



Full wwPDB X-ray Structure Validation Report ⓘ

Feb 27, 2014 – 01:59 AM GMT

PDB ID : 2Y11
Title : THE CRYSTAL STRUCTURE OF EF-TU AND TRP-TRNA-TRP BOUND
TO A COGNATE CODON ON THE 70S RIBOSOME.
Authors : Schmeing, T.M.; Voorhees, R.M.; Ramakrishnan, V.
Deposited on : 2010-12-07
Resolution : 3.10 Å(reported)

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

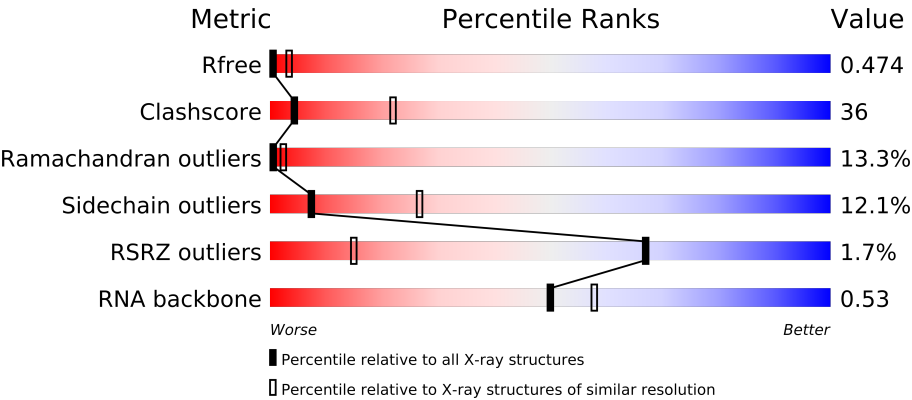
The following versions of software and data (see [references](#)) were used in the production of this report:

MolProbity : 4.02b-467
Mogul : 1.15 2013
Xtriage (Phenix) : dev-1323
EDS : stable22639
Percentile statistics : 21963
Refmac : 5.8.0049
CCP4 : 6.3.0 (Settle)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)
Validation Pipeline (wwPDB-VP) : stable22683

1 Overall quality at a glance

The reported resolution of this entry is 3.10 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}	66092	1007 (3.18-3.02)
Clashscore	79885	1078 (3.16-3.04)
Ramachandran outliers	78287	1044 (3.16-3.04)
Sidechain outliers	78261	1044 (3.16-3.04)
RSRZ outliers	66119	1008 (3.18-3.02)
RNA backbone	1838	1047 (3.60-2.60)

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

Mol	Chain	Length	Quality of chain
1	0	85	
2	1	98	
3	2	72	
4	3	60	
5	4	71	
6	5	60	
7	6	54	
8	7	49	
9	8	65	
10	9	37	
11	A	2915	
12	B	122	

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Mol	Chain	Length	Quality of chain
13	C	229	
14	D	276	
15	E	206	
16	F	210	
17	G	182	
18	H	180	
19	J	173	
20	K	147	
21	N	140	
22	O	122	
23	P	150	
24	Q	141	
25	R	118	
26	S	112	
27	T	146	
28	U	118	
29	V	101	
30	W	113	
31	X	96	
32	Y	110	
33	Z	206	

2 Entry composition

There are 33 unique types of molecules in this entry. The entry contains 93750 atoms, of which 0 are hydrogen and 0 are deuterium.

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

- Molecule 1 is a protein called 50S RIBOSOMAL PROTEIN L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	0	84	Total	C	N	O	S	0	0	0
			662	410	140	111	1			

- Molecule 2 is a protein called 50S RIBOSOMAL PROTEIN L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	1	93	Total	C	N	O	S	0	0	0
			731	460	145	125	1			

- Molecule 3 is a protein called 50S RIBOSOMAL PROTEIN L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	2	71	Total	C	N	O	S	0	0	0
			598	370	121	106	1			

- Molecule 4 is a protein called 50S RIBOSOMAL PROTEIN L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	3	59	Total	C	N	O	S	0	0	0
			467	298	90	78	1			

- Molecule 5 is a protein called 50S RIBOSOMAL PROTEIN L31.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	4	44	Total	C	N	O	S	0	0	0
			340	218	57	61	4			

- Molecule 6 is a protein called 50S RIBOSOMAL PROTEIN L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	5	59	Total	C	N	O	S	0	0	0
			459	288	90	76	5			

- Molecule 7 is a protein called 50S RIBOSOMAL PROTEIN L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	6	50	Total	C	N	O	S	0	0	0
			433	270	88	71	4			

- Molecule 8 is a protein called 50S RIBOSOMAL PROTEIN L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	7	48	Total	C	N	O	S	0	0	0
			418	257	104	55	2			

- Molecule 9 is a protein called 50S RIBOSOMAL PROTEIN L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	8	63	Total	C	N	O	S	0	0	0
			507	326	101	78	2			

- Molecule 10 is a protein called 50S RIBOSOMAL PROTEIN L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	9	37	Total	C	N	O	S	0	0	0
			307	188	68	47	4			

- Molecule 11 is a RNA chain called 23S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	A	2901	Total	C	N	O	P	0	0	0
			62477	27807	11683	20087	2900			

- Molecule 12 is a RNA chain called 5S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	B	119	Total	C	N	O	P	0	0	0
			2551	1136	471	826	118			

- Molecule 13 is a protein called 50S RIBOSOMAL PROTEIN L1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	C	228	Total	C	N	O	S	0	0	0
			1742	1101	319	319	3			

- Molecule 14 is a protein called 50S RIBOSOMAL PROTEIN L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	D	275	Total	C	N	O	S	0	0	0
			2145	1353	428	361	3			

- Molecule 15 is a protein called 50S RIBOSOMAL PROTEIN L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	E	204	Total	C	N	O	S	0	0	0
			1563	988	299	270	6			

- Molecule 16 is a protein called 50S RIBOSOMAL PROTEIN L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	F	207	Total	C	N	O	S	0	0	0
			1623	1035	303	282	3			

- Molecule 17 is a protein called 50S RIBOSOMAL PROTEIN L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	G	181	Total	C	N	O	S	0	0	0
			1474	942	268	260	4			

- Molecule 18 is a protein called 50S RIBOSOMAL PROTEIN L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	H	159	Total	C	N	O	S	0	0	0
			1222	773	228	220	1			

- Molecule 19 is a protein called 50S RIBOSOMAL PROTEIN L10.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
19	J	130	Total	C	N	O	0	0	0
			651	391	130	130			

- Molecule 20 is a protein called 50S RIBOSOMAL PROTEIN L11.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
20	K	140	Total	C	N	O	0	0	0
			700	420	140	140			

- Molecule 21 is a protein called 50S RIBOSOMAL PROTEIN L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	N	138	Total	C	N	O	S	0	0	0
			1104	712	206	182	4			

- Molecule 22 is a protein called 50S RIBOSOMAL PROTEIN L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	O	122	Total	C	N	O	S	0	0	0
			933	588	171	170	4			

- Molecule 23 is a protein called 50S RIBOSOMAL PROTEIN L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	P	146	Total	C	N	O	S	0	0	0
			1114	692	227	193	2			

- Molecule 24 is a protein called 50S RIBOSOMAL PROTEIN L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	Q	141	Total	C	N	O	S	0	0	0
			1122	715	212	188	7			

- Molecule 25 is a protein called 50S RIBOSOMAL PROTEIN L17.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
25	R	117	Total	C	N	O	0	0	0
			960	599	202	159			

- Molecule 26 is a protein called 50S RIBOSOMAL PROTEIN L18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
26	S	98	Total	C	N	O	0	0	0
			770	486	154	130			

- Molecule 27 is a protein called 50S RIBOSOMAL PROTEIN L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	T	137	Total	C	N	O	S	0	0	0
			1141	710	234	196	1			

- Molecule 28 is a protein called 50S RIBOSOMAL PROTEIN L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	U	117	Total	C	N	O	S	0	0	0
			958	604	202	151	1			

- Molecule 29 is a protein called 50S RIBOSOMAL PROTEIN L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	V	101	Total	C	N	O	S	0	0	0
			779	501	142	135	1			

- Molecule 30 is a protein called 50S RIBOSOMAL PROTEIN L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	W	113	Total	C	N	O	S	0	0	0
			896	563	176	155	2			

- Molecule 31 is a protein called 50S RIBOSOMAL PROTEIN L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	X	92	Total	C	N	O	S	0	0	0
			725	471	131	123				

- Molecule 32 is a protein called 50S RIBOSOMAL PROTEIN L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	Y	100	Total	C	N	O	S	0	0	0
			775	500	148	123	4			

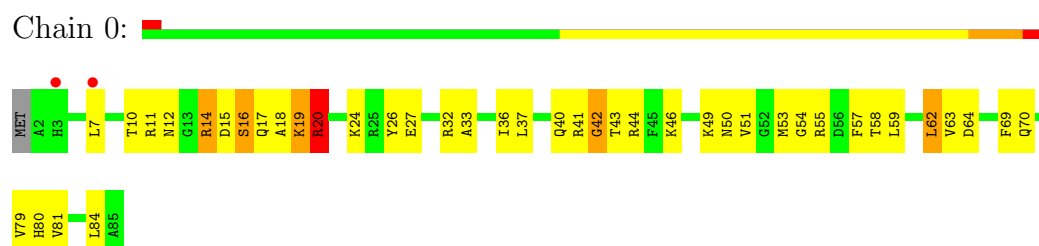
- Molecule 33 is a protein called 50S RIBOSOMAL PROTEIN L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	Z	176	Total	C	N	O	S	0	0	0
			1403	897	252	252	2			

