



Full wwPDB X-ray Structure Validation Report ⓘ

Jan 31, 2016 – 09:04 PM GMT

PDB ID : 1N36
Title : Structure of the *Thermus thermophilus* 30S ribosomal subunit in the presence of crystallographically disordered codon and near-cognate transfer RNA anticodon stem-loop mismatched at the second codon position
Authors : Ogle, J.M.; Murphy IV, F.V.; Tarry, M.J.; Ramakrishnan, V.
Deposited on : 2002-10-25
Resolution : 3.65 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
<http://wwpdb.org/validation/2016/XrayValidationReportHelp>
with specific help available everywhere you see the ⓘ symbol.

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

MolProbity : 4.02b-467
Mogul : 1.7 (RC4), CSD as536be (2015)
Xtriage (Phenix) : 1.9-1692
EDS : rb-20026688
Percentile statistics : 20151230.v01 (using entries in the PDB archive December 30th 2015)
Refmac : 5.8.0135
CCP4 : 6.5.0
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : trunk26865

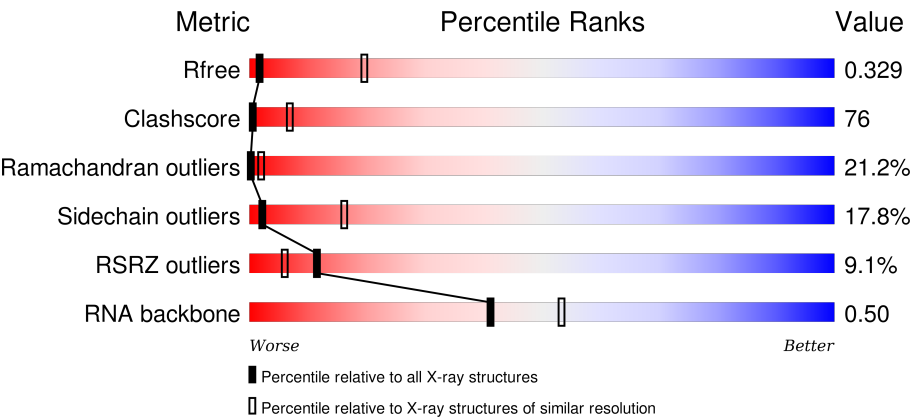
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.65 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}	91344	1010 (3.82-3.50)
Clashscore	102246	1125 (3.82-3.50)
Ramachandran outliers	100387	1079 (3.82-3.50)
Sidechain outliers	100360	1078 (3.82-3.50)
RSRZ outliers	91569	1017 (3.82-3.50)
RNA backbone	2183	1066 (4.52-2.80)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria. 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	<div><div>11%</div><div>9%</div><div>70%</div><div>18%</div><div>••</div></div>
2	B	256	<div><div>%</div><div>8%</div><div>55%</div><div>23%</div><div>5%</div><div>9%</div></div>
3	C	239	<div><div>9%</div><div>6%</div><div>49%</div><div>29%</div><div>•</div><div>14%</div></div>
4	D	208	<div><div>3%</div><div>12%</div><div>57%</div><div>25%</div><div>6%</div></div>

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

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
22	ZN	D	306	-	-	-	X

2 Entry composition

There are 22 unique types of molecules in this entry. The entry contains 51680 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	22	0	0
			32508	14472	6016	10509	1511			

- Molecule 2 is a protein called 30S RIBOSOMAL PROTEIN S2.

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

- Molecule 3 is a protein called 30S RIBOSOMAL PROTEIN S3.

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

- Molecule 4 is a protein called 30S RIBOSOMAL PROTEIN S4.

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

- Molecule 5 is a protein called 30S RIBOSOMAL PROTEIN S5.

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

- Molecule 6 is a protein called 30S RIBOSOMAL PROTEIN S6.

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

- Molecule 7 is a protein called 30S RIBOSOMAL PROTEIN S7.

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

- Molecule 8 is a protein called 30S RIBOSOMAL PROTEIN S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	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 9 is a protein called 30S RIBOSOMAL PROTEIN S9.

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

- Molecule 10 is a protein called 30S RIBOSOMAL PROTEIN S10.

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

- Molecule 11 is a protein called 30S RIBOSOMAL PROTEIN S11.

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

- Molecule 12 is a protein called 30S RIBOSOMAL PROTEIN S12.

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

- Molecule 13 is a protein called 30S RIBOSOMAL PROTEIN S13.

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

- Molecule 14 is a protein called 30S RIBOSOMAL PROTEIN S14.

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

- Molecule 15 is a protein called 30S RIBOSOMAL PROTEIN S15.

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

- Molecule 16 is a protein called 30S RIBOSOMAL PROTEIN S16.

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

- Molecule 17 is a protein called 30S RIBOSOMAL PROTEIN S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	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

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Chain	Residue	Modelled	Actual	Comment	Reference
Q	96	GLN	ALA	CONFLICT	UNP Q5SHP7

- Molecule 18 is a protein called 30S RIBOSOMAL PROTEIN S18.

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

- Molecule 19 is a protein called 30S RIBOSOMAL PROTEIN S19.

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

- Molecule 20 is a protein called 30S RIBOSOMAL PROTEIN S20.

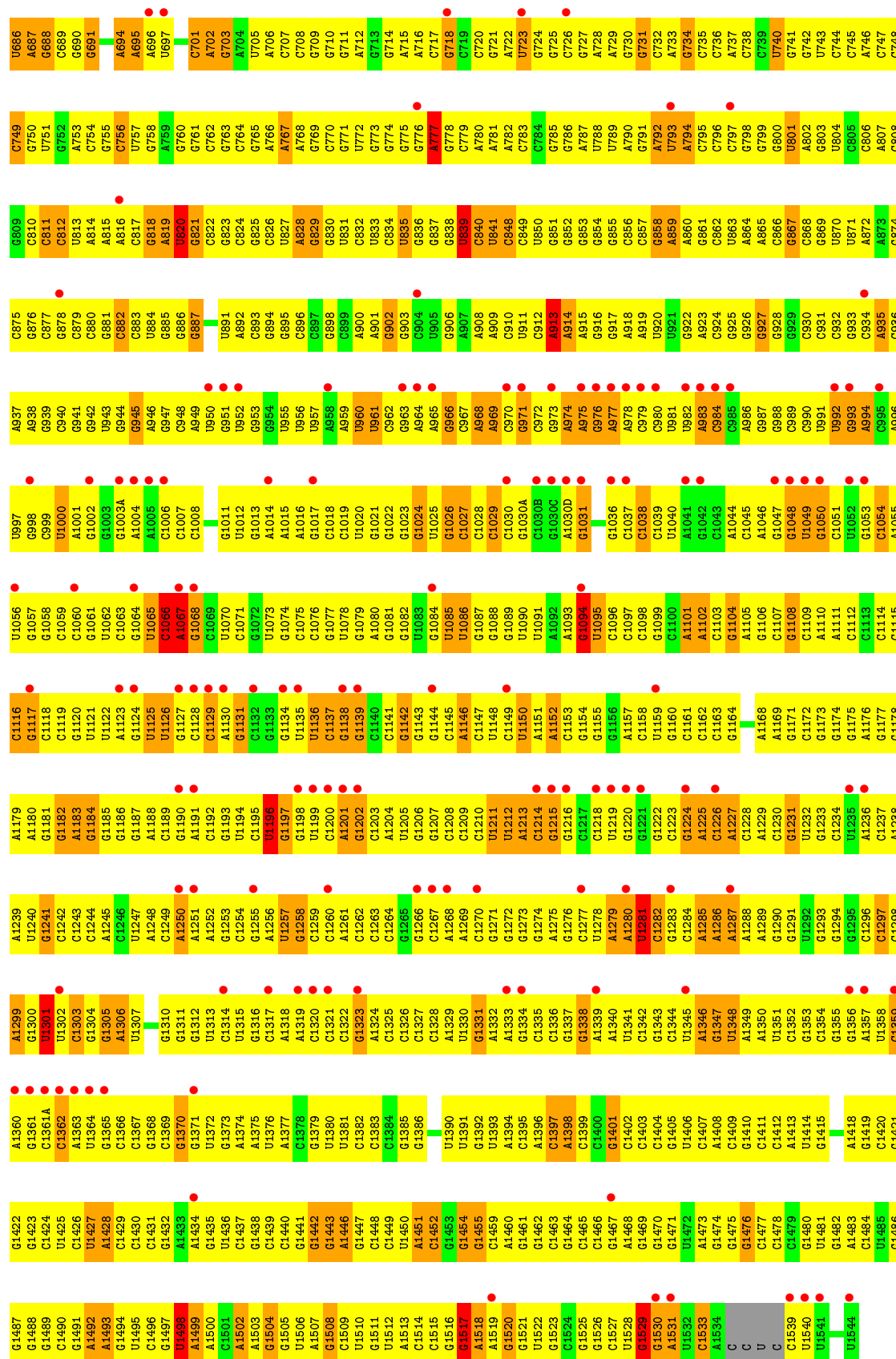
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	T	99	Total	C	N	O	S	0	0	0
			763	470	162	129	2			

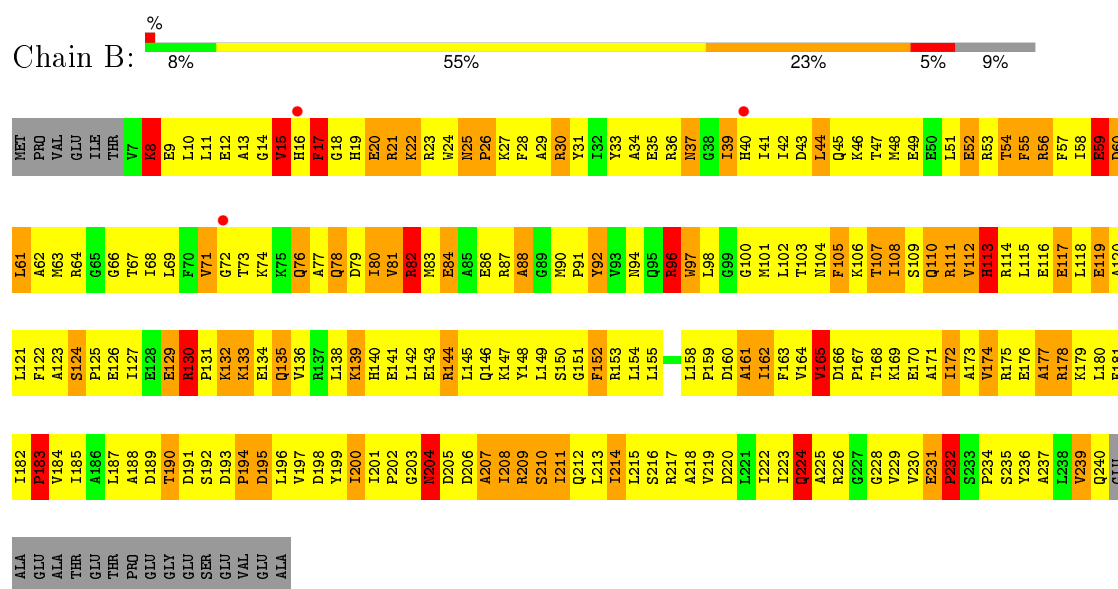
- Molecule 21 is a protein called 30S RIBOSOMAL PROTEIN THX.

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

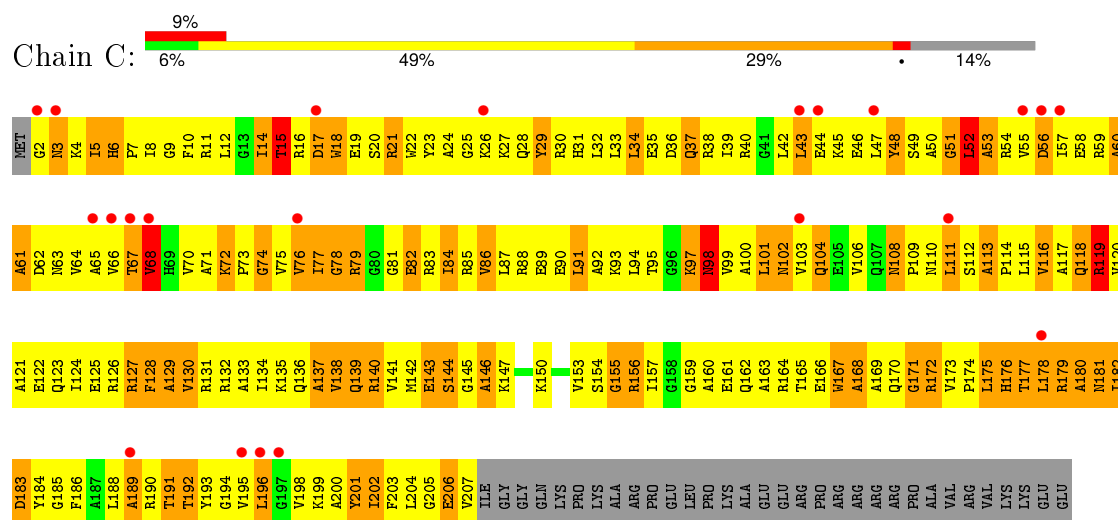
- Molecule 22 is ZINC ION (three-letter code: ZN) (formula: Zn).

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

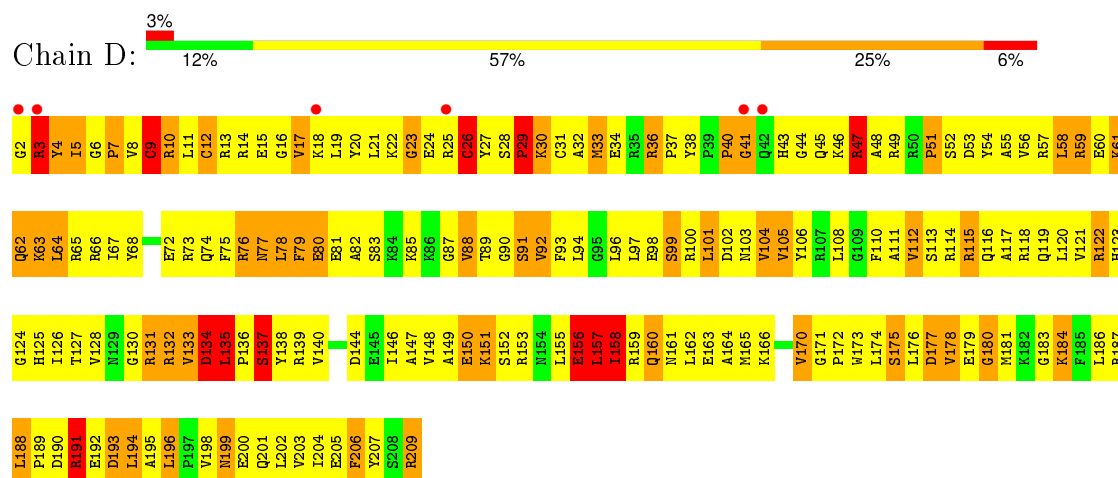




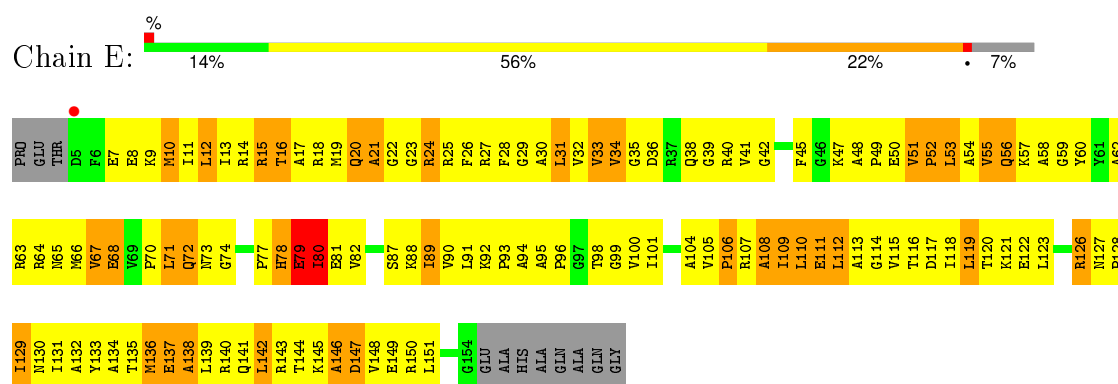
• Molecule 3: 30S RIBOSOMAL PROTEIN S3



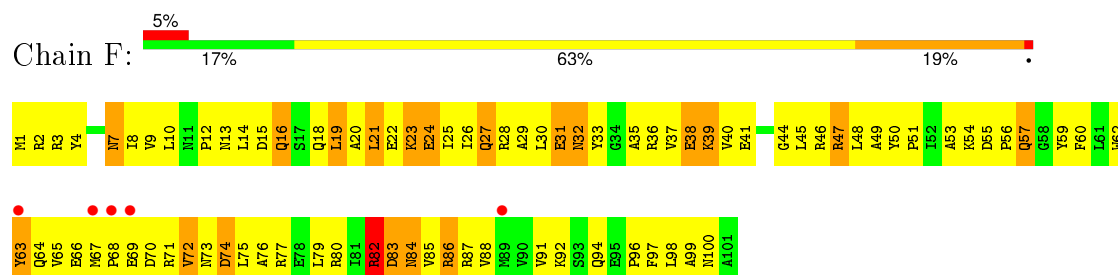
• Molecule 4: 30S RIBOSOMAL PROTEIN S4



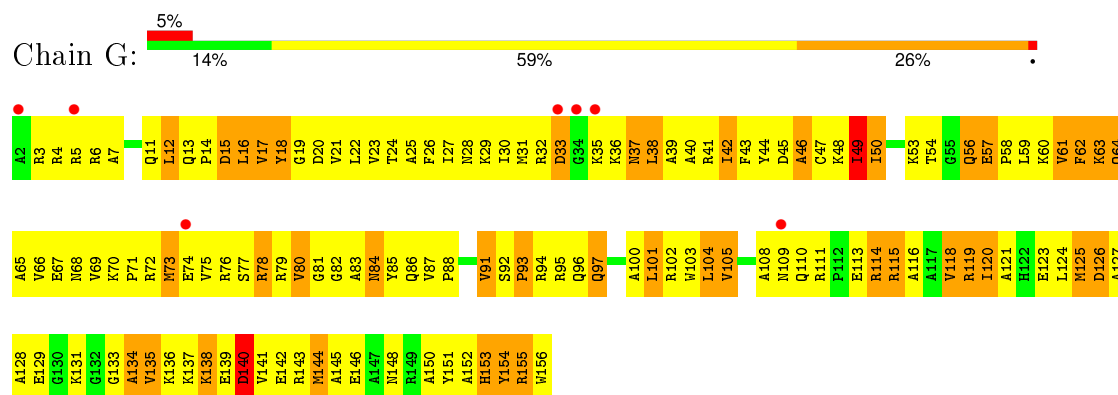
• Molecule 5: 30S RIBOSOMAL PROTEIN S5



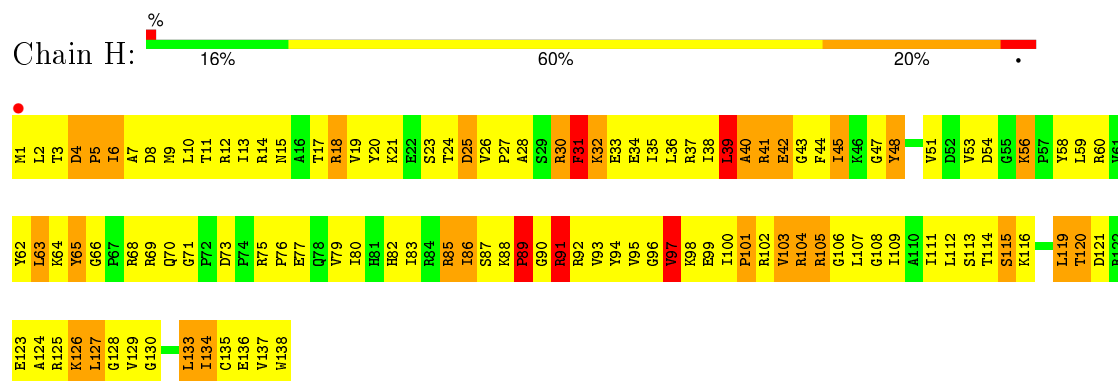
• Molecule 6: 30S RIBOSOMAL PROTEIN S6



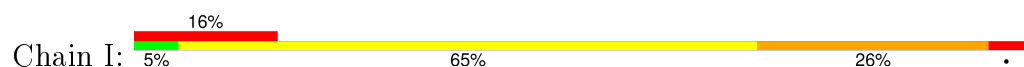
• Molecule 7: 30S RIBOSOMAL PROTEIN S7

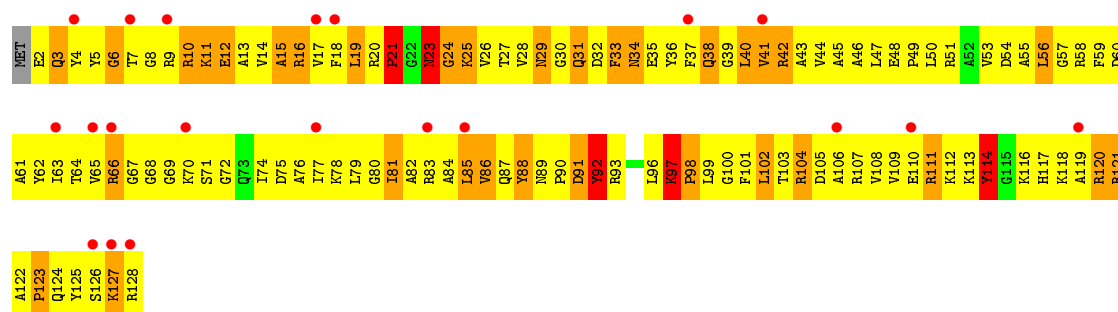


- Molecule 8: 30S RIBOSOMAL PROTEIN S8

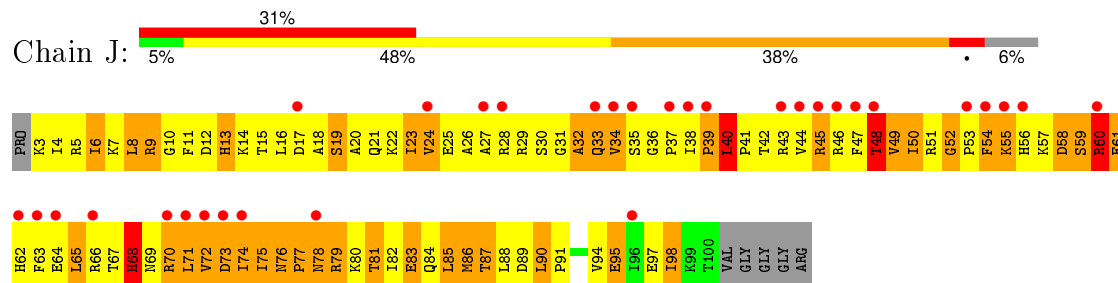


• Molecule 9: 30S RIBOSOMAL PROTEIN S9

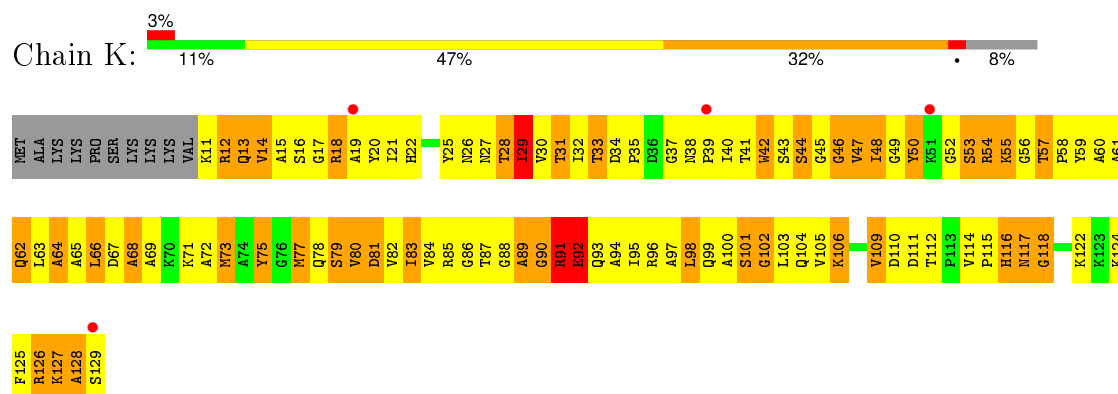




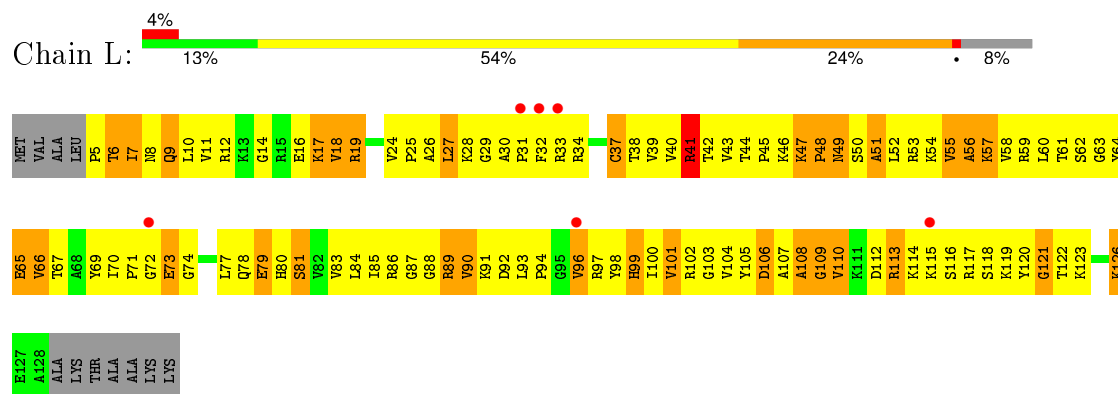
• Molecule 10: 30S RIBOSOMAL PROTEIN S10



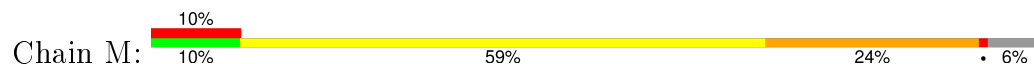
• Molecule 11: 30S RIBOSOMAL PROTEIN S11

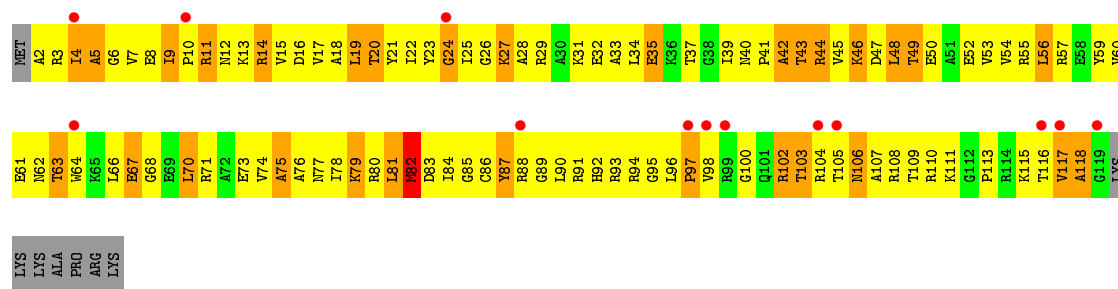


• Molecule 12: 30S RIBOSOMAL PROTEIN S12

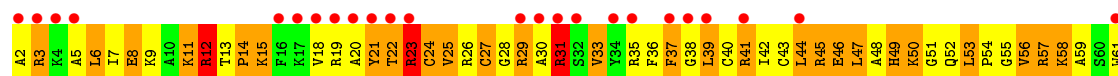


• Molecule 13: 30S RIBOSOMAL PROTEIN S13

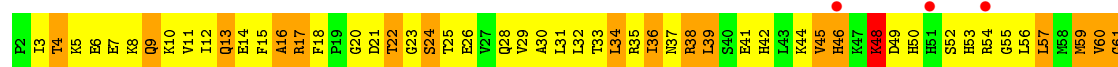
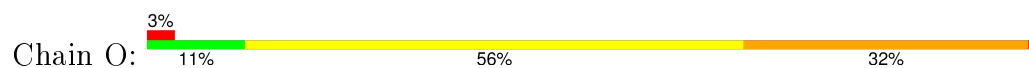




• Molecule 14: 30S RIBOSOMAL PROTEIN S14



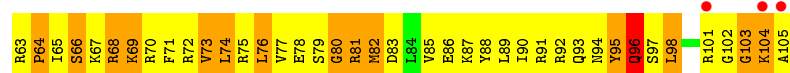
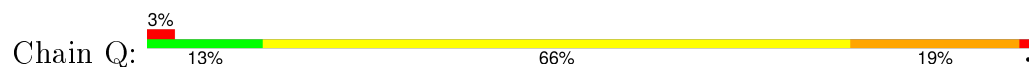
• Molecule 15: 30S RIBOSOMAL PROTEIN S15



• Molecule 16: 30S RIBOSOMAL PROTEIN S16



• Molecule 17: 30S RIBOSOMAL PROTEIN S17

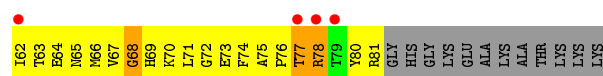
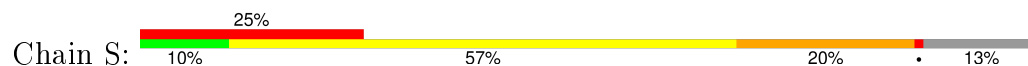


• Molecule 18: 30S RIBOSOMAL PROTEIN S18

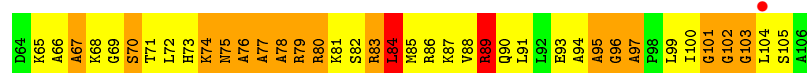
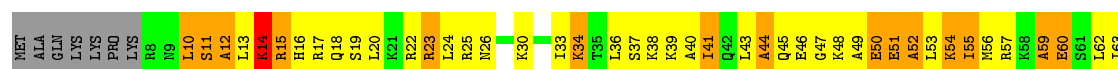
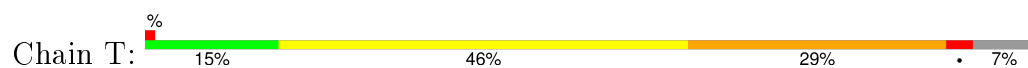




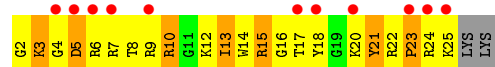
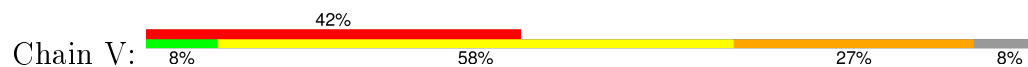
• Molecule 19: 30S RIBOSOMAL PROTEIN S19



• Molecule 20: 30S RIBOSOMAL PROTEIN S20



• Molecule 21: 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	402.84Å 402.84Å 174.28Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	141.42 – 3.65 148.66 – 3.64	Depositor EDS
% Data completeness (in resolution range)	92.6 (141.42-3.65) 89.6 (148.66-3.64)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	0.14	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.44 (at 3.67Å)	Xtriage
Refinement program	CNS 1.1	Depositor
R, R_{free}	0.260 , 0.324 0.267 , 0.329	Depositor DCC
R_{free} test set	7049 reflections (5.22%)	DCC
Wilson B-factor (Å ²)	107.1	Xtriage
Anisotropy	0.426	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.23 , 122.1	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning ²	$\langle L \rangle = 0.46$, $\langle L^2 \rangle = 0.29$	Xtriage
Outliers	1 of 143390 reflections (0.001%)	Xtriage
F_o, F_c correlation	0.85	EDS
Total number of atoms	51680	wwPDB-VP
Average B, all atoms (Å ²)	93.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.54% 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, 0.375 respectively for untwinned datasets, and 0.333, 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	0.64	4/36387 (0.0%)	0.78	27/56789 (0.0%)
2	B	0.47	0/1935	0.79	0/2609
3	C	0.46	0/1636	0.77	0/2205
4	D	0.49	0/1733	0.70	0/2318
5	E	0.61	0/1162	0.88	2/1564 (0.1%)
6	F	0.42	0/856	0.72	0/1154
7	G	0.44	0/1276	0.77	1/1709 (0.1%)
8	H	0.65	0/1136	0.87	1/1527 (0.1%)
9	I	0.45	0/1029	0.73	0/1378
10	J	0.47	0/805	0.86	0/1082
11	K	0.49	0/900	0.81	0/1213
12	L	0.51	0/986	0.87	0/1320
13	M	0.40	0/947	0.73	0/1270
14	N	0.46	0/501	0.75	1/664 (0.2%)
15	O	0.51	0/745	0.74	0/992
16	P	0.58	0/716	0.88	1/963 (0.1%)
17	Q	0.58	0/870	0.90	2/1159 (0.2%)
18	R	0.45	0/603	0.75	0/799
19	S	0.47	0/661	0.82	0/890
20	T	0.48	0/765	0.79	0/1007
21	V	0.48	0/212	0.66	0/277
All	All	0.59	4/55861 (0.0%)	0.78	35/82889 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	1	63
8	H	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
All	All	1	64

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	858	G	C5-C6	-6.65	1.35	1.42
1	A	1508	G	C5-C6	-5.12	1.37	1.42
1	A	574	A	C5-C6	-5.04	1.36	1.41
1	A	821	G	C5-C6	-5.03	1.37	1.42

All (35) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	290	C	N1-C1'-C2'	-8.80	102.33	112.00
1	A	1498	U	C2'-C3'-O3'	8.73	128.71	109.50
1	A	575	G	C2'-C3'-O3'	7.82	126.70	109.50
1	A	60	A	C2'-C3'-O3'	7.67	126.37	109.50
1	A	1454	G	N9-C1'-C2'	-7.34	103.92	112.00
1	A	1517	G	N9-C1'-C2'	-6.94	104.36	112.00
1	A	266	G	C2'-C3'-O3'	6.93	124.79	113.70
1	A	108	G	O4'-C1'-N9	6.84	113.68	108.20
1	A	1529	G	N9-C1'-C2'	6.61	122.59	114.00
1	A	34	C	N1-C1'-C2'	-6.36	105.01	112.00
1	A	141	A	N9-C1'-C2'	-6.31	105.06	112.00
1	A	812	C	N1-C1'-C2'	6.10	121.93	114.00
5	E	110	LEU	CA-CB-CG	-6.10	101.27	115.30
1	A	68	G	N9-C1'-C2'	-5.94	105.47	112.00
1	A	70	G	N9-C1'-C2'	-5.79	105.63	112.00
1	A	1085	U	C2'-C3'-O3'	5.66	122.75	113.70
1	A	190(H)	G	N9-C1'-C2'	-5.58	105.86	112.00
1	A	820	U	N1-C1'-C2'	5.54	121.20	114.00
1	A	265	G	O4'-C1'-N9	5.46	112.57	108.20
1	A	586	C	N1-C1'-C2'	-5.42	106.04	112.00
16	P	51	VAL	N-CA-C	5.32	125.37	111.00
7	G	49	ILE	N-CA-C	-5.30	96.68	111.00
1	A	328	C	C2'-C3'-O3'	5.29	122.17	113.70
1	A	183	G	N9-C1'-C2'	-5.25	106.22	112.00
5	E	119	LEU	CA-CB-CG	-5.25	103.23	115.30
14	N	31	ARG	N-CA-C	5.23	125.13	111.00
1	A	16	A	N9-C1'-C2'	-5.23	106.25	112.00
17	Q	33	GLY	N-CA-C	5.23	126.17	113.10
17	Q	56	VAL	N-CA-C	-5.21	96.94	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	H	89	PRO	N-CA-C	-5.11	98.83	112.10
1	A	1443	G	N9-C1'-C2'	5.10	120.62	114.00
1	A	573	A	N9-C1'-C2'	5.09	120.61	114.00
1	A	818	G	N9-C1'-C2'	5.08	120.61	114.00
1	A	839	U	N1-C1'-C2'	5.08	120.61	114.00
1	A	533	A	C2'-C3'-O3'	5.08	121.82	113.70

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
1	A	1498	U	C3'

All (64) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	1066	C	Sidechain
1	A	1067	A	Sidechain
1	A	1094	G	Sidechain
1	A	1196	U	Sidechain
1	A	1213	A	Sidechain
1	A	1231	G	Sidechain
1	A	127	G	Sidechain
1	A	1281	U	Sidechain
1	A	129	U	Sidechain
1	A	1301	U	Sidechain
1	A	1370	G	Sidechain
1	A	1381	U	Sidechain
1	A	1401	G	Sidechain
1	A	1454	G	Sidechain
1	A	1455	G	Sidechain
1	A	1502	A	Sidechain
1	A	1531	A	Sidechain
1	A	156	G	Sidechain
1	A	183	G	Sidechain
1	A	239	U	Sidechain
1	A	250	A	Sidechain
1	A	263	A	Sidechain
1	A	265	G	Sidechain
1	A	296	U	Sidechain
1	A	303	A	Sidechain
1	A	305	G	Sidechain
1	A	317	G	Sidechain

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Mol	Chain	Res	Type	Group
1	A	332	G	Sidechain
1	A	352	C	Sidechain
1	A	396	G	Sidechain
1	A	397	A	Sidechain
1	A	434	U	Sidechain
1	A	444	C	Sidechain
1	A	490	G	Sidechain
1	A	498	U	Sidechain
1	A	533	A	Sidechain
1	A	551	U	Sidechain
1	A	560	U	Sidechain
1	A	572	A	Sidechain
1	A	573	A	Sidechain
1	A	574	A	Sidechain
1	A	576	G	Sidechain
1	A	634	C	Sidechain
1	A	666	G	Sidechain
1	A	682	G	Sidechain
1	A	686	U	Sidechain
1	A	691	G	Sidechain
1	A	694	A	Sidechain
1	A	740	U	Sidechain
1	A	756	C	Sidechain
1	A	767	A	Sidechain
1	A	77	G	Sidechain
1	A	777	A	Sidechain
1	A	801	U	Sidechain
1	A	811	C	Sidechain
1	A	819	A	Sidechain
1	A	829	G	Sidechain
1	A	835	U	Sidechain
1	A	870	U	Sidechain
1	A	882	C	Sidechain
1	A	887	G	Sidechain
1	A	898	G	Sidechain
1	A	913	A	Sidechain
8	H	48	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	2582	0
2	B	1900	0	1951	415	0
3	C	1612	0	1677	503	0
4	D	1703	0	1764	410	0
5	E	1146	0	1207	238	0
6	F	843	0	857	150	0
7	G	1257	0	1296	278	0
8	H	1116	0	1177	221	0
9	I	1011	0	1043	277	0
10	J	792	0	835	283	0
11	K	885	0	904	167	0
12	L	970	0	1057	204	0
13	M	937	0	995	225	0
14	N	492	0	532	165	0
15	O	734	0	771	150	0
16	P	700	0	720	199	0
17	Q	857	0	930	177	0
18	R	597	0	668	137	0
19	S	647	0	673	182	0
20	T	763	0	861	206	0
21	V	208	0	221	52	0
22	D	1	0	0	0	0
22	N	1	0	0	0	0
All	All	51680	0	36553	6732	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 76.

