



# Full wwPDB X-ray Structure Validation Report ⓘ

Feb 3, 2024 – 09:03 PM EST

PDB ID : 1N34  
Title : Structure of the *Thermus thermophilus* 30S ribosomal subunit in the presence of codon and crystallographically disordered near-cognate transfer rna anticodon stem-loop mismatched at the first codon position  
Authors : Ogle, J.M.; Murphy IV, F.V.; Tarry, M.J.; Ramakrishnan, V.  
Deposited on : 2002-10-25  
Resolution : 3.80 Å(reported)

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

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

A user guide is available at

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

MolProbity : 4.02b-467  
Xtriage (Phenix) : 1.13  
EDS : 2.36  
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)  
Refmac : 5.8.0158  
CCP4 : 7.0.044 (Gargrove)  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.36

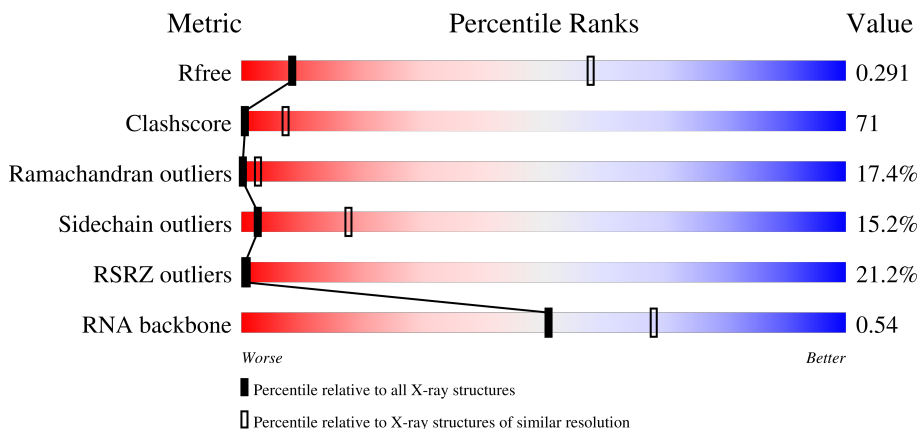
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 3.80 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
$R_{free}$	130704	1212 (4.00-3.60)
Clashscore	141614	1288 (4.00-3.60)
Ramachandran outliers	138981	1243 (4.00-3.60)
Sidechain outliers	138945	1237 (4.00-3.60)
RSRZ outliers	127900	1121 (4.00-3.60)
RNA backbone	3102	1036 (4.60-3.00)

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

Mol	Chain	Length	Quality of chain
1	A	1522	
2	Z	6	
3	B	256	
4	C	239	

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Mol	Chain	Length	Quality of chain
5	D	208	4% 8% 67% 20%
6	E	161	2% 14% 55% 23% 7%
7	F	101	10% 18% 62% 19%
8	G	155	5% 10% 64% 22%
9	H	138	15% 64% 18%
10	I	128	22% 11% 61% 23% 5%
11	J	104	39% 8% 58% 25% 6%
12	K	129	9% 16% 60% 16% 8%
13	L	135	7% 16% 57% 17% 8%
14	M	126	13% 14% 65% 13% 6%
15	N	60	42% 8% 37% 50% 5%
16	O	88	7% 7% 74% 15% 5%
17	P	88	8% 8% 57% 26% 6%
18	Q	104	9% 11% 67% 21%
19	R	88	3% 11% 55% 16% 17%
20	S	92	28% 22% 51% 13% 13%
21	T	106	2% 10% 61% 22% 7%
22	V	26	19% 12% 62% 12% 8% 8%

## 2 Entry composition i

There are 23 unique types of molecules in this entry. The entry contains 51757 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a RNA chain called 16S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
1	A	1513	32508	14472	6016	10509	1511	42	0	0

- Molecule 2 is a RNA chain called A-SITE MESSENGER RNA FRAGMENT.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
2	Z	4	77	36	8	30	3	0	0	0

- Molecule 3 is a protein called 30S RIBOSOMAL PROTEIN S2.

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

- Molecule 4 is a protein called 30S RIBOSOMAL PROTEIN S3.

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

- Molecule 5 is a protein called 30S RIBOSOMAL PROTEIN S4.

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

- Molecule 6 is a protein called 30S RIBOSOMAL PROTEIN S5.

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

- Molecule 7 is a protein called 30S RIBOSOMAL PROTEIN S6.

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

- Molecule 8 is a protein called 30S RIBOSOMAL PROTEIN S7.

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

- Molecule 9 is a protein called 30S RIBOSOMAL PROTEIN S8.

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

There are 8 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
H	25	ASP	GLU	conflict	UNP Q5SHQ2
H	37	ARG	LYS	conflict	UNP Q5SHQ2
H	52	ASP	GLU	conflict	UNP Q5SHQ2
H	61	VAL	ILE	conflict	UNP Q5SHQ2
H	62	TYR	HIS	conflict	UNP Q5SHQ2
H	81	HIS	LYS	conflict	UNP Q5SHQ2
H	88	LYS	ARG	conflict	UNP Q5SHQ2
H	115	SER	PRO	conflict	UNP Q5SHQ2

- Molecule 10 is a protein called 30S RIBOSOMAL PROTEIN S9.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
			Total	C	N	O			
10	I	127	1011	639	198	174	0	0	0

- Molecule 11 is a protein called 30S RIBOSOMAL PROTEIN S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
11	J	98	792	498	156	137	1	0	0	0

- Molecule 12 is a protein called 30S RIBOSOMAL PROTEIN S11.

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

- Molecule 13 is a protein called 30S RIBOSOMAL PROTEIN S12.

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

- Molecule 14 is a protein called 30S RIBOSOMAL PROTEIN S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
14	M	118	937	579	193	163	2	0	0	0

- Molecule 15 is a protein called 30S RIBOSOMAL PROTEIN S14.

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

- Molecule 16 is a protein called 30S RIBOSOMAL PROTEIN S15.

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

- Molecule 17 is a protein called 30S RIBOSOMAL PROTEIN S16.

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

- Molecule 18 is a protein called 30S RIBOSOMAL PROTEIN S17.

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

There are 7 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
Q	50	LYS	ARG	conflict	UNP Q5SHP7
Q	53	LEU	VAL	conflict	UNP Q5SHP7
Q	62	SER	ALA	conflict	UNP Q5SHP7
Q	79	SER	GLU	conflict	UNP Q5SHP7
Q	82	MET	LEU	conflict	UNP Q5SHP7
Q	90	ILE	VAL	conflict	UNP Q5SHP7
Q	96	GLN	ALA	conflict	UNP Q5SHP7

- Molecule 19 is a protein called 30S RIBOSOMAL PROTEIN S18.

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

- Molecule 20 is a protein called 30S RIBOSOMAL PROTEIN S19.

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

- Molecule 21 is a protein called 30S RIBOSOMAL PROTEIN S20.

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

- Molecule 22 is a protein called 30S RIBOSOMAL PROTEIN THX.

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

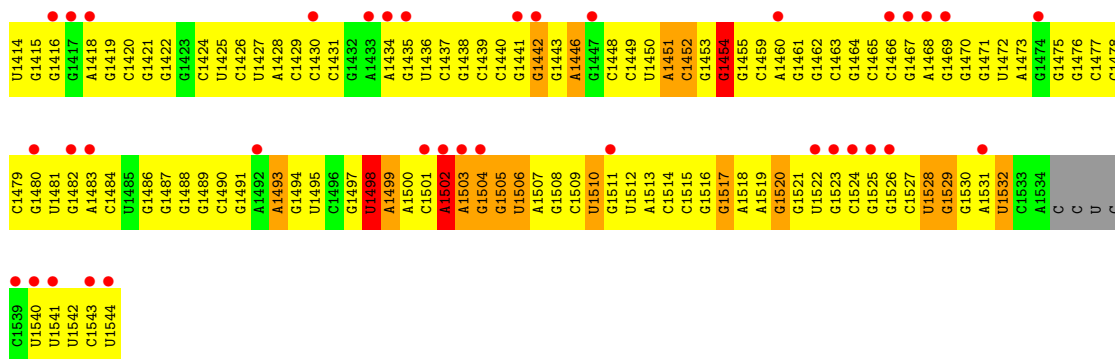
- Molecule 23 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
23	D	1	Total	Zn	0	0
			1	1		
23	N	1	Total	Zn	0	0
			1	1		

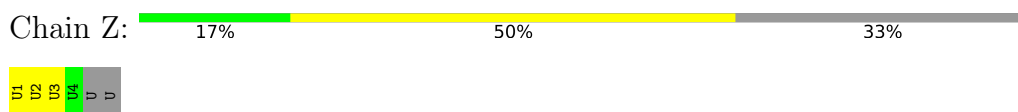




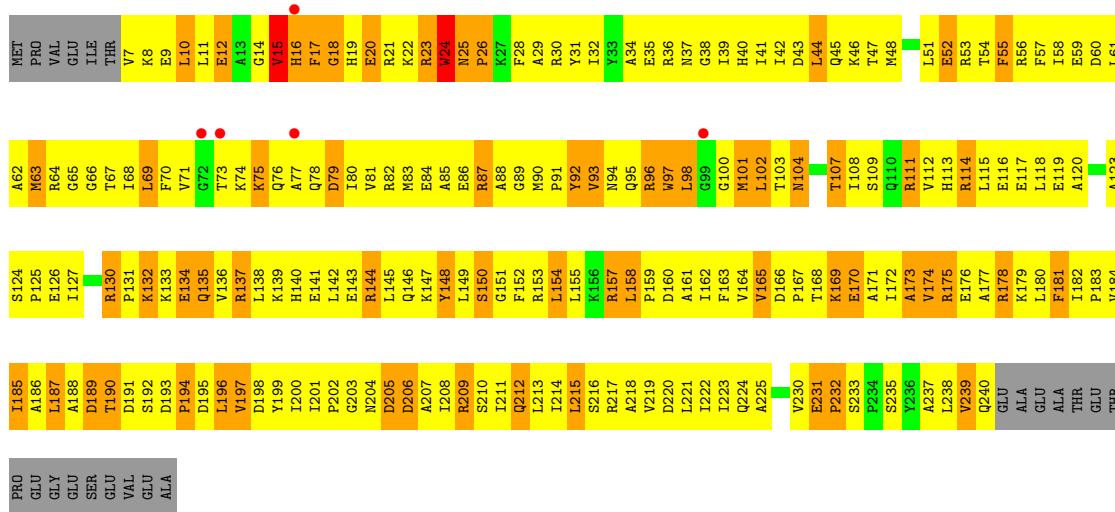
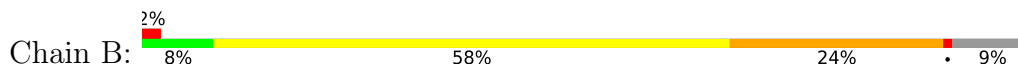
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G1354	G1293	G1233	G1173	U1052	U997	A937	G874	A807	C747	A687	G627
G1355	G1294	G1234	C1113	G1053	C998	A938	C875	C808	C748	G688	G628
G1356	G1295	U1235	G1174	U1055	C999	A939	G876	C809	C749	G689	G629
A1357	C1296	A1236	C1115	A1056	U1000	C940	G877	C810	C750	G690	G630
U1358	C1297	C1237	G1175	U1056	G941	C941	G878	C811	U751	G691	G631
C1359	A1298	A1238	G1176	G1057	G1002	G942	C879	C812	U752	U692	A632
A1360	G1300	A1239	C1118	G1058	U1003	U943	C880	U813	A753	G693	A633
G1361	U1301	U1240	C1119	C1059	G1003A	G944	C881	A814	C754	A694	C634
C1362	G1302	G1241	G1181	U1060	A1004	A945	C882	A815	C755	A695	A635
C1363	C1303	C1242	G1182	A1061	A1005	A946	C883	A816	C756	A696	U636
A1364	G1304	A1243	A1183	U1062	C1006	G947	U884	C817	U757	U697	G637
U1365	G1305	C1244	A1184	C1063	C1007	C948	G885	G818	U758	G698	G638
G1366	A1306	A1245	G1185	G1064	C1008	A949	G886	A819	A759	C699	G639
C1367	U1307	U1246	U1125	U1065	G1009	U950	G887	U820	U760	G700	A640
C1368	U1308	U1247	U1126	G1066	G1010	G951	G888	G821	G761	C701	U641
G1369	G1309	A1248	G1127	A1067	U1011	U952	A889	C822	C762	A702	A642
C1370	C1310	C1249	C1128	U1068	G1012	G953	G890	G823	G763	G703	G643
G1371	G1311	A1250	G1129	U1069	G1013	G954	U891	C824	C764	A704	G644
C1372	G1312	A1251	A1130	U1070	A1014	U955	A892	G825	C765	U705	G645
C1373	C1313	A1252	C1131	C1071	A1015	U956	C893	C826	A766	A706	G646
A1374	U1314	G1253	C1132	U1072	A1016	U957	G894	U827	A767	C707	U647
A1375	U1315	C1254	G1133	U1073	G1017	A958	G895	A828	A768	C708	A648
U1376	G1316	G1255	U1134	G1074	C1018	A959	C896	G829	G769	G709	G649
A1377	C1317	A1256	U1135	C1075	U1019	U960	C897	G830	C770	G710	G650
C1378	A1318	U1257	U1136	C1076	U1020	U961	G898	U831	G771	G711	C651
G1379	A1319	G1258	C1137	U1077	G1021	G962	C899	C832	U772	A712	U652
U1380	C1320	C1259	G1138	U1078	U1022	G963	A900	C833	U773	G713	A653
U1381	C1321	C1260	C1139	G1079	G1023	A964	A901	C834	G774	C834	G654
C1382	C1322	A1261	C1140	A1080	U1024	A965	G902	U835	G775	A715	A655
C1383	G1323	C1262	C1141	G1081	U1025	G966	G903	G836	C776	A716	C656
C1384	A1324	C1263	U1142	G1082	G1026	C967	G906	G837	A777	C717	G657
G1385	C1325	C1264	G1143	U1083	C1027	A968	G907	G838	G778	G718	G658
C1386	C1326	G1265	C1144	G1084	U1028	A969	A907	U839	C779	C719	U659
G1387	C1327	G1266	C1145	U1085	C1029	C970	A908	C840	A780	C720	G660
C1388	A1328	C1267	U1146	G1086	C1030	C971	A909	U841	A781	G721	G661
U1389	U1330	A1268	C1147	G1087	G1030A	C972	C910	C848	A782	A722	G662
U1390	G1331	C1269	U1148	U1088	C1030B	G973	U911	C849	C783	U723	A663
C1391	A1332	C1270	C1149	G1089	G1030C	A974	C912	U850	C784	G724	G664
C1392	C1333	G1271	U1150	U1090	A1030D	A975	A913	G851	G785	G725	A665
U1393	G1334	G1272	A1151	U1091	G1031	G976	A914	G852	A786	C726	G666
A1394	C1335	G1273	C1152	A1092	G1032	A977	A915	C853	A787	G727	G667
C1395	C1336	G1274	G1153	U1093	G1033	A978	G916	G854	U788	A728	G668
G1396	G1337	A1275	G1154	G1094	G1034	C979	G917	G855	U789	A729	U669
C1397	A1338	G1276	G1155	U1095	A1035	C980	A918	U856	A790	G730	G670
A1398	C1339	C1277	G1156	C1096	U981	U981	A919	G858	G791	G731	G671
C1399	U1340	U1278	C1157	C1097	C1036	U982	U920	A859	A792	C732	U672
U1400	U1341	A1279	U1158	C1098	C1037	A983	U921	A860	U793	A733	G673
G1401	C1342	U1281	U1159	G1099	C1038	C984	G922	G861	A794	G734	G674
C1402	G1343	C1282	G1160	C1100	U1040	C985	A923	C862	C795	C735	A675
C1403	C1344	G1283	C1161	A1101	A1041	A986	C924	U863	C796	C736	A676
C1404	U1345	C1284	C1162	U1102	U1042	G987	G925	A864	C797	A737	U677
G1405	A1346	A1285	C1163	C1103	C1043	G988	G926	A865	G798	C738	U678
U1406	C1347	A1286	G1164	G1104	U1044	C989	G927	C866	G799	G739	C679
C1407	U1348	U1287	C1165	A1105	C1045	C990	G928	G867	U800	U740	C680
A1408	A1349	A1288	A1166	G1106	A1046	U991	G928	C868	G801	G741	C681
C1412	A1350	A1289	U1167	C1107	G1047	U992	C932	G869	A802	G742	G682
A1413	U1351	G1290	A1168	G1108	U1048	G993	G933	U870	G803	U743	G683
	C1352	G1291	A1169	U1109	U1049	A994	A934	U871	U804	C744	A684
			G1171	A1110	G1050	C995	A935	A872	C805	G745	G685



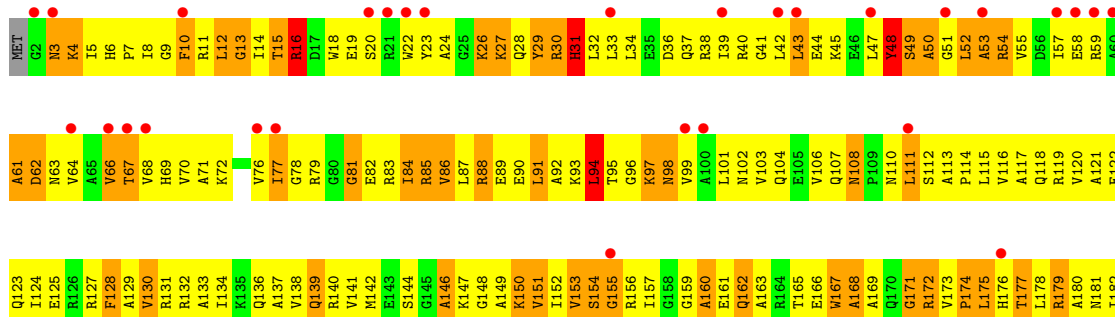
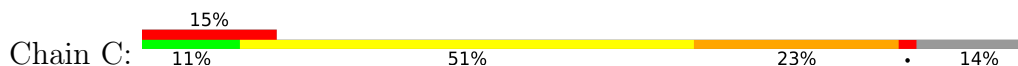
• Molecule 2: A-SITE MESSENGER RNA FRAGMENT

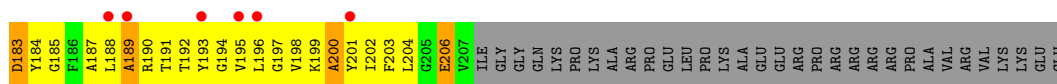


• Molecule 3: 30S RIBOSOMAL PROTEIN S2

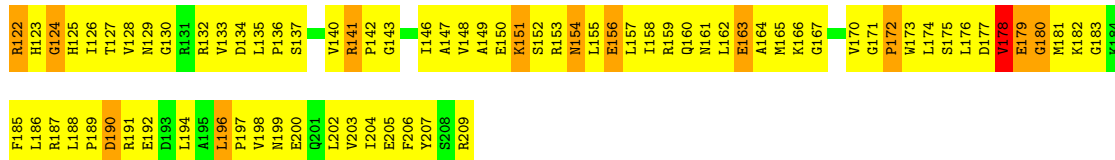
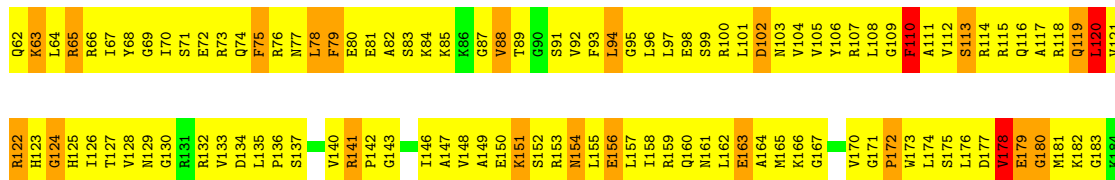
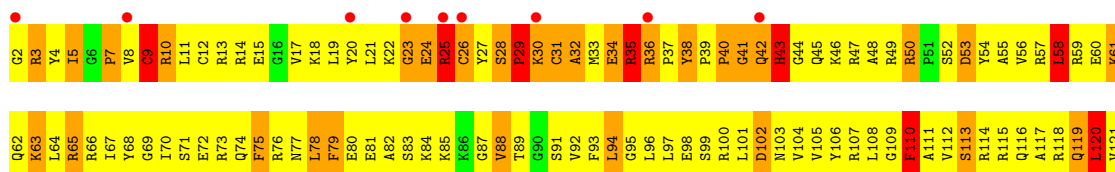
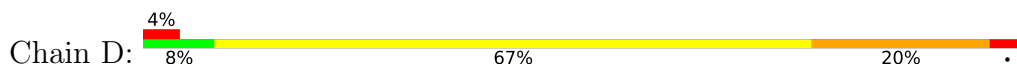


• Molecule 4: 30S RIBOSOMAL PROTEIN S3

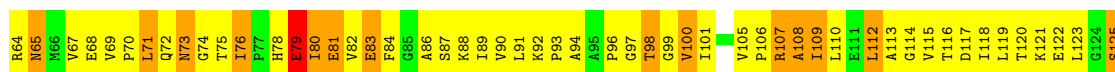
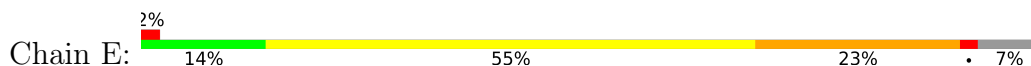




- Molecule 5: 30S RIBOSOMAL PROTEIN S4



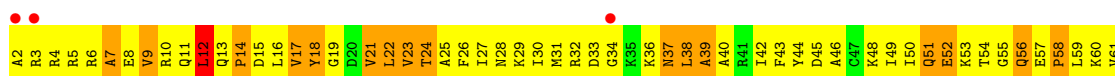
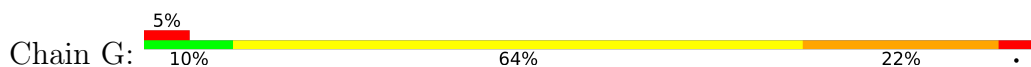
- Molecule 6: 30S RIBOSOMAL PROTEIN S5

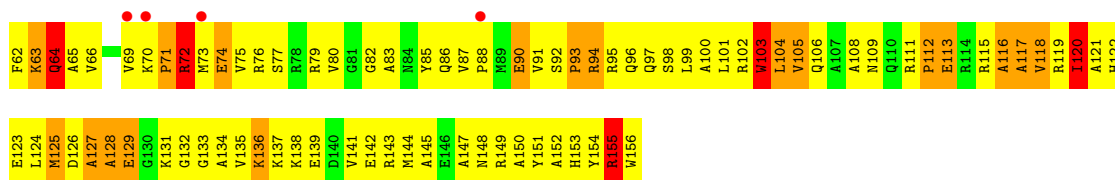


- Molecule 7: 30S RIBOSOMAL PROTEIN S6

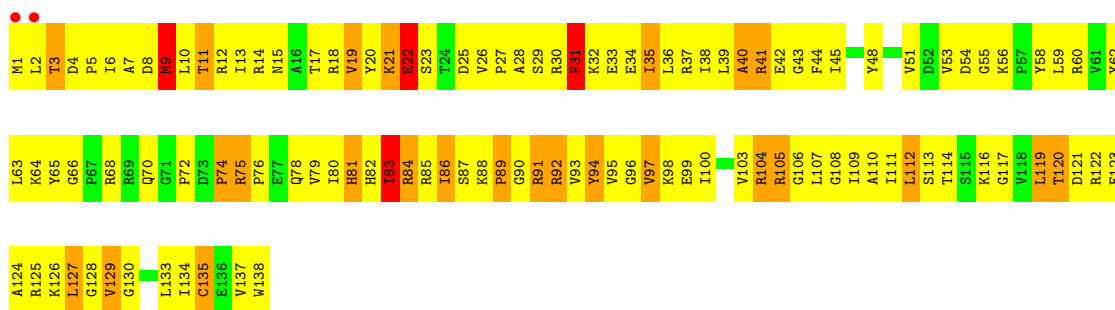


- Molecule 8: 30S RIBOSOMAL PROTEIN S7

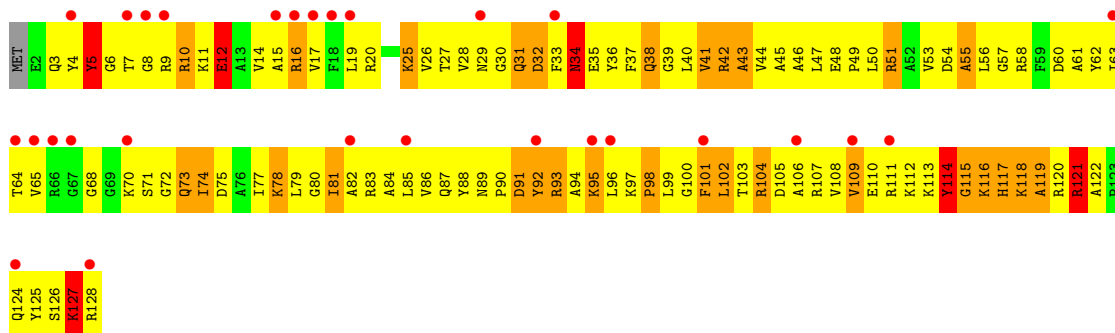
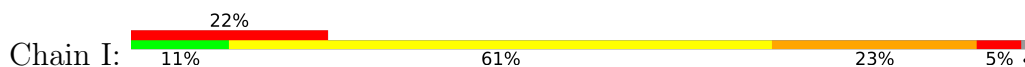




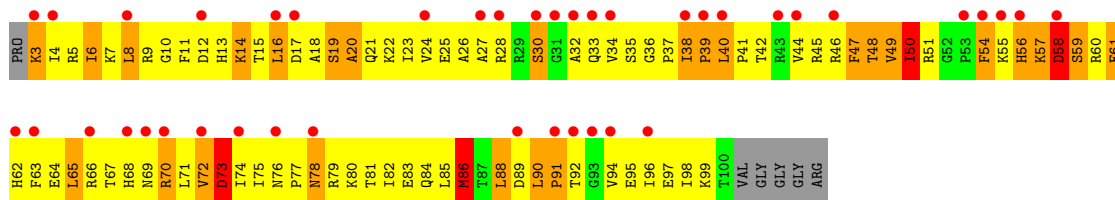
• Molecule 9: 30S RIBOSOMAL PROTEIN S8



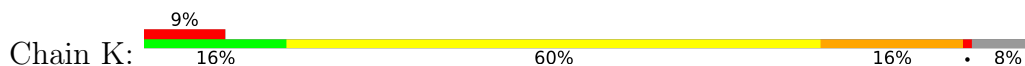
• Molecule 10: 30S RIBOSOMAL PROTEIN S9



• Molecule 11: 30S RIBOSOMAL PROTEIN S10

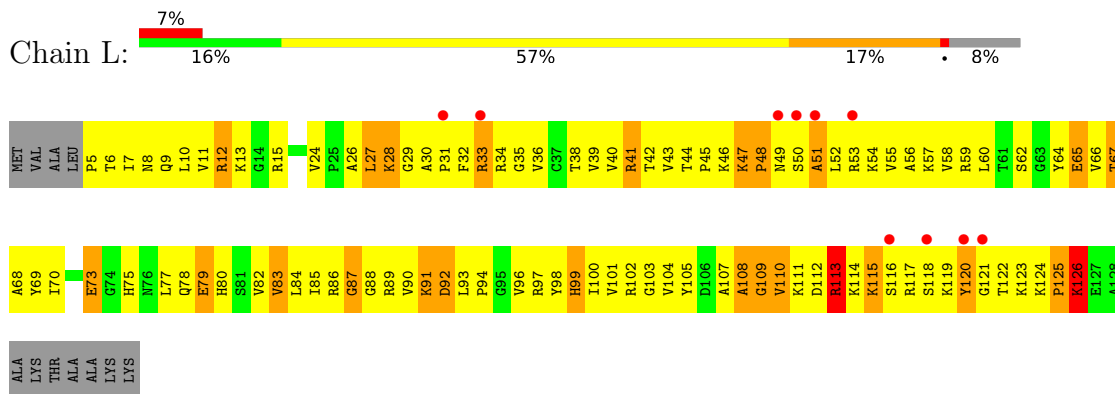


• Molecule 12: 30S RIBOSOMAL PROTEIN S11

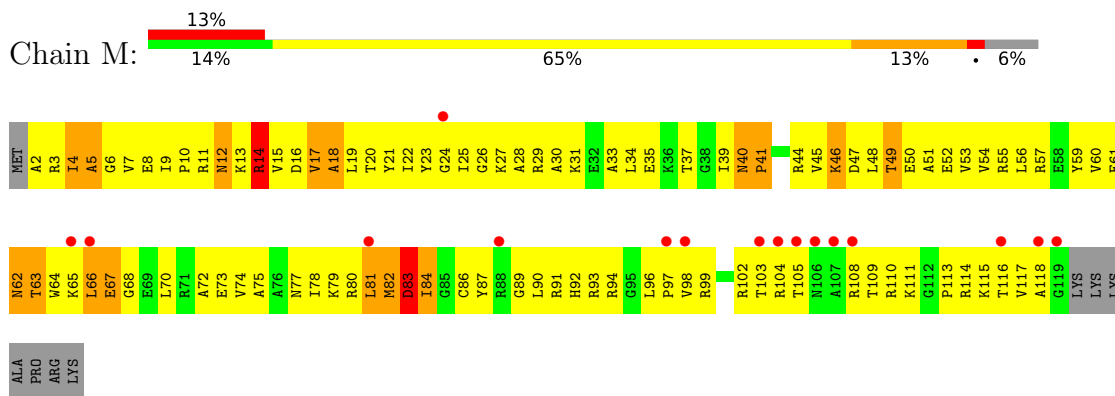




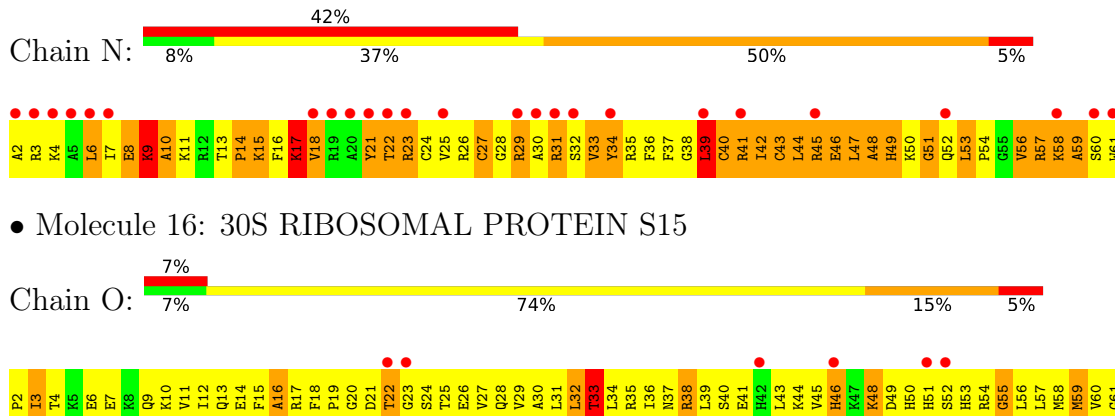
• Molecule 13: 30S RIBOSOMAL PROTEIN S12



• Molecule 14: 30S RIBOSOMAL PROTEIN S13



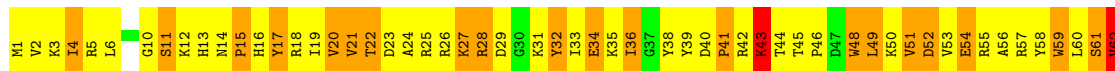
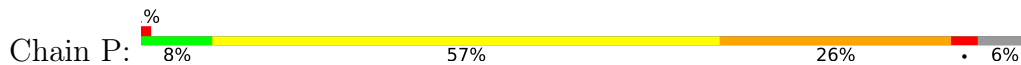
• Molecule 15: 30S RIBOSOMAL PROTEIN S14



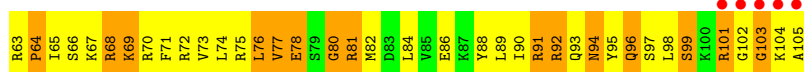
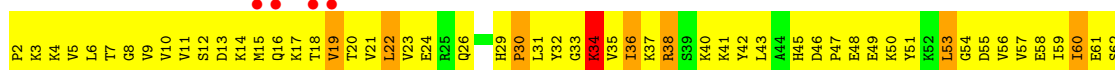
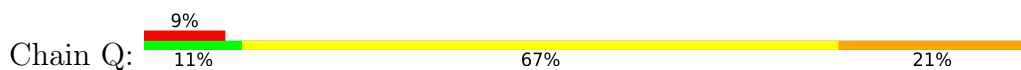
• Molecule 16: 30S RIBOSOMAL PROTEIN S15



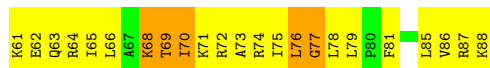
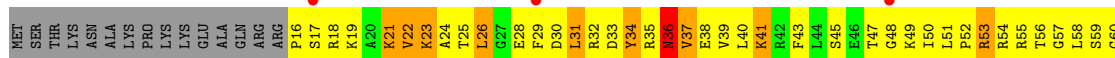
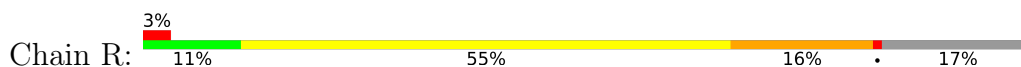
- Molecule 17: 30S RIBOSOMAL PROTEIN S16



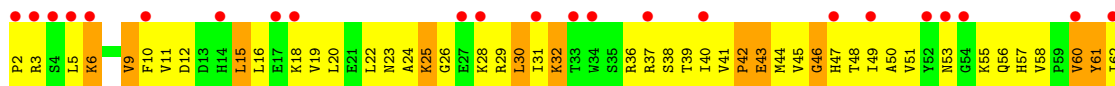
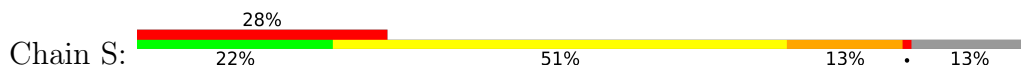
- Molecule 18: 30S RIBOSOMAL PROTEIN S17



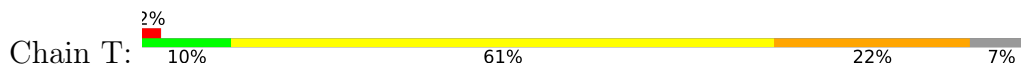
- Molecule 19: 30S RIBOSOMAL PROTEIN S18

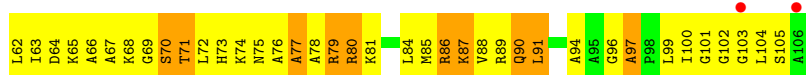


- Molecule 20: 30S RIBOSOMAL PROTEIN S19

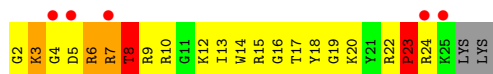
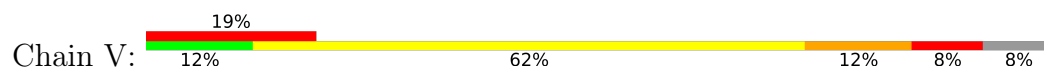


- Molecule 21: 30S RIBOSOMAL PROTEIN S20





• Molecule 22: 30S RIBOSOMAL PROTEIN THX



## 4 Data and refinement statistics

Property	Value	Source
Space group	P 41 21 2	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	401.84Å 401.84Å 173.85Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	141.42 – 3.80 148.30 – 3.78	Depositor EDS
% Data completeness (in resolution range)	92.6 (141.42-3.80) 92.4 (148.30-3.78)	Depositor EDS
$R_{merge}$	(Not available)	Depositor
$R_{sym}$	0.08	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.94 (at 3.78Å)	Xtrriage
Refinement program	CNS	Depositor
R, $R_{free}$	0.241 , 0.312 0.224 , 0.291	Depositor DCC
$R_{free}$ test set	6465 reflections (4.94%)	wwPDB-VP
Wilson B-factor (Å <sup>2</sup> )	122.1	Xtrriage
Anisotropy	0.327	Xtrriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.28 , 194.9	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.47$ , $\langle L^2 \rangle = 0.30$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
$F_o, F_c$ correlation	0.84	EDS
Total number of atoms	51757	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	101.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.15% of the height of the origin peak. No significant pseudotranslation is detected.*

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

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



## 5 Model quality i

### 5.1 Standard geometry i

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

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	0.60	1/36387 (0.0%)	0.76	22/56789 (0.0%)
2	Z	0.62	0/84	0.87	0/128
3	B	0.42	0/1935	0.73	0/2609
4	C	0.37	0/1636	0.70	0/2205
5	D	0.44	0/1733	0.73	0/2318
6	E	0.52	0/1162	0.83	0/1564
7	F	0.37	0/856	0.69	0/1154
8	G	0.35	0/1276	0.66	0/1709
9	H	0.57	0/1136	0.87	0/1527
10	I	0.36	0/1029	0.66	0/1378
11	J	0.36	0/805	0.68	0/1082
12	K	0.42	0/900	0.71	0/1213
13	L	0.41	0/986	0.76	0/1320
14	M	0.36	0/947	0.68	0/1270
15	N	0.38	0/501	0.74	0/664
16	O	0.44	0/745	0.67	0/992
17	P	0.47	0/716	0.71	0/963
18	Q	0.56	0/870	0.83	1/1159 (0.1%)
19	R	0.41	0/603	0.71	0/799
20	S	0.35	0/661	0.67	0/890
21	T	0.37	0/765	0.73	0/1007
22	V	0.40	0/212	0.71	0/277
All	All	0.54	1/55945 (0.0%)	0.75	23/83017 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	2	42

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Mol	Chain	#Chirality outliers	#Planarity outliers
17	P	0	1
All	All	2	43

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	858	G	C5-C6	-6.02	1.36	1.42

All (23) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	51	A	C2'-C3'-O3'	9.80	131.06	109.50
1	A	266	G	C2'-C3'-O3'	9.28	129.91	109.50
1	A	1498	U	C2'-C3'-O3'	9.05	129.41	109.50
1	A	1085	U	C2'-C3'-O3'	7.77	126.60	109.50
1	A	575	G	C2'-C3'-O3'	7.36	125.69	109.50
1	A	108	G	O4'-C1'-N9	7.06	113.85	108.20
1	A	243	A	C2'-C3'-O3'	6.70	124.42	113.70
18	Q	22	LEU	CA-CB-CG	-6.25	100.91	115.30
1	A	7	G	C2'-C3'-O3'	5.96	123.24	113.70
1	A	68	G	N9-C1'-C2'	-5.82	105.60	112.00
1	A	366	C	C2'-C3'-O3'	5.61	122.68	113.70
1	A	1454	G	N9-C1'-C2'	-5.57	105.87	112.00
1	A	586	C	N1-C1'-C2'	-5.38	106.08	112.00
1	A	810	C	C5'-C4'-C3'	5.37	124.59	116.00
1	A	559	A	OP2-P-O3'	5.29	116.83	105.20
1	A	1364	U	C2'-C3'-O3'	5.28	122.16	113.70
1	A	353	A	C5'-C4'-O4'	-5.28	102.77	109.10
1	A	812	C	N1-C1'-C2'	5.26	120.84	114.00
1	A	1200	C	N1-C1'-C2'	5.17	120.72	114.00
1	A	328	C	C2'-C3'-O3'	5.11	121.88	113.70
1	A	1498	U	C4'-C3'-O3'	5.08	123.16	113.00
1	A	389	A	C5'-C4'-C3'	5.06	124.09	116.00
1	A	906	G	N9-C1'-C2'	-5.01	106.48	112.00

All (2) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
1	A	51	A	C3'
1	A	1498	U	C3'

All (43) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	1065	U	Sidechain
1	A	1066	C	Sidechain
1	A	1083	U	Sidechain
1	A	1094	G	Sidechain
1	A	127	G	Sidechain
1	A	1281	U	Sidechain
1	A	1322	C	Sidechain
1	A	1454	G	Sidechain
1	A	148	G	Sidechain
1	A	1502	A	Sidechain
1	A	1510	U	Sidechain
1	A	197	A	Sidechain
1	A	203	U	Sidechain
1	A	230	G	Sidechain
1	A	239	U	Sidechain
1	A	28	G	Sidechain
1	A	296	U	Sidechain
1	A	305	G	Sidechain
1	A	317	G	Sidechain
1	A	516	U	Sidechain
1	A	551	U	Sidechain
1	A	560	U	Sidechain
1	A	566	G	Sidechain
1	A	567	G	Sidechain
1	A	575	G	Sidechain
1	A	576	G	Sidechain
1	A	592	G	Sidechain
1	A	609	A	Sidechain
1	A	654	G	Sidechain
1	A	657	G	Sidechain
1	A	682	G	Sidechain
1	A	760	G	Sidechain
1	A	777	A	Sidechain
1	A	785	G	Sidechain
1	A	787	A	Sidechain
1	A	817	C	Sidechain
1	A	827	U	Sidechain
1	A	859	A	Sidechain
1	A	870	U	Sidechain
1	A	883	C	Sidechain
1	A	898	G	Sidechain
1	A	90	U	Sidechain
17	P	32	TYR	Sidechain

## 5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	32508	0	16414	2480	0
2	Z	77	0	42	5	0
3	B	1900	0	1951	427	0
4	C	1612	0	1677	396	0
5	D	1703	0	1765	380	0
6	E	1146	0	1207	261	0
7	F	843	0	857	159	0
8	G	1257	0	1296	257	0
9	H	1116	0	1177	235	0
10	I	1011	0	1043	246	0
11	J	792	0	835	245	0
12	K	885	0	904	142	0
13	L	970	0	1057	183	0
14	M	937	0	995	167	0
15	N	492	0	533	140	0
16	O	734	0	771	142	0
17	P	700	0	720	175	0
18	Q	857	0	930	180	0
19	R	597	0	668	143	0
20	S	647	0	673	114	0
21	T	763	0	861	174	0
22	V	208	0	221	53	0
23	D	1	0	0	0	0
23	N	1	0	0	0	0
All	All	51757	0	36597	6246	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 71.

All (6246) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:818:G:O2'	1:A:819:A:H5''	1.44	1.17
1:A:1064:G:H4'	1:A:1065:U:H5'	1.28	1.15
1:A:1443:G:H5''	1:A:1446:A:H5'	1.21	1.14