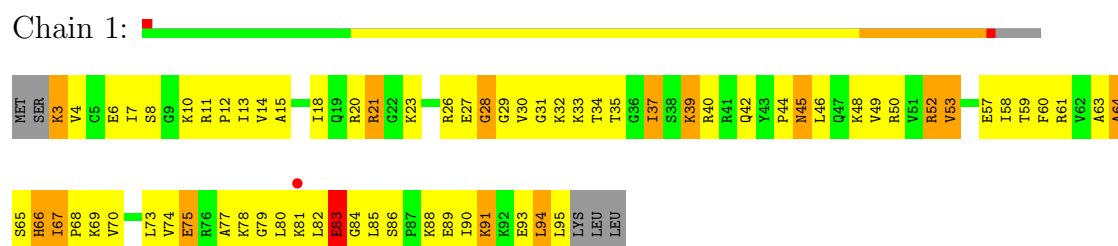
3 Residue-property plots

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

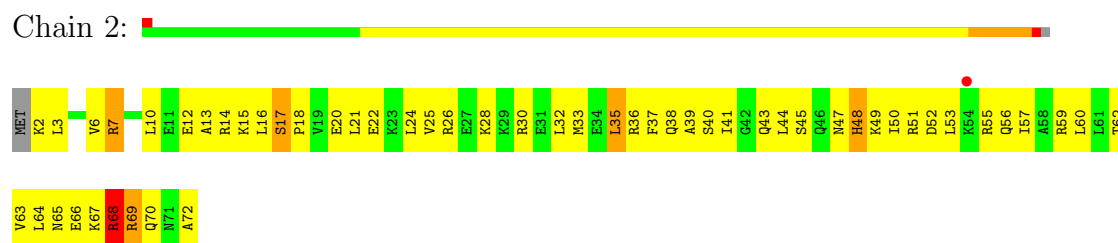
- Molecule 1: 50S RIBOSOMAL PROTEIN L27



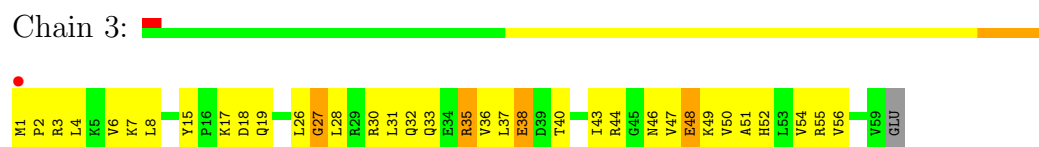
- Molecule 2: 50S RIBOSOMAL PROTEIN L28



- Molecule 3: 50S RIBOSOMAL PROTEIN L29



- Molecule 4: 50S RIBOSOMAL PROTEIN L30



- Molecule 5: 50S RIBOSOMAL PROTEIN L31





• Molecule 6: 50S RIBOSOMAL PROTEIN L32

Chain 5:



• Molecule 7: 50S RIBOSOMAL PROTEIN L33

Chain 6:



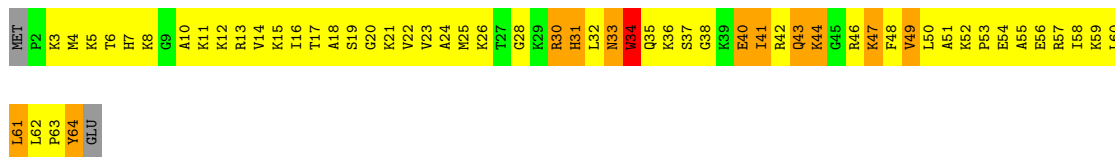
• Molecule 8: 50S RIBOSOMAL PROTEIN L34

Chain 7:



• Molecule 9: 50S RIBOSOMAL PROTEIN L35

Chain 8:



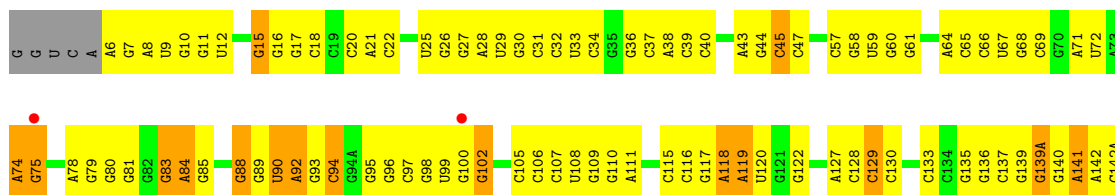
• Molecule 10: 50S RIBOSOMAL PROTEIN L36

Chain 9:



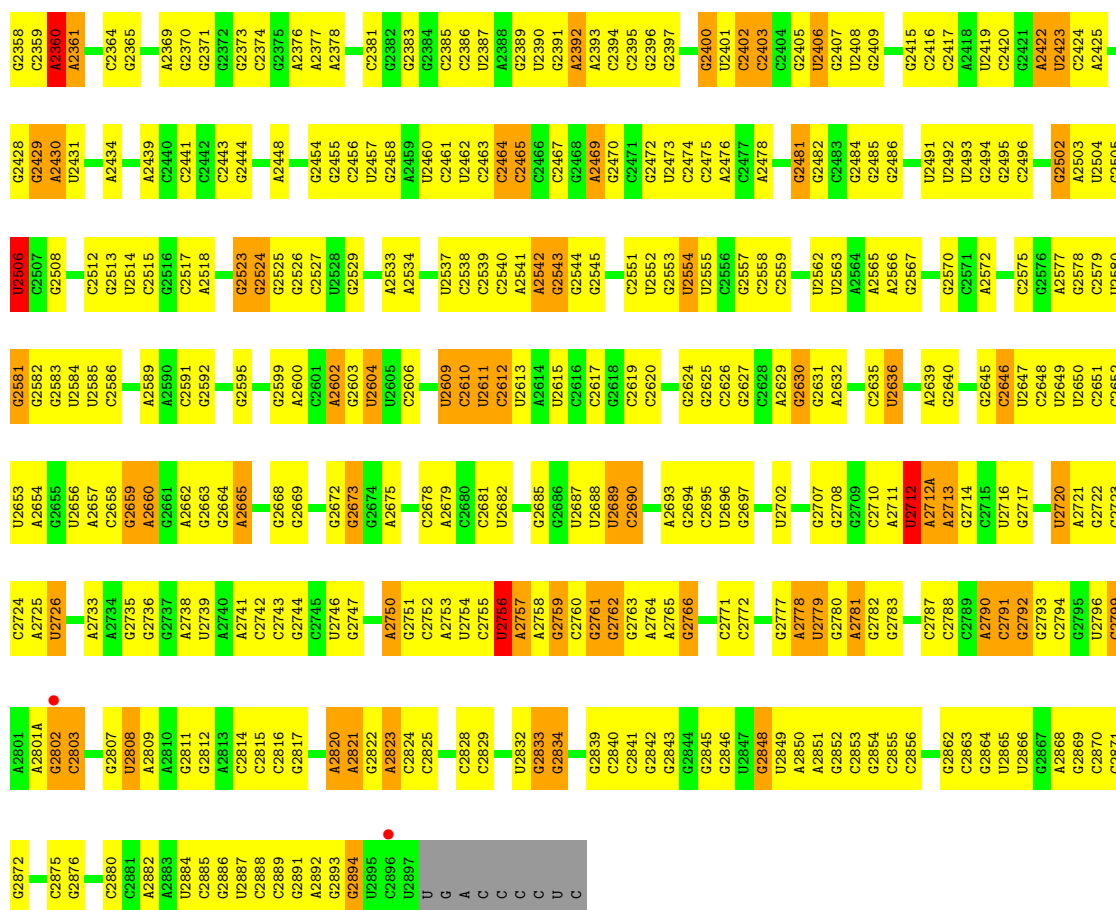
• Molecule 11: 23S RIBOSOMAL RNA

Chain A:



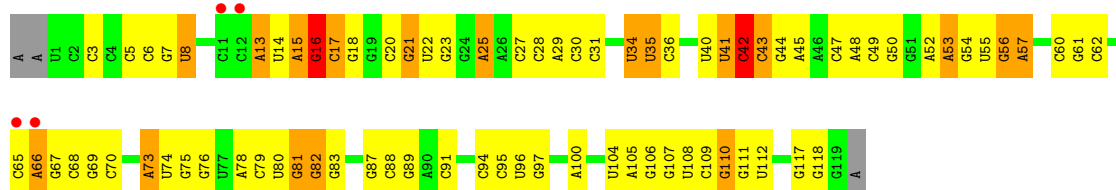






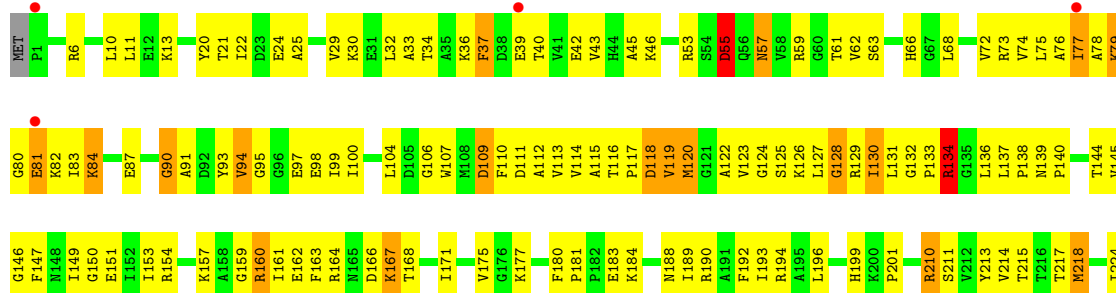
• Molecule 12: 5S RIBOSOMAL RNA

Chain B:



• Molecule 13: 50S RIBOSOMAL PROTEIN L1

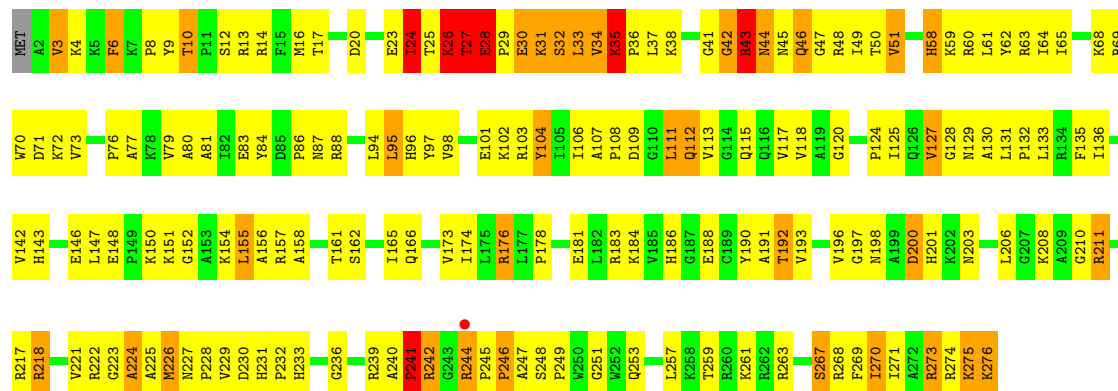
Chain C:





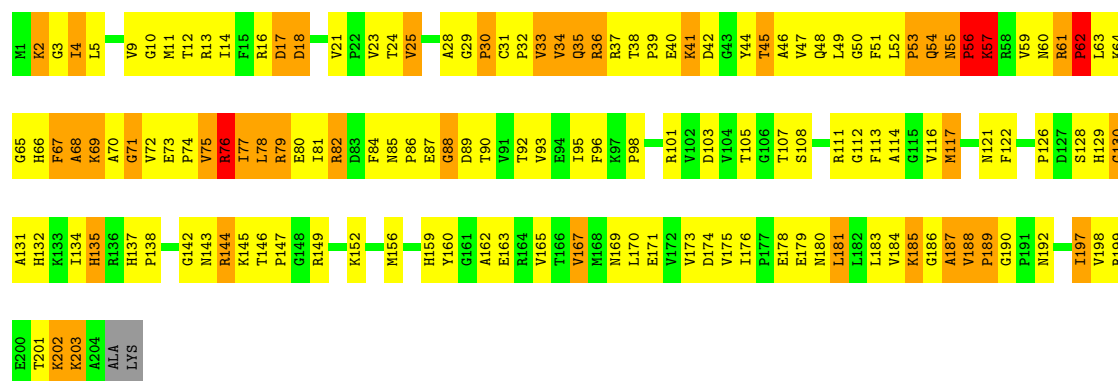
• Molecule 14: 50S RIBOSOMAL PROTEIN L2

Chain D:



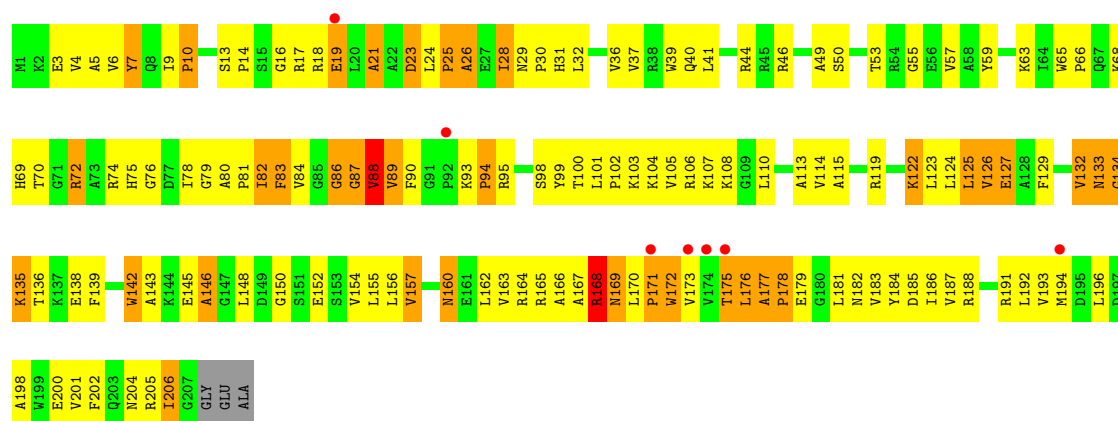
• Molecule 15: 50S RIBOSOMAL PROTEIN L3

Chain E:



• Molecule 16: 50S RIBOSOMAL PROTEIN L4

Chain F:



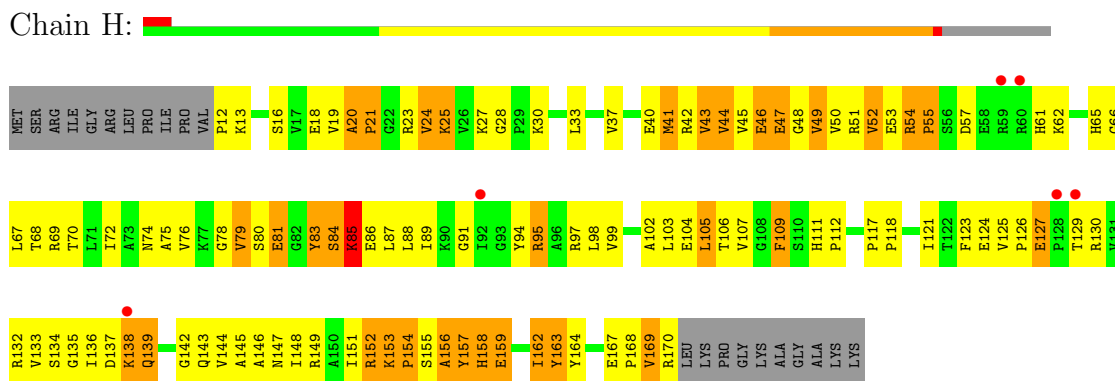
• Molecule 17: 50S RIBOSOMAL PROTEIN L5

Chain G:



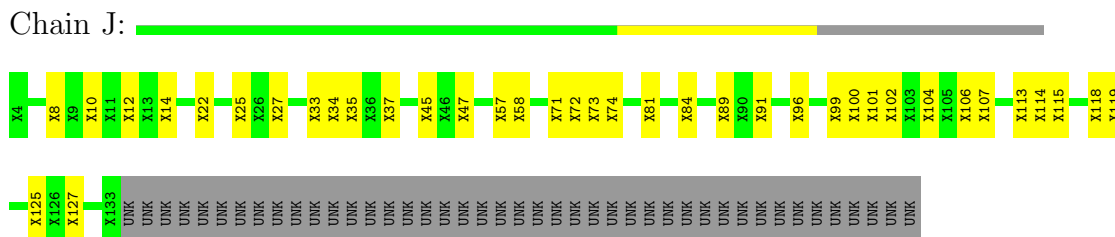
- Molecule 18: 50S RIBOSOMAL PROTEIN L6

Chain H:



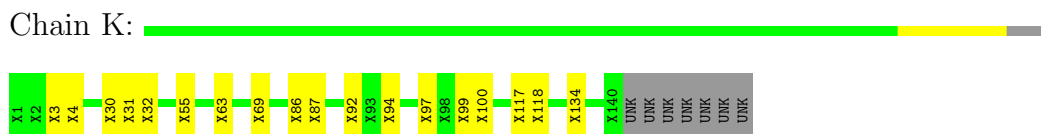
- Molecule 19: 50S RIBOSOMAL PROTEIN L10

Chain J:



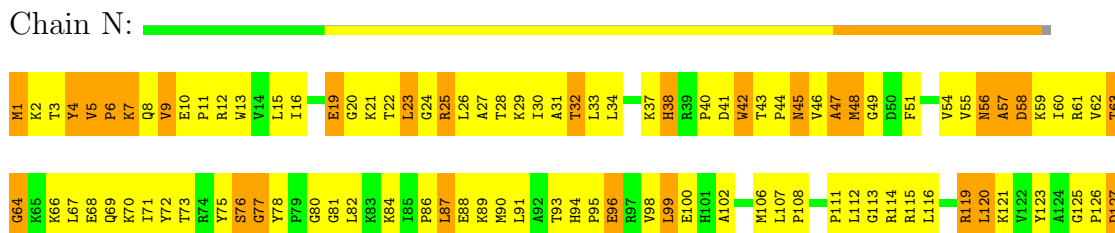
- Molecule 20: 50S RIBOSOMAL PROTEIN L11

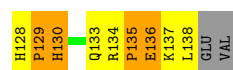
Chain K:



- Molecule 21: 50S RIBOSOMAL PROTEIN L13

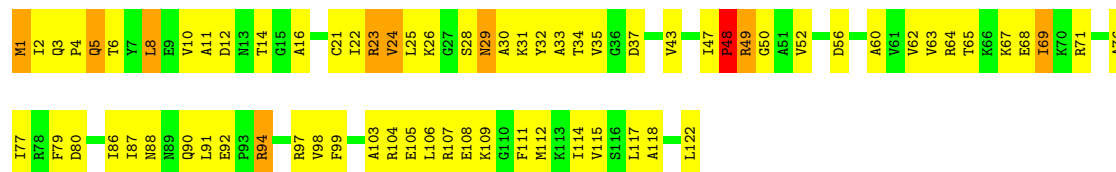
Chain N:





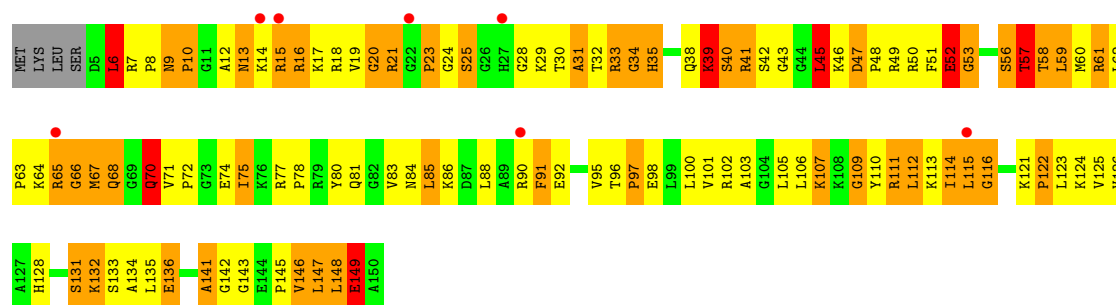
• Molecule 22: 50S RIBOSOMAL PROTEIN L14

Chain O:



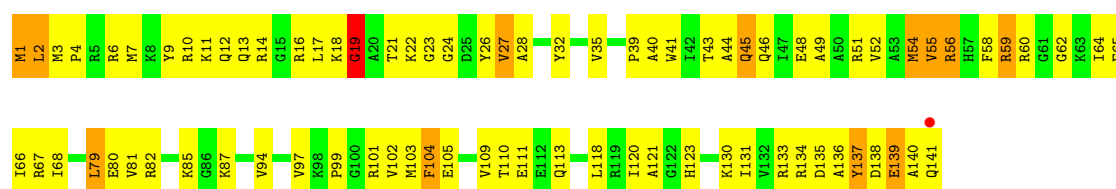
• Molecule 23: 50S RIBOSOMAL PROTEIN L15

Chain P:



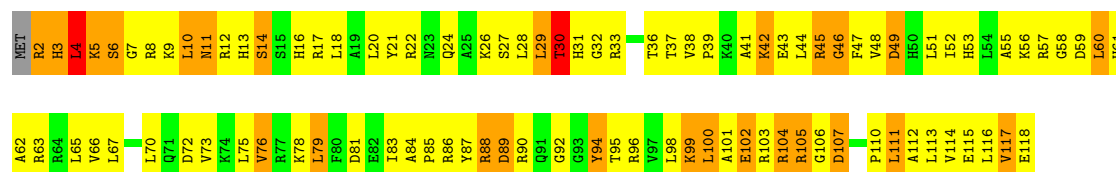
• Molecule 24: 50S RIBOSOMAL PROTEIN L16

Chain Q:



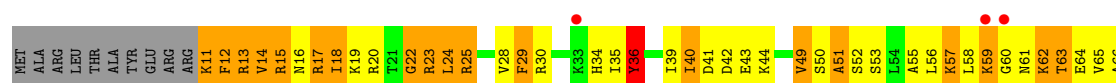
• Molecule 25: 50S RIBOSOMAL PROTEIN L17

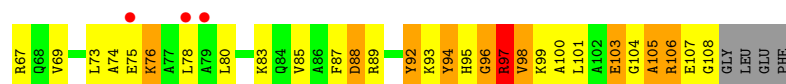
Chain R:



• Molecule 26: 50S RIBOSOMAL PROTEIN L18

Chain S:





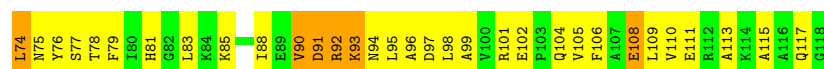
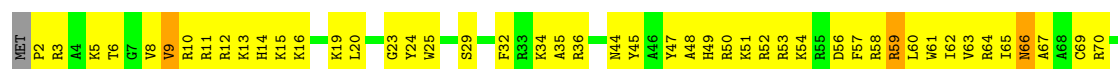
• Molecule 27: 50S RIBOSOMAL PROTEIN L19

Chain T:



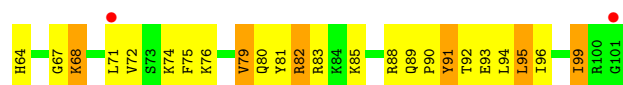
• Molecule 28: 50S RIBOSOMAL PROTEIN L20

Chain U:



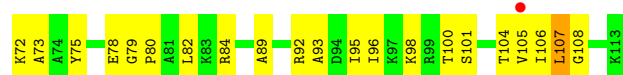
• Molecule 29: 50S RIBOSOMAL PROTEIN L21

Chain V:



• Molecule 30: 50S RIBOSOMAL PROTEIN L22

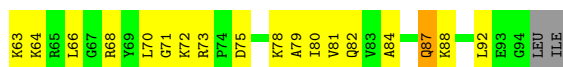
Chain W:



• Molecule 31: 50S RIBOSOMAL PROTEIN L23

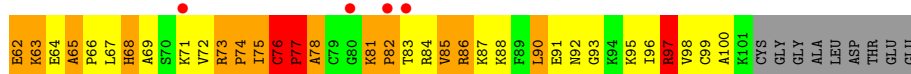
Chain X:





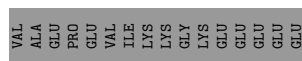
• Molecule 32: 50S RIBOSOMAL PROTEIN L24

Chain Y:



• Molecule 33: 50S RIBOSOMAL PROTEIN L25

Chain Z:



4 Data and refinement statistics

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α , β , γ	290.20Å 269.20Å 404.00Å 90.00° 91.54° 90.00°	Depositor
Resolution (Å)	50.00 – 3.10 49.51 – 2.90	Depositor EDS
% Data completeness (in resolution range)	99.8 (50.00-3.10) 92.4 (49.51-2.90)	Depositor EDS
R_{merge}	0.02	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.36 (at 2.91Å)	Xtriage
Refinement program	CNS 1.2	Depositor
R, R_{free}	0.237 , 0.264 0.470 , 0.474	Depositor DCC
R_{free} test set	62894 reflections (5.24%)	DCC
Wilson B-factor (Å ²)	79.7	Xtriage
Anisotropy	0.030	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.26 , 71.3	EDS
Estimated twinning fraction	0.026 for h,-k,-l	Xtriage
L-test for twinning	$\langle L \rangle = 0.45$, $\langle L^2 \rangle = 0.27$	Xtriage
Outliers	1 of 1263345 reflections (0.000%)	Xtriage
F_o, F_c correlation	0.63	EDS
Total number of atoms	93750	wwPDB-VP
Average B, all atoms (Å ²)	105.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 8.44% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

5 Model quality ⓘ

5.1 Standard geometry ⓘ

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# $ Z > 5$	RMSZ	# $ Z > 5$
1	0	0.45	0/671	0.70	0/892
2	1	0.43	0/738	0.72	0/981
3	2	0.35	0/600	0.63	0/793
4	3	0.35	0/472	0.60	0/634
5	4	0.41	0/349	0.64	0/474
6	5	0.40	0/473	0.64	0/639
7	6	0.62	0/440	0.95	0/586
8	7	0.45	0/426	0.71	0/561
9	8	0.55	0/515	0.77	0/679
10	9	0.53	0/310	0.70	0/407
11	A	0.52	5/69976 (0.0%)	0.72	27/109244 (0.0%)
12	B	0.49	0/2853	0.74	0/4451
13	C	0.42	1/1774 (0.1%)	0.74	3/2391 (0.1%)
14	D	0.52	0/2195	0.88	4/2955 (0.1%)
15	E	0.43	0/1596	0.71	0/2153
16	F	0.38	0/1658	0.74	3/2244 (0.1%)
17	G	0.39	0/1499	0.70	1/2016 (0.0%)
18	H	0.35	0/1245	0.67	0/1682
21	N	0.39	0/1131	0.71	1/1525 (0.1%)
22	O	0.52	1/943 (0.1%)	0.71	0/1269
23	P	0.43	0/1131	0.89	3/1504 (0.2%)
24	Q	0.51	0/1143	0.72	1/1527 (0.1%)
25	R	0.38	0/974	0.72	1/1302 (0.1%)
26	S	0.43	0/778	0.75	0/1036
27	T	0.44	0/1155	0.76	2/1542 (0.1%)
28	U	0.44	0/975	0.67	0/1297
29	V	0.38	0/790	0.67	0/1057
30	W	0.38	0/907	0.64	0/1216
31	X	0.43	0/739	0.91	3/993 (0.3%)
32	Y	0.37	0/788	0.68	1/1051 (0.1%)
33	Z	0.46	0/1435	0.74	0/1949
All	All	0.49	7/100679 (0.0%)	0.73	50/151050 (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
11	A	2	63
12	B	0	2
24	Q	0	1
All	All	2	66

All (7) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	A	761	A	C5-C6	-10.15	1.31	1.41
11	A	2506	U	N1-C2	8.44	1.46	1.38
13	C	120	MET	CG-SD	5.98	1.96	1.81
11	A	761	A	C5-C4	5.28	1.42	1.38
11	A	2180	U	N1-C2	5.20	1.43	1.38
11	A	1968	G	C5-C6	-5.12	1.37	1.42
22	O	21	CYS	CB-SG	-5.00	1.73	1.81

All (50) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
16	F	168	ARG	NE-CZ-NH2	-13.66	113.47	120.30
13	C	134	ARG	NE-CZ-NH2	-13.34	113.63	120.30
31	X	60	ARG	NE-CZ-NH1	13.14	126.87	120.30
13	C	134	ARG	NE-CZ-NH1	13.12	126.86	120.30
31	X	60	ARG	NE-CZ-NH2	-12.98	113.81	120.30
16	F	168	ARG	NE-CZ-NH1	12.88	126.74	120.30
14	D	43	ARG	NE-CZ-NH1	12.21	126.41	120.30
14	D	43	ARG	NE-CZ-NH2	-11.71	114.45	120.30
11	A	1786	A	N9-C1'-C2'	9.32	126.12	114.00
11	A	1820	U	C2'-C3'-O3'	9.11	129.54	109.50
11	A	1819	A	C2'-C3'-O3'	8.20	127.55	109.50
11	A	1427	A	C2'-C3'-O3'	7.84	126.74	109.50
23	P	52	GLU	N-CA-C	7.77	131.97	111.00
13	C	134	ARG	CD-NE-CZ	7.22	133.70	123.60
11	A	945	A	N9-C1'-C2'	7.20	123.35	114.00
11	A	1653	G	C2'-C3'-O3'	7.18	125.29	109.50
23	P	53	GLY	N-CA-C	-7.17	95.17	113.10
11	A	2610	C	C2'-C3'-O3'	7.10	125.12	109.50
14	D	43	ARG	CD-NE-CZ	7.08	133.50	123.60
11	A	1799	G	C2'-C3'-O3'	7.02	124.95	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	A	1698	A	O4'-C1'-N9	6.97	113.77	108.20
11	A	2360	A	N9-C1'-C2'	-6.88	104.44	112.00
11	A	1970	A	C5'-C4'-O4'	6.77	117.22	109.10
31	X	60	ARG	CD-NE-CZ	6.57	132.79	123.60
11	A	1948	G	C5'-C4'-O4'	-6.53	101.26	109.10
16	F	168	ARG	CD-NE-CZ	6.39	132.55	123.60
11	A	1300	U	C2'-C3'-O3'	6.35	123.86	113.70
14	D	35	LYS	N-CA-C	6.34	128.11	111.00
17	G	34	LEU	CA-CB-CG	6.02	129.15	115.30
11	A	1495	A	N9-C1'-C2'	5.97	121.77	114.00
11	A	1970	A	C5'-C4'-C3'	5.89	125.42	116.00
11	A	1987	G	C5'-C4'-C3'	-5.84	106.65	116.00
27	T	29	ARG	N-CA-C	5.71	126.43	111.00
24	Q	19	GLY	N-CA-C	5.68	127.30	113.10
11	A	527	C	O4'-C1'-N1	5.65	112.72	108.20
11	A	857	C	C5'-C4'-C3'	-5.57	107.09	116.00
11	A	906	G	C5'-C4'-C3'	-5.56	107.10	116.00
27	T	80	SER	N-CA-C	5.53	125.92	111.00
23	P	45	LEU	N-CA-C	-5.51	96.11	111.00
11	A	2278	A	C5'-C4'-C3'	5.49	124.78	116.00
11	A	1819	A	C4'-C3'-O3'	5.47	123.95	113.00
25	R	4	LEU	CA-CB-CG	5.42	127.77	115.30
21	N	77	GLY	N-CA-C	-5.31	99.83	113.10
11	A	387	U	C2'-C3'-O3'	5.30	122.18	113.70
11	A	2405	G	N9-C1'-C2'	5.24	120.81	114.00
32	Y	54	LYS	N-CA-C	-5.21	96.94	111.00
11	A	2756	U	C2'-C3'-O3'	5.17	121.97	113.70
11	A	2559	C	C5'-C4'-C3'	-5.16	107.75	116.00
11	A	2286	A	N9-C1'-C2'	5.02	120.53	114.00
11	A	2128	C	N1-C1'-C2'	-5.02	106.48	112.00

All (2) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
11	A	1819	A	C3'
11	A	1820	U	C3'

All (66) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
11	A	1156	A	Sidechain
11	A	1162	G	Sidechain