All (6732) 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)
4:D:158:ILE:H	4:D:158:ILE:CD1	1.57	1.15
4:D:176:LEU:HG	4:D:177:ASP:H	0.96	1.12
1:A:243:A:H4'	1:A:244:U:H5'	1.22	1.12
1:A:1250:A:H4'	9:I:68:GLY:HA2	1.31	1.12
1:A:1347:G:N2	1:A:1373:G:H2'	1.65	1.12
17:Q:97:SER:HB2	17:Q:103:GLY:HA2	1.21	1.11
14:N:24:CYS:SG	14:N:27:CYS:HB3	1.89	1.11
1:A:1443:G:C5'	1:A:1446:A:H5'	1.80	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:45:ARG:HB3	10:J:45:ARG:HH11	1.01	1.10
17:Q:70:ARG:HG3	17:Q:70:ARG:HH11	1.17	1.10
4:D:17:VAL:HG12	4:D:18:LYS:H	1.11	1.10
10:J:8:LEU:HD13	10:J:16:LEU:HD21	1.34	1.09
20:T:33:ILE:HD11	20:T:63:ILE:HA	1.34	1.09
2:B:101:MET:HA	2:B:108:ILE:HD13	1.31	1.08
1:A:501:C:H2'	1:A:502:G:H8	1.13	1.08
1:A:793:U:H3'	1:A:794:A:C5'	1.83	1.08
3:C:50:ALA:HA	3:C:72:LYS:HD3	1.34	1.08
1:A:1443:G:H5''	1:A:1446:A:C5'	1.82	1.08
11:K:127:LYS:HA	11:K:127:LYS:HE3	1.30	1.08
1:A:1372:U:H5''	9:I:71:SER:HB3	1.28	1.08
15:O:16:ALA:HB1	15:O:21:ASP:HB3	1.34	1.07
15:O:87:ILE:HG22	15:O:88:ARG:H	1.16	1.07
9:I:102:LEU:HD23	9:I:102:LEU:H	1.19	1.07
3:C:85:ARG:HA	3:C:88:ARG:HG3	1.33	1.07
8:H:87:SER:HB2	8:H:93:VAL:HB	1.33	1.06
3:C:71:ALA:HA	3:C:106:VAL:HB	1.10	1.06
1:A:1182:G:H4'	1:A:1183:A:C5'	1.84	1.06
3:C:123:GLN:HB3	3:C:128:PHE:HE2	1.19	1.06
1:A:1123:A:H4'	10:J:37:PRO:HD2	1.37	1.06
1:A:946:A:H2'	1:A:947:G:H8	1.15	1.06
4:D:64:LEU:HB2	4:D:198:VAL:HG21	1.29	1.05
12:L:47:LYS:HG3	12:L:48:PRO:HD3	1.08	1.05
1:A:1182:G:H4'	1:A:1183:A:H5''	1.39	1.05
1:A:1065:U:H4'	1:A:1066:C:H5'	1.35	1.04
8:H:63:LEU:H	8:H:63:LEU:HD12	1.21	1.04
1:A:1150:U:O3'	10:J:41:PRO:HA	1.56	1.04
7:G:135:VAL:HG13	7:G:138:LYS:HZ2	1.20	1.04
1:A:1305:G:N2	1:A:1331:G:H2'	1.71	1.04
9:I:108:VAL:HG12	9:I:109:VAL:H	1.19	1.04
1:A:200:G:H2'	1:A:201:C:H5''	1.38	1.04
4:D:10:ARG:HG3	4:D:10:ARG:HH11	1.21	1.04
7:G:93:PRO:HG2	7:G:94:ARG:H	1.21	1.04
18:R:39:VAL:HG13	18:R:40:LEU:H	1.21	1.04
10:J:86:MET:HG3	10:J:87:THR:H	1.16	1.03
3:C:76:VAL:HG21	3:C:103:VAL:HG11	1.36	1.03
12:L:89:ARG:HH21	12:L:97:ARG:HG2	1.22	1.03
7:G:141:VAL:HA	7:G:144:MET:HB2	1.37	1.03
15:O:12:ILE:HD12	15:O:12:ILE:H	1.20	1.03
2:B:82:ARG:HA	2:B:92:TYR:CE2	1.93	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:28:LYS:HD3	19:S:29:ARG:H	1.22	1.03
8:H:44:PHE:O	8:H:45:ILE:HG23	1.58	1.02
4:D:62:GLN:HA	4:D:62:GLN:HE21	1.21	1.02
7:G:111:ARG:HH11	7:G:111:ARG:HB3	1.24	1.02
4:D:22:LYS:HB2	4:D:26:CYS:SG	1.99	1.02
14:N:6:LEU:HD22	14:N:23:ARG:HH21	1.20	1.02
1:A:1127:G:H1'	1:A:1148:U:H3	1.20	1.01
3:C:59:ARG:HG3	3:C:60:ALA:H	1.26	1.01
2:B:28:PHE:CZ	2:B:189:ASP:HA	1.95	1.01
2:B:231:GLU:HB2	2:B:232:PRO:HD2	1.43	1.01
10:J:77:PRO:HA	10:J:81:THR:HG21	1.42	1.01
1:A:1305:G:H22	1:A:1331:G:H2'	1.25	1.01
3:C:182:ILE:HG22	3:C:183:ASP:H	1.25	1.00
1:A:463:A:H2'	1:A:474:G:H8	1.25	1.00
1:A:64:G:H4'	1:A:65:U:O5'	1.58	1.00
10:J:16:LEU:HA	10:J:94:VAL:HG21	1.42	1.00
4:D:158:ILE:HD12	4:D:158:ILE:N	1.71	1.00
11:K:16:SER:O	11:K:35:PRO:HG3	1.59	1.00
4:D:158:ILE:H	4:D:158:ILE:HD12	0.86	1.00
2:B:44:LEU:H	2:B:44:LEU:HD23	1.21	1.00
16:P:82:GLN:H	16:P:82:GLN:NE2	1.60	0.99
12:L:84:LEU:HB3	12:L:101:VAL:HG21	1.43	0.99
3:C:3:ASN:HD22	3:C:3:ASN:H	1.04	0.99
1:A:1129:C:H4'	1:A:1130:A:N7	1.75	0.99
3:C:190:ARG:HA	3:C:195:VAL:HG22	1.44	0.99
3:C:52:LEU:H	3:C:52:LEU:HD23	1.27	0.99
12:L:84:LEU:HB3	12:L:101:VAL:CG2	1.92	0.99
19:S:22:LEU:HB3	19:S:28:LYS:HB2	1.43	0.99
1:A:456:C:H2'	1:A:457:C:H6	1.26	0.99
4:D:176:LEU:CG	4:D:177:ASP:H	1.75	0.99
1:A:518:C:H5''	1:A:530:G:H1'	1.43	0.99
1:A:736:C:H2'	1:A:737:A:C8	1.97	0.99
1:A:1298:C:H4'	1:A:1299:A:H5'	1.45	0.99
4:D:119:GLN:HG3	4:D:123:HIS:HE1	1.24	0.98
4:D:64:LEU:HD23	4:D:198:VAL:HG11	1.45	0.98
4:D:176:LEU:HG	4:D:177:ASP:N	1.76	0.98
1:A:1412:C:H2'	1:A:1413:A:H8	1.26	0.98
3:C:62:ASP:HA	3:C:97:LYS:HB3	1.46	0.98
16:P:22:THR:HG23	16:P:23:ASP:H	1.28	0.98
1:A:269:C:H2'	1:A:270:A:H8	1.27	0.98
4:D:156:GLU:HG2	4:D:157:LEU:HD13	1.42	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:79:ARG:HA	10:J:82:ILE:HB	1.44	0.98
1:A:284:G:H2'	1:A:285:G:H8	1.27	0.98
20:T:40:ALA:HA	20:T:55:ILE:HD11	1.42	0.98
8:H:11:THR:HG23	8:H:14:ARG:NH1	1.79	0.98
19:S:32:LYS:HA	19:S:50:ALA:HB3	1.44	0.98
13:M:81:LEU:HD13	13:M:88:ARG:HB3	1.46	0.98
9:I:19:LEU:HD21	9:I:59:PHE:HB3	1.46	0.97
3:C:66:VAL:HG23	3:C:99:VAL:HG21	1.44	0.97
5:E:55:VAL:HG23	5:E:56:GLN:H	1.29	0.97
3:C:182:ILE:HG22	3:C:183:ASP:N	1.78	0.97
7:G:38:LEU:HG	7:G:42:ILE:HD11	1.43	0.97
9:I:80:GLY:HA2	9:I:83:ARG:HB3	1.46	0.97
12:L:41:ARG:HB3	12:L:41:ARG:HH11	1.26	0.97
7:G:65:ALA:HB2	7:G:128:ALA:HA	1.43	0.97
8:H:65:TYR:HA	8:H:79:VAL:HG23	1.45	0.97
5:E:8:GLU:HB2	5:E:34:VAL:HG22	1.47	0.97
1:A:1280:A:H5''	10:J:40:LEU:HD21	1.43	0.96
19:S:12:ASP:HB2	19:S:38:SER:HB2	1.47	0.96
2:B:172:ILE:H	2:B:172:ILE:HD12	1.26	0.96
4:D:133:VAL:HG12	4:D:134:ASP:H	1.28	0.96
6:F:33:TYR:HB2	6:F:75:LEU:HD23	1.47	0.96
3:C:156:ARG:HH21	3:C:161:GLU:HA	1.29	0.96
1:A:380:G:N2	1:A:382:A:H3'	1.81	0.96
15:O:48:LYS:HZ2	15:O:48:LYS:N	1.63	0.96
4:D:64:LEU:O	4:D:64:LEU:HD13	1.66	0.96
3:C:11:ARG:HH12	3:C:179:ARG:H	1.11	0.96
1:A:376:G:H5''	16:P:5:ARG:HG3	1.48	0.95
1:A:201:C:H2'	1:A:202:U:H5''	1.48	0.95
1:A:501:C:H2'	1:A:502:G:C8	2.01	0.95
3:C:58:GLU:HB2	3:C:65:ALA:HB3	1.47	0.95
3:C:66:VAL:HG12	3:C:68:VAL:HB	1.47	0.95
10:J:30:SER:HB3	10:J:84:GLN:NE2	1.80	0.95
1:A:962:C:H2'	1:A:963:G:H8	1.31	0.95
3:C:88:ARG:HA	3:C:91:LEU:HB3	1.48	0.95
18:R:43:PHE:HA	18:R:51:LEU:HD12	1.48	0.95
13:M:10:PRO:HB2	13:M:18:ALA:HB1	1.48	0.95
1:A:393:A:H2'	1:A:394:G:H8	1.30	0.95
15:O:82:ILE:HD11	15:O:88:ARG:HG3	1.47	0.95
1:A:444:C:H2'	1:A:445:G:H8	1.30	0.95
7:G:29:LYS:HZ1	7:G:102:ARG:HA	1.31	0.94
3:C:83:ARG:HA	3:C:86:VAL:HG23	1.46	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:41:VAL:HG22	5:E:113:ALA:HA	1.49	0.94
5:E:110:LEU:HD13	5:E:118:ILE:HD12	1.48	0.94
10:J:6:ILE:HG13	10:J:73:ASP:HA	1.49	0.94
1:A:1267:C:H1'	21:V:20:LYS:HE3	1.48	0.94
20:T:90:GLN:O	20:T:93:GLU:HG2	1.68	0.94
5:E:80:ILE:HG22	8:H:104:ARG:HH21	1.32	0.94
1:A:243:A:C4'	1:A:244:U:H5'	1.97	0.94
16:P:67:THR:HG22	16:P:69:THR:H	1.32	0.94
5:E:35:GLY:H	5:E:112:LEU:HD12	1.30	0.94
1:A:737:A:H2'	1:A:738:C:H6	1.32	0.94
15:O:48:LYS:NZ	15:O:48:LYS:H	1.64	0.94
1:A:1343:G:H2'	1:A:1344:C:C6	2.01	0.94
7:G:66:VAL:HG22	7:G:104:LEU:HD11	1.49	0.94
4:D:10:ARG:HG2	4:D:11:LEU:N	1.80	0.94
4:D:62:GLN:HE22	4:D:65:ARG:HH11	1.13	0.94
3:C:92:ALA:HA	3:C:95:THR:HG22	1.47	0.94
1:A:737:A:H2'	1:A:738:C:C6	2.03	0.93
19:S:15:LEU:O	19:S:19:VAL:HB	1.69	0.93
12:L:90:VAL:HG11	12:L:93:LEU:HG	1.50	0.93
1:A:131:C:H2'	1:A:132:C:C6	2.04	0.93
3:C:64:VAL:CG2	3:C:97:LYS:HB2	1.98	0.93
14:N:11:LYS:O	14:N:12:ARG:HB3	1.65	0.93
1:A:946:A:H2'	1:A:947:G:C8	2.02	0.93
6:F:47:ARG:HA	6:F:47:ARG:HH11	1.34	0.93
1:A:1203:C:H2'	1:A:1204:A:O4'	1.69	0.93
2:B:36:ARG:HD2	2:B:41:ILE:HD12	1.48	0.93
12:L:66:VAL:HG12	12:L:67:THR:H	1.34	0.92
1:A:256:U:H2'	1:A:257:G:H8	1.30	0.92
1:A:1178:G:H21	1:A:1180:A:H3'	1.32	0.92
2:B:144:ARG:HG3	2:B:145:LEU:N	1.84	0.92
10:J:4:ILE:HB	10:J:74:ILE:HG13	1.51	0.92
12:L:43:VAL:HG12	12:L:44:THR:H	1.34	0.92
5:E:81:GLU:HG2	5:E:90:VAL:HG12	1.46	0.92
3:C:71:ALA:CA	3:C:106:VAL:HB	2.00	0.92
1:A:1007:C:H42	1:A:1022:G:H22	1.12	0.92
1:A:243:A:H4'	1:A:244:U:C5'	1.99	0.92
1:A:420:U:O2'	1:A:421:U:H5"	1.70	0.92
9:I:14:VAL:O	9:I:65:VAL:HG23	1.68	0.92
5:E:78:HIS:ND1	8:H:104:ARG:HD2	1.83	0.92
10:J:38:ILE:HB	10:J:71:LEU:HB3	1.50	0.92
1:A:397:A:O2'	1:A:398:C:H5"	1.68	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:40:ILE:HG22	11:K:41:THR:HG23	1.47	0.92
14:N:14:PRO:HG2	14:N:15:LYS:H	1.34	0.92
16:P:59:TRP:CE3	16:P:59:TRP:HA	2.05	0.91
2:B:219:VAL:HA	2:B:222:ILE:HD12	1.52	0.91
2:B:96:ARG:H	2:B:96:ARG:NE	1.68	0.91
1:A:1047:G:H2'	1:A:1048:G:H5''	1.49	0.91
5:E:51:VAL:HB	5:E:52:PRO:HD3	1.52	0.91
7:G:116:ALA:N	7:G:119:ARG:HH21	1.68	0.91
8:H:24:THR:HG22	8:H:63:LEU:HD11	1.51	0.91
10:J:45:ARG:HB3	10:J:45:ARG:NH1	1.85	0.91
1:A:1286:A:H2'	1:A:1287:A:H4'	1.52	0.91
1:A:877:C:O2'	1:A:878:G:H5'	1.70	0.91
1:A:710:G:H5''	6:F:54:LYS:HZ3	1.35	0.91
12:L:45:PRO:HB3	12:L:92:ASP:HB3	1.52	0.91
2:B:20:GLU:HA	2:B:21:ARG:HH21	1.36	0.91
1:A:1329:A:P	13:M:28:ALA:HB3	2.11	0.90
1:A:1104:G:H4'	2:B:111:ARG:NH2	1.86	0.90
1:A:707:C:H2'	1:A:708:C:H6	1.33	0.90
1:A:256:U:H2'	1:A:257:G:C8	2.05	0.90
20:T:67:ALA:HA	20:T:73:HIS:H	1.33	0.90
20:T:75:ASN:HD22	20:T:75:ASN:N	1.64	0.90
1:A:390:C:H2'	1:A:391:G:H8	1.36	0.90
4:D:12:CYS:SG	4:D:19:LEU:HB2	2.12	0.90
7:G:20:ASP:OD2	7:G:22:LEU:HG	1.72	0.90
1:A:750:G:N3	15:O:23:GLY:HA3	1.87	0.90
1:A:982:U:H5	14:N:31:ARG:HH12	1.18	0.90
11:K:33:THR:HA	11:K:39:PRO:HA	1.53	0.90
1:A:405:U:H3'	1:A:406:G:H5'	1.52	0.90
1:A:990:C:H4'	1:A:1018:C:OP1	1.71	0.90
1:A:1236:A:H4'	1:A:1304:G:H4'	1.52	0.90
4:D:62:GLN:HE22	4:D:65:ARG:NH1	1.70	0.90
15:O:48:LYS:HZ2	15:O:48:LYS:H	0.90	0.89
5:E:50:GLU:HG3	5:E:52:PRO:HD2	1.54	0.89
14:N:53:LEU:HD12	14:N:56:VAL:HB	1.51	0.89
18:R:18:ARG:HA	18:R:18:ARG:NE	1.85	0.89
1:A:1090:U:H2'	1:A:1091:U:H6	1.35	0.89
9:I:10:ARG:CZ	9:I:11:LYS:HB2	2.01	0.89
10:J:49:VAL:HG11	14:N:41:ARG:HB2	1.54	0.89
1:A:503:C:H2'	1:A:504:C:H6	1.38	0.89
1:A:560:U:H4'	1:A:561:U:H5''	1.52	0.89
1:A:1107:C:H2'	1:A:1108:G:H5'	1.53	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:65:VAL:HG11	9:I:77:ILE:HD11	1.55	0.89
13:M:49:THR:HB	13:M:52:GLU:HG3	1.54	0.89
1:A:167:G:H2'	1:A:168:G:C8	2.08	0.89
7:G:155:ARG:HA	7:G:155:ARG:HE	1.37	0.89
4:D:104:VAL:HG21	4:D:140:VAL:HG21	1.54	0.89
7:G:111:ARG:HB3	7:G:111:ARG:NH1	1.87	0.89
7:G:65:ALA:HB2	7:G:128:ALA:CA	2.02	0.89
14:N:56:VAL:HG22	14:N:57:ARG:H	1.38	0.89
8:H:134:ILE:HG22	8:H:135:CYS:N	1.87	0.89
3:C:150:LYS:HG3	3:C:169:ALA:HB2	1.55	0.89
1:A:168:G:O2'	1:A:169:C:H5'	1.73	0.89
16:P:21:VAL:HG21	16:P:59:TRP:CD1	2.08	0.88
16:P:74:LEU:HB3	16:P:79:VAL:HG23	1.54	0.88
1:A:894:G:H2'	1:A:895:G:C8	2.07	0.88
1:A:1117:G:N2	1:A:1180:A:H1'	1.88	0.88
9:I:48:GLU:HA	9:I:51:ARG:HE	1.39	0.88
9:I:7:THR:HB	9:I:83:ARG:NH1	1.89	0.88
13:M:17:VAL:HG22	13:M:27:LYS:HD3	1.55	0.88
1:A:735:C:H2'	1:A:736:C:H6	1.35	0.88
1:A:383:A:H2'	1:A:384:G:H5'	1.54	0.88
1:A:793:U:H3'	1:A:794:A:H5'	1.53	0.88
7:G:38:LEU:HD23	7:G:39:ALA:H	1.34	0.88
1:A:1519:A:H2'	1:A:1520:G:H5'	1.56	0.88
11:K:87:THR:HA	11:K:91:ARG:HH12	1.39	0.88
1:A:436:C:H2'	1:A:437:U:H6	1.37	0.88
3:C:120:VAL:HA	3:C:123:GLN:HB2	1.56	0.88
1:A:390:C:H2'	1:A:391:G:C8	2.08	0.88
1:A:1412:C:H2'	1:A:1413:A:C8	2.09	0.88
1:A:710:G:H5''	6:F:54:LYS:NZ	1.87	0.88
1:A:760:G:N2	17:Q:104:LYS:H	1.72	0.88
16:P:4:ILE:HG13	16:P:64:ALA:HB1	1.54	0.88
4:D:187:ARG:HE	4:D:188:LEU:HD12	1.39	0.88
1:A:1366:C:H2'	1:A:1367:C:H6	1.36	0.88
20:T:57:ARG:NH2	20:T:102:GLY:HA3	1.88	0.87
16:P:21:VAL:HG21	16:P:59:TRP:NE1	1.89	0.87
5:E:11:ILE:HD11	5:E:33:VAL:HG22	1.55	0.87
2:B:178:ARG:HH22	8:H:68:ARG:NH2	1.72	0.87
7:G:28:ASN:HA	7:G:31:MET:HB2	1.54	0.87
9:I:7:THR:HG22	9:I:8:GLY:H	1.38	0.87
1:A:235:C:H5'	17:Q:70:ARG:HD3	1.53	0.87
1:A:392:G:H2'	1:A:393:A:C8	2.08	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:78:ASN:C	10:J:80:LYS:H	1.77	0.87
21:V:17:THR:HG22	21:V:18:TYR:H	1.38	0.87
1:A:1008:C:H42	1:A:1021:G:H1	1.18	0.87
13:M:10:PRO:CB	13:M:18:ALA:HB1	2.04	0.87
1:A:373:A:H2'	1:A:374:A:H8	1.38	0.87
19:S:11:VAL:HG22	19:S:39:THR:HG22	1.54	0.87
1:A:601:C:O2'	1:A:602:A:H5'	1.74	0.87
1:A:309:G:H2'	1:A:310:G:H8	1.38	0.86
1:A:1443:G:H5''	1:A:1446:A:H5'	0.91	0.86
1:A:382:A:H2'	1:A:383:A:H8	1.36	0.86
18:R:58:LEU:HD22	18:R:62:GLU:HB3	1.57	0.86
2:B:82:ARG:HA	2:B:92:TYR:HE2	1.40	0.86
1:A:1050:G:H22	1:A:1209:C:H1'	1.38	0.86
4:D:61:LYS:HD3	4:D:62:GLN:N	1.90	0.86
12:L:47:LYS:HG3	12:L:48:PRO:CD	2.01	0.86
1:A:1097:C:H2'	1:A:1098:C:H6	1.40	0.86
7:G:136:LYS:O	7:G:140:ASP:N	2.07	0.86
10:J:9:ARG:HH12	10:J:69:ASN:HB3	1.37	0.86
14:N:6:LEU:HD22	14:N:23:ARG:NH2	1.91	0.86
5:E:89:ILE:HD13	5:E:90:VAL:N	1.89	0.86
1:A:1195:C:H3'	1:A:1196:U:H5'	1.55	0.86
1:A:284:G:H2'	1:A:285:G:C8	2.09	0.86
1:A:986:A:H1'	19:S:55:LYS:HA	1.58	0.86
1:A:258:G:H2'	1:A:259:G:H8	1.40	0.86
16:P:33:ILE:O	16:P:34:GLU:HB3	1.75	0.86
1:A:1507:A:C2	1:A:1530:G:H1'	2.10	0.86
5:E:26:PHE:O	5:E:27:ARG:HG3	1.75	0.86
17:Q:98:LEU:HA	17:Q:102:GLY:HA2	1.57	0.86
3:C:123:GLN:HB3	3:C:128:PHE:CE2	2.09	0.86
10:J:42:THR:HG23	10:J:68:HIS:HA	1.57	0.86
8:H:134:ILE:HG22	8:H:135:CYS:H	1.38	0.86
3:C:129:ALA:HB1	3:C:132:ARG:HB2	1.57	0.86
7:G:38:LEU:HD23	7:G:39:ALA:N	1.90	0.86
1:A:357:G:O2'	1:A:358:U:H5'	1.74	0.86
11:K:16:SER:HA	11:K:79:SER:HB3	1.58	0.86
1:A:1047:G:C2'	1:A:1048:G:H5''	2.05	0.86
4:D:157:LEU:HB2	4:D:158:ILE:HD12	1.56	0.86
1:A:1015:A:H2'	1:A:1016:A:C8	2.11	0.86
3:C:18:TRP:HE1	14:N:56:VAL:HG12	1.38	0.86
6:F:94:GLN:HB3	18:R:32:ARG:HH11	1.38	0.86
4:D:23:GLY:HA2	4:D:112:VAL:O	1.76	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:894:G:H2'	1:A:895:G:H8	1.39	0.86
4:D:52:SER:C	4:D:54:TYR:H	1.77	0.86
10:J:45:ARG:CB	10:J:45:ARG:HH11	1.87	0.86
3:C:64:VAL:HG23	3:C:97:LYS:HB2	1.56	0.86
15:O:56:LEU:HA	15:O:59:MET:HG3	1.58	0.86
1:A:1215:G:H2'	1:A:1216:G:O4'	1.76	0.86
15:O:64:ARG:HH22	15:O:68:ARG:HH22	1.20	0.86
4:D:36:ARG:N	4:D:37:PRO:HD3	1.91	0.85
9:I:102:LEU:HD23	9:I:102:LEU:N	1.89	0.85
9:I:16:ARG:H	9:I:16:ARG:HD3	1.41	0.85
11:K:95:ILE:HG22	11:K:99:GLN:HE21	1.41	0.85
4:D:189:PRO:HB2	4:D:194:LEU:HD21	1.58	0.85
17:Q:97:SER:HB2	17:Q:103:GLY:CA	2.06	0.85
2:B:134:GLU:HB3	2:B:138:LEU:HD23	1.58	0.85
10:J:98:ILE:H	10:J:98:ILE:HD12	1.40	0.85
1:A:115:G:H1'	1:A:116:A:N7	1.89	0.85
3:C:3:ASN:HD22	3:C:3:ASN:N	1.69	0.85
13:M:79:LYS:HE2	13:M:79:LYS:HA	1.56	0.85
6:F:33:TYR:HA	6:F:71:ARG:NH2	1.90	0.85
18:R:21:LYS:HD2	18:R:21:LYS:H	1.39	0.85
19:S:38:SER:HB3	19:S:71:LEU:HD11	1.55	0.85
1:A:528:C:H2'	1:A:529:G:H5'	1.58	0.85
5:E:40:ARG:HG2	5:E:68:GLU:OE2	1.76	0.85
1:A:1347:G:H3'	9:I:108:VAL:O	1.76	0.85
14:N:46:GLU:HA	14:N:49:HIS:HD2	1.39	0.85
1:A:1488:G:H2'	1:A:1489:G:C8	2.11	0.85
4:D:119:GLN:HG3	4:D:123:HIS:CE1	2.11	0.85
3:C:76:VAL:O	3:C:83:ARG:HB3	1.77	0.85
2:B:130:ARG:HB3	2:B:131:PRO:HD2	1.59	0.85
5:E:92:LYS:HB3	5:E:119:LEU:HB2	1.59	0.85
17:Q:95:TYR:O	17:Q:97:SER:N	2.10	0.85
15:O:39:LEU:HD13	15:O:56:LEU:HB2	1.57	0.85
1:A:1255:G:O2'	1:A:1258:G:H1'	1.77	0.85
20:T:76:ALA:O	20:T:80:ARG:HG2	1.75	0.84
1:A:200:G:C2'	1:A:201:C:H5''	2.06	0.84
12:L:47:LYS:CG	12:L:48:PRO:HD3	2.02	0.84
10:J:40:LEU:HD23	10:J:41:PRO:HD2	1.56	0.84
21:V:10:ARG:HA	21:V:13:ILE:HG22	1.60	0.84
7:G:126:ASP:HB3	7:G:131:LYS:O	1.77	0.84
7:G:17:VAL:HG12	7:G:18:TYR:N	1.92	0.84
1:A:126:G:H1	1:A:235:C:H42	1.20	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:30:LYS:HD3	20:T:72:LEU:HD21	1.57	0.84
1:A:1522:U:O2'	1:A:1523:G:H5'	1.77	0.84
17:Q:86:GLU:O	17:Q:90:ILE:HG13	1.76	0.84
1:A:761:G:H5''	17:Q:101:ARG:O	1.78	0.84
14:N:26:ARG:NH2	14:N:47:LEU:HD11	1.92	0.84
1:A:882:C:O2'	1:A:883:C:H5'	1.78	0.84
3:C:22:TRP:HB3	3:C:59:ARG:HB3	1.60	0.84
5:E:87:SER:HB3	5:E:131:ILE:HD13	1.60	0.84
3:C:71:ALA:O	3:C:73:PRO:HD3	1.77	0.84
1:A:1020:U:H2'	1:A:1021:G:H8	1.42	0.84
18:R:18:ARG:HE	18:R:18:ARG:HA	1.39	0.84
10:J:14:LYS:HA	10:J:17:ASP:HB3	1.59	0.84
1:A:376:G:H2'	1:A:377:G:H8	1.42	0.84
11:K:58:PRO:CB	11:K:93:GLN:HG3	2.06	0.84
1:A:1234:C:H1'	1:A:1364:U:O2	1.76	0.84
3:C:137:ALA:O	3:C:141:VAL:HG22	1.77	0.84
19:S:15:LEU:HB3	19:S:33:THR:HG21	1.60	0.84
1:A:392:G:H2'	1:A:393:A:H8	1.42	0.84
20:T:83:ARG:O	20:T:87:LYS:HG3	1.77	0.84
21:V:6:ARG:HG2	21:V:15:ARG:HH12	1.41	0.83
4:D:19:LEU:HB3	4:D:21:LEU:HD13	1.60	0.83
1:A:1347:G:H21	1:A:1373:G:H2'	1.40	0.83
3:C:112:SER:HB3	3:C:115:LEU:HD12	1.59	0.83
3:C:23:TYR:CG	3:C:24:ALA:N	2.44	0.83
19:S:28:LYS:CD	19:S:29:ARG:H	1.92	0.83
3:C:48:TYR:HB2	3:C:52:LEU:HB3	1.57	0.83
7:G:135:VAL:HG13	7:G:138:LYS:NZ	1.93	0.83
20:T:50:GLU:HG2	20:T:100:ILE:HG13	1.60	0.83
3:C:91:LEU:HD11	3:C:99:VAL:HG22	1.60	0.83
12:L:25:PRO:C	12:L:27:LEU:H	1.81	0.83
1:A:541:G:H2'	1:A:542:G:H8	1.43	0.83
1:A:1154:G:H2'	1:A:1155:G:H8	1.44	0.83
7:G:46:ALA:HB1	7:G:121:ALA:N	1.93	0.83
13:M:98:VAL:HG23	13:M:110:ARG:HH12	1.40	0.83
12:L:83:VAL:HG22	12:L:84:LEU:H	1.42	0.83
3:C:121:ALA:O	3:C:124:ILE:HG22	1.78	0.83
16:P:74:LEU:HB3	16:P:79:VAL:CG2	2.08	0.83
11:K:17:GLY:H	11:K:77:MET:HE1	1.44	0.83
1:A:538:G:H5''	12:L:114:LYS:HB2	1.60	0.83
4:D:36:ARG:H	4:D:37:PRO:HD3	1.43	0.83
3:C:126:ARG:C	3:C:128:PHE:H	1.80	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:86:VAL:HG11	9:I:93:ARG:HG3	1.61	0.83
20:T:53:LEU:HD12	20:T:100:ILE:HB	1.60	0.83
5:E:80:ILE:HD11	5:E:138:ALA:HB1	1.60	0.83
1:A:858:G:O2'	1:A:859:A:H5''	1.78	0.83
1:A:1066:C:H2'	1:A:1067:A:H5'	1.61	0.83
3:C:110:ASN:O	3:C:111:LEU:HG	1.79	0.83
10:J:62:HIS:HB3	14:N:59:ALA:HB3	1.60	0.83
1:A:1134:G:H2'	1:A:1135:U:O4'	1.79	0.83
13:M:10:PRO:HB3	13:M:18:ALA:O	1.78	0.83
1:A:875:C:H1'	8:H:15:ASN:OD1	1.77	0.83
1:A:518:C:H5''	1:A:530:G:C1'	2.08	0.82
4:D:29:PRO:O	4:D:30:LYS:HG3	1.78	0.82
17:Q:98:LEU:HA	17:Q:102:GLY:CA	2.09	0.82
9:I:75:ASP:O	9:I:78:LYS:HB3	1.79	0.82
19:S:53:ASN:ND2	19:S:77:THR:HA	1.94	0.82
1:A:258:G:H2'	1:A:259:G:C8	2.12	0.82
1:A:1048:G:H21	1:A:1214:C:H2'	1.42	0.82
1:A:7:G:H5'	1:A:298:A:H5'	1.61	0.82
4:D:59:ARG:HH21	4:D:62:GLN:HG3	1.43	0.82
3:C:88:ARG:HH12	3:C:101:LEU:HB3	1.42	0.82
10:J:46:ARG:HH12	10:J:64:GLU:HG2	1.42	0.82
8:H:86:ILE:HG22	8:H:87:SER:N	1.93	0.82
10:J:10:GLY:HA3	10:J:16:LEU:HD12	1.62	0.82
1:A:269:C:H2'	1:A:270:A:C8	2.14	0.82
7:G:29:LYS:O	7:G:105:VAL:HG11	1.80	0.82
10:J:40:LEU:HD22	10:J:69:ASN:OD1	1.79	0.82
13:M:49:THR:HG22	13:M:50:GLU:H	1.45	0.82
1:A:726:C:H42	1:A:731:G:H1	1.27	0.82
4:D:156:GLU:HG2	4:D:157:LEU:H	1.44	0.82
1:A:382:A:H2'	1:A:383:A:C8	2.13	0.82
2:B:25:ASN:C	2:B:25:ASN:HD22	1.82	0.82
4:D:15:GLU:HG3	4:D:63:LYS:NZ	1.94	0.81
4:D:9:CYS:HB2	4:D:22:LYS:NZ	1.95	0.81
15:O:87:ILE:HG22	15:O:88:ARG:N	1.94	0.81
18:R:38:GLU:N	18:R:41:LYS:HG3	1.95	0.81
12:L:6:THR:O	12:L:8:ASN:N	2.12	0.81
1:A:708:C:H2'	1:A:709:G:C8	2.14	0.81
1:A:824:C:H2'	1:A:825:G:H8	1.44	0.81
1:A:148:G:H2'	1:A:149:A:H8	1.44	0.81
8:H:11:THR:HG22	8:H:15:ASN:ND2	1.95	0.81
1:A:200:G:H1	1:A:217:C:H42	1.23	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:428:G:H1'	1:A:430:A:C8	2.15	0.81
19:S:24:ALA:HB3	19:S:25:LYS:NZ	1.95	0.81
21:V:10:ARG:HA	21:V:13:ILE:CG2	2.10	0.81
7:G:17:VAL:HG12	7:G:18:TYR:H	1.45	0.81
19:S:53:ASN:HD21	19:S:77:THR:HA	1.43	0.81
20:T:51:GLU:HG2	20:T:52:ALA:H	1.43	0.81
1:A:201:C:C2'	1:A:202:U:H5''	2.08	0.81
2:B:21:ARG:N	2:B:21:ARG:HE	1.78	0.81
2:B:71:VAL:HG23	2:B:164:VAL:HA	1.62	0.81
13:M:77:ASN:O	13:M:80:ARG:HB3	1.79	0.81
5:E:8:GLU:HA	5:E:34:VAL:HA	1.60	0.81
4:D:156:GLU:CG	4:D:157:LEU:H	1.92	0.81
1:A:1118:C:H1'	1:A:1179:A:C4	2.16	0.81
10:J:77:PRO:HA	10:J:81:THR:CG2	2.09	0.81
2:B:231:GLU:HB2	2:B:232:PRO:CD	2.10	0.81
1:A:1174:G:H2'	1:A:1175:G:H8	1.45	0.81
12:L:113:ARG:NH1	12:L:115:LYS:HB2	1.95	0.81
3:C:19:GLU:H	14:N:51:GLY:HA3	1.46	0.81
14:N:41:ARG:HH11	14:N:41:ARG:HG2	1.46	0.81
3:C:120:VAL:O	3:C:124:ILE:HB	1.80	0.81
10:J:38:ILE:HD12	10:J:71:LEU:HD12	1.61	0.81
2:B:73:THR:HG23	2:B:96:ARG:NH2	1.96	0.81
1:A:476:G:H2'	1:A:477:G:C8	2.16	0.81
6:F:1:MET:SD	6:F:66:GLU:HG2	2.20	0.81
5:E:70:PRO:O	5:E:72:GLN:N	2.13	0.81
9:I:19:LEU:HG	9:I:61:ALA:HB2	1.61	0.81
15:O:64:ARG:HH22	15:O:68:ARG:NH2	1.77	0.81
1:A:1065:U:H4'	1:A:1066:C:C5'	2.11	0.81
7:G:71:PRO:HD3	7:G:103:TRP:HZ3	1.46	0.81
1:A:107:G:H2'	1:A:108:G:H5'	1.60	0.81
8:H:11:THR:HG23	8:H:14:ARG:HH12	1.46	0.81
4:D:9:CYS:SG	4:D:22:LYS:NZ	2.52	0.80
12:L:73:GLU:HB2	12:L:110:VAL:HG11	1.62	0.80
10:J:6:ILE:CG1	10:J:73:ASP:HA	2.10	0.80
12:L:102:ARG:HA	12:L:107:ALA:HB1	1.63	0.80
1:A:56:U:H2'	1:A:57:G:C8	2.16	0.80
7:G:137:LYS:HA	7:G:140:ASP:HB2	1.63	0.80
3:C:7:PRO:HA	3:C:10:PHE:HB3	1.62	0.80
1:A:129(A):G:HO2'	1:A:190(E):U:H2'	1.46	0.80
3:C:196:LEU:N	3:C:196:LEU:HD23	1.97	0.80
1:A:610:G:H2'	1:A:611:A:C8	2.16	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:22:G:H2'	1:A:23:C:C6	2.16	0.80
3:C:153:VAL:HA	3:C:198:VAL:HG22	1.62	0.80
3:C:50:ALA:HA	3:C:72:LYS:CD	2.11	0.80
2:B:43:ASP:O	2:B:46:LYS:HB3	1.81	0.80
5:E:8:GLU:CB	5:E:34:VAL:HG22	2.11	0.80
8:H:89:PRO:O	8:H:91:ARG:N	2.15	0.80
10:J:86:MET:HG3	10:J:87:THR:N	1.95	0.80
19:S:67:VAL:O	19:S:69:HIS:N	2.13	0.80
10:J:31:GLY:HA2	10:J:78:ASN:HB2	1.64	0.80
14:N:56:VAL:O	14:N:57:ARG:HB2	1.81	0.80
1:A:1319:A:H61	1:A:1361:G:H21	1.30	0.80
1:A:436:C:H2'	1:A:437:U:C6	2.16	0.80
9:I:24:GLY:HA2	9:I:60:ASP:HA	1.62	0.80
13:M:78:ILE:HD12	13:M:78:ILE:H	1.47	0.80
8:H:64:LYS:HG3	8:H:79:VAL:HG21	1.62	0.80
3:C:112:SER:O	3:C:115:LEU:HB2	1.81	0.80
1:A:1205:U:H4'	3:C:195:VAL:CG2	2.12	0.80
3:C:62:ASP:CA	3:C:97:LYS:HB3	2.12	0.80
6:F:94:GLN:HB3	18:R:32:ARG:NH1	1.96	0.80
18:R:22:VAL:HG12	18:R:23:LYS:N	1.97	0.80
1:A:840:C:H5''	1:A:841:U:OP1	1.81	0.80
1:A:351:G:H4'	1:A:352:C:OP1	1.82	0.80
1:A:1130:A:H5''	9:I:20:ARG:HD3	1.62	0.80
13:M:13:LYS:O	13:M:18:ALA:HB2	1.81	0.80
20:T:30:LYS:NZ	20:T:80:ARG:HH22	1.81	0.80
1:A:444:C:H2'	1:A:445:G:C8	2.17	0.80
1:A:167:G:H2'	1:A:168:G:H8	1.42	0.80
1:A:128:G:H4'	17:Q:3:LYS:HG2	1.63	0.80
5:E:18:ARG:HH21	5:E:25:ARG:HB3	1.47	0.80
1:A:1392:G:O2'	1:A:1393:U:H5'	1.82	0.80
4:D:25:ARG:HG3	4:D:30:LYS:HB3	1.64	0.79
7:G:15:ASP:OD1	7:G:17:VAL:HB	1.82	0.79
18:R:40:LEU:CD2	18:R:79:LEU:HD21	2.12	0.79
1:A:408:A:H5'	4:D:116:GLN:HB2	1.65	0.79
3:C:181:ASN:C	3:C:182:ILE:HD12	2.02	0.79
1:A:250:A:H4'	1:A:251:G:O5'	1.81	0.79
1:A:1261:A:H62	1:A:1274:G:H21	1.28	0.79
13:M:56:LEU:O	13:M:60:VAL:HG23	1.83	0.79
19:S:49:ILE:HG22	19:S:60:VAL:HB	1.63	0.79
18:R:78:LEU:C	18:R:79:LEU:HD12	2.02	0.79
2:B:84:GLU:OE1	2:B:216:SER:HA	1.81	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:92:GLU:HA	11:K:95:ILE:HD12	1.65	0.79
1:A:454:C:H5	1:A:478:A:H61	1.30	0.79
1:A:456:C:H2'	1:A:457:C:C6	2.14	0.79
1:A:182:U:H5'	1:A:182:U:H6	1.46	0.79
2:B:175:ARG:NH1	2:B:175:ARG:HB2	1.97	0.79
1:A:1090:U:H2'	1:A:1091:U:C6	2.16	0.79
19:S:15:LEU:HD13	19:S:44:MET:HE1	1.63	0.79
13:M:75:ALA:O	13:M:79:LYS:HB2	1.83	0.79
14:N:12:ARG:O	14:N:14:PRO:HD3	1.81	0.79
12:L:57:LYS:HA	12:L:66:VAL:O	1.83	0.79
3:C:32:LEU:O	3:C:36:ASP:HB2	1.82	0.79
2:B:111:ARG:HB3	2:B:149:LEU:HD11	1.65	0.79
5:E:99:GLY:O	5:E:101:ILE:HG13	1.82	0.79
12:L:70:ILE:HG12	12:L:100:ILE:HD12	1.65	0.79
19:S:11:VAL:HB	19:S:16:LEU:HD22	1.65	0.79
1:A:1053:G:HO2'	1:A:1199:U:H5	1.30	0.79
1:A:1244:C:H2'	1:A:1245:A:C8	2.18	0.79
7:G:66:VAL:HG13	7:G:100:ALA:HB1	1.65	0.79
9:I:7:THR:HG22	9:I:8:GLY:N	1.95	0.79
3:C:113:ALA:HB3	3:C:114:PRO:HD3	1.64	0.79
1:A:793:U:H3'	1:A:794:A:H5''	1.65	0.79
1:A:1225:A:H5'	13:M:103:THR:HG23	1.65	0.79
10:J:27:ALA:HA	10:J:30:SER:OG	1.83	0.78
2:B:97:TRP:CH2	2:B:101:MET:HB2	2.18	0.78
1:A:174:C:H2'	1:A:175:C:H6	1.48	0.78
4:D:121:VAL:O	4:D:134:ASP:HB2	1.82	0.78
1:A:1065:U:H1'	1:A:1066:C:OP2	1.83	0.78
7:G:70:LYS:HE2	7:G:100:ALA:HB2	1.65	0.78
1:A:962:C:H2'	1:A:963:G:C8	2.16	0.78
1:A:1333:A:H2'	1:A:1334:G:O4'	1.83	0.78
16:P:22:THR:HG23	16:P:24:ALA:H	1.47	0.78
3:C:116:VAL:HA	3:C:119:ARG:HB3	1.66	0.78
3:C:27:LYS:HA	3:C:30:ARG:HH12	1.46	0.78
10:J:26:ALA:HB3	10:J:85:LEU:HG	1.65	0.78
8:H:97:VAL:HA	8:H:100:ILE:HD13	1.64	0.78
4:D:52:SER:O	4:D:54:TYR:N	2.16	0.78
7:G:92:SER:O	7:G:96:GLN:HB2	1.83	0.78
10:J:83:GLU:HA	10:J:86:MET:HB2	1.65	0.78
1:A:736:C:H2'	1:A:737:A:H8	1.46	0.78
20:T:13:LEU:HD12	20:T:14:LYS:N	1.97	0.78
1:A:237:C:H2'	1:A:238:G:C8	2.19	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1190:G:OP2	3:C:5:ILE:HG23	1.84	0.78
7:G:39:ALA:HA	7:G:42:ILE:HD12	1.66	0.78
2:B:72:GLY:HA3	2:B:81:VAL:HG21	1.66	0.78
2:B:9:GLU:CD	2:B:217:ARG:HH22	1.87	0.78
6:F:18:GLN:HA	6:F:21:LEU:HD23	1.65	0.78
1:A:532:A:H2'	1:A:533:A:H5'	1.66	0.78
14:N:46:GLU:HA	14:N:49:HIS:CD2	2.17	0.78
1:A:60:A:H4'	1:A:61:G:O5'	1.83	0.78
7:G:38:LEU:O	7:G:42:ILE:HG13	1.84	0.78
1:A:219:C:H2'	1:A:220:G:H5'	1.66	0.78
2:B:127:ILE:HD12	2:B:127:ILE:H	1.48	0.78
9:I:5:TYR:HE2	9:I:16:ARG:HB2	1.48	0.78
3:C:26:LYS:NZ	10:J:45:ARG:HE	1.82	0.78
10:J:9:ARG:HB3	10:J:9:ARG:NH1	1.98	0.78
10:J:34:VAL:HA	10:J:75:ILE:H	1.49	0.78
4:D:17:VAL:HG12	4:D:18:LYS:N	1.92	0.78
1:A:1228:C:H2'	1:A:1229:A:H8	1.47	0.78
1:A:517:G:H1'	1:A:519:C:H42	1.48	0.77
6:F:15:ASP:OD1	6:F:18:GLN:HG3	1.84	0.77
1:A:708:C:H2'	1:A:709:G:H8	1.47	0.77
1:A:942:G:N2	1:A:943:U:C2	2.51	0.77
9:I:108:VAL:HG12	9:I:109:VAL:N	1.98	0.77
2:B:97:TRP:CZ2	2:B:102:LEU:HD13	2.20	0.77
3:C:138:VAL:O	3:C:142:MET:HB2	1.83	0.77
1:A:1509:C:O2'	1:A:1510:U:H5'	1.83	0.77
7:G:93:PRO:HG2	7:G:94:ARG:N	1.98	0.77
1:A:982:U:H5	14:N:31:ARG:NH1	1.82	0.77
1:A:1319:A:H61	1:A:1361:G:N2	1.82	0.77
1:A:511:C:O2'	1:A:512:U:H5''	1.84	0.77
4:D:25:ARG:C	4:D:27:TYR:H	1.86	0.77
1:A:1014:A:H5'	19:S:14:HIS:HB3	1.67	0.77
13:M:81:LEU:O	13:M:89:GLY:HA3	1.85	0.77
1:A:707:C:H2'	1:A:708:C:C6	2.19	0.77
12:L:83:VAL:HG21	12:L:100:ILE:HD13	1.67	0.77
12:L:89:ARG:O	12:L:90:VAL:HG23	1.84	0.77
16:P:39:TYR:HE2	16:P:41:PRO:HG3	1.48	0.77
1:A:781:A:H2'	1:A:782:A:H5'	1.67	0.77
1:A:92:C:H2'	1:A:93:G:C8	2.19	0.77
1:A:291:C:O2'	1:A:292:G:H5'	1.84	0.77
18:R:38:GLU:H	18:R:41:LYS:HE3	1.48	0.77
2:B:223:ILE:HD13	2:B:230:VAL:HG21	1.65	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:45:VAL:HB	15:O:46:HIS:ND1	1.99	0.77
1:A:608:A:H2'	1:A:609:A:H8	1.50	0.77
1:A:1197:G:OP1	1:A:1197:G:H3'	1.84	0.77
12:L:41:ARG:HH12	12:L:43:VAL:HG22	1.50	0.77
2:B:168:THR:OG1	2:B:192:SER:HA	1.85	0.77
6:F:97:PHE:HD1	18:R:65:ILE:HD12	1.49	0.77
12:L:92:ASP:O	12:L:94:PRO:HD3	1.85	0.77
3:C:7:PRO:O	3:C:11:ARG:N	2.17	0.77
4:D:17:VAL:CG1	4:D:18:LYS:H	1.94	0.77
1:A:559:A:H4'	1:A:560:U:O5'	1.85	0.77
1:A:518:C:H4'	1:A:519:C:C6	2.20	0.76
1:A:314:C:O2'	1:A:315:A:H5'	1.85	0.76
14:N:6:LEU:HB3	14:N:23:ARG:HE	1.49	0.76
1:A:376:G:H5''	16:P:5:ARG:CG	2.15	0.76
3:C:62:ASP:HA	3:C:97:LYS:CB	2.14	0.76
2:B:44:LEU:H	2:B:44:LEU:CD2	1.96	0.76
4:D:114:ARG:HA	4:D:117:ALA:HB3	1.66	0.76
1:A:1095:U:OP1	1:A:1108:G:N2	2.19	0.76
2:B:97:TRP:HZ2	2:B:102:LEU:HD13	1.50	0.76
1:A:99:C:H2'	1:A:101:A:C8	2.20	0.76
1:A:615:C:H2'	1:A:616:G:H5'	1.68	0.76
7:G:137:LYS:CA	7:G:140:ASP:HB2	2.16	0.76
1:A:186:C:H2'	1:A:187:C:C6	2.20	0.76
20:T:80:ARG:NH1	20:T:80:ARG:HB3	2.00	0.76
6:F:79:LEU:O	6:F:85:VAL:HG11	1.85	0.76
8:H:89:PRO:C	8:H:91:ARG:H	1.89	0.76
12:L:55:VAL:HG12	12:L:56:ALA:H	1.50	0.76
1:A:1238:A:N7	1:A:1303:C:H1'	1.99	0.76
3:C:130:VAL:O	3:C:134:ILE:HG13	1.86	0.76
1:A:222:U:H2'	1:A:223:U:C6	2.21	0.76
16:P:64:ALA:O	16:P:66:PRO:HD3	1.84	0.76
2:B:210:SER:O	2:B:212:GLN:N	2.19	0.76
2:B:21:ARG:HG2	2:B:22:LYS:N	1.99	0.76
6:F:12:PRO:HG3	6:F:57:GLN:HG3	1.65	0.76
12:L:43:VAL:HG12	12:L:44:THR:N	2.00	0.76
1:A:186:C:H2'	1:A:187:C:H6	1.49	0.76
3:C:55:VAL:HA	3:C:68:VAL:HG22	1.65	0.76
18:R:22:VAL:HG12	18:R:23:LYS:H	1.50	0.76
12:L:89:ARG:NH2	12:L:97:ARG:HG2	2.00	0.76
3:C:52:LEU:H	3:C:52:LEU:CD2	1.99	0.76
11:K:58:PRO:HB2	11:K:93:GLN:HG3	1.67	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1020:U:H2'	1:A:1021:G:C8	2.21	0.76
1:A:1046:A:H3'	1:A:1047:G:H8	1.51	0.76
5:E:70:PRO:C	5:E:72:GLN:H	1.88	0.76
1:A:922:G:H5'	5:E:19:MET:O	1.85	0.76
1:A:615:C:C2'	1:A:616:G:H5'	2.16	0.76
10:J:9:ARG:H	10:J:9:ARG:NE	1.83	0.76
1:A:129(A):G:O2'	1:A:190(E):U:H2'	1.85	0.76
3:C:59:ARG:HG3	3:C:60:ALA:N	2.01	0.76
17:Q:10:VAL:HG23	17:Q:55:ASP:O	1.84	0.76
12:L:11:VAL:HG13	17:Q:29:HIS:HD2	1.49	0.76
1:A:973:G:H3'	1:A:974:A:H5''	1.68	0.76
1:A:1109:C:O2'	1:A:1110:A:H5'	1.86	0.76
19:S:11:VAL:HG11	19:S:16:LEU:HD13	1.67	0.76
1:A:1406:U:H2'	1:A:1407:C:C6	2.21	0.76
1:A:710:G:OP1	6:F:54:LYS:HD2	1.86	0.76
1:A:628:G:O2'	1:A:629:G:H5'	1.86	0.76
5:E:55:VAL:HG23	5:E:56:GLN:N	2.01	0.76
10:J:44:VAL:HG12	10:J:45:ARG:H	1.50	0.76
21:V:10:ARG:H	21:V:10:ARG:HD2	1.48	0.76
2:B:69:LEU:HD13	2:B:155:LEU:HD11	1.66	0.76
3:C:47:LEU:HD11	3:C:76:VAL:HG12	1.68	0.76
1:A:376:G:O2'	1:A:377:G:H5'	1.86	0.76
8:H:63:LEU:H	8:H:63:LEU:CD1	1.98	0.76
1:A:265:G:O2'	1:A:266:G:H5'	1.86	0.76
3:C:156:ARG:NH2	3:C:161:GLU:HA	1.99	0.76
19:S:58:VAL:HG12	19:S:59:PRO:HD2	1.66	0.76
1:A:237:C:H2'	1:A:238:G:H8	1.49	0.75
1:A:1343:G:H2'	1:A:1344:C:H6	1.48	0.75
9:I:49:PRO:HG2	9:I:50:LEU:HD12	1.68	0.75
3:C:160:ALA:C	3:C:162:GLN:H	1.88	0.75
1:A:190(H):G:O2'	1:A:190(I):G:H5'	1.85	0.75
14:N:7:ILE:O	14:N:7:ILE:HG22	1.86	0.75
1:A:1150:U:H4'	10:J:41:PRO:HD3	1.66	0.75
1:A:1163:C:H2'	1:A:1164:G:H8	1.50	0.75
3:C:179:ARG:HD2	3:C:180:ALA:N	2.00	0.75
20:T:60:GLU:HA	20:T:63:ILE:HD12	1.68	0.75
15:O:48:LYS:HD3	15:O:48:LYS:N	2.01	0.75
17:Q:80:GLY:O	17:Q:81:ARG:HB3	1.86	0.75
4:D:59:ARG:NH2	4:D:62:GLN:HG3	2.01	0.75
19:S:24:ALA:HB3	19:S:25:LYS:HZ3	1.51	0.75
1:A:1326:C:OP1	21:V:12:LYS:HD2	1.86	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:95:ILE:HG22	11:K:99:GLN:NE2	2.00	0.75
12:L:7:ILE:O	12:L:10:LEU:N	2.18	0.75
20:T:15:ARG:O	20:T:19:SER:N	2.18	0.75
4:D:127:THR:HG22	4:D:147:ALA:O	1.86	0.75
1:A:790:A:H2'	1:A:791:G:C8	2.20	0.75
18:R:70:ILE:CG2	18:R:74:ARG:HD2	2.16	0.75
21:V:2:GLY:O	21:V:3:LYS:HG2	1.87	0.75
4:D:201:GLN:HA	4:D:204:ILE:HD12	1.68	0.75
9:I:3:GLN:C	9:I:3:GLN:HE21	1.90	0.75
16:P:21:VAL:HG12	16:P:21:VAL:O	1.87	0.75
2:B:218:ALA:O	2:B:222:ILE:HG13	1.87	0.75
17:Q:64:PRO:C	17:Q:65:ILE:HD12	2.07	0.75
6:F:35:ALA:HB1	6:F:65:VAL:HG21	1.68	0.75
1:A:597:G:H2'	1:A:598:U:H5'	1.68	0.75
10:J:22:LYS:HB2	10:J:22:LYS:NZ	2.01	0.75
1:A:797:C:O2'	1:A:798:G:H5'	1.85	0.75
2:B:74:LYS:HE3	2:B:205:ASP:O	1.87	0.75
8:H:97:VAL:HG22	8:H:98:LYS:N	2.02	0.75
9:I:111:ARG:HH11	9:I:111:ARG:HG3	1.51	0.75
1:A:1241:G:H2'	1:A:1242:C:C6	2.22	0.75
9:I:85:LEU:O	9:I:89:ASN:HB3	1.87	0.75
14:N:26:ARG:HG3	14:N:27:CYS:H	1.50	0.75
20:T:54:LYS:HA	20:T:57:ARG:HD2	1.69	0.75
20:T:88:VAL:O	20:T:91:LEU:HB2	1.86	0.75
3:C:88:ARG:NH1	3:C:101:LEU:HB3	2.02	0.75
1:A:1508:G:H2'	1:A:1509:C:H6	1.50	0.75
1:A:95:U:H2'	1:A:96:G:C8	2.22	0.75
1:A:144:G:H1	1:A:178:C:H42	1.35	0.75
1:A:514:C:H42	1:A:537:G:H1	1.34	0.75
1:A:761:G:C5'	17:Q:102:GLY:HA3	2.17	0.75
8:H:85:ARG:HG3	8:H:85:ARG:HH11	1.52	0.75
1:A:144:G:H1	1:A:178:C:N4	1.85	0.75
1:A:1001:A:C2'	1:A:1002:G:H5'	2.17	0.75
1:A:1369:C:H2'	1:A:1370:G:O4'	1.86	0.74
1:A:190(E):U:C2	17:Q:63:ARG:HD3	2.22	0.74
3:C:90:GLU:HA	3:C:93:LYS:HG3	1.68	0.74
4:D:64:LEU:HB2	4:D:198:VAL:CG2	2.15	0.74
3:C:116:VAL:O	3:C:119:ARG:HB3	1.86	0.74
3:C:20:SER:C	3:C:21:ARG:HD2	2.08	0.74
16:P:51:VAL:HG12	16:P:52:ASP:N	2.01	0.74
1:A:1226:C:H5"	13:M:103:THR:OG1	1.87	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:762:C:H2'	1:A:763:G:H8	1.52	0.74
1:A:517:G:H1'	1:A:519:C:N4	2.01	0.74
1:A:1142:G:H3'	1:A:1143:G:H8	1.52	0.74
3:C:181:ASN:O	3:C:182:ILE:HD12	1.87	0.74
7:G:71:PRO:O	7:G:96:GLN:HG3	1.87	0.74
1:A:451:A:N6	1:A:481:G:C4	2.55	0.74
16:P:75:ARG:HA	16:P:80:PHE:CE1	2.23	0.74
1:A:975:A:O5'	1:A:976:G:H5'	1.87	0.74
1:A:154:C:O2'	1:A:155:C:H5'	1.88	0.74
6:F:9:VAL:HB	6:F:87:ARG:HB2	1.68	0.74
1:A:428:G:H5'	4:D:7:PRO:HB3	1.68	0.74
4:D:163:GLU:O	4:D:166:LYS:HE2	1.87	0.74
1:A:309:G:H2'	1:A:310:G:C8	2.21	0.74
15:O:12:ILE:N	15:O:12:ILE:HD12	2.00	0.74
1:A:709:G:H2'	1:A:710:G:H8	1.51	0.74
18:R:31:LEU:O	18:R:31:LEU:HD23	1.86	0.74
1:A:1356:G:H2'	1:A:1357:A:C8	2.22	0.74
16:P:21:VAL:HG11	16:P:59:TRP:HE1	1.51	0.74
1:A:579:G:H2'	1:A:580:U:C6	2.22	0.74
1:A:579:G:H2'	1:A:580:U:H6	1.50	0.74
3:C:180:ALA:HB1	3:C:203:PHE:CE1	2.22	0.74
13:M:49:THR:HG22	13:M:50:GLU:N	2.03	0.74
20:T:51:GLU:O	20:T:54:LYS:HB3	1.87	0.74
5:E:139:LEU:HD23	5:E:142:LEU:HD11	1.70	0.74
18:R:39:VAL:HG13	18:R:40:LEU:N	2.00	0.74
13:M:81:LEU:HA	13:M:84:ILE:HG12	1.67	0.74
7:G:12:LEU:HD12	7:G:12:LEU:N	2.02	0.74
4:D:64:LEU:CB	4:D:198:VAL:HG21	2.15	0.74
5:E:99:GLY:N	5:E:117:ASP:OD1	2.21	0.74
1:A:695:A:H2	1:A:787:A:H1'	1.52	0.74
9:I:86:VAL:HA	9:I:89:ASN:O	1.88	0.74
2:B:68:ILE:H	2:B:90:MET:HE3	1.53	0.74
5:E:111:GLU:O	5:E:113:ALA:N	2.21	0.74
1:A:1210:C:H2'	1:A:1211:U:C5'	2.17	0.74
1:A:707:C:H5''	11:K:20:TYR:HD2	1.52	0.74
9:I:34:ASN:HD22	9:I:34:ASN:N	1.85	0.74
1:A:538:G:H2'	1:A:539:A:H8	1.50	0.74
4:D:161:ASN:O	4:D:165:MET:HG2	1.87	0.74
4:D:200:GLU:O	4:D:204:ILE:HG13	1.88	0.74
13:M:20:THR:HA	13:M:25:ILE:HG22	1.68	0.74
13:M:37:THR:HG22	13:M:39:ILE:HG13	1.67	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:503:C:H2'	1:A:504:C:C6	2.22	0.74
1:A:545:C:O2'	1:A:546:G:H5'	1.86	0.74
3:C:112:SER:CB	3:C:115:LEU:HD12	2.16	0.74
9:I:48:GLU:N	9:I:49:PRO:HD2	2.02	0.74
1:A:107:G:C2'	1:A:108:G:H5'	2.17	0.74
1:A:112:G:H4'	1:A:389:A:H5''	1.68	0.74
1:A:1001:A:H2'	1:A:1002:G:H5'	1.69	0.74
1:A:180:U:C2'	1:A:181:G:H5'	2.18	0.74
1:A:89:C:H2'	1:A:90:U:H6	1.53	0.74
1:A:1367:C:H5''	10:J:60:ARG:HH12	1.52	0.73
3:C:183:ASP:OD2	3:C:184:TYR:N	2.21	0.73
10:J:70:ARG:HB3	10:J:70:ARG:HH11	1.52	0.73
2:B:74:LYS:CE	2:B:166:ASP:HB2	2.17	0.73
1:A:1508:G:H2'	1:A:1509:C:C6	2.23	0.73
17:Q:9:VAL:HG12	17:Q:10:VAL:N	2.02	0.73
1:A:1424:C:O2'	1:A:1425:U:H5'	1.88	0.73
1:A:137:C:H42	1:A:226:G:H1	1.35	0.73
10:J:80:LYS:O	10:J:84:GLN:HB2	1.87	0.73
10:J:86:MET:C	10:J:88:LEU:H	1.90	0.73
3:C:22:TRP:HH2	3:C:33:LEU:HB2	1.53	0.73
1:A:1104:G:H4'	2:B:111:ARG:CZ	2.17	0.73
17:Q:48:GLU:HG3	17:Q:50:LYS:HB2	1.69	0.73
1:A:29:G:H5'	1:A:296:U:OP1	1.88	0.73
20:T:53:LEU:HD21	20:T:101:GLY:O	1.89	0.73
2:B:8:LYS:CD	2:B:9:GLU:H	2.01	0.73
1:A:491:G:H2'	1:A:492:G:C8	2.23	0.73
7:G:93:PRO:CG	7:G:94:ARG:H	2.00	0.73
9:I:21:PRO:HA	9:I:59:PHE:HA	1.68	0.73
9:I:26:VAL:HG13	9:I:63:ILE:HB	1.70	0.73
3:C:93:LYS:HE2	3:C:93:LYS:HA	1.68	0.73
2:B:163:PHE:HA	2:B:185:ILE:O	1.89	0.73
5:E:12:LEU:HD13	5:E:12:LEU:O	1.89	0.73
5:E:9:LYS:O	5:E:33:VAL:HG23	1.88	0.73
1:A:448:A:H2'	1:A:449:C:C6	2.24	0.73
1:A:1193:G:O2'	1:A:1194:U:H5'	1.88	0.73
4:D:13:ARG:HD2	4:D:38:TYR:O	1.88	0.73
3:C:179:ARG:O	3:C:181:ASN:N	2.21	0.73
9:I:42:ARG:NH2	9:I:75:ASP:OD2	2.21	0.73
10:J:16:LEU:HG	10:J:94:VAL:HG11	1.70	0.73
19:S:72:GLY:C	19:S:74:PHE:N	2.40	0.73
8:H:38:ILE:O	8:H:39:LEU:C	2.26	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:208:ILE:HG22	2:B:209:ARG:N	2.00	0.73
11:K:58:PRO:HB3	11:K:93:GLN:HG3	1.69	0.73
1:A:666:G:H2'	1:A:667:G:H8	1.52	0.73
1:A:528:C:C2'	1:A:529:G:H5'	2.17	0.73
3:C:126:ARG:HB3	3:C:128:PHE:HB3	1.71	0.73
7:G:61:VAL:O	7:G:65:ALA:HB3	1.88	0.73
19:S:14:HIS:O	19:S:18:LYS:HG2	1.87	0.73
3:C:59:ARG:HG3	3:C:61:ALA:H	1.53	0.73
1:A:1306:A:C2	1:A:1307:U:H1'	2.23	0.73
13:M:91:ARG:HB2	13:M:98:VAL:HG22	1.70	0.73
1:A:673:G:H2'	1:A:674:G:C8	2.23	0.73
1:A:785:G:O2'	1:A:786:G:H5'	1.88	0.73
4:D:156:GLU:OE2	4:D:157:LEU:HD22	1.89	0.73
4:D:194:LEU:HD22	4:D:194:LEU:N	2.03	0.73
1:A:761:G:H4'	17:Q:102:GLY:HA3	1.71	0.73
1:A:1163:C:H2'	1:A:1164:G:C8	2.24	0.73
1:A:1367:C:C5'	10:J:60:ARG:HH12	2.02	0.73
10:J:30:SER:HB3	10:J:84:GLN:CD	2.08	0.73
19:S:23:ASN:HA	19:S:27:GLU:HA	1.69	0.73
1:A:375:U:OP1	16:P:69:THR:HG21	1.89	0.73
16:P:50:LYS:O	16:P:51:VAL:HG23	1.89	0.73
1:A:476:G:H2'	1:A:477:G:H8	1.49	0.73
1:A:1361:G:H8	1:A:1361:G:O5'	1.72	0.73
13:M:20:THR:O	13:M:20:THR:HG22	1.88	0.73
11:K:87:THR:CA	11:K:91:ARG:HH12	2.00	0.73
18:R:43:PHE:C	18:R:44:LEU:HD22	2.09	0.73
1:A:538:G:H4'	12:L:114:LYS:HD3	1.69	0.73
3:C:129:ALA:HB1	3:C:132:ARG:CB	2.18	0.73
1:A:1440:C:H2'	1:A:1441:G:H5'	1.71	0.73
3:C:88:ARG:CA	3:C:91:LEU:HB3	2.17	0.73
1:A:21:G:H2'	1:A:22:G:C8	2.24	0.73
1:A:160:A:H1'	1:A:344:A:N7	2.03	0.73
1:A:1200:C:O2	1:A:1200:C:H2'	1.89	0.73
1:A:779:C:O2'	1:A:780:A:H5'	1.89	0.73
7:G:23:VAL:O	7:G:27:ILE:HG13	1.88	0.73
1:A:130:A:H5'	17:Q:63:ARG:HH21	1.54	0.73
3:C:83:ARG:C	3:C:85:ARG:H	1.92	0.73
2:B:207:ALA:HB3	2:B:210:SER:HB3	1.70	0.73
9:I:112:LYS:HA	9:I:119:ALA:HA	1.71	0.72
13:M:3:ARG:HA	13:M:8:GLU:O	1.89	0.72
20:T:46:GLU:CB	20:T:48:LYS:HE2	2.18	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:7:PRO:O	4:D:10:ARG:HB3	1.87	0.72
12:L:41:ARG:HD2	12:L:42:THR:H	1.54	0.72
5:E:13:ILE:HG22	5:E:30:ALA:HA	1.69	0.72
21:V:6:ARG:HD2	21:V:15:ARG:HH22	1.53	0.72
2:B:101:MET:HA	2:B:108:ILE:CD1	2.17	0.72
2:B:96:ARG:N	2:B:96:ARG:NE	2.38	0.72
1:A:694:A:H3'	1:A:695:A:H5''	1.70	0.72
3:C:67:THR:HA	3:C:102:ASN:HD21	1.52	0.72
8:H:82:HIS:HD2	8:H:83:ILE:H	1.37	0.72
15:O:12:ILE:CD1	15:O:12:ILE:H	1.97	0.72
2:B:21:ARG:H	2:B:21:ARG:HE	1.33	0.72
5:E:11:ILE:HB	5:E:12:LEU:HD12	1.69	0.72
11:K:18:ARG:HB2	11:K:33:THR:HG23	1.70	0.72
1:A:913:A:H1'	1:A:914:A:O4'	1.89	0.72
1:A:1418:A:H2'	1:A:1419:G:O4'	1.89	0.72
1:A:1372:U:H5''	9:I:71:SER:CB	2.15	0.72
7:G:45:ASP:C	7:G:47:CYS:H	1.92	0.72
9:I:50:LEU:HD12	9:I:50:LEU:H	1.52	0.72
19:S:64:GLU:OE1	19:S:67:VAL:HG21	1.90	0.72
1:A:463:A:H2'	1:A:474:G:C8	2.18	0.72
1:A:419:C:H5	1:A:425:G:N1	1.87	0.72
1:A:1127:G:H1'	1:A:1148:U:N3	2.02	0.72
1:A:1180:A:O2'	1:A:1181:G:H5'	1.89	0.72
1:A:1276:G:C2'	1:A:1277:C:H5'	2.20	0.72
5:E:126:ARG:HG2	5:E:126:ARG:NH1	2.04	0.72
1:A:735:C:H2'	1:A:736:C:C6	2.22	0.72
7:G:101:LEU:HD23	7:G:101:LEU:N	2.04	0.72
9:I:19:LEU:HA	9:I:61:ALA:HA	1.71	0.72
15:O:16:ALA:CB	15:O:21:ASP:HB3	2.17	0.72
13:M:79:LYS:HE2	13:M:79:LYS:CA	2.19	0.72
1:A:1096:C:O2'	1:A:1097:C:H5'	1.88	0.72
1:A:1250:A:H4'	9:I:68:GLY:CA	2.13	0.72
9:I:51:ARG:HG2	9:I:56:LEU:HD12	1.70	0.72
9:I:42:ARG:O	9:I:74:ILE:HG21	1.90	0.72
1:A:273:A:C2'	1:A:274:A:H5'	2.19	0.72
3:C:85:ARG:CA	3:C:88:ARG:HG3	2.18	0.72
6:F:16:GLN:HA	6:F:19:LEU:HB3	1.70	0.72
6:F:44:GLY:HA2	6:F:59:TYR:CE1	2.24	0.72
4:D:52:SER:C	4:D:54:TYR:N	2.42	0.72
12:L:26:ALA:HB2	12:L:98:TYR:HE2	1.55	0.72
1:A:279:A:OP2	17:Q:95:TYR:OH	2.07	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1370:G:H2'	1:A:1371:G:H8	1.55	0.72
10:J:40:LEU:HD13	10:J:69:ASN:HB2	1.70	0.72
19:S:40:ILE:HD13	19:S:62:ILE:HD11	1.72	0.72
1:A:397:A:C2'	1:A:398:C:H5''	2.20	0.72
1:A:858:G:H8	1:A:858:G:O5'	1.71	0.72
14:N:50:LYS:HG3	14:N:51:GLY:H	1.54	0.72
16:P:43:LYS:HB3	16:P:48:TRP:CG	2.25	0.72
16:P:67:THR:HG22	16:P:69:THR:N	2.03	0.72
3:C:47:LEU:HD11	3:C:76:VAL:CG1	2.20	0.72
1:A:861:G:H2'	1:A:862:C:H6	1.55	0.72
1:A:327:A:O2'	1:A:328:C:O4'	2.07	0.72
4:D:101:LEU:HB2	4:D:138:TYR:HB3	1.71	0.71
1:A:1088:G:H2'	1:A:1089:G:H8	1.55	0.71
1:A:1263:C:H2'	1:A:1264:C:O4'	1.90	0.71
1:A:943:U:O2'	1:A:944:G:H5'	1.90	0.71
3:C:11:ARG:HA	3:C:14:ILE:CG1	2.20	0.71
9:I:11:LYS:O	9:I:12:GLU:HB3	1.90	0.71
9:I:21:PRO:HA	9:I:60:ASP:N	2.03	0.71
19:S:15:LEU:HD12	19:S:16:LEU:N	2.05	0.71
1:A:399:G:O2'	1:A:400:C:H5'	1.89	0.71
2:B:151:GLY:C	2:B:153:ARG:H	1.93	0.71
2:B:165:VAL:O	2:B:167:PRO:HD3	1.89	0.71
6:F:18:GLN:O	6:F:21:LEU:HB3	1.89	0.71
1:A:17:U:H2'	1:A:18:C:C6	2.24	0.71
3:C:34:LEU:O	3:C:38:ARG:HG2	1.90	0.71
1:A:1240:U:O4	7:G:30:ILE:HG23	1.89	0.71
17:Q:70:ARG:CG	17:Q:70:ARG:HH11	1.99	0.71
17:Q:88:TYR:HA	17:Q:91:ARG:HE	1.56	0.71
1:A:178:C:O2'	1:A:179:A:H5'	1.90	0.71
1:A:287:U:O2'	1:A:288:A:H5'	1.90	0.71
3:C:8:ILE:HG21	14:N:50:LYS:HB3	1.70	0.71
16:P:82:GLN:H	16:P:82:GLN:HE21	1.35	0.71
3:C:52:LEU:HD23	3:C:52:LEU:N	2.05	0.71
1:A:560:U:H4'	1:A:561:U:C5'	2.19	0.71
20:T:15:ARG:HA	20:T:18:GLN:HB2	1.71	0.71
1:A:1436:U:O2'	1:A:1437:C:H5'	1.91	0.71
1:A:518:C:C5'	1:A:530:G:H1'	2.20	0.71
1:A:73:C:H2'	1:A:74:C:C6	2.25	0.71
1:A:1266:G:N2	1:A:1268:A:H3'	2.05	0.71
3:C:10:PHE:CZ	3:C:178:LEU:HD22	2.26	0.71
5:E:91:LEU:HD23	5:E:120:THR:CG2	2.20	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:423:G:H2'	1:A:424:G:H5'	1.71	0.71
1:A:1038:C:H2'	1:A:1039:C:C6	2.26	0.71
2:B:30:ARG:HG3	2:B:31:TYR:CE1	2.26	0.71
4:D:152:SER:O	4:D:155:LEU:HB2	1.90	0.71
4:D:158:ILE:CD1	4:D:158:ILE:N	2.38	0.71
4:D:9:CYS:HB2	4:D:22:LYS:HZ1	1.53	0.71
3:C:12:LEU:H	3:C:14:ILE:CD1	2.03	0.71
9:I:5:TYR:CD2	9:I:6:GLY:N	2.57	0.71
10:J:23:ILE:N	10:J:23:ILE:HD12	2.05	0.71
8:H:104:ARG:HG3	8:H:138:TRP:CE3	2.26	0.71
5:E:10:MET:SD	5:E:10:MET:N	2.53	0.71
1:A:977:A:H2'	1:A:978:A:H5''	1.73	0.71
20:T:69:GLY:O	20:T:71:THR:N	2.22	0.71
1:A:434:U:H2'	1:A:435:C:C6	2.26	0.71
1:A:1260:C:O5'	1:A:1284:C:H4'	1.91	0.71
10:J:44:VAL:HG12	10:J:45:ARG:N	2.04	0.71
1:A:794:A:H2'	1:A:795:C:C6	2.26	0.71
13:M:91:ARG:CB	13:M:98:VAL:HG22	2.20	0.71
2:B:188:ALA:HB1	2:B:192:SER:OG	1.90	0.71
4:D:191:ARG:NH2	4:D:198:VAL:O	2.23	0.71
16:P:28:ARG:HG3	16:P:29:ASP:N	2.04	0.71
20:T:75:ASN:ND2	20:T:75:ASN:N	2.36	0.71
2:B:68:ILE:N	2:B:90:MET:HE3	2.05	0.71
17:Q:97:SER:HB3	17:Q:102:GLY:O	1.90	0.71
1:A:383:A:H2'	1:A:384:G:C5'	2.21	0.71
1:A:192:U:H5'	20:T:102:GLY:CA	2.21	0.71
1:A:1305:G:HO2'	1:A:1306:A:H8	1.37	0.71
13:M:90:LEU:HD23	13:M:93:ARG:HD2	1.72	0.71
1:A:1215:G:C2	1:A:1216:G:H1'	2.26	0.71
1:A:853:G:O2'	1:A:854:G:H5'	1.91	0.71
8:H:123:GLU:O	8:H:126:LYS:HB3	1.91	0.71
1:A:624:C:H2'	1:A:625:G:H8	1.55	0.71
1:A:1174:G:H2'	1:A:1175:G:C8	2.24	0.71
5:E:35:GLY:N	5:E:112:LEU:HD12	2.06	0.71
21:V:21:TYR:O	21:V:23:PRO:HD3	1.91	0.70
1:A:1007:C:N4	1:A:1022:G:H22	1.88	0.70
18:R:24:ALA:C	18:R:26:LEU:H	1.94	0.70
2:B:30:ARG:HG3	2:B:31:TYR:CD1	2.26	0.70
13:M:62:ASN:O	13:M:63:THR:HB	1.89	0.70
5:E:126:ARG:HG2	5:E:126:ARG:HH11	1.55	0.70
1:A:1102:A:H2'	1:A:1103:C:C6	2.26	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:12:LEU:HD12	7:G:12:LEU:H	1.54	0.70
1:A:933:G:OP2	7:G:3:ARG:HB3	1.92	0.70
1:A:115:G:H1	1:A:312:C:H42	1.37	0.70
10:J:3:LYS:HG2	10:J:76:ASN:HD22	1.56	0.70
2:B:91:PRO:HG2	2:B:155:LEU:CD2	2.21	0.70
2:B:91:PRO:HG2	2:B:155:LEU:HD21	1.72	0.70
1:A:423:G:C2'	1:A:424:G:H5'	2.21	0.70
1:A:1047:G:C3'	1:A:1048:G:H5''	2.21	0.70
1:A:1339:A:H2'	1:A:1340:A:O4'	1.92	0.70
1:A:838:G:H2'	1:A:839:U:H5''	1.71	0.70
1:A:1382:C:H2'	1:A:1383:C:C6	2.26	0.70
1:A:994:A:H2'	1:A:994:A:N3	2.06	0.70
12:L:90:VAL:HG12	12:L:92:ASP:HB2	1.73	0.70
1:A:352:C:H4'	1:A:354:G:OP1	1.91	0.70
1:A:1218:C:H2'	1:A:1219:U:C6	2.25	0.70
10:J:70:ARG:CB	10:J:70:ARG:HH11	2.04	0.70
13:M:14:ARG:HB3	13:M:14:ARG:NH1	2.04	0.70
16:P:20:VAL:O	16:P:21:VAL:HG23	1.91	0.70
15:O:21:ASP:OD2	15:O:24:SER:HB3	1.90	0.70
18:R:40:LEU:HD23	18:R:40:LEU:O	1.92	0.70
1:A:1355:G:H2'	1:A:1356:G:H8	1.55	0.70
17:Q:51:TYR:CE1	17:Q:73:VAL:HB	2.27	0.70
11:K:11:LYS:O	11:K:12:ARG:HB2	1.91	0.70
4:D:155:LEU:HB3	4:D:158:ILE:HD13	1.73	0.70
1:A:1142:G:H3'	1:A:1143:G:C8	2.26	0.70
16:P:43:LYS:HB3	16:P:48:TRP:CD1	2.26	0.70
5:E:105:VAL:HG11	5:E:131:ILE:HG22	1.72	0.70
2:B:19:HIS:HB3	2:B:189:ASP:OD2	1.91	0.70
20:T:20:LEU:O	20:T:23:ARG:HB3	1.91	0.70
1:A:1053:G:H4'	1:A:1054:C:H5'	1.72	0.70
12:L:42:THR:HG23	12:L:53:ARG:O	1.90	0.70
9:I:18:PHE:O	9:I:61:ALA:HB1	1.91	0.70
19:S:28:LYS:HD3	19:S:29:ARG:N	2.02	0.70
1:A:185:A:H2'	1:A:186:C:C6	2.25	0.70
1:A:380:G:H21	1:A:382:A:H3'	1.53	0.70
15:O:86:GLY:C	15:O:87:ILE:HD12	2.12	0.70
5:E:39:GLY:N	5:E:71:LEU:HD11	2.06	0.70
15:O:3:ILE:HA	15:O:7:GLU:OE1	1.92	0.70
1:A:1060:C:H2'	1:A:1061:G:H8	1.57	0.70
3:C:180:ALA:CB	3:C:206:GLU:HG3	2.22	0.70
10:J:26:ALA:HB3	10:J:85:LEU:CG	2.21	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:8:LEU:HD13	10:J:16:LEU:CD2	2.18	0.70
19:S:38:SER:H	19:S:71:LEU:HD12	1.56	0.70
11:K:99:GLN:HA	11:K:105:VAL:HG21	1.73	0.70
6:F:33:TYR:CB	6:F:75:LEU:HD23	2.21	0.70
1:A:707:C:H5''	11:K:20:TYR:CD2	2.27	0.70
4:D:120:LEU:O	4:D:125:HIS:HB2	1.92	0.70
3:C:36:ASP:O	3:C:39:ILE:HG12	1.91	0.70
13:M:50:GLU:O	13:M:54:VAL:HG23	1.91	0.70
10:J:64:GLU:HG3	14:N:59:ALA:CB	2.22	0.70
20:T:50:GLU:O	20:T:53:LEU:N	2.23	0.70
8:H:11:THR:HG22	8:H:15:ASN:HD21	1.55	0.70
8:H:12:ARG:NH1	8:H:27:PRO:HD3	2.06	0.70
2:B:144:ARG:HG3	2:B:145:LEU:H	1.56	0.70
11:K:15:ALA:HA	11:K:77:MET:HA	1.73	0.70
1:A:1525:G:O2'	1:A:1526:G:H5'	1.91	0.70
1:A:92:C:H2'	1:A:93:G:H8	1.57	0.70
20:T:82:SER:O	20:T:83:ARG:C	2.30	0.70
1:A:1196:U:H5''	1:A:1197:G:H5'	1.74	0.70
1:A:170:U:O2'	1:A:171:A:H5'	1.91	0.70
1:A:292:G:H3'	1:A:293:G:H8	1.55	0.69
1:A:1093:A:H2	1:A:1109:C:HO2'	1.38	0.69
1:A:1189:C:H2'	1:A:1190:G:H5'	1.74	0.69
9:I:101:PHE:N	9:I:102:LEU:HD23	2.07	0.69
14:N:40:CYS:SG	14:N:42:ILE:HG13	2.32	0.69
1:A:792:A:O2'	1:A:793:U:OP2	2.10	0.69
18:R:25:THR:C	18:R:26:LEU:HD12	2.12	0.69
1:A:448:A:P	1:A:485:G:H22	2.14	0.69
3:C:3:ASN:N	3:C:3:ASN:ND2	2.40	0.69
20:T:70:SER:HA	20:T:73:HIS:CD2	2.28	0.69
2:B:96:ARG:O	2:B:98:LEU:HD23	1.92	0.69
14:N:11:LYS:HE3	14:N:13:THR:HB	1.74	0.69
4:D:79:PHE:HD2	4:D:79:PHE:O	1.74	0.69
3:C:121:ALA:O	3:C:125:GLU:HG3	1.93	0.69
10:J:40:LEU:HD23	10:J:41:PRO:CD	2.23	0.69
10:J:79:ARG:NH1	10:J:82:ILE:HD12	2.06	0.69
1:A:38:G:H22	1:A:397:A:P	2.15	0.69
3:C:66:VAL:C	3:C:68:VAL:H	1.95	0.69
3:C:85:ARG:O	3:C:89:GLU:HG2	1.92	0.69
6:F:20:ALA:HA	6:F:23:LYS:HB2	1.74	0.69
1:A:603:U:H2'	1:A:604:G:H8	1.57	0.69
1:A:1298:C:C4'	1:A:1299:A:H5'	2.21	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:141:VAL:O	7:G:144:MET:N	2.24	0.69
9:I:24:GLY:CA	9:I:60:ASP:HA	2.22	0.69
13:M:19:LEU:C	13:M:21:TYR:H	1.96	0.69
1:A:106:C:O2'	1:A:107:G:H5'	1.92	0.69
17:Q:59:ILE:HG22	17:Q:71:PHE:HB3	1.74	0.69
20:T:43:LEU:O	20:T:48:LYS:HG2	1.92	0.69
18:R:39:VAL:CG1	18:R:40:LEU:H	2.00	0.69
1:A:1226:C:C5	13:M:104:ARG:HA	2.27	0.69
1:A:499:A:H4'	1:A:500:G:H5'	1.74	0.69
15:O:26:GLU:HA	15:O:81:LEU:HD11	1.75	0.69
1:A:690:G:OP2	11:K:27:ASN:HB2	1.91	0.69
4:D:100:ARG:HB3	4:D:102:ASP:OD1	1.91	0.69
4:D:160:GLN:O	4:D:163:GLU:HB3	1.92	0.69
12:L:113:ARG:HH12	12:L:115:LYS:HB2	1.52	0.69
9:I:19:LEU:HG	9:I:60:ASP:O	1.93	0.69
6:F:7:ASN:ND2	18:R:76:LEU:HD11	2.07	0.69
2:B:20:GLU:O	2:B:39:ILE:HG23	1.91	0.69
11:K:46:GLY:O	11:K:47:VAL:C	2.31	0.69
13:M:74:VAL:HA	13:M:77:ASN:ND2	2.07	0.69
1:A:19:C:H2'	1:A:20:U:H6	1.58	0.69
1:A:1206:G:H2'	1:A:1207:G:C8	2.27	0.69
1:A:163:C:H2'	1:A:163:C:O2	1.92	0.69
5:E:148:VAL:HG21	8:H:107:LEU:HD13	1.74	0.69
1:A:746:A:O2'	1:A:747:C:H5'	1.91	0.69
1:A:1152:A:H5''	10:J:13:HIS:HB2	1.75	0.69
1:A:1299:A:H2'	1:A:1299:A:N3	2.05	0.69
16:P:2:VAL:O	16:P:64:ALA:HA	1.92	0.69
8:H:40:ALA:HA	8:H:45:ILE:CG1	2.23	0.69
6:F:50:TYR:CE1	18:R:77:GLY:HA2	2.27	0.69
2:B:204:ASN:ND2	2:B:206:ASP:H	1.89	0.69
1:A:1527:C:O2'	1:A:1528:U:H5'	1.93	0.69
14:N:8:GLU:HA	14:N:11:LYS:HD3	1.73	0.69
1:A:918:A:H2'	1:A:919:A:O4'	1.92	0.69
1:A:135:C:O2	16:P:1:MET:HB2	1.92	0.69
1:A:404:U:O2'	1:A:405:U:H5'	1.93	0.69
1:A:1330:U:H4'	13:M:23:TYR:CE1	2.27	0.69
9:I:19:LEU:CG	9:I:61:ALA:HB2	2.22	0.69
2:B:96:ARG:CZ	2:B:96:ARG:H	2.06	0.69
1:A:1036:G:H2'	1:A:1037:C:O4'	1.92	0.69
1:A:627:G:O2'	1:A:628:G:H5'	1.92	0.69
4:D:10:ARG:CG	4:D:11:LEU:N	2.55	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:139:GLN:O	3:C:143:GLU:HG3	1.93	0.69
13:M:8:GLU:HG3	13:M:22:ILE:HG12	1.74	0.69
19:S:32:LYS:HA	19:S:50:ALA:CB	2.21	0.69
1:A:1238:A:H2	1:A:1241:G:N3	1.91	0.69
10:J:13:HIS:O	10:J:17:ASP:HB2	1.92	0.69
1:A:1446:A:H5''	1:A:1446:A:N3	2.06	0.69
17:Q:70:ARG:HG3	17:Q:70:ARG:NH1	1.95	0.69
16:P:47:ASP:O	16:P:49:LEU:N	2.26	0.69
1:A:187:C:O2'	20:T:89:ARG:HD2	1.92	0.69
3:C:90:GLU:HA	3:C:93:LYS:CG	2.23	0.69
1:A:1104:G:OP1	2:B:111:ARG:HD2	1.93	0.69
5:E:45:PHE:CE2	5:E:47:LYS:HE3	2.27	0.69
14:N:12:ARG:HG2	14:N:12:ARG:O	1.92	0.69
20:T:14:LYS:O	20:T:16:HIS:N	2.26	0.69
1:A:600:C:OP1	8:H:97:VAL:HG12	1.92	0.69
1:A:541:G:H2'	1:A:542:G:C8	2.28	0.69
3:C:125:GLU:O	3:C:127:ARG:HD2	1.93	0.69
10:J:12:ASP:HB3	10:J:15:THR:HB	1.75	0.69
11:K:53:SER:O	11:K:55:LYS:N	2.26	0.69
3:C:22:TRP:HB3	3:C:59:ARG:CB	2.22	0.69
6:F:22:GLU:HA	6:F:25:ILE:HG22	1.75	0.69
15:O:17:ARG:HD3	15:O:77:ARG:HH11	1.58	0.69
1:A:322:C:O2'	20:T:23:ARG:HD3	1.92	0.69
8:H:96:GLY:H	8:H:99:GLU:CD	1.95	0.69
6:F:97:PHE:HD2	6:F:98:LEU:H	1.41	0.69
1:A:1477:C:H2'	1:A:1478:C:C6	2.28	0.69
11:K:82:VAL:O	11:K:83:ILE:HG13	1.93	0.69
4:D:205:GLU:O	4:D:207:TYR:N	2.26	0.69
1:A:1205:U:H4'	3:C:195:VAL:HG21	1.75	0.69
1:A:1315:U:H2'	1:A:1316:G:O4'	1.92	0.69
5:E:13:ILE:HA	5:E:29:GLY:O	1.93	0.69
7:G:116:ALA:CA	7:G:119:ARG:HH21	2.05	0.69
3:C:64:VAL:HG21	3:C:95:THR:OG1	1.93	0.69
2:B:71:VAL:HG21	2:B:164:VAL:HG22	1.74	0.69
2:B:36:ARG:CD	2:B:41:ILE:HD12	2.22	0.69
1:A:103:C:OP1	20:T:17:ARG:NH1	2.26	0.69
1:A:22:G:H2'	1:A:23:C:H6	1.58	0.69
1:A:1171:G:H2'	1:A:1172:C:C6	2.28	0.69
9:I:11:LYS:HD3	9:I:11:LYS:O	1.92	0.68
10:J:22:LYS:HB2	10:J:22:LYS:HZ2	1.57	0.68
17:Q:6:LEU:O	17:Q:58:GLU:HA	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:48:TYR:O	3:C:52:LEU:HD22	1.93	0.68
11:K:127:LYS:HA	11:K:127:LYS:CE	2.12	0.68
7:G:155:ARG:HA	7:G:155:ARG:NE	2.08	0.68
1:A:1425:U:H2'	1:A:1426:C:C6	2.28	0.68
3:C:11:ARG:HH12	3:C:179:ARG:N	1.88	0.68
7:G:44:TYR:O	7:G:47:CYS:HB2	1.93	0.68
3:C:76:VAL:HA	3:C:83:ARG:HD2	1.74	0.68
18:R:40:LEU:HD23	18:R:40:LEU:C	2.14	0.68
1:A:1406:U:H1'	1:A:1517:G:N2	2.08	0.68
4:D:24:GLU:HG3	4:D:25:ARG:H	1.58	0.68
12:L:66:VAL:HG11	12:L:98:TYR:CE1	2.28	0.68
1:A:1123:A:H4'	10:J:37:PRO:CD	2.19	0.68
3:C:170:GLN:HG2	3:C:171:GLY:H	1.57	0.68
10:J:35:SER:HB2	10:J:73:ASP:O	1.93	0.68
13:M:5:ALA:CB	13:M:22:ILE:HD13	2.24	0.68
6:F:8:ILE:HG12	6:F:88:VAL:HG22	1.74	0.68
2:B:9:GLU:HB3	2:B:12:GLU:OE2	1.92	0.68
1:A:478:A:O2'	1:A:479:C:H5'	1.93	0.68
1:A:73:C:H2'	1:A:74:C:H6	1.56	0.68
1:A:923:A:O2'	1:A:924:C:H5'	1.93	0.68
12:L:59:ARG:HH11	12:L:59:ARG:HG3	1.58	0.68
1:A:114:U:H2'	1:A:115:G:C8	2.28	0.68
1:A:1313:U:H3'	19:S:6:LYS:HD3	1.75	0.68
3:C:37:GLN:HE22	14:N:52:GLN:HE22	1.42	0.68
9:I:6:GLY:HA2	9:I:83:ARG:HD2	1.75	0.68
10:J:49:VAL:HG11	14:N:41:ARG:CB	2.24	0.68
13:M:54:VAL:O	13:M:57:ARG:HB3	1.93	0.68
11:K:43:SER:O	11:K:44:SER:HB3	1.92	0.68
1:A:659:U:H3	1:A:746:A:H61	1.38	0.68
17:Q:76:LEU:C	17:Q:76:LEU:HD12	2.14	0.68
1:A:524:G:H2'	1:A:525:C:C6	2.29	0.68
1:A:524:G:H2'	1:A:525:C:H6	1.59	0.68
3:C:12:LEU:H	3:C:14:ILE:HD11	1.58	0.68
1:A:376:G:H2'	1:A:377:G:C8	2.27	0.68
18:R:38:GLU:H	18:R:41:LYS:HG3	1.56	0.68
3:C:196:LEU:H	3:C:196:LEU:HD23	1.59	0.68
1:A:142:G:H2'	1:A:143:A:H8	1.58	0.68
10:J:57:LYS:HE2	10:J:58:ASP:OD2	1.94	0.68
13:M:53:VAL:O	13:M:57:ARG:HB2	1.94	0.68
1:A:1507:A:H2	1:A:1530:G:H1'	1.53	0.68
2:B:178:ARG:NE	2:B:196:LEU:O	2.25	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:25:PRO:O	12:L:27:LEU:HD13	1.93	0.68
1:A:824:C:H2'	1:A:825:G:C8	2.28	0.68
1:A:1361(A):C:C2'	1:A:1362:C:H5''	2.23	0.68
1:A:1086:U:O2'	1:A:1087:G:H5'	1.93	0.68
12:L:26:ALA:HB2	12:L:98:TYR:CE2	2.29	0.68
1:A:1279:A:H5''	1:A:1280:A:OP1	1.92	0.68
1:A:1316:G:H2'	1:A:1318:A:OP2	1.94	0.68
10:J:9:ARG:HH22	10:J:69:ASN:HB2	1.57	0.68
3:C:18:TRP:CD1	14:N:51:GLY:HA2	2.29	0.68
1:A:254:G:O2'	1:A:255:G:H5'	1.92	0.68
11:K:52:GLY:O	11:K:54:ARG:N	2.27	0.68
5:E:139:LEU:CD2	5:E:142:LEU:HD11	2.24	0.68
6:F:28:ARG:HA	6:F:31:GLU:OE1	1.93	0.68
1:A:769:G:O2'	1:A:770:C:H5'	1.93	0.68
1:A:491:G:H2'	1:A:492:G:H8	1.55	0.68
14:N:9:LYS:C	14:N:9:LYS:HD3	2.13	0.68
1:A:1007:C:H42	1:A:1022:G:N2	1.89	0.68
1:A:76:C:O2'	1:A:77:G:H5'	1.94	0.68
1:A:1247:U:O2'	1:A:1248:A:H5'	1.94	0.68
1:A:830:G:O2'	1:A:831:U:H5'	1.94	0.68
1:A:930:C:C2'	1:A:931:C:H5'	2.23	0.68
1:A:125:U:H2'	1:A:126:G:C8	2.29	0.68
2:B:102:LEU:HD21	2:B:162:ILE:HD11	1.76	0.68
3:C:91:LEU:CD1	3:C:99:VAL:HG22	2.23	0.68
8:H:28:ALA:HA	8:H:59:LEU:HD12	1.75	0.68
1:A:1158:C:H5''	2:B:133:LYS:HE3	1.76	0.68
2:B:21:ARG:HH12	2:B:23:ARG:NH2	1.92	0.68
1:A:782:A:C6	1:A:801:U:C2	2.81	0.68
4:D:36:ARG:H	4:D:37:PRO:CD	2.07	0.68
12:L:70:ILE:HD13	12:L:77:LEU:HD12	1.74	0.68
12:L:89:ARG:O	12:L:90:VAL:CG2	2.41	0.68
1:A:1289:A:H3'	1:A:1290:G:H8	1.59	0.68
7:G:116:ALA:O	7:G:120:ILE:HG12	1.94	0.68
1:A:1441:G:H4'	1:A:1442:G:C2	2.29	0.68
20:T:85:MET:HB2	20:T:104:LEU:HD21	1.75	0.68
2:B:13:ALA:C	2:B:15:VAL:H	1.95	0.68
11:K:73:MET:HA	11:K:77:MET:HB2	1.75	0.68
18:R:70:ILE:HG22	18:R:71:LYS:N	2.08	0.68
17:Q:7:THR:HA	17:Q:57:VAL:O	1.94	0.68
1:A:359:U:H2'	1:A:360:A:H8	1.58	0.68
2:B:105:PHE:C	2:B:105:PHE:HD2	1.98	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:2:GLY:O	4:D:3:ARG:HB2	1.92	0.68
3:C:76:VAL:HB	3:C:103:VAL:HG21	1.76	0.68
5:E:59:GLY:O	5:E:62:ALA:HB3	1.93	0.68
1:A:1262:C:H2'	1:A:1263:C:C6	2.29	0.67
7:G:66:VAL:HG12	7:G:70:LYS:HE3	1.76	0.67
7:G:91:VAL:CG1	7:G:92:SER:N	2.57	0.67
21:V:6:ARG:O	21:V:12:LYS:HE3	1.94	0.67
17:Q:67:LYS:HA	17:Q:70:ARG:NH2	2.09	0.67
1:A:651:C:O2'	1:A:652:U:H5'	1.94	0.67
6:F:29:ALA:O	6:F:32:ASN:HB3	1.93	0.67
1:A:1407:C:O2'	1:A:1408:A:H5'	1.94	0.67
4:D:80:GLU:HA	4:D:80:GLU:OE2	1.93	0.67
1:A:532:A:H2'	1:A:533:A:C5'	2.24	0.67
9:I:5:TYR:CE2	9:I:16:ARG:HB2	2.29	0.67
13:M:33:ALA:O	13:M:37:THR:HB	1.94	0.67
13:M:10:PRO:O	13:M:45:VAL:HG21	1.94	0.67
5:E:66:MET:O	5:E:67:VAL:HG13	1.93	0.67
1:A:419:C:H3'	1:A:419:C:O2	1.93	0.67
1:A:1026:G:H2'	1:A:1027:C:H5'	1.76	0.67
4:D:123:HIS:HB2	4:D:125:HIS:CD2	2.30	0.67
4:D:9:CYS:CB	4:D:22:LYS:NZ	2.57	0.67
1:A:760:G:H2'	1:A:761:G:O4'	1.94	0.67
1:A:1276:G:O2'	1:A:1277:C:H5'	1.94	0.67
7:G:137:LYS:HA	7:G:140:ASP:CB	2.24	0.67
10:J:22:LYS:C	10:J:23:ILE:HD12	2.15	0.67
10:J:77:PRO:O	10:J:78:ASN:HB2	1.95	0.67
3:C:84:ILE:HG13	3:C:101:LEU:HD22	1.77	0.67
15:O:56:LEU:HA	15:O:59:MET:CG	2.24	0.67
6:F:96:PRO:HB2	18:R:30:ASP:OD1	1.93	0.67
1:A:538:G:H2'	1:A:539:A:C8	2.29	0.67
4:D:105:VAL:O	4:D:108:LEU:HB2	1.94	0.67
12:L:33:ARG:HG2	12:L:60:LEU:HD12	1.76	0.67
7:G:103:TRP:NE1	7:G:137:LYS:HD3	2.09	0.67
14:N:29:ARG:HG2	14:N:30:ALA:H	1.60	0.67
13:M:90:LEU:O	13:M:93:ARG:HB2	1.95	0.67
1:A:1048:G:N2	1:A:1214:C:H2'	2.10	0.67
1:A:857:C:H2'	1:A:858:G:C8	2.29	0.67
1:A:24:U:H2'	1:A:25:C:C6	2.28	0.67
1:A:1428:A:H2'	1:A:1429:C:C6	2.28	0.67
1:A:336:C:H2'	1:A:337:C:C6	2.29	0.67
1:A:352:C:H2'	1:A:352:C:O2	1.93	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:7:LYS:HA	10:J:71:LEU:HD22	1.75	0.67
13:M:25:ILE:CD1	13:M:66:LEU:HD21	2.25	0.67
10:J:64:GLU:N	14:N:59:ALA:HB2	2.09	0.67
17:Q:17:LYS:O	17:Q:46:ASP:O	2.13	0.67
1:A:36:C:H2'	1:A:37:U:H6	1.57	0.67
3:C:64:VAL:HG23	3:C:97:LYS:CB	2.25	0.67
15:O:78:TYR:O	15:O:82:ILE:HG22	1.95	0.67
18:R:38:GLU:HA	18:R:41:LYS:HZ2	1.59	0.67
11:K:87:THR:HA	11:K:91:ARG:NH1	2.09	0.67
8:H:65:TYR:CA	8:H:79:VAL:HG23	2.23	0.67
1:A:1030:C:H2'	1:A:1030(A):G:O4'	1.93	0.67
7:G:78:ARG:O	7:G:84:ASN:HA	1.94	0.67
12:L:66:VAL:HG21	12:L:98:TYR:CE1	2.30	0.67
1:A:243:A:C5'	1:A:244:U:H5'	2.24	0.67
10:J:46:ARG:NH1	10:J:64:GLU:HG2	2.08	0.67
10:J:79:ARG:O	10:J:83:GLU:HB2	1.94	0.67
14:N:46:GLU:O	14:N:49:HIS:HB2	1.93	0.67
19:S:72:GLY:C	19:S:74:PHE:H	1.96	0.67
2:B:105:PHE:C	2:B:105:PHE:CD2	2.66	0.67
2:B:87:ARG:NH1	2:B:219:VAL:HB	2.09	0.67
1:A:328:C:H2'	1:A:328:C:O2	1.95	0.67
1:A:849:C:C2'	1:A:850:U:H5'	2.24	0.67
18:R:86:VAL:O	18:R:87:ARG:HB2	1.94	0.67
1:A:1244:C:H2'	1:A:1245:A:H8	1.57	0.67
9:I:77:ILE:HG22	9:I:81:ILE:HD11	1.76	0.67
20:T:80:ARG:HH11	20:T:80:ARG:HB3	1.60	0.67
3:C:85:ARG:HA	3:C:88:ARG:CG	2.19	0.67
17:Q:90:ILE:O	17:Q:93:GLN:HB3	1.94	0.67
1:A:1361:G:O5'	1:A:1361:G:C8	2.47	0.67
6:F:38:GLU:O	6:F:39:LYS:HB2	1.93	0.67
1:A:625:G:H2'	1:A:626:U:C6	2.29	0.67
4:D:15:GLU:HG3	4:D:63:LYS:HZ3	1.57	0.67
1:A:1015:A:H2'	1:A:1016:A:H8	1.55	0.67
3:C:23:TYR:OH	10:J:9:ARG:HB2	1.94	0.67
13:M:49:THR:O	13:M:53:VAL:HG23	1.95	0.67
16:P:80:PHE:CD1	16:P:80:PHE:N	2.63	0.67
20:T:43:LEU:HD12	20:T:55:ILE:HD13	1.75	0.67
14:N:14:PRO:CG	14:N:15:LYS:H	2.08	0.67
2:B:27:LYS:O	2:B:194:PRO:HG3	1.95	0.67
1:A:849:C:O2'	1:A:850:U:H5'	1.95	0.67
1:A:1447:G:N3	1:A:1447:G:H2'	2.10	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:41:ARG:HB3	12:L:41:ARG:NH1	2.04	0.67
1:A:1182:G:H4'	1:A:1183:A:O5'	1.92	0.67
9:I:55:ALA:HB1	9:I:59:PHE:CD1	2.30	0.67
1:A:1151:A:H5''	10:J:42:THR:OG1	1.95	0.67
13:M:22:ILE:HG21	13:M:66:LEU:HD23	1.77	0.67
16:P:59:TRP:HE3	16:P:59:TRP:HA	1.55	0.67
15:O:10:LYS:HG3	15:O:11:VAL:N	2.10	0.67
1:A:1222:G:H5''	19:S:78:ARG:NH1	2.10	0.67
4:D:152:SER:OG	4:D:155:LEU:HD12	1.95	0.67
10:J:9:ARG:NE	10:J:9:ARG:N	2.42	0.67
5:E:79:GLU:HA	5:E:91:LEU:O	1.95	0.67
2:B:54:THR:HG23	2:B:199:TYR:HB2	1.77	0.67
1:A:839:U:O2	1:A:839:U:H2'	1.95	0.67
13:M:117:VAL:O	13:M:118:ALA:HB2	1.94	0.67
1:A:1150:U:O3'	10:J:41:PRO:CA	2.38	0.66
1:A:1372:U:C5'	9:I:71:SER:HB3	2.15	0.66
1:A:452:A:H4'	16:P:72:ARG:NH2	2.10	0.66
8:H:45:ILE:HG22	8:H:63:LEU:HA	1.76	0.66
18:R:37:VAL:HG23	18:R:38:GLU:N	2.09	0.66
4:D:25:ARG:NE	4:D:30:LYS:HB3	2.09	0.66
1:A:1347:G:H1'	1:A:1348:U:C5	2.30	0.66
1:A:1366:C:H2'	1:A:1367:C:C6	2.24	0.66
7:G:92:SER:HB3	7:G:93:PRO:HD2	1.76	0.66
19:S:19:VAL:HG22	19:S:47:HIS:HE1	1.59	0.66
16:P:80:PHE:O	16:P:82:GLN:N	2.28	0.66
20:T:57:ARG:HH21	20:T:100:ILE:HG22	1.60	0.66
1:A:478:A:H2'	1:A:479:C:O4'	1.94	0.66
1:A:322:C:O2'	1:A:323:U:H5'	1.94	0.66
12:L:46:LYS:HE3	12:L:47:LYS:HE2	1.78	0.66
9:I:117:HIS:HB2	9:I:121:ARG:HD2	1.76	0.66
10:J:23:ILE:N	10:J:23:ILE:CD1	2.59	0.66
19:S:63:THR:HB	19:S:65:ASN:OD1	1.95	0.66
5:E:82:VAL:HG21	5:E:138:ALA:H	1.60	0.66
1:A:1510:U:H2'	1:A:1511:G:C8	2.30	0.66
1:A:149:A:O2'	1:A:150:C:H5'	1.94	0.66
1:A:174:C:H2'	1:A:175:C:C6	2.30	0.66
4:D:25:ARG:HG3	4:D:30:LYS:CB	2.24	0.66
12:L:66:VAL:HG11	12:L:98:TYR:HE1	1.61	0.66
1:A:1182:G:C4'	1:A:1183:A:H5''	2.22	0.66
7:G:46:ALA:HB1	7:G:121:ALA:CA	2.26	0.66
9:I:7:THR:CG2	9:I:8:GLY:H	2.08	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:51:GLY:N	3:C:70:VAL:HG13	2.10	0.66
5:E:147:ASP:N	5:E:147:ASP:OD2	2.29	0.66
8:H:80:ILE:O	8:H:80:ILE:HG22	1.96	0.66
21:V:24:ARG:O	21:V:25:LYS:HB2	1.94	0.66
3:C:50:ALA:CA	3:C:72:LYS:HD3	2.19	0.66
3:C:91:LEU:HD12	3:C:101:LEU:HB2	1.76	0.66
1:A:590:C:OP1	8:H:30:ARG:N	2.27	0.66
8:H:63:LEU:N	8:H:63:LEU:HD12	2.03	0.66
1:A:525:C:H2'	1:A:526:C:C6	2.30	0.66
1:A:624:C:H2'	1:A:625:G:C8	2.29	0.66
1:A:1152:A:C5'	10:J:13:HIS:HB2	2.26	0.66
3:C:180:ALA:HB1	3:C:203:PHE:HE1	1.58	0.66
10:J:16:LEU:CA	10:J:94:VAL:HG21	2.23	0.66
19:S:72:GLY:C	19:S:75:ALA:H	1.98	0.66
1:A:129(A):G:HO2'	1:A:130:A:P	2.17	0.66
16:P:22:THR:HG23	16:P:23:ASP:N	2.07	0.66
11:K:93:GLN:NE2	11:K:96:ARG:NH2	2.44	0.66
1:A:832:C:O2'	1:A:833:U:H5'	1.96	0.66
1:A:1403:C:H2'	1:A:1404:C:C6	2.30	0.66
12:L:67:THR:OG1	12:L:96:VAL:HA	1.96	0.66
10:J:78:ASN:C	10:J:80:LYS:N	2.48	0.66
8:H:31:PHE:O	8:H:33:GLU:N	2.28	0.66
18:R:59:SER:H	18:R:62:GLU:HB2	1.60	0.66
5:E:115:VAL:HG12	5:E:116:THR:N	2.10	0.66
12:L:79:GLU:O	12:L:79:GLU:HG2	1.95	0.66
12:L:24:VAL:HG13	12:L:98:TYR:CE2	2.30	0.66
10:J:29:ARG:HG3	10:J:84:GLN:HE22	1.59	0.66
1:A:261:U:O2	1:A:263:A:H8	1.79	0.66
15:O:4:THR:OG1	15:O:6:GLU:HG2	1.96	0.66
13:M:81:LEU:HA	13:M:84:ILE:CG1	2.25	0.66
1:A:489:C:H2'	1:A:490:G:H8	1.59	0.66
1:A:1049:U:OP1	14:N:3:ARG:HG2	1.96	0.66
1:A:333:G:H4'	20:T:16:HIS:CE1	2.31	0.66
1:A:959:A:H3'	1:A:960:U:H5''	1.78	0.66
1:A:89:C:H2'	1:A:90:U:C6	2.31	0.66
1:A:1277:C:H1'	1:A:1282:C:O2	1.95	0.66
1:A:254:G:O3'	17:Q:69:LYS:HE2	1.96	0.66
3:C:44:GLU:OE1	3:C:55:VAL:HG22	1.96	0.66
6:F:2:ARG:O	6:F:66:GLU:HG3	1.96	0.66
1:A:1360:A:H2'	1:A:1361:G:C8	2.31	0.66
3:C:160:ALA:C	3:C:162:GLN:N	2.49	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:82:ALA:O	4:D:85:LYS:N	2.29	0.66
12:L:46:LYS:N	12:L:92:ASP:O	2.29	0.66
1:A:1201:A:H4'	1:A:1202:G:O5'	1.96	0.66
1:A:1313:U:P	19:S:6:LYS:HG2	2.36	0.66
1:A:1346:A:H5'	9:I:120:ARG:HH12	1.61	0.66
9:I:96:LEU:HG	9:I:102:LEU:HD13	1.77	0.66
14:N:41:ARG:NH1	14:N:41:ARG:HG2	2.11	0.66
17:Q:67:LYS:HA	17:Q:70:ARG:HH22	1.61	0.66
20:T:75:ASN:O	20:T:76:ALA:C	2.34	0.66
1:A:580:U:H2'	1:A:581:G:O4'	1.95	0.66
1:A:741:G:O2'	1:A:742:G:H5'	1.95	0.66
18:R:22:VAL:O	18:R:24:ALA:N	2.28	0.66
1:A:913:A:O2'	1:A:914:A:P	2.54	0.66
4:D:153:ARG:HG2	4:D:181:MET:SD	2.36	0.65
4:D:26:CYS:HA	4:D:31:CYS:HB2	1.77	0.65
1:A:312:C:H2'	1:A:313:A:C8	2.30	0.65
1:A:1293:G:H2'	1:A:1294:G:O4'	1.96	0.65
3:C:132:ARG:O	3:C:136:GLN:HG3	1.95	0.65
19:S:70:LYS:H	19:S:73:GLU:HG3	1.61	0.65
1:A:376:G:OP1	16:P:5:ARG:HB2	1.95	0.65
13:M:76:ALA:O	13:M:80:ARG:N	2.29	0.65
2:B:178:ARG:NH2	8:H:68:ARG:NH2	2.44	0.65
20:T:11:SER:O	20:T:13:LEU:N	2.29	0.65
1:A:922:G:N2	1:A:1396:A:C4	2.64	0.65
4:D:43:HIS:O	4:D:45:GLN:N	2.29	0.65
12:L:89:ARG:HA	12:L:96:VAL:O	1.96	0.65
7:G:46:ALA:HB2	7:G:120:ILE:HB	1.79	0.65
7:G:47:CYS:C	7:G:49:ILE:H	1.98	0.65
13:M:48:LEU:CD2	13:M:52:GLU:HB2	2.26	0.65
19:S:42:PRO:O	19:S:45:VAL:HG23	1.96	0.65
19:S:27:GLU:OE1	19:S:47:HIS:NE2	2.28	0.65
2:B:96:ARG:O	2:B:98:LEU:CD2	2.45	0.65
5:E:111:GLU:O	5:E:114:GLY:N	2.25	0.65
5:E:87:SER:HB3	5:E:131:ILE:CD1	2.24	0.65
2:B:165:VAL:O	2:B:187:LEU:O	2.15	0.65
2:B:204:ASN:C	2:B:204:ASN:HD22	2.00	0.65
1:A:711:G:H2'	1:A:712:A:C8	2.31	0.65
4:D:144:ASP:O	4:D:184:LYS:HA	1.96	0.65
1:A:534:U:H5''	1:A:535:A:OP2	1.96	0.65
1:A:1064:G:H4'	1:A:1065:U:H5'	1.76	0.65
9:I:46:ALA:O	9:I:81:ILE:HD12	1.95	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:44:VAL:HG13	10:J:65:LEU:O	1.95	0.65
10:J:9:ARG:HA	10:J:69:ASN:HA	1.78	0.65
10:J:65:LEU:HA	14:N:55:GLY:O	1.95	0.65
19:S:18:LYS:HE2	19:S:31:ILE:HD12	1.77	0.65
19:S:64:GLU:HA	19:S:67:VAL:HG23	1.77	0.65
16:P:51:VAL:O	16:P:52:ASP:HB3	1.96	0.65
20:T:75:ASN:H	20:T:75:ASN:HD22	1.39	0.65
2:B:77:ALA:HA	2:B:211:ILE:HD11	1.78	0.65
1:A:1065:U:O4	1:A:1190:G:H1'	1.96	0.65
9:I:4:TYR:HE1	9:I:21:PRO:HG2	1.60	0.65
1:A:255:G:H1'	17:Q:16:GLN:OE1	1.97	0.65
1:A:191:G:C4	20:T:105:SER:HB3	2.32	0.65
16:P:70:ALA:O	16:P:74:LEU:HG	1.96	0.65
3:C:101:LEU:HD23	3:C:102:ASN:N	2.11	0.65
1:A:824:C:O2'	1:A:825:G:H5'	1.96	0.65
1:A:227:G:H2'	1:A:228:A:C8	2.32	0.65
1:A:1374:A:H2'	1:A:1375:A:H8	1.59	0.65
4:D:201:GLN:HA	4:D:204:ILE:CD1	2.26	0.65
1:A:1260:C:H4'	1:A:1284:C:H5'	1.79	0.65
9:I:24:GLY:N	9:I:60:ASP:HA	2.11	0.65
13:M:20:THR:HG23	13:M:26:GLY:HA2	1.76	0.65
2:B:60:ASP:O	2:B:62:ALA:N	2.28	0.65
11:K:79:SER:O	11:K:80:VAL:HB	1.96	0.65
1:A:407:G:O2'	4:D:116:GLN:HG3	1.96	0.65
4:D:133:VAL:HG12	4:D:134:ASP:N	2.06	0.65
12:L:90:VAL:HG12	12:L:92:ASP:H	1.61	0.65
1:A:1066:C:C2'	1:A:1067:A:H5'	2.26	0.65
10:J:7:LYS:HG2	10:J:71:LEU:CD2	2.26	0.65
19:S:11:VAL:HG21	19:S:41:VAL:HG11	1.78	0.65
8:H:82:HIS:CD2	8:H:83:ILE:H	2.14	0.65
1:A:1210:C:H2'	1:A:1211:U:H5''	1.78	0.65
4:D:25:ARG:CG	4:D:30:LYS:HB3	2.26	0.65
1:A:1060:C:O2'	1:A:1061:G:H5'	1.96	0.65
1:A:1202:G:O2'	1:A:1203:C:H5'	1.96	0.65
3:C:114:PRO:HD3	3:C:184:TYR:O	1.95	0.65
3:C:173:VAL:O	3:C:173:VAL:HG12	1.97	0.65
3:C:19:GLU:HG2	3:C:54:ARG:HH21	1.60	0.65
1:A:1343:G:H4'	9:I:122:ALA:O	1.97	0.65
10:J:8:LEU:HA	10:J:95:GLU:OE2	1.97	0.65
16:P:45:THR:OG1	16:P:47:ASP:OD1	2.10	0.65
2:B:111:ARG:O	2:B:113:HIS:N	2.27	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:956:U:O2'	1:A:957:U:H5'	1.97	0.65
1:A:1425:U:H2'	1:A:1426:C:H6	1.59	0.65
8:H:102:ARG:NH1	8:H:105:ARG:NH1	2.45	0.65
4:D:148:VAL:HG12	4:D:149:ALA:N	2.11	0.65
1:A:1123:A:O3'	10:J:36:GLY:HA3	1.97	0.65
7:G:93:PRO:O	7:G:97:GLN:HB2	1.97	0.65
20:T:102:GLY:O	20:T:103:GLY:C	2.35	0.65
5:E:135:THR:O	5:E:136:MET:C	2.33	0.65
5:E:77:PRO:O	5:E:78:HIS:HB3	1.95	0.65
18:R:38:GLU:N	18:R:41:LYS:HE3	2.12	0.65
1:A:1490:C:O2'	1:A:1491:G:H5'	1.97	0.65
1:A:76:C:H2'	1:A:77:G:H8	1.62	0.65
12:L:43:VAL:HG23	12:L:55:VAL:HG21	1.78	0.65
17:Q:101:ARG:HG2	17:Q:101:ARG:HH11	1.62	0.65
1:A:1181:G:O2'	1:A:1182:G:H5'	1.97	0.65
1:A:1251:A:H4'	9:I:12:GLU:OE2	1.96	0.65
1:A:1278:U:H5'	1:A:1279:A:H5'	1.79	0.65
9:I:43:ALA:HA	9:I:74:ILE:HD13	1.78	0.65
1:A:383:A:C2'	1:A:384:G:H5'	2.26	0.65
16:P:42:ARG:C	16:P:43:LYS:HD2	2.17	0.65
1:A:794:A:H2'	1:A:795:C:H6	1.61	0.65
5:E:91:LEU:HA	5:E:120:THR:HG22	1.79	0.65
5:E:12:LEU:CD1	5:E:31:LEU:HB2	2.27	0.65
15:O:55:GLY:O	15:O:59:MET:HG2	1.96	0.65
15:O:38:ARG:O	15:O:41:GLU:N	2.30	0.65
1:A:540:G:H2'	1:A:541:G:O4'	1.97	0.65
1:A:608:A:H2'	1:A:609:A:C8	2.32	0.65
1:A:34:C:H42	1:A:550:G:H1	1.44	0.65
15:O:48:LYS:HZ3	15:O:48:LYS:HB2	1.62	0.65
20:T:38:LYS:HA	20:T:41:ILE:HD12	1.77	0.65
10:J:37:PRO:HA	10:J:72:VAL:HG13	1.78	0.64
10:J:85:LEU:H	10:J:88:LEU:HD12	1.62	0.64
17:Q:68:ARG:O	17:Q:69:LYS:HB2	1.97	0.64
1:A:697:U:O2	1:A:798:G:H1'	1.97	0.64
15:O:71:GLN:HB2	15:O:78:TYR:CD1	2.32	0.64
5:E:41:VAL:HG22	5:E:113:ALA:CA	2.26	0.64
5:E:137:GLU:O	5:E:140:ARG:N	2.29	0.64
2:B:208:ILE:O	2:B:210:SER:N	2.30	0.64
1:A:1413:A:O2'	1:A:1414:U:H5'	1.97	0.64
2:B:184:VAL:N	2:B:198:ASP:OD2	2.30	0.64
1:A:402:G:O2'	1:A:403:C:H5'	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1153:C:H2'	1:A:1154:G:C8	2.32	0.64
3:C:137:ALA:HA	3:C:140:ARG:HH11	1.62	0.64
13:M:48:LEU:HD13	13:M:53:VAL:HG22	1.79	0.64
17:Q:66:SER:O	17:Q:69:LYS:HB3	1.97	0.64
1:A:371:G:H2'	1:A:372:C:H6	1.63	0.64
2:B:9:GLU:HG3	2:B:217:ARG:HH12	1.61	0.64
1:A:1504:G:OP1	1:A:1507:A:H4'	1.96	0.64
1:A:1509:C:C2'	1:A:1510:U:H5'	2.28	0.64
1:A:634:C:H2'	1:A:635:G:H8	1.62	0.64
1:A:991:U:O4	1:A:1212:U:H2'	1.97	0.64
2:B:239:VAL:HG12	2:B:240:GLN:N	2.12	0.64
4:D:104:VAL:HG12	4:D:105:VAL:N	2.11	0.64
4:D:104:VAL:HG21	4:D:140:VAL:CG2	2.26	0.64
1:A:608:A:C4	1:A:609:A:C8	2.85	0.64
1:A:1189:C:H5''	3:C:5:ILE:HD13	1.80	0.64
10:J:9:ARG:NH1	10:J:69:ASN:HB3	2.11	0.64
16:P:21:VAL:HG21	16:P:59:TRP:HE1	1.59	0.64
16:P:72:ARG:O	16:P:75:ARG:HB2	1.97	0.64
3:C:67:THR:HA	3:C:102:ASN:ND2	2.13	0.64
1:A:1195:C:H3'	1:A:1196:U:C5'	2.25	0.64
1:A:1374:A:H2'	1:A:1375:A:O4'	1.97	0.64
1:A:1467:G:H2'	1:A:1468:A:C8	2.32	0.64
12:L:60:LEU:HD21	12:L:85:ILE:HD12	1.80	0.64
1:A:1240:U:H3'	1:A:1241:G:H5'	1.80	0.64
16:P:26:ARG:HD2	16:P:31:LYS:O	1.97	0.64
16:P:28:ARG:HG3	16:P:29:ASP:CG	2.18	0.64
2:B:69:LEU:HB3	2:B:162:ILE:HG12	1.80	0.64
3:C:91:LEU:HG	3:C:99:VAL:HG13	1.78	0.64
8:H:26:VAL:HG13	8:H:59:LEU:HB2	1.79	0.64
18:R:38:GLU:HA	18:R:41:LYS:NZ	2.11	0.64
1:A:815:A:O2'	1:A:1527:C:H1'	1.97	0.64
1:A:818:G:O2'	1:A:819:A:H5'	1.97	0.64
1:A:879:C:O2'	1:A:880:C:H5'	1.98	0.64
1:A:1418:A:H8	1:A:1418:A:O5'	1.80	0.64
1:A:979:C:H2'	1:A:980:C:O4'	1.98	0.64
1:A:1024:G:N3	1:A:1024:G:H2'	2.13	0.64
4:D:36:ARG:HA	4:D:38:TYR:CE2	2.32	0.64
12:L:113:ARG:HD3	12:L:114:LYS:H	1.62	0.64
3:C:11:ARG:NH2	3:C:175:LEU:O	2.29	0.64
1:A:939:G:H5''	7:G:102:ARG:CZ	2.27	0.64
9:I:89:ASN:C	9:I:91:ASP:H	2.01	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:11:THR:O	8:H:12:ARG:C	2.36	0.64
2:B:208:ILE:HA	2:B:211:ILE:HG12	1.80	0.64
15:O:53:HIS:O	15:O:56:LEU:HB3	1.97	0.64
1:A:575:G:OP1	1:A:575:G:H4'	1.97	0.64
1:A:89:C:C6	1:A:90:U:H5	2.16	0.64
1:A:346:G:H2'	1:A:347:G:H5'	1.78	0.64
4:D:120:LEU:HD23	4:D:120:LEU:O	1.98	0.64
12:L:69:TYR:O	12:L:100:ILE:HG13	1.98	0.64
1:A:1178:G:N2	1:A:1180:A:H3'	2.10	0.64
1:A:1201:A:H5'	1:A:1203:C:OP2	1.96	0.64
1:A:1262:C:H2'	1:A:1263:C:H6	1.62	0.64
3:C:138:VAL:CG1	3:C:170:GLN:HB2	2.27	0.64
21:V:10:ARG:HG2	21:V:10:ARG:HH11	1.60	0.64
3:C:48:TYR:CB	3:C:52:LEU:HB3	2.28	0.64
18:R:21:LYS:HG3	18:R:55:ARG:HA	1.79	0.64
8:H:97:VAL:HG13	8:H:98:LYS:H	1.62	0.64
6:F:53:ALA:C	6:F:55:ASP:H	2.00	0.64
1:A:248:C:O2'	1:A:249:U:H5'	1.98	0.64
1:A:716:A:H1'	11:K:118:GLY:HA2	1.79	0.64
1:A:1088:G:H8	1:A:1088:G:O5'	1.80	0.64
3:C:37:GLN:NE2	14:N:52:GLN:HE22	1.95	0.64
10:J:6:ILE:HG13	10:J:73:ASP:CA	2.27	0.64
1:A:709:G:H2'	1:A:710:G:C8	2.31	0.64
5:E:19:MET:HE3	5:E:20:GLN:H	1.63	0.64
1:A:673:G:H5''	6:F:87:ARG:NH1	2.13	0.64
8:H:18:ARG:HH11	8:H:18:ARG:HB2	1.62	0.64
12:L:18:VAL:O	12:L:19:ARG:HB2	1.96	0.64
4:D:9:CYS:SG	4:D:31:CYS:O	2.56	0.64
4:D:201:GLN:HE22	5:E:99:GLY:CA	2.10	0.64
1:A:1014:A:C2	1:A:1219:U:H1'	2.32	0.64
1:A:1110:A:H8	1:A:1110:A:O5'	1.81	0.64
19:S:15:LEU:O	19:S:19:VAL:CB	2.43	0.64
1:A:254:G:OP1	17:Q:67:LYS:O	2.16	0.64
16:P:35:LYS:O	16:P:36:ILE:HG23	1.98	0.64
3:C:76:VAL:HG23	3:C:77:ILE:H	1.62	0.64
8:H:11:THR:HA	8:H:14:ARG:NH1	2.12	0.64
1:A:1305:G:O2'	1:A:1306:A:H8	1.79	0.64
2:B:168:THR:HG1	2:B:192:SER:HA	1.60	0.64
1:A:592:G:O2'	1:A:593:G:H5'	1.98	0.64
1:A:162:A:C5	1:A:163:C:H1'	2.33	0.64
1:A:518:C:H4'	1:A:519:C:C5	2.33	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:694:A:C3'	1:A:695:A:H5''	2.28	0.64
8:H:113:SER:HB2	8:H:134:ILE:HD11	1.79	0.64
1:A:851:G:H2'	1:A:852:G:H8	1.63	0.64
3:C:42:LEU:HA	3:C:46:GLU:OE2	1.98	0.64
1:A:1365:G:O2'	1:A:1366:C:H5'	1.98	0.64
13:M:31:LYS:C	13:M:33:ALA:H	1.98	0.64
13:M:42:ALA:O	13:M:43:THR:O	2.15	0.64
8:H:14:ARG:HH11	8:H:14:ARG:HB3	1.63	0.64
2:B:59:GLU:O	2:B:62:ALA:HB3	1.98	0.64
1:A:448:A:H2'	1:A:449:C:H6	1.63	0.64
5:E:64:ARG:O	5:E:65:ASN:HB3	1.98	0.64
1:A:1097:C:H2'	1:A:1098:C:C6	2.28	0.63
1:A:1111:A:H2'	1:A:1112:C:O4'	1.97	0.63
3:C:198:VAL:HG12	3:C:199:LYS:O	1.98	0.63
14:N:50:LYS:HE3	14:N:52:GLN:HG3	1.80	0.63
5:E:89:ILE:HD13	5:E:90:VAL:H	1.64	0.63
2:B:118:LEU:HB3	2:B:142:LEU:HD12	1.79	0.63
1:A:1196:U:H5''	1:A:1197:G:C5'	2.28	0.63
1:A:317:G:C6	1:A:318:G:N7	2.67	0.63
1:A:318:G:H2'	1:A:319:G:H8	1.62	0.63
5:E:60:TYR:O	5:E:64:ARG:HG2	1.98	0.63
1:A:136:C:O2'	16:P:63:GLY:HA2	1.97	0.63
9:I:13:ALA:O	9:I:76:ALA:HB1	1.98	0.63
4:D:79:PHE:HD2	4:D:79:PHE:C	2.02	0.63
1:A:1091:U:O2	1:A:1093:A:H8	1.81	0.63
1:A:1114:C:H42	1:A:1186:G:H1	1.44	0.63
1:A:1190:G:H3'	3:C:3:ASN:O	1.99	0.63
19:S:5:LEU:O	19:S:6:LYS:HB2	1.97	0.63
1:A:261:U:O2	1:A:263:A:C8	2.50	0.63
16:P:5:ARG:HG2	16:P:6:LEU:N	2.12	0.63
1:A:1406:U:H1'	1:A:1517:G:H21	1.61	0.63
1:A:639:G:O2'	1:A:640:A:H5'	1.97	0.63
4:D:187:ARG:NE	4:D:188:LEU:HD12	2.12	0.63
1:A:285:G:O2'	1:A:286:G:H5'	1.97	0.63
3:C:8:ILE:CG2	14:N:50:LYS:HB3	2.28	0.63
7:G:62:PHE:CD2	7:G:66:VAL:HG21	2.34	0.63
9:I:63:ILE:HD13	9:I:77:ILE:HG21	1.79	0.63
16:P:40:ASP:HB3	16:P:48:TRP:CB	2.28	0.63
1:A:200:G:C3'	1:A:201:C:H5''	2.28	0.63
2:B:19:HIS:CE1	2:B:206:ASP:HB3	2.34	0.63
1:A:781:A:C5	1:A:802:A:C2	2.86	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:48:LYS:N	15:O:48:LYS:CD	2.61	0.63
1:A:971:G:H4'	1:A:972:C:C5'	2.28	0.63
2:B:36:ARG:HD2	2:B:41:ILE:CD1	2.26	0.63
4:D:58:LEU:O	4:D:61:LYS:HB3	1.99	0.63
1:A:1369:C:H2'	1:A:1370:G:C8	2.34	0.63
3:C:131:ARG:HA	3:C:134:ILE:HD12	1.81	0.63
9:I:7:THR:HB	9:I:83:ARG:HH12	1.63	0.63
9:I:92:TYR:O	9:I:96:LEU:HB2	1.98	0.63
20:T:51:GLU:HG2	20:T:52:ALA:N	2.12	0.63
13:M:106:ASN:O	13:M:107:ALA:HB3	1.97	0.63
6:F:8:ILE:HG22	6:F:10:LEU:HG	1.81	0.63
1:A:1488:G:H2'	1:A:1489:G:H8	1.63	0.63
1:A:941:G:H1	1:A:1342:C:N4	1.97	0.63
3:C:27:LYS:HA	3:C:30:ARG:NH1	2.12	0.63
9:I:43:ALA:HA	9:I:74:ILE:HG21	1.78	0.63
9:I:46:ALA:C	9:I:81:ILE:HD12	2.19	0.63
1:A:372:C:N3	1:A:387:U:H5	1.97	0.63
1:A:201:C:C3'	1:A:202:U:H5''	2.29	0.63
2:B:21:ARG:NE	2:B:21:ARG:H	1.96	0.63
15:O:33:THR:HG23	15:O:63:ARG:NH1	2.13	0.63
1:A:1481:U:O2'	1:A:1482:G:H5'	1.97	0.63
12:L:84:LEU:CB	12:L:101:VAL:HG21	2.25	0.63
12:L:55:VAL:O	12:L:56:ALA:HB2	1.98	0.63
1:A:1016:A:H2'	1:A:1017:G:O4'	1.99	0.63
7:G:70:LYS:HE2	7:G:100:ALA:CB	2.29	0.63
10:J:9:ARG:HH12	10:J:69:ASN:CB	2.09	0.63
13:M:14:ARG:HH11	13:M:14:ARG:HB3	1.60	0.63
1:A:112:G:H5'	1:A:389:A:H4'	1.78	0.63
1:A:452:A:O2'	1:A:453:A:H8	1.81	0.63
16:P:64:ALA:O	16:P:66:PRO:CD	2.47	0.63
3:C:48:TYR:HD1	3:C:52:LEU:HD22	1.64	0.63
1:A:950:U:H2'	1:A:951:G:H8	1.63	0.63
2:B:60:ASP:C	2:B:62:ALA:N	2.51	0.63
2:B:8:LYS:HD2	2:B:9:GLU:H	1.63	0.63
11:K:66:LEU:HD23	11:K:69:ALA:CB	2.28	0.63
1:A:1057:G:H5'	3:C:155:GLY:HA3	1.81	0.63
2:B:239:VAL:HG12	2:B:240:GLN:H	1.63	0.63
4:D:21:LEU:HD21	4:D:66:ARG:O	1.98	0.63
4:D:96:LEU:N	4:D:96:LEU:HD12	2.14	0.63
3:C:126:ARG:C	3:C:128:PHE:N	2.52	0.63
20:T:30:LYS:NZ	20:T:80:ARG:NH2	2.46	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:80:ILE:CD1	5:E:138:ALA:HB1	2.28	0.63
6:F:91:VAL:HG11	18:R:72:ARG:NH1	2.14	0.63
2:B:129:GLU:HB3	2:B:130:ARG:HD2	1.81	0.63
1:A:731:G:OP1	1:A:766:A:H1'	1.99	0.63
20:T:13:LEU:O	20:T:14:LYS:C	2.37	0.63
1:A:361:G:H2'	1:A:362:G:H5'	1.80	0.63
3:C:104:GLN:HA	3:C:104:GLN:NE2	2.14	0.63
4:D:157:LEU:HB2	4:D:158:ILE:CD1	2.27	0.63
4:D:15:GLU:HG3	4:D:63:LYS:HZ2	1.63	0.63
5:E:51:VAL:HB	5:E:52:PRO:CD	2.25	0.63
7:G:115:ARG:HE	7:G:118:VAL:CG2	2.12	0.63
7:G:138:LYS:HD3	7:G:139:GLU:HG3	1.81	0.63
1:A:371:G:H2'	1:A:372:C:C6	2.34	0.63
16:P:47:ASP:C	16:P:49:LEU:H	2.02	0.63
1:A:695:A:H2	1:A:787:A:C1'	2.11	0.63
3:C:22:TRP:HB3	3:C:59:ARG:HG2	1.81	0.63
1:A:1228:C:H2'	1:A:1229:A:C8	2.32	0.63
13:M:87:TYR:CD1	13:M:90:LEU:HD12	2.34	0.63
1:A:585:G:N3	1:A:879:C:H4'	2.14	0.63
11:K:83:ILE:HG22	11:K:83:ILE:O	1.97	0.63
