



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 20, 2026 – 10:26 AM UTC

PDB ID : 1N34 / pdb_00001n34
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

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>.

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

MolProbity : 4-5-2 with Phenix2.0
Xtriage (Phenix) : 2.0
EDS : 3.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4 : 9.0.010 (Gargrove)
Density-Fitness : 1.0.12
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.49

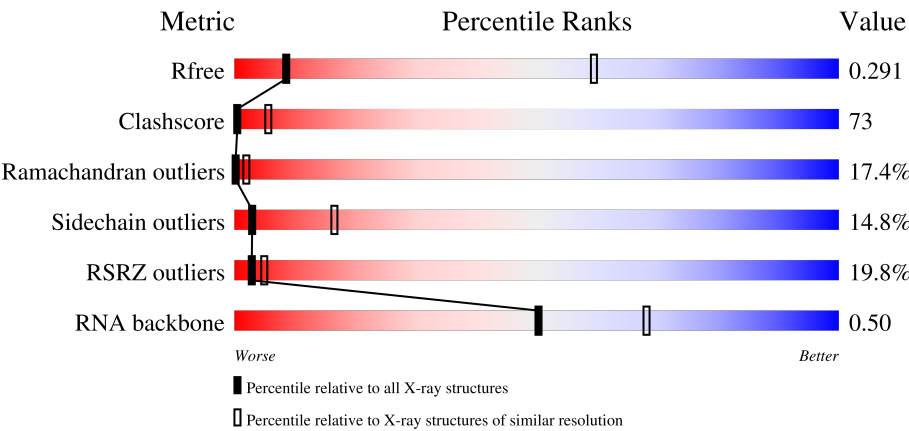
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

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}	180053	1065 (3.96-3.64)
Clashscore	190562	1012 (3.94-3.66)
Ramachandran outliers	187476	1048 (3.96-3.64)
Sidechain outliers	187428	1043 (3.96-3.64)
RSRZ outliers	180081	1064 (3.96-3.64)
RNA backbone	3983	1007 (4.50-3.10)

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 ≥ 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	28% 10% 71% 15% ••
2	Z	6	50% 17% 50% 33%
3	B	256	9% 8% 53% 28% • 9%
4	C	239	12% 9% 49% 26% • 14%

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Mol	Chain	Length	Quality of chain
5	D	208	
6	E	161	
7	F	101	
8	G	155	
9	H	138	
10	I	128	
11	J	104	
12	K	129	
13	L	135	
14	M	126	
15	N	60	
16	O	88	
17	P	88	
18	Q	104	
19	R	88	
20	S	92	
21	T	106	
22	V	26	

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
1	A	1513	Total	C	N	O	P	42	0	0
			32508	14472	6016	10509	1511			

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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
10	I	127	Total	C	N	O	0	0	0
			1011	639	198	174			

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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			

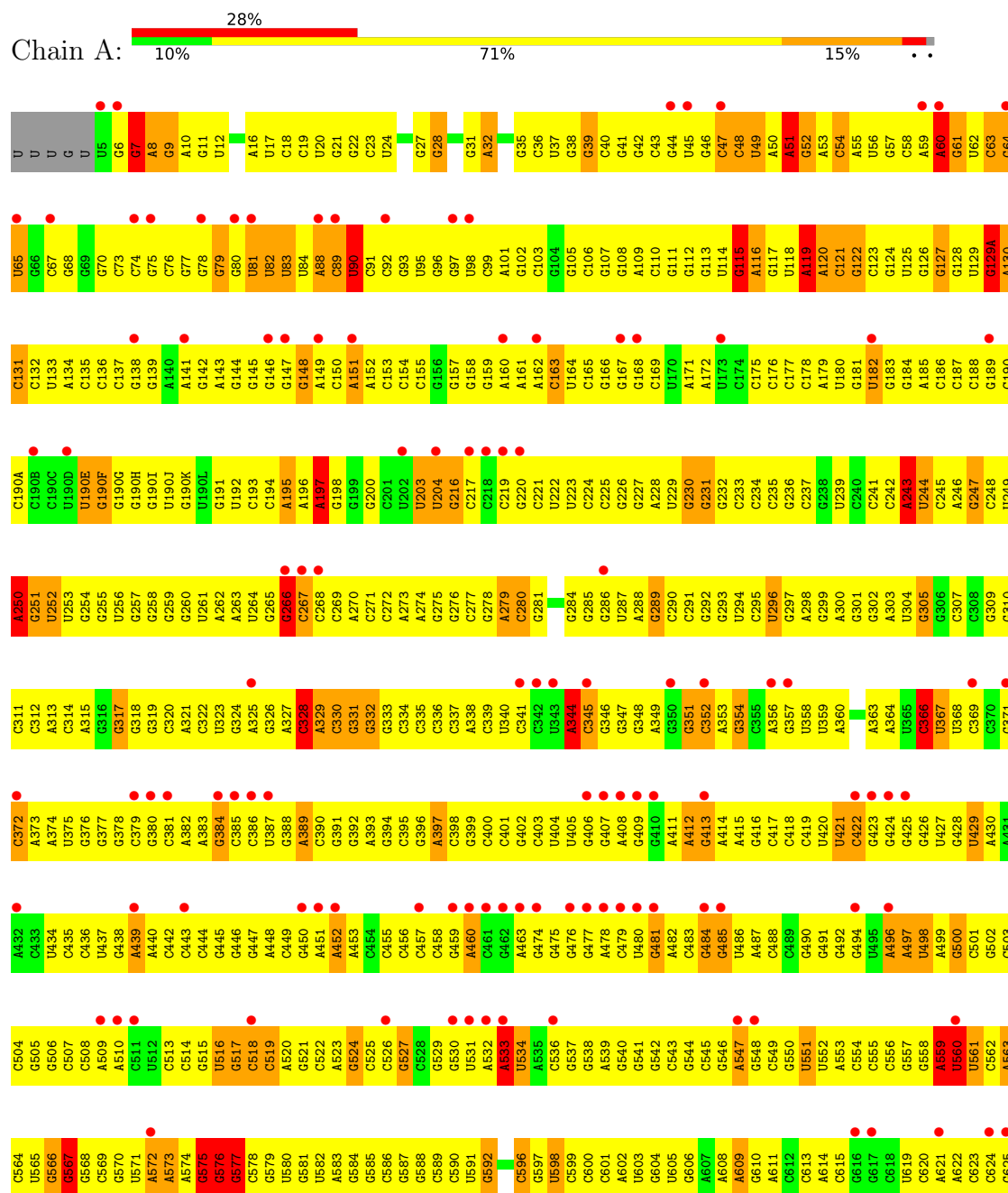
- Molecule 23 is ZINC ION (CCD ID: ZN) (formula: Zn).

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

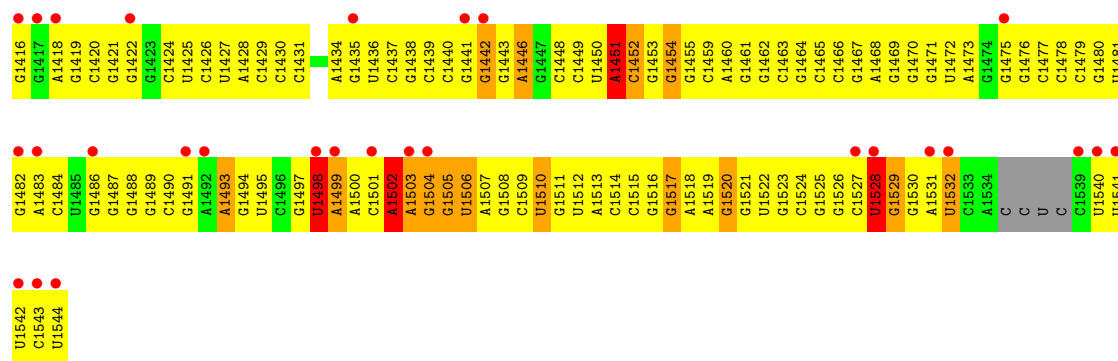
3 Residue-property plots

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

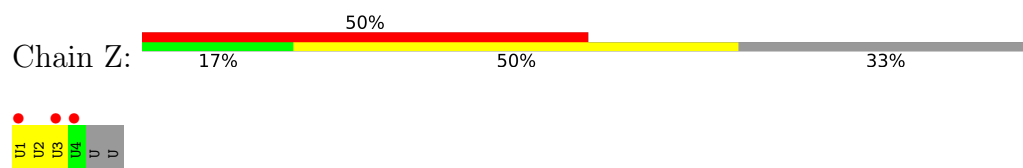
• Molecule 1: 16S RIBOSOMAL RNA



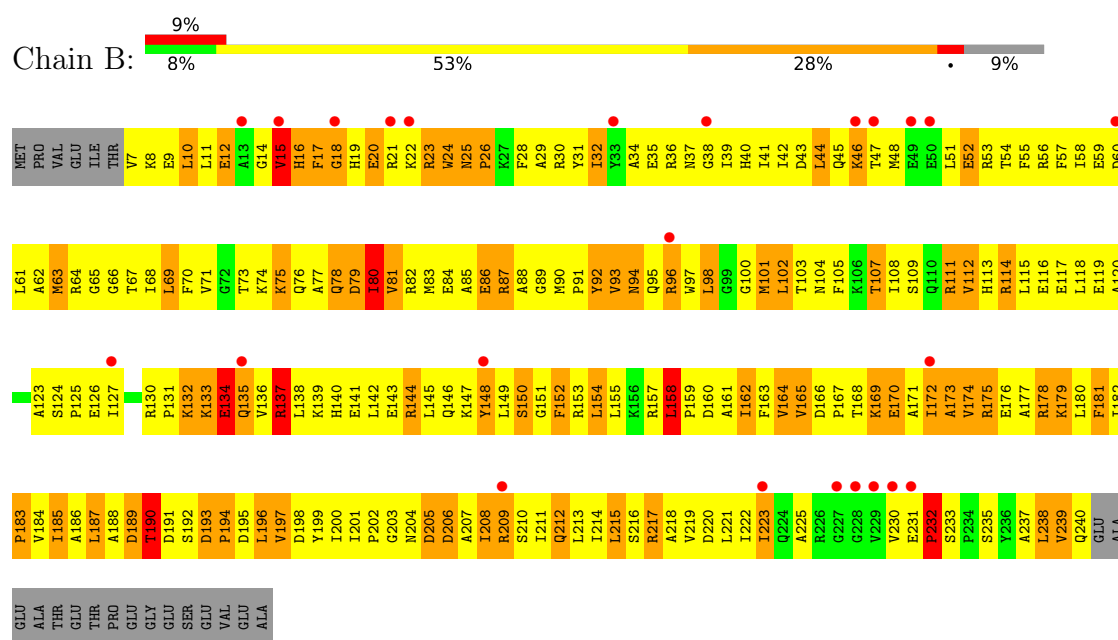
G1356	A1236	C1115	A1055	U1000	G875	A807	A746	U686	U626
A1357	C1237	C1116	U1056	A1001	G876	C808	C747	A687	G627
A1358	A1238	G1117	G1057	G1002	G877	G809	C748	G688	G628
C1359	A1239	C1118	G1058	G1003	G878	C910	C749	C689	G629
A1360	A1240	C1119	C1059	G1003A	G879	G879	G750	G690	G630
G1361	G1241	G1120	C1060	A1004	C880	C911	G751	G691	G631
C1361A	C1242	U1121	G1061	A1005	G881	A814	G752	U692	A632
A1362	C1243	U1122	U1062	C1006	C882	A815	A753	G693	A633
A1363	G1184	A1123	C1063	A1007	C883	A816	C754	A694	C634
U1364	G1185	G1124	G1064	C1008	U884	C817	G755	A695	A635
G1365	G1186	U1125	U1065	G1009	G885	G818	C756	A696	U636
C1366	G1187	G1126	C1066	G1010	G886	A819	G757	U697	G637
C1367	A1188	G1127	A1067	G1011	G887	U820	G758	G698	G638
G1368	C1128	C1128	G1068	U1012	G888	G821	A759	C699	C639
A1369	C1129	C1129	C1069	U1013	A889	C822	G760	G700	A640
G1370	A1130	A1130	U1070	A1014	G890	G823	G761	C701	U641
G1371	C1131	G1131	C1071	A1015	U891	C824	C762	A702	A642
U1372	G1132	C1132	G1072	A1016	A892	G825	G763	G703	C643
G1373	G1133	G1133	U1073	A1017	A893	C826	C764	A704	G644
A1374	G1134	G1134	G1074	C1018	G894	U827	G765	U705	C645
A1375	U1135	U1135	C1075	C1019	G895	A828	A766	A706	U646
U1376	C1136	C1136	C1076	G1021	C896	G829	A767	C707	C647
G1377	G1137	G1137	G1077	U1020	C897	G830	A768	C708	A648
C1378	G1138	G1138	U1078	G1022	G898	U831	G771	G709	G649
A1379	C1139	C1139	G1079	G1023	C899	C832	C772	G710	C650
U1380	C1140	C1140	A1080	G1024	A900	U833	U772	G711	C651
A1381	C1141	C1141	G1081	U1025	A901	U834	G773	A712	U652
C1382	G1142	G1142	G1082	G1026	A902	U835	G774	G713	G653
A1383	G1143	G1143	U1083	C1027	G903	G836	G775	G714	G654
C1384	G1144	G1144	G1084	C1028	G906	G837	G776	A715	G655
G1385	C1145	C1145	U1085	G1029	A906	U838	A777	A716	C656
G1386	A1146	C1146	U1086	C1030	A907	U839	G778	C717	C657
C1387	C1147	C1147	G1087	G1030A	A908	C840	G779	G718	G658
A1388	U1148	U1148	G1088	C1030B	A909	U841	A780	C719	U659
C1389	U1149	U1149	U1089	G1030C	A910	U842	A781	C720	G660
U1390	U1150	U1150	U1090	A1030D	U911	C849	A782	G721	G661
A1391	A1151	A1151	U1091	G1031	C912	U850	C783	A722	G662
G1392	C1152	C1152	A1092	G1032	A913	G851	C784	U723	A663
U1393	G1153	G1153	A1093	G1033	A914	G852	G785	G724	G664
A1394	C1154	C1154	U1094	A1034	A915	G853	G786	C725	A665
C1395	G1155	G1155	C1095	A1035	G916	G854	A787	C726	G666
A1396	C1156	C1156	U1096	G1036	G917	G855	U788	G727	G667
C1397	G1157	G1157	C1097	G1037	A918	U858	U789	A728	G668
A1398	C1158	C1158	U1098	C1038	A919	G859	A790	U729	U669
G1399	U1159	U1159	G1099	C1039	U920	A859	G791	G730	C670
C1400	G1160	G1160	A1101	U1040	U921	A860	A792	C731	U671
A1401	C1161	C1161	U1102	A1041	G922	G861	U793	C732	G672
C1402	C1162	C1162	C1103	G1042	A923	C862	A794	A733	G673
G1403	C1163	C1163	C1104	C1043	C924	U863	C795	G734	G674
A1404	G1164	G1164	G1105	A1044	G925	A864	C796	C735	A675
C1405	C1165	C1165	A1106	C1045	G926	A865	C797	C736	A676
U1406	G1166	G1166	U1107	U1046	G927	C866	G798	C737	U677
C1407	A1167	A1167	C1108	G1047	G928	G867	G799	C738	U678
A1408	C1168	C1168	U1109	U1048	C929	C868	G800	C739	G679
G1409	A1169	A1169	C1110	U1049	A994	U870	G801	U740	C680
C1410	G1171	G1171	A1110	C1050	C932	U871	A802	G741	C681
U1411	C1172	C1172	A1111	G1051	C933	U872	G803	G742	G682
C1412	U1173	U1173	C1112	C1052	A995	A873	U804	U743	G683
A1413	G1174	G1174	C1113	U1053	A996	A874	C805	C744	A684
U1414	C1175	C1175	C1114	C1054	C999	A937	G874	U745	G685



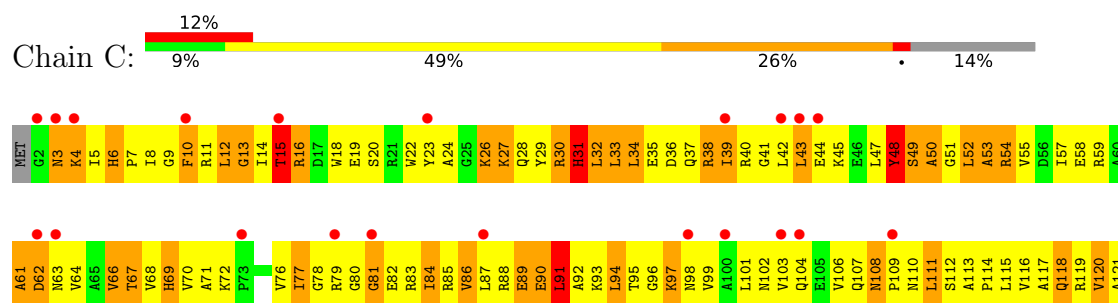
• Molecule 2: A-SITE MESSENGER RNA FRAGMENT

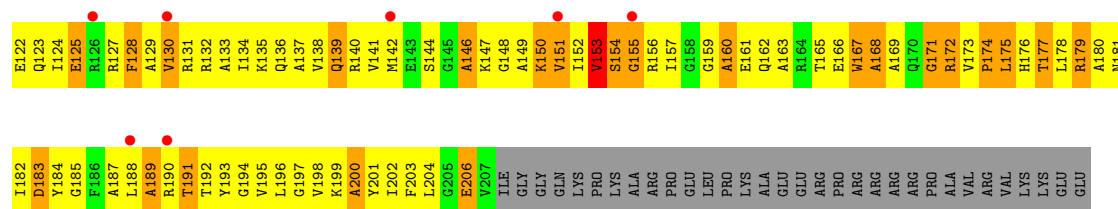


• Molecule 3: 30S RIBOSOMAL PROTEIN S2

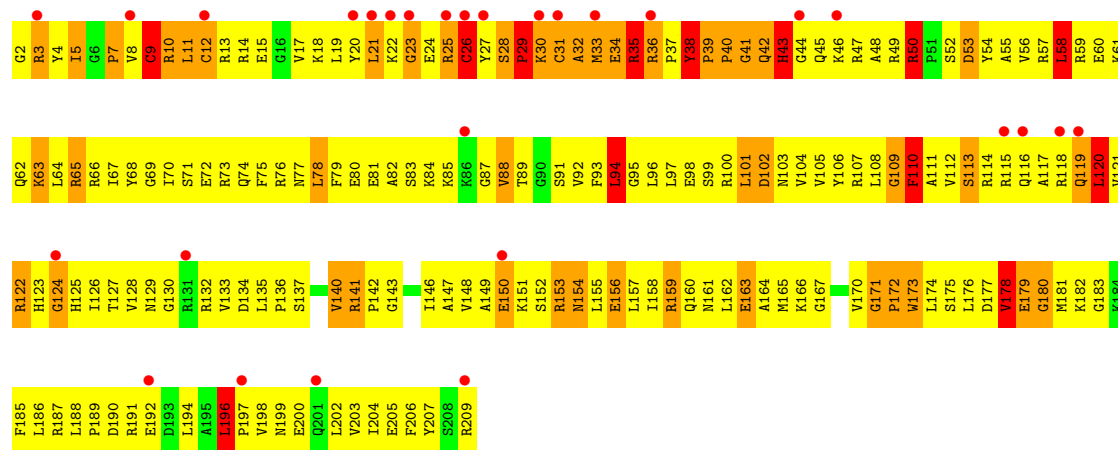
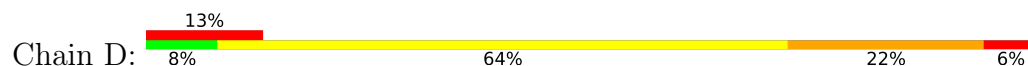


• Molecule 4: 30S RIBOSOMAL PROTEIN S3

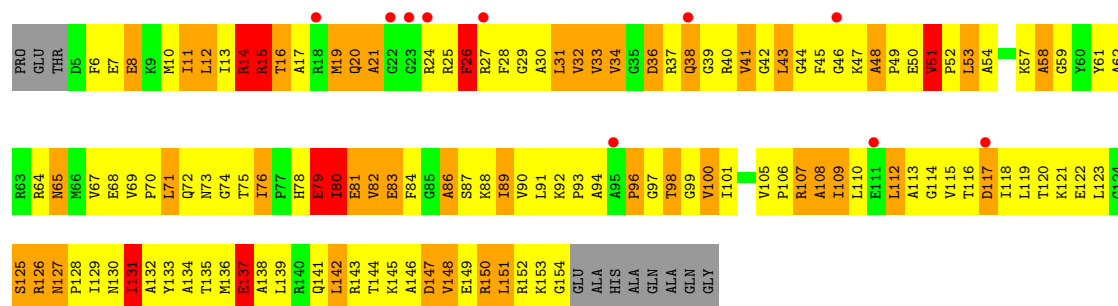
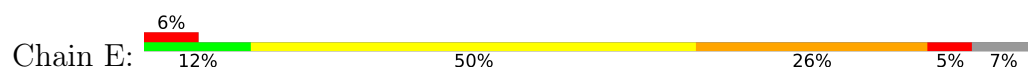




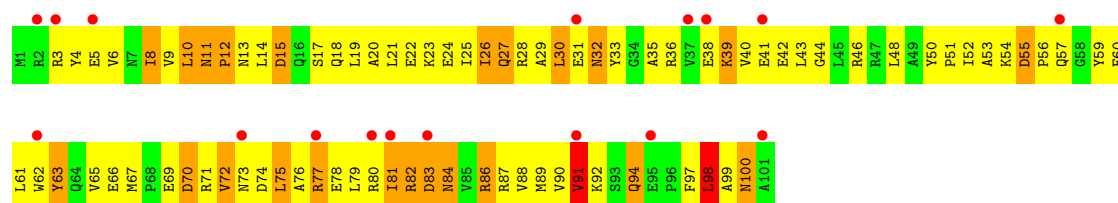
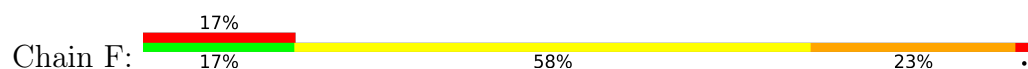
● Molecule 5: 30S RIBOSOMAL PROTEIN S4