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:R:53:ARG:HH21	19:R:60:GLY:N	1.46	1.14
6:E:13:ILE:HG22	6:E:30:ALA:HA	1.22	1.13
9:H:97:VAL:HG13	9:H:98:LYS:H	1.04	1.12
1:A:383:A:H2'	1:A:384:G:H5'	1.30	1.12
1:A:1437:C:H2'	1:A:1438:G:H8	1.09	1.12
17:P:40:ASP:HB3	17:P:48:TRP:HB2	1.29	1.11
1:A:939:G:H5''	8:G:102:ARG:HH22	1.11	1.10
17:P:74:LEU:HD22	17:P:79:VAL:HG21	1.32	1.10
5:D:104:VAL:HG21	5:D:140:VAL:HG21	1.34	1.10
4:C:50:ALA:HA	4:C:72:LYS:HD3	1.18	1.09
1:A:1305:G:H22	1:A:1331:G:H2'	0.96	1.08
11:J:25:GLU:HA	11:J:28:ARG:HG2	1.32	1.08
8:G:48:LYS:HE2	8:G:48:LYS:HA	1.30	1.08
1:A:709:G:H2'	1:A:710:G:H8	1.14	1.08
1:A:1116:C:C2'	1:A:1117:G:H5''	1.81	1.08
6:E:80:ILE:HG22	9:H:104:ARG:HH21	0.96	1.07
1:A:1104:G:H4'	3:B:111:ARG:NH2	1.68	1.06
3:B:68:ILE:H	3:B:90:MET:HE3	1.12	1.06
1:A:1329:A:P	14:M:28:ALA:HB3	1.94	1.06
10:I:93:ARG:HB3	10:I:93:ARG:HH11	1.18	1.06
1:A:977:A:H2'	1:A:978:A:H5''	1.38	1.05
1:A:1116:C:H2'	1:A:1117:G:H5''	1.08	1.05
14:M:77:ASN:O	14:M:80:ARG:HB3	1.56	1.05
4:C:66:VAL:HG12	4:C:67:THR:H	1.17	1.05
7:F:50:TYR:HE1	19:R:77:GLY:HA2	1.19	1.05
17:P:27:LYS:H	17:P:27:LYS:HE3	1.15	1.05
5:D:70:ILE:HG22	5:D:71:SER:H	1.19	1.05
1:A:1241:G:H2'	1:A:1242:C:H6	1.21	1.04
14:M:96:LEU:HB3	14:M:97:PRO:HD2	1.39	1.04
6:E:110:LEU:HD13	6:E:118:ILE:HD12	1.38	1.04
1:A:745:C:H2'	1:A:746:A:H8	1.16	1.03
3:B:111:ARG:HH11	3:B:111:ARG:CA	1.72	1.03
1:A:125:U:H2'	1:A:126:G:C8	1.93	1.03
9:H:28:ALA:HA	9:H:59:LEU:HD11	1.33	1.03
13:L:55:VAL:HG22	13:L:69:TYR:HA	1.40	1.03
12:K:40:ILE:HG22	12:K:41:THR:HG23	1.41	1.03
17:P:2:VAL:HG23	17:P:64:ALA:H	1.21	1.03
1:A:390:C:H2'	1:A:391:G:H8	1.22	1.02
1:A:1226:C:H2'	14:M:103:THR:HB	1.40	1.02
1:A:78:G:H2'	1:A:79:G:H5''	1.39	1.02
1:A:501:C:H2'	1:A:502:G:H8	1.24	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1368:G:H5''	10:I:112:LYS:HB3	1.40	1.02
10:I:118:LYS:HE2	10:I:121:ARG:HB2	1.39	1.02
1:A:538:G:H5''	13:L:114:LYS:HB2	1.40	1.02
3:B:88:ALA:HB2	3:B:219:VAL:HG13	1.42	1.01
1:A:1023:G:H3'	1:A:1024:G:H5'	1.42	1.01
12:K:33:THR:HA	12:K:39:PRO:HA	1.42	1.01
11:J:34:VAL:HG12	11:J:36:GLY:H	1.24	1.01
1:A:1150:U:H4'	11:J:41:PRO:HG3	1.43	1.00
1:A:736:C:H2'	1:A:737:A:C8	1.97	1.00
1:A:559:A:H4'	1:A:560:U:H5''	1.41	1.00
4:C:3:ASN:HD22	4:C:3:ASN:N	1.54	0.99
5:D:108:LEU:HD12	5:D:146:ILE:HD11	1.44	0.99
13:L:57:LYS:HG2	13:L:67:THR:HG23	1.44	0.99
17:P:74:LEU:O	17:P:79:VAL:HG23	1.63	0.99
6:E:80:ILE:HG22	9:H:104:ARG:NH2	1.78	0.99
12:K:18:ARG:HB2	12:K:33:THR:HG23	1.45	0.99
1:A:474:G:H2'	1:A:475:G:H8	1.25	0.99
6:E:13:ILE:HB	6:E:29:GLY:O	1.63	0.99
4:C:71:ALA:HA	4:C:106:VAL:HB	1.44	0.98
4:C:92:ALA:HB1	4:C:96:GLY:HA2	1.42	0.98
3:B:178:ARG:HB3	9:H:72:PRO:HA	1.46	0.98
5:D:10:ARG:HH11	5:D:10:ARG:HG3	1.25	0.98
1:A:939:G:H5''	8:G:102:ARG:NH2	1.78	0.98
3:B:208:ILE:H	3:B:208:ILE:HD12	1.24	0.98
13:L:53:ARG:HH12	13:L:92:ASP:HB2	1.23	0.98
3:B:132:LYS:HA	3:B:135:GLN:HB3	1.45	0.98
10:I:93:ARG:HB3	10:I:93:ARG:NH1	1.79	0.97
11:J:19:SER:HB3	11:J:91:PRO:HG3	1.43	0.97
5:D:23:GLY:HA2	5:D:113:SER:HB2	1.44	0.97
10:I:108:VAL:HG12	10:I:109:VAL:H	1.27	0.97
1:A:1305:G:H22	1:A:1331:G:C2'	1.75	0.97
4:C:151:VAL:HG13	4:C:198:VAL:HG11	1.46	0.97
19:R:39:VAL:HG13	19:R:40:LEU:H	1.27	0.97
11:J:35:SER:HB2	11:J:73:ASP:HB2	1.46	0.97
1:A:1437:C:H2'	1:A:1438:G:C8	1.97	0.97
5:D:64:LEU:HB2	5:D:198:VAL:HG21	1.44	0.97
1:A:737:A:H2'	1:A:738:C:C6	1.99	0.97
1:A:1077:G:N2	1:A:1079:G:H3'	1.79	0.96
1:A:1226:C:H6	14:M:103:THR:HG1	1.00	0.96
4:C:39:ILE:HD13	4:C:57:ILE:HG12	1.46	0.96
1:A:243:A:H4'	1:A:244:U:H5'	1.46	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:959:A:H3'	1:A:960:U:H5''	1.47	0.96
17:P:21:VAL:O	17:P:33:ILE:HG12	1.65	0.96
3:B:92:TYR:CD2	3:B:151:GLY:HA3	2.01	0.96
6:E:80:ILE:CG2	9:H:104:ARG:HH21	1.78	0.96
19:R:53:ARG:HH21	19:R:60:GLY:H	1.08	0.96
17:P:4:ILE:HG13	17:P:64:ALA:HB1	1.47	0.96
5:D:120:LEU:HD23	5:D:125:HIS:HB2	1.48	0.96
8:G:70:LYS:HZ2	8:G:96:GLN:HB3	1.30	0.95
13:L:41:ARG:HG2	13:L:42:THR:H	1.30	0.95
7:F:25:ILE:HG12	7:F:82:ARG:HD2	1.45	0.95
21:T:60:GLU:HA	21:T:63:ILE:HD12	1.48	0.95
1:A:1241:G:H2'	1:A:1242:C:C6	2.01	0.95
1:A:1507:A:H2'	1:A:1508:G:C8	2.01	0.95
15:N:26:ARG:HH22	15:N:47:LEU:HD23	1.30	0.95
1:A:926:G:N2	1:A:1505:G:H2'	1.81	0.95
1:A:952:U:H2'	1:A:953:G:H8	1.30	0.95
10:I:17:VAL:HG21	10:I:80:GLY:HA3	1.47	0.95
19:R:37:VAL:HB	19:R:41:LYS:HE3	1.49	0.95
7:F:30:LEU:HD23	7:F:30:LEU:H	1.31	0.95
9:H:60:ARG:HH11	9:H:60:ARG:HG3	1.31	0.95
1:A:1305:G:N2	1:A:1331:G:H2'	1.81	0.95
7:F:50:TYR:CE1	19:R:77:GLY:HA2	2.01	0.95
14:M:49:THR:HG22	14:M:50:GLU:H	1.28	0.95
19:R:23:LYS:HD2	19:R:57:GLY:O	1.66	0.95
11:J:62:HIS:HB3	15:N:59:ALA:HB3	1.49	0.94
1:A:745:C:H2'	1:A:746:A:C8	2.01	0.94
1:A:708:C:H2'	1:A:709:G:C8	2.02	0.94
9:H:2:LEU:HD23	9:H:3:THR:N	1.83	0.94
11:J:7:LYS:HD3	11:J:71:LEU:HD21	1.45	0.94
14:M:34:LEU:HD23	14:M:41:PRO:HA	1.50	0.94
14:M:10:PRO:HB2	14:M:18:ALA:HB1	1.47	0.94
1:A:673:G:H2'	1:A:674:G:C8	2.04	0.93
1:A:1352:C:H2'	1:A:1353:G:C8	2.03	0.93
8:G:75:VAL:HG11	8:G:86:GLN:HB3	1.48	0.93
5:D:50:ARG:HB3	5:D:50:ARG:HH11	1.30	0.93
8:G:12:LEU:H	8:G:12:LEU:HD12	1.33	0.93
18:Q:88:TYR:HA	18:Q:91:ARG:HD2	1.47	0.93
1:A:555:C:H2'	1:A:556:C:C6	2.03	0.92
4:C:26:LYS:H	4:C:26:LYS:HD3	1.31	0.92
18:Q:97:SER:H	18:Q:103:GLY:HA2	1.33	0.92
5:D:125:HIS:HA	5:D:149:ALA:HB2	1.51	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:219:VAL:HA	3:B:222:ILE:HD12	1.47	0.92
18:Q:97:SER:HB2	18:Q:102:GLY:O	1.70	0.92
13:L:6:THR:OG1	13:L:9:GLN:HG3	1.68	0.92
1:A:1015:A:H4'	15:N:15:LYS:NZ	1.85	0.92
1:A:336:C:H2'	1:A:337:C:H6	1.33	0.92
5:D:61:LYS:HZ1	5:D:62:GLN:HA	1.35	0.92
6:E:78:HIS:CD2	9:H:104:ARG:HD2	2.03	0.92
16:O:16:ALA:HB1	16:O:21:ASP:HB3	1.49	0.92
18:Q:70:ARG:HG3	18:Q:70:ARG:HH11	1.31	0.92
1:A:665:A:H2'	1:A:732:C:O2	1.68	0.92
1:A:1047:G:H3'	1:A:1048:G:H5''	1.50	0.92
3:B:101:MET:HA	3:B:108:ILE:HD12	1.48	0.91
15:N:2:ALA:HB2	15:N:28:GLY:HA3	1.51	0.91
1:A:56:U:H2'	1:A:57:G:H8	1.33	0.91
1:A:405:U:H3'	1:A:406:G:H5'	1.51	0.91
1:A:853:G:O2'	1:A:854:G:H5'	1.70	0.91
18:Q:26:GLN:HG2	18:Q:37:LYS:HG3	1.48	0.91
22:V:6:ARG:HG2	22:V:15:ARG:HH12	1.34	0.91
1:A:1089:G:H1	1:A:1096:C:H42	1.02	0.91
6:E:126:ARG:HG2	6:E:126:ARG:HH11	1.32	0.91
10:I:106:ALA:O	10:I:108:VAL:HG23	1.70	0.91
1:A:539:A:H2'	1:A:540:G:H8	1.32	0.91
1:A:709:G:H2'	1:A:710:G:C8	2.03	0.91
12:K:73:MET:HG2	12:K:103:LEU:HD21	1.52	0.91
11:J:83:GLU:HA	11:J:86:MET:SD	2.11	0.91
16:O:55:GLY:O	16:O:59:MET:HG2	1.70	0.91
1:A:168:G:O2'	1:A:169:C:H5'	1.71	0.91
1:A:806:C:H2'	1:A:807:A:H8	1.34	0.91
13:L:27:LEU:HB3	13:L:33:ARG:HH12	1.34	0.91
13:L:102:ARG:HA	13:L:107:ALA:HB1	1.53	0.91
14:M:98:VAL:HG23	14:M:110:ARG:HH12	1.36	0.90
18:Q:96:GLN:HB3	18:Q:103:GLY:C	1.90	0.90
1:A:1207:G:H2'	1:A:1208:C:C6	2.07	0.90
3:B:32:ILE:HG21	3:B:40:HIS:HB2	1.50	0.90
3:B:91:PRO:HG2	3:B:155:LEU:HG	1.51	0.90
1:A:952:U:H2'	1:A:953:G:C8	2.07	0.90
8:G:17:VAL:HG12	8:G:18:TYR:H	1.37	0.90
9:H:97:VAL:HG13	9:H:98:LYS:N	1.86	0.90
10:I:48:GLU:HA	10:I:51:ARG:HE	1.37	0.90
18:Q:67:LYS:HA	18:Q:70:ARG:HH22	1.36	0.90
1:A:1116:C:H2'	1:A:1117:G:C5'	2.00	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:I:50:LEU:HD23	10:I:85:LEU:HD11	1.52	0.90
1:A:736:C:H2'	1:A:737:A:H8	1.37	0.90
1:A:979:C:H2'	1:A:980:C:H5'	1.55	0.90
4:C:19:GLU:HB3	4:C:40:ARG:NH2	1.87	0.90
1:A:491:G:H2'	1:A:492:G:H8	1.36	0.89
3:B:137:ARG:HB2	3:B:137:ARG:HH11	1.35	0.89
4:C:131:ARG:HA	4:C:134:ILE:HD12	1.53	0.89
1:A:922:G:H4'	6:E:20:GLN:HA	1.53	0.89
17:P:39:TYR:HA	17:P:49:LEU:HD12	1.51	0.89
12:K:95:ILE:HD12	12:K:95:ILE:H	1.38	0.89
3:B:69:LEU:HB3	3:B:162:ILE:HG12	1.52	0.89
4:C:27:LYS:HA	4:C:30:ARG:HH12	1.34	0.89
19:R:47:THR:HG22	19:R:48:GLY:H	1.35	0.89
3:B:218:ALA:O	3:B:222:ILE:HG13	1.71	0.89
1:A:375:U:H4'	17:P:17:TYR:HE2	1.36	0.89
13:L:45:PRO:HB3	13:L:92:ASP:HB3	1.54	0.89
1:A:46:G:H1'	1:A:396:G:H22	1.37	0.89
1:A:78:G:C2'	1:A:79:G:H5''	2.03	0.89
5:D:3:ARG:HE	5:D:3:ARG:N	1.71	0.89
11:J:90:LEU:H	11:J:91:PRO:CD	1.86	0.88
10:I:93:ARG:HH12	10:I:96:LEU:HD23	1.35	0.88
3:B:36:ARG:HD2	3:B:41:ILE:HD12	1.56	0.88
3:B:158:LEU:HD12	3:B:159:PRO:HD2	1.56	0.88
10:I:17:VAL:HA	10:I:63:ILE:HG22	1.55	0.88
15:N:60:SER:O	15:N:61:TRP:HB3	1.72	0.88
1:A:332:G:H2'	1:A:333:G:H8	1.37	0.88
1:A:858:G:H8	1:A:858:G:O5'	1.56	0.88
1:A:882:C:O2'	1:A:883:C:H5'	1.73	0.88
1:A:1277:C:H2'	1:A:1278:U:H5'	1.56	0.88
4:C:51:GLY:HA3	4:C:70:VAL:HA	1.56	0.88
5:D:38:TYR:HB2	5:D:39:PRO:HD2	1.54	0.88
7:F:46:ARG:HH12	19:R:37:VAL:HG21	1.36	0.88
1:A:258:G:H2'	1:A:259:G:H8	1.37	0.88
10:I:113:LYS:HD3	10:I:119:ALA:HA	1.53	0.88
16:O:33:THR:HG22	16:O:63:ARG:HH11	1.36	0.88
11:J:7:LYS:O	11:J:96:ILE:HA	1.72	0.87
1:A:707:C:H2'	1:A:708:C:C6	2.07	0.87
1:A:1178:G:N2	1:A:1180:A:H3'	1.89	0.87
8:G:56:GLN:NE2	8:G:56:GLN:H	1.72	0.87
4:C:149:ALA:O	4:C:150:LYS:HB2	1.74	0.87
1:A:986:A:H1'	20:S:55:LYS:HA	1.56	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1528:U:O2'	1:A:1529:G:H3'	1.75	0.87
4:C:19:GLU:HB3	4:C:40:ARG:HH22	1.37	0.87
14:M:37:THR:HG22	14:M:39:ILE:HG13	1.56	0.87
1:A:474:G:H2'	1:A:475:G:C8	2.09	0.87
1:A:1066:C:C2	1:A:1067:A:H2	1.92	0.87
8:G:63:LYS:N	8:G:63:LYS:HZ2	1.72	0.87
14:M:91:ARG:HB2	14:M:98:VAL:HG22	1.56	0.87
6:E:11:ILE:CG2	6:E:31:LEU:HB3	2.05	0.86
11:J:40:LEU:HD22	11:J:69:ASN:HD22	1.38	0.86
1:A:304:U:H2'	1:A:305:G:C8	2.10	0.86
4:C:156:ARG:HB2	4:C:160:ALA:O	1.75	0.86
1:A:1347:G:N2	1:A:1373:G:H2'	1.90	0.86
3:B:73:THR:HG23	3:B:96:ARG:HH21	1.40	0.86
1:A:939:G:C5'	8:G:102:ARG:HH22	1.87	0.86
6:E:11:ILE:HG22	6:E:12:LEU:N	1.89	0.86
4:C:39:ILE:HG21	4:C:57:ILE:HD11	1.56	0.86
7:F:10:LEU:HD12	7:F:59:TYR:HB3	1.58	0.86
18:Q:70:ARG:HG3	18:Q:70:ARG:NH1	1.86	0.86
1:A:537:G:H5''	13:L:113:ARG:NH2	1.90	0.86
3:B:189:ASP:OD1	3:B:205:ASP:HB3	1.74	0.86
4:C:91:LEU:HD23	4:C:92:ALA:N	1.90	0.86
21:T:51:GLU:HA	21:T:54:LYS:HB2	1.58	0.86
4:C:120:VAL:HG12	4:C:124:ILE:HD11	1.56	0.86
19:R:39:VAL:HG13	19:R:40:LEU:N	1.89	0.86
1:A:781:A:H2'	1:A:782:A:H5'	1.56	0.86
3:B:111:ARG:HD2	3:B:145:LEU:HD22	1.56	0.86
4:C:85:ARG:HG3	4:C:86:VAL:H	1.39	0.86
1:A:838:G:H2'	1:A:839:U:H5''	1.57	0.85
1:A:1190:G:OP1	4:C:4:LYS:HA	1.76	0.85
5:D:9:CYS:HB2	5:D:22:LYS:NZ	1.88	0.85
10:I:48:GLU:N	10:I:49:PRO:HD2	1.91	0.85
20:S:16:LEU:HA	20:S:19:VAL:HG12	1.58	0.85
1:A:68:G:H1	1:A:101:A:H61	1.24	0.85
1:A:141:A:H1'	1:A:182:U:O2	1.76	0.85
1:A:1507:A:H2'	1:A:1508:G:H8	1.38	0.85
4:C:113:ALA:HB2	4:C:202:ILE:HG13	1.58	0.85
1:A:932:C:H4'	8:G:4:ARG:NH2	1.90	0.85
4:C:190:ARG:HB3	4:C:190:ARG:NH1	1.92	0.85
9:H:112:LEU:H	9:H:112:LEU:HD12	1.41	0.85
13:L:42:THR:HG21	13:L:52:LEU:HB3	1.59	0.85
18:Q:8:GLY:HA3	18:Q:23:VAL:HG22	1.55	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:129(A):G:HO2'	1:A:190(E):U:H2'	1.42	0.85
5:D:61:LYS:NZ	5:D:62:GLN:HE21	1.75	0.85
1:A:1402:C:H2'	1:A:1403:C:H6	1.42	0.85
3:B:21:ARG:H	3:B:23:ARG:HE	1.22	0.85
3:B:166:ASP:HB2	3:B:205:ASP:HB2	1.58	0.85
5:D:3:ARG:HE	5:D:3:ARG:H	1.20	0.85
4:C:88:ARG:O	4:C:91:LEU:HD22	1.76	0.85
6:E:8:GLU:HB3	6:E:34:VAL:HG23	1.56	0.85
7:F:94:GLN:NE2	19:R:32:ARG:HD3	1.91	0.85
10:I:46:ALA:O	10:I:81:ILE:HD11	1.77	0.85
1:A:555:C:H2'	1:A:556:C:H6	1.39	0.85
1:A:992:U:H4'	1:A:993:G:O5'	1.76	0.85
14:M:37:THR:HG23	14:M:55:ARG:HB3	1.59	0.85
1:A:894:G:H2'	1:A:895:G:C8	2.11	0.84
4:C:43:LEU:HD13	4:C:68:VAL:HG21	1.59	0.84
8:G:21:VAL:HG23	8:G:22:LEU:H	1.42	0.84
1:A:284:G:H2'	1:A:285:G:H8	1.43	0.84
1:A:1354:C:H2'	1:A:1355:G:H8	1.42	0.84
3:B:35:GLU:HA	3:B:40:HIS:HA	1.59	0.84
9:H:103:VAL:HG21	9:H:109:ILE:C	1.97	0.84
1:A:463:A:H2'	1:A:474:G:C8	2.12	0.84
5:D:64:LEU:HD23	5:D:198:VAL:HG11	1.58	0.84
4:C:14:ILE:HG22	4:C:15:THR:H	1.40	0.84
13:L:87:GLY:HA2	13:L:98:TYR:HA	1.60	0.84
16:O:2:PRO:HG2	16:O:3:ILE:H	1.42	0.84
1:A:304:U:H2'	1:A:305:G:H8	1.43	0.84
9:H:96:GLY:H	9:H:99:GLU:HB2	1.42	0.84
14:M:4:ILE:HG22	14:M:5:ALA:N	1.93	0.84
4:C:62:ASP:O	4:C:97:LYS:HG2	1.77	0.84
13:L:114:LYS:C	13:L:117:ARG:HH12	1.81	0.84
1:A:1154:G:H2'	1:A:1155:G:H8	1.41	0.84
1:A:1347:G:H3'	10:I:108:VAL:O	1.78	0.84
1:A:340:U:H2'	1:A:341:C:H6	1.42	0.84
1:A:1207:G:H2'	1:A:1208:C:H6	1.43	0.84
6:E:70:PRO:O	6:E:72:GLN:N	2.11	0.84
13:L:10:LEU:HD12	18:Q:32:TYR:CZ	2.12	0.84
20:S:28:LYS:HG2	20:S:29:ARG:H	1.41	0.84
1:A:376:G:H2'	1:A:377:G:H8	1.43	0.83
1:A:946:A:H2'	1:A:947:G:H8	1.39	0.83
1:A:1493:A:H5'	2:Z:2:U:H5'	1.59	0.83
7:F:89:MET:HB3	19:R:76:LEU:HD21	1.60	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:12:LEU:HD22	6:E:13:ILE:N	1.93	0.83
1:A:112:G:H5'	1:A:389:A:H4'	1.59	0.83
1:A:340:U:H2'	1:A:341:C:C6	2.12	0.83
13:L:53:ARG:HH12	13:L:92:ASP:CB	1.92	0.83
4:C:113:ALA:HA	4:C:116:VAL:HB	1.60	0.83
4:C:150:LYS:HA	4:C:169:ALA:HB2	1.59	0.83
9:H:97:VAL:CG1	9:H:98:LYS:H	1.89	0.83
13:L:92:ASP:O	13:L:94:PRO:HD3	1.79	0.83
18:Q:53:LEU:HD12	18:Q:54:GLY:N	1.94	0.83
1:A:380:G:N2	1:A:382:A:H3'	1.93	0.83
15:N:48:ALA:HB2	15:N:53:LEU:HD23	1.59	0.83
1:A:1104:G:H4'	3:B:111:ARG:HH21	1.40	0.83
1:A:1023:G:H3'	1:A:1024:G:C5'	2.08	0.83
3:B:18:GLY:N	3:B:41:ILE:HG23	1.92	0.83
6:E:11:ILE:HG22	6:E:31:LEU:HB3	1.60	0.83
11:J:48:THR:HG22	11:J:61:GLU:O	1.79	0.83
17:P:1:MET:HE1	17:P:3:LYS:HD2	1.60	0.83
18:Q:98:LEU:HD12	18:Q:103:GLY:N	1.94	0.83
1:A:598:U:H2'	1:A:599:C:H6	1.43	0.82
1:A:797:C:O2'	1:A:798:G:H5'	1.78	0.82
11:J:40:LEU:HD22	11:J:69:ASN:ND2	1.93	0.82
16:O:9:GLN:HB3	16:O:13:GLN:HE21	1.42	0.82
17:P:74:LEU:CD2	17:P:79:VAL:HG21	2.09	0.82
1:A:382:A:H2'	1:A:383:A:C8	2.14	0.82
1:A:1316:G:H5'	15:N:17:LYS:NZ	1.93	0.82
1:A:253:U:H2'	1:A:254:G:H8	1.44	0.82
1:A:352:C:O2	1:A:352:C:H2'	1.79	0.82
1:A:940:C:H2'	1:A:941:G:C8	2.14	0.82
9:H:3:THR:HG23	9:H:4:ASP:N	1.93	0.82
16:O:27:VAL:HG12	16:O:31:LEU:HD12	1.61	0.82
1:A:633:G:H2'	1:A:634:C:C6	2.14	0.82
6:E:14:ARG:H	6:E:29:GLY:HA3	1.42	0.82
4:C:191:THR:HG22	4:C:193:TYR:H	1.43	0.82
6:E:79:GLU:HB3	6:E:93:PRO:HD2	1.61	0.82
9:H:87:SER:HA	9:H:93:VAL:HG23	1.62	0.82
11:J:34:VAL:HG12	11:J:36:GLY:N	1.93	0.82
1:A:723:U:H2'	1:A:724:G:H5'	1.61	0.82
10:I:93:ARG:HH11	10:I:93:ARG:CB	1.93	0.82
1:A:41:G:H2'	1:A:42:G:H8	1.44	0.82
1:A:99:C:H2'	1:A:101:A:O4'	1.79	0.82
1:A:127:G:O2'	18:Q:2:PRO:HA	1.80	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:J:38:ILE:HD11	11:J:71:LEU:HB2	1.60	0.82
20:S:49:ILE:HG12	20:S:50:ALA:H	1.44	0.82
1:A:1001:A:H2'	1:A:1002:G:H5''	1.62	0.82
1:A:818:G:HO2'	1:A:819:A:H5''	1.42	0.82
1:A:1148:U:H2'	1:A:1149:C:O4'	1.79	0.82
1:A:1279:A:H5''	11:J:9:ARG:HH22	1.45	0.82
12:K:58:PRO:HB2	12:K:93:GLN:HG3	1.60	0.82
12:K:93:GLN:HA	12:K:96:ARG:HB3	1.61	0.82
8:G:71:PRO:HD3	8:G:103:TRP:HZ3	1.45	0.82
1:A:1047:G:C3'	1:A:1048:G:H5''	2.08	0.81
5:D:187:ARG:NE	5:D:188:LEU:H	1.78	0.81
16:O:78:TYR:CE2	16:O:82:ILE:HG13	2.15	0.81
5:D:52:SER:O	5:D:56:VAL:HG23	1.80	0.81
5:D:187:ARG:HH21	5:D:188:LEU:HB2	1.43	0.81
1:A:848:C:O2'	1:A:849:C:H5'	1.79	0.81
1:A:1063:C:H3'	1:A:1064:G:H2'	1.62	0.81
4:C:50:ALA:HA	4:C:72:LYS:CD	2.05	0.81
1:A:1407:C:H42	1:A:1494:G:H1	1.28	0.81
3:B:24:TRP:CZ3	3:B:26:PRO:HA	2.14	0.81
3:B:82:ARG:HA	3:B:92:TYR:CE1	2.16	0.81
20:S:5:LEU:HD21	20:S:70:LYS:HZ1	1.43	0.81
5:D:71:SER:OG	5:D:74:GLN:HB2	1.79	0.81
1:A:708:C:H2'	1:A:709:G:H8	1.45	0.81
1:A:1040:U:H2'	1:A:1041:A:H8	1.45	0.81
1:A:1504:G:OP1	1:A:1507:A:H4'	1.80	0.81
4:C:87:LEU:HA	4:C:90:GLU:HB3	1.63	0.81
20:S:49:ILE:HG12	20:S:50:ALA:N	1.96	0.81
1:A:942:G:H2'	1:A:943:U:C6	2.16	0.81
6:E:121:LYS:HD2	6:E:122:GLU:O	1.79	0.81
1:A:22:G:H2'	1:A:23:C:C6	2.15	0.81
1:A:107:G:H2'	1:A:108:G:H5'	1.61	0.81
5:D:127:THR:HA	5:D:132:ARG:HA	1.63	0.81
6:E:128:PRO:HG2	6:E:129:ILE:HD12	1.63	0.81
19:R:31:LEU:HD12	19:R:65:ILE:HB	1.61	0.81
6:E:71:LEU:HD21	6:E:115:VAL:HG22	1.61	0.80
9:H:4:ASP:OD2	9:H:7:ALA:HB2	1.81	0.80
11:J:81:THR:HA	11:J:84:GLN:HE21	1.46	0.80
3:B:21:ARG:H	3:B:23:ARG:NE	1.80	0.80
3:B:55:PHE:HA	3:B:58:ILE:HD12	1.61	0.80
1:A:203:U:H3'	1:A:203:U:OP1	1.82	0.80
1:A:946:A:H2'	1:A:947:G:C8	2.15	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:175:ARG:HB3	3:B:175:ARG:NH1	1.97	0.80
1:A:296:U:H2'	1:A:297:G:H8	1.43	0.80
1:A:710:G:H5''	7:F:54:LYS:NZ	1.96	0.80
14:M:23:TYR:HE2	14:M:70:LEU:HD22	1.46	0.80
1:A:186:C:H2'	1:A:187:C:C6	2.17	0.80
1:A:328:C:O2	1:A:328:C:H2'	1.79	0.80
5:D:2:GLY:N	5:D:3:ARG:HH21	1.79	0.80
12:K:15:ALA:HA	12:K:77:MET:HA	1.61	0.80
1:A:137:C:H42	1:A:226:G:H1	1.26	0.80
1:A:276:G:H5'	18:Q:15:MET:HE1	1.63	0.80
7:F:22:GLU:O	7:F:25:ILE:HG22	1.80	0.80
1:A:989:C:O2'	1:A:990:C:H5'	1.81	0.80
5:D:162:LEU:HD13	5:D:181:MET:HG2	1.63	0.80
10:I:10:ARG:HE	10:I:11:LYS:N	1.80	0.80
11:J:36:GLY:O	11:J:72:VAL:HA	1.82	0.80
13:L:33:ARG:O	13:L:85:ILE:HG12	1.82	0.80
18:Q:98:LEU:HD12	18:Q:103:GLY:CA	2.12	0.80
1:A:777:A:H2'	1:A:778:G:H8	1.45	0.80
3:B:88:ALA:HB2	3:B:219:VAL:CG1	2.11	0.80
14:M:91:ARG:CB	14:M:98:VAL:HG22	2.12	0.80
1:A:515:G:H1'	1:A:537:G:H22	1.47	0.80
1:A:932:C:H42	1:A:1385:G:H1	1.26	0.80
5:D:117:ALA:O	5:D:121:VAL:HG23	1.81	0.80
13:L:32:PHE:HD1	13:L:86:ARG:HB3	1.46	0.80
3:B:111:ARG:HH11	3:B:111:ARG:HA	1.44	0.80
5:D:127:THR:CG2	5:D:147:ALA:HB3	2.13	0.80
19:R:31:LEU:O	19:R:31:LEU:HD13	1.82	0.80
4:C:116:VAL:O	4:C:119:ARG:HB3	1.82	0.79
4:C:172:ARG:HB3	4:C:172:ARG:NH1	1.95	0.79
4:C:174:PRO:HB2	4:C:177:THR:HB	1.63	0.79
10:I:48:GLU:HB2	10:I:51:ARG:HH21	1.46	0.79
19:R:39:VAL:CG1	19:R:40:LEU:H	1.95	0.79
1:A:836:G:H2'	1:A:837:G:H8	1.46	0.79
1:A:1201:A:H1'	1:A:1202:G:OP2	1.81	0.79
4:C:66:VAL:HG12	4:C:67:THR:N	1.98	0.79
1:A:7:G:H5'	1:A:298:A:O4'	1.82	0.79
3:B:64:ARG:NH1	3:B:64:ARG:HB2	1.97	0.79
7:F:63:TYR:H	7:F:63:TYR:HD1	1.28	0.79
15:N:3:ARG:CB	15:N:3:ARG:HH11	1.96	0.79
13:L:53:ARG:NH1	13:L:92:ASP:HB2	1.98	0.79
15:N:26:ARG:NH2	15:N:47:LEU:HD23	1.97	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:O:56:LEU:HA	16:O:59:MET:CG	2.13	0.79
1:A:737:A:H2'	1:A:738:C:H6	1.44	0.79
1:A:1219:U:H2'	1:A:1220:G:H8	1.46	0.79
16:O:70:LEU:HD12	16:O:78:TYR:HB2	1.62	0.79
18:Q:58:GLU:O	18:Q:59:ILE:HD13	1.81	0.79
20:S:38:SER:OG	20:S:71:LEU:HD12	1.82	0.79
4:C:6:HIS:NE2	4:C:8:ILE:HB	1.97	0.79
8:G:69:VAL:HG21	8:G:104:LEU:HD21	1.64	0.79
14:M:98:VAL:CG2	14:M:110:ARG:HH12	1.95	0.79
8:G:124:LEU:O	8:G:127:ALA:HB3	1.82	0.79
11:J:7:LYS:HA	11:J:71:LEU:HD23	1.63	0.79
12:K:19:ALA:HB2	12:K:80:VAL:HG11	1.62	0.79
1:A:51:A:C2	1:A:116:A:H1'	2.17	0.79
1:A:95:U:H2'	1:A:96:G:C8	2.18	0.79
1:A:390:C:H2'	1:A:391:G:C8	2.15	0.79
1:A:450:G:H2'	1:A:481:G:H22	1.48	0.79
1:A:539:A:OP1	13:L:114:LYS:HE2	1.83	0.79
1:A:960:U:H2'	1:A:1225:A:H62	1.47	0.79
1:A:1254:C:H42	1:A:1283:G:H22	1.28	0.79
5:D:187:ARG:NH2	5:D:188:LEU:HB2	1.97	0.79
9:H:3:THR:CG2	9:H:4:ASP:H	1.94	0.79
13:L:115:LYS:HD2	13:L:116:SER:H	1.47	0.79
1:A:1293:G:H2'	1:A:1294:G:C8	2.17	0.79
9:H:116:LYS:HG3	9:H:129:VAL:HG21	1.64	0.79
14:M:90:LEU:HA	14:M:93:ARG:HG2	1.65	0.79
1:A:103:C:O2	1:A:172:A:H2	1.65	0.78
1:A:309:G:H2'	1:A:310:G:H8	1.48	0.78
1:A:539:A:H2'	1:A:540:G:C8	2.18	0.78
1:A:927:G:H2'	1:A:928:G:H8	1.48	0.78
1:A:936:C:H2'	1:A:937:A:O4'	1.82	0.78
14:M:4:ILE:HG22	14:M:5:ALA:H	1.47	0.78
17:P:2:VAL:CG2	17:P:64:ALA:H	1.95	0.78
17:P:39:TYR:HB2	17:P:73:LEU:HD13	1.63	0.78
3:B:208:ILE:H	3:B:208:ILE:CD1	1.94	0.78
11:J:40:LEU:HD13	11:J:69:ASN:HB3	1.65	0.78
1:A:62:U:H5''	1:A:385:C:O2	1.84	0.78
1:A:266:G:C8	1:A:266:G:H5''	2.19	0.78
1:A:1171:G:H2'	1:A:1172:C:C5	2.18	0.78
1:A:1243:C:H2'	1:A:1244:C:H6	1.48	0.78
6:E:78:HIS:HD2	9:H:104:ARG:HD2	1.47	0.78
7:F:19:LEU:HD21	7:F:23:LYS:HE3	1.63	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1158:C:H5''	3:B:133:LYS:HE3	1.65	0.78
8:G:21:VAL:HG23	8:G:22:LEU:HD12	1.65	0.78
8:G:92:SER:HB2	8:G:93:PRO:HD2	1.66	0.78
11:J:48:THR:HG21	11:J:62:HIS:CE1	2.18	0.78
5:D:162:LEU:HD11	5:D:178:VAL:HG12	1.66	0.78
10:I:10:ARG:HD3	10:I:105:ASP:HB3	1.65	0.78
1:A:977:A:C2'	1:A:978:A:H5''	2.14	0.78
5:D:79:PHE:CZ	5:D:204:ILE:HA	2.19	0.78
5:D:162:LEU:O	5:D:165:MET:HB2	1.83	0.78
6:E:89:ILE:HD12	6:E:121:LYS:O	1.83	0.78
1:A:559:A:H4'	1:A:560:U:C5'	2.12	0.78
4:C:6:HIS:HE2	4:C:8:ILE:HB	1.47	0.78
17:P:74:LEU:HD13	17:P:79:VAL:HB	1.66	0.78
20:S:22:LEU:HD11	20:S:31:ILE:HD11	1.65	0.78
1:A:625:G:H2'	1:A:626:U:C6	2.19	0.78
4:C:120:VAL:O	4:C:124:ILE:HG13	1.84	0.78
1:A:74:C:H2'	1:A:75:G:H5'	1.64	0.78
1:A:598:U:H2'	1:A:599:C:C6	2.18	0.78
1:A:1250:A:H4'	10:I:68:GLY:CA	2.13	0.78
3:B:185:ILE:H	3:B:185:ILE:HD12	1.48	0.78
4:C:116:VAL:O	4:C:120:VAL:HG23	1.83	0.78
1:A:1309:G:H5'	14:M:78:ILE:HD11	1.65	0.77
3:B:185:ILE:HD12	3:B:185:ILE:N	1.99	0.77
8:G:70:LYS:HA	8:G:100:ALA:HB2	1.64	0.77
11:J:8:LEU:HA	11:J:96:ILE:HG12	1.65	0.77
11:J:8:LEU:HD13	11:J:71:LEU:HA	1.66	0.77
11:J:40:LEU:HB3	11:J:69:ASN:HB2	1.65	0.77
13:L:88:GLY:H	13:L:98:TYR:HA	1.49	0.77
3:B:15:VAL:HG11	3:B:209:ARG:HB3	1.66	0.77
3:B:82:ARG:HG3	3:B:92:TYR:HE1	1.48	0.77
5:D:121:VAL:O	5:D:134:ASP:HA	1.84	0.77
10:I:17:VAL:HG12	10:I:19:LEU:CD1	2.13	0.77
1:A:447:G:H2'	1:A:485:G:N2	1.98	0.77
4:C:84:ILE:HG12	4:C:88:ARG:NH1	2.00	0.77
7:F:30:LEU:HD23	7:F:30:LEU:N	1.98	0.77
17:P:21:VAL:HG12	17:P:33:ILE:HD11	1.64	0.77
1:A:190(H):G:H2'	1:A:190(I):G:H8	1.50	0.77
4:C:29:TYR:H	4:C:32:LEU:HD12	1.50	0.77
8:G:21:VAL:HG23	8:G:22:LEU:N	1.99	0.77
9:H:111:ILE:O	9:H:134:ILE:HB	1.84	0.77
1:A:861:G:O2'	1:A:862:C:H5'	1.85	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1438:G:H2'	1:A:1439:C:C6	2.18	0.77
3:B:80:ILE:HD11	3:B:211:ILE:HG22	1.66	0.77
1:A:393:A:H2'	1:A:394:G:H8	1.48	0.77
13:L:8:ASN:O	13:L:12:ARG:HG2	1.84	0.77
17:P:48:TRP:HE3	17:P:49:LEU:HB2	1.50	0.77
1:A:164:U:H2'	1:A:165:C:H6	1.49	0.77
1:A:1007:C:N4	1:A:1022:G:H1	1.82	0.77
5:D:155:LEU:HB3	5:D:158:ILE:HG13	1.66	0.77
18:Q:21:VAL:O	18:Q:23:VAL:HG23	1.84	0.77
1:A:524:G:H2'	1:A:525:C:C6	2.20	0.77
4:C:92:ALA:CB	4:C:96:GLY:HA2	2.14	0.77
4:C:153:VAL:HA	4:C:198:VAL:HG22	1.66	0.77
5:D:175:SER:O	5:D:183:GLY:HA2	1.84	0.77
4:C:34:LEU:HD11	4:C:38:ARG:NH2	2.00	0.77
1:A:1153:C:H2'	1:A:1154:G:H8	1.50	0.76
1:A:1401:G:H2'	1:A:1402:C:H5'	1.67	0.76
4:C:50:ALA:HB1	4:C:72:LYS:HB2	1.65	0.76
4:C:113:ALA:H	4:C:202:ILE:HD12	1.50	0.76
14:M:78:ILE:HA	14:M:81:LEU:HD23	1.65	0.76
18:Q:95:TYR:O	18:Q:97:SER:N	2.18	0.76
3:B:77:ALA:HB2	3:B:211:ILE:HD13	1.67	0.76
3:B:101:MET:CA	3:B:108:ILE:HD12	2.14	0.76
17:P:27:LYS:HE3	17:P:27:LYS:N	1.98	0.76
1:A:78:G:H2'	1:A:79:G:C5'	2.15	0.76
17:P:2:VAL:HG23	17:P:64:ALA:N	1.98	0.76
17:P:70:ALA:O	17:P:74:LEU:HB2	1.85	0.76
1:A:502:G:H2'	1:A:503:C:C6	2.20	0.76
1:A:677:U:H3	1:A:713:G:H22	1.32	0.76
1:A:877:C:O2	9:H:3:THR:HG21	1.85	0.76
3:B:9:GLU:CD	3:B:217:ARG:HH12	1.88	0.76
9:H:3:THR:HG23	9:H:4:ASP:H	1.49	0.76
19:R:36:ASN:HD21	19:R:38:GLU:HB2	1.50	0.76
3:B:44:LEU:HD12	3:B:45:GLN:H	1.50	0.76
5:D:79:PHE:HZ	5:D:204:ILE:HA	1.50	0.76
6:E:148:VAL:HG21	9:H:107:LEU:HD13	1.67	0.76
18:Q:5:VAL:HG12	18:Q:58:GLU:HG2	1.68	0.76
5:D:22:LYS:HB2	5:D:26:CYS:SG	2.25	0.76
12:K:30:VAL:HG21	12:K:65:ALA:HA	1.67	0.76
1:A:107:G:C2'	1:A:108:G:H5'	2.14	0.76
1:A:126:G:H5'	1:A:633:G:N2	2.01	0.76
4:C:37:GLN:NE2	15:N:52:GLN:HG3	2.01	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:115:VAL:HG11	6:E:118:ILE:HG13	1.68	0.76
21:T:10:LEU:HD12	21:T:12:ALA:HB3	1.65	0.76
1:A:1260:C:O5'	1:A:1284:C:H4'	1.84	0.76
6:E:129:ILE:HD12	6:E:129:ILE:H	1.48	0.76
8:G:42:ILE:HG23	8:G:120:ILE:HG13	1.68	0.76
21:T:67:ALA:HA	21:T:73:HIS:H	1.50	0.76
1:A:383:A:C2'	1:A:384:G:H5'	2.14	0.76
1:A:627:G:H2'	1:A:628:G:H8	1.48	0.76
6:E:91:LEU:HD22	6:E:120:THR:HG21	1.67	0.76
8:G:30:ILE:H	8:G:30:ILE:HD12	1.50	0.76
16:O:33:THR:HG22	16:O:63:ARG:NH1	2.00	0.76
18:Q:4:LYS:HG2	18:Q:6:LEU:HD21	1.67	0.76
1:A:73:C:H2'	1:A:74:C:C6	2.21	0.76
1:A:600:C:OP1	9:H:97:VAL:HG12	1.85	0.76
1:A:781:A:H2'	1:A:782:A:C5'	2.15	0.76
3:B:69:LEU:HD12	3:B:71:VAL:HG23	1.68	0.76
3:B:178:ARG:HH22	9:H:68:ARG:NH2	1.84	0.76
6:E:10:MET:SD	6:E:13:ILE:HG23	2.26	0.76
6:E:93:PRO:HG2	9:H:105:ARG:NH2	2.01	0.76
10:I:46:ALA:HB2	10:I:74:ILE:HG23	1.68	0.76
18:Q:98:LEU:HA	18:Q:102:GLY:HA2	1.68	0.76
1:A:1219:U:H2'	1:A:1220:G:C8	2.20	0.75
1:A:1316:G:H5'	15:N:17:LYS:HZ1	1.50	0.75
17:P:48:TRP:CE3	17:P:49:LEU:HB2	2.21	0.75
1:A:6:G:H1	6:E:98:THR:HG1	1.34	0.75
1:A:38:G:N2	1:A:397:A:H5''	2.00	0.75
1:A:222:U:H2'	1:A:223:U:C6	2.20	0.75
1:A:1150:U:O3'	11:J:41:PRO:HA	1.87	0.75
1:A:1165:C:H2'	1:A:1166:G:H5''	1.67	0.75
3:B:54:THR:HG23	3:B:199:TYR:HB3	1.68	0.75
3:B:77:ALA:HB2	3:B:211:ILE:CD1	2.17	0.75
5:D:65:ARG:HD3	5:D:75:PHE:HD1	1.50	0.75
1:A:1317:C:H2'	1:A:1318:A:O4'	1.86	0.75
1:A:1513:A:H2'	1:A:1514:C:C6	2.22	0.75
3:B:29:ALA:HA	3:B:32:ILE:HD13	1.69	0.75
4:C:6:HIS:CD2	4:C:9:GLY:H	2.04	0.75
5:D:111:ALA:HA	5:D:161:ASN:HD22	1.50	0.75
9:H:33:GLU:O	9:H:36:LEU:HB2	1.86	0.75
21:T:57:ARG:HH21	21:T:102:GLY:H	1.33	0.75
1:A:186:C:H2'	1:A:187:C:C5	2.21	0.75
1:A:1015:A:H4'	15:N:15:LYS:HZ3	1.51	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:18:GLY:HA2	3:B:41:ILE:HA	1.67	0.75
4:C:172:ARG:HB3	4:C:172:ARG:HH11	1.51	0.75
11:J:6:ILE:O	11:J:71:LEU:HA	1.86	0.75
1:A:707:C:H2'	1:A:708:C:H6	1.48	0.75
3:B:21:ARG:HA	3:B:39:ILE:HG13	1.67	0.75
8:G:105:VAL:HA	8:G:108:ALA:HB3	1.68	0.75
16:O:33:THR:HG23	16:O:63:ARG:HD2	1.67	0.75
1:A:715:A:H2'	1:A:716:A:H8	1.52	0.75
1:A:1049:U:H1'	1:A:1050:G:OP2	1.86	0.75
1:A:1153:C:P	11:J:13:HIS:HE2	2.10	0.75
1:A:1443:G:H5''	1:A:1446:A:C5'	2.09	0.75
3:B:102:LEU:HD21	3:B:162:ILE:HD11	1.67	0.75
1:A:40:C:H2'	1:A:41:G:C8	2.21	0.75
14:M:102:ARG:HD2	14:M:105:THR:OG1	1.86	0.75
1:A:1379:G:N7	8:G:2:ALA:HB3	2.01	0.75
6:E:90:VAL:HG12	6:E:121:LYS:O	1.86	0.75
8:G:70:LYS:NZ	8:G:96:GLN:HB3	2.01	0.75
1:A:666:G:H5'	1:A:726:C:H1'	1.69	0.74
3:B:82:ARG:HG3	3:B:92:TYR:CE1	2.20	0.74
4:C:3:ASN:N	4:C:3:ASN:ND2	2.29	0.74
9:H:26:VAL:HG13	9:H:59:LEU:HD13	1.69	0.74
14:M:8:GLU:C	14:M:9:ILE:HD12	2.07	0.74
1:A:1182:G:H4'	1:A:1183:A:C5'	2.16	0.74
1:A:1413:A:O2'	1:A:1414:U:H5'	1.86	0.74
3:B:92:TYR:HD2	3:B:151:GLY:HA3	1.50	0.74
5:D:50:ARG:HB3	5:D:50:ARG:NH1	2.01	0.74
15:N:43:CYS:HA	15:N:46:GLU:OE2	1.86	0.74
16:O:36:ILE:HD12	16:O:63:ARG:HD3	1.69	0.74
20:S:30:LEU:HD23	20:S:31:ILE:N	2.02	0.74
1:A:545:C:O2'	1:A:546:G:H5'	1.87	0.74
11:J:16:LEU:HD13	11:J:94:VAL:HG13	1.70	0.74
1:A:106:C:O2'	1:A:107:G:H5'	1.86	0.74
1:A:663:A:O2'	1:A:664:G:H5'	1.87	0.74
1:A:984:C:H42	1:A:1221:G:H1	1.35	0.74
5:D:120:LEU:HD22	5:D:126:ILE:HD11	1.68	0.74
9:H:3:THR:CG2	9:H:4:ASP:N	2.50	0.74
11:J:89:ASP:HB2	11:J:91:PRO:HD2	1.69	0.74
1:A:130:A:OP2	1:A:190(E):U:H2'	1.87	0.74
1:A:247:G:OP2	18:Q:99:SER:HB2	1.87	0.74
1:A:627:G:H2'	1:A:628:G:C8	2.22	0.74
5:D:107:ARG:O	5:D:174:LEU:HD13	1.87	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:36:ASP:OD2	6:E:40:ARG:HB2	1.86	0.74
10:I:118:LYS:O	10:I:120:ARG:N	2.19	0.74
11:J:34:VAL:HG13	11:J:73:ASP:O	1.88	0.74
1:A:1520:G:O2'	1:A:1521:G:H5'	1.87	0.74
15:N:46:GLU:OE1	15:N:47:LEU:N	2.20	0.74
1:A:112:G:H21	1:A:354:G:H5'	1.52	0.74
1:A:284:G:H2'	1:A:285:G:C8	2.22	0.74
1:A:681:C:H2'	1:A:682:G:H8	1.52	0.74
1:A:777:A:H2'	1:A:778:G:C8	2.22	0.74
1:A:894:G:H2'	1:A:895:G:H8	1.50	0.74
1:A:1109:C:H2'	1:A:1110:A:O4'	1.87	0.74
1:A:1356:G:H2'	1:A:1357:A:C8	2.22	0.74
5:D:150:GLU:H	5:D:150:GLU:CD	1.91	0.74
10:I:19:LEU:HG	10:I:61:ALA:HB2	1.68	0.74
15:N:41:ARG:HG2	15:N:41:ARG:HH11	1.52	0.74
6:E:8:GLU:CB	6:E:34:VAL:HG23	2.18	0.74
6:E:64:ARG:O	6:E:65:ASN:HB3	1.87	0.74
10:I:47:LEU:HA	10:I:81:ILE:HD12	1.69	0.74
1:A:744:C:H2'	1:A:745:C:C6	2.23	0.74
6:E:13:ILE:HD12	6:E:13:ILE:O	1.87	0.74
1:A:408:A:H2'	1:A:409:G:H8	1.51	0.74
1:A:1007:C:H2'	1:A:1008:C:H6	1.52	0.74
1:A:1117:G:H21	1:A:1180:A:H1'	1.52	0.74
1:A:1472:U:H2'	1:A:1473:A:H8	1.53	0.74
4:C:120:VAL:HG12	4:C:124:ILE:CD1	2.17	0.74
8:G:22:LEU:H	8:G:22:LEU:HD12	1.53	0.74
15:N:9:LYS:C	15:N:11:LYS:H	1.88	0.74
1:A:922:G:H2'	1:A:923:A:C8	2.23	0.73
1:A:1278:U:H5''	1:A:1279:A:O4'	1.87	0.73
6:E:71:LEU:CD2	6:E:115:VAL:HG22	2.18	0.73
16:O:56:LEU:HA	16:O:59:MET:HG3	1.70	0.73
1:A:750:G:N3	16:O:23:GLY:HA3	2.03	0.73
1:A:1097:C:H2'	1:A:1098:C:H6	1.51	0.73
1:A:1182:G:H4'	1:A:1183:A:H5''	1.69	0.73
1:A:1343:G:H4'	10:I:122:ALA:O	1.88	0.73
4:C:85:ARG:HG3	4:C:86:VAL:N	2.02	0.73
21:T:29:LYS:HE2	21:T:66:ALA:HA	1.70	0.73
1:A:1230:C:O2'	1:A:1231:G:H5'	1.87	0.73
17:P:59:TRP:HA	17:P:59:TRP:CE3	2.22	0.73
20:S:16:LEU:O	20:S:19:VAL:HG12	1.86	0.73
1:A:253:U:H2'	1:A:254:G:C8	2.23	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:335:C:H2'	1:A:336:C:C6	2.23	0.73
1:A:1443:G:C5'	1:A:1446:A:H5'	2.11	0.73
1:A:1508:G:H2'	1:A:1509:C:H6	1.53	0.73
4:C:66:VAL:CG1	4:C:67:THR:H	1.96	0.73
4:C:153:VAL:HG12	4:C:154:SER:H	1.52	0.73
6:E:81:GLU:HA	6:E:89:ILE:O	1.88	0.73
17:P:55:ARG:O	17:P:58:TYR:N	2.21	0.73
1:A:710:G:H5''	7:F:54:LYS:HZ3	1.54	0.73
1:A:715:A:H2'	1:A:716:A:C8	2.22	0.73
3:B:208:ILE:HD12	3:B:208:ILE:N	2.01	0.73
4:C:70:VAL:HG12	4:C:72:LYS:H	1.54	0.73
1:A:1015:A:H4'	15:N:15:LYS:HZ1	1.53	0.73
8:G:138:LYS:HD3	8:G:139:GLU:N	2.02	0.73
12:K:126:ARG:O	12:K:128:ALA:N	2.20	0.73
13:L:38:THR:HG22	13:L:39:VAL:H	1.52	0.73
1:A:1255:G:N3	1:A:1259:C:H1'	2.04	0.73
3:B:116:GLU:HG2	3:B:153:ARG:NH2	2.03	0.73
5:D:64:LEU:HD12	5:D:75:PHE:HZ	1.53	0.73
11:J:20:ALA:HB2	11:J:96:ILE:HD11	1.69	0.73
14:M:49:THR:HB	14:M:52:GLU:HG3	1.70	0.73
1:A:1520:G:H2'	1:A:1521:G:H8	1.51	0.73
4:C:3:ASN:HD22	4:C:3:ASN:H	1.35	0.73
1:A:76:C:O2'	1:A:77:G:H5'	1.89	0.73
1:A:691:G:O2'	1:A:797:C:H4'	1.89	0.73
5:D:21:LEU:HD11	5:D:66:ARG:O	1.89	0.73
9:H:9:MET:O	9:H:13:ILE:HG13	1.88	0.73
9:H:37:ARG:O	9:H:40:ALA:HB3	1.89	0.73
19:R:37:VAL:CB	19:R:41:LYS:HE3	2.17	0.73
1:A:97:G:H2'	1:A:98:U:O4'	1.89	0.72
6:E:30:ALA:HB3	6:E:46:GLY:O	1.89	0.72
1:A:957:U:H2'	1:A:959:A:OP2	1.89	0.72
3:B:101:MET:CE	3:B:108:ILE:HG21	2.19	0.72
1:A:285:G:H2'	1:A:286:G:H8	1.53	0.72
1:A:840:C:H5''	1:A:841:U:OP1	1.87	0.72
1:A:927:G:H4'	1:A:1503:A:N7	2.04	0.72
3:B:38:GLY:C	3:B:39:ILE:HD12	2.09	0.72
4:C:120:VAL:O	4:C:124:ILE:N	2.23	0.72
4:C:173:VAL:O	4:C:173:VAL:HG12	1.88	0.72
17:P:40:ASP:CB	17:P:48:TRP:HB2	2.14	0.72
1:A:8:A:N6	5:D:209:ARG:HB2	2.04	0.72
1:A:542:G:H5'	5:D:41:GLY:HA3	1.70	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1089:G:H1	1:A:1096:C:N4	1.84	0.72
3:B:127:ILE:H	3:B:127:ILE:HD12	1.55	0.72
3:B:137:ARG:HB2	3:B:137:ARG:NH1	2.04	0.72
10:I:10:ARG:HD2	10:I:11:LYS:H	1.55	0.72
12:K:91:ARG:HD3	12:K:92:GLU:N	2.04	0.72
17:P:40:ASP:HB3	17:P:48:TRP:CB	2.14	0.72
1:A:598:U:H4'	9:H:94:TYR:CD2	2.24	0.72
1:A:1476:G:H2'	1:A:1477:C:C6	2.23	0.72
4:C:42:LEU:HD21	4:C:91:LEU:HA	1.69	0.72
8:G:17:VAL:HG12	8:G:18:TYR:N	2.05	0.72
1:A:424:G:H2'	1:A:425:G:H8	1.55	0.72
1:A:1181:G:H4'	1:A:1184:G:H5'	1.72	0.72
7:F:11:ASN:N	7:F:86:ARG:HG2	2.05	0.72
10:I:93:ARG:NH1	10:I:96:LEU:HD23	2.03	0.72
10:I:100:GLY:C	10:I:102:LEU:H	1.92	0.72
19:R:37:VAL:O	19:R:41:LYS:HG3	1.89	0.72
1:A:1158:C:H42	1:A:1181:G:H22	1.37	0.72
4:C:76:VAL:HG11	4:C:103:VAL:HG21	1.72	0.72
8:G:93:PRO:HG2	8:G:94:ARG:H	1.53	0.72
11:J:85:LEU:O	11:J:85:LEU:HD12	1.90	0.72
18:Q:92:ARG:HB3	18:Q:92:ARG:HH11	1.54	0.72
1:A:501:C:H2'	1:A:502:G:C8	2.17	0.72
1:A:681:C:H2'	1:A:682:G:C8	2.25	0.72
1:A:1243:C:H2'	1:A:1244:C:C6	2.24	0.72
4:C:150:LYS:HA	4:C:169:ALA:CB	2.20	0.72
14:M:40:ASN:HD22	14:M:41:PRO:CD	2.02	0.72
1:A:106:C:H2'	1:A:107:G:H8	1.54	0.72
1:A:128:G:H5'	18:Q:2:PRO:HB3	1.72	0.72
3:B:54:THR:O	3:B:58:ILE:HG13	1.90	0.72
5:D:187:ARG:CZ	5:D:188:LEU:H	2.02	0.72
12:K:48:ILE:HD11	12:K:67:ASP:HB3	1.72	0.72
13:L:97:ARG:HG3	13:L:98:TYR:CE1	2.25	0.72
1:A:166:G:H2'	1:A:167:G:H8	1.54	0.72
1:A:942:G:H2'	1:A:943:U:H6	1.54	0.72
1:A:1234:C:H5'	1:A:1365:G:OP1	1.89	0.72
1:A:1372:U:OP1	10:I:71:SER:HB3	1.90	0.72
4:C:50:ALA:C	4:C:70:VAL:HG13	2.10	0.72
4:C:112:SER:C	4:C:114:PRO:HD2	2.10	0.72
5:D:12:CYS:SG	5:D:19:LEU:HB2	2.30	0.72
5:D:27:TYR:O	5:D:29:PRO:HD3	1.90	0.72
11:J:6:ILE:HD11	11:J:73:ASP:H	1.55	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:536:C:H2'	1:A:537:G:C8	2.25	0.71
1:A:1424:C:O2'	1:A:1425:U:H5'	1.89	0.71
1:A:1427:U:H2'	1:A:1428:A:C8	2.23	0.71
6:E:79:GLU:HB3	6:E:93:PRO:CD	2.19	0.71
7:F:15:ASP:OD1	7:F:18:GLN:HB3	1.90	0.71
11:J:90:LEU:H	11:J:91:PRO:HD2	1.52	0.71
16:O:7:GLU:O	16:O:10:LYS:HB3	1.89	0.71
16:O:9:GLN:HB3	16:O:13:GLN:NE2	2.05	0.71
1:A:389:A:H2'	1:A:390:C:H5'	1.71	0.71
3:B:82:ARG:HA	3:B:92:TYR:CD1	2.25	0.71
14:M:11:ARG:HD2	14:M:12:ASN:H	1.55	0.71
21:T:29:LYS:HD3	21:T:71:THR:HG21	1.71	0.71
1:A:57:G:H2'	1:A:58:C:H6	1.55	0.71
1:A:1281:U:H4'	1:A:1282:C:OP2	1.89	0.71
1:A:1351:U:H4'	8:G:33:ASP:OD1	1.89	0.71
6:E:41:VAL:HG21	6:E:113:ALA:HB1	1.72	0.71
17:P:28:ARG:HD2	17:P:29:ASP:OD2	1.90	0.71
5:D:64:LEU:HB2	5:D:198:VAL:CG2	2.21	0.71
5:D:100:ARG:NH1	5:D:137:SER:HA	2.05	0.71
8:G:60:LYS:HE2	8:G:64:GLN:HB2	1.72	0.71
17:P:59:TRP:HA	17:P:59:TRP:HE3	1.55	0.71
18:Q:51:TYR:CE1	18:Q:73:VAL:HB	2.25	0.71
1:A:830:G:O2'	1:A:831:U:H5'	1.89	0.71
3:B:21:ARG:N	3:B:23:ARG:HE	1.88	0.71
4:C:123:GLN:O	4:C:128:PHE:HB2	1.91	0.71
12:K:44:SER:OG	12:K:47:VAL:HG23	1.90	0.71
13:L:46:LYS:HD3	13:L:47:LYS:N	2.05	0.71
13:L:55:VAL:HG13	13:L:68:ALA:O	1.90	0.71
15:N:24:CYS:HB3	15:N:28:GLY:N	2.05	0.71
1:A:258:G:H2'	1:A:259:G:C8	2.24	0.71
1:A:877:C:H1'	9:H:3:THR:CG2	2.19	0.71
1:A:1249:C:H1'	10:I:70:LYS:HE3	1.70	0.71
4:C:191:THR:HB	4:C:194:GLY:C	2.09	0.71
5:D:65:ARG:HA	5:D:75:PHE:CE1	2.26	0.71
11:J:38:ILE:CD1	11:J:71:LEU:HB2	2.21	0.71
13:L:46:LYS:HD3	13:L:48:PRO:HD2	1.72	0.71
19:R:58:LEU:HD13	19:R:63:GLN:HA	1.72	0.71
22:V:10:ARG:HA	22:V:13:ILE:HD12	1.72	0.71
1:A:243:A:C4'	1:A:244:U:H5'	2.20	0.71
1:A:560:U:H4'	1:A:561:U:H5''	1.72	0.71
6:E:8:GLU:HB3	6:E:34:VAL:CG2	2.20	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:H:119:LEU:CD1	9:H:124:ALA:HA	2.20	0.71
20:S:62:ILE:HD11	20:S:66:MET:O	1.90	0.71
1:A:17:U:H1'	1:A:1080:A:N3	2.05	0.71
1:A:41:G:H2'	1:A:42:G:C8	2.25	0.71
4:C:154:SER:HA	4:C:165:THR:HA	1.73	0.71
5:D:104:VAL:HG21	5:D:140:VAL:CG2	2.18	0.71
11:J:32:ALA:HB3	11:J:76:ASN:HB2	1.73	0.71
11:J:50:ILE:N	11:J:60:ARG:HG3	2.06	0.71
14:M:40:ASN:HD22	14:M:41:PRO:N	1.88	0.71
4:C:150:LYS:HE2	4:C:152:ILE:HD11	1.72	0.71
9:H:20:TYR:HA	9:H:65:TYR:CE2	2.26	0.71
11:J:38:ILE:O	11:J:70:ARG:HA	1.90	0.71
12:K:126:ARG:HG2	12:K:126:ARG:HH11	1.53	0.71
17:P:32:TYR:HE2	17:P:35:LYS:HB2	1.55	0.71
20:S:11:VAL:HG22	20:S:39:THR:HB	1.72	0.71
1:A:309:G:H2'	1:A:310:G:C8	2.26	0.71
1:A:1339:A:H2'	1:A:1340:A:O4'	1.91	0.71
3:B:19:HIS:NE2	3:B:205:ASP:OD1	2.19	0.71
5:D:65:ARG:HG2	5:D:65:ARG:HH11	1.56	0.71
6:E:11:ILE:HG21	6:E:31:LEU:CD1	2.20	0.71
12:K:65:ALA:O	12:K:68:ALA:HB3	1.91	0.71
16:O:40:SER:O	16:O:44:LYS:HG2	1.91	0.71
20:S:11:VAL:HG13	20:S:38:SER:HB2	1.73	0.71
1:A:175:C:H2'	1:A:176:C:C6	2.26	0.70
1:A:390:C:O3'	17:P:28:ARG:NH2	2.20	0.70
1:A:968:A:C8	1:A:1062:U:H4'	2.26	0.70
4:C:55:VAL:HG22	4:C:68:VAL:HG13	1.71	0.70
18:Q:5:VAL:HA	18:Q:59:ILE:O	1.91	0.70
1:A:125:U:H2'	1:A:126:G:H8	1.52	0.70
1:A:383:A:H2'	1:A:384:G:C5'	2.16	0.70
1:A:455:C:H2'	1:A:456:C:H6	1.56	0.70
5:D:70:ILE:HG22	5:D:71:SER:N	1.99	0.70
10:I:102:LEU:N	10:I:102:LEU:HD23	2.05	0.70
10:I:111:ARG:O	10:I:119:ALA:HB2	1.91	0.70
19:R:53:ARG:HG2	19:R:63:GLN:HG2	1.72	0.70
1:A:359:U:H2'	1:A:360:A:H8	1.56	0.70
1:A:1194:U:H2'	1:A:1195:C:C6	2.26	0.70
5:D:114:ARG:HH11	5:D:114:ARG:HG3	1.56	0.70
7:F:32:ASN:N	7:F:32:ASN:HD22	1.86	0.70
15:N:26:ARG:HH12	15:N:47:LEU:CD2	2.03	0.70
20:S:63:THR:HG22	20:S:64:GLU:H	1.56	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:V:12:LYS:O	22:V:16:GLY:HA2	1.92	0.70
1:A:1154:G:H2'	1:A:1155:G:C8	2.25	0.70
3:B:19:HIS:CE1	3:B:206:ASP:HB2	2.26	0.70
5:D:36:ARG:HG2	5:D:36:ARG:O	1.90	0.70
16:O:26:GLU:HA	16:O:81:LEU:CD1	2.21	0.70
1:A:1091:U:H2'	1:A:1093:A:OP2	1.91	0.70
3:B:12:GLU:C	3:B:14:GLY:H	1.93	0.70
3:B:71:VAL:HA	3:B:93:VAL:HG23	1.73	0.70
4:C:131:ARG:O	4:C:134:ILE:HB	1.91	0.70
5:D:152:SER:O	5:D:158:ILE:HD12	1.92	0.70
20:S:30:LEU:HD21	20:S:50:ALA:HB2	1.73	0.70
1:A:1257:U:H4'	1:A:1258:G:H5'	1.72	0.70
5:D:112:VAL:H	5:D:116:GLN:NE2	1.90	0.70
9:H:28:ALA:CA	9:H:59:LEU:HD11	2.17	0.70
12:K:124:LYS:O	12:K:124:LYS:HD3	1.90	0.70
1:A:293:G:H2'	1:A:294:U:H6	1.55	0.70
1:A:505:G:H5'	1:A:534:U:H2'	1.73	0.70
1:A:735:C:H2'	1:A:736:C:H6	1.57	0.70
9:H:20:TYR:HA	9:H:65:TYR:HE2	1.55	0.70
1:A:1147:C:H4'	10:I:5:TYR:CE1	2.27	0.70
4:C:51:GLY:O	4:C:52:LEU:HG	1.90	0.70
4:C:180:ALA:HB1	4:C:203:PHE:CE1	2.26	0.70
7:F:97:PHE:O	7:F:98:LEU:HD23	1.92	0.70
10:I:111:ARG:HH11	10:I:111:ARG:HG3	1.55	0.70
21:T:33:ILE:CD1	21:T:63:ILE:HA	2.22	0.70
1:A:131:C:O2'	1:A:262:A:H1'	1.91	0.70
1:A:707:C:H5''	12:K:20:TYR:HD2	1.56	0.70
1:A:1202:G:C6	15:N:42:ILE:HG21	2.27	0.70
1:A:1511:G:H2'	1:A:1512:U:O4'	1.92	0.70
3:B:216:SER:C	3:B:218:ALA:H	1.94	0.70
8:G:92:SER:O	8:G:96:GLN:HB2	1.91	0.70
1:A:502:G:H2'	1:A:503:C:H6	1.52	0.70
1:A:1048:G:OP1	15:N:3:ARG:HG3	1.90	0.70
1:A:1349:A:H2'	1:A:1350:A:H8	1.57	0.70
8:G:50:ILE:HG12	8:G:125:MET:SD	2.31	0.70
8:G:99:LEU:HB3	8:G:103:TRP:CZ3	2.26	0.70
11:J:6:ILE:O	11:J:71:LEU:HD23	1.92	0.70
12:K:46:GLY:HA2	12:K:49:GLY:O	1.92	0.70
15:N:26:ARG:HH12	15:N:47:LEU:HD23	1.57	0.70
21:T:87:LYS:O	21:T:91:LEU:HB2	1.92	0.70
1:A:824:C:H2'	1:A:825:G:H8	1.57	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:918:A:H2'	1:A:919:A:C8	2.26	0.69
1:A:1316:G:N2	1:A:1318:A:H3'	2.07	0.69
3:B:231:GLU:HB2	3:B:232:PRO:HD2	1.72	0.69
4:C:159:GLY:HA2	4:C:193:TYR:CD1	2.26	0.69
9:H:80:ILE:O	9:H:80:ILE:HG22	1.91	0.69
5:D:10:ARG:HG3	5:D:10:ARG:NH1	2.05	0.69
7:F:99:ALA:O	7:F:100:ASN:HB2	1.92	0.69
11:J:7:LYS:HD3	11:J:71:LEU:CD2	2.22	0.69
13:L:90:VAL:HG22	13:L:99:HIS:HE1	1.57	0.69
14:M:8:GLU:OE1	14:M:22:ILE:HA	1.92	0.69
1:A:579:G:H2'	1:A:580:U:H6	1.57	0.69
1:A:633:G:H2'	1:A:634:C:H6	1.57	0.69
7:F:71:ARG:O	7:F:73:ASN:N	2.25	0.69
10:I:97:LYS:HB3	10:I:98:PRO:HD3	1.75	0.69
10:I:113:LYS:CD	10:I:119:ALA:HA	2.22	0.69
11:J:38:ILE:CG1	11:J:71:LEU:HB2	2.22	0.69
14:M:16:ASP:HB2	14:M:31:LYS:NZ	2.07	0.69
18:Q:29:HIS:CE1	18:Q:30:PRO:HG2	2.27	0.69
19:R:31:LEU:CD1	19:R:65:ILE:HB	2.21	0.69
1:A:112:G:C2	1:A:113:G:C8	2.81	0.69
1:A:254:G:O3'	18:Q:69:LYS:HE2	1.92	0.69
1:A:921:U:O2'	1:A:922:G:H5'	1.92	0.69
1:A:1153:C:H2'	1:A:1154:G:C8	2.27	0.69
1:A:1351:U:O2'	1:A:1352:C:H5'	1.91	0.69
5:D:61:LYS:CE	5:D:62:GLN:HE21	2.05	0.69
6:E:13:ILE:CB	6:E:29:GLY:O	2.39	0.69
15:N:24:CYS:HB3	15:N:28:GLY:H	1.56	0.69
17:P:43:LYS:HB3	17:P:48:TRP:CD1	2.26	0.69
1:A:137:C:H2'	1:A:138:G:H8	1.57	0.69
1:A:322:C:O2'	1:A:323:U:H5'	1.93	0.69
1:A:382:A:H2'	1:A:383:A:H8	1.56	0.69
1:A:627:G:O2'	1:A:628:G:H5'	1.92	0.69
1:A:1123:A:H4'	11:J:37:PRO:CG	2.22	0.69
1:A:1366:C:H2'	1:A:1367:C:H6	1.56	0.69
9:H:119:LEU:HD12	9:H:124:ALA:HA	1.73	0.69
12:K:54:ARG:O	12:K:57:THR:HG22	1.92	0.69
20:S:16:LEU:CA	20:S:19:VAL:HG12	2.23	0.69
1:A:92:C:H2'	1:A:93:G:C8	2.28	0.69
1:A:877:C:H5''	9:H:88:LYS:HD2	1.75	0.69
1:A:1198:G:H2'	1:A:1199:U:C6	2.28	0.69
6:E:79:GLU:HB3	6:E:92:LYS:HA	1.73	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:O:32:LEU:HD13	16:O:63:ARG:HB2	1.75	0.69
8:G:14:PRO:HA	8:G:21:VAL:HA	1.75	0.69
11:J:16:LEU:HD22	11:J:94:VAL:HG22	1.75	0.69
17:P:1:MET:CE	17:P:3:LYS:HD2	2.21	0.69
17:P:13:HIS:O	17:P:15:PRO:HD3	1.93	0.69
1:A:9:G:OP2	6:E:121:LYS:NZ	2.24	0.69
1:A:145:G:H2'	1:A:146:G:C8	2.27	0.69
1:A:620:C:H2'	1:A:621:A:O4'	1.92	0.69
1:A:932:C:N4	1:A:1385:G:H1	1.91	0.69
1:A:973:G:H3'	1:A:974:A:H5''	1.74	0.69
1:A:1200:C:H2'	1:A:1200:C:O2	1.93	0.69
1:A:1252:A:H61	1:A:1285:A:H61	1.41	0.69
3:B:92:TYR:CE2	3:B:151:GLY:HA3	2.27	0.69
4:C:6:HIS:ND1	4:C:7:PRO:HD2	2.08	0.69
5:D:104:VAL:CG2	5:D:140:VAL:HG21	2.20	0.69
6:E:144:THR:O	6:E:148:VAL:HG23	1.92	0.69
10:I:9:ARG:HG2	10:I:14:VAL:HA	1.73	0.69
10:I:50:LEU:CD2	10:I:85:LEU:HD11	2.22	0.69
14:M:70:LEU:C	14:M:70:LEU:HD23	2.13	0.69
18:Q:101:ARG:NH1	18:Q:101:ARG:HA	2.07	0.69
19:R:37:VAL:HG23	19:R:38:GLU:H	1.58	0.69
1:A:291:C:O2'	1:A:292:G:H5'	1.92	0.69
5:D:7:PRO:HG2	5:D:10:ARG:HD2	1.74	0.69
9:H:1:MET:HG2	9:H:2:LEU:N	2.08	0.69
1:A:1165:C:C3'	1:A:1166:G:H5''	2.23	0.69
4:C:79:ARG:HG2	4:C:82:GLU:HB2	1.74	0.69
5:D:133:VAL:HG12	5:D:135:LEU:H	1.57	0.69
16:O:56:LEU:O	16:O:59:MET:HB2	1.93	0.69
17:P:20:VAL:O	17:P:21:VAL:HG23	1.93	0.69
21:T:57:ARG:HH21	21:T:102:GLY:N	1.91	0.69
1:A:102:G:H2'	1:A:103:C:H6	1.57	0.68
1:A:538:G:H4'	13:L:114:LYS:HD3	1.74	0.68
5:D:3:ARG:O	5:D:5:ILE:HG13	1.93	0.68
8:G:112:PRO:HG2	8:G:113:GLU:H	1.58	0.68
8:G:145:ALA:C	8:G:147:ALA:H	1.95	0.68
10:I:118:LYS:HG3	10:I:121:ARG:HB3	1.75	0.68
18:Q:75:ARG:HH12	18:Q:77:VAL:HG13	1.57	0.68
18:Q:76:LEU:HD22	18:Q:78:GLU:H	1.57	0.68
1:A:933:G:OP2	8:G:3:ARG:HB2	1.93	0.68
1:A:1512:U:H2'	1:A:1513:A:C8	2.29	0.68
10:I:114:TYR:O	10:I:116:LYS:N	2.26	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:K:12:ARG:HD2	12:K:13:GLN:O	1.93	0.68
21:T:15:ARG:O	21:T:18:GLN:HB2	1.93	0.68
22:V:7:ARG:O	22:V:8:THR:HG23	1.93	0.68
1:A:1240:U:C2	8:G:32:ARG:HD2	2.28	0.68
10:I:85:LEU:HD12	10:I:85:LEU:N	2.09	0.68
11:J:26:ALA:HB3	11:J:85:LEU:HD23	1.75	0.68
15:N:3:ARG:NH1	15:N:3:ARG:HB3	2.08	0.68
19:R:36:ASN:ND2	19:R:38:GLU:HB2	2.08	0.68
20:S:5:LEU:HD11	20:S:70:LYS:HZ3	1.57	0.68
21:T:13:LEU:C	21:T:13:LEU:HD12	2.14	0.68
21:T:63:ILE:O	21:T:66:ALA:HB3	1.92	0.68
1:A:9:G:H2'	1:A:10:A:H8	1.57	0.68
1:A:190(J):U:H2'	1:A:190(K):G:C8	2.29	0.68
1:A:409:G:H5'	5:D:25:ARG:HB2	1.75	0.68
1:A:447:G:H21	1:A:488:C:N4	1.92	0.68
1:A:909:A:H2'	1:A:910:C:O4'	1.93	0.68
1:A:1521:G:H2'	1:A:1522:U:C6	2.28	0.68
4:C:52:LEU:HD12	4:C:52:LEU:O	1.94	0.68
4:C:114:PRO:O	4:C:118:GLN:HG3	1.93	0.68
5:D:111:ALA:HA	5:D:161:ASN:ND2	2.08	0.68
5:D:119:GLN:HG3	5:D:123:HIS:CD2	2.28	0.68
6:E:91:LEU:HA	6:E:120:THR:HG22	1.74	0.68
7:F:90:VAL:HG12	7:F:91:VAL:H	1.58	0.68
18:Q:8:GLY:HA3	18:Q:22:LEU:O	1.94	0.68
1:A:377:G:O2'	1:A:378:G:H5'	1.94	0.68
1:A:1320:C:N3	20:S:36:ARG:HD3	2.07	0.68
1:A:1372:U:P	10:I:71:SER:HB3	2.33	0.68
6:E:122:GLU:HG2	6:E:131:ILE:HD12	1.76	0.68
11:J:27:ALA:HB2	11:J:84:GLN:HB2	1.75	0.68
18:Q:62:SER:OG	18:Q:72:ARG:HG3	1.94	0.68
1:A:56:U:O2'	1:A:57:G:H5'	1.94	0.68
1:A:189:G:O2'	1:A:190:C:H5'	1.92	0.68
1:A:960:U:H5'	1:A:960:U:O2	1.94	0.68
1:A:1007:C:H2'	1:A:1008:C:C6	2.28	0.68
1:A:1412:C:H2'	1:A:1413:A:C8	2.28	0.68
1:A:1523:G:C5	1:A:1524:C:C5	2.82	0.68
8:G:59:LEU:O	8:G:63:LYS:HG2	1.93	0.68
11:J:64:GLU:O	11:J:65:LEU:HB2	1.93	0.68
12:K:30:VAL:HG12	12:K:31:THR:N	2.07	0.68
17:P:3:LYS:O	17:P:21:VAL:HG13	1.94	0.68
19:R:36:ASN:O	19:R:39:VAL:HG12	1.94	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:109:A:H2'	1:A:326:G:N2	2.08	0.68
1:A:542:G:O3'	5:D:14:ARG:NH2	2.27	0.68
1:A:735:C:H2'	1:A:736:C:C6	2.28	0.68
1:A:1103:C:H5''	3:B:98:LEU:HD12	1.76	0.68
1:A:1241:G:C4	1:A:1242:C:C5	2.82	0.68
3:B:10:LEU:C	3:B:12:GLU:H	1.97	0.68
5:D:9:CYS:HB2	5:D:22:LYS:HZ3	1.56	0.68
14:M:54:VAL:O	14:M:57:ARG:HG2	1.93	0.68
1:A:43:C:P	17:P:12:LYS:HD3	2.33	0.68
1:A:807:A:H2'	1:A:808:C:C6	2.29	0.68
3:B:231:GLU:HB2	3:B:232:PRO:CD	2.24	0.68
4:C:14:ILE:HG22	4:C:15:THR:HG23	1.74	0.68
9:H:86:ILE:HG22	9:H:87:SER:N	2.09	0.68
10:I:108:VAL:HG12	10:I:109:VAL:N	2.06	0.68
17:P:74:LEU:HD12	17:P:80:PHE:CZ	2.29	0.68
21:T:57:ARG:HH22	21:T:100:ILE:HG12	1.58	0.68
21:T:60:GLU:CA	21:T:63:ILE:HD12	2.22	0.68
1:A:926:G:H21	1:A:1505:G:H2'	1.59	0.68
1:A:1250:A:H4'	10:I:68:GLY:HA2	1.74	0.68
1:A:1436:U:H2'	1:A:1437:C:C6	2.29	0.68
3:B:204:ASN:HB3	3:B:206:ASP:O	1.94	0.68
5:D:32:ALA:C	5:D:34:GLU:N	2.47	0.68
5:D:124:GLY:HA3	5:D:132:ARG:HD2	1.76	0.68
7:F:5:GLU:HB2	7:F:91:VAL:HG23	1.76	0.68
9:H:103:VAL:HG11	9:H:109:ILE:H	1.59	0.68
20:S:63:THR:HG22	20:S:64:GLU:N	2.09	0.68
1:A:131:C:H2'	1:A:132:C:C6	2.29	0.68
1:A:380:G:H21	1:A:382:A:H3'	1.59	0.68
1:A:1171:G:H2'	1:A:1172:C:C6	2.29	0.68
1:A:1435:G:H2'	1:A:1436:U:C6	2.29	0.68
3:B:68:ILE:H	3:B:90:MET:CE	1.99	0.68
5:D:8:VAL:C	5:D:10:ARG:H	1.96	0.68
21:T:49:ALA:O	21:T:53:LEU:HD23	1.94	0.68
1:A:112:G:O2'	1:A:113:G:H5'	1.95	0.67
1:A:913:A:H1'	1:A:914:A:O4'	1.94	0.67
1:A:1096:C:O2'	1:A:1097:C:H5'	1.94	0.67
1:A:1402:C:H2'	1:A:1403:C:C6	2.28	0.67
1:A:524:G:H4'	13:L:89:ARG:HH22	1.59	0.67
1:A:1329:A:OP1	14:M:28:ALA:HB3	1.92	0.67
5:D:65:ARG:HG2	5:D:65:ARG:NH1	2.07	0.67
5:D:108:LEU:HD12	5:D:146:ILE:CD1	2.23	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:187:ARG:HH21	5:D:188:LEU:CB	2.07	0.67