1:A:811:C:O2'	1:A:901:A:N1	2.30	0.63
1:A:542:G:OP1	4:D:10:ARG:NH2	2.31	0.63
1:A:621:A:C5	1:A:622:A:N7	2.66	0.63
3:C:116:VAL:CA	3:C:119:ARG:HB3	2.29	0.63
9:I:85:LEU:HB3	9:I:92:TYR:HD1	1.62	0.63
13:M:48:LEU:HD22	13:M:53:VAL:CG2	2.29	0.63
14:N:40:CYS:HB3	14:N:43:CYS:SG	2.38	0.63
8:H:5:PRO:O	8:H:8:ASP:N	2.31	0.63
1:A:455:C:O2'	1:A:456:C:H5'	1.99	0.63
13:M:74:VAL:O	13:M:76:ALA:N	2.32	0.63
18:R:70:ILE:HG22	18:R:74:ARG:HD2	1.79	0.63
4:D:190:ASP:O	4:D:191:ARG:C	2.36	0.62
3:C:118:GLN:O	3:C:121:ALA:HB3	1.99	0.62
3:C:21:ARG:HD3	3:C:57:ILE:O	1.99	0.62
7:G:22:LEU:O	7:G:25:ALA:HB3	1.98	0.62
1:A:356:A:H2'	1:A:357:G:H8	1.63	0.62
5:E:105:VAL:HG21	5:E:128:PRO:HA	1.80	0.62
2:B:140:HIS:O	2:B:144:ARG:HB3	1.99	0.62
2:B:61:LEU:CD2	2:B:66:GLY:HA3	2.28	0.62
11:K:67:ASP:C	11:K:69:ALA:H	2.02	0.62
13:M:88:ARG:HA	13:M:98:VAL:CG1	2.29	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:10:ARG:HG2	4:D:11:LEU:H	1.61	0.62
3:C:10:PHE:CE2	3:C:178:LEU:HB2	2.34	0.62
9:I:108:VAL:CG1	9:I:109:VAL:H	2.04	0.62
9:I:10:ARG:NE	9:I:11:LYS:HB2	2.14	0.62
10:J:47:PHE:CE2	14:N:37:PHE:HZ	2.17	0.62
1:A:386:C:C2'	1:A:387:U:H5'	2.29	0.62
1:A:589:C:O2'	1:A:590:C:H5'	1.99	0.62
8:H:111:ILE:HD12	8:H:135:CYS:SG	2.38	0.62
1:A:877:C:H5''	8:H:88:LYS:HD3	1.80	0.62
11:K:33:THR:CA	11:K:39:PRO:HA	2.27	0.62
1:A:637:G:H2'	1:A:638:G:O4'	1.99	0.62
1:A:29:G:H1	1:A:554:C:H42	1.47	0.62
1:A:1004:A:H5''	1:A:1025:U:C5	2.34	0.62
4:D:62:GLN:HA	4:D:62:GLN:NE2	2.01	0.62
9:I:17:VAL:HG13	9:I:63:ILE:HG12	1.81	0.62
9:I:28:VAL:HG22	9:I:63:ILE:HG22	1.82	0.62
10:J:3:LYS:N	10:J:76:ASN:H	1.98	0.62
13:M:25:ILE:HD11	13:M:66:LEU:HD21	1.82	0.62
19:S:27:GLU:HB3	19:S:47:HIS:CD2	2.34	0.62
21:V:10:ARG:NH1	21:V:10:ARG:HG2	2.14	0.62
3:C:64:VAL:HG21	3:C:97:LYS:HB2	1.82	0.62
15:O:75:PRO:O	15:O:78:TYR:HB3	2.00	0.62
5:E:137:GLU:O	5:E:138:ALA:C	2.38	0.62
2:B:16:HIS:NE2	2:B:214:ILE:HD11	2.13	0.62
2:B:208:ILE:C	2:B:210:SER:H	2.02	0.62
6:F:71:ARG:O	6:F:73:ASN:N	2.31	0.62
1:A:1520:G:H2'	1:A:1521:G:C8	2.34	0.62
1:A:667:G:O2'	15:O:49:ASP:HA	1.99	0.62
12:L:7:ILE:O	12:L:10:LEU:HB2	1.98	0.62
1:A:1237:C:O2'	1:A:1335:C:H5'	2.00	0.62
7:G:24:THR:HG22	7:G:28:ASN:HD21	1.64	0.62
9:I:80:GLY:HA2	9:I:83:ARG:CB	2.26	0.62
10:J:46:ARG:HG2	10:J:46:ARG:HH11	1.64	0.62
1:A:370:C:O2'	1:A:371:G:H5'	1.98	0.62
16:P:41:PRO:O	16:P:43:LYS:HG3	1.97	0.62
2:B:131:PRO:O	2:B:133:LYS:N	2.32	0.62
1:A:740:U:O2'	1:A:741:G:H5'	1.99	0.62
2:B:175:ARG:HH11	2:B:175:ARG:HB2	1.61	0.62
1:A:1225:A:H5'	13:M:103:THR:CG2	2.29	0.62
1:A:1013:G:H1'	1:A:1016:A:H62	1.64	0.62
3:C:203:PHE:CZ	3:C:206:GLU:HB2	2.35	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:51:VAL:O	5:E:54:ALA:HB3	2.00	0.62
14:N:46:GLU:CD	14:N:47:LEU:HD23	2.20	0.62
16:P:48:TRP:CE3	16:P:49:LEU:HB2	2.35	0.62
5:E:111:GLU:O	5:E:112:LEU:C	2.37	0.62
1:A:728:A:O2'	1:A:729:A:H5'	1.98	0.62
15:O:32:LEU:HD22	15:O:63:ARG:HD3	1.82	0.62
2:B:178:ARG:HH11	2:B:178:ARG:HG3	1.63	0.62
1:A:1050:G:N2	1:A:1209:C:H1'	2.12	0.62
1:A:1337:G:H5''	1:A:1338:G:OP1	1.99	0.62
1:A:1168:A:H2'	1:A:1169:A:C8	2.34	0.62
1:A:1081:G:H2'	1:A:1082:G:O4'	1.99	0.62
4:D:134:ASP:O	4:D:136:PRO:N	2.33	0.62
4:D:33:MET:O	4:D:37:PRO:HG3	2.00	0.62
12:L:84:LEU:HB3	12:L:101:VAL:HG22	1.78	0.62
1:A:1237:C:H3'	1:A:1238:A:H5'	1.81	0.62
7:G:14:PRO:HA	7:G:21:VAL:HG12	1.80	0.62
10:J:19:SER:O	10:J:91:PRO:HG3	1.99	0.62
1:A:106:C:O2	1:A:379:C:H4'	2.00	0.62
1:A:185:A:H2'	1:A:186:C:H6	1.62	0.62
1:A:369:C:O2'	1:A:370:C:H5'	2.00	0.62
1:A:795:C:H5''	1:A:796:C:OP2	2.00	0.62
5:E:79:GLU:O	5:E:80:ILE:HG23	1.99	0.62
5:E:91:LEU:HD12	5:E:138:ALA:HB1	1.80	0.62
1:A:1102:A:H2'	1:A:1103:C:H6	1.64	0.62
6:F:30:LEU:HD23	6:F:35:ALA:HB3	1.81	0.62
1:A:148:G:H2'	1:A:149:A:C8	2.32	0.62
1:A:1207:G:H2'	1:A:1208:C:C6	2.34	0.62
20:T:96:GLY:O	20:T:97:ALA:HB3	1.99	0.62
4:D:10:ARG:NH1	4:D:10:ARG:HG3	1.98	0.62
4:D:176:LEU:HD23	4:D:176:LEU:H	1.64	0.62
4:D:187:ARG:HE	4:D:188:LEU:CD1	2.11	0.62
1:A:1189:C:H5''	3:C:5:ILE:HG21	1.80	0.62
9:I:19:LEU:HD23	9:I:21:PRO:HD3	1.82	0.62
10:J:90:LEU:N	10:J:91:PRO:HD2	2.15	0.62
13:M:34:LEU:HD12	13:M:39:ILE:O	1.99	0.62
13:M:5:ALA:HB3	13:M:22:ILE:HD13	1.82	0.62
1:A:106:C:C2'	1:A:107:G:H5'	2.29	0.62
1:A:372:C:H1'	1:A:373:A:OP2	1.99	0.62
8:H:4:ASP:OD2	8:H:85:ARG:NH1	2.33	0.62
2:B:112:VAL:HG11	2:B:153:ARG:HA	1.82	0.62
2:B:187:LEU:HD22	2:B:201:ILE:O	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:44:LEU:HD12	18:R:48:GLY:O	2.00	0.62
1:A:1210:C:H2'	1:A:1211:U:C4'	2.29	0.62
12:L:6:THR:O	12:L:7:ILE:C	2.36	0.62
20:T:11:SER:O	20:T:13:LEU:HG	1.99	0.62
17:Q:51:TYR:CG	17:Q:73:VAL:HG11	2.34	0.62
1:A:1494:G:C2'	1:A:1495:U:H5'	2.29	0.62
8:H:136:GLU:O	8:H:136:GLU:HG2	1.99	0.62
1:A:429:U:O4'	1:A:430:A:H5"	2.00	0.62
12:L:57:LYS:HE2	12:L:67:THR:HG22	1.82	0.62
1:A:1314:C:H2'	1:A:1315:U:C6	2.35	0.62
1:A:945:G:N2	1:A:1334:G:H4'	2.13	0.62
3:C:205:GLY:O	3:C:206:GLU:HB3	2.00	0.62
10:J:7:LYS:HG2	10:J:71:LEU:HD21	1.81	0.62
10:J:78:ASN:O	10:J:80:LYS:N	2.32	0.62
1:A:549:C:H2'	1:A:550:G:H8	1.65	0.62
8:H:17:THR:CG2	8:H:63:LEU:HD23	2.29	0.62
1:A:836:G:H2'	1:A:837:G:H8	1.65	0.62
18:R:64:ARG:O	18:R:67:ALA:HB3	1.99	0.62
1:A:551:U:H2'	1:A:552:U:C6	2.34	0.62
1:A:1323:G:H2'	1:A:1324:A:C8	2.34	0.62
4:D:79:PHE:CD2	4:D:79:PHE:C	2.73	0.62
12:L:39:VAL:HG12	12:L:41:ARG:H	1.65	0.62
1:A:287:U:C2'	1:A:288:A:H5'	2.29	0.62
1:A:1061:G:O4'	10:J:56:HIS:ND1	2.32	0.62
1:A:1281:U:H5'	1:A:1282:C:C5	2.34	0.62
10:J:15:THR:O	10:J:19:SER:N	2.23	0.62
14:N:24:CYS:O	14:N:28:GLY:HA2	2.00	0.62
19:S:15:LEU:HD13	19:S:44:MET:CE	2.30	0.62
1:A:399:G:H2'	1:A:400:C:C6	2.35	0.62
2:B:112:VAL:HG13	2:B:153:ARG:HG2	1.81	0.62
13:M:89:GLY:O	13:M:93:ARG:HG3	1.99	0.62
3:C:156:ARG:HH21	3:C:161:GLU:CA	2.10	0.62
11:K:18:ARG:HD2	11:K:34:ASP:O	1.99	0.62
1:A:56:U:H2'	1:A:57:G:H8	1.62	0.62
1:A:1088:G:H2'	1:A:1089:G:C8	2.34	0.62
7:G:141:VAL:O	7:G:142:GLU:C	2.38	0.62
7:G:46:ALA:HB1	7:G:121:ALA:H	1.62	0.62
9:I:46:ALA:HB1	9:I:81:ILE:CD1	2.30	0.62
10:J:8:LEU:HD12	10:J:70:ARG:O	1.99	0.62
13:M:14:ARG:HH11	13:M:14:ARG:CB	2.12	0.62
19:S:22:LEU:HD22	19:S:28:LYS:HB2	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1269:A:H5'	21:V:18:TYR:O	1.99	0.62
20:T:51:GLU:O	20:T:55:ILE:HG12	2.00	0.62
11:K:89:ALA:O	11:K:91:ARG:N	2.33	0.62
1:A:573:A:H2'	1:A:574:A:O4'	2.00	0.62
1:A:1424:C:H42	1:A:1476:G:H1	1.47	0.62
1:A:325:A:N6	1:A:326:G:N1	2.48	0.62
4:D:130:GLY:C	4:D:132:ARG:H	2.04	0.61
12:L:56:ALA:HB2	12:L:70:ILE:HD11	1.81	0.61
7:G:135:VAL:O	7:G:139:GLU:HG3	2.00	0.61
7:G:17:VAL:CG1	7:G:18:TYR:H	2.10	0.61
1:A:1150:U:H4'	10:J:41:PRO:CD	2.29	0.61
19:S:15:LEU:HD11	19:S:38:SER:OG	2.00	0.61
1:A:273:A:O2'	1:A:274:A:H5'	2.00	0.61
2:B:92:TYR:CD1	2:B:151:GLY:HA3	2.34	0.61
13:M:78:ILE:N	13:M:78:ILE:HD12	2.14	0.61
13:M:92:HIS:HA	13:M:110:ARG:NH2	2.14	0.61
1:A:1311:G:N7	19:S:2:PRO:HD2	2.15	0.61
12:L:11:VAL:HG13	17:Q:29:HIS:CD2	2.31	0.61
1:A:745:C:O2'	1:A:746:A:H5'	2.00	0.61
1:A:1374:A:C4	1:A:1375:A:C8	2.88	0.61
11:K:84:VAL:HG22	11:K:110:ASP:HA	1.81	0.61
1:A:411:A:H2'	1:A:413:G:C1'	2.30	0.61
4:D:120:LEU:HD22	4:D:126:ILE:HD11	1.82	0.61
4:D:4:TYR:O	4:D:5:ILE:HB	2.01	0.61
7:G:72:ARG:HE	7:G:142:GLU:HB3	1.64	0.61
1:A:451:A:H8	1:A:451:A:O5'	1.83	0.61
20:T:53:LEU:HD11	20:T:101:GLY:O	1.99	0.61
5:E:71:LEU:HD13	5:E:114:GLY:O	2.00	0.61
8:H:44:PHE:O	8:H:45:ILE:CG2	2.40	0.61
2:B:54:THR:HA	2:B:199:TYR:HB3	1.82	0.61
1:A:1514:C:H2'	1:A:1515:C:C6	2.35	0.61
1:A:102:G:H2'	1:A:103:C:H6	1.65	0.61
1:A:1463:C:O2'	1:A:1464:G:H5'	1.99	0.61
2:B:117:GLU:HG2	2:B:117:GLU:O	2.01	0.61
1:A:529:G:H2'	1:A:530:G:H5'	1.82	0.61
4:D:124:GLY:HA3	4:D:132:ARG:HH21	1.64	0.61
4:D:54:TYR:HE1	4:D:206:PHE:HE1	1.46	0.61
12:L:24:VAL:C	12:L:26:ALA:H	2.02	0.61
1:A:44:G:OP2	16:P:12:LYS:HB2	2.00	0.61
20:T:40:ALA:CA	20:T:55:ILE:HD11	2.25	0.61
5:E:139:LEU:HA	5:E:142:LEU:CD1	2.31	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:22:LYS:HE3	2:B:40:HIS:NE2	2.15	0.61
1:A:421:U:H3'	1:A:422:C:H5'	1.81	0.61
15:O:20:GLY:O	15:O:22:THR:HG22	2.00	0.61
9:I:33:PHE:CD2	9:I:34:ASN:ND2	2.67	0.61
1:A:344:A:H5''	1:A:345:C:C5	2.36	0.61
4:D:101:LEU:CB	4:D:138:TYR:HB3	2.30	0.61
4:D:176:LEU:HA	4:D:183:GLY:HA2	1.82	0.61
1:A:1128:C:O2'	1:A:1129:C:H5''	2.00	0.61
9:I:103:THR:HG22	9:I:104:ARG:O	2.00	0.61
9:I:47:LEU:C	9:I:49:PRO:HD2	2.20	0.61
13:M:10:PRO:HB2	13:M:18:ALA:CB	2.27	0.61
19:S:22:LEU:O	19:S:25:LYS:HD2	1.99	0.61
16:P:74:LEU:HD22	16:P:79:VAL:HG21	1.82	0.61
3:C:87:LEU:O	3:C:91:LEU:N	2.32	0.61
2:B:139:LYS:HD2	2:B:143:GLU:OE2	1.99	0.61
2:B:208:ILE:C	2:B:210:SER:N	2.51	0.61
11:K:67:ASP:O	11:K:71:LYS:HG3	2.01	0.61
1:A:445:G:H2'	1:A:446:G:H8	1.63	0.61
6:F:99:ALA:O	18:R:28:GLU:HA	2.01	0.61
1:A:1465:C:H2'	1:A:1466:C:C6	2.36	0.61
11:K:115:PRO:C	11:K:117:ASN:H	2.02	0.61
1:A:418:C:O2	1:A:418:C:H2'	2.01	0.61
4:D:47:ARG:HE	4:D:49:ARG:HA	1.64	0.61
1:A:292:G:H3'	1:A:293:G:C8	2.36	0.61
1:A:1178:G:N2	1:A:1181:G:OP2	2.33	0.61
1:A:988:G:H2'	1:A:989:C:O4'	2.00	0.61
7:G:46:ALA:CB	7:G:120:ILE:HB	2.30	0.61
13:M:4:ILE:HG23	13:M:57:ARG:HA	1.83	0.61
19:S:22:LEU:CB	19:S:28:LYS:HB2	2.25	0.61
19:S:49:ILE:HG12	19:S:71:LEU:HD22	1.81	0.61
1:A:235:C:H1'	17:Q:61:GLU:OE1	1.99	0.61
1:A:112:G:C2	1:A:113:G:C8	2.88	0.61
20:T:56:MET:CE	20:T:88:VAL:HG11	2.30	0.61
20:T:70:SER:HA	20:T:73:HIS:HD2	1.65	0.61
20:T:30:LYS:HZ3	20:T:80:ARG:HH22	1.48	0.61
2:B:118:LEU:HB3	2:B:142:LEU:CD1	2.31	0.61
15:O:48:LYS:CE	15:O:48:LYS:H	2.13	0.61
1:A:299:G:H2'	1:A:300:A:C8	2.35	0.61
2:B:177:ALA:O	2:B:180:LEU:N	2.32	0.61
1:A:619:U:N3	4:D:135:LEU:HD21	2.16	0.61
12:L:33:ARG:CG	12:L:60:LEU:HD12	2.31	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1015:A:H2'	1:A:1016:A:O4'	2.01	0.61
1:A:1370:G:C2	1:A:1371:G:N7	2.68	0.61
1:A:36:C:H2'	1:A:37:U:C6	2.35	0.61
3:C:88:ARG:HA	3:C:91:LEU:CB	2.28	0.61
2:B:54:THR:HG23	2:B:199:TYR:CB	2.31	0.61
18:R:87:ARG:NH1	18:R:87:ARG:HG3	2.14	0.61
3:C:191:THR:HG23	3:C:194:GLY:N	2.15	0.61
1:A:620:C:C6	4:D:135:LEU:HD13	2.35	0.61
1:A:1201:A:H4'	1:A:1202:G:C5'	2.31	0.61
13:M:48:LEU:HD22	13:M:53:VAL:HG23	1.83	0.61
1:A:367:U:O2	1:A:369:C:C5	2.53	0.61
1:A:695:A:C2	1:A:787:A:H1'	2.35	0.61
11:K:17:GLY:O	11:K:80:VAL:HA	2.00	0.61
6:F:33:TYR:HA	6:F:71:ARG:HH21	1.63	0.61
1:A:927:G:N2	1:A:1391:U:H1'	2.16	0.61
1:A:142:G:O2'	1:A:196:A:N1	2.26	0.61
16:P:50:LYS:HG2	16:P:51:VAL:N	2.16	0.61
16:P:82:GLN:O	16:P:82:GLN:HG2	2.01	0.61
20:T:50:GLU:O	20:T:52:ALA:N	2.34	0.61
8:H:36:LEU:O	8:H:40:ALA:N	2.32	0.61
8:H:5:PRO:O	8:H:6:ILE:C	2.38	0.61
2:B:134:GLU:C	2:B:136:VAL:H	2.03	0.61
2:B:71:VAL:CG2	2:B:164:VAL:HG22	2.31	0.61
1:A:1209:C:H2'	1:A:1209:C:O2	2.01	0.61
1:A:572:A:H5''	1:A:917:G:H4'	1.81	0.61
1:A:93:G:O2'	1:A:95:U:H5'	2.00	0.61
11:K:30:VAL:HG21	11:K:65:ALA:HB2	1.83	0.61
4:D:156:GLU:CG	4:D:157:LEU:N	2.63	0.61
1:A:761:G:H5'	17:Q:102:GLY:HA3	1.82	0.61
3:C:113:ALA:HB3	3:C:184:TYR:O	2.01	0.61
3:C:175:LEU:O	3:C:177:THR:N	2.34	0.61
7:G:111:ARG:HH11	7:G:111:ARG:CB	2.08	0.61
10:J:79:ARG:HB2	10:J:79:ARG:HH11	1.66	0.61
13:M:53:VAL:HA	13:M:56:LEU:HD11	1.83	0.61
1:A:385:C:O2'	1:A:386:C:H5'	2.01	0.61
1:A:375:U:H4'	16:P:17:TYR:HE2	1.65	0.61
16:P:6:LEU:N	16:P:6:LEU:HD12	2.15	0.61
3:C:74:GLY:C	3:C:76:VAL:H	2.03	0.61
3:C:95:THR:HG23	3:C:98:ASN:HA	1.81	0.61
1:A:950:U:H5	13:M:102:ARG:NH2	1.99	0.61
2:B:143:GLU:HA	2:B:146:GLN:OE1	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:265:G:H2'	1:A:267:C:C5	2.36	0.61
6:F:30:LEU:HD23	6:F:30:LEU:C	2.21	0.61
1:A:963:G:H1	1:A:972:C:H42	1.47	0.61
1:A:514:C:N4	1:A:537:G:H1	1.99	0.61
12:L:41:ARG:HH11	12:L:41:ARG:CB	2.08	0.61
3:C:138:VAL:HG11	3:C:170:GLN:HB2	1.83	0.61
1:A:192:U:H5'	20:T:102:GLY:HA2	1.83	0.61
5:E:82:VAL:HG21	5:E:138:ALA:N	2.15	0.61
1:A:665:A:C2	1:A:732:C:C2	2.89	0.61
2:B:132:LYS:C	2:B:134:GLU:H	2.04	0.61
2:B:28:PHE:CE1	2:B:189:ASP:HA	2.35	0.61
6:F:3:ARG:HA	6:F:66:GLU:HG3	1.83	0.61
18:R:43:PHE:CA	18:R:51:LEU:HD12	2.28	0.61
20:T:11:SER:C	20:T:13:LEU:H	2.04	0.61
1:A:1393:U:O2'	1:A:1394:A:H2'	2.00	0.61
1:A:413:G:N3	1:A:413:G:H2'	2.16	0.60
1:A:1128:C:H42	1:A:1143:G:H1	1.49	0.60
14:N:56:VAL:HG13	14:N:57:ARG:N	2.14	0.60
1:A:1424:C:H2'	1:A:1425:U:O4'	2.00	0.60
1:A:1476:G:H2'	1:A:1477:C:C6	2.36	0.60
3:C:118:GLN:O	3:C:122:GLU:HG3	2.00	0.60
10:J:31:GLY:HA3	10:J:76:ASN:O	2.01	0.60
1:A:255:G:N2	1:A:272:C:H1'	2.16	0.60
17:Q:67:LYS:HA	17:Q:70:ARG:NH1	2.16	0.60
15:O:16:ALA:HB2	15:O:21:ASP:O	2.01	0.60
2:B:71:VAL:HG23	2:B:164:VAL:CA	2.31	0.60
14:N:7:ILE:O	14:N:7:ILE:CG2	2.48	0.60
1:A:1425:U:O2'	1:A:1426:C:H5'	2.01	0.60
9:I:31:GLN:HB3	9:I:35:GLU:HB3	1.83	0.60
4:D:151:LYS:H	4:D:151:LYS:HD2	1.66	0.60
1:A:1421:G:H2'	1:A:1422:G:C8	2.37	0.60
12:L:74:GLY:O	12:L:110:VAL:HG13	2.02	0.60
10:J:42:THR:CG2	10:J:68:HIS:HA	2.30	0.60
1:A:1151:A:H5''	10:J:42:THR:N	2.16	0.60
1:A:219:C:C2'	1:A:220:G:H5'	2.30	0.60
1:A:378:G:C2	1:A:386:C:O2	2.55	0.60
16:P:5:ARG:CZ	16:P:22:THR:HG21	2.30	0.60
11:K:89:ALA:O	11:K:90:GLY:C	2.39	0.60
6:F:27:GLN:O	6:F:30:LEU:HB3	2.01	0.60
3:C:5:ILE:HD12	3:C:10:PHE:HB2	1.82	0.60
10:J:36:GLY:O	10:J:38:ILE:HG13	1.99	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:129(A):G:O2'	1:A:130:A:P	2.60	0.60
4:D:76:ARG:HG3	4:D:77:ASN:N	2.15	0.60
1:A:549:C:H2'	1:A:550:G:C8	2.37	0.60
1:A:946:A:C4	1:A:947:G:N7	2.69	0.60
2:B:76:GLN:HG3	2:B:206:ASP:OD2	2.01	0.60
11:K:82:VAL:HG22	11:K:98:LEU:HD12	1.83	0.60
1:A:1494:G:O2'	1:A:1495:U:H5'	2.01	0.60
7:G:75:VAL:HG21	7:G:148:ASN:HD22	1.66	0.60
1:A:1137:C:O2'	1:A:1138:G:H5''	2.01	0.60
4:D:25:ARG:CD	4:D:30:LYS:HB3	2.31	0.60
4:D:201:GLN:NE2	5:E:99:GLY:HA2	2.17	0.60
1:A:1063:C:H3'	1:A:1064:G:H2'	1.83	0.60
1:A:1154:G:H2'	1:A:1155:G:C8	2.31	0.60
9:I:104:ARG:HE	9:I:105:ASP:H	1.49	0.60
9:I:77:ILE:HG22	9:I:81:ILE:CD1	2.31	0.60
19:S:69:HIS:HB3	19:S:73:GLU:OE1	2.01	0.60
1:A:229:U:O2'	1:A:230:G:H5'	2.00	0.60
1:A:230:G:C4	1:A:231:G:C8	2.90	0.60
1:A:463:A:H4'	16:P:82:GLN:HE22	1.66	0.60
20:T:36:LEU:O	20:T:39:LYS:HB3	2.02	0.60
20:T:77:ALA:O	20:T:81:LYS:HG3	2.01	0.60
2:B:55:PHE:HD1	2:B:58:ILE:HD12	1.65	0.60
6:F:22:GLU:O	6:F:24:GLU:N	2.34	0.60
1:A:750:G:H1'	15:O:22:THR:HG23	1.81	0.60
1:A:854:G:H3'	1:A:871:U:O4	2.00	0.60
1:A:486:U:H2'	1:A:487:A:H8	1.65	0.60
11:K:82:VAL:HG12	11:K:83:ILE:N	2.15	0.60
1:A:1137:C:H4'	1:A:1138:G:C2	2.36	0.60
12:L:109:GLY:HA3	12:L:120:TYR:O	2.02	0.60
3:C:135:LYS:HZ3	5:E:52:PRO:HG2	1.66	0.60
13:M:49:THR:CG2	13:M:50:GLU:H	2.14	0.60
19:S:74:PHE:O	19:S:76:PRO:HD3	2.02	0.60
16:P:24:ALA:C	16:P:26:ARG:H	2.03	0.60
1:A:263:A:OP2	20:T:79:ARG:NH1	2.35	0.60
8:H:137:VAL:HG12	8:H:138:TRP:N	2.15	0.60
13:M:84:ILE:O	13:M:84:ILE:HG13	2.00	0.60
1:A:770:C:O2'	1:A:771:G:H5'	2.01	0.60
8:H:126:LYS:C	8:H:128:GLY:H	2.05	0.60
2:B:168:THR:OG1	2:B:192:SER:CA	2.49	0.60
12:L:78:GLN:HG2	12:L:81:SER:OG	2.00	0.60
1:A:944:G:H2'	1:A:945:G:H5''	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:182:ILE:CG2	3:C:183:ASP:N	2.51	0.60
5:E:55:VAL:O	5:E:58:ALA:N	2.29	0.60
1:A:229:U:O2'	16:P:23:ASP:OD2	2.19	0.60
16:P:7:ALA:CB	16:P:28:ARG:O	2.50	0.60
20:T:30:LYS:HZ2	20:T:80:ARG:HH22	1.49	0.60
2:B:102:LEU:O	2:B:105:PHE:HB2	2.01	0.60
8:H:137:VAL:CG1	8:H:138:TRP:N	2.64	0.60
6:F:62:TRP:C	6:F:63:TYR:HD1	2.04	0.60
1:A:153:C:N4	1:A:169:C:N4	2.49	0.60
1:A:180:U:H2'	1:A:181:G:H5'	1.84	0.60
9:I:126:SER:HB2	9:I:127:LYS:NZ	2.17	0.60
1:A:1461:G:H2'	1:A:1462:G:C8	2.36	0.60
1:A:615:C:H2'	1:A:616:G:C5'	2.32	0.60
17:Q:104:LYS:HG3	17:Q:105:ALA:H	1.65	0.60
1:A:1281:U:H5'	1:A:1282:C:H5	1.67	0.60
3:C:139:GLN:HE21	3:C:139:GLN:CA	2.15	0.60
9:I:106:ALA:O	9:I:108:VAL:HG23	2.02	0.60
10:J:61:GLU:OE2	14:N:58:LYS:HD3	2.02	0.60
10:J:8:LEU:CD1	10:J:70:ARG:HB2	2.32	0.60
1:A:260:G:H2'	1:A:261:U:H6	1.67	0.60
18:R:59:SER:HB3	18:R:62:GLU:OE1	2.01	0.60
2:B:44:LEU:N	2:B:44:LEU:HD23	2.06	0.60
2:B:9:GLU:CG	2:B:217:ARG:HH12	2.13	0.60
1:A:575:G:C6	1:A:821:G:N7	2.70	0.60
1:A:23:C:H2'	1:A:24:U:H6	1.67	0.60
1:A:1226:C:H5''	13:M:103:THR:HG1	1.67	0.60
8:H:96:GLY:O	8:H:98:LYS:N	2.35	0.60
4:D:80:GLU:CA	4:D:80:GLU:OE2	2.50	0.60
1:A:1152:A:H5''	10:J:13:HIS:O	2.01	0.60
3:C:12:LEU:HD22	14:N:50:LYS:O	2.02	0.60
9:I:10:ARG:HD3	9:I:105:ASP:HB3	1.84	0.60
9:I:21:PRO:HA	9:I:59:PHE:CA	2.32	0.60
14:N:23:ARG:HA	14:N:29:ARG:O	2.02	0.60
19:S:22:LEU:HB3	19:S:28:LYS:CB	2.27	0.60
1:A:230:G:H2'	1:A:231:G:O4'	2.02	0.60
1:A:44:G:C2	1:A:45:U:H1'	2.36	0.60
20:T:33:ILE:HG13	20:T:62:LEU:HD22	1.84	0.60
2:B:160:ASP:O	2:B:161:ALA:HB2	2.00	0.60
2:B:21:ARG:HH12	2:B:23:ARG:HH22	1.50	0.60
1:A:1046:A:H3'	1:A:1047:G:C8	2.34	0.60
1:A:544:G:C5	1:A:545:C:C5	2.90	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:448:A:H62	1:A:486:U:H3	1.48	0.60
1:A:1403:C:O2'	1:A:1404:C:H5'	2.00	0.60
4:D:36:ARG:HG3	4:D:38:TYR:CZ	2.37	0.60
3:C:190:ARG:CA	3:C:195:VAL:HG22	2.27	0.60
9:I:19:LEU:CD1	9:I:61:ALA:HB2	2.32	0.60
14:N:46:GLU:OE1	14:N:47:LEU:HD23	2.02	0.60
2:B:52:GLU:O	2:B:56:ARG:HG3	2.02	0.60
11:K:15:ALA:HB1	11:K:78:GLN:HB2	1.83	0.60
1:A:1515:C:O2'	1:A:1516:G:H5'	2.01	0.60
11:K:86:GLY:HA2	11:K:112:THR:HG23	1.84	0.60
11:K:104:GLN:HA	11:K:104:GLN:OE1	2.01	0.60
1:A:623:C:H2'	1:A:624:C:C6	2.37	0.59
4:D:206:PHE:HD2	4:D:207:TYR:CE2	2.19	0.59
1:A:760:G:N2	17:Q:104:LYS:N	2.47	0.59
7:G:24:THR:HG22	7:G:28:ASN:ND2	2.17	0.59
1:A:371:G:H21	1:A:374:A:N6	2.00	0.59
1:A:1306:A:H2'	1:A:1307:U:O4'	2.02	0.59
1:A:429:U:H4'	1:A:430:A:O5'	2.01	0.59
1:A:1182:G:O2'	1:A:1183:A:OP2	2.19	0.59
3:C:198:VAL:HG12	3:C:199:LYS:N	2.17	0.59
3:C:39:ILE:HD11	3:C:57:ILE:HD11	1.84	0.59
7:G:22:LEU:HD12	7:G:22:LEU:C	2.22	0.59
7:G:91:VAL:HG12	7:G:92:SER:O	2.02	0.59
9:I:21:PRO:HA	9:I:59:PHE:C	2.23	0.59
13:M:4:ILE:HG22	13:M:5:ALA:N	2.16	0.59
14:N:2:ALA:HA	14:N:27:CYS:O	2.01	0.59
16:P:31:LYS:HG2	16:P:32:TYR:N	2.17	0.59
5:E:91:LEU:HD23	5:E:120:THR:HG22	1.83	0.59
8:H:34:GLU:HA	8:H:34:GLU:OE2	2.02	0.59
8:H:40:ALA:HA	8:H:45:ILE:HG12	1.84	0.59
6:F:30:LEU:HD23	6:F:31:GLU:N	2.16	0.59
17:Q:90:ILE:O	17:Q:93:GLN:N	2.34	0.59
4:D:55:ALA:O	4:D:58:LEU:HB3	2.01	0.59
12:L:46:LYS:HE3	12:L:47:LYS:CE	2.32	0.59
1:A:1184:G:H2'	1:A:1185:G:C8	2.37	0.59
5:E:13:ILE:HD12	5:E:13:ILE:O	2.02	0.59
7:G:60:LYS:HA	7:G:63:LYS:HB2	1.82	0.59
9:I:11:LYS:O	9:I:12:GLU:CB	2.50	0.59
1:A:1130:A:H5''	9:I:20:ARG:CD	2.31	0.59
1:A:1151:A:P	10:J:41:PRO:HA	2.42	0.59
19:S:19:VAL:HG22	19:S:47:HIS:CE1	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:222:U:H2'	1:A:223:U:C5	2.38	0.59
1:A:502:G:H1'	1:A:550:G:H5'	1.84	0.59
1:A:1355:G:O2'	1:A:1356:G:H5'	2.01	0.59
1:A:1436:U:C4	1:A:1437:C:N3	2.70	0.59
1:A:162:A:C4	1:A:163:C:H1'	2.38	0.59
1:A:190:C:H2'	1:A:190(A):C:H6	1.66	0.59
4:D:25:ARG:C	4:D:27:TYR:N	2.56	0.59
4:D:62:GLN:NE2	4:D:65:ARG:HH11	1.94	0.59
1:A:1120:G:O2'	1:A:1121:U:H5'	2.02	0.59
3:C:6:HIS:CD2	3:C:8:ILE:HB	2.36	0.59
7:G:32:ARG:O	7:G:33:ASP:HB2	2.02	0.59
7:G:39:ALA:HA	7:G:42:ILE:CD1	2.33	0.59
16:P:12:LYS:O	16:P:13:HIS:HB2	2.01	0.59
16:P:18:ARG:HD3	16:P:35:LYS:HD3	1.84	0.59
16:P:22:THR:O	16:P:23:ASP:HB2	2.02	0.59
1:A:377:G:OP1	16:P:3:LYS:HD2	2.02	0.59
3:C:61:ALA:C	3:C:63:ASN:H	2.06	0.59
1:A:1520:G:H2'	1:A:1521:G:H8	1.67	0.59
15:O:49:ASP:OD2	15:O:52:SER:HB2	2.02	0.59
1:A:1382:C:H2'	1:A:1383:C:H6	1.67	0.59
5:E:115:VAL:HG12	5:E:116:THR:H	1.67	0.59
1:A:1374:A:H2'	1:A:1375:A:C8	2.38	0.59
2:B:200:ILE:O	2:B:202:PRO:HD3	2.02	0.59
1:A:616:G:O2'	1:A:617:G:H5'	2.03	0.59
4:D:152:SER:HA	4:D:155:LEU:HD12	1.83	0.59
1:A:1184:G:H2'	1:A:1185:G:H8	1.67	0.59
9:I:28:VAL:HA	9:I:63:ILE:O	2.02	0.59
14:N:26:ARG:HG3	14:N:27:CYS:N	2.15	0.59
1:A:130:A:OP1	17:Q:63:ARG:HD2	2.02	0.59
1:A:1101:A:H4'	1:A:1102:A:O5'	2.02	0.59
2:B:142:LEU:O	2:B:146:GLN:HG3	2.01	0.59
11:K:93:GLN:HE22	11:K:96:ARG:HH22	1.50	0.59
1:A:686:U:O2	1:A:687:A:C8	2.56	0.59
1:A:915:A:H2'	1:A:916:G:H5'	1.84	0.59
1:A:447:G:N1	1:A:485:G:H2'	2.17	0.59
4:D:117:ALA:O	4:D:121:VAL:HG23	2.02	0.59
1:A:1201:A:O2'	1:A:1202:G:OP2	2.17	0.59
3:C:121:ALA:HA	3:C:124:ILE:HB	1.84	0.59
7:G:100:ALA:O	7:G:104:LEU:HG	2.02	0.59
7:G:139:GLU:O	7:G:141:VAL:N	2.35	0.59
9:I:88:TYR:CD1	9:I:88:TYR:C	2.76	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:97:LYS:HA	9:I:102:LEU:HD11	1.82	0.59
19:S:31:ILE:HG22	19:S:33:THR:H	1.66	0.59
4:D:73:ARG:O	4:D:77:ASN:HB2	2.03	0.59
5:E:90:VAL:HG23	5:E:90:VAL:O	2.02	0.59
18:R:38:GLU:H	18:R:41:LYS:CE	2.14	0.59
5:E:16:THR:HG21	5:E:27:ARG:HB2	1.85	0.59
17:Q:21:VAL:O	17:Q:41:LYS:HA	2.02	0.59
1:A:248:C:C2'	1:A:249:U:H5'	2.32	0.59
1:A:1118:C:H5'	9:I:104:ARG:CD	2.33	0.59
1:A:1124:G:H2'	1:A:1145:C:N4	2.17	0.59
1:A:1347:G:N7	9:I:107:ARG:HB3	2.17	0.59
3:C:122:GLU:C	3:C:124:ILE:H	2.06	0.59
9:I:16:ARG:CD	9:I:16:ARG:H	2.13	0.59
9:I:50:LEU:HA	9:I:85:LEU:HD11	1.85	0.59
9:I:56:LEU:HD23	9:I:57:GLY:N	2.18	0.59
1:A:1021:G:H2'	1:A:1022:G:O4'	2.03	0.59
1:A:1053:G:O2'	1:A:1199:U:H5	1.84	0.59
4:D:191:ARG:HE	4:D:200:GLU:CD	2.06	0.59
4:D:201:GLN:HE22	5:E:99:GLY:HA2	1.65	0.59
12:L:45:PRO:HB2	12:L:49:ASN:O	2.03	0.59
1:A:1240:U:H3'	1:A:1241:G:C5'	2.31	0.59
3:C:203:PHE:HZ	3:C:206:GLU:HB2	1.67	0.59
5:E:52:PRO:O	5:E:55:VAL:HG22	2.01	0.59
9:I:21:PRO:CA	9:I:59:PHE:HA	2.33	0.59
1:A:1014:A:C5'	19:S:14:HIS:HB3	2.32	0.59
16:P:6:LEU:HD21	16:P:73:LEU:CD1	2.33	0.59
20:T:54:LYS:HB2	20:T:100:ILE:CD1	2.33	0.59
2:B:73:THR:CG2	2:B:169:LYS:HE3	2.33	0.59
2:B:10:LEU:O	2:B:12:GLU:N	2.31	0.59
2:B:60:ASP:C	2:B:62:ALA:H	2.06	0.59
6:F:82:ARG:HH11	6:F:82:ARG:HB3	1.66	0.59
1:A:1226:C:H4'	1:A:1227:A:OP1	2.03	0.59
1:A:615:C:O2'	1:A:616:G:H5'	2.03	0.59
4:D:6:GLY:H	4:D:115:ARG:HH22	1.50	0.59
4:D:32:ALA:O	4:D:34:GLU:N	2.36	0.59
4:D:9:CYS:O	4:D:12:CYS:HB2	2.02	0.59
12:L:90:VAL:CG1	12:L:92:ASP:HB2	2.32	0.59
3:C:134:ILE:O	3:C:138:VAL:HG23	2.02	0.59
16:P:67:THR:O	16:P:70:ALA:HB3	2.02	0.59
20:T:62:LEU:O	20:T:62:LEU:HD23	2.03	0.59
3:C:48:TYR:HA	3:C:52:LEU:HB3	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:48:TYR:HB2	3:C:52:LEU:HD13	1.83	0.59
1:A:336:C:H2'	1:A:337:C:H6	1.66	0.59
1:A:1269:A:C2	1:A:1313:U:H1'	2.38	0.59
13:M:24:GLY:C	13:M:25:ILE:HD12	2.24	0.59
14:N:23:ARG:HD3	14:N:28:GLY:O	2.03	0.59
10:J:49:VAL:CG1	14:N:41:ARG:HB2	2.29	0.59
19:S:22:LEU:HD12	19:S:47:HIS:CE1	2.38	0.59
8:H:104:ARG:HG2	8:H:104:ARG:HH11	1.66	0.59
6:F:62:TRP:CH2	6:F:64:GLN:HB2	2.38	0.59
11:K:68:ALA:O	11:K:72:ALA:HB2	2.03	0.59
1:A:922:G:H1	1:A:1395:C:N4	2.00	0.59
1:A:956:U:C2'	1:A:957:U:H5'	2.33	0.59
1:A:1003(A):G:H21	1:A:1038:C:H1'	1.67	0.59
1:A:838:G:C2'	1:A:839:U:H5''	2.33	0.59
1:A:744:C:O2'	1:A:745:C:H5'	2.02	0.59
3:C:79:ARG:N	3:C:79:ARG:HD3	2.18	0.59
2:B:181:PHE:CD2	8:H:70:GLN:HB3	2.38	0.59
3:C:94:LEU:C	3:C:94:LEU:HD23	2.23	0.59
1:A:587:G:H8	1:A:587:G:O5'	1.86	0.59
12:L:70:ILE:CD1	12:L:77:LEU:HD12	2.33	0.58
1:A:1240:U:H1'	7:G:38:LEU:HD11	1.85	0.58
1:A:390:C:H4'	16:P:28:ARG:NH2	2.18	0.58
16:P:82:GLN:NE2	16:P:82:GLN:N	2.42	0.58
1:A:191:G:H1'	20:T:105:SER:HB3	1.85	0.58
20:T:44:ALA:O	20:T:47:GLY:N	2.36	0.58
3:C:65:ALA:N	3:C:99:VAL:HB	2.18	0.58
5:E:105:VAL:CG1	5:E:131:ILE:HG22	2.33	0.58
8:H:82:HIS:ND1	8:H:138:TRP:NE1	2.51	0.58
13:M:102:ARG:NH1	13:M:105:THR:OG1	2.36	0.58
2:B:60:ASP:OD1	2:B:61:LEU:N	2.36	0.58
5:E:12:LEU:N	5:E:12:LEU:CD1	2.66	0.58
1:A:1019:C:O2'	1:A:1020:U:H5'	2.03	0.58
1:A:687:A:O2'	1:A:688:G:OP2	2.18	0.58
1:A:147:G:N2	1:A:148:G:C4	2.71	0.58
1:A:180:U:O2'	1:A:181:G:H5'	2.04	0.58
7:G:11:GLN:NE2	7:G:11:GLN:HA	2.18	0.58
4:D:22:LYS:CB	4:D:26:CYS:SG	2.76	0.58
1:A:243:A:C2	1:A:246:A:C8	2.90	0.58
1:A:281:G:O2'	1:A:282:A:P	2.61	0.58
1:A:1189:C:C2'	1:A:1190:G:H5'	2.33	0.58
3:C:137:ALA:N	3:C:140:ARG:NH1	2.51	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:33:ILE:HD11	20:T:63:ILE:CA	2.23	0.58
2:B:96:ARG:HA	2:B:96:ARG:HE	1.68	0.58
1:A:1518:A:OP2	1:A:1518:A:O4'	2.21	0.58
18:R:43:PHE:O	18:R:44:LEU:HD22	2.03	0.58
1:A:1214:C:H5''	1:A:1215:G:OP2	2.03	0.58
1:A:168:G:C2'	1:A:169:C:H5'	2.32	0.58
1:A:915:A:C2'	1:A:916:G:H5'	2.33	0.58
2:B:25:ASN:HD21	2:B:27:LYS:HG3	1.68	0.58
1:A:610:G:H2'	1:A:611:A:H8	1.66	0.58
1:A:1319:A:N6	1:A:1361:G:H21	1.98	0.58
1:A:836:G:C6	1:A:851:G:C6	2.91	0.58
9:I:111:ARG:NH1	9:I:111:ARG:HG3	2.17	0.58
1:A:763:G:H2'	1:A:764:C:H6	1.68	0.58
1:A:193:C:H2'	1:A:194:C:H6	1.68	0.58
3:C:21:ARG:NH2	3:C:56:ASP:OD2	2.36	0.58
3:C:102:ASN:N	3:C:102:ASN:HD22	2.00	0.58
15:O:11:VAL:HA	15:O:14:GLU:HB3	1.85	0.58
2:B:19:HIS:N	2:B:39:ILE:HG21	2.18	0.58
1:A:754:C:O5'	15:O:72:ARG:NH2	2.36	0.58
1:A:328:C:C2'	1:A:328:C:O2	2.48	0.58
5:E:19:MET:SD	5:E:24:ARG:HD2	2.42	0.58
19:S:80:TYR:CG	19:S:81:ARG:N	2.67	0.58
1:A:757:U:H2'	1:A:758:G:O4'	2.02	0.58
4:D:206:PHE:CD2	4:D:207:TYR:CE2	2.91	0.58
12:L:58:VAL:HG21	12:L:83:VAL:HG11	1.84	0.58
3:C:108:ASN:CG	3:C:111:LEU:HD12	2.23	0.58
10:J:71:LEU:HD13	10:J:72:VAL:H	1.68	0.58
16:P:10:GLY:HA2	16:P:16:HIS:HB2	1.85	0.58
6:F:64:GLN:HG2	6:F:64:GLN:O	2.03	0.58
2:B:210:SER:C	2:B:212:GLN:H	2.06	0.58
2:B:44:LEU:HA	2:B:47:THR:CB	2.33	0.58
2:B:82:ARG:CA	2:B:92:TYR:HE2	2.13	0.58
1:A:1407:C:H2'	1:A:1408:A:H8	1.66	0.58
15:O:48:LYS:NZ	15:O:48:LYS:HB2	2.18	0.58
1:A:1436:U:C5	1:A:1437:C:N3	2.71	0.58
1:A:996:A:H2'	1:A:997:U:C6	2.37	0.58
1:A:438:G:N2	1:A:495:U:H3'	2.18	0.58
4:D:52:SER:O	4:D:56:VAL:HG23	2.03	0.58
1:A:1067:A:N3	1:A:1068:G:H1'	2.18	0.58
9:I:114:TYR:O	9:I:116:LYS:HG2	2.04	0.58
9:I:48:GLU:HA	9:I:51:ARG:NE	2.15	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:39:TYR:CE2	16:P:41:PRO:HG3	2.33	0.58
2:B:217:ARG:HA	2:B:220:ASP:OD2	2.02	0.58
1:A:685:G:C2	1:A:686:U:C5	2.92	0.58
1:A:1360:A:H3'	1:A:1361:G:N7	2.18	0.58
1:A:976:G:N2	1:A:1361(A):C:H2'	2.18	0.58
3:C:167:TRP:O	3:C:168:ALA:CB	2.52	0.58
1:A:681:C:H2'	1:A:682:G:H8	1.69	0.58
12:L:24:VAL:HG13	12:L:98:TYR:HE2	1.67	0.58
1:A:1258:G:H1	1:A:1277:C:N4	2.02	0.58
1:A:1367:C:P	9:I:112:LYS:HZ1	2.26	0.58
3:C:10:PHE:CD2	3:C:178:LEU:HD13	2.39	0.58
7:G:67:GLU:HA	7:G:70:LYS:HD2	1.84	0.58
21:V:10:ARG:H	21:V:10:ARG:CD	2.16	0.58
1:A:357:G:C2	1:A:358:U:C6	2.92	0.58
16:P:50:LYS:HG2	16:P:51:VAL:H	1.66	0.58
20:T:30:LYS:HZ2	20:T:80:ARG:NH2	2.01	0.58
5:E:78:HIS:ND1	8:H:104:ARG:CD	2.62	0.58
11:K:47:VAL:O	11:K:48:ILE:C	2.40	0.58
11:K:25:TYR:CE2	11:K:88:GLY:HA2	2.39	0.58
13:M:73:GLU:O	13:M:76:ALA:HB3	2.02	0.58
13:M:78:ILE:CD1	13:M:78:ILE:H	2.16	0.58
6:F:4:TYR:CZ	6:F:72:VAL:HG21	2.39	0.58
10:J:98:ILE:H	10:J:98:ILE:CD1	2.10	0.58
1:A:1489:G:H2'	1:A:1490:C:C6	2.38	0.58
1:A:1226:C:N4	13:M:104:ARG:HG3	2.18	0.58
1:A:1437:C:H6	1:A:1438:G:C8	2.20	0.58
20:T:69:GLY:C	20:T:71:THR:H	2.07	0.58
3:C:191:THR:C	3:C:193:TYR:H	2.06	0.58
1:A:410:G:OP2	4:D:25:ARG:HD2	2.03	0.58
1:A:58:C:O2'	1:A:59:A:H5'	2.04	0.58
1:A:1098:C:O2'	1:A:1099:G:H5'	2.03	0.58
3:C:10:PHE:CE1	3:C:178:LEU:HD22	2.38	0.58
3:C:203:PHE:O	3:C:204:LEU:HG	2.04	0.58
9:I:85:LEU:HB3	9:I:92:TYR:CD1	2.39	0.58
16:P:42:ARG:O	16:P:43:LYS:HD2	2.03	0.58
2:B:115:LEU:HD22	2:B:153:ARG:HE	1.67	0.58
5:E:11:ILE:HD11	5:E:33:VAL:CG2	2.31	0.58
1:A:580:U:H1'	15:O:57:LEU:HD23	1.86	0.58
1:A:664:G:H22	1:A:741:G:H1	1.52	0.58
1:A:840:C:H3'	1:A:840:C:OP2	2.03	0.58
1:A:1404:C:H1'	1:A:1499:A:C2	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:826:C:H2'	1:A:827:U:H6	1.68	0.58
3:C:166:GLU:HA	3:C:166:GLU:OE2	2.03	0.58
4:D:127:THR:HG1	4:D:130:GLY:C	2.07	0.58
1:A:1241:G:H2'	1:A:1242:C:H6	1.68	0.58
1:A:930:C:H2'	1:A:931:C:H5'	1.85	0.58
10:J:4:ILE:HD12	10:J:4:ILE:N	2.19	0.58
1:A:260:G:H2'	1:A:261:U:C6	2.38	0.58
16:P:24:ALA:C	16:P:26:ARG:N	2.57	0.58
1:A:1049:U:O2'	1:A:1050:G:OP2	2.20	0.58
17:Q:81:ARG:HG3	17:Q:81:ARG:O	2.03	0.58
1:A:346:G:C2'	1:A:347:G:H5'	2.33	0.58
1:A:1044:A:H2'	1:A:1045:C:O4'	2.04	0.58
8:H:54:ASP:C	8:H:56:LYS:H	2.07	0.58
1:A:539:A:H2'	1:A:540:G:C8	2.39	0.58
4:D:108:LEU:HD22	4:D:176:LEU:HB3	1.86	0.58
1:A:1191:A:C4	1:A:1192:C:H5	2.21	0.58
1:A:930:C:O2'	1:A:931:C:H5'	2.02	0.58
7:G:65:ALA:CB	7:G:128:ALA:HA	2.24	0.58
7:G:15:ASP:C	7:G:17:VAL:H	2.06	0.58
9:I:84:ALA:O	9:I:86:VAL:N	2.37	0.58
10:J:50:ILE:N	10:J:60:ARG:HG3	2.18	0.58
10:J:85:LEU:N	10:J:88:LEU:HD12	2.19	0.58
16:P:4:ILE:HG12	16:P:21:VAL:HG22	1.86	0.58
20:T:50:GLU:O	20:T:51:GLU:C	2.40	0.58
8:H:17:THR:HG22	8:H:63:LEU:HD23	1.83	0.58
1:A:948:C:O2'	1:A:949:A:H5'	2.03	0.58
1:A:721:G:C6	1:A:733:A:C2	2.91	0.58
20:T:13:LEU:HD12	20:T:13:LEU:C	2.23	0.58
1:A:21:G:H2'	1:A:22:G:H8	1.69	0.58
17:Q:9:VAL:CG1	17:Q:10:VAL:N	2.66	0.58
1:A:1001:A:O2'	1:A:1002:G:H5'	2.02	0.58
1:A:16:A:O2'	1:A:17:U:H5'	2.04	0.58
11:K:30:VAL:HG21	11:K:65:ALA:CA	2.34	0.58
1:A:1451:A:O2'	1:A:1452:C:OP1	2.21	0.58
1:A:1376:U:H2'	1:A:1377:A:C8	2.39	0.58
5:E:95:ALA:HB1	5:E:96:PRO:CD	2.34	0.58
4:D:152:SER:CA	4:D:155:LEU:HD12	2.33	0.58
4:D:5:ILE:HA	4:D:115:ARG:NH2	2.19	0.58
1:A:1185:G:O2'	1:A:1186:G:H5'	2.04	0.58
1:A:1187:G:H2'	1:A:1188:A:C8	2.39	0.58
1:A:1347:G:H1'	1:A:1348:U:H5	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:116:ALA:HA	7:G:119:ARG:NH2	2.19	0.58
9:I:43:ALA:CA	9:I:74:ILE:HD13	2.33	0.58
9:I:53:VAL:HG21	9:I:85:LEU:CD1	2.32	0.58
10:J:65:LEU:HD23	10:J:66:ARG:N	2.19	0.58
19:S:22:LEU:HD11	19:S:31:ILE:HD11	1.84	0.58
16:P:5:ARG:C	16:P:6:LEU:HD12	2.24	0.58
1:A:502:G:C2	1:A:503:C:C2	2.92	0.58
8:H:104:ARG:C	8:H:106:GLY:H	2.06	0.58
11:K:93:GLN:NE2	11:K:96:ARG:HH22	2.02	0.58
1:A:7:G:H5'	1:A:298:A:C5'	2.34	0.58
1:A:858:G:C2'	1:A:859:A:H5''	2.34	0.58
1:A:1028:C:H2'	1:A:1029:C:O4'	2.04	0.58
1:A:361:G:C2'	1:A:362:G:H5'	2.33	0.58
1:A:1465:C:H2'	1:A:1466:C:O4'	2.04	0.58
1:A:1470:G:O2'	1:A:1471:G:H5'	2.04	0.58
1:A:509:A:H4'	1:A:510:A:OP1	2.03	0.58
1:A:1056:U:H5'	3:C:163:ALA:CB	2.34	0.58
12:L:84:LEU:O	12:L:101:VAL:HG13	2.04	0.57
1:A:989:C:O2'	1:A:990:C:H5'	2.04	0.57
7:G:91:VAL:HG12	7:G:92:SER:N	2.16	0.57
2:B:152:PHE:O	2:B:152:PHE:CD2	2.56	0.57
6:F:2:ARG:C	6:F:66:GLU:HG3	2.24	0.57
1:A:444:C:H42	1:A:490:G:H1	1.50	0.57
1:A:102:G:N2	1:A:171:A:H2	2.01	0.57
15:O:41:GLU:HA	15:O:44:LYS:HG2	1.86	0.57
1:A:496:A:H4'	1:A:497:A:OP1	2.02	0.57
4:D:16:GLY:O	4:D:33:MET:HE1	2.03	0.57
1:A:1301:U:O2	1:A:1301:U:H2'	2.05	0.57
7:G:134:ALA:O	7:G:136:LYS:N	2.37	0.57
1:A:1350:A:OP2	9:I:118:LYS:HD3	2.03	0.57
1:A:1151:A:H5''	10:J:42:THR:H	1.67	0.57
19:S:5:LEU:HD12	19:S:5:LEU:N	2.20	0.57
3:C:67:THR:HG22	3:C:67:THR:O	2.05	0.57
1:A:935:A:O2'	1:A:936:C:H5'	2.05	0.57
1:A:135:C:C2	16:P:1:MET:HB2	2.38	0.57
1:A:1160:G:O2'	1:A:1161:C:H5'	2.04	0.57
4:D:21:LEU:HD11	4:D:67:ILE:HA	1.85	0.57
4:D:36:ARG:N	4:D:37:PRO:CD	2.63	0.57
1:A:52:G:O2'	1:A:53:A:H5'	2.04	0.57
3:C:147:LYS:HD3	3:C:203:PHE:CE2	2.39	0.57
3:C:18:TRP:HZ2	14:N:56:VAL:O	1.88	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1291:G:H5''	7:G:41:ARG:HH22	1.70	0.57
9:I:118:LYS:NZ	9:I:118:LYS:HB3	2.20	0.57
9:I:23:ASN:H	9:I:60:ASP:H	1.52	0.57
19:S:74:PHE:N	19:S:74:PHE:CD1	2.71	0.57
1:A:390:C:C3'	16:P:28:ARG:HH22	2.16	0.57
8:H:11:THR:O	8:H:14:ARG:N	2.37	0.57
15:O:61:GLY:O	15:O:63:ARG:N	2.36	0.57
1:A:684:A:O2'	1:A:685:G:H5'	2.04	0.57
9:I:110:GLU:HG2	9:I:111:ARG:H	1.69	0.57
11:K:109:VAL:HG12	18:R:84:LYS:HB3	1.86	0.57
1:A:826:C:H2'	1:A:827:U:C6	2.39	0.57
12:L:115:LYS:O	12:L:117:ARG:HG3	2.04	0.57
1:A:1258:G:H1	1:A:1277:C:H42	1.50	0.57
9:I:42:ARG:HH22	9:I:75:ASP:CG	2.07	0.57
1:A:381:C:H2'	1:A:382:A:O4'	2.04	0.57
2:B:172:ILE:H	2:B:172:ILE:CD1	2.00	0.57
11:K:50:TYR:HB3	11:K:54:ARG:HB2	1.86	0.57
1:A:650:G:O2'	1:A:651:C:H5'	2.04	0.57
5:E:71:LEU:HD22	5:E:114:GLY:O	2.04	0.57
6:F:48:LEU:HB3	6:F:50:TYR:O	2.04	0.57
2:B:12:GLU:C	2:B:14:GLY:H	2.06	0.57
13:M:87:TYR:O	13:M:90:LEU:N	2.38	0.57
1:A:445:G:H2'	1:A:446:G:C8	2.39	0.57
14:N:3:ARG:HD3	14:N:3:ARG:H	1.69	0.57
1:A:977:A:C2'	1:A:978:A:H5''	2.33	0.57
1:A:600:C:OP1	8:H:97:VAL:CG1	2.52	0.57
1:A:1253:G:N1	1:A:1285:A:N6	2.52	0.57
1:A:1328:C:O3'	13:M:28:ALA:HB3	2.03	0.57
1:A:945:G:H21	1:A:1334:G:H4'	1.70	0.57
3:C:21:ARG:CZ	3:C:56:ASP:HB3	2.34	0.57
7:G:100:ALA:HB3	7:G:101:LEU:HD23	1.86	0.57
9:I:102:LEU:CD2	9:I:102:LEU:N	2.61	0.57
10:J:3:LYS:N	10:J:75:ILE:HA	2.19	0.57
16:P:57:ARG:NH1	16:P:79:VAL:O	2.37	0.57
16:P:82:GLN:HE21	16:P:82:GLN:N	2.00	0.57
17:Q:85:VAL:HG12	17:Q:89:LEU:HG	1.86	0.57
1:A:701:C:H5'	1:A:703:G:O4'	2.04	0.57
1:A:967:C:H2'	1:A:968:A:N7	2.20	0.57
1:A:411:A:H2'	1:A:413:G:C8	2.39	0.57
4:D:54:TYR:HE1	4:D:206:PHE:CE1	2.22	0.57
4:D:96:LEU:C	4:D:98:GLU:H	2.08	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:761:G:C4'	17:Q:102:GLY:HA3	2.34	0.57
14:N:33:VAL:HA	14:N:39:LEU:O	2.04	0.57
14:N:5:ALA:O	14:N:6:LEU:HD12	2.04	0.57
16:P:21:VAL:HG12	16:P:33:ILE:HB	1.85	0.57
8:H:134:ILE:CG2	8:H:135:CYS:N	2.58	0.57
8:H:31:PHE:HZ	8:H:134:ILE:CD1	2.17	0.57
18:R:26:LEU:N	18:R:26:LEU:HD12	2.19	0.57
1:A:1435:G:H2'	1:A:1436:U:C6	2.40	0.57
17:Q:75:ARG:CG	17:Q:76:LEU:N	2.67	0.57
18:R:87:ARG:HH11	18:R:87:ARG:HG3	1.69	0.57
7:G:54:THR:HB	7:G:56:GLN:HE22	1.68	0.57
1:A:676:A:H2'	1:A:677:U:C6	2.39	0.57
8:H:69:ARG:HD3	8:H:75:ARG:O	2.04	0.57
1:A:621:A:H2'	1:A:622:A:H8	1.68	0.57
17:Q:96:GLN:CD	17:Q:97:SER:N	2.58	0.57
1:A:1298:C:H4'	1:A:1299:A:C5'	2.28	0.57
15:O:79:ARG:O	15:O:83:GLU:N	2.34	0.57
2:B:16:HIS:O	2:B:17:PHE:O	2.22	0.57
15:O:50:HIS:O	15:O:53:HIS:N	2.32	0.57
1:A:1487:G:C2'	1:A:1488:G:H5'	2.35	0.57
12:L:25:PRO:C	12:L:27:LEU:N	2.54	0.57
1:A:1037:C:O2	1:A:1037:C:H2'	2.03	0.57
18:R:87:ARG:CG	18:R:87:ARG:HH11	2.17	0.57
1:A:1249:C:H3'	1:A:1249:C:H6	1.70	0.57
11:K:81:ASP:OD1	11:K:106:LYS:HB2	2.04	0.57
1:A:84:U:H2'	1:A:88:A:C8	2.39	0.57
7:G:45:ASP:C	7:G:47:CYS:N	2.58	0.57
7:G:67:GLU:HA	7:G:70:LYS:HG3	1.86	0.57
9:I:9:ARG:H	9:I:79:LEU:HD12	1.68	0.57
10:J:20:ALA:C	10:J:22:LYS:H	2.08	0.57
19:S:30:LEU:HD23	19:S:31:ILE:O	2.05	0.57
2:B:46:LYS:O	2:B:49:GLU:N	2.37	0.57
11:K:102:GLY:O	11:K:103:LEU:HD23	2.05	0.57
1:A:894:G:C2	1:A:895:G:C4	2.92	0.57
1:A:632:A:H2'	1:A:633:G:H5'	1.85	0.57
1:A:103:C:P	20:T:17:ARG:NH1	2.78	0.57
1:A:596:C:OP2	1:A:597:G:OP2	2.23	0.57
18:R:86:VAL:O	18:R:87:ARG:CB	2.53	0.57
17:Q:40:LYS:HD3	17:Q:42:TYR:OH	2.05	0.57
1:A:411:A:C2'	1:A:413:G:H1'	2.34	0.57
4:D:63:LYS:O	4:D:67:ILE:HG13	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1347:G:O2'	1:A:1348:U:P	2.63	0.57
7:G:45:ASP:O	7:G:47:CYS:N	2.38	0.57
13:M:57:ARG:O	13:M:61:GLU:HG3	2.04	0.57
1:A:219:C:O2'	1:A:381:C:H5'	2.05	0.57
1:A:384:G:H2'	1:A:385:C:C6	2.40	0.57
3:C:76:VAL:HG23	3:C:77:ILE:N	2.20	0.57
15:O:21:ASP:CG	15:O:24:SER:HB3	2.25	0.57
5:E:82:VAL:HB	5:E:89:ILE:HG22	1.87	0.57
3:C:51:GLY:HA3	3:C:70:VAL:HA	1.87	0.57
2:B:12:GLU:C	2:B:14:GLY:N	2.55	0.57
2:B:187:LEU:HD12	2:B:205:ASP:HA	1.87	0.57
11:K:79:SER:O	11:K:80:VAL:CB	2.53	0.57
13:M:94:ARG:HG2	13:M:94:ARG:HH11	1.68	0.57
1:A:726:C:O2'	1:A:727:G:H5'	2.04	0.57
17:Q:9:VAL:O	17:Q:21:VAL:HA	2.05	0.57
1:A:1374:A:O2'	1:A:1375:A:H5'	2.05	0.57
1:A:190(F):G:OP1	1:A:190(F):G:H8	1.88	0.57
4:D:111:ALA:HA	4:D:161:ASN:ND2	2.20	0.57
4:D:89:THR:O	4:D:90:GLY:C	2.43	0.57
4:D:96:LEU:CD1	4:D:96:LEU:H	2.18	0.57
1:A:1257:U:H4'	1:A:1258:G:OP2	2.03	0.57
3:C:11:ARG:HA	3:C:14:ILE:HD11	1.87	0.57
10:J:40:LEU:HB3	10:J:69:ASN:O	2.05	0.57
19:S:64:GLU:HA	19:S:67:VAL:CG2	2.34	0.57
16:P:39:TYR:HD1	16:P:49:LEU:HD13	1.69	0.57
2:B:219:VAL:HA	2:B:222:ILE:CD1	2.32	0.57
20:T:11:SER:C	20:T:13:LEU:N	2.56	0.57
4:D:46:LYS:HG2	4:D:47:ARG:H	1.70	0.56
1:A:1089:G:O2'	1:A:1090:U:H5'	2.04	0.56
1:A:1346:A:O2'	1:A:1347:G:OP2	2.22	0.56
7:G:115:ARG:HD3	7:G:115:ARG:H	1.70	0.56
10:J:59:SER:O	10:J:61:GLU:N	2.38	0.56
19:S:72:GLY:O	19:S:75:ALA:N	2.34	0.56
1:A:192:U:H5'	20:T:102:GLY:HA3	1.87	0.56
6:F:79:LEU:N	6:F:79:LEU:HD22	2.20	0.56
11:K:66:LEU:O	11:K:69:ALA:HB3	2.05	0.56
1:A:1509:C:C2	1:A:1510:U:C6	2.93	0.56
1:A:318:G:H2'	1:A:319:G:C8	2.40	0.56
12:L:34:ARG:O	12:L:61:THR:HG23	2.05	0.56
7:G:5:ARG:HG2	7:G:7:ALA:H	1.71	0.56
8:H:114:THR:HG22	8:H:130:GLY:O	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:411:A:H2'	1:A:413:G:H1'	1.87	0.56
1:A:428:G:C5'	4:D:7:PRO:HB3	2.35	0.56
4:D:148:VAL:CG2	4:D:181:MET:HB3	2.35	0.56
4:D:173:TRP:CD1	4:D:189:PRO:HD3	2.40	0.56
1:A:1288:A:H2'	1:A:1289:A:C8	2.40	0.56
3:C:184:TYR:CG	3:C:185:GLY:N	2.72	0.56
7:G:66:VAL:CG1	7:G:100:ALA:HB1	2.35	0.56
14:N:24:CYS:O	14:N:28:GLY:N	2.39	0.56
1:A:355:C:H1'	1:A:388:G:N3	2.20	0.56
1:A:862:C:O2'	1:A:863:U:H5'	2.05	0.56
5:E:41:VAL:HG12	5:E:42:GLY:N	2.20	0.56
1:A:734:G:C6	1:A:735:C:C4	2.92	0.56
11:K:16:SER:HA	11:K:79:SER:CB	2.34	0.56
6:F:19:LEU:HD23	6:F:20:ALA:N	2.20	0.56
15:O:56:LEU:O	15:O:59:MET:N	2.38	0.56
7:G:152:ALA:HB1	7:G:155:ARG:CZ	2.35	0.56
1:A:175:C:O2'	1:A:176:C:H5'	2.04	0.56
1:A:1207:G:H2'	1:A:1208:C:H6	1.70	0.56
11:K:30:VAL:HG21	11:K:65:ALA:CB	2.35	0.56
3:C:182:ILE:CG2	3:C:183:ASP:H	2.00	0.56
7:G:113:GLU:HB3	7:G:118:VAL:HG11	1.87	0.56
7:G:71:PRO:HD3	7:G:103:TRP:CZ3	2.35	0.56
10:J:24:VAL:HG22	10:J:72:VAL:HG11	1.88	0.56
10:J:28:ARG:HA	10:J:33:GLN:HA	1.86	0.56
10:J:40:LEU:HD22	10:J:69:ASN:CG	2.25	0.56
13:M:63:THR:HG23	13:M:64:TRP:CD2	2.40	0.56
1:A:1093:A:H2	1:A:1109:C:O2'	1.88	0.56
10:J:9:ARG:CZ	10:J:9:ARG:HB3	2.35	0.56
1:A:1442:G:C5	1:A:1446:A:N1	2.73	0.56
2:B:61:LEU:HD21	2:B:66:GLY:HA3	1.87	0.56
2:B:22:LYS:HA	2:B:40:HIS:HE1	1.69	0.56
11:K:91:ARG:HD3	11:K:92:GLU:OE1	2.05	0.56
6:F:24:GLU:O	6:F:28:ARG:N	2.39	0.56
1:A:1510:U:H1'	1:A:1526:G:N2	2.19	0.56
5:E:15:ARG:O	5:E:16:THR:HG22	2.05	0.56
2:B:25:ASN:ND2	2:B:25:ASN:C	2.54	0.56
1:A:1206:G:H2'	1:A:1207:G:H8	1.70	0.56
1:A:997:U:O2	1:A:1044:A:H2	1.88	0.56
1:A:562:C:H4'	1:A:563:A:H5'	1.86	0.56
1:A:998:G:O2'	1:A:999:C:H5'	2.06	0.56
8:H:48:TYR:C	8:H:48:TYR:CD1	2.78	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:885:G:H1	1:A:912:C:H42	1.53	0.56
1:A:433:C:H2'	1:A:434:U:C6	2.40	0.56
4:D:105:VAL:HG13	4:D:110:PHE:HB2	1.88	0.56
4:D:14:ARG:HB2	4:D:40:PRO:CG	2.36	0.56
1:A:245:C:O2'	1:A:246:A:H5'	2.05	0.56
1:A:1090:U:O2'	1:A:1091:U:H5'	2.05	0.56
1:A:393:A:H2'	1:A:394:G:C8	2.23	0.56
3:C:48:TYR:C	3:C:50:ALA:H	2.09	0.56
3:C:95:THR:CG2	3:C:98:ASN:HA	2.35	0.56
15:O:21:ASP:OD1	15:O:24:SER:HB3	2.05	0.56
5:E:106:PRO:O	5:E:107:ARG:C	2.43	0.56
2:B:115:LEU:HD23	2:B:115:LEU:C	2.25	0.56
1:A:606:G:N2	1:A:631:G:H2'	2.19	0.56
15:O:64:ARG:NH2	15:O:68:ARG:HH22	1.97	0.56
1:A:13:U:C5	1:A:916:G:O6	2.59	0.56
1:A:321:A:H2'	1:A:322:C:H6	1.70	0.56
1:A:969:A:O2'	1:A:970:C:H5'	2.06	0.56
4:D:125:HIS:HA	4:D:149:ALA:CB	2.35	0.56
4:D:194:LEU:CD2	4:D:194:LEU:N	2.69	0.56
12:L:97:ARG:C	12:L:98:TYR:CD1	2.79	0.56
1:A:1091:U:H2'	1:A:1093:A:OP2	2.05	0.56
1:A:1276:G:H21	1:A:1282:C:H1'	1.70	0.56
3:C:132:ARG:HA	3:C:135:LYS:HD2	1.87	0.56
16:P:10:GLY:HA3	16:P:15:PRO:HA	1.86	0.56
1:A:649:G:O2'	1:A:650:G:H5'	2.06	0.56
13:M:80:ARG:O	13:M:82:MET:N	2.39	0.56
6:F:21:LEU:HD12	6:F:21:LEU:O	2.05	0.56
1:A:1215:G:O2'	1:A:1216:G:H5'	2.05	0.56
4:D:62:GLN:O	4:D:65:ARG:HB3	2.05	0.56
1:A:1201:A:H4'	1:A:1202:G:H5''	1.88	0.56
10:J:63:PHE:HE1	14:N:45:ARG:HA	1.71	0.56
10:J:81:THR:HG22	10:J:82:ILE:N	2.19	0.56
19:S:64:GLU:O	19:S:67:VAL:HB	2.05	0.56
1:A:273:A:H2'	1:A:274:A:H5'	1.87	0.56
1:A:359:U:H2'	1:A:360:A:C8	2.39	0.56
20:T:101:GLY:O	20:T:103:GLY:N	2.39	0.56
11:K:77:MET:SD	11:K:80:VAL:HG23	2.45	0.56
2:B:178:ARG:C	2:B:180:LEU:H	2.08	0.56
17:Q:74:LEU:O	17:Q:75:ARG:HB2	2.05	0.56
1:A:519:C:O2'	1:A:520:A:H5'	2.05	0.56
4:D:21:LEU:HD12	4:D:21:LEU:N	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:539:A:OP1	12:L:114:LYS:HE2	2.06	0.56
9:I:7:THR:HA	9:I:16:ARG:HA	1.88	0.56
10:J:16:LEU:HD22	10:J:70:ARG:CD	2.36	0.56
16:P:30:GLY:O	16:P:31:LYS:O	2.24	0.56
16:P:39:TYR:CD1	16:P:73:LEU:HD21	2.40	0.56
1:A:781:A:C2'	1:A:782:A:H5'	2.33	0.56
15:O:62:GLN:O	15:O:66:LEU:HG	2.05	0.56
1:A:61:G:H2'	1:A:62:U:O4'	2.06	0.56
8:H:114:THR:HG21	8:H:129:VAL:HG23	1.88	0.56
1:A:577:G:H1'	1:A:816:A:N3	2.21	0.56
4:D:116:GLN:O	4:D:116:GLN:HG2	2.05	0.56
4:D:19:LEU:O	4:D:22:LYS:HG3	2.06	0.56
4:D:8:VAL:O	4:D:10:ARG:N	2.38	0.56
5:E:92:LYS:O	5:E:118:ILE:HG22	2.06	0.56
12:L:97:ARG:HB2	12:L:98:TYR:CE1	2.41	0.56
7:G:13:GLN:O	7:G:21:VAL:HG12	2.05	0.56
7:G:141:VAL:C	7:G:143:ARG:N	2.56	0.56
1:A:1254:C:H41	10:J:43:ARG:CZ	2.18	0.56
14:N:37:PHE:HB2	14:N:39:LEU:HD11	1.88	0.56
14:N:48:ALA:C	14:N:50:LYS:H	2.09	0.56
1:A:186:C:C2	1:A:187:C:C5	2.93	0.56
3:C:40:ARG:CD	3:C:55:VAL:HG11	2.36	0.56
5:E:105:VAL:O	5:E:109:ILE:HG12	2.06	0.56
5:E:91:LEU:HD23	5:E:120:THR:HG21	1.87	0.56
6:F:33:TYR:CA	6:F:71:ARG:HH21	2.19	0.56
1:A:96:G:O2'	1:A:97:G:H5'	2.06	0.56
1:A:1207:G:O2'	1:A:1208:C:H5'	2.05	0.56
11:K:30:VAL:HG21	11:K:65:ALA:HA	1.86	0.56
7:G:54:THR:HB	7:G:56:GLN:NE2	2.21	0.56
1:A:428:G:O2'	1:A:429:U:O5'	2.16	0.56
4:D:165:MET:C	4:D:166:LYS:HG3	2.27	0.56
4:D:64:LEU:CD2	4:D:198:VAL:HG11	2.30	0.56
4:D:30:LYS:C	4:D:32:ALA:H	2.09	0.56
12:L:43:VAL:CG1	12:L:44:THR:H	2.14	0.56
1:A:1314:C:OP2	19:S:6:LYS:HD2	2.06	0.56
1:A:1370:G:H2'	1:A:1371:G:C8	2.39	0.56
7:G:114:ARG:H	7:G:114:ARG:HD3	1.70	0.56
7:G:141:VAL:CA	7:G:144:MET:HB2	2.23	0.56
7:G:62:PHE:O	7:G:66:VAL:HB	2.05	0.56
9:I:79:LEU:HD13	9:I:83:ARG:NH2	2.20	0.56
10:J:60:ARG:O	10:J:61:GLU:HB3	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:53:VAL:C	16:P:55:ARG:N	2.55	0.56
20:T:57:ARG:HH22	20:T:102:GLY:HA3	1.68	0.56
3:C:91:LEU:CD1	3:C:101:LEU:HB2	2.36	0.56
15:O:87:ILE:CG2	15:O:88:ARG:H	1.98	0.56
1:A:477:G:O2'	1:A:478:A:H5'	2.05	0.56
13:M:98:VAL:CG2	13:M:110:ARG:HH12	2.16	0.56
1:A:751:U:H1'	15:O:23:GLY:O	2.05	0.56
1:A:168:G:HO2'	1:A:169:C:H5'	1.71	0.56
1:A:544:G:C4	1:A:545:C:C5	2.94	0.56
11:K:11:LYS:NZ	11:K:11:LYS:HB2	2.21	0.56
5:E:93:PRO:HG2	8:H:105:ARG:HH21	1.71	0.56
1:A:1461:G:H2'	1:A:1462:G:H8	1.69	0.56
4:D:79:PHE:CD1	4:D:207:TYR:CD1	2.94	0.56
1:A:1127:G:H1	1:A:1144:G:N2	2.02	0.56
1:A:1347:G:C6	9:I:107:ARG:CZ	2.89	0.56
3:C:16:ARG:HH22	3:C:183:ASP:HB2	1.71	0.56
3:C:180:ALA:O	3:C:206:GLU:HA	2.05	0.56
7:G:69:VAL:HA	7:G:138:LYS:HD2	1.88	0.56
9:I:96:LEU:HG	9:I:102:LEU:HD22	1.88	0.56
14:N:37:PHE:HB2	14:N:39:LEU:CD1	2.36	0.56
16:P:6:LEU:HB3	16:P:17:TYR:HD2	1.70	0.56
1:A:190(L):U:O2	20:T:105:SER:HB2	2.05	0.56
20:T:84:LEU:O	20:T:87:LYS:HB2	2.06	0.56
3:C:75:VAL:O	3:C:83:ARG:HD2	2.06	0.56
8:H:104:ARG:O	8:H:106:GLY:N	2.38	0.56
8:H:40:ALA:O	8:H:43:GLY:N	2.39	0.56
11:K:73:MET:CA	11:K:77:MET:HB2	2.35	0.56
1:A:729:A:H2'	1:A:730:G:H8	1.71	0.56
1:A:742:G:H2'	1:A:743:U:O4'	2.06	0.56
3:C:196:LEU:N	3:C:196:LEU:CD2	2.68	0.56
1:A:927:G:H2'	1:A:928:G:H8	1.71	0.56
1:A:1025:U:HO2'	1:A:1026:G:H8	1.54	0.56
12:L:109:GLY:HA3	12:L:121:GLY:O	2.05	0.56
1:A:407:G:H4'	4:D:116:GLN:HA	1.88	0.55
12:L:32:PHE:HA	12:L:85:ILE:O	2.05	0.55
12:L:90:VAL:C	12:L:92:ASP:H	2.09	0.55
17:Q:98:LEU:CA	17:Q:102:GLY:HA2	2.34	0.55
17:Q:104:LYS:HG3	17:Q:105:ALA:N	2.21	0.55
3:C:113:ALA:O	3:C:114:PRO:C	2.44	0.55
7:G:16:LEU:HD22	7:G:16:LEU:N	2.20	0.55
9:I:3:GLN:NE2	9:I:3:GLN:C	2.57	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:16:LEU:HG	10:J:94:VAL:CG1	2.35	0.55
14:N:21:TYR:N	14:N:21:TYR:CD1	2.73	0.55
1:A:256:U:H5'	17:Q:17:LYS:NZ	2.21	0.55
1:A:376:G:C4	1:A:389:A:C2	2.94	0.55
3:C:91:LEU:O	3:C:95:THR:HG22	2.06	0.55
5:E:109:ILE:O	5:E:113:ALA:HB2	2.06	0.55
5:E:135:THR:HG22	5:E:136:MET:N	2.20	0.55
2:B:204:ASN:HD22	2:B:206:ASP:H	1.53	0.55
5:E:31:LEU:CD2	5:E:45:PHE:HB2	2.36	0.55
1:A:601:C:C2'	1:A:602:A:H5'	2.36	0.55
1:A:438:G:H22	1:A:495:U:H3'	1.71	0.55
4:D:117:ALA:O	4:D:120:LEU:N	2.39	0.55
4:D:128:VAL:HG21	4:D:138:TYR:CE2	2.41	0.55
4:D:13:ARG:HD3	4:D:36:ARG:O	2.07	0.55
1:A:986:A:H1'	19:S:55:LYS:CA	2.34	0.55
9:I:55:ALA:HA	9:I:58:ARG:CZ	2.36	0.55
10:J:47:PHE:O	10:J:48:THR:C	2.44	0.55
10:J:10:GLY:O	10:J:68:HIS:HD2	1.88	0.55
1:A:256:U:H5'	17:Q:17:LYS:HZ1	1.71	0.55
16:P:24:ALA:O	16:P:26:ARG:N	2.40	0.55
16:P:26:ARG:HD3	16:P:31:LYS:HB3	1.88	0.55
11:K:54:ARG:O	11:K:57:THR:HG22	2.05	0.55
3:C:83:ARG:HA	3:C:86:VAL:CG2	2.27	0.55
2:B:10:LEU:HG	2:B:48:MET:SD	2.46	0.55
14:N:14:PRO:HG2	14:N:15:LYS:N	2.15	0.55
2:B:24:TRP:CZ3	2:B:26:PRO:HA	2.41	0.55
20:T:11:SER:O	20:T:14:LYS:NZ	2.39	0.55
1:A:596:C:O2'	1:A:597:G:H5'	2.05	0.55
1:A:1424:C:C2'	1:A:1425:U:H5'	2.36	0.55
20:T:96:GLY:O	20:T:97:ALA:CB	2.54	0.55
1:A:909:A:C8	1:A:910:C:C6	2.94	0.55
1:A:189:G:H2'	1:A:190:C:H6	1.71	0.55
2:B:182:ILE:HG22	2:B:182:ILE:O	2.05	0.55
4:D:199:ASN:HD22	4:D:199:ASN:C	2.08	0.55
4:D:103:ASN:OD1	4:D:114:ARG:NE	2.39	0.55
12:L:45:PRO:HA	12:L:93:LEU:HD23	1.88	0.55
1:A:1250:A:H2'	1:A:1251:A:C8	2.41	0.55
3:C:5:ILE:HG13	3:C:6:HIS:H	1.70	0.55
5:E:51:VAL:CB	5:E:52:PRO:HD3	2.32	0.55
19:S:51:VAL:HG11	19:S:71:LEU:HB3	1.88	0.55
17:Q:67:LYS:HA	17:Q:70:ARG:HH12	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:463:A:C4	1:A:474:G:C8	2.94	0.55
16:P:7:ALA:HB2	16:P:28:ARG:O	2.06	0.55
3:C:91:LEU:CD2	3:C:99:VAL:HG13	2.37	0.55
18:R:40:LEU:HD21	18:R:79:LEU:HD21	1.85	0.55
2:B:80:ILE:HD12	2:B:208:ILE:HD13	1.89	0.55
2:B:61:LEU:HD23	2:B:61:LEU:O	2.07	0.55
1:A:895:G:H2'	1:A:896:C:H6	1.71	0.55
1:A:848:C:O2'	1:A:849:C:H5'	2.06	0.55
1:A:1056:U:C5'	3:C:163:ALA:HB2	2.36	0.55
1:A:1119:C:H2'	1:A:1120:G:C8	2.41	0.55
1:A:1255:G:N1	1:A:1283:G:C2	2.75	0.55
7:G:32:ARG:O	7:G:33:ASP:CB	2.54	0.55
9:I:88:TYR:CZ	9:I:89:ASN:HB2	2.42	0.55
10:J:50:ILE:HG23	14:N:41:ARG:HD3	1.89	0.55
10:J:34:VAL:C	10:J:75:ILE:HB	2.27	0.55
10:J:86:MET:C	10:J:88:LEU:N	2.60	0.55
13:M:8:GLU:OE2	13:M:22:ILE:HA	2.06	0.55
19:S:28:LYS:O	19:S:29:ARG:HG3	2.06	0.55
19:S:49:ILE:HG23	19:S:51:VAL:HG22	1.89	0.55
19:S:70:LYS:HG2	19:S:73:GLU:OE2	2.06	0.55
1:A:39:G:C4	1:A:498:U:O4	2.60	0.55
3:C:22:TRP:HB3	3:C:59:ARG:CG	2.35	0.55
8:H:31:PHE:HZ	8:H:134:ILE:HD13	1.71	0.55
8:H:82:HIS:CD2	8:H:83:ILE:N	2.75	0.55
6:F:83:ASP:C	6:F:85:VAL:H	2.10	0.55
11:K:99:GLN:HA	11:K:105:VAL:CG2	2.36	0.55
13:M:96:LEU:HB3	13:M:97:PRO:HD2	1.88	0.55
1:A:820:U:H4'	1:A:821:G:OP2	2.06	0.55
1:A:13:U:O2	1:A:914:A:C8	2.59	0.55
1:A:309:G:C4	1:A:310:G:N7	2.75	0.55
1:A:1278:U:H5'	1:A:1279:A:C5'	2.35	0.55
3:C:11:ARG:HH22	3:C:177:THR:C	2.10	0.55
3:C:6:HIS:HD2	3:C:8:ILE:H	1.53	0.55
9:I:72:GLY:O	9:I:75:ASP:N	2.34	0.55
16:P:23:ASP:O	16:P:25:ARG:N	2.30	0.55
17:Q:59:ILE:CG2	17:Q:71:PHE:HB3	2.35	0.55
1:A:503:C:C2	1:A:504:C:C5	2.94	0.55
8:H:24:THR:HG23	8:H:24:THR:O	2.07	0.55
8:H:30:ARG:O	8:H:31:PHE:O	2.25	0.55
18:R:36:ASN:C	18:R:36:ASN:HD22	2.08	0.55
18:R:59:SER:OG	18:R:62:GLU:HG3	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:60:PHE:CZ	18:R:78:LEU:HD21	2.41	0.55
2:B:58:ILE:O	2:B:59:GLU:C	2.45	0.55
1:A:101:A:C2'	1:A:102:G:H5'	2.37	0.55
1:A:596:C:H2'	1:A:596:C:O2	2.06	0.55
1:A:193:C:H2'	1:A:194:C:C6	2.41	0.55
1:A:1451:A:H4'	1:A:1452:C:OP2	2.06	0.55
1:A:411:A:C1'	1:A:413:G:H1'	2.37	0.55
4:D:206:PHE:CD2	4:D:207:TYR:HE2	2.24	0.55
4:D:74:GLN:HE22	4:D:137:SER:HB3	1.71	0.55
4:D:8:VAL:O	4:D:11:LEU:N	2.40	0.55
1:A:1251:A:H8	1:A:1251:A:O5'	1.90	0.55
1:A:1327:C:OP1	21:V:21:TYR:CE1	2.59	0.55
7:G:46:ALA:HA	7:G:121:ALA:HB2	1.88	0.55
21:V:17:THR:HG22	21:V:18:TYR:N	2.14	0.55
1:A:1442:G:C6	1:A:1446:A:N6	2.74	0.55
1:A:254:G:H5''	17:Q:69:LYS:HD3	1.89	0.55
16:P:11:SER:O	16:P:13:HIS:N	2.39	0.55
20:T:75:ASN:ND2	20:T:75:ASN:H	2.01	0.55
2:B:97:TRP:CZ2	2:B:101:MET:HB2	2.41	0.55
3:C:66:VAL:C	3:C:68:VAL:N	2.59	0.55
3:C:85:ARG:C	3:C:87:LEU:N	2.60	0.55
1:A:854:G:H3'	1:A:871:U:C4	2.41	0.55
6:F:97:PHE:CD2	6:F:98:LEU:N	2.74	0.55
6:F:97:PHE:HD1	18:R:65:ILE:CD1	2.20	0.55
15:O:41:GLU:HA	15:O:44:LYS:CG	2.37	0.55
11:K:125:PHE:N	11:K:125:PHE:CD1	2.73	0.55
4:D:122:ARG:NE	4:D:134:ASP:OD2	2.37	0.55
4:D:32:ALA:C	4:D:34:GLU:N	2.60	0.55
5:E:94:ALA:HB3	5:E:117:ASP:O	2.07	0.55
17:Q:97:SER:CB	17:Q:103:GLY:HA2	2.14	0.55
3:C:182:ILE:HG22	3:C:183:ASP:O	2.07	0.55
7:G:16:LEU:HD22	7:G:16:LEU:H	1.71	0.55
7:G:29:LYS:HZ1	7:G:102:ARG:CA	2.11	0.55
9:I:2:GLU:OE1	9:I:20:ARG:HG2	2.06	0.55
13:M:55:ARG:HH11	13:M:55:ARG:HG3	1.70	0.55
19:S:25:LYS:N	19:S:25:LYS:HD2	2.22	0.55
1:A:400:C:H2'	1:A:401:C:C6	2.42	0.55
2:B:12:GLU:HB3	2:B:213:LEU:HD11	1.89	0.55
2:B:13:ALA:C	2:B:15:VAL:N	2.60	0.55
11:K:62:GLN:HE22	11:K:97:ALA:HA	1.71	0.55
1:A:1497:G:O2'	1:A:1498:U:H5'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1526:G:H2'	1:A:1527:C:H6	1.70	0.55
15:O:56:LEU:HD12	15:O:59:MET:HB2	1.87	0.55
14:N:8:GLU:O	14:N:11:LYS:HE2	2.06	0.55
1:A:706:A:O2'	11:K:29:ILE:HD11	2.07	0.55
1:A:101:A:O2'	1:A:102:G:H5'	2.07	0.55
1:A:1225:A:H5'	13:M:103:THR:OG1	2.07	0.55
17:Q:29:HIS:ND1	17:Q:30:PRO:HD2	2.22	0.55
1:A:1477:C:H2'	1:A:1478:C:H6	1.72	0.55
1:A:29:G:O2'	1:A:30:U:H5'	2.06	0.55
2:B:29:ALA:C	2:B:31:TYR:H	2.10	0.55
7:G:75:VAL:HG11	7:G:86:GLN:HB3	1.88	0.55
1:A:402:G:C2'	1:A:403:C:H5'	2.37	0.55
4:D:102:ASP:O	4:D:103:ASN:C	2.43	0.55
12:L:113:ARG:HB2	12:L:122:THR:HG21	1.89	0.55
12:L:90:VAL:CG1	12:L:93:LEU:HG	2.32	0.55
1:A:1127:G:H1	1:A:1144:G:H22	1.54	0.55
1:A:1176:A:H2'	1:A:1177:G:C1'	2.36	0.55
3:C:122:GLU:O	3:C:126:ARG:HG3	2.07	0.55
20:T:53:LEU:CD1	20:T:100:ILE:HB	2.33	0.55
20:T:62:LEU:O	20:T:65:LYS:HB3	2.07	0.55
3:C:93:LYS:HA	3:C:93:LYS:CE	2.36	0.55
18:R:53:ARG:HD3	18:R:63:GLN:HG2	1.89	0.55
1:A:1102:A:C4	1:A:1103:C:C5	2.94	0.55
2:B:71:VAL:CG2	2:B:164:VAL:HG13	2.36	0.55
6:F:1:MET:CE	6:F:36:ARG:HH21	2.20	0.55
1:A:1520:G:O2'	1:A:1521:G:H5'	2.07	0.55
17:Q:29:HIS:CG	17:Q:30:PRO:HD2	2.42	0.55
7:G:54:THR:HB	7:G:56:GLN:OE1	2.07	0.55
4:D:20:TYR:C	4:D:22:LYS:H	2.09	0.55
4:D:49:ARG:HG2	4:D:49:ARG:HH11	1.72	0.55
1:A:1089:G:H1	1:A:1096:C:H42	1.54	0.55
1:A:1150:U:H4'	10:J:41:PRO:HB3	1.88	0.55
1:A:1351:U:O2'	1:A:1352:C:H5'	2.07	0.55
1:A:1347:G:H22	1:A:1373:G:H2'	1.62	0.55
3:C:133:ALA:O	3:C:136:GLN:HB2	2.07	0.55
3:C:141:VAL:HG23	3:C:142:MET:N	2.21	0.55
14:N:22:THR:HB	14:N:33:VAL:HG11	1.88	0.55
19:S:63:THR:HG22	19:S:64:GLU:N	2.22	0.55
6:F:82:ARG:O	6:F:84:ASN:N	2.40	0.55
1:A:880:C:OP2	12:L:6:THR:OG1	2.23	0.55
1:A:327:A:C3'	1:A:328:C:H5''	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:34:ASN:ND2	9:I:34:ASN:N	2.51	0.55
3:C:25:GLY:HA2	3:C:29:TYR:H	1.72	0.55
1:A:505:G:H1	1:A:526:C:H42	1.54	0.55
1:A:293:G:O2'	1:A:294:U:H5'	2.07	0.55
1:A:1349:A:O2'	1:A:1350:A:H5'	2.06	0.55
3:C:143:GLU:OE1	3:C:144:SER:N	2.39	0.55
10:J:39:PRO:HA	10:J:70:ARG:HH22	1.72	0.55
13:M:22:ILE:CG2	13:M:66:LEU:HD23	2.37	0.55
19:S:22:LEU:CD1	19:S:31:ILE:HD11	2.37	0.55
19:S:70:LYS:H	19:S:73:GLU:CG	2.20	0.55
1:A:191:G:N9	20:T:105:SER:HB3	2.21	0.55
16:P:53:VAL:O	16:P:54:GLU:C	2.44	0.55
2:B:67:THR:HA	2:B:90:MET:HE1	1.88	0.55
1:A:1157:A:H4'	1:A:1158:C:O5'	2.07	0.55
2:B:116:GLU:C	2:B:118:LEU:H	2.10	0.55
2:B:8:LYS:HD3	2:B:9:GLU:H	1.72	0.55
5:E:26:PHE:C	5:E:27:ARG:HG3	2.26	0.55
1:A:1390:U:H2'	1:A:1391:U:H6	1.70	0.55
9:I:25:LYS:HD3	9:I:25:LYS:N	2.22	0.55
1:A:293:G:C2	1:A:294:U:C6	2.95	0.54
1:A:1281:U:H4'	1:A:1282:C:OP2	2.07	0.54
7:G:59:LEU:O	7:G:63:LYS:HG3	2.07	0.54
17:Q:67:LYS:HA	17:Q:70:ARG:CZ	2.37	0.54
16:P:9:PHE:O	16:P:10:GLY:O	2.24	0.54
1:A:861:G:C5	1:A:862:C:C5	2.95	0.54
2:B:74:LYS:HE3	2:B:166:ASP:HB2	1.89	0.54
2:B:167:PRO:O	2:B:171:ALA:HB2	2.07	0.54
2:B:60:ASP:CG	2:B:61:LEU:N	2.61	0.54
1:A:782:A:H2'	1:A:783:C:O4'	2.07	0.54
1:A:153:C:N3	1:A:169:C:N3	2.55	0.54
1:A:1197:G:OP1	1:A:1198:G:OP2	2.25	0.54
5:E:40:ARG:NH1	5:E:68:GLU:OE2	2.39	0.54
1:A:321:A:HO2'	1:A:322:C:H6	1.55	0.54
1:A:418:C:C2'	1:A:418:C:O2	2.55	0.54
2:B:200:ILE:HD12	2:B:200:ILE:N	2.22	0.54
1:A:1503:A:H5'	1:A:1531:A:C1'	2.37	0.54
17:Q:34:LYS:HB2	17:Q:34:LYS:NZ	2.22	0.54
4:D:68:TYR:CD1	4:D:68:TYR:N	2.74	0.54
1:A:1346:A:O2'	1:A:1347:G:O4'	2.25	0.54
3:C:150:LYS:HB2	3:C:173:VAL:HG21	1.90	0.54
7:G:28:ASN:OD1	7:G:36:LYS:HE3	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:55:ALA:HA	9:I:58:ARG:NH2	2.22	0.54
13:M:20:THR:HG23	13:M:25:ILE:O	2.07	0.54
1:A:44:G:H2'	1:A:45:U:O4'	2.07	0.54
17:Q:62:SER:OG	17:Q:63:ARG:N	2.40	0.54
1:A:397:A:N3	1:A:397:A:H3'	2.22	0.54
3:C:50:ALA:O	3:C:72:LYS:N	2.31	0.54
15:O:80:ALA:O	15:O:84:LYS:HG3	2.07	0.54
5:E:7:GLU:O	5:E:34:VAL:HA	2.07	0.54
1:A:1215:G:C2'	1:A:1216:G:H5'	2.37	0.54
17:Q:85:VAL:CG1	17:Q:89:LEU:HG	2.38	0.54
1:A:1135:U:H4'	1:A:1136:U:H5	1.71	0.54
1:A:1001:A:H2'	1:A:1002:G:C5'	2.37	0.54
12:L:56:ALA:O	12:L:58:VAL:HG23	2.06	0.54
10:J:64:GLU:O	10:J:65:LEU:HB2	2.08	0.54
1:A:191:G:N2	20:T:103:GLY:O	2.36	0.54
1:A:184:G:C4'	1:A:224:C:H4'	2.37	0.54
20:T:53:LEU:O	20:T:56:MET:HB3	2.07	0.54
1:A:498:U:O2	1:A:498:U:H2'	2.07	0.54
8:H:27:PRO:HG3	8:H:58:TYR:CE2	2.43	0.54
1:A:949:A:C2	1:A:1233:G:N3	2.75	0.54
13:M:90:LEU:HA	13:M:93:ARG:HD2	1.90	0.54
8:H:19:VAL:CG2	8:H:21:LYS:HG2	2.38	0.54
5:E:8:GLU:HA	5:E:34:VAL:CA	2.36	0.54
1:A:322:C:C2'	1:A:323:U:H5'	2.37	0.54
6:F:38:GLU:O	6:F:39:LYS:CB	2.55	0.54
2:B:200:ILE:HD12	2:B:200:ILE:H	1.71	0.54
1:A:886:G:H2'	1:A:887:G:O4'	2.07	0.54
1:A:410:G:OP2	4:D:30:LYS:HD3	2.07	0.54
3:C:153:VAL:HG22	3:C:198:VAL:HG21	1.90	0.54
1:A:1240:U:C4	7:G:30:ILE:HG23	2.42	0.54
9:I:72:GLY:O	9:I:75:ASP:HB2	2.08	0.54
19:S:15:LEU:HB3	19:S:33:THR:CG2	2.34	0.54
1:A:9:G:H5''	5:E:126:ARG:CZ	2.37	0.54
2:B:55:PHE:CD1	2:B:58:ILE:HD12	2.42	0.54
13:M:94:ARG:O	13:M:96:LEU:HD12	2.08	0.54
1:A:442:C:O2'	1:A:443:C:H5'	2.08	0.54
12:L:28:LYS:O	12:L:30:ALA:N	2.41	0.54
5:E:129:ILE:O	5:E:129:ILE:HG22	2.06	0.54
1:A:828:A:H2'	1:A:829:G:O4'	2.08	0.54
1:A:1187:G:H2'	1:A:1188:A:H8	1.72	0.54
1:A:988:G:HO2'	1:A:1016:A:H2	1.52	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:31:LYS:C	13:M:33:ALA:N	2.61	0.54
19:S:44:MET:O	19:S:46:GLY:N	2.40	0.54
19:S:38:SER:H	19:S:71:LEU:CD1	2.21	0.54
19:S:36:ARG:HH21	19:S:75:ALA:CB	2.20	0.54
1:A:451:A:H4'	16:P:72:ARG:HH12	1.72	0.54
20:T:90:GLN:HG3	20:T:91:LEU:N	2.21	0.54
3:C:66:VAL:O	3:C:68:VAL:N	2.40	0.54
2:B:44:LEU:HA	2:B:47:THR:HB	1.89	0.54
6:F:32:ASN:ND2	6:F:32:ASN:O	2.41	0.54
1:A:924:C:H2'	1:A:925:G:H8	1.71	0.54
5:E:88:LYS:HD3	5:E:123:LEU:HB2	1.89	0.54
4:D:158:ILE:O	4:D:162:LEU:HD13	2.08	0.54
4:D:54:TYR:CE1	4:D:206:PHE:HE1	2.26	0.54
1:A:123:C:H42	1:A:238:G:H1	1.56	0.54
17:Q:101:ARG:HG2	17:Q:101:ARG:NH1	2.23	0.54
3:C:139:GLN:O	3:C:142:MET:HB3	2.07	0.54
9:I:48:GLU:CD	9:I:51:ARG:HH21	2.11	0.54
1:A:481:G:H5'	1:A:482:A:OP1	2.08	0.54
3:C:64:VAL:HG12	3:C:65:ALA:N	2.22	0.54
2:B:151:GLY:O	2:B:153:ARG:N	2.40	0.54
1:A:444:C:N4	1:A:491:G:C6	2.75	0.54
14:N:11:LYS:NZ	14:N:13:THR:O	2.25	0.54
1:A:707:C:O2'	1:A:708:C:H5'	2.08	0.54
1:A:323:U:H2'	1:A:324:G:O4'	2.08	0.54
20:T:10:LEU:O	20:T:12:ALA:N	2.41	0.54
1:A:833:U:H3	1:A:853:G:H1	1.55	0.54
8:H:116:LYS:NZ	8:H:127:LEU:HB3	2.23	0.54
1:A:508:C:H4'	1:A:509:A:O5'	2.08	0.54
1:A:412:A:H4'	1:A:413:G:OP1	2.06	0.54
1:A:1122:U:H2'	1:A:1123:A:O4'	2.08	0.54
1:A:1192:C:H2'	1:A:1192:C:O2	2.06	0.54
3:C:23:TYR:HD1	10:J:11:PHE:CE1	2.25	0.54
10:J:79:ARG:HB2	10:J:79:ARG:NH1	2.23	0.54
14:N:26:ARG:O	14:N:27:CYS:C	2.46	0.54
14:N:37:PHE:N	14:N:37:PHE:CD1	2.75	0.54
21:V:6:ARG:HD2	21:V:15:ARG:NH2	2.21	0.54
17:Q:18:THR:HG21	17:Q:69:LYS:HD2	1.89	0.54
3:C:88:ARG:HA	3:C:91:LEU:HD13	1.90	0.54
5:E:109:ILE:O	5:E:113:ALA:CB	2.55	0.54
1:A:1074:G:C2	1:A:1102:A:C5	2.96	0.54
2:B:116:GLU:O	2:B:118:LEU:N	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:63:LEU:O	11:K:67:ASP:N	2.41	0.54
13:M:109:THR:HG23	13:M:110:ARG:N	2.22	0.54
6:F:33:TYR:C	6:F:71:ARG:HH21	2.11	0.54
1:A:815:A:O2'	1:A:1527:C:C1'	2.54	0.54
15:O:56:LEU:O	15:O:59:MET:HB2	2.08	0.54
14:N:11:LYS:CE	14:N:13:THR:HB	2.37	0.54
1:A:425:G:O2'	1:A:426:G:H5'	2.08	0.54
1:A:13:U:O2	1:A:914:A:H3'	2.07	0.54
1:A:823:G:O2'	1:A:824:C:H5'	2.08	0.54
5:E:144:THR:O	5:E:148:VAL:HG23	2.08	0.54
4:D:126:ILE:HG22	4:D:127:THR:H	1.73	0.54
12:L:93:LEU:HB2	12:L:96:VAL:HG21	1.89	0.54
1:A:1094:G:O2'	1:A:1108:G:N2	2.41	0.54
7:G:74:GLU:HG2	7:G:91:VAL:HG22	1.90	0.54
19:S:18:LYS:HG3	19:S:18:LYS:O	2.07	0.54
1:A:399:G:C5	1:A:400:C:C4	2.96	0.54
8:H:38:ILE:HG22	8:H:39:LEU:N	2.22	0.54
2:B:131:PRO:C	2:B:133:LYS:H	2.11	0.54
1:A:265:G:H2'	1:A:267:C:H5	1.72	0.54
1:A:603:U:H3	1:A:635:G:H1	1.56	0.54
1:A:66:G:N3	1:A:66:G:H2'	2.23	0.54
5:E:19:MET:HE3	5:E:23:GLY:O	2.08	0.54
4:D:100:ARG:O	4:D:101:LEU:C	2.45	0.54
4:D:28:SER:O	4:D:29:PRO:C	2.46	0.54
12:L:101:VAL:O	12:L:102:ARG:C	2.45	0.54
12:L:41:ARG:HD2	12:L:42:THR:N	2.22	0.54
1:A:1177:G:H2'	1:A:1178:G:H8	1.72	0.54
1:A:1275:A:H2'	1:A:1276:G:C8	2.43	0.54
1:A:1352:C:H42	1:A:1370:G:H1	1.56	0.54
3:C:23:TYR:HA	10:J:11:PHE:CE1	2.42	0.54
13:M:45:VAL:C	13:M:47:ASP:H	2.11	0.54
14:N:44:LEU:O	14:N:44:LEU:HD12	2.08	0.54
1:A:129(A):G:N3	1:A:190(E):U:H5"	2.23	0.54
1:A:374:A:H2'	1:A:375:U:C6	2.43	0.54
16:P:76:GLN:C	16:P:78:GLY:H	2.10	0.54
20:T:84:LEU:O	20:T:87:LYS:N	2.41	0.54
3:C:84:ILE:O	3:C:84:ILE:HG23	2.08	0.54
1:A:950:U:H5	13:M:102:ARG:CZ	2.21	0.54
18:R:75:ILE:C	18:R:77:GLY:H	2.11	0.54
2:B:79:ASP:O	2:B:80:ILE:C	2.47	0.54
13:M:81:LEU:HA	13:M:84:ILE:CD1	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:91:ARG:HB3	13:M:97:PRO:O	2.08	0.54
5:E:47:LYS:HD2	5:E:47:LYS:N	2.23	0.54
14:N:14:PRO:O	14:N:15:LYS:HB2	2.06	0.54
1:A:316:G:H2'	1:A:317:G:C8	2.43	0.54
20:T:15:ARG:O	20:T:16:HIS:C	2.46	0.54
8:H:100:ILE:HG13	8:H:112:LEU:HD21	1.88	0.54
6:F:97:PHE:C	6:F:98:LEU:HG	2.26	0.54
1:A:1419:G:C6	1:A:1482:G:H1'	2.43	0.54
12:L:103:GLY:HA2	12:L:108:ALA:HA	1.90	0.54
12:L:78:GLN:O	12:L:80:HIS:N	2.41	0.54
1:A:1249:C:O2	9:I:70:LYS:HE3	2.08	0.54
1:A:428:G:OP2	4:D:7:PRO:HG3	2.07	0.54
9:I:10:ARG:HD3	9:I:105:ASP:CB	2.38	0.54
10:J:47:PHE:CE2	14:N:37:PHE:CZ	2.96	0.54
21:V:7:ARG:HB2	21:V:21:TYR:CZ	2.43	0.54
1:A:1442:G:C4	1:A:1446:A:N1	2.76	0.54
1:A:124:G:C6	1:A:125:U:C4	2.96	0.54
20:T:67:ALA:HA	20:T:73:HIS:N	2.15	0.54
4:D:2:GLY:N	4:D:3:ARG:NH2	2.56	0.54
15:O:71:GLN:HB2	15:O:78:TYR:CG	2.42	0.54
2:B:9:GLU:HG3	2:B:217:ARG:NH1	2.23	0.54
2:B:87:ARG:HH11	2:B:219:VAL:HB	1.70	0.54
11:K:90:GLY:O	11:K:91:ARG:C	2.45	0.54
1:A:267:C:N4	1:A:268:C:N4	2.56	0.54
1:A:99:C:H2'	1:A:101:A:O4'	2.08	0.54
5:E:70:PRO:C	5:E:72:GLN:N	2.57	0.54
1:A:227:G:H2'	1:A:228:A:H8	1.71	0.54
1:A:1004:A:H5"	1:A:1025:U:H5	1.73	0.54
1:A:715:A:H2'	1:A:716:A:C8	2.43	0.54
1:A:341:C:O2	1:A:349:A:C2	2.61	0.54
1:A:429:U:C1'	1:A:430:A:H5"	2.38	0.53
1:A:529:G:C2'	1:A:530:G:H5'	2.38	0.53
1:A:290:C:H2'	1:A:291:C:H5'	1.88	0.53
1:A:115:G:C2	1:A:313:A:C2	2.96	0.53
1:A:1276:G:H21	1:A:1282:C:C1'	2.20	0.53
1:A:1347:G:HO2'	1:A:1348:U:H5	1.52	0.53
7:G:67:GLU:HA	7:G:70:LYS:CD	2.38	0.53
9:I:97:LYS:NZ	9:I:102:LEU:CD1	2.71	0.53
13:M:49:THR:CG2	13:M:50:GLU:N	2.72	0.53
20:T:51:GLU:O	20:T:55:ILE:HG23	2.07	0.53
20:T:76:ALA:O	20:T:77:ALA:C	2.46	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:874:G:O2'	1:A:875:C:H5'	2.07	0.53
1:A:877:C:HO2'	1:A:878:G:H5'	1.70	0.53
1:A:864:A:H2	1:A:917:G:N3	2.05	0.53
1:A:152:A:N6	1:A:170:U:C2	2.76	0.53
20:T:13:LEU:CD1	20:T:14:LYS:N	2.70	0.53
1:A:1200:C:N3	1:A:1206:G:O6	2.40	0.53
1:A:1078:U:O2'	1:A:1079:G:H5'	2.08	0.53
1:A:340:U:H2'	1:A:341:C:C6	2.44	0.53
1:A:303:A:O2'	1:A:304:U:H5'	2.08	0.53
12:L:53:ARG:HG3	12:L:93:LEU:HD21	1.90	0.53
1:A:291:C:C2'	1:A:292:G:H5'	2.38	0.53
1:A:931:C:H42	1:A:1386:G:H1	1.57	0.53
7:G:20:ASP:OD2	7:G:23:VAL:HG13	2.08	0.53
14:N:22:THR:HB	14:N:33:VAL:HB	1.89	0.53
19:S:40:ILE:HD12	19:S:69:HIS:HB2	1.90	0.53
17:Q:6:LEU:O	17:Q:59:ILE:N	2.40	0.53
2:B:96:ARG:CA	2:B:96:ARG:NE	2.72	0.53
15:O:7:GLU:O	15:O:10:LYS:HB3	2.08	0.53
2:B:130:ARG:HB3	2:B:131:PRO:CD	2.34	0.53
11:K:101:SER:OG	11:K:102:GLY:N	2.40	0.53
1:A:298:A:H2'	1:A:299:G:O4'	2.08	0.53
1:A:868:C:H2'	1:A:869:G:H5'	1.89	0.53
1:A:913:A:O2'	1:A:914:A:OP2	2.26	0.53
8:H:51:VAL:HG21	8:H:60:ARG:HG3	1.89	0.53
1:A:623:C:H2'	1:A:624:C:H6	1.71	0.53
12:L:60:LEU:HD11	12:L:85:ILE:HD12	1.90	0.53
1:A:1089:G:C2'	1:A:1090:U:H5'	2.39	0.53
1:A:1109:C:OP2	3:C:176:HIS:CD2	2.61	0.53
1:A:1259:C:H2'	1:A:1259:C:O2	2.07	0.53
3:C:115:LEU:HA	3:C:118:GLN:OE1	2.09	0.53
3:C:16:ARG:NH2	3:C:183:ASP:HB2	2.22	0.53
7:G:70:LYS:HG2	7:G:100:ALA:HB2	1.88	0.53
7:G:21:VAL:O	7:G:24:THR:N	2.41	0.53
9:I:16:ARG:NH2	9:I:64:THR:HG22	2.24	0.53
9:I:4:TYR:CE1	9:I:21:PRO:HG2	2.43	0.53
1:A:187:C:O2'	20:T:89:ARG:CD	2.56	0.53
1:A:358:U:H2'	1:A:359:U:C6	2.43	0.53
5:E:108:ALA:O	5:E:109:ILE:C	2.47	0.53
8:H:104:ARG:C	8:H:106:GLY:N	2.61	0.53
2:B:19:HIS:CD2	2:B:20:GLU:HG2	2.44	0.53
1:A:723:U:O2	1:A:723:U:H2'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:94:ALA:O	20:T:95:ALA:HB2	2.08	0.53
19:S:11:VAL:HG22	19:S:39:THR:CG2	2.31	0.53
19:S:17:GLU:C	19:S:19:VAL:H	2.12	0.53
19:S:7:LYS:O	19:S:7:LYS:HG3	2.08	0.53
16:P:39:TYR:OH	16:P:41:PRO:HA	2.09	0.53
17:Q:5:VAL:HG12	17:Q:6:LEU:N	2.23	0.53
2:B:51:LEU:HD22	2:B:55:PHE:CE2	2.44	0.53
1:A:1519:A:H2'	1:A:1520:G:C5'	2.34	0.53
1:A:167:G:C2'	1:A:168:G:H8	2.17	0.53
2:B:178:ARG:NH2	2:B:196:LEU:O	2.41	0.53
1:A:20:U:O2'	1:A:21:G:H5'	2.08	0.53
1:A:520:A:H61	1:A:529:G:H1'	1.74	0.53
1:A:538:G:C4'	12:L:114:LYS:HD3	2.37	0.53
12:L:89:ARG:HH21	12:L:97:ARG:CG	2.07	0.53
1:A:987:G:N2	1:A:1219:U:N3	2.57	0.53
1:A:1109:C:OP1	3:C:176:HIS:NE2	2.41	0.53
3:C:7:PRO:HB2	3:C:11:ARG:HD2	1.90	0.53
7:G:139:GLU:O	7:G:140:ASP:C	2.47	0.53
1:A:1325:C:O3'	21:V:17:THR:HG21	2.09	0.53
20:T:65:LYS:O	20:T:68:LYS:CB	2.56	0.53
2:B:170:GLU:OE2	2:B:172:ILE:HD13	2.07	0.53
5:E:41:VAL:HG12	5:E:42:GLY:H	1.73	0.53
2:B:151:GLY:C	2:B:153:ARG:N	2.61	0.53
2:B:47:THR:O	2:B:48:MET:C	2.47	0.53
13:M:74:VAL:C	13:M:76:ALA:N	2.62	0.53
1:A:1407:C:H2'	1:A:1408:A:C8	2.43	0.53
1:A:1514:C:O2'	1:A:1515:C:H5'	2.09	0.53
5:E:18:ARG:HE	5:E:25:ARG:HB2	1.73	0.53
1:A:327:A:H3'	1:A:328:C:H5''	1.91	0.53
1:A:182:U:H3'	1:A:182:U:OP2	2.08	0.53
1:A:1225:A:H2'	1:A:1226:C:C6	2.44	0.53
1:A:1206:G:C6	1:A:1207:G:C6	2.97	0.53
1:A:1376:U:H2'	1:A:1377:A:H8	1.72	0.53
1:A:439:A:C4	1:A:497:A:C2	2.96	0.53
1:A:612:C:O2'	1:A:613:C:H5'	2.08	0.53
4:D:103:ASN:O	4:D:104:VAL:C	2.46	0.53
4:D:156:GLU:O	4:D:157:LEU:C	2.47	0.53
4:D:21:LEU:HD12	4:D:21:LEU:H	1.74	0.53
1:A:52:G:H2'	1:A:53:A:H8	1.74	0.53
1:A:1204:A:C6	1:A:1205:U:C2	2.96	0.53
3:C:108:ASN:OD1	3:C:111:LEU:HD12	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:118:GLN:HA	3:C:121:ALA:HB3	1.91	0.53
3:C:150:LYS:HA	3:C:169:ALA:HA	1.89	0.53
9:I:18:PHE:HB2	9:I:62:TYR:HB3	1.90	0.53
9:I:40:LEU:O	9:I:42:ARG:N	2.41	0.53
9:I:89:ASN:O	9:I:91:ASP:N	2.38	0.53
19:S:10:PHE:O	19:S:39:THR:HB	2.07	0.53
1:A:44:G:H1'	1:A:399:G:N2	2.24	0.53
16:P:52:ASP:OD2	16:P:54:GLU:HB3	2.08	0.53
16:P:71:ARG:HA	16:P:74:LEU:HD12	1.91	0.53
16:P:53:VAL:HB	16:P:79:VAL:HG13	1.89	0.53
20:T:46:GLU:HB2	20:T:48:LYS:HE2	1.91	0.53
13:M:113:PRO:O	13:M:115:LYS:HG3	2.08	0.53
11:K:91:ARG:O	11:K:92:GLU:C	2.47	0.53
15:O:62:GLN:O	15:O:65:ARG:HB3	2.07	0.53
1:A:300:A:H8	1:A:300:A:O5'	1.91	0.53
5:E:18:ARG:HH21	5:E:25:ARG:CB	2.19	0.53
1:A:855:G:H2'	1:A:856:C:C6	2.44	0.53
1:A:960:U:H2'	1:A:1225:A:N6	2.24	0.53
6:F:74:ASP:HA	6:F:77:ARG:NE	2.24	0.53
1:A:1105:A:H2'	1:A:1106:G:H8	1.73	0.53
1:A:428:G:C1'	1:A:430:A:C8	2.90	0.53
4:D:15:GLU:O	4:D:63:LYS:NZ	2.41	0.53
4:D:162:LEU:HD23	4:D:181:MET:HG2	1.90	0.53
12:L:101:VAL:O	12:L:101:VAL:HG23	2.08	0.53
17:Q:92:ARG:O	17:Q:95:TYR:HB2	2.09	0.53
1:A:1243:C:O2'	1:A:1244:C:H5'	2.08	0.53
1:A:1179:A:O2'	9:I:104:ARG:HB2	2.07	0.53
9:I:18:PHE:HD1	9:I:62:TYR:HD2	1.57	0.53
10:J:90:LEU:H	10:J:91:PRO:HD2	1.72	0.53
20:T:88:VAL:HA	20:T:91:LEU:HD12	1.90	0.53
18:R:36:ASN:ND2	18:R:37:VAL:O	2.42	0.53
2:B:22:LYS:HG3	2:B:40:HIS:CE1	2.44	0.53
13:M:87:TYR:O	13:M:88:ARG:C	2.46	0.53
1:A:490:G:C2	1:A:491:G:C8	2.96	0.53
1:A:849:C:H2'	1:A:850:U:H5'	1.89	0.53
8:H:116:LYS:HZ3	8:H:127:LEU:HB3	1.72	0.53
8:H:54:ASP:CG	8:H:54:ASP:O	2.47	0.53
12:L:34:ARG:HB3	12:L:61:THR:HG21	1.89	0.53
4:D:21:LEU:CD1	4:D:21:LEU:H	2.22	0.53
12:L:117:ARG:HG3	12:L:117:ARG:HH11	1.74	0.53
1:A:1190:G:OP1	3:C:4:LYS:HA	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1359:C:OP2	14:N:22:THR:HG21	2.09	0.53
3:C:126:ARG:C	3:C:127:ARG:HD2	2.28	0.53
3:C:12:LEU:C	3:C:14:ILE:H	2.11	0.53
3:C:175:LEU:N	3:C:175:LEU:HD22	2.24	0.53
3:C:176:HIS:O	3:C:178:LEU:N	2.37	0.53
7:G:67:GLU:HA	7:G:70:LYS:CG	2.39	0.53
9:I:118:LYS:NZ	9:I:118:LYS:CB	2.72	0.53
10:J:31:GLY:O	10:J:32:ALA:CB	2.56	0.53
10:J:80:LYS:O	10:J:84:GLN:CB	2.55	0.53
14:N:39:LEU:HD22	14:N:43:CYS:HB3	1.90	0.53
19:S:55:LYS:HE2	19:S:56:GLN:HE21	1.72	0.53
1:A:379:C:O2'	1:A:380:G:H5'	2.08	0.53
20:T:33:ILE:O	20:T:37:SER:N	2.36	0.53
3:C:77:ILE:HD13	3:C:84:ILE:HD12	1.90	0.53
15:O:3:ILE:N	15:O:3:ILE:HD12	2.23	0.53
15:O:6:GLU:CD	15:O:6:GLU:H	2.12	0.53
13:M:78:ILE:C	13:M:80:ARG:N	2.62	0.53
6:F:68:PRO:O	6:F:72:VAL:HG22	2.08	0.53
1:A:1407:C:H2'	1:A:1408:A:O4'	2.09	0.53
1:A:1526:G:O2'	1:A:1527:C:H5'	2.09	0.53
1:A:419:C:C3'	1:A:419:C:O2	2.57	0.53
1:A:715:A:O2'	1:A:716:A:H5'	2.08	0.53
3:C:167:TRP:O	3:C:168:ALA:HB2	2.08	0.53
17:Q:40:LYS:HD3	17:Q:42:TYR:CZ	2.44	0.53
2:B:225:ALA:O	2:B:226:ARG:C	2.46	0.53
1:A:59:A:N6	1:A:331:G:H1'	2.23	0.53
3:C:179:ARG:CD	3:C:180:ALA:N	2.71	0.53
3:C:27:LYS:HA	3:C:30:ARG:HH22	1.73	0.53
9:I:96:LEU:O	9:I:102:LEU:HD21	2.09	0.53
10:J:49:VAL:C	10:J:60:ARG:HG3	2.29	0.53
14:N:22:THR:HB	14:N:33:VAL:CG1	2.39	0.53
1:A:198:G:H1	1:A:219:C:H42	1.56	0.53
1:A:377:G:C2	1:A:387:U:O2	2.62	0.53
16:P:75:ARG:C	16:P:78:GLY:H	2.12	0.53
20:T:33:ILE:HG22	20:T:34:LYS:N	2.22	0.53
20:T:46:GLU:HB3	20:T:48:LYS:HE2	1.91	0.53
2:B:100:GLY:O	2:B:101:MET:C	2.46	0.53
3:C:64:VAL:HG12	3:C:65:ALA:H	1.73	0.53
1:A:1230:C:H2'	1:A:1231:G:H8	1.74	0.53
18:R:36:ASN:C	18:R:36:ASN:ND2	2.61	0.53
1:A:443:C:O2'	1:A:444:C:H5'	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:877:C:H1'	8:H:3:THR:CG2	2.39	0.53
15:O:60:VAL:O	15:O:64:ARG:HG2	2.09	0.53
6:F:100:ASN:H	18:R:23:LYS:HE3	1.72	0.53
1:A:103:C:O2'	1:A:172:A:N1	2.35	0.53
8:H:120:THR:HG23	8:H:123:GLU:HB2	1.91	0.53
1:A:597:G:H2'	1:A:598:U:C5'	2.38	0.53
1:A:1418:A:H61	1:A:1482:G:C2'	2.21	0.53
3:C:104:GLN:HA	3:C:104:GLN:HE21	1.74	0.53
9:I:30:GLY:O	9:I:31:GLN:C	2.47	0.53
4:D:100:ARG:O	4:D:102:ASP:N	2.42	0.53
4:D:101:LEU:O	4:D:104:VAL:HB	2.09	0.53
12:L:69:TYR:CZ	12:L:70:ILE:O	2.62	0.53
1:A:1119:C:H2'	1:A:1120:G:H8	1.74	0.53
1:A:1240:U:OP1	7:G:119:ARG:NH2	2.33	0.53
3:C:131:ARG:O	3:C:134:ILE:HB	2.09	0.53
7:G:16:LEU:H	7:G:16:LEU:CD2	2.22	0.53
13:M:8:GLU:CG	13:M:22:ILE:HG12	2.37	0.53
15:O:16:ALA:C	15:O:18:PHE:H	2.12	0.53
13:M:88:ARG:HA	13:M:98:VAL:HG13	1.91	0.53
6:F:75:LEU:HD13	6:F:75:LEU:C	2.30	0.53
15:O:29:VAL:HG11	15:O:67:LEU:HD21	1.91	0.53
18:R:30:ASP:C	18:R:32:ARG:H	2.12	0.53
1:A:67:C:H2'	1:A:68:G:C8	2.44	0.53
8:H:96:GLY:N	8:H:99:GLU:HB2	2.23	0.53
1:A:597:G:N2	8:H:94:TYR:CE2	2.77	0.53
1:A:1426:C:H2'	1:A:1427:U:C6	2.43	0.53
1:A:1026:G:N3	1:A:1026:G:H2'	2.23	0.53
2:B:181:PHE:CE2	8:H:70:GLN:HB3	2.44	0.53
7:G:156:TRP:CD1	7:G:156:TRP:O	2.61	0.53
1:A:619:U:O2	4:D:133:VAL:HG13	2.09	0.52
4:D:9:CYS:SG	4:D:32:ALA:HB3	2.49	0.52
9:I:112:LYS:HE2	9:I:116:LYS:O	2.09	0.52
13:M:33:ALA:C	13:M:35:GLU:H	2.11	0.52
16:P:40:ASP:HB3	16:P:48:TRP:HB2	1.89	0.52
8:H:28:ALA:HA	8:H:59:LEU:CD1	2.38	0.52
1:A:646:U:H2'	1:A:647:C:C6	2.44	0.52
1:A:1355:G:C4	1:A:1356:G:C8	2.97	0.52
1:A:1473:A:H2'	1:A:1474:G:O4'	2.09	0.52
3:C:191:THR:HG23	3:C:194:GLY:H	1.73	0.52
1:A:1065:U:O4	1:A:1190:G:C1'	2.56	0.52
1:A:941:G:H1	1:A:1342:C:H42	1.57	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:986:A:H2'	1:A:987:G:O4'	2.09	0.52
9:I:19:LEU:HD23	9:I:21:PRO:CD	2.39	0.52
10:J:68:HIS:CD2	10:J:68:HIS:H	2.26	0.52
10:J:62:HIS:C	14:N:59:ALA:HB3	2.30	0.52
1:A:390:C:O5'	1:A:390:C:H6	1.91	0.52
16:P:17:TYR:CD1	16:P:17:TYR:N	2.78	0.52
5:E:126:ARG:CG	5:E:126:ARG:HH11	2.22	0.52
8:H:10:LEU:CD2	8:H:83:ILE:HD11	2.39	0.52
8:H:86:ILE:HG22	8:H:87:SER:H	1.72	0.52
18:R:76:LEU:O	18:R:78:LEU:HG	2.09	0.52
15:O:8:LYS:O	15:O:9:GLN:C	2.47	0.52
1:A:423:G:C3'	1:A:424:G:H5'	2.39	0.52
20:T:14:LYS:O	20:T:17:ARG:N	2.39	0.52
1:A:836:G:H2'	1:A:837:G:C8	2.45	0.52
7:G:151:TYR:HA	7:G:153:HIS:CE1	2.43	0.52
4:D:125:HIS:O	4:D:126:ILE:HD13	2.09	0.52
1:A:1203:C:H5'	14:N:2:ALA:HB1	1.90	0.52
1:A:1312:G:N2	1:A:1326:C:N3	2.57	0.52
3:C:139:GLN:HA	3:C:142:MET:HB3	1.91	0.52
7:G:101:LEU:C	7:G:103:TRP:N	2.63	0.52
7:G:115:ARG:C	7:G:119:ARG:HH21	2.13	0.52
7:G:46:ALA:CA	7:G:121:ALA:HB2	2.39	0.52
13:M:64:TRP:HB2	13:M:66:LEU:HD11	1.91	0.52
14:N:23:ARG:N	14:N:33:VAL:HG21	2.25	0.52
1:A:377:G:H5''	16:P:24:ALA:HB1	1.90	0.52
16:P:39:TYR:CD1	16:P:73:LEU:CD2	2.93	0.52
1:A:191:G:C1'	20:T:105:SER:HB3	2.40	0.52
1:A:39:G:H1'	1:A:498:U:C5	2.44	0.52
3:C:91:LEU:HD21	3:C:99:VAL:H	1.74	0.52
11:K:21:ILE:HD11	11:K:95:ILE:HA	1.91	0.52
1:A:568:G:N2	1:A:883:C:C6	2.77	0.52
1:A:328:C:H4'	1:A:329:A:H5'	1.90	0.52
1:A:1437:C:H2'	1:A:1438:G:C8	2.45	0.52
11:K:98:LEU:HD23	11:K:98:LEU:N	2.24	0.52
1:A:756:C:O2'	1:A:757:U:H5'	2.10	0.52
1:A:1078:U:C2'	1:A:1079:G:H5'	2.39	0.52
1:A:774:G:N2	1:A:775:G:H1'	2.24	0.52
4:D:105:VAL:HG12	4:D:106:TYR:N	2.24	0.52
4:D:121:VAL:HG12	4:D:134:ASP:O	2.09	0.52
4:D:190:ASP:O	4:D:192:GLU:N	2.42	0.52
1:A:123:C:OP1	1:A:312:C:H5'	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1142:G:H2'	1:A:1143:G:O4'	2.09	0.52
1:A:1219:U:H2'	1:A:1220:G:H8	1.74	0.52
9:I:50:LEU:HD11	9:I:81:ILE:HG22	1.91	0.52
9:I:97:LYS:O	9:I:99:LEU:N	2.42	0.52
1:A:1316:G:H4'	14:N:18:VAL:CG1	2.40	0.52
14:N:43:CYS:O	14:N:47:LEU:HB2	2.10	0.52
19:S:22:LEU:HD22	19:S:28:LYS:HG3	1.91	0.52
20:T:39:LYS:O	20:T:43:LEU:HG	2.09	0.52
20:T:79:ARG:O	20:T:83:ARG:N	2.43	0.52
1:A:38:G:N2	1:A:397:A:H5"	2.24	0.52
2:B:210:SER:C	2:B:212:GLN:N	2.62	0.52
15:O:48:LYS:H	15:O:48:LYS:CD	2.21	0.52
1:A:102:G:O2'	1:A:103:C:H5'	2.10	0.52
1:A:91:C:H2'	1:A:92:C:H6	1.73	0.52
1:A:922:G:N2	1:A:1396:A:C5	2.78	0.52
6:F:97:PHE:CD1	18:R:65:ILE:HD12	2.37	0.52
17:Q:51:TYR:CD2	17:Q:73:VAL:HG11	2.43	0.52
1:A:718:G:H4'	11:K:117:ASN:HD21	1.73	0.52
12:L:81:SER:HB3	12:L:106:ASP:HB2	1.91	0.52
8:H:114:THR:HG22	8:H:130:GLY:C	2.29	0.52
1:A:437:U:H2'	1:A:438:G:O4'	2.10	0.52
5:E:101:ILE:HD12	5:E:119:LEU:HD21	1.92	0.52
12:L:88:GLY:C	12:L:89:ARG:HG2	2.30	0.52
1:A:1276:G:H2'	1:A:1277:C:H5'	1.92	0.52
7:G:111:ARG:HD2	7:G:123:GLU:OE2	2.10	0.52
1:A:450:G:N2	1:A:482:A:H61	2.08	0.52
16:P:2:VAL:O	16:P:64:ALA:CA	2.57	0.52
2:B:73:THR:HG21	2:B:169:LYS:HE3	1.92	0.52
5:E:139:LEU:HA	5:E:142:LEU:HG	1.90	0.52
18:R:56:THR:O	18:R:58:LEU:N	2.43	0.52
2:B:204:ASN:C	2:B:204:ASN:ND2	2.62	0.52
1:A:858:G:O6	1:A:869:G:C8	2.62	0.52
8:H:100:ILE:HG23	8:H:101:PRO:HD2	1.90	0.52
5:E:144:THR:C	5:E:146:ALA:N	2.63	0.52
3:C:191:THR:OG1	3:C:193:TYR:CD2	2.63	0.52
7:G:65:ALA:CB	7:G:128:ALA:CA	2.84	0.52
7:G:135:VAL:O	7:G:138:LYS:HD3	2.09	0.52
7:G:14:PRO:O	7:G:15:ASP:C	2.47	0.52
9:I:53:VAL:HG21	9:I:85:LEU:HD13	1.90	0.52
19:S:23:ASN:O	19:S:25:LYS:N	2.43	0.52
16:P:28:ARG:HD2	16:P:29:ASP:OD2	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:21:VAL:HG11	16:P:59:TRP:NE1	2.23	0.52
20:T:67:ALA:CA	20:T:73:HIS:H	2.15	0.52
8:H:87:SER:HB2	8:H:93:VAL:CB	2.24	0.52
1:A:665:A:H2'	1:A:732:C:O2	2.10	0.52
18:R:35:ARG:O	18:R:37:VAL:N	2.42	0.52
2:B:44:LEU:HA	2:B:47:THR:OG1	2.09	0.52
1:A:1511:G:C6	1:A:1512:U:N3	2.78	0.52
1:A:1526:G:H2'	1:A:1527:C:C6	2.44	0.52
1:A:1046:A:N3	1:A:1046:A:H2'	2.25	0.52
1:A:1487:G:H2'	1:A:1488:G:H5'	1.91	0.52
1:A:145:G:H2'	1:A:146:G:H8	1.75	0.52
1:A:799:G:C2'	1:A:800:G:H5'	2.39	0.52
1:A:529:G:H4'	1:A:533:A:C2	2.44	0.52
4:D:8:VAL:C	4:D:10:ARG:N	2.61	0.52
1:A:1121:U:H2'	1:A:1122:U:C6	2.45	0.52
1:A:1129:C:H1'	1:A:1131:G:C8	2.44	0.52
1:A:1240:U:C1'	7:G:38:LEU:HD11	2.40	0.52
1:A:1372:U:O2'	1:A:1373:G:H5'	2.09	0.52
1:A:986:A:O2'	1:A:987:G:H5'	2.09	0.52
3:C:113:ALA:HB3	3:C:183:ASP:OD2	2.09	0.52
7:G:61:VAL:O	7:G:65:ALA:CB	2.57	0.52
1:A:1118:C:H5'	9:I:104:ARG:HD2	1.92	0.52
9:I:64:THR:CG2	9:I:66:ARG:HH21	2.23	0.52
10:J:14:LYS:HA	10:J:17:ASP:CB	2.35	0.52
10:J:31:GLY:HA3	10:J:81:THR:OG1	2.10	0.52
