T:22:LEU:HD21	19:T:39:SER:OG	1.91	0.71
1:A:1126:U:O2'	1:A:1127:G:H5'	1.91	0.71
1:A:129(A):G:O2'	1:A:130:A:OP2	2.07	0.71
1:A:1492:A:N6	14:O:50:SER:CB	2.54	0.71
1:A:498:A:H4'	1:A:500:G:H5'	1.72	0.71
1:A:703:G:O2'	1:A:704:A:OP2	2.07	0.71
1:A:922:G:N2	1:A:923:A:H1'	2.06	0.71
1:A:949:A:H2'	1:A:950:U:C6	2.26	0.71
1:A:1054:C:N4	3:B:34:G:O2'	2.24	0.71
4:E:185:ILE:HG22	4:E:199:TYR:HB2	1.73	0.71
6:G:139:ARG:HG2	6:G:140:VAL:N	2.06	0.71
6:G:61:LYS:N	6:G:203:VAL:HG22	2.06	0.71
7:H:133:TYR:HD2	7:H:136:MET:HG3	1.56	0.71
9:J:5:ARG:CD	9:J:7:ALA:H	2.03	0.71
10:K:120:THR:N	10:K:123:GLU:OE1	2.23	0.71
11:L:48:GLU:N	11:L:49:PRO:HD2	2.05	0.71
12:M:61:GLU:HG2	12:M:62:HIS:N	2.04	0.71
17:R:15:PHE:CD1	17:R:30:ALA:HB2	2.25	0.71
20:U:37:VAL:HG12	20:U:41:LYS:HE3	1.72	0.71
1:A:1324:A:O4'	1:A:1362:C:H4'	1.91	0.70
1:A:330:C:O2'	1:A:331:G:H5'	1.90	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:624:C:H2'	1:A:625:G:H8	1.56	0.70
1:A:695:A:H2'	1:A:696:A:O4'	1.91	0.70
1:A:795:C:H4'	1:A:1506:U:C2	2.27	0.70
1:A:970:C:N3	15:P:126:LYS:NZ	2.39	0.70
5:F:29:TYR:HD2	5:F:29:TYR:O	1.72	0.70
5:F:70:VAL:O	5:F:105:GLU:HA	1.91	0.70
6:G:135:LEU:C	6:G:137:SER:H	1.92	0.70
6:G:141:ARG:O	6:G:143:GLY:N	2.23	0.70
6:G:63:LYS:HG2	6:G:64:LEU:N	2.06	0.70
7:H:81:GLU:CB	7:H:90:VAL:HG22	2.21	0.70
9:J:111:ARG:NH1	9:J:111:ARG:HB3	2.05	0.70
18:S:51:VAL:HG21	18:S:73:LEU:HD11	1.72	0.70
20:U:74:ARG:HG3	20:U:79:LEU:CD2	2.19	0.70
1:A:1115:C:H2'	1:A:1116:C:C6	2.26	0.70
1:A:1128:C:H1'	1:A:1146:A:N6	2.02	0.70
1:A:1157:A:H2'	1:A:1157:A:N3	2.05	0.70
1:A:1306:A:N6	1:A:1331:G:H1'	2.07	0.70
1:A:1513:A:H2'	1:A:1514:C:C6	2.26	0.70
6:G:76:ARG:O	6:G:79:PHE:HB3	1.91	0.70
8:I:10:LEU:HD21	8:I:61:LEU:HG	1.72	0.70
8:I:62:TRP:CZ2	8:I:64:GLN:HB2	2.26	0.70
9:J:104:LEU:HD23	9:J:134:ALA:HB1	1.73	0.70
9:J:42:ILE:HG22	9:J:120:ILE:HD11	1.73	0.70
10:K:70:GLN:HE22	10:K:72:PRO:HD2	1.54	0.70
11:L:15:ALA:HB1	11:L:77:ILE:HG13	1.73	0.70
12:M:15:THR:HG23	12:M:16:LEU:CD2	2.21	0.70
13:N:54:ARG:O	13:N:57:THR:HG22	1.90	0.70
14:O:58:VAL:CG1	14:O:59:ARG:N	2.54	0.70
20:U:70:ILE:CG2	20:U:74:ARG:HE	2.01	0.70
1:A:1382:C:H2'	1:A:1383:C:H6	1.56	0.70
1:A:1032:A:C5	1:A:1032(A):G:H1'	2.26	0.70
1:A:1128:C:C5	1:A:1139:G:O6	2.44	0.70
1:A:1200:C:O5'	1:A:1202:G:OP1	2.08	0.70
1:A:1320:C:H42	21:V:36:ARG:NH1	1.86	0.70
1:A:335:C:O2'	1:A:1433:A:N3	2.21	0.70
1:A:517:G:N2	1:A:533:A:P	2.64	0.70
1:A:26:A:H61	1:A:558:G:C2'	2.03	0.70
1:A:858:G:H22	1:A:870:U:P	2.15	0.70
1:A:878:G:H2'	1:A:879:C:H6	1.54	0.70
1:A:970:C:H5''	1:A:971:G:OP1	1.90	0.70
3:C:67:C:H2'	3:C:68:C:C6	2.26	0.70
4:E:16:HIS:CA	4:E:204:ASN:HB2	2.20	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:H:86:ALA:O	7:H:125:SER:HB3	1.91	0.70
10:K:85:ARG:HD2	10:K:134:ILE:O	1.90	0.70
14:O:48:PRO:HG2	14:O:49:ASN:H	1.56	0.70
15:P:98:VAL:CG2	15:P:110:ARG:HH21	2.03	0.70
17:R:11:VAL:HA	17:R:14:GLU:OE2	1.91	0.70
17:R:15:PHE:HD1	17:R:30:ALA:HB2	1.55	0.70
1:A:192:U:H5'	22:W:102:GLY:CA	2.21	0.70
1:A:1062:U:C2'	1:A:1063:C:C5	2.67	0.70
1:A:47:C:C4'	1:A:48:C:H5''	2.17	0.70
1:A:893:C:O2'	1:A:894:G:H5'	1.92	0.70
4:E:48:MET:HA	4:E:51:LEU:CD1	2.20	0.70
5:F:77:ILE:HD11	5:F:103:VAL:HG21	1.72	0.70
6:G:20:TYR:CA	6:G:26:CYS:O	2.39	0.70
6:G:58:LEU:HD13	6:G:58:LEU:C	2.12	0.70
10:K:29:SER:HB2	10:K:32:LYS:NZ	2.05	0.70
10:K:92:ARG:N	10:K:92:ARG:HD2	2.04	0.70
13:N:30:VAL:O	13:N:42:TRP:HB2	1.91	0.70
14:O:27:LEU:HD23	14:O:33:ARG:HD3	1.74	0.70
21:V:40:ILE:HB	21:V:67:VAL:O	1.91	0.70
1:A:1306:A:H2'	1:A:1307:U:O4'	1.91	0.70
1:A:1326:C:H5''	23:X:12:LYS:NZ	2.07	0.70
1:A:1494:G:N2	1:A:1495:U:C4	2.58	0.70
1:A:197:A:P	1:A:197:A:O4'	2.50	0.70
1:A:719:C:H3'	1:A:720:C:C6	2.26	0.70
4:E:54:THR:CG2	4:E:201:ILE:HD11	2.19	0.70
5:F:187:ALA:H	5:F:198:VAL:HG22	1.56	0.70
8:I:14:LEU:HD12	8:I:15:ASP:O	1.91	0.70
10:K:47:GLY:O	10:K:61:VAL:HG13	1.91	0.70
12:M:82:ILE:HG23	12:M:86:MET:SD	2.31	0.70
15:P:13:LYS:O	15:P:14:ARG:O	2.09	0.70
1:A:1312:G:N7	21:V:3:ARG:O	2.24	0.70
3:C:44:G:H2'	3:C:45:U:O4'	1.91	0.70
1:A:1196:U:H3'	1:A:1196:U:H6	1.54	0.70
1:A:1407:C:O2'	1:A:1408:A:H5'	1.92	0.70
1:A:168:G:N1	1:A:169:C:N4	2.40	0.70
1:A:540:G:C6	1:A:541:G:C5	2.80	0.70
1:A:624:C:H4'	18:S:10:GLY:O	1.90	0.70
1:A:787:A:H2'	1:A:788:U:C5'	2.21	0.70
1:A:959:A:H2'	1:A:960:U:C4'	2.21	0.70
4:E:115:LEU:HB2	4:E:145:LEU:HG	1.74	0.70
4:E:24:TRP:CZ3	4:E:26:PRO:HA	2.27	0.70
7:H:9:LYS:HG3	7:H:112:LEU:HG	1.73	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:J:141:VAL:O	9:J:144:MET:HE2	1.91	0.70
9:J:38:LEU:HA	9:J:41:ARG:CG	2.22	0.70
10:K:9:MET:HG2	10:K:13:ILE:CD1	2.21	0.70
19:T:82:MET:HA	19:T:85:VAL:CG2	2.20	0.70
20:U:46:GLU:H	20:U:49:LYS:NZ	1.89	0.70
8:I:48:LEU:CB	20:U:78:LEU:HD23	2.20	0.70
3:B:69:G:H2'	3:B:70:G:O4'	1.92	0.70
3:B:10:G:H2'	3:B:11:C:H6	1.56	0.70
1:A:1068:G:H2'	1:A:1069:C:H6	1.56	0.70
1:A:1274:G:H22	1:A:1275:A:H62	1.38	0.70
1:A:403:C:O2'	6:G:122:ARG:CZ	2.39	0.70
1:A:659:U:H2'	1:A:660:G:C8	2.26	0.70
1:A:711:G:O2'	1:A:712:A:H5'	1.92	0.70
1:A:745:C:H5''	1:A:851:G:H1'	1.72	0.70
1:A:891:U:H5	1:A:906:G:N1	1.89	0.70
5:F:38:ARG:HB2	5:F:94:LEU:CD1	2.22	0.70
6:G:187:ARG:HE	6:G:188:LEU:HG	1.57	0.70
7:H:98:THR:HG21	7:H:119:LEU:HD21	1.72	0.70
10:K:119:LEU:HB3	10:K:123:GLU:OE1	1.91	0.70
10:K:10:LEU:HA	10:K:13:ILE:HD12	1.74	0.70
10:K:50:ARG:NH1	10:K:50:ARG:HG2	2.03	0.70
14:O:100:ILE:N	14:O:100:ILE:HD13	2.06	0.70
14:O:68:ALA:HB1	14:O:99:HIS:HA	1.73	0.70
16:Q:51:GLY:C	16:Q:53:LEU:H	1.92	0.70
18:S:51:VAL:CG2	18:S:73:LEU:HD11	2.22	0.70
1:A:275:G:H5'	19:T:14:LYS:HZ2	1.53	0.70
20:U:33:ASP:OD2	20:U:36:ASN:HB2	1.91	0.70
1:A:800:G:C8	1:A:800:G:O5'	2.44	0.70
1:A:1064:G:N3	1:A:1066:C:N4	2.40	0.70
1:A:1244:C:H2'	1:A:1245:A:C8	2.26	0.70
1:A:517:G:N2	1:A:533:A:OP2	2.25	0.70
1:A:519:C:C2'	1:A:520:A:H5'	2.21	0.70
1:A:19:C:O2	1:A:572:A:H2	1.75	0.70
1:A:789:U:H3'	1:A:789:U:H6	1.57	0.70
4:E:116:GLU:HG2	4:E:117:GLU:N	2.04	0.70
4:E:118:LEU:CD2	4:E:142:LEU:HB2	2.20	0.70
4:E:187:LEU:HD13	4:E:188:ALA:N	2.06	0.70
4:E:59:GLU:HB3	4:E:221:LEU:CD2	2.17	0.70
5:F:11:ARG:HG3	5:F:16:ARG:NH2	2.06	0.70
5:F:113:ALA:HB2	5:F:202:ILE:HG13	1.74	0.70
5:F:91:LEU:HD11	5:F:99:VAL:H	1.55	0.70
7:H:147:ASP:HA	7:H:150:ARG:CB	2.20	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:H:20:GLN:HE22	7:H:21:ALA:HB3	1.57	0.70
7:H:81:GLU:HA	7:H:89:ILE:O	1.92	0.70
13:N:63:LEU:C	13:N:63:LEU:HD23	2.11	0.70
13:N:65:ALA:HB1	13:N:98:LEU:CD2	2.22	0.70
18:S:35:LYS:HZ2	18:S:37:GLY:N	1.89	0.70
2:I:14:U:H2'	2:I:15:U:C6	2.26	0.70
1:A:1201:A:H2'	1:A:1201:A:N3	2.07	0.70
1:A:1203:C:O2'	1:A:1204:A:H5'	1.91	0.70
1:A:130:A:N7	19:T:64:PRO:HD2	2.07	0.70
1:A:1315:U:O2'	1:A:1360:A:N3	2.23	0.70
1:A:1414:U:H2'	1:A:1415:G:C8	2.25	0.70
1:A:421:U:H5''	1:A:422:C:OP2	1.91	0.70
1:A:519:C:H2'	1:A:520:A:C5'	2.21	0.70
1:A:535:A:H4'	1:A:536:C:OP2	1.92	0.70
1:A:865:A:C4	1:A:866:C:O2	2.45	0.70
1:A:858:G:N1	1:A:869:G:H3'	2.07	0.70
1:A:944:G:H3'	1:A:945:G:C5'	2.21	0.70
4:E:132:LYS:H	4:E:132:LYS:CE	2.03	0.70
1:A:1206:G:C5'	5:F:194:GLY:HA2	2.21	0.70
6:G:145:GLU:HG2	6:G:184:LYS:HE2	1.72	0.70
6:G:78:LEU:CD1	6:G:96:LEU:HB3	2.22	0.70
7:H:28:PHE:CD1	7:H:28:PHE:N	2.58	0.70
7:H:59:GLY:C	7:H:63:ARG:HH21	1.95	0.70
8:I:8:ILE:HG23	8:I:88:VAL:HA	1.73	0.70
9:J:143:ARG:CD	9:J:144:MET:N	2.55	0.70
11:L:10:ARG:HA	11:L:104:ARG:HE	1.57	0.70
13:N:95:ILE:CA	13:N:98:LEU:HG	2.20	0.70
14:O:82:VAL:N	14:O:106:ASP:OD1	2.24	0.70
15:P:10:PRO:HB2	15:P:18:ALA:HA	1.73	0.70
17:R:36:ILE:HD11	17:R:60:VAL:CG1	2.22	0.70
22:W:27:LYS:C	22:W:27:LYS:HD3	2.12	0.70
10:K:54:ASP:O	10:K:56:LYS:HD2	1.92	0.70
1:A:1073:U:O2'	1:A:1074:G:H5'	1.91	0.70
1:A:1120:G:O5'	1:A:1120:G:H8	1.75	0.70
1:A:1319:A:OP2	21:V:5:LEU:HD22	1.92	0.70
1:A:1391:U:H2'	1:A:1392:G:C8	2.27	0.70
1:A:529:G:C8	1:A:529:G:C3'	2.75	0.70
1:A:572:A:OP1	1:A:573:A:OP1	2.10	0.70
1:A:595:G:O6	1:A:641:U:H3'	1.92	0.70
1:A:843:U:H3'	1:A:848:C:H5'	1.74	0.70
1:A:959:A:H2	1:A:1221:G:N3	1.90	0.70
1:A:973:G:H22	1:A:974:A:N6	1.89	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:97:TRP:CZ2	4:E:102:LEU:HD13	2.24	0.70
4:E:25:ASN:O	4:E:25:ASN:CG	2.27	0.70
7:H:52:PRO:O	7:H:55:VAL:CB	2.37	0.70
7:H:78:HIS:NE2	7:H:142:LEU:HB3	2.06	0.70
9:J:113:GLU:OE1	9:J:118:VAL:HG12	1.91	0.70
15:P:59:TYR:CE1	15:P:63:THR:HG21	2.27	0.70
21:V:18:LYS:HE2	21:V:22:LEU:HB2	1.74	0.70
21:V:38:SER:O	21:V:70:LYS:HA	1.90	0.70
6:G:159:ARG:O	6:G:160:GLN:C	2.30	0.70
1:A:1144:G:N2	1:A:1146:A:N6	2.39	0.69
1:A:1502:A:H5''	1:A:1503:A:OP2	1.92	0.69
1:A:153:C:H2'	1:A:154:C:C6	2.27	0.69
1:A:287:U:H2'	1:A:288:A:H5'	1.74	0.69
1:A:453:A:N6	1:A:480:U:N3	2.40	0.69
4:E:115:LEU:HD13	4:E:145:LEU:CG	2.21	0.69
6:G:177:ASP:OD1	6:G:179:GLU:HB3	1.91	0.69
10:K:18:ARG:HG3	10:K:18:ARG:NH1	2.02	0.69
10:K:51:VAL:HG11	10:K:60:ARG:NH2	2.07	0.69
11:L:38:GLN:HA	11:L:38:GLN:OE1	1.92	0.69
14:O:56:ALA:HB2	14:O:70:ILE:HG12	1.73	0.69
18:S:31:LYS:HB3	18:S:31:LYS:HZ3	1.54	0.69
21:V:63:THR:O	21:V:66:MET:HG2	1.92	0.69
1:A:219:C:H2'	1:A:220:G:O4'	1.91	0.69
2:1:36:U:C4'	2:1:37:U:OP2	2.40	0.69
1:A:1067:A:H2	1:A:1068:G:N3	1.90	0.69
1:A:1321:C:C5	1:A:1322:C:H2'	2.27	0.69
1:A:1430:C:C2	1:A:1431:C:H5	2.09	0.69
4:E:164:VAL:HG12	4:E:186:ALA:CB	2.21	0.69
4:E:192:SER:O	4:E:194:PRO:HD3	1.92	0.69
5:F:91:LEU:HD23	5:F:91:LEU:C	2.13	0.69
6:G:74:GLN:HA	6:G:77:ASN:ND2	1.99	0.69
9:J:122:HIS:O	9:J:125:MET:CG	2.38	0.69
9:J:103:TRP:HH2	9:J:138:LYS:HA	1.49	0.69
10:K:19:VAL:HB	10:K:21:LYS:HG2	1.74	0.69
10:K:36:LEU:HA	10:K:39:LEU:HB2	1.73	0.69
10:K:48:TYR:CB	10:K:61:VAL:HG22	2.22	0.69
10:K:68:ARG:CZ	10:K:74:PRO:HB3	2.21	0.69
10:K:94:TYR:HE1	10:K:132:GLU:OE1	1.74	0.69
11:L:8:GLY:HA3	11:L:76:ALA:O	1.92	0.69
12:M:84:GLN:HA	12:M:88:LEU:HD12	1.73	0.69
17:R:34:LEU:HG	17:R:35:ARG:N	2.06	0.69
22:W:56:MET:CG	22:W:88:VAL:HG21	2.21	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:20:U:H2'	3:D:20:U:O2	1.90	0.69
1:A:489:C:H2'	1:A:490:G:C8	2.26	0.69
1:A:865:A:H5'	1:A:1078:U:C4	2.27	0.69
1:A:1186:G:N2	16:Q:61:TRP:O	2.25	0.69
1:A:129(A):G:H4'	1:A:130:A:C5'	2.22	0.69
1:A:16:A:C1'	7:H:17:ALA:HB3	2.22	0.69
1:A:623:C:O2'	1:A:624:C:H5'	1.91	0.69
3:C:46:G:H5'	3:C:47:U:OP2	1.92	0.69
4:E:168:THR:CG2	4:E:192:SER:HA	2.22	0.69
4:E:102:LEU:HB3	4:E:180:LEU:CD1	2.22	0.69
5:F:138:VAL:HG22	5:F:151:VAL:CG2	2.22	0.69
6:G:121:VAL:O	6:G:134:ASP:HB2	1.93	0.69
6:G:78:LEU:HD21	6:G:96:LEU:HD22	1.73	0.69
9:J:63:LYS:CA	9:J:63:LYS:HE2	2.21	0.69
10:K:112:LEU:HD21	10:K:114:THR:CG2	2.22	0.69
13:N:32:ILE:HD12	13:N:41:THR:OG1	1.91	0.69
15:P:8:GLU:CG	15:P:22:ILE:HG12	2.21	0.69
17:R:34:LEU:CG	17:R:35:ARG:N	2.55	0.69
19:T:5:VAL:CG2	19:T:60:ILE:HA	2.11	0.69
19:T:7:THR:HG21	19:T:56:VAL:HG12	1.73	0.69
20:U:46:GLU:H	20:U:49:LYS:HZ1	1.37	0.69
22:W:48:LYS:HB3	22:W:51:GLU:CG	2.22	0.69
6:G:47:ARG:CZ	6:G:47:ARG:HB2	2.22	0.69
3:D:75:C:H5''	3:D:76:A:O2'	1.91	0.69
1:A:336:C:H2'	1:A:337:C:H6	1.57	0.69
1:A:109:A:C2	1:A:327:A:N1	2.60	0.69
1:A:1428:A:H2'	1:A:1429:C:H6	1.53	0.69
1:A:317:G:OP1	1:A:353:A:N6	2.25	0.69
1:A:684:A:H2	1:A:706:A:H61	1.40	0.69
4:E:15:VAL:HG21	4:E:209:ARG:HB3	1.75	0.69
6:G:128:VAL:HG21	6:G:133:VAL:HB	1.75	0.69
6:G:166:LYS:NZ	6:G:178:VAL:O	2.21	0.69
6:G:31:CYS:O	6:G:33:MET:N	2.24	0.69
7:H:94:ALA:HB2	7:H:119:LEU:HD21	1.73	0.69
10:K:9:MET:O	10:K:13:ILE:HG13	1.93	0.69
10:K:91:ARG:HG3	14:O:7:ILE:HD12	1.74	0.69
13:N:102:GLY:C	13:N:104:GLN:H	1.95	0.69
17:R:53:HIS:C	17:R:57:LEU:HD13	2.11	0.69
8:I:89:MET:HE2	20:U:76:LEU:HD21	1.75	0.69
21:V:48:THR:HA	21:V:60:VAL:O	1.92	0.69
1:A:414:A:H2'	1:A:415:A:C8	2.24	0.69
1:A:465:A:N7	1:A:467:G:C2	2.60	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:663:A:N6	1:A:742:G:O6	2.18	0.69
1:A:803:G:O2'	1:A:804:U:H5'	1.91	0.69
4:E:187:LEU:HD22	4:E:201:ILE:O	1.92	0.69
4:E:222:ILE:HD12	4:E:223:ILE:HG13	1.74	0.69
4:E:223:ILE:HG21	4:E:229:VAL:HA	1.73	0.69
6:G:152:SER:O	6:G:158:ILE:HG13	1.91	0.69
8:I:76:ALA:CB	8:I:80:ARG:NH2	2.55	0.69
2:1:36:U:H1'	9:J:82:GLY:HA2	1.73	0.69
10:K:107:LEU:HD23	10:K:107:LEU:N	2.08	0.69
10:K:70:GLN:CA	10:K:70:GLN:HE21	2.04	0.69
11:L:37:PHE:N	11:L:37:PHE:HD2	1.90	0.69
12:M:10:GLY:HA3	12:M:16:LEU:HD21	1.75	0.69
14:O:82:VAL:O	14:O:106:ASP:HB2	1.91	0.69
15:P:2:ALA:HB3	15:P:4:ILE:HD11	1.74	0.69
15:P:91:ARG:HB2	15:P:98:VAL:HG13	1.74	0.69
18:S:74:LEU:HD22	18:S:79:VAL:HG21	1.73	0.69
20:U:26:LEU:HG	20:U:27:GLY:O	1.92	0.69
22:W:23:ARG:CA	22:W:26:ASN:OD1	2.40	0.69
22:W:42:GLN:O	22:W:45:GLN:HB2	1.92	0.69
1:A:344:A:H5''	1:A:345:C:C5	2.26	0.69
14:O:126:LYS:HZ2	14:O:128:ALA:H	1.38	0.69
1:A:1229:A:OP1	15:P:116:THR:HG22	1.93	0.69
1:A:1289:A:O2'	1:A:1290:G:H5'	1.92	0.69
1:A:129(A):G:C8	1:A:129(A):G:H3'	2.27	0.69
1:A:1322:C:H5''	1:A:1323:G:OP1	1.93	0.69
1:A:1464:G:C2'	1:A:1465:C:C5	2.72	0.69
1:A:61:G:C5	1:A:62:U:C4	2.80	0.69
1:A:892:A:HO2'	1:A:1415:G:HO2'	1.39	0.69
1:A:953:G:O2'	15:P:125:ARG:CA	2.34	0.69
3:C:75:C:C6	3:C:76:A:H4'	2.26	0.69
4:E:174:VAL:C	4:E:178:ARG:HG2	2.13	0.69
4:E:19:HIS:CE1	4:E:204:ASN:HD21	2.11	0.69
4:E:212:GLN:O	4:E:216:SER:CB	2.41	0.69
9:J:74:GLU:HA	9:J:145:ALA:CB	2.21	0.69
9:J:38:LEU:HD12	9:J:41:ARG:HD3	1.75	0.69
10:K:10:LEU:HD22	10:K:135:CYS:SG	2.33	0.69
15:P:14:ARG:H	15:P:44:ARG:NE	1.90	0.69
16:Q:42:ILE:O	16:Q:43:CYS:C	2.30	0.69
17:R:53:HIS:O	17:R:56:LEU:HB3	1.92	0.69
1:A:580:U:H4'	17:R:58:MET:HG2	1.73	0.69
18:S:39:TYR:CD1	18:S:40:ASP:N	2.61	0.69
1:A:277:C:C5'	19:T:68:ARG:HH12	2.06	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:306:G:O2'	1:A:307:C:H5'	1.92	0.69
1:A:654:G:C2	1:A:753:A:H1'	2.27	0.69
1:A:679:C:H2'	1:A:680:C:H6	1.56	0.69
1:A:716:A:H1'	13:N:118:GLY:CA	2.18	0.69
1:A:720:C:H6	1:A:720:C:O5'	1.76	0.69
4:E:35:GLU:O	4:E:36:ARG:CZ	2.40	0.69
4:E:60:ASP:HB3	4:E:64:ARG:NH1	2.07	0.69
5:F:59:ARG:NH2	5:F:64:VAL:HG13	2.07	0.69
6:G:118:ARG:HG3	6:G:118:ARG:HH21	1.57	0.69
7:H:11:ILE:HD12	7:H:104:ALA:HB1	1.75	0.69
7:H:105:VAL:CG2	7:H:132:ALA:HB2	2.22	0.69
7:H:26:PHE:N	7:H:26:PHE:CD1	2.60	0.69
10:K:17:THR:CG2	10:K:18:ARG:NH2	2.55	0.69
13:N:85:ARG:HE	13:N:111:ASP:HB3	1.55	0.69
1:A:750:G:O4'	17:R:22:THR:OG1	2.11	0.69
18:S:39:TYR:OH	18:S:41:PRO:HG3	1.93	0.69
19:T:5:VAL:CG1	19:T:6:LEU:N	2.56	0.69
1:A:1102:A:C6	1:A:1103:C:N4	2.60	0.69
1:A:1129:C:H1'	1:A:1130:A:N7	2.06	0.69
1:A:370:C:C2	1:A:371:G:C8	2.81	0.69
4:E:60:ASP:O	4:E:63:MET:HB3	1.93	0.69
5:F:118:GLN:O	5:F:122:GLU:HG3	1.93	0.69
6:G:34:GLU:O	6:G:35:ARG:HB2	1.92	0.69
7:H:102:ALA:HB3	7:H:106:PRO:HB2	1.75	0.69
7:H:103:GLY:O	7:H:106:PRO:HD2	1.92	0.69
7:H:150:ARG:HD3	7:H:150:ARG:O	1.92	0.69
7:H:45:PHE:CE1	7:H:47:LYS:HD2	2.27	0.69
9:J:78:ARG:HE	9:J:80:VAL:HG23	1.57	0.69
10:K:32:LYS:O	10:K:36:LEU:HD23	1.92	0.69
14:O:88:GLY:HA3	14:O:99:HIS:CE1	2.27	0.69
16:Q:40:CYS:N	16:Q:43:CYS:SG	2.59	0.69
16:Q:55:GLY:O	16:Q:56:VAL:C	2.31	0.69
18:S:28:ARG:HG3	18:S:29:ASP:OD2	1.92	0.69
19:T:29:HIS:CE1	19:T:30:PRO:HG2	2.27	0.69
19:T:4:LYS:O	19:T:5:VAL:HG23	1.93	0.69
19:T:88:TYR:HA	19:T:91:ARG:NE	2.08	0.69
8:I:99:ALA:CB	20:U:31:LEU:HD11	2.22	0.69
21:V:12:ASP:O	21:V:16:LEU:HD13	1.93	0.69
22:W:63:ILE:O	22:W:66:ALA:HB3	1.92	0.69
1:A:1200:C:H5''	1:A:1201:A:C3'	2.22	0.69
1:A:1298:C:H41	9:J:114:ARG:HB3	1.56	0.69
1:A:1399:C:H42	1:A:1504:G:H1	1.41	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1435:G:C2	1:A:1436:U:C4	2.80	0.69
1:A:1520:G:H2'	1:A:1521:G:H8	1.57	0.69
1:A:264:U:C2'	1:A:264:U:O2	2.40	0.69
1:A:517:G:H5'	1:A:519:C:N4	2.06	0.69
1:A:60:A:C2	1:A:107:G:N3	2.60	0.69
1:A:627:G:O2'	1:A:628:G:H5'	1.93	0.69
3:B:37:A:OP2	3:B:38:A:N7	2.26	0.69
4:E:15:VAL:HG23	4:E:16:HIS:CE1	2.28	0.69
4:E:173:ALA:O	4:E:176:GLU:HB2	1.93	0.69
4:E:212:GLN:OE1	4:E:215:LEU:HB3	1.92	0.69
4:E:80:ILE:HD12	4:E:208:ILE:HG23	1.75	0.69
5:F:110:ASN:HD21	5:F:140:ARG:HG2	1.56	0.69
10:K:26:VAL:HG13	10:K:27:PRO:N	2.07	0.69
11:L:16:ARG:NE	11:L:18:PHE:CZ	2.61	0.69
11:L:45:ALA:HB3	11:L:74:ILE:CG2	2.21	0.69
1:A:564:C:OP1	14:O:15:ARG:CZ	2.41	0.69
1:A:1308:U:H5''	15:P:110:ARG:HH22	1.57	0.69
17:R:75:PRO:O	17:R:78:TYR:HB3	1.93	0.69
18:S:51:VAL:HG21	18:S:73:LEU:CD1	2.22	0.69
19:T:43:LEU:HD11	19:T:69:LYS:HG3	1.72	0.69
20:U:36:ASN:HB3	20:U:40:LEU:CD2	2.23	0.69
22:W:23:ARG:HD3	22:W:24:LEU:N	2.07	0.69
1:A:1407:C:H2'	1:A:1408:A:H5'	1.73	0.69
1:A:191(C):G:H2'	1:A:191(D):U:O4'	1.93	0.69
1:A:529:G:N1	14:O:49:ASN:ND2	2.40	0.69
1:A:640:A:C2'	1:A:641:U:H5'	2.23	0.69
1:A:684:A:O3'	13:N:12:ARG:NH2	2.25	0.69
1:A:735:C:H2'	1:A:736:C:C6	2.26	0.69
1:A:79:G:H2'	1:A:80:G:O4'	1.93	0.69
3:C:59:U:O2	3:C:59:U:H2'	1.92	0.69
5:F:116:VAL:HG11	5:F:141:VAL:CG2	2.22	0.69
5:F:30:ARG:HG2	5:F:31:HIS:N	2.05	0.69
6:G:60:GLU:HA	6:G:63:LYS:HD3	1.74	0.69
7:H:122:GLU:CG	7:H:126:ARG:HG3	2.23	0.69
8:I:28:ARG:NH1	8:I:28:ARG:HG2	2.08	0.69
9:J:64:GLN:HB3	9:J:128:ALA:HB1	1.74	0.69
1:A:1367:C:P	11:L:115:GLY:HA2	2.32	0.69
11:L:97:LYS:HZ2	11:L:102:LEU:HD22	1.57	0.69
1:A:1328:C:OP1	15:P:28:ALA:HB2	1.93	0.69
5:F:6:HIS:HB3	16:Q:49:HIS:CE1	2.28	0.69
18:S:60:LEU:HA	18:S:64:ALA:CB	2.20	0.69
1:A:1013:G:H2'	1:A:1015:A:OP2	1.91	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1104:G:H2'	1:A:1105:A:H8	1.57	0.69
1:A:1128:C:C1'	1:A:1146:A:H61	2.05	0.69
1:A:1147:C:N3	1:A:1148:U:C4	2.61	0.69
1:A:1148:U:O4'	11:L:16:ARG:HD2	1.93	0.69
1:A:1423:G:H2'	1:A:1424:C:C6	2.28	0.69
1:A:1461:G:O2'	1:A:1462:G:H5'	1.93	0.69
1:A:20:U:O2'	1:A:21:G:H5'	1.93	0.69
1:A:745:C:H5'	1:A:851:G:N3	2.08	0.69
1:A:953:G:H2'	1:A:954:G:C8	2.27	0.69
5:F:7:PRO:O	5:F:11:ARG:HG2	1.93	0.69
6:G:90:GLY:HA3	6:G:200:GLU:OE2	1.93	0.69
7:H:118:ILE:O	7:H:119:LEU:HD23	1.92	0.69
8:I:10:LEU:N	8:I:10:LEU:CD2	2.55	0.69
8:I:4:TYR:CE1	8:I:72:VAL:HG11	2.28	0.69
11:L:78:LYS:HA	11:L:81:ILE:HD12	1.74	0.69
17:R:81:LEU:CD2	17:R:85:LEU:HD13	2.23	0.69
18:S:20:VAL:CG2	18:S:35:LYS:HA	2.21	0.69
1:A:1082:G:C2'	1:A:1083:U:H5'	2.23	0.68
1:A:1201:A:O2'	1:A:1202:G:H5''	1.92	0.68
1:A:1465:C:N3	1:A:1466:C:C6	2.60	0.68
1:A:790:A:H2'	1:A:791:G:O5'	1.92	0.68
1:A:856:C:N3	1:A:857:C:C5	2.61	0.68
1:A:948:C:H2'	1:A:949:A:H8	1.57	0.68
4:E:187:LEU:CD2	4:E:201:ILE:O	2.42	0.68
6:G:112:VAL:CG2	6:G:161:ASN:HD21	2.06	0.68
7:H:76:ILE:HG21	7:H:142:LEU:CB	2.23	0.68
8:I:7:ASN:ND2	8:I:62:TRP:CD1	2.58	0.68
10:K:126:LYS:HD2	10:K:126:LYS:C	2.13	0.68
17:R:43:LEU:HD11	17:R:56:LEU:HD23	1.74	0.68
18:S:32:TYR:N	18:S:32:TYR:CD1	2.62	0.68
1:A:264:U:H2'	19:T:64:PRO:HB2	1.73	0.68
20:U:36:ASN:HB3	20:U:40:LEU:HG	1.74	0.68
20:U:47:THR:O	20:U:82:THR:HA	1.92	0.68
21:V:36:ARG:HG3	21:V:72:GLY:HA2	1.75	0.68
22:W:56:MET:HG2	22:W:88:VAL:CG2	2.22	0.68
3:B:12:U:N3	3:B:24:G:N2	2.41	0.68
3:B:1:G:H2'	3:B:1:G:N3	2.08	0.68
1:A:1514:C:H2'	1:A:1515:C:H6	1.58	0.68
1:A:38:G:N2	1:A:397:A:C5'	2.37	0.68
1:A:432:A:N7	1:A:433:C:C5	2.61	0.68
1:A:474:G:H5'	18:S:81:ARG:CG	2.22	0.68
1:A:887:G:H2'	1:A:888:G:C8	2.29	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:41:GLY:O	5:F:45:LYS:HB2	1.93	0.68
7:H:76:ILE:HG21	7:H:142:LEU:HB3	1.73	0.68
7:H:68:GLU:O	7:H:70:PRO:HD3	1.93	0.68
6:G:88:VAL:HG22	7:H:97:GLY:H	1.58	0.68
10:K:11:THR:O	10:K:12:ARG:C	2.32	0.68
13:N:82:VAL:HG12	13:N:108:ILE:HG23	1.74	0.68
13:N:69:ALA:O	13:N:72:ALA:HB3	1.92	0.68
14:O:84:LEU:HD23	14:O:84:LEU:C	2.14	0.68
20:U:36:ASN:HB3	20:U:40:LEU:HD21	1.75	0.68
22:W:55:ILE:O	22:W:57:ARG:N	2.26	0.68
22:W:56:MET:SD	22:W:84:LEU:HD12	2.33	0.68
1:A:1063:C:C5	1:A:1064:G:N7	2.62	0.68
1:A:1213:A:C6	1:A:1215:G:C2	2.81	0.68
1:A:236:G:C3'	1:A:237:C:H6	2.06	0.68
1:A:474:G:H5'	18:S:81:ARG:HE	1.58	0.68
3:C:41:C:C4	3:C:42:C:C5	2.82	0.68
4:E:95:GLN:O	4:E:97:TRP:N	2.27	0.68
9:J:12:LEU:O	9:J:12:LEU:HD12	1.94	0.68
9:J:70:LYS:HB3	9:J:96:GLN:HG2	1.75	0.68
10:K:88:LYS:N	10:K:88:LYS:HZ2	1.91	0.68
1:A:964:A:H1'	12:M:55:LYS:HZ2	1.57	0.68
13:N:81:ASP:OD1	13:N:106:LYS:HD2	1.94	0.68
17:R:77:ARG:O	17:R:80:ALA:HB3	1.92	0.68
22:W:14:LYS:N	22:W:17:ARG:NH2	2.41	0.68
2:1:48:U:H2'	2:1:49:U:C6	2.28	0.68
1:A:1250:A:N3	1:A:1370:G:O2'	2.26	0.68
1:A:195:A:H4'	22:W:68:LYS:NZ	2.08	0.68
1:A:259:G:H2'	1:A:260:G:H8	1.52	0.68
1:A:359:U:H2'	1:A:360:A:C8	2.28	0.68
1:A:442:C:H2'	1:A:442:C:O2	1.93	0.68
1:A:573:A:C2	1:A:574:A:C6	2.80	0.68
1:A:831:U:H2'	1:A:832:C:C6	2.29	0.68
1:A:899:C:N4	1:A:900:A:N1	2.40	0.68
1:A:992:U:O2'	1:A:993:G:OP2	2.11	0.68
3:C:25:C:N4	3:C:26:A:N6	2.41	0.68
4:E:136:VAL:N	4:E:139:LYS:HZ2	1.91	0.68
4:E:43:ASP:OD1	4:E:44:LEU:HG	1.93	0.68
6:G:90:GLY:HA3	6:G:200:GLU:CD	2.14	0.68
7:H:88:LYS:HB3	7:H:123:LEU:O	1.94	0.68
10:K:46:LYS:HZ1	10:K:65:TYR:H	1.39	0.68
13:N:91:ARG:O	13:N:94:ALA:HB3	1.92	0.68
14:O:82:VAL:HG12	14:O:83:VAL:N	2.08	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:R:36:ILE:HD12	17:R:63:ARG:CD	2.22	0.68
19:T:44:ALA:HB1	19:T:72:ARG:CA	2.22	0.68
1:A:1008:C:H2'	1:A:1009:G:O4'	1.93	0.68
10:K:53:VAL:O	10:K:56:LYS:HB2	1.93	0.68
1:A:1045:C:H2'	1:A:1046:A:C8	2.27	0.68
1:A:1292:U:H2'	1:A:1293:G:H8	1.58	0.68
1:A:1402:C:H2'	1:A:1403:C:H6	1.57	0.68
1:A:1465:C:H2'	1:A:1466:C:O5'	1.94	0.68
1:A:193:C:C2	1:A:194:C:C5	2.82	0.68
1:A:262:A:C2'	1:A:263:A:C8	2.74	0.68
1:A:130:A:C4	1:A:264:U:H1'	2.28	0.68
1:A:314:C:H5''	1:A:315:A:OP2	1.94	0.68
1:A:59:A:H4'	1:A:388:G:C5'	2.24	0.68
1:A:394:G:C4	1:A:395:C:C5	2.82	0.68
1:A:608:A:C2	1:A:609:A:C8	2.81	0.68
1:A:644:G:O2'	1:A:645:C:H5'	1.94	0.68
1:A:821:G:H2'	1:A:822:C:H6	1.58	0.68
1:A:945:G:C2	1:A:946:A:C8	2.81	0.68
1:A:97:U:O2'	1:A:99:C:H5'	1.94	0.68
4:E:213:LEU:C	4:E:213:LEU:HD23	2.14	0.68
4:E:23:ARG:HB2	4:E:23:ARG:NH1	2.09	0.68
1:A:1189:C:O2'	5:F:176:HIS:NE2	2.27	0.68
6:G:109:GLY:O	6:G:110:PHE:C	2.31	0.68
6:G:146:ILE:HD12	6:G:183:GLY:O	1.93	0.68
7:H:9:LYS:HA	7:H:9:LYS:HE2	1.75	0.68
8:I:79:LEU:HB2	8:I:88:VAL:HG11	1.74	0.68
9:J:143:ARG:O	9:J:146:GLU:OE1	2.11	0.68
1:A:1240:U:H1'	9:J:42:ILE:HD11	1.76	0.68
9:J:2:ALA:HB1	9:J:5:ARG:O	1.94	0.68
11:L:6:GLY:CA	11:L:83:ARG:HB3	2.23	0.68
13:N:41:THR:CB	13:N:71:LYS:HD3	2.22	0.68
13:N:45:GLY:HA3	13:N:55:LYS:HB3	1.76	0.68
14:O:37:CYS:CB	14:O:58:VAL:HG22	2.24	0.68
14:O:68:ALA:HB1	14:O:98:TYR:C	2.13	0.68
19:T:88:TYR:CA	19:T:91:ARG:HH21	2.06	0.68
20:U:53:ARG:CG	20:U:63:GLN:HE21	2.05	0.68
20:U:63:GLN:O	20:U:67:ALA:HB2	1.93	0.68
22:W:43:LEU:HD23	22:W:46:GLU:OE2	1.94	0.68
1:A:194:C:H5''	22:W:65:LYS:NZ	2.09	0.68
3:D:9:A:N3	3:D:46:G:H1'	2.09	0.68
1:A:112:G:OP1	1:A:389:A:O2'	2.12	0.68
1:A:518:C:O2'	14:O:50:SER:HB3	1.92	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:831:U:H2'	1:A:832:C:H6	1.59	0.68
3:C:18:G:C2	3:C:58:A:C4	2.81	0.68
4:E:136:VAL:HA	4:E:139:LYS:NZ	2.09	0.68
5:F:22:TRP:HB3	5:F:59:ARG:HB3	1.74	0.68
6:G:192:GLU:N	6:G:192:GLU:OE1	2.27	0.68
6:G:24:GLU:C	6:G:27:TYR:HB3	2.14	0.68
6:G:35:ARG:O	6:G:37:PRO:N	2.27	0.68
7:H:43:LEU:HB3	7:H:136:MET:CE	2.23	0.68
7:H:74:GLY:O	7:H:115:VAL:HG12	1.92	0.68
7:H:79:GLU:HB3	7:H:91:LEU:O	1.93	0.68
8:I:16:GLN:HG3	8:I:17:SER:N	2.09	0.68
9:J:46:ALA:HB2	9:J:120:ILE:HD12	1.76	0.68
11:L:49:PRO:HD3	11:L:78:LYS:HZ3	1.58	0.68
12:M:76:ASN:O	12:M:78:ASN:N	2.26	0.68
16:Q:27:CYS:H	16:Q:43:CYS:HB3	1.58	0.68
16:Q:46:GLU:O	16:Q:49:HIS:HB2	1.93	0.68
17:R:81:LEU:HD23	17:R:85:LEU:HD13	1.74	0.68
22:W:40:ALA:HA	22:W:55:ILE:HD13	1.74	0.68
1:A:1209:C:O2'	1:A:1210:C:H5'	1.93	0.68
1:A:1221:G:OP1	1:A:1320:C:N4	2.27	0.68
1:A:379:C:H2'	1:A:380:G:H5'	1.75	0.68
1:A:427:U:C2	1:A:428:G:N7	2.62	0.68
1:A:516:U:C4	1:A:517:G:N1	2.62	0.68
1:A:915:A:O5'	1:A:915:A:H8	1.77	0.68
1:A:963:G:O2'	1:A:964:A:H5'	1.94	0.68
3:C:15:G:C8	3:C:15:G:OP2	2.46	0.68
4:E:184:VAL:O	4:E:198:ASP:CB	2.36	0.68
4:E:82:ARG:O	4:E:86:GLU:HG3	1.93	0.68
5:F:38:ARG:HB2	5:F:94:LEU:CD2	2.24	0.68
12:M:27:ALA:HB2	12:M:85:LEU:HG	1.75	0.68
1:A:1316:G:O6	21:V:6:LYS:HE2	1.94	0.68
1:A:346:G:O2'	1:A:347:G:H5'	1.94	0.68
1:A:992:U:O4	1:A:1043:C:OP2	2.11	0.68
1:A:366:C:H4'	1:A:367:U:OP1	1.94	0.68
1:A:742:G:H2'	1:A:743:U:O4'	1.94	0.68
1:A:80:G:C2'	1:A:81:G:O4'	2.35	0.68
4:E:118:LEU:HD11	4:E:141:GLU:OE2	1.93	0.68
4:E:69:LEU:HB2	4:E:159:PRO:HB2	1.76	0.68
4:E:96:ARG:O	4:E:98:LEU:HD22	1.94	0.68
5:F:143:GLU:O	5:F:145:GLY:N	2.27	0.68
5:F:151:VAL:HG12	5:F:152:ILE:N	2.09	0.68
5:F:52:LEU:O	5:F:53:ALA:HB2	1.93	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:H:12:LEU:HD13	7:H:30:ALA:HA	1.75	0.68
7:H:135:THR:O	7:H:139:LEU:HD12	1.94	0.68
7:H:56:GLN:NE2	7:H:56:GLN:H	1.92	0.68
8:I:11:ASN:HD22	8:I:86:ARG:HH22	1.41	0.68
12:M:27:ALA:HB2	12:M:85:LEU:HD11	1.76	0.68
14:O:52:LEU:N	14:O:52:LEU:HD23	2.09	0.68
14:O:84:LEU:CG	14:O:85:ILE:N	2.56	0.68
14:O:85:ILE:HD11	14:O:98:TYR:HB3	1.75	0.68
1:A:1230:C:O2	15:P:126:LYS:HD3	1.94	0.68
15:P:67:GLU:HG3	15:P:68:GLY:H	1.59	0.68
18:S:82:GLN:HG3	18:S:82:GLN:O	1.94	0.68
20:U:74:ARG:CA	20:U:79:LEU:HD11	2.23	0.68
1:A:345:C:H5''	1:A:346:G:OP1	1.93	0.68
3:D:2:C:H2'	3:D:3:C:C6	2.29	0.68
1:A:1211:U:O2'	1:A:1213:A:H1'	1.92	0.68
1:A:1285:A:H4'	1:A:1286:A:C8	2.29	0.68
1:A:1317:C:C2'	1:A:1318:A:H5'	2.24	0.68
1:A:1333:A:H2'	1:A:1334:G:O4'	1.94	0.68
1:A:137:C:C2	1:A:227:G:N2	2.62	0.68
1:A:834:C:O2'	1:A:835:U:C5'	2.42	0.68
1:A:900:A:C8	1:A:901:A:N7	2.62	0.68
4:E:144:ARG:HD3	4:E:148:TYR:CZ	2.29	0.68
6:G:148:VAL:HB	6:G:181:MET:CE	2.17	0.68
8:I:6:VAL:O	8:I:6:VAL:CG1	2.42	0.68
10:K:115:SER:O	10:K:116:LYS:HD2	1.94	0.68
11:L:15:ALA:HB1	11:L:77:ILE:CG1	2.24	0.68
1:A:1307:U:H5''	15:P:101:GLN:HE21	1.59	0.68
15:P:15:VAL:HG11	15:P:39:ILE:CD1	2.24	0.68
15:P:91:ARG:CB	15:P:98:VAL:HG13	2.24	0.68
18:S:20:VAL:HG13	18:S:21:VAL:H	1.59	0.68
19:T:75:ARG:NH1	19:T:77:VAL:HG22	2.09	0.68
20:U:38:GLU:O	20:U:41:LYS:HB2	1.94	0.68
20:U:43:PHE:C	20:U:51:LEU:HD22	2.13	0.68
3:D:16:U:H4'	3:D:18:G:C5'	2.24	0.68
3:D:19:G:C2	3:D:57:G:H1'	2.28	0.68
1:A:1390:U:H2'	1:A:1391:U:C5	2.29	0.68
1:A:1520:G:H2'	1:A:1521:G:C8	2.29	0.68
1:A:819:A:N6	1:A:1529:G:N7	2.42	0.68
1:A:191(D):U:H2'	1:A:191(E):G:H8	1.59	0.68
1:A:292:G:C5	1:A:293:G:H1'	2.29	0.68
1:A:425:G:N2	1:A:426:G:H1'	2.08	0.68
1:A:558:G:H2'	1:A:559:A:C2	2.28	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:570:G:H5'	1:A:820:U:C1'	2.19	0.68
1:A:792:A:N3	1:A:794:A:C6	2.62	0.68
1:A:968:A:H5''	1:A:969:A:O5'	1.94	0.68
1:A:999:U:H2'	1:A:1000:A:O4'	1.93	0.68
4:E:21:ARG:HE	4:E:21:ARG:N	1.90	0.68
6:G:120:LEU:HB2	6:G:125:HIS:CD2	2.29	0.68
6:G:204:ILE:HD12	6:G:204:ILE:H	1.58	0.68
7:H:86:ALA:HB3	7:H:130:ASN:HD21	1.58	0.68
13:N:106:LYS:HG2	13:N:107:SER:H	1.59	0.68
13:N:19:ALA:CB	13:N:80:VAL:HG21	2.24	0.68
19:T:104:LYS:HD3	19:T:105:ALA:H	1.58	0.68
19:T:88:TYR:O	19:T:92:ARG:CB	2.41	0.68
19:T:91:ARG:O	19:T:94:ASN:HB2	1.94	0.68
8:I:49:ALA:CB	20:U:80:PRO:HD3	2.23	0.68
22:W:31:SER:OG	22:W:32:ALA:N	2.26	0.68
23:X:6:ARG:HB3	23:X:15:ARG:NH2	2.09	0.68
1:A:511:C:O2'	1:A:512:U:H6	1.75	0.68
1:A:1054:C:N4	3:B:34:G:HO2'	1.92	0.67
1:A:1287:A:N6	1:A:1371:G:O4'	2.27	0.67
1:A:208:U:H4'	1:A:209:U:OP1	1.92	0.67
1:A:323:U:H5'	22:W:23:ARG:HB2	1.77	0.67
1:A:518:C:O2'	1:A:519:C:P	2.51	0.67
1:A:692:U:H1'	1:A:694:A:N7	2.09	0.67
1:A:735:C:O2'	20:U:75:ILE:HD13	1.94	0.67
1:A:775:G:C2	1:A:776:G:N7	2.62	0.67
1:A:858:G:N2	1:A:869:G:C3'	2.55	0.67
1:A:863:U:O2	1:A:863:U:C2'	2.40	0.67
1:A:872:A:HO2'	1:A:873:A:P	2.17	0.67
1:A:873:A:H8	1:A:873:A:OP1	1.76	0.67
1:A:900:A:H2'	1:A:901:A:C8	2.29	0.67
3:C:51:U:H2'	3:C:52:G:C8	2.29	0.67
4:E:173:ALA:HA	4:E:176:GLU:HG3	1.76	0.67
4:E:82:ARG:CA	4:E:92:TYR:HE1	2.07	0.67
5:F:22:TRP:HB3	5:F:59:ARG:CB	2.24	0.67
5:F:35:GLU:HA	5:F:38:ARG:HG3	1.76	0.67
6:G:104:VAL:HA	6:G:107:ARG:HB2	1.74	0.67
6:G:26:CYS:HA	6:G:31:CYS:CB	2.23	0.67
6:G:2:GLY:O	6:G:4:TYR:N	2.25	0.67
6:G:58:LEU:CD1	6:G:59:ARG:HH11	2.07	0.67
7:H:55:VAL:HG12	7:H:56:GLN:N	2.08	0.67
9:J:74:GLU:HA	9:J:145:ALA:HB1	1.75	0.67
10:K:109:ILE:CD1	10:K:137:VAL:HB	2.23	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:K:6:ILE:HG13	10:K:85:ARG:CZ	2.24	0.67
10:K:87:SER:CB	10:K:93:VAL:H	2.08	0.67
13:N:42:TRP:CE3	13:N:43:SER:HA	2.28	0.67
14:O:32:PHE:HB3	14:O:84:LEU:HD21	1.74	0.67
1:A:953:G:HO2'	15:P:125:ARG:HA	1.58	0.67
15:P:23:TYR:CD2	15:P:70:LEU:HD13	2.29	0.67
1:A:1202:G:H1'	16:Q:29:ARG:HD2	1.75	0.67
12:M:50:ILE:HB	16:Q:41:ARG:HE	1.58	0.67
17:R:34:LEU:HD12	17:R:35:ARG:N	2.09	0.67
1:A:760:G:H1	19:T:105:ALA:C	1.97	0.67
22:W:40:ALA:HB2	22:W:55:ILE:HG21	1.75	0.67
1:A:617:G:H4'	18:S:44:THR:OG1	1.94	0.67
3:C:44:G:N2	3:C:45:U:H1'	2.09	0.67
1:A:1053:G:C5'	1:A:1054:C:H5'	2.20	0.67
1:A:1407:C:H2'	1:A:1408:A:C5'	2.24	0.67
1:A:197:A:H62	1:A:221:C:H5'	1.59	0.67
1:A:608:A:H2'	1:A:608:A:N3	2.08	0.67
1:A:668:G:HO2'	17:R:46:HIS:CE1	2.10	0.67
5:F:118:GLN:O	5:F:121:ALA:HB3	1.94	0.67
5:F:70:VAL:HG12	5:F:71:ALA:H	1.59	0.67
1:A:403:C:O3'	6:G:122:ARG:HD2	1.93	0.67
7:H:79:GLU:CB	7:H:91:LEU:O	2.42	0.67
8:I:17:SER:O	8:I:20:ALA:HB3	1.95	0.67
9:J:69:VAL:CB	9:J:104:LEU:HD11	2.25	0.67
10:K:45:ILE:HB	10:K:61:VAL:HG11	1.75	0.67
1:A:1231:G:P	11:L:127:LYS:HE2	2.34	0.67
12:M:42:THR:HG23	12:M:68:HIS:HA	1.76	0.67
12:M:65:LEU:HD13	16:Q:36:PHE:CE2	2.29	0.67
13:N:104:GLN:NE2	13:N:106:LYS:H	1.91	0.67
14:O:53:ARG:HB3	14:O:69:TYR:HE1	1.58	0.67
19:T:35:VAL:CG1	19:T:36:ILE:N	2.58	0.67
22:W:88:VAL:HG12	22:W:92:LEU:HD11	1.76	0.67
3:C:44:G:N1	3:C:45:U:O2	2.27	0.67
1:A:1452:C:O4'	1:A:1453:G:N2	2.27	0.67
1:A:1470:G:O2'	1:A:1471:G:H5'	1.95	0.67
1:A:286:G:C5	1:A:287:U:C5	2.83	0.67
1:A:331:G:OP1	1:A:332:G:C8	2.48	0.67
1:A:454:C:H3'	1:A:455:C:C5	2.29	0.67
1:A:515:G:O6	1:A:533:A:N7	2.27	0.67
1:A:609:A:C4	1:A:610:G:C8	2.82	0.67
1:A:826:C:H5'	10:K:12:ARG:HE	1.59	0.67
1:A:829:G:O2'	4:E:26:PRO:CG	2.43	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:47:THR:HG23	4:E:51:LEU:HD21	1.76	0.67
6:G:50:ARG:HG2	6:G:51:PRO:CD	2.17	0.67
7:H:140:ARG:NH1	7:H:140:ARG:HB3	2.10	0.67
9:J:38:LEU:HA	9:J:41:ARG:HG3	1.76	0.67
10:K:13:ILE:CG2	10:K:14:ARG:N	2.54	0.67
10:K:89:PRO:HB3	10:K:92:ARG:NH2	2.09	0.67
15:P:14:ARG:HA	15:P:45:VAL:H	1.60	0.67
1:A:1308:U:H3'	15:P:99:ARG:NH2	2.08	0.67
17:R:25:THR:O	17:R:29:VAL:HG23	1.94	0.67
19:T:29:HIS:CE1	19:T:31:LEU:H	2.12	0.67
21:V:36:ARG:HA	21:V:71:LEU:CD1	2.23	0.67
22:W:37:SER:O	22:W:40:ALA:HB3	1.95	0.67
1:A:339:C:H2'	1:A:340:U:C6	2.28	0.67
2:1:43:U:H2'	2:1:44:U:C6	2.29	0.67
15:P:3:ARG:CG	15:P:7:VAL:HA	2.24	0.67
1:A:1239:A:H1'	1:A:1241:G:N9	2.08	0.67
1:A:125:U:H2'	1:A:126:G:C8	2.28	0.67
1:A:1283:G:C2'	1:A:1284:C:H5'	2.25	0.67
1:A:1305:G:H2'	1:A:1331:G:H22	1.58	0.67
1:A:1360:A:N7	16:Q:17:LYS:HD3	2.09	0.67
1:A:251:G:H22	1:A:272:C:H42	1.43	0.67
1:A:112:G:H21	1:A:354:G:H5'	1.60	0.67
5:F:182:ILE:CA	5:F:204:LEU:HG	2.21	0.67
6:G:14:ARG:C	6:G:14:ARG:CD	2.62	0.67
6:G:61:LYS:CG	6:G:207:TYR:HE1	2.06	0.67
7:H:105:VAL:HG12	7:H:106:PRO:N	2.09	0.67
7:H:35:GLY:HA3	7:H:41:VAL:HG13	1.75	0.67
8:I:76:ALA:O	8:I:79:LEU:HG	1.95	0.67
8:I:81:ILE:O	8:I:83:ASP:N	2.27	0.67
9:J:72:ARG:HH11	9:J:72:ARG:CB	2.07	0.67
10:K:61:VAL:CG1	10:K:62:TYR:N	2.56	0.67
11:L:50:LEU:HD22	11:L:51:ARG:NH1	2.10	0.67
11:L:82:ALA:O	11:L:85:LEU:HB3	1.94	0.67
14:O:84:LEU:N	14:O:104:VAL:HG11	2.10	0.67
14:O:50:SER:O	14:O:51:ALA:HB2	1.95	0.67
15:P:59:TYR:CD2	15:P:60:VAL:HG23	2.29	0.67
16:Q:35:ARG:O	16:Q:37:PHE:N	2.28	0.67
20:U:55:ARG:HH11	20:U:55:ARG:CB	2.06	0.67
1:A:1349:A:H2'	1:A:1350:A:C8	2.29	0.67
1:A:1429:C:C2	1:A:1430:C:C5	2.82	0.67
1:A:1476:G:H2'	1:A:1477:C:C6	2.29	0.67
1:A:315:A:N1	1:A:330:C:C6	2.62	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:572:A:O5'	1:A:573:A:OP2	2.11	0.67
1:A:791:G:H2'	1:A:792:A:C8	2.30	0.67
1:A:834:C:N4	1:A:853:G:C6	2.63	0.67
1:A:959:A:C2'	1:A:960:U:H4'	2.25	0.67
1:A:989:C:H2'	1:A:990:C:H5'	1.77	0.67
4:E:141:GLU:CD	4:E:142:LEU:N	2.47	0.67
6:G:113:SER:HB3	6:G:116:GLN:HG3	1.75	0.67
7:H:109:ILE:HG23	7:H:110:LEU:N	2.10	0.67
8:I:60:PHE:CE2	20:U:78:LEU:HD21	2.29	0.67
10:K:103:VAL:CB	10:K:108:GLY:HA3	2.24	0.67
10:K:109:ILE:HG13	10:K:111:ILE:HD11	1.77	0.67
10:K:36:LEU:O	10:K:39:LEU:HB3	1.94	0.67
10:K:77:GLU:OE2	10:K:78:GLN:N	2.28	0.67
11:L:77:ILE:O	11:L:81:ILE:HG13	1.95	0.67
1:A:563:A:H3'	14:O:15:ARG:NH1	2.09	0.67
1:A:1047:G:H5''	16:Q:4:LYS:CD	2.24	0.67
17:R:16:ALA:CB	17:R:21:ASP:HB3	2.17	0.67
19:T:57:VAL:HG23	19:T:58:GLU:N	2.10	0.67
19:T:59:ILE:HD11	19:T:72:ARG:N	2.09	0.67
1:A:1002:G:OP2	1:A:1002:G:O4'	2.12	0.67
1:A:1307:U:H5''	15:P:101:GLN:NE2	2.09	0.67
1:A:1367:C:OP1	11:L:115:GLY:N	2.28	0.67
1:A:1412:C:H2'	1:A:1413:A:H8	1.56	0.67
1:A:1404:C:H1'	1:A:1499:A:N1	2.09	0.67
1:A:1518:A:H8	1:A:1518:A:O5'	1.78	0.67
1:A:300:A:H2'	1:A:301:G:H5'	1.77	0.67
1:A:373:A:N7	1:A:482:A:N7	2.42	0.67
1:A:748:C:H6	1:A:748:C:O5'	1.76	0.67
1:A:870:U:H5'	1:A:871:U:OP1	1.94	0.67
1:A:972:C:P	12:M:57:LYS:HZ2	2.18	0.67
1:A:9:G:OP2	7:H:121:LYS:HA	1.94	0.67
3:C:33:U:C2	3:C:35:A:OP2	2.47	0.67
4:E:92:TYR:O	4:E:152:PHE:HB2	1.94	0.67
4:E:175:ARG:O	4:E:176:GLU:C	2.33	0.67
5:F:55:VAL:HG13	5:F:68:VAL:HG22	1.77	0.67
6:G:10:ARG:NH1	6:G:14:ARG:HB2	2.10	0.67
6:G:148:VAL:CG2	6:G:162:LEU:HD21	2.24	0.67
6:G:190:ASP:O	6:G:193:ASP:OD1	2.12	0.67
9:J:70:LYS:HA	9:J:100:ALA:CB	2.25	0.67
9:J:42:ILE:HG22	9:J:120:ILE:CD1	2.25	0.67
10:K:51:VAL:HG21	10:K:60:ARG:NH2	2.09	0.67
10:K:88:LYS:N	10:K:88:LYS:NZ	2.42	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:L:83:ARG:O	11:L:86:VAL:HB	1.94	0.67
11:L:93:ARG:NH2	11:L:97:LYS:HG2	2.10	0.67
12:M:7:LYS:O	12:M:97:GLU:CB	2.40	0.67
13:N:54:ARG:HG3	13:N:54:ARG:NH1	2.09	0.67
14:O:100:ILE:C	14:O:101:VAL:HG22	2.14	0.67
14:O:117:ARG:HH21	14:O:124:LYS:CA	1.97	0.67
14:O:36:VAL:HG23	14:O:81:SER:C	2.15	0.67
15:P:34:LEU:CD2	15:P:39:ILE:HG13	2.25	0.67
16:Q:12:ARG:O	16:Q:14:PRO:N	2.27	0.67
1:A:1077:G:N2	1:A:1080:A:OP2	2.27	0.67
1:A:1113:C:O5'	1:A:1113:C:C6	2.47	0.67
1:A:1305:G:N2	1:A:1331:G:H2'	2.09	0.67
1:A:22:G:C2'	1:A:23:C:H6	2.05	0.67
1:A:55:A:H2'	1:A:56:U:C5'	2.24	0.67
1:A:645:C:H2'	1:A:646:U:H6	1.58	0.67
1:A:665:A:C8	1:A:733:A:C2	2.83	0.67
1:A:894:G:C5	1:A:895:G:N7	2.62	0.67
4:E:112:VAL:HG22	4:E:149:LEU:HD11	1.76	0.67
7:H:12:LEU:HG	7:H:129:ILE:HG12	1.77	0.67
9:J:15:ASP:H	9:J:20:ASP:N	1.92	0.67
9:J:94:ARG:NH1	9:J:94:ARG:HG3	2.09	0.67
9:J:94:ARG:HG3	9:J:94:ARG:HH11	1.59	0.67
1:A:642:A:N7	10:K:115:SER:HA	2.08	0.67
11:L:47:LEU:CD1	11:L:51:ARG:HH22	2.05	0.67
13:N:21:ILE:HG22	13:N:30:VAL:HG22	1.76	0.67
16:Q:24:CYS:SG	16:Q:27:CYS:N	2.68	0.67
17:R:16:ALA:HB1	17:R:21:ASP:CB	2.17	0.67
3:D:58:A:C2'	3:D:61:C:C5	2.77	0.67
2:1:20:G:O2'	2:1:21:G:H5'	1.94	0.67
1:A:1326:C:H2'	1:A:1327:C:H6	1.60	0.67
1:A:791:G:N2	1:A:1498:U:P	2.64	0.67
1:A:1528:U:H1'	1:A:1529:G:H21	1.59	0.67
1:A:394:G:H2'	1:A:395:C:H6	1.58	0.67
1:A:581:G:H4'	17:R:64:ARG:HH12	1.60	0.67
1:A:961:U:H2'	1:A:962:C:O4'	1.95	0.67
3:D:35:A:H2'	3:D:36:A:O4'	1.94	0.67
4:E:101:MET:HA	4:E:108:ILE:CG1	2.25	0.67
4:E:91:PRO:HB3	4:E:152:PHE:CE1	2.30	0.67
1:A:1347:G:C8	11:L:107:ARG:HB3	2.28	0.67
14:O:88:GLY:N	14:O:98:TYR:HA	2.04	0.67
1:A:255:G:O4'	19:T:16:GLN:HB2	1.95	0.67
21:V:30:LEU:HD12	21:V:59:PRO:HA	1.75	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:V:45:VAL:HG13	21:V:64:GLU:HA	1.76	0.67
1:A:1129:C:N4	1:A:1139:G:C5	2.62	0.67
1:A:1396:A:O4'	1:A:1398:A:H1'	1.95	0.67
1:A:192:U:H2'	1:A:193:C:H6	1.59	0.67
1:A:194:C:H5''	22:W:65:LYS:HZ3	1.60	0.67
1:A:295:C:N4	1:A:303:A:N1	2.43	0.67
1:A:329:A:O2'	1:A:330:C:H5'	1.95	0.67
1:A:698:G:H2'	1:A:699:C:H6	1.58	0.67
1:A:900:A:H2'	1:A:901:A:H8	1.59	0.67
3:C:76:A:H3'	3:C:76:A:OP1	1.95	0.67
4:E:49:GLU:N	4:E:49:GLU:OE2	2.28	0.67
5:F:57:ILE:HG22	5:F:59:ARG:NH2	2.10	0.67
6:G:141:ARG:HH11	6:G:142:PRO:HD2	1.60	0.67
6:G:26:CYS:O	6:G:33:MET:CG	2.43	0.67
8:I:53:ALA:HB2	8:I:86:ARG:HD2	1.77	0.67
1:A:1231:G:OP1	11:L:126:SER:OG	2.13	0.67
13:N:110:ASP:HB2	20:U:88:LYS:HD2	1.75	0.67
14:O:114:LYS:O	14:O:117:ARG:NH1	2.27	0.67
20:U:61:LYS:HD2	20:U:64:ARG:NH2	2.06	0.67
22:W:90:GLN:O	22:W:93:GLU:HB2	1.94	0.67
6:G:47:ARG:HH11	6:G:47:ARG:HB2	1.60	0.67
10:K:54:ASP:HB2	10:K:56:LYS:HD3	1.77	0.67
1:A:1097:C:H2'	1:A:1098:C:H6	1.60	0.67
3:B:50:U:H2'	3:B:51:U:C6	2.30	0.67
2:1:38:U:O2'	2:1:39:U:O4'	2.13	0.67
1:A:1138:G:C6	1:A:1140:C:C6	2.83	0.67
1:A:13:U:H5'	1:A:14:U:OP2	1.95	0.67
1:A:259:G:C2	1:A:260:G:C4	2.83	0.67
1:A:592:G:H2'	1:A:593:G:H5'	1.76	0.67
4:E:80:ILE:CD1	4:E:212:GLN:HG2	2.25	0.67
4:E:80:ILE:HD13	4:E:211:ILE:CG2	2.25	0.67
5:F:124:ILE:HG12	5:F:130:VAL:HG22	1.75	0.67
5:F:187:ALA:HB3	5:F:198:VAL:HG22	1.76	0.67
6:G:112:VAL:HG23	6:G:161:ASN:HD21	1.60	0.67
6:G:20:TYR:O	6:G:26:CYS:SG	2.53	0.67
9:J:70:LYS:O	9:J:138:LYS:HE3	1.95	0.67
13:N:63:LEU:HA	13:N:66:LEU:HG	1.77	0.67
19:T:21:VAL:HG22	19:T:43:LEU:HA	1.76	0.67
19:T:44:ALA:HA	19:T:71:PHE:O	1.95	0.67
1:A:1181:G:H2'	1:A:1182:G:O4'	1.94	0.66
1:A:1228:C:H4'	15:P:116:THR:CA	2.22	0.66
1:A:1307:U:H6	1:A:1307:U:O5'	1.77	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:178:C:C2	1:A:179:A:C8	2.84	0.66
1:A:129(A):G:N2	1:A:191(A):G:C8	2.63	0.66
1:A:990:C:H2'	1:A:991:U:C6	2.30	0.66
4:E:83:MET:HB2	4:E:234:PRO:HG3	1.75	0.66
8:I:84:ASN:O	8:I:86:ARG:N	2.28	0.66
15:P:48:LEU:HD11	15:P:56:LEU:CD1	2.23	0.66
16:Q:22:THR:O	16:Q:23:ARG:HG2	1.94	0.66
17:R:62:GLN:HA	17:R:65:ARG:NH1	2.09	0.66
2:1:51:U:H4'	2:1:52:U:OP1	1.95	0.66
1:A:1233:G:O2'	1:A:1365:G:OP1	2.12	0.66
1:A:1256:A:O3'	1:A:1257:U:C4'	2.41	0.66
1:A:173:U:H5''	1:A:197:A:O2'	1.96	0.66
1:A:51:A:O2'	1:A:52:G:OP2	2.12	0.66
1:A:592:G:C2'	1:A:593:G:H5'	2.25	0.66
4:E:219:VAL:CG1	4:E:223:ILE:HD11	2.14	0.66
4:E:61:LEU:HA	4:E:64:ARG:CD	2.25	0.66
5:F:94:LEU:HD23	5:F:94:LEU:O	1.95	0.66
6:G:147:ALA:CB	6:G:181:MET:O	2.42	0.66
6:G:61:LYS:CB	6:G:203:VAL:HG13	2.24	0.66
7:H:84:PHE:CZ	7:H:133:TYR:CB	2.76	0.66
9:J:79:ARG:CD	9:J:84:ASN:HB3	2.25	0.66
10:K:36:LEU:O	10:K:39:LEU:CB	2.42	0.66
12:M:90:LEU:H	12:M:91:PRO:HD2	1.58	0.66
13:N:66:LEU:CB	13:N:70:LYS:HZ2	2.08	0.66
13:N:78:GLN:OE1	13:N:79:SER:N	2.27	0.66
14:O:101:VAL:HG23	14:O:104:VAL:CG2	2.25	0.66
16:Q:52:GLN:C	16:Q:53:LEU:HD23	2.16	0.66
8:I:98:LEU:HG	20:U:28:GLU:HG2	1.78	0.66
22:W:12:ALA:O	22:W:15:ARG:HG2	1.94	0.66
1:A:1200:C:H5''	1:A:1201:A:H3'	1.77	0.66
1:A:1333:A:H8	1:A:1333:A:O5'	1.79	0.66
1:A:1389:C:O2'	1:A:1390:U:H5'	1.95	0.66
1:A:1404:C:C1'	1:A:1499:A:C2	2.78	0.66
1:A:390:C:H2'	1:A:391:G:H8	1.60	0.66
1:A:47:C:O2'	1:A:48:C:P	2.52	0.66
1:A:571:U:H6	1:A:571:U:H5''	1.58	0.66
1:A:795:C:H6	1:A:795:C:O5'	1.77	0.66
1:A:946:A:C2'	1:A:947:G:C8	2.75	0.66
3:C:34:G:C4	3:C:35:A:C8	2.83	0.66
3:C:55:U:H2'	3:C:57:G:N7	2.10	0.66
1:A:1206:G:H5'	5:F:194:GLY:CA	2.23	0.66
5:F:24:ALA:HB2	5:F:32:LEU:HD12	1.76	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:39:PRO:O	6:G:44:GLY:HA3	1.95	0.66
7:H:94:ALA:HB3	7:H:117:ASP:C	2.15	0.66
9:J:87:VAL:HG13	9:J:152:ALA:CA	2.21	0.66
10:K:82:HIS:O	10:K:137:VAL:CA	2.41	0.66
10:K:40:ALA:HB2	10:K:45:ILE:CG1	2.24	0.66
11:L:9:ARG:CD	11:L:14:VAL:HG22	2.22	0.66
11:L:40:LEU:C	11:L:42:ARG:N	2.45	0.66
11:L:98:PRO:C	11:L:100:GLY:N	2.49	0.66
12:M:23:ILE:HG23	12:M:85:LEU:CD2	2.21	0.66
12:M:11:PHE:CZ	12:M:65:LEU:HG	2.31	0.66
13:N:111:ASP:CG	13:N:113:PRO:HD3	2.16	0.66
18:S:4:ILE:CG2	18:S:21:VAL:CG1	2.72	0.66
8:I:50:TYR:OH	20:U:77:GLY:CA	2.43	0.66
21:V:40:ILE:C	21:V:68:GLY:HA2	2.16	0.66
3:B:4:C:H2'	3:B:5:G:C8	2.29	0.66
1:A:1049:U:H1'	1:A:1201:A:C8	2.30	0.66
1:A:1181:G:C2'	1:A:1182:G:H5'	2.26	0.66
1:A:1191:A:N3	1:A:1191:A:H2'	2.08	0.66
1:A:1405:G:H2'	1:A:1406:U:H6	1.61	0.66
1:A:1443:G:H4'	1:A:1446:A:H5'	0.79	0.66
1:A:794:A:H4'	1:A:1521:G:O2'	1.94	0.66
1:A:185:A:H2'	1:A:186:C:C6	2.30	0.66
1:A:428:G:C2	1:A:430:A:N6	2.64	0.66
1:A:647:C:C2	1:A:648:A:C8	2.83	0.66
1:A:686:U:O2'	1:A:687:A:OP1	2.14	0.66
1:A:832:C:H2'	1:A:833:U:C6	2.29	0.66
1:A:576:G:C8	1:A:881:G:H1'	2.30	0.66
3:C:21:A:H2'	3:C:22:G:O5'	1.95	0.66
3:C:37:A:H2'	3:C:38:A:C8	2.29	0.66
5:F:94:LEU:O	5:F:95:THR:HG23	1.96	0.66
6:G:119:GLN:HG3	6:G:123:HIS:CE1	2.31	0.66
7:H:11:ILE:HB	7:H:31:LEU:CD2	2.24	0.66
10:K:109:ILE:O	10:K:136:GLU:HB2	1.95	0.66
10:K:126:LYS:HZ2	10:K:127:LEU:HD23	1.58	0.66
10:K:70:GLN:HB2	10:K:73:ASP:O	1.95	0.66
13:N:23:ALA:HB2	13:N:28:THR:HG23	1.78	0.66
14:O:27:LEU:HB2	14:O:64:TYR:CZ	2.30	0.66
16:Q:23:ARG:N	16:Q:33:VAL:HG21	2.10	0.66
17:R:71:GLN:HG3	17:R:75:PRO:CB	2.20	0.66
18:S:58:TYR:CD1	18:S:58:TYR:C	2.68	0.66
19:T:16:GLN:O	19:T:17:LYS:HB2	1.95	0.66
3:B:58:A:H4'	3:B:59:U:OP1	1.95	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1054:C:C2'	1:A:1055:A:H5''	2.25	0.66
1:A:1157:A:N1	1:A:1180:A:C4	2.63	0.66
1:A:168:G:C6	1:A:169:C:N4	2.63	0.66
1:A:67:C:O4'	1:A:172:A:H1'	1.95	0.66
1:A:192:U:C2	1:A:193:C:C5	2.83	0.66
1:A:263:A:O5'	1:A:263:A:C8	2.49	0.66
1:A:363:A:C2'	1:A:364:A:H5'	2.26	0.66
1:A:671:G:H2'	1:A:672:U:C1'	2.25	0.66
1:A:705:U:C5	1:A:706:A:N7	2.64	0.66
1:A:760:G:H2'	19:T:103:GLY:O	1.95	0.66
1:A:821:G:O2'	1:A:822:C:H5'	1.94	0.66
3:B:29:G:H2'	3:B:30:G:H8	1.60	0.66
4:E:78:GLN:NE2	4:E:96:ARG:NH2	2.43	0.66
8:I:23:LYS:CA	8:I:26:ILE:HD12	2.26	0.66
1:A:1373:G:H5''	9:J:36:LYS:HD2	1.76	0.66
11:L:23:ASN:ND2	11:L:57:GLY:O	2.29	0.66
11:L:26:VAL:HG13	11:L:63:ILE:CD1	2.26	0.66
12:M:52:GLY:H	12:M:59:SER:HB2	1.59	0.66
12:M:23:ILE:CG2	12:M:85:LEU:HD23	2.21	0.66
13:N:102:GLY:HA2	13:N:105:VAL:CG2	2.24	0.66
13:N:122:LYS:O	13:N:126:ARG:HG3	1.96	0.66
14:O:62:SER:O	14:O:63:GLY:C	2.34	0.66
18:S:73:LEU:O	18:S:73:LEU:HD13	1.94	0.66
21:V:40:ILE:HG13	21:V:69:HIS:O	1.93	0.66
3:D:55:U:H1'	3:D:58:A:N7	2.10	0.66
1:A:937:A:H1'	1:A:1379:G:N2	2.10	0.66
1:A:236:G:H3'	1:A:237:C:C6	2.30	0.66
1:A:434:U:H2'	1:A:435:C:H6	1.60	0.66
1:A:872:A:H2'	1:A:873:A:C5'	2.24	0.66
1:A:908:A:C2	1:A:909:A:N7	2.64	0.66
4:E:164:VAL:HG22	4:E:165:VAL:N	2.11	0.66
4:E:185:ILE:CG2	4:E:199:TYR:HB2	2.26	0.66
4:E:194:PRO:O	4:E:196:LEU:N	2.29	0.66
1:A:829:G:O2'	4:E:26:PRO:HG2	1.95	0.66
4:E:84:GLU:N	4:E:234:PRO:HG3	2.10	0.66
4:E:96:ARG:N	4:E:96:ARG:HD2	2.11	0.66
5:F:187:ALA:HB3	5:F:198:VAL:CG2	2.26	0.66
6:G:117:ALA:O	6:G:121:VAL:HG23	1.95	0.66
6:G:16:GLY:O	6:G:18:LYS:N	2.28	0.66
7:H:61:TYR:HA	7:H:64:ARG:CG	2.25	0.66
10:K:101:PRO:O	10:K:102:ARG:CB	2.43	0.66
10:K:10:LEU:CD1	10:K:85:ARG:HD3	2.21	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:L:51:ARG:HH11	11:L:51:ARG:CA	2.07	0.66
12:M:8:LEU:HD22	12:M:94:VAL:CG1	2.25	0.66
16:Q:22:THR:CG2	16:Q:33:VAL:HG23	2.26	0.66
20:U:66:LEU:HD12	20:U:67:ALA:CA	2.25	0.66
22:W:25:ARG:HH11	22:W:25:ARG:HG3	1.61	0.66
22:W:61:SER:OG	22:W:62:LEU:N	2.28	0.66
1:A:1182:G:H4'	1:A:1183:A:O5'	1.96	0.66
1:A:1234:C:C5'	1:A:1364:U:O2'	2.41	0.66
1:A:198:G:O2'	1:A:199:G:H5'	1.95	0.66
1:A:250:A:O2'	1:A:251:G:OP2	2.14	0.66
1:A:380:G:N2	1:A:382:A:H3'	2.11	0.66
1:A:435:C:H2'	1:A:436:C:O4'	1.94	0.66
1:A:701:C:O2'	1:A:702:A:OP2	2.12	0.66
1:A:715:A:O2'	1:A:716:A:H5'	1.96	0.66
1:A:943:U:H2'	1:A:944:G:C8	2.31	0.66
4:E:17:PHE:CA	4:E:42:ILE:HG22	2.25	0.66
6:G:101:LEU:HD23	6:G:135:LEU:O	1.96	0.66
6:G:4:TYR:O	6:G:5:ILE:HG23	1.96	0.66
7:H:17:ALA:HA	7:H:26:PHE:CD2	2.31	0.66
9:J:115:ARG:HG3	9:J:118:VAL:HG21	1.78	0.66
10:K:31:PHE:O	10:K:35:ILE:HG12	1.96	0.66
14:O:34:ARG:HD3	14:O:105:TYR:OH	1.95	0.66
1:A:562:C:O2'	14:O:15:ARG:HB3	1.96	0.66
14:O:53:ARG:NE	14:O:92:ASP:OD2	2.29	0.66
15:P:18:ALA:HB2	15:P:45:VAL:CG2	2.25	0.66
15:P:67:GLU:CD	15:P:68:GLY:N	2.49	0.66
16:Q:45:ARG:CG	16:Q:45:ARG:HH11	2.08	0.66
22:W:66:ALA:O	22:W:67:ALA:C	2.33	0.66
3:B:75:C:C5	3:B:76:A:H2	2.13	0.66
1:A:1263:C:C2	1:A:1264:C:C5	2.84	0.66
1:A:1347:G:H3'	11:L:107:ARG:C	2.16	0.66
1:A:437:U:H2'	1:A:438:G:O4'	1.96	0.66
1:A:483:C:OP2	1:A:484:G:H3'	1.95	0.66
1:A:564:C:OP1	14:O:15:ARG:NH2	2.29	0.66
1:A:582:U:OP1	17:R:68:ARG:NH1	2.28	0.66
1:A:967:C:O5'	1:A:967:C:H6	1.78	0.66
3:C:75:C:H6	3:C:76:A:H4'	1.61	0.66
6:G:123:HIS:HB2	6:G:125:HIS:CE1	2.31	0.66
6:G:11:LEU:CA	6:G:14:ARG:HB3	2.26	0.66
10:K:37:ARG:HD3	10:K:41:ARG:CG	2.16	0.66
7:H:152:ARG:HH21	10:K:44:PHE:H	1.41	0.66
11:L:101:PHE:CD1	11:L:101:PHE:N	2.64	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:L:37:PHE:N	11:L:37:PHE:CD2	2.62	0.66
11:L:53:VAL:HG11	11:L:92:TYR:OH	1.96	0.66
12:M:27:ALA:HB2	12:M:85:LEU:CD1	2.26	0.66
13:N:68:ALA:O	13:N:71:LYS:HG3	1.94	0.66
14:O:60:LEU:CD1	14:O:64:TYR:HB3	2.26	0.66
15:P:22:ILE:HB	15:P:25:ILE:HD12	1.77	0.66
13:N:110:ASP:CB	20:U:88:LYS:HD2	2.26	0.66
21:V:62:ILE:CD1	21:V:67:VAL:HG13	2.26	0.66
22:W:73:HIS:O	22:W:76:ALA:N	2.19	0.66
22:W:53:LEU:HD21	22:W:92:LEU:HD13	1.78	0.66
3:B:23:A:H2'	3:B:24:G:O4'	1.96	0.66
1:A:1049:U:O5'	1:A:1049:U:H6	1.78	0.66
1:A:1190:G:OP2	5:F:5:ILE:HG13	1.95	0.66
1:A:1298:C:N4	9:J:114:ARG:HB3	2.10	0.66
1:A:479:C:H2'	1:A:480:U:C2	2.31	0.66
1:A:579:G:O2'	1:A:580:U:H5'	1.95	0.66
1:A:597:G:C6	1:A:644:G:C6	2.84	0.66
1:A:688:G:O2'	1:A:689:C:H5'	1.96	0.66
1:A:696:A:N3	1:A:697:U:O4'	2.29	0.66
1:A:714:G:H2'	1:A:715:A:C8	2.31	0.66
3:C:74:C:H2'	3:C:75:C:H5''	1.77	0.66
3:D:34:G:OP1	3:D:35:A:H8	1.79	0.66
4:E:102:LEU:HB3	4:E:180:LEU:HD13	1.78	0.66
1:A:1100:C:OP2	4:E:98:LEU:HD21	1.95	0.66
6:G:149:ALA:O	6:G:152:SER:HB3	1.95	0.66
6:G:144:ASP:C	6:G:184:LYS:HD3	2.16	0.66
6:G:195:ALA:O	6:G:196:LEU:HD12	1.95	0.66
6:G:30:LYS:HG2	6:G:35:ARG:HD2	1.78	0.66
7:H:149:GLU:HA	7:H:152:ARG:HB3	1.77	0.66
10:K:51:VAL:CG2	10:K:60:ARG:HH21	2.06	0.66
14:O:34:ARG:HB2	14:O:105:TYR:OH	1.95	0.66
14:O:69:TYR:O	14:O:71:PRO:HD3	1.96	0.66
19:T:40:LYS:HZ3	19:T:40:LYS:CB	2.09	0.66
1:A:1003:G:C6	1:A:1004:A:H1'	2.30	0.66
1:A:1040:U:H2'	1:A:1041:A:C8	2.31	0.66
1:A:1158:C:N3	1:A:1160:G:C8	2.64	0.66
1:A:994:A:C8	1:A:1216:G:H4'	2.31	0.66
1:A:953:G:C6	1:A:1229:A:N6	2.64	0.66
1:A:1339:A:H2'	1:A:1340:A:C5'	2.22	0.66
1:A:1378:C:O2	1:A:1378:C:C2'	2.44	0.66
1:A:1388:C:H2'	1:A:1389:C:C6	2.28	0.66
1:A:1526:G:H2'	1:A:1527:C:C5	2.31	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:267:C:N4	1:A:268:C:N4	2.44	0.66
1:A:560:U:O2'	1:A:561:U:OP2	2.13	0.66
1:A:566:G:H4'	1:A:567:G:OP1	1.96	0.66
1:A:647:C:N3	1:A:648:A:N7	2.44	0.66
1:A:87:A:H2'	1:A:88:C:O4'	1.96	0.66
4:E:101:MET:C	4:E:103:THR:H	1.99	0.66
5:F:24:ALA:HB1	5:F:28:GLN:NE2	2.11	0.66
5:F:5:ILE:HG23	12:M:51:ARG:HH12	1.61	0.66
6:G:57:ARG:HH22	7:H:107:ARG:HD3	1.61	0.66
7:H:41:VAL:HG11	7:H:112:LEU:HB3	1.77	0.66
7:H:81:GLU:CA	7:H:90:VAL:HG22	2.25	0.66
1:A:1240:U:OP2	9:J:116:ALA:N	2.29	0.66
9:J:140:ASP:O	9:J:144:MET:CB	2.43	0.66
1:A:942:G:N2	11:L:124:GLN:HE22	1.90	0.66
12:M:24:VAL:CG2	12:M:72:VAL:HG13	2.25	0.66
19:T:65:ILE:HG23	19:T:69:LYS:O	1.96	0.66
1:A:1227:A:OP1	21:V:80:TYR:CE2	2.49	0.66
3:D:15:G:H2'	3:D:60:U:O2	1.96	0.66
1:A:1085:U:H5'	1:A:1094:G:H21	1.58	0.65
1:A:1285:A:O2'	1:A:1286:A:OP2	2.14	0.65
1:A:1376:U:O2	1:A:1377:A:N7	2.29	0.65
1:A:1405:G:H1'	1:A:1519:A:O4'	1.96	0.65
1:A:277:C:H5''	19:T:68:ARG:NH1	2.11	0.65
1:A:454:C:H3'	1:A:455:C:C6	2.32	0.65
1:A:520:A:OP2	14:O:51:ALA:HB1	1.96	0.65
1:A:877:C:O2'	10:K:3:THR:HG21	1.96	0.65
3:C:34:G:C5	3:C:35:A:N7	2.65	0.65
4:E:163:PHE:CD2	4:E:164:VAL:N	2.64	0.65
4:E:217:ARG:HG3	4:E:217:ARG:HH11	1.61	0.65
4:E:69:LEU:HB2	4:E:159:PRO:CB	2.27	0.65
4:E:80:ILE:HG21	4:E:211:ILE:HG21	1.78	0.65
4:E:68:ILE:O	4:E:90:MET:HB3	1.96	0.65
5:F:52:LEU:HA	5:F:70:VAL:CG2	2.23	0.65
6:G:18:LYS:HE3	6:G:33:MET:CB	2.27	0.65
6:G:13:ARG:C	6:G:40:PRO:HD3	2.17	0.65
7:H:102:ALA:HB1	7:H:106:PRO:CB	2.25	0.65
7:H:142:LEU:N	7:H:143:ARG:HE	1.94	0.65
7:H:18:ARG:N	7:H:26:PHE:HB3	2.11	0.65
7:H:43:LEU:HD23	7:H:43:LEU:C	2.16	0.65
9:J:43:PHE:HD2	9:J:44:TYR:CE2	2.14	0.65
11:L:26:VAL:HG13	11:L:63:ILE:HD11	1.78	0.65
15:P:96:LEU:H	15:P:96:LEU:HD23	1.60	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:R:34:LEU:HD12	17:R:38:ARG:HE	1.61	0.65
19:T:41:LYS:O	19:T:42:TYR:CD1	2.49	0.65
21:V:22:LEU:O	21:V:25:LYS:NZ	2.29	0.65
1:A:1069:C:H1'	1:A:1191:A:H2	1.60	0.65
1:A:1266:G:H2'	1:A:1268:A:OP2	1.96	0.65
1:A:1430:C:O2'	1:A:1431:C:O5'	2.14	0.65
1:A:405:U:H3'	1:A:406:G:H5'	1.77	0.65
1:A:68:G:H2'	1:A:69:G:O4'	1.97	0.65
1:A:809:G:C2'	1:A:810:C:H5'	2.27	0.65
1:A:963:G:H2'	1:A:964:A:H8	1.61	0.65
4:E:72:GLY:HA2	4:E:165:VAL:CG2	2.25	0.65
5:F:15:THR:HB	5:F:181:ASN:OD1	1.97	0.65
5:F:76:VAL:HG12	5:F:77:ILE:N	2.11	0.65
6:G:12:CYS:HB3	6:G:31:CYS:O	1.95	0.65
6:G:143:GLY:HA2	6:G:185:PHE:CG	2.32	0.65
6:G:52:SER:O	6:G:54:TYR:N	2.29	0.65
1:A:9:G:C5'	7:H:126:ARG:HD3	2.17	0.65
9:J:5:ARG:HD2	9:J:7:ALA:N	2.09	0.65
10:K:29:SER:O	10:K:32:LYS:HG2	1.96	0.65
14:O:42:THR:OG1	14:O:52:LEU:HD12	1.96	0.65
14:O:35:GLY:O	14:O:82:VAL:HA	1.96	0.65
1:A:1308:U:H3'	15:P:99:ARG:CZ	2.26	0.65
17:R:3:ILE:H	17:R:3:ILE:HD12	1.62	0.65
20:U:52:PRO:HG2	20:U:54:ARG:HB3	1.79	0.65
21:V:51:VAL:HB	21:V:58:VAL:CG2	2.25	0.65
1:A:1320:C:H5''	21:V:70:LYS:HD2	1.77	0.65
23:X:9:ARG:HD2	23:X:9:ARG:H	1.61	0.65
1:A:160:A:C1'	1:A:344:A:N7	2.59	0.65
3:D:66:U:C2	3:D:67:C:C5	2.85	0.65
1:A:1060:C:H4'	12:M:52:GLY:CA	2.26	0.65
1:A:1239:A:H62	1:A:1299:A:H61	1.43	0.65
1:A:286:G:C4	1:A:287:U:C6	2.84	0.65
1:A:380:G:H21	1:A:382:A:H3'	1.60	0.65
1:A:486:U:C2'	1:A:487:A:O5'	2.44	0.65
1:A:767:A:N6	1:A:768:A:C6	2.64	0.65
1:A:867:G:H2'	1:A:868:C:C5	2.31	0.65
1:A:978:A:O2'	1:A:979:C:H5'	1.96	0.65
4:E:126:GLU:O	4:E:129:GLU:HB2	1.96	0.65
4:E:91:PRO:HG2	4:E:155:LEU:HD23	1.78	0.65
5:F:136:GLN:O	5:F:139:GLN:HB2	1.96	0.65
6:G:121:VAL:HG11	6:G:136:PRO:HA	1.79	0.65
6:G:67:ILE:HD12	6:G:67:ILE:C	2.17	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:93:PHE:CA	6:G:96:LEU:HD12	2.21	0.65
9:J:143:ARG:HD3	9:J:144:MET:N	2.10	0.65
12:M:11:PHE:HZ	12:M:65:LEU:HG	1.62	0.65
13:N:126:ARG:HB3	13:N:126:ARG:HH11	1.60	0.65
18:S:49:LEU:HD11	18:S:51:VAL:CG2	2.20	0.65
19:T:29:HIS:CE1	19:T:31:LEU:N	2.64	0.65
21:V:45:VAL:HA	21:V:67:VAL:CG2	2.26	0.65
3:B:22:G:OP2	3:B:22:G:H8	1.79	0.65
1:A:1085:U:OP2	1:A:1086:U:O4	2.15	0.65
1:A:1108:G:H4'	1:A:1191:A:H1'	1.79	0.65
1:A:1185:G:O2'	1:A:1186:G:H5'	1.95	0.65
1:A:127:G:H2'	1:A:128:G:H5'	1.79	0.65
1:A:1299:A:N7	1:A:1301:U:C6	2.64	0.65
1:A:556:C:O2'	1:A:557:G:H5'	1.96	0.65
1:A:719:C:OP2	1:A:720:C:N4	2.30	0.65
1:A:781:A:O2'	1:A:782:A:H5'	1.95	0.65
1:A:940:C:H2'	1:A:941:G:H8	1.60	0.65
1:A:945:G:H1'	1:A:1337:G:O2'	1.96	0.65
3:C:76:A:H3'	3:C:76:A:H8	1.61	0.65
5:F:44:GLU:HA	5:F:52:LEU:HD11	1.78	0.65
7:H:17:ALA:HA	7:H:26:PHE:CB	2.27	0.65
8:I:30:LEU:HD23	8:I:75:LEU:HD13	1.78	0.65
12:M:89:ASP:O	12:M:90:LEU:HG	1.95	0.65
13:N:62:GLN:OE1	13:N:63:LEU:HB2	1.95	0.65
14:O:33:ARG:O	14:O:85:ILE:HG22	1.96	0.65
1:A:1219:U:P	16:Q:19:ARG:HH22	2.19	0.65
18:S:26:ARG:O	18:S:27:LYS:O	2.13	0.65
18:S:42:ARG:O	18:S:43:LYS:HB2	1.96	0.65
19:T:60:ILE:HD13	19:T:62:SER:OG	1.95	0.65
22:W:88:VAL:HG12	22:W:92:LEU:CD1	2.26	0.65
3:D:15:G:N1	3:D:48:C:N4	2.45	0.65
3:D:18:G:C2'	3:D:19:G:O5'	2.44	0.65
1:A:1113:C:O2'	1:A:1114:C:H5'	1.95	0.65
1:A:1226:C:O2'	1:A:1227:A:OP1	2.13	0.65
1:A:1239:A:C2	1:A:1298:C:C5	2.83	0.65
1:A:1409:C:C2	1:A:1410:G:C8	2.85	0.65
1:A:191:G:O2'	22:W:102:GLY:HA2	1.97	0.65
1:A:551:U:H2'	1:A:552:U:H6	1.53	0.65
1:A:611:A:N1	1:A:629:G:N2	2.37	0.65
1:A:878:G:H2'	1:A:879:C:C6	2.31	0.65
1:A:931:C:H2'	1:A:932:C:C5	2.31	0.65
1:A:981:U:H6	1:A:981:U:O5'	1.79	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:130:ARG:CB	4:E:131:PRO:HD2	2.23	0.65
4:E:136:VAL:HA	4:E:139:LYS:HZ3	1.60	0.65
1:A:543:C:P	6:G:10:ARG:HH22	2.19	0.65
8:I:33:TYR:CE2	8:I:74:ASP:HB2	2.32	0.65
8:I:75:LEU:O	8:I:79:LEU:HG	1.97	0.65
1:A:827:U:H5'	10:K:16:ALA:HA	1.78	0.65
1:A:597:G:N2	10:K:94:TYR:CE2	2.57	0.65
13:N:31:THR:HG23	13:N:41:THR:O	1.97	0.65
15:P:34:LEU:HD23	15:P:39:ILE:CG1	2.26	0.65
15:P:15:VAL:HG11	15:P:39:ILE:HD12	1.76	0.65
17:R:6:GLU:HG2	17:R:7:GLU:HG3	1.78	0.65
21:V:39:THR:O	21:V:40:ILE:O	2.14	0.65
3:D:17:C:H5'	3:D:18:G:O5'	1.95	0.65
1:A:344:A:O2'	1:A:345:C:P	2.54	0.65
1:A:1097:C:O2'	1:A:1098:C:H5'	1.97	0.65
3:B:6:G:O2'	3:B:7:A:H5'	1.97	0.65
1:A:1148:U:O2'	1:A:1149:C:H5'	1.96	0.65
1:A:1409:C:O2	1:A:1410:G:C8	2.49	0.65
1:A:236:G:H2'	1:A:237:C:C6	2.31	0.65
1:A:451:A:H61	1:A:480:U:H2'	1.60	0.65
1:A:976:G:C6	1:A:1362:C:C4	2.84	0.65
4:E:102:LEU:H	4:E:102:LEU:HD13	1.58	0.65
4:E:55:PHE:HE2	4:E:218:ALA:HA	1.60	0.65
5:F:39:ILE:HG22	5:F:40:ARG:N	2.11	0.65
6:G:116:GLN:O	6:G:119:GLN:HB3	1.97	0.65
6:G:12:CYS:HA	6:G:19:LEU:CB	2.21	0.65
7:H:133:TYR:CD2	7:H:136:MET:HG3	2.32	0.65
7:H:31:LEU:HD12	7:H:129:ILE:HA	1.77	0.65
7:H:78:HIS:HD2	7:H:78:HIS:H	1.40	0.65
10:K:97:VAL:HG13	10:K:98:LYS:NZ	2.11	0.65
13:N:14:VAL:O	13:N:16:SER:N	2.30	0.65
13:N:66:LEU:O	13:N:69:ALA:HB3	1.97	0.65
1:A:1230:C:O2'	15:P:126:LYS:HE2	1.96	0.65
15:P:15:VAL:O	15:P:18:ALA:HB3	1.97	0.65
1:A:1021:G:H2'	1:A:1022:G:C1'	2.27	0.65
1:A:772:U:H2'	1:A:773:G:H8	1.61	0.65
1:A:1054:C:H3'	1:A:1054:C:H6	1.62	0.65
1:A:1251:A:H61	1:A:1285:A:H2	1.43	0.65
1:A:1357:A:C5	1:A:1358:U:C4	2.84	0.65
1:A:1405:G:H2'	1:A:1406:U:C6	2.31	0.65
1:A:328:C:O2'	1:A:329:A:P	2.55	0.65
1:A:865:A:H2'	1:A:866:C:O4'	1.97	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:C:7:A:O2'	3:C:8:U:P	2.54	0.65
4:E:103:THR:O	4:E:104:ASN:HB3	1.95	0.65
5:F:28:GLN:N	5:F:30:ARG:NE	2.44	0.65
6:G:146:ILE:HD12	6:G:146:ILE:N	2.10	0.65
7:H:12:LEU:O	7:H:30:ALA:HA	1.97	0.65
7:H:17:ALA:HA	7:H:26:PHE:HD2	1.61	0.65
8:I:1:MET:HG2	8:I:68:PRO:HA	1.78	0.65
9:J:6:ARG:CZ	9:J:6:ARG:N	2.60	0.65
10:K:100:ILE:HD13	10:K:125:ARG:HE	1.60	0.65
10:K:32:LYS:HZ1	10:K:32:LYS:H	1.45	0.65
12:M:34:VAL:CG1	12:M:35:SER:H	2.06	0.65
12:M:76:ASN:C	12:M:78:ASN:H	1.98	0.65
15:P:99:ARG:HH11	15:P:99:ARG:HG3	1.60	0.65
5:F:8:ILE:HD13	16:Q:50:LYS:O	1.97	0.65
17:R:42:HIS:CE1	17:R:43:LEU:HA	2.32	0.65
20:U:29:PHE:CD2	20:U:39:VAL:HG11	2.32	0.65
21:V:74:PHE:N	21:V:74:PHE:CD1	2.64	0.65
1:A:1115:C:H2'	1:A:1116:C:H6	1.61	0.65
1:A:1227:A:C8	15:P:117:VAL:CG2	2.79	0.65
1:A:1320:C:C5	21:V:37:ARG:CZ	2.80	0.65
1:A:1366:C:O2'	1:A:1367:C:H5'	1.96	0.65
1:A:1399:C:O2'	1:A:1400:C:OP2	2.15	0.65
1:A:522:C:N4	1:A:523:A:C6	2.65	0.65
1:A:656:C:C2'	1:A:657:G:H5'	2.27	0.65
1:A:969:A:O2'	12:M:55:LYS:NZ	2.25	0.65
3:C:8:U:H3	3:C:14:A:H62	1.44	0.65
4:E:171:ALA:O	4:E:174:VAL:N	2.30	0.65
4:E:97:TRP:HH2	4:E:176:GLU:CG	2.09	0.65
6:G:124:GLY:O	6:G:126:ILE:HG12	1.96	0.65
1:A:409:G:H5'	6:G:24:GLU:HB3	1.79	0.65
10:K:40:ALA:N	10:K:45:ILE:HG23	2.11	0.65
10:K:44:PHE:HE2	10:K:109:ILE:HD13	1.62	0.65
10:K:33:GLU:HG2	10:K:59:LEU:CD1	2.24	0.65
13:N:48:ILE:CG2	13:N:63:LEU:HD13	2.25	0.65
1:A:1329:A:H5'	15:P:29:ARG:CZ	2.27	0.65
16:Q:42:ILE:HA	16:Q:45:ARG:HG2	1.79	0.65
16:Q:52:GLN:O	16:Q:53:LEU:HD23	1.96	0.65
1:A:391:G:OP1	18:S:28:ARG:NH2	2.30	0.65
3:D:60:U:O5'	3:D:60:U:H6	1.79	0.65
3:D:40:C:H2'	3:D:41:C:H5''	1.78	0.65
1:A:983:A:H1'	1:A:1201:A:C8	2.31	0.65
1:A:1202:G:N2	1:A:1203:C:H1'	2.11	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1287:A:H61	1:A:1371:G:C4'	2.10	0.65
1:A:1346:A:H62	1:A:1374:A:H3'	1.61	0.65
1:A:1528:U:C1'	1:A:1529:G:H21	2.10	0.65
1:A:181:G:O2'	1:A:182:U:H5'	1.96	0.65
1:A:187:C:O2	1:A:191(A):G:C6	2.50	0.65
1:A:51:A:H4'	1:A:52:G:C5'	2.27	0.65
1:A:520:A:H8	1:A:521:G:H5''	1.61	0.65
1:A:533:A:C5	1:A:536:C:N4	2.65	0.65
1:A:568:G:N2	1:A:574:A:C2	2.63	0.65
1:A:61:G:H2'	1:A:62:U:H6	1.56	0.65
1:A:679:C:O2'	1:A:680:C:H5'	1.97	0.65
4:E:196:LEU:HD12	4:E:196:LEU:C	2.17	0.65
6:G:173:TRP:CE2	6:G:189:PRO:HB3	2.32	0.65
11:L:113:LYS:HZ2	11:L:119:ALA:CB	2.09	0.65
14:O:25:PRO:O	14:O:27:LEU:N	2.30	0.65
15:P:10:PRO:O	15:P:45:VAL:HG21	1.97	0.65
17:R:53:HIS:CD2	17:R:57:LEU:HD11	2.32	0.65
3:D:18:G:H2'	3:D:19:G:C4'	2.26	0.65
3:D:55:U:H2'	3:D:57:G:N7	2.12	0.65
1:A:129(A):G:H8	1:A:129(A):G:H3'	1.61	0.65
1:A:1378:C:N3	1:A:1379:G:C1'	2.60	0.65
1:A:1440:C:H2'	1:A:1441:G:O4'	1.97	0.65
1:A:103:C:H1'	1:A:151:A:C2	2.32	0.65
1:A:361:G:N7	1:A:362:G:C6	2.65	0.65
1:A:568:G:N2	1:A:574:A:H2	1.95	0.65
1:A:758:G:H8	1:A:758:G:O5'	1.79	0.65
1:A:820:U:O2'	1:A:821:G:OP2	2.14	0.65
1:A:824:C:O4'	10:K:1:MET:N	2.26	0.65
3:C:36:A:N6	3:C:37:A:N6	2.46	0.65
1:A:1338:G:H21	3:C:41:C:C1'	2.10	0.65
4:E:39:ILE:O	4:E:41:ILE:CD1	2.45	0.65
5:F:193:TYR:HB2	5:F:196:LEU:HD22	1.78	0.65
5:F:38:ARG:CG	5:F:94:LEU:HD21	2.27	0.65
6:G:118:ARG:HG3	6:G:136:PRO:CB	2.26	0.65
6:G:56:VAL:HG12	6:G:57:ARG:N	2.10	0.65
7:H:137:GLU:HA	7:H:137:GLU:OE2	1.97	0.65
12:M:5:ARG:HB2	12:M:5:ARG:NH1	2.11	0.65
13:N:44:SER:H	13:N:47:VAL:HB	1.62	0.65
14:O:85:ILE:CD1	14:O:98:TYR:HB2	2.26	0.65
14:O:85:ILE:CD1	14:O:98:TYR:CB	2.74	0.65
15:P:16:ASP:O	15:P:19:LEU:HG	1.97	0.65
19:T:51:TYR:HD1	19:T:51:TYR:H	1.41	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:U:47:THR:N	20:U:49:LYS:HZ3	1.91	0.65
1:A:1171:G:H2'	1:A:1172:C:C6	2.32	0.65
1:A:1256:A:O2'	1:A:1257:U:H1'	1.97	0.64
1:A:124:G:H2'	1:A:125:U:H6	1.61	0.64
1:A:1345:U:H5'	1:A:1346:A:OP1	1.96	0.64
1:A:138:G:N2	1:A:226:G:H1'	2.12	0.64
1:A:1419:G:O2'	1:A:1420:C:H6	1.80	0.64
1:A:1490:C:H2'	1:A:1491:G:H5'	1.75	0.64
1:A:1508:G:O2'	1:A:1509:C:H5'	1.96	0.64
1:A:291:C:C3'	1:A:305:G:H22	1.99	0.64
1:A:307:C:N4	1:A:308:C:H5	1.94	0.64
1:A:59:A:H1'	1:A:354:G:N2	2.12	0.64
1:A:687:A:H61	1:A:703:G:C1'	2.09	0.64
1:A:737:A:O2'	1:A:738:C:H5'	1.97	0.64
1:A:759:A:N6	1:A:760:G:N3	2.44	0.64
1:A:888:G:C2	1:A:889:A:N6	2.63	0.64
3:B:37:A:H2'	3:B:38:A:O4'	1.97	0.64
4:E:118:LEU:CD1	4:E:142:LEU:HD12	2.25	0.64
4:E:208:ILE:HA	4:E:211:ILE:CB	2.27	0.64
4:E:20:GLU:HA	4:E:21:ARG:NH2	2.08	0.64
4:E:69:LEU:HD13	4:E:70:PHE:N	2.12	0.64
5:F:124:ILE:CD1	5:F:130:VAL:HG13	2.27	0.64
5:F:51:GLY:O	5:F:70:VAL:HG13	1.97	0.64
7:H:31:LEU:CD1	7:H:129:ILE:HA	2.27	0.64
1:A:6:G:N1	7:H:96:PRO:HG2	2.12	0.64
11:L:121:ARG:HG2	11:L:121:ARG:HH11	1.60	0.64
14:O:54:LYS:CB	14:O:70:ILE:HB	2.26	0.64
14:O:58:VAL:HG12	14:O:59:ARG:N	2.10	0.64
3:C:29:G:H5'	15:P:118:ALA:O	1.97	0.64
16:Q:40:CYS:O	16:Q:44:LEU:CB	2.45	0.64
17:R:33:THR:HG23	17:R:87:ILE:HD11	1.79	0.64
19:T:62:SER:CB	19:T:72:ARG:HG2	2.26	0.64
19:T:82:MET:HA	19:T:85:VAL:HG21	1.78	0.64
21:V:62:ILE:CD1	21:V:67:VAL:HA	2.26	0.64
22:W:57:ARG:O	22:W:59:ALA:N	2.29	0.64
23:X:5:ASP:O	23:X:7:ARG:HG2	1.97	0.64
3:D:18:G:N2	3:D:57:G:H2'	2.12	0.64
2:1:48:U:OP2	2:1:48:U:H6	1.78	0.64
19:T:24:GLU:CD	19:T:24:GLU:N	2.51	0.64
1:A:1057:G:H2'	1:A:1058:G:C8	2.32	0.64
1:A:955:U:C1'	1:A:1227:A:H61	2.03	0.64
1:A:1243:C:OP2	23:X:10:ARG:CZ	2.45	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1298:C:O2	1:A:1298:C:H2'	1.97	0.64
1:A:1321:C:C4	1:A:1322:C:H2'	2.32	0.64
1:A:1358:U:OP2	1:A:1359:C:C5	2.49	0.64
1:A:1371:G:P	11:L:11:LYS:HE3	2.37	0.64
1:A:314:C:H2'	1:A:315:A:H1'	1.78	0.64
1:A:579:G:O5'	1:A:579:G:H8	1.80	0.64
1:A:603:U:H2'	1:A:604:G:H8	1.62	0.64
1:A:675:A:H1'	13:N:116:HIS:CG	2.33	0.64
1:A:754:C:O2	1:A:754:C:C3'	2.46	0.64
4:E:15:VAL:HG21	4:E:210:SER:N	2.11	0.64
5:F:84:ILE:O	5:F:101:LEU:HD13	1.97	0.64
6:G:101:LEU:CB	6:G:138:TYR:O	2.46	0.64
9:J:17:VAL:HG11	9:J:44:TYR:CE2	2.32	0.64
11:L:15:ALA:CB	11:L:77:ILE:HG13	2.27	0.64
12:M:7:LYS:HG3	12:M:71:LEU:HD11	1.78	0.64
15:P:97:PRO:CB	15:P:101:GLN:HB2	2.25	0.64
16:Q:26:ARG:HB2	16:Q:43:CYS:CB	2.27	0.64
18:S:6:LEU:HD22	18:S:6:LEU:C	2.18	0.64
19:T:4:LYS:CE	19:T:5:VAL:O	2.44	0.64
19:T:6:LEU:HD12	19:T:6:LEU:C	2.17	0.64
1:A:189:U:C4	19:T:72:ARG:NH2	2.63	0.64
19:T:88:TYR:CA	19:T:91:ARG:NH2	2.60	0.64
20:U:63:GLN:HA	20:U:66:LEU:HD11	1.79	0.64
21:V:40:ILE:HG12	21:V:71:LEU:HD23	1.77	0.64
1:A:772:U:O2'	1:A:773:G:H5'	1.97	0.64
1:A:1125:U:H4'	1:A:1126:U:C5	2.32	0.64
1:A:1196:U:H4'	1:A:1197:G:O5'	1.98	0.64
1:A:1295:G:N2	1:A:1302:U:H3	1.95	0.64
1:A:1389:C:H2'	1:A:1390:U:H5'	1.80	0.64
1:A:1431:C:H42	1:A:1469:G:H1	1.45	0.64
1:A:665:A:H2'	1:A:725:G:H21	1.57	0.64
1:A:755:G:H2'	1:A:756:C:C6	2.33	0.64
3:C:20:U:O2	3:C:20:U:C2'	2.46	0.64
3:C:21:A:N1	3:C:48:C:C4	2.65	0.64
4:E:224:GLN:HG2	4:E:229:VAL:CG2	2.27	0.64
4:E:49:GLU:O	4:E:52:GLU:CD	2.36	0.64
4:E:61:LEU:HD11	4:E:68:ILE:HD13	1.78	0.64
5:F:112:SER:O	5:F:116:VAL:HG23	1.96	0.64
5:F:11:ARG:HD3	5:F:15:THR:CG2	2.26	0.64
6:G:19:LEU:C	6:G:21:LEU:N	2.45	0.64
8:I:2:ARG:CZ	8:I:69:GLU:HG2	2.28	0.64
1:A:1373:G:C5'	9:J:36:LYS:HB2	2.27	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:K:38:ILE:HD11	10:K:118:VAL:HB	1.79	0.64
10:K:26:VAL:CG2	10:K:27:PRO:HD2	2.23	0.64
10:K:29:SER:C	10:K:32:LYS:HZ2	2.01	0.64
11:L:9:ARG:HD2	11:L:14:VAL:HG13	1.80	0.64
14:O:48:PRO:CG	14:O:49:ASN:H	2.10	0.64
19:T:59:ILE:CG1	19:T:71:PHE:HB3	2.27	0.64
21:V:38:SER:HB3	21:V:71:LEU:HG	1.78	0.64
22:W:26:ASN:ND2	22:W:27:LYS:N	2.44	0.64
1:A:1326:C:H5''	23:X:12:LYS:HZ1	1.63	0.64
1:A:350:G:N2	1:A:351:G:C2	2.66	0.64
1:A:1278:U:H5'	1:A:1279:A:H5'	1.78	0.64
1:A:132:C:N3	1:A:231:G:C2	2.66	0.64
1:A:1434:A:N6	1:A:1435:G:C2	2.66	0.64
1:A:518:C:C5	1:A:530:G:C5	2.85	0.64
1:A:921:U:O2'	1:A:922:G:H5'	1.98	0.64
4:E:208:ILE:CD1	4:E:239:VAL:HG11	2.27	0.64
4:E:219:VAL:O	4:E:223:ILE:CG1	2.46	0.64
5:F:122:GLU:HA	5:F:125:GLU:CG	2.19	0.64
5:F:132:ARG:HB3	5:F:136:GLN:NE2	2.13	0.64
7:H:140:ARG:CB	7:H:140:ARG:NH1	2.61	0.64
8:I:12:PRO:HB2	8:I:57:GLN:HE21	1.61	0.64
8:I:46:ARG:NH2	20:U:37:VAL:CG1	2.59	0.64
9:J:65:ALA:N	9:J:128:ALA:HA	2.12	0.64
9:J:155:ARG:NH1	9:J:156:TRP:N	2.40	0.64
10:K:64:LYS:O	10:K:79:VAL:HB	1.98	0.64
13:N:53:SER:OG	13:N:54:ARG:N	2.28	0.64
14:O:85:ILE:HA	14:O:99:HIS:O	1.97	0.64
15:P:10:PRO:HG3	15:P:18:ALA:CB	2.27	0.64
16:Q:34:TYR:OH	16:Q:44:LEU:HD22	1.97	0.64
1:A:1007:C:H2'	1:A:1008:C:C6	2.33	0.64
1:A:1382:C:H6	1:A:1382:C:O5'	1.80	0.64
2:1:38:U:O2'	2:1:39:U:H5'	1.98	0.64
1:A:109:A:H4'	1:A:110:C:OP2	1.95	0.64
1:A:1203:C:H2'	1:A:1204:A:O4'	1.97	0.64
1:A:1378:C:OP1	9:J:6:ARG:HD3	1.97	0.64
1:A:449:C:C2'	1:A:450:G:O4'	2.44	0.64
1:A:817:C:O2	1:A:817:C:C2'	2.45	0.64
1:A:858:G:N2	1:A:870:U:OP2	2.30	0.64
3:C:74:C:H3'	3:C:75:C:H5''	1.78	0.64
4:E:12:GLU:C	4:E:14:GLY:H	2.01	0.64
4:E:130:ARG:HD3	4:E:131:PRO:CD	2.27	0.64
4:E:58:ILE:O	4:E:61:LEU:HD22	1.98	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:14:ILE:HG22	5:F:15:THR:N	2.12	0.64
6:G:141:ARG:HH11	6:G:142:PRO:CD	2.10	0.64
7:H:84:PHE:CG	7:H:134:ALA:HA	2.33	0.64
9:J:29:LYS:NZ	9:J:102:ARG:HB2	2.12	0.64
9:J:125:MET:HG3	9:J:126:ASP:N	2.10	0.64
10:K:32:LYS:CG	10:K:33:GLU:N	2.61	0.64
13:N:125:PHE:CD1	13:N:125:PHE:N	2.66	0.64
13:N:63:LEU:O	13:N:66:LEU:HB2	1.97	0.64
17:R:49:ASP:CG	17:R:52:SER:HB2	2.17	0.64
19:T:35:VAL:HG12	19:T:36:ILE:N	2.13	0.64
20:U:73:ALA:C	20:U:79:LEU:HD11	2.16	0.64
1:A:111:G:H5''	1:A:112:G:OP2	1.98	0.64
1:A:1208:C:H2'	1:A:1209:C:C6	2.33	0.64
1:A:1226:C:O3'	15:P:111:LYS:NZ	2.28	0.64
1:A:1273:G:H3'	1:A:1274:G:H8	1.63	0.64
1:A:1317:C:H2'	1:A:1318:A:O4'	1.97	0.64
1:A:1367:C:OP1	11:L:115:GLY:HA2	1.97	0.64
1:A:394:G:C6	1:A:395:C:N4	2.66	0.64
1:A:452:A:N6	1:A:480:U:C2	2.66	0.64
1:A:748:C:C3'	1:A:748:C:C6	2.81	0.64
1:A:809:G:H2'	1:A:810:C:H5'	1.79	0.64
1:A:765:G:H21	1:A:816:A:H2	1.45	0.64
1:A:841:U:O2	1:A:841:U:H2'	1.97	0.64
3:C:47:U:C6	3:C:47:U:H3'	2.33	0.64
5:F:35:GLU:O	5:F:38:ARG:HG2	1.97	0.64
6:G:205:GLU:CD	7:H:100:VAL:HB	2.17	0.64
8:I:30:LEU:CA	8:I:75:LEU:HD11	2.23	0.64
8:I:78:GLU:O	8:I:81:ILE:HD12	1.96	0.64
9:J:38:LEU:HA	9:J:41:ARG:HB2	1.80	0.64
1:A:684:A:C4'	13:N:12:ARG:NH2	2.55	0.64
13:N:18:ARG:HB2	13:N:20:TYR:HE1	1.62	0.64
14:O:76:ASN:ND2	14:O:77:LEU:HD23	2.13	0.64
15:P:29:ARG:CZ	15:P:64:TRP:NE1	2.61	0.64
1:A:667:G:H4'	17:R:51:HIS:ND1	2.12	0.64
18:S:14:ASN:HB2	18:S:42:ARG:HH12	1.63	0.64
22:W:26:ASN:HD22	22:W:27:LYS:N	1.95	0.64
1:A:1072:G:C6	1:A:1073:U:C4	2.86	0.64
1:A:1100:C:C2'	4:E:98:LEU:HD11	2.28	0.64
1:A:983:A:C1'	1:A:1201:A:N7	2.59	0.64
1:A:1404:C:C1'	1:A:1499:A:N1	2.61	0.64
1:A:1436:U:O5'	1:A:1436:U:H6	1.80	0.64
1:A:1471:G:H2'	1:A:1472:U:C6	2.33	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:55:A:H2'	1:A:56:U:H5'	1.77	0.64
1:A:689:C:C2	1:A:690:G:C8	2.86	0.64
1:A:982:U:H1'	1:A:983:A:N6	2.12	0.64
1:A:959:A:H1'	1:A:985:C:C1'	2.27	0.64
4:E:78:GLN:HE22	4:E:96:ARG:NH2	1.96	0.64
5:F:51:GLY:O	5:F:52:LEU:O	2.16	0.64
6:G:110:PHE:O	6:G:161:ASN:ND2	2.31	0.64
6:G:20:TYR:C	6:G:26:CYS:SG	2.75	0.64
7:H:76:ILE:HG22	7:H:78:HIS:CD2	2.33	0.64
8:I:76:ALA:O	8:I:80:ARG:HG3	1.98	0.64
10:K:126:LYS:CD	10:K:127:LEU:N	2.61	0.64
10:K:29:SER:HB2	10:K:32:LYS:HZ3	1.63	0.64
11:L:117:HIS:HD2	11:L:121:ARG:HD3	1.63	0.64
11:L:28:VAL:O	11:L:30:GLY:N	2.30	0.64
11:L:38:GLN:O	11:L:40:LEU:N	2.30	0.64
1:A:528:C:H42	14:O:49:ASN:HD21	1.43	0.64
15:P:19:LEU:C	15:P:25:ILE:HG21	2.18	0.64
16:Q:40:CYS:HB2	16:Q:42:ILE:HG13	1.80	0.64
17:R:34:LEU:CG	17:R:35:ARG:H	2.09	0.64
1:A:659:U:OP1	17:R:9:GLN:NE2	2.31	0.64
21:V:30:LEU:HA	21:V:49:ILE:CA	2.26	0.64
22:W:13:LEU:O	22:W:14:LYS:C	2.36	0.64
1:A:1154:G:H2'	1:A:1155:G:C8	2.31	0.64
1:A:791:G:H21	1:A:1497:G:H4'	1.63	0.64
1:A:1506:U:N3	1:A:1522:U:OP1	2.25	0.64
1:A:130:A:H4'	1:A:190:G:N3	2.12	0.64
1:A:287:U:C2'	1:A:287:U:O2	2.46	0.64
1:A:707:C:H4'	13:N:20:TYR:CD2	2.32	0.64
1:A:723:U:H5	2:1:30:U:O2'	1.77	0.64
1:A:731:G:O2'	1:A:732:C:H5'	1.97	0.64
1:A:740:U:H2'	1:A:741:G:H8	1.63	0.64
3:C:21:A:N7	3:C:46:G:O6	2.30	0.64
4:E:163:PHE:CE1	4:E:186:ALA:HA	2.32	0.64
5:F:134:ILE:HD11	5:F:153:VAL:HG11	1.79	0.64
5:F:53:ALA:CB	5:F:115:LEU:HD21	2.27	0.64
6:G:108:LEU:O	6:G:110:PHE:N	2.30	0.64
6:G:170:VAL:CG2	6:G:176:LEU:HB3	2.28	0.64
8:I:4:TYR:CZ	8:I:72:VAL:HG11	2.33	0.64
8:I:7:ASN:CG	8:I:62:TRP:HD1	2.01	0.64
9:J:111:ARG:HH11	9:J:111:ARG:HB3	1.62	0.64
9:J:69:VAL:HB	9:J:104:LEU:HD11	1.80	0.64
10:K:126:LYS:HE3	10:K:127:LEU:HB2	1.80	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:N:79:SER:HA	13:N:104:GLN:CG	2.28	0.64
20:U:74:ARG:HA	20:U:79:LEU:HD13	1.76	0.64
20:U:74:ARG:H	20:U:74:ARG:HD2	1.62	0.64
21:V:11:VAL:O	21:V:12:ASP:O	2.16	0.64
21:V:40:ILE:HG12	21:V:71:LEU:CD2	2.28	0.64
22:W:55:ILE:O	22:W:56:MET:C	2.37	0.64
3:D:8:U:OP1	3:D:49:C:H5'	1.98	0.64
1:A:1376:U:H3	1:A:1377:A:H62	1.45	0.64
1:A:1064:G:OP1	1:A:1386:G:C4'	2.46	0.64
1:A:1392:G:H8	1:A:1392:G:O5'	1.81	0.64
1:A:318:G:O2'	1:A:1468:A:O2'	2.12	0.64
1:A:254:G:H2'	1:A:255:G:H8	1.63	0.64
1:A:362:G:O3'	14:O:33:ARG:NH2	2.31	0.64
1:A:529:G:N1	14:O:49:ASN:HB3	2.10	0.64
1:A:560:U:O4'	1:A:566:G:N2	2.31	0.64
4:E:115:LEU:HA	4:E:118:LEU:HD12	1.80	0.64
6:G:191:ARG:NH1	6:G:192:GLU:HA	2.13	0.64
7:H:62:ALA:O	7:H:66:MET:SD	2.55	0.64
9:J:74:GLU:CG	9:J:75:VAL:N	2.61	0.64
10:K:67:PRO:HD2	10:K:77:GLU:H	1.62	0.64
10:K:89:PRO:HB3	10:K:92:ARG:HH21	1.63	0.64
13:N:48:ILE:O	13:N:49:GLY:C	2.36	0.64
19:T:41:LYS:HG2	19:T:42:TYR:N	2.11	0.64
19:T:43:LEU:HD22	19:T:44:ALA:O	1.97	0.64
20:U:56:THR:O	20:U:58:LEU:HG	1.97	0.64
15:P:87:TYR:HB2	21:V:73:GLU:O	1.98	0.64
2:1:35:U:O3'	2:1:36:U:O4'	2.16	0.64
1:A:1005:A:H1'	1:A:1036:G:N2	2.12	0.64
1:A:1084:G:C4	1:A:1085:U:C5	2.80	0.64
1:A:1274:G:N2	1:A:1275:A:N6	2.46	0.64
1:A:127:G:C2'	1:A:128:G:H5'	2.28	0.64
1:A:1310:G:H3'	21:V:2:PRO:CD	2.21	0.64
1:A:1519:A:C2'	1:A:1520:G:H5'	2.27	0.64
1:A:50:A:C2	1:A:360:A:N3	2.65	0.64
1:A:687:A:O2'	1:A:688:G:P	2.56	0.64
1:A:80:G:N3	1:A:81:G:H1'	2.13	0.64
1:A:967:C:O5'	1:A:967:C:C6	2.50	0.64
1:A:981:U:C6	1:A:981:U:O5'	2.51	0.64
4:E:169:LYS:HE2	4:E:170:GLU:N	2.13	0.64
4:E:175:ARG:HA	4:E:178:ARG:HB2	1.80	0.64
4:E:76:GLN:O	4:E:77:ALA:HB2	1.98	0.64
5:F:157:ILE:HG13	5:F:164:ARG:HG2	1.80	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:8:ILE:CG1	5:F:16:ARG:HD2	2.28	0.64
11:L:113:LYS:HD2	11:L:113:LYS:N	2.13	0.64
11:L:113:LYS:NZ	11:L:119:ALA:HB1	2.13	0.64
14:O:117:ARG:NH2	14:O:124:LYS:HG3	2.13	0.64
15:P:14:ARG:HB3	15:P:44:ARG:HD2	1.79	0.64
5:F:29:TYR:HB3	16:Q:36:PHE:HE1	1.63	0.64
17:R:65:ARG:O	17:R:68:ARG:CB	2.45	0.64
3:B:72:C:N4	3:B:73:A:H62	1.95	0.64
1:A:1243:C:OP1	23:X:10:ARG:HD2	1.98	0.63
1:A:1346:A:H8	1:A:1348:U:C2	2.16	0.63
1:A:922:G:O2'	1:A:1398:A:N1	2.27	0.63
1:A:184:G:C4'	1:A:224:C:H4'	2.28	0.63
1:A:236:G:C4	1:A:237:C:C5	2.86	0.63
1:A:378:G:H2'	1:A:379:C:C6	2.33	0.63
1:A:936:C:H2'	1:A:937:A:O4'	1.97	0.63
1:A:966:G:H2'	1:A:967:C:C6	2.33	0.63
1:A:981:U:H6	1:A:981:U:H3'	1.61	0.63
3:C:74:C:H2'	3:C:75:C:C5'	2.28	0.63
4:E:155:LEU:HB3	4:E:159:PRO:HG3	1.79	0.63
4:E:175:ARG:HA	4:E:178:ARG:HG3	1.80	0.63
4:E:64:ARG:H	4:E:64:ARG:HD2	1.63	0.63
5:F:131:ARG:HH12	7:H:51:VAL:HG23	1.62	0.63
1:A:1206:G:H4'	5:F:192:THR:C	2.19	0.63
5:F:191:THR:O	5:F:193:TYR:N	2.31	0.63
6:G:199:ASN:CG	6:G:200:GLU:H	1.99	0.63
8:I:60:PHE:N	8:I:60:PHE:CD1	2.66	0.63
9:J:69:VAL:HG11	9:J:104:LEU:CD2	2.27	0.63
9:J:143:ARG:CD	9:J:144:MET:H	2.11	0.63
10:K:102:ARG:CZ	10:K:102:ARG:CB	2.69	0.63
12:M:49:VAL:O	12:M:60:ARG:HB3	1.98	0.63
14:O:83:VAL:HA	14:O:104:VAL:O	1.98	0.63
15:P:49:THR:HB	15:P:52:GLU:OE1	1.97	0.63
22:W:85:MET:HA	22:W:88:VAL:CG2	2.28	0.63
9:J:67:GLU:OE2	9:J:67:GLU:HA	1.97	0.63
1:A:1003:G:C4	1:A:1004:A:H1'	2.32	0.63
1:A:1079:G:C2	1:A:1080:A:N1	2.65	0.63
1:A:301:G:N2	1:A:302:G:C1'	2.61	0.63
1:A:307:C:N4	1:A:308:C:C5	2.66	0.63
1:A:493:G:H2'	1:A:494:U:H5	1.63	0.63
1:A:620:C:O2'	1:A:621:A:H5'	1.98	0.63
1:A:627:G:H2'	1:A:628:G:H8	1.63	0.63
1:A:611:A:N6	1:A:629:G:N1	2.25	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:640:A:O2'	1:A:641:U:H5'	1.98	0.63
1:A:701:C:H5''	1:A:702:A:H3'	1.79	0.63
1:A:585:G:N3	1:A:879:C:H4'	2.13	0.63
1:A:907:A:OP1	1:A:907:A:H4'	1.98	0.63
1:A:978:A:H8	1:A:980:C:H41	1.45	0.63
4:E:97:TRP:NE1	4:E:101:MET:SD	2.72	0.63
5:F:12:LEU:HD21	16:Q:58:LYS:N	2.13	0.63
8:I:14:LEU:HD13	8:I:15:ASP:N	2.13	0.63
8:I:45:LEU:HG	8:I:59:TYR:CD1	2.34	0.63
11:L:19:LEU:HD23	11:L:20:ARG:N	2.12	0.63
13:N:23:ALA:HB1	13:N:28:THR:OG1	1.99	0.63
14:O:32:PHE:HB2	14:O:84:LEU:HD21	1.80	0.63
14:O:53:ARG:CZ	14:O:93:LEU:HD22	2.28	0.63
14:O:93:LEU:N	14:O:93:LEU:HD23	2.11	0.63
1:A:581:G:H4'	17:R:64:ARG:NH1	2.13	0.63
18:S:14:ASN:HA	18:S:42:ARG:NH1	2.13	0.63
18:S:27:LYS:H	18:S:27:LYS:NZ	1.96	0.63
21:V:18:LYS:CA	21:V:18:LYS:HE3	2.20	0.63
3:D:19:G:H21	3:D:57:G:C1'	2.08	0.63
3:D:59:U:O2	3:D:59:U:H2'	1.97	0.63
1:A:1004:A:O2'	1:A:1005:A:O5'	2.16	0.63
1:A:1252:A:C6	1:A:1253:G:N7	2.65	0.63
1:A:236:G:N3	1:A:236:G:H2'	2.12	0.63
1:A:54:C:N4	1:A:352:C:H2'	2.14	0.63
1:A:494:U:H2'	1:A:494:U:O2	1.97	0.63
1:A:569:C:H1'	1:A:574:A:C2	2.33	0.63
1:A:817:C:O2'	1:A:818:G:O5'	2.15	0.63
1:A:927:G:H4'	1:A:1503:A:N7	2.13	0.63
1:A:961:U:C5	1:A:983:A:N6	2.66	0.63
3:B:31:A:H2'	3:B:32:U:H5'	1.81	0.63
5:F:152:ILE:HG22	5:F:167:TRP:HB3	1.81	0.63
5:F:57:ILE:HG22	5:F:59:ARG:HH21	1.63	0.63
6:G:14:ARG:C	6:G:14:ARG:HD3	2.18	0.63
7:H:9:LYS:CG	7:H:112:LEU:HG	2.27	0.63
9:J:29:LYS:CD	9:J:101:LEU:HD22	2.28	0.63
9:J:113:GLU:CB	9:J:118:VAL:HG11	2.29	0.63
9:J:44:TYR:O	9:J:47:CYS:N	2.32	0.63
10:K:40:ALA:HA	10:K:45:ILE:HG23	1.81	0.63
12:M:8:LEU:HD22	12:M:94:VAL:HG12	1.80	0.63
13:N:62:GLN:O	13:N:65:ALA:HB3	1.98	0.63
13:N:75:TYR:O	13:N:77:MET:N	2.30	0.63
1:A:363:A:C8	14:O:31:PRO:HD2	2.33	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:T:78:GLU:HG2	19:T:81:ARG:HB2	1.80	0.63
20:U:66:LEU:CD1	20:U:67:ALA:N	2.52	0.63
21:V:36:ARG:HA	21:V:71:LEU:HD12	1.80	0.63
21:V:5:LEU:HB2	21:V:9:VAL:CG2	2.11	0.63
1:A:489:C:O2'	1:A:490:G:H5'	1.98	0.63
1:A:1520:G:C2'	1:A:1521:G:H8	2.11	0.63
1:A:185:A:H2'	1:A:186:C:H6	1.61	0.63
1:A:50:A:C6	1:A:361:G:H4'	2.33	0.63
1:A:372:C:N4	1:A:389:A:H62	1.95	0.63
1:A:218:C:H5'	1:A:466:C:H41	1.64	0.63
1:A:481:G:H5'	1:A:482:A:OP1	1.97	0.63
1:A:581:G:H2'	1:A:582:U:OP2	1.98	0.63
3:C:74:C:C3'	3:C:75:C:H5''	2.29	0.63
4:E:25:ASN:O	4:E:27:LYS:N	2.31	0.63
4:E:87:ARG:O	4:E:89:GLY:N	2.32	0.63
5:F:172:ARG:HB3	5:F:172:ARG:CZ	2.27	0.63
6:G:154:ASN:HD22	6:G:155:LEU:HD22	1.62	0.63
1:A:736:C:H4'	8:I:89:MET:SD	2.38	0.63
9:J:72:ARG:HH22	9:J:138:LYS:NZ	1.96	0.63
9:J:42:ILE:CG2	9:J:120:ILE:HD11	2.29	0.63
13:N:91:ARG:CG	13:N:95:ILE:HD11	2.29	0.63
16:Q:16:PHE:O	16:Q:18:VAL:N	2.32	0.63
18:S:35:LYS:O	18:S:36:ILE:HG23	1.98	0.63
19:T:3:LYS:HD3	19:T:61:GLU:O	1.97	0.63
22:W:8:ARG:HH11	22:W:8:ARG:HB3	1.63	0.63
1:A:1003:G:O5'	1:A:1003:G:H8	1.81	0.63
1:A:1039:C:N4	1:A:1040:U:O4	2.31	0.63
1:A:1161:C:C2	1:A:1162:C:C5	2.87	0.63
1:A:1260:C:H4'	1:A:1284:C:C5'	2.28	0.63
1:A:1423:G:H2'	1:A:1424:C:H6	1.62	0.63
1:A:597:G:H2'	1:A:598:U:H5'	1.79	0.63
1:A:601:C:H2'	1:A:602:A:C8	2.31	0.63
1:A:698:G:H2'	1:A:699:C:C6	2.32	0.63
1:A:706:A:C2	1:A:707:C:C6	2.86	0.63
1:A:722:A:O3'	1:A:723:U:N3	2.31	0.63
1:A:588:G:H1'	1:A:753:A:N1	2.12	0.63
1:A:811:C:H6	1:A:811:C:H3'	1.63	0.63
1:A:570:G:C5'	1:A:820:U:H1'	2.19	0.63
1:A:827:U:H4'	10:K:19:VAL:CG2	2.26	0.63
1:A:983:A:N3	1:A:983:A:C3'	2.61	0.63
4:E:185:ILE:CB	4:E:199:TYR:HB2	2.29	0.63
4:E:39:ILE:O	4:E:41:ILE:HD12	1.98	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1191:A:OP1	5:F:4:LYS:CG	2.47	0.63
6:G:120:LEU:HA	6:G:125:HIS:NE2	2.14	0.63
9:J:135:VAL:HG12	9:J:139:GLU:OE2	1.98	0.63
1:A:826:C:H5'	10:K:12:ARG:HH21	1.63	0.63
10:K:68:ARG:NH2	10:K:74:PRO:HB3	2.13	0.63
11:L:19:LEU:CD2	11:L:20:ARG:N	2.62	0.63
14:O:28:LYS:HZ1	14:O:33:ARG:NH2	1.89	0.63
15:P:19:LEU:O	15:P:25:ILE:HD12	1.98	0.63
21:V:20:LEU:HG	21:V:21:GLU:H	1.63	0.63
21:V:38:SER:HB3	21:V:71:LEU:HD12	1.80	0.63
22:W:59:ALA:O	22:W:60:GLU:C	2.36	0.63
1:A:1128:C:O2	1:A:1146:A:N6	2.31	0.63
1:A:1255:G:N2	1:A:1276:G:N2	2.45	0.63
1:A:1261:A:H3'	1:A:1262:C:C5	2.33	0.63
1:A:1399:C:C4	1:A:1502:A:N7	2.66	0.63
1:A:224:C:C2	1:A:225:C:C5	2.87	0.63
1:A:375:U:O2'	1:A:376:G:H5'	1.99	0.63
1:A:676:A:H2'	1:A:677:U:C6	2.34	0.63
1:A:947:G:N2	1:A:948:C:C2	2.67	0.63
5:F:182:ILE:CG2	5:F:202:ILE:O	2.47	0.63
6:G:128:VAL:CG2	6:G:133:VAL:HB	2.29	0.63
6:G:15:GLU:CB	6:G:19:LEU:HD11	2.28	0.63
6:G:61:LYS:O	6:G:64:LEU:HB3	1.98	0.63
7:H:51:VAL:HB	7:H:52:PRO:CD	2.21	0.63
8:I:1:MET:SD	8:I:68:PRO:HG3	2.39	0.63
8:I:53:ALA:CB	8:I:86:ARG:HD2	2.28	0.63
9:J:129:GLU:CB	9:J:131:LYS:HE2	2.29	0.63
10:K:137:VAL:HG12	10:K:138:TRP:N	2.14	0.63
10:K:21:LYS:C	10:K:63:LEU:HD13	2.18	0.63
10:K:6:ILE:HG13	10:K:85:ARG:NH2	2.14	0.63
12:M:5:ARG:HD3	12:M:6:ILE:N	2.14	0.63
12:M:85:LEU:N	12:M:85:LEU:HD12	2.13	0.63
13:N:101:SER:O	13:N:103:LEU:N	2.32	0.63
9:J:153:HIS:HE1	13:N:58:PRO:CD	2.11	0.63
1:A:519:C:C5'	14:O:51:ALA:HB2	2.29	0.63
14:O:97:ARG:HB3	14:O:98:TYR:CE1	2.33	0.63
15:P:13:LYS:HA	15:P:44:ARG:NE	2.14	0.63
15:P:23:TYR:CE2	15:P:70:LEU:HD13	2.33	0.63
17:R:42:HIS:ND1	17:R:42:HIS:C	2.52	0.63
17:R:33:THR:HG23	17:R:87:ILE:HD12	1.80	0.63
18:S:43:LYS:HG3	18:S:48:TRP:CZ3	2.34	0.63
18:S:43:LYS:HG3	18:S:48:TRP:CE3	2.33	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:T:58:GLU:CD	19:T:74:LEU:HB3	2.19	0.63
3:D:75:C:C3'	3:D:76:A:H4'	2.21	0.63
1:A:1192:C:N4	1:A:1193:G:C5	2.67	0.63
1:A:1202:G:H21	1:A:1203:C:C1'	2.11	0.63
1:A:1254:C:OP1	12:M:45:ARG:CZ	2.47	0.63
1:A:1321:C:O5'	1:A:1321:C:C6	2.51	0.63
1:A:1441:G:H1'	1:A:1461:G:N2	2.14	0.63
1:A:815:A:N1	1:A:1529:G:C2	2.67	0.63
1:A:775:G:H2'	1:A:776:G:C8	2.34	0.63
1:A:791:G:N2	1:A:1497:G:O3'	2.32	0.63
4:E:56:ARG:HB3	4:E:56:ARG:CZ	2.29	0.63
4:E:82:ARG:HD2	4:E:92:TYR:HH	1.63	0.63
5:F:82:GLU:O	5:F:85:ARG:HB3	1.97	0.63
5:F:87:LEU:HB2	5:F:101:LEU:HD11	1.81	0.63
7:H:96:PRO:C	7:H:98:THR:N	2.49	0.63
8:I:68:PRO:HB2	8:I:71:ARG:HG2	1.80	0.63
10:K:38:ILE:O	10:K:41:ARG:HB2	1.99	0.63
12:M:39:PRO:HA	12:M:70:ARG:HH11	1.63	0.63
12:M:79:ARG:CZ	12:M:82:ILE:HB	2.28	0.63
13:N:106:LYS:CG	13:N:107:SER:H	2.09	0.63
13:N:21:ILE:HG22	13:N:30:VAL:CG2	2.27	0.63
13:N:69:ALA:HB1	13:N:103:LEU:CD1	2.28	0.63
14:O:110:VAL:CG2	14:O:113:ARG:HG3	2.29	0.63
14:O:27:LEU:HD23	14:O:33:ARG:CD	2.28	0.63
14:O:38:THR:HG23	14:O:39:VAL:H	1.63	0.63
17:R:63:ARG:HH12	17:R:87:ILE:CD1	2.11	0.63
18:S:75:ARG:HA	18:S:80:PHE:HB2	1.79	0.63
19:T:63:ARG:HG2	19:T:64:PRO:N	2.12	0.63
12:M:3:LYS:HE3	12:M:77:PRO:CD	2.29	0.63
2:1:28:G:H2'	2:1:29:G:H8	1.63	0.63
2:1:33:U:H2'	2:1:34:U:C4	2.33	0.63
1:A:237:C:OP1	19:T:40:LYS:NZ	2.32	0.63
1:A:50:A:C6	1:A:361:G:C4'	2.82	0.63
1:A:439:A:H3'	1:A:440:A:H8	1.64	0.63
1:A:518:C:H3'	1:A:530:G:N2	2.14	0.63
1:A:52:G:O2'	1:A:53:A:H5'	1.99	0.63
1:A:553:A:H2'	1:A:554:C:O4'	1.99	0.63
1:A:830:G:C6	1:A:831:U:C4	2.87	0.63
1:A:21:G:N2	1:A:915:A:N6	2.46	0.63
4:E:118:LEU:HD22	4:E:142:LEU:CD1	2.29	0.63
4:E:67:THR:CB	4:E:155:LEU:HD21	2.28	0.63
4:E:162:ILE:N	4:E:162:ILE:HD13	2.14	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:52:GLU:CG	4:E:53:ARG:N	2.62	0.63
4:E:71:VAL:HG22	4:E:93:VAL:CB	2.28	0.63
4:E:70:PHE:O	4:E:92:TYR:HB2	1.98	0.63
1:A:1077:G:O6	7:H:47:LYS:NZ	2.32	0.63
9:J:155:ARG:HH11	9:J:156:TRP:H	1.44	0.63
9:J:17:VAL:HB	9:J:44:TYR:OH	1.99	0.63
9:J:70:LYS:HA	9:J:100:ALA:HB2	1.81	0.63
10:K:29:SER:C	10:K:32:LYS:NZ	2.52	0.63
1:A:972:C:O2	12:M:55:LYS:HE3	1.98	0.63
13:N:62:GLN:O	13:N:66:LEU:HG	1.99	0.63
14:O:9:GLN:HA	14:O:12:ARG:NH1	2.12	0.63
14:O:56:ALA:HB2	14:O:70:ILE:HG13	1.80	0.63
15:P:25:ILE:HG12	15:P:66:LEU:HD13	1.80	0.63
1:A:1202:G:H1'	16:Q:29:ARG:HE	1.63	0.63
19:T:88:TYR:HA	19:T:91:ARG:CZ	2.28	0.63
22:W:23:ARG:HD3	22:W:24:LEU:H	1.64	0.63
22:W:63:ILE:HD11	22:W:80:ARG:HB3	1.78	0.63