16:O:61:GLY:O	16:O:64:ARG:HG2	1.93	0.67
19:R:87:ARG:HG2	19:R:87:ARG:HH11	1.59	0.67
1:A:403:C:O2'	1:A:404:U:H5'	1.93	0.67
1:A:1517:G:H5'	1:A:1517:G:H8	1.60	0.67
6:E:11:ILE:CG2	6:E:12:LEU:N	2.56	0.67
6:E:110:LEU:O	6:E:113:ALA:HB3	1.93	0.67
17:P:43:LYS:HB3	17:P:48:TRP:NE1	2.09	0.67
1:A:74:C:C2'	1:A:75:G:H5'	2.23	0.67
1:A:375:U:H4'	17:P:17:TYR:CE2	2.25	0.67
1:A:385:C:H2'	1:A:386:C:H6	1.59	0.67
4:C:6:HIS:CD2	4:C:9:GLY:N	2.62	0.67
5:D:100:ARG:HG2	5:D:102:ASP:HB3	1.75	0.67
9:H:60:ARG:HG3	9:H:60:ARG:NH1	1.97	0.67
14:M:49:THR:HG22	14:M:50:GLU:N	2.05	0.67
1:A:250:A:H4'	1:A:251:G:O5'	1.95	0.67
1:A:327:A:H3'	1:A:328:C:H5''	1.75	0.67
4:C:34:LEU:O	4:C:38:ARG:HG2	1.93	0.67
6:E:149:GLU:O	6:E:153:LYS:N	2.27	0.67
9:H:82:HIS:HB3	9:H:138:TRP:NE1	2.09	0.67
1:A:112:G:H4'	1:A:389:A:H5''	1.77	0.67
1:A:266:G:H5''	1:A:266:G:H8	1.59	0.67
1:A:1228:C:H2'	1:A:1229:A:H8	1.58	0.67
3:B:15:VAL:CG1	3:B:209:ARG:HB3	2.24	0.67
3:B:219:VAL:HA	3:B:222:ILE:CD1	2.21	0.67
7:F:75:LEU:O	7:F:79:LEU:HG	1.95	0.67
8:G:53:LYS:HB2	8:G:53:LYS:NZ	2.10	0.67
9:H:28:ALA:HA	9:H:59:LEU:CD1	2.18	0.67
14:M:98:VAL:HG23	14:M:110:ARG:NH1	2.08	0.67
17:P:74:LEU:HD13	17:P:79:VAL:CB	2.24	0.67
1:A:164:U:H2'	1:A:165:C:C6	2.28	0.67
1:A:608:A:H2'	1:A:609:A:H8	1.58	0.67
1:A:640:A:C2'	1:A:641:U:H5'	2.24	0.67
1:A:1065:U:O2'	1:A:1066:C:OP2	2.11	0.67
1:A:1067:A:H1'	1:A:1068:G:OP2	1.95	0.67
1:A:1077:G:H22	1:A:1079:G:H3'	1.56	0.67
1:A:1125:U:H3	11:J:5:ARG:HH11	1.43	0.67
1:A:1319:A:H5'	1:A:1320:C:OP1	1.95	0.67
3:B:178:ARG:HH22	9:H:68:ARG:HH21	1.43	0.67
4:C:85:ARG:NH1	4:C:85:ARG:HB2	2.09	0.67
4:C:94:LEU:HD12	4:C:95:THR:N	2.09	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:64:LEU:O	5:D:64:LEU:HD13	1.94	0.67
8:G:30:ILE:HD12	8:G:30:ILE:N	2.09	0.67
9:H:33:GLU:HG3	9:H:48:TYR:CE1	2.30	0.67
12:K:126:ARG:C	12:K:128:ALA:H	1.98	0.67
20:S:28:LYS:C	20:S:29:ARG:HD2	2.15	0.67
20:S:36:ARG:HB2	20:S:72:GLY:CA	2.25	0.67
21:T:41:ILE:HD11	21:T:84:LEU:HD22	1.76	0.67
1:A:145:G:H2'	1:A:146:G:H8	1.58	0.67
1:A:718:G:H5'	1:A:719:C:OP2	1.95	0.67
1:A:854:G:H3'	1:A:871:U:O4	1.95	0.67
1:A:1510:U:H2'	1:A:1511:G:C8	2.29	0.67
3:B:73:THR:HG23	3:B:96:ARG:NH2	2.10	0.67
4:C:19:GLU:HG3	15:N:52:GLN:HE22	1.59	0.67
4:C:51:GLY:CA	4:C:70:VAL:HA	2.23	0.67
4:C:179:ARG:HD2	4:C:179:ARG:O	1.95	0.67
13:L:60:LEU:HD21	13:L:66:VAL:HG22	1.77	0.67
16:O:87:ILE:HG22	16:O:88:ARG:N	2.09	0.67
1:A:1087:G:N2	1:A:1099:G:H1'	2.10	0.67
1:A:1117:G:N2	1:A:1180:A:H1'	2.10	0.67
1:A:1165:C:C2'	1:A:1166:G:H5''	2.25	0.67
1:A:1392:G:O2'	1:A:1393:U:H5'	1.95	0.67
3:B:175:ARG:HB3	3:B:175:ARG:HH11	1.58	0.67
5:D:10:ARG:HH11	5:D:10:ARG:CG	2.05	0.67
5:D:58:LEU:HA	5:D:206:PHE:CE1	2.28	0.67
18:Q:4:LYS:CG	18:Q:6:LEU:HD21	2.25	0.67
18:Q:90:ILE:HG22	18:Q:94:ASN:HD22	1.60	0.67
21:T:33:ILE:HD11	21:T:63:ILE:HA	1.77	0.67
1:A:59:A:H3'	1:A:331:G:H22	1.58	0.67
1:A:806:C:H2'	1:A:807:A:C8	2.25	0.67
1:A:1182:G:H4'	1:A:1183:A:O5'	1.95	0.67
3:B:111:ARG:HH11	3:B:111:ARG:CB	2.08	0.67
3:B:135:GLN:O	3:B:139:LYS:HE2	1.95	0.67
5:D:110:PHE:HD1	5:D:110:PHE:H	1.42	0.67
1:A:515:G:H1'	1:A:537:G:N2	2.09	0.66
1:A:828:A:H2'	1:A:829:G:O4'	1.95	0.66
4:C:32:LEU:O	4:C:36:ASP:HB2	1.95	0.66
4:C:52:LEU:HD21	4:C:118:GLN:OE1	1.95	0.66
7:F:54:LYS:O	7:F:56:PRO:HD3	1.95	0.66
13:L:27:LEU:HB3	13:L:33:ARG:NH1	2.09	0.66
13:L:60:LEU:HD11	13:L:85:ILE:HD11	1.78	0.66
15:N:3:ARG:HH11	15:N:3:ARG:HB2	1.58	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:S:5:LEU:HD21	20:S:70:LYS:NZ	2.10	0.66
1:A:664:G:H1	1:A:741:G:H1	1.42	0.66
1:A:1011:G:H2'	1:A:1012:U:H5'	1.76	0.66
1:A:1012:U:H2'	1:A:1013:G:C8	2.30	0.66
1:A:1280:A:H5''	11:J:40:LEU:HD21	1.77	0.66
3:B:219:VAL:CA	3:B:222:ILE:HD12	2.24	0.66
4:C:85:ARG:HA	4:C:89:GLU:OE2	1.94	0.66
11:J:44:VAL:HG22	11:J:66:ARG:HE	1.59	0.66
1:A:179:A:H2'	1:A:180:U:C6	2.30	0.66
1:A:392:G:H2'	1:A:393:A:C8	2.30	0.66
1:A:919:A:O2'	1:A:920:U:H5'	1.95	0.66
3:B:178:ARG:HH11	3:B:178:ARG:HG3	1.59	0.66
5:D:3:ARG:H	5:D:3:ARG:NE	1.93	0.66
8:G:16:LEU:H	8:G:16:LEU:HD22	1.61	0.66
11:J:46:ARG:HH11	11:J:64:GLU:HB3	1.60	0.66
12:K:12:ARG:HG3	12:K:12:ARG:HH11	1.61	0.66
13:L:84:LEU:O	13:L:101:VAL:HG22	1.96	0.66
19:R:26:LEU:HD22	19:R:26:LEU:N	2.10	0.66
1:A:101:A:O2'	1:A:102:G:H5'	1.96	0.66
1:A:129(A):G:O2'	1:A:190(E):U:H2'	1.95	0.66
1:A:792:A:O2'	1:A:793:U:OP2	2.12	0.66
9:H:116:LYS:HE3	9:H:127:LEU:HD12	1.75	0.66
1:A:373:A:H2'	1:A:374:A:H8	1.60	0.66
1:A:1305:G:H8	1:A:1305:G:OP2	1.78	0.66
3:B:12:GLU:C	3:B:14:GLY:N	2.47	0.66
9:H:116:LYS:CG	9:H:129:VAL:HG21	2.24	0.66
11:J:16:LEU:HD22	11:J:94:VAL:HG13	1.78	0.66
11:J:26:ALA:O	11:J:84:GLN:HB3	1.95	0.66
11:J:42:THR:HG23	11:J:67:THR:O	1.95	0.66
11:J:98:ILE:HD12	11:J:98:ILE:N	2.10	0.66
20:S:29:ARG:HD2	20:S:29:ARG:N	2.09	0.66
1:A:56:U:H2'	1:A:57:G:C8	2.25	0.66
1:A:524:G:H4'	13:L:89:ARG:NH2	2.11	0.66
1:A:577:G:H1'	1:A:816:A:C4	2.31	0.66
1:A:1426:C:H2'	1:A:1427:U:C6	2.30	0.66
3:B:21:ARG:HG3	3:B:23:ARG:HG3	1.77	0.66
3:B:32:ILE:N	3:B:32:ILE:HD12	2.11	0.66
9:H:97:VAL:HG13	9:H:98:LYS:HG2	1.77	0.66
10:I:104:ARG:C	10:I:104:ARG:HD3	2.15	0.66
13:L:41:ARG:HG2	13:L:42:THR:N	2.07	0.66
17:P:57:ARG:NH1	17:P:79:VAL:O	2.29	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:Q:56:VAL:O	18:Q:77:VAL:HG23	1.95	0.66
19:R:22:VAL:O	19:R:24:ALA:N	2.29	0.66
1:A:491:G:H2'	1:A:492:G:C8	2.24	0.66
1:A:781:A:C2'	1:A:782:A:H5'	2.26	0.66
1:A:918:A:C2	1:A:919:A:C4	2.83	0.66
3:B:82:ARG:HB2	3:B:94:ASN:OD1	1.96	0.66
5:D:8:VAL:O	5:D:10:ARG:N	2.28	0.66
11:J:90:LEU:HD23	11:J:91:PRO:HD3	1.78	0.66
1:A:1151:A:H5''	11:J:42:THR:OG1	1.95	0.66
3:B:118:LEU:HB3	3:B:142:LEU:HD23	1.78	0.66
6:E:76:ILE:HD13	6:E:118:ILE:HD11	1.78	0.66
9:H:9:MET:HE1	9:H:32:LYS:O	1.95	0.66
10:I:118:LYS:C	10:I:120:ARG:H	1.99	0.66
21:T:43:LEU:HD13	21:T:48:LYS:HG3	1.78	0.66
5:D:29:PRO:O	5:D:30:LYS:HB2	1.95	0.66
5:D:61:LYS:NZ	5:D:62:GLN:NE2	2.43	0.66
14:M:23:TYR:CE2	14:M:70:LEU:HD22	2.30	0.66
17:P:18:ARG:HD3	17:P:35:LYS:HD2	1.77	0.66
18:Q:76:LEU:CD2	18:Q:78:GLU:H	2.09	0.66
22:V:9:ARG:O	22:V:13:ILE:HG13	1.96	0.66
1:A:434:U:H2'	1:A:435:C:C2	2.31	0.66
1:A:591:U:H2'	1:A:592:G:H8	1.59	0.66
1:A:597:G:H2'	1:A:598:U:H5'	1.77	0.66
1:A:722:A:H1'	1:A:723:U:C2	2.31	0.66
1:A:1065:U:H4'	1:A:1066:C:C5'	2.26	0.66
5:D:61:LYS:HZ1	5:D:62:GLN:CA	2.07	0.66
11:J:48:THR:HG21	11:J:62:HIS:ND1	2.10	0.66
13:L:38:THR:HG22	13:L:39:VAL:N	2.11	0.66
21:T:12:ALA:HA	21:T:14:LYS:NZ	2.11	0.66
1:A:1391:U:H2'	1:A:1392:G:C8	2.31	0.65
4:C:130:VAL:HG11	4:C:157:ILE:HG21	1.78	0.65
5:D:79:PHE:HD2	5:D:79:PHE:O	1.77	0.65
6:E:126:ARG:HH11	6:E:126:ARG:CG	2.09	0.65
11:J:4:ILE:HG12	11:J:74:ILE:H	1.59	0.65
15:N:37:PHE:O	15:N:39:LEU:N	2.25	0.65
17:P:21:VAL:HG11	17:P:59:TRP:CD1	2.29	0.65
19:R:53:ARG:NH2	19:R:60:GLY:H	1.87	0.65
19:R:55:ARG:HH11	19:R:55:ARG:HA	1.61	0.65
21:T:39:LYS:HG2	21:T:55:ILE:HD13	1.77	0.65
1:A:22:G:H2'	1:A:23:C:H6	1.61	0.65
1:A:397:A:H3'	1:A:397:A:N3	2.11	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:556:C:O2'	1:A:557:G:H5'	1.95	0.65
3:B:71:VAL:HA	3:B:93:VAL:CG2	2.27	0.65
3:B:77:ALA:CB	3:B:211:ILE:HD13	2.26	0.65
3:B:111:ARG:HD2	3:B:145:LEU:CD2	2.25	0.65
4:C:27:LYS:CA	4:C:30:ARG:HH12	2.06	0.65
5:D:47:ARG:NH1	5:D:49:ARG:HA	2.11	0.65
12:K:32:ILE:HD12	12:K:72:ALA:HB2	1.78	0.65
12:K:126:ARG:HH11	12:K:126:ARG:CG	2.09	0.65
13:L:40:VAL:O	13:L:40:VAL:HG12	1.96	0.65
14:M:11:ARG:HE	14:M:46:LYS:HD2	1.61	0.65
15:N:9:LYS:HD3	15:N:10:ALA:N	2.11	0.65
16:O:26:GLU:HG3	16:O:81:LEU:HD12	1.78	0.65
18:Q:40:LYS:HG2	18:Q:42:TYR:HE2	1.61	0.65
1:A:577:G:H1'	1:A:816:A:N3	2.12	0.65
1:A:1260:C:H4'	1:A:1284:C:H5'	1.77	0.65
1:A:1286:A:H3'	1:A:1287:A:H5''	1.78	0.65
4:C:50:ALA:CA	4:C:72:LYS:HD3	2.12	0.65
4:C:113:ALA:HA	4:C:116:VAL:CB	2.26	0.65
5:D:25:ARG:HH21	5:D:30:LYS:HD2	1.60	0.65
11:J:44:VAL:CG2	11:J:66:ARG:HE	2.08	0.65
11:J:54:PHE:HD2	11:J:55:LYS:N	1.93	0.65
19:R:76:LEU:O	19:R:78:LEU:HG	1.96	0.65
1:A:332:G:H2'	1:A:333:G:C8	2.27	0.65
4:C:148:GLY:HA3	4:C:172:ARG:O	1.95	0.65
14:M:46:LYS:HE2	14:M:46:LYS:HA	1.77	0.65
16:O:32:LEU:HD13	16:O:63:ARG:CB	2.26	0.65
1:A:38:G:H22	1:A:397:A:C5'	2.09	0.65
1:A:254:G:OP1	18:Q:67:LYS:O	2.14	0.65
1:A:337:C:H2'	1:A:338:A:C8	2.31	0.65
1:A:625:G:H2'	1:A:626:U:H6	1.59	0.65
3:B:25:ASN:HD22	3:B:25:ASN:C	1.99	0.65
7:F:78:GLU:O	7:F:81:ILE:HG12	1.97	0.65
9:H:17:THR:HG22	9:H:78:GLN:OE1	1.97	0.65
16:O:27:VAL:CG1	16:O:31:LEU:HD12	2.26	0.65
1:A:1123:A:H4'	11:J:37:PRO:HD2	1.77	0.65
1:A:1157:A:H4'	1:A:1158:C:O5'	1.94	0.65
1:A:1510:U:H2'	1:A:1511:G:N7	2.12	0.65
3:B:19:HIS:HE1	3:B:206:ASP:HB2	1.62	0.65
4:C:129:ALA:CB	4:C:132:ARG:HD2	2.27	0.65
5:D:3:ARG:N	5:D:3:ARG:NE	2.45	0.65
5:D:23:GLY:CA	5:D:113:SER:HB2	2.24	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:120:LEU:CD2	5:D:125:HIS:HB2	2.24	0.65
6:E:41:VAL:HG21	6:E:113:ALA:CB	2.27	0.65
7:F:62:TRP:CG	19:R:35:ARG:NH1	2.65	0.65
9:H:54:ASP:O	9:H:56:LYS:HD3	1.96	0.65
21:T:58:LYS:O	21:T:62:LEU:HB2	1.97	0.65
1:A:502:G:H1'	1:A:550:G:H5'	1.78	0.65
1:A:1173:G:C2'	1:A:1174:G:H5'	2.27	0.65
3:B:158:LEU:CD1	3:B:159:PRO:HD2	2.26	0.65
4:C:45:LYS:O	4:C:45:LYS:HD3	1.96	0.65
10:I:47:LEU:HA	10:I:81:ILE:CD1	2.26	0.65
10:I:97:LYS:C	10:I:99:LEU:H	2.00	0.65
11:J:5:ARG:HA	11:J:73:ASP:OD2	1.96	0.65
12:K:57:THR:HG23	12:K:60:ALA:H	1.61	0.65
1:A:538:G:H2'	1:A:539:A:C8	2.32	0.65
1:A:814:A:H2'	1:A:816:A:H5''	1.79	0.65
1:A:861:G:C5	1:A:862:C:C5	2.85	0.65
1:A:1073:U:H2'	1:A:1074:G:C8	2.31	0.65
1:A:1401:G:C2'	1:A:1402:C:H5'	2.27	0.65
6:E:147:ASP:O	6:E:151:LEU:HB2	1.97	0.65
10:I:10:ARG:NE	10:I:11:LYS:N	2.45	0.65
10:I:27:THR:HA	10:I:32:ASP:HA	1.79	0.65
11:J:32:ALA:CB	11:J:76:ASN:HB2	2.25	0.65
17:P:39:TYR:HE2	17:P:41:PRO:HG3	1.62	0.65
18:Q:60:ILE:HD13	18:Q:61:GLU:N	2.11	0.65
21:T:73:HIS:O	21:T:76:ALA:HB3	1.97	0.65
1:A:97:G:C2	1:A:98:U:H1'	2.32	0.65
1:A:351:G:H4'	1:A:352:C:OP1	1.96	0.65
1:A:385:C:H2'	1:A:386:C:C6	2.31	0.65
1:A:1206:G:H2'	1:A:1206:G:N3	2.10	0.65
3:B:32:ILE:CG2	3:B:40:HIS:HB2	2.24	0.65
3:B:193:ASP:OD1	3:B:196:LEU:HB2	1.96	0.65
9:H:87:SER:HA	9:H:93:VAL:CG2	2.27	0.65
11:J:90:LEU:N	11:J:91:PRO:CD	2.59	0.65
12:K:93:GLN:O	12:K:97:ALA:N	2.30	0.65
13:L:124:LYS:HG3	13:L:125:PRO:HD2	1.79	0.65
15:N:9:LYS:C	15:N:11:LYS:N	2.50	0.65
17:P:43:LYS:CB	17:P:48:TRP:CD1	2.80	0.65
19:R:25:THR:C	19:R:26:LEU:HD13	2.16	0.65
20:S:64:GLU:HA	20:S:67:VAL:HG23	1.78	0.65
1:A:11:G:N2	1:A:24:U:H1'	2.12	0.65
1:A:46:G:H1'	1:A:396:G:N2	2.10	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1061:G:N2	1:A:1197:G:H1'	2.12	0.65
1:A:1152:A:OP1	11:J:13:HIS:HB2	1.96	0.65
1:A:1273:G:H2'	1:A:1274:G:C8	2.32	0.65
1:A:1440:C:C2'	1:A:1441:G:H5'	2.27	0.65
3:B:28:PHE:CD2	3:B:190:THR:HA	2.32	0.65
3:B:188:ALA:HB3	3:B:200:ILE:HG23	1.79	0.65
3:B:239:VAL:HB	3:B:240:GLN:OE1	1.97	0.65
5:D:64:LEU:HD12	5:D:75:PHE:CZ	2.31	0.65
6:E:12:LEU:O	6:E:12:LEU:HD13	1.96	0.65
14:M:37:THR:HG21	14:M:56:LEU:HD23	1.78	0.65
19:R:53:ARG:NH2	19:R:60:GLY:N	2.31	0.65
1:A:474:G:H4'	17:P:81:ARG:NH2	2.12	0.64
1:A:664:G:N2	1:A:741:G:H22	1.95	0.64
1:A:723:U:H2'	1:A:724:G:C5'	2.27	0.64
1:A:757:U:H2'	1:A:758:G:O4'	1.97	0.64
1:A:1356:G:H2'	1:A:1357:A:H8	1.59	0.64
1:A:1490:C:H2'	1:A:1491:G:H8	1.61	0.64
3:B:102:LEU:N	3:B:102:LEU:CD1	2.61	0.64
3:B:111:ARG:HH11	3:B:111:ARG:N	1.95	0.64
4:C:14:ILE:HG22	4:C:15:THR:N	2.09	0.64
4:C:54:ARG:HB3	4:C:54:ARG:HH11	1.61	0.64
9:H:82:HIS:CD2	9:H:138:TRP:HE1	2.15	0.64
10:I:46:ALA:HB2	10:I:74:ILE:CG2	2.27	0.64
14:M:94:ARG:HH11	14:M:94:ARG:HG3	1.62	0.64
19:R:38:GLU:HA	19:R:41:LYS:HD2	1.79	0.64
1:A:9:G:H2'	1:A:10:A:C8	2.33	0.64
1:A:394:G:O2'	1:A:395:C:H5'	1.97	0.64
1:A:818:G:C2'	1:A:819:A:H5''	2.28	0.64
1:A:838:G:C2'	1:A:839:U:H5''	2.26	0.64
1:A:1145:C:H1'	1:A:1146:A:N7	2.11	0.64
4:C:26:LYS:HD3	4:C:26:LYS:N	2.09	0.64
5:D:9:CYS:CB	5:D:22:LYS:HZ3	2.10	0.64
6:E:14:ARG:HG2	6:E:14:ARG:HH11	1.62	0.64
13:L:59:ARG:HE	13:L:65:GLU:HB3	1.63	0.64
13:L:60:LEU:HD11	13:L:85:ILE:CD1	2.28	0.64
13:L:88:GLY:N	13:L:98:TYR:HA	2.10	0.64
18:Q:98:LEU:HD12	18:Q:103:GLY:H	1.61	0.64
21:T:33:ILE:HG12	21:T:62:LEU:HD22	1.79	0.64
1:A:503:C:H2'	1:A:504:C:C6	2.32	0.64
1:A:731:G:OP1	1:A:766:A:H1'	1.96	0.64
1:A:836:G:H2'	1:A:837:G:C8	2.30	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1307:U:H5'	14:M:109:THR:HG21	1.79	0.64
1:A:1347:G:H2'	1:A:1373:G:C6	2.33	0.64
1:A:1374:A:O2'	1:A:1375:A:H5'	1.97	0.64
3:B:74:LYS:O	3:B:78:GLN:HB2	1.97	0.64
3:B:188:ALA:O	3:B:202:PRO:HA	1.98	0.64
6:E:74:GLY:HA3	6:E:116:THR:HG22	1.79	0.64
18:Q:66:SER:HB3	18:Q:69:LYS:HD3	1.78	0.64
20:S:69:HIS:HB3	20:S:73:GLU:OE1	1.97	0.64
1:A:352:C:O2	1:A:352:C:C2'	2.45	0.64
1:A:518:C:H5''	1:A:519:C:C5	2.33	0.64
1:A:1001:A:C2'	1:A:1002:G:H5''	2.28	0.64
1:A:1038:C:H2'	1:A:1039:C:H6	1.62	0.64
1:A:1207:G:H2'	1:A:1208:C:C5	2.33	0.64
1:A:1370:G:O2'	1:A:1371:G:H5'	1.97	0.64
4:C:26:LYS:O	4:C:30:ARG:NH1	2.31	0.64
7:F:46:ARG:NH1	19:R:37:VAL:HG21	2.11	0.64
9:H:35:ILE:O	9:H:39:LEU:HD23	1.96	0.64
1:A:372:C:H41	1:A:387:U:H2'	1.62	0.64
1:A:597:G:H2'	1:A:598:U:C5'	2.28	0.64
1:A:673:G:H5''	7:F:87:ARG:NH1	2.11	0.64
1:A:744:C:H2'	1:A:745:C:H6	1.61	0.64
7:F:62:TRP:CG	7:F:62:TRP:O	2.50	0.64
17:P:4:ILE:CG1	17:P:64:ALA:HB1	2.23	0.64
18:Q:74:LEU:O	18:Q:74:LEU:HD23	1.98	0.64
20:S:49:ILE:HG22	20:S:60:VAL:HB	1.79	0.64
1:A:67:C:O2'	1:A:171:A:H1'	1.97	0.64
1:A:328:C:O2	1:A:328:C:C2'	2.46	0.64
1:A:444:C:H2'	1:A:445:G:H8	1.62	0.64
1:A:760:G:N2	18:Q:104:LYS:H	1.96	0.64
1:A:782:A:N1	1:A:801:U:H1'	2.12	0.64
1:A:840:C:H4'	1:A:848:C:C4	2.32	0.64
1:A:1371:G:H2'	1:A:1372:U:H6	1.61	0.64
3:B:36:ARG:N	3:B:39:ILE:O	2.31	0.64
6:E:122:GLU:HG2	6:E:131:ILE:CD1	2.28	0.64
7:F:36:ARG:HG3	7:F:36:ARG:HH11	1.61	0.64
14:M:48:LEU:HD12	14:M:53:VAL:HG22	1.79	0.64
16:O:17:ARG:HG3	16:O:17:ARG:HH11	1.61	0.64
1:A:666:G:H2'	1:A:667:G:H8	1.63	0.64
1:A:668:G:H4'	16:O:48:LYS:HB2	1.79	0.64
1:A:1152:A:O2'	1:A:1153:C:H5'	1.97	0.64
1:A:1468:A:H3'	1:A:1469:G:H8	1.63	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:24:TRP:CB	3:B:190:THR:HG23	2.28	0.64
4:C:55:VAL:HG13	4:C:68:VAL:HG22	1.80	0.64
8:G:128:ALA:O	8:G:129:GLU:HG2	1.97	0.64
10:I:89:ASN:HB3	10:I:92:TYR:HB2	1.78	0.64
11:J:14:LYS:HB2	11:J:14:LYS:NZ	2.13	0.64
14:M:82:MET:O	14:M:84:ILE:N	2.29	0.64
14:M:90:LEU:HA	14:M:93:ARG:CG	2.26	0.64
14:M:90:LEU:CA	14:M:93:ARG:HG2	2.28	0.64
1:A:193:C:H2'	1:A:194:C:H6	1.63	0.64
1:A:403:C:H4'	5:D:122:ARG:NH1	2.13	0.64
1:A:1205:U:H5''	4:C:190:ARG:HH21	1.62	0.64
1:A:1374:A:C4	1:A:1375:A:C8	2.86	0.64
1:A:1425:U:H2'	1:A:1426:C:C6	2.33	0.64
1:A:1430:C:O2'	1:A:1431:C:H5'	1.98	0.64
1:A:1502:A:H2	1:A:1505:G:H1	1.46	0.64
4:C:51:GLY:HA3	4:C:70:VAL:HG22	1.80	0.64
4:C:55:VAL:CG2	4:C:68:VAL:HG13	2.28	0.64
5:D:155:LEU:HD22	5:D:157:LEU:H	1.63	0.64
6:E:88:LYS:HB3	6:E:123:LEU:O	1.97	0.64
8:G:42:ILE:CG2	8:G:120:ILE:HG13	2.27	0.64
9:H:48:TYR:HA	9:H:60:ARG:O	1.97	0.64
1:A:446:G:H2'	1:A:447:G:H5'	1.79	0.64
1:A:984:C:N4	1:A:1221:G:H1	1.96	0.64
1:A:1239:A:H62	1:A:1299:A:H62	1.43	0.64
4:C:153:VAL:CA	4:C:198:VAL:HG22	2.28	0.64
12:K:48:ILE:O	12:K:48:ILE:HG22	1.98	0.64
18:Q:67:LYS:CA	18:Q:70:ARG:HH22	2.11	0.64
20:S:46:GLY:HA2	20:S:61:TYR:CE2	2.32	0.64
1:A:538:G:H5''	13:L:114:LYS:CB	2.21	0.64
1:A:1102:A:H2'	1:A:1103:C:H6	1.63	0.64
1:A:1486:G:H2'	1:A:1487:G:O4'	1.98	0.64
4:C:52:LEU:CD1	4:C:118:GLN:HE22	2.11	0.64
4:C:130:VAL:O	4:C:134:ILE:HG13	1.98	0.64
5:D:102:ASP:HB2	5:D:136:PRO:CB	2.27	0.64
7:F:4:TYR:CZ	7:F:72:VAL:HG21	2.33	0.64
9:H:95:VAL:HG12	9:H:96:GLY:N	2.12	0.64
12:K:16:SER:C	12:K:77:MET:HE1	2.17	0.64
13:L:32:PHE:CD1	13:L:86:ARG:HB3	2.30	0.64
1:A:110:C:H2'	1:A:111:G:O4'	1.98	0.63
1:A:1381:U:O2'	1:A:1382:C:H5'	1.99	0.63
1:A:1442:G:C6	1:A:1446:A:N6	2.66	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1526:G:O2'	1:A:1527:C:H5'	1.98	0.63
3:B:164:VAL:O	3:B:186:ALA:HA	1.97	0.63
5:D:152:SER:OG	5:D:155:LEU:HB2	1.99	0.63
8:G:60:LYS:HG2	8:G:64:GLN:HB3	1.78	0.63
11:J:8:LEU:HD22	11:J:70:ARG:HB2	1.79	0.63
11:J:63:PHE:C	15:N:59:ALA:HB2	2.19	0.63
13:L:84:LEU:HB2	13:L:105:TYR:CE1	2.32	0.63
15:N:2:ALA:CB	15:N:28:GLY:HA3	2.28	0.63
17:P:19:ILE:HG22	17:P:19:ILE:O	1.98	0.63
21:T:56:MET:O	21:T:59:ALA:HB3	1.98	0.63
1:A:20:U:H2'	1:A:21:G:O4'	1.96	0.63
1:A:49:U:O2'	1:A:50:A:H2'	1.98	0.63
1:A:93:G:O2'	1:A:95:U:H5'	1.97	0.63
1:A:192:U:C1'	21:T:103:GLY:HA2	2.29	0.63
1:A:358:U:O2'	1:A:359:U:H5'	1.98	0.63
1:A:1118:C:H1'	1:A:1179:A:C4	2.33	0.63
4:C:23:TYR:HE2	11:J:95:GLU:HB3	1.62	0.63
5:D:31:CYS:O	5:D:31:CYS:SG	2.56	0.63
5:D:162:LEU:O	5:D:162:LEU:HD23	1.98	0.63
13:L:67:THR:O	13:L:96:VAL:HG13	1.98	0.63
18:Q:12:SER:H	18:Q:20:THR:HG1	1.45	0.63
1:A:191:G:H21	21:T:103:GLY:C	2.01	0.63
1:A:646:U:H2'	1:A:647:C:C6	2.34	0.63
1:A:1257:U:H1'	1:A:1258:G:OP2	1.98	0.63
1:A:1344:C:O2'	1:A:1345:U:H5'	1.98	0.63
1:A:1419:G:H2'	1:A:1420:C:C6	2.33	0.63
1:A:1463:C:O2'	1:A:1464:G:H5'	1.97	0.63
5:D:77:ASN:O	5:D:81:GLU:HG3	1.99	0.63
5:D:127:THR:O	5:D:146:ILE:HA	1.98	0.63
6:E:13:ILE:CG2	6:E:30:ALA:HA	2.15	0.63
9:H:41:ARG:HB3	9:H:41:ARG:NH1	2.14	0.63
1:A:58:C:O2'	1:A:59:A:H5'	1.98	0.63
1:A:310:G:H2'	1:A:311:C:H6	1.63	0.63
1:A:496:A:H4'	1:A:497:A:OP1	1.97	0.63
4:C:48:TYR:HA	4:C:52:LEU:HD23	1.78	0.63
6:E:61:TYR:O	6:E:64:ARG:N	2.32	0.63
8:G:88:PRO:HG2	8:G:152:ALA:HB2	1.80	0.63
11:J:69:ASN:C	11:J:70:ARG:HG2	2.19	0.63
17:P:26:ARG:HG2	17:P:27:LYS:HE3	1.80	0.63
17:P:74:LEU:HD11	17:P:79:VAL:HG11	1.80	0.63
18:Q:101:ARG:HA	18:Q:101:ARG:CZ	2.27	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:S:41:VAL:HG23	20:S:44:MET:HG3	1.80	0.63
1:A:186:C:O2'	21:T:85:MET:HG3	1.98	0.63
1:A:243:A:H4'	1:A:244:U:C5'	2.26	0.63
1:A:916:G:H2'	1:A:917:G:H8	1.63	0.63
4:C:64:VAL:HB	4:C:99:VAL:HA	1.81	0.63
4:C:153:VAL:O	4:C:165:THR:HG23	1.98	0.63
10:I:99:LEU:HB3	10:I:101:PHE:HD1	1.63	0.63
1:A:178:C:O2'	1:A:179:A:H5'	1.99	0.63
1:A:322:C:C2'	1:A:323:U:H5'	2.29	0.63
4:C:156:ARG:H	4:C:163:ALA:HA	1.63	0.63
7:F:33:TYR:HA	7:F:71:ARG:HH21	1.64	0.63
19:R:31:LEU:HD21	19:R:66:LEU:HB2	1.81	0.63
1:A:321:A:H2'	1:A:322:C:H6	1.64	0.63
1:A:541:G:H2'	1:A:542:G:H8	1.63	0.63
1:A:643:C:H4'	9:H:31:PHE:HE2	1.62	0.63
1:A:1077:G:H1	6:E:47:LYS:NZ	1.97	0.63
1:A:1221:G:OP1	20:S:36:ARG:HD2	1.98	0.63
3:B:187:LEU:HD21	3:B:203:GLY:HA3	1.80	0.63
5:D:9:CYS:CA	5:D:22:LYS:HD3	2.28	0.63
8:G:65:ALA:HB1	8:G:127:ALA:HB1	1.79	0.63
11:J:16:LEU:CD1	11:J:94:VAL:HG13	2.28	0.63
11:J:50:ILE:HD11	15:N:41:ARG:NH1	2.14	0.63
1:A:229:U:O2'	1:A:230:G:H5'	1.99	0.63
1:A:537:G:H5''	13:L:113:ARG:HH22	1.64	0.63
1:A:714:G:H21	1:A:777:A:H1'	1.63	0.63
1:A:788:U:O2'	1:A:789:U:H5'	1.98	0.63
1:A:877:C:H1'	9:H:3:THR:HG21	1.80	0.63
1:A:1107:C:H2'	1:A:1108:G:H5'	1.81	0.63
1:A:1197:G:OP1	1:A:1197:G:H3'	1.98	0.63
4:C:39:ILE:CD1	4:C:57:ILE:HG12	2.27	0.63
5:D:181:MET:O	5:D:182:LYS:HD3	1.98	0.63
9:H:34:GLU:O	9:H:35:ILE:C	2.37	0.63
15:N:8:GLU:O	15:N:11:LYS:HG3	1.98	0.63
17:P:11:SER:N	17:P:14:ASN:O	2.32	0.63
1:A:6:G:H2'	6:E:119:LEU:HD11	1.81	0.63
1:A:518:C:H5''	1:A:519:C:C6	2.34	0.63
1:A:779:C:OP1	12:K:122:LYS:HE2	1.99	0.63
1:A:1342:C:H2'	1:A:1343:G:H8	1.64	0.63
1:A:1367:C:N3	1:A:1368:G:C8	2.67	0.63
1:A:1414:U:H2'	1:A:1415:G:H8	1.64	0.63
3:B:130:ARG:HD2	3:B:131:PRO:HD2	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:9:CYS:HB2	5:D:22:LYS:HZ2	1.63	0.63
6:E:131:ILE:HG22	6:E:132:ALA:N	2.14	0.63
7:F:82:ARG:HB3	7:F:82:ARG:HH11	1.64	0.63
8:G:46:ALA:HA	8:G:121:ALA:HB2	1.81	0.63
12:K:85:ARG:HE	12:K:111:ASP:HB3	1.62	0.63
13:L:57:LYS:HG2	13:L:67:THR:CG2	2.26	0.63
18:Q:62:SER:CB	18:Q:72:ARG:HG3	2.29	0.63
1:A:84:U:H2'	1:A:88:A:C8	2.34	0.62
1:A:746:A:O2'	1:A:747:C:H5'	1.99	0.62
5:D:88:VAL:HG12	5:D:91:SER:H	1.63	0.62
5:D:108:LEU:HD22	5:D:176:LEU:HB2	1.81	0.62
8:G:38:LEU:HD12	8:G:39:ALA:N	2.14	0.62
8:G:117:ALA:C	8:G:120:ILE:HG12	2.19	0.62
11:J:8:LEU:HG	11:J:96:ILE:CD1	2.29	0.62
21:T:97:ALA:O	21:T:99:LEU:HD12	1.99	0.62
1:A:128:G:C5'	18:Q:2:PRO:HB3	2.30	0.62
1:A:763:G:H2'	1:A:764:C:H6	1.64	0.62
1:A:923:A:OP1	6:E:21:ALA:HB2	1.98	0.62
1:A:1420:C:O2'	1:A:1421:G:H5'	2.00	0.62
3:B:16:HIS:NE2	3:B:214:ILE:HD11	2.13	0.62
3:B:48:MET:HA	3:B:51:LEU:HD12	1.81	0.62
5:D:102:ASP:HB2	5:D:136:PRO:HB3	1.81	0.62
5:D:134:ASP:O	5:D:136:PRO:HD3	1.99	0.62
6:E:8:GLU:HB3	6:E:34:VAL:HA	1.80	0.62
6:E:42:GLY:HA2	6:E:136:MET:HE2	1.80	0.62
6:E:71:LEU:HD13	6:E:114:GLY:O	1.99	0.62
8:G:28:ASN:O	8:G:31:MET:HB3	1.99	0.62
10:I:105:ASP:OD2	10:I:107:ARG:HG3	1.99	0.62
13:L:104:VAL:O	13:L:105:TYR:HB2	1.99	0.62
1:A:408:A:H2'	1:A:409:G:C8	2.34	0.62
1:A:790:A:H2'	1:A:791:G:C8	2.35	0.62
1:A:889:A:H5'	1:A:891:U:H1'	1.81	0.62
1:A:986:A:H4'	20:S:55:LYS:HG3	1.81	0.62
1:A:1036:G:O2'	1:A:1037:C:H5'	2.00	0.62
1:A:1451:A:O2'	1:A:1452:C:OP1	2.16	0.62
4:C:36:ASP:OD1	4:C:39:ILE:HD12	1.99	0.62
4:C:139:GLN:HA	4:C:139:GLN:HE21	1.63	0.62
4:C:184:TYR:CG	4:C:185:GLY:N	2.67	0.62
7:F:19:LEU:HD23	7:F:20:ALA:N	2.14	0.62
9:H:95:VAL:HG13	9:H:99:GLU:HB2	1.81	0.62
10:I:11:LYS:O	10:I:12:GLU:HB2	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:T:51:GLU:O	21:T:55:ILE:HG13	1.99	0.62
1:A:501:C:O2'	1:A:502:G:H5'	1.98	0.62
1:A:839:U:O2	1:A:839:U:H2'	1.97	0.62
1:A:861:G:C6	1:A:862:C:C5	2.88	0.62
1:A:1065:U:H4'	1:A:1066:C:O5'	2.00	0.62
4:C:18:TRP:CD1	15:N:54:PRO:HA	2.34	0.62
7:F:48:LEU:HD13	7:F:52:ILE:HG13	1.81	0.62
8:G:53:LYS:HB2	8:G:53:LYS:HZ3	1.64	0.62
9:H:134:ILE:O	9:H:135:CYS:HB3	1.98	0.62
11:J:6:ILE:HA	11:J:97:GLU:O	1.98	0.62
17:P:23:ASP:C	17:P:25:ARG:H	2.02	0.62
1:A:19:C:O2'	1:A:20:U:H5'	2.00	0.62
1:A:580:U:H2'	1:A:581:G:O4'	1.98	0.62
1:A:644:G:C5	1:A:645:C:C5	2.88	0.62
1:A:1066:C:C2	1:A:1067:A:C2	2.82	0.62
5:D:154:ASN:HA	5:D:159:ARG:NH2	2.15	0.62
6:E:147:ASP:OD2	6:E:147:ASP:N	2.33	0.62
10:I:47:LEU:C	10:I:49:PRO:HD2	2.19	0.62
11:J:25:GLU:HA	11:J:28:ARG:CG	2.18	0.62
12:K:54:ARG:HB3	12:K:54:ARG:NH1	2.15	0.62
12:K:122:LYS:O	12:K:123:LYS:C	2.38	0.62
16:O:78:TYR:CZ	16:O:82:ILE:HG13	2.35	0.62
18:Q:40:LYS:CG	18:Q:42:TYR:HE2	2.12	0.62
19:R:58:LEU:HB2	19:R:63:GLN:HB2	1.82	0.62
1:A:1128:C:H1'	1:A:1130:A:N7	2.13	0.62
1:A:1293:G:H2'	1:A:1294:G:H8	1.65	0.62
3:B:181:PHE:HD2	9:H:70:GLN:HB3	1.63	0.62
4:C:9:GLY:C	4:C:11:ARG:H	2.01	0.62
4:C:42:LEU:CD2	4:C:91:LEU:HA	2.30	0.62
4:C:174:PRO:O	4:C:177:THR:HG22	2.00	0.62
5:D:106:TYR:C	5:D:108:LEU:H	2.01	0.62
5:D:132:ARG:HG2	5:D:132:ARG:HH11	1.64	0.62
7:F:32:ASN:N	7:F:32:ASN:ND2	2.48	0.62
17:P:10:GLY:HA3	17:P:15:PRO:HA	1.82	0.62
20:S:16:LEU:HA	20:S:19:VAL:CG1	2.29	0.62
21:T:84:LEU:C	21:T:84:LEU:HD13	2.20	0.62
1:A:52:G:H2'	1:A:53:A:H8	1.64	0.62
1:A:559:A:O2'	1:A:560:U:OP2	2.18	0.62
1:A:1461:G:H2'	1:A:1462:G:C8	2.34	0.62
3:B:166:ASP:CB	3:B:205:ASP:HB2	2.28	0.62
4:C:120:VAL:HG12	4:C:124:ILE:CG1	2.30	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:I:17:VAL:HG12	10:I:19:LEU:HD11	1.81	0.62
11:J:12:ASP:OD1	11:J:13:HIS:N	2.33	0.62
20:S:20:LEU:O	20:S:24:ALA:HB2	2.00	0.62
1:A:296:U:H2'	1:A:297:G:C8	2.29	0.62
1:A:794:A:H2'	1:A:795:C:C6	2.34	0.62
1:A:840:C:OP2	1:A:840:C:H3'	1.99	0.62
1:A:977:A:C8	1:A:1223:C:C2	2.88	0.62
1:A:1193:G:O2'	1:A:1194:U:H5'	1.99	0.62
1:A:1288:A:H1'	1:A:1352:C:HO2'	1.64	0.62
3:B:217:ARG:HA	3:B:220:ASP:OD2	2.00	0.62
5:D:143:GLY:N	5:D:185:PHE:O	2.30	0.62
5:D:149:ALA:O	5:D:153:ARG:N	2.32	0.62
6:E:46:GLY:HA3	6:E:58:ALA:HB2	1.80	0.62
8:G:15:ASP:OD1	8:G:23:VAL:HG11	2.00	0.62
8:G:30:ILE:H	8:G:30:ILE:CD1	2.13	0.62
8:G:94:ARG:O	8:G:97:GLN:HB3	1.99	0.62
9:H:103:VAL:HG11	9:H:109:ILE:N	2.15	0.62
14:M:89:GLY:O	14:M:93:ARG:HG2	2.00	0.62
14:M:96:LEU:HB3	14:M:97:PRO:CD	2.25	0.62
1:A:1209:C:O2'	1:A:1210:C:H5'	2.00	0.62
1:A:1326:C:O3'	22:V:19:GLY:HA3	1.99	0.62
3:B:12:GLU:HG3	3:B:213:LEU:HD21	1.82	0.62
3:B:134:GLU:C	3:B:136:VAL:H	2.03	0.62
5:D:162:LEU:HD13	5:D:181:MET:HE3	1.82	0.62
10:I:14:VAL:O	10:I:65:VAL:HG23	1.99	0.62
14:M:81:LEU:H	14:M:81:LEU:CD2	2.13	0.62
17:P:21:VAL:HG11	17:P:59:TRP:NE1	2.15	0.62
1:A:714:G:N2	1:A:777:A:H1'	2.15	0.62
1:A:1244:C:H2'	1:A:1245:A:C8	2.35	0.62
1:A:1250:A:H4'	10:I:68:GLY:O	2.00	0.62
1:A:1327:C:H5''	22:V:20:LYS:HB3	1.80	0.62
1:A:1525:G:O2'	1:A:1526:G:H5'	1.99	0.62
9:H:40:ALA:O	9:H:43:GLY:N	2.21	0.62
11:J:77:PRO:HB2	11:J:82:ILE:CG1	2.29	0.62
21:T:29:LYS:O	21:T:32:ALA:HB3	2.00	0.62
1:A:252:U:H2'	1:A:253:U:C5	2.35	0.61
1:A:815:A:N6	1:A:1509:C:H1'	2.14	0.61
1:A:941:G:C2'	1:A:942:G:H5'	2.30	0.61
1:A:949:A:H1'	1:A:1364:U:H3	1.65	0.61
6:E:11:ILE:HG21	6:E:31:LEU:HD12	1.80	0.61
6:E:42:GLY:HA2	6:E:136:MET:CE	2.30	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:3:ARG:O	15:N:7:ILE:HG13	1.99	0.61
1:A:926:G:H3'	1:A:1505:G:H21	1.65	0.61
1:A:1222:G:OP1	20:S:77:THR:HG21	1.99	0.61
1:A:1441:G:H4'	1:A:1442:G:C2	2.35	0.61
1:A:1526:G:H2'	1:A:1527:C:C6	2.35	0.61
7:F:15:ASP:OD2	7:F:18:GLN:N	2.32	0.61
10:I:43:ALA:H	10:I:74:ILE:HD13	1.64	0.61
13:L:86:ARG:HH11	13:L:86:ARG:HG3	1.64	0.61
14:M:14:ARG:HG2	14:M:14:ARG:HH11	1.64	0.61
18:Q:95:TYR:HA	18:Q:98:LEU:HD13	1.82	0.61
19:R:58:LEU:HD12	19:R:63:GLN:OE1	2.00	0.61
22:V:12:LYS:HG3	22:V:17:THR:OG1	2.00	0.61
1:A:419:C:O2'	1:A:420:U:H5'	2.00	0.61
1:A:1520:G:H2'	1:A:1521:G:C8	2.34	0.61
4:C:155:GLY:O	4:C:196:LEU:HD22	2.00	0.61
6:E:36:ASP:OD1	6:E:38:GLN:N	2.32	0.61
9:H:82:HIS:HB3	9:H:138:TRP:CD1	2.35	0.61
13:L:101:VAL:HG23	13:L:101:VAL:O	2.01	0.61
18:Q:66:SER:O	18:Q:70:ARG:NH1	2.32	0.61
1:A:542:G:H2'	1:A:543:C:C6	2.34	0.61
1:A:875:C:H1'	9:H:15:ASN:OD1	2.00	0.61
6:E:100:VAL:CG1	6:E:100:VAL:O	2.48	0.61
8:G:58:PRO:HA	8:G:61:VAL:CG2	2.29	0.61
8:G:148:ASN:C	8:G:150:ALA:H	2.02	0.61
9:H:97:VAL:HA	9:H:100:ILE:CD1	2.31	0.61
10:I:48:GLU:N	10:I:49:PRO:CD	2.63	0.61
14:M:45:VAL:HA	14:M:48:LEU:HG	1.83	0.61
21:T:10:LEU:HD12	21:T:12:ALA:CB	2.30	0.61
1:A:376:G:O2'	1:A:377:G:H5'	2.00	0.61
1:A:542:G:H2'	1:A:543:C:H6	1.65	0.61
1:A:664:G:H22	1:A:741:G:H22	1.48	0.61
1:A:872:A:O2'	1:A:873:A:H3'	2.01	0.61
1:A:1288:A:H2'	1:A:1289:A:H8	1.66	0.61
3:B:162:ILE:HG22	3:B:184:VAL:HG13	1.82	0.61
3:B:221:LEU:O	3:B:221:LEU:HD13	2.01	0.61
4:C:31:HIS:C	4:C:33:LEU:H	2.02	0.61
5:D:32:ALA:C	5:D:34:GLU:H	2.02	0.61
5:D:52:SER:O	5:D:54:TYR:N	2.34	0.61
9:H:86:ILE:HG21	9:H:133:LEU:HD22	1.82	0.61
15:N:51:GLY:C	15:N:53:LEU:H	2.03	0.61
18:Q:19:VAL:HG23	18:Q:21:VAL:HG22	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:Q:63:ARG:HG2	18:Q:64:PRO:HD2	1.83	0.61
1:A:1125:U:H3	11:J:5:ARG:NH1	1.99	0.61
3:B:64:ARG:HB2	3:B:64:ARG:HH11	1.66	0.61
3:B:69:LEU:HD12	3:B:71:VAL:CG2	2.31	0.61
4:C:54:ARG:HH11	4:C:54:ARG:CB	2.13	0.61
4:C:69:HIS:CE1	4:C:104:GLN:HB2	2.35	0.61
4:C:87:LEU:HA	4:C:90:GLU:CB	2.30	0.61
6:E:39:GLY:HA2	6:E:71:LEU:HD12	1.81	0.61
8:G:38:LEU:HD12	8:G:39:ALA:H	1.65	0.61
8:G:91:VAL:HG12	8:G:92:SER:N	2.16	0.61
14:M:81:LEU:H	14:M:81:LEU:HD22	1.66	0.61
16:O:81:LEU:HD23	16:O:81:LEU:C	2.20	0.61
18:Q:5:VAL:CG1	18:Q:58:GLU:HG2	2.29	0.61
1:A:57:G:H2'	1:A:58:C:C6	2.35	0.61
1:A:751:U:H1'	16:O:23:GLY:O	2.01	0.61
1:A:1372:U:O5'	10:I:71:SER:HB3	2.00	0.61
5:D:109:GLY:O	5:D:111:ALA:N	2.34	0.61
6:E:51:VAL:HB	6:E:52:PRO:HD3	1.83	0.61
6:E:72:GLN:O	6:E:73:ASN:HB3	2.00	0.61
11:J:9:ARG:O	11:J:16:LEU:HD11	1.99	0.61
18:Q:70:ARG:HH11	18:Q:70:ARG:CG	2.04	0.61
20:S:29:ARG:O	20:S:30:LEU:HB2	2.01	0.61
1:A:7:G:H2'	6:E:119:LEU:HD22	1.83	0.61
1:A:393:A:O2'	1:A:394:G:H5'	2.01	0.61
1:A:455:C:N4	1:A:477:G:H1	1.98	0.61
1:A:620:C:C2	5:D:135:LEU:HD22	2.36	0.61
1:A:1125:U:O4	11:J:5:ARG:HD3	2.00	0.61
4:C:172:ARG:HH11	4:C:172:ARG:CB	2.14	0.61
5:D:8:VAL:C	5:D:10:ARG:N	2.54	0.61
5:D:155:LEU:CD2	5:D:157:LEU:H	2.12	0.61
10:I:80:GLY:C	10:I:82:ALA:H	2.04	0.61
16:O:26:GLU:HA	16:O:81:LEU:HD12	1.82	0.61
16:O:50:HIS:O	16:O:52:SER:N	2.34	0.61
17:P:21:VAL:O	17:P:21:VAL:HG12	2.01	0.61
1:A:458:C:O2'	1:A:459:G:H5'	2.01	0.61
1:A:579:G:H2'	1:A:580:U:C6	2.36	0.61
1:A:674:G:H5'	7:F:50:TYR:CE2	2.36	0.61
1:A:714:G:O2'	1:A:715:A:H5'	2.01	0.61
1:A:1059:C:H4'	15:N:45:ARG:HH22	1.66	0.61
1:A:1223:C:H3'	1:A:1224:G:H5''	1.82	0.61
4:C:113:ALA:HB2	4:C:202:ILE:CG1	2.29	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:G:109:ASN:C	8:G:111:ARG:H	2.04	0.61
19:R:29:PHE:HE1	19:R:31:LEU:HD23	1.65	0.61
1:A:157:G:H2'	1:A:158:G:C8	2.36	0.61
1:A:268:C:H2'	1:A:269:C:H6	1.66	0.61
1:A:614:A:H2'	1:A:615:C:C6	2.36	0.61
1:A:936:C:O2'	1:A:937:A:H5'	2.01	0.61
1:A:1197:G:H2'	1:A:1198:G:H5'	1.81	0.61
3:B:219:VAL:HG22	3:B:222:ILE:HD12	1.80	0.61
5:D:61:LYS:HZ1	5:D:62:GLN:HE21	1.48	0.61
20:S:22:LEU:HD11	20:S:31:ILE:CD1	2.29	0.61
1:A:19:C:H2'	1:A:20:U:H6	1.66	0.60
1:A:920:U:H2'	1:A:921:U:C6	2.36	0.60
1:A:1182:G:C4'	1:A:1183:A:H5''	2.31	0.60
3:B:219:VAL:C	3:B:221:LEU:H	2.02	0.60
9:H:6:ILE:O	9:H:9:MET:HB3	2.01	0.60
9:H:92:ARG:HB3	9:H:94:TYR:HE1	1.65	0.60
11:J:27:ALA:HA	11:J:84:GLN:CD	2.22	0.60
12:K:27:ASN:OD1	12:K:28:THR:N	2.34	0.60
15:N:31:ARG:C	15:N:33:VAL:H	2.04	0.60
17:P:76:GLN:C	17:P:78:GLY:H	2.03	0.60
1:A:137:C:O2'	1:A:138:G:H5'	2.00	0.60
1:A:336:C:H2'	1:A:337:C:C6	2.25	0.60
5:D:191:ARG:NH1	5:D:200:GLU:HG2	2.15	0.60
6:E:146:ALA:O	6:E:149:GLU:N	2.34	0.60
7:F:33:TYR:HA	7:F:71:ARG:NH2	2.16	0.60
9:H:120:THR:HG23	9:H:123:GLU:CB	2.31	0.60
19:R:31:LEU:HD11	19:R:66:LEU:N	2.16	0.60
1:A:126:G:H5'	1:A:633:G:H22	1.64	0.60
1:A:522:C:H2'	1:A:523:A:O4'	2.00	0.60
1:A:648:A:H2'	1:A:649:G:H8	1.66	0.60
1:A:1073:U:H2'	1:A:1074:G:H8	1.66	0.60
1:A:1158:C:N4	1:A:1181:G:H22	1.99	0.60
1:A:1517:G:H2'	1:A:1518:A:O4'	2.00	0.60
3:B:7:VAL:O	3:B:8:LYS:HG3	2.01	0.60
3:B:75:LYS:HA	3:B:78:GLN:HE21	1.67	0.60
3:B:125:PRO:HG2	3:B:126:GLU:OE2	2.01	0.60
4:C:113:ALA:HA	4:C:116:VAL:CG2	2.31	0.60
4:C:120:VAL:CG1	4:C:124:ILE:HD11	2.31	0.60
5:D:31:CYS:O	5:D:32:ALA:HB3	2.01	0.60
6:E:14:ARG:H	6:E:29:GLY:CA	2.14	0.60
6:E:107:ARG:O	6:E:108:ALA:C	2.39	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:H:45:ILE:HD12	9:H:45:ILE:O	2.01	0.60
10:I:10:ARG:HE	10:I:11:LYS:CA	2.14	0.60
10:I:114:TYR:CD2	11:J:59:SER:O	2.53	0.60
11:J:5:ARG:HB3	11:J:99:LYS:O	2.01	0.60
11:J:22:LYS:HE3	11:J:90:LEU:HD23	1.81	0.60
1:A:251:G:H4'	1:A:252:U:O5'	2.00	0.60
1:A:821:G:O2'	1:A:822:C:H5'	2.01	0.60
3:B:104:ASN:ND2	3:B:107:THR:OG1	2.34	0.60
4:C:70:VAL:HG12	4:C:72:LYS:N	2.16	0.60
4:C:118:GLN:O	4:C:121:ALA:HB3	2.02	0.60
4:C:159:GLY:HA2	4:C:193:TYR:CE1	2.36	0.60
5:D:110:PHE:HD1	5:D:110:PHE:N	2.00	0.60
6:E:53:LEU:HD22	6:E:57:LYS:HE3	1.82	0.60
12:K:49:GLY:O	12:K:50:TYR:C	2.40	0.60
13:L:78:GLN:O	13:L:80:HIS:N	2.34	0.60
13:L:86:ARG:HG3	13:L:86:ARG:NH1	2.16	0.60
16:O:10:LYS:NZ	16:O:14:GLU:HG2	2.16	0.60
1:A:265:G:H2'	1:A:267:C:H5	1.66	0.60
1:A:314:C:O2'	1:A:315:A:H5'	2.01	0.60
1:A:1384:C:H2'	1:A:1385:G:C8	2.36	0.60
3:B:168:THR:OG1	3:B:192:SER:HA	2.01	0.60
1:A:780:A:O2'	1:A:781:A:H5''	2.01	0.60
1:A:1318:A:H4'	20:S:10:PHE:CE2	2.37	0.60
1:A:1343:G:H2'	1:A:1344:C:C6	2.36	0.60
1:A:1402:C:O2	1:A:1500:A:N1	2.35	0.60
3:B:92:TYR:HE2	3:B:151:GLY:N	2.00	0.60
4:C:152:ILE:N	4:C:198:VAL:HG13	2.17	0.60
6:E:11:ILE:HB	6:E:31:LEU:O	2.01	0.60
8:G:70:LYS:CA	8:G:100:ALA:HB2	2.32	0.60
13:L:119:LYS:O	13:L:120:TYR:CG	2.55	0.60
18:Q:9:VAL:O	18:Q:21:VAL:HA	2.01	0.60
1:A:192:U:O4'	21:T:103:GLY:HA2	2.01	0.60
1:A:1165:C:H3'	1:A:1166:G:H5''	1.83	0.60
1:A:1481:U:H2'	1:A:1482:G:O4'	2.01	0.60
3:B:130:ARG:HH21	3:B:134:GLU:HG2	1.66	0.60
3:B:179:LYS:O	3:B:180:LEU:HB2	2.01	0.60
5:D:176:LEU:HD12	5:D:177:ASP:N	2.17	0.60
10:I:10:ARG:CD	10:I:11:LYS:H	2.13	0.60
13:L:54:LYS:C	13:L:70:ILE:HD12	2.21	0.60
1:A:263:A:P	21:T:79:ARG:HH12	2.24	0.60
1:A:379:C:O2'	1:A:380:G:H5'	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:577:G:C4	1:A:816:A:C2	2.90	0.60
1:A:994:A:H2'	1:A:994:A:N3	2.16	0.60
1:A:1365:G:O2'	1:A:1366:C:H5'	2.02	0.60
1:A:1489:G:H2'	1:A:1490:C:C6	2.37	0.60
1:A:1493:A:C5'	2:Z:2:U:H5'	2.30	0.60
1:A:1502:A:H2	1:A:1505:G:N1	1.99	0.60
3:B:54:THR:HG23	3:B:199:TYR:CB	2.31	0.60
8:G:144:MET:O	8:G:147:ALA:HB3	2.02	0.60
13:L:62:SER:OG	13:L:64:TYR:HB2	2.01	0.60
16:O:48:LYS:CE	16:O:48:LYS:H	2.15	0.60
16:O:70:LEU:HD12	16:O:78:TYR:CB	2.31	0.60
19:R:86:VAL:HG12	19:R:87:ARG:H	1.66	0.60
1:A:574:A:N3	1:A:883:C:H1'	2.16	0.60
1:A:664:G:OP1	19:R:64:ARG:HD2	2.02	0.60
1:A:1367:C:P	10:I:112:LYS:NZ	2.75	0.60
1:A:1465:C:O2'	1:A:1466:C:H5'	2.02	0.60
1:A:1494:G:O2'	1:A:1495:U:H5'	2.01	0.60
3:B:69:LEU:HD13	3:B:70:PHE:N	2.17	0.60
5:D:126:ILE:O	5:D:132:ARG:HB2	2.00	0.60
6:E:41:VAL:HG22	6:E:113:ALA:HA	1.83	0.60
13:L:126:LYS:N	13:L:126:LYS:HE3	2.17	0.60
19:R:60:GLY:O	19:R:64:ARG:HB2	2.02	0.60
19:R:68:LYS:O	19:R:69:THR:C	2.40	0.60
1:A:279:A:H5''	1:A:280:C:H3'	1.83	0.60
1:A:385:C:O2'	1:A:386:C:H5'	2.01	0.60
1:A:988:G:H2'	1:A:989:C:O4'	2.01	0.60
1:A:1181:G:H4'	1:A:1184:G:C5'	2.31	0.60
1:A:1287:A:C8	1:A:1288:A:N7	2.69	0.60
1:A:1347:G:H2'	1:A:1373:G:N1	2.17	0.60
4:C:84:ILE:HG23	4:C:84:ILE:O	2.01	0.60
4:C:123:GLN:NE2	4:C:133:ALA:HB1	2.16	0.60
4:C:177:THR:HG21	4:C:180:ALA:HB2	1.82	0.60
4:C:191:THR:HG21	4:C:193:TYR:CE1	2.36	0.60
8:G:62:PHE:C	8:G:63:LYS:HZ2	2.04	0.60
8:G:71:PRO:C	8:G:72:ARG:HD3	2.21	0.60
8:G:118:VAL:O	8:G:119:ARG:C	2.39	0.60
1:A:91:C:H2'	1:A:92:C:H6	1.67	0.59
1:A:190(H):G:H2'	1:A:190(I):G:C8	2.34	0.59
1:A:1056:U:H5'	4:C:163:ALA:CB	2.32	0.59
1:A:1123:A:H4'	11:J:37:PRO:CD	2.32	0.59
3:B:10:LEU:HD12	3:B:10:LEU:N	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:93:VAL:HG21	3:B:97:TRP:HD1	1.67	0.59
3:B:97:TRP:CZ2	3:B:102:LEU:HD13	2.36	0.59
3:B:97:TRP:HZ3	3:B:172:ILE:HG22	1.67	0.59
4:C:50:ALA:CB	4:C:72:LYS:HB2	2.31	0.59
6:E:30:ALA:O	6:E:45:PHE:HD2	1.85	0.59
6:E:83:GLU:OE1	6:E:83:GLU:HA	2.02	0.59
6:E:126:ARG:HG2	6:E:126:ARG:NH1	2.09	0.59
8:G:50:ILE:HD11	8:G:121:ALA:O	2.02	0.59
10:I:34:ASN:HD22	10:I:34:ASN:N	1.99	0.59
12:K:21:ILE:HD13	12:K:94:ALA:CB	2.32	0.59
15:N:29:ARG:HE	15:N:42:ILE:HD11	1.67	0.59
18:Q:92:ARG:O	18:Q:95:TYR:HD1	1.84	0.59
1:A:68:G:H1	1:A:101:A:N6	1.99	0.59
1:A:118:U:C5	1:A:288:A:C5	2.90	0.59
1:A:719:C:O2	19:R:50:ILE:HG13	2.02	0.59
1:A:787:A:C2	1:A:796:C:N3	2.70	0.59
1:A:789:U:H2'	1:A:791:G:OP2	2.02	0.59
1:A:1060:C:O2'	1:A:1061:G:H5'	2.02	0.59
1:A:1168:A:H2'	1:A:1169:A:C8	2.36	0.59
1:A:1273:G:H2'	1:A:1274:G:H8	1.67	0.59
1:A:1346:A:C8	1:A:1348:U:C2	2.90	0.59
1:A:1465:C:H2'	1:A:1466:C:O4'	2.02	0.59
5:D:157:LEU:HA	5:D:160:GLN:HB3	1.83	0.59
11:J:27:ALA:CB	11:J:84:GLN:HB2	2.32	0.59
1:A:640:A:O2'	1:A:641:U:H5'	2.01	0.59
1:A:1130:A:N6	1:A:1144:G:H21	2.00	0.59
1:A:1182:G:O2'	1:A:1183:A:OP2	2.21	0.59
1:A:1244:C:H2'	1:A:1245:A:H8	1.68	0.59
1:A:1294:G:H2'	1:A:1295:G:H8	1.66	0.59
5:D:155:LEU:HD23	5:D:156:GLU:N	2.17	0.59
8:G:48:LYS:HE2	8:G:48:LYS:CA	2.20	0.59
10:I:79:LEU:CD2	10:I:102:LEU:HA	2.31	0.59
15:N:26:ARG:NH1	15:N:47:LEU:HD23	2.17	0.59
17:P:74:LEU:O	17:P:79:VAL:CG2	2.44	0.59
19:R:73:ALA:HB3	19:R:79:LEU:HD12	1.83	0.59
1:A:356:A:H2'	1:A:357:G:H8	1.67	0.59
1:A:422:C:H4'	1:A:423:G:C2	2.38	0.59
1:A:439:A:C4	1:A:497:A:C2	2.90	0.59
1:A:778:G:O2'	1:A:779:C:H5'	2.02	0.59
1:A:838:G:H1	1:A:848:C:H42	1.48	0.59
1:A:860:A:N6	1:A:861:G:C2	2.71	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:960:U:H2'	1:A:1225:A:N6	2.16	0.59
1:A:1418:A:H2'	1:A:1419:G:O4'	2.02	0.59
1:A:1481:U:O2'	1:A:1482:G:H5'	2.02	0.59
3:B:189:ASP:HB3	3:B:203:GLY:O	2.02	0.59
5:D:23:GLY:HA2	5:D:113:SER:CB	2.26	0.59
10:I:83:ARG:O	10:I:86:VAL:HG22	2.02	0.59
13:L:27:LEU:O	13:L:29:GLY:N	2.34	0.59
1:A:106:C:H2'	1:A:107:G:C8	2.37	0.59
1:A:425:G:H2'	1:A:426:G:H5'	1.85	0.59
1:A:622:A:H2'	1:A:623:C:H5'	1.84	0.59
1:A:724:G:O2'	1:A:725:G:H5'	2.01	0.59
1:A:886:G:O2'	1:A:887:G:H5'	2.02	0.59
1:A:1102:A:H2'	1:A:1103:C:C6	2.37	0.59
1:A:1148:U:H4'	10:I:14:VAL:HG13	1.84	0.59
1:A:1370:G:C2	1:A:1371:G:N7	2.71	0.59
4:C:190:ARG:HB3	4:C:190:ARG:HH11	1.67	0.59
5:D:65:ARG:HA	5:D:75:PHE:HE1	1.66	0.59
6:E:53:LEU:CD2	6:E:57:LYS:HE3	2.33	0.59
10:I:96:LEU:O	10:I:99:LEU:HB2	2.02	0.59
12:K:100:ALA:O	12:K:102:GLY:N	2.35	0.59
1:A:682:G:O2'	1:A:683:G:H5'	2.03	0.59
3:B:97:TRP:CH2	3:B:173:ALA:HA	2.37	0.59
5:D:178:VAL:C	5:D:180:GLY:H	2.05	0.59
6:E:13:ILE:HD12	6:E:13:ILE:C	2.21	0.59
8:G:97:GLN:HG2	8:G:101:LEU:HD11	1.83	0.59
8:G:137:LYS:O	8:G:141:VAL:HG12	2.03	0.59
12:K:54:ARG:HB3	12:K:54:ARG:HH11	1.68	0.59
1:A:310:G:H2'	1:A:311:C:C6	2.37	0.59
1:A:389:A:C2'	1:A:390:C:H5'	2.32	0.59
1:A:552:U:O2'	1:A:553:A:H5'	2.03	0.59
1:A:621:A:H2'	1:A:622:A:H8	1.66	0.59
1:A:940:C:H2'	1:A:941:G:H8	1.68	0.59
1:A:1086:U:O5'	1:A:1086:U:H6	1.86	0.59
1:A:1406:U:O2'	1:A:1407:C:H5'	2.03	0.59
4:C:10:PHE:CE2	4:C:178:LEU:HD13	2.37	0.59
5:D:112:VAL:O	5:D:112:VAL:HG12	2.01	0.59
5:D:162:LEU:CD1	5:D:178:VAL:HG12	2.32	0.59
8:G:155:ARG:HD3	8:G:155:ARG:C	2.23	0.59
11:J:5:ARG:O	11:J:98:ILE:HA	2.02	0.59
16:O:75:PRO:O	16:O:79:ARG:HG3	2.02	0.59
1:A:254:G:H5''	18:Q:69:LYS:CD	2.32	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:655:A:C2	1:A:754:C:N4	2.71	0.59
1:A:825:G:H2'	1:A:826:C:H6	1.68	0.59
1:A:1286:A:H2'	1:A:1287:A:H4'	1.85	0.59
4:C:51:GLY:N	4:C:70:VAL:HG13	2.17	0.59
5:D:162:LEU:CD1	5:D:181:MET:HG2	2.33	0.59
8:G:48:LYS:HA	8:G:48:LYS:CE	2.14	0.59
10:I:4:TYR:CE2	10:I:88:TYR:HB2	2.38	0.59
10:I:50:LEU:HD21	10:I:81:ILE:HB	1.84	0.59
12:K:44:SER:N	12:K:47:VAL:HG21	2.17	0.59
13:L:115:LYS:HD2	13:L:116:SER:N	2.18	0.59
21:T:50:GLU:O	21:T:53:LEU:N	2.28	0.59
1:A:687:A:H4'	1:A:688:G:O5'	2.02	0.59
1:A:1187:G:H2'	1:A:1188:A:C8	2.38	0.59
1:A:1326:C:OP1	22:V:12:LYS:NZ	2.36	0.59
3:B:173:ALA:O	3:B:176:GLU:N	2.36	0.59
4:C:139:GLN:HA	4:C:139:GLN:NE2	2.18	0.59
5:D:149:ALA:HB3	5:D:152:SER:HB3	1.84	0.59
6:E:78:HIS:CG	6:E:78:HIS:O	2.55	0.59
7:F:18:GLN:O	7:F:21:LEU:HB3	2.03	0.59
9:H:120:THR:HG23	9:H:123:GLU:HB2	1.84	0.59
10:I:115:GLY:HA2	11:J:58:ASP:OD1	2.03	0.59
11:J:18:ALA:C	11:J:20:ALA:H	2.05	0.59
12:K:33:THR:OG1	12:K:34:ASP:N	2.35	0.59
13:L:89:ARG:CB	13:L:89:ARG:HH11	2.16	0.59
18:Q:77:VAL:O	18:Q:78:GLU:HB3	2.03	0.59
1:A:286:G:H2'	1:A:287:U:H6	1.67	0.59
1:A:510:A:N3	1:A:543:C:H1'	2.18	0.59
1:A:537:G:H2'	1:A:538:G:H8	1.68	0.59
1:A:781:A:C5	1:A:802:A:C2	2.91	0.59
8:G:138:LYS:HD3	8:G:139:GLU:HG3	1.85	0.59
12:K:50:TYR:HB3	12:K:54:ARG:HB2	1.85	0.59
14:M:5:ALA:HB3	14:M:8:GLU:HG3	1.85	0.59
16:O:17:ARG:NH1	16:O:77:ARG:NH1	2.51	0.59
1:A:95:U:H2'	1:A:96:G:H8	1.67	0.58
1:A:262:A:H2'	1:A:263:A:C8	2.37	0.58
1:A:363:A:N7	13:L:30:ALA:HB1	2.17	0.58
1:A:913:A:H1'	1:A:914:A:C1'	2.33	0.58
1:A:1454:G:H2'	1:A:1455:G:H8	1.68	0.58
3:B:16:HIS:CE1	3:B:214:ILE:HD11	2.38	0.58
4:C:51:GLY:HA3	4:C:70:VAL:CA	2.31	0.58
6:E:43:LEU:HD12	6:E:136:MET:HE2	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:F:90:VAL:O	7:F:91:VAL:HG13	2.03	0.58
8:G:45:ASP:O	8:G:48:LYS:HB2	2.02	0.58
8:G:60:LYS:O	8:G:64:GLN:N	2.35	0.58
14:M:6:GLY:O	14:M:67:GLU:HG3	2.02	0.58
14:M:113:PRO:O	14:M:115:LYS:HG3	2.03	0.58
15:N:9:LYS:C	15:N:9:LYS:HD3	2.23	0.58
16:O:3:ILE:HG13	16:O:3:ILE:O	2.02	0.58
17:P:5:ARG:C	17:P:6:LEU:HD12	2.23	0.58
1:A:436:C:H2'	1:A:437:U:H6	1.68	0.58
1:A:620:C:N1	5:D:135:LEU:HD13	2.17	0.58
1:A:779:C:O2'	1:A:780:A:H5'	2.03	0.58
1:A:1243:C:OP2	22:V:10:ARG:CZ	2.52	0.58
1:A:1319:A:H2'	1:A:1323:G:N7	2.18	0.58
3:B:52:GLU:HG2	3:B:53:ARG:N	2.18	0.58
3:B:67:THR:HA	3:B:90:MET:HE1	1.84	0.58
5:D:66:ARG:O	5:D:69:GLY:N	2.35	0.58
6:E:19:MET:HE3	6:E:24:ARG:HA	1.85	0.58
6:E:89:ILE:O	6:E:89:ILE:HG23	2.03	0.58
7:F:38:GLU:O	7:F:39:LYS:HB3	2.03	0.58
7:F:94:GLN:HE21	19:R:32:ARG:HD3	1.68	0.58
12:K:56:GLY:O	12:K:89:ALA:HB1	2.03	0.58
16:O:33:THR:CG2	16:O:63:ARG:HH11	2.13	0.58
16:O:85:LEU:HD12	16:O:86:GLY:H	1.67	0.58
18:Q:12:SER:N	18:Q:20:THR:OG1	2.35	0.58
21:T:57:ARG:NH2	21:T:102:GLY:H	2.00	0.58
1:A:293:G:H2'	1:A:294:U:C6	2.38	0.58
1:A:376:G:OP2	17:P:67:THR:HG21	2.03	0.58
1:A:455:C:O2'	1:A:456:C:H5'	2.02	0.58
1:A:589:C:H2'	1:A:590:C:H6	1.66	0.58
1:A:1211:U:H5'	1:A:1212:U:O5'	2.04	0.58
1:A:1441:G:H4'	1:A:1442:G:N1	2.17	0.58
4:C:23:TYR:CE2	11:J:95:GLU:HB3	2.37	0.58
6:E:73:ASN:O	6:E:73:ASN:ND2	2.36	0.58
10:I:8:GLY:CA	10:I:79:LEU:HB3	2.34	0.58
12:K:16:SER:HA	12:K:79:SER:O	2.04	0.58
20:S:22:LEU:HB2	20:S:47:HIS:HE1	1.68	0.58
21:T:46:GLU:CB	21:T:48:LYS:HE2	2.33	0.58
1:A:38:G:N2	1:A:397:A:C5'	2.67	0.58
1:A:232:G:H2'	1:A:233:C:C6	2.38	0.58
1:A:291:C:H3'	1:A:305:G:H22	1.68	0.58
1:A:341:C:N3	1:A:349:A:C2	2.72	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:359:U:H2'	1:A:360:A:C8	2.37	0.58
1:A:1109:C:O2'	1:A:1110:A:H5'	2.04	0.58
1:A:1173:G:H2'	1:A:1174:G:H5'	1.85	0.58
1:A:1276:G:O2'	1:A:1277:C:H5'	2.03	0.58
1:A:1342:C:O2'	1:A:1343:G:H5'	2.02	0.58
3:B:20:GLU:O	3:B:39:ILE:HG23	2.04	0.58
6:E:121:LYS:HD3	6:E:122:GLU:N	2.17	0.58
11:J:22:LYS:HE3	11:J:90:LEU:CD2	2.34	0.58
15:N:53:LEU:C	15:N:53:LEU:HD12	2.24	0.58
16:O:10:LYS:HD2	16:O:10:LYS:C	2.24	0.58
18:Q:68:ARG:HB3	18:Q:68:ARG:HH11	1.68	0.58
21:T:57:ARG:HH22	21:T:100:ILE:CD1	2.16	0.58
1:A:292:G:H3'	1:A:293:G:H8	1.68	0.58
1:A:425:G:C2'	1:A:426:G:H5'	2.34	0.58
1:A:516:U:H2'	1:A:517:G:C8	2.38	0.58
1:A:720:C:N3	1:A:721:G:C6	2.71	0.58
1:A:865:A:O2'	1:A:866:C:H5'	2.02	0.58
1:A:1277:C:C2'	1:A:1278:U:H5'	2.32	0.58
4:C:64:VAL:HG12	4:C:66:VAL:HG23	1.84	0.58
4:C:157:ILE:CD1	4:C:166:GLU:HB2	2.33	0.58
5:D:61:LYS:HD2	5:D:207:TYR:OH	2.03	0.58
5:D:149:ALA:O	5:D:152:SER:N	2.29	0.58
7:F:24:GLU:O	7:F:28:ARG:HB2	2.03	0.58
8:G:151:TYR:HA	8:G:153:HIS:CE1	2.38	0.58
9:H:34:GLU:O	9:H:37:ARG:N	2.37	0.58
9:H:82:HIS:HD2	9:H:138:TRP:HE1	1.52	0.58
10:I:8:GLY:HA3	10:I:79:LEU:HB3	1.84	0.58
14:M:13:LYS:O	14:M:14:ARG:C	2.42	0.58
19:R:75:ILE:C	19:R:77:GLY:H	2.05	0.58
1:A:366:C:O2'	1:A:367:U:H5''	2.03	0.58
1:A:961:U:OP1	1:A:1223:C:H4'	2.03	0.58
1:A:963:G:H21	11:J:54:PHE:HE2	1.51	0.58
1:A:1064:G:H5'	1:A:1066:C:O4'	2.03	0.58
1:A:1111:A:H61	4:C:177:THR:HA	1.67	0.58
4:C:174:PRO:HB2	4:C:177:THR:CB	2.32	0.58
9:H:1:MET:HG2	9:H:2:LEU:H	1.68	0.58
9:H:11:THR:O	9:H:14:ARG:N	2.36	0.58
11:J:5:ARG:HA	11:J:73:ASP:CG	2.24	0.58
13:L:41:ARG:CG	13:L:42:THR:H	2.01	0.58
14:M:65:LYS:O	14:M:70:LEU:HD12	2.03	0.58
16:O:20:GLY:O	16:O:22:THR:HG22	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:P:71:ARG:O	17:P:75:ARG:N	2.33	0.58
18:Q:40:LYS:HG2	18:Q:42:TYR:CE2	2.39	0.58
1:A:23:C:O2'	1:A:24:U:H5'	2.04	0.58
1:A:123:C:H4'	1:A:290:C:O2	2.04	0.58
1:A:157:G:H2'	1:A:158:G:H8	1.68	0.58
1:A:287:U:O2'	1:A:288:A:H5'	2.03	0.58
1:A:529:G:H2'	1:A:530:G:H5'	1.86	0.58
1:A:545:C:H5''	5:D:72:GLU:HG2	1.85	0.58
1:A:608:A:C4	1:A:609:A:C8	2.91	0.58
1:A:642:A:O2'	1:A:643:C:H5'	2.03	0.58
1:A:941:G:O2'	1:A:942:G:H5'	2.04	0.58
1:A:1343:G:O3'	10:I:122:ALA:HB3	2.03	0.58
1:A:1368:G:C5'	10:I:112:LYS:O	2.52	0.58
4:C:16:ARG:NH2	4:C:183:ASP:HB2	2.18	0.58
5:D:65:ARG:CD	5:D:75:PHE:HD1	2.17	0.58
5:D:119:GLN:NE2	5:D:123:HIS:NE2	2.42	0.58
7:F:9:VAL:HA	7:F:59:TYR:O	2.03	0.58
8:G:145:ALA:C	8:G:147:ALA:N	2.56	0.58
16:O:53:HIS:O	16:O:56:LEU:HB3	2.04	0.58
17:P:67:THR:HG22	17:P:68:ASP:N	2.17	0.58
19:R:35:ARG:O	19:R:37:VAL:N	2.32	0.58
21:T:35:THR:HA	21:T:38:LYS:HD2	1.85	0.58
1:A:346:G:C2'	1:A:347:G:H5'	2.33	0.58
1:A:346:G:H2'	1:A:347:G:H5'	1.86	0.58
1:A:538:G:OP2	13:L:115:LYS:HB2	2.03	0.58
1:A:680:C:O2'	1:A:681:C:H5'	2.03	0.58
1:A:1251:A:H2'	1:A:1252:A:C8	2.38	0.58
10:I:112:LYS:HD3	10:I:113:LYS:O	2.04	0.58
10:I:125:TYR:HE1	10:I:128:ARG:HG3	1.68	0.58
11:J:7:LYS:HA	11:J:71:LEU:CD2	2.33	0.58
11:J:16:LEU:HD13	11:J:94:VAL:CG1	2.33	0.58
12:K:15:ALA:HA	12:K:77:MET:CA	2.30	0.58
12:K:34:ASP:O	12:K:36:ASP:N	2.37	0.58
17:P:4:ILE:HD11	17:P:59:TRP:HB3	1.86	0.58
21:T:15:ARG:HA	21:T:18:GLN:HB2	1.86	0.58
22:V:2:GLY:O	22:V:5:ASP:HB2	2.04	0.58
22:V:5:ASP:O	22:V:6:ARG:HB2	2.02	0.58
1:A:352:C:H4'	1:A:354:G:OP1	2.02	0.58
1:A:824:C:H2'	1:A:825:G:C8	2.39	0.58
1:A:1057:G:H2'	1:A:1058:G:C8	2.39	0.58
1:A:1102:A:C4	1:A:1103:C:C5	2.91	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1247:U:O2'	1:A:1248:A:H5'	2.04	0.58
1:A:1385:G:H2'	1:A:1386:G:O4'	2.03	0.58
1:A:1390:U:H2'	1:A:1391:U:C6	2.38	0.58
3:B:111:ARG:HA	3:B:111:ARG:NH1	2.16	0.58
6:E:20:GLN:O	6:E:21:ALA:C	2.42	0.58
9:H:95:VAL:HG13	9:H:99:GLU:CB	2.34	0.58
9:H:114:THR:HG22	9:H:130:GLY:O	2.03	0.58
1:A:265:G:H2'	1:A:267:C:C5	2.38	0.58
1:A:809:G:C6	1:A:810:C:C5	2.92	0.58