1:A:277:C:H5'	17:Q:68:ARG:NH1	2.24	0.52
16:P:74:LEU:C	16:P:80:PHE:HE1	2.12	0.52
2:B:161:ALA:O	2:B:162:ILE:HG13	2.09	0.52
3:C:92:ALA:CA	3:C:95:THR:HG22	2.32	0.52
18:R:37:VAL:HB	18:R:41:LYS:CG	2.39	0.52
6:F:18:GLN:C	6:F:21:LEU:HB3	2.30	0.52
15:O:73:GLU:O	15:O:74:ASP:HB2	2.10	0.52
17:Q:90:ILE:O	17:Q:91:ARG:C	2.47	0.52
1:A:316:G:C2	1:A:317:G:C5	2.98	0.52
1:A:1427:U:O4	1:A:1428:A:N6	2.43	0.52
12:L:40:VAL:O	12:L:40:VAL:HG12	2.10	0.52
1:A:415:A:H2'	1:A:416:G:C8	2.44	0.52
4:D:176:LEU:O	4:D:177:ASP:HB3	2.10	0.52
4:D:201:GLN:OE1	4:D:204:ILE:HD12	2.10	0.52
4:D:203:VAL:O	4:D:204:ILE:C	2.47	0.52
1:A:1114:C:H2'	1:A:1115:C:H5'	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1267:C:O2'	21:V:20:LYS:HG3	2.10	0.52
7:G:39:ALA:HA	7:G:42:ILE:CG1	2.40	0.52
9:I:97:LYS:HZ1	9:I:102:LEU:HG	1.75	0.52
19:S:12:ASP:H	19:S:38:SER:CB	2.22	0.52
19:S:49:ILE:CG1	19:S:51:VAL:HG13	2.40	0.52
16:P:5:ARG:HH21	16:P:28:ARG:HA	1.74	0.52
5:E:137:GLU:OE1	5:E:141:GLN:NE2	2.37	0.52
8:H:85:ARG:HG3	8:H:85:ARG:NH1	2.25	0.52
6:F:69:GLU:O	6:F:72:VAL:HG23	2.10	0.52
14:N:9:LYS:C	14:N:11:LYS:N	2.63	0.52
18:R:18:ARG:C	18:R:19:LYS:HG2	2.29	0.52
1:A:915:A:H2'	1:A:916:G:C5'	2.40	0.52
1:A:909:A:H2'	1:A:910:C:O4'	2.10	0.52
7:G:54:THR:CB	7:G:56:GLN:HE22	2.23	0.52
1:A:906:G:O5'	1:A:906:G:H8	1.92	0.52
2:B:78:GLN:HG3	2:B:94:ASN:OD1	2.10	0.52
1:A:628:G:C2'	1:A:629:G:H5'	2.39	0.52
4:D:92:VAL:O	4:D:96:LEU:HD13	2.10	0.52
1:A:941:G:H2'	1:A:942:G:H8	1.75	0.52
7:G:116:ALA:CA	7:G:119:ARG:NH2	2.73	0.52
14:N:46:GLU:OE1	14:N:47:LEU:N	2.41	0.52
16:P:67:THR:HB	16:P:70:ALA:HB2	1.91	0.52
20:T:51:GLU:O	20:T:55:ILE:N	2.43	0.52
3:C:83:ARG:C	3:C:85:ARG:N	2.62	0.52
3:C:76:VAL:HA	3:C:83:ARG:CD	2.39	0.52
1:A:1514:C:H2'	1:A:1515:C:H6	1.75	0.52
1:A:567:G:H2'	1:A:568:G:O4'	2.10	0.52
1:A:575:G:O2'	1:A:576:G:OP2	2.26	0.52
1:A:895:G:H2'	1:A:896:C:C6	2.44	0.52
1:A:916:G:C2	1:A:917:G:N7	2.78	0.52
1:A:553:A:O2'	1:A:554:C:H5'	2.09	0.52
1:A:14:U:O2	1:A:17:U:H5	1.93	0.52
1:A:552:U:H4'	12:L:86:ARG:O	2.09	0.52
8:H:54:ASP:C	8:H:56:LYS:N	2.63	0.52
12:L:50:SER:O	12:L:51:ALA:HB2	2.09	0.52
1:A:1328:C:H5''	13:M:28:ALA:HB1	1.92	0.52
1:A:1329:A:H2'	1:A:1330:U:O4'	2.10	0.52
3:C:127:ARG:HD2	3:C:127:ARG:N	2.24	0.52
3:C:24:ALA:HB1	3:C:28:GLN:HE22	1.75	0.52
3:C:6:HIS:NE2	3:C:8:ILE:HB	2.24	0.52
5:E:50:GLU:OE1	5:E:51:VAL:HG23	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:41:ARG:O	7:G:42:ILE:C	2.48	0.52
1:A:1291:G:O2'	9:I:38:GLN:HG3	2.10	0.52
1:A:1130:A:O3'	9:I:3:GLN:HG3	2.10	0.52
10:J:31:GLY:O	10:J:32:ALA:HB2	2.10	0.52
19:S:23:ASN:OD1	19:S:27:GLU:OE1	2.29	0.52
20:T:66:ALA:C	20:T:68:LYS:H	2.12	0.52
2:B:97:TRP:HZ3	2:B:176:GLU:OE2	1.92	0.52
2:B:14:GLY:C	2:B:15:VAL:HG22	2.30	0.52
2:B:21:ARG:NH1	2:B:23:ARG:NH2	2.57	0.52
1:A:742:G:O2'	1:A:743:U:H5'	2.10	0.52
12:L:6:THR:O	12:L:9:GLN:N	2.42	0.52
1:A:1391:U:H2'	1:A:1392:G:C8	2.44	0.52
1:A:961:U:OP1	1:A:1223:C:H4'	2.10	0.52
1:A:1467:G:O5'	1:A:1467:G:H8	1.93	0.52
1:A:539:A:H2'	1:A:540:G:H8	1.74	0.51
1:A:942:G:O2'	1:A:943:U:H5'	2.10	0.51
5:E:48:ALA:O	5:E:50:GLU:N	2.42	0.51
3:C:135:LYS:NZ	5:E:52:PRO:HG2	2.26	0.51
1:A:1180:A:OP1	9:I:103:THR:HG23	2.10	0.51
9:I:85:LEU:O	9:I:92:TYR:HB2	2.10	0.51
10:J:22:LYS:HZ2	10:J:23:ILE:CD1	2.23	0.51
13:M:35:GLU:C	13:M:37:THR:H	2.13	0.51
19:S:28:LYS:CG	19:S:29:ARG:H	2.19	0.51
2:B:118:LEU:O	2:B:120:ALA:N	2.43	0.51
2:B:134:GLU:HB3	2:B:138:LEU:CD2	2.36	0.51
2:B:116:GLU:HG2	2:B:153:ARG:NH2	2.25	0.51
2:B:187:LEU:CD1	2:B:205:ASP:HA	2.40	0.51
11:K:66:LEU:HD21	11:K:101:SER:HA	1.92	0.51
1:A:1414:U:O2'	1:A:1415:G:H5'	2.09	0.51
2:B:178:ARG:O	2:B:180:LEU:N	2.43	0.51
1:A:180:U:H3	1:A:196:A:N6	2.08	0.51
8:H:103:VAL:HG21	8:H:109:ILE:O	2.10	0.51
1:A:521:G:C6	1:A:529:G:N2	2.79	0.51
1:A:1112:C:O2	3:C:179:ARG:CB	2.58	0.51
1:A:1124:G:H5''	10:J:35:SER:O	2.10	0.51
1:A:1243:C:OP2	21:V:10:ARG:NE	2.43	0.51
7:G:95:ARG:O	7:G:96:GLN:C	2.48	0.51
9:I:7:THR:CG2	9:I:8:GLY:N	2.65	0.51
19:S:11:VAL:CG1	19:S:16:LEU:HD13	2.39	0.51
1:A:1014:A:H4'	19:S:14:HIS:CG	2.45	0.51
19:S:34:TRP:O	19:S:51:VAL:HA	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:V:14:TRP:C	21:V:16:GLY:N	2.62	0.51
16:P:50:LYS:O	16:P:51:VAL:CG2	2.58	0.51
20:T:43:LEU:O	20:T:46:GLU:HB2	2.10	0.51
8:H:113:SER:HB2	8:H:134:ILE:CD1	2.40	0.51
1:A:949:A:C5	1:A:950:U:N3	2.78	0.51
2:B:131:PRO:C	2:B:133:LYS:N	2.64	0.51
2:B:55:PHE:O	2:B:58:ILE:N	2.44	0.51
13:M:96:LEU:O	13:M:97:PRO:O	2.29	0.51
1:A:489:C:H2'	1:A:490:G:C8	2.41	0.51
15:O:46:HIS:N	15:O:46:HIS:ND1	2.57	0.51
12:L:78:GLN:C	12:L:80:HIS:H	2.13	0.51
1:A:204:U:O2'	1:A:216:G:O5'	2.24	0.51
4:D:96:LEU:H	4:D:96:LEU:HD12	1.75	0.51
1:A:286:G:H2'	1:A:287:U:C6	2.45	0.51
1:A:308:C:H2'	1:A:309:G:C8	2.46	0.51
1:A:1276:G:H21	1:A:1282:C:C2'	2.23	0.51
3:C:11:ARG:HH11	3:C:11:ARG:HG2	1.76	0.51
19:S:34:TRP:CD2	19:S:57:HIS:HE1	2.28	0.51
1:A:380:G:H22	1:A:382:A:H3'	1.67	0.51
3:C:75:VAL:O	3:C:83:ARG:NH1	2.43	0.51
3:C:91:LEU:C	3:C:91:LEU:HD23	2.31	0.51
8:H:6:ILE:HB	8:H:85:ARG:NH1	2.26	0.51
2:B:92:TYR:C	2:B:92:TYR:CD1	2.82	0.51
15:O:63:ARG:C	15:O:65:ARG:N	2.62	0.51
1:A:1215:G:H2'	1:A:1216:G:C4'	2.39	0.51
8:H:91:ARG:NH1	17:Q:33:GLY:HA3	2.26	0.51
12:L:62:SER:O	12:L:64:TYR:N	2.43	0.51
1:A:318:G:C2	1:A:319:G:C5	2.99	0.51
8:H:125:ARG:HD2	8:H:125:ARG:H	1.76	0.51
17:Q:80:GLY:O	17:Q:81:ARG:CB	2.55	0.51
1:A:690:G:H2'	1:A:691:G:O4'	2.10	0.51
1:A:718:G:O4'	11:K:117:ASN:ND2	2.43	0.51
7:G:53:LYS:O	7:G:54:THR:HG23	2.10	0.51
2:B:235:SER:C	2:B:237:ALA:N	2.63	0.51
4:D:20:TYR:C	4:D:22:LYS:N	2.64	0.51
17:Q:98:LEU:HD23	17:Q:98:LEU:H	1.76	0.51
1:A:1152:A:H5''	10:J:13:HIS:CB	2.40	0.51
1:A:1255:G:N2	1:A:1259:C:O2	2.35	0.51
3:C:21:ARG:NH2	3:C:56:ASP:HB3	2.26	0.51
13:M:20:THR:CG2	13:M:20:THR:O	2.59	0.51
14:N:48:ALA:O	14:N:50:LYS:N	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:400:C:O5'	1:A:400:C:H6	1.94	0.51
2:B:98:LEU:N	2:B:98:LEU:HD23	2.24	0.51
1:A:39:G:O6	1:A:547:A:H5''	2.10	0.51
3:C:102:ASN:N	3:C:102:ASN:ND2	2.58	0.51
8:H:4:ASP:OD2	8:H:7:ALA:HB2	2.10	0.51
1:A:1074:G:O2'	2:B:103:THR:HG21	2.10	0.51
1:A:476:G:C2'	1:A:477:G:H8	2.21	0.51
1:A:1518:A:C4	1:A:1518:A:OP2	2.63	0.51
1:A:603:U:O2'	1:A:604:G:H5'	2.10	0.51
3:C:31:HIS:HA	3:C:34:LEU:HB2	1.92	0.51
5:E:144:THR:HB	5:E:147:ASP:OD2	2.10	0.51
3:C:79:ARG:NH2	3:C:82:GLU:HG3	2.25	0.51
7:G:5:ARG:O	7:G:7:ALA:N	2.42	0.51
11:K:122:LYS:O	11:K:125:PHE:N	2.40	0.51
1:A:807:A:H2'	1:A:808:C:C6	2.46	0.51
4:D:157:LEU:CB	4:D:158:ILE:HD12	2.33	0.51
12:L:37:CYS:HA	12:L:58:VAL:HA	1.93	0.51
1:A:290:C:C4	1:A:291:C:C5	2.98	0.51
3:C:116:VAL:HA	3:C:119:ARG:CB	2.40	0.51
1:A:1107:C:OP1	3:C:174:PRO:HD3	2.11	0.51
1:A:1347:G:C6	9:I:107:ARG:NH2	2.78	0.51
10:J:19:SER:OG	10:J:91:PRO:HB2	2.10	0.51
13:M:17:VAL:HG12	13:M:21:TYR:HE1	1.76	0.51
13:M:42:ALA:O	13:M:43:THR:C	2.48	0.51
19:S:18:LYS:O	19:S:22:LEU:HD11	2.09	0.51
1:A:1440:C:C2'	1:A:1441:G:H5'	2.39	0.51
16:P:18:ARG:HD3	16:P:35:LYS:CD	2.39	0.51
16:P:78:GLY:C	16:P:80:PHE:N	2.62	0.51
11:K:56:GLY:O	11:K:57:THR:C	2.49	0.51
1:A:949:A:N1	1:A:1233:G:N3	2.58	0.51
6:F:62:TRP:C	6:F:63:TYR:CD1	2.83	0.51
1:A:146:G:C2	1:A:147:G:C8	2.98	0.51
1:A:701:C:OP1	1:A:703:G:H5'	2.10	0.51
1:A:138:G:O2'	1:A:139:G:H5'	2.11	0.51
17:Q:94:ASN:HD22	17:Q:94:ASN:N	2.08	0.51
1:A:1298:C:C4	7:G:114:ARG:HD2	2.46	0.51
3:C:132:ARG:HA	3:C:135:LYS:CD	2.40	0.51
3:C:139:GLN:C	3:C:139:GLN:HE21	2.14	0.51
3:C:177:THR:O	3:C:179:ARG:N	2.44	0.51
7:G:41:ARG:O	7:G:44:TYR:N	2.43	0.51
7:G:91:VAL:CG1	7:G:92:SER:H	2.24	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:255:G:O2'	17:Q:16:GLN:NE2	2.43	0.51
16:P:22:THR:OG1	16:P:26:ARG:HB3	2.10	0.51
2:B:102:LEU:HD21	2:B:162:ILE:CD1	2.40	0.51
5:E:79:GLU:O	5:E:79:GLU:OE1	2.28	0.51
8:H:28:ALA:H	8:H:58:TYR:HA	1.74	0.51
1:A:1228:C:OP2	13:M:111:LYS:HE2	2.11	0.51
1:A:1409:C:H2'	1:A:1410:G:H8	1.74	0.51
1:A:1529:G:H4'	1:A:1530:G:OP2	2.09	0.51
1:A:769:G:H4'	1:A:1513:A:H4'	1.93	0.51
1:A:74:C:H2'	1:A:75:G:O4'	2.10	0.51
1:A:251:G:H4'	1:A:252:U:O5'	2.10	0.51
13:M:116:THR:HG22	13:M:117:VAL:N	2.25	0.51
4:D:82:ALA:O	4:D:83:SER:C	2.49	0.51
1:A:1430:C:O2'	1:A:1431:C:H5'	2.10	0.51
4:D:175:SER:OG	4:D:186:LEU:HD21	2.11	0.51
4:D:8:VAL:O	4:D:9:CYS:C	2.49	0.51
12:L:66:VAL:HG12	12:L:67:THR:N	2.15	0.51
1:A:53:A:C2	1:A:54:C:C2	2.98	0.51
1:A:1245:A:C2	1:A:1293:G:N3	2.79	0.51
10:J:86:MET:H	10:J:88:LEU:HG	1.76	0.51
10:J:89:ASP:O	10:J:90:LEU:HB2	2.11	0.51
13:M:15:VAL:O	13:M:19:LEU:HD12	2.11	0.51
21:V:6:ARG:CD	21:V:15:ARG:HH22	2.24	0.51
1:A:393:A:O2'	1:A:394:G:H5'	2.10	0.51
20:T:79:ARG:O	20:T:80:ARG:C	2.48	0.51
3:C:84:ILE:O	3:C:88:ARG:HD2	2.10	0.51
3:C:85:ARG:C	3:C:87:LEU:H	2.12	0.51
1:A:642:A:N3	8:H:113:SER:O	2.43	0.51
1:A:875:C:O2'	8:H:14:ARG:HD2	2.11	0.51
1:A:735:C:H1'	18:R:75:ILE:HD11	1.93	0.51
2:B:164:VAL:HG12	2:B:165:VAL:N	2.25	0.51
2:B:208:ILE:CG2	2:B:209:ARG:N	2.72	0.51
2:B:21:ARG:HH22	2:B:23:ARG:NH2	2.08	0.51
6:F:71:ARG:O	6:F:72:VAL:C	2.49	0.51
12:L:62:SER:C	12:L:64:TYR:H	2.14	0.51
1:A:835:U:H3	1:A:851:G:H1	1.59	0.51
6:F:9:VAL:CB	6:F:87:ARG:HB2	2.40	0.51
1:A:1434:A:O2'	1:A:1435:G:H5'	2.10	0.51
6:F:74:ASP:HB3	6:F:77:ARG:HH21	1.76	0.51
1:A:409:G:H2'	1:A:410:G:O4'	2.11	0.51
4:D:113:SER:O	4:D:117:ALA:N	2.42	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:149:ALA:O	4:D:150:GLU:C	2.49	0.51
1:A:1144:G:H21	1:A:1146:A:H61	1.56	0.51
1:A:1153:C:OP1	10:J:13:HIS:CE1	2.64	0.51
3:C:39:ILE:CD1	3:C:57:ILE:HD11	2.41	0.51
1:A:1318:A:H4'	19:S:10:PHE:CD2	2.45	0.51
20:T:99:LEU:C	20:T:101:GLY:N	2.61	0.51
6:F:19:LEU:HD23	6:F:23:LYS:HG3	1.91	0.51
6:F:71:ARG:C	6:F:73:ASN:N	2.62	0.51
1:A:891:U:O2'	1:A:892:A:H5'	2.09	0.51
1:A:925:G:N1	1:A:927:G:C5	2.79	0.51
8:H:100:ILE:HG21	8:H:125:ARG:HE	1.76	0.51
1:A:597:G:C5	1:A:598:U:C6	2.98	0.51
1:A:1474:G:H2'	1:A:1475:G:H8	1.75	0.51
1:A:991:U:O2'	1:A:993:G:C8	2.63	0.51
3:C:191:THR:CG2	3:C:194:GLY:O	2.58	0.51
1:A:407:G:H2'	1:A:408:A:C8	2.46	0.51
4:D:43:HIS:HB3	4:D:46:LYS:HE3	1.92	0.51
4:D:96:LEU:CD1	4:D:96:LEU:N	2.73	0.51
9:I:122:ALA:HB1	9:I:123:PRO:HD2	1.93	0.51
13:M:5:ALA:HB2	13:M:22:ILE:HD13	1.93	0.51
14:N:24:CYS:O	14:N:28:GLY:CA	2.58	0.51
14:N:36:PHE:HB3	14:N:37:PHE:CE1	2.46	0.51
1:A:185:A:H1'	20:T:81:LYS:HZ3	1.76	0.51
16:P:43:LYS:CB	16:P:48:TRP:CD1	2.92	0.51
2:B:91:PRO:HG3	2:B:154:LEU:HB2	1.93	0.51
3:C:44:GLU:OE1	3:C:68:VAL:HG22	2.11	0.51
3:C:50:ALA:HA	3:C:72:LYS:HB2	1.92	0.51
15:O:16:ALA:O	15:O:18:PHE:N	2.44	0.51
11:K:67:ASP:C	11:K:69:ALA:N	2.64	0.51
1:A:264:U:C2'	1:A:265:G:H5'	2.41	0.51
1:A:1021:G:H2'	1:A:1022:G:C8	2.46	0.51
5:E:25:ARG:C	5:E:26:PHE:CD1	2.84	0.51
1:A:1361(A):C:H2'	1:A:1362:C:H5''	1.91	0.51
8:H:97:VAL:C	8:H:99:GLU:H	2.14	0.51
18:R:69:THR:O	18:R:70:ILE:C	2.49	0.51
1:A:763:G:H2'	1:A:764:C:C6	2.46	0.51
4:D:200:GLU:O	4:D:203:VAL:HB	2.11	0.51
7:G:36:LYS:O	7:G:40:ALA:N	2.43	0.51
13:M:56:LEU:HD12	13:M:57:ARG:H	1.74	0.51
19:S:19:VAL:HG12	19:S:20:LEU:N	2.26	0.51
16:P:12:LYS:O	16:P:13:HIS:CB	2.59	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:4:ILE:CG1	16:P:64:ALA:HB1	2.35	0.51
1:A:186:C:H4'	20:T:82:SER:HB2	1.93	0.51
8:H:4:ASP:OD2	8:H:7:ALA:CB	2.59	0.51
2:B:76:GLN:O	2:B:208:ILE:HD11	2.10	0.51
5:E:9:LYS:O	5:E:33:VAL:N	2.43	0.51
15:O:29:VAL:O	15:O:32:LEU:HB3	2.11	0.51
15:O:28:GLN:O	15:O:32:LEU:HB2	2.11	0.51
1:A:877:C:C2'	1:A:878:G:H5'	2.40	0.51
11:K:33:THR:OG1	11:K:34:ASP:N	2.42	0.51
1:A:321:A:H2'	1:A:322:C:C6	2.46	0.51
2:B:173:ALA:O	2:B:174:VAL:C	2.49	0.51
1:A:1474:G:H2'	1:A:1475:G:C8	2.46	0.51
1:A:1418:A:O2'	1:A:1419:G:H5'	2.11	0.51
8:H:53:VAL:O	8:H:54:ASP:HB3	2.10	0.51
3:C:201:TYR:O	3:C:202:ILE:HG13	2.10	0.51
1:A:436:C:O2'	1:A:437:U:H5'	2.11	0.50
1:A:1144:G:H21	1:A:1146:A:N6	2.09	0.50
1:A:1176:A:H2'	1:A:1177:G:O4'	2.11	0.50
3:C:11:ARG:HA	3:C:14:ILE:CD1	2.41	0.50
7:G:74:GLU:N	7:G:91:VAL:HG23	2.26	0.50
10:J:60:ARG:H	10:J:60:ARG:HD3	1.75	0.50
19:S:36:ARG:HH21	19:S:75:ALA:HB1	1.75	0.50
1:A:277:C:P	17:Q:68:ARG:HH12	2.33	0.50
1:A:399:G:N7	1:A:400:C:N4	2.59	0.50
16:P:80:PHE:HD1	16:P:80:PHE:H	1.55	0.50
20:T:59:ALA:O	20:T:60:GLU:C	2.49	0.50
1:A:665:A:H3'	1:A:725:G:N2	2.27	0.50
2:B:10:LEU:HG	2:B:48:MET:CE	2.40	0.50
2:B:142:LEU:O	2:B:143:GLU:C	2.50	0.50
11:K:58:PRO:O	11:K:59:TYR:C	2.49	0.50
17:Q:65:ILE:N	17:Q:65:ILE:HD12	2.25	0.50
14:N:8:GLU:CA	14:N:11:LYS:HD3	2.41	0.50
17:Q:11:VAL:HG11	17:Q:22:LEU:HB2	1.93	0.50
1:A:24:U:H2'	1:A:25:C:H6	1.74	0.50
1:A:841:U:H5'	1:A:848:C:C5	2.46	0.50
1:A:1224:G:N2	1:A:1362:C:N3	2.59	0.50
1:A:363:A:O2'	1:A:364:A:H5'	2.10	0.50
1:A:1080:A:H5'	5:E:14:ARG:NH2	2.25	0.50
1:A:1492:A:O2'	1:A:1493:A:C8	2.65	0.50
5:E:150:ARG:O	5:E:151:LEU:C	2.48	0.50
7:G:110:GLN:OE1	7:G:110:GLN:HA	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:620:C:N1	4:D:135:LEU:HD13	2.26	0.50
4:D:150:GLU:O	4:D:152:SER:N	2.45	0.50
4:D:163:GLU:O	4:D:165:MET:N	2.44	0.50
12:L:56:ALA:O	12:L:57:LYS:C	2.49	0.50
1:A:290:C:H42	1:A:310:G:H1	1.58	0.50
1:A:54:C:H2'	1:A:352:C:H41	1.76	0.50
1:A:59:A:H2'	1:A:331:G:N2	2.26	0.50
1:A:1118:C:H1'	1:A:1179:A:N9	2.27	0.50
1:A:1371:G:C4	1:A:1372:U:C5	3.00	0.50
3:C:126:ARG:CB	3:C:128:PHE:HB3	2.41	0.50
3:C:179:ARG:C	3:C:181:ASN:H	2.14	0.50
7:G:108:ALA:O	7:G:119:ARG:HB3	2.12	0.50
7:G:65:ALA:HB2	7:G:128:ALA:CB	2.41	0.50
10:J:55:LYS:HB2	10:J:56:HIS:CD2	2.47	0.50
19:S:35:SER:O	19:S:71:LEU:HD13	2.11	0.50
19:S:65:ASN:OD1	19:S:66:MET:HG3	2.12	0.50
15:O:15:PHE:O	15:O:16:ALA:C	2.49	0.50
8:H:104:ARG:HG2	8:H:104:ARG:NH1	2.26	0.50
8:H:4:ASP:CG	8:H:85:ARG:HH12	2.15	0.50
18:R:37:VAL:HB	18:R:41:LYS:HD3	1.93	0.50
14:N:9:LYS:O	14:N:9:LYS:HD3	2.09	0.50
1:A:424:G:H2'	1:A:425:G:H8	1.76	0.50
1:A:687:A:O2'	1:A:688:G:P	2.69	0.50
2:B:25:ASN:O	2:B:27:LYS:N	2.45	0.50
1:A:101:A:C2	1:A:102:G:C8	2.99	0.50
1:A:75:G:O2'	1:A:76:C:H5'	2.11	0.50
1:A:1036:G:H2'	1:A:1037:C:C4'	2.41	0.50
1:A:722:A:H3'	1:A:722:A:N3	2.25	0.50
1:A:290:C:C2'	1:A:291:C:H5'	2.41	0.50
1:A:57:G:C2	1:A:58:C:O2	2.65	0.50
1:A:1064:G:OP1	1:A:1386:G:H4'	2.11	0.50
1:A:1291:G:H5''	7:G:41:ARG:NH2	2.26	0.50
1:A:1298:C:O4'	1:A:1299:A:C6	2.64	0.50
1:A:1313:U:OP2	19:S:6:LYS:HA	2.11	0.50
3:C:8:ILE:HG22	14:N:50:LYS:HA	1.93	0.50
1:A:939:G:H5''	7:G:102:ARG:NH2	2.26	0.50
7:G:73:MET:HA	7:G:91:VAL:HG23	1.92	0.50
9:I:49:PRO:HG2	9:I:50:LEU:CD1	2.38	0.50
14:N:37:PHE:CD2	14:N:53:LEU:HD21	2.46	0.50
1:A:235:C:H5'	17:Q:70:ARG:CD	2.33	0.50
16:P:74:LEU:HB3	16:P:79:VAL:HG21	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:100:ILE:O	20:T:102:GLY:N	2.44	0.50
20:T:54:LYS:HB2	20:T:100:ILE:HD11	1.93	0.50
8:H:10:LEU:HD22	8:H:83:ILE:HD11	1.93	0.50
18:R:38:GLU:H	18:R:41:LYS:CG	2.25	0.50
18:R:79:LEU:HD12	18:R:79:LEU:N	2.26	0.50
2:B:213:LEU:HD23	2:B:213:LEU:C	2.32	0.50
11:K:48:ILE:HG13	11:K:64:ALA:HA	1.93	0.50
8:H:21:LYS:O	8:H:65:TYR:OH	2.22	0.50
14:N:14:PRO:CG	14:N:15:LYS:N	2.73	0.50
1:A:102:G:H22	1:A:171:A:H2	1.57	0.50
1:A:21:G:C2	1:A:22:G:C6	2.98	0.50
1:A:834:C:O2'	1:A:835:U:H5'	2.12	0.50
1:A:922:G:H1	1:A:1395:C:H42	1.58	0.50
6:F:12:PRO:CG	6:F:57:GLN:HG3	2.37	0.50
1:A:1084:G:OP1	1:A:1086:U:C4	2.65	0.50
5:E:95:ALA:HB1	5:E:96:PRO:HD2	1.92	0.50
1:A:342:C:H6	1:A:342:C:O5'	1.95	0.50
1:A:564:C:H5'	17:Q:32:TYR:CE2	2.47	0.50
13:M:67:GLU:O	13:M:68:GLY:C	2.50	0.50
4:D:23:GLY:HA2	4:D:113:SER:HB2	1.92	0.50
1:A:1346:A:O2'	1:A:1347:G:P	2.69	0.50
3:C:116:VAL:C	3:C:119:ARG:HB3	2.31	0.50
3:C:143:GLU:C	3:C:145:GLY:H	2.14	0.50
7:G:13:GLN:C	7:G:21:VAL:HG12	2.32	0.50
13:M:22:ILE:O	13:M:24:GLY:N	2.41	0.50
14:N:59:ALA:HB1	14:N:61:TRP:HZ3	1.75	0.50
19:S:49:ILE:HG22	19:S:60:VAL:CB	2.39	0.50
17:Q:18:THR:HG23	17:Q:69:LYS:NZ	2.26	0.50
16:P:21:VAL:CG1	16:P:33:ILE:HB	2.42	0.50
16:P:75:ARG:CA	16:P:80:PHE:CE1	2.94	0.50
12:L:104:VAL:O	12:L:105:TYR:HB2	2.11	0.50
3:C:50:ALA:HA	3:C:72:LYS:CG	2.41	0.50
2:B:74:LYS:HE2	2:B:166:ASP:HB2	1.90	0.50
5:E:12:LEU:C	5:E:12:LEU:HD13	2.32	0.50
1:A:960:U:H4'	1:A:961:U:C5'	2.42	0.50
8:H:97:VAL:HA	8:H:100:ILE:CD1	2.37	0.50
1:A:137:C:N3	1:A:226:G:N2	2.44	0.50
18:R:88:LYS:HG3	18:R:88:LYS:OXT	2.12	0.50
3:C:191:THR:OG1	3:C:192:THR:N	2.45	0.50
1:A:772:U:O2'	1:A:773:G:H5'	2.12	0.50
1:A:570:G:C6	1:A:571:U:O4	2.65	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:140:A:H2'	1:A:141:A:O4'	2.11	0.50
1:A:407:G:C6	1:A:408:A:N6	2.80	0.50
1:A:438:G:H4'	1:A:439:A:OP1	2.10	0.50
3:C:141:VAL:O	3:C:146:ALA:HB3	2.11	0.50
10:J:44:VAL:CG1	10:J:45:ARG:H	2.23	0.50
10:J:65:LEU:C	10:J:65:LEU:HD23	2.31	0.50
13:M:14:ARG:HH12	13:M:16:ASP:HB2	1.77	0.50
13:M:17:VAL:C	13:M:19:LEU:N	2.64	0.50
13:M:23:TYR:CE2	13:M:70:LEU:HD22	2.46	0.50
1:A:272:C:O2'	1:A:273:A:H5'	2.11	0.50
1:A:386:C:H2'	1:A:387:U:H5'	1.92	0.50
17:Q:63:ARG:HH11	17:Q:63:ARG:HG3	1.76	0.50
20:T:79:ARG:HG2	20:T:83:ARG:HH11	1.76	0.50
5:E:130:ASN:O	5:E:133:TYR:N	2.45	0.50
5:E:80:ILE:C	5:E:81:GLU:HG3	2.31	0.50
8:H:86:ILE:CG2	8:H:87:SER:N	2.65	0.50
2:B:92:TYR:HE1	2:B:151:GLY:N	2.10	0.50
2:B:112:VAL:CG1	2:B:153:ARG:HA	2.41	0.50
2:B:42:ILE:CD1	2:B:203:GLY:HA2	2.41	0.50
2:B:81:VAL:O	2:B:83:MET:N	2.44	0.50
13:M:88:ARG:HD2	19:S:3:ARG:NH2	2.26	0.50
5:E:9:LYS:O	5:E:32:VAL:HA	2.11	0.50
18:R:22:VAL:HG13	18:R:26:LEU:HD11	1.93	0.50
5:E:20:GLN:O	5:E:21:ALA:C	2.50	0.50
1:A:1361(A):C:O2'	1:A:1362:C:H5''	2.12	0.50
1:A:961:U:H1'	1:A:984:C:O4'	2.12	0.50
1:A:777:A:C6	1:A:778:G:C5	3.00	0.50
1:A:691:G:OP2	11:K:26:ASN:ND2	2.42	0.50
1:A:1403:C:H2'	1:A:1404:C:H6	1.72	0.50
1:A:189:G:H2'	1:A:190:C:C6	2.46	0.50
5:E:143:ARG:HH11	5:E:143:ARG:HG3	1.75	0.50
3:C:188:LEU:O	3:C:189:ALA:HB2	2.11	0.50
4:D:134:ASP:O	4:D:135:LEU:C	2.49	0.50
1:A:619:U:H3	4:D:135:LEU:HD21	1.76	0.50
4:D:192:GLU:O	4:D:193:ASP:C	2.50	0.50
12:L:24:VAL:O	12:L:26:ALA:N	2.41	0.50
1:A:53:A:C6	1:A:54:C:C4	2.99	0.50
1:A:1162:C:H2'	1:A:1163:C:C6	2.47	0.50
3:C:137:ALA:CA	3:C:140:ARG:HH11	2.25	0.50
3:C:183:ASP:OD2	3:C:184:TYR:O	2.30	0.50
7:G:63:LYS:O	7:G:67:GLU:HG2	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:97:LYS:NZ	9:I:102:LEU:HD11	2.27	0.50
10:J:22:LYS:HZ1	10:J:91:PRO:HD3	1.76	0.50
1:A:112:G:O2'	1:A:113:G:H5'	2.11	0.50
1:A:392:G:C2	1:A:393:A:C5	3.00	0.50
1:A:39:G:C2	1:A:40:C:C6	3.00	0.50
8:H:38:ILE:O	8:H:40:ALA:N	2.44	0.50
8:H:40:ALA:O	8:H:41:ARG:C	2.50	0.50
1:A:665:A:N3	1:A:732:C:H2'	2.26	0.50
2:B:223:ILE:HG21	2:B:230:VAL:HG23	1.93	0.50
2:B:88:ALA:HB2	2:B:219:VAL:CG1	2.42	0.50
1:A:1509:C:H2'	1:A:1510:U:O4'	2.10	0.50
1:A:298:A:C6	1:A:299:G:C2	3.00	0.50
7:G:152:ALA:CB	7:G:155:ARG:CZ	2.89	0.50
1:A:602:A:H2'	1:A:603:U:O4'	2.12	0.50
1:A:959:A:C2	1:A:1222:G:O4'	2.65	0.50
1:A:886:G:H1	1:A:911:U:H3	1.60	0.50
1:A:1533:C:H3'	1:A:1533:C:O2	2.12	0.50
1:A:626:U:O2'	1:A:627:G:H5'	2.11	0.50
4:D:110:PHE:N	4:D:110:PHE:CD1	2.80	0.50
4:D:32:ALA:C	4:D:34:GLU:H	2.14	0.50
1:A:1317:C:O2'	1:A:1318:A:H5'	2.11	0.50
10:J:33:GLN:C	10:J:75:ILE:HG22	2.31	0.50
14:N:53:LEU:HD12	14:N:56:VAL:CB	2.34	0.50
1:A:1326:C:OP1	21:V:17:THR:HB	2.12	0.50
1:A:366:C:O2'	1:A:367:U:H5''	2.11	0.50
20:T:39:LYS:HG2	20:T:55:ILE:HD12	1.94	0.50
20:T:60:GLU:O	20:T:63:ILE:HB	2.11	0.50
8:H:31:PHE:CZ	8:H:134:ILE:HD13	2.47	0.50
2:B:220:ASP:O	2:B:224:GLN:HB2	2.11	0.50
2:B:35:GLU:HA	2:B:40:HIS:HA	1.93	0.50
1:A:1413:A:C2	1:A:1414:U:N1	2.80	0.50
15:O:48:LYS:C	15:O:50:HIS:N	2.63	0.50
1:A:687:A:H4'	1:A:688:G:O5'	2.12	0.50
1:A:635:G:H2'	1:A:636:U:C6	2.47	0.50
1:A:762:C:H2'	1:A:763:G:C8	2.40	0.50
1:A:142:G:H1'	1:A:196:A:C2	2.47	0.50
1:A:624:C:O5'	1:A:624:C:H6	1.94	0.50
4:D:12:CYS:HG	4:D:19:LEU:HB2	1.75	0.50
1:A:1245:A:C2	1:A:1293:G:C2	3.00	0.50
3:C:21:ARG:HD2	3:C:21:ARG:N	2.26	0.50
9:I:6:GLY:CA	9:I:83:ARG:HD2	2.40	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:13:LYS:O	13:M:14:ARG:C	2.49	0.50
19:S:49:ILE:HG12	19:S:71:LEU:CD2	2.42	0.50
21:V:9:ARG:O	21:V:13:ILE:HB	2.12	0.50
16:P:75:ARG:HA	16:P:80:PHE:HE1	1.75	0.50
20:T:75:ASN:O	20:T:78:ALA:N	2.45	0.50
20:T:85:MET:O	20:T:86:ARG:C	2.48	0.50
3:C:71:ALA:O	3:C:73:PRO:CD	2.56	0.50
2:B:71:VAL:HG23	2:B:164:VAL:HG13	1.93	0.50
1:A:1392:G:C2'	1:A:1393:U:H5'	2.42	0.50
1:A:923:A:H2	1:A:1395:C:N3	2.10	0.50
1:A:927:G:N2	1:A:1391:U:C1'	2.75	0.50
1:A:597:G:C2'	1:A:598:U:H5'	2.40	0.50
1:A:1418:A:C2'	1:A:1419:G:H5'	2.42	0.50
1:A:16:A:C2	1:A:920:U:O2	2.65	0.50
1:A:711:G:H2'	1:A:712:A:H8	1.73	0.50
1:A:679:C:H2'	1:A:680:C:C6	2.47	0.50
1:A:157:G:H2'	1:A:158:G:H8	1.75	0.50
13:M:11:ARG:HD3	13:M:12:ASN:N	2.27	0.50
4:D:24:GLU:O	4:D:25:ARG:HB3	2.12	0.50
12:L:60:LEU:HD23	12:L:65:GLU:HA	1.92	0.50
1:A:1240:U:O2	7:G:38:LEU:HD21	2.11	0.50
3:C:119:ARG:O	3:C:123:GLN:HG3	2.11	0.50
9:I:118:LYS:H	9:I:121:ARG:HB3	1.77	0.50
10:J:10:GLY:CA	10:J:16:LEU:HD12	2.37	0.50
10:J:26:ALA:O	10:J:84:GLN:OE1	2.28	0.50
10:J:48:THR:HG21	10:J:62:HIS:CE1	2.47	0.50
14:N:40:CYS:SG	14:N:41:ARG:N	2.85	0.50
19:S:24:ALA:HB3	19:S:25:LYS:HZ2	1.73	0.50
21:V:8:THR:HG22	21:V:9:ARG:H	1.77	0.50
1:A:376:G:HO2'	1:A:377:G:H5'	1.75	0.50
1:A:452:A:C4'	16:P:72:ARG:NH2	2.74	0.50
16:P:75:ARG:N	16:P:80:PHE:HE1	2.09	0.50
20:T:99:LEU:O	20:T:100:ILE:C	2.50	0.50
2:B:91:PRO:HG3	2:B:154:LEU:CB	2.42	0.50
3:C:47:LEU:HD21	3:C:76:VAL:CG1	2.41	0.50
3:C:83:ARG:O	3:C:85:ARG:N	2.43	0.50
5:E:132:ALA:O	5:E:135:THR:N	2.39	0.50
8:H:108:GLY:HA3	8:H:138:TRP:CB	2.42	0.50
6:F:22:GLU:C	6:F:24:GLU:N	2.65	0.50
1:A:1399:C:C2	1:A:1502:A:N6	2.80	0.50
17:Q:90:ILE:HA	17:Q:93:GLN:CB	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:97:VAL:C	8:H:99:GLU:N	2.64	0.50
1:A:190(B):C:H2'	1:A:190(C):C:O4'	2.11	0.50
1:A:16:A:C2'	1:A:17:U:H5'	2.42	0.50
2:B:30:ARG:O	2:B:31:TYR:CD1	2.65	0.50
1:A:1533:C:O2	1:A:1533:C:C2'	2.60	0.50
1:A:1448:C:N3	1:A:1449:C:C5	2.80	0.50
8:H:25:ASP:N	8:H:25:ASP:OD1	2.36	0.50
4:D:159:ARG:O	4:D:163:GLU:HB2	2.11	0.49
12:L:115:LYS:O	12:L:117:ARG:N	2.34	0.49
12:L:59:ARG:HH11	12:L:59:ARG:CG	2.25	0.49
1:A:115:G:H1	1:A:312:C:N4	2.09	0.49
1:A:115:G:C1'	1:A:116:A:N7	2.71	0.49
1:A:943:U:C2'	1:A:944:G:H5'	2.42	0.49
3:C:27:LYS:CA	3:C:30:ARG:HH12	2.21	0.49
7:G:17:VAL:O	7:G:19:GLY:N	2.45	0.49
14:N:46:GLU:OE2	14:N:47:LEU:HD23	2.11	0.49
1:A:39:G:C2	1:A:40:C:C5	2.99	0.49
8:H:34:GLU:O	8:H:37:ARG:N	2.45	0.49
2:B:210:SER:OG	2:B:211:ILE:N	2.43	0.49
17:Q:11:VAL:CG1	17:Q:22:LEU:HB2	2.42	0.49
1:A:924:C:H2'	1:A:925:G:C8	2.47	0.49
1:A:1077:G:N2	1:A:1080:A:OP2	2.39	0.49
1:A:1483:A:C2'	1:A:1484:C:H5'	2.41	0.49
1:A:1483:A:H2'	1:A:1484:C:O4'	2.12	0.49
7:G:80:VAL:HG12	7:G:81:GLY:N	2.27	0.49
13:M:71:ARG:HG2	13:M:71:ARG:HH11	1.77	0.49
1:A:1349:A:OP2	9:I:118:LYS:NZ	2.45	0.49
3:C:150:LYS:CG	3:C:169:ALA:HB2	2.37	0.49
5:E:30:ALA:HB1	5:E:55:VAL:HG12	1.93	0.49
7:G:118:VAL:O	7:G:120:ILE:N	2.45	0.49
1:A:1128:C:OP1	9:I:66:ARG:NH2	2.45	0.49
10:J:47:PHE:CZ	14:N:37:PHE:HZ	2.29	0.49
10:J:64:GLU:HG3	14:N:59:ALA:HB2	1.94	0.49
10:J:4:ILE:O	10:J:6:ILE:HG12	2.12	0.49
13:M:70:LEU:HD23	13:M:70:LEU:O	2.13	0.49
14:N:21:TYR:O	14:N:23:ARG:N	2.45	0.49
14:N:6:LEU:CD2	14:N:23:ARG:HE	2.25	0.49
19:S:34:TRP:HE3	19:S:34:TRP:H	1.59	0.49
1:A:44:G:N2	1:A:45:U:H1'	2.27	0.49
16:P:60:LEU:HD21	16:P:66:PRO:HD3	1.94	0.49
16:P:74:LEU:O	16:P:78:GLY:N	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:788:U:O2'	1:A:789:U:H5'	2.12	0.49
3:C:55:VAL:HG13	3:C:68:VAL:CG2	2.42	0.49
3:C:22:TRP:HD1	3:C:59:ARG:HB2	1.76	0.49
5:E:80:ILE:HD11	5:E:91:LEU:HD12	1.95	0.49
2:B:46:LYS:O	2:B:47:THR:C	2.50	0.49
2:B:54:THR:O	2:B:58:ILE:HG13	2.12	0.49
6:F:30:LEU:CD2	6:F:35:ALA:HB3	2.42	0.49
11:K:32:ILE:HG22	11:K:33:THR:N	2.27	0.49
1:A:67:C:O2'	1:A:171:A:H1'	2.11	0.49
1:A:182:U:H2'	1:A:183:G:H5'	1.93	0.49
1:A:89:C:H6	1:A:89:C:OP2	1.95	0.49
17:Q:48:GLU:OE1	17:Q:50:LYS:HD2	2.11	0.49
1:A:886:G:C2	1:A:887:G:C4	3.00	0.49
13:M:11:ARG:O	13:M:12:ASN:HB3	2.12	0.49
1:A:1455:G:O5'	1:A:1455:G:H8	1.95	0.49
1:A:414:A:OP2	1:A:428:G:N2	2.45	0.49
4:D:156:GLU:N	4:D:156:GLU:OE1	2.45	0.49
3:C:120:VAL:CA	3:C:123:GLN:HB2	2.34	0.49
3:C:131:ARG:O	3:C:135:LYS:HG3	2.12	0.49
3:C:139:GLN:O	3:C:140:ARG:C	2.50	0.49
7:G:22:LEU:HD12	7:G:23:VAL:N	2.27	0.49
7:G:24:THR:HA	7:G:27:ILE:HD12	1.93	0.49
10:J:6:ILE:HD11	10:J:74:ILE:N	2.26	0.49
10:J:86:MET:N	10:J:88:LEU:HG	2.27	0.49
16:P:5:ARG:HB2	16:P:67:THR:OG1	2.11	0.49
5:E:12:LEU:HD11	5:E:31:LEU:HB2	1.93	0.49
1:A:1497:G:C5	1:A:1498:U:C4	3.00	0.49
1:A:971:G:OP1	1:A:971:G:H3'	2.12	0.49
7:G:155:ARG:HE	7:G:155:ARG:CA	2.16	0.49
1:A:606:G:H2'	1:A:631:G:N2	2.27	0.49
18:R:26:LEU:HD21	18:R:42:ARG:HD2	1.93	0.49
1:A:597:G:C6	1:A:644:G:C6	3.00	0.49
5:E:92:LYS:O	5:E:118:ILE:CG2	2.61	0.49
1:A:1175:G:O2'	1:A:1176:A:H5'	2.12	0.49
1:A:1371:G:H2'	1:A:1372:U:H6	1.77	0.49
3:C:203:PHE:CG	3:C:204:LEU:N	2.79	0.49
10:J:16:LEU:HA	10:J:19:SER:HB3	1.93	0.49
10:J:22:LYS:NZ	10:J:23:ILE:CD1	2.75	0.49
10:J:84:GLN:O	10:J:85:LEU:CB	2.59	0.49
10:J:95:GLU:C	10:J:95:GLU:CD	2.70	0.49
19:S:19:VAL:HG12	19:S:20:LEU:HD23	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:192:U:O3'	20:T:57:ARG:NH1	2.45	0.49
1:A:356:A:O2'	1:A:357:G:H5'	2.12	0.49
16:P:19:ILE:O	16:P:36:ILE:HG13	2.12	0.49
3:C:91:LEU:CG	3:C:99:VAL:HG13	2.43	0.49
1:A:1306:A:C5	1:A:1332:A:C8	3.01	0.49
18:R:53:ARG:HD3	18:R:63:GLN:CG	2.42	0.49
2:B:212:GLN:O	2:B:213:LEU:C	2.50	0.49
8:H:19:VAL:O	8:H:19:VAL:HG23	2.12	0.49
6:F:22:GLU:C	6:F:24:GLU:H	2.15	0.49
6:F:28:ARG:O	6:F:31:GLU:OE2	2.30	0.49
1:A:580:U:C1'	15:O:57:LEU:HD23	2.41	0.49
1:A:171:A:O2'	1:A:172:A:H5'	2.12	0.49
1:A:855:G:H2'	1:A:856:C:H6	1.76	0.49
1:A:562:C:H2'	1:A:562:C:OP2	2.12	0.49
4:D:148:VAL:HG12	4:D:149:ALA:H	1.76	0.49
12:L:33:ARG:C	12:L:84:LEU:HD12	2.32	0.49
1:A:582:U:H2'	1:A:583:A:O4'	2.13	0.49
1:A:1343:G:C4	1:A:1344:C:C5	3.00	0.49
3:C:26:LYS:C	3:C:28:GLN:N	2.66	0.49
7:G:111:ARG:O	7:G:119:ARG:HG2	2.13	0.49
9:I:3:GLN:NE2	9:I:4:TYR:N	2.60	0.49
1:A:1152:A:H5''	10:J:13:HIS:CA	2.42	0.49
10:J:54:PHE:O	10:J:55:LYS:O	2.30	0.49
13:M:70:LEU:C	13:M:70:LEU:HD23	2.32	0.49
14:N:6:LEU:O	14:N:23:ARG:HD2	2.12	0.49
1:A:375:U:O2'	1:A:376:G:H5'	2.12	0.49
1:A:399:G:C5	1:A:400:C:N4	2.81	0.49
20:T:99:LEU:O	20:T:101:GLY:N	2.46	0.49
3:C:91:LEU:HD12	3:C:101:LEU:HD12	1.94	0.49
8:H:39:LEU:O	8:H:44:PHE:HB2	2.12	0.49
18:R:72:ARG:O	18:R:75:ILE:N	2.45	0.49
2:B:204:ASN:OD1	2:B:207:ALA:HB2	2.12	0.49
1:A:971:G:H4'	1:A:972:C:H5'	1.94	0.49
1:A:684:A:H2'	1:A:685:G:H8	1.77	0.49
11:K:34:ASP:OD1	11:K:38:ASN:HB2	2.12	0.49
1:A:893:C:C4	1:A:894:G:N7	2.80	0.49
15:O:17:ARG:HH11	15:O:17:ARG:HG3	1.77	0.49
2:B:24:TRP:HA	2:B:190:THR:CG2	2.43	0.49
8:H:120:THR:OG1	8:H:121:ASP:N	2.46	0.49
1:A:499:A:H4'	1:A:500:G:OP1	2.12	0.49
15:O:26:GLU:HG3	15:O:81:LEU:HD12	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:109:GLY:N	12:L:121:GLY:O	2.46	0.49
12:L:28:LYS:C	12:L:30:ALA:H	2.15	0.49
1:A:411:A:N9	1:A:413:G:H1'	2.27	0.49
4:D:177:ASP:OD2	4:D:178:VAL:N	2.45	0.49
4:D:201:GLN:O	4:D:205:GLU:HG3	2.13	0.49
4:D:56:VAL:HG12	4:D:202:LEU:HD13	1.93	0.49
3:C:198:VAL:CG1	3:C:199:LYS:N	2.75	0.49
3:C:37:GLN:HE22	14:N:52:GLN:NE2	2.08	0.49
7:G:124:LEU:O	7:G:127:ALA:HB3	2.11	0.49
7:G:16:LEU:HG	9:I:41:VAL:O	2.12	0.49
7:G:16:LEU:HD12	9:I:44:VAL:HG13	1.95	0.49
9:I:7:THR:N	9:I:83:ARG:HD2	2.28	0.49
9:I:8:GLY:HA2	9:I:79:LEU:HD13	1.94	0.49
13:M:48:LEU:HD21	13:M:52:GLU:HB2	1.94	0.49
14:N:22:THR:O	14:N:23:ARG:O	2.29	0.49
21:V:18:TYR:CE2	21:V:23:PRO:O	2.65	0.49
16:P:4:ILE:HG12	16:P:21:VAL:CG2	2.43	0.49
16:P:53:VAL:O	16:P:55:ARG:N	2.45	0.49
20:T:43:LEU:HD12	20:T:55:ILE:CD1	2.42	0.49
20:T:50:GLU:HB3	20:T:100:ILE:HD11	1.95	0.49
2:B:73:THR:HG23	2:B:96:ARG:HH21	1.72	0.49
5:E:105:VAL:HB	5:E:106:PRO:HD3	1.95	0.49
6:F:80:ARG:HH11	6:F:80:ARG:HG2	1.77	0.49
18:R:73:ALA:CB	18:R:79:LEU:HD13	2.42	0.49
2:B:135:GLN:O	2:B:139:LYS:HB2	2.13	0.49
13:M:76:ALA:O	13:M:77:ASN:C	2.50	0.49
1:A:707:C:O3'	11:K:20:TYR:HE2	1.95	0.49
5:E:25:ARG:C	5:E:26:PHE:HD1	2.15	0.49
1:A:68:G:H8	1:A:68:G:O5'	1.95	0.49
1:A:1438:G:H2'	1:A:1439:C:C6	2.48	0.49
5:E:93:PRO:CG	8:H:105:ARG:HH21	2.26	0.49
1:A:84:U:C4	1:A:88:A:C6	3.01	0.49
10:J:51:ARG:O	10:J:52:GLY:O	2.31	0.49
4:D:101:LEU:HD12	4:D:101:LEU:O	2.13	0.49
4:D:171:GLY:O	4:D:173:TRP:N	2.46	0.49
4:D:9:CYS:HB2	4:D:22:LYS:CE	2.43	0.49
1:A:54:C:H2'	1:A:352:C:N4	2.28	0.49
17:Q:98:LEU:HB3	17:Q:103:GLY:H	1.77	0.49
1:A:1347:G:O2'	1:A:1348:U:OP2	2.31	0.49
7:G:145:ALA:O	7:G:146:GLU:HB3	2.11	0.49
7:G:61:VAL:HG13	7:G:128:ALA:CB	2.41	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:68:ASN:C	7:G:70:LYS:H	2.16	0.49
10:J:47:PHE:CB	14:N:44:LEU:HD21	2.43	0.49
13:M:70:LEU:C	13:M:70:LEU:CD2	2.81	0.49
19:S:36:ARG:NE	19:S:52:TYR:O	2.46	0.49
1:A:376:G:OP2	16:P:67:THR:HG21	2.12	0.49
20:T:62:LEU:C	20:T:65:LYS:HB3	2.33	0.49
8:H:35:ILE:O	8:H:39:LEU:HB2	2.13	0.49
2:B:74:LYS:O	2:B:77:ALA:N	2.44	0.49
8:H:91:ARG:HH12	17:Q:33:GLY:HA3	1.77	0.49
1:A:681:C:H2'	1:A:682:G:C8	2.48	0.49
1:A:403:C:H2'	1:A:404:U:H6	1.76	0.49
4:D:88:VAL:O	4:D:91:SER:HB3	2.12	0.49
1:A:1060:C:HO2'	10:J:56:HIS:HD1	1.61	0.49
1:A:1110:A:H2'	1:A:1111:A:H5'	1.95	0.49
1:A:1313:U:C5	19:S:4:SER:OG	2.64	0.49
3:C:127:ARG:HG2	3:C:127:ARG:HH11	1.78	0.49
10:J:94:VAL:HG12	10:J:95:GLU:N	2.28	0.49
14:N:25:VAL:HG12	14:N:26:ARG:N	2.27	0.49
21:V:4:GLY:O	21:V:6:ARG:N	2.45	0.49
20:T:52:ALA:O	20:T:53:LEU:C	2.50	0.49
3:C:95:THR:HG23	3:C:95:THR:O	2.13	0.49
6:F:83:ASP:O	6:F:85:VAL:N	2.45	0.49
2:B:213:LEU:O	2:B:216:SER:OG	2.29	0.49
13:M:84:ILE:O	13:M:84:ILE:CG1	2.61	0.49
8:H:21:LYS:N	8:H:65:TYR:OH	2.46	0.49
1:A:766:A:H2'	1:A:767:A:O4'	2.12	0.49
1:A:766:A:C8	1:A:814:A:N6	2.81	0.49
1:A:606:G:H21	1:A:631:G:H2'	1.77	0.49
1:A:865:A:N6	1:A:866:C:N4	2.61	0.49
20:T:23:ARG:O	20:T:26:ASN:N	2.45	0.49
1:A:1379:G:H2'	1:A:1380:U:H5'	1.94	0.49
1:A:935:A:C2	7:G:3:ARG:NH2	2.78	0.49
11:K:82:VAL:CG1	11:K:83:ILE:N	2.76	0.49
18:R:87:ARG:O	18:R:88:LYS:HB2	2.13	0.49
1:A:248:C:H2'	1:A:249:U:H5'	1.95	0.49
4:D:104:VAL:HG11	4:D:146:ILE:HD13	1.95	0.49
4:D:9:CYS:HA	4:D:22:LYS:HD2	1.94	0.49
4:D:61:LYS:NZ	4:D:72:GLU:OE2	2.44	0.49
12:L:41:ARG:HH11	12:L:42:THR:H	1.60	0.49
12:L:46:LYS:CE	12:L:47:LYS:HE2	2.43	0.49
12:L:93:LEU:O	12:L:96:VAL:HG23	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1317:C:H2'	1:A:1318:A:O4'	2.13	0.49
7:G:32:ARG:HG3	7:G:32:ARG:O	2.12	0.49
7:G:66:VAL:O	7:G:70:LYS:HG3	2.13	0.49
3:C:37:GLN:NE2	14:N:52:GLN:NE2	2.59	0.49
19:S:11:VAL:HG21	19:S:41:VAL:CG1	2.40	0.49
19:S:55:LYS:HE2	19:S:56:GLN:NE2	2.28	0.49
1:A:255:G:C2	1:A:272:C:C2	3.00	0.49
16:P:19:ILE:O	16:P:36:ILE:CG1	2.61	0.49
20:T:80:ARG:HH11	20:T:80:ARG:CB	2.24	0.49
1:A:36:C:O2'	1:A:501:C:OP1	2.31	0.49
3:C:48:TYR:CA	3:C:52:LEU:HB3	2.43	0.49
15:O:5:LYS:O	15:O:8:LYS:HB3	2.12	0.49
13:M:81:LEU:HA	13:M:84:ILE:HD11	1.95	0.49
13:M:91:ARG:HB3	13:M:98:VAL:HG22	1.91	0.49
1:A:1509:C:C2'	1:A:1510:U:C5'	2.90	0.49
1:A:781:A:C3'	1:A:782:A:H5'	2.42	0.49
14:N:8:GLU:O	14:N:8:GLU:HG2	2.12	0.49
2:B:34:ALA:O	2:B:41:ILE:N	2.45	0.49
1:A:421:U:H3'	1:A:422:C:C5'	2.41	0.49
1:A:1210:C:C2'	1:A:1211:U:H5''	2.42	0.49
1:A:881:G:OP2	12:L:12:ARG:NH2	2.44	0.49
18:R:21:LYS:O	18:R:22:VAL:O	2.31	0.49
5:E:36:ASP:C	5:E:38:GLN:N	2.66	0.49
1:A:1468:A:H3'	1:A:1469:G:C8	2.48	0.49
12:L:18:VAL:O	12:L:19:ARG:CB	2.60	0.49
1:A:908:A:C2	1:A:909:A:C4	3.00	0.49
1:A:119:A:H4'	1:A:120:A:C8	2.48	0.49
7:G:82:GLY:HA3	7:G:85:TYR:OH	2.13	0.49
1:A:433:C:H2'	1:A:434:U:H6	1.77	0.49
4:D:148:VAL:HG23	4:D:181:MET:HB3	1.93	0.49
4:D:163:GLU:C	4:D:165:MET:N	2.65	0.49
1:A:245:C:O2	1:A:283:C:N3	2.46	0.49
7:G:57:GLU:O	7:G:59:LEU:N	2.46	0.49
9:I:80:GLY:O	9:I:84:ALA:N	2.39	0.49
10:J:42:THR:HG23	10:J:68:HIS:CA	2.36	0.49
10:J:85:LEU:H	10:J:88:LEU:CD1	2.25	0.49
10:J:8:LEU:HD13	10:J:70:ARG:HB2	1.94	0.49
19:S:41:VAL:HG23	19:S:44:MET:HG3	1.93	0.49
21:V:14:TRP:O	21:V:16:GLY:N	2.46	0.49
1:A:190(K):G:O2'	1:A:190(L):U:H5'	2.12	0.49
1:A:357:G:C2'	1:A:358:U:H5'	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:78:GLY:HA2	16:P:80:PHE:HD1	1.78	0.49
20:T:65:LYS:O	20:T:68:LYS:N	2.40	0.49
20:T:78:ALA:O	20:T:82:SER:N	2.43	0.49
1:A:695:A:H2'	1:A:696:A:C8	2.48	0.49
3:C:44:GLU:HG3	3:C:52:LEU:HA	1.94	0.49
15:O:78:TYR:O	15:O:79:ARG:C	2.50	0.49
1:A:860:A:H2'	1:A:861:G:O4'	2.13	0.49
8:H:37:ARG:O	8:H:41:ARG:HB2	2.13	0.49
15:O:8:LYS:HG2	15:O:12:ILE:HD11	1.94	0.49
15:O:9:GLN:HA	15:O:12:ILE:HD13	1.95	0.49
2:B:114:ARG:O	2:B:115:LEU:C	2.51	0.49
2:B:123:ALA:O	2:B:124:SER:C	2.50	0.49
2:B:141:GLU:O	2:B:145:LEU:HG	2.12	0.49
13:M:81:LEU:HD13	13:M:88:ARG:CB	2.31	0.49
1:A:1509:C:H2'	1:A:1510:U:C5'	2.43	0.49
2:B:178:ARG:C	2:B:180:LEU:N	2.65	0.49
5:E:36:ASP:OD2	5:E:40:ARG:HB2	2.13	0.49
8:H:100:ILE:HG21	8:H:121:ASP:HB2	1.95	0.49
18:R:70:ILE:O	18:R:71:LYS:C	2.51	0.49
1:A:1423:G:O2'	1:A:1424:C:H5'	2.13	0.49
1:A:979:C:H3'	1:A:980:C:C6	2.48	0.49
1:A:325:A:H2'	1:A:326:G:O4'	2.12	0.49
1:A:1483:A:C2	1:A:1484:C:H1'	2.47	0.49
1:A:241:C:O2'	1:A:242:C:H5'	2.12	0.49
1:A:988:G:O2'	1:A:1016:A:H2	1.96	0.48
3:C:113:ALA:HB3	3:C:114:PRO:CD	2.40	0.48
9:I:10:ARG:HD2	9:I:11:LYS:N	2.28	0.48
9:I:45:ALA:O	9:I:48:GLU:HB3	2.13	0.48
19:S:15:LEU:HD21	19:S:38:SER:HB3	1.95	0.48
19:S:16:LEU:O	19:S:20:LEU:HG	2.13	0.48
2:B:172:ILE:HD12	2:B:172:ILE:N	2.10	0.48
1:A:35:G:H2'	1:A:36:C:C6	2.48	0.48
1:A:502:G:OP1	12:L:118:SER:N	2.46	0.48
1:A:791:G:N1	1:A:792:A:N6	2.61	0.48
3:C:58:GLU:HG2	3:C:67:THR:OG1	2.14	0.48
15:O:82:ILE:HG12	15:O:82:ILE:O	2.13	0.48
3:C:51:GLY:C	3:C:53:ALA:H	2.15	0.48
15:O:10:LYS:CG	15:O:11:VAL:N	2.75	0.48
2:B:79:ASP:O	2:B:82:ARG:N	2.46	0.48
11:K:44:SER:O	11:K:46:GLY:N	2.46	0.48
1:A:267:C:C4	1:A:268:C:N4	2.81	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:61:GLY:O	15:O:65:ARG:N	2.41	0.48
1:A:1215:G:H2'	1:A:1216:G:C5'	2.43	0.48
2:B:24:TRP:HA	2:B:190:THR:HG23	1.94	0.48
1:A:176:C:H2'	1:A:177:C:H6	1.78	0.48
1:A:296:U:H2'	1:A:297:G:C8	2.48	0.48
1:A:658:G:O2'	1:A:659:U:H5'	2.12	0.48
1:A:337:C:H2'	1:A:338:A:C8	2.48	0.48
6:F:38:GLU:O	6:F:38:GLU:HG2	2.13	0.48
1:A:1464:G:O2'	1:A:1465:C:H5'	2.13	0.48
1:A:11:G:C5	1:A:12:U:C4	3.01	0.48
4:D:61:LYS:O	4:D:62:GLN:C	2.52	0.48
1:A:1124:G:H2'	1:A:1145:C:H41	1.78	0.48
1:A:986:A:C2	19:S:52:TYR:HE2	2.30	0.48
10:J:28:ARG:O	10:J:28:ARG:HG2	2.13	0.48
19:S:31:ILE:HG22	19:S:32:LYS:N	2.28	0.48
19:S:33:THR:O	19:S:33:THR:HG23	2.13	0.48
16:P:57:ARG:O	16:P:61:SER:N	2.47	0.48
17:Q:59:ILE:HG22	17:Q:71:PHE:CD1	2.47	0.48
2:B:107:THR:O	2:B:110:GLN:HG3	2.13	0.48
5:E:79:GLU:OE1	8:H:104:ARG:HD3	2.13	0.48
2:B:126:GLU:OE2	2:B:129:GLU:HB3	2.13	0.48
11:K:60:ALA:O	11:K:61:ALA:C	2.50	0.48
1:A:814:A:O2'	1:A:815:A:H3'	2.14	0.48
2:B:33:TYR:O	2:B:34:ALA:HB2	2.12	0.48
1:A:635:G:H2'	1:A:636:U:H6	1.78	0.48
1:A:657:G:O2'	1:A:658:G:H5'	2.13	0.48
11:K:81:ASP:OD1	11:K:106:LYS:CB	2.60	0.48
4:D:176:LEU:CG	4:D:177:ASP:N	2.49	0.48
13:M:60:VAL:HG13	13:M:64:TRP:CZ3	2.48	0.48
19:S:42:PRO:HG3	19:S:64:GLU:OE1	2.13	0.48
1:A:255:G:O3'	17:Q:17:LYS:HD2	2.12	0.48
1:A:231:G:C2	1:A:232:G:C8	3.01	0.48
16:P:17:TYR:HD1	16:P:17:TYR:N	2.11	0.48
20:T:48:LYS:HB3	20:T:51:GLU:CG	2.43	0.48
1:A:502:G:H2'	1:A:503:C:C6	2.49	0.48
11:K:52:GLY:O	11:K:53:SER:C	2.52	0.48
6:F:91:VAL:HG11	18:R:72:ARG:CZ	2.43	0.48
2:B:118:LEU:C	2:B:120:ALA:N	2.66	0.48
2:B:223:ILE:O	2:B:224:GLN:C	2.51	0.48
2:B:44:LEU:O	2:B:45:GLN:C	2.49	0.48
1:A:455:C:H2'	1:A:456:C:C6	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:142:G:N3	1:A:196:A:H2	2.09	0.48
7:G:79:ARG:HA	7:G:83:ALA:O	2.12	0.48
1:A:518:C:N4	12:L:49:ASN:HD21	2.12	0.48
1:A:1316:G:C4	1:A:1318:A:OP2	2.65	0.48
7:G:46:ALA:CB	7:G:121:ALA:H	2.26	0.48
7:G:26:PHE:O	7:G:29:LYS:N	2.39	0.48
9:I:15:ALA:HB2	9:I:65:VAL:CG2	2.43	0.48
9:I:91:ASP:OD2	9:I:91:ASP:N	2.47	0.48
9:I:97:LYS:HZ1	9:I:102:LEU:CD1	2.26	0.48
9:I:97:LYS:HZ1	9:I:102:LEU:CG	2.27	0.48
10:J:40:LEU:HD13	10:J:69:ASN:CB	2.39	0.48
10:J:46:ARG:HG2	10:J:46:ARG:NH1	2.27	0.48
1:A:1440:C:H2'	1:A:1441:G:C5'	2.41	0.48
1:A:393:A:C4	1:A:394:G:C8	3.01	0.48
16:P:20:VAL:O	16:P:21:VAL:CB	2.61	0.48
1:A:696:A:O5'	1:A:696:A:H8	1.97	0.48
3:C:66:VAL:CG1	3:C:68:VAL:HB	2.33	0.48
5:E:128:PRO:O	5:E:130:ASN:N	2.47	0.48
8:H:20:TYR:HA	8:H:65:TYR:CE2	2.49	0.48
8:H:20:TYR:HA	8:H:65:TYR:CZ	2.48	0.48
6:F:73:ASN:O	6:F:75:LEU:N	2.47	0.48
15:O:17:ARG:CD	15:O:77:ARG:HH11	2.24	0.48
1:A:913:A:H1'	1:A:914:A:C1'	2.43	0.48
18:R:29:PHE:HE1	18:R:31:LEU:HA	1.79	0.48
6:F:55:ASP:C	6:F:57:GLN:H	2.15	0.48
1:A:644:G:C5	1:A:645:C:C5	3.00	0.48
1:A:1025:U:H2'	1:A:1026:G:H8	1.79	0.48
18:R:87:ARG:CG	18:R:87:ARG:NH1	2.75	0.48
1:A:1075:C:O2'	1:A:1076:C:H5'	2.14	0.48
20:T:94:ALA:O	20:T:95:ALA:CB	2.61	0.48
1:A:617:G:H1	1:A:623:C:H42	1.62	0.48
4:D:205:GLU:C	4:D:207:TYR:N	2.64	0.48
4:D:57:ARG:HB3	4:D:206:PHE:HB2	1.94	0.48
4:D:63:LYS:C	4:D:65:ARG:H	2.17	0.48
4:D:7:PRO:HB2	4:D:10:ARG:HB3	1.96	0.48
12:L:60:LEU:HD21	12:L:85:ILE:CD1	2.43	0.48
1:A:1110:A:C8	1:A:1110:A:O5'	2.65	0.48
3:C:14:ILE:HD13	3:C:14:ILE:N	2.28	0.48
7:G:29:LYS:NZ	7:G:102:ARG:HA	2.16	0.48
1:A:1152:A:H5''	10:J:13:HIS:C	2.33	0.48
3:C:91:LEU:HG	3:C:99:VAL:CG1	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1305:G:O2'	1:A:1306:A:P	2.72	0.48
2:B:139:LYS:O	2:B:143:GLU:HG3	2.13	0.48
11:K:92:GLU:CA	11:K:95:ILE:HD12	2.38	0.48
1:A:490:G:O2'	1:A:491:G:H5'	2.13	0.48
1:A:892:A:C6	1:A:893:C:C4	3.02	0.48
1:A:605:U:O2'	1:A:606:G:H5'	2.12	0.48
18:R:21:LYS:HD2	18:R:21:LYS:N	2.19	0.48
18:R:24:ALA:C	18:R:26:LEU:N	2.60	0.48
1:A:914:A:O2'	1:A:915:A:H5'	2.14	0.48
18:R:65:ILE:O	18:R:66:LEU:C	2.51	0.48
1:A:544:G:H2'	1:A:545:C:H6	1.79	0.48
1:A:508:C:P	4:D:209:ARG:HH22	2.36	0.48
5:E:151:LEU:HD11	8:H:77:GLU:OE2	2.13	0.48
4:D:136:PRO:C	4:D:138:TYR:H	2.16	0.48
4:D:173:TRP:CD1	4:D:187:ARG:O	2.66	0.48
1:A:1114:C:N4	1:A:1115:C:C4	2.81	0.48
1:A:939:G:H4'	7:G:102:ARG:HH21	1.78	0.48
3:C:126:ARG:O	3:C:128:PHE:N	2.46	0.48
3:C:205:GLY:O	3:C:206:GLU:CB	2.60	0.48
3:C:5:ILE:CG1	3:C:6:HIS:H	2.26	0.48
10:J:60:ARG:H	10:J:60:ARG:CD	2.27	0.48
14:N:24:CYS:SG	14:N:27:CYS:CB	2.83	0.48
3:C:48:TYR:HB2	3:C:52:LEU:CB	2.36	0.48
15:O:70:LEU:HD12	15:O:78:TYR:HA	1.95	0.48
1:A:642:A:C8	8:H:115:SER:HA	2.48	0.48
1:A:1231:G:C2	1:A:1232:U:C2	3.02	0.48
1:A:948:C:C5	13:M:106:ASN:OD1	2.67	0.48
2:B:111:ARG:C	2:B:113:HIS:N	2.66	0.48
2:B:61:LEU:HD23	2:B:66:GLY:HA3	1.96	0.48
1:A:768:A:C2'	1:A:769:G:H5'	2.43	0.48
1:A:1360:A:C3'	1:A:1361:G:C8	2.97	0.48
3:C:162:GLN:HG3	3:C:164:ARG:CD	2.43	0.48
1:A:345:C:H4'	1:A:346:G:H5''	1.96	0.48
1:A:1379:G:C2'	1:A:1380:U:H5'	2.43	0.48
1:A:337:C:H2'	1:A:338:A:H8	1.78	0.48
4:D:151:LYS:H	4:D:151:LYS:CD	2.27	0.48
1:A:509:A:H2'	1:A:510:A:C8	2.48	0.48
11:K:124:LYS:HB3	11:K:125:PHE:CD1	2.49	0.48
7:G:156:TRP:HD1	7:G:156:TRP:O	1.96	0.48
1:A:1296:C:H5'	13:M:44:ARG:HH22	1.79	0.48
1:A:1385:G:O2'	1:A:1386:G:H5'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:139:GLN:CA	3:C:139:GLN:NE2	2.75	0.48
3:C:184:TYR:HA	3:C:200:ALA:O	2.12	0.48
3:C:153:VAL:HG22	3:C:198:VAL:CG2	2.44	0.48
7:G:65:ALA:HB1	7:G:127:ALA:C	2.34	0.48
7:G:131:LYS:O	7:G:131:LYS:HG3	2.12	0.48
19:S:22:LEU:CD2	19:S:31:ILE:HD11	2.43	0.48
16:P:68:ASP:O	16:P:71:ARG:HG3	2.13	0.48
20:T:76:ALA:C	20:T:80:ARG:HG2	2.34	0.48
2:B:73:THR:HG23	2:B:96:ARG:CZ	2.42	0.48
18:R:37:VAL:HG23	18:R:38:GLU:H	1.77	0.48
2:B:109:SER:C	2:B:111:ARG:H	2.16	0.48
11:K:17:GLY:H	11:K:77:MET:CE	2.22	0.48
5:E:32:VAL:HG12	5:E:33:VAL:N	2.29	0.48
1:A:1518:A:C8	1:A:1518:A:H3'	2.48	0.48
1:A:102:G:N2	1:A:171:A:C2	2.81	0.48
1:A:841:U:H5'	1:A:848:C:C6	2.48	0.48
1:A:1397:C:HO2'	1:A:1398:A:P	2.36	0.48
8:H:95:VAL:HB	8:H:99:GLU:HB3	1.95	0.48
1:A:1437:C:O2'	1:A:1438:G:H5'	2.13	0.48
2:B:184:VAL:HG11	2:B:197:VAL:HG22	1.95	0.48
6:F:40:VAL:HG23	6:F:41:GLU:N	2.27	0.48
4:D:31:CYS:SG	4:D:31:CYS:O	2.72	0.48
4:D:4:TYR:HE2	4:D:6:GLY:C	2.17	0.48
12:L:89:ARG:C	12:L:90:VAL:HG23	2.34	0.48
1:A:1176:A:C6	1:A:1177:G:C2	3.02	0.48
1:A:1288:A:N6	1:A:1289:A:N6	2.62	0.48
1:A:1367:C:H5'	10:J:60:ARG:HH12	1.76	0.48
7:G:137:LYS:O	7:G:138:LYS:C	2.50	0.48
10:J:13:HIS:ND1	10:J:14:LYS:N	2.61	0.48
10:J:3:LYS:HB2	10:J:76:ASN:HA	1.96	0.48
21:V:5:ASP:HB3	21:V:8:THR:OG1	2.13	0.48
1:A:184:G:O2'	1:A:185:A:H5'	2.14	0.48
1:A:219:C:H2'	1:A:220:G:C5'	2.41	0.48
1:A:371:G:H21	1:A:374:A:H62	1.62	0.48
8:H:23:SER:HA	8:H:63:LEU:HD13	1.96	0.48
13:M:80:ARG:C	13:M:82:MET:H	2.17	0.48
15:O:68:ARG:HH11	15:O:68:ARG:CB	2.27	0.48
18:R:22:VAL:CG1	18:R:23:LYS:N	2.68	0.48
1:A:1397:C:H4'	1:A:1398:A:OP2	2.14	0.48
1:A:922:G:C6	1:A:923:A:N1	2.82	0.48
1:A:925:G:C2	1:A:927:G:C8	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:76:LEU:HD12	17:Q:77:VAL:N	2.28	0.48
6:F:74:ASP:HA	6:F:77:ARG:HE	1.78	0.48
1:A:458:C:N3	1:A:459:G:C2	2.82	0.48
4:D:156:GLU:N	4:D:156:GLU:CD	2.67	0.48
4:D:79:PHE:O	4:D:79:PHE:CD2	2.62	0.48
1:A:1162:C:C2	1:A:1175:G:C2	3.02	0.48
7:G:68:ASN:O	7:G:138:LYS:HE3	2.14	0.48
7:G:70:LYS:HB3	7:G:96:GLN:HG2	1.96	0.48
17:Q:70:ARG:CG	17:Q:70:ARG:NH1	2.62	0.48
3:C:99:VAL:HG23	3:C:101:LEU:N	2.29	0.48
15:O:16:ALA:C	15:O:18:PHE:N	2.67	0.48
18:R:37:VAL:HG23	18:R:41:LYS:HE3	1.95	0.48
11:K:97:ALA:O	11:K:100:ALA:N	2.44	0.48
18:R:43:PHE:CD1	18:R:43:PHE:N	2.82	0.48
18:R:21:LYS:NZ	18:R:54:ARG:O	2.39	0.48
1:A:152:A:N6	1:A:170:U:N3	2.62	0.48
1:A:321:A:H2	1:A:332:G:H22	1.61	0.48
1:A:73:C:C2	1:A:74:C:C5	3.02	0.48
1:A:1397:C:O2'	1:A:1398:A:P	2.71	0.48
1:A:975:A:H4'	1:A:976:G:O5'	2.14	0.48
1:A:1247:U:C2'	1:A:1248:A:H5'	2.44	0.48
1:A:551:U:H2'	1:A:552:U:H6	1.77	0.48
1:A:325:A:N6	1:A:326:G:C6	2.82	0.48
1:A:1075:C:H6	1:A:1075:C:O5'	1.97	0.48
5:E:129:ILE:CG2	5:E:129:ILE:O	2.62	0.48
1:A:405:U:C3'	1:A:406:G:H5'	2.36	0.48
4:D:118:ARG:O	4:D:121:VAL:HB	2.14	0.48
1:A:236:G:H2'	1:A:237:C:O4'	2.14	0.48
1:A:287:U:H2'	1:A:288:A:H5'	1.94	0.48
1:A:607:A:C4	1:A:608:A:C8	3.02	0.48
17:Q:94:ASN:O	17:Q:95:TYR:C	2.52	0.48
1:A:1254:C:N4	10:J:43:ARG:CZ	2.77	0.48
3:C:180:ALA:HA	3:C:207:VAL:H	1.78	0.48
7:G:21:VAL:HA	7:G:24:THR:OG1	2.14	0.48
10:J:20:ALA:C	10:J:22:LYS:N	2.67	0.48
10:J:29:ARG:HG3	10:J:29:ARG:O	2.13	0.48
1:A:1151:A:C2	10:J:39:PRO:HG3	2.49	0.48
21:V:8:THR:HG22	21:V:9:ARG:N	2.29	0.48
1:A:376:G:C2	1:A:389:A:C2	3.02	0.48
16:P:20:VAL:O	16:P:21:VAL:CG2	2.59	0.48
16:P:66:PRO:O	16:P:67:THR:C	2.52	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:44:GLU:CG	3:C:55:VAL:HG22	2.43	0.48
8:H:11:THR:CG2	8:H:14:ARG:NH1	2.67	0.48
3:C:51:GLY:HA3	3:C:71:ALA:H	1.79	0.48
1:A:947:G:C2	1:A:948:C:C2	3.02	0.48
13:M:77:ASN:O	13:M:81:LEU:HG	2.14	0.48
13:M:81:LEU:CD1	13:M:88:ARG:HB3	2.33	0.48
1:A:602:A:O2'	1:A:603:U:H5'	2.14	0.48
1:A:67:C:HO2'	1:A:171:A:H1'	1.79	0.48
1:A:1226:C:OP2	13:M:103:THR:HG21	2.13	0.48
6:F:13:ASN:ND2	6:F:57:GLN:OE1	2.46	0.48
3:C:162:GLN:O	3:C:164:ARG:HG3	2.14	0.48
1:A:1437:C:C6	1:A:1438:G:N7	2.81	0.48
13:M:117:VAL:O	13:M:118:ALA:CB	2.60	0.48
12:L:113:ARG:HD3	12:L:114:LYS:N	2.29	0.47
1:A:1327:C:H5''	21:V:20:LYS:HB2	1.96	0.47
7:G:105:VAL:O	7:G:105:VAL:HG12	2.14	0.47
13:M:55:ARG:O	13:M:59:TYR:N	2.41	0.47
21:V:6:ARG:HG2	21:V:15:ARG:NH1	2.21	0.47
2:B:97:TRP:CE3	2:B:98:LEU:O	2.67	0.47
3:C:48:TYR:CD1	3:C:52:LEU:HD22	2.46	0.47
15:O:71:GLN:C	15:O:71:GLN:OE1	2.52	0.47
15:O:79:ARG:O	15:O:83:GLU:HB3	2.13	0.47
8:H:40:ALA:HA	8:H:45:ILE:HG13	1.95	0.47
1:A:960:U:H4'	1:A:961:U:H5''	1.96	0.47
1:A:341:C:O5'	1:A:341:C:H6	1.96	0.47
11:K:13:GLN:HA	11:K:75:TYR:O	2.14	0.47
6:F:86:ARG:H	6:F:86:ARG:HG2	1.46	0.47
1:A:438:G:H22	1:A:496:A:P	2.37	0.47
4:D:47:ARG:HE	4:D:49:ARG:CA	2.26	0.47
4:D:91:SER:O	4:D:92:VAL:C	2.52	0.47
1:A:1127:G:OP2	1:A:1127:G:H8	1.97	0.47
1:A:1369:C:C2'	1:A:1370:G:O4'	2.58	0.47
7:G:69:VAL:O	7:G:138:LYS:HB2	2.14	0.47
14:N:22:THR:HB	14:N:33:VAL:CB	2.44	0.47
14:N:47:LEU:C	14:N:49:HIS:N	2.67	0.47
1:A:253:U:H2'	1:A:254:G:H8	1.78	0.47
1:A:255:G:N2	1:A:272:C:C2	2.83	0.47
17:Q:18:THR:HG23	17:Q:69:LYS:HZ2	1.79	0.47
16:P:31:LYS:CG	16:P:32:TYR:N	2.77	0.47
16:P:71:ARG:HH11	16:P:71:ARG:HG2	1.79	0.47
16:P:78:GLY:C	16:P:80:PHE:H	2.17	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:9:MET:HG3	8:H:26:VAL:HG21	1.95	0.47
8:H:40:ALA:HB1	8:H:47:GLY:HA2	1.96	0.47
2:B:138:LEU:HD22	2:B:138:LEU:N	2.29	0.47
8:H:88:LYS:C	8:H:89:PRO:O	2.50	0.47
1:A:688:G:H2'	1:A:689:C:C6	2.49	0.47
1:A:707:C:H4'	11:K:20:TYR:CE2	2.49	0.47
15:O:76:GLU:O	15:O:77:ARG:C	2.52	0.47
1:A:825:G:C6	1:A:876:G:C6	3.02	0.47
1:A:151:A:H2'	1:A:152:A:C8	2.49	0.47
20:T:17:ARG:O	20:T:20:LEU:HB2	2.14	0.47
1:A:778:G:O2'	1:A:779:C:H5'	2.14	0.47
1:A:1435:G:H2'	1:A:1436:U:C5	2.49	0.47
15:O:30:ALA:O	15:O:31:LEU:C	2.51	0.47
1:A:1432:G:H1'	1:A:1468:A:H61	1.79	0.47
1:A:164:U:H2'	1:A:165:C:C6	2.50	0.47
12:L:38:THR:HG22	12:L:39:VAL:HG23	1.95	0.47
1:A:1064:G:H5'	1:A:1066:C:O4'	2.14	0.47
1:A:1288:A:H2'	1:A:1289:A:H8	1.79	0.47
3:C:113:ALA:O	3:C:116:VAL:N	2.47	0.47
3:C:175:LEU:N	3:C:175:LEU:CD2	2.77	0.47
3:C:153:VAL:HG13	3:C:198:VAL:HG22	1.95	0.47
7:G:25:ALA:O	7:G:29:LYS:N	2.47	0.47
7:G:91:VAL:HG13	7:G:92:SER:H	1.78	0.47
13:M:19:LEU:C	13:M:21:TYR:N	2.64	0.47
1:A:787:A:O2'	1:A:788:U:H5'	2.14	0.47
1:A:1102:A:C6	1:A:1103:C:N4	2.82	0.47
1:A:264:U:O2'	17:Q:64:PRO:HB2	2.14	0.47
15:O:35:ARG:O	15:O:36:ILE:C	2.51	0.47
15:O:49:ASP:CG	15:O:49:ASP:O	2.53	0.47
1:A:1210:C:H2'	1:A:1211:U:H4'	1.97	0.47
1:A:877:C:O2	8:H:3:THR:HG21	2.13	0.47
1:A:750:G:C2	15:O:23:GLY:HA3	2.49	0.47
1:A:1392:G:H2'	1:A:1393:U:H6	1.79	0.47
1:A:956:U:H2'	1:A:957:U:H5'	1.96	0.47
8:H:126:LYS:C	8:H:128:GLY:N	2.68	0.47
6:F:53:ALA:C	6:F:55:ASP:N	2.67	0.47
1:A:134:A:H8	1:A:134:A:O5'	1.96	0.47
7:G:5:ARG:C	7:G:7:ALA:H	2.18	0.47
4:D:130:GLY:O	4:D:132:ARG:N	2.47	0.47
12:L:42:THR:HG22	12:L:52:LEU:HD22	1.97	0.47
1:A:1365:G:C2'	1:A:1366:C:H5'	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:942:G:N2	1:A:943:U:N1	2.63	0.47
7:G:68:ASN:C	7:G:70:LYS:N	2.68	0.47
19:S:19:VAL:HA	19:S:22:LEU:CD1	2.43	0.47
19:S:34:TRP:O	19:S:35:SER:C	2.52	0.47
19:S:70:LYS:H	19:S:73:GLU:CD	2.17	0.47
1:A:132:C:H2'	1:A:133:U:O5'	2.14	0.47
1:A:231:G:N3	1:A:231:G:H2'	2.29	0.47
16:P:39:TYR:HA	16:P:49:LEU:HD12	1.97	0.47
2:B:96:ARG:CA	2:B:96:ARG:HE	2.27	0.47
5:E:133:TYR:O	5:E:137:GLU:HB2	2.14	0.47
1:A:720:C:N3	1:A:721:G:C6	2.82	0.47
6:F:48:LEU:O	6:F:49:ALA:C	2.53	0.47
1:A:1103:C:H2'	1:A:1104:G:O4'	2.14	0.47
1:A:1074:G:O4'	2:B:104:ASN:HB2	2.15	0.47
2:B:112:VAL:HG21	2:B:152:PHE:O	2.14	0.47
11:K:69:ALA:O	11:K:72:ALA:HB3	2.14	0.47
1:A:419:C:C5	1:A:425:G:C2	3.02	0.47
1:A:425:G:C2	1:A:426:G:C8	3.02	0.47
1:A:128:G:O2'	17:Q:3:LYS:HE3	2.14	0.47
5:E:16:THR:CG2	5:E:27:ARG:HB2	2.44	0.47
1:A:487:A:H2'	1:A:488:C:O4'	2.15	0.47
1:A:506:G:N7	1:A:507:C:C5	2.82	0.47
1:A:1056:U:C5'	3:C:163:ALA:CB	2.92	0.47
1:A:519:C:O2'	1:A:520:A:C5'	2.63	0.47
4:D:128:VAL:HG11	4:D:138:TYR:HE2	1.80	0.47
4:D:202:LEU:O	4:D:205:GLU:HB2	2.13	0.47
12:L:83:VAL:HG22	12:L:84:LEU:N	2.20	0.47
3:C:179:ARG:C	3:C:181:ASN:N	2.66	0.47
7:G:63:LYS:HB3	7:G:63:LYS:NZ	2.30	0.47
19:S:15:LEU:HD12	19:S:16:LEU:H	1.77	0.47
19:S:22:LEU:HD21	19:S:31:ILE:HD11	1.96	0.47
20:T:62:LEU:HA	20:T:65:LYS:HB3	1.96	0.47
1:A:1229:A:O2'	1:A:1230:C:H5'	2.13	0.47
1:A:1305:G:O2'	1:A:1306:A:O5'	2.32	0.47
6:F:10:LEU:HD23	6:F:85:VAL:HA	1.96	0.47
18:R:33:ASP:OD2	18:R:36:ASN:HB3	2.15	0.47
2:B:210:SER:O	2:B:213:LEU:N	2.48	0.47
11:K:67:ASP:O	11:K:69:ALA:N	2.48	0.47
11:K:97:ALA:O	11:K:100:ALA:HB3	2.14	0.47
5:E:33:VAL:C	5:E:34:VAL:HG23	2.33	0.47
1:A:1513:A:H2'	1:A:1514:C:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1210:C:C3'	1:A:1211:U:H5''	2.44	0.47
17:Q:11:VAL:HA	17:Q:85:VAL:HG22	1.96	0.47
1:A:79:G:C2	1:A:80:G:C8	3.02	0.47
1:A:1419:G:N7	1:A:1420:C:C4	2.82	0.47
1:A:1382:C:H2'	1:A:1383:C:C5	2.49	0.47
5:E:146:ALA:O	5:E:149:GLU:HB2	2.14	0.47
1:A:1056:U:O5'	3:C:163:ALA:HB2	2.15	0.47
4:D:38:TYR:CG	4:D:45:GLN:HG2	2.49	0.47
1:A:306:G:C4	1:A:307:C:C5	3.03	0.47
17:Q:96:GLN:NE2	17:Q:97:SER:OG	2.44	0.47
5:E:28:PHE:CE1	5:E:50:GLU:HA	2.49	0.47
10:J:22:LYS:HD2	10:J:90:LEU:HD13	1.97	0.47
13:M:23:TYR:HE2	13:M:70:LEU:HD22	1.78	0.47
10:J:64:GLU:HG3	14:N:59:ALA:HA	1.97	0.47
16:P:14:ASN:N	16:P:15:PRO:CD	2.78	0.47
16:P:48:TRP:HE3	16:P:49:LEU:HB2	1.76	0.47
16:P:80:PHE:O	16:P:82:GLN:NE2	2.45	0.47
2:B:108:ILE:HG13	2:B:108:ILE:O	2.13	0.47
2:B:73:THR:O	2:B:73:THR:HG22	2.13	0.47
11:K:53:SER:O	11:K:54:ARG:C	2.52	0.47
1:A:588:G:C6	1:A:589:C:N4	2.83	0.47
2:B:21:ARG:HG2	2:B:22:LYS:H	1.76	0.47
1:A:1413:A:H2'	1:A:1414:U:O4'	2.15	0.47
1:A:560:U:O2'	1:A:561:U:OP2	2.30	0.47
1:A:632:A:C2'	1:A:633:G:H5'	2.45	0.47
1:A:913:A:H4'	1:A:914:A:O5'	2.15	0.47
2:B:25:ASN:O	2:B:26:PRO:C	2.53	0.47
1:A:142:G:O2'	1:A:143:A:H5'	2.13	0.47
1:A:447:G:H2'	1:A:485:G:N2	2.30	0.47
3:C:191:THR:HG21	3:C:193:TYR:CE1	2.49	0.47
1:A:533:A:C6	1:A:536:C:C4	3.03	0.47
4:D:131:ARG:O	4:D:132:ARG:O	2.32	0.47
12:L:84:LEU:HD23	12:L:101:VAL:HG11	1.96	0.47
1:A:11:G:C6	1:A:12:U:C4	3.03	0.47
1:A:616:G:C2'	1:A:617:G:H5'	2.44	0.47
4:D:10:ARG:HH12	4:D:40:PRO:CB	2.27	0.47
4:D:178:VAL:C	4:D:180:GLY:H	2.17	0.47
4:D:63:LYS:O	4:D:65:ARG:N	2.48	0.47
1:A:430:A:P	4:D:7:PRO:HA	2.54	0.47
1:A:243:A:O2'	1:A:244:U:OP2	2.29	0.47
1:A:608:A:C2'	1:A:609:A:H8	2.23	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1188:A:O3'	14:N:58:LYS:HE2	2.15	0.47
1:A:1287:A:C5	1:A:1288:A:C6	3.02	0.47
1:A:1326:C:H2'	1:A:1327:C:H6	1.78	0.47
3:C:128:PHE:O	3:C:129:ALA:C	2.52	0.47
9:I:99:LEU:HD22	9:I:99:LEU:N	2.29	0.47
1:A:1313:U:OP2	19:S:6:LYS:HG2	2.15	0.47
1:A:986:A:H2	19:S:52:TYR:HE2	1.62	0.47
1:A:987:G:N2	1:A:1219:U:H3	2.12	0.47
3:C:14:ILE:HD13	3:C:14:ILE:H	1.79	0.47
3:C:178:LEU:O	3:C:179:ARG:HB2	2.13	0.47
3:C:23:TYR:CD1	3:C:24:ALA:N	2.79	0.47
10:J:16:LEU:HD13	10:J:70:ARG:HG3	1.97	0.47
10:J:80:LYS:O	10:J:84:GLN:N	2.46	0.47
3:C:19:GLU:N	14:N:51:GLY:HA3	2.24	0.47
1:A:1267:C:O2	21:V:20:LYS:HD2	2.15	0.47
1:A:1443:G:C4'	1:A:1446:A:H5'	2.42	0.47
1:A:393:A:OP2	16:P:12:LYS:HE2	2.14	0.47
16:P:15:PRO:O	16:P:41:PRO:HD2	2.15	0.47
16:P:21:VAL:CG1	16:P:59:TRP:HE1	2.25	0.47
1:A:391:G:C6	1:A:392:G:C5	3.02	0.47
16:P:71:ARG:O	16:P:75:ARG:N	2.48	0.47
16:P:76:GLN:C	16:P:78:GLY:N	2.68	0.47
20:T:102:GLY:O	20:T:103:GLY:O	2.32	0.47
8:H:11:THR:CG2	8:H:14:ARG:HH12	2.21	0.47
5:E:135:THR:O	5:E:137:GLU:N	2.48	0.47
8:H:14:ARG:NH1	8:H:14:ARG:HB3	2.28	0.47
8:H:37:ARG:O	8:H:41:ARG:CB	2.63	0.47
1:A:951:G:O2'	1:A:952:U:H5'	2.14	0.47
1:A:665:A:H1'	1:A:733:A:O4'	2.15	0.47
2:B:120:ALA:C	2:B:122:PHE:H	2.17	0.47
2:B:134:GLU:O	2:B:136:VAL:N	2.46	0.47
6:F:14:LEU:HD11	6:F:84:ASN:OD1	2.14	0.47
6:F:19:LEU:CD2	6:F:20:ALA:N	2.77	0.47
6:F:18:GLN:HA	6:F:21:LEU:CD2	2.41	0.47
1:A:579:G:H5'	1:A:728:A:H1'	1.96	0.47
1:A:666:G:H5'	1:A:726:C:H1'	1.97	0.47
1:A:894:G:C2	1:A:895:G:C5	3.03	0.47
1:A:1360:A:C2'	1:A:1361:G:C8	2.98	0.47
1:A:1356:G:C2	1:A:1357:A:C5	3.02	0.47
1:A:1402:C:H2'	1:A:1403:C:C6	2.50	0.47
12:L:16:GLU:O	12:L:17:LYS:O	2.33	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:20:THR:HA	17:Q:43:LEU:HD23	1.96	0.47
1:A:1322:C:OP1	1:A:1322:C:H6	1.98	0.47
4:D:31:CYS:C	4:D:33:MET:H	2.16	0.47
1:A:1109:C:C2'	1:A:1110:A:H5'	2.45	0.47
1:A:1261:A:H2'	1:A:1262:C:H5'	1.95	0.47
1:A:1284:C:H3'	1:A:1285:A:H8	1.79	0.47
1:A:1290:G:H2'	1:A:1291:G:H8	1.79	0.47
1:A:1326:C:OP2	21:V:6:ARG:NH2	2.47	0.47
7:G:24:THR:O	7:G:28:ASN:ND2	2.48	0.47
9:I:79:LEU:HD22	9:I:83:ARG:HH21	1.80	0.47
1:A:1148:U:OP1	9:I:7:THR:HG21	2.14	0.47
9:I:59:PHE:HE2	9:I:88:TYR:HH	1.61	0.47
14:N:56:VAL:HG22	14:N:57:ARG:N	2.17	0.47
1:A:1220:G:HO2'	19:S:52:TYR:HD2	1.63	0.47
17:Q:66:SER:HB3	17:Q:69:LYS:HD3	1.96	0.47
1:A:131:C:C2'	1:A:132:C:C6	2.89	0.47
1:A:372:C:N3	1:A:387:U:C5	2.79	0.47
1:A:390:C:O3'	16:P:28:ARG:NH2	2.43	0.47
16:P:67:THR:CG2	16:P:68:ASP:N	2.78	0.47
1:A:787:A:H2'	1:A:788:U:H6	1.80	0.47
11:K:127:LYS:CA	11:K:127:LYS:HE3	2.22	0.47
6:F:7:ASN:O	6:F:8:ILE:HG13	2.14	0.47
15:O:11:VAL:O	15:O:14:GLU:HB3	2.14	0.47
1:A:77:G:O2'	1:A:78:G:H5'	2.15	0.47
1:A:99:C:H2'	1:A:101:A:H8	1.72	0.47
6:F:53:ALA:O	6:F:55:ASP:N	2.47	0.47
3:C:162:GLN:HG3	3:C:164:ARG:HD3	1.96	0.47
1:A:1355:G:H2'	1:A:1356:G:C8	2.44	0.47
1:A:346:G:H2'	1:A:347:G:C5'	2.45	0.47
1:A:936:C:H2'	1:A:937:A:O4'	2.14	0.47
17:Q:76:LEU:HD12	17:Q:78:GLU:H	1.79	0.47
1:A:1539:C:H2'	1:A:1540:U:C6	2.50	0.47
12:L:126:LYS:O	12:L:126:LYS:CD	2.63	0.47
2:B:191:ASP:N	2:B:191:ASP:OD1	2.48	0.47
4:D:47:ARG:HH11	4:D:47:ARG:HG3	1.80	0.47
12:L:41:ARG:HH11	12:L:42:THR:N	2.13	0.47
12:L:88:GLY:O	12:L:89:ARG:HG2	2.14	0.47
1:A:1061:G:O2'	1:A:1062:U:H5'	2.14	0.47
1:A:1126:U:H2'	1:A:1127:G:O4'	2.15	0.47
1:A:1313:U:O5'	19:S:6:LYS:HG2	2.15	0.47
10:J:62:HIS:CB	14:N:59:ALA:HB3	2.40	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:38:G:N2	1:A:397:A:C5'	2.78	0.47
3:C:43:LEU:HD11	3:C:68:VAL:HG21	1.97	0.47
5:E:130:ASN:O	5:E:133:TYR:HB2	2.15	0.47
8:H:31:PHE:O	8:H:32:LYS:C	2.52	0.47
11:K:44:SER:C	11:K:46:GLY:N	2.68	0.47
6:F:3:ARG:CA	6:F:66:GLU:HG3	2.44	0.47
1:A:443:C:H42	1:A:491:G:H1	1.61	0.47
6:F:51:PRO:HB3	6:F:56:PRO:HA	1.96	0.47
1:A:673:G:H5''	6:F:87:ARG:CZ	2.45	0.47
1:A:344:A:H5''	1:A:345:C:H5	1.76	0.47
1:A:345:C:H4'	1:A:346:G:C5'	2.45	0.47
17:Q:76:LEU:HD12	17:Q:78:GLU:N	2.29	0.47
1:A:1374:A:N3	1:A:1375:A:C8	2.82	0.47
1:A:992:U:H3	1:A:1044:A:H62	1.62	0.47
4:D:157:LEU:HD13	4:D:157:LEU:H	1.80	0.47
4:D:74:GLN:O	4:D:78:LEU:N	2.43	0.47
1:A:59:A:H1'	1:A:354:G:C2	2.50	0.47
1:A:1013:G:H1'	1:A:1016:A:N6	2.29	0.47
7:G:67:GLU:O	7:G:70:LYS:HB2	2.15	0.47
9:I:10:ARG:HD3	9:I:105:ASP:CG	2.36	0.47
9:I:93:ARG:HA	9:I:96:LEU:CD2	2.44	0.47
9:I:96:LEU:O	9:I:102:LEU:CD2	2.63	0.47
10:J:79:ARG:HH11	10:J:82:ILE:HD12	1.76	0.47
13:M:17:VAL:C	13:M:19:LEU:H	2.17	0.47
16:P:28:ARG:HG3	16:P:29:ASP:OD1	2.14	0.47
8:H:13:ILE:O	8:H:14:ARG:C	2.51	0.47
13:M:110:ARG:HH11	13:M:110:ARG:HG2	1.80	0.47
1:A:740:U:H1'	15:O:42:HIS:CE1	2.50	0.47
1:A:559:A:O2'	1:A:560:U:OP2	2.32	0.47
2:B:239:VAL:CG1	2:B:240:GLN:N	2.76	0.47
7:G:148:ASN:C	7:G:150:ALA:H	2.18	0.47
1:A:1450:U:H2'	1:A:1452:C:C5	2.50	0.47
4:D:124:GLY:CA	4:D:132:ARG:HE	2.27	0.46
1:A:1115:C:O4'	14:N:61:TRP:HA	2.15	0.46
1:A:1141:C:H2'	1:A:1142:G:O4'	2.14	0.46
3:C:117:ALA:O	3:C:121:ALA:HB2	2.14	0.46
3:C:138:VAL:O	3:C:142:MET:CB	2.60	0.46
7:G:15:ASP:C	7:G:17:VAL:N	2.69	0.46
1:A:1150:U:H4'	10:J:41:PRO:CB	2.44	0.46
13:M:34:LEU:HD13	13:M:39:ILE:HB	1.96	0.46
14:N:36:PHE:CD1	14:N:36:PHE:O	2.68	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:38:SER:HB3	19:S:71:LEU:CD1	2.38	0.46
19:S:40:ILE:CG2	19:S:62:ILE:HG12	2.45	0.46
16:P:45:THR:OG1	16:P:46:PRO:N	2.47	0.46
16:P:57:ARG:CZ	16:P:79:VAL:O	2.63	0.46
16:P:66:PRO:O	16:P:67:THR:O	2.32	0.46
20:T:78:ALA:O	20:T:81:LYS:HB2	2.15	0.46
2:B:97:TRP:CZ3	2:B:176:GLU:OE2	2.69	0.46
8:H:85:ARG:NE	8:H:87:SER:O	2.48	0.46
1:A:721:G:OP2	18:R:53:ARG:HG2	2.14	0.46
2:B:14:GLY:O	2:B:15:VAL:HG22	2.14	0.46
2:B:20:GLU:HA	2:B:21:ARG:NH2	2.18	0.46
6:F:68:PRO:O	6:F:72:VAL:CG2	2.63	0.46
1:A:1057:G:H2'	1:A:1058:G:C8	2.50	0.46
1:A:1500:A:OP2	1:A:1505:G:OP2	2.32	0.46
18:R:47:THR:HG22	18:R:48:GLY:H	1.80	0.46
12:L:5:PRO:O	12:L:7:ILE:N	2.48	0.46
1:A:687:A:HO2'	1:A:688:G:P	2.38	0.46
1:A:636:U:H5'	17:Q:2:PRO:HG2	1.97	0.46
5:E:26:PHE:O	5:E:27:ARG:CG	2.57	0.46
1:A:97:G:H2'	1:A:98:U:H5'	1.97	0.46
1:A:190(B):C:N3	1:A:190(H):G:C2	2.82	0.46
1:A:992:U:H1'	1:A:993:G:OP2	2.15	0.46
1:A:1451:A:O3'	1:A:1452:C:H6	1.99	0.46
4:D:110:PHE:N	4:D:110:PHE:HD1	2.14	0.46
4:D:135:LEU:O	4:D:138:TYR:HB2	2.15	0.46
12:L:45:PRO:HD3	12:L:51:ALA:O	2.14	0.46
12:L:53:ARG:HH12	12:L:92:ASP:CB	2.28	0.46
1:A:1120:G:C2	1:A:1121:U:C4	3.03	0.46
1:A:1326:C:N4	1:A:1327:C:H41	2.13	0.46
1:A:1326:C:OP2	21:V:6:ARG:CZ	2.63	0.46
1:A:1343:G:C6	1:A:1344:C:N4	2.84	0.46
1:A:1352:C:H2'	1:A:1353:G:C8	2.51	0.46
3:C:124:ILE:HD11	3:C:153:VAL:HG11	1.98	0.46
10:J:84:GLN:O	10:J:85:LEU:HB2	2.14	0.46
13:M:3:ARG:CD	13:M:7:VAL:HA	2.45	0.46
13:M:14:ARG:HG3	13:M:44:ARG:CZ	2.45	0.46
14:N:23:ARG:HH12	14:N:30:ALA:HB2	1.80	0.46
21:V:10:ARG:CA	21:V:13:ILE:HG22	2.38	0.46
21:V:17:THR:O	21:V:22:ARG:HG2	2.15	0.46
1:A:190(J):U:H2'	1:A:190(K):G:C8	2.50	0.46
1:A:379:C:C2'	1:A:380:G:H5'	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:391:G:P	16:P:28:ARG:HH12	2.38	0.46
1:A:452:A:O2'	1:A:453:A:C8	2.66	0.46
1:A:9:G:OP1	5:E:122:GLU:HB2	2.15	0.46
8:H:31:PHE:HE1	8:H:35:ILE:HG13	1.80	0.46
8:H:5:PRO:O	8:H:8:ASP:HB3	2.14	0.46
3:C:51:GLY:CA	3:C:70:VAL:HG13	2.45	0.46
6:F:62:TRP:CE2	18:R:35:ARG:NH2	2.83	0.46
15:O:8:LYS:O	15:O:10:LYS:N	2.49	0.46
2:B:15:VAL:HB	2:B:16:HIS:H	1.55	0.46
1:A:1522:U:C2'	1:A:1523:G:H5'	2.44	0.46
18:R:18:ARG:O	18:R:19:LYS:O	2.33	0.46
1:A:1070:U:O2'	1:A:1071:C:H5'	2.15	0.46
1:A:70:G:H2'	1:A:73:C:O4'	2.16	0.46
20:T:13:LEU:CG	20:T:14:LYS:N	2.79	0.46
20:T:13:LEU:HD12	20:T:14:LYS:CA	2.44	0.46
1:A:852:G:O2'	1:A:853:G:H5'	2.16	0.46
2:B:239:VAL:O	2:B:240:GLN:C	2.52	0.46
1:A:341:C:O2'	1:A:342:C:H5'	2.15	0.46
1:A:204:U:H4'	1:A:216:G:OP1	2.14	0.46
1:A:807:A:C2	1:A:808:C:C2	3.03	0.46
4:D:205:GLU:C	4:D:207:TYR:H	2.19	0.46
1:A:1061:G:C2'	1:A:1062:U:H5'	2.45	0.46
1:A:1125:U:O4	10:J:5:ARG:CD	2.63	0.46
1:A:1201:A:HO2'	1:A:1202:G:P	2.36	0.46
9:I:16:ARG:HH21	9:I:64:THR:HG22	1.80	0.46
1:A:132:C:O2'	1:A:133:U:H5'	2.15	0.46
1:A:357:G:HO2'	1:A:358:U:H5'	1.79	0.46
1:A:389:A:C6	1:A:390:C:H1'	2.51	0.46
20:T:56:MET:HE2	20:T:88:VAL:HG11	1.97	0.46
5:E:78:HIS:CG	5:E:78:HIS:O	2.68	0.46
8:H:9:MET:O	8:H:10:LEU:C	2.53	0.46
2:B:116:GLU:C	2:B:118:LEU:N	2.68	0.46
2:B:111:ARG:CB	2:B:149:LEU:HD11	2.41	0.46
2:B:21:ARG:O	2:B:39:ILE:HA	2.16	0.46
2:B:44:LEU:C	2:B:46:LYS:N	2.66	0.46
2:B:51:LEU:O	2:B:52:GLU:C	2.54	0.46
1:A:1057:G:O2'	1:A:1058:G:H5'	2.15	0.46
1:A:768:A:H2'	1:A:769:G:H5'	1.97	0.46
1:A:1390:U:H2'	1:A:1391:U:C6	2.49	0.46
1:A:927:G:C5	1:A:928:G:N7	2.83	0.46
1:A:976:G:C8	1:A:1358:U:C2	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:142:G:H1'	1:A:196:A:H2	1.80	0.46
1:A:1004:A:H8	1:A:1037:C:HO2'	1.63	0.46
16:P:1:MET:HE1	16:P:65:GLN:HB2	1.97	0.46
5:E:115:VAL:CG1	5:E:116:THR:N	2.79	0.46
1:A:1345:U:C2	1:A:1377:A:C2	3.02	0.46
4:D:148:VAL:CG1	4:D:149:ALA:N	2.77	0.46
4:D:61:LYS:HD3	4:D:62:GLN:CA	2.45	0.46
12:L:98:TYR:N	12:L:98:TYR:CD1	2.84	0.46
1:A:245:C:C6	1:A:284:G:N2	2.84	0.46
1:A:1089:G:H2'	1:A:1090:U:H5'	1.98	0.46
1:A:1189:C:C5'	3:C:5:ILE:HD13	2.45	0.46
1:A:1286:A:H8	1:A:1287:A:H4'	1.81	0.46
3:C:126:ARG:HD2	3:C:128:PHE:CD2	2.51	0.46
5:E:48:ALA:HB3	5:E:54:ALA:HA	1.97	0.46
10:J:65:LEU:C	10:J:65:LEU:CD2	2.83	0.46
10:J:82:ILE:O	10:J:86:MET:SD	2.73	0.46
10:J:86:MET:CG	10:J:87:THR:H	1.97	0.46
19:S:44:MET:O	19:S:45:VAL:C	2.54	0.46
1:A:401:C:P	4:D:73:ARG:HH21	2.38	0.46
1:A:44:G:OP2	16:P:12:LYS:HD2	2.15	0.46
20:T:51:GLU:HA	20:T:54:LYS:HB3	1.97	0.46
20:T:33:ILE:CD1	20:T:63:ILE:HA	2.24	0.46
6:F:85:VAL:O	6:F:85:VAL:HG12	2.14	0.46
1:A:1073:U:H3	1:A:1102:A:H61	1.63	0.46
2:B:109:SER:C	2:B:111:ARG:N	2.68	0.46
2:B:92:TYR:C	2:B:92:TYR:HD1	2.19	0.46
1:A:167:G:HO2'	1:A:168:G:H8	1.62	0.46
18:R:24:ALA:O	18:R:26:LEU:N	2.49	0.46
1:A:866:C:H2'	1:A:867:G:O4'	2.14	0.46
1:A:318:G:N2	1:A:319:G:C4	2.83	0.46
1:A:144:G:N2	1:A:178:C:N3	2.57	0.46
1:A:676:A:H2'	1:A:677:U:H6	1.79	0.46
17:Q:47:PRO:C	17:Q:49:GLU:H	2.18	0.46
1:A:402:G:H1'	1:A:620:C:H42	1.80	0.46
4:D:149:ALA:O	4:D:152:SER:N	2.42	0.46
4:D:152:SER:HA	4:D:155:LEU:CD1	2.45	0.46
4:D:173:TRP:HB2	4:D:187:ARG:O	2.16	0.46
4:D:99:SER:O	4:D:140:VAL:HG23	2.15	0.46
1:A:1279:A:O2'	1:A:1282:C:N4	2.48	0.46
1:A:1320:C:O4'	19:S:73:GLU:HG2	2.15	0.46
1:A:1334:G:O5'	1:A:1334:G:H8	1.99	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:939:G:H4'	7:G:102:ARG:NH2	2.30	0.46
3:C:111:LEU:HD21	3:C:146:ALA:N	2.31	0.46
3:C:179:ARG:HD2	3:C:180:ALA:CA	2.45	0.46
3:C:26:LYS:C	3:C:28:GLN:H	2.18	0.46
7:G:43:PHE:HD2	7:G:44:TYR:HD2	1.62	0.46
1:A:1250:A:C4'	9:I:68:GLY:HA2	2.21	0.46
9:I:97:LYS:CB	9:I:98:PRO:HD3	2.45	0.46
10:J:9:ARG:O	10:J:95:GLU:OE1	2.34	0.46
13:M:19:LEU:O	13:M:21:TYR:N	2.48	0.46
14:N:21:TYR:H	14:N:21:TYR:HD1	1.54	0.46
19:S:23:ASN:CA	19:S:27:GLU:HA	2.43	0.46
1:A:370:C:H2'	1:A:371:G:H8	1.81	0.46
1:A:374:A:C4	1:A:375:U:C5	3.04	0.46
1:A:112:G:C5'	1:A:389:A:H4'	2.45	0.46
1:A:463:A:H4'	16:P:82:GLN:NE2	2.31	0.46
16:P:49:LEU:CD1	16:P:73:LEU:HD22	2.45	0.46
20:T:48:LYS:O	20:T:52:ALA:HB3	2.16	0.46
20:T:65:LYS:O	20:T:68:LYS:HB2	2.14	0.46
1:A:501:C:O2'	1:A:502:G:H5'	2.16	0.46
3:C:77:ILE:CD1	3:C:84:ILE:HD12	2.45	0.46
15:O:25:THR:HG21	15:O:70:LEU:HD23	1.98	0.46
18:R:76:LEU:O	18:R:77:GLY:C	2.51	0.46
1:A:1158:C:H5''	2:B:133:LYS:CE	2.44	0.46
5:E:10:MET:HA	5:E:31:LEU:O	2.15	0.46
15:O:35:ARG:HB3	15:O:59:MET:HE1	1.98	0.46
18:R:30:ASP:O	18:R:32:ARG:N	2.49	0.46
1:A:754:C:H1'	15:O:69:TYR:CG	2.51	0.46
15:O:74:ASP:OD2	15:O:77:ARG:HG3	2.15	0.46
1:A:927:G:C4	1:A:928:G:C8	3.04	0.46
1:A:955:U:H2'	1:A:956:U:H6	1.81	0.46
5:E:93:PRO:HG2	8:H:105:ARG:NH2	2.29	0.46
1:A:428:G:O3'	4:D:36:ARG:NH2	2.47	0.46
1:A:541:G:O2'	1:A:542:G:H5'	2.16	0.46
4:D:104:VAL:O	4:D:105:VAL:C	2.52	0.46
12:L:67:THR:HG1	12:L:96:VAL:HA	1.81	0.46
1:A:1262:C:H42	1:A:1273:G:H1	1.62	0.46
5:E:50:GLU:O	5:E:51:VAL:C	2.54	0.46
9:I:50:LEU:HD12	9:I:50:LEU:N	2.28	0.46
10:J:64:GLU:HG3	14:N:59:ALA:CA	2.46	0.46
1:A:793:U:C3'	1:A:794:A:C5'	2.74	0.46
15:O:87:ILE:N	15:O:87:ILE:HD12	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:860:A:N6	1:A:861:G:C2	2.83	0.46
2:B:126:GLU:OE2	2:B:129:GLU:CB	2.64	0.46
1:A:1512:U:O2'	1:A:1513:A:H5'	2.16	0.46
1:A:655:A:H2'	1:A:656:C:O4'	2.16	0.46
6:F:99:ALA:O	6:F:100:ASN:C	2.54	0.46
1:A:319:G:O2'	1:A:320:C:H5'	2.16	0.46
5:E:19:MET:SD	5:E:24:ARG:HA	2.56	0.46
1:A:1340:A:O2'	1:A:1341:U:H5'	2.14	0.46
17:Q:75:ARG:HG2	17:Q:76:LEU:N	2.31	0.46
1:A:248:C:H2'	1:A:249:U:C5'	2.46	0.46
1:A:1076:C:C2	1:A:1077:G:C8	3.04	0.46
1:A:439:A:H3'	1:A:440:A:H8	1.80	0.46
4:D:74:GLN:O	4:D:78:LEU:HB2	2.16	0.46
12:L:42:THR:CG2	12:L:52:LEU:HD22	2.45	0.46
1:A:308:C:H2'	1:A:309:G:H8	1.81	0.46
1:A:760:G:H21	17:Q:103:GLY:HA3	1.81	0.46
3:C:16:ARG:O	3:C:17:ASP:C	2.54	0.46
9:I:19:LEU:HD21	9:I:59:PHE:O	2.15	0.46
9:I:19:LEU:HD12	9:I:61:ALA:HB2	1.97	0.46
10:J:68:HIS:CD2	10:J:68:HIS:N	2.82	0.46
13:M:26:GLY:O	13:M:28:ALA:N	2.49	0.46
14:N:41:ARG:HG3	14:N:42:ILE:N	2.31	0.46
19:S:52:TYR:CD1	19:S:56:GLN:O	2.68	0.46
19:S:63:THR:O	19:S:67:VAL:HG23	2.16	0.46
21:V:18:TYR:HE2	21:V:23:PRO:O	1.97	0.46
1:A:131:C:N3	1:A:232:G:C6	2.84	0.46
1:A:382:A:C2	1:A:383:A:C4	3.03	0.46
1:A:451:A:C2	1:A:480:U:C5	3.03	0.46
16:P:14:ASN:OD1	16:P:14:ASN:O	2.34	0.46
16:P:6:LEU:CD1	16:P:6:LEU:N	2.78	0.46
16:P:71:ARG:O	16:P:75:ARG:HG3	2.15	0.46
1:A:1518:A:H8	1:A:1518:A:H3'	1.81	0.46
1:A:575:G:C4	1:A:881:G:N2	2.83	0.46
1:A:7:G:C6	1:A:298:A:C2	3.04	0.46
1:A:594:G:N1	1:A:596:C:N4	2.64	0.46
11:K:98:LEU:HD23	11:K:98:LEU:H	1.80	0.46
1:A:1432:G:O2'	1:A:1468:A:N6	2.49	0.46
12:L:28:LYS:C	12:L:30:ALA:N	2.68	0.46
7:G:153:HIS:HD2	7:G:154:TYR:CZ	2.33	0.46
4:D:19:LEU:HB3	4:D:21:LEU:CD1	2.39	0.46
4:D:46:LYS:HG2	4:D:47:ARG:N	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:760:G:H22	17:Q:104:LYS:H	1.55	0.46
1:A:1120:G:H1	1:A:1153:C:H42	1.64	0.46
3:C:139:GLN:HA	3:C:139:GLN:NE2	2.31	0.46
3:C:170:GLN:O	3:C:172:ARG:N	2.49	0.46
3:C:180:ALA:HB2	3:C:206:GLU:HG3	1.97	0.46
7:G:29:LYS:HG3	7:G:101:LEU:HD12	1.98	0.46
7:G:71:PRO:CD	7:G:103:TRP:HZ3	2.21	0.46
10:J:48:THR:HG1	10:J:62:HIS:CE1	2.29	0.46
13:M:20:THR:HA	13:M:25:ILE:O	2.16	0.46
14:N:24:CYS:HA	14:N:33:VAL:HG13	1.98	0.46
19:S:67:VAL:C	19:S:69:HIS:N	2.69	0.46
1:A:390:C:O2'	16:P:28:ARG:NH2	2.49	0.46
1:A:696:A:H2'	1:A:697:U:H6	1.81	0.46
5:E:137:GLU:CD	5:E:141:GLN:HE21	2.18	0.46
18:R:33:ASP:OD2	18:R:36:ASN:CB	2.64	0.46
11:K:19:ALA:HB2	11:K:80:VAL:HG13	1.97	0.46
5:E:12:LEU:HD13	5:E:31:LEU:HB2	1.98	0.46
5:E:45:PHE:CD2	5:E:47:LYS:HE3	2.50	0.46
1:A:1437:C:H6	1:A:1438:G:N7	2.14	0.46
1:A:718:G:C4'	11:K:117:ASN:ND2	2.79	0.46
3:C:191:THR:HG23	3:C:194:GLY:C	2.37	0.46
1:A:1077:G:N2	1:A:1079:G:H3'	2.30	0.46
1:A:799:G:H2'	1:A:800:G:H5'	1.98	0.46
18:R:85:LEU:HD12	18:R:85:LEU:C	2.36	0.46
4:D:59:ARG:O	4:D:62:GLN:HB2	2.16	0.46
1:A:1186:G:C2	1:A:1187:G:C4	3.04	0.46
3:C:11:ARG:HA	3:C:14:ILE:HG12	1.95	0.46
9:I:93:ARG:HA	9:I:96:LEU:HD23	1.96	0.46
10:J:49:VAL:O	10:J:60:ARG:HA	2.16	0.46
13:M:43:THR:O	13:M:44:ARG:O	2.33	0.46
19:S:53:ASN:N	19:S:56:GLN:O	2.49	0.46
21:V:17:THR:CG2	21:V:18:TYR:H	2.19	0.46
16:P:10:GLY:HA3	16:P:16:HIS:N	2.31	0.46
15:O:9:GLN:OE1	15:O:9:GLN:HA	2.15	0.46
2:B:10:LEU:C	2:B:12:GLU:H	2.16	0.46
15:O:33:THR:HG23	15:O:63:ARG:HH11	1.79	0.46
15:O:48:LYS:CB	15:O:48:LYS:NZ	2.78	0.46
14:N:14:PRO:HB2	14:N:19:ARG:HB2	1.97	0.46
1:A:705:U:C5	1:A:706:A:C5	3.04	0.46
7:G:75:VAL:CG1	7:G:86:GLN:HB3	2.45	0.46
12:L:78:GLN:C	12:L:80:HIS:N	2.69	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:507:C:H3'	1:A:508:C:H2'	1.97	0.46
1:A:676:A:C2	1:A:677:U:C4	3.04	0.46
1:A:562:C:C4'	1:A:563:A:H5'	2.45	0.46
4:D:170:VAL:HG13	4:D:174:LEU:HB2	1.98	0.46
1:A:1242:C:C4	1:A:1243:C:C5	3.04	0.46
1:A:1298:C:C4'	1:A:1299:A:C5'	2.92	0.46
1:A:1326:C:OP1	21:V:12:LYS:CD	2.62	0.46
1:A:1349:A:H2'	1:A:1350:A:C5'	2.45	0.46
7:G:47:CYS:C	7:G:49:ILE:N	2.69	0.46
10:J:31:GLY:O	10:J:76:ASN:HB2	2.16	0.46
10:J:26:ALA:HB3	10:J:85:LEU:CD1	2.45	0.46
1:A:373:A:H2'	1:A:374:A:C8	2.31	0.46
20:T:78:ALA:O	20:T:79:ARG:C	2.53	0.46
8:H:31:PHE:CE1	8:H:35:ILE:HG13	2.51	0.46
1:A:1006:C:H2'	1:A:1007:C:O4'	2.15	0.46
6:F:54:LYS:O	6:F:56:PRO:HD3	2.16	0.46
1:A:977:A:C8	1:A:1223:C:C2	3.03	0.46
1:A:1225:A:H5'	13:M:103:THR:CB	2.46	0.46
1:A:1470:G:H2'	1:A:1471:G:C8	2.51	0.46
6:F:74:ASP:O	6:F:77:ARG:HG2	2.16	0.46
1:A:799:G:O2'	1:A:800:G:H5'	2.16	0.46
1:A:670:G:O2'	1:A:671:G:H5'	2.16	0.46
8:H:119:LEU:CD1	8:H:124:ALA:HA	2.46	0.46
12:L:49:ASN:HD22	12:L:49:ASN:HA	1.54	0.45
12:L:58:VAL:HG12	12:L:59:ARG:N	2.31	0.45
1:A:309:G:H1'	1:A:608:A:C2	2.51	0.45
1:A:1095:U:P	1:A:1108:G:H1	2.38	0.45
1:A:1275:A:H2'	1:A:1276:G:H8	1.81	0.45
1:A:940:C:O2'	1:A:941:G:H5'	2.17	0.45
3:C:24:ALA:HB1	3:C:28:GLN:NE2	2.31	0.45
7:G:114:ARG:N	7:G:114:ARG:HD3	2.22	0.45
9:I:15:ALA:HB1	9:I:77:ILE:HG12	1.98	0.45
9:I:18:PHE:CD1	9:I:62:TYR:HD2	2.35	0.45
9:I:63:ILE:HD13	9:I:77:ILE:CG2	2.46	0.45
9:I:80:GLY:C	9:I:83:ARG:H	2.19	0.45
10:J:57:LYS:HG2	10:J:60:ARG:NE	2.30	0.45
9:I:114:TYR:HE2	10:J:61:GLU:H	1.64	0.45
10:J:82:ILE:O	10:J:86:MET:HA	2.17	0.45
10:J:90:LEU:C	10:J:90:LEU:HD23	2.36	0.45
1:A:355:C:C2	1:A:356:A:C8	3.04	0.45
1:A:451:A:H1'	1:A:452:A:C8	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:61:ALA:O	3:C:62:ASP:HB2	2.16	0.45
3:C:76:VAL:O	3:C:78:GLY:N	2.49	0.45
1:A:1228:C:OP1	13:M:115:LYS:HD3	2.15	0.45
18:R:33:ASP:OD2	18:R:36:ASN:N	2.47	0.45
2:B:111:ARG:HA	2:B:111:ARG:HD3	1.60	0.45
2:B:135:GLN:C	2:B:139:LYS:HB2	2.37	0.45
11:K:41:THR:O	11:K:42:TRP:HB3	2.15	0.45
11:K:46:GLY:O	11:K:48:ILE:N	2.49	0.45
1:A:266:G:O2'	1:A:267:C:OP2	2.26	0.45
1:A:1516:G:N2	1:A:1520:G:C4	2.84	0.45
1:A:585:G:C6	1:A:586:C:C4	3.04	0.45
1:A:568:G:O6	12:L:5:PRO:HD3	2.16	0.45
1:A:1049:U:H4'	1:A:1050:G:O5'	2.17	0.45
1:A:321:A:N3	1:A:322:C:C5	2.84	0.45
3:C:38:ARG:HD3	3:C:38:ARG:HA	1.80	0.45
1:A:979:C:OP2	1:A:980:C:H5	1.98	0.45
8:H:66:GLY:O	8:H:76:PRO:HB3	2.16	0.45
1:A:427:U:C4'	1:A:541:G:H5''	2.47	0.45
4:D:127:THR:HA	4:D:132:ARG:HA	1.99	0.45
1:A:245:C:C2'	1:A:246:A:H5'	2.46	0.45
1:A:1350:A:C6	1:A:1351:U:C4	3.04	0.45
1:A:1112:C:O2	3:C:179:ARG:HB3	2.15	0.45
3:C:21:ARG:CD	3:C:21:ARG:N	2.79	0.45
3:C:27:LYS:HA	3:C:30:ARG:NH2	2.32	0.45
7:G:14:PRO:CA	7:G:21:VAL:HG12	2.45	0.45
9:I:23:ASN:O	9:I:56:LEU:O	2.35	0.45
10:J:20:ALA:O	10:J:23:ILE:N	2.32	0.45
10:J:6:ILE:CD1	10:J:73:ASP:HA	2.46	0.45
10:J:4:ILE:HD12	10:J:74:ILE:O	2.16	0.45
13:M:41:PRO:O	13:M:42:ALA:O	2.33	0.45
14:N:26:ARG:CZ	14:N:47:LEU:HD21	2.46	0.45
20:T:45:GLN:CD	20:T:45:GLN:C	2.74	0.45
1:A:861:G:C4	1:A:862:C:C5	3.04	0.45
1:A:950:U:H2'	1:A:951:G:C8	2.47	0.45
2:B:118:LEU:O	2:B:119:GLU:C	2.55	0.45
11:K:87:THR:C	11:K:91:ARG:HH12	2.18	0.45
13:M:92:HIS:CE1	13:M:98:VAL:HG21	2.50	0.45
6:F:33:TYR:CG	6:F:75:LEU:HD23	2.51	0.45
1:A:667:G:N2	1:A:668:G:C4	2.84	0.45
15:O:36:ILE:CD1	15:O:63:ARG:HD3	2.46	0.45
11:K:18:ARG:HD3	11:K:33:THR:HG23	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:153:C:N4	1:A:169:C:H42	2.12	0.45
1:A:1486:G:H2'	1:A:1487:G:C8	2.51	0.45
17:Q:87:LYS:O	17:Q:88:TYR:C	2.55	0.45
1:A:867:G:N2	1:A:868:C:C2	2.85	0.45
1:A:75:G:N2	1:A:96:G:N2	2.64	0.45
1:A:1380:U:C5	7:G:3:ARG:HA	2.50	0.45
1:A:690:G:C6	1:A:691:G:C2	3.04	0.45
1:A:507:C:OP2	1:A:508:C:O2'	2.32	0.45
1:A:677:U:H2'	1:A:678:U:O4'	2.16	0.45
17:Q:4:LYS:O	17:Q:60:ILE:HA	2.16	0.45
1:A:541:G:C4	1:A:542:G:C8	3.04	0.45
4:D:100:ARG:HH11	4:D:100:ARG:HG2	1.82	0.45
1:A:1250:A:H61	1:A:1354:C:C1'	2.29	0.45
3:C:153:VAL:HG13	3:C:198:VAL:CG2	2.46	0.45
3:C:206:GLU:O	3:C:207:VAL:HB	2.16	0.45
9:I:85:LEU:HD22	9:I:92:TYR:CE1	2.51	0.45
10:J:16:LEU:HD21	10:J:70:ARG:HB2	1.97	0.45
19:S:41:VAL:HA	19:S:42:PRO:HD3	1.83	0.45
1:A:356:A:H2'	1:A:357:G:C8	2.48	0.45
20:T:79:ARG:CG	20:T:83:ARG:HH11	2.29	0.45
3:C:76:VAL:CG2	3:C:77:ILE:N	2.79	0.45
8:H:11:THR:HA	8:H:14:ARG:HH12	1.78	0.45
8:H:11:THR:O	8:H:13:ILE:N	2.49	0.45
18:R:38:GLU:O	18:R:39:VAL:C	2.54	0.45
2:B:142:LEU:C	2:B:144:ARG:N	2.68	0.45
2:B:74:LYS:HD3	2:B:206:ASP:HB2	1.98	0.45
2:B:231:GLU:CB	2:B:232:PRO:CD	2.87	0.45
11:K:46:GLY:O	11:K:49:GLY:N	2.49	0.45
13:M:81:LEU:CA	13:M:84:ILE:HG12	2.41	0.45
1:A:1213:A:C6	1:A:1215:G:C8	3.04	0.45
15:O:17:ARG:CZ	15:O:77:ARG:NH1	2.80	0.45
15:O:74:ASP:O	15:O:76:GLU:N	2.50	0.45
17:Q:85:VAL:O	17:Q:89:LEU:N	2.48	0.45
1:A:1361:G:H8	1:A:1361:G:P	2.39	0.45
3:C:162:GLN:HG3	3:C:164:ARG:HG3	1.97	0.45
1:A:142:G:N3	1:A:196:A:C2	2.85	0.45
1:A:1340:A:H2'	1:A:1341:U:O4'	2.16	0.45
7:G:11:GLN:HE21	7:G:11:GLN:HA	1.82	0.45
1:A:507:C:C4	1:A:508:C:H5	2.35	0.45
4:D:10:ARG:NH1	4:D:10:ARG:CG	2.70	0.45
4:D:52:SER:OG	4:D:55:ALA:N	2.36	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:84:LEU:HG	12:L:101:VAL:HG11	1.98	0.45
12:L:55:VAL:HG12	12:L:56:ALA:N	2.24	0.45
1:A:1313:U:H3'	19:S:6:LYS:CD	2.45	0.45
1:A:944:G:C2'	1:A:945:G:H5''	2.46	0.45
7:G:125:MET:O	7:G:128:ALA:N	2.50	0.45
9:I:75:ASP:C	9:I:78:LYS:HB3	2.36	0.45
9:I:97:LYS:O	9:I:100:GLY:N	2.36	0.45
10:J:22:LYS:NZ	10:J:23:ILE:HD11	2.31	0.45
10:J:3:LYS:HB2	10:J:77:PRO:HD3	1.98	0.45
13:M:2:ALA:O	13:M:10:PRO:HD2	2.17	0.45
14:N:28:GLY:O	14:N:29:ARG:O	2.34	0.45
14:N:43:CYS:O	14:N:46:GLU:OE1	2.35	0.45
1:A:223:U:C4	1:A:224:C:C5	3.05	0.45
1:A:192:U:H4'	20:T:57:ARG:NH1	2.31	0.45
1:A:38:G:H22	1:A:397:A:C5'	2.29	0.45
5:E:141:GLN:O	5:E:142:LEU:C	2.54	0.45
1:A:665:A:N3	1:A:732:C:C2	2.84	0.45
2:B:109:SER:O	2:B:111:ARG:N	2.49	0.45
11:K:59:TYR:O	11:K:63:LEU:HG	2.17	0.45
1:A:456:C:C6	1:A:457:C:H5	2.34	0.45
1:A:580:U:H1'	15:O:57:LEU:CD2	2.46	0.45
1:A:167:G:C2	1:A:168:G:C5	3.04	0.45
1:A:319:G:N2	1:A:320:C:C2	2.85	0.45
1:A:98:U:H2'	1:A:99:C:C6	2.51	0.45
1:A:955:U:O2'	1:A:956:U:H5'	2.16	0.45
18:R:29:PHE:CD1	18:R:29:PHE:C	2.90	0.45
1:A:811:C:H4'	1:A:900:A:N6	2.32	0.45
2:B:158:LEU:CD2	2:B:159:PRO:HD2	2.46	0.45
1:A:411:A:C8	1:A:413:G:C8	3.04	0.45
4:D:10:ARG:O	4:D:11:LEU:C	2.53	0.45
4:D:150:GLU:OE1	4:D:150:GLU:HA	2.16	0.45
4:D:4:TYR:HE2	4:D:6:GLY:O	1.99	0.45
1:A:1114:C:C4	1:A:1115:C:C5	3.05	0.45
1:A:1342:C:O2'	1:A:1343:G:H5'	2.17	0.45
3:C:14:ILE:O	3:C:15:THR:HG23	2.17	0.45
13:M:44:ARG:HD2	13:M:44:ARG:N	2.32	0.45
17:Q:67:LYS:CA	17:Q:70:ARG:HH12	2.29	0.45
1:A:191:G:O2'	20:T:102:GLY:HA2	2.16	0.45
1:A:44:G:C2	1:A:399:G:N1	2.85	0.45
17:Q:6:LEU:N	17:Q:59:ILE:O	2.50	0.45
15:O:78:TYR:CZ	15:O:82:ILE:HD12	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:142:LEU:HD23	2:B:146:GLN:CG	2.47	0.45
1:A:1411:C:H2'	1:A:1412:C:O4'	2.17	0.45