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Mol	Chain	Res	Type	Group
11	A	1238	G	Sidechain
11	A	1393	A	Sidechain
11	A	1425	G	Sidechain
11	A	15	G	Sidechain
11	A	1647	G	Sidechain
11	A	1649	G	Sidechain
11	A	1673	U	Sidechain
11	A	1772	G	Sidechain
11	A	1773	A	Sidechain
11	A	1798	U	Sidechain
11	A	1801	G	Sidechain
11	A	1807	G	Sidechain
11	A	1822	G	Sidechain
11	A	1831	G	Sidechain
11	A	1841	U	Sidechain
11	A	1954	G	Sidechain
11	A	2000	G	Sidechain
11	A	201	C	Sidechain
11	A	2010	G	Sidechain
11	A	2031	A	Sidechain
11	A	2052	G	Sidechain
11	A	2061	G	Sidechain
11	A	2074	U	Sidechain
11	A	2075	U	Sidechain
11	A	2128	C	Sidechain
11	A	2132	U	Sidechain
11	A	2133	G	Sidechain
11	A	2134	A	Sidechain
11	A	2157	G	Sidechain
11	A	2250	G	Sidechain
11	A	2320	A	Sidechain
11	A	2344	U	Sidechain
11	A	2360	A	Sidechain
11	A	2464	C	Sidechain
11	A	2481	G	Sidechain
11	A	2504	U	Sidechain
11	A	2506	U	Sidechain
11	A	2508	G	Sidechain
11	A	2523	G	Sidechain
11	A	2542	A	Sidechain
11	A	2581	G	Sidechain
11	A	2595	G	Sidechain

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Mol	Chain	Res	Type	Group
11	A	2659	G	Sidechain
11	A	2665	A	Sidechain
11	A	2685	G	Sidechain
11	A	2712	U	Sidechain
11	A	2848	G	Sidechain
11	A	383	U	Sidechain
11	A	631	A	Sidechain
11	A	632	A	Sidechain
11	A	686	G	Sidechain
11	A	688	U	Sidechain
11	A	700	G	Sidechain
11	A	746	A	Sidechain
11	A	760	G	Sidechain
11	A	792	G	Sidechain
11	A	813	U	Sidechain
11	A	913	U	Sidechain
11	A	945	A	Sidechain
11	A	956	G	Sidechain
11	A	958	U	Sidechain
12	B	16	G	Sidechain
12	B	42	C	Sidechain
24	Q	9	TYR	Sidechain

5.2 Close contacts ⓘ

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	0	662	0	688	66	0
2	1	731	0	808	82	0
3	2	598	0	653	87	0
4	3	467	0	523	35	0
5	4	340	0	339	49	0
6	5	459	0	480	84	0
7	6	433	0	461	121	0
8	7	418	0	467	38	0
9	8	507	0	576	130	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
10	9	307	0	338	32	0
11	A	62477	0	31497	2061	0
12	B	2551	0	1295	93	0
13	C	1742	0	1800	160	0
14	D	2145	0	2234	254	0
15	E	1563	0	1629	237	0
16	F	1623	0	1677	214	0
17	G	1474	0	1535	235	0
18	H	1222	0	1282	159	0
19	J	651	0	156	23	0
20	K	700	0	167	9	0
21	N	1104	0	1180	160	0
22	O	933	0	996	84	0
23	P	1114	0	1187	267	0
24	Q	1122	0	1179	119	0
25	R	960	0	1021	151	0
26	S	770	0	832	135	0
27	T	1141	0	1202	199	0
28	U	958	0	1015	129	0
29	V	779	0	852	139	0
30	W	896	0	953	84	0
31	X	725	0	778	100	0
32	Y	775	0	870	177	0
33	Z	1403	0	1432	211	0
All	All	93750	0	62102	5576	0

Clashscore is defined as the number of clashes calculated for the entry per 1000 atoms (including hydrogens) of the entry. The overall clashscore for this entry is 36.

All (5576) close contacts within the same asymmetric unit are listed below.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:D:35:LYS:HG3	14:D:104:TYR:CE2	1.77	1.19
11:A:2645:G:H3'	11:A:2646:C:H5'	1.25	1.18
11:A:1484:G:H2'	11:A:1485:G:H5''	1.24	1.18
17:G:139:LEU:HA	17:G:144:ILE:HG12	1.27	1.15
31:X:35:THR:HG22	31:X:37:THR:H	1.05	1.14
11:A:2833:G:H3'	11:A:2834:G:H5''	1.29	1.13
11:A:2092:U:H4'	11:A:2093:G:H5''	1.19	1.13
11:A:925:C:H2'	11:A:926:A:H5''	1.29	1.13
11:A:1899:G:N2	11:A:1902:C:H41	1.48	1.12
33:Z:69:THR:HG22	33:Z:90:VAL:HA	1.22	1.11
11:A:1378:A:O2'	11:A:1379:A:H5'	1.48	1.11

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:X:12:VAL:HB	31:X:17:ALA:HB1	1.34	1.10
31:X:12:VAL:HG23	31:X:13:LEU:H	1.14	1.09
6:5:4:HIS:HB2	6:5:5:PRO:HD3	1.31	1.09
16:F:24:LEU:HB3	16:F:25:PRO:HD2	1.36	1.08
9:8:62:LEU:HD13	11:A:242:G:H5''	1.31	1.07
29:V:62:LEU:HD21	29:V:95:LEU:HB2	1.33	1.07
23:P:58:THR:HG22	23:P:61:ARG:HE	1.09	1.07
7:6:30:THR:HG22	7:6:31:PRO:HD2	1.29	1.07
3:2:35:LEU:HD11	3:2:50:ILE:HG13	1.31	1.06
27:T:82:LEU:H	27:T:82:LEU:HD12	1.19	1.05
31:X:63:LYS:HE2	31:X:72:LYS:HE3	1.39	1.05
1:0:10:THR:HG22	1:0:12:ASN:H	1.17	1.05
4:3:35:ARG:HH11	4:3:35:ARG:HB2	1.13	1.05
11:A:2761:G:H2'	11:A:2762:G:H5''	1.38	1.05
11:A:2603:G:H2'	11:A:2604:U:H5''	1.35	1.04
15:E:57:LYS:HE3	15:E:57:LYS:HA	1.39	1.04
7:6:18:ARG:HH11	7:6:18:ARG:HG2	1.20	1.04
11:A:628:G:H2'	11:A:629:G:H5''	1.34	1.04
11:A:1301:A:O2'	11:A:1302:A:H2'	1.55	1.04
26:S:30:ARG:HH22	26:S:62:LYS:HD3	1.13	1.04
17:G:72:ARG:HB2	17:G:87:PRO:HD2	1.37	1.04
16:F:192:LEU:HD21	16:F:194:MET:HG3	1.37	1.04
13:C:175:VAL:HG12	13:C:188:ASN:HB3	1.40	1.04
26:S:49:VAL:HG12	26:S:50:SER:H	1.20	1.04
32:Y:8:LYS:H	32:Y:8:LYS:HD2	1.17	1.04
7:6:19:ARG:HG2	7:6:20:ASN:H	1.20	1.03
2:1:65:SER:O	2:1:66:HIS:HB2	1.55	1.03
11:A:1665:A:H2'	11:A:1666:G:H5''	1.38	1.03
11:A:272(H):C:H2'	11:A:272(I):U:H5''	1.38	1.03
3:2:68:ARG:HH11	3:2:68:ARG:HB2	1.18	1.02
7:6:35:GLU:HB3	7:6:51:GLU:HB2	1.34	1.02
11:A:1959:G:H2'	11:A:1960:A:H5''	1.40	1.02
12:B:20:C:H2'	12:B:21:G:H5''	1.41	1.02
18:H:85:LYS:HZ3	18:H:133:VAL:N	1.57	1.02
27:T:28:VAL:O	27:T:29:ARG:HD2	1.60	1.02
11:A:2187:G:H2'	11:A:2188:C:H5'	1.41	1.02
11:A:1884:A:H2'	11:A:1885:A:H5''	1.40	1.02
18:H:153:LYS:H	18:H:153:LYS:HD3	1.25	1.01
11:A:330:A:HO2'	11:A:331:A:H8	1.05	1.01
11:A:1024:G:H3'	11:A:1025:G:H5''	1.41	1.01
24:Q:60:ARG:HB3	24:Q:60:ARG:HH11	1.21	1.01
11:A:2012:G:H4'	30:W:96:ILE:HD11	1.40	1.00

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:1747(A):G:H2'	11:A:1748:G:H5''	1.40	1.00
23:P:62:LEU:H	23:P:62:LEU:HD23	1.24	1.00
18:H:106:THR:HG22	18:H:112:PRO:HB3	1.42	1.00
16:F:155:LEU:HD11	16:F:176:LEU:HD22	1.41	0.99
14:D:30:GLU:HB3	14:D:35:LYS:HZ3	1.25	0.99
32:Y:13:VAL:HG11	32:Y:28:LYS:HD3	1.44	0.99
11:A:27:G:H22	11:A:512:G:H2'	1.28	0.99
14:D:34:VAL:HG23	14:D:35:LYS:H	1.27	0.98
27:T:53:ARG:HH11	27:T:53:ARG:HB3	1.28	0.98
18:H:169:VAL:HG22	18:H:170:ARG:H	1.28	0.98
11:A:654(H):G:H2'	11:A:654(I):C:H5'	1.42	0.98
7:6:19:ARG:CG	7:6:20:ASN:H	1.76	0.98
11:A:271(L):U:H5''	11:A:271(M):G:H5'	1.45	0.98
21:N:23:LEU:HD23	21:N:24:GLY:N	1.78	0.98
23:P:146:VAL:HG22	23:P:147:LEU:H	1.25	0.98
16:F:37:VAL:HG11	23:P:7:ARG:HH22	1.27	0.98
11:A:2833:G:H3'	11:A:2834:G:C5'	1.93	0.98
12:B:8:U:H6	12:B:8:U:H5'	1.29	0.97
15:E:38:THR:HG22	15:E:40:GLU:H	1.27	0.97
17:G:67:LYS:HD3	17:G:67:LYS:H	1.29	0.97
11:A:1948:G:H5'	11:A:1948:G:H8	1.27	0.97
11:A:2307:G:H21	11:A:2308:G:H5''	1.30	0.97
30:W:5:ALA:HB2	30:W:54:ALA:HB2	1.46	0.97
1:0:49:LYS:N	1:0:80:HIS:HD1	1.63	0.97
11:A:2317:C:H2'	11:A:2318:G:H5'	1.45	0.97
32:Y:50:ARG:HD2	32:Y:53:PRO:HA	1.47	0.96
16:F:132:VAL:HG22	16:F:133:ASN:H	1.27	0.96
11:A:1887:C:H2'	11:A:1888:G:H5''	1.47	0.96
11:A:1069:A:H1'	11:A:1070:A:OP1	1.66	0.96
6:5:44:THR:HG21	25:R:101:ALA:HB2	1.48	0.96
27:T:80:SER:HB3	27:T:81:PRO:HD3	1.44	0.96
21:N:111:PRO:HA	21:N:114:ARG:HH12	1.25	0.96
7:6:16:CYS:SG	7:6:48:VAL:HG22	2.04	0.96
11:A:2603:G:C2'	11:A:2604:U:H5''	1.95	0.95
27:T:28:VAL:HG22	27:T:47:GLY:N	1.80	0.95
11:A:259:G:H21	11:A:621:A:H8	1.08	0.95
11:A:1543:C:H3'	11:A:1544:A:H5''	1.48	0.95
22:O:104:ARG:HH21	27:T:33:LYS:HE2	1.28	0.95
32:Y:10:GLY:HA2	32:Y:27:VAL:HG13	1.48	0.95
14:D:267:SER:O	14:D:269:PHE:N	1.99	0.95
8:7:37:LYS:HD2	8:7:39:ARG:HD3	1.49	0.95
7:6:41:PRO:HD2	7:6:46:HIS:H	1.29	0.94