1:A:1242:C:C5'	23:X:10:ARG:HH12	2.02	0.63
3:D:58:A:H2'	3:D:61:C:N4	2.13	0.63
3:D:48:C:N4	3:D:59:U:O2	2.32	0.63
1:A:1028:C:H2'	1:A:1028(A):C:H6	1.58	0.63
1:A:1202:G:N2	1:A:1203:C:C1'	2.61	0.63
1:A:1419:G:O2'	1:A:1420:C:O4'	2.17	0.63
1:A:193:C:H2'	1:A:194:C:C5	2.34	0.63
1:A:308:C:C2	1:A:309:G:C8	2.86	0.63
1:A:36:C:N3	1:A:37:U:O2	2.32	0.63
1:A:43:C:H2'	1:A:44:G:C8	2.33	0.63
1:A:579:G:C2'	1:A:580:U:H5'	2.29	0.63
1:A:720:C:H2'	1:A:721:G:C8	2.34	0.63
1:A:781:A:N6	1:A:802:A:N3	2.47	0.63
1:A:922:G:O2'	1:A:923:A:H5'	1.99	0.63
1:A:947:G:N3	1:A:948:C:C6	2.67	0.63
1:A:992:U:H4'	1:A:993:G:O5'	1.98	0.63
4:E:163:PHE:HE1	4:E:201:ILE:HD13	1.64	0.63
5:F:47:LEU:HD11	5:F:83:ARG:NH2	2.14	0.63
6:G:150:GLU:O	6:G:152:SER:N	2.32	0.63
6:G:57:ARG:NH2	7:H:107:ARG:HD3	2.14	0.63
7:H:31:LEU:CD1	7:H:129:ILE:HG23	2.18	0.63
7:H:56:GLN:NE2	7:H:56:GLN:N	2.47	0.63
8:I:7:ASN:C	8:I:8:ILE:HG12	2.18	0.63
10:K:45:ILE:HG13	10:K:47:GLY:H	1.62	0.63
10:K:48:TYR:CD1	10:K:48:TYR:C	2.73	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:M:12:ASP:O	12:M:15:THR:HG22	1.98	0.63
14:O:91:LYS:O	14:O:92:ASP:CB	2.47	0.63
1:A:1216:G:H5''	16:Q:5:ALA:CB	2.29	0.63
18:S:12:LYS:HZ1	18:S:13:HIS:CE1	2.16	0.63
21:V:36:ARG:HG3	21:V:72:GLY:CA	2.27	0.63
3:D:16:U:O2'	3:D:17:C:H4'	1.99	0.63
3:D:41:C:H5'	3:D:41:C:C6	2.33	0.63
1:A:1132:C:C4	1:A:1133:G:N7	2.67	0.62
1:A:1272:G:H2'	1:A:1273:G:H8	1.65	0.62
1:A:1276:G:O2'	1:A:1282:C:H4'	1.98	0.62
1:A:235:C:H2'	1:A:236:G:H8	1.64	0.62
1:A:355:C:C1'	1:A:388:G:H2'	2.24	0.62
1:A:453:A:H62	1:A:480:U:H3	1.45	0.62
1:A:671:G:H2'	1:A:672:U:O4'	1.99	0.62
1:A:689:C:H5''	1:A:690:G:OP2	1.99	0.62
1:A:762:C:C2	1:A:763:G:N7	2.67	0.62
1:A:778:G:H2'	1:A:779:C:C6	2.34	0.62
1:A:795:C:H4'	1:A:1506:U:O2	1.99	0.62
1:A:817:C:O2'	1:A:818:G:P	2.57	0.62
1:A:962:C:H2'	1:A:963:G:O4'	1.98	0.62
1:A:1339:A:O4'	3:C:41:C:H5''	1.98	0.62
3:C:53:G:O2'	3:C:54:U:H5'	1.98	0.62
3:C:18:G:C6	3:C:57:G:N1	2.67	0.62
3:C:75:C:C3'	3:C:76:A:O3'	2.47	0.62
4:E:169:LYS:HE2	4:E:170:GLU:CA	2.28	0.62
5:F:59:ARG:CZ	5:F:59:ARG:HB2	2.26	0.62
5:F:63:ASN:O	5:F:99:VAL:HG12	1.99	0.62
6:G:129:ASN:ND2	6:G:144:ASP:CG	2.53	0.62
6:G:94:LEU:O	6:G:97:LEU:HB2	1.99	0.62
7:H:105:VAL:HG22	7:H:132:ALA:HB2	1.80	0.62
7:H:81:GLU:HB3	7:H:90:VAL:CG2	2.28	0.62
8:I:60:PHE:CE2	20:U:78:LEU:HD11	2.34	0.62
9:J:99:LEU:HD21	9:J:102:ARG:HD2	1.81	0.62
10:K:13:ILE:HG22	10:K:14:ARG:H	1.58	0.62
11:L:62:TYR:C	11:L:63:ILE:HD12	2.18	0.62
12:M:48:THR:HG23	12:M:61:GLU:O	1.98	0.62
12:M:79:ARG:NH2	12:M:82:ILE:HD12	2.13	0.62
13:N:19:ALA:N	13:N:80:VAL:HG21	2.14	0.62
15:P:14:ARG:CA	15:P:44:ARG:HA	2.29	0.62
15:P:55:ARG:HH21	15:P:56:LEU:HD11	1.64	0.62
16:Q:24:CYS:HB3	16:Q:28:GLY:O	1.98	0.62
21:V:22:LEU:HG	21:V:25:LYS:NZ	2.11	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:W:51:GLU:O	22:W:55:ILE:HG13	1.98	0.62
23:X:11:GLY:O	23:X:15:ARG:HG2	1.99	0.62
1:A:1016:A:H8	1:A:1016:A:O5'	1.82	0.62
15:P:121:LYS:HA	15:P:121:LYS:HE3	1.80	0.62
15:P:121:LYS:CA	15:P:121:LYS:HE3	2.29	0.62
1:A:130:A:N6	19:T:64:PRO:HG2	2.14	0.62
1:A:1505:G:H5''	1:A:1506:U:O5'	1.99	0.62
1:A:520:A:C8	1:A:521:G:O4'	2.52	0.62
1:A:750:G:N3	17:R:23:GLY:O	2.32	0.62
1:A:755:G:H2'	1:A:756:C:C5	2.34	0.62
1:A:765:G:O2'	1:A:766:A:C5'	2.42	0.62
1:A:818:G:O2'	1:A:819:A:OP1	2.17	0.62
1:A:828:A:O4'	1:A:859:A:H2	1.82	0.62
1:A:895:G:H2'	1:A:896:C:C6	2.35	0.62
1:A:900:A:C5	1:A:901:A:N7	2.68	0.62
3:C:2:C:H2'	3:C:3:C:H6	1.62	0.62
4:E:9:GLU:HG2	4:E:10:LEU:N	2.15	0.62
4:E:70:PHE:CB	4:E:163:PHE:O	2.47	0.62
5:F:108:ASN:ND2	5:F:111:LEU:HD13	2.09	0.62
5:F:146:ALA:C	5:F:147:LYS:HD2	2.19	0.62
5:F:138:VAL:HG22	5:F:151:VAL:HG21	1.81	0.62
7:H:141:GLN:C	7:H:142:LEU:HG	2.20	0.62
8:I:22:GLU:O	8:I:26:ILE:HG13	1.99	0.62
8:I:2:ARG:O	8:I:67:MET:SD	2.57	0.62
8:I:36:ARG:CZ	8:I:36:ARG:HB3	2.28	0.62
1:A:1373:G:H5''	9:J:36:LYS:HB2	1.81	0.62
11:L:109:VAL:O	11:L:109:VAL:HG12	1.98	0.62
11:L:110:GLU:O	11:L:111:ARG:HB2	1.98	0.62
1:A:1344:C:H5'	11:L:120:ARG:O	1.98	0.62
11:L:66:ARG:HG2	11:L:67:GLY:N	2.15	0.62
12:M:7:LYS:HG3	12:M:71:LEU:HD13	1.80	0.62
14:O:30:ALA:HB1	14:O:31:PRO:HD2	1.80	0.62
14:O:65:GLU:O	14:O:66:VAL:HG13	1.99	0.62
14:O:85:ILE:HD11	14:O:98:TYR:C	2.19	0.62
15:P:81:LEU:O	15:P:86:CYS:SG	2.57	0.62
16:Q:29:ARG:HH11	16:Q:29:ARG:CB	2.06	0.62
19:T:75:ARG:CZ	19:T:77:VAL:HG22	2.29	0.62
20:U:87:ARG:O	20:U:88:LYS:C	2.37	0.62
1:A:1187:G:H2'	1:A:1188:A:H8	1.65	0.62
1:A:1210:C:O3'	1:A:1214:C:N4	2.32	0.62
1:A:1394:A:HO2'	1:A:1395:C:P	2.22	0.62
1:A:1425:U:O2'	1:A:1426:C:H5'	1.97	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:527:G:C2	1:A:528:C:C2	2.88	0.62
4:E:158:LEU:HB2	4:E:160:ASP:OD2	1.99	0.62
2:1:8:U:H1'	4:E:15:VAL:HG12	1.81	0.62
4:E:200:ILE:O	4:E:202:PRO:CD	2.47	0.62
4:E:224:GLN:HA	4:E:229:VAL:HG22	1.81	0.62
5:F:178:LEU:O	5:F:179:ARG:HB2	1.99	0.62
5:F:17:ASP:HB3	5:F:18:TRP:CE3	2.32	0.62
5:F:196:LEU:HD23	5:F:196:LEU:N	2.14	0.62
5:F:67:THR:HG22	5:F:104:GLN:CG	2.24	0.62
1:A:404:U:C4'	6:G:122:ARG:NH1	2.62	0.62
6:G:162:LEU:CD1	6:G:181:MET:HG2	2.25	0.62
7:H:86:ALA:O	7:H:125:SER:CB	2.47	0.62
8:I:72:VAL:HG23	8:I:73:ASN:N	2.11	0.62
9:J:99:LEU:HD23	9:J:102:ARG:HB3	1.80	0.62
10:K:11:THR:O	10:K:13:ILE:N	2.33	0.62
12:M:6:ILE:HG22	12:M:98:ILE:HA	1.81	0.62
13:N:78:GLN:O	13:N:103:LEU:O	2.16	0.62
13:N:126:ARG:C	13:N:128:ALA:H	2.02	0.62
13:N:73:MET:O	13:N:75:TYR:N	2.32	0.62
13:N:79:SER:HA	13:N:104:GLN:HG3	1.82	0.62
15:P:10:PRO:CG	15:P:18:ALA:HB1	2.28	0.62
17:R:5:LYS:HZ2	17:R:5:LYS:HB2	1.62	0.62
19:T:104:LYS:HD3	19:T:105:ALA:HB3	1.82	0.62
19:T:21:VAL:CG2	19:T:43:LEU:HA	2.29	0.62
19:T:76:LEU:C	19:T:76:LEU:HD23	2.19	0.62
20:U:21:LYS:CE	20:U:23:LYS:HB3	2.28	0.62
21:V:18:LYS:HA	21:V:18:LYS:CE	2.22	0.62
22:W:48:LYS:HB3	22:W:51:GLU:HG3	1.81	0.62
1:A:727:G:C8	1:A:727:G:C3'	2.82	0.62
1:A:1329:A:C5'	15:P:29:ARG:NE	2.63	0.62
1:A:177:C:N3	1:A:178:C:C5	2.68	0.62
1:A:375:U:O2'	18:S:6:LEU:CD2	2.48	0.62
1:A:438:G:H2'	1:A:494:U:O4	1.98	0.62
1:A:520:A:N6	1:A:529:G:C2	2.67	0.62
1:A:710:G:O2'	1:A:711:G:H5'	1.99	0.62
1:A:851:G:C2	1:A:852:G:H1'	2.35	0.62
1:A:86:U:H2'	1:A:87:A:H5'	1.82	0.62
3:C:30:G:H2'	3:C:31:A:O4'	1.99	0.62
4:E:115:LEU:HB2	4:E:145:LEU:CD2	2.30	0.62
4:E:91:PRO:CG	4:E:154:LEU:HB3	2.22	0.62
6:G:8:VAL:CG1	6:G:11:LEU:HD12	2.29	0.62
6:G:146:ILE:HD12	6:G:146:ILE:H	1.64	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:61:LYS:CA	6:G:203:VAL:HG22	2.29	0.62
8:I:46:ARG:HH22	20:U:37:VAL:HG22	1.64	0.62
8:I:52:ILE:HG21	8:I:87:ARG:CZ	2.30	0.62
1:A:826:C:H5'	10:K:12:ARG:NE	2.15	0.62
10:K:79:VAL:HB	10:K:80:ILE:HD12	1.80	0.62
10:K:87:SER:HB3	10:K:93:VAL:HG23	1.81	0.62
11:L:97:LYS:HZ2	11:L:102:LEU:HB3	1.64	0.62
11:L:26:VAL:HG22	11:L:61:ALA:HB3	1.81	0.62
12:M:31:GLY:HA3	12:M:74:ILE:CG2	2.29	0.62
12:M:60:ARG:HB2	12:M:60:ARG:CZ	2.29	0.62
12:M:79:ARG:NH1	12:M:82:ILE:HB	2.14	0.62
13:N:92:GLU:O	13:N:94:ALA:N	2.32	0.62
14:O:33:ARG:CG	14:O:60:LEU:HD23	2.29	0.62
15:P:60:VAL:HG13	15:P:64:TRP:HB2	1.80	0.62
16:Q:48:ALA:CA	16:Q:53:LEU:HD12	2.29	0.62
18:S:53:VAL:HG23	18:S:54:GLU:N	2.14	0.62
1:A:1021:G:H2'	1:A:1022:G:O4'	2.00	0.62
1:A:1194:U:H2'	1:A:1195:C:O4'	1.99	0.62
1:A:1271:G:OP1	1:A:1314:C:C5'	2.45	0.62
1:A:127:G:HO2'	19:T:2:PRO:N	1.97	0.62
1:A:68:G:O4'	1:A:171:A:H1'	1.99	0.62
1:A:228:A:H2'	1:A:229:U:C5'	2.28	0.62
1:A:257:G:O2'	1:A:258:G:H5'	1.99	0.62
1:A:373:A:O2'	1:A:374:A:H5'	1.99	0.62
1:A:376:G:H2'	1:A:377:G:C8	2.26	0.62
1:A:523:A:O5'	1:A:523:A:H8	1.81	0.62
1:A:56:U:H2'	1:A:57:G:H8	1.64	0.62
1:A:873:A:C8	1:A:873:A:OP1	2.52	0.62
1:A:933:G:N7	9:J:3:ARG:NH2	2.46	0.62
4:E:101:MET:HB3	4:E:108:ILE:HG13	1.80	0.62
4:E:132:LYS:HB3	4:E:132:LYS:HZ2	1.65	0.62
4:E:118:LEU:HD22	4:E:142:LEU:HD12	1.82	0.62
5:F:10:PHE:HB3	5:F:11:ARG:HE	1.64	0.62
6:G:102:ASP:HB2	6:G:136:PRO:C	2.19	0.62
6:G:170:VAL:N	6:G:176:LEU:HD22	2.10	0.62
6:G:196:LEU:O	6:G:196:LEU:HD12	2.00	0.62
6:G:26:CYS:O	6:G:31:CYS:SG	2.57	0.62
8:I:44:GLY:HA2	8:I:59:TYR:CZ	2.34	0.62
8:I:94:GLN:HB3	20:U:32:ARG:NH2	2.14	0.62
9:J:5:ARG:C	9:J:5:ARG:HD2	2.20	0.62
12:M:75:ILE:HG22	12:M:76:ASN:H	1.64	0.62
16:Q:27:CYS:H	16:Q:43:CYS:CB	2.11	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:376:G:H5''	18:S:5:ARG:HD2	1.80	0.62
19:T:80:GLY:O	19:T:82:MET:N	2.32	0.62
23:X:9:ARG:NH1	23:X:21:TYR:HD2	1.96	0.62
3:B:10:G:H2'	3:B:11:C:C6	2.33	0.62
3:D:3:C:H2'	3:D:4:C:H6	1.62	0.62
17:R:45:VAL:O	17:R:45:VAL:HG12	1.99	0.62
1:A:116:A:H8	1:A:116:A:O5'	1.83	0.62
1:A:1193:G:H2'	1:A:1194:U:O5'	1.99	0.62
1:A:1278:U:OP1	1:A:1279:A:H4'	1.99	0.62
1:A:1305:G:H21	1:A:1331:G:H2'	1.64	0.62
1:A:1357:A:H8	1:A:1357:A:O5'	1.83	0.62
1:A:255:G:C4'	19:T:16:GLN:O	2.44	0.62
1:A:273:A:H1'	19:T:16:GLN:OE1	2.00	0.62
1:A:301:G:N2	1:A:302:G:C4	2.67	0.62
1:A:362:G:H4'	14:O:28:LYS:HZ1	1.65	0.62
1:A:607:A:O2'	1:A:608:A:H5'	1.99	0.62
1:A:937:A:N7	1:A:938:A:N7	2.48	0.62
1:A:971:G:P	1:A:1231:G:H21	2.23	0.62
3:B:34:G:N2	3:B:35:A:H1'	2.15	0.62
3:C:36:A:H61	3:C:37:A:N6	1.98	0.62
4:E:10:LEU:HD23	4:E:11:LEU:HD21	1.81	0.62
4:E:53:ARG:HH12	4:E:200:ILE:CD1	2.12	0.62
4:E:78:GLN:HE22	4:E:96:ARG:HH22	1.43	0.62
4:E:96:ARG:H	4:E:96:ARG:HD2	1.64	0.62
5:F:23:TYR:CD2	5:F:24:ALA:N	2.64	0.62
6:G:100:ARG:HB2	6:G:103:ASN:HB2	1.82	0.62
6:G:92:VAL:HG12	6:G:96:LEU:HD11	1.81	0.62
7:H:87:SER:HB3	7:H:131:ILE:HG12	1.81	0.62
10:K:112:LEU:HB2	10:K:132:GLU:O	1.99	0.62
4:E:196:LEU:HA	10:K:74:PRO:HG3	1.82	0.62
1:A:706:A:H4'	13:N:29:ILE:CD1	2.30	0.62
13:N:48:ILE:HD11	13:N:64:ALA:CB	2.29	0.62
14:O:24:VAL:HG23	14:O:97:ARG:CG	2.24	0.62
1:A:1228:C:OP1	15:P:115:LYS:N	2.32	0.62
15:P:20:THR:HA	15:P:25:ILE:CG2	2.30	0.62
15:P:62:ASN:C	15:P:64:TRP:H	2.02	0.62
11:L:111:ARG:HD2	16:Q:61:TRP:HE1	1.65	0.62
19:T:97:SER:O	19:T:98:LEU:HD13	1.98	0.62
20:U:51:LEU:CD1	20:U:51:LEU:N	2.63	0.62
21:V:33:THR:CG2	21:V:49:ILE:HD12	2.30	0.62
3:D:18:G:N3	3:D:19:G:H1'	2.15	0.62
1:A:1381:U:H2'	1:A:1382:C:H5'	1.81	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1107:C:P	5:F:172:ARG:HG2	2.39	0.62
1:A:1296:C:C1'	1:A:1302:U:O4	2.47	0.62
1:A:1299:A:C5	1:A:1301:U:H1'	2.34	0.62
1:A:1315:U:H2'	1:A:1316:G:O4'	2.00	0.62
1:A:279:A:N3	1:A:281:G:N2	2.48	0.62
1:A:59:A:H4'	1:A:388:G:H5''	1.80	0.62
1:A:541:G:H4'	6:G:42:GLN:CB	2.30	0.62
1:A:645:C:H2'	1:A:646:U:C6	2.34	0.62
1:A:851:G:O2'	1:A:852:G:H5'	1.99	0.62
1:A:859:A:H2'	1:A:860:A:O5'	2.00	0.62
1:A:96:G:H2'	1:A:97:U:H6	1.63	0.62
3:C:66:U:H3'	3:C:67:C:H6	1.63	0.62
3:C:6:G:C2'	3:C:7:A:C8	2.77	0.62
4:E:17:PHE:HA	4:E:42:ILE:HG22	1.80	0.62
4:E:47:THR:O	4:E:51:LEU:CG	2.45	0.62
4:E:97:TRP:CH2	4:E:176:GLU:CG	2.83	0.62
8:I:52:ILE:HG22	8:I:53:ALA:H	1.63	0.62
9:J:72:ARG:NH2	9:J:138:LYS:HZ3	1.95	0.62
10:K:113:SER:O	10:K:131:GLY:HA3	2.00	0.62
12:M:10:GLY:CA	12:M:94:VAL:HG22	2.29	0.62
13:N:53:SER:O	13:N:55:LYS:N	2.32	0.62
13:N:27:ASN:HA	13:N:55:LYS:O	2.00	0.62
13:N:57:THR:CG2	13:N:59:TYR:HB3	2.29	0.62
1:A:523:A:N6	14:O:53:ARG:HH22	1.96	0.62
18:S:3:LYS:HE2	18:S:24:ALA:CB	2.28	0.62
1:A:237:C:H5''	19:T:25:ARG:NH1	2.14	0.62
19:T:75:ARG:HG2	19:T:76:LEU:N	2.14	0.62
20:U:21:LYS:HD2	20:U:23:LYS:H	1.65	0.62
21:V:11:VAL:HG11	21:V:41:VAL:CG2	2.29	0.62
21:V:19:VAL:HG21	21:V:44:MET:HG2	1.82	0.62
21:V:38:SER:HB3	21:V:71:LEU:CG	2.29	0.62
1:A:511:C:C2	1:A:512:U:C5	2.88	0.62
22:W:8:ARG:NH1	22:W:8:ARG:HB3	2.14	0.62
1:A:1105:A:H2'	1:A:1106:G:H8	1.64	0.62
1:A:1252:A:C5	1:A:1253:G:N7	2.67	0.62
1:A:37:U:P	14:O:123:LYS:HD2	2.40	0.62
1:A:566:G:H4'	1:A:567:G:H5'	1.81	0.62
1:A:580:U:H3'	1:A:581:G:C8	2.34	0.62
1:A:649:G:H2'	1:A:650:G:H8	1.63	0.62
1:A:771:G:C6	1:A:809:G:C6	2.88	0.62
1:A:836:G:P	20:U:61:LYS:NZ	2.73	0.62
3:C:25:C:H2'	3:C:26:A:C8	2.34	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:C:31:A:H3'	3:C:32:U:C6	2.34	0.62
4:E:60:ASP:CG	4:E:64:ARG:NH2	2.53	0.62
5:F:11:ARG:HG3	5:F:16:ARG:NE	2.15	0.62
5:F:151:VAL:HG22	5:F:200:ALA:HB1	1.82	0.62
1:A:1191:A:P	5:F:4:LYS:HZ3	2.22	0.62
9:J:140:ASP:O	9:J:144:MET:HB3	1.99	0.62
10:K:112:LEU:HD21	10:K:114:THR:HG23	1.81	0.62
10:K:129:VAL:CG2	10:K:130:GLY:H	2.09	0.62
10:K:114:THR:HA	10:K:131:GLY:CA	2.29	0.62
11:L:37:PHE:CD1	11:L:43:ALA:HA	2.35	0.62
13:N:33:THR:HG22	13:N:39:PRO:HB3	1.82	0.62
1:A:363:A:C5	14:O:31:PRO:HD2	2.35	0.62
1:A:965:A:N1	15:P:124:PRO:HB3	2.14	0.62
15:P:13:LYS:HB3	15:P:17:VAL:CB	2.29	0.62
22:W:12:ALA:H	22:W:13:LEU:CD1	2.01	0.62
22:W:14:LYS:N	22:W:17:ARG:HH21	1.98	0.62
22:W:73:HIS:N	22:W:76:ALA:HB3	2.09	0.62
23:X:2:GLY:N	23:X:5:ASP:HB2	2.14	0.62
1:A:135:C:H3'	1:A:135:C:C6	2.35	0.62
1:A:1363:A:H1'	1:A:1365:G:C6	2.35	0.62
1:A:1461:G:H2'	1:A:1462:G:C8	2.31	0.62
1:A:434:U:H2'	1:A:435:C:C6	2.35	0.62
1:A:50:A:O2'	1:A:360:A:H2	1.82	0.62
1:A:538:G:OP1	14:O:114:LYS:N	2.33	0.62
1:A:591:U:H6	1:A:591:U:O5'	1.82	0.62
1:A:714:G:O2'	1:A:715:A:H5'	2.00	0.62
1:A:796:C:H2'	1:A:797:C:C6	2.35	0.62
1:A:826:C:C5'	10:K:12:ARG:HH21	2.12	0.62
1:A:848:C:O2'	1:A:849:C:H5'	1.99	0.62
4:E:92:TYR:HE2	4:E:151:GLY:O	1.82	0.62
4:E:69:LEU:O	4:E:162:ILE:CB	2.47	0.62
4:E:35:GLU:C	4:E:35:GLU:CD	2.59	0.62
5:F:66:VAL:C	5:F:102:ASN:HD22	2.02	0.62
5:F:24:ALA:HB3	5:F:29:TYR:HB2	1.81	0.62
6:G:15:GLU:OE2	6:G:63:LYS:HB3	2.00	0.62
6:G:57:ARG:HH22	7:H:107:ARG:CD	2.13	0.62
1:A:922:G:C4'	7:H:20:GLN:HA	2.23	0.62
7:H:24:ARG:C	7:H:25:ARG:HD3	2.20	0.62
9:J:140:ASP:HA	9:J:143:ARG:NE	2.13	0.62
13:N:82:VAL:HB	13:N:108:ILE:CG1	2.27	0.62
14:O:57:LYS:HE2	14:O:67:THR:HG21	1.82	0.62
15:P:10:PRO:CG	15:P:18:ALA:HA	2.28	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:P:91:ARG:HH11	15:P:96:LEU:HD12	1.65	0.62
18:S:4:ILE:HG23	18:S:21:VAL:HG13	1.82	0.62
19:T:50:LYS:HD2	19:T:51:TYR:CZ	2.35	0.62
22:W:26:ASN:ND2	22:W:27:LYS:H	1.98	0.62
22:W:64:ASP:O	22:W:67:ALA:CB	2.47	0.62
23:X:5:ASP:O	23:X:7:ARG:N	2.32	0.62
1:A:490:G:H2'	1:A:491:G:C8	2.34	0.62
2:1:8:U:O2'	4:E:15:VAL:HA	2.00	0.62
1:A:1061:G:C2	1:A:1197:G:C2	2.88	0.62
1:A:1363:A:H1'	1:A:1365:G:C5	2.34	0.62
1:A:1464:G:C2	1:A:1465:C:N4	2.68	0.62
1:A:169:C:H2'	1:A:170:U:C5	2.35	0.62
1:A:438:G:H21	1:A:495:A:H8	1.46	0.62
1:A:518:C:C2	1:A:529:G:O6	2.53	0.62
1:A:843:U:H3'	1:A:848:C:C5'	2.29	0.62
1:A:989:C:O2'	1:A:990:C:H5'	2.00	0.62
3:B:33:U:O2	3:B:35:A:H5"	2.00	0.62
3:C:27:G:C2	3:C:28:G:C5	2.88	0.62
4:E:208:ILE:HG12	4:E:211:ILE:HD12	1.82	0.62
8:I:85:VAL:CG1	8:I:88:VAL:HG13	2.28	0.62
9:J:143:ARG:HH11	9:J:144:MET:CB	2.06	0.62
9:J:142:GLU:O	9:J:145:ALA:O	2.17	0.62
9:J:35:LYS:HE2	9:J:38:LEU:HB2	1.82	0.62
10:K:34:GLU:O	10:K:38:ILE:HG12	1.99	0.62
12:M:79:ARG:NH2	12:M:82:ILE:HG21	2.15	0.62
1:A:537:G:O3'	14:O:113:ARG:NH1	2.31	0.62
14:O:39:VAL:HB	14:O:57:LYS:CB	2.26	0.62
14:O:77:LEU:HD22	14:O:81:SER:HB3	1.81	0.62
15:P:11:ARG:HG3	15:P:11:ARG:NH1	2.12	0.62
16:Q:10:ALA:C	16:Q:12:ARG:H	2.02	0.62
18:S:27:LYS:O	18:S:29:ASP:N	2.33	0.62
18:S:22:THR:HA	18:S:33:ILE:HG13	1.81	0.62
1:A:377:G:OP1	18:S:5:ARG:HD3	2.00	0.62
18:S:8:ARG:NH2	18:S:11:SER:O	2.32	0.62
22:W:44:ALA:HB3	22:W:91:LEU:CD1	2.13	0.62
3:D:48:C:HO2'	3:D:49:C:P	2.23	0.62
10:K:53:VAL:HG12	10:K:54:ASP:OD1	2.00	0.62
2:1:32:U:O2'	2:1:33:U:H5'	2.00	0.61
1:A:1189:C:C2'	1:A:1190:G:H5'	2.29	0.61
1:A:1306:A:H61	1:A:1331:G:H1'	1.65	0.61
1:A:1441:G:C2'	1:A:1460:A:H61	2.13	0.61
1:A:594:G:N7	1:A:595:G:C2	2.68	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:672:U:H2'	1:A:672:U:O2	1.97	0.61
1:A:738:C:H2'	1:A:739:C:C6	2.33	0.61
1:A:917:G:HO2'	1:A:918:A:H5'	1.65	0.61
4:E:208:ILE:HA	4:E:211:ILE:CG1	2.29	0.61
4:E:212:GLN:OE1	4:E:212:GLN:HA	1.92	0.61
5:F:35:GLU:HA	5:F:38:ARG:HG2	1.83	0.61
6:G:54:TYR:O	6:G:55:ALA:C	2.39	0.61
10:K:9:MET:CE	10:K:13:ILE:HD11	2.30	0.61
12:M:47:PHE:CE1	12:M:64:GLU:HA	2.34	0.61
13:N:100:ALA:C	13:N:102:GLY:H	2.02	0.61
13:N:73:MET:CE	13:N:103:LEU:HD22	2.29	0.61
14:O:47:LYS:N	14:O:48:PRO:CD	2.63	0.61
16:Q:27:CYS:SG	16:Q:43:CYS:N	2.63	0.61
19:T:104:LYS:HD3	19:T:105:ALA:CB	2.29	0.61
2:I:52:U:H5''	6:G:50:ARG:HB2	1.81	0.61
1:A:1005:A:H4'	1:A:1037:C:O2	1.99	0.61
1:A:1305:G:N3	1:A:1331:G:N2	2.48	0.61
1:A:151:A:N7	1:A:152:A:C2	2.69	0.61
1:A:274:A:O2'	1:A:275:G:H1'	2.00	0.61
1:A:292:G:N7	1:A:293:G:H1'	2.15	0.61
1:A:323:U:H3'	1:A:323:U:H6	1.65	0.61
1:A:389:A:C6	1:A:390:C:C1'	2.83	0.61
1:A:730:G:H2'	1:A:731:G:H5'	1.81	0.61
1:A:791:G:N1	1:A:1498:U:OP1	2.33	0.61
1:A:572:A:C4'	1:A:917:G:H5'	2.25	0.61
1:A:990:C:H2'	1:A:991:U:C1'	2.30	0.61
4:E:189:ASP:OD1	4:E:205:ASP:N	2.33	0.61
4:E:29:ALA:O	4:E:32:ILE:HB	1.99	0.61
4:E:64:ARG:HG2	4:E:66:GLY:H	1.65	0.61
5:F:67:THR:HA	5:F:102:ASN:O	2.00	0.61
5:F:142:MET:HG2	5:F:170:GLN:HG3	1.80	0.61
5:F:24:ALA:HB1	5:F:28:GLN:HE22	1.63	0.61
5:F:64:VAL:O	5:F:99:VAL:HG11	1.99	0.61
6:G:146:ILE:HD12	6:G:146:ILE:O	1.99	0.61
7:H:79:GLU:CB	7:H:92:LYS:HA	2.22	0.61
8:I:36:ARG:O	8:I:66:GLU:HG2	1.99	0.61
10:K:12:ARG:HH11	10:K:27:PRO:CD	2.05	0.61
10:K:20:TYR:HE1	10:K:78:GLN:HE22	1.46	0.61
12:M:4:ILE:HG12	12:M:99:LYS:O	2.00	0.61
13:N:104:GLN:NE2	13:N:106:LYS:HB2	2.15	0.61
13:N:34:ASP:OD1	13:N:37:GLY:N	2.31	0.61
14:O:33:ARG:HG2	14:O:60:LEU:HD23	1.83	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:P:10:PRO:CG	15:P:18:ALA:CB	2.77	0.61
15:P:46:LYS:HG3	15:P:47:ASP:OD1	2.00	0.61
15:P:48:LEU:HD23	15:P:49:THR:N	2.15	0.61
20:U:80:PRO:HB2	20:U:82:THR:O	2.00	0.61
22:W:53:LEU:O	22:W:56:MET:N	2.34	0.61
22:W:73:HIS:H	22:W:76:ALA:HB2	1.65	0.61
22:W:87:LYS:O	22:W:88:VAL:C	2.36	0.61
1:A:1166:G:H2'	1:A:1169:A:OP2	2.00	0.61
1:A:1054:C:OP2	1:A:1197:G:P	2.59	0.61
1:A:1321:C:H2'	1:A:1322:C:C6	2.34	0.61
1:A:1466:C:H2'	1:A:1467:G:C8	2.36	0.61
1:A:54:C:H41	1:A:352:C:H2'	1.65	0.61
1:A:407:G:N2	1:A:436:C:H1'	2.15	0.61
1:A:51:A:O2'	1:A:52:G:P	2.58	0.61
1:A:817:C:HO2'	1:A:818:G:H5''	1.64	0.61
4:E:211:ILE:HG22	4:E:212:GLN:N	2.14	0.61
4:E:214:ILE:O	4:E:217:ARG:HB2	1.99	0.61
5:F:48:TYR:CA	5:F:52:LEU:HD22	2.30	0.61
6:G:144:ASP:O	6:G:184:LYS:HD3	2.00	0.61
7:H:96:PRO:HD2	7:H:98:THR:OG1	1.99	0.61
9:J:115:ARG:O	9:J:118:VAL:HB	2.00	0.61
9:J:50:ILE:HG21	9:J:58:PRO:CA	2.30	0.61
10:K:100:ILE:CD1	10:K:125:ARG:HE	2.13	0.61
10:K:126:LYS:HZ1	10:K:127:LEU:HB2	1.65	0.61
1:A:826:C:H5'	10:K:12:ARG:NH2	2.15	0.61
4:E:181:PHE:HE1	10:K:70:GLN:HE22	1.49	0.61
12:M:40:LEU:HB2	12:M:69:ASN:HB2	1.82	0.61
13:N:58:PRO:CB	13:N:93:GLN:HB2	2.19	0.61
15:P:98:VAL:O	15:P:98:VAL:HG12	2.00	0.61
16:Q:13:THR:O	16:Q:14:PRO:C	2.37	0.61
1:A:375:U:H4'	18:S:17:TYR:HE2	1.62	0.61
19:T:27:PHE:O	19:T:35:VAL:HG13	2.00	0.61
20:U:46:GLU:HB3	20:U:85:LEU:CD1	2.24	0.61
21:V:15:LEU:CD2	21:V:38:SER:HB2	2.29	0.61
1:A:986:A:H4'	21:V:55:LYS:CG	2.29	0.61
3:B:21:A:N6	3:B:46:G:H2'	2.15	0.61
1:A:1137:C:H4'	1:A:1138:G:N1	2.15	0.61
1:A:1295:G:H21	1:A:1302:U:H3	1.47	0.61
1:A:1429:C:H2'	1:A:1430:C:C6	2.35	0.61
1:A:191(C):G:O5'	1:A:191(C):G:H8	1.84	0.61
1:A:191(D):U:H2'	1:A:191(E):G:C8	2.35	0.61
1:A:265:G:C2'	1:A:266:G:H5'	2.29	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:280:C:N3	19:T:39:SER:HB2	2.14	0.61
1:A:522:C:H41	1:A:523:A:N6	1.94	0.61
1:A:702:A:HO2'	1:A:703:G:P	2.23	0.61
1:A:730:G:H2'	1:A:731:G:C5'	2.30	0.61
1:A:914:A:O2'	1:A:915:A:O5'	2.17	0.61
4:E:18:GLY:CA	4:E:41:ILE:HG23	2.31	0.61
6:G:36:ARG:HB3	6:G:38:TYR:CE2	2.35	0.61
2:1:52:U:C4'	6:G:50:ARG:HA	2.28	0.61
7:H:141:GLN:O	7:H:142:LEU:HG	2.00	0.61
7:H:79:GLU:CG	7:H:93:PRO:HD2	2.30	0.61
10:K:28:ALA:O	10:K:29:SER:CB	2.48	0.61
11:L:26:VAL:HA	11:L:61:ALA:O	2.01	0.61
13:N:114:VAL:HG22	13:N:115:PRO:N	2.14	0.61
14:O:22:SER:C	14:O:24:VAL:H	2.04	0.61
19:T:9:VAL:HB	19:T:84:LEU:HD13	1.81	0.61
21:V:40:ILE:HD12	21:V:74:PHE:CE2	2.36	0.61
1:A:1011:G:N2	1:A:1019:C:H1'	2.15	0.61
1:A:1001:G:H5'	1:A:1001:G:H8	1.65	0.61
1:A:1026:G:C8	1:A:1027:C:C6	2.89	0.61
1:A:1058:G:O2'	1:A:1059:C:H5'	1.98	0.61
1:A:1148:U:O2	1:A:1149:C:N1	2.33	0.61
1:A:134:A:C6	1:A:135:C:C4	2.88	0.61
1:A:137:C:C2'	1:A:138:G:O5'	2.48	0.61
1:A:1513:A:H2'	1:A:1514:C:H6	1.64	0.61
1:A:449:C:H2'	1:A:450:G:C4'	2.29	0.61
1:A:574:A:H5''	1:A:575:G:OP2	2.00	0.61
1:A:5:U:C4	6:G:86:LYS:HD3	2.35	0.61
1:A:687:A:H2'	1:A:701:C:H41	1.66	0.61
1:A:812:C:O2	1:A:813:U:H5	1.82	0.61
1:A:866:C:C6	1:A:867:G:H1'	2.35	0.61
1:A:979:C:H42	16:Q:18:VAL:CB	2.13	0.61
4:E:97:TRP:CZ3	4:E:176:GLU:HG3	2.35	0.61
4:E:21:ARG:O	4:E:23:ARG:HD3	1.99	0.61
5:F:188:LEU:HD22	5:F:189:ALA:H	1.64	0.61
5:F:22:TRP:HB2	5:F:59:ARG:HB3	1.83	0.61
6:G:87:GLY:O	6:G:89:THR:N	2.34	0.61
9:J:50:ILE:HD13	9:J:58:PRO:HA	1.81	0.61
9:J:95:ARG:O	9:J:96:GLN:C	2.39	0.61
10:K:8:ASP:OD2	10:K:12:ARG:HD2	2.00	0.61
10:K:6:ILE:CG2	10:K:7:ALA:H	1.91	0.61
11:L:15:ALA:HB3	11:L:76:ALA:CB	2.29	0.61
13:N:14:VAL:O	13:N:14:VAL:HG12	1.99	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:N:95:ILE:HA	13:N:98:LEU:HD12	1.82	0.61
15:P:16:ASP:HA	15:P:19:LEU:CD2	2.30	0.61
15:P:66:LEU:CA	15:P:70:LEU:HD12	2.25	0.61
17:R:36:ILE:HA	17:R:59:MET:HE1	1.83	0.61
17:R:62:GLN:CA	17:R:65:ARG:HH22	2.07	0.61
18:S:31:LYS:HG2	18:S:32:TYR:N	2.15	0.61
21:V:32:LYS:HA	21:V:50:ALA:CB	2.26	0.61
2:1:27:A:O2'	2:1:28:G:H5'	2.01	0.61
1:A:1124:G:N7	1:A:1145:C:H2'	2.15	0.61
1:A:1418:A:C3'	1:A:1419:G:H5'	2.30	0.61
1:A:1498:U:O2'	1:A:1499:A:O5'	2.17	0.61
1:A:17:U:O2'	1:A:18:C:H5'	2.01	0.61
1:A:38:G:N2	1:A:397:A:C4	2.68	0.61
1:A:414:A:C2'	1:A:415:A:H8	2.13	0.61
1:A:955:U:C2	1:A:956:U:C5	2.87	0.61
1:A:995:C:O2'	16:Q:4:LYS:HE2	2.00	0.61
4:E:69:LEU:CD2	4:E:91:PRO:HB3	2.30	0.61
5:F:67:THR:CA	5:F:102:ASN:HB2	2.30	0.61
5:F:10:PHE:O	5:F:11:ARG:NH2	2.33	0.61
5:F:47:LEU:HD12	5:F:49:SER:HB3	1.82	0.61
1:A:8:A:N6	6:G:209:ARG:NH1	2.46	0.61
7:H:127:ASN:O	7:H:128:PRO:C	2.38	0.61
7:H:12:LEU:HG	7:H:129:ILE:CG1	2.30	0.61
7:H:91:LEU:HD12	7:H:118:ILE:CG2	2.31	0.61
9:J:50:ILE:HD12	9:J:58:PRO:HB3	1.82	0.61
9:J:22:LEU:HB3	9:J:62:PHE:HE2	1.65	0.61
11:L:45:ALA:O	11:L:78:LYS:HG3	2.01	0.61
15:P:20:THR:HA	15:P:25:ILE:CB	2.31	0.61
17:R:70:LEU:HG	17:R:78:TYR:CB	2.30	0.61
17:R:71:GLN:HB2	17:R:78:TYR:HE1	1.63	0.61
18:S:20:VAL:CG1	18:S:32:TYR:HB2	2.30	0.61
22:W:43:LEU:HD22	22:W:48:LYS:CB	2.31	0.61
3:D:19:G:H5'	3:D:20:U:C4	2.34	0.61
1:A:1055:A:N6	1:A:1206:G:C5	2.68	0.61
1:A:1320:C:H3'	1:A:1321:C:C6	2.35	0.61
1:A:186:C:H2'	1:A:186(A):C:H6	1.66	0.61
1:A:373:A:C2	1:A:374:A:C8	2.89	0.61
1:A:62:U:OP1	1:A:386:C:H5'	2.00	0.61
1:A:47:C:O2'	1:A:48:C:OP2	2.19	0.61
1:A:752:G:O4'	1:A:752:G:OP2	2.18	0.61
1:A:866:C:H3'	1:A:867:G:H8	1.66	0.61
1:A:8:A:H5'	7:H:120:THR:O	2.00	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:C:10:G:O5'	3:C:10:G:H8	1.83	0.61
4:E:140:HIS:O	4:E:143:GLU:HB3	2.00	0.61
4:E:141:GLU:OE1	4:E:142:LEU:N	2.33	0.61
4:E:58:ILE:O	4:E:61:LEU:HB3	2.01	0.61
5:F:24:ALA:HB1	5:F:28:GLN:CD	2.19	0.61
7:H:76:ILE:HG21	7:H:142:LEU:HD13	1.82	0.61
8:I:39:LYS:O	8:I:63:TYR:HA	2.00	0.61
10:K:8:ASP:O	10:K:11:THR:OG1	2.19	0.61
10:K:34:GLU:HA	10:K:34:GLU:OE1	2.00	0.61
10:K:38:ILE:C	10:K:41:ARG:HB2	2.21	0.61
10:K:67:PRO:O	10:K:76:PRO:HA	1.99	0.61
1:A:1373:G:OP1	11:L:42:ARG:NH2	2.34	0.61
1:A:1253:G:OP1	12:M:44:VAL:HB	2.01	0.61
11:L:111:ARG:HD2	16:Q:61:TRP:NE1	2.15	0.61
16:Q:4:LYS:O	16:Q:7:ILE:HG13	2.00	0.61
17:R:6:GLU:O	17:R:7:GLU:C	2.39	0.61
18:S:4:ILE:N	18:S:4:ILE:CD1	2.54	0.61
18:S:59:TRP:CE3	18:S:59:TRP:HA	2.36	0.61
19:T:25:ARG:HG2	19:T:26:GLN:N	2.15	0.61
1:A:189:U:N3	19:T:72:ARG:NH2	2.44	0.61
20:U:69:THR:O	20:U:70:ILE:C	2.39	0.61
1:A:986:A:H4'	21:V:55:LYS:CD	2.31	0.61
3:D:64:A:H2'	3:D:65:G:H8	1.65	0.61
1:A:1126:U:H2'	1:A:1127:G:C8	2.36	0.61
1:A:1157:A:C8	1:A:1181:G:N2	2.69	0.61
1:A:136:C:O2'	18:S:63:GLY:HA2	2.01	0.61
1:A:118:U:O4	1:A:289:G:H4'	2.00	0.61
1:A:314:C:H2'	1:A:315:A:C1'	2.31	0.61
1:A:354:G:N2	1:A:355:C:C2	2.69	0.61
1:A:515:G:H2'	1:A:516:U:O4'	2.00	0.61
1:A:558:G:C5'	1:A:559:A:H5''	2.31	0.61
1:A:59:A:O2'	1:A:388:G:H5''	2.00	0.61
1:A:782:A:C6	1:A:801:U:C2	2.88	0.61
4:E:182:ILE:HD13	4:E:182:ILE:H	1.66	0.61
5:F:10:PHE:HD1	5:F:178:LEU:CD2	2.14	0.61
5:F:11:ARG:HH22	5:F:179:ARG:N	1.97	0.61
5:F:180:ALA:HB1	5:F:182:ILE:HD11	1.81	0.61
5:F:91:LEU:HD23	5:F:92:ALA:N	2.15	0.61
6:G:80:GLU:HA	6:G:83:SER:OG	2.00	0.61
8:I:2:ARG:O	8:I:67:MET:HE1	2.01	0.61
8:I:78:GLU:HA	8:I:81:ILE:CD1	2.31	0.61
9:J:88:PRO:CG	9:J:152:ALA:HB2	2.29	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:K:75:ARG:HB2	10:K:75:ARG:NH1	2.15	0.61
13:N:73:MET:SD	13:N:103:LEU:HB3	2.40	0.61
13:N:39:PRO:C	13:N:40:ILE:HD13	2.21	0.61
15:P:52:GLU:HB3	15:P:55:ARG:CZ	2.30	0.61
1:A:255:G:OP2	19:T:66:SER:HB2	2.00	0.61
19:T:81:ARG:HG2	19:T:84:LEU:HD21	1.83	0.61
20:U:20:ALA:HB1	20:U:55:ARG:HH21	1.65	0.61
21:V:40:ILE:O	21:V:41:VAL:HG13	2.00	0.61
22:W:50:GLU:OE1	22:W:100:ILE:HG23	2.00	0.61
22:W:57:ARG:NH2	22:W:100:ILE:HD12	2.15	0.61
3:D:75:C:H5''	3:D:76:A:C4'	2.30	0.61
1:A:131:C:N4	1:A:232:G:N1	2.48	0.61
3:B:9:A:O2'	3:B:45:U:C2'	2.48	0.61
19:T:100:LYS:NZ	19:T:100:LYS:HB3	2.15	0.61
1:A:1157:A:C1'	1:A:1181:G:H21	2.14	0.61
1:A:1248:A:H2'	11:L:70:LYS:HZ1	1.64	0.61
1:A:934:C:N4	1:A:1344:C:N3	2.48	0.61
1:A:1373:G:O2'	9:J:34:GLY:HA2	2.00	0.61
1:A:1443:G:O3'	1:A:1446:A:H4'	2.01	0.61
1:A:190:G:H8	1:A:190:G:OP1	1.82	0.61
1:A:224:C:H2'	1:A:225:C:C6	2.35	0.61
1:A:406:G:H21	6:G:119:GLN:HE22	1.48	0.61
1:A:467:G:H3'	1:A:467:G:OP2	2.01	0.61
1:A:721:G:O6	20:U:71:LYS:NZ	2.27	0.61
1:A:869:G:H4'	1:A:872:A:C8	2.35	0.61
1:A:918:A:O2'	1:A:919:A:OP1	2.19	0.61
1:A:938:A:C4	1:A:939:G:C8	2.89	0.61
1:A:969:A:C4'	1:A:969:A:OP1	2.48	0.61
4:E:55:PHE:HA	4:E:58:ILE:CG1	2.31	0.61
5:F:120:VAL:HG21	5:F:137:ALA:HB1	1.82	0.61
6:G:165:MET:HE1	6:G:167:GLY:H	1.65	0.61
6:G:170:VAL:HG11	6:G:174:LEU:HB2	1.82	0.61
8:I:64:GLN:C	8:I:65:VAL:CG1	2.70	0.61
8:I:89:MET:CE	20:U:76:LEU:HD21	2.31	0.61
10:K:22:GLU:HA	10:K:63:LEU:CD2	2.22	0.61
10:K:46:LYS:HD2	10:K:63:LEU:O	2.01	0.61
11:L:93:ARG:CZ	11:L:97:LYS:HG2	2.29	0.61
19:T:3:LYS:O	19:T:5:VAL:HG23	2.01	0.61
21:V:46:GLY:O	21:V:47:HIS:ND1	2.34	0.61
1:A:1319:A:H4'	21:V:70:LYS:HZ1	1.64	0.61
22:W:73:HIS:O	22:W:74:LYS:C	2.39	0.61
1:A:1327:C:OP1	23:X:20:LYS:HE2	2.01	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:8:U:O4	3:D:14:A:N7	2.34	0.61
1:A:1054:C:H3'	1:A:1054:C:C6	2.36	0.61
1:A:1215:G:C2	1:A:1216:G:C8	2.89	0.61
1:A:1269:A:C8	1:A:1270:C:H1'	2.36	0.61
1:A:1288:A:C4	1:A:1289:A:N7	2.69	0.61
1:A:1371:G:OP2	11:L:11:LYS:NZ	2.34	0.61
1:A:1453:G:H2'	1:A:1454:G:C4'	2.31	0.61
1:A:501:C:H2'	1:A:502:G:H8	1.65	0.61
1:A:781:A:C2'	1:A:782:A:C5'	2.67	0.61
3:C:30:G:C2	3:C:31:A:H1'	2.36	0.61
4:E:28:PHE:N	4:E:194:PRO:HG2	2.16	0.61
4:E:84:GLU:OE1	4:E:216:SER:HA	2.01	0.61
4:E:87:ARG:C	4:E:89:GLY:N	2.54	0.61
6:G:168:ARG:HD2	6:G:168:ARG:H	1.66	0.61
6:G:35:ARG:O	6:G:37:PRO:CD	2.49	0.61
7:H:75:THR:HA	7:H:118:ILE:HD11	1.82	0.61
7:H:135:THR:C	7:H:139:LEU:HD12	2.22	0.61
8:I:14:LEU:CD1	8:I:15:ASP:N	2.57	0.61
8:I:4:TYR:HB3	8:I:91:VAL:O	2.01	0.61
9:J:106:GLN:NE2	9:J:106:GLN:HA	2.14	0.61
9:J:12:LEU:HD22	9:J:24:THR:HG22	1.83	0.61
9:J:51:GLN:HE22	9:J:58:PRO:CG	2.13	0.61
10:K:69:ARG:NH1	10:K:73:ASP:O	2.34	0.61
12:M:23:ILE:CG2	12:M:72:VAL:HG11	2.30	0.61
12:M:83:GLU:OE1	12:M:83:GLU:HA	1.99	0.61
13:N:104:GLN:HE22	13:N:106:LYS:HB2	1.65	0.61
13:N:42:TRP:HE3	13:N:43:SER:N	1.99	0.61
13:N:92:GLU:OE1	13:N:92:GLU:HA	2.01	0.61
14:O:90:VAL:HG12	14:O:93:LEU:HD21	1.82	0.61
14:O:24:VAL:HG22	14:O:98:TYR:CE1	2.34	0.61
17:R:39:LEU:CD1	17:R:56:LEU:HD13	2.31	0.61
14:O:11:VAL:HG22	19:T:32:TYR:HD1	1.66	0.61
19:T:66:SER:CB	19:T:69:LYS:NZ	2.62	0.61
8:I:50:TYR:HE1	20:U:81:PHE:CE2	2.19	0.61
13:N:84:VAL:HB	20:U:88:LYS:HZ3	1.66	0.61
3:B:72:C:H2'	3:B:73:A:H8	1.65	0.61
3:B:18:G:C2'	3:B:57:G:H1	2.14	0.61
1:A:1126:U:C2	1:A:1127:G:C8	2.89	0.60
1:A:1180:A:O2'	1:A:1181:G:H5'	2.00	0.60
1:A:1314:C:O5'	21:V:6:LYS:HG2	1.99	0.60
1:A:1389:C:H2'	1:A:1390:U:C5'	2.31	0.60
1:A:186(E):C:O2'	1:A:186(F):C:H5'	2.01	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:221:C:H2'	1:A:222:U:H6	1.66	0.60
1:A:571:U:C6	1:A:571:U:H5''	2.35	0.60
1:A:64:G:N2	1:A:67:C:C4	2.69	0.60
1:A:685:G:H2'	1:A:686:U:C6	2.36	0.60
1:A:690:G:N3	1:A:690:G:H2'	2.15	0.60
1:A:801:U:H2'	1:A:801:U:O2	2.00	0.60
1:A:766:A:N7	1:A:814:A:C6	2.69	0.60
1:A:765:G:N2	1:A:816:A:C2	2.69	0.60
1:A:857:C:O2'	1:A:858:G:H5'	2.00	0.60
1:A:854:G:P	1:A:871:U:O2	2.59	0.60
3:C:76:A:H3'	3:C:76:A:C8	2.35	0.60
4:E:115:LEU:HD12	4:E:118:LEU:CD1	2.28	0.60
4:E:19:HIS:HB3	4:E:189:ASP:OD2	2.00	0.60
4:E:35:GLU:O	4:E:36:ARG:NE	2.35	0.60
1:A:409:G:H5''	6:G:24:GLU:OE1	2.01	0.60
6:G:58:LEU:CD1	6:G:59:ARG:NH1	2.64	0.60
7:H:77:PRO:O	7:H:93:PRO:HG3	2.01	0.60
8:I:33:TYR:CE2	8:I:75:LEU:N	2.69	0.60
8:I:80:ARG:CG	8:I:88:VAL:HG21	2.29	0.60
10:K:51:VAL:HG12	10:K:52:ASP:N	2.16	0.60
12:M:12:ASP:OD1	12:M:14:LYS:HB2	2.01	0.60
14:O:34:ARG:HG3	14:O:105:TYR:CE1	2.36	0.60
15:P:4:ILE:O	15:P:5:ALA:HB3	2.01	0.60
17:R:43:LEU:HD11	17:R:56:LEU:CD2	2.31	0.60
18:S:19:ILE:HD12	18:S:38:TYR:N	2.16	0.60
18:S:4:ILE:CG2	18:S:21:VAL:HG13	2.30	0.60
1:A:761:G:H1'	19:T:104:LYS:O	2.01	0.60
19:T:7:THR:HG22	19:T:56:VAL:HG12	1.83	0.60
19:T:58:GLU:OE2	19:T:74:LEU:HB3	2.01	0.60
19:T:59:ILE:CD1	19:T:72:ARG:N	2.64	0.60
3:D:63:G:H2'	3:D:64:A:H8	1.66	0.60
6:G:43:HIS:O	6:G:46:LYS:HB2	1.99	0.60
14:O:43:VAL:HG12	14:O:44:THR:O	2.01	0.60
1:A:129(A):G:N2	1:A:191(A):G:C4	2.69	0.60
1:A:1400:C:C4'	1:A:1401:G:OP2	2.49	0.60
1:A:155:C:O2'	1:A:156:G:H5'	2.01	0.60
1:A:169:C:O2'	1:A:170:U:H5'	2.01	0.60
1:A:293:G:N3	1:A:293:G:H2'	2.15	0.60
1:A:383:A:H2'	1:A:384:G:O4'	2.00	0.60
1:A:789:U:H3'	1:A:789:U:C6	2.36	0.60
1:A:797:C:HO2'	1:A:798:G:H5'	1.66	0.60
3:C:46:G:N3	3:C:46:G:H2'	2.17	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:138:LEU:O	4:E:141:GLU:HB3	2.01	0.60
4:E:142:LEU:O	4:E:142:LEU:HD23	2.01	0.60
4:E:146:GLN:O	4:E:148:TYR:N	2.34	0.60
4:E:175:ARG:HD2	4:E:179:LYS:NZ	2.16	0.60
4:E:163:PHE:CZ	4:E:186:ALA:HA	2.36	0.60
4:E:208:ILE:HA	4:E:211:ILE:HD12	1.83	0.60
4:E:40:HIS:C	4:E:41:ILE:HD12	2.21	0.60
4:E:77:ALA:O	4:E:80:ILE:N	2.34	0.60
4:E:92:TYR:H	4:E:152:PHE:HA	1.64	0.60
5:F:36:ASP:OD2	5:F:40:ARG:NH1	2.34	0.60
5:F:8:ILE:O	5:F:11:ARG:N	2.33	0.60
6:G:102:ASP:HB2	6:G:136:PRO:O	2.01	0.60
6:G:170:VAL:HG12	6:G:171:GLY:N	2.17	0.60
7:H:15:ARG:CZ	7:H:26:PHE:CE2	2.83	0.60
8:I:10:LEU:HD11	8:I:61:LEU:CD1	2.31	0.60
8:I:75:LEU:HD23	8:I:78:GLU:HB3	1.82	0.60
9:J:26:PHE:CD2	9:J:43:PHE:HE1	2.19	0.60
9:J:6:ARG:HA	9:J:6:ARG:NH1	2.16	0.60
12:M:39:PRO:O	12:M:69:ASN:O	2.19	0.60
12:M:18:ALA:CB	12:M:91:PRO:HB3	2.23	0.60
13:N:28:THR:HG22	13:N:29:ILE:N	2.16	0.60
13:N:92:GLU:O	13:N:93:GLN:C	2.39	0.60
15:P:20:THR:HA	15:P:25:ILE:HG22	1.81	0.60
5:F:33:LEU:CG	16:Q:54:PRO:HD2	2.31	0.60
17:R:49:ASP:OD1	17:R:52:SER:HB2	2.01	0.60
20:U:67:ALA:O	20:U:70:ILE:N	2.34	0.60
21:V:24:ALA:C	21:V:26:GLY:H	2.04	0.60
21:V:46:GLY:HA2	21:V:62:ILE:O	2.01	0.60
21:V:47:HIS:H	21:V:62:ILE:CG2	2.13	0.60
22:W:49:ALA:HA	22:W:92:LEU:CD2	2.26	0.60
1:A:161:A:N6	1:A:162:A:C6	2.70	0.60
1:A:1005:A:C1'	1:A:1036:G:N2	2.63	0.60
1:A:129(A):G:C2	1:A:188:U:O2'	2.53	0.60
1:A:1329:A:O2'	1:A:1330:U:H5'	2.01	0.60
1:A:245:C:C2	1:A:284:G:C2	2.89	0.60
1:A:619:U:N3	6:G:135:LEU:HD21	2.16	0.60
1:A:600:C:C2	1:A:639:G:N2	2.69	0.60
1:A:890:G:O2'	1:A:891:U:P	2.60	0.60
1:A:91:C:C2	1:A:92:G:C8	2.89	0.60
1:A:944:G:H8	1:A:944:G:O5'	1.85	0.60
3:C:73:A:H2'	3:C:74:C:OP1	2.01	0.60
4:E:115:LEU:HB2	4:E:145:LEU:CG	2.31	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:11:ARG:O	5:F:14:ILE:HB	2.02	0.60
6:G:31:CYS:SG	6:G:33:MET:CG	2.89	0.60
10:K:17:THR:HG21	10:K:80:ILE:CG2	2.32	0.60
10:K:1:MET:CG	10:K:2:LEU:H	2.14	0.60
1:A:1232:U:OP1	11:L:125:TYR:O	2.19	0.60
1:A:1370:G:H5''	11:L:12:GLU:CD	2.22	0.60
11:L:38:GLN:C	11:L:40:LEU:N	2.53	0.60
12:M:6:ILE:O	12:M:71:LEU:HD13	2.00	0.60
12:M:75:ILE:HG22	12:M:76:ASN:N	2.16	0.60
15:P:98:VAL:H	15:P:110:ARG:HH21	1.49	0.60
1:A:1230:C:O2	15:P:126:LYS:CG	2.50	0.60
15:P:22:ILE:HB	15:P:25:ILE:CG1	2.31	0.60
15:P:14:ARG:H	15:P:44:ARG:HD2	1.65	0.60
15:P:66:LEU:C	15:P:70:LEU:HB2	2.22	0.60
1:A:1316:G:H5''	16:Q:17:LYS:NZ	2.17	0.60
16:Q:26:ARG:CB	16:Q:43:CYS:CB	2.79	0.60
16:Q:54:PRO:O	16:Q:56:VAL:N	2.35	0.60
18:S:18:ARG:NH1	18:S:35:LYS:CB	2.47	0.60
18:S:20:VAL:C	18:S:36:ILE:HD11	2.21	0.60
18:S:75:ARG:HA	18:S:80:PHE:CB	2.31	0.60
1:A:189:U:H2'	19:T:63:ARG:NH2	2.16	0.60
20:U:53:ARG:HD3	20:U:63:GLN:NE2	2.16	0.60
21:V:22:LEU:C	21:V:22:LEU:HD23	2.21	0.60
1:A:986:A:C4'	21:V:55:LYS:HG3	2.32	0.60
3:D:47:U:H2'	3:D:48:C:C5'	2.21	0.60
1:A:1010:G:C2	1:A:1020:U:H1'	2.37	0.60
1:A:1010:G:N2	1:A:1020:U:C1'	2.61	0.60
2:1:34:U:H3'	2:1:34:U:H6	1.65	0.60
1:A:1005:A:C3'	1:A:1006:C:H6	2.09	0.60
1:A:129(A):G:H2'	1:A:189:U:C5	2.36	0.60
1:A:1346:A:C8	1:A:1348:U:C2	2.88	0.60
1:A:1319:A:C2	1:A:1361:G:N2	2.70	0.60
1:A:1411:C:C2	1:A:1412:C:C5	2.90	0.60
1:A:173:U:H4'	1:A:197:A:H1'	1.83	0.60
1:A:244:U:O2'	1:A:245:C:P	2.60	0.60
1:A:274:A:H5'	1:A:275:G:OP1	2.01	0.60
1:A:357:G:OP1	1:A:367:U:H3'	2.01	0.60
1:A:594:G:H3'	1:A:595:G:O4'	2.01	0.60
1:A:777:A:C4	1:A:778:G:C8	2.89	0.60
1:A:794:A:H2'	1:A:795:C:C6	2.37	0.60
4:E:162:ILE:O	4:E:185:ILE:HD13	2.01	0.60
4:E:56:ARG:O	4:E:59:GLU:HG3	2.02	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:70:PHE:HB3	4:E:163:PHE:O	2.00	0.60
6:G:20:TYR:CB	6:G:26:CYS:O	2.49	0.60
7:H:94:ALA:CB	7:H:119:LEU:HD21	2.31	0.60
7:H:45:PHE:HE1	7:H:47:LYS:HD2	1.65	0.60
13:N:20:TYR:HE1	13:N:33:THR:HG1	1.47	0.60
14:O:38:THR:HG22	14:O:58:VAL:HA	1.82	0.60
14:O:56:ALA:CB	14:O:68:ALA:O	2.36	0.60
15:P:18:ALA:HB2	15:P:45:VAL:HG21	1.83	0.60
18:S:58:TYR:HD1	18:S:59:TRP:N	1.98	0.60
21:V:27:GLU:HG2	21:V:28:LYS:H	1.63	0.60
2:1:21:G:H2'	2:1:22:C:C6	2.37	0.60
1:A:1171:G:HO2'	1:A:1172:C:H6	1.49	0.60
1:A:1095:U:H5'	1:A:1109:C:O2	2.01	0.60
1:A:1196:U:C6	1:A:1196:U:H3'	2.36	0.60
1:A:130:A:H4'	1:A:190:G:C4	2.37	0.60
1:A:1376:U:O2	1:A:1377:A:N6	2.35	0.60
1:A:227:G:H2'	1:A:228:A:C8	2.36	0.60
1:A:229:U:H2'	1:A:230:G:C8	2.37	0.60
1:A:538:G:N2	1:A:539:A:H1'	2.17	0.60
1:A:594:G:C5	1:A:595:G:N3	2.69	0.60
1:A:597:G:H2'	1:A:598:U:C5'	2.31	0.60
1:A:620:C:C4	6:G:135:LEU:HD22	2.36	0.60
1:A:67:C:H4'	1:A:172:A:C1'	2.32	0.60
1:A:877:C:O2'	1:A:878:G:H5'	2.02	0.60
1:A:890:G:O2'	1:A:891:U:C6	2.53	0.60
5:F:156:ARG:NH2	5:F:160:ALA:O	2.34	0.60
5:F:48:TYR:HD2	5:F:48:TYR:O	1.85	0.60
1:A:404:U:H4'	6:G:122:ARG:NH1	2.16	0.60
6:G:128:VAL:HG12	6:G:129:ASN:N	2.17	0.60
6:G:32:ALA:HB3	6:G:33:MET:HE3	1.83	0.60
6:G:65:ARG:HG3	6:G:72:GLU:OE1	2.01	0.60
7:H:18:ARG:H	7:H:26:PHE:HB3	1.65	0.60
9:J:87:VAL:HG21	9:J:154:TYR:HB2	1.82	0.60
10:K:119:LEU:HB3	10:K:124:ALA:HB2	1.83	0.60
1:A:599:C:O2'	10:K:130:GLY:N	2.34	0.60
10:K:37:ARG:HD2	10:K:38:ILE:N	2.16	0.60
10:K:70:GLN:NE2	10:K:71:GLY:N	2.47	0.60
10:K:87:SER:HB3	10:K:93:VAL:H	1.64	0.60
12:M:9:ARG:C	12:M:94:VAL:HG13	2.21	0.60
13:N:26:ASN:O	13:N:27:ASN:HB2	2.02	0.60
13:N:45:GLY:O	13:N:50:TYR:HB2	2.02	0.60
1:A:33:A:N3	14:O:32:PHE:CZ	2.70	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:P:13:LYS:HA	15:P:44:ARG:CZ	2.31	0.60
15:P:98:VAL:CB	15:P:110:ARG:HH21	2.14	0.60
20:U:34:TYR:CD1	20:U:35:ARG:N	2.69	0.60
20:U:34:TYR:HD1	20:U:35:ARG:N	1.99	0.60
21:V:12:ASP:O	21:V:16:LEU:HD22	2.01	0.60
1:A:107:G:C6	22:W:15:ARG:NH2	2.69	0.60
3:B:22:G:N7	3:B:46:G:N2	2.50	0.60
1:A:1011:G:C2'	1:A:1012:U:H5'	2.32	0.60
1:A:1044:A:H2'	1:A:1045:C:C5'	2.30	0.60
1:A:1392:G:H2'	1:A:1393:U:C6	2.36	0.60
1:A:167:G:H2'	1:A:168:G:H8	1.67	0.60
1:A:186:C:O2'	1:A:186(A):C:H5'	2.00	0.60
1:A:258:G:O6	1:A:259:G:O6	2.19	0.60
1:A:362:G:N3	1:A:364:A:C8	2.69	0.60
1:A:405:U:H5''	1:A:406:G:O4'	2.01	0.60
1:A:572:A:O2'	1:A:916:G:O2'	2.11	0.60
1:A:65:U:H4'	1:A:66:G:O5'	2.01	0.60
1:A:703:G:O5'	1:A:703:G:H8	1.84	0.60
1:A:780:A:H2	1:A:803:G:C6	2.19	0.60
1:A:790:A:N6	1:A:791:G:N1	2.49	0.60
1:A:791:G:H3'	1:A:791:G:OP2	2.02	0.60
1:A:796:C:C2	1:A:797:C:C5	2.90	0.60
1:A:90:C:O2'	1:A:91:C:C5'	2.50	0.60
1:A:9:G:H3'	7:H:126:ARG:HH11	1.66	0.60
3:C:40:C:C2'	3:C:41:C:C5'	2.74	0.60
4:E:52:GLU:HG2	4:E:53:ARG:N	2.16	0.60
6:G:128:VAL:HG21	6:G:133:VAL:CB	2.31	0.60
6:G:176:LEU:O	6:G:176:LEU:HG	2.01	0.60
6:G:177:ASP:HB3	6:G:182:LYS:O	2.02	0.60
6:G:187:ARG:CZ	6:G:188:LEU:HG	2.31	0.60
7:H:88:LYS:CB	7:H:123:LEU:O	2.50	0.60
7:H:40:ARG:N	7:H:68:GLU:OE1	2.35	0.60
9:J:71:PRO:CD	9:J:100:ALA:HB2	2.31	0.60
10:K:104:ARG:HB3	10:K:107:LEU:HG	1.83	0.60
10:K:6:ILE:CD1	10:K:85:ARG:HD3	2.32	0.60
10:K:95:VAL:HG11	10:K:133:LEU:HD11	1.84	0.60
14:O:41:ARG:HH12	14:O:55:VAL:HG11	1.67	0.60
14:O:35:GLY:O	14:O:82:VAL:CG1	2.50	0.60
17:R:40:SER:O	17:R:43:LEU:HB2	2.02	0.60
18:S:8:ARG:HD3	18:S:15:PRO:CA	2.29	0.60
18:S:20:VAL:HG11	18:S:32:TYR:CB	2.30	0.60
20:U:31:LEU:N	20:U:31:LEU:HD12	2.16	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:V:30:LEU:HD21	21:V:50:ALA:HB2	1.84	0.60
21:V:45:VAL:CG2	21:V:67:VAL:HG21	2.27	0.60
22:W:63:ILE:HD13	22:W:80:ARG:CB	2.29	0.60
1:A:1028(B):C:O2	1:A:1028(B):C:H2'	1.99	0.60
1:A:1041:A:C6	1:A:1042:G:N7	2.70	0.60
1:A:1062:U:C2'	1:A:1063:C:C6	2.82	0.60
1:A:1127:G:H21	1:A:1147:C:H42	1.50	0.60
1:A:1251:A:O2'	1:A:1369:C:O2'	2.09	0.60
1:A:1320:C:C5	21:V:37:ARG:NH2	2.70	0.60
1:A:923:A:O4'	1:A:1398:A:C2	2.54	0.60
1:A:254:G:C6	1:A:273:A:N6	2.69	0.60
1:A:323:U:C5	1:A:324:G:H1'	2.37	0.60
1:A:362:G:N3	1:A:364:A:H8	1.98	0.60
1:A:390:C:C4	1:A:391:G:N7	2.70	0.60
1:A:49:U:O2'	1:A:50:A:OP1	2.16	0.60
1:A:667:G:H2'	1:A:668:G:C8	2.37	0.60
1:A:687:A:O2'	1:A:688:G:O5'	2.20	0.60
1:A:867:G:H2'	1:A:868:C:H6	1.63	0.60
1:A:570:G:N2	1:A:873:A:N1	2.50	0.60
4:E:78:GLN:NE2	4:E:96:ARG:HH12	1.98	0.60
5:F:149:ALA:HB3	5:F:170:GLN:HE21	1.67	0.60
5:F:173:VAL:O	5:F:175:LEU:N	2.35	0.60
5:F:30:ARG:CG	5:F:31:HIS:H	2.09	0.60
5:F:55:VAL:HG22	5:F:68:VAL:HG22	1.83	0.60
6:G:110:PHE:CE1	6:G:148:VAL:HG23	2.34	0.60
6:G:59:ARG:C	6:G:63:LYS:NZ	2.53	0.60
7:H:103:GLY:C	7:H:107:ARG:HH12	2.05	0.60
9:J:103:TRP:CH2	9:J:138:LYS:CA	2.74	0.60
10:K:1:MET:HG2	10:K:2:LEU:H	1.66	0.60
10:K:98:LYS:O	10:K:98:LYS:HG2	2.01	0.60
10:K:97:VAL:HG22	10:K:98:LYS:N	2.14	0.60
11:L:103:THR:CG2	11:L:104:ARG:H	2.12	0.60
11:L:27:THR:HG23	11:L:30:GLY:O	2.02	0.60
12:M:69:ASN:O	12:M:70:ARG:HD3	2.01	0.60
14:O:7:ILE:HB	14:O:8:ASN:ND2	2.16	0.60
1:A:1202:G:H1'	16:Q:29:ARG:CD	2.31	0.60
12:M:63:PHE:HA	16:Q:59:ALA:HB2	1.83	0.60
1:A:375:U:C3'	18:S:6:LEU:HD21	2.30	0.60
19:T:59:ILE:CD1	19:T:60:ILE:N	2.65	0.60
23:X:13:ILE:CG2	23:X:14:TRP:N	2.65	0.60
1:A:1017:G:O2'	1:A:1018:C:H5'	2.01	0.60
4:E:156:LYS:HG2	4:E:156:LYS:O	2.02	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:1:46:U:N3	3:B:34:G:N1	2.49	0.60
1:A:1484:C:C2'	1:A:1485:U:H5'	2.31	0.60
1:A:1507:A:C2'	1:A:1508:G:H5'	2.32	0.60
1:A:306:G:O5'	1:A:306:G:H8	1.84	0.60
1:A:394:G:H2'	1:A:395:C:C6	2.36	0.60
1:A:425:G:O2'	1:A:426:G:H5'	2.00	0.60
1:A:44:G:C6	1:A:45:U:C2	2.90	0.60
1:A:677:U:H2'	1:A:678:U:H5	1.59	0.60
1:A:753:A:H5'	1:A:754:C:C5	2.37	0.60
1:A:796:C:H2'	1:A:797:C:H6	1.66	0.60
1:A:887:G:H2'	1:A:888:G:H8	1.67	0.60
1:A:896:C:C2	1:A:897:C:C5	2.90	0.60
1:A:95:G:C2'	1:A:96:G:H5'	2.32	0.60
4:E:87:ARG:C	4:E:89:GLY:H	2.05	0.60
5:F:39:ILE:HG21	5:F:57:ILE:HD13	1.84	0.60
7:H:74:GLY:O	7:H:75:THR:HB	2.01	0.60
8:I:52:ILE:HG21	8:I:87:ARG:NH2	2.16	0.60
8:I:95:GLU:H	8:I:96:PRO:HD2	1.64	0.60
12:M:12:ASP:O	12:M:16:LEU:HD23	2.01	0.60
12:M:62:HIS:O	16:Q:59:ALA:HB3	2.01	0.60
13:N:15:ALA:O	13:N:78:GLN:NE2	2.35	0.60
14:O:12:ARG:CZ	14:O:12:ARG:HB3	2.30	0.60
1:A:529:G:C6	14:O:49:ASN:CG	2.74	0.60
16:Q:40:CYS:O	16:Q:44:LEU:HB2	2.02	0.60
1:A:1047:G:C5'	16:Q:4:LYS:HD3	2.32	0.60
18:S:56:ALA:O	18:S:60:LEU:CG	2.50	0.60
19:T:38:ARG:HG3	19:T:39:SER:N	2.16	0.60
19:T:95:TYR:O	19:T:97:SER:N	2.35	0.60
21:V:36:ARG:HH21	21:V:51:VAL:HG12	1.65	0.60
2:1:37:U:H2'	2:1:38:U:C2	2.37	0.60
1:A:1224:G:H2'	1:A:1225:A:OP1	2.01	0.60
1:A:1466:C:H3'	1:A:1467:G:C8	2.37	0.60
1:A:1468:A:C8	1:A:1469:G:C8	2.90	0.60
1:A:815:A:C2	1:A:1529:G:C2	2.89	0.60
1:A:224:C:H2'	1:A:225:C:H6	1.66	0.60
1:A:306:G:N3	1:A:307:C:C6	2.69	0.60
1:A:376:G:OP1	18:S:6:LEU:HD13	2.00	0.60
1:A:44:G:H2'	1:A:45:U:C5'	2.32	0.60
1:A:657:G:H2'	1:A:658:G:C5'	2.30	0.60
1:A:766:A:C2	1:A:767:A:H1'	2.37	0.60
1:A:818:G:N3	1:A:820:U:C5	2.69	0.60
1:A:818:G:H3'	1:A:819:A:H5''	1.84	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:951:G:N2	1:A:952:U:C2	2.70	0.60
1:A:953:G:H1'	15:P:125:ARG:C	2.21	0.60
3:D:37:A:H61	9:J:79:ARG:NH2	1.99	0.60
4:E:124:SER:OG	4:E:125:PRO:HD2	2.02	0.60
4:E:112:VAL:HG13	4:E:149:LEU:HD21	1.84	0.60
4:E:102:LEU:HD22	4:E:176:GLU:OE1	2.02	0.60
4:E:166:ASP:OD1	4:E:205:ASP:OD2	2.20	0.60
4:E:97:TRP:HB3	4:E:172:ILE:HD12	1.83	0.60
5:F:12:LEU:O	5:F:17:ASP:OD2	2.19	0.60
5:F:142:MET:CB	5:F:149:ALA:HB2	2.32	0.60
5:F:157:ILE:O	5:F:157:ILE:HG22	2.00	0.60
5:F:91:LEU:CD2	5:F:92:ALA:N	2.64	0.60
6:G:139:ARG:HG2	6:G:140:VAL:H	1.66	0.60
1:A:923:A:C5'	7:H:21:ALA:HB2	2.32	0.60
7:H:80:ILE:HD11	7:H:91:LEU:HB3	1.83	0.60
10:K:38:ILE:CA	10:K:41:ARG:HB2	2.32	0.60
13:N:54:ARG:O	13:N:56:GLY:N	2.35	0.60
15:P:97:PRO:HG2	15:P:103:THR:CG2	2.09	0.60
21:V:37:ARG:O	21:V:70:LYS:HE2	2.02	0.60
1:A:191:G:C1'	22:W:105:SER:HA	2.25	0.60
3:D:3:C:H2'	3:D:4:C:C6	2.36	0.60
1:A:1049:U:C4	16:Q:3:ARG:HB2	2.37	0.60
1:A:1069:C:N4	1:A:1094:G:O6	2.35	0.60
1:A:1116:C:H2'	1:A:1117:G:C8	2.37	0.60
1:A:123:C:OP1	1:A:311:C:O2'	2.20	0.60
1:A:12:U:C2	1:A:13:U:O4	2.55	0.60
1:A:1300:G:C2	1:A:1335:C:C2	2.90	0.60
1:A:1305:G:H5''	23:X:4:GLY:C	2.22	0.60
1:A:28:G:O2'	1:A:296:U:OP1	2.15	0.60
1:A:438:G:N2	1:A:495:A:C8	2.68	0.60
1:A:483:C:N4	1:A:484:G:C2	2.70	0.60
1:A:557:G:H2'	1:A:558:G:C1'	2.32	0.60
1:A:55:A:C2	1:A:56:U:H1'	2.37	0.60
1:A:620:C:N3	6:G:135:LEU:HD22	2.17	0.60
1:A:632:A:C4	1:A:633:G:C8	2.89	0.60
1:A:775:G:H2'	1:A:776:G:N7	2.15	0.60
1:A:781:A:HO2'	1:A:782:A:P	2.25	0.60
1:A:892:A:O2'	1:A:893:C:H5'	2.02	0.60
1:A:955:U:C2	1:A:956:U:H5	2.20	0.60
1:A:992:U:H5'	1:A:993:G:C8	2.37	0.60
4:E:97:TRP:CE3	4:E:172:ILE:HB	2.36	0.60
5:F:91:LEU:CD1	5:F:99:VAL:H	2.14	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:H:70:PRO:HG2	7:H:143:ARG:HB3	1.84	0.60
7:H:78:HIS:ND1	10:K:104:ARG:HD3	2.17	0.60
8:I:77:ARG:O	8:I:81:ILE:HG13	2.02	0.60
9:J:107:ALA:HB3	9:J:123:GLU:OE1	2.02	0.60
10:K:70:GLN:CB	10:K:73:ASP:O	2.50	0.60
10:K:84:ARG:HH11	10:K:84:ARG:CB	1.99	0.60
13:N:23:ALA:HB1	13:N:88:GLY:HA3	1.82	0.60
13:N:87:THR:HG22	13:N:91:ARG:NH2	2.16	0.60
18:S:28:ARG:NH1	18:S:29:ASP:OD2	2.35	0.60
22:W:49:ALA:CB	22:W:99:LEU:HG	2.32	0.60
1:A:121:C:H5'	1:A:122:G:OP1	2.02	0.59
1:A:1308:U:P	15:P:99:ARG:HG3	2.42	0.59
1:A:1419:G:HO2'	1:A:1420:C:H6	1.47	0.59
1:A:302:G:O2'	1:A:556:C:H5''	2.02	0.59
1:A:678:U:H2'	1:A:679:C:C5	2.35	0.59
1:A:678:U:C2	1:A:679:C:C5	2.90	0.59
1:A:719:C:H2'	1:A:720:C:O4'	2.02	0.59
4:E:131:PRO:O	4:E:134:GLU:N	2.35	0.59
4:E:179:LYS:C	4:E:181:PHE:N	2.53	0.59
4:E:75:LYS:O	4:E:77:ALA:N	2.34	0.59
5:F:124:ILE:HD11	5:F:130:VAL:HG13	1.83	0.59
6:G:114:ARG:HH11	6:G:114:ARG:HG3	1.66	0.59
6:G:172:PRO:HG3	6:G:193:ASP:HB3	1.83	0.59
6:G:80:GLU:O	6:G:83:SER:N	2.34	0.59
9:J:72:ARG:HG2	9:J:142:GLU:OE1	2.02	0.59
10:K:104:ARG:CB	10:K:107:LEU:HG	2.32	0.59
10:K:10:LEU:CD1	10:K:85:ARG:HB2	2.32	0.59
1:A:1349:A:OP1	11:L:120:ARG:HB2	2.02	0.59
13:N:87:THR:CG2	13:N:91:ARG:HH22	2.14	0.59
14:O:100:ILE:O	14:O:101:VAL:HG13	2.01	0.59
15:P:87:TYR:HB3	21:V:73:GLU:HB2	1.84	0.59
17:R:39:LEU:C	17:R:39:LEU:HD23	2.22	0.59
17:R:36:ILE:HG13	17:R:59:MET:CE	2.30	0.59
1:A:564:C:C5	19:T:31:LEU:HD11	2.37	0.59
1:A:130:A:OP2	19:T:63:ARG:NH2	2.35	0.59
21:V:30:LEU:HD11	21:V:50:ALA:HB2	1.84	0.59
22:W:76:ALA:O	22:W:79:ARG:HG2	2.02	0.59
3:B:20:U:H3'	3:B:21:A:C5'	2.32	0.59
1:A:1025:U:H2'	1:A:1026:G:N7	2.17	0.59
1:A:1209:C:C2'	1:A:1210:C:H5'	2.32	0.59
1:A:129(A):G:N2	1:A:191(A):G:N7	2.50	0.59
1:A:1343:G:H2'	1:A:1344:C:C6	2.37	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1451:A:H5''	1:A:1452:C:H5	1.67	0.59
1:A:1496:C:H2'	1:A:1497:G:O4'	2.02	0.59
1:A:190:G:O2'	1:A:191(A):G:P	2.60	0.59
1:A:285:G:O2'	1:A:286:G:H5'	2.03	0.59
1:A:296:U:O2	1:A:302:G:C2	2.55	0.59
1:A:425:G:C2'	1:A:426:G:H5'	2.32	0.59
1:A:719:C:O2	20:U:50:ILE:HG13	2.02	0.59
1:A:961:U:O2'	1:A:962:C:C5'	2.48	0.59
4:E:115:LEU:HD12	4:E:115:LEU:O	2.02	0.59
4:E:170:GLU:O	4:E:171:ALA:C	2.40	0.59
5:F:110:ASN:CB	5:F:144:SER:OG	2.50	0.59
5:F:47:LEU:HD11	5:F:83:ARG:HH21	1.67	0.59
9:J:31:MET:CG	9:J:32:ARG:H	2.15	0.59
10:K:9:MET:O	10:K:13:ILE:CG1	2.50	0.59
13:N:20:TYR:O	13:N:30:VAL:HA	2.03	0.59
15:P:102:ARG:O	15:P:104:ARG:N	2.31	0.59
15:P:52:GLU:HA	15:P:55:ARG:HD3	1.82	0.59
1:A:1358:U:H5'	16:Q:34:TYR:HA	1.83	0.59
12:M:65:LEU:HD13	16:Q:36:PHE:CZ	2.37	0.59
17:R:71:GLN:O	17:R:75:PRO:HD3	2.01	0.59
19:T:104:LYS:CD	19:T:105:ALA:H	2.15	0.59
8:I:62:TRP:CB	20:U:35:ARG:HH12	2.15	0.59
22:W:28:ALA:O	22:W:31:SER:OG	2.13	0.59
23:X:14:TRP:CZ3	23:X:15:ARG:NE	2.70	0.59
1:A:109:A:O2'	1:A:110:C:OP1	2.19	0.59
1:A:1120:G:O5'	1:A:1120:G:C8	2.55	0.59
1:A:1065:U:OP2	1:A:1190:G:N2	2.35	0.59
1:A:1279:A:O2'	1:A:1282:C:C4	2.52	0.59
1:A:1376:U:OP1	9:J:98:SER:HB3	2.03	0.59
1:A:1431:C:O2'	1:A:1432:G:H5'	2.02	0.59
1:A:1483:A:C8	1:A:1483:A:O5'	2.49	0.59
1:A:1508:G:H2'	1:A:1509:C:H6	1.68	0.59
1:A:290:C:H2'	1:A:291:C:H5'	1.83	0.59
1:A:321:A:H61	1:A:332:G:H1	1.49	0.59
1:A:366:C:O2'	1:A:367:U:P	2.60	0.59
1:A:676:A:H5''	13:N:113:PRO:HB2	1.84	0.59
1:A:689:C:P	13:N:55:LYS:HZ2	2.25	0.59
1:A:696:A:H2'	1:A:697:U:C5'	2.31	0.59
1:A:745:C:H1'	1:A:836:G:O2'	2.02	0.59
1:A:940:C:H2'	1:A:941:G:C8	2.37	0.59
3:B:33:U:O2'	3:B:35:A:C8	2.54	0.59
4:E:132:LYS:HA	4:E:135:GLN:OE1	2.01	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:114:ARG:HH12	4:E:141:GLU:HG3	1.66	0.59
4:E:33:TYR:HB2	4:E:43:ASP:HB2	1.84	0.59
6:G:98:GLU:HA	6:G:103:ASN:HD21	1.65	0.59
7:H:147:ASP:O	7:H:148:VAL:C	2.41	0.59
8:I:13:ASN:HD22	8:I:13:ASN:N	1.98	0.59
11:L:87:GLN:O	11:L:90:PRO:HD3	2.02	0.59
11:L:53:VAL:HG11	11:L:92:TYR:CZ	2.37	0.59
13:N:23:ALA:HB2	13:N:28:THR:CG2	2.32	0.59
14:O:86:ARG:HH22	14:O:119:LYS:CG	2.14	0.59
16:Q:34:TYR:OH	16:Q:41:ARG:HA	2.02	0.59
1:A:474:G:O5'	18:S:81:ARG:HG3	2.02	0.59
19:T:81:ARG:CG	19:T:84:LEU:HD21	2.32	0.59
20:U:21:LYS:HD2	20:U:22:VAL:N	2.17	0.59
20:U:22:VAL:HG23	20:U:56:THR:HA	1.84	0.59
20:U:66:LEU:O	20:U:70:ILE:HG13	2.01	0.59
20:U:72:ARG:CA	20:U:75:ILE:HD12	2.18	0.59
1:A:1320:C:C5	21:V:72:GLY:HA3	2.36	0.59
22:W:14:LYS:O	22:W:15:ARG:C	2.39	0.59
3:D:8:U:N3	3:D:14:A:N6	2.38	0.59
14:O:126:LYS:HD2	14:O:128:ALA:HB3	1.84	0.59
3:D:5:G:C2	3:D:6:G:N7	2.70	0.59
1:A:1066:C:C5	1:A:1067:A:N7	2.70	0.59
1:A:12:U:N3	1:A:13:U:O4	2.36	0.59
1:A:1347:G:C8	11:L:107:ARG:CB	2.82	0.59
1:A:1435:G:C2	1:A:1436:U:O4	2.55	0.59
1:A:1419:G:O6	1:A:1482:G:C6	2.54	0.59
1:A:20:U:C4	1:A:21:G:C6	2.90	0.59
1:A:246:A:H1'	1:A:247:G:H1'	1.82	0.59
1:A:321:A:O3'	1:A:1436:U:H5'	2.02	0.59
1:A:503:C:N3	1:A:504:C:C5	2.70	0.59
1:A:524:G:H2'	1:A:525:C:H6	1.62	0.59
1:A:579:G:C5	1:A:580:U:C5	2.90	0.59
3:C:11:C:H2'	3:C:12:U:H6	1.67	0.59
3:C:7:A:H4'	3:C:8:U:OP2	2.02	0.59
4:E:91:PRO:HG3	4:E:155:LEU:H	1.66	0.59
5:F:47:LEU:HD12	5:F:83:ARG:HH21	1.66	0.59
7:H:10:MET:HA	7:H:32:VAL:HG22	1.84	0.59
7:H:37:ARG:HH11	7:H:111:GLU:C	2.06	0.59
5:F:131:ARG:NH1	7:H:50:GLU:OE1	2.36	0.59
8:I:52:ILE:HG21	8:I:87:ARG:NH1	2.17	0.59
9:J:75:VAL:HG22	9:J:88:PRO:N	2.16	0.59
11:L:116:LYS:O	11:L:121:ARG:HB3	2.02	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:562:C:C2'	14:O:15:ARG:HB3	2.32	0.59
14:O:46:LYS:CE	14:O:47:LYS:HZ1	2.16	0.59
15:P:13:LYS:HB3	15:P:17:VAL:HB	1.83	0.59
17:R:77:ARG:NH1	17:R:77:ARG:O	2.36	0.59
8:I:89:MET:HG2	20:U:76:LEU:HD21	1.84	0.59
22:W:51:GLU:HA	22:W:54:LYS:CG	2.32	0.59
3:D:55:U:O5'	3:D:55:U:H6	1.85	0.59
2:1:52:U:OP1	6:G:50:ARG:HB2	2.01	0.59
1:A:1129:C:C4	1:A:1139:G:O6	2.56	0.59
1:A:964:A:OP1	1:A:1199:U:OP1	2.21	0.59
1:A:1240:U:C6	9:J:32:ARG:NH2	2.71	0.59
1:A:1258:G:H2'	1:A:1259:C:C5	2.37	0.59
1:A:1443:G:N3	1:A:1443:G:H2'	2.16	0.59
1:A:130:A:H5''	1:A:190:G:H2'	1.85	0.59
1:A:305:G:O2'	1:A:306:G:P	2.60	0.59
1:A:789:U:O2'	1:A:791:G:N7	2.32	0.59
1:A:866:C:C6	1:A:867:G:C1'	2.85	0.59
1:A:858:G:C2	1:A:869:G:H3'	2.36	0.59
1:A:89:U:H2'	1:A:90:C:O4'	2.03	0.59
1:A:951:G:O4'	1:A:971:G:H5'	2.02	0.59
4:E:199:TYR:O	4:E:201:ILE:HD12	2.03	0.59
6:G:18:LYS:HG2	6:G:33:MET:CB	2.25	0.59
7:H:34:VAL:HG21	7:H:62:ALA:CB	2.32	0.59
7:H:79:GLU:HB3	7:H:92:LYS:CA	2.23	0.59
8:I:16:GLN:HG3	8:I:17:SER:H	1.67	0.59
8:I:60:PHE:N	8:I:60:PHE:HD1	2.01	0.59
9:J:71:PRO:HA	9:J:138:LYS:HE3	1.84	0.59
10:K:48:TYR:HA	10:K:60:ARG:O	2.01	0.59
12:M:20:ALA:HB1	12:M:37:PRO:HB3	1.83	0.59
13:N:73:MET:SD	13:N:78:GLN:HB3	2.42	0.59
13:N:85:ARG:HG3	13:N:85:ARG:NH1	2.18	0.59
17:R:36:ILE:HD11	17:R:60:VAL:CG2	2.32	0.59
19:T:3:LYS:O	19:T:4:LYS:O	2.20	0.59
20:U:58:LEU:CB	20:U:62:GLU:HB3	2.18	0.59
21:V:29:ARG:HG2	21:V:48:THR:HB	1.85	0.59
22:W:20:LEU:O	22:W:23:ARG:HD3	2.03	0.59
22:W:23:ARG:NH1	22:W:24:LEU:HG	2.18	0.59
1:A:1305:G:H5''	23:X:5:ASP:N	2.18	0.59
23:X:6:ARG:NH1	23:X:15:ARG:CZ	2.66	0.59
6:G:43:HIS:CB	6:G:46:LYS:HG3	2.18	0.59
1:A:1143:G:N2	1:A:1144:G:C4	2.71	0.59
1:A:1285:A:C4'	1:A:1286:A:N7	2.65	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1291:G:N2	1:A:1292:U:C2	2.71	0.59
1:A:1300:G:HO2'	1:A:1301:U:H6	1.50	0.59
1:A:1483:A:H2'	1:A:1484:C:C5'	2.33	0.59
1:A:21:G:N2	1:A:916:G:C5	2.71	0.59
1:A:357:G:P	1:A:367:U:H2'	2.42	0.59
1:A:397:A:O2'	1:A:399:G:OP2	2.14	0.59
1:A:449:C:C4	1:A:450:G:H1'	2.38	0.59
1:A:46:G:H22	1:A:366:C:H1'	1.68	0.59
1:A:510:A:O5'	1:A:510:A:H8	1.85	0.59
1:A:552:U:C2'	1:A:553:A:H5'	2.33	0.59
1:A:558:G:C4	1:A:559:A:C2	2.90	0.59
1:A:64:G:H5'	1:A:66:G:OP1	2.02	0.59
1:A:668:G:O2'	1:A:669:U:H5'	2.03	0.59
1:A:675:A:H2'	1:A:676:A:O4'	2.01	0.59
1:A:764:C:C4	1:A:765:G:O6	2.56	0.59
1:A:859:A:N6	1:A:860:A:C2	2.70	0.59
5:F:29:TYR:CD2	5:F:29:TYR:C	2.76	0.59
6:G:165:MET:CE	6:G:167:GLY:H	2.15	0.59
7:H:114:GLY:O	7:H:115:VAL:CG1	2.51	0.59
7:H:80:ILE:CD1	7:H:91:LEU:HB3	2.32	0.59
8:I:79:LEU:O	8:I:80:ARG:C	2.40	0.59
9:J:38:LEU:CD1	9:J:41:ARG:HD3	2.32	0.59
10:K:126:LYS:NZ	10:K:127:LEU:HB2	2.18	0.59
12:M:54:PHE:H	16:Q:41:ARG:NH2	2.01	0.59
13:N:13:GLN:HA	13:N:76:GLY:HA3	1.85	0.59
14:O:83:VAL:CG2	14:O:84:LEU:H	2.08	0.59
14:O:85:ILE:CG2	14:O:85:ILE:O	2.51	0.59
14:O:91:LYS:O	14:O:92:ASP:HB3	2.03	0.59
15:P:52:GLU:CA	15:P:55:ARG:NE	2.64	0.59
1:A:1217:C:OP1	16:Q:8:GLU:OE2	2.21	0.59
19:T:25:ARG:HH21	19:T:40:LYS:CD	1.99	0.59
21:V:43:GLU:O	21:V:47:HIS:NE2	2.30	0.59
22:W:13:LEU:C	22:W:17:ARG:HH21	2.06	0.59
2:1:39:U:H5''	2:1:40:U:C5'	2.32	0.59
1:A:1025:U:H2'	1:A:1026:G:C8	2.37	0.59
1:A:1376:U:H6	1:A:1376:U:O5'	1.85	0.59
1:A:1405:G:C4'	1:A:1519:A:H4'	2.33	0.59
1:A:1433:A:C8	1:A:1468:A:N6	2.71	0.59
1:A:1487:G:O2'	1:A:1488:G:H5'	2.02	0.59
1:A:1500:A:OP1	1:A:1508:G:OP1	2.21	0.59
1:A:369:C:OP2	1:A:388:G:N1	2.35	0.59
1:A:370:C:H2'	1:A:371:G:H8	1.68	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:397:A:C2'	1:A:399:G:OP2	2.49	0.59
1:A:836:G:P	20:U:61:LYS:HZ1	2.26	0.59
1:A:978:A:N6	1:A:1361:G:N2	2.38	0.59
4:E:113:HIS:HA	4:E:116:GLU:OE1	2.02	0.59
4:E:15:VAL:HG11	4:E:209:ARG:CB	2.31	0.59
4:E:41:ILE:HD12	4:E:41:ILE:N	2.16	0.59
5:F:122:GLU:O	5:F:125:GLU:HB2	2.02	0.59
5:F:64:VAL:O	5:F:66:VAL:HG23	2.02	0.59
6:G:148:VAL:CB	6:G:181:MET:HE3	2.24	0.59
6:G:194:LEU:CB	6:G:196:LEU:HD11	2.31	0.59
9:J:122:HIS:HA	9:J:125:MET:SD	2.43	0.59
9:J:41:ARG:HG2	9:J:41:ARG:HH11	1.66	0.59
9:J:50:ILE:O	9:J:54:THR:O	2.20	0.59
10:K:122:ARG:N	10:K:122:ARG:HD3	2.17	0.59
10:K:41:ARG:HB3	10:K:41:ARG:HH11	1.64	0.59
10:K:79:VAL:O	10:K:81:HIS:N	2.36	0.59
1:A:1177:G:OP2	11:L:93:ARG:NH2	2.35	0.59
13:N:48:ILE:HD11	13:N:64:ALA:CA	2.32	0.59
13:N:73:MET:SD	13:N:103:LEU:HD22	2.43	0.59
13:N:87:THR:HG22	13:N:91:ARG:NH1	2.16	0.59
15:P:19:LEU:HD12	15:P:20:THR:H	1.66	0.59
15:P:8:GLU:HG3	15:P:22:ILE:CG1	2.25	0.59
1:A:1358:U:C5'	16:Q:34:TYR:HA	2.32	0.59
17:R:70:LEU:HD11	17:R:77:ARG:HH21	1.67	0.59
17:R:70:LEU:HG	17:R:78:TYR:HB2	1.85	0.59
1:A:474:G:OP1	18:S:80:PHE:O	2.21	0.59
19:T:22:LEU:HD12	19:T:40:LYS:O	2.02	0.59
19:T:51:TYR:N	19:T:51:TYR:CD1	2.61	0.59
20:U:39:VAL:O	20:U:42:ARG:HB2	2.03	0.59
22:W:104:LEU:O	22:W:105:SER:O	2.21	0.59
23:X:23:PRO:C	23:X:25:LYS:H	2.04	0.59
1:A:345:C:H5'	1:A:346:G:C5	2.38	0.59
1:A:1097:C:H2'	1:A:1098:C:C6	2.37	0.59
6:G:151:LYS:H	6:G:151:LYS:CD	2.14	0.59
2:1:12:U:H5'	2:1:13:U:OP2	2.02	0.59
1:A:1269:A:H8	1:A:1270:C:C1'	2.15	0.59
1:A:1443:G:OP1	1:A:1446:A:OP1	2.21	0.59
1:A:1490:C:H2'	1:A:1491:G:C5'	2.32	0.59
1:A:221:C:H2'	1:A:222:U:C6	2.37	0.59
1:A:355:C:N3	1:A:356:A:N7	2.51	0.59
1:A:555:C:H5''	1:A:556:C:OP2	2.02	0.59
1:A:619:U:O2	6:G:133:VAL:HG13	2.03	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:816:A:C2'	1:A:817:C:OP2	2.49	0.59
1:A:859:A:O2'	1:A:860:A:C5'	2.50	0.59
1:A:886:G:HO2'	1:A:887:G:H5'	1.67	0.59
1:A:244:U:O4	1:A:893:C:N3	2.36	0.59
1:A:979:C:P	1:A:981:U:O4	2.60	0.59
3:C:74:C:C2'	3:C:75:C:H5''	2.33	0.59
4:E:46:LYS:HA	4:E:49:GLU:OE1	2.03	0.59
5:F:42:LEU:HD12	5:F:94:LEU:CD1	2.32	0.59
5:F:43:LEU:CD1	5:F:55:VAL:HG11	2.32	0.59
7:H:12:LEU:HD13	7:H:12:LEU:O	2.03	0.59
7:H:140:ARG:HB3	7:H:140:ARG:HH11	1.67	0.59
7:H:41:VAL:HG21	7:H:113:ALA:HB2	1.84	0.59
7:H:43:LEU:O	7:H:65:ASN:ND2	2.36	0.59
7:H:48:ALA:HB3	7:H:53:LEU:CB	2.26	0.59
10:K:40:ALA:HA	10:K:43:GLY:O	2.01	0.59
13:N:18:ARG:NH2	13:N:36:ASP:O	2.35	0.59
14:O:110:VAL:O	14:O:113:ARG:HB2	2.02	0.59
20:U:75:ILE:CG2	20:U:76:LEU:HD22	2.33	0.59
21:V:2:PRO:O	21:V:3:ARG:O	2.19	0.59
3:D:8:U:O4'	3:D:48:C:H4'	2.03	0.59
3:B:74:C:C2'	3:B:75:C:H5'	2.32	0.59
1:A:1085:U:O2	1:A:1094:G:O6	2.21	0.59
1:A:1129:C:C5	1:A:1139:G:N7	2.71	0.59
1:A:1269:A:H8	1:A:1270:C:H1'	1.68	0.59
1:A:1311:G:OP2	21:V:2:PRO:N	2.36	0.59
1:A:251:G:H5'	1:A:252:U:OP1	2.01	0.59
1:A:597:G:C5	1:A:644:G:N1	2.71	0.59
1:A:5:U:C5	6:G:86:LYS:HD3	2.38	0.59
1:A:87:A:H62	1:A:88:C:N4	2.00	0.59
1:A:969:A:O4'	1:A:969:A:OP1	2.21	0.59
3:C:21:A:N6	3:C:46:G:C2	2.70	0.59
4:E:10:LEU:O	4:E:11:LEU:O	2.21	0.59
4:E:185:ILE:HB	4:E:199:TYR:HB2	1.85	0.59
5:F:17:ASP:OD2	5:F:18:TRP:CZ3	2.56	0.59
6:G:170:VAL:HG12	6:G:171:GLY:H	1.68	0.59
6:G:19:LEU:N	6:G:33:MET:HE1	2.06	0.59
6:G:52:SER:C	6:G:54:TYR:H	2.06	0.59
6:G:57:ARG:HH22	7:H:107:ARG:NE	2.01	0.59
7:H:11:ILE:CB	7:H:31:LEU:HD22	2.31	0.59
9:J:77:SER:CA	9:J:156:TRP:HZ2	2.16	0.59
10:K:38:ILE:HA	10:K:41:ARG:HB2	1.85	0.59
10:K:88:LYS:HZ3	10:K:88:LYS:HB2	1.68	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:M:16:LEU:HB3	12:M:70:ARG:CG	2.32	0.59
13:N:73:MET:HE2	13:N:103:LEU:HD22	1.84	0.59
13:N:19:ALA:N	13:N:80:VAL:CG2	2.65	0.59
14:O:60:LEU:HD11	14:O:64:TYR:HB3	1.85	0.59
15:P:78:ILE:O	15:P:81:LEU:HD22	2.03	0.59
20:U:27:GLY:O	20:U:28:GLU:C	2.40	0.59
3:D:18:G:C2	3:D:19:G:H1'	2.36	0.59
3:D:59:U:OP2	3:D:59:U:O4'	2.21	0.59
3:D:60:U:H2'	3:D:61:C:OP1	2.03	0.59
1:A:232:G:C5	1:A:233:C:N4	2.71	0.59
2:1:44:U:C2	2:1:45:U:C5	2.90	0.59
3:B:8:U:O4	3:B:14:A:H5''	2.03	0.59
1:A:1074:G:H2'	1:A:1075:C:O4'	2.03	0.59
1:A:1129:C:C1'	1:A:1130:A:N7	2.65	0.59
1:A:1262:C:H2'	1:A:1263:C:H6	1.65	0.59
1:A:1361:G:N7	1:A:1362:C:H5	2.01	0.59
1:A:1399:C:H4'	1:A:1400:C:O5'	2.03	0.59
1:A:173:U:H5''	1:A:197:A:H1'	1.82	0.59
1:A:508:C:H4'	1:A:509:A:O5'	2.03	0.59
1:A:296:U:HO2'	1:A:556:C:HO2'	1.50	0.59
1:A:748:C:O2'	1:A:749:C:C6	2.54	0.59
1:A:921:U:C2	1:A:922:G:C8	2.90	0.59
4:E:189:ASP:OD2	4:E:205:ASP:OD1	2.20	0.59
4:E:58:ILE:HG22	4:E:221:LEU:HD12	1.85	0.59
4:E:58:ILE:HG22	4:E:61:LEU:HD22	1.83	0.59
5:F:114:PRO:HD3	5:F:183:ASP:OD1	2.03	0.59
5:F:157:ILE:O	5:F:158:GLY:C	2.41	0.59
5:F:150:LYS:CB	5:F:173:VAL:HG21	2.22	0.59
6:G:82:ALA:HB1	6:G:89:THR:HA	1.84	0.59
7:H:106:PRO:HB3	7:H:120:THR:HG21	1.85	0.59
7:H:61:TYR:HA	7:H:64:ARG:HG2	1.85	0.59
7:H:76:ILE:HG21	7:H:142:LEU:CD1	2.33	0.59
9:J:65:ALA:HB2	9:J:124:LEU:HD23	1.83	0.59
10:K:17:THR:HG21	10:K:80:ILE:HG21	1.84	0.59
10:K:39:LEU:HD12	10:K:45:ILE:HG22	1.85	0.59
13:N:112:THR:N	13:N:113:PRO:CD	2.64	0.59
1:A:692:U:O4	13:N:53:SER:N	2.36	0.59
13:N:86:GLY:CA	13:N:112:THR:HG23	2.33	0.59
15:P:38:GLY:O	15:P:39:ILE:HG23	2.03	0.59
15:P:3:ARG:HG2	15:P:7:VAL:HA	1.84	0.59
1:A:1044:A:C2'	1:A:1045:C:H5'	2.31	0.58
1:A:1053:G:H4'	1:A:1054:C:O3'	2.02	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1064:G:C1'	1:A:1066:C:N3	2.63	0.58
1:A:1135:U:O3'	1:A:1136:U:H6	1.86	0.58
1:A:953:G:C6	1:A:1229:A:C6	2.91	0.58
1:A:1411:C:H2'	1:A:1412:C:H6	1.68	0.58
1:A:1437:C:H2'	1:A:1438:G:H8	1.68	0.58
1:A:189:U:C2	19:T:72:ARG:NH1	2.70	0.58
1:A:173:U:H4'	1:A:197:A:C4	2.38	0.58
1:A:230:G:N2	1:A:231:G:H1'	2.18	0.58
1:A:267:C:N4	1:A:268:C:H41	1.99	0.58
1:A:278:G:H1'	1:A:282:A:H1'	1.85	0.58
1:A:362:G:H3'	14:O:34:ARG:NH2	2.18	0.58
1:A:439:A:H1'	1:A:496:A:N1	2.18	0.58
1:A:445:G:O2'	1:A:446:G:H5'	2.03	0.58
1:A:918:A:HO2'	1:A:919:A:P	2.26	0.58
1:A:926:G:N2	2:1:39:U:P	2.76	0.58
4:E:25:ASN:HD21	4:E:27:LYS:HG3	1.67	0.58
4:E:82:ARG:HB2	4:E:94:ASN:HD22	1.68	0.58
5:F:157:ILE:HG13	5:F:164:ARG:CB	2.33	0.58
6:G:52:SER:O	6:G:55:ALA:N	2.36	0.58
6:G:79:PHE:CE1	6:G:204:ILE:HG23	2.38	0.58
6:G:8:VAL:HG13	6:G:11:LEU:HD12	1.85	0.58
8:I:69:GLU:O	8:I:72:VAL:HG13	2.02	0.58
9:J:75:VAL:CG1	9:J:76:ARG:N	2.66	0.58
11:L:11:LYS:O	11:L:11:LYS:HG2	2.03	0.58
12:M:12:ASP:HB3	12:M:15:THR:HG22	1.85	0.58
13:N:29:ILE:HA	13:N:44:SER:OG	2.03	0.58
1:A:1228:C:C4'	15:P:116:THR:HA	2.28	0.58
15:P:73:GLU:C	15:P:73:GLU:CD	2.62	0.58
16:Q:23:ARG:NE	16:Q:30:ALA:HB2	2.17	0.58
1:A:135:C:C2	18:S:1:MET:HG2	2.38	0.58
18:S:31:LYS:HG2	18:S:32:TYR:H	1.68	0.58
20:U:53:ARG:NH1	20:U:58:LEU:O	2.36	0.58
22:W:27:LYS:O	22:W:28:ALA:C	2.39	0.58
22:W:91:LEU:HD23	22:W:91:LEU:N	2.18	0.58
14:O:126:LYS:HE3	14:O:126:LYS:H	1.68	0.58
2:1:31:U:H2'	2:1:32:U:O4'	2.03	0.58
1:A:1212:U:O2'	1:A:1213:A:O5'	2.20	0.58
1:A:1419:G:C2'	1:A:1420:C:H6	2.16	0.58
1:A:1417:G:H22	1:A:1482:G:H2'	1.67	0.58
1:A:46:G:H1'	1:A:396:G:H22	1.68	0.58
1:A:676:A:H2'	1:A:677:U:H6	1.68	0.58
4:E:31:TYR:HE2	4:E:200:ILE:CG2	2.15	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:58:ILE:O	4:E:61:LEU:N	2.36	0.58
5:F:126:ARG:O	5:F:127:ARG:HB2	2.02	0.58
5:F:150:LYS:HZ3	5:F:152:ILE:CG2	2.15	0.58
5:F:30:ARG:N	5:F:30:ARG:HD3	2.18	0.58
6:G:130:GLY:O	6:G:131:ARG:C	2.40	0.58
6:G:155:LEU:HB2	6:G:158:ILE:CG1	2.26	0.58
6:G:185:PHE:CD2	6:G:186:LEU:N	2.71	0.58
6:G:206:PHE:HD2	6:G:207:TYR:CD1	2.20	0.58
6:G:30:LYS:NZ	6:G:35:ARG:HD2	2.17	0.58
6:G:85:LYS:HB3	6:G:85:LYS:NZ	2.18	0.58
7:H:141:GLN:N	7:H:141:GLN:OE1	2.35	0.58
8:I:79:LEU:HD23	8:I:79:LEU:N	2.17	0.58
10:K:6:ILE:HD13	10:K:6:ILE:C	2.24	0.58
11:L:89:ASN:ND2	11:L:92:TYR:CE1	2.72	0.58
12:M:48:THR:HA	12:M:62:HIS:HB3	1.84	0.58
13:N:23:ALA:CB	13:N:88:GLY:HA3	2.32	0.58
13:N:63:LEU:O	13:N:63:LEU:HD23	2.02	0.58
15:P:67:GLU:OE2	15:P:68:GLY:N	2.36	0.58
16:Q:24:CYS:CB	16:Q:40:CYS:N	2.60	0.58
16:Q:39:LEU:HD12	16:Q:44:LEU:HD12	1.84	0.58
1:A:582:U:C5'	17:R:64:ARG:NH2	2.64	0.58
18:S:15:PRO:HD2	18:S:42:ARG:NE	2.19	0.58
18:S:6:LEU:C	18:S:6:LEU:CD2	2.71	0.58
20:U:47:THR:O	20:U:47:THR:HG22	2.02	0.58
20:U:17:SER:HB3	20:U:54:ARG:NH1	2.18	0.58
21:V:40:ILE:CD1	21:V:71:LEU:HD23	2.32	0.58
3:B:55:U:N3	3:B:57:G:H5''	2.18	0.58
3:D:67:C:H2'	3:D:68:C:O4'	2.03	0.58
7:H:73:ASN:O	7:H:73:ASN:ND2	2.32	0.58
1:A:1034:G:H2'	1:A:1035:A:C8	2.38	0.58
1:A:110:C:H6	1:A:110:C:O5'	1.85	0.58
1:A:114:U:H2'	1:A:115:G:H8	1.68	0.58
1:A:1178:G:N2	1:A:1180:A:H5''	2.18	0.58
1:A:1253:G:O2'	1:A:1254:C:H5'	2.04	0.58
1:A:1274:G:H2'	1:A:1275:A:C8	2.38	0.58
1:A:148:G:N2	1:A:175:C:C4	2.71	0.58
1:A:1514:C:H2'	1:A:1515:C:C5	2.38	0.58
1:A:16:A:H1'	7:H:17:ALA:HB3	1.84	0.58
1:A:244:U:C2'	1:A:245:C:OP2	2.50	0.58
1:A:246:A:H4'	1:A:247:G:H4'	1.84	0.58
1:A:262:A:C6	1:A:263:A:N6	2.72	0.58
1:A:278:G:C4	19:T:95:TYR:HE2	2.21	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:300:A:H2'	1:A:301:G:C5'	2.33	0.58
1:A:306:G:C4	1:A:307:C:C5	2.91	0.58
1:A:866:C:H3'	1:A:867:G:C8	2.37	0.58
1:A:950:U:O2'	1:A:951:G:H5'	2.03	0.58
3:D:33:U:H3'	3:D:34:G:C5'	2.32	0.58
4:E:192:SER:O	4:E:194:PRO:CD	2.51	0.58
4:E:222:ILE:O	4:E:226:ARG:CB	2.42	0.58
5:F:157:ILE:HG21	5:F:164:ARG:HE	1.67	0.58
5:F:178:LEU:O	5:F:179:ARG:CB	2.51	0.58
5:F:83:ARG:C	5:F:85:ARG:H	2.05	0.58
7:H:136:MET:HA	7:H:139:LEU:HD12	1.84	0.58
8:I:41:GLU:H	8:I:63:TYR:HD1	1.49	0.58
9:J:73:MET:CE	9:J:146:GLU:HB2	2.32	0.58
9:J:47:CYS:HA	9:J:50:ILE:HD12	1.84	0.58
9:J:54:THR:O	9:J:55:GLY:C	2.42	0.58
11:L:117:HIS:C	11:L:119:ALA:H	2.04	0.58
11:L:43:ALA:O	11:L:45:ALA:N	2.35	0.58
5:F:5:ILE:CG2	12:M:51:ARG:HH12	2.16	0.58
1:A:973:G:C1'	12:M:55:LYS:H	2.15	0.58
14:O:10:LEU:HD21	14:O:15:ARG:HE	1.69	0.58
15:P:81:LEU:CD2	15:P:82:MET:N	2.66	0.58
17:R:35:ARG:NH1	17:R:59:MET:HE2	2.18	0.58
19:T:58:GLU:HG2	19:T:59:ILE:N	2.17	0.58
21:V:36:ARG:HB2	21:V:71:LEU:HB3	1.85	0.58
22:W:34:LYS:O	22:W:38:LYS:HG3	2.04	0.58
23:X:9:ARG:N	23:X:9:ARG:HD2	2.16	0.58
1:A:1173:G:H2'	1:A:1174:G:H5''	1.85	0.58
1:A:101:A:C4	1:A:102:G:N7	2.72	0.58
1:A:1143:G:N3	1:A:1144:G:C8	2.71	0.58
1:A:1181:G:O3'	1:A:1184:G:H5'	2.04	0.58
1:A:133:U:H5'	1:A:134:A:P	2.44	0.58
1:A:815:A:C2	1:A:1527:C:O2	2.57	0.58
1:A:186(A):C:O2'	22:W:89:ARG:NH2	2.36	0.58
1:A:357:G:H1'	1:A:368:U:O2	2.02	0.58
1:A:482:A:C2'	1:A:482:A:N3	2.66	0.58
1:A:656:C:H2'	1:A:657:G:H5'	1.85	0.58
3:C:25:C:H2'	3:C:26:A:H8	1.68	0.58
4:E:100:GLY:C	4:E:104:ASN:HD21	2.07	0.58
4:E:109:SER:O	4:E:110:GLN:C	2.42	0.58
4:E:169:LYS:C	4:E:171:ALA:H	2.05	0.58
4:E:19:HIS:CA	4:E:39:ILE:HD11	2.34	0.58
6:G:60:GLU:OE2	6:G:202:LEU:HD12	2.02	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:63:LYS:H	6:G:63:LYS:HD2	1.67	0.58
6:G:98:GLU:O	6:G:103:ASN:HB3	2.04	0.58
7:H:102:ALA:CB	7:H:106:PRO:CB	2.79	0.58
7:H:72:GLN:NE2	7:H:144:THR:HA	2.18	0.58
9:J:115:ARG:CB	9:J:118:VAL:CG2	2.77	0.58
9:J:31:MET:CG	9:J:32:ARG:N	2.58	0.58
10:K:119:LEU:HD12	10:K:123:GLU:OE2	2.03	0.58
10:K:30:ARG:O	10:K:33:GLU:HB2	2.03	0.58
10:K:6:ILE:CD1	10:K:7:ALA:N	2.66	0.58
14:O:85:ILE:HG13	14:O:87:GLY:N	2.14	0.58
15:P:22:ILE:HB	15:P:25:ILE:HG13	1.84	0.58
1:A:1358:U:OP1	16:Q:34:TYR:HA	2.02	0.58
17:R:41:GLU:HA	17:R:44:LYS:HE3	1.85	0.58
1:A:375:U:O2'	18:S:6:LEU:HD21	2.04	0.58
20:U:17:SER:HB3	20:U:54:ARG:CZ	2.34	0.58
20:U:26:LEU:HD22	20:U:39:VAL:CG2	2.33	0.58
22:W:43:LEU:HD12	22:W:55:ILE:CD1	2.24	0.58
2:1:39:U:O3'	2:1:40:U:H6	1.86	0.58
1:A:1216:G:H2'	1:A:1217:C:C6	2.38	0.58
1:A:1253:G:N3	1:A:1355:G:O2'	2.36	0.58
1:A:1253:G:H2'	1:A:1254:C:O4'	2.03	0.58
1:A:1309:G:C2	1:A:1310:G:C8	2.90	0.58
1:A:1431:C:O2	1:A:1432:G:O4'	2.21	0.58
1:A:67:C:O2	1:A:171:A:H2	1.86	0.58
1:A:42:G:H2'	1:A:43:C:H6	1.66	0.58
1:A:534:U:H5''	1:A:535:A:OP2	2.03	0.58
1:A:591:U:H2'	1:A:592:G:C8	2.39	0.58
1:A:697:U:C2'	1:A:698:G:C8	2.83	0.58
1:A:666:G:C2	1:A:741:G:N3	2.71	0.58
1:A:822:C:H2'	1:A:823:G:H8	1.67	0.58
1:A:908:A:N3	1:A:909:A:C8	2.71	0.58
1:A:914:A:H2'	1:A:915:A:C8	2.38	0.58
1:A:970:C:H4'	1:A:972:C:C6	2.38	0.58
4:E:111:ARG:HA	4:E:111:ARG:NH1	2.08	0.58
4:E:149:LEU:HD22	4:E:153:ARG:HG2	1.85	0.58
4:E:19:HIS:ND1	4:E:204:ASN:ND2	2.52	0.58
4:E:219:VAL:CG1	4:E:222:ILE:HD11	2.32	0.58
4:E:91:PRO:HG2	4:E:155:LEU:HB2	1.85	0.58
5:F:26:LYS:O	5:F:28:GLN:HG3	2.04	0.58
6:G:98:GLU:O	6:G:100:ARG:N	2.37	0.58
7:H:12:LEU:HG	7:H:129:ILE:HD11	1.83	0.58
7:H:63:ARG:HA	7:H:66:MET:CG	2.33	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:H:7:GLU:O	7:H:34:VAL:HA	2.03	0.58
8:I:77:ARG:N	8:I:80:ARG:NH2	2.52	0.58
8:I:98:LEU:CD2	20:U:28:GLU:HA	2.33	0.58
7:H:78:HIS:HB2	10:K:104:ARG:HD3	1.83	0.58
10:K:35:ILE:HD13	10:K:118:VAL:HG21	1.85	0.58
1:A:878:G:H5'	10:K:89:PRO:HG2	1.85	0.58
11:L:23:ASN:C	11:L:23:ASN:HD22	2.05	0.58
1:A:539:A:OP1	14:O:114:LYS:HE2	2.03	0.58
17:R:34:LEU:CD1	17:R:35:ARG:N	2.67	0.58
18:S:49:LEU:CD2	18:S:73:LEU:HD21	2.32	0.58
19:T:61:GLU:HA	19:T:71:PHE:CD2	2.37	0.58
22:W:65:LYS:O	22:W:68:LYS:CG	2.52	0.58
3:D:59:U:O2	3:D:59:U:C2'	2.52	0.58
3:D:9:A:C2	3:D:46:G:C1'	2.86	0.58
1:A:1003:G:C2	1:A:1004:A:O2'	2.53	0.58
1:A:1350:A:N6	1:A:1373:G:C2	2.71	0.58
1:A:135:C:O5'	1:A:135:C:H6	1.86	0.58
1:A:1376:U:H2'	1:A:1377:A:N7	2.19	0.58
1:A:1389:C:H2'	1:A:1390:U:O4'	2.03	0.58
1:A:1395:C:H2'	1:A:1396:A:H8	1.66	0.58
1:A:7:G:H1'	1:A:298:A:N9	2.17	0.58
1:A:372:C:O2'	1:A:373:A:OP2	2.14	0.58
1:A:375:U:C4'	18:S:17:TYR:HE2	2.16	0.58
1:A:430:A:OP1	6:G:9:CYS:CB	2.52	0.58
1:A:523:A:C8	1:A:523:A:O5'	2.57	0.58
1:A:765:G:HO2'	1:A:766:A:H5'	1.62	0.58
1:A:792:A:O2'	1:A:794:A:N7	2.28	0.58
1:A:881:G:C6	1:A:882:C:C4	2.92	0.58
1:A:951:G:O2'	1:A:972:C:H5	1.87	0.58
1:A:965:A:H1'	1:A:969:A:C8	2.39	0.58
3:C:28:G:H8	3:C:28:G:O5'	1.87	0.58
4:E:72:GLY:O	4:E:74:LYS:N	2.35	0.58
4:E:7:VAL:HG23	4:E:8:LYS:N	2.13	0.58
5:F:22:TRP:HH2	5:F:33:LEU:N	2.01	0.58
5:F:35:GLU:CA	5:F:38:ARG:HG2	2.34	0.58
5:F:38:ARG:HG3	5:F:94:LEU:HD21	1.86	0.58
1:A:619:U:H3	6:G:135:LEU:HD21	1.68	0.58
6:G:166:LYS:CE	6:G:178:VAL:HG12	2.31	0.58
9:J:100:ALA:HA	9:J:103:TRP:HE3	1.68	0.58
9:J:73:MET:HE2	9:J:146:GLU:HB2	1.85	0.58
9:J:34:GLY:O	9:J:36:LYS:N	2.37	0.58
9:J:37:ASN:CG	9:J:38:LEU:H	2.07	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:K:82:HIS:O	10:K:137:VAL:CG1	2.52	0.58
10:K:36:LEU:CA	10:K:39:LEU:HB2	2.32	0.58
11:L:34:ASN:OD1	11:L:43:ALA:CB	2.51	0.58
11:L:45:ALA:HB3	11:L:74:ILE:HG22	1.84	0.58
12:M:60:ARG:CA	12:M:60:ARG:HH11	2.15	0.58
12:M:39:PRO:CA	12:M:70:ARG:HH11	2.17	0.58
16:Q:12:ARG:O	16:Q:13:THR:C	2.41	0.58
19:T:98:LEU:HD13	19:T:102:GLY:O	2.04	0.58
21:V:74:PHE:HD1	21:V:74:PHE:N	2.00	0.58
1:A:1244:C:OP2	23:X:9:ARG:CD	2.49	0.58
1:A:1031:G:H2'	1:A:1032:A:C8	2.37	0.58
1:A:1202:G:H1'	16:Q:29:ARG:NE	2.17	0.58
1:A:1313:U:O4	21:V:4:SER:CB	2.51	0.58
1:A:1320:C:O2'	21:V:73:GLU:HB3	2.04	0.58
1:A:1430:C:C2'	1:A:1431:C:O5'	2.50	0.58
1:A:1465:C:O2	1:A:1465:C:C2'	2.51	0.58
1:A:148:G:H2'	1:A:149:A:H8	1.68	0.58
1:A:1490:C:C2'	1:A:1491:G:C5'	2.81	0.58
1:A:246:A:O2'	1:A:247:G:P	2.61	0.58
1:A:263:A:C3'	1:A:264:U:H5''	2.33	0.58
1:A:322:C:O2'	22:W:23:ARG:HB2	2.04	0.58
1:A:358:U:H2'	1:A:359:U:C6	2.39	0.58
1:A:611:A:H2'	1:A:612:C:H6	1.68	0.58
1:A:656:C:O2'	1:A:657:G:H5'	2.03	0.58
1:A:812:C:O4'	1:A:813:U:C5	2.56	0.58
1:A:986:A:H1'	21:V:55:LYS:HA	1.85	0.58
4:E:33:TYR:CG	4:E:43:ASP:HB2	2.38	0.58
4:E:69:LEU:HD23	4:E:91:PRO:HB3	1.86	0.58
4:E:78:GLN:O	4:E:94:ASN:ND2	2.37	0.58
5:F:156:ARG:H	5:F:163:ALA:HB1	1.67	0.58
5:F:71:ALA:HB2	5:F:106:VAL:CG2	2.34	0.58
6:G:118:ARG:HG3	6:G:136:PRO:HB2	1.84	0.58
6:G:24:GLU:CD	6:G:25:ARG:N	2.56	0.58
6:G:19:LEU:O	6:G:26:CYS:SG	2.62	0.58
7:H:84:PHE:CD1	7:H:134:ALA:HA	2.39	0.58
7:H:15:ARG:HH11	7:H:15:ARG:HG3	1.69	0.58
9:J:76:ARG:HD3	9:J:89:MET:HE1	1.86	0.58
10:K:126:LYS:HZ1	10:K:127:LEU:HD23	1.69	0.58
10:K:51:VAL:CG1	10:K:52:ASP:N	2.66	0.58
10:K:67:PRO:HD2	10:K:76:PRO:HB3	1.85	0.58
11:L:37:PHE:HA	11:L:40:LEU:HD12	1.84	0.58
13:N:32:ILE:CG2	13:N:40:ILE:HD11	2.22	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:O:84:LEU:O	14:O:100:ILE:HA	2.04	0.58
15:P:14:ARG:O	15:P:45:VAL:HG23	2.04	0.58
20:U:58:LEU:HD22	20:U:62:GLU:CG	2.32	0.58
1:A:259:G:H5''	22:W:83:ARG:NH2	2.19	0.58
1:A:1026:G:O6	1:A:1036:G:C2	2.57	0.58
1:A:1038:C:H2'	1:A:1039:C:C5	2.39	0.58
1:A:1049:U:C1'	1:A:1201:A:O4'	2.52	0.58
1:A:1157:A:O4'	1:A:1158:C:N3	2.37	0.58
1:A:1193:G:C6	1:A:1194:U:C4	2.91	0.58
1:A:123:C:OP1	1:A:312:C:H5'	2.03	0.58
1:A:19:C:H1'	1:A:864:A:N3	2.18	0.58
1:A:230:G:N2	1:A:231:G:N3	2.51	0.58
1:A:241:C:O2'	1:A:242:C:H5'	2.04	0.58
1:A:375:U:C4'	18:S:17:TYR:CE2	2.87	0.58
1:A:391:G:C6	1:A:392:G:C5	2.92	0.58
1:A:428:G:O2'	1:A:429:U:P	2.62	0.58
1:A:448:A:O2'	1:A:449:C:H5'	2.04	0.58
1:A:689:C:C4	1:A:690:G:N7	2.72	0.58
1:A:719:C:H3'	1:A:720:C:C5	2.39	0.58
1:A:891:U:H5	1:A:906:G:C2	2.21	0.58
1:A:894:G:H2'	1:A:895:G:H8	1.68	0.58
1:A:934:C:O2	1:A:937:A:N6	2.36	0.58
1:A:978:A:N1	1:A:1318:A:N6	2.52	0.58
4:E:136:VAL:N	4:E:139:LYS:NZ	2.51	0.58
4:E:118:LEU:HD11	4:E:141:GLU:CD	2.23	0.58
4:E:150:SER:HA	4:E:153:ARG:CG	2.34	0.58
4:E:150:SER:O	4:E:151:GLY:O	2.22	0.58
4:E:80:ILE:HG23	4:E:212:GLN:HE21	1.68	0.58
7:H:34:VAL:CG2	7:H:62:ALA:HB1	2.32	0.58
8:I:30:LEU:HB3	8:I:35:ALA:CB	2.33	0.58
8:I:67:MET:SD	8:I:67:MET:O	2.62	0.58
9:J:89:MET:SD	9:J:89:MET:N	2.76	0.58
11:L:49:PRO:CG	11:L:81:ILE:HB	2.34	0.58
1:A:676:A:H4'	13:N:114:VAL:O	2.03	0.58
13:N:20:TYR:CZ	13:N:83:ILE:HG12	2.39	0.58
15:P:13:LYS:HA	15:P:44:ARG:NH2	2.18	0.58
15:P:81:LEU:CD2	15:P:82:MET:HG2	2.30	0.58
16:Q:14:PRO:O	16:Q:15:LYS:C	2.41	0.58
17:R:79:ARG:CG	17:R:82:ILE:HD12	2.33	0.58
17:R:8:LYS:HE2	17:R:12:ILE:HD11	1.86	0.58
19:T:10:VAL:CG2	19:T:55:ASP:HB2	2.33	0.58
21:V:15:LEU:HD12	21:V:44:MET:HE1	1.86	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:V:50:ALA:HB1	21:V:57:HIS:HB3	1.85	0.58
21:V:40:ILE:CG1	21:V:71:LEU:HD23	2.34	0.58
22:W:54:LYS:H	22:W:100:ILE:HD11	1.69	0.58
22:W:56:MET:SD	22:W:84:LEU:CD1	2.92	0.58
1:A:1268:A:H4'	23:X:20:LYS:HB2	1.86	0.58
19:T:99:SER:C	19:T:100:LYS:HG2	2.24	0.58
1:A:1089:G:H2'	1:A:1090:U:C5'	2.32	0.58
1:A:1104:G:H2'	1:A:1105:A:C8	2.39	0.58
1:A:1180:A:OP1	11:L:102:LEU:CD1	2.48	0.58
1:A:1203:C:H2'	1:A:1204:A:H8	1.68	0.58
1:A:1333:A:H2'	1:A:1334:G:C8	2.39	0.58
1:A:243:A:O2'	1:A:244:U:OP2	2.16	0.58
1:A:296:U:H1'	1:A:302:G:H22	1.63	0.58
1:A:413:G:H22	1:A:428:G:C2'	2.17	0.58
1:A:486:U:H2'	1:A:487:A:C5'	2.34	0.58
1:A:684:A:H1'	13:N:39:PRO:HD2	1.86	0.58
1:A:939:G:C2	1:A:940:C:C4	2.91	0.58
3:C:21:A:N1	3:C:48:C:C2	2.71	0.58
3:C:73:A:C2'	3:C:74:C:OP1	2.52	0.58
4:E:189:ASP:O	4:E:191:ASP:N	2.36	0.58
4:E:60:ASP:C	4:E:64:ARG:NH1	2.57	0.58
4:E:67:THR:HB	4:E:90:MET:SD	2.43	0.58
4:E:82:ARG:HA	4:E:92:TYR:CZ	2.39	0.58
4:E:87:ARG:NH2	4:E:219:VAL:HG11	2.19	0.58
6:G:13:ARG:HH21	6:G:40:PRO:CA	2.14	0.58
6:G:193:ASP:OD2	6:G:194:LEU:HD21	2.04	0.58
6:G:78:LEU:O	6:G:79:PHE:C	2.43	0.58
7:H:28:PHE:HE1	7:H:49:PRO:C	2.06	0.58
9:J:133:GLY:O	9:J:137:LYS:HG3	2.03	0.58
11:L:26:VAL:HG22	11:L:61:ALA:CB	2.34	0.58
11:L:49:PRO:CD	11:L:78:LYS:HG2	2.29	0.58
14:O:119:LYS:HB3	14:O:120:TYR:HD1	1.69	0.58
15:P:20:THR:HA	15:P:25:ILE:HB	1.84	0.58
1:A:750:G:H1'	17:R:23:GLY:N	2.18	0.58
17:R:75:PRO:O	17:R:79:ARG:N	2.31	0.58
20:U:26:LEU:HD22	20:U:39:VAL:HG22	1.85	0.58
22:W:49:ALA:O	22:W:52:ALA:HB3	2.04	0.58
22:W:64:ASP:O	22:W:65:LYS:C	2.41	0.58
22:W:72:LEU:HD22	22:W:76:ALA:CB	2.34	0.58
3:D:18:G:N3	3:D:58:A:O4'	2.35	0.58
3:D:21:A:C2'	3:D:22:G:O4'	2.51	0.58
3:B:55:U:C2'	3:B:55:U:O2	2.50	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:B:75:C:O2	3:B:75:C:H2'	2.04	0.58
1:A:1067:A:O2'	1:A:1068:G:P	2.62	0.58
1:A:1134:G:C6	1:A:1135:U:H1'	2.39	0.58
1:A:1394:A:O2'	1:A:1395:C:P	2.61	0.58
1:A:191:G:H1'	22:W:105:SER:CA	2.27	0.58
1:A:429:U:H5'	1:A:430:A:OP1	2.03	0.58
1:A:571:U:O4	1:A:865:A:N1	2.37	0.58
1:A:859:A:H2'	1:A:860:A:C5'	2.34	0.58
1:A:954:G:H2'	1:A:955:U:O4'	2.04	0.58
4:E:61:LEU:N	4:E:64:ARG:HH11	2.01	0.58
7:H:105:VAL:O	7:H:109:ILE:HG22	2.04	0.58
7:H:76:ILE:HG22	7:H:78:HIS:HD2	1.69	0.58
10:K:17:THR:HB	10:K:18:ARG:CZ	2.33	0.58
1:A:755:G:N3	10:K:1:MET:HE1	2.18	0.58
10:K:38:ILE:CD1	10:K:118:VAL:HB	2.34	0.58
10:K:5:PRO:CA	10:K:8:ASP:HB3	2.34	0.58
10:K:5:PRO:C	10:K:8:ASP:HB3	2.24	0.58
13:N:111:ASP:OD2	13:N:113:PRO:CD	2.46	0.58
13:N:54:ARG:C	13:N:56:GLY:H	2.07	0.58
5:F:29:TYR:OH	16:Q:54:PRO:HB2	2.02	0.58
17:R:26:GLU:OE2	17:R:26:GLU:HA	2.04	0.58
18:S:27:LYS:HB2	18:S:27:LYS:HZ2	1.69	0.58
19:T:34:LYS:HD2	19:T:35:VAL:H	1.69	0.58
1:A:189:U:C2	19:T:63:ARG:NH2	2.72	0.58
21:V:21:GLU:O	21:V:24:ALA:CB	2.52	0.58
21:V:64:GLU:O	21:V:67:VAL:HG23	2.03	0.58
1:A:186(A):C:H1'	22:W:104:LEU:HD21	1.84	0.58
1:A:341:C:O2'	1:A:342:C:H5'	2.04	0.58
3:B:8:U:H2'	3:B:22:G:O6	2.04	0.58
2:1:30:U:C2'	2:1:31:U:O4'	2.40	0.57
1:A:1059:C:O2'	12:M:53:PRO:HD3	2.04	0.57
1:A:1178:G:N2	1:A:1180:A:C5'	2.67	0.57
1:A:1275:A:H2'	1:A:1276:G:H5'	1.86	0.57
1:A:1367:C:OP1	11:L:115:GLY:CA	2.51	0.57
1:A:197:A:N6	1:A:221:C:C5'	2.65	0.57
1:A:225:C:C2'	1:A:226:G:C5'	2.79	0.57
1:A:106:C:O2	1:A:379:C:H4'	2.04	0.57
1:A:522:C:H1'	1:A:536:C:H5''	1.85	0.57
1:A:644:G:C2'	1:A:645:C:H5'	2.33	0.57
1:A:815:A:H2	1:A:1527:C:O2	1.87	0.57
1:A:908:A:H2'	1:A:909:A:H8	1.68	0.57
1:A:935:A:H2'	1:A:936:C:H6	1.69	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:C:60:U:C5'	3:C:61:C:OP2	2.48	0.57
4:E:200:ILE:O	4:E:200:ILE:HG22	2.02	0.57
4:E:80:ILE:HD13	4:E:211:ILE:HG22	1.86	0.57
4:E:215:LEU:HD13	4:E:215:LEU:O	2.03	0.57
4:E:55:PHE:CE2	4:E:218:ALA:HA	2.39	0.57
4:E:84:GLU:HG3	4:E:212:GLN:OE1	2.03	0.57
6:G:18:LYS:C	6:G:20:TYR:H	2.06	0.57
7:H:62:ALA:HB3	7:H:63:ARG:HE	1.68	0.57
7:H:80:ILE:HG21	7:H:142:LEU:HD21	1.86	0.57
9:J:50:ILE:CD1	9:J:58:PRO:HB3	2.34	0.57
10:K:112:LEU:HD12	10:K:131:GLY:C	2.24	0.57
10:K:14:ARG:O	10:K:17:THR:CB	2.48	0.57
10:K:39:LEU:O	10:K:43:GLY:O	2.22	0.57
11:L:65:VAL:HG21	11:L:77:ILE:HD11	1.85	0.57
11:L:82:ALA:HB2	11:L:101:PHE:CZ	2.39	0.57
13:N:28:THR:CG2	13:N:29:ILE:N	2.67	0.57
1:A:689:C:OP2	13:N:46:GLY:HA3	2.04	0.57
14:O:5:PRO:O	14:O:6:THR:CG2	2.52	0.57
15:P:80:ARG:O	15:P:84:ILE:HG12	2.04	0.57
16:Q:34:TYR:N	16:Q:34:TYR:CD1	2.71	0.57
18:S:19:ILE:HB	18:S:37:GLY:C	2.23	0.57
18:S:49:LEU:HD12	18:S:50:LYS:N	2.19	0.57
20:U:46:GLU:N	20:U:46:GLU:OE2	2.37	0.57
1:A:835:U:OP1	20:U:64:ARG:NH1	2.33	0.57
22:W:49:ALA:HB3	22:W:99:LEU:HD11	1.85	0.57
1:A:341:C:O2'	1:A:342:C:C5'	2.52	0.57
2:1:6:U:O2	2:1:6:U:H2'	2.02	0.57
1:A:1163:C:H2'	1:A:1164:G:H5'	1.84	0.57
1:A:1006:C:O2	1:A:1006:C:H2'	2.03	0.57
1:A:1147:C:N3	1:A:1148:U:C5	2.72	0.57
1:A:1194:U:C5	1:A:1195:C:C5	2.92	0.57
1:A:1319:A:N6	1:A:1323:G:N3	2.52	0.57
1:A:1448:C:N3	1:A:1459:C:O2	2.37	0.57
1:A:197:A:OP2	1:A:197:A:O4'	2.22	0.57
1:A:276:G:P	19:T:14:LYS:HD3	2.44	0.57
1:A:301:G:N2	1:A:302:G:N9	2.53	0.57
1:A:325:A:N7	1:A:326:G:C6	2.72	0.57
1:A:35:G:O2'	1:A:36:C:H5'	2.03	0.57
1:A:544:G:H2'	1:A:545:C:H6	1.64	0.57
1:A:547:A:H5'	1:A:548:G:OP1	2.04	0.57
1:A:572:A:O5'	1:A:573:A:P	2.62	0.57
1:A:586:C:OP1	19:T:34:LYS:CE	2.52	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:591:U:OP1	10:K:30:ARG:NH2	2.37	0.57
1:A:600:C:H5'	10:K:129:VAL:HA	1.86	0.57
1:A:61:G:C6	1:A:107:G:C6	2.92	0.57
1:A:714:G:O5'	1:A:714:G:H8	1.87	0.57
1:A:744:C:O2'	1:A:851:G:N2	2.37	0.57
1:A:778:G:HO2'	1:A:779:C:H5'	1.69	0.57
1:A:875:C:C2	1:A:876:G:C8	2.91	0.57
1:A:900:A:C2'	1:A:901:A:O5'	2.53	0.57
1:A:924:C:C2	1:A:925:G:N7	2.72	0.57
1:A:932:C:H3'	9:J:3:ARG:CG	2.21	0.57
3:C:31:A:H3'	3:C:32:U:H6	1.68	0.57
4:E:67:THR:OG1	4:E:155:LEU:HD11	2.04	0.57
4:E:182:ILE:CD1	4:E:182:ILE:H	2.16	0.57
1:A:1107:C:P	5:F:172:ARG:HH11	2.28	0.57
5:F:181:ASN:HD22	5:F:206:GLU:HA	1.69	0.57
5:F:189:ALA:HB3	5:F:196:LEU:N	2.12	0.57
6:G:110:PHE:CZ	6:G:147:ALA:CB	2.87	0.57
7:H:107:ARG:HB2	7:H:107:ARG:CZ	2.33	0.57
8:I:83:ASP:OD1	8:I:84:ASN:ND2	2.37	0.57
10:K:11:THR:C	10:K:13:ILE:N	2.56	0.57
10:K:17:THR:HG21	10:K:18:ARG:NH2	2.19	0.57
10:K:5:PRO:O	10:K:6:ILE:C	2.42	0.57
11:L:47:LEU:HD21	11:L:50:LEU:HD13	1.86	0.57
11:L:67:GLY:O	11:L:73:GLN:NE2	2.37	0.57
12:M:16:LEU:HB3	12:M:70:ARG:HG2	1.86	0.57
12:M:9:ARG:HH11	12:M:9:ARG:CB	2.17	0.57
1:A:35:G:O2'	14:O:118:SER:HA	2.04	0.57
1:A:562:C:O2'	14:O:15:ARG:CD	2.49	0.57
16:Q:23:ARG:HH11	16:Q:28:GLY:C	2.07	0.57
19:T:31:LEU:C	19:T:32:TYR:HD2	2.05	0.57
1:A:191:G:O2'	22:W:102:GLY:O	2.21	0.57
1:A:336:C:H2'	1:A:337:C:C6	2.38	0.57
1:A:346:G:N2	1:A:347:G:C4	2.71	0.57
2:1:23:A:H2'	2:1:24:A:H8	1.69	0.57
3:B:19:G:O2'	3:B:57:G:N2	2.37	0.57
3:B:27:G:H2'	3:B:28:G:C8	2.39	0.57
1:A:1133:G:N1	1:A:1142:G:C6	2.72	0.57
1:A:199:G:O2'	1:A:200:G:H5'	2.04	0.57
1:A:330:C:H2'	1:A:331:G:H8	1.70	0.57
1:A:412:A:H4'	1:A:412:A:OP2	2.04	0.57
1:A:559:A:O2'	1:A:560:U:P	2.61	0.57
1:A:673:G:N2	1:A:674:G:C2	2.72	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:689:C:H2'	1:A:690:G:C1'	2.34	0.57
1:A:696:A:H2'	1:A:697:U:H5'	1.86	0.57
1:A:708:C:C4'	13:N:37:GLY:HA3	2.34	0.57
1:A:731:G:O2'	1:A:732:C:C5'	2.52	0.57
1:A:757:U:H1'	1:A:879:C:O2'	2.03	0.57
1:A:862:C:C4	1:A:863:U:H5	2.21	0.57
1:A:873:A:O4'	1:A:873:A:OP1	2.22	0.57
1:A:878:G:H5''	10:K:89:PRO:O	2.03	0.57
1:A:968:A:C5'	1:A:969:A:O5'	2.51	0.57
1:A:981:U:C6	1:A:981:U:H3'	2.39	0.57
3:C:46:G:O4'	3:C:46:G:OP2	2.22	0.57
3:C:55:U:C2'	3:C:57:G:N7	2.67	0.57
3:C:70:G:H2'	3:C:71:G:H8	1.67	0.57
3:D:35:A:H2'	3:D:36:A:C1'	2.34	0.57
4:E:100:GLY:HA2	4:E:176:GLU:OE2	2.03	0.57
4:E:179:LYS:O	4:E:181:PHE:N	2.37	0.57
5:F:46:GLU:O	5:F:47:LEU:HD13	2.03	0.57
6:G:67:ILE:HD12	6:G:68:TYR:N	2.19	0.57
7:H:132:ALA:O	7:H:135:THR:HB	2.04	0.57
8:I:12:PRO:CB	8:I:58:GLY:HA2	2.20	0.57
8:I:67:MET:SD	8:I:67:MET:N	2.76	0.57