6:F:14:LEU:HD22	6:F:18:GLN:NE2	2.31	0.45
6:F:1:MET:HE1	6:F:36:ARG:HH21	1.81	0.45
14:N:8:GLU:O	14:N:11:LYS:CE	2.64	0.45
2:B:178:ARG:NH1	2:B:178:ARG:HG3	2.29	0.45
5:E:15:ARG:CZ	5:E:26:PHE:HE2	2.29	0.45
1:A:913:A:C1'	1:A:914:A:O4'	2.63	0.45
5:E:73:ASN:O	5:E:73:ASN:ND2	2.48	0.45
1:A:778:G:C5	1:A:779:C:C5	3.04	0.45
3:C:79:ARG:HH21	3:C:82:GLU:HG3	1.80	0.45
1:A:773:G:C5	1:A:774:G:N7	2.84	0.45
3:C:201:TYR:CD1	3:C:201:TYR:N	2.85	0.45
1:A:621:A:C4	1:A:622:A:N7	2.85	0.45
4:D:191:ARG:O	4:D:192:GLU:C	2.54	0.45
1:A:281:G:HO2'	1:A:282:A:P	2.39	0.45
1:A:1014:A:N6	1:A:1015:A:N6	2.64	0.45
1:A:1128:C:H2'	1:A:1139:G:N7	2.31	0.45
1:A:1220:G:H1'	19:S:52:TYR:HD2	1.81	0.45
7:G:123:GLU:O	7:G:124:LEU:C	2.53	0.45
7:G:136:LYS:O	7:G:140:ASP:HB2	2.17	0.45
9:I:50:LEU:HD11	9:I:81:ILE:CG2	2.46	0.45
9:I:49:PRO:HB2	9:I:82:ALA:HA	1.98	0.45
10:J:9:ARG:CZ	10:J:9:ARG:CB	2.94	0.45
19:S:22:LEU:HD22	19:S:28:LYS:CB	2.46	0.45
19:S:36:ARG:NH2	19:S:75:ALA:HB3	2.32	0.45
19:S:49:ILE:HG12	19:S:51:VAL:HG13	1.98	0.45
19:S:68:GLY:O	19:S:69:HIS:ND1	2.49	0.45
3:C:76:VAL:CG2	3:C:77:ILE:H	2.17	0.45
11:K:91:ARG:HG2	11:K:95:ILE:HD11	1.99	0.45
6:F:25:ILE:HG23	6:F:26:ILE:N	2.32	0.45
1:A:880:C:O2'	1:A:881:G:H5'	2.17	0.45
1:A:686:U:O2	1:A:687:A:C4	2.70	0.45
1:A:636:U:H5'	17:Q:2:PRO:CG	2.46	0.45
1:A:864:A:C6	1:A:865:A:N1	2.85	0.45
1:A:68:G:O4'	1:A:171:A:H1'	2.17	0.45
1:A:327:A:C6	1:A:329:A:C5	3.04	0.45
1:A:849:C:H2'	1:A:850:U:C5'	2.46	0.45
1:A:977:A:C8	1:A:1223:C:N3	2.85	0.45
17:Q:10:VAL:HG21	17:Q:55:ASP:HB2	1.98	0.45
17:Q:81:ARG:C	17:Q:83:ASP:H	2.19	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:657:G:H2'	1:A:658:G:H8	1.82	0.45
1:A:659:U:H3	1:A:746:A:N6	2.10	0.45
1:A:639:G:N2	1:A:640:A:C4	2.85	0.45
1:A:1249:C:H3'	1:A:1249:C:C6	2.51	0.45
8:H:60:ARG:HB3	8:H:62:TYR:HE2	1.81	0.45
15:O:13:GLN:HE21	15:O:13:GLN:HB3	1.48	0.45
4:D:195:ALA:O	4:D:196:LEU:C	2.54	0.45
3:C:12:LEU:C	3:C:14:ILE:N	2.70	0.45
1:A:1371:G:O3'	9:I:69:GLY:HA3	2.17	0.45
9:I:88:TYR:O	9:I:90:PRO:HD2	2.16	0.45
10:J:16:LEU:HD22	10:J:70:ARG:HD3	1.99	0.45
10:J:24:VAL:HG12	10:J:25:GLU:N	2.31	0.45
14:N:48:ALA:HA	14:N:53:LEU:HB2	1.98	0.45
5:E:39:GLY:CA	5:E:71:LEU:HD11	2.45	0.45
8:H:87:SER:CB	8:H:93:VAL:HB	2.24	0.45
18:R:61:LYS:O	18:R:62:GLU:C	2.55	0.45
2:B:71:VAL:O	2:B:165:VAL:HG22	2.15	0.45
1:A:444:C:N3	1:A:491:G:C2	2.85	0.45
2:B:36:ARG:O	2:B:37:ASN:O	2.35	0.45
1:A:559:A:H4'	1:A:560:U:C5'	2.46	0.45
1:A:865:A:N6	1:A:866:C:H42	2.14	0.45
1:A:96:G:C2	1:A:97:G:C8	3.05	0.45
8:H:100:ILE:CG2	8:H:101:PRO:N	2.79	0.45
1:A:30:U:O2'	1:A:31:G:OP1	2.27	0.45
8:H:18:ARG:HH11	8:H:18:ARG:CB	2.28	0.45
1:A:901:A:C5	1:A:902:G:H1'	2.52	0.45
1:A:967:C:O2'	9:I:128:ARG:NH2	2.50	0.45
9:I:25:LYS:HD3	9:I:25:LYS:H	1.80	0.45
1:A:806:C:H2'	1:A:807:A:H8	1.81	0.45
1:A:529:G:C4'	1:A:533:A:C2	3.00	0.45
1:A:538:G:H5''	12:L:114:LYS:CB	2.41	0.45
1:A:281:G:C2'	1:A:282:A:OP2	2.64	0.45
1:A:1219:U:H2'	1:A:1220:G:C8	2.52	0.45
7:G:38:LEU:CG	7:G:42:ILE:HD11	2.32	0.45
9:I:48:GLU:N	9:I:49:PRO:CD	2.73	0.45
9:I:6:GLY:O	9:I:80:GLY:HA3	2.16	0.45
13:M:17:VAL:HG22	13:M:27:LYS:CD	2.37	0.45
1:A:1329:A:OP1	13:M:28:ALA:HB3	2.17	0.45
14:N:42:ILE:O	14:N:45:ARG:N	2.49	0.45
16:P:10:GLY:HA3	16:P:16:HIS:H	1.82	0.45
20:T:67:ALA:CB	20:T:77:ALA:HB2	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:132:ALA:O	5:E:135:THR:HB	2.17	0.45
2:B:43:ASP:OD1	2:B:43:ASP:C	2.55	0.45
1:A:478:A:C2'	1:A:479:C:H5'	2.47	0.45
2:B:177:ALA:O	2:B:178:ARG:C	2.55	0.45
1:A:599:C:O2'	1:A:600:C:H5'	2.16	0.45
1:A:644:G:H2'	1:A:645:C:O4'	2.17	0.45
1:A:178:C:O2'	1:A:179:A:C5'	2.62	0.45
1:A:1356:G:H2'	1:A:1357:A:H8	1.76	0.45
9:I:32:ASP:O	9:I:33:PHE:C	2.55	0.45
1:A:839:U:C2'	1:A:839:U:O2	2.64	0.45
1:A:639:G:H2'	1:A:640:A:H8	1.82	0.45
1:A:1081:G:OP1	5:E:17:ALA:O	2.35	0.45
12:L:108:ALA:O	12:L:109:GLY:O	2.34	0.45
2:B:182:ILE:O	2:B:183:PRO:C	2.55	0.45
1:A:1492:A:HO2'	1:A:1493:A:H8	1.60	0.45
12:L:126:LYS:C	12:L:126:LYS:HD2	2.37	0.45
1:A:407:G:H1	1:A:435:C:H42	1.64	0.45
4:D:201:GLN:NE2	5:E:99:GLY:CA	2.76	0.45
1:A:307:C:C6	1:A:308:C:H5	2.35	0.45
1:A:307:C:H2'	1:A:308:C:H6	1.82	0.45
1:A:56:U:O2'	1:A:57:G:H5'	2.17	0.45
1:A:1095:U:C5'	1:A:1109:C:O2	2.65	0.45
1:A:1260:C:P	1:A:1284:C:H4'	2.57	0.45
1:A:1353:G:C2	1:A:1354:C:C5	3.05	0.45
1:A:1112:C:O2	3:C:179:ARG:HB2	2.16	0.45
3:C:180:ALA:HB1	3:C:206:GLU:HG3	1.99	0.45
7:G:125:MET:HB3	7:G:126:ASP:H	1.59	0.45
7:G:70:LYS:HA	7:G:71:PRO:HD2	1.78	0.45
10:J:94:VAL:HG12	10:J:95:GLU:H	1.81	0.45
10:J:9:ARG:HB3	10:J:9:ARG:HH11	1.80	0.45
14:N:25:VAL:HG23	14:N:38:GLY:O	2.17	0.45
19:S:11:VAL:HG12	19:S:16:LEU:HB2	1.99	0.45
17:Q:67:LYS:O	17:Q:68:ARG:C	2.54	0.45
1:A:131:C:O2	1:A:232:G:C2	2.70	0.45
17:Q:5:VAL:O	17:Q:6:LEU:HG	2.17	0.45
1:A:734:G:C5	1:A:735:C:C4	3.05	0.45
11:K:91:ARG:O	11:K:93:GLN:N	2.49	0.45
6:F:67:MET:SD	6:F:72:VAL:HA	2.57	0.45
6:F:47:ARG:NH1	6:F:47:ARG:HA	2.17	0.45
1:A:419:C:O2	1:A:419:C:C2'	2.65	0.45
1:A:568:G:O2'	1:A:574:A:N1	2.38	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:16:THR:HG22	5:E:27:ARG:O	2.16	0.45
9:I:110:GLU:OE2	9:I:113:LYS:NZ	2.49	0.45
9:I:113:LYS:N	9:I:113:LYS:HD2	2.32	0.45
3:C:201:TYR:O	3:C:202:ILE:CG1	2.65	0.45
1:A:12:U:H4'	1:A:526:C:O2'	2.17	0.45
4:D:194:LEU:HB3	4:D:196:LEU:HG	1.97	0.45
17:Q:95:TYR:C	17:Q:97:SER:N	2.70	0.45
1:A:1260:C:C5'	1:A:1284:C:H4'	2.47	0.45
1:A:1312:G:C2	1:A:1326:C:N3	2.85	0.45
1:A:1343:G:C5	1:A:1344:C:C4	3.05	0.45
3:C:141:VAL:HG23	3:C:142:MET:H	1.81	0.45
3:C:182:ILE:O	3:C:183:ASP:HB2	2.17	0.45
7:G:61:VAL:HG13	7:G:128:ALA:HB2	1.98	0.45
9:I:118:LYS:HB2	9:I:121:ARG:HB2	1.99	0.45
10:J:22:LYS:HZ2	10:J:23:ILE:HD13	1.81	0.45
13:M:48:LEU:HD22	13:M:53:VAL:HG22	1.98	0.45
13:M:57:ARG:HH11	13:M:57:ARG:HG2	1.82	0.45
1:A:197:A:H1'	1:A:198:G:H1'	1.97	0.45
1:A:377:G:C2	1:A:378:G:N7	2.85	0.45
17:Q:44:ALA:HB2	17:Q:59:ILE:HD12	1.99	0.45
20:T:101:GLY:O	20:T:102:GLY:C	2.54	0.45
5:E:122:GLU:OE1	5:E:131:ILE:HG21	2.17	0.45
5:E:39:GLY:HA2	5:E:71:LEU:HD21	1.98	0.45
2:B:55:PHE:HE1	2:B:218:ALA:HA	1.82	0.45
2:B:21:ARG:HA	2:B:39:ILE:CG1	2.47	0.45
8:H:65:TYR:CD1	8:H:65:TYR:N	2.84	0.45
1:A:1521:G:C2	1:A:1522:U:N3	2.85	0.45
1:A:127:G:O3'	17:Q:2:PRO:HD2	2.16	0.45
17:Q:88:TYR:O	17:Q:89:LEU:C	2.56	0.45
1:A:913:A:O2'	1:A:914:A:C5'	2.65	0.45
2:B:194:PRO:HG2	2:B:195:ASP:H	1.82	0.45
20:T:18:GLN:O	20:T:22:ARG:HG3	2.17	0.45
1:A:555:C:H2'	1:A:556:C:C6	2.52	0.45
5:E:148:VAL:O	5:E:149:GLU:C	2.55	0.45
1:A:1076:C:N3	1:A:1077:G:N7	2.65	0.45
1:A:1483:A:H2'	1:A:1484:C:H5'	1.99	0.45
1:A:765:G:O6	1:A:812:C:C6	2.70	0.45
2:B:148:TYR:N	2:B:148:TYR:CD2	2.84	0.45
4:D:111:ALA:HB1	4:D:116:GLN:OE1	2.17	0.44
4:D:58:LEU:C	4:D:58:LEU:HD13	2.37	0.44
12:L:41:ARG:NH1	12:L:42:THR:H	2.15	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:293:G:N2	1:A:294:U:C2	2.85	0.44
1:A:1241:G:C6	1:A:1242:C:N4	2.85	0.44
1:A:1269:A:C2	1:A:1313:U:C1'	3.00	0.44
1:A:1270:C:O2'	1:A:1271:G:H5'	2.16	0.44
1:A:1238:A:N7	1:A:1301:U:O4	2.50	0.44
3:C:173:VAL:O	3:C:175:LEU:HD22	2.17	0.44
1:A:1347:G:N1	9:I:107:ARG:NH2	2.66	0.44
9:I:79:LEU:O	9:I:83:ARG:N	2.50	0.44
10:J:44:VAL:CG1	10:J:45:ARG:N	2.75	0.44
14:N:50:LYS:CG	14:N:51:GLY:H	2.21	0.44
17:Q:66:SER:O	17:Q:70:ARG:NH1	2.50	0.44
16:P:9:PHE:CE2	16:P:18:ARG:HD2	2.52	0.44
20:T:73:HIS:HB3	20:T:74:LYS:H	1.39	0.44
1:A:547:A:OP2	4:D:2:GLY:N	2.49	0.44
11:K:54:ARG:C	11:K:56:GLY:H	2.20	0.44
3:C:62:ASP:C	3:C:97:LYS:HB3	2.38	0.44
1:A:1405:G:C2	1:A:1497:G:C2	3.04	0.44
1:A:1409:C:H2'	1:A:1410:G:C8	2.52	0.44
1:A:1507:A:N6	1:A:1508:G:O6	2.50	0.44
1:A:1518:A:O2'	1:A:1519:A:H5'	2.17	0.44
15:O:48:LYS:O	15:O:49:ASP:C	2.55	0.44
1:A:922:G:O2'	1:A:1398:A:N1	2.47	0.44
1:A:499:A:C4'	1:A:500:G:H5'	2.45	0.44
1:A:1036:G:C2'	1:A:1037:C:H5'	2.46	0.44
15:O:26:GLU:HA	15:O:81:LEU:CD1	2.45	0.44
1:A:658:G:OP1	15:O:31:LEU:HD11	2.16	0.44
1:A:722:A:O2'	1:A:723:U:C2	2.69	0.44
17:Q:23:VAL:HG12	17:Q:23:VAL:O	2.16	0.44
4:D:125:HIS:HA	4:D:149:ALA:HB2	2.00	0.44
4:D:149:ALA:O	4:D:152:SER:HB3	2.17	0.44
1:A:282:A:C4	1:A:283:C:C6	3.06	0.44
5:E:52:PRO:O	5:E:53:LEU:C	2.52	0.44
9:I:46:ALA:HB1	9:I:81:ILE:HD11	1.98	0.44
10:J:9:ARG:NH1	10:J:69:ASN:CB	2.77	0.44
13:M:55:ARG:NH1	13:M:55:ARG:HG3	2.31	0.44
14:N:27:CYS:SG	14:N:29:ARG:CB	3.05	0.44
14:N:47:LEU:O	14:N:49:HIS:N	2.50	0.44
19:S:16:LEU:O	19:S:19:VAL:HG12	2.17	0.44
19:S:6:LYS:HB3	19:S:7:LYS:H	1.45	0.44
1:A:42:G:C2	1:A:401:C:O2	2.70	0.44
16:P:53:VAL:HA	16:P:56:ALA:HB3	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:97:LYS:N	3:C:97:LYS:HD2	2.31	0.44
18:R:37:VAL:HB	18:R:41:LYS:CD	2.47	0.44
18:R:41:LYS:HZ2	18:R:41:LYS:HB2	1.81	0.44
15:O:9:GLN:CA	15:O:12:ILE:HD13	2.47	0.44
2:B:149:LEU:O	2:B:153:ARG:HB2	2.17	0.44
2:B:214:ILE:O	2:B:215:LEU:C	2.55	0.44
1:A:1310:G:OP2	13:M:88:ARG:NH1	2.50	0.44
5:E:31:LEU:HD21	5:E:45:PHE:HB2	1.99	0.44
6:F:65:VAL:HG22	6:F:66:GLU:N	2.32	0.44
1:A:419:C:H5	1:A:425:G:C2	2.34	0.44
1:A:1214:C:H4'	1:A:1215:G:OP1	2.18	0.44
1:A:586:C:H1'	1:A:878:G:O2'	2.16	0.44
1:A:882:C:C2'	1:A:883:C:H5'	2.47	0.44
1:A:21:G:C2	1:A:22:G:C5	3.05	0.44
2:B:175:ARG:CB	2:B:175:ARG:HH11	2.28	0.44
1:A:1494:G:H2'	1:A:1495:U:H5'	1.98	0.44
11:K:124:LYS:C	11:K:125:PHE:HD1	2.21	0.44
1:A:303:A:C2	1:A:304:U:O2	2.70	0.44
11:K:22:HIS:O	11:K:22:HIS:CG	2.69	0.44
1:A:541:G:N3	1:A:542:G:C8	2.86	0.44
1:A:1064:G:N3	1:A:1066:C:N4	2.66	0.44
3:C:177:THR:O	3:C:177:THR:HG23	2.18	0.44
9:I:10:ARG:CD	9:I:105:ASP:HB3	2.46	0.44
9:I:23:ASN:HA	9:I:23:ASN:HD22	1.59	0.44
9:I:55:ALA:O	9:I:58:ARG:N	2.51	0.44
13:M:9:ILE:HA	13:M:10:PRO:HD2	1.81	0.44
1:A:253:U:H2'	1:A:254:G:C8	2.52	0.44
1:A:131:C:H2'	1:A:132:C:C5	2.50	0.44
5:E:107:ARG:O	5:E:108:ALA:C	2.56	0.44
2:B:116:GLU:HG2	2:B:153:ARG:CZ	2.47	0.44
1:A:740:U:H2'	1:A:741:G:H8	1.81	0.44
12:L:8:ASN:O	12:L:9:GLN:C	2.53	0.44
18:R:22:VAL:HG12	18:R:26:LEU:HD13	1.99	0.44
1:A:913:A:O2'	1:A:914:A:O5'	2.35	0.44
1:A:1000:U:H2'	1:A:1001:A:C8	2.52	0.44
1:A:448:A:N7	1:A:486:U:O4	2.50	0.44
1:A:902:G:O2'	1:A:903:G:H5'	2.17	0.44
1:A:190:C:H2'	1:A:190(A):C:C6	2.49	0.44
1:A:775:G:O2'	1:A:776:G:H5'	2.17	0.44
1:A:564:C:C4	1:A:565:U:C4	3.05	0.44
11:K:85:ARG:HD3	11:K:111:ASP:O	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:353:A:H5'	1:A:353:A:H8	1.83	0.44
1:A:813:U:O2	1:A:813:U:H2'	2.17	0.44
1:A:436:C:C2	1:A:437:U:C5	3.05	0.44
4:D:96:LEU:C	4:D:98:GLU:N	2.69	0.44
12:L:90:VAL:HG12	12:L:92:ASP:N	2.31	0.44
17:Q:94:ASN:O	17:Q:95:TYR:O	2.36	0.44
1:A:1128:C:N4	1:A:1143:G:H1	2.15	0.44
1:A:1258:G:H2'	1:A:1259:C:H6	1.82	0.44
3:C:126:ARG:C	3:C:127:ARG:CD	2.86	0.44
7:G:58:PRO:HA	7:G:61:VAL:CG2	2.47	0.44
1:A:1149:C:OP1	9:I:9:ARG:HD3	2.17	0.44
10:J:3:LYS:CB	10:J:77:PRO:HD3	2.48	0.44
10:J:10:GLY:O	10:J:67:THR:HA	2.16	0.44
13:M:39:ILE:HD12	13:M:56:LEU:CD2	2.48	0.44
19:S:10:PHE:HZ	19:S:12:ASP:OD2	1.99	0.44
15:O:79:ARG:O	15:O:80:ALA:C	2.55	0.44
5:E:139:LEU:HA	5:E:142:LEU:CG	2.48	0.44
1:A:455:C:H2'	1:A:456:C:H6	1.82	0.44
1:A:1521:G:C2	1:A:1522:U:C2	3.05	0.44
1:A:707:C:C5'	11:K:20:TYR:CD2	2.98	0.44
5:E:15:ARG:CZ	5:E:26:PHE:CE2	3.01	0.44
1:A:332:G:H2'	1:A:333:G:H8	1.82	0.44
20:T:19:SER:OG	20:T:20:LEU:N	2.50	0.44
1:A:250:A:H5'	1:A:252:U:H5'	1.99	0.44
1:A:182:U:C5'	1:A:182:U:H6	2.26	0.44
3:C:162:GLN:HG3	3:C:164:ARG:CG	2.47	0.44
1:A:1438:G:C6	1:A:1439:C:N4	2.85	0.44
17:Q:56:VAL:HB	17:Q:77:VAL:HB	1.99	0.44
1:A:1029:C:C2'	1:A:1030:C:H5'	2.48	0.44
1:A:1468:A:H2'	1:A:1469:G:O4'	2.17	0.44
4:D:7:PRO:HG2	4:D:10:ARG:HD2	1.99	0.44
4:D:24:GLU:C	4:D:26:CYS:H	2.21	0.44
1:A:306:G:H2'	1:A:307:C:H6	1.83	0.44
1:A:1110:A:C2'	1:A:1111:A:H5'	2.48	0.44
1:A:1349:A:C2'	1:A:1350:A:H5'	2.47	0.44
7:G:36:LYS:HA	7:G:39:ALA:HB3	1.99	0.44
7:G:41:ARG:O	7:G:43:PHE:N	2.50	0.44
7:G:60:LYS:HG2	7:G:64:GLN:HB3	1.99	0.44
9:I:5:TYR:CG	9:I:6:GLY:N	2.83	0.44
10:J:84:GLN:O	10:J:85:LEU:HG	2.17	0.44
19:S:22:LEU:O	19:S:25:LYS:CD	2.64	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:30:LEU:HD23	19:S:30:LEU:C	2.38	0.44
1:A:355:C:C4	1:A:356:A:N7	2.86	0.44
1:A:369:C:C2'	1:A:370:C:H5'	2.48	0.44
1:A:482:A:C2	1:A:483:C:H1'	2.53	0.44
3:C:48:TYR:HD1	3:C:52:LEU:CD2	2.30	0.44
15:O:79:ARG:O	15:O:82:ILE:CG2	2.65	0.44
15:O:87:ILE:CG2	15:O:88:ARG:N	2.66	0.44
5:E:138:ALA:O	5:E:139:LEU:C	2.55	0.44
18:R:41:LYS:NZ	18:R:41:LYS:HB2	2.32	0.44
18:R:59:SER:N	18:R:62:GLU:HB2	2.29	0.44
6:F:1:MET:SD	6:F:66:GLU:O	2.76	0.44
1:A:167:G:C2'	1:A:168:G:C8	2.91	0.44
1:A:1487:G:N2	1:A:1488:G:H1'	2.32	0.44
1:A:97:G:C2	1:A:98:U:H1'	2.53	0.44
1:A:957:U:H3	1:A:960:U:H5''	1.82	0.44
1:A:593:G:H2'	1:A:594:G:O4'	2.18	0.44
5:E:144:THR:HG22	5:E:145:LYS:N	2.31	0.44
1:A:616:G:C6	1:A:617:G:N7	2.85	0.44
4:D:126:ILE:HG22	4:D:127:THR:N	2.32	0.44
4:D:21:LEU:CD1	4:D:21:LEU:N	2.81	0.44
4:D:79:PHE:CD1	4:D:207:TYR:HD1	2.33	0.44
12:L:46:LYS:HG2	12:L:47:LYS:N	2.32	0.44
12:L:83:VAL:HG13	12:L:84:LEU:N	2.33	0.44
1:A:1149:C:C2'	1:A:1150:U:O5'	2.66	0.44
1:A:1285:A:O2'	1:A:1286:A:P	2.76	0.44
1:A:1291:G:OP1	7:G:41:ARG:NH2	2.51	0.44
1:A:1302:U:H3'	1:A:1303:C:C5'	2.48	0.44
3:C:127:ARG:HG2	3:C:127:ARG:NH1	2.32	0.44
7:G:29:LYS:HB3	7:G:105:VAL:HG21	2.00	0.44
9:I:20:ARG:O	9:I:21:PRO:O	2.36	0.44
13:M:35:GLU:C	13:M:37:THR:N	2.70	0.44
19:S:23:ASN:HA	19:S:27:GLU:CA	2.44	0.44
20:T:33:ILE:O	20:T:34:LYS:C	2.56	0.44
18:R:40:LEU:CD2	18:R:40:LEU:C	2.86	0.44
2:B:72:GLY:HA2	2:B:165:VAL:CG2	2.47	0.44
11:K:25:TYR:OH	11:K:87:THR:HB	2.18	0.44
11:K:66:LEU:HD23	11:K:69:ALA:HB3	1.99	0.44
1:A:740:U:O2'	1:A:741:G:C5'	2.64	0.44
1:A:971:G:H5''	1:A:972:C:H5''	2.00	0.44
18:R:21:LYS:CD	18:R:21:LYS:H	2.20	0.44
17:Q:22:LEU:HA	17:Q:22:LEU:HD12	1.73	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:823:G:C6	1:A:824:C:N4	2.85	0.44
20:T:23:ARG:O	20:T:24:LEU:C	2.56	0.44
1:A:922:G:C5'	5:E:19:MET:O	2.63	0.44
1:A:1036:G:C6	1:A:1037:C:H1'	2.53	0.44
20:T:69:GLY:C	20:T:71:THR:N	2.70	0.44
11:K:98:LEU:CD2	11:K:98:LEU:H	2.27	0.44
12:L:119:LYS:O	12:L:120:TYR:HB2	2.17	0.44
1:A:411:A:C8	1:A:413:G:N9	2.86	0.44
1:A:517:G:C6	1:A:531:U:O4'	2.71	0.44
4:D:152:SER:CB	4:D:155:LEU:HD12	2.47	0.44
5:E:119:LEU:HD23	5:E:119:LEU:HA	1.53	0.44
12:L:110:VAL:O	12:L:122:THR:HG21	2.18	0.44
12:L:24:VAL:HG12	12:L:24:VAL:O	2.16	0.44
1:A:1272:G:H2'	1:A:1273:G:H8	1.83	0.44
10:J:39:PRO:O	10:J:70:ARG:NH1	2.51	0.44
10:J:62:HIS:HB3	14:N:59:ALA:CB	2.41	0.44
10:J:67:THR:O	10:J:68:HIS:C	2.56	0.44
14:N:37:PHE:O	14:N:39:LEU:HG	2.18	0.44
1:A:373:A:C2	1:A:482:A:C6	3.05	0.44
5:E:80:ILE:HG22	8:H:104:ARG:NH2	2.15	0.44
8:H:44:PHE:C	8:H:45:ILE:HG12	2.37	0.44
1:A:735:C:C2	1:A:736:C:C5	3.06	0.44
18:R:35:ARG:O	18:R:36:ASN:C	2.56	0.44
15:O:36:ILE:HG22	15:O:37:ASN:N	2.32	0.44
1:A:1210:C:H3'	1:A:1211:U:H5''	2.00	0.44
1:A:1070:U:H5'	5:E:18:ARG:HH12	1.83	0.44
1:A:1135:U:H4'	1:A:1136:U:C5	2.50	0.44
1:A:146:G:C4	1:A:147:G:C8	3.06	0.44
1:A:172:A:O2'	1:A:173:U:H5'	2.18	0.44
5:E:20:GLN:O	5:E:21:ALA:O	2.35	0.44
3:C:160:ALA:O	3:C:162:GLN:N	2.51	0.44
6:F:9:VAL:HA	6:F:59:TYR:O	2.18	0.44
1:A:142:G:H2'	1:A:143:A:C8	2.46	0.44
1:A:936:C:H2'	1:A:937:A:C8	2.53	0.44
8:H:102:ARG:HH12	8:H:105:ARG:NH1	2.15	0.44
1:A:364:A:C2	1:A:365:U:O4	2.71	0.44
7:G:148:ASN:C	7:G:150:ALA:N	2.69	0.44
13:M:71:ARG:HG2	13:M:71:ARG:NH1	2.33	0.44
1:A:521:G:O2'	1:A:522:C:H5'	2.18	0.44
5:E:118:ILE:HG22	5:E:119:LEU:H	1.83	0.44
1:A:53:A:C2'	1:A:54:C:O5'	2.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:102:GLY:O	17:Q:103:GLY:O	2.36	0.44
1:A:1064:G:H4'	1:A:1065:U:C5'	2.47	0.44
1:A:1250:A:C2	1:A:1287:A:C2	3.06	0.44
3:C:108:ASN:OD1	3:C:108:ASN:N	2.49	0.44
3:C:113:ALA:O	3:C:116:VAL:HG23	2.18	0.44
3:C:116:VAL:O	3:C:117:ALA:C	2.57	0.44
3:C:154:SER:HA	3:C:165:THR:HA	1.98	0.44
7:G:114:ARG:HD3	7:G:114:ARG:HA	1.81	0.44
9:I:100:GLY:C	9:I:102:LEU:H	2.21	0.44
9:I:121:ARG:O	9:I:121:ARG:HD3	2.18	0.44
13:M:33:ALA:C	13:M:35:GLU:N	2.71	0.44
13:M:34:LEU:CD1	13:M:41:PRO:HA	2.48	0.44
13:M:39:ILE:CD1	13:M:52:GLU:HB3	2.47	0.44
19:S:18:LYS:O	19:S:22:LEU:HD21	2.18	0.44
1:A:106:C:H2'	1:A:107:G:O4'	2.17	0.44
1:A:191:G:C6	1:A:192:U:C4	3.05	0.44
1:A:229:U:H2'	1:A:230:G:H8	1.83	0.44
16:P:35:LYS:HG2	16:P:36:ILE:N	2.33	0.44
3:C:91:LEU:O	3:C:95:THR:CG2	2.66	0.44
18:R:37:VAL:O	18:R:38:GLU:HB2	2.18	0.44
13:M:80:ARG:C	13:M:82:MET:N	2.71	0.44
13:M:80:ARG:HG2	13:M:81:LEU:N	2.31	0.44
6:F:19:LEU:HD23	6:F:19:LEU:C	2.38	0.44
1:A:1513:A:O2'	1:A:1514:C:H5'	2.18	0.44
18:R:28:GLU:OE1	18:R:28:GLU:N	2.51	0.44
1:A:543:C:H2'	1:A:544:G:O4'	2.18	0.44
1:A:134:A:H2'	1:A:135:C:O4'	2.17	0.44
7:G:76:ARG:O	7:G:86:GLN:HA	2.18	0.44
2:B:63:MET:HB3	2:B:225:ALA:HB1	1.99	0.44
7:G:88:PRO:CG	7:G:151:TYR:O	2.66	0.44
13:M:85:GLY:O	13:M:86:CYS:C	2.56	0.44
4:D:61:LYS:HA	4:D:203:VAL:HG22	2.00	0.44
12:L:84:LEU:CG	12:L:101:VAL:HG11	2.47	0.44
1:A:290:C:C3'	1:A:290:C:C6	3.01	0.44
1:A:290:C:N4	1:A:291:C:C5	2.86	0.44
1:A:1129:C:OP1	9:I:18:PHE:HE1	2.01	0.44
1:A:1273:G:H2'	1:A:1274:G:C8	2.53	0.44
5:E:55:VAL:CG2	5:E:56:GLN:H	2.13	0.44
7:G:101:LEU:CD2	7:G:101:LEU:N	2.71	0.44
9:I:43:ALA:CB	9:I:74:ILE:HD13	2.48	0.44
9:I:50:LEU:HD11	9:I:81:ILE:HB	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:24:CYS:SG	14:N:27:CYS:N	2.91	0.44
1:A:197:A:H1'	1:A:198:G:C1'	2.47	0.44
16:P:7:ALA:HB1	16:P:28:ARG:O	2.18	0.44
16:P:49:LEU:HD13	16:P:73:LEU:HD22	2.00	0.44
3:C:99:VAL:HG23	3:C:100:ALA:N	2.33	0.44
8:H:32:LYS:O	8:H:33:GLU:C	2.55	0.44
8:H:41:ARG:C	8:H:43:GLY:H	2.20	0.44
6:F:83:ASP:C	6:F:85:VAL:N	2.70	0.44
18:R:34:TYR:CE1	18:R:35:ARG:HG3	2.53	0.44
2:B:119:GLU:O	2:B:123:ALA:HB2	2.18	0.44
11:K:58:PRO:HB2	11:K:93:GLN:CG	2.43	0.44
1:A:1406:U:H2'	1:A:1407:C:C5	2.53	0.44
1:A:1502:A:H5'	1:A:1504:G:N7	2.32	0.44
14:N:9:LYS:C	14:N:11:LYS:H	2.22	0.44
1:A:1048:G:H21	1:A:1214:C:C2'	2.22	0.44
1:A:75:G:N2	1:A:96:G:C2	2.85	0.44
1:A:833:U:H2'	1:A:834:C:C6	2.53	0.44
3:C:157:ILE:HB	3:C:164:ARG:NH2	2.33	0.44
1:A:597:G:C5	1:A:644:G:C6	3.06	0.44
3:C:38:ARG:HH11	3:C:38:ARG:HG3	1.82	0.44
1:A:1039:C:H2'	1:A:1040:U:H6	1.82	0.44
15:O:31:LEU:C	15:O:31:LEU:HD23	2.39	0.44
17:Q:56:VAL:C	17:Q:57:VAL:HG13	2.38	0.44
1:A:32:A:H2'	1:A:33:A:O4'	2.16	0.44
4:D:117:ALA:C	4:D:121:VAL:HG23	2.38	0.43
4:D:156:GLU:HG2	4:D:157:LEU:N	2.24	0.43
4:D:28:SER:O	4:D:30:LYS:N	2.51	0.43
1:A:542:G:H5'	4:D:41:GLY:HA2	2.00	0.43
4:D:91:SER:O	4:D:94:LEU:N	2.51	0.43
1:A:1095:U:H2'	1:A:1096:C:C6	2.52	0.43
1:A:1117:G:N2	1:A:1180:A:O2'	2.50	0.43
1:A:1296:C:H5'	1:A:1297:C:OP2	2.18	0.43
3:C:130:VAL:HB	3:C:131:ARG:H	1.63	0.43
3:C:153:VAL:HG12	3:C:154:SER:N	2.33	0.43
3:C:9:GLY:O	3:C:12:LEU:HG	2.18	0.43
7:G:103:TRP:CD1	7:G:137:LYS:HD3	2.53	0.43
9:I:14:VAL:O	9:I:15:ALA:HB2	2.17	0.43
9:I:89:ASN:C	9:I:91:ASP:N	2.69	0.43
1:A:1152:A:OP1	10:J:68:HIS:ND1	2.50	0.43
13:M:39:ILE:O	13:M:41:PRO:HD3	2.18	0.43
1:A:1316:G:H4'	14:N:18:VAL:HG11	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:53:PRO:HA	14:N:41:ARG:HH21	1.83	0.43
19:S:40:ILE:CD1	19:S:62:ILE:HD11	2.46	0.43
21:V:10:ARG:HH11	21:V:10:ARG:CG	2.29	0.43
1:A:190(E):U:N3	17:Q:72:ARG:CZ	2.81	0.43
1:A:229:U:H2'	1:A:230:G:C8	2.53	0.43
20:T:44:ALA:O	20:T:45:GLN:C	2.56	0.43
20:T:73:HIS:O	20:T:76:ALA:HB3	2.18	0.43
3:C:85:ARG:HG3	3:C:85:ARG:HH11	1.83	0.43
3:C:93:LYS:HE2	3:C:93:LYS:CA	2.40	0.43
8:H:108:GLY:HA3	8:H:138:TRP:HB3	1.99	0.43
8:H:14:ARG:CB	8:H:14:ARG:NH1	2.80	0.43
8:H:5:PRO:HB3	8:H:32:LYS:HE3	2.00	0.43
18:R:72:ARG:O	18:R:75:ILE:HB	2.17	0.43
2:B:130:ARG:CB	2:B:131:PRO:HD2	2.41	0.43
2:B:9:GLU:CD	2:B:217:ARG:NH2	2.65	0.43
11:K:14:VAL:HG12	11:K:16:SER:H	1.82	0.43
13:M:81:LEU:CD1	13:M:88:ARG:HD3	2.48	0.43
1:A:750:G:N2	1:A:751:U:C2	2.86	0.43
1:A:835:U:OP1	18:R:64:ARG:NH2	2.51	0.43
1:A:182:U:H2'	1:A:183:G:C5'	2.47	0.43
1:A:1223:C:OP1	1:A:1224:G:H3'	2.18	0.43
1:A:160:A:H61	1:A:347:G:H1'	1.82	0.43
1:A:1055:A:C8	1:A:1206:G:C2	3.06	0.43
1:A:1003(A):G:N2	1:A:1038:C:C2	2.85	0.43
11:K:27:ASN:OD1	11:K:28:THR:N	2.43	0.43
1:A:639:G:C2	1:A:640:A:C5	3.06	0.43
1:A:110:C:H2'	1:A:111:G:C5'	2.48	0.43
1:A:533:A:H2'	1:A:534:U:H5''	1.99	0.43
4:D:22:LYS:O	4:D:23:GLY:C	2.57	0.43
5:E:98:THR:HB	5:E:117:ASP:HB3	1.99	0.43
12:L:59:ARG:HH12	12:L:65:GLU:HG2	1.83	0.43
1:A:290:C:H3'	1:A:290:C:C6	2.53	0.43
1:A:1347:G:H3'	9:I:109:VAL:HA	1.99	0.43
1:A:930:C:H2'	1:A:931:C:C5'	2.46	0.43
1:A:942:G:C2	1:A:943:U:C6	3.06	0.43
3:C:114:PRO:HG3	3:C:185:GLY:CA	2.48	0.43
3:C:126:ARG:O	3:C:127:ARG:HB2	2.18	0.43
7:G:31:MET:HG2	7:G:36:LYS:CB	2.48	0.43
7:G:72:ARG:HA	7:G:96:GLN:OE1	2.18	0.43
9:I:65:VAL:HG22	9:I:66:ARG:N	2.32	0.43
19:S:46:GLY:O	19:S:47:HIS:O	2.36	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:129:U:O3'	1:A:129(A):G:H3'	2.18	0.43
1:A:112:G:C4'	1:A:389:A:H5''	2.44	0.43
16:P:75:ARG:CA	16:P:80:PHE:HE1	2.31	0.43
20:T:65:LYS:O	20:T:66:ALA:C	2.55	0.43
20:T:93:GLU:OE2	20:T:93:GLU:HA	2.18	0.43
3:C:61:ALA:O	3:C:63:ASN:ND2	2.50	0.43
15:O:10:LYS:O	15:O:14:GLU:HB2	2.18	0.43
2:B:19:HIS:HD2	2:B:189:ASP:OD1	2.01	0.43
11:K:94:ALA:O	11:K:95:ILE:C	2.55	0.43
13:M:74:VAL:C	13:M:76:ALA:H	2.21	0.43
6:F:18:GLN:O	6:F:21:LEU:CB	2.63	0.43
1:A:880:C:H5	12:L:9:GLN:HE22	1.65	0.43
1:A:322:C:H2'	1:A:323:U:H5'	1.99	0.43
1:A:1477:C:H2'	1:A:1478:C:C5	2.53	0.43
12:L:87:GLY:O	12:L:99:HIS:N	2.52	0.43
1:A:289:G:H8	1:A:289:G:H5'	1.83	0.43
1:A:1142:G:C3'	1:A:1143:G:H8	2.26	0.43
3:C:11:ARG:NH1	3:C:179:ARG:H	1.95	0.43
7:G:49:ILE:HG22	7:G:49:ILE:O	2.18	0.43
1:A:124:G:C5	1:A:125:U:C5	3.06	0.43
4:D:17:VAL:CG1	4:D:18:LYS:N	2.63	0.43
1:A:129(A):G:H4'	1:A:130:A:OP2	2.18	0.43
1:A:381:C:C2	1:A:382:A:C8	3.07	0.43
16:P:60:LEU:HD23	16:P:60:LEU:HA	1.73	0.43
16:P:67:THR:HG22	16:P:68:ASP:N	2.32	0.43
20:T:50:GLU:HG2	20:T:100:ILE:CG1	2.39	0.43
20:T:77:ALA:O	20:T:78:ALA:C	2.56	0.43
3:C:48:TYR:CD1	3:C:52:LEU:HD13	2.53	0.43
3:C:85:ARG:O	3:C:87:LEU:N	2.51	0.43
1:A:642:A:C6	1:A:643:C:C4	3.06	0.43
1:A:642:A:C5	1:A:643:C:C5	3.07	0.43
2:B:21:ARG:NH1	2:B:23:ARG:CZ	2.81	0.43
2:B:44:LEU:O	2:B:47:THR:N	2.51	0.43
2:B:80:ILE:HG22	2:B:81:VAL:N	2.32	0.43
11:K:91:ARG:O	11:K:94:ALA:N	2.50	0.43
6:F:1:MET:HE2	6:F:36:ARG:HH21	1.83	0.43
1:A:877:C:H1'	8:H:3:THR:HG22	2.00	0.43
1:A:688:G:H2'	1:A:689:C:H6	1.84	0.43
1:A:891:U:C2'	1:A:892:A:H5'	2.48	0.43
15:O:68:ARG:HH11	15:O:68:ARG:HB3	1.83	0.43
1:A:858:G:C6	1:A:869:G:C8	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1360:A:H3'	1:A:1361:G:C8	2.53	0.43
1:A:836:G:H1	1:A:850:U:H3	1.66	0.43
1:A:959:A:H5''	1:A:960:U:OP2	2.19	0.43
17:Q:9:VAL:CG1	17:Q:10:VAL:H	2.30	0.43
1:A:448:A:C2	1:A:449:C:C4	3.06	0.43
17:Q:75:ARG:HG3	17:Q:76:LEU:H	1.83	0.43
4:D:151:LYS:N	4:D:151:LYS:HD2	2.30	0.43
12:L:106:ASP:OD2	12:L:106:ASP:N	2.51	0.43
5:E:151:LEU:CD1	8:H:77:GLU:OE2	2.67	0.43
1:A:122:G:OP1	1:A:122:G:H8	2.02	0.43
1:A:11:G:O2'	1:A:12:U:H5'	2.18	0.43
4:D:117:ALA:O	4:D:118:ARG:C	2.56	0.43
4:D:126:ILE:O	4:D:132:ARG:HB2	2.18	0.43
4:D:31:CYS:O	4:D:33:MET:N	2.36	0.43
4:D:6:GLY:O	4:D:8:VAL:N	2.51	0.43
12:L:115:LYS:C	12:L:117:ARG:H	2.20	0.43
1:A:351:G:O2'	1:A:352:C:O5'	2.32	0.43
1:A:1117:G:N2	1:A:1180:A:C1'	2.72	0.43
1:A:1241:G:C2	1:A:1242:C:C4	3.06	0.43
1:A:1251:A:H2'	1:A:1252:A:C8	2.53	0.43
1:A:1298:C:H4'	1:A:1299:A:C4	2.54	0.43
1:A:1372:U:C2'	1:A:1373:G:H5'	2.48	0.43
3:C:133:ALA:HA	3:C:136:GLN:NE2	2.32	0.43
3:C:137:ALA:CA	3:C:140:ARG:NH1	2.81	0.43
7:G:139:GLU:C	7:G:141:VAL:N	2.72	0.43
10:J:48:THR:HG23	10:J:62:HIS:HA	2.00	0.43
1:A:186:C:H2'	1:A:187:C:C5	2.53	0.43
1:A:259:G:H2'	1:A:260:G:C8	2.54	0.43
8:H:87:SER:HB3	8:H:133:LEU:O	2.19	0.43
2:B:42:ILE:HD12	2:B:203:GLY:HA2	1.99	0.43
13:M:78:ILE:O	13:M:80:ARG:N	2.51	0.43
6:F:23:LYS:O	6:F:27:GLN:HG3	2.19	0.43
6:F:32:ASN:HD22	6:F:32:ASN:C	2.19	0.43
1:A:575:G:C6	1:A:821:G:C8	3.07	0.43
1:A:299:G:C5	1:A:300:A:C6	3.07	0.43
1:A:602:A:C6	1:A:637:G:C6	3.06	0.43
1:A:149:A:C2	1:A:150:C:C6	3.07	0.43
20:T:14:LYS:NZ	20:T:17:ARG:NH2	2.67	0.43
1:A:23:C:H2'	1:A:24:U:C6	2.49	0.43
1:A:338:A:H2'	1:A:339:C:O4'	2.19	0.43
1:A:1431:C:C2	1:A:1470:G:C2	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:100:VAL:O	5:E:100:VAL:HG23	2.19	0.43
4:D:93:PHE:O	4:D:97:LEU:HB2	2.18	0.43
1:A:116:A:O2'	1:A:117:G:H5'	2.19	0.43
3:C:119:ARG:C	3:C:121:ALA:N	2.71	0.43
3:C:203:PHE:C	3:C:204:LEU:HG	2.38	0.43
5:E:13:ILE:HG22	5:E:30:ALA:CA	2.43	0.43
7:G:101:LEU:C	7:G:103:TRP:H	2.21	0.43
7:G:113:GLU:HB3	7:G:118:VAL:CG1	2.49	0.43
9:I:123:PRO:O	9:I:124:GLN:HB3	2.18	0.43
9:I:28:VAL:HG13	9:I:65:VAL:HG12	2.01	0.43
9:I:54:ASP:C	9:I:58:ARG:HH21	2.22	0.43
9:I:4:TYR:CD2	9:I:88:TYR:CB	3.02	0.43
10:J:49:VAL:O	10:J:60:ARG:O	2.36	0.43
13:M:39:ILE:HD12	13:M:56:LEU:HD21	2.01	0.43
14:N:23:ARG:HH11	14:N:23:ARG:HG2	1.83	0.43
14:N:24:CYS:O	14:N:25:VAL:C	2.56	0.43
14:N:53:LEU:O	14:N:56:VAL:HB	2.19	0.43
4:D:3:ARG:N	4:D:3:ARG:NE	2.67	0.43
3:C:50:ALA:O	3:C:72:LYS:HG3	2.18	0.43
1:A:949:A:C6	1:A:950:U:N3	2.86	0.43
1:A:733:A:H4'	1:A:734:G:OP1	2.19	0.43
2:B:216:SER:O	2:B:219:VAL:HG23	2.19	0.43
13:M:74:VAL:O	13:M:75:ALA:C	2.57	0.43
13:M:80:ARG:HG2	13:M:81:LEU:HD23	2.00	0.43
18:R:44:LEU:CD1	18:R:48:GLY:O	2.67	0.43
1:A:655:A:C2	1:A:754:C:N4	2.87	0.43
1:A:97:G:H2'	1:A:98:U:O4'	2.19	0.43
17:Q:79:SER:OG	17:Q:80:GLY:N	2.52	0.43
9:I:113:LYS:H	9:I:113:LYS:HD2	1.84	0.43
3:C:191:THR:CG2	3:C:194:GLY:C	2.86	0.43
1:A:965:A:C2'	1:A:966:G:OP2	2.67	0.43
1:A:51:A:H4'	1:A:52:G:H5'	2.01	0.43
17:Q:95:TYR:O	17:Q:98:LEU:N	2.52	0.43
1:A:1262:C:N4	1:A:1273:G:H1	2.17	0.43
1:A:1367:C:C2	1:A:1368:G:C8	3.07	0.43
7:G:139:GLU:O	7:G:142:GLU:N	2.51	0.43
14:N:23:ARG:HG2	14:N:23:ARG:NH1	2.32	0.43
19:S:33:THR:O	19:S:34:TRP:C	2.57	0.43
1:A:254:G:C2	1:A:273:A:C2	3.05	0.43
1:A:130:A:H1'	1:A:263:A:O2'	2.18	0.43
1:A:381:C:C4	1:A:382:A:C5	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:28:ARG:HG3	16:P:29:ASP:H	1.82	0.43
16:P:38:TYR:OH	16:P:50:LYS:HD3	2.18	0.43
20:T:53:LEU:HD13	20:T:53:LEU:C	2.39	0.43
2:B:160:ASP:O	2:B:161:ALA:CB	2.66	0.43
2:B:73:THR:HG22	2:B:169:LYS:HE3	1.99	0.43
3:C:95:THR:HG23	3:C:98:ASN:CA	2.48	0.43
1:A:717:C:O2'	1:A:734:G:O4'	2.37	0.43
2:B:60:ASP:O	2:B:61:LEU:C	2.56	0.43
11:K:69:ALA:O	11:K:73:MET:HG2	2.19	0.43
1:A:1502:A:H2	1:A:1505:G:H1	1.66	0.43
1:A:666:G:C2	1:A:741:G:C4	3.06	0.43
1:A:877:C:O2	8:H:3:THR:CG2	2.67	0.43
11:K:34:ASP:OD2	11:K:38:ASN:N	2.52	0.43
1:A:603:U:H2'	1:A:604:G:C8	2.45	0.43
17:Q:85:VAL:O	17:Q:86:GLU:C	2.56	0.43
1:A:324:G:P	20:T:22:ARG:HH12	2.42	0.43
3:C:157:ILE:C	3:C:159:GLY:N	2.72	0.43
1:A:1503:A:H5'	1:A:1531:A:H1'	2.01	0.43
1:A:1480:G:N3	1:A:1480:G:H2'	2.34	0.43
1:A:518:C:H5''	1:A:530:G:O4'	2.19	0.43
4:D:128:VAL:HG11	4:D:138:TYR:CE2	2.53	0.43
1:A:287:U:H2'	1:A:288:A:C5'	2.49	0.43
1:A:1118:C:C1'	1:A:1179:A:H1'	2.49	0.43
1:A:1127:G:N1	1:A:1144:G:N2	2.55	0.43
3:C:123:GLN:HE21	3:C:126:ARG:NH2	2.16	0.43
7:G:120:ILE:O	7:G:124:LEU:HG	2.19	0.43
7:G:38:LEU:HG	7:G:42:ILE:CD1	2.31	0.43
10:J:8:LEU:O	10:J:16:LEU:HD11	2.19	0.43
10:J:8:LEU:HD21	10:J:20:ALA:HB2	2.00	0.43
1:A:964:A:O2'	10:J:55:LYS:HD3	2.19	0.43
13:M:33:ALA:O	13:M:37:THR:CB	2.65	0.43
19:S:10:PHE:CZ	19:S:12:ASP:HA	2.53	0.43
19:S:64:GLU:OE1	19:S:64:GLU:HA	2.19	0.43
1:A:253:U:OP1	17:Q:67:LYS:HE3	2.18	0.43
1:A:483:C:H3'	1:A:484:G:H2'	2.01	0.43
2:B:97:TRP:HB2	2:B:170:GLU:OE2	2.18	0.43
3:C:44:GLU:HG2	3:C:55:VAL:HG22	2.01	0.43
5:E:41:VAL:O	5:E:66:MET:HA	2.18	0.43
13:M:106:ASN:O	13:M:107:ALA:CB	2.62	0.43
6:F:63:TYR:CD1	6:F:63:TYR:N	2.86	0.43
6:F:91:VAL:HG12	6:F:92:LYS:O	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:73:ALA:HB1	18:R:79:LEU:HD13	2.01	0.43
2:B:55:PHE:CE1	2:B:218:ALA:HA	2.54	0.43
14:N:11:LYS:O	14:N:12:ARG:CB	2.49	0.43
1:A:1050:G:O2'	1:A:1051:C:H5'	2.18	0.43
1:A:317:G:O5'	1:A:317:G:H8	2.01	0.43
1:A:644:G:C6	1:A:645:C:C4	3.06	0.43
1:A:181:G:C2	1:A:195:A:C8	3.06	0.43
1:A:679:C:O5'	1:A:679:C:H6	2.02	0.43
8:H:54:ASP:O	8:H:56:LYS:HD3	2.19	0.43
4:D:152:SER:O	4:D:153:ARG:C	2.57	0.43
1:A:116:A:H2'	1:A:117:G:O4'	2.18	0.43
1:A:246:A:N1	1:A:279:A:N7	2.67	0.43
1:A:1298:C:C3'	1:A:1299:A:H5'	2.47	0.43
7:G:43:PHE:HD2	7:G:44:TYR:CD2	2.37	0.43
9:I:17:VAL:HG13	9:I:63:ILE:CG1	2.46	0.43
9:I:8:GLY:HA2	9:I:79:LEU:CD1	2.49	0.43
10:J:18:ALA:C	10:J:20:ALA:H	2.22	0.43
13:M:19:LEU:HB3	13:M:25:ILE:HG21	1.99	0.43
14:N:39:LEU:HB2	14:N:40:CYS:H	1.62	0.43
17:Q:5:VAL:CG1	17:Q:6:LEU:N	2.82	0.43
20:T:57:ARG:NH2	20:T:100:ILE:HG22	2.31	0.43
3:C:22:TRP:CD1	3:C:59:ARG:NE	2.87	0.43
1:A:665:A:N1	1:A:732:C:C4	2.86	0.43
1:A:1074:G:O2'	2:B:103:THR:CG2	2.67	0.43
15:O:69:TYR:CE1	15:O:73:GLU:OE1	2.71	0.43
1:A:321:A:O2'	1:A:322:C:O4'	2.34	0.43
2:B:174:VAL:O	2:B:175:ARG:C	2.56	0.43
8:H:116:LYS:HZ3	8:H:127:LEU:HD12	1.83	0.43
8:H:96:GLY:O	8:H:97:VAL:HG13	2.19	0.43
8:H:95:VAL:HB	8:H:99:GLU:CB	2.48	0.43
1:A:1424:C:H2'	1:A:1425:U:C5'	2.49	0.43
1:A:1029:C:H2'	1:A:1030:C:H5'	1.99	0.43
12:L:86:ARG:HG3	12:L:86:ARG:HH11	1.83	0.43
1:A:1345:U:H3'	1:A:1345:U:OP1	2.18	0.43
1:A:1470:G:H2'	1:A:1471:G:H8	1.84	0.43
1:A:1503:A:H5'	1:A:1531:A:O4'	2.18	0.43
1:A:1076:C:O2'	1:A:1077:G:H5'	2.18	0.43
1:A:435:C:C2'	1:A:436:C:O5'	2.67	0.43
4:D:110:PHE:HA	4:D:162:LEU:HD11	2.01	0.43
4:D:98:GLU:HG2	4:D:189:PRO:HG3	2.01	0.43
4:D:94:LEU:HD22	4:D:196:LEU:HD12	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:57:G:C6	1:A:58:C:N3	2.86	0.43
17:Q:95:TYR:HB3	17:Q:96:GLN:H	1.44	0.43
1:A:1088:G:C8	1:A:1088:G:O5'	2.68	0.43
1:A:1129:C:H4'	1:A:1130:A:C8	2.46	0.43
1:A:1298:C:H5''	1:A:1299:A:H5''	2.00	0.43
7:G:61:VAL:O	7:G:62:PHE:C	2.57	0.43
13:M:29:ARG:HB3	13:M:64:TRP:CH2	2.53	0.43
21:V:18:TYR:HA	21:V:22:ARG:HB3	2.01	0.43
20:T:79:ARG:O	20:T:83:ARG:HB2	2.19	0.43
2:B:73:THR:CG2	2:B:73:THR:O	2.66	0.43
1:A:39:G:O2'	1:A:40:C:H5'	2.18	0.43
3:C:48:TYR:C	3:C:48:TYR:CD1	2.90	0.43
2:B:55:PHE:O	2:B:56:ARG:C	2.57	0.43
2:B:92:TYR:CE1	2:B:151:GLY:N	2.87	0.43
2:B:24:TRP:CB	2:B:190:THR:HG23	2.49	0.43
1:A:327:A:N6	1:A:329:A:C6	2.86	0.43
8:H:96:GLY:C	8:H:97:VAL:CG1	2.86	0.43
15:O:45:VAL:HB	15:O:46:HIS:H	1.58	0.43
1:A:1002:G:N3	1:A:1002:G:H2'	2.34	0.43
1:A:226:G:H2'	1:A:227:G:H8	1.84	0.43
1:A:1036:G:H2'	1:A:1037:C:C5'	2.49	0.43
1:A:979:C:H3'	1:A:980:C:H6	1.84	0.43
1:A:885:G:H1	1:A:912:C:N4	2.16	0.43
4:D:156:GLU:CD	4:D:157:LEU:H	2.22	0.43
12:L:83:VAL:CG2	12:L:100:ILE:HD13	2.45	0.43
1:A:1127:G:N2	1:A:1147:C:H42	2.16	0.43
1:A:1257:U:H5''	1:A:1258:G:O5'	2.18	0.43
3:C:122:GLU:C	3:C:124:ILE:N	2.71	0.43
3:C:137:ALA:O	3:C:139:GLN:N	2.51	0.43
3:C:111:LEU:HD21	3:C:146:ALA:H	1.84	0.43
9:I:23:ASN:HB3	9:I:60:ASP:OD1	2.19	0.43
9:I:86:VAL:HA	9:I:89:ASN:C	2.39	0.43
10:J:19:SER:OG	10:J:91:PRO:CB	2.67	0.43
10:J:18:ALA:O	10:J:20:ALA:N	2.52	0.43
10:J:38:ILE:HA	10:J:39:PRO:HD3	1.90	0.43
19:S:22:LEU:CD2	19:S:28:LYS:HB2	2.49	0.43
19:S:34:TRP:HE3	19:S:34:TRP:N	2.17	0.43
1:A:234:C:H2'	1:A:235:C:H6	1.84	0.43
1:A:132:C:C4	1:A:133:U:C5	3.07	0.43
20:T:40:ALA:HA	20:T:55:ILE:CD1	2.30	0.43
2:B:108:ILE:CG1	2:B:108:ILE:O	2.67	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:91:PRO:HG3	2:B:154:LEU:HD12	2.01	0.43
1:A:37:U:H2'	1:A:38:G:H5'	2.00	0.43
3:C:102:ASN:H	3:C:102:ASN:HD22	1.67	0.43
2:B:126:GLU:HG2	2:B:129:GLU:HB2	2.00	0.43
2:B:9:GLU:CD	2:B:217:ARG:HH12	2.22	0.43
11:K:62:GLN:O	11:K:63:LEU:C	2.57	0.43
3:C:155:GLY:O	3:C:156:ARG:O	2.36	0.43
1:A:881:G:P	12:L:12:ARG:HH22	2.41	0.43
1:A:127:G:C2	1:A:128:G:C8	3.07	0.43
17:Q:90:ILE:HA	17:Q:93:GLN:HB3	2.01	0.43
1:A:915:A:O2'	1:A:916:G:H5'	2.18	0.43
1:A:102:G:H2'	1:A:103:C:C6	2.48	0.43
1:A:854:G:C6	1:A:855:G:N7	2.87	0.43
1:A:1455:G:C8	1:A:1455:G:O5'	2.71	0.43
4:D:57:ARG:NH2	4:D:205:GLU:OE2	2.44	0.42
4:D:49:ARG:HG2	4:D:49:ARG:NH1	2.34	0.42
4:D:62:GLN:O	4:D:63:LYS:C	2.58	0.42
3:C:140:ARG:O	3:C:141:VAL:C	2.57	0.42
3:C:179:ARG:HD2	3:C:180:ALA:HA	2.01	0.42
5:E:28:PHE:CD1	5:E:50:GLU:HA	2.53	0.42
10:J:7:LYS:HB2	10:J:97:GLU:HB2	2.00	0.42
10:J:47:PHE:HB2	14:N:44:LEU:HD21	1.99	0.42
19:S:12:ASP:CB	19:S:38:SER:HB2	2.33	0.42
19:S:40:ILE:HB	19:S:67:VAL:O	2.19	0.42
16:P:39:TYR:C	16:P:39:TYR:CD2	2.92	0.42
20:T:51:GLU:CA	20:T:54:LYS:HB3	2.49	0.42
2:B:17:PHE:CD1	2:B:17:PHE:C	2.92	0.42
2:B:58:ILE:O	2:B:60:ASP:N	2.52	0.42
11:K:48:ILE:HD13	11:K:48:ILE:N	2.34	0.42
5:E:12:LEU:C	5:E:12:LEU:HD22	2.39	0.42
6:F:30:LEU:C	6:F:32:ASN:H	2.22	0.42
1:A:1406:U:H5'	1:A:1518:A:O2'	2.19	0.42
17:Q:82:MET:O	17:Q:86:GLU:N	2.35	0.42
20:T:14:LYS:O	20:T:15:ARG:C	2.57	0.42
1:A:593:G:C6	1:A:594:G:C5	3.06	0.42
1:A:1475:G:H2'	1:A:1476:G:O4'	2.19	0.42
1:A:1003(A):G:C2	1:A:1004:A:C4	3.07	0.42
1:A:680:C:O2'	1:A:681:C:H5'	2.19	0.42
1:A:1503:A:C4	1:A:1531:A:C2	3.07	0.42
4:D:148:VAL:HG21	4:D:181:MET:HB3	2.00	0.42
4:D:201:GLN:HE22	5:E:99:GLY:HA3	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:28:SER:O	4:D:30:LYS:HB2	2.18	0.42
1:A:1152:A:C4	1:A:1153:C:C5	3.07	0.42
1:A:945:G:N3	1:A:945:G:H2'	2.34	0.42
1:A:988:G:O2'	1:A:989:C:H5'	2.19	0.42
7:G:37:ASN:O	7:G:40:ALA:HB3	2.19	0.42
7:G:38:LEU:C	7:G:42:ILE:HG13	2.37	0.42
10:J:31:GLY:CA	10:J:81:THR:OG1	2.67	0.42
10:J:3:LYS:CG	10:J:76:ASN:HA	2.49	0.42
14:N:20:ALA:O	14:N:22:THR:N	2.52	0.42
16:P:56:ALA:O	16:P:60:LEU:N	2.52	0.42
1:A:36:C:H6	1:A:36:C:O5'	2.03	0.42
1:A:789:U:H3	1:A:792:A:P	2.42	0.42
8:H:104:ARG:HA	8:H:104:ARG:HD3	1.75	0.42
1:A:664:G:N2	1:A:742:G:C2	2.87	0.42
15:O:36:ILE:O	15:O:37:ASN:C	2.58	0.42
17:Q:90:ILE:HA	17:Q:93:GLN:HB2	2.00	0.42
1:A:1432:G:H1'	1:A:1468:A:N6	2.33	0.42
1:A:363:A:N6	1:A:364:A:N1	2.67	0.42
12:L:103:GLY:H	12:L:108:ALA:N	2.17	0.42
1:A:1249:C:C3'	1:A:1249:C:C6	3.02	0.42
1:A:1459:C:C2	1:A:1460:A:C8	3.06	0.42
4:D:200:GLU:HG2	4:D:201:GLN:N	2.34	0.42
4:D:57:ARG:CD	4:D:202:LEU:HD22	2.49	0.42
12:L:24:VAL:C	12:L:26:ALA:N	2.70	0.42
12:L:58:VAL:CG1	12:L:59:ARG:N	2.81	0.42
1:A:123:C:H4'	1:A:290:C:O2	2.19	0.42
1:A:1287:A:N7	1:A:1288:A:N6	2.67	0.42
1:A:1299:A:C8	1:A:1301:U:O2	2.72	0.42
1:A:1313:U:H5	19:S:4:SER:OG	2.01	0.42
1:A:944:G:H3'	1:A:945:G:C5'	2.49	0.42
3:C:26:LYS:O	3:C:30:ARG:NH1	2.53	0.42
7:G:135:VAL:CG1	7:G:138:LYS:HZ2	2.10	0.42
9:I:97:LYS:HZ1	9:I:102:LEU:HD11	1.84	0.42
13:M:14:ARG:HH12	13:M:16:ASP:CG	2.23	0.42
19:S:22:LEU:HB3	19:S:28:LYS:N	2.33	0.42
17:Q:46:ASP:OD2	17:Q:46:ASP:C	2.58	0.42
16:P:39:TYR:HD1	16:P:73:LEU:HD22	1.83	0.42
20:T:84:LEU:HD22	20:T:88:VAL:CG2	2.50	0.42
1:A:498:U:O2	1:A:498:U:C2'	2.67	0.42
11:K:53:SER:C	11:K:55:LYS:N	2.72	0.42
3:C:83:ARG:CA	3:C:86:VAL:HG23	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:109:ILE:HD13	5:E:109:ILE:N	2.34	0.42
18:R:38:GLU:CA	18:R:41:LYS:HE3	2.49	0.42
15:O:4:THR:N	15:O:7:GLU:OE1	2.46	0.42
2:B:208:ILE:CA	2:B:211:ILE:HG12	2.48	0.42
2:B:21:ARG:HA	2:B:39:ILE:HG12	2.01	0.42
2:B:55:PHE:O	2:B:57:PHE:N	2.52	0.42
2:B:82:ARG:O	2:B:92:TYR:HE2	2.02	0.42
1:A:1520:G:C2	1:A:1521:G:C5	3.07	0.42
1:A:1022:G:C2	1:A:1023:G:N7	2.87	0.42
1:A:818:G:N3	1:A:820:U:C5	2.87	0.42
1:A:1059:C:H42	1:A:1198:G:H1	1.65	0.42
1:A:868:C:C2'	1:A:869:G:H5'	2.49	0.42
1:A:321:A:C2'	1:A:322:C:H6	2.32	0.42
1:A:1358:U:OP1	14:N:35:ARG:HB2	2.19	0.42
1:A:597:G:N2	8:H:94:TYR:HE2	2.17	0.42
1:A:1200:C:O2	1:A:1200:C:C2'	2.60	0.42
17:Q:76:LEU:CD1	17:Q:76:LEU:C	2.83	0.42
1:A:908:A:O2'	1:A:909:A:H5'	2.19	0.42
17:Q:45:HIS:NE2	17:Q:47:PRO:HG3	2.33	0.42
13:M:32:GLU:O	13:M:32:GLU:HG2	2.19	0.42
1:A:433:C:C2	1:A:434:U:C5	3.07	0.42
1:A:525:C:H2'	1:A:526:C:H6	1.81	0.42
1:A:582:U:C2	1:A:760:G:C6	3.07	0.42
1:A:1013:G:O2'	1:A:1014:A:C8	2.72	0.42
1:A:1120:G:N1	1:A:1121:U:C4	2.87	0.42
1:A:1128:C:N3	1:A:1144:G:N2	2.67	0.42
1:A:1286:A:H2'	1:A:1287:A:C4'	2.35	0.42
1:A:1343:G:H2'	1:A:1344:C:C5	2.48	0.42
3:C:10:PHE:CE2	3:C:178:LEU:HD13	2.54	0.42
3:C:184:TYR:OH	3:C:186:PHE:HB2	2.18	0.42
7:G:17:VAL:HG12	7:G:18:TYR:HD1	1.84	0.42
3:C:23:TYR:HD1	10:J:11:PHE:CZ	2.37	0.42
13:M:3:ARG:HD3	13:M:7:VAL:HA	2.01	0.42
13:M:59:TYR:O	13:M:63:THR:HB	2.18	0.42
1:A:255:G:N2	1:A:272:C:C1'	2.81	0.42
1:A:451:A:H1'	1:A:452:A:N7	2.33	0.42
16:P:10:GLY:CA	16:P:16:HIS:H	2.32	0.42
1:A:37:U:O2'	1:A:38:G:H5'	2.19	0.42
5:E:41:VAL:HG12	5:E:42:GLY:O	2.20	0.42
5:E:90:VAL:HG22	5:E:121:LYS:O	2.19	0.42
1:A:951:G:C5	1:A:952:U:C5	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:10:LEU:C	2:B:12:GLU:N	2.73	0.42
2:B:164:VAL:HG12	2:B:165:VAL:H	1.84	0.42
11:K:31:THR:OG1	11:K:42:TRP:HB3	2.19	0.42
13:M:95:GLY:C	13:M:96:LEU:HD12	2.39	0.42
1:A:1310:G:C6	19:S:2:PRO:HD3	2.55	0.42
6:F:16:GLN:C	6:F:16:GLN:NE2	2.73	0.42
1:A:1507:A:C5	1:A:1508:G:N7	2.87	0.42
1:A:581:G:OP1	15:O:65:ARG:NH2	2.27	0.42
1:A:981:U:O4	1:A:1222:G:O6	2.37	0.42
17:Q:76:LEU:HD11	17:Q:78:GLU:C	2.39	0.42
5:E:74:GLY:O	5:E:116:THR:HG22	2.19	0.42
1:A:993:G:H3'	1:A:993:G:N3	2.34	0.42
12:L:109:GLY:CA	12:L:121:GLY:O	2.67	0.42
13:M:11:ARG:O	13:M:12:ASN:CB	2.66	0.42
17:Q:13:ASP:O	17:Q:14:LYS:HB2	2.18	0.42
8:H:1:MET:HG2	8:H:2:LEU:O	2.18	0.42
1:A:440:A:C6	1:A:495:U:N3	2.88	0.42
4:D:124:GLY:HA3	4:D:132:ARG:HE	1.81	0.42
4:D:162:LEU:N	4:D:162:LEU:HD12	2.35	0.42
4:D:54:TYR:O	4:D:55:ALA:C	2.58	0.42
5:E:110:LEU:HA	5:E:110:LEU:HD23	1.81	0.42
12:L:42:THR:HG23	12:L:53:ARG:C	2.40	0.42
17:Q:94:ASN:ND2	17:Q:94:ASN:N	2.67	0.42
1:A:1239:A:H61	1:A:1296:C:H2'	1.84	0.42
1:A:1241:G:C4	1:A:1242:C:C5	3.08	0.42
1:A:1261:A:H5'	1:A:1284:C:OP1	2.19	0.42
1:A:1371:G:C5	1:A:1372:U:C5	3.07	0.42
1:A:988:G:H1'	1:A:1015:A:N1	2.35	0.42
7:G:118:VAL:O	7:G:119:ARG:C	2.58	0.42
9:I:43:ALA:HB2	9:I:74:ILE:HD13	2.00	0.42
9:I:74:ILE:O	9:I:74:ILE:HG22	2.19	0.42
1:A:1151:A:C5'	10:J:42:THR:H	2.31	0.42
13:M:60:VAL:HG13	13:M:64:TRP:CE3	2.54	0.42
19:S:53:ASN:ND2	19:S:53:ASN:O	2.52	0.42
1:A:187:C:H1'	20:T:104:LEU:CD2	2.49	0.42
16:P:72:ARG:O	16:P:75:ARG:N	2.50	0.42
20:T:52:ALA:O	20:T:55:ILE:HG12	2.19	0.42
15:O:78:TYR:OH	15:O:82:ILE:HD12	2.19	0.42
1:A:951:G:C6	1:A:1231:G:C6	3.08	0.42
2:B:131:PRO:O	2:B:134:GLU:HG3	2.19	0.42
11:K:63:LEU:O	11:K:64:ALA:C	2.57	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:96:LEU:O	13:M:110:ARG:CZ	2.68	0.42
15:O:56:LEU:O	15:O:59:MET:CB	2.68	0.42
15:O:61:GLY:O	15:O:62:GLN:C	2.57	0.42
2:B:25:ASN:ND2	2:B:27:LYS:HG3	2.35	0.42
1:A:500:G:C6	1:A:546:G:C2	3.07	0.42
1:A:1428:A:C6	1:A:1473:A:N6	2.88	0.42
1:A:485:G:C2'	1:A:486:U:OP2	2.68	0.42
1:A:994:A:C2'	1:A:994:A:N3	2.79	0.42
5:E:146:ALA:O	5:E:149:GLU:N	2.52	0.42
8:H:105:ARG:O	8:H:105:ARG:HG3	2.20	0.42
7:G:153:HIS:CD2	7:G:154:TYR:CZ	3.07	0.42
8:H:1:MET:HG2	8:H:2:LEU:N	2.35	0.42
4:D:136:PRO:O	4:D:138:TYR:N	2.45	0.42
4:D:59:ARG:O	4:D:60:GLU:C	2.58	0.42
4:D:63:LYS:C	4:D:65:ARG:N	2.73	0.42
12:L:74:GLY:H	12:L:110:VAL:CG1	2.32	0.42
1:A:117:G:O2'	1:A:118:U:H5'	2.18	0.42
1:A:1114:C:H2'	1:A:1115:C:C5'	2.50	0.42
3:C:118:GLN:O	3:C:122:GLU:N	2.42	0.42
3:C:116:VAL:O	3:C:119:ARG:N	2.52	0.42
3:C:120:VAL:O	3:C:124:ILE:CB	2.61	0.42
7:G:58:PRO:HA	7:G:61:VAL:HG23	2.01	0.42
9:I:43:ALA:HA	9:I:74:ILE:CG2	2.46	0.42
9:I:97:LYS:C	9:I:99:LEU:N	2.72	0.42
10:J:49:VAL:HG12	10:J:50:ILE:H	1.83	0.42
10:J:56:HIS:O	10:J:58:ASP:N	2.53	0.42
13:M:59:TYR:O	13:M:63:THR:CG2	2.67	0.42
21:V:5:ASP:O	21:V:6:ARG:C	2.57	0.42
1:A:401:C:P	4:D:73:ARG:NH2	2.93	0.42
20:T:67:ALA:HB1	20:T:73:HIS:HA	2.02	0.42
3:C:47:LEU:HD11	3:C:76:VAL:HG13	1.97	0.42
1:A:649:G:N2	1:A:650:G:C4	2.88	0.42
5:E:135:THR:C	5:E:137:GLU:N	2.72	0.42
5:E:141:GLN:O	5:E:142:LEU:O	2.37	0.42
18:R:38:GLU:HA	18:R:41:LYS:CE	2.49	0.42
2:B:136:VAL:HA	2:B:139:LYS:CB	2.50	0.42
2:B:19:HIS:CD2	2:B:189:ASP:OD1	2.73	0.42
2:B:203:GLY:O	2:B:204:ASN:C	2.57	0.42
2:B:214:ILE:HG22	2:B:215:LEU:N	2.35	0.42
5:E:12:LEU:HD13	5:E:12:LEU:N	2.35	0.42
1:A:781:A:H4'	1:A:1522:U:O2'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:34:LEU:O	15:O:35:ARG:C	2.58	0.42
18:R:50:ILE:CG2	18:R:51:LEU:N	2.83	0.42
1:A:635:G:C4	1:A:636:U:C5	3.07	0.42
1:A:79:G:C2	1:A:91:C:N3	2.88	0.42
1:A:956:U:H2'	1:A:957:U:C5'	2.49	0.42
6:F:45:LEU:O	6:F:46:ARG:CG	2.67	0.42
1:A:1419:G:H3'	1:A:1420:C:C6	2.54	0.42
1:A:1437:C:H2'	1:A:1438:G:H8	1.83	0.42
3:C:45:LYS:HD3	3:C:46:GLU:OE2	2.19	0.42
1:A:508:C:P	4:D:209:ARG:NH2	2.93	0.42
2:B:235:SER:C	2:B:237:ALA:H	2.21	0.42
1:A:120:A:C6	1:A:122:G:C2	3.07	0.42
4:D:200:GLU:N	4:D:200:GLU:OE1	2.46	0.42
4:D:61:LYS:CD	4:D:62:GLN:N	2.73	0.42
4:D:6:GLY:H	4:D:115:ARG:NH2	2.15	0.42
12:L:97:ARG:C	12:L:98:TYR:CG	2.93	0.42
1:A:310:G:N2	1:A:311:C:C2	2.87	0.42
1:A:1013:G:HO2'	1:A:1014:A:H8	1.66	0.42
1:A:1327:C:O2'	1:A:1328:C:H5'	2.19	0.42
1:A:1343:G:C6	1:A:1344:C:C4	3.08	0.42
1:A:1372:U:H2'	1:A:1373:G:C5'	2.49	0.42
3:C:131:ARG:O	3:C:135:LYS:N	2.45	0.42
3:C:21:ARG:NH1	3:C:56:ASP:HB3	2.34	0.42
3:C:5:ILE:O	3:C:6:HIS:HB2	2.20	0.42
7:G:92:SER:CB	7:G:93:PRO:HD2	2.46	0.42
9:I:10:ARG:NH2	9:I:11:LYS:HB2	2.33	0.42
9:I:99:LEU:HB3	9:I:101:PHE:CE1	2.54	0.42
10:J:8:LEU:CD2	10:J:20:ALA:HB2	2.50	0.42
13:M:17:VAL:O	13:M:19:LEU:N	2.52	0.42
19:S:15:LEU:HD11	19:S:38:SER:HG	1.84	0.42
1:A:185:A:C4	1:A:186:C:C5	3.07	0.42
1:A:356:A:C4	1:A:357:G:C8	3.08	0.42
16:P:55:ARG:O	16:P:56:ALA:C	2.58	0.42
20:T:63:ILE:O	20:T:66:ALA:HB3	2.20	0.42
5:E:82:VAL:HG11	5:E:134:ALA:O	2.20	0.42
13:M:102:ARG:NH1	13:M:106:ASN:HD22	2.17	0.42
1:A:1074:G:N2	1:A:1102:A:C8	2.88	0.42
2:B:140:HIS:O	2:B:141:GLU:C	2.57	0.42
11:K:69:ALA:HB1	11:K:101:SER:HB2	2.02	0.42
13:M:110:ARG:O	13:M:110:ARG:HG3	2.19	0.42
15:O:54:ARG:O	15:O:55:GLY:C	2.57	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:821:G:H2'	1:A:822:C:H6	1.84	0.42
1:A:850:U:O2'	1:A:851:G:H5'	2.19	0.42
1:A:154:C:H2'	1:A:155:C:H6	1.84	0.42
1:A:302:G:N3	1:A:556:C:H4'	2.35	0.42
1:A:1086:U:H2'	1:A:1087:G:O4'	2.20	0.42
1:A:1403:C:O2	1:A:1499:A:N1	2.53	0.42
2:B:239:VAL:CG1	2:B:240:GLN:H	2.21	0.42
1:A:675:A:H1'	11:K:116:HIS:CG	2.55	0.42
3:C:82:GLU:HA	3:C:82:GLU:OE1	2.19	0.42
1:A:701:C:H4'	1:A:702:A:OP2	2.18	0.42
1:A:803:G:C6	1:A:804:U:C4	3.07	0.42
1:A:525:C:OP1	12:L:91:LYS:HD3	2.19	0.42
1:A:528:C:O2'	1:A:529:G:H5'	2.19	0.42
4:D:165:MET:O	4:D:166:LYS:HG3	2.20	0.42
12:L:38:THR:HG22	12:L:39:VAL:N	2.35	0.42
17:Q:98:LEU:HA	17:Q:102:GLY:N	2.34	0.42
1:A:1095:U:H5''	1:A:1109:C:O2	2.20	0.42
1:A:1173:G:C5	1:A:1174:G:C5	3.08	0.42
1:A:1178:G:H8	1:A:1178:G:O5'	2.03	0.42
3:C:175:LEU:O	3:C:176:HIS:C	2.58	0.42
3:C:179:ARG:HG3	3:C:179:ARG:HH11	1.85	0.42
3:C:19:GLU:O	3:C:56:ASP:HA	2.20	0.42
9:I:40:LEU:H	9:I:40:LEU:HD23	1.85	0.42
10:J:70:ARG:CG	10:J:70:ARG:HH11	2.32	0.42
10:J:79:ARG:HH11	10:J:79:ARG:CB	2.32	0.42
10:J:9:ARG:H	10:J:9:ARG:CD	2.26	0.42
13:M:56:LEU:O	13:M:60:VAL:N	2.38	0.42
14:N:28:GLY:C	14:N:29:ARG:O	2.58	0.42
19:S:34:TRP:CD1	19:S:52:TYR:HB2	2.55	0.42
1:A:355:C:H1'	1:A:388:G:H1'	2.02	0.42
1:A:391:G:C2'	1:A:392:G:O5'	2.68	0.42
1:A:191:G:O2'	20:T:102:GLY:O	2.33	0.42
5:E:105:VAL:HG11	5:E:132:ALA:N	2.34	0.42
8:H:4:ASP:CG	8:H:85:ARG:NH1	2.73	0.42
1:A:737:A:OP1	6:F:91:VAL:HG13	2.19	0.42
1:A:1074:G:N2	1:A:1102:A:C5	2.87	0.42
2:B:134:GLU:C	2:B:136:VAL:N	2.72	0.42
2:B:57:PHE:CZ	2:B:61:LEU:CD1	3.03	0.42
1:A:1399:C:C4	1:A:1401:G:C2	3.07	0.42
1:A:1502:A:H2	1:A:1505:G:N1	2.18	0.42
1:A:1507:A:H2'	1:A:1508:G:H8	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1518:A:C8	1:A:1518:A:C3'	3.02	0.42
1:A:686:U:O2	1:A:687:A:C5	2.73	0.42
1:A:865:A:C6	1:A:866:C:N4	2.88	0.42
1:A:718:G:C4'	11:K:117:ASN:HD21	2.32	0.42
1:A:508:C:O4'	1:A:508:C:O2	2.36	0.42
7:G:54:THR:HB	7:G:56:GLN:CD	2.40	0.42
4:D:130:GLY:C	4:D:132:ARG:N	2.73	0.42
4:D:134:ASP:OD1	4:D:135:LEU:HD23	2.20	0.42
1:A:410:G:OP1	4:D:30:LYS:HE3	2.19	0.42
1:A:51:A:H1'	1:A:52:G:OP2	2.20	0.42
1:A:1177:G:C5	1:A:1178:G:N7	2.88	0.42
3:C:112:SER:OG	3:C:115:LEU:HG	2.20	0.42
5:E:48:ALA:C	5:E:50:GLU:H	2.23	0.42
7:G:26:PHE:C	7:G:28:ASN:N	2.74	0.42
7:G:59:LEU:O	7:G:63:LYS:CG	2.68	0.42
9:I:38:GLN:O	9:I:40:LEU:N	2.53	0.42
10:J:27:ALA:HB3	10:J:74:ILE:HG22	2.01	0.42
10:J:8:LEU:O	10:J:8:LEU:CD1	2.68	0.42
19:S:31:ILE:CG2	19:S:32:LYS:N	2.83	0.42
1:A:184:G:C6	1:A:185:A:N7	2.88	0.42
1:A:186:C:C5'	20:T:78:ALA:HB1	2.49	0.42
4:D:77:ASN:O	4:D:81:GLU:HG3	2.19	0.42
20:T:62:LEU:CA	20:T:65:LYS:HB3	2.50	0.42
8:H:32:LYS:O	8:H:36:LEU:HG	2.19	0.42
13:M:94:ARG:NH1	13:M:94:ARG:HG2	2.35	0.42
1:A:666:G:N2	1:A:741:G:H1'	2.35	0.42
1:A:916:G:H2'	1:A:917:G:H8	1.84	0.42
1:A:170:U:O2'	1:A:171:A:C5'	2.64	0.42
5:E:19:MET:HE3	5:E:20:GLN:N	2.31	0.42
1:A:1224:G:H4'	1:A:1225:A:OP1	2.20	0.42
8:H:100:ILE:HG22	8:H:125:ARG:HH21	1.83	0.42
5:E:145:LYS:O	5:E:149:GLU:HG3	2.20	0.42
1:A:746:A:C2'	1:A:747:C:H5'	2.50	0.42
11:K:109:VAL:CG1	18:R:84:LYS:HB3	2.50	0.42
11:K:114:VAL:HA	11:K:115:PRO:HD3	1.87	0.42
1:A:520:A:N6	1:A:529:G:H1'	2.34	0.42
4:D:61:LYS:NZ	4:D:207:TYR:OH	2.50	0.42
4:D:13:ARG:HB3	4:D:40:PRO:HD3	2.02	0.42
1:A:313:A:N6	1:A:314:C:N4	2.68	0.42
1:A:1368:G:O2'	1:A:1369:C:H5'	2.20	0.42
1:A:941:G:C6	1:A:942:G:N7	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:121:ALA:HA	7:G:124:LEU:HD12	2.02	0.42
1:A:1240:U:C2	7:G:32:ARG:HD2	2.54	0.42
9:I:23:ASN:H	9:I:60:ASP:N	2.16	0.42
9:I:46:ALA:HB1	9:I:81:ILE:HD12	2.02	0.42
16:P:8:ARG:HE	16:P:15:PRO:HB3	1.85	0.42
16:P:58:TYR:HA	16:P:61:SER:CB	2.50	0.42
1:A:38:G:O2'	1:A:39:G:H5''	2.20	0.42
1:A:1305:G:O2'	1:A:1306:A:C8	2.61	0.42
18:R:59:SER:O	18:R:63:GLN:N	2.43	0.42
1:A:1104:G:H4'	2:B:111:ARG:HH22	1.76	0.42
2:B:112:VAL:HG22	2:B:149:LEU:HD13	2.02	0.42
1:A:882:C:H2'	1:A:883:C:H6	1.85	0.42
1:A:145:G:H2'	1:A:146:G:C8	2.53	0.42
1:A:67:C:H4'	1:A:172:A:O4'	2.19	0.42
20:T:23:ARG:O	20:T:25:ARG:N	2.53	0.42
1:A:545:C:C2'	1:A:546:G:H5'	2.50	0.42
1:A:29:G:H8	1:A:29:G:O5'	2.03	0.42
1:A:830:G:H2'	1:A:831:U:O4'	2.20	0.42
1:A:715:A:H2'	1:A:716:A:H8	1.84	0.42
9:I:31:GLN:HB3	9:I:35:GLU:CB	2.48	0.42
7:G:75:VAL:HA	7:G:87:VAL:O	2.20	0.42
1:A:1075:C:H2'	1:A:1076:C:H6	1.85	0.42
5:E:127:ASN:OD1	5:E:129:ILE:HB	2.20	0.42
11:K:128:ALA:O	11:K:129:SER:HB2	2.20	0.42
1:A:810:C:O2	1:A:810:C:H2'	2.20	0.42
19:S:61:TYR:C	19:S:61:TYR:CD2	2.93	0.42
1:A:308:C:O2	1:A:309:G:C8	2.73	0.41
1:A:1281:U:HO2'	1:A:1282:C:P	2.42	0.41
1:A:1271:G:H5'	1:A:1314:C:OP1	2.19	0.41
1:A:1346:A:H4'	1:A:1347:G:O5'	2.20	0.41
3:C:175:LEU:CD2	3:C:175:LEU:H	2.33	0.41
7:G:141:VAL:O	7:G:145:ALA:N	2.49	0.41
7:G:14:PRO:O	7:G:15:ASP:O	2.38	0.41
1:A:1117:G:O2'	9:I:104:ARG:HD3	2.20	0.41
14:N:6:LEU:HD22	14:N:23:ARG:CZ	2.49	0.41
1:A:391:G:H2'	1:A:392:G:O5'	2.20	0.41
20:T:43:LEU:O	20:T:44:ALA:C	2.58	0.41
1:A:223:U:C5'	20:T:68:LYS:HZ1	2.33	0.41
20:T:82:SER:O	20:T:84:LEU:N	2.52	0.41
2:B:91:PRO:HG2	2:B:155:LEU:HD23	1.99	0.41
2:B:97:TRP:HH2	2:B:102:LEU:H	1.67	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:792:A:C6	1:A:794:A:C6	3.08	0.41
3:C:91:LEU:HD21	3:C:98:ASN:HD22	1.85	0.41
2:B:119:GLU:OE1	2:B:153:ARG:NH2	2.53	0.41
1:A:268:C:C2'	1:A:269:C:O5'	2.68	0.41
18:R:22:VAL:HG13	18:R:26:LEU:CD1	2.50	0.41
1:A:102:G:N3	1:A:151:A:H2	2.18	0.41
20:T:10:LEU:O	20:T:11:SER:C	2.58	0.41
6:F:9:VAL:CG2	6:F:87:ARG:HB2	2.50	0.41
1:A:345:C:O4'	1:A:346:G:N2	2.52	0.41
1:A:17:U:N3	1:A:919:A:H2	2.18	0.41
8:H:18:ARG:HD3	8:H:18:ARG:HA	1.83	0.41
3:C:201:TYR:C	3:C:202:ILE:HG13	2.40	0.41
1:A:409:G:O2'	1:A:410:G:H5'	2.20	0.41
4:D:134:ASP:CG	4:D:135:LEU:N	2.73	0.41
4:D:192:GLU:O	4:D:194:LEU:N	2.53	0.41
4:D:22:LYS:HE2	4:D:22:LYS:HB3	1.56	0.41
4:D:66:ARG:O	4:D:67:ILE:C	2.56	0.41
4:D:91:SER:O	4:D:93:PHE:N	2.53	0.41
17:Q:97:SER:CB	17:Q:103:GLY:CA	2.89	0.41
3:C:206:GLU:O	3:C:207:VAL:CB	2.68	0.41
7:G:17:VAL:CG1	7:G:18:TYR:N	2.61	0.41
9:I:118:LYS:HZ2	9:I:118:LYS:CB	2.31	0.41
10:J:26:ALA:O	10:J:29:ARG:HG2	2.19	0.41
14:N:27:CYS:SG	14:N:29:ARG:HB3	2.60	0.41
21:V:22:ARG:HH11	21:V:22:ARG:HG2	1.85	0.41
1:A:377:G:O2'	1:A:378:G:H5'	2.20	0.41
1:A:451:A:C6	1:A:481:G:C4	3.08	0.41
16:P:22:THR:CG2	16:P:23:ASP:H	2.12	0.41
16:P:8:ARG:HH21	16:P:15:PRO:HD3	1.84	0.41
20:T:54:LYS:N	20:T:100:ILE:HD12	2.35	0.41
20:T:51:GLU:C	20:T:54:LYS:HB3	2.40	0.41
3:C:22:TRP:CB	3:C:59:ARG:HG2	2.50	0.41
5:E:71:LEU:CD1	5:E:114:GLY:O	2.67	0.41
1:A:202:U:H2'	1:A:202:U:O2	2.20	0.41
6:F:63:TYR:HD1	6:F:63:TYR:N	2.19	0.41
2:B:104:ASN:O	2:B:104:ASN:CG	2.59	0.41
2:B:129:GLU:CD	2:B:130:ARG:H	2.23	0.41
1:A:455:C:H42	1:A:477:G:H1	1.66	0.41
13:M:109:THR:CG2	13:M:110:ARG:N	2.83	0.41
13:M:78:ILE:C	13:M:80:ARG:H	2.23	0.41
1:A:491:G:C2	1:A:492:G:C5	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:575:G:C4	1:A:881:G:C2	3.08	0.41
1:A:707:C:C2	1:A:708:C:C5	3.08	0.41
1:A:982:U:H1'	1:A:983:A:C5	2.55	0.41
11:K:33:THR:OG1	11:K:38:ASN:O	2.38	0.41
2:B:24:TRP:CA	2:B:190:THR:HG23	2.50	0.41
1:A:1319:A:N6	1:A:1361:G:N2	2.60	0.41
1:A:832:C:C2'	1:A:833:U:H5'	2.50	0.41
18:R:31:LEU:HD21	18:R:66:LEU:H	1.85	0.41
3:C:42:LEU:O	3:C:45:LYS:N	2.53	0.41
1:A:1495:U:C4	1:A:1496:C:N4	2.88	0.41
11:K:86:GLY:CA	11:K:112:THR:HG23	2.49	0.41
1:A:507:C:C4	1:A:508:C:C5	3.09	0.41
1:A:967:C:O2'	9:I:128:ARG:NE	2.52	0.41
2:B:182:ILE:O	2:B:183:PRO:O	2.37	0.41
2:B:193:ASP:C	2:B:193:ASP:OD1	2.59	0.41
4:D:125:HIS:HA	4:D:149:ALA:HB3	2.01	0.41
4:D:127:THR:O	4:D:127:THR:HG23	2.20	0.41
4:D:157:LEU:O	4:D:160:GLN:N	2.54	0.41
1:A:1015:A:H1'	1:A:1218:C:O2'	2.20	0.41
1:A:1061:G:C6	1:A:1062:U:C4	3.09	0.41
1:A:1276:G:N2	1:A:1282:C:O2	2.54	0.41
1:A:1369:C:H2'	1:A:1370:G:H8	1.83	0.41
1:A:941:G:C5	1:A:942:G:N7	2.89	0.41
9:I:118:LYS:HZ3	9:I:118:LYS:HB3	1.84	0.41
13:M:34:LEU:HD11	13:M:41:PRO:HA	2.02	0.41
1:A:1243:C:OP2	21:V:10:ARG:CZ	2.67	0.41
1:A:355:C:H5'	1:A:389:A:OP2	2.21	0.41
1:A:451:A:N6	1:A:481:G:H1'	2.36	0.41
20:T:67:ALA:O	20:T:73:HIS:ND1	2.53	0.41
3:C:95:THR:HG23	3:C:98:ASN:H	1.84	0.41
5:E:63:ARG:O	5:E:66:MET:HG2	2.20	0.41
1:A:949:A:C6	1:A:1233:G:C2	3.08	0.41
1:A:740:U:O4'	15:O:42:HIS:ND1	2.53	0.41
14:N:9:LYS:CD	14:N:9:LYS:O	2.68	0.41
1:A:584:G:C2	1:A:585:G:C4	3.09	0.41
12:L:7:ILE:O	12:L:10:LEU:CB	2.68	0.41
18:R:30:ASP:C	18:R:32:ARG:N	2.73	0.41
15:O:74:ASP:OD1	15:O:74:ASP:O	2.38	0.41
1:A:837:G:C2	1:A:850:U:O2	2.74	0.41
1:A:250:A:C4'	1:A:251:G:O5'	2.61	0.41
1:A:29:G:N2	1:A:555:C:C4	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:345:C:H5'	1:A:346:G:C4	2.55	0.41
1:A:1436:U:C2'	1:A:1437:C:H5'	2.49	0.41
1:A:1038:C:H2'	1:A:1039:C:C5	2.54	0.41
1:A:932:C:C6	7:G:3:ARG:HD3	2.54	0.41
3:C:201:TYR:N	3:C:201:TYR:HD1	2.17	0.41
5:E:143:ARG:NH1	8:H:77:GLU:CD	2.73	0.41
1:A:110:C:H2'	1:A:111:G:H5'	2.02	0.41
1:A:938:A:C8	1:A:938:A:O5'	2.73	0.41
4:D:150:GLU:C	4:D:152:SER:N	2.74	0.41
12:L:33:ARG:HB3	12:L:60:LEU:HD12	2.01	0.41
12:L:69:TYR:CE1	12:L:70:ILE:O	2.73	0.41
1:A:51:A:C2	1:A:116:A:H1'	2.55	0.41
1:A:1116:C:H2'	1:A:1117:G:C5'	2.50	0.41
1:A:1185:G:C2	1:A:1186:G:C8	3.08	0.41
3:C:112:SER:OG	3:C:115:LEU:CG	2.68	0.41
1:A:1191:A:OP2	3:C:3:ASN:OD1	2.39	0.41
9:I:86:VAL:O	9:I:87:GLN:C	2.56	0.41
9:I:88:TYR:CE1	9:I:89:ASN:HB2	2.56	0.41
1:A:1202:G:O2'	14:N:2:ALA:HB1	2.21	0.41
21:V:15:ARG:HB2	21:V:15:ARG:HH11	1.86	0.41
1:A:273:A:H2'	1:A:274:A:C5'	2.50	0.41
1:A:259:G:H2'	1:A:260:G:H8	1.86	0.41
17:Q:71:PHE:C	17:Q:72:ARG:HG2	2.40	0.41
20:T:57:ARG:HE	20:T:100:ILE:HG21	1.85	0.41
20:T:76:ALA:O	20:T:80:ARG:CG	2.60	0.41
3:C:40:ARG:HG3	3:C:40:ARG:HH11	1.86	0.41
11:K:127:LYS:CA	11:K:127:LYS:CE	2.93	0.41
15:O:16:ALA:CB	15:O:21:ASP:O	2.68	0.41
5:E:131:ILE:HA	5:E:131:ILE:HD13	1.82	0.41
2:B:19:HIS:H	2:B:39:ILE:CG2	2.34	0.41
2:B:21:ARG:HA	2:B:39:ILE:N	2.35	0.41
11:K:100:ALA:O	11:K:102:GLY:N	2.53	0.41
11:K:78:GLN:O	11:K:79:SER:O	2.39	0.41
13:M:76:ALA:O	13:M:79:LYS:N	2.53	0.41
5:E:12:LEU:N	5:E:12:LEU:HD12	2.35	0.41
1:A:1047:G:H1	1:A:1210:C:H42	1.68	0.41
1:A:602:A:N3	1:A:637:G:C2	2.88	0.41
1:A:1070:U:H2'	1:A:1071:C:C6	2.56	0.41
1:A:322:C:H2'	1:A:323:U:C5'	2.50	0.41
1:A:922:G:C2	1:A:1396:A:C2	3.07	0.41
1:A:1222:G:H5"	19:S:78:ARG:HH11	1.81	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:126:LYS:HG2	8:H:127:LEU:HD22	2.02	0.41
8:H:127:LEU:HD22	8:H:127:LEU:N	2.35	0.41
1:A:593:G:N1	1:A:594:G:C4	2.88	0.41
2:B:29:ALA:C	2:B:31:TYR:N	2.73	0.41
1:A:362:G:H2'	1:A:364:A:OP2	2.20	0.41
1:A:325:A:N6	1:A:326:G:C2	2.88	0.41
1:A:718:G:C5	11:K:116:HIS:CD2	3.08	0.41
3:C:94:LEU:C	3:C:94:LEU:CD2	2.88	0.41
1:A:416:G:O5'	1:A:416:G:H8	2.03	0.41
1:A:1030(D):A:H3'	1:A:1031:G:C5'	2.50	0.41
1:A:411:A:C2	1:A:431:A:N6	2.88	0.41
1:A:437:U:O2'	1:A:438:G:H5'	2.21	0.41
1:A:521:G:OP1	12:L:73:GLU:O	2.38	0.41
1:A:533:A:HO2'	1:A:534:U:P	2.43	0.41
1:A:427:U:H4'	1:A:541:G:H5''	2.01	0.41
1:A:622:A:C2	1:A:623:C:H1'	2.55	0.41
4:D:57:ARG:NE	4:D:202:LEU:HD22	2.35	0.41
4:D:31:CYS:C	4:D:33:MET:N	2.74	0.41
1:A:118:U:O4	1:A:288:A:H2'	2.19	0.41
1:A:59:A:H1'	1:A:354:G:N2	2.36	0.41
1:A:1148:U:O2'	9:I:14:VAL:HG11	2.20	0.41
1:A:1177:G:H2'	1:A:1178:G:O5'	2.20	0.41
3:C:120:VAL:HG12	3:C:120:VAL:O	2.20	0.41
3:C:16:ARG:NH2	3:C:183:ASP:CB	2.84	0.41
7:G:100:ALA:HB3	7:G:101:LEU:CD2	2.51	0.41
7:G:47:CYS:O	7:G:49:ILE:N	2.49	0.41
9:I:93:ARG:HG2	9:I:96:LEU:HD23	2.03	0.41
10:J:18:ALA:HA	10:J:21:GLN:CB	2.51	0.41
14:N:47:LEU:O	14:N:50:LYS:HG2	2.21	0.41
1:A:393:A:N3	1:A:394:G:C8	2.88	0.41
1:A:451:A:H61	1:A:481:G:H1'	1.85	0.41
1:A:451:A:N6	1:A:481:G:N9	2.69	0.41
15:O:79:ARG:O	15:O:82:ILE:HG22	2.21	0.41
1:A:862:C:O4'	1:A:874:G:H4'	2.20	0.41
1:A:1157:A:O4'	1:A:1158:C:C2	2.73	0.41
2:B:163:PHE:HZ	2:B:201:ILE:HD12	1.85	0.41
2:B:82:ARG:HA	2:B:92:TYR:CD2	2.51	0.41
15:O:63:ARG:C	15:O:65:ARG:H	2.24	0.41
1:A:1047:G:C3'	1:A:1048:G:C5'	2.95	0.41
2:B:178:ARG:O	8:H:71:GLY:HA2	2.20	0.41
1:A:633:G:C2	1:A:634:C:O2	2.72	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:22:G:O2'	1:A:23:C:H5'	2.19	0.41
1:A:513:C:H2'	1:A:514:C:C6	2.55	0.41
1:A:1427:U:H3	1:A:1473:A:H61	1.68	0.41
9:I:13:ALA:HB3	9:I:76:ALA:HB2	2.02	0.41
8:H:60:ARG:HG3	8:H:60:ARG:NH1	2.35	0.41
1:A:413:G:H2'	1:A:428:G:N2	2.35	0.41
1:A:438:G:C4'	1:A:439:A:OP1	2.68	0.41
1:A:621:A:C4	1:A:622:A:C8	3.09	0.41
1:A:622:A:C4	1:A:623:C:C6	3.08	0.41
4:D:25:ARG:O	4:D:27:TYR:N	2.52	0.41
4:D:59:ARG:HG2	4:D:59:ARG:H	1.75	0.41
1:A:1240:U:P	7:G:119:ARG:HH22	2.42	0.41
7:G:109:ASN:OD1	7:G:119:ARG:NH1	2.53	0.41
1:A:1351:U:C4'	7:G:33:ASP:OD1	2.69	0.41
7:G:72:ARG:HG2	7:G:142:GLU:HG2	2.01	0.41
9:I:26:VAL:CG1	9:I:28:VAL:HG23	2.50	0.41
7:G:44:TYR:CE1	9:I:41:VAL:HG21	2.55	0.41
9:I:3:GLN:O	9:I:4:TYR:CD2	2.74	0.41
9:I:55:ALA:O	9:I:56:LEU:C	2.59	0.41
9:I:17:VAL:HG11	9:I:81:ILE:HG23	2.01	0.41
13:M:6:GLY:O	13:M:7:VAL:HG23	2.20	0.41
17:Q:18:THR:HG22	17:Q:19:VAL:N	2.36	0.41
16:P:42:ARG:O	16:P:43:LYS:C	2.59	0.41
16:P:43:LYS:HA	16:P:48:TRP:HB3	2.02	0.41
16:P:21:VAL:CG2	16:P:59:TRP:HE1	2.31	0.41
15:O:18:PHE:CE2	15:O:21:ASP:HB2	2.56	0.41
15:O:9:GLN:O	15:O:10:LYS:C	2.58	0.41
6:F:73:ASN:O	6:F:76:ALA:N	2.54	0.41
1:A:880:C:OP2	12:L:9:GLN:OE1	2.38	0.41
1:A:322:C:C2'	1:A:323:U:C5'	2.98	0.41
1:A:103:C:P	20:T:17:ARG:HH12	2.43	0.41
2:B:175:ARG:CZ	2:B:175:ARG:HB2	2.51	0.41
6:F:12:PRO:HB2	6:F:45:LEU:HD21	2.01	0.41
1:A:16:A:H2'	1:A:17:U:H5'	2.02	0.41
1:A:658:G:C2	1:A:749:C:N3	2.88	0.41
12:L:120:TYR:CD2	12:L:120:TYR:N	2.84	0.41
11:K:124:LYS:HB3	11:K:125:PHE:CE1	2.56	0.41
1:A:564:C:C6	17:Q:31:LEU:HD11	2.56	0.41
4:D:102:ASP:CG	4:D:103:ASN:H	2.23	0.41
4:D:133:VAL:O	4:D:134:ASP:HB3	2.21	0.41
1:A:1162:C:N3	1:A:1175:G:C2	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1262:C:O2'	1:A:1263:C:H5'	2.20	0.41
1:A:1285:A:H5'	1:A:1286:A:C2	2.55	0.41
1:A:1333:A:H2'	1:A:1334:G:C8	2.56	0.41
3:C:118:GLN:CA	3:C:121:ALA:HB3	2.49	0.41
7:G:120:ILE:O	7:G:121:ALA:C	2.59	0.41
7:G:17:VAL:C	7:G:19:GLY:N	2.74	0.41
7:G:23:VAL:O	7:G:24:THR:C	2.58	0.41
9:I:16:ARG:N	9:I:16:ARG:HD3	2.20	0.41
9:I:56:LEU:CD2	9:I:57:GLY:N	2.83	0.41
13:M:14:ARG:HH12	13:M:16:ASP:CB	2.34	0.41
19:S:69:HIS:CB	19:S:73:GLU:OE1	2.67	0.41
1:A:232:G:N3	1:A:263:A:H2	2.18	0.41
20:T:57:ARG:HE	20:T:100:ILE:CG2	2.33	0.41
20:T:60:GLU:CA	20:T:63:ILE:HD12	2.44	0.41
20:T:66:ALA:O	20:T:68:LYS:N	2.53	0.41
2:B:73:THR:CB	2:B:96:ARG:HH21	2.34	0.41
1:A:792:A:H1'	1:A:793:U:C5'	2.50	0.41
3:C:88:ARG:C	3:C:90:GLU:H	2.22	0.41
8:H:104:ARG:CZ	8:H:138:TRP:CZ2	3.04	0.41
11:K:59:TYR:CE1	11:K:63:LEU:HD21	2.56	0.41
11:K:61:ALA:O	11:K:64:ALA:HB3	2.20	0.41
1:A:264:U:O2'	1:A:265:G:H5'	2.20	0.41
1:A:491:G:C2	1:A:492:G:C4	3.09	0.41
2:B:178:ARG:CZ	2:B:196:LEU:O	2.69	0.41
17:Q:88:TYR:CD2	17:Q:89:LEU:HD23	2.55	0.41
12:L:27:LEU:HD22	12:L:64:TYR:CE1	2.55	0.41
1:A:865:A:C6	1:A:866:C:C4	3.09	0.41
1:A:147:G:C2	1:A:176:C:N3	2.89	0.41
1:A:514:C:H2'	1:A:515:G:O4'	2.20	0.41
1:A:673:G:O3'	6:F:87:ARG:NH2	2.54	0.41
5:E:144:THR:O	5:E:146:ALA:N	2.53	0.41
17:Q:75:ARG:HH12	17:Q:77:VAL:HG22	1.85	0.41
11:K:115:PRO:C	11:K:117:ASN:N	2.70	0.41
1:A:83:U:O2'	1:A:84:U:H5'	2.20	0.41
1:A:1118:C:H1'	1:A:1179:A:N3	2.34	0.41
1:A:1302:U:O4	13:M:14:ARG:HD3	2.21	0.41
1:A:939:G:N2	1:A:1344:C:O2	2.53	0.41
3:C:109:PRO:CB	3:C:115:LEU:HD13	2.51	0.41
3:C:153:VAL:HG12	3:C:154:SER:H	1.85	0.41
1:A:1060:C:C5	3:C:2:GLY:N	2.89	0.41
9:I:50:LEU:HD11	9:I:81:ILE:CB	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:20:ALA:O	10:J:23:ILE:HB	2.20	0.41
10:J:72:VAL:O	10:J:73:ASP:O	2.38	0.41
13:M:20:THR:CA	13:M:25:ILE:HG22	2.43	0.41
3:C:18:TRP:CD1	14:N:54:PRO:HA	2.55	0.41
19:S:17:GLU:O	19:S:19:VAL:N	2.43	0.41
1:A:376:G:O2'	1:A:377:G:C5'	2.64	0.41
1:A:453:A:N6	1:A:480:U:H3	2.17	0.41
3:C:58:GLU:CG	3:C:67:THR:OG1	2.69	0.41
15:O:83:GLU:HG2	15:O:83:GLU:O	2.20	0.41
8:H:33:GLU:HA	8:H:36:LEU:HD12	2.01	0.41
2:B:15:VAL:HG11	2:B:209:ARG:C	2.41	0.41
2:B:28:PHE:CZ	2:B:189:ASP:CA	2.86	0.41
6:F:19:LEU:C	6:F:21:LEU:N	2.73	0.41
1:A:1520:G:N1	1:A:1521:G:C6	2.89	0.41
1:A:879:C:C5	12:L:6:THR:HG21	2.55	0.41
1:A:879:C:H6	1:A:879:C:H3'	1.84	0.41
1:A:102:G:C5	1:A:103:C:C5	3.08	0.41
1:A:175:C:H2'	1:A:176:C:O4'	2.20	0.41
12:L:86:ARG:HG3	12:L:86:ARG:NH1	2.36	0.41
1:A:758:G:O5'	1:A:758:G:H8	2.04	0.41
1:A:622:A:C2	1:A:623:C:C1'	3.03	0.41
4:D:100:ARG:HH12	4:D:137:SER:HA	1.85	0.41
12:L:53:ARG:NH1	12:L:93:LEU:HD21	2.36	0.41
4:D:163:GLU:C	4:D:165:MET:H	2.24	0.41
12:L:115:LYS:C	12:L:117:ARG:N	2.74	0.41
3:C:10:PHE:O	3:C:14:ILE:HD11	2.20	0.41
7:G:143:ARG:O	7:G:145:ALA:O	2.39	0.41
7:G:21:VAL:O	7:G:24:THR:CB	2.69	0.41
9:I:18:PHE:O	9:I:61:ALA:CB	2.66	0.41
10:J:18:ALA:C	10:J:20:ALA:N	2.74	0.41
10:J:90:LEU:O	10:J:90:LEU:HD23	2.20	0.41
1:A:1326:C:H5''	21:V:18:TYR:O	2.21	0.41
1:A:1253:G:N2	1:A:1254:C:H1'	2.36	0.41
1:A:944:G:C3'	1:A:945:G:C5'	2.99	0.41
9:I:97:LYS:O	9:I:98:PRO:C	2.57	0.41
10:J:3:LYS:CG	10:J:76:ASN:HD22	2.30	0.41
10:J:82:ILE:O	10:J:86:MET:HB2	2.21	0.41
13:M:10:PRO:CB	13:M:18:ALA:CB	2.89	0.41
3:C:18:TRP:CZ2	14:N:56:VAL:O	2.73	0.41
19:S:17:GLU:C	19:S:19:VAL:N	2.73	0.41
19:S:40:ILE:HD13	19:S:62:ILE:CD1	2.47	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:124:G:C5	1:A:125:U:C4	3.09	0.41
1:A:256:U:C5'	17:Q:17:LYS:NZ	2.82	0.41
1:A:451:A:N7	1:A:481:G:C2	2.89	0.41
1:A:191:G:C5	1:A:192:U:C5	3.09	0.41
17:Q:5:VAL:HA	17:Q:59:ILE:O	2.20	0.41
20:T:100:ILE:HG13	20:T:100:ILE:H	1.73	0.41
20:T:30:LYS:CD	20:T:72:LEU:HD21	2.41	0.41
2:B:105:PHE:O	2:B:107:THR:N	2.53	0.41
1:A:547:A:H4'	1:A:548:G:O5'	2.19	0.41
1:A:37:U:C2'	1:A:38:G:H5'	2.51	0.41
4:D:2:GLY:C	4:D:3:ARG:HE	2.23	0.41
1:A:35:G:OP1	12:L:104:VAL:HG22	2.20	0.41
3:C:59:ARG:O	3:C:60:ALA:HB2	2.20	0.41
3:C:61:ALA:C	3:C:63:ASN:N	2.73	0.41
1:A:588:G:C4	1:A:753:A:C6	3.09	0.41
5:E:63:ARG:HA	5:E:66:MET:SD	2.61	0.41
8:H:7:ALA:HA	8:H:10:LEU:HD12	2.03	0.41
8:H:40:ALA:O	8:H:42:GLU:N	2.54	0.41
1:A:590:C:C2	1:A:650:G:C2	3.09	0.41
1:A:953:G:O6	1:A:1228:C:N4	2.53	0.41
6:F:91:VAL:CG1	18:R:72:ARG:NH2	2.84	0.41
6:F:80:ARG:NH1	6:F:88:VAL:HB	2.35	0.41
2:B:122:PHE:O	2:B:127:ILE:HG13	2.21	0.41
2:B:142:LEU:HD23	2:B:146:GLN:HG3	2.01	0.41
2:B:53:ARG:CG	2:B:54:THR:N	2.83	0.41
1:A:1101:A:C4'	1:A:1102:A:O5'	2.68	0.41
6:F:18:GLN:CA	6:F:21:LEU:HB3	2.50	0.41
6:F:1:MET:SD	6:F:66:GLU:OE2	2.78	0.41
6:F:16:GLN:C	6:F:16:GLN:CD	2.80	0.41
6:F:32:ASN:ND2	6:F:32:ASN:C	2.75	0.41
1:A:1405:G:O2'	1:A:1406:U:H5'	2.21	0.41
1:A:1408:A:H2'	1:A:1409:C:H6	1.86	0.41
1:A:1500:A:OP1	1:A:1508:G:OP1	2.39	0.41
14:N:9:LYS:NZ	14:N:9:LYS:O	2.37	0.41
1:A:1046:A:C2	1:A:1047:G:H1'	2.56	0.41
1:A:1213:A:C5	1:A:1215:G:N7	2.88	0.41
15:O:68:ARG:O	15:O:72:ARG:HB2	2.21	0.41
6:F:100:ASN:HD22	18:R:23:LYS:HG2	1.86	0.41
18:R:20:ALA:C	18:R:55:ARG:HH12	2.24	0.41
1:A:101:A:C2	1:A:102:G:N9	2.89	0.41
1:A:923:A:C2	1:A:1395:C:N3	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:100:ILE:CG2	8:H:125:ARG:HE	2.34	0.41
3:C:157:ILE:C	3:C:159:GLY:H	2.24	0.41
1:A:596:C:OP2	1:A:596:C:H3'	2.20	0.41
1:A:763:G:N2	1:A:764:C:C2	2.89	0.41
1:A:195:A:C6	1:A:196:A:N1	2.89	0.41
1:A:1025:U:C2'	1:A:1026:G:H8	2.34	0.41
1:A:1004:A:N7	1:A:1037:C:O2	2.53	0.41
1:A:658:G:C2'	1:A:659:U:H5'	2.50	0.41
16:P:1:MET:CE	16:P:65:GLN:HB2	2.50	0.41
17:Q:75:ARG:CG	17:Q:76:LEU:H	2.34	0.41
17:Q:56:VAL:O	17:Q:57:VAL:CG1	2.69	0.41
1:A:830:G:C2'	1:A:831:U:H5'	2.50	0.41
13:M:116:THR:HG22	13:M:117:VAL:H	1.86	0.41
1:A:1402:C:O2'	1:A:1403:C:H5'	2.20	0.41
5:E:93:PRO:O	5:E:93:PRO:HG2	2.21	0.41
8:H:18:ARG:HB2	8:H:18:ARG:NH1	2.30	0.41
1:A:1465:C:H2'	1:A:1466:C:H6	1.84	0.41
1:A:1078:U:H2'	1:A:1079:G:O4'	2.21	0.41
1:A:203:U:H5''	1:A:204:U:O5'	2.21	0.41
1:A:156:G:C2	1:A:166:G:C6	3.09	0.41
16:P:81:ARG:NE	16:P:83:GLU:OE2	2.51	0.41
1:A:505:G:C6	1:A:535:A:C2	3.09	0.41
4:D:205:GLU:O	4:D:206:PHE:C	2.59	0.41
4:D:91:SER:OG	4:D:92:VAL:N	2.54	0.41
1:A:51:A:C1'	1:A:52:G:OP2	2.69	0.41
1:A:761:G:H4'	17:Q:102:GLY:CA	2.46	0.41
1:A:1151:A:H5'	10:J:41:PRO:HA	2.03	0.41
1:A:1261:A:H62	1:A:1274:G:N2	2.05	0.41
3:C:138:VAL:HG12	3:C:170:GLN:HB2	2.03	0.41
9:I:65:VAL:CG2	9:I:66:ARG:N	2.84	0.41
10:J:8:LEU:HD21	10:J:20:ALA:CB	2.50	0.41
13:M:8:GLU:OE2	13:M:22:ILE:HG23	2.21	0.41
21:V:18:TYR:CE2	21:V:24:ARG:HD3	2.56	0.41
16:P:74:LEU:HD22	16:P:79:VAL:CG2	2.50	0.41
2:B:73:THR:CG2	2:B:96:ARG:HH21	2.33	0.41
1:A:397:A:C6	1:A:548:G:N7	2.89	0.41
1:A:501:C:H1'	1:A:549:C:H1'	2.02	0.41
3:C:95:THR:O	3:C:95:THR:CG2	2.69	0.41
1:A:588:G:C6	1:A:753:A:C8	3.09	0.41
1:A:872:A:C8	1:A:874:G:C8	3.09	0.41
2:B:115:LEU:O	2:B:118:LEU:HB2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:21:ARG:O	2:B:22:LYS:HB2	2.20	0.41
11:K:14:VAL:HG21	11:K:40:ILE:HD11	2.03	0.41
11:K:44:SER:O	11:K:45:GLY:C	2.58	0.41
11:K:93:GLN:O	11:K:96:ARG:HB3	2.21	0.41
11:K:93:GLN:CD	11:K:96:ARG:NH2	2.74	0.41
1:A:1057:G:C5	1:A:1058:G:C5	3.09	0.41
1:A:578:C:O2'	1:A:579:G:H5'	2.21	0.41
1:A:892:A:C6	1:A:893:C:N4	2.89	0.41
2:B:196:LEU:HA	2:B:196:LEU:HD23	1.80	0.41
15:O:68:ARG:NH1	15:O:68:ARG:CB	2.84	0.41
1:A:109:A:C2	1:A:327:A:N1	2.89	0.41
1:A:76:C:H2'	1:A:77:G:C8	2.50	0.41
1:A:1361:G:C8	1:A:1361:G:P	3.14	0.41
1:A:60:A:H1'	1:A:61:G:O4'	2.21	0.41
6:F:12:PRO:CB	6:F:45:LEU:HD21	2.51	0.41
1:A:594:G:N2	1:A:646:U:O2	2.53	0.41
1:A:448:A:OP2	1:A:485:G:N2	2.44	0.41
1:A:552:U:O2'	12:L:31:PRO:HB3	2.21	0.41
9:I:36:TYR:CZ	9:I:70:LYS:HE2	2.55	0.41
5:E:14:ARG:NH1	5:E:129:ILE:CD1	2.84	0.41
1:A:623:C:O2'	1:A:624:C:H5'	2.21	0.40
4:D:119:GLN:C	4:D:121:VAL:N	2.74	0.40
4:D:49:ARG:O	4:D:51:PRO:N	2.54	0.40
12:L:24:VAL:HG12	12:L:26:ALA:HB3	2.01	0.40
1:A:1125:U:OP2	1:A:1145:C:N4	2.54	0.40
1:A:1118:C:O4'	1:A:1179:A:H1'	2.21	0.40
1:A:1299:A:O2'	1:A:1300:G:H4'	2.21	0.40
1:A:1367:C:N3	1:A:1368:G:N7	2.69	0.40
3:C:131:ARG:O	3:C:134:ILE:N	2.54	0.40
7:G:28:ASN:CA	7:G:31:MET:HB2	2.37	0.40
9:I:96:LEU:CG	9:I:102:LEU:HD13	2.45	0.40
9:I:19:LEU:CD2	9:I:59:PHE:HB3	2.33	0.40
10:J:76:ASN:N	10:J:76:ASN:ND2	2.68	0.40
14:N:47:LEU:O	14:N:48:ALA:C	2.60	0.40
21:V:14:TRP:O	21:V:15:ARG:C	2.59	0.40
1:A:106:C:H2'	1:A:107:G:C5'	2.50	0.40
1:A:260:G:C4	1:A:261:U:C5	3.09	0.40
1:A:370:C:C2	1:A:371:G:C8	3.09	0.40
1:A:376:G:N3	1:A:389:A:C2	2.88	0.40
2:B:90:MET:HA	2:B:91:PRO:HD3	1.81	0.40
1:A:792:A:HO2'	1:A:793:U:P	2.37	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:66:VAL:HG12	3:C:66:VAL:O	2.20	0.40
15:O:78:TYR:C	15:O:82:ILE:HG22	2.41	0.40
1:A:872:A:C2	1:A:874:G:C6	3.09	0.40
8:H:42:GLU:OE1	8:H:42:GLU:O	2.39	0.40
18:R:68:LYS:HE3	18:R:72:ARG:NH2	2.36	0.40
2:B:136:VAL:HA	2:B:139:LYS:HB2	2.03	0.40
2:B:187:LEU:HD23	2:B:201:ILE:HB	2.03	0.40
1:A:1414:U:H2'	1:A:1415:G:H8	1.86	0.40
1:A:1520:G:C6	1:A:1521:G:C6	3.09	0.40
14:N:11:LYS:NZ	14:N:13:THR:HB	2.36	0.40
5:E:36:ASP:OD1	5:E:38:GLN:N	2.48	0.40
8:H:126:LYS:O	8:H:128:GLY:N	2.54	0.40
1:A:597:G:N7	1:A:598:U:C5	2.89	0.40
1:A:302:G:H21	1:A:556:C:C4'	2.33	0.40
11:K:83:ILE:HA	11:K:109:VAL:O	2.21	0.40
13:M:108:ARG:NE	13:M:108:ARG:HA	2.36	0.40
1:A:528:C:H5'	1:A:535:A:N6	2.36	0.40
1:A:620:C:H2'	1:A:621:A:O4'	2.21	0.40
4:D:127:THR:HG1	4:D:130:GLY:CA	2.34	0.40
4:D:57:ARG:HD2	4:D:202:LEU:HD22	2.03	0.40
1:A:1255:G:N1	1:A:1283:G:N2	2.70	0.40
1:A:939:G:H2'	1:A:940:C:C6	2.57	0.40
3:C:114:PRO:HG3	3:C:185:GLY:HA2	2.03	0.40
3:C:7:PRO:HA	3:C:10:PHE:CB	2.41	0.40
9:I:23:ASN:HB3	9:I:24:GLY:H	1.67	0.40
9:I:42:ARG:HE	9:I:42:ARG:HB3	1.51	0.40
10:J:18:ALA:HA	10:J:21:GLN:HB2	2.04	0.40
13:M:44:ARG:HB2	13:M:46:LYS:HG2	2.03	0.40
19:S:5:LEU:CD2	19:S:9:VAL:HG13	2.50	0.40
1:A:377:G:C2	1:A:378:G:C5	3.09	0.40
1:A:394:G:O2'	1:A:395:C:H5'	2.21	0.40
1:A:44:G:N3	1:A:399:G:C2	2.89	0.40
20:T:75:ASN:O	20:T:78:ALA:HB3	2.21	0.40
5:E:41:VAL:CG2	5:E:113:ALA:CB	2.99	0.40
5:E:135:THR:O	5:E:138:ALA:N	2.55	0.40
5:E:39:GLY:HA2	5:E:71:LEU:CG	2.51	0.40
1:A:1230:C:O2'	1:A:1231:G:H5'	2.21	0.40
1:A:1305:G:OP2	1:A:1305:G:C8	2.74	0.40
1:A:1073:U:P	5:E:57:LYS:NZ	2.94	0.40
2:B:123:ALA:O	2:B:124:SER:O	2.39	0.40
2:B:223:ILE:HD13	2:B:230:VAL:CG2	2.46	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:15:ALA:HB1	11:K:78:GLN:CB	2.49	0.40
1:A:455:C:C2	1:A:456:C:C5	3.09	0.40
1:A:475:G:C4	1:A:476:G:C8	3.10	0.40
18:R:45:SER:C	18:R:47:THR:N	2.69	0.40
1:A:420:U:O2	1:A:424:G:N2	2.54	0.40
1:A:1059:C:N4	1:A:1198:G:H1	2.20	0.40
1:A:320:C:O2'	1:A:321:A:H5'	2.22	0.40
8:H:94:TYR:CD1	8:H:94:TYR:N	2.89	0.40
2:B:30:ARG:C	2:B:31:TYR:CD1	2.94	0.40
1:A:1382:C:O2'	1:A:1383:C:H5'	2.21	0.40
1:A:714:G:H2'	1:A:715:A:C8	2.56	0.40
1:A:363:A:N1	1:A:364:A:C2	2.89	0.40
1:A:1494:G:H2'	1:A:1495:U:C5'	2.51	0.40
1:A:969:A:H2'	1:A:970:C:O4'	2.21	0.40
8:H:60:ARG:CB	8:H:62:TYR:HE2	2.34	0.40
1:A:773:G:H2'	1:A:774:G:H8	1.86	0.40
1:A:1321:C:H2'	1:A:1322:C:H5	1.86	0.40
4:D:64:LEU:HD12	4:D:75:PHE:CZ	2.56	0.40
4:D:97:LEU:HD23	4:D:97:LEU:O	2.21	0.40
1:A:1015:A:C2'	1:A:1016:A:C8	2.93	0.40
1:A:1152:A:O2'	1:A:1153:C:O5'	2.37	0.40
1:A:1255:G:N1	1:A:1283:G:N3	2.70	0.40
3:C:179:ARG:HD3	3:C:207:VAL:HA	2.02	0.40
10:J:26:ALA:HB3	10:J:85:LEU:HD11	2.03	0.40
13:M:17:VAL:O	13:M:20:THR:N	2.54	0.40
1:A:255:G:H1'	17:Q:16:GLN:CD	2.42	0.40
1:A:106:C:HO2'	1:A:107:G:H5'	1.83	0.40
20:T:39:LYS:HG2	20:T:55:ILE:CD1	2.51	0.40
2:B:69:LEU:CD2	2:B:102:LEU:HD11	2.52	0.40
8:H:11:THR:C	8:H:13:ILE:N	2.70	0.40
18:R:76:LEU:HD23	18:R:76:LEU:HA	1.72	0.40
2:B:57:PHE:CZ	2:B:61:LEU:HD12	2.56	0.40
11:K:31:THR:O	11:K:31:THR:HG22	2.22	0.40
6:F:15:ASP:C	6:F:15:ASP:OD1	2.60	0.40
1:A:781:A:N7	1:A:802:A:C2	2.90	0.40
1:A:684:A:H2'	1:A:685:G:C8	2.55	0.40
1:A:74:C:C4	1:A:75:G:C5	3.10	0.40
20:T:11:SER:O	20:T:14:LYS:HE2	2.21	0.40
5:E:72:GLN:O	5:E:73:ASN:HB3	2.22	0.40
13:M:103:THR:OG1	13:M:103:THR:O	2.32	0.40
1:A:596:C:C2'	1:A:596:C:O2	2.70	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:89:C:N1	1:A:90:U:H5	2.19	0.40
1:A:1424:C:C2'	1:A:1425:U:C5'	2.99	0.40
1:A:301:G:H2'	1:A:302:G:C8	2.56	0.40
1:A:14:U:H6	1:A:14:U:H3'	1.87	0.40
7:G:77:SER:O	7:G:78:ARG:HB2	2.22	0.40
1:A:701:C:O2'	1:A:702:A:P	2.79	0.40
1:A:119:A:N6	1:A:240:C:C2	2.90	0.40
2:B:86:GLU:HG2	2:B:86:GLU:H	1.70	0.40
17:Q:26:GLN:O	17:Q:27:PHE:HB3	2.22	0.40
1:A:408:A:C6	1:A:409:G:C6	3.10	0.40
1:A:533:A:O2'	1:A:534:U:P	2.79	0.40
1:A:541:G:C2	1:A:542:G:C4	3.10	0.40
1:A:613:C:C2	1:A:628:G:N2	2.89	0.40
4:D:125:HIS:C	4:D:126:ILE:HD13	2.42	0.40
4:D:125:HIS:C	4:D:149:ALA:HB2	2.41	0.40
4:D:47:ARG:NH1	4:D:47:ARG:HG3	2.36	0.40
4:D:48:ALA:O	4:D:49:ARG:C	2.60	0.40
4:D:5:ILE:HA	4:D:115:ARG:HH22	1.85	0.40
1:A:279:A:C2	17:Q:98:LEU:HD12	2.57	0.40
1:A:283:C:C2	1:A:284:G:C8	3.09	0.40
1:A:287:U:C2'	1:A:288:A:C5'	3.00	0.40
1:A:1269:A:N3	1:A:1313:U:H1'	2.36	0.40
1:A:1299:A:C4	1:A:1301:U:C2	3.10	0.40
1:A:942:G:N3	1:A:943:U:C6	2.90	0.40
3:C:140:ARG:HB2	3:C:141:VAL:H	1.71	0.40
7:G:136:LYS:C	7:G:140:ASP:HB2	2.41	0.40
9:I:29:ASN:OD1	9:I:64:THR:HG23	2.20	0.40
14:N:23:ARG:NH1	14:N:29:ARG:C	2.74	0.40
1:A:382:A:C4	1:A:383:A:C8	3.10	0.40
17:Q:6:LEU:HD23	17:Q:6:LEU:HA	1.91	0.40
17:Q:71:PHE:O	17:Q:72:ARG:HG2	2.22	0.40
11:K:50:TYR:HB2	11:K:55:LYS:HG2	2.04	0.40
15:O:4:THR:OG1	15:O:7:GLU:HB3	2.22	0.40
2:B:17:PHE:HD1	2:B:17:PHE:C	2.24	0.40
2:B:39:ILE:HG22	2:B:40:HIS:N	2.37	0.40
1:A:877:C:C2'	1:A:878:G:C5'	2.99	0.40
1:A:883:C:N3	1:A:884:U:C4	2.89	0.40
1:A:686:U:O2	1:A:687:A:N9	2.54	0.40
11:K:33:THR:HG1	11:K:37:GLY:C	2.24	0.40
7:G:152:ALA:HA	7:G:155:ARG:NH2	2.36	0.40
1:A:1222:G:H5''	19:S:78:ARG:HH12	1.84	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:52:LYS:O	17:Q:55:ASP:OD2	2.38	0.40
3:C:157:ILE:H	3:C:160:ALA:HB3	1.86	0.40
1:A:1003(A):G:O5'	1:A:1003(A):G:H8	2.04	0.40
4:D:72:GLU:C	4:D:74:GLN:N	2.75	0.40
4:D:87:GLY:O	4:D:89:THR:N	2.55	0.40
4:D:89:THR:O	4:D:91:SER:N	2.55	0.40
12:L:46:LYS:HG2	12:L:47:LYS:CG	2.51	0.40
12:L:89:ARG:HB2	12:L:90:VAL:H	1.60	0.40
1:A:59:A:H2'	1:A:331:G:H22	1.85	0.40
1:A:1186:G:N2	1:A:1187:G:H1'	2.36	0.40
1:A:1238:A:H5'	1:A:1336:C:H41	1.86	0.40
1:A:990:C:H4'	1:A:1018:C:P	2.61	0.40
7:G:30:ILE:O	7:G:31:MET:C	2.59	0.40
19:S:28:LYS:CG	19:S:29:ARG:N	2.84	0.40
1:A:187:C:O2'	20:T:89:ARG:NE	2.55	0.40
1:A:357:G:N3	1:A:358:U:C6	2.90	0.40
16:P:23:ASP:C	16:P:25:ARG:N	2.75	0.40
1:A:186:C:O2'	20:T:82:SER:HA	2.21	0.40
2:B:101:MET:O	2:B:105:PHE:HA	2.22	0.40
1:A:694:A:H5'	11:K:53:SER:HB2	2.03	0.40
3:C:59:ARG:CG	3:C:60:ALA:H	2.12	0.40
1:A:949:A:H61	1:A:1232:U:H3	1.68	0.40
13:M:81:LEU:HD13	13:M:88:ARG:HD3	2.04	0.40
6:F:35:ALA:HA	6:F:67:MET:HB3	2.03	0.40
1:A:1215:G:C2'	1:A:1216:G:C5'	2.99	0.40
1:A:568:G:N2	1:A:883:C:C5	2.90	0.40
1:A:706:A:C8	1:A:707:C:C5	3.10	0.40
1:A:710:G:H5''	6:F:54:LYS:HZ1	1.77	0.40
1:A:560:U:O4'	1:A:566:G:N2	2.54	0.40
1:A:894:G:N3	1:A:895:G:C8	2.90	0.40
1:A:604:G:C5	1:A:605:U:C5	3.09	0.40
1:A:1486:G:H2'	1:A:1487:G:H8	1.87	0.40
2:B:168:THR:HG22	2:B:168:THR:O	2.21	0.40
6:F:97:PHE:O	6:F:98:LEU:HD23	2.20	0.40
17:Q:79:SER:O	17:Q:80:GLY:O	2.39	0.40
1:A:777:A:H2'	1:A:777:A:N3	2.35	0.40
1:A:1481:U:H2'	1:A:1482:G:O4'	2.21	0.40
5:E:148:VAL:HG21	8:H:107:LEU:CD1	2.49	0.40
11:K:82:VAL:CG1	11:K:83:ILE:H	2.35	0.40
2:B:181:PHE:HD2	8:H:70:GLN:HB3	1.82	0.40
1:A:1011:G:H2'	1:A:1012:U:O4'	2.22	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	B	232/256 (91%)	104 (45%)	70 (30%)	58 (25%)	0	1
3	C	204/239 (85%)	95 (47%)	59 (29%)	50 (24%)	0	1
4	D	206/208 (99%)	94 (46%)	62 (30%)	50 (24%)	0	1
5	E	148/161 (92%)	86 (58%)	38 (26%)	24 (16%)	0	4
6	F	99/101 (98%)	72 (73%)	15 (15%)	12 (12%)	0	8
7	G	153/155 (99%)	78 (51%)	45 (29%)	30 (20%)	0	3
8	H	136/138 (99%)	81 (60%)	32 (24%)	23 (17%)	0	4
9	I	125/128 (98%)	66 (53%)	38 (30%)	21 (17%)	0	4
10	J	96/104 (92%)	54 (56%)	19 (20%)	23 (24%)	0	1
11	K	117/129 (91%)	53 (45%)	33 (28%)	31 (26%)	0	0
12	L	122/135 (90%)	65 (53%)	28 (23%)	29 (24%)	0	1
13	M	116/126 (92%)	67 (58%)	28 (24%)	21 (18%)	0	3
14	N	58/60 (97%)	25 (43%)	19 (33%)	14 (24%)	0	1
15	O	86/88 (98%)	44 (51%)	23 (27%)	19 (22%)	0	1
16	P	81/88 (92%)	41 (51%)	18 (22%)	22 (27%)	0	0
17	Q	102/104 (98%)	66 (65%)	25 (24%)	11 (11%)	0	10
18	R	71/88 (81%)	38 (54%)	16 (22%)	17 (24%)	0	1
19	S	78/92 (85%)	43 (55%)	24 (31%)	11 (14%)	0	6
20	T	97/106 (92%)	31 (32%)	36 (37%)	30 (31%)	0	0
21	V	22/26 (85%)	14 (64%)	7 (32%)	1 (4%)	3	34
All	All	2349/2532 (93%)	1217 (52%)	635 (27%)	497 (21%)	0	2