1:A:1165:C:H2'	1:A:1166:G:C5'	2.33	0.58
1:A:1265:G:C2	1:A:1266:G:H1'	2.39	0.58
1:A:1399:C:C2	1:A:1502:A:N6	2.72	0.58
3:B:52:GLU:O	3:B:56:ARG:HG3	2.04	0.58
3:B:239:VAL:HG12	3:B:240:GLN:N	2.19	0.58
5:D:112:VAL:H	5:D:116:GLN:HE22	1.51	0.58
6:E:14:ARG:HG2	6:E:14:ARG:NH1	2.18	0.58
6:E:105:VAL:HG11	6:E:132:ALA:HB2	1.85	0.58
9:H:4:ASP:CG	9:H:7:ALA:H	2.06	0.58
10:I:10:ARG:HA	10:I:104:ARG:HE	1.69	0.58
11:J:8:LEU:HB2	11:J:70:ARG:HB2	1.86	0.58
13:L:46:LYS:CD	13:L:48:PRO:HD2	2.33	0.58
13:L:119:LYS:O	13:L:120:TYR:CB	2.52	0.58
14:M:91:ARG:HG3	14:M:98:VAL:HA	1.86	0.58
18:Q:84:LEU:O	18:Q:84:LEU:HD23	2.03	0.58
20:S:15:LEU:HD21	20:S:38:SER:OG	2.04	0.58
21:T:50:GLU:HG3	21:T:100:ILE:HG21	1.84	0.58
1:A:144:G:H1	1:A:178:C:H42	1.51	0.57
1:A:263:A:HO2'	1:A:264:U:C5'	2.17	0.57
1:A:624:C:H4'	17:P:10:GLY:O	2.04	0.57
1:A:737:A:OP1	7:F:92:LYS:HB2	2.04	0.57
1:A:1407:C:H2'	1:A:1408:A:H8	1.68	0.57
1:A:1427:U:H2'	1:A:1428:A:H8	1.68	0.57
3:B:56:ARG:CB	3:B:56:ARG:HH11	2.16	0.57
3:B:130:ARG:CD	3:B:131:PRO:HD2	2.35	0.57
4:C:107:GLN:O	4:C:108:ASN:HB2	2.04	0.57
8:G:22:LEU:HB3	8:G:62:PHE:CE2	2.40	0.57
8:G:120:ILE:HD13	8:G:120:ILE:N	2.18	0.57
11:J:14:LYS:O	11:J:14:LYS:HD3	2.03	0.57
12:K:51:LYS:O	12:K:55:LYS:HD2	2.04	0.57
14:M:54:VAL:HG13	14:M:55:ARG:N	2.18	0.57
16:O:28:GLN:O	16:O:32:LEU:HB2	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:273:A:O2'	1:A:274:A:H5'	2.04	0.57
1:A:670:G:H2'	1:A:671:G:O4'	2.04	0.57
1:A:677:U:H3	1:A:713:G:N2	1.99	0.57
1:A:947:G:O3'	14:M:109:THR:HB	2.04	0.57
1:A:1266:G:N2	1:A:1270:C:H42	2.02	0.57
4:C:19:GLU:CB	4:C:40:ARG:NH2	2.65	0.57
8:G:70:LYS:CG	8:G:96:GLN:HG2	2.34	0.57
1:A:445:G:H2'	1:A:446:G:H8	1.67	0.57
1:A:521:G:C5	1:A:529:G:N2	2.72	0.57
1:A:579:G:H5'	1:A:728:A:H1'	1.86	0.57
1:A:723:U:H2'	1:A:723:U:O2	2.04	0.57
1:A:1095:U:H5''	1:A:1109:C:N3	2.19	0.57
1:A:1483:A:H2'	1:A:1484:C:O4'	2.05	0.57
4:C:47:LEU:HD22	4:C:68:VAL:HG12	1.86	0.57
5:D:17:VAL:HG12	5:D:18:LYS:N	2.19	0.57
5:D:65:ARG:CA	5:D:75:PHE:HE1	2.18	0.57
5:D:171:GLY:O	5:D:174:LEU:N	2.36	0.57
7:F:82:ARG:HB3	7:F:82:ARG:NH1	2.19	0.57
8:G:70:LYS:HG2	8:G:96:GLN:HG2	1.86	0.57
11:J:19:SER:CB	11:J:91:PRO:HG3	2.29	0.57
11:J:45:ARG:HG2	11:J:45:ARG:HH11	1.69	0.57
12:K:111:ASP:O	12:K:112:THR:C	2.43	0.57
15:N:48:ALA:HB2	15:N:53:LEU:CD2	2.31	0.57
16:O:25:THR:O	16:O:29:VAL:HG23	2.04	0.57
1:A:190(F):G:H4'	1:A:190(G):G:OP2	2.04	0.57
1:A:399:G:O2'	1:A:400:C:H5'	2.04	0.57
1:A:542:G:C5'	5:D:41:GLY:HA3	2.33	0.57
1:A:707:C:H5''	12:K:20:TYR:CD2	2.38	0.57
1:A:851:G:H2'	1:A:852:G:H8	1.69	0.57
1:A:977:A:H8	1:A:1223:C:C2	2.21	0.57
1:A:1077:G:N2	1:A:1080:A:OP2	2.31	0.57
1:A:1288:A:O4'	1:A:1353:G:H4'	2.03	0.57
1:A:1343:G:H2'	1:A:1344:C:H6	1.68	0.57
1:A:1352:C:H2'	1:A:1353:G:H8	1.61	0.57
1:A:1368:G:H5'	10:I:112:LYS:O	2.04	0.57
1:A:1461:G:H2'	1:A:1462:G:H8	1.67	0.57
6:E:19:MET:O	6:E:20:GLN:HB2	2.04	0.57
8:G:21:VAL:CG2	8:G:22:LEU:H	2.15	0.57
8:G:23:VAL:HG13	8:G:43:PHE:CD2	2.39	0.57
8:G:26:PHE:CE2	8:G:30:ILE:HD11	2.39	0.57
8:G:58:PRO:HA	8:G:61:VAL:HG23	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:H:66:GLY:C	9:H:76:PRO:HB3	2.24	0.57
9:H:86:ILE:HG22	9:H:133:LEU:O	2.04	0.57
10:I:16:ARG:HG2	10:I:16:ARG:HH11	1.69	0.57
10:I:55:ALA:O	10:I:57:GLY:N	2.37	0.57
11:J:54:PHE:O	11:J:55:LYS:HG2	2.05	0.57
12:K:28:THR:HG21	12:K:89:ALA:O	2.04	0.57
16:O:70:LEU:HD13	16:O:70:LEU:O	2.05	0.57
17:P:45:THR:HB	17:P:46:PRO:HD2	1.86	0.57
18:Q:38:ARG:N	18:Q:38:ARG:HD2	2.20	0.57
18:Q:77:VAL:O	18:Q:78:GLU:CB	2.52	0.57
1:A:64:G:O2'	1:A:65:U:OP2	2.18	0.57
1:A:203:U:H5''	1:A:204:U:OP1	2.04	0.57
1:A:337:C:H2'	1:A:338:A:H8	1.67	0.57
1:A:429:U:H4'	1:A:430:A:O5'	2.02	0.57
1:A:560:U:H4'	1:A:561:U:C5'	2.33	0.57
1:A:923:A:H2	1:A:1395:C:N3	2.02	0.57
1:A:956:U:H2'	1:A:957:U:O4'	2.03	0.57
1:A:1511:G:C6	1:A:1512:U:N3	2.72	0.57
3:B:71:VAL:HG13	3:B:93:VAL:HG21	1.86	0.57
4:C:96:GLY:O	4:C:99:VAL:HG12	2.04	0.57
5:D:87:GLY:O	5:D:89:THR:N	2.38	0.57
6:E:146:ALA:O	6:E:149:GLU:HB3	2.04	0.57
10:I:118:LYS:HE2	10:I:121:ARG:CB	2.25	0.57
12:K:16:SER:O	12:K:35:PRO:HD3	2.04	0.57
12:K:77:MET:O	12:K:78:GLN:HG3	2.05	0.57
18:Q:67:LYS:HA	18:Q:70:ARG:NH2	2.14	0.57
19:R:37:VAL:HG23	19:R:38:GLU:N	2.18	0.57
20:S:32:LYS:HB2	20:S:32:LYS:NZ	2.19	0.57
20:S:40:ILE:HG21	20:S:62:ILE:HG12	1.87	0.57
1:A:32:A:H1'	1:A:48:C:N4	2.19	0.57
1:A:101:A:C2'	1:A:102:G:H5'	2.34	0.57
1:A:103:C:O2	1:A:172:A:C2	2.54	0.57
1:A:463:A:O2'	17:P:81:ARG:HA	2.05	0.57
1:A:921:U:C2'	1:A:922:G:H5'	2.34	0.57
1:A:1088:G:H2'	1:A:1089:G:H8	1.70	0.57
1:A:1178:G:H22	1:A:1180:A:H3'	1.65	0.57
3:B:61:LEU:HD22	3:B:66:GLY:HA3	1.87	0.57
4:C:15:THR:O	4:C:16:ARG:HB2	2.04	0.57
4:C:190:ARG:HB3	4:C:190:ARG:CZ	2.35	0.57
5:D:75:PHE:HE2	5:D:93:PHE:CZ	2.22	0.57
8:G:13:GLN:HB2	8:G:14:PRO:HD2	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:H:20:TYR:CZ	9:H:75:ARG:HB3	2.39	0.57
12:K:27:ASN:CG	12:K:28:THR:N	2.58	0.57
12:K:124:LYS:HD3	12:K:124:LYS:C	2.24	0.57
14:M:3:ARG:HG3	14:M:9:ILE:HD11	1.86	0.57
19:R:47:THR:HG22	19:R:48:GLY:N	2.14	0.57
1:A:44:G:OP2	17:P:12:LYS:HB2	2.04	0.57
1:A:115:G:H1'	1:A:116:A:N7	2.19	0.57
1:A:319:G:O2'	1:A:320:C:H5'	2.04	0.57
1:A:750:G:H1'	16:O:22:THR:HG23	1.87	0.57
1:A:1072:G:H2'	1:A:1073:U:C6	2.40	0.57
1:A:1118:C:O2	1:A:1179:A:C6	2.58	0.57
1:A:1289:A:H2'	1:A:1290:G:H5'	1.87	0.57
3:B:59:GLU:O	3:B:62:ALA:HB3	2.05	0.57
5:D:124:GLY:C	5:D:126:ILE:H	2.07	0.57
9:H:4:ASP:OD2	9:H:7:ALA:CB	2.52	0.57
10:I:94:ALA:O	10:I:95:LYS:HG2	2.04	0.57
11:J:16:LEU:CD2	11:J:94:VAL:HG13	2.34	0.57
14:M:78:ILE:C	14:M:80:ARG:N	2.56	0.57
17:P:39:TYR:HD1	17:P:73:LEU:HD22	1.70	0.57
17:P:39:TYR:OH	17:P:41:PRO:HA	2.03	0.57
17:P:50:LYS:O	17:P:51:VAL:HG23	2.05	0.57
1:A:514:C:H2'	1:A:515:G:O4'	2.04	0.57
1:A:750:G:H1'	16:O:23:GLY:H	1.69	0.57
1:A:1004:A:H5''	1:A:1025:U:C5	2.39	0.57
1:A:1360:A:H2'	1:A:1361:G:C8	2.39	0.57
4:C:137:ALA:O	4:C:141:VAL:HG23	2.05	0.57
4:C:167:TRP:O	4:C:168:ALA:HB3	2.05	0.57
6:E:71:LEU:HD11	6:E:113:ALA:O	2.05	0.57
9:H:109:ILE:HD11	9:H:137:VAL:HB	1.87	0.57
11:J:12:ASP:CG	11:J:15:THR:HB	2.25	0.57
11:J:34:VAL:HA	11:J:75:ILE:H	1.70	0.57
11:J:86:MET:N	11:J:88:LEU:HD21	2.20	0.57
14:M:34:LEU:CD2	14:M:41:PRO:HA	2.31	0.57
15:N:43:CYS:HA	15:N:46:GLU:CD	2.25	0.57
1:A:40:C:H2'	1:A:41:G:H8	1.66	0.57
1:A:519:C:O2'	1:A:520:A:H5'	2.03	0.57
1:A:674:G:H2'	1:A:675:A:H8	1.68	0.57
1:A:689:C:H2'	1:A:690:G:O4'	2.05	0.57
1:A:722:A:H1'	1:A:723:U:N3	2.18	0.57
1:A:730:G:C5	1:A:731:G:H1'	2.40	0.57
1:A:880:C:H2'	1:A:881:G:H8	1.70	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1037:C:H2'	1:A:1038:C:C6	2.40	0.57
1:A:1065:U:C5	1:A:1190:G:H1'	2.40	0.57
1:A:1305:G:OP1	22:V:2:GLY:O	2.23	0.57
3:B:130:ARG:NE	3:B:131:PRO:HD2	2.19	0.57
4:C:110:ASN:O	4:C:111:LEU:HG	2.05	0.57
5:D:57:ARG:HH22	6:E:107:ARG:HD3	1.69	0.57
8:G:87:VAL:HG22	8:G:154:TYR:HD1	1.69	0.57
9:H:134:ILE:HG22	9:H:135:CYS:SG	2.44	0.57
15:N:3:ARG:CB	15:N:3:ARG:NH1	2.61	0.57
17:P:20:VAL:O	17:P:21:VAL:CG2	2.53	0.57
17:P:50:LYS:HG2	17:P:51:VAL:N	2.20	0.57
19:R:74:ARG:HA	19:R:79:LEU:O	2.05	0.57
21:T:8:ARG:HG3	21:T:9:ASN:ND2	2.19	0.57
21:T:57:ARG:HH21	21:T:102:GLY:CA	2.18	0.57
1:A:373:A:H2'	1:A:374:A:C8	2.40	0.57
1:A:448:A:P	1:A:485:G:H22	2.27	0.57
1:A:463:A:H2'	1:A:474:G:H8	1.69	0.57
1:A:613:C:H2'	1:A:614:A:C8	2.40	0.57
1:A:688:G:O2'	1:A:689:C:H5'	2.05	0.57
4:C:54:ARG:HB3	4:C:54:ARG:NH1	2.19	0.57
4:C:85:ARG:HA	4:C:88:ARG:HB3	1.87	0.57
5:D:98:GLU:HA	5:D:98:GLU:OE2	2.05	0.57
8:G:23:VAL:O	8:G:27:ILE:HG13	2.04	0.57
8:G:115:ARG:HD2	8:G:118:VAL:HG23	1.85	0.57
11:J:59:SER:O	11:J:60:ARG:HB2	2.05	0.57
17:P:51:VAL:O	17:P:52:ASP:HB3	2.04	0.57
1:A:256:U:H2'	1:A:257:G:H8	1.69	0.56
1:A:312:C:H2'	1:A:313:A:C8	2.39	0.56
1:A:959:A:C2	1:A:1222:G:H4'	2.40	0.56
1:A:1413:A:H2	1:A:1487:G:H1	1.53	0.56
3:B:102:LEU:HD21	3:B:162:ILE:CD1	2.32	0.56
3:B:102:LEU:N	3:B:102:LEU:HD12	2.19	0.56
4:C:19:GLU:HG3	15:N:52:GLN:NE2	2.20	0.56
6:E:86:ALA:HB3	6:E:125:SER:HB2	1.86	0.56
8:G:148:ASN:C	8:G:150:ALA:N	2.57	0.56
13:L:83:VAL:HG21	13:L:100:ILE:HD13	1.87	0.56
13:L:83:VAL:HG22	13:L:84:LEU:H	1.69	0.56
14:M:6:GLY:O	14:M:7:VAL:HG22	2.05	0.56
20:S:44:MET:HA	20:S:47:HIS:CD2	2.39	0.56
1:A:620:C:C1'	5:D:135:LEU:HD13	2.35	0.56
1:A:658:G:C6	1:A:749:C:N4	2.73	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:782:A:H2'	1:A:783:C:O4'	2.05	0.56
1:A:999:C:H2'	1:A:1000:U:C6	2.40	0.56
1:A:1010:G:O2'	1:A:1011:G:H5'	2.04	0.56
1:A:1076:C:O2'	1:A:1077:G:H5'	2.05	0.56
3:B:68:ILE:N	3:B:90:MET:HE3	1.98	0.56
4:C:9:GLY:O	4:C:11:ARG:N	2.35	0.56
4:C:59:ARG:HB3	4:C:64:VAL:HG13	1.86	0.56
5:D:83:SER:HA	5:D:89:THR:CG2	2.35	0.56
5:D:187:ARG:NE	5:D:188:LEU:N	2.51	0.56
8:G:61:VAL:O	8:G:65:ALA:CB	2.53	0.56
8:G:79:ARG:HA	8:G:83:ALA:O	2.05	0.56
10:I:28:VAL:HA	10:I:63:ILE:O	2.04	0.56
10:I:48:GLU:OE1	10:I:51:ARG:HB2	2.04	0.56
11:J:49:VAL:O	11:J:60:ARG:HA	2.05	0.56
11:J:49:VAL:HG21	15:N:41:ARG:HB2	1.87	0.56
12:K:57:THR:OG1	12:K:58:PRO:HD2	2.05	0.56
16:O:88:ARG:HD3	16:O:89:GLY:N	2.20	0.56
20:S:30:LEU:HA	20:S:48:THR:O	2.05	0.56
20:S:42:PRO:O	20:S:45:VAL:HG23	2.05	0.56
21:T:59:ALA:O	21:T:63:ILE:HG13	2.05	0.56
1:A:89:C:H2'	1:A:90:U:C6	2.39	0.56
1:A:190(I):G:O2'	1:A:190(J):U:H5'	2.05	0.56
1:A:391:G:C4	1:A:392:G:C8	2.93	0.56
1:A:499:A:H4'	1:A:500:G:H5'	1.87	0.56
1:A:575:G:OP1	1:A:575:G:H4'	2.04	0.56
1:A:613:C:O2'	1:A:614:A:H5'	2.05	0.56
1:A:639:G:O2'	1:A:640:A:H5'	2.04	0.56
1:A:877:C:O2'	1:A:878:G:H5'	2.04	0.56
1:A:1187:G:H2'	1:A:1188:A:H8	1.70	0.56
1:A:1478:C:O2	1:A:1478:C:H2'	2.05	0.56
3:B:15:VAL:HG11	3:B:209:ARG:CB	2.35	0.56
4:C:29:TYR:HA	4:C:32:LEU:HB2	1.87	0.56
4:C:41:GLY:O	4:C:45:LYS:HB2	2.06	0.56
8:G:62:PHE:HB3	8:G:63:LYS:NZ	2.20	0.56
10:I:55:ALA:CB	10:I:58:ARG:HD2	2.36	0.56
10:I:99:LEU:HB3	10:I:101:PHE:CD1	2.40	0.56
13:L:10:LEU:HD12	18:Q:32:TYR:CE1	2.39	0.56
13:L:34:ARG:HG2	13:L:35:GLY:N	2.21	0.56
14:M:34:LEU:HD23	14:M:41:PRO:CA	2.31	0.56
15:N:46:GLU:HA	15:N:49:HIS:HD2	1.70	0.56
19:R:16:PRO:HD2	19:R:19:LYS:HD3	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:T:33:ILE:O	21:T:36:LEU:HB3	2.05	0.56
21:T:86:ARG:O	21:T:88:VAL:N	2.39	0.56
1:A:564:C:H2'	1:A:565:U:C6	2.41	0.56
1:A:603:U:O2'	1:A:604:G:H5'	2.05	0.56
1:A:832:C:O2'	1:A:833:U:H5'	2.05	0.56
1:A:875:C:O2'	9:H:14:ARG:HD2	2.06	0.56
1:A:1261:A:H5'	1:A:1284:C:OP1	2.06	0.56
1:A:1288:A:H1'	1:A:1353:G:O4'	2.06	0.56
3:B:92:TYR:CE2	3:B:151:GLY:CA	2.88	0.56
4:C:10:PHE:CZ	4:C:178:LEU:HD22	2.40	0.56
4:C:52:LEU:HD11	4:C:118:GLN:HE22	1.68	0.56
6:E:7:GLU:HG2	6:E:8:GLU:N	2.21	0.56
7:F:63:TYR:N	7:F:63:TYR:CD1	2.74	0.56
8:G:57:GLU:C	8:G:59:LEU:H	2.09	0.56
8:G:75:VAL:HG12	8:G:76:ARG:N	2.20	0.56
10:I:16:ARG:O	10:I:63:ILE:HG22	2.05	0.56
10:I:75:ASP:O	10:I:78:LYS:HB3	2.05	0.56
10:I:89:ASN:C	10:I:91:ASP:H	2.07	0.56
21:T:44:ALA:HB1	21:T:91:LEU:HB3	1.86	0.56
1:A:341:C:N3	1:A:349:A:N1	2.54	0.56
1:A:447:G:H21	1:A:488:C:H42	1.54	0.56
1:A:659:U:H2'	1:A:660:G:O4'	2.05	0.56
1:A:677:U:H2'	1:A:678:U:C6	2.40	0.56
1:A:1001:A:H2'	1:A:1002:G:C5'	2.35	0.56
1:A:1261:A:H2'	1:A:1262:C:H5'	1.87	0.56
3:B:17:PHE:HB3	3:B:44:LEU:HD23	1.87	0.56
4:C:38:ARG:HH11	4:C:38:ARG:HG3	1.70	0.56
4:C:61:ALA:O	4:C:63:ASN:N	2.36	0.56
5:D:24:GLU:O	5:D:25:ARG:HB2	2.06	0.56
5:D:75:PHE:HE2	5:D:93:PHE:CE1	2.23	0.56
5:D:102:ASP:HB2	5:D:136:PRO:CA	2.35	0.56
6:E:121:LYS:HD3	6:E:122:GLU:H	1.71	0.56
9:H:63:LEU:HD12	9:H:63:LEU:N	2.19	0.56
13:L:82:VAL:O	13:L:105:TYR:HB3	2.06	0.56
15:N:43:CYS:SG	15:N:44:LEU:N	2.78	0.56
18:Q:90:ILE:HG22	18:Q:94:ASN:ND2	2.20	0.56
1:A:893:C:H2'	1:A:894:G:H8	1.71	0.56
1:A:1281:U:H5'	1:A:1282:C:C5	2.41	0.56
5:D:127:THR:HG21	5:D:147:ALA:HB3	1.85	0.56
8:G:102:ARG:O	8:G:104:LEU:N	2.39	0.56
11:J:25:GLU:HG3	11:J:28:ARG:HD2	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:K:30:VAL:HG12	12:K:31:THR:H	1.70	0.56
13:L:28:LYS:O	13:L:28:LYS:HG2	2.04	0.56
16:O:87:ILE:HG22	16:O:88:ARG:H	1.71	0.56
1:A:447:G:C6	1:A:485:G:H2'	2.40	0.56
1:A:1306:A:C6	1:A:1332:A:C8	2.94	0.56
1:A:1381:U:H5	1:A:1382:C:C5	2.23	0.56
3:B:162:ILE:HG22	3:B:162:ILE:O	2.05	0.56
8:G:120:ILE:HD13	8:G:120:ILE:H	1.71	0.56
11:J:8:LEU:CD2	11:J:70:ARG:HB2	2.35	0.56
11:J:71:LEU:O	11:J:72:VAL:HB	2.06	0.56
18:Q:29:HIS:CD2	18:Q:36:ILE:HD13	2.41	0.56
19:R:17:SER:OG	19:R:55:ARG:HD3	2.06	0.56
1:A:142:G:N3	1:A:196:A:H2	2.04	0.56
1:A:836:G:C6	1:A:851:G:C6	2.94	0.56
1:A:858:G:H22	1:A:869:G:H3'	1.71	0.56
1:A:1088:G:N2	1:A:1098:C:H1'	2.20	0.56
1:A:1358:U:H5''	15:N:35:ARG:HG3	1.87	0.56
1:A:1521:G:H2'	1:A:1522:U:H6	1.69	0.56
3:B:62:ALA:O	3:B:65:GLY:N	2.39	0.56
6:E:41:VAL:CG2	6:E:113:ALA:HA	2.35	0.56
6:E:118:ILE:HG22	6:E:119:LEU:N	2.21	0.56
8:G:49:ILE:HA	8:G:52:GLU:HB2	1.88	0.56
9:H:48:TYR:CG	9:H:48:TYR:O	2.58	0.56
10:I:16:ARG:N	10:I:16:ARG:HD2	2.21	0.56
14:M:17:VAL:HG12	14:M:18:ALA:N	2.21	0.56
15:N:31:ARG:HD3	15:N:31:ARG:N	2.21	0.56
1:A:537:G:H2'	1:A:538:G:C8	2.40	0.56
1:A:555:C:H2'	1:A:556:C:C5	2.40	0.56
1:A:939:G:C5'	8:G:102:ARG:NH2	2.57	0.56
1:A:1111:A:N6	4:C:177:THR:HA	2.21	0.56
1:A:1284:C:H2'	1:A:1285:A:C8	2.41	0.56
1:A:1288:A:H1'	1:A:1352:C:O2'	2.05	0.56
4:C:23:TYR:CZ	11:J:10:GLY:HA2	2.41	0.56
5:D:15:GLU:O	5:D:17:VAL:HG23	2.05	0.56
5:D:112:VAL:N	5:D:116:GLN:NE2	2.52	0.56
5:D:206:PHE:HD2	5:D:207:TYR:CD1	2.24	0.56
6:E:115:VAL:HG11	6:E:118:ILE:CG1	2.36	0.56
6:E:141:GLN:O	6:E:142:LEU:O	2.23	0.56
15:N:60:SER:O	15:N:61:TRP:CB	2.51	0.56
19:R:16:PRO:C	19:R:18:ARG:H	2.08	0.56
1:A:222:U:H2'	1:A:223:U:H6	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:357:G:OP1	1:A:367:U:H5''	2.06	0.56
1:A:424:G:H2'	1:A:425:G:C8	2.37	0.56
1:A:542:G:C2	1:A:543:C:C4	2.95	0.56
1:A:1095:U:OP1	1:A:1108:G:N2	2.38	0.56
3:B:19:HIS:CD2	3:B:20:GLU:HG2	2.40	0.56
4:C:48:TYR:C	4:C:50:ALA:H	2.10	0.56
5:D:81:GLU:HA	5:D:84:LYS:HE2	1.88	0.56
7:F:10:LEU:HD11	7:F:59:TYR:HD2	1.71	0.56
7:F:40:VAL:HB	7:F:63:TYR:HA	1.87	0.56
10:I:86:VAL:O	10:I:90:PRO:HB3	2.06	0.56
10:I:126:SER:HB2	10:I:127:LYS:HD2	1.87	0.56
11:J:4:ILE:O	11:J:73:ASP:HB3	2.06	0.56
13:L:108:ALA:O	13:L:109:GLY:O	2.24	0.56
15:N:11:LYS:C	15:N:13:THR:N	2.54	0.56
15:N:39:LEU:HD13	15:N:40:CYS:O	2.06	0.56
15:N:54:PRO:C	15:N:56:VAL:H	2.08	0.56
16:O:11:VAL:O	16:O:15:PHE:HD1	1.88	0.56
16:O:25:THR:HG21	16:O:70:LEU:HD23	1.86	0.56
16:O:84:LYS:O	16:O:86:GLY:N	2.39	0.56
17:P:27:LYS:H	17:P:27:LYS:CE	2.04	0.56
20:S:5:LEU:HD11	20:S:70:LYS:NZ	2.20	0.56
22:V:6:ARG:HE	22:V:15:ARG:CZ	2.17	0.56
1:A:124:G:C5	1:A:125:U:C5	2.94	0.55
1:A:146:G:O2'	1:A:147:G:H5'	2.07	0.55
1:A:629:G:O2'	1:A:630:G:H5'	2.05	0.55
1:A:1440:C:H2'	1:A:1441:G:H5'	1.89	0.55
3:B:34:ALA:O	3:B:40:HIS:HA	2.05	0.55
3:B:78:GLN:O	3:B:94:ASN:OD1	2.23	0.55
3:B:100:GLY:O	3:B:101:MET:C	2.44	0.55
3:B:115:LEU:O	3:B:119:GLU:HG3	2.06	0.55
3:B:178:ARG:HG3	3:B:178:ARG:NH1	2.21	0.55
4:C:178:LEU:O	4:C:179:ARG:HB2	2.06	0.55
5:D:132:ARG:HG2	5:D:132:ARG:NH1	2.21	0.55
6:E:11:ILE:HG22	6:E:12:LEU:H	1.68	0.55
7:F:78:GLU:OE2	7:F:81:ILE:HD11	2.06	0.55
9:H:107:LEU:HD23	9:H:107:LEU:N	2.20	0.55
10:I:26:VAL:O	10:I:32:ASP:HB2	2.06	0.55
13:L:5:PRO:HA	13:L:9:GLN:OE1	2.06	0.55
18:Q:97:SER:N	18:Q:103:GLY:HA2	2.12	0.55
21:T:57:ARG:HH22	21:T:100:ILE:CG1	2.18	0.55
1:A:292:G:H3'	1:A:293:G:C8	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:376:G:H2'	1:A:377:G:C8	2.34	0.55
1:A:742:G:O2'	1:A:743:U:H5'	2.06	0.55
1:A:799:G:O2'	1:A:800:G:H5'	2.06	0.55
1:A:866:C:H2'	1:A:867:G:O4'	2.06	0.55
1:A:1065:U:H4'	1:A:1066:C:H5'	1.87	0.55
1:A:1142:G:H2'	1:A:1143:G:O4'	2.07	0.55
1:A:1250:A:H5''	10:I:68:GLY:H	1.70	0.55
3:B:35:GLU:HA	3:B:40:HIS:CA	2.34	0.55
3:B:178:ARG:NH2	9:H:68:ARG:NH2	2.54	0.55
5:D:61:LYS:HZ1	5:D:62:GLN:NE2	2.02	0.55
5:D:73:ARG:O	5:D:77:ASN:ND2	2.39	0.55
5:D:157:LEU:HD23	5:D:157:LEU:C	2.26	0.55
7:F:40:VAL:HG23	7:F:63:TYR:N	2.21	0.55
8:G:21:VAL:CG2	8:G:22:LEU:HD12	2.36	0.55
8:G:69:VAL:HG12	8:G:100:ALA:HA	1.88	0.55
10:I:79:LEU:O	10:I:83:ARG:HG3	2.07	0.55
13:L:120:TYR:O	13:L:122:THR:N	2.39	0.55
14:M:16:ASP:HB2	14:M:31:LYS:HZ1	1.69	0.55
20:S:64:GLU:HA	20:S:67:VAL:CG2	2.35	0.55
1:A:60:A:H4'	1:A:61:G:O5'	2.06	0.55
1:A:375:U:C4'	17:P:17:TYR:HE2	2.14	0.55
1:A:502:G:H4'	1:A:550:G:H4'	1.86	0.55
1:A:560:U:O2'	1:A:561:U:OP2	2.21	0.55
1:A:608:A:H2'	1:A:609:A:C8	2.39	0.55
1:A:619:U:H3	5:D:134:ASP:CG	2.09	0.55
1:A:1075:C:H5'	3:B:103:THR:HG21	1.87	0.55
1:A:1197:G:C2'	1:A:1198:G:H5'	2.35	0.55
1:A:1381:U:C5	1:A:1382:C:C5	2.94	0.55
3:B:21:ARG:CA	3:B:39:ILE:HG13	2.36	0.55
4:C:39:ILE:HD13	4:C:57:ILE:CG1	2.30	0.55
5:D:156:GLU:O	5:D:160:GLN:HB2	2.06	0.55
6:E:12:LEU:HD13	6:E:12:LEU:C	2.27	0.55
10:I:50:LEU:CG	10:I:81:ILE:HB	2.36	0.55
12:K:46:GLY:C	12:K:48:ILE:N	2.57	0.55
18:Q:8:GLY:CA	18:Q:23:VAL:HG22	2.30	0.55
18:Q:86:GLU:O	18:Q:90:ILE:HG13	2.07	0.55
1:A:946:A:N1	1:A:1236:A:C2	2.74	0.55
1:A:1190:G:P	4:C:4:LYS:HA	2.47	0.55
1:A:1252:A:C2	1:A:1253:G:H1'	2.42	0.55
3:B:163:PHE:HD1	3:B:185:ILE:HB	1.70	0.55
3:B:206:ASP:O	3:B:207:ALA:HB3	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:74:GLY:CA	6:E:116:THR:HG22	2.36	0.55
9:H:11:THR:HA	9:H:14:ARG:NH1	2.21	0.55
10:I:32:ASP:OD1	10:I:35:GLU:HB2	2.06	0.55
10:I:85:LEU:HB3	10:I:92:TYR:HD1	1.72	0.55
10:I:127:LYS:H	10:I:127:LYS:HE3	1.70	0.55
11:J:4:ILE:HD11	11:J:74:ILE:CD1	2.36	0.55
12:K:46:GLY:O	12:K:48:ILE:N	2.40	0.55
12:K:93:GLN:HA	12:K:93:GLN:HE21	1.72	0.55
21:T:47:GLY:C	21:T:49:ALA:H	2.09	0.55
21:T:51:GLU:HA	21:T:54:LYS:CB	2.34	0.55
21:T:69:GLY:O	21:T:70:SER:C	2.45	0.55
21:T:100:ILE:HG23	21:T:101:GLY:N	2.22	0.55
1:A:459:G:C8	1:A:460:A:H3'	2.40	0.55
1:A:946:A:C6	1:A:1236:A:C2	2.94	0.55
1:A:959:A:H5''	1:A:960:U:OP2	2.05	0.55
1:A:1030(D):A:H2'	1:A:1031:G:O4'	2.07	0.55
1:A:1335:C:H5''	1:A:1336:C:H5'	1.89	0.55
1:A:1450:U:H2'	1:A:1452:C:C5	2.42	0.55
3:B:64:ARG:HH11	3:B:64:ARG:CB	2.19	0.55
3:B:173:ALA:O	3:B:174:VAL:C	2.44	0.55
4:C:88:ARG:O	4:C:88:ARG:HD3	2.07	0.55
4:C:150:LYS:O	4:C:200:ALA:HA	2.06	0.55
7:F:8:ILE:O	7:F:61:LEU:N	2.40	0.55
9:H:119:LEU:HD23	9:H:119:LEU:N	2.22	0.55
11:J:51:ARG:HG3	15:N:45:ARG:HD2	1.87	0.55
15:N:9:LYS:O	15:N:11:LYS:N	2.40	0.55
19:R:25:THR:O	19:R:26:LEU:HD13	2.07	0.55
1:A:119:A:O2'	1:A:120:A:OP2	2.23	0.55
1:A:1157:A:H61	1:A:1178:G:H1'	1.70	0.55
5:D:35:ARG:O	5:D:36:ARG:HB3	2.07	0.55
7:F:15:ASP:OD2	7:F:17:SER:N	2.39	0.55
7:F:38:GLU:O	7:F:39:LYS:CB	2.55	0.55
7:F:48:LEU:HD13	7:F:52:ILE:CG1	2.36	0.55
7:F:84:ASN:HA	7:F:86:ARG:HH21	1.71	0.55
7:F:92:LYS:O	7:F:94:GLN:HG3	2.07	0.55
22:V:6:ARG:HE	22:V:15:ARG:NH2	2.05	0.55
1:A:256:U:H2'	1:A:257:G:C8	2.42	0.55
1:A:415:A:H2'	1:A:416:G:H8	1.71	0.55
1:A:794:A:H2'	1:A:795:C:H6	1.72	0.55
1:A:1288:A:O2'	1:A:1289:A:H5'	2.07	0.55
1:A:1497:G:N7	1:A:1498:U:C4	2.75	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:185:ILE:HG23	3:B:199:TYR:HB2	1.89	0.55
4:C:188:LEU:HD11	4:C:195:VAL:HG13	1.88	0.55
6:E:71:LEU:HD22	6:E:114:GLY:O	2.07	0.55
12:K:58:PRO:CB	12:K:93:GLN:HG3	2.33	0.55
16:O:54:ARG:O	16:O:56:LEU:N	2.39	0.55
18:Q:45:HIS:HB2	18:Q:65:ILE:HD12	1.88	0.55
18:Q:90:ILE:O	18:Q:92:ARG:N	2.40	0.55
21:T:41:ILE:CD1	21:T:87:LYS:HE2	2.37	0.55
1:A:192:U:H1'	21:T:103:GLY:HA2	1.88	0.55
1:A:1050:G:H22	1:A:1208:C:H42	1.53	0.55
1:A:1055:A:H2'	1:A:1055:A:N3	2.21	0.55
3:B:24:TRP:HD1	3:B:24:TRP:H	1.53	0.55
6:E:37:ARG:HA	6:E:114:GLY:CA	2.37	0.55
8:G:115:ARG:HB3	8:G:118:VAL:CG2	2.36	0.55
10:I:125:TYR:CE1	10:I:128:ARG:HG3	2.41	0.55
11:J:38:ILE:CD1	11:J:71:LEU:HD12	2.37	0.55
11:J:39:PRO:O	11:J:40:LEU:CB	2.55	0.55
13:L:5:PRO:HB2	13:L:10:LEU:CD2	2.35	0.55
19:R:58:LEU:HD22	19:R:62:GLU:HB3	1.89	0.55
1:A:273:A:C2'	1:A:274:A:H5'	2.37	0.55
1:A:490:G:O2'	1:A:491:G:H5'	2.07	0.55
1:A:657:G:C2	1:A:658:G:C8	2.95	0.55
1:A:695:A:H2'	1:A:696:A:C8	2.42	0.55
1:A:834:C:H2'	1:A:835:U:C6	2.42	0.55
1:A:866:C:H2'	1:A:867:G:O5'	2.07	0.55
1:A:1121:U:H2'	1:A:1122:U:C6	2.42	0.55
1:A:1347:G:O2'	1:A:1348:U:P	2.64	0.55
6:E:36:ASP:O	6:E:37:ARG:HB2	2.07	0.55
6:E:76:ILE:O	6:E:93:PRO:HB3	2.06	0.55
10:I:100:GLY:C	10:I:102:LEU:N	2.60	0.55
12:K:110:ASP:HB3	19:R:85:LEU:HB3	1.88	0.55
17:P:52:ASP:O	17:P:55:ARG:HB2	2.06	0.55
20:S:11:VAL:CG2	20:S:39:THR:HB	2.36	0.55
20:S:40:ILE:HD11	20:S:71:LEU:CD2	2.37	0.55
1:A:16:A:C2'	1:A:17:U:H5'	2.37	0.55
1:A:60:A:P	1:A:60:A:H8	2.30	0.55
1:A:252:U:H2'	1:A:253:U:C6	2.41	0.55
1:A:760:G:H1	18:Q:105:ALA:HA	1.71	0.55
1:A:966:G:H2'	1:A:967:C:O4'	2.07	0.55
1:A:1201:A:C1'	1:A:1202:G:OP2	2.52	0.55
1:A:1202:G:N2	15:N:27:CYS:HB2	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1418:A:H61	1:A:1482:G:H1'	1.71	0.55
1:A:1543:C:H2'	1:A:1544:U:H6	1.72	0.55
5:D:52:SER:C	5:D:54:TYR:H	2.11	0.55
5:D:114:ARG:HH11	5:D:114:ARG:CG	2.20	0.55
5:D:165:MET:CE	5:D:176:LEU:HD23	2.37	0.55
8:G:21:VAL:CG2	8:G:22:LEU:N	2.70	0.55
8:G:56:GLN:NE2	8:G:56:GLN:N	2.50	0.55
13:L:87:GLY:CA	13:L:98:TYR:HA	2.36	0.55
15:N:42:ILE:O	15:N:43:CYS:C	2.46	0.55
18:Q:13:ASP:O	18:Q:15:MET:N	2.36	0.55
21:T:75:ASN:O	21:T:76:ALA:C	2.46	0.55
1:A:255:G:O6	1:A:266:G:O6	2.23	0.54
1:A:632:A:C8	1:A:633:G:C8	2.94	0.54
1:A:686:U:O2	1:A:687:A:C8	2.60	0.54
1:A:838:G:N2	1:A:849:C:C2	2.75	0.54
1:A:878:G:H5''	9:H:89:PRO:O	2.07	0.54
1:A:943:U:O2'	1:A:944:G:H5'	2.06	0.54
1:A:990:C:H5''	1:A:1017:G:O3'	2.07	0.54
1:A:1176:A:H2'	1:A:1177:G:C8	2.43	0.54
1:A:1282:C:H2'	1:A:1283:G:O4'	2.07	0.54
8:G:14:PRO:HA	8:G:21:VAL:N	2.22	0.54
8:G:25:ALA:O	8:G:28:ASN:HB2	2.07	0.54
8:G:33:ASP:O	8:G:33:ASP:OD2	2.25	0.54
8:G:50:ILE:HG22	8:G:50:ILE:O	2.07	0.54
9:H:20:TYR:CE2	9:H:75:ARG:HD2	2.43	0.54
9:H:37:ARG:O	9:H:40:ALA:N	2.40	0.54
9:H:41:ARG:HB3	9:H:41:ARG:HH11	1.72	0.54
10:I:33:PHE:CD2	10:I:47:LEU:HD11	2.42	0.54
10:I:113:LYS:HD3	10:I:119:ALA:CA	2.31	0.54
12:K:26:ASN:O	12:K:55:LYS:HG3	2.07	0.54
13:L:89:ARG:HB3	13:L:89:ARG:NH1	2.22	0.54
1:A:110:C:C5	1:A:111:G:N7	2.75	0.54
1:A:827:U:C2	1:A:870:U:O4	2.60	0.54
1:A:902:G:H2'	1:A:903:G:H8	1.71	0.54
1:A:1124:G:H5''	11:J:36:GLY:HA3	1.89	0.54
1:A:1407:C:H2'	1:A:1408:A:C8	2.42	0.54
1:A:1421:G:H2'	1:A:1422:G:O4'	2.08	0.54
3:B:97:TRP:HZ2	3:B:102:LEU:HD13	1.72	0.54
7:F:52:ILE:O	7:F:53:ALA:HB3	2.08	0.54
10:I:33:PHE:C	10:I:35:GLU:H	2.11	0.54
10:I:43:ALA:N	10:I:74:ILE:HD13	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:J:58:ASP:O	11:J:59:SER:HB2	2.07	0.54
13:L:69:TYR:CG	13:L:70:ILE:N	2.74	0.54
17:P:71:ARG:NH1	17:P:71:ARG:HB2	2.21	0.54
19:R:36:ASN:CG	19:R:39:VAL:HG12	2.28	0.54
20:S:72:GLY:C	20:S:74:PHE:H	2.11	0.54
1:A:303:A:H2'	1:A:304:U:O4'	2.08	0.54
1:A:384:G:H2'	1:A:385:C:C6	2.42	0.54
1:A:437:U:O2	1:A:437:U:H2'	2.07	0.54
1:A:632:A:H2'	1:A:633:G:O4'	2.08	0.54
1:A:635:G:H2'	1:A:636:U:H6	1.71	0.54
1:A:1073:U:H3	1:A:1102:A:H61	1.56	0.54
1:A:1202:G:H2'	1:A:1203:C:O4'	2.07	0.54
1:A:1245:A:O2'	1:A:1246:C:H5'	2.07	0.54
1:A:1450:U:O2'	1:A:1451:A:H8	1.90	0.54
3:B:150:SER:O	3:B:153:ARG:HB2	2.07	0.54
9:H:4:ASP:CG	9:H:85:ARG:HH11	2.11	0.54
9:H:30:ARG:O	9:H:33:GLU:HB3	2.07	0.54
10:I:114:TYR:HD2	11:J:59:SER:O	1.90	0.54
17:P:6:LEU:HD12	17:P:6:LEU:N	2.22	0.54
18:Q:10:VAL:HG13	18:Q:19:VAL:HB	1.88	0.54
18:Q:90:ILE:O	18:Q:91:ARG:C	2.45	0.54
19:R:37:VAL:HB	19:R:41:LYS:CE	2.30	0.54
1:A:175:C:H2'	1:A:176:C:H6	1.72	0.54
1:A:317:G:H2'	1:A:318:G:H8	1.71	0.54
1:A:596:C:O2'	1:A:597:G:H5'	2.07	0.54
1:A:935:A:H61	8:G:3:ARG:HG2	1.71	0.54
1:A:1169:A:H2'	1:A:1171:G:H5'	1.90	0.54
1:A:1205:U:H2'	1:A:1206:G:C8	2.42	0.54
1:A:1354:C:H2'	1:A:1355:G:C8	2.34	0.54
3:B:24:TRP:HZ3	3:B:29:ALA:HB2	1.73	0.54
3:B:74:LYS:O	3:B:75:LYS:C	2.45	0.54
4:C:153:VAL:HG22	4:C:198:VAL:CG2	2.37	0.54
5:D:100:ARG:HH12	5:D:137:SER:HA	1.73	0.54
6:E:93:PRO:HG2	9:H:105:ARG:CZ	2.36	0.54
6:E:99:GLY:N	6:E:117:ASP:OD1	2.32	0.54
10:I:101:PHE:N	10:I:102:LEU:HD23	2.23	0.54
11:J:5:ARG:O	11:J:98:ILE:HG23	2.07	0.54
11:J:20:ALA:HB2	11:J:96:ILE:CD1	2.38	0.54
13:L:42:THR:CG2	13:L:52:LEU:HB3	2.35	0.54
15:N:24:CYS:SG	15:N:40:CYS:HB2	2.47	0.54
16:O:46:HIS:ND1	16:O:46:HIS:N	2.55	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:R:59:SER:C	19:R:61:LYS:N	2.60	0.54
20:S:16:LEU:C	20:S:19:VAL:HG12	2.27	0.54
20:S:43:GLU:C	20:S:45:VAL:H	2.10	0.54
21:T:36:LEU:O	21:T:39:LYS:HB3	2.06	0.54
1:A:166:G:H2'	1:A:167:G:C8	2.38	0.54
1:A:243:A:C2	1:A:246:A:C8	2.95	0.54
3:B:18:GLY:CA	3:B:41:ILE:HG23	2.37	0.54
3:B:79:ASP:O	3:B:82:ARG:HB3	2.07	0.54
7:F:71:ARG:O	7:F:74:ASP:N	2.32	0.54
8:G:9:VAL:O	8:G:11:GLN:N	2.40	0.54
8:G:155:ARG:O	8:G:156:TRP:HB3	2.08	0.54
14:M:11:ARG:HD2	14:M:12:ASN:N	2.22	0.54
14:M:79:LYS:C	14:M:79:LYS:HD3	2.28	0.54
1:A:190:C:O2'	1:A:190(A):C:H5'	2.08	0.54
1:A:773:G:C6	1:A:774:G:N7	2.76	0.54
1:A:1211:U:H1'	1:A:1213:A:C2	2.43	0.54
1:A:1244:C:C2	1:A:1294:G:N2	2.76	0.54
1:A:1362:C:H5'	1:A:1363:A:OP1	2.08	0.54
1:A:1466:C:H2'	1:A:1467:G:O4'	2.07	0.54
4:C:112:SER:C	4:C:114:PRO:CD	2.76	0.54
4:C:134:ILE:O	4:C:137:ALA:HB3	2.08	0.54
5:D:24:GLU:HB2	5:D:112:VAL:HG11	1.90	0.54
5:D:43:HIS:N	5:D:43:HIS:CD2	2.76	0.54
6:E:10:MET:SD	6:E:10:MET:C	2.85	0.54
9:H:4:ASP:OD1	9:H:85:ARG:NH1	2.41	0.54
12:K:43:SER:HA	12:K:47:VAL:HG11	1.89	0.54
13:L:50:SER:O	13:L:51:ALA:HB2	2.08	0.54
14:M:94:ARG:HG3	14:M:94:ARG:NH1	2.23	0.54
16:O:34:LEU:C	16:O:34:LEU:HD23	2.28	0.54
17:P:50:LYS:O	17:P:51:VAL:CG2	2.56	0.54
20:S:15:LEU:HD12	20:S:16:LEU:N	2.23	0.54
21:T:70:SER:O	21:T:72:LEU:N	2.40	0.54
21:T:77:ALA:O	21:T:78:ALA:C	2.46	0.54
21:T:86:ARG:O	21:T:89:ARG:N	2.41	0.54
1:A:254:G:O2'	1:A:255:G:H5'	2.06	0.54
1:A:376:G:P	17:P:67:THR:HG21	2.48	0.54
1:A:573:A:C6	1:A:574:A:N1	2.76	0.54
1:A:868:C:H2'	1:A:869:G:O4'	2.07	0.54
1:A:1103:C:C5'	3:B:98:LEU:HD12	2.37	0.54
1:A:1323:G:H2'	1:A:1324:A:C8	2.43	0.54
1:A:1421:G:C2	1:A:1422:G:H1'	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:187:LEU:HD23	3:B:201:ILE:O	2.08	0.54
3:B:237:ALA:O	3:B:239:VAL:N	2.40	0.54
4:C:13:GLY:O	4:C:14:ILE:HD13	2.07	0.54
4:C:77:ILE:HG22	4:C:78:GLY:N	2.22	0.54
5:D:34:GLU:O	5:D:35:ARG:CB	2.56	0.54
8:G:95:ARG:O	8:G:96:GLN:C	2.46	0.54
9:H:11:THR:HG23	9:H:14:ARG:NH1	2.23	0.54
11:J:13:HIS:CG	11:J:14:LYS:N	2.76	0.54
12:K:33:THR:OG1	12:K:37:GLY:O	2.26	0.54
19:R:21:LYS:O	19:R:22:VAL:C	2.45	0.54
20:S:22:LEU:HD22	20:S:28:LYS:HD2	1.90	0.54
21:T:64:ASP:O	21:T:67:ALA:HB3	2.06	0.54
22:V:17:THR:O	22:V:22:ARG:HD3	2.08	0.54
1:A:43:C:O5'	17:P:12:LYS:HD3	2.07	0.54
1:A:276:G:O3'	18:Q:68:ARG:NH2	2.39	0.54
1:A:647:C:H2'	1:A:648:A:C8	2.42	0.54
1:A:886:G:H1	1:A:911:U:H3	1.55	0.54
1:A:1020:U:H2'	1:A:1021:G:O4'	2.08	0.54
3:B:82:ARG:HA	3:B:92:TYR:HE1	1.68	0.54
3:B:140:HIS:O	3:B:141:GLU:C	2.46	0.54
3:B:180:LEU:HB2	3:B:182:ILE:CD1	2.37	0.54
4:C:134:ILE:HG23	4:C:151:VAL:HG11	1.90	0.54
5:D:52:SER:C	5:D:54:TYR:N	2.60	0.54
8:G:18:TYR:OH	8:G:58:PRO:HG2	2.07	0.54
8:G:108:ALA:O	8:G:119:ARG:HB3	2.07	0.54
8:G:131:LYS:O	8:G:131:LYS:HG3	2.08	0.54
10:I:37:PHE:O	10:I:39:GLY:N	2.41	0.54
12:K:59:TYR:O	12:K:62:GLN:HB2	2.08	0.54
13:L:24:VAL:O	13:L:24:VAL:HG12	2.06	0.54
13:L:78:GLN:C	13:L:80:HIS:H	2.11	0.54
14:M:74:VAL:HA	14:M:77:ASN:HB3	1.90	0.54
15:N:4:LYS:C	15:N:6:LEU:H	2.10	0.54
18:Q:80:GLY:O	18:Q:81:ARG:HB2	2.06	0.54
18:Q:96:GLN:HB3	18:Q:103:GLY:CA	2.38	0.54
20:S:40:ILE:O	20:S:67:VAL:HG13	2.07	0.54
1:A:59:A:C3'	1:A:331:G:H22	2.20	0.54
1:A:73:C:H2'	1:A:74:C:H6	1.72	0.54
1:A:118:U:O4	1:A:288:A:H2'	2.07	0.54
1:A:428:G:O4'	1:A:430:A:C8	2.61	0.54
1:A:860:A:C6	1:A:861:G:C4	2.96	0.54
1:A:979:C:C2'	1:A:980:C:H5'	2.34	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1130:A:C2	1:A:1146:A:C6	2.96	0.54
1:A:1326:C:O2'	1:A:1327:C:H5'	2.07	0.54
3:B:181:PHE:N	3:B:181:PHE:CD1	2.75	0.54
4:C:173:VAL:O	4:C:175:LEU:N	2.37	0.54
4:C:188:LEU:O	4:C:189:ALA:HB3	2.07	0.54
5:D:57:ARG:NH2	6:E:107:ARG:HD3	2.22	0.54
5:D:64:LEU:CB	5:D:198:VAL:HG21	2.29	0.54
6:E:98:THR:HG22	6:E:99:GLY:O	2.08	0.54
7:F:99:ALA:O	19:R:28:GLU:HA	2.07	0.54
8:G:141:VAL:HG13	8:G:142:GLU:N	2.22	0.54
13:L:41:ARG:CG	13:L:42:THR:N	2.70	0.54
13:L:117:ARG:O	13:L:118:SER:C	2.46	0.54
17:P:39:TYR:CE2	17:P:41:PRO:HA	2.43	0.54
18:Q:69:LYS:H	18:Q:70:ARG:NH1	2.05	0.54
20:S:30:LEU:HD23	20:S:30:LEU:C	2.28	0.54
20:S:49:ILE:CG1	20:S:50:ALA:H	2.20	0.54
21:T:30:LYS:HG2	21:T:34:LYS:HE3	1.90	0.54
1:A:132:C:O2'	1:A:133:U:H5'	2.08	0.54
1:A:141:A:O2'	1:A:142:G:H5'	2.08	0.54
1:A:232:G:H2'	1:A:233:C:H6	1.72	0.54
1:A:323:U:H2'	1:A:324:G:O4'	2.07	0.54
1:A:401:C:H2'	1:A:402:G:H8	1.73	0.54
1:A:621:A:H2'	1:A:622:A:C8	2.42	0.54
1:A:885:G:H2'	1:A:886:G:H8	1.72	0.54
1:A:996:A:H2'	1:A:997:U:C6	2.43	0.54
1:A:1147:C:H4'	10:I:5:TYR:HE1	1.73	0.54
1:A:1436:U:O2'	1:A:1437:C:H5'	2.08	0.54
4:C:52:LEU:HD11	4:C:118:GLN:NE2	2.22	0.54
4:C:78:GLY:HA3	4:C:82:GLU:HB3	1.88	0.54
4:C:188:LEU:O	4:C:189:ALA:CB	2.55	0.54
8:G:17:VAL:CG1	8:G:18:TYR:H	2.08	0.54
11:J:22:LYS:HE2	11:J:23:ILE:HD11	1.89	0.54
11:J:39:PRO:O	11:J:69:ASN:O	2.26	0.54
11:J:54:PHE:HD2	11:J:54:PHE:C	2.11	0.54
13:L:113:ARG:HD3	13:L:114:LYS:N	2.23	0.54
21:T:30:LYS:HD3	21:T:80:ARG:HH22	1.73	0.54
1:A:105:G:O2'	1:A:106:C:H5'	2.08	0.53
1:A:357:G:C2	1:A:358:U:C5	2.96	0.53
1:A:601:C:H2'	1:A:602:A:H8	1.71	0.53
1:A:663:A:HO2'	1:A:664:G:H5'	1.71	0.53
1:A:787:A:C5	1:A:788:U:N3	2.76	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1124:G:H5''	11:J:35:SER:O	2.09	0.53
1:A:1269:A:N1	1:A:1312:G:O2'	2.38	0.53
3:B:56:ARG:NH1	3:B:56:ARG:HB2	2.23	0.53
3:B:71:VAL:HG22	3:B:93:VAL:CG2	2.38	0.53
5:D:36:ARG:N	5:D:37:PRO:HD3	2.23	0.53
5:D:162:LEU:HD13	5:D:181:MET:CE	2.37	0.53
6:E:78:HIS:CD2	9:H:104:ARG:CD	2.86	0.53
6:E:97:GLY:O	6:E:99:GLY:N	2.41	0.53
6:E:148:VAL:HG21	9:H:107:LEU:CD1	2.38	0.53
9:H:12:ARG:NH1	9:H:27:PRO:HD3	2.23	0.53
11:J:38:ILE:HD12	11:J:71:LEU:HD12	1.90	0.53
12:K:95:ILE:O	12:K:99:GLN:HG2	2.07	0.53
14:M:34:LEU:HD12	14:M:34:LEU:N	2.23	0.53
16:O:88:ARG:HD3	16:O:88:ARG:C	2.28	0.53
17:P:43:LYS:CB	17:P:48:TRP:NE1	2.71	0.53
19:R:22:VAL:HG12	19:R:23:LYS:N	2.22	0.53
19:R:36:ASN:O	19:R:37:VAL:C	2.47	0.53
1:A:74:C:H2'	1:A:75:G:C5'	2.35	0.53
1:A:271:C:H2'	1:A:272:C:H6	1.73	0.53
1:A:400:C:O2'	1:A:401:C:H5'	2.08	0.53
1:A:403:C:H4'	5:D:122:ARG:HH11	1.73	0.53
1:A:562:C:H1'	13:L:15:ARG:HB3	1.91	0.53
1:A:865:A:N6	1:A:866:C:H42	2.06	0.53
1:A:1068:G:N7	1:A:1094:G:H2'	2.23	0.53
1:A:1077:G:H21	1:A:1079:G:H3'	1.65	0.53
1:A:1542:U:O2'	1:A:1543:C:H5'	2.08	0.53
3:B:96:ARG:O	3:B:98:LEU:CD2	2.56	0.53
3:B:163:PHE:HA	3:B:185:ILE:HB	1.89	0.53
5:D:177:ASP:OD1	5:D:182:LYS:HB2	2.07	0.53
8:G:5:ARG:C	8:G:7:ALA:H	2.11	0.53
8:G:139:GLU:O	8:G:143:ARG:HG3	2.07	0.53
9:H:11:THR:HG23	9:H:14:ARG:HH12	1.72	0.53
11:J:6:ILE:CD1	11:J:73:ASP:H	2.19	0.53
15:N:3:ARG:C	15:N:7:ILE:HG13	2.29	0.53
17:P:21:VAL:O	17:P:33:ILE:CG1	2.48	0.53
17:P:75:ARG:HA	17:P:80:PHE:CD1	2.43	0.53
20:S:20:LEU:O	20:S:20:LEU:HD12	2.07	0.53
1:A:116:A:H2'	1:A:117:G:O4'	2.07	0.53
1:A:277:C:C5'	18:Q:68:ARG:HH21	2.22	0.53
1:A:479:C:H5	1:A:480:U:C4	2.26	0.53
1:A:637:G:O2'	1:A:638:G:H5'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:923:A:O2'	1:A:924:C:H5'	2.09	0.53
1:A:1123:A:H4'	11:J:37:PRO:HG2	1.89	0.53
1:A:1152:A:H5''	11:J:13:HIS:CD2	2.42	0.53
1:A:1342:C:H1'	10:I:124:GLN:HG2	1.90	0.53
1:A:1454:G:H2'	1:A:1455:G:C8	2.43	0.53
3:B:76:GLN:O	3:B:208:ILE:HG13	2.09	0.53
4:C:24:ALA:HB1	4:C:28:GLN:HE21	1.74	0.53
4:C:136:GLN:O	4:C:140:ARG:HG3	2.08	0.53
4:C:198:VAL:HG12	4:C:199:LYS:N	2.23	0.53
5:D:13:ARG:HH21	5:D:40:PRO:HA	1.73	0.53
11:J:54:PHE:C	11:J:54:PHE:CD2	2.81	0.53
12:K:62:GLN:O	12:K:63:LEU:C	2.46	0.53
17:P:19:ILE:HG22	17:P:36:ILE:HG13	1.90	0.53
18:Q:66:SER:HB3	18:Q:69:LYS:HB3	1.89	0.53
18:Q:92:ARG:C	18:Q:94:ASN:H	2.09	0.53
18:Q:98:LEU:HD12	18:Q:98:LEU:H	1.74	0.53
21:T:61:SER:O	21:T:62:LEU:C	2.47	0.53
1:A:164:U:O2'	1:A:165:C:H5'	2.08	0.53
1:A:192:U:H2'	1:A:193:C:H6	1.74	0.53
1:A:815:A:H62	1:A:1509:C:H1'	1.72	0.53
1:A:923:A:C2	1:A:1395:C:N3	2.76	0.53
3:B:130:ARG:HE	3:B:134:GLU:HG2	1.73	0.53
5:D:38:TYR:HB2	5:D:39:PRO:CD	2.33	0.53
8:G:85:TYR:HD1	8:G:154:TYR:HH	1.55	0.53
9:H:9:MET:HE1	9:H:32:LYS:CA	2.38	0.53
10:I:79:LEU:O	10:I:82:ALA:HB3	2.08	0.53
11:J:22:LYS:HD2	11:J:23:ILE:HG12	1.90	0.53
12:K:21:ILE:HD13	12:K:94:ALA:HB3	1.89	0.53
15:N:26:ARG:NH2	15:N:43:CYS:HB2	2.23	0.53
19:R:16:PRO:HG2	19:R:19:LYS:HB3	1.90	0.53
21:T:44:ALA:HB3	21:T:91:LEU:HD22	1.90	0.53
1:A:120:A:H2'	1:A:122:G:N7	2.23	0.53
1:A:191:G:O2'	21:T:102:GLY:O	2.24	0.53
1:A:883:C:O2'	1:A:884:U:H5'	2.08	0.53
1:A:1048:G:O2'	1:A:1049:U:H3'	2.08	0.53
3:B:180:LEU:HB2	3:B:182:ILE:HD11	1.91	0.53
6:E:43:LEU:HD12	6:E:136:MET:CE	2.39	0.53
7:F:53:ALA:C	7:F:55:ASP:H	2.11	0.53
9:H:40:ALA:O	9:H:41:ARG:C	2.47	0.53
11:J:90:LEU:H	11:J:91:PRO:HD3	1.72	0.53
14:M:14:ARG:HG2	14:M:14:ARG:NH1	2.22	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:Q:29:HIS:O	18:Q:31:LEU:N	2.42	0.53
18:Q:59:ILE:HG22	18:Q:71:PHE:CD1	2.43	0.53
18:Q:64:PRO:HA	18:Q:70:ARG:HG2	1.90	0.53
1:A:112:G:C5'	1:A:389:A:H4'	2.35	0.53
1:A:295:C:H2'	1:A:296:U:C6	2.44	0.53
1:A:591:U:H2'	1:A:592:G:C8	2.41	0.53
1:A:951:G:C2'	1:A:952:U:H5'	2.39	0.53
1:A:1459:C:O2'	1:A:1460:A:H5'	2.08	0.53
3:B:189:ASP:CG	3:B:205:ASP:HB3	2.29	0.53
4:C:29:TYR:N	4:C:32:LEU:HD12	2.19	0.53
5:D:43:HIS:CD2	5:D:43:HIS:H	2.24	0.53
5:D:68:TYR:OH	5:D:196:LEU:HD11	2.09	0.53
6:E:39:GLY:CA	6:E:71:LEU:HD12	2.39	0.53
6:E:67:VAL:HG11	6:E:139:LEU:HB2	1.91	0.53
6:E:130:ASN:O	6:E:131:ILE:C	2.47	0.53
6:E:144:THR:HB	6:E:147:ASP:OD2	2.08	0.53
8:G:48:LYS:O	8:G:52:GLU:HB2	2.08	0.53
9:H:95:VAL:CG1	9:H:96:GLY:N	2.72	0.53
14:M:4:ILE:CG2	14:M:5:ALA:H	2.12	0.53
14:M:18:ALA:O	14:M:20:THR:N	2.40	0.53
16:O:62:GLN:HA	16:O:65:ARG:HD3	1.91	0.53
18:Q:53:LEU:HD12	18:Q:54:GLY:H	1.68	0.53
1:A:445:G:H2'	1:A:446:G:C8	2.44	0.53
1:A:613:C:H2'	1:A:614:A:H8	1.73	0.53
1:A:1148:U:H5'	10:I:9:ARG:NH1	2.24	0.53
1:A:1327:C:H5''	22:V:20:LYS:CB	2.39	0.53
1:A:1487:G:O2'	1:A:1488:G:H5'	2.08	0.53
3:B:182:ILE:O	3:B:183:PRO:C	2.46	0.53
4:C:29:TYR:C	4:C:31:HIS:H	2.13	0.53
4:C:114:PRO:HG3	4:C:185:GLY:HA3	1.91	0.53
4:C:130:VAL:HG11	4:C:157:ILE:CG2	2.39	0.53
5:D:13:ARG:NH1	5:D:38:TYR:CD1	2.71	0.53
5:D:59:ARG:O	5:D:62:GLN:N	2.42	0.53
6:E:27:ARG:HA	6:E:49:PRO:HA	1.90	0.53
6:E:39:GLY:N	6:E:71:LEU:HD12	2.23	0.53
6:E:152:ARG:O	9:H:64:LYS:NZ	2.37	0.53
8:G:125:MET:C	8:G:127:ALA:H	2.11	0.53
10:I:17:VAL:HG12	10:I:19:LEU:HD13	1.90	0.53
14:M:54:VAL:HA	14:M:57:ARG:HG2	1.91	0.53
15:N:37:PHE:HE2	15:N:53:LEU:HD13	1.74	0.53
16:O:2:PRO:HG2	16:O:3:ILE:N	2.20	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:O:70:LEU:HD12	16:O:78:TYR:CA	2.38	0.53
16:O:81:LEU:HD23	16:O:81:LEU:O	2.09	0.53
1:A:192:U:O2	21:T:60:GLU:OE1	2.26	0.53
1:A:377:G:H5'	17:P:5:ARG:NH1	2.24	0.53
1:A:1017:G:H2'	1:A:1018:C:O4'	2.09	0.53
1:A:1102:A:C6	1:A:1103:C:N4	2.77	0.53
1:A:1194:U:H2'	1:A:1195:C:H6	1.71	0.53
1:A:1390:U:H2'	1:A:1391:U:H6	1.74	0.53
1:A:1421:G:N2	1:A:1422:G:H1'	2.24	0.53
1:A:1505:G:H5''	1:A:1506:U:OP1	2.09	0.53
3:B:169:LYS:C	3:B:169:LYS:HD3	2.29	0.53
4:C:71:ALA:HA	4:C:106:VAL:CB	2.30	0.53
8:G:154:TYR:O	8:G:156:TRP:N	2.41	0.53
11:J:25:GLU:CA	11:J:28:ARG:HG2	2.22	0.53
13:L:111:LYS:O	13:L:112:ASP:HB3	2.09	0.53
17:P:39:TYR:CE2	17:P:41:PRO:N	2.77	0.53
1:A:254:G:H5''	18:Q:69:LYS:HD3	1.91	0.53
1:A:475:G:H2'	1:A:475:G:N3	2.23	0.53
1:A:642:A:C2'	1:A:643:C:H5'	2.38	0.53
1:A:697:U:H2'	1:A:698:G:H5'	1.91	0.53
2:Z:2:U:H2'	2:Z:3:U:O4'	2.08	0.53
3:B:46:LYS:NZ	3:B:46:LYS:HB2	2.23	0.53
4:C:47:LEU:HD23	4:C:70:VAL:CG2	2.38	0.53
4:C:139:GLN:HE21	4:C:139:GLN:CA	2.22	0.53
7:F:14:LEU:HB2	7:F:19:LEU:HD12	1.91	0.53
12:K:48:ILE:HD12	12:K:64:ALA:HA	1.91	0.53
18:Q:41:LYS:C	18:Q:42:TYR:HD2	2.12	0.53
21:T:33:ILE:HD13	21:T:63:ILE:HA	1.91	0.53
21:T:89:ARG:C	21:T:91:LEU:H	2.12	0.53
1:A:285:G:N3	1:A:286:G:C8	2.78	0.53
1:A:541:G:O3'	5:D:41:GLY:HA2	2.09	0.53
1:A:1099:G:H2'	1:A:1100:C:O4'	2.09	0.53
1:A:1307:U:H2'	1:A:1308:U:O4'	2.09	0.53
1:A:1310:G:H2'	1:A:1311:G:C8	2.44	0.53
4:C:31:HIS:N	4:C:31:HIS:CD2	2.77	0.53
5:D:75:PHE:CE2	5:D:93:PHE:CZ	2.97	0.53
5:D:92:VAL:O	5:D:96:LEU:HD13	2.09	0.53
11:J:40:LEU:HD23	11:J:41:PRO:HD2	1.91	0.53
14:M:54:VAL:HG13	14:M:55:ARG:H	1.73	0.53
15:N:26:ARG:CZ	15:N:47:LEU:HD23	2.39	0.53
17:P:15:PRO:CG	17:P:41:PRO:HG2	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:P:50:LYS:HG2	17:P:51:VAL:H	1.73	0.53
19:R:59:SER:O	19:R:63:GLN:N	2.42	0.53
21:T:14:LYS:O	21:T:17:ARG:N	2.42	0.53
1:A:179:A:H2'	1:A:180:U:H6	1.70	0.52
1:A:344:A:H5''	1:A:345:C:H5	1.74	0.52
1:A:564:C:C5	18:Q:31:LEU:HD21	2.44	0.52
1:A:902:G:O2'	1:A:903:G:H5'	2.09	0.52
1:A:1054:C:OP2	1:A:1197:G:OP2	2.27	0.52
1:A:1512:U:H2'	1:A:1513:A:H8	1.73	0.52
5:D:9:CYS:CB	5:D:22:LYS:HD3	2.38	0.52
6:E:51:VAL:O	6:E:54:ALA:HB3	2.09	0.52
6:E:94:ALA:CB	6:E:98:THR:HG21	2.38	0.52
8:G:97:GLN:O	8:G:101:LEU:HG	2.09	0.52
10:I:45:ALA:O	10:I:48:GLU:HB3	2.08	0.52
11:J:62:HIS:C	15:N:59:ALA:HB3	2.29	0.52
1:A:168:G:C2'	1:A:169:C:H5'	2.39	0.52
1:A:171:A:O2'	1:A:172:A:H5'	2.09	0.52
1:A:448:A:C2	1:A:449:C:C2	2.97	0.52
1:A:629:G:H2'	1:A:630:G:H8	1.74	0.52
1:A:664:G:N2	1:A:742:G:C2	2.78	0.52
1:A:710:G:H2'	1:A:711:G:H8	1.74	0.52
1:A:1173:G:O2'	1:A:1174:G:H5'	2.09	0.52
3:B:217:ARG:HA	3:B:220:ASP:CG	2.30	0.52
5:D:25:ARG:O	5:D:25:ARG:HD3	2.09	0.52
5:D:35:ARG:HG2	5:D:35:ARG:NH1	2.24	0.52
5:D:124:GLY:C	5:D:126:ILE:N	2.63	0.52
6:E:8:GLU:C	6:E:8:GLU:OE2	2.47	0.52
12:K:126:ARG:CG	12:K:126:ARG:NH1	2.69	0.52
13:L:117:ARG:HH11	13:L:117:ARG:HG3	1.74	0.52
14:M:14:ARG:O	14:M:17:VAL:HB	2.09	0.52
15:N:41:ARG:HG2	15:N:41:ARG:NH1	2.23	0.52
16:O:67:LEU:HD22	16:O:82:ILE:HD11	1.91	0.52
17:P:39:TYR:CD1	17:P:73:LEU:HD22	2.44	0.52
19:R:30:ASP:O	19:R:32:ARG:N	2.43	0.52
20:S:22:LEU:HD11	20:S:31:ILE:CG1	2.39	0.52
21:T:33:ILE:CG1	21:T:62:LEU:HD22	2.39	0.52
1:A:625:G:O2'	1:A:626:U:H5'	2.08	0.52
1:A:668:G:H1'	16:O:46:HIS:HD2	1.75	0.52
1:A:746:A:C2	1:A:747:C:C2	2.97	0.52
1:A:782:A:C6	1:A:801:U:C2	2.97	0.52
1:A:945:G:N1	1:A:1337:G:C2	2.77	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1040:U:H2'	1:A:1041:A:C8	2.36	0.52
1:A:1350:A:N6	1:A:1373:G:H21	2.07	0.52
4:C:43:LEU:HD13	4:C:68:VAL:CG2	2.36	0.52
4:C:122:GLU:O	4:C:125:GLU:N	2.39	0.52
5:D:178:VAL:C	5:D:180:GLY:N	2.62	0.52
6:E:11:ILE:HG12	6:E:33:VAL:HG23	1.91	0.52
6:E:91:LEU:HD22	6:E:120:THR:CG2	2.37	0.52
11:J:47:PHE:O	11:J:48:THR:HG23	2.10	0.52
11:J:55:LYS:O	11:J:56:HIS:HB2	2.10	0.52
13:L:54:LYS:HB3	13:L:70:ILE:HD12	1.91	0.52
17:P:33:ILE:O	17:P:34:GLU:HB2	2.08	0.52
1:A:406:G:H2'	1:A:407:G:H8	1.74	0.52
1:A:452:A:O2'	1:A:453:A:H8	1.93	0.52
1:A:513:C:H2'	1:A:514:C:C6	2.45	0.52
1:A:737:A:H1'	7:F:73:ASN:OD1	2.09	0.52
1:A:959:A:C3'	1:A:960:U:H5''	2.30	0.52
1:A:1036:G:H2'	1:A:1037:C:O4'	2.10	0.52
1:A:1184:G:C2	1:A:1185:G:C8	2.98	0.52
1:A:1193:G:H2'	1:A:1194:U:H6	1.74	0.52
4:C:121:ALA:O	4:C:124:ILE:HB	2.10	0.52
6:E:83:GLU:O	6:E:87:SER:O	2.27	0.52
10:I:34:ASN:N	10:I:34:ASN:ND2	2.56	0.52
10:I:55:ALA:HB1	10:I:58:ARG:HD2	1.92	0.52
11:J:55:LYS:HG3	11:J:56:HIS:N	2.24	0.52
11:J:64:GLU:N	15:N:59:ALA:HB2	2.24	0.52
13:L:89:ARG:HH11	13:L:89:ARG:HB2	1.74	0.52
14:M:23:TYR:HB2	14:M:67:GLU:OE2	2.10	0.52
14:M:81:LEU:HD22	14:M:81:LEU:N	2.24	0.52
17:P:26:ARG:NE	17:P:31:LYS:O	2.43	0.52
22:V:23:PRO:O	22:V:24:ARG:HD3	2.09	0.52
1:A:220:G:H2'	1:A:221:C:H6	1.74	0.52
1:A:767:A:H2'	1:A:768:A:O4'	2.10	0.52
1:A:1202:G:H21	15:N:27:CYS:HA	1.75	0.52
3:B:134:GLU:O	3:B:138:LEU:HG	2.10	0.52
4:C:87:LEU:HD22	4:C:90:GLU:OE1	2.10	0.52
4:C:188:LEU:O	4:C:197:GLY:HA2	2.10	0.52
6:E:126:ARG:CG	6:E:126:ARG:NH1	2.71	0.52
11:J:40:LEU:HD23	11:J:41:PRO:N	2.24	0.52
14:M:40:ASN:HD22	14:M:41:PRO:HD2	1.75	0.52
1:A:774:G:H1	1:A:805:C:H42	1.57	0.52
1:A:792:A:C4'	1:A:793:U:H5''	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1345:U:C4	1:A:1377:A:N3	2.77	0.52
3:B:7:VAL:C	3:B:8:LYS:HG3	2.30	0.52
4:C:14:ILE:CG2	4:C:15:THR:H	2.18	0.52
5:D:8:VAL:O	5:D:11:LEU:HG	2.10	0.52
5:D:100:ARG:HG3	5:D:100:ARG:HH11	1.74	0.52
7:F:19:LEU:CD2	7:F:23:LYS:HE3	2.38	0.52
8:G:120:ILE:H	8:G:120:ILE:CD1	2.20	0.52
9:H:21:LYS:O	9:H:22:GLU:HB3	2.09	0.52
10:I:64:THR:HG22	10:I:64:THR:O	2.08	0.52
11:J:42:THR:HG23	11:J:67:THR:C	2.29	0.52
12:K:54:ARG:HH11	12:K:54:ARG:CB	2.23	0.52
16:O:6:GLU:H	16:O:6:GLU:CD	2.12	0.52
18:Q:9:VAL:HG13	18:Q:55:ASP:O	2.09	0.52
19:R:59:SER:C	19:R:61:LYS:H	2.13	0.52
21:T:62:LEU:O	21:T:65:LYS:HB2	2.09	0.52
1:A:55:A:C2	1:A:56:U:C2	2.98	0.52
1:A:115:G:C2	1:A:313:A:C2	2.97	0.52
1:A:298:A:H2'	1:A:299:G:O4'	2.10	0.52
1:A:338:A:H2'	1:A:339:C:O4'	2.09	0.52
1:A:956:U:O2'	1:A:957:U:H5'	2.10	0.52
1:A:1526:G:H2'	1:A:1527:C:H6	1.73	0.52
4:C:29:TYR:H	4:C:32:LEU:CD1	2.20	0.52
4:C:89:GLU:C	4:C:91:LEU:H	2.13	0.52
4:C:120:VAL:C	4:C:124:ILE:HG13	2.30	0.52
5:D:191:ARG:O	5:D:194:LEU:N	2.38	0.52
6:E:11:ILE:HG21	6:E:31:LEU:HD13	1.91	0.52
8:G:14:PRO:HA	8:G:21:VAL:CA	2.40	0.52
8:G:57:GLU:O	8:G:59:LEU:N	2.43	0.52
11:J:77:PRO:HB2	11:J:82:ILE:HG12	1.90	0.52
14:M:66:LEU:N	14:M:66:LEU:HD12	2.24	0.52
19:R:59:SER:H	19:R:62:GLU:HB2	1.74	0.52
20:S:18:LYS:HG2	20:S:18:LYS:O	2.10	0.52
20:S:41:VAL:HB	20:S:42:PRO:HD2	1.92	0.52
22:V:6:ARG:NE	22:V:15:ARG:NH1	2.57	0.52
1:A:10:A:O2'	1:A:11:G:H5'	2.09	0.52
1:A:18:C:O2'	1:A:19:C:H5'	2.09	0.52
1:A:46:G:OP1	1:A:307:C:H4'	2.09	0.52
1:A:286:G:H2'	1:A:287:U:C6	2.43	0.52
1:A:445:G:H2'	1:A:446:G:O4'	2.10	0.52
1:A:521:G:O2'	1:A:522:C:H5'	2.10	0.52
1:A:538:G:C5'	13:L:114:LYS:HB2	2.27	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:962:C:O2'	1:A:963:G:H5'	2.10	0.52
3:B:32:ILE:HD12	3:B:32:ILE:H	1.75	0.52
6:E:50:GLU:HG3	6:E:52:PRO:HD2	1.91	0.52
8:G:22:LEU:O	8:G:25:ALA:HB3	2.10	0.52
16:O:17:ARG:CZ	16:O:77:ARG:HH11	2.21	0.52
18:Q:33:GLY:O	18:Q:34:LYS:C	2.48	0.52
1:A:382:A:C2	1:A:383:A:C4	2.97	0.52
1:A:409:G:OP1	5:D:24:GLU:O	2.27	0.52
1:A:619:U:O2	5:D:133:VAL:HG13	2.09	0.52
1:A:718:G:O5'	12:K:117:ASN:ND2	2.43	0.52
1:A:1007:C:H42	1:A:1022:G:H1	1.57	0.52
1:A:1126:U:O5'	1:A:1126:U:H6	1.93	0.52
1:A:1479:C:H2'	1:A:1480:G:H8	1.75	0.52
3:B:216:SER:C	3:B:218:ALA:N	2.56	0.52
4:C:180:ALA:CB	4:C:182:ILE:HG13	2.40	0.52
5:D:42:GLN:O	5:D:44:GLY:N	2.43	0.52
5:D:82:ALA:O	5:D:85:LYS:N	2.43	0.52
5:D:157:LEU:HA	5:D:160:GLN:CB	2.40	0.52
9:H:94:TYR:N	9:H:94:TYR:CD1	2.77	0.52
9:H:119:LEU:HD12	9:H:124:ALA:CA	2.39	0.52
10:I:42:ARG:O	10:I:44:VAL:N	2.42	0.52
18:Q:3:LYS:HB3	18:Q:60:ILE:HD11	1.92	0.52
19:R:40:LEU:O	19:R:41:LYS:C	2.48	0.52
21:T:41:ILE:O	21:T:44:ALA:N	2.43	0.52
1:A:128:G:C2	1:A:234:C:C2	2.97	0.52
1:A:226:G:O2'	1:A:227:G:H5'	2.09	0.52
1:A:231:G:C2	1:A:232:G:C8	2.98	0.52
1:A:303:A:O2'	1:A:304:U:H5'	2.08	0.52
1:A:538:G:OP1	13:L:113:ARG:HD3	2.10	0.52
1:A:542:G:H5'	5:D:41:GLY:CA	2.37	0.52
1:A:649:G:O2'	1:A:650:G:H5'	2.10	0.52
1:A:811:C:O2'	1:A:901:A:N1	2.41	0.52
1:A:1011:G:C2'	1:A:1012:U:H5'	2.40	0.52
1:A:1371:G:C4	1:A:1372:U:C6	2.98	0.52
3:B:74:LYS:O	3:B:78:GLN:N	2.43	0.52
4:C:27:LYS:HA	4:C:30:ARG:NH1	2.15	0.52
5:D:196:LEU:HD23	5:D:197:PRO:HD2	1.91	0.52
7:F:6:VAL:HG22	7:F:90:VAL:HG13	1.91	0.52
8:G:112:PRO:O	8:G:113:GLU:C	2.47	0.52
9:H:4:ASP:OD2	9:H:7:ALA:N	2.43	0.52
15:N:46:GLU:O	15:N:49:HIS:HB2	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:O:58:MET:O	16:O:59:MET:C	2.47	0.52
1:A:417:C:O2'	1:A:418:C:H5'	2.11	0.51
1:A:640:A:H2'	1:A:641:U:H5'	1.91	0.51
1:A:791:G:H2'	1:A:792:A:H5'	1.91	0.51
1:A:814:A:H2'	1:A:816:A:C5'	2.39	0.51
1:A:822:C:O2'	1:A:823:G:H5'	2.10	0.51
1:A:1243:C:OP2	22:V:10:ARG:NE	2.43	0.51
1:A:1254:C:N4	1:A:1283:G:H22	2.03	0.51
4:C:188:LEU:HD11	4:C:195:VAL:CG1	2.40	0.51
7:F:4:TYR:HD1	7:F:91:VAL:O	1.93	0.51
7:F:60:PHE:CZ	19:R:78:LEU:HD21	2.45	0.51
8:G:116:ALA:HA	8:G:119:ARG:CZ	2.41	0.51
11:J:38:ILE:HG13	11:J:71:LEU:HB2	1.92	0.51
16:O:50:HIS:O	16:O:53:HIS:N	2.44	0.51
17:P:39:TYR:CE2	17:P:41:PRO:CA	2.93	0.51
17:P:39:TYR:CD1	17:P:73:LEU:CD2	2.92	0.51
18:Q:61:GLU:HA	18:Q:71:PHE:CE1	2.44	0.51
21:T:41:ILE:HG12	21:T:88:VAL:HG22	1.91	0.51
21:T:70:SER:N	21:T:73:HIS:CD2	2.78	0.51
1:A:351:G:HO2'	1:A:352:C:C5'	2.22	0.51
1:A:415:A:H2'	1:A:416:G:C8	2.46	0.51
1:A:443:C:O2'	1:A:444:C:H5'	2.11	0.51
1:A:525:C:H2'	1:A:526:C:H6	1.75	0.51
1:A:604:G:C6	1:A:605:U:C4	2.99	0.51
1:A:830:G:H2'	1:A:831:U:O4'	2.10	0.51