9:J:71:PRO:CG	9:J:96:GLN:HA	2.34	0.57
10:K:94:TYR:CE1	10:K:132:GLU:OE1	2.57	0.57
10:K:32:LYS:HG3	10:K:59:LEU:CD1	2.34	0.57
12:M:32:ALA:HB2	12:M:75:ILE:C	2.24	0.57
16:Q:24:CYS:N	16:Q:33:VAL:HG11	2.18	0.57
20:U:18:ARG:HH21	20:U:21:LYS:CB	2.10	0.57
1:A:338:A:O2'	1:A:339:C:H5'	2.03	0.57
1:A:346:G:N2	1:A:347:G:C5	2.72	0.57
1:A:1085:U:C5'	1:A:1094:G:N2	2.65	0.57
1:A:1275:A:C2'	1:A:1276:G:H5'	2.34	0.57
1:A:1440:C:H6	1:A:1440:C:OP2	1.87	0.57
1:A:1502:A:C6	1:A:1504:G:C2	2.93	0.57
1:A:21:G:C8	1:A:22:G:N7	2.71	0.57
1:A:247:G:C6	1:A:278:G:N1	2.73	0.57
1:A:287:U:H2'	1:A:288:A:C5'	2.34	0.57
1:A:296:U:H2'	1:A:297:G:H8	1.66	0.57
1:A:109:A:N6	1:A:326:G:C6	2.73	0.57
1:A:565:U:H2'	1:A:566:G:N7	2.19	0.57
1:A:877:C:OP1	10:K:88:LYS:HD3	2.04	0.57
1:A:926:G:N2	2:1:39:U:OP2	2.37	0.57
1:A:952:U:H5'	1:A:972:C:N4	2.07	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:C:75:C:H2'	3:C:76:A:O3'	2.04	0.57
4:E:105:PHE:C	4:E:107:THR:H	2.06	0.57
4:E:178:ARG:NH2	4:E:196:LEU:O	2.37	0.57
4:E:70:PHE:HA	4:E:163:PHE:O	2.04	0.57
5:F:84:ILE:HG13	5:F:101:LEU:CD2	2.31	0.57
5:F:107:GLN:OE1	5:F:111:LEU:HD22	2.05	0.57
5:F:44:GLU:HA	5:F:52:LEU:CD1	2.33	0.57
6:G:114:ARG:O	6:G:117:ALA:HB3	2.04	0.57
6:G:125:HIS:HA	6:G:149:ALA:HB3	1.85	0.57
6:G:170:VAL:HG11	6:G:174:LEU:CB	2.34	0.57
8:I:75:LEU:CD2	8:I:79:LEU:HD21	2.30	0.57
9:J:113:GLU:HB2	9:J:118:VAL:HG11	1.87	0.57
12:M:27:ALA:HB2	12:M:85:LEU:CD2	2.34	0.57
13:N:13:GLN:CB	13:N:76:GLY:HA3	2.33	0.57
15:P:52:GLU:HB3	15:P:55:ARG:NH2	2.20	0.57
15:P:60:VAL:HG22	15:P:64:TRP:CE3	2.39	0.57
17:R:71:GLN:N	17:R:78:TYR:CD1	2.72	0.57
22:W:49:ALA:HB1	22:W:99:LEU:HG	1.86	0.57
3:D:55:U:O2'	3:D:57:G:N7	2.37	0.57
1:A:799:G:H3'	1:A:800:G:C8	2.39	0.57
15:P:121:LYS:C	15:P:121:LYS:HE3	2.24	0.57
1:A:1022:G:H2'	1:A:1022:G:N3	2.18	0.57
2:1:34:U:C6	2:1:34:U:H3'	2.39	0.57
1:A:1004:A:H2'	1:A:1036:G:O6	2.05	0.57
1:A:1003:G:N7	1:A:1004:A:N3	2.52	0.57
1:A:1039:C:H2'	1:A:1040:U:H6	1.70	0.57
1:A:1161:C:H2'	1:A:1162:C:C6	2.39	0.57
1:A:1255:G:H21	1:A:1276:G:H22	1.49	0.57
1:A:136:C:H4'	18:S:65:GLN:HE22	1.69	0.57
1:A:22:G:C2'	1:A:23:C:O4'	2.52	0.57
1:A:266:G:H2'	19:T:67:LYS:HZ3	1.70	0.57
1:A:333:G:H4'	22:W:16:HIS:HD2	1.65	0.57
1:A:540:G:H21	6:G:42:GLN:HE22	1.52	0.57
1:A:594:G:N2	1:A:596:C:N4	2.52	0.57
1:A:778:G:C4	1:A:779:C:C5	2.92	0.57
1:A:91:C:C2	1:A:92:G:N7	2.72	0.57
3:B:32:U:C4	3:B:33:U:O4	2.57	0.57
3:C:34:G:C2'	3:C:35:A:H5'	2.34	0.57
4:E:35:GLU:OE2	4:E:36:ARG:O	2.23	0.57
4:E:71:VAL:HG13	4:E:73:THR:HG23	1.85	0.57
5:F:12:LEU:HG	16:Q:57:ARG:HG3	1.85	0.57
6:G:106:TYR:HB3	6:G:114:ARG:NE	2.20	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:146:ILE:O	6:G:147:ALA:HB2	2.03	0.57
6:G:170:VAL:CG1	6:G:174:LEU:HB2	2.34	0.57
6:G:20:TYR:HB2	6:G:27:TYR:HA	1.86	0.57
6:G:52:SER:OG	6:G:54:TYR:HB3	2.05	0.57
7:H:18:ARG:O	7:H:25:ARG:O	2.21	0.57
7:H:75:THR:O	7:H:75:THR:HG23	2.05	0.57
7:H:78:HIS:CG	10:K:107:LEU:HD21	2.39	0.57
9:J:113:GLU:OE1	9:J:118:VAL:C	2.42	0.57
1:A:932:C:H5''	9:J:3:ARG:HB3	1.86	0.57
11:L:50:LEU:CD2	11:L:51:ARG:HH12	2.15	0.57
13:N:41:THR:HB	13:N:71:LYS:CE	2.34	0.57
14:O:117:ARG:HG3	14:O:117:ARG:NH1	2.14	0.57
15:P:100:GLY:O	15:P:101:GLN:O	2.23	0.57
15:P:23:TYR:O	15:P:66:LEU:HB2	2.04	0.57
15:P:74:VAL:HG12	15:P:78:ILE:CD1	2.26	0.57
16:Q:40:CYS:O	16:Q:44:LEU:HB3	2.04	0.57
17:R:39:LEU:HD21	17:R:56:LEU:HD22	1.85	0.57
20:U:64:ARG:O	20:U:67:ALA:HB3	2.05	0.57
1:A:1251:A:H2'	1:A:1252:A:N7	2.20	0.57
1:A:1238:A:N6	1:A:1301:U:H3	1.97	0.57
1:A:1468:A:H2'	1:A:1469:G:O5'	2.05	0.57
1:A:440:A:C3'	1:A:442:C:H6	2.18	0.57
1:A:509:A:C5	1:A:510:A:C6	2.92	0.57
1:A:571:U:C3'	1:A:572:A:C5'	2.72	0.57
1:A:778:G:N3	1:A:779:C:C6	2.73	0.57
1:A:812:C:O2'	1:A:813:U:OP2	2.20	0.57
1:A:815:A:H1'	1:A:817:C:H42	1.67	0.57
1:A:876:G:O2'	10:K:11:THR:HG21	2.05	0.57
1:A:944:G:C2'	1:A:945:G:H5''	2.34	0.57
1:A:973:G:N1	1:A:974:A:C6	2.73	0.57
4:E:173:ALA:CA	4:E:176:GLU:HB2	2.34	0.57
4:E:187:LEU:CA	4:E:201:ILE:O	2.45	0.57
4:E:74:LYS:HZ3	4:E:76:GLN:HB2	1.70	0.57
4:E:79:ASP:O	4:E:82:ARG:HB3	2.03	0.57
4:E:69:LEU:CD1	4:E:92:TYR:HA	2.32	0.57
5:F:135:LYS:HZ2	7:H:52:PRO:HG2	1.70	0.57
5:F:159:GLY:N	5:F:193:TYR:CE1	2.69	0.57
5:F:22:TRP:CH2	5:F:32:LEU:HB3	2.39	0.57
5:F:8:ILE:HG22	5:F:9:GLY:N	2.19	0.57
7:H:63:ARG:CA	7:H:66:MET:HG2	2.35	0.57
8:I:95:GLU:HA	20:U:32:ARG:HB3	1.85	0.57
3:D:32:U:O2'	9:J:77:SER:HB2	2.03	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:K:18:ARG:NH1	10:K:18:ARG:N	2.52	0.57
10:K:40:ALA:N	10:K:45:ILE:CG2	2.68	0.57
10:K:45:ILE:HG13	10:K:61:VAL:HG13	1.85	0.57
11:L:47:LEU:HD11	11:L:56:LEU:CG	2.33	0.57
12:M:10:GLY:N	12:M:16:LEU:HD11	2.19	0.57
12:M:35:SER:N	12:M:73:ASP:O	2.38	0.57
1:A:685:G:H4'	13:N:40:ILE:O	2.05	0.57
14:O:88:GLY:O	14:O:90:VAL:HG23	2.04	0.57
15:P:87:TYR:HB2	21:V:73:GLU:HB2	1.85	0.57
19:T:68:ARG:H	19:T:70:ARG:CZ	2.16	0.57
19:T:74:LEU:O	19:T:74:LEU:HD13	2.05	0.57
8:I:60:PHE:HE2	20:U:78:LEU:HD21	1.68	0.57
20:U:80:PRO:O	20:U:82:THR:O	2.22	0.57
23:X:12:LYS:HG3	23:X:17:THR:OG1	2.05	0.57
1:A:1270:C:OP1	23:X:24:ARG:NH2	2.37	0.57
1:A:1151:A:C5	1:A:1152:A:C8	2.92	0.57
1:A:1157:A:H1'	1:A:1181:G:H21	1.70	0.57
1:A:1253:G:N2	1:A:1254:C:H1'	2.17	0.57
1:A:1302:U:H2'	1:A:1303:C:H5'	1.87	0.57
1:A:1394:A:H62	1:A:1501:C:C4'	2.18	0.57
1:A:1504:G:O2'	1:A:1505:G:OP2	2.21	0.57
1:A:250:A:H4'	1:A:251:G:O5'	2.05	0.57
1:A:295:C:O2'	1:A:296:U:H5'	2.04	0.57
1:A:307:C:H41	1:A:308:C:H41	1.52	0.57
1:A:505:G:C6	1:A:535:A:C2	2.92	0.57
1:A:543:C:N3	1:A:544:G:N7	2.52	0.57
1:A:816:A:H2'	1:A:817:C:OP2	2.04	0.57
1:A:817:C:C2	1:A:819:A:H5'	2.40	0.57
1:A:890:G:C2'	1:A:891:U:OP2	2.53	0.57
1:A:900:A:H2'	1:A:901:A:O5'	2.05	0.57
1:A:943:U:H2'	1:A:944:G:H8	1.70	0.57
4:E:146:GLN:O	4:E:147:LYS:C	2.42	0.57
5:F:187:ALA:N	5:F:198:VAL:HG22	2.19	0.57
5:F:191:THR:C	5:F:193:TYR:H	2.08	0.57
6:G:155:LEU:N	6:G:158:ILE:HG13	2.17	0.57
7:H:37:ARG:NH1	7:H:111:GLU:HB2	2.20	0.57
7:H:50:GLU:HB2	7:H:53:LEU:HD23	1.86	0.57
8:I:75:LEU:O	8:I:78:GLU:HB3	2.04	0.57
8:I:95:GLU:H	8:I:96:PRO:HD3	1.67	0.57
9:J:93:PRO:O	9:J:94:ARG:C	2.43	0.57
10:K:18:ARG:HH11	10:K:18:ARG:CB	2.17	0.57
10:K:18:ARG:CG	10:K:18:ARG:NH1	2.61	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:K:29:SER:CB	10:K:32:LYS:NZ	2.65	0.57
13:N:106:LYS:HG2	13:N:107:SER:N	2.19	0.57
15:P:108:ARG:CZ	15:P:111:LYS:HD3	2.34	0.57
15:P:48:LEU:HD13	15:P:53:VAL:HA	1.86	0.57
1:A:112:G:OP2	18:S:27:LYS:HD3	2.05	0.57
20:U:61:LYS:CD	20:U:64:ARG:HH22	2.07	0.57
21:V:31:ILE:H	21:V:49:ILE:HA	1.67	0.57
21:V:32:LYS:HB2	21:V:57:HIS:NE2	2.20	0.57
21:V:5:LEU:HD12	21:V:9:VAL:CG1	2.33	0.57
3:D:63:G:H2'	3:D:64:A:C8	2.40	0.57
1:A:340:U:C2	1:A:341:C:C5	2.92	0.57
1:A:1257:U:O2'	1:A:1258:G:C8	2.57	0.57
1:A:1269:A:H5'	1:A:1326:C:C4'	2.34	0.57
1:A:1390:U:C2	1:A:1391:U:C4	2.92	0.57
1:A:244:U:O2'	1:A:245:C:OP2	2.22	0.57
1:A:263:A:O5'	1:A:263:A:H8	1.87	0.57
1:A:434:U:C2	1:A:435:C:C5	2.92	0.57
1:A:539:A:OP1	14:O:114:LYS:NZ	2.38	0.57
1:A:932:C:H5''	9:J:3:ARG:CB	2.35	0.57
4:E:113:HIS:HA	4:E:116:GLU:OE2	2.04	0.57
4:E:17:PHE:HA	4:E:42:ILE:CG2	2.34	0.57
5:F:35:GLU:C	5:F:38:ARG:HG2	2.25	0.57
6:G:15:GLU:OE2	6:G:66:ARG:NH1	2.37	0.57
7:H:13:ILE:CD1	7:H:13:ILE:N	2.66	0.57
7:H:80:ILE:CG2	7:H:142:LEU:HD21	2.34	0.57
10:K:7:ALA:O	10:K:10:LEU:HB2	2.04	0.57
1:A:692:U:O4	13:N:52:GLY:C	2.43	0.57
13:N:92:GLU:OE2	13:N:96:ARG:HB2	2.05	0.57
15:P:97:PRO:N	15:P:110:ARG:HG2	2.19	0.57
15:P:84:ILE:HD11	15:P:86:CYS:SG	2.44	0.57
16:Q:18:VAL:HG23	16:Q:19:ARG:HG3	1.86	0.57
16:Q:45:ARG:NH1	16:Q:45:ARG:CB	2.54	0.57
17:R:35:ARG:HH22	17:R:59:MET:HE3	1.69	0.57
18:S:20:VAL:HA	18:S:36:ILE:HG13	1.85	0.57
19:T:59:ILE:CG1	19:T:60:ILE:N	2.67	0.57
20:U:53:ARG:NH2	20:U:60:GLY:N	2.50	0.57
1:A:1005:A:H2'	1:A:1006:C:C5'	2.34	0.57
1:A:1240:U:O2'	1:A:1241:G:OP1	2.21	0.57
1:A:1265:G:C2'	1:A:1266:G:H5'	2.35	0.57
1:A:1242:C:HO2'	1:A:1303:C:H5''	1.64	0.57
1:A:129(A):G:H4'	1:A:130:A:H5''	1.86	0.57
1:A:1364:U:O5'	1:A:1364:U:H6	1.88	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1515:C:O2'	1:A:1516:G:H5'	2.05	0.57
1:A:175:C:O2'	1:A:176:C:H5'	2.04	0.57
1:A:237:C:H2'	1:A:238:G:C8	2.40	0.57
1:A:389:A:N1	1:A:390:C:H1'	2.20	0.57
1:A:453:A:OP2	1:A:453:A:H8	1.87	0.57
1:A:696:A:C2	1:A:697:U:O4'	2.58	0.57
1:A:763:G:C2'	1:A:764:C:O5'	2.53	0.57
1:A:769:G:H5'	1:A:1513:A:C4'	2.34	0.57
1:A:792:A:C2'	1:A:794:A:H62	2.06	0.57
1:A:575:G:C6	1:A:821:G:C8	2.93	0.57
1:A:843:U:C3'	1:A:848:C:H5'	2.35	0.57
1:A:861:G:H2'	1:A:862:C:H6	1.69	0.57
1:A:872:A:C6	1:A:874:G:N7	2.73	0.57
1:A:978:A:H3'	1:A:978:A:H8	1.69	0.57
3:C:14:A:H2'	3:C:15:G:C8	2.37	0.57
3:C:5:G:C2	3:C:69:G:C2	2.92	0.57
4:E:118:LEU:HD11	4:E:141:GLU:OE1	2.04	0.57
4:E:149:LEU:C	4:E:151:GLY:N	2.56	0.57
4:E:80:ILE:HD12	4:E:208:ILE:CG2	2.34	0.57
5:F:122:GLU:O	5:F:125:GLU:CB	2.53	0.57
5:F:142:MET:HA	5:F:146:ALA:CB	2.34	0.57
5:F:25:GLY:N	5:F:28:GLN:HE22	2.03	0.57
6:G:141:ARG:HD3	6:G:142:PRO:CD	2.23	0.57
6:G:169:LYS:CG	6:G:176:LEU:HD21	2.34	0.57
6:G:59:ARG:HB3	6:G:63:LYS:HZ2	1.69	0.57
7:H:18:ARG:HB2	7:H:26:PHE:HA	1.86	0.57
8:I:37:VAL:HA	8:I:65:VAL:HG11	1.87	0.57
9:J:63:LYS:O	9:J:66:VAL:HB	2.05	0.57
10:K:7:ALA:HA	10:K:10:LEU:CG	2.35	0.57
10:K:126:LYS:CE	10:K:127:LEU:HB2	2.34	0.57
12:M:32:ALA:CB	12:M:75:ILE:HB	2.34	0.57
12:M:45:ARG:HG2	12:M:65:LEU:O	2.04	0.57
12:M:6:ILE:HD11	12:M:73:ASP:H	1.70	0.57
12:M:29:ARG:HB2	12:M:84:GLN:HE21	1.69	0.57
14:O:29:GLY:O	14:O:30:ALA:O	2.21	0.57
14:O:46:LYS:HE3	14:O:47:LYS:HZ1	1.69	0.57
15:P:102:ARG:C	15:P:104:ARG:H	2.08	0.57
12:M:49:VAL:CG2	16:Q:41:ARG:HB2	2.35	0.57
17:R:27:VAL:HG12	17:R:31:LEU:HD22	1.87	0.57
18:S:27:LYS:O	18:S:28:ARG:C	2.41	0.57
18:S:23:ASP:CG	18:S:33:ILE:HD11	2.23	0.57
19:T:43:LEU:CD2	19:T:44:ALA:O	2.53	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:U:45:SER:N	20:U:51:LEU:HD21	2.20	0.57
20:U:22:VAL:HG22	20:U:55:ARG:O	2.05	0.57
20:U:75:ILE:HG22	20:U:76:LEU:HD22	1.87	0.57
23:X:9:ARG:O	23:X:10:ARG:C	2.43	0.57
1:A:1089:G:C2'	1:A:1090:U:H5'	2.34	0.57
1:A:1144:G:N3	1:A:1144:G:H2'	2.20	0.57
1:A:1196:U:O2'	1:A:1197:G:OP2	2.21	0.57
1:A:1455:G:O2'	1:A:1459:C:H5'	2.05	0.57
1:A:1448:C:C2	1:A:1459:C:O2	2.58	0.57
1:A:176:C:H2'	1:A:177:C:H6	1.70	0.57
1:A:189:U:H3	19:T:63:ARG:HE	1.53	0.57
1:A:194:C:H5''	22:W:65:LYS:CD	2.35	0.57
1:A:173:U:C5'	1:A:197:A:O2'	2.53	0.57
1:A:33:A:O2'	1:A:363:A:H1'	2.05	0.57
1:A:372:C:N3	1:A:376:G:O6	2.37	0.57
1:A:406:G:N2	1:A:407:G:C4	2.73	0.57
1:A:730:G:C5	1:A:731:G:H1'	2.39	0.57
1:A:752:G:C8	1:A:752:G:OP2	2.58	0.57
1:A:654:G:H1'	1:A:753:A:C2	2.40	0.57
1:A:889:A:H5''	1:A:890:G:OP1	2.04	0.57
1:A:1103:C:O2'	4:E:111:ARG:HD2	2.05	0.57
4:E:157:ARG:HG2	4:E:158:LEU:CD2	2.35	0.57
4:E:25:ASN:OD1	4:E:192:SER:O	2.22	0.57
4:E:15:VAL:HG22	4:E:209:ARG:CZ	2.34	0.57
5:F:55:VAL:HG22	5:F:68:VAL:CG1	2.32	0.57
5:F:21:ARG:HD2	5:F:58:GLU:OE2	2.05	0.57
6:G:98:GLU:OE2	6:G:103:ASN:OD1	2.22	0.57
6:G:120:LEU:C	6:G:120:LEU:HD12	2.25	0.57
6:G:173:TRP:CA	6:G:186:LEU:HD12	2.34	0.57
1:A:409:G:OP2	6:G:22:LYS:HG2	2.04	0.57
1:A:8:A:H4'	7:H:102:ALA:HA	1.87	0.57
7:H:109:ILE:HG23	7:H:110:LEU:CD2	2.34	0.57
8:I:50:TYR:CZ	20:U:77:GLY:HA2	2.39	0.57
9:J:23:VAL:HG12	9:J:24:THR:N	2.19	0.57
10:K:18:ARG:N	10:K:18:ARG:CZ	2.68	0.57
13:N:84:VAL:CG2	13:N:111:ASP:H	2.17	0.57
15:P:2:ALA:O	15:P:4:ILE:N	2.37	0.57
15:P:90:LEU:HA	15:P:93:ARG:CB	2.34	0.57
16:Q:19:ARG:O	16:Q:20:ALA:C	2.44	0.57
1:A:1114:C:H1'	16:Q:60:SER:CB	2.32	0.57
17:R:63:ARG:NH2	17:R:87:ILE:HG21	2.19	0.57
19:T:43:LEU:CD1	19:T:43:LEU:C	2.66	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:T:7:THR:HG22	19:T:8:GLY:N	2.18	0.57
21:V:80:TYR:CE2	21:V:81:ARG:HD3	2.40	0.57
6:G:151:LYS:HD2	6:G:151:LYS:N	2.20	0.57
2:1:39:U:O5'	2:1:40:U:OP1	2.23	0.56
1:A:1049:U:C6	1:A:1049:U:O5'	2.58	0.56
1:A:1216:G:C4	1:A:1217:C:C5	2.93	0.56
1:A:1226:C:O2'	1:A:1227:A:P	2.62	0.56
1:A:1436:U:H2'	1:A:1437:C:C6	2.38	0.56
1:A:173:U:H4'	1:A:197:A:N3	2.20	0.56
1:A:22:G:C4	1:A:23:C:C5	2.93	0.56
1:A:251:G:C2	1:A:266:G:C6	2.93	0.56
1:A:366:C:HO2'	1:A:367:U:P	2.27	0.56
1:A:409:G:C2	1:A:410:G:C8	2.93	0.56
1:A:533:A:C6	1:A:536:C:C4	2.93	0.56
1:A:587:G:N2	1:A:755:G:C5	2.72	0.56
1:A:754:C:C2'	1:A:755:G:OP1	2.53	0.56
1:A:934:C:N3	1:A:938:A:N6	2.48	0.56
1:A:949:A:C1'	1:A:1364:U:H3	2.18	0.56
4:E:173:ALA:HA	4:E:176:GLU:CB	2.34	0.56
4:E:42:ILE:HG12	4:E:43:ASP:N	2.16	0.56
4:E:57:PHE:O	4:E:57:PHE:HD2	1.88	0.56
6:G:114:ARG:HH11	6:G:114:ARG:CG	2.17	0.56
6:G:154:ASN:HD22	6:G:155:LEU:N	2.02	0.56
6:G:15:GLU:CG	6:G:63:LYS:HB3	2.35	0.56
6:G:200:GLU:HG3	6:G:201:GLN:H	1.67	0.56
7:H:142:LEU:H	7:H:143:ARG:HE	1.52	0.56
7:H:61:TYR:HA	7:H:64:ARG:HG3	1.87	0.56
8:I:42:GLU:HB2	8:I:61:LEU:HD23	1.87	0.56
8:I:50:TYR:CZ	8:I:52:ILE:HD11	2.40	0.56
8:I:6:VAL:HG12	8:I:63:TYR:H	1.69	0.56
8:I:9:VAL:HG13	8:I:59:TYR:O	2.05	0.56
9:J:5:ARG:HH11	9:J:5:ARG:HB3	1.68	0.56
11:L:67:GLY:N	11:L:73:GLN:HE21	2.03	0.56
18:S:39:TYR:HD1	18:S:40:ASP:N	2.02	0.56
20:U:77:GLY:C	20:U:79:LEU:HD12	2.25	0.56
21:V:80:TYR:CE2	21:V:81:ARG:CD	2.88	0.56
22:W:25:ARG:O	22:W:28:ALA:HB3	2.04	0.56
3:D:18:G:N1	3:D:57:G:C2	2.73	0.56
1:A:1138:G:N1	1:A:1140:C:C6	2.73	0.56
1:A:1241:G:OP2	1:A:1241:G:H8	1.88	0.56
1:A:1305:G:OP1	23:X:2:GLY:HA3	2.05	0.56
1:A:1348:U:O2	1:A:1349:A:C8	2.57	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1361:G:H3'	1:A:1361:G:H8	1.69	0.56
1:A:1405:G:C4	1:A:1406:U:H5	2.23	0.56
1:A:1430:C:N3	1:A:1431:C:H5	2.02	0.56
1:A:1431:C:N4	1:A:1470:G:C6	2.74	0.56
1:A:187:C:C4	1:A:188:U:O2	2.58	0.56
1:A:560:U:O5'	1:A:566:G:N2	2.38	0.56
1:A:571:U:H6	1:A:571:U:C5'	2.19	0.56
1:A:738:C:C2	1:A:739:C:C5	2.93	0.56
1:A:81:G:H3'	1:A:82:U:H5''	1.87	0.56
1:A:952:U:C5'	1:A:972:C:N4	2.65	0.56
1:A:993:G:O2'	1:A:994:A:P	2.63	0.56
3:D:37:A:H3'	3:D:38:A:H8	1.70	0.56
5:F:201:TYR:N	5:F:201:TYR:HD1	2.02	0.56
5:F:181:ASN:HD21	5:F:206:GLU:HG2	1.70	0.56
6:G:17:VAL:O	6:G:19:LEU:HD23	2.04	0.56
6:G:190:ASP:O	6:G:191:ARG:C	2.43	0.56
8:I:89:MET:CE	20:U:75:ILE:HG21	2.36	0.56
9:J:69:VAL:HG21	9:J:104:LEU:CG	2.34	0.56
10:K:85:ARG:NH1	10:K:85:ARG:CG	2.66	0.56
11:L:96:LEU:HD12	11:L:101:PHE:HE1	1.70	0.56
12:M:52:GLY:H	12:M:59:SER:CB	2.18	0.56
13:N:111:ASP:O	13:N:112:THR:C	2.43	0.56
18:S:51:VAL:O	18:S:52:ASP:C	2.42	0.56
1:A:101:A:C4	1:A:102:G:C8	2.93	0.56
1:A:132:C:O2'	1:A:133:U:O5'	2.23	0.56
1:A:171:A:O2'	1:A:172:A:H5'	2.05	0.56
1:A:230:G:H4'	18:S:25:ARG:NH1	2.20	0.56
1:A:379:C:H2'	1:A:380:G:C5'	2.35	0.56
1:A:37:U:H2'	1:A:38:G:H5'	1.86	0.56
1:A:465:A:H5'	1:A:466:C:OP2	2.06	0.56
1:A:55:A:C2'	1:A:56:U:C5'	2.80	0.56
1:A:682:G:C6	1:A:683:G:N7	2.73	0.56
1:A:80:G:H3'	1:A:81:G:H8	1.70	0.56
1:A:815:A:C5	1:A:1529:G:C6	2.93	0.56
1:A:907:A:C2'	1:A:908:A:H8	2.16	0.56
3:C:41:C:C2'	3:C:42:C:O5'	2.53	0.56
3:C:21:A:C2	3:C:48:C:C4	2.93	0.56
4:E:162:ILE:O	4:E:185:ILE:CD1	2.53	0.56
4:E:78:GLN:HE22	4:E:96:ARG:CZ	2.17	0.56
5:F:157:ILE:O	5:F:159:GLY:N	2.38	0.56
6:G:11:LEU:C	6:G:19:LEU:HD12	2.25	0.56
6:G:72:GLU:OE1	6:G:72:GLU:HA	2.05	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:H:151:LEU:HD21	10:K:67:PRO:CG	2.34	0.56
7:H:16:THR:CG2	7:H:28:PHE:HA	2.34	0.56
7:H:43:LEU:HB3	7:H:136:MET:HE2	1.86	0.56
9:J:89:MET:HE2	9:J:156:TRP:CD1	2.39	0.56
9:J:76:ARG:HH11	9:J:89:MET:HG3	1.69	0.56
10:K:81:HIS:HB3	10:K:138:TRP:O	2.05	0.56
15:P:10:PRO:HG3	15:P:18:ALA:CA	2.35	0.56
16:Q:33:VAL:O	16:Q:34:TYR:O	2.23	0.56
16:Q:55:GLY:O	16:Q:56:VAL:O	2.23	0.56
19:T:8:GLY:O	19:T:56:VAL:CG1	2.53	0.56
8:I:100:ASN:O	20:U:28:GLU:N	2.39	0.56
20:U:63:GLN:O	20:U:67:ALA:CB	2.53	0.56
20:U:80:PRO:O	20:U:81:PHE:C	2.44	0.56
1:A:1000:A:C2	1:A:1001:G:N7	2.74	0.56
1:A:1160:G:C2	1:A:1161:C:C6	2.93	0.56
1:A:1187:G:H2'	1:A:1188:A:C8	2.40	0.56
1:A:1309:G:OP2	15:P:99:ARG:NH2	2.38	0.56
1:A:1321:C:C5	1:A:1322:C:H3'	2.40	0.56
1:A:1419:G:H2'	1:A:1420:C:C6	2.39	0.56
1:A:256:U:H6	1:A:256:U:O5'	1.87	0.56
1:A:517:G:H5''	1:A:518:C:OP1	2.06	0.56
1:A:589:C:N4	1:A:590:C:N4	2.53	0.56
1:A:597:G:C2'	1:A:598:U:H5'	2.35	0.56
1:A:722:A:O3'	1:A:723:U:C4	2.59	0.56
1:A:935:A:H2'	1:A:936:C:C6	2.41	0.56
1:A:970:C:H4'	1:A:972:C:C5	2.40	0.56
3:C:70:G:C2	3:C:71:G:C8	2.94	0.56
4:E:19:HIS:CE1	4:E:204:ASN:ND2	2.73	0.56
4:E:208:ILE:HG13	4:E:211:ILE:HD12	1.87	0.56
5:F:151:VAL:CG1	5:F:152:ILE:N	2.67	0.56
6:G:105:VAL:HG21	6:G:121:VAL:HG21	1.87	0.56
6:G:13:ARG:CB	6:G:40:PRO:HD3	2.35	0.56
6:G:157:LEU:O	6:G:158:ILE:C	2.43	0.56
6:G:26:CYS:O	6:G:33:MET:SD	2.63	0.56
7:H:122:GLU:HG2	7:H:126:ARG:HG3	1.85	0.56
7:H:70:PRO:CB	7:H:143:ARG:HA	2.31	0.56
9:J:43:PHE:HD2	9:J:44:TYR:CD2	2.23	0.56
10:K:123:GLU:O	10:K:126:LYS:HE3	2.04	0.56
10:K:26:VAL:HG13	10:K:27:PRO:CD	2.35	0.56
10:K:36:LEU:HD23	10:K:36:LEU:N	2.10	0.56
10:K:69:ARG:NH1	10:K:74:PRO:O	2.38	0.56
1:A:942:G:N2	11:L:124:GLN:OE1	2.38	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1248:A:O2'	11:L:36:TYR:CE1	2.57	0.56
12:M:8:LEU:HD13	12:M:94:VAL:CG1	2.22	0.56
15:P:23:TYR:HE2	15:P:70:LEU:CD2	2.16	0.56
15:P:77:ASN:O	15:P:80:ARG:NH1	2.38	0.56
17:R:60:VAL:HA	17:R:63:ARG:CD	2.34	0.56
18:S:58:TYR:CD1	18:S:59:TRP:N	2.73	0.56
19:T:43:LEU:HD11	19:T:69:LYS:CG	2.35	0.56
19:T:59:ILE:CD1	19:T:72:ARG:O	2.49	0.56
21:V:22:LEU:C	21:V:24:ALA:H	2.07	0.56
21:V:80:TYR:CG	21:V:81:ARG:N	2.73	0.56
22:W:53:LEU:O	22:W:54:LYS:C	2.43	0.56
22:W:57:ARG:O	22:W:58:LYS:C	2.44	0.56
3:D:57:G:H8	3:D:57:G:O5'	1.88	0.56
1:A:337:C:N4	1:A:338:A:N6	2.54	0.56
3:D:40:C:O2	3:D:40:C:H2'	2.04	0.56
3:D:44:G:C2'	3:D:45:U:H5'	2.36	0.56
3:B:9:A:N3	3:B:45:U:O2	2.38	0.56
1:A:511:C:O2'	1:A:512:U:O4'	2.23	0.56
1:A:772:U:C2	1:A:773:G:C8	2.94	0.56
2:1:39:U:H5''	2:1:40:U:H5'	1.86	0.56
1:A:1002:G:C6	1:A:1003:G:O6	2.59	0.56
1:A:1054:C:H2'	1:A:1055:A:C5'	2.30	0.56
1:A:1315:U:O5'	1:A:1315:U:H6	1.87	0.56
1:A:922:G:N3	1:A:1398:A:H2	2.02	0.56
1:A:1499:A:C5	1:A:1500:A:N7	2.74	0.56
1:A:1526:G:H2'	1:A:1527:C:C6	2.41	0.56
1:A:19:C:N3	1:A:20:U:C5	2.73	0.56
1:A:22:G:H4'	1:A:885:G:C8	2.41	0.56
1:A:241:C:H2'	1:A:242:C:O5'	2.04	0.56
1:A:261:U:C2'	1:A:263:A:OP2	2.52	0.56
1:A:541:G:O4'	6:G:42:GLN:NE2	2.36	0.56
1:A:782:A:N6	1:A:801:U:C6	2.74	0.56
3:B:36:A:N6	3:B:37:A:N6	2.53	0.56
3:C:65:G:H2'	3:C:66:U:C6	2.40	0.56
4:E:52:GLU:OE1	4:E:53:ARG:HB2	2.06	0.56
4:E:56:ARG:C	4:E:56:ARG:HD2	2.26	0.56
4:E:97:TRP:HE1	4:E:101:MET:CE	2.18	0.56
5:F:33:LEU:HD23	5:F:36:ASP:OD1	2.05	0.56
5:F:34:LEU:O	5:F:38:ARG:HD3	2.06	0.56
5:F:46:GLU:C	5:F:47:LEU:HD22	2.26	0.56
6:G:121:VAL:HB	6:G:136:PRO:CG	2.18	0.56
6:G:100:ARG:CZ	6:G:137:SER:HA	2.34	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:4:TYR:CG	6:G:5:ILE:N	2.74	0.56
6:G:58:LEU:O	6:G:58:LEU:HD22	2.06	0.56
6:G:78:LEU:O	6:G:81:GLU:N	2.39	0.56
7:H:72:GLN:NE2	7:H:145:LYS:H	2.02	0.56
8:I:75:LEU:O	8:I:78:GLU:N	2.38	0.56
9:J:109:ASN:O	9:J:119:ARG:NE	2.38	0.56
9:J:50:ILE:HB	9:J:51:GLN:OE1	2.06	0.56
12:M:27:ALA:CB	12:M:85:LEU:HD21	2.35	0.56
17:R:16:ALA:O	17:R:17:ARG:C	2.44	0.56
17:R:62:GLN:CD	17:R:65:ARG:NH2	2.59	0.56
1:A:376:G:OP1	18:S:5:ARG:HB2	2.05	0.56
20:U:40:LEU:N	20:U:40:LEU:HD23	2.20	0.56
22:W:89:ARG:HH21	22:W:104:LEU:HD22	1.70	0.56
22:W:63:ILE:HG22	22:W:64:ASP:N	2.21	0.56
22:W:79:ARG:O	22:W:80:ARG:C	2.42	0.56
3:D:8:U:C5	3:D:13:C:N4	2.73	0.56
6:G:151:LYS:HD2	6:G:151:LYS:H	1.71	0.56
1:A:1537:U:C2	1:A:1538:C:C6	2.94	0.56
14:O:16:GLU:O	14:O:17:LYS:HB3	2.04	0.56
1:A:1002:G:N2	1:A:1039:C:C4	2.74	0.56
1:A:1132:C:H2'	1:A:1133:G:H8	1.70	0.56
1:A:1241:G:O2'	1:A:1242:C:H5'	2.06	0.56
1:A:1313:U:C4	21:V:4:SER:HB2	2.39	0.56
1:A:1396:A:C2'	1:A:1397:C:OP2	2.52	0.56
1:A:1481:U:H2'	1:A:1482:G:N7	2.21	0.56
1:A:225:C:H2'	1:A:226:G:O5'	2.04	0.56
1:A:41:G:C4	1:A:42:G:C8	2.94	0.56
1:A:474:G:O5'	18:S:81:ARG:HA	2.06	0.56
1:A:484:G:O4'	1:A:486:U:C6	2.58	0.56
1:A:501:C:H2'	1:A:502:G:C8	2.41	0.56
1:A:607:A:C5	1:A:608:A:C8	2.93	0.56
1:A:5:U:O2'	1:A:6:G:OP2	2.22	0.56
1:A:748:C:H3'	1:A:748:C:H6	1.67	0.56
1:A:758:G:C2'	1:A:759:A:OP2	2.54	0.56
1:A:570:G:O2'	1:A:819:A:H8	1.85	0.56
4:E:150:SER:O	4:E:151:GLY:C	2.44	0.56
5:F:200:ALA:C	5:F:201:TYR:CD1	2.79	0.56
5:F:24:ALA:HB2	5:F:32:LEU:CD1	2.35	0.56
5:F:6:HIS:HB3	16:Q:49:HIS:ND1	2.20	0.56
6:G:120:LEU:HG	6:G:121:VAL:N	2.21	0.56
6:G:166:LYS:HA	6:G:178:VAL:HG11	1.86	0.56
2:1:52:U:H4'	6:G:50:ARG:CB	2.34	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:I:42:GLU:HG3	8:I:44:GLY:H	1.70	0.56
8:I:57:GLN:OE1	8:I:57:GLN:N	2.37	0.56
9:J:64:GLN:O	9:J:68:ASN:ND2	2.38	0.56
10:K:45:ILE:O	10:K:45:ILE:HG12	2.06	0.56
10:K:46:LYS:HE3	10:K:64:LYS:CG	2.27	0.56
11:L:97:LYS:NZ	11:L:102:LEU:HD22	2.21	0.56
11:L:37:PHE:CE1	11:L:74:ILE:HG12	2.41	0.56
11:L:58:HIS:HD2	11:L:59:PHE:CE1	2.23	0.56
1:A:718:G:C4'	13:N:117:ASN:HD21	2.17	0.56
14:O:68:ALA:CB	14:O:98:TYR:O	2.54	0.56
14:O:97:ARG:C	14:O:98:TYR:CD1	2.79	0.56
15:P:20:THR:HG23	15:P:26:GLY:HA2	1.87	0.56
15:P:2:ALA:O	15:P:4:ILE:HD12	2.04	0.56
16:Q:41:ARG:HA	16:Q:44:LEU:CD2	2.35	0.56
17:R:81:LEU:HD23	17:R:81:LEU:C	2.25	0.56
18:S:39:TYR:CE1	18:S:41:PRO:HG3	2.40	0.56
20:U:79:LEU:N	20:U:79:LEU:HD12	2.20	0.56
3:B:8:U:H5'	3:B:9:A:OP1	2.06	0.56
1:A:1117:G:OP1	11:L:104:ARG:NH1	2.38	0.56
1:A:1157:A:H4'	1:A:1158:C:C2	2.41	0.56
1:A:186(C):G:O2'	1:A:186(D):C:H5'	2.05	0.56
1:A:237:C:H2'	1:A:238:G:H8	1.71	0.56
1:A:308:C:C2'	1:A:309:G:O5'	2.53	0.56
1:A:46:G:H1'	1:A:396:G:N2	2.21	0.56
1:A:564:C:N3	19:T:31:LEU:HD11	2.20	0.56
1:A:595:G:H8	1:A:641:U:C4	2.19	0.56
1:A:809:G:O2'	1:A:810:C:H5'	2.05	0.56
1:A:977:A:H4'	1:A:982:U:O4	2.06	0.56
3:C:19:G:H5''	3:C:20:U:C4	2.40	0.56
3:C:4:C:O2'	3:C:5:G:H5'	2.05	0.56
4:E:157:ARG:O	4:E:158:LEU:HG	2.05	0.56
4:E:16:HIS:NE2	4:E:213:LEU:HB3	2.21	0.56
4:E:171:ALA:CA	4:E:174:VAL:HB	2.36	0.56
4:E:23:ARG:HH11	4:E:24:TRP:H	1.49	0.56
5:F:40:ARG:HA	5:F:43:LEU:CD1	2.33	0.56
6:G:135:LEU:C	6:G:137:SER:N	2.55	0.56
6:G:15:GLU:HB3	6:G:19:LEU:HD11	1.88	0.56
6:G:195:ALA:O	6:G:196:LEU:C	2.44	0.56
7:H:33:VAL:CG2	7:H:43:LEU:HD12	2.32	0.56
8:I:37:VAL:HA	8:I:65:VAL:HB	1.88	0.56
8:I:53:ALA:CB	8:I:86:ARG:HH11	2.18	0.56
9:J:110:GLN:O	9:J:111:ARG:O	2.24	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:J:57:GLU:O	9:J:61:VAL:HG23	2.06	0.56
10:K:6:ILE:O	10:K:7:ALA:C	2.42	0.56
11:L:111:ARG:HG2	11:L:112:LYS:O	2.05	0.56
12:M:32:ALA:O	12:M:33:GLN:HB2	2.05	0.56
13:N:23:ALA:CB	13:N:28:THR:HG23	2.35	0.56
14:O:23:LYS:O	14:O:24:VAL:HG23	2.05	0.56
14:O:97:ARG:HB3	14:O:98:TYR:CD1	2.41	0.56
15:P:48:LEU:HD22	15:P:53:VAL:CG2	2.31	0.56
19:T:51:TYR:O	19:T:52:LYS:HG3	2.06	0.56
19:T:53:LEU:O	19:T:82:MET:SD	2.63	0.56
19:T:3:LYS:HE3	19:T:62:SER:O	2.06	0.56
20:U:30:ASP:OD2	20:U:32:ARG:HB2	2.06	0.56
20:U:51:LEU:N	20:U:51:LEU:HD12	2.21	0.56
22:W:50:GLU:OE1	22:W:100:ILE:HG12	2.05	0.56
3:D:56:C:H2'	3:D:57:G:O4'	2.04	0.56
1:A:164:U:H2'	1:A:165:C:C6	2.39	0.56
3:C:44:G:O2'	3:C:45:U:H5'	2.06	0.56
15:P:120:LYS:O	15:P:121:LYS:CB	2.54	0.56
1:A:1443:G:O5'	1:A:1446:A:OP1	2.23	0.56
1:A:295:C:O2	1:A:296:U:O4'	2.24	0.56
1:A:392:G:H5'	18:S:12:LYS:HZ3	1.70	0.56
1:A:872:A:C5	1:A:874:G:N7	2.73	0.56
1:A:962:C:O2'	1:A:1200:C:C5	2.57	0.56
3:C:31:A:OP1	11:L:127:LYS:HE3	2.04	0.56
4:E:134:GLU:HB3	4:E:135:GLN:NE2	2.21	0.56
4:E:139:LYS:CG	4:E:140:HIS:N	2.64	0.56
5:F:139:GLN:O	5:F:143:GLU:HG3	2.05	0.56
6:G:11:LEU:HA	6:G:14:ARG:CB	2.32	0.56
6:G:58:LEU:HD22	6:G:62:GLN:HG2	1.88	0.56
7:H:109:ILE:HD11	7:H:139:LEU:CD1	2.35	0.56
7:H:79:GLU:HA	7:H:91:LEU:CD2	2.35	0.56
9:J:116:ALA:O	9:J:120:ILE:HG13	2.05	0.56
9:J:47:CYS:SG	9:J:50:ILE:HD12	2.46	0.56
10:K:102:ARG:HD3	10:K:105:ARG:NH1	2.21	0.56
10:K:28:ALA:O	10:K:29:SER:OG	2.20	0.56
11:L:17:VAL:HG21	11:L:77:ILE:O	2.05	0.56
11:L:32:ASP:CG	11:L:33:PHE:N	2.58	0.56
11:L:38:GLN:C	11:L:40:LEU:H	2.09	0.56
11:L:15:ALA:HB3	11:L:77:ILE:N	2.19	0.56
14:O:27:LEU:CD2	14:O:33:ARG:HH11	2.19	0.56
14:O:85:ILE:HG13	14:O:99:HIS:O	2.05	0.56
15:P:40:ASN:C	15:P:42:ALA:H	2.09	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:Q:10:ALA:O	16:Q:12:ARG:HG2	2.05	0.56
1:A:581:G:O3'	17:R:64:ARG:NH2	2.38	0.56
1:A:254:G:OP1	19:T:67:LYS:O	2.23	0.56
20:U:58:LEU:HB2	20:U:63:GLN:OE1	2.04	0.56
22:W:86:ARG:HG2	22:W:87:LYS:N	2.21	0.56
3:D:67:C:O2'	3:D:68:C:H5'	2.05	0.56
14:O:18:VAL:O	14:O:19:ARG:HB2	2.06	0.56
1:A:1113:C:N3	1:A:1114:C:C5	2.73	0.56
1:A:124:G:C2'	1:A:125:U:O4'	2.54	0.56
1:A:1278:U:H5'	1:A:1279:A:C4'	2.35	0.56
1:A:1446:A:O2'	1:A:1447:G:P	2.63	0.56
1:A:1516:G:H22	1:A:1518:A:C3'	2.15	0.56
1:A:182:U:H2'	1:A:182:U:O2	2.06	0.56
1:A:324:G:N2	1:A:327:A:OP2	2.39	0.56
1:A:519:C:C5	1:A:520:A:N3	2.74	0.56
1:A:562:C:O2'	14:O:15:ARG:CB	2.53	0.56
1:A:640:A:H2'	1:A:641:U:C5'	2.36	0.56
1:A:794:A:C6	1:A:795:C:N4	2.74	0.56
1:A:815:A:C8	1:A:819:A:H2	2.24	0.56
1:A:961:U:C6	1:A:983:A:N1	2.74	0.56
4:E:101:MET:O	4:E:103:THR:N	2.39	0.56
4:E:107:THR:O	4:E:108:ILE:C	2.43	0.56
4:E:107:THR:C	4:E:109:SER:N	2.56	0.56
4:E:69:LEU:O	4:E:162:ILE:HB	2.06	0.56
5:F:10:PHE:C	5:F:11:ARG:HE	2.09	0.56
5:F:8:ILE:HD11	5:F:16:ARG:HD2	1.88	0.56
6:G:205:GLU:O	6:G:206:PHE:C	2.44	0.56
6:G:93:PHE:O	6:G:96:LEU:N	2.39	0.56
7:H:9:LYS:CB	7:H:33:VAL:HB	2.30	0.56
9:J:26:PHE:HD2	9:J:43:PHE:HE1	1.52	0.56
11:L:78:LYS:HD3	11:L:79:LEU:HD22	1.87	0.56
12:M:32:ALA:HB2	12:M:75:ILE:O	2.05	0.56
12:M:34:VAL:HG22	12:M:74:ILE:CD1	2.36	0.56
14:O:76:ASN:HD22	14:O:77:LEU:HD23	1.69	0.56
14:O:84:LEU:HD23	14:O:85:ILE:N	2.20	0.56
1:A:1228:C:P	15:P:115:LYS:HB3	2.46	0.56
15:P:71:ARG:O	15:P:73:GLU:N	2.39	0.56
19:T:40:LYS:NZ	19:T:42:TYR:CE1	2.74	0.56
3:D:41:C:H6	3:D:41:C:C5'	2.18	0.56
9:J:132:GLY:O	9:J:136:LYS:HB2	2.06	0.56
2:1:37:U:H5''	2:1:38:U:OP1	2.06	0.56
2:1:38:U:OP2	2:1:38:U:C6	2.58	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1125:U:H4'	1:A:1126:U:H5	1.71	0.56
1:A:1251:A:C2'	1:A:1252:A:C8	2.88	0.56
1:A:944:G:N2	1:A:1339:A:H62	1.86	0.56
1:A:190:G:HO2'	1:A:191(A):G:P	2.28	0.56
1:A:283:C:O2	1:A:283:C:C2'	2.51	0.56
1:A:366:C:O2'	1:A:394:G:N2	2.39	0.56
1:A:300:A:C2	1:A:566:G:O6	2.59	0.56
1:A:577:G:N2	1:A:578:C:H1'	2.19	0.56
1:A:577:G:H1'	1:A:816:A:C2	2.41	0.56
1:A:944:G:C3'	1:A:945:G:C5'	2.82	0.56
1:A:962:C:O2'	1:A:963:G:H5'	2.05	0.56
1:A:974:A:H8	1:A:974:A:OP1	1.88	0.56
4:E:189:ASP:HB2	4:E:205:ASP:CB	2.36	0.56
4:E:20:GLU:OE1	4:E:20:GLU:N	2.38	0.56
6:G:144:ASP:HA	6:G:184:LYS:HZ2	1.71	0.56
6:G:15:GLU:HA	6:G:15:GLU:OE1	2.06	0.56
6:G:162:LEU:O	6:G:166:LYS:HG2	2.05	0.56
6:G:34:GLU:O	6:G:35:ARG:CB	2.54	0.56
7:H:106:PRO:O	7:H:109:ILE:CG2	2.54	0.56
8:I:23:LYS:HA	8:I:26:ILE:CG1	2.35	0.56
8:I:72:VAL:O	8:I:73:ASN:C	2.44	0.56
10:K:14:ARG:HD2	10:K:15:ASN:ND2	2.21	0.56
10:K:44:PHE:HD1	10:K:79:VAL:HG12	1.71	0.56
11:L:111:ARG:HG2	11:L:112:LYS:N	2.21	0.56
11:L:49:PRO:HD3	11:L:78:LYS:CG	2.33	0.56
13:N:31:THR:OG1	13:N:42:TRP:HB3	2.05	0.56
13:N:80:VAL:CG2	13:N:81:ASP:N	2.69	0.56
14:O:27:LEU:HD21	14:O:33:ARG:HH11	1.70	0.56
14:O:85:ILE:HD12	14:O:99:HIS:C	2.26	0.56
16:Q:11:LYS:O	16:Q:13:THR:N	2.39	0.56
16:Q:13:THR:O	16:Q:15:LYS:N	2.39	0.56
16:Q:42:ILE:C	16:Q:44:LEU:N	2.56	0.56
17:R:66:LEU:HD23	17:R:66:LEU:H	1.70	0.56
21:V:12:ASP:O	21:V:15:LEU:HG	2.05	0.56
22:W:62:LEU:HD23	22:W:65:LYS:HG3	1.87	0.56
11:L:99:LEU:HD22	11:L:99:LEU:N	2.20	0.56
1:A:1159:U:C5'	1:A:1160:G:OP1	2.51	0.56
1:A:1261:A:C2	1:A:1262:C:C2	2.93	0.56
1:A:1299:A:N6	1:A:1301:U:C2	2.74	0.56
1:A:1238:A:N7	1:A:1303:C:H1'	2.21	0.56
1:A:1336:C:O2'	1:A:1337:G:C5	2.56	0.56
1:A:1362(A):C:H5'	1:A:1363:A:P	2.45	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1466:C:C3'	1:A:1467:G:C8	2.89	0.56
1:A:151:A:N6	1:A:152:A:C2	2.74	0.56
1:A:62:U:H1'	1:A:379:C:H1'	1.87	0.56
1:A:409:G:C5'	6:G:24:GLU:OE1	2.54	0.56
1:A:435:C:C2'	1:A:436:C:H5'	2.36	0.56
1:A:597:G:O2'	1:A:598:U:H5'	2.05	0.56
1:A:893:C:C2	1:A:894:G:C8	2.94	0.56
1:A:962:C:H2'	1:A:963:G:C8	2.41	0.56
4:E:135:GLN:O	4:E:139:LYS:HG2	2.06	0.56
5:F:131:ARG:HH12	7:H:51:VAL:CG2	2.19	0.56
1:A:532:A:C5'	5:F:161:GLU:OE1	2.54	0.56
5:F:84:ILE:HG13	5:F:101:LEU:CD1	2.35	0.56
6:G:200:GLU:HG3	6:G:201:GLN:HE21	1.70	0.56
6:G:25:ARG:C	6:G:27:TYR:N	2.59	0.56
6:G:63:LYS:HD2	6:G:63:LYS:N	2.21	0.56
7:H:72:GLN:HG3	7:H:77:PRO:HD3	1.88	0.56
8:I:76:ALA:HA	8:I:79:LEU:HD12	1.88	0.56
9:J:26:PHE:CD2	9:J:43:PHE:CE1	2.94	0.56
9:J:75:VAL:HG12	9:J:76:ARG:N	2.19	0.56
11:L:36:TYR:HD2	11:L:37:PHE:CE2	2.23	0.56
12:M:27:ALA:HB2	12:M:85:LEU:HD21	1.87	0.56
12:M:27:ALA:CB	12:M:85:LEU:HD11	2.36	0.56
13:N:85:ARG:NH2	13:N:111:ASP:OD2	2.38	0.56
13:N:92:GLU:C	13:N:94:ALA:N	2.57	0.56
13:N:62:GLN:HA	13:N:97:ALA:CB	2.36	0.56
14:O:96:VAL:HG12	14:O:96:VAL:O	2.05	0.56
17:R:70:LEU:O	17:R:74:ASP:O	2.23	0.56
18:S:12:LYS:NZ	18:S:13:HIS:CE1	2.74	0.56
19:T:18:THR:HG23	19:T:69:LYS:HE3	1.87	0.56
19:T:53:LEU:HG	19:T:53:LEU:O	2.06	0.56
19:T:44:ALA:CB	19:T:71:PHE:O	2.55	0.56
21:V:69:HIS:CB	21:V:74:PHE:HZ	2.04	0.56
3:B:59:U:C5	3:B:60:U:C4	2.94	0.56
15:P:3:ARG:HA	15:P:7:VAL:HA	1.88	0.56
1:A:1004:A:H5''	1:A:1025:U:C5	2.41	0.55
1:A:1069:C:H1'	1:A:1191:A:C2	2.40	0.55
1:A:1077:G:H21	1:A:1079:G:H3'	1.64	0.55
1:A:1204:A:H2'	1:A:1205:U:H5'	1.87	0.55
1:A:1222:G:OP2	1:A:1322:C:H5	1.89	0.55
1:A:1259:C:H6	1:A:1259:C:O5'	1.89	0.55
1:A:1300:G:O2'	1:A:1301:U:O5'	2.24	0.55
1:A:1377:A:H5''	1:A:1378:C:C6	2.41	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1430:C:C2	1:A:1431:C:C5	2.93	0.55
1:A:1500:A:OP2	1:A:1505:G:OP2	2.24	0.55
1:A:1516:G:N2	1:A:1518:A:P	2.79	0.55
1:A:1528:U:HO2'	1:A:1529:G:H3'	1.68	0.55
1:A:250:A:H5'	1:A:252:U:O4'	2.05	0.55
1:A:432:A:N7	1:A:433:C:C6	2.74	0.55
1:A:454:C:H5''	1:A:455:C:OP2	2.06	0.55
1:A:373:A:C6	1:A:482:A:N6	2.74	0.55
1:A:68:G:H4'	1:A:171:A:O4'	2.06	0.55
1:A:587:G:N3	1:A:755:G:C2	2.74	0.55
1:A:768:A:N6	1:A:769:G:C6	2.74	0.55
1:A:949:A:O2'	1:A:971:G:N2	2.39	0.55
1:A:978:A:N1	1:A:1318:A:C6	2.74	0.55
4:E:113:HIS:HA	4:E:116:GLU:CD	2.26	0.55
2:1:12:U:OP1	4:E:37:ASN:HB2	2.05	0.55
4:E:97:TRP:CZ2	4:E:102:LEU:CD1	2.82	0.55
5:F:3:ASN:CG	5:F:4:LYS:N	2.59	0.55
5:F:59:ARG:CZ	5:F:64:VAL:HG22	2.36	0.55
6:G:185:PHE:HD2	6:G:186:LEU:H	1.54	0.55
9:J:85:TYR:HD1	9:J:154:TYR:CE1	2.24	0.55
10:K:6:ILE:HD12	10:K:85:ARG:HD3	1.88	0.55
11:L:49:PRO:HD3	11:L:78:LYS:NZ	2.20	0.55
11:L:114:TYR:CE1	12:M:60:ARG:NH1	2.74	0.55
13:N:44:SER:N	13:N:47:VAL:HG21	2.21	0.55
13:N:71:LYS:HG3	13:N:72:ALA:H	1.71	0.55
14:O:24:VAL:HG13	14:O:98:TYR:CE2	2.41	0.55
14:O:85:ILE:CD1	14:O:98:TYR:HB3	2.37	0.55
1:A:728:A:H5'	17:R:54:ARG:HH22	1.70	0.55
17:R:71:GLN:N	17:R:78:TYR:HD1	2.03	0.55
18:S:12:LYS:HZ1	18:S:13:HIS:CD2	2.24	0.55
18:S:49:LEU:HD12	18:S:50:LYS:H	1.70	0.55
18:S:60:LEU:CA	18:S:64:ALA:HB3	2.28	0.55
8:I:46:ARG:NH2	20:U:37:VAL:CG2	2.68	0.55
23:X:6:ARG:HH11	23:X:15:ARG:NH2	2.03	0.55
23:X:4:GLY:C	23:X:6:ARG:N	2.57	0.55
1:A:1017:G:H2'	1:A:1018:C:H6	1.71	0.55
1:A:1125:U:OP2	1:A:1126:U:O4	2.24	0.55
1:A:1332:A:N3	1:A:1332:A:H2'	2.21	0.55
1:A:1346:A:O2'	1:A:1347:G:OP2	2.22	0.55
1:A:1234:C:C4'	1:A:1364:U:H1'	2.34	0.55
1:A:1428:A:C6	1:A:1429:C:N4	2.75	0.55
1:A:1464:G:N3	1:A:1465:C:C5	2.74	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:155:C:C2	1:A:167:G:C2	2.94	0.55
1:A:476:G:O2'	1:A:477:G:H5'	2.06	0.55
1:A:545:C:OP2	6:G:62:GLN:OE1	2.23	0.55
1:A:781:A:H4'	1:A:1522:U:HO2'	1.67	0.55
1:A:886:G:C2'	1:A:887:G:C5'	2.82	0.55
1:A:966:G:C2'	1:A:967:C:O5'	2.54	0.55
1:A:974:A:P	16:Q:31:ARG:HG2	2.46	0.55
3:C:50:U:O2'	3:C:51:U:H5'	2.05	0.55
3:C:73:A:O2'	3:C:74:C:P	2.64	0.55
4:E:149:LEU:O	4:E:151:GLY:N	2.39	0.55
4:E:176:GLU:O	4:E:180:LEU:CG	2.52	0.55
4:E:31:TYR:OH	4:E:200:ILE:HD13	2.07	0.55
1:A:1109:C:OP2	5:F:176:HIS:CD2	2.59	0.55
5:F:47:LEU:CD1	5:F:83:ARG:NH2	2.70	0.55
1:A:402:G:P	6:G:74:GLN:HE21	2.28	0.55
6:G:80:GLU:CA	6:G:83:SER:OG	2.54	0.55
1:A:9:G:H3'	7:H:126:ARG:NH1	2.21	0.55
7:H:43:LEU:HB3	7:H:136:MET:HE1	1.87	0.55
7:H:72:GLN:HE21	7:H:144:THR:HG23	1.71	0.55
7:H:20:GLN:NE2	7:H:21:ALA:H	2.03	0.55
8:I:49:ALA:HB3	20:U:79:LEU:CA	2.36	0.55
9:J:36:LYS:HZ2	9:J:36:LYS:HA	1.68	0.55
9:J:97:GLN:O	9:J:98:SER:C	2.45	0.55
1:A:878:G:O4'	10:K:3:THR:HG21	2.06	0.55
11:L:16:ARG:NH1	11:L:64:THR:HG21	2.21	0.55
12:M:26:ALA:C	12:M:28:ARG:H	2.09	0.55
12:M:47:PHE:CE2	16:Q:37:PHE:HZ	2.24	0.55
14:O:26:ALA:O	14:O:27:LEU:HB3	2.06	0.55
14:O:64:TYR:C	14:O:65:GLU:HG3	2.25	0.55
1:A:1329:A:H5''	15:P:29:ARG:CG	2.37	0.55
17:R:42:HIS:O	17:R:43:LEU:C	2.45	0.55
18:S:72:ARG:NH2	18:S:73:LEU:HD23	2.19	0.55
19:T:28:PRO:C	19:T:36:ILE:HD11	2.26	0.55
19:T:86:GLU:O	19:T:89:LEU:HB2	2.06	0.55
20:U:34:TYR:HE1	20:U:35:ARG:HE	1.53	0.55
1:A:1319:A:C5'	21:V:5:LEU:HD21	2.36	0.55
21:V:62:ILE:HD11	21:V:67:VAL:CG1	2.35	0.55
22:W:81:LYS:HB3	22:W:85:MET:CE	2.36	0.55
2:1:10:U:O2	2:1:12:U:H5''	2.06	0.55
2:1:31:U:O2'	2:1:32:U:H5'	2.07	0.55
1:A:1014:A:H4'	21:V:14:HIS:ND1	2.20	0.55
1:A:1269:A:H5'	1:A:1326:C:H4'	1.87	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1494:G:O2'	1:A:1495:U:C6	2.57	0.55
1:A:815:A:C2	1:A:1529:G:N2	2.74	0.55
1:A:277:C:OP2	19:T:41:LYS:NZ	2.34	0.55
1:A:378:G:H2'	1:A:379:C:H6	1.71	0.55
1:A:529:G:H1	14:O:49:ASN:CB	2.15	0.55
1:A:562:C:O2	14:O:15:ARG:O	2.23	0.55
1:A:60:A:H62	1:A:110:C:H42	1.53	0.55
1:A:679:C:H2'	1:A:680:C:C6	2.40	0.55
1:A:815:A:C8	1:A:819:A:C2	2.94	0.55
1:A:859:A:C2'	1:A:860:A:C5'	2.84	0.55
1:A:866:C:C5	1:A:867:G:C1'	2.86	0.55
1:A:945:G:N2	1:A:1337:G:C2	2.75	0.55
4:E:115:LEU:HD22	4:E:145:LEU:HG	1.88	0.55
4:E:75:LYS:CA	4:E:75:LYS:NZ	2.69	0.55
4:E:84:GLU:HA	4:E:84:GLU:OE2	2.06	0.55
6:G:21:LEU:CD1	6:G:67:ILE:HG22	2.34	0.55
7:H:106:PRO:HG3	7:H:122:GLU:OE2	2.07	0.55
7:H:102:ALA:CB	7:H:120:THR:HG22	2.32	0.55
7:H:91:LEU:HG	7:H:92:LYS:N	2.21	0.55
8:I:55:ASP:OD2	8:I:86:ARG:NH1	2.39	0.55
9:J:111:ARG:CZ	9:J:112:PRO:HD2	2.36	0.55
9:J:49:ILE:H	9:J:49:ILE:HD12	1.72	0.55
10:K:114:THR:C	10:K:116:LYS:H	2.09	0.55
10:K:19:VAL:HB	10:K:21:LYS:CG	2.35	0.55
11:L:78:LYS:NZ	11:L:101:PHE:HE2	1.96	0.55
11:L:17:VAL:HG11	11:L:81:ILE:HA	1.88	0.55
11:L:81:ILE:O	11:L:84:ALA:HB3	2.07	0.55
12:M:28:ARG:HG2	12:M:28:ARG:HH11	1.71	0.55
13:N:112:THR:O	13:N:112:THR:HG22	2.06	0.55
13:N:83:ILE:N	13:N:83:ILE:HD12	2.21	0.55
14:O:5:PRO:O	14:O:6:THR:OG1	2.23	0.55
18:S:18:ARG:HH11	18:S:20:VAL:HG21	1.71	0.55
18:S:52:ASP:C	18:S:52:ASP:OD2	2.45	0.55
19:T:66:SER:HB3	19:T:69:LYS:HZ3	1.70	0.55
21:V:47:HIS:O	21:V:61:TYR:HA	2.06	0.55
3:D:21:A:N1	3:D:46:G:N2	2.42	0.55
3:B:9:A:O2'	3:B:45:U:H2'	2.06	0.55
1:A:1065:U:C5	1:A:1190:G:H1'	2.42	0.55
1:A:1452:C:H5'	1:A:1453:G:N3	2.22	0.55
1:A:170:U:O2'	1:A:171:A:H5'	2.07	0.55
1:A:319:G:C2'	1:A:320:C:H5'	2.36	0.55
1:A:352:C:OP1	1:A:352:C:C6	2.60	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:483:C:O5'	1:A:483:C:H6	1.88	0.55
1:A:575:G:N1	1:A:821:G:N7	2.53	0.55
1:A:624:C:H2'	1:A:625:G:C8	2.38	0.55
1:A:902:G:H2'	1:A:903:G:H8	1.70	0.55
3:B:30:G:O2'	3:B:31:A:H5'	2.06	0.55
3:B:34:G:N1	3:B:35:A:H1'	2.19	0.55
3:C:10:G:O5'	3:C:10:G:C8	2.59	0.55
4:E:101:MET:C	4:E:103:THR:N	2.59	0.55
4:E:147:LYS:HE2	4:E:147:LYS:CA	2.36	0.55
4:E:54:THR:HG23	4:E:199:TYR:CB	2.36	0.55
4:E:69:LEU:HD22	4:E:91:PRO:CB	2.36	0.55
5:F:65:ALA:O	5:F:66:VAL:HB	2.06	0.55
6:G:100:ARG:HH22	6:G:137:SER:CA	2.13	0.55
6:G:171:GLY:HA3	6:G:173:TRP:HZ3	1.71	0.55
6:G:20:TYR:HB2	6:G:27:TYR:CA	2.36	0.55
7:H:105:VAL:HG12	7:H:106:PRO:CD	2.36	0.55
7:H:118:ILE:C	7:H:119:LEU:CD2	2.74	0.55
8:I:14:LEU:CD1	8:I:19:LEU:N	2.66	0.55
8:I:36:ARG:HB2	8:I:36:ARG:NH1	2.20	0.55
9:J:75:VAL:CG2	9:J:88:PRO:HB3	2.36	0.55
10:K:23:SER:O	10:K:24:THR:HB	2.07	0.55
13:N:100:ALA:C	13:N:102:GLY:N	2.59	0.55
1:A:521:G:O6	14:O:49:ASN:ND2	2.40	0.55
14:O:45:PRO:HG2	14:O:49:ASN:O	2.06	0.55
15:P:87:TYR:HD1	21:V:73:GLU:CB	2.19	0.55
17:R:79:ARG:HA	17:R:82:ILE:HG13	1.86	0.55
19:T:104:LYS:CG	19:T:105:ALA:H	2.19	0.55
19:T:44:ALA:HB1	19:T:71:PHE:O	2.06	0.55
19:T:87:LYS:O	19:T:91:ARG:HB3	2.06	0.55
21:V:11:VAL:HG13	21:V:38:SER:OG	2.06	0.55
21:V:40:ILE:HD11	21:V:71:LEU:HD23	1.88	0.55
22:W:53:LEU:HD21	22:W:92:LEU:CD1	2.37	0.55
1:A:1171:G:H2'	1:A:1172:C:C5	2.40	0.55
3:B:13:C:H2'	3:B:14:A:C5'	2.35	0.55
3:D:70:G:H2'	3:D:71:G:H8	1.70	0.55
2:1:51:U:O2'	2:1:52:U:O5'	2.23	0.55
1:A:1213:A:N6	1:A:1215:G:C2	2.74	0.55
1:A:1452:C:H4'	1:A:1453:G:H5''	1.89	0.55
1:A:179:A:H3'	1:A:180:U:C6	2.41	0.55
1:A:266:G:N2	1:A:270:A:N6	2.53	0.55
1:A:308:C:H2'	1:A:309:G:O5'	2.07	0.55
1:A:38:G:O2'	1:A:39:G:H5''	2.07	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:558:G:O5'	1:A:559:A:H3'	2.06	0.55
1:A:591:U:OP1	10:K:30:ARG:CZ	2.54	0.55
1:A:706:A:H4'	13:N:29:ILE:HD13	1.88	0.55
1:A:713:G:H2'	1:A:714:G:N7	2.20	0.55
1:A:717:C:C2'	1:A:718:G:OP2	2.55	0.55
1:A:766:A:H2'	1:A:767:A:H8	1.70	0.55
1:A:858:G:O5'	1:A:858:G:H8	1.89	0.55
1:A:902:G:HO2'	1:A:903:G:H5'	1.68	0.55
1:A:917:G:O2'	1:A:918:A:C5'	2.54	0.55
1:A:939:G:N2	1:A:940:C:C2	2.75	0.55
1:A:975:A:C8	1:A:1365:G:N2	2.74	0.55
1:A:978:A:H8	1:A:980:C:N4	2.05	0.55
4:E:121:LEU:HD22	4:E:126:GLU:OE2	2.06	0.55
4:E:102:LEU:CB	4:E:180:LEU:CD1	2.84	0.55
4:E:208:ILE:CA	4:E:211:ILE:HB	2.35	0.55
4:E:221:LEU:HD13	4:E:222:ILE:N	2.21	0.55
4:E:70:PHE:HB3	4:E:163:PHE:HB3	1.87	0.55
6:G:107:ARG:HD2	6:G:174:LEU:HD11	1.89	0.55
6:G:13:ARG:HB3	6:G:40:PRO:HD3	1.89	0.55
7:H:101:ILE:N	7:H:101:ILE:HD13	2.22	0.55
7:H:37:ARG:NH1	7:H:112:LEU:N	2.55	0.55
8:I:95:GLU:C	20:U:32:ARG:HG3	2.26	0.55
1:A:1342:C:C1'	11:L:124:GLN:OE1	2.49	0.55
14:O:86:ARG:HH22	14:O:119:LYS:HG2	1.70	0.55
15:P:88:ARG:NH2	15:P:92:HIS:HD2	2.05	0.55
15:P:99:ARG:HG3	15:P:99:ARG:NH1	2.19	0.55
12:M:65:LEU:CB	16:Q:56:VAL:HG13	2.31	0.55
18:S:7:ALA:HB3	18:S:18:ARG:HB2	1.87	0.55
18:S:6:LEU:CD1	18:S:6:LEU:N	2.67	0.55
21:V:12:ASP:C	21:V:16:LEU:HD22	2.27	0.55
1:A:1113:C:C2	1:A:1114:C:C6	2.94	0.55
1:A:110:C:C2'	1:A:111:G:H5'	2.37	0.55
1:A:1158:C:C2'	1:A:1158:C:O2	2.54	0.55
1:A:266:G:N2	1:A:270:A:H62	2.05	0.55
1:A:327:A:C2	1:A:329:A:C4	2.95	0.55
1:A:32:A:H2'	1:A:33:A:C8	2.41	0.55
1:A:34:C:O2'	1:A:35:G:C5'	2.51	0.55
1:A:355:C:C2	1:A:356:A:N7	2.75	0.55
1:A:465:A:N7	1:A:467:G:N1	2.53	0.55
1:A:558:G:C3'	1:A:559:A:C5'	2.72	0.55
1:A:574:A:H8	1:A:574:A:O5'	1.89	0.55
1:A:594:G:N7	1:A:595:G:N3	2.55	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:781:A:O2'	1:A:782:A:OP1	2.24	0.55
3:B:34:G:C2	3:B:35:A:C1'	2.79	0.55
3:C:15:G:N2	3:C:48:C:H42	1.99	0.55
4:E:105:PHE:CD1	4:E:108:ILE:HB	2.42	0.55
4:E:115:LEU:HD13	4:E:145:LEU:HG	1.88	0.55
5:F:155:GLY:O	5:F:196:LEU:HB2	2.06	0.55
5:F:40:ARG:NH1	5:F:40:ARG:HG3	2.22	0.55
5:F:5:ILE:N	5:F:5:ILE:HD12	2.21	0.55
6:G:50:ARG:CG	6:G:51:PRO:HD2	2.23	0.55
6:G:79:PHE:O	6:G:80:GLU:C	2.45	0.55
7:H:43:LEU:HD23	7:H:44:GLY:CA	2.36	0.55
9:J:78:ARG:O	9:J:84:ASN:CA	2.29	0.55
3:D:32:U:H1'	9:J:86:GLN:NE2	2.21	0.55
1:A:643:C:H5'	10:K:31:PHE:CZ	2.42	0.55
10:K:44:PHE:O	10:K:64:LYS:CD	2.55	0.55
10:K:82:HIS:CD2	10:K:138:TRP:HE1	2.25	0.55
11:L:15:ALA:CB	11:L:77:ILE:N	2.70	0.55
1:A:1060:C:H4'	12:M:52:GLY:HA2	1.87	0.55
13:N:85:ARG:HD2	13:N:113:PRO:HD2	1.89	0.55
14:O:7:ILE:HB	14:O:8:ASN:HD22	1.70	0.55
15:P:59:TYR:CD2	15:P:60:VAL:N	2.75	0.55
12:M:49:VAL:CG1	16:Q:41:ARG:HD2	2.24	0.55
17:R:31:LEU:HD12	17:R:31:LEU:N	2.21	0.55
19:T:48:GLU:OE1	19:T:50:LYS:HB2	2.07	0.55
8:I:50:TYR:CE1	20:U:81:PHE:CE2	2.95	0.55
23:X:3:LYS:O	23:X:14:TRP:CE3	2.60	0.55
3:D:58:A:O2'	3:D:61:C:H5	1.89	0.55
1:A:1094:G:H2'	1:A:1108:G:H22	1.72	0.55
1:A:1127:G:H21	1:A:1147:C:N4	2.04	0.55
1:A:23:C:O2'	1:A:24:U:H5'	2.06	0.55
1:A:413:G:H2'	1:A:414:A:OP2	2.06	0.55
1:A:432:A:H3'	1:A:432:A:H8	1.71	0.55
1:A:593:G:C5	1:A:594:G:C8	2.94	0.55
1:A:646:U:C2	1:A:647:C:C5	2.95	0.55
1:A:675:A:H2'	1:A:676:A:H8	1.69	0.55
1:A:939:G:C2	1:A:940:C:N3	2.75	0.55
1:A:980:C:C4	1:A:981:U:N3	2.75	0.55
1:A:966:G:C2	3:C:34:G:H5'	2.40	0.55
4:E:17:PHE:C	4:E:42:ILE:HG22	2.27	0.55
4:E:82:ARG:H	4:E:94:ASN:ND2	2.04	0.55
5:F:142:MET:CE	5:F:143:GLU:HA	2.37	0.55
5:F:177:THR:O	5:F:178:LEU:C	2.45	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1112:C:O2	5:F:179:ARG:NE	2.40	0.55
6:G:170:VAL:HG11	6:G:174:LEU:HD12	1.88	0.55
6:G:39:PRO:O	6:G:44:GLY:CA	2.55	0.55
7:H:115:VAL:HG11	7:H:118:ILE:HD12	1.89	0.55
1:A:9:G:P	7:H:122:GLU:OE1	2.65	0.55
7:H:5:ASP:O	7:H:36:ASP:HA	2.07	0.55
7:H:76:ILE:HG23	7:H:77:PRO:HD2	1.89	0.55
8:I:7:ASN:C	8:I:8:ILE:CG1	2.74	0.55
9:J:17:VAL:O	9:J:17:VAL:CG1	2.54	0.55
9:J:68:ASN:ND2	9:J:127:ALA:O	2.39	0.55
10:K:123:GLU:OE1	10:K:124:ALA:N	2.39	0.55
10:K:138:TRP:OXT	10:K:138:TRP:CE3	2.60	0.55
10:K:17:THR:HB	10:K:18:ARG:NH2	2.21	0.55
1:A:942:G:N2	11:L:124:GLN:NE2	2.49	0.55
13:N:54:ARG:C	13:N:56:GLY:N	2.60	0.55
15:P:108:ARG:HD2	15:P:108:ARG:N	2.22	0.55
12:M:46:ARG:NH1	16:Q:59:ALA:HB1	2.22	0.55
17:R:11:VAL:O	17:R:12:ILE:C	2.45	0.55
19:T:31:LEU:C	19:T:32:TYR:CD2	2.80	0.55
19:T:92:ARG:O	19:T:95:TYR:N	2.36	0.55
1:A:720:C:H1'	20:U:50:ILE:HD12	1.88	0.55
20:U:58:LEU:C	20:U:62:GLU:HB2	2.27	0.55
20:U:76:LEU:H	20:U:76:LEU:CD2	2.14	0.55
1:A:983:A:O2'	1:A:1050:G:OP2	2.22	0.55
1:A:1054:C:C3'	1:A:1054:C:C6	2.89	0.55
1:A:1082:G:H2'	1:A:1083:U:H5'	1.88	0.55
1:A:1150:U:H5'	1:A:1280:A:N1	2.22	0.55
1:A:1288:A:O5'	1:A:1288:A:H8	1.89	0.55
1:A:1409:C:O2'	1:A:1410:G:H5'	2.06	0.55
1:A:20:U:C2'	1:A:21:G:O4'	2.55	0.55
1:A:265:G:C8	1:A:267:C:C5	2.94	0.55
1:A:429:U:O2'	1:A:430:A:H5''	2.07	0.55
1:A:657:G:C4'	17:R:28:GLN:HE22	2.20	0.55
1:A:801:U:C2	1:A:802:A:C8	2.95	0.55
4:E:15:VAL:CG2	4:E:209:ARG:NE	2.66	0.55
5:F:192:THR:HG22	5:F:192:THR:O	2.06	0.55
5:F:67:THR:CG2	5:F:104:GLN:CG	2.85	0.55
6:G:60:GLU:HA	6:G:63:LYS:CD	2.37	0.55
7:H:122:GLU:HB3	7:H:126:ARG:HG3	1.89	0.55
7:H:109:ILE:CD1	7:H:135:THR:HB	2.34	0.55
7:H:140:ARG:CZ	7:H:140:ARG:HB2	2.37	0.55
8:I:48:LEU:HB3	20:U:78:LEU:CD2	2.28	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:I:79:LEU:O	8:I:85:VAL:HG21	2.07	0.55
9:J:109:ASN:HA	9:J:119:ARG:HD3	1.88	0.55
10:K:10:LEU:O	10:K:14:ARG:NH1	2.30	0.55
10:K:114:THR:O	10:K:116:LYS:N	2.40	0.55
10:K:47:GLY:O	10:K:61:VAL:HA	2.06	0.55
11:L:11:LYS:O	11:L:12:GLU:HG2	2.07	0.55
11:L:27:THR:HG22	11:L:30:GLY:H	1.71	0.55
1:A:519:C:H5''	14:O:51:ALA:HB2	1.87	0.55
19:T:4:LYS:CD	19:T:5:VAL:N	2.63	0.55
21:V:52:TYR:HA	21:V:56:GLN:O	2.07	0.55
22:W:78:ALA:O	22:W:79:ARG:C	2.45	0.55
3:D:48:C:C4	3:D:59:U:O2	2.59	0.55
1:A:232:G:C4	1:A:233:C:C5	2.95	0.55
2:1:17:U:O2'	2:1:18:U:P	2.65	0.55
1:A:1054:C:OP1	1:A:1197:G:OP1	2.25	0.55
1:A:1160:G:N3	1:A:1160:G:C2'	2.67	0.55
1:A:1230:C:O2'	15:P:126:LYS:CE	2.54	0.55
1:A:1224:G:O6	1:A:1322:C:H1'	2.06	0.55
1:A:151:A:H62	1:A:152:A:H2	1.55	0.55
1:A:229:U:H2'	1:A:230:G:H8	1.72	0.55
1:A:272:C:C2'	1:A:273:A:H8	2.17	0.55
1:A:49:U:C5	1:A:361:G:C2	2.95	0.55
1:A:505:G:C8	1:A:535:A:H1'	2.42	0.55
1:A:619:U:O4	6:G:134:ASP:OD1	2.24	0.55
1:A:686:U:OP1	1:A:686:U:H4'	2.06	0.55
1:A:756:C:O2'	1:A:823:G:H1'	2.07	0.55
1:A:787:A:C2	1:A:788:U:O4'	2.60	0.55
1:A:855:G:O5'	1:A:871:U:O4	2.25	0.55
3:C:59:U:N3	3:C:60:U:C4	2.75	0.55
4:E:104:ASN:OD1	4:E:108:ILE:CG1	2.53	0.55
6:G:58:LEU:CD2	6:G:62:GLN:HG2	2.36	0.55
6:G:59:ARG:HH11	6:G:59:ARG:CA	2.13	0.55
7:H:109:ILE:HG12	7:H:110:LEU:HD23	1.87	0.55
7:H:78:HIS:CE1	7:H:142:LEU:HD22	2.42	0.55
7:H:81:GLU:H	7:H:81:GLU:CD	2.09	0.55
9:J:102:ARG:O	9:J:103:TRP:C	2.45	0.55
10:K:112:LEU:HA	10:K:134:ILE:H	1.72	0.55
10:K:95:VAL:CG1	10:K:133:LEU:HD11	2.37	0.55
10:K:63:LEU:HB2	10:K:65:TYR:CE1	2.42	0.55
12:M:44:VAL:HG22	12:M:66:ARG:CD	2.37	0.55
12:M:84:GLN:C	12:M:85:LEU:HD12	2.26	0.55
12:M:8:LEU:HD12	12:M:16:LEU:HA	1.89	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:M:19:SER:N	12:M:91:PRO:HG3	2.21	0.55
14:O:60:LEU:HD21	14:O:64:TYR:CD2	2.42	0.55
16:Q:42:ILE:O	16:Q:44:LEU:N	2.39	0.55
18:S:27:LYS:C	18:S:29:ASP:N	2.58	0.55
22:W:57:ARG:C	22:W:59:ALA:N	2.56	0.55
3:D:48:C:O2'	3:D:49:C:OP2	2.23	0.55
1:A:1123:A:H5''	12:M:36:GLY:HA3	1.89	0.55
1:A:103:C:H1'	1:A:151:A:H2	1.70	0.55
1:A:1193:G:C8	1:A:1193:G:H3'	2.42	0.55
1:A:1217:C:H2'	1:A:1218:C:H6	1.71	0.55
1:A:1345:U:C2	1:A:1377:A:C6	2.95	0.55
1:A:1514:C:C2	1:A:1515:C:C5	2.95	0.55
1:A:20:U:O4'	1:A:572:A:N1	2.40	0.55
1:A:263:A:C5'	22:W:75:ASN:HD21	2.19	0.55
1:A:294:U:O2	1:A:295:C:C5	2.61	0.55
1:A:494:U:O2'	1:A:495:A:H5'	2.07	0.55
1:A:528:C:H42	14:O:49:ASN:ND2	2.01	0.55
1:A:712:A:O2'	1:A:713:G:O4'	2.22	0.55
1:A:833:U:C2	1:A:834:C:C5	2.95	0.55
1:A:891:U:C5	1:A:906:G:C2	2.95	0.55
1:A:954:G:N2	1:A:1228:C:C4	2.75	0.55
3:C:36:A:C6	3:C:37:A:C5	2.94	0.55
3:C:5:G:O2'	3:C:6:G:O5'	2.24	0.55
4:E:152:PHE:O	4:E:154:LEU:N	2.38	0.55
5:F:69:HIS:HA	5:F:104:GLN:O	2.06	0.55
5:F:58:GLU:N	5:F:65:ALA:HB3	2.18	0.55
6:G:110:PHE:CZ	6:G:147:ALA:HB1	2.42	0.55
1:A:8:A:C4'	7:H:102:ALA:HA	2.36	0.55
7:H:70:PRO:O	7:H:76:ILE:HG12	2.06	0.55
9:J:106:GLN:NE2	9:J:106:GLN:CA	2.69	0.55
9:J:149:ARG:O	9:J:150:ALA:C	2.45	0.55
10:K:24:THR:H	10:K:60:ARG:HD3	1.72	0.55
11:L:11:LYS:H	11:L:104:ARG:HH21	1.51	0.55
11:L:11:LYS:HB2	11:L:108:VAL:HG12	1.88	0.55
11:L:15:ALA:CB	11:L:76:ALA:HB3	2.36	0.55
11:L:15:ALA:HB2	11:L:73:GLN:O	2.07	0.55
13:N:59:TYR:O	13:N:62:GLN:NE2	2.40	0.55
13:N:91:ARG:HD2	13:N:95:ILE:HD11	1.90	0.55
14:O:53:ARG:HB3	14:O:69:TYR:CE1	2.41	0.55
15:P:63:THR:O	15:P:63:THR:HG23	2.06	0.55
16:Q:23:ARG:NH1	16:Q:29:ARG:N	2.54	0.55
16:Q:42:ILE:HG13	16:Q:43:CYS:H	1.72	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:R:31:LEU:HA	17:R:34:LEU:HD21	1.88	0.55
17:R:44:LYS:O	17:R:46:HIS:N	2.40	0.55
20:U:75:ILE:HG22	20:U:76:LEU:N	2.21	0.55
1:A:186:C:O2'	22:W:85:MET:SD	2.56	0.55
3:D:60:U:C2'	3:D:61:C:OP1	2.55	0.55
10:K:54:ASP:C	10:K:56:LYS:H	2.09	0.55
1:A:1021:G:H2'	1:A:1022:G:H1'	1.89	0.55
1:A:1053:G:O6	1:A:1199:U:H2'	2.08	0.54
1:A:1395:C:C2'	1:A:1396:A:O5'	2.55	0.54
1:A:1450:U:H1'	1:A:1454:G:N2	2.22	0.54
1:A:17:U:H2'	1:A:18:C:C6	2.37	0.54
1:A:49:U:N1	1:A:364:A:N6	2.54	0.54
1:A:635:G:C6	1:A:636:U:C4	2.96	0.54
1:A:761:G:H5'	19:T:102:GLY:C	2.27	0.54
1:A:812:C:O2'	1:A:813:U:P	2.64	0.54
4:E:61:LEU:N	4:E:64:ARG:NH1	2.55	0.54
6:G:78:LEU:CD2	6:G:96:LEU:HD22	2.37	0.54
6:G:93:PHE:O	6:G:95:GLY:N	2.40	0.54
7:H:122:GLU:O	7:H:123:LEU:HD22	2.07	0.54
7:H:76:ILE:CD1	7:H:142:LEU:HB2	2.27	0.54
1:A:1081:G:OP1	7:H:17:ALA:O	2.25	0.54
9:J:123:GLU:OE1	9:J:134:ALA:HB2	2.06	0.54
10:K:32:LYS:HG3	10:K:59:LEU:HD12	1.89	0.54
10:K:61:VAL:CG1	10:K:62:TYR:H	2.19	0.54
10:K:72:PRO:O	10:K:73:ASP:HB2	2.06	0.54
11:L:45:ALA:HB3	11:L:74:ILE:HG21	1.88	0.54
12:M:40:LEU:HD12	12:M:69:ASN:CB	2.37	0.54
13:N:24:SER:OG	13:N:25:TYR:N	2.39	0.54
15:P:37:THR:HG23	15:P:56:LEU:HD22	1.89	0.54
15:P:81:LEU:HD22	15:P:82:MET:H	1.69	0.54
3:D:13:C:OP2	3:D:13:C:H6	1.89	0.54
3:B:62:C:O2'	3:B:63:G:H5'	2.06	0.54
3:C:44:G:C2	3:C:45:U:O2	2.60	0.54
1:A:350:G:N3	1:A:350:G:H2'	2.22	0.54
2:1:37:U:C3'	2:1:38:U:C6	2.91	0.54
1:A:1145:C:O2'	1:A:1146:A:H8	1.90	0.54
1:A:1239:A:H1'	1:A:1241:G:C5	2.42	0.54
1:A:1277:C:H2'	1:A:1278:U:O4'	2.06	0.54
1:A:1371:G:C5	1:A:1372:U:C5	2.96	0.54
1:A:1064:G:OP1	1:A:1386:G:H5'	2.07	0.54
1:A:1406:U:O2	1:A:1407:C:C6	2.60	0.54
1:A:27:G:N1	1:A:557:G:C4	2.75	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:313:A:H2'	1:A:314:C:H6	1.58	0.54
1:A:557:G:H2'	1:A:558:G:N9	2.22	0.54
1:A:580:U:H2'	1:A:581:G:O4'	2.07	0.54
1:A:619:U:H3	6:G:135:LEU:CD2	2.20	0.54
1:A:664:G:H22	1:A:741:G:H22	1.54	0.54
1:A:652:U:O4	1:A:752:G:H2'	2.07	0.54
1:A:22:G:C5'	1:A:885:G:O4'	2.53	0.54
1:A:968:A:H5''	1:A:969:A:C5'	2.37	0.54
3:C:58:A:H4'	3:C:59:U:OP1	2.07	0.54
3:C:9:A:H5''	3:C:10:G:OP2	2.06	0.54
4:E:131:PRO:O	4:E:134:GLU:HB2	2.07	0.54
4:E:58:ILE:CG2	4:E:221:LEU:HD12	2.38	0.54
4:E:82:ARG:HB2	4:E:94:ASN:HD21	1.73	0.54
5:F:72:LYS:O	5:F:76:VAL:HB	2.06	0.54
6:G:129:ASN:ND2	6:G:145:GLU:HG2	2.22	0.54
7:H:109:ILE:HG23	7:H:110:LEU:H	1.73	0.54
8:I:14:LEU:CD1	8:I:15:ASP:O	2.55	0.54
9:J:45:ASP:HB2	9:J:117:ALA:HB2	1.88	0.54
9:J:66:VAL:O	9:J:70:LYS:HG3	2.06	0.54
10:K:33:GLU:CA	10:K:36:LEU:HD21	2.34	0.54
10:K:24:THR:O	10:K:60:ARG:CA	2.54	0.54
1:A:1179:A:C4'	11:L:103:THR:OG1	2.49	0.54
11:L:118:LYS:HB2	11:L:121:ARG:HB2	1.87	0.54
11:L:70:LYS:CD	11:L:70:LYS:H	2.20	0.54
12:M:59:SER:O	12:M:60:ARG:O	2.25	0.54
13:N:18:ARG:CA	13:N:80:VAL:HG23	2.34	0.54
13:N:58:PRO:HB2	13:N:93:GLN:CG	2.37	0.54
13:N:99:GLN:O	13:N:105:VAL:HG21	2.07	0.54
14:O:102:ARG:HD3	14:O:110:VAL:HG13	1.87	0.54
15:P:36:LYS:HB3	15:P:59:TYR:CZ	2.42	0.54
15:P:59:TYR:CE2	15:P:60:VAL:CG2	2.90	0.54
16:Q:23:ARG:HH11	16:Q:29:ARG:N	2.05	0.54
16:Q:48:ALA:HA	16:Q:53:LEU:HD12	1.88	0.54
17:R:41:GLU:CD	17:R:41:GLU:C	2.65	0.54
18:S:19:ILE:CB	18:S:37:GLY:O	2.51	0.54
18:S:59:TRP:HE3	18:S:59:TRP:HA	1.70	0.54
19:T:31:LEU:O	19:T:32:TYR:CD2	2.52	0.54
20:U:37:VAL:CG1	20:U:41:LYS:NZ	2.70	0.54
1:A:232:G:C6	1:A:233:C:N4	2.75	0.54
3:B:72:C:N4	3:B:73:A:N6	2.55	0.54
1:A:1165:C:C5	1:A:1166:G:C8	2.95	0.54
1:A:69:G:C2	1:A:101:A:C2	2.96	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1066:C:H5	1:A:1067:A:H62	1.55	0.54
1:A:1145:C:O2'	1:A:1146:A:C8	2.61	0.54
1:A:1267:C:C2'	1:A:1267:C:O2	2.55	0.54
1:A:1342:C:O2'	11:L:124:GLN:CB	2.52	0.54
1:A:1415:G:C6	1:A:1416:G:N7	2.76	0.54
1:A:1446:A:HO2'	1:A:1447:G:P	2.29	0.54
1:A:1524:C:H2'	1:A:1525:G:O4'	2.06	0.54
1:A:258:G:H2'	1:A:259:G:H8	1.71	0.54
1:A:265:G:C2'	1:A:267:C:H5	2.10	0.54
1:A:596:C:H2'	1:A:596:C:O2	2.07	0.54
1:A:595:G:N7	1:A:641:U:C2	2.75	0.54
1:A:738:C:N4	1:A:739:C:H41	2.05	0.54
1:A:741:G:O2'	1:A:742:G:H5'	2.08	0.54
1:A:763:G:H2'	1:A:764:C:O5'	2.07	0.54
1:A:789:U:C3'	1:A:789:U:C6	2.90	0.54
1:A:832:C:C2	1:A:833:U:C5	2.95	0.54
1:A:859:A:C2'	1:A:860:A:O5'	2.55	0.54
1:A:858:G:N2	1:A:870:U:P	2.80	0.54
1:A:913:A:O2'	1:A:914:A:P	2.66	0.54
1:A:956:U:O2'	1:A:957:U:C5'	2.55	0.54
1:A:959:A:C3'	1:A:960:U:C5'	2.83	0.54
4:E:32:ILE:HD12	4:E:190:THR:HG22	1.90	0.54
4:E:53:ARG:NH1	4:E:200:ILE:HD12	2.21	0.54
4:E:14:GLY:CA	4:E:209:ARG:HH21	2.13	0.54
4:E:69:LEU:HD22	4:E:92:TYR:N	2.22	0.54
5:F:150:LYS:NZ	5:F:152:ILE:CG2	2.69	0.54
5:F:157:ILE:HG13	5:F:164:ARG:HB3	1.89	0.54
5:F:72:LYS:O	5:F:76:VAL:CG2	2.56	0.54
6:G:122:ARG:HA	6:G:134:ASP:O	2.07	0.54
6:G:200:GLU:O	6:G:201:GLN:C	2.45	0.54
9:J:69:VAL:CG1	9:J:104:LEU:HD21	2.36	0.54
3:D:32:U:H1'	9:J:86:GLN:OE1	2.06	0.54
10:K:87:SER:CB	10:K:93:VAL:N	2.70	0.54
11:L:37:PHE:HD1	11:L:43:ALA:HA	1.72	0.54
11:L:9:ARG:CD	11:L:14:VAL:HG13	2.38	0.54
12:M:75:ILE:HG22	12:M:76:ASN:ND2	2.22	0.54
16:Q:26:ARG:HE	16:Q:43:CYS:C	2.11	0.54
17:R:36:ILE:HD11	17:R:60:VAL:CB	2.38	0.54
17:R:36:ILE:CD1	17:R:60:VAL:HG22	2.36	0.54
19:T:38:ARG:HG3	19:T:39:SER:H	1.73	0.54
19:T:84:LEU:O	19:T:87:LYS:HB2	2.06	0.54
8:I:97:PHE:HE2	20:U:62:GLU:OE2	1.91	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:N:84:VAL:CG2	20:U:88:LYS:HD3	2.33	0.54
21:V:45:VAL:CA	21:V:67:VAL:HG21	2.36	0.54
22:W:86:ARG:HG2	22:W:87:LYS:H	1.72	0.54
18:S:67:THR:HB	18:S:70:ALA:CB	2.36	0.54
1:A:1037:C:C4	1:A:1038:C:N4	2.76	0.54
1:A:1057:G:C4'	5:F:197:GLY:H	2.16	0.54
1:A:1104:G:C4	1:A:1105:A:C8	2.96	0.54
1:A:1134:G:C6	1:A:1135:U:C1'	2.90	0.54
1:A:1438:G:C5	1:A:1439:C:C5	2.95	0.54
1:A:152:A:H3'	1:A:152:A:H8	1.72	0.54
1:A:498:A:O2'	1:A:500:G:C8	2.60	0.54
1:A:598:U:C4'	10:K:94:TYR:CD2	2.86	0.54
1:A:622:A:H2'	1:A:623:C:C5'	2.37	0.54
1:A:647:C:O2'	1:A:648:A:H5'	2.08	0.54
1:A:691:G:N2	13:N:51:LYS:NZ	2.55	0.54
1:A:778:G:C2'	1:A:779:C:H5'	2.37	0.54
1:A:791:G:H2'	1:A:792:A:O4'	2.06	0.54
1:A:833:U:HO2'	1:A:834:C:H6	1.55	0.54
1:A:848:C:C4	1:A:849:C:C5	2.95	0.54
3:C:47:U:H3'	3:C:47:U:H6	1.71	0.54
1:A:1104:G:O2'	4:E:111:ARG:NH2	2.38	0.54
4:E:152:PHE:CD1	4:E:152:PHE:C	2.81	0.54
4:E:8:LYS:O	4:E:9:GLU:HB2	2.06	0.54
5:F:110:ASN:ND2	5:F:140:ARG:O	2.40	0.54
5:F:35:GLU:O	5:F:39:ILE:HG13	2.07	0.54
6:G:152:SER:HA	6:G:155:LEU:CD2	2.37	0.54
6:G:152:SER:HA	6:G:155:LEU:HD21	1.88	0.54
6:G:24:GLU:CD	6:G:24:GLU:C	2.66	0.54
6:G:52:SER:O	6:G:53:ASP:C	2.45	0.54
7:H:100:VAL:C	7:H:101:ILE:HD13	2.27	0.54
7:H:79:GLU:O	7:H:80:ILE:HG23	2.07	0.54
8:I:80:ARG:O	8:I:81:ILE:C	2.45	0.54
10:K:112:LEU:HD11	10:K:114:THR:HG22	1.89	0.54
10:K:10:LEU:CA	10:K:13:ILE:HD12	2.37	0.54
7:H:152:ARG:HH21	10:K:44:PHE:N	2.06	0.54
10:K:88:LYS:HZ3	10:K:88:LYS:CB	2.20	0.54
11:L:28:VAL:O	11:L:29:ASN:C	2.44	0.54
13:N:66:LEU:O	13:N:70:LYS:HD2	2.08	0.54
14:O:53:ARG:NH2	14:O:92:ASP:OD2	2.41	0.54
15:P:34:LEU:HD23	15:P:39:ILE:CD1	2.37	0.54
16:Q:27:CYS:N	16:Q:43:CYS:HB3	2.23	0.54
16:Q:41:ARG:HA	16:Q:44:LEU:HD23	1.90	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:R:69:TYR:OH	17:R:73:GLU:HG3	2.08	0.54
18:S:4:ILE:HG12	18:S:66:PRO:HA	1.88	0.54
19:T:29:HIS:HE1	19:T:31:LEU:HB3	1.72	0.54
1:A:192:U:H4'	22:W:103:GLY:N	2.23	0.54
22:W:43:LEU:CD1	22:W:51:GLU:HB2	2.37	0.54
22:W:83:ARG:HA	22:W:86:ARG:CD	2.38	0.54
3:D:39:U:H2'	3:D:40:C:O4'	2.06	0.54
1:A:1058:G:O5'	1:A:1058:G:H8	1.91	0.54
1:A:153:C:C2	1:A:154:C:C5	2.96	0.54
1:A:265:G:C4	1:A:267:C:C6	2.96	0.54
1:A:9:G:C2	1:A:26:A:C2	2.96	0.54
1:A:307:C:H2'	1:A:307:C:O2	2.06	0.54
1:A:362:G:H2'	1:A:364:A:OP2	2.07	0.54
1:A:397:A:C2	1:A:548:G:C6	2.96	0.54
1:A:407:G:H5''	6:G:115:ARG:HD2	1.90	0.54
1:A:446:G:H2'	1:A:447:G:C8	2.42	0.54
1:A:519:C:C4	1:A:520:A:N3	2.76	0.54
1:A:553:A:C2	1:A:554:C:C2	2.96	0.54
1:A:563:A:C5	1:A:567:G:H1'	2.42	0.54
1:A:628:G:H2'	1:A:629:G:O4'	2.08	0.54
1:A:714:G:HO2'	1:A:777:A:N6	2.06	0.54
1:A:861:G:H2'	1:A:862:C:C6	2.43	0.54
3:C:46:G:OP2	3:C:46:G:C8	2.61	0.54
5:F:18:TRP:CZ2	16:Q:57:ARG:HB2	2.43	0.54
5:F:193:TYR:HD2	5:F:193:TYR:N	2.05	0.54
6:G:105:VAL:CG2	6:G:121:VAL:HG22	2.29	0.54
6:G:172:PRO:CG	6:G:193:ASP:HB3	2.37	0.54
6:G:200:GLU:CG	6:G:201:GLN:N	2.68	0.54
1:A:427:U:OP1	6:G:41:GLY:N	2.36	0.54
6:G:6:GLY:O	6:G:8:VAL:HG22	2.07	0.54
7:H:106:PRO:CG	7:H:122:GLU:OE2	2.56	0.54
7:H:45:PHE:CD1	7:H:45:PHE:O	2.61	0.54
8:I:77:ARG:HA	8:I:80:ARG:HE	1.71	0.54
10:K:41:ARG:HB3	10:K:41:ARG:CZ	2.38	0.54
10:K:4:ASP:O	10:K:5:PRO:C	2.45	0.54
10:K:69:ARG:HH11	10:K:69:ARG:HG3	1.72	0.54
14:O:100:ILE:H	14:O:100:ILE:HD13	1.71	0.54
14:O:48:PRO:CG	14:O:49:ASN:N	2.70	0.54
14:O:50:SER:O	14:O:51:ALA:CB	2.55	0.54
14:O:60:LEU:HD13	14:O:64:TYR:O	2.06	0.54
15:P:60:VAL:HG22	15:P:64:TRP:HE3	1.72	0.54
15:P:69:GLU:O	15:P:71:ARG:N	2.41	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:Q:23:ARG:C	16:Q:33:VAL:HG11	2.28	0.54
20:U:45:SER:HB3	20:U:51:LEU:CD1	2.31	0.54
20:U:62:GLU:O	20:U:63:GLN:C	2.45	0.54
21:V:19:VAL:HG22	21:V:43:GLU:CD	2.27	0.54
22:W:22:ARG:O	22:W:26:ASN:OD1	2.26	0.54
22:W:83:ARG:HA	22:W:86:ARG:HD3	1.90	0.54
22:W:87:LYS:O	22:W:91:LEU:HG	2.08	0.54
1:A:1009:G:H2'	1:A:1010:G:H8	1.73	0.54
1:A:806:C:O2'	1:A:807:A:H5'	2.07	0.54
2:1:36:U:O2	9:J:82:GLY:HA2	2.08	0.54
1:A:1057:G:C5	1:A:1204:A:C2	2.96	0.54
1:A:1099:G:C5	1:A:1100:C:C5	2.95	0.54
1:A:1151:A:H1'	12:M:39:PRO:HB2	1.90	0.54
1:A:1201:A:C2'	1:A:1202:G:OP2	2.55	0.54
1:A:129(A):G:C8	1:A:129(A):G:C3'	2.89	0.54
1:A:1350:A:P	11:L:118:LYS:HG3	2.48	0.54
1:A:1363:A:H5''	1:A:1364:U:C5	2.43	0.54
1:A:1512:U:C2	1:A:1513:A:N7	2.76	0.54
1:A:1513:A:N1	1:A:1523:G:C6	2.76	0.54
1:A:46:G:N2	1:A:366:C:H1'	2.22	0.54
1:A:859:A:N7	1:A:860:A:C4	2.76	0.54
1:A:862:C:C2	1:A:863:U:H5	2.24	0.54
1:A:965:A:O2'	1:A:966:G:O5'	2.24	0.54
3:C:10:G:C6	3:C:11:C:C4	2.95	0.54
4:E:100:GLY:O	4:E:104:ASN:ND2	2.41	0.54
4:E:46:LYS:HA	4:E:46:LYS:CE	2.34	0.54
4:E:64:ARG:H	4:E:64:ARG:CD	2.20	0.54
5:F:123:GLN:HB3	5:F:128:PHE:CE2	2.41	0.54
5:F:135:LYS:NZ	7:H:52:PRO:HG2	2.23	0.54
1:A:1057:G:OP1	5:F:155:GLY:CA	2.56	0.54
5:F:30:ARG:H	5:F:30:ARG:HD3	1.71	0.54
6:G:101:LEU:O	6:G:104:VAL:CG2	2.40	0.54
6:G:30:LYS:HG2	6:G:35:ARG:CG	2.38	0.54
6:G:13:ARG:NH1	6:G:38:TYR:CE1	2.75	0.54
7:H:136:MET:CA	7:H:139:LEU:HD12	2.38	0.54
8:I:36:ARG:CZ	8:I:36:ARG:CB	2.85	0.54
9:J:87:VAL:HB	9:J:156:TRP:CH2	2.42	0.54
10:K:112:LEU:CB	10:K:133:LEU:HA	2.37	0.54
10:K:110:ALA:O	10:K:120:THR:HA	2.08	0.54
13:N:115:PRO:O	13:N:116:HIS:ND1	2.40	0.54
1:A:970:C:O2	15:P:126:LYS:HD2	2.07	0.54
15:P:91:ARG:HH12	15:P:103:THR:CG2	2.19	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:R:27:VAL:O	17:R:28:GLN:C	2.45	0.54
18:S:6:LEU:CD2	18:S:17:TYR:CD2	2.85	0.54
21:V:36:ARG:NH2	21:V:51:VAL:HG12	2.23	0.54
21:V:58:VAL:HG21	21:V:75:ALA:HB1	1.89	0.54
1:A:1036:G:N7	1:A:1037:C:C5	2.76	0.54
1:A:1055:A:N1	1:A:1056:U:H1'	2.23	0.54
1:A:1215:G:C2	1:A:1216:G:N7	2.76	0.54
1:A:1283:G:H2'	1:A:1284:C:H5'	1.90	0.54
1:A:1316:G:H5''	16:Q:17:LYS:HZ2	1.73	0.54
1:A:1342:C:H2'	1:A:1343:G:H8	1.72	0.54
1:A:133:U:H4'	1:A:134:A:OP1	2.08	0.54
1:A:1361:G:H3'	1:A:1361:G:C8	2.43	0.54
1:A:1365:G:C6	1:A:1366:C:C4	2.95	0.54
1:A:278:G:C1'	1:A:282:A:H1'	2.38	0.54
1:A:290:C:C2'	1:A:291:C:H5'	2.38	0.54
1:A:493:G:H2'	1:A:494:U:C5	2.41	0.54
1:A:522:C:H1'	1:A:536:C:C5'	2.37	0.54
1:A:540:G:O6	1:A:541:G:C6	2.60	0.54
1:A:541:G:H2'	1:A:542:G:H8	1.72	0.54
1:A:920:U:H2'	1:A:921:U:H6	1.72	0.54
1:A:946:A:H2'	1:A:947:G:H8	1.63	0.54
1:A:968:A:H2'	1:A:968:A:N3	2.22	0.54
1:A:974:A:OP2	16:Q:31:ARG:CG	2.49	0.54
1:A:979:C:OP2	1:A:980:C:C5	2.61	0.54
4:E:47:THR:HG1	4:E:202:PRO:HG2	1.72	0.54
5:F:110:ASN:HD21	5:F:140:ARG:CG	2.19	0.54
5:F:29:TYR:CD1	16:Q:36:PHE:CZ	2.95	0.54
6:G:99:SER:O	6:G:140:VAL:HG23	2.08	0.54
8:I:52:ILE:CG2	8:I:53:ALA:N	2.71	0.54
8:I:12:PRO:CB	8:I:57:GLN:HE21	2.20	0.54
8:I:80:ARG:CB	8:I:88:VAL:HG21	2.38	0.54
9:J:86:GLN:HB2	9:J:148:ASN:CG	2.28	0.54
10:K:111:ILE:HG23	10:K:119:LEU:O	2.07	0.54
10:K:6:ILE:HD12	10:K:7:ALA:N	2.23	0.54
10:K:7:ALA:O	10:K:8:ASP:C	2.46	0.54
11:L:67:GLY:C	11:L:73:GLN:HE21	2.11	0.54
11:L:70:LYS:HD2	11:L:70:LYS:N	2.22	0.54
13:N:99:GLN:HA	13:N:105:VAL:CG1	2.37	0.54
14:O:48:PRO:HG2	14:O:49:ASN:N	2.21	0.54
1:A:520:A:OP1	14:O:52:LEU:HD21	2.07	0.54
1:A:1227:A:P	15:P:111:LYS:HE3	2.48	0.54
15:P:27:LYS:HD2	15:P:31:LYS:HZ2	1.68	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:T:16:GLN:O	19:T:17:LYS:CB	2.55	0.54
10:K:91:ARG:CG	19:T:34:LYS:HB2	2.27	0.54
1:A:280:C:H1'	19:T:38:ARG:CZ	2.38	0.54
19:T:51:TYR:CD2	19:T:57:VAL:HG11	2.43	0.54
19:T:44:ALA:CA	19:T:71:PHE:O	2.55	0.54
8:I:100:ASN:OD1	20:U:26:LEU:O	2.25	0.54
1:A:735:C:H5'	20:U:71:LYS:CD	2.38	0.54
23:X:14:TRP:HZ3	23:X:15:ARG:NE	2.02	0.54
1:A:1068:G:H2'	1:A:1069:C:C6	2.41	0.54
1:A:110:C:H2'	1:A:111:G:C5'	2.37	0.54
1:A:1263:C:C2'	1:A:1264:C:H6	2.16	0.54
1:A:1277:C:O2'	1:A:1279:A:C8	2.60	0.54
1:A:1345:U:N3	1:A:1377:A:C6	2.75	0.54
1:A:1392:G:H2'	1:A:1393:U:H6	1.73	0.54
1:A:1446:A:O2'	1:A:1447:G:OP1	2.25	0.54
1:A:1465:C:N4	1:A:1466:C:C4	2.75	0.54
1:A:281:G:HO2'	1:A:282:A:P	2.31	0.54
1:A:321:A:H2'	1:A:322:C:C6	2.43	0.54
1:A:389:A:C4	1:A:390:C:O4'	2.61	0.54
1:A:450:G:H5''	1:A:451:A:H3'	1.90	0.54
1:A:451:A:OP1	1:A:481:G:N2	2.40	0.54
1:A:486:U:N3	1:A:487:A:C8	2.76	0.54
1:A:27:G:C2	1:A:557:G:N3	2.75	0.54
1:A:738:C:N4	1:A:739:C:N4	2.56	0.54
1:A:769:G:C5'	1:A:1513:A:H4'	2.37	0.54
1:A:789:U:H2'	1:A:790:A:H3'	1.90	0.54
4:E:212:GLN:O	4:E:213:LEU:C	2.43	0.54
4:E:221:LEU:O	4:E:221:LEU:HD22	2.07	0.54
6:G:38:TYR:CE1	6:G:45:GLN:NE2	2.70	0.54
6:G:8:VAL:C	6:G:10:ARG:N	2.59	0.54
7:H:35:GLY:HA3	7:H:41:VAL:HG12	1.89	0.54
7:H:80:ILE:HA	7:H:81:GLU:OE2	2.07	0.54
9:J:107:ALA:CB	9:J:123:GLU:OE1	2.56	0.54
9:J:5:ARG:NH1	9:J:5:ARG:O	2.41	0.54
9:J:75:VAL:HA	9:J:89:MET:CE	2.37	0.54
1:A:600:C:H5'	10:K:129:VAL:CA	2.38	0.54
10:K:70:GLN:HE21	10:K:70:GLN:HA	1.72	0.54
11:L:93:ARG:HH22	11:L:97:LYS:HE2	1.73	0.54
14:O:7:ILE:HG22	14:O:8:ASN:N	2.23	0.54
15:P:20:THR:HG23	15:P:25:ILE:O	2.07	0.54
1:A:1316:G:C4'	16:Q:17:LYS:HD2	2.36	0.54
17:R:29:VAL:HG12	17:R:85:LEU:HD21	1.89	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:R:79:ARG:HB3	17:R:79:ARG:HH11	1.73	0.54
18:S:20:VAL:HG12	18:S:21:VAL:N	2.21	0.54
18:S:61:SER:OG	18:S:62:VAL:N	2.39	0.54
1:A:474:G:H5'	18:S:81:ARG:CD	2.36	0.54
20:U:44:LEU:O	20:U:45:SER:OG	2.21	0.54
3:D:26:A:H2'	3:D:26:A:N3	2.23	0.54
3:B:48:C:N3	3:B:59:U:C6	2.75	0.54
14:O:18:VAL:O	14:O:19:ARG:CB	2.55	0.54
3:B:47:U:N3	3:B:49:C:H4'	2.23	0.54
1:A:1056:U:H2'	1:A:1056:U:O2	2.07	0.54
1:A:1126:U:H2'	1:A:1127:G:O4'	2.08	0.54
1:A:1411:C:N3	1:A:1412:C:C5	2.75	0.54
1:A:145:G:N1	1:A:178:C:C4	2.76	0.54
1:A:198:G:H2'	1:A:199:G:O5'	2.08	0.54
1:A:199:G:H2'	1:A:200:G:H8	1.73	0.54
1:A:475:G:C2'	1:A:476:G:C8	2.79	0.54
1:A:696:A:C6	1:A:697:U:H1'	2.43	0.54
1:A:752:G:OP2	1:A:752:G:H8	1.90	0.54
1:A:950:U:H1'	1:A:971:G:N3	2.23	0.54
3:B:37:A:C2'	3:B:38:A:H5'	2.38	0.54
3:C:19:G:C2	3:C:57:G:N3	2.76	0.54
3:C:59:U:C2'	3:C:59:U:O2	2.54	0.54
4:E:173:ALA:O	4:E:174:VAL:C	2.46	0.54
6:G:31:CYS:O	6:G:33:MET:CG	2.53	0.54
7:H:104:ALA:N	7:H:107:ARG:HH12	2.06	0.54
8:I:19:LEU:HG	8:I:23:LYS:HD3	1.89	0.54
8:I:64:GLN:C	8:I:65:VAL:HG12	2.27	0.54
8:I:76:ALA:C	8:I:79:LEU:HG	2.28	0.54
1:A:876:G:O2'	10:K:11:THR:CG2	2.56	0.54
10:K:65:TYR:HA	10:K:79:VAL:HG23	1.88	0.54
1:A:1347:G:H2'	11:L:107:ARG:O	2.07	0.54
1:A:1059:C:O2'	12:M:53:PRO:CD	2.56	0.54
13:N:101:SER:OG	13:N:103:LEU:HG	2.08	0.54
1:A:363:A:C4	14:O:31:PRO:HG2	2.42	0.54
14:O:34:ARG:HA	14:O:84:LEU:HB2	1.89	0.54
14:O:62:SER:OG	14:O:64:TYR:CG	2.57	0.54
15:P:95:GLY:C	15:P:110:ARG:HD2	2.28	0.54
15:P:13:LYS:O	15:P:17:VAL:HB	2.08	0.54
1:A:755:G:OP2	17:R:65:ARG:CD	2.56	0.54
18:S:27:LYS:N	18:S:27:LYS:NZ	2.55	0.54
19:T:66:SER:OG	19:T:67:LYS:N	2.36	0.54
19:T:81:ARG:HG3	19:T:84:LEU:CG	2.38	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:U:62:GLU:O	20:U:66:LEU:CG	2.42	0.54
20:U:75:ILE:HG22	20:U:76:LEU:HD13	1.89	0.54
20:U:81:PHE:O	20:U:82:THR:HG22	2.07	0.54
21:V:27:GLU:HG2	21:V:29:ARG:N	2.11	0.54
1:A:799:G:N2	1:A:800:G:H1'	2.23	0.54
1:A:1085:U:H5''	1:A:1086:U:C5	2.43	0.54
1:A:1339:A:H8	1:A:1339:A:O5'	1.91	0.54
1:A:1373:G:H4'	9:J:34:GLY:O	2.08	0.54
1:A:1405:G:C4	1:A:1406:U:C5	2.96	0.54
1:A:1431:C:N3	1:A:1469:G:N1	2.55	0.54
1:A:927:G:C5'	1:A:1503:A:H62	2.20	0.54
1:A:167:G:H2'	1:A:168:G:C8	2.43	0.54
1:A:50:A:O2'	1:A:52:G:C5	2.61	0.54
1:A:51:A:C2'	1:A:52:G:OP2	2.56	0.54
1:A:703:G:O5'	1:A:703:G:C8	2.61	0.54
1:A:864:A:C6	1:A:865:A:N1	2.76	0.54
1:A:950:U:C2'	1:A:951:G:H5'	2.38	0.54
1:A:965:A:C8	1:A:969:A:N3	2.76	0.54
3:C:21:A:C2'	3:C:22:G:O5'	2.55	0.54
3:C:70:G:C4	3:C:71:G:C8	2.95	0.54
4:E:175:ARG:HA	4:E:178:ARG:CB	2.38	0.54
4:E:187:LEU:HB2	4:E:201:ILE:CG2	2.38	0.54
4:E:58:ILE:HG22	4:E:221:LEU:CD1	2.38	0.54
4:E:80:ILE:HD13	4:E:212:GLN:HE21	1.73	0.54
1:A:1205:U:C4'	5:F:195:VAL:HG13	2.26	0.54
5:F:40:ARG:HH11	5:F:40:ARG:HG3	1.72	0.54
1:A:620:C:C1'	6:G:135:LEU:HD13	2.38	0.54
6:G:133:VAL:CG1	6:G:138:TYR:HD1	2.07	0.54
6:G:150:GLU:C	6:G:152:SER:H	2.12	0.54
6:G:30:LYS:H	6:G:34:GLU:HB3	1.71	0.54
7:H:76:ILE:CG2	7:H:78:HIS:CD2	2.91	0.54
8:I:13:ASN:N	8:I:13:ASN:ND2	2.56	0.54
9:J:21:VAL:HG23	9:J:22:LEU:CD2	2.38	0.54
9:J:38:LEU:HA	9:J:41:ARG:CB	2.37	0.54
10:K:67:PRO:CD	10:K:76:PRO:HB3	2.38	0.54
11:L:69:GLY:C	11:L:73:GLN:OE1	2.46	0.54
12:M:10:GLY:CA	12:M:16:LEU:HD21	2.38	0.54
13:N:126:ARG:C	13:N:128:ALA:N	2.62	0.54
14:O:27:LEU:HD22	14:O:62:SER:OG	2.07	0.54
17:R:81:LEU:O	17:R:82:ILE:C	2.47	0.54
20:U:41:LYS:O	20:U:43:PHE:N	2.36	0.54
21:V:22:LEU:HA	21:V:25:LYS:NZ	2.23	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:48:C:H6	3:D:48:C:OP1	1.91	0.54
1:A:1172:C:H2'	1:A:1173:G:O4'	2.08	0.54
3:D:40:C:C3'	3:D:41:C:C5'	2.83	0.54
3:D:27:G:H2'	3:D:28:G:H8	1.73	0.54
3:B:21:A:C2	3:B:48:C:H1'	2.43	0.54
6:G:159:ARG:HG2	6:G:159:ARG:HH11	1.73	0.54
1:A:1026:G:N7	1:A:1027:C:C6	2.76	0.53
1:A:1048:G:N2	1:A:1210:C:H1'	2.22	0.53
1:A:1064:G:N2	1:A:1192:C:N3	2.56	0.53
1:A:1068:G:OP2	1:A:1094:G:H5'	2.07	0.53
1:A:1178:G:H21	1:A:1180:A:H3'	1.74	0.53
1:A:1185:G:C2'	1:A:1186:G:H5'	2.38	0.53
1:A:120:A:C8	1:A:122:G:C6	2.96	0.53
1:A:1319:A:H4'	21:V:70:LYS:HZ2	1.71	0.53
1:A:1321:C:H4'	15:P:87:TYR:HH	1.71	0.53
1:A:1346:A:C2	9:J:10:ARG:CD	2.87	0.53
1:A:1353:G:C4	1:A:1370:G:N2	2.76	0.53
1:A:1353:G:N3	1:A:1370:G:N2	2.55	0.53
1:A:1462:G:H2'	1:A:1463:C:H6	1.73	0.53
1:A:1399:C:N3	1:A:1502:A:N6	2.56	0.53
1:A:306:G:C2'	1:A:307:C:H5'	2.37	0.53
1:A:582:U:O5'	1:A:582:U:H6	1.90	0.53
1:A:607:A:C4	1:A:608:A:C8	2.96	0.53
1:A:689:C:C5	1:A:690:G:N7	2.76	0.53
1:A:728:A:H8	17:R:54:ARG:NH2	2.06	0.53
1:A:735:C:H6	1:A:735:C:O5'	1.90	0.53
1:A:756:C:H4'	1:A:823:G:O2'	2.08	0.53
1:A:88:C:H2'	1:A:89:U:OP2	2.07	0.53
1:A:961:U:C6	1:A:983:A:C6	2.95	0.53
1:A:974:A:H5'	1:A:975:A:P	2.48	0.53
1:A:981:U:C6	1:A:981:U:C3'	2.91	0.53
1:A:993:G:HO2'	1:A:994:A:P	2.32	0.53
3:D:32:U:H2'	3:D:33:U:H5'	1.90	0.53
4:E:80:ILE:HD13	4:E:211:ILE:HG21	1.90	0.53
4:E:52:GLU:OE1	4:E:53:ARG:N	2.41	0.53
5:F:43:LEU:HD11	5:F:55:VAL:HG11	1.89	0.53
6:G:123:HIS:HB2	6:G:125:HIS:HE1	1.71	0.53
6:G:118:ARG:HH21	6:G:136:PRO:HB2	1.70	0.53
6:G:146:ILE:CD1	6:G:146:ILE:O	2.56	0.53
1:A:509:A:OP1	6:G:52:SER:HB3	2.08	0.53
7:H:34:VAL:HG21	7:H:62:ALA:HB1	1.89	0.53
7:H:44:GLY:HA3	7:H:61:TYR:HB2	1.90	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:J:15:ASP:HB2	9:J:23:VAL:HB	1.90	0.53
9:J:45:ASP:O	9:J:49:ILE:HD12	2.07	0.53
10:K:109:ILE:CG1	10:K:109:ILE:O	2.57	0.53
10:K:82:HIS:NE2	10:K:84:ARG:CG	2.70	0.53
10:K:8:ASP:C	10:K:8:ASP:OD2	2.46	0.53
12:M:60:ARG:NH1	12:M:60:ARG:HB2	2.23	0.53
13:N:110:ASP:HB2	20:U:88:LYS:CD	2.38	0.53
13:N:71:LYS:O	13:N:74:ALA:N	2.41	0.53
1:A:362:G:O5'	14:O:34:ARG:NH2	2.41	0.53
14:O:41:ARG:CG	14:O:42:THR:H	2.21	0.53
16:Q:27:CYS:SG	16:Q:42:ILE:CD1	2.96	0.53
17:R:69:TYR:HA	17:R:72:ARG:HB3	1.90	0.53
18:S:56:ALA:C	18:S:60:LEU:HD12	2.29	0.53
18:S:76:GLN:O	18:S:77:ALA:C	2.46	0.53
19:T:6:LEU:CD1	19:T:6:LEU:C	2.76	0.53
19:T:75:ARG:HH22	19:T:77:VAL:CG2	2.13	0.53
21:V:51:VAL:HG21	21:V:60:VAL:HG21	1.91	0.53
22:W:57:ARG:HH21	22:W:100:ILE:HD12	1.73	0.53
22:W:72:LEU:CD2	22:W:76:ALA:CB	2.86	0.53
3:D:47:U:H3	3:D:49:C:H5''	1.72	0.53
1:A:1133:G:C6	1:A:1134:G:N7	2.77	0.53
1:A:1256:A:N6	1:A:1278:U:O2'	2.41	0.53
1:A:1363:A:H5''	1:A:1364:U:P	2.47	0.53
1:A:939:G:H4'	1:A:1375:A:O2'	2.08	0.53
1:A:229:U:C2	1:A:230:G:C8	2.96	0.53
1:A:393:A:OP2	18:S:12:LYS:HE3	2.08	0.53
1:A:568:G:N2	1:A:883:C:H1'	2.22	0.53
1:A:673:G:H2'	1:A:674:G:N7	2.23	0.53
1:A:819:A:C5'	1:A:820:U:OP2	2.54	0.53
3:C:7:A:HO2'	3:C:8:U:P	2.30	0.53
4:E:144:ARG:HD3	4:E:148:TYR:OH	2.09	0.53
4:E:149:LEU:HD23	4:E:153:ARG:HG2	1.89	0.53
4:E:217:ARG:NH1	4:E:217:ARG:HG3	2.22	0.53
4:E:234:PRO:HB2	4:E:238:LEU:HD22	1.89	0.53
4:E:55:PHE:O	4:E:58:ILE:HB	2.07	0.53
5:F:164:ARG:CG	5:F:165:THR:N	2.71	0.53
5:F:66:VAL:HG12	5:F:66:VAL:O	2.08	0.53
6:G:132:ARG:CG	6:G:132:ARG:NH1	2.63	0.53
6:G:63:LYS:CA	6:G:66:ARG:HD2	2.37	0.53
8:I:12:PRO:HG2	8:I:13:ASN:H	1.74	0.53
9:J:127:ALA:O	9:J:128:ALA:C	2.46	0.53
9:J:37:ASN:OD1	9:J:38:LEU:N	2.24	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:932:C:OP1	9:J:3:ARG:O	2.27	0.53
9:J:78:ARG:HE	9:J:80:VAL:CG2	2.21	0.53
7:H:80:ILE:HG22	10:K:104:ARG:NH2	2.24	0.53
13:N:11:LYS:HB3	13:N:13:GLN:CD	2.28	0.53
17:R:32:LEU:HD12	17:R:59:MET:HG2	1.89	0.53
18:S:27:LYS:O	18:S:30:GLY:N	2.36	0.53
1:A:586:C:OP1	19:T:34:LYS:HE3	2.08	0.53
19:T:88:TYR:HA	19:T:91:ARG:NH2	2.23	0.53
1:A:735:C:C4'	20:U:75:ILE:HD11	2.38	0.53
20:U:87:ARG:O	20:U:88:LYS:OXT	2.26	0.53
3:D:28:G:N3	3:D:29:G:C8	2.76	0.53
1:A:491:G:N2	1:A:492:G:H1'	2.23	0.53
1:A:1003:G:OP2	1:A:1004:A:N3	2.41	0.53
1:A:1094:G:C3'	1:A:1108:G:H22	2.20	0.53
1:A:1138:G:H3'	1:A:1138:G:N3	2.23	0.53
1:A:1227:A:N9	15:P:117:VAL:HG21	2.23	0.53
1:A:1300:G:O2'	1:A:1301:U:P	2.66	0.53
1:A:1438:G:C6	1:A:1439:C:C5	2.96	0.53
1:A:1449:C:H2'	1:A:1450:U:O5'	2.08	0.53
1:A:1479:C:H2'	1:A:1480:G:H8	1.73	0.53
1:A:1517:G:H2'	1:A:1517:G:N3	2.23	0.53
1:A:377:G:C2	1:A:378:G:N7	2.76	0.53
1:A:425:G:N2	1:A:426:G:C1'	2.70	0.53
1:A:426:G:O3'	6:G:41:GLY:O	2.26	0.53
1:A:568:G:C4	1:A:569:C:C5	2.97	0.53
1:A:646:U:H2'	1:A:647:C:H6	1.73	0.53
1:A:669:U:O4'	17:R:46:HIS:HE1	1.91	0.53
1:A:687:A:C4	1:A:704:A:N6	2.77	0.53
1:A:728:A:N1	1:A:729:A:C4	2.76	0.53
1:A:818:G:C2'	1:A:819:A:OP1	2.56	0.53
1:A:822:C:C2	1:A:823:G:C8	2.96	0.53
1:A:931:C:H2'	1:A:932:C:H5	1.72	0.53
3:C:21:A:N1	3:C:48:C:N3	2.55	0.53
1:A:1103:C:HO2'	4:E:111:ARG:HD2	1.71	0.53
5:F:142:MET:HB3	5:F:149:ALA:HB2	1.90	0.53
5:F:142:MET:SD	5:F:146:ALA:HB3	2.48	0.53
6:G:107:ARG:CD	6:G:174:LEU:HD11	2.37	0.53
7:H:105:VAL:HG21	7:H:132:ALA:HB2	1.89	0.53
7:H:122:GLU:CB	7:H:126:ARG:HG3	2.39	0.53
7:H:76:ILE:HD12	7:H:142:LEU:HD12	1.89	0.53
7:H:23:GLY:HA3	7:H:25:ARG:HH12	1.71	0.53
7:H:59:GLY:O	7:H:62:ALA:CB	2.56	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:I:20:ALA:O	8:I:24:GLU:HG3	2.08	0.53
8:I:77:ARG:N	8:I:80:ARG:CZ	2.71	0.53
8:I:79:LEU:C	8:I:81:ILE:N	2.60	0.53
9:J:88:PRO:HG2	9:J:152:ALA:CB	2.37	0.53
10:K:100:ILE:HB	10:K:125:ARG:HH21	1.71	0.53
10:K:82:HIS:C	10:K:137:VAL:HG13	2.28	0.53
11:L:70:LYS:H	11:L:70:LYS:HD2	1.72	0.53
1:A:1202:G:N7	12:M:53:PRO:HB2	2.22	0.53
13:N:73:MET:CG	13:N:103:LEU:HD13	2.37	0.53
13:N:128:ALA:O	13:N:129:SER:C	2.47	0.53
15:P:92:HIS:CD2	15:P:98:VAL:HG11	2.43	0.53
17:R:31:LEU:N	17:R:31:LEU:CD1	2.71	0.53
19:T:35:VAL:HA	19:T:36:ILE:HD13	1.90	0.53
20:U:74:ARG:CG	20:U:74:ARG:HH11	2.17	0.53
22:W:23:ARG:O	22:W:24:LEU:C	2.47	0.53
1:A:1286:A:OP1	23:X:25:LYS:HG3	2.08	0.53
3:D:21:A:N6	3:D:48:C:C5	2.76	0.53
3:D:9:A:N3	3:D:46:G:C1'	2.72	0.53
1:A:998(A):C:O2	1:A:998(A):C:H2'	2.08	0.53
1:A:1068:G:C6	1:A:1108:G:N3	2.77	0.53
1:A:1124:G:OP1	12:M:35:SER:O	2.26	0.53
1:A:1159:U:O4	1:A:1182:G:N3	2.41	0.53
1:A:119:A:O2'	1:A:120:A:OP2	2.13	0.53
1:A:251:G:C2	1:A:266:G:O6	2.61	0.53
1:A:258:G:C6	1:A:259:G:C6	2.97	0.53
1:A:328:C:O2	1:A:328:C:H3'	2.08	0.53
1:A:328:C:H4'	1:A:329:A:O5'	2.09	0.53
1:A:433:C:C4	1:A:434:U:O4	2.62	0.53
1:A:519:C:H5'	14:O:51:ALA:HB2	1.90	0.53
1:A:601:C:C2	1:A:638:G:C2	2.96	0.53
1:A:601:C:H2'	1:A:602:A:O4'	2.07	0.53
1:A:660:G:H2'	1:A:661:G:H8	1.72	0.53
1:A:667:G:H5''	17:R:51:HIS:CE1	2.43	0.53
1:A:67:C:C4'	1:A:172:A:H1'	2.39	0.53
1:A:739:C:O2'	1:A:740:U:H5'	2.09	0.53
1:A:832:C:C2	1:A:855:G:N1	2.77	0.53
1:A:868:C:H3'	1:A:869:G:H8	1.73	0.53
1:A:758:G:H4'	1:A:880:C:H4'	1.90	0.53
3:C:57:G:H2'	3:C:58:A:H5''	1.91	0.53
4:E:124:SER:HB3	4:E:126:GLU:CD	2.28	0.53
4:E:12:GLU:OE1	4:E:209:ARG:NH2	2.40	0.53
4:E:132:LYS:N	4:E:132:LYS:HZ3	2.07	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:219:VAL:HA	4:E:222:ILE:HD11	1.90	0.53
5:F:112:SER:OG	5:F:115:LEU:HD12	2.08	0.53
5:F:193:TYR:N	5:F:193:TYR:CD2	2.75	0.53
6:G:107:ARG:HH11	6:G:107:ARG:CA	2.07	0.53
6:G:129:ASN:ND2	6:G:144:ASP:OD1	2.41	0.53
7:H:69:VAL:O	7:H:70:PRO:C	2.47	0.53
7:H:78:HIS:HB3	10:K:104:ARG:HB3	1.90	0.53
9:J:108:ALA:HA	9:J:111:ARG:HG3	1.90	0.53
1:A:876:G:H1'	10:K:11:THR:HG21	1.90	0.53
1:A:539:A:OP1	14:O:114:LYS:CE	2.56	0.53
14:O:32:PHE:HB2	14:O:84:LEU:CD1	2.36	0.53
16:Q:39:LEU:HB2	16:Q:44:LEU:HD13	1.89	0.53
17:R:64:ARG:HG2	17:R:65:ARG:N	2.22	0.53
17:R:17:ARG:NH1	17:R:77:ARG:CD	2.70	0.53
19:T:3:LYS:HD3	19:T:60:ILE:HD11	1.90	0.53
19:T:66:SER:HB3	19:T:69:LYS:NZ	2.23	0.53
20:U:58:LEU:O	20:U:59:SER:O	2.27	0.53
3:B:50:U:H2'	3:B:51:U:H6	1.73	0.53
2:1:35:U:C6	2:1:35:U:H3'	2.43	0.53
2:1:37:U:C6	2:1:37:U:O5'	2.61	0.53
1:A:1041:A:C2	1:A:1042:G:C8	2.96	0.53
1:A:1055:A:N7	1:A:1206:G:C2	2.76	0.53
1:A:105:G:H2'	1:A:106:C:H6	1.69	0.53
1:A:1068:G:N1	1:A:1108:G:H1'	2.24	0.53
1:A:1157:A:H5''	1:A:1158:C:OP1	2.09	0.53
1:A:1297:C:HO2'	1:A:1298:C:H6	1.56	0.53
1:A:1321:C:N3	21:V:37:ARG:NH2	2.56	0.53
1:A:1422:G:C2	1:A:1423:G:C5	2.97	0.53
1:A:1508:G:H2'	1:A:1509:C:C6	2.43	0.53
1:A:235:C:OP1	19:T:70:ARG:HG3	2.07	0.53
1:A:130:A:C6	1:A:264:U:H1'	2.43	0.53
1:A:292:G:C2	1:A:309:G:C2	2.97	0.53
1:A:46:G:C2	1:A:396:G:C6	2.96	0.53
1:A:399:G:C4	1:A:400:C:C5	2.96	0.53
1:A:587:G:C2	1:A:755:G:C6	2.96	0.53
1:A:780:A:OP1	13:N:122:LYS:HA	2.08	0.53
1:A:81:G:C6	1:A:82:U:O4	2.62	0.53
1:A:875:C:O2'	1:A:876:G:O5'	2.18	0.53
1:A:585:G:O2'	1:A:879:C:H5''	2.08	0.53
1:A:992:U:H4'	1:A:993:G:C5'	2.39	0.53
4:E:82:ARG:HA	4:E:92:TYR:OH	2.08	0.53
5:F:126:ARG:O	5:F:127:ARG:CB	2.56	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:151:VAL:HG13	5:F:200:ALA:HB2	1.90	0.53
5:F:11:ARG:HH12	5:F:180:ALA:N	2.05	0.53
5:F:182:ILE:HG22	5:F:183:ASP:N	2.23	0.53
6:G:106:TYR:CD2	6:G:114:ARG:N	2.77	0.53
6:G:128:VAL:HG21	6:G:133:VAL:CG2	2.38	0.53
6:G:179:GLU:O	6:G:181:MET:N	2.33	0.53
7:H:150:ARG:HD3	7:H:150:ARG:C	2.29	0.53
7:H:50:GLU:HB2	7:H:53:LEU:CD2	2.38	0.53
7:H:78:HIS:CD2	7:H:78:HIS:N	2.72	0.53
8:I:47:ARG:O	20:U:78:LEU:HD22	2.08	0.53
10:K:7:ALA:O	10:K:10:LEU:N	2.41	0.53
10:K:69:ARG:NH2	10:K:75:ARG:O	2.41	0.53
11:L:31:GLN:N	11:L:31:GLN:OE1	2.41	0.53
11:L:23:ASN:O	11:L:59:PHE:N	2.41	0.53
13:N:48:ILE:HD12	13:N:63:LEU:CD2	2.22	0.53
15:P:16:ASP:C	15:P:19:LEU:HG	2.28	0.53
1:A:994:A:N3	16:Q:5:ALA:HA	2.22	0.53
17:R:70:LEU:HD21	17:R:81:LEU:HD13	1.90	0.53
1:A:450:G:H5'	18:S:43:LYS:HZ2	1.74	0.53
19:T:4:LYS:O	19:T:5:VAL:CG2	2.57	0.53
19:T:60:ILE:HD11	19:T:62:SER:HA	1.89	0.53
1:A:277:C:OP1	19:T:68:ARG:NH1	2.41	0.53
20:U:75:ILE:O	20:U:76:LEU:C	2.45	0.53
21:V:79:THR:O	21:V:79:THR:HG22	2.08	0.53
22:W:72:LEU:HD13	22:W:77:ALA:CA	2.38	0.53
23:X:21:TYR:O	23:X:22:ARG:HB2	2.08	0.53
2:1:23:A:H2'	2:1:24:A:C8	2.44	0.53
1:A:1164:G:H1'	1:A:1173:G:N2	2.23	0.53
1:A:490:G:H2'	1:A:491:G:H8	1.72	0.53
2:1:25:G:C2	2:1:26:G:H1'	2.44	0.53
1:A:1109:C:OP1	5:F:176:HIS:NE2	2.42	0.53
1:A:1138:G:N1	1:A:1140:C:C5	2.77	0.53
1:A:1161:C:H6	1:A:1161:C:OP2	1.92	0.53
1:A:1308:U:O5'	15:P:99:ARG:NH1	2.41	0.53
1:A:1443:G:O2'	1:A:1447:G:P	2.66	0.53
1:A:1443:G:O2'	1:A:1446:A:O3'	2.27	0.53
1:A:193:C:H2'	1:A:194:C:H6	1.73	0.53
1:A:290:C:C6	1:A:290:C:O5'	2.55	0.53
1:A:515:G:H3'	1:A:516:U:H6	1.73	0.53
1:A:594:G:H2'	1:A:595:G:C1'	2.38	0.53
1:A:597:G:C5	1:A:644:G:C2	2.96	0.53
1:A:658:G:O2'	1:A:659:U:H5'	2.09	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:716:A:C2'	1:A:717:C:H5'	2.39	0.53
1:A:821:G:O2'	1:A:822:C:C5'	2.55	0.53
1:A:828:A:C8	1:A:829:G:C8	2.97	0.53
1:A:969:A:H5'	1:A:970:C:OP2	2.08	0.53
3:C:21:A:N7	3:C:46:G:C6	2.76	0.53
4:E:107:THR:HA	4:E:110:GLN:OE1	2.09	0.53
4:E:175:ARG:HD2	4:E:179:LYS:CE	2.38	0.53
4:E:193:ASP:O	4:E:194:PRO:C	2.46	0.53
4:E:72:GLY:O	4:E:73:THR:C	2.47	0.53
4:E:99:GLY:HA3	4:E:101:MET:SD	2.48	0.53
5:F:87:LEU:HD12	5:F:101:LEU:HD11	1.91	0.53
5:F:17:ASP:OD2	5:F:18:TRP:HZ3	1.90	0.53
5:F:24:ALA:CB	5:F:32:LEU:HD12	2.38	0.53
6:G:118:ARG:NH2	6:G:118:ARG:HG3	2.21	0.53
6:G:187:ARG:HD2	6:G:188:LEU:H	1.73	0.53
6:G:18:LYS:HE2	6:G:20:TYR:CD2	2.44	0.53
6:G:200:GLU:CG	6:G:201:GLN:H	2.22	0.53
6:G:6:GLY:O	6:G:8:VAL:CG2	2.56	0.53
6:G:98:GLU:CD	6:G:107:ARG:HG3	2.28	0.53
7:H:141:GLN:OE1	7:H:141:GLN:CA	2.55	0.53
8:I:76:ALA:HB1	8:I:80:ARG:CZ	2.39	0.53
9:J:76:ARG:HD3	9:J:156:TRP:CD1	2.43	0.53
11:L:19:LEU:HD22	11:L:59:PHE:CD2	2.40	0.53
11:L:58:HIS:HD2	11:L:59:PHE:CD1	2.25	0.53
12:M:23:ILE:O	12:M:27:ALA:HB3	2.08	0.53
12:M:24:VAL:CA	12:M:34:VAL:HG21	2.35	0.53
12:M:6:ILE:HG21	12:M:98:ILE:HG13	1.90	0.53
13:N:50:TYR:CZ	13:N:54:ARG:HB3	2.44	0.53
1:A:33:A:N3	14:O:32:PHE:HZ	2.06	0.53
1:A:659:U:OP1	17:R:9:GLN:CD	2.46	0.53
18:S:26:ARG:HD2	18:S:31:LYS:H	1.73	0.53
20:U:29:PHE:CE1	20:U:36:ASN:OD1	2.62	0.53
20:U:72:ARG:HA	20:U:75:ILE:CD1	2.20	0.53
22:W:79:ARG:HG3	22:W:79:ARG:HH11	1.73	0.53
3:D:73:A:C2	3:D:74:C:O4'	2.61	0.53
1:A:1004:A:H3'	1:A:1025:U:C2	2.42	0.53
1:A:1073:U:H2'	1:A:1074:G:C8	2.32	0.53
1:A:1101:A:O2'	1:A:1102:A:P	2.67	0.53
1:A:1191:A:P	5:F:4:LYS:NZ	2.81	0.53
1:A:1239:A:H5''	1:A:1240:U:OP1	2.09	0.53
1:A:1284:C:H2'	1:A:1285:A:C8	2.44	0.53
1:A:1284:C:N3	1:A:1285:A:N6	2.56	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1292:U:OP2	1:A:1292:U:H6	1.92	0.53
1:A:1440:C:C6	1:A:1440:C:OP2	2.62	0.53
1:A:1451:A:N3	1:A:1451:A:H2'	2.22	0.53
1:A:1454:G:H2'	1:A:1455:G:C8	2.30	0.53
1:A:190:G:H4'	1:A:191(A):G:OP2	2.08	0.53
1:A:196:A:H1'	1:A:222:U:C1'	2.38	0.53
1:A:295:C:H2'	1:A:296:U:O5'	2.09	0.53
1:A:352:C:H6	1:A:352:C:OP1	1.92	0.53
1:A:465:A:C8	1:A:467:G:C6	2.96	0.53
1:A:530:G:C6	3:B:35:A:O2'	2.53	0.53
1:A:637:G:O2'	1:A:638:G:H5'	2.09	0.53
1:A:740:U:H2'	1:A:741:G:C8	2.42	0.53
1:A:979:C:H2'	1:A:980:C:C5'	2.38	0.53
4:E:54:THR:HG23	4:E:199:TYR:HB3	1.89	0.53
4:E:80:ILE:HG12	4:E:212:GLN:HG2	1.91	0.53
4:E:79:ASP:O	4:E:83:MET:HG2	2.08	0.53
5:F:125:GLU:O	5:F:127:ARG:HG3	2.09	0.53
5:F:24:ALA:CB	5:F:28:GLN:HE22	2.20	0.53
5:F:49:SER:C	5:F:51:GLY:H	2.11	0.53
6:G:161:ASN:O	6:G:165:MET:HB3	2.08	0.53
6:G:143:GLY:CA	6:G:185:PHE:HB3	2.33	0.53
6:G:78:LEU:HD13	6:G:96:LEU:CB	2.38	0.53
1:A:737:A:H5'	8:I:90:VAL:HG13	1.90	0.53
10:K:19:VAL:O	10:K:20:TYR:HB2	2.09	0.53
12:M:39:PRO:O	12:M:40:LEU:CB	2.56	0.53
13:N:101:SER:HG	13:N:103:LEU:HG	1.73	0.53
14:O:41:ARG:CG	14:O:42:THR:N	2.61	0.53
15:P:81:LEU:HB2	15:P:86:CYS:SG	2.49	0.53
19:T:27:PHE:O	19:T:36:ILE:CD1	2.57	0.53