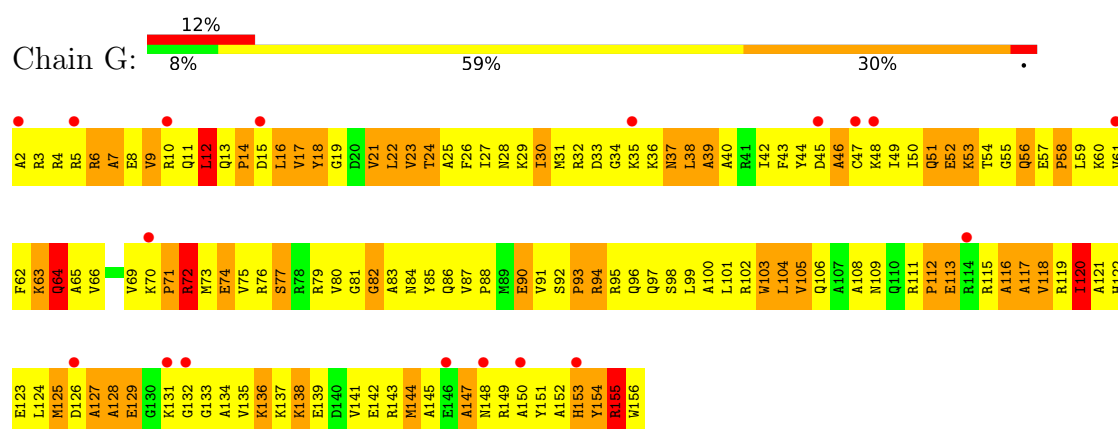
● Molecule 6: 30S RIBOSOMAL PROTEIN S5



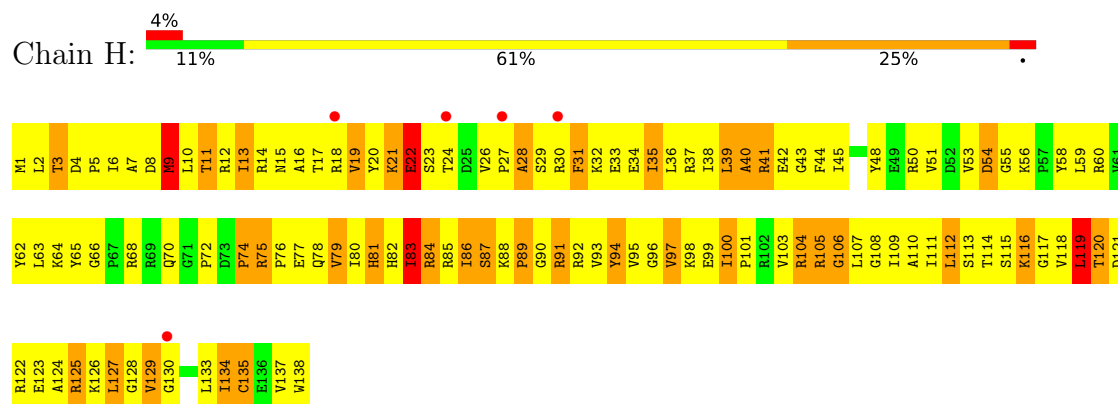
● Molecule 7: 30S RIBOSOMAL PROTEIN S6



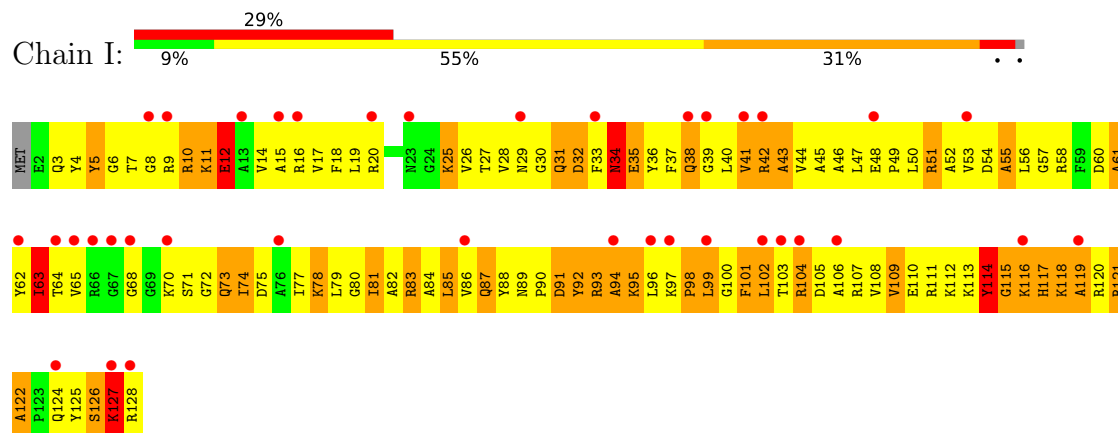
● Molecule 8: 30S RIBOSOMAL PROTEIN S7



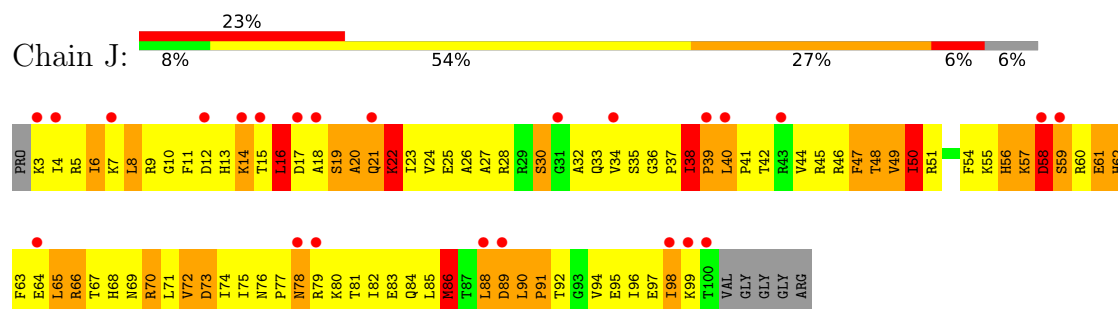
• Molecule 9: 30S RIBOSOMAL PROTEIN S8



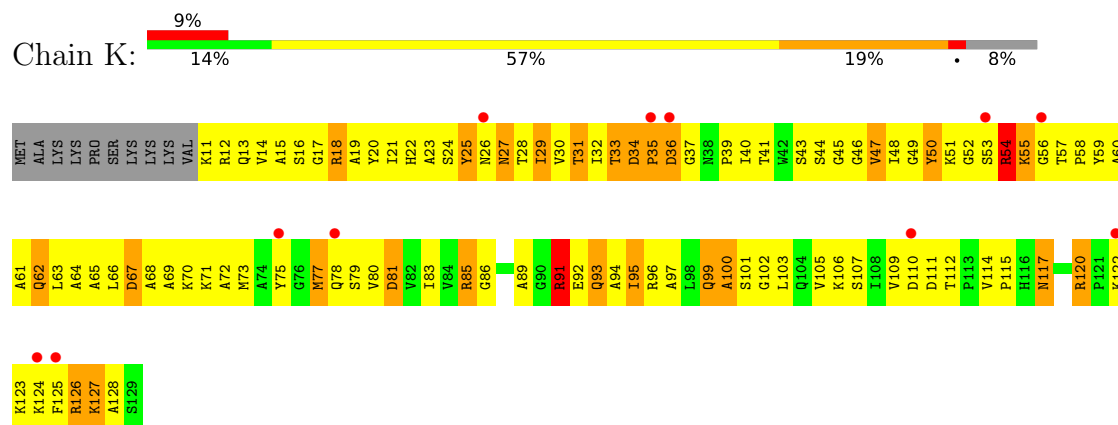
• Molecule 10: 30S RIBOSOMAL PROTEIN S9



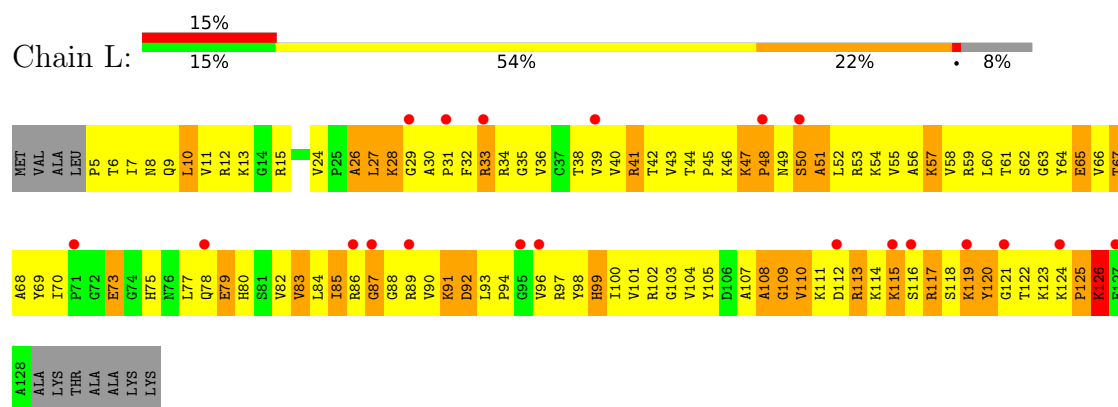
• Molecule 11: 30S RIBOSOMAL PROTEIN S10



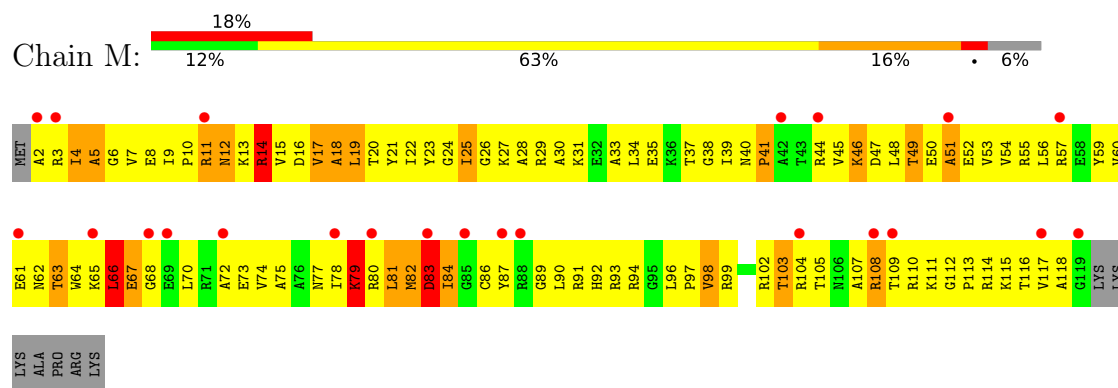
- Molecule 12: 30S RIBOSOMAL PROTEIN S11



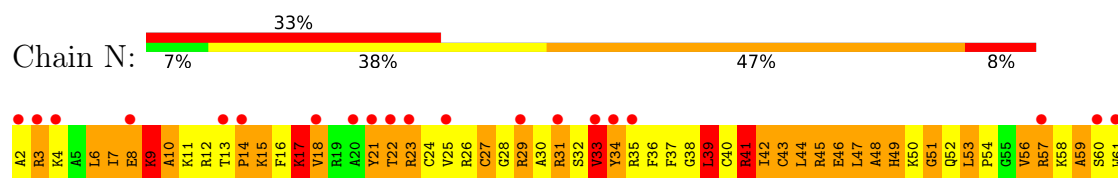
- Molecule 13: 30S RIBOSOMAL PROTEIN S12

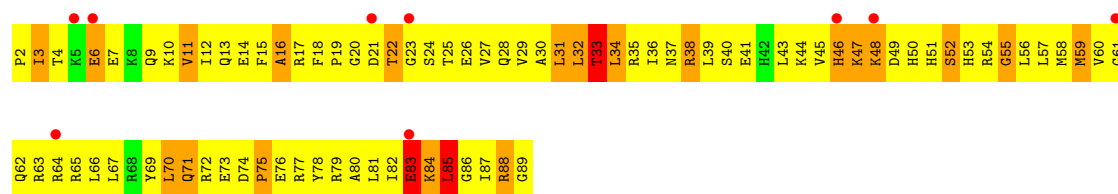


- Molecule 14: 30S RIBOSOMAL PROTEIN S13

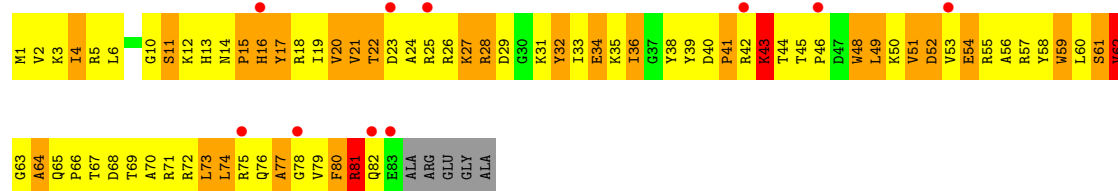


- Molecule 15: 30S RIBOSOMAL PROTEIN S14

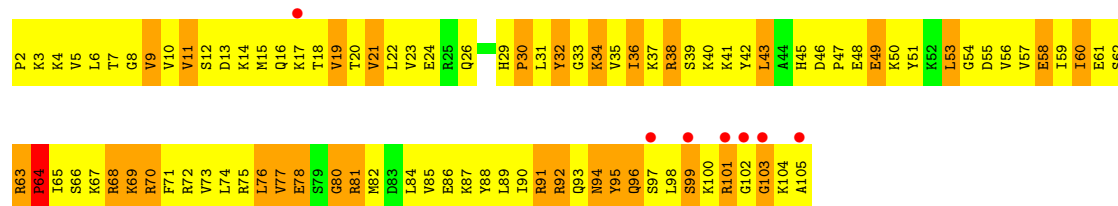
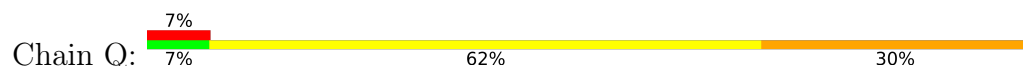




• Molecule 17: 30S RIBOSOMAL PROTEIN S16



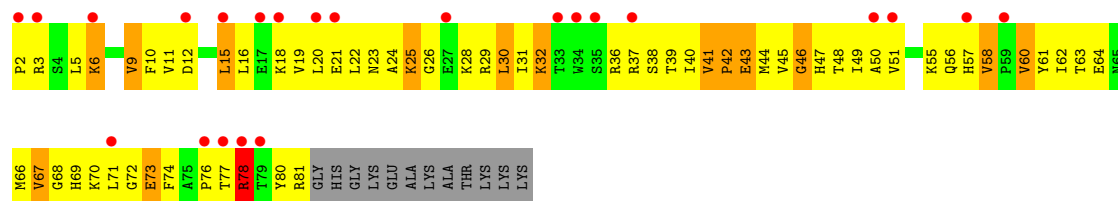
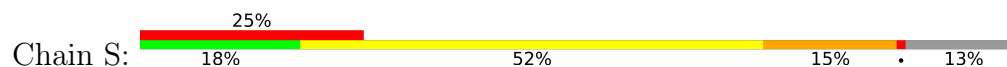
• Molecule 18: 30S RIBOSOMAL PROTEIN S17



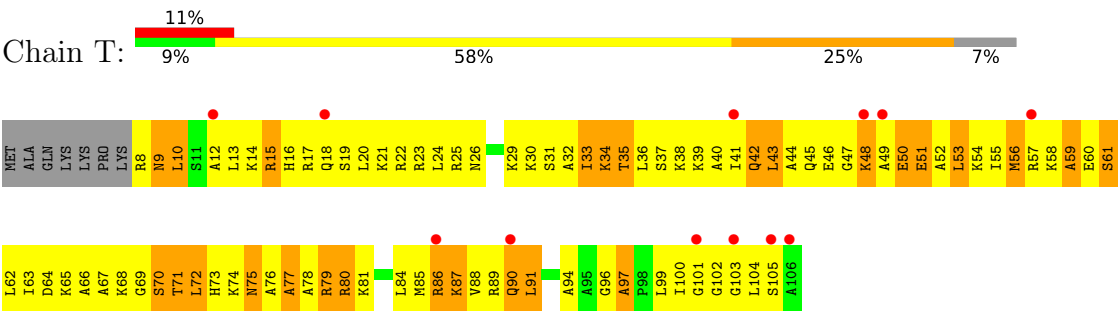
• Molecule 19: 30S RIBOSOMAL PROTEIN S18



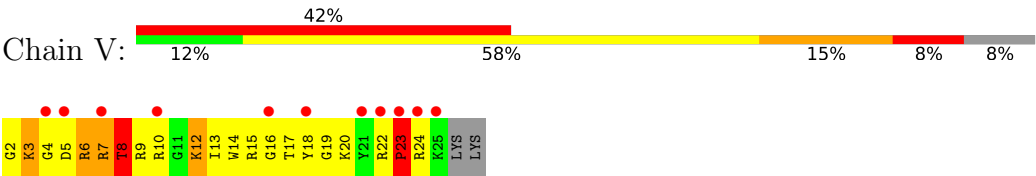
• Molecule 20: 30S RIBOSOMAL PROTEIN S19



• 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, α , β , γ	401.84Å 401.84Å 173.85Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	141.42 – 3.80 141.42 – 3.80	Depositor EDS
% Data completeness (in resolution range)	92.6 (141.42-3.80) 92.6 (141.42-3.80)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	0.08	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.94 (at 3.78Å)	Xtriage
Refinement program	CNS	Depositor
R, R_{free}	0.241 , 0.312 0.225 , 0.291	Depositor DCC
R_{free} test set	6465 reflections (4.94%)	wwPDB-VP
Wilson B-factor (Å ²)	122.1	Xtriage
Anisotropy	0.327	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.46 , 827.6	EDS
L-test for twinning ²	$\langle L \rangle = 0.47$, $\langle L^2 \rangle = 0.30$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.88	EDS
Total number of atoms	51757	wwPDB-VP
Average B, all atoms (Å ²)	101.0	wwPDB-VP

Xtriage'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.*

¹Intensities estimated from amplitudes.

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

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section:
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	0.50	0/36387	0.76	52/56789 (0.1%)
2	Z	0.55	0/84	0.83	0/128
3	B	0.50	0/1935	1.12	20/2609 (0.8%)
4	C	0.45	0/1636	1.09	18/2205 (0.8%)
5	D	0.51	0/1733	1.13	22/2318 (0.9%)
6	E	0.68	0/1162	1.26	18/1564 (1.2%)
7	F	0.42	0/856	1.02	6/1154 (0.5%)
8	G	0.42	0/1276	1.02	10/1709 (0.6%)
9	H	0.73	0/1136	1.35	15/1527 (1.0%)
10	I	0.44	0/1029	1.07	9/1378 (0.7%)
11	J	0.46	0/805	1.13	7/1082 (0.6%)
12	K	0.57	0/900	1.08	9/1213 (0.7%)
13	L	0.51	0/986	1.14	7/1320 (0.5%)
14	M	0.50	0/947	1.12	10/1270 (0.8%)
15	N	0.44	0/501	1.04	4/664 (0.6%)
16	O	0.56	0/745	0.96	3/992 (0.3%)
17	P	0.56	0/716	1.00	2/963 (0.2%)
18	Q	0.69	0/870	1.24	11/1159 (0.9%)
19	R	0.51	0/603	1.11	7/799 (0.9%)
20	S	0.44	0/661	1.08	6/890 (0.7%)
21	T	0.44	0/765	1.02	1/1007 (0.1%)
22	V	0.49	0/212	1.05	1/277 (0.4%)
All	All	0.51	0/55945	0.89	238/83017 (0.3%)

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

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

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

There are no bond length outliers.

All (238) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	H	100	ILE	CA-C-N	15.18	135.42	119.78
9	H	100	ILE	C-N-CA	15.18	135.42	119.78
1	A	51	A	C2'-C3'-O3'	14.37	131.06	109.50
1	A	266	G	C2'-C3'-O3'	13.61	129.91	109.50
1	A	1498	U	C2'-C3'-O3'	13.27	129.41	109.50
13	L	26	ALA	N-CA-C	-12.40	97.76	111.28
1	A	1085	U	C2'-C3'-O3'	11.40	126.60	109.50
11	J	38	ILE	N-CA-C	10.88	117.99	108.63
1	A	575	G	C2'-C3'-O3'	10.79	125.69	109.50
3	B	190	THR	N-CA-C	10.23	122.51	111.36
1	A	243	A	C2'-C3'-O3'	9.94	124.42	109.50
5	D	21	LEU	N-CA-C	-9.27	101.05	111.71
1	A	1498	U	C4'-C3'-O3'	9.17	123.16	109.40
1	A	7	G	C2'-C3'-O3'	9.16	123.24	109.50
8	G	154	TYR	N-CA-C	-9.15	102.11	113.18
8	G	6	ARG	N-CA-C	-9.10	103.32	112.97
1	A	366	C	C2'-C3'-O3'	8.79	122.68	109.50
10	I	122	ALA	CA-C-N	8.78	129.31	119.92
10	I	122	ALA	C-N-CA	8.78	129.31	119.92
10	I	94	ALA	N-CA-C	-8.76	102.59	113.28
10	I	87	GLN	N-CA-C	-8.55	102.97	113.41
6	E	26	PHE	N-CA-C	8.51	120.49	108.74
1	A	1364	U	C2'-C3'-O3'	8.44	122.16	109.50
11	J	16	LEU	N-CA-C	-8.39	102.14	112.38
15	N	12	ARG	N-CA-C	-8.31	102.17	112.47
1	A	328	C	C2'-C3'-O3'	8.25	121.88	109.50
19	R	46	GLU	N-CA-C	-8.23	102.25	111.71
1	A	7	G	C4'-C3'-O3'	8.22	121.74	109.40
1	A	51	A	C4'-C3'-O3'	8.16	121.63	109.40
4	C	191	THR	N-CA-C	8.14	121.36	107.93
9	H	134	ILE	N-CA-C	8.09	119.82	111.00
5	D	33	MET	N-CA-C	-8.06	103.20	112.87
1	A	1101	A	C2'-C3'-O3'	8.06	121.59	109.50
4	C	6	HIS	CA-C-N	7.81	127.10	118.97
4	C	6	HIS	C-N-CA	7.81	127.10	118.97

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	G	52	GLU	N-CA-C	-7.73	105.81	114.62
4	C	39	ILE	N-CA-C	-7.66	101.32	112.04
4	C	91	LEU	N-CA-C	-7.62	102.63	112.23
14	M	107	ALA	N-CA-C	-7.58	100.79	112.99
1	A	792	A	C2'-C3'-O3'	7.46	120.69	109.50
10	I	83	ARG	N-CA-C	-7.41	104.23	113.28
3	B	80	ILE	N-CA-C	-7.40	101.80	111.05
11	J	21	GLN	N-CA-C	-7.40	104.11	113.72
6	E	58	ALA	N-CA-C	-7.36	103.19	111.07
1	A	115	G	C2'-C3'-O3'	7.29	120.43	109.50
1	A	250	A	C2'-C3'-O3'	7.29	120.43	109.50
4	C	89	GLU	N-CA-C	-7.20	105.02	113.88
14	M	112	GLY	CA-C-N	7.20	127.63	119.93
14	M	112	GLY	C-N-CA	7.20	127.63	119.93
3	B	94	ASN	N-CA-C	-7.16	102.50	112.45
4	C	118	GLN	N-CA-C	-7.15	102.68	111.33
18	Q	85	VAL	N-CA-C	-7.07	103.63	110.42
19	R	51	LEU	CA-C-N	7.02	128.62	119.84
19	R	51	LEU	C-N-CA	7.02	128.62	119.84
1	A	960	U	C2'-C3'-O3'	7.02	120.03	109.50
10	I	61	ALA	N-CA-C	7.00	117.74	107.88
3	B	152	PHE	N-CA-C	-6.93	104.69	113.01
18	Q	58	GLU	N-CA-C	-6.90	98.48	109.59
3	B	86	GLU	N-CA-C	-6.88	104.14	112.54
1	A	1049	U	C2'-C3'-O3'	6.88	119.81	109.50
4	C	90	GLU	N-CA-C	-6.85	105.04	113.19
1	A	533	A	C2'-C3'-O3'	6.84	119.76	109.50
3	B	193	ASP	CA-C-N	6.78	128.31	119.84
3	B	193	ASP	C-N-CA	6.78	128.31	119.84
4	C	32	LEU	N-CA-C	-6.74	104.07	113.37
14	M	11	ARG	N-CA-C	6.71	119.52	108.99
5	D	109	GLY	N-CA-C	6.67	123.89	115.42
10	I	99	LEU	N-CA-C	-6.63	105.08	113.43
21	T	75	ASN	N-CA-C	-6.61	104.48	112.54
1	A	119	A	C2'-C3'-O3'	6.56	119.34	109.50
4	C	38	ARG	N-CA-C	-6.53	105.31	113.28
14	M	25	ILE	N-CA-C	6.53	117.22	108.27
8	G	46	ALA	N-CA-C	-6.53	104.58	112.54
20	S	15	LEU	N-CA-C	-6.51	104.95	114.39
11	J	22	LYS	N-CA-C	-6.46	105.56	113.50
5	D	38	TYR	CA-C-N	6.45	124.31	119.66
5	D	38	TYR	C-N-CA	6.45	124.31	119.66