1:A:1014:A:H2'	1:A:1015:A:C4	2.46	0.51
1:A:1384:C:H2'	1:A:1385:G:H8	1.74	0.51
3:B:20:GLU:HA	3:B:23:ARG:HH21	1.75	0.51
4:C:48:TYR:HA	4:C:52:LEU:HB3	1.91	0.51
4:C:203:PHE:HZ	4:C:206:GLU:OE2	1.93	0.51
5:D:10:ARG:HG2	5:D:11:LEU:HD23	1.91	0.51
5:D:64:LEU:HD23	5:D:198:VAL:CG1	2.34	0.51
5:D:171:GLY:O	5:D:173:TRP:N	2.42	0.51
6:E:34:VAL:N	6:E:42:GLY:O	2.43	0.51
9:H:112:LEU:HD12	9:H:112:LEU:N	2.19	0.51
11:J:40:LEU:HD13	11:J:69:ASN:CB	2.38	0.51
12:K:18:ARG:HB2	12:K:33:THR:CG2	2.29	0.51
12:K:23:ALA:HB3	12:K:86:GLY:O	2.10	0.51
13:L:38:THR:CG2	13:L:39:VAL:H	2.18	0.51
13:L:102:ARG:O	13:L:104:VAL:N	2.43	0.51
14:M:67:GLU:O	14:M:70:LEU:N	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:M:91:ARG:HB3	14:M:98:VAL:HG22	1.92	0.51
15:N:14:PRO:HG2	15:N:15:LYS:H	1.75	0.51
19:R:34:TYR:HE1	19:R:35:ARG:HE	1.58	0.51
19:R:39:VAL:CG1	19:R:40:LEU:N	2.58	0.51
20:S:5:LEU:O	20:S:6:LYS:HB2	2.11	0.51
1:A:79:G:O2'	1:A:80:G:H5'	2.11	0.51
1:A:89:C:H2'	1:A:90:U:H6	1.75	0.51
1:A:136:C:O2'	17:P:63:GLY:HA2	2.11	0.51
1:A:363:A:O2'	1:A:364:A:H5'	2.11	0.51
1:A:520:A:H62	1:A:529:G:H21	1.58	0.51
1:A:561:U:HO2'	1:A:562:C:P	2.33	0.51
1:A:893:C:H2'	1:A:894:G:C8	2.45	0.51
1:A:1069:C:O2'	1:A:1192:C:H1'	2.11	0.51
1:A:1251:A:H2'	1:A:1252:A:H8	1.75	0.51
1:A:1438:G:H2'	1:A:1439:C:H6	1.70	0.51
3:B:211:ILE:C	3:B:213:LEU:H	2.14	0.51
4:C:47:LEU:CD2	4:C:68:VAL:HG12	2.41	0.51
4:C:134:ILE:HG23	4:C:151:VAL:CG1	2.40	0.51
5:D:152:SER:O	5:D:155:LEU:HB2	2.10	0.51
6:E:144:THR:HG22	6:E:145:LYS:N	2.24	0.51
7:F:35:ALA:HA	7:F:67:MET:HB3	1.92	0.51
8:G:16:LEU:HD22	8:G:16:LEU:N	2.25	0.51
8:G:73:MET:HA	8:G:90:GLU:HA	1.92	0.51
9:H:95:VAL:HG11	9:H:100:ILE:HA	1.92	0.51
10:I:111:ARG:HG3	10:I:111:ARG:NH1	2.24	0.51
13:L:117:ARG:HG2	13:L:122:THR:OG1	2.10	0.51
16:O:78:TYR:CD2	16:O:79:ARG:N	2.79	0.51
17:P:58:TYR:O	17:P:61:SER:HB3	2.10	0.51
18:Q:92:ARG:HA	18:Q:95:TYR:CE1	2.45	0.51
19:R:16:PRO:CD	19:R:19:LYS:HD3	2.41	0.51
19:R:21:LYS:HZ1	19:R:54:ARG:HA	1.75	0.51
19:R:59:SER:O	19:R:61:LYS:N	2.43	0.51
22:V:13:ILE:HG22	22:V:14:TRP:N	2.25	0.51
1:A:16:A:O2'	1:A:17:U:H5'	2.09	0.51
1:A:82:U:H2'	1:A:83:U:O5'	2.09	0.51
1:A:293:G:C4	1:A:294:U:C5	2.97	0.51
1:A:475:G:C2	1:A:476:G:N7	2.78	0.51
1:A:668:G:O2'	1:A:669:U:H5'	2.11	0.51
1:A:673:G:H5''	7:F:87:ARG:HH11	1.75	0.51
1:A:736:C:C2	1:A:737:A:N7	2.79	0.51
1:A:1016:A:H2'	1:A:1017:G:O4'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1217:C:O2'	1:A:1218:C:H5'	2.11	0.51
1:A:1250:A:C4'	10:I:68:GLY:O	2.58	0.51
1:A:1267:C:O2'	22:V:20:LYS:HG3	2.11	0.51
1:A:1497:G:C8	1:A:1498:U:C5	2.98	0.51
3:B:71:VAL:CG1	3:B:170:GLU:HG2	2.40	0.51
4:C:29:TYR:HE2	4:C:33:LEU:HD22	1.75	0.51
4:C:113:ALA:O	4:C:114:PRO:C	2.48	0.51
5:D:13:ARG:NH2	5:D:40:PRO:HA	2.25	0.51
5:D:60:GLU:OE2	5:D:199:ASN:N	2.43	0.51
5:D:110:PHE:N	5:D:110:PHE:CD1	2.70	0.51
6:E:36:ASP:OD1	6:E:38:GLN:CB	2.58	0.51
7:F:33:TYR:CD1	7:F:75:LEU:HD23	2.46	0.51
9:H:36:LEU:CD1	9:H:59:LEU:HD22	2.40	0.51
9:H:44:PHE:HE2	9:H:109:ILE:HD13	1.75	0.51
9:H:125:ARG:O	9:H:128:GLY:N	2.44	0.51
15:N:7:ILE:O	15:N:7:ILE:HG22	2.11	0.51
1:A:392:G:H2'	1:A:393:A:H8	1.74	0.51
1:A:420:U:O2'	1:A:421:U:H5''	2.11	0.51
1:A:691:G:O6	12:K:55:LYS:HD3	2.10	0.51
1:A:1056:U:H2'	1:A:1057:G:H8	1.76	0.51
1:A:1314:C:OP2	20:S:6:LYS:HD2	2.11	0.51
1:A:1361(A):C:C2'	1:A:1362:C:H5''	2.40	0.51
2:Z:1:U:H2'	2:Z:2:U:C6	2.46	0.51
3:B:24:TRP:HA	3:B:190:THR:HG23	1.92	0.51
3:B:44:LEU:CD1	3:B:45:GLN:H	2.21	0.51
3:B:163:PHE:HE2	3:B:215:LEU:HG	1.76	0.51
4:C:113:ALA:HB2	4:C:202:ILE:CD1	2.39	0.51
4:C:148:GLY:HA2	4:C:171:GLY:O	2.10	0.51
5:D:9:CYS:SG	5:D:22:LYS:HE2	2.51	0.51
5:D:110:PHE:CE2	5:D:148:VAL:HG22	2.44	0.51
8:G:23:VAL:HG22	8:G:43:PHE:CE2	2.45	0.51
9:H:53:VAL:O	9:H:54:ASP:HB3	2.10	0.51
10:I:80:GLY:O	10:I:84:ALA:N	2.43	0.51
10:I:111:ARG:O	10:I:113:LYS:HD2	2.10	0.51
11:J:51:ARG:NE	11:J:61:GLU:HB2	2.26	0.51
13:L:54:LYS:CB	13:L:70:ILE:HD12	2.41	0.51
14:M:39:ILE:HD11	14:M:52:GLU:O	2.10	0.51
18:Q:8:GLY:CA	18:Q:22:LEU:O	2.59	0.51
21:T:53:LEU:O	21:T:54:LYS:C	2.48	0.51
21:T:55:ILE:O	21:T:57:ARG:N	2.44	0.51
1:A:254:G:H5''	18:Q:69:LYS:HD2	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:376:G:C4	1:A:389:A:C2	2.99	0.51
1:A:476:G:O2'	1:A:477:G:H5'	2.11	0.51
1:A:1522:U:O2'	1:A:1523:G:H5'	2.11	0.51
3:B:169:LYS:CD	3:B:170:GLU:N	2.74	0.51
4:C:12:LEU:HD21	15:N:49:HIS:O	2.11	0.51
4:C:180:ALA:HB3	4:C:182:ILE:HG13	1.93	0.51
5:D:61:LYS:HG3	5:D:207:TYR:HE1	1.76	0.51
5:D:106:TYR:C	5:D:108:LEU:N	2.62	0.51
5:D:153:ARG:HH11	5:D:153:ARG:HG3	1.76	0.51
6:E:15:ARG:O	6:E:16:THR:CG2	2.58	0.51
6:E:78:HIS:HD2	9:H:104:ARG:CD	2.21	0.51
8:G:71:PRO:O	8:G:96:GLN:OE1	2.29	0.51
10:I:104:ARG:HD3	10:I:105:ASP:N	2.25	0.51
11:J:4:ILE:HD11	11:J:74:ILE:HD13	1.93	0.51
11:J:35:SER:HB2	11:J:72:VAL:O	2.10	0.51
12:K:44:SER:H	12:K:47:VAL:HB	1.76	0.51
22:V:12:LYS:CB	22:V:22:ARG:HD2	2.40	0.51
1:A:131:C:H1'	1:A:262:A:N3	2.26	0.51
1:A:184:G:C4'	1:A:224:C:H4'	2.41	0.51
1:A:363:A:C5	13:L:31:PRO:HD2	2.45	0.51
1:A:412:A:H4'	1:A:413:G:C8	2.46	0.51
1:A:552:U:H4'	13:L:86:ARG:O	2.11	0.51
1:A:683:G:O2'	1:A:684:A:H5'	2.10	0.51
1:A:1142:G:H3'	1:A:1143:G:H8	1.75	0.51
1:A:1249:C:H2'	1:A:1250:A:H5'	1.91	0.51
1:A:1258:G:H1	1:A:1277:C:H42	1.58	0.51
1:A:1292:U:O2'	1:A:1293:G:H5'	2.10	0.51
1:A:1368:G:OP2	10:I:112:LYS:CD	2.58	0.51
1:A:1448:C:N3	1:A:1449:C:C5	2.78	0.51
3:B:79:ASP:O	3:B:82:ARG:N	2.37	0.51
4:C:123:GLN:HE22	4:C:140:ARG:HH22	1.59	0.51
4:C:150:LYS:HG3	4:C:169:ALA:HB2	1.92	0.51
6:E:51:VAL:O	6:E:54:ALA:N	2.44	0.51
8:G:16:LEU:H	8:G:16:LEU:CD2	2.23	0.51
10:I:48:GLU:CB	10:I:51:ARG:HH21	2.20	0.51
12:K:52:GLY:O	12:K:55:LYS:HD2	2.10	0.51
15:N:26:ARG:HH21	15:N:43:CYS:CB	2.22	0.51
16:O:12:ILE:C	16:O:14:GLU:H	2.14	0.51
18:Q:45:HIS:HB3	18:Q:72:ARG:HG2	1.92	0.51
19:R:22:VAL:O	19:R:25:THR:N	2.42	0.51
20:S:49:ILE:CG1	20:S:50:ALA:N	2.71	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:T:46:GLU:CG	21:T:48:LYS:HE2	2.41	0.51
1:A:481:G:H2'	1:A:483:C:H41	1.75	0.51
1:A:785:G:H1'	1:A:798:G:N2	2.25	0.51
1:A:955:U:O2'	1:A:956:U:H5'	2.11	0.51
1:A:1197:G:OP1	1:A:1198:G:OP2	2.29	0.51
1:A:1238:A:C2	1:A:1241:G:N3	2.78	0.51
1:A:1347:G:C6	10:I:107:ARG:CZ	2.94	0.51
5:D:178:VAL:O	5:D:180:GLY:N	2.43	0.51
7:F:82:ARG:O	7:F:84:ASN:N	2.44	0.51
8:G:51:GLN:OE1	8:G:51:GLN:HA	2.11	0.51
9:H:2:LEU:HD23	9:H:2:LEU:C	2.31	0.51
9:H:9:MET:HG3	9:H:13:ILE:HD11	1.92	0.51
15:N:11:LYS:C	15:N:13:THR:H	2.14	0.51
17:P:38:TYR:CE2	17:P:50:LYS:HB3	2.45	0.51
19:R:52:PRO:O	19:R:56:THR:HG23	2.10	0.51
20:S:44:MET:HA	20:S:47:HIS:HD2	1.75	0.51
20:S:62:ILE:HG13	20:S:63:THR:N	2.25	0.51
1:A:601:C:H2'	1:A:602:A:C8	2.46	0.51
1:A:969:A:O2'	1:A:970:C:H5'	2.10	0.51
1:A:1073:U:OP1	6:E:57:LYS:HE2	2.10	0.51
1:A:1262:C:H2'	1:A:1263:C:C6	2.45	0.51
1:A:1299:A:C8	1:A:1301:U:H1'	2.45	0.51
3:B:132:LYS:O	3:B:132:LYS:HG2	2.10	0.51
3:B:178:ARG:NH2	9:H:68:ARG:HH21	2.08	0.51
4:C:22:TRP:CD1	4:C:59:ARG:HG2	2.45	0.51
5:D:35:ARG:HG2	5:D:35:ARG:HH11	1.76	0.51
6:E:19:MET:HA	6:E:19:MET:CE	2.41	0.51
10:I:108:VAL:CG1	10:I:109:VAL:H	2.11	0.51
11:J:81:THR:HA	11:J:84:GLN:NE2	2.21	0.51
14:M:31:LYS:C	14:M:33:ALA:H	2.13	0.51
14:M:59:TYR:O	14:M:63:THR:HG22	2.11	0.51
21:T:12:ALA:HA	21:T:14:LYS:HZ2	1.74	0.51
1:A:658:G:O2'	1:A:659:U:H5'	2.11	0.51
1:A:736:C:OP1	19:R:68:LYS:HD3	2.10	0.51
1:A:1101:A:H4'	1:A:1102:A:O5'	2.10	0.51
1:A:1109:C:H2'	1:A:1110:A:C8	2.46	0.51
1:A:1118:C:OP1	10:I:104:ARG:NH1	2.44	0.51
1:A:1311:G:H1	1:A:1326:C:H42	1.57	0.51
3:B:10:LEU:C	3:B:12:GLU:N	2.64	0.51
3:B:48:MET:O	3:B:51:LEU:HB2	2.11	0.51
4:C:58:GLU:HB3	11:J:92:THR:HG21	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:59:ARG:NE	5:D:59:ARG:HA	2.26	0.51
5:D:128:VAL:O	5:D:129:ASN:HB2	2.10	0.51
6:E:26:PHE:CD1	6:E:26:PHE:N	2.79	0.51
6:E:105:VAL:HB	6:E:106:PRO:HD3	1.93	0.51
7:F:80:ARG:HG2	7:F:80:ARG:HH11	1.75	0.51
10:I:27:THR:CA	10:I:32:ASP:HA	2.41	0.51
14:M:70:LEU:HD23	14:M:70:LEU:O	2.11	0.51
17:P:32:TYR:CE2	17:P:35:LYS:HB2	2.42	0.51
1:A:154:C:H1'	1:A:168:G:H22	1.76	0.50
1:A:181:G:N2	1:A:195:A:C4	2.79	0.50
1:A:295:C:H2'	1:A:296:U:H6	1.75	0.50
1:A:309:G:H1'	1:A:608:A:C2	2.46	0.50
1:A:532:A:H61	4:C:160:ALA:HA	1.76	0.50
1:A:718:G:C4'	12:K:117:ASN:HD21	2.24	0.50
1:A:755:G:C6	1:A:756:C:N4	2.79	0.50
1:A:1113:C:O5'	1:A:1113:C:H6	1.94	0.50
1:A:1205:U:O2'	1:A:1206:G:H8	1.93	0.50
1:A:1252:A:H2'	1:A:1253:G:O4'	2.11	0.50
3:B:82:ARG:CA	3:B:92:TYR:HE1	2.24	0.50
3:B:97:TRP:CE2	3:B:101:MET:HG3	2.46	0.50
3:B:98:LEU:HB2	3:B:101:MET:HE3	1.93	0.50
3:B:217:ARG:HD3	3:B:220:ASP:OD1	2.11	0.50
4:C:153:VAL:HG22	4:C:198:VAL:HG22	1.93	0.50
6:E:109:ILE:O	6:E:113:ALA:HB2	2.11	0.50
7:F:10:LEU:HD21	7:F:61:LEU:HD11	1.92	0.50
7:F:25:ILE:HG12	7:F:82:ARG:CD	2.31	0.50
8:G:117:ALA:HA	8:G:120:ILE:HG13	1.93	0.50
10:I:55:ALA:HA	10:I:58:ARG:HE	1.77	0.50
11:J:6:ILE:O	11:J:71:LEU:CD2	2.59	0.50
17:P:39:TYR:CE2	17:P:41:PRO:HG3	2.43	0.50
19:R:56:THR:O	19:R:58:LEU:HG	2.10	0.50
1:A:411:A:P	5:D:30:LYS:HZ2	2.34	0.50
1:A:442:C:O2'	1:A:443:C:H5'	2.11	0.50
1:A:522:C:N4	1:A:523:A:N1	2.60	0.50
1:A:1117:G:O3'	10:I:104:ARG:NH1	2.44	0.50
1:A:1343:G:C6	1:A:1344:C:N4	2.80	0.50
3:B:42:ILE:HG22	3:B:43:ASP:N	2.26	0.50
3:B:223:ILE:HG21	3:B:230:VAL:HG21	1.93	0.50
4:C:11:ARG:O	4:C:12:LEU:C	2.49	0.50
4:C:175:LEU:HD21	4:C:201:TYR:CE2	2.47	0.50
5:D:99:SER:O	5:D:140:VAL:HG23	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:148:VAL:HG12	5:D:149:ALA:N	2.26	0.50
6:E:101:ILE:HB	6:E:119:LEU:HD23	1.93	0.50
7:F:51:PRO:HB3	7:F:56:PRO:HB3	1.94	0.50
9:H:9:MET:HE1	9:H:32:LYS:C	2.31	0.50
10:I:10:ARG:CD	10:I:11:LYS:N	2.74	0.50
10:I:28:VAL:O	10:I:30:GLY:N	2.45	0.50
11:J:90:LEU:N	11:J:91:PRO:HD2	2.24	0.50
12:K:58:PRO:O	12:K:61:ALA:HB3	2.10	0.50
13:L:119:LYS:O	13:L:120:TYR:HB2	2.12	0.50
16:O:27:VAL:O	16:O:31:LEU:N	2.37	0.50
16:O:52:SER:O	16:O:53:HIS:C	2.49	0.50
17:P:23:ASP:O	17:P:24:ALA:HB3	2.11	0.50
19:R:30:ASP:C	19:R:32:ARG:N	2.64	0.50
22:V:6:ARG:O	22:V:7:ARG:C	2.50	0.50
1:A:90:U:H2'	1:A:91:C:C5	2.46	0.50
1:A:125:U:H3	1:A:236:G:H1	1.59	0.50
1:A:499:A:H4'	1:A:500:G:OP1	2.12	0.50
1:A:851:G:H2'	1:A:852:G:C8	2.46	0.50
1:A:994:A:N7	1:A:1216:G:H4'	2.26	0.50
1:A:1128:C:C2	1:A:1139:G:C6	2.99	0.50
1:A:1361(A):C:O2'	1:A:1362:C:H5''	2.12	0.50
1:A:1368:G:P	10:I:112:LYS:O	2.69	0.50
1:A:1407:C:N4	1:A:1494:G:H1	2.04	0.50
3:B:185:ILE:N	3:B:185:ILE:CD1	2.70	0.50
5:D:33:MET:HA	5:D:37:PRO:HB3	1.94	0.50
10:I:10:ARG:HH21	10:I:11:LYS:CG	2.24	0.50
11:J:4:ILE:CG1	11:J:74:ILE:H	2.24	0.50
14:M:108:ARG:NH1	14:M:111:LYS:NZ	2.59	0.50
21:T:57:ARG:O	21:T:58:LYS:C	2.50	0.50
1:A:255:G:H1'	18:Q:16:GLN:OE1	2.12	0.50
1:A:447:G:H2'	1:A:485:G:C2	2.47	0.50
1:A:456:C:H42	1:A:476:G:H1	1.58	0.50
1:A:521:G:P	13:L:54:LYS:HE2	2.52	0.50
1:A:659:U:O2'	1:A:660:G:H5'	2.11	0.50
1:A:706:A:C5	1:A:707:C:C5	3.00	0.50
1:A:866:C:C2'	1:A:867:G:O5'	2.58	0.50
1:A:1103:C:H5''	3:B:98:LEU:CD1	2.40	0.50
1:A:1329:A:P	14:M:28:ALA:CB	2.85	0.50
3:B:29:ALA:C	3:B:31:TYR:H	2.15	0.50
3:B:97:TRP:CZ3	3:B:172:ILE:HG22	2.45	0.50
4:C:57:ILE:HD12	4:C:57:ILE:N	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:68:TYR:CE2	5:D:97:LEU:HB3	2.47	0.50
5:D:152:SER:O	5:D:155:LEU:N	2.35	0.50
5:D:173:TRP:C	5:D:186:LEU:HD12	2.31	0.50
6:E:40:ARG:HG2	6:E:68:GLU:OE1	2.11	0.50
8:G:62:PHE:HB3	8:G:63:LYS:HZ1	1.76	0.50
8:G:148:ASN:O	8:G:150:ALA:N	2.45	0.50
9:H:18:ARG:C	9:H:20:TYR:H	2.14	0.50
11:J:14:LYS:O	11:J:17:ASP:HB3	2.11	0.50
11:J:61:GLU:OE1	15:N:45:ARG:HG3	2.11	0.50
12:K:18:ARG:HB3	12:K:20:TYR:HE1	1.76	0.50
13:L:55:VAL:CG1	13:L:56:ALA:N	2.74	0.50
16:O:41:GLU:O	16:O:44:LYS:HB2	2.12	0.50
1:A:46:G:C4	1:A:396:G:N1	2.80	0.50
1:A:61:G:H2'	1:A:62:U:O4'	2.12	0.50
1:A:230:G:H2'	1:A:231:G:O4'	2.11	0.50
1:A:290:C:C4	1:A:291:C:C5	2.99	0.50
1:A:371:G:H1'	1:A:482:A:H1'	1.94	0.50
1:A:648:A:O2'	1:A:649:G:H5'	2.11	0.50
1:A:724:G:H2'	1:A:725:G:H8	1.77	0.50
1:A:1046:A:H2'	1:A:1046:A:N3	2.26	0.50
1:A:1046:A:H3'	1:A:1047:G:C8	2.47	0.50
1:A:1382:C:H2'	1:A:1383:C:C6	2.47	0.50
1:A:1503:A:H5'	1:A:1531:A:H1'	1.93	0.50
1:A:1508:G:H2'	1:A:1509:C:C6	2.41	0.50
1:A:1514:C:H2'	1:A:1515:C:C6	2.47	0.50
4:C:151:VAL:CG1	4:C:198:VAL:HG11	2.28	0.50
4:C:180:ALA:C	4:C:182:ILE:H	2.14	0.50
4:C:188:LEU:CD1	4:C:195:VAL:HG13	2.41	0.50
5:D:170:VAL:HG22	5:D:174:LEU:HB2	1.94	0.50
6:E:33:VAL:CG1	6:E:109:ILE:HD13	2.42	0.50
6:E:105:VAL:O	6:E:109:ILE:HG12	2.12	0.50
7:F:30:LEU:HB3	7:F:35:ALA:CB	2.42	0.50
8:G:62:PHE:CB	8:G:63:LYS:HZ1	2.24	0.50
9:H:11:THR:O	9:H:12:ARG:C	2.49	0.50
9:H:26:VAL:HG13	9:H:59:LEU:CD1	2.39	0.50
9:H:86:ILE:CG2	9:H:87:SER:N	2.74	0.50
18:Q:18:THR:HG23	18:Q:69:LYS:NZ	2.25	0.50
18:Q:96:GLN:CB	18:Q:104:LYS:HB2	2.42	0.50
19:R:75:ILE:O	19:R:77:GLY:N	2.43	0.50
21:T:86:ARG:O	21:T:87:LYS:C	2.50	0.50
1:A:54:C:O2'	1:A:55:A:H5'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:175:C:O2'	1:A:176:C:H5'	2.11	0.50
1:A:463:A:C2'	1:A:474:G:C8	2.92	0.50
1:A:792:A:H4'	1:A:793:U:H5''	1.93	0.50
1:A:858:G:O5'	1:A:858:G:C8	2.48	0.50
1:A:1202:G:O2'	1:A:1203:C:H5'	2.12	0.50
1:A:1260:C:OP1	1:A:1284:C:O3'	2.30	0.50
1:A:1303:C:H2'	1:A:1304:G:H5'	1.93	0.50
1:A:1318:A:O2'	20:S:37:ARG:HB3	2.11	0.50
1:A:1346:A:H4'	1:A:1347:G:O5'	2.12	0.50
1:A:1367:C:P	10:I:112:LYS:HZ1	2.35	0.50
1:A:1372:U:C5'	10:I:71:SER:HB3	2.42	0.50
1:A:1374:A:H2'	1:A:1375:A:H8	1.77	0.50
3:B:82:ARG:O	3:B:86:GLU:HG3	2.12	0.50
4:C:12:LEU:HD21	15:N:50:LYS:HA	1.94	0.50
4:C:79:ARG:H	4:C:82:GLU:HB3	1.76	0.50
6:E:116:THR:HG23	6:E:117:ASP:OD2	2.11	0.50
14:M:3:ARG:HG3	14:M:9:ILE:CD1	2.42	0.50
15:N:43:CYS:O	15:N:45:ARG:N	2.45	0.50
16:O:56:LEU:O	16:O:57:LEU:C	2.50	0.50
17:P:17:TYR:N	17:P:17:TYR:CD1	2.79	0.50
17:P:75:ARG:O	17:P:78:GLY:N	2.44	0.50
21:T:46:GLU:HB3	21:T:48:LYS:HE2	1.94	0.50
21:T:72:LEU:N	21:T:72:LEU:HD23	2.26	0.50
22:V:10:ARG:HA	22:V:13:ILE:CD1	2.41	0.50
1:A:102:G:N2	1:A:171:A:H2	2.10	0.50
1:A:344:A:H5''	1:A:345:C:C5	2.46	0.50
1:A:446:G:C2'	1:A:447:G:H5'	2.42	0.50
1:A:447:G:N1	1:A:485:G:H2'	2.26	0.50
1:A:542:G:OP1	5:D:10:ARG:NH2	2.42	0.50
1:A:1226:C:H5'	14:M:96:LEU:HD13	1.92	0.50
1:A:1314:C:O2'	1:A:1315:U:H5'	2.11	0.50
3:B:114:ARG:HD3	3:B:117:GLU:HB3	1.93	0.50
3:B:131:PRO:C	3:B:133:LYS:H	2.15	0.50
4:C:172:ARG:NH1	4:C:174:PRO:HD3	2.27	0.50
5:D:109:GLY:C	5:D:111:ALA:H	2.15	0.50
6:E:152:ARG:HG3	9:H:43:GLY:O	2.12	0.50
8:G:111:ARG:HG2	8:G:112:PRO:HD2	1.93	0.50
13:L:107:ALA:O	13:L:108:ALA:O	2.30	0.50
14:M:39:ILE:O	14:M:40:ASN:C	2.50	0.50
17:P:55:ARG:O	17:P:56:ALA:C	2.50	0.50
17:P:57:ARG:CZ	17:P:79:VAL:O	2.59	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:S:67:VAL:C	20:S:69:HIS:N	2.63	0.50
1:A:275:G:O2'	18:Q:15:MET:HE1	2.11	0.50
1:A:509:A:H62	1:A:510:A:H61	1.60	0.50
1:A:1228:C:H2'	1:A:1229:A:C8	2.44	0.50
4:C:85:ARG:O	4:C:87:LEU:N	2.45	0.50
4:C:152:ILE:O	4:C:153:VAL:O	2.29	0.50
5:D:36:ARG:O	5:D:36:ARG:CG	2.60	0.50
6:E:130:ASN:O	6:E:133:TYR:N	2.45	0.50
8:G:73:MET:O	8:G:74:GLU:HB3	2.12	0.50
9:H:87:SER:HB2	9:H:93:VAL:HB	1.92	0.50
12:K:27:ASN:HD21	12:K:29:ILE:HG22	1.77	0.50
12:K:58:PRO:HB2	12:K:93:GLN:CG	2.37	0.50
13:L:79:GLU:O	13:L:80:HIS:CG	2.65	0.50
14:M:17:VAL:O	14:M:18:ALA:C	2.50	0.50
16:O:69:TYR:CZ	16:O:73:GLU:HG3	2.47	0.50
18:Q:29:HIS:HD2	18:Q:36:ILE:HD13	1.75	0.50
1:A:114:U:H2'	1:A:115:G:C8	2.47	0.50
1:A:392:G:N2	1:A:393:A:C4	2.80	0.50
1:A:412:A:O2'	1:A:413:G:H5''	2.12	0.50
1:A:448:A:H2'	1:A:449:C:C6	2.47	0.50
1:A:524:G:C6	1:A:525:C:N4	2.79	0.50
1:A:866:C:C5	1:A:867:G:H1'	2.47	0.50
1:A:1305:G:N2	1:A:1331:G:C2'	2.57	0.50
1:A:1346:A:O2'	1:A:1347:G:OP2	2.29	0.50
1:A:1414:U:O2'	1:A:1415:G:H5'	2.11	0.50
3:B:25:ASN:C	3:B:25:ASN:ND2	2.64	0.50
3:B:142:LEU:O	3:B:146:GLN:HG3	2.10	0.50
4:C:92:ALA:HB1	4:C:96:GLY:CA	2.29	0.50
4:C:150:LYS:O	4:C:151:VAL:HG23	2.11	0.50
5:D:9:CYS:SG	5:D:22:LYS:CE	3.00	0.50
9:H:90:GLY:O	9:H:91:ARG:CB	2.59	0.50
10:I:19:LEU:CG	10:I:61:ALA:HB2	2.41	0.50
11:J:22:LYS:HD2	11:J:23:ILE:N	2.27	0.50
16:O:87:ILE:CG2	16:O:88:ARG:N	2.74	0.50
21:T:79:ARG:O	21:T:80:ARG:C	2.50	0.50
1:A:176:C:O2'	1:A:177:C:H5'	2.11	0.49
1:A:180:U:H2'	1:A:181:G:H5'	1.93	0.49
1:A:192:U:H5'	21:T:102:GLY:CA	2.42	0.49
1:A:569:C:H4'	1:A:574:A:N7	2.27	0.49
1:A:1004:A:H2'	1:A:1005:A:C5'	2.42	0.49
1:A:1129:C:H1'	1:A:1132:C:H5	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1228:C:N4	1:A:1229:A:H62	2.10	0.49
1:A:1289:A:C2'	1:A:1290:G:H5'	2.42	0.49
3:B:187:LEU:HD21	3:B:203:GLY:CA	2.41	0.49
3:B:187:LEU:HA	3:B:201:ILE:HB	1.92	0.49
4:C:26:LYS:H	4:C:26:LYS:CD	2.10	0.49
4:C:38:ARG:HG3	4:C:38:ARG:NH1	2.27	0.49
4:C:113:ALA:N	4:C:114:PRO:CD	2.75	0.49
6:E:76:ILE:HG22	6:E:93:PRO:HB3	1.94	0.49
7:F:90:VAL:HG12	7:F:91:VAL:N	2.27	0.49
9:H:82:HIS:CB	9:H:138:TRP:NE1	2.74	0.49
11:J:81:THR:HG22	11:J:81:THR:O	2.12	0.49
13:L:26:ALA:O	13:L:27:LEU:HB2	2.12	0.49
13:L:46:LYS:O	13:L:47:LYS:C	2.50	0.49
14:M:37:THR:C	14:M:39:ILE:H	2.15	0.49
14:M:70:LEU:C	14:M:70:LEU:CD2	2.79	0.49
14:M:96:LEU:CD2	14:M:111:LYS:HD3	2.42	0.49
16:O:57:LEU:HD12	16:O:57:LEU:N	2.26	0.49
17:P:17:TYR:N	17:P:17:TYR:HD1	2.10	0.49
19:R:30:ASP:C	19:R:32:ARG:H	2.16	0.49
19:R:34:TYR:CD1	19:R:35:ARG:N	2.80	0.49
19:R:74:ARG:HB3	19:R:81:PHE:CE1	2.47	0.49
1:A:76:C:H42	1:A:93:G:H1	1.59	0.49
1:A:293:G:C2	1:A:294:U:C5	3.00	0.49
1:A:302:G:N3	1:A:556:C:H4'	2.27	0.49
1:A:324:G:N2	1:A:327:A:C8	2.81	0.49
1:A:405:U:C3'	1:A:406:G:H5'	2.35	0.49
1:A:502:G:C1'	1:A:550:G:H5'	2.43	0.49
1:A:547:A:H4'	1:A:548:G:O5'	2.11	0.49
1:A:951:G:H2'	1:A:952:U:H5'	1.93	0.49
1:A:1036:G:H2'	1:A:1037:C:C6	2.47	0.49
1:A:1037:C:C4	1:A:1038:C:N4	2.80	0.49
1:A:1202:G:H1'	15:N:29:ARG:HG3	1.94	0.49
1:A:1346:A:O2'	1:A:1347:G:P	2.70	0.49
3:B:19:HIS:O	3:B:20:GLU:O	2.30	0.49
3:B:40:HIS:HE1	3:B:190:THR:HG21	1.77	0.49
3:B:88:ALA:CB	3:B:219:VAL:HG13	2.27	0.49
3:B:208:ILE:O	3:B:211:ILE:N	2.45	0.49
5:D:122:ARG:HA	5:D:134:ASP:HB2	1.94	0.49
9:H:111:ILE:O	9:H:111:ILE:HG22	2.11	0.49
11:J:8:LEU:CA	11:J:96:ILE:HG12	2.40	0.49
11:J:38:ILE:HD11	11:J:71:LEU:CB	2.39	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:K:11:LYS:O	12:K:12:ARG:HB3	2.12	0.49
14:M:10:PRO:CB	14:M:18:ALA:HB1	2.32	0.49
17:P:39:TYR:CZ	17:P:41:PRO:HA	2.47	0.49
1:A:126:G:H1	1:A:235:C:H42	1.61	0.49
1:A:241:C:O2'	1:A:242:C:H5'	2.12	0.49
1:A:638:G:O2'	1:A:639:G:H5'	2.11	0.49
1:A:748:C:O2'	1:A:749:C:P	2.70	0.49
1:A:763:G:H2'	1:A:764:C:C6	2.45	0.49
1:A:825:G:H2'	1:A:826:C:C6	2.48	0.49
1:A:1001:A:C2	1:A:1002:G:H8	2.31	0.49
1:A:1258:G:H2'	1:A:1259:C:C6	2.47	0.49
1:A:1320:C:N3	20:S:36:ARG:CD	2.74	0.49
1:A:1371:G:O2'	1:A:1372:U:H5'	2.12	0.49
3:B:92:TYR:CE2	3:B:151:GLY:N	2.80	0.49
3:B:118:LEU:C	3:B:120:ALA:N	2.66	0.49
3:B:167:PRO:HG2	3:B:168:THR:H	1.77	0.49
4:C:31:HIS:C	4:C:33:LEU:N	2.66	0.49
4:C:77:ILE:HG23	4:C:81:GLY:HA2	1.93	0.49
4:C:125:GLU:C	4:C:127:ARG:H	2.14	0.49
6:E:51:VAL:O	6:E:52:PRO:C	2.50	0.49
7:F:50:TYR:CE1	19:R:77:GLY:CA	2.86	0.49
7:F:98:LEU:HD23	19:R:30:ASP:HA	1.94	0.49
8:G:56:GLN:H	8:G:56:GLN:CD	2.14	0.49
8:G:95:ARG:C	8:G:97:GLN:N	2.63	0.49
8:G:151:TYR:HD2	8:G:153:HIS:HE1	1.60	0.49
9:H:113:SER:HB2	9:H:134:ILE:HD11	1.94	0.49
11:J:58:ASP:O	11:J:59:SER:CB	2.59	0.49
17:P:50:LYS:C	17:P:51:VAL:HG23	2.33	0.49
19:R:87:ARG:HG2	19:R:87:ARG:NH1	2.26	0.49
1:A:190(I):G:C2'	1:A:190(J):U:H5'	2.42	0.49
1:A:377:G:H5'	17:P:5:ARG:HH12	1.77	0.49
1:A:834:C:H2'	1:A:835:U:H6	1.78	0.49
1:A:1023:G:C3'	1:A:1024:G:C5'	2.85	0.49
3:B:97:TRP:CZ2	3:B:101:MET:HB2	2.47	0.49
4:C:202:ILE:CG2	4:C:204:LEU:HD21	2.43	0.49
5:D:58:LEU:HA	5:D:206:PHE:CD1	2.48	0.49
8:G:69:VAL:HG21	8:G:104:LEU:CD2	2.40	0.49
8:G:132:GLY:O	8:G:133:GLY:C	2.51	0.49
9:H:3:THR:O	9:H:5:PRO:HD3	2.11	0.49
9:H:51:VAL:O	9:H:58:TYR:N	2.37	0.49
9:H:74:PRO:O	9:H:75:ARG:HB2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:I:49:PRO:HB2	10:I:82:ALA:HB2	1.93	0.49
10:I:96:LEU:O	10:I:102:LEU:HD21	2.13	0.49
12:K:33:THR:CA	12:K:39:PRO:HA	2.29	0.49
16:O:39:LEU:O	16:O:43:LEU:HG	2.13	0.49
17:P:61:SER:C	17:P:62:VAL:HG22	2.33	0.49
1:A:32:A:OP1	1:A:398:C:H1'	2.12	0.49
1:A:255:G:H2'	1:A:256:U:C6	2.47	0.49
1:A:295:C:N3	1:A:303:A:C2	2.81	0.49
1:A:340:U:O5'	1:A:340:U:H6	1.96	0.49
1:A:577:G:H2'	1:A:578:C:H6	1.77	0.49
1:A:629:G:H2'	1:A:630:G:C8	2.46	0.49
1:A:956:U:C2'	1:A:957:U:H5'	2.42	0.49
1:A:1023:G:H2'	1:A:1023:G:N3	2.27	0.49
1:A:1126:U:H2'	1:A:1127:G:O5'	2.12	0.49
1:A:1475:G:O2'	1:A:1476:G:H5'	2.12	0.49
4:C:9:GLY:C	4:C:11:ARG:N	2.66	0.49
4:C:63:ASN:N	4:C:63:ASN:HD22	2.10	0.49
5:D:64:LEU:HD23	5:D:198:VAL:HG21	1.93	0.49
5:D:64:LEU:HA	5:D:67:ILE:HD12	1.94	0.49
5:D:78:LEU:HB3	5:D:93:PHE:HE2	1.76	0.49
6:E:100:VAL:O	6:E:100:VAL:HG12	2.12	0.49
6:E:127:ASN:C	6:E:127:ASN:OD1	2.50	0.49
7:F:52:ILE:HD11	19:R:77:GLY:HA3	1.94	0.49
9:H:45:ILE:HD12	9:H:45:ILE:C	2.33	0.49
12:K:92:GLU:HA	12:K:95:ILE:HD13	1.94	0.49
15:N:25:VAL:HG12	15:N:39:LEU:HA	1.94	0.49
15:N:26:ARG:HH21	15:N:43:CYS:HB2	1.78	0.49
16:O:2:PRO:O	16:O:38:ARG:NH1	2.44	0.49
17:P:80:PHE:O	17:P:81:ARG:O	2.31	0.49
18:Q:11:VAL:CG2	18:Q:12:SER:N	2.76	0.49
18:Q:68:ARG:O	18:Q:69:LYS:HB2	2.12	0.49
21:T:15:ARG:C	21:T:18:GLN:HB2	2.33	0.49
21:T:70:SER:CA	21:T:73:HIS:HD2	2.26	0.49
1:A:116:A:H2'	1:A:117:G:C8	2.47	0.49
1:A:322:C:H2'	1:A:323:U:H5'	1.93	0.49
1:A:533:A:C2	1:A:536:C:C5	3.01	0.49
1:A:571:U:H2'	1:A:572:A:H5''	1.95	0.49
1:A:575:G:O2'	1:A:576:G:OP2	2.27	0.49
1:A:1064:G:OP1	1:A:1386:G:H4'	2.13	0.49
1:A:1075:C:O2'	1:A:1076:C:H5'	2.13	0.49
1:A:1152:A:P	11:J:13:HIS:HB2	2.52	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1269:A:C4	1:A:1313:U:H1'	2.47	0.49
1:A:1450:U:O2'	1:A:1451:A:C8	2.64	0.49
3:B:39:ILE:HD12	3:B:39:ILE:N	2.27	0.49
3:B:118:LEU:CB	3:B:142:LEU:HD23	2.41	0.49
6:E:19:MET:CE	6:E:24:ARG:HG2	2.43	0.49
6:E:82:VAL:HG21	6:E:138:ALA:HA	1.93	0.49
7:F:12:PRO:CB	7:F:57:GLN:HB2	2.42	0.49
8:G:39:ALA:O	8:G:40:ALA:C	2.50	0.49
9:H:119:LEU:HD11	9:H:124:ALA:HA	1.94	0.49
18:Q:92:ARG:C	18:Q:94:ASN:N	2.65	0.49
19:R:37:VAL:C	19:R:41:LYS:HE3	2.32	0.49
20:S:56:GLN:HG2	20:S:57:HIS:H	1.77	0.49
1:A:193:C:H2'	1:A:194:C:C6	2.44	0.49
1:A:287:U:C2'	1:A:288:A:H5'	2.43	0.49
1:A:295:C:C4	1:A:296:U:C4	3.00	0.49
1:A:404:U:O2'	1:A:405:U:H5'	2.12	0.49
1:A:540:G:H2'	1:A:541:G:C8	2.48	0.49
1:A:714:G:C2	1:A:777:A:H1'	2.48	0.49
1:A:1145:C:C1'	1:A:1146:A:N7	2.75	0.49
1:A:1257:U:H4'	1:A:1258:G:C5'	2.41	0.49
1:A:1331:G:OP1	1:A:1331:G:H4'	2.12	0.49
1:A:1368:G:OP2	10:I:112:LYS:O	2.31	0.49
1:A:1499:A:H1'	1:A:1520:G:H5'	1.94	0.49
3:B:82:ARG:CA	3:B:92:TYR:CE1	2.93	0.49
4:C:120:VAL:HG12	4:C:124:ILE:HG13	1.94	0.49
4:C:138:VAL:HG23	4:C:139:GLN:N	2.27	0.49
6:E:51:VAL:CB	6:E:52:PRO:HD3	2.41	0.49
7:F:41:GLU:H	7:F:62:TRP:HE3	1.59	0.49
8:G:26:PHE:O	8:G:27:ILE:C	2.51	0.49
9:H:53:VAL:O	9:H:53:VAL:HG13	2.11	0.49
9:H:104:ARG:O	9:H:106:GLY:N	2.46	0.49
9:H:124:ALA:O	9:H:128:GLY:N	2.45	0.49
11:J:35:SER:N	11:J:75:ILE:HG13	2.28	0.49
16:O:15:PHE:O	16:O:16:ALA:C	2.50	0.49
16:O:78:TYR:HD2	16:O:79:ARG:N	2.11	0.49
17:P:42:ARG:O	17:P:43:LYS:C	2.50	0.49
1:A:327:A:H3'	1:A:328:C:C5'	2.42	0.49
1:A:357:G:O2'	1:A:358:U:H5'	2.12	0.49
1:A:961:U:O2'	1:A:962:C:H5'	2.12	0.49
1:A:1163:C:H2'	1:A:1164:G:H8	1.77	0.49
1:A:1343:G:C6	1:A:1344:C:C4	3.01	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1351:U:C4'	8:G:33:ASP:OD1	2.60	0.49
3:B:91:PRO:HG3	3:B:154:LEU:CB	2.43	0.49
3:B:134:GLU:HA	3:B:137:ARG:HG2	1.93	0.49
4:C:11:ARG:O	4:C:14:ILE:N	2.39	0.49
4:C:87:LEU:O	4:C:91:LEU:N	2.45	0.49
5:D:154:ASN:CA	5:D:159:ARG:NH2	2.76	0.49
6:E:16:THR:O	6:E:17:ALA:HB2	2.11	0.49
6:E:96:PRO:HA	6:E:117:ASP:OD2	2.12	0.49
7:F:33:TYR:CE1	7:F:75:LEU:HA	2.48	0.49
8:G:102:ARG:O	8:G:103:TRP:C	2.51	0.49
10:I:28:VAL:HG11	10:I:33:PHE:HD1	1.77	0.49
15:N:51:GLY:C	15:N:53:LEU:N	2.64	0.49
16:O:11:VAL:O	16:O:14:GLU:HB3	2.11	0.49
17:P:23:ASP:C	17:P:25:ARG:N	2.65	0.49
19:R:59:SER:OG	19:R:62:GLU:HG3	2.11	0.49
20:S:39:THR:HG22	20:S:40:ILE:N	2.27	0.49
20:S:40:ILE:CG2	20:S:62:ILE:HG12	2.41	0.49
1:A:37:U:O2'	1:A:38:G:H5'	2.13	0.49
1:A:122:G:H8	1:A:122:G:OP1	1.96	0.49
1:A:152:A:H3'	1:A:153:C:C6	2.47	0.49
1:A:190:C:H2'	1:A:190(A):C:C6	2.47	0.49
1:A:706:A:C1'	12:K:29:ILE:HD11	2.43	0.49
1:A:799:G:C2'	1:A:800:G:H5'	2.43	0.49
1:A:1056:U:C5'	4:C:163:ALA:HB2	2.43	0.49
1:A:1064:G:O4'	1:A:1066:C:C6	2.66	0.49
1:A:1118:C:H5'	10:I:104:ARG:HG3	1.95	0.49
1:A:1231:G:O2'	1:A:1232:U:H5'	2.12	0.49
3:B:24:TRP:CA	3:B:190:THR:HG23	2.42	0.49
3:B:51:LEU:O	3:B:52:GLU:C	2.50	0.49
3:B:180:LEU:O	3:B:182:ILE:HD12	2.12	0.49
4:C:39:ILE:HG22	4:C:55:VAL:HG11	1.95	0.49
4:C:66:VAL:CG1	4:C:67:THR:N	2.68	0.49
5:D:150:GLU:C	5:D:152:SER:H	2.16	0.49
6:E:43:LEU:HD22	6:E:44:GLY:N	2.27	0.49
7:F:4:TYR:CE1	7:F:92:LYS:HD3	2.48	0.49
7:F:10:LEU:HD11	7:F:59:TYR:CD2	2.47	0.49
11:J:40:LEU:HD23	11:J:41:PRO:CD	2.43	0.49
13:L:47:LYS:HB3	13:L:48:PRO:CD	2.43	0.49
13:L:68:ALA:HB1	13:L:100:ILE:HG13	1.94	0.49
16:O:55:GLY:O	16:O:58:MET:HB2	2.13	0.49
18:Q:81:ARG:HA	18:Q:81:ARG:HD2	1.58	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:Q:98:LEU:CD1	18:Q:103:GLY:CA	2.89	0.49
21:T:12:ALA:HA	21:T:14:LYS:HZ3	1.77	0.49
21:T:34:LYS:O	21:T:38:LYS:HG3	2.13	0.49
21:T:70:SER:O	21:T:71:THR:C	2.49	0.49
22:V:6:ARG:HE	22:V:15:ARG:NH1	2.11	0.49
22:V:6:ARG:O	22:V:8:THR:OG1	2.26	0.49
1:A:276:G:C5'	18:Q:15:MET:HE1	2.39	0.49
1:A:277:C:H5''	18:Q:68:ARG:HH21	1.78	0.49
1:A:605:U:O2'	1:A:606:G:H5'	2.13	0.49
1:A:663:A:H2'	1:A:664:G:O4'	2.13	0.49
1:A:741:G:O2'	1:A:742:G:H5'	2.13	0.49
1:A:854:G:C6	1:A:855:G:N7	2.81	0.49
1:A:1329:A:OP2	14:M:28:ALA:HB3	2.13	0.49
1:A:1404:C:C2	1:A:1499:A:N6	2.81	0.49
1:A:1434:A:O2'	1:A:1435:G:H5'	2.13	0.49
3:B:16:HIS:O	3:B:204:ASN:OD1	2.30	0.49
3:B:24:TRP:N	3:B:24:TRP:CD1	2.75	0.49
3:B:44:LEU:HD12	3:B:44:LEU:N	2.26	0.49
4:C:22:TRP:CZ2	4:C:32:LEU:O	2.66	0.49
4:C:203:PHE:CD1	4:C:204:LEU:N	2.80	0.49
6:E:8:GLU:HB2	6:E:33:VAL:O	2.12	0.49
7:F:30:LEU:CB	7:F:35:ALA:HB3	2.42	0.49
11:J:77:PRO:C	11:J:81:THR:HB	2.32	0.49
12:K:12:ARG:HG3	12:K:12:ARG:NH1	2.23	0.49
16:O:81:LEU:HD23	16:O:85:LEU:HD11	1.95	0.49
21:T:22:ARG:O	21:T:25:ARG:N	2.46	0.49
21:T:45:GLN:N	21:T:91:LEU:HD22	2.28	0.49
1:A:129(A):G:O2'	1:A:130:A:OP2	2.24	0.48
1:A:229:U:O2'	17:P:23:ASP:OD2	2.27	0.48
1:A:276:G:N2	1:A:277:C:C2	2.81	0.48
1:A:371:G:N2	1:A:372:C:C6	2.81	0.48
1:A:476:G:H2'	1:A:477:G:H8	1.77	0.48
1:A:522:C:N4	1:A:523:A:C6	2.81	0.48
1:A:647:C:H2'	1:A:648:A:H8	1.77	0.48
1:A:719:C:H42	19:R:74:ARG:HH12	1.60	0.48
1:A:730:G:N2	1:A:765:G:H5''	2.28	0.48
1:A:767:A:O2'	1:A:768:A:H5'	2.13	0.48
1:A:933:G:O6	8:G:3:ARG:NH2	2.45	0.48
1:A:942:G:N2	1:A:943:U:C2	2.81	0.48
1:A:1001:A:C3'	1:A:1002:G:H5''	2.42	0.48
1:A:1031:G:O2'	1:A:1032:G:H5'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1137:C:H5'	1:A:1138:G:C5	2.48	0.48
1:A:1269:A:C5'	22:V:18:TYR:O	2.61	0.48
1:A:1472:U:H2'	1:A:1473:A:C8	2.41	0.48
3:B:172:ILE:N	3:B:172:ILE:HD12	2.28	0.48
4:C:22:TRP:HZ2	4:C:32:LEU:O	1.96	0.48
4:C:22:TRP:NE1	4:C:36:ASP:OD2	2.44	0.48
5:D:163:GLU:C	5:D:165:MET:H	2.17	0.48
6:E:12:LEU:HD22	6:E:12:LEU:C	2.33	0.48
6:E:144:THR:O	6:E:147:ASP:OD2	2.31	0.48
7:F:15:ASP:CG	7:F:18:GLN:HB3	2.33	0.48
8:G:105:VAL:HA	8:G:108:ALA:CB	2.41	0.48
8:G:125:MET:O	8:G:127:ALA:N	2.46	0.48
9:H:90:GLY:O	9:H:91:ARG:HB2	2.12	0.48
10:I:27:THR:HA	10:I:32:ASP:CA	2.42	0.48
10:I:28:VAL:HG21	10:I:36:TYR:HB3	1.95	0.48
13:L:84:LEU:HD12	13:L:85:ILE:N	2.28	0.48
14:M:108:ARG:HA	14:M:111:LYS:HB3	1.95	0.48
18:Q:58:GLU:C	18:Q:59:ILE:HD13	2.34	0.48
21:T:8:ARG:HG3	21:T:9:ASN:CG	2.34	0.48
21:T:16:HIS:O	21:T:17:ARG:C	2.51	0.48
22:V:10:ARG:HG2	22:V:13:ILE:HD12	1.94	0.48
1:A:444:C:H2'	1:A:445:G:C8	2.46	0.48
1:A:674:G:C5'	7:F:50:TYR:CE2	2.96	0.48
1:A:722:A:C6	1:A:724:G:C4	3.01	0.48
1:A:760:G:H22	18:Q:104:LYS:H	1.61	0.48
1:A:818:G:H3'	1:A:819:A:H5'	1.95	0.48
1:A:1065:U:H5	1:A:1190:G:N3	2.11	0.48
1:A:1245:A:C2	1:A:1293:G:C2	3.01	0.48
3:B:21:ARG:O	3:B:23:ARG:N	2.42	0.48
3:B:101:MET:N	3:B:108:ILE:HD12	2.29	0.48
4:C:40:ARG:NH1	4:C:55:VAL:O	2.46	0.48
5:D:157:LEU:O	5:D:160:GLN:HB3	2.13	0.48
6:E:33:VAL:HG13	6:E:109:ILE:HD13	1.96	0.48
6:E:89:ILE:HD12	6:E:90:VAL:H	1.79	0.48
7:F:36:ARG:HG3	7:F:36:ARG:NH1	2.27	0.48
8:G:54:THR:HB	8:G:56:GLN:NE2	2.27	0.48
14:M:34:LEU:N	14:M:34:LEU:CD1	2.77	0.48
16:O:54:ARG:O	16:O:57:LEU:N	2.47	0.48
17:P:6:LEU:HB3	17:P:17:TYR:HD2	1.78	0.48
18:Q:59:ILE:CG2	18:Q:71:PHE:HB3	2.43	0.48
20:S:41:VAL:HG22	20:S:44:MET:SD	2.53	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:T:30:LYS:HE2	21:T:72:LEU:CD2	2.43	0.48
21:T:67:ALA:O	21:T:73:HIS:ND1	2.47	0.48
1:A:148:G:H2'	1:A:149:A:H8	1.77	0.48
1:A:149:A:C2	1:A:150:C:C4	3.01	0.48
1:A:300:A:H8	1:A:300:A:O5'	1.95	0.48
1:A:321:A:H4'	1:A:1436:U:H5'	1.95	0.48
1:A:1153:C:P	11:J:13:HIS:NE2	2.84	0.48
1:A:1511:G:H8	1:A:1511:G:O5'	1.96	0.48
6:E:40:ARG:HG2	6:E:40:ARG:HH11	1.78	0.48
7:F:26:ILE:O	7:F:27:GLN:C	2.52	0.48
8:G:50:ILE:HD11	8:G:121:ALA:HA	1.93	0.48
9:H:5:PRO:HB3	9:H:32:LYS:NZ	2.28	0.48
9:H:9:MET:O	9:H:10:LEU:C	2.52	0.48
10:I:27:THR:OG1	10:I:32:ASP:HA	2.14	0.48
10:I:50:LEU:CD2	10:I:81:ILE:HB	2.43	0.48
13:L:86:ARG:O	13:L:87:GLY:O	2.32	0.48
18:Q:6:LEU:HD12	18:Q:42:TYR:CE1	2.49	0.48
21:T:45:GLN:N	21:T:91:LEU:CD2	2.77	0.48
1:A:190(G):G:N2	1:A:190(H):G:C4	2.82	0.48
1:A:570:G:O6	1:A:866:C:N4	2.47	0.48
1:A:600:C:OP1	9:H:97:VAL:CG1	2.58	0.48
1:A:656:C:O2'	1:A:657:G:H5'	2.12	0.48
1:A:684:A:O2'	1:A:685:G:H5'	2.13	0.48
1:A:858:G:C6	1:A:869:G:N7	2.81	0.48
1:A:898:G:C2	1:A:902:G:C6	3.01	0.48
1:A:925:G:C2	1:A:927:G:C8	3.01	0.48
1:A:1250:A:H2'	1:A:1251:A:C8	2.48	0.48
1:A:1255:G:O2'	1:A:1258:G:H1'	2.13	0.48
1:A:1338:G:N7	1:A:1339:A:C5	2.82	0.48
1:A:1347:G:O2'	1:A:1348:U:OP2	2.29	0.48
1:A:1454:G:C2	1:A:1455:G:C5	3.01	0.48
4:C:139:GLN:O	4:C:140:ARG:C	2.51	0.48
7:F:25:ILE:HG21	7:F:82:ARG:HD3	1.94	0.48
8:G:36:LYS:O	8:G:39:ALA:HB3	2.13	0.48
8:G:98:SER:O	8:G:99:LEU:C	2.51	0.48
8:G:125:MET:C	8:G:127:ALA:N	2.66	0.48
10:I:85:LEU:N	10:I:85:LEU:CD1	2.76	0.48
10:I:97:LYS:C	10:I:99:LEU:N	2.67	0.48
10:I:127:LYS:HE3	10:I:127:LYS:N	2.28	0.48
11:J:14:LYS:HB2	11:J:14:LYS:HZ2	1.75	0.48
12:K:14:VAL:HG12	12:K:16:SER:O	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:L:38:THR:O	13:L:40:VAL:HG23	2.13	0.48
15:N:8:GLU:C	15:N:10:ALA:N	2.66	0.48
17:P:10:GLY:O	17:P:11:SER:HB3	2.12	0.48
17:P:20:VAL:C	17:P:21:VAL:HG23	2.33	0.48
18:Q:29:HIS:HA	18:Q:36:ILE:HD11	1.96	0.48
18:Q:96:GLN:HG2	18:Q:104:LYS:HB2	1.96	0.48
19:R:71:LYS:HA	19:R:74:ARG:HD2	1.95	0.48
21:T:44:ALA:CB	21:T:91:LEU:HD22	2.43	0.48
21:T:57:ARG:HH21	21:T:102:GLY:HA3	1.78	0.48
21:T:102:GLY:C	21:T:104:LEU:H	2.14	0.48
1:A:32:A:C1'	1:A:48:C:H41	2.26	0.48
1:A:36:C:C4	1:A:37:U:C4	3.01	0.48
1:A:321:A:O2'	1:A:322:C:H5'	2.13	0.48
1:A:341:C:O2	1:A:349:A:H2	1.96	0.48
1:A:401:C:H1'	1:A:622:A:H1'	1.94	0.48
1:A:748:C:H1'	1:A:749:C:H5	1.77	0.48
1:A:996:A:H2'	1:A:997:U:H6	1.76	0.48
1:A:1279:A:H5''	11:J:9:ARG:NH2	2.22	0.48
1:A:1515:C:O2'	1:A:1516:G:H5'	2.13	0.48
3:B:118:LEU:C	3:B:120:ALA:H	2.16	0.48
4:C:83:ARG:C	4:C:85:ARG:H	2.17	0.48
4:C:111:LEU:HD21	4:C:144:SER:O	2.13	0.48
5:D:24:GLU:C	5:D:24:GLU:CD	2.72	0.48
6:E:72:GLN:O	6:E:73:ASN:CB	2.61	0.48
7:F:69:GLU:O	7:F:72:VAL:HG23	2.14	0.48
9:H:4:ASP:CG	9:H:85:ARG:NH1	2.67	0.48
12:K:91:ARG:HH21	19:R:88:LYS:HE3	1.79	0.48
13:L:11:VAL:HG11	18:Q:36:ILE:CG2	2.43	0.48
15:N:28:GLY:O	15:N:29:ARG:C	2.52	0.48
17:P:23:ASP:O	17:P:23:ASP:OD1	2.30	0.48
21:T:43:LEU:N	21:T:43:LEU:HD23	2.29	0.48
1:A:184:G:O4'	1:A:224:C:H4'	2.13	0.48
1:A:818:G:C3'	1:A:819:A:C5'	2.91	0.48
1:A:830:G:C2'	1:A:831:U:H5'	2.43	0.48
1:A:957:U:H1'	1:A:960:U:H3	1.79	0.48
1:A:959:A:C2	1:A:1222:G:C4'	2.97	0.48
1:A:1103:C:H2'	1:A:1104:G:O4'	2.13	0.48
1:A:1104:G:H4'	3:B:111:ARG:HH22	1.71	0.48
1:A:1240:U:N1	8:G:32:ARG:HD2	2.28	0.48
1:A:1455:G:H8	1:A:1455:G:O5'	1.97	0.48
1:A:1490:C:H2'	1:A:1491:G:C8	2.45	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:111:ARG:N	3:B:111:ARG:NH1	2.61	0.48
3:B:163:PHE:CD1	3:B:185:ILE:HB	2.49	0.48
3:B:179:LYS:O	3:B:180:LEU:CB	2.60	0.48
4:C:147:LYS:HE2	4:C:203:PHE:CE2	2.48	0.48
4:C:180:ALA:HB1	4:C:203:PHE:HE1	1.77	0.48
5:D:9:CYS:CB	5:D:22:LYS:NZ	2.66	0.48
5:D:162:LEU:CG	5:D:178:VAL:HG12	2.43	0.48
8:G:109:ASN:C	8:G:111:ARG:N	2.66	0.48
8:G:112:PRO:HG2	8:G:113:GLU:N	2.27	0.48
10:I:118:LYS:C	10:I:120:ARG:N	2.66	0.48
13:L:89:ARG:CB	13:L:89:ARG:NH1	2.75	0.48
14:M:74:VAL:HG23	14:M:75:ALA:N	2.29	0.48
15:N:46:GLU:HA	15:N:49:HIS:CD2	2.47	0.48
17:P:15:PRO:HG2	17:P:41:PRO:HG2	1.95	0.48
18:Q:17:LYS:O	18:Q:46:ASP:N	2.36	0.48
21:T:44:ALA:O	21:T:45:GLN:C	2.51	0.48
1:A:56:U:C2	1:A:57:G:C8	3.02	0.48
1:A:68:G:H5'	1:A:171:A:H1'	1.96	0.48
1:A:128:G:C2	1:A:129:U:O2	2.67	0.48
1:A:277:C:C5'	18:Q:68:ARG:NH2	2.77	0.48
1:A:518:C:O2'	1:A:519:C:P	2.71	0.48
1:A:650:G:O2'	1:A:651:C:H5'	2.14	0.48
1:A:817:C:H1'	1:A:819:A:H5'	1.96	0.48
1:A:836:G:C5	1:A:851:G:C6	3.02	0.48
1:A:1046:A:H5''	1:A:1047:G:N7	2.28	0.48
1:A:1250:A:H4'	10:I:68:GLY:C	2.34	0.48
1:A:1315:U:H2'	1:A:1316:G:O4'	2.13	0.48
4:C:39:ILE:HG21	4:C:57:ILE:CD1	2.37	0.48
4:C:161:GLU:HG3	4:C:162:GLN:N	2.28	0.48
5:D:170:VAL:HG22	5:D:174:LEU:CB	2.44	0.48
8:G:124:LEU:O	8:G:127:ALA:CB	2.58	0.48
9:H:100:ILE:HG12	9:H:112:LEU:HD21	1.94	0.48
10:I:117:HIS:HB2	10:I:121:ARG:HD2	1.95	0.48
13:L:97:ARG:HG3	13:L:98:TYR:CD1	2.48	0.48
13:L:112:ASP:OD2	13:L:113:ARG:N	2.47	0.48
14:M:49:THR:CG2	14:M:50:GLU:H	2.08	0.48
15:N:36:PHE:C	15:N:36:PHE:CD1	2.86	0.48
16:O:39:LEU:HD23	16:O:56:LEU:HB2	1.96	0.48
18:Q:96:GLN:HB2	18:Q:104:LYS:HB2	1.95	0.48
18:Q:97:SER:O	18:Q:99:SER:N	2.47	0.48
20:S:60:VAL:O	20:S:62:ILE:N	2.45	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:T:53:LEU:N	21:T:53:LEU:HD22	2.28	0.48
21:T:84:LEU:HD13	21:T:84:LEU:O	2.13	0.48
1:A:126:G:H2'	1:A:127:G:H8	1.78	0.48
1:A:138:G:O2'	1:A:139:G:H5'	2.14	0.48
1:A:444:C:C4	1:A:491:G:N1	2.81	0.48
1:A:490:G:C6	1:A:491:G:N7	2.82	0.48
1:A:552:U:H2'	1:A:553:A:C8	2.48	0.48
1:A:670:G:O2'	1:A:671:G:H5'	2.14	0.48
1:A:722:A:O2'	1:A:723:U:H3'	2.14	0.48
1:A:725:G:C2	1:A:726:C:C6	3.01	0.48
1:A:839:U:O2	1:A:839:U:C2'	2.62	0.48
1:A:926:G:H5'	1:A:927:G:O5'	2.13	0.48
1:A:1367:C:P	10:I:112:LYS:HZ2	2.35	0.48
1:A:1435:G:H2'	1:A:1436:U:C5	2.48	0.48
3:B:51:LEU:O	3:B:55:PHE:HB2	2.14	0.48
4:C:51:GLY:C	4:C:53:ALA:H	2.16	0.48
5:D:82:ALA:O	5:D:83:SER:C	2.51	0.48
8:G:26:PHE:O	8:G:29:LYS:N	2.47	0.48
8:G:32:ARG:C	8:G:34:GLY:H	2.16	0.48
8:G:97:GLN:O	8:G:100:ALA:HB3	2.13	0.48
10:I:27:THR:O	10:I:63:ILE:HG12	2.13	0.48
10:I:100:GLY:O	10:I:102:LEU:N	2.47	0.48
11:J:39:PRO:HA	11:J:70:ARG:HH21	1.78	0.48
11:J:74:ILE:HD12	11:J:74:ILE:N	2.28	0.48
12:K:81:ASP:OD2	12:K:107:SER:HB2	2.14	0.48
13:L:7:ILE:O	13:L:10:LEU:N	2.47	0.48
15:N:39:LEU:HD22	15:N:43:CYS:SG	2.53	0.48
16:O:9:GLN:O	16:O:10:LYS:C	2.52	0.48
16:O:43:LEU:N	16:O:43:LEU:HD23	2.29	0.48
18:Q:7:THR:HG23	18:Q:57:VAL:O	2.14	0.48
1:A:53:A:C2'	1:A:54:C:O5'	2.62	0.48
1:A:124:G:C4	1:A:125:U:C5	3.01	0.48
1:A:381:C:H2'	1:A:382:A:O4'	2.14	0.48
1:A:458:C:N3	1:A:459:G:C2	2.81	0.48
1:A:506:G:C5	1:A:507:C:C5	3.01	0.48
1:A:604:G:O2'	1:A:605:U:H5'	2.14	0.48
1:A:614:A:H2'	1:A:615:C:H6	1.77	0.48
1:A:782:A:N6	1:A:801:U:C6	2.82	0.48
1:A:1053:G:H4'	1:A:1054:C:H5'	1.96	0.48
1:A:1440:C:O2'	1:A:1441:G:H5'	2.14	0.48
3:B:62:ALA:HB1	3:B:225:ALA:HB3	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:52:LEU:CD2	4:C:118:GLN:HE22	2.27	0.48
4:C:153:VAL:O	4:C:154:SER:HB3	2.12	0.48
7:F:44:GLY:HA3	7:F:59:TYR:CE1	2.48	0.48
7:F:99:ALA:O	7:F:100:ASN:CB	2.59	0.48
8:G:104:LEU:O	8:G:106:GLN:N	2.47	0.48
9:H:8:ASP:O	9:H:12:ARG:HG3	2.13	0.48
10:I:10:ARG:O	10:I:12:GLU:N	2.45	0.48
11:J:57:LYS:HG2	11:J:58:ASP:H	1.79	0.48
17:P:23:ASP:OD1	17:P:25:ARG:HG3	2.13	0.48
1:A:637:G:H2'	1:A:638:G:H8	1.79	0.48
1:A:787:A:C4	1:A:788:U:O2	2.67	0.48
1:A:787:A:H2'	1:A:788:U:O2	2.14	0.48
1:A:859:A:H2'	1:A:860:A:O4'	2.13	0.48
1:A:867:G:O2'	1:A:868:C:H5'	2.14	0.48
1:A:1047:G:C3'	1:A:1048:G:C5'	2.88	0.48
1:A:1348:U:N3	1:A:1374:A:N7	2.61	0.48
1:A:1369:C:OP2	10:I:111:ARG:HA	2.14	0.48
3:B:101:MET:HE3	3:B:108:ILE:HG21	1.95	0.48
3:B:114:ARG:HD2	3:B:118:LEU:HG	1.95	0.48
4:C:26:LYS:C	4:C:28:GLN:H	2.16	0.48
5:D:96:LEU:N	5:D:96:LEU:HD12	2.29	0.48
5:D:177:ASP:C	5:D:179:GLU:N	2.68	0.48
6:E:94:ALA:HB1	6:E:98:THR:HG21	1.96	0.48
7:F:89:MET:CE	19:R:76:LEU:HD23	2.44	0.48
9:H:3:THR:HG22	9:H:4:ASP:H	1.76	0.48
9:H:9:MET:CE	9:H:32:LYS:HA	2.44	0.48
9:H:89:PRO:HA	9:H:92:ARG:NH1	2.28	0.48
10:I:79:LEU:HD22	10:I:83:ARG:HD2	1.96	0.48
12:K:22:HIS:HA	12:K:85:ARG:O	2.13	0.48
18:Q:9:VAL:O	18:Q:11:VAL:HG13	2.14	0.48
18:Q:95:TYR:CA	18:Q:98:LEU:HD13	2.43	0.48
21:T:22:ARG:O	21:T:23:ARG:C	2.51	0.48
21:T:89:ARG:C	21:T:91:LEU:N	2.67	0.48
1:A:236:G:H2'	1:A:237:C:O4'	2.14	0.47
1:A:645:C:H2'	1:A:646:U:H6	1.79	0.47
1:A:688:G:H2'	1:A:689:C:H6	1.79	0.47
1:A:701:C:O5'	1:A:703:G:H5'	2.14	0.47
1:A:750:G:C1'	16:O:22:THR:HG23	2.44	0.47
1:A:1026:G:H2'	1:A:1026:G:N3	2.29	0.47
1:A:1088:G:H22	1:A:1098:C:H1'	1.79	0.47
1:A:1158:C:C5	1:A:1160:G:C8	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:97:TRP:CD2	3:B:101:MET:HG3	2.49	0.47
4:C:29:TYR:O	4:C:31:HIS:N	2.44	0.47
5:D:109:GLY:C	5:D:111:ALA:N	2.66	0.47
6:E:53:LEU:HD22	6:E:57:LYS:CE	2.43	0.47
7:F:62:TRP:CE2	19:R:35:ARG:NH2	2.78	0.47
7:F:74:ASP:O	7:F:77:ARG:HG2	2.14	0.47
9:H:53:VAL:O	9:H:53:VAL:CG1	2.62	0.47
10:I:53:VAL:HG12	10:I:53:VAL:O	2.14	0.47
15:N:4:LYS:C	15:N:6:LEU:N	2.68	0.47
18:Q:76:LEU:HD23	18:Q:77:VAL:N	2.29	0.47
21:T:13:LEU:HD11	21:T:17:ARG:HE	1.79	0.47
21:T:14:LYS:O	21:T:15:ARG:C	2.52	0.47
1:A:83:U:H2'	1:A:84:U:H6	1.78	0.47
1:A:195:A:C6	1:A:196:A:N1	2.83	0.47
1:A:358:U:H2'	1:A:359:U:C6	2.49	0.47
1:A:413:G:O2'	1:A:428:G:N2	2.47	0.47
1:A:754:C:O2	1:A:754:C:H3'	2.14	0.47
1:A:942:G:H2'	1:A:943:U:C5	2.49	0.47
1:A:1001:A:H61	1:A:1040:U:H3	1.62	0.47
1:A:1049:U:C1'	1:A:1050:G:OP2	2.60	0.47
1:A:1055:A:N7	1:A:1200:C:N4	2.62	0.47
1:A:1189:C:P	15:N:58:LYS:HZ3	2.37	0.47
1:A:1233:G:O2'	1:A:1365:G:OP1	2.32	0.47
1:A:1256:A:H4'	1:A:1257:U:H5'	1.95	0.47
1:A:1266:G:N2	1:A:1270:C:N4	2.63	0.47
4:C:77:ILE:CD1	4:C:84:ILE:HD12	2.44	0.47
5:D:31:CYS:O	5:D:32:ALA:CB	2.62	0.47
6:E:7:GLU:HG2	6:E:8:GLU:H	1.76	0.47
6:E:53:LEU:O	6:E:57:LYS:HB2	2.14	0.47
6:E:133:TYR:O	6:E:137:GLU:HB2	2.14	0.47
9:H:53:VAL:HG12	9:H:58:TYR:CD1	2.49	0.47
10:I:16:ARG:HG2	10:I:16:ARG:NH1	2.29	0.47
11:J:15:THR:HG22	11:J:94:VAL:HG21	1.96	0.47
11:J:49:VAL:O	11:J:50:ILE:C	2.52	0.47
12:K:15:ALA:CA	12:K:77:MET:HA	2.40	0.47
12:K:20:TYR:CE1	12:K:83:ILE:HD12	2.48	0.47
16:O:70:LEU:HD13	16:O:70:LEU:C	2.34	0.47
17:P:2:VAL:C	17:P:64:ALA:HA	2.34	0.47
17:P:3:LYS:HA	17:P:64:ALA:HA	1.96	0.47
18:Q:51:TYR:CE1	18:Q:73:VAL:CB	2.97	0.47
18:Q:51:TYR:CD1	18:Q:73:VAL:HG11	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:Q:66:SER:CB	18:Q:69:LYS:HD3	2.44	0.47
18:Q:92:ARG:HB3	18:Q:92:ARG:NH1	2.24	0.47
18:Q:98:LEU:H	18:Q:98:LEU:CD1	2.28	0.47
21:T:45:GLN:CG	21:T:91:LEU:HD21	2.43	0.47
21:T:57:ARG:C	21:T:59:ALA:N	2.65	0.47
21:T:65:LYS:O	21:T:68:LYS:CB	2.62	0.47
1:A:23:C:C2'	1:A:24:U:H5'	2.45	0.47
1:A:131:C:H1'	1:A:262:A:C2	2.49	0.47
1:A:334:C:H2'	1:A:335:C:C6	2.49	0.47
1:A:544:G:C5	1:A:545:C:C5	3.02	0.47
1:A:731:G:OP1	1:A:766:A:C1'	2.62	0.47
1:A:883:C:C2'	1:A:884:U:H5'	2.43	0.47
1:A:979:C:H5	1:A:980:C:N1	2.12	0.47
1:A:1265:G:C2'	1:A:1266:G:H5'	2.44	0.47
4:C:26:LYS:HG2	4:C:27:LYS:H	1.79	0.47
4:C:173:VAL:N	4:C:174:PRO:CD	2.77	0.47
5:D:70:ILE:CG2	5:D:71:SER:H	2.02	0.47
6:E:48:ALA:HB1	6:E:49:PRO:HD2	1.95	0.47
6:E:50:GLU:OE2	6:E:51:VAL:HG23	2.14	0.47
6:E:51:VAL:HB	6:E:52:PRO:CD	2.45	0.47
8:G:14:PRO:HB2	8:G:19:GLY:C	2.35	0.47
8:G:51:GLN:OE1	8:G:55:GLY:HA2	2.13	0.47
8:G:60:LYS:HA	8:G:63:LYS:HB2	1.96	0.47
8:G:116:ALA:O	8:G:120:ILE:HG12	2.13	0.47
12:K:17:GLY:O	12:K:80:VAL:HG13	2.13	0.47
12:K:83:ILE:HG12	12:K:109:VAL:HG23	1.95	0.47
13:L:97:ARG:HG3	13:L:98:TYR:HE1	1.76	0.47
13:L:114:LYS:CA	13:L:117:ARG:HH12	2.27	0.47
14:M:31:LYS:C	14:M:33:ALA:N	2.67	0.47
16:O:48:LYS:H	16:O:48:LYS:HE3	1.79	0.47
16:O:85:LEU:HD12	16:O:85:LEU:N	2.29	0.47
17:P:58:TYR:O	17:P:61:SER:N	2.43	0.47
21:T:47:GLY:O	21:T:49:ALA:N	2.47	0.47
1:A:120:A:C4	1:A:122:G:C5	3.03	0.47
1:A:389:A:H2'	1:A:390:C:C5'	2.40	0.47
1:A:396:G:C5	1:A:398:C:N4	2.82	0.47
1:A:481:G:H2'	1:A:483:C:N4	2.29	0.47
1:A:942:G:N3	1:A:943:U:C6	2.82	0.47
1:A:1238:A:C2	1:A:1241:G:H1'	2.49	0.47
1:A:1291:G:O2'	10:I:38:GLN:HG3	2.14	0.47
3:B:91:PRO:HG3	3:B:154:LEU:HB3	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:109:SER:HA	3:B:112:VAL:HG23	1.97	0.47
3:B:130:ARG:HD2	3:B:131:PRO:CD	2.43	0.47
3:B:212:GLN:NE2	3:B:235:SER:OG	2.47	0.47
4:C:40:ARG:O	4:C:44:GLU:HB2	2.15	0.47
4:C:99:VAL:O	4:C:99:VAL:HG13	2.13	0.47
5:D:50:ARG:NH1	5:D:50:ARG:CB	2.74	0.47
10:I:102:LEU:H	10:I:102:LEU:HD23	1.75	0.47
11:J:55:LYS:O	11:J:56:HIS:CB	2.62	0.47
12:K:12:ARG:HD2	12:K:12:ARG:O	2.14	0.47
15:N:18:VAL:HG23	15:N:18:VAL:O	2.14	0.47
16:O:2:PRO:CG	16:O:3:ILE:H	2.12	0.47
17:P:57:ARG:HH12	17:P:79:VAL:HA	1.78	0.47
19:R:45:SER:OG	19:R:49:LYS:HB2	2.14	0.47
20:S:51:VAL:CG2	20:S:71:LEU:HD22	2.44	0.47
21:T:48:LYS:HB2	21:T:52:ALA:HB2	1.96	0.47
1:A:357:G:N2	1:A:358:U:C4	2.83	0.47
1:A:457:C:H2'	1:A:458:C:C5	2.50	0.47
1:A:540:G:H2'	1:A:541:G:H8	1.80	0.47
1:A:785:G:C4	1:A:798:G:N1	2.82	0.47
1:A:958:A:H2	1:A:985:C:O2	1.97	0.47
1:A:979:C:H5	1:A:980:C:C6	2.32	0.47
1:A:1068:G:N7	1:A:1094:G:C8	2.83	0.47
1:A:1120:G:O2'	1:A:1121:U:H5'	2.14	0.47
1:A:1193:G:C2	1:A:1194:U:C6	3.03	0.47
1:A:1222:G:P	20:S:77:THR:HG21	2.55	0.47
1:A:1238:A:N7	1:A:1303:C:H1'	2.30	0.47
1:A:1425:U:O2'	1:A:1426:C:H5'	2.15	0.47
3:B:96:ARG:O	3:B:98:LEU:HD23	2.14	0.47
3:B:134:GLU:O	3:B:137:ARG:HG2	2.15	0.47
4:C:101:LEU:HD23	4:C:102:ASN:N	2.30	0.47
6:E:143:ARG:HH11	6:E:143:ARG:HG3	1.79	0.47
7:F:91:VAL:HB	7:F:92:LYS:H	1.42	0.47
8:G:95:ARG:O	8:G:97:GLN:N	2.47	0.47
8:G:106:GLN:C	8:G:108:ALA:H	2.18	0.47
10:I:17:VAL:CG2	10:I:80:GLY:HA3	2.33	0.47
10:I:79:LEU:HD23	10:I:102:LEU:HA	1.95	0.47
11:J:46:ARG:NH1	11:J:64:GLU:HB3	2.27	0.47
13:L:47:LYS:O	13:L:48:PRO:C	2.53	0.47
15:N:22:THR:HB	15:N:33:VAL:HG21	1.97	0.47
15:N:25:VAL:HG12	15:N:39:LEU:CA	2.44	0.47
17:P:10:GLY:HA3	17:P:15:PRO:C	2.34	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:Q:92:ARG:O	18:Q:94:ASN:N	2.48	0.47
1:A:65:U:O4'	1:A:200:G:H4'	2.15	0.47
1:A:154:C:H1'	1:A:168:G:N2	2.29	0.47
1:A:429:U:H4'	1:A:430:A:C5'	2.45	0.47
1:A:509:A:N6	1:A:510:A:H61	2.11	0.47
1:A:561:U:O2'	1:A:562:C:P	2.73	0.47
1:A:632:A:C2'	1:A:633:G:H5'	2.45	0.47
1:A:677:U:H2'	1:A:678:U:H6	1.80	0.47
1:A:1032:G:H2'	1:A:1033:G:H8	1.79	0.47
1:A:1068:G:OP2	1:A:1068:G:H8	1.98	0.47
1:A:1287:A:H2'	1:A:1288:A:C8	2.50	0.47
1:A:1305:G:OP2	1:A:1305:G:C8	2.63	0.47
1:A:1413:A:H2'	1:A:1414:U:O4'	2.14	0.47
1:A:1520:G:C2	1:A:1521:G:C5	3.03	0.47
3:B:24:TRP:HB3	3:B:190:THR:HG23	1.97	0.47
3:B:111:ARG:HA	3:B:111:ARG:HD3	1.55	0.47
3:B:167:PRO:O	3:B:168:THR:C	2.52	0.47
8:G:90:GLU:HB3	8:G:91:VAL:H	1.50	0.47
8:G:127:ALA:O	8:G:129:GLU:N	2.47	0.47
9:H:125:ARG:O	9:H:126:LYS:C	2.53	0.47
10:I:28:VAL:HG13	10:I:33:PHE:HA	1.97	0.47
10:I:113:LYS:NZ	10:I:119:ALA:HB1	2.29	0.47
11:J:69:ASN:O	11:J:70:ARG:NE	2.45	0.47
14:M:39:ILE:HD12	14:M:56:LEU:CD2	2.43	0.47
14:M:51:ALA:C	14:M:54:VAL:HG12	2.35	0.47
16:O:36:ILE:HG12	16:O:59:MET:HB3	1.97	0.47
16:O:87:ILE:CG2	16:O:88:ARG:H	2.27	0.47
1:A:11:G:H2'	1:A:12:U:O4'	2.14	0.47
1:A:21:G:C2	1:A:22:G:C6	3.03	0.47
1:A:63:C:O2'	1:A:64:G:H5'	2.15	0.47
1:A:130:A:C2	1:A:264:U:C2	3.03	0.47
1:A:358:U:H2'	1:A:359:U:H6	1.80	0.47
1:A:407:G:O2'	5:D:116:GLN:HA	2.15	0.47
1:A:452:A:O2'	1:A:453:A:C8	2.67	0.47
1:A:525:C:H2'	1:A:526:C:C6	2.50	0.47
1:A:591:U:O2'	1:A:592:G:H5'	2.14	0.47
1:A:794:A:C2	1:A:795:C:C2	3.03	0.47
1:A:858:G:H22	1:A:869:G:C3'	2.28	0.47
1:A:864:A:H2	1:A:917:G:N3	2.12	0.47
1:A:907:A:C4	1:A:908:A:C8	3.02	0.47
1:A:913:A:H1'	1:A:914:A:H1'	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:997:U:H2'	1:A:998:G:O4'	2.14	0.47
1:A:1162:C:O2'	1:A:1163:C:H5'	2.14	0.47
1:A:1173:G:H2'	1:A:1174:G:C5'	2.45	0.47