19:T:10:VAL:HB	19:T:54:GLY:C	2.29	0.53
20:U:46:GLU:N	20:U:49:LYS:NZ	2.56	0.53
20:U:47:THR:H	20:U:49:LYS:NZ	2.00	0.53
1:A:736:C:OP1	20:U:72:ARG:NH2	2.42	0.53
22:W:40:ALA:O	22:W:41:ILE:C	2.47	0.53
22:W:91:LEU:HD23	22:W:91:LEU:H	1.74	0.53
1:A:131:C:C4	1:A:232:G:C2	2.97	0.53
1:A:1072:G:C6	1:A:1104:G:C6	2.96	0.53
1:A:1302:U:O2'	1:A:1303:C:P	2.67	0.53
1:A:1307:U:H2'	1:A:1308:U:O4'	2.09	0.53
1:A:1251:A:C2	1:A:1354:C:H1'	2.43	0.53
1:A:1418:A:C2'	1:A:1419:G:H5'	2.38	0.53
1:A:1468:A:H2'	1:A:1469:G:H5'	1.89	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:363:A:N1	1:A:364:A:N3	2.57	0.53
1:A:424:G:O2'	1:A:425:G:H5'	2.09	0.53
1:A:521:G:C2	1:A:522:C:C2	2.96	0.53
1:A:577:G:OP1	1:A:577:G:H8	1.91	0.53
1:A:593:G:C6	1:A:594:G:C5	2.97	0.53
1:A:67:C:H2'	1:A:68:G:C8	2.44	0.53
1:A:791:G:C8	1:A:792:A:N7	2.76	0.53
1:A:855:G:O2'	1:A:856:C:H5'	2.08	0.53
3:C:34:G:H2'	3:C:35:A:H8	1.73	0.53
3:C:5:G:H2'	3:C:6:G:C8	2.44	0.53
4:E:196:LEU:CD1	4:E:196:LEU:C	2.77	0.53
6:G:124:GLY:O	6:G:125:HIS:C	2.47	0.53
6:G:128:VAL:O	6:G:130:GLY:N	2.42	0.53
9:J:10:ARG:HH11	9:J:10:ARG:HB2	1.74	0.53
9:J:12:LEU:HD22	9:J:24:THR:CG2	2.38	0.53
10:K:48:TYR:CD1	10:K:49:GLU:N	2.77	0.53
11:L:23:ASN:ND2	11:L:24:GLY:N	2.57	0.53
12:M:30:SER:HB3	12:M:80:LYS:CG	2.37	0.53
12:M:61:GLU:CG	12:M:62:HIS:H	2.19	0.53
13:N:40:ILE:N	13:N:40:ILE:CD1	2.61	0.53
13:N:58:PRO:HB2	13:N:93:GLN:HG3	1.91	0.53
13:N:43:SER:HB3	13:N:64:ALA:HB1	1.91	0.53
14:O:21:LYS:O	14:O:22:SER:O	2.27	0.53
14:O:32:PHE:HB3	14:O:85:ILE:O	2.09	0.53
14:O:36:VAL:HG23	14:O:81:SER:O	2.08	0.53
1:A:952:U:HO2'	15:P:126:LYS:C	2.12	0.53
17:R:54:ARG:HD3	17:R:55:GLY:N	2.24	0.53
17:R:36:ILE:HG13	17:R:59:MET:SD	2.49	0.53
17:R:79:ARG:HA	17:R:82:ILE:CG1	2.38	0.53
1:A:136:C:O4'	18:S:1:MET:HE1	2.09	0.53
19:T:59:ILE:O	19:T:59:ILE:HG23	2.08	0.53
19:T:7:THR:HG23	19:T:8:GLY:H	1.74	0.53
20:U:26:LEU:CD2	20:U:29:PHE:HB2	2.39	0.53
20:U:39:VAL:O	20:U:43:PHE:CE1	2.62	0.53
23:X:3:LYS:HD2	23:X:14:TRP:HB2	1.90	0.53
1:A:112:G:N2	1:A:113:G:N9	2.57	0.53
1:A:1184:G:C2	1:A:1185:G:C5	2.97	0.53
1:A:1053:G:N7	1:A:1200:C:OP2	2.42	0.53
1:A:1222:G:C2	1:A:1223:C:N3	2.76	0.53
1:A:1386:G:O2'	1:A:1387:G:H5'	2.09	0.53
1:A:1442:G:C6	1:A:1446:A:C6	2.97	0.53
1:A:1453:G:H2'	1:A:1454:G:C5'	2.39	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1405:G:O4'	1:A:1519:A:C4'	2.56	0.53
1:A:151:A:N6	1:A:152:A:H2	2.06	0.53
1:A:166:G:C2	1:A:167:G:C8	2.97	0.53
1:A:300:A:C2'	1:A:301:G:H5'	2.38	0.53
1:A:335:C:H1'	1:A:1434:A:H1'	1.91	0.53
1:A:557:G:C3'	1:A:558:G:C8	2.88	0.53
1:A:566:G:C4'	1:A:567:G:OP1	2.57	0.53
1:A:745:C:H2'	1:A:746:A:C8	2.44	0.53
1:A:875:C:C2'	1:A:876:G:O5'	2.56	0.53
1:A:900:A:N7	1:A:901:A:N7	2.56	0.53
3:C:12:U:H6	3:C:12:U:O5'	1.92	0.53
2:1:40:U:C4	3:C:37:A:N1	2.77	0.53
3:C:5:G:H2'	3:C:6:G:H8	1.74	0.53
4:E:169:LYS:C	4:E:171:ALA:N	2.62	0.53
4:E:70:PHE:CA	4:E:163:PHE:O	2.57	0.53
4:E:80:ILE:HB	4:E:208:ILE:HD11	1.89	0.53
5:F:136:GLN:HA	5:F:139:GLN:HB2	1.91	0.53
5:F:46:GLU:HB3	5:F:47:LEU:CD2	2.38	0.53
6:G:173:TRP:CD1	6:G:189:PRO:CB	2.91	0.53
2:1:52:U:OP2	6:G:50:ARG:HG3	2.09	0.53
6:G:94:LEU:HA	6:G:97:LEU:HD11	1.89	0.53
7:H:149:GLU:O	7:H:152:ARG:N	2.42	0.53
8:I:79:LEU:HB2	8:I:88:VAL:CG1	2.39	0.53
9:J:56:GLN:NE2	9:J:56:GLN:H	2.07	0.53
9:J:77:SER:C	9:J:156:TRP:HZ2	2.13	0.53
10:K:103:VAL:HG11	10:K:109:ILE:N	2.24	0.53
19:T:40:LYS:HB3	19:T:42:TYR:HE1	1.73	0.53
19:T:10:VAL:CG2	19:T:55:ASP:O	2.49	0.53
19:T:69:LYS:CB	19:T:69:LYS:HZ2	2.22	0.53
19:T:8:GLY:C	19:T:56:VAL:HG13	2.29	0.53
8:I:98:LEU:HD21	20:U:28:GLU:HA	1.90	0.53
21:V:11:VAL:HG12	21:V:16:LEU:HD11	1.91	0.53
1:A:1320:C:H5	21:V:37:ARG:CZ	2.21	0.53
21:V:47:HIS:H	21:V:62:ILE:HG22	1.73	0.53
22:W:54:LYS:O	22:W:57:ARG:CB	2.56	0.53
3:B:8:U:H3'	3:B:13:C:H41	1.74	0.53
3:B:62:C:O5'	3:B:62:C:H6	1.92	0.53
1:A:1150:U:H2'	1:A:1151:A:C8	2.44	0.53
1:A:1151:A:OP1	12:M:41:PRO:CA	2.55	0.53
1:A:1189:C:OP1	5:F:5:ILE:HG21	2.09	0.53
1:A:1201:A:HO2'	1:A:1202:G:H5''	1.73	0.53
1:A:1223:C:O5'	1:A:1224:G:H5''	2.08	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1430:C:C2	1:A:1471:G:N2	2.77	0.53
1:A:241:C:C2'	1:A:242:C:O5'	2.57	0.53
1:A:269:C:H2'	1:A:270:A:C8	2.43	0.53
1:A:281:G:O2'	1:A:282:A:H8	1.92	0.53
1:A:382:A:C2'	1:A:383:A:O5'	2.57	0.53
1:A:574:A:O3'	1:A:575:G:H4'	2.06	0.53
1:A:68:G:H5'	1:A:171:A:O2'	2.08	0.53
1:A:739:C:H2'	1:A:740:U:C5'	2.40	0.53
1:A:754:C:O2	1:A:755:G:H5'	2.08	0.53
1:A:765:G:O5'	1:A:765:G:H8	1.92	0.53
1:A:867:G:N2	1:A:868:C:C2	2.77	0.53
1:A:955:U:N3	1:A:956:U:C5	2.77	0.53
1:A:980:C:H3'	1:A:981:U:C5	2.44	0.53
3:C:75:C:C2'	3:C:76:A:O3'	2.56	0.53
4:E:103:THR:O	4:E:104:ASN:CB	2.57	0.53
5:F:140:ARG:CZ	5:F:140:ARG:HB3	2.38	0.53
5:F:179:ARG:HG2	5:F:179:ARG:O	2.08	0.53
6:G:126:ILE:HG21	6:G:133:VAL:O	2.08	0.53
6:G:128:VAL:HA	6:G:146:ILE:CG2	2.39	0.53
7:H:9:LYS:HD2	7:H:111:GLU:OE1	2.09	0.53
7:H:90:VAL:O	7:H:120:THR:OG1	2.16	0.53
7:H:95:ALA:O	7:H:96:PRO:O	2.28	0.53
10:K:18:ARG:H	10:K:18:ARG:CD	2.21	0.53
10:K:62:TYR:O	10:K:63:LEU:O	2.26	0.53
11:L:15:ALA:HB3	11:L:76:ALA:HB3	1.88	0.53
11:L:7:THR:O	11:L:83:ARG:CZ	2.56	0.53
12:M:23:ILE:CD1	12:M:85:LEU:HB3	2.39	0.53
12:M:31:GLY:HA2	12:M:81:THR:OG1	2.08	0.53
13:N:59:TYR:O	13:N:60:ALA:C	2.47	0.53
14:O:12:ARG:HH11	14:O:12:ARG:HB3	1.73	0.53
14:O:28:LYS:CE	14:O:33:ARG:HH22	2.22	0.53
17:R:35:ARG:CZ	17:R:35:ARG:HB3	2.37	0.53
18:S:81:ARG:HG2	18:S:83:GLU:HG2	1.90	0.53
19:T:5:VAL:HA	19:T:59:ILE:O	2.09	0.53
20:U:36:ASN:C	20:U:40:LEU:HG	2.26	0.53
20:U:68:LYS:O	20:U:72:ARG:HG3	2.08	0.53
21:V:42:PRO:O	21:V:44:MET:N	2.42	0.53
21:V:64:GLU:HG2	21:V:65:ASN:N	2.23	0.53
23:X:6:ARG:HG3	23:X:7:ARG:N	2.24	0.53
14:O:126:LYS:CA	14:O:126:LYS:HE3	2.39	0.53
2:1:33:U:H2'	2:1:34:U:C5	2.44	0.52
1:A:1002:G:N2	1:A:1039:C:N4	2.58	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1026:G:H2'	1:A:1027:C:C5'	2.38	0.52
1:A:1039:C:C4	1:A:1040:U:C5	2.96	0.52
1:A:1073:U:O2'	1:A:1074:G:C5'	2.57	0.52
1:A:112:G:C2'	1:A:113:G:H5'	2.39	0.52
1:A:1188:A:C8	1:A:1188:A:OP2	2.62	0.52
1:A:1202:G:N7	12:M:53:PRO:CB	2.72	0.52
1:A:1237:C:O4'	1:A:1334:G:N2	2.42	0.52
1:A:250:A:N3	1:A:252:U:C2	2.77	0.52
1:A:267:C:OP2	19:T:67:LYS:NZ	2.34	0.52
1:A:57:G:N2	1:A:388:G:N7	2.58	0.52
1:A:559:A:C8	1:A:561:U:C5	2.96	0.52
1:A:562:C:H2'	14:O:15:ARG:HB3	1.91	0.52
1:A:583:A:H2'	1:A:584:G:C8	2.44	0.52
1:A:585:G:H2'	1:A:586:C:H6	1.74	0.52
1:A:720:C:H5''	20:U:52:PRO:HB3	1.92	0.52
1:A:817:C:O2	1:A:817:C:H2'	2.09	0.52
1:A:86:U:OP2	1:A:87:A:N1	2.42	0.52
1:A:886:G:H2'	1:A:887:G:C5'	2.39	0.52
1:A:922:G:H2'	1:A:923:A:O4'	2.09	0.52
4:E:173:ALA:HA	4:E:176:GLU:CG	2.39	0.52
4:E:102:LEU:O	4:E:180:LEU:HD13	2.09	0.52
4:E:50:GLU:CG	4:E:200:ILE:O	2.42	0.52
4:E:234:PRO:CA	4:E:238:LEU:HD13	2.38	0.52
4:E:82:ARG:CB	4:E:94:ASN:HD21	2.22	0.52
5:F:12:LEU:CD1	5:F:18:TRP:CH2	2.92	0.52
5:F:132:ARG:HB3	5:F:136:GLN:HE22	1.73	0.52
5:F:134:ILE:N	5:F:134:ILE:HD12	2.22	0.52
5:F:36:ASP:OD2	5:F:57:ILE:HD12	2.08	0.52
6:G:10:ARG:NH1	6:G:11:LEU:HD23	2.23	0.52
1:A:407:G:H1'	6:G:119:GLN:OE1	2.08	0.52
6:G:180:GLY:O	6:G:181:MET:C	2.47	0.52
7:H:110:LEU:HD22	7:H:139:LEU:HD21	1.91	0.52
7:H:115:VAL:CG2	7:H:118:ILE:HD12	2.36	0.52
7:H:151:LEU:HD11	10:K:77:GLU:HB2	1.91	0.52
7:H:80:ILE:HD12	7:H:80:ILE:N	2.24	0.52
8:I:45:LEU:HD23	8:I:59:TYR:CA	2.39	0.52
4:E:181:PHE:HE1	10:K:72:PRO:HD2	1.73	0.52
11:L:17:VAL:HA	11:L:63:ILE:HG23	1.89	0.52
12:M:44:VAL:HG22	12:M:66:ARG:HD3	1.91	0.52
12:M:8:LEU:CD1	12:M:16:LEU:HA	2.39	0.52
13:N:128:ALA:O	13:N:129:SER:OXT	2.27	0.52
9:J:153:HIS:CE1	13:N:58:PRO:CG	2.93	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:N:63:LEU:O	13:N:66:LEU:CB	2.56	0.52
1:A:521:G:OP2	14:O:54:LYS:NZ	2.38	0.52
14:O:5:PRO:O	14:O:6:THR:CB	2.57	0.52
15:P:15:VAL:HG11	15:P:34:LEU:CD2	2.39	0.52
15:P:55:ARG:HH21	15:P:56:LEU:CD2	2.17	0.52
15:P:64:TRP:HD1	15:P:65:LYS:H	1.55	0.52
16:Q:27:CYS:C	16:Q:40:CYS:SG	2.88	0.52
17:R:69:TYR:O	17:R:70:LEU:C	2.48	0.52
21:V:32:LYS:CB	21:V:50:ALA:HB3	2.39	0.52
22:W:15:ARG:O	22:W:16:HIS:C	2.47	0.52
22:W:29:LYS:O	22:W:32:ALA:N	2.42	0.52
23:X:8:THR:HG22	23:X:21:TYR:CE2	2.44	0.52
1:A:132:C:O2'	1:A:133:U:O4'	2.26	0.52
1:A:230:G:C2	1:A:231:G:C4	2.98	0.52
1:A:283:C:O2	1:A:284:G:O4'	2.28	0.52
1:A:29:G:H4'	1:A:295:C:O3'	2.10	0.52
1:A:36:C:O3'	14:O:123:LYS:HA	2.09	0.52
1:A:563:A:H1'	1:A:566:G:C2'	2.39	0.52
1:A:657:G:C6	1:A:658:G:N7	2.76	0.52
1:A:675:A:N1	1:A:716:A:C2	2.77	0.52
1:A:775:G:N3	1:A:776:G:C8	2.77	0.52
1:A:80:G:C2	1:A:81:G:H1'	2.44	0.52
1:A:889:A:OP1	1:A:891:U:H1'	2.09	0.52
3:C:16:U:H6	3:C:16:U:O5'	1.91	0.52
3:C:24:G:C4	3:C:25:C:C5	2.98	0.52
3:C:76:A:C3'	3:C:76:A:C8	2.93	0.52
4:E:142:LEU:O	4:E:143:GLU:C	2.47	0.52
4:E:186:ALA:O	4:E:201:ILE:HD13	2.09	0.52
4:E:208:ILE:HD12	4:E:239:VAL:HG11	1.90	0.52
4:E:61:LEU:HD23	4:E:62:ALA:H	1.72	0.52
5:F:14:ILE:CG2	5:F:179:ARG:HA	2.30	0.52
6:G:187:ARG:O	6:G:188:LEU:C	2.48	0.52
6:G:30:LYS:CA	6:G:34:GLU:HB3	2.39	0.52
7:H:56:GLN:CD	7:H:56:GLN:H	2.12	0.52
7:H:60:TYR:HD1	7:H:64:ARG:HD2	1.73	0.52
11:L:79:LEU:HD22	11:L:101:PHE:HD2	1.74	0.52
11:L:50:LEU:CD2	11:L:51:ARG:NH1	2.72	0.52
11:L:50:LEU:HD23	11:L:50:LEU:C	2.29	0.52
12:M:24:VAL:O	12:M:28:ARG:HG3	2.09	0.52
15:P:22:ILE:HB	15:P:25:ILE:HD11	1.90	0.52
19:T:29:HIS:CG	19:T:30:PRO:HD2	2.45	0.52
19:T:65:ILE:O	19:T:69:LYS:O	2.27	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:U:61:LYS:HB3	20:U:62:GLU:OE1	2.09	0.52
21:V:15:LEU:HD12	21:V:44:MET:CE	2.39	0.52
22:W:33:ILE:HD11	22:W:62:LEU:O	2.10	0.52
14:O:43:VAL:CG1	14:O:44:THR:N	2.72	0.52
2:1:37:U:H6	2:1:37:U:O5'	1.93	0.52
1:A:1005:A:C6	1:A:1026:G:N2	2.76	0.52
1:A:1113:C:C2	1:A:1114:C:C5	2.97	0.52
1:A:1157:A:C6	1:A:1180:A:C5	2.97	0.52
1:A:1215:G:N2	1:A:1216:G:C8	2.78	0.52
1:A:1238:A:N7	1:A:1301:U:O4	2.41	0.52
1:A:1251:A:N6	1:A:1285:A:H2	2.06	0.52
1:A:1252:A:C5	1:A:1253:G:C8	2.98	0.52
1:A:1263:C:O2'	1:A:1264:C:H5'	2.09	0.52
1:A:1321:C:H3'	1:A:1321:C:C6	2.44	0.52
1:A:976:G:C2	1:A:1362:C:C2	2.96	0.52
1:A:1376:U:C2	1:A:1377:A:N7	2.77	0.52
1:A:1520:G:O2'	1:A:1521:G:H8	1.92	0.52
1:A:14:U:C6	1:A:16:A:OP2	2.62	0.52
1:A:250:A:N3	1:A:252:U:N3	2.57	0.52
1:A:320:C:O2'	1:A:321:A:H5'	2.10	0.52
1:A:386:C:C4	1:A:387:U:C5	2.98	0.52
1:A:620:C:C6	1:A:621:A:C8	2.98	0.52
1:A:657:G:O2'	1:A:658:G:H5'	2.09	0.52
1:A:671:G:C2	1:A:672:U:C2	2.98	0.52
1:A:857:C:C2	1:A:858:G:C1'	2.92	0.52
1:A:899:C:H2'	1:A:900:A:O4'	2.09	0.52
1:A:944:G:H2'	1:A:945:G:H5''	1.89	0.52
1:A:960:U:N3	1:A:1225:A:C5	2.75	0.52
3:C:11:C:C2	3:C:12:U:C5	2.97	0.52
4:E:166:ASP:O	4:E:169:LYS:HD3	2.09	0.52
4:E:35:GLU:O	4:E:36:ARG:NH2	2.43	0.52
4:E:42:ILE:HG23	4:E:43:ASP:N	2.24	0.52
1:A:1056:U:H5'	5:F:163:ALA:HB3	1.90	0.52
5:F:177:THR:O	5:F:179:ARG:N	2.42	0.52
5:F:52:LEU:CA	5:F:70:VAL:HG22	2.27	0.52
6:G:170:VAL:H	6:G:176:LEU:CD2	2.16	0.52
7:H:20:GLN:CD	7:H:21:ALA:N	2.62	0.52
1:A:923:A:OP1	7:H:21:ALA:CB	2.55	0.52
9:J:56:GLN:CD	9:J:56:GLN:H	2.12	0.52
11:L:7:THR:O	11:L:83:ARG:NH1	2.42	0.52
12:M:89:ASP:C	12:M:90:LEU:HG	2.29	0.52
13:N:29:ILE:HG13	13:N:29:ILE:O	2.10	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:O:69:TYR:O	14:O:100:ILE:CD1	2.57	0.52
14:O:82:VAL:O	14:O:83:VAL:HB	2.09	0.52
14:O:90:VAL:HG12	14:O:90:VAL:O	2.10	0.52
1:A:952:U:H1'	15:P:126:LYS:O	2.09	0.52
15:P:27:LYS:O	15:P:29:ARG:N	2.39	0.52
15:P:87:TYR:CD2	15:P:87:TYR:C	2.81	0.52
17:R:26:GLU:OE2	17:R:26:GLU:CA	2.56	0.52
17:R:64:ARG:O	17:R:67:LEU:HB2	2.09	0.52
17:R:79:ARG:HG2	17:R:82:ILE:HD12	1.91	0.52
18:S:14:ASN:HA	18:S:42:ARG:NH2	2.25	0.52
19:T:20:THR:C	19:T:21:VAL:HG13	2.30	0.52
19:T:66:SER:HB3	19:T:69:LYS:HB3	1.91	0.52
21:V:44:MET:O	21:V:62:ILE:HG21	2.08	0.52
1:A:160:A:C2	1:A:343:U:H1'	2.45	0.52
3:B:26:A:OP1	3:B:27:G:OP2	2.27	0.52
14:O:16:GLU:OE1	14:O:17:LYS:O	2.27	0.52
20:U:83:GLU:O	20:U:84:LYS:C	2.47	0.52
1:A:1083:U:H3'	1:A:1084:G:H8	1.74	0.52
1:A:1192:C:N4	1:A:1193:G:N7	2.57	0.52
1:A:1262:C:C2	1:A:1263:C:C5	2.98	0.52
1:A:261:U:C4	1:A:264:U:OP2	2.62	0.52
1:A:286:G:H2'	1:A:287:U:H6	1.73	0.52
1:A:321:A:C2	1:A:322:C:C4	2.98	0.52
1:A:321:A:C6	1:A:322:C:N4	2.78	0.52
1:A:587:G:C2	1:A:755:G:C5	2.98	0.52
1:A:591:U:H2'	1:A:592:G:H8	1.72	0.52
1:A:758:G:H2'	1:A:759:A:OP2	2.10	0.52
1:A:811:C:C6	1:A:811:C:H3'	2.43	0.52
1:A:828:A:C2'	1:A:829:G:O5'	2.57	0.52
1:A:857:C:N3	1:A:858:G:H1'	2.25	0.52
1:A:918:A:H2'	1:A:919:A:H8	1.69	0.52
1:A:953:G:O2'	1:A:954:G:H5'	2.09	0.52
1:A:993:G:C6	1:A:1046:A:C6	2.97	0.52
3:C:2:C:H6	3:C:2:C:O5'	1.92	0.52
5:F:110:ASN:HD21	5:F:140:ARG:CD	2.22	0.52
5:F:136:GLN:O	5:F:137:ALA:C	2.47	0.52
6:G:168:ARG:N	6:G:168:ARG:CD	2.69	0.52
7:H:117:ASP:O	7:H:118:ILE:HG13	2.09	0.52
7:H:57:LYS:O	7:H:58:ALA:C	2.48	0.52
7:H:9:LYS:HB2	7:H:33:VAL:CB	2.32	0.52
8:I:41:GLU:HG2	8:I:42:GLU:N	2.24	0.52
9:J:69:VAL:CB	9:J:135:VAL:HG22	2.39	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:587:G:H4'	10:K:3:THR:O	2.09	0.52
10:K:49:GLU:O	10:K:49:GLU:OE1	2.28	0.52
11:L:106:ALA:O	11:L:107:ARG:CG	2.53	0.52
11:L:115:GLY:C	11:L:117:HIS:H	2.13	0.52
12:M:79:ARG:HD3	12:M:80:LYS:N	2.24	0.52
12:M:87:THR:O	12:M:87:THR:HG22	2.09	0.52
13:N:57:THR:OG1	13:N:59:TYR:CB	2.57	0.52
9:J:150:ALA:HB2	13:N:59:TYR:CD2	2.45	0.52
13:N:64:ALA:O	13:N:65:ALA:C	2.47	0.52
13:N:66:LEU:C	13:N:70:LYS:HZ2	2.13	0.52
1:A:551:U:O2'	14:O:86:ARG:HD2	2.09	0.52
15:P:91:ARG:O	15:P:96:LEU:HD23	2.09	0.52
17:R:70:LEU:CG	17:R:78:TYR:CD1	2.88	0.52
22:W:55:ILE:C	22:W:57:ARG:N	2.60	0.52
2:1:51:U:O2'	2:1:52:U:C5'	2.57	0.52
1:A:1207:G:O2'	1:A:1208:C:H5'	2.10	0.52
1:A:1232:U:OP1	11:L:126:SER:HB2	2.10	0.52
1:A:127:G:N2	1:A:128:G:H1'	2.24	0.52
1:A:1326:C:O2'	1:A:1327:C:H5'	2.08	0.52
1:A:1361:G:N7	1:A:1362:C:C5	2.77	0.52
1:A:1393:U:H2'	1:A:1394:A:OP2	2.10	0.52
1:A:1411:C:O5'	1:A:1411:C:H6	1.92	0.52
1:A:1422:G:N1	1:A:1423:G:C5	2.78	0.52
1:A:280:C:N3	19:T:39:SER:CB	2.73	0.52
1:A:333:G:C2	1:A:334:C:C5	2.98	0.52
1:A:50:A:H61	1:A:361:G:H4'	1.70	0.52
1:A:37:U:O2	1:A:548:G:N1	2.43	0.52
1:A:38:G:N2	1:A:397:A:C8	2.75	0.52
1:A:474:G:O2'	1:A:475:G:H5'	2.09	0.52
1:A:498:A:H1'	1:A:500:G:O4'	2.09	0.52
1:A:579:G:C4	1:A:580:U:C6	2.98	0.52
1:A:947:G:C2	1:A:948:C:C6	2.97	0.52
4:E:119:GLU:HA	4:E:142:LEU:CD1	2.37	0.52
4:E:136:VAL:O	4:E:139:LYS:CG	2.56	0.52
4:E:20:GLU:C	4:E:39:ILE:HG13	2.30	0.52
4:E:56:ARG:HH11	4:E:57:PHE:N	2.07	0.52
5:F:142:MET:HA	5:F:146:ALA:HB3	1.92	0.52
5:F:142:MET:HE2	5:F:143:GLU:HA	1.92	0.52
6:G:154:ASN:ND2	6:G:155:LEU:CD2	2.72	0.52
6:G:79:PHE:CG	6:G:80:GLU:N	2.77	0.52
7:H:107:ARG:NH1	7:H:107:ARG:CB	2.72	0.52
7:H:125:SER:C	7:H:127:ASN:N	2.61	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:H:133:TYR:HA	7:H:136:MET:CG	2.40	0.52
7:H:147:ASP:O	7:H:150:ARG:HB3	2.09	0.52
8:I:3:ARG:HG3	8:I:65:VAL:C	2.28	0.52
8:I:61:LEU:HD22	8:I:63:TYR:OH	2.09	0.52
8:I:11:ASN:CB	8:I:84:ASN:HB3	2.39	0.52
9:J:146:GLU:O	9:J:147:ALA:C	2.47	0.52
10:K:36:LEU:CD1	10:K:48:TYR:HB2	2.37	0.52
10:K:86:ILE:HG22	10:K:87:SER:N	2.24	0.52
12:M:41:PRO:O	12:M:42:THR:C	2.47	0.52
13:N:102:GLY:HA2	13:N:105:VAL:HG23	1.90	0.52
13:N:65:ALA:CB	13:N:98:LEU:HD23	2.33	0.52
14:O:35:GLY:HA3	14:O:60:LEU:CB	2.40	0.52
17:R:53:HIS:O	17:R:57:LEU:CD1	2.56	0.52
17:R:78:TYR:O	17:R:81:LEU:HB3	2.10	0.52
18:S:43:LYS:HE3	18:S:48:TRP:HZ3	1.74	0.52
18:S:52:ASP:OD1	18:S:55:ARG:CG	2.57	0.52
18:S:53:VAL:HG12	18:S:79:VAL:HG22	1.92	0.52
18:S:59:TRP:O	18:S:60:LEU:C	2.47	0.52
19:T:36:ILE:HD13	19:T:36:ILE:H	1.74	0.52
22:W:40:ALA:CB	22:W:55:ILE:HG21	2.38	0.52
22:W:72:LEU:HD22	22:W:76:ALA:C	2.30	0.52
23:X:17:THR:O	23:X:22:ARG:NH2	2.43	0.52
3:D:58:A:C2	3:D:61:C:H1'	2.44	0.52
1:A:1123:A:O4'	1:A:1123:A:OP2	2.27	0.52
2:1:46:U:H3'	2:1:46:U:C6	2.45	0.52
1:A:1034:G:C2	1:A:1035:A:C5	2.98	0.52
1:A:1048:G:H1'	1:A:1215:G:H5'	1.92	0.52
1:A:1064:G:OP1	1:A:1386:G:C5'	2.58	0.52
1:A:1227:A:H4'	15:P:115:LYS:NZ	2.25	0.52
1:A:1270:C:O2'	1:A:1313:U:O2'	2.23	0.52
1:A:1317:C:O2'	1:A:1318:A:H5'	2.10	0.52
1:A:1422:G:H2'	1:A:1423:G:C8	2.41	0.52
1:A:178:C:H2'	1:A:179:A:H8	1.73	0.52
1:A:186(B):C:C2'	1:A:186(C):G:H5'	2.39	0.52
1:A:186(C):G:C6	1:A:186(D):C:C4	2.97	0.52
1:A:20:U:H6	1:A:916:G:N2	2.08	0.52
1:A:216:G:H2'	1:A:217:C:C6	2.44	0.52
1:A:226:G:C2	1:A:227:G:C4	2.97	0.52
1:A:314:C:O3'	1:A:315:A:O4'	2.27	0.52
1:A:595:G:H8	1:A:641:U:O4	1.93	0.52
1:A:598:U:C2	1:A:599:C:C6	2.97	0.52
1:A:640:A:H2'	1:A:641:U:C4'	2.40	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:739:C:H2'	1:A:739:C:O2	2.10	0.52
1:A:790:A:C2'	1:A:791:G:O5'	2.57	0.52
1:A:817:C:C6	1:A:819:A:H4'	2.44	0.52
1:A:915:A:O2'	1:A:916:G:H5'	2.08	0.52
1:A:948:C:H2'	1:A:949:A:C8	2.42	0.52
1:A:973:G:N1	1:A:974:A:C5	2.78	0.52
3:C:53:G:N2	3:C:62:C:C2	2.77	0.52
4:E:105:PHE:C	4:E:107:THR:N	2.62	0.52
4:E:80:ILE:HD11	4:E:212:GLN:HG2	1.92	0.52
4:E:217:ARG:O	4:E:220:ASP:CB	2.52	0.52
4:E:47:THR:CG2	4:E:51:LEU:HD21	2.37	0.52
5:F:14:ILE:HG22	5:F:15:THR:HG22	1.92	0.52
5:F:29:TYR:HB3	16:Q:36:PHE:CE1	2.45	0.52
6:G:137:SER:O	6:G:138:TYR:C	2.47	0.52
6:G:16:GLY:O	6:G:17:VAL:C	2.48	0.52
7:H:34:VAL:O	7:H:41:VAL:HA	2.09	0.52
7:H:78:HIS:CG	10:K:104:ARG:HD3	2.43	0.52
9:J:87:VAL:HB	9:J:156:TRP:CZ3	2.45	0.52
10:K:14:ARG:HH11	10:K:14:ARG:N	2.08	0.52
10:K:9:MET:O	10:K:10:LEU:C	2.48	0.52
1:A:779:C:H4'	13:N:120:ARG:O	2.10	0.52
14:O:28:LYS:NZ	14:O:33:ARG:NH2	2.41	0.52
14:O:57:LYS:CG	14:O:67:THR:HG22	2.28	0.52
20:U:20:ALA:HB1	20:U:55:ARG:NH2	2.24	0.52
20:U:31:LEU:HD21	20:U:62:GLU:OE2	2.10	0.52
3:D:58:A:O2'	3:D:59:U:P	2.67	0.52
20:U:83:GLU:HA	20:U:83:GLU:OE1	2.09	0.52
1:A:30:U:HO2'	1:A:31:G:P	2.32	0.52
1:A:1045:C:C2'	1:A:1046:A:H8	2.19	0.52
1:A:1155:G:H2'	1:A:1156:G:C8	2.44	0.52
1:A:1203:C:C2	1:A:1204:A:C8	2.97	0.52
1:A:1216:G:OP1	16:Q:3:ARG:NH2	2.43	0.52
1:A:1234:C:C4	1:A:1235:U:C4	2.97	0.52
1:A:1310:G:O2'	1:A:1311:G:H5'	2.09	0.52
1:A:1429:C:O2'	1:A:1430:C:O5'	2.23	0.52
1:A:1450:U:H1'	1:A:1453:G:H1	1.75	0.52
1:A:151:A:C5	1:A:152:A:C2	2.97	0.52
1:A:66:G:C5'	1:A:173:U:O4	2.55	0.52
1:A:133:U:O4	1:A:229:U:O4	2.27	0.52
1:A:355:C:C4	1:A:356:A:N7	2.78	0.52
1:A:46:G:C2	1:A:366:C:C2	2.98	0.52
1:A:382:A:H2'	1:A:383:A:O5'	2.10	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:393:A:H5'	1:A:483:C:H4'	1.92	0.52
1:A:581:G:C2'	1:A:582:U:OP2	2.57	0.52
1:A:608:A:C2	1:A:609:A:O4'	2.62	0.52
1:A:673:G:C2'	1:A:674:G:C8	2.91	0.52
1:A:766:A:C8	1:A:814:A:C6	2.97	0.52
1:A:785:G:C6	1:A:798:G:C6	2.98	0.52
1:A:895:G:H2'	1:A:896:C:H6	1.73	0.52
4:E:72:GLY:HA2	4:E:165:VAL:HG22	1.91	0.52
4:E:73:THR:O	4:E:74:LYS:C	2.48	0.52
5:F:28:GLN:NE2	5:F:29:TYR:H	2.08	0.52
6:G:128:VAL:N	6:G:146:ILE:HG22	2.24	0.52
6:G:141:ARG:CG	6:G:142:PRO:HD2	2.39	0.52
6:G:61:LYS:HA	6:G:203:VAL:CG2	2.39	0.52
6:G:9:CYS:O	6:G:12:CYS:HB2	2.10	0.52
7:H:98:THR:CG2	7:H:119:LEU:HD21	2.39	0.52
8:I:29:ALA:O	8:I:30:LEU:C	2.47	0.52
8:I:40:VAL:HG22	8:I:40:VAL:O	2.09	0.52
8:I:46:ARG:NH2	20:U:37:VAL:HG11	2.25	0.52
9:J:146:GLU:O	9:J:149:ARG:N	2.42	0.52
1:A:1373:G:H5'	9:J:36:LYS:HB2	1.92	0.52
11:L:4:TYR:CE1	11:L:59:PHE:CE2	2.91	0.52
13:N:99:GLN:HA	13:N:105:VAL:HG13	1.91	0.52
14:O:84:LEU:O	14:O:100:ILE:HG22	2.10	0.52
14:O:24:VAL:HG13	14:O:26:ALA:N	2.23	0.52
1:A:1226:C:C5'	15:P:103:THR:O	2.54	0.52
16:Q:16:PHE:O	16:Q:17:LYS:C	2.47	0.52
1:A:1048:G:C5'	16:Q:3:ARG:NH1	2.68	0.52
18:S:38:TYR:O	18:S:49:LEU:HD12	2.10	0.52
19:T:22:LEU:HD11	19:T:39:SER:OG	2.09	0.52
19:T:7:THR:HG23	19:T:8:GLY:N	2.24	0.52
22:W:29:LYS:O	22:W:32:ALA:CB	2.56	0.52
3:B:12:U:C2	3:B:24:G:N2	2.78	0.52
1:A:1032(B):G:H2'	1:A:1033:G:O4'	2.10	0.52
1:A:1060:C:H2'	1:A:1061:G:H8	1.75	0.52
1:A:1248:A:HO2'	11:L:36:TYR:HE1	1.47	0.52
1:A:1285:A:O4'	1:A:1286:A:N7	2.42	0.52
1:A:1321:C:C5	1:A:1322:C:C2'	2.93	0.52
1:A:1323:G:C4	1:A:1324:A:N7	2.78	0.52
1:A:210:U:H4'	1:A:216:G:O4'	2.10	0.52
1:A:299:G:C2'	1:A:300:A:C8	2.92	0.52
1:A:375:U:H2'	1:A:376:G:C5'	2.39	0.52
1:A:411:A:C5	1:A:429:U:C5	2.98	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:432:A:C8	1:A:432:A:H3'	2.44	0.52
1:A:543:C:P	6:G:10:ARG:NH2	2.83	0.52
1:A:573:A:OP2	1:A:574:A:OP2	2.28	0.52
1:A:729:A:H2'	1:A:730:G:O5'	2.10	0.52
1:A:776:G:C5'	1:A:777:A:OP1	2.51	0.52
1:A:811:C:H5	1:A:812:C:C2	2.28	0.52
1:A:817:C:N1	1:A:819:A:H5'	2.25	0.52
1:A:88:C:C2'	1:A:89:U:OP2	2.58	0.52
3:C:75:C:O5'	3:C:76:A:OP2	2.27	0.52
4:E:130:ARG:CB	4:E:131:PRO:CD	2.88	0.52
4:E:15:VAL:O	4:E:16:HIS:HB2	2.08	0.52
4:E:43:ASP:O	4:E:47:THR:HB	2.10	0.52
1:A:1056:U:O2'	5:F:195:VAL:O	2.17	0.52
5:F:37:GLN:HA	5:F:37:GLN:OE1	2.09	0.52
5:F:43:LEU:CD2	5:F:55:VAL:HG21	2.40	0.52
6:G:17:VAL:O	6:G:18:LYS:C	2.48	0.52
6:G:15:GLU:HB2	6:G:19:LEU:HD11	1.92	0.52
9:J:42:ILE:O	9:J:43:PHE:C	2.48	0.52
10:K:111:ILE:HG13	10:K:120:THR:HG22	1.92	0.52
10:K:68:ARG:N	10:K:76:PRO:HG3	2.25	0.52
16:Q:14:PRO:HB2	16:Q:17:LYS:HA	1.91	0.52
17:R:54:ARG:NE	17:R:58:MET:HE2	2.25	0.52
17:R:77:ARG:NH1	17:R:81:LEU:H	2.07	0.52
18:S:12:LYS:O	18:S:13:HIS:HB2	2.08	0.52
18:S:26:ARG:O	18:S:27:LYS:C	2.46	0.52
18:S:54:GLU:O	18:S:55:ARG:C	2.45	0.52
18:S:82:GLN:CG	18:S:82:GLN:O	2.57	0.52
3:D:54:U:OP2	3:D:55:U:C4	2.62	0.52
3:B:16:U:OP1	3:B:16:U:C6	2.62	0.52
1:A:1134:G:N2	1:A:1136:U:O4	2.42	0.52
1:A:1118:C:C4	1:A:1156:G:N2	2.78	0.52
1:A:1202:G:C2'	1:A:1203:C:O5'	2.58	0.52
1:A:1240:U:C1'	9:J:42:ILE:HD11	2.39	0.52
1:A:124:G:OP1	1:A:310:G:N2	2.33	0.52
1:A:1251:A:H2'	1:A:1252:A:C5	2.45	0.52
1:A:1406:U:H2'	1:A:1407:C:O5'	2.09	0.52
1:A:1430:C:N3	1:A:1471:G:C2	2.78	0.52
1:A:186:C:H2'	1:A:186(A):C:C6	2.44	0.52
1:A:304:U:O2'	1:A:305:G:H5'	2.10	0.52
1:A:390:C:N4	1:A:391:G:O6	2.43	0.52
1:A:458:C:N4	1:A:464:G:C6	2.78	0.52
1:A:527:G:N2	1:A:528:C:C2	2.77	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:533:A:OP2	1:A:533:A:O4'	2.27	0.52
1:A:671:G:C2	1:A:672:U:H1'	2.44	0.52
1:A:675:A:N3	13:N:116:HIS:HB2	2.25	0.52
1:A:754:C:H1'	17:R:69:TYR:CG	2.44	0.52
1:A:920:U:O2'	1:A:921:U:H5'	2.10	0.52
1:A:977:A:N6	1:A:1224:G:OP1	2.42	0.52
1:A:978:A:H3'	1:A:978:A:C8	2.44	0.52
1:A:986:A:O2'	21:V:55:LYS:HG3	2.09	0.52
1:A:996:A:C2	1:A:997:U:C5	2.98	0.52
3:B:34:G:H8	3:B:34:G:OP1	1.93	0.52
3:C:65:G:C6	3:C:66:U:C4	2.98	0.52
4:E:123:ALA:O	4:E:124:SER:O	2.28	0.52
4:E:115:LEU:CD2	4:E:149:LEU:HD22	2.36	0.52
6:G:171:GLY:HA3	6:G:173:TRP:CZ3	2.44	0.52
7:H:47:LYS:H	7:H:57:LYS:CE	2.23	0.52
7:H:71:LEU:HD21	7:H:74:GLY:N	2.24	0.52
10:K:102:ARG:HH21	10:K:105:ARG:HA	1.74	0.52
10:K:100:ILE:HG23	10:K:121:ASP:HA	1.92	0.52
10:K:49:GLU:OE1	10:K:60:ARG:HB3	2.09	0.52
11:L:7:THR:CG2	11:L:9:ARG:HH11	2.22	0.52
12:M:28:ARG:NH1	12:M:28:ARG:HG2	2.24	0.52
12:M:5:ARG:NH2	12:M:73:ASP:OD2	2.43	0.52
13:N:80:VAL:HG22	13:N:81:ASP:N	2.25	0.52
13:N:84:VAL:O	13:N:84:VAL:HG23	2.09	0.52
17:R:78:TYR:HD2	17:R:78:TYR:C	2.14	0.52
19:T:75:ARG:HH12	19:T:77:VAL:CG2	2.23	0.52
22:W:51:GLU:HB3	22:W:54:LYS:HZ1	1.75	0.52
1:A:263:A:H5'	22:W:75:ASN:HD21	1.75	0.52
2:1:36:U:H6	2:1:36:U:H5''	1.74	0.52
1:A:1343:G:H2'	1:A:1344:C:O4'	2.10	0.52
1:A:1362(A):C:H5'	1:A:1363:A:OP1	2.10	0.52
1:A:259:G:N2	1:A:260:G:N3	2.58	0.52
1:A:263:A:C2'	1:A:264:U:C5'	2.75	0.52
1:A:254:G:N1	1:A:273:A:C6	2.78	0.52
1:A:280:C:C5'	1:A:281:G:OP2	2.57	0.52
1:A:355:C:N4	1:A:356:A:N6	2.56	0.52
1:A:381:C:O2	1:A:381:C:H2'	2.10	0.52
1:A:62:U:H4'	1:A:385:C:O2	2.10	0.52
1:A:390:C:C2	1:A:391:G:C8	2.97	0.52
1:A:429:U:H1'	1:A:430:A:H5''	1.90	0.52
1:A:485:G:O2'	1:A:486:U:H6	1.93	0.52
1:A:558:G:O5'	1:A:559:A:C3'	2.58	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:717:C:O2'	1:A:718:G:P	2.68	0.52
1:A:735:C:O2'	20:U:75:ILE:CD1	2.57	0.52
1:A:812:C:H4'	1:A:813:U:H6	1.75	0.52
1:A:854:G:H5''	1:A:871:U:N3	2.20	0.52
1:A:924:C:O2'	1:A:925:G:H5'	2.10	0.52
1:A:93:U:H2'	1:A:95:G:H8	1.71	0.52
1:A:954:G:H2'	1:A:955:U:C6	2.45	0.52
1:A:978:A:C8	1:A:980:C:N4	2.78	0.52
3:C:16:U:H4'	3:C:18:G:C5'	2.37	0.52
3:C:60:U:OP1	3:C:61:C:C5	2.63	0.52
3:C:75:C:O5'	3:C:76:A:P	2.68	0.52
4:E:105:PHE:O	4:E:109:SER:OG	2.21	0.52
4:E:238:LEU:HD23	4:E:238:LEU:O	2.09	0.52
4:E:44:LEU:O	4:E:45:GLN:C	2.48	0.52
5:F:127:ARG:C	5:F:128:PHE:CD1	2.84	0.52
6:G:30:LYS:HG2	6:G:35:ARG:CD	2.40	0.52
7:H:72:GLN:HE22	7:H:144:THR:HG23	1.74	0.52
8:I:48:LEU:CD1	8:I:50:TYR:O	2.55	0.52
9:J:140:ASP:O	9:J:144:MET:HB2	2.10	0.52
9:J:88:PRO:HA	9:J:89:MET:HE3	1.93	0.52
10:K:91:ARG:C	10:K:92:ARG:HD2	2.31	0.52
11:L:82:ALA:HB1	11:L:101:PHE:CE1	2.45	0.52
1:A:1188:A:C5'	12:M:61:GLU:OE2	2.54	0.52
14:O:104:VAL:O	14:O:106:ASP:N	2.43	0.52
14:O:60:LEU:CD2	14:O:60:LEU:C	2.77	0.52
15:P:19:LEU:O	15:P:22:ILE:HG13	2.10	0.52
15:P:23:TYR:HB3	15:P:67:GLU:CA	2.19	0.52
17:R:52:SER:O	17:R:53:HIS:C	2.46	0.52
17:R:17:ARG:HH11	17:R:77:ARG:HD3	1.72	0.52
18:S:20:VAL:HG11	18:S:32:TYR:CD2	2.44	0.52
18:S:18:ARG:NH1	18:S:32:TYR:CE2	2.78	0.52
18:S:57:ARG:HA	18:S:60:LEU:HD12	1.92	0.52
1:A:465:A:H61	18:S:82:GLN:HE22	1.58	0.52
19:T:4:LYS:C	19:T:5:VAL:HG23	2.31	0.52
21:V:27:GLU:OE2	21:V:29:ARG:HA	2.10	0.52
21:V:62:ILE:CG1	21:V:67:VAL:HG22	2.38	0.52
3:D:9:A:H5''	3:D:10:G:OP2	2.10	0.52
1:A:1170:A:C8	1:A:1171:G:C8	2.98	0.52
2:1:28:G:H2'	2:1:29:G:C8	2.45	0.51
2:1:37:U:H2'	2:1:38:U:C6	2.46	0.51
2:1:46:U:N3	3:B:34:G:C6	2.78	0.51
1:A:1003:G:N2	1:A:1038:C:H1'	2.24	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1065:U:HO2'	1:A:1066:C:P	2.33	0.51
1:A:1129:C:H4'	1:A:1130:A:H8	1.74	0.51
1:A:1234:C:H4'	1:A:1364:U:C1'	2.38	0.51
1:A:1246:C:H2'	1:A:1247:U:H6	1.75	0.51
1:A:1278:U:H5'	1:A:1279:A:C5'	2.40	0.51
1:A:1319:A:O2'	1:A:1321:C:N4	2.43	0.51
1:A:1396:A:O2'	1:A:1397:C:H5''	2.10	0.51
1:A:1401:G:H2'	1:A:1402:C:C5'	2.40	0.51
1:A:1404:C:O4'	1:A:1499:A:N1	2.43	0.51
1:A:246:A:O2'	1:A:247:G:O5'	2.27	0.51
1:A:475:G:C2	1:A:476:G:C5	2.98	0.51
1:A:583:A:H2'	1:A:584:G:O4'	2.10	0.51
1:A:587:G:N3	1:A:755:G:N1	2.58	0.51
1:A:626:U:O2'	1:A:627:G:H5'	2.10	0.51
1:A:642:A:N3	10:K:113:SER:OG	2.32	0.51
1:A:652:U:H1'	1:A:653:A:C2	2.45	0.51
1:A:667:G:OP2	1:A:732:C:O2'	2.25	0.51
1:A:686:U:H2'	1:A:687:A:C8	2.45	0.51
1:A:833:U:O2'	1:A:834:C:H6	1.92	0.51
1:A:946:A:O2'	1:A:1333:A:H1'	2.10	0.51
1:A:961:U:C2'	1:A:962:C:H5'	2.40	0.51
1:A:971:G:N2	1:A:1363:A:OP2	2.43	0.51
4:E:16:HIS:O	4:E:204:ASN:CB	2.55	0.51
5:F:186:PHE:HB2	5:F:199:LYS:HG2	1.92	0.51
5:F:84:ILE:HD11	5:F:88:ARG:HH21	1.76	0.51
6:G:101:LEU:O	6:G:104:VAL:N	2.43	0.51
6:G:10:ARG:HH11	6:G:11:LEU:HD23	1.74	0.51
1:A:404:U:OP2	6:G:118:ARG:NH1	2.42	0.51
6:G:166:LYS:HD3	6:G:178:VAL:CG1	2.39	0.51
6:G:170:VAL:HG23	6:G:176:LEU:CD2	2.38	0.51
6:G:25:ARG:NH1	6:G:30:LYS:HB3	2.25	0.51
9:J:68:ASN:O	9:J:135:VAL:HG13	2.10	0.51
9:J:77:SER:C	9:J:156:TRP:CZ2	2.83	0.51
10:K:6:ILE:C	10:K:6:ILE:CD1	2.79	0.51
11:L:113:LYS:NZ	11:L:119:ALA:CB	2.72	0.51
11:L:11:LYS:CB	11:L:108:VAL:HG12	2.41	0.51
1:A:1230:C:H5''	11:L:127:LYS:HE3	1.91	0.51
9:J:16:LEU:HD12	11:L:44:VAL:CG2	2.41	0.51
11:L:97:LYS:CE	11:L:102:LEU:HD22	2.40	0.51
12:M:5:ARG:CZ	12:M:5:ARG:CB	2.88	0.51
13:N:110:ASP:HB3	20:U:85:LEU:HB3	1.92	0.51
13:N:33:THR:HA	13:N:38:ASN:O	2.10	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:O:12:ARG:CB	14:O:12:ARG:CZ	2.87	0.51
15:P:20:THR:CG2	15:P:26:GLY:HA2	2.40	0.51
15:P:69:GLU:O	15:P:70:LEU:C	2.49	0.51
15:P:81:LEU:HA	15:P:84:ILE:HD11	1.92	0.51
18:S:6:LEU:CA	18:S:18:ARG:O	2.56	0.51
18:S:20:VAL:HG11	18:S:32:TYR:HB2	1.89	0.51
19:T:60:ILE:O	19:T:62:SER:OG	2.26	0.51
19:T:84:LEU:O	19:T:87:LYS:N	2.43	0.51
22:W:48:LYS:O	22:W:49:ALA:C	2.48	0.51
1:A:1305:G:H5'	23:X:4:GLY:HA3	1.92	0.51
3:D:47:U:C2	3:D:48:C:H5'	2.45	0.51
1:A:233:C:C2'	1:A:234:C:H5'	2.39	0.51
1:A:73:G:C6	1:A:74:C:C4	2.98	0.51
2:1:10:U:C2	2:1:12:U:OP2	2.63	0.51
1:A:1048:G:O3'	1:A:1049:U:H3'	2.10	0.51
1:A:1117:G:C2	1:A:1184:G:C2	2.98	0.51
1:A:1202:G:N3	1:A:1203:C:C6	2.78	0.51
1:A:1273:G:H2'	1:A:1274:G:O4'	2.09	0.51
1:A:1293:G:C4	1:A:1294:G:C8	2.98	0.51
1:A:1500:A:H2'	1:A:1501:C:C6	2.45	0.51
1:A:1511:G:O2'	1:A:1512:U:H5'	2.10	0.51
1:A:1539:C:H2'	1:A:1540:U:O4'	2.09	0.51
1:A:279:A:C1'	1:A:281:G:C4	2.90	0.51
1:A:291:C:C3'	1:A:305:G:N2	2.64	0.51
1:A:317:G:C2'	1:A:318:G:H5'	2.39	0.51
1:A:35:G:C6	1:A:36:C:C4	2.97	0.51
1:A:413:G:N2	1:A:428:G:O2'	2.41	0.51
1:A:503:C:C2	1:A:504:C:C5	2.98	0.51
1:A:687:A:N3	1:A:704:A:C6	2.78	0.51
1:A:689:C:H2'	1:A:690:G:H1'	1.91	0.51
1:A:945:G:N1	1:A:946:A:N7	2.57	0.51
1:A:947:G:H21	1:A:948:C:H1'	1.75	0.51
1:A:953:G:H1'	15:P:126:LYS:N	2.25	0.51
1:A:961:U:C5	1:A:983:A:C6	2.99	0.51
4:E:91:PRO:CG	4:E:155:LEU:H	2.23	0.51
4:E:67:THR:HB	4:E:155:LEU:CD2	2.37	0.51
4:E:69:LEU:CD1	4:E:70:PHE:N	2.74	0.51
5:F:142:MET:C	5:F:142:MET:SD	2.88	0.51
5:F:27:LYS:O	5:F:28:GLN:HB3	2.11	0.51
6:G:91:SER:O	6:G:92:VAL:C	2.49	0.51
7:H:37:ARG:HG2	7:H:112:LEU:O	2.11	0.51
8:I:40:VAL:HA	8:I:63:TYR:HD1	1.74	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:I:51:PRO:HA	8:I:55:ASP:O	2.10	0.51
9:J:111:ARG:HD2	9:J:123:GLU:CB	2.36	0.51
9:J:16:LEU:O	9:J:17:VAL:HG23	2.09	0.51
9:J:74:GLU:O	9:J:88:PRO:CA	2.53	0.51
9:J:99:LEU:O	9:J:99:LEU:HD23	2.10	0.51
10:K:10:LEU:HD11	10:K:85:ARG:CD	2.26	0.51
10:K:14:ARG:HB3	10:K:83:ILE:HG21	1.92	0.51
10:K:97:VAL:HG12	10:K:99:GLU:OE2	2.10	0.51
1:A:1370:G:H5''	11:L:12:GLU:HG3	1.92	0.51
9:J:16:LEU:HB3	11:L:41:VAL:HG12	1.93	0.51
14:O:118:SER:O	14:O:121:GLY:HA2	2.09	0.51
5:F:12:LEU:CD2	16:Q:57:ARG:CG	2.80	0.51
18:S:30:GLY:C	18:S:31:LYS:O	2.45	0.51
18:S:73:LEU:CD1	18:S:73:LEU:C	2.76	0.51
20:U:36:ASN:OD1	20:U:39:VAL:HB	2.11	0.51
6:G:46:LYS:O	6:G:47:ARG:C	2.48	0.51
1:A:159:G:C2	1:A:161:A:OP2	2.63	0.51
1:A:1060:C:H2'	1:A:1061:G:C8	2.45	0.51
1:A:1190:G:P	5:F:5:ILE:HG13	2.50	0.51
1:A:959:A:C2	1:A:1221:G:N3	2.76	0.51
1:A:1376:U:H3	1:A:1377:A:N6	2.07	0.51
1:A:1376:U:O4	9:J:10:ARG:HD2	2.10	0.51
1:A:1400:C:C5	1:A:1400:C:OP1	2.63	0.51
1:A:1455:G:C2'	1:A:1459:C:H5'	2.40	0.51
1:A:309:G:O2'	1:A:310:G:O4'	2.22	0.51
1:A:45:U:H2'	1:A:46:G:C8	2.45	0.51
1:A:599:C:N4	1:A:640:A:N6	2.59	0.51
1:A:621:A:H2'	1:A:622:A:C8	2.46	0.51
1:A:67:C:C4'	1:A:172:A:C1'	2.89	0.51
1:A:808:C:C4	1:A:809:G:N7	2.79	0.51
1:A:893:C:N3	1:A:894:G:N7	2.58	0.51
1:A:990:C:H2'	1:A:991:U:N1	2.26	0.51
3:C:36:A:N6	3:C:37:A:C6	2.78	0.51
4:E:25:ASN:HB3	4:E:191:ASP:CA	2.40	0.51
4:E:25:ASN:HD21	4:E:27:LYS:CG	2.23	0.51
4:E:52:GLU:CD	4:E:53:ARG:H	2.13	0.51
4:E:92:TYR:CE2	4:E:151:GLY:O	2.63	0.51
5:F:157:ILE:HG13	5:F:164:ARG:NE	2.26	0.51
5:F:174:PRO:HB2	5:F:177:THR:HG22	1.92	0.51
6:G:60:GLU:HA	6:G:63:LYS:HZ3	1.75	0.51
6:G:82:ALA:CB	6:G:92:VAL:HB	2.39	0.51
8:I:37:VAL:HA	8:I:65:VAL:CB	2.41	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:K:101:PRO:HG2	10:K:102:ARG:H	1.74	0.51
10:K:98:LYS:N	10:K:98:LYS:NZ	2.48	0.51
11:L:106:ALA:C	11:L:107:ARG:HG3	2.29	0.51
11:L:50:LEU:HD21	11:L:55:ALA:C	2.31	0.51
13:N:12:ARG:HH11	13:N:40:ILE:HG23	1.76	0.51
13:N:13:GLN:O	13:N:14:VAL:HG23	2.11	0.51
14:O:115:LYS:O	14:O:116:SER:C	2.49	0.51
15:P:24:GLY:O	15:P:25:ILE:HG12	2.11	0.51
15:P:27:LYS:O	15:P:28:ALA:HB3	2.10	0.51
15:P:19:LEU:HD11	15:P:30:ALA:CB	2.40	0.51
1:A:1187:G:H1'	16:Q:61:TRP:C	2.31	0.51
17:R:12:ILE:HG12	17:R:31:LEU:HD11	1.91	0.51
17:R:21:ASP:OD2	17:R:24:SER:CB	2.59	0.51
18:S:58:TYR:O	18:S:61:SER:CB	2.58	0.51
19:T:75:ARG:HH11	19:T:75:ARG:HG2	1.76	0.51
22:W:16:HIS:O	22:W:17:ARG:C	2.48	0.51
22:W:18:GLN:O	22:W:19:SER:C	2.49	0.51
22:W:73:HIS:HD2	22:W:74:LYS:NZ	2.08	0.51
3:B:72:C:C2	3:B:73:A:N7	2.78	0.51
1:A:1169:A:H8	1:A:1169:A:OP2	1.93	0.51
2:1:36:U:H1'	9:J:82:GLY:CA	2.39	0.51
1:A:1053:G:N2	1:A:1058:G:O6	2.43	0.51
1:A:1104:G:H4'	4:E:111:ARG:CZ	2.40	0.51
1:A:1145:C:C1'	1:A:1146:A:C8	2.89	0.51
1:A:1151:A:O2'	12:M:70:ARG:NH1	2.43	0.51
1:A:1157:A:N1	1:A:1180:A:C5	2.78	0.51
1:A:1302:U:O2'	1:A:1303:C:C5'	2.58	0.51
1:A:1419:G:H2'	1:A:1420:C:H6	1.74	0.51
1:A:1465:C:N3	1:A:1466:C:C5	2.78	0.51
1:A:553:A:C2'	1:A:554:C:O4'	2.59	0.51
1:A:597:G:N2	10:K:94:TYR:CZ	2.79	0.51
1:A:643:C:HO2'	10:K:132:GLU:CD	2.12	0.51
1:A:730:G:H2'	1:A:731:G:C4'	2.41	0.51
1:A:775:G:C4	1:A:776:G:N7	2.78	0.51
1:A:828:A:H4'	1:A:828:A:OP1	2.10	0.51
1:A:890:G:H2'	1:A:891:U:OP2	2.11	0.51
1:A:957:U:H3	1:A:960:U:C5'	2.23	0.51
1:A:96:G:C5	1:A:97:U:C4	2.99	0.51
3:C:9:A:N6	3:C:22:G:C5	2.79	0.51
3:C:37:A:C5	3:C:38:A:C5	2.98	0.51
3:C:49:C:H2'	3:C:49:C:O2	2.09	0.51
3:C:70:G:C6	3:C:71:G:N7	2.78	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:126:ILE:O	6:G:132:ARG:CB	2.57	0.51
6:G:128:VAL:HG23	6:G:133:VAL:N	2.25	0.51
6:G:31:CYS:C	6:G:33:MET:H	2.12	0.51
6:G:90:GLY:O	6:G:94:LEU:HG	2.11	0.51
8:I:76:ALA:HA	8:I:79:LEU:HD11	1.92	0.51
8:I:89:MET:HE2	20:U:75:ILE:HG21	1.91	0.51
9:J:152:ALA:O	9:J:154:TYR:N	2.42	0.51
10:K:6:ILE:CG1	10:K:85:ARG:CZ	2.89	0.51
11:L:32:ASP:OD1	11:L:35:GLU:HB2	2.10	0.51
12:M:51:ARG:NH2	12:M:61:GLU:OE1	2.44	0.51
12:M:72:VAL:HG12	12:M:73:ASP:N	2.25	0.51
12:M:7:LYS:NZ	12:M:71:LEU:HD11	2.25	0.51
12:M:19:SER:OG	12:M:91:PRO:HG3	2.10	0.51
13:N:42:TRP:CZ3	13:N:47:VAL:CG2	2.94	0.51
14:O:24:VAL:CG1	14:O:26:ALA:HB2	2.40	0.51
15:P:78:ILE:HG23	15:P:81:LEU:HD11	1.93	0.51
17:R:76:GLU:O	17:R:77:ARG:C	2.49	0.51
18:S:27:LYS:H	18:S:27:LYS:HZ1	1.58	0.51
18:S:55:ARG:NH2	18:S:58:TYR:CG	2.79	0.51
19:T:75:ARG:HH12	19:T:77:VAL:CA	2.23	0.51
21:V:30:LEU:HD12	21:V:59:PRO:CA	2.39	0.51
1:A:1314:C:N4	21:V:4:SER:O	2.43	0.51
21:V:71:LEU:O	21:V:74:PHE:CD1	2.63	0.51
1:A:1081:G:OP2	7:H:27:ARG:HD2	2.11	0.51
1:A:1182:G:C4'	1:A:1183:A:O5'	2.58	0.51
1:A:1226:C:OP2	15:P:103:THR:HB	2.10	0.51
1:A:978:A:C6	1:A:1318:A:N6	2.79	0.51
1:A:1450:U:C1'	1:A:1454:G:N2	2.73	0.51
1:A:196:A:H1'	1:A:222:U:H1'	1.92	0.51
1:A:295:C:C2'	1:A:296:U:O5'	2.59	0.51
1:A:447:G:H1'	1:A:487:A:H61	1.76	0.51
1:A:467:G:N2	1:A:468:A:C4	2.78	0.51
1:A:486:U:O2	1:A:486:U:H2'	2.10	0.51
1:A:652:U:H2'	1:A:752:G:H22	1.75	0.51
1:A:801:U:C2'	1:A:801:U:O2	2.58	0.51
1:A:809:G:H2'	1:A:810:C:C5'	2.40	0.51
1:A:834:C:O2'	1:A:835:U:O4'	2.28	0.51
3:C:5:G:C2'	3:C:6:G:O5'	2.58	0.51
3:D:34:G:N3	3:D:34:G:H2'	2.25	0.51
4:E:141:GLU:CD	4:E:141:GLU:C	2.69	0.51
4:E:15:VAL:C	4:E:16:HIS:HD1	2.13	0.51
4:E:163:PHE:CE1	4:E:186:ALA:CA	2.94	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:221:LEU:CD1	4:E:221:LEU:C	2.75	0.51
4:E:45:GLN:O	4:E:48:MET:HB2	2.11	0.51
4:E:75:LYS:HZ2	4:E:75:LYS:C	2.12	0.51
5:F:22:TRP:CZ2	5:F:33:LEU:HG	2.45	0.51
6:G:106:TYR:OH	6:G:112:VAL:O	2.22	0.51
6:G:127:THR:OG1	6:G:149:ALA:HA	2.10	0.51
6:G:173:TRP:H	6:G:173:TRP:HE3	1.58	0.51
7:H:136:MET:HA	7:H:139:LEU:CD1	2.40	0.51
7:H:43:LEU:N	7:H:65:ASN:ND2	2.48	0.51
8:I:6:VAL:O	8:I:6:VAL:HG13	2.11	0.51
9:J:23:VAL:HG13	9:J:43:PHE:CE2	2.46	0.51
11:L:3:GLN:HG3	11:L:20:ARG:CG	2.41	0.51
11:L:97:LYS:NZ	11:L:102:LEU:HB3	2.25	0.51
15:P:45:VAL:O	15:P:47:ASP:N	2.43	0.51
18:S:32:TYR:N	18:S:32:TYR:HD1	2.07	0.51
21:V:18:LYS:HE2	21:V:22:LEU:CD1	2.41	0.51
23:X:9:ARG:NH1	23:X:21:TYR:CD2	2.76	0.51
2:I:10:U:O2'	2:I:12:U:C5	2.61	0.51
1:A:1003:G:N2	1:A:1005:A:H5'	2.26	0.51
1:A:1213:A:C2	1:A:1215:G:C4	2.99	0.51
1:A:1406:U:O4'	1:A:1518:A:H4'	2.11	0.51
1:A:1430:C:O2'	1:A:1431:C:C5'	2.59	0.51
1:A:1507:A:C2	1:A:1530:G:H1'	2.46	0.51
1:A:186(B):C:C4'	22:W:89:ARG:HH22	2.23	0.51
1:A:390:C:N3	1:A:391:G:N7	2.59	0.51
1:A:420:U:HO2'	1:A:421:U:H5	1.57	0.51
1:A:497:U:O2	1:A:498:A:C8	2.64	0.51
1:A:611:A:H2'	1:A:612:C:C6	2.46	0.51
1:A:754:C:H1'	17:R:69:TYR:CB	2.41	0.51
1:A:901:A:N3	1:A:902:G:C1'	2.74	0.51
1:A:946:A:C2'	1:A:947:G:H8	2.21	0.51
3:C:21:A:C2	3:C:48:C:N3	2.79	0.51
3:C:55:U:H6	3:C:55:U:O5'	1.92	0.51
4:E:163:PHE:CA	4:E:185:ILE:O	2.47	0.51
4:E:187:LEU:HD23	4:E:201:ILE:HG22	1.93	0.51
4:E:35:GLU:OE2	4:E:39:ILE:N	2.44	0.51
5:F:117:ALA:O	5:F:118:GLN:C	2.49	0.51
5:F:183:ASP:OD2	5:F:183:ASP:C	2.47	0.51
1:A:1205:U:H1'	5:F:195:VAL:HG22	1.93	0.51
6:G:113:SER:HB3	6:G:116:GLN:CG	2.41	0.51
7:H:140:ARG:CB	7:H:140:ARG:CZ	2.88	0.51
7:H:80:ILE:HD12	7:H:80:ILE:H	1.74	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:I:36:ARG:NH1	8:I:36:ARG:CB	2.74	0.51
9:J:18:TYR:O	9:J:19:GLY:C	2.49	0.51
9:J:74:GLU:CG	9:J:75:VAL:H	2.10	0.51
10:K:97:VAL:HG13	10:K:98:LYS:N	2.25	0.51
11:L:67:GLY:N	11:L:73:GLN:NE2	2.58	0.51
12:M:44:VAL:HA	12:M:66:ARG:HB3	1.92	0.51
1:A:1061:G:H5'	12:M:59:SER:OG	2.11	0.51
12:M:7:LYS:HZ2	12:M:71:LEU:HD21	1.74	0.51
13:N:18:ARG:CD	13:N:34:ASP:O	2.59	0.51
13:N:63:LEU:HG	13:N:66:LEU:HD12	1.91	0.51
13:N:68:ALA:O	13:N:72:ALA:HB2	2.11	0.51
18:S:26:ARG:NE	18:S:31:LYS:HZ3	2.08	0.51
18:S:3:LYS:C	18:S:4:ILE:HD13	2.30	0.51
20:U:41:LYS:HA	20:U:44:LEU:HD23	1.93	0.51
3:D:20:U:C2'	3:D:20:U:O2	2.57	0.51
3:D:48:C:OP1	3:D:48:C:O4'	2.29	0.51
5:F:60:ALA:HA	12:M:92:THR:O	2.11	0.51
19:T:100:LYS:HB3	19:T:100:LYS:HZ2	1.74	0.51
1:A:1384:C:H2'	1:A:1385:G:O4'	2.09	0.51
1:A:1064:G:O2'	1:A:1065:U:H1'	2.10	0.51
1:A:1102:A:C6	1:A:1103:C:C4	2.99	0.51
1:A:1227:A:C8	1:A:1228:C:O4'	2.58	0.51
1:A:1248:A:C2	1:A:1249:C:N3	2.78	0.51
1:A:1329:A:C2'	1:A:1330:U:H5'	2.40	0.51
1:A:1350:A:N6	1:A:1373:G:N2	2.59	0.51
1:A:1415:G:C2	1:A:1416:G:C8	2.99	0.51
1:A:1425:U:C2	1:A:1426:C:C5	2.98	0.51
1:A:1442:G:O5'	1:A:1442:G:N3	2.44	0.51
1:A:1418:A:N1	1:A:1483:A:C6	2.79	0.51
1:A:149:A:H2'	1:A:150:C:C6	2.46	0.51
1:A:1510:U:C2'	1:A:1511:G:C8	2.92	0.51
1:A:332:G:O2'	1:A:333:G:H5'	2.11	0.51
1:A:438:G:H5''	6:G:123:HIS:HB3	1.92	0.51
1:A:539:A:OP2	14:O:115:LYS:CE	2.58	0.51
1:A:577:G:O2'	1:A:578:C:O5'	2.22	0.51
1:A:629:G:C2	1:A:630:G:C8	2.99	0.51
1:A:657:G:H4'	17:R:28:GLN:NE2	2.25	0.51
1:A:686:U:H2'	1:A:687:A:H8	1.76	0.51
1:A:706:A:N3	1:A:707:C:C6	2.78	0.51
1:A:765:G:N2	1:A:816:A:H2	2.06	0.51
1:A:80:G:H2'	1:A:81:G:C8	2.45	0.51
1:A:851:G:C2	1:A:852:G:C1'	2.94	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:857:C:C2	1:A:858:G:H1'	2.45	0.51
1:A:85:U:H2'	1:A:86:U:C5'	2.40	0.51
1:A:570:G:C6	1:A:866:C:N4	2.78	0.51
1:A:85:U:O2'	1:A:86:U:H5'	2.11	0.51
1:A:872:A:C5	1:A:874:G:C8	2.99	0.51
1:A:958:A:H2'	1:A:959:A:C8	2.45	0.51
1:A:971:G:C5	1:A:1365:G:H5'	2.46	0.51
4:E:35:GLU:HG2	4:E:39:ILE:O	2.11	0.51
4:E:58:ILE:O	4:E:61:LEU:CB	2.59	0.51
5:F:179:ARG:O	5:F:206:GLU:HG3	2.11	0.51
6:G:17:VAL:O	6:G:18:LYS:O	2.29	0.51
6:G:60:GLU:O	6:G:63:LYS:HD2	2.10	0.51
6:G:76:ARG:HG3	6:G:207:TYR:CE2	2.46	0.51
7:H:14:ARG:HG2	7:H:29:GLY:O	2.10	0.51
7:H:20:GLN:NE2	7:H:21:ALA:N	2.59	0.51
8:I:11:ASN:ND2	8:I:86:ARG:HH22	2.07	0.51
8:I:52:ILE:CG2	8:I:53:ALA:H	2.23	0.51
9:J:71:PRO:HD2	9:J:100:ALA:HB2	1.92	0.51
9:J:71:PRO:CG	9:J:96:GLN:HG3	2.40	0.51
9:J:71:PRO:HD3	9:J:100:ALA:HB2	1.92	0.51
10:K:79:VAL:O	10:K:80:ILE:C	2.47	0.51
12:M:82:ILE:O	12:M:86:MET:CB	2.56	0.51
12:M:9:ARG:HG3	12:M:95:GLU:OE2	2.11	0.51
13:N:58:PRO:CA	13:N:90:GLY:HA3	2.41	0.51
13:N:57:THR:OG1	13:N:59:TYR:HB2	2.10	0.51
13:N:43:SER:CB	13:N:64:ALA:HB1	2.40	0.51
14:O:35:GLY:HA3	14:O:60:LEU:HB3	1.93	0.51
16:Q:36:PHE:CD1	16:Q:36:PHE:O	2.64	0.51
18:S:58:TYR:O	18:S:61:SER:HB3	2.11	0.51
14:O:126:LYS:HZ2	14:O:128:ALA:N	2.06	0.51
3:D:40:C:H3'	3:D:41:C:H5''	1.91	0.51
1:A:513:C:C4	1:A:514:C:C5	2.98	0.51
1:A:1071:C:N4	1:A:1084:G:N2	2.58	0.51
1:A:1198:G:O2'	1:A:1199:U:H5'	2.11	0.51
1:A:1230:C:O2	15:P:126:LYS:CD	2.58	0.51
1:A:1276:G:O2'	1:A:1277:C:H5'	2.10	0.51
1:A:1298:C:C6	9:J:114:ARG:NH1	2.79	0.51
1:A:135:C:C6	1:A:135:C:C3'	2.93	0.51
1:A:1399:C:C4	1:A:1502:A:N6	2.77	0.51
1:A:192:U:H5'	22:W:102:GLY:HA2	1.91	0.51
1:A:300:A:H8	1:A:300:A:O5'	1.94	0.51
1:A:306:G:O5'	1:A:306:G:C8	2.64	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:411:A:C5	1:A:429:U:C4	2.99	0.51
1:A:40:C:O2'	1:A:41:G:H5'	2.10	0.51
1:A:44:G:H2'	1:A:45:U:O5'	2.10	0.51
1:A:474:G:H2'	1:A:475:G:H8	1.76	0.51
1:A:494:U:C2'	1:A:495:A:H5'	2.41	0.51
1:A:527:G:H2'	1:A:528:C:C6	2.46	0.51
1:A:531:U:H5''	1:A:532:A:OP1	2.11	0.51
1:A:782:A:N1	1:A:801:U:C2	2.78	0.51
4:E:58:ILE:O	4:E:61:LEU:CD2	2.58	0.51
4:E:59:GLU:O	4:E:62:ALA:HB3	2.11	0.51
4:E:97:TRP:CZ3	4:E:172:ILE:HB	2.46	0.51
5:F:108:ASN:O	5:F:110:ASN:N	2.44	0.51
5:F:116:VAL:C	5:F:119:ARG:HB3	2.30	0.51
6:G:147:ALA:O	6:G:149:ALA:N	2.43	0.51
6:G:30:LYS:CG	6:G:35:ARG:HD2	2.39	0.51
6:G:81:GLU:O	6:G:85:LYS:HB2	2.11	0.51
7:H:133:TYR:O	7:H:136:MET:HB2	2.11	0.51
7:H:94:ALA:HB1	7:H:98:THR:CG2	2.31	0.51
8:I:79:LEU:O	8:I:81:ILE:N	2.44	0.51
9:J:16:LEU:HD12	11:L:44:VAL:HG23	1.93	0.51
10:K:11:THR:HA	10:K:14:ARG:NH2	2.25	0.51
10:K:26:VAL:HG13	10:K:27:PRO:HD2	1.91	0.51
10:K:39:LEU:HB3	10:K:45:ILE:CG2	2.38	0.51
10:K:6:ILE:HG21	10:K:85:ARG:NH2	2.26	0.51
11:L:11:LYS:N	11:L:104:ARG:NH2	2.55	0.51
11:L:49:PRO:HG3	11:L:81:ILE:HB	1.92	0.51
13:N:126:ARG:CZ	13:N:126:ARG:HB3	2.41	0.51
1:A:684:A:C3'	13:N:12:ARG:HH22	2.23	0.51
13:N:41:THR:HB	13:N:71:LYS:HD3	1.92	0.51
5:F:12:LEU:CD2	16:Q:58:LYS:H	2.20	0.51
18:S:75:ARG:O	18:S:78:GLY:N	2.44	0.51
19:T:29:HIS:CE1	19:T:31:LEU:HB3	2.46	0.51
19:T:63:ARG:CG	19:T:64:PRO:HD2	2.38	0.51
19:T:81:ARG:HG3	19:T:84:LEU:HG	1.93	0.51
20:U:26:LEU:HB2	20:U:42:ARG:NH1	2.26	0.51
1:A:491:G:O2'	1:A:492:G:H5'	2.10	0.51
2:1:30:U:H6	2:1:30:U:C5'	2.11	0.51
1:A:1026:G:C8	1:A:1027:C:H6	2.28	0.51
1:A:1051:C:H2'	1:A:1052:U:C6	2.46	0.51
1:A:1054:C:H41	3:B:34:G:HO2'	1.57	0.51
1:A:1064:G:N3	1:A:1066:C:C4	2.78	0.51
1:A:1151:A:P	12:M:41:PRO:HA	2.50	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1212:U:O2'	1:A:1213:A:H8	1.92	0.51
1:A:1251:A:C4'	1:A:1370:G:H4'	2.41	0.51
1:A:1465:C:C2'	1:A:1466:C:O5'	2.59	0.51
1:A:191(D):U:O2'	1:A:191(E):G:H5'	2.11	0.51
1:A:270:A:H8	1:A:270:A:OP2	1.94	0.51
1:A:323:U:C5	1:A:324:G:C1'	2.94	0.51
1:A:380:G:N2	1:A:383:A:OP2	2.44	0.51
1:A:27:G:H22	1:A:557:G:H1'	1.73	0.51
1:A:750:G:H1'	17:R:22:THR:C	2.31	0.51
1:A:759:A:N6	1:A:760:G:C2	2.79	0.51
1:A:795:C:C4'	1:A:1506:U:C2	2.94	0.51
1:A:848:C:C2	1:A:849:C:C6	2.98	0.51
1:A:872:A:C2'	1:A:873:A:C5'	2.82	0.51
1:A:955:U:H2'	1:A:956:U:H6	1.76	0.51
1:A:967:C:H2'	1:A:968:A:C8	2.45	0.51
3:B:39:U:H2'	3:B:40:C:O4'	2.11	0.51
4:E:101:MET:HB3	4:E:105:PHE:CE1	2.46	0.51
5:F:37:GLN:O	5:F:38:ARG:C	2.47	0.51
6:G:8:VAL:O	6:G:11:LEU:HB2	2.11	0.51
6:G:13:ARG:HA	6:G:32:ALA:CB	2.41	0.51
6:G:31:CYS:C	6:G:33:MET:N	2.64	0.51
7:H:63:ARG:C	7:H:66:MET:HG2	2.30	0.51
8:I:12:PRO:C	8:I:14:LEU:H	2.14	0.51
8:I:2:ARG:NE	8:I:69:GLU:HG2	2.26	0.51
8:I:97:PHE:CE2	20:U:31:LEU:HD22	2.46	0.51
9:J:135:VAL:O	9:J:139:GLU:OE2	2.29	0.51
9:J:42:ILE:HD13	9:J:116:ALA:CB	2.41	0.51
9:J:72:ARG:HG3	9:J:73:MET:N	2.24	0.51
11:L:49:PRO:HB3	11:L:101:PHE:CZ	2.46	0.51
11:L:47:LEU:HD11	11:L:50:LEU:HD22	1.93	0.51
13:N:82:VAL:CG1	13:N:108:ILE:HG23	2.40	0.51
15:P:73:GLU:O	15:P:74:VAL:C	2.50	0.51
1:A:1049:U:O4	16:Q:3:ARG:HB2	2.11	0.51
17:R:70:LEU:CD2	17:R:81:LEU:HD13	2.41	0.51
17:R:78:TYR:CD2	17:R:78:TYR:C	2.84	0.51
18:S:54:GLU:O	18:S:57:ARG:N	2.44	0.51
18:S:57:ARG:O	18:S:58:TYR:C	2.48	0.51
19:T:32:TYR:O	19:T:33:GLY:C	2.48	0.51
19:T:56:VAL:C	19:T:57:VAL:CG1	2.79	0.51
19:T:60:ILE:HD13	19:T:62:SER:HG	1.73	0.51
20:U:22:VAL:HG22	20:U:55:ARG:NH1	2.25	0.51
21:V:30:LEU:CG	21:V:50:ALA:HB2	2.41	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:W:13:LEU:H	22:W:13:LEU:CD1	1.99	0.51
22:W:37:SER:O	22:W:41:ILE:HG13	2.09	0.51
22:W:88:VAL:O	22:W:92:LEU:HD12	2.11	0.51
3:D:75:C:H5''	3:D:76:A:C1'	2.41	0.51
6:G:159:ARG:O	6:G:163:GLU:HB3	2.11	0.51
1:A:219:C:H6	1:A:219:C:O5'	1.94	0.51
1:A:1094:G:H3'	1:A:1108:G:H22	1.76	0.51
1:A:1124:G:N2	1:A:1126:U:N3	2.39	0.51
1:A:1224:G:O6	1:A:1322:C:C1'	2.59	0.51
1:A:1320:C:H3'	1:A:1321:C:C5	2.46	0.51
1:A:1321:C:C3'	1:A:1321:C:C6	2.94	0.51
1:A:1326:C:C2	1:A:1327:C:C6	2.99	0.51
1:A:1339:A:C2	3:C:31:A:O2'	2.64	0.51
1:A:1419:G:C6	1:A:1482:G:C2	2.99	0.51
1:A:1506:U:O4	1:A:1521:G:O3'	2.27	0.51
1:A:16:A:N3	1:A:16:A:H2'	2.26	0.51
1:A:247:G:C6	1:A:248:C:C5	2.99	0.51
1:A:25:C:H4'	1:A:524:G:N3	2.25	0.51
1:A:254:G:O6	1:A:273:A:N6	2.44	0.51
1:A:450:G:H5''	1:A:451:A:O5'	2.11	0.51
1:A:498:A:O2'	1:A:500:G:O4'	2.26	0.51
1:A:598:U:N3	1:A:599:C:C5	2.78	0.51
1:A:688:G:C6	1:A:700:G:C6	2.99	0.51
1:A:692:U:N3	1:A:695:A:OP2	2.44	0.51
1:A:896:C:H2'	1:A:897:C:H6	1.76	0.51
1:A:957:U:O2	1:A:959:A:C8	2.64	0.51
3:C:74:C:H6	3:C:75:C:H5''	1.76	0.51
4:E:152:PHE:CG	4:E:153:ARG:N	2.77	0.51
4:E:20:GLU:N	4:E:39:ILE:HD11	2.25	0.51
4:E:28:PHE:CD1	4:E:32:ILE:HD12	2.46	0.51
5:F:179:ARG:HD2	5:F:206:GLU:OE1	2.10	0.51
5:F:182:ILE:HD11	5:F:203:PHE:CD1	2.46	0.51
5:F:52:LEU:O	5:F:53:ALA:CB	2.59	0.51
5:F:39:ILE:HG21	5:F:57:ILE:CD1	2.40	0.51
5:F:78:GLY:O	5:F:80:GLY:N	2.43	0.51
6:G:79:PHE:HE1	6:G:204:ILE:HG23	1.75	0.51
8:I:40:VAL:HA	8:I:63:TYR:CD1	2.46	0.51
9:J:20:ASP:OD1	9:J:22:LEU:HB2	2.10	0.51
9:J:78:ARG:NE	9:J:80:VAL:HG23	2.26	0.51
3:D:32:U:H1'	9:J:86:GLN:CD	2.31	0.51
12:M:9:ARG:HH11	12:M:9:ARG:HB2	1.75	0.51
14:O:62:SER:C	14:O:64:TYR:N	2.62	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1308:U:H6	15:P:99:ARG:HH12	1.49	0.51
16:Q:27:CYS:O	16:Q:40:CYS:SG	2.69	0.51
16:Q:41:ARG:O	16:Q:44:LEU:HB3	2.11	0.51
17:R:79:ARG:NH1	17:R:79:ARG:CB	2.74	0.51
19:T:101:ARG:HD2	19:T:101:ARG:N	2.25	0.51
19:T:59:ILE:HG12	19:T:71:PHE:HB3	1.93	0.51
19:T:88:TYR:HA	19:T:91:ARG:HE	1.76	0.51
1:A:1014:A:O3'	21:V:14:HIS:HE1	1.94	0.51
23:X:3:LYS:HZ2	23:X:13:ILE:HG21	1.75	0.51
23:X:7:ARG:O	23:X:12:LYS:HD3	2.11	0.51
15:P:58:GLU:O	15:P:61:GLU:HB3	2.11	0.51
2:1:9:U:N3	2:1:13:U:C4	2.80	0.50
1:A:1039:C:O2'	1:A:1040:U:H5'	2.11	0.50
1:A:1109:C:H2'	1:A:1110:A:C8	2.47	0.50
1:A:1129:C:C4	1:A:1139:G:C6	3.00	0.50
1:A:1279:A:O2'	1:A:1282:C:N4	2.44	0.50
1:A:134:A:N6	1:A:135:C:N4	2.59	0.50
1:A:1475:G:O2'	1:A:1476:G:H5'	2.10	0.50
1:A:1487:G:C2	1:A:1488:G:C8	2.98	0.50
1:A:145:G:C6	1:A:178:C:C4	2.99	0.50
1:A:191(C):G:C2'	1:A:191(D):U:O4'	2.59	0.50
1:A:210:U:H4'	1:A:216:G:O5'	2.10	0.50
1:A:267:C:H2'	1:A:268:C:C6	2.46	0.50
1:A:266:G:H22	1:A:270:A:N6	2.09	0.50
1:A:294:U:C2	1:A:295:C:C5	2.99	0.50
1:A:328:C:HO2'	1:A:329:A:P	2.34	0.50
1:A:439:A:H1'	1:A:496:A:C2	2.46	0.50
1:A:440:A:H62	1:A:493:G:H21	1.58	0.50
1:A:55:A:H2'	1:A:56:U:C4'	2.41	0.50
1:A:68:G:C5	1:A:69:G:C8	2.99	0.50
1:A:701:C:H4'	1:A:702:A:OP2	2.12	0.50
1:A:834:C:C4	1:A:853:G:N1	2.79	0.50
1:A:939:G:H2'	1:A:940:C:C5	2.44	0.50
1:A:9:G:C8	7:H:126:ARG:NH2	2.79	0.50
4:E:57:PHE:HD2	4:E:57:PHE:C	2.15	0.50
5:F:11:ARG:HH11	5:F:15:THR:CG2	2.23	0.50
6:G:64:LEU:C	6:G:64:LEU:HD13	2.31	0.50
7:H:147:ASP:O	7:H:150:ARG:N	2.44	0.50
7:H:45:PHE:CG	7:H:45:PHE:O	2.64	0.50
7:H:78:HIS:HE2	7:H:142:LEU:HB3	1.75	0.50
10:K:14:ARG:HD2	10:K:15:ASN:HD22	1.76	0.50
10:K:19:VAL:HB	10:K:21:LYS:CD	2.41	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:L:16:ARG:O	11:L:63:ILE:HG23	2.10	0.50
14:O:52:LEU:HG	14:O:52:LEU:O	2.11	0.50
14:O:84:LEU:CD2	14:O:85:ILE:N	2.74	0.50
15:P:11:ARG:CG	15:P:11:ARG:NH1	2.71	0.50
15:P:88:ARG:HE	15:P:98:VAL:HG11	1.76	0.50
16:Q:51:GLY:C	16:Q:53:LEU:N	2.62	0.50
22:W:13:LEU:CB	22:W:17:ARG:HH21	2.13	0.50
3:D:57:G:H8	3:D:57:G:P	2.34	0.50
18:S:67:THR:N	18:S:70:ALA:HB3	2.26	0.50
1:A:1382:C:C6	1:A:1383:C:H5	2.29	0.50
1:A:1028(B):C:O2	1:A:1028(B):C:C2'	2.58	0.50
1:A:1105:A:O2'	1:A:1106:G:H5'	2.11	0.50
1:A:1324:A:C6	1:A:1325:C:C5	3.00	0.50
1:A:927:G:N1	1:A:1391:U:C2	2.79	0.50
1:A:1495:U:O2'	1:A:1496:C:O5'	2.29	0.50
1:A:34:C:O4'	14:O:32:PHE:CE2	2.64	0.50
1:A:559:A:O2'	1:A:560:U:OP2	2.23	0.50
1:A:836:G:C2	1:A:837:G:C8	2.99	0.50
1:A:836:G:C6	1:A:851:G:C6	2.99	0.50
1:A:850:U:H2'	1:A:851:G:H8	1.76	0.50
1:A:862:C:C4	1:A:863:U:C5	2.99	0.50
1:A:915:A:C8	1:A:915:A:O5'	2.62	0.50
1:A:936:C:H2'	1:A:937:A:C5'	2.41	0.50
1:A:939:G:N2	1:A:940:C:N3	2.59	0.50
3:C:14:A:C4	3:C:15:G:C8	2.99	0.50
4:E:124:SER:C	4:E:126:GLU:H	2.15	0.50
4:E:150:SER:C	4:E:153:ARG:HB2	2.32	0.50
4:E:167:PRO:CG	4:E:168:THR:H	2.21	0.50
4:E:16:HIS:NE2	4:E:210:SER:HA	2.25	0.50
4:E:44:LEU:CD2	4:E:44:LEU:H	2.22	0.50
4:E:58:ILE:HG23	4:E:61:LEU:HD13	1.93	0.50
4:E:80:ILE:CD1	4:E:208:ILE:CG2	2.87	0.50
4:E:72:GLY:CA	4:E:81:VAL:HG21	2.41	0.50
4:E:82:ARG:CB	4:E:94:ASN:ND2	2.70	0.50
1:A:1112:C:O2	5:F:179:ARG:CZ	2.59	0.50
5:F:182:ILE:HG23	5:F:202:ILE:C	2.32	0.50
6:G:148:VAL:HG11	6:G:153:ARG:HA	1.92	0.50
6:G:155:LEU:HD22	6:G:155:LEU:H	1.77	0.50
6:G:62:GLN:O	6:G:66:ARG:HD2	2.10	0.50
6:G:67:ILE:CD1	6:G:67:ILE:C	2.79	0.50
7:H:37:ARG:NH1	7:H:111:GLU:C	2.65	0.50
7:H:84:PHE:HB3	7:H:87:SER:O	2.10	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:I:60:PHE:HE2	20:U:78:LEU:HD11	1.76	0.50
10:K:119:LEU:HB3	10:K:123:GLU:CD	2.31	0.50
10:K:84:ARG:O	10:K:135:CYS:SG	2.69	0.50
10:K:14:ARG:HH11	10:K:14:ARG:CA	2.24	0.50
10:K:70:GLN:HE21	10:K:70:GLN:C	2.14	0.50
11:L:100:GLY:C	11:L:101:PHE:CD1	2.84	0.50
11:L:113:LYS:O	11:L:115:GLY:N	2.38	0.50
13:N:121:PRO:HB2	13:N:125:PHE:HD1	1.75	0.50
14:O:90:VAL:HB	14:O:96:VAL:CG1	2.42	0.50
15:P:125:ARG:HG3	15:P:125:ARG:O	2.11	0.50
15:P:29:ARG:HD3	15:P:64:TRP:CE2	2.46	0.50
15:P:73:GLU:C	15:P:75:ALA:N	2.62	0.50
15:P:90:LEU:CD2	15:P:93:ARG:HH11	2.24	0.50
15:P:96:LEU:O	15:P:98:VAL:N	2.45	0.50
17:R:15:PHE:O	17:R:16:ALA:C	2.49	0.50
20:U:26:LEU:HD23	20:U:29:PHE:HB2	1.93	0.50
22:W:21:LYS:HA	22:W:24:LEU:CD1	2.36	0.50
1:A:160:A:O2'	1:A:161:A:H5'	2.11	0.50
3:B:4:C:C2	3:B:5:G:N7	2.79	0.50
1:A:1128:C:H4'	1:A:1148:U:C5	2.46	0.50
1:A:116:A:O5'	1:A:116:A:C8	2.65	0.50
1:A:1189:C:O2'	1:A:1190:G:H5'	2.11	0.50
1:A:1202:G:H21	1:A:1203:C:H1'	1.70	0.50
1:A:1259:C:O2'	1:A:1283:G:N2	2.43	0.50
1:A:126:G:C6	1:A:236:G:O6	2.65	0.50
1:A:1277:C:C2'	1:A:1279:A:H8	2.24	0.50
1:A:1303:C:N4	1:A:1304:G:C2	2.79	0.50
1:A:1324:A:C6	1:A:1325:C:C4	3.00	0.50
1:A:1342:C:O2'	11:L:124:GLN:HA	2.11	0.50
1:A:136:C:H2'	1:A:137:C:C6	2.46	0.50
1:A:22:G:C4	1:A:23:C:C6	2.98	0.50
1:A:308:C:O2	1:A:309:G:C8	2.64	0.50
1:A:356:A:H2'	1:A:357:G:O4'	2.11	0.50
1:A:409:G:H2'	1:A:410:G:O5'	2.12	0.50
1:A:49:U:C4	1:A:364:A:N7	2.79	0.50
1:A:558:G:C4'	1:A:559:A:H5''	2.42	0.50
1:A:606:G:N2	1:A:631:G:N3	2.59	0.50
1:A:622:A:H2'	1:A:623:C:H5'	1.93	0.50
1:A:611:A:N6	1:A:629:G:C6	2.74	0.50
1:A:957:U:H1'	1:A:960:U:H5	1.76	0.50
1:A:978:A:H61	1:A:1361:G:N2	2.05	0.50
4:E:142:LEU:C	4:E:142:LEU:HD23	2.31	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:149:LEU:O	4:E:150:SER:C	2.50	0.50
4:E:208:ILE:HD13	4:E:239:VAL:HG11	1.94	0.50
4:E:85:ALA:O	4:E:86:GLU:C	2.50	0.50
4:E:9:GLU:OE1	4:E:12:GLU:HG2	2.10	0.50
5:F:172:ARG:NH1	5:F:174:PRO:HD3	2.25	0.50
5:F:28:GLN:CD	5:F:29:TYR:N	2.64	0.50
6:G:104:VAL:HG11	6:G:140:VAL:CG2	2.26	0.50
1:A:404:U:P	6:G:118:ARG:NH1	2.84	0.50
1:A:404:U:H5'	6:G:122:ARG:HD3	1.94	0.50
6:G:19:LEU:O	6:G:20:TYR:C	2.48	0.50
6:G:61:LYS:HA	6:G:203:VAL:HG22	1.93	0.50
7:H:127:ASN:O	7:H:127:ASN:OD1	2.29	0.50
10:K:121:ASP:O	10:K:122:ARG:C	2.49	0.50
10:K:89:PRO:CB	10:K:92:ARG:HH21	2.23	0.50
12:M:22:LYS:NZ	12:M:90:LEU:CD1	2.73	0.50
12:M:48:THR:CA	12:M:62:HIS:HB3	2.40	0.50
14:O:8:ASN:O	14:O:9:GLN:C	2.50	0.50
17:R:46:HIS:O	17:R:47:LYS:HB2	2.11	0.50
18:S:21:VAL:N	18:S:36:ILE:HD11	2.26	0.50
19:T:29:HIS:CD2	19:T:30:PRO:HD2	2.47	0.50
19:T:51:TYR:CE1	19:T:73:VAL:HG11	2.46	0.50
19:T:10:VAL:CB	19:T:54:GLY:H	2.24	0.50
19:T:10:VAL:HB	19:T:55:ASP:N	2.26	0.50
19:T:75:ARG:CG	19:T:76:LEU:N	2.74	0.50
20:U:63:GLN:HA	20:U:66:LEU:HD21	1.94	0.50
20:U:81:PHE:O	20:U:82:THR:CB	2.59	0.50
1:A:1015:A:H2'	1:A:1016:A:H8	1.76	0.50
1:A:1101:A:C4'	1:A:1102:A:O5'	2.52	0.50
1:A:1362(A):C:H5'	1:A:1363:A:O5'	2.11	0.50
1:A:1401:G:H2'	1:A:1402:C:C4'	2.41	0.50
1:A:1463:C:O2'	1:A:1464:G:H5'	2.12	0.50
1:A:1517:G:N2	1:A:1518:A:C1'	2.73	0.50
1:A:245:C:N3	1:A:284:G:N1	2.59	0.50
1:A:577:G:N2	1:A:578:C:C2	2.79	0.50
1:A:579:G:C6	1:A:580:U:C5	3.00	0.50
1:A:595:G:N7	1:A:641:U:N3	2.59	0.50
1:A:712:A:H2'	1:A:713:G:C8	2.47	0.50
1:A:739:C:H2'	1:A:740:U:H5'	1.94	0.50
1:A:750:G:H1'	17:R:23:GLY:CA	2.42	0.50
1:A:778:G:C5	1:A:779:C:C5	2.99	0.50
1:A:792:A:C4	1:A:794:A:N6	2.79	0.50
1:A:829:G:O2'	1:A:830:G:H5'	2.12	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:663:A:C5'	1:A:836:G:OP1	2.57	0.50
1:A:848:C:N3	1:A:849:C:C5	2.79	0.50
1:A:872:A:C2	1:A:874:G:O6	2.64	0.50
1:A:899:C:N4	1:A:900:A:C6	2.79	0.50
3:C:21:A:N6	3:C:46:G:N1	2.59	0.50
3:C:73:A:HO2'	3:C:74:C:P	2.34	0.50
6:G:105:VAL:HG13	6:G:120:LEU:HD21	1.93	0.50
6:G:123:HIS:CB	6:G:125:HIS:HE1	2.24	0.50
6:G:100:ARG:NH2	6:G:136:PRO:O	2.44	0.50
6:G:110:PHE:HZ	6:G:147:ALA:CB	2.24	0.50
6:G:170:VAL:CG1	6:G:171:GLY:H	2.24	0.50
6:G:66:ARG:O	6:G:68:TYR:N	2.44	0.50
7:H:7:GLU:HG2	7:H:112:LEU:CD2	2.41	0.50
9:J:87:VAL:CG1	9:J:152:ALA:HA	2.31	0.50
9:J:49:ILE:HG21	9:J:121:ALA:CB	2.30	0.50
9:J:75:VAL:HG22	9:J:88:PRO:CB	2.41	0.50
10:K:40:ALA:CB	10:K:45:ILE:HG23	2.41	0.50
13:N:69:ALA:O	13:N:72:ALA:N	2.44	0.50
15:P:48:LEU:CD1	15:P:53:VAL:HA	2.41	0.50
16:Q:10:ALA:C	16:Q:12:ARG:N	2.64	0.50
17:R:36:ILE:CG2	17:R:37:ASN:N	2.73	0.50
18:S:74:LEU:HD22	18:S:79:VAL:CG2	2.42	0.50
18:S:75:ARG:HG3	18:S:80:PHE:CD1	2.46	0.50
19:T:26:GLN:O	19:T:27:PHE:HB3	2.12	0.50
21:V:39:THR:HG22	21:V:39:THR:O	2.11	0.50
21:V:51:VAL:O	21:V:58:VAL:HG22	2.11	0.50
22:W:42:GLN:O	22:W:43:LEU:C	2.49	0.50
1:A:336:C:C2	1:A:337:C:C5	2.99	0.50
1:A:341:C:O2'	1:A:342:C:O5'	2.29	0.50
1:A:1031:G:O2'	1:A:1032:A:H5'	2.10	0.50
3:D:70:G:H2'	3:D:71:G:C8	2.46	0.50
2:1:3:U:H2'	2:1:4:U:C5	2.47	0.50
1:A:926:G:H22	2:1:39:U:P	2.33	0.50
1:A:108:G:C2	1:A:109:A:N1	2.80	0.50
1:A:1117:G:N2	1:A:1184:G:C4	2.80	0.50
1:A:1128:C:C4	1:A:1139:G:O6	2.64	0.50
1:A:1148:U:C2'	1:A:1148:U:O2	2.58	0.50
1:A:1255:G:H1'	1:A:1259:C:H1'	1.93	0.50
1:A:258:G:C6	1:A:259:G:O6	2.65	0.50
1:A:295:C:N4	1:A:303:A:C2	2.80	0.50
1:A:32:A:N6	1:A:553:A:N6	2.59	0.50
1:A:50:A:O2'	1:A:360:A:C2	2.63	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:393:A:H2'	1:A:394:G:H8	1.77	0.50
1:A:410:G:N2	1:A:429:U:N3	2.60	0.50
1:A:465:A:N6	18:S:82:GLN:HE22	2.10	0.50
1:A:27:G:C6	1:A:557:G:C2	3.00	0.50
1:A:627:G:O2'	1:A:628:G:C5'	2.57	0.50
1:A:671:G:H2'	1:A:672:U:H1'	1.93	0.50
1:A:686:U:OP1	1:A:686:U:C4'	2.60	0.50
1:A:860:A:N7	1:A:861:G:C4	2.79	0.50
1:A:885:G:C2	1:A:913:A:N1	2.80	0.50
1:A:96:G:C2	1:A:97:U:C2	3.00	0.50
1:A:997:U:OP2	1:A:997:U:H6	1.94	0.50
4:E:114:ARG:O	4:E:118:LEU:HB2	2.11	0.50
4:E:28:PHE:CA	4:E:194:PRO:HG2	2.41	0.50
4:E:69:LEU:HB3	4:E:162:ILE:CG2	2.36	0.50
5:F:28:GLN:NE2	5:F:29:TYR:N	2.60	0.50
5:F:78:GLY:HA3	5:F:82:GLU:OE1	2.11	0.50
5:F:91:LEU:C	5:F:91:LEU:CD2	2.79	0.50
6:G:169:LYS:HA	6:G:176:LEU:CD1	2.41	0.50
6:G:199:ASN:OD1	6:G:202:LEU:HG	2.12	0.50
6:G:88:VAL:HG13	7:H:97:GLY:HA3	1.93	0.50
7:H:115:VAL:HG11	7:H:118:ILE:CD1	2.41	0.50
1:A:16:A:O4'	7:H:17:ALA:HB3	2.12	0.50
8:I:46:ARG:NH2	20:U:37:VAL:HG13	2.27	0.50
9:J:5:ARG:HH11	9:J:5:ARG:C	2.15	0.50
10:K:112:LEU:HD12	10:K:131:GLY:O	2.11	0.50
1:A:826:C:H5'	10:K:12:ARG:CZ	2.41	0.50
10:K:26:VAL:O	10:K:58:TYR:HD1	1.94	0.50
11:L:97:LYS:HB3	11:L:98:PRO:CD	2.39	0.50
13:N:57:THR:HG21	13:N:59:TYR:HB3	1.93	0.50
13:N:70:LYS:H	13:N:70:LYS:HD2	1.77	0.50
15:P:20:THR:OG1	15:P:26:GLY:HA2	2.11	0.50
15:P:67:GLU:HG3	15:P:68:GLY:N	2.23	0.50
15:P:90:LEU:HD23	15:P:93:ARG:HD3	1.93	0.50
17:R:71:GLN:CG	17:R:75:PRO:HB3	2.23	0.50
18:S:75:ARG:CG	18:S:80:PHE:CB	2.81	0.50
18:S:7:ALA:O	18:S:17:TYR:HA	2.11	0.50
19:T:45:HIS:ND1	19:T:46:ASP:N	2.60	0.50
19:T:88:TYR:N	19:T:91:ARG:NH2	2.40	0.50
21:V:11:VAL:HG22	21:V:39:THR:O	2.11	0.50
22:W:27:LYS:C	22:W:27:LYS:CD	2.79	0.50
1:A:262:A:C4'	22:W:74:LYS:HG3	2.41	0.50
1:A:337:C:H2'	1:A:338:A:H8	1.75	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:B:9:A:C4	3:B:46:G:N2	2.79	0.50
3:B:74:C:H2'	3:B:75:C:O4'	2.11	0.50
1:A:102:G:H2'	1:A:103:C:O4'	2.12	0.50
1:A:1196:U:C3'	1:A:1196:U:C6	2.94	0.50
1:A:1224:G:C2'	1:A:1225:A:OP1	2.60	0.50
1:A:1284:C:C2	1:A:1285:A:N7	2.79	0.50
1:A:1302:U:O2'	1:A:1303:C:OP1	2.24	0.50
1:A:1314:C:N4	21:V:4:SER:OG	2.45	0.50
1:A:1377:A:C5'	1:A:1378:C:C5	2.95	0.50
1:A:393:A:C6	1:A:394:G:N7	2.80	0.50
1:A:430:A:N7	1:A:431:A:N7	2.60	0.50
1:A:433:C:H2'	1:A:434:U:C6	2.47	0.50
1:A:446:G:O2'	1:A:447:G:H5'	2.11	0.50
1:A:5:U:O2'	1:A:6:G:P	2.70	0.50
1:A:749:C:C2'	1:A:749:C:O2	2.59	0.50
1:A:831:U:C2	1:A:832:C:C5	2.99	0.50
3:C:23:A:N6	3:C:24:G:O6	2.45	0.50
4:E:171:ALA:HA	4:E:174:VAL:CB	2.40	0.50
4:E:67:THR:CG2	4:E:155:LEU:HD21	2.42	0.50
5:F:76:VAL:CG1	5:F:77:ILE:N	2.74	0.50
6:G:98:GLU:CA	6:G:103:ASN:ND2	2.68	0.50
6:G:139:ARG:CG	6:G:140:VAL:N	2.74	0.50
6:G:165:MET:HG3	6:G:166:LYS:N	2.26	0.50
6:G:187:ARG:CD	6:G:188:LEU:H	2.24	0.50
6:G:64:LEU:CD1	6:G:75:PHE:CZ	2.95	0.50
8:I:1:MET:HA	8:I:67:MET:O	2.11	0.50
8:I:75:LEU:O	8:I:76:ALA:C	2.50	0.50
9:J:51:GLN:CD	9:J:58:PRO:HD3	2.32	0.50
9:J:79:ARG:HA	9:J:83:ALA:O	2.11	0.50
9:J:79:ARG:NE	9:J:84:ASN:HB3	2.27	0.50
11:L:5:TYR:CZ	11:L:18:PHE:CZ	2.99	0.50
12:M:19:SER:CA	12:M:91:PRO:HG3	2.41	0.50
12:M:57:LYS:O	12:M:58:ASP:CG	2.50	0.50
13:N:79:SER:HA	13:N:104:GLN:HE21	1.76	0.50
13:N:122:LYS:O	13:N:123:LYS:C	2.50	0.50
13:N:18:ARG:HB2	13:N:20:TYR:CE1	2.44	0.50
13:N:85:ARG:NE	13:N:111:ASP:OD2	2.45	0.50
14:O:39:VAL:HG11	14:O:41:ARG:NH2	2.26	0.50
15:P:88:ARG:CG	15:P:98:VAL:HG12	2.27	0.50
17:R:4:THR:HG22	17:R:6:GLU:OE1	2.12	0.50
19:T:12:SER:OG	19:T:14:LYS:HD2	2.11	0.50
19:T:2:PRO:O	19:T:4:LYS:N	2.45	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:T:7:THR:CG2	19:T:57:VAL:O	2.58	0.50
3:D:50:U:H2'	3:D:51:U:C6	2.47	0.50
3:D:54:U:OP2	3:D:55:U:O4	2.29	0.50
2:1:22:C:H2'	2:1:23:A:N9	2.26	0.50
2:1:41:U:H2'	2:1:42:U:O4'	2.12	0.50
2:1:51:U:O2'	2:1:52:U:H5'	2.10	0.50
1:A:999:U:C4	1:A:1042:G:N1	2.80	0.50
1:A:1058:G:C2'	1:A:1059:C:H5'	2.42	0.50
1:A:1094:G:H3'	1:A:1108:G:N2	2.27	0.50
1:A:1113:C:H2'	1:A:1114:C:H6	1.77	0.50
1:A:1160:G:O6	1:A:1177:G:N2	2.44	0.50
1:A:1365:G:N1	1:A:1366:C:C4	2.80	0.50
1:A:1379:G:C5	1:A:1380:U:C5	3.00	0.50
1:A:1463:C:C2'	1:A:1464:G:H5'	2.41	0.50
1:A:156:G:C6	1:A:157:G:N7	2.80	0.50
1:A:254:G:C6	1:A:273:A:C6	3.00	0.50
1:A:451:A:OP1	1:A:481:G:N1	2.43	0.50
1:A:465:A:N6	1:A:467:G:N3	2.60	0.50
1:A:652:U:C2	1:A:752:G:N2	2.79	0.50
1:A:696:A:N6	1:A:797:C:O2'	2.43	0.50
1:A:778:G:C4	1:A:779:C:C6	3.00	0.50
1:A:833:U:C2	1:A:834:C:H5	2.30	0.50
1:A:957:U:H2'	1:A:959:A:OP2	2.11	0.50
3:C:38:A:C2'	3:C:39:U:H5'	2.42	0.50
4:E:131:PRO:C	4:E:133:LYS:N	2.64	0.50
4:E:178:ARG:O	10:K:71:GLY:O	2.30	0.50
4:E:177:ALA:O	4:E:179:LYS:N	2.45	0.50
4:E:208:ILE:HG21	4:E:239:VAL:CG1	2.37	0.50
5:F:11:ARG:HH11	5:F:15:THR:HG21	1.77	0.50
1:A:532:A:H5''	5:F:161:GLU:OE1	2.11	0.50
5:F:11:ARG:HH22	5:F:178:LEU:HA	1.77	0.50
5:F:31:HIS:CE1	5:F:34:LEU:HD13	2.47	0.50
5:F:47:LEU:HD22	5:F:47:LEU:N	2.27	0.50
1:A:1191:A:H5''	5:F:4:LYS:HD3	1.94	0.50
6:G:101:LEU:C	6:G:104:VAL:HG22	2.26	0.50
6:G:187:ARG:HH21	6:G:188:LEU:HD11	1.77	0.50
7:H:11:ILE:O	7:H:12:LEU:C	2.50	0.50
7:H:122:GLU:HG2	7:H:126:ARG:CG	2.41	0.50
10:K:69:ARG:O	10:K:74:PRO:HA	2.10	0.50
11:L:45:ALA:O	11:L:78:LYS:CB	2.58	0.50
13:N:102:GLY:O	13:N:104:GLN:N	2.45	0.50
13:N:13:GLN:CA	13:N:76:GLY:HA3	2.42	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:N:63:LEU:HA	13:N:66:LEU:CG	2.41	0.50
14:O:69:TYR:O	14:O:71:PRO:CD	2.59	0.50
14:O:85:ILE:CG1	14:O:99:HIS:O	2.60	0.50
14:O:89:ARG:NE	14:O:97:ARG:HG3	2.25	0.50
16:Q:26:ARG:HB3	16:Q:43:CYS:HB3	1.94	0.50
17:R:61:GLY:O	17:R:62:GLN:C	2.50	0.50
17:R:62:GLN:N	17:R:65:ARG:HH12	2.10	0.50
20:U:60:GLY:O	20:U:64:ARG:HG3	2.11	0.50
21:V:39:THR:O	21:V:40:ILE:C	2.50	0.50
21:V:58:VAL:HG21	21:V:75:ALA:CB	2.41	0.50
21:V:58:VAL:O	21:V:58:VAL:HG23	2.11	0.50
2:1:28:G:C2'	2:1:29:G:H5'	2.41	0.50
1:A:1204:A:C2'	1:A:1205:U:H5'	2.41	0.50
1:A:1237:C:H5''	1:A:1238:A:C8	2.47	0.50
1:A:35:G:C6	1:A:550:G:N1	2.80	0.50
1:A:429:U:O2	1:A:430:A:C8	2.65	0.50
1:A:598:U:O2'	1:A:599:C:H5'	2.12	0.50
1:A:676:A:C4	1:A:677:U:C5	2.99	0.50
1:A:571:U:OP1	1:A:819:A:C8	2.65	0.50
3:B:41:C:H5'	3:B:41:C:H6	1.75	0.50
3:C:34:G:C4	3:C:35:A:N7	2.80	0.50
4:E:171:ALA:O	4:E:172:ILE:C	2.49	0.50
4:E:163:PHE:CE1	4:E:201:ILE:HD13	2.45	0.50
4:E:72:GLY:C	4:E:74:LYS:N	2.63	0.50
5:F:30:ARG:H	5:F:30:ARG:CD	2.23	0.50
6:G:108:LEU:HD12	6:G:183:GLY:HA3	1.93	0.50
1:A:404:U:O4'	6:G:122:ARG:NH1	2.45	0.50
7:H:71:LEU:HG	7:H:72:GLN:H	1.77	0.50
8:I:52:ILE:CG2	8:I:87:ARG:HH22	2.25	0.50
9:J:69:VAL:C	9:J:138:LYS:HD2	2.32	0.50
9:J:68:ASN:ND2	9:J:128:ALA:HA	2.27	0.50
9:J:75:VAL:HA	9:J:89:MET:HE3	1.93	0.50
10:K:110:ALA:C	10:K:111:ILE:HD12	2.31	0.50
12:M:57:LYS:HG2	12:M:57:LYS:O	2.11	0.50
13:N:22:HIS:O	13:N:28:THR:HG23	2.12	0.50
13:N:63:LEU:HA	13:N:66:LEU:CD1	2.41	0.50
13:N:62:GLN:OE1	13:N:63:LEU:N	2.45	0.50
14:O:83:VAL:C	14:O:104:VAL:HG11	2.32	0.50
1:A:363:A:N7	14:O:31:PRO:HD2	2.25	0.50
14:O:41:ARG:CB	14:O:41:ARG:NH1	2.70	0.50
15:P:39:ILE:O	15:P:40:ASN:C	2.49	0.50
15:P:96:LEU:N	15:P:96:LEU:HD23	2.27	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:580:U:C4'	17:R:58:MET:HG2	2.42	0.50
18:S:52:ASP:OD2	18:S:55:ARG:N	2.45	0.50
21:V:29:ARG:HG2	21:V:48:THR:CB	2.42	0.50
21:V:40:ILE:HB	21:V:68:GLY:HA2	1.94	0.50
1:A:615:C:H2'	1:A:616:G:O4'	2.11	0.50
1:A:1027:C:C4	1:A:1028:C:C5	2.99	0.50
1:A:1058:G:O5'	1:A:1058:G:C8	2.64	0.50
1:A:1065:U:C2'	1:A:1066:C:OP2	2.59	0.50
1:A:1329:A:O3'	15:P:24:GLY:HA2	2.12	0.50
1:A:1352:C:H2'	1:A:1353:G:O4'	2.12	0.50
1:A:1419:G:O2'	1:A:1420:C:C5'	2.60	0.50
1:A:1413:A:H61	1:A:1487:G:H1	1.60	0.50
1:A:152:A:H3'	1:A:152:A:C8	2.47	0.50
1:A:1533:C:C2'	1:A:1534:A:O5'	2.60	0.50
1:A:181:G:C2'	1:A:182:U:OP2	2.59	0.50
1:A:186(D):C:H2'	1:A:186(E):C:C5	2.46	0.50
1:A:299:G:H2'	1:A:300:A:C5	2.46	0.50
1:A:322:C:H2'	1:A:323:U:O4'	2.11	0.50
1:A:327:A:O3'	1:A:328:C:O4'	2.30	0.50
1:A:355:C:H2'	1:A:356:A:H8	1.77	0.50
1:A:50:A:C2	1:A:360:A:C2'	2.94	0.50
1:A:373:A:H1'	1:A:481:G:C1'	2.24	0.50
1:A:380:G:N2	1:A:382:A:C3'	2.75	0.50
1:A:494:U:H2'	1:A:495:A:C5'	2.42	0.50
1:A:668:G:H1'	17:R:46:HIS:NE2	2.27	0.50
1:A:698:G:C6	1:A:699:C:C4	3.00	0.50
1:A:850:U:C2	1:A:851:G:N7	2.80	0.50
1:A:888:G:N1	1:A:889:A:N6	2.60	0.50
1:A:962:C:N3	1:A:974:A:N1	2.59	0.50
4:E:165:VAL:O	4:E:187:LEU:O	2.30	0.50
4:E:60:ASP:CG	4:E:64:ARG:HH22	2.14	0.50
4:E:80:ILE:HB	4:E:208:ILE:CD1	2.42	0.50
5:F:110:ASN:CG	5:F:144:SER:OG	2.51	0.50
5:F:114:PRO:HD3	5:F:183:ASP:OD2	2.12	0.50
6:G:173:TRP:HD1	6:G:185:PHE:CE2	2.30	0.50
8:I:26:ILE:CG2	8:I:30:LEU:HD11	2.39	0.50
8:I:1:MET:CB	8:I:67:MET:O	2.59	0.50
9:J:107:ALA:HB3	9:J:134:ALA:HB2	1.94	0.50
9:J:17:VAL:O	9:J:17:VAL:HG13	2.12	0.50
9:J:69:VAL:CA	9:J:135:VAL:HG22	2.42	0.50
10:K:44:PHE:O	10:K:64:LYS:HD2	2.12	0.50
11:L:118:LYS:O	11:L:119:ALA:C	2.50	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:L:11:LYS:C	11:L:12:GLU:HG2	2.32	0.50
11:L:22:GLY:C	11:L:58:HIS:O	2.50	0.50
11:L:27:THR:HG21	11:L:62:TYR:CE1	2.47	0.50
11:L:5:TYR:CD2	11:L:6:GLY:N	2.80	0.50
11:L:94:ALA:O	11:L:95:LYS:HG2	2.12	0.50
13:N:114:VAL:CG2	13:N:115:PRO:N	2.75	0.50
13:N:46:GLY:HA2	13:N:55:LYS:HD2	1.93	0.50
15:P:62:ASN:C	15:P:64:TRP:N	2.65	0.50
17:R:13:GLN:O	17:R:14:GLU:C	2.50	0.50
19:T:65:ILE:CG2	19:T:69:LYS:HD2	2.40	0.50
8:I:46:ARG:HH22	20:U:37:VAL:HG13	1.74	0.50
20:U:50:ILE:O	20:U:52:PRO:HD3	2.12	0.50
1:A:663:A:H4'	20:U:61:LYS:HZ1	1.76	0.50
20:U:79:LEU:N	20:U:79:LEU:CD1	2.75	0.50
21:V:22:LEU:CA	21:V:25:LYS:HZ1	2.24	0.50
21:V:33:THR:OG1	21:V:49:ILE:HD12	2.12	0.50
1:A:333:G:C4'	22:W:16:HIS:CD2	2.93	0.50
3:D:49:C:N3	3:D:50:U:C5	2.80	0.50
3:D:75:C:H5''	3:D:76:A:H4'	1.91	0.50
2:1:43:U:O2	2:1:44:U:C5	2.65	0.50
3:B:52:G:O2'	3:B:53:G:O4'	2.18	0.50
7:H:8:GLU:O	7:H:8:GLU:CD	2.50	0.50
2:1:34:U:C6	2:1:34:U:OP2	2.65	0.49
1:A:1042:G:O2'	1:A:1043:C:H5'	2.12	0.49
1:A:1181:G:N7	1:A:1182:G:C2	2.80	0.49
1:A:1240:U:H2'	9:J:32:ARG:NH2	2.20	0.49
1:A:1242:C:C4	1:A:1243:C:C5	3.00	0.49
1:A:1301:U:C4	1:A:1303:C:N1	2.81	0.49
1:A:1306:A:H3'	1:A:1307:U:C6	2.47	0.49
1:A:246:A:C4	1:A:282:A:N6	2.79	0.49
1:A:247:G:O2'	1:A:248:C:H5'	2.12	0.49
1:A:275:G:O2'	1:A:276:G:H5'	2.12	0.49
1:A:295:C:H2'	1:A:296:U:O4'	2.11	0.49
1:A:484:G:C8	1:A:486:U:C4	3.00	0.49
1:A:50:A:O2'	1:A:52:G:C8	2.57	0.49
1:A:579:G:HO2'	1:A:580:U:H5'	1.76	0.49
1:A:56:U:H2'	1:A:57:G:C8	2.44	0.49
1:A:594:G:H2'	1:A:595:G:H1'	1.94	0.49
1:A:687:A:H2	1:A:700:G:H21	1.56	0.49
1:A:757:U:H4'	1:A:879:C:O2	2.12	0.49
1:A:926:G:C4	1:A:1505:G:N2	2.80	0.49
1:A:947:G:C2	1:A:948:C:C2	3.00	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:C:7:A:O2'	3:C:8:U:OP1	2.25	0.49
4:E:144:ARG:O	4:E:147:LYS:CB	2.60	0.49
4:E:60:ASP:CB	4:E:64:ARG:NH1	2.74	0.49
4:E:92:TYR:O	4:E:152:PHE:CB	2.59	0.49
5:F:119:ARG:HG2	5:F:120:VAL:N	2.25	0.49
5:F:157:ILE:CG1	5:F:164:ARG:HG2	2.40	0.49
5:F:138:VAL:HG12	5:F:170:GLN:HE21	1.77	0.49
5:F:191:THR:HB	5:F:193:TYR:CD2	2.47	0.49
6:G:148:VAL:HG21	6:G:162:LEU:HD21	1.93	0.49
7:H:108:ALA:HA	7:H:111:GLU:OE1	2.12	0.49
9:J:111:ARG:HH12	9:J:112:PRO:HD2	1.74	0.49
10:K:60:ARG:HG3	10:K:61:VAL:N	2.26	0.49
11:L:47:LEU:CD1	11:L:50:LEU:HB3	2.31	0.49
11:L:51:ARG:NH1	11:L:51:ARG:CA	2.73	0.49
12:M:5:ARG:O	12:M:6:ILE:HG23	2.12	0.49
13:N:67:ASP:N	13:N:70:LYS:HZ2	2.09	0.49
13:N:20:TYR:CD2	13:N:83:ILE:HG21	2.47	0.49
13:N:24:SER:O	13:N:88:GLY:HA2	2.12	0.49
14:O:100:ILE:CD1	14:O:100:ILE:H	2.21	0.49
14:O:117:ARG:CG	14:O:117:ARG:HH11	2.12	0.49
15:P:26:GLY:O	15:P:29:ARG:HB2	2.12	0.49
17:R:15:PHE:N	17:R:15:PHE:CD2	2.79	0.49
19:T:12:SER:H	19:T:20:THR:HG1	1.59	0.49
19:T:11:VAL:HB	19:T:20:THR:CB	2.41	0.49
19:T:22:LEU:HD13	19:T:41:LYS:CA	2.42	0.49
20:U:46:GLU:N	20:U:49:LYS:HZ1	2.09	0.49
20:U:52:PRO:O	20:U:55:ARG:N	2.40	0.49
21:V:19:VAL:HG22	21:V:43:GLU:OE2	2.12	0.49
22:W:53:LEU:HB2	22:W:100:ILE:HG13	1.94	0.49
22:W:30:LYS:O	22:W:34:LYS:HG3	2.12	0.49
3:D:58:A:O2'	3:D:61:C:C5	2.64	0.49
3:B:58:A:O2'	3:B:59:U:H5''	2.12	0.49
2:1:37:U:H3'	2:1:38:U:C5	2.46	0.49
1:A:1037:C:C4	1:A:1038:C:C4	3.00	0.49
1:A:110:C:O5'	1:A:110:C:C6	2.65	0.49
1:A:1205:U:H2'	1:A:1206:G:C8	2.46	0.49
1:A:122:G:C2	1:A:123:C:H1'	2.47	0.49
1:A:1436:U:H3'	1:A:1437:C:C6	2.47	0.49
1:A:1415:G:C6	1:A:1486:G:C6	3.00	0.49
1:A:22:G:C2	1:A:23:C:C2	3.00	0.49
1:A:306:G:C4	1:A:307:C:C6	3.00	0.49
1:A:315:A:N3	1:A:315:A:H2'	2.27	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:364:A:C2	1:A:365:U:O4	2.65	0.49
1:A:429:U:H4'	1:A:430:A:C5'	2.41	0.49
1:A:447:G:C8	1:A:447:G:O5'	2.59	0.49
1:A:44:G:H2'	1:A:45:U:H5'	1.94	0.49
1:A:468:A:C5	1:A:474:G:C5	3.00	0.49
1:A:595:G:N7	1:A:641:U:C4	2.80	0.49
1:A:778:G:C6	1:A:779:C:C4	2.99	0.49
1:A:769:G:H22	1:A:811:C:H1'	1.77	0.49
1:A:817:C:O2'	1:A:818:G:OP2	2.30	0.49
1:A:21:G:N2	1:A:916:G:C6	2.80	0.49
1:A:929:G:C6	1:A:930:C:C5	3.00	0.49
1:A:935:A:C4	1:A:936:C:C5	3.00	0.49
1:A:947:G:C2	1:A:948:C:N1	2.80	0.49
1:A:960:U:H2'	1:A:960:U:O2	2.11	0.49
1:A:967:C:OP2	1:A:968:A:H3'	2.13	0.49
3:C:47:U:C6	3:C:47:U:C3'	2.94	0.49
3:C:19:G:N2	3:C:56:C:N3	2.60	0.49
3:C:65:G:H2'	3:C:66:U:H6	1.77	0.49
4:E:136:VAL:CA	4:E:139:LYS:NZ	2.73	0.49
4:E:177:ALA:O	4:E:178:ARG:C	2.49	0.49
4:E:61:LEU:HD21	4:E:68:ILE:HD11	1.93	0.49
5:F:12:LEU:CD1	16:Q:57:ARG:HG3	2.41	0.49
1:A:1107:C:OP1	5:F:172:ARG:NH1	2.45	0.49
5:F:6:HIS:NE2	5:F:8:ILE:HB	2.26	0.49
6:G:135:LEU:CD1	6:G:138:TYR:HB2	2.39	0.49
7:H:44:GLY:O	7:H:58:ALA:HB1	2.12	0.49
8:I:1:MET:HB3	8:I:67:MET:O	2.12	0.49
8:I:42:GLU:HB2	8:I:61:LEU:CD2	2.41	0.49
11:L:47:LEU:O	11:L:50:LEU:HB3	2.13	0.49
11:L:5:TYR:HD2	11:L:6:GLY:N	2.10	0.49
12:M:23:ILE:HG13	12:M:85:LEU:CB	2.30	0.49
15:P:4:ILE:O	15:P:5:ALA:CB	2.60	0.49
15:P:23:TYR:HD2	15:P:70:LEU:HD13	1.77	0.49
17:R:29:VAL:O	17:R:30:ALA:C	2.50	0.49
17:R:79:ARG:HA	17:R:82:ILE:CD1	2.42	0.49
17:R:83:GLU:O	17:R:84:LYS:C	2.49	0.49
18:S:14:ASN:CA	18:S:42:ARG:NH2	2.76	0.49
8:I:96:PRO:HD2	20:U:32:ARG:HE	1.76	0.49
20:U:49:LYS:H	20:U:49:LYS:CE	2.20	0.49
1:A:720:C:H4'	20:U:50:ILE:HG22	1.94	0.49
13:N:84:VAL:HG21	20:U:88:LYS:NZ	2.27	0.49
3:B:71:G:N2	3:B:72:C:C1'	2.68	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1171:G:C2'	1:A:1172:C:C6	2.95	0.49
3:D:41:C:H2'	3:D:42:C:O4'	2.12	0.49
3:D:44:G:H2'	3:D:45:U:H5'	1.94	0.49
1:A:511:C:O2'	1:A:512:U:P	2.70	0.49
1:A:1298:C:C2	9:J:114:ARG:NH1	2.80	0.49
1:A:1306:A:C2	1:A:1332:A:C8	3.00	0.49
1:A:1348:U:OP2	11:L:109:VAL:HA	2.13	0.49
1:A:136:C:H2'	1:A:137:C:H6	1.77	0.49
1:A:937:A:H1'	1:A:1379:G:H22	1.77	0.49
1:A:1400:C:C6	1:A:1400:C:OP1	2.66	0.49
1:A:1415:G:H2'	1:A:1416:G:O5'	2.12	0.49
1:A:1431:C:H2'	1:A:1432:G:C4'	2.42	0.49
1:A:1451:A:OP1	1:A:1451:A:H8	1.95	0.49
1:A:1479:C:H2'	1:A:1480:G:O4'	2.12	0.49
1:A:1480:G:C2'	1:A:1481:U:O5'	2.60	0.49
1:A:15:G:C2	1:A:16:A:C5	3.01	0.49
1:A:745:C:H2'	1:A:746:A:H8	1.76	0.49
1:A:874:G:C2	1:A:875:C:C6	3.00	0.49
1:A:924:C:H2'	1:A:925:G:C8	2.47	0.49
1:A:975:A:O2'	1:A:1358:U:C1'	2.54	0.49
1:A:9:G:C8	7:H:126:ARG:CZ	2.95	0.49
3:C:58:A:H2'	3:C:61:C:C5	2.46	0.49
3:D:34:G:OP1	3:D:35:A:C8	2.64	0.49
4:E:153:ARG:NH2	4:E:154:LEU:O	2.45	0.49
4:E:43:ASP:OD1	4:E:44:LEU:N	2.45	0.49
4:E:71:VAL:O	4:E:165:VAL:HG22	2.12	0.49
5:F:12:LEU:HD12	5:F:18:TRP:CH2	2.46	0.49
5:F:142:MET:CA	5:F:146:ALA:HB3	2.43	0.49
5:F:15:THR:HG21	5:F:181:ASN:N	2.26	0.49
6:G:128:VAL:CG1	6:G:129:ASN:N	2.75	0.49
6:G:12:CYS:SG	6:G:19:LEU:O	2.70	0.49
6:G:165:MET:O	6:G:166:LYS:C	2.50	0.49
7:H:91:LEU:HD12	7:H:118:ILE:HG23	1.94	0.49
7:H:145:LYS:O	7:H:148:VAL:CB	2.50	0.49
7:H:26:PHE:HD1	7:H:26:PHE:N	2.08	0.49
8:I:7:ASN:O	8:I:89:MET:O	2.30	0.49
10:K:6:ILE:HG21	10:K:85:ARG:HH22	1.76	0.49
10:K:98:LYS:NZ	10:K:98:LYS:H	1.90	0.49
11:L:23:ASN:HD22	11:L:24:GLY:N	2.09	0.49
11:L:15:ALA:HB3	11:L:76:ALA:C	2.32	0.49
14:O:117:ARG:O	14:O:121:GLY:HA2	2.12	0.49
18:S:56:ALA:HB1	18:S:79:VAL:HG11	1.92	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:T:33:GLY:O	19:T:34:LYS:C	2.50	0.49
19:T:21:VAL:O	19:T:42:TYR:O	2.29	0.49
20:U:62:GLU:C	20:U:66:LEU:HG	2.31	0.49
1:A:735:C:H4'	20:U:75:ILE:HD11	1.95	0.49
21:V:51:VAL:HB	21:V:58:VAL:HG22	1.94	0.49
1:A:1319:A:OP1	21:V:5:LEU:HD11	2.12	0.49
22:W:65:LYS:O	22:W:68:LYS:HG2	2.12	0.49
3:B:13:C:O2'	3:B:14:A:H4'	2.12	0.49
1:A:1002:G:N7	1:A:1004:A:N1	2.60	0.49
1:A:108:G:O6	22:W:15:ARG:HD2	2.12	0.49
1:A:1251:A:C2	1:A:1252:A:C6	3.01	0.49
1:A:1287:A:H2'	1:A:1288:A:N7	2.28	0.49
1:A:1307:U:N3	1:A:1308:U:C5	2.80	0.49
1:A:1399:C:O2	1:A:1401:G:C5	2.66	0.49
1:A:1428:A:C4	1:A:1429:C:C5	3.01	0.49
1:A:1440:C:C2	1:A:1441:G:C8	3.00	0.49
1:A:1499:A:H8	1:A:1499:A:O5'	1.96	0.49
1:A:67:C:O2	1:A:171:A:C2	2.64	0.49
1:A:176:C:O2'	1:A:177:C:H5'	2.13	0.49
1:A:186(A):C:N4	1:A:191:G:C6	2.80	0.49
1:A:208:U:O3'	1:A:209:U:H6	1.95	0.49
1:A:226:G:O2'	1:A:227:G:C5'	2.59	0.49
1:A:236:G:C2'	1:A:237:C:C6	2.95	0.49
1:A:325:A:H2'	1:A:326:G:O5'	2.13	0.49
1:A:327:A:C2	1:A:329:A:N3	2.80	0.49
1:A:413:G:C2'	1:A:414:A:OP2	2.60	0.49
1:A:501:C:O2'	1:A:549:C:O2	2.26	0.49
1:A:584:G:H2'	1:A:585:G:O5'	2.13	0.49
1:A:5:U:N3	6:G:86:LYS:HB3	2.27	0.49
1:A:610:G:H2'	1:A:611:A:H5'	1.92	0.49
1:A:711:G:O2'	1:A:712:A:C5'	2.61	0.49
1:A:870:U:C5'	1:A:871:U:OP1	2.61	0.49
1:A:956:U:O2'	1:A:957:U:H5'	2.13	0.49
1:A:1229:A:O2'	3:C:30:G:OP1	2.31	0.49
3:C:19:G:N2	3:C:57:G:C4	2.80	0.49
4:E:187:LEU:HA	4:E:201:ILE:HB	1.93	0.49
4:E:76:GLN:O	4:E:211:ILE:CD1	2.61	0.49
4:E:88:ALA:HA	4:E:222:ILE:HD11	1.93	0.49
5:F:138:VAL:O	5:F:139:GLN:C	2.50	0.49
1:A:407:G:C1'	6:G:119:GLN:OE1	2.60	0.49
6:G:121:VAL:O	6:G:134:ASP:CB	2.61	0.49
6:G:155:LEU:CB	6:G:158:ILE:HG12	2.33	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:199:ASN:CG	6:G:200:GLU:N	2.64	0.49
6:G:32:ALA:C	6:G:34:GLU:N	2.63	0.49
6:G:87:GLY:O	6:G:88:VAL:C	2.51	0.49
7:H:152:ARG:NH2	10:K:44:PHE:N	2.59	0.49
7:H:54:ALA:O	7:H:57:LYS:HB3	2.13	0.49
8:I:41:GLU:O	8:I:42:GLU:CB	2.60	0.49
9:J:49:ILE:HG12	9:J:121:ALA:HB2	1.94	0.49
9:J:46:ALA:O	9:J:49:ILE:N	2.46	0.49
10:K:85:ARG:CD	10:K:134:ILE:O	2.59	0.49
10:K:36:LEU:C	10:K:39:LEU:HB2	2.33	0.49
10:K:82:HIS:CE1	10:K:84:ARG:HG3	2.48	0.49
10:K:97:VAL:HG13	10:K:98:LYS:HZ2	1.75	0.49
11:L:11:LYS:O	11:L:11:LYS:CG	2.59	0.49
11:L:69:GLY:O	11:L:73:GLN:HG3	2.12	0.49
12:M:16:LEU:HD22	12:M:16:LEU:N	2.27	0.49
12:M:24:VAL:HG13	12:M:34:VAL:HG11	1.95	0.49
12:M:56:HIS:O	12:M:58:ASP:N	2.42	0.49
14:O:25:PRO:HD2	14:O:98:TYR:OH	2.12	0.49
15:P:16:ASP:HB3	15:P:34:LEU:HD11	1.93	0.49
17:R:59:MET:O	17:R:62:GLN:HB3	2.13	0.49
17:R:79:ARG:HA	17:R:82:ILE:HD12	1.94	0.49
21:V:22:LEU:C	21:V:24:ALA:N	2.64	0.49
21:V:40:ILE:O	21:V:68:GLY:CA	2.59	0.49
3:D:17:C:C5	3:D:19:G:H8	2.30	0.49
3:D:63:G:C2	3:D:64:A:C4	3.00	0.49
1:A:341:C:C2'	1:A:342:C:O5'	2.61	0.49
1:A:1009:G:N2	1:A:1010:G:H1'	2.27	0.49
2:1:40:U:H2'	2:1:41:U:H6	1.77	0.49
1:A:1253:G:C2	1:A:1285:A:N6	2.75	0.49
1:A:1268:A:H1'	1:A:1326:C:O2'	2.12	0.49
1:A:1305:G:P	1:A:1305:G:O4'	2.71	0.49
1:A:978:A:O4'	1:A:1322:C:O2	2.30	0.49
1:A:1251:A:H2	1:A:1354:C:H1'	1.76	0.49
1:A:138:G:N2	1:A:226:G:C1'	2.74	0.49
1:A:123:C:O2'	1:A:290:C:H1'	2.13	0.49
1:A:49:U:C4	1:A:361:G:C2	3.00	0.49
1:A:521:G:C5	1:A:529:G:N2	2.81	0.49
1:A:518:C:H3'	1:A:530:G:H21	1.76	0.49
1:A:565:U:N3	1:A:566:G:O6	2.46	0.49
1:A:607:A:C2'	1:A:608:A:H5'	2.42	0.49
1:A:60:A:H62	1:A:110:C:N4	2.10	0.49
1:A:723:U:H2'	1:A:723:U:O2	2.12	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:797:C:C2'	1:A:798:G:H5'	2.41	0.49
1:A:821:G:H2'	1:A:822:C:C6	2.42	0.49
1:A:852:G:C6	1:A:853:G:N7	2.81	0.49
1:A:85:U:C2'	1:A:86:U:H5'	2.43	0.49
3:B:37:A:N6	3:B:38:A:C2	2.81	0.49
4:E:212:GLN:HB3	4:E:235:SER:HG	1.71	0.49
4:E:35:GLU:HG2	4:E:39:ILE:C	2.33	0.49
4:E:57:PHE:CD2	4:E:57:PHE:C	2.86	0.49
5:F:11:ARG:NH2	5:F:178:LEU:HA	2.27	0.49
5:F:188:LEU:HD13	5:F:189:ALA:N	2.28	0.49
5:F:77:ILE:CG2	5:F:81:GLY:HA2	2.42	0.49
6:G:104:VAL:HG23	6:G:105:VAL:N	2.27	0.49
6:G:146:ILE:CD1	6:G:146:ILE:N	2.69	0.49
6:G:191:ARG:HD3	6:G:192:GLU:CA	2.42	0.49
6:G:59:ARG:CB	6:G:63:LYS:HZ2	2.26	0.49
7:H:45:PHE:CD1	7:H:47:LYS:HD2	2.47	0.49
8:I:76:ALA:C	8:I:80:ARG:CZ	2.81	0.49
9:J:149:ARG:HB3	13:N:59:TYR:CE2	2.47	0.49
9:J:6:ARG:HA	9:J:6:ARG:HH11	1.77	0.49
10:K:14:ARG:CA	10:K:17:THR:OG1	2.54	0.49
10:K:40:ALA:HB2	10:K:45:ILE:CD1	2.41	0.49
12:M:31:GLY:N	12:M:81:THR:OG1	2.46	0.49
12:M:4:ILE:HD13	12:M:98:ILE:HG23	1.94	0.49
13:N:66:LEU:HB2	13:N:70:LYS:HZ2	1.76	0.49
13:N:62:GLN:HA	13:N:97:ALA:HB2	1.94	0.49
13:N:95:ILE:CG2	13:N:98:LEU:HD12	2.41	0.49
14:O:25:PRO:CD	14:O:98:TYR:OH	2.61	0.49
14:O:42:THR:CA	14:O:55:VAL:HG23	2.42	0.49
1:A:1227:A:OP2	15:P:111:LYS:HE3	2.13	0.49
15:P:66:LEU:HA	15:P:70:LEU:CD1	2.33	0.49
18:S:26:ARG:HB3	18:S:30:GLY:HA3	1.95	0.49
19:T:44:ALA:HB2	19:T:59:ILE:HD13	1.95	0.49
20:U:22:VAL:HG13	20:U:55:ARG:HH12	1.77	0.49
20:U:25:THR:HG22	20:U:42:ARG:NE	2.28	0.49
20:U:38:GLU:HG2	20:U:39:VAL:H	1.77	0.49
8:I:49:ALA:HB3	20:U:79:LEU:N	2.28	0.49
22:W:16:HIS:O	22:W:19:SER:N	2.46	0.49
22:W:40:ALA:CA	22:W:55:ILE:HG21	2.42	0.49
22:W:51:GLU:HA	22:W:54:LYS:HG3	1.94	0.49
23:X:12:LYS:HB3	23:X:17:THR:O	2.12	0.49
1:A:1108:G:C8	1:A:1109:C:C5	3.01	0.49
1:A:1109:C:O2'	1:A:1110:A:H5'	2.13	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1274:G:H21	1:A:1275:A:N6	2.11	0.49
1:A:1285:A:C4'	1:A:1286:A:C8	2.95	0.49
1:A:1317:C:H2'	1:A:1318:A:H5'	1.94	0.49
1:A:1413:A:C2	1:A:1414:U:N1	2.81	0.49
1:A:1497:G:HO2'	1:A:1518:A:H2	1.61	0.49
1:A:186(B):C:H4'	22:W:89:ARG:CZ	2.42	0.49
1:A:309:G:H2'	1:A:310:G:H8	1.76	0.49
1:A:423:G:N2	1:A:424:G:C5	2.80	0.49
1:A:430:A:H4'	6:G:7:PRO:HA	1.94	0.49
1:A:51:A:C2	1:A:116:A:H1'	2.47	0.49
1:A:607:A:N1	18:S:31:LYS:HG3	2.27	0.49
1:A:684:A:O2'	13:N:39:PRO:O	2.30	0.49
1:A:707:C:H2'	1:A:708:C:O5'	2.13	0.49
1:A:78:G:C6	1:A:79:G:C5	3.01	0.49
1:A:812:C:O4'	1:A:813:U:H5	1.95	0.49
1:A:858:G:O5'	1:A:858:G:C8	2.66	0.49
1:A:859:A:C2'	1:A:860:A:O4'	2.58	0.49
1:A:872:A:O2'	1:A:873:A:P	2.68	0.49
1:A:888:G:H3'	1:A:889:A:H8	1.78	0.49
1:A:87:A:N7	1:A:88:C:N3	2.60	0.49
4:E:134:GLU:O	4:E:138:LEU:CG	2.56	0.49
4:E:208:ILE:HA	4:E:211:ILE:CD1	2.42	0.49
5:F:71:ALA:HB2	5:F:106:VAL:HG23	1.94	0.49
5:F:144:SER:OG	5:F:144:SER:O	2.21	0.49
6:G:128:VAL:HG21	6:G:133:VAL:HG23	1.94	0.49
6:G:127:THR:O	6:G:146:ILE:CG2	2.58	0.49
6:G:148:VAL:HG13	6:G:152:SER:OG	2.13	0.49
6:G:152:SER:O	6:G:154:ASN:ND2	2.45	0.49
6:G:178:VAL:O	6:G:179:GLU:O	2.31	0.49
1:A:430:A:P	6:G:9:CYS:H	2.36	0.49
7:H:43:LEU:CD2	7:H:44:GLY:N	2.67	0.49
8:I:57:GLN:O	8:I:57:GLN:NE2	2.45	0.49
8:I:78:GLU:O	8:I:81:ILE:CB	2.57	0.49
9:J:47:CYS:O	9:J:51:GLN:HG2	2.12	0.49
10:K:89:PRO:HA	10:K:92:ARG:NE	2.28	0.49
11:L:48:GLU:N	11:L:49:PRO:CD	2.73	0.49
11:L:85:LEU:HD12	11:L:89:ASN:ND2	2.28	0.49
12:M:7:LYS:HZ2	12:M:71:LEU:HD11	1.78	0.49
13:N:18:ARG:HG2	13:N:18:ARG:NH1	2.26	0.49
13:N:45:GLY:O	13:N:50:TYR:CB	2.60	0.49
14:O:106:ASP:O	14:O:107:ALA:C	2.51	0.49
14:O:82:VAL:HB	14:O:106:ASP:OD2	2.13	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:P:13:LYS:CB	15:P:17:VAL:HG11	2.39	0.49
15:P:90:LEU:HD21	15:P:93:ARG:HH11	1.76	0.49
15:P:96:LEU:O	15:P:98:VAL:HG23	2.12	0.49
16:Q:26:ARG:HB3	16:Q:43:CYS:CB	2.43	0.49
18:S:21:VAL:HG22	18:S:36:ILE:HD13	1.95	0.49