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:G:63:ILE:HA	17:G:143:GLU:HG3	1.48	0.94
16:F:6:VAL:HG12	16:F:7:TYR:H	1.33	0.94
11:A:1826:G:H4'	14:D:242:ARG:HH21	1.29	0.94
31:X:63:LYS:HD3	31:X:70:LEU:HD21	1.49	0.94
9:8:15:LYS:HD3	23:P:65:ARG:HH22	1.32	0.94
31:X:8:ILE:H	31:X:8:ILE:HD12	1.28	0.94
11:A:2101:G:H2'	11:A:2102:U:H5''	1.49	0.94
11:A:628:G:C2'	11:A:629:G:H5''	1.98	0.94
26:S:52:SER:HB3	26:S:55:ALA:HB3	1.48	0.94
11:A:1190:G:H5'	23:P:35:HIS:H	1.31	0.94
23:P:47:ASP:HB2	23:P:51:PHE:HB2	1.50	0.93
22:O:14:THR:HG21	22:O:86:ILE:HD13	1.48	0.93
11:A:654(E):G:N2	11:A:654(Q):C:H1'	1.82	0.93
17:G:32:PRO:HB2	17:G:172:LEU:HG	1.48	0.93
33:Z:163:LEU:HD11	33:Z:165:VAL:HG13	1.47	0.93
27:T:85:LYS:HB3	27:T:85:LYS:NZ	1.84	0.93
11:A:1948:G:H5'	11:A:1948:G:C8	2.04	0.93
11:A:1602:U:H3'	11:A:1603:A:H5'	1.50	0.93
17:G:125:PHE:HD1	17:G:126:ASP:H	1.14	0.93
16:F:28:ILE:H	16:F:28:ILE:HD13	1.34	0.93
15:E:52:LEU:HD11	27:T:1:MET:HG2	1.51	0.93
11:A:1047:G:H2'	11:A:1110:G:H21	1.32	0.93
17:G:5:VAL:HB	17:G:8:LYS:HB2	1.51	0.93
9:8:62:LEU:HD13	11:A:242:G:C5'	2.00	0.92
23:P:147:LEU:HG	23:P:148:LEU:H	1.31	0.92
11:A:2160:G:H8	11:A:2160:G:H5'	1.34	0.92
11:A:654(E):G:H22	11:A:654(Q):C:H1'	1.34	0.92
11:A:2245:U:H5'	11:A:2246:G:H5'	1.47	0.92
9:8:6:THR:HB	9:8:11:LYS:NZ	1.84	0.92
15:E:16:ARG:HD3	15:E:21:VAL:HG11	1.51	0.92
7:6:33:LYS:HE2	7:6:33:LYS:HA	1.49	0.92
17:G:73:ALA:H	17:G:87:PRO:HG2	1.35	0.92
11:A:654(C):G:H2'	11:A:654(D):G:H5'	1.51	0.92
32:Y:28:LYS:HB3	32:Y:39:VAL:H	1.34	0.91
11:A:2248:C:H2'	11:A:2249:U:H5'	1.48	0.91
18:H:85:LYS:HZ3	18:H:133:VAL:H	1.12	0.91
11:A:1484:G:C2'	11:A:1485:G:H5''	1.99	0.91
11:A:761:A:H8	11:A:761:A:O5'	1.53	0.91
27:T:53:ARG:NH1	27:T:53:ARG:HB3	1.83	0.91
14:D:35:LYS:HD3	14:D:63:ARG:HG2	1.53	0.91
6:5:3:LYS:HD3	11:A:747:U:OP1	1.71	0.91
2:1:45:ASN:HD21	11:A:2090:G:H21	1.14	0.91

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:925:C:C2'	11:A:926:A:H5''	2.00	0.90
11:A:1779:U:H5	11:A:1784:A:N7	1.69	0.90
9:8:61:LEU:HD12	9:8:61:LEU:H	1.35	0.90
23:P:16:ARG:HB2	23:P:16:ARG:NH1	1.86	0.90
1:0:50:ASN:HD22	1:0:63:VAL:HG21	1.33	0.90
11:A:1899:G:H21	11:A:1902:C:H41	1.00	0.90
17:G:133:LEU:HD11	17:G:157:ILE:HD12	1.53	0.90
17:G:60:LEU:HD22	17:G:63:ILE:HD11	1.51	0.90
23:P:132:LYS:HD2	23:P:132:LYS:H	1.35	0.90
23:P:58:THR:HG22	23:P:61:ARG:NE	1.87	0.89
17:G:135:LEU:HD13	17:G:140:ILE:HD11	1.52	0.89
11:A:2092:U:C4'	11:A:2093:G:H5''	2.02	0.89
11:A:2068:U:H3	11:A:2430:A:H2	0.91	0.89
26:S:106:ARG:NH1	26:S:106:ARG:HB3	1.86	0.89
11:A:27:G:N2	11:A:512:G:H2'	1.86	0.89
23:P:9:ASN:H	23:P:10:PRO:HD2	1.35	0.89
33:Z:18:LEU:HD12	33:Z:18:LEU:H	1.36	0.89
26:S:97:ARG:NH2	26:S:98:VAL:HA	1.87	0.89
12:B:3:C:H42	12:B:118:G:H1	1.15	0.89
15:E:111:ARG:HG3	15:E:160:TYR:CD2	2.08	0.89
6:5:40:LYS:NZ	6:5:46:CYS:H	1.71	0.89
26:S:59:LYS:HG2	26:S:60:GLY:H	1.38	0.89
17:G:77:ILE:HD13	17:G:77:ILE:H	1.36	0.89
23:P:65:ARG:HB3	23:P:68:GLN:HE22	1.37	0.89
29:V:18:LEU:HD23	29:V:19:LYS:H	1.37	0.89
11:A:2415:G:O3'	23:P:66:GLY:HA3	1.69	0.89
27:T:28:VAL:HG13	27:T:46:GLU:HA	1.54	0.89
33:Z:166:SER:HB2	33:Z:168:GLU:N	1.88	0.89
11:A:1877:A:H2'	11:A:1878:G:H5'	1.52	0.89
25:R:99:LYS:H	25:R:99:LYS:HD2	1.38	0.89
16:F:160:ASN:HD21	16:F:162:LEU:HB2	1.38	0.88
11:A:2580:U:H5'	15:E:131:ALA:HB2	1.54	0.88
11:A:1293:C:H2'	11:A:1294:U:H5''	1.54	0.88
15:E:77:ILE:HG22	15:E:78:LEU:HD12	1.55	0.88
31:X:35:THR:HG22	31:X:37:THR:N	1.89	0.88
4:3:35:ARG:NH1	4:3:35:ARG:HB2	1.87	0.88
16:F:122:LYS:HG3	16:F:191:ARG:HG3	1.55	0.88
7:6:53:LYS:HG2	7:6:54:ILE:H	1.38	0.88
16:F:32:LEU:O	16:F:36:VAL:HG23	1.74	0.88
26:S:34:HIS:HB2	26:S:36:TYR:HE1	1.39	0.88
30:W:26:GLY:H	30:W:71:VAL:HG23	1.39	0.88
16:F:125:LEU:HD23	16:F:125:LEU:H	1.38	0.88

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:1058:G:H2'	11:A:1059:G:H5''	1.56	0.87
31:X:35:THR:HB	31:X:38:GLU:HB2	1.55	0.87
15:E:4:ILE:HD11	15:E:28:ALA:HB1	1.55	0.87
11:A:2675:A:H5'	22:O:31:LYS:HE3	1.56	0.87
7:6:15:GLU:HB2	7:6:20:ASN:HB3	1.57	0.87
11:A:2712:U:O2'	11:A:2712(A):A:H5''	1.73	0.87
29:V:39:LEU:HA	29:V:47:VAL:HG11	1.56	0.87
11:A:2761:G:C2'	11:A:2762:G:H5''	2.03	0.87
15:E:3:GLY:HA3	15:E:81:ILE:HD12	1.56	0.87
33:Z:30:ASN:HD22	33:Z:32:HIS:H	1.23	0.87
26:S:106:ARG:HB3	26:S:106:ARG:HH11	1.40	0.87
23:P:126:VAL:HA	23:P:145:PRO:HG2	1.55	0.87
23:P:23:PRO:HD2	23:P:33:ARG:HE	1.39	0.87
9:8:59:LYS:HE2	23:P:50:ARG:HB3	1.55	0.87
11:A:2491:U:H5'	11:A:2570:G:H5''	1.55	0.87
11:A:2126:A:H4'	11:A:2127:G:O5'	1.73	0.87
6:5:50:GLY:HA3	6:5:56:LYS:HD3	1.57	0.87
11:A:1747(A):G:C2'	11:A:1748:G:H5''	2.03	0.87
11:A:2756:U:H1'	11:A:2757:A:H5''	1.55	0.87
33:Z:51:ALA:HB1	33:Z:57:ILE:HD11	1.54	0.86
29:V:15:GLU:HB3	29:V:16:PRO:HD2	1.57	0.86
11:A:1517:G:H8	11:A:1517:G:H5'	1.40	0.86
33:Z:79:ARG:HH11	33:Z:79:ARG:HB3	1.38	0.86
11:A:1876:A:H2'	11:A:1877:A:H5''	1.56	0.86
28:U:92:ARG:NH2	29:V:10:LYS:HB3	1.89	0.86
24:Q:56:ARG:HH11	24:Q:56:ARG:HG3	1.39	0.86
11:A:1012:U:O4	21:N:28:THR:HG21	1.74	0.86
33:Z:89:PHE:HE2	33:Z:96:VAL:HG21	1.41	0.86
24:Q:141:GLN:HE21	33:Z:72:ARG:HA	1.38	0.86
29:V:2:PHE:HB2	29:V:42:GLY:HA2	1.56	0.86
32:Y:81:LYS:HD3	32:Y:97:ARG:O	1.75	0.86
11:A:2131:G:H1'	11:A:2133:G:N2	1.90	0.86
16:F:3:GLU:HA	16:F:24:LEU:HG	1.58	0.86
32:Y:49:VAL:O	32:Y:50:ARG:HB2	1.76	0.86
2:1:21:ARG:HH11	2:1:21:ARG:HB3	1.39	0.86
27:T:28:VAL:HG11	27:T:46:GLU:HG3	1.56	0.85
15:E:111:ARG:HB3	25:R:2:ARG:HH12	1.41	0.85
1:0:43:THR:H	11:A:2331:G:H4'	1.40	0.85
24:Q:60:ARG:HB3	24:Q:60:ARG:NH1	1.90	0.85
7:6:15:GLU:CD	7:6:18:ARG:CZ	2.44	0.85
17:G:131:TYR:HB3	17:G:159:VAL:HG13	1.57	0.85
11:A:1697:G:H3'	11:A:1698:A:H5''	1.57	0.85