1:A:1200:C:O2	1:A:1200:C:C2'	2.61	0.47
1:A:1258:G:H2'	1:A:1259:C:H6	1.80	0.47
1:A:1329:A:O2'	1:A:1330:U:H5'	2.14	0.47
1:A:1391:U:H2'	1:A:1392:G:H8	1.77	0.47
3:B:12:GLU:CG	3:B:213:LEU:HD21	2.44	0.47
3:B:56:ARG:CB	3:B:56:ARG:NH1	2.77	0.47
3:B:74:LYS:C	3:B:78:GLN:HB2	2.35	0.47
3:B:169:LYS:O	3:B:171:ALA:N	2.48	0.47
4:C:20:SER:HB3	4:C:22:TRP:NE1	2.29	0.47
5:D:59:ARG:O	5:D:60:GLU:C	2.53	0.47
5:D:128:VAL:C	5:D:130:GLY:H	2.18	0.47
6:E:153:LYS:HG2	6:E:154:GLY:N	2.30	0.47
7:F:19:LEU:HD23	7:F:19:LEU:C	2.35	0.47
7:F:40:VAL:HG13	7:F:40:VAL:O	2.14	0.47
7:F:100:ASN:O	19:R:28:GLU:HB3	2.14	0.47
8:G:23:VAL:HG13	8:G:43:PHE:CE2	2.50	0.47
9:H:20:TYR:O	9:H:21:LYS:O	2.31	0.47
9:H:31:PHE:O	9:H:34:GLU:N	2.48	0.47
10:I:27:THR:CG2	10:I:62:TYR:HD1	2.27	0.47
10:I:89:ASN:HD22	10:I:92:TYR:CA	2.27	0.47
12:K:93:GLN:HA	12:K:96:ARG:CB	2.40	0.47
13:L:55:VAL:HA	13:L:70:ILE:HG13	1.97	0.47
16:O:4:THR:OG1	16:O:7:GLU:HB2	2.15	0.47
16:O:57:LEU:CD1	16:O:57:LEU:H	2.27	0.47
18:Q:78:GLU:HG3	18:Q:78:GLU:O	2.14	0.47
21:T:14:LYS:O	21:T:16:HIS:N	2.47	0.47
1:A:36:C:O2'	1:A:37:U:H5'	2.15	0.47
1:A:229:U:H2'	1:A:230:G:C8	2.49	0.47
1:A:277:C:H5'	18:Q:68:ARG:NH2	2.30	0.47
1:A:501:C:H1'	1:A:549:C:H1'	1.96	0.47
1:A:707:C:H4'	12:K:20:TYR:CD2	2.49	0.47
1:A:853:G:HO2'	1:A:854:G:H5'	1.77	0.47
1:A:1186:G:N2	1:A:1187:G:H1'	2.29	0.47
1:A:1309:G:OP2	14:M:99:ARG:NH2	2.48	0.47
4:C:51:GLY:CA	4:C:70:VAL:HG13	2.44	0.47
4:C:113:ALA:O	4:C:117:ALA:N	2.39	0.47
4:C:116:VAL:C	4:C:119:ARG:HB3	2.35	0.47
5:D:96:LEU:O	5:D:97:LEU:C	2.51	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:112:VAL:O	5:D:113:SER:HB2	2.15	0.47
5:D:158:ILE:HG22	5:D:181:MET:HE1	1.96	0.47
5:D:191:ARG:HH12	5:D:200:GLU:HG2	1.80	0.47
5:D:202:LEU:O	5:D:203:VAL:C	2.53	0.47
9:H:65:TYR:HA	9:H:79:VAL:HG23	1.97	0.47
10:I:10:ARG:NE	10:I:11:LYS:H	2.12	0.47
10:I:28:VAL:CG1	10:I:33:PHE:HD1	2.27	0.47
10:I:40:LEU:O	10:I:42:ARG:N	2.48	0.47
11:J:4:ILE:HG12	11:J:74:ILE:N	2.27	0.47
11:J:28:ARG:HH21	11:J:34:VAL:HG21	1.80	0.47
11:J:86:MET:H	11:J:88:LEU:HD21	1.80	0.47
12:K:44:SER:N	12:K:47:VAL:CG2	2.78	0.47
12:K:46:GLY:C	12:K:48:ILE:H	2.18	0.47
12:K:72:ALA:O	12:K:77:MET:HB2	2.14	0.47
13:L:55:VAL:HG12	13:L:56:ALA:N	2.30	0.47
17:P:23:ASP:O	17:P:25:ARG:N	2.44	0.47
19:R:34:TYR:CD1	19:R:35:ARG:HG3	2.50	0.47
20:S:67:VAL:O	20:S:69:HIS:N	2.47	0.47
1:A:150:C:C2'	1:A:151:A:O5'	2.62	0.47
1:A:434:U:H2'	1:A:435:C:N1	2.30	0.47
1:A:513:C:O2'	1:A:514:C:H5'	2.14	0.47
1:A:523:A:H61	13:L:53:ARG:NH1	2.13	0.47
1:A:788:U:O2	1:A:788:U:O4'	2.30	0.47
1:A:792:A:HO2'	1:A:793:U:P	2.36	0.47
1:A:1421:G:O2'	1:A:1422:G:H5'	2.14	0.47
1:A:1517:G:H5'	1:A:1517:G:C8	2.45	0.47
4:C:96:GLY:O	4:C:98:ASN:N	2.48	0.47
4:C:157:ILE:HD11	4:C:166:GLU:H	1.79	0.47
5:D:158:ILE:HG22	5:D:181:MET:CE	2.45	0.47
8:G:44:TYR:OH	10:I:41:VAL:HG11	2.14	0.47
9:H:29:SER:OG	9:H:32:LYS:HB2	2.15	0.47
14:M:91:ARG:N	14:M:91:ARG:HD2	2.29	0.47
17:P:67:THR:CG2	17:P:68:ASP:N	2.77	0.47
19:R:58:LEU:HB3	19:R:62:GLU:HB2	1.96	0.47
20:S:23:ASN:HA	20:S:26:GLY:O	2.14	0.47
21:T:78:ALA:O	21:T:79:ARG:O	2.33	0.47
1:A:142:G:N3	1:A:196:A:C2	2.83	0.47
1:A:142:G:O2'	1:A:196:A:N1	2.34	0.47
1:A:259:G:C2	1:A:260:G:C4	3.04	0.47
1:A:502:G:OP1	13:L:117:ARG:N	2.48	0.47
1:A:543:C:O2'	1:A:544:G:H5'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:620:C:H2'	1:A:621:A:C8	2.50	0.47
1:A:1070:U:OP1	6:E:25:ARG:NH1	2.48	0.47
1:A:1240:U:O2	8:G:38:LEU:HD13	2.15	0.47
1:A:1368:G:OP2	10:I:112:LYS:HD3	2.15	0.47
3:B:114:ARG:O	3:B:115:LEU:C	2.54	0.47
3:B:114:ARG:O	3:B:117:GLU:HB3	2.15	0.47
4:C:51:GLY:HA2	4:C:71:ALA:H	1.80	0.47
4:C:153:VAL:HG12	4:C:154:SER:N	2.27	0.47
6:E:69:VAL:HG22	6:E:139:LEU:HB3	1.97	0.47
9:H:96:GLY:O	9:H:98:LYS:N	2.48	0.47
10:I:27:THR:HG23	10:I:62:TYR:HD1	1.80	0.47
11:J:35:SER:CB	11:J:73:ASP:HB2	2.32	0.47
14:M:80:ARG:HH21	20:S:69:HIS:CE1	2.33	0.47
16:O:62:GLN:O	16:O:65:ARG:HB2	2.15	0.47
17:P:22:THR:OG1	17:P:23:ASP:N	2.48	0.47
20:S:36:ARG:HB3	20:S:51:VAL:CG1	2.45	0.47
1:A:73:C:H2'	1:A:74:C:C5	2.50	0.46
1:A:445:G:C4	1:A:446:G:C8	3.03	0.46
1:A:687:A:O2'	1:A:688:G:OP2	2.33	0.46
1:A:741:G:H5'	16:O:39:LEU:HD13	1.96	0.46
1:A:1070:U:H2'	1:A:1071:C:H6	1.80	0.46
1:A:1085:U:H5'	1:A:1094:G:N2	2.31	0.46
1:A:1540:U:H5	1:A:1541:U:O2	1.97	0.46
3:B:120:ALA:O	3:B:123:ALA:HB3	2.15	0.46
3:B:148:TYR:C	3:B:150:SER:H	2.16	0.46
3:B:210:SER:O	3:B:213:LEU:HB3	2.15	0.46
5:D:38:TYR:CE1	5:D:45:GLN:HG3	2.50	0.46
5:D:176:LEU:HD13	5:D:182:LYS:O	2.15	0.46
8:G:135:VAL:HG12	8:G:139:GLU:OE2	2.14	0.46
9:H:37:ARG:O	9:H:40:ALA:CB	2.61	0.46
9:H:60:ARG:NH1	9:H:60:ARG:CG	2.69	0.46
10:I:49:PRO:CG	10:I:81:ILE:HG13	2.45	0.46
11:J:71:LEU:O	11:J:72:VAL:CB	2.63	0.46
12:K:93:GLN:O	12:K:96:ARG:HB3	2.15	0.46
12:K:122:LYS:O	12:K:125:PHE:N	2.48	0.46
13:L:84:LEU:HD12	13:L:85:ILE:H	1.80	0.46
15:N:25:VAL:H	15:N:39:LEU:HA	1.80	0.46
18:Q:11:VAL:HG22	18:Q:20:THR:OG1	2.15	0.46
21:T:30:LYS:HE2	21:T:72:LEU:HD21	1.98	0.46
21:T:71:THR:C	21:T:72:LEU:HD23	2.36	0.46
1:A:19:C:O2	1:A:572:A:H2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:115:G:H1	1:A:312:C:H42	1.61	0.46
1:A:318:G:C2	1:A:319:G:C8	3.03	0.46
1:A:321:A:C2	1:A:333:G:C2	3.03	0.46
1:A:435:C:H2'	1:A:436:C:C6	2.50	0.46
1:A:450:G:N2	1:A:482:A:H61	2.12	0.46
1:A:481:G:O2'	1:A:482:A:N7	2.49	0.46
1:A:532:A:H2'	1:A:533:A:C5'	2.46	0.46
1:A:712:A:N1	1:A:713:G:C2	2.84	0.46
1:A:1223:C:H3'	1:A:1224:G:C5'	2.45	0.46
1:A:1346:A:H1'	1:A:1348:U:C6	2.51	0.46
3:B:69:LEU:HD13	3:B:69:LEU:C	2.34	0.46
3:B:139:LYS:O	3:B:143:GLU:HG3	2.15	0.46
4:C:167:TRP:O	4:C:168:ALA:CB	2.63	0.46
5:D:102:ASP:HA	5:D:121:VAL:HG21	1.97	0.46
6:E:89:ILE:O	6:E:89:ILE:CG2	2.63	0.46
7:F:89:MET:HB3	19:R:76:LEU:CD2	2.40	0.46
8:G:65:ALA:HB1	8:G:127:ALA:CB	2.45	0.46
9:H:59:LEU:HD12	9:H:59:LEU:N	2.30	0.46
9:H:95:VAL:CG1	9:H:99:GLU:HB2	2.45	0.46
10:I:89:ASN:HD22	10:I:92:TYR:CB	2.29	0.46
11:J:8:LEU:HB2	11:J:70:ARG:CB	2.44	0.46
12:K:59:TYR:CE2	12:K:63:LEU:HD11	2.50	0.46
12:K:95:ILE:HG22	12:K:99:GLN:NE2	2.30	0.46
13:L:90:VAL:HG22	13:L:99:HIS:CE1	2.43	0.46
14:M:86:CYS:SG	20:S:73:GLU:OE1	2.66	0.46
15:N:26:ARG:HH22	15:N:47:LEU:CD2	2.14	0.46
20:S:18:LYS:HG2	20:S:31:ILE:HD12	1.96	0.46
21:T:40:ALA:HB2	21:T:55:ILE:HG22	1.98	0.46
1:A:259:G:O2'	1:A:260:G:H5'	2.15	0.46
1:A:262:A:C6	1:A:263:A:C6	3.04	0.46
1:A:381:C:H2'	1:A:382:A:C8	2.50	0.46
1:A:562:C:H4'	1:A:563:A:O5'	2.15	0.46
1:A:683:G:H2'	1:A:684:A:O4'	2.15	0.46
1:A:688:G:H2'	1:A:689:C:C6	2.51	0.46
1:A:698:G:O2'	1:A:699:C:H5'	2.15	0.46
1:A:705:U:C5	1:A:706:A:N7	2.83	0.46
1:A:714:G:N3	1:A:777:A:H1'	2.30	0.46
1:A:797:C:C2'	1:A:798:G:H5'	2.45	0.46
1:A:838:G:H1	1:A:848:C:N4	2.13	0.46
1:A:1072:G:H2'	1:A:1073:U:O4'	2.15	0.46
1:A:1415:G:H2'	1:A:1416:G:C8	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:112:VAL:HA	3:B:149:LEU:HD13	1.96	0.46
3:B:136:VAL:O	3:B:140:HIS:N	2.45	0.46
4:C:3:ASN:O	4:C:4:LYS:O	2.32	0.46
4:C:12:LEU:O	4:C:14:ILE:N	2.48	0.46
4:C:157:ILE:HD11	4:C:166:GLU:HB2	1.96	0.46
5:D:53:ASP:O	5:D:57:ARG:HD3	2.16	0.46
5:D:207:TYR:CD1	5:D:207:TYR:N	2.84	0.46
6:E:12:LEU:O	6:E:31:LEU:N	2.48	0.46
11:J:3:LYS:N	11:J:3:LYS:HD2	2.30	0.46
11:J:18:ALA:O	11:J:20:ALA:N	2.43	0.46
14:M:27:LYS:O	14:M:30:ALA:HB3	2.15	0.46
15:N:47:LEU:O	15:N:49:HIS:N	2.48	0.46
15:N:57:ARG:O	15:N:59:ALA:N	2.49	0.46
16:O:2:PRO:CG	16:O:3:ILE:N	2.76	0.46
17:P:12:LYS:O	17:P:14:ASN:N	2.41	0.46
18:Q:102:GLY:O	18:Q:103:GLY:O	2.34	0.46
19:R:51:LEU:HA	19:R:52:PRO:HD3	1.66	0.46
21:T:79:ARG:HB3	21:T:80:ARG:H	1.62	0.46
1:A:351:G:O2'	1:A:352:C:O5'	2.30	0.46
1:A:515:G:C5	1:A:516:U:C5	3.04	0.46
1:A:542:G:C5'	5:D:41:GLY:CA	2.94	0.46
1:A:877:C:O2	9:H:3:THR:CG2	2.61	0.46
1:A:990:C:H5''	1:A:1018:C:OP1	2.16	0.46
1:A:1116:C:C3'	1:A:1117:G:H5''	2.45	0.46
1:A:1157:A:C1'	1:A:1181:G:H21	2.27	0.46
3:B:12:GLU:O	3:B:14:GLY:N	2.48	0.46
3:B:93:VAL:HG21	3:B:97:TRP:CD1	2.48	0.46
3:B:98:LEU:CD2	3:B:98:LEU:N	2.79	0.46
5:D:65:ARG:HB2	5:D:75:PHE:HE1	1.80	0.46
5:D:103:ASN:O	5:D:104:VAL:C	2.50	0.46
5:D:118:ARG:HG3	5:D:136:PRO:HG2	1.96	0.46
6:E:128:PRO:HG2	6:E:129:ILE:H	1.81	0.46
7:F:22:GLU:C	7:F:24:GLU:N	2.68	0.46
7:F:30:LEU:N	7:F:30:LEU:CD2	2.70	0.46
10:I:26:VAL:HG12	10:I:27:THR:N	2.29	0.46
11:J:94:VAL:HG12	11:J:95:GLU:N	2.31	0.46
13:L:6:THR:O	13:L:9:GLN:HB2	2.16	0.46
13:L:84:LEU:HB2	13:L:105:TYR:CD1	2.50	0.46
14:M:82:MET:O	14:M:83:ASP:C	2.53	0.46
18:Q:94:ASN:C	18:Q:96:GLN:N	2.67	0.46
1:A:148:G:C2	1:A:149:A:C8	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:163:C:O2'	1:A:164:U:H5'	2.16	0.46
1:A:336:C:O2'	1:A:337:C:H5'	2.14	0.46
1:A:379:C:H42	1:A:385:C:H42	1.63	0.46
1:A:506:G:C6	1:A:507:C:C4	3.03	0.46
1:A:742:G:C2'	1:A:743:U:H5'	2.45	0.46
1:A:774:G:N2	1:A:775:G:H1'	2.31	0.46
1:A:789:U:O2	1:A:791:G:H3'	2.15	0.46
1:A:861:G:C5	1:A:862:C:H5	2.32	0.46
1:A:1002:G:H2'	1:A:1002:G:N3	2.31	0.46
1:A:1148:U:H2'	1:A:1149:C:C6	2.51	0.46
1:A:1249:C:O2	10:I:70:LYS:HE3	2.15	0.46
1:A:1342:C:O2'	10:I:124:GLN:HA	2.16	0.46
1:A:1413:A:H2'	1:A:1414:U:H6	1.79	0.46
1:A:1509:C:C2'	1:A:1510:U:H5'	2.45	0.46
3:B:80:ILE:CD1	3:B:211:ILE:HG22	2.43	0.46
4:C:42:LEU:C	4:C:44:GLU:H	2.19	0.46
4:C:132:ARG:C	4:C:134:ILE:N	2.68	0.46
5:D:171:GLY:O	5:D:174:LEU:HB2	2.16	0.46
6:E:15:ARG:CZ	6:E:26:PHE:CE2	2.97	0.46
11:J:26:ALA:CB	11:J:85:LEU:HB3	2.46	0.46
13:L:28:LYS:C	13:L:30:ALA:N	2.67	0.46
15:N:33:VAL:O	15:N:34:TYR:C	2.52	0.46
17:P:60:LEU:HD23	17:P:60:LEU:HA	1.76	0.46
21:T:30:LYS:O	21:T:31:SER:C	2.54	0.46
1:A:35:G:C6	1:A:36:C:C4	3.04	0.46
1:A:296:U:H1'	1:A:556:C:H1'	1.96	0.46
1:A:479:C:C5	1:A:480:U:C4	3.04	0.46
1:A:543:C:P	5:D:14:ARG:HH21	2.38	0.46
1:A:1003:G:N2	1:A:1040:U:C2	2.83	0.46
1:A:1026:G:N2	1:A:1027:C:H1'	2.30	0.46
1:A:1227:A:OP2	14:M:111:LYS:HD2	2.16	0.46
1:A:1379:G:O2'	1:A:1380:U:H5'	2.15	0.46
3:B:142:LEU:CD1	3:B:146:GLN:NE2	2.78	0.46
3:B:144:ARG:O	3:B:147:LYS:N	2.48	0.46
4:C:7:PRO:O	4:C:11:ARG:CD	2.64	0.46
4:C:134:ILE:HG23	4:C:151:VAL:HB	1.97	0.46
6:E:53:LEU:HD22	6:E:57:LYS:NZ	2.30	0.46
6:E:61:TYR:O	6:E:62:ALA:C	2.52	0.46
6:E:108:ALA:O	6:E:109:ILE:C	2.54	0.46
7:F:3:ARG:HG2	7:F:66:GLU:CG	2.46	0.46
8:G:12:LEU:H	8:G:12:LEU:CD1	2.11	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:G:51:GLN:HA	8:G:54:THR:O	2.15	0.46
9:H:81:HIS:HB2	9:H:138:TRP:O	2.15	0.46
11:J:38:ILE:HG12	11:J:72:VAL:H	1.81	0.46
11:J:62:HIS:HB3	15:N:59:ALA:CB	2.35	0.46
12:K:126:ARG:C	12:K:128:ALA:N	2.67	0.46
13:L:7:ILE:O	13:L:10:LEU:HB2	2.16	0.46
15:N:43:CYS:O	15:N:44:LEU:C	2.54	0.46
17:P:39:TYR:CB	17:P:73:LEU:HD13	2.39	0.46
18:Q:92:ARG:HA	18:Q:95:TYR:HE1	1.81	0.46
20:S:56:GLN:HG2	20:S:57:HIS:N	2.30	0.46
1:A:52:G:H2'	1:A:53:A:C8	2.48	0.46
1:A:67:C:HO2'	1:A:171:A:H1'	1.80	0.46
1:A:219:C:O2'	1:A:381:C:H5'	2.16	0.46
1:A:247:G:C6	1:A:278:G:N1	2.83	0.46
1:A:266:G:O2'	1:A:267:C:OP2	2.24	0.46
1:A:567:G:H2'	1:A:568:G:O4'	2.16	0.46
1:A:610:G:H2'	1:A:611:A:H8	1.80	0.46
1:A:722:A:H2'	1:A:722:A:N3	2.30	0.46
1:A:794:A:C5	1:A:795:C:C4	3.04	0.46
1:A:854:G:H3'	1:A:871:U:C4	2.50	0.46
1:A:892:A:C2	1:A:907:A:C4	3.04	0.46
1:A:1032:G:H2'	1:A:1033:G:C8	2.51	0.46
1:A:1036:G:H2'	1:A:1037:C:H6	1.80	0.46
1:A:1052:U:N3	1:A:1200:C:N3	2.64	0.46
1:A:1346:A:H1'	1:A:1348:U:C5	2.51	0.46
1:A:1364:U:H6	22:V:14:TRP:HZ2	1.64	0.46
3:B:67:THR:HA	3:B:90:MET:CE	2.46	0.46
3:B:114:ARG:HG2	3:B:114:ARG:HH11	1.81	0.46
3:B:144:ARG:O	3:B:147:LYS:HB2	2.15	0.46
3:B:182:ILE:HD12	3:B:182:ILE:N	2.30	0.46
4:C:82:GLU:O	4:C:85:ARG:HG2	2.15	0.46
5:D:61:LYS:NZ	5:D:62:GLN:HA	2.19	0.46
5:D:199:ASN:O	5:D:200:GLU:C	2.54	0.46
6:E:19:MET:HE3	6:E:24:ARG:CA	2.44	0.46
7:F:69:GLU:HG3	7:F:70:ASP:H	1.80	0.46
11:J:44:VAL:HG13	11:J:66:ARG:HG2	1.98	0.46
12:K:17:GLY:O	12:K:80:VAL:HA	2.16	0.46
12:K:71:LYS:O	12:K:75:TYR:HB2	2.16	0.46
16:O:17:ARG:HG3	16:O:17:ARG:NH1	2.30	0.46
17:P:19:ILE:HD13	17:P:38:TYR:CA	2.46	0.46
17:P:56:ALA:O	17:P:57:ARG:C	2.54	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:Q:29:HIS:O	18:Q:30:PRO:C	2.54	0.46
20:S:19:VAL:HG13	20:S:20:LEU:N	2.31	0.46
20:S:74:PHE:O	20:S:76:PRO:HD3	2.14	0.46
1:A:250:A:O2'	1:A:251:G:OP2	2.32	0.46
1:A:908:A:C2	1:A:909:A:C5	3.04	0.46
1:A:957:U:H1'	1:A:960:U:N3	2.30	0.46
1:A:1310:G:H2'	1:A:1311:G:H8	1.81	0.46
1:A:1346:A:C4	1:A:1348:U:C4	3.04	0.46
1:A:1372:U:OP1	10:I:72:GLY:N	2.37	0.46
3:B:52:GLU:CG	3:B:53:ARG:N	2.79	0.46
3:B:79:ASP:C	3:B:82:ARG:H	2.18	0.46
4:C:89:GLU:C	4:C:91:LEU:N	2.68	0.46
5:D:92:VAL:O	5:D:92:VAL:HG12	2.16	0.46
5:D:162:LEU:HA	5:D:165:MET:HG2	1.97	0.46
8:G:106:GLN:HE21	8:G:137:LYS:NZ	2.12	0.46
10:I:5:TYR:O	10:I:84:ALA:HA	2.15	0.46
10:I:47:LEU:HD23	10:I:81:ILE:CD1	2.45	0.46
11:J:57:LYS:O	11:J:58:ASP:C	2.54	0.46
15:N:31:ARG:O	15:N:33:VAL:HG13	2.15	0.46
15:N:42:ILE:HB	15:N:43:CYS:H	1.46	0.46
16:O:37:ASN:O	16:O:40:SER:HB2	2.15	0.46
16:O:66:LEU:O	16:O:69:TYR:HB3	2.16	0.46
21:T:84:LEU:O	21:T:88:VAL:HG23	2.16	0.46
21:T:86:ARG:HB3	21:T:90:GLN:CD	2.36	0.46
21:T:100:ILE:HG23	21:T:101:GLY:H	1.81	0.46
1:A:35:G:C5	1:A:36:C:C4	3.04	0.46
1:A:99:C:H2'	1:A:101:A:C1'	2.46	0.46
1:A:277:C:P	18:Q:68:ARG:NH2	2.89	0.46
1:A:291:C:C2'	1:A:292:G:H5'	2.46	0.46
1:A:377:G:C5'	17:P:5:ARG:NH1	2.79	0.46
1:A:435:C:C6	1:A:436:C:H5	2.34	0.46
1:A:524:G:O3'	13:L:89:ARG:NH2	2.49	0.46
1:A:544:G:C6	1:A:545:C:C4	3.04	0.46
1:A:674:G:C2	1:A:675:A:C5	3.04	0.46
1:A:689:C:C2'	1:A:690:G:H5'	2.46	0.46
1:A:735:C:H1'	19:R:75:ILE:HD11	1.98	0.46
1:A:1004:A:H2'	1:A:1005:A:H5'	1.97	0.46
1:A:1191:A:C4	1:A:1192:C:H5	2.33	0.46
1:A:1511:G:N1	1:A:1512:U:C2	2.84	0.46
1:A:1525:G:H2'	1:A:1526:G:H8	1.81	0.46
3:B:16:HIS:NE2	3:B:214:ILE:CD1	2.78	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:24:TRP:HA	3:B:190:THR:CG2	2.46	0.46
3:B:56:ARG:HH11	3:B:56:ARG:HB3	1.80	0.46
5:D:12:CYS:SG	5:D:22:LYS:HG3	2.56	0.46
5:D:22:LYS:HE3	5:D:22:LYS:HB3	1.69	0.46
5:D:64:LEU:HD13	5:D:64:LEU:C	2.36	0.46
5:D:103:ASN:O	5:D:106:TYR:N	2.46	0.46
5:D:180:GLY:O	5:D:182:LYS:NZ	2.40	0.46
6:E:15:ARG:O	6:E:16:THR:HG22	2.15	0.46
7:F:27:GLN:O	7:F:31:GLU:HG3	2.15	0.46
8:G:71:PRO:O	8:G:72:ARG:HD3	2.15	0.46
8:G:91:VAL:CG1	8:G:92:SER:N	2.79	0.46
8:G:105:VAL:CA	8:G:108:ALA:HB3	2.41	0.46
11:J:72:VAL:O	11:J:73:ASP:HB2	2.16	0.46
11:J:92:THR:C	11:J:94:VAL:H	2.19	0.46
12:K:93:GLN:CA	12:K:96:ARG:HB3	2.37	0.46
12:K:125:PHE:N	12:K:125:PHE:CD1	2.84	0.46
13:L:28:LYS:O	13:L:29:GLY:C	2.53	0.46
14:M:46:LYS:HG3	14:M:46:LYS:O	2.16	0.46
14:M:74:VAL:O	14:M:77:ASN:HB3	2.15	0.46
14:M:90:LEU:HD23	14:M:93:ARG:HD2	1.98	0.46
15:N:8:GLU:O	15:N:10:ALA:N	2.49	0.46
15:N:60:SER:O	15:N:61:TRP:HE3	1.99	0.46
21:T:67:ALA:O	21:T:73:HIS:CE1	2.69	0.46
1:A:67:C:H2'	1:A:68:G:C8	2.50	0.46
1:A:252:U:C4	1:A:253:U:O4	2.69	0.46
1:A:426:G:H2'	1:A:427:U:H6	1.80	0.46
1:A:538:G:H2'	1:A:539:A:H8	1.78	0.46
1:A:555:C:C2	1:A:556:C:C5	3.04	0.46
1:A:577:G:H2'	1:A:578:C:C6	2.51	0.46
1:A:662:G:H2'	1:A:663:A:C8	2.51	0.46
1:A:848:C:C2'	1:A:849:C:H5'	2.45	0.46
1:A:939:G:H5''	8:G:102:ARG:CZ	2.43	0.46
1:A:1205:U:H2'	1:A:1206:G:N7	2.31	0.46
3:B:95:GLN:HA	3:B:96:ARG:CZ	2.46	0.46
3:B:108:ILE:HG22	3:B:152:PHE:CE2	2.50	0.46
4:C:20:SER:HB3	4:C:22:TRP:HE1	1.81	0.46
4:C:172:ARG:HH12	4:C:174:PRO:HD3	1.81	0.46
4:C:177:THR:O	4:C:177:THR:CG2	2.64	0.46
5:D:177:ASP:O	5:D:179:GLU:N	2.48	0.46
7:F:42:GLU:HG3	7:F:61:LEU:HD23	1.98	0.46
9:H:104:ARG:O	9:H:105:ARG:C	2.53	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:I:80:GLY:O	10:I:82:ALA:N	2.45	0.46
11:J:33:GLN:HB3	11:J:34:VAL:H	1.60	0.46
12:K:36:ASP:N	12:K:36:ASP:OD2	2.48	0.46
12:K:67:ASP:OD2	12:K:71:LYS:NZ	2.49	0.46
13:L:73:GLU:OE2	13:L:73:GLU:HA	2.17	0.46
22:V:5:ASP:O	22:V:6:ARG:CB	2.64	0.46
1:A:188:C:H2'	1:A:189:G:H8	1.81	0.45
1:A:297:G:N2	1:A:299:G:H3'	2.32	0.45
1:A:319:G:C2	1:A:320:C:C6	3.04	0.45
1:A:674:G:H2'	1:A:675:A:C8	2.51	0.45
1:A:685:G:C2	1:A:686:U:C4	3.04	0.45
1:A:937:A:C2	1:A:1379:G:C6	3.04	0.45
1:A:1085:U:H3'	1:A:1086:U:H5	1.80	0.45
1:A:1371:G:C5	1:A:1372:U:C5	3.04	0.45
4:C:112:SER:OG	4:C:115:LEU:HG	2.16	0.45
5:D:150:GLU:C	5:D:152:SER:N	2.69	0.45
6:E:30:ALA:O	6:E:45:PHE:CD2	2.69	0.45
7:F:80:ARG:NH1	7:F:88:VAL:HB	2.31	0.45
9:H:103:VAL:HG12	9:H:108:GLY:HA3	1.98	0.45
9:H:114:THR:OG1	9:H:119:LEU:HD21	2.17	0.45
10:I:33:PHE:O	10:I:35:GLU:N	2.49	0.45
13:L:6:THR:O	13:L:7:ILE:C	2.55	0.45
17:P:71:ARG:HG3	17:P:80:PHE:CZ	2.51	0.45
20:S:5:LEU:HD13	20:S:9:VAL:HG13	1.98	0.45
20:S:30:LEU:HD23	20:S:31:ILE:O	2.16	0.45
20:S:40:ILE:HD11	20:S:71:LEU:HD23	1.97	0.45
1:A:120:A:O2'	1:A:121:C:H4'	2.16	0.45
1:A:132:C:C4	1:A:133:U:C5	3.04	0.45
1:A:144:G:N2	1:A:178:C:N3	2.57	0.45
1:A:225:C:H2'	1:A:226:G:O4'	2.17	0.45
1:A:373:A:C5	1:A:482:A:N7	2.84	0.45
1:A:429:U:C4'	1:A:430:A:H5''	2.46	0.45
1:A:790:A:H2'	1:A:791:G:H8	1.79	0.45
1:A:858:G:O2'	1:A:859:A:H5'	2.17	0.45
1:A:862:C:O2	1:A:862:C:H2'	2.15	0.45
1:A:1142:G:H3'	1:A:1143:G:C8	2.52	0.45
1:A:1361:G:C2'	1:A:1361(A):C:H5'	2.46	0.45
1:A:1389:C:O2'	1:A:1390:U:H5'	2.16	0.45
3:B:134:GLU:O	3:B:136:VAL:N	2.48	0.45
3:B:194:PRO:O	3:B:197:VAL:HG23	2.17	0.45
3:B:219:VAL:C	3:B:221:LEU:N	2.69	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:70:VAL:CG1	4:C:72:LYS:H	2.27	0.45
5:D:10:ARG:HH12	5:D:40:PRO:CB	2.28	0.45
7:F:33:TYR:HD1	7:F:75:LEU:HD23	1.81	0.45
9:H:4:ASP:O	9:H:5:PRO:C	2.52	0.45
11:J:14:LYS:C	11:J:17:ASP:HB3	2.37	0.45
12:K:18:ARG:HB3	12:K:20:TYR:CE1	2.51	0.45
13:L:36:VAL:O	13:L:58:VAL:HA	2.16	0.45
13:L:91:LYS:O	13:L:93:LEU:N	2.49	0.45
14:M:16:ASP:N	14:M:16:ASP:OD2	2.49	0.45
14:M:74:VAL:HG23	14:M:75:ALA:H	1.81	0.45
16:O:16:ALA:CB	16:O:21:ASP:HB3	2.35	0.45
18:Q:40:LYS:CD	18:Q:42:TYR:HE2	2.29	0.45
20:S:51:VAL:HG22	20:S:71:LEU:HD22	1.99	0.45
21:T:22:ARG:O	21:T:25:ARG:CB	2.64	0.45
21:T:50:GLU:O	21:T:52:ALA:N	2.49	0.45
21:T:55:ILE:O	21:T:56:MET:C	2.54	0.45
1:A:64:G:O2'	1:A:65:U:P	2.75	0.45
1:A:128:G:N2	1:A:234:C:C2	2.84	0.45
1:A:258:G:N3	1:A:259:G:C8	2.85	0.45
1:A:313:A:O2'	1:A:314:C:H5'	2.15	0.45
1:A:666:G:H2'	1:A:667:G:C8	2.48	0.45
1:A:684:A:N6	1:A:685:G:C6	2.84	0.45
1:A:686:U:O2	1:A:687:A:C5	2.69	0.45
1:A:908:A:C2	1:A:909:A:C4	3.04	0.45
1:A:951:G:O2'	1:A:952:U:H5'	2.17	0.45
1:A:959:A:H3'	1:A:960:U:C5'	2.32	0.45
1:A:971:G:H4'	1:A:972:C:H5'	1.98	0.45
1:A:1039:C:O2'	1:A:1040:U:H5'	2.16	0.45
1:A:1193:G:N3	1:A:1194:U:C6	2.85	0.45
1:A:1196:U:OP1	1:A:1197:G:H5'	2.16	0.45
1:A:1267:C:O2	22:V:20:LYS:HD2	2.16	0.45
1:A:1426:C:H2'	1:A:1427:U:H6	1.77	0.45
3:B:137:ARG:HG3	3:B:138:LEU:N	2.31	0.45
4:C:11:ARG:HG2	4:C:11:ARG:HH11	1.81	0.45
4:C:34:LEU:HD11	4:C:38:ARG:CZ	2.46	0.45
4:C:48:TYR:HA	4:C:52:LEU:CD2	2.44	0.45
4:C:119:ARG:NH1	4:C:119:ARG:HG2	2.32	0.45
5:D:43:HIS:CB	5:D:46:LYS:HE3	2.47	0.45
5:D:80:GLU:OE1	5:D:80:GLU:HA	2.16	0.45
6:E:24:ARG:HG2	6:E:24:ARG:HH11	1.81	0.45
6:E:76:ILE:HG13	6:E:142:LEU:HD13	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:141:GLN:O	6:E:143:ARG:HG2	2.15	0.45
9:H:26:VAL:CG1	9:H:59:LEU:HB2	2.46	0.45
9:H:104:ARG:HG3	9:H:138:TRP:CE3	2.51	0.45
10:I:42:ARG:O	10:I:43:ALA:C	2.55	0.45
12:K:25:TYR:CD1	12:K:25:TYR:N	2.84	0.45
13:L:5:PRO:HB2	13:L:10:LEU:HD23	1.98	0.45
13:L:56:ALA:O	13:L:58:VAL:HG23	2.15	0.45
17:P:39:TYR:HE2	17:P:41:PRO:CG	2.27	0.45
17:P:74:LEU:CD1	17:P:79:VAL:HG11	2.45	0.45
18:Q:12:SER:HB3	18:Q:20:THR:OG1	2.16	0.45
18:Q:36:ILE:H	18:Q:36:ILE:HG12	1.52	0.45
19:R:86:VAL:HG12	19:R:87:ARG:N	2.31	0.45
21:T:15:ARG:CA	21:T:18:GLN:HB2	2.45	0.45
22:V:3:LYS:HB3	22:V:14:TRP:CB	2.46	0.45
1:A:39:G:H2'	1:A:40:C:H6	1.80	0.45
1:A:70:G:O2'	1:A:73:C:H5'	2.17	0.45
1:A:109:A:C8	1:A:326:G:H2'	2.51	0.45
1:A:330:C:H4'	1:A:330:C:OP2	2.17	0.45
1:A:366:C:O2'	1:A:367:U:C5'	2.62	0.45
1:A:372:C:N4	1:A:387:U:H2'	2.30	0.45
1:A:448:A:H2'	1:A:449:C:H6	1.81	0.45
1:A:451:A:N7	1:A:481:G:C2	2.85	0.45
1:A:556:C:C2'	1:A:557:G:H5'	2.46	0.45
1:A:879:C:O2'	1:A:880:C:H5'	2.16	0.45
1:A:883:C:N3	1:A:884:U:C4	2.84	0.45
1:A:941:G:H2'	1:A:942:G:H5'	1.97	0.45
1:A:1015:A:H2'	1:A:1016:A:O4'	2.16	0.45
1:A:1097:C:H2'	1:A:1098:C:C6	2.39	0.45
1:A:1148:U:O2'	10:I:14:VAL:HG21	2.17	0.45
1:A:1255:G:H2'	1:A:1279:A:H62	1.80	0.45
1:A:1318:A:H4'	20:S:10:PHE:CZ	2.52	0.45
1:A:1407:C:O2'	1:A:1408:A:H5'	2.16	0.45
3:B:71:VAL:HG22	3:B:93:VAL:HG21	1.98	0.45
3:B:93:VAL:HG11	3:B:97:TRP:CD1	2.52	0.45
4:C:5:ILE:C	4:C:5:ILE:HD12	2.36	0.45
5:D:162:LEU:HA	5:D:165:MET:CG	2.47	0.45
7:F:84:ASN:HA	7:F:86:ARG:NH2	2.32	0.45
8:G:61:VAL:O	8:G:65:ALA:HB3	2.17	0.45
8:G:116:ALA:O	8:G:118:VAL:N	2.50	0.45
8:G:135:VAL:O	8:G:139:GLU:HG3	2.17	0.45
9:H:86:ILE:HG22	9:H:87:SER:H	1.79	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:H:116:LYS:HE2	9:H:129:VAL:HG21	1.99	0.45
9:H:120:THR:HG23	9:H:123:GLU:OE1	2.16	0.45
10:I:12:GLU:OE1	10:I:12:GLU:O	2.34	0.45
10:I:20:ARG:O	10:I:60:ASP:N	2.45	0.45
11:J:17:ASP:O	11:J:21:GLN:HB2	2.16	0.45
14:M:108:ARG:NH1	14:M:111:LYS:HZ2	2.14	0.45
17:P:51:VAL:O	17:P:52:ASP:CB	2.64	0.45
17:P:53:VAL:O	17:P:54:GLU:C	2.54	0.45
17:P:76:GLN:C	17:P:78:GLY:N	2.70	0.45
18:Q:75:ARG:NH1	18:Q:77:VAL:HG13	2.29	0.45
19:R:43:PHE:HB3	19:R:66:LEU:HD21	1.98	0.45
20:S:63:THR:CG2	20:S:64:GLU:H	2.27	0.45
21:T:22:ARG:O	21:T:26:ASN:N	2.45	0.45
22:V:12:LYS:HB2	22:V:22:ARG:HD2	1.97	0.45
1:A:89:C:C2'	1:A:90:U:O5'	2.65	0.45
1:A:119:A:C5	1:A:288:A:C2	3.04	0.45
1:A:137:C:H2'	1:A:138:G:C8	2.43	0.45
1:A:146:G:C4	1:A:147:G:C8	3.04	0.45
1:A:317:G:C6	1:A:318:G:N7	2.85	0.45
1:A:419:C:H42	1:A:424:G:H1	1.65	0.45
1:A:428:G:H4'	1:A:429:U:H5''	1.98	0.45
1:A:443:C:H42	1:A:491:G:H1	1.64	0.45
1:A:451:A:H2	1:A:480:U:C5	2.35	0.45
1:A:478:A:C2	1:A:479:C:N3	2.85	0.45
1:A:541:G:H2'	1:A:542:G:C8	2.49	0.45
1:A:714:G:H1'	1:A:777:A:C8	2.51	0.45
1:A:921:U:H2'	1:A:922:G:H5'	1.97	0.45
1:A:949:A:C5	1:A:950:U:C4	3.05	0.45
1:A:1041:A:N3	1:A:1041:A:H2'	2.32	0.45
1:A:1193:G:C2	1:A:1194:U:C5	3.04	0.45
1:A:1289:A:N1	1:A:1371:G:O2'	2.42	0.45
1:A:1360:A:H2'	1:A:1361:G:O4'	2.17	0.45
3:B:18:GLY:HA3	3:B:41:ILE:HG12	1.98	0.45
3:B:28:PHE:HB2	3:B:194:PRO:HD3	1.98	0.45
4:C:77:ILE:HG22	4:C:78:GLY:H	1.81	0.45
5:D:9:CYS:HA	5:D:22:LYS:HD3	1.98	0.45
5:D:17:VAL:HG12	5:D:18:LYS:H	1.80	0.45
5:D:114:ARG:CG	5:D:114:ARG:NH1	2.80	0.45
6:E:76:ILE:HG13	6:E:142:LEU:CD1	2.46	0.45
6:E:141:GLN:O	6:E:142:LEU:C	2.55	0.45
8:G:32:ARG:C	8:G:34:GLY:N	2.70	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:G:115:ARG:HB3	8:G:118:VAL:HG23	1.97	0.45
9:H:27:PRO:HG3	9:H:58:TYR:CE2	2.51	0.45
10:I:116:LYS:HD3	10:I:120:ARG:CA	2.47	0.45
11:J:63:PHE:CA	15:N:59:ALA:HB2	2.47	0.45
12:K:29:ILE:HB	12:K:43:SER:O	2.16	0.45
15:N:17:LYS:H	15:N:17:LYS:HG3	1.58	0.45
16:O:10:LYS:HG3	16:O:11:VAL:N	2.32	0.45
16:O:14:GLU:HG3	16:O:15:PHE:CE1	2.52	0.45
17:P:75:ARG:HA	17:P:80:PHE:HD1	1.82	0.45
19:R:34:TYR:HD1	19:R:35:ARG:N	2.14	0.45
20:S:40:ILE:HG21	20:S:62:ILE:CG1	2.46	0.45
1:A:134:A:H2'	1:A:135:C:O4'	2.17	0.45
1:A:513:C:H2'	1:A:514:C:H6	1.80	0.45
1:A:523:A:H2	1:A:527:G:C6	2.34	0.45
1:A:861:G:C2'	1:A:862:C:H5'	2.45	0.45
1:A:876:G:H1'	9:H:11:THR:HG21	1.98	0.45
1:A:969:A:C2'	1:A:970:C:H5'	2.46	0.45
1:A:1104:G:H2'	1:A:1105:A:C8	2.52	0.45
1:A:1129:C:O2'	1:A:1131:G:H3'	2.17	0.45
1:A:1372:U:O4	1:A:1373:G:C2	2.69	0.45
1:A:1524:C:H2'	1:A:1525:G:C8	2.51	0.45
4:C:118:GLN:O	4:C:122:GLU:N	2.28	0.45
5:D:123:HIS:O	5:D:125:HIS:N	2.49	0.45
5:D:163:GLU:O	5:D:165:MET:N	2.50	0.45
6:E:16:THR:OG1	6:E:17:ALA:N	2.50	0.45
7:F:33:TYR:CD1	7:F:75:LEU:HA	2.52	0.45
7:F:83:ASP:O	7:F:84:ASN:HB2	2.16	0.45
8:G:26:PHE:CD2	8:G:30:ILE:HD11	2.50	0.45
9:H:82:HIS:CB	9:H:138:TRP:CE2	2.99	0.45
9:H:83:ILE:HG23	9:H:83:ILE:O	2.16	0.45
13:L:26:ALA:O	13:L:27:LEU:CB	2.65	0.45
14:M:87:TYR:CD1	14:M:90:LEU:HD12	2.52	0.45
15:N:26:ARG:HH12	15:N:47:LEU:HD21	1.79	0.45
20:S:16:LEU:O	20:S:19:VAL:CG1	2.61	0.45
1:A:75:G:H22	1:A:95:U:H3	1.63	0.45
1:A:623:C:C2	1:A:624:C:C5	3.04	0.45
1:A:948:C:OP1	14:M:109:THR:HG22	2.17	0.45
1:A:1226:C:H2'	14:M:103:THR:CB	2.30	0.45
1:A:1317:C:OP2	15:N:17:LYS:HD2	2.16	0.45
1:A:1347:G:C2'	1:A:1348:U:OP2	2.65	0.45
1:A:1403:C:O2'	1:A:1404:C:H5'	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1415:G:H2'	1:A:1416:G:H8	1.81	0.45
3:B:111:ARG:HG3	3:B:149:LEU:HD11	1.98	0.45
3:B:144:ARG:HG3	3:B:145:LEU:N	2.31	0.45
3:B:177:ALA:O	3:B:179:LYS:N	2.50	0.45
4:C:43:LEU:O	4:C:47:LEU:HD13	2.17	0.45
5:D:28:SER:O	5:D:29:PRO:C	2.54	0.45
7:F:22:GLU:C	7:F:24:GLU:H	2.18	0.45
16:O:50:HIS:C	16:O:52:SER:H	2.20	0.45
17:P:39:TYR:HA	17:P:49:LEU:CD1	2.36	0.45
19:R:53:ARG:CG	19:R:63:GLN:HG2	2.43	0.45
22:V:10:ARG:HA	22:V:13:ILE:CG1	2.46	0.45
1:A:227:G:H2'	1:A:228:A:O4'	2.17	0.45
1:A:277:C:OP1	18:Q:41:LYS:HD2	2.16	0.45
1:A:293:G:N3	1:A:294:U:C6	2.85	0.45
1:A:421:U:H3'	1:A:422:C:C5'	2.47	0.45
1:A:425:G:O2'	1:A:426:G:H5'	2.15	0.45
1:A:599:C:O2'	9:H:129:VAL:HG12	2.16	0.45
1:A:786:G:H2'	1:A:787:A:O4'	2.17	0.45
1:A:1014:A:C5	1:A:1015:A:N6	2.85	0.45
1:A:1314:C:H2'	1:A:1315:U:H6	1.82	0.45
1:A:1513:A:H2'	1:A:1514:C:H6	1.77	0.45
3:B:55:PHE:CD1	3:B:58:ILE:HD12	2.51	0.45
5:D:24:GLU:HB2	5:D:112:VAL:CG1	2.47	0.45
5:D:176:LEU:HD12	5:D:177:ASP:H	1.79	0.45
6:E:30:ALA:HB3	6:E:46:GLY:CA	2.46	0.45
6:E:36:ASP:O	6:E:37:ARG:CB	2.65	0.45
6:E:37:ARG:HA	6:E:114:GLY:HA2	1.99	0.45
6:E:131:ILE:CG2	6:E:132:ALA:N	2.80	0.45
7:F:13:ASN:O	7:F:14:LEU:HD23	2.17	0.45
8:G:26:PHE:CZ	8:G:30:ILE:HD11	2.50	0.45
8:G:71:PRO:HG2	8:G:96:GLN:HG3	1.99	0.45
10:I:17:VAL:HA	10:I:63:ILE:CG2	2.37	0.45
14:M:6:GLY:O	14:M:7:VAL:CG2	2.65	0.45
16:O:56:LEU:O	16:O:59:MET:N	2.49	0.45
1:A:77:G:H2'	1:A:78:G:H8	1.82	0.45
1:A:124:G:C6	1:A:125:U:C4	3.05	0.45
1:A:190:C:H2'	1:A:190(A):C:H6	1.81	0.45
1:A:457:C:N3	1:A:476:G:N1	2.65	0.45
1:A:463:A:H5''	17:P:80:PHE:HB3	1.98	0.45
1:A:1056:U:H5'	4:C:163:ALA:HB2	1.98	0.45
1:A:1076:C:C2	1:A:1077:G:C8	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1286:A:H3'	1:A:1287:A:C5'	2.46	0.45
1:A:1347:G:C8	10:I:107:ARG:HB3	2.52	0.45
1:A:1448:C:C2	1:A:1449:C:C5	3.05	0.45
3:B:85:ALA:HB3	3:B:92:TYR:CD1	2.52	0.45
3:B:111:ARG:CA	3:B:111:ARG:NH1	2.57	0.45
3:B:158:LEU:HG	3:B:159:PRO:N	2.26	0.45
3:B:168:THR:HG21	3:B:191:ASP:OD2	2.17	0.45
4:C:22:TRP:CH2	4:C:32:LEU:HB3	2.52	0.45
4:C:53:ALA:HB3	4:C:69:HIS:HB2	1.99	0.45
4:C:55:VAL:CG1	4:C:68:VAL:HG22	2.46	0.45
4:C:92:ALA:HA	4:C:95:THR:O	2.16	0.45
5:D:127:THR:OG1	5:D:130:GLY:O	2.30	0.45
8:G:155:ARG:O	8:G:156:TRP:CB	2.64	0.45
9:H:113:SER:HB2	9:H:134:ILE:CD1	2.47	0.45
14:M:78:ILE:C	14:M:80:ARG:H	2.18	0.45
14:M:79:LYS:O	14:M:83:ASP:OD1	2.34	0.45
15:N:40:CYS:HB3	15:N:43:CYS:SG	2.57	0.45
18:Q:97:SER:O	18:Q:98:LEU:C	2.54	0.45
19:R:45:SER:HA	19:R:51:LEU:HD21	1.98	0.45
1:A:120:A:C5	1:A:122:G:C6	3.06	0.45
1:A:166:G:O2'	1:A:167:G:H5'	2.16	0.45
1:A:285:G:C2	1:A:286:G:C8	3.04	0.45
1:A:351:G:O2'	1:A:352:C:C5'	2.65	0.45
1:A:393:A:N3	1:A:394:G:C8	2.85	0.45
1:A:533:A:C5	1:A:536:C:C4	3.05	0.45
1:A:564:C:C2	18:Q:31:LEU:HD11	2.52	0.45
1:A:583:A:H2'	1:A:584:G:O4'	2.17	0.45
1:A:634:C:H2'	1:A:635:G:H8	1.81	0.45
1:A:807:A:H2'	1:A:808:C:H6	1.81	0.45
1:A:814:A:O2'	1:A:815:A:H3'	2.17	0.45
1:A:877:C:H5''	9:H:88:LYS:CD	2.45	0.45
1:A:885:G:H2'	1:A:886:G:C8	2.52	0.45
1:A:973:G:C3'	1:A:974:A:H5''	2.42	0.45
1:A:1030(C):G:H2'	1:A:1030(D):A:H8	1.81	0.45
3:B:141:GLU:O	3:B:142:LEU:C	2.55	0.45
4:C:84:ILE:HG12	4:C:88:ARG:HH11	1.80	0.45
4:C:85:ARG:HB2	4:C:85:ARG:HH11	1.79	0.45
4:C:119:ARG:HG2	4:C:119:ARG:HH11	1.82	0.45
5:D:9:CYS:SG	5:D:31:CYS:O	2.75	0.45
5:D:54:TYR:O	5:D:55:ALA:C	2.55	0.45
5:D:94:LEU:O	5:D:95:GLY:C	2.54	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:41:VAL:HG13	6:E:113:ALA:HA	1.99	0.45
7:F:5:GLU:O	7:F:90:VAL:HA	2.17	0.45
7:F:10:LEU:CD1	7:F:59:TYR:HB3	2.38	0.45
7:F:87:ARG:HH11	7:F:87:ARG:HG3	1.82	0.45
10:I:19:LEU:HA	10:I:60:ASP:O	2.17	0.45
11:J:48:THR:CG2	11:J:62:HIS:CG	3.00	0.45
11:J:51:ARG:HG3	15:N:45:ARG:CD	2.47	0.45
13:L:113:ARG:NH1	13:L:115:LYS:HB3	2.32	0.45
14:M:9:ILE:O	14:M:9:ILE:HG22	2.16	0.45
14:M:56:LEU:O	14:M:60:VAL:N	2.50	0.45
18:Q:53:LEU:HD12	18:Q:53:LEU:C	2.37	0.45
18:Q:77:VAL:O	18:Q:78:GLU:HG2	2.17	0.45
1:A:54:C:O2	1:A:54:C:H2'	2.16	0.44
1:A:229:U:H2'	1:A:230:G:H8	1.82	0.44
1:A:261:U:H2'	1:A:263:A:OP2	2.17	0.44
1:A:376:G:O3'	17:P:5:ARG:HD2	2.17	0.44
1:A:624:C:O2'	1:A:625:G:H5'	2.17	0.44
1:A:737:A:H5''	7:F:92:LYS:HE3	1.99	0.44
1:A:1081:G:O2'	1:A:1082:G:H5'	2.18	0.44
1:A:1148:U:O2'	1:A:1149:C:H5'	2.18	0.44
1:A:1207:G:C8	1:A:1207:G:OP2	2.70	0.44
1:A:1240:U:P	8:G:116:ALA:HB2	2.57	0.44
1:A:1319:A:H2'	1:A:1323:G:C8	2.52	0.44
1:A:1477:C:C2	1:A:1478:C:H5	2.34	0.44
3:B:151:GLY:C	3:B:153:ARG:N	2.70	0.44
3:B:167:PRO:O	3:B:169:LYS:N	2.51	0.44
4:C:23:TYR:CE2	11:J:10:GLY:HA2	2.52	0.44
4:C:117:ALA:HB1	4:C:187:ALA:CB	2.47	0.44
8:G:27:ILE:HG22	8:G:39:ALA:HB1	1.99	0.44
9:H:117:GLY:O	9:H:119:LEU:CD2	2.66	0.44
10:I:27:THR:CB	10:I:32:ASP:HA	2.46	0.44
14:M:57:ARG:O	14:M:61:GLU:HB2	2.17	0.44
14:M:116:THR:HG22	14:M:117:VAL:N	2.32	0.44
16:O:10:LYS:HZ1	16:O:14:GLU:HG2	1.82	0.44
18:Q:90:ILE:C	18:Q:92:ARG:N	2.68	0.44
18:Q:94:ASN:C	18:Q:96:GLN:H	2.20	0.44
18:Q:98:LEU:CD1	18:Q:103:GLY:HA3	2.47	0.44
18:Q:98:LEU:O	18:Q:99:SER:HB3	2.17	0.44
19:R:61:LYS:O	19:R:65:ILE:HG13	2.16	0.44
20:S:36:ARG:HB2	20:S:72:GLY:HA3	1.98	0.44
1:A:52:G:O2'	1:A:53:A:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:75:G:N2	1:A:95:U:H3	2.16	0.44
1:A:160:A:C6	1:A:161:A:C2	3.05	0.44
1:A:231:G:H2'	1:A:231:G:N3	2.31	0.44
1:A:248:C:O2'	1:A:249:U:H5'	2.18	0.44
1:A:381:C:H2'	1:A:382:A:H8	1.82	0.44
1:A:549:C:H2'	1:A:550:G:C8	2.52	0.44
1:A:691:G:N7	12:K:26:ASN:HB3	2.32	0.44
1:A:833:U:H2'	1:A:834:C:C6	2.52	0.44
1:A:942:G:C4	1:A:943:U:C5	3.05	0.44
1:A:1147:C:O2'	10:I:16:ARG:HG3	2.18	0.44
1:A:1321:C:C2	20:S:36:ARG:NH1	2.85	0.44
1:A:1353:G:O2'	1:A:1354:C:H5'	2.17	0.44
1:A:1403:C:O2	1:A:1499:A:N1	2.50	0.44
1:A:1542:U:H2'	1:A:1543:C:O4'	2.16	0.44
3:B:177:ALA:C	3:B:179:LYS:N	2.70	0.44
5:D:7:PRO:O	5:D:10:ARG:HD2	2.18	0.44
5:D:94:LEU:HA	5:D:97:LEU:HD12	1.98	0.44
6:E:11:ILE:HG21	6:E:31:LEU:HB3	1.92	0.44
6:E:146:ALA:O	6:E:150:ARG:N	2.40	0.44
10:I:112:LYS:HD3	10:I:112:LYS:C	2.37	0.44
13:L:115:LYS:CD	13:L:116:SER:H	2.24	0.44
17:P:69:THR:O	17:P:72:ARG:HB3	2.17	0.44
21:T:89:ARG:O	21:T:91:LEU:N	2.50	0.44
22:V:4:GLY:HA2	22:V:14:TRP:CZ3	2.52	0.44
1:A:47:C:O2	1:A:49:U:C5	2.71	0.44
1:A:110:C:H2'	1:A:111:G:H8	1.82	0.44
1:A:119:A:H4'	1:A:120:A:C8	2.52	0.44
1:A:248:C:C2'	1:A:249:U:H5'	2.48	0.44
1:A:332:G:C4	1:A:333:G:C8	3.05	0.44
1:A:518:C:O2'	1:A:519:C:OP2	2.31	0.44
1:A:645:C:H2'	1:A:646:U:C6	2.53	0.44
1:A:719:C:H3'	1:A:720:C:H6	1.81	0.44
1:A:976:G:N7	1:A:1358:U:C2	2.86	0.44
1:A:1523:G:O2'	1:A:1524:C:H5'	2.16	0.44
3:B:81:VAL:O	3:B:92:TYR:HD1	2.01	0.44
3:B:180:LEU:CB	3:B:182:ILE:HD11	2.47	0.44
4:C:51:GLY:C	4:C:53:ALA:N	2.70	0.44
4:C:113:ALA:N	4:C:202:ILE:HD12	2.25	0.44
4:C:203:PHE:O	4:C:204:LEU:HD23	2.17	0.44
6:E:87:SER:OG	6:E:131:ILE:HG12	2.18	0.44
7:F:5:GLU:HB2	7:F:91:VAL:CG2	2.45	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:G:31:MET:HG2	8:G:32:ARG:N	2.31	0.44
8:G:50:ILE:CD1	8:G:124:LEU:HB2	2.47	0.44
8:G:117:ALA:HA	8:G:120:ILE:CG1	2.48	0.44
9:H:68:ARG:HH12	9:H:70:GLN:NE2	2.15	0.44
10:I:49:PRO:HG3	10:I:81:ILE:HG13	1.99	0.44
11:J:95:GLU:CD	11:J:95:GLU:C	2.75	0.44
13:L:43:VAL:HG12	13:L:44:THR:N	2.33	0.44
15:N:21:TYR:O	15:N:23:ARG:N	2.51	0.44
16:O:45:VAL:HB	16:O:46:HIS:ND1	2.32	0.44
16:O:54:ARG:C	16:O:56:LEU:N	2.71	0.44
17:P:57:ARG:O	17:P:61:SER:HB3	2.17	0.44
17:P:77:ALA:O	17:P:78:GLY:C	2.54	0.44
18:Q:22:LEU:HA	18:Q:22:LEU:HD12	1.63	0.44
20:S:16:LEU:HD12	20:S:19:VAL:CG1	2.47	0.44
20:S:42:PRO:O	20:S:44:MET:N	2.50	0.44
21:T:12:ALA:C	21:T:14:LYS:N	2.71	0.44
21:T:13:LEU:HD12	21:T:14:LYS:N	2.31	0.44
1:A:230:G:C4	1:A:231:G:C8	3.05	0.44
1:A:819:A:H4'	1:A:820:U:OP2	2.16	0.44
1:A:876:G:C6	1:A:877:C:N4	2.85	0.44
1:A:1190:G:OP2	4:C:5:ILE:HG13	2.17	0.44
1:A:1401:G:H2'	1:A:1402:C:C5'	2.40	0.44
1:A:1424:C:C2'	1:A:1425:U:H5'	2.48	0.44
1:A:1509:C:O2'	1:A:1510:U:H5'	2.18	0.44
3:B:15:VAL:HG13	3:B:209:ARG:HD3	1.99	0.44
3:B:185:ILE:H	3:B:185:ILE:CD1	2.26	0.44
4:C:118:GLN:HA	4:C:121:ALA:HB3	1.99	0.44
5:D:191:ARG:O	5:D:192:GLU:C	2.54	0.44
6:E:8:GLU:HG2	6:E:34:VAL:HG23	1.98	0.44
8:G:129:GLU:OE1	8:G:131:LYS:HE2	2.18	0.44
10:I:49:PRO:CB	10:I:82:ALA:HB2	2.47	0.44
11:J:11:PHE:CE2	11:J:65:LEU:HD21	2.52	0.44
11:J:49:VAL:HG11	15:N:41:ARG:CB	2.47	0.44
11:J:90:LEU:CD2	11:J:91:PRO:HD3	2.45	0.44
12:K:30:VAL:HG21	12:K:65:ALA:CA	2.42	0.44
13:L:27:LEU:HG	13:L:28:LYS:H	1.83	0.44
13:L:27:LEU:HD22	13:L:62:SER:HB2	2.00	0.44
13:L:45:PRO:HD3	13:L:51:ALA:O	2.18	0.44
14:M:64:TRP:HB3	14:M:65:LYS:H	1.63	0.44
14:M:87:TYR:CZ	14:M:91:ARG:HD3	2.52	0.44
14:M:92:HIS:HA	14:M:110:ARG:NH2	2.31	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:Q:48:GLU:O	18:Q:50:LYS:N	2.50	0.44
20:S:47:HIS:O	20:S:48:THR:HB	2.18	0.44
1:A:109:A:N7	1:A:326:G:H2'	2.33	0.44
1:A:412:A:H4'	1:A:413:G:H8	1.83	0.44
1:A:412:A:O4'	5:D:35:ARG:NH2	2.50	0.44
1:A:521:G:OP2	13:L:54:LYS:HE2	2.17	0.44
1:A:524:G:H2'	1:A:525:C:C5	2.52	0.44
1:A:861:G:C4	1:A:862:C:C6	3.05	0.44
1:A:1405:G:O2'	1:A:1406:U:H5'	2.17	0.44
1:A:1503:A:H5'	1:A:1531:A:C1'	2.48	0.44
3:B:112:VAL:O	3:B:115:LEU:HB3	2.17	0.44
3:B:193:ASP:HA	3:B:194:PRO:HD2	1.73	0.44
6:E:8:GLU:CG	6:E:34:VAL:HG23	2.47	0.44
6:E:41:VAL:CG1	6:E:113:ALA:HA	2.47	0.44
8:G:17:VAL:CG1	8:G:18:TYR:N	2.72	0.44
9:H:11:THR:O	9:H:13:ILE:N	2.50	0.44
12:K:48:ILE:O	12:K:48:ILE:CG2	2.65	0.44
16:O:4:THR:OG1	16:O:7:GLU:CB	2.66	0.44
16:O:56:LEU:HA	16:O:59:MET:HG2	1.93	0.44
17:P:10:GLY:HA3	17:P:15:PRO:CA	2.46	0.44
18:Q:50:LYS:HD2	18:Q:51:TYR:CZ	2.53	0.44
20:S:67:VAL:C	20:S:69:HIS:H	2.21	0.44
1:A:51:A:C2	1:A:116:A:C1'	2.97	0.44
1:A:597:G:C6	1:A:644:G:C6	3.06	0.44
1:A:774:G:O2'	1:A:775:G:H5'	2.18	0.44
1:A:986:A:O2'	1:A:987:G:H5'	2.18	0.44
1:A:1066:C:H2'	1:A:1067:A:C2	2.52	0.44
1:A:1149:C:O2'	1:A:1280:A:N1	2.49	0.44
1:A:1280:A:C4	11:J:41:PRO:HG2	2.52	0.44
1:A:1365:G:C2'	1:A:1366:C:H5'	2.47	0.44
3:B:9:GLU:HB3	3:B:12:GLU:HG2	1.99	0.44
4:C:9:GLY:HA2	15:N:49:HIS:O	2.17	0.44
4:C:11:ARG:O	4:C:13:GLY:N	2.50	0.44
4:C:90:GLU:HA	4:C:93:LYS:HB2	2.00	0.44
5:D:154:ASN:C	5:D:154:ASN:HD22	2.21	0.44
6:E:106:PRO:O	6:E:107:ARG:C	2.56	0.44
8:G:25:ALA:O	8:G:26:PHE:C	2.56	0.44
14:M:29:ARG:HB3	14:M:64:TRP:CH2	2.52	0.44
16:O:18:PHE:HB2	16:O:19:PRO:CD	2.48	0.44
16:O:32:LEU:HD13	16:O:63:ARG:CA	2.48	0.44
17:P:26:ARG:CD	17:P:31:LYS:O	2.66	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:P:32:TYR:CD1	17:P:32:TYR:N	2.85	0.44
17:P:58:TYR:O	17:P:61:SER:CB	2.65	0.44
21:T:57:ARG:NH2	21:T:102:GLY:HA3	2.33	0.44
22:V:3:LYS:HB3	22:V:14:TRP:CG	2.52	0.44
1:A:322:C:O2'	21:T:23:ARG:HD3	2.17	0.44
1:A:333:G:H4'	21:T:16:HIS:NE2	2.32	0.44
1:A:380:G:C4	1:A:384:G:N2	2.86	0.44
1:A:434:U:C4	1:A:435:C:N4	2.85	0.44
1:A:487:A:H2'	1:A:488:C:O4'	2.17	0.44
1:A:880:C:H2'	1:A:881:G:C8	2.50	0.44
1:A:892:A:C5	1:A:893:C:C4	3.06	0.44
1:A:1162:C:H2'	1:A:1163:C:H6	1.82	0.44
1:A:1314:C:H2'	1:A:1315:U:C6	2.51	0.44
1:A:1329:A:OP2	14:M:28:ALA:CB	2.66	0.44
1:A:1337:G:H5''	1:A:1338:G:OP1	2.18	0.44
1:A:1419:G:C5	1:A:1420:C:C4	3.05	0.44
3:B:74:LYS:O	3:B:78:GLN:CB	2.66	0.44
3:B:219:VAL:HA	3:B:222:ILE:CG1	2.47	0.44
4:C:132:ARG:C	4:C:134:ILE:H	2.20	0.44
4:C:138:VAL:O	4:C:142:MET:N	2.29	0.44
5:D:34:GLU:O	5:D:35:ARG:HB2	2.16	0.44
5:D:148:VAL:HG12	5:D:149:ALA:H	1.82	0.44
6:E:110:LEU:CD1	6:E:118:ILE:HD12	2.26	0.44
7:F:25:ILE:HG23	7:F:26:ILE:N	2.33	0.44
7:F:48:LEU:HD13	7:F:52:ILE:CD1	2.48	0.44
8:G:73:MET:SD	8:G:90:GLU:HA	2.57	0.44
9:H:8:ASP:O	9:H:9:MET:C	2.56	0.44
9:H:10:LEU:H	9:H:10:LEU:HG	1.64	0.44
9:H:26:VAL:HG12	9:H:59:LEU:O	2.17	0.44
9:H:58:TYR:C	9:H:59:LEU:HD12	2.38	0.44
9:H:86:ILE:HG21	9:H:133:LEU:HB3	1.99	0.44
10:I:15:ALA:HA	10:I:65:VAL:HA	2.00	0.44
10:I:116:LYS:HD3	10:I:120:ARG:C	2.38	0.44
11:J:6:ILE:O	11:J:71:LEU:CA	2.63	0.44
11:J:15:THR:C	11:J:17:ASP:N	2.71	0.44
13:L:110:VAL:N	13:L:122:THR:CG2	2.81	0.44
13:L:110:VAL:H	13:L:122:THR:HG23	1.82	0.44
21:T:71:THR:OG1	21:T:72:LEU:N	2.51	0.44
1:A:107:G:H2'	1:A:108:G:C5'	2.39	0.44
1:A:196:A:O2'	1:A:197:A:H2'	2.18	0.44
1:A:318:G:N3	1:A:319:G:C8	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:529:G:O6	13:L:49:ASN:HB3	2.17	0.44
1:A:604:G:C5	1:A:605:U:C5	3.05	0.44
1:A:707:C:O3'	12:K:20:TYR:HE2	2.01	0.44
1:A:1127:G:N2	1:A:1146:A:N6	2.66	0.44
1:A:1269:A:H5''	22:V:18:TYR:O	2.18	0.44
1:A:1316:G:C5'	15:N:17:LYS:NZ	2.72	0.44
1:A:1389:C:C2'	1:A:1390:U:H5'	2.48	0.44
3:B:145:LEU:O	3:B:149:LEU:HB2	2.17	0.44
4:C:14:ILE:O	4:C:16:ARG:N	2.50	0.44
4:C:195:VAL:O	4:C:196:LEU:HD23	2.17	0.44
5:D:165:MET:O	5:D:167:GLY:N	2.50	0.44
8:G:109:ASN:OD1	8:G:119:ARG:NE	2.42	0.44
9:H:20:TYR:C	9:H:21:LYS:O	2.55	0.44
9:H:31:PHE:O	9:H:32:LYS:C	2.56	0.44
9:H:84:ARG:O	9:H:135:CYS:HB2	2.18	0.44
9:H:97:VAL:HA	9:H:100:ILE:HD12	1.98	0.44
9:H:121:ASP:O	9:H:122:ARG:C	2.55	0.44
11:J:85:LEU:O	11:J:85:LEU:CD1	2.64	0.44
13:L:60:LEU:HD22	13:L:60:LEU:N	2.32	0.44
14:M:37:THR:HG21	14:M:56:LEU:CD2	2.47	0.44
15:N:48:ALA:HB1	15:N:56:VAL:HG11	1.99	0.44
16:O:39:LEU:CD2	16:O:56:LEU:HB2	2.47	0.44
19:R:53:ARG:HD3	19:R:63:GLN:HB2	1.99	0.44
20:S:28:LYS:HG2	20:S:29:ARG:N	2.21	0.44
1:A:90:U:H2'	1:A:91:C:C6	2.53	0.44
1:A:554:C:C4	1:A:555:C:N4	2.86	0.44
1:A:588:G:C4	1:A:753:A:C6	3.06	0.44
1:A:620:C:O4'	5:D:135:LEU:HD13	2.18	0.44
1:A:742:G:H2'	1:A:743:U:O4'	2.18	0.44
1:A:782:A:N1	1:A:801:U:C1'	2.78	0.44
1:A:951:G:H2'	1:A:952:U:C5'	2.48	0.44
1:A:974:A:OP2	15:N:41:ARG:NH1	2.49	0.44
1:A:1154:G:O2'	1:A:1155:G:H5'	2.18	0.44
1:A:1178:G:C4	1:A:1180:A:OP2	2.71	0.44
1:A:1278:U:O3'	1:A:1279:A:N3	2.51	0.44
1:A:1311:G:N7	20:S:2:PRO:HA	2.33	0.44
1:A:1339:A:O2'	1:A:1340:A:H5'	2.18	0.44
1:A:1399:C:C2	1:A:1401:G:C5	3.06	0.44
1:A:1441:G:H4'	1:A:1442:G:C6	2.52	0.44
1:A:1497:G:N7	1:A:1498:U:C5	2.85	0.44
3:B:130:ARG:CZ	3:B:131:PRO:HD2	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:144:SER:C	4:C:146:ALA:H	2.21	0.44
4:C:174:PRO:HB2	4:C:177:THR:CG2	2.48	0.44
5:D:155:LEU:HD22	5:D:157:LEU:HB3	1.99	0.44
9:H:100:ILE:HG23	9:H:112:LEU:HD21	2.00	0.44
11:J:78:ASN:O	11:J:80:LYS:N	2.50	0.44
12:K:21:ILE:HD13	12:K:94:ALA:HB1	2.00	0.44
14:M:39:ILE:HG22	14:M:40:ASN:O	2.17	0.44
14:M:81:LEU:CD2	14:M:81:LEU:N	2.80	0.44
17:P:53:VAL:HG12	17:P:79:VAL:HG22	2.00	0.44
19:R:40:LEU:HD21	19:R:69:THR:HG21	2.00	0.44
20:S:40:ILE:HG21	20:S:66:MET:O	2.18	0.44
22:V:12:LYS:HB3	22:V:17:THR:O	2.18	0.44
1:A:28:G:O2'	1:A:296:U:H5''	2.17	0.43
1:A:80:G:H2'	1:A:81:U:OP1	2.18	0.43
1:A:542:G:C2	1:A:543:C:C5	3.05	0.43
1:A:707:C:C2	1:A:708:C:C5	3.05	0.43
1:A:717:C:H2'	1:A:734:G:OP2	2.18	0.43
1:A:719:C:H42	19:R:74:ARG:NH1	2.16	0.43
1:A:779:C:N3	1:A:780:A:C2	2.86	0.43
1:A:803:G:C6	1:A:804:U:N3	2.86	0.43
1:A:928:G:H4'	1:A:1532:U:O2'	2.18	0.43
1:A:979:C:OP1	1:A:1222:G:O6	2.34	0.43
1:A:1243:C:O2'	1:A:1244:C:H5'	2.18	0.43
1:A:1293:G:H2'	1:A:1294:G:O4'	2.18	0.43
1:A:1343:G:C4	1:A:1344:C:C5	3.06	0.43
1:A:1370:G:H5''	10:I:109:VAL:HG21	2.00	0.43
3:B:95:GLN:HG3	3:B:147:LYS:O	2.18	0.43
3:B:124:SER:HB2	3:B:125:PRO:HD2	2.00	0.43
4:C:112:SER:OG	4:C:115:LEU:HD12	2.18	0.43
5:D:100:ARG:NH1	5:D:100:ARG:HG3	2.32	0.43
6:E:92:LYS:N	6:E:119:LEU:O	2.47	0.43
6:E:121:LYS:CD	6:E:122:GLU:N	2.81	0.43
8:G:26:PHE:O	8:G:29:LYS:HB2	2.18	0.43
8:G:60:LYS:HE2	8:G:64:GLN:CB	2.45	0.43
8:G:141:VAL:O	8:G:144:MET:HB2	2.17	0.43
9:H:117:GLY:O	9:H:119:LEU:HD23	2.18	0.43
10:I:6:GLY:O	10:I:80:GLY:HA2	2.18	0.43
11:J:77:PRO:HG2	11:J:82:ILE:HD11	2.00	0.43
16:O:36:ILE:CD1	16:O:63:ARG:HD3	2.45	0.43
19:R:51:LEU:HA	19:R:51:LEU:HD23	1.83	0.43
19:R:72:ARG:O	19:R:75:ILE:HB	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:226:G:C2	1:A:227:G:N7	2.86	0.43
1:A:318:G:H2'	1:A:319:G:H8	1.83	0.43
1:A:437:U:H2'	1:A:438:G:H5'	2.00	0.43
1:A:533:A:C5	1:A:536:C:N4	2.86	0.43
1:A:885:G:H1	1:A:912:C:H42	1.64	0.43
1:A:939:G:O2'	1:A:940:C:H5'	2.18	0.43
1:A:1127:G:H21	1:A:1146:A:N6	2.16	0.43
1:A:1269:A:H5'	22:V:18:TYR:O	2.17	0.43
1:A:1455:G:C8	1:A:1455:G:O5'	2.70	0.43
1:A:1503:A:C4	1:A:1531:A:C2	3.06	0.43
3:B:19:HIS:CD2	3:B:205:ASP:H	2.35	0.43
3:B:84:GLU:OE1	3:B:216:SER:HA	2.18	0.43
3:B:114:ARG:CD	3:B:118:LEU:HG	2.47	0.43
3:B:219:VAL:CG2	3:B:222:ILE:HD12	2.45	0.43
4:C:47:LEU:O	4:C:48:TYR:C	2.56	0.43
5:D:55:ALA:O	5:D:59:ARG:N	2.51	0.43
6:E:33:VAL:CG2	6:E:109:ILE:HD13	2.48	0.43
8:G:24:THR:O	8:G:28:ASN:ND2	2.51	0.43
8:G:49:ILE:CG2	8:G:53:LYS:HZ3	2.32	0.43
9:H:95:VAL:HG21	9:H:133:LEU:HD12	2.00	0.43
11:J:56:HIS:C	11:J:57:LYS:O	2.56	0.43
13:L:69:TYR:HB2	13:L:96:VAL:HG11	2.00	0.43
13:L:75:HIS:HD2	13:L:77:LEU:HB2	1.83	0.43
13:L:112:ASP:O	13:L:113:ARG:CB	2.66	0.43
14:M:2:ALA:O	14:M:10:PRO:HD2	2.17	0.43
14:M:70:LEU:C	14:M:72:ALA:N	2.71	0.43
14:M:79:LYS:O	14:M:82:MET:HB2	2.18	0.43
14:M:80:ARG:C	14:M:82:MET:N	2.71	0.43
15:N:24:CYS:SG	15:N:39:LEU:C	2.96	0.43
16:O:57:LEU:HD12	16:O:57:LEU:H	1.83	0.43
16:O:73:GLU:OE1	16:O:73:GLU:HA	2.19	0.43
20:S:43:GLU:C	20:S:45:VAL:N	2.72	0.43
1:A:53:A:H2'	1:A:54:C:O5'	2.18	0.43
1:A:101:A:H2'	1:A:102:G:H5'	2.01	0.43
1:A:143:A:O3'	1:A:144:G:H8	2.00	0.43
1:A:356:A:H2'	1:A:357:G:C8	2.50	0.43
1:A:363:A:N1	1:A:364:A:C2	2.86	0.43
1:A:380:G:N2	1:A:383:A:OP2	2.50	0.43
1:A:451:A:O5'	1:A:451:A:H8	2.01	0.43
1:A:596:C:OP2	1:A:597:G:OP2	2.35	0.43
1:A:623:C:N3	1:A:624:C:C4	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:663:A:C2'	1:A:664:G:H5'	2.48	0.43
1:A:803:G:H2'	1:A:804:U:O4'	2.18	0.43
1:A:935:A:H61	8:G:3:ARG:CG	2.31	0.43
1:A:1067:A:O2'	1:A:1093:A:O3'	2.24	0.43
1:A:1097:C:C2	1:A:1098:C:C6	3.06	0.43
1:A:1104:G:C2	1:A:1105:A:C4	3.07	0.43
1:A:1273:G:H2'	1:A:1274:G:O4'	2.18	0.43
1:A:1285:A:O2'	1:A:1286:A:P	2.76	0.43
1:A:1511:G:O2'	1:A:1512:U:H5'	2.19	0.43
3:B:55:PHE:O	3:B:56:ARG:C	2.56	0.43
3:B:96:ARG:N	3:B:96:ARG:NE	2.66	0.43
3:B:167:PRO:O	3:B:171:ALA:HB2	2.18	0.43
4:C:45:LYS:HD3	4:C:45:LYS:C	2.38	0.43
5:D:122:ARG:HE	5:D:134:ASP:HB2	1.82	0.43
5:D:171:GLY:HA2	5:D:172:PRO:HD2	1.71	0.43
6:E:15:ARG:O	6:E:16:THR:O	2.36	0.43
6:E:32:VAL:O	6:E:32:VAL:HG13	2.17	0.43
6:E:33:VAL:HG22	6:E:109:ILE:CD1	2.48	0.43
6:E:59:GLY:O	6:E:62:ALA:HB3	2.19	0.43
6:E:92:LYS:O	6:E:118:ILE:HG23	2.17	0.43
7:F:10:LEU:O	7:F:11:ASN:C	2.57	0.43
9:H:110:ALA:CB	9:H:121:ASP:HB3	2.48	0.43
10:I:40:LEU:C	10:I:42:ARG:N	2.71	0.43
10:I:111:ARG:HH12	10:I:113:LYS:HA	1.83	0.43
11:J:14:LYS:HD3	11:J:14:LYS:C	2.39	0.43
12:K:44:SER:H	12:K:47:VAL:CB	2.31	0.43
15:N:15:LYS:HD3	15:N:16:PHE:HE1	1.84	0.43
18:Q:98:LEU:HD12	18:Q:103:GLY:HA3	1.97	0.43
21:T:23:ARG:HG2	21:T:23:ARG:HH11	1.83	0.43
21:T:62:LEU:O	21:T:66:ALA:N	2.39	0.43
1:A:428:G:H4'	1:A:429:U:C5'	2.48	0.43
1:A:902:G:H2'	1:A:903:G:C8	2.53	0.43
1:A:977:A:N6	1:A:1224:G:O4'	2.52	0.43
1:A:1003(A):G:C2	1:A:1004:A:H1'	2.53	0.43
1:A:1115:C:O2'	1:A:1116:C:H5'	2.18	0.43
1:A:1121:U:H2'	1:A:1122:U:H6	1.83	0.43
1:A:1157:A:N9	1:A:1181:G:N2	2.66	0.43
1:A:1165:C:H2'	1:A:1166:G:C4'	2.49	0.43
1:A:1225:A:H2'	1:A:1226:C:C6	2.54	0.43
1:A:1329:A:H2'	1:A:1330:U:O4'	2.18	0.43
1:A:1356:G:O2'	1:A:1357:A:H5'	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:69:LEU:HD22	3:B:69:LEU:HA	1.70	0.43
3:B:80:ILE:CD1	3:B:212:GLN:HA	2.49	0.43
3:B:89:GLY:O	3:B:154:LEU:HD23	2.18	0.43
4:C:34:LEU:HD13	4:C:34:LEU:C	2.39	0.43
9:H:9:MET:HE2	9:H:32:LYS:HA	2.01	0.43
9:H:34:GLU:OE2	9:H:34:GLU:HA	2.18	0.43
10:I:5:TYR:CG	10:I:6:GLY:N	2.85	0.43
10:I:89:ASN:O	10:I:92:TYR:HB2	2.17	0.43
11:J:34:VAL:HG12	11:J:35:SER:N	2.32	0.43
12:K:44:SER:H	12:K:47:VAL:CG2	2.31	0.43
14:M:39:ILE:HD12	14:M:56:LEU:HD21	1.99	0.43
15:N:15:LYS:HD3	15:N:16:PHE:CE1	2.54	0.43
17:P:54:GLU:OE1	17:P:54:GLU:O	2.37	0.43
17:P:57:ARG:HH12	17:P:79:VAL:HG13	1.83	0.43
17:P:65:GLN:NE2	17:P:71:ARG:HH22	2.15	0.43
18:Q:42:TYR:O	18:Q:43:LEU:HD23	2.19	0.43
21:T:50:GLU:HA	21:T:100:ILE:CG2	2.49	0.43
1:A:6:G:H4'	1:A:298:A:H4'	1.99	0.43
1:A:222:U:O2'	1:A:223:U:H5'	2.18	0.43
1:A:293:G:N3	1:A:294:U:C5	2.86	0.43
1:A:394:G:H2'	1:A:395:C:H6	1.83	0.43
1:A:544:G:OP1	5:D:62:GLN:OE1	2.36	0.43
1:A:602:A:N1	1:A:637:G:C6	2.86	0.43
1:A:710:G:C5'	7:F:54:LYS:HZ3	2.27	0.43