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	D	196	LEU	CA-C-N	6.41	127.86	119.84
5	D	196	LEU	C-N-CA	6.41	127.86	119.84
1	A	344	A	C2'-C3'-O3'	6.40	119.10	109.50
4	C	109	PRO	N-CA-C	-6.38	105.31	114.18
19	R	35	ARG	N-CA-C	6.37	119.03	111.71
15	N	7	ILE	N-CA-C	-6.35	106.14	112.17
13	L	63	GLY	N-CA-C	-6.35	106.95	115.21
14	M	79	LYS	N-CA-C	-6.33	104.11	112.34
9	H	116	LYS	N-CA-C	-6.32	103.69	111.40
3	B	137	ARG	N-CA-C	-6.32	103.69	111.33
15	N	41	ARG	N-CA-C	-6.32	104.63	112.90
18	Q	9	VAL	N-CA-C	6.29	117.76	108.45
1	A	748	C	C2'-C3'-O3'	6.28	118.92	109.50
1	A	1528	U	C2'-C3'-O3'	6.28	118.91	109.50
9	H	28	ALA	N-CA-C	6.24	118.83	110.35
12	K	95	ILE	N-CA-C	-6.24	104.44	110.42
5	D	150	GLU	N-CA-C	-6.22	103.64	111.11
5	D	50	ARG	CA-C-N	-6.21	112.68	120.51
5	D	50	ARG	C-N-CA	-6.21	112.68	120.51
6	E	127	ASN	CA-C-N	6.21	125.70	119.24
6	E	127	ASN	C-N-CA	6.21	125.70	119.24
1	A	1067	A	C2'-C3'-O3'	6.20	118.81	109.50
16	O	52	SER	N-CA-C	-6.20	105.74	113.55
6	E	148	VAL	N-CA-C	-6.19	104.48	110.42
1	A	577	G	C3'-C2'-O2'	6.19	119.98	110.70
9	H	119	LEU	N-CA-C	6.16	118.43	109.07
1	A	993	G	C2'-C3'-O3'	6.15	118.72	109.50
3	B	217	ARG	N-CA-C	-6.15	104.89	113.37
19	R	81	PHE	N-CA-C	-6.14	105.58	114.12
5	D	39	PRO	CA-C-N	6.09	127.45	119.84
5	D	39	PRO	C-N-CA	6.09	127.45	119.84
5	D	171	GLY	CA-C-N	6.07	127.42	119.84
5	D	171	GLY	C-N-CA	6.07	127.42	119.84
18	Q	39	SER	N-CA-C	6.06	117.45	108.60
6	E	86	ALA	N-CA-C	-6.05	105.20	113.30
1	A	60	A	C2'-C3'-O3'	6.04	118.56	109.50
18	Q	21	VAL	N-CA-C	6.04	115.54	106.42
3	B	172	ILE	N-CA-C	-6.04	103.34	111.44
1	A	484	G	C2'-C3'-O3'	6.00	118.51	109.50
1	A	129(A)	G	C2'-C3'-O3'	5.99	118.48	109.50
18	Q	32	TYR	N-CA-C	5.99	120.44	113.20
6	E	134	ALA	N-CA-C	-5.98	104.68	111.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	E	117	ASP	N-CA-C	5.95	117.14	107.32
16	O	34	LEU	N-CA-C	-5.92	104.46	111.03
3	B	179	LYS	N-CA-C	-5.90	99.62	109.24
8	G	144	MET	N-CA-C	-5.90	104.85	111.28
6	E	15	ARG	N-CA-C	5.90	118.94	111.69
9	H	77	GLU	N-CA-C	-5.89	101.76	110.48
9	H	79	VAL	N-CA-C	-5.89	105.38	110.74
7	F	77	ARG	N-CA-C	-5.88	105.20	112.38
18	Q	63	ARG	CA-C-N	5.87	127.18	119.84
18	Q	63	ARG	C-N-CA	5.87	127.18	119.84
14	M	108	ARG	N-CA-C	5.87	118.46	111.71
6	E	89	ILE	N-CA-C	5.85	116.71	108.17
20	S	58	VAL	CA-C-N	5.83	126.16	119.92
20	S	58	VAL	C-N-CA	5.83	126.16	119.92
1	A	1281	U	C2'-C3'-O3'	5.82	118.22	109.50
4	C	135	LYS	N-CA-C	-5.82	105.44	112.54
1	A	1200	C	N1-C1'-C2'	5.81	120.72	112.00
17	P	80	PHE	N-CA-C	5.78	120.61	113.50
3	B	134	GLU	N-CA-C	-5.78	105.12	111.82
4	C	120	VAL	N-CA-C	-5.75	104.72	110.30
9	H	39	LEU	N-CA-C	-5.75	104.37	111.33
1	A	810	C	C5'-C4'-C3'	5.73	124.59	116.00
4	C	69	HIS	N-CA-C	5.70	118.10	110.35
1	A	481	G	C4'-C3'-O3'	-5.69	104.47	113.00
6	E	28	PHE	N-CA-C	5.68	118.71	108.48
12	K	34	ASP	CA-C-N	5.68	126.94	119.84
12	K	34	ASP	C-N-CA	5.68	126.94	119.84
13	L	85	ILE	N-CA-C	5.67	117.58	108.85
11	J	62	HIS	N-CA-C	5.66	119.04	109.76
12	K	91	ARG	N-CA-C	-5.66	105.11	111.28
19	R	50	ILE	CB-CA-C	-5.65	105.81	111.80
10	I	126	SER	N-CA-C	5.64	118.41	109.50
1	A	687	A	C2'-C3'-O3'	5.63	117.95	109.50
13	L	119	LYS	N-CA-C	-5.63	101.51	109.96
9	H	87	SER	N-CA-C	-5.62	101.96	110.28
1	A	1299	A	N9-C1'-C2'	5.58	120.36	112.00
14	M	66	LEU	N-CA-C	5.55	118.31	109.65
13	L	57	LYS	N-CA-C	-5.54	102.08	110.28
18	Q	100	LYS	N-CA-C	-5.54	106.22	114.64
7	F	98	LEU	N-CA-C	5.53	115.59	108.34
3	B	112	VAL	N-CA-C	-5.53	104.56	110.36
1	A	1195	C	N1-C1'-C2'	5.52	120.28	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	H	106	GLY	N-CA-C	5.52	121.42	114.25
5	D	94	LEU	N-CA-C	-5.49	104.52	111.11
1	A	1451	A	C2'-C3'-O3'	5.47	117.71	109.50
6	E	33	VAL	N-CA-C	-5.47	104.09	110.05
5	D	12	CYS	N-CA-C	-5.45	105.25	112.34
6	E	32	VAL	N-CA-C	5.45	116.13	108.17
1	A	563	A	C4'-C3'-O3'	-5.45	104.83	113.00
18	Q	95	TYR	N-CA-C	-5.44	105.74	112.38
9	H	54	ASP	N-CA-C	-5.43	105.29	112.24
1	A	389	A	C5'-C4'-C3'	5.39	124.09	116.00
5	D	11	LEU	N-CA-C	-5.39	106.38	113.12
5	D	153	ARG	N-CA-C	-5.39	104.64	111.11
18	Q	38	ARG	N-CA-C	5.39	118.72	110.36
1	A	1224	G	C2'-C3'-O3'	5.38	117.58	109.50
7	F	94	GLN	N-CA-C	5.38	118.17	109.40
9	H	125	ARG	N-CA-C	-5.38	105.32	111.07
9	H	115	SER	N-CA-C	-5.37	105.99	112.54
5	D	26	CYS	N-CA-C	-5.36	106.44	112.87
8	G	153	HIS	N-CA-C	-5.36	106.24	112.89
15	N	33	VAL	N-CA-C	5.36	120.49	109.34
3	B	78	GLN	N-CA-C	5.35	119.94	113.41
5	D	173	TRP	N-CA-C	-5.35	105.97	112.88
6	E	14	ARG	N-CA-C	5.33	117.37	109.69
1	A	1335	C	C4'-C3'-O3'	-5.32	105.02	113.00
10	I	63	ILE	N-CA-C	5.31	116.17	107.24
1	A	1182	G	C2'-C3'-O3'	5.31	117.47	109.50
6	E	19	MET	N-CA-C	-5.31	103.52	110.53
1	A	1066	C	N1-C1'-C2'	5.31	119.96	112.00
5	D	159	ARG	N-CA-C	-5.30	105.40	111.07
5	D	31	CYS	N-CA-C	-5.30	106.40	112.92
8	G	77	SER	N-CA-C	5.29	118.86	109.96
3	B	223	ILE	CB-CA-C	-5.29	105.20	111.81
6	E	48	ALA	CA-C-N	5.28	124.94	119.56
6	E	48	ALA	C-N-CA	5.28	124.94	119.56
7	F	55	ASP	CA-C-N	5.28	126.44	119.84
7	F	55	ASP	C-N-CA	5.28	126.44	119.84
8	G	136	LYS	N-CA-C	-5.27	105.18	111.03
1	A	1130	A	N9-C1'-C2'	5.27	119.90	112.00
6	E	80	ILE	CB-CA-C	-5.26	102.66	111.29
3	B	81	VAL	N-CA-C	-5.25	106.09	112.76
3	B	223	ILE	N-CA-C	-5.24	105.22	110.30
14	M	51	ALA	N-CA-C	-5.24	106.85	113.18

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1360	A	N9-C1'-C2'	5.22	119.83	112.00
4	C	80	GLY	N-CA-C	-5.22	108.42	115.36
12	K	25	TYR	N-CA-C	-5.22	105.25	113.02
1	A	559	A	C2'-C3'-O3'	5.21	117.31	109.50
3	B	158	LEU	CA-C-N	5.20	125.14	119.78
3	B	158	LEU	C-N-CA	5.20	125.14	119.78
7	F	8	ILE	N-CA-C	5.18	115.32	107.75
17	P	73	LEU	N-CA-C	-5.17	104.90	111.11
1	A	1502	A	C1'-C2'-O2'	-5.17	104.04	111.80
12	K	120	ARG	CA-C-N	-5.16	115.46	120.98
12	K	120	ARG	C-N-CA	-5.16	115.46	120.98
4	C	15	THR	N-CA-C	5.15	121.77	110.80
4	C	34	LEU	N-CA-C	-5.14	105.76	111.36
9	H	101	PRO	N-CA-C	5.14	119.38	111.21
8	G	47	CYS	N-CA-C	-5.13	106.97	113.18
1	A	839	U	N1-C1'-C2'	5.13	119.70	112.00
20	S	41	VAL	CA-C-N	5.11	126.22	119.84
20	S	41	VAL	C-N-CA	5.11	126.22	119.84
1	A	587	G	C4'-C3'-O3'	-5.10	105.35	113.00
4	C	125	GLU	N-CA-C	-5.10	106.75	113.12
12	K	85	ARG	N-CA-C	5.10	117.66	108.48
1	A	560	U	C2'-C3'-O3'	5.09	117.14	109.50
11	J	89	ASP	N-CA-C	5.09	114.96	108.24
19	R	18	ARG	N-CA-C	-5.09	107.24	113.50
16	O	47	LYS	N-CA-C	-5.08	105.63	111.07
1	A	840	C	N1-C1'-C2'	5.07	119.61	112.00
14	M	98	VAL	N-CA-C	5.07	118.50	113.53
13	L	61	THR	N-CA-C	-5.07	107.16	113.19
11	J	66	ARG	N-CA-C	5.06	117.01	108.96
20	S	67	VAL	CB-CA-C	-5.05	107.42	111.71
22	V	12	LYS	N-CA-C	-5.02	107.30	112.93
12	K	99	GLN	N-CA-C	-5.02	105.08	111.11
13	L	50	SER	N-CA-C	5.02	117.43	109.50
8	G	147	ALA	N-CA-C	-5.02	106.30	112.72
3	B	133	LYS	N-CA-C	-5.01	104.89	111.96

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

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Mol	Chain	Res	Type	Group
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	2482	0
2	Z	77	0	42	5	0
3	B	1900	0	1951	450	0
4	C	1612	0	1677	412	0
5	D	1703	0	1765	399	0
6	E	1146	0	1207	261	0
7	F	843	0	857	163	0
8	G	1257	0	1296	270	0
9	H	1116	0	1177	246	0
10	I	1011	0	1043	253	0
11	J	792	0	835	255	0
12	K	885	0	904	151	0
13	L	970	0	1057	193	0
14	M	937	0	995	178	0
15	N	492	0	533	149	0
16	O	734	0	771	159	0
17	P	700	0	720	186	0
18	Q	857	0	930	191	0
19	R	597	0	668	154	0
20	S	647	0	673	121	0
21	T	763	0	861	187	0
22	V	208	0	221	55	0
23	D	1	0	0	0	0
23	N	1	0	0	0	0
All	All	51757	0	36597	6455	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 73.