20:U:74:ARG:NH1	20:U:81:PHE:HB3	2.27	0.49
22:W:45:GLN:NE2	22:W:91:LEU:HB3	2.28	0.49
15:P:58:GLU:O	15:P:61:GLU:CB	2.61	0.49
3:D:26:A:C2	3:D:27:G:C8	3.00	0.49
9:J:136:LYS:HE3	9:J:136:LYS:HB3	1.55	0.49
2:1:34:U:H6	2:1:34:U:OP2	1.96	0.49
1:A:1054:C:C5	3:B:34:G:H4'	2.48	0.49
1:A:1197:G:H3'	1:A:1197:G:P	2.49	0.49
1:A:1260:C:O5'	1:A:1284:C:H4'	2.12	0.49
1:A:1311:G:N7	21:V:2:PRO:HA	2.27	0.49
1:A:978:A:N6	1:A:1318:A:N6	2.60	0.49
1:A:1336:C:H4'	1:A:1337:G:N1	2.28	0.49
1:A:945:G:C2	1:A:1337:G:C4	3.00	0.49
1:A:1340:A:H2'	1:A:1341:U:C6	2.47	0.49
1:A:1353:G:C2	1:A:1370:G:C2	3.01	0.49
1:A:134:A:N1	1:A:135:C:C4	2.80	0.49
1:A:1371:G:OP2	11:L:11:LYS:HE3	2.13	0.49
1:A:1410:G:H2'	1:A:1411:C:C6	2.48	0.49
1:A:262:A:C5	1:A:263:A:N6	2.81	0.49
1:A:250:A:C2	1:A:274:A:N1	2.81	0.49
1:A:453:A:N6	1:A:480:U:C2	2.73	0.49
1:A:519:C:N4	1:A:520:A:N3	2.59	0.49
1:A:631:G:O2'	1:A:632:A:C8	2.60	0.49
1:A:643:C:C2	1:A:644:G:C8	3.01	0.49
1:A:781:A:O4'	1:A:1523:G:H1'	2.11	0.49
1:A:843:U:H3	4:E:37:ASN:HA	1.77	0.49
3:B:34:G:C6	3:B:35:A:C8	3.00	0.49
4:E:91:PRO:CG	4:E:155:LEU:HD23	2.42	0.49
4:E:192:SER:C	4:E:194:PRO:CD	2.80	0.49
4:E:71:VAL:HG22	4:E:93:VAL:N	2.28	0.49
5:F:132:ARG:C	5:F:136:GLN:HE21	2.15	0.49
5:F:17:ASP:O	5:F:18:TRP:C	2.51	0.49
5:F:55:VAL:HG12	5:F:57:ILE:HG13	1.95	0.49
5:F:55:VAL:CG2	5:F:68:VAL:HG13	2.39	0.49
5:F:6:HIS:O	5:F:8:ILE:N	2.45	0.49
6:G:8:VAL:C	6:G:10:ARG:H	2.15	0.49
6:G:128:VAL:HG23	6:G:133:VAL:H	1.78	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:152:SER:OG	6:G:158:ILE:HD12	2.12	0.49
6:G:64:LEU:HD12	6:G:75:PHE:CZ	2.47	0.49
9:J:106:GLN:O	9:J:109:ASN:N	2.45	0.49
9:J:123:GLU:O	9:J:124:LEU:C	2.50	0.49
9:J:15:ASP:N	9:J:20:ASP:H	2.09	0.49
9:J:2:ALA:CB	9:J:5:ARG:O	2.60	0.49
9:J:76:ARG:NH1	9:J:89:MET:CG	2.72	0.49
10:K:96:GLY:O	10:K:97:VAL:C	2.51	0.49
11:L:113:LYS:HZ1	11:L:119:ALA:HB1	1.77	0.49
11:L:78:LYS:HD3	11:L:79:LEU:CD2	2.41	0.49
12:M:54:PHE:CE1	12:M:55:LYS:HB3	2.48	0.49
13:N:46:GLY:HA3	13:N:55:LYS:HD2	1.91	0.49
13:N:63:LEU:C	13:N:63:LEU:CD2	2.81	0.49
13:N:84:VAL:O	13:N:85:ARG:HD3	2.13	0.49
15:P:81:LEU:HD11	15:P:88:ARG:NH2	2.20	0.49
16:Q:34:TYR:CE1	16:Q:39:LEU:O	2.65	0.49
17:R:63:ARG:HH12	17:R:87:ILE:HD13	1.76	0.49
19:T:20:THR:O	19:T:21:VAL:HG13	2.13	0.49
21:V:18:LYS:HE2	21:V:22:LEU:CB	2.43	0.49
21:V:31:ILE:O	21:V:33:THR:N	2.46	0.49
21:V:64:GLU:CG	21:V:65:ASN:N	2.73	0.49
22:W:29:LYS:O	22:W:30:LYS:C	2.50	0.49
1:A:160:A:H1'	1:A:344:A:H62	1.77	0.49
2:1:21:G:H2'	2:1:22:C:O4'	2.12	0.49
2:1:31:U:O5'	2:1:31:U:H6	1.96	0.49
2:1:40:U:H2'	2:1:41:U:C6	2.47	0.49
1:A:1062:U:C2	1:A:1063:C:N4	2.80	0.49
1:A:1100:C:O2	1:A:1102:A:C5'	2.56	0.49
1:A:1186:G:H21	16:Q:61:TRP:C	2.13	0.49
1:A:132:C:C2	1:A:133:U:C5	3.00	0.49
1:A:1346:A:C8	1:A:1348:U:N3	2.81	0.49
1:A:1441:G:N2	1:A:1459:C:C5	2.81	0.49
1:A:1477:C:H6	1:A:1477:C:O5'	1.95	0.49
1:A:1478:C:O2'	1:A:1479:C:H5'	2.12	0.49
1:A:194:C:O2'	1:A:195:A:H4'	2.13	0.49
1:A:228:A:O2'	1:A:229:U:H5'	2.12	0.49
1:A:277:C:P	19:T:68:ARG:HH12	2.36	0.49
1:A:28:G:C6	1:A:556:C:N4	2.81	0.49
1:A:367:U:O2'	1:A:368:U:H4'	2.12	0.49
1:A:41:G:C4	1:A:42:G:N7	2.81	0.49
1:A:447:G:N2	1:A:486:U:C5	2.81	0.49
1:A:609:A:H2'	1:A:610:G:O4'	2.13	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:908:A:C2	1:A:909:A:C5	3.01	0.49
3:C:72:C:N4	3:C:73:A:N6	2.61	0.49
4:E:60:ASP:O	4:E:64:ARG:HD2	2.12	0.49
4:E:77:ALA:HA	4:E:208:ILE:CD1	2.33	0.49
5:F:187:ALA:CB	5:F:198:VAL:HG22	2.42	0.49
5:F:28:GLN:HA	5:F:30:ARG:NH1	2.27	0.49
5:F:84:ILE:CD1	5:F:101:LEU:HD22	2.42	0.49
6:G:188:LEU:C	6:G:189:PRO:O	2.46	0.49
6:G:191:ARG:CD	6:G:191:ARG:C	2.81	0.49
7:H:34:VAL:CG2	7:H:62:ALA:CB	2.91	0.49
7:H:79:GLU:CG	7:H:93:PRO:CD	2.89	0.49
8:I:28:ARG:N	8:I:28:ARG:HD3	2.27	0.49
8:I:86:ARG:O	8:I:87:ARG:HG2	2.12	0.49
9:J:43:PHE:CD2	9:J:44:TYR:CE2	2.99	0.49
9:J:75:VAL:HG11	9:J:86:GLN:HB3	1.95	0.49
10:K:122:ARG:H	10:K:122:ARG:HD3	1.76	0.49
10:K:33:GLU:OE2	10:K:50:ARG:HD2	2.12	0.49
11:L:112:LYS:HG3	11:L:117:HIS:CA	2.41	0.49
1:A:1368:G:OP1	11:L:113:LYS:HA	2.13	0.49
11:L:27:THR:HB	11:L:62:TYR:HD1	1.76	0.49
11:L:4:TYR:CE1	11:L:59:PHE:HE2	2.14	0.49
11:L:79:LEU:O	11:L:82:ALA:HB3	2.12	0.49
12:M:12:ASP:HB3	12:M:15:THR:CG2	2.43	0.49
12:M:48:THR:HG23	12:M:61:GLU:C	2.33	0.49
12:M:6:ILE:CG1	12:M:73:ASP:H	2.26	0.49
13:N:57:THR:C	13:N:59:TYR:N	2.60	0.49
1:A:1187:G:O2'	16:Q:61:TRP:OXT	2.22	0.49
17:R:35:ARG:NH2	17:R:59:MET:HE3	2.28	0.49
18:S:39:TYR:CD1	18:S:39:TYR:C	2.85	0.49
18:S:3:LYS:HA	18:S:4:ILE:HD13	1.94	0.49
20:U:39:VAL:O	20:U:43:PHE:HE1	1.95	0.49
21:V:19:VAL:CG1	21:V:20:LEU:N	2.75	0.49
21:V:81:ARG:HB2	21:V:81:ARG:HH11	1.78	0.49
3:B:14:A:C8	3:B:22:G:N2	2.81	0.49
3:B:44:G:H2'	3:B:45:U:H5'	1.95	0.49
3:B:58:A:C4'	3:B:59:U:OP1	2.60	0.49
1:A:109:A:N3	1:A:109:A:O4'	2.46	0.49
1:A:113:G:C4'	1:A:354:G:H5''	2.43	0.49
1:A:1239:A:C2'	1:A:1239:A:N3	2.74	0.49
1:A:1301:U:C4	1:A:1303:C:C6	3.00	0.49
1:A:132:C:HO2'	1:A:133:U:H6	1.59	0.49
1:A:1338:G:C2	1:A:1339:A:C5	3.01	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1419:G:C2'	1:A:1420:C:C6	2.95	0.49
1:A:1429:C:H2'	1:A:1430:C:H6	1.78	0.49
1:A:1416:G:N2	1:A:1485:U:H1'	2.27	0.49
1:A:1539:C:H6	1:A:1539:C:O5'	1.96	0.49
1:A:138:G:C2	1:A:226:G:C4	3.01	0.49
1:A:270:A:O2'	1:A:271:C:C5'	2.56	0.49
1:A:423:G:N2	1:A:424:G:C4	2.80	0.49
1:A:432:A:C8	1:A:433:C:C6	3.01	0.49
1:A:527:G:H2'	1:A:528:C:H6	1.78	0.49
1:A:59:A:H4'	1:A:388:G:O5'	2.13	0.49
1:A:649:G:H2'	1:A:650:G:C8	2.44	0.49
1:A:744:C:H2'	1:A:745:C:C6	2.48	0.49
1:A:907:A:C4	1:A:908:A:C8	3.00	0.49
1:A:924:C:C2'	1:A:925:G:O5'	2.61	0.49
3:C:23:A:C6	3:C:24:G:C6	3.01	0.49
4:E:167:PRO:HG2	4:E:168:THR:N	2.24	0.49
5:F:14:ILE:HG13	5:F:178:LEU:CD1	2.43	0.49
5:F:179:ARG:CD	5:F:206:GLU:OE1	2.61	0.49
6:G:98:GLU:OE2	6:G:107:ARG:HG3	2.12	0.49
1:A:408:A:C5'	6:G:116:GLN:HE21	2.25	0.49
6:G:144:ASP:HA	6:G:184:LYS:HZ3	1.77	0.49
6:G:200:GLU:OE2	6:G:201:GLN:NE2	2.45	0.49
7:H:149:GLU:O	7:H:150:ARG:C	2.51	0.49
7:H:56:GLN:HE21	7:H:56:GLN:N	2.10	0.49
8:I:68:PRO:O	8:I:69:GLU:C	2.51	0.49
9:J:49:ILE:CG2	9:J:121:ALA:HB1	2.33	0.49
9:J:65:ALA:CB	9:J:124:LEU:HD23	2.43	0.49
9:J:72:ARG:O	9:J:91:VAL:N	2.43	0.49
10:K:14:ARG:CB	10:K:14:ARG:NH1	2.56	0.49
10:K:68:ARG:CD	10:K:69:ARG:N	2.73	0.49
11:L:85:LEU:HD11	11:L:92:TYR:HE1	1.77	0.49
12:M:49:VAL:C	12:M:60:ARG:HB3	2.32	0.49
13:N:51:LYS:HD3	13:N:52:GLY:N	2.24	0.49
13:N:80:VAL:H	13:N:104:GLN:HE21	1.58	0.49
14:O:59:ARG:HE	14:O:65:GLU:CG	2.26	0.49
16:Q:23:ARG:HA	16:Q:30:ALA:HA	1.93	0.49
18:S:55:ARG:O	18:S:56:ALA:C	2.51	0.49
19:T:68:ARG:N	19:T:70:ARG:NH2	2.46	0.49
8:I:98:LEU:CG	20:U:28:GLU:HG3	2.41	0.49
1:A:736:C:C5'	20:U:72:ARG:NH2	2.68	0.49
1:A:1034:G:N3	1:A:1035:A:N7	2.61	0.49
1:A:1118:C:H1'	1:A:1179:A:C8	2.48	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1053:G:C2	1:A:1199:U:C4	3.01	0.49
1:A:1330:U:OP1	15:P:25:ILE:N	2.37	0.49
1:A:1354:C:H2'	1:A:1355:G:C8	2.48	0.49
1:A:1413:A:N1	1:A:1487:G:N2	2.41	0.49
1:A:1435:G:H2'	1:A:1436:U:C6	2.47	0.49
1:A:1469:G:N2	1:A:1470:G:C4	2.81	0.49
1:A:1488:G:C6	1:A:1489:G:N7	2.81	0.49
1:A:293:G:C8	1:A:293:G:OP2	2.66	0.49
1:A:392:G:H5'	18:S:12:LYS:HZ2	1.78	0.49
1:A:404:U:OP1	6:G:118:ARG:CZ	2.61	0.49
1:A:498:A:C4'	1:A:500:G:H5'	2.39	0.49
1:A:521:G:N2	1:A:522:C:C2	2.81	0.49
1:A:537:G:H5''	14:O:113:ARG:NH1	2.28	0.49
1:A:545:C:O2'	1:A:546:G:C5'	2.55	0.49
1:A:547:A:H4'	1:A:548:G:O5'	2.10	0.49
1:A:748:C:O2'	1:A:749:C:C5'	2.61	0.49
1:A:769:G:O2'	1:A:770:C:C5'	2.61	0.49
1:A:925:G:H1'	1:A:1502:A:H1'	1.95	0.49
1:A:949:A:H2'	1:A:950:U:C5	2.48	0.49
1:A:972:C:O2	1:A:972:C:H2'	2.12	0.49
1:A:983:A:N3	1:A:983:A:C2'	2.76	0.49
4:E:168:THR:CB	4:E:192:SER:HA	2.43	0.49
5:F:88:ARG:HG3	5:F:99:VAL:O	2.13	0.49
6:G:133:VAL:HG11	6:G:135:LEU:HD12	1.95	0.49
6:G:205:GLU:CD	7:H:100:VAL:H	2.16	0.49
7:H:74:GLY:O	7:H:75:THR:CB	2.61	0.49
9:J:70:LYS:O	9:J:138:LYS:CE	2.61	0.49
1:A:598:U:C4'	10:K:94:TYR:HD2	2.17	0.49
1:A:675:A:N3	13:N:116:HIS:CB	2.76	0.49
13:N:120:ARG:HE	13:N:126:ARG:HH21	1.60	0.49
13:N:18:ARG:HD3	13:N:18:ARG:N	2.28	0.49
13:N:31:THR:HG22	13:N:32:ILE:N	2.27	0.49
13:N:94:ALA:O	13:N:98:LEU:HG	2.13	0.49
14:O:24:VAL:O	14:O:24:VAL:HG12	2.12	0.49
14:O:60:LEU:HD21	14:O:64:TYR:HD2	1.76	0.49
15:P:10:PRO:HG3	15:P:18:ALA:HA	1.93	0.49
17:R:42:HIS:CD2	17:R:43:LEU:N	2.81	0.49
18:S:8:ARG:O	18:S:9:PHE:HD2	1.95	0.49
19:T:75:ARG:HH12	19:T:77:VAL:HA	1.77	0.49
1:A:986:A:H4'	21:V:55:LYS:HE3	1.94	0.49
1:A:1081:G:H2'	1:A:1082:G:C8	2.48	0.48
1:A:1085:U:O2	1:A:1094:G:C6	2.66	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1177:G:H8	1:A:1177:G:O5'	1.96	0.48
1:A:946:A:N6	1:A:1236:A:C6	2.80	0.48
1:A:1300:G:O2'	1:A:1301:U:H6	1.95	0.48
1:A:1347:G:HO2'	1:A:1348:U:P	2.35	0.48
1:A:1370:G:H5''	11:L:12:GLU:CG	2.43	0.48
1:A:1369:C:H2'	1:A:1370:G:O4'	2.13	0.48
1:A:1387:G:C4	1:A:1388:C:C5	3.01	0.48
1:A:1454:G:C4	1:A:1455:G:N7	2.80	0.48
1:A:1499:A:H2'	1:A:1500:A:H5'	1.95	0.48
1:A:1512:U:O2'	1:A:1513:A:H5'	2.13	0.48
1:A:66:G:C4'	1:A:173:U:O4	2.59	0.48
1:A:279:A:H5''	1:A:280:C:H3'	1.93	0.48
1:A:295:C:C4	1:A:303:A:C2	3.01	0.48
1:A:451:A:O2'	1:A:452:A:C8	2.65	0.48
1:A:505:G:N1	1:A:535:A:C2	2.81	0.48
1:A:672:U:O2	1:A:673:G:N7	2.45	0.48
1:A:69:G:H2'	1:A:69:G:N3	2.28	0.48
1:A:874:G:N2	1:A:875:C:C2	2.80	0.48
1:A:972:C:OP2	12:M:57:LYS:HD2	2.13	0.48
3:B:29:G:C4	3:B:30:G:C8	3.01	0.48
4:E:115:LEU:HD23	4:E:149:LEU:CD2	2.35	0.48
4:E:207:ALA:C	4:E:209:ARG:N	2.67	0.48
4:E:234:PRO:O	4:E:238:LEU:HD22	2.12	0.48
4:E:28:PHE:CE1	4:E:31:TYR:HB2	2.48	0.48
4:E:55:PHE:CD2	4:E:58:ILE:HD12	2.48	0.48
4:E:76:GLN:O	4:E:211:ILE:HD11	2.12	0.48
5:F:12:LEU:HD11	16:Q:57:ARG:HG3	1.94	0.48
5:F:16:ARG:O	5:F:17:ASP:OD1	2.31	0.48
5:F:190:ARG:O	5:F:191:THR:C	2.51	0.48
7:H:105:VAL:O	7:H:106:PRO:C	2.51	0.48
7:H:82:VAL:HG11	7:H:134:ALA:O	2.12	0.48
7:H:71:LEU:HD23	7:H:72:GLN:N	2.28	0.48
7:H:80:ILE:HG22	10:K:104:ARG:HH22	1.78	0.48
8:I:14:LEU:HD11	8:I:19:LEU:CA	2.43	0.48
8:I:47:ARG:C	8:I:48:LEU:HD23	2.31	0.48
9:J:115:ARG:O	9:J:118:VAL:CB	2.60	0.48
9:J:47:CYS:HA	9:J:50:ILE:HG13	1.93	0.48
9:J:71:PRO:C	9:J:96:GLN:HE21	2.16	0.48
9:J:99:LEU:O	9:J:99:LEU:CD2	2.61	0.48
10:K:124:ALA:O	10:K:125:ARG:C	2.51	0.48
10:K:89:PRO:HA	10:K:92:ARG:HE	1.78	0.48
12:M:49:VAL:O	12:M:60:ARG:HA	2.13	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:N:22:HIS:HD2	13:N:23:ALA:N	2.11	0.48
13:N:23:ALA:CB	13:N:88:GLY:CA	2.91	0.48
15:P:14:ARG:HG3	15:P:16:ASP:OD2	2.12	0.48
15:P:29:ARG:NH1	15:P:66:LEU:HD22	2.28	0.48
15:P:77:ASN:OD1	15:P:78:ILE:HG13	2.13	0.48
17:R:36:ILE:O	17:R:40:SER:OG	2.20	0.48
18:S:53:VAL:HG23	18:S:54:GLU:H	1.78	0.48
22:W:85:MET:CA	22:W:88:VAL:HG23	2.39	0.48
1:A:30:U:O2'	1:A:31:G:P	2.71	0.48
2:1:34:U:C6	2:1:34:U:C3'	2.96	0.48
1:A:1025:U:H4'	1:A:1025:U:OP1	2.13	0.48
1:A:1104:G:H2'	1:A:1105:A:O4'	2.13	0.48
1:A:115:G:O2'	1:A:116:A:N7	2.47	0.48
1:A:1227:A:H4'	15:P:115:LYS:HZ1	1.78	0.48
1:A:1300:G:C2'	1:A:1301:U:OP2	2.61	0.48
1:A:1342:C:H2'	1:A:1343:G:C8	2.48	0.48
1:A:949:A:H4'	1:A:1364:U:O4	2.13	0.48
1:A:937:A:C2	1:A:1379:G:C6	3.00	0.48
1:A:1494:G:N3	1:A:1495:U:C4	2.81	0.48
1:A:1498:U:O2	1:A:1498:U:H2'	2.13	0.48
1:A:151:A:C5	1:A:152:A:N3	2.80	0.48
1:A:68:G:H5'	1:A:171:A:H1'	1.95	0.48
1:A:198:G:C2'	1:A:199:G:O5'	2.61	0.48
1:A:124:G:N2	1:A:238:G:H1'	2.28	0.48
1:A:262:A:C2	1:A:263:A:C6	3.01	0.48
1:A:242:C:C2	1:A:285:G:N2	2.81	0.48
1:A:287:U:C2'	1:A:288:A:H5'	2.42	0.48
1:A:323:U:H3'	1:A:323:U:C6	2.47	0.48
1:A:424:G:C4	1:A:425:G:C8	3.00	0.48
1:A:445:G:H2'	1:A:446:G:H8	1.77	0.48
1:A:543:C:C2	1:A:544:G:N7	2.81	0.48
1:A:685:G:H2'	1:A:686:U:H6	1.76	0.48
1:A:784:C:H2'	1:A:785:G:O4'	2.13	0.48
1:A:874:G:N1	1:A:875:C:C4	2.81	0.48
1:A:973:G:N2	1:A:974:A:H62	2.07	0.48
4:E:169:LYS:HE2	4:E:170:GLU:HA	1.95	0.48
4:E:102:LEU:CB	4:E:176:GLU:OE1	2.52	0.48
4:E:178:ARG:HE	4:E:196:LEU:CD1	2.11	0.48
4:E:163:PHE:CZ	4:E:186:ALA:C	2.86	0.48
4:E:207:ALA:O	4:E:209:ARG:N	2.46	0.48
4:E:59:GLU:CA	4:E:221:LEU:HD21	2.43	0.48
4:E:58:ILE:O	4:E:59:GLU:C	2.51	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:69:LEU:CD2	4:E:91:PRO:CB	2.90	0.48
4:E:82:ARG:CD	4:E:92:TYR:OH	2.54	0.48
5:F:11:ARG:HG3	5:F:16:ARG:CZ	2.43	0.48
5:F:10:PHE:CD1	5:F:178:LEU:HD22	2.35	0.48
5:F:25:GLY:N	5:F:28:GLN:NE2	2.61	0.48
6:G:144:ASP:O	6:G:184:LYS:HA	2.13	0.48
6:G:193:ASP:O	6:G:194:LEU:HD13	2.13	0.48
7:H:37:ARG:O	7:H:38:GLN:HG3	2.13	0.48
7:H:77:PRO:HG2	7:H:78:HIS:CD2	2.48	0.48
9:J:10:ARG:NH1	9:J:10:ARG:CB	2.76	0.48
9:J:15:ASP:CB	9:J:20:ASP:H	2.25	0.48
10:K:102:ARG:CB	10:K:102:ARG:NH1	2.76	0.48
10:K:126:LYS:HZ1	10:K:127:LEU:CB	2.27	0.48
10:K:24:THR:HG23	10:K:24:THR:O	2.12	0.48
4:E:181:PHE:HE1	10:K:70:GLN:NE2	2.11	0.48
11:L:116:LYS:HD3	11:L:116:LYS:N	2.27	0.48
11:L:85:LEU:HD11	11:L:92:TYR:CE1	2.48	0.48
12:M:60:ARG:NH1	12:M:60:ARG:CA	2.76	0.48
13:N:42:TRP:CE3	13:N:43:SER:N	2.81	0.48
13:N:45:GLY:CA	13:N:55:LYS:HB3	2.41	0.48
14:O:47:LYS:H	14:O:48:PRO:HD3	1.76	0.48
15:P:15:VAL:CG1	15:P:34:LEU:HD21	2.43	0.48
17:R:66:LEU:N	17:R:66:LEU:CD2	2.75	0.48
3:D:50:U:C4	3:D:65:G:N1	2.82	0.48
18:S:68:ASP:O	18:S:69:THR:C	2.49	0.48
1:A:1031:G:C6	1:A:1032:A:C6	3.01	0.48
1:A:136:C:H4'	18:S:65:GLN:NE2	2.29	0.48
1:A:1376:U:H2'	1:A:1377:A:H8	1.75	0.48
1:A:1437:C:O2'	1:A:1438:G:H5'	2.14	0.48
1:A:1492:A:O3'	1:A:1493:A:O4'	2.30	0.48
1:A:1524:C:H5''	13:N:120:ARG:HH22	1.78	0.48
1:A:20:U:H5	1:A:916:G:H1	1.61	0.48
1:A:264:U:O2	1:A:265:G:O4'	2.31	0.48
1:A:247:G:N2	1:A:282:A:C2	2.77	0.48
1:A:328:C:O2'	1:A:329:A:OP2	2.31	0.48
1:A:392:G:C4'	18:S:12:LYS:HZ3	2.26	0.48
1:A:467:G:C2	1:A:468:A:C5	3.01	0.48
1:A:526:C:N4	1:A:535:A:H2	2.07	0.48
1:A:552:U:H4'	14:O:87:GLY:O	2.13	0.48
1:A:572:A:C2	1:A:916:G:N2	2.81	0.48
1:A:579:G:C4	1:A:580:U:C5	3.01	0.48
1:A:628:G:C2'	1:A:629:G:H8	2.21	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:654:G:H1	1:A:754:C:N4	2.12	0.48
1:A:690:G:H3'	1:A:691:G:C8	2.48	0.48
1:A:714:G:O2'	1:A:777:A:N6	2.46	0.48
1:A:818:G:N2	1:A:820:U:C2	2.82	0.48
1:A:843:U:H3'	1:A:848:C:C4'	2.44	0.48
1:A:872:A:N1	1:A:874:G:C6	2.80	0.48
3:C:36:A:C6	3:C:37:A:N7	2.81	0.48
4:E:124:SER:C	4:E:126:GLU:N	2.67	0.48
4:E:170:GLU:C	4:E:174:VAL:HG23	2.34	0.48
4:E:213:LEU:HD23	4:E:217:ARG:HD3	1.95	0.48
5:F:124:ILE:HG23	5:F:130:VAL:CG2	2.43	0.48
5:F:176:HIS:O	5:F:178:LEU:N	2.46	0.48
5:F:29:TYR:HD2	5:F:29:TYR:C	2.15	0.48
6:G:106:TYR:CE2	6:G:113:SER:HA	2.48	0.48
6:G:54:TYR:CE2	6:G:58:LEU:HB2	2.47	0.48
7:H:109:ILE:HD13	7:H:135:THR:HG21	1.91	0.48
9:J:5:ARG:HH11	9:J:5:ARG:CB	2.26	0.48
10:K:15:ASN:H	10:K:15:ASN:HD22	1.61	0.48
10:K:92:ARG:HG2	10:K:92:ARG:NH1	2.24	0.48
11:L:50:LEU:HD11	11:L:56:LEU:CA	2.23	0.48
13:N:29:ILE:HG22	13:N:44:SER:OG	2.13	0.48
13:N:67:ASP:O	13:N:68:ALA:C	2.50	0.48
13:N:85:ARG:CZ	13:N:111:ASP:OD2	2.61	0.48
14:O:24:VAL:HG13	14:O:26:ALA:H	1.77	0.48
14:O:28:LYS:CE	14:O:33:ARG:HH12	2.19	0.48
15:P:2:ALA:O	15:P:8:GLU:O	2.31	0.48
15:P:81:LEU:HD21	15:P:88:ARG:NH2	2.28	0.48
18:S:9:PHE:CE1	18:S:18:ARG:HG3	2.47	0.48
13:N:110:ASP:OD2	20:U:88:LYS:HD2	2.13	0.48
21:V:16:LEU:CD1	21:V:44:MET:HE1	2.35	0.48
3:D:18:G:H21	3:D:58:A:H5'	1.72	0.48
3:D:9:A:N6	3:D:23:A:H62	1.98	0.48
1:A:345:C:H5'	1:A:346:G:C4	2.48	0.48
3:D:4:C:N3	3:D:70:G:N1	2.61	0.48
1:A:1057:G:H2'	1:A:1058:G:O5'	2.14	0.48
1:A:1067:A:C2	1:A:1068:G:H1'	2.47	0.48
1:A:1094:G:C2'	1:A:1108:G:H22	2.27	0.48
1:A:1087:G:N2	1:A:1099:G:C4	2.82	0.48
1:A:1148:U:C4'	11:L:16:ARG:HD2	2.43	0.48
1:A:1148:U:O2	1:A:1149:C:O4'	2.31	0.48
1:A:1158:C:C4	1:A:1160:G:C1'	2.90	0.48
1:A:117:G:O6	1:A:289:G:O4'	2.30	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1191:A:O5'	5:F:4:LYS:NZ	2.46	0.48
1:A:1217:C:H2'	1:A:1218:C:C6	2.47	0.48
1:A:1372:U:H2'	1:A:1373:G:O4'	2.13	0.48
1:A:1377:A:O2'	1:A:1378:C:P	2.71	0.48
1:A:1405:G:C2	1:A:1406:U:C5	3.01	0.48
1:A:1422:G:O2'	1:A:1423:G:H5'	2.13	0.48
1:A:41:G:N3	1:A:42:G:C8	2.81	0.48
1:A:556:C:C2'	1:A:557:G:H5'	2.43	0.48
1:A:566:G:H4'	1:A:567:G:C5'	2.43	0.48
1:A:593:G:H2'	1:A:594:G:O4'	2.13	0.48
1:A:821:G:O6	1:A:880:C:N4	2.46	0.48
1:A:826:C:C2	1:A:827:U:C5	3.01	0.48
3:B:32:U:H2'	3:B:33:U:C6	2.49	0.48
3:C:18:G:N2	3:C:58:A:C4	2.80	0.48
4:E:131:PRO:O	4:E:134:GLU:CB	2.61	0.48
5:F:114:PRO:HD3	5:F:183:ASP:CG	2.34	0.48
5:F:39:ILE:CG2	5:F:40:ARG:N	2.72	0.48
6:G:14:ARG:O	6:G:14:ARG:CZ	2.62	0.48
6:G:54:TYR:O	6:G:56:VAL:N	2.46	0.48
6:G:79:PHE:HA	6:G:93:PHE:CD1	2.49	0.48
8:I:53:ALA:O	8:I:55:ASP:OD1	2.31	0.48
8:I:34:GLY:HA3	8:I:68:PRO:CG	2.44	0.48
9:J:113:GLU:CB	9:J:118:VAL:CG1	2.91	0.48
10:K:114:THR:OG1	10:K:119:LEU:CD2	2.61	0.48
12:M:10:GLY:HA3	12:M:16:LEU:CD2	2.42	0.48
12:M:49:VAL:HG11	16:Q:45:ARG:HD2	1.93	0.48
12:M:63:PHE:HA	16:Q:59:ALA:N	2.28	0.48
1:A:1492:A:C6	14:O:50:SER:HB2	2.48	0.48
15:P:95:GLY:O	15:P:110:ARG:HD2	2.13	0.48
15:P:13:LYS:CG	15:P:17:VAL:HG11	2.43	0.48
19:T:32:TYR:O	19:T:34:LYS:N	2.46	0.48
20:U:25:THR:HG22	20:U:42:ARG:CZ	2.43	0.48
6:G:47:ARG:NH2	6:G:48:ALA:O	2.46	0.48
1:A:342:C:C2	1:A:343:U:C5	3.02	0.48
1:A:160:A:H1'	1:A:344:A:N7	2.29	0.48
3:B:18:G:H2'	3:B:57:G:H1	1.77	0.48
3:B:61:C:H2'	3:B:62:C:C5	2.48	0.48
15:P:121:LYS:O	15:P:122:LYS:HB3	2.13	0.48
1:A:1533:C:N4	2:1:32:U:H3	2.12	0.48
2:1:37:U:H2'	2:1:38:U:C4	2.48	0.48
1:A:1046:A:N3	1:A:1046:A:H2'	2.29	0.48
1:A:1109:C:H2'	1:A:1110:A:H8	1.78	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1132:C:H2'	1:A:1133:G:C8	2.47	0.48
1:A:1155:G:H2'	1:A:1156:G:H8	1.78	0.48
1:A:1240:U:H4'	1:A:1241:G:OP2	2.12	0.48
1:A:1150:U:C5'	1:A:1280:A:C2	2.95	0.48
1:A:1284:C:C6	1:A:1285:A:N7	2.81	0.48
1:A:1500:A:H2'	1:A:1501:C:H6	1.79	0.48
1:A:68:G:C4'	1:A:171:A:H1'	2.44	0.48
1:A:294:U:H2'	1:A:295:C:C6	2.48	0.48
1:A:432:A:C8	1:A:432:A:C3'	2.97	0.48
1:A:446:G:H2'	1:A:447:G:H8	1.79	0.48
1:A:48:C:C5	1:A:364:A:H2	2.32	0.48
1:A:584:G:C2'	1:A:585:G:O5'	2.62	0.48
1:A:666:G:H22	1:A:741:G:H1'	1.78	0.48
1:A:683:G:H2'	1:A:684:A:C8	2.48	0.48
1:A:580:U:O4	1:A:761:G:O6	2.31	0.48
1:A:842:C:H5'	1:A:848:C:O2	2.13	0.48
1:A:866:C:H6	1:A:867:G:C1'	2.27	0.48
1:A:872:A:C4	1:A:874:G:N7	2.82	0.48
1:A:890:G:O2'	1:A:891:U:O5'	2.31	0.48
1:A:997:U:OP2	1:A:997:U:C6	2.66	0.48
4:E:189:ASP:CB	4:E:205:ASP:HB3	2.40	0.48
4:E:209:ARG:HD2	4:E:209:ARG:C	2.33	0.48
4:E:78:GLN:NE2	4:E:96:ARG:NH1	2.57	0.48
5:F:140:ARG:HH11	5:F:140:ARG:HB3	1.75	0.48
1:A:1111:A:N1	5:F:177:THR:HA	2.28	0.48
5:F:6:HIS:HA	5:F:7:PRO:HD2	1.77	0.48
6:G:70:ILE:CD1	6:G:100:ARG:HH21	2.18	0.48
6:G:118:ARG:HA	6:G:136:PRO:HB3	1.95	0.48
6:G:120:LEU:CG	6:G:121:VAL:N	2.77	0.48
6:G:62:GLN:CA	6:G:62:GLN:HE21	2.26	0.48
6:G:64:LEU:O	6:G:67:ILE:HG13	2.14	0.48
8:I:41:GLU:N	8:I:63:TYR:CD1	2.81	0.48
9:J:65:ALA:HA	9:J:128:ALA:N	2.28	0.48
9:J:15:ASP:OD2	9:J:23:VAL:HG11	2.12	0.48
10:K:36:LEU:HD12	10:K:48:TYR:CD1	2.48	0.48
11:L:79:LEU:HD22	11:L:101:PHE:CD2	2.47	0.48
11:L:2:GLU:O	11:L:21:PRO:HD2	2.13	0.48
12:M:31:GLY:CA	12:M:81:THR:OG1	2.62	0.48
14:O:102:ARG:CZ	14:O:109:GLY:C	2.82	0.48
1:A:529:G:C6	14:O:49:ASN:ND2	2.81	0.48
15:P:29:ARG:HH11	15:P:66:LEU:HD22	1.79	0.48
15:P:24:GLY:CA	15:P:66:LEU:HB2	2.19	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:S:14:ASN:OD1	18:S:14:ASN:C	2.51	0.48
20:U:71:LYS:O	20:U:72:ARG:C	2.51	0.48
22:W:59:ALA:O	22:W:61:SER:N	2.46	0.48
22:W:85:MET:HB2	22:W:104:LEU:CD2	2.35	0.48
1:A:160:A:O4'	1:A:344:A:N7	2.47	0.48
1:A:73:G:C6	1:A:74:C:N4	2.82	0.48
22:W:36:LEU:HD23	22:W:36:LEU:HA	1.47	0.48
2:1:31:U:N3	2:1:32:U:C4	2.81	0.48
1:A:1317:C:H41	16:Q:18:VAL:HG11	1.78	0.48
1:A:1321:C:C5	1:A:1322:C:C3'	2.97	0.48
1:A:1327:C:H5''	23:X:20:LYS:NZ	2.28	0.48
1:A:934:C:N4	1:A:1344:C:C2	2.78	0.48
1:A:1347:G:H4'	1:A:1348:U:C5'	2.42	0.48
1:A:1410:G:C2	1:A:1411:C:C4	3.01	0.48
1:A:166:G:H2'	1:A:167:G:O5'	2.13	0.48
1:A:22:G:O4'	1:A:885:G:H1'	2.14	0.48
1:A:246:A:HO2'	1:A:247:G:C1'	2.17	0.48
1:A:251:G:C5'	1:A:252:U:OP1	2.61	0.48
1:A:323:U:H5	1:A:324:G:N9	2.11	0.48
1:A:375:U:C2'	1:A:376:G:H5'	2.43	0.48
1:A:430:A:C5	1:A:431:A:C8	3.01	0.48
1:A:621:A:H2'	1:A:622:A:H8	1.77	0.48
1:A:643:C:N3	1:A:644:G:N7	2.60	0.48
1:A:705:U:C4	1:A:706:A:N7	2.81	0.48
1:A:739:C:C2'	1:A:740:U:H5'	2.43	0.48
1:A:666:G:N1	1:A:741:G:C4	2.82	0.48
1:A:786:G:N2	1:A:787:A:H1'	2.28	0.48
1:A:832:C:N3	1:A:833:U:C4	2.82	0.48
1:A:1493:A:C6	3:B:37:A:H5'	2.49	0.48
3:C:72:C:C4	3:C:73:A:N6	2.82	0.48
4:E:77:ALA:O	4:E:78:GLN:C	2.51	0.48
5:F:58:GLU:HB2	5:F:65:ALA:CB	2.44	0.48
5:F:66:VAL:HB	5:F:99:VAL:HG21	1.95	0.48
6:G:187:ARG:HG3	6:G:188:LEU:N	2.28	0.48
6:G:201:GLN:O	6:G:202:LEU:C	2.52	0.48
6:G:59:ARG:HB3	6:G:63:LYS:NZ	2.29	0.48
7:H:107:ARG:O	7:H:108:ALA:C	2.50	0.48
7:H:91:LEU:HA	7:H:119:LEU:O	2.14	0.48
9:J:27:ILE:HG12	9:J:43:PHE:CG	2.48	0.48
9:J:37:ASN:O	9:J:39:ALA:N	2.47	0.48
9:J:57:GLU:HB3	9:J:58:PRO:HD2	1.95	0.48
9:J:72:ARG:HG2	9:J:142:GLU:CD	2.33	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:824:C:C1'	10:K:1:MET:N	2.77	0.48
10:K:24:THR:H	10:K:60:ARG:CD	2.26	0.48
10:K:41:ARG:HH11	10:K:41:ARG:C	2.17	0.48
10:K:21:LYS:O	10:K:63:LEU:HD13	2.13	0.48
1:A:1179:A:O3'	11:L:103:THR:OG1	2.32	0.48
11:L:5:TYR:OH	11:L:16:ARG:HG3	2.14	0.48
11:L:75:ASP:O	11:L:78:LYS:HB3	2.13	0.48
13:N:58:PRO:HB3	13:N:90:GLY:HA2	1.93	0.48
13:N:78:GLN:CD	13:N:78:GLN:N	2.66	0.48
1:A:363:A:C8	14:O:30:ALA:HB1	2.48	0.48
14:O:86:ARG:HH22	14:O:119:LYS:CD	2.26	0.48
1:A:950:U:H3'	15:P:102:ARG:HH22	1.77	0.48
16:Q:22:THR:HG22	16:Q:33:VAL:HG23	1.94	0.48
16:Q:3:ARG:O	16:Q:3:ARG:HG3	2.13	0.48
17:R:57:LEU:O	17:R:58:MET:C	2.52	0.48
19:T:27:PHE:HB2	19:T:28:PRO:HD2	1.95	0.48
21:V:30:LEU:HA	21:V:48:THR:O	2.14	0.48
7:H:153:LYS:HG2	7:H:154:GLY:N	2.25	0.48
6:G:159:ARG:HD2	6:G:163:GLU:OE2	2.12	0.48
2:1:41:U:O2'	2:1:42:U:H5'	2.14	0.48
1:A:1074:G:O2'	1:A:1075:C:H5'	2.14	0.48
1:A:1080:A:N7	1:A:1081:G:H1'	2.28	0.48
1:A:1100:C:H2'	4:E:98:LEU:HD13	1.86	0.48
1:A:1127:G:O2'	1:A:1148:U:N3	2.42	0.48
1:A:1158:C:H2'	1:A:1158:C:O2	2.12	0.48
1:A:1288:A:H1'	1:A:1352:C:O2'	2.14	0.48
1:A:1325:C:C2	1:A:1326:C:C5	3.01	0.48
1:A:1358:U:H5''	1:A:1359:C:OP2	2.13	0.48
1:A:1371:G:OP2	11:L:11:LYS:CE	2.62	0.48
1:A:1413:A:N6	1:A:1488:G:N1	2.62	0.48
1:A:173:U:C5'	1:A:197:A:H1'	2.43	0.48
1:A:439:A:H3'	1:A:440:A:C8	2.45	0.48
1:A:60:A:O2'	1:A:61:G:P	2.71	0.48
1:A:873:A:H2'	1:A:873:A:N3	2.28	0.48
1:A:878:G:O2'	1:A:879:C:H5'	2.13	0.48
1:A:922:G:C2	1:A:923:A:C4	3.02	0.48
1:A:947:G:H2'	1:A:948:C:H6	1.78	0.48
1:A:996:A:C2	1:A:997:U:C4	3.02	0.48
3:B:31:A:C2'	3:B:32:U:H5'	2.43	0.48
3:C:19:G:C4	3:C:57:G:N2	2.82	0.48
4:E:112:VAL:CG1	4:E:149:LEU:HD21	2.44	0.48
4:E:52:GLU:O	4:E:53:ARG:C	2.52	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:28:GLN:C	5:F:30:ARG:HD3	2.33	0.48
5:F:48:TYR:C	5:F:48:TYR:CD2	2.87	0.48
5:F:8:ILE:HG13	5:F:16:ARG:HD2	1.95	0.48
6:G:102:ASP:HB2	6:G:136:PRO:CA	2.44	0.48
6:G:145:GLU:CG	6:G:184:LYS:HE2	2.43	0.48
6:G:30:LYS:HZ3	6:G:35:ARG:HD2	1.77	0.48
7:H:112:LEU:O	7:H:113:ALA:C	2.52	0.48
9:J:102:ARG:O	9:J:105:VAL:N	2.47	0.48
9:J:113:GLU:OE1	9:J:119:ARG:N	2.47	0.48
9:J:149:ARG:O	9:J:152:ALA:N	2.46	0.48
10:K:104:ARG:O	10:K:105:ARG:C	2.51	0.48
10:K:9:MET:CG	10:K:26:VAL:HG11	2.41	0.48
10:K:40:ALA:HB2	10:K:45:ILE:HG23	1.96	0.48
10:K:41:ARG:HH11	10:K:41:ARG:CB	2.27	0.48
11:L:9:ARG:HD2	11:L:14:VAL:CG1	2.43	0.48
12:M:79:ARG:O	12:M:81:THR:N	2.47	0.48
13:N:81:ASP:HA	13:N:107:SER:O	2.14	0.48
14:O:68:ALA:HB1	14:O:99:HIS:CA	2.43	0.48
14:O:8:ASN:N	14:O:8:ASN:HD22	2.09	0.48
15:P:102:ARG:HG3	15:P:104:ARG:HB3	1.96	0.48
16:Q:29:ARG:HB2	16:Q:40:CYS:HB3	1.96	0.48
18:S:19:ILE:HG13	18:S:38:TYR:CA	2.40	0.48
20:U:81:PHE:O	20:U:82:THR:HB	2.14	0.48
21:V:22:LEU:HA	21:V:25:LYS:HZ1	1.79	0.48
22:W:54:LYS:N	22:W:100:ILE:HD11	2.28	0.48
1:A:333:G:C4'	22:W:16:HIS:HD2	2.25	0.48
22:W:42:GLN:O	22:W:45:GLN:N	2.47	0.48
6:G:43:HIS:ND1	6:G:46:LYS:HE3	2.29	0.48
3:D:3:C:C2	3:D:4:C:C5	3.01	0.48
1:A:76:G:H2'	1:A:77:C:C6	2.48	0.48
1:A:1049:U:H1'	1:A:1201:A:H8	1.76	0.48
1:A:1129:C:C5'	1:A:1130:A:OP1	2.51	0.48
1:A:1144:G:N2	1:A:1146:A:N7	2.62	0.48
1:A:1145:C:O2'	1:A:1146:A:O5'	2.32	0.48
1:A:1147:C:C2	1:A:1148:U:C5	3.02	0.48
1:A:1178:G:N2	1:A:1180:A:O5'	2.47	0.48
1:A:1052:U:OP2	1:A:1200:C:O2	2.31	0.48
1:A:1261:A:H5'	1:A:1284:C:OP1	2.14	0.48
1:A:1261:A:H3'	1:A:1262:C:C6	2.48	0.48
1:A:1347:G:H22	1:A:1373:G:H3'	1.77	0.48
1:A:1388:C:O2'	1:A:1389:C:H5'	2.13	0.48
1:A:1413:A:N6	1:A:1488:G:C5	2.80	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1443:G:P	1:A:1446:A:OP1	2.71	0.48
1:A:1480:G:H2'	1:A:1481:U:C5'	2.43	0.48
1:A:1486:G:H2'	1:A:1487:G:O4'	2.12	0.48
1:A:236:G:C3'	1:A:237:C:C6	2.91	0.48
1:A:293:G:C4	1:A:294:U:C5	3.02	0.48
1:A:440:A:N6	1:A:494:U:C6	2.80	0.48
1:A:49:U:O4	1:A:362:G:N2	2.47	0.48
1:A:536:C:H6	1:A:536:C:O5'	1.96	0.48
1:A:552:U:C2	1:A:553:A:C8	3.02	0.48
1:A:601:C:O2'	1:A:602:A:H5'	2.14	0.48
1:A:729:A:N6	17:R:51:HIS:CD2	2.82	0.48
1:A:910:C:HO2'	1:A:911:U:H5'	1.78	0.48
3:C:19:G:N2	3:C:57:G:N3	2.62	0.48
5:F:110:ASN:ND2	5:F:144:SER:OG	2.46	0.48
5:F:114:PRO:O	5:F:117:ALA:HB3	2.14	0.48
6:G:104:VAL:CG2	6:G:105:VAL:N	2.76	0.48
6:G:106:TYR:CE1	6:G:112:VAL:C	2.87	0.48
7:H:105:VAL:HG13	7:H:132:ALA:HA	1.96	0.48
7:H:121:LYS:CE	7:H:122:GLU:N	2.77	0.48
7:H:40:ARG:CA	7:H:68:GLU:OE1	2.61	0.48
8:I:12:PRO:HG2	8:I:13:ASN:ND2	2.28	0.48
9:J:129:GLU:OE1	9:J:131:LYS:HD3	2.14	0.48
10:K:3:THR:HB	10:K:4:ASP:OD1	2.14	0.48
10:K:49:GLU:OE2	10:K:51:VAL:HG23	2.14	0.48
10:K:5:PRO:O	10:K:6:ILE:O	2.32	0.48
11:L:82:ALA:CB	11:L:101:PHE:CE1	2.97	0.48
13:N:119:CYS:O	13:N:120:ARG:C	2.52	0.48
13:N:60:ALA:O	13:N:63:LEU:N	2.47	0.48
14:O:77:LEU:CD1	14:O:107:ALA:HB2	2.39	0.48
14:O:24:VAL:CG1	14:O:26:ALA:H	2.26	0.48
5:F:29:TYR:CD1	16:Q:36:PHE:HZ	2.32	0.48
17:R:62:GLN:HA	17:R:65:ARG:HH12	1.77	0.48
17:R:6:GLU:C	17:R:8:LYS:N	2.64	0.48
19:T:18:THR:O	19:T:19:VAL:HG13	2.13	0.48
21:V:68:GLY:O	21:V:69:HIS:ND1	2.46	0.48
22:W:30:LYS:HB2	22:W:30:LYS:NZ	2.29	0.48
22:W:81:LYS:HB3	22:W:85:MET:HE3	1.95	0.48
3:D:19:G:H5'	3:D:20:U:O4	2.13	0.48
2:1:41:U:H2'	2:1:42:U:H6	1.78	0.48
1:A:1054:C:OP2	1:A:1197:G:OP2	2.30	0.48
1:A:1065:U:O2'	1:A:1066:C:P	2.71	0.48
1:A:1181:G:H2'	1:A:1182:G:H5'	1.96	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1193:G:O2'	1:A:1194:U:H5'	2.13	0.48
1:A:1206:G:H2'	1:A:1207:G:C8	2.49	0.48
1:A:1273:G:C3'	1:A:1274:G:H8	2.26	0.48
1:A:1299:A:N7	1:A:1301:U:N1	2.61	0.48
1:A:1323:G:C6	1:A:1324:A:N6	2.82	0.48
1:A:1521:G:O2'	1:A:1522:U:C5'	2.58	0.48
1:A:174:C:N3	1:A:175:C:C5	2.82	0.48
1:A:225:C:O2	1:A:226:G:O4'	2.32	0.48
1:A:294:U:H2'	1:A:295:C:C5	2.49	0.48
1:A:383:A:H2'	1:A:384:G:C4'	2.44	0.48
1:A:515:G:C2	1:A:537:G:C2	3.02	0.48
1:A:522:C:H5''	14:O:120:TYR:HH	1.75	0.48
1:A:533:A:H3'	1:A:534:U:H5''	1.96	0.48
1:A:587:G:H1'	1:A:755:G:C2	2.41	0.48
1:A:656:C:H2'	1:A:657:G:C5'	2.44	0.48
1:A:658:G:C6	1:A:749:C:N4	2.81	0.48
1:A:692:U:C2	1:A:694:A:H3'	2.48	0.48
1:A:738:C:OP1	8:I:4:TYR:OH	2.32	0.48
1:A:859:A:H2'	1:A:860:A:C4'	2.44	0.48
1:A:87:A:N7	1:A:88:C:C5	2.81	0.48
1:A:982:U:H1'	1:A:983:A:H62	1.78	0.48
3:C:41:C:H2'	3:C:42:C:O5'	2.13	0.48
3:C:67:C:C2	3:C:68:C:C5	3.02	0.48
4:E:59:GLU:HB2	4:E:225:ALA:HB2	1.94	0.48
4:E:36:ARG:HA	4:E:36:ARG:HE	1.79	0.48
5:F:116:VAL:HG13	5:F:119:ARG:HD3	1.96	0.48
5:F:5:ILE:CG2	12:M:51:ARG:HH22	2.27	0.48
5:F:64:VAL:HG12	5:F:64:VAL:O	2.13	0.48
6:G:128:VAL:HB	6:G:132:ARG:HA	1.95	0.48
6:G:51:PRO:O	6:G:52:SER:C	2.50	0.48
6:G:75:PHE:HE1	6:G:97:LEU:CD2	2.27	0.48
6:G:205:GLU:OE1	7:H:100:VAL:HB	2.14	0.48
7:H:69:VAL:HG12	7:H:76:ILE:HD11	1.96	0.48
8:I:41:GLU:N	8:I:63:TYR:HD1	2.11	0.48
8:I:30:LEU:HD23	8:I:75:LEU:CD1	2.43	0.48
10:K:103:VAL:CB	10:K:108:GLY:C	2.81	0.48
10:K:111:ILE:CD1	10:K:136:GLU:HA	2.44	0.48
10:K:112:LEU:HG	10:K:113:SER:N	2.28	0.48
10:K:17:THR:CB	10:K:18:ARG:NH2	2.77	0.48
11:L:37:PHE:O	11:L:40:LEU:HB2	2.12	0.48
13:N:33:THR:HB	13:N:38:ASN:O	2.14	0.48
14:O:11:VAL:HG22	19:T:32:TYR:CD1	2.47	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:P:71:ARG:O	15:P:72:ALA:C	2.50	0.48
15:P:86:CYS:SG	15:P:89:GLY:HA3	2.53	0.48
16:Q:48:ALA:O	16:Q:51:GLY:N	2.46	0.48
20:U:66:LEU:CD1	20:U:67:ALA:H	2.22	0.48
21:V:51:VAL:CG2	21:V:60:VAL:HG21	2.43	0.48
3:B:52:G:C6	3:B:63:G:O6	2.67	0.48
1:A:102:G:C5	1:A:103:C:C5	3.02	0.48
1:A:1213:A:C5	1:A:1215:G:C6	3.01	0.48
1:A:1326:C:H2'	1:A:1327:C:C6	2.45	0.48
1:A:1329:A:H5'	15:P:29:ARG:HE	1.72	0.48
1:A:1346:A:N6	1:A:1375:A:OP2	2.40	0.48
1:A:137:C:H1'	18:S:62:VAL:HA	1.96	0.48
1:A:1389:C:C2'	1:A:1390:U:C5'	2.88	0.48
1:A:1431:C:N4	1:A:1469:G:N1	2.56	0.48
1:A:1433:A:N1	1:A:1434:A:C2	2.82	0.48
1:A:1476:G:C4	1:A:1477:C:C5	3.02	0.48
1:A:279:A:H4'	1:A:280:C:O5'	2.14	0.48
1:A:298:A:N6	1:A:299:G:C2	2.82	0.48
1:A:355:C:H42	1:A:356:A:N6	2.12	0.48
1:A:414:A:N7	1:A:430:A:N6	2.62	0.48
1:A:439:A:C2	1:A:496:A:H1'	2.49	0.48
1:A:47:C:C5	1:A:365:U:H2'	2.49	0.48
1:A:538:G:O2'	1:A:539:A:H5'	2.14	0.48
1:A:682:G:C6	1:A:709:G:C6	3.02	0.48
1:A:748:C:O2'	1:A:749:C:H5'	2.14	0.48
1:A:754:C:H5'	1:A:755:G:H8	1.69	0.48
1:A:769:G:O2'	1:A:770:C:H5'	2.14	0.48
1:A:832:C:C4	1:A:833:U:O4	2.66	0.48
1:A:922:G:H4'	7:H:20:GLN:CA	2.27	0.48
1:A:925:G:O2'	1:A:927:G:OP1	2.19	0.48
3:C:3:C:O2'	3:C:4:C:O5'	2.31	0.48
4:E:193:ASP:CG	4:E:196:LEU:HD11	2.34	0.48
4:E:187:LEU:HD23	4:E:201:ILE:O	2.14	0.48
4:E:76:GLN:O	4:E:77:ALA:CB	2.62	0.48
4:E:81:VAL:HB	4:E:94:ASN:OD1	2.14	0.48
5:F:11:ARG:O	5:F:12:LEU:C	2.52	0.48
5:F:182:ILE:CD1	5:F:203:PHE:CD1	2.97	0.48
5:F:36:ASP:HA	5:F:39:ILE:CD1	2.40	0.48
6:G:200:GLU:HG3	6:G:201:GLN:NE2	2.29	0.48
7:H:74:GLY:O	7:H:115:VAL:CG1	2.60	0.48
9:J:125:MET:O	9:J:126:ASP:C	2.52	0.48
9:J:38:LEU:C	9:J:41:ARG:HB2	2.34	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:K:122:ARG:O	10:K:125:ARG:HB3	2.14	0.48
10:K:37:ARG:CD	10:K:38:ILE:HD13	2.34	0.48
11:L:27:THR:CG2	11:L:62:TYR:CE1	2.97	0.48
11:L:4:TYR:HB3	11:L:87:GLN:HB2	1.95	0.48
13:N:85:ARG:NE	13:N:113:PRO:HD3	2.28	0.48
13:N:22:HIS:C	13:N:22:HIS:CD2	2.87	0.48
14:O:33:ARG:HG2	14:O:60:LEU:CD2	2.43	0.48
15:P:39:ILE:HG21	15:P:56:LEU:CD1	2.44	0.48
15:P:66:LEU:O	15:P:70:LEU:HB2	2.13	0.48
15:P:69:GLU:C	15:P:71:ARG:N	2.66	0.48
15:P:92:HIS:CA	15:P:98:VAL:HG21	2.44	0.48
15:P:88:ARG:NH2	15:P:92:HIS:CD2	2.81	0.48
18:S:10:GLY:HA3	18:S:14:ASN:O	2.14	0.48
21:V:9:VAL:HG11	21:V:39:THR:HG21	1.96	0.48
22:W:17:ARG:O	22:W:20:LEU:CB	2.59	0.48
3:D:24:G:C6	3:D:25:C:C4	3.02	0.48
3:B:71:G:H21	3:B:72:C:H1'	1.76	0.48
1:A:1171:G:H2'	1:A:1172:C:H6	1.78	0.48
1:A:511:C:O2'	1:A:512:U:O5'	2.32	0.48
12:M:3:LYS:N	12:M:3:LYS:CD	2.77	0.48
1:A:1065:U:H2'	1:A:1066:C:OP2	2.13	0.47
1:A:1105:A:N3	1:A:1106:G:C8	2.82	0.47
1:A:1237:C:HO2'	1:A:1300:G:H22	1.54	0.47
1:A:978:A:N6	1:A:1318:A:H61	2.12	0.47
1:A:1371:G:O2'	1:A:1372:U:H5'	2.13	0.47
1:A:142:G:N1	1:A:143:A:C5	2.82	0.47
1:A:1483:A:H3'	1:A:1484:C:C6	2.49	0.47
1:A:1490:C:H2'	1:A:1491:G:O4'	2.14	0.47
1:A:1502:A:C2	1:A:1504:G:C4	3.01	0.47
1:A:152:A:C8	1:A:153:C:C6	3.02	0.47
1:A:20:U:O4	1:A:21:G:C6	2.68	0.47
1:A:295:C:O2	1:A:296:U:C1'	2.62	0.47
1:A:428:G:HO2'	1:A:429:U:P	2.38	0.47
1:A:458:C:H3'	1:A:464:G:C8	2.48	0.47
1:A:497:U:O2'	1:A:498:A:H5'	2.13	0.47
1:A:52:G:C2'	1:A:53:A:O4'	2.59	0.47
1:A:570:G:O3'	1:A:819:A:H2'	2.13	0.47
1:A:573:A:C2	1:A:574:A:N1	2.82	0.47
1:A:62:U:C2	1:A:63:C:C5	3.02	0.47
1:A:673:G:C2	1:A:674:G:N1	2.82	0.47
1:A:687:A:C2	1:A:704:A:C6	3.01	0.47
1:A:691:G:N2	13:N:51:LYS:HZ3	2.12	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:695:A:C2	1:A:696:A:C4	3.02	0.47
1:A:715:A:H4'	1:A:777:A:H61	1.79	0.47
1:A:752:G:C2'	1:A:753:A:OP2	2.61	0.47
1:A:830:G:C6	1:A:857:C:C4	3.02	0.47
1:A:909:A:C2	1:A:910:C:C1'	2.97	0.47
1:A:938:A:O2'	1:A:1376:U:H4'	2.14	0.47
1:A:960:U:O2'	1:A:961:U:P	2.72	0.47
1:A:995:C:O2	16:Q:4:LYS:NZ	2.47	0.47
3:C:21:A:C8	3:C:46:G:O6	2.67	0.47
3:D:35:A:H2'	3:D:36:A:C8	2.49	0.47
4:E:193:ASP:N	4:E:193:ASP:OD1	2.41	0.47
4:E:50:GLU:O	4:E:51:LEU:C	2.53	0.47
4:E:74:LYS:O	4:E:75:LYS:C	2.50	0.47
5:F:148:GLY:HA3	5:F:172:ARG:O	2.14	0.47
5:F:64:VAL:HG12	5:F:66:VAL:HG23	1.95	0.47
5:F:77:ILE:HG22	5:F:81:GLY:HA2	1.95	0.47
5:F:64:VAL:O	5:F:99:VAL:CG1	2.62	0.47
6:G:104:VAL:O	6:G:105:VAL:C	2.52	0.47
6:G:123:HIS:N	6:G:123:HIS:CD2	2.81	0.47
6:G:191:ARG:CD	6:G:192:GLU:N	2.69	0.47
7:H:31:LEU:O	7:H:31:LEU:HD23	2.14	0.47
7:H:49:PRO:O	7:H:50:GLU:HG2	2.14	0.47
8:I:6:VAL:O	8:I:6:VAL:HG12	2.15	0.47
9:J:106:GLN:NE2	9:J:109:ASN:ND2	2.62	0.47
9:J:113:GLU:OE2	9:J:119:ARG:CG	2.58	0.47
9:J:94:ARG:O	9:J:97:GLN:HB3	2.14	0.47
10:K:18:ARG:HH12	10:K:78:GLN:CD	2.16	0.47
10:K:48:TYR:HB3	10:K:61:VAL:HG22	1.93	0.47
10:K:63:LEU:CG	10:K:65:TYR:HE1	2.27	0.47
11:L:28:VAL:C	11:L:30:GLY:N	2.64	0.47
12:M:16:LEU:HB3	12:M:70:ARG:HG3	1.96	0.47
13:N:102:GLY:O	13:N:104:GLN:O	2.31	0.47
14:O:42:THR:HA	14:O:55:VAL:HG23	1.95	0.47
17:R:8:LYS:HE2	17:R:9:GLN:HE22	1.77	0.47
19:T:59:ILE:HG13	19:T:60:ILE:N	2.29	0.47
20:U:51:LEU:HA	20:U:52:PRO:HD2	1.48	0.47
20:U:74:ARG:CA	20:U:79:LEU:HD21	2.42	0.47
21:V:30:LEU:HD12	21:V:59:PRO:HB3	1.95	0.47
21:V:68:GLY:O	21:V:69:HIS:CG	2.67	0.47
22:W:85:MET:O	22:W:86:ARG:C	2.52	0.47
2:1:48:U:C6	2:1:48:U:OP2	2.64	0.47
3:B:74:C:O2'	3:B:75:C:H5'	2.14	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:73:G:C2	1:A:74:C:C2	3.02	0.47
2:1:17:U:O2'	2:1:18:U:OP1	2.29	0.47
1:A:1006:C:O2	1:A:1006:C:C2'	2.61	0.47
1:A:1067:A:H2	1:A:1068:G:C4	2.32	0.47
1:A:108:G:C5	22:W:15:ARG:NE	2.83	0.47
1:A:1134:G:H2'	1:A:1135:U:H5'	1.94	0.47
1:A:1261:A:N3	1:A:1261:A:H2'	2.28	0.47
1:A:1224:G:O6	1:A:1322:C:H4'	2.14	0.47
1:A:1323:G:C2	1:A:1324:A:C5	3.02	0.47
1:A:13:U:C5'	1:A:13:U:H6	2.27	0.47
1:A:145:G:C2	1:A:178:C:C2	3.01	0.47
1:A:68:G:H21	1:A:152:A:H1'	1.78	0.47
1:A:141:A:C4'	1:A:182:U:H1'	2.44	0.47
1:A:186(A):C:C2'	1:A:186(B):C:H5'	2.44	0.47
1:A:230:G:N1	1:A:231:G:C4	2.82	0.47
1:A:258:G:C4	1:A:259:G:N7	2.82	0.47
1:A:290:C:H2'	1:A:291:C:C5'	2.44	0.47
1:A:433:C:N4	1:A:434:U:O4	2.48	0.47
1:A:52:G:C4	1:A:53:A:C8	3.02	0.47
1:A:541:G:C8	1:A:541:G:OP2	2.67	0.47
1:A:55:A:HO2'	1:A:56:U:H5'	1.78	0.47
1:A:575:G:O2'	1:A:576:G:H5'	2.15	0.47
1:A:57:G:C6	1:A:58:C:C4	3.02	0.47
1:A:665:A:C2	1:A:732:C:C4	3.02	0.47
1:A:729:A:C2'	1:A:730:G:O5'	2.62	0.47
1:A:812:C:C2'	1:A:813:U:OP2	2.62	0.47
1:A:904:C:H2'	1:A:905:U:C6	2.49	0.47
1:A:932:C:O2	1:A:932:C:H2'	2.14	0.47
1:A:972:C:P	12:M:57:LYS:NZ	2.86	0.47
3:C:30:G:N3	3:C:31:A:H1'	2.29	0.47
4:E:178:ARG:CA	4:E:184:VAL:HG21	2.40	0.47
4:E:189:ASP:CG	4:E:205:ASP:CG	2.71	0.47
4:E:45:GLN:O	4:E:49:GLU:OE2	2.32	0.47
4:E:84:GLU:CD	4:E:234:PRO:HD2	2.34	0.47
5:F:18:TRP:CZ2	16:Q:55:GLY:O	2.67	0.47
6:G:193:ASP:C	6:G:194:LEU:HD22	2.34	0.47
1:A:540:G:N2	6:G:42:GLN:NE2	2.56	0.47
9:J:119:ARG:O	9:J:120:ILE:C	2.52	0.47
9:J:71:PRO:CA	9:J:138:LYS:HE3	2.43	0.47
9:J:139:GLU:O	9:J:143:ARG:HG3	2.14	0.47
10:K:103:VAL:CG1	10:K:108:GLY:HA3	2.44	0.47
10:K:25:ASP:HA	10:K:59:LEU:O	2.14	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:K:67:PRO:N	10:K:76:PRO:HB3	2.29	0.47
12:M:9:ARG:HG3	12:M:9:ARG:O	2.14	0.47
13:N:114:VAL:HG23	13:N:115:PRO:HD2	1.96	0.47
1:A:362:G:H4'	14:O:28:LYS:NZ	2.28	0.47
14:O:48:PRO:HG3	14:O:92:ASP:OD1	2.14	0.47
14:O:53:ARG:CZ	14:O:92:ASP:OD2	2.62	0.47
17:R:55:GLY:O	17:R:56:LEU:C	2.51	0.47
17:R:59:MET:O	17:R:63:ARG:HG2	2.15	0.47
20:U:17:SER:CB	20:U:54:ARG:NH1	2.77	0.47
20:U:87:ARG:HH11	20:U:87:ARG:HG2	1.79	0.47
22:W:100:ILE:C	22:W:102:GLY:H	2.14	0.47
22:W:86:ARG:CG	22:W:87:LYS:N	2.77	0.47
3:D:18:G:H2'	3:D:19:G:O4'	2.14	0.47
1:A:1011:G:C2	1:A:1012:U:H1'	2.49	0.47
6:G:159:ARG:HD2	6:G:163:GLU:CD	2.34	0.47
2:1:10:U:O2'	2:1:12:U:H5	1.95	0.47
1:A:1066:C:C3'	1:A:1067:A:C8	2.90	0.47
1:A:1151:A:N6	1:A:1152:A:C5	2.82	0.47
1:A:1212:U:OP2	1:A:1212:U:O4'	2.32	0.47
1:A:1237:C:C4'	1:A:1334:G:N2	2.77	0.47
1:A:1407:C:O5'	1:A:1407:C:H6	1.97	0.47
1:A:1409:C:O5'	1:A:1409:C:H6	1.96	0.47
1:A:198:G:C2	1:A:199:G:C8	3.03	0.47
1:A:208:U:O2	1:A:208:U:H2'	2.14	0.47
1:A:292:G:OP2	1:A:293:G:N7	2.47	0.47
1:A:406:G:N2	1:A:437:U:O2	2.47	0.47
1:A:444:C:O2'	1:A:445:G:H5'	2.14	0.47
1:A:464:G:N2	1:A:474:G:O6	2.47	0.47
1:A:520:A:OP2	14:O:51:ALA:CB	2.60	0.47
1:A:521:G:C6	1:A:529:G:N2	2.82	0.47
1:A:640:A:H2'	1:A:641:U:H5'	1.94	0.47
1:A:644:G:H2'	1:A:645:C:H5'	1.96	0.47
1:A:648:A:C2	1:A:649:G:C8	3.03	0.47
1:A:718:G:N7	1:A:719:C:N4	2.62	0.47
1:A:778:G:C2	1:A:779:C:C6	3.02	0.47
1:A:849:C:O2'	1:A:850:U:H5'	2.14	0.47
1:A:862:C:N3	1:A:863:U:H5	2.12	0.47
3:B:30:G:O6	3:B:41:C:N4	2.47	0.47
4:E:101:MET:HA	4:E:104:ASN:OD1	2.15	0.47
4:E:24:TRP:CZ2	4:E:26:PRO:HA	2.49	0.47
6:G:59:ARG:HH22	6:G:66:ARG:NH1	2.07	0.47
8:I:45:LEU:HD23	8:I:59:TYR:CB	2.44	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:K:114:THR:H	10:K:119:LEU:CD2	2.26	0.47
1:A:1368:G:P	11:L:112:LYS:O	2.73	0.47
11:L:113:LYS:HB2	11:L:114:TYR:H	1.39	0.47
12:M:15:THR:HG21	12:M:93:GLY:O	2.14	0.47
13:N:80:VAL:N	13:N:104:GLN:NE2	2.56	0.47
13:N:91:ARG:CD	13:N:95:ILE:HD11	2.44	0.47
14:O:110:VAL:HG21	14:O:113:ARG:HG3	1.95	0.47
14:O:5:PRO:HB3	14:O:10:LEU:CD1	2.40	0.47
14:O:34:ARG:N	14:O:84:LEU:HD12	2.29	0.47
15:P:92:HIS:CE1	15:P:110:ARG:NH2	2.83	0.47
16:Q:27:CYS:SG	16:Q:42:ILE:HG13	2.54	0.47
17:R:81:LEU:O	17:R:85:LEU:HD12	2.14	0.47
18:S:71:ARG:HB2	18:S:71:ARG:NH1	2.29	0.47
19:T:5:VAL:CG1	19:T:6:LEU:H	2.27	0.47
20:U:71:LYS:O	20:U:73:ALA:N	2.47	0.47
21:V:52:TYR:OH	21:V:55:LYS:HA	2.13	0.47
21:V:78:ARG:O	21:V:79:THR:OG1	2.21	0.47
14:O:126:LYS:HD2	14:O:126:LYS:O	2.14	0.47
1:A:1165:C:C4	1:A:1166:G:C8	3.03	0.47
2:1:47:U:H5''	2:1:48:U:OP1	2.14	0.47
1:A:1342:C:C5'	11:L:125:TYR:HB2	2.44	0.47
1:A:134:A:P	1:A:134:A:H8	2.36	0.47
1:A:321:A:H5''	1:A:1436:U:O4'	2.13	0.47
1:A:290:C:H3'	1:A:290:C:C6	2.49	0.47
1:A:372:C:N4	1:A:389:A:N6	2.61	0.47
1:A:379:C:C2'	1:A:380:G:H5'	2.42	0.47
1:A:432:A:C8	1:A:433:C:C5	3.02	0.47
1:A:44:G:C5	1:A:45:U:C6	3.02	0.47
1:A:502:G:O2'	1:A:503:C:H5'	2.13	0.47
1:A:559:A:C3'	1:A:560:U:H5'	2.43	0.47
1:A:706:A:C4'	13:N:29:ILE:HD13	2.44	0.47
1:A:709:G:C4	1:A:710:G:C8	3.03	0.47
1:A:715:A:H2'	1:A:716:A:O4'	2.14	0.47
1:A:721:G:H1'	1:A:722:A:N1	2.30	0.47
1:A:742:G:C2	1:A:743:U:H1'	2.49	0.47
1:A:761:G:H1'	19:T:103:GLY:O	2.13	0.47
1:A:862:C:C2	1:A:863:U:C5	3.02	0.47
3:C:54:U:C5	3:C:55:U:C4	3.02	0.47
3:C:4:C:C2'	3:C:5:G:O5'	2.62	0.47
4:E:104:ASN:OD1	4:E:104:ASN:O	2.31	0.47
4:E:181:PHE:CE1	10:K:70:GLN:NE2	2.82	0.47
5:F:71:ALA:CA	5:F:105:GLU:HG3	2.42	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:179:ARG:HG2	5:F:206:GLU:OE1	2.13	0.47
6:G:121:VAL:HA	6:G:126:ILE:CD1	2.36	0.47
6:G:14:ARG:HD3	6:G:15:GLU:OE1	2.14	0.47
6:G:27:TYR:CD2	6:G:27:TYR:O	2.68	0.47
6:G:32:ALA:O	6:G:37:PRO:HA	2.14	0.47
7:H:103:GLY:O	7:H:104:ALA:C	2.52	0.47
7:H:109:ILE:CG2	7:H:110:LEU:N	2.75	0.47
7:H:109:ILE:HG12	7:H:139:LEU:HD11	1.97	0.47
7:H:144:THR:HG22	7:H:146:ALA:CB	2.44	0.47
7:H:94:ALA:HB3	7:H:117:ASP:O	2.15	0.47
8:I:16:GLN:CG	8:I:17:SER:H	2.25	0.47
8:I:25:ILE:O	8:I:26:ILE:C	2.52	0.47
9:J:123:GLU:OE1	9:J:134:ALA:CB	2.62	0.47
9:J:155:ARG:O	9:J:156:TRP:HE3	1.97	0.47
9:J:15:ASP:OD1	9:J:18:TYR:N	2.47	0.47
9:J:50:ILE:HD13	9:J:58:PRO:CA	2.45	0.47
10:K:87:SER:HB2	10:K:91:ARG:O	2.14	0.47
10:K:9:MET:HE3	10:K:13:ILE:HD11	1.96	0.47
12:M:33:GLN:C	12:M:34:VAL:HG23	2.35	0.47
13:N:44:SER:N	13:N:47:VAL:CG2	2.77	0.47
13:N:85:ARG:HA	13:N:85:ARG:HD3	1.56	0.47
14:O:102:ARG:HG3	14:O:120:TYR:HA	1.97	0.47
14:O:24:VAL:HG13	14:O:98:TYR:CZ	2.49	0.47
15:P:37:THR:CG2	15:P:56:LEU:HD22	2.45	0.47
16:Q:16:PHE:C	16:Q:18:VAL:N	2.67	0.47
18:S:6:LEU:CG	18:S:17:TYR:HD2	2.26	0.47
1:A:136:C:C1'	18:S:1:MET:HE1	2.44	0.47
19:T:38:ARG:HA	19:T:38:ARG:HE	1.80	0.47
20:U:21:LYS:HE2	20:U:23:LYS:HB3	1.97	0.47
1:A:1314:C:OP2	21:V:6:LYS:HA	2.14	0.47
22:W:22:ARG:C	22:W:26:ASN:OD1	2.52	0.47
22:W:37:SER:OG	22:W:38:LYS:N	2.47	0.47
22:W:88:VAL:O	22:W:92:LEU:HG	2.14	0.47
3:D:14:A:C2	3:D:15:G:N7	2.82	0.47
3:B:26:A:N6	3:B:44:G:C6	2.78	0.47
1:A:1027:C:OP2	1:A:1028:C:OP2	2.32	0.47
1:A:1134:G:C6	1:A:1141:C:N4	2.82	0.47
1:A:1214:C:H4'	1:A:1215:G:OP2	2.12	0.47
1:A:122:G:O5'	1:A:122:G:H8	1.97	0.47
1:A:1284:C:N1	1:A:1285:A:N7	2.61	0.47
1:A:1351:U:C2	1:A:1352:C:C5	3.03	0.47
1:A:1497:G:H2'	1:A:1498:U:C6	2.49	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1506:U:H3'	1:A:1507:A:C5'	2.45	0.47
1:A:265:G:N9	1:A:267:C:C5	2.83	0.47
1:A:276:G:O2'	1:A:277:C:H5'	2.14	0.47
1:A:303:A:O2'	1:A:304:U:H5'	2.15	0.47
1:A:109:A:N6	1:A:326:G:N1	2.62	0.47
1:A:393:A:N6	1:A:394:G:O6	2.47	0.47
1:A:657:G:N2	1:A:750:G:C8	2.83	0.47
1:A:706:A:H4'	13:N:22:HIS:ND1	2.30	0.47
1:A:587:G:N2	1:A:754:C:OP2	2.47	0.47
1:A:790:A:OP1	3:C:38:A:O2'	2.25	0.47
1:A:889:A:H4'	1:A:890:G:C5'	2.44	0.47
1:A:900:A:H62	1:A:901:A:N6	2.13	0.47
1:A:813:U:OP1	1:A:904:C:H5'	2.14	0.47
1:A:933:G:O5'	1:A:933:G:H8	1.98	0.47
1:A:991:U:O2'	1:A:993:G:H8	1.92	0.47
4:E:168:THR:O	4:E:169:LYS:HB2	2.15	0.47
4:E:218:ALA:O	4:E:219:VAL:C	2.52	0.47
4:E:80:ILE:CG2	4:E:81:VAL:N	2.78	0.47
5:F:84:ILE:CG1	5:F:101:LEU:HD13	2.43	0.47
5:F:33:LEU:CD2	5:F:36:ASP:OD1	2.63	0.47
5:F:63:ASN:O	5:F:64:VAL:HB	2.15	0.47
6:G:3:ARG:HG3	6:G:118:ARG:NE	2.30	0.47
6:G:83:SER:N	6:G:89:THR:HG23	2.29	0.47
7:H:37:ARG:HG2	7:H:111:GLU:O	2.14	0.47
7:H:17:ALA:CA	7:H:26:PHE:HD2	2.27	0.47
7:H:59:GLY:CA	7:H:63:ARG:HH21	2.27	0.47
7:H:65:ASN:O	7:H:65:ASN:CG	2.53	0.47
8:I:4:TYR:N	8:I:67:MET:HE2	2.29	0.47
8:I:3:ARG:CA	8:I:67:MET:CE	2.84	0.47
8:I:76:ALA:CB	8:I:80:ARG:CZ	2.92	0.47
9:J:15:ASP:HB3	9:J:19:GLY:N	2.30	0.47
9:J:47:CYS:HA	9:J:50:ILE:CG1	2.43	0.47
10:K:6:ILE:HG23	10:K:85:ARG:NH1	2.30	0.47
10:K:6:ILE:HD12	10:K:85:ARG:CZ	2.44	0.47
12:M:49:VAL:O	12:M:60:ARG:CB	2.62	0.47
13:N:106:LYS:CG	13:N:107:SER:N	2.77	0.47
1:A:551:U:C5'	14:O:119:LYS:NZ	2.61	0.47
14:O:119:LYS:O	14:O:120:TYR:HB2	2.15	0.47
1:A:952:U:O2'	15:P:126:LYS:OXT	2.32	0.47
15:P:2:ALA:HB3	15:P:4:ILE:CD1	2.41	0.47
15:P:66:LEU:CA	15:P:70:LEU:HB2	2.45	0.47
12:M:47:PHE:CE2	16:Q:37:PHE:CZ	3.02	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:6:HIS:CB	16:Q:49:HIS:ND1	2.77	0.47
17:R:34:LEU:HD12	17:R:38:ARG:NE	2.29	0.47
1:A:721:G:OP2	20:U:63:GLN:HG2	2.15	0.47
20:U:70:ILE:O	20:U:74:ARG:CD	2.59	0.47
20:U:74:ARG:H	20:U:74:ARG:CD	2.28	0.47
20:U:74:ARG:NH1	20:U:81:PHE:CB	2.78	0.47
22:W:98:PRO:O	22:W:99:LEU:O	2.32	0.47
1:A:511:C:O2'	1:A:512:U:C6	2.52	0.47
2:1:39:U:O3'	2:1:40:U:C6	2.67	0.47
1:A:1005:A:C5	1:A:1026:G:N2	2.82	0.47
1:A:1150:U:H5'	1:A:1280:A:H2	1.76	0.47
1:A:1161:C:O2	1:A:1162:C:C5	2.67	0.47
1:A:115:G:O2'	1:A:116:A:P	2.72	0.47
1:A:1275:A:O2'	1:A:1276:G:H5'	2.14	0.47
1:A:1301:U:O4	1:A:1303:C:C2	2.68	0.47
1:A:1308:U:H2'	1:A:1309:G:C8	2.49	0.47
1:A:1327:C:O2'	1:A:1328:C:H5'	2.15	0.47
1:A:1390:U:C2	1:A:1391:U:C5	3.03	0.47
1:A:1443:G:O2'	1:A:1447:G:OP1	2.33	0.47
1:A:230:G:H5'	18:S:23:ASP:OD2	2.14	0.47
1:A:237:C:OP1	19:T:40:LYS:CE	2.62	0.47
1:A:261:U:O4	22:W:79:ARG:NH2	2.46	0.47
1:A:266:G:O2'	1:A:268:C:OP2	2.30	0.47
1:A:50:A:C2	1:A:360:A:O2'	2.64	0.47
1:A:524:G:H2'	1:A:525:C:O4'	2.15	0.47
1:A:575:G:C6	1:A:821:G:N7	2.83	0.47
1:A:60:A:HO2'	1:A:61:G:P	2.37	0.47
1:A:622:A:N3	1:A:623:C:O4'	2.48	0.47
1:A:627:G:H2'	1:A:628:G:C8	2.47	0.47
1:A:667:G:H4'	17:R:51:HIS:CG	2.49	0.47
1:A:767:A:N6	1:A:813:U:C2	2.83	0.47
1:A:877:C:H2'	1:A:878:G:C8	2.50	0.47
1:A:993:G:N1	1:A:1046:A:C6	2.83	0.47
1:A:997:U:C4	1:A:998:G:N7	2.83	0.47
3:D:32:U:HO2'	9:J:77:SER:CB	2.28	0.47
4:E:15:VAL:O	4:E:16:HIS:CB	2.61	0.47
5:F:180:ALA:HB1	5:F:203:PHE:HE1	1.80	0.47
6:G:133:VAL:HG21	6:G:138:TYR:CE1	2.50	0.47
9:J:121:ALA:O	9:J:122:HIS:C	2.52	0.47
9:J:44:TYR:O	9:J:45:ASP:C	2.52	0.47
9:J:95:ARG:O	9:J:97:GLN:N	2.47	0.47
10:K:123:GLU:O	10:K:124:ALA:C	2.51	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:K:14:ARG:HB3	10:K:14:ARG:CZ	2.42	0.47
10:K:5:PRO:HA	10:K:8:ASP:CB	2.42	0.47
10:K:92:ARG:N	10:K:92:ARG:CD	2.75	0.47
12:M:46:ARG:NH1	16:Q:59:ALA:CB	2.77	0.47
12:M:78:ASN:O	12:M:79:ARG:C	2.51	0.47
12:M:80:LYS:HD3	12:M:80:LYS:O	2.15	0.47
14:O:86:ARG:HD3	14:O:101:VAL:HG11	1.96	0.47
14:O:117:ARG:CG	14:O:117:ARG:NH1	2.74	0.47
15:P:15:VAL:HG11	15:P:34:LEU:HD21	1.96	0.47
16:Q:13:THR:C	16:Q:15:LYS:N	2.66	0.47
17:R:33:THR:O	17:R:37:ASN:ND2	2.46	0.47
19:T:40:LYS:NZ	19:T:42:TYR:HE1	2.12	0.47
1:A:279:A:C2	19:T:98:LEU:HG	2.47	0.47
21:V:80:TYR:CE1	21:V:81:ARG:HG3	2.49	0.47
22:W:67:ALA:O	22:W:68:LYS:C	2.52	0.47
23:X:14:TRP:O	23:X:15:ARG:C	2.52	0.47
2:1:22:C:C2'	2:1:23:A:C8	2.91	0.47
1:A:443:C:C2	1:A:492:G:C2	3.02	0.47
3:D:66:U:H2'	3:D:67:C:C6	2.49	0.47
1:A:1117:G:H5'	1:A:1118:C:OP2	2.14	0.47
1:A:113:G:H2'	1:A:114:U:H6	1.76	0.47
1:A:1181:G:H2'	1:A:1182:G:C4'	2.44	0.47
1:A:1202:G:C4	16:Q:42:ILE:CD1	2.94	0.47
1:A:1215:G:N3	1:A:1215:G:H2'	2.28	0.47
1:A:1302:U:C3'	1:A:1303:C:H5'	2.45	0.47
1:A:1335:C:H5''	1:A:1336:C:H5'	1.95	0.47
1:A:1361:G:C8	1:A:1361:G:O5'	2.68	0.47
1:A:1396:A:H4'	1:A:1398:A:O4'	2.15	0.47
1:A:193:C:O2'	1:A:194:C:H5'	2.14	0.47
1:A:22:G:C4'	1:A:885:G:O4'	2.62	0.47
1:A:290:C:C6	1:A:290:C:C3'	2.98	0.47
1:A:355:C:H2'	1:A:356:A:C8	2.50	0.47
1:A:408:A:N6	1:A:409:G:O6	2.48	0.47
1:A:409:G:C4	1:A:410:G:C8	3.02	0.47
1:A:414:A:H62	1:A:430:A:N6	2.12	0.47
1:A:450:G:H5'	18:S:43:LYS:NZ	2.30	0.47
1:A:528:C:O4'	1:A:535:A:C6	2.68	0.47
1:A:622:A:C2	1:A:623:C:C1'	2.98	0.47
1:A:640:A:C2'	1:A:641:U:C5'	2.91	0.47
1:A:67:C:OP1	1:A:199:G:H5''	2.14	0.47
1:A:68:G:H8	1:A:68:G:O5'	1.98	0.47
1:A:783:C:C2'	1:A:784:C:H5'	2.42	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:801:U:H2'	1:A:802:A:C8	2.50	0.47
1:A:832:C:N3	1:A:855:G:C6	2.83	0.47
1:A:873:A:P	1:A:873:A:O4'	2.73	0.47
1:A:874:G:H2'	1:A:875:C:O5'	2.15	0.47
1:A:901:A:N3	1:A:902:G:O4'	2.48	0.47
1:A:891:U:C5	1:A:906:G:N2	2.82	0.47
1:A:92:G:C2	1:A:93:U:C2	3.03	0.47
3:B:39:U:C6	3:B:39:U:O5'	2.67	0.47
3:D:36:A:H3'	3:D:37:A:C8	2.49	0.47
4:E:114:ARG:NH1	4:E:141:GLU:HG3	2.29	0.47
4:E:160:ASP:HB3	4:E:182:ILE:CG2	2.35	0.47
4:E:213:LEU:CD2	4:E:213:LEU:C	2.82	0.47
4:E:95:GLN:HG3	4:E:148:TYR:HB2	1.91	0.47
5:F:205:GLY:O	5:F:206:GLU:CB	2.54	0.47
6:G:54:TYR:C	6:G:56:VAL:N	2.67	0.47
7:H:19:MET:SD	7:H:24:ARG:HG2	2.54	0.47
7:H:48:ALA:HB1	7:H:53:LEU:CD1	2.40	0.47
8:I:30:LEU:C	8:I:35:ALA:HB3	2.35	0.47
9:J:68:ASN:ND2	9:J:128:ALA:CA	2.78	0.47
10:K:110:ALA:HA	10:K:136:GLU:CB	2.40	0.47
10:K:119:LEU:N	10:K:119:LEU:CD2	2.72	0.47
10:K:75:ARG:CZ	10:K:75:ARG:CB	2.79	0.47
13:N:31:THR:OG1	13:N:42:TRP:CB	2.63	0.47
15:P:10:PRO:CG	15:P:18:ALA:CA	2.91	0.47
15:P:75:ALA:O	15:P:79:LYS:HB2	2.15	0.47
1:A:625:G:H4'	18:S:16:HIS:CG	2.50	0.47
18:S:21:VAL:CG2	18:S:59:TRP:HE1	2.21	0.47
18:S:60:LEU:O	18:S:61:SER:C	2.53	0.47
20:U:52:PRO:C	20:U:54:ARG:N	2.67	0.47
20:U:22:VAL:HG22	20:U:55:ARG:HH12	1.80	0.47
21:V:50:ALA:HA	21:V:58:VAL:O	2.14	0.47
2:1:35:U:C5	2:1:35:U:OP2	2.67	0.47
1:A:1057:G:H5'	5:F:196:LEU:HA	1.97	0.47
1:A:1067:A:H4'	1:A:1068:G:O5'	2.15	0.47
1:A:1086:U:H2'	1:A:1087:G:C8	2.49	0.47
1:A:1138:G:C2	1:A:1140:C:C5	3.02	0.47
1:A:1184:G:N1	1:A:1185:G:C6	2.82	0.47
1:A:1185:G:H2'	1:A:1186:G:C5'	2.45	0.47
1:A:1200:C:C5'	1:A:1202:G:OP1	2.62	0.47
1:A:1254:C:OP1	12:M:45:ARG:HD2	2.15	0.47
1:A:1277:C:O2'	1:A:1279:A:H8	1.97	0.47
1:A:1403:C:H1'	1:A:1500:A:N1	2.29	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1492:A:H2'	1:A:1493:A:C4	2.50	0.47
1:A:14:U:O2	1:A:17:U:H5	1.98	0.47
1:A:258:G:C5	1:A:259:G:N7	2.83	0.47
1:A:45:U:O2	1:A:398:C:N3	2.47	0.47
1:A:475:G:HO2'	1:A:476:G:H8	1.60	0.47
1:A:557:G:O3'	1:A:558:G:O4'	2.32	0.47
1:A:22:G:P	1:A:561:U:O2	2.72	0.47
1:A:611:A:C5	1:A:612:C:C5	3.03	0.47
1:A:68:G:C2	1:A:69:G:H1'	2.49	0.47
1:A:729:A:O2'	1:A:730:G:H5'	2.15	0.47
1:A:742:G:C2'	1:A:743:U:H5'	2.45	0.47
1:A:587:G:N2	1:A:755:G:C4	2.82	0.47
1:A:766:A:C8	1:A:814:A:N6	2.82	0.47
1:A:774:G:C4	1:A:775:G:C8	3.02	0.47
1:A:792:A:C2	1:A:794:A:N1	2.83	0.47
1:A:818:G:N2	1:A:820:U:C5	2.81	0.47
1:A:837:G:N1	1:A:838:G:C5	2.83	0.47
1:A:913:A:O2'	1:A:914:A:O5'	2.32	0.47
1:A:936:C:H2'	1:A:937:A:H5'	1.94	0.47
1:A:95:G:N2	1:A:96:G:H1'	2.29	0.47
3:C:74:C:H2'	3:C:75:C:H4'	1.97	0.47
4:E:102:LEU:CD2	4:E:176:GLU:CB	2.82	0.47
4:E:117:GLU:CD	4:E:118:LEU:N	2.68	0.47
4:E:184:VAL:HB	4:E:198:ASP:CG	2.33	0.47
4:E:44:LEU:HD23	4:E:44:LEU:H	1.79	0.47
4:E:61:LEU:O	4:E:64:ARG:HD2	2.15	0.47
4:E:97:TRP:HE3	4:E:172:ILE:HB	1.80	0.47
5:F:150:LYS:NZ	5:F:152:ILE:HG21	2.29	0.47
5:F:59:ARG:CZ	5:F:64:VAL:HA	2.42	0.47
6:G:35:ARG:O	6:G:36:ARG:C	2.53	0.47
6:G:4:TYR:HE2	6:G:8:VAL:HG22	1.80	0.47
6:G:78:LEU:HB3	6:G:93:PHE:CE2	2.50	0.47
9:J:15:ASP:HB2	9:J:23:VAL:CB	2.45	0.47
10:K:114:THR:HB	10:K:129:VAL:HG13	1.96	0.47
10:K:10:LEU:C	10:K:13:ILE:HB	2.29	0.47
10:K:40:ALA:HB2	10:K:45:ILE:HD13	1.97	0.47
10:K:78:GLN:O	10:K:79:VAL:C	2.52	0.47
11:L:108:VAL:HG23	11:L:108:VAL:O	2.15	0.47
11:L:41:VAL:O	11:L:44:VAL:HG22	2.13	0.47
12:M:24:VAL:HG13	12:M:34:VAL:CG1	2.44	0.47
13:N:44:SER:H	13:N:47:VAL:CB	2.25	0.47
15:P:36:LYS:HB3	15:P:59:TYR:OH	2.14	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:29:TYR:CG	16:Q:36:PHE:HE1	2.32	0.47
17:R:63:ARG:NH2	17:R:87:ILE:HD13	2.26	0.47
18:S:19:ILE:HB	18:S:36:ILE:O	2.15	0.47
18:S:53:VAL:HA	18:S:79:VAL:HG22	1.95	0.47
19:T:29:HIS:ND1	19:T:30:PRO:N	2.62	0.47
19:T:60:ILE:HD13	19:T:62:SER:CB	2.45	0.47
19:T:5:VAL:O	19:T:6:LEU:HB3	2.15	0.47
19:T:6:LEU:HD12	19:T:6:LEU:O	2.15	0.47
20:U:18:ARG:HH22	20:U:21:LYS:HD3	1.79	0.47
8:I:89:MET:CB	20:U:76:LEU:HD11	2.40	0.47
21:V:35:SER:C	21:V:37:ARG:H	2.18	0.47
21:V:30:LEU:N	21:V:48:THR:O	2.48	0.47
22:W:62:LEU:O	22:W:63:ILE:C	2.53	0.47
3:D:19:G:P	3:D:20:U:O4	2.72	0.47
3:D:43:C:H2'	3:D:44:G:H8	1.78	0.47
3:D:44:G:C6	3:D:45:U:O2	2.68	0.47
18:S:67:THR:HG22	18:S:68:ASP:N	2.30	0.47
1:A:443:C:C6	1:A:492:G:N2	2.83	0.47
1:A:1015:A:N7	1:A:1016:A:N6	2.63	0.47
1:A:1029:G:C4	1:A:1032(A):G:N1	2.82	0.47
1:A:1049:U:O2'	1:A:1050:G:OP2	2.32	0.47
1:A:1119:C:H2'	1:A:1120:G:N7	2.27	0.47
1:A:1128:C:O4'	1:A:1148:U:O4	2.33	0.47
1:A:1180:A:O5'	1:A:1180:A:H8	1.98	0.47
1:A:1317:C:C5	1:A:1317:C:OP1	2.68	0.47
1:A:1371:G:H5''	11:L:68:GLY:O	2.15	0.47
1:A:1426:C:O2'	1:A:1427:U:H5'	2.15	0.47
1:A:1461:G:O2'	1:A:1462:G:C5'	2.62	0.47
1:A:1428:A:N6	1:A:1473:A:N6	2.62	0.47
1:A:1483:A:H2'	1:A:1484:C:O4'	2.13	0.47
1:A:927:G:O5'	1:A:1503:A:N7	2.47	0.47
1:A:152:A:N7	1:A:153:C:C5	2.83	0.47
1:A:307:C:C4	1:A:308:C:C5	2.82	0.47
1:A:332:G:H2'	1:A:333:G:C8	2.39	0.47
1:A:397:A:HO2'	1:A:398:C:H3'	1.78	0.47
1:A:519:C:O2'	1:A:520:A:H5'	2.14	0.47
1:A:592:G:O2'	1:A:593:G:H5'	2.15	0.47
1:A:606:G:H22	1:A:631:G:H2'	1.79	0.47
1:A:695:A:C4	1:A:696:A:C8	3.02	0.47
1:A:737:A:H2'	1:A:738:C:H6	1.79	0.47
1:A:581:G:C6	1:A:758:G:N7	2.83	0.47
1:A:767:A:C6	1:A:768:A:C5	3.03	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:84:U:H2'	1:A:85:U:C1'	2.44	0.47
1:A:964:A:C2	1:A:965:A:N7	2.83	0.47
3:B:37:A:H2'	3:B:38:A:H5'	1.96	0.47
3:C:15:G:H22	3:C:48:C:N4	2.04	0.47
4:E:110:GLN:O	4:E:113:HIS:HB3	2.15	0.47
4:E:186:ALA:O	4:E:201:ILE:CB	2.57	0.47
4:E:234:PRO:HB2	4:E:238:LEU:CD2	2.45	0.47
4:E:33:TYR:CB	4:E:43:ASP:HB2	2.45	0.47
2:1:18:U:C4	4:E:76:GLN:NE2	2.82	0.47
5:F:5:ILE:HD13	5:F:10:PHE:CE2	2.49	0.47
6:G:61:LYS:CG	6:G:207:TYR:CE1	2.92	0.47
6:G:79:PHE:CD2	6:G:80:GLU:N	2.83	0.47
8:I:71:ARG:O	8:I:72:VAL:C	2.53	0.47
10:K:14:ARG:CZ	10:K:15:ASN:ND2	2.78	0.47
10:K:34:GLU:C	10:K:37:ARG:HB3	2.32	0.47
11:L:46:ALA:HB1	11:L:77:ILE:CG2	2.45	0.47
12:M:9:ARG:NH1	12:M:9:ARG:CB	2.78	0.47
13:N:22:HIS:CD2	13:N:23:ALA:N	2.83	0.47
13:N:99:GLN:HA	13:N:105:VAL:CG2	2.44	0.47
14:O:102:ARG:CZ	14:O:110:VAL:N	2.78	0.47
14:O:86:ARG:HH22	14:O:119:LYS:HD3	1.80	0.47
14:O:24:VAL:HG13	14:O:98:TYR:OH	2.15	0.47
1:A:1228:C:OP1	15:P:115:LYS:CB	2.63	0.47
15:P:33:ALA:HB2	15:P:64:TRP:CZ3	2.49	0.47
16:Q:23:ARG:CD	16:Q:30:ALA:HB2	2.44	0.47
18:S:4:ILE:HG12	18:S:66:PRO:CA	2.44	0.47
19:T:43:LEU:HD11	19:T:69:LYS:CB	2.45	0.47
20:U:51:LEU:CD1	20:U:51:LEU:H	2.28	0.47
20:U:56:THR:O	20:U:57:GLY:C	2.53	0.47
20:U:31:LEU:HD23	20:U:65:ILE:HG13	1.95	0.47
13:N:84:VAL:HG21	20:U:88:LYS:HZ2	1.78	0.47
22:W:11:SER:O	22:W:12:ALA:HB2	2.13	0.47
22:W:49:ALA:O	22:W:53:LEU:HG	2.14	0.47
3:D:48:C:C5	3:D:59:U:C2	3.03	0.47
2:1:46:U:C3'	2:1:46:U:C6	2.98	0.47
1:A:1003:G:H2'	1:A:1004:A:H4'	1.96	0.47
1:A:1085:U:H5''	1:A:1086:U:H5	1.78	0.47
1:A:1270:C:HO2'	1:A:1313:U:HO2'	1.59	0.47
1:A:1274:G:H2'	1:A:1275:A:H8	1.78	0.47
1:A:1340:A:H2'	1:A:1341:U:H6	1.80	0.47
1:A:1390:U:C4	1:A:1391:U:O4	2.68	0.47
1:A:1475:G:C2'	1:A:1476:G:O5'	2.63	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1476:G:H2'	1:A:1477:C:C5	2.50	0.47
1:A:67:C:O2'	1:A:171:A:H1'	2.15	0.47
1:A:251:G:N3	1:A:266:G:C6	2.83	0.47
1:A:285:G:C5	1:A:286:G:N7	2.83	0.47
1:A:29:G:C5'	1:A:296:U:OP1	2.59	0.47
1:A:25:C:H4'	1:A:524:G:N2	2.30	0.47
1:A:536:C:O5'	1:A:536:C:C6	2.68	0.47
1:A:59:A:H61	1:A:331:G:H1'	1.80	0.47
1:A:686:U:HO2'	1:A:687:A:P	2.37	0.47
1:A:697:U:O5'	1:A:697:U:C6	2.62	0.47
1:A:841:U:OP2	1:A:842:C:N4	2.48	0.47
1:A:872:A:C6	1:A:874:G:C5	3.03	0.47
1:A:936:C:C2'	1:A:937:A:C5'	2.92	0.47
1:A:981:U:C6	1:A:982:U:C5	3.03	0.47
3:C:31:A:C2	3:C:40:C:C4	3.03	0.47
4:E:104:ASN:O	4:E:107:THR:HB	2.15	0.47
4:E:135:GLN:C	4:E:139:LYS:NZ	2.59	0.47
4:E:179:LYS:C	4:E:181:PHE:H	2.18	0.47
4:E:219:VAL:HA	4:E:222:ILE:CG1	2.45	0.47
4:E:73:THR:HA	4:E:94:ASN:HA	1.96	0.47
5:F:12:LEU:HD21	16:Q:57:ARG:HG2	1.91	0.47
5:F:186:PHE:CA	5:F:198:VAL:O	2.59	0.47
5:F:152:ILE:O	5:F:199:LYS:O	2.33	0.47
5:F:22:TRP:CZ2	16:Q:54:PRO:HG2	2.50	0.47
5:F:57:ILE:HG23	5:F:66:VAL:HG22	1.96	0.47
6:G:170:VAL:CG1	6:G:174:LEU:HD12	2.45	0.47
6:G:26:CYS:SG	6:G:26:CYS:O	2.73	0.47
6:G:64:LEU:CD1	6:G:65:ARG:N	2.76	0.47
7:H:47:LYS:O	7:H:57:LYS:HE2	2.15	0.47
7:H:77:PRO:HG2	7:H:78:HIS:H	1.79	0.47
9:J:45:ASP:HB2	9:J:117:ALA:CB	2.44	0.47
11:L:4:TYR:CG	11:L:88:TYR:HB2	2.50	0.47
12:M:54:PHE:H	16:Q:41:ARG:HH21	1.63	0.47
13:N:21:ILE:HD11	13:N:82:VAL:CG1	2.45	0.47
15:P:66:LEU:HA	15:P:70:LEU:HB2	1.97	0.47
15:P:79:LYS:O	15:P:82:MET:HB2	2.14	0.47
17:R:29:VAL:O	17:R:33:THR:OG1	2.25	0.47
1:A:376:G:H4'	18:S:28:ARG:CB	2.45	0.47
19:T:4:LYS:CG	19:T:5:VAL:N	2.77	0.47
19:T:75:ARG:HG2	19:T:75:ARG:NH1	2.30	0.47
19:T:80:GLY:O	19:T:81:ARG:C	2.54	0.47
20:U:36:ASN:O	20:U:37:VAL:C	2.52	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:W:38:LYS:O	22:W:41:ILE:N	2.48	0.47
22:W:57:ARG:HG2	22:W:57:ARG:HH11	1.80	0.47
1:A:1173:G:C2'	1:A:1174:G:H5''	2.45	0.47
3:D:5:G:C2	3:D:6:G:C5	3.02	0.47
6:G:151:LYS:CD	6:G:151:LYS:N	2.78	0.47
12:M:17:ASP:O	12:M:21:GLN:HB3	2.14	0.47
1:A:1121:U:O5'	1:A:1121:U:C6	2.68	0.47
2:1:31:U:H2'	2:1:32:U:C6	2.50	0.47
1:A:1054:C:P	1:A:1197:G:P	3.13	0.47
1:A:1124:G:H2'	1:A:1126:U:O4	2.15	0.47
1:A:1124:G:N2	1:A:1127:G:C4	2.83	0.47
1:A:112:G:C2	1:A:113:G:C8	3.03	0.47
1:A:1142:G:O2'	1:A:1143:G:C5'	2.61	0.47
1:A:1224:G:O6	1:A:1322:C:C4'	2.63	0.47
1:A:1272:G:H2'	1:A:1273:G:C8	2.49	0.47
1:A:135:C:O2	18:S:1:MET:HG2	2.14	0.47
1:A:1392:G:O2'	1:A:1393:U:H5'	2.15	0.47
1:A:1407:C:C2'	1:A:1408:A:C5'	2.86	0.47
1:A:141:A:H2'	1:A:142:G:O4'	2.14	0.47
1:A:1507:A:C2'	1:A:1508:G:C5'	2.92	0.47
1:A:155:C:H2'	1:A:156:G:O4'	2.15	0.47
1:A:261:U:H5''	1:A:262:A:OP2	2.15	0.47
1:A:485:G:HO2'	1:A:486:U:H6	1.60	0.47
1:A:541:G:H8	1:A:541:G:OP2	1.97	0.47
1:A:544:G:C4	1:A:545:C:C5	3.03	0.47
1:A:588:G:N3	1:A:588:G:H2'	2.28	0.47
1:A:691:G:O6	13:N:26:ASN:O	2.33	0.47
1:A:748:C:H1'	1:A:749:C:C5	2.50	0.47
1:A:815:A:C6	1:A:1529:G:C2	3.03	0.47
1:A:896:C:N3	1:A:897:C:C5	2.83	0.47
1:A:908:A:C2	1:A:909:A:C8	3.03	0.47
1:A:914:A:H2'	1:A:915:A:N7	2.30	0.47
1:A:977:A:N3	1:A:977:A:H2'	2.30	0.47
1:A:994:A:N7	1:A:1216:G:C4'	2.69	0.47
3:B:38:A:H2'	3:B:39:U:C6	2.48	0.47
4:E:160:ASP:O	4:E:161:ALA:HB2	2.15	0.47
4:E:189:ASP:OD2	4:E:205:ASP:CG	2.54	0.47
4:E:216:SER:O	4:E:220:ASP:OD1	2.33	0.47
4:E:223:ILE:HA	4:E:226:ARG:HD2	1.97	0.47
4:E:55:PHE:O	4:E:58:ILE:CB	2.63	0.47
5:F:88:ARG:N	5:F:101:LEU:HD12	2.30	0.47
5:F:120:VAL:HG21	5:F:137:ALA:HB2	1.96	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:132:ARG:C	5:F:136:GLN:NE2	2.69	0.47
6:G:38:TYR:CZ	6:G:45:GLN:NE2	2.83	0.47
6:G:63:LYS:CG	6:G:64:LEU:N	2.77	0.47
7:H:129:ILE:O	7:H:132:ALA:HB3	2.15	0.47
7:H:76:ILE:CG2	7:H:142:LEU:HD13	2.44	0.47
7:H:39:GLY:C	7:H:68:GLU:OE1	2.54	0.47
8:I:46:ARG:HG2	8:I:47:ARG:N	2.29	0.47
8:I:33:TYR:CZ	8:I:75:LEU:HA	2.49	0.47
9:J:64:GLN:C	9:J:128:ALA:HA	2.36	0.47
9:J:37:ASN:O	9:J:38:LEU:C	2.53	0.47
10:K:101:PRO:O	10:K:102:ARG:HG3	2.14	0.47
10:K:126:LYS:NZ	10:K:127:LEU:CD2	2.73	0.47
10:K:114:THR:HA	10:K:130:GLY:O	2.15	0.47
11:L:121:ARG:CG	11:L:121:ARG:HH11	2.26	0.47
11:L:17:VAL:CG2	11:L:77:ILE:HG23	2.44	0.47
12:M:97:GLU:C	12:M:98:ILE:HD12	2.36	0.47
13:N:121:PRO:HB2	13:N:125:PHE:CD1	2.49	0.47
14:O:115:LYS:O	14:O:116:SER:O	2.33	0.47
15:P:24:GLY:C	15:P:66:LEU:HD13	2.35	0.47
15:P:78:ILE:O	15:P:81:LEU:HD13	2.15	0.47
16:Q:36:PHE:CE2	16:Q:37:PHE:CE1	3.03	0.47
16:Q:35:ARG:C	16:Q:37:PHE:N	2.67	0.47
17:R:18:PHE:O	17:R:18:PHE:CD1	2.68	0.47
17:R:75:PRO:HA	17:R:78:TYR:CD1	2.49	0.47
1:A:392:G:C5'	18:S:12:LYS:HZ3	2.27	0.47
1:A:376:G:OP1	18:S:6:LEU:CD1	2.62	0.47
19:T:18:THR:CG2	19:T:43:LEU:HD21	2.30	0.47
20:U:46:GLU:CB	20:U:85:LEU:HD13	2.27	0.47
22:W:14:LYS:O	22:W:18:GLN:HG3	2.15	0.47
22:W:31:SER:O	22:W:32:ALA:C	2.53	0.47
22:W:38:LYS:O	22:W:39:LYS:C	2.53	0.47
22:W:43:LEU:HB2	22:W:55:ILE:CD1	2.44	0.47
22:W:99:LEU:HD23	22:W:99:LEU:H	1.80	0.47
3:D:16:U:H6	3:D:16:U:O5'	1.97	0.47
1:A:161:A:C6	1:A:162:A:C6	3.03	0.47
3:D:27:G:H2'	3:D:28:G:C8	2.49	0.47
14:O:125:PRO:O	14:O:127:GLU:N	2.46	0.47
1:A:993:G:O6	1:A:1046:A:N6	2.48	0.46
1:A:1061:G:H2'	1:A:1062:U:O4'	2.15	0.46
1:A:1067:A:O2'	1:A:1068:G:O5'	2.33	0.46
1:A:1134:G:N2	1:A:1136:U:C4	2.84	0.46
1:A:1148:U:H5'	11:L:16:ARG:HG3	1.96	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:954:G:H21	1:A:1227:A:H62	1.62	0.46
1:A:1305:G:C2	1:A:1331:G:C2	3.03	0.46
1:A:1354:C:O5'	1:A:1354:C:H6	1.98	0.46
1:A:1433:A:H62	1:A:1467:G:H21	0.82	0.46
1:A:1483:A:H3'	1:A:1484:C:H6	1.80	0.46
1:A:1486:G:C6	1:A:1487:G:C5	3.02	0.46
1:A:68:G:H5'	1:A:171:A:C1'	2.45	0.46
1:A:209:U:OP2	1:A:209:U:C6	2.68	0.46
1:A:19:C:C2	1:A:20:U:C5	3.03	0.46
1:A:311:C:HO2'	1:A:312:C:H5'	1.79	0.46
1:A:51:A:N1	1:A:116:A:C4	2.83	0.46
1:A:586:C:P	19:T:34:LYS:NZ	2.89	0.46
1:A:593:G:C6	1:A:647:C:N3	2.83	0.46
1:A:686:U:O2'	1:A:687:A:P	2.73	0.46
1:A:666:G:N2	1:A:741:G:H1'	2.30	0.46
1:A:763:G:N3	1:A:764:C:C6	2.83	0.46
1:A:817:C:C5	1:A:819:A:O4'	2.68	0.46
1:A:966:G:N2	3:C:34:G:H5'	2.30	0.46
1:A:978:A:C8	1:A:978:A:C3'	2.98	0.46
3:C:28:G:C4	3:C:29:G:N7	2.84	0.46
3:C:41:C:H3'	3:C:41:C:OP2	2.15	0.46
3:C:63:G:H2'	3:C:64:A:O4'	2.15	0.46
3:C:72:C:O2'	3:C:73:A:O4'	2.24	0.46
4:E:118:LEU:HD12	4:E:145:LEU:HD23	1.97	0.46
4:E:71:VAL:HG21	4:E:93:VAL:HB	1.96	0.46
5:F:204:LEU:O	5:F:205:GLY:C	2.53	0.46
6:G:20:TYR:C	6:G:22:LYS:H	2.12	0.46
7:H:151:LEU:HA	7:H:151:LEU:HD23	1.59	0.46
7:H:53:LEU:O	7:H:54:ALA:C	2.53	0.46
8:I:70:ASP:O	8:I:73:ASN:ND2	2.48	0.46
9:J:129:GLU:HB3	9:J:131:LYS:HE2	1.97	0.46
1:A:1240:U:C2	9:J:32:ARG:NE	2.83	0.46
9:J:75:VAL:HG13	9:J:87:VAL:C	2.35	0.46
10:K:120:THR:OG1	10:K:122:ARG:NH1	2.45	0.46
10:K:6:ILE:CG2	10:K:85:ARG:NH1	2.78	0.46
11:L:97:LYS:HD2	11:L:102:LEU:HD22	1.98	0.46
11:L:22:GLY:O	11:L:58:HIS:O	2.33	0.46
11:L:53:VAL:HG21	11:L:92:TYR:CD1	2.48	0.46
12:M:60:ARG:O	12:M:61:GLU:HB2	2.15	0.46
14:O:121:GLY:O	14:O:122:THR:OG1	2.29	0.46
14:O:36:VAL:HG13	14:O:36:VAL:O	2.14	0.46
15:P:14:ARG:HA	15:P:45:VAL:N	2.26	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:R:3:ILE:CD1	17:R:3:ILE:H	2.24	0.46
20:U:43:PHE:CD2	20:U:56:THR:HG22	2.50	0.46
21:V:30:LEU:HD12	21:V:59:PRO:CB	2.45	0.46
1:A:1320:C:C6	21:V:37:ARG:NH1	2.83	0.46
21:V:10:PHE:O	21:V:39:THR:HB	2.15	0.46
21:V:39:THR:C	21:V:40:ILE:O	2.53	0.46
22:W:51:GLU:CA	22:W:54:LYS:CE	2.92	0.46
23:X:4:GLY:C	23:X:6:ARG:H	2.18	0.46
2:1:6:U:C2'	2:1:7:U:C5	2.88	0.46
1:A:1164:G:N1	1:A:1165:C:C2	2.82	0.46
3:B:58:A:H5''	3:B:59:U:OP1	2.15	0.46
3:B:66:U:C4	3:B:67:C:C5	3.03	0.46
2:1:8:U:H5'	4:E:19:HIS:CE1	2.50	0.46
1:A:1034:G:H2'	1:A:1035:A:H8	1.81	0.46
1:A:1075:C:C4'	1:A:1101:A:N6	2.71	0.46
1:A:1133:G:C6	1:A:1142:G:C6	3.03	0.46
1:A:1189:C:O5'	1:A:1189:C:H6	1.99	0.46
1:A:1193:G:C8	1:A:1193:G:C3'	2.98	0.46
1:A:1323:G:H4'	1:A:1362(A):C:N4	2.29	0.46
1:A:1402:C:C5	1:A:1403:C:C5	3.03	0.46
1:A:148:G:C2	1:A:175:C:C4	3.03	0.46
1:A:150:C:O2	1:A:151:A:C8	2.68	0.46
1:A:175:C:H2'	1:A:176:C:H6	1.80	0.46
1:A:184:G:O4'	1:A:224:C:H4'	2.14	0.46
1:A:20:U:H5	1:A:916:G:N1	2.12	0.46
1:A:292:G:H3'	1:A:293:G:H8	1.79	0.46
1:A:352:C:H4'	1:A:354:G:OP1	2.15	0.46
1:A:362:G:C8	14:O:34:ARG:NH2	2.65	0.46
1:A:47:C:C5	1:A:365:U:C2	3.03	0.46
1:A:47:C:O2'	1:A:48:C:O5'	2.33	0.46
1:A:571:U:H4'	1:A:572:A:OP2	2.16	0.46
1:A:573:A:N1	1:A:574:A:C6	2.83	0.46
1:A:293:G:H5'	1:A:609:A:N1	2.30	0.46
1:A:728:A:N6	1:A:729:A:C6	2.83	0.46
1:A:817:C:H1'	1:A:819:A:C5'	2.46	0.46
1:A:81:G:H5''	1:A:82:U:OP2	2.16	0.46
1:A:901:A:H2'	1:A:902:G:O5'	2.15	0.46
1:A:929:G:C6	1:A:930:C:C4	3.03	0.46
3:C:69:G:H2'	3:C:70:G:H8	1.80	0.46
1:A:1104:G:H4'	4:E:111:ARG:NH2	2.30	0.46
4:E:32:ILE:HG22	4:E:32:ILE:O	2.14	0.46
4:E:48:MET:O	4:E:49:GLU:C	2.50	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:73:THR:CG2	4:E:95:GLN:O	2.59	0.46
5:F:194:GLY:O	5:F:196:LEU:HD23	2.15	0.46
5:F:8:ILE:CD1	5:F:16:ARG:HD2	2.44	0.46
6:G:17:VAL:O	6:G:19:LEU:CD2	2.63	0.46
6:G:145:GLU:CB	6:G:184:LYS:HG2	2.36	0.46
6:G:82:ALA:C	6:G:89:THR:HG23	2.35	0.46
8:I:24:GLU:O	8:I:27:GLN:N	2.49	0.46
8:I:1:MET:CA	8:I:67:MET:O	2.64	0.46
9:J:106:GLN:N	9:J:106:GLN:HE21	2.12	0.46
9:J:143:ARG:O	9:J:145:ALA:O	2.33	0.46
9:J:38:LEU:CA	9:J:41:ARG:HB2	2.45	0.46
10:K:82:HIS:CD2	10:K:138:TRP:NE1	2.83	0.46
1:A:1342:C:C4'	11:L:125:TYR:HB2	2.37	0.46
13:N:28:THR:CG2	13:N:29:ILE:H	2.28	0.46
13:N:32:ILE:HD13	13:N:72:ALA:HA	1.97	0.46
1:A:551:U:C5'	14:O:119:LYS:HZ3	2.23	0.46
15:P:108:ARG:HH12	15:P:111:LYS:HB3	1.73	0.46
15:P:20:THR:O	15:P:20:THR:CG2	2.64	0.46
15:P:20:THR:O	15:P:25:ILE:O	2.34	0.46
1:A:375:U:O3'	18:S:6:LEU:HD11	2.15	0.46
18:S:71:ARG:CB	18:S:71:ARG:NH1	2.78	0.46
19:T:43:LEU:CD2	19:T:44:ALA:N	2.61	0.46
19:T:91:ARG:HG2	19:T:92:ARG:N	2.29	0.46
21:V:16:LEU:HD12	21:V:44:MET:CE	2.38	0.46
22:W:25:ARG:HH11	22:W:25:ARG:CG	2.26	0.46
22:W:38:LYS:HA	22:W:41:ILE:HD12	1.97	0.46
22:W:60:GLU:OE1	22:W:81:LYS:HD3	2.15	0.46
23:X:15:ARG:HB3	23:X:17:THR:HG23	1.97	0.46
1:A:1382:C:H2'	1:A:1383:C:C5	2.50	0.46
10:K:54:ASP:O	10:K:56:LYS:CD	2.62	0.46
4:E:230:VAL:HG12	4:E:231:GLU:N	2.29	0.46
1:A:1072:G:C6	1:A:1104:G:N1	2.84	0.46
1:A:1284:C:N3	1:A:1285:A:C6	2.83	0.46
1:A:945:G:C6	1:A:1337:G:C5	3.03	0.46
1:A:1468:A:C2'	1:A:1469:G:O5'	2.63	0.46
1:A:1479:C:H2'	1:A:1480:G:C8	2.50	0.46
1:A:1480:G:H2'	1:A:1481:U:O5'	2.14	0.46
1:A:1486:G:C2	1:A:1487:G:C4	3.02	0.46
1:A:1508:G:O2'	1:A:1509:C:C5'	2.63	0.46
1:A:141:A:O2'	1:A:182:U:C6	2.58	0.46
1:A:322:C:O2'	1:A:323:U:C5'	2.56	0.46
1:A:34:C:H2'	1:A:35:G:C8	2.43	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:390:C:C2'	1:A:391:G:O5'	2.64	0.46
1:A:424:G:C2	1:A:425:G:C8	3.04	0.46
1:A:494:U:H2'	1:A:495:A:H5'	1.96	0.46
1:A:59:A:H1'	1:A:354:G:C2	2.50	0.46
1:A:600:C:N3	1:A:601:C:C5	2.83	0.46
1:A:706:A:H4'	13:N:29:ILE:HD11	1.98	0.46
1:A:734:G:H8	1:A:734:G:OP1	1.99	0.46
1:A:89:U:C2	1:A:90:C:C5	3.03	0.46
1:A:20:U:C6	1:A:916:G:N2	2.83	0.46
3:C:14:A:C5	3:C:15:G:N7	2.83	0.46
4:E:100:GLY:C	4:E:104:ASN:ND2	2.69	0.46
4:E:139:LYS:CG	4:E:140:HIS:H	2.23	0.46
4:E:115:LEU:CB	4:E:145:LEU:HG	2.44	0.46
5:F:122:GLU:O	5:F:125:GLU:N	2.48	0.46
5:F:127:ARG:C	5:F:128:PHE:HD1	2.18	0.46
5:F:190:ARG:CA	5:F:190:ARG:NE	2.73	0.46
6:G:149:ALA:O	6:G:150:GLU:O	2.34	0.46
6:G:20:TYR:HA	6:G:31:CYS:SG	2.55	0.46
6:G:62:GLN:C	6:G:66:ARG:HD2	2.36	0.46
6:G:77:ASN:HA	6:G:80:GLU:OE2	2.16	0.46
6:G:80:GLU:O	6:G:81:GLU:C	2.51	0.46
7:H:102:ALA:O	7:H:107:ARG:NH2	2.48	0.46
7:H:133:TYR:HA	7:H:136:MET:HG2	1.96	0.46
7:H:84:PHE:HZ	7:H:133:TYR:HB3	1.68	0.46
7:H:149:GLU:OE2	7:H:149:GLU:HA	2.15	0.46
7:H:48:ALA:HB3	7:H:54:ALA:N	2.30	0.46
8:I:19:LEU:HD11	8:I:23:LYS:HZ2	1.80	0.46
8:I:21:LEU:O	8:I:25:ILE:HG13	2.15	0.46
10:K:19:VAL:O	10:K:20:TYR:CB	2.63	0.46
11:L:37:PHE:HB3	11:L:40:LEU:HB2	1.96	0.46
12:M:24:VAL:CG2	12:M:34:VAL:HG11	2.42	0.46
13:N:73:MET:C	13:N:75:TYR:H	2.18	0.46
13:N:87:THR:CG2	13:N:91:ARG:HH12	2.24	0.46
1:A:37:U:P	14:O:123:LYS:HB3	2.53	0.46
14:O:23:LYS:CE	14:O:23:LYS:HA	2.21	0.46
14:O:82:VAL:CG1	14:O:83:VAL:H	2.22	0.46
16:Q:40:CYS:O	16:Q:41:ARG:C	2.54	0.46
17:R:56:LEU:O	17:R:59:MET:HB3	2.14	0.46
18:S:51:VAL:HG22	18:S:73:LEU:HD11	1.96	0.46
19:T:15:MET:H	19:T:15:MET:HE3	1.79	0.46
21:V:18:LYS:HG2	21:V:31:ILE:HG21	1.96	0.46
22:W:23:ARG:NH2	22:W:24:LEU:HD23	2.31	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:342:C:O2'	1:A:343:U:H5'	2.16	0.46
1:A:1381:U:H2'	1:A:1381:U:O2	2.14	0.46
15:P:121:LYS:O	15:P:122:LYS:CB	2.63	0.46
22:W:96:GLY:O	22:W:97:ALA:HB3	2.15	0.46
8:I:54:LYS:N	8:I:54:LYS:HD2	2.31	0.46
1:A:998:G:C6	1:A:1044:A:C6	3.03	0.46
1:A:1055:A:H2'	1:A:1056:U:O5'	2.16	0.46
1:A:1079:G:N2	1:A:1080:A:N1	2.62	0.46
1:A:1095:U:N3	1:A:1096:C:C5	2.83	0.46
1:A:1192:C:C5	1:A:1193:G:N7	2.83	0.46
1:A:1206:G:C2	1:A:1207:G:C4	3.03	0.46
1:A:1268:A:C2	1:A:1327:C:H1'	2.50	0.46
1:A:1269:A:H2'	1:A:1270:C:O4'	2.15	0.46
1:A:1224:G:C6	1:A:1322:C:H4'	2.51	0.46
1:A:133:U:C4'	1:A:134:A:OP1	2.64	0.46
1:A:949:A:O2'	1:A:1364:U:N3	2.46	0.46
1:A:1497:G:H2'	1:A:1498:U:H6	1.80	0.46
1:A:1532:U:O5'	1:A:1532:U:H6	1.98	0.46
1:A:185:A:C6	1:A:186:C:N4	2.84	0.46
1:A:20:U:H5'	1:A:572:A:C6	2.49	0.46
1:A:410:G:N3	1:A:432:A:C6	2.83	0.46
1:A:517:G:N7	1:A:531:U:C2	2.83	0.46
1:A:553:A:H2'	1:A:554:C:C1'	2.46	0.46
1:A:578:C:C2'	1:A:728:A:N3	2.78	0.46
1:A:625:G:H2'	1:A:626:U:H6	1.80	0.46
1:A:766:A:C2	1:A:767:A:C4	3.03	0.46
1:A:714:G:C1'	1:A:777:A:N7	2.77	0.46
1:A:791:G:C8	1:A:792:A:C8	3.03	0.46
1:A:802:A:H2'	1:A:803:G:O4'	2.15	0.46
1:A:87:A:C8	1:A:88:C:N1	2.84	0.46
1:A:88:C:O2'	1:A:89:U:P	2.74	0.46
1:A:902:G:C2'	1:A:903:G:H5'	2.43	0.46
3:C:38:A:C8	3:C:39:U:C5	3.03	0.46
4:E:20:GLU:OE2	4:E:189:ASP:OD2	2.33	0.46
4:E:32:ILE:HD11	4:E:40:HIS:CD2	2.39	0.46
5:F:11:ARG:HE	5:F:11:ARG:N	2.13	0.46
5:F:29:TYR:CD1	16:Q:36:PHE:CE1	3.03	0.46
5:F:48:TYR:HD2	5:F:48:TYR:C	2.17	0.46
6:G:110:PHE:HZ	6:G:147:ALA:HB1	1.80	0.46
6:G:175:SER:OG	6:G:184:LYS:O	2.27	0.46
6:G:60:GLU:OE1	6:G:202:LEU:HD12	2.15	0.46
7:H:98:THR:HB	7:H:117:ASP:HA	1.97	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:9:G:C8	7:H:126:ARG:NH1	2.84	0.46
7:H:32:VAL:C	7:H:43:LEU:HG	2.35	0.46
8:I:4:TYR:CD1	8:I:90:VAL:HG22	2.51	0.46
8:I:4:TYR:HD1	8:I:90:VAL:HG22	1.80	0.46
8:I:56:PRO:HG2	8:I:57:GLN:OE1	2.15	0.46
8:I:3:ARG:O	8:I:93:SER:OG	2.32	0.46
10:K:111:ILE:CD1	10:K:111:ILE:N	2.59	0.46
10:K:20:TYR:CE2	10:K:75:ARG:HD2	2.51	0.46
11:L:101:PHE:O	11:L:102:LEU:HD23	2.16	0.46
11:L:114:TYR:O	11:L:116:LYS:NZ	2.47	0.46
11:L:49:PRO:HB2	11:L:82:ALA:CA	2.46	0.46
12:M:40:LEU:CB	12:M:69:ASN:HB2	2.46	0.46
12:M:74:ILE:HD11	12:M:85:LEU:HD21	1.96	0.46
13:N:32:ILE:O	13:N:39:PRO:HB2	2.16	0.46
15:P:13:LYS:HD3	15:P:17:VAL:HG11	1.96	0.46
15:P:81:LEU:CD1	15:P:88:ARG:HH22	2.21	0.46
16:Q:24:CYS:SG	16:Q:27:CYS:C	2.94	0.46
16:Q:45:ARG:HG3	16:Q:46:GLU:N	2.31	0.46
18:S:63:GLY:O	18:S:64:ALA:C	2.52	0.46
18:S:56:ALA:HB1	18:S:74:LEU:CD1	2.45	0.46
20:U:22:VAL:O	20:U:24:ALA:N	2.48	0.46
21:V:62:ILE:HD11	21:V:67:VAL:CB	2.44	0.46
23:X:3:LYS:NZ	23:X:13:ILE:HG21	2.31	0.46
3:D:40:C:H3'	3:D:41:C:C5'	2.45	0.46
15:P:3:ARG:CG	15:P:7:VAL:HG12	2.44	0.46
3:B:74:C:OP1	3:B:74:C:O3'	2.33	0.46
2:1:30:U:C4	2:1:31:U:C4	3.04	0.46
1:A:1084:G:O2'	1:A:1085:U:OP1	2.32	0.46
1:A:1188:A:C2	1:A:1189:C:C2	3.03	0.46
1:A:1188:A:H3'	1:A:1189:C:H5	1.80	0.46
1:A:1189:C:C6	1:A:1189:C:OP2	2.68	0.46
1:A:1308:U:C6	15:P:99:ARG:NH1	2.77	0.46
1:A:1313:U:O4	21:V:4:SER:OG	2.23	0.46
1:A:1443:G:C5'	1:A:1446:A:H5'	2.39	0.46
1:A:1533:C:H2'	1:A:1534:A:H8	1.80	0.46
1:A:209:U:H5''	1:A:210:U:OP1	2.15	0.46
1:A:295:C:C2	1:A:296:U:C6	3.03	0.46
1:A:332:G:O2'	1:A:333:G:C5'	2.63	0.46
1:A:517:G:C4	1:A:531:U:O4'	2.68	0.46
1:A:594:G:C5	1:A:595:G:N2	2.80	0.46
1:A:623:C:H2'	1:A:624:C:H6	1.79	0.46
1:A:629:G:N3	1:A:630:G:C8	2.84	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:696:A:C2'	1:A:697:U:H5'	2.44	0.46
1:A:711:G:C2'	1:A:712:A:O5'	2.63	0.46
1:A:728:A:C6	1:A:729:A:C5	3.03	0.46
1:A:885:G:C2	1:A:913:A:C2	3.03	0.46
1:A:89:U:H6	1:A:89:U:O5'	1.99	0.46
1:A:947:G:C4	1:A:948:C:C6	3.04	0.46
1:A:965:A:O2'	1:A:966:G:P	2.74	0.46
1:A:968:A:O4'	1:A:968:A:OP1	2.33	0.46
3:C:19:G:H1'	3:C:57:G:H21	1.80	0.46
3:C:70:G:N3	3:C:71:G:C8	2.84	0.46
4:E:19:HIS:C	4:E:20:GLU:HG2	2.36	0.46
4:E:23:ARG:CZ	4:E:23:ARG:HB2	2.45	0.46
4:E:57:PHE:CD1	4:E:199:TYR:HE1	2.32	0.46
4:E:82:ARG:HB3	4:E:83:MET:HE2	1.96	0.46
5:F:134:ILE:CD1	5:F:134:ILE:N	2.79	0.46
5:F:132:ARG:O	5:F:135:LYS:HB2	2.16	0.46
5:F:31:HIS:HA	5:F:34:LEU:HB3	1.97	0.46
5:F:96:GLY:O	5:F:97:LYS:C	2.53	0.46
6:G:88:VAL:HG12	6:G:91:SER:H	1.80	0.46
7:H:121:LYS:HE3	7:H:121:LYS:HB3	1.74	0.46
7:H:151:LEU:HD11	10:K:67:PRO:HG2	1.98	0.46
7:H:36:ASP:OD1	7:H:38:GLN:HB2	2.16	0.46
7:H:41:VAL:O	7:H:67:VAL:O	2.33	0.46
7:H:61:TYR:CA	7:H:64:ARG:HG2	2.46	0.46
7:H:78:HIS:ND1	10:K:107:LEU:CD1	2.64	0.46
8:I:95:GLU:N	8:I:95:GLU:CD	2.69	0.46
8:I:96:PRO:O	8:I:97:PHE:CB	2.60	0.46
9:J:29:LYS:HD2	9:J:102:ARG:HA	1.98	0.46
9:J:3:ARG:C	9:J:4:ARG:HG2	2.36	0.46
9:J:94:ARG:NH1	9:J:98:SER:OG	2.49	0.46
10:K:104:ARG:CD	10:K:107:LEU:HD11	2.46	0.46
10:K:10:LEU:O	10:K:83:ILE:HD13	2.14	0.46
11:L:16:ARG:CG	11:L:18:PHE:CE1	2.89	0.46
12:M:9:ARG:NH1	12:M:9:ARG:HB3	2.30	0.46
16:Q:34:TYR:CZ	16:Q:44:LEU:HD22	2.51	0.46
16:Q:35:ARG:O	16:Q:38:GLY:N	2.48	0.46
17:R:18:PHE:O	17:R:20:GLY:N	2.48	0.46
1:A:667:G:H5'	17:R:51:HIS:CD2	2.51	0.46
18:S:4:ILE:HA	18:S:20:VAL:O	2.16	0.46
18:S:71:ARG:HB2	18:S:71:ARG:CZ	2.46	0.46
19:T:29:HIS:ND1	19:T:32:TYR:N	2.63	0.46
19:T:28:PRO:CB	19:T:33:GLY:O	2.59	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:U:25:THR:HG22	20:U:42:ARG:NH2	2.31	0.46
20:U:23:LYS:HD2	20:U:57:GLY:O	2.15	0.46
20:U:80:PRO:O	20:U:81:PHE:CD1	2.69	0.46
21:V:37:ARG:HA	21:V:37:ARG:HD3	1.43	0.46
21:V:51:VAL:HB	21:V:75:ALA:HB2	1.97	0.46
1:A:614:A:H2'	1:A:615:C:C6	2.50	0.46
2:1:13:U:H3'	2:1:14:U:C6	2.51	0.46
1:A:1055:A:HO2'	1:A:1056:U:P	2.37	0.46
1:A:1058:G:N2	12:M:53:PRO:HG3	2.31	0.46
1:A:120:A:C8	1:A:122:G:C5	3.04	0.46
1:A:1289:A:C2	1:A:1372:U:H4'	2.51	0.46
1:A:1363:A:H5''	1:A:1364:U:C6	2.51	0.46
1:A:1405:G:N3	1:A:1406:U:C5	2.84	0.46
1:A:1464:G:HO2'	1:A:1465:C:H6	1.63	0.46
1:A:1517:G:C2	1:A:1518:A:C4	3.03	0.46
1:A:186(B):C:C2	1:A:186(C):G:C8	3.03	0.46
1:A:227:G:C6	1:A:228:A:C6	3.03	0.46
1:A:323:U:O2	1:A:329:A:N6	2.49	0.46
1:A:452:A:C6	1:A:453:A:C6	3.03	0.46
1:A:495:A:H4'	1:A:496:A:OP1	2.15	0.46
1:A:518:C:C5	1:A:530:G:N7	2.83	0.46
1:A:625:G:H2'	1:A:626:U:C6	2.50	0.46
1:A:644:G:C5	1:A:645:C:C5	3.04	0.46
1:A:745:C:N4	1:A:746:A:H62	2.13	0.46
1:A:811:C:C6	1:A:811:C:C3'	2.98	0.46
1:A:854:G:H3'	1:A:871:U:C4	2.48	0.46
1:A:867:G:N3	1:A:868:C:C5	2.83	0.46
1:A:933:G:OP2	9:J:3:ARG:HG2	2.15	0.46
1:A:938:A:C6	1:A:939:G:C5	3.03	0.46
1:A:958:A:H2'	1:A:959:A:O4'	2.16	0.46
3:C:47:U:O4	3:C:49:C:C4'	2.60	0.46
3:C:66:U:C3'	3:C:67:C:C6	2.96	0.46
4:E:73:THR:HG22	4:E:94:ASN:C	2.35	0.46
5:F:40:ARG:NE	16:Q:52:GLN:NE2	2.64	0.46
5:F:59:ARG:NE	5:F:64:VAL:CA	2.64	0.46
6:G:130:GLY:HA3	6:G:131:ARG:NH1	2.31	0.46
6:G:145:GLU:N	6:G:184:LYS:HE2	2.30	0.46
6:G:195:ALA:O	6:G:196:LEU:O	2.33	0.46
8:I:12:PRO:O	8:I:14:LEU:N	2.48	0.46
8:I:14:LEU:HD22	8:I:18:GLN:CD	2.35	0.46
8:I:19:LEU:HD11	8:I:23:LYS:NZ	2.31	0.46
8:I:65:VAL:O	8:I:67:MET:CE	2.63	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:I:11:ASN:HB2	8:I:84:ASN:HB3	1.97	0.46
9:J:111:ARG:HD3	9:J:122:HIS:CB	2.46	0.46
9:J:122:HIS:N	9:J:125:MET:HE3	2.30	0.46
10:K:109:ILE:O	10:K:109:ILE:HG13	2.14	0.46
10:K:127:LEU:HD13	10:K:127:LEU:C	2.35	0.46
10:K:15:ASN:N	10:K:15:ASN:HD22	2.13	0.46
10:K:35:ILE:C	10:K:37:ARG:N	2.68	0.46
10:K:37:ARG:CD	10:K:41:ARG:HG3	2.19	0.46
10:K:70:GLN:HE21	10:K:71:GLY:H	1.47	0.46
10:K:6:ILE:CD1	10:K:85:ARG:CZ	2.93	0.46
11:L:50:LEU:HD21	11:L:55:ALA:O	2.15	0.46
9:J:153:HIS:CE1	13:N:58:PRO:HD2	2.42	0.46
14:O:34:ARG:HD3	14:O:105:TYR:CZ	2.51	0.46
14:O:92:ASP:CA	14:O:93:LEU:HD23	2.45	0.46
1:A:880:C:P	14:O:9:GLN:HE21	2.38	0.46
15:P:73:GLU:O	15:P:75:ALA:N	2.49	0.46
18:S:26:ARG:CD	18:S:31:LYS:HZ3	2.28	0.46
18:S:53:VAL:HA	18:S:79:VAL:CG2	2.45	0.46
18:S:74:LEU:CD2	18:S:79:VAL:HG21	2.43	0.46
1:A:237:C:C5'	19:T:25:ARG:CZ	2.86	0.46
19:T:27:PHE:C	19:T:27:PHE:CD2	2.87	0.46
19:T:88:TYR:CD2	19:T:92:ARG:HD2	2.51	0.46
21:V:24:ALA:O	21:V:26:GLY:N	2.49	0.46
21:V:58:VAL:HG23	21:V:60:VAL:CG2	2.44	0.46
22:W:50:GLU:CB	22:W:99:LEU:HD12	2.46	0.46
3:B:9:A:N3	3:B:46:G:C2	2.84	0.46
3:B:9:A:O2'	3:B:45:U:O2'	2.25	0.46
1:A:1029:G:C4	1:A:1032(A):G:C6	3.03	0.46
1:A:1176:A:N6	1:A:1177:G:N1	2.63	0.46
1:A:1183:A:H2'	1:A:1184:G:OP1	2.15	0.46
1:A:1276:G:H1'	1:A:1282:C:O2'	2.15	0.46
1:A:1506:U:C5'	1:A:1507:A:OP2	2.59	0.46
1:A:186(C):G:C6	1:A:191(E):G:C6	3.03	0.46
1:A:217:C:N4	1:A:218:C:N4	2.64	0.46
1:A:25:C:H4'	1:A:524:G:H21	1.80	0.46
1:A:267:C:C2	1:A:268:C:C5	3.04	0.46
1:A:298:A:H3'	1:A:299:G:H8	1.80	0.46
1:A:322:C:C2'	1:A:323:U:H5'	2.46	0.46
1:A:395:C:C2	1:A:396:G:N7	2.83	0.46
1:A:474:G:OP2	1:A:474:G:H8	1.97	0.46
1:A:520:A:C8	1:A:521:G:H5''	2.48	0.46
1:A:564:C:H2'	1:A:565:U:O4'	2.16	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:569:C:C1'	1:A:574:A:C2	2.99	0.46
1:A:589:C:N4	1:A:590:C:H41	2.14	0.46
1:A:670:G:C6	1:A:671:G:C8	3.03	0.46
1:A:717:C:O2'	1:A:718:G:OP2	2.33	0.46
1:A:588:G:H1'	1:A:753:A:C6	2.49	0.46
1:A:779:C:H2'	1:A:780:A:O4'	2.15	0.46
1:A:812:C:C4'	1:A:813:U:H6	2.28	0.46
1:A:817:C:C6	1:A:819:A:C4'	2.98	0.46
1:A:946:A:C3'	1:A:947:G:H8	2.29	0.46
1:A:956:U:O2	1:A:960:U:O4	2.34	0.46
3:C:42:C:H2'	3:C:43:C:O4'	2.15	0.46
4:E:115:LEU:HD23	4:E:149:LEU:HD13	1.94	0.46
4:E:46:LYS:NZ	4:E:49:GLU:HG2	2.31	0.46
4:E:56:ARG:O	4:E:57:PHE:C	2.53	0.46
5:F:50:ALA:HB1	5:F:72:LYS:HB2	1.96	0.46
6:G:98:GLU:HG2	6:G:173:TRP:HE1	1.80	0.46
6:G:195:ALA:C	6:G:196:LEU:HG	2.35	0.46
6:G:3:ARG:NH1	6:G:118:ARG:CZ	2.78	0.46
9:J:149:ARG:O	9:J:151:TYR:N	2.49	0.46
9:J:155:ARG:C	9:J:156:TRP:HE3	2.19	0.46
9:J:42:ILE:HD13	9:J:116:ALA:HB1	1.98	0.46
9:J:50:ILE:HD13	9:J:58:PRO:CB	2.46	0.46
10:K:35:ILE:O	10:K:36:LEU:C	2.52	0.46
10:K:51:VAL:HG21	10:K:60:ARG:HE	1.81	0.46
10:K:79:VAL:HG12	10:K:80:ILE:N	2.31	0.46
11:L:5:TYR:HD2	11:L:6:GLY:H	1.62	0.46
12:M:60:ARG:NH1	12:M:60:ARG:CB	2.79	0.46
13:N:23:ALA:HB1	13:N:88:GLY:CA	2.45	0.46
15:P:96:LEU:O	15:P:97:PRO:C	2.52	0.46
5:F:18:TRP:HZ2	16:Q:57:ARG:HB2	1.80	0.46
19:T:56:VAL:C	19:T:57:VAL:HG12	2.36	0.46
19:T:84:LEU:O	19:T:85:VAL:C	2.54	0.46
19:T:87:LYS:HD2	19:T:87:LYS:HA	1.54	0.46
20:U:33:ASP:O	20:U:69:THR:HG23	2.15	0.46
3:D:21:A:C6	3:D:46:G:N2	2.79	0.46
1:A:1171:G:O2'	1:A:1172:C:H6	1.99	0.46
3:B:52:G:H2'	3:B:53:G:N9	2.31	0.46
1:A:1048:G:HO2'	1:A:1050:G:P	2.38	0.46
1:A:1058:G:H21	12:M:53:PRO:HG3	1.81	0.46
1:A:110:C:C2'	1:A:111:G:C5'	2.94	0.46
1:A:1092:A:N7	1:A:1183:A:N7	2.63	0.46
1:A:1256:A:C6	1:A:1278:U:O2'	2.64	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1259:C:C2	1:A:1283:G:H1'	2.49	0.46
1:A:1361:G:C8	1:A:1361:G:C3'	2.99	0.46
1:A:1319:A:H61	1:A:1361:G:H1'	1.80	0.46
1:A:1374:A:H2'	1:A:1375:A:O5'	2.16	0.46
1:A:1399:C:HO2'	1:A:1400:C:P	2.38	0.46
1:A:1453:G:O2'	1:A:1454:G:H5'	2.16	0.46
1:A:1459:C:P	22:W:27:LYS:NZ	2.89	0.46
1:A:142:G:O2'	1:A:196:A:C2	2.64	0.46
1:A:196:A:H1'	1:A:222:U:O4'	2.15	0.46
1:A:278:G:C4	19:T:95:TYR:CE2	3.04	0.46
1:A:377:G:OP1	18:S:3:LYS:HD2	2.15	0.46
1:A:501:C:OP2	14:O:124:LYS:HD2	2.16	0.46
1:A:560:U:C2'	1:A:561:U:OP2	2.63	0.46
1:A:563:A:C2	1:A:567:G:C5	3.04	0.46
1:A:590:C:OP1	10:K:29:SER:CB	2.62	0.46
1:A:597:G:C8	1:A:644:G:N2	2.83	0.46
1:A:771:G:O6	1:A:809:G:C6	2.69	0.46
1:A:834:C:N4	1:A:853:G:O6	2.49	0.46
1:A:864:A:O5'	1:A:864:A:H8	1.99	0.46
1:A:873:A:C5'	1:A:874:G:OP2	2.60	0.46
1:A:924:C:H5'	1:A:1399:C:OP1	2.16	0.46
1:A:977:A:N6	1:A:1224:G:P	2.88	0.46
1:A:97:U:H2'	1:A:99:C:C6	2.51	0.46
4:E:20:GLU:CG	4:E:189:ASP:OD2	2.64	0.46
4:E:32:ILE:O	4:E:32:ILE:CG2	2.61	0.46
4:E:18:GLY:HA2	4:E:41:ILE:HG23	1.96	0.46
4:E:88:ALA:HA	4:E:222:ILE:CD1	2.46	0.46
5:F:84:ILE:HG13	5:F:101:LEU:CG	2.46	0.46