1:A:977:A:C8	1:A:1223:C:N3	2.86	0.43
1:A:978:A:C2	1:A:1319:A:H1'	2.53	0.43
1:A:1046:A:H3'	1:A:1047:G:H8	1.82	0.43
1:A:1064:G:C4	1:A:1066:C:C4	3.07	0.43
1:A:1347:G:H21	1:A:1373:G:H2'	1.75	0.43
1:A:1366:C:O2'	1:A:1367:C:H5'	2.19	0.43
1:A:1518:A:C6	1:A:1519:A:C6	3.07	0.43
3:B:44:LEU:O	3:B:47:THR:HB	2.18	0.43
3:B:57:PHE:O	3:B:58:ILE:C	2.54	0.43
3:B:191:ASP:OD1	3:B:191:ASP:N	2.50	0.43
4:C:8:ILE:HG22	4:C:12:LEU:HD23	2.00	0.43
4:C:133:ALA:HA	4:C:136:GLN:HB2	2.01	0.43
4:C:185:GLY:O	4:C:199:LYS:O	2.37	0.43
5:D:5:ILE:HG22	5:D:5:ILE:O	2.19	0.43
5:D:38:TYR:CB	5:D:39:PRO:HD2	2.36	0.43
5:D:83:SER:HA	5:D:89:THR:OG1	2.18	0.43
5:D:204:ILE:O	5:D:207:TYR:N	2.43	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:97:GLY:O	6:E:98:THR:C	2.56	0.43
7:F:3:ARG:HA	7:F:66:GLU:HA	2.01	0.43
7:F:6:VAL:HG12	7:F:8:ILE:HG13	2.00	0.43
8:G:54:THR:HB	8:G:56:GLN:HE22	1.84	0.43
9:H:92:ARG:HG2	9:H:94:TYR:OH	2.19	0.43
10:I:63:ILE:HD12	10:I:77:ILE:HG12	2.00	0.43
11:J:7:LYS:N	11:J:97:GLU:O	2.45	0.43
14:M:2:ALA:N	14:M:11:ARG:NH1	2.66	0.43
15:N:56:VAL:HG13	15:N:57:ARG:N	2.33	0.43
17:P:19:ILE:HD12	17:P:19:ILE:N	2.33	0.43
17:P:71:ARG:HA	17:P:74:LEU:HB3	2.00	0.43
17:P:74:LEU:HD13	17:P:79:VAL:CG2	2.48	0.43
19:R:53:ARG:HH21	19:R:60:GLY:CA	2.24	0.43
19:R:70:ILE:O	19:R:71:LYS:C	2.54	0.43
1:A:77:G:O2'	1:A:78:G:H5'	2.19	0.43
1:A:91:C:H2'	1:A:92:C:C6	2.50	0.43
1:A:102:G:C5	1:A:103:C:C5	3.07	0.43
1:A:116:A:O5'	1:A:116:A:H8	2.00	0.43
1:A:232:G:H1'	1:A:262:A:N1	2.33	0.43
1:A:324:G:H8	1:A:324:G:OP2	2.02	0.43
1:A:380:G:H22	1:A:382:A:H3'	1.78	0.43
1:A:414:A:P	1:A:428:G:H22	2.41	0.43
1:A:564:C:N3	1:A:565:U:C4	2.86	0.43
1:A:597:G:N2	9:H:94:TYR:HE2	2.16	0.43
1:A:602:A:C6	1:A:637:G:C6	3.07	0.43
1:A:639:G:N2	1:A:640:A:C4	2.87	0.43
1:A:684:A:C5	1:A:685:G:N7	2.86	0.43
1:A:1030:C:C2'	1:A:1030(A):G:H5'	2.49	0.43
1:A:1076:C:C4	1:A:1077:G:N7	2.87	0.43
1:A:1083:U:C5	1:A:1084:G:C5	3.06	0.43
1:A:1092:A:C2	1:A:1183:A:N1	2.86	0.43
1:A:1255:G:C8	1:A:1279:A:N6	2.86	0.43
4:C:29:TYR:CE2	4:C:33:LEU:HD22	2.54	0.43
5:D:8:VAL:HG21	5:D:115:ARG:NH1	2.34	0.43
5:D:25:ARG:C	5:D:27:TYR:N	2.71	0.43
5:D:47:ARG:HD3	5:D:48:ALA:N	2.34	0.43
5:D:66:ARG:O	5:D:67:ILE:C	2.57	0.43
7:F:4:TYR:CE2	7:F:72:VAL:HG21	2.54	0.43
8:G:97:GLN:CG	8:G:101:LEU:HD11	2.48	0.43
10:I:55:ALA:HA	10:I:58:ARG:NE	2.33	0.43
10:I:73:GLN:O	10:I:75:ASP:N	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:J:40:LEU:HB3	11:J:69:ASN:CB	2.43	0.43
12:K:46:GLY:O	12:K:47:VAL:C	2.57	0.43
16:O:21:ASP:OD1	16:O:24:SER:CB	2.66	0.43
17:P:57:ARG:HH12	17:P:79:VAL:CA	2.31	0.43
19:R:38:GLU:CA	19:R:41:LYS:HD2	2.45	0.43
19:R:88:LYS:OXT	19:R:88:LYS:HG3	2.19	0.43
22:V:12:LYS:HB3	22:V:22:ARG:HD2	1.99	0.43
1:A:42:G:C2	1:A:43:C:C2	3.07	0.43
1:A:46:G:C1'	1:A:396:G:H22	2.21	0.43
1:A:182:U:H6	1:A:182:U:H5'	1.84	0.43
1:A:187:C:O2'	21:T:89:ARG:NE	2.52	0.43
1:A:375:U:H2'	1:A:376:G:H8	1.84	0.43
1:A:573:A:H2'	1:A:574:A:O4'	2.17	0.43
1:A:1124:G:C5'	11:J:36:GLY:HA3	2.47	0.43
1:A:1158:C:H3'	1:A:1158:C:O2	2.19	0.43
1:A:1162:C:H2'	1:A:1163:C:C6	2.53	0.43
1:A:1205:U:C2	1:A:1206:G:N7	2.87	0.43
1:A:1250:A:C6	1:A:1251:A:C6	3.06	0.43
1:A:1255:G:N7	1:A:1279:A:N7	2.67	0.43
1:A:1347:G:H1'	1:A:1348:U:H5	1.83	0.43
1:A:1388:C:O2'	1:A:1389:C:H5'	2.18	0.43
1:A:1465:C:C2'	1:A:1466:C:H5'	2.48	0.43
3:B:7:VAL:N	3:B:8:LYS:NZ	2.67	0.43
4:C:47:LEU:O	4:C:49:SER:N	2.52	0.43
4:C:85:ARG:O	4:C:86:VAL:C	2.57	0.43
5:D:58:LEU:HA	5:D:206:PHE:HE1	1.81	0.43
5:D:76:ARG:HG2	5:D:76:ARG:HH11	1.84	0.43
5:D:150:GLU:CD	5:D:150:GLU:N	2.68	0.43
6:E:112:LEU:HD13	6:E:112:LEU:O	2.18	0.43
6:E:149:GLU:O	6:E:153:LYS:HB2	2.18	0.43
8:G:45:ASP:HA	8:G:48:LYS:HG2	1.99	0.43
11:J:90:LEU:HD23	11:J:90:LEU:N	2.34	0.43
13:L:45:PRO:HB2	13:L:49:ASN:O	2.19	0.43
15:N:8:GLU:C	15:N:10:ALA:H	2.22	0.43
15:N:40:CYS:SG	15:N:42:ILE:HG13	2.59	0.43
16:O:56:LEU:O	16:O:59:MET:CB	2.65	0.43
17:P:19:ILE:HD13	17:P:38:TYR:HA	2.01	0.43
18:Q:9:VAL:HG22	18:Q:56:VAL:HG22	2.00	0.43
21:T:31:SER:O	21:T:32:ALA:C	2.57	0.43
21:T:65:LYS:O	21:T:68:LYS:HB2	2.18	0.43
1:A:16:A:C2	1:A:920:U:O2	2.72	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:32:A:C1'	1:A:48:C:N4	2.81	0.43
1:A:185:A:H2'	1:A:186:C:C6	2.54	0.43
1:A:718:G:C5'	1:A:719:C:OP2	2.65	0.43
1:A:764:C:H2'	1:A:765:G:H8	1.84	0.43
1:A:972:C:OP2	11:J:57:LYS:HE3	2.19	0.43
1:A:1057:G:H2'	1:A:1058:G:O4'	2.18	0.43
1:A:1202:G:C5	15:N:42:ILE:HD13	2.53	0.43
1:A:1205:U:C2'	1:A:1206:G:C8	3.01	0.43
1:A:1237:C:H2'	1:A:1336:C:C5	2.53	0.43
1:A:1350:A:C6	1:A:1351:U:C4	3.07	0.43
3:B:83:MET:O	3:B:87:ARG:HB2	2.19	0.43
3:B:104:ASN:CG	3:B:107:THR:OG1	2.57	0.43
3:B:175:ARG:HB3	3:B:175:ARG:CZ	2.49	0.43
3:B:231:GLU:O	3:B:232:PRO:O	2.37	0.43
4:C:28:GLN:HB3	4:C:32:LEU:HD11	2.01	0.43
4:C:39:ILE:O	4:C:43:LEU:HB2	2.19	0.43
5:D:79:PHE:C	5:D:79:PHE:CD2	2.91	0.43
7:F:44:GLY:C	7:F:60:PHE:H	2.21	0.43
8:G:46:ALA:CA	8:G:121:ALA:HB2	2.48	0.43
8:G:72:ARG:O	8:G:90:GLU:HG3	2.18	0.43
9:H:95:VAL:HG23	9:H:133:LEU:HB2	2.00	0.43
13:L:36:VAL:O	13:L:59:ARG:N	2.38	0.43
14:M:7:VAL:HG23	14:M:7:VAL:O	2.19	0.43
15:N:2:ALA:C	15:N:7:ILE:HD11	2.38	0.43
19:R:21:LYS:HZ3	19:R:54:ARG:C	2.21	0.43
20:S:74:PHE:O	20:S:76:PRO:CD	2.67	0.43
1:A:44:G:C2	1:A:399:G:C2	3.07	0.43
1:A:113:G:O2'	1:A:114:U:H5'	2.18	0.43
1:A:243:A:N6	1:A:281:G:H1'	2.33	0.43
1:A:334:C:H2'	1:A:335:C:H6	1.83	0.43
1:A:477:G:H2'	1:A:478:A:C8	2.53	0.43
1:A:636:U:O2'	1:A:637:G:H5'	2.18	0.43
1:A:675:A:H2'	1:A:676:A:H8	1.84	0.43
1:A:689:C:O2'	1:A:690:G:H5'	2.19	0.43
1:A:705:U:C4	1:A:706:A:C5	3.07	0.43
1:A:761:G:H5'	18:Q:102:GLY:HA3	2.01	0.43
1:A:771:G:C6	1:A:772:U:O4	2.72	0.43
1:A:782:A:H62	1:A:800:G:H21	1.67	0.43
1:A:936:C:H2'	1:A:937:A:C8	2.53	0.43
1:A:990:C:H5''	1:A:1018:C:P	2.59	0.43
1:A:1250:A:H61	1:A:1354:C:H1'	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1311:G:C2	1:A:1327:C:N3	2.86	0.43
3:B:135:GLN:O	3:B:139:LYS:HG3	2.19	0.43
3:B:184:VAL:O	3:B:198:ASP:HB2	2.19	0.43
3:B:189:ASP:OD1	3:B:189:ASP:N	2.52	0.43
4:C:134:ILE:HG23	4:C:151:VAL:CB	2.48	0.43
4:C:193:TYR:HE1	4:C:196:LEU:HD21	1.83	0.43
4:C:195:VAL:C	4:C:196:LEU:HD23	2.40	0.43
8:G:106:GLN:HE21	8:G:137:LYS:HZ2	1.65	0.43
11:J:26:ALA:HB3	11:J:85:LEU:CD2	2.44	0.43
13:L:84:LEU:HB3	13:L:101:VAL:CG2	2.49	0.43
14:M:67:GLU:O	14:M:68:GLY:C	2.57	0.43
16:O:32:LEU:O	16:O:35:ARG:N	2.52	0.43
16:O:60:VAL:O	16:O:61:GLY:C	2.55	0.43
17:P:28:ARG:HG3	17:P:29:ASP:N	2.34	0.43
18:Q:24:GLU:HG2	18:Q:37:LYS:HE3	2.00	0.43
18:Q:98:LEU:HD12	18:Q:98:LEU:N	2.34	0.43
20:S:11:VAL:HG22	20:S:39:THR:CB	2.44	0.43
21:T:13:LEU:C	21:T:13:LEU:CD1	2.85	0.43
21:T:13:LEU:O	21:T:14:LYS:C	2.56	0.43
22:V:2:GLY:O	22:V:5:ASP:CB	2.67	0.43
1:A:142:G:H1'	1:A:195:A:N1	2.34	0.43
1:A:269:C:O2'	1:A:270:A:H5'	2.19	0.43
1:A:376:G:N3	1:A:389:A:C2	2.87	0.43
1:A:503:C:O2'	1:A:504:C:H5'	2.19	0.43
1:A:532:A:N6	4:C:160:ALA:HA	2.34	0.43
1:A:740:U:O2'	1:A:741:G:H5'	2.19	0.43
1:A:772:U:H2'	1:A:773:G:O4'	2.19	0.43
1:A:1224:G:O2'	1:A:1225:A:OP1	2.31	0.43
1:A:1286:A:H2	22:V:18:TYR:HH	1.61	0.43
1:A:1380:U:C4	8:G:3:ARG:HD3	2.54	0.43
1:A:1392:G:H2'	1:A:1393:U:C6	2.54	0.43
3:B:55:PHE:HA	3:B:58:ILE:CD1	2.41	0.43
3:B:80:ILE:O	3:B:84:GLU:HB2	2.19	0.43
3:B:141:GLU:O	3:B:144:ARG:HB3	2.19	0.43
3:B:178:ARG:HH21	3:B:196:LEU:C	2.22	0.43
4:C:55:VAL:O	4:C:55:VAL:HG12	2.19	0.43
4:C:79:ARG:HG2	4:C:82:GLU:CB	2.44	0.43
4:C:183:ASP:CG	4:C:184:TYR:N	2.72	0.43
5:D:97:LEU:O	5:D:100:ARG:HB2	2.19	0.43
5:D:125:HIS:O	5:D:126:ILE:HD13	2.19	0.43
5:D:206:PHE:CD2	5:D:207:TYR:CE1	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:105:VAL:CG1	6:E:132:ALA:HB2	2.49	0.43
7:F:22:GLU:O	7:F:24:GLU:N	2.52	0.43
7:F:60:PHE:CE2	19:R:78:LEU:HD21	2.54	0.43
8:G:15:ASP:OD2	8:G:16:LEU:N	2.52	0.43
9:H:19:VAL:HG23	9:H:21:LYS:HG2	2.00	0.43
9:H:106:GLY:C	9:H:107:LEU:HD23	2.39	0.43
10:I:79:LEU:O	10:I:83:ARG:N	2.52	0.43
10:I:118:LYS:HB2	10:I:118:LYS:HE3	1.69	0.43
11:J:8:LEU:N	11:J:8:LEU:CD1	2.82	0.43
12:K:46:GLY:O	12:K:49:GLY:N	2.45	0.43
14:M:5:ALA:O	14:M:8:GLU:HB2	2.19	0.43
14:M:28:ALA:C	14:M:30:ALA:H	2.21	0.43
16:O:43:LEU:CD1	16:O:53:HIS:HA	2.49	0.43
16:O:52:SER:C	16:O:54:ARG:N	2.71	0.43
16:O:53:HIS:O	16:O:57:LEU:HD13	2.18	0.43
17:P:57:ARG:NH1	17:P:79:VAL:HG13	2.34	0.43
19:R:16:PRO:CG	19:R:19:LYS:HB3	2.48	0.43
20:S:36:ARG:HA	20:S:71:LEU:HB3	2.01	0.43
21:T:72:LEU:HD13	21:T:80:ARG:HE	1.83	0.43
22:V:10:ARG:HA	22:V:13:ILE:HB	2.01	0.43
1:A:9:G:C2	1:A:10:A:C5	3.07	0.42
1:A:291:C:O2	1:A:291:C:H2'	2.19	0.42
1:A:403:C:OP1	5:D:136:PRO:HD2	2.19	0.42
1:A:439:A:H2'	1:A:440:A:O4'	2.19	0.42
1:A:570:G:C6	1:A:571:U:O4	2.72	0.42
1:A:622:A:N7	1:A:623:C:C6	2.87	0.42
1:A:756:C:O2'	1:A:757:U:H5'	2.19	0.42
1:A:872:A:C5	1:A:874:G:C8	3.07	0.42
1:A:936:C:C2'	1:A:937:A:O4'	2.62	0.42
1:A:1306:A:C5	1:A:1332:A:C8	3.07	0.42
1:A:1307:U:H2'	1:A:1308:U:C6	2.54	0.42
1:A:1395:C:O2'	1:A:1396:A:H5'	2.19	0.42
1:A:1508:G:O2'	1:A:1509:C:H5'	2.18	0.42
3:B:7:VAL:N	3:B:8:LYS:HZ3	2.16	0.42
3:B:80:ILE:HD12	3:B:212:GLN:HA	2.01	0.42
3:B:87:ARG:NH2	3:B:233:SER:HB2	2.34	0.42
3:B:134:GLU:C	3:B:136:VAL:N	2.69	0.42
4:C:12:LEU:HD22	15:N:50:LYS:O	2.19	0.42
4:C:141:VAL:O	4:C:146:ALA:HB3	2.19	0.42
4:C:191:THR:HG21	4:C:193:TYR:CD1	2.53	0.42
5:D:80:GLU:HB3	5:D:84:LYS:NZ	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:101:LEU:O	5:D:102:ASP:C	2.57	0.42
6:E:30:ALA:CB	6:E:46:GLY:O	2.64	0.42
6:E:39:GLY:H	6:E:71:LEU:HD12	1.83	0.42
6:E:109:ILE:HG21	6:E:135:THR:HG22	2.00	0.42
7:F:71:ARG:O	7:F:72:VAL:C	2.56	0.42
8:G:61:VAL:C	8:G:63:LYS:N	2.70	0.42
8:G:138:LYS:HD3	8:G:139:GLU:H	1.79	0.42
9:H:11:THR:C	9:H:13:ILE:N	2.70	0.42
10:I:50:LEU:HG	10:I:81:ILE:HB	2.01	0.42
11:J:4:ILE:HD11	11:J:74:ILE:HD12	2.01	0.42
11:J:8:LEU:HD12	11:J:96:ILE:HG23	1.99	0.42
11:J:49:VAL:HG11	15:N:41:ARG:HB2	2.01	0.42
13:L:53:ARG:NH1	13:L:92:ASP:CB	2.69	0.42
13:L:78:GLN:C	13:L:80:HIS:N	2.73	0.42
15:N:36:PHE:CD1	15:N:36:PHE:O	2.72	0.42
15:N:37:PHE:O	15:N:39:LEU:HG	2.18	0.42
16:O:18:PHE:HD1	16:O:19:PRO:O	2.01	0.42
18:Q:51:TYR:CG	18:Q:73:VAL:HG11	2.53	0.42
18:Q:76:LEU:CD2	18:Q:78:GLU:N	2.78	0.42
19:R:22:VAL:HG11	19:R:43:PHE:CE2	2.54	0.42
1:A:55:A:H2'	1:A:56:U:C6	2.54	0.42
1:A:351:G:O5'	1:A:351:G:H8	2.02	0.42
1:A:423:G:C2'	1:A:424:G:H5'	2.49	0.42
1:A:550:G:C6	1:A:551:U:C5	3.07	0.42
1:A:716:A:C5	1:A:717:C:C5	3.07	0.42
1:A:778:G:C4	1:A:779:C:C6	3.07	0.42
1:A:858:G:C6	1:A:869:G:C8	3.07	0.42
1:A:1076:C:N3	1:A:1077:G:N7	2.67	0.42
1:A:1148:U:O2'	10:I:14:VAL:HG11	2.19	0.42
1:A:1346:A:O2'	1:A:1347:G:O4'	2.37	0.42
3:B:143:GLU:HA	3:B:146:GLN:HE21	1.84	0.42
3:B:181:PHE:O	3:B:183:PRO:HD3	2.19	0.42
4:C:15:THR:O	4:C:16:ARG:CB	2.68	0.42
4:C:18:TRP:HE1	15:N:56:VAL:HG12	1.83	0.42
5:D:65:ARG:HG3	5:D:66:ARG:N	2.33	0.42
5:D:149:ALA:O	5:D:150:GLU:C	2.56	0.42
7:F:8:ILE:HB	7:F:61:LEU:HB2	2.01	0.42
7:F:44:GLY:HA2	7:F:60:PHE:N	2.33	0.42
8:G:27:ILE:O	8:G:28:ASN:C	2.56	0.42
8:G:60:LYS:O	8:G:63:LYS:HB2	2.19	0.42
8:G:70:LYS:HG3	8:G:96:GLN:HG2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:I:80:GLY:C	10:I:82:ALA:N	2.71	0.42
12:K:95:ILE:H	12:K:95:ILE:CD1	2.14	0.42
21:T:43:LEU:O	21:T:46:GLU:HB2	2.19	0.42
21:T:53:LEU:N	21:T:53:LEU:CD2	2.82	0.42
1:A:82:U:C2'	1:A:83:U:O5'	2.68	0.42
1:A:153:C:H2'	1:A:154:C:C6	2.54	0.42
1:A:192:U:C2	1:A:193:C:C6	3.08	0.42
1:A:226:G:C2	1:A:227:G:C8	3.08	0.42
1:A:247:G:C2	1:A:248:C:C5	3.07	0.42
1:A:317:G:C5	1:A:318:G:N7	2.88	0.42
1:A:446:G:H2'	1:A:447:G:C5'	2.46	0.42
1:A:685:G:C2	1:A:686:U:C5	3.06	0.42
1:A:707:C:O3'	12:K:20:TYR:CE2	2.73	0.42
1:A:730:G:N7	1:A:731:G:H1'	2.34	0.42
1:A:992:U:H1'	1:A:993:G:OP2	2.18	0.42
1:A:1007:C:O2'	1:A:1008:C:H5'	2.19	0.42
1:A:1244:C:N3	1:A:1294:G:N2	2.68	0.42
1:A:1325:C:OP2	22:V:6:ARG:NH2	2.48	0.42
1:A:1528:U:O2'	1:A:1529:G:P	2.78	0.42
3:B:103:THR:N	3:B:176:GLU:OE1	2.44	0.42
3:B:115:LEU:HG	3:B:119:GLU:HG3	2.01	0.42
4:C:190:ARG:HH11	4:C:190:ARG:CB	2.30	0.42
5:D:163:GLU:C	5:D:165:MET:N	2.73	0.42
5:D:196:LEU:HB3	5:D:198:VAL:HG12	2.01	0.42
7:F:12:PRO:HG3	7:F:55:ASP:HB3	2.01	0.42
8:G:14:PRO:O	8:G:15:ASP:HB2	2.19	0.42
8:G:62:PHE:C	8:G:63:LYS:NZ	2.70	0.42
8:G:72:ARG:O	8:G:73:MET:HG2	2.19	0.42
8:G:109:ASN:HA	8:G:119:ARG:HD2	2.00	0.42
8:G:122:HIS:O	8:G:125:MET:HB2	2.20	0.42
9:H:82:HIS:CD2	9:H:138:TRP:NE1	2.85	0.42
10:I:4:TYR:HB3	10:I:87:GLN:HB2	2.00	0.42
10:I:33:PHE:C	10:I:35:GLU:N	2.73	0.42
10:I:97:LYS:O	10:I:99:LEU:N	2.52	0.42
11:J:18:ALA:C	11:J:20:ALA:N	2.72	0.42
16:O:57:LEU:N	16:O:57:LEU:CD1	2.82	0.42
16:O:79:ARG:O	16:O:83:GLU:N	2.48	0.42
17:P:1:MET:O	17:P:3:LYS:HG3	2.19	0.42
18:Q:88:TYR:O	18:Q:89:LEU:C	2.57	0.42
1:A:27:G:H2'	1:A:28:G:H8	1.83	0.42
1:A:348:G:O2'	1:A:349:A:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:503:C:OP2	13:L:116:SER:HB3	2.20	0.42
1:A:582:U:O2'	1:A:583:A:H5'	2.18	0.42
1:A:619:U:N3	5:D:134:ASP:OD2	2.51	0.42
1:A:645:C:H2'	1:A:646:U:O4'	2.19	0.42
1:A:773:G:C5	1:A:774:G:N7	2.88	0.42
1:A:1102:A:C5	1:A:1103:C:C5	3.07	0.42
1:A:1148:U:H2'	1:A:1149:C:H6	1.83	0.42
1:A:1154:G:C4	1:A:1155:G:C8	3.06	0.42
1:A:1222:G:C5'	20:S:77:THR:HG21	2.49	0.42
1:A:1237:C:C4'	1:A:1334:G:N2	2.82	0.42
1:A:1374:A:N3	1:A:1375:A:C8	2.87	0.42
1:A:1453:G:H2'	1:A:1454:G:O4'	2.19	0.42
3:B:21:ARG:HG2	3:B:23:ARG:CZ	2.50	0.42
3:B:44:LEU:HD12	3:B:45:GLN:N	2.25	0.42
3:B:124:SER:HB2	3:B:126:GLU:OE1	2.19	0.42
3:B:137:ARG:HG3	3:B:138:LEU:HG	2.01	0.42
5:D:25:ARG:NH2	5:D:30:LYS:HD2	2.31	0.42
9:H:109:ILE:CD1	9:H:137:VAL:HB	2.49	0.42
11:J:27:ALA:CA	11:J:84:GLN:HB2	2.49	0.42
14:M:16:ASP:HB2	14:M:31:LYS:HZ2	1.82	0.42
16:O:17:ARG:NH1	16:O:77:ARG:HH11	2.16	0.42
16:O:70:LEU:HD12	16:O:78:TYR:HA	2.01	0.42
20:S:20:LEU:HD12	20:S:20:LEU:C	2.40	0.42
21:T:19:SER:OG	21:T:20:LEU:N	2.52	0.42
21:T:33:ILE:HG22	21:T:34:LYS:N	2.33	0.42
1:A:22:G:O2'	1:A:23:C:H5'	2.20	0.42
1:A:38:G:C2	1:A:397:A:H5''	2.52	0.42
1:A:264:U:O2'	18:Q:64:PRO:HB2	2.19	0.42
1:A:411:A:H2'	1:A:413:G:C8	2.55	0.42
1:A:426:G:H2'	1:A:427:U:C6	2.54	0.42
1:A:597:G:C2'	1:A:598:U:H5'	2.49	0.42
1:A:629:G:H2'	1:A:630:G:O4'	2.19	0.42
1:A:693:G:H2'	1:A:694:A:O4'	2.19	0.42
1:A:977:A:C8	1:A:1223:C:C4	3.08	0.42
1:A:1454:G:O2'	1:A:1455:G:H5'	2.20	0.42
3:B:81:VAL:HG22	3:B:215:LEU:HD11	2.02	0.42
3:B:111:ARG:HB3	3:B:149:LEU:HD11	2.02	0.42
3:B:194:PRO:HA	3:B:200:ILE:HD11	2.02	0.42
5:D:10:ARG:HG2	5:D:11:LEU:CD2	2.49	0.42
7:F:19:LEU:C	7:F:21:LEU:H	2.22	0.42
8:G:57:GLU:C	8:G:59:LEU:N	2.73	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:H:123:GLU:O	9:H:126:LYS:HB2	2.20	0.42
11:J:4:ILE:HG13	11:J:73:ASP:HA	2.01	0.42
18:Q:54:GLY:HA3	18:Q:82:MET:SD	2.59	0.42
19:R:34:TYR:HE1	19:R:35:ARG:NE	2.17	0.42
21:T:37:SER:O	21:T:40:ALA:HB3	2.20	0.42
1:A:41:G:N3	1:A:42:G:C8	2.88	0.42
1:A:148:G:O2'	1:A:149:A:H5'	2.20	0.42
1:A:162:A:C5	1:A:163:C:H1'	2.54	0.42
1:A:719:C:N4	19:R:74:ARG:HH12	2.17	0.42
1:A:720:C:H2'	1:A:721:G:C8	2.54	0.42
1:A:832:C:N3	1:A:855:G:C6	2.87	0.42
1:A:877:C:C1'	9:H:3:THR:HG21	2.49	0.42
1:A:916:G:H2'	1:A:917:G:C8	2.49	0.42
1:A:1333:A:H2'	1:A:1334:G:C8	2.54	0.42
3:B:92:TYR:CD2	3:B:92:TYR:C	2.91	0.42
3:B:215:LEU:O	3:B:218:ALA:HB3	2.19	0.42
5:D:20:TYR:C	5:D:22:LYS:N	2.71	0.42
5:D:59:ARG:O	5:D:63:LYS:N	2.43	0.42
5:D:141:ARG:HB3	5:D:142:PRO:CD	2.49	0.42
7:F:52:ILE:HD13	7:F:87:ARG:HE	1.83	0.42
8:G:23:VAL:HG12	8:G:27:ILE:HD11	2.01	0.42
8:G:70:LYS:HZ2	8:G:96:GLN:CB	2.16	0.42
8:G:117:ALA:O	8:G:120:ILE:HG12	2.18	0.42
9:H:51:VAL:HG21	9:H:60:ARG:CG	2.50	0.42
11:J:85:LEU:O	11:J:86:MET:O	2.38	0.42
12:K:48:ILE:CD1	12:K:64:ALA:HA	2.49	0.42
14:M:10:PRO:O	14:M:45:VAL:HG11	2.19	0.42
14:M:70:LEU:O	14:M:73:GLU:N	2.47	0.42
15:N:6:LEU:HD12	15:N:23:ARG:NH1	2.34	0.42
17:P:64:ALA:O	17:P:66:PRO:N	2.52	0.42
19:R:25:THR:O	19:R:25:THR:HG22	2.19	0.42
19:R:30:ASP:O	19:R:33:ASP:N	2.50	0.42
20:S:78:ARG:CG	20:S:78:ARG:HH11	2.32	0.42
21:T:19:SER:O	21:T:20:LEU:C	2.57	0.42
21:T:22:ARG:O	21:T:25:ARG:HB3	2.20	0.42
1:A:333:G:C2	1:A:334:C:C5	3.08	0.42
1:A:447:G:N2	1:A:488:C:N4	2.64	0.42
1:A:492:G:H2'	1:A:494:G:C8	2.55	0.42
1:A:665:A:N3	1:A:732:C:C2	2.88	0.42
1:A:882:C:C2'	1:A:883:C:H5'	2.49	0.42
1:A:918:A:C2	1:A:919:A:N3	2.86	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:979:C:OP1	1:A:1223:C:N4	2.53	0.42
1:A:1074:G:C2	1:A:1102:A:C5	3.08	0.42
1:A:1197:G:O2'	1:A:1198:G:H5'	2.19	0.42
1:A:1262:C:H2'	1:A:1263:C:H6	1.83	0.42
1:A:1342:C:H2'	1:A:1343:G:C8	2.51	0.42
1:A:1428:A:H2'	1:A:1429:C:C6	2.54	0.42
1:A:1470:G:O2'	1:A:1471:G:H5'	2.20	0.42
3:B:135:GLN:O	3:B:135:GLN:HG2	2.20	0.42
5:D:58:LEU:O	5:D:59:ARG:C	2.58	0.42
5:D:150:GLU:O	5:D:152:SER:N	2.52	0.42
5:D:152:SER:O	5:D:153:ARG:C	2.57	0.42
8:G:62:PHE:CB	8:G:63:LYS:NZ	2.83	0.42
11:J:37:PRO:HA	11:J:72:VAL:HG22	2.02	0.42
13:L:7:ILE:O	13:L:11:VAL:N	2.46	0.42
15:N:21:TYR:CD1	15:N:21:TYR:N	2.84	0.42
21:T:38:LYS:O	21:T:39:LYS:C	2.57	0.42
1:A:244:U:O4	1:A:906:G:H1'	2.20	0.42
1:A:341:C:C2	1:A:349:A:H2	2.38	0.42
1:A:391:G:C5	1:A:392:G:N7	2.87	0.42
1:A:492:G:H2'	1:A:494:G:H8	1.85	0.42
1:A:498:U:O2	1:A:498:U:H2'	2.20	0.42
1:A:1095:U:H5''	1:A:1109:C:C2	2.54	0.42
1:A:1179:A:O3'	10:I:103:THR:HG23	2.20	0.42
1:A:1255:G:H2'	1:A:1279:A:N6	2.34	0.42
1:A:1379:G:OP1	8:G:6:ARG:NH2	2.53	0.42
1:A:1393:U:O2'	1:A:1394:A:H2'	2.20	0.42
1:A:1523:G:C2'	1:A:1524:C:H5'	2.50	0.42
3:B:223:ILE:HG21	3:B:230:VAL:CG2	2.50	0.42
5:D:42:GLN:HB3	5:D:43:HIS:H	1.62	0.42
5:D:190:ASP:O	5:D:191:ARG:C	2.57	0.42
6:E:11:ILE:HG12	6:E:33:VAL:CG2	2.49	0.42
7:F:9:VAL:O	7:F:86:ARG:HB2	2.20	0.42
8:G:118:VAL:O	8:G:120:ILE:N	2.52	0.42
10:I:86:VAL:HA	10:I:90:PRO:HA	2.01	0.42
10:I:121:ARG:HG2	10:I:121:ARG:HH11	1.85	0.42
12:K:20:TYR:CZ	12:K:83:ILE:HD12	2.54	0.42
13:L:47:LYS:HB3	13:L:48:PRO:HD2	2.01	0.42
13:L:59:ARG:HG2	13:L:59:ARG:HH11	1.85	0.42
16:O:79:ARG:O	16:O:80:ALA:C	2.57	0.42
19:R:56:THR:HB	19:R:58:LEU:HD12	2.02	0.42
21:T:57:ARG:O	21:T:59:ALA:N	2.51	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:45:U:H2'	1:A:46:G:H8	1.84	0.42
1:A:197:A:H4'	1:A:198:G:O5'	2.20	0.42
1:A:254:G:C2	1:A:273:A:C2	3.08	0.42
1:A:292:G:N1	1:A:309:G:C6	2.88	0.42
1:A:376:G:OP1	17:P:6:LEU:HD13	2.20	0.42
1:A:585:G:N3	1:A:879:C:H4'	2.35	0.42
1:A:614:A:O2'	1:A:615:C:H5'	2.20	0.42
1:A:697:U:C2'	1:A:698:G:H5'	2.50	0.42
1:A:725:G:N3	1:A:726:C:C6	2.87	0.42
1:A:778:G:C5	1:A:779:C:C5	3.08	0.42
1:A:779:C:H2'	1:A:780:A:O4'	2.20	0.42
1:A:803:G:C2'	1:A:804:U:H5'	2.49	0.42
1:A:824:C:O2'	1:A:825:G:H5'	2.20	0.42
1:A:1068:G:N7	1:A:1094:G:C2'	2.83	0.42
1:A:1068:G:N3	1:A:1191:A:H2	2.17	0.42
1:A:1186:G:C2	1:A:1187:G:C8	3.07	0.42
1:A:1196:U:O2'	1:A:1197:G:OP2	2.29	0.42
1:A:1372:U:H5''	10:I:71:SER:HB3	2.01	0.42
1:A:1469:G:O2'	1:A:1470:G:H5'	2.20	0.42
1:A:1508:G:C4	1:A:1509:C:C5	3.07	0.42
3:B:12:GLU:CD	3:B:213:LEU:HD21	2.40	0.42
3:B:197:VAL:HB	3:B:200:ILE:CG1	2.50	0.42
4:C:112:SER:OG	4:C:115:LEU:CD1	2.68	0.42
5:D:10:ARG:NH1	5:D:10:ARG:CG	2.70	0.42
5:D:12:CYS:O	5:D:33:MET:SD	2.77	0.42
5:D:79:PHE:O	5:D:79:PHE:CD2	2.66	0.42
7:F:28:ARG:O	7:F:29:ALA:C	2.58	0.42
8:G:62:PHE:O	8:G:66:VAL:HG23	2.19	0.42
8:G:97:GLN:O	8:G:98:SER:C	2.58	0.42
9:H:9:MET:CE	9:H:32:LYS:CA	2.98	0.42
9:H:20:TYR:HD1	9:H:65:TYR:CD2	2.37	0.42
11:J:8:LEU:HG	11:J:96:ILE:HD11	2.02	0.42
17:P:21:VAL:CG1	17:P:33:ILE:HD11	2.44	0.42
1:A:62:U:OP1	1:A:385:C:O2'	2.35	0.42
1:A:364:A:N6	13:L:28:LYS:NZ	2.68	0.42
1:A:391:G:C6	1:A:392:G:C5	3.07	0.42
1:A:518:C:HO2'	1:A:519:C:P	2.43	0.42
1:A:992:U:H3	1:A:1044:A:H62	1.68	0.42
1:A:1236:A:OP1	22:V:2:GLY:HA3	2.19	0.42
1:A:1300:G:C5	1:A:1335:C:C5	3.08	0.42
1:A:1347:G:N7	10:I:107:ARG:HB3	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1404:C:H1'	1:A:1499:A:N1	2.35	0.42
3:B:189:ASP:HB2	3:B:190:THR:H	1.64	0.42
4:C:191:THR:O	4:C:193:TYR:N	2.53	0.42
5:D:58:LEU:HB3	5:D:59:ARG:H	1.66	0.42
5:D:108:LEU:HD23	5:D:170:VAL:HG21	2.02	0.42
5:D:187:ARG:O	5:D:189:PRO:HD3	2.19	0.42
6:E:147:ASP:HA	6:E:150:ARG:HB3	2.02	0.42
7:F:52:ILE:HG23	7:F:87:ARG:NH2	2.34	0.42
7:F:69:GLU:CG	7:F:70:ASP:H	2.33	0.42
8:G:63:LYS:C	8:G:65:ALA:N	2.72	0.42
8:G:112:PRO:CG	8:G:113:GLU:H	2.31	0.42
9:H:7:ALA:O	9:H:8:ASP:C	2.58	0.42
11:J:9:ARG:HA	11:J:68:HIS:O	2.20	0.42
11:J:26:ALA:HB1	11:J:85:LEU:HB3	2.01	0.42
11:J:51:ARG:CZ	11:J:61:GLU:HB2	2.50	0.42
13:L:33:ARG:HA	13:L:33:ARG:HD2	1.60	0.42
15:N:2:ALA:HB2	15:N:27:CYS:O	2.20	0.42
16:O:84:LYS:O	16:O:85:LEU:C	2.58	0.42
18:Q:60:ILE:O	18:Q:71:PHE:CD1	2.73	0.42
21:T:10:LEU:C	21:T:12:ALA:N	2.71	0.42
21:T:96:GLY:O	21:T:97:ALA:HB3	2.19	0.42
1:A:195:A:H2	1:A:222:U:O2	2.02	0.41
1:A:236:G:H2'	1:A:237:C:C6	2.55	0.41
1:A:243:A:C5'	1:A:244:U:H5'	2.49	0.41
1:A:275:G:C2	1:A:276:G:C8	3.08	0.41
1:A:523:A:C2	1:A:527:G:C6	3.07	0.41
1:A:564:C:C4	1:A:565:U:C4	3.08	0.41
1:A:568:G:N2	1:A:883:C:C6	2.87	0.41
1:A:783:C:O2'	1:A:784:C:H5'	2.20	0.41
1:A:858:G:N2	1:A:869:G:H2'	2.34	0.41
1:A:895:G:H2'	1:A:896:C:H6	1.85	0.41
1:A:936:C:H2'	1:A:937:A:H8	1.85	0.41
1:A:1086:U:O2'	1:A:1087:G:H5'	2.20	0.41
1:A:1091:U:O2	1:A:1093:A:C8	2.73	0.41
1:A:1202:G:H21	15:N:27:CYS:HB2	1.85	0.41
1:A:1285:A:O3'	1:A:1286:A:O4'	2.37	0.41
1:A:1440:C:H2'	1:A:1441:G:O4'	2.20	0.41
3:B:12:GLU:OE1	3:B:12:GLU:HA	2.14	0.41
3:B:95:GLN:C	3:B:96:ARG:CZ	2.88	0.41
3:B:172:ILE:N	3:B:172:ILE:CD1	2.83	0.41
4:C:120:VAL:O	4:C:121:ALA:C	2.57	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:179:ARG:HG3	4:C:179:ARG:HH11	1.85	0.41
5:D:162:LEU:HD21	5:D:178:VAL:CG1	2.49	0.41
6:E:132:ALA:O	6:E:135:THR:HB	2.20	0.41
7:F:9:VAL:HG22	7:F:60:PHE:CD2	2.55	0.41
8:G:77:SER:HB2	8:G:86:GLN:HA	2.00	0.41
10:I:10:ARG:HD2	10:I:11:LYS:N	2.29	0.41
10:I:26:VAL:CG1	10:I:27:THR:N	2.82	0.41
13:L:40:VAL:O	13:L:40:VAL:CG1	2.67	0.41
13:L:102:ARG:C	13:L:104:VAL:H	2.23	0.41
17:P:57:ARG:HH12	17:P:79:VAL:CG1	2.33	0.41
18:Q:60:ILE:O	18:Q:71:PHE:HD1	2.03	0.41
19:R:35:ARG:C	19:R:37:VAL:H	2.22	0.41
20:S:38:SER:HG	20:S:71:LEU:HD12	1.80	0.41
21:T:57:ARG:HH12	21:T:100:ILE:HD11	1.85	0.41
1:A:115:G:O5'	1:A:115:G:H8	2.03	0.41
1:A:216:G:N2	1:A:217:C:H41	2.18	0.41
1:A:273:A:H2'	1:A:274:A:H5'	2.01	0.41
1:A:401:C:H1'	1:A:622:A:C1'	2.50	0.41
1:A:502:G:C2	1:A:503:C:C2	3.08	0.41
1:A:622:A:H2'	1:A:623:C:C5'	2.50	0.41
1:A:827:U:H2'	1:A:870:U:O4	2.20	0.41
1:A:835:U:OP1	19:R:64:ARG:NH2	2.53	0.41
1:A:1118:C:O5'	1:A:1118:C:H6	2.03	0.41
1:A:1147:C:H4'	10:I:5:TYR:CZ	2.55	0.41
1:A:1202:G:C2	15:N:27:CYS:HB2	2.54	0.41
1:A:1226:C:C5	14:M:104:ARG:HB2	2.55	0.41
1:A:1309:G:C6	1:A:1329:A:C2	3.08	0.41
1:A:1402:C:O2'	1:A:1403:C:H5'	2.19	0.41
1:A:1490:C:O2'	1:A:1491:G:H5'	2.20	0.41
1:A:1513:A:O2'	1:A:1514:C:H5'	2.20	0.41
3:B:61:LEU:O	3:B:66:GLY:N	2.45	0.41
3:B:132:LYS:HA	3:B:135:GLN:CB	2.31	0.41
3:B:134:GLU:HG3	3:B:135:GLN:N	2.35	0.41
3:B:157:ARG:O	3:B:158:LEU:O	2.38	0.41
3:B:161:ALA:HB1	3:B:185:ILE:HD11	2.02	0.41
4:C:48:TYR:C	4:C:48:TYR:CD1	2.94	0.41
4:C:48:TYR:O	4:C:50:ALA:N	2.49	0.41
4:C:79:ARG:H	4:C:82:GLU:CB	2.33	0.41
4:C:142:MET:HA	4:C:146:ALA:HB3	2.02	0.41
5:D:65:ARG:HH11	5:D:65:ARG:CG	2.28	0.41
6:E:8:GLU:OE2	6:E:8:GLU:O	2.38	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:57:LYS:HE3	6:E:57:LYS:HB2	1.89	0.41
6:E:119:LEU:HD23	6:E:119:LEU:HA	1.82	0.41
9:H:21:LYS:HB3	9:H:22:GLU:H	1.73	0.41
9:H:40:ALA:O	9:H:42:GLU:N	2.53	0.41
10:I:48:GLU:HB2	10:I:51:ARG:NH2	2.25	0.41
10:I:79:LEU:HD22	10:I:83:ARG:CD	2.50	0.41
13:L:57:LYS:HA	13:L:67:THR:HA	2.03	0.41
14:M:62:ASN:O	14:M:63:THR:HB	2.20	0.41
14:M:83:ASP:OD1	14:M:83:ASP:N	2.52	0.41
16:O:83:GLU:O	16:O:83:GLU:HG2	2.20	0.41
16:O:86:GLY:C	16:O:87:ILE:HG13	2.41	0.41
17:P:26:ARG:HD2	17:P:31:LYS:O	2.20	0.41
20:S:22:LEU:O	20:S:25:LYS:HD2	2.20	0.41
21:T:60:GLU:O	21:T:63:ILE:HB	2.20	0.41
22:V:18:TYR:CD1	22:V:24:ARG:NH2	2.88	0.41
1:A:77:G:H2'	1:A:78:G:O4'	2.21	0.41
1:A:122:G:C2	1:A:123:C:C2	3.08	0.41
1:A:257:G:N1	1:A:258:G:C5	2.89	0.41
1:A:290:C:C5	1:A:291:C:H5	2.38	0.41
1:A:302:G:O2'	1:A:303:A:H5'	2.19	0.41
1:A:377:G:C5'	17:P:5:ARG:HH12	2.32	0.41
1:A:463:A:C5	1:A:474:G:C5	3.08	0.41
1:A:477:G:C2	1:A:478:A:C2	3.08	0.41
1:A:507:C:C4	1:A:508:C:C5	3.08	0.41
1:A:825:G:C6	1:A:876:G:C6	3.08	0.41
1:A:921:U:O2'	6:E:19:MET:O	2.33	0.41
1:A:926:G:H5'	1:A:927:G:C5'	2.51	0.41
1:A:1053:G:C4	1:A:1199:U:C5	3.08	0.41
1:A:1130:A:O5'	1:A:1131:G:OP2	2.38	0.41
1:A:1133:G:N2	1:A:1141:C:H42	2.18	0.41
1:A:1271:G:O2'	1:A:1272:G:H5'	2.20	0.41
3:B:44:LEU:O	3:B:47:THR:N	2.53	0.41
3:B:76:GLN:HA	3:B:208:ILE:HD11	2.01	0.41
4:C:57:ILE:HG22	4:C:58:GLU:N	2.36	0.41
5:D:204:ILE:O	5:D:205:GLU:C	2.58	0.41
6:E:31:LEU:CD2	6:E:44:GLY:O	2.69	0.41
6:E:80:ILE:HD12	6:E:91:LEU:HB2	2.02	0.41
8:G:49:ILE:HG22	8:G:49:ILE:O	2.21	0.41
10:I:28:VAL:HG22	10:I:32:ASP:O	2.20	0.41
12:K:30:VAL:CG1	12:K:31:THR:N	2.77	0.41
12:K:114:VAL:O	12:K:114:VAL:HG13	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:3:ARG:O	15:N:6:LEU:N	2.46	0.41
16:O:30:ALA:O	16:O:31:LEU:C	2.59	0.41
17:P:67:THR:HG22	17:P:69:THR:H	1.86	0.41
18:Q:92:ARG:O	18:Q:95:TYR:CD1	2.69	0.41
19:R:39:VAL:O	19:R:40:LEU:C	2.58	0.41
19:R:61:LYS:O	19:R:64:ARG:N	2.51	0.41
1:A:39:G:O2'	1:A:40:C:H5'	2.20	0.41
1:A:60:A:C4'	1:A:61:G:O5'	2.69	0.41
1:A:404:U:O2	1:A:404:U:H2'	2.20	0.41
1:A:596:C:OP2	1:A:596:C:H3'	2.20	0.41
1:A:757:U:OP1	1:A:822:C:O2'	2.38	0.41
1:A:859:A:H2'	1:A:860:A:C8	2.56	0.41
1:A:862:C:O2'	1:A:863:U:H5'	2.21	0.41
1:A:910:C:C4	1:A:911:U:C5	3.09	0.41
1:A:1030(A):G:H2'	1:A:1030(C):G:OP2	2.20	0.41
1:A:1065:U:HO2'	1:A:1066:C:P	2.41	0.41
1:A:1095:U:P	1:A:1108:G:H1	2.43	0.41
1:A:1111:A:H2'	1:A:1112:C:O4'	2.19	0.41
1:A:1327:C:H2'	1:A:1328:C:C6	2.56	0.41
3:B:8:LYS:HE2	3:B:8:LYS:HB2	1.89	0.41
3:B:18:GLY:CA	3:B:41:ILE:HG12	2.50	0.41
3:B:176:GLU:O	3:B:179:LYS:O	2.39	0.41
4:C:43:LEU:C	4:C:47:LEU:HD13	2.41	0.41
4:C:86:VAL:HG23	4:C:87:LEU:N	2.35	0.41
5:D:98:GLU:OE1	5:D:194:LEU:HD11	2.21	0.41
5:D:104:VAL:O	5:D:105:VAL:C	2.59	0.41
6:E:19:MET:HE3	6:E:19:MET:HA	2.02	0.41
6:E:34:VAL:O	6:E:42:GLY:N	2.54	0.41
7:F:5:GLU:OE1	19:R:34:TYR:OH	2.39	0.41
7:F:40:VAL:HG23	7:F:62:TRP:C	2.41	0.41
8:G:134:ALA:O	8:G:136:LYS:N	2.54	0.41
11:J:6:ILE:HD11	11:J:73:ASP:N	2.30	0.41
11:J:34:VAL:CG1	11:J:35:SER:N	2.83	0.41
12:K:23:ALA:CB	12:K:28:THR:HG22	2.51	0.41
13:L:87:GLY:HA2	13:L:98:TYR:CA	2.41	0.41
16:O:48:LYS:H	16:O:48:LYS:HE2	1.83	0.41
17:P:65:GLN:HA	17:P:66:PRO:HD2	1.95	0.41
18:Q:60:ILE:HD13	18:Q:61:GLU:H	1.83	0.41
19:R:43:PHE:HA	19:R:51:LEU:HD12	2.02	0.41
19:R:61:LYS:O	19:R:62:GLU:C	2.58	0.41
21:T:67:ALA:HB2	21:T:77:ALA:HB2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:T:102:GLY:O	21:T:104:LEU:N	2.50	0.41
22:V:2:GLY:O	22:V:3:LYS:C	2.59	0.41
1:A:154:C:H2'	1:A:155:C:C6	2.56	0.41
1:A:263:A:O2'	1:A:264:U:H5'	2.21	0.41
1:A:279:A:H5'	1:A:281:G:O4'	2.20	0.41
1:A:324:G:N2	1:A:326:G:H3'	2.35	0.41
1:A:384:G:C6	1:A:385:C:N4	2.88	0.41
1:A:406:G:H2'	1:A:407:G:C8	2.55	0.41
1:A:520:A:H62	1:A:529:G:N2	2.18	0.41
1:A:521:G:OP1	13:L:73:GLU:O	2.38	0.41
1:A:533:A:C6	1:A:536:C:C4	3.08	0.41
1:A:543:C:C2	1:A:544:G:C8	3.07	0.41
1:A:578:C:H2'	1:A:579:G:H8	1.85	0.41
1:A:783:C:H2'	1:A:784:C:H6	1.83	0.41
1:A:1048:G:H1'	1:A:1215:G:C5'	2.50	0.41
1:A:1061:G:N1	1:A:1197:G:C5	2.89	0.41
1:A:1192:C:O2	1:A:1192:C:H2'	2.20	0.41
1:A:1201:A:H4'	1:A:1202:G:H5''	2.03	0.41
1:A:1387:G:C6	1:A:1388:C:N4	2.88	0.41
1:A:1477:C:H2'	1:A:1478:C:C6	2.56	0.41
1:A:1520:G:C4	1:A:1521:G:N7	2.89	0.41
4:C:51:GLY:HA3	4:C:70:VAL:CG2	2.49	0.41
4:C:131:ARG:HA	4:C:134:ILE:CD1	2.38	0.41
6:E:33:VAL:HG11	6:E:109:ILE:HA	2.01	0.41
7:F:14:LEU:O	7:F:15:ASP:O	2.38	0.41
7:F:89:MET:SD	19:R:76:LEU:HD23	2.60	0.41
8:G:31:MET:CG	8:G:32:ARG:N	2.83	0.41
8:G:106:GLN:C	8:G:108:ALA:N	2.73	0.41
9:H:23:SER:HA	9:H:62:TYR:HA	2.02	0.41
11:J:8:LEU:N	11:J:8:LEU:HD12	2.36	0.41
11:J:22:LYS:NZ	11:J:23:ILE:HG12	2.36	0.41
12:K:115:PRO:C	12:K:117:ASN:H	2.23	0.41
13:L:112:ASP:O	13:L:113:ARG:HB3	2.20	0.41
14:M:91:ARG:O	14:M:110:ARG:NH2	2.53	0.41
19:R:56:THR:HB	19:R:58:LEU:CD1	2.51	0.41
21:T:30:LYS:O	21:T:33:ILE:N	2.53	0.41
1:A:83:U:H2'	1:A:84:U:C6	2.54	0.41
1:A:115:G:O2'	1:A:116:A:OP2	2.34	0.41
1:A:132:C:O5'	1:A:132:C:H6	2.04	0.41
1:A:269:C:H2'	1:A:270:A:C8	2.55	0.41
1:A:499:A:C4	1:A:547:A:N6	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:643:C:H4'	9:H:31:PHE:CE2	2.48	0.41
1:A:715:A:O2'	1:A:716:A:H5'	2.21	0.41
1:A:794:A:C6	1:A:795:C:C4	3.08	0.41
1:A:922:G:H5''	6:E:20:GLN:HG2	2.02	0.41
1:A:1090:U:O2'	1:A:1091:U:H5'	2.21	0.41
1:A:1197:G:H2'	1:A:1198:G:C5'	2.49	0.41
1:A:1223:C:OP1	1:A:1225:A:H8	2.04	0.41
1:A:1281:U:H5'	1:A:1282:C:H5	1.84	0.41
4:C:10:PHE:CZ	4:C:178:LEU:HD13	2.55	0.41
4:C:91:LEU:HD23	4:C:92:ALA:H	1.78	0.41
5:D:32:ALA:O	5:D:34:GLU:N	2.52	0.41
5:D:46:LYS:HE3	5:D:46:LYS:HB2	1.89	0.41
6:E:14:ARG:HG3	6:E:29:GLY:HA3	2.02	0.41
6:E:43:LEU:C	6:E:43:LEU:HD13	2.40	0.41
7:F:22:GLU:OE1	7:F:82:ARG:NH1	2.54	0.41
7:F:23:LYS:O	7:F:27:GLN:CG	2.69	0.41
9:H:38:ILE:O	9:H:39:LEU:C	2.59	0.41
10:I:73:GLN:O	10:I:74:ILE:C	2.59	0.41
11:J:48:THR:HG22	11:J:61:GLU:C	2.40	0.41
11:J:73:ASP:N	11:J:73:ASP:OD1	2.53	0.41
12:K:93:GLN:NE2	12:K:96:ARG:HG2	2.36	0.41
12:K:125:PHE:N	12:K:125:PHE:HD1	2.19	0.41
14:M:40:ASN:ND2	14:M:41:PRO:N	2.62	0.41
16:O:86:GLY:O	16:O:87:ILE:HG13	2.20	0.41
18:Q:42:TYR:N	18:Q:42:TYR:CD2	2.89	0.41
18:Q:74:LEU:HD23	18:Q:74:LEU:C	2.41	0.41
19:R:22:VAL:O	19:R:23:LYS:C	2.58	0.41
19:R:61:LYS:O	19:R:64:ARG:HB3	2.20	0.41
20:S:45:VAL:C	20:S:47:HIS:H	2.24	0.41
21:T:40:ALA:HB2	21:T:55:ILE:CG2	2.50	0.41
1:A:62:U:C2'	1:A:63:C:H5'	2.51	0.41
1:A:158:G:C2	1:A:159:G:N7	2.89	0.41
1:A:392:G:OP1	17:P:13:HIS:N	2.48	0.41
1:A:507:C:C4	1:A:508:C:H5	2.39	0.41
1:A:586:C:H1'	1:A:878:G:O2'	2.20	0.41
1:A:709:G:C4	1:A:710:G:N7	2.89	0.41
1:A:1001:A:H2'	1:A:1002:G:C4'	2.50	0.41
1:A:1214:C:H3'	1:A:1214:C:O2	2.21	0.41
1:A:1235:U:H5''	22:V:3:LYS:HB2	2.02	0.41
1:A:1366:C:C2	1:A:1367:C:C6	3.08	0.41
1:A:1525:G:H2'	1:A:1526:G:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:20:GLU:OE2	3:B:205:ASP:OD1	2.39	0.41
3:B:62:ALA:O	3:B:63:MET:C	2.58	0.41
3:B:167:PRO:C	3:B:169:LYS:N	2.71	0.41
3:B:213:LEU:O	3:B:217:ARG:HG2	2.20	0.41
4:C:121:ALA:HA	4:C:124:ILE:HD12	2.02	0.41
5:D:152:SER:OG	5:D:155:LEU:HD12	2.21	0.41
8:G:50:ILE:HD11	8:G:124:LEU:HB2	2.01	0.41
10:I:99:LEU:HD12	10:I:101:PHE:CE1	2.55	0.41
12:K:21:ILE:HD12	12:K:95:ILE:HG13	2.03	0.41
13:L:11:VAL:HG11	18:Q:36:ILE:HG21	2.02	0.41
13:L:110:VAL:CG2	13:L:120:TYR:HB3	2.51	0.41
14:M:15:VAL:O	14:M:16:ASP:C	2.57	0.41
14:M:40:ASN:HD22	14:M:40:ASN:C	2.22	0.41
17:P:71:ARG:HH11	17:P:71:ARG:CB	2.33	0.41
19:R:36:ASN:ND2	19:R:36:ASN:C	2.74	0.41
1:A:17:U:H2'	1:A:18:C:C6	2.55	0.41
1:A:77:G:C6	1:A:93:G:C2	3.08	0.41
1:A:557:G:C6	1:A:558:G:N1	2.89	0.41
1:A:602:A:N3	1:A:637:G:C2	2.89	0.41
1:A:652:U:O4	1:A:752:G:O2'	2.31	0.41
1:A:785:G:H1'	1:A:798:G:H22	1.86	0.41
1:A:821:G:C4	1:A:822:C:C5	3.08	0.41
1:A:1003(A):G:C5	1:A:1004:A:N3	2.88	0.41
1:A:1055:A:C2	1:A:1056:U:C1'	3.04	0.41
1:A:1183:A:H2'	1:A:1184:G:OP1	2.21	0.41
1:A:1511:G:C2'	1:A:1512:U:H5'	2.51	0.41
3:B:160:ASP:O	3:B:161:ALA:HB2	2.20	0.41
3:B:177:ALA:O	3:B:178:ARG:C	2.58	0.41
3:B:196:LEU:CD2	3:B:196:LEU:O	2.68	0.41
3:B:230:VAL:HG12	3:B:231:GLU:N	2.36	0.41
4:C:48:TYR:C	4:C:50:ALA:N	2.74	0.41
4:C:63:ASN:N	4:C:63:ASN:ND2	2.67	0.41
5:D:8:VAL:CG2	5:D:115:ARG:NH1	2.83	0.41
5:D:125:HIS:HA	5:D:149:ALA:CB	2.37	0.41
6:E:75:THR:OG1	6:E:93:PRO:HA	2.20	0.41
9:H:103:VAL:CG1	9:H:108:GLY:HA3	2.51	0.41
10:I:70:LYS:HD3	10:I:73:GLN:NE2	2.36	0.41
14:M:11:ARG:C	14:M:13:LYS:H	2.25	0.41
17:P:10:GLY:O	17:P:11:SER:CB	2.69	0.41
19:R:69:THR:O	19:R:70:ILE:C	2.58	0.41
21:T:42:GLN:O	21:T:46:GLU:HG2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:T:57:ARG:HH12	21:T:100:ILE:CD1	2.34	0.41
21:T:59:ALA:O	21:T:60:GLU:C	2.58	0.41
22:V:23:PRO:C	22:V:24:ARG:HD3	2.41	0.41
1:A:11:G:C2	1:A:24:U:O2	2.74	0.41
1:A:11:G:N1	1:A:24:U:C2	2.89	0.41
1:A:20:U:H1'	1:A:916:G:N2	2.35	0.41
1:A:37:U:OP2	13:L:123:LYS:HE3	2.21	0.41
1:A:67:C:O2	1:A:171:A:C2	2.74	0.41
1:A:68:G:C2	1:A:102:G:C2	3.09	0.41
1:A:77:G:H2'	1:A:78:G:C8	2.56	0.41
1:A:116:A:OP2	1:A:289:G:OP2	2.39	0.41
1:A:122:G:N1	1:A:123:C:C2	2.89	0.41
1:A:185:A:H2'	1:A:186:C:H6	1.86	0.41
1:A:219:C:H2'	1:A:220:G:H5'	2.03	0.41
1:A:292:G:H2'	1:A:293:G:O5'	2.20	0.41
1:A:328:C:H4'	1:A:329:A:H5'	2.03	0.41
1:A:377:G:P	17:P:5:ARG:HH11	2.44	0.41
1:A:419:C:N4	1:A:424:G:H1	2.18	0.41
1:A:533:A:O2'	1:A:534:U:OP1	2.25	0.41
1:A:539:A:H5'	13:L:114:LYS:HZ3	1.86	0.41
1:A:577:G:C1'	1:A:816:A:C4	3.03	0.41
1:A:602:A:C6	1:A:603:U:C4	3.09	0.41
1:A:603:U:H2'	1:A:604:G:H8	1.84	0.41
1:A:610:G:H2'	1:A:611:A:C8	2.56	0.41
1:A:756:C:H2'	1:A:757:U:C6	2.56	0.41
1:A:900:A:N1	1:A:901:A:C2	2.89	0.41
1:A:925:G:N1	1:A:927:G:C5	2.89	0.41
1:A:977:A:N7	1:A:1223:C:H2'	2.35	0.41
1:A:1068:G:C8	1:A:1094:G:H2'	2.56	0.41
1:A:1107:C:H2'	1:A:1108:G:C5'	2.50	0.41
1:A:1109:C:H2'	1:A:1110:A:H8	1.84	0.41
1:A:1206:G:N1	1:A:1207:G:C5	2.89	0.41
1:A:1224:G:O2'	1:A:1225:A:P	2.79	0.41
1:A:1279:A:C5'	11:J:9:ARG:HH12	2.33	0.41
1:A:1287:A:N7	1:A:1288:A:N6	2.69	0.41
1:A:1340:A:O2'	1:A:1341:U:H5'	2.20	0.41
1:A:1345:U:C4	1:A:1377:A:C2	3.09	0.41
1:A:1355:G:H2'	1:A:1356:G:C8	2.56	0.41
1:A:1365:G:C5	1:A:1366:C:C5	3.09	0.41
1:A:1404:C:H1'	1:A:1499:A:C2	2.56	0.41
1:A:1465:C:C4	1:A:1466:C:C4	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1499:A:H2'	1:A:1500:A:H8	1.86	0.41
1:A:1511:G:C6	1:A:1512:U:C2	3.09	0.41
3:B:20:GLU:HB3	3:B:23:ARG:HE	1.86	0.41
3:B:30:ARG:NH2	3:B:194:PRO:HB2	2.36	0.41
3:B:169:LYS:HD2	3:B:170:GLU:N	2.35	0.41
4:C:7:PRO:O	4:C:11:ARG:HD2	2.21	0.41
4:C:22:TRP:HB2	4:C:23:TYR:H	1.52	0.41
4:C:110:ASN:O	4:C:111:LEU:CG	2.67	0.41
5:D:43:HIS:HB3	5:D:46:LYS:HE3	2.03	0.41
5:D:65:ARG:CD	5:D:75:PHE:CD1	3.00	0.41
5:D:80:GLU:O	5:D:81:GLU:C	2.59	0.41
6:E:12:LEU:O	6:E:31:LEU:HB2	2.21	0.41
6:E:150:ARG:O	6:E:153:LYS:N	2.51	0.41
7:F:4:TYR:CE2	7:F:72:VAL:CG2	3.04	0.41
7:F:43:LEU:HD22	7:F:43:LEU:N	2.36	0.41
7:F:67:MET:CE	7:F:72:VAL:HA	2.51	0.41
8:G:18:TYR:HE1	8:G:57:GLU:OE1	2.03	0.41
8:G:57:GLU:HG3	8:G:59:LEU:H	1.86	0.41
8:G:63:LYS:HA	8:G:63:LYS:HD3	1.94	0.41
9:H:54:ASP:O	9:H:54:ASP:CG	2.58	0.41
10:I:25:LYS:NZ	10:I:25:LYS:HB3	2.36	0.41
10:I:38:GLN:O	10:I:39:GLY:C	2.58	0.41
10:I:104:ARG:C	10:I:104:ARG:CD	2.86	0.41
11:J:19:SER:HB3	11:J:91:PRO:CG	2.31	0.41
11:J:49:VAL:CB	15:N:41:ARG:HB2	2.51	0.41
11:J:57:LYS:O	11:J:58:ASP:O	2.39	0.41
12:K:24:SER:OG	12:K:27:ASN:N	2.51	0.41
12:K:122:LYS:O	12:K:126:ARG:N	2.49	0.41
13:L:60:LEU:HD11	13:L:85:ILE:HD13	2.01	0.41
13:L:85:ILE:HG22	13:L:100:ILE:HG12	2.01	0.41
13:L:98:TYR:CD1	13:L:98:TYR:N	2.88	0.41
14:M:24:GLY:O	14:M:25:ILE:HG13	2.21	0.41
14:M:30:ALA:O	14:M:34:LEU:HD13	2.21	0.41
14:M:52:GLU:HG2	14:M:55:ARG:NH2	2.36	0.41
14:M:54:VAL:CG1	14:M:55:ARG:N	2.83	0.41
14:M:79:LYS:HD3	14:M:79:LYS:O	2.20	0.41
14:M:80:ARG:HH22	20:S:3:ARG:NH2	2.19	0.41
14:M:110:ARG:HG2	14:M:110:ARG:HH11	1.85	0.41
16:O:9:GLN:HA	16:O:12:ILE:HD12	2.03	0.41
17:P:71:ARG:HB2	17:P:71:ARG:HH11	1.86	0.41
18:Q:89:LEU:HA	18:Q:89:LEU:HD23	1.71	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:S:31:ILE:O	20:S:50:ALA:HB3	2.21	0.41
21:T:56:MET:HG3	21:T:84:LEU:HD11	2.03	0.41
21:T:56:MET:HG3	21:T:84:LEU:CD1	2.51	0.41
21:T:63:ILE:HG21	21:T:81:LYS:HG3	2.02	0.41
1:A:164:U:C2	1:A:165:C:C5	3.09	0.41
1:A:192:U:O4'	21:T:102:GLY:O	2.37	0.41
1:A:279:A:C5'	1:A:280:C:H3'	2.51	0.41
1:A:300:A:N7	1:A:301:G:C8	2.89	0.41
1:A:369:C:OP2	1:A:388:G:N1	2.50	0.41
1:A:373:A:C2	1:A:482:A:N6	2.89	0.41
1:A:373:A:N7	1:A:482:A:C8	2.89	0.41
1:A:436:C:O2	1:A:437:U:C6	2.73	0.41
1:A:455:C:H2'	1:A:456:C:C6	2.46	0.41
1:A:579:G:C4	1:A:580:U:C5	3.09	0.41
1:A:676:A:C2	1:A:677:U:C4	3.09	0.41
1:A:718:G:C5	1:A:719:C:C4	3.08	0.41
1:A:892:A:H2'	1:A:893:C:C6	2.56	0.41
1:A:953:G:C6	1:A:954:G:C5	3.08	0.41
1:A:993:G:H4'	1:A:994:A:OP2	2.21	0.41
1:A:1077:G:H1	6:E:47:LYS:HZ3	1.69	0.41
1:A:1252:A:H2'	1:A:1253:G:O5'	2.21	0.41
1:A:1284:C:H2'	1:A:1285:A:H8	1.85	0.41
1:A:1353:G:H2'	1:A:1354:C:C6	2.56	0.41
1:A:1488:G:H2'	1:A:1489:G:C8	2.56	0.41
3:B:47:THR:HA	3:B:202:PRO:HG2	2.03	0.41
3:B:136:VAL:O	3:B:139:LYS:N	2.54	0.41
4:C:34:LEU:HD23	15:N:25:VAL:HG21	2.03	0.41
4:C:152:ILE:N	4:C:198:VAL:CG1	2.82	0.41
5:D:198:VAL:HG22	5:D:199:ASN:N	2.36	0.41
6:E:64:ARG:O	6:E:65:ASN:CB	2.64	0.41
7:F:10:LEU:O	7:F:11:ASN:O	2.39	0.41
7:F:48:LEU:HD13	7:F:52:ILE:HD12	2.01	0.41
8:G:9:VAL:O	8:G:9:VAL:HG23	2.20	0.41
8:G:38:LEU:O	8:G:42:ILE:HG13	2.21	0.41
8:G:72:ARG:HG2	8:G:142:GLU:OE1	2.22	0.41
8:G:91:VAL:HG12	8:G:92:SER:H	1.84	0.41
9:H:55:GLY:C	9:H:56:LYS:HD2	2.41	0.41
9:H:121:ASP:CG	9:H:122:ARG:H	2.24	0.41
10:I:65:VAL:HG13	10:I:65:VAL:O	2.21	0.41
10:I:93:ARG:HA	10:I:96:LEU:CB	2.50	0.41
11:J:30:SER:OG	11:J:81:THR:HA	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:K:24:SER:HG	12:K:27:ASN:N	2.19	0.41
12:K:40:ILE:HG23	12:K:75:TYR:CD2	2.55	0.41
15:N:31:ARG:C	15:N:33:VAL:N	2.73	0.41
16:O:50:HIS:C	16:O:52:SER:N	2.75	0.41
16:O:54:ARG:O	16:O:55:GLY:C	2.59	0.41
21:T:78:ALA:O	21:T:79:ARG:C	2.58	0.41
22:V:3:LYS:HD3	22:V:14:TRP:HB2	2.03	0.41
1:A:60:A:H2	1:A:107:G:N3	2.18	0.40
1:A:116:A:H2'	1:A:117:G:H8	1.86	0.40
1:A:198:G:H1	1:A:219:C:H42	1.69	0.40
1:A:292:G:C2'	1:A:293:G:O5'	2.69	0.40
1:A:356:A:C4	1:A:357:G:C8	3.10	0.40
1:A:376:G:C2	1:A:389:A:C2	3.10	0.40
1:A:459:G:N7	1:A:460:A:H3'	2.36	0.40
1:A:515:G:C1'	1:A:537:G:H22	2.26	0.40
1:A:859:A:H2'	1:A:860:A:H8	1.86	0.40
1:A:968:A:OP1	1:A:968:A:H8	2.04	0.40
1:A:1397:C:OP2	6:E:24:ARG:NH2	2.53	0.40
3:B:95:GLN:HA	3:B:95:GLN:OE1	2.21	0.40
3:B:111:ARG:O	3:B:112:VAL:C	2.58	0.40
3:B:200:ILE:CG2	3:B:201:ILE:N	2.84	0.40
4:C:12:LEU:C	4:C:14:ILE:N	2.75	0.40
4:C:101:LEU:HD23	4:C:101:LEU:C	2.41	0.40
4:C:155:GLY:C	4:C:156:ARG:HG2	2.41	0.40
5:D:11:LEU:C	5:D:13:ARG:N	2.73	0.40
5:D:65:ARG:HB2	5:D:75:PHE:CE1	2.56	0.40
5:D:108:LEU:HD23	5:D:108:LEU:HA	1.70	0.40
6:E:11:ILE:HD12	6:E:105:VAL:HG22	2.03	0.40
6:E:135:THR:O	6:E:138:ALA:HB3	2.21	0.40
7:F:19:LEU:C	7:F:21:LEU:N	2.74	0.40
8:G:102:ARG:C	8:G:104:LEU:N	2.74	0.40
10:I:17:VAL:HG11	10:I:81:ILE:N	2.36	0.40
11:J:4:ILE:HG23	11:J:77:PRO:HG3	2.02	0.40
12:K:49:GLY:O	12:K:51:LYS:HG2	2.21	0.40
12:K:120:ARG:HH11	12:K:120:ARG:HG2	1.85	0.40
14:M:91:ARG:HB3	14:M:97:PRO:O	2.21	0.40
16:O:49:ASP:OD2	16:O:52:SER:HB2	2.22	0.40
1:A:44:G:N1	1:A:399:G:C6	2.90	0.40
1:A:407:G:O2'	5:D:116:GLN:HG3	2.21	0.40
1:A:455:C:N4	1:A:477:G:N1	2.67	0.40
1:A:491:G:N3	1:A:492:G:C8	2.90	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:514:C:H2'	1:A:515:G:H8	1.85	0.40
1:A:521:G:OP1	13:L:54:LYS:HE2	2.21	0.40
1:A:976:G:C4	1:A:1363:A:N6	2.89	0.40
1:A:978:A:H8	1:A:978:A:O5'	2.04	0.40
1:A:986:A:C2	1:A:1220:G:C2	3.09	0.40
1:A:1048:G:N3	1:A:1215:G:H5'	2.36	0.40
1:A:1066:C:H2'	1:A:1067:A:N3	2.36	0.40
1:A:1071:C:H42	1:A:1104:G:H1	1.70	0.40
1:A:1124:G:H4'	11:J:38:ILE:CG2	2.52	0.40
1:A:1234:C:O2'	1:A:1235:U:H5'	2.21	0.40
1:A:1311:G:O6	20:S:2:PRO:HB3	2.22	0.40
1:A:1400:C:H3'	1:A:1401:G:H5'	2.02	0.40
1:A:1503:A:C4	1:A:1531:A:H2	2.39	0.40
1:A:1509:C:H2'	1:A:1510:U:O4'	2.21	0.40
3:B:25:ASN:O	3:B:26:PRO:C	2.59	0.40
3:B:81:VAL:O	3:B:81:VAL:HG12	2.21	0.40
3:B:136:VAL:HA	3:B:139:LYS:CG	2.50	0.40
3:B:144:ARG:O	3:B:145:LEU:C	2.59	0.40
3:B:151:GLY:C	3:B:153:ARG:H	2.24	0.40
4:C:10:PHE:O	4:C:11:ARG:HG3	2.20	0.40
4:C:112:SER:O	4:C:115:LEU:N	2.47	0.40
4:C:131:ARG:HE	4:C:131:ARG:HB2	1.71	0.40
5:D:106:TYR:O	5:D:108:LEU:N	2.54	0.40
7:F:11:ASN:HA	7:F:86:ARG:CG	2.51	0.40
7:F:94:GLN:NE2	19:R:32:ARG:CD	2.75	0.40
9:H:23:SER:N	9:H:63:LEU:HD13	2.35	0.40
10:I:31:GLN:HB3	10:I:35:GLU:HB3	2.03	0.40
13:L:28:LYS:O	13:L:30:ALA:N	2.54	0.40
14:M:26:GLY:C	14:M:28:ALA:N	2.74	0.40
17:P:3:LYS:HE3	17:P:65:GLN:O	2.22	0.40
17:P:44:THR:C	17:P:45:THR:CG2	2.89	0.40
18:Q:57:VAL:HB	18:Q:73:VAL:HG13	2.03	0.40
19:R:34:TYR:HD1	19:R:35:ARG:HG3	1.83	0.40
20:S:63:THR:CG2	20:S:64:GLU:N	2.78	0.40
21:T:61:SER:O	21:T:64:ASP:N	2.53	0.40
21:T:84:LEU:C	21:T:84:LEU:CD1	2.88	0.40
1:A:190(H):G:O2'	1:A:190(I):G:H5'	2.20	0.40
1:A:485:G:C2'	1:A:486:U:OP2	2.69	0.40
1:A:577:G:C4	1:A:578:C:C5	3.09	0.40
1:A:608:A:C2'	1:A:609:A:H8	2.29	0.40
1:A:691:G:P	12:K:26:ASN:HD22	2.44	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:716:A:O2'	1:A:717:C:H5'	2.22	0.40
1:A:830:G:H2'	1:A:831:U:C5'	2.52	0.40
1:A:922:G:N2	1:A:1396:A:C4	2.90	0.40
1:A:1212:U:O2'	1:A:1213:A:O4'	2.36	0.40
1:A:1237:C:H4'	1:A:1334:G:N2	2.36	0.40
1:A:1251:A:N1	1:A:1252:A:C6	2.89	0.40
1:A:1540:U:C5	1:A:1541:U:O2	2.74	0.40
2:Z:3:U:O5'	2:Z:3:U:H6	2.04	0.40
3:B:60:ASP:OD1	3:B:64:ARG:NH1	2.47	0.40
3:B:136:VAL:O	3:B:139:LYS:HB2	2.20	0.40
4:C:6:HIS:HB3	15:N:49:HIS:ND1	2.36	0.40
4:C:52:LEU:HD21	4:C:118:GLN:HE22	1.86	0.40
4:C:153:VAL:HG22	4:C:198:VAL:HG21	2.02	0.40
5:D:17:VAL:CG1	5:D:18:LYS:N	2.85	0.40
5:D:114:ARG:O	5:D:117:ALA:HB3	2.22	0.40
5:D:118:ARG:HG3	5:D:136:PRO:CG	2.51	0.40
6:E:107:ARG:O	6:E:108:ALA:O	2.39	0.40
6:E:121:LYS:CD	6:E:122:GLU:O	2.62	0.40
7:F:22:GLU:HA	7:F:25:ILE:HG22	2.04	0.40
8:G:108:ALA:HA	8:G:123:GLU:OE1	2.21	0.40
9:H:112:LEU:HD11	9:H:121:ASP:HA	2.03	0.40
10:I:50:LEU:HD11	10:I:81:ILE:HB	2.04	0.40
13:L:54:LYS:O	13:L:70:ILE:CG1	2.70	0.40
14:M:96:LEU:O	14:M:110:ARG:NH1	2.54	0.40
1:A:75:G:C2	1:A:96:G:N1	2.89	0.40
1:A:183:G:O2'	1:A:224:C:H1'	2.21	0.40
1:A:321:A:H2'	1:A:322:C:C6	2.49	0.40
1:A:325:A:C5	1:A:326:G:C5	3.09	0.40
1:A:371:G:C6	1:A:391:G:O6	2.74	0.40
1:A:376:G:C6	1:A:389:A:C6	3.09	0.40
1:A:515:G:C6	1:A:516:U:C4	3.09	0.40
1:A:523:A:N6	13:L:53:ARG:NH1	2.69	0.40
1:A:581:G:O6	1:A:758:G:C8	2.75	0.40
1:A:777:A:C4	1:A:778:G:C8	3.09	0.40
1:A:791:G:C2'	1:A:792:A:H5'	2.51	0.40
1:A:807:A:C2	1:A:808:C:C2	3.10	0.40
1:A:942:G:C2	1:A:943:U:C2	3.09	0.40
1:A:1070:U:O2	1:A:1106:G:C2	2.74	0.40
1:A:1286:A:H4'	1:A:1286:A:OP1	2.21	0.40
1:A:1305:G:H5''	22:V:5:ASP:HA	2.03	0.40
1:A:1306:A:O2'	14:M:109:THR:HG21	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1394:A:N6	1:A:1501:C:H5'	2.36	0.40
1:A:1413:A:C4	1:A:1414:U:C6	3.10	0.40
1:A:1513:A:H2'	1:A:1514:C:C5	2.53	0.40
1:A:1523:G:C6	1:A:1524:C:C4	3.09	0.40
3:B:74:LYS:NZ	3:B:205:ASP:OD2	2.54	0.40
3:B:113:HIS:ND1	3:B:113:HIS:C	2.74	0.40
4:C:88:ARG:HH11	4:C:88:ARG:HG3	1.86	0.40
4:C:114:PRO:HD3	4:C:184:TYR:O	2.21	0.40
5:D:63:LYS:O	5:D:64:LEU:C	2.60	0.40
5:D:202:LEU:O	5:D:205:GLU:N	2.55	0.40
6:E:42:GLY:HA2	6:E:136:MET:HE1	2.04	0.40
7:F:53:ALA:O	7:F:54:LYS:HB2	2.21	0.40
8:G:27:ILE:O	8:G:30:ILE:N	2.54	0.40
8:G:117:ALA:CA	8:G:120:ILE:HG12	2.51	0.40
9:H:134:ILE:O	9:H:135:CYS:CB	2.63	0.40
11:J:39:PRO:O	11:J:40:LEU:HB3	2.21	0.40
11:J:48:THR:HG22	11:J:62:HIS:HA	2.03	0.40
13:L:36:VAL:C	13:L:58:VAL:HG13	2.42	0.40
1:A:250:A:N3	1:A:252:U:N3	2.70	0.40
1:A:318:G:O2'	1:A:319:G:H5'	2.21	0.40
1:A:337:C:C2	1:A:338:A:N7	2.89	0.40
1:A:344:A:O2'	1:A:345:C:OP1	2.37	0.40
1:A:357:G:H1'	1:A:368:U:O2	2.22	0.40
1:A:399:G:C6	1:A:400:C:N4	2.90	0.40
1:A:455:C:N3	1:A:478:A:H2	2.19	0.40
1:A:532:A:N6	4:C:159:GLY:O	2.55	0.40
1:A:710:G:H5''	7:F:54:LYS:CE	2.52	0.40
1:A:783:C:C6	1:A:784:C:H5	2.39	0.40
1:A:921:U:H2'	1:A:922:G:C5'	2.51	0.40
1:A:1061:G:C6	1:A:1062:U:N3	2.89	0.40
1:A:1065:U:C5'	1:A:1066:C:H5'	2.51	0.40
1:A:1148:U:H4'	10:I:14:VAL:CG1	2.51	0.40
1:A:1235:U:H2'	1:A:1236:A:O4'	2.22	0.40
1:A:1286:A:C2	22:V:18:TYR:OH	2.74	0.40
3:B:8:LYS:O	3:B:9:GLU:HB2	2.22	0.40
3:B:60:ASP:C	3:B:62:ALA:H	2.24	0.40
3:B:71:VAL:HG11	3:B:170:GLU:HG2	2.04	0.40
4:C:12:LEU:C	4:C:14:ILE:H	2.25	0.40
6:E:33:VAL:HG21	6:E:108:ALA:HB1	2.03	0.40
6:E:79:GLU:HB3	6:E:93:PRO:HD3	1.99	0.40
6:E:129:ILE:HD12	6:E:129:ILE:N	2.26	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:H:5:PRO:HB3	9:H:32:LYS:HZ2	1.85	0.40
9:H:121:ASP:O	9:H:124:ALA:N	2.55	0.40
13:L:9:GLN:O	13:L:13:LYS:N	2.48	0.40
13:L:27:LEU:C	13:L:29:GLY:N	2.75	0.40
14:M:21:TYR:N	14:M:21:TYR:CD1	2.90	0.40
15:N:15:LYS:HB3	15:N:16:PHE:CD1	2.56	0.40
15:N:25:VAL:HG12	15:N:39:LEU:HB3	2.03	0.40
16:O:14:GLU:O	16:O:14:GLU:CG	2.69	0.40
18:Q:69:LYS:N	18:Q:70:ARG:HH12	2.20	0.40
21:T:12:ALA:C	21:T:14:LYS:H	2.25	0.40
21:T:23:ARG:O	21:T:24:LEU:C	2.58	0.40