All (6455) 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
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
3:B:68:ILE:H	3:B:90:MET:HE3	1.09	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
8:G:70:LYS:HZ2	8:G:96:GLN:HB3	1.27	0.98
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
18:Q:96:GLN:HB3	18:Q:103:GLY:C	1.90	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
5:D:61:LYS:HZ1	5:D:62:GLN:HA	1.36	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
6:E:43:LEU:HD12	6:E:136:MET:HE2	1.55	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
9:H:103:VAL:HG21	9:H:109:ILE:C	1.97	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
1:A:1015:A:H4'	15:N:15:LYS:HZ1	1.38	0.87
11:J:7:LYS:O	11:J:96:ILE:HA	1.72	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
13:L:114:LYS:C	13:L:117:ARG:HH12	1.81	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
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
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
6:E:19:MET:HE1	6:E:24:ARG:HG2	1.58	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
17:P:1:MET:HE3	17:P:3:LYS:HD2	1.58	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
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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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:276:G:H5'	18:Q:15:MET:HE1	1.59	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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: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
16:O:35:ARG:HB3	16:O:59:MET:HE1	1.61	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
8:G:63:LYS:N	8:G:63:LYS:HZ2	1.76	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
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
3:B:9:GLU:CD	3:B:217:ARG:HH12	1.88	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
1:A:276:G:C5'	18:Q:15:MET:HE1	2.11	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
14:M:8:GLU:C	14:M:9:ILE:HD12	2.07	0.79
15:N:26:ARG:NH2	15:N:47:LEU:HD23	1.97	0.79
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:150:GLU:H	5:D:150:GLU:CD	1.91	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
10:I:100:GLY:C	10:I:102:LEU:H	1.92	0.78
15:N:9:LYS:C	15:N:11:LYS:H	1.88	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:38:GLY:C	3:B:39:ILE:HD12	2.09	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:68:ILE:N	3:B:90:MET:HE3	1.95	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
8:G:21:VAL:HG23	8:G:22:LEU:N	1.99	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
4:C:50:ALA:C	4:C:70:VAL:HG13	2.10	0.76
4:C:112:SER:C	4:C:114:PRO:HD2	2.10	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
4:C:191:THR:HB	4:C:194:GLY:C	2.09	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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: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
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
3:B:12:GLU:C	3:B:14:GLY:H	1.93	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
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
14:M:70:LEU:C	14:M:70:LEU:HD23	2.13	0.73
16:O:56:LEU:HA	16:O:59:MET:HG3	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
3:B:216:SER:C	3:B:218:ALA:H	1.94	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
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:HZ1	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
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
3:B:10:LEU:C	3:B:12:GLU:H	1.97	0.73
4:C:85:ARG:HG3	4:C:86:VAL:N	2.02	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
5:D:8:VAL:C	5:D:10:ARG:H	1.96	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
8:G:145:ALA:C	8:G:147:ALA:H	1.95	0.72
10:I:93:ARG:NH1	10:I:96:LEU:HD23	2.03	0.72
19:R:37:VAL:O	19:R:41:LYS:HG3	1.89	0.72
21:T:13:LEU:C	21:T:13:LEU:HD12	2.14	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
6:E:42:GLY:HA2	6:E:136:MET:HE1	1.70	0.72
11:J:6:ILE:HD11	11:J:73:ASP:H	1.55	0.72
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
12:K:126:ARG:C	12:K:128:ALA:H	1.98	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
20:S:5:LEU:HD21	20:S:70:LYS:HZ1	1.53	0.71
20:S:28:LYS:C	20:S:29:ARG:HD2	2.15	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:12:GLU:C	3:B:14:GLY:N	2.47	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:I:104:ARG:C	10:I:104:ARG:HD3	2.15	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
10:I:118:LYS:C	10:I:120:ARG:H	1.99	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
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: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
6:E:19:MET:HA	6:E:19:MET:HE3	1.73	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
3:B:25:ASN:HD22	3:B:25:ASN:C	1.99	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
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
10:I:97:LYS:C	10:I:99:LEU:H	2.00	0.69
5:D:10:ARG:HG3	5:D:10:ARG:NH1	2.05	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
19:R:25:THR:C	19:R:26:LEU:HD13	2.16	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
20:S:5:LEU:HD11	20:S:70:LYS:HZ3	1.57	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
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
11:J:63:PHE:C	15:N:59:ALA:HB2	2.19	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:191:G:H21	21:T:103:GLY:C	2.01	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
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
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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
9:H:34:GLU:O	9:H:35:ILE:C	2.37	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
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
7:F:99:ALA:O	7:F:100:ASN:HB2	1.92	0.67
9:H:60:ARG:HG3	9:H:60:ARG:NH1	1.97	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
5:D:32:ALA:C	5:D:34:GLU:H	2.02	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:23:ASP:C	17:P:25:ARG:H	2.02	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
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
10:I:47:LEU:C	10:I:49:PRO:HD2	2.19	0.67
12:K:122:LYS:O	12:K:123:LYS:C	2.38	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:9:GLY:C	4:C:11:ARG:H	2.01	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
5:D:106:TYR:C	5:D:108:LEU:H	2.01	0.67
8:G:117:ALA:C	8:G:120:ILE:HG12	2.19	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
21:T:84:LEU:C	21:T:84:LEU:HD13	2.20	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
8:G:148:ASN:C	8:G:150:ALA:H	2.02	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
3:B:134:GLU:C	3:B:136:VAL:H	2.03	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
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
11:J:69:ASN:C	11:J:70:ARG:HG2	2.19	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
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
14:M:49:THR:HG22	14:M:50:GLU:N	2.05	0.66
15:N:51:GLY:C	15:N:53:LEU:H	2.03	0.66
16:O:81:LEU:HD23	16:O:81:LEU:C	2.20	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
15:N:9:LYS:C	15:N:11:LYS:N	2.50	0.66
17:P:18:ARG:HD3	17:P:35:LYS:HD2	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
10:I:80:GLY:C	10:I:82:ALA:H	2.04	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:31:HIS:C	4:C:33:LEU:H	2.02	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:27:ALA:HA	11:J:84:GLN:CD	2.22	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
17:P:76:GLN:C	17:P:78:GLY:H	2.03	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
6:E:107:ARG:O	6:E:108:ALA:C	2.39	0.65
7:F:78:GLU:O	7:F:81:ILE:HG12	1.97	0.65
8:G:109:ASN:C	8:G:111:ARG:H	2.04	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
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
12:K:49:GLY:O	12:K:50:TYR:C	2.40	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
1:A:1316:G:H5'	15:N:17:LYS:HZ1	1.59	0.65
3:B:158:LEU:CD1	3:B:159:PRO:HD2	2.26	0.65
3:B:219:VAL:C	3:B:221:LEU:H	2.02	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
11:J:5:ARG:HA	11:J:73:ASP:OD2	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
5:D:32:ALA:C	5:D:34:GLU:N	2.47	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
5:D:61:LYS:HZ1	5:D:62:GLN:CA	2.08	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:54:LYS:C	13:L:70:ILE:HD12	2.21	0.65
13:L:124:LYS:HG3	13:L:125:PRO:HD2	1.79	0.65
15:N:31:ARG:C	15:N:33:VAL:H	2.04	0.65
17:P:43:LYS:CB	17:P:48:TRP:CD1	2.80	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:R:53:ARG:NH2	19:R:60:GLY:N	2.31	0.65
19:R:68:LYS:O	19:R:69:THR:C	2.40	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
8:G:118:VAL:O	8:G:119:ARG:C	2.39	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:12:SER:H	18:Q:20:THR:HG1	1.44	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
8:G:71:PRO:C	8:G:72:ARG:HD3	2.21	0.64
8:G:155:ARG:HD3	8:G:155:ARG:C	2.23	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:13:ILE:HD12	6:E:13:ILE:C	2.21	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:10:LYS:HZ1	16:O:14:GLU:HG2	1.63	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
5:D:178:VAL:C	5:D:180:GLY:H	2.05	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:165:MET:HE2	5:D:176:LEU:HD23	1.79	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:18:ALA:C	11:J:20:ALA:H	2.05	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
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
15:N:9:LYS:C	15:N:9:LYS:HD3	2.23	0.63
17:P:5:ARG:C	17:P:6:LEU:HD12	2.23	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
3:B:24:TRP:CD1	3:B:24:TRP:H	2.15	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
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
20:S:41:VAL:HG23	20:S:44:MET:HG3	1.80	0.63
21:T:56:MET:HE3	21:T:88:VAL:HG11	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
5:D:158:ILE:HG22	5:D:181:MET:HE1	1.81	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:275:G:O2'	18:Q:15:MET:HE2	1.99	0.63
1:A:322:C:C2'	1:A:323:U:H5'	2.29	0.63
1:A:452:A:HO2'	1:A:453:A:H8	1.44	0.63
4:C:156:ARG:H	4:C:163:ALA:HA	1.63	0.63
6:E:19:MET:HE1	6:E:24:ARG:CG	2.28	0.63
7:F:33:TYR:HA	7:F:71:ARG:HH21	1.64	0.63
14:M:13:LYS:O	14:M:14:ARG:C	2.42	0.63
15:N:53:LEU:C	15:N:53:LEU:HD12	2.24	0.63
16:O:10:LYS:HD2	16:O:10:LYS:C	2.24	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
19:R:75:ILE:C	19:R:77:GLY:H	2.05	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
6:E:20:GLN:O	6:E:21:ALA:C	2.42	0.62
8:G:38:LEU:HD12	8:G:39:ALA:N	2.14	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: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
11:J:5:ARG:HA	11:J:73:ASP:CG	2.24	0.62
13:L:104:VAL:O	13:L:105:TYR:HB2	1.99	0.62
17:P:1:MET:HE3	17:P:3:LYS:CD	2.30	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
7:F:19:LEU:HD23	7:F:20:ALA:N	2.14	0.62
9:H:4:ASP:CG	9:H:7:ALA:H	2.06	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
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
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
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
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: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:132:ARG:HG2	5:D:132:ARG:HH11	1.64	0.62
12:K:111:ASP:O	12:K:112:THR:C	2.43	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:120:VAL:HG12	4:C:124:ILE:CG1	2.30	0.62
7:F:62:TRP:CG	19:R:35:ARG:HH12	2.18	0.62
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
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:66:GLY:C	9:H:76:PRO:HB3	2.24	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
5:D:61:LYS:HZ1	5:D:62:GLN:HE21	1.47	0.62
10:I:14:VAL:O	10:I:65:VAL:HG23	1.99	0.62
12:K:124:LYS:HD3	12:K:124:LYS:C	2.24	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:755:G:H1'	9:H:1:MET:HE3	1.82	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
5:D:124:GLY:C	5:D:126:ILE:H	2.07	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
11:J:12:ASP:CG	11:J:15:THR:HB	2.25	0.61
15:N:3:ARG:O	15:N:7:ILE:HG13	1.99	0.61
15:N:43:CYS:HA	15:N:46:GLU:CD	2.25	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:1367:C:P	10:I:112:LYS:HZ1	2.23	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
21:T:12:ALA:HA	21:T:14:LYS:HZ2	1.65	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
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:1015:A:H4'	15:N:15:LYS:HZ2	1.66	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:221:LEU:O	3:B:221:LEU:HD13	2.01	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
18:Q:19:VAL:HG23	18:Q:21:VAL:HG22	1.81	0.61
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
6:E:42:GLY:HA2	6:E:136:MET:CE	2.30	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
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
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:155:LEU:CD2	5:D:157:LEU:H	2.12	0.61
8:G:57:GLU:C	8:G:59:LEU:H	2.09	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
6:E:72:GLN:O	6:E:73:ASN:HB3	2.00	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
15:N:11:LYS:C	15:N:13:THR:N	2.54	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
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
10:I:89:ASN:C	10:I:91:ASP:H	2.07	0.60
12:K:27:ASN:OD1	12:K:28:THR:N	2.34	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
15:N:54:PRO:C	15:N:56:VAL:H	2.08	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:48:TYR:C	4:C:50:ALA:H	2.10	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:46:GLY:C	12:K:48:ILE:N	2.57	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
19:R:16:PRO:C	19:R:18:ARG:H	2.08	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:100:GLY:O	3:B:101:MET:C	2.44	0.60
3:B:168:THR:OG1	3:B:192:SER:HA	2.01	0.60
12:K:27:ASN:CG	12:K:28:THR:N	2.58	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
5:D:157:LEU:HD23	5:D:157:LEU:C	2.26	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:619:U:H3	5:D:134:ASP:CG	2.09	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:176:LEU:HD12	5:D:177:ASP:N	2.17	0.60
6:E:12:LEU:HD13	6:E:12:LEU:C	2.27	0.60
10:I:10:ARG:CD	10:I:11:LYS:H	2.13	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
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
21:T:69:GLY:O	21:T:70:SER:C	2.45	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
3:B:173:ALA:O	3:B:174:VAL:C	2.44	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
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
14:M:78:ILE:C	14:M:80:ARG:N	2.56	0.60
21:T:47:GLY:C	21:T:49:ALA:H	2.09	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
3:B:98:LEU:HB2	3:B:101:MET:HE3	1.84	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
8:G:125:MET:C	8:G:127:ALA:H	2.11	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
5:D:52:SER:C	5:D:54:TYR:H	2.11	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
15:N:42:ILE:O	15:N:43:CYS:C	2.46	0.59
21:T:75:ASN:O	21:T:76:ALA:C	2.46	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
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
10:I:33:PHE:C	10:I:35:GLU:H	2.11	0.59
12:K:54:ARG:HB3	12:K:54:ARG:HH11	1.68	0.59
18:Q:90:ILE:O	18:Q:91:ARG:C	2.45	0.59
19:R:36:ASN:CG	19:R:39:VAL:HG12	2.28	0.59
20:S:72:GLY:C	20:S:74:PHE:H	2.11	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:61:LYS:HZ1	5:D:62:GLN:NE2	2.00	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
9:H:4:ASP:CG	9:H:85:ARG:HH11	2.11	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
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
3:B:74:LYS:O	3:B:75:LYS:C	2.45	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
19:R:59:SER:C	19:R:61:LYS:N	2.60	0.59
20:S:16:LEU:C	20:S:19:VAL:HG12	2.27	0.59
20:S:43:GLU:C	20:S:45:VAL:H	2.10	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
13:L:89:ARG:CB	13:L:89:ARG:HH11	2.16	0.59
14:M:79:LYS:C	14:M:79:LYS:HD3	2.28	0.59
18:Q:77:VAL:O	18:Q:78:GLU:HB3	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:95:ARG:O	8:G:96:GLN:C	2.46	0.59
8:G:138:LYS:HD3	8:G:139:GLU:HG3	1.85	0.59
8:G:148:ASN:C	8:G:150:ALA:N	2.57	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
16:O:34:LEU:C	16:O:34:LEU:HD23	2.28	0.59
21:T:77:ALA:O	21:T:78:ALA:C	2.46	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
4:C:112:SER:C	4:C:114:PRO:CD	2.76	0.58
6:E:10:MET:SD	6:E:10:MET:C	2.85	0.58
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
16:O:3:ILE:HG13	16:O:3:ILE:O	2.02	0.58
19:R:21:LYS:O	19:R:22:VAL:C	2.45	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:140:HIS:O	3:B:141:GLU:C	2.46	0.58
5:D:66:ARG:O	5:D:69:GLY:N	2.35	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
13:L:78:GLN:C	13:L:80:HIS:H	2.11	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
13:L:117:ARG:O	13:L:118:SER:C	2.46	0.58
15:N:4:LYS:C	15:N:6:LEU:H	2.10	0.58
20:S:22:LEU:HB2	20:S:47:HIS:HE1	1.68	0.58
20:S:30:LEU:HD23	20:S:30:LEU:C	2.28	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
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
8:G:5:ARG:C	8:G:7:ALA:H	2.11	0.58
11:J:22:LYS:HE3	11:J:90:LEU:CD2	2.34	0.58
11:J:54:PHE:HD2	11:J:54:PHE:C	2.11	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
19:R:36:ASN:O	19:R:37:VAL:C	2.47	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
5:D:24:GLU:C	5:D:24:GLU:CD	2.72	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
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
16:O:88:ARG:C	16:O:88:ARG:HD3	2.28	0.58
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
12:K:62:GLN:O	12:K:63:LEU:C	2.46	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:3:ARG:C	15:N:7:ILE:HG13	2.29	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
18:Q:92:ARG:C	18:Q:94:ASN:H	2.09	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
21:T:61:SER:O	21:T:62:LEU:C	2.47	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
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
9:H:40:ALA:O	9:H:41:ARG:C	2.47	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
11:J:54:PHE:C	11:J:54:PHE:CD2	2.81	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:189:ASP:CG	3:B:205:ASP:HB3	2.29	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
6:E:130:ASN:O	6:E:131:ILE:C	2.47	0.58
8:G:145:ALA:C	8:G:147:ALA:N	2.56	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: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
3:B:169:LYS:C	3:B:169:LYS:HD3	2.29	0.57
3:B:182:ILE:O	3:B:183:PRO:C	2.46	0.57
4:C:29:TYR:C	4:C:31:HIS:H	2.13	0.57
4:C:107:GLN:O	4:C:108:ASN:HB2	2.04	0.57
5:D:52:SER:C	5:D:54:TYR:N	2.60	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:106:TYR:C	5:D:108:LEU:N	2.62	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
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
18:Q:41:LYS:C	18:Q:42:TYR:HD2	2.12	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
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:42:THR:HG23	11:J:67:THR:C	2.29	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
21:T:89:ARG:C	21:T:91:LEU:H	2.12	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
11:J:62:HIS:C	15:N:59:ALA:HB3	2.29	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
6:E:8:GLU:C	6:E:8:GLU:OE2	2.47	0.57
8:G:13:GLN:HB2	8:G:14:PRO:HD2	1.86	0.57
9:H:20:TYR:CZ	9:H:75:ARG:HB3	2.39	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:16:ASP:HB2	14:M:31:LYS:HZ2	1.68	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
5:D:17:VAL:C	5:D:33:MET:HE2	2.30	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: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
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
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:68:ILE:H	3:B:90:MET:CE	1.99	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
3:B:216:SER:C	3:B:218:ALA:N	2.56	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
7:F:53:ALA:C	7:F:55:ASP:H	2.11	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
4:C:120:VAL:C	4:C:124:ILE:HG13	2.30	0.56
6:E:86:ALA:HB3	6:E:125:SER:HB2	1.86	0.56
12:K:16:SER:C	12:K:77:MET:HE1	2.30	0.56
13:L:83:VAL:HG22	13:L:84:LEU:H	1.69	0.56
13:L:83:VAL:HG21	13:L:100:ILE:HD13	1.87	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
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
4:C:9:GLY:O	4:C:11:ARG:N	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:59:ARG:HB3	4:C:64:VAL:HG13	1.86	0.56
4:C:89:GLU:C	4:C:91:LEU:H	2.13	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:6:GLU:H	16:O:6:GLU:CD	2.12	0.56
16:O:88:ARG:HD3	16:O:89:GLY:N	2.20	0.56
18:Q:33:GLY:O	18:Q:34:LYS:C	2.48	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
3:B:217:ARG:HA	3:B:220:ASP:CG	2.30	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
5:D:8:VAL:C	5:D:10:ARG:N	2.54	0.56
7:F:32:ASN:N	7:F:32:ASN:ND2	2.48	0.56
8:G:62:PHE:HB3	8:G:63:LYS:NZ	2.20	0.56
8:G:112:PRO:O	8:G:113:GLU:C	2.47	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