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:R:73:VAL:O	25:R:76:VAL:HG12	1.75	0.85
25:R:38:VAL:HB	25:R:39:PRO:HD3	1.58	0.85
8:7:10:ARG:HH12	8:7:14:LYS:HE3	1.41	0.85
11:A:2604:U:H6	11:A:2604:U:H5'	1.42	0.85
11:A:1279:G:H4'	25:R:31:HIS:CD2	2.11	0.85
9:8:59:LYS:HB2	9:8:59:LYS:NZ	1.92	0.85
32:Y:28:LYS:O	32:Y:38:ILE:HG22	1.76	0.85
11:A:1959:G:C2'	11:A:1960:A:H5''	2.07	0.85
27:T:27:THR:O	27:T:28:VAL:HB	1.74	0.85
14:D:63:ARG:HH11	14:D:63:ARG:HG3	1.42	0.84
11:A:2762:G:H5'	11:A:2762:G:H8	1.40	0.84
30:W:107:LEU:HD12	30:W:107:LEU:H	1.42	0.84
24:Q:141:GLN:HG3	33:Z:72:ARG:NH1	1.92	0.84
31:X:11:PRO:HA	31:X:28:PHE:HB3	1.59	0.84
6:5:3:LYS:HD2	6:5:3:LYS:H	1.40	0.84
11:A:1665:A:C2'	11:A:1666:G:H5''	2.06	0.84
3:2:25:VAL:HG22	3:2:60:LEU:HD13	1.57	0.84
11:A:2189:U:C3'	11:A:2190:G:H4'	2.07	0.84
33:Z:7:ALA:HB3	33:Z:61:LEU:HD23	1.58	0.84
18:H:103:LEU:HB2	18:H:123:PHE:HD2	1.42	0.84
11:A:1050:A:H2'	11:A:1051:G:H5'	1.59	0.84
33:Z:163:LEU:HG	33:Z:165:VAL:HG22	1.57	0.84
15:E:111:ARG:HB3	25:R:2:ARG:NH1	1.93	0.84
11:A:321:G:H21	16:F:165:ARG:HH21	1.25	0.84
29:V:99:ILE:HD13	29:V:99:ILE:H	1.43	0.84
8:7:34:ARG:HD2	8:7:39:ARG:HG3	1.57	0.84
13:C:119:VAL:HG23	13:C:120:MET:HE2	1.60	0.84
11:A:2317:C:C2'	11:A:2318:G:H5'	2.06	0.84
13:C:53:ARG:HB3	13:C:53:ARG:HH11	1.43	0.84
9:8:32:LEU:HD23	9:8:36:LYS:HZ1	1.38	0.84
21:N:111:PRO:HA	21:N:114:ARG:NH1	1.92	0.84
17:G:79:ASN:O	17:G:80:PHE:HB2	1.76	0.84
11:A:2159:G:C2'	11:A:2160:G:H5''	2.08	0.83
11:A:673:C:H6	11:A:673:C:H5'	1.42	0.83
23:P:58:THR:C	23:P:60:MET:H	1.79	0.83
11:A:1539:G:H2'	11:A:1540:U:H5'	1.60	0.83
27:T:32:TYR:CD2	27:T:81:PRO:HB2	2.13	0.83
11:A:1602:U:H3'	11:A:1603:A:C5'	2.08	0.83
11:A:1378:A:H4'	11:A:1379:A:OP1	1.76	0.83
33:Z:162:GLU:O	33:Z:163:LEU:HD23	1.76	0.83
17:G:131:TYR:HB3	17:G:159:VAL:CG1	2.08	0.83
33:Z:6:LYS:HG3	33:Z:60:GLU:CG	2.09	0.83

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:612:C:H2'	11:A:613:G:C5'	2.08	0.83
11:A:1227:G:OP1	28:U:13:LYS:HD2	1.78	0.83
11:A:272(H):C:C2'	11:A:272(I):U:H5''	2.09	0.83
11:A:330:A:H2	11:A:1210:A:H2'	1.42	0.83
16:F:101:LEU:HD12	16:F:102:PRO:HD2	1.58	0.83
11:A:860:U:H5	11:A:917:A:N7	1.75	0.83
11:A:1899:G:N2	11:A:1902:C:N4	2.25	0.83
10:9:4:ARG:O	10:9:36:GLN:HA	1.78	0.83
33:Z:163:LEU:CD1	33:Z:165:VAL:HG13	2.09	0.83
26:S:24:LEU:HB3	26:S:85:VAL:HG12	1.61	0.83
11:A:2777:G:H5''	11:A:2778:A:H5'	1.61	0.83
23:P:40:SER:C	23:P:41:ARG:HD2	1.99	0.83
9:8:32:LEU:HD11	11:A:2391:G:P	2.18	0.83
17:G:82:LEU:HD13	17:G:87:PRO:HA	1.60	0.83
14:D:43:ARG:HH21	14:D:44:ASN:ND2	1.77	0.83
29:V:19:LYS:HG2	29:V:94:LEU:HB2	1.61	0.82
14:D:176:ARG:HG2	14:D:176:ARG:HH11	1.40	0.82
15:E:132:HIS:HA	15:E:135:HIS:CE1	2.14	0.82
18:H:41:MET:HG3	18:H:42:ARG:H	1.44	0.82
16:F:37:VAL:HG11	23:P:7:ARG:NH2	1.94	0.82
23:P:47:ASP:HB3	23:P:48:PRO:CA	2.10	0.82
1:0:10:THR:HG22	1:0:12:ASN:N	1.95	0.82
6:5:40:LYS:HZ1	6:5:46:CYS:H	1.24	0.82
21:N:73:THR:CG2	21:N:82:LEU:HD11	2.09	0.82
11:A:2656:U:H3	11:A:2665:A:H2	1.21	0.82
11:A:658:C:H2'	11:A:659:C:C6	2.14	0.82
11:A:2189:U:H2'	11:A:2190:G:H4'	1.60	0.82
11:A:1434:A:H61	11:A:1558:A:H62	1.28	0.82
1:0:62:LEU:HD23	1:0:62:LEU:H	1.44	0.82
11:A:2179:C:H4'	11:A:2180:U:C2	2.15	0.82
7:6:11:LEU:HD21	7:6:51:GLU:CG	2.09	0.82
11:A:2068:U:N3	11:A:2430:A:H2	1.74	0.82
33:Z:6:LYS:HG3	33:Z:60:GLU:HG3	1.60	0.82
23:P:124:LYS:HD3	23:P:143:GLY:HA3	1.62	0.82
17:G:85:GLY:C	17:G:87:PRO:HD3	2.00	0.81
11:A:321:G:N2	16:F:165:ARG:HH21	1.77	0.81
8:7:10:ARG:NH1	8:7:14:LYS:HE3	1.94	0.81
6:5:4:HIS:HB2	6:5:5:PRO:CD	2.09	0.81
23:P:7:ARG:O	23:P:10:PRO:HD2	1.78	0.81
13:C:6:ARG:O	13:C:10:LEU:HD23	1.80	0.81
11:A:1678:G:H22	11:A:1989:G:H22	1.27	0.81
5:4:9:LEU:HD13	5:4:10:VAL:H	1.45	0.81

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:1884:A:C2'	11:A:1885:A:H5''	2.10	0.81
16:F:37:VAL:CG1	23:P:7:ARG:HH22	1.93	0.81
14:D:267:SER:C	14:D:269:PHE:H	1.82	0.81
24:Q:51:ARG:O	24:Q:55:VAL:HG12	1.81	0.81
11:A:2524:G:H8	11:A:2524:G:H5'	1.44	0.81
33:Z:151:HIS:HB3	33:Z:170:THR:HA	1.60	0.81
11:A:910:A:H62	24:Q:12:GLN:HA	1.45	0.81
12:B:16:G:HO2'	12:B:17:C:H6	1.27	0.81
14:D:8:PRO:HB3	14:D:14:ARG:HB3	1.61	0.81
7:6:35:GLU:CB	7:6:51:GLU:HB2	2.10	0.81
26:S:89:ARG:HB3	26:S:92:TYR:HB3	1.61	0.81
11:A:1348:G:H2'	11:A:1349:A:H5''	1.63	0.81
11:A:2185:C:H2'	11:A:2186:G:H5'	1.63	0.81
28:U:65:ILE:HD11	28:U:96:ALA:HB3	1.62	0.81
27:T:100:TYR:HD2	27:T:103:ARG:HH21	1.28	0.81
14:D:35:LYS:HD2	14:D:36:PRO:N	1.96	0.81
11:A:2110:G:H1	11:A:2178:C:H5	1.25	0.81
18:H:70:THR:HG22	18:H:74:ASN:HD21	1.45	0.81
33:Z:122:ARG:HG2	33:Z:122:ARG:HH11	1.44	0.81
13:C:181:PRO:HG2	13:C:184:LYS:HG2	1.61	0.81
14:D:35:LYS:HG3	14:D:104:TYR:HE2	1.39	0.81
25:R:24:GLN:NE2	25:R:36:THR:HG21	1.96	0.81
26:S:36:TYR:N	26:S:36:TYR:HD1	1.78	0.81
11:A:2131:G:N3	11:A:2133:G:N2	2.29	0.81
11:A:122:G:H1	11:A:129:C:H42	1.29	0.81
18:H:126:PRO:O	18:H:127:GLU:HG2	1.80	0.80
9:8:52:LYS:N	9:8:53:PRO:HD2	1.96	0.80
3:2:35:LEU:HD11	3:2:50:ILE:CG1	2.10	0.80
32:Y:8:LYS:N	32:Y:8:LYS:HD2	1.95	0.80
11:A:1683:C:H2'	11:A:1684:C:H6	1.46	0.80
7:6:11:LEU:HD21	7:6:51:GLU:HG2	1.63	0.80
11:A:2248:C:C2'	11:A:2249:U:H5'	2.11	0.80
26:S:78:LEU:HD11	26:S:103:GLU:HG3	1.61	0.80
11:A:1689:A:H62	11:A:1698:A:H2	1.27	0.80
15:E:14:ILE:HD11	15:E:173:VAL:HG11	1.62	0.80
28:U:15:LYS:O	28:U:19:LYS:HG2	1.82	0.80
32:Y:95:LYS:HE3	32:Y:99:CYS:O	1.80	0.80
5:4:31:ILE:HG21	17:G:142:PRO:HB2	1.63	0.80
21:N:22:THR:HA	21:N:61:ARG:HB2	1.63	0.80
33:Z:30:ASN:ND2	33:Z:32:HIS:H	1.78	0.80
7:6:7:ILE:HB	7:6:27:LYS:HZ2	1.47	0.80
7:6:12:GLU:HG3	7:6:23:THR:CG2	2.11	0.80