There are no symmetry-related clashes.

## 5.3 Torsion angles [i](#)

### 5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
3	B	232/256 (91%)	134 (58%)	71 (31%)	27 (12%)	0	6
4	C	204/239 (85%)	95 (47%)	64 (31%)	45 (22%)	0	1
5	D	206/208 (99%)	109 (53%)	63 (31%)	34 (16%)	0	3
6	E	148/161 (92%)	98 (66%)	30 (20%)	20 (14%)	0	4
7	F	99/101 (98%)	56 (57%)	30 (30%)	13 (13%)	0	5
8	G	153/155 (99%)	68 (44%)	47 (31%)	38 (25%)	0	1
9	H	136/138 (99%)	91 (67%)	28 (21%)	17 (12%)	0	6
10	I	125/128 (98%)	70 (56%)	27 (22%)	28 (22%)	0	1
11	J	96/104 (92%)	51 (53%)	26 (27%)	19 (20%)	0	2
12	K	117/129 (91%)	72 (62%)	31 (26%)	14 (12%)	0	6
13	L	122/135 (90%)	81 (66%)	22 (18%)	19 (16%)	0	4

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
14	M	116/126 (92%)	66 (57%)	33 (28%)	17 (15%)	0	4
15	N	58/60 (97%)	25 (43%)	8 (14%)	25 (43%)	0	0
16	O	86/88 (98%)	42 (49%)	30 (35%)	14 (16%)	0	3
17	P	81/88 (92%)	44 (54%)	20 (25%)	17 (21%)	0	1
18	Q	102/104 (98%)	60 (59%)	27 (26%)	15 (15%)	0	4
19	R	71/88 (81%)	36 (51%)	24 (34%)	11 (16%)	0	4
20	S	78/92 (85%)	45 (58%)	24 (31%)	9 (12%)	0	7
21	T	97/106 (92%)	34 (35%)	42 (43%)	21 (22%)	0	1
22	V	22/26 (85%)	10 (46%)	7 (32%)	5 (23%)	0	1
All	All	2349/2532 (93%)	1287 (55%)	654 (28%)	408 (17%)	0	3

All (408) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	B	20	GLU
3	B	158	LEU
3	B	232	PRO
3	B	239	VAL
4	C	4	LYS
4	C	12	LEU
4	C	15	THR
4	C	16	ARG
4	C	53	ALA
4	C	66	VAL
4	C	67	THR
4	C	77	ILE
4	C	86	VAL
4	C	94	LEU
4	C	97	LYS
4	C	111	LEU
4	C	130	VAL
4	C	146	ALA
4	C	150	LYS
4	C	153	VAL
4	C	155	GLY
4	C	171	GLY
4	C	179	ARG
4	C	189	ALA
5	D	25	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
5	D	30	LYS
5	D	40	PRO
5	D	42	GLN
5	D	43	HIS
5	D	172	PRO
6	E	71	LEU
6	E	83	GLU
6	E	98	THR
6	E	108	ALA
6	E	142	LEU
7	F	15	ASP
7	F	39	LYS
7	F	72	VAL
7	F	83	ASP
7	F	84	ASN
7	F	91	VAL
7	F	100	ASN
8	G	9	VAL
8	G	10	ARG
8	G	14	PRO
8	G	17	VAL
8	G	37	ASN
8	G	51	GLN
8	G	72	ARG
8	G	90	GLU
8	G	155	ARG
9	H	21	LYS
9	H	40	ALA
9	H	83	ILE
9	H	91	ARG
9	H	97	VAL
9	H	105	ARG
10	I	7	THR
10	I	12	GLU
10	I	38	GLN
10	I	42	ARG
10	I	43	ALA
10	I	54	ASP
10	I	55	ALA
10	I	115	GLY
10	I	121	ARG
11	J	20	ALA

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
11	J	30	SER
11	J	39	PRO
11	J	50	ILE
11	J	58	ASP
11	J	59	SER
11	J	61	GLU
11	J	65	LEU
11	J	72	VAL
11	J	78	ASN
11	J	79	ARG
11	J	86	MET
11	J	90	LEU
12	K	35	PRO
12	K	36	ASP
12	K	101	SER
12	K	127	LYS
13	L	27	LEU
13	L	28	LYS
13	L	41	ARG
13	L	47	LYS
13	L	48	PRO
13	L	79	GLU
13	L	87	GLY
13	L	108	ALA
13	L	109	GLY
13	L	113	ARG
13	L	120	TYR
14	M	18	ALA
14	M	19	LEU
14	M	63	THR
14	M	67	GLU
14	M	82	MET
14	M	83	ASP
14	M	84	ILE
14	M	118	ALA
15	N	14	PRO
15	N	15	LYS
15	N	22	THR
15	N	33	VAL
15	N	42	ILE
15	N	44	LEU
15	N	47	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
15	N	59	ALA
16	O	51	HIS
17	P	16	HIS
17	P	21	VAL
17	P	81	ARG
18	Q	14	LYS
18	Q	69	LYS
18	Q	78	GLU
18	Q	81	ARG
18	Q	96	GLN
18	Q	103	GLY
19	R	22	VAL
19	R	23	LYS
20	S	78	ARG
21	T	50	GLU
21	T	70	SER
21	T	79	ARG
21	T	87	LYS
21	T	94	ALA
3	B	15	VAL
3	B	18	GLY
3	B	22	LYS
3	B	24	TRP
3	B	37	ASN
3	B	135	GLN
3	B	150	SER
3	B	165	VAL
3	B	174	VAL
3	B	238	LEU
4	C	13	GLY
4	C	30	ARG
4	C	31	HIS
4	C	48	TYR
4	C	50	ALA
4	C	128	PHE
4	C	168	ALA
4	C	206	GLU
5	D	4	TYR
5	D	9	CYS
5	D	23	GLY
5	D	35	ARG
5	D	41	GLY

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
5	D	53	ASP
5	D	58	LEU
5	D	88	VAL
5	D	110	PHE
5	D	124	GLY
6	E	16	THR
6	E	21	ALA
6	E	107	ARG
6	E	109	ILE
6	E	125	SER
7	F	12	PRO
7	F	70	ASP
7	F	86	ARG
8	G	7	ALA
8	G	22	LEU
8	G	23	VAL
8	G	74	GLU
8	G	82	GLY
8	G	93	PRO
8	G	103	TRP
8	G	105	VAL
8	G	112	PRO
8	G	120	ILE
8	G	125	MET
8	G	127	ALA
9	H	22	GLU
9	H	81	HIS
10	I	5	TYR
10	I	29	ASN
10	I	34	ASN
10	I	81	ILE
10	I	116	LYS
10	I	119	ALA
11	J	24	VAL
11	J	56	HIS
11	J	57	LYS
12	K	50	TYR
12	K	55	LYS
12	K	106	LYS
13	L	51	ALA
13	L	73	GLU
13	L	91	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
13	L	92	ASP
13	L	103	GLY
13	L	121	GLY
13	L	125	PRO
14	M	4	ILE
14	M	47	ASP
14	M	114	ARG
15	N	17	LYS
15	N	29	ARG
15	N	30	ALA
15	N	38	GLY
15	N	39	LEU
15	N	43	CYS
15	N	48	ALA
15	N	58	LYS
16	O	16	ALA
16	O	55	GLY
16	O	59	MET
16	O	72	ARG
16	O	85	LEU
17	P	11	SER
17	P	52	ASP
18	Q	47	PRO
18	Q	49	GLU
18	Q	80	GLY
18	Q	99	SER
19	R	69	THR
20	S	6	LYS
20	S	30	LEU
20	S	42	PRO
20	S	43	GLU
21	T	33	ILE
21	T	48	LYS
21	T	51	GLU
21	T	56	MET
21	T	61	SER
21	T	71	THR
21	T	86	ARG
22	V	6	ARG
22	V	7	ARG
3	B	16	HIS
3	B	173	ALA

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
4	C	49	SER
4	C	61	ALA
4	C	154	SER
4	C	200	ALA
5	D	29	PRO
5	D	32	ALA
5	D	63	LYS
5	D	163	GLU
5	D	164	ALA
5	D	179	GLU
6	E	38	GLN
6	E	79	GLU
7	F	65	VAL
8	G	12	LEU
8	G	104	LEU
8	G	116	ALA
8	G	117	ALA
8	G	126	ASP
8	G	128	ALA
8	G	149	ARG
9	H	9	MET
9	H	31	PHE
9	H	41	ARG
9	H	74	PRO
9	H	75	ARG
9	H	135	CYS
10	I	56	LEU
10	I	78	LYS
10	I	101	PHE
10	I	114	TYR
10	I	127	LYS
11	J	19	SER
11	J	40	LEU
13	L	126	LYS
15	N	10	ALA
15	N	45	ARG
16	O	71	GLN
16	O	83	GLU
17	P	15	PRO
17	P	34	GLU
17	P	51	VAL
17	P	82	GLN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
18	Q	64	PRO
18	Q	91	ARG
19	R	31	LEU
19	R	76	LEU
20	S	73	GLU
21	T	34	LYS
21	T	74	LYS
21	T	77	ALA
21	T	80	ARG
22	V	3	LYS
22	V	23	PRO
3	B	132	LYS
3	B	169	LYS
4	C	10	PHE
4	C	43	LEU
4	C	62	ASP
4	C	81	GLY
4	C	108	ASN
4	C	181	ASN
5	D	113	SER
5	D	120	LEU
5	D	166	LYS
6	E	20	GLN
6	E	36	ASP
6	E	84	PHE
6	E	126	ARG
6	E	137	GLU
8	G	58	PRO
8	G	64	GLN
8	G	71	PRO
8	G	113	GLU
9	H	104	ARG
10	I	73	GLN
11	J	73	ASP
12	K	27	ASN
12	K	54	ARG
12	K	62	GLN
12	K	100	ALA
12	K	117	ASN
14	M	12	ASN
14	M	41	PRO
14	M	49	THR

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
15	N	9	LYS
15	N	34	TYR
15	N	49	HIS
15	N	51	GLY
16	O	33	THR
16	O	84	LYS
17	P	64	ALA
17	P	77	ALA
18	Q	30	PRO
18	Q	34	LYS
18	Q	53	LEU
19	R	41	LYS
19	R	77	GLY
20	S	60	VAL
21	T	9	ASN
21	T	15	ARG
21	T	59	ALA
21	T	90	GLN
21	T	97	ALA
22	V	8	THR
3	B	11	LEU
3	B	75	LYS
3	B	144	ARG
3	B	154	LEU
3	B	170	GLU
3	B	194	PRO
3	B	209	ARG
3	B	212	GLN
4	C	160	ALA
4	C	192	THR
5	D	65	ARG
5	D	151	LYS
5	D	178	VAL
7	F	11	ASN
8	G	39	ALA
8	G	80	VAL
8	G	129	GLU
10	I	31	GLN
10	I	32	ASP
10	I	51	ARG
10	I	74	ILE
10	I	95	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
14	M	5	ALA
14	M	17	VAL
15	N	23	ARG
15	N	32	SER
16	O	38	ARG
16	O	88	ARG
17	P	43	LYS
17	P	62	VAL
4	C	27	LYS
4	C	139	GLN
4	C	174	PRO
5	D	7	PRO
5	D	38	TYR
5	D	180	GLY
6	E	65	ASN
8	G	18	TYR
8	G	21	VAL
12	K	45	GLY
14	M	14	ARG
15	N	18	VAL
17	P	4	ILE
17	P	41	PRO
19	R	36	ASN
19	R	68	LYS
19	R	70	ILE
4	C	151	VAL
5	D	196	LEU
10	I	41	VAL
16	O	3	ILE
17	P	36	ILE
4	C	84	ILE
5	D	5	ILE
6	E	51	VAL
7	F	26	ILE
10	I	98	PRO
16	O	75	PRO
5	D	28	SER
8	G	118	VAL
9	H	89	PRO
17	P	20	VAL
20	S	9	VAL
12	K	47	VAL

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Mol	Chain	Res	Type
20	S	46	GLY
3	B	26	PRO
6	E	131	ILE
9	H	19	VAL
19	R	37	VAL

### 5.3.2 Protein sidechains [i](#)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
3	B	202/220 (92%)	156 (77%)	46 (23%)	1 6
4	C	160/188 (85%)	140 (88%)	20 (12%)	4 24
5	D	180/180 (100%)	150 (83%)	30 (17%)	2 15
6	E	115/122 (94%)	90 (78%)	25 (22%)	1 7
7	F	90/90 (100%)	81 (90%)	9 (10%)	7 32
8	G	126/126 (100%)	111 (88%)	15 (12%)	5 26
9	H	119/119 (100%)	102 (86%)	17 (14%)	3 20
10	I	98/99 (99%)	79 (81%)	19 (19%)	1 9
11	J	87/91 (96%)	70 (80%)	17 (20%)	1 9
12	K	90/99 (91%)	76 (84%)	14 (16%)	2 17
13	L	104/111 (94%)	94 (90%)	10 (10%)	8 34
14	M	94/101 (93%)	85 (90%)	9 (10%)	8 34
15	N	49/49 (100%)	35 (71%)	14 (29%)	0 2
16	O	79/79 (100%)	68 (86%)	11 (14%)	3 21
17	P	72/74 (97%)	59 (82%)	13 (18%)	1 12
18	Q	96/96 (100%)	83 (86%)	13 (14%)	4 22
19	R	64/77 (83%)	59 (92%)	5 (8%)	12 42
20	S	71/79 (90%)	63 (89%)	8 (11%)	6 28
21	T	76/82 (93%)	71 (93%)	5 (7%)	16 48
22	V	19/21 (90%)	17 (90%)	2 (10%)	7 30

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
All	All	1991/2103 (95%)	1689 (85%)	302 (15%)	<b>3</b> <b>18</b>

All (302) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
3	B	10	LEU
3	B	12	GLU
3	B	15	VAL
3	B	17	PHE
3	B	23	ARG
3	B	24	TRP
3	B	25	ASN
3	B	44	LEU
3	B	52	GLU
3	B	55	PHE
3	B	63	MET
3	B	69	LEU
3	B	79	ASP
3	B	87	ARG
3	B	92	TYR
3	B	93	VAL
3	B	96	ARG
3	B	97	TRP
3	B	98	LEU
3	B	101	MET
3	B	102	LEU
3	B	104	ASN
3	B	107	THR
3	B	111	ARG
3	B	114	ARG
3	B	130	ARG
3	B	134	GLU
3	B	137	ARG
3	B	148	TYR
3	B	157	ARG
3	B	165	VAL
3	B	175	ARG
3	B	178	ARG
3	B	181	PHE
3	B	185	ILE
3	B	187	LEU
3	B	189	ASP

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
3	B	190	THR
3	B	195	ASP
3	B	196	LEU
3	B	197	VAL
3	B	205	ASP
3	B	206	ASP
3	B	215	LEU
3	B	224	GLN
3	B	231	GLU
4	C	3	ASN
4	C	16	ARG
4	C	26	LYS
4	C	29	TYR
4	C	31	HIS
4	C	48	TYR
4	C	52	LEU
4	C	54	ARG
4	C	85	ARG
4	C	88	ARG
4	C	91	LEU
4	C	94	LEU
4	C	98	ASN
4	C	162	GLN
4	C	167	TRP
4	C	172	ARG
4	C	175	LEU
4	C	176	HIS
4	C	177	THR
4	C	183	ASP
5	D	3	ARG
5	D	9	CYS
5	D	10	ARG
5	D	24	GLU
5	D	25	ARG
5	D	26	CYS
5	D	29	PRO
5	D	31	CYS
5	D	34	GLU
5	D	35	ARG
5	D	36	ARG
5	D	43	HIS
5	D	50	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
5	D	58	LEU
5	D	61	LYS
5	D	75	PHE
5	D	78	LEU
5	D	79	PHE
5	D	94	LEU
5	D	102	ASP
5	D	110	PHE
5	D	119	GLN
5	D	120	LEU
5	D	122	ARG
5	D	141	ARG
5	D	151	LYS
5	D	154	ASN
5	D	156	GLU
5	D	178	VAL
5	D	190	ASP
6	E	6	PHE
6	E	8	GLU
6	E	11	ILE
6	E	12	LEU
6	E	14	ARG
6	E	15	ARG
6	E	26	PHE
6	E	31	LEU
6	E	34	VAL
6	E	41	VAL
6	E	43	LEU
6	E	45	PHE
6	E	51	VAL
6	E	53	LEU
6	E	73	ASN
6	E	76	ILE
6	E	79	GLU
6	E	80	ILE
6	E	81	GLU
6	E	100	VAL
6	E	112	LEU
6	E	131	ILE
6	E	147	ASP
6	E	150	ARG
6	E	151	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
7	F	10	LEU
7	F	27	GLN
7	F	30	LEU
7	F	32	ASN
7	F	63	TYR
7	F	82	ARG
7	F	91	VAL
7	F	92	LYS
7	F	98	LEU
8	G	8	GLU
8	G	12	LEU
8	G	24	THR
8	G	37	ASN
8	G	38	LEU
8	G	52	GLU
8	G	56	GLN
8	G	63	LYS
8	G	64	GLN
8	G	72	ARG
8	G	94	ARG
8	G	103	TRP
8	G	120	ILE
8	G	136	LYS
8	G	155	ARG
9	H	3	THR
9	H	9	MET
9	H	11	THR
9	H	22	GLU
9	H	25	ASP
9	H	31	PHE
9	H	35	ILE
9	H	83	ILE
9	H	84	ARG
9	H	86	ILE
9	H	92	ARG
9	H	94	TYR
9	H	112	LEU
9	H	119	LEU
9	H	120	THR
9	H	127	LEU
9	H	129	VAL
10	I	3	GLN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
10	I	5	TYR
10	I	10	ARG
10	I	12	GLU
10	I	16	ARG
10	I	25	LYS
10	I	34	ASN
10	I	91	ASP
10	I	92	TYR
10	I	93	ARG
10	I	102	LEU
10	I	104	ARG
10	I	109	VAL
10	I	110	GLU
10	I	114	TYR
10	I	117	HIS
10	I	118	LYS
10	I	121	ARG
10	I	127	LYS
11	J	3	LYS
11	J	6	ILE
11	J	8	LEU
11	J	14	LYS
11	J	16	LEU
11	J	38	ILE
11	J	47	PHE
11	J	48	THR
11	J	49	VAL
11	J	50	ILE
11	J	54	PHE
11	J	58	ASP
11	J	70	ARG
11	J	73	ASP
11	J	86	MET
11	J	88	LEU
11	J	91	PRO
12	K	18	ARG
12	K	29	ILE
12	K	33	THR
12	K	54	ARG
12	K	66	LEU
12	K	67	ASP
12	K	77	MET

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
12	K	81	ASP
12	K	91	ARG
12	K	93	GLN
12	K	105	VAL
12	K	120	ARG
12	K	126	ARG
12	K	127	LYS
13	L	12	ARG
13	L	33	ARG
13	L	65	GLU
13	L	67	THR
13	L	83	VAL
13	L	99	HIS
13	L	110	VAL
13	L	113	ARG
13	L	115	LYS
13	L	126	LYS
14	M	14	ARG
14	M	35	GLU
14	M	40	ASN
14	M	44	ARG
14	M	46	LYS
14	M	62	ASN
14	M	66	LEU
14	M	81	LEU
14	M	83	ASP
15	N	6	LEU
15	N	8	GLU
15	N	9	LYS
15	N	17	LYS
15	N	21	TYR
15	N	27	CYS
15	N	31	ARG
15	N	39	LEU
15	N	40	CYS
15	N	41	ARG
15	N	46	GLU
15	N	53	LEU
15	N	56	VAL
15	N	57	ARG
16	O	22	THR
16	O	32	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
16	O	33	THR
16	O	46	HIS
16	O	48	LYS
16	O	70	LEU
16	O	71	GLN
16	O	76	GLU
16	O	83	GLU
16	O	85	LEU
16	O	88	ARG
17	P	17	TYR
17	P	22	THR
17	P	27	LYS
17	P	28	ARG
17	P	43	LYS
17	P	48	TRP
17	P	49	LEU
17	P	54	GLU
17	P	59	TRP
17	P	61	SER
17	P	62	VAL
17	P	74	LEU
17	P	81	ARG
18	Q	19	VAL
18	Q	34	LYS
18	Q	35	VAL
18	Q	36	ILE
18	Q	38	ARG
18	Q	60	ILE
18	Q	68	ARG
18	Q	76	LEU
18	Q	77	VAL
18	Q	92	ARG
18	Q	93	GLN
18	Q	94	ASN
18	Q	101	ARG
19	R	21	LYS
19	R	26	LEU
19	R	34	TYR
19	R	36	ASN
19	R	53	ARG
20	S	12	ASP
20	S	15	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
20	S	25	LYS
20	S	32	LYS
20	S	53	ASN
20	S	58	VAL
20	S	61	TYR
20	S	78	ARG
21	T	10	LEU
21	T	42	GLN
21	T	43	LEU
21	T	91	LEU
21	T	105	SER
22	V	8	THR
22	V	23	PRO

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (65) such sidechains are listed below:

<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
3	B	25	ASN
3	B	78	GLN
3	B	104	ASN
3	B	146	GLN
3	B	212	GLN
4	C	3	ASN
4	C	6	HIS
4	C	28	GLN
4	C	63	ASN
4	C	98	ASN
4	C	118	GLN
4	C	123	GLN
4	C	139	GLN
4	C	162	GLN
5	D	43	HIS
5	D	45	GLN
5	D	62	GLN
5	D	77	ASN
5	D	116	GLN
5	D	119	GLN
5	D	154	ASN
5	D	161	ASN
5	D	201	GLN
6	E	73	ASN
6	E	78	HIS

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Mol	Chain	Res	Type
7	F	18	GLN
7	F	27	GLN
7	F	32	ASN
7	F	57	GLN
7	F	94	GLN
8	G	37	ASN
8	G	56	GLN
8	G	68	ASN
8	G	86	GLN
8	G	96	GLN
8	G	106	GLN
8	G	122	HIS
8	G	148	ASN
9	H	70	GLN
9	H	82	HIS
10	I	34	ASN
10	I	73	GLN
10	I	89	ASN
10	I	124	GLN
11	J	84	GLN
12	K	26	ASN
12	K	93	GLN
12	K	99	GLN
12	K	117	ASN
13	L	75	HIS
13	L	78	GLN
14	M	12	ASN
14	M	40	ASN
14	M	62	ASN
16	O	13	GLN
16	O	37	ASN
17	P	65	GLN
17	P	82	GLN
18	Q	16	GLN
18	Q	94	ASN
19	R	36	ASN
20	S	47	HIS
20	S	53	ASN
21	T	42	GLN
21	T	73	HIS

### 5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A	1511/1522 (99%)	234 (15%)	51 (3%)
2	Z	3/6 (50%)	0	0
All	All	1514/1528 (99%)	234 (15%)	51 (3%)

All (234) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	A	8	A
1	A	9	G
1	A	31	G
1	A	32	A
1	A	39	G
1	A	47	C
1	A	48	C
1	A	49	U
1	A	51	A
1	A	52	G
1	A	54	C
1	A	61	G
1	A	63	C
1	A	65	U
1	A	79	G
1	A	81	U
1	A	82	U
1	A	83	U
1	A	88	A
1	A	89	C
1	A	90	U
1	A	116	A
1	A	120	A
1	A	121	C
1	A	122	G
1	A	130	A
1	A	131	C
1	A	151	A
1	A	163	C
1	A	182	U
1	A	190(E)	U
1	A	190(F)	G
1	A	195	A
1	A	197	A
1	A	204	U
1	A	216	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	231	G
1	A	244	U
1	A	245	C
1	A	247	G
1	A	251	G
1	A	252	U
1	A	266	G
1	A	267	C
1	A	280	C
1	A	289	G
1	A	328	C
1	A	329	A
1	A	330	C
1	A	331	G
1	A	332	G
1	A	345	C
1	A	352	C
1	A	353	A
1	A	354	G
1	A	367	U
1	A	372	C
1	A	384	G
1	A	397	A
1	A	412	A
1	A	413	G
1	A	421	U
1	A	422	C
1	A	429	U
1	A	439	A
1	A	452	A
1	A	460	A
1	A	485	G
1	A	497	A
1	A	498	U
1	A	500	G
1	A	517	G
1	A	518	C
1	A	519	C
1	A	524	G
1	A	527	G
1	A	531	U
1	A	533	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	534	U
1	A	547	A
1	A	559	A
1	A	560	U
1	A	561	U
1	A	567	G
1	A	572	A
1	A	573	A
1	A	575	G
1	A	576	G
1	A	577	G
1	A	596	C
1	A	598	U
1	A	653	A
1	A	665	A
1	A	686	U
1	A	687	A
1	A	688	G
1	A	703	G
1	A	718	G
1	A	722	A
1	A	723	U
1	A	724	G
1	A	731	G
1	A	733	A
1	A	749	C
1	A	755	G
1	A	777	A
1	A	781	A
1	A	782	A
1	A	787	A
1	A	792	A
1	A	793	U
1	A	794	A
1	A	815	A
1	A	817	C
1	A	819	A
1	A	828	A
1	A	839	U
1	A	840	C
1	A	841	U
1	A	848	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	867	G
1	A	873	A
1	A	885	G
1	A	902	G
1	A	913	A
1	A	914	A
1	A	926	G
1	A	927	G
1	A	934	C
1	A	935	A
1	A	945	G
1	A	960	U
1	A	961	U
1	A	966	G
1	A	969	A
1	A	974	A
1	A	975	A
1	A	977	A
1	A	984	C
1	A	989	C
1	A	992	U
1	A	993	G
1	A	994	A
1	A	1002	G
1	A	1005	A
1	A	1024	G
1	A	1026	G
1	A	1042	G
1	A	1045	C
1	A	1048	G
1	A	1050	G
1	A	1053	G
1	A	1054	C
1	A	1064	G
1	A	1065	U
1	A	1066	C
1	A	1068	G
1	A	1070	U
1	A	1085	U
1	A	1086	U
1	A	1094	G
1	A	1095	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	1101	A
1	A	1102	A
1	A	1117	G
1	A	1125	U
1	A	1127	G
1	A	1129	C
1	A	1130	A
1	A	1131	G
1	A	1136	U
1	A	1137	C
1	A	1138	G
1	A	1139	G
1	A	1142	G
1	A	1146	A
1	A	1148	U
1	A	1152	A
1	A	1159	U
1	A	1166	G
1	A	1183	A
1	A	1184	G
1	A	1196	U
1	A	1197	G
1	A	1200	C
1	A	1201	A
1	A	1202	G
1	A	1207	G
1	A	1211	U
1	A	1212	U
1	A	1214	C
1	A	1225	A
1	A	1226	C
1	A	1236	A
1	A	1238	A
1	A	1250	A
1	A	1253	G
1	A	1256	A
1	A	1258	G
1	A	1280	A
1	A	1281	U
1	A	1282	C
1	A	1286	A
1	A	1287	A

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Mol	Chain	Res	Type
1	A	1300	G
1	A	1316	G
1	A	1320	C
1	A	1331	G
1	A	1336	C
1	A	1338	G
1	A	1347	G
1	A	1348	U
1	A	1359	C
1	A	1362	C
1	A	1363	A
1	A	1365	G
1	A	1370	G
1	A	1395	C
1	A	1398	A
1	A	1442	G
1	A	1446	A
1	A	1452	C
1	A	1493	A
1	A	1499	A
1	A	1502	A
1	A	1503	A
1	A	1504	G
1	A	1505	G
1	A	1506	U
1	A	1517	G
1	A	1520	G
1	A	1529	G
1	A	1530	G
1	A	1532	U

All (51) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	A	7	G
1	A	51	A
1	A	60	A
1	A	64	G
1	A	89	C
1	A	115	G
1	A	119	A
1	A	129(A)	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	243	A
1	A	250	A
1	A	251	G
1	A	266	G
1	A	279	A
1	A	328	C
1	A	344	A
1	A	351	G
1	A	366	C
1	A	484	G
1	A	496	A
1	A	518	C
1	A	533	A
1	A	559	A
1	A	560	U
1	A	575	G
1	A	687	A
1	A	748	C
1	A	792	A
1	A	872	A
1	A	960	U
1	A	976	G
1	A	992	U
1	A	993	G
1	A	1049	U
1	A	1065	U
1	A	1067	A
1	A	1085	U
1	A	1101	A
1	A	1145	C
1	A	1182	G
1	A	1183	A
1	A	1196	U
1	A	1201	A
1	A	1224	G
1	A	1257	U
1	A	1281	U
1	A	1346	A
1	A	1347	G
1	A	1364	U
1	A	1451	A
1	A	1498	U

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Mol	Chain	Res	Type
1	A	1528	U

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

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

#### 5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

#### 5.6 Ligand geometry [i](#)

Of 2 ligands modelled in this entry, 2 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

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

There are no such residues in this entry.

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

There are no chain breaks in this entry.

## 6 Fit of model and data [i](#)

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

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
1	A	1511/1522 (99%)	1.96	572 (37%) 0 0	15, 88, 187, 199	0
2	Z	4/6 (66%)	1.03	0 100 100	168, 184, 185, 199	0
3	B	234/256 (91%)	0.02	5 (2%) 63 55	23, 99, 178, 199	0
4	C	206/239 (86%)	0.91	35 (16%) 1 1	46, 134, 198, 199	0
5	D	208/208 (100%)	0.21	9 (4%) 35 30	14, 86, 165, 189	0
6	E	150/161 (93%)	0.12	4 (2%) 54 45	6, 56, 120, 160	0
7	F	101/101 (100%)	0.53	10 (9%) 7 6	44, 111, 171, 185	0
8	G	155/155 (100%)	0.15	7 (4%) 33 28	43, 141, 195, 199	0
9	H	138/138 (100%)	0.06	2 (1%) 75 68	3, 46, 115, 127	0
10	I	127/128 (99%)	0.92	28 (22%) 0 1	40, 146, 195, 199	0
11	J	98/104 (94%)	1.78	41 (41%) 0 0	63, 154, 199, 199	0
12	K	119/129 (92%)	0.38	11 (9%) 9 7	16, 93, 164, 199	0
13	L	124/135 (91%)	0.35	10 (8%) 12 10	19, 96, 159, 196	0
14	M	118/126 (93%)	0.59	16 (13%) 3 3	61, 125, 173, 199	0
15	N	60/60 (100%)	2.04	25 (41%) 0 0	42, 134, 185, 199	0
16	O	88/88 (100%)	0.17	6 (6%) 17 13	25, 70, 145, 189	0
17	P	83/88 (94%)	0.20	1 (1%) 79 72	12, 69, 141, 188	0
18	Q	104/104 (100%)	0.28	9 (8%) 10 8	2, 69, 140, 199	0
19	R	73/88 (82%)	0.33	3 (4%) 37 31	27, 87, 168, 194	0
20	S	80/92 (86%)	1.82	26 (32%) 0 0	55, 152, 198, 199	0
21	T	99/106 (93%)	-0.02	2 (2%) 65 58	24, 82, 169, 199	0
22	V	24/26 (92%)	1.16	5 (20%) 1 1	39, 125, 181, 195	0
All	All	3904/4060 (96%)	1.06	827 (21%) 0 1	2, 98, 186, 199	0

All (827) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	1221	G	10.4
4	C	2	GLY	10.3
1	A	1053	G	9.4
20	S	2	PRO	9.0
5	D	42	GLN	8.5
1	A	985	C	8.2
15	N	2	ALA	8.2
1	A	1144	G	8.1
4	C	43	LEU	8.1
1	A	1540	U	8.1
1	A	1017	G	8.0
1	A	1220	G	7.9
1	A	992	U	7.9
1	A	1319	A	7.8
18	Q	105	ALA	7.8
1	A	1200	C	7.5
1	A	1216	G	7.4
20	S	78	ARG	7.3
15	N	4	LYS	7.2
1	A	1005	A	7.0
1	A	993	G	7.0
1	A	978	A	6.9
1	A	1001	A	6.8
1	A	1016	A	6.8
14	M	104	ARG	6.8
1	A	1283	G	6.7
20	S	77	THR	6.6
1	A	971	G	6.6
1	A	1024	G	6.5
1	A	1255	G	6.5
15	N	52	GLN	6.5
14	M	119	GLY	6.4
1	A	1219	U	6.4
1	A	1128	C	6.4
1	A	1022	G	6.4
20	S	53	ASN	6.3
1	A	1314	C	6.3
1	A	1139	G	6.3
10	I	65	VAL	6.2
1	A	988	G	6.2
15	N	61	TRP	6.2
1	A	1013	G	6.2
18	Q	102	GLY	6.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	A	1222	G	6.1
1	A	1361(A)	C	6.1
1	A	989	C	6.1
1	A	1135	U	6.0
1	A	1143	G	6.0
20	S	79	THR	5.9
1	A	1147	C	5.8
15	N	3	ARG	5.8
4	C	39	ILE	5.8
1	A	1124	G	5.8
9	H	1	MET	5.8
1	A	984	C	5.7
1	A	410	G	5.7
1	A	1047	G	5.7
1	A	1215	G	5.7
1	A	1268	A	5.7
1	A	1023	G	5.7
1	A	1218	C	5.6
15	N	29	ARG	5.5
1	A	1134	G	5.4
11	J	89	ASP	5.4
1	A	160	A	5.3
1	A	1277	C	5.2
1	A	1048	G	5.2
1	A	990	C	5.2
1	A	1159	U	5.2
11	J	39	PRO	5.2
1	A	1318	A	5.2
1	A	529	G	5.1
1	A	1361	G	5.1
1	A	1223	C	5.1
8	G	2	ALA	5.1
1	A	1226	C	5.1
1	A	548	G	5.0
10	I	9	ARG	5.0
11	J	31	GLY	5.0
1	A	1027	C	5.0
4	C	196	LEU	5.0
1	A	1267	C	5.0
1	A	1354	C	5.0
1	A	691	G	5.0
1	A	428	G	5.0

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	A	1434	A	4.9
14	M	24	GLY	4.9
1	A	1046	A	4.9
1	A	1279	A	4.9
1	A	1056	U	4.9
4	C	42	LEU	4.8
1	A	1375	A	4.8
1	A	1004	A	4.8
1	A	1018	C	4.8
1	A	1123	A	4.8
15	N	22	THR	4.7
15	N	21	TYR	4.7
1	A	1014	A	4.7
15	N	20	ALA	4.7
1	A	979	C	4.7
1	A	1033	G	4.7
10	I	67	GLY	4.6
1	A	976	G	4.6
1	A	1274	G	4.6
1	A	1435	G	4.6
15	N	31	ARG	4.6
20	S	34	TRP	4.6
1	A	429	U	4.6
16	O	51	HIS	4.6
1	A	406	G	4.6
1	A	1002	G	4.6
1	A	816	A	4.5
1	A	1504	G	4.5
11	J	92	THR	4.5
5	D	30	LYS	4.5
1	A	1211	U	4.5
1	A	1370	G	4.5
1	A	1049	U	4.5
10	I	92	TYR	4.5
11	J	70	ARG	4.5
4	C	195	VAL	4.5
20	S	3	ARG	4.5
13	L	50	SER	4.5
1	A	1259	C	4.5
1	A	500	G	4.5
1	A	496	A	4.5
1	A	1323	G	4.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	A	1334	G	4.4
1	A	1214	C	4.4
1	A	994	A	4.4
1	A	1052	U	4.4
20	S	47	HIS	4.4
1	A	991	U	4.4
15	N	23	ARG	4.4
1	A	1138	G	4.4
1	A	1006	C	4.3
1	A	1502	A	4.3
11	J	69	ASN	4.3
1	A	1129	C	4.3
1	A	388	G	4.3
1	A	1025	U	4.3
10	I	128	ARG	4.3
22	V	25	LYS	4.3
1	A	836	G	4.3
18	Q	101	ARG	4.3
1	A	1034	G	4.3
1	A	970	C	4.3
1	A	195	A	4.2
10	I	17	VAL	4.2
1	A	1539	C	4.2
1	A	1050	G	4.2
1	A	1030	C	4.2
1	A	1282	C	4.2
1	A	1117	G	4.2
1	A	1467	G	4.2
1	A	533	A	4.2
1	A	343	U	4.2
15	N	60	SER	4.1
1	A	1011	G	4.1
11	J	28	ARG	4.1
10	I	4	TYR	4.1
14	M	118	ALA	4.1
1	A	1019	C	4.1
1	A	1210	C	4.1
1	A	1201	A	4.0
1	A	1287	A	4.0
1	A	1304	G	4.0
1	A	1339	A	4.0
1	A	251	G	4.0

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
15	N	32	SER	4.0
8	G	69	VAL	4.0
15	N	6	LEU	4.0
1	A	697	U	4.0
1	A	1296	C	4.0
1	A	1191	A	4.0
10	I	66	ARG	4.0
1	A	1026	G	4.0
1	A	960	U	4.0
1	A	1127	G	4.0
11	J	38	ILE	4.0
1	A	1468	A	3.9
1	A	266	G	3.9
1	A	1171	G	3.9
10	I	15	ALA	3.9
20	S	27	GLU	3.9
1	A	218	C	3.9
1	A	1043	C	3.9
4	C	189	ALA	3.9
10	I	63	ILE	3.9
1	A	547	A	3.9
20	S	31	ILE	3.9
1	A	1531	A	3.9
1	A	1317	C	3.9
1	A	1503	A	3.9
11	J	54	PHE	3.9
1	A	196	A	3.8
1	A	181	G	3.8
1	A	1003(A)	G	3.8
1	A	758	G	3.8
1	A	1151	A	3.8
4	C	76	VAL	3.8
1	A	701	C	3.8
1	A	1327	C	3.8
1	A	1015	A	3.8
1	A	687	A	3.8
1	A	1303	C	3.8
1	A	171	A	3.8
1	A	1250	A	3.8
1	A	869	G	3.8
1	A	536	C	3.8
1	A	730	G	3.7

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
20	S	28	LYS	3.7
1	A	995	C	3.7
1	A	438	G	3.7
1	A	1010	G	3.7
14	M	105	THR	3.7
1	A	1012	U	3.7
1	A	541	G	3.7
1	A	1031	G	3.7
1	A	777	A	3.7
1	A	1035	A	3.7
1	A	814	A	3.7
22	V	4	GLY	3.7
10	I	16	ARG	3.7
1	A	1359	C	3.7
11	J	4	ILE	3.7
20	S	6	LYS	3.7
1	A	97	G	3.7
1	A	714	G	3.7
14	M	108	ARG	3.7
11	J	30	SER	3.6
1	A	172	A	3.6
1	A	958	A	3.6
1	A	1360	A	3.6
1	A	1084	G	3.6
13	L	118	SER	3.6
1	A	501	C	3.6
21	T	106	ALA	3.6
1	A	425	G	3.6
1	A	1365	G	3.6
1	A	715	A	3.6
4	C	20	SER	3.6
1	A	1181	G	3.6
1	A	1224	G	3.6
22	V	7	ARG	3.6
11	J	53	PRO	3.6
1	A	1213	A	3.6
1	A	161	A	3.5
1	A	426	G	3.5
1	A	781	A	3.5
1	A	1333	A	3.5
4	C	68	VAL	3.5
11	J	74	ILE	3.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
11	J	78	ASN	3.5
14	M	106	ASN	3.5
1	A	1269	A	3.5
1	A	36	C	3.5
1	A	696	A	3.5
4	C	57	ILE	3.5
1	A	1217	C	3.5
1	A	1273	G	3.5
4	C	155	GLY	3.5
1	A	1038	C	3.5
1	A	1289	A	3.5
1	A	1324	A	3.5
1	A	1349	A	3.5
11	J	32	ALA	3.5
1	A	1355	G	3.5
1	A	1371	G	3.5
22	V	24	ARG	3.5
11	J	16	LEU	3.5
1	A	903	G	3.5
1	A	1028	C	3.5
1	A	700	G	3.5
1	A	1042	G	3.5
1	A	706	A	3.5
4	C	21	ARG	3.5
1	A	431	A	3.4
1	A	418	C	3.4
1	A	373	A	3.4
1	A	1157	A	3.4
1	A	934	C	3.4
13	L	51	ALA	3.4
4	C	10	PHE	3.4
1	A	1094	G	3.4
5	D	23	GLY	3.4
1	A	997	U	3.4
1	A	1254	C	3.4
15	N	34	TYR	3.4
1	A	987	G	3.3
1	A	1441	G	3.3
1	A	1315	U	3.3
1	A	379	C	3.3
1	A	1119	C	3.3
1	A	769	G	3.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	A	1003	G	3.3
1	A	1544	U	3.3
10	I	101	PHE	3.3
14	M	107	ALA	3.3
20	S	37	ARG	3.3
11	J	40	LEU	3.3
1	A	961	U	3.3
1	A	254	G	3.3
1	A	1145	C	3.3
4	C	53	ALA	3.3
7	F	10	LEU	3.3
1	A	776	G	3.3
1	A	1338	G	3.3
1	A	964	A	3.3
1	A	1348	U	3.2
1	A	1055	A	3.2
1	A	1067	A	3.2
4	C	58	GLU	3.2
1	A	424	G	3.2
1	A	951	G	3.2
11	J	34	VAL	3.2
1	A	983	A	3.2
1	A	1260	C	3.2
1	A	1501	C	3.2
1	A	704	A	3.2
1	A	1374	A	3.2
12	K	28	THR	3.2
1	A	797	C	3.2
1	A	793	U	3.2
5	D	25	ARG	3.2
1	A	521	G	3.2
1	A	1305	G	3.2
12	K	42	TRP	3.2
1	A	409	G	3.2
1	A	969	A	3.2
1	A	1101	A	3.2
1	A	1176	A	3.2
1	A	1392	G	3.2
20	S	18	LYS	3.2
1	A	482	A	3.2
1	A	1275	A	3.2
1	A	289	G	3.2

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	A	130	A	3.1
15	N	5	ALA	3.1
1	A	800	G	3.1
6	E	19	MET	3.1
1	A	1248	A	3.1
1	A	798	G	3.1
1	A	1021	G	3.1
1	A	1395	C	3.1
20	S	54	GLY	3.1
1	A	868	C	3.1
1	A	1036	G	3.1
3	B	77	ALA	3.1
1	A	5	U	3.1
1	A	1130	A	3.1
1	A	1433	A	3.1
12	K	40	ILE	3.1
1	A	481	G	3.1
1	A	1300	G	3.1
4	C	176	HIS	3.1
1	A	1037	C	3.1
4	C	188	LEU	3.1
1	A	768	A	3.1
1	A	977	A	3.1
4	C	64	VAL	3.1
1	A	67	C	3.1
1	A	1068	G	3.1
1	A	1280	A	3.1
10	I	82	ALA	3.1
1	A	353	A	3.1
1	A	363	A	3.1
1	A	1290	G	3.1
1	A	1483	A	3.1
4	C	193	TYR	3.0
11	J	96	ILE	3.0
14	M	88	ARG	3.0
20	S	60	VAL	3.0
20	S	52	TYR	3.0
11	J	44	VAL	3.0
10	I	96	LEU	3.0
1	A	151	A	3.0
1	A	159	G	3.0
1	A	301	G	3.0

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	A	752	G	3.0
1	A	526	C	3.0
13	L	53	ARG	3.0
1	A	1270	C	3.0
1	A	1373	G	3.0
18	Q	104	LYS	3.0
1	A	726	C	3.0
1	A	190(K)	G	3.0
1	A	1417	G	3.0
1	A	152	A	3.0
1	A	1418	A	3.0
4	C	47	LEU	3.0
4	C	22	TRP	3.0
1	A	1344	C	3.0
1	A	35	G	3.0
1	A	1108	G	3.0
1	A	1271	G	3.0
1	A	1356	G	3.0
1	A	1251	A	3.0
10	I	95	LYS	2.9
1	A	959	A	2.9
1	A	811	C	2.9
1	A	935	A	2.9
3	B	72	GLY	2.9
1	A	1044	A	2.9
1	A	1057	G	2.9
11	J	76	ASN	2.9
10	I	64	THR	2.9
1	A	66	G	2.9
1	A	319	G	2.9
1	A	745	C	2.9
1	A	51	A	2.9
10	I	124	GLN	2.9
1	A	872	A	2.9
1	A	1102	A	2.9
1	A	595	G	2.9
1	A	1030(A)	G	2.9
1	A	1523	G	2.9
1	A	47	C	2.9
12	K	56	GLY	2.9
1	A	757	U	2.9
1	A	982	U	2.9

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
15	N	41	ARG	2.9
1	A	837	G	2.9
1	A	1276	G	2.9
1	A	1380	U	2.8
1	A	268	C	2.8
1	A	556	C	2.8
1	A	888	G	2.8
10	I	106	ALA	2.8
1	A	162	A	2.8
1	A	1168	A	2.8
8	G	3	ARG	2.8
4	C	60	ALA	2.8
1	A	1045	C	2.8
22	V	5	ASP	2.8
11	J	55	LYS	2.8
1	A	335	C	2.8
1	A	1132	C	2.8
1	A	1369	C	2.8
4	C	59	ARG	2.8
4	C	100	ALA	2.8
16	O	23	GLY	2.8
1	A	621	A	2.8
1	A	1169	A	2.8
1	A	1180	A	2.8
1	A	450	G	2.8
4	C	99	VAL	2.8
1	A	780	A	2.8
21	T	103	GLY	2.8
1	A	803	G	2.8
7	F	67	MET	2.8
1	A	1480	G	2.8
9	H	2	LEU	2.8
15	N	39	LEU	2.7
1	A	1029	C	2.7
1	A	439	A	2.7
11	J	68	HIS	2.7
1	A	182	U	2.7
1	A	775	G	2.7
4	C	201	TYR	2.7
4	C	33	LEU	2.7
1	A	443	C	2.7
1	A	1322	C	2.7

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	A	975	A	2.7
1	A	37	U	2.7
1	A	1232	U	2.7
1	A	666	G	2.7
1	A	1156	G	2.7
3	B	16	HIS	2.7
11	J	3	LYS	2.7
1	A	369	C	2.7
1	A	1009	G	2.7
1	A	766	A	2.7
20	S	4	SER	2.7
1	A	174	C	2.7
1	A	1249	C	2.7
1	A	909	A	2.7
1	A	1080	A	2.7
11	J	94	VAL	2.7
1	A	804	U	2.7
10	I	29	ASN	2.7
1	A	746	A	2.7
1	A	1405	G	2.7
1	A	892	A	2.7
1	A	540	G	2.7
1	A	668	G	2.7
1	A	1265	G	2.7
15	N	30	ALA	2.7
7	F	7	ASN	2.7
1	A	952	U	2.6
1	A	815	A	2.6
1	A	347	G	2.6
1	A	718	G	2.6
1	A	1266	G	2.6
1	A	879	C	2.6
1	A	1041	A	2.6
1	A	1331	G	2.6
4	C	111	LEU	2.6
7	F	48	LEU	2.6
1	A	770	C	2.6
20	S	62	ILE	2.6
1	A	430	A	2.6
1	A	432	A	2.6
1	A	690	G	2.6
6	E	5	ASP	2.6

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
10	I	33	PHE	2.6
1	A	1320	C	2.6
1	A	1239	A	2.6
1	A	950	U	2.6
1	A	944	G	2.6
1	A	1368	G	2.6
20	S	17	GLU	2.6
1	A	528	C	2.6
1	A	620	C	2.6
1	A	1140	C	2.6
19	R	17	SER	2.6
1	A	228	A	2.6
1	A	509	A	2.6
14	M	65	LYS	2.6
1	A	74	C	2.6
1	A	867	G	2.6
1	A	1131	G	2.6
1	A	414	A	2.6
1	A	1288	A	2.6
1	A	1357	A	2.6
1	A	1363	A	2.6
1	A	692	U	2.6
1	A	723	U	2.6
1	A	1261	A	2.6
1	A	1469	G	2.6
15	N	7	ILE	2.6
20	S	40	ILE	2.6
7	F	12	PRO	2.5
1	A	427	U	2.5
1	A	744	C	2.5
1	A	1118	C	2.5
1	A	1378	C	2.5
1	A	914	A	2.5
1	A	378	G	2.5
1	A	1182	G	2.5
11	J	17	ASP	2.5
20	S	49	ILE	2.5
1	A	273	A	2.5
1	A	572	A	2.5
1	A	1030(B)	C	2.5
1	A	1332	A	2.5
1	A	1362	C	2.5

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Mol	Chain	Res	Type	RSRZ
11	J	24	VAL	2.5
6	E	18	ARG	2.5
1	A	253	U	2.5
1	A	520	A	2.5
1	A	1227	A	2.5
1	A	1430	C	2.5
1	A	1064	G	2.5
5	D	20	TYR	2.5
1	A	315	A	2.5
1	A	483	C	2.5
11	J	33	GLN	2.5
1	A	183	G	2.5
1	A	939	G	2.5
1	A	1511	G	2.5
1	A	267	C	2.5
1	A	300	A	2.5
1	A	398	C	2.5
1	A	695	A	2.5
1	A	1093	A	2.5
1	A	1284	C	2.5
1	A	667	G	2.5
1	A	190(B)	C	2.5
1	A	513	C	2.5
1	A	946	A	2.5
1	A	1113	C	2.5
19	R	48	GLY	2.5
1	A	1133	G	2.5
1	A	1258	G	2.5
1	A	342	C	2.5
1	A	484	G	2.5
1	A	878	G	2.5
10	I	70	LYS	2.5
10	I	7	THR	2.5
12	K	55	LYS	2.5
1	A	874	G	2.4
19	R	29	PHE	2.5
1	A	1256	A	2.4
10	I	111	ARG	2.4
1	A	346	G	2.4
1	A	675	A	2.4
1	A	683	G	2.4
1	A	906	G	2.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	A	1032	G	2.4
1	A	1238	A	2.4
1	A	1524	C	2.4
1	A	1000	U	2.4
10	I	109	VAL	2.4
1	A	1137	C	2.4
4	C	77	ILE	2.4
1	A	861	G	2.4
1	A	1177	G	2.4
1	A	1482	G	2.4
4	C	3	ASN	2.4
1	A	925	G	2.4
1	A	1235	U	2.4
1	A	1396	A	2.4
13	L	33	ARG	2.4
1	A	750	G	2.4
4	C	67	THR	2.4
1	A	365	U	2.4
5	D	26	CYS	2.4
12	K	39	PRO	2.4
1	A	504	C	2.4
11	J	58	ASP	2.4
1	A	115	G	2.4
1	A	760	G	2.4
1	A	1175	G	2.4
1	A	1393	U	2.4
11	J	93	GLY	2.4
1	A	1126	U	2.4
10	I	18	PHE	2.4
7	F	72	VAL	2.4
1	A	913	A	2.4
13	L	116	SER	2.4
1	A	352	C	2.4
11	J	72	VAL	2.3
1	A	255	G	2.3
1	A	391	G	2.3
1	A	1202	G	2.3
11	J	43	ARG	2.3
4	C	51	GLY	2.3
1	A	632	A	2.3
7	F	79	LEU	2.3
1	A	111	G	2.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	A	786	G	2.3
1	A	1416	G	2.3
1	A	1526	G	2.3
12	K	29	ILE	2.3
1	A	996	A	2.3
1	A	65	U	2.3
1	A	1237	C	2.3
1	A	1541	U	2.3
13	L	31	PRO	2.3
12	K	116	HIS	2.3
1	A	1079	G	2.3
1	A	1278	U	2.3
4	C	23	TYR	2.3
11	J	62	HIS	2.3
12	K	19	ALA	2.3
1	A	13	U	2.3
1	A	1236	A	2.3
1	A	18	C	2.3
1	A	1347	G	2.3
1	A	1447	G	2.3
10	I	19	LEU	2.3
1	A	1150	U	2.3
14	M	81	LEU	2.3
18	Q	18	THR	2.3
1	A	1146	A	2.3
1	A	278	G	2.3
1	A	1142	G	2.3
1	A	1401	G	2.3
3	B	73	THR	2.3
1	A	1345	U	2.3
1	A	716	A	2.3
1	A	156	G	2.3
1	A	413	G	2.3
1	A	688	G	2.3
1	A	698	G	2.3
1	A	902	G	2.3
1	A	1178	G	2.3
1	A	180	U	2.3
16	O	22	THR	2.3
1	A	344	A	2.3
1	A	674	G	2.3
11	J	66	ARG	2.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
13	L	49	ASN	2.3
1	A	1301	U	2.3
1	A	60	A	2.3
1	A	219	C	2.3
1	A	290	C	2.3
1	A	511	C	2.3
1	A	108	G	2.2
1	A	898	G	2.2
1	A	947	G	2.2
11	J	91	PRO	2.2
15	N	19	ARG	2.2
20	S	33	THR	2.2
1	A	1285	A	2.2
1	A	1203	C	2.2
11	J	27	ALA	2.2
1	A	170	U	2.2
1	A	515	G	2.2
14	M	116	THR	2.2
11	J	56	HIS	2.2
1	A	1188	A	2.2
1	A	283	C	2.2
1	A	817	C	2.2
1	A	1366	C	2.2
1	A	751	U	2.2
1	A	22	G	2.2
1	A	530	G	2.2
1	A	713	G	2.2
1	A	727	G	2.2
1	A	915	A	2.2
7	F	14	LEU	2.2
1	A	233	C	2.2
1	A	615	C	2.2
7	F	73	ASN	2.2
11	J	63	PHE	2.2
1	A	865	A	2.2
1	A	323	U	2.2
10	I	8	GLY	2.2
1	A	433	C	2.2
1	A	1326	C	2.2
16	O	42	HIS	2.2
7	F	9	VAL	2.2
8	G	70	LYS	2.2

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	A	510	A	2.2
1	A	813	U	2.2
1	A	1358	U	2.2
1	A	417	C	2.2
1	A	1543	C	2.2
3	B	99	GLY	2.2
1	A	517	G	2.2
1	A	527	G	2.2
1	A	703	G	2.2
1	A	965	A	2.2
8	G	73	MET	2.2
1	A	1525	G	2.2
18	Q	16	GLN	2.2
8	G	34	GLY	2.2
1	A	641	U	2.2
20	S	5	LEU	2.2
1	A	938	A	2.2
5	D	36	ARG	2.2
1	A	6	G	2.2
1	A	68	G	2.2
1	A	275	G	2.2
1	A	1160	G	2.2
1	A	336	C	2.2
15	N	58	LYS	2.2
15	N	18	VAL	2.2
1	A	361	G	2.2
1	A	537	G	2.2
1	A	633	G	2.2
1	A	731	G	2.2
1	A	765	G	2.2
1	A	1061	G	2.2
1	A	1321	C	2.2
12	K	36	ASP	2.2
14	M	98	VAL	2.2
5	D	8	VAL	2.1
1	A	272	C	2.1
20	S	10	PHE	2.1
1	A	851	G	2.1
1	A	954	G	2.1
1	A	1291	G	2.1
1	A	986	A	2.1
1	A	955	U	2.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
18	Q	19	VAL	2.1
1	A	119	A	2.1
5	D	2	GLY	2.1
14	M	103	THR	2.1
1	A	948	C	2.1
1	A	570	G	2.1
1	A	581	G	2.1
1	A	628	G	2.1
1	A	885	G	2.1
1	A	1353	G	2.1
16	O	46	HIS	2.1
1	A	63	C	2.1
1	A	1406	U	2.1
1	A	1466	C	2.1
1	A	1522	U	2.1
8	G	88	PRO	2.1
1	A	949	A	2.1
16	O	52	SER	2.1
1	A	123	C	2.1
1	A	656	C	2.1
15	N	25	VAL	2.1
1	A	15	G	2.1
1	A	380	G	2.1
12	K	35	PRO	2.1
14	M	97	PRO	2.1
15	N	45	ARG	2.1
6	E	17	ALA	2.1
1	A	862	C	2.1
1	A	1172	C	2.1
14	M	66	LEU	2.1
1	A	329	A	2.1
1	A	1492	A	2.1
11	J	46	ARG	2.1
11	J	8	LEU	2.1
1	A	576	G	2.1
1	A	823	G	2.1
1	A	1313	U	2.1
1	A	1379	G	2.1
13	L	120	TYR	2.1
1	A	92	C	2.1
11	J	12	ASP	2.1
1	A	252	U	2.1

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Mol	Chain	Res	Type	RSRZ
1	A	916	G	2.0
18	Q	15	MET	2.0
13	L	121	GLY	2.0
1	A	1199	U	2.0
10	I	85	LEU	2.0
1	A	1262	C	2.0
1	A	1367	C	2.0
17	P	83	GLU	2.0
1	A	263	A	2.0
1	A	864	A	2.0
1	A	1460	A	2.0
1	A	1114	C	2.0
1	A	1316	G	2.0
1	A	1442	G	2.0
1	A	1086	U	2.0
4	C	66	VAL	2.0
1	A	282	A	2.0
1	A	889	A	2.0
1	A	264	U	2.0
1	A	783	C	2.0
1	A	972	C	2.0
1	A	1089	G	2.0
1	A	1136	U	2.0
1	A	1474	G	2.0
18	Q	103	GLY	2.0
1	A	374	A	2.0
1	A	901	A	2.0
20	S	14	HIS	2.0

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

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

## 6.3 Carbohydrates [i](#)

There are no monosaccharides in this entry.

## 6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum,

median, 95<sup>th</sup> percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
23	ZN	D	306	1/1	0.88	0.39	78,78,78,78	0
23	ZN	N	307	1/1	0.99	0.11	78,78,78,78	0

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

There are no such residues in this entry.