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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	0.56
19:R:16:PRO:HD2	19:R:19:LYS:HD3	1.87	0.56
19:R:40:LEU:O	19:R:41:LYS:C	2.48	0.56
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: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
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
12:K:33:THR:OG1	12:K:34:ASP:N	2.35	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
3:B:211:ILE:C	3:B:213:LEU:H	2.14	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
12:K:30:VAL:HG12	12:K:31:THR:H	1.70	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
4:C:113:ALA:O	4:C:114:PRO:C	2.48	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:7:VAL:C	3:B:8:LYS:HG3	2.30	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:18:ARG:C	9:H:20:TYR:H	2.14	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:11:LYS:C	15:N:13:THR:H	2.14	0.56
15:N:31:ARG:HD3	15:N:31:ARG:N	2.21	0.56
21:T:53:LEU:O	21:T:54:LYS:C	2.48	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:A:222:U:H2'	1:A:223:U:H6	1.71	0.56
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
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:39:LEU:HD13	15:N:40:CYS:O	2.06	0.56
16:O:11:VAL:O	16:O:15:PHE:HD1	1.88	0.56
16:O:12:ILE:C	16:O:14:GLU:H	2.14	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
19:R:59:SER:C	19:R:61:LYS:H	2.13	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: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
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:2:LEU:HD23	9:H:2:LEU:C	2.31	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:M:31:LYS:C	14:M:33:ALA:H	2.13	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
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
4:C:180:ALA:C	4:C:182:ILE:H	2.14	0.55
5:D:73:ARG:O	5:D:77:ASN:ND2	2.39	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
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: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:10:LEU:C	3:B:12:GLU:N	2.64	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
10:I:50:LEU:CG	10:I:81:ILE:HB	2.36	0.55
13:L:28:LYS:O	13:L:28:LYS:HG2	2.04	0.55
14:M:70:LEU:C	14:M:70:LEU:CD2	2.79	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
5:D:165:MET:HE2	5:D:176:LEU:CD2	2.37	0.55
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:51:GLU:HA	21:T:54:LYS:CB	2.34	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
4:C:11:ARG:O	4:C:12:LEU:C	2.49	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:9:MET:HE1	9:H:32:LYS:C	2.31	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
16:O:52:SER:O	16:O:53:HIS:C	2.49	0.55
19:R:25:THR:O	19:R:26:LEU:HD13	2.07	0.55
21:T:57:ARG:O	21:T:58:LYS:C	2.50	0.55
21:T:102:GLY:C	21:T:104:LEU:H	2.14	0.55
22:V:6:ARG:O	22:V:7:ARG:C	2.50	0.55
1:A:1157:A:H61	1:A:1178:G:H1'	1.70	0.55
3:B:29:ALA:C	3:B:31:TYR:H	2.15	0.55
4:C:178:LEU:O	4:C:179:ARG:HB2	2.06	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:H	3:B:24:TRP:HD1	1.53	0.55
5:D:124:GLY:C	5:D:126:ILE:N	2.63	0.55
5:D:173:TRP:C	5:D:186:LEU:HD12	2.31	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
9:H:11:THR:O	9:H:12:ARG:C	2.49	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
20:S:5:LEU:HD11	20:S:70:LYS:NZ	2.20	0.55
21:T:86:ARG:O	21:T:87:LYS:C	2.50	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:76:ILE:O	6:E:93:PRO:HB3	2.06	0.55
11:J:95:GLU:CD	11:J:95:GLU:C	2.75	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:K:110:ASP:HB3	19:R:85:LEU:HB3	1.88	0.55
16:O:56:LEU:O	16:O:57:LEU:C	2.50	0.55
17:P:52:ASP:O	17:P:55:ARG:HB2	2.06	0.55
17:P:55:ARG:O	17:P:56:ALA:C	2.50	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
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
3:B:131:PRO:C	3:B:133:LYS:H	2.15	0.55
5:D:109:GLY:C	5:D:111:ALA:H	2.15	0.55
5:D:114:ARG:HH11	5:D:114:ARG:CG	2.20	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
14:M:39:ILE:O	14:M:40:ASN:C	2.50	0.55
18:Q:13:ASP:O	18:Q:15:MET:N	2.36	0.55
20:S:67:VAL:C	20:S:69:HIS:N	2.63	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
5:D:178:VAL:C	5:D:180:GLY:N	2.62	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
14:M:17:VAL:O	14:M:18:ALA:C	2.50	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:43:ALA:N	10:I:74:ILE:HD13	2.22	0.54
10:I:100:GLY:C	10:I:102:LEU:N	2.60	0.54
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
21:T:79:ARG:O	21:T:80:ARG:C	2.50	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
6:E:36:ASP:O	6:E:37:ARG:HB2	2.07	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
13:L:46:LYS:O	13:L:47:LYS:C	2.50	0.54
14:M:37:THR:C	14:M:39:ILE:H	2.15	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
19:R:30:ASP:C	19:R:32:ARG:H	2.16	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:25:ASN:C	3:B:25:ASN:ND2	2.64	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
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
3:B:118:LEU:C	3:B:120:ALA:N	2.66	0.54
5:D:165:MET:CE	5:D:176:LEU:HD23	2.37	0.54
6:E:51:VAL:O	6:E:52:PRO:C	2.50	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:56:GLN:H	8:G:56:GLN:CD	2.14	0.54
8:G:95:ARG:C	8:G:97:GLN:N	2.63	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
17:P:50:LYS:C	17:P:51:VAL:HG23	2.33	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: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
8:G:132:GLY:O	8:G:133:GLY:C	2.51	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:H:4:ASP:OD1	9:H:85:ARG:NH1	2.41	0.54
11:J:77:PRO:C	11:J:81:THR:HB	2.32	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
17:P:50:LYS:O	17:P:51:VAL:CG2	2.56	0.54
17:P:61:SER:C	17:P:62:VAL:HG22	2.33	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: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
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
4:C:125:GLU:C	4:C:127:ARG:H	2.14	0.54
5:D:34:GLU:O	5:D:35:ARG:CB	2.56	0.54
6:E:127:ASN:C	6:E:127:ASN:OD1	2.50	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
20:S:22:LEU:HD22	20:S:28:LYS:HD2	1.90	0.54
21:T:15:ARG:C	21:T:18:GLN:HB2	2.33	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: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
8:G:18:TYR:OH	8:G:58:PRO:HG2	2.07	0.54
8:G:39:ALA:O	8:G:40:ALA:C	2.50	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
14:M:74:VAL:HA	14:M:77:ASN:HB3	1.90	0.54
15:N:51:GLY:C	15:N:53:LEU:N	2.64	0.54
18:Q:80:GLY:O	18:Q:81:ARG:HB2	2.06	0.54
18:Q:92:ARG:C	18:Q:94:ASN:N	2.65	0.54
18:Q:96:GLN:HB3	18:Q:103:GLY:CA	2.38	0.54
19:R:30:ASP:C	19:R:32:ARG:N	2.64	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
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:26:PHE:O	8:G:27:ILE:C	2.51	0.54
8:G:141:VAL:HG13	8:G:142:GLU:N	2.22	0.54
16:O:15:PHE:O	16:O:16:ALA:C	2.50	0.54
17:P:39:TYR:CE2	17:P:41:PRO:HA	2.43	0.54
17:P:42:ARG:O	17:P:43:LYS:C	2.50	0.54
18:Q:69:LYS:H	18:Q:70:ARG:NH1	2.05	0.54
19:R:37:VAL:C	19:R:41:LYS:HE3	2.32	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
8:G:102:ARG:O	8:G:103:TRP:C	2.51	0.54
9:H:45:ILE:HD12	9:H:45:ILE:C	2.33	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
13:L:113:ARG:HD3	13:L:114:LYS:N	2.23	0.54
17:P:23:ASP:C	17:P:25:ARG:N	2.65	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:787:A:C5	1:A:788:U:N3	2.76	0.53
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:51:LEU:O	3:B:52:GLU:C	2.50	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:150:GLU:C	5:D:152:SER:H	2.16	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
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
21:T:70:SER:O	21:T:71:THR:C	2.49	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
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
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
5:D:163:GLU:C	5:D:165:MET:H	2.17	0.53
6:E:12:LEU:HD22	6:E:12:LEU:C	2.33	0.53
7:F:15:ASP:CG	7:F:18:GLN:HB3	2.33	0.53
10:I:97:LYS:C	10:I:99:LEU:N	2.67	0.53
17:P:19:ILE:HG22	17:P:36:ILE:HG13	1.90	0.53
18:Q:58:GLU:C	18:Q:59:ILE:HD13	2.34	0.53
18:Q:66:SER:HB3	18:Q:69:LYS:HB3	1.89	0.53
18:Q:98:LEU:HD12	18:Q:98:LEU:H	1.74	0.53
21:T:8:ARG:HG3	21:T:9:ASN:CG	2.34	0.53
21:T:16:HIS:O	21:T:17:ARG:C	2.51	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
7:F:26:ILE:O	7:F:27:GLN:C	2.52	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
1:A:1347:G:HO2'	1:A:1348:U:P	2.32	0.53
3:B:180:LEU:HB2	3:B:182:ILE:HD11	1.91	0.53
9:H:9:MET:O	9:H:10:LEU:C	2.52	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
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
4:C:29:TYR:N	4:C:32:LEU:HD12	2.19	0.53
4:C:139:GLN:O	4:C:140:ARG:C	2.51	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: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
8:G:98:SER:O	8:G:99:LEU:C	2.51	0.53
8:G:125:MET:C	8:G:127:ALA:N	2.66	0.53
9:H:4:ASP:CG	9:H:85:ARG:NH1	2.67	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
17:P:20:VAL:C	17:P:21:VAL:HG23	2.33	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
4:C:83:ARG:C	4:C:85:ARG:H	2.17	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
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:28:GLY:O	15:N:29:ARG:C	2.52	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
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
18:Q:18:THR:HG23	18:Q:69:LYS:HZ2	1.73	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
4:C:51:GLY:C	4:C:53:ALA:H	2.16	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
17:P:39:TYR:CE2	17:P:41:PRO:N	2.77	0.53
21:T:44:ALA:O	21:T:45:GLN:C	2.51	0.53
1:A:254:G:H5''	18:Q:69:LYS:HD3	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:A:1250:A:H4'	10:I:68:GLY:C	2.34	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
3:B:118:LEU:C	3:B:120:ALA:H	2.16	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
8:G:109:ASN:C	8:G:111:ARG:N	2.66	0.53
12:K:48:ILE:HD12	12:K:64:ALA:HA	1.91	0.53
15:N:36:PHE:C	15:N:36:PHE:CD1	2.86	0.53
21:T:33:ILE:HD13	21:T:63:ILE:HA	1.91	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:26:LYS:C	4:C:28:GLN:H	2.16	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:82:ALA:O	5:D:83:SER:C	2.51	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
16:O:9:GLN:O	16:O:10:LYS:C	2.52	0.53
17:P:15:PRO:CG	17:P:41:PRO:HG2	2.38	0.53
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
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:22:ARG:O	21:T:23:ARG:C	2.51	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
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:31:HIS:C	4:C:33:LEU:N	2.66	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
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
15:N:4:LYS:C	15:N:6:LEU:N	2.68	0.52
17:P:2:VAL:C	17:P:64:ALA:HA	2.34	0.52
17:P:33:ILE:O	17:P:34:GLU:HB2	2.08	0.52
21:T:14:LYS:O	21:T:15:ARG:C	2.52	0.52
21:T:89:ARG:C	21:T:91:LEU:N	2.67	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
3:B:67:THR:HA	3:B:90:MET:HE1	1.91	0.52
3:B:148:TYR:C	3:B:150:SER:H	2.16	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:49:VAL:O	11:J:50:ILE:C	2.52	0.52
11:J:55:LYS:HG3	11:J:56:HIS:N	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
16:O:70:LEU:HD13	16:O:70:LEU:C	2.34	0.52
17:P:26:ARG:NE	17:P:31:LYS:O	2.43	0.52
21:T:57:ARG:C	21:T:59:ALA:N	2.65	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
8:G:32:ARG:C	8:G:34:GLY:H	2.16	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
1:A:1345:U:C4	1:A:1377:A:N3	2.77	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
12:K:54:ARG:HH11	12:K:54:ARG:CB	2.23	0.52
18:Q:9:VAL:HG13	18:Q:55:ASP:O	2.09	0.52
20:S:38:SER:HG	20:S:71:LEU:HD12	1.72	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
3:B:167:PRO:O	3:B:168:THR:C	2.52	0.52
4:C:29:TYR:H	4:C:32:LEU:CD1	2.20	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
8:G:106:GLN:C	8:G:108:ALA:H	2.18	0.52
11:J:77:PRO:HB2	11:J:82:ILE:HG12	1.90	0.52
13:L:47:LYS:O	13:L:48:PRO:C	2.53	0.52
14:M:66:LEU:N	14:M:66:LEU:HD12	2.24	0.52
17:P:10:GLY:HA3	17:P:15:PRO:C	2.34	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
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
5:D:109:GLY:C	5:D:111:ALA:N	2.66	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
9:H:125:ARG:O	9:H:126:LYS:C	2.53	0.52
11:J:64:GLU:N	15:N:59:ALA:HB2	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:M:51:ALA:C	14:M:54:VAL:HG12	2.35	0.52
16:O:17:ARG:CZ	16:O:77:ARG:HH11	2.21	0.52
1:A:229:U:O2'	17:P:23:ASP:OD2	2.27	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
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:128:VAL:C	5:D:130:GLY:H	2.18	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
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:69:LEU:HD13	3:B:69:LEU:C	2.34	0.52
3:B:74:LYS:O	3:B:78:GLN:N	2.43	0.52
3:B:74:LYS:C	3:B:78:GLN:HB2	2.35	0.52
4:C:27:LYS:HA	4:C:30:ARG:NH1	2.15	0.52
4:C:184:TYR:CG	4:C:185:GLY:N	2.67	0.52
5:D:59:ARG:O	5:D:60:GLU:C	2.53	0.52
5:D:196:LEU:HD23	5:D:197:PRO:HD2	1.91	0.52
5:D:202:LEU:O	5:D:203:VAL:C	2.53	0.52
7:F:6:VAL:HG22	7:F:90:VAL:HG13	1.91	0.52
7:F:19:LEU:HD23	7:F:19:LEU:C	2.35	0.52
9:H:4:ASP:OD2	9:H:7:ALA:N	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:L:111:LYS:O	13:L:112:ASP:HB3	2.09	0.52
15:N:46:GLU:O	15:N:49:HIS:HB2	2.09	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:116:VAL:C	4:C:119:ARG:HB3	2.35	0.51
4:C:188:LEU:HD11	4:C:195:VAL:CG1	2.40	0.51
5:D:96:LEU:O	5:D:97:LEU:C	2.51	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:14:PRO:HB2	8:G:19:GLY:C	2.35	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:753:A:C2	9:H:1:MET:HE2	2.45	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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: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:114:ARG:O	3:B:115:LEU:C	2.54	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
21:T:71:THR:C	21:T:72:LEU:HD23	2.36	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
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:55:ILE:O	21:T:57:ARG:N	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:254:G:H5''	18:Q:69:LYS:HD2	1.91	0.51
1:A:276:G:H5''	18:Q:15:MET:HE1	1.88	0.51
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:1153:C:P	11:J:13:HIS:NE2	2.84	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: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
9:H:53:VAL:O	9:H:54:ASP:HB3	2.10	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
5:D:103:ASN:O	5:D:104:VAL:C	2.50	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
14:M:82:MET:O	14:M:83:ASP:C	2.53	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:26:ARG:HH21	15:N:43:CYS:CB	2.22	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
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
3:B:219:VAL:C	3:B:221:LEU:N	2.69	0.51
4:C:42:LEU:C	4:C:44:GLU:H	2.19	0.51
5:D:178:VAL:O	5:D:180:GLY:N	2.43	0.51
6:E:108:ALA:O	6:E:109:ILE:C	2.54	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:9:MET:HG3	9:H:13:ILE:HD11	1.92	0.51
13:L:28:LYS:C	13:L:30:ALA:N	2.67	0.51
15:N:33:VAL:O	15:N:34:TYR:C	2.52	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
21:T:30:LYS:O	21:T:31:SER:C	2.54	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:61:TYR:O	6:E:62:ALA:C	2.52	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:59:TYR:O	14:M:63:THR:HG22	2.11	0.51
15:N:43:CYS:O	15:N:44:LEU:C	2.54	0.51
18:Q:94:ASN:C	18:Q:96:GLN:N	2.67	0.51
1:A:658:G:O2'	1:A:659:U:H5'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
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
17:P:56:ALA:O	17:P:57:ARG:C	2.54	0.51
18:Q:29:HIS:O	18:Q:30:PRO:C	2.54	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:79:ASP:C	3:B:82:ARG:H	2.18	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: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
6:E:144:THR:HG22	6:E:145:LYS:N	2.24	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
11:J:57:LYS:O	11:J:58:ASP:C	2.54	0.50
17:P:39:TYR:CE2	17:P:41:PRO:HG3	2.43	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:R:56:THR:O	19:R:58:LEU:HG	2.10	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:89:GLU:C	4:C:91:LEU:N	2.68	0.50
4:C:175:LEU:HD21	4:C:201:TYR:CE2	2.47	0.50
5:D:64:LEU:HD13	5:D:64:LEU:C	2.36	0.50
5:D:99:SER:O	5:D:140:VAL:HG23	2.11	0.50
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
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:28:LYS:O	13:L:29:GLY:C	2.53	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
17:P:23:ASP:O	17:P:24:ALA:HB3	2.11	0.50
21:T:86:ARG:HB3	21:T:90:GLN:CD	2.36	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:411:A:P	5:D:30:LYS:HZ2	2.34	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
9:H:104:ARG:O	9:H:105:ARG:C	2.53	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
11:J:92:THR:C	11:J:94:VAL:H	2.19	0.50
14:M:108:ARG:NH1	14:M:111:LYS:NZ	2.59	0.50
1:A:255:G:H1'	18:Q:16:GLN:OE1	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
5:D:68:TYR:CE2	5:D:97:LEU:HB3	2.47	0.50
5:D:150:GLU:C	5:D:152:SER:N	2.69	0.50
5:D:152:SER:O	5:D:155:LEU:N	2.35	0.50
6:E:40:ARG:HG2	6:E:68:GLU:OE1	2.11	0.50
8:G:148:ASN:O	8:G:150:ALA:N	2.45	0.50
9:H:4:ASP:O	9:H:5:PRO:C	2.52	0.50
11:J:14:LYS:O	11:J:17:ASP:HB3	2.11	0.50
11:J:14:LYS:C	11:J:17:ASP:HB3	2.37	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:6:THR:O	13:L:7:ILE:C	2.55	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:1346:A:O2'	1:A:1347:G:OP2	2.29	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:132:ARG:C	4:C:134:ILE:N	2.68	0.50
4:C:151:VAL:CG1	4:C:198:VAL:HG11	2.28	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
12:K:46:GLY:C	12:K:48:ILE:H	2.18	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:55:ILE:O	21:T:56:MET:C	2.54	0.50
1:A:54:C:O2'	1:A:55:A:H5'	2.12	0.50
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: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
5:D:199:ASN:O	5:D:200:GLU:C	2.54	0.50
6:E:116:THR:HG23	6:E:117:ASP:OD2	2.11	0.50
10:I:42:ARG:O	10:I:43:ALA:C	2.55	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:134:GLU:C	3:B:136:VAL:N	2.69	0.50
4:C:172:ARG:NH1	4:C:174:PRO:HD3	2.27	0.50
5:D:127:THR:OG1	5:D:130:GLY:O	2.30	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
15:N:8:GLU:C	15:N:10:ALA:N	2.66	0.50
17:P:53:VAL:O	17:P:54:GLU:C	2.54	0.50
17:P:57:ARG:CZ	17:P:79:VAL:O	2.59	0.50
17:P:76:GLN:C	17:P:78:GLY:N	2.70	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
1:A:1450:U:O2'	1:A:1451:A:C8	2.64	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
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:1414:U:O2'	1:A:1415:G:H5'	2.11	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:O:87:ILE:CG2	16:O:88:ARG:N	2.74	0.50
17:P:1:MET:HE3	17:P:3:LYS:CG	2.42	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
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
8:G:62:PHE:C	8:G:63:LYS:HZ2	2.20	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
14:M:96:LEU:CD2	14:M:111:LYS:HD3	2.42	0.49
16:O:50:HIS:C	16:O:52:SER:H	2.20	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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:167:PRO:HG2	3:B:168:THR:H	1.77	0.49
4:C:77:ILE:HG23	4:C:81:GLY:HA2	1.93	0.49
6:E:141:GLN:O	6:E:142:LEU:C	2.55	0.49
7:F:22:GLU:C	7:F:24:GLU:H	2.18	0.49
7:F:22:GLU:C	7:F:24:GLU:N	2.68	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:151:TYR:HD2	8:G:153:HIS:HE1	1.60	0.49
9:H:5:PRO:HB3	9:H:32:LYS:HZ1	1.78	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
18:Q:53:LEU:HD12	18:Q:53:LEU:C	2.37	0.49
18:Q:97:SER:O	18:Q:98:LEU:C	2.54	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
3:B:141:GLU:O	3:B:142:LEU:C	2.55	0.49
4:C:202:ILE:CG2	4:C:204:LEU:HD21	2.43	0.49
5:D:54:TYR:O	5:D:55:ALA:C	2.55	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:58:LEU:HA	5:D:206:PHE:CD1	2.48	0.49
5:D:94:LEU:O	5:D:95:GLY:C	2.54	0.49
8:G:69:VAL:HG21	8:G:104:LEU:CD2	2.40	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
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
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
3:B:213:LEU:C	3:B:216:SER:HG	2.21	0.49
4:C:63:ASN:N	4:C:63:ASN:HD22	2.10	0.49
5:D:28:SER:O	5:D:29:PRO:C	2.54	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
7:F:52:ILE:HD11	19:R:77:GLY:HA3	1.94	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
18:Q:90:ILE:C	18:Q:92:ARG:N	2.68	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:A:1269:A:C4	1:A:1313:U:H1'	2.47	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
4:C:5:ILE:C	4:C:5:ILE:HD12	2.36	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
9:H:119:LEU:HD11	9:H:124:ALA:HA	1.94	0.49
12:K:11:LYS:O	12:K:12:ARG:HB3	2.12	0.49
14:M:78:ILE:C	14:M:80:ARG:H	2.18	0.49
18:Q:94:ASN:C	18:Q:96:GLN:H	2.20	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:51:GLY:C	4:C:53:ALA:N	2.70	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
5:D:177:ASP:C	5:D:179:GLU:N	2.68	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:62:PHE:C	8:G:63:LYS:NZ	2.70	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
10:I:112:LYS:HD3	10:I:112:LYS:C	2.37	0.49
11:J:35:SER:N	11:J:75:ILE:HG13	2.28	0.49
16:O:54:ARG:C	16:O:56:LEU:N	2.71	0.49
16:O:78:TYR:HD2	16:O:79:ARG:N	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:P:77:ALA:O	17:P:78:GLY:C	2.54	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
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
5:D:191:ARG:O	5:D:192:GLU:C	2.54	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
10:I:28:VAL:HG11	10:I:33:PHE:HD1	1.77	0.49
16:O:11:VAL:O	16:O:14:GLU:HB3	2.11	0.49
19:R:59:SER:OG	19:R:62:GLU:HG3	2.11	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: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
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
20:S:67:VAL:C	20:S:69:HIS:H	2.21	0.49
21:T:34:LYS:O	21:T:38:LYS:HG3	2.13	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: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:CD1	3:B:24:TRP:N	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
5:D:154:ASN:C	5:D:154:ASN:HD22	2.21	0.49
6:E:8:GLU:HB2	6:E:33:VAL:O	2.12	0.49
6:E:106:PRO:O	6:E:107:ARG:C	2.56	0.49
7:F:30:LEU:CB	7:F:35:ALA:HB3	2.42	0.49
8:G:25:ALA:O	8:G:26:PHE:C	2.56	0.49
8:G:32:ARG:C	8:G:34:GLY:N	2.70	0.49
10:I:116:LYS:HD3	10:I:120:ARG:C	2.38	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
19:R:21:LYS:HZ3	19:R:54:ARG:C	2.21	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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
6:E:144:THR:O	6:E:147:ASP:OD2	2.31	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:8:ASP:O	9:H:9:MET:C	2.56	0.48
9:H:20:TYR:C	9:H:21:LYS:O	2.55	0.48
9:H:58:TYR:C	9:H:59:LEU:HD12	2.38	0.48
9:H:90:GLY:O	9:H:91:ARG:HB2	2.12	0.48
9:H:121:ASP:O	9:H:122:ARG:C	2.55	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:62:SER:HG	13:L:64:TYR:HB2	1.78	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
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
4:C:132:ARG:C	4:C:134:ILE:H	2.20	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
9:H:31:PHE:O	9:H:32:LYS:C	2.56	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:39:THR:HG22	20:S:40:ILE:N	2.27	0.48
20:S:41:VAL:HG22	20:S:44:MET:SD	2.53	0.48
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: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
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
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
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
10:I:85:LEU:N	10:I:85:LEU:CD1	2.76	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
13:L:38:THR:O	13:L:40:VAL:HG23	2.13	0.48
17:P:10:GLY:O	17:P:11:SER:HB3	2.12	0.48
18:Q:29:HIS:HA	18:Q:36:ILE:HD11	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
4:C:45:LYS:HD3	4:C:45:LYS:C	2.38	0.48
4:C:47:LEU:O	4:C:48:TYR:C	2.56	0.48
4:C:111:LEU:HD21	4:C:144:SER:O	2.13	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
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
14:M:70:LEU:C	14:M:72:ALA:N	2.71	0.48
15:N:24:CYS:SG	15:N:39:LEU:C	2.96	0.48
17:P:23:ASP:O	17:P:23:ASP:OD1	2.30	0.48
20:S:43:GLU:C	20:S:45:VAL:N	2.72	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
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:144:SER:C	4:C:146:ALA:H	2.21	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
7:F:10:LEU:O	7:F:11:ASN:C	2.57	0.48
8:G:61:VAL:C	8:G:63:LYS:N	2.70	0.48
8:G:112:PRO:HG2	8:G:113:GLU:N	2.27	0.48
10:I:40:LEU:C	10:I:42:ARG:N	2.71	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:8:GLU:C	15:N:10:ALA:H	2.22	0.48
15:N:46:GLU:HA	15:N:49:HIS:CD2	2.47	0.48
16:O:10:LYS:HZ3	16:O:11:VAL:HA	1.78	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
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:1315:U:H2'	1:A:1316:G:O4'	2.13	0.48
3:B:57:PHE:O	3:B:58:ILE:C	2.54	0.48
4:C:34:LEU:HD13	4:C:34:LEU:C	2.39	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
5:D:180:GLY:O	5:D:182:LYS:NZ	2.40	0.48
8:G:26:PHE:O	8:G:29:LYS:N	2.47	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: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
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
5:D:66:ARG:O	5:D:67:ILE:C	2.57	0.48
6:E:97:GLY:O	6:E:98:THR:C	2.56	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
12:K:46:GLY:O	12:K:47:VAL:C	2.57	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:114:ARG:HD2	3:B:118:LEU:HG	1.95	0.48
4:C:85:ARG:O	4:C:86:VAL:C	2.57	0.48
5:D:96:LEU:N	5:D:96:LEU:HD12	2.29	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
14:M:80:ARG:C	14:M:82:MET:N	2.71	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
19:R:70:ILE:O	19:R:71:LYS:C	2.54	0.48
21:T:31:SER:O	21:T:32:ALA:C	2.57	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
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:25:ARG:C	5:D:27:TYR:N	2.71	0.47
6:E:53:LEU:HD22	6:E:57:LYS:CE	2.43	0.47
7:F:44:GLY:C	7:F:60:PHE:H	2.21	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
14:M:31:LYS:C	14:M:33:ALA:N	2.67	0.47
15:N:2:ALA:C	15:N:7:ILE:HD11	2.38	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
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: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
3:B:104:ASN:CG	3:B:107:THR:OG1	2.57	0.47
4:C:77:ILE:CD1	4:C:84:ILE:HD12	2.44	0.47
4:C:195:VAL:C	4:C:196:LEU:HD23	2.40	0.47
5:D:31:CYS:O	5:D:32:ALA:CB	2.62	0.47
5:D:79:PHE:C	5:D:79:PHE:CD2	2.91	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:14:LYS:HD3	11:J:14:LYS:C	2.39	0.47
11:J:15:THR:HG22	11:J:94:VAL:HG21	1.96	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
14:M:67:GLU:O	14:M:68:GLY:C	2.57	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:T:13:LEU:O	21:T:14:LYS:C	2.56	0.47
21:T:45:GLN:CG	21:T:91:LEU:HD21	2.43	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:652:U:O4	1:A:752:G:O2'	2.31	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
3:B:178:ARG:HH21	3:B:196:LEU:C	2.22	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
4:C:183:ASP:CG	4:C:184:TYR:N	2.72	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: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:78:GLN:C	13:L:80:HIS:N	2.73	0.47
13:L:97:ARG:HG3	13:L:98:TYR:HE1	1.76	0.47
16:O:48:LYS:H	16:O:48:LYS:HE3	1.79	0.47
16:O:52:SER:C	16:O:54:ARG:N	2.71	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
20:S:20:LEU:HD12	20:S:20:LEU:C	2.40	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:177:ALA:C	3:B:179:LYS:N	2.70	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
5:D:101:LEU:O	5:D:102:ASP:C	2.57	0.47
7:F:71:ARG:O	7:F:72:VAL:C	2.56	0.47
9:H:11:THR:C	9:H:13:ILE:N	2.70	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
5:D:149:ALA:O	5:D:150:GLU:C	2.56	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:27:ILE:O	8:G:28:ASN:C	2.56	0.47
8:G:95:ARG:O	8:G:97:GLN:N	2.47	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:J:46:ARG:NH1	11:J:64:GLU:HB3	2.27	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
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
5:D:163:GLU:C	5:D:165:MET:N	2.73	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
10:I:28:VAL:HG13	10:I:33:PHE:HA	1.97	0.47
10:I:33:PHE:C	10:I:35:GLU:N	2.73	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:28:ALA:C	14:M:30:ALA:H	2.21	0.47
14:M:39:ILE:HD12	14:M:56:LEU:CD2	2.43	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
18:Q:88:TYR:O	18:Q:89:LEU:C	2.57	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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:55:PHE:O	3:B:56:ARG:C	2.56	0.47
3:B:56:ARG:CB	3:B:56:ARG:NH1	2.77	0.47
3:B:92:TYR:CD2	3:B:92:TYR:C	2.91	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
6:E:153:LYS:HG2	6:E:154:GLY:N	2.30	0.47
7:F:19:LEU:C	7:F:21:LEU:H	2.22	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
8:G:57:GLU:C	8:G:59:LEU:N	2.73	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
9:H:106:GLY:C	9:H:107:LEU:HD23	2.39	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: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
3:B:12:GLU:CD	3:B:213:LEU:HD21	2.40	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
5:D:112:VAL:O	5:D:113:SER:HB2	2.15	0.47
5:D:191:ARG:HH12	5:D:200:GLU:HG2	1.80	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:49:GLY:H	2.23	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:58:LEU:O	5:D:59:ARG:C	2.58	0.47
5:D:152:SER:O	5:D:153:ARG:C	2.57	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:19:SER:O	21:T:20:LEU:C	2.57	0.47
21:T:38:LYS:O	21:T:39:LYS:C	2.57	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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: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
5:D:190:ASP:O	5:D:191:ARG:C	2.57	0.47
6:E:69:VAL:HG22	6:E:139:LEU:HB3	1.97	0.47
7:F:28:ARG:O	7:F:29:ALA:C	2.58	0.47
8:G:138:LYS:HZ1	8:G:142:GLU:CD	2.23	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:60:VAL:O	16:O:61:GLY:C	2.55	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
21:T:12:ALA:C	21:T:14:LYS:N	2.71	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: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
6:E:43:LEU:C	6:E:43:LEU:HD13	2.40	0.46
8:G:97:GLN:O	8:G:98:SER:C	2.58	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