All (497) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	B	15	VAL
2	B	17	PHE
2	B	39	ILE
2	B	78	GLN
2	B	82	ARG
2	B	96	ARG
2	B	183	PRO
2	B	190	THR
2	B	204	ASN
2	B	211	ILE
3	C	15	THR
3	C	17	ASP
3	C	18	TRP
3	C	60	ALA
3	C	72	LYS
3	C	77	ILE
3	C	111	LEU
3	C	156	ARG
3	C	168	ALA
3	C	171	GLY
3	C	176	HIS
3	C	179	ARG
3	C	180	ALA
3	C	183	ASP
3	C	189	ALA
4	D	29	PRO
4	D	36	ARG
4	D	40	PRO
4	D	44	GLY
4	D	53	ASP
4	D	91	SER
4	D	92	VAL
4	D	132	ARG
4	D	156	GLU
4	D	177	ASP
4	D	191	ARG
5	E	21	ALA
5	E	71	LEU
5	E	104	ALA
5	E	112	LEU
5	E	142	LEU
5	E	146	ALA
6	F	37	VAL

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Mol	Chain	Res	Type
6	F	39	LYS
6	F	83	ASP
7	G	50	ILE
7	G	63	LYS
7	G	97	GLN
7	G	114	ARG
7	G	125	MET
7	G	135	VAL
8	H	31	PHE
8	H	32	LYS
8	H	40	ALA
8	H	45	ILE
8	H	97	VAL
8	H	105	ARG
8	H	134	ILE
9	I	21	PRO
9	I	31	GLN
9	I	38	GLN
9	I	41	VAL
9	I	56	LEU
9	I	85	LEU
9	I	92	TYR
9	I	120	ARG
9	I	123	PRO
10	J	32	ALA
10	J	39	PRO
10	J	48	THR
10	J	54	PHE
10	J	55	LYS
10	J	58	ASP
10	J	59	SER
10	J	60	ARG
10	J	65	LEU
10	J	73	ASP
10	J	78	ASN
10	J	85	LEU
10	J	86	MET
10	J	90	LEU
11	K	12	ARG
11	K	47	VAL
11	K	48	ILE
11	K	50	TYR