5:F:33:LEU:HD11	16:Q:53:LEU:CA	2.28	0.46
5:F:47:LEU:O	5:F:52:LEU:HD13	2.16	0.46
6:G:191:ARG:HB3	6:G:192:GLU:OE1	2.16	0.46
7:H:9:LYS:HD2	7:H:112:LEU:HD23	1.96	0.46
7:H:12:LEU:C	7:H:13:ILE:HD12	2.35	0.46
9:J:70:LYS:C	9:J:138:LYS:HE3	2.36	0.46
1:A:1240:U:N1	9:J:32:ARG:NH2	2.63	0.46
9:J:69:VAL:HG13	9:J:135:VAL:N	2.30	0.46
9:J:75:VAL:HG22	9:J:88:PRO:HA	1.95	0.46
10:K:137:VAL:CG1	10:K:138:TRP:N	2.79	0.46
10:K:18:ARG:H	10:K:18:ARG:HD2	1.81	0.46
13:N:21:ILE:HG12	13:N:83:ILE:O	2.15	0.46
14:O:85:ILE:HD12	14:O:99:HIS:O	2.15	0.46
14:O:26:ALA:HA	14:O:98:TYR:HE2	1.80	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:P:104:ARG:CD	15:P:105:THR:HG23	2.46	0.46
15:P:25:ILE:HG12	15:P:66:LEU:CD1	2.46	0.46
15:P:15:VAL:CG1	15:P:39:ILE:HD12	2.43	0.46
17:R:49:ASP:O	17:R:50:HIS:C	2.53	0.46
1:A:43:C:O5'	18:S:12:LYS:HG2	2.15	0.46
18:S:19:ILE:O	18:S:36:ILE:HG13	2.15	0.46
21:V:15:LEU:O	21:V:16:LEU:C	2.53	0.46
22:W:33:ILE:CD1	22:W:63:ILE:HA	2.24	0.46
22:W:86:ARG:O	22:W:90:GLN:OE1	2.34	0.46
1:A:131:C:C4	1:A:232:G:N2	2.84	0.46
1:A:73:G:C4	1:A:74:C:C5	3.03	0.46
1:A:104:G:N1	1:A:105:G:C5	2.83	0.46
1:A:1062:U:N3	1:A:1063:C:N4	2.63	0.46
1:A:1152:A:C6	1:A:1153:C:C4	3.04	0.46
1:A:1053:G:H2'	1:A:1199:U:H5	1.80	0.46
1:A:1332:A:H3'	1:A:1333:A:C8	2.51	0.46
1:A:1358:U:OP1	16:Q:34:TYR:CA	2.63	0.46
1:A:1407:C:N3	1:A:1495:U:O4	2.49	0.46
1:A:184:G:H4'	1:A:224:C:O3'	2.16	0.46
1:A:258:G:N1	1:A:259:G:C5	2.84	0.46
1:A:251:G:H1	1:A:271:C:H41	1.64	0.46
1:A:299:G:C5	1:A:300:A:N6	2.84	0.46
1:A:305:G:O2'	1:A:306:G:OP2	2.33	0.46
1:A:438:G:C5'	6:G:123:HIS:HB3	2.45	0.46
1:A:498:A:C4'	1:A:500:G:OP1	2.61	0.46
1:A:586:C:H1'	1:A:878:G:O2'	2.16	0.46
1:A:682:G:C2	1:A:683:G:C8	3.04	0.46
1:A:688:G:H2'	1:A:689:C:O4'	2.16	0.46
1:A:695:A:C2	1:A:696:A:N9	2.84	0.46
1:A:706:A:C2	1:A:707:C:N1	2.84	0.46
1:A:729:A:N6	17:R:51:HIS:NE2	2.64	0.46
1:A:739:C:H2'	1:A:740:U:O5'	2.16	0.46
1:A:931:C:H2'	1:A:932:C:C6	2.51	0.46
3:C:4:C:H2'	3:C:5:G:O5'	2.15	0.46
4:E:80:ILE:CG1	4:E:212:GLN:HG2	2.45	0.46
4:E:35:GLU:CD	4:E:36:ARG:N	2.69	0.46
5:F:5:ILE:CD1	5:F:10:PHE:CE2	2.99	0.46
6:G:100:ARG:HH11	6:G:100:ARG:HG2	1.81	0.46
1:A:408:A:H5'	6:G:116:GLN:HE21	1.81	0.46
6:G:112:VAL:HG22	6:G:161:ASN:HD21	1.81	0.46
6:G:173:TRP:CD1	6:G:185:PHE:CE2	3.02	0.46
6:G:29:PRO:O	6:G:30:LYS:CB	2.64	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:H:129:ILE:O	7:H:130:ASN:C	2.54	0.46
7:H:40:ARG:HB2	7:H:68:GLU:OE1	2.14	0.46
9:J:15:ASP:OD2	9:J:16:LEU:N	2.49	0.46
10:K:114:THR:H	10:K:119:LEU:HD23	1.81	0.46
10:K:46:LYS:HG3	10:K:64:LYS:HB2	1.97	0.46
10:K:49:GLU:OE2	10:K:60:ARG:HB3	2.16	0.46
10:K:63:LEU:HB2	10:K:65:TYR:HE1	1.79	0.46
1:A:1131:G:OP1	11:L:20:ARG:NH1	2.49	0.46
11:L:31:GLN:HB3	11:L:35:GLU:OE2	2.15	0.46
12:M:47:PHE:HZ	12:M:65:LEU:HB2	1.80	0.46
12:M:16:LEU:HD13	12:M:94:VAL:HG21	1.98	0.46
13:N:103:LEU:O	13:N:104:GLN:CB	2.63	0.46
13:N:34:ASP:CB	13:N:35:PRO:CD	2.94	0.46
15:P:73:GLU:OE2	15:P:77:ASN:HB3	2.16	0.46
15:P:97:PRO:CB	15:P:101:GLN:CB	2.94	0.46
17:R:11:VAL:C	17:R:13:GLN:N	2.62	0.46
17:R:6:GLU:O	17:R:8:LYS:N	2.49	0.46
18:S:75:ARG:O	18:S:76:GLN:C	2.54	0.46
19:T:50:LYS:HB3	19:T:51:TYR:CD1	2.51	0.46
8:I:97:PHE:O	20:U:30:ASP:HA	2.16	0.46
3:B:18:G:HO2'	3:B:57:G:N2	2.13	0.46
1:A:1026:G:C8	1:A:1027:C:C5	3.04	0.46
1:A:1111:A:C6	1:A:1112:C:N4	2.84	0.46
1:A:1132:C:C2	1:A:1133:G:C8	3.03	0.46
1:A:1180:A:C2'	1:A:1181:G:C5'	2.86	0.46
1:A:1182:G:H4'	1:A:1183:A:C5'	2.45	0.46
1:A:1210:C:H2'	1:A:1211:U:C6	2.51	0.46
1:A:991:U:N3	1:A:1212:U:O2	2.49	0.46
1:A:1239:A:H4'	1:A:1240:U:O5'	2.15	0.46
1:A:1250:A:C8	1:A:1251:A:N7	2.85	0.46
1:A:1277:C:H2'	1:A:1279:A:H8	1.80	0.46
1:A:1284:C:C4	1:A:1285:A:C5	3.04	0.46
1:A:1309:G:O6	1:A:1329:A:C6	2.69	0.46
1:A:1305:G:N2	1:A:1331:G:N3	2.63	0.46
1:A:1363:A:N3	1:A:1365:G:N1	2.63	0.46
1:A:1422:G:C2	1:A:1423:G:N7	2.84	0.46
1:A:18:C:N4	1:A:918:A:N6	2.64	0.46
1:A:244:U:HO2'	1:A:245:C:P	2.36	0.46
1:A:310:G:H2'	1:A:311:C:C5	2.49	0.46
1:A:659:U:C2	1:A:660:G:N7	2.84	0.46
1:A:692:U:O2	1:A:694:A:H8	1.99	0.46
1:A:883:C:H5'	1:A:884:U:OP2	2.16	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:955:U:H2'	1:A:956:U:C6	2.51	0.46
3:C:36:A:N1	3:C:37:A:C5	2.84	0.46
4:E:76:GLN:HG3	4:E:206:ASP:OD2	2.16	0.46
5:F:36:ASP:OD2	5:F:36:ASP:C	2.54	0.46
6:G:191:ARG:HD3	6:G:191:ARG:C	2.35	0.46
2:I:52:U:C5'	6:G:50:ARG:HB2	2.45	0.46
6:G:72:GLU:O	6:G:75:PHE:HB3	2.15	0.46
7:H:9:LYS:HB3	7:H:108:ALA:HB1	1.97	0.46
7:H:6:PHE:HZ	7:H:66:MET:SD	2.39	0.46
8:I:69:GLU:O	8:I:72:VAL:HG22	2.16	0.46
9:J:111:ARG:HD3	9:J:122:HIS:HB3	1.98	0.46
9:J:57:GLU:CB	9:J:58:PRO:HD2	2.47	0.46
9:J:76:ARG:HH11	9:J:89:MET:CG	2.28	0.46
13:N:42:TRP:HZ3	13:N:47:VAL:CG2	2.29	0.46
14:O:102:ARG:NH2	14:O:109:GLY:C	2.69	0.46
14:O:110:VAL:HB	14:O:113:ARG:HG3	1.98	0.46
14:O:64:TYR:O	14:O:65:GLU:HG3	2.16	0.46
15:P:90:LEU:O	15:P:91:ARG:C	2.52	0.46
17:R:36:ILE:CG1	17:R:60:VAL:HG22	2.46	0.46
8:I:46:ARG:HH12	20:U:37:VAL:HG22	1.81	0.46
20:U:40:LEU:O	20:U:41:LYS:C	2.54	0.46
20:U:53:ARG:CA	20:U:63:GLN:HE21	2.25	0.46
1:A:191:G:N3	22:W:105:SER:HB3	2.31	0.46
22:W:81:LYS:O	22:W:84:LEU:N	2.49	0.46
23:X:24:ARG:O	23:X:25:LYS:CB	2.60	0.46
3:D:64:A:C4	3:D:65:G:C8	3.04	0.46
1:A:1163:C:H2'	1:A:1164:G:C5'	2.46	0.46
1:A:1170:A:N7	1:A:1171:G:C5	2.84	0.46
15:P:3:ARG:HG3	15:P:7:VAL:HA	1.97	0.46
16:Q:9:LYS:O	16:Q:9:LYS:HD3	2.16	0.46
2:I:52:U:O2'	6:G:51:PRO:HD3	2.16	0.45
1:A:101:A:C5	1:A:102:G:N7	2.84	0.45
1:A:1047:G:O2'	1:A:1048:G:H5'	2.16	0.45
1:A:1084:G:N3	1:A:1085:U:H5	2.14	0.45
1:A:1118:C:O4'	1:A:1179:A:H1'	2.16	0.45
1:A:1210:C:H4'	1:A:1214:C:H42	1.81	0.45
1:A:1220:G:O2'	1:A:1221:G:H5'	2.16	0.45
1:A:1307:U:C4	1:A:1308:U:C5	3.04	0.45
1:A:1357:A:C5	1:A:1358:U:O4	2.67	0.45
1:A:1435:G:N1	1:A:1436:U:O4	2.49	0.45
1:A:1449:C:C2'	1:A:1450:U:O5'	2.62	0.45
1:A:1517:G:N1	1:A:1518:A:N3	2.64	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1405:G:H1'	1:A:1518:A:O2'	2.15	0.45
1:A:1513:A:C2	1:A:1523:G:C6	3.03	0.45
1:A:15:G:H2'	1:A:15:G:N3	2.31	0.45
1:A:307:C:C5'	1:A:308:C:OP2	2.64	0.45
1:A:319:G:H2'	1:A:320:C:C5'	2.46	0.45
1:A:320:C:O2'	1:A:321:A:C5'	2.65	0.45
1:A:46:G:H2'	1:A:366:C:N4	2.30	0.45
1:A:62:U:H5''	1:A:385:C:O2'	2.16	0.45
1:A:404:U:H5'	6:G:122:ARG:CD	2.45	0.45
1:A:41:G:C2'	1:A:42:G:C8	2.87	0.45
1:A:515:G:H3'	1:A:516:U:C6	2.51	0.45
1:A:564:C:C4	1:A:565:U:C4	3.03	0.45
1:A:687:A:H2'	1:A:701:C:N4	2.30	0.45
1:A:689:C:OP2	13:N:55:LYS:NZ	2.49	0.45
1:A:737:A:OP1	8:I:92:LYS:N	2.41	0.45
1:A:737:A:H2'	1:A:738:C:C6	2.51	0.45
1:A:880:C:O2'	1:A:881:G:H5'	2.16	0.45
1:A:888:G:H3'	1:A:889:A:C8	2.50	0.45
1:A:917:G:H2'	1:A:918:A:H8	1.81	0.45
1:A:999:U:O5'	1:A:999:U:H6	1.99	0.45
4:E:157:ARG:HG2	4:E:158:LEU:HD21	1.98	0.45
4:E:15:VAL:HG21	4:E:209:ARG:CB	2.42	0.45
4:E:164:VAL:CG2	4:E:165:VAL:N	2.77	0.45
4:E:32:ILE:HD12	4:E:190:THR:CG2	2.46	0.45
4:E:168:THR:HG21	4:E:192:SER:HA	1.96	0.45
4:E:83:MET:HB2	4:E:234:PRO:CG	2.45	0.45
4:E:73:THR:HG22	4:E:95:GLN:N	2.31	0.45
5:F:185:GLY:O	5:F:199:LYS:HA	2.16	0.45
5:F:30:ARG:NH1	5:F:31:HIS:HB2	2.31	0.45
6:G:165:MET:SD	6:G:168:ARG:NH1	2.89	0.45
6:G:61:LYS:HA	6:G:203:VAL:CG1	2.46	0.45
6:G:61:LYS:HG2	6:G:203:VAL:HG13	1.97	0.45
6:G:85:LYS:O	6:G:86:LYS:O	2.34	0.45
7:H:41:VAL:HG21	7:H:113:ALA:CB	2.45	0.45
9:J:139:GLU:CD	9:J:139:GLU:H	2.20	0.45
9:J:17:VAL:O	9:J:18:TYR:CD1	2.69	0.45
10:K:123:GLU:CD	10:K:124:ALA:H	2.13	0.45
10:K:126:LYS:NZ	10:K:127:LEU:CB	2.78	0.45
10:K:14:ARG:HD2	10:K:14:ARG:C	2.35	0.45
10:K:63:LEU:HD23	10:K:63:LEU:C	2.36	0.45
10:K:6:ILE:HD11	10:K:85:ARG:HD3	1.98	0.45
1:A:1341:U:O2'	11:L:126:SER:O	2.29	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:L:6:GLY:HA3	11:L:84:ALA:N	2.32	0.45
12:M:8:LEU:HG	12:M:19:SER:HB3	1.98	0.45
1:A:1060:C:C4'	12:M:52:GLY:HA2	2.45	0.45
13:N:85:ARG:HD3	13:N:112:THR:H	1.80	0.45
13:N:90:GLY:C	13:N:92:GLU:N	2.67	0.45
14:O:103:GLY:CA	14:O:107:ALA:O	2.64	0.45
14:O:22:SER:C	14:O:24:VAL:N	2.70	0.45
15:P:59:TYR:CG	15:P:60:VAL:N	2.84	0.45
16:Q:29:ARG:HD2	16:Q:42:ILE:HD11	1.98	0.45
17:R:75:PRO:HA	17:R:78:TYR:CG	2.50	0.45
18:S:19:ILE:HD11	18:S:39:TYR:HB3	1.97	0.45
18:S:34:GLU:OE1	18:S:35:LYS:O	2.33	0.45
19:T:34:LYS:HD2	19:T:35:VAL:N	2.30	0.45
22:W:81:LYS:O	22:W:82:SER:C	2.53	0.45
3:D:55:U:H3'	3:D:55:U:C6	2.51	0.45
3:D:55:U:O3'	3:D:57:G:N7	2.48	0.45
3:B:19:G:HO2'	3:B:57:G:N2	2.13	0.45
2:1:4:U:H6	2:1:4:U:O5'	1.99	0.45
1:A:1027:C:N3	1:A:1028:C:C5	2.84	0.45
1:A:1084:G:HO2'	1:A:1085:U:P	2.39	0.45
1:A:1099:G:N7	1:A:1100:C:C5	2.85	0.45
1:A:1205:U:O2'	5:F:194:GLY:CA	2.64	0.45
1:A:1250:A:H4'	11:L:68:GLY:N	2.31	0.45
1:A:1265:G:C6	1:A:1271:G:C6	3.03	0.45
1:A:1149:C:O2'	1:A:1280:A:N1	2.43	0.45
1:A:1319:A:N1	1:A:1361:G:N2	2.63	0.45
1:A:19:C:O2	1:A:572:A:C2	2.62	0.45
1:A:225:C:C2'	1:A:226:G:O5'	2.64	0.45
1:A:260:G:C4	1:A:261:U:N3	2.84	0.45
1:A:301:G:C2	1:A:302:G:N9	2.85	0.45
1:A:440:A:C8	1:A:442:C:C5	3.04	0.45
1:A:39:G:N7	1:A:547:A:C8	2.85	0.45
1:A:674:G:O2'	1:A:675:A:H5'	2.16	0.45
1:A:689:C:O3'	1:A:705:U:O2'	2.32	0.45
1:A:706:A:C2'	1:A:707:C:O5'	2.64	0.45
1:A:774:G:H3'	1:A:775:G:H8	1.81	0.45
1:A:814:A:O2'	1:A:815:A:H5'	2.16	0.45
1:A:80:G:C3'	1:A:81:G:H8	2.29	0.45
1:A:830:G:C6	1:A:831:U:C5	3.04	0.45
1:A:888:G:C2	1:A:909:A:N6	2.80	0.45
1:A:928:G:H4'	1:A:1532:U:H5''	1.97	0.45
1:A:961:U:C2'	1:A:962:C:C5'	2.94	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:C:29:G:O2'	3:C:30:G:H5'	2.17	0.45
4:E:136:VAL:CA	4:E:139:LYS:HZ2	2.30	0.45
4:E:50:GLU:CG	4:E:200:ILE:HB	2.47	0.45
5:F:156:ARG:O	5:F:157:ILE:C	2.54	0.45
6:G:31:CYS:O	6:G:33:MET:CE	2.59	0.45
7:H:59:GLY:O	7:H:62:ALA:N	2.50	0.45
8:I:50:TYR:CE1	20:U:81:PHE:CZ	3.04	0.45
9:J:47:CYS:O	9:J:50:ILE:HB	2.17	0.45
9:J:22:LEU:HG	9:J:63:LYS:HZ2	1.82	0.45
10:K:49:GLU:O	10:K:59:LEU:HD23	2.17	0.45
11:L:26:VAL:HG13	11:L:63:ILE:HD13	1.98	0.45
11:L:67:GLY:C	11:L:73:GLN:NE2	2.69	0.45
14:O:26:ALA:HA	14:O:98:TYR:CE2	2.51	0.45
14:O:69:TYR:HB3	14:O:99:HIS:HB3	1.96	0.45
14:O:85:ILE:HD11	14:O:99:HIS:H	1.73	0.45
15:P:81:LEU:O	15:P:84:ILE:CG1	2.64	0.45
16:Q:4:LYS:HA	16:Q:7:ILE:HD11	1.98	0.45
17:R:41:GLU:O	17:R:44:LYS:HB2	2.15	0.45
17:R:71:GLN:HA	17:R:75:PRO:HB3	1.99	0.45
18:S:21:VAL:HG21	18:S:59:TRP:CE2	2.47	0.45
19:T:59:ILE:HD11	19:T:71:PHE:C	2.36	0.45
19:T:59:ILE:HD11	19:T:71:PHE:CA	2.45	0.45
20:U:31:LEU:CD1	20:U:31:LEU:N	2.79	0.45
20:U:59:SER:O	20:U:60:GLY:C	2.54	0.45
3:D:18:G:O6	3:D:57:G:N1	2.49	0.45
14:O:126:LYS:CD	14:O:128:ALA:HB3	2.45	0.45
1:A:800:G:P	1:A:800:G:H8	2.39	0.45
3:B:25:C:H2'	3:B:25:C:O2	2.17	0.45
3:B:58:A:C6	3:B:61:C:H1'	2.50	0.45
12:M:36:GLY:O	12:M:38:ILE:N	2.49	0.45
1:A:1055:A:O2'	1:A:1056:U:OP1	2.26	0.45
1:A:1068:G:O6	1:A:1108:G:N3	2.49	0.45
1:A:1118:C:O4'	1:A:1179:A:C1'	2.65	0.45
1:A:1176:A:C6	1:A:1177:G:C6	3.04	0.45
1:A:1188:A:N3	1:A:1188:A:H2'	2.30	0.45
1:A:1191:A:N3	1:A:1191:A:C2'	2.79	0.45
1:A:1287:A:N6	1:A:1371:G:C4'	2.77	0.45
1:A:134:A:H2'	1:A:135:C:O5'	2.16	0.45
1:A:1409:C:H2'	1:A:1410:G:H8	1.81	0.45
1:A:1429:C:H2'	1:A:1430:C:C5	2.50	0.45
1:A:1466:C:C2'	1:A:1467:G:C8	2.98	0.45
1:A:1523:G:C6	1:A:1524:C:C4	3.04	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:255:G:C1'	19:T:16:GLN:HB2	2.46	0.45
1:A:27:G:OP2	1:A:27:G:H8	1.98	0.45
1:A:307:C:N4	1:A:308:C:N4	2.58	0.45
1:A:415:A:H2'	1:A:416:G:O4'	2.16	0.45
1:A:416:G:O6	1:A:428:G:O6	2.34	0.45
1:A:450:G:OP1	1:A:452:A:P	2.74	0.45
1:A:483:C:C6	1:A:483:C:C3'	3.00	0.45
1:A:752:G:O2'	1:A:753:A:P	2.75	0.45
1:A:828:A:O2'	1:A:829:G:O5'	2.27	0.45
1:A:918:A:O2'	1:A:919:A:P	2.74	0.45
3:C:46:G:OP2	3:C:46:G:H8	1.98	0.45
3:C:53:G:C2	3:C:62:C:N3	2.84	0.45
3:C:74:C:H2'	3:C:75:C:C4'	2.47	0.45
4:E:179:LYS:O	4:E:180:LEU:C	2.53	0.45
4:E:186:ALA:O	4:E:201:ILE:CD1	2.64	0.45
4:E:19:HIS:C	4:E:39:ILE:HD11	2.37	0.45
4:E:223:ILE:HA	4:E:226:ARG:CD	2.46	0.45
5:F:182:ILE:CD1	5:F:203:PHE:HD1	2.29	0.45
6:G:121:VAL:HG11	6:G:136:PRO:CA	2.45	0.45
6:G:13:ARG:CA	6:G:32:ALA:HB2	2.47	0.45
9:J:20:ASP:OD1	9:J:23:VAL:HG23	2.17	0.45
9:J:38:LEU:O	9:J:42:ILE:HG13	2.16	0.45
10:K:28:ALA:HA	10:K:59:LEU:HD12	1.98	0.45
1:A:1186:G:H4'	11:L:110:GLU:HG3	1.99	0.45
11:L:20:ARG:O	11:L:21:PRO:C	2.53	0.45
11:L:67:GLY:O	11:L:68:GLY:C	2.54	0.45
11:L:69:GLY:O	11:L:70:LYS:C	2.55	0.45
11:L:75:ASP:O	11:L:78:LYS:N	2.50	0.45
11:L:7:THR:HG21	11:L:9:ARG:NH1	2.30	0.45
14:O:86:ARG:HD3	14:O:101:VAL:CG1	2.47	0.45
14:O:48:PRO:CD	14:O:49:ASN:H	2.29	0.45
15:P:87:TYR:HD2	15:P:87:TYR:C	2.20	0.45
1:A:1317:C:C2	16:Q:16:PHE:CZ	3.04	0.45
16:Q:28:GLY:O	16:Q:29:ARG:C	2.54	0.45
1:A:1114:C:O2'	16:Q:60:SER:CB	2.65	0.45
17:R:21:ASP:OD2	17:R:24:SER:HB3	2.17	0.45
19:T:101:ARG:HG2	19:T:102:GLY:H	1.82	0.45
21:V:36:ARG:HB2	21:V:71:LEU:CB	2.45	0.45
22:W:40:ALA:HB2	22:W:55:ILE:HG22	1.95	0.45
22:W:63:ILE:HG23	22:W:72:LEU:CD1	2.47	0.45
23:X:23:PRO:C	23:X:25:LYS:N	2.69	0.45
3:D:28:G:H2'	3:D:29:G:C8	2.35	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1018:C:H2'	1:A:1019:C:O4'	2.16	0.45
1:A:1537:U:H2'	1:A:1538:C:H6	1.81	0.45
2:1:29:G:C3'	2:1:30:U:C5'	2.92	0.45
2:1:35:U:H5	2:1:35:U:OP2	2.00	0.45
1:A:1003:G:C8	1:A:1003:G:O5'	2.67	0.45
1:A:1061:G:N2	1:A:1197:G:C4	2.83	0.45
1:A:1076:C:C2	1:A:1077:G:C8	3.04	0.45
1:A:1082:G:O2'	1:A:1083:U:H5'	2.16	0.45
1:A:1231:G:H2'	1:A:1232:U:C6	2.50	0.45
1:A:1401:G:C2'	1:A:1402:C:H5'	2.46	0.45
1:A:1477:C:N4	1:A:1478:C:N4	2.64	0.45
1:A:1496:C:O5'	1:A:1496:C:H6	2.00	0.45
1:A:791:G:N2	1:A:1497:G:H4'	2.31	0.45
1:A:102:G:N3	1:A:151:A:H2	2.14	0.45
1:A:151:A:O2'	1:A:152:A:H5'	2.16	0.45
1:A:251:G:O4'	1:A:252:U:C5	2.70	0.45
1:A:299:G:C2	1:A:300:A:C6	3.05	0.45
1:A:50:A:N1	1:A:361:G:O4'	2.50	0.45
1:A:539:A:C6	1:A:540:G:C6	3.04	0.45
1:A:710:G:C2	1:A:711:G:C8	3.04	0.45
1:A:737:A:O2'	1:A:738:C:C5'	2.65	0.45
1:A:833:U:C2'	1:A:834:C:H6	2.30	0.45
1:A:902:G:H2'	1:A:903:G:C8	2.50	0.45
1:A:934:C:N4	1:A:939:G:N1	2.64	0.45
1:A:966:G:O2'	1:A:967:C:O5'	2.34	0.45
1:A:99:C:H2'	1:A:101:A:C8	2.52	0.45
3:C:9:A:H4'	3:C:10:G:OP2	2.16	0.45
3:C:19:G:H5''	3:C:20:U:O4	2.16	0.45
3:C:34:G:OP1	3:C:34:G:H8	2.00	0.45
4:E:109:SER:O	4:E:111:ARG:N	2.49	0.45
4:E:115:LEU:HB2	4:E:145:LEU:HD21	1.97	0.45
4:E:28:PHE:HE1	4:E:31:TYR:O	1.99	0.45
4:E:56:ARG:CB	4:E:56:ARG:NH1	2.54	0.45
4:E:92:TYR:C	4:E:92:TYR:CD2	2.87	0.45
5:F:15:THR:CB	5:F:181:ASN:HA	2.46	0.45
5:F:186:PHE:CD1	5:F:187:ALA:N	2.85	0.45
5:F:21:ARG:HB2	5:F:58:GLU:CG	2.40	0.45
5:F:30:ARG:HH11	5:F:30:ARG:HG2	1.81	0.45
6:G:187:ARG:CG	6:G:188:LEU:N	2.79	0.45
6:G:24:GLU:OE2	6:G:24:GLU:C	2.55	0.45
7:H:107:ARG:HB2	7:H:107:ARG:NH1	2.29	0.45
7:H:5:ASP:HB3	7:H:6:PHE:H	1.61	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:H:79:GLU:HA	7:H:91:LEU:HD23	1.98	0.45
9:J:5:ARG:HB3	9:J:5:ARG:CZ	2.45	0.45
10:K:75:ARG:HA	10:K:76:PRO:HD3	1.70	0.45
1:A:1343:G:H5'	11:L:124:GLN:HA	1.97	0.45
11:L:46:ALA:HB1	11:L:77:ILE:HG22	1.97	0.45
12:M:33:GLN:O	12:M:34:VAL:HB	2.17	0.45
12:M:70:ARG:HA	12:M:70:ARG:HD3	1.79	0.45
1:A:564:C:OP1	14:O:15:ARG:NE	2.50	0.45
14:O:79:GLU:H	14:O:79:GLU:HG3	1.60	0.45
14:O:88:GLY:O	14:O:99:HIS:CD2	2.70	0.45
16:Q:23:ARG:CA	16:Q:33:VAL:HG21	2.46	0.45
1:A:1048:G:OP1	16:Q:3:ARG:HD2	2.17	0.45
1:A:750:G:O2'	17:R:23:GLY:O	2.35	0.45
17:R:24:SER:O	17:R:25:THR:C	2.55	0.45
18:S:1:MET:CB	18:S:3:LYS:HZ1	2.29	0.45
18:S:29:ASP:O	18:S:30:GLY:O	2.35	0.45
1:A:136:C:H4'	18:S:65:GLN:OE1	2.16	0.45
21:V:24:ALA:C	21:V:26:GLY:N	2.70	0.45
22:W:47:GLY:O	22:W:49:ALA:N	2.45	0.45
1:A:261:U:H5	22:W:79:ARG:NH1	2.15	0.45
22:W:91:LEU:C	22:W:93:GLU:H	2.20	0.45
1:A:1353:G:OP2	23:X:3:LYS:NZ	2.47	0.45
3:D:39:U:H2'	3:D:40:C:H6	1.74	0.45
18:S:68:ASP:C	18:S:70:ALA:N	2.69	0.45
1:A:1108:G:N7	1:A:1109:C:C5	2.85	0.45
1:A:1181:G:O3'	1:A:1184:G:C5'	2.65	0.45
1:A:1213:A:N6	1:A:1215:G:N2	2.65	0.45
1:A:1251:A:H4'	1:A:1370:G:H4'	1.99	0.45
1:A:1263:C:H2'	1:A:1264:C:C5	2.50	0.45
1:A:1296:C:C5	1:A:1297:C:N4	2.84	0.45
1:A:1305:G:OP1	23:X:2:GLY:N	2.50	0.45
1:A:1316:G:C4	1:A:1318:A:OP2	2.70	0.45
1:A:1343:G:C5	1:A:1344:C:C4	3.04	0.45
1:A:1477:C:C4	1:A:1478:C:C5	3.03	0.45
1:A:1484:C:H2'	1:A:1485:U:C5'	2.47	0.45
1:A:1533:C:H2'	1:A:1534:A:O5'	2.15	0.45
1:A:183:G:H2'	1:A:184:G:O4'	2.17	0.45
1:A:275:G:C2	1:A:276:G:C8	3.04	0.45
1:A:282:A:N3	1:A:282:A:H2'	2.29	0.45
1:A:321:A:H2'	1:A:322:C:H6	1.81	0.45
1:A:425:G:C2	1:A:426:G:C8	3.05	0.45
1:A:468:A:N6	1:A:474:G:C6	2.84	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:523:A:O2'	1:A:525:C:H5	1.98	0.45
1:A:571:U:H5'	1:A:572:A:OP2	2.17	0.45
1:A:61:G:C8	1:A:62:U:C5	3.05	0.45
1:A:640:A:C5	1:A:641:U:C6	3.04	0.45
1:A:714:G:H1'	1:A:777:A:C5	2.51	0.45
1:A:792:A:O2'	1:A:793:U:H5''	2.16	0.45
1:A:18:C:N4	1:A:918:A:H61	2.13	0.45
1:A:954:G:H2'	1:A:955:U:H6	1.80	0.45
4:E:58:ILE:HB	4:E:221:LEU:HG	1.98	0.45
5:F:172:ARG:CZ	5:F:172:ARG:CB	2.93	0.45
6:G:114:ARG:NH1	6:G:114:ARG:CG	2.76	0.45
6:G:119:GLN:CG	6:G:123:HIS:CE1	3.00	0.45
7:H:114:GLY:C	7:H:115:VAL:HG13	2.36	0.45
7:H:145:LYS:HA	7:H:148:VAL:HG21	1.94	0.45
7:H:35:GLY:N	7:H:112:LEU:CD1	2.79	0.45
7:H:61:TYR:O	7:H:65:ASN:N	2.38	0.45
8:I:47:ARG:HA	8:I:57:GLN:HA	1.97	0.45
9:J:147:ALA:C	9:J:149:ARG:H	2.19	0.45
10:K:102:ARG:HE	10:K:105:ARG:HD2	1.81	0.45
10:K:110:ALA:HB3	10:K:121:ASP:OD1	2.16	0.45
10:K:137:VAL:HG12	10:K:138:TRP:H	1.82	0.45
10:K:19:VAL:CG1	10:K:21:LYS:HE3	2.46	0.45
10:K:68:ARG:O	10:K:69:ARG:HB3	2.16	0.45
10:K:6:ILE:HD12	10:K:85:ARG:NH1	2.31	0.45
11:L:119:ALA:O	11:L:120:ARG:CB	2.64	0.45
11:L:49:PRO:CB	11:L:82:ALA:HB2	2.42	0.45
14:O:36:VAL:HA	14:O:82:VAL:HA	1.99	0.45
15:P:40:ASN:HB3	15:P:43:THR:HG23	1.98	0.45
15:P:48:LEU:HD13	15:P:53:VAL:CG2	2.40	0.45
1:A:995:C:C2'	16:Q:4:LYS:HE2	2.46	0.45
17:R:60:VAL:HA	17:R:63:ARG:CG	2.47	0.45
17:R:65:ARG:CZ	17:R:65:ARG:HB3	2.46	0.45
17:R:79:ARG:HB3	17:R:79:ARG:NH1	2.31	0.45
13:N:84:VAL:CG2	20:U:88:LYS:NZ	2.80	0.45
21:V:18:LYS:CE	21:V:22:LEU:HD12	2.46	0.45
22:W:43:LEU:HA	22:W:43:LEU:HD23	1.73	0.45
3:D:47:U:H2'	3:D:47:U:O2	2.16	0.45
1:A:164:U:C2'	1:A:165:C:C6	2.99	0.45
1:A:343:U:C2'	1:A:344:A:O5'	2.64	0.45
1:A:1079:G:N2	1:A:1080:A:C2	2.84	0.45
1:A:1107:C:P	5:F:172:ARG:NH1	2.89	0.45
1:A:1126:U:OP1	1:A:1126:U:O4'	2.35	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1213:A:H2'	1:A:1215:G:N7	2.31	0.45
1:A:1239:A:H8	1:A:1241:G:H1'	1.82	0.45
1:A:1342:C:O2'	1:A:1343:G:H5'	2.16	0.45
1:A:976:G:C4	1:A:1363:A:N6	2.84	0.45
1:A:141:A:O4'	1:A:182:U:H1'	2.17	0.45
1:A:1468:A:C8	1:A:1469:G:H8	2.33	0.45
1:A:1476:G:C6	1:A:1477:C:N4	2.85	0.45
1:A:1509:C:O2'	1:A:1510:U:C5'	2.56	0.45
1:A:278:G:N2	1:A:279:A:H62	2.15	0.45
1:A:322:C:N3	1:A:323:U:O2	2.49	0.45
1:A:407:G:C2	1:A:436:C:O2	2.70	0.45
1:A:456:C:C2	1:A:477:G:C2	3.05	0.45
1:A:577:G:N2	1:A:578:C:C1'	2.79	0.45
1:A:637:G:C6	1:A:638:G:N7	2.85	0.45
1:A:723:U:O4'	2:1:29:G:O2'	2.22	0.45
1:A:747:C:H6	1:A:747:C:O5'	1.99	0.45
1:A:747:C:H2'	1:A:748:C:O4'	2.17	0.45
1:A:787:A:C2'	1:A:788:U:H5'	2.35	0.45
1:A:829:G:N2	1:A:858:G:O2'	2.49	0.45
1:A:873:A:C4'	1:A:874:G:OP2	2.65	0.45
1:A:938:A:O2'	1:A:939:G:C5'	2.58	0.45
1:A:953:G:C2'	1:A:954:G:O5'	2.65	0.45
3:C:3:C:C2'	3:C:4:C:O5'	2.65	0.45
3:C:59:U:C4	3:C:60:U:C4	3.04	0.45
4:E:46:LYS:CE	4:E:49:GLU:HG2	2.47	0.45
6:G:98:GLU:O	6:G:103:ASN:CB	2.63	0.45
6:G:125:HIS:CB	6:G:152:SER:HB2	2.36	0.45
6:G:196:LEU:HA	6:G:197:PRO:HD2	1.86	0.45
9:J:21:VAL:HG23	9:J:22:LEU:HD22	1.99	0.45
9:J:26:PHE:CD2	9:J:62:PHE:HE1	2.34	0.45
9:J:29:LYS:NZ	9:J:98:SER:O	2.48	0.45
10:K:111:ILE:H	10:K:111:ILE:HD12	1.76	0.45
10:K:88:LYS:O	10:K:90:GLY:N	2.50	0.45
11:L:101:PHE:O	11:L:102:LEU:CD2	2.65	0.45
11:L:63:ILE:N	11:L:63:ILE:CD1	2.64	0.45
12:M:55:LYS:O	12:M:55:LYS:CG	2.65	0.45
13:N:85:ARG:CD	13:N:113:PRO:HD2	2.46	0.45
14:O:34:ARG:O	14:O:60:LEU:HB2	2.17	0.45
17:R:60:VAL:O	17:R:63:ARG:CG	2.49	0.45
18:S:66:PRO:HG2	18:S:71:ARG:NH1	2.32	0.45
19:T:3:LYS:O	19:T:4:LYS:C	2.54	0.45
19:T:75:ARG:NH1	19:T:76:LEU:O	2.48	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:T:7:THR:HG22	19:T:56:VAL:CG1	2.47	0.45
20:U:43:PHE:O	20:U:51:LEU:CD1	2.52	0.45
22:W:23:ARG:HA	22:W:26:ASN:CG	2.37	0.45
22:W:40:ALA:O	22:W:43:LEU:N	2.49	0.45
1:A:513:C:N3	1:A:514:C:C5	2.84	0.45
2:1:26:G:C6	2:1:27:A:N6	2.85	0.45
1:A:1002:G:H2'	1:A:1002:G:N3	2.31	0.45
1:A:1101:A:O2'	1:A:1102:A:OP2	2.35	0.45
1:A:1145:C:O2'	1:A:1146:A:P	2.74	0.45
1:A:1225:A:N3	1:A:1225:A:H2'	2.32	0.45
1:A:1228:C:O3'	15:P:116:THR:HA	2.17	0.45
1:A:1338:G:H2'	1:A:1339:A:H8	1.76	0.45
1:A:1466:C:C3'	1:A:1467:G:H8	2.30	0.45
1:A:1466:C:H2'	1:A:1467:G:N9	2.30	0.45
1:A:1466:C:H3'	1:A:1467:G:H8	1.80	0.45
1:A:1488:G:N3	1:A:1489:G:C8	2.84	0.45
1:A:1498:U:O2'	1:A:1499:A:C5'	2.65	0.45
1:A:22:G:O2'	1:A:23:C:O4'	2.34	0.45
1:A:448:A:OP2	1:A:485:G:N2	2.50	0.45
1:A:509:A:C6	1:A:510:A:N1	2.85	0.45
1:A:524:G:O2'	1:A:525:C:C5'	2.64	0.45
1:A:544:G:C2	1:A:545:C:C2	3.05	0.45
1:A:665:A:O4'	1:A:733:A:H1'	2.16	0.45
1:A:767:A:H2'	1:A:768:A:H5'	1.99	0.45
1:A:781:A:N7	1:A:802:A:N1	2.64	0.45
1:A:87:A:C8	1:A:88:C:C2	3.05	0.45
1:A:920:U:H2'	1:A:921:U:C6	2.50	0.45
1:A:941:G:H2'	1:A:942:G:O5'	2.15	0.45
1:A:956:U:C2	1:A:960:U:O4	2.70	0.45
1:A:981:U:C3'	1:A:981:U:H6	2.26	0.45
4:E:12:GLU:C	4:E:14:GLY:N	2.70	0.45
4:E:157:ARG:C	4:E:158:LEU:CD2	2.81	0.45
4:E:102:LEU:HD23	4:E:176:GLU:HB3	1.95	0.45
4:E:179:LYS:HG2	10:K:72:PRO:HA	1.98	0.45
5:F:123:GLN:HB3	5:F:128:PHE:CZ	2.52	0.45
5:F:157:ILE:HG13	5:F:164:ARG:CD	2.46	0.45
5:F:70:VAL:HG12	5:F:72:LYS:H	1.82	0.45
6:G:126:ILE:O	6:G:132:ARG:HB3	2.17	0.45
6:G:145:GLU:HB3	6:G:184:LYS:CG	2.38	0.45
6:G:80:GLU:O	6:G:83:SER:OG	2.34	0.45
7:H:20:GLN:NE2	7:H:21:ALA:HB3	2.29	0.45
7:H:95:ALA:C	7:H:96:PRO:O	2.53	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:I:2:ARG:O	8:I:67:MET:CE	2.64	0.45
8:I:97:PHE:CE2	20:U:62:GLU:OE2	2.69	0.45
9:J:104:LEU:O	9:J:105:VAL:C	2.55	0.45
9:J:42:ILE:HG21	9:J:116:ALA:HB1	1.98	0.45
9:J:17:VAL:HG21	9:J:44:TYR:CZ	2.50	0.45
9:J:29:LYS:HE3	9:J:101:LEU:CD1	2.39	0.45
9:J:37:ASN:OD1	9:J:38:LEU:HD13	2.17	0.45
9:J:69:VAL:HG13	9:J:135:VAL:CA	2.47	0.45
12:M:34:VAL:CA	12:M:74:ILE:HG12	2.40	0.45
13:N:26:ASN:O	13:N:27:ASN:CB	2.65	0.45
15:P:17:VAL:HG12	15:P:21:TYR:CZ	2.52	0.45
15:P:40:ASN:CG	15:P:42:ALA:HB3	2.37	0.45
12:M:49:VAL:HG22	16:Q:41:ARG:HB2	1.97	0.45
17:R:62:GLN:CA	17:R:65:ARG:HH12	2.30	0.45
18:S:34:GLU:CD	18:S:35:LYS:N	2.70	0.45
21:V:15:LEU:HG	21:V:16:LEU:N	2.26	0.45
1:A:1286:A:C5'	23:X:25:LYS:HG2	2.25	0.45
3:B:62:C:C2	3:B:63:G:N7	2.84	0.45
3:D:5:G:N2	3:D:6:G:C5	2.85	0.45
2:1:30:U:H3'	2:1:31:U:C6	2.51	0.45
1:A:1001:G:C5	1:A:1002:G:H1'	2.51	0.45
1:A:1083:U:H3'	1:A:1084:G:C8	2.52	0.45
1:A:1108:G:C5	1:A:1109:C:C4	3.05	0.45
1:A:1252:A:C6	1:A:1253:G:C5	3.05	0.45
1:A:976:G:C6	1:A:1362:C:N4	2.85	0.45
1:A:1386:G:N1	1:A:1387:G:C5	2.85	0.45
1:A:1392:G:C2'	1:A:1393:U:O5'	2.65	0.45
1:A:1424:C:H2'	1:A:1425:U:C6	2.52	0.45
1:A:1433:A:O2'	1:A:1434:A:H5'	2.16	0.45
1:A:1480:G:C2'	1:A:1481:U:C5'	2.95	0.45
1:A:152:A:OP2	1:A:153:C:H5	1.99	0.45
1:A:144:G:C6	1:A:179:A:C6	3.04	0.45
1:A:181:G:H2'	1:A:182:U:OP2	2.17	0.45
1:A:195:A:P	22:W:68:LYS:HZ1	2.40	0.45
1:A:195:A:H1'	1:A:223:U:H5'	1.99	0.45
1:A:246:A:C2	1:A:282:A:C5	3.04	0.45
1:A:251:G:C4'	1:A:252:U:OP1	2.65	0.45
1:A:273:A:C2	1:A:274:A:C1'	2.91	0.45
1:A:292:G:C4	1:A:309:G:N2	2.84	0.45
1:A:307:C:N3	1:A:308:C:H5	2.14	0.45
1:A:416:G:C2	1:A:417:C:C2	3.05	0.45
1:A:619:U:H1'	6:G:133:VAL:HG22	1.99	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:622:A:C2	1:A:623:C:O4'	2.70	0.45
1:A:722:A:H5'	1:A:723:U:O4	2.16	0.45
1:A:588:G:C4	1:A:753:A:C5	3.05	0.45
1:A:812:C:C4'	1:A:813:U:C6	3.00	0.45
1:A:890:G:O2'	1:A:891:U:H6	1.98	0.45
1:A:895:G:N2	1:A:896:C:C2	2.85	0.45
1:A:92:G:N2	1:A:93:U:H1'	2.31	0.45
4:E:31:TYR:CZ	4:E:200:ILE:HG21	2.51	0.45
4:E:7:VAL:CG2	4:E:8:LYS:H	2.21	0.45
5:F:122:GLU:HA	5:F:125:GLU:OE2	2.17	0.45
5:F:160:ALA:C	5:F:162:GLN:N	2.69	0.45
5:F:172:ARG:NH1	5:F:172:ARG:HB3	2.31	0.45
6:G:140:VAL:HG12	6:G:185:PHE:HD1	1.81	0.45
6:G:30:LYS:N	6:G:34:GLU:CB	2.72	0.45
6:G:30:LYS:HA	6:G:35:ARG:HG2	1.98	0.45
7:H:140:ARG:O	7:H:141:GLN:C	2.52	0.45
7:H:41:VAL:CG2	7:H:113:ALA:HA	2.47	0.45
7:H:57:LYS:NZ	7:H:61:TYR:OH	2.45	0.45
8:I:16:GLN:O	8:I:19:LEU:HB3	2.17	0.45
8:I:23:LYS:HA	8:I:26:ILE:HG13	1.98	0.45
8:I:53:ALA:O	8:I:55:ASP:CG	2.55	0.45
8:I:79:LEU:CD2	8:I:79:LEU:N	2.76	0.45
9:J:129:GLU:HB2	9:J:131:LYS:HE2	1.99	0.45
11:L:113:LYS:H	11:L:113:LYS:HD2	1.81	0.45
1:A:1254:C:OP1	12:M:45:ARG:NE	2.50	0.45
12:M:4:ILE:HD13	12:M:98:ILE:CG2	2.47	0.45
13:N:79:SER:HA	13:N:104:GLN:NE2	2.31	0.45
13:N:34:ASP:HB2	13:N:35:PRO:CD	2.47	0.45
13:N:81:ASP:OD1	13:N:106:LYS:CD	2.64	0.45
15:P:104:ARG:HG2	15:P:105:THR:N	2.31	0.45
15:P:20:THR:O	15:P:20:THR:HG22	2.15	0.45
15:P:52:GLU:CB	15:P:55:ARG:CZ	2.94	0.45
17:R:27:VAL:HG12	17:R:31:LEU:CD2	2.47	0.45
18:S:32:TYR:C	18:S:34:GLU:N	2.70	0.45
20:U:38:GLU:N	20:U:38:GLU:CD	2.64	0.45
20:U:58:LEU:HB3	20:U:62:GLU:CG	2.43	0.45
20:U:78:LEU:O	20:U:79:LEU:CB	2.64	0.45
15:P:87:TYR:HD1	21:V:73:GLU:HB3	1.81	0.45
18:S:67:THR:CB	18:S:70:ALA:HB2	2.43	0.45
11:L:99:LEU:CD2	11:L:99:LEU:N	2.80	0.45
1:A:110:C:H2'	1:A:111:G:H8	1.82	0.45
1:A:1227:A:OP1	21:V:80:TYR:HE2	1.95	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1321:C:H3'	1:A:1321:C:H6	1.82	0.45
1:A:1365:G:C2	1:A:1366:C:C6	3.05	0.45
1:A:1399:C:O2	1:A:1401:G:N7	2.50	0.45
1:A:1453:G:C2'	1:A:1454:G:H5'	2.46	0.45
1:A:1438:G:N2	1:A:1464:G:H1'	2.32	0.45
1:A:1470:G:C6	1:A:1471:G:C5	3.05	0.45
1:A:1519:A:H8	1:A:1519:A:O5'	1.99	0.45
1:A:152:A:C8	1:A:153:C:C5	3.05	0.45
1:A:50:A:N3	1:A:360:A:N3	2.65	0.45
1:A:392:G:N2	1:A:393:A:H1'	2.32	0.45
1:A:440:A:H2'	1:A:442:C:O4'	2.17	0.45
1:A:690:G:H2'	1:A:691:G:O5'	2.17	0.45
1:A:692:U:C4	13:N:26:ASN:ND2	2.84	0.45
1:A:789:U:C3'	1:A:789:U:H6	2.26	0.45
1:A:81:G:O6	1:A:82:U:O4	2.35	0.45
1:A:986:A:H2'	1:A:987:G:H8	1.81	0.45
4:E:119:GLU:CA	4:E:142:LEU:CD1	2.95	0.45
4:E:185:ILE:O	4:E:185:ILE:HG12	2.17	0.45
4:E:51:LEU:HD23	4:E:51:LEU:N	2.32	0.45
4:E:70:PHE:HB3	4:E:163:PHE:C	2.38	0.45
5:F:116:VAL:HG21	5:F:141:VAL:HG22	1.97	0.45
5:F:155:GLY:O	5:F:196:LEU:CB	2.64	0.45
5:F:85:ARG:HH21	5:F:89:GLU:CA	2.28	0.45
6:G:106:TYR:CD2	6:G:114:ARG:HG2	2.44	0.45
6:G:139:ARG:CG	6:G:140:VAL:H	2.29	0.45
6:G:194:LEU:O	6:G:195:ALA:O	2.35	0.45
7:H:110:LEU:HD23	7:H:110:LEU:N	2.32	0.45
7:H:112:LEU:O	7:H:114:GLY:N	2.49	0.45
8:I:21:LEU:O	8:I:24:GLU:HG3	2.17	0.45
9:J:126:ASP:O	9:J:131:LYS:CG	2.64	0.45
9:J:144:MET:HE2	9:J:144:MET:HB3	1.90	0.45
1:A:824:C:C1'	10:K:1:MET:H1	2.29	0.45
10:K:26:VAL:O	10:K:58:TYR:CD1	2.70	0.45
11:L:71:SER:O	11:L:74:ILE:N	2.50	0.45
12:M:22:LYS:CE	12:M:90:LEU:HD12	2.45	0.45
13:N:108:ILE:HB	20:U:88:LYS:OXT	2.17	0.45
13:N:86:GLY:H	13:N:112:THR:HG23	1.82	0.45
13:N:32:ILE:O	13:N:40:ILE:HD13	2.17	0.45
14:O:24:VAL:CG1	14:O:98:TYR:CE2	3.00	0.45
15:P:22:ILE:CB	15:P:25:ILE:HD12	2.47	0.45
1:A:995:C:O2	16:Q:4:LYS:CE	2.65	0.45
18:S:40:ASP:CG	18:S:40:ASP:O	2.55	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:189:U:H3	19:T:63:ARG:CB	2.30	0.45
19:T:65:ILE:HG23	19:T:69:LYS:CD	2.41	0.45
20:U:17:SER:HB2	20:U:54:ARG:HH12	1.81	0.45
20:U:22:VAL:CG2	20:U:55:ARG:O	2.65	0.45
22:W:31:SER:O	22:W:34:LYS:HB2	2.17	0.45
22:W:84:LEU:C	22:W:84:LEU:CD1	2.86	0.45
23:X:3:LYS:O	23:X:14:TRP:HE3	1.98	0.45
3:D:48:C:O2'	3:D:49:C:P	2.74	0.45
1:A:1163:C:N4	1:A:1174:G:C6	2.85	0.45
3:B:18:G:H22	3:B:55:U:H1'	1.82	0.45
3:D:66:U:N3	3:D:67:C:C4	2.85	0.45
14:O:125:PRO:C	14:O:127:GLU:H	2.20	0.45
2:1:13:U:H3'	2:1:14:U:C5	2.52	0.45
1:A:1056:U:O2	5:F:195:VAL:CG2	2.62	0.45
1:A:1057:G:C4	1:A:1058:G:C8	3.05	0.45
1:A:1236:A:H5''	1:A:1305:G:OP1	2.17	0.45
1:A:1308:U:H2'	1:A:1309:G:H8	1.82	0.45
1:A:1310:G:C2	1:A:1328:C:C2	3.04	0.45
1:A:266:G:C2'	1:A:267:C:OP2	2.65	0.45
1:A:318:G:O2'	1:A:319:G:H5'	2.17	0.45
1:A:47:C:C5	1:A:365:U:O2	2.70	0.45
1:A:538:G:OP1	14:O:114:LYS:HB2	2.16	0.45
1:A:689:C:C6	1:A:690:G:C8	3.05	0.45
1:A:779:C:N4	1:A:780:A:C2	2.85	0.45
1:A:897:C:C2'	1:A:898:G:O5'	2.65	0.45
1:A:963:G:N1	1:A:973:G:C6	2.85	0.45
4:E:42:ILE:HD12	4:E:202:PRO:HB2	1.90	0.45
5:F:176:HIS:O	5:F:177:THR:C	2.55	0.45
5:F:187:ALA:HB3	5:F:198:VAL:HG21	1.98	0.45
6:G:198:VAL:HG23	6:G:199:ASN:N	2.25	0.45
6:G:15:GLU:OE2	6:G:63:LYS:HE3	2.17	0.45
8:I:41:GLU:O	8:I:42:GLU:HB3	2.16	0.45
9:J:51:GLN:NE2	9:J:58:PRO:HD3	2.31	0.45
9:J:71:PRO:HG2	9:J:96:GLN:HA	1.98	0.45
10:K:114:THR:CG2	10:K:119:LEU:HD23	2.41	0.45
10:K:15:ASN:O	10:K:16:ALA:C	2.55	0.45
10:K:63:LEU:CD2	10:K:63:LEU:N	2.80	0.45
11:L:19:LEU:HD22	11:L:20:ARG:N	2.32	0.45
12:M:55:LYS:O	12:M:55:LYS:HG3	2.16	0.45
1:A:676:A:C4'	13:N:114:VAL:O	2.65	0.45
13:N:23:ALA:CB	13:N:28:THR:CG2	2.95	0.45
1:A:538:G:OP2	14:O:115:LYS:HB2	2.17	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1228:C:O5'	15:P:115:LYS:O	2.35	0.45
15:P:26:GLY:C	15:P:27:LYS:O	2.55	0.45
15:P:48:LEU:HD22	15:P:49:THR:O	2.17	0.45
16:Q:45:ARG:CG	16:Q:45:ARG:NH1	2.72	0.45
17:R:66:LEU:CD2	17:R:66:LEU:H	2.29	0.45
17:R:69:TYR:O	17:R:72:ARG:N	2.50	0.45
18:S:34:GLU:OE2	18:S:35:LYS:N	2.50	0.45
18:S:8:ARG:HH12	18:S:11:SER:CA	2.28	0.45
19:T:97:SER:CB	19:T:104:LYS:H	2.30	0.45
20:U:67:ALA:HA	20:U:70:ILE:CG1	2.46	0.45
8:I:50:TYR:HH	20:U:77:GLY:HA2	1.80	0.45
21:V:25:LYS:HD2	21:V:25:LYS:O	2.17	0.45
21:V:45:VAL:HG22	21:V:67:VAL:CG2	2.37	0.45
22:W:12:ALA:C	22:W:14:LYS:N	2.68	0.45
23:X:6:ARG:HG3	23:X:7:ARG:H	1.82	0.45
15:P:122:LYS:O	15:P:123:ALA:HB2	2.17	0.45
3:D:30:G:H2'	3:D:31:A:C8	2.52	0.45
2:1:46:U:C2	3:B:34:G:C2	3.05	0.44
1:A:1068:G:N2	1:A:1191:A:C2	2.85	0.44
1:A:1236:A:H2'	1:A:1237:C:C6	2.53	0.44
1:A:1267:C:N4	1:A:1268:A:N1	2.62	0.44
1:A:1315:U:O2'	1:A:1360:A:C1'	2.64	0.44
1:A:1333:A:C8	1:A:1333:A:O5'	2.64	0.44
1:A:1336:C:C2'	1:A:1337:G:OP2	2.65	0.44
1:A:133:U:O3'	1:A:134:A:C8	2.70	0.44
1:A:1349:A:O2'	1:A:1350:A:H5'	2.17	0.44
1:A:1402:C:H2'	1:A:1403:C:O5'	2.18	0.44
1:A:1412:C:C2	1:A:1413:A:C8	3.05	0.44
1:A:1446:A:O4'	1:A:1446:A:N3	2.50	0.44
1:A:1495:U:C2'	1:A:1496:C:O5'	2.65	0.44
1:A:1498:U:HO2'	1:A:1499:A:C5'	2.30	0.44
1:A:1511:G:C6	1:A:1512:U:C4	3.06	0.44
1:A:819:A:N3	1:A:1529:G:O6	2.50	0.44
1:A:186(B):C:N3	1:A:186(C):G:C8	2.84	0.44
1:A:186(D):C:C2	1:A:186(E):C:C5	3.05	0.44
1:A:19:C:N3	1:A:20:U:H5	2.14	0.44
1:A:242:C:C2'	1:A:243:A:O5'	2.65	0.44
1:A:246:A:HO2'	1:A:247:G:C4'	2.24	0.44
1:A:113:G:O4'	1:A:354:G:H5''	2.17	0.44
1:A:363:A:N1	1:A:364:A:C2	2.85	0.44
1:A:393:A:C5	1:A:394:G:N7	2.85	0.44
1:A:530:G:H5'	1:A:531:U:H5''	1.99	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:563:A:C2	1:A:567:G:C4	3.05	0.44
1:A:568:G:H2'	1:A:569:C:C6	2.52	0.44
1:A:597:G:C4	1:A:644:G:C2	3.06	0.44
1:A:664:G:OP1	20:U:64:ARG:NE	2.25	0.44
1:A:721:G:H1'	1:A:722:A:C2	2.52	0.44
1:A:754:C:C2'	1:A:754:C:O2	2.64	0.44
1:A:828:A:C5'	1:A:859:A:N1	2.80	0.44
1:A:88:C:O2'	1:A:89:U:O5'	2.35	0.44
1:A:953:G:O3'	15:P:124:PRO:O	2.36	0.44
1:A:988:G:N1	1:A:989:C:C2	2.85	0.44
4:E:115:LEU:HA	4:E:145:LEU:HD23	1.99	0.44
4:E:28:PHE:HA	4:E:194:PRO:HG2	1.99	0.44
4:E:49:GLU:HA	4:E:52:GLU:OE2	2.17	0.44
5:F:130:VAL:O	5:F:134:ILE:HD13	2.17	0.44
5:F:138:VAL:HG13	5:F:149:ALA:HB1	1.99	0.44
5:F:28:GLN:CA	5:F:30:ARG:CZ	2.95	0.44
5:F:64:VAL:O	5:F:65:ALA:C	2.54	0.44
6:G:80:GLU:O	6:G:83:SER:CB	2.66	0.44
7:H:105:VAL:HG12	7:H:106:PRO:HD3	1.99	0.44
7:H:10:MET:SD	7:H:10:MET:O	2.75	0.44
1:A:8:A:C5'	7:H:120:THR:O	2.65	0.44
7:H:12:LEU:HD12	7:H:31:LEU:N	2.32	0.44
9:J:64:GLN:HB3	9:J:128:ALA:CB	2.45	0.44
10:K:113:SER:O	10:K:131:GLY:CA	2.65	0.44
10:K:10:LEU:CD2	10:K:135:CYS:SG	3.04	0.44
10:K:44:PHE:O	10:K:64:LYS:HD3	2.17	0.44
4:E:181:PHE:CE1	10:K:71:GLY:HA3	2.52	0.44
11:L:91:ASP:O	11:L:91:ASP:CG	2.54	0.44
13:N:100:ALA:O	13:N:102:GLY:N	2.50	0.44
13:N:31:THR:HG23	13:N:42:TRP:HB3	1.98	0.44
13:N:43:SER:HA	13:N:47:VAL:HG11	1.99	0.44
14:O:26:ALA:C	14:O:27:LEU:O	2.52	0.44
14:O:55:VAL:O	14:O:70:ILE:HD11	2.16	0.44
14:O:88:GLY:O	14:O:89:ARG:C	2.55	0.44
14:O:85:ILE:CG1	14:O:98:TYR:HB3	2.47	0.44
15:P:17:VAL:HG12	15:P:21:TYR:OH	2.17	0.44
15:P:40:ASN:C	15:P:42:ALA:N	2.69	0.44
18:S:14:ASN:O	18:S:14:ASN:CG	2.56	0.44
18:S:8:ARG:NH1	18:S:14:ASN:O	2.50	0.44
19:T:61:GLU:CA	19:T:71:PHE:CE2	2.97	0.44
19:T:7:THR:CG2	19:T:56:VAL:CG1	2.85	0.44
19:T:86:GLU:O	19:T:89:LEU:N	2.50	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:V:50:ALA:HB1	21:V:57:HIS:CB	2.46	0.44
1:A:1319:A:OP2	21:V:5:LEU:HD13	2.17	0.44
22:W:23:ARG:CD	22:W:24:LEU:N	2.78	0.44
22:W:33:ILE:O	22:W:34:LYS:C	2.53	0.44
22:W:61:SER:HG	22:W:62:LEU:H	1.65	0.44
22:W:98:PRO:O	22:W:99:LEU:C	2.54	0.44
3:D:16:U:H4'	3:D:18:G:O5'	2.17	0.44
3:D:50:U:C4	3:D:65:G:C6	3.05	0.44
3:D:73:A:H2'	3:D:73:A:N3	2.32	0.44
1:A:1034:G:C2	1:A:1035:A:N7	2.85	0.44
1:A:1080:A:H4'	7:H:16:THR:HG1	1.81	0.44
1:A:1068:G:N2	1:A:1191:A:N3	2.50	0.44
1:A:1203:C:H2'	1:A:1204:A:C8	2.51	0.44
1:A:1241:G:O2'	1:A:1242:C:C5'	2.65	0.44
1:A:1252:A:N6	1:A:1253:G:C6	2.85	0.44
1:A:1255:G:HO2'	1:A:1258:G:HO2'	1.63	0.44
1:A:1309:G:C6	1:A:1329:A:C6	3.05	0.44
1:A:1320:C:N3	21:V:72:GLY:HA3	2.31	0.44
1:A:1350:A:C5	1:A:1351:U:C5	3.06	0.44
1:A:1419:G:O2'	1:A:1420:C:O5'	2.34	0.44
1:A:1465:C:C2	1:A:1466:C:C6	3.06	0.44
1:A:1506:U:H3'	1:A:1507:A:H5'	1.99	0.44
1:A:230:G:OP1	18:S:33:ILE:HG12	2.18	0.44
1:A:26:A:N6	1:A:558:G:H1'	2.32	0.44
1:A:119:A:N6	1:A:287:U:C2	2.78	0.44
1:A:321:A:C4	1:A:322:C:C5	3.06	0.44
1:A:483:C:O5'	1:A:483:C:C6	2.69	0.44
1:A:517:G:C8	1:A:531:U:C6	3.06	0.44
1:A:557:G:H3'	1:A:558:G:H8	1.74	0.44
1:A:563:A:O2'	1:A:566:G:H2'	2.17	0.44
1:A:579:G:H2'	1:A:580:U:H6	1.82	0.44
1:A:632:A:H2'	1:A:633:G:O4'	2.16	0.44
1:A:696:A:C2	1:A:697:U:C1'	3.00	0.44
1:A:720:C:C4	1:A:721:G:H2'	2.51	0.44
1:A:836:G:N1	1:A:837:G:C5	2.85	0.44
1:A:878:G:OP1	10:K:88:LYS:HB2	2.17	0.44
3:C:17:C:H4'	3:C:17:C:OP2	2.16	0.44
3:C:20:U:OP1	3:C:20:U:O4'	2.35	0.44
1:A:1339:A:H2	3:C:31:A:HO2'	1.58	0.44
3:C:31:A:C5'	3:C:32:U:OP2	2.62	0.44
4:E:80:ILE:HG13	4:E:239:VAL:HG21	2.00	0.44
4:E:87:ARG:HB3	4:E:87:ARG:CZ	2.46	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:96:GLY:O	5:F:98:ASN:N	2.49	0.44
6:G:39:PRO:HG2	6:G:44:GLY:O	2.17	0.44
7:H:91:LEU:HD12	7:H:118:ILE:HG21	1.97	0.44
7:H:23:GLY:HA3	7:H:25:ARG:CZ	2.45	0.44
7:H:71:LEU:HD11	7:H:74:GLY:CA	2.37	0.44
8:I:95:GLU:N	8:I:96:PRO:CD	2.64	0.44
9:J:146:GLU:HG2	9:J:149:ARG:HD2	1.99	0.44
9:J:69:VAL:HG13	9:J:135:VAL:HA	1.98	0.44
10:K:26:VAL:CG2	10:K:27:PRO:CD	2.87	0.44
10:K:44:PHE:HA	10:K:79:VAL:CG1	2.47	0.44
10:K:6:ILE:CG2	10:K:7:ALA:N	2.59	0.44
15:P:13:LYS:HD3	15:P:17:VAL:CG1	2.46	0.44
18:S:16:HIS:C	18:S:17:TYR:HD1	2.19	0.44
20:U:86:VAL:O	20:U:87:ARG:CB	2.59	0.44
13:N:84:VAL:HG11	20:U:88:LYS:HE2	1.98	0.44
21:V:36:ARG:HA	21:V:71:LEU:HD13	1.97	0.44
22:W:13:LEU:N	22:W:13:LEU:CD1	2.57	0.44
1:A:1382:C:C4	1:A:1383:C:N4	2.83	0.44
22:W:94:ALA:O	22:W:95:ALA:HB3	2.17	0.44
1:A:1000:A:N6	1:A:1001:G:O6	2.50	0.44
1:A:1025:U:O2	1:A:1026:G:O6	2.36	0.44
1:A:1068:G:O2'	1:A:1069:C:C5'	2.55	0.44
1:A:110:C:H6	1:A:110:C:P	2.40	0.44
1:A:1111:A:N1	5:F:177:THR:HB	2.33	0.44
1:A:1148:U:O2	1:A:1149:C:C1'	2.66	0.44
1:A:1152:A:N1	1:A:1153:C:C4	2.86	0.44
1:A:122:G:C2	1:A:123:C:C1'	3.00	0.44
1:A:1268:A:C2'	1:A:1269:A:O5'	2.65	0.44
1:A:1477:C:H2'	1:A:1478:C:O4'	2.17	0.44
1:A:251:G:O4'	1:A:252:U:H5	2.00	0.44
1:A:279:A:H5'	1:A:280:C:C3'	2.33	0.44
1:A:46:G:N3	1:A:396:G:N1	2.66	0.44
1:A:483:C:OP2	1:A:483:C:C6	2.71	0.44
1:A:580:U:C5'	17:R:58:MET:HG2	2.48	0.44
1:A:641:U:O2'	1:A:642:A:N7	2.50	0.44
1:A:644:G:H2'	1:A:645:C:C5'	2.48	0.44
1:A:692:U:C2	1:A:694:A:OP2	2.71	0.44
1:A:701:C:H1'	1:A:703:G:C6	2.53	0.44
1:A:706:A:H2'	1:A:707:C:O5'	2.17	0.44
1:A:718:G:C4	13:N:116:HIS:NE2	2.84	0.44
1:A:828:A:C8	1:A:829:G:N9	2.85	0.44
1:A:867:G:C2	1:A:868:C:C4	3.06	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:89:U:N3	1:A:90:C:C4	2.85	0.44
1:A:943:U:H6	1:A:943:U:O5'	2.00	0.44
1:A:965:A:N7	1:A:969:A:N3	2.66	0.44
3:C:72:C:C2'	3:C:73:A:C8	2.95	0.44
4:E:132:LYS:HB3	4:E:132:LYS:NZ	2.29	0.44
4:E:140:HIS:HA	4:E:143:GLU:HB3	1.99	0.44
4:E:171:ALA:N	4:E:174:VAL:HG23	2.32	0.44
5:F:5:ILE:HG22	12:M:51:ARG:HH22	1.83	0.44
6:G:120:LEU:HG	6:G:121:VAL:H	1.82	0.44
6:G:135:LEU:HB2	6:G:138:TYR:HB2	1.99	0.44
7:H:82:VAL:HB	7:H:138:ALA:HB2	2.00	0.44
8:I:30:LEU:CB	8:I:35:ALA:HB3	2.44	0.44
8:I:41:GLU:CB	8:I:62:TRP:HE3	2.26	0.44
9:J:126:ASP:CA	9:J:131:LYS:HG3	2.47	0.44
9:J:77:SER:HA	9:J:85:TYR:O	2.17	0.44
11:L:10:ARG:NE	11:L:75:ASP:OD2	2.51	0.44
11:L:50:LEU:HD21	11:L:56:LEU:HB2	1.99	0.44
12:M:33:GLN:O	12:M:34:VAL:CB	2.64	0.44
12:M:5:ARG:HH11	12:M:5:ARG:CG	2.30	0.44
12:M:6:ILE:CD1	12:M:73:ASP:H	2.30	0.44
13:N:66:LEU:HB3	13:N:70:LYS:HZ2	1.81	0.44
13:N:85:ARG:CG	13:N:85:ARG:NH1	2.79	0.44
13:N:87:THR:HA	13:N:91:ARG:HH12	1.77	0.44
16:Q:34:TYR:OH	16:Q:41:ARG:CA	2.65	0.44
5:F:29:TYR:CE2	16:Q:54:PRO:HB2	2.51	0.44
17:R:24:SER:O	17:R:28:GLN:HG2	2.17	0.44
1:A:729:A:H62	17:R:51:HIS:CD2	2.36	0.44
17:R:54:ARG:O	17:R:55:GLY:C	2.56	0.44
17:R:63:ARG:O	17:R:64:ARG:C	2.56	0.44
20:U:37:VAL:HG12	20:U:41:LYS:HZ2	1.77	0.44
20:U:52:PRO:CG	20:U:54:ARG:HB3	2.45	0.44
21:V:37:ARG:HH11	21:V:70:LYS:HD3	1.82	0.44
23:X:12:LYS:O	23:X:13:ILE:C	2.56	0.44
3:D:18:G:H2'	3:D:19:G:C5'	2.46	0.44
3:D:48:C:C4	3:D:59:U:C2	3.06	0.44
3:D:7:A:H2'	3:D:8:U:OP1	2.18	0.44
1:A:131:C:C4	1:A:232:G:N1	2.85	0.44
3:D:43:C:H2'	3:D:44:G:C8	2.52	0.44
3:B:16:U:H4'	3:B:60:U:O2'	2.17	0.44
3:B:75:C:C4	3:B:76:A:H2	2.34	0.44
1:A:104:G:H5'	1:A:172:A:N1	2.32	0.44
1:A:1142:G:H2'	1:A:1143:G:C8	2.41	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1227:A:C8	1:A:1228:C:C6	3.06	0.44
1:A:1362:C:O2'	1:A:1362(A):C:C6	2.71	0.44
1:A:1352:C:H1'	1:A:1371:G:N2	2.32	0.44
1:A:1394:A:C3'	1:A:1395:C:H5'	2.47	0.44
1:A:1395:C:H2'	1:A:1396:A:C8	2.50	0.44
1:A:1451:A:H5''	1:A:1452:C:C5	2.50	0.44
1:A:210:U:H5'	1:A:216:G:OP1	2.17	0.44
1:A:251:G:H4'	1:A:252:U:OP1	2.17	0.44
1:A:258:G:H2'	1:A:259:G:C8	2.52	0.44
1:A:370:C:C2'	1:A:371:G:H5'	2.46	0.44
1:A:397:A:H2'	1:A:399:G:OP2	2.17	0.44
1:A:399:G:C6	1:A:400:C:C4	3.05	0.44
1:A:414:A:C4	1:A:415:A:C8	3.06	0.44
1:A:411:A:C6	1:A:429:U:C4	3.06	0.44
1:A:548:G:H2'	1:A:549:C:O5'	2.18	0.44
1:A:689:C:H2'	1:A:689:C:O2	2.16	0.44
1:A:737:A:C2'	1:A:738:C:O5'	2.66	0.44
1:A:779:C:O2'	1:A:780:A:H5'	2.18	0.44
1:A:791:G:C5	1:A:792:A:N7	2.85	0.44
1:A:872:A:O2'	1:A:873:A:C5'	2.58	0.44
1:A:935:A:C6	1:A:936:C:N4	2.85	0.44
1:A:942:G:C2	1:A:943:U:C6	3.05	0.44
1:A:947:G:O3'	15:P:109:THR:OG1	2.24	0.44
1:A:962:C:C4	1:A:963:G:N7	2.85	0.44
4:E:61:LEU:CA	4:E:64:ARG:HH11	2.31	0.44
5:F:6:HIS:CD2	16:Q:49:HIS:ND1	2.85	0.44
5:F:83:ARG:C	5:F:85:ARG:N	2.67	0.44
6:G:107:ARG:HD2	6:G:173:TRP:CZ2	2.52	0.44
6:G:198:VAL:CG2	6:G:199:ASN:H	2.14	0.44
7:H:91:LEU:CD1	7:H:118:ILE:HG23	2.47	0.44
8:I:14:LEU:O	8:I:15:ASP:HB3	2.17	0.44
9:J:14:PRO:HG3	9:J:21:VAL:HG13	1.99	0.44
9:J:6:ARG:O	9:J:7:ALA:HB3	2.17	0.44
10:K:9:MET:SD	10:K:32:LYS:HB2	2.57	0.44
11:L:101:PHE:C	11:L:102:LEU:CD2	2.81	0.44
11:L:27:THR:HA	11:L:31:GLN:O	2.17	0.44
11:L:47:LEU:CD1	11:L:51:ARG:HH12	2.30	0.44
11:L:96:LEU:O	11:L:100:GLY:CA	2.62	0.44
12:M:22:LYS:HZ2	12:M:90:LEU:CD1	2.26	0.44
13:N:42:TRP:CZ3	13:N:47:VAL:HG21	2.52	0.44
14:O:41:ARG:HG2	14:O:42:THR:HG22	2.00	0.44
14:O:60:LEU:CD2	14:O:64:TYR:HB3	2.46	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:880:C:P	14:O:9:GLN:NE2	2.91	0.44
1:A:1329:A:C5'	15:P:29:ARG:CZ	2.94	0.44
15:P:39:ILE:HG21	15:P:56:LEU:HD13	1.99	0.44
15:P:98:VAL:HB	15:P:110:ARG:HH21	1.82	0.44
1:A:750:G:C2'	17:R:23:GLY:O	2.66	0.44
17:R:33:THR:O	17:R:34:LEU:C	2.56	0.44
18:S:10:GLY:CA	18:S:14:ASN:ND2	2.81	0.44
20:U:74:ARG:O	20:U:77:GLY:HA2	2.17	0.44
21:V:21:GLU:O	21:V:24:ALA:HB2	2.17	0.44
21:V:38:SER:OG	21:V:39:THR:N	2.50	0.44
22:W:57:ARG:CZ	22:W:100:ILE:HD12	2.47	0.44
15:P:54:VAL:O	15:P:58:GLU:HG3	2.16	0.44
3:D:4:C:H2'	3:D:5:G:O4'	2.17	0.44
1:A:1074:G:C2'	1:A:1075:C:H5'	2.47	0.44
1:A:1133:G:H3'	1:A:1133:G:C8	2.52	0.44
1:A:1151:A:N7	1:A:1152:A:C8	2.86	0.44
1:A:1187:G:C2'	1:A:1188:A:H8	2.31	0.44
1:A:1242:C:N3	1:A:1243:C:C5	2.85	0.44
1:A:1343:G:C2	1:A:1344:C:C2	3.06	0.44
1:A:1315:U:H1'	1:A:1360:A:N3	2.33	0.44
1:A:1480:G:C6	1:A:1481:U:C2	3.05	0.44
1:A:148:G:O2'	1:A:149:A:H5'	2.17	0.44
1:A:1519:A:C3'	1:A:1520:G:H5'	2.47	0.44
1:A:179:A:N3	1:A:179:A:H2'	2.32	0.44
1:A:189:U:H2'	19:T:63:ARG:HH22	1.82	0.44
1:A:194:C:O3'	22:W:68:LYS:NZ	2.50	0.44
1:A:254:G:C1'	19:T:15:MET:HG2	2.48	0.44
1:A:279:A:OP2	19:T:95:TYR:OH	2.32	0.44
1:A:285:G:C6	1:A:286:G:C5	3.06	0.44
1:A:285:G:C6	1:A:286:G:N7	2.86	0.44
1:A:37:U:OP1	14:O:123:LYS:HE3	2.18	0.44
1:A:428:G:O2'	1:A:429:U:OP2	2.30	0.44
1:A:414:A:C6	1:A:431:A:C2	3.06	0.44
1:A:520:A:H3'	1:A:520:A:H8	1.82	0.44
1:A:518:C:C6	1:A:530:G:C4	3.05	0.44
1:A:540:G:C5	1:A:541:G:N7	2.86	0.44
1:A:568:G:C2	1:A:574:A:H2	2.35	0.44
1:A:567:G:N2	1:A:568:G:H1'	2.33	0.44
1:A:622:A:C4	1:A:623:C:C6	3.04	0.44
1:A:664:G:N3	1:A:726:C:H4'	2.32	0.44
1:A:582:U:OP2	1:A:758:G:N2	2.51	0.44
1:A:779:C:N3	1:A:780:A:N3	2.64	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:857:C:H2'	1:A:858:G:C5'	2.46	0.44
1:A:975:A:O2'	1:A:976:G:P	2.76	0.44
3:C:38:A:N7	3:C:39:U:C5	2.86	0.44
4:E:153:ARG:O	4:E:153:ARG:CZ	2.65	0.44
4:E:167:PRO:O	4:E:174:VAL:HG21	2.17	0.44
4:E:25:ASN:O	4:E:26:PRO:C	2.56	0.44
5:F:38:ARG:NH1	5:F:38:ARG:CB	2.58	0.44
6:G:129:ASN:HD21	6:G:145:GLU:HG2	1.82	0.44
6:G:155:LEU:O	6:G:158:ILE:N	2.51	0.44
6:G:176:LEU:H	6:G:176:LEU:HD23	1.81	0.44
6:G:30:LYS:HG2	6:G:35:ARG:HG3	2.00	0.44
6:G:65:ARG:HG3	6:G:72:GLU:CD	2.38	0.44
6:G:67:ILE:CD1	6:G:68:TYR:CD1	3.00	0.44
6:G:83:SER:N	6:G:89:THR:CG2	2.80	0.44
7:H:112:LEU:HA	7:H:112:LEU:HD22	1.79	0.44
7:H:52:PRO:O	7:H:55:VAL:N	2.50	0.44
7:H:7:GLU:OE1	7:H:37:ARG:NH2	2.50	0.44
7:H:84:PHE:CG	7:H:134:ALA:CA	3.00	0.44
10:K:101:PRO:HG2	10:K:102:ARG:N	2.32	0.44
10:K:84:ARG:C	10:K:135:CYS:HG	2.19	0.44
12:M:40:LEU:HA	12:M:40:LEU:HD23	1.87	0.44
12:M:40:LEU:O	12:M:42:THR:N	2.51	0.44
14:O:113:ARG:NH2	14:O:116:SER:O	2.42	0.44
14:O:82:VAL:O	14:O:83:VAL:CB	2.65	0.44
18:S:8:ARG:NH1	18:S:11:SER:O	2.51	0.44
18:S:42:ARG:C	18:S:43:LYS:HD2	2.38	0.44
1:A:280:C:O2	19:T:39:SER:HB3	2.18	0.44
21:V:18:LYS:HE2	21:V:22:LEU:HD12	1.99	0.44
21:V:32:LYS:HB3	21:V:50:ALA:HB3	1.99	0.44
1:A:1319:A:H5'	21:V:5:LEU:HD21	1.99	0.44
22:W:10:LEU:HD12	22:W:11:SER:N	2.32	0.44
1:A:1003:G:C8	1:A:1003:G:OP2	2.70	0.44
1:A:1085:U:O4'	1:A:1094:G:C2	2.70	0.44
1:A:1068:G:C8	1:A:1094:G:C8	3.04	0.44
1:A:1065:U:H5	1:A:1190:G:N3	2.14	0.44
1:A:1241:G:OP2	1:A:1241:G:C8	2.69	0.44
1:A:1250:A:H2'	1:A:1251:A:C8	2.53	0.44
1:A:1347:G:O2'	1:A:1348:U:P	2.75	0.44
1:A:1368:G:O2'	1:A:1369:C:H5'	2.17	0.44
1:A:1396:A:H2'	1:A:1397:C:OP2	2.17	0.44
1:A:1424:C:C2'	1:A:1425:U:O5'	2.66	0.44
1:A:1454:G:C4	1:A:1455:G:C8	3.05	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1480:G:O2'	1:A:1481:U:C5'	2.61	0.44
1:A:1504:G:O4'	1:A:1505:G:C6	2.70	0.44
1:A:1520:G:C2'	1:A:1521:G:C8	2.95	0.44
1:A:151:A:C6	1:A:152:A:C2	3.05	0.44
1:A:169:C:C6	1:A:170:U:H5	2.35	0.44
1:A:185:A:C4	1:A:186:C:C5	3.06	0.44
1:A:22:G:OP1	1:A:561:U:O2	2.35	0.44
1:A:24:U:C4	1:A:25:C:C5	3.05	0.44
1:A:270:A:C5	1:A:271:C:C5	3.06	0.44
1:A:292:G:C2	1:A:309:G:N3	2.86	0.44
1:A:311:C:O2'	1:A:312:C:H5'	2.17	0.44
1:A:314:C:H2'	1:A:315:A:C8	2.53	0.44
1:A:409:G:N2	1:A:410:G:O4'	2.50	0.44
1:A:568:G:N3	1:A:574:A:H2	2.16	0.44
1:A:625:G:C4	1:A:626:U:C5	3.06	0.44
1:A:723:U:O5'	1:A:723:U:C6	2.71	0.44
1:A:960:U:H5'	1:A:960:U:C6	2.53	0.44
4:E:101:MET:HB3	4:E:105:PHE:CD1	2.53	0.44
4:E:145:LEU:O	4:E:149:LEU:HB3	2.14	0.44
4:E:157:ARG:HG2	4:E:158:LEU:HD23	1.98	0.44
5:F:164:ARG:HG2	5:F:165:THR:N	2.32	0.44
5:F:190:ARG:O	5:F:191:THR:O	2.36	0.44
6:G:92:VAL:O	6:G:96:LEU:HG	2.17	0.44
7:H:108:ALA:HA	7:H:111:GLU:CD	2.38	0.44
8:I:96:PRO:N	20:U:32:ARG:HG3	2.32	0.44
9:J:129:GLU:HB3	9:J:131:LYS:HG2	1.99	0.44
9:J:11:GLN:NE2	9:J:12:LEU:HD12	2.33	0.44
9:J:6:ARG:H	9:J:6:ARG:CZ	2.29	0.44
10:K:48:TYR:CA	10:K:61:VAL:HG22	2.47	0.44
10:K:97:VAL:HG22	10:K:98:LYS:HZ2	1.83	0.44
11:L:105:ASP:OD1	11:L:107:ARG:NH2	2.50	0.44
11:L:36:TYR:HD2	11:L:37:PHE:HE2	1.66	0.44
13:N:48:ILE:HD11	13:N:64:ALA:HA	1.98	0.44
13:N:66:LEU:CB	13:N:70:LYS:NZ	2.79	0.44
14:O:102:ARG:HH11	14:O:110:VAL:CG1	2.31	0.44
14:O:36:VAL:O	14:O:59:ARG:O	2.36	0.44
15:P:55:ARG:HH21	15:P:56:LEU:CD1	2.30	0.44
15:P:91:ARG:HB3	15:P:98:VAL:HG13	1.98	0.44
16:Q:13:THR:HG22	16:Q:13:THR:O	2.17	0.44
16:Q:26:ARG:HE	16:Q:43:CYS:HA	1.82	0.44
17:R:39:LEU:HD22	17:R:56:LEU:CD2	2.42	0.44
1:A:377:G:OP1	18:S:5:ARG:NH1	2.51	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:T:22:LEU:CD1	19:T:41:LYS:HA	2.48	0.44
19:T:5:VAL:CB	19:T:59:ILE:O	2.66	0.44
20:U:62:GLU:HB3	20:U:66:LEU:HD23	2.00	0.44
21:V:30:LEU:C	21:V:30:LEU:HD23	2.38	0.44
21:V:30:LEU:HA	21:V:48:THR:C	2.38	0.44
3:D:64:A:C2	3:D:65:G:C8	3.05	0.44
1:A:1171:G:C2'	1:A:1172:C:H6	2.31	0.44
1:A:489:C:O2'	1:A:490:G:C5'	2.65	0.44
3:D:4:C:C4	3:D:70:G:N1	2.85	0.44
2:1:18:U:O4	4:E:76:GLN:NE2	2.50	0.44
1:A:108:G:C5'	1:A:109:A:H5''	2.36	0.44
1:A:124:G:C6	1:A:125:U:N3	2.86	0.44
1:A:1315:U:O2	1:A:1360:A:H2	2.00	0.44
1:A:1224:G:N2	1:A:1362(A):C:C4	2.81	0.44
1:A:1390:U:N3	1:A:1391:U:C4	2.86	0.44
1:A:1402:C:H2'	1:A:1403:C:C6	2.45	0.44
1:A:1423:G:C2	1:A:1424:C:C2	3.05	0.44
1:A:1434:A:N7	1:A:1435:G:N7	2.66	0.44
1:A:1434:A:N7	1:A:1435:G:C5	2.85	0.44
1:A:1483:A:H2'	1:A:1484:C:O5'	2.18	0.44
1:A:1403:C:C1'	1:A:1500:A:H61	2.14	0.44
1:A:27:G:OP2	1:A:27:G:C8	2.70	0.44
1:A:307:C:C2'	1:A:307:C:O2	2.65	0.44
1:A:380:G:C6	1:A:384:G:O6	2.71	0.44
1:A:38:G:N3	1:A:397:A:C6	2.86	0.44
1:A:544:G:C6	1:A:545:C:N4	2.86	0.44
1:A:20:U:O4'	1:A:572:A:C6	2.70	0.44
1:A:593:G:N1	1:A:647:C:C2	2.86	0.44
1:A:621:A:N6	1:A:622:A:N6	2.65	0.44
1:A:655:A:C6	1:A:656:C:C4	3.06	0.44
1:A:674:G:H4'	20:U:81:PHE:HZ	1.82	0.44
1:A:679:C:O5'	1:A:679:C:H6	2.00	0.44
1:A:715:A:C4'	1:A:777:A:N6	2.81	0.44
1:A:581:G:O6	1:A:758:G:C8	2.71	0.44
1:A:824:C:H4'	10:K:1:MET:HA	2.00	0.44
1:A:951:G:C2	1:A:952:U:C2	3.06	0.44
1:A:95:G:H2'	1:A:96:G:H5'	1.98	0.44
3:C:13:C:H2'	3:C:14:A:O5'	2.18	0.44
3:C:4:C:O2'	3:C:5:G:C5'	2.65	0.44
4:E:165:VAL:HG23	4:E:166:ASP:N	2.21	0.44
4:E:207:ALA:O	4:E:210:SER:N	2.50	0.44
4:E:23:ARG:O	4:E:24:TRP:CD1	2.70	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:54:THR:CG2	4:E:199:TYR:HB3	2.48	0.44
5:F:138:VAL:O	5:F:170:GLN:NE2	2.51	0.44
7:H:103:GLY:C	7:H:107:ARG:NH1	2.71	0.44
7:H:111:GLU:H	7:H:111:GLU:HG3	1.56	0.44
7:H:39:GLY:O	7:H:68:GLU:OE2	2.36	0.44
9:J:113:GLU:HB3	9:J:118:VAL:HG11	1.98	0.44
9:J:74:GLU:HA	9:J:145:ALA:HB3	1.98	0.44
1:A:1376:U:OP1	9:J:98:SER:CB	2.66	0.44
10:K:112:LEU:CD1	10:K:133:LEU:HD23	2.48	0.44
10:K:32:LYS:H	10:K:32:LYS:NZ	2.13	0.44
11:L:11:LYS:HA	11:L:108:VAL:HG11	1.98	0.44
11:L:42:ARG:O	11:L:43:ALA:C	2.53	0.44
13:N:65:ALA:O	13:N:68:ALA:HB3	2.18	0.44
13:N:95:ILE:O	13:N:99:GLN:HG3	2.17	0.44
15:P:14:ARG:CB	15:P:44:ARG:HD2	2.46	0.44
16:Q:26:ARG:HB2	16:Q:39:LEU:HD22	1.99	0.44
5:F:29:TYR:CB	16:Q:36:PHE:HE1	2.30	0.44
17:R:42:HIS:ND1	17:R:43:LEU:N	2.66	0.44
18:S:19:ILE:HG22	18:S:36:ILE:O	2.17	0.44
19:T:10:VAL:CG1	19:T:54:GLY:N	2.74	0.44
19:T:63:ARG:O	19:T:65:ILE:HG22	2.17	0.44
21:V:19:VAL:HG11	21:V:44:MET:HE3	2.00	0.44
21:V:30:LEU:CD1	21:V:50:ALA:HB2	2.47	0.44
21:V:30:LEU:CD2	21:V:50:ALA:HB2	2.47	0.44
1:A:194:C:O3'	22:W:65:LYS:NZ	2.50	0.44
3:D:56:C:C3'	3:D:57:G:C8	2.99	0.44
2:1:46:U:O2	3:B:34:G:C2	2.70	0.44
1:A:108:G:C5	22:W:15:ARG:CZ	3.01	0.44
1:A:1102:A:C2'	1:A:1103:C:O5'	2.65	0.44
1:A:1230:C:O2	15:P:126:LYS:HG2	2.17	0.44
1:A:1241:G:C4	1:A:1242:C:C5	3.06	0.44
1:A:1301:U:O4	1:A:1303:C:H1'	2.18	0.44
1:A:1315:U:O2'	1:A:1360:A:N9	2.50	0.44
1:A:139:G:N2	1:A:225:C:C2	2.86	0.44
1:A:1401:G:O2'	1:A:1402:C:H5'	2.17	0.44
1:A:1411:C:H2'	1:A:1412:C:C6	2.50	0.44
1:A:1418:A:N1	1:A:1483:A:N1	2.66	0.44
1:A:1435:G:H2'	1:A:1436:U:H5	1.76	0.44
1:A:166:G:O2'	1:A:167:G:C5'	2.60	0.44
1:A:282:A:C5	1:A:283:C:C5	3.06	0.44
1:A:394:G:C5	1:A:395:C:C5	3.06	0.44
1:A:44:G:C6	1:A:399:G:C6	3.06	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:665:A:C8	1:A:725:G:C2	3.06	0.44
1:A:760:G:C2	19:T:104:LYS:O	2.70	0.44
1:A:780:A:C2	1:A:803:G:C6	3.04	0.44
1:A:830:G:C5	1:A:831:U:C5	3.06	0.44
1:A:865:A:OP2	1:A:865:A:C8	2.71	0.44
1:A:22:G:O4'	1:A:885:G:C1'	2.65	0.44
1:A:894:G:C6	1:A:895:G:C5	3.06	0.44
1:A:973:G:C2	1:A:974:A:N7	2.86	0.44
3:C:4:C:C2	3:C:5:G:C8	3.06	0.44
3:C:9:A:C4'	3:C:10:G:OP2	2.66	0.44
4:E:106:LYS:O	4:E:110:GLN:OE1	2.36	0.44
1:A:1104:G:H4'	4:E:111:ARG:HH21	1.83	0.44
4:E:28:PHE:HA	4:E:194:PRO:CG	2.48	0.44
4:E:53:ARG:NE	4:E:199:TYR:CE2	2.82	0.44
4:E:72:GLY:HA2	4:E:165:VAL:HG21	1.96	0.44
5:F:159:GLY:O	5:F:160:ALA:O	2.36	0.44
5:F:10:PHE:O	5:F:178:LEU:HD22	2.17	0.44
5:F:39:ILE:O	5:F:40:ARG:C	2.54	0.44
5:F:82:GLU:OE1	5:F:83:ARG:N	2.51	0.44
6:G:85:LYS:HZ3	6:G:85:LYS:HB3	1.79	0.44
7:H:19:MET:HE3	7:H:20:GLN:N	2.32	0.44
9:J:126:ASP:O	9:J:131:LYS:HG3	2.17	0.44
9:J:74:GLU:CA	9:J:145:ALA:HB1	2.46	0.44
10:K:100:ILE:CG2	10:K:121:ASP:HA	2.48	0.44
10:K:107:LEU:CD2	10:K:107:LEU:N	2.78	0.44
10:K:22:GLU:CB	10:K:63:LEU:HD22	2.47	0.44
1:A:1342:C:O2'	11:L:124:GLN:CA	2.66	0.44
11:L:72:GLY:HA2	11:L:75:ASP:OD2	2.18	0.44
11:L:89:ASN:O	11:L:91:ASP:N	2.50	0.44
5:F:23:TYR:CG	12:M:11:PHE:HB2	2.53	0.44
12:M:40:LEU:HD12	12:M:69:ASN:HB3	1.99	0.44
12:M:30:SER:CA	12:M:80:LYS:HG3	2.48	0.44
13:N:18:ARG:HB3	13:N:83:ILE:CD1	2.48	0.44
14:O:33:ARG:HG3	14:O:60:LEU:HD23	2.00	0.44
14:O:53:ARG:NH1	14:O:93:LEU:HD22	2.32	0.44
15:P:98:VAL:HG23	15:P:110:ARG:NH2	2.24	0.44
16:Q:29:ARG:HD3	16:Q:40:CYS:HB3	2.00	0.44
17:R:67:LEU:O	17:R:70:LEU:CB	2.60	0.44
1:A:754:C:O5'	17:R:72:ARG:NH2	2.50	0.44
17:R:77:ARG:HH12	17:R:81:LEU:CA	2.28	0.44
19:T:41:LYS:C	19:T:42:TYR:CD1	2.91	0.44
19:T:62:SER:HB2	19:T:63:ARG:H	1.65	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:T:81:ARG:CG	19:T:84:LEU:HD11	2.47	0.44
8:I:98:LEU:HD23	20:U:28:GLU:HA	2.00	0.44
8:I:60:PHE:CZ	20:U:78:LEU:HD21	2.52	0.44
21:V:63:THR:O	21:V:64:GLU:C	2.56	0.44
22:W:30:LYS:O	22:W:31:SER:C	2.56	0.44
22:W:50:GLU:HB2	22:W:99:LEU:HD12	1.99	0.44
1:A:344:A:H5''	1:A:345:C:H5	1.78	0.44
1:A:160:A:C1'	1:A:344:A:H62	2.31	0.44
3:B:52:G:N1	3:B:63:G:C6	2.86	0.44
1:A:1011:G:N1	1:A:1012:U:H1'	2.33	0.44
1:A:74:C:N3	1:A:75:C:C5	2.86	0.44
3:D:62:C:O5'	3:D:62:C:H6	2.01	0.44
2:1:37:U:H2'	2:1:38:U:C5	2.53	0.44
1:A:1142:G:C4	1:A:1143:G:C8	3.06	0.44
1:A:119:A:H62	1:A:287:U:H3	1.66	0.44
1:A:1389:C:H2'	1:A:1390:U:C4'	2.47	0.44
1:A:142:G:N3	1:A:142:G:H2'	2.32	0.44
1:A:1431:C:O2	1:A:1432:G:C1'	2.66	0.44
1:A:152:A:C8	1:A:152:A:C3'	3.00	0.44
1:A:166:G:C2'	1:A:167:G:O5'	2.66	0.44
1:A:187:C:N3	1:A:188:U:O2	2.51	0.44
1:A:270:A:C8	1:A:270:A:OP2	2.69	0.44
1:A:245:C:N3	1:A:284:G:C6	2.85	0.44
1:A:298:A:C2	1:A:299:G:H1'	2.53	0.44
1:A:321:A:HO2'	1:A:322:C:H6	1.66	0.44
1:A:352:C:H6	1:A:352:C:P	2.40	0.44
1:A:355:C:C2	1:A:356:A:C8	3.06	0.44
1:A:398:C:H2'	1:A:399:G:H8	1.82	0.44
1:A:420:U:H1'	1:A:424:G:N2	2.32	0.44
1:A:529:G:N1	14:O:49:ASN:CG	2.71	0.44
1:A:535:A:C4'	1:A:536:C:OP2	2.63	0.44
1:A:597:G:C2'	1:A:598:U:C5'	2.94	0.44
1:A:645:C:O2'	1:A:646:U:H5'	2.18	0.44
1:A:581:G:O6	1:A:758:G:N7	2.51	0.44
1:A:818:G:H3'	1:A:820:U:OP2	2.17	0.44
1:A:907:A:N3	1:A:908:A:C8	2.86	0.44
1:A:926:G:C4	1:A:1505:G:C2	3.05	0.44
1:A:938:A:C2'	1:A:939:G:O5'	2.66	0.44
1:A:93:U:H2'	1:A:95:G:N7	2.31	0.44
3:C:29:G:C6	3:C:42:C:N3	2.86	0.44
4:E:152:PHE:HZ	4:E:155:LEU:O	2.01	0.44
4:E:208:ILE:O	4:E:211:ILE:HB	2.18	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:8:LYS:HB3	4:E:9:GLU:H	1.61	0.44
5:F:147:LYS:HB2	5:F:203:PHE:HD2	1.83	0.44
5:F:98:ASN:C	5:F:99:VAL:CG1	2.86	0.44
6:G:165:MET:CG	6:G:166:LYS:N	2.81	0.44
6:G:55:ALA:C	6:G:59:ARG:HG2	2.31	0.44
6:G:76:ARG:O	6:G:80:GLU:HG3	2.18	0.44
7:H:91:LEU:C	7:H:91:LEU:CD2	2.68	0.44
7:H:96:PRO:O	7:H:97:GLY:C	2.55	0.44
8:I:9:VAL:HA	8:I:10:LEU:HD23	2.00	0.44
8:I:81:ILE:CG2	8:I:82:ARG:N	2.56	0.44
9:J:36:LYS:HZ1	9:J:36:LYS:HA	1.75	0.44
9:J:65:ALA:HA	9:J:68:ASN:HD22	1.83	0.44
11:L:50:LEU:CD1	11:L:56:LEU:HG	2.41	0.44
5:F:23:TYR:CD1	12:M:11:PHE:N	2.86	0.44
13:N:99:GLN:O	13:N:102:GLY:HA2	2.18	0.44
1:A:718:G:C4'	13:N:117:ASN:ND2	2.81	0.44
14:O:102:ARG:NE	14:O:109:GLY:HA2	2.33	0.44
14:O:78:GLN:N	14:O:81:SER:OG	2.51	0.44
17:R:7:GLU:C	17:R:10:LYS:HG2	2.34	0.44
17:R:27:VAL:O	17:R:31:LEU:HD13	2.18	0.44
18:S:8:ARG:HD3	18:S:15:PRO:CB	2.47	0.44
19:T:15:MET:H	19:T:15:MET:CE	2.30	0.44
19:T:18:THR:HG22	19:T:43:LEU:CD2	2.31	0.44
19:T:58:GLU:C	19:T:58:GLU:OE1	2.55	0.44
21:V:47:HIS:H	21:V:62:ILE:HG23	1.82	0.44
1:A:1225:A:H5'	21:V:78:ARG:NH1	2.32	0.44
1:A:186(A):C:C4'	22:W:85:MET:HG3	2.47	0.44
22:W:88:VAL:O	22:W:92:LEU:CG	2.66	0.44
1:A:1166:G:N3	1:A:1171:G:O6	2.50	0.44
3:D:67:C:C4	3:D:68:C:C5	3.06	0.44
1:A:112:G:H2'	1:A:112:G:N3	2.32	0.43
1:A:1228:C:H4'	15:P:115:LYS:O	2.17	0.43
1:A:1242:C:O3'	23:X:10:ARG:NH1	2.50	0.43
1:A:1298:C:N1	9:J:114:ARG:NH1	2.66	0.43
1:A:129(A):G:C8	1:A:189:U:OP1	2.71	0.43
1:A:1236:A:C4'	1:A:1304:G:H4'	2.28	0.43
1:A:133:U:H5'	1:A:134:A:OP1	2.17	0.43
1:A:1408:A:C2	1:A:1494:G:O2'	2.60	0.43
1:A:20:U:C2'	1:A:20:U:O2	2.65	0.43
1:A:250:A:O2'	1:A:251:G:P	2.76	0.43
1:A:261:U:O4	1:A:264:U:OP2	2.36	0.43
1:A:270:A:C4	1:A:271:C:C5	3.06	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:57:G:O6	1:A:356:A:N6	2.51	0.43
1:A:421:U:C2	5:F:127:ARG:CZ	3.01	0.43
1:A:594:G:C3'	1:A:595:G:O4'	2.65	0.43
1:A:666:G:H4'	1:A:731:G:N2	2.33	0.43
1:A:66:G:N1	1:A:67:C:C4	2.86	0.43
1:A:675:A:C2'	1:A:676:A:H8	2.31	0.43
1:A:679:C:O2'	1:A:680:C:C5'	2.65	0.43
1:A:712:A:C6	1:A:713:G:C6	3.06	0.43
1:A:734:G:H2'	1:A:735:C:C5	2.50	0.43
1:A:736:C:H5''	20:U:72:ARG:CZ	2.44	0.43
1:A:787:A:N3	1:A:787:A:H2'	2.33	0.43
1:A:832:C:H2'	1:A:833:U:C5	2.53	0.43
1:A:977:A:O2'	1:A:979:C:P	2.75	0.43
3:C:21:A:H61	3:C:46:G:N2	2.12	0.43
4:E:111:ARG:O	4:E:114:ARG:HG3	2.18	0.43
4:E:146:GLN:NE2	4:E:150:SER:CB	2.72	0.43
5:F:138:VAL:HG13	5:F:149:ALA:CB	2.48	0.43
5:F:67:THR:HG23	5:F:102:ASN:HB3	1.99	0.43
5:F:8:ILE:CG2	16:Q:49:HIS:O	2.66	0.43
6:G:112:VAL:CG2	6:G:161:ASN:ND2	2.78	0.43
6:G:166:LYS:CD	6:G:178:VAL:HG12	2.48	0.43
7:H:105:VAL:CG1	7:H:132:ALA:HA	2.48	0.43
8:I:12:PRO:HB3	8:I:58:GLY:CA	2.23	0.43
8:I:36:ARG:HB2	8:I:36:ARG:HH11	1.81	0.43
8:I:67:MET:SD	8:I:67:MET:C	2.96	0.43
9:J:150:ALA:HA	13:N:59:TYR:CB	2.48	0.43
9:J:90:GLU:O	9:J:92:SER:N	2.50	0.43
7:H:79:GLU:O	10:K:104:ARG:NH1	2.50	0.43
10:K:45:ILE:HG13	10:K:47:GLY:N	2.32	0.43
10:K:72:PRO:O	10:K:73:ASP:CB	2.66	0.43
10:K:95:VAL:HB	10:K:99:GLU:CD	2.38	0.43
1:A:1148:U:H6	11:L:16:ARG:CZ	2.30	0.43
11:L:93:ARG:C	11:L:95:LYS:H	2.19	0.43
12:M:43:ARG:HG3	12:M:44:VAL:N	2.33	0.43
13:N:110:ASP:HB2	20:U:88:LYS:HB3	1.95	0.43
14:O:11:VAL:HG12	14:O:11:VAL:O	2.18	0.43
14:O:34:ARG:CA	14:O:84:LEU:HD12	2.48	0.43
14:O:41:ARG:CB	14:O:41:ARG:CZ	2.95	0.43
15:P:68:GLY:O	15:P:71:ARG:HB2	2.18	0.43
17:R:18:PHE:CE1	17:R:21:ASP:HB2	2.53	0.43
18:S:38:TYR:CE1	18:S:50:LYS:HB3	2.53	0.43
18:S:59:TRP:O	18:S:61:SER:N	2.51	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:T:27:PHE:C	19:T:35:VAL:HG13	2.38	0.43
20:U:69:THR:HA	20:U:72:ARG:CG	2.42	0.43
21:V:46:GLY:C	21:V:61:TYR:HE2	2.22	0.43
22:W:99:LEU:HD23	22:W:99:LEU:N	2.33	0.43
3:D:41:C:C4	3:D:42:C:C5	3.06	0.43
1:A:1029:G:O4'	1:A:1032(A):G:N2	2.51	0.43
1:A:1126:U:OP2	1:A:1281:U:C2	2.70	0.43
1:A:1129:C:H4'	1:A:1130:A:C8	2.52	0.43
1:A:1194:U:H6	1:A:1194:U:O5'	2.01	0.43
1:A:1203:C:H6	1:A:1203:C:O5'	2.01	0.43
1:A:1251:A:N1	1:A:1285:A:H2	2.16	0.43
1:A:1300:G:C6	1:A:1335:C:C5	3.05	0.43
1:A:130:A:C6	19:T:64:PRO:HG2	2.52	0.43
1:A:1349:A:H2'	1:A:1350:A:O4'	2.17	0.43
1:A:1361:G:C8	1:A:1362:C:C5	3.06	0.43
1:A:1430:C:O2'	1:A:1431:C:H5'	2.17	0.43
1:A:1454:G:C5	1:A:1455:G:N7	2.86	0.43
1:A:1465:C:C4	1:A:1466:C:C5	3.05	0.43
1:A:186(A):C:H4'	22:W:85:MET:HG3	2.00	0.43
1:A:251:G:N3	1:A:266:G:O6	2.51	0.43
1:A:294:U:C2	1:A:295:C:H5	2.34	0.43
1:A:301:G:C2	1:A:302:G:C4	3.05	0.43
1:A:429:U:C1'	1:A:430:A:H5''	2.48	0.43
1:A:528:C:O2'	1:A:535:A:C8	2.69	0.43
1:A:579:G:N3	1:A:580:U:C6	2.86	0.43
1:A:604:G:C6	1:A:635:G:C6	3.06	0.43
1:A:604:G:N2	1:A:605:U:H1'	2.33	0.43
1:A:658:G:C6	1:A:659:U:C4	3.07	0.43
1:A:685:G:O5'	1:A:685:G:H8	2.01	0.43
1:A:721:G:H1'	1:A:722:A:C6	2.53	0.43
1:A:723:U:O5'	1:A:723:U:N1	2.51	0.43
1:A:770:C:O2'	1:A:771:G:H5'	2.18	0.43
1:A:78:G:N1	1:A:79:G:C5	2.86	0.43
1:A:838:G:C2	1:A:849:C:C2	3.06	0.43
1:A:927:G:C4'	1:A:1503:A:N7	2.80	0.43
3:D:36:A:H3'	3:D:37:A:H8	1.83	0.43
4:E:118:LEU:O	4:E:119:GLU:C	2.57	0.43
4:E:118:LEU:HD22	4:E:119:GLU:N	2.34	0.43
4:E:16:HIS:CE1	4:E:213:LEU:CD1	2.97	0.43
5:F:89:GLU:O	5:F:90:GLU:C	2.56	0.43
5:F:91:LEU:O	5:F:92:ALA:C	2.56	0.43
5:F:6:HIS:CD2	5:F:9:GLY:H	2.36	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:199:ASN:OD1	6:G:200:GLU:N	2.37	0.43
6:G:30:LYS:HA	6:G:34:GLU:HB3	1.98	0.43
6:G:61:LYS:HA	6:G:203:VAL:HG13	2.00	0.43
6:G:63:LYS:HA	6:G:66:ARG:CD	2.44	0.43
7:H:11:ILE:CG2	7:H:31:LEU:HD22	2.48	0.43
8:I:26:ILE:HG22	8:I:30:LEU:CD1	2.42	0.43
8:I:9:VAL:HG22	8:I:60:PHE:CD2	2.53	0.43
9:J:115:ARG:CG	9:J:118:VAL:HG21	2.48	0.43
9:J:46:ALA:HA	9:J:49:ILE:CD1	2.22	0.43
9:J:65:ALA:O	9:J:69:VAL:CG2	2.63	0.43
1:A:878:G:O4'	10:K:3:THR:CG2	2.66	0.43
10:K:62:TYR:C	10:K:63:LEU:O	2.56	0.43
11:L:116:LYS:O	11:L:118:LYS:N	2.51	0.43
11:L:23:ASN:O	11:L:59:PHE:O	2.36	0.43
13:N:88:GLY:O	13:N:90:GLY:N	2.50	0.43
14:O:110:VAL:HB	14:O:113:ARG:CG	2.48	0.43
18:S:42:ARG:O	18:S:43:LYS:CB	2.66	0.43
19:T:35:VAL:CG1	19:T:36:ILE:H	2.30	0.43
20:U:77:GLY:C	20:U:78:LEU:HG	2.37	0.43
21:V:28:LYS:O	21:V:29:ARG:HB2	2.18	0.43
22:W:54:LYS:HA	22:W:57:ARG:CD	2.49	0.43
22:W:64:ASP:OD1	22:W:81:LYS:HE3	2.17	0.43
22:W:84:LEU:C	22:W:84:LEU:HD13	2.39	0.43
1:A:186(B):C:H4'	22:W:89:ARG:NH2	2.33	0.43
23:X:13:ILE:HG23	23:X:14:TRP:N	2.32	0.43
3:D:17:C:C5	3:D:19:G:C8	3.06	0.43
3:D:75:C:H5''	3:D:76:A:O4'	2.18	0.43
1:A:1174:G:H8	1:A:1174:G:H5'	1.84	0.43
2:1:3:U:O2	2:1:4:U:O4	2.36	0.43
19:T:96:GLN:OE1	19:T:96:GLN:O	2.36	0.43
2:1:30:U:H2'	2:1:31:U:C1'	2.44	0.43
2:1:38:U:O2'	2:1:39:U:C5'	2.65	0.43
1:A:1064:G:O3'	1:A:1065:U:O4'	2.35	0.43
1:A:1081:G:H2'	1:A:1082:G:H8	1.83	0.43
1:A:1192:C:N4	1:A:1193:G:C6	2.85	0.43
1:A:1321:C:H2'	1:A:1322:C:C5	2.53	0.43
1:A:1337:G:H5''	1:A:1338:G:OP1	2.18	0.43
1:A:1363:A:N3	1:A:1365:G:O6	2.51	0.43
1:A:1401:G:C6	1:A:1402:C:C2	3.07	0.43
1:A:1436:U:C3'	1:A:1437:C:H6	2.32	0.43
1:A:1436:U:C6	1:A:1436:U:O5'	2.66	0.43
1:A:1499:A:C2'	1:A:1500:A:H5'	2.48	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1399:C:C2	1:A:1502:A:N6	2.86	0.43
1:A:1510:U:C2'	1:A:1511:G:H8	2.22	0.43
1:A:1533:C:C5	1:A:1534:A:N7	2.86	0.43
1:A:22:G:N9	1:A:914:A:N6	2.66	0.43
1:A:257:G:C5	1:A:258:G:C8	3.06	0.43
1:A:320:C:O2'	1:A:321:A:O4'	2.28	0.43
1:A:332:G:N3	1:A:333:G:C8	2.87	0.43
1:A:427:U:N1	1:A:428:G:N7	2.66	0.43
1:A:600:C:C2	1:A:601:C:C6	3.06	0.43
1:A:629:G:C4	1:A:630:G:C8	3.06	0.43
1:A:606:G:N2	1:A:631:G:H2'	2.33	0.43
1:A:64:G:C4'	1:A:65:U:H5''	2.29	0.43
1:A:761:G:C5	1:A:762:C:C5	3.06	0.43
1:A:826:C:H2'	1:A:827:U:H6	1.82	0.43
1:A:874:G:H2'	1:A:875:C:C5'	2.47	0.43
1:A:86:U:C2'	1:A:87:A:H5'	2.47	0.43
1:A:953:G:H4'	15:P:124:PRO:O	2.18	0.43
3:C:58:A:O2'	3:C:59:U:O5'	2.36	0.43
3:C:66:U:C3'	3:C:67:C:H6	2.30	0.43
4:E:74:LYS:NZ	4:E:205:ASP:O	2.48	0.43
4:E:222:ILE:HD13	4:E:226:ARG:NH2	2.25	0.43
4:E:77:ALA:O	4:E:80:ILE:HG22	2.19	0.43
4:E:84:GLU:HG2	4:E:234:PRO:CG	2.47	0.43
4:E:92:TYR:HE2	4:E:151:GLY:C	2.22	0.43
5:F:117:ALA:O	5:F:121:ALA:HB2	2.19	0.43
6:G:143:GLY:HA2	6:G:185:PHE:CD1	2.54	0.43
6:G:153:ARG:O	6:G:154:ASN:CB	2.66	0.43
6:G:155:LEU:O	6:G:158:ILE:HB	2.18	0.43
6:G:29:PRO:O	6:G:30:LYS:HB2	2.18	0.43
7:H:15:ARG:CG	7:H:15:ARG:HH11	2.31	0.43
7:H:25:ARG:HD3	7:H:25:ARG:N	2.33	0.43
7:H:91:LEU:CG	7:H:92:LYS:N	2.82	0.43
8:I:45:LEU:HD23	8:I:59:TYR:HA	2.00	0.43
8:I:8:ILE:HG23	8:I:89:MET:H	1.82	0.43
11:L:45:ALA:O	11:L:78:LYS:CG	2.66	0.43
12:M:79:ARG:HH11	12:M:79:ARG:HA	1.84	0.43
13:N:13:GLN:HA	13:N:76:GLY:CA	2.48	0.43
13:N:32:ILE:O	13:N:39:PRO:CB	2.66	0.43
13:N:50:TYR:HD1	13:N:55:LYS:HA	1.83	0.43
13:N:69:ALA:O	13:N:72:ALA:CB	2.65	0.43
14:O:100:ILE:O	14:O:101:VAL:HG22	2.19	0.43
14:O:59:ARG:HE	14:O:65:GLU:HG2	1.84	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:M:65:LEU:CD1	16:Q:36:PHE:CZ	3.02	0.43
18:S:53:VAL:CG2	18:S:54:GLU:N	2.81	0.43
22:W:13:LEU:HD13	22:W:17:ARG:HH22	1.83	0.43
22:W:20:LEU:O	22:W:24:LEU:HG	2.17	0.43
1:A:133:U:OP1	22:W:74:LYS:NZ	2.50	0.43
1:A:1166:G:N2	1:A:1169:A:O5'	2.51	0.43
3:D:40:C:H5'	3:D:41:C:OP2	2.18	0.43
1:A:998(A):C:O2	1:A:998(A):C:C2'	2.65	0.43
2:1:39:U:H3'	2:1:39:U:C6	2.53	0.43
1:A:1003:G:H21	1:A:1005:A:H5'	1.82	0.43
1:A:1108:G:C6	1:A:1109:C:N4	2.86	0.43
1:A:110:C:H2'	1:A:111:G:C8	2.53	0.43
1:A:1157:A:N6	1:A:1180:A:C5	2.86	0.43
1:A:951:G:C5	1:A:1231:G:C6	3.07	0.43
1:A:1293:G:O2'	1:A:1294:G:H5'	2.18	0.43
1:A:1268:A:H2	1:A:1327:C:H1'	1.83	0.43
1:A:1287:A:H1'	1:A:1353:G:O2'	2.18	0.43
1:A:1441:G:N2	1:A:1459:C:H5	2.16	0.43
1:A:1484:C:H2'	1:A:1485:U:H5'	1.99	0.43
1:A:1499:A:N6	1:A:1500:A:N6	2.66	0.43
1:A:15:G:H2'	1:A:16:A:C8	2.53	0.43
1:A:181:G:H22	1:A:223:U:H4'	1.83	0.43
1:A:36:C:OP1	14:O:123:LYS:HG2	2.18	0.43
1:A:450:G:C8	1:A:481:G:C6	3.06	0.43
1:A:525:C:O5'	1:A:525:C:H6	2.02	0.43
1:A:531:U:P	1:A:531:U:H3'	2.59	0.43
1:A:609:A:H2'	1:A:610:G:H8	1.84	0.43
1:A:648:A:O2'	1:A:649:G:H5'	2.19	0.43
1:A:830:G:C2	1:A:857:C:C2	3.07	0.43
1:A:892:A:H2'	1:A:893:C:C6	2.53	0.43
3:C:28:G:C2	3:C:43:C:O2	2.71	0.43
3:C:58:A:H2'	3:C:61:C:C4	2.53	0.43
3:C:50:U:C4	3:C:65:G:N1	2.86	0.43
4:E:84:GLU:CD	4:E:233:SER:HB3	2.38	0.43
5:F:23:TYR:CD1	12:M:11:PHE:HB2	2.54	0.43
5:F:27:LYS:HE3	5:F:27:LYS:HB2	1.79	0.43
6:G:134:ASP:OD2	6:G:134:ASP:O	2.36	0.43
7:H:36:ASP:OD2	7:H:40:ARG:HB3	2.18	0.43
7:H:76:ILE:CG2	7:H:77:PRO:HD2	2.49	0.43
8:I:34:GLY:C	8:I:68:PRO:HD3	2.38	0.43
8:I:34:GLY:O	8:I:68:PRO:HD3	2.19	0.43
9:J:69:VAL:HG11	9:J:104:LEU:HD21	1.94	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:32:U:O2'	9:J:77:SER:CB	2.65	0.43
10:K:104:ARG:HD3	10:K:107:LEU:HD11	2.01	0.43
10:K:104:ARG:HB2	10:K:108:GLY:H	1.83	0.43
10:K:134:ILE:HB	10:K:135:CYS:H	1.47	0.43
1:A:755:G:H21	10:K:1:MET:HE1	1.83	0.43
15:P:15:VAL:HG11	15:P:39:ILE:HD11	1.98	0.43
16:Q:46:GLU:O	16:Q:49:HIS:CB	2.64	0.43
1:A:667:G:C5'	17:R:51:HIS:CE1	3.02	0.43
18:S:40:ASP:OD1	18:S:40:ASP:O	2.36	0.43
1:A:377:G:P	18:S:5:ARG:HD3	2.58	0.43
20:U:31:LEU:CD2	20:U:65:ILE:HG13	2.48	0.43
21:V:16:LEU:O	21:V:17:GLU:C	2.55	0.43
21:V:17:GLU:OE1	21:V:18:LYS:N	2.51	0.43
22:W:53:LEU:HD12	22:W:100:ILE:HG13	2.00	0.43
22:W:57:ARG:HH21	22:W:100:ILE:CD1	2.30	0.43
3:D:15:G:H8	3:D:15:G:O5'	2.01	0.43
1:A:513:C:H2'	1:A:514:C:H6	1.83	0.43
2:1:10:U:O5'	2:1:10:U:H6	2.01	0.43
1:A:1498:U:C2	2:1:41:U:OP1	2.72	0.43
1:A:102:G:C6	1:A:103:C:C4	3.06	0.43
1:A:102:G:C6	1:A:103:C:C5	3.07	0.43
1:A:113:G:H4'	1:A:354:G:H5''	1.99	0.43
1:A:1159:U:C5	1:A:1181:G:N7	2.86	0.43
1:A:1312:G:C2'	1:A:1313:U:H5'	2.48	0.43
1:A:1369:C:OP2	11:L:111:ARG:HA	2.18	0.43
1:A:1375:A:C2	1:A:1376:U:O2	2.71	0.43
1:A:1412:C:C2	1:A:1413:A:N7	2.87	0.43
1:A:318:G:O2'	1:A:1469:G:OP1	2.36	0.43
1:A:222:U:O2'	1:A:223:U:H5'	2.18	0.43
1:A:237:C:H5''	19:T:25:ARG:NH2	2.31	0.43
1:A:302:G:O6	1:A:303:A:C6	2.72	0.43
1:A:450:G:N7	1:A:481:G:C5	2.86	0.43
1:A:486:U:C2	1:A:487:A:C8	3.06	0.43
1:A:498:A:H61	1:A:547:A:C5'	2.31	0.43
1:A:533:A:H3'	1:A:534:U:C5'	2.47	0.43
1:A:548:G:O2'	1:A:549:C:H5'	2.18	0.43
1:A:658:G:C2	1:A:659:U:C2	3.07	0.43
1:A:696:A:C4	1:A:697:U:O4'	2.72	0.43
1:A:887:G:O2'	1:A:888:G:H5'	2.19	0.43
1:A:244:U:C6	1:A:894:G:C2	3.07	0.43
1:A:924:C:H2'	1:A:925:G:H8	1.83	0.43
4:E:16:HIS:O	4:E:18:GLY:N	2.51	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:193:ASP:O	4:E:194:PRO:O	2.36	0.43
4:E:80:ILE:HG22	4:E:81:VAL:N	2.33	0.43
6:G:101:LEU:O	6:G:102:ASP:C	2.56	0.43
1:A:407:G:O2'	6:G:116:GLN:HG2	2.17	0.43
6:G:112:VAL:N	6:G:116:GLN:OE1	2.42	0.43
6:G:13:ARG:NH1	6:G:36:ARG:HD3	2.34	0.43
1:A:401:C:OP2	6:G:73:ARG:NH2	2.52	0.43
7:H:37:ARG:NH1	7:H:112:LEU:HA	2.33	0.43
1:A:1194:U:H5'	7:H:22:GLY:O	2.19	0.43
8:I:14:LEU:HD21	8:I:18:GLN:HG2	2.00	0.43
8:I:91:VAL:HG12	8:I:92:LYS:O	2.18	0.43
8:I:94:GLN:C	8:I:95:GLU:HG3	2.39	0.43
9:J:13:GLN:O	9:J:14:PRO:O	2.35	0.43
9:J:15:ASP:HB3	9:J:20:ASP:H	1.84	0.43
10:K:19:VAL:O	10:K:19:VAL:HG12	2.18	0.43
10:K:70:GLN:NE2	10:K:70:GLN:CA	2.76	0.43
11:L:100:GLY:C	11:L:101:PHE:CG	2.91	0.43
11:L:10:ARG:NH2	11:L:75:ASP:CG	2.72	0.43
13:N:50:TYR:CD1	13:N:55:LYS:HA	2.54	0.43
15:P:14:ARG:CG	15:P:44:ARG:NH1	2.77	0.43
15:P:6:GLY:O	15:P:8:GLU:N	2.52	0.43
17:R:87:ILE:CG2	17:R:88:ARG:N	2.81	0.43
18:S:19:ILE:CG2	18:S:36:ILE:O	2.67	0.43
21:V:27:GLU:O	21:V:28:LYS:HB2	2.17	0.43
21:V:30:LEU:HB2	21:V:48:THR:HG22	2.00	0.43
21:V:32:LYS:HB2	21:V:57:HIS:CE1	2.54	0.43
22:W:11:SER:CA	22:W:13:LEU:HD11	2.35	0.43
22:W:45:GLN:HE21	22:W:91:LEU:CD1	2.17	0.43
1:A:186(B):C:H4'	22:W:89:ARG:HH22	1.83	0.43
3:D:50:U:O2'	3:D:51:U:H5'	2.17	0.43
1:A:511:C:C2'	1:A:512:U:C6	3.01	0.43
3:B:75:C:O2	3:B:75:C:C2'	2.67	0.43
1:A:1149:C:H2'	1:A:1280:A:H61	1.83	0.43
1:A:1223:C:H3'	1:A:1223:C:H6	1.84	0.43
1:A:1291:G:C6	1:A:1292:U:C4	3.07	0.43
1:A:1331:G:C2'	1:A:1332:A:OP2	2.66	0.43
1:A:1349:A:C2'	1:A:1350:A:H8	2.27	0.43
1:A:1347:G:N2	1:A:1373:G:H2'	2.33	0.43
1:A:1410:G:C6	1:A:1411:C:N4	2.86	0.43
1:A:1465:C:H2'	1:A:1466:C:C5'	2.48	0.43
1:A:1472:U:C2'	1:A:1473:A:H5'	2.47	0.43
1:A:1494:G:O2'	1:A:1495:U:H6	1.98	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:196:A:O2'	1:A:222:U:O4'	2.36	0.43
1:A:375:U:H2'	1:A:376:G:O5'	2.18	0.43
1:A:411:A:N7	1:A:429:U:C5	2.86	0.43
1:A:518:C:C5	1:A:530:G:C8	3.07	0.43
1:A:529:G:N1	14:O:49:ASN:CB	2.78	0.43
1:A:555:C:H2'	1:A:555:C:O2	2.18	0.43
1:A:573:A:H2'	1:A:574:A:N7	2.31	0.43
1:A:598:U:C2	1:A:599:C:C5	3.06	0.43
1:A:61:G:N7	1:A:62:U:C4	2.87	0.43
1:A:594:G:N1	1:A:646:U:N3	2.67	0.43
1:A:696:A:N1	1:A:697:U:H1'	2.33	0.43
1:A:707:C:C2'	1:A:708:C:O5'	2.67	0.43
1:A:833:U:H2'	1:A:834:C:C6	2.52	0.43
1:A:874:G:N2	1:A:875:C:N1	2.66	0.43
1:A:893:C:H2'	1:A:894:G:H8	1.84	0.43
1:A:885:G:N2	1:A:913:A:C2	2.85	0.43
1:A:918:A:H2'	1:A:919:A:O4'	2.19	0.43
1:A:950:U:H1'	1:A:971:G:C4	2.53	0.43
1:A:977:A:N6	1:A:1224:G:O5'	2.51	0.43
3:C:10:G:H2'	3:C:11:C:C6	2.53	0.43
4:E:28:PHE:HE1	4:E:31:TYR:C	2.22	0.43
5:F:10:PHE:HB3	5:F:11:ARG:NE	2.32	0.43
5:F:55:VAL:HG22	5:F:68:VAL:CG2	2.47	0.43
6:G:133:VAL:HG21	6:G:138:TYR:HE1	1.83	0.43
6:G:179:GLU:C	6:G:181:MET:N	2.72	0.43
6:G:98:GLU:OE1	6:G:107:ARG:HG3	2.18	0.43
7:H:51:VAL:O	7:H:52:PRO:C	2.55	0.43
8:I:35:ALA:O	8:I:36:ARG:CG	2.62	0.43
8:I:90:VAL:O	8:I:90:VAL:HG13	2.18	0.43
9:J:139:GLU:N	9:J:139:GLU:CD	2.72	0.43
9:J:49:ILE:HG12	9:J:121:ALA:CB	2.47	0.43
10:K:100:ILE:HD12	10:K:100:ILE:N	2.11	0.43
1:A:1347:G:C8	11:L:107:ARG:HB2	2.54	0.43
11:L:23:ASN:HA	11:L:57:GLY:O	2.18	0.43
12:M:51:ARG:HB2	12:M:59:SER:C	2.39	0.43
12:M:69:ASN:O	12:M:70:ARG:NH1	2.51	0.43
9:J:153:HIS:CE1	13:N:58:PRO:CD	2.98	0.43
13:N:25:TYR:OH	13:N:87:THR:HB	2.18	0.43
14:O:102:ARG:NH1	14:O:110:VAL:HA	2.34	0.43
14:O:64:TYR:C	14:O:65:GLU:CG	2.87	0.43
14:O:98:TYR:N	14:O:98:TYR:CD1	2.86	0.43
1:A:994:A:C4	16:Q:5:ALA:HA	2.54	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:R:12:ILE:HG12	17:R:27:VAL:HG13	2.01	0.43
17:R:77:ARG:C	17:R:77:ARG:CZ	2.86	0.43
19:T:60:ILE:CD1	19:T:62:SER:HA	2.48	0.43
21:V:30:LEU:HD23	21:V:32:LYS:H	1.84	0.43
21:V:41:VAL:CB	21:V:42:PRO:CD	2.81	0.43
21:V:63:THR:HG22	21:V:64:GLU:N	2.33	0.43
1:A:104:G:P	22:W:21:LYS:HZ3	2.42	0.43
22:W:25:ARG:O	22:W:28:ALA:N	2.51	0.43
22:W:76:ALA:O	22:W:77:ALA:C	2.56	0.43
3:D:18:G:O2'	3:D:19:G:H4'	2.18	0.43
3:D:60:U:OP2	3:D:61:C:C5	2.72	0.43
6:G:47:ARG:O	6:G:47:ARG:HG3	2.18	0.43
1:A:131:C:N4	1:A:232:G:H1	2.16	0.43
1:A:342:C:C2	1:A:348:G:N2	2.86	0.43
3:B:12:U:H3'	3:B:12:U:C6	2.53	0.43
11:L:99:LEU:CD2	11:L:99:LEU:H	2.31	0.43
2:1:27:A:H2'	2:1:28:G:O4'	2.18	0.43
2:1:51:U:HO2'	2:1:52:U:C5'	2.31	0.43
1:A:1004:A:C5'	1:A:1025:U:C5	3.02	0.43
1:A:99:C:O2'	1:A:101:A:OP1	2.33	0.43
1:A:1051:C:H2'	1:A:1052:U:O4'	2.19	0.43
1:A:1082:G:C6	1:A:1083:U:C5	3.06	0.43
1:A:1228:C:OP1	15:P:115:LYS:HB3	2.18	0.43
1:A:1300:G:H2'	1:A:1301:U:OP2	2.18	0.43
1:A:934:C:C5	1:A:1344:C:C2	3.07	0.43
1:A:1360:A:N1	1:A:1361:G:C2	2.86	0.43
1:A:1345:U:N3	1:A:1377:A:N6	2.66	0.43
1:A:199:G:H2'	1:A:200:G:C8	2.53	0.43
1:A:22:G:C2'	1:A:23:C:C6	2.82	0.43
1:A:247:G:N1	1:A:278:G:C2	2.86	0.43
1:A:285:G:C4	1:A:286:G:C8	3.07	0.43
1:A:333:G:C2	1:A:334:C:C4	3.07	0.43
1:A:408:A:C6	1:A:409:G:C6	3.06	0.43
1:A:407:G:O2'	1:A:408:A:H5'	2.18	0.43
1:A:440:A:C2'	1:A:442:C:H6	2.31	0.43
1:A:44:G:C2	1:A:45:U:H1'	2.54	0.43
1:A:558:G:C5'	1:A:559:A:C5'	2.96	0.43
1:A:643:C:C4	1:A:644:G:N7	2.87	0.43
1:A:714:G:H2'	1:A:715:A:H8	1.77	0.43
1:A:747:C:H2'	1:A:748:C:C1'	2.49	0.43
1:A:753:A:O2'	1:A:754:C:OP2	2.34	0.43
1:A:761:G:H2'	1:A:762:C:H6	1.84	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:862:C:N3	1:A:863:U:C5	2.87	0.43
1:A:896:C:C2	1:A:897:C:C6	3.06	0.43
1:A:950:U:H2'	1:A:951:G:H5'	2.00	0.43
3:C:29:G:C2	3:C:30:G:C8	3.06	0.43
4:E:164:VAL:HG22	4:E:165:VAL:H	1.82	0.43
4:E:218:ALA:O	4:E:221:LEU:N	2.51	0.43
4:E:223:ILE:HA	4:E:226:ARG:NE	2.34	0.43
4:E:47:THR:HB	4:E:48:MET:SD	2.59	0.43
4:E:73:THR:O	4:E:78:GLN:HB2	2.19	0.43
5:F:142:MET:HB3	5:F:170:GLN:CD	2.38	0.43
1:A:1055:A:H2	5:F:156:ARG:HD3	1.83	0.43
5:F:15:THR:HG23	5:F:15:THR:O	2.18	0.43
5:F:39:ILE:O	5:F:41:GLY:N	2.52	0.43
1:A:404:U:OP1	6:G:118:ARG:NH1	2.51	0.43
6:G:76:ARG:HG3	6:G:207:TYR:CD2	2.54	0.43
7:H:50:GLU:HB2	7:H:53:LEU:HG	2.01	0.43
7:H:56:GLN:CA	7:H:56:GLN:HE21	2.30	0.43
9:J:111:ARG:NH1	9:J:122:HIS:ND1	2.67	0.43
9:J:54:THR:OG1	9:J:54:THR:O	2.37	0.43
10:K:40:ALA:O	10:K:41:ARG:C	2.57	0.43
10:K:7:ALA:HB2	10:K:85:ARG:HH11	1.83	0.43
10:K:85:ARG:HD2	10:K:85:ARG:HA	1.79	0.43
10:K:97:VAL:CG1	10:K:98:LYS:NZ	2.81	0.43
11:L:33:PHE:HE1	11:L:47:LEU:HB2	1.84	0.43
11:L:49:PRO:HB2	11:L:82:ALA:HA	2.00	0.43
12:M:30:SER:O	12:M:78:ASN:HB3	2.18	0.43
12:M:63:PHE:HA	16:Q:59:ALA:CB	2.48	0.43
13:N:99:GLN:HA	13:N:105:VAL:HG22	2.00	0.43
13:N:42:TRP:CZ3	13:N:47:VAL:HG22	2.53	0.43
14:O:32:PHE:C	14:O:84:LEU:HD11	2.38	0.43
15:P:60:VAL:HG13	15:P:64:TRP:CE3	2.54	0.43
15:P:8:GLU:O	15:P:10:PRO:HD2	2.18	0.43
1:A:979:C:O2	16:Q:19:ARG:NE	2.52	0.43
16:Q:24:CYS:HA	16:Q:39:LEU:HA	2.01	0.43
18:S:20:VAL:HG11	18:S:32:TYR:CG	2.54	0.43
19:T:5:VAL:CA	19:T:59:ILE:O	2.66	0.43
19:T:5:VAL:HG13	19:T:59:ILE:C	2.31	0.43
19:T:92:ARG:O	19:T:93:GLN:C	2.57	0.43
19:T:97:SER:C	19:T:98:LEU:HD22	2.39	0.43
3:D:19:G:OP1	3:D:20:U:O4	2.36	0.43
3:D:64:A:N3	3:D:65:G:C8	2.87	0.43
12:M:3:LYS:N	12:M:3:LYS:HD2	2.33	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1018:C:C4	1:A:1019:C:C5	3.06	0.43
2:1:35:U:C3'	2:1:35:U:C6	3.01	0.43
1:A:1063:C:C5	1:A:1064:G:C8	3.07	0.43
1:A:1099:G:H2'	1:A:1100:C:O5'	2.19	0.43
1:A:1014:A:C2	1:A:1219:U:H1'	2.54	0.43
1:A:1226:C:C5	15:P:104:ARG:CA	2.89	0.43
1:A:1234:C:N4	1:A:1235:U:C4	2.86	0.43
1:A:1239:A:C8	1:A:1241:G:H1'	2.53	0.43
1:A:1272:G:C4	1:A:1273:G:C8	3.07	0.43
1:A:128:G:C5	1:A:129:U:C4	3.07	0.43
1:A:1328:C:H2'	1:A:1329:A:H8	1.84	0.43
1:A:1350:A:C6	1:A:1351:U:C4	3.06	0.43
1:A:1436:U:C2'	1:A:1437:C:C6	3.02	0.43
1:A:1436:U:C3'	1:A:1437:C:C6	3.02	0.43
1:A:1455:G:H2'	1:A:1459:C:H5'	1.99	0.43
1:A:319:G:H4'	1:A:1468:A:H4'	1.99	0.43
1:A:1470:G:C2	1:A:1471:G:C4	3.07	0.43
1:A:1483:A:H2'	1:A:1484:C:H5'	2.00	0.43
1:A:149:A:C2	1:A:150:C:C2	3.07	0.43
1:A:191(C):G:O2'	1:A:191(D):U:H5'	2.18	0.43
1:A:259:G:C2	1:A:260:G:N3	2.87	0.43
1:A:50:A:C6	1:A:361:G:O4'	2.71	0.43
1:A:424:G:N3	1:A:425:G:C8	2.86	0.43
1:A:407:G:N1	1:A:436:C:C2	2.86	0.43
1:A:483:C:N4	1:A:484:G:N1	2.66	0.43
1:A:494:U:O2	1:A:495:A:O4'	2.37	0.43
1:A:589:C:C4	1:A:590:C:N4	2.87	0.43
1:A:696:A:N3	1:A:786:G:O2'	2.35	0.43
1:A:766:A:C8	1:A:814:A:N1	2.87	0.43
1:A:780:A:C2	1:A:803:G:N1	2.86	0.43
1:A:85:U:H2'	1:A:86:U:O4'	2.18	0.43
1:A:922:G:C2'	1:A:923:A:H5'	2.48	0.43
1:A:957:U:O2	1:A:960:U:C5	2.71	0.43
1:A:991:U:H6	1:A:991:U:OP2	2.02	0.43
3:C:26:A:O2'	3:C:27:G:H5'	2.18	0.43
3:C:27:G:N2	3:C:28:G:C5	2.87	0.43
3:C:2:C:H2'	3:C:3:C:C6	2.49	0.43
3:C:7:A:C4	3:C:49:C:C5	3.06	0.43
3:C:71:G:C6	3:C:72:C:C4	3.06	0.43
4:E:126:GLU:O	4:E:127:ILE:C	2.57	0.43
5:F:108:ASN:C	5:F:110:ASN:H	2.22	0.43
5:F:33:LEU:O	5:F:36:ASP:N	2.52	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:11:LEU:O	6:G:14:ARG:HB3	2.19	0.43
6:G:20:TYR:CB	6:G:27:TYR:HA	2.49	0.43
7:H:55:VAL:C	7:H:57:LYS:N	2.71	0.43
8:I:97:PHE:CE2	20:U:65:ILE:HD11	2.54	0.43
9:J:135:VAL:O	9:J:138:LYS:CB	2.56	0.43
9:J:139:GLU:O	9:J:142:GLU:HB2	2.18	0.43
9:J:14:PRO:HB3	9:J:19:GLY:C	2.39	0.43
9:J:63:LYS:HA	9:J:63:LYS:CE	2.33	0.43
9:J:79:ARG:HG2	9:J:84:ASN:HB3	2.01	0.43
10:K:111:ILE:CG2	10:K:118:VAL:CG1	2.97	0.43
10:K:10:LEU:CD2	10:K:83:ILE:HD11	2.48	0.43
11:L:112:LYS:CG	11:L:117:HIS:HA	2.45	0.43
1:A:1343:G:O2'	11:L:121:ARG:HA	2.18	0.43
11:L:70:LYS:O	11:L:71:SER:C	2.56	0.43
11:L:49:PRO:CD	11:L:78:LYS:HZ3	2.29	0.43
12:M:48:THR:OG1	12:M:62:HIS:HB3	2.19	0.43
12:M:48:THR:O	12:M:49:VAL:HG23	2.19	0.43
13:N:123:LYS:N	13:N:126:ARG:HG3	2.34	0.43
13:N:63:LEU:CA	13:N:66:LEU:HG	2.47	0.43
1:A:363:A:P	14:O:33:ARG:HH21	2.41	0.43
14:O:57:LYS:C	14:O:58:VAL:HG23	2.39	0.43
14:O:27:LEU:CD2	14:O:62:SER:OG	2.66	0.43
15:P:10:PRO:HG2	15:P:18:ALA:CB	2.48	0.43
17:R:29:VAL:HG22	17:R:67:LEU:HD21	2.01	0.43
17:R:3:ILE:HA	17:R:38:ARG:HH12	1.84	0.43
17:R:53:HIS:CD2	17:R:57:LEU:CD1	3.01	0.43
1:A:136:C:O4'	18:S:1:MET:CE	2.66	0.43
18:S:26:ARG:HD3	18:S:31:LYS:HZ3	1.84	0.43
18:S:26:ARG:HG3	18:S:26:ARG:HH11	1.83	0.43
18:S:55:ARG:O	18:S:59:TRP:HB2	2.19	0.43
19:T:57:VAL:CB	19:T:75:ARG:O	2.64	0.43
20:U:51:LEU:HD13	20:U:51:LEU:H	1.82	0.43
20:U:64:ARG:HH11	20:U:64:ARG:HG3	1.83	0.43
13:N:110:ASP:HA	20:U:88:LYS:HD3	2.01	0.43
21:V:70:LYS:O	21:V:71:LEU:C	2.57	0.43
3:D:17:C:H5	3:D:19:G:H8	1.67	0.43
1:A:160:A:C2'	1:A:161:A:H5'	2.49	0.43
14:O:126:LYS:NZ	14:O:128:ALA:N	2.57	0.43
1:A:1164:G:C6	1:A:1165:C:N3	2.87	0.43
3:D:28:G:N1	3:D:43:C:C2	2.87	0.43
3:B:45:U:O4	3:B:46:G:O6	2.37	0.43
1:A:1061:G:N3	1:A:1197:G:C2	2.87	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1091:U:O2	1:A:1093:A:C8	2.72	0.43
1:A:1068:G:C8	1:A:1094:G:N7	2.87	0.43
1:A:1187:G:C4	1:A:1188:A:C8	3.07	0.43
1:A:1200:C:C5'	1:A:1201:A:O3'	2.63	0.43
1:A:1225:A:OP2	15:P:102:ARG:O	2.37	0.43
1:A:1344:C:O2'	1:A:1349:A:H5'	2.18	0.43
1:A:1368:G:H2'	1:A:1369:C:H6	1.84	0.43
1:A:1433:A:H8	1:A:1433:A:O5'	2.02	0.43
1:A:193:C:O4'	22:W:60:GLU:CG	2.67	0.43
1:A:20:U:O4'	1:A:572:A:C2	2.72	0.43
1:A:21:G:C2	1:A:915:A:N6	2.84	0.43
1:A:363:A:H5''	14:O:105:TYR:OH	2.19	0.43
1:A:556:C:H2'	1:A:557:G:O4'	2.19	0.43
1:A:619:U:O2	1:A:619:U:C2'	2.67	0.43
1:A:738:C:C4	1:A:739:C:C5	3.06	0.43
1:A:760:G:C5'	1:A:761:G:OP2	2.66	0.43
1:A:766:A:C2	1:A:767:A:C1'	3.01	0.43
1:A:774:G:C6	1:A:775:G:C5	3.07	0.43
1:A:826:C:C5'	10:K:12:ARG:NH2	2.77	0.43
1:A:899:C:C4	1:A:900:A:C6	3.07	0.43
1:A:915:A:H2'	1:A:916:G:C4'	2.48	0.43
1:A:965:A:P	1:A:1198:G:H5''	2.59	0.43
1:A:994:A:OP1	1:A:995:C:H5	2.01	0.43
3:B:29:G:C5	3:B:30:G:N7	2.87	0.43
4:E:114:ARG:C	4:E:114:ARG:HD3	2.39	0.43
4:E:115:LEU:O	4:E:118:LEU:HD13	2.19	0.43
4:E:149:LEU:C	4:E:149:LEU:HD23	2.38	0.43
4:E:153:ARG:O	4:E:154:LEU:C	2.57	0.43
4:E:60:ASP:O	4:E:63:MET:N	2.52	0.43
4:E:84:GLU:OE1	4:E:233:SER:OG	2.23	0.43
5:F:143:GLU:C	5:F:145:GLY:N	2.72	0.43
5:F:22:TRP:CZ3	5:F:32:LEU:HD13	2.53	0.43
5:F:43:LEU:CD1	5:F:55:VAL:HG21	2.49	0.43
5:F:82:GLU:O	5:F:85:ARG:CB	2.65	0.43
6:G:165:MET:O	6:G:167:GLY:N	2.52	0.43
6:G:91:SER:O	6:G:94:LEU:N	2.51	0.43
6:G:94:LEU:CA	6:G:97:LEU:HD12	2.42	0.43
7:H:71:LEU:O	7:H:72:GLN:HG2	2.18	0.43
8:I:52:ILE:CG2	8:I:87:ARG:NH2	2.82	0.43
10:K:117:GLY:O	10:K:119:LEU:CD2	2.67	0.43
10:K:11:THR:OG1	10:K:12:ARG:N	2.52	0.43
10:K:12:ARG:HH11	10:K:26:VAL:HG22	1.83	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:K:108:GLY:HA2	10:K:138:TRP:CB	2.49	0.43
10:K:45:ILE:HD12	10:K:61:VAL:HG22	2.01	0.43
10:K:75:ARG:HH11	10:K:75:ARG:CG	2.32	0.43
11:L:38:GLN:O	11:L:39:GLY:C	2.57	0.43
11:L:65:VAL:CG2	11:L:73:GLN:HB3	2.49	0.43
12:M:81:THR:O	12:M:85:LEU:CD1	2.67	0.43
12:M:89:ASP:O	12:M:90:LEU:CG	2.63	0.43
13:N:59:TYR:CD1	13:N:62:GLN:NE2	2.87	0.43