10:I:80:GLY:C	10:I:82:ALA:N	2.71	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:115:PRO:C	12:K:117:ASN:H	2.23	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
1:A:19:C:O2	1:A:572:A:H2	1.97	0.46
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:139:LYS:O	3:B:143:GLU:HG3	2.15	0.46
4:C:120:VAL:O	4:C:121:ALA:C	2.57	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:7:ALA:O	9:H:8:ASP:C	2.58	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
13:L:102:ARG:C	13:L:104:VAL:H	2.23	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
16:O:84:LYS:O	16:O:85:LEU:C	2.58	0.46
20:S:18:LYS:HG2	20:S:31:ILE:HD12	1.96	0.46
21:T:13:LEU:C	21:T:13:LEU:CD1	2.85	0.46
21:T:40:ALA:HB2	21:T:55:ILE:HG22	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
3:B:95:GLN:C	3:B:96:ARG:CZ	2.88	0.46
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:35:ARG:C	19:R:37:VAL:H	2.22	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
4:C:48:TYR:C	4:C:48:TYR:CD1	2.94	0.46
5:D:65:ARG:HB2	5:D:75:PHE:HE1	1.80	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: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
16:O:30:ALA:O	16:O:31:LEU:C	2.59	0.46
16:O:79:ARG:O	16:O:80:ALA:C	2.57	0.46
16:O:86:GLY:C	16:O:87:ILE:HG13	2.41	0.46
1:A:148:G:C2	1:A:149:A:C8	3.03	0.46
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
5:D:20:TYR:C	5:D:22:LYS:N	2.71	0.46
5:D:104:VAL:O	5:D:105:VAL:C	2.59	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
8:G:62:PHE:CB	8:G:63:LYS:HZ1	2.28	0.46
8:G:63:LYS:C	8:G:65:ALA:N	2.72	0.46
11:J:26:ALA:CB	11:J:85:LEU:HB3	2.46	0.46
17:P:60:LEU:HD23	17:P:60:LEU:HA	1.76	0.46
19:R:39:VAL:O	19:R:40:LEU:C	2.58	0.46
22:V:2:GLY:O	22:V:3:LYS:C	2.59	0.46
1:A:35:G:C6	1:A:36:C:C4	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
3:B:151:GLY:C	3:B:153:ARG:N	2.70	0.46
4:C:7:PRO:O	4:C:11:ARG:CD	2.64	0.46
4:C:43:LEU:C	4:C:47:LEU:HD13	2.41	0.46
4:C:134:ILE:HG23	4:C:151:VAL:HB	1.97	0.46
5:D:150:GLU:CD	5:D:150:GLU:N	2.68	0.46
5:D:204:ILE:O	5:D:205:GLU:C	2.58	0.46
6:E:53:LEU:HD22	6:E:57:LYS:NZ	2.30	0.46
7:F:3:ARG:HG2	7:F:66:GLU:CG	2.46	0.46
7:F:40:VAL:HG23	7:F:62:TRP:C	2.41	0.46
8:G:12:LEU:H	8:G:12:LEU:CD1	2.11	0.46
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
13:L:7:ILE:O	13:L:10:LEU:HB2	2.16	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
19:R:61:LYS:O	19:R:62:GLU:C	2.58	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:119:A:O2'	1:A:120:A:OP2	2.23	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:565:U:OP2	1:A:566:G:O2'	2.33	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
11:J:48:THR:HG22	11:J:61:GLU:C	2.40	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
19:R:22:VAL:O	19:R:23:LYS:C	2.58	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
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:C	8:G:108:ALA:N	2.73	0.46
8:G:106:GLN:HE21	8:G:137:LYS:NZ	2.12	0.46
9:H:38:ILE:O	9:H:39:LEU:C	2.59	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
10:I:73:GLN:O	10:I:74:ILE:C	2.59	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
18:Q:74:LEU:HD23	18:Q:74:LEU:C	2.41	0.46
21:T:84:LEU:O	21:T:88:VAL:HG23	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
3:B:62:ALA:O	3:B:63:MET:C	2.58	0.46
3:B:167:PRO:C	3:B:169:LYS:N	2.71	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:103:ASN:O	5:D:106:TYR:N	2.46	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
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
14:M:15:VAL:O	14:M:16:ASP:C	2.57	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:59:ALA:O	21:T:60:GLU:C	2.58	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
3:B:177:ALA:O	3:B:178:ARG:C	2.58	0.46
4:C:20:SER:HB3	4:C:22:TRP:HE1	1.81	0.46
4:C:48:TYR:C	4:C:50:ALA:N	2.74	0.46
4:C:172:ARG:HH12	4:C:174:PRO:HD3	1.81	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
8:G:70:LYS:HZ2	8:G:96:GLN:CB	2.12	0.46
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:41:ARG:CG	13:L:42:THR:N	2.70	0.46
13:L:73:GLU:OE2	13:L:73:GLU:HA	2.17	0.46
13:L:114:LYS:CA	13:L:117:ARG:HH12	2.27	0.46
14:M:11:ARG:C	14:M:13:LYS:H	2.25	0.46
19:R:69:THR:O	19:R:70:ILE:C	2.58	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:80:GLU:O	5:D:81:GLU:C	2.59	0.45
5:D:158:ILE:HG22	5:D:181:MET:CE	2.45	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:H:54:ASP:O	9:H:54:ASP:CG	2.58	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
10:I:38:GLN:O	10:I:39:GLY:C	2.58	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
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:121:ASP:CG	9:H:122:ARG:H	2.24	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:40:ASN:HD22	14:M:40:ASN:C	2.22	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:55:GLY:C	9:H:56:LYS:HD2	2.41	0.45
9:H:104:ARG:HG3	9:H:138:TRP:CE3	2.51	0.45
10:I:104:ARG:C	10:I:104:ARG:CD	2.86	0.45
11:J:15:THR:C	11:J:17:ASP:N	2.71	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
16:O:50:HIS:C	16:O:52:SER:N	2.75	0.45
16:O:54:ARG:O	16:O:55:GLY:C	2.59	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
21:T:78:ALA:O	21:T:79:ARG:C	2.58	0.45
22:V:3:LYS:HB3	22:V:14:TRP:CB	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
3:B:111:ARG:O	3:B:112:VAL:C	2.58	0.45
4:C:101:LEU:HD23	4:C:101:LEU:C	2.41	0.45
4:C:155:GLY:C	4:C:156:ARG:HG2	2.41	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
3:B:144:ARG:O	3:B:145:LEU:C	2.59	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
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:44:THR:C	17:P:45:THR:CG2	2.89	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
3:B:25:ASN:O	3:B:26:PRO:C	2.59	0.45
3:B:151:GLY:C	3:B:153:ARG:H	2.24	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
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:113:HIS:ND1	3:B:113:HIS:C	2.74	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:63:LYS:O	5:D:64:LEU:C	2.60	0.45
12:K:17:GLY:N	12:K:77:MET:HE1	2.32	0.45
16:O:55:GLY:C	16:O:59:MET:HG2	2.41	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
21:T:23:ARG:O	21:T:24:LEU:C	2.58	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
4:C:12:LEU:C	4:C:14:ILE:H	2.25	0.45
4:C:26:LYS:C	4:C:28:GLN:N	2.75	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
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
13:L:27:LEU:C	13:L:29:GLY:N	2.75	0.45
13:L:91:LYS:O	13:L:92:ASP:C	2.60	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
4:C:142:MET:O	4:C:142:MET:HE3	2.17	0.45
5:D:79:PHE:HD2	5:D:79:PHE:C	2.24	0.45
5:D:162:LEU:HD13	5:D:181:MET:HE3	1.98	0.45
6:E:15:ARG:C	6:E:16:THR:O	2.59	0.45
8:G:102:ARG:C	8:G:104:LEU:N	2.74	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
9:H:125:ARG:C	9:H:128:GLY:H	2.25	0.45
10:I:18:PHE:C	10:I:19:LEU:HD12	2.42	0.45
10:I:40:LEU:O	10:I:41:VAL:C	2.60	0.45
10:I:89:ASN:C	10:I:91:ASP:N	2.75	0.45
13:L:108:ALA:O	13:L:109:GLY:C	2.59	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
17:P:64:ALA:O	17:P:65:GLN:C	2.60	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:60:ASP:C	3:B:62:ALA:H	2.24	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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:69:LEU:C	3:B:69:LEU:CD1	2.90	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
5:D:11:LEU:C	5:D:13:ARG:N	2.73	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:26:GLY:C	14:M:28:ALA:N	2.74	0.44
14:M:57:ARG:O	14:M:61:GLU:HB2	2.17	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
20:S:45:VAL:C	20:S:47:HIS:H	2.24	0.44
21:T:10:LEU:C	21:T:12:ALA:N	2.71	0.44
1:A:52:G:O2'	1:A:53:A:H5'	2.17	0.44
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:166:ASP:CG	3:B:205:ASP:HB2	2.42	0.44
4:C:9:GLY:C	4:C:11:ARG:N	2.66	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
11:J:34:VAL:C	11:J:75:ILE:HG13	2.43	0.44
11:J:56:HIS:C	11:J:57:LYS:O	2.56	0.44
12:K:67:ASP:OD1	12:K:67:ASP:C	2.60	0.44
13:L:115:LYS:CD	13:L:116:SER:H	2.24	0.44
15:N:9:LYS:C	15:N:9:LYS:CD	2.86	0.44
16:O:12:ILE:C	16:O:14:GLU:N	2.76	0.44
17:P:69:THR:O	17:P:72:ARG:HB3	2.17	0.44
21:T:84:LEU:C	21:T:84:LEU:CD1	2.88	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:12:LEU:C	4:C:14:ILE:N	2.75	0.44
4:C:70:VAL:HG12	4:C:72:LYS:C	2.42	0.44
4:C:113:ALA:N	4:C:202:ILE:HD12	2.25	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:177:THR:O	4:C:177:THR:CG2	2.64	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
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
9:H:97:VAL:O	9:H:98:LYS:C	2.60	0.44
10:I:49:PRO:HG3	10:I:81:ILE:HG13	1.99	0.44
10:I:50:LEU:C	10:I:52:ALA:H	2.25	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
17:P:57:ARG:O	17:P:61:SER:HB3	2.17	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: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:55:ALA:O	5:D:56:VAL:C	2.61	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
16:O:21:ASP:OD2	16:O:21:ASP:C	2.60	0.44
18:Q:48:GLU:O	18:Q:50:LYS:N	2.50	0.44
19:R:36:ASN:ND2	19:R:36:ASN:C	2.74	0.44
19:R:43:PHE:C	19:R:51:LEU:HD12	2.42	0.44
21:T:47:GLY:C	21:T:49:ALA:N	2.75	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
4:C:183:ASP:C	4:C:183:ASP:OD1	2.58	0.44
5:D:115:ARG:O	5:D:116:GLN:C	2.61	0.44
5:D:155:LEU:HD23	5:D:155:LEU:C	2.42	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
7:F:78:GLU:C	7:F:80:ARG:H	2.25	0.44
7:F:89:MET:HE2	19:R:76:LEU:HD23	1.99	0.44
8:G:17:VAL:CG1	8:G:18:TYR:N	2.72	0.44
8:G:21:VAL:O	8:G:22:LEU:C	2.61	0.44
8:G:106:GLN:HE21	8:G:137:LYS:HZ2	1.64	0.44
9:H:11:THR:O	9:H:13:ILE:N	2.50	0.44
10:I:117:HIS:C	10:I:118:LYS:CG	2.90	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
16:O:81:LEU:C	16:O:81:LEU:CD2	2.90	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:61:TYR:C	20:S:61:TYR:CD2	2.94	0.44
21:T:20:LEU:O	21:T:21:LYS:C	2.59	0.44
22:V:23:PRO:C	22:V:24:ARG:HD3	2.41	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
3:B:144:ARG:HG3	3:B:145:LEU:N	2.31	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
8:G:94:ARG:HD3	8:G:94:ARG:C	2.42	0.44
10:I:72:GLY:O	10:I:73:GLN:C	2.60	0.44
13:L:126:LYS:HE3	13:L:126:LYS:C	2.43	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
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:138:VAL:O	4:C:142:MET:N	2.29	0.44
4:C:191:THR:C	4:C:193:TYR:H	2.25	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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:86:ILE:HG21	9:H:133:LEU:HB3	1.99	0.44
9:H:119:LEU:HD12	9:H:123:GLU:C	2.42	0.44
10:I:15:ALA:HA	10:I:65:VAL:HA	2.00	0.44
11:J:6:ILE:O	11:J:71:LEU:CA	2.63	0.44
13:L:36:VAL:C	13:L:58:VAL:HG13	2.42	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
16:O:6:GLU:O	16:O:7:GLU:C	2.60	0.44
18:Q:53:LEU:HG	18:Q:82:MET:HE1	1.99	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
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
3:B:169:LYS:C	3:B:169:LYS:CD	2.91	0.44
3:B:208:ILE:O	3:B:209:ARG:C	2.61	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
8:G:136:LYS:HD2	8:G:136:LYS:C	2.43	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
11:J:18:ALA:C	11:J:20:ALA:N	2.72	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
13:L:115:LYS:O	13:L:116:SER:C	2.60	0.44
13:L:119:LYS:C	13:L:120:TYR:CG	2.96	0.44
14:M:37:THR:HG21	14:M:56:LEU:CD2	2.47	0.44
14:M:38:GLY:O	14:M:39:ILE:C	2.59	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
20:S:72:GLY:C	20:S:74:PHE:N	2.73	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
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
5:D:206:PHE:CD2	5:D:206:PHE:C	2.96	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
15:N:43:CYS:C	15:N:47:LEU:HB2	2.43	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:8:LEU:C	11:J:16:LEU:HD12	2.43	0.43
11:J:77:PRO:HG2	11:J:82:ILE:HD11	2.00	0.43
14:M:62:ASN:HD22	14:M:62:ASN:C	2.26	0.43
14:M:116:THR:HG22	14:M:117:VAL:N	2.32	0.43
16:O:36:ILE:CD1	16:O:63:ARG:HD3	2.45	0.43
16:O:71:GLN:C	16:O:71:GLN:CD	2.85	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
21:T:12:ALA:C	21:T:14:LYS:H	2.25	0.43
22:V:13:ILE:O	22:V:14:TRP:C	2.59	0.43
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:101:MET:HE3	3:B:108:ILE:HG21	1.99	0.43
3:B:114:ARG:CD	3:B:118:LEU:HG	2.47	0.43
3:B:180:LEU:C	3:B:182:ILE:HD12	2.43	0.43
3:B:219:VAL:CG2	3:B:222:ILE:HD12	2.45	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
6:E:152:ARG:O	9:H:64:LYS:NZ	2.37	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
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
13:L:120:TYR:C	13:L:122:THR:H	2.26	0.43
14:M:2:ALA:O	14:M:10:PRO:HD2	2.17	0.43
14:M:79:LYS:O	14:M:82:MET:HB2	2.18	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
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
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: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: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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
9:H:110:ALA:CB	9:H:121:ASP:HB3	2.48	0.43
10:I:111:ARG:HH12	10:I:113:LYS:HA	1.83	0.43
12:K:44:SER:H	12:K:47:VAL:CB	2.31	0.43
14:M:15:VAL:C	14:M:17:VAL:N	2.75	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
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:133:ALA:HA	4:C:136:GLN:CD	2.44	0.43
5:D:57:ARG:O	5:D:58:LEU:C	2.60	0.43
6:E:30:ALA:HB3	6:E:46:GLY:C	2.43	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
15:N:47:LEU:C	15:N:49:HIS:N	2.76	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:S:15:LEU:HD12	20:S:15:LEU:C	2.43	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:364:A:N6	13:L:28:LYS:HZ2	2.17	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:HZ1	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: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: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
6:E:128:PRO:O	6:E:129:ILE:C	2.58	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
7:F:19:LEU:C	7:F:21:LEU:N	2.74	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:102:G:C5	1:A:103:C:C5	3.07	0.43
1:A:103:C:O2'	1:A:172:A:N1	2.51	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:518:C:HO2'	1:A:519:C:P	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:1153:C:OP1	11:J:13:HIS:NE2	2.51	0.43
1:A:1255:G:C8	1:A:1279:A:N6	2.86	0.43
3:B:80:ILE:C	3:B:82:ARG:N	2.76	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:47:ARG:HD3	5:D:48:ALA:N	2.34	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
8:G:116:ALA:O	8:G:117:ALA:C	2.62	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
11:J:40:LEU:HB3	11:J:69:ASN:CB	2.43	0.43
16:O:21:ASP:OD1	16:O:24:SER:CB	2.66	0.43
16:O:78:TYR:O	16:O:79:ARG:C	2.61	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:127:ARG:O	4:C:128:PHE:C	2.61	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
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
10:I:77:ILE:O	10:I:78:LYS:C	2.62	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
14:M:24:GLY:C	14:M:25:ILE:HG13	2.44	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
16:O:88:ARG:C	16:O:88:ARG:CD	2.92	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
20:S:19:VAL:C	20:S:21:GLU:H	2.26	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
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:17:PHE:CD1	3:B:17:PHE:C	2.94	0.43
3:B:83:MET:O	3:B:87:ARG:HB2	2.19	0.43
3:B:175:ARG:HB3	3:B:175:ARG:CZ	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
4:C:52:LEU:HD21	4:C:118:GLN:CD	2.43	0.43
4:C:125:GLU:C	4:C:127:ARG:N	2.75	0.43
4:C:191:THR:C	4:C:193:TYR:N	2.75	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
8:G:134:ALA:C	8:G:136:LYS:N	2.76	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:54:PRO:C	15:N:56:VAL:N	2.75	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
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
11:J:26:ALA:HB3	11:J:85:LEU:CD2	2.44	0.43
11:J:34:VAL:C	11:J:36:GLY:H	2.26	0.43
13:L:84:LEU:HB3	13:L:101:VAL:CG2	2.49	0.43
14:M:56:LEU:O	14:M:57:ARG:C	2.62	0.43
16:O:32:LEU:O	16:O:35:ARG:N	2.52	0.43
18:Q:24:GLU:HG2	18:Q:37:LYS:HE3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
20:S:67:VAL:O	20:S:68:GLY:C	2.62	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
4:C:10:PHE:C	4:C:11:ARG:HG3	2.44	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
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
6:E:105:VAL:CG1	6:E:132:ALA:HB2	2.49	0.43
6:E:149:GLU:O	6:E:150:ARG:C	2.60	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
10:I:36:TYR:C	10:I:37:PHE:CD1	2.97	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
16:O:43:LEU:CD1	16:O:53:HIS:HA	2.49	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
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
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
8:G:138:LYS:HD3	8:G:139:GLU:H	1.79	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
14:M:62:ASN:C	14:M:62:ASN:ND2	2.76	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
16:O:70:LEU:C	16:O:70:LEU:CD1	2.91	0.42
17:P:44:THR:C	17:P:45:THR:HG23	2.44	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
19:R:75:ILE:C	19:R:77:GLY:N	2.72	0.42
21:T:41:ILE:C	21:T:43:LEU:N	2.75	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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: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
12:K:95:ILE:H	12:K:95:ILE:CD1	2.14	0.42
13:L:27:LEU:C	13:L:29:GLY:H	2.27	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:7:VAL:N	3:B:8:LYS:HZ3	2.17	0.42
3:B:101:MET:HA	3:B:101:MET:HE2	2.02	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:190:ARG:HH11	4:C:190:ARG:CB	2.30	0.42
5:D:177:ASP:C	5:D:179:GLU:H	2.26	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: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:97:LYS:O	10:I:99:LEU:N	2.52	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
19:R:16:PRO:C	19:R:18:ARG:N	2.75	0.42
19:R:36:ASN:C	19:R:36:ASN:HD22	2.25	0.42
19:R:46:GLU:H	19:R:46:GLU:CD	2.26	0.42
20:S:47:HIS:O	20:S:48:THR:HB	2.18	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
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:1288:A:H1'	1:A:1352:C:HO2'	1.83	0.42
1:A:1289:A:N1	1:A:1371:G:O2'	2.42	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
3:B:238:LEU:C	3:B:239:VAL:HG23	2.45	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
19:R:76:LEU:O	19:R:77:GLY:C	2.61	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
21:T:55:ILE:C	21:T:57:ARG:N	2.75	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
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
11:J:25:GLU:O	11:J:26:ALA:C	2.63	0.42
12:K:34:ASP:C	12:K:36:ASP:H	2.26	0.42
18:Q:54:GLY:HA3	18:Q:82:MET:SD	2.59	0.42
19:R:21:LYS:NZ	19:R:54:ARG:C	2.77	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:60:ASP:C	3:B:62:ALA:N	2.78	0.42
3:B:126:GLU:O	3:B:127:ILE:C	2.62	0.42
3:B:215:LEU:O	3:B:218:ALA:HB3	2.19	0.42
5:D:5:ILE:O	5:D:5:ILE:HG22	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
6:E:15:ARG:C	6:E:16:THR:HG22	2.45	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: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:75:ILE:O	11:J:76:ASN:C	2.63	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
12:K:69:ALA:O	12:K:70:LYS:C	2.60	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:3:LYS:HA	17:P:64:ALA:C	2.45	0.42
17:P:64:ALA:O	17:P:66:PRO:N	2.52	0.42
18:Q:87:LYS:O	18:Q:88:TYR:C	2.62	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
19:R:88:LYS:OXT	19:R:88:LYS:HG3	2.19	0.42
20:S:78:ARG:CG	20:S:78:ARG:HH11	2.32	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
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
3:B:239:VAL:O	3:B:240:GLN:C	2.61	0.42
5:D:150:GLU:O	5:D:152:SER:N	2.52	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
11:J:65:LEU:HD23	11:J:65:LEU:C	2.44	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
8:G:151:TYR:C	8:G:153:HIS:H	2.28	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
14:M:16:ASP:HB2	14:M:31:LYS:HZ1	1.83	0.42
17:P:39:TYR:CD2	17:P:39:TYR:C	2.98	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
8:G:35:LYS:C	8:G:37:ASN:N	2.78	0.42
8:G:62:PHE:O	8:G:66:VAL:HG23	2.19	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
11:J:12:ASP:CG	11:J:13:HIS:N	2.78	0.42
17:P:21:VAL:CG1	17:P:33:ILE:HD11	2.44	0.42
21:T:75:ASN:C	21:T:77:ALA:N	2.77	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: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
1:A:1404:C:H1'	1:A:1499:A:N1	2.35	0.42
3:B:60:ASP:CG	3:B:64:ARG:HH12	2.26	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:22:LYS:O	5:D:23:GLY:C	2.63	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:112:PRO:CG	8:G:113:GLU:H	2.31	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:K:52:GLY:O	12:K:53:SER:C	2.63	0.42
12:K:110:ASP:OD1	12:K:110:ASP:C	2.63	0.42
13:L:33:ARG:HA	13:L:33:ARG:HD2	1.60	0.42
14:M:18:ALA:O	14:M:19:LEU:C	2.63	0.42
15:N:2:ALA:HB2	15:N:27:CYS:O	2.20	0.42
16:O:47:LYS:O	16:O:48:LYS:C	2.63	0.42
18:Q:48:GLU:O	18:Q:49:GLU:C	2.63	0.42
18:Q:60:ILE:O	18:Q:71:PHE:CD1	2.73	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:172:ILE:N	3:B:172:ILE:CD1	2.83	0.41
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
8:G:81:GLY:O	8:G:82:GLY:C	2.63	0.41
8:G:120:ILE:O	8:G:121:ALA:C	2.62	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
12:K:53:SER:O	12:K:54:ARG:C	2.63	0.41
13:L:40:VAL:O	13:L:40:VAL:CG1	2.67	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:45:SER:C	19:R:47:THR:N	2.74	0.41
21:T:57:ARG:HH12	21:T:100:ILE:HD11	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:115:G:O5'	1:A:115:G:H8	2.03	0.41
1:A:192:U:H5'	21:T:102:GLY:C	2.45	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
3:B:231:GLU:C	3:B:231:GLU:CD	2.88	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: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
8:G:14:PRO:O	8:G:15:ASP:HB2	2.19	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:37:THR:C	14:M:39:ILE:N	2.79	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
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:33:ILE:O	21:T:34:LYS:C	2.63	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
9:H:103:VAL:O	9:H:104:ARG:C	2.64	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
14:M:62:ASN:O	14:M:63:THR:HB	2.20	0.41
15:N:3:ARG:O	15:N:6:LEU:N	2.46	0.41
15:N:37:PHE:C	15:N:39:LEU:H	2.22	0.41
15:N:48:ALA:C	15:N:50:LYS:N	2.78	0.41
16:O:74:ASP:O	16:O:75:PRO:C	2.64	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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:105:PHE:C	3:B:107:THR:H	2.27	0.41
3:B:176:GLU:O	3:B:179:LYS:O	2.39	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
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
8:G:134:ALA:O	8:G:136:LYS:N	2.54	0.41
9:H:96:GLY:O	9:H:97:VAL:C	2.62	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
15:N:36:PHE:C	15:N:36:PHE:HD1	2.28	0.41
16:O:48:LYS:H	16:O:48:LYS:HE2	1.83	0.41
17:P:28:ARG:HG3	17:P:29:ASP:N	2.34	0.41
17:P:65:GLN:HA	17:P:66:PRO:HD2	1.95	0.41
18:Q:21:VAL:O	18:Q:22:LEU:C	2.61	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
21:T:41:ILE:O	21:T:42:GLN:C	2.63	0.41
21:T:42:GLN:C	21:T:42:GLN:HE21	2.29	0.41
21:T:67:ALA:HB2	21:T:77:ALA:HB2	2.02	0.41
21:T:102:GLY:O	21:T:104:LEU:N	2.50	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
5:D:52:SER:O	5:D:53:ASP:C	2.64	0.41
5:D:100:ARG:O	5:D:101:LEU:C	2.64	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
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
13:L:112:ASP:O	13:L:113:ARG:HB3	2.20	0.41
13:L:119:LYS:C	13:L:120:TYR:CD2	2.99	0.41
14:M:26:GLY:C	14:M:28:ALA:H	2.29	0.41
14:M:91:ARG:O	14:M:110:ARG:NH2	2.53	0.41
15:N:45:ARG:C	15:N:47:LEU:N	2.77	0.41
18:Q:74:LEU:C	18:Q:74:LEU:CD2	2.93	0.41
19:R:35:ARG:C	19:R:37:VAL:N	2.79	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:322:C:HO2'	1:A:323:U:H5'	1.84	0.41
1:A:499:A:C4	1:A:547:A:N6	2.88	0.41
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
5:D:79:PHE:O	5:D:79:PHE:CD2	2.66	0.41
6:E:14:ARG:HG3	6:E:29:GLY:HA3	2.02	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:50:ARG:C	9:H:51:VAL:CG2	2.93	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:28:ALA:C	14:M:30:ALA:N	2.79	0.41
14:M:40:ASN:ND2	14:M:41:PRO:N	2.62	0.41
15:N:31:ARG:C	15:N:33:VAL:N	2.73	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
19:R:61:LYS:O	19:R:64:ARG:HB3	2.20	0.41
21:T:40:ALA:HB2	21:T:55:ILE:CG2	2.50	0.41
21:T:102:GLY:C	21:T:104:LEU:N	2.78	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
3:B:20:GLU:OE2	3:B:205:ASP:OD1	2.39	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
4:C:203:PHE:C	4:C:204:LEU:HG	2.45	0.41
5:D:25:ARG:C	5:D:27:TYR:H	2.28	0.41
5:D:152:SER:OG	5:D:155:LEU:HD12	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
12:K:95:ILE:C	12:K:97:ALA:N	2.79	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
17:P:71:ARG:HH11	17:P:71:ARG:CB	2.33	0.41
18:Q:95:TYR:O	18:Q:96:GLN:C	2.64	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: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:1188:A:OP1	10:I:114:TYR:OH	2.36	0.41
1:A:1511:G:C2'	1:A:1512:U:H5'	2.51	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: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:8:GLU:OE2	6:E:8:GLU:O	2.38	0.41
6:E:75:THR:OG1	6:E:93:PRO:HA	2.20	0.41
9:H:15:ASN:O	9:H:16:ALA:C	2.63	0.41
9:H:103:VAL:CG1	9:H:108:GLY:HA3	2.51	0.41
9:H:118:VAL:C	9:H:119:LEU:HD23	2.46	0.41
10:I:70:LYS:HD3	10:I:73:GLN:NE2	2.36	0.41
12:K:73:MET:HE1	12:K:102:GLY:HA3	2.03	0.41
17:P:10:GLY:O	17:P:11:SER:CB	2.69	0.41
21:T:42:GLN:O	21:T:46:GLU:HG2	2.21	0.41
21:T:57:ARG:HH12	21:T:100:ILE:CD1	2.34	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
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:116:GLU:O	3:B:117:GLU:C	2.64	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:90:GLU:O	4:C:90:GLU:CD	2.63	0.41
4:C:110:ASN:O	4:C:111:LEU:CG	2.67	0.41
4:C:155:GLY:O	4:C:156:ARG:C	2.64	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:26:PHE:C	8:G:30:ILE:HD13	2.46	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
10:I:25:LYS:NZ	10:I:25:LYS:HB3	2.36	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
15:N:53:LEU:C	15:N:53:LEU:CD1	2.94	0.41
16:O:9:GLN:HA	16:O:12:ILE:HD12	2.03	0.41
16:O:39:LEU:O	16:O:40:SER:C	2.62	0.41
17:P:1:MET:O	17:P:2:VAL:C	2.64	0.41
17:P:48:TRP:HE3	17:P:48:TRP:C	2.28	0.41
17:P:71:ARG:HB2	17:P:71:ARG:HH11	1.86	0.41
17:P:78:GLY:C	17:P:80:PHE:H	2.27	0.41
18:Q:15:MET:HE3	18:Q:15:MET:HB2	1.96	0.41
18:Q:48:GLU:C	18:Q:50:LYS:N	2.77	0.41
18:Q:86:GLU:O	18:Q:87:LYS:C	2.61	0.41
18:Q:89:LEU:HA	18:Q:89:LEU:HD23	1.71	0.41
20:S:31:ILE:O	20:S:50:ALA:HB3	2.21	0.41
21:T:14:LYS:C	21:T:16:HIS:N	2.77	0.41
21:T:56:MET:HG3	21:T:84:LEU:HD11	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
3:B:194:PRO:O	3:B:195:ASP:C	2.64	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
7:F:76:ALA:C	7:F:78:GLU:N	2.77	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:61:VAL:C	8:G:63:LYS:H	2.29	0.41
8:G:72:ARG:HG2	8:G:142:GLU:OE1	2.22	0.41
8:G:84:ASN:O	8:G:84:ASN:CG	2.63	0.41
8:G:91:VAL:HG12	8:G:92:SER:H	1.84	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:22:LYS:HD2	11:J:22:LYS:C	2.46	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:J:30:SER:OG	11:J:81:THR:HA	2.21	0.41
12:K:40:ILE:HG23	12:K:75:TYR:CD2	2.55	0.41
16:O:32:LEU:C	16:O:34:LEU:N	2.78	0.41
17:P:72:ARG:O	17:P:73:LEU:C	2.64	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:1305:G:OP1	22:V:2:GLY:C	2.64	0.40
1:A:1397:C:OP2	6:E:24:ARG:NH2	2.53	0.40
3:B:14:GLY:C	3:B:15:VAL:CG2	2.94	0.40
3:B:80:ILE:C	3:B:82:ARG:H	2.28	0.40
3:B:95:GLN:HA	3:B:95:GLN:OE1	2.21	0.40
3:B:160:ASP:O	3:B:161:ALA:HB2	2.20	0.40
3:B:200:ILE:CG2	3:B:201:ILE:N	2.84	0.40
5:D:15:GLU:C	5:D:17:VAL:H	2.29	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
5:D:117:ALA:O	5:D:118:ARG:C	2.65	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
9:H:133:LEU:HD23	9:H:133:LEU:C	2.46	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
11:J:19:SER:C	11:J:22:LYS:NZ	2.78	0.40
11:J:80:LYS:C	11:J:82:ILE:H	2.29	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
21:T:36:LEU:C	21:T:36:LEU:HD13	2.46	0.40
1:A:36:C:HO2'	1:A:37:U:H5'	1.85	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:1316:G:H5'	15:N:17:LYS:HZ2	1.80	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:81:VAL:O	3:B:81:VAL:HG12	2.21	0.40
3:B:101:MET:HE2	3:B:108:ILE:HG21	1.98	0.40
3:B:136:VAL:HA	3:B:139:LYS:CG	2.50	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
16:O:78:TYR:CD2	16:O:78:TYR:C	2.99	0.40
17:P:3:LYS:HE3	17:P:65:GLN:O	2.22	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
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
1:A:716:A:O2'	1:A:717:C:H5'	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
3:B:148:TYR:C	3:B:150:SER:N	2.78	0.40
4:C:5:ILE:C	4:C:5:ILE:CD1	2.94	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:122:GLU:C	4:C:124:ILE:N	2.79	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:91:SER:C	5:D:93:PHE:N	2.79	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:40:ASN:C	14:M:40:ASN:ND2	2.78	0.40
14:M:96:LEU:O	14:M:110:ARG:NH1	2.54	0.40
20:S:80:TYR:O	20:S:81:ARG:C	2.64	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:220:ASP:OD2	3:B:220:ASP:C	2.62	0.40
4:C:35:GLU:CD	4:C:59:ARG:HH22	2.30	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:64:LEU:C	5:D:64:LEU:CD1	2.94	0.40
5:D:98:GLU:C	5:D:100:ARG:H	2.29	0.40
5:D:202:LEU:O	5:D:205:GLU:N	2.55	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:105:TYR:C	13:L:107:ALA:H	2.29	0.40
17:P:41:PRO:C	17:P:43:LYS:H	2.30	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:60:ASP:CG	3:B:64:ARG:NH1	2.79	0.40
3:B:71:VAL:HG11	3:B:170:GLU:HG2	2.04	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
8:G:37:ASN:C	8:G:39:ALA:N	2.78	0.40
9:H:121:ASP:O	9:H:124:ALA:N	2.55	0.40
12:K:40:ILE:CD1	12:K:77:MET:HE3	2.51	0.40
13:L:9:GLN:O	13:L:13:LYS:N	2.48	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
16:O:65:ARG:O	16:O:66:LEU:C	2.64	0.40
18:Q:69:LYS:N	18:Q:70:ARG:HH12	2.20	0.40
20:S:30:LEU:HD23	20:S:31:ILE:C	2.47	0.40
21:T:100:ILE:O	21:T:101:GLY:C	2.64	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
3	B	232/256 (91%)	134 (58%)	71 (31%)	27 (12%)	0	4
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	2
6	E	148/161 (92%)	98 (66%)	30 (20%)	20 (14%)	0	3
7	F	99/101 (98%)	56 (57%)	30 (30%)	13 (13%)	0	3
8	G	153/155 (99%)	68 (44%)	47 (31%)	38 (25%)	0	0
9	H	136/138 (99%)	91 (67%)	28 (21%)	17 (12%)	0	4