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Mol	Chain	Res	Type
11	K	53	SER
11	K	54	ARG
11	K	79	SER
11	K	80	VAL
11	K	90	GLY
11	K	101	SER
11	K	126	ARG
12	L	7	ILE
12	L	17	LYS
12	L	19	ARG
12	L	27	LEU
12	L	41	ARG
12	L	56	ALA
12	L	90	VAL
12	L	108	ALA
12	L	121	GLY
13	M	42	ALA
13	M	43	THR
13	M	44	ARG
13	M	63	THR
13	M	97	PRO
13	M	118	ALA
14	N	14	PRO
14	N	15	LYS
14	N	22	THR
14	N	23	ARG
14	N	25	VAL
14	N	29	ARG
14	N	33	VAL
14	N	49	HIS
16	P	10	GLY
16	P	12	LYS
16	P	20	VAL
16	P	21	VAL
16	P	23	ASP
16	P	31	LYS
16	P	34	GLU
16	P	36	ILE
16	P	48	TRP
16	P	81	ARG
17	Q	14	LYS
17	Q	69	LYS

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Mol	Chain	Res	Type
17	Q	80	GLY
17	Q	81	ARG
17	Q	95	TYR
17	Q	96	GLN
17	Q	103	GLY
18	R	19	LYS
18	R	22	VAL
18	R	23	LYS
18	R	36	ASN
18	R	37	VAL
18	R	70	ILE
19	S	6	LYS
19	S	24	ALA
19	S	35	SER
19	S	45	VAL
19	S	47	HIS
19	S	77	THR
19	S	78	ARG
20	T	11	SER
20	T	14	LYS
20	T	15	ARG
20	T	49	ALA
20	T	50	GLU
20	T	51	GLU
20	T	54	LYS
20	T	70	SER
20	T	74	LYS
20	T	89	ARG
21	V	3	LYS
2	B	18	GLY
2	B	22	LYS
2	B	37	ASN
2	B	61	LEU
2	B	80	ILE
2	B	84	GLU
2	B	88	ALA
2	B	106	LYS
2	B	117	GLU
2	B	130	ARG
2	B	132	LYS
2	B	135	GLN
2	B	150	SER