13:N:69:ALA:O	13:N:70:LYS:C	2.58	0.43
13:N:99:GLN:O	13:N:105:VAL:CG2	2.67	0.43
15:P:14:ARG:HA	15:P:44:ARG:CA	2.40	0.43
15:P:2:ALA:HB3	15:P:4:ILE:CG1	2.49	0.43
15:P:91:ARG:NH1	15:P:96:LEU:HD12	2.32	0.43
16:Q:61:TRP:CD1	16:Q:61:TRP:C	2.92	0.43
18:S:4:ILE:HG12	18:S:65:GLN:O	2.17	0.43
1:A:584:G:OP2	19:T:87:LYS:NZ	2.51	0.43
22:W:17:ARG:HA	22:W:20:LEU:HG	2.00	0.43
22:W:25:ARG:CZ	22:W:25:ARG:HB2	2.49	0.43
3:D:14:A:N3	3:D:14:A:C2'	2.78	0.43
1:A:1055:A:C2'	1:A:1055:A:N3	2.77	0.43
1:A:107:G:H2'	1:A:108:G:O4'	2.19	0.43
1:A:113:G:O4'	1:A:354:G:C5'	2.67	0.43
1:A:1201:A:H2'	1:A:1202:G:OP2	2.19	0.43
1:A:1201:A:C2'	1:A:1201:A:N3	2.80	0.43
1:A:1326:C:O2'	1:A:1327:C:C5'	2.67	0.43
1:A:1329:A:P	15:P:28:ALA:HB3	2.58	0.43
1:A:1358:U:C5	1:A:1359:C:C5	3.06	0.43
1:A:1365:G:C6	1:A:1366:C:N4	2.87	0.43
1:A:1374:A:C4	1:A:1375:A:C8	3.07	0.43
1:A:144:G:C4	1:A:179:A:C2	3.07	0.43
1:A:1516:G:C2	1:A:1518:A:P	3.12	0.43
1:A:67:C:C1'	1:A:172:A:H1'	2.49	0.43
1:A:185:A:O2'	1:A:186:C:H5'	2.18	0.43
1:A:226:G:O2'	1:A:227:G:H5'	2.18	0.43
1:A:242:C:H2'	1:A:243:A:O5'	2.19	0.43
1:A:451:A:H1'	1:A:452:A:C5	2.52	0.43
1:A:600:C:HO2'	1:A:601:C:H5'	1.79	0.43
1:A:738:C:N3	1:A:739:C:C5	2.87	0.43
1:A:826:C:O5'	1:A:826:C:H6	2.02	0.43
1:A:830:G:N1	1:A:857:C:C4	2.87	0.43
1:A:978:A:H3'	1:A:980:C:H41	1.83	0.43
3:C:22:G:O2'	3:C:23:A:H5'	2.18	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:C:41:C:C2	3:C:42:C:C6	3.07	0.43
3:C:48:C:OP2	3:C:48:C:H6	2.02	0.43
4:E:105:PHE:O	4:E:109:SER:CB	2.67	0.43
4:E:149:LEU:C	4:E:151:GLY:H	2.22	0.43
4:E:222:ILE:CD1	4:E:223:ILE:HG13	2.47	0.43
4:E:92:TYR:N	4:E:92:TYR:CD2	2.87	0.43
4:E:93:VAL:HG12	4:E:95:GLN:H	1.83	0.43
4:E:97:TRP:O	4:E:99:GLY:N	2.46	0.43
5:F:29:TYR:HA	5:F:32:LEU:HD12	2.01	0.43
5:F:43:LEU:HD11	5:F:55:VAL:CG1	2.48	0.43
6:G:18:LYS:O	6:G:19:LEU:HD23	2.19	0.43
6:G:192:GLU:CD	6:G:192:GLU:H	2.11	0.43
6:G:25:ARG:NH1	6:G:25:ARG:HB3	2.34	0.43
6:G:32:ALA:N	6:G:34:GLU:O	2.52	0.43
6:G:6:GLY:O	6:G:8:VAL:N	2.52	0.43
7:H:82:VAL:HG11	7:H:134:ALA:C	2.39	0.43
7:H:33:VAL:C	7:H:34:VAL:HG22	2.38	0.43
7:H:97:GLY:O	7:H:99:GLY:N	2.52	0.43
8:I:24:GLU:OE2	8:I:28:ARG:NH2	2.43	0.43
8:I:94:GLN:C	8:I:95:GLU:CG	2.87	0.43
9:J:76:ARG:HD3	9:J:89:MET:CE	2.48	0.43
9:J:79:ARG:CG	9:J:84:ASN:HB3	2.48	0.43
11:L:5:TYR:OH	11:L:16:ARG:CG	2.67	0.43
12:M:24:VAL:HG13	12:M:34:VAL:HB	2.01	0.43
15:P:71:ARG:C	15:P:73:GLU:N	2.71	0.43
1:A:1309:G:OP2	15:P:99:ARG:CZ	2.67	0.43
16:Q:26:ARG:HE	16:Q:43:CYS:CB	2.31	0.43
17:R:54:ARG:CA	17:R:57:LEU:HD13	2.49	0.43
17:R:5:LYS:HG3	17:R:6:GLU:OE2	2.19	0.43
1:A:392:G:C5'	18:S:12:LYS:NZ	2.78	0.43
18:S:74:LEU:HA	18:S:74:LEU:HD23	1.82	0.43
19:T:104:LYS:O	19:T:105:ALA:C	2.57	0.43
19:T:27:PHE:O	19:T:27:PHE:CD2	2.72	0.43
1:A:277:C:P	19:T:41:LYS:HZ3	2.40	0.43
19:T:48:GLU:N	19:T:48:GLU:OE1	2.51	0.43
19:T:65:ILE:O	19:T:66:SER:HB3	2.18	0.43
20:U:45:SER:OG	20:U:49:LYS:HE3	2.19	0.43
22:W:12:ALA:O	22:W:15:ARG:N	2.51	0.43
22:W:51:GLU:CA	22:W:54:LYS:HD2	2.42	0.43
22:W:82:SER:OG	22:W:83:ARG:N	2.52	0.43
22:W:81:LYS:HB3	22:W:85:MET:HE1	2.00	0.43
23:X:13:ILE:HG22	23:X:14:TRP:H	1.84	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:54:U:OP2	3:D:55:U:C5	2.72	0.43
3:D:55:U:H2'	3:D:57:G:OP2	2.18	0.43
1:A:30:U:H2'	1:A:31:G:OP1	2.19	0.43
1:A:1035:A:H2'	1:A:1036:G:C5'	2.43	0.42
1:A:1067:A:N3	1:A:1068:G:C1'	2.83	0.42
1:A:1087:G:H2'	1:A:1088:G:H8	1.84	0.42
1:A:1130:A:H5''	1:A:1131:G:OP2	2.19	0.42
1:A:1161:C:H2'	1:A:1162:C:C5	2.54	0.42
1:A:1253:G:N2	1:A:1285:A:N6	2.66	0.42
1:A:1360:A:N1	1:A:1361:G:N1	2.67	0.42
1:A:971:G:H2'	1:A:1365:G:O2'	2.19	0.42
1:A:1402:C:O2'	1:A:1403:C:H5'	2.19	0.42
1:A:1414:U:C2'	1:A:1415:G:H8	2.23	0.42
1:A:1431:C:H2'	1:A:1432:G:C5'	2.49	0.42
1:A:1443:G:H4'	1:A:1446:A:C4'	2.42	0.42
1:A:151:A:N6	1:A:171:A:C6	2.87	0.42
1:A:183:G:N3	1:A:223:U:O2'	2.51	0.42
1:A:246:A:H1'	1:A:247:G:C1'	2.48	0.42
1:A:253:U:H2'	1:A:254:G:C8	2.54	0.42
1:A:266:G:H2'	1:A:267:C:OP2	2.19	0.42
1:A:307:C:C6	1:A:307:C:O5'	2.72	0.42
1:A:383:A:OP2	1:A:383:A:H8	2.01	0.42
1:A:519:C:C2'	1:A:520:A:C5'	2.90	0.42
1:A:539:A:P	14:O:114:LYS:NZ	2.91	0.42
1:A:558:G:O5'	1:A:559:A:O3'	2.37	0.42
1:A:584:G:C2	1:A:585:G:C8	3.07	0.42
1:A:687:A:C2	1:A:704:A:C5	3.07	0.42
1:A:84:U:C2'	1:A:85:U:O4'	2.62	0.42
1:A:892:A:C2	1:A:907:A:C4	3.07	0.42
1:A:901:A:C2'	1:A:902:G:O5'	2.65	0.42
1:A:908:A:N3	1:A:909:A:N7	2.67	0.42
1:A:973:G:H3'	1:A:974:A:H5''	2.01	0.42
1:A:980:C:H1'	16:Q:19:ARG:HA	2.01	0.42
3:C:18:G:C8	3:C:18:G:OP1	2.71	0.42
3:C:34:G:C6	3:C:35:A:N7	2.87	0.42
3:D:34:G:N3	3:D:35:A:H5''	2.34	0.42
4:E:120:ALA:O	4:E:121:LEU:C	2.56	0.42
4:E:77:ALA:CB	4:E:211:ILE:HD13	2.44	0.42
4:E:55:PHE:HA	4:E:58:ILE:HG13	2.01	0.42
4:E:8:LYS:O	4:E:9:GLU:CB	2.67	0.42
5:F:112:SER:OG	5:F:115:LEU:CG	2.67	0.42
5:F:42:LEU:O	5:F:45:LYS:HB3	2.19	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:69:GLY:C	6:G:70:ILE:HG12	2.39	0.42
7:H:141:GLN:O	7:H:142:LEU:CB	2.66	0.42
7:H:65:ASN:HD21	7:H:136:MET:CE	2.32	0.42
7:H:71:LEU:CG	7:H:72:GLN:N	2.82	0.42
7:H:82:VAL:HG13	7:H:134:ALA:HB1	2.00	0.42
8:I:2:ARG:HH11	8:I:69:GLU:HB3	1.84	0.42
9:J:112:PRO:O	9:J:113:GLU:HG2	2.20	0.42
9:J:50:ILE:CD1	9:J:58:PRO:CB	2.96	0.42
9:J:76:ARG:HH12	9:J:89:MET:HG3	1.82	0.42
1:A:642:A:C5	10:K:115:SER:HA	2.54	0.42
10:K:37:ARG:O	10:K:38:ILE:C	2.57	0.42
10:K:40:ALA:HB2	10:K:45:ILE:CG2	2.49	0.42
10:K:45:ILE:HD12	10:K:61:VAL:CG2	2.48	0.42
10:K:83:ILE:HG23	10:K:83:ILE:O	2.18	0.42
11:L:33:PHE:HB3	11:L:34:ASN:H	1.71	0.42
11:L:53:VAL:HG12	11:L:53:VAL:O	2.18	0.42
11:L:66:ARG:HB3	11:L:66:ARG:HE	1.70	0.42
11:L:10:ARG:HH21	11:L:75:ASP:CG	2.22	0.42
11:L:83:ARG:HA	11:L:86:VAL:HG23	2.00	0.42
12:M:48:THR:OG1	12:M:62:HIS:CD2	2.72	0.42
13:N:99:GLN:CB	13:N:105:VAL:HG11	2.39	0.42
14:O:9:GLN:O	14:O:12:ARG:N	2.50	0.42
1:A:965:A:C2	15:P:124:PRO:HB3	2.54	0.42
15:P:13:LYS:HA	15:P:44:ARG:HE	1.80	0.42
15:P:4:ILE:O	15:P:8:GLU:HB2	2.19	0.42
16:Q:39:LEU:HB2	16:Q:44:LEU:HB2	2.01	0.42
16:Q:4:LYS:HA	16:Q:7:ILE:CD1	2.49	0.42
17:R:63:ARG:HG3	17:R:64:ARG:H	1.83	0.42
17:R:69:TYR:CZ	17:R:73:GLU:HG3	2.54	0.42
18:S:52:ASP:OD1	18:S:55:ARG:HG2	2.18	0.42
18:S:55:ARG:HH21	18:S:58:TYR:CB	2.32	0.42
18:S:58:TYR:O	18:S:59:TRP:C	2.57	0.42
19:T:82:MET:C	19:T:85:VAL:HB	2.36	0.42
20:U:71:LYS:O	20:U:75:ILE:HG13	2.19	0.42
22:W:51:GLU:HA	22:W:54:LYS:HE3	1.97	0.42
22:W:75:ASN:O	22:W:78:ALA:CB	2.60	0.42
3:D:40:C:O2	3:D:40:C:C2'	2.67	0.42
3:B:1:G:C2'	3:B:1:G:N3	2.81	0.42
12:M:13:HIS:O	12:M:13:HIS:ND1	2.52	0.42
1:A:1000:A:H2'	1:A:1001:G:H5'	2.00	0.42
1:A:1095:U:C2	1:A:1096:C:C5	3.07	0.42
1:A:1105:A:C2	1:A:1106:G:C8	3.07	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:111:G:C5'	1:A:112:G:OP2	2.67	0.42
1:A:1189:C:H2'	1:A:1190:G:H5'	2.01	0.42
1:A:120:A:C6	1:A:122:G:C2	3.08	0.42
1:A:1250:A:H2'	1:A:1251:A:O4'	2.19	0.42
1:A:1285:A:O2'	1:A:1286:A:P	2.77	0.42
1:A:1291:G:N1	1:A:1292:U:C4	2.87	0.42
1:A:1333:A:H2'	1:A:1334:G:H8	1.80	0.42
1:A:945:G:C2	1:A:1337:G:N3	2.86	0.42
1:A:174:C:OP1	1:A:197:A:H2	2.03	0.42
1:A:65:U:C6	1:A:381:C:C5	3.07	0.42
1:A:383:A:C2'	1:A:384:G:H5'	2.49	0.42
1:A:60:A:OP2	1:A:387:U:H4'	2.19	0.42
1:A:390:C:H2'	1:A:391:G:O5'	2.19	0.42
1:A:438:G:C2	1:A:495:A:C8	3.07	0.42
1:A:503:C:C2	1:A:504:C:C6	3.07	0.42
1:A:503:C:C4	1:A:504:C:C5	3.07	0.42
1:A:519:C:C5	1:A:520:A:C2	3.07	0.42
1:A:51:A:N1	1:A:353:A:C2	2.87	0.42
1:A:580:U:O2	1:A:580:U:H2'	2.19	0.42
1:A:721:G:H8	1:A:721:G:OP1	2.02	0.42
1:A:767:A:C2'	1:A:768:A:H5'	2.49	0.42
1:A:781:A:C2	1:A:782:A:H1'	2.55	0.42
1:A:880:C:H2'	1:A:881:G:O5'	2.19	0.42
1:A:89:U:C4	1:A:90:C:C5	3.07	0.42
1:A:900:A:C4	1:A:901:A:N7	2.87	0.42
1:A:953:G:O2'	1:A:954:G:C5'	2.67	0.42
1:A:958:A:O2'	1:A:959:A:H5'	2.20	0.42
1:A:962:C:C4	1:A:963:G:C5	3.07	0.42
1:A:975:A:H4'	1:A:976:G:C5'	2.50	0.42
1:A:975:A:H4'	1:A:976:G:H5'	2.00	0.42
3:C:10:G:H2'	3:C:11:C:H6	1.84	0.42
4:E:136:VAL:C	4:E:139:LYS:HG2	2.40	0.42
4:E:95:GLN:OE1	4:E:95:GLN:HA	2.19	0.42
5:F:113:ALA:HB3	5:F:114:PRO:HD3	2.01	0.42
5:F:175:LEU:O	5:F:176:HIS:O	2.37	0.42
5:F:92:ALA:O	5:F:96:GLY:N	2.47	0.42
6:G:120:LEU:O	6:G:121:VAL:C	2.57	0.42
6:G:128:VAL:CG2	6:G:133:VAL:N	2.82	0.42
6:G:13:ARG:N	6:G:32:ALA:HB2	2.34	0.42
6:G:170:VAL:HG11	6:G:174:LEU:CD1	2.49	0.42
6:G:3:ARG:HG3	6:G:118:ARG:CZ	2.49	0.42
6:G:61:LYS:HZ1	6:G:72:GLU:CD	2.22	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:H:50:GLU:O	7:H:51:VAL:C	2.57	0.42
7:H:95:ALA:H	7:H:96:PRO:CD	2.31	0.42
1:A:1346:A:N1	9:J:10:ARG:HD3	2.31	0.42
10:K:101:PRO:O	10:K:102:ARG:CG	2.67	0.42
10:K:121:ASP:HB3	10:K:122:ARG:H	1.39	0.42
13:N:31:THR:CG2	13:N:32:ILE:N	2.81	0.42
13:N:44:SER:O	13:N:47:VAL:HB	2.20	0.42
9:J:150:ALA:CA	13:N:59:TYR:CG	2.99	0.42
13:N:84:VAL:HG21	20:U:88:LYS:CE	2.48	0.42
14:O:111:LYS:O	14:O:112:ASP:C	2.57	0.42
15:P:27:LYS:CD	15:P:31:LYS:NZ	2.75	0.42
16:Q:12:ARG:HD3	16:Q:12:ARG:HA	1.83	0.42
16:Q:49:HIS:O	16:Q:50:LYS:C	2.58	0.42
1:A:668:G:C4'	17:R:48:LYS:O	2.60	0.42
19:T:22:LEU:HD12	19:T:23:VAL:N	2.34	0.42
19:T:83:ASP:O	19:T:86:GLU:HB2	2.18	0.42
19:T:97:SER:O	19:T:98:LEU:CD2	2.61	0.42
20:U:36:ASN:HD22	20:U:36:ASN:HA	1.60	0.42
21:V:71:LEU:O	21:V:72:GLY:C	2.54	0.42
22:W:75:ASN:HB2	22:W:78:ALA:HB3	2.01	0.42
1:A:342:C:C2	1:A:348:G:C2	3.06	0.42
3:B:14:A:C6	3:B:22:G:O2'	2.70	0.42
3:B:24:G:C5	3:B:25:C:C5	3.06	0.42
16:Q:9:LYS:C	16:Q:9:LYS:HD3	2.39	0.42
1:A:1080:A:N7	1:A:1081:G:C1'	2.82	0.42
1:A:1155:G:C6	1:A:1156:G:C6	3.07	0.42
1:A:1223:C:C6	1:A:1223:C:H3'	2.53	0.42
1:A:1317:C:C6	1:A:1317:C:OP1	2.72	0.42
1:A:1339:A:C3'	1:A:1340:A:H5'	2.49	0.42
1:A:1424:C:H2'	1:A:1425:U:O5'	2.18	0.42
1:A:1433:A:N1	1:A:1434:A:N3	2.67	0.42
1:A:194:C:O2'	22:W:68:LYS:NZ	2.38	0.42
1:A:217:C:C4	1:A:218:C:C5	3.07	0.42
1:A:40:C:H2'	1:A:41:G:O5'	2.20	0.42
1:A:455:C:C6	1:A:455:C:O5'	2.73	0.42
1:A:738:C:C4	1:A:739:C:N4	2.88	0.42
1:A:843:U:C3'	1:A:848:C:C5'	2.97	0.42
1:A:855:G:H2'	1:A:856:C:C5'	2.49	0.42
1:A:872:A:N1	1:A:874:G:C5	2.87	0.42
1:A:872:A:C2	1:A:874:G:N7	2.87	0.42
1:A:921:U:H2'	1:A:922:G:H8	1.83	0.42
1:A:91:C:N3	1:A:92:G:N7	2.67	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:956:U:OP2	1:A:956:U:C6	2.72	0.42
1:A:977:A:C4'	1:A:982:U:O4	2.66	0.42
3:C:18:G:C6	3:C:57:G:C6	3.08	0.42
1:A:1341:U:H5'	3:C:32:U:H5'	1.99	0.42
4:E:135:GLN:O	4:E:139:LYS:HB3	2.19	0.42
4:E:167:PRO:C	4:E:169:LYS:N	2.72	0.42
4:E:88:ALA:O	4:E:222:ILE:HD13	2.19	0.42
4:E:82:ARG:N	4:E:92:TYR:HE1	2.16	0.42
5:F:77:ILE:CD1	5:F:103:VAL:HG21	2.45	0.42
5:F:191:THR:HB	5:F:193:TYR:CE2	2.53	0.42
5:F:50:ALA:CA	5:F:72:LYS:HD2	2.49	0.42
6:G:152:SER:C	6:G:154:ASN:ND2	2.72	0.42
6:G:26:CYS:CA	6:G:31:CYS:HB3	2.40	0.42
7:H:107:ARG:HB3	7:H:107:ARG:HH11	1.84	0.42
7:H:11:ILE:CG2	7:H:12:LEU:N	2.66	0.42
7:H:124:GLY:O	7:H:126:ARG:N	2.52	0.42
7:H:144:THR:C	7:H:146:ALA:N	2.68	0.42
9:J:121:ALA:HB1	9:J:125:MET:CE	2.48	0.42
9:J:66:VAL:HG12	9:J:70:LYS:CE	2.43	0.42
10:K:118:VAL:C	10:K:119:LEU:HD22	2.40	0.42
10:K:9:MET:HE2	10:K:13:ILE:HD11	2.01	0.42
10:K:46:LYS:HZ2	10:K:64:LYS:CA	2.18	0.42
10:K:96:GLY:O	10:K:97:VAL:O	2.38	0.42
1:A:1231:G:OP2	11:L:127:LYS:HE2	2.19	0.42
13:N:60:ALA:O	13:N:61:ALA:C	2.58	0.42
13:N:71:LYS:O	13:N:74:ALA:CB	2.62	0.42
14:O:53:ARG:NH2	14:O:92:ASP:HB3	2.34	0.42
14:O:7:ILE:O	14:O:8:ASN:C	2.58	0.42
15:P:83:ASP:O	15:P:84:ILE:O	2.37	0.42
16:Q:4:LYS:O	16:Q:6:LEU:N	2.53	0.42
17:R:29:VAL:HG21	17:R:81:LEU:CD1	2.38	0.42
18:S:57:ARG:O	18:S:60:LEU:N	2.52	0.42
19:T:19:VAL:HG21	19:T:73:VAL:HG21	2.01	0.42
20:U:59:SER:O	20:U:62:GLU:N	2.51	0.42
21:V:20:LEU:C	21:V:21:GLU:HG2	2.39	0.42
22:W:61:SER:O	22:W:65:LYS:HG2	2.19	0.42
1:A:194:C:H4'	22:W:68:LYS:HE2	2.00	0.42
1:A:263:A:H5''	22:W:75:ASN:HD21	1.83	0.42
3:D:7:A:N6	3:D:49:C:C4	2.87	0.42
3:D:55:U:C3'	3:D:55:U:C6	3.02	0.42
2:1:5:U:O2	2:1:6:U:H5	2.01	0.42
1:A:513:C:O5'	1:A:513:C:H6	2.02	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1048:G:O2'	1:A:1049:U:O3'	2.23	0.42
1:A:1057:G:C2'	1:A:1058:G:O5'	2.67	0.42
1:A:1059:C:C4	1:A:1060:C:C5	3.06	0.42
1:A:1095:U:N3	1:A:1096:C:C4	2.87	0.42
1:A:1116:C:C2	1:A:1117:G:C8	3.07	0.42
1:A:1243:C:N3	1:A:1244:C:C5	2.87	0.42
1:A:1297:C:H5'	1:A:1298:C:OP1	2.19	0.42
1:A:129(A):G:C4'	1:A:130:A:O5'	2.63	0.42
1:A:134:A:O5'	1:A:134:A:C8	2.72	0.42
1:A:1352:C:N3	1:A:1371:G:C6	2.87	0.42
1:A:1449:C:H2'	1:A:1450:U:C5'	2.50	0.42
1:A:1405:G:O2'	1:A:1519:A:H5'	2.19	0.42
1:A:15:G:N3	1:A:16:A:C8	2.88	0.42
1:A:186(A):C:O2'	1:A:186(B):C:H5'	2.19	0.42
1:A:129(A):G:C2	1:A:191(A):G:C8	3.07	0.42
1:A:193:C:N3	1:A:194:C:N4	2.67	0.42
1:A:254:G:N2	19:T:16:GLN:OE1	2.53	0.42
1:A:254:G:N3	1:A:255:G:C8	2.88	0.42
1:A:270:A:C6	1:A:271:C:C4	3.07	0.42
1:A:293:G:C2	1:A:294:U:C6	3.07	0.42
1:A:323:U:C3'	1:A:323:U:C6	3.01	0.42
1:A:408:A:C4	1:A:409:G:N7	2.88	0.42
1:A:437:U:O2'	6:G:123:HIS:ND1	2.44	0.42
1:A:44:G:C2	1:A:45:U:C1'	3.02	0.42
1:A:509:A:N3	1:A:543:C:O2'	2.39	0.42
1:A:540:G:C6	1:A:541:G:C6	3.07	0.42
1:A:643:C:N3	1:A:644:G:C8	2.86	0.42
1:A:740:U:OP2	17:R:2:PRO:HB3	2.20	0.42
1:A:823:G:C6	1:A:878:G:C6	3.08	0.42
1:A:864:A:N6	1:A:865:A:N6	2.67	0.42
1:A:874:G:H2'	1:A:875:C:H5'	2.01	0.42
1:A:901:A:H2'	1:A:902:G:O4'	2.19	0.42
1:A:938:A:H2'	1:A:939:G:O5'	2.19	0.42
3:B:33:U:N3	3:B:35:A:H5''	2.32	0.42
4:E:177:ALA:CB	4:E:184:VAL:HG22	2.49	0.42
4:E:218:ALA:C	4:E:220:ASP:N	2.71	0.42
4:E:33:TYR:CD2	4:E:43:ASP:HB2	2.53	0.42
4:E:92:TYR:O	4:E:152:PHE:CA	2.67	0.42
5:F:11:ARG:CA	5:F:11:ARG:NE	2.82	0.42
5:F:176:HIS:HB3	5:F:177:THR:H	1.54	0.42
5:F:180:ALA:O	5:F:182:ILE:HG13	2.19	0.42
5:F:34:LEU:O	5:F:38:ARG:HG2	2.19	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:40:ARG:C	5:F:43:LEU:HB3	2.38	0.42
5:F:58:GLU:O	5:F:65:ALA:N	2.51	0.42
5:F:95:THR:HB	5:F:97:LYS:HE2	2.01	0.42
5:F:64:VAL:HB	5:F:99:VAL:CG1	2.49	0.42
6:G:118:ARG:HG3	6:G:136:PRO:HB3	1.99	0.42
6:G:32:ALA:HA	6:G:37:PRO:HA	2.02	0.42
6:G:30:LYS:HZ3	6:G:35:ARG:CD	2.33	0.42
6:G:77:ASN:O	6:G:78:LEU:C	2.57	0.42
7:H:89:ILE:HD11	7:H:122:GLU:OE2	2.19	0.42
7:H:141:GLN:C	7:H:142:LEU:CG	2.87	0.42
7:H:50:GLU:CB	7:H:53:LEU:HD23	2.48	0.42
9:J:72:ARG:NH2	9:J:138:LYS:NZ	2.63	0.42
9:J:78:ARG:C	9:J:84:ASN:HA	2.25	0.42
10:K:120:THR:O	10:K:123:GLU:OE1	2.38	0.42
11:L:27:THR:CG2	11:L:30:GLY:H	2.32	0.42
13:N:114:VAL:CG2	13:N:115:PRO:CD	2.98	0.42
13:N:87:THR:HG22	13:N:91:ARG:CZ	2.49	0.42
14:O:82:VAL:HG12	14:O:105:TYR:HD1	1.84	0.42
14:O:39:VAL:HG11	14:O:41:ARG:HH22	1.83	0.42
14:O:78:GLN:O	14:O:79:GLU:C	2.55	0.42
14:O:9:GLN:O	14:O:10:LEU:C	2.57	0.42
15:P:56:LEU:H	15:P:56:LEU:HG	1.53	0.42
15:P:60:VAL:HG13	15:P:64:TRP:CB	2.46	0.42
1:A:765:G:OP1	17:R:50:HIS:CD2	2.72	0.42
17:R:8:LYS:HE2	17:R:9:GLN:NE2	2.35	0.42
18:S:35:LYS:HZ2	18:S:37:GLY:CA	2.32	0.42
1:A:255:G:OP1	19:T:69:LYS:CE	2.67	0.42
19:T:43:LEU:HD11	19:T:69:LYS:HB2	2.00	0.42
21:V:35:SER:O	21:V:37:ARG:N	2.53	0.42
21:V:41:VAL:O	21:V:44:MET:HB2	2.19	0.42
1:A:1018:C:O2'	1:A:1019:C:H5'	2.19	0.42
14:O:43:VAL:HG12	14:O:44:THR:N	2.33	0.42
1:A:1167:A:OP1	1:A:1167:A:C8	2.72	0.42
1:A:1073:U:C2	1:A:1074:G:C8	3.07	0.42
1:A:60:A:N6	1:A:107:G:O2'	2.48	0.42
1:A:1156:G:N3	1:A:1179:A:N1	2.67	0.42
1:A:1231:G:H2'	1:A:1232:U:H6	1.84	0.42
1:A:1305:G:OP1	23:X:2:GLY:CA	2.66	0.42
1:A:1307:U:C2	1:A:1308:U:C6	3.07	0.42
1:A:1320:C:C2	21:V:72:GLY:HA3	2.55	0.42
1:A:1348:U:C2	1:A:1349:A:C8	3.08	0.42
1:A:1392:G:H2'	1:A:1393:U:O4'	2.18	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1397:C:N4	2:1:46:U:C5	2.87	0.42
1:A:1476:G:H2'	1:A:1477:C:H6	1.79	0.42
1:A:20:U:N3	1:A:21:G:C5	2.88	0.42
1:A:315:A:N1	1:A:330:C:N1	2.67	0.42
1:A:51:A:N1	1:A:353:A:N1	2.67	0.42
1:A:592:G:H2'	1:A:593:G:C5'	2.45	0.42
1:A:61:G:C6	1:A:107:G:O6	2.72	0.42
1:A:627:G:C2'	1:A:628:G:O5'	2.68	0.42
1:A:652:U:C5	1:A:752:G:C2	3.08	0.42
1:A:698:G:C2	1:A:699:C:C2	3.08	0.42
1:A:720:C:H4'	20:U:50:ILE:CG2	2.49	0.42
1:A:723:U:H6	2:1:30:U:H4'	1.84	0.42
1:A:763:G:C2	1:A:764:C:C6	3.07	0.42
1:A:783:C:H2'	1:A:784:C:H6	1.84	0.42
1:A:80:G:H2'	1:A:81:G:C1'	2.45	0.42
1:A:828:A:H8	1:A:829:G:C8	2.36	0.42
1:A:894:G:HO2'	1:A:895:G:H5'	1.82	0.42
1:A:906:G:H5'	1:A:907:A:OP2	2.20	0.42
1:A:993:G:N2	1:A:995:C:N4	2.68	0.42
3:C:40:C:O2	3:C:40:C:H2'	2.19	0.42
3:C:49:C:C2	3:C:50:U:C5	3.08	0.42
4:E:113:HIS:ND1	4:E:116:GLU:OE1	2.51	0.42
4:E:132:LYS:NZ	4:E:132:LYS:CB	2.81	0.42
4:E:204:ASN:HD22	4:E:205:ASP:N	2.17	0.42
5:F:66:VAL:O	5:F:102:ASN:HB2	2.19	0.42
5:F:182:ILE:HD11	5:F:203:PHE:CE1	2.54	0.42
5:F:54:ARG:O	5:F:68:VAL:HG13	2.19	0.42
6:G:125:HIS:HB3	6:G:152:SER:CB	2.37	0.42
6:G:146:ILE:CD1	6:G:146:ILE:C	2.88	0.42
6:G:181:MET:HE3	6:G:181:MET:HB2	1.74	0.42
6:G:188:LEU:O	6:G:189:PRO:C	2.53	0.42
6:G:207:TYR:O	6:G:208:SER:C	2.57	0.42
6:G:51:PRO:O	6:G:51:PRO:HG2	2.19	0.42
7:H:53:LEU:O	7:H:57:LYS:CB	2.68	0.42
1:A:19:C:OP1	7:H:86:ALA:HB1	2.20	0.42
8:I:46:ARG:NH2	20:U:37:VAL:HG21	2.35	0.42
8:I:78:GLU:HA	8:I:81:ILE:HD12	2.02	0.42
10:K:97:VAL:HG13	10:K:98:LYS:HZ1	1.82	0.42
1:A:1347:G:H3'	11:L:107:ARG:HB3	2.02	0.42
11:L:10:ARG:O	11:L:11:LYS:C	2.56	0.42
11:L:8:GLY:O	11:L:15:ALA:O	2.37	0.42
13:N:59:TYR:O	13:N:62:GLN:CD	2.58	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:N:83:ILE:N	13:N:83:ILE:CD1	2.82	0.42
13:N:65:ALA:CB	13:N:98:LEU:CD2	2.94	0.42
13:N:99:GLN:O	13:N:102:GLY:N	2.52	0.42
14:O:105:TYR:HB2	14:O:106:ASP:H	1.57	0.42
14:O:52:LEU:N	14:O:52:LEU:CD2	2.79	0.42
15:P:19:LEU:HD21	15:P:30:ALA:HA	2.02	0.42
15:P:52:GLU:HA	15:P:55:ARG:CZ	2.48	0.42
15:P:81:LEU:O	15:P:84:ILE:HG13	2.19	0.42
18:S:19:ILE:O	18:S:36:ILE:O	2.37	0.42
1:A:760:G:C2'	19:T:103:GLY:HA3	2.49	0.42
14:O:11:VAL:CG2	19:T:32:TYR:HD1	2.32	0.42
19:T:62:SER:HB3	19:T:72:ARG:CD	2.48	0.42
1:A:255:G:OP1	19:T:69:LYS:HE2	2.18	0.42
20:U:43:PHE:HD2	20:U:56:THR:HG22	1.84	0.42
20:U:60:GLY:C	20:U:64:ARG:NH1	2.73	0.42
21:V:25:LYS:C	21:V:25:LYS:CD	2.82	0.42
21:V:51:VAL:HG23	21:V:60:VAL:CG2	2.49	0.42
3:D:7:A:C6	3:D:49:C:C6	3.07	0.42
3:B:14:A:N6	3:B:22:G:O2'	2.52	0.42
2:1:37:U:C2	2:1:38:U:O4	2.73	0.42
1:A:1088:G:N2	1:A:1089:G:H1'	2.34	0.42
1:A:1261:A:C2	1:A:1262:C:N3	2.88	0.42
1:A:1326:C:C2	1:A:1327:C:C5	3.07	0.42
1:A:1331:G:C4'	1:A:1331:G:OP1	2.68	0.42
1:A:1408:A:H2	1:A:1495:U:C5	2.28	0.42
1:A:1539:C:C4	2:1:26:G:C2	3.08	0.42
1:A:248:C:H4'	1:A:283:C:H1'	2.01	0.42
1:A:283:C:C2	1:A:284:G:C8	3.07	0.42
1:A:293:G:N3	1:A:294:U:C6	2.88	0.42
1:A:299:G:C4	1:A:300:A:N6	2.88	0.42
1:A:425:G:H2'	1:A:426:G:H5'	2.01	0.42
1:A:41:G:C5	1:A:42:G:N7	2.88	0.42
1:A:723:U:C2'	1:A:723:U:O2	2.68	0.42
1:A:724:G:N2	1:A:725:G:N9	2.68	0.42
1:A:854:G:OP2	1:A:871:U:O2	2.38	0.42
1:A:965:A:N6	15:P:126:LYS:OXT	2.52	0.42
1:A:996:A:N1	1:A:997:U:C4	2.88	0.42
3:C:10:G:C6	3:C:11:C:N4	2.88	0.42
4:E:138:LEU:HG	4:E:138:LEU:H	1.68	0.42
4:E:140:HIS:C	4:E:143:GLU:HB3	2.39	0.42
4:E:95:GLN:CD	4:E:148:TYR:HB3	2.35	0.42
4:E:84:GLU:OE2	4:E:84:GLU:CA	2.68	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:29:TYR:CD2	5:F:29:TYR:O	2.60	0.42
6:G:101:LEU:HD21	6:G:121:VAL:CG1	2.50	0.42
7:H:129:ILE:O	7:H:132:ALA:N	2.53	0.42
7:H:109:ILE:HD11	7:H:136:MET:SD	2.59	0.42
7:H:96:PRO:C	7:H:98:THR:H	2.17	0.42
9:J:101:LEU:O	9:J:102:ARG:C	2.58	0.42
9:J:76:ARG:O	9:J:156:TRP:CZ2	2.72	0.42
9:J:38:LEU:CA	9:J:41:ARG:HG3	2.45	0.42
9:J:41:ARG:HH11	9:J:41:ARG:CG	2.32	0.42
9:J:51:GLN:HE22	9:J:58:PRO:CD	2.33	0.42
10:K:111:ILE:HD12	10:K:136:GLU:HA	2.00	0.42
10:K:67:PRO:C	10:K:68:ARG:O	2.56	0.42
10:K:69:ARG:HG3	10:K:69:ARG:NH1	2.34	0.42
11:L:33:PHE:CE2	11:L:43:ALA:O	2.73	0.42
11:L:40:LEU:HB3	11:L:42:ARG:CB	2.29	0.42
11:L:17:VAL:HG11	11:L:81:ILE:HG12	2.02	0.42
1:A:969:A:C2'	12:M:55:LYS:HZ1	2.29	0.42
12:M:16:LEU:HD12	12:M:70:ARG:HG2	2.00	0.42
13:N:42:TRP:CE3	13:N:43:SER:CA	2.91	0.42
13:N:50:TYR:CE1	13:N:60:ALA:HB2	2.54	0.42
14:O:23:LYS:CA	14:O:23:LYS:HE3	2.15	0.42
14:O:33:ARG:O	14:O:84:LEU:CG	2.62	0.42
14:O:46:LYS:HZ3	14:O:94:PRO:CG	2.32	0.42
14:O:84:LEU:CD2	14:O:84:LEU:C	2.83	0.42
1:A:755:G:OP2	17:R:65:ARG:HD2	2.19	0.42
17:R:65:ARG:O	17:R:66:LEU:C	2.57	0.42
17:R:76:GLU:C	17:R:78:TYR:N	2.72	0.42
18:S:32:TYR:O	18:S:33:ILE:C	2.57	0.42
18:S:35:LYS:HD2	18:S:35:LYS:C	2.38	0.42
19:T:17:LYS:HE3	19:T:48:GLU:CA	2.45	0.42
20:U:22:VAL:C	20:U:24:ALA:N	2.71	0.42
20:U:80:PRO:O	20:U:82:THR:N	2.53	0.42
22:W:22:ARG:O	22:W:23:ARG:C	2.57	0.42
22:W:49:ALA:HB3	22:W:99:LEU:CG	2.49	0.42
3:B:20:U:H3'	3:B:21:A:H5''	1.99	0.42
3:D:2:C:H2'	3:D:3:C:H6	1.80	0.42
2:1:39:U:H3'	2:1:39:U:H6	1.85	0.42
1:A:101:A:N3	1:A:102:G:C8	2.88	0.42
1:A:1004:A:C3'	1:A:1025:U:C4	2.89	0.42
1:A:1053:G:O3'	1:A:1054:C:H4'	2.19	0.42
1:A:1103:C:C2	1:A:1104:G:C8	3.07	0.42
1:A:1130:A:C6	1:A:1146:A:N1	2.88	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1130:A:C2	1:A:1146:A:C2	3.07	0.42
1:A:113:G:C5	1:A:114:U:C4	3.07	0.42
1:A:1183:A:C2'	1:A:1184:G:OP1	2.68	0.42
1:A:1324:A:C2	1:A:1325:C:C6	3.07	0.42
1:A:1331:G:HO2'	1:A:1332:A:P	2.43	0.42
1:A:1386:G:O2'	1:A:1387:G:C5'	2.68	0.42
1:A:1455:G:H5''	22:W:31:SER:OG	2.19	0.42
1:A:1494:G:C2	1:A:1495:U:C4	3.08	0.42
1:A:151:A:C6	1:A:152:A:N3	2.87	0.42
1:A:258:G:C6	1:A:259:G:C5	3.08	0.42
1:A:265:G:C8	1:A:267:C:C4	3.08	0.42
1:A:265:G:H5'	19:T:64:PRO:C	2.40	0.42
1:A:7:G:H1'	1:A:298:A:C4	2.53	0.42
1:A:373:A:C5	1:A:482:A:N7	2.88	0.42
1:A:390:C:H2'	1:A:391:G:C8	2.46	0.42
1:A:392:G:C4	1:A:393:A:C8	3.08	0.42
1:A:576:G:N7	1:A:881:G:O4'	2.53	0.42
1:A:66:G:H2'	1:A:67:C:O5'	2.20	0.42
1:A:66:G:H8	1:A:66:G:P	2.42	0.42
1:A:680:C:C2	1:A:711:G:C2	3.08	0.42
1:A:701:C:H5''	1:A:702:A:C3'	2.49	0.42
1:A:577:G:C1'	1:A:816:A:C2	3.03	0.42
1:A:831:U:H2'	1:A:832:C:O4'	2.18	0.42
1:A:848:C:O2'	1:A:849:C:C5'	2.66	0.42
1:A:865:A:C5	1:A:866:C:O2	2.73	0.42
1:A:924:C:H2'	1:A:925:G:O5'	2.19	0.42
1:A:979:C:C5	1:A:980:C:C5	3.08	0.42
4:E:163:PHE:CD1	4:E:185:ILE:O	2.72	0.42
4:E:187:LEU:CD1	4:E:187:LEU:C	2.81	0.42
4:E:187:LEU:HB2	4:E:201:ILE:HG22	2.02	0.42
4:E:23:ARG:H	4:E:23:ARG:HG3	1.46	0.42
5:F:120:VAL:HG13	5:F:133:ALA:HB1	2.00	0.42
5:F:33:LEU:HD23	5:F:36:ASP:HB3	2.01	0.42
5:F:83:ARG:C	5:F:87:LEU:HG	2.40	0.42
6:G:126:ILE:H	6:G:132:ARG:HD2	1.84	0.42
6:G:179:GLU:C	6:G:181:MET:H	2.21	0.42
6:G:73:ARG:O	6:G:74:GLN:C	2.58	0.42
6:G:88:VAL:O	6:G:92:VAL:HG23	2.20	0.42
6:G:97:LEU:O	6:G:103:ASN:ND2	2.49	0.42
7:H:100:VAL:HG11	7:H:107:ARG:CG	2.34	0.42
7:H:152:ARG:O	7:H:152:ARG:HD3	2.20	0.42
7:H:34:VAL:HG23	7:H:62:ALA:HB1	2.02	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:I:21:LEU:HD12	8:I:24:GLU:OE1	2.19	0.42
9:J:88:PRO:HD2	9:J:152:ALA:CA	2.49	0.42
9:J:152:ALA:C	9:J:154:TYR:H	2.22	0.42
9:J:12:LEU:HD11	9:J:21:VAL:HB	2.02	0.42
9:J:93:PRO:O	9:J:96:GLN:N	2.53	0.42
10:K:104:ARG:HB2	10:K:107:LEU:HG	2.02	0.42
10:K:5:PRO:O	10:K:8:ASP:CB	2.54	0.42
11:L:97:LYS:CE	11:L:102:LEU:HD13	2.48	0.42
12:M:16:LEU:CD2	12:M:16:LEU:H	2.33	0.42
13:N:71:LYS:HG3	13:N:72:ALA:N	2.35	0.42
1:A:880:C:OP2	14:O:9:GLN:NE2	2.52	0.42
15:P:96:LEU:C	15:P:110:ARG:HG2	2.40	0.42
12:M:49:VAL:CG1	16:Q:41:ARG:HB2	2.49	0.42
5:F:40:ARG:HE	16:Q:52:GLN:NE2	2.18	0.42
17:R:66:LEU:O	17:R:67:LEU:C	2.58	0.42
19:T:104:LYS:CD	19:T:105:ALA:N	2.79	0.42
19:T:53:LEU:CG	19:T:53:LEU:O	2.66	0.42
19:T:60:ILE:HG12	19:T:61:GLU:N	2.34	0.42
20:U:18:ARG:HH21	20:U:21:LYS:CG	2.33	0.42
20:U:58:LEU:HD13	20:U:66:LEU:CD2	2.49	0.42
21:V:22:LEU:CA	21:V:25:LYS:NZ	2.83	0.42
1:A:164:U:C2'	1:A:164:U:O2	2.64	0.42
1:A:1164:G:C6	1:A:1165:C:C4	3.07	0.42
3:B:57:G:N3	3:B:57:G:H2'	2.34	0.42
3:B:15:G:C4	3:B:59:U:O2	2.73	0.42
1:A:443:C:N1	1:A:492:G:N2	2.67	0.42
22:W:8:ARG:NH1	22:W:8:ARG:CB	2.82	0.42
1:A:1537:U:C2	1:A:1538:C:C5	3.08	0.42
3:D:73:A:C2'	3:D:74:C:OP1	2.68	0.42
4:E:228:GLY:O	4:E:230:VAL:HG23	2.19	0.42
1:A:1001:G:C8	1:A:1001:G:H3'	2.55	0.42
1:A:1084:G:OP1	1:A:1086:U:C1'	2.68	0.42
1:A:1127:G:N2	1:A:1147:C:N4	2.67	0.42
1:A:1262:C:H6	1:A:1262:C:O5'	2.02	0.42
1:A:1268:A:O2'	1:A:1269:A:O5'	2.38	0.42
1:A:1298:C:O2	1:A:1298:C:C2'	2.59	0.42
1:A:1325:C:H2'	1:A:1326:C:C6	2.54	0.42
1:A:1326:C:OP1	23:X:17:THR:OG1	2.23	0.42
1:A:1324:A:C4'	1:A:1362:C:H4'	2.48	0.42
1:A:1404:C:C2	1:A:1405:G:C8	3.08	0.42
1:A:1433:A:C2'	1:A:1434:A:H5'	2.50	0.42
1:A:1476:G:C2	1:A:1477:C:C4	3.07	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1508:G:HO2'	1:A:1509:C:H5'	1.85	0.42
1:A:1534:A:C2	1:A:1535:C:C6	3.08	0.42
1:A:236:G:C2'	1:A:237:C:H6	2.33	0.42
1:A:278:G:N2	1:A:279:A:N6	2.67	0.42
1:A:35:G:C5	1:A:36:C:C5	3.08	0.42
1:A:44:G:C2	1:A:399:G:C2	3.08	0.42
1:A:421:U:O2	5:F:127:ARG:CZ	2.68	0.42
1:A:424:G:O5'	1:A:424:G:H8	2.02	0.42
1:A:42:G:C4	1:A:43:C:C5	3.08	0.42
1:A:450:G:H3'	1:A:481:G:H1	1.84	0.42
1:A:573:A:C2'	1:A:574:A:C8	2.92	0.42
1:A:578:C:C6	1:A:578:C:H3'	2.55	0.42
1:A:589:C:H1'	1:A:653:A:N6	2.35	0.42
1:A:730:G:N7	1:A:731:G:C1'	2.78	0.42
1:A:748:C:O2'	1:A:749:C:O4'	2.38	0.42
1:A:78:G:C6	1:A:79:G:N7	2.88	0.42
1:A:843:U:H3'	1:A:848:C:O4'	2.19	0.42
1:A:879:C:N3	1:A:880:C:C5	2.88	0.42
1:A:821:G:C6	1:A:880:C:N3	2.88	0.42
1:A:953:G:N1	1:A:1229:A:C6	2.88	0.42
3:D:32:U:H1'	9:J:86:GLN:HE22	1.84	0.42
4:E:125:PRO:C	4:E:127:ILE:HG13	2.40	0.42
4:E:119:GLU:OE1	4:E:142:LEU:HD21	2.18	0.42
4:E:171:ALA:O	4:E:174:VAL:CB	2.63	0.42
4:E:189:ASP:HB2	4:E:205:ASP:CG	2.40	0.42
4:E:207:ALA:O	4:E:208:ILE:C	2.58	0.42
4:E:20:GLU:O	4:E:39:ILE:CG1	2.64	0.42
4:E:43:ASP:O	4:E:44:LEU:O	2.38	0.42
4:E:69:LEU:CD1	4:E:69:LEU:C	2.87	0.42
5:F:12:LEU:HD22	16:Q:58:LYS:HB2	2.01	0.42
5:F:129:ALA:CB	5:F:132:ARG:HD2	2.49	0.42
5:F:12:LEU:HD11	5:F:18:TRP:CZ2	2.55	0.42
5:F:36:ASP:OD2	5:F:36:ASP:O	2.36	0.42
5:F:40:ARG:O	5:F:44:GLU:HG3	2.19	0.42
5:F:74:GLY:C	5:F:76:VAL:N	2.71	0.42
6:G:181:MET:O	6:G:181:MET:HE2	2.19	0.42
6:G:31:CYS:O	6:G:33:MET:SD	2.78	0.42
6:G:96:LEU:O	6:G:97:LEU:C	2.58	0.42
7:H:109:ILE:CD1	7:H:136:MET:SD	3.08	0.42
7:H:33:VAL:C	7:H:34:VAL:CG2	2.87	0.42
7:H:83:GLU:HG2	7:H:88:LYS:HE2	2.02	0.42
8:I:62:TRP:CD1	20:U:35:ARG:NH2	2.88	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:I:97:PHE:CD2	20:U:31:LEU:HD22	2.54	0.42
9:J:49:ILE:HD12	9:J:49:ILE:N	2.34	0.42
9:J:75:VAL:HG13	9:J:87:VAL:N	2.35	0.42
9:J:77:SER:OG	9:J:86:GLN:OE1	2.37	0.42
10:K:104:ARG:C	10:K:106:GLY:N	2.73	0.42
10:K:109:ILE:HG12	10:K:137:VAL:C	2.40	0.42
10:K:35:ILE:HD13	10:K:35:ILE:N	2.35	0.42
10:K:46:LYS:NZ	10:K:65:TYR:H	2.11	0.42
11:L:121:ARG:NH1	11:L:121:ARG:CG	2.81	0.42
11:L:17:VAL:HG11	11:L:81:ILE:CA	2.48	0.42
11:L:33:PHE:CZ	11:L:46:ALA:HB3	2.54	0.42
11:L:98:PRO:O	11:L:100:GLY:N	2.51	0.42
12:M:52:GLY:O	12:M:53:PRO:C	2.57	0.42
12:M:47:PHE:HZ	12:M:65:LEU:CB	2.33	0.42
13:N:54:ARG:HH11	13:N:54:ARG:CG	2.22	0.42
14:O:82:VAL:HG12	14:O:105:TYR:CD1	2.55	0.42
14:O:61:THR:O	14:O:62:SER:CB	2.68	0.42
1:A:912:C:OP1	14:O:94:PRO:HG3	2.19	0.42
15:P:19:LEU:HB2	15:P:25:ILE:HG21	2.00	0.42
15:P:78:ILE:C	15:P:81:LEU:HD13	2.39	0.42
18:S:9:PHE:CE2	18:S:18:ARG:HG3	2.52	0.42
21:V:33:THR:HG21	21:V:49:ILE:CD1	2.43	0.42
22:W:72:LEU:HD13	22:W:77:ALA:HA	2.02	0.42
22:W:74:LYS:N	22:W:74:LYS:HD3	2.35	0.42
1:A:131:C:C5	1:A:232:G:N2	2.88	0.42
3:D:43:C:C2	3:D:44:G:C8	3.07	0.42
1:A:513:C:N4	1:A:514:C:N4	2.68	0.42
1:A:1066:C:H5''	1:A:1067:A:P	2.60	0.42
1:A:1084:G:H2'	1:A:1085:U:H6	1.77	0.42
1:A:1305:G:OP2	1:A:1305:G:O4'	2.38	0.42
1:A:130:A:C2	1:A:264:U:H6	2.38	0.42
1:A:1410:G:N2	1:A:1411:C:C2	2.88	0.42
1:A:1475:G:H2'	1:A:1476:G:H8	1.85	0.42
1:A:1481:U:C2'	1:A:1482:G:C8	2.96	0.42
1:A:102:G:N3	1:A:151:A:C2	2.88	0.42
1:A:188:U:C2'	1:A:189:U:O5'	2.68	0.42
1:A:221:C:C2	1:A:222:U:C5	3.08	0.42
1:A:132:C:C2	1:A:231:G:C2	3.04	0.42
1:A:24:U:O2'	1:A:25:C:H5'	2.20	0.42
1:A:50:A:H2	1:A:360:A:C2'	2.32	0.42
1:A:377:G:H2'	1:A:378:G:H8	1.84	0.42
1:A:403:C:H2'	1:A:404:U:C6	2.55	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:428:G:O2'	1:A:429:U:O5'	2.36	0.42
1:A:483:C:H3'	1:A:483:C:C6	2.54	0.42
1:A:50:A:C2	1:A:360:A:H2'	2.54	0.42
1:A:562:C:O2'	14:O:15:ARG:CG	2.68	0.42
1:A:632:A:O2'	1:A:633:G:H5'	2.19	0.42
1:A:697:U:C3'	1:A:698:G:H8	2.32	0.42
1:A:744:C:H4'	1:A:852:G:O2'	2.20	0.42
1:A:713:G:H22	1:A:777:A:H1'	1.82	0.42
1:A:812:C:O2	1:A:813:U:C5	2.67	0.42
1:A:835:U:O2	1:A:852:G:N2	2.53	0.42
1:A:895:G:C2	1:A:896:C:C4	3.07	0.42
1:A:972:C:O2	1:A:972:C:C2'	2.68	0.42
1:A:993:G:N2	1:A:1046:A:N3	2.68	0.42
3:C:34:G:N3	3:C:35:A:C8	2.88	0.42
3:C:15:G:N2	3:C:60:U:O2	2.53	0.42
3:C:75:C:O3'	3:C:76:A:O3'	2.38	0.42
4:E:169:LYS:NZ	4:E:170:GLU:HB2	2.35	0.42
4:E:55:PHE:HD2	4:E:221:LEU:HB2	1.85	0.42
4:E:59:GLU:HA	4:E:221:LEU:HD11	2.01	0.42
4:E:20:GLU:O	4:E:40:HIS:HB2	2.20	0.42
4:E:49:GLU:O	4:E:50:GLU:C	2.56	0.42
4:E:80:ILE:HD12	4:E:208:ILE:CD1	2.50	0.42
5:F:138:VAL:HG12	5:F:149:ALA:HB3	2.01	0.42
5:F:147:LYS:HE3	5:F:147:LYS:HA	2.02	0.42
5:F:186:PHE:CD1	5:F:186:PHE:C	2.90	0.42
5:F:70:VAL:HG12	5:F:71:ALA:N	2.31	0.42
6:G:105:VAL:HB	6:G:117:ALA:HB1	2.01	0.42
6:G:78:LEU:O	6:G:81:GLU:HB3	2.19	0.42
7:H:131:ILE:HG22	7:H:132:ALA:N	2.33	0.42
8:I:50:TYR:N	8:I:50:TYR:CD2	2.87	0.42
8:I:1:MET:HE2	8:I:68:PRO:HG3	1.97	0.42
9:J:71:PRO:CD	9:J:96:GLN:HG3	2.50	0.42
10:K:102:ARG:HH11	10:K:102:ARG:CG	2.32	0.42
10:K:85:ARG:HD2	10:K:86:ILE:H	1.85	0.42
10:K:92:ARG:CG	10:K:92:ARG:NH1	2.78	0.42
11:L:7:THR:CG2	11:L:9:ARG:NH1	2.82	0.42
13:N:80:VAL:N	13:N:104:GLN:HE21	2.17	0.42
14:O:14:GLY:O	14:O:15:ARG:HG3	2.19	0.42
1:A:950:U:OP2	15:P:102:ARG:NH2	2.53	0.42
1:A:1228:C:O4'	15:P:117:VAL:HG23	2.20	0.42
15:P:69:GLU:OE1	15:P:69:GLU:O	2.37	0.42
15:P:91:ARG:O	15:P:96:LEU:CD2	2.68	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:Q:24:CYS:HA	16:Q:38:GLY:O	2.19	0.42
19:T:76:LEU:O	19:T:76:LEU:HD23	2.20	0.42
1:A:958:A:N3	21:V:55:LYS:HB2	2.34	0.42
22:W:59:ALA:C	22:W:61:SER:N	2.72	0.42
3:D:58:A:O2'	3:D:60:U:O4	2.38	0.42
1:A:343:U:O2'	1:A:344:A:O5'	2.26	0.42
2:1:41:U:H2'	2:1:42:U:C6	2.55	0.42
1:A:1003:G:OP2	1:A:1004:A:C2	2.73	0.42
1:A:1076:C:O2'	1:A:1077:G:H5'	2.19	0.42
1:A:112:G:H5'	1:A:389:A:C4'	2.30	0.42
1:A:1175:G:N1	1:A:1176:A:C6	2.88	0.42
1:A:1250:A:N7	1:A:1251:A:C5	2.88	0.42
1:A:1320:C:H1'	21:V:73:GLU:HB3	2.02	0.42
1:A:147:G:C6	1:A:148:G:C5	3.08	0.42
1:A:148:G:H1	1:A:174:C:N4	2.09	0.42
1:A:1394:A:C8	1:A:1501:C:H1'	2.50	0.42
1:A:1511:G:C5	1:A:1512:U:C5	3.08	0.42
1:A:222:U:C2'	1:A:223:U:O5'	2.68	0.42
1:A:255:G:C6	1:A:256:U:C4	3.08	0.42
1:A:319:G:H2'	1:A:320:C:H5'	2.01	0.42
1:A:324:G:OP1	22:W:22:ARG:HB3	2.20	0.42
1:A:409:G:OP2	6:G:22:LYS:HE2	2.20	0.42
1:A:416:G:C2'	1:A:417:C:C6	2.89	0.42
1:A:451:A:HO2'	1:A:452:A:C1'	2.32	0.42
1:A:51:A:H4'	1:A:52:G:H5''	2.01	0.42
1:A:570:G:N2	1:A:873:A:H61	2.18	0.42
1:A:610:G:C2'	1:A:611:A:C5'	2.96	0.42
1:A:62:U:H2'	1:A:63:C:C6	2.55	0.42
1:A:675:A:C2'	1:A:676:A:C8	2.99	0.42
1:A:587:G:N3	1:A:755:G:C6	2.88	0.42
1:A:776:G:N2	1:A:802:A:OP2	2.53	0.42
1:A:880:C:C2'	1:A:881:G:O5'	2.68	0.42
1:A:942:G:N2	1:A:943:U:C2	2.88	0.42
1:A:947:G:O2'	1:A:948:C:C5'	2.61	0.42
1:A:980:C:C5	1:A:981:U:N3	2.87	0.42
3:C:18:G:N2	3:C:58:A:C8	2.88	0.42
4:E:114:ARG:HG3	4:E:115:LEU:N	2.35	0.42
4:E:114:ARG:O	4:E:118:LEU:CB	2.68	0.42
4:E:118:LEU:O	4:E:121:LEU:N	2.53	0.42
4:E:126:GLU:O	4:E:127:ILE:O	2.37	0.42
4:E:185:ILE:HG22	4:E:199:TYR:CB	2.47	0.42
4:E:71:VAL:O	4:E:164:VAL:CG2	2.62	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:181:ASN:ND2	5:F:206:GLU:HA	2.34	0.42
5:F:33:LEU:O	5:F:36:ASP:CB	2.59	0.42
5:F:59:ARG:HH11	5:F:59:ARG:HG2	1.85	0.42
6:G:13:ARG:HE	6:G:40:PRO:CB	2.24	0.42
6:G:149:ALA:O	6:G:150:GLU:C	2.58	0.42
6:G:166:LYS:CA	6:G:178:VAL:HG11	2.50	0.42
6:G:194:LEU:CD2	6:G:194:LEU:N	2.67	0.42
7:H:19:MET:CE	7:H:20:GLN:N	2.83	0.42
8:I:80:ARG:O	8:I:81:ILE:O	2.37	0.42
8:I:8:ILE:HG22	8:I:87:ARG:O	2.19	0.42
8:I:94:GLN:CB	20:U:32:ARG:NH2	2.81	0.42
9:J:6:ARG:N	9:J:6:ARG:NH1	2.67	0.42
10:K:114:THR:C	10:K:116:LYS:N	2.72	0.42
10:K:33:GLU:CD	10:K:59:LEU:HD21	2.40	0.42
11:L:125:TYR:HB3	11:L:126:SER:H	1.58	0.42
11:L:47:LEU:O	11:L:47:LEU:CD1	2.62	0.42
11:L:6:GLY:HA3	11:L:84:ALA:H	1.84	0.42
11:L:9:ARG:HA	11:L:76:ALA:HB1	2.01	0.42
12:M:37:PRO:HA	12:M:72:VAL:HA	2.02	0.42
12:M:30:SER:OG	12:M:81:THR:HA	2.19	0.42
12:M:81:THR:O	12:M:83:GLU:N	2.52	0.42
13:N:101:SER:O	13:N:102:GLY:C	2.57	0.42
13:N:122:LYS:O	13:N:124:LYS:N	2.53	0.42
13:N:34:ASP:CG	13:N:36:ASP:H	2.22	0.42
13:N:44:SER:HB2	13:N:47:VAL:HG23	2.02	0.42
14:O:123:LYS:HE3	14:O:123:LYS:HB3	1.85	0.42
15:P:22:ILE:CG1	15:P:25:ILE:HD12	2.50	0.42
17:R:56:LEU:CD1	17:R:59:MET:HE1	2.50	0.42
17:R:71:GLN:O	17:R:72:ARG:C	2.57	0.42
18:S:80:PHE:O	18:S:80:PHE:CD2	2.72	0.42
19:T:31:LEU:O	19:T:31:LEU:CG	2.59	0.42
19:T:58:GLU:OE1	19:T:75:ARG:N	2.52	0.42
21:V:48:THR:HG23	21:V:60:VAL:O	2.20	0.42
21:V:77:THR:C	21:V:78:ARG:HG2	2.40	0.42
1:A:1459:C:P	22:W:27:LYS:HZ2	2.43	0.42
22:W:40:ALA:O	22:W:42:GLN:N	2.53	0.42
23:X:18:TYR:HA	23:X:22:ARG:HB3	2.02	0.42
23:X:25:LYS:O	23:X:25:LYS:CD	2.68	0.42
1:A:1305:G:C5'	23:X:4:GLY:C	2.88	0.42
3:D:18:G:C6	3:D:57:G:C2	3.07	0.42
3:D:21:A:N6	3:D:48:C:H6	2.16	0.42
1:A:1170:A:H3'	1:A:1170:A:H8	1.84	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1537:U:C4	1:A:1538:C:C5	3.07	0.42
18:S:46:PRO:CD	18:S:47:ASP:H	2.32	0.42
1:A:1100:C:O2'	1:A:1102:A:O5'	2.37	0.41
1:A:1102:A:N6	1:A:1103:C:N4	2.68	0.41
1:A:1141:C:C2	1:A:1142:G:C8	3.07	0.41
1:A:1157:A:N6	1:A:1180:A:N7	2.68	0.41
1:A:1191:A:H5''	5:F:4:LYS:CE	2.50	0.41
1:A:1194:U:C4	1:A:1195:C:C4	3.08	0.41
1:A:1055:A:N6	1:A:1206:G:C8	2.88	0.41
1:A:1245:A:C4	1:A:1246:C:C5	3.08	0.41
1:A:1256:A:H61	1:A:1278:U:C2'	2.32	0.41
1:A:1302:U:H4'	1:A:1303:C:OP1	2.20	0.41
1:A:1307:U:C6	1:A:1307:U:O5'	2.66	0.41
1:A:1287:A:H2	1:A:1370:G:H21	1.67	0.41
1:A:1393:U:C2'	1:A:1394:A:OP2	2.68	0.41
1:A:1418:A:H2'	1:A:1419:G:H5'	2.00	0.41
1:A:1453:G:C2'	1:A:1454:G:C5'	2.98	0.41
1:A:1494:G:N3	1:A:1495:U:C5	2.88	0.41
1:A:130:A:O2'	1:A:190:G:N2	2.53	0.41
1:A:244:U:H2'	1:A:245:C:OP2	2.19	0.41
1:A:297:G:N2	1:A:299:G:H3'	2.35	0.41
1:A:293:G:C6	1:A:305:G:C2	3.08	0.41
1:A:328:C:O2	1:A:328:C:C3'	2.68	0.41
1:A:42:G:C6	1:A:43:C:C4	3.08	0.41
1:A:438:G:N3	1:A:495:A:C8	2.88	0.41
1:A:448:A:C4	1:A:487:A:C2	3.08	0.41
1:A:44:G:C6	1:A:399:G:N1	2.87	0.41
1:A:498:A:C8	1:A:547:A:C6	3.08	0.41
1:A:519:C:H5'	14:O:51:ALA:CB	2.49	0.41
1:A:606:G:C2	1:A:631:G:C2	3.08	0.41
1:A:671:G:N3	1:A:671:G:H2'	2.35	0.41
1:A:701:C:HO2'	1:A:702:A:P	2.39	0.41
1:A:718:G:H4'	13:N:117:ASN:ND2	2.25	0.41
1:A:728:A:C8	17:R:54:ARG:NH1	2.88	0.41
1:A:763:G:N2	1:A:764:C:C2	2.88	0.41
1:A:95:G:H2'	1:A:96:G:O4'	2.20	0.41
1:A:957:U:O2	1:A:960:U:C6	2.73	0.41
1:A:970:C:H42	15:P:126:LYS:NZ	2.18	0.41
1:A:999:U:C4	1:A:1042:G:C6	3.08	0.41
3:C:8:U:H1'	3:C:48:C:H1'	2.02	0.41
4:E:112:VAL:O	4:E:116:GLU:OE2	2.38	0.41
4:E:118:LEU:CD2	4:E:142:LEU:HD12	2.48	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:33:TYR:HB3	4:E:42:ILE:O	2.20	0.41
4:E:46:LYS:O	4:E:47:THR:C	2.58	0.41
4:E:42:ILE:CD1	4:E:47:THR:OG1	2.68	0.41
5:F:128:PHE:O	5:F:130:VAL:N	2.52	0.41
5:F:194:GLY:O	5:F:196:LEU:CD2	2.68	0.41
5:F:33:LEU:HD23	5:F:36:ASP:CB	2.50	0.41
5:F:6:HIS:CD2	5:F:8:ILE:HG22	2.55	0.41
6:G:161:ASN:O	6:G:165:MET:CB	2.67	0.41
6:G:17:VAL:O	6:G:17:VAL:HG12	2.20	0.41
6:G:33:MET:H	6:G:33:MET:HE3	1.84	0.41
5:F:131:ARG:HH22	7:H:51:VAL:HG23	1.85	0.41
8:I:14:LEU:HD11	8:I:18:GLN:HB3	1.99	0.41
8:I:23:LYS:HE3	8:I:61:LEU:HD11	2.02	0.41
8:I:59:TYR:C	8:I:60:PHE:CD1	2.93	0.41
9:J:94:ARG:C	9:J:94:ARG:HH11	2.22	0.41
10:K:65:TYR:CD2	10:K:78:GLN:HA	2.55	0.41
10:K:75:ARG:HH11	10:K:75:ARG:HG3	1.85	0.41
11:L:72:GLY:O	11:L:75:ASP:OD2	2.37	0.41
12:M:54:PHE:O	12:M:55:LYS:C	2.58	0.41
12:M:65:LEU:HD13	16:Q:36:PHE:HE2	1.81	0.41
13:N:104:GLN:HE22	13:N:106:LYS:CB	2.33	0.41
1:A:683:G:N3	13:N:38:ASN:ND2	2.68	0.41
14:O:102:ARG:HH11	14:O:110:VAL:HG13	1.85	0.41
14:O:7:ILE:CG2	14:O:8:ASN:N	2.80	0.41
14:O:92:ASP:C	14:O:93:LEU:CD2	2.83	0.41
15:P:8:GLU:HG3	15:P:22:ILE:CD1	2.50	0.41
16:Q:3:ARG:O	16:Q:3:ARG:CG	2.68	0.41
16:Q:48:ALA:N	16:Q:53:LEU:HD12	2.35	0.41
16:Q:51:GLY:O	16:Q:53:LEU:N	2.52	0.41
12:M:46:ARG:CZ	16:Q:61:TRP:CE3	3.03	0.41
1:A:1313:U:O4	21:V:4:SER:HB2	2.17	0.41
21:V:77:THR:HG23	21:V:78:ARG:HG2	2.01	0.41
22:W:74:LYS:HB2	22:W:75:ASN:H	1.65	0.41
22:W:49:ALA:HB3	22:W:99:LEU:HG	2.01	0.41
6:G:159:ARG:HG2	6:G:159:ARG:NH1	2.35	0.41
1:A:1053:G:O5'	1:A:1055:A:OP1	2.38	0.41
1:A:1090:U:O2'	1:A:1091:U:C5'	2.68	0.41
1:A:1102:A:N1	1:A:1103:C:C4	2.89	0.41
1:A:1068:G:O6	1:A:1108:G:C2	2.73	0.41
1:A:1095:U:OP1	1:A:1108:G:N2	2.53	0.41
1:A:1185:G:H8	1:A:1185:G:O5'	2.03	0.41
1:A:120:A:H2'	1:A:122:G:C8	2.55	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1287:A:H61	1:A:1371:G:H5'	1.85	0.41
1:A:1290:G:C6	1:A:1291:G:N7	2.88	0.41
1:A:1306:A:H3'	1:A:1307:U:C5	2.55	0.41
1:A:1336:C:O2'	1:A:1337:G:OP2	2.37	0.41
1:A:1347:G:H3'	11:L:107:ARG:O	2.20	0.41
1:A:1360:A:C2	1:A:1361:G:C4	3.09	0.41
1:A:1411:C:C2	1:A:1412:C:C6	3.08	0.41
1:A:149:A:C2	1:A:150:C:N3	2.89	0.41
1:A:145:G:C6	1:A:178:C:N4	2.88	0.41
1:A:440:A:H3'	1:A:442:C:C5	2.55	0.41
1:A:438:G:N2	1:A:494:U:C2	2.88	0.41
1:A:520:A:OP1	14:O:52:LEU:CD2	2.68	0.41
1:A:518:C:O2	1:A:529:G:O6	2.38	0.41
1:A:61:G:C6	1:A:62:U:N3	2.88	0.41
1:A:697:U:H5'	1:A:786:G:O2'	2.21	0.41
1:A:830:G:O6	1:A:857:C:N4	2.54	0.41
3:C:9:A:C5'	3:C:10:G:OP2	2.68	0.41
3:C:19:G:O2'	3:C:20:U:OP2	2.32	0.41
3:C:33:U:H6	3:C:33:U:O5'	2.03	0.41
3:C:75:C:OP1	3:C:76:A:OP2	2.39	0.41
4:E:163:PHE:CZ	4:E:186:ALA:CA	3.02	0.41
4:E:21:ARG:HE	4:E:21:ARG:H	1.63	0.41
4:E:50:GLU:HG3	4:E:200:ILE:C	2.32	0.41
5:F:11:ARG:NH2	5:F:179:ARG:H	2.08	0.41
5:F:19:GLU:CD	5:F:19:GLU:N	2.74	0.41
6:G:126:ILE:O	6:G:132:ARG:HB2	2.20	0.41
6:G:177:ASP:C	6:G:179:GLU:H	2.22	0.41
7:H:149:GLU:OE2	7:H:152:ARG:HG3	2.20	0.41
7:H:26:PHE:HB2	7:H:27:ARG:H	1.57	0.41
9:J:126:ASP:CB	9:J:131:LYS:HG3	2.50	0.41
9:J:69:VAL:HG13	9:J:135:VAL:HG22	2.02	0.41
10:K:109:ILE:HG12	10:K:137:VAL:H	1.84	0.41
10:K:36:LEU:O	10:K:39:LEU:HB2	2.18	0.41
10:K:28:ALA:HB3	10:K:57:PRO:O	2.20	0.41
10:K:65:TYR:HB3	10:K:76:PRO:HB2	2.02	0.41
11:L:17:VAL:HG11	11:L:81:ILE:CG1	2.50	0.41
12:M:5:ARG:CD	12:M:6:ILE:N	2.83	0.41
12:M:79:ARG:NH2	12:M:82:ILE:CG2	2.82	0.41
13:N:21:ILE:O	13:N:21:ILE:HG13	2.19	0.41
13:N:42:TRP:CE3	13:N:42:TRP:C	2.93	0.41
14:O:83:VAL:C	14:O:104:VAL:CG1	2.88	0.41
14:O:86:ARG:NH1	14:O:119:LYS:CG	2.66	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:P:88:ARG:CZ	15:P:92:HIS:HD2	2.33	0.41
16:Q:41:ARG:HG3	16:Q:42:ILE:N	2.35	0.41
17:R:34:LEU:HD11	17:R:35:ARG:HG3	2.02	0.41
18:S:9:PHE:N	18:S:9:PHE:CD2	2.88	0.41
1:A:280:C:C1'	19:T:38:ARG:CZ	2.98	0.41
20:U:21:LYS:NZ	20:U:23:LYS:CB	2.66	0.41
20:U:81:PHE:O	20:U:82:THR:CG2	2.67	0.41
21:V:30:LEU:CD1	21:V:59:PRO:HB3	2.51	0.41
22:W:51:GLU:CB	22:W:54:LYS:NZ	2.77	0.41
22:W:64:ASP:O	22:W:67:ALA:CA	2.66	0.41
3:B:14:A:N9	3:B:22:G:N2	2.67	0.41
15:P:121:LYS:HG3	15:P:121:LYS:O	2.20	0.41
2:1:16:U:N3	2:1:18:U:OP1	2.53	0.41
1:A:1044:A:C6	1:A:1045:C:H1'	2.55	0.41
1:A:1080:A:C8	1:A:1080:A:O5'	2.74	0.41
1:A:1091:U:C6	1:A:1093:A:OP2	2.73	0.41
1:A:1175:G:H2'	1:A:1176:A:C8	2.55	0.41
1:A:1159:U:C5	1:A:1181:G:C5	3.08	0.41
1:A:1185:G:H2'	1:A:1186:G:H5'	2.02	0.41
1:A:1251:A:C2	1:A:1252:A:N1	2.88	0.41
1:A:1371:G:C5	1:A:1372:U:C6	3.08	0.41
1:A:1422:G:N3	1:A:1423:G:C8	2.88	0.41
1:A:1480:G:C2'	1:A:1481:U:H5'	2.50	0.41
1:A:149:A:C2	1:A:150:C:C4	3.08	0.41
1:A:1518:A:C6	1:A:1519:A:N6	2.88	0.41
1:A:25:C:H4'	1:A:524:G:C2	2.55	0.41
1:A:296:U:O2'	1:A:556:C:O2'	2.22	0.41
1:A:468:A:H4'	18:S:82:GLN:CB	2.38	0.41
1:A:486:U:C2'	1:A:486:U:O2	2.67	0.41
1:A:607:A:C4	1:A:608:A:H8	2.38	0.41
1:A:667:G:C6	1:A:740:U:C4	3.08	0.41
1:A:671:G:C2'	1:A:672:U:O4'	2.67	0.41
1:A:64:G:N2	1:A:68:G:O6	2.42	0.41
1:A:811:C:C5	1:A:812:C:O2	2.73	0.41
1:A:812:C:O4'	1:A:813:U:C6	2.73	0.41
1:A:994:A:H2	16:Q:4:LYS:HG2	1.86	0.41
3:C:33:U:N1	3:C:35:A:OP2	2.53	0.41
4:E:163:PHE:HE1	4:E:201:ILE:CD1	2.30	0.41
4:E:173:ALA:C	4:E:176:GLU:HB2	2.40	0.41
4:E:213:LEU:HD21	4:E:217:ARG:HE	1.85	0.41
4:E:80:ILE:HG23	4:E:212:GLN:NE2	2.32	0.41
5:F:108:ASN:ND2	5:F:111:LEU:CD1	2.72	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:119:ARG:C	5:F:121:ALA:N	2.70	0.41
5:F:150:LYS:HA	5:F:169:ALA:HB1	2.01	0.41
1:A:1056:U:H5'	5:F:163:ALA:CB	2.50	0.41
5:F:38:ARG:HB2	5:F:94:LEU:CG	2.50	0.41
5:F:47:LEU:CD1	5:F:49:SER:HB3	2.47	0.41
5:F:22:TRP:CB	5:F:59:ARG:CB	2.87	0.41
6:G:57:ARG:HB3	6:G:206:PHE:CB	2.34	0.41
7:H:14:ARG:HG3	7:H:14:ARG:O	2.20	0.41
8:I:50:TYR:CE1	8:I:52:ILE:HD11	2.54	0.41
10:K:84:ARG:C	10:K:135:CYS:SG	2.98	0.41
10:K:12:ARG:HB2	10:K:26:VAL:HG21	2.01	0.41
10:K:65:TYR:HE2	10:K:78:GLN:CD	2.24	0.41
10:K:65:TYR:HB2	10:K:66:GLY:H	1.56	0.41
12:M:51:ARG:N	12:M:60:ARG:HA	2.35	0.41
12:M:46:ARG:NE	12:M:64:GLU:OE2	2.54	0.41
13:N:21:ILE:HG22	13:N:30:VAL:HG21	2.01	0.41
14:O:37:CYS:SG	14:O:78:GLN:O	2.78	0.41
14:O:39:VAL:CB	14:O:57:LYS:HB2	2.34	0.41
15:P:20:THR:HA	15:P:25:ILE:C	2.40	0.41
15:P:74:VAL:O	15:P:78:ILE:CG1	2.64	0.41
17:R:13:GLN:O	17:R:15:PHE:N	2.53	0.41
17:R:29:VAL:CG2	17:R:81:LEU:HD11	2.39	0.41
18:S:40:ASP:OD1	18:S:48:TRP:HB2	2.20	0.41
1:A:761:G:C1'	19:T:103:GLY:O	2.68	0.41
19:T:86:GLU:O	19:T:87:LYS:C	2.56	0.41
22:W:16:HIS:O	22:W:19:SER:HB3	2.20	0.41
22:W:50:GLU:CA	22:W:99:LEU:HD12	2.49	0.41
1:A:1166:G:C2	1:A:1171:G:O6	2.72	0.41
3:B:62:C:C2	3:B:63:G:C8	3.08	0.41
18:S:2:VAL:O	18:S:2:VAL:HG12	2.20	0.41
2:1:37:U:C2'	2:1:38:U:C6	3.04	0.41
2:1:39:U:C6	2:1:39:U:C3'	3.04	0.41
1:A:1095:U:H5'	1:A:1109:C:C2	2.56	0.41
1:A:1474:G:C6	1:A:1475:G:N7	2.88	0.41
1:A:1401:G:C6	1:A:1504:G:N2	2.88	0.41
1:A:1507:A:N6	1:A:1530:G:C5	2.88	0.41
1:A:66:G:O4'	1:A:173:U:C4	2.72	0.41
1:A:255:G:OP1	19:T:69:LYS:NZ	2.53	0.41
1:A:265:G:H5''	19:T:65:ILE:HA	2.03	0.41
1:A:274:A:O3'	1:A:275:G:O4'	2.38	0.41
1:A:317:G:C2'	1:A:318:G:C5'	2.99	0.41
1:A:50:A:H61	1:A:361:G:C5'	2.33	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:452:A:C6	1:A:453:A:N6	2.88	0.41
1:A:46:G:N2	1:A:366:C:C1'	2.83	0.41
1:A:48:C:H2'	1:A:49:U:OP1	2.20	0.41
1:A:51:A:H4'	1:A:52:G:O5'	2.16	0.41
1:A:538:G:O3'	14:O:114:LYS:CD	2.52	0.41
1:A:547:A:C4'	1:A:548:G:OP1	2.69	0.41
1:A:686:U:O4	1:A:703:G:O2'	2.38	0.41
1:A:730:G:C2'	1:A:731:G:H5'	2.49	0.41
1:A:739:C:C2'	1:A:739:C:O2	2.69	0.41
1:A:856:C:H2'	1:A:856:C:O2	2.19	0.41
1:A:892:A:C4	1:A:907:A:C6	3.09	0.41
3:C:28:G:N1	3:C:43:C:C2	2.89	0.41
4:E:70:PHE:O	4:E:92:TYR:CB	2.67	0.41
4:E:96:ARG:O	4:E:98:LEU:N	2.53	0.41
5:F:142:MET:HG3	5:F:143:GLU:N	2.35	0.41
5:F:165:THR:CG2	5:F:166:GLU:N	2.81	0.41
5:F:66:VAL:O	5:F:102:ASN:ND2	2.53	0.41
6:G:107:ARG:HD2	6:G:173:TRP:CH2	2.55	0.41
6:G:169:LYS:HA	6:G:176:LEU:HD11	2.02	0.41
6:G:18:LYS:HE2	6:G:20:TYR:HB3	2.03	0.41
6:G:191:ARG:O	6:G:194:LEU:HD23	2.20	0.41
6:G:13:ARG:NH1	6:G:36:ARG:HB2	2.28	0.41
6:G:4:TYR:CD2	6:G:5:ILE:N	2.88	0.41
7:H:43:LEU:CB	7:H:136:MET:HE1	2.50	0.41
7:H:39:GLY:C	7:H:68:GLU:OE2	2.59	0.41
7:H:9:LYS:HD3	7:H:108:ALA:HB1	2.02	0.41
8:I:7:ASN:O	8:I:8:ILE:HG12	2.19	0.41
9:J:118:VAL:HG12	9:J:122:HIS:NE2	2.36	0.41
9:J:143:ARG:O	9:J:144:MET:C	2.59	0.41
9:J:27:ILE:HA	9:J:30:ILE:HD12	2.02	0.41
9:J:69:VAL:O	9:J:138:LYS:HD2	2.19	0.41
9:J:87:VAL:HG21	9:J:154:TYR:CB	2.49	0.41
10:K:39:LEU:HB3	10:K:40:ALA:H	1.75	0.41
12:M:76:ASN:C	12:M:78:ASN:N	2.69	0.41
13:N:33:THR:CA	13:N:38:ASN:O	2.69	0.41
13:N:86:GLY:N	13:N:112:THR:HG23	2.35	0.41
1:A:538:G:C3'	14:O:114:LYS:HD3	2.48	0.41
15:P:102:ARG:C	15:P:104:ARG:N	2.71	0.41
15:P:56:LEU:O	15:P:59:TYR:CB	2.51	0.41
17:R:71:GLN:CA	17:R:78:TYR:CD1	3.03	0.41
20:U:53:ARG:O	20:U:55:ARG:N	2.54	0.41
21:V:16:LEU:O	21:V:19:VAL:N	2.53	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:V:44:MET:O	21:V:62:ILE:HD13	2.20	0.41
22:W:79:ARG:NH1	22:W:79:ARG:HG3	2.34	0.41
22:W:41:ILE:O	22:W:91:LEU:CD1	2.68	0.41
1:A:336:C:O2'	1:A:337:C:H5'	2.20	0.41
2:1:37:U:H2'	2:1:38:U:N3	2.36	0.41
1:A:1068:G:H2'	1:A:1069:C:O4'	2.20	0.41
1:A:1151:A:N7	1:A:1152:A:N7	2.69	0.41
1:A:1181:G:H2'	1:A:1182:G:C5'	2.51	0.41
1:A:1255:G:N2	1:A:1276:G:H21	2.16	0.41
1:A:1256:A:O2'	1:A:1257:U:C1'	2.67	0.41
1:A:1346:A:C8	1:A:1348:U:C4	3.09	0.41
1:A:1377:A:H5''	1:A:1378:C:C5	2.54	0.41
1:A:1415:G:H2'	1:A:1416:G:C5'	2.51	0.41
1:A:1502:A:N1	1:A:1504:G:C2	2.89	0.41
1:A:1521:G:N3	1:A:1522:U:C6	2.89	0.41
1:A:68:G:C4'	1:A:171:A:C1'	2.98	0.41
1:A:188:U:H2'	1:A:189:U:O5'	2.20	0.41
1:A:253:U:H2'	1:A:254:G:H8	1.85	0.41
1:A:292:G:C8	1:A:293:G:H1'	2.55	0.41
1:A:317:G:C2	1:A:318:G:C8	3.08	0.41
1:A:390:C:C2	1:A:391:G:N7	2.88	0.41
1:A:541:G:H2'	1:A:542:G:C8	2.53	0.41
1:A:552:U:H2'	1:A:553:A:O4'	2.20	0.41
1:A:577:G:HO2'	1:A:578:C:P	2.42	0.41
1:A:643:C:O2'	10:K:132:GLU:CD	2.58	0.41
1:A:570:G:OP2	1:A:820:U:O2'	2.39	0.41
1:A:874:G:C6	1:A:875:C:C4	3.08	0.41
1:A:897:C:H2'	1:A:898:G:O5'	2.20	0.41
1:A:970:C:C5'	1:A:972:C:C6	3.03	0.41
1:A:981:U:C5	1:A:981:U:OP2	2.73	0.41
1:A:989:C:H2'	1:A:990:C:C5'	2.48	0.41
3:B:32:U:C4	3:B:33:U:C4	3.08	0.41
3:C:15:G:N3	3:C:15:G:H2'	2.36	0.41
3:C:21:A:N6	3:C:46:G:H1	2.17	0.41
4:E:157:ARG:O	4:E:158:LEU:CG	2.68	0.41
4:E:180:LEU:O	4:E:181:PHE:CB	2.61	0.41
4:E:89:GLY:O	4:E:90:MET:HG2	2.20	0.41
5:F:94:LEU:O	5:F:95:THR:CG2	2.67	0.41
5:F:97:LYS:O	5:F:98:ASN:O	2.37	0.41
6:G:106:TYR:CZ	6:G:112:VAL:O	2.73	0.41
6:G:3:ARG:HH11	6:G:3:ARG:HG3	1.85	0.41
6:G:4:TYR:CZ	6:G:5:ILE:O	2.73	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:H:135:THR:HG22	7:H:139:LEU:HD11	2.02	0.41
1:A:923:A:H5''	7:H:21:ALA:HB2	2.02	0.41
7:H:28:PHE:HE1	7:H:49:PRO:O	2.04	0.41
7:H:79:GLU:HG3	7:H:93:PRO:HD3	2.00	0.41
8:I:76:ALA:CA	8:I:79:LEU:HG	2.50	0.41
8:I:4:TYR:CA	8:I:93:SER:OG	2.68	0.41
9:J:72:ARG:CG	9:J:72:ARG:HH11	2.32	0.41
9:J:88:PRO:HD2	9:J:152:ALA:HA	2.01	0.41
10:K:14:ARG:NE	10:K:15:ASN:ND2	2.68	0.41
11:L:113:LYS:C	11:L:115:GLY:H	2.21	0.41
11:L:3:GLN:HG3	11:L:20:ARG:HD3	2.02	0.41
12:M:34:VAL:HG13	12:M:74:ILE:HG12	2.02	0.41
13:N:54:ARG:O	13:N:57:THR:N	2.54	0.41
13:N:21:ILE:HD11	13:N:82:VAL:HG11	2.03	0.41
14:O:7:ILE:O	14:O:10:LEU:HB2	2.21	0.41
14:O:62:SER:O	14:O:64:TYR:N	2.53	0.41
14:O:69:TYR:O	14:O:100:ILE:HD11	2.21	0.41
15:P:10:PRO:O	15:P:45:VAL:HG11	2.20	0.41
15:P:24:GLY:C	15:P:25:ILE:HG12	2.41	0.41
16:Q:41:ARG:HA	16:Q:44:LEU:HD22	2.02	0.41
16:Q:47:LEU:HD23	16:Q:47:LEU:HA	1.67	0.41
17:R:18:PHE:C	17:R:20:GLY:H	2.23	0.41
1:A:728:A:C5'	17:R:54:ARG:HH22	2.32	0.41
19:T:10:VAL:HG11	19:T:53:LEU:N	2.36	0.41
19:T:36:ILE:CD1	19:T:36:ILE:N	2.65	0.41
19:T:27:PHE:O	19:T:36:ILE:HG12	2.20	0.41
19:T:78:GLU:HG3	19:T:79:SER:N	2.34	0.41
20:U:53:ARG:C	20:U:55:ARG:H	2.23	0.41
20:U:78:LEU:C	20:U:79:LEU:CD1	2.82	0.41
1:A:1314:C:OP2	21:V:6:LYS:CB	2.68	0.41
22:W:51:GLU:HG2	22:W:51:GLU:H	1.65	0.41
22:W:53:LEU:HB2	22:W:100:ILE:CD1	2.50	0.41
22:W:74:LYS:H	22:W:74:LYS:HD3	1.86	0.41
1:A:131:C:O2	1:A:131:C:H2'	2.19	0.41
2:1:21:G:C2'	2:1:22:C:O4'	2.69	0.41
3:B:12:U:O5'	3:B:12:U:H6	2.03	0.41
3:B:67:C:C2'	3:B:67:C:O2	2.67	0.41
2:1:15:U:H6	2:1:15:U:O5'	2.04	0.41
2:1:35:U:P	2:1:35:U:H6	2.43	0.41
1:A:63:C:N3	1:A:105:G:C6	2.88	0.41
1:A:1181:G:O2'	1:A:1182:G:H5'	2.20	0.41
1:A:1202:G:O2'	1:A:1203:C:O5'	2.38	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1301:U:C5	1:A:1303:C:C5	3.09	0.41
1:A:1363:A:H4'	1:A:1364:U:O5'	2.21	0.41
1:A:149:A:C6	1:A:150:C:N4	2.88	0.41
1:A:103:C:C1'	1:A:151:A:C2	3.01	0.41
1:A:20:U:O2'	1:A:21:G:C5'	2.65	0.41
1:A:248:C:O4'	1:A:282:A:H2	2.03	0.41
1:A:118:U:C4	1:A:288:A:H2'	2.52	0.41
1:A:319:G:C2'	1:A:320:C:C5'	2.98	0.41
1:A:134:A:C5	1:A:325:A:C2	3.09	0.41
1:A:448:A:C5	1:A:487:A:C2	3.08	0.41
1:A:449:C:N1	1:A:450:G:H1'	2.27	0.41
1:A:46:G:C4	1:A:396:G:N1	2.88	0.41
1:A:50:A:N1	1:A:360:A:O2'	2.31	0.41
1:A:509:A:N7	1:A:510:A:N6	2.68	0.41
1:A:558:G:H5''	1:A:559:A:C5'	2.51	0.41
1:A:667:G:C2	1:A:740:U:C2	3.09	0.41
1:A:690:G:C2'	1:A:691:G:O5'	2.69	0.41
1:A:721:G:O2'	1:A:722:A:C2	2.63	0.41
1:A:723:U:H6	2:1:30:U:C4'	2.34	0.41
1:A:815:A:N6	1:A:1529:G:C4	2.89	0.41
1:A:833:U:H2'	1:A:834:C:H6	1.85	0.41
1:A:834:C:O2'	1:A:835:U:C4'	2.69	0.41
1:A:838:G:N2	1:A:849:C:C2	2.88	0.41
1:A:869:G:H5''	1:A:870:U:OP1	2.21	0.41
1:A:986:A:H2'	1:A:987:G:C8	2.56	0.41
1:A:993:G:C2	1:A:1046:A:C2	3.08	0.41
3:C:6:G:C4	3:C:7:A:N7	2.88	0.41
4:E:158:LEU:O	4:E:160:ASP:OD2	2.38	0.41
4:E:162:ILE:N	4:E:162:ILE:CD1	2.80	0.41
4:E:201:ILE:H	4:E:201:ILE:HD12	1.86	0.41
4:E:20:GLU:OE2	4:E:205:ASP:OD2	2.39	0.41
4:E:36:ARG:HA	4:E:36:ARG:NE	2.35	0.41
4:E:42:ILE:HD12	4:E:203:GLY:N	2.36	0.41
4:E:59:GLU:N	4:E:221:LEU:HD11	2.36	0.41
5:F:72:LYS:O	5:F:76:VAL:CB	2.68	0.41
6:G:63:LYS:H	6:G:63:LYS:CD	2.32	0.41
7:H:55:VAL:O	7:H:56:GLN:C	2.56	0.41
8:I:65:VAL:HG23	8:I:66:GLU:C	2.40	0.41
9:J:69:VAL:HA	9:J:135:VAL:HG13	2.02	0.41
10:K:39:LEU:CD1	10:K:39:LEU:C	2.88	0.41
10:K:49:GLU:OE1	10:K:49:GLU:C	2.59	0.41
11:L:118:LYS:HA	11:L:118:LYS:HD3	1.79	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:L:50:LEU:CD2	11:L:56:LEU:HB2	2.51	0.41
13:N:22:HIS:HA	13:N:85:ARG:O	2.21	0.41
14:O:46:LYS:CE	14:O:47:LYS:NZ	2.75	0.41
14:O:6:THR:CB	14:O:9:GLN:OE1	2.69	0.41
15:P:14:ARG:NE	15:P:44:ARG:HH11	2.19	0.41
15:P:69:GLU:OE1	15:P:69:GLU:C	2.58	0.41
5:F:6:HIS:CB	16:Q:49:HIS:CE1	3.01	0.41
17:R:79:ARG:HB2	17:R:79:ARG:CZ	2.51	0.41
18:S:34:GLU:OE1	18:S:36:ILE:HG23	2.20	0.41
18:S:35:LYS:NZ	18:S:37:GLY:CA	2.83	0.41
1:A:273:A:C1'	19:T:16:GLN:OE1	2.66	0.41
22:W:64:ASP:C	22:W:66:ALA:N	2.71	0.41
3:D:48:C:N4	3:D:59:U:C2	2.88	0.41
14:O:126:LYS:O	14:O:128:ALA:N	2.54	0.41
1:A:1165:C:H2'	1:A:1166:G:C5'	2.50	0.41
3:D:5:G:H2'	3:D:5:G:N3	2.36	0.41
1:A:1536:C:C2	1:A:1537:U:C5	3.08	0.41
1:A:1537:U:N3	1:A:1538:C:C5	2.89	0.41
1:A:1001:G:C8	1:A:1001:G:C3'	3.04	0.41
1:A:1032(B):G:C2	1:A:1033:G:C4	3.08	0.41
1:A:1050:G:N3	1:A:1050:G:H2'	2.35	0.41
1:A:1081:G:OP1	7:H:18:ARG:CA	2.69	0.41
1:A:1144:G:N1	1:A:1145:C:C2	2.89	0.41
1:A:1157:A:C2'	1:A:1157:A:N3	2.80	0.41
1:A:1234:C:C4'	1:A:1364:U:O2'	2.68	0.41
1:A:1284:C:C6	1:A:1285:A:C8	3.09	0.41
1:A:1288:A:N3	1:A:1352:C:O2'	2.49	0.41
1:A:1291:G:C2	1:A:1292:U:C2	3.07	0.41
1:A:132:C:N3	1:A:231:G:N2	2.67	0.41
1:A:1331:G:O2'	1:A:1332:A:P	2.78	0.41
1:A:937:A:N3	1:A:1379:G:N1	2.68	0.41
1:A:1387:G:O2'	1:A:1388:C:H5'	2.21	0.41
1:A:1405:G:H4'	1:A:1519:A:C5'	2.50	0.41
1:A:173:U:C5'	1:A:197:A:C2'	2.99	0.41
1:A:255:G:P	19:T:69:LYS:NZ	2.94	0.41
1:A:354:G:C2	1:A:355:C:C4	3.08	0.41
1:A:429:U:O2	1:A:431:A:N7	2.54	0.41
1:A:458:C:C4	1:A:464:G:C6	3.08	0.41
1:A:468:A:H3'	1:A:474:G:H8	1.85	0.41
1:A:493:G:HO2'	1:A:494:U:H6	1.64	0.41
1:A:518:C:O2'	14:O:50:SER:CB	2.66	0.41
1:A:548:G:C6	1:A:549:C:N4	2.89	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:579:G:O4'	1:A:728:A:H1'	2.20	0.41
1:A:624:C:H4'	18:S:10:GLY:C	2.41	0.41
1:A:698:G:C6	1:A:699:C:N4	2.89	0.41
1:A:725:G:H2'	1:A:726:C:C6	2.56	0.41
1:A:760:G:H5'	1:A:761:G:OP2	2.20	0.41
1:A:791:G:N7	1:A:792:A:N7	2.69	0.41
1:A:866:C:H5''	1:A:867:G:C8	2.56	0.41
1:A:942:G:N2	11:L:124:GLN:CD	2.74	0.41
1:A:951:G:C2'	1:A:970:C:O2'	2.68	0.41
1:A:952:U:C2'	1:A:953:G:H5'	2.50	0.41
1:A:97:U:O5'	1:A:97:U:H6	2.04	0.41
3:C:19:G:H5''	3:C:20:U:C5	2.56	0.41
4:E:144:ARG:O	4:E:147:LYS:N	2.54	0.41
4:E:188:ALA:O	4:E:205:ASP:HB3	2.21	0.41
4:E:25:ASN:HD21	4:E:27:LYS:HB2	1.85	0.41
4:E:39:ILE:HG12	4:E:40:HIS:O	2.21	0.41
4:E:69:LEU:HD13	4:E:70:PHE:H	1.84	0.41
4:E:85:ALA:HB3	4:E:92:TYR:CD1	2.56	0.41
5:F:121:ALA:O	5:F:122:GLU:C	2.57	0.41
5:F:124:ILE:CD1	5:F:130:VAL:CG1	2.97	0.41
5:F:172:ARG:HH11	5:F:172:ARG:HG2	1.86	0.41
5:F:15:THR:HG21	5:F:181:ASN:H	1.85	0.41
5:F:191:THR:C	5:F:193:TYR:N	2.73	0.41
6:G:11:LEU:O	6:G:12:CYS:C	2.59	0.41
6:G:193:ASP:OD2	6:G:194:LEU:CD2	2.67	0.41
6:G:200:GLU:C	6:G:204:ILE:HD12	2.38	0.41
6:G:62:GLN:NE2	6:G:62:GLN:HA	2.36	0.41
7:H:145:LYS:CA	7:H:148:VAL:HG23	2.47	0.41
8:I:59:TYR:CE2	8:I:61:LEU:HD21	2.55	0.41
9:J:118:VAL:HG12	9:J:122:HIS:CE1	2.55	0.41
7:H:78:HIS:ND1	10:K:104:ARG:CD	2.82	0.41
10:K:104:ARG:HE	10:K:138:TRP:HZ3	1.63	0.41
10:K:18:ARG:NE	10:K:18:ARG:H	2.18	0.41
10:K:23:SER:HA	10:K:62:TYR:CD1	2.55	0.41
10:K:45:ILE:HD11	10:K:48:TYR:CB	2.37	0.41
11:L:31:GLN:HG2	11:L:35:GLU:OE1	2.21	0.41
9:J:16:LEU:O	11:L:41:VAL:CG1	2.69	0.41
11:L:97:LYS:HZ2	11:L:102:LEU:CD2	2.31	0.41
1:A:685:G:H4'	13:N:40:ILE:HA	2.02	0.41
13:N:42:TRP:C	13:N:42:TRP:HE3	2.24	0.41
13:N:50:TYR:CE2	13:N:54:ARG:HB3	2.56	0.41
14:O:117:ARG:O	14:O:121:GLY:CA	2.68	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:O:119:LYS:HE3	14:O:119:LYS:HB2	1.67	0.41
14:O:32:PHE:HB3	14:O:86:ARG:HA	2.02	0.41
15:P:69:GLU:O	15:P:72:ALA:N	2.53	0.41
5:F:33:LEU:HD21	16:Q:52:GLN:O	2.20	0.41
17:R:34:LEU:HD12	17:R:35:ARG:CA	2.50	0.41
17:R:40:SER:O	17:R:41:GLU:C	2.58	0.41
19:T:14:LYS:O	19:T:15:MET:O	2.39	0.41
19:T:5:VAL:O	19:T:6:LEU:CB	2.68	0.41
20:U:40:LEU:O	20:U:43:PHE:CD1	2.63	0.41
1:A:192:U:C4'	22:W:103:GLY:N	2.83	0.41
23:X:5:ASP:O	23:X:6:ARG:HG2	2.20	0.41
2:1:44:U:N3	2:1:45:U:C5	2.89	0.41
3:B:72:C:N3	3:B:73:A:N7	2.68	0.41
1:A:1030:C:H2'	1:A:1031:G:C8	2.55	0.41
1:A:1029:G:N3	1:A:1031:G:OP2	2.54	0.41
11:L:99:LEU:HD22	11:L:99:LEU:H	1.86	0.41
1:A:1065:U:C2'	1:A:1065:U:O2	2.57	0.41
1:A:1101:A:H1'	1:A:1102:A:O4'	2.21	0.41
1:A:1115:C:C4	1:A:1116:C:C4	3.09	0.41
1:A:1135:U:O3'	1:A:1136:U:C6	2.70	0.41
1:A:1157:A:C6	1:A:1180:A:C6	3.09	0.41
1:A:1188:A:H2'	1:A:1189:C:C6	2.56	0.41
1:A:1221:G:C6	1:A:1222:G:C5	3.08	0.41
1:A:971:G:O5'	1:A:1231:G:N2	2.53	0.41
1:A:129(A):G:HO2'	1:A:130:A:P	2.37	0.41
1:A:1318:A:H8	1:A:1318:A:O5'	2.04	0.41
1:A:1371:G:C6	1:A:1372:U:C4	3.08	0.41
1:A:1423:G:C6	1:A:1424:C:C4	3.09	0.41
1:A:1424:C:H2'	1:A:1425:U:H6	1.85	0.41
1:A:1425:U:O2	1:A:1476:G:C2	2.74	0.41
1:A:1540:U:C6	1:A:1540:U:O5'	2.74	0.41
1:A:217:C:C4	1:A:218:C:C4	3.09	0.41
1:A:323:U:C5	1:A:324:G:C4	2.98	0.41
1:A:380:G:H2'	1:A:382:A:OP2	2.20	0.41
1:A:427:U:O5'	1:A:427:U:C6	2.64	0.41
1:A:437:U:C5	1:A:438:G:C5	3.09	0.41
1:A:498:A:H4'	1:A:500:G:C5'	2.47	0.41
1:A:563:A:O2'	1:A:566:G:C2'	2.68	0.41
1:A:592:G:C6	1:A:648:A:N6	2.89	0.41
1:A:619:U:H2'	1:A:619:U:O2	2.20	0.41
1:A:681:C:O2'	1:A:682:G:H5'	2.20	0.41
1:A:782:A:C8	1:A:783:C:C5	3.08	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:937:A:C8	1:A:938:A:N7	2.88	0.41
1:A:949:A:HO2'	1:A:1364:U:H3	1.63	0.41
3:C:5:G:O2'	3:C:6:G:C5'	2.69	0.41
3:C:63:G:H2'	3:C:64:A:C8	2.56	0.41
4:E:157:ARG:CA	4:E:158:LEU:HD23	2.50	0.41
4:E:28:PHE:CE1	4:E:31:TYR:CB	3.04	0.41
4:E:46:LYS:O	4:E:49:GLU:N	2.54	0.41
4:E:90:MET:SD	4:E:91:PRO:CD	3.01	0.41
5:F:35:GLU:CD	5:F:95:THR:HG21	2.40	0.41
6:G:196:LEU:O	6:G:196:LEU:CD1	2.69	0.41
6:G:60:GLU:OE2	6:G:202:LEU:CD1	2.67	0.41
7:H:106:PRO:HG2	7:H:122:GLU:OE2	2.20	0.41
7:H:71:LEU:HG	7:H:72:GLN:N	2.35	0.41
7:H:82:VAL:HG13	7:H:82:VAL:O	2.21	0.41
8:I:82:ARG:O	8:I:83:ASP:C	2.59	0.41
9:J:146:GLU:HG3	9:J:149:ARG:CZ	2.50	0.41
9:J:80:VAL:HG12	9:J:81:GLY:N	2.36	0.41
10:K:14:ARG:CD	10:K:15:ASN:ND2	2.83	0.41
10:K:35:ILE:O	10:K:37:ARG:N	2.53	0.41
10:K:6:ILE:HD12	10:K:85:ARG:CD	2.51	0.41
10:K:6:ILE:CD1	10:K:85:ARG:NE	2.83	0.41
11:L:26:VAL:CG1	11:L:63:ILE:HD13	2.51	0.41
5:F:23:TYR:CE1	12:M:10:GLY:C	2.94	0.41
13:N:12:ARG:NH1	13:N:40:ILE:HG23	2.35	0.41
14:O:88:GLY:C	14:O:89:ARG:O	2.59	0.41
14:O:6:THR:OG1	14:O:9:GLN:HB2	2.21	0.41
17:R:36:ILE:HG22	17:R:37:ASN:N	2.36	0.41
19:T:10:VAL:HB	19:T:54:GLY:H	1.85	0.41
20:U:17:SER:CB	20:U:54:ARG:HH12	2.32	0.41
1:A:1311:G:OP2	21:V:2:PRO:CD	2.69	0.41
22:W:102:GLY:O	22:W:104:LEU:N	2.54	0.41
1:A:161:A:N1	1:A:347:G:O2'	2.48	0.41
3:D:44:G:C3'	3:D:45:U:H5'	2.50	0.41
3:B:9:A:C2	3:B:46:G:N2	2.89	0.41
2:1:29:G:C6	2:1:30:U:C5	3.09	0.41
1:A:1026:G:O6	1:A:1036:G:N2	2.53	0.41
1:A:1115:C:O2'	1:A:1116:C:C5'	2.69	0.41
1:A:1206:G:C6	1:A:1207:G:C5	3.09	0.41
1:A:1270:C:C4	1:A:1271:G:N7	2.89	0.41
1:A:1278:U:H5'	1:A:1279:A:H4'	2.02	0.41
1:A:1276:G:HO2'	1:A:1282:C:H4'	1.84	0.41
1:A:1358:U:OP1	16:Q:35:ARG:HG3	2.21	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:68:G:C5'	1:A:171:A:H1'	2.50	0.41
1:A:284:G:O2'	1:A:285:G:C5'	2.62	0.41
1:A:118:U:H3'	1:A:288:A:N6	2.35	0.41
1:A:298:A:H8	1:A:298:A:OP1	2.04	0.41
1:A:354:G:N3	1:A:355:C:C6	2.88	0.41
1:A:386:C:N4	1:A:387:U:C4	2.89	0.41
1:A:401:C:OP2	6:G:73:ARG:CZ	2.69	0.41
1:A:410:G:N2	1:A:429:U:C2	2.88	0.41
1:A:455:C:O2'	1:A:456:C:H5'	2.21	0.41
1:A:520:A:H3'	1:A:520:A:C8	2.56	0.41
1:A:518:C:H5	1:A:530:G:C8	2.39	0.41
1:A:584:G:C6	1:A:585:G:N7	2.88	0.41
1:A:622:A:H2'	1:A:623:C:O5'	2.21	0.41
1:A:637:G:C2	1:A:638:G:C8	3.08	0.41
1:A:658:G:OP1	17:R:31:LEU:HD23	2.21	0.41
1:A:67:C:H5'	1:A:172:A:HO2'	1.79	0.41
1:A:741:G:H2'	1:A:742:G:H8	1.85	0.41
1:A:662:G:N1	1:A:744:C:C4	2.89	0.41
1:A:785:G:C2	1:A:798:G:C4	3.09	0.41
1:A:867:G:N3	1:A:868:C:C6	2.89	0.41
1:A:85:U:H2'	1:A:86:U:H5'	2.02	0.41
1:A:89:U:O2'	1:A:90:C:H5'	2.21	0.41
1:A:966:G:H2'	1:A:967:C:O5'	2.21	0.41
1:A:979:C:OP2	1:A:980:C:N4	2.54	0.41
1:A:961:U:O4'	1:A:983:A:C2	2.73	0.41
4:E:144:ARG:O	4:E:145:LEU:C	2.60	0.41
4:E:213:LEU:O	4:E:216:SER:HB3	2.21	0.41
4:E:221:LEU:HD13	4:E:222:ILE:HA	2.02	0.41
4:E:43:ASP:OD2	4:E:45:GLN:HB2	2.21	0.41
4:E:58:ILE:CG2	4:E:221:LEU:CD1	2.99	0.41
5:F:150:LYS:C	5:F:150:LYS:HD3	2.40	0.41
1:A:1191:A:C5'	5:F:4:LYS:HZ2	2.33	0.41
5:F:59:ARG:HD3	5:F:61:ALA:O	2.20	0.41
1:A:1081:G:OP1	7:H:18:ARG:CB	2.68	0.41
7:H:61:TYR:O	7:H:62:ALA:C	2.59	0.41
8:I:69:GLU:HB2	8:I:70:ASP:H	1.43	0.41
10:K:25:ASP:N	10:K:25:ASP:OD1	2.53	0.41
10:K:49:GLU:CD	10:K:60:ARG:HB3	2.40	0.41
10:K:68:ARG:NE	10:K:74:PRO:HB3	2.36	0.41
11:L:5:TYR:CZ	11:L:18:PHE:CE2	3.08	0.41
11:L:6:GLY:CA	11:L:80:GLY:O	2.60	0.41
1:A:1279:A:H5''	12:M:7:LYS:HE2	2.02	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:N:120:ARG:HE	13:N:126:ARG:NH2	2.19	0.41
14:O:109:GLY:O	14:O:111:LYS:N	2.54	0.41
14:O:59:ARG:CA	14:O:64:TYR:O	2.51	0.41
14:O:46:LYS:HZ3	14:O:94:PRO:HG2	1.84	0.41
18:S:40:ASP:HA	18:S:41:PRO:HD3	1.76	0.41
18:S:71:ARG:HH11	18:S:71:ARG:HB3	1.85	0.41
1:A:254:G:O2'	19:T:18:THR:OG1	2.35	0.41
20:U:45:SER:CB	20:U:49:LYS:HZ1	2.34	0.41
20:U:47:THR:N	20:U:49:LYS:HE2	2.36	0.41
20:U:56:THR:HB	20:U:58:LEU:CD1	2.44	0.41
1:A:1210:C:C4'	1:A:1214:C:H42	2.33	0.41
1:A:1274:G:H2'	1:A:1274:G:N3	2.36	0.41
1:A:1311:G:N7	21:V:2:PRO:CA	2.84	0.41
1:A:1348:U:P	11:L:109:VAL:HA	2.60	0.41
1:A:1403:C:O2	1:A:1499:A:N6	2.54	0.41
1:A:1442:G:P	1:A:1442:G:N2	2.94	0.41
1:A:196:A:H3'	1:A:196:A:H8	1.86	0.41
1:A:329:A:C6	1:A:332:G:C2	3.09	0.41
1:A:369:C:C2	1:A:370:C:C5	3.09	0.41
1:A:375:U:C2'	1:A:376:G:C5'	2.99	0.41
1:A:391:G:O6	1:A:392:G:C6	2.74	0.41
1:A:468:A:N6	1:A:474:G:N1	2.68	0.41
1:A:468:A:N7	1:A:474:G:N7	2.69	0.41
1:A:475:G:C4	1:A:476:G:N7	2.89	0.41
1:A:439:A:C4	1:A:496:A:C5	3.09	0.41
1:A:498:A:C4	1:A:547:A:C2	3.09	0.41
1:A:537:G:O2'	1:A:538:G:H5'	2.20	0.41
1:A:687:A:O2'	1:A:688:G:OP2	2.38	0.41
1:A:690:G:C2	1:A:691:G:O4'	2.74	0.41
1:A:735:C:O5'	1:A:735:C:C6	2.72	0.41
1:A:80:G:C2'	1:A:81:G:H8	2.34	0.41
1:A:837:G:C2	1:A:838:G:C5	3.08	0.41
1:A:896:C:H2'	1:A:897:C:C6	2.56	0.41
1:A:908:A:H2'	1:A:909:A:C8	2.53	0.41
1:A:930:C:C4	1:A:931:C:C5	3.09	0.41
1:A:938:A:C2	1:A:939:G:N9	2.89	0.41
1:A:96:G:H2'	1:A:97:U:C5	2.51	0.41
3:C:67:C:N4	3:C:68:C:H41	2.19	0.41
4:E:122:PHE:O	4:E:123:ALA:C	2.59	0.41
4:E:52:GLU:CD	4:E:53:ARG:N	2.74	0.41
5:F:183:ASP:OD2	5:F:184:TYR:N	2.54	0.41
6:G:100:ARG:NH1	6:G:137:SER:HA	2.35	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:36:ARG:HG2	6:G:38:TYR:OH	2.21	0.41
7:H:9:LYS:HD3	7:H:108:ALA:CB	2.51	0.41
7:H:109:ILE:CD1	7:H:139:LEU:HD11	2.50	0.41
7:H:141:GLN:O	7:H:142:LEU:CG	2.67	0.41
8:I:2:ARG:C	8:I:67:MET:SD	3.00	0.41
9:J:147:ALA:C	9:J:149:ARG:N	2.74	0.41
9:J:71:PRO:HB2	9:J:72:ARG:H	1.77	0.41
10:K:81:HIS:CD2	10:K:138:TRP:O	2.74	0.41
10:K:10:LEU:HA	10:K:83:ILE:HD11	2.03	0.41
1:A:1367:C:OP2	11:L:115:GLY:HA2	2.21	0.41
11:L:116:LYS:HB3	11:L:122:ALA:N	2.34	0.41
13:N:41:THR:HB	13:N:71:LYS:CD	2.50	0.41
14:O:103:GLY:HA2	14:O:107:ALA:O	2.21	0.41
14:O:110:VAL:CB	14:O:113:ARG:HG3	2.51	0.41
14:O:85:ILE:CD1	14:O:99:HIS:O	2.69	0.41
1:A:1229:A:P	15:P:116:THR:HG22	2.60	0.41
15:P:48:LEU:HD23	15:P:52:GLU:HB2	1.93	0.41
15:P:90:LEU:CD2	15:P:93:ARG:HD3	2.50	0.41
18:S:32:TYR:O	18:S:34:GLU:N	2.54	0.41
18:S:4:ILE:O	18:S:66:PRO:HA	2.21	0.41
18:S:75:ARG:HA	18:S:80:PHE:HB3	2.03	0.41
18:S:75:ARG:HG3	18:S:80:PHE:CG	2.55	0.41
1:A:1310:G:N7	21:V:2:PRO:HD3	2.36	0.41
21:V:51:VAL:HB	21:V:75:ALA:CB	2.50	0.41
1:A:1331:G:O6	23:X:7:ARG:NH2	2.54	0.41
3:D:15:G:O6	3:D:48:C:C4	2.74	0.41
6:G:47:ARG:CB	6:G:47:ARG:HH11	2.32	0.41
1:A:1165:C:N4	1:A:1166:G:C5	2.89	0.41
1:A:1169:A:C5	1:A:1170:A:N1	2.89	0.41
3:B:12:U:C6	3:B:12:U:C3'	3.04	0.41
10:K:54:ASP:C	10:K:56:LYS:N	2.74	0.41
1:A:73:G:N2	1:A:74:C:C2	2.88	0.41
1:A:418:C:O2'	1:A:419:C:H5'	2.20	0.41
2:1:39:U:H4'	2:1:40:U:H5'	2.01	0.41
1:A:1043:C:C4	1:A:1044:A:N7	2.89	0.41
1:A:1080:A:H8	1:A:1080:A:O5'	2.04	0.41
1:A:1092:A:C8	1:A:1183:A:N7	2.89	0.41
1:A:1107:C:H2'	1:A:1107:C:O2	2.21	0.41
1:A:1148:U:H5'	11:L:16:ARG:HD2	2.01	0.41
1:A:11:G:O2'	1:A:12:U:H5'	2.21	0.41
1:A:1363:A:H1'	1:A:1365:G:N7	2.35	0.41
1:A:1440:C:O2	1:A:1441:G:O4'	2.39	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1475:G:H2'	1:A:1476:G:O5'	2.21	0.41
1:A:170:U:H2'	1:A:170:U:O2	2.20	0.41
1:A:397:A:C2'	1:A:398:C:OP2	2.69	0.41
1:A:543:C:OP2	6:G:10:ARG:NH2	2.53	0.41
1:A:626:U:H2'	1:A:627:G:H8	1.86	0.41
1:A:592:G:C6	1:A:648:A:C6	3.09	0.41
1:A:673:G:C6	1:A:734:G:C6	3.09	0.41
1:A:766:A:C2'	1:A:767:A:H8	2.34	0.41
1:A:924:C:C2	1:A:925:G:C8	3.08	0.41
4:E:118:LEU:HD22	4:E:142:LEU:HD13	2.02	0.41
4:E:130:ARG:NE	4:E:130:ARG:CA	2.78	0.41
4:E:221:LEU:HD13	4:E:221:LEU:O	2.19	0.41
5:F:138:VAL:CG1	5:F:149:ALA:HB3	2.51	0.41
5:F:18:TRP:CE2	16:Q:55:GLY:O	2.74	0.41
5:F:73:PRO:HD3	5:F:105:GLU:CD	2.41	0.41
6:G:108:LEU:HA	6:G:108:LEU:HD22	1.78	0.41
6:G:122:ARG:HG3	6:G:136:PRO:HG2	2.03	0.41
7:H:75:THR:CA	7:H:118:ILE:HD11	2.50	0.41
8:I:2:ARG:CD	8:I:69:GLU:HG2	2.51	0.41
8:I:11:ASN:HB3	8:I:84:ASN:HB3	2.03	0.41
9:J:69:VAL:C	9:J:100:ALA:HB1	2.41	0.41
9:J:26:PHE:O	9:J:29:LYS:HB2	2.21	0.41
9:J:86:GLN:O	9:J:148:ASN:CB	2.65	0.41
10:K:104:ARG:O	10:K:107:LEU:HD23	2.21	0.41
10:K:20:TYR:HD1	10:K:65:TYR:CZ	2.38	0.41
10:K:32:LYS:O	10:K:35:ILE:N	2.55	0.41
10:K:92:ARG:CG	10:K:92:ARG:HH11	2.20	0.41
11:L:47:LEU:HD11	11:L:56:LEU:CD1	2.51	0.41
12:M:33:GLN:O	12:M:34:VAL:HG23	2.20	0.41
9:J:150:ALA:HA	13:N:59:TYR:HB2	2.03	0.41
14:O:84:LEU:CA	14:O:104:VAL:HG11	2.50	0.41
14:O:86:ARG:NH2	14:O:119:LYS:HD3	2.35	0.41
14:O:5:PRO:HG3	14:O:15:ARG:NH2	2.35	0.41
14:O:31:PRO:HB2	14:O:32:PHE:H	1.71	0.41
15:P:19:LEU:HD13	15:P:25:ILE:CG2	2.51	0.41
16:Q:16:PHE:HB3	16:Q:18:VAL:HG22	2.03	0.41
17:R:13:GLN:HB3	17:R:13:GLN:HE21	1.66	0.41
17:R:33:THR:HB	17:R:34:LEU:H	1.79	0.41
18:S:31:LYS:NZ	18:S:31:LYS:CB	2.78	0.41
18:S:58:TYR:HD1	18:S:59:TRP:CA	2.33	0.41
3:D:17:C:N4	3:D:19:G:C8	2.85	0.41
1:A:160:A:H2	1:A:343:U:H1'	1.84	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:B:18:G:O2'	3:B:57:G:N2	2.53	0.41
12:M:17:ASP:O	12:M:21:GLN:CB	2.70	0.41
2:1:37:U:H2'	2:1:38:U:N1	2.35	0.40
1:A:1033:G:C2	1:A:1034:G:C4	3.09	0.40
1:A:1053:G:O6	1:A:1200:C:OP2	2.39	0.40
1:A:1055:A:N6	1:A:1206:G:C4	2.89	0.40
1:A:1133:G:C5	1:A:1134:G:N7	2.89	0.40
1:A:1120:G:N1	1:A:1154:G:C2	2.89	0.40
1:A:1195:C:H5''	1:A:1196:U:OP2	2.21	0.40
1:A:1269:A:C5	1:A:1313:U:O4'	2.74	0.40
1:A:978:A:C2	1:A:1319:A:N3	2.89	0.40
1:A:1338:G:C6	1:A:1339:A:C6	3.09	0.40
1:A:1422:G:C2	1:A:1423:G:C8	3.10	0.40
1:A:14:U:O2	1:A:17:U:C5	2.74	0.40
1:A:186(B):C:C4'	22:W:89:ARG:NH2	2.83	0.40
1:A:196:A:C8	1:A:196:A:H3'	2.56	0.40
1:A:22:G:OP2	1:A:561:U:O2	2.39	0.40
1:A:253:U:O4'	1:A:276:G:H1'	2.21	0.40
1:A:280:C:H1'	19:T:38:ARG:CD	2.51	0.40
1:A:374:A:O4'	1:A:481:G:N2	2.54	0.40
1:A:406:G:C8	1:A:495:A:C2	3.09	0.40
1:A:652:U:C1'	1:A:653:A:C2	3.04	0.40
1:A:780:A:N3	1:A:803:G:N1	2.69	0.40
1:A:942:G:H21	11:L:124:GLN:CD	2.23	0.40
1:A:972:C:OP2	12:M:57:LYS:NZ	2.52	0.40
1:A:986:A:H4'	21:V:55:LYS:CE	2.51	0.40
1:A:988:G:C6	1:A:989:C:C4	3.09	0.40
1:A:993:G:H21	1:A:995:C:N4	2.19	0.40
3:C:11:C:H2'	3:C:12:U:C5	2.57	0.40
3:C:38:A:C8	3:C:39:U:C6	3.09	0.40
4:E:222:ILE:CB	4:E:226:ARG:HH21	2.23	0.40
5:F:18:TRP:O	5:F:21:ARG:HG2	2.20	0.40
5:F:87:LEU:HB2	5:F:101:LEU:HD12	2.02	0.40
6:G:20:TYR:CD2	6:G:27:TYR:CD2	3.09	0.40
7:H:45:PHE:HE1	7:H:47:LYS:CD	2.33	0.40
7:H:64:ARG:H	7:H:64:ARG:HG2	1.69	0.40
9:J:113:GLU:OE1	9:J:122:HIS:ND1	2.54	0.40
10:K:14:ARG:HA	10:K:17:THR:CB	2.50	0.40
10:K:46:LYS:HG3	10:K:64:LYS:HG3	2.03	0.40
10:K:77:GLU:HB3	10:K:78:GLN:H	1.45	0.40
1:A:599:C:O3'	10:K:96:GLY:HA3	2.21	0.40
11:L:121:ARG:HG2	11:L:121:ARG:O	2.21	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:M:26:ALA:O	12:M:84:GLN:CD	2.59	0.40
13:N:73:MET:C	13:N:75:TYR:N	2.74	0.40
14:O:30:ALA:HB1	14:O:31:PRO:CD	2.49	0.40
14:O:27:LEU:CD2	14:O:33:ARG:HD3	2.48	0.40
14:O:57:LYS:HE2	14:O:67:THR:CG2	2.50	0.40
15:P:15:VAL:HG11	15:P:34:LEU:HD23	2.03	0.40
15:P:91:ARG:C	15:P:98:VAL:HG22	2.41	0.40
17:R:79:ARG:HG3	17:R:82:ILE:HD12	2.02	0.40
1:A:760:G:N1	19:T:105:ALA:C	2.68	0.40
19:T:10:VAL:HG12	19:T:54:GLY:N	2.26	0.40
20:U:50:ILE:HG22	20:U:50:ILE:O	2.20	0.40
22:W:13:LEU:O	22:W:16:HIS:N	2.54	0.40
1:A:339:C:C4	1:A:340:U:C5	3.10	0.40
1:A:1009:G:N3	1:A:1010:G:C8	2.89	0.40
3:C:44:G:C2'	3:C:45:U:H5'	2.50	0.40
1:A:1015:A:C5	1:A:1016:A:C6	3.09	0.40
1:A:1029:G:O2'	1:A:1031:G:N7	2.43	0.40
3:B:47:U:C4	3:B:49:C:H4'	2.56	0.40
1:A:101:A:C2'	1:A:102:G:H8	2.16	0.40
1:A:122:G:H2'	1:A:123:C:O4'	2.21	0.40
1:A:1298:C:C5	9:J:114:ARG:CD	2.95	0.40
1:A:1347:G:H3'	11:L:107:ARG:CA	2.51	0.40
1:A:1422:G:N1	1:A:1423:G:C6	2.89	0.40
1:A:142:G:HO2'	1:A:196:A:H2	1.55	0.40
1:A:1517:G:C6	1:A:1518:A:C2	3.09	0.40
1:A:186(A):C:N4	1:A:191:G:N1	2.70	0.40
1:A:191:G:C6	1:A:192:U:C4	3.10	0.40
1:A:22:G:N3	1:A:23:C:C6	2.89	0.40
1:A:261:U:C3'	1:A:263:A:OP2	2.69	0.40
1:A:116:A:OP1	1:A:289:G:OP1	2.39	0.40
1:A:310:G:C4	1:A:311:C:C5	3.08	0.40
1:A:315:A:N1	1:A:330:C:C5	2.90	0.40
1:A:363:A:N7	14:O:30:ALA:CB	2.74	0.40
1:A:413:G:N1	6:G:36:ARG:NH1	2.69	0.40
1:A:40:C:C2'	1:A:41:G:O5'	2.69	0.40
1:A:498:A:N6	1:A:547:A:O5'	2.45	0.40
1:A:59:A:N6	1:A:331:G:H1'	2.36	0.40
1:A:624:C:O2	1:A:625:G:C8	2.75	0.40
1:A:774:G:H3'	1:A:775:G:C8	2.56	0.40
1:A:796:C:OP1	13:N:123:LYS:HD3	2.20	0.40
1:A:835:U:C2	1:A:852:G:N2	2.89	0.40
1:A:873:A:H4'	1:A:874:G:OP2	2.20	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:885:G:O2'	1:A:915:A:C2	2.74	0.40
3:C:16:U:C4'	3:C:18:G:H5''	2.46	0.40
3:C:1:G:C2	3:C:2:C:C4	3.10	0.40
3:C:37:A:C6	3:C:38:A:C6	3.09	0.40
3:C:67:C:N4	3:C:68:C:N4	2.68	0.40
3:C:75:C:H3'	3:C:75:C:C6	2.56	0.40
4:E:118:LEU:CD1	4:E:141:GLU:OE2	2.65	0.40
1:A:843:U:N3	4:E:37:ASN:HA	2.37	0.40
4:E:97:TRP:HZ2	4:E:102:LEU:HD11	1.80	0.40
5:F:8:ILE:O	5:F:9:GLY:C	2.59	0.40
6:G:101:LEU:HG	6:G:102:ASP:N	2.35	0.40
6:G:153:ARG:O	6:G:154:ASN:HB3	2.21	0.40
6:G:208:SER:O	6:G:209:ARG:NH1	2.43	0.40
8:I:52:ILE:HD13	8:I:87:ARG:HH21	1.70	0.40
8:I:82:ARG:O	8:I:84:ASN:N	2.54	0.40
9:J:10:ARG:HH11	9:J:10:ARG:CB	2.33	0.40
9:J:68:ASN:HB3	9:J:135:VAL:HG11	2.03	0.40
9:J:12:LEU:HD21	9:J:25:ALA:HB2	2.02	0.40
9:J:41:ARG:CZ	9:J:41:ARG:HB3	2.49	0.40
1:A:824:C:H1'	10:K:1:MET:O	2.22	0.40
10:K:23:SER:HA	10:K:62:TYR:HD1	1.86	0.40
12:M:12:ASP:CB	12:M:15:THR:HG22	2.51	0.40
5:F:5:ILE:HG22	12:M:51:ARG:NH2	2.37	0.40
12:M:46:ARG:CD	12:M:64:GLU:OE2	2.69	0.40
13:N:13:GLN:CD	13:N:76:GLY:H	2.23	0.40
14:O:57:LYS:HG2	14:O:67:THR:CG2	2.30	0.40
15:P:15:VAL:HB	15:P:34:LEU:HD21	2.02	0.40
15:P:84:ILE:CD1	15:P:86:CYS:SG	3.07	0.40
17:R:25:THR:OG1	17:R:26:GLU:N	2.54	0.40
18:S:19:ILE:HD11	18:S:38:TYR:C	2.42	0.40
19:T:87:LYS:C	19:T:91:ARG:HE	2.24	0.40
20:U:36:ASN:H	20:U:40:LEU:HD11	1.87	0.40
21:V:11:VAL:CG1	21:V:38:SER:OG	2.69	0.40
22:W:25:ARG:NH1	22:W:25:ARG:CG	2.84	0.40
1:A:186(A):C:O4'	22:W:85:MET:SD	2.79	0.40
15:P:58:GLU:C	15:P:61:GLU:HB2	2.41	0.40
1:A:159:G:N1	1:A:163:C:N4	2.70	0.40
1:A:1170:A:H3'	1:A:1170:A:C8	2.56	0.40
6:G:160:GLN:OE1	6:G:160:GLN:HA	2.20	0.40
14:O:17:LYS:O	14:O:18:VAL:O	2.39	0.40
15:P:12:ASN:O	15:P:12:ASN:OD1	2.38	0.40
2:1:30:U:C4	2:1:31:U:N3	2.90	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:1:8:U:H2'	2:1:8:U:O2	2.21	0.40
1:A:1049:U:O2	1:A:1201:A:H1'	2.21	0.40
1:A:1151:A:H1'	12:M:39:PRO:CB	2.52	0.40
1:A:1196:U:C5'	1:A:1197:G:H5'	2.45	0.40
1:A:1253:G:H22	1:A:1285:A:N6	2.19	0.40
1:A:1273:G:C2'	1:A:1274:G:H8	2.35	0.40
1:A:1245:A:C6	1:A:1293:G:N1	2.89	0.40
1:A:1309:G:C1'	15:P:74:VAL:HG13	2.51	0.40
1:A:1338:G:C6	1:A:1339:A:N6	2.90	0.40
1:A:1350:A:H2'	1:A:1351:U:H6	1.86	0.40
1:A:1395:C:H2'	1:A:1396:A:O5'	2.21	0.40
1:A:1431:C:O2'	1:A:1432:G:C5'	2.69	0.40
1:A:335:C:H4'	1:A:1434:A:H4'	2.02	0.40
1:A:1477:C:C2	1:A:1478:C:C5	3.09	0.40
1:A:222:U:C2	1:A:223:U:C5	3.09	0.40
1:A:398:C:H2'	1:A:399:G:C8	2.56	0.40
1:A:426:G:C2	1:A:427:U:C2	3.09	0.40
1:A:464:G:H8	1:A:464:G:O5'	2.03	0.40
1:A:477:G:C2	1:A:478:A:C4	3.09	0.40
1:A:521:G:P	14:O:54:LYS:NZ	2.95	0.40
1:A:528:C:C4'	1:A:535:A:N6	2.84	0.40
1:A:938:A:C2'	1:A:939:G:C5'	2.98	0.40
3:C:19:G:N1	3:C:56:C:N4	2.68	0.40
3:C:37:A:N6	3:C:38:A:N1	2.70	0.40
3:C:52:G:C6	3:C:53:G:C5	3.10	0.40
4:E:9:GLU:CG	4:E:10:LEU:N	2.83	0.40
4:E:163:PHE:CZ	4:E:187:LEU:N	2.90	0.40
4:E:167:PRO:CG	4:E:168:THR:N	2.83	0.40
4:E:71:VAL:HG22	4:E:93:VAL:CA	2.52	0.40
5:F:84:ILE:HA	5:F:101:LEU:CD1	2.50	0.40
6:G:122:ARG:HA	6:G:134:ASP:HB2	2.03	0.40
6:G:13:ARG:HA	6:G:32:ALA:HB2	2.02	0.40
6:G:177:ASP:C	6:G:179:GLU:N	2.74	0.40
6:G:58:LEU:HD13	6:G:58:LEU:O	2.22	0.40
1:A:402:G:OP1	6:G:74:GLN:NE2	2.54	0.40
7:H:79:GLU:OE1	10:K:105:ARG:HB2	2.22	0.40
9:J:42:ILE:HG22	9:J:117:ALA:HA	2.04	0.40
10:K:119:LEU:HB3	10:K:123:GLU:OE2	2.20	0.40
10:K:39:LEU:HD13	10:K:39:LEU:HA	1.71	0.40
1:A:1148:U:C5'	11:L:16:ARG:HD2	2.51	0.40
11:L:16:ARG:HH12	11:L:64:THR:HG21	1.86	0.40
12:M:12:ASP:O	12:M:15:THR:CG2	2.67	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:M:76:ASN:ND2	12:M:76:ASN:N	2.69	0.40
14:O:41:ARG:C	14:O:42:THR:HG22	2.41	0.40
14:O:6:THR:HG21	14:O:9:GLN:OE1	2.21	0.40
14:O:93:LEU:N	14:O:93:LEU:CD2	2.80	0.40
16:Q:8:GLU:O	16:Q:10:ALA:N	2.55	0.40
17:R:7:GLU:CB	17:R:10:LYS:HE3	2.45	0.40
17:R:63:ARG:HH22	17:R:87:ILE:CD1	2.30	0.40
17:R:7:GLU:HA	17:R:10:LYS:CG	2.51	0.40
19:T:15:MET:HB3	19:T:18:THR:OG1	2.21	0.40
22:W:14:LYS:O	22:W:17:ARG:N	2.54	0.40
22:W:56:MET:O	22:W:56:MET:SD	2.78	0.40
1:A:1009:G:C2	1:A:1010:G:C8	3.08	0.40
1:A:1029:G:H21	1:A:1031:G:H3'	1.86	0.40
1:A:457:C:H3'	1:A:457:C:C6	2.56	0.40
2:1:52:U:O4'	6:G:49:ARG:O	2.40	0.40
2:1:9:U:C2	2:1:13:U:O4	2.74	0.40
1:A:1210:C:H4'	1:A:1214:C:C4	2.55	0.40
1:A:1277:C:C5	1:A:1278:U:O2	2.74	0.40
1:A:136:C:O2	1:A:137:C:C6	2.75	0.40
1:A:1386:G:H2'	1:A:1387:G:H8	1.86	0.40
1:A:1397:C:H42	2:1:46:U:H5	1.69	0.40
1:A:1459:C:OP1	22:W:27:LYS:NZ	2.54	0.40
1:A:1472:U:H6	1:A:1472:U:O5'	2.04	0.40
1:A:172:A:N7	1:A:174:C:C4	2.89	0.40
1:A:193:C:O2'	1:A:194:C:C5'	2.69	0.40
1:A:247:G:C6	1:A:278:G:C2	3.09	0.40
1:A:260:G:C2	1:A:261:U:O2	2.75	0.40
1:A:260:G:N3	1:A:261:U:O2	2.54	0.40
1:A:27:G:H8	1:A:27:G:P	2.44	0.40
1:A:551:U:C2	1:A:552:U:C5	3.09	0.40
1:A:560:U:N3	1:A:566:G:O4'	2.54	0.40
1:A:650:G:C2	1:A:651:C:C6	3.09	0.40
1:A:670:G:C6	1:A:671:G:N7	2.90	0.40
1:A:673:G:C2	1:A:674:G:C6	3.10	0.40
1:A:688:G:N1	1:A:700:G:C6	2.89	0.40
1:A:744:C:H2'	1:A:745:C:H6	1.86	0.40
1:A:901:A:H2	1:A:902:G:O2'	2.04	0.40
1:A:979:C:OP2	1:A:981:U:N3	2.52	0.40
3:D:34:G:N3	3:D:34:G:C2'	2.84	0.40
3:D:37:A:H3'	3:D:38:A:C8	2.54	0.40
4:E:80:ILE:CG1	4:E:208:ILE:HD13	2.51	0.40
4:E:50:GLU:O	4:E:53:ARG:HB3	2.21	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:119:ARG:O	5:F:120:VAL:C	2.60	0.40
5:F:123:GLN:O	5:F:124:ILE:C	2.60	0.40
5:F:164:ARG:CG	5:F:165:THR:H	2.34	0.40
5:F:77:ILE:HD13	5:F:84:ILE:HB	2.04	0.40
6:G:106:TYR:O	6:G:108:LEU:N	2.54	0.40
6:G:187:ARG:NH2	6:G:188:LEU:HD21	2.37	0.40
6:G:57:ARG:HH22	7:H:107:ARG:HE	1.65	0.40
6:G:91:SER:OG	6:G:92:VAL:N	2.54	0.40
7:H:109:ILE:CG2	7:H:110:LEU:H	2.32	0.40
7:H:110:LEU:O	7:H:111:GLU:C	2.59	0.40
8:I:3:ARG:O	8:I:93:SER:CB	2.69	0.40
9:J:123:GLU:OE1	9:J:134:ALA:N	2.45	0.40
9:J:26:PHE:C	9:J:26:PHE:CD1	2.92	0.40
9:J:36:LYS:O	9:J:39:ALA:HB3	2.21	0.40
9:J:91:VAL:O	9:J:92:SER:O	2.40	0.40
10:K:70:GLN:NE2	10:K:70:GLN:HA	2.37	0.40
4:E:179:LYS:HB3	10:K:72:PRO:HB3	2.03	0.40
10:K:87:SER:HB3	10:K:93:VAL:N	2.30	0.40
10:K:88:LYS:N	10:K:88:LYS:HZ3	2.17	0.40
11:L:33:PHE:CZ	11:L:43:ALA:O	2.74	0.40
11:L:89:ASN:C	11:L:91:ASP:H	2.23	0.40
11:L:93:ARG:O	11:L:95:LYS:N	2.46	0.40
13:N:14:VAL:HG11	13:N:35:PRO:HG2	2.02	0.40
15:P:91:ARG:HD2	15:P:96:LEU:HG	2.03	0.40
17:R:79:ARG:O	17:R:82:ILE:HB	2.22	0.40
18:S:3:LYS:CD	18:S:24:ALA:HB2	2.52	0.40
19:T:13:ASP:HB3	19:T:52:LYS:HG2	2.03	0.40
19:T:68:ARG:N	19:T:70:ARG:CZ	2.83	0.40
8:I:99:ALA:HB3	20:U:31:LEU:HD11	2.01	0.40
1:A:736:C:C5'	20:U:72:ARG:HH22	2.02	0.40
21:V:66:MET:O	21:V:69:HIS:HD2	2.04	0.40
21:V:68:GLY:C	21:V:69:HIS:CG	2.95	0.40
22:W:23:ARG:O	22:W:24:LEU:O	2.39	0.40
22:W:66:ALA:O	22:W:68:LYS:N	2.55	0.40
22:W:76:ALA:C	22:W:78:ALA:N	2.74	0.40
23:X:3:LYS:HZ2	23:X:13:ILE:CG2	2.33	0.40
3:D:57:G:C8	3:D:57:G:OP2	2.75	0.40
3:D:64:A:O2'	3:D:65:G:H5'	2.21	0.40
3:D:9:A:N6	3:D:22:G:N7	2.69	0.40
1:A:341:C:C2	1:A:342:C:C5	3.10	0.40
1:A:491:G:C2'	1:A:492:G:H5'	2.51	0.40
1:A:77:C:H6	1:A:77:C:O5'	2.03	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1121:U:H6	1:A:1121:U:O5'	2.04	0.40
1:A:1532:U:C2	2:1:33:U:O2	2.75	0.40
2:1:50:U:O2'	2:1:51:U:P	2.79	0.40
1:A:104:G:C2	1:A:105:G:C8	3.09	0.40
1:A:1113:C:OP2	1:A:1113:C:C5	2.75	0.40
1:A:1125:U:OP2	1:A:1125:U:H4'	2.20	0.40
1:A:1226:C:OP2	15:P:103:THR:CB	2.69	0.40
1:A:1287:A:H61	1:A:1371:G:C5'	2.34	0.40
1:A:1328:C:N4	1:A:1329:A:N6	2.70	0.40
1:A:1331:G:O4'	1:A:1331:G:OP1	2.40	0.40
1:A:1413:A:O2'	1:A:1414:U:O5'	2.40	0.40
1:A:335:C:H4'	1:A:1434:A:C4'	2.52	0.40
1:A:1489:G:C2	1:A:1490:C:C2	3.10	0.40
1:A:175:C:C2	1:A:176:C:C5	3.09	0.40
1:A:186(B):C:C2	1:A:186(C):G:H8	2.40	0.40
1:A:189:U:C2	19:T:72:ARG:NH2	2.85	0.40
1:A:273:A:C6	1:A:274:A:C5	3.10	0.40
1:A:286:G:C6	1:A:287:U:C5	3.09	0.40
1:A:32:A:OP1	1:A:398:C:H1'	2.20	0.40
1:A:432:A:N7	1:A:433:C:C4	2.90	0.40
1:A:602:A:C6	1:A:603:U:C4	3.10	0.40
1:A:609:A:O2'	1:A:610:G:H5'	2.21	0.40
1:A:634:C:H2'	1:A:635:G:H8	1.86	0.40
1:A:697:U:H3'	1:A:698:G:H8	1.87	0.40
1:A:698:G:N2	1:A:699:C:C2	2.89	0.40
1:A:803:G:C6	1:A:804:U:C4	3.10	0.40
1:A:818:G:O2'	1:A:819:A:P	2.80	0.40
1:A:867:G:C2	1:A:868:C:C5	3.09	0.40
1:A:87:A:C8	1:A:88:C:C6	3.09	0.40
1:A:87:A:N7	1:A:88:C:C2	2.89	0.40
1:A:894:G:C6	1:A:895:G:N7	2.89	0.40
1:A:89:U:N3	1:A:90:C:C5	2.90	0.40
1:A:899:C:N3	1:A:900:A:C2	2.90	0.40
1:A:901:A:HO2'	1:A:902:G:P	2.44	0.40
1:A:934:C:H5	1:A:1344:C:C2	2.39	0.40
1:A:93:U:O2	1:A:95:G:N7	2.54	0.40
1:A:970:C:H42	15:P:126:LYS:HZ1	1.68	0.40
4:E:11:LEU:N	4:E:11:LEU:HD23	2.36	0.40
4:E:68:ILE:HG23	4:E:161:ALA:O	2.22	0.40
4:E:165:VAL:CG2	4:E:166:ASP:H	2.16	0.40
4:E:219:VAL:O	4:E:223:ILE:CD1	2.69	0.40
5:F:48:TYR:O	5:F:51:GLY:N	2.53	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:52:LEU:O	5:F:115:LEU:HD21	2.21	0.40
7:H:84:PHE:CB	7:H:134:ALA:HA	2.52	0.40
7:H:31:LEU:HB2	7:H:129:ILE:HG23	2.03	0.40
8:I:29:ALA:O	8:I:32:ASN:N	2.54	0.40
8:I:52:ILE:HG21	8:I:87:ARG:HH12	1.86	0.40
1:A:1298:C:C6	9:J:114:ARG:HD3	2.52	0.40
9:J:125:MET:O	9:J:127:ALA:N	2.55	0.40
9:J:143:ARG:HD2	9:J:144:MET:N	2.18	0.40
9:J:21:VAL:HG23	9:J:22:LEU:HD23	2.03	0.40
9:J:27:ILE:CG1	9:J:43:PHE:CD1	2.99	0.40
9:J:6:ARG:CA	9:J:6:ARG:CZ	3.00	0.40
9:J:90:GLU:OE2	9:J:90:GLU:N	2.54	0.40
10:K:100:ILE:CB	10:K:125:ARG:HH21	2.33	0.40
10:K:29:SER:HB3	10:K:32:LYS:HZ3	1.84	0.40
10:K:98:LYS:HZ2	10:K:98:LYS:CA	2.32	0.40
12:M:4:ILE:HG22	12:M:4:ILE:O	2.21	0.40
12:M:27:ALA:HB1	12:M:74:ILE:CD1	2.52	0.40
13:N:116:HIS:O	13:N:117:ASN:CB	2.69	0.40
13:N:57:THR:O	13:N:58:PRO:C	2.58	0.40
14:O:34:ARG:CG	14:O:105:TYR:CE1	3.05	0.40
1:A:363:A:C4	14:O:31:PRO:HD2	2.57	0.40
14:O:54:LYS:HB3	14:O:70:ILE:CB	2.38	0.40
1:A:1228:C:O2'	15:P:116:THR:HA	2.22	0.40
15:P:13:LYS:HA	15:P:44:ARG:HH21	1.87	0.40
15:P:26:GLY:H	15:P:29:ARG:HB2	1.86	0.40
15:P:36:LYS:CD	15:P:59:TYR:HE1	2.35	0.40
15:P:70:LEU:O	15:P:73:GLU:HB3	2.21	0.40
15:P:77:ASN:HA	15:P:80:ARG:CG	2.51	0.40
16:Q:58:LYS:HD2	16:Q:59:ALA:O	2.21	0.40
17:R:36:ILE:HD11	17:R:60:VAL:HA	2.02	0.40
1:A:760:G:N1	19:T:105:ALA:OXT	2.40	0.40
20:U:42:ARG:C	20:U:43:PHE:CD1	2.95	0.40
20:U:45:SER:CA	20:U:51:LEU:HD21	2.52	0.40
20:U:62:GLU:O	20:U:64:ARG:N	2.55	0.40
22:W:24:LEU:O	22:W:25:ARG:C	2.58	0.40
1:A:160:A:N1	1:A:346:G:O6	2.55	0.40