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
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	1
12	K	117/129 (91%)	72 (62%)	31 (26%)	14 (12%)	0	4
13	L	122/135 (90%)	81 (66%)	22 (18%)	19 (16%)	0	2
14	M	116/126 (92%)	66 (57%)	33 (28%)	17 (15%)	0	2
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	2
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	2
19	R	71/88 (81%)	36 (51%)	24 (34%)	11 (16%)	0	2
20	S	78/92 (85%)	45 (58%)	24 (31%)	9 (12%)	0	4
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	0
All	All	2349/2532 (93%)	1287 (55%)	654 (28%)	408 (17%)	0	2

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

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Mol	Chain	Res	Type
4	C	153	VAL
4	C	155	GLY
4	C	171	GLY
4	C	179	ARG
4	C	189	ALA
5	D	25	ARG
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

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Mol	Chain	Res	Type
10	I	43	ALA
10	I	54	ASP
10	I	55	ALA
10	I	115	GLY
10	I	121	ARG
11	J	20	ALA
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

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Mol	Chain	Res	Type
15	N	15	LYS
15	N	22	THR
15	N	33	VAL
15	N	42	ILE
15	N	44	LEU
15	N	47	LEU
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

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Mol	Chain	Res	Type
4	C	206	GLU
5	D	4	TYR
5	D	9	CYS
5	D	23	GLY
5	D	35	ARG
5	D	41	GLY
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

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Mol	Chain	Res	Type
12	K	50	TYR
12	K	55	LYS
12	K	106	LYS
13	L	51	ALA
13	L	73	GLU
13	L	91	LYS
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

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Mol	Chain	Res	Type
21	T	71	THR
21	T	86	ARG
22	V	6	ARG
22	V	7	ARG
3	B	16	HIS
3	B	173	ALA
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

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Mol	Chain	Res	Type
16	O	71	GLN
16	O	83	GLU
17	P	15	PRO
17	P	34	GLU
17	P	51	VAL
17	P	82	GLN
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

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Mol	Chain	Res	Type
12	K	62	GLN
12	K	100	ALA
12	K	117	ASN
14	M	12	ASN
14	M	41	PRO
14	M	49	THR
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

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Mol	Chain	Res	Type
8	G	129	GLU
10	I	31	GLN
10	I	32	ASP
10	I	51	ARG
10	I	74	ILE
10	I	95	LYS
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

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Mol	Chain	Res	Type
5	D	28	SER
8	G	118	VAL
9	H	89	PRO
17	P	20	VAL
20	S	9	VAL
12	K	47	VAL
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 ⓘ

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%)	157 (78%)	45 (22%)	1	5
4	C	160/188 (85%)	145 (91%)	15 (9%)	8	30
5	D	180/180 (100%)	156 (87%)	24 (13%)	4	19
6	E	115/122 (94%)	89 (77%)	26 (23%)	1	5
7	F	90/90 (100%)	80 (89%)	10 (11%)	6	24
8	G	126/126 (100%)	111 (88%)	15 (12%)	5	22
9	H	119/119 (100%)	103 (87%)	16 (13%)	4	19
10	I	98/99 (99%)	78 (80%)	20 (20%)	1	7
11	J	87/91 (96%)	71 (82%)	16 (18%)	1	11
12	K	90/99 (91%)	76 (84%)	14 (16%)	2	15
13	L	104/111 (94%)	94 (90%)	10 (10%)	8	29
14	M	94/101 (93%)	85 (90%)	9 (10%)	8	29
15	N	49/49 (100%)	35 (71%)	14 (29%)	0	2
16	O	79/79 (100%)	67 (85%)	12 (15%)	3	16
17	P	72/74 (97%)	58 (81%)	14 (19%)	1	9

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
18	Q	96/96 (100%)	81 (84%)	15 (16%)	2	15
19	R	64/77 (83%)	60 (94%)	4 (6%)	16	42
20	S	71/79 (90%)	66 (93%)	5 (7%)	14	40
21	T	76/82 (93%)	68 (90%)	8 (10%)	6	26
22	V	19/21 (90%)	17 (90%)	2 (10%)	6	26
All	All	1991/2103 (95%)	1697 (85%)	294 (15%)	3	16

All (294) 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	25	ASN
3	B	32	ILE
3	B	44	LEU
3	B	46	LYS
3	B	52	GLU
3	B	63	MET
3	B	69	LEU
3	B	79	ASP
3	B	80	ILE
3	B	87	ARG
3	B	92	TYR
3	B	93	VAL
3	B	96	ARG
3	B	98	LEU
3	B	101	MET
3	B	102	LEU
3	B	107	THR
3	B	111	ARG
3	B	114	ARG
3	B	134	GLU
3	B	137	ARG
3	B	148	TYR
3	B	162	ILE
3	B	164	VAL
3	B	165	VAL

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Mol	Chain	Res	Type
3	B	175	ARG
3	B	178	ARG
3	B	181	PHE
3	B	183	PRO
3	B	185	ILE
3	B	187	LEU
3	B	189	ASP
3	B	190	THR
3	B	196	LEU
3	B	197	VAL
3	B	205	ASP
3	B	206	ASP
3	B	208	ILE
3	B	215	LEU
3	B	232	PRO
4	C	3	ASN
4	C	26	LYS
4	C	31	HIS
4	C	33	LEU
4	C	48	TYR
4	C	52	LEU
4	C	54	ARG
4	C	91	LEU
4	C	153	VAL
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	26	CYS
5	D	29	PRO
5	D	34	GLU
5	D	35	ARG
5	D	36	ARG
5	D	43	HIS
5	D	50	ARG
5	D	58	LEU
5	D	78	LEU

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Mol	Chain	Res	Type
5	D	94	LEU
5	D	101	LEU
5	D	102	ASP
5	D	110	PHE
5	D	119	GLN
5	D	120	LEU
5	D	122	ARG
5	D	140	VAL
5	D	141	ARG
5	D	154	ASN
5	D	156	GLU
5	D	178	VAL
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	51	VAL
6	E	53	LEU
6	E	76	ILE
6	E	79	GLU
6	E	80	ILE
6	E	81	GLU
6	E	82	VAL
6	E	96	PRO
6	E	100	VAL
6	E	112	LEU
6	E	131	ILE
6	E	137	GLU
6	E	147	ASP
6	E	150	ARG
6	E	151	LEU
7	F	10	LEU
7	F	27	GLN
7	F	30	LEU
7	F	32	ASN

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Mol	Chain	Res	Type
7	F	63	TYR
7	F	75	LEU
7	F	81	ILE
7	F	82	ARG
7	F	91	VAL
7	F	98	LEU
8	G	8	GLU
8	G	12	LEU
8	G	16	LEU
8	G	24	THR
8	G	30	ILE
8	G	38	LEU
8	G	53	LYS
8	G	56	GLN
8	G	63	LYS
8	G	64	GLN
8	G	72	ARG
8	G	94	ARG
8	G	120	ILE
8	G	138	LYS
8	G	155	ARG
9	H	3	THR
9	H	9	MET
9	H	11	THR
9	H	13	ILE
9	H	22	GLU
9	H	24	THR
9	H	35	ILE
9	H	83	ILE
9	H	84	ARG
9	H	86	ILE
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
10	I	10	ARG
10	I	11	LYS
10	I	12	GLU
10	I	25	LYS

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Mol	Chain	Res	Type
10	I	34	ASN
10	I	35	GLU
10	I	63	ILE
10	I	85	LEU
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	127	LYS
11	J	6	ILE
11	J	8	LEU
11	J	14	LYS
11	J	16	LEU
11	J	22	LYS
11	J	38	ILE
11	J	47	PHE
11	J	48	THR
11	J	49	VAL
11	J	50	ILE
11	J	58	ASP
11	J	70	ARG
11	J	86	MET
11	J	88	LEU
11	J	91	PRO
11	J	98	ILE
12	K	18	ARG
12	K	29	ILE
12	K	31	THR
12	K	33	THR
12	K	54	ARG
12	K	66	LEU
12	K	67	ASP
12	K	77	MET
12	K	81	ASP
12	K	91	ARG
12	K	93	GLN

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Mol	Chain	Res	Type
12	K	105	VAL
12	K	126	ARG
12	K	127	LYS
13	L	10	LEU
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	115	LYS
13	L	117	ARG
13	L	126	LYS
14	M	14	ARG
14	M	35	GLU
14	M	44	ARG
14	M	46	LYS
14	M	66	LEU
14	M	79	LYS
14	M	81	LEU
14	M	83	ASP
14	M	103	THR
15	N	3	ARG
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	41	ARG
15	N	46	GLU
15	N	53	LEU
15	N	56	VAL
15	N	57	ARG
16	O	6	GLU
16	O	11	VAL
16	O	22	THR
16	O	31	LEU
16	O	32	LEU
16	O	33	THR

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Mol	Chain	Res	Type
16	O	46	HIS
16	O	48	LYS
16	O	70	LEU
16	O	76	GLU
16	O	83	GLU
16	O	85	LEU
17	P	16	HIS
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	11	VAL
18	Q	19	VAL
18	Q	35	VAL
18	Q	36	ILE
18	Q	43	LEU
18	Q	60	ILE
18	Q	64	PRO
18	Q	68	ARG
18	Q	70	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	53	ARG
19	R	76	LEU
20	S	12	ASP
20	S	25	LYS
20	S	32	LYS

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Mol	Chain	Res	Type
20	S	58	VAL
20	S	78	ARG
21	T	10	LEU
21	T	35	THR
21	T	42	GLN
21	T	43	LEU
21	T	53	LEU
21	T	72	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 (69) such sidechains are listed below:

Mol	Chain	Res	Type
3	B	25	ASN
3	B	37	ASN
3	B	78	GLN
3	B	104	ASN
3	B	146	GLN
3	B	212	GLN
3	B	224	GLN
4	C	3	ASN
4	C	6	HIS
4	C	28	GLN
4	C	63	ASN
4	C	98	ASN
4	C	102	ASN
4	C	118	GLN
4	C	123	GLN
4	C	139	GLN
5	D	42	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	160	GLN
5	D	161	ASN

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Mol	Chain	Res	Type
5	D	201	GLN
6	E	73	ASN
6	E	78	HIS
7	F	18	GLN
7	F	27	GLN
7	F	32	ASN
7	F	57	GLN
7	F	94	GLN
8	G	28	ASN
8	G	37	ASN
8	G	56	GLN
8	G	86	GLN
8	G	96	GLN
8	G	106	GLN
8	G	122	HIS
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	40	ASN
14	M	62	ASN
16	O	13	GLN
16	O	37	ASN
17	P	16	HIS
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	18	GLN
21	T	42	GLN

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Mol	Chain	Res	Type
21	T	73	HIS

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A	1511/1522 (99%)	236 (15%)	51 (3%)
2	Z	3/6 (50%)	0	0
All	All	1514/1528 (99%)	236 (15%)	51 (3%)

All (236) 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

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Mol	Chain	Res	Type
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
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	366	C
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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	1049	U
1	A	1050	G
1	A	1053	G
1	A	1054	C

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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
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

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Mol	Chain	Res	Type
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
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 oligosaccharides 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 ⓘ

6.1 Protein, DNA and RNA chains ⓘ

In the following table, the column labelled ‘#RSRZ> 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95th 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 ²)	Q<0.9
1	A	1511/1522 (99%)	1.44	421 (27%) 1 2	15, 88, 187, 199	0
2	Z	4/6 (66%)	2.30	3 (75%) 0 0	168, 184, 185, 199	0
3	B	234/256 (91%)	0.72	24 (10%) 12 14	23, 99, 178, 199	0
4	C	206/239 (86%)	1.05	28 (13%) 7 10	46, 134, 198, 199	0
5	D	208/208 (100%)	0.79	28 (13%) 7 10	14, 86, 165, 189	0
6	E	150/161 (93%)	0.35	10 (6%) 24 20	6, 56, 120, 160	0
7	F	101/101 (100%)	0.93	17 (16%) 4 7	44, 111, 171, 185	0
8	G	155/155 (100%)	0.91	18 (11%) 9 12	43, 141, 195, 199	0
9	H	138/138 (100%)	0.20	5 (3%) 46 32	3, 46, 115, 127	0
10	I	127/128 (99%)	1.43	37 (29%) 1 2	40, 146, 195, 199	0
11	J	98/104 (94%)	1.58	24 (24%) 2 3	63, 154, 199, 199	0
12	K	119/129 (92%)	0.55	11 (9%) 14 16	16, 93, 164, 199	0
13	L	124/135 (91%)	0.83	20 (16%) 4 8	19, 96, 159, 196	0
14	M	118/126 (93%)	1.04	23 (19%) 3 5	61, 125, 173, 199	0
15	N	60/60 (100%)	1.66	20 (33%) 1 2	42, 134, 185, 199	0
16	O	88/88 (100%)	0.40	9 (10%) 12 14	25, 70, 145, 189	0
17	P	83/88 (94%)	0.66	10 (12%) 9 12	12, 69, 141, 188	0
18	Q	104/104 (100%)	0.73	7 (6%) 24 20	2, 69, 140, 199	0
19	R	73/88 (82%)	0.71	13 (17%) 4 6	27, 87, 168, 194	0
20	S	80/92 (86%)	1.55	23 (28%) 1 2	55, 152, 198, 199	0
21	T	99/106 (93%)	0.69	12 (12%) 8 12	24, 82, 169, 199	0
22	V	24/26 (92%)	1.81	11 (45%) 0 1	39, 125, 181, 195	0
All	All	3904/4060 (96%)	1.08	774 (19%) 3 5	2, 98, 186, 199	0

All (774) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
18	Q	102	GLY	12.0
11	J	89	ASP	8.3
15	N	20	ALA	7.8
8	G	2	ALA	7.7
1	A	1117	G	7.4
15	N	22	THR	7.0
4	C	2	GLY	7.0
18	Q	101	ARG	6.4
18	Q	105	ALA	6.4
1	A	1159	U	6.3
1	A	1200	C	6.3
1	A	723	U	6.2
21	T	106	ALA	6.1
1	A	1134	G	6.1
10	I	124	GLN	5.9
12	K	124	LYS	5.9
3	B	49	GLU	5.8
19	R	18	ARG	5.8
1	A	1017	G	5.7
1	A	1138	G	5.7
4	C	43	LEU	5.6
1	A	1053	G	5.6
1	A	1540	U	5.5
1	A	1050	G	5.3
1	A	1319	A	5.3
10	I	9	ARG	5.3
1	A	1018	C	5.3
1	A	793	U	5.2
1	A	1250	A	5.2
1	A	1013	G	5.2
17	P	83	GLU	5.2
1	A	1002	G	5.0
15	N	31	ARG	5.0
1	A	1355	G	5.0
7	F	2	ARG	5.0
20	S	79	THR	4.9
1	A	1201	A	4.9
1	A	1127	G	4.9
1	A	1266	G	4.9
1	A	97	G	4.8
1	A	406	G	4.8
1	A	1281	U	4.8
1	A	1019	C	4.8

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Mol	Chain	Res	Type	RSRZ
1	A	1116	C	4.8
1	A	1003	G	4.8
1	A	1126	U	4.7
1	A	1544	U	4.7
1	A	1135	U	4.7
1	A	459	G	4.7
1	A	1333	A	4.7
15	N	4	LYS	4.7
1	A	997	U	4.7
4	C	100	ALA	4.6
5	D	26	CYS	4.6
1	A	190(D)	U	4.6
1	A	1025	U	4.6
1	A	1129	C	4.6
8	G	126	ASP	4.6
15	N	35	ARG	4.6
1	A	969	A	4.5
1	A	1370	G	4.5
15	N	61	TRP	4.5
11	J	12	ASP	4.5
1	A	65	U	4.5
1	A	496	A	4.5
21	T	49	ALA	4.5
1	A	1139	G	4.5
11	J	78	ASN	4.5
10	I	67	GLY	4.5
1	A	451	A	4.5
19	R	88	LYS	4.5
1	A	869	G	4.5
1	A	1492	A	4.5
1	A	988	G	4.4
1	A	1049	U	4.4
1	A	1006	C	4.4
1	A	1217	C	4.4
15	N	2	ALA	4.4
1	A	1041	A	4.4
1	A	1264	C	4.4
1	A	1124	G	4.4
5	D	20	TYR	4.4
1	A	1172	C	4.3
11	J	31	GLY	4.3
1	A	1222	G	4.3