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Mol	Chain	Res	Type
2	B	152	PHE
2	B	161	ALA
2	B	174	VAL
2	B	177	ALA
2	B	207	ALA
2	B	214	ILE
2	B	224	GLN
2	B	239	VAL
3	C	29	TYR
3	C	43	LEU
3	C	53	ALA
3	C	61	ALA
3	C	67	THR
3	C	78	GLY
3	C	84	ILE
3	C	101	LEU
3	C	119	ARG
3	C	129	ALA
3	C	130	VAL
3	C	155	GLY
3	C	178	LEU
3	C	182	ILE
4	D	7	PRO
4	D	23	GLY
4	D	30	LYS
4	D	33	MET
4	D	41	GLY
4	D	58	LEU
4	D	63	LYS
4	D	101	LEU
4	D	104	VAL
4	D	131	ARG
4	D	133	VAL
4	D	134	ASP
4	D	151	LYS
4	D	157	LEU
4	D	158	ILE
4	D	172	PRO
4	D	175	SER
4	D	206	PHE
5	E	49	PRO
5	E	79	GLU

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Mol	Chain	Res	Type
5	E	108	ALA
5	E	111	GLU
5	E	129	ILE
6	F	19	LEU
6	F	23	LYS
6	F	70	ASP
6	F	72	VAL
6	F	74	ASP
6	F	84	ASN
7	G	6	ARG
7	G	15	ASP
7	G	18	TYR
7	G	33	ASP
7	G	42	ILE
7	G	46	ALA
7	G	80	VAL
7	G	93	PRO
7	G	118	VAL
7	G	119	ARG
7	G	134	ALA
7	G	140	ASP
8	H	6	ILE
8	H	39	LEU
8	H	41	ARG
8	H	42	GLU
8	H	90	GLY
8	H	91	ARG
8	H	126	LYS
9	I	12	GLU
9	I	29	ASN
9	I	33	PHE
9	I	39	GLY
9	I	114	TYR
10	J	24	VAL
10	J	52	GLY
10	J	68	HIS
11	K	64	ALA
11	K	68	ALA
11	K	83	ILE
11	K	91	ARG
11	K	102	GLY
11	K	106	LYS

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Mol	Chain	Res	Type
11	K	117	ASN
11	K	118	GLY
12	L	6	THR
12	L	14	GLY
12	L	18	VAL
12	L	51	ALA
12	L	55	VAL
12	L	63	GLY
12	L	73	GLU
12	L	79	GLU
12	L	96	VAL
12	L	109	GLY
12	L	116	SER
12	L	123	LYS
13	M	5	ALA
13	M	14	ARG
13	M	20	THR
13	M	27	LYS
13	M	67	GLU
13	M	75	ALA
13	M	81	LEU
13	M	100	GLY
13	M	117	VAL
14	N	12	ARG
14	N	50	LYS
14	N	57	ARG
15	O	9	GLN
15	O	34	LEU
15	O	36	ILE
15	O	48	LYS
15	O	61	GLY
15	O	62	GLN
15	O	79	ARG
15	O	87	ILE
16	P	27	LYS
16	P	51	VAL
16	P	63	GLY
16	P	67	THR
16	P	78	GLY
17	Q	33	GLY
17	Q	47	PRO
18	R	17	SER

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Mol	Chain	Res	Type
18	R	18	ARG
18	R	31	LEU
18	R	57	GLY
18	R	69	THR
18	R	87	ARG
19	S	28	LYS
19	S	68	GLY
20	T	12	ALA
20	T	60	GLU
20	T	67	ALA
20	T	84	LEU
20	T	95	ALA
20	T	101	GLY
20	T	102	GLY
20	T	103	GLY
2	B	8	LYS
2	B	11	LEU
2	B	20	GLU
2	B	26	PRO
2	B	110	GLN
2	B	113	HIS
2	B	133	LYS
2	B	147	LYS
2	B	179	LYS
2	B	209	ARG
2	B	229	VAL
2	B	232	PRO
2	B	234	PRO
3	C	6	HIS
3	C	74	GLY
3	C	98	ASN
3	C	144	SER
3	C	146	ALA
3	C	177	THR
4	D	3	ARG
4	D	47	ARG
4	D	64	LEU
4	D	137	SER
4	D	196	LEU
5	E	16	THR
5	E	22	GLY
5	E	52	PRO

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Mol	Chain	Res	Type
5	E	55	VAL
5	E	137	GLU
5	E	138	ALA
6	F	38	GLU
7	G	17	VAL
8	H	89	PRO
9	I	15	ALA
10	J	19	SER
10	J	40	LEU
10	J	76	ASN
11	K	13	GLN
11	K	42	TRP
11	K	44	SER
11	K	46	GLY
11	K	55	LYS
11	K	62	GLN
11	K	89	ALA
11	K	128	ALA
14	N	31	ARG
15	O	17	ARG
15	O	78	TYR
16	P	25	ARG
17	Q	64	PRO
18	R	21	LYS
18	R	25	THR
18	R	76	LEU
19	S	61	TYR
20	T	34	LYS
20	T	55	ILE
20	T	76	ALA
20	T	79	ARG
2	B	52	GLU
2	B	119	GLU
2	B	165	VAL
2	B	208	ILE
2	B	228	GLY
3	C	49	SER
3	C	52	LEU
3	C	76	VAL
3	C	137	ALA
3	C	140	ARG
4	D	5	ILE

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Mol	Chain	Res	Type
4	D	12	CYS
4	D	26	CYS
4	D	51	PRO
4	D	150	GLU
4	D	164	ALA
4	D	180	GLY
4	D	193	ASP
5	E	72	GLN
5	E	109	ILE
6	F	82	ARG
7	G	78	ARG
7	G	91	VAL
7	G	104	LEU
7	G	105	VAL
7	G	120	ILE
7	G	129	GLU
8	H	63	LEU
8	H	73	ASP
9	I	23	ASN
9	I	67	GLY
10	J	61	GLU
11	K	73	MET
11	K	92	GLU
12	L	29	GLY
12	L	57	LYS
13	M	24	GLY
13	M	46	LYS
14	N	45	ARG
15	O	16	ALA
15	O	59	MET
15	O	60	VAL
15	O	74	ASP
16	P	13	HIS
16	P	72	ARG
17	Q	66	SER
18	R	71	LYS
19	S	60	VAL
20	T	59	ALA
20	T	97	ALA
2	B	56	ARG
3	C	68	VAL
3	C	113	ALA

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Mol	Chain	Res	Type
3	C	192	THR
4	D	4	TYR
4	D	9	CYS
4	D	105	VAL
5	E	78	HIS
5	E	136	MET
6	F	27	GLN
7	G	35	LYS
7	G	48	LYS
8	H	5	PRO
8	H	86	ILE
8	H	127	LEU
9	I	24	GLY
12	L	47	LYS
12	L	71	PRO
12	L	72	GLY
12	L	89	ARG
13	M	49	THR
13	M	82	MET
15	O	38	ARG
15	O	80	ALA
15	O	88	ARG
16	P	43	LYS
16	P	52	ASP
20	T	44	ALA
20	T	77	ALA
20	T	78	ALA
2	B	54	THR
2	B	59	GLU
2	B	121	LEU
2	B	124	SER
2	B	194	PRO
3	C	172	ARG
3	C	206	GLU
4	D	135	LEU
4	D	184	LYS
5	E	34	VAL
11	K	14	VAL
13	M	106	ASN
15	O	75	PRO
16	P	41	PRO
18	R	39	VAL

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Mol	Chain	Res	Type
20	T	52	ALA
20	T	96	GLY
2	B	81	VAL
3	C	51	GLY
3	C	81	GLY
4	D	17	VAL
7	G	61	VAL
8	H	4	ASP
14	N	56	VAL
15	O	45	VAL
2	B	112	VAL
2	B	125	PRO
3	C	138	VAL
3	C	202	ILE
8	H	103	VAL
9	I	97	LYS
13	M	4	ILE
3	C	5	ILE
4	D	88	VAL
5	E	106	PRO
7	G	49	ILE
9	I	6	GLY
10	J	72	VAL
20	T	41	ILE
5	E	80	ILE
12	L	48	PRO
12	L	101	VAL
16	P	2	VAL
4	D	178	VAL
7	G	133	GLY
8	H	101	PRO
9	I	98	PRO
10	J	77	PRO
11	K	29	ILE

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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	
2	B	202/220 (92%)	163 (81%)	39 (19%)	2	13
3	C	160/188 (85%)	127 (79%)	33 (21%)	1	11
4	D	180/180 (100%)	147 (82%)	33 (18%)	2	14
5	E	115/122 (94%)	98 (85%)	17 (15%)	4	26
6	F	90/90 (100%)	79 (88%)	11 (12%)	6	34
7	G	126/126 (100%)	105 (83%)	21 (17%)	3	19
8	H	119/119 (100%)	103 (87%)	16 (13%)	5	30
9	I	98/99 (99%)	71 (72%)	27 (28%)	0	4
10	J	87/91 (96%)	63 (72%)	24 (28%)	0	4
11	K	90/99 (91%)	73 (81%)	17 (19%)	2	13
12	L	104/111 (94%)	90 (86%)	14 (14%)	5	30
13	M	94/101 (93%)	80 (85%)	14 (15%)	4	26
14	N	49/49 (100%)	31 (63%)	18 (37%)	0	1
15	O	79/79 (100%)	68 (86%)	11 (14%)	4	29
16	P	72/74 (97%)	59 (82%)	13 (18%)	2	15
17	Q	96/96 (100%)	82 (85%)	14 (15%)	4	27
18	R	64/77 (83%)	55 (86%)	9 (14%)	4	28
19	S	71/79 (90%)	62 (87%)	9 (13%)	5	32
20	T	76/82 (93%)	68 (90%)	8 (10%)	8	42
21	V	19/21 (90%)	13 (68%)	6 (32%)	0	3
All	All	1991/2103 (95%)	1637 (82%)	354 (18%)	2	16

All (354) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	B	8	LYS
2	B	15	VAL
2	B	17	PHE
2	B	21	ARG
2	B	25	ASN
2	B	30	ARG
2	B	44	LEU
2	B	55	PHE
2	B	59	GLU
2	B	60	ASP
2	B	64	ARG

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Mol	Chain	Res	Type
2	B	71	VAL
2	B	76	GLN
2	B	82	ARG
2	B	92	TYR
2	B	96	ARG
2	B	97	TRP
2	B	105	PHE
2	B	107	THR
2	B	108	ILE
2	B	111	ARG
2	B	113	HIS
2	B	129	GLU
2	B	130	ARG
2	B	139	LYS
2	B	144	ARG
2	B	162	ILE
2	B	165	VAL
2	B	172	ILE
2	B	178	ARG
2	B	183	PRO
2	B	195	ASP
2	B	200	ILE
2	B	204	ASN
2	B	210	SER
2	B	224	GLN
2	B	231	GLU
2	B	232	PRO
2	B	236	TYR
3	C	3	ASN
3	C	14	ILE
3	C	15	THR
3	C	21	ARG
3	C	34	LEU
3	C	35	GLU
3	C	37	GLN
3	C	48	TYR
3	C	52	LEU
3	C	56	ASP
3	C	68	VAL
3	C	79	ARG
3	C	82	GLU
3	C	86	VAL

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Mol	Chain	Res	Type
3	C	91	LEU
3	C	97	LYS
3	C	98	ASN
3	C	102	ASN
3	C	104	GLN
3	C	108	ASN
3	C	116	VAL
3	C	118	GLN
3	C	119	ARG
3	C	127	ARG
3	C	128	PHE
3	C	139	GLN
3	C	143	GLU
3	C	167	TRP
3	C	175	LEU
3	C	181	ASN
3	C	191	THR
3	C	196	LEU
3	C	201	TYR
4	D	3	ARG
4	D	9	CYS
4	D	10	ARG
4	D	26	CYS
4	D	29	PRO
4	D	47	ARG
4	D	59	ARG
4	D	61	LYS
4	D	62	GLN
4	D	76	ARG
4	D	77	ASN
4	D	78	LEU
4	D	79	PHE
4	D	80	GLU
4	D	99	SER
4	D	112	VAL
4	D	115	ARG
4	D	122	ARG
4	D	134	ASP
4	D	135	LEU
4	D	137	SER
4	D	139	ARG
4	D	156	GLU

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Mol	Chain	Res	Type
4	D	157	LEU
4	D	158	ILE
4	D	160	GLN
4	D	170	VAL
4	D	179	GLU
4	D	188	LEU
4	D	191	ARG
4	D	194	LEU
4	D	199	ASN
4	D	209	ARG
5	E	10	MET
5	E	12	LEU
5	E	15	ARG
5	E	20	GLN
5	E	24	ARG
5	E	31	LEU
5	E	33	VAL
5	E	51	VAL
5	E	53	LEU
5	E	56	GLN
5	E	67	VAL
5	E	68	GLU
5	E	79	GLU
5	E	80	ILE
5	E	89	ILE
5	E	126	ARG
5	E	147	ASP
6	F	7	ASN
6	F	16	GLN
6	F	21	LEU
6	F	24	GLU
6	F	31	GLU
6	F	32	ASN
6	F	47	ARG
6	F	57	GLN
6	F	63	TYR
6	F	82	ARG
6	F	86	ARG
7	G	4	ARG
7	G	12	LEU
7	G	16	LEU
7	G	37	ASN

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Mol	Chain	Res	Type
7	G	38	LEU
7	G	50	ILE
7	G	56	GLN
7	G	57	GLU
7	G	62	PHE
7	G	64	GLN
7	G	73	MET
7	G	84	ASN
7	G	101	LEU
7	G	115	ARG
7	G	126	ASP
7	G	138	LYS
7	G	140	ASP
7	G	144	MET
7	G	153	HIS
7	G	154	TYR
7	G	155	ARG
8	H	18	ARG
8	H	25	ASP
8	H	30	ARG
8	H	31	PHE
8	H	39	LEU
8	H	56	LYS
8	H	65	TYR
8	H	85	ARG
8	H	91	ARG
8	H	92	ARG
8	H	97	VAL
8	H	104	ARG
8	H	115	SER
8	H	119	LEU
8	H	120	THR
8	H	133	LEU
9	I	3	GLN
9	I	10	ARG
9	I	11	LYS
9	I	16	ARG
9	I	19	LEU
9	I	21	PRO
9	I	23	ASN
9	I	25	LYS
9	I	27	THR

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Mol	Chain	Res	Type
9	I	34	ASN
9	I	37	PHE
9	I	40	LEU
9	I	42	ARG
9	I	66	ARG
9	I	81	ILE
9	I	86	VAL
9	I	88	TYR
9	I	91	ASP
9	I	92	TYR
9	I	97	LYS
9	I	102	LEU
9	I	104	ARG
9	I	111	ARG
9	I	114	TYR
9	I	121	ARG
9	I	125	TYR
9	I	127	LYS
10	J	6	ILE
10	J	8	LEU
10	J	9	ARG
10	J	13	HIS
10	J	23	ILE
10	J	33	GLN
10	J	34	VAL
10	J	40	LEU
10	J	45	ARG
10	J	48	THR
10	J	49	VAL
10	J	50	ILE
10	J	60	ARG
10	J	68	HIS
10	J	70	ARG
10	J	71	LEU
10	J	74	ILE
10	J	75	ILE
10	J	79	ARG
10	J	81	THR
10	J	83	GLU
10	J	87	THR
10	J	95	GLU
10	J	98	ILE

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Mol	Chain	Res	Type
11	K	18	ARG
11	K	28	THR
11	K	29	ILE
11	K	31	THR
11	K	33	THR
11	K	57	THR
11	K	66	LEU
11	K	75	TYR
11	K	77	MET
11	K	81	ASP
11	K	91	ARG
11	K	92	GLU
11	K	98	LEU
11	K	109	VAL
11	K	116	HIS
11	K	126	ARG
11	K	127	LYS
12	L	9	GLN
12	L	37	CYS
12	L	41	ARG
12	L	49	ASN
12	L	54	LYS
12	L	65	GLU
12	L	66	VAL
12	L	81	SER
12	L	99	HIS
12	L	106	ASP
12	L	110	VAL
12	L	112	ASP
12	L	113	ARG
12	L	126	LYS
13	M	9	ILE
13	M	11	ARG
13	M	19	LEU
13	M	35	GLU
13	M	40	ASN
13	M	48	LEU
13	M	56	LEU
13	M	70	LEU
13	M	79	LYS
13	M	82	MET
13	M	83	ASP

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Mol	Chain	Res	Type
13	M	87	TYR
13	M	102	ARG
13	M	103	THR
14	N	3	ARG
14	N	6	LEU
14	N	8	GLU
14	N	11	LYS
14	N	12	ARG
14	N	21	TYR
14	N	23	ARG
14	N	24	CYS
14	N	27	CYS
14	N	31	ARG
14	N	37	PHE
14	N	39	LEU
14	N	41	ARG
14	N	44	LEU
14	N	46	GLU
14	N	47	LEU
14	N	53	LEU
14	N	58	LYS
15	O	4	THR
15	O	13	GLN
15	O	22	THR
15	O	24	SER
15	O	39	LEU
15	O	46	HIS
15	O	48	LYS
15	O	57	LEU
15	O	81	LEU
15	O	82	ILE
15	O	83	GLU
16	P	5	ARG
16	P	17	TYR
16	P	20	VAL
16	P	21	VAL
16	P	29	ASP
16	P	43	LYS
16	P	45	THR
16	P	59	TRP
16	P	62	VAL
16	P	69	THR

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Mol	Chain	Res	Type
16	P	71	ARG
16	P	80	PHE
16	P	82	GLN
17	Q	20	THR
17	Q	34	LYS
17	Q	36	ILE
17	Q	38	ARG
17	Q	53	LEU
17	Q	60	ILE
17	Q	68	ARG
17	Q	73	VAL
17	Q	74	LEU
17	Q	76	LEU
17	Q	82	MET
17	Q	96	GLN
17	Q	98	LEU
17	Q	104	LYS
18	R	18	ARG
18	R	28	GLU
18	R	36	ASN
18	R	39	VAL
18	R	47	THR
18	R	53	ARG
18	R	56	THR
18	R	86	VAL
18	R	87	ARG
19	S	12	ASP
19	S	19	VAL
19	S	25	LYS
19	S	32	LYS
19	S	34	TRP
19	S	39	THR
19	S	52	TYR
19	S	58	VAL
19	S	61	TYR
20	T	10	LEU
20	T	14	LYS
20	T	23	ARG
20	T	75	ASN
20	T	80	ARG
20	T	83	ARG
20	T	84	LEU

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Mol	Chain	Res	Type
20	T	89	ARG
21	V	5	ASP
21	V	10	ARG
21	V	13	ILE
21	V	15	ARG
21	V	21	TYR
21	V	23	PRO

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (66) such sidechains are listed below:

Mol	Chain	Res	Type
2	B	19	HIS
2	B	25	ASN
2	B	37	ASN
2	B	78	GLN
2	B	204	ASN
3	C	3	ASN
3	C	28	GLN
3	C	37	GLN
3	C	98	ASN
3	C	102	ASN
3	C	104	GLN
3	C	123	GLN
3	C	136	GLN
3	C	139	GLN
4	D	42	GLN
4	D	62	GLN
4	D	74	GLN
4	D	77	ASN
4	D	123	HIS
4	D	129	ASN
4	D	160	GLN
4	D	199	ASN
4	D	201	GLN
5	E	73	ASN
5	E	130	ASN
6	F	7	ASN
6	F	13	ASN
6	F	16	GLN
6	F	18	GLN
6	F	32	ASN
6	F	57	GLN

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Mol	Chain	Res	Type
6	F	73	ASN
6	F	100	ASN
7	G	11	GLN
7	G	37	ASN
7	G	56	GLN
7	G	148	ASN
9	I	23	ASN
9	I	34	ASN
10	J	33	GLN
10	J	76	ASN
10	J	84	GLN
11	K	62	GLN
11	K	78	GLN
11	K	93	GLN
11	K	99	GLN
11	K	117	ASN
12	L	49	ASN
12	L	75	HIS
12	L	78	GLN
13	M	12	ASN
13	M	40	ASN
13	M	62	ASN
13	M	77	ASN
13	M	106	ASN
15	O	13	GLN
15	O	37	ASN
15	O	50	HIS
16	P	82	GLN
17	Q	16	GLN
17	Q	94	ASN
17	Q	96	GLN
18	R	36	ASN
19	S	53	ASN
19	S	56	GLN
20	T	75	ASN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A	1511/1522 (99%)	253 (16%)	62 (4%)

All (253) 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	41	G
1	A	42	G
1	A	47	C
1	A	48	C
1	A	49	U
1	A	50	A
1	A	51	A
1	A	52	G
1	A	61	G
1	A	64	G
1	A	65	U
1	A	73	C
1	A	81	U
1	A	82	U
1	A	89	C
1	A	91	C
1	A	116	A
1	A	120	A
1	A	121	C
1	A	129(A)	G
1	A	130	A
1	A	131	C
1	A	163	C
1	A	182	U
1	A	183	G
1	A	190(E)	U
1	A	190(F)	G
1	A	190(G)	G
1	A	195	A
1	A	197	A
1	A	199	G
1	A	201	C
1	A	202	U
1	A	216	G
1	A	217	C
1	A	244	U
1	A	247	G
1	A	251	G

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Mol	Chain	Res	Type
1	A	252	U
1	A	266	G
1	A	267	C
1	A	280	C
1	A	282	A
1	A	283	C
1	A	289	G
1	A	326	G
1	A	328	C
1	A	329	A
1	A	330	C
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	373	A
1	A	384	G
1	A	392	G
1	A	397	A
1	A	398	C
1	A	412	A
1	A	413	G
1	A	414	A
1	A	421	U
1	A	423	G
1	A	424	G
1	A	428	G
1	A	429	U
1	A	430	A
1	A	436	C
1	A	439	A
1	A	452	A
1	A	453	A
1	A	460	A
1	A	461	C
1	A	481	G
1	A	482	A
1	A	484	G
1	A	485	G

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Mol	Chain	Res	Type
1	A	497	A
1	A	498	U
1	A	500	G
1	A	509	A
1	A	510	A
1	A	511	C
1	A	512	U
1	A	517	G
1	A	518	C
1	A	519	C
1	A	527	G
1	A	531	U
1	A	533	A
1	A	534	U
1	A	545	C
1	A	547	A
1	A	559	A
1	A	560	U
1	A	561	U
1	A	562	C
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	632	A
1	A	653	A
1	A	665	A
1	A	687	A
1	A	688	G
1	A	695	A
1	A	702	A
1	A	703	G
1	A	718	G
1	A	723	U
1	A	724	G
1	A	731	G
1	A	734	G
1	A	749	C
1	A	755	G

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Mol	Chain	Res	Type
1	A	777	A
1	A	792	A
1	A	793	U
1	A	794	A
1	A	817	C
1	A	820	U
1	A	828	A
1	A	839	U
1	A	840	C
1	A	841	U
1	A	848	C
1	A	859	A
1	A	867	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	968	A
1	A	969	A
1	A	971	G
1	A	974	A
1	A	975	A
1	A	976	G
1	A	977	A
1	A	983	A
1	A	984	C
1	A	992	U
1	A	993	G
1	A	994	A
1	A	1000	U
1	A	1024	G
1	A	1026	G
1	A	1027	C
1	A	1029	C
1	A	1031	G

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Mol	Chain	Res	Type
1	A	1038	C
1	A	1048	G
1	A	1050	G
1	A	1054	C
1	A	1066	C
1	A	1068	G
1	A	1086	U
1	A	1094	G
1	A	1095	U
1	A	1101	A
1	A	1102	A
1	A	1104	G
1	A	1108	G
1	A	1116	C
1	A	1117	G
1	A	1125	U
1	A	1126	U
1	A	1129	C
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	1150	U
1	A	1152	A
1	A	1159	U
1	A	1183	A
1	A	1184	G
1	A	1196	U
1	A	1197	G
1	A	1201	A
1	A	1202	G
1	A	1211	U
1	A	1212	U
1	A	1215	G
1	A	1225	A
1	A	1226	C
1	A	1227	A
1	A	1241	G
1	A	1250	A

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Mol	Chain	Res	Type
1	A	1256	A
1	A	1257	U
1	A	1258	G
1	A	1279	A
1	A	1280	A
1	A	1281	U
1	A	1282	C
1	A	1285	A
1	A	1286	A
1	A	1287	A
1	A	1297	C
1	A	1299	A
1	A	1301	U
1	A	1303	C
1	A	1305	G
1	A	1306	A
1	A	1323	G
1	A	1331	G
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	1398	A
1	A	1427	U
1	A	1428	A
1	A	1442	G
1	A	1446	A
1	A	1452	C
1	A	1476	G
1	A	1492	A
1	A	1493	A
1	A	1499	A
1	A	1504	G
1	A	1506	U
1	A	1517	G
1	A	1518	A
1	A	1520	G
1	A	1529	G
1	A	1530	G
1	A	1533	C

All (62) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	A	7	G
1	A	30	U
1	A	51	A
1	A	60	A
1	A	64	G
1	A	115	G
1	A	119	A
1	A	129(A)	G
1	A	204	U
1	A	243	A
1	A	250	A
1	A	251	G
1	A	266	G
1	A	279	A
1	A	281	G
1	A	328	C
1	A	344	A
1	A	351	G
1	A	353	A
1	A	366	C
1	A	372	C
1	A	428	G
1	A	429	U
1	A	438	G
1	A	484	G
1	A	496	A
1	A	509	A
1	A	533	A
1	A	559	A
1	A	560	U
1	A	575	G
1	A	687	A
1	A	701	C
1	A	748	C
1	A	792	A
1	A	840	C
1	A	913	A
1	A	960	U
1	A	975	A
1	A	992	U
1	A	993	G
1	A	1049	U

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Mol	Chain	Res	Type
1	A	1065	U
1	A	1067	A
1	A	1085	U
1	A	1101	A
1	A	1182	G
1	A	1196	U
1	A	1201	A
1	A	1214	C
1	A	1224	G
1	A	1226	C
1	A	1257	U
1	A	1279	A
1	A	1281	U
1	A	1285	A
1	A	1305	G
1	A	1346	A
1	A	1347	G
1	A	1397	C
1	A	1451	A
1	A	1498	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 carbohydrates 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

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

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	1512/1522 (99%)	0.85	166 (10%) 7 5	12, 87, 171, 195	0
2	B	234/256 (91%)	-0.12	3 (1%) 79 64	21, 87, 149, 181	0
3	C	206/239 (86%)	0.40	22 (10%) 8 5	31, 115, 164, 182	0
4	D	208/208 (100%)	0.07	6 (2%) 55 37	15, 83, 140, 189	0
5	E	150/161 (93%)	0.04	1 (0%) 89 80	4, 55, 110, 132	0
6	F	101/101 (100%)	0.15	5 (4%) 32 20	32, 111, 151, 174	0
7	G	155/155 (100%)	-0.13	7 (4%) 37 23	27, 116, 156, 189	0
8	H	138/138 (100%)	-0.04	1 (0%) 89 80	0, 45, 102, 156	0
9	I	127/128 (99%)	0.68	20 (15%) 3 2	30, 120, 164, 186	0
10	J	98/104 (94%)	1.33	32 (32%) 1 1	43, 122, 168, 183	0
11	K	119/129 (92%)	0.19	4 (3%) 49 32	21, 87, 147, 195	0
12	L	124/135 (91%)	0.15	6 (4%) 34 21	2, 77, 127, 154	0
13	M	118/126 (93%)	0.49	13 (11%) 7 5	45, 118, 163, 195	0
14	N	60/60 (100%)	1.98	24 (40%) 0 1	50, 118, 171, 186	0
15	O	88/88 (100%)	-0.07	3 (3%) 49 32	23, 79, 143, 195	0
16	P	83/88 (94%)	0.09	2 (2%) 62 44	0, 60, 119, 138	0
17	Q	104/104 (100%)	-0.03	3 (2%) 55 37	8, 59, 132, 195	0
18	R	73/88 (82%)	-0.01	3 (4%) 41 25	3, 81, 147, 182	0
19	S	80/92 (86%)	1.34	23 (28%) 1 1	49, 124, 178, 181	0
20	T	99/106 (93%)	-0.30	1 (1%) 84 71	10, 66, 124, 141	0
21	V	24/26 (92%)	1.99	11 (45%) 0 1	84, 114, 145, 180	0
All	All	3901/4054 (96%)	0.49	356 (9%) 11 6	0, 90, 162, 195	0

All (356) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
14	N	4	LYS	10.6
19	S	3	ARG	8.1
17	Q	105	ALA	8.0
4	D	42	GLN	7.9
11	K	129	SER	7.3
21	V	24	ARG	7.1
19	S	31	ILE	7.0
14	N	17	LYS	6.9
9	I	9	ARG	6.6
19	S	77	THR	6.5
1	A	1220	G	6.2
3	C	2	GLY	6.1
1	A	1005	A	6.1
13	M	98	VAL	5.9
9	I	128	ARG	5.9
3	C	67	THR	5.9
9	I	37	PHE	5.8
10	J	55	LYS	5.8
10	J	46	ARG	5.7
1	A	1053	G	5.6
7	G	2	ALA	5.6
1	A	1200	C	5.5
14	N	30	ALA	5.5
13	M	99	ARG	5.4
1	A	975	A	5.4
1	A	1361(A)	C	5.3
14	N	3	ARG	5.2
14	N	31	ARG	5.2
1	A	1117	G	5.1
14	N	18	VAL	5.1
1	A	985	C	5.1
10	J	54	PHE	5.1
3	C	196	LEU	5.0
10	J	47	PHE	4.9
1	A	1030(B)	C	4.9
4	D	41	GLY	4.8
14	N	2	ALA	4.7
21	V	17	THR	4.6
14	N	22	THR	4.5
1	A	1031	G	4.5
8	H	1	MET	4.5
1	A	984	C	4.5
1	A	1004	A	4.5

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Mol	Chain	Res	Type	RSRZ
1	A	1129	C	4.4
1	A	1320	C	4.4
13	M	119	GLY	4.4
1	A	978	A	4.4
13	M	88	ARG	4.3
3	C	195	VAL	4.3
10	J	53	PRO	4.3
21	V	4	GLY	4.3
1	A	1191	A	4.3
1	A	388	G	4.2
1	A	993	G	4.1
1	A	979	C	4.1
9	I	17	VAL	4.1
19	S	36	ARG	4.1
1	A	723	U	4.1
1	A	1219	U	4.0
10	J	43	ARG	4.0
19	S	37	ARG	4.0
14	N	32	SER	4.0
3	C	43	LEU	3.9
14	N	34	TYR	3.9
14	N	61	TRP	3.9
14	N	44	LEU	3.9
1	A	1362	C	3.9
10	J	34	VAL	3.9
1	A	1270	C	3.9
1	A	976	G	3.9
10	J	64	GLU	3.8
1	A	1260	C	3.8
1	A	547	A	3.8
1	A	1317	C	3.8
14	N	29	ARG	3.6
3	C	47	LEU	3.6
19	S	35	SER	3.6
14	N	20	ALA	3.6
1	A	964	A	3.6
13	M	10	PRO	3.6
19	S	78	ARG	3.6
1	A	1283	G	3.6
14	N	21	TYR	3.5
10	J	24	VAL	3.5
1	A	1540	U	3.5

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Mol	Chain	Res	Type	RSRZ
7	G	74	GLU	3.5
1	A	1319	A	3.5
3	C	57	ILE	3.5
1	A	1221	G	3.5
1	A	1144	G	3.4
11	K	51	LYS	3.4
1	A	1202	G	3.4
13	M	104	ARG	3.4
21	V	9	ARG	3.4
13	M	116	THR	3.4
19	S	62	ILE	3.4
4	D	2	GLY	3.4
9	I	63	ILE	3.4
1	A	1250	A	3.4
17	Q	104	LYS	3.4
1	A	1003(A)	G	3.3
10	J	28	ARG	3.3
14	N	19	ARG	3.3
1	A	1201	A	3.3
10	J	72	VAL	3.3
3	C	65	ALA	3.3
10	J	96	ILE	3.3
1	A	1017	G	3.3
9	I	126	SER	3.3
1	A	1041	A	3.2
1	A	1363	A	3.2
19	S	30	LEU	3.2
13	M	4	ILE	3.2
10	J	62	HIS	3.2
9	I	65	VAL	3.2
19	S	34	TRP	3.2
10	J	38	ILE	3.2
13	M	97	PRO	3.2
19	S	28	LYS	3.2
1	A	1030(C)	G	3.2
1	A	1135	U	3.2
1	A	1226	C	3.2
10	J	63	PHE	3.1
10	J	71	LEU	3.1
10	J	44	VAL	3.1
1	A	1236	A	3.1
1	A	934	C	3.1

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Mol	Chain	Res	Type	RSRZ
1	A	1159	U	3.1
9	I	70	LYS	3.1
14	N	5	ALA	3.1
1	A	977	A	3.1
19	S	53	ASN	3.1
21	V	7	ARG	3.1
1	A	536	C	3.0
7	G	5	ARG	3.0
1	A	1124	G	3.0
1	A	1334	G	3.0
1	A	958	A	3.0
1	A	81	U	3.0
1	A	983	A	3.0
1	A	427	U	3.0
1	A	971	G	3.0
3	C	66	VAL	3.0
12	L	33	ARG	3.0
14	N	23	ARG	3.0
19	S	2	PRO	3.0
19	S	48	THR	3.0
19	S	47	HIS	3.0
1	A	1360	A	3.0
10	J	73	ASP	3.0
11	K	19	ALA	3.0
21	V	5	ASP	3.0
1	A	1361	G	3.0
1	A	1214	C	3.0
12	L	115	LYS	3.0
1	A	973	G	2.9
1	A	353	A	2.9
6	F	67	MET	2.9
1	A	1321	C	2.9
10	J	74	ILE	2.9
1	A	1049	U	2.9
1	A	1224	G	2.9
5	E	5	ASP	2.9
9	I	119	ALA	2.9
1	A	1030(D)	A	2.9
1	A	1064	G	2.8
6	F	63	TYR	2.8
3	C	26	LYS	2.8
1	A	548	G	2.8

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Mol	Chain	Res	Type	RSRZ
1	A	1356	G	2.8
19	S	79	THR	2.8
10	J	27	ALA	2.8
1	A	982	U	2.8
1	A	992	U	2.8
1	A	1357	A	2.8
9	I	77	ILE	2.8
1	A	80	G	2.8
13	M	105	THR	2.8
10	J	33	GLN	2.8
1	A	1434	A	2.8
1	A	1036	G	2.8
1	A	67	C	2.8
3	C	189	ALA	2.8
1	A	499	A	2.7
6	F	68	PRO	2.7
1	A	1139	G	2.7
1	A	1277	C	2.7
1	A	998	G	2.7
1	A	1251	A	2.7
4	D	3	ARG	2.7
1	A	1216	G	2.7
6	F	69	GLU	2.7
9	I	110	GLU	2.6
1	A	1014	A	2.6
9	I	85	LEU	2.6
1	A	1047	G	2.6
1	A	1190	G	2.6
4	D	25	ARG	2.6
13	M	64	TRP	2.6
17	Q	101	ARG	2.6
7	G	35	LYS	2.6
1	A	1128	C	2.6
14	N	37	PHE	2.6
9	I	66	ARG	2.6
1	A	1030	C	2.6
1	A	1371	G	2.6
1	A	1302	U	2.6
1	A	521	G	2.6
1	A	1068	G	2.6
1	A	1094	G	2.6
20	T	104	LEU	2.6

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Mol	Chain	Res	Type	RSRZ
1	A	1050	G	2.5
1	A	1132	C	2.5
3	C	103	VAL	2.5
9	I	4	TYR	2.5
1	A	1084	G	2.5
1	A	1052	U	2.5
3	C	68	VAL	2.5
12	L	31	PRO	2.5
19	S	32	LYS	2.5
1	A	952	U	2.5
1	A	1198	G	2.5
21	V	18	TYR	2.5
1	A	1123	A	2.5
14	N	39	LEU	2.4
2	B	72	GLY	2.4
1	A	1002	G	2.4
1	A	1060	C	2.4
1	A	1215	G	2.4
1	A	373	A	2.4
1	A	1287	A	2.4
4	D	18	LYS	2.4
1	A	1467	G	2.4
3	C	44	GLU	2.4
21	V	6	ARG	2.4
1	A	1127	G	2.4
1	A	1134	G	2.4
1	A	1042	G	2.4
13	M	24	GLY	2.4
3	C	17	ASP	2.4
15	O	54	ARG	2.4
16	P	83	GLU	2.4
1	A	1199	U	2.4
1	A	1048	G	2.4
3	C	197	GLY	2.4
14	N	38	GLY	2.4
1	A	365	U	2.4
1	A	904	C	2.4
9	I	106	ALA	2.4
1	A	410	G	2.4
1	A	1267	C	2.4
6	F	89	MET	2.4
18	R	80	PRO	2.4

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Mol	Chain	Res	Type	RSRZ
21	V	23	PRO	2.4
10	J	78	ASN	2.4
16	P	54	GLU	2.4
1	A	718	G	2.4
14	N	16	PHE	2.4
2	B	16	HIS	2.4
2	B	40	HIS	2.4
1	A	161	A	2.4
1	A	537	G	2.4
1	A	1255	G	2.4
3	C	56	ASP	2.4
19	S	12	ASP	2.4
10	J	48	THR	2.4
1	A	776	G	2.3
1	A	995	C	2.3
1	A	1531	A	2.3
1	A	1323	G	2.3
1	A	970	C	2.3
15	O	46	HIS	2.3
9	I	7	THR	2.3
10	J	66	ARG	2.3
14	N	35	ARG	2.3
1	A	1130	A	2.3
9	I	41	VAL	2.3
10	J	45	ARG	2.3
10	J	70	ARG	2.3
19	S	15	LEU	2.3
1	A	1541	U	2.3
1	A	1544	U	2.3
1	A	1138	G	2.3
11	K	39	PRO	2.3
9	I	127	LYS	2.3
21	V	20	LYS	2.3
19	S	44	MET	2.3
14	N	41	ARG	2.3
1	A	1268	A	2.2
1	A	1364	U	2.2
1	A	675	A	2.2
1	A	267	C	2.2
1	A	327	A	2.2
1	A	696	A	2.2
1	A	697	U	2.2

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Mol	Chain	Res	Type	RSRZ
3	C	178	LEU	2.2
18	R	71	LYS	2.2
1	A	793	U	2.2
1	A	950	U	2.2
7	G	34	GLY	2.2
1	A	47	C	2.2
1	A	878	G	2.2
1	A	816	A	2.2
12	L	72	GLY	2.2
12	L	96	VAL	2.2
1	A	374	A	2.2
9	I	83	ARG	2.2
7	G	109	ASN	2.2
1	A	963	G	2.2
10	J	17	ASP	2.2
1	A	1037	C	2.1
12	L	32	PHE	2.1
1	A	674	G	2.1
3	C	111	LEU	2.1
1	A	1314	C	2.1
10	J	37	PRO	2.1
1	A	1333	A	2.1
1	A	389	A	2.1
1	A	965	A	2.1
1	A	1365	G	2.1
10	J	56	HIS	2.1
19	S	41	VAL	2.1
1	A	1345	U	2.1
1	A	797	C	2.1
1	A	726	C	2.1
1	A	1359	C	2.1
3	C	76	VAL	2.1
1	A	1235	U	2.1
1	A	1280	A	2.1
1	A	1539	C	2.1
9	I	18	PHE	2.1
1	A	1067	A	2.1
1	A	1266	G	2.1
10	J	35	SER	2.1
1	A	1149	C	2.1
1	A	1519	A	2.1
18	R	74	ARG	2.1

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Mol	Chain	Res	Type	RSRZ
1	A	980	C	2.1
1	A	1218	C	2.1
10	J	39	PRO	2.1
1	A	1056	U	2.1
3	C	3	ASN	2.0
13	M	117	VAL	2.0
1	A	1006	C	2.0
1	A	1339	A	2.0
1	A	951	G	2.0
19	S	54	GLY	2.0
21	V	25	LYS	2.0
15	O	51	HIS	2.0
10	J	60	ARG	2.0
3	C	55	VAL	2.0
19	S	33	THR	2.0
7	G	33	ASP	2.0
1	A	39	G	2.0
1	A	1530	G	2.0
1	A	363	A	2.0

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

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

6.3 Carbohydrates [i](#)

There are no carbohydrates in this entry.

6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 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	LLDF	B-factors(Å ²)	Q<0.9
22	ZN	D	306	1/1	0.97	0.45	2.88	74,74,74,74	0
22	ZN	N	307	1/1	0.97	0.10	-1.16	74,74,74,74	0

6.5 Other polymers [i](#)

There are no such residues in this entry.