There are no symmetry-related clashes.

5.3 Torsion angles

5.3.1 Protein backbone ⓘ

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all 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	
4	E	232/256 (91%)	114 (49%)	42 (18%)	76 (33%)	0	0
5	F	204/239 (85%)	107 (52%)	46 (22%)	51 (25%)	0	2
6	G	206/209 (99%)	96 (47%)	57 (28%)	53 (26%)	0	2
7	H	148/162 (91%)	93 (63%)	38 (26%)	17 (12%)	1	15
8	I	99/101 (98%)	58 (59%)	19 (19%)	22 (22%)	0	3
9	J	153/156 (98%)	73 (48%)	45 (29%)	35 (23%)	0	3
10	K	136/138 (99%)	68 (50%)	35 (26%)	33 (24%)	0	2
11	L	125/128 (98%)	62 (50%)	33 (26%)	30 (24%)	0	3
12	M	96/105 (91%)	52 (54%)	20 (21%)	24 (25%)	0	2
13	N	117/129 (91%)	65 (56%)	29 (25%)	23 (20%)	0	4
14	O	122/132 (92%)	50 (41%)	30 (25%)	42 (34%)	0	0
15	P	123/126 (98%)	56 (46%)	34 (28%)	33 (27%)	0	2
16	Q	58/61 (95%)	24 (41%)	16 (28%)	18 (31%)	0	1
17	R	86/89 (97%)	36 (42%)	35 (41%)	15 (17%)	0	6
18	S	81/88 (92%)	42 (52%)	24 (30%)	15 (18%)	0	5
19	T	102/105 (97%)	62 (61%)	23 (22%)	17 (17%)	0	7
20	U	71/88 (81%)	26 (37%)	26 (37%)	19 (27%)	0	2
21	V	78/93 (84%)	32 (41%)	23 (30%)	23 (30%)	0	1
22	W	97/106 (92%)	38 (39%)	32 (33%)	27 (28%)	0	1
23	X	22/27 (82%)	9 (41%)	6 (27%)	7 (32%)	0	1
All	All	2356/2538 (93%)	1163 (49%)	613 (26%)	580 (25%)	0	2

All (580) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	E	8	LYS
4	E	11	LEU

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Mol	Chain	Res	Type
4	E	13	ALA
4	E	15	VAL
4	E	16	HIS
4	E	17	PHE
4	E	22	LYS
4	E	26	PRO
4	E	37	ASN
4	E	42	ILE
4	E	44	LEU
4	E	45	GLN
4	E	76	GLN
4	E	77	ALA
4	E	78	GLN
4	E	97	TRP
4	E	104	ASN
4	E	109	SER
4	E	122	PHE
4	E	124	SER
4	E	127	ILE
4	E	131	PRO
4	E	147	LYS
4	E	153	ARG
4	E	154	LEU
4	E	155	LEU
4	E	161	ALA
4	E	165	VAL
4	E	168	THR
4	E	169	LYS
4	E	171	ALA
4	E	172	ILE
4	E	181	PHE
4	E	191	ASP
4	E	194	PRO
4	E	195	ASP
4	E	200	ILE
4	E	201	ILE
4	E	204	ASN
4	E	207	ALA
4	E	211	ILE
4	E	226	ARG
4	E	230	VAL
4	E	232	PRO

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Mol	Chain	Res	Type
4	E	236	TYR
5	F	4	LYS
5	F	12	LEU
5	F	14	ILE
5	F	18	TRP
5	F	24	ALA
5	F	28	GLN
5	F	39	ILE
5	F	43	LEU
5	F	52	LEU
5	F	53	ALA
5	F	64	VAL
5	F	65	ALA
5	F	79	ARG
5	F	83	ARG
5	F	84	ILE
5	F	95	THR
5	F	97	LYS
5	F	98	ASN
5	F	119	ARG
5	F	129	ALA
5	F	157	ILE
5	F	160	ALA
5	F	176	HIS
5	F	177	THR
5	F	179	ARG
5	F	191	THR
5	F	192	THR
6	G	3	ARG
6	G	17	VAL
6	G	18	LYS
6	G	21	LEU
6	G	29	PRO
6	G	30	LYS
6	G	31	CYS
6	G	48	ALA
6	G	56	VAL
6	G	71	SER
6	G	86	LYS
6	G	88	VAL
6	G	99	SER
6	G	109	GLY

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Mol	Chain	Res	Type
6	G	131	ARG
6	G	142	PRO
6	G	148	VAL
6	G	150	GLU
6	G	151	LYS
6	G	154	ASN
6	G	166	LYS
6	G	168	ARG
6	G	170	VAL
6	G	179	GLU
6	G	191	ARG
6	G	195	ALA
6	G	198	VAL
6	G	199	ASN
7	H	12	LEU
7	H	55	VAL
7	H	75	THR
7	H	128	PRO
7	H	144	THR
8	I	11	ASN
8	I	16	GLN
8	I	27	GLN
8	I	72	VAL
8	I	81	ILE
8	I	82	ARG
8	I	84	ASN
8	I	85	VAL
8	I	95	GLU
8	I	97	PHE
9	J	4	ARG
9	J	8	GLU
9	J	14	PRO
9	J	17	VAL
9	J	31	MET
9	J	35	LYS
9	J	37	ASN
9	J	71	PRO
9	J	91	VAL
9	J	111	ARG
9	J	134	ALA
9	J	142	GLU
10	K	6	ILE

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Mol	Chain	Res	Type
10	K	13	ILE
10	K	29	SER
10	K	30	ARG
10	K	63	LEU
10	K	74	PRO
10	K	75	ARG
10	K	76	PRO
10	K	77	GLU
10	K	79	VAL
10	K	103	VAL
10	K	105	ARG
10	K	115	SER
10	K	121	ASP
10	K	129	VAL
11	L	29	ASN
11	L	33	PHE
11	L	44	VAL
11	L	70	LYS
11	L	98	PRO
11	L	109	VAL
11	L	116	LYS
11	L	118	LYS
12	M	34	VAL
12	M	36	GLY
12	M	39	PRO
12	M	40	LEU
12	M	55	LYS
12	M	56	HIS
12	M	60	ARG
12	M	72	VAL
12	M	79	ARG
12	M	80	LYS
12	M	90	LEU
13	N	14	VAL
13	N	15	ALA
13	N	27	ASN
13	N	39	PRO
13	N	74	ALA
13	N	78	GLN
13	N	106	LYS
13	N	113	PRO
13	N	116	HIS

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Mol	Chain	Res	Type
14	O	6	THR
14	O	7	ILE
14	O	18	VAL
14	O	19	ARG
14	O	22	SER
14	O	28	LYS
14	O	30	ALA
14	O	46	LYS
14	O	48	PRO
14	O	51	ALA
14	O	62	SER
14	O	66	VAL
14	O	83	VAL
14	O	92	ASP
14	O	101	VAL
14	O	110	VAL
14	O	116	SER
14	O	127	GLU
15	P	11	ARG
15	P	12	ASN
15	P	14	ARG
15	P	59	TYR
15	P	84	ILE
15	P	101	GLN
15	P	107	ALA
15	P	121	LYS
15	P	124	PRO
16	Q	12	ARG
16	Q	18	VAL
16	Q	29	ARG
16	Q	31	ARG
16	Q	34	TYR
16	Q	36	PHE
16	Q	44	LEU
16	Q	54	PRO
16	Q	55	GLY
17	R	3	ILE
17	R	16	ALA
18	S	11	SER
18	S	15	PRO
18	S	24	ALA
18	S	27	LYS

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Mol	Chain	Res	Type
18	S	61	SER
19	T	3	LYS
19	T	4	LYS
19	T	15	MET
19	T	34	LYS
19	T	48	GLU
19	T	50	LYS
19	T	81	ARG
19	T	104	LYS
20	U	42	ARG
20	U	49	LYS
20	U	52	PRO
20	U	59	SER
20	U	75	ILE
20	U	79	LEU
20	U	82	THR
20	U	87	ARG
21	V	3	ARG
21	V	6	LYS
21	V	12	ASP
21	V	21	GLU
21	V	28	LYS
21	V	32	LYS
21	V	40	ILE
21	V	42	PRO
21	V	43	GLU
21	V	64	GLU
21	V	70	LYS
21	V	79	THR
22	W	12	ALA
22	W	99	LEU
22	W	105	SER
23	X	6	ARG
23	X	9	ARG
4	E	9	GLU
4	E	29	ALA
4	E	73	THR
4	E	102	LEU
4	E	151	GLY
4	E	178	ARG
4	E	190	THR
4	E	227	GLY

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Mol	Chain	Res	Type
5	F	27	LYS
5	F	30	ARG
5	F	66	VAL
5	F	74	GLY
5	F	101	LEU
5	F	158	GLY
5	F	206	GLU
6	G	4	TYR
6	G	67	ILE
6	G	73	ARG
6	G	101	LEU
6	G	107	ARG
6	G	138	TYR
6	G	139	ARG
6	G	165	MET
6	G	181	MET
6	G	200	GLU
6	G	208	SER
7	H	37	ARG
7	H	98	THR
7	H	102	ALA
7	H	104	ALA
8	I	13	ASN
8	I	14	LEU
8	I	51	PRO
8	I	83	ASP
9	J	23	VAL
9	J	56	GLN
9	J	72	ARG
9	J	92	SER
9	J	94	ARG
9	J	112	PRO
9	J	113	GLU
9	J	146	GLU
9	J	153	HIS
10	K	37	ARG
10	K	78	GLN
10	K	97	VAL
10	K	102	ARG
10	K	108	GLY
10	K	123	GLU
10	K	134	ILE

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Mol	Chain	Res	Type
11	L	39	GLY
11	L	68	GLY
11	L	71	SER
11	L	94	ALA
11	L	104	ARG
11	L	114	TYR
11	L	120	ARG
11	L	125	TYR
12	M	31	GLY
12	M	58	ASP
12	M	61	GLU
12	M	78	ASN
12	M	94	VAL
13	N	13	GLN
13	N	55	LYS
13	N	76	GLY
13	N	102	GLY
13	N	104	GLN
13	N	115	PRO
14	O	31	PRO
14	O	41	ARG
14	O	42	THR
14	O	76	ASN
14	O	87	GLY
14	O	94	PRO
14	O	126	LYS
15	P	8	GLU
15	P	43	THR
15	P	46	LYS
15	P	67	GLU
15	P	117	VAL
15	P	122	LYS
15	P	123	ALA
16	Q	5	ALA
16	Q	9	LYS
16	Q	17	LYS
16	Q	22	THR
16	Q	28	GLY
16	Q	56	VAL
17	R	6	GLU
17	R	46	HIS
17	R	76	GLU

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Mol	Chain	Res	Type
17	R	83	GLU
17	R	87	ILE
18	S	30	GLY
18	S	43	LYS
18	S	82	GLN
19	T	16	GLN
19	T	33	GLY
19	T	96	GLN
19	T	98	LEU
20	U	28	GLU
20	U	34	TYR
20	U	37	VAL
20	U	38	GLU
20	U	54	ARG
20	U	64	ARG
21	V	20	LEU
21	V	36	ARG
21	V	65	ASN
21	V	71	LEU
22	W	49	ALA
22	W	56	MET
22	W	68	LYS
22	W	101	GLY
22	W	102	GLY
22	W	103	GLY
23	X	7	ARG
4	E	88	ALA
4	E	96	ARG
4	E	110	GLN
4	E	141	GLU
4	E	157	ARG
4	E	180	LEU
4	E	183	PRO
4	E	237	ALA
5	F	7	PRO
5	F	49	SER
5	F	62	ASP
5	F	81	GLY
5	F	127	ARG
5	F	139	GLN
5	F	145	GLY
5	F	178	LEU

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Mol	Chain	Res	Type
5	F	181	ASN
6	G	7	PRO
6	G	40	PRO
6	G	51	PRO
6	G	53	ASP
6	G	153	ARG
7	H	26	PHE
7	H	96	PRO
7	H	112	LEU
8	I	12	PRO
8	I	15	ASP
8	I	69	GLU
9	J	6	ARG
9	J	38	LEU
9	J	103	TRP
9	J	121	ALA
10	K	24	THR
10	K	39	LEU
10	K	41	ARG
10	K	44	PHE
10	K	69	ARG
10	K	73	ASP
10	K	90	GLY
11	L	43	ALA
11	L	47	LEU
11	L	102	LEU
11	L	103	THR
11	L	105	ASP
11	L	117	HIS
12	M	77	PRO
13	N	37	GLY
13	N	53	SER
13	N	93	GLN
13	N	123	LYS
14	O	23	LYS
14	O	26	ALA
14	O	80	HIS
14	O	100	ILE
14	O	105	TYR
14	O	106	ASP
14	O	107	ALA
14	O	121	GLY

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Mol	Chain	Res	Type
14	O	122	THR
15	P	5	ALA
15	P	45	VAL
15	P	70	LEU
15	P	75	ALA
15	P	87	TYR
15	P	120	LYS
17	R	19	PRO
17	R	33	THR
17	R	88	ARG
18	S	28	ARG
18	S	44	THR
18	S	54	GLU
18	S	66	PRO
20	U	71	LYS
20	U	72	ARG
20	U	81	PHE
21	V	25	LYS
21	V	30	LEU
22	W	15	ARG
22	W	24	LEU
22	W	32	ALA
22	W	50	GLU
22	W	57	ARG
22	W	59	ALA
22	W	76	ALA
22	W	84	LEU
4	E	74	LYS
4	E	91	PRO
4	E	98	LEU
4	E	150	SER
4	E	158	LEU
4	E	167	PRO
4	E	174	VAL
4	E	193	ASP
4	E	229	VAL
5	F	3	ASN
5	F	16	ARG
5	F	109	PRO
6	G	36	ARG
6	G	147	ALA
6	G	196	LEU

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Mol	Chain	Res	Type
7	H	53	LEU
7	H	153	LYS
8	I	17	SER
9	J	32	ARG
9	J	93	PRO
9	J	97	GLN
9	J	131	LYS
9	J	155	ARG
10	K	71	GLY
11	L	55	ALA
11	L	95	LYS
11	L	110	GLU
11	L	126	SER
12	M	30	SER
12	M	53	PRO
12	M	54	PHE
13	N	118	GLY
14	O	16	GLU
14	O	17	LYS
14	O	70	ILE
15	P	72	ALA
15	P	106	ASN
16	Q	16	PHE
17	R	5	LYS
17	R	44	LYS
18	S	57	ARG
18	S	64	ALA
19	T	6	LEU
19	T	14	LYS
19	T	53	LEU
21	V	76	PRO
22	W	58	LYS
22	W	61	SER
22	W	78	ALA
22	W	97	ALA
23	X	8	THR
23	X	24	ARG
4	E	75	LYS
5	F	146	ALA
5	F	174	PRO
7	H	95	ALA
7	H	113	ALA

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Mol	Chain	Res	Type
8	I	36	ARG
9	J	96	GLN
9	J	122	HIS
10	K	65	TYR
10	K	104	ARG
11	L	52	ALA
11	L	107	ARG
12	M	73	ASP
14	O	111	LYS
14	O	123	LYS
15	P	27	LYS
15	P	103	THR
16	Q	13	THR
17	R	29	VAL
18	S	36	ILE
20	U	19	LYS
21	V	11	VAL
21	V	29	ARG
21	V	67	VAL
21	V	73	GLU
22	W	25	ARG
22	W	60	GLU
23	X	10	ARG
23	X	22	ARG
4	E	20	GLU
4	E	176	GLU
5	F	87	LEU
6	G	92	VAL
6	G	94	LEU
6	G	117	ALA
7	H	142	LEU
8	I	37	VAL
9	J	18	TYR
9	J	50	ILE
9	J	130	GLY
10	K	80	ILE
11	L	57	GLY
12	M	37	PRO
12	M	41	PRO
13	N	34	ASP
14	O	90	VAL
15	P	3	ARG

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Mol	Chain	Res	Type
15	P	7	VAL
15	P	97	PRO
19	T	17	LYS
19	T	80	GLY
22	W	20	LEU
22	W	67	ALA
4	E	130	ARG
5	F	70	VAL
13	N	49	GLY
16	Q	7	ILE
17	R	82	ILE
6	G	128	VAL
6	G	136	PRO
6	G	143	GLY
8	I	26	ILE
15	P	113	PRO
17	R	45	VAL
20	U	51	LEU
22	W	100	ILE
5	F	197	GLY
14	O	104	VAL
4	E	239	VAL
8	I	65	VAL
12	M	91	PRO
14	O	96	VAL
15	P	15	VAL
15	P	85	GLY
22	W	41	ILE
4	E	182	ILE
11	L	90	PRO
13	N	48	ILE
15	P	53	VAL

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
4	E	202/220 (92%)	138 (68%)	64 (32%)	0 4

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
5	F	160/188 (85%)	123 (77%)	37 (23%)	1	9
6	G	180/181 (99%)	131 (73%)	49 (27%)	0	6
7	H	115/123 (94%)	78 (68%)	37 (32%)	0	4
8	I	90/90 (100%)	61 (68%)	29 (32%)	0	4
9	J	126/127 (99%)	93 (74%)	33 (26%)	1	7
10	K	119/119 (100%)	86 (72%)	33 (28%)	0	6
11	L	98/99 (99%)	73 (74%)	25 (26%)	1	8
12	M	88/92 (96%)	67 (76%)	21 (24%)	1	9
13	N	90/99 (91%)	74 (82%)	16 (18%)	2	19
14	O	104/109 (95%)	81 (78%)	23 (22%)	1	11
15	P	100/101 (99%)	75 (75%)	25 (25%)	1	8
16	Q	49/50 (98%)	36 (74%)	13 (26%)	1	7
17	R	79/80 (99%)	64 (81%)	15 (19%)	2	16
18	S	72/74 (97%)	49 (68%)	23 (32%)	0	4
19	T	96/97 (99%)	67 (70%)	29 (30%)	0	5
20	U	64/77 (83%)	48 (75%)	16 (25%)	1	8
21	V	71/80 (89%)	55 (78%)	16 (22%)	1	10
22	W	76/82 (93%)	59 (78%)	17 (22%)	1	11
23	X	19/22 (86%)	17 (90%)	2 (10%)	10	47
All	All	1998/2110 (95%)	1475 (74%)	523 (26%)	1	7

All (523) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
4	E	10	LEU
4	E	11	LEU
4	E	17	PHE
4	E	20	GLU
4	E	21	ARG
4	E	23	ARG
4	E	25	ASN
4	E	26	PRO
4	E	35	GLU
4	E	36	ARG
4	E	40	HIS

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Mol	Chain	Res	Type
4	E	44	LEU
4	E	48	MET
4	E	49	GLU
4	E	52	GLU
4	E	56	ARG
4	E	57	PHE
4	E	61	LEU
4	E	64	ARG
4	E	69	LEU
4	E	70	PHE
4	E	74	LYS
4	E	75	LYS
4	E	80	ILE
4	E	84	GLU
4	E	91	PRO
4	E	92	TYR
4	E	96	ARG
4	E	101	MET
4	E	102	LEU
4	E	105	PHE
4	E	111	ARG
4	E	114	ARG
4	E	118	LEU
4	E	122	PHE
4	E	131	PRO
4	E	132	LYS
4	E	134	GLU
4	E	135	GLN
4	E	137	ARG
4	E	147	LYS
4	E	148	TYR
4	E	152	PHE
4	E	153	ARG
4	E	154	LEU
4	E	158	LEU
4	E	162	ILE
4	E	168	THR
4	E	169	LYS
4	E	172	ILE
4	E	181	PHE
4	E	182	ILE
4	E	185	ILE

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Mol	Chain	Res	Type
4	E	187	LEU
4	E	189	ASP
4	E	191	ASP
4	E	194	PRO
4	E	195	ASP
4	E	196	LEU
4	E	204	ASN
4	E	209	ARG
4	E	212	GLN
4	E	217	ARG
4	E	222	ILE
5	F	5	ILE
5	F	8	ILE
5	F	10	PHE
5	F	15	THR
5	F	23	TYR
5	F	29	TYR
5	F	30	ARG
5	F	33	LEU
5	F	35	GLU
5	F	38	ARG
5	F	46	GLU
5	F	48	TYR
5	F	52	LEU
5	F	59	ARG
5	F	67	THR
5	F	82	GLU
5	F	89	GLU
5	F	91	LEU
5	F	95	THR
5	F	97	LYS
5	F	107	GLN
5	F	125	GLU
5	F	136	GLN
5	F	139	GLN
5	F	140	ARG
5	F	142	MET
5	F	164	ARG
5	F	176	HIS
5	F	178	LEU
5	F	184	TYR
5	F	186	PHE

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Mol	Chain	Res	Type
5	F	190	ARG
5	F	193	TYR
5	F	195	VAL
5	F	196	LEU
5	F	201	TYR
5	F	204	LEU
6	G	5	ILE
6	G	8	VAL
6	G	9	CYS
6	G	10	ARG
6	G	14	ARG
6	G	15	GLU
6	G	20	TYR
6	G	24	GLU
6	G	25	ARG
6	G	26	CYS
6	G	29	PRO
6	G	31	CYS
6	G	33	MET
6	G	47	ARG
6	G	51	PRO
6	G	57	ARG
6	G	59	ARG
6	G	61	LYS
6	G	63	LYS
6	G	68	TYR
6	G	78	LEU
6	G	79	PHE
6	G	83	SER
6	G	85	LYS
6	G	107	ARG
6	G	108	LEU
6	G	114	ARG
6	G	116	GLN
6	G	120	LEU
6	G	131	ARG
6	G	135	LEU
6	G	138	TYR
6	G	141	ARG
6	G	142	PRO
6	G	146	ILE
6	G	154	ASN

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Mol	Chain	Res	Type
6	G	155	LEU
6	G	168	ARG
6	G	173	TRP
6	G	175	SER
6	G	176	LEU
6	G	178	VAL
6	G	181	MET
6	G	182	LYS
6	G	190	ASP
6	G	191	ARG
6	G	193	ASP
6	G	196	LEU
6	G	198	VAL
7	H	5	ASP
7	H	6	PHE
7	H	7	GLU
7	H	15	ARG
7	H	16	THR
7	H	25	ARG
7	H	26	PHE
7	H	27	ARG
7	H	28	PHE
7	H	31	LEU
7	H	34	VAL
7	H	41	VAL
7	H	56	GLN
7	H	60	TYR
7	H	63	ARG
7	H	64	ARG
7	H	67	VAL
7	H	73	ASN
7	H	78	HIS
7	H	79	GLU
7	H	80	ILE
7	H	81	GLU
7	H	89	ILE
7	H	91	LEU
7	H	101	ILE
7	H	105	VAL
7	H	111	GLU
7	H	112	LEU
7	H	119	LEU

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Mol	Chain	Res	Type
7	H	121	LYS
7	H	128	PRO
7	H	131	ILE
7	H	133	TYR
7	H	141	GLN
7	H	143	ARG
7	H	150	ARG
7	H	152	ARG
8	I	2	ARG
8	I	4	TYR
8	I	5	GLU
8	I	6	VAL
8	I	8	ILE
8	I	10	LEU
8	I	14	LEU
8	I	28	ARG
8	I	37	VAL
8	I	40	VAL
8	I	47	ARG
8	I	48	LEU
8	I	50	TYR
8	I	55	ASP
8	I	57	GLN
8	I	60	PHE
8	I	65	VAL
8	I	66	GLU
8	I	67	MET
8	I	69	GLU
8	I	74	ASP
8	I	75	LEU
8	I	79	LEU
8	I	83	ASP
8	I	88	VAL
8	I	94	GLN
8	I	95	GLU
8	I	98	LEU
8	I	100	ASN
9	J	5	ARG
9	J	6	ARG
9	J	10	ARG
9	J	12	LEU
9	J	14	PRO

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Mol	Chain	Res	Type
9	J	17	VAL
9	J	18	TYR
9	J	22	LEU
9	J	47	CYS
9	J	51	GLN
9	J	54	THR
9	J	56	GLN
9	J	69	VAL
9	J	72	ARG
9	J	74	GLU
9	J	89	MET
9	J	99	LEU
9	J	101	LEU
9	J	103	TRP
9	J	106	GLN
9	J	111	ARG
9	J	113	GLU
9	J	123	GLU
9	J	124	LEU
9	J	126	ASP
9	J	136	LYS
9	J	139	GLU
9	J	143	ARG
9	J	146	GLU
9	J	149	ARG
9	J	153	HIS
9	J	155	ARG
9	J	156	TRP
10	K	4	ASP
10	K	6	ILE
10	K	14	ARG
10	K	18	ARG
10	K	25	ASP
10	K	26	VAL
10	K	31	PHE
10	K	32	LYS
10	K	33	GLU
10	K	36	LEU
10	K	37	ARG
10	K	39	LEU
10	K	41	ARG
10	K	45	ILE

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Mol	Chain	Res	Type
10	K	49	GLU
10	K	50	ARG
10	K	54	ASP
10	K	63	LEU
10	K	70	GLN
10	K	84	ARG
10	K	88	LYS
10	K	92	ARG
10	K	98	LYS
10	K	100	ILE
10	K	102	ARG
10	K	103	VAL
10	K	104	ARG
10	K	107	LEU
10	K	111	ILE
10	K	119	LEU
10	K	122	ARG
10	K	126	LYS
10	K	136	GLU
11	L	4	TYR
11	L	5	TYR
11	L	11	LYS
11	L	12	GLU
11	L	19	LEU
11	L	21	PRO
11	L	23	ASN
11	L	32	ASP
11	L	33	PHE
11	L	37	PHE
11	L	47	LEU
11	L	51	ARG
11	L	54	ASP
11	L	63	ILE
11	L	64	THR
11	L	75	ASP
11	L	79	LEU
11	L	89	ASN
11	L	101	PHE
11	L	102	LEU
11	L	105	ASP
11	L	110	GLU
11	L	113	LYS

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Mol	Chain	Res	Type
11	L	116	LYS
11	L	117	HIS
12	M	3	LYS
12	M	4	ILE
12	M	5	ARG
12	M	9	ARG
12	M	11	PHE
12	M	14	LYS
12	M	33	GLN
12	M	45	ARG
12	M	47	PHE
12	M	49	VAL
12	M	60	ARG
12	M	62	HIS
12	M	63	PHE
12	M	73	ASP
12	M	78	ASN
12	M	79	ARG
12	M	81	THR
12	M	83	GLU
12	M	85	LEU
12	M	95	GLU
12	M	99	LYS
13	N	13	GLN
13	N	18	ARG
13	N	22	HIS
13	N	39	PRO
13	N	40	ILE
13	N	42	TRP
13	N	50	TYR
13	N	62	GLN
13	N	67	ASP
13	N	78	GLN
13	N	81	ASP
13	N	99	GLN
13	N	104	GLN
13	N	116	HIS
13	N	125	PHE
13	N	126	ARG
14	O	8	ASN
14	O	10	LEU
14	O	16	GLU

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Mol	Chain	Res	Type
14	O	23	LYS
14	O	32	PHE
14	O	38	THR
14	O	42	THR
14	O	53	ARG
14	O	60	LEU
14	O	64	TYR
14	O	65	GLU
14	O	66	VAL
14	O	73	GLU
14	O	75	HIS
14	O	84	LEU
14	O	85	ILE
14	O	93	LEU
14	O	100	ILE
14	O	101	VAL
14	O	113	ARG
14	O	119	LYS
14	O	126	LYS
14	O	127	GLU
15	P	4	ILE
15	P	11	ARG
15	P	25	ILE
15	P	35	GLU
15	P	47	ASP
15	P	48	LEU
15	P	49	THR
15	P	61	GLU
15	P	64	TRP
15	P	66	LEU
15	P	73	GLU
15	P	77	ASN
15	P	80	ARG
15	P	81	LEU
15	P	87	TYR
15	P	88	ARG
15	P	91	ARG
15	P	96	LEU
15	P	99	ARG
15	P	101	GLN
15	P	108	ARG
15	P	110	ARG

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Mol	Chain	Res	Type
15	P	121	LYS
15	P	124	PRO
15	P	126	LYS
16	Q	16	PHE
16	Q	21	TYR
16	Q	22	THR
16	Q	24	CYS
16	Q	29	ARG
16	Q	34	TYR
16	Q	40	CYS
16	Q	43	CYS
16	Q	45	ARG
16	Q	49	HIS
16	Q	54	PRO
16	Q	56	VAL
16	Q	61	TRP
17	R	3	ILE
17	R	4	THR
17	R	5	LYS
17	R	13	GLN
17	R	38	ARG
17	R	41	GLU
17	R	42	HIS
17	R	49	ASP
17	R	54	ARG
17	R	64	ARG
17	R	66	LEU
17	R	73	GLU
17	R	77	ARG
17	R	78	TYR
17	R	79	ARG
18	S	2	VAL
18	S	3	LYS
18	S	4	ILE
18	S	6	LEU
18	S	14	ASN
18	S	15	PRO
18	S	18	ARG
18	S	27	LYS
18	S	32	TYR
18	S	36	ILE
18	S	39	TYR

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Mol	Chain	Res	Type
18	S	40	ASP
18	S	48	TRP
18	S	54	GLU
18	S	55	ARG
18	S	59	TRP
18	S	62	VAL
18	S	65	GLN
18	S	66	PRO
18	S	69	THR
18	S	72	ARG
18	S	75	ARG
18	S	80	PHE
19	T	6	LEU
19	T	12	SER
19	T	15	MET
19	T	18	THR
19	T	24	GLU
19	T	25	ARG
19	T	27	PHE
19	T	28	PRO
19	T	36	ILE
19	T	38	ARG
19	T	40	LYS
19	T	43	LEU
19	T	48	GLU
19	T	51	TYR
19	T	57	VAL
19	T	58	GLU
19	T	60	ILE
19	T	62	SER
19	T	67	LYS
19	T	69	LYS
19	T	84	LEU
19	T	86	GLU
19	T	87	LYS
19	T	93	GLN
19	T	95	TYR
19	T	96	GLN
19	T	98	LEU
19	T	100	LYS
19	T	101	ARG
20	U	28	GLU

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Mol	Chain	Res	Type
20	U	32	ARG
20	U	34	TYR
20	U	36	ASN
20	U	38	GLU
20	U	49	LYS
20	U	53	ARG
20	U	55	ARG
20	U	62	GLU
20	U	63	GLN
20	U	72	ARG
20	U	74	ARG
20	U	79	LEU
20	U	80	PRO
20	U	81	PHE
20	U	83	GLU
21	V	12	ASP
21	V	15	LEU
21	V	16	LEU
21	V	17	GLU
21	V	18	LYS
21	V	19	VAL
21	V	25	LYS
21	V	34	TRP
21	V	36	ARG
21	V	37	ARG
21	V	41	VAL
21	V	42	PRO
21	V	43	GLU
21	V	57	HIS
21	V	61	TYR
21	V	74	PHE
22	W	13	LEU
22	W	23	ARG
22	W	25	ARG
22	W	26	ASN
22	W	30	LYS
22	W	35	THR
22	W	42	GLN
22	W	51	GLU
22	W	56	MET
22	W	63	ILE
22	W	71	THR

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Mol	Chain	Res	Type
22	W	73	HIS
22	W	79	ARG
22	W	84	LEU
22	W	87	LYS
22	W	88	VAL
22	W	91	LEU
23	X	9	ARG
23	X	10	ARG

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (81) such sidechains are listed below:

Mol	Chain	Res	Type
4	E	40	HIS
4	E	78	GLN
4	E	94	ASN
4	E	135	GLN
4	E	204	ASN
4	E	224	GLN
5	F	3	ASN
5	F	6	HIS
5	F	28	GLN
5	F	102	ASN
5	F	108	ASN
5	F	110	ASN
5	F	136	GLN
5	F	139	GLN
5	F	170	GLN
6	G	42	GLN
6	G	62	GLN
6	G	74	GLN
6	G	77	ASN
6	G	154	ASN
6	G	161	ASN
6	G	201	GLN
7	H	56	GLN
7	H	65	ASN
7	H	72	GLN
7	H	78	HIS
8	I	7	ASN
8	I	13	ASN
8	I	18	GLN
8	I	32	ASN

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Mol	Chain	Res	Type
8	I	64	GLN
8	I	84	ASN
8	I	100	ASN
9	J	56	GLN
9	J	68	ASN
9	J	96	GLN
9	J	97	GLN
9	J	106	GLN
9	J	109	ASN
9	J	110	GLN
9	J	148	ASN
9	J	153	HIS
10	K	15	ASN
10	K	70	GLN
11	L	3	GLN
11	L	23	ASN
11	L	58	HIS
11	L	73	GLN
11	L	87	GLN
11	L	89	ASN
11	L	117	HIS
12	M	56	HIS
12	M	62	HIS
12	M	68	HIS
12	M	76	ASN
12	M	78	ASN
13	N	26	ASN
13	N	27	ASN
13	N	38	ASN
13	N	104	GLN
13	N	117	ASN
14	O	8	ASN
14	O	49	ASN
14	O	99	HIS
15	P	12	ASN
15	P	40	ASN
15	P	92	HIS
16	Q	52	GLN
17	R	9	GLN
17	R	13	GLN
17	R	37	ASN
17	R	53	HIS

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Mol	Chain	Res	Type
17	R	62	GLN
18	S	82	GLN
19	T	93	GLN
21	V	14	HIS
22	W	16	HIS
22	W	42	GLN
22	W	45	GLN
22	W	73	HIS
22	W	75	ASN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A	1515/1522 (99%)	463 (30%)	137 (9%)
2	1	49/50 (98%)	21 (42%)	4 (8%)
3	B	75/76 (98%)	32 (42%)	1 (1%)
3	C	75/76 (98%)	23 (30%)	4 (5%)
3	D	75/76 (98%)	23 (30%)	1 (1%)
All	All	1789/1800 (99%)	562 (31%)	147 (8%)

All (562) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	A	6	G
1	A	8	A
1	A	9	G
1	A	14	U
1	A	19	C
1	A	20	U
1	A	31	G
1	A	32	A
1	A	39	G
1	A	44	G
1	A	45	U
1	A	48	C
1	A	50	A
1	A	51	A
1	A	52	G
1	A	61	G
1	A	65	U
1	A	66	G

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Mol	Chain	Res	Type
1	A	78	G
1	A	82	U
1	A	89	U
1	A	101	A
1	A	103	C
1	A	108	G
1	A	110	C
1	A	115	G
1	A	116	A
1	A	120	A
1	A	121	C
1	A	122	G
1	A	124	G
1	A	127	G
1	A	129(A)	G
1	A	130	A
1	A	131	C
1	A	132	C
1	A	134	A
1	A	163	C
1	A	182	U
1	A	188	U
1	A	189	U
1	A	190	G
1	A	191(A)	G
1	A	195	A
1	A	197	A
1	A	198	G
1	A	209	U
1	A	210	U
1	A	216	G
1	A	236	G
1	A	243	A
1	A	244	U
1	A	245	C
1	A	247	G
1	A	251	G
1	A	252	U
1	A	253	U
1	A	262	A
1	A	264	U
1	A	265	G

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Mol	Chain	Res	Type
1	A	266	G
1	A	267	C
1	A	270	A
1	A	275	G
1	A	279	A
1	A	280	C
1	A	281	G
1	A	282	A
1	A	289	G
1	A	293	G
1	A	295	C
1	A	296	U
1	A	306	G
1	A	308	C
1	A	309	G
1	A	313	A
1	A	314	C
1	A	315	A
1	A	316	G
1	A	326	G
1	A	328	C
1	A	329	A
1	A	330	C
1	A	332	G
1	A	336	C
1	A	345	C
1	A	346	G
1	A	348	G
1	A	351	G
1	A	352	C
1	A	353	A
1	A	354	G
1	A	364	A
1	A	367	U
1	A	368	U
1	A	372	C
1	A	373	A
1	A	378	G
1	A	379	C
1	A	382	A
1	A	383	A
1	A	388	G

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Mol	Chain	Res	Type
1	A	389	A
1	A	390	C
1	A	392	G
1	A	397	A
1	A	398	C
1	A	410	G
1	A	412	A
1	A	413	G
1	A	414	A
1	A	422	C
1	A	423	G
1	A	428	G
1	A	429	U
1	A	430	A
1	A	438	G
1	A	439	A
1	A	451	A
1	A	452	A
1	A	454	C
1	A	465	A
1	A	466	C
1	A	467	G
1	A	474	G
1	A	481	G
1	A	482	A
1	A	483	C
1	A	484	G
1	A	485	G
1	A	486	U
1	A	487	A
1	A	496	A
1	A	497	U
1	A	500	G
1	A	508	C
1	A	509	A
1	A	511	C
1	A	518	C
1	A	519	C
1	A	521	G
1	A	522	C
1	A	524	G
1	A	527	G

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Mol	Chain	Res	Type
1	A	528	C
1	A	530	G
1	A	531	U
1	A	532	A
1	A	533	A
1	A	534	U
1	A	535	A
1	A	536	C
1	A	541	G
1	A	548	G
1	A	553	A
1	A	555	C
1	A	559	A
1	A	560	U
1	A	561	U
1	A	563	A
1	A	565	U
1	A	566	G
1	A	567	G
1	A	572	A
1	A	573	A
1	A	575	G
1	A	577	G
1	A	579	G
1	A	585	G
1	A	595	G
1	A	596	C
1	A	598	U
1	A	607	A
1	A	609	A
1	A	623	C
1	A	642	A
1	A	650	G
1	A	653	A
1	A	655	A
1	A	665	A
1	A	672	U
1	A	673	G
1	A	679	C
1	A	687	A
1	A	688	G
1	A	690	G

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Mol	Chain	Res	Type
1	A	691	G
1	A	693	G
1	A	694	A
1	A	697	U
1	A	702	A
1	A	703	G
1	A	704	A
1	A	718	G
1	A	719	C
1	A	721	G
1	A	723	U
1	A	724	G
1	A	728	A
1	A	730	G
1	A	731	G
1	A	733	A
1	A	749	C
1	A	752	G
1	A	753	A
1	A	754	C
1	A	763	G
1	A	764	C
1	A	766	A
1	A	776	G
1	A	777	A
1	A	781	A
1	A	782	A
1	A	785	G
1	A	788	U
1	A	790	A
1	A	791	G
1	A	793	U
1	A	794	A
1	A	801	U
1	A	812	C
1	A	813	U
1	A	815	A
1	A	816	A
1	A	817	C
1	A	818	G
1	A	819	A
1	A	820	U

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Mol	Chain	Res	Type
1	A	821	G
1	A	828	A
1	A	841	U
1	A	843	U
1	A	848	C
1	A	854	G
1	A	860	A
1	A	865	A
1	A	870	U
1	A	871	U
1	A	872	A
1	A	873	A
1	A	874	G
1	A	884	U
1	A	885	G
1	A	889	A
1	A	890	G
1	A	891	U
1	A	901	A
1	A	902	G
1	A	907	A
1	A	910	C
1	A	913	A
1	A	914	A
1	A	917	G
1	A	919	A
1	A	920	U
1	A	926	G
1	A	927	G
1	A	932	C
1	A	934	C
1	A	935	A
1	A	945	G
1	A	949	A
1	A	950	U
1	A	956	U
1	A	958	A
1	A	960	U
1	A	961	U
1	A	963	G
1	A	965	A
1	A	966	G

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Mol	Chain	Res	Type
1	A	967	C
1	A	968	A
1	A	969	A
1	A	971	G
1	A	972	C
1	A	974	A
1	A	975	A
1	A	976	G
1	A	977	A
1	A	980	C
1	A	982	U
1	A	991	U
1	A	993	G
1	A	994	A
1	A	995	C
1	A	997	U
1	A	998	G
1	A	1000	A
1	A	1001	G
1	A	1002	G
1	A	1003	G
1	A	1004	A
1	A	1005	A
1	A	1006	C
1	A	1007	C
1	A	1016	A
1	A	1023	G
1	A	1024	G
1	A	1026	G
1	A	1027	C
1	A	1029	G
1	A	1049	U
1	A	1050	G
1	A	1054	C
1	A	1056	U
1	A	1057	G
1	A	1063	C
1	A	1064	G
1	A	1065	U
1	A	1066	C
1	A	1067	A
1	A	1068	G

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Mol	Chain	Res	Type
1	A	1081	G
1	A	1084	G
1	A	1085	U
1	A	1086	U
1	A	1089	G
1	A	1094	G
1	A	1096	C
1	A	1097	C
1	A	1100	C
1	A	1101	A
1	A	1102	A
1	A	1103	C
1	A	1118	C
1	A	1123	A
1	A	1125	U
1	A	1126	U
1	A	1129	C
1	A	1130	A
1	A	1131	G
1	A	1132	C
1	A	1136	U
1	A	1138	G
1	A	1139	G
1	A	1140	C
1	A	1145	C
1	A	1146	A
1	A	1147	C
1	A	1148	U
1	A	1152	A
1	A	1156	G
1	A	1157	A
1	A	1158	C
1	A	1159	U
1	A	1160	G
1	A	1161	C
1	A	1174	G
1	A	1182	G
1	A	1183	A
1	A	1184	G
1	A	1185	G
1	A	1188	A
1	A	1189	C

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Mol	Chain	Res	Type
1	A	1190	G
1	A	1195	C
1	A	1196	U
1	A	1197	G
1	A	1200	C
1	A	1201	A
1	A	1202	G
1	A	1203	C
1	A	1211	U
1	A	1212	U
1	A	1213	A
1	A	1215	G
1	A	1225	A
1	A	1226	C
1	A	1227	A
1	A	1229	A
1	A	1240	U
1	A	1241	G
1	A	1249	C
1	A	1256	A
1	A	1257	U
1	A	1263	C
1	A	1269	A
1	A	1270	C
1	A	1278	U
1	A	1279	A
1	A	1280	A
1	A	1281	U
1	A	1282	C
1	A	1283	G
1	A	1285	A
1	A	1286	A
1	A	1287	A
1	A	1289	A
1	A	1292	U
1	A	1297	C
1	A	1298	C
1	A	1301	U
1	A	1302	U
1	A	1303	C
1	A	1305	G
1	A	1317	C

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Mol	Chain	Res	Type
1	A	1318	A
1	A	1319	A
1	A	1320	C
1	A	1322	C
1	A	1323	G
1	A	1331	G
1	A	1332	A
1	A	1333	A
1	A	1345	U
1	A	1346	A
1	A	1347	G
1	A	1348	U
1	A	1353	G
1	A	1362(A)	C
1	A	1363	A
1	A	1364	U
1	A	1365	G
1	A	1375	A
1	A	1378	C
1	A	1379	G
1	A	1381	U
1	A	1393	U
1	A	1394	A
1	A	1395	C
1	A	1396	A
1	A	1397	C
1	A	1398	A
1	A	1399	C
1	A	1400	C
1	A	1401	G
1	A	1404	C
1	A	1413	A
1	A	1419	G
1	A	1430	C
1	A	1431	C
1	A	1432	G
1	A	1435	G
1	A	1440	C
1	A	1442	G
1	A	1443	G
1	A	1446	A
1	A	1447	G

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Mol	Chain	Res	Type
1	A	1449	C
1	A	1450	U
1	A	1451	A
1	A	1454	G
1	A	1466	C
1	A	1467	G
1	A	1469	G
1	A	1481	U
1	A	1484	C
1	A	1492	A
1	A	1493	A
1	A	1494	G
1	A	1495	U
1	A	1498	U
1	A	1504	G
1	A	1505	G
1	A	1506	U
1	A	1507	A
1	A	1517	G
1	A	1520	G
1	A	1527	C
1	A	1530	G
1	A	1531	A
1	A	1532	U
1	A	1534	A
2	1	5	U
2	1	9	U
2	1	13	U
2	1	17	U
2	1	18	U
2	1	19	U
2	1	20	G
2	1	21	G
2	1	26	G
2	1	27	A
2	1	30	U
2	1	34	U
2	1	36	U
2	1	37	U
2	1	38	U
2	1	40	U
2	1	45	U

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Mol	Chain	Res	Type
2	1	47	U
2	1	48	U
2	1	51	U
2	1	52	U
3	C	6	G
3	C	8	U
3	C	10	G
3	C	15	G
3	C	17	C
3	C	18	G
3	C	19	G
3	C	20	U
3	C	40	C
3	C	41	C
3	C	43	C
3	C	46	G
3	C	47	U
3	C	48	C
3	C	49	C
3	C	58	A
3	C	59	U
3	C	60	U
3	C	61	C
3	C	64	A
3	C	74	C
3	C	75	C
3	C	76	A
3	D	10	G
3	D	13	C
3	D	17	C
3	D	18	G
3	D	19	G
3	D	27	G
3	D	34	G
3	D	35	A
3	D	36	A
3	D	40	C
3	D	41	C
3	D	42	C
3	D	45	U
3	D	46	G
3	D	48	C

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Mol	Chain	Res	Type
3	D	49	C
3	D	52	G
3	D	56	C
3	D	58	A
3	D	59	U
3	D	61	C
3	D	74	C
3	D	76	A
3	B	2	C
3	B	3	C
3	B	4	C
3	B	6	G
3	B	8	U
3	B	9	A
3	B	10	G
3	B	12	U
3	B	14	A
3	B	15	G
3	B	16	U
3	B	19	G
3	B	20	U
3	B	21	A
3	B	22	G
3	B	25	C
3	B	34	G
3	B	36	A
3	B	37	A
3	B	41	C
3	B	43	C
3	B	47	U
3	B	48	C
3	B	49	C
3	B	55	U
3	B	57	G
3	B	58	A
3	B	59	U
3	B	61	C
3	B	62	C
3	B	68	C
3	B	74	C

All (147) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	A	5	U
1	A	8	A
1	A	30	U
1	A	31	G
1	A	47	C
1	A	51	A
1	A	60	A
1	A	65	U
1	A	88	C
1	A	99	C
1	A	109	A
1	A	115	G
1	A	119	A
1	A	129(A)	G
1	A	181	G
1	A	190	G
1	A	208	U
1	A	210	U
1	A	243	A
1	A	244	U
1	A	246	A
1	A	250	A
1	A	251	G
1	A	266	G
1	A	274	A
1	A	279	A
1	A	280	C
1	A	281	G
1	A	305	G
1	A	308	C
1	A	327	A
1	A	328	C
1	A	329	A
1	A	344	A
1	A	345	C
1	A	351	G
1	A	366	C
1	A	367	U
1	A	372	C
1	A	413	G
1	A	428	G
1	A	429	U
1	A	451	A

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Mol	Chain	Res	Type
1	A	484	G
1	A	495	A
1	A	496	A
1	A	498	A
1	A	508	C
1	A	518	C
1	A	531	U
1	A	535	A
1	A	547	A
1	A	559	A
1	A	560	U
1	A	562	C
1	A	563	A
1	A	566	G
1	A	576	G
1	A	652	U
1	A	686	U
1	A	687	A
1	A	701	C
1	A	702	A
1	A	703	G
1	A	717	C
1	A	721	G
1	A	723	U
1	A	748	C
1	A	753	A
1	A	781	A
1	A	792	A
1	A	793	U
1	A	812	C
1	A	815	A
1	A	816	A
1	A	817	C
1	A	818	G
1	A	819	A
1	A	820	U
1	A	871	U
1	A	872	A
1	A	873	A
1	A	889	A
1	A	890	G
1	A	901	A

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Mol	Chain	Res	Type
1	A	913	A
1	A	918	A
1	A	960	U
1	A	965	A
1	A	968	A
1	A	974	A
1	A	975	A
1	A	992	U
1	A	993	G
1	A	1004	A
1	A	1049	U
1	A	1055	A
1	A	1065	U
1	A	1067	A
1	A	1084	G
1	A	1085	U
1	A	1101	A
1	A	1129	C
1	A	1145	C
1	A	1159	U
1	A	1182	G
1	A	1183	A
1	A	1196	U
1	A	1212	U
1	A	1214	C
1	A	1224	G
1	A	1226	C
1	A	1239	A
1	A	1240	U
1	A	1285	A
1	A	1297	C
1	A	1300	G
1	A	1302	U
1	A	1322	C
1	A	1331	G
1	A	1345	U
1	A	1346	A
1	A	1347	G
1	A	1363	A
1	A	1364	U
1	A	1377	A
1	A	1394	A

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Mol	Chain	Res	Type
1	A	1399	C
1	A	1400	C
1	A	1446	A
1	A	1468	A
1	A	1502	A
1	A	1504	G
1	A	1505	G
1	A	1528	U
1	A	1529	G
1	A	1531	A
2	1	17	U
2	1	36	U
2	1	50	U
2	1	51	U
3	C	7	A
3	C	9	A
3	C	58	A
3	C	73	A
3	D	58	A
3	B	58	A

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

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

5.5 Carbohydrates ⓘ

There are no carbohydrates in this entry.

5.6 Ligand geometry ⓘ

There are no ligands in this entry.

5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

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

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

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

6.3 Carbohydrates

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

6.4 Ligands

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

6.5 Other polymers

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