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Mol	Chain	Res	Type	RSRZ
1	A	1277	C	4.3
1	A	410	G	4.2
1	A	1108	G	4.2
1	A	1142	G	4.2
1	A	989	C	4.2
1	A	1335	C	4.2
3	B	229	VAL	4.2
1	A	1011	G	4.2
10	I	128	ARG	4.2
15	N	3	ARG	4.2
13	L	115	LYS	4.2
1	A	1269	A	4.2
15	N	34	TYR	4.2
20	S	78	ARG	4.2
5	D	33	MET	4.1
20	S	35	SER	4.1
1	A	980	C	4.1
1	A	1128	C	4.1
1	A	1196	U	4.1
4	C	63	ASN	4.1
1	A	970	C	4.1
1	A	1539	C	4.1
1	A	1361	G	4.1
1	A	1365	G	4.1
1	A	1005	A	4.1
4	C	130	VAL	4.1
1	A	1144	G	4.0
1	A	1361(A)	C	4.0
1	A	81	U	4.0
1	A	1360	A	3.9
6	E	111	GLU	3.9
7	F	95	GLU	3.9
16	O	83	GLU	3.9
1	A	462	G	3.9
1	A	1441	G	3.9
6	E	38	GLN	3.9
20	S	3	ARG	3.9
1	A	531	U	3.9
1	A	993	G	3.9
1	A	691	G	3.9
1	A	858	G	3.9
13	L	112	ASP	3.9

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Mol	Chain	Res	Type	RSRZ
13	L	48	PRO	3.8
1	A	220	G	3.8
1	A	1034	G	3.8
22	V	25	LYS	3.8
5	D	201	GLN	3.8
11	J	98	ILE	3.8
6	E	95	ALA	3.8
5	D	86	LYS	3.8
1	A	1248	A	3.8
4	C	62	ASP	3.8
1	A	1284	C	3.8
21	T	105	SER	3.8
7	F	83	ASP	3.8
1	A	530	G	3.8
13	L	86	ARG	3.8
11	J	15	THR	3.8
11	J	58	ASP	3.8
4	C	79	ARG	3.7
22	V	7	ARG	3.7
1	A	1157	A	3.7
1	A	985	C	3.7
1	A	1147	C	3.7
4	C	142	MET	3.7
20	S	71	LEU	3.7
1	A	621	A	3.7
14	M	104	ARG	3.7
1	A	481	G	3.7
14	M	119	GLY	3.6
1	A	979	C	3.6
1	A	1033	G	3.6
5	D	21	LEU	3.6
12	K	35	PRO	3.6
19	R	85	LEU	3.6
1	A	1532	U	3.6
1	A	1141	C	3.6
1	A	1249	C	3.6
1	A	75	G	3.6
10	I	70	LYS	3.6
11	J	7	LYS	3.6
1	A	463	A	3.6
10	I	23	ASN	3.6
3	B	18	GLY	3.6

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Mol	Chain	Res	Type	RSRZ
1	A	1118	C	3.5
20	S	2	PRO	3.5
14	M	69	GLU	3.5
14	M	108	ARG	3.5
1	A	1003(A)	G	3.5
1	A	1274	G	3.5
1	A	98	U	3.5
1	A	439	A	3.5
1	A	991	U	3.5
1	A	1268	A	3.5
10	I	97	LYS	3.5
5	D	36	ARG	3.5
7	F	31	GLU	3.5
10	I	42	ARG	3.5
1	A	352	C	3.5
1	A	457	C	3.5
1	A	1212	U	3.5
1	A	1295	G	3.5
17	P	82	GLN	3.5
14	M	85	GLY	3.5
17	P	78	GLY	3.5
1	A	1398	A	3.5
1	A	1331	G	3.5
3	B	231	GLU	3.5
4	C	81	GLY	3.5
10	I	103	THR	3.5
11	J	21	GLN	3.5
1	A	868	C	3.5
1	A	1317	C	3.5
11	J	3	LYS	3.4
1	A	1215	G	3.4
1	A	1504	G	3.4
10	I	29	ASN	3.4
8	G	45	ASP	3.4
1	A	1043	C	3.4
1	A	1119	C	3.4
5	D	115	ARG	3.4
7	F	3	ARG	3.4
10	I	119	ALA	3.4
22	V	5	ASP	3.4
3	B	209	ARG	3.4
1	A	714	G	3.4

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Mol	Chain	Res	Type	RSRZ
1	A	1133	G	3.4
1	A	1291	G	3.4
11	J	4	ILE	3.4
13	L	124	LYS	3.4
1	A	190(B)	C	3.4
1	A	1354	C	3.4
3	B	148	TYR	3.4
1	A	1528	U	3.4
1	A	996	A	3.4
1	A	1001	A	3.4
1	A	1375	A	3.4
1	A	350	G	3.4
1	A	89	C	3.4
1	A	1030(B)	C	3.4
1	A	1137	C	3.4
1	A	943	U	3.4
18	Q	97	SER	3.4
1	A	1094	G	3.3
1	A	1491	G	3.3
18	Q	103	GLY	3.3
1	A	1047	G	3.3
1	A	218	C	3.3
1	A	1210	C	3.3
22	V	4	GLY	3.3
4	C	104	GLN	3.3
20	S	18	LYS	3.3
15	N	18	VAL	3.3
1	A	1145	C	3.3
1	A	286	G	3.3
1	A	1143	G	3.3
1	A	1190	G	3.3
4	C	73	PRO	3.3
20	S	51	VAL	3.3
15	N	21	TYR	3.3
21	T	48	LYS	3.3
20	S	37	ARG	3.2
1	A	202	U	3.2
1	A	1121	U	3.2
1	A	1259	C	3.2
1	A	64	G	3.2
1	A	450	G	3.2
10	I	106	ALA	3.2

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Mol	Chain	Res	Type	RSRZ
19	R	16	PRO	3.2
10	I	68	GLY	3.2
12	K	56	GLY	3.2
19	R	54	ARG	3.2
22	V	10	ARG	3.2
1	A	1109	C	3.2
1	A	1180	A	3.2
1	A	1221	G	3.2
1	A	1435	G	3.2
4	C	109	PRO	3.2
5	D	23	GLY	3.2
5	D	25	ARG	3.2
7	F	80	ARG	3.2
20	S	12	ASP	3.2
7	F	38	GLU	3.2
1	A	1378	C	3.2
1	A	1407	C	3.2
17	P	46	PRO	3.2
1	A	1218	C	3.1
11	J	100	THR	3.1
15	N	57	ARG	3.1
11	J	99	LYS	3.1
1	A	413	G	3.1
1	A	1023	G	3.1
1	A	1290	G	3.1
1	A	343	U	3.1
11	J	18	ALA	3.1
12	K	36	ASP	3.1
1	A	325	A	3.1
1	A	1251	A	3.1
1	A	1286	A	3.1
1	A	1531	A	3.1
10	I	64	THR	3.1
20	S	33	THR	3.1
1	A	548	G	3.1
13	L	127	GLU	3.1
14	M	83	ASP	3.1
3	B	21	ARG	3.1
1	A	1209	C	3.1
1	A	1359	C	3.1
3	B	33	TYR	3.1
18	Q	17	LYS	3.1

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Mol	Chain	Res	Type	RSRZ
22	V	22	ARG	3.1
9	H	130	GLY	3.1
1	A	1211	U	3.1
9	H	24	THR	3.1
1	A	380	G	3.1
1	A	1171	G	3.1
1	A	1503	A	3.1
1	A	379	C	3.1
1	A	1038	C	3.1
10	I	8	GLY	3.1
4	C	39	ILE	3.0
21	T	12	ALA	3.0
5	D	30	LYS	3.0
22	V	24	ARG	3.0
1	A	424	G	3.0
1	A	1216	G	3.0
1	A	1475	G	3.0
1	A	1418	A	3.0
1	A	369	C	3.0
1	A	479	C	3.0
11	J	17	ASP	3.0
1	A	1099	G	3.0
1	A	1287	A	3.0
1	A	342	C	3.0
1	A	1230	C	3.0
17	P	75	ARG	3.0
1	A	5	U	3.0
1	A	173	U	3.0
1	A	1348	U	3.0
13	L	95	GLY	3.0
1	A	478	A	3.0
1	A	1123	A	3.0
1	A	1271	G	3.0
1	A	1294	G	3.0
1	A	1318	A	3.0
1	A	1483	A	3.0
10	I	127	LYS	3.0
1	A	511	C	3.0
1	A	1260	C	3.0
1	A	1000	U	3.0
1	A	1364	U	3.0
2	Z	1	U	3.0

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Mol	Chain	Res	Type	RSRZ
4	C	98	ASN	2.9
10	I	41	VAL	2.9
1	A	616	G	2.9
1	A	998	G	2.9
1	A	1255	G	2.9
1	A	372	C	2.9
1	A	1411	C	2.9
22	V	21	TYR	2.9
20	S	27	GLU	2.9
3	B	228	GLY	2.9
13	L	89	ARG	2.9
1	A	1280	A	2.9
1	A	1285	A	2.9
6	E	23	GLY	2.9
7	F	77	ARG	2.9
8	G	132	GLY	2.9
1	A	384	G	2.9
10	I	13	ALA	2.9
14	M	42	ALA	2.9
1	A	1257	U	2.9
1	A	1541	U	2.9
15	N	25	VAL	2.9
1	A	160	A	2.9
4	C	42	LEU	2.9
5	D	3	ARG	2.9
1	A	1214	C	2.9
1	A	78	G	2.9
1	A	204	U	2.9
1	A	962	C	2.9
1	A	995	C	2.9
1	A	477	G	2.9
20	S	34	TRP	2.9
10	I	16	ARG	2.9
1	A	141	A	2.8
1	A	978	A	2.8
1	A	1176	A	2.8
1	A	219	C	2.8
1	A	443	C	2.8
1	A	518	C	2.8
1	A	484	G	2.8
1	A	630	G	2.8
20	S	15	LEU	2.8

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Mol	Chain	Res	Type	RSRZ
1	A	88	A	2.8
1	A	790	A	2.8
5	D	8	VAL	2.8
1	A	836	G	2.8
1	A	1024	G	2.8
1	A	1026	G	2.8
14	M	11	ARG	2.8
3	B	172	ILE	2.8
20	S	20	LEU	2.8
10	I	86	VAL	2.8
5	D	116	GLN	2.8
1	A	356	A	2.8
1	A	794	A	2.8
1	A	935	A	2.8
1	A	1016	A	2.8
20	S	57	HIS	2.8
6	E	117	ASP	2.8
1	A	480	U	2.8
1	A	1351	U	2.8
1	A	47	C	2.8
1	A	1160	G	2.8
1	A	1224	G	2.8
1	A	1334	G	2.8
5	D	12	CYS	2.8
20	S	77	THR	2.8
6	E	24	ARG	2.7
11	J	79	ARG	2.7
1	A	345	C	2.7
1	A	1397	C	2.7
3	B	46	LYS	2.7
1	A	146	G	2.7
1	A	1273	G	2.7
1	A	59	A	2.7
1	A	182	U	2.7
10	I	53	VAL	2.7
5	D	197	PRO	2.7
20	S	6	LYS	2.7
5	D	124	GLY	2.7
19	R	20	ALA	2.7
1	A	624	C	2.7
1	A	1282	C	2.7
1	A	1501	C	2.7

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Mol	Chain	Res	Type	RSRZ
1	A	1543	C	2.7
14	M	88	ARG	2.7
1	A	715	A	2.7
1	A	838	G	2.7
1	A	1261	A	2.7
1	A	1416	G	2.7
21	T	90	GLN	2.7
5	D	118	ARG	2.7
8	G	146	GLU	2.7
11	J	64	GLU	2.7
1	A	1219	U	2.7
19	R	19	LYS	2.7
1	A	990	C	2.7
8	G	5	ARG	2.7
1	A	1004	A	2.7
1	A	1101	A	2.7
19	R	17	SER	2.7
1	A	697	U	2.7
1	A	1048	G	2.7
1	A	1220	G	2.7
1	A	1278	U	2.7
1	A	1381	U	2.7
8	G	47	CYS	2.7
1	A	1107	C	2.7
1	A	1296	C	2.7
11	J	39	PRO	2.6
13	L	87	GLY	2.6
1	A	432	A	2.6
1	A	1377	A	2.6
5	D	27	TYR	2.6
1	A	1323	G	2.6
1	A	1482	G	2.6
3	B	127	ILE	2.6
6	E	18	ARG	2.6
15	N	23	ARG	2.6
22	V	23	PRO	2.6
8	G	48	LYS	2.6
14	M	68	GLY	2.6
1	A	1165	C	2.6
5	D	209	ARG	2.6
14	M	78	ILE	2.6
1	A	839	U	2.6

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Mol	Chain	Res	Type	RSRZ
1	A	1086	U	2.6
7	F	57	GLN	2.6
6	E	22	GLY	2.6
10	I	62	TYR	2.6
11	J	40	LEU	2.6
1	A	44	G	2.6
1	A	167	G	2.6
1	A	266	G	2.6
1	A	1197	G	2.6
1	A	1283	G	2.6
1	A	1356	G	2.6
21	T	57	ARG	2.6
1	A	386	C	2.6
1	A	1223	C	2.6
1	A	572	A	2.6
1	A	1035	A	2.6
1	A	1499	A	2.6
1	A	1315	U	2.6
19	R	36	ASN	2.6
4	C	103	VAL	2.6
6	E	27	ARG	2.6
8	G	131	LYS	2.6
1	A	1156	G	2.6
1	A	1401	G	2.6
1	A	74	C	2.6
1	A	268	C	2.6
1	A	381	C	2.6
1	A	1163	C	2.6
4	C	3	ASN	2.6
7	F	91	VAL	2.6
9	H	18	ARG	2.6
1	A	1229	A	2.6
3	B	135	GLN	2.6
20	S	59	PRO	2.6
1	A	956	U	2.6
4	C	4	LYS	2.5
13	L	116	SER	2.5
15	N	60	SER	2.5
10	I	65	VAL	2.5
1	A	485	G	2.5
1	A	625	G	2.5
1	A	1131	G	2.5

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Mol	Chain	Res	Type	RSRZ
1	A	1310	G	2.5
3	B	13	ALA	2.5
5	D	44	GLY	2.5
1	A	747	C	2.5
1	A	626	U	2.5
1	A	1256	A	2.5
20	S	50	ALA	2.5
21	T	103	GLY	2.5
21	T	41	ILE	2.5
10	I	48	GLU	2.5
1	A	80	G	2.5
1	A	1272	G	2.5
1	A	92	C	2.5
1	A	1029	C	2.5
1	A	1297	C	2.5
1	A	547	A	2.5
1	A	977	A	2.5
1	A	992	U	2.5
1	A	1040	U	2.5
1	A	1136	U	2.5
1	A	1289	A	2.5
1	A	1339	A	2.5
8	G	15	ASP	2.5
11	J	14	LYS	2.5
14	M	51	ALA	2.5
3	B	227	GLY	2.5
11	J	43	ARG	2.5
8	G	61	VAL	2.5
22	V	18	TYR	2.5
1	A	1242	C	2.5
1	A	1267	C	2.5
1	A	837	G	2.5
1	A	1030(A)	G	2.5
1	A	1042	G	2.5
1	A	1182	G	2.5
1	A	1231	G	2.5
5	D	150	GLU	2.5
1	A	1012	U	2.5
1	A	510	A	2.5
13	L	71	PRO	2.5
10	I	66	ARG	2.5
16	O	23	GLY	2.5

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Mol	Chain	Res	Type	RSRZ
16	O	64	ARG	2.5
11	J	34	VAL	2.5
4	C	126	ARG	2.4
2	Z	4	U	2.4
1	A	147	G	2.4
1	A	494	G	2.4
1	A	509	A	2.4
1	A	1093	A	2.4
1	A	1346	A	2.4
4	C	151	VAL	2.4
3	B	22	LYS	2.4
3	B	50	GLU	2.4
7	F	5	GLU	2.4
19	R	28	GLU	2.4
12	K	26	ASN	2.4
17	P	42	ARG	2.4
17	P	23	ASP	2.4
3	B	230	VAL	2.4
5	D	22	LYS	2.4
10	I	99	LEU	2.4
1	A	67	C	2.4
1	A	1051	C	2.4
1	A	1247	U	2.4
12	K	78	GLN	2.4
1	A	460	A	2.4
1	A	533	A	2.4
10	I	39	GLY	2.4
1	A	357	G	2.4
1	A	698	G	2.4
1	A	1417	G	2.4
16	O	5	LYS	2.4
17	P	25	ARG	2.4
1	A	149	A	2.4
14	M	61	GLU	2.4
8	G	153	HIS	2.4
1	A	1253	G	2.4
1	A	1304	G	2.4
6	E	46	GLY	2.4
21	T	101	GLY	2.4
16	O	21	ASP	2.4
20	S	76	PRO	2.3
1	A	1203	C	2.3

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Mol	Chain	Res	Type	RSRZ
10	I	104	ARG	2.3
12	K	75	TYR	2.3
1	A	1371	G	2.3
16	O	6	GLU	2.3
20	S	21	GLU	2.3
12	K	53	SER	2.3
1	A	1232	U	2.3
1	A	1498	U	2.3
2	Z	3	U	2.3
10	I	20	ARG	2.3
4	C	23	TYR	2.3
1	A	60	A	2.3
1	A	1262	C	2.3
1	A	1306	A	2.3
1	A	1327	C	2.3
10	I	94	ALA	2.3
3	B	15	VAL	2.3
1	A	1486	G	2.3
8	G	150	ALA	2.3
11	J	88	LEU	2.3
3	B	60	ASP	2.3
20	S	17	GLU	2.3
1	A	151	A	2.3
4	C	190	ARG	2.3
1	A	267	C	2.3
1	A	1045	C	2.3
5	D	31	CYS	2.3
10	I	96	LEU	2.3
21	T	18	GLN	2.3
7	F	41	GLU	2.3
10	I	116	LYS	2.3
3	B	96	ARG	2.3
1	A	425	G	2.3
1	A	933	G	2.3
1	A	1022	G	2.3
1	A	1175	G	2.3
1	A	1276	G	2.3
1	A	385	C	2.3
1	A	536	C	2.3
1	A	1208	C	2.3
14	M	117	VAL	2.3
17	P	53	VAL	2.3

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Mol	Chain	Res	Type	RSRZ
4	C	15	THR	2.2
4	C	188	LEU	2.2
14	M	2	ALA	2.2
10	I	38	GLN	2.2
1	A	423	G	2.2
1	A	700	G	2.2
1	A	971	G	2.2
1	A	1300	G	2.2
1	A	1347	G	2.2
8	G	10	ARG	2.2
14	M	3	ARG	2.2
1	A	408	A	2.2
1	A	1014	A	2.2
1	A	1227	A	2.2
1	A	748	C	2.2
1	A	1115	C	2.2
1	A	1303	C	2.2
1	A	1314	C	2.2
1	A	1382	C	2.2
9	H	30	ARG	2.2
13	L	121	GLY	2.2
15	N	29	ARG	2.2
1	A	387	U	2.2
1	A	1150	U	2.2
1	A	1376	U	2.2
5	D	46	LYS	2.2
1	A	138	G	2.2
1	A	407	G	2.2
1	A	629	G	2.2
1	A	1442	G	2.2
14	M	57	ARG	2.2
5	D	192	GLU	2.2
1	A	1279	A	2.2
3	B	47	THR	2.2
19	R	21	LYS	2.2
14	M	72	ALA	2.2
13	L	78	GLN	2.2
14	M	44	ARG	2.2
21	T	86	ARG	2.2
22	V	16	GLY	2.2
1	A	1345	U	2.2
4	C	10	PHE	2.2

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Mol	Chain	Res	Type	RSRZ
1	A	452	A	2.2
1	A	963	G	2.2
1	A	1120	G	2.2
1	A	1184	G	2.2
1	A	1288	A	2.2
10	I	102	LEU	2.2
5	D	131	ARG	2.2
11	J	59	SER	2.2
13	L	33	ARG	2.2
14	M	80	ARG	2.2
19	R	42	ARG	2.2
7	F	37	VAL	2.2
1	A	795	C	2.2
1	A	1027	C	2.2
1	A	1140	C	2.2
7	F	81	ILE	2.2
15	N	13	THR	2.2
16	O	48	LYS	2.2
12	K	110	ASP	2.1
1	A	45	U	2.1
14	M	87	TYR	2.1
15	N	33	VAL	2.1
13	L	119	LYS	2.1
14	M	109	THR	2.1
1	A	532	A	2.1
1	A	792	A	2.1
1	A	6	G	2.1
1	A	168	G	2.1
1	A	371	G	2.1
1	A	1009	G	2.1
1	A	1422	G	2.1
1	A	934	C	2.1
7	F	62	TRP	2.1
13	L	96	VAL	2.1
1	A	1090	U	2.1
1	A	1091	U	2.1
1	A	1542	U	2.1
8	G	114	ARG	2.1
16	O	46	HIS	2.1
1	A	889	A	2.1
1	A	965	A	2.1
16	O	61	GLY	2.1

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Mol	Chain	Res	Type	RSRZ
15	N	14	PRO	2.1
1	A	409	G	2.1
1	A	1008	C	2.1
19	R	87	ARG	2.1
7	F	101	ALA	2.1
10	I	15	ALA	2.1
7	F	73	ASN	2.1
5	D	119	GLN	2.1
12	K	122	LYS	2.1
10	I	33	PHE	2.1
3	B	38	GLY	2.1
1	A	687	A	2.1
1	A	1349	A	2.1
13	L	50	SER	2.1
8	G	148	ASN	2.1
13	L	39	VAL	2.1
1	A	341	C	2.1
1	A	461	C	2.1
1	A	526	C	2.1
1	A	948	C	2.1
1	A	1527	C	2.1
1	A	474	G	2.1
1	A	690	G	2.1
1	A	162	A	2.0
1	A	946	A	2.0
1	A	994	A	2.0
1	A	1046	A	2.0
1	A	1299	A	2.0
13	L	29	GLY	2.0
3	B	223	ILE	2.0
12	K	125	PHE	2.0
1	A	217	C	2.0
1	A	1195	C	2.0
1	A	189	G	2.0
1	A	476	G	2.0
1	A	617	G	2.0
1	A	939	G	2.0
1	A	1021	G	2.0
1	A	1164	G	2.0
1	A	1265	G	2.0
1	A	1312	G	2.0
4	C	155	GLY	2.0

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Mol	Chain	Res	Type	RSRZ
8	G	70	LYS	2.0
13	L	31	PRO	2.0
17	P	16	HIS	2.0
4	C	44	GLU	2.0
15	N	8	GLU	2.0
4	C	87	LEU	2.0
10	I	76	ALA	2.0
18	Q	99	SER	2.0
1	A	777	A	2.0
8	G	35	LYS	2.0
14	M	65	LYS	2.0
9	H	27	PRO	2.0
1	A	422	C	2.0
1	A	1226	C	2.0
1	A	1254	C	2.0
1	A	560	U	2.0
1	A	841	U	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 oligosaccharides 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, 95th 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($\text{\AA}^2$)	Q<0.9
23	ZN	D	306	1/1	0.94	0.34	78,78,78,78	0
23	ZN	N	307	1/1	0.99	0.07	78,78,78,78	0

6.5 Other polymers [i](#)

There are no such residues in this entry.