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:1678:G:N2	11:A:1989:G:H22	1.80	0.80
21:N:72:TYR:HD2	21:N:90:MET:HG3	1.46	0.80
17:G:67:LYS:HD3	17:G:67:LYS:N	1.97	0.80
21:N:72:TYR:CD2	21:N:90:MET:HG3	2.16	0.80
22:O:47:ILE:HG23	22:O:48:PRO:HD2	1.62	0.80
16:F:178:PRO:HG2	16:F:179:GLU:OE1	1.81	0.80
11:A:1876:A:C2'	11:A:1877:A:H5''	2.12	0.80
25:R:92:GLY:H	25:R:94:TYR:HE1	1.30	0.80
15:E:105:THR:HB	15:E:197:ILE:HG23	1.64	0.80
17:G:47:LYS:HD3	17:G:81:LYS:HG3	1.64	0.80
11:A:2189:U:C2'	11:A:2190:G:H4'	2.10	0.80
11:A:654(H):G:C2'	11:A:654(I):C:H5'	2.12	0.80
33:Z:23:LYS:O	33:Z:24:LEU:HB3	1.82	0.80
27:T:24:PRO:HD3	27:T:52:ILE:HD12	1.63	0.80
7:6:18:ARG:NH1	7:6:18:ARG:HG2	1.90	0.79
6:5:33:CYS:HG	6:5:49:CYS:HG	1.03	0.79
9:8:17:THR:CG2	9:8:21:LYS:HB2	2.12	0.79
3:2:10:LEU:HD21	3:2:14:ARG:CZ	2.11	0.79
3:2:68:ARG:O	3:2:69:ARG:HG3	1.83	0.79
27:T:28:VAL:HG22	27:T:47:GLY:H	1.41	0.79
11:A:296:C:O2'	11:A:297:C:H5'	1.82	0.79
11:A:621:A:H2'	11:A:622:G:H5'	1.65	0.79
27:T:23:ARG:HG2	27:T:120:ARG:HH12	1.46	0.79
27:T:115:ARG:HH11	27:T:115:ARG:HG3	1.44	0.79
26:S:13:ARG:HG3	26:S:14:VAL:H	1.47	0.79
11:A:1865:G:H5'	11:A:1866:C:OP2	1.82	0.79
15:E:111:ARG:HA	25:R:2:ARG:HG3	1.64	0.79
28:U:92:ARG:O	28:U:94:ASN:N	2.15	0.79
31:X:24:GLY:O	31:X:82:GLN:HA	1.83	0.79
32:Y:10:GLY:CA	32:Y:27:VAL:HG13	2.13	0.79
13:C:76:ALA:HB3	13:C:94:VAL:HG13	1.65	0.79
11:A:2645:G:H3'	11:A:2646:C:C5'	2.10	0.79
11:A:1279:G:H4'	25:R:31:HIS:HD2	1.45	0.79
11:A:586:A:H5'	16:F:89:VAL:HG21	1.64	0.79
17:G:51:ARG:HD3	17:G:53:LEU:HD21	1.64	0.79
11:A:1902:C:O2'	14:D:244:ARG:HB3	1.83	0.79
32:Y:8:LYS:CD	32:Y:8:LYS:H	1.96	0.79
11:A:2187:G:C2'	11:A:2188:C:H5'	2.12	0.79
16:F:29:ASN:HD22	16:F:32:LEU:HB2	1.45	0.79
27:T:55:ASN:H	27:T:59:THR:HG22	1.48	0.79
26:S:85:VAL:HG23	26:S:106:ARG:HG3	1.62	0.79
11:A:886:C:O2'	11:A:887:A:H4'	1.83	0.79

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:655:A:H4'	11:A:656:G:H5'	1.65	0.79
11:A:2159:G:H2'	11:A:2160:G:H5''	1.65	0.79
11:A:612:C:H2'	11:A:613:G:H5'	1.63	0.79
25:R:18:LEU:HD11	25:R:22:ARG:CZ	2.13	0.79
16:F:46:ARG:HH11	16:F:46:ARG:HG2	1.48	0.79
32:Y:13:VAL:HG23	32:Y:73:ARG:O	1.82	0.79
17:G:63:ILE:HG22	17:G:143:GLU:HB2	1.63	0.78
11:A:1803:A:O3'	14:D:259:THR:HG21	1.83	0.78
31:X:12:VAL:HG23	31:X:13:LEU:N	1.97	0.78
16:F:24:LEU:HB3	16:F:25:PRO:CD	2.13	0.78
7:6:17:LYS:HB3	7:6:18:ARG:HH12	1.48	0.78
11:A:733:G:N7	11:A:761:A:C6	2.51	0.78
17:G:114:ILE:O	17:G:116:ASP:N	2.15	0.78
15:E:167:VAL:HG12	15:E:189:PRO:HD3	1.65	0.78
29:V:64:HIS:ND1	29:V:92:THR:HG22	1.98	0.78
9:8:4:MET:O	9:8:62:LEU:HD11	1.83	0.78
11:A:1887:C:C2'	11:A:1888:G:H5''	2.12	0.78
16:F:29:ASN:ND2	16:F:32:LEU:HB2	1.98	0.78
11:A:2101:G:C2'	11:A:2102:U:H5''	2.14	0.78
7:6:11:LEU:HD22	7:6:12:GLU:H	1.48	0.78
11:A:2572:A:C8	15:E:144:ARG:HD2	2.19	0.78
11:A:1720:U:H3'	11:A:1721:G:H5''	1.66	0.78
31:X:12:VAL:CG2	31:X:13:LEU:H	1.95	0.78
18:H:42:ARG:O	18:H:43:VAL:HG13	1.82	0.78
33:Z:151:HIS:CB	33:Z:170:THR:HA	2.14	0.78
11:A:2801(A):A:H4'	11:A:2802:G:H5'	1.65	0.78
11:A:1039:G:H1	11:A:1116:C:H42	1.32	0.78
21:N:30:ILE:O	21:N:34:LEU:HB2	1.83	0.78
13:C:123:VAL:HG23	13:C:127:LEU:HD13	1.65	0.78
23:P:41:ARG:CA	23:P:41:ARG:HH11	1.97	0.78
2:1:8:SER:HB3	2:1:66:HIS:CE1	2.19	0.78
33:Z:152:ALA:O	33:Z:155:LEU:HD22	1.84	0.78
26:S:12:PHE:C	26:S:12:PHE:HD1	1.86	0.78
11:A:225:A:O2'	11:A:257:A:H4'	1.83	0.78
11:A:2760:C:H2'	11:A:2761:G:H5''	1.64	0.77
28:U:48:ALA:O	28:U:52:ARG:HG3	1.84	0.77
3:2:33:MET:O	3:2:37:PHE:HB2	1.84	0.77
16:F:53:THR:HG23	16:F:55:GLY:H	1.49	0.77
6:5:3:LYS:HD3	11:A:747:U:P	2.24	0.77
11:A:2173:A:N3	11:A:2173:A:H2'	1.99	0.77
1:0:14:ARG:HH11	1:0:14:ARG:HG3	1.49	0.77
21:N:47:ALA:HB2	21:N:112:LEU:HD11	1.63	0.77

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:H:85:LYS:NZ	18:H:133:VAL:H	1.81	0.77
33:Z:24:LEU:HD23	33:Z:24:LEU:O	1.84	0.77
11:A:2131:G:H1'	11:A:2133:G:H21	1.48	0.77
21:N:46:VAL:CG1	21:N:48:MET:HG3	2.12	0.77
14:D:186:HIS:HD2	14:D:188:GLU:H	1.31	0.77
33:Z:9:TYR:HE1	33:Z:35:ARG:CZ	1.98	0.77
11:A:330:A:C2	11:A:1210:A:H2'	2.18	0.77
2:1:15:ALA:HB2	2:1:42:GLN:HG3	1.66	0.77
11:A:1264:G:H3'	11:A:1265:A:H5''	1.65	0.77
3:2:68:ARG:HA	3:2:72:ALA:HB3	1.67	0.77
11:A:512:G:HO2'	11:A:513:A:H8	1.29	0.77
27:T:55:ASN:N	27:T:59:THR:HG22	2.00	0.77
9:8:8:LYS:HB3	9:8:12:LYS:HE3	1.66	0.77
11:A:1038:C:H2'	11:A:1039:G:H5''	1.65	0.77
32:Y:2:ARG:HD3	32:Y:3:VAL:HG23	1.66	0.77
32:Y:7:VAL:HG21	32:Y:8:LYS:NZ	2.00	0.77
23:P:112:LEU:H	23:P:128:HIS:HD2	1.33	0.77
32:Y:28:LYS:HD2	32:Y:39:VAL:HG22	1.66	0.77
14:D:69:ARG:NH2	14:D:128:GLY:O	2.17	0.77
31:X:12:VAL:HB	31:X:17:ALA:CB	2.13	0.77
11:A:2186:G:H2'	11:A:2187:G:C8	2.20	0.77
11:A:672:C:C2'	11:A:673:C:H5''	2.14	0.77
11:A:1403:C:H5''	11:A:1471:A:H1'	1.67	0.77
6:5:24:ALA:O	6:5:25:LEU:HB2	1.82	0.77
18:H:16:SER:HB2	18:H:27:LYS:HB2	1.66	0.77
23:P:58:THR:HB	23:P:61:ARG:HH21	1.49	0.77
7:6:19:ARG:HG2	7:6:20:ASN:N	1.98	0.77
11:A:2485:G:H5''	24:Q:46:GLN:HE21	1.48	0.77
9:8:32:LEU:HD13	11:A:2391:G:H3'	1.67	0.77
11:A:28:A:N6	11:A:512:G:H1'	2.00	0.77
4:3:6:VAL:HG12	4:3:56:VAL:HG22	1.67	0.77
11:A:1826:G:H4'	14:D:242:ARG:NH2	2.00	0.76
25:R:72:ASP:HB3	25:R:75:LEU:HB3	1.65	0.76
11:A:658:C:H2'	11:A:659:C:H6	1.51	0.76
21:N:51:PHE:CZ	21:N:119:ARG:HD2	2.20	0.76
29:V:29:PRO:HA	29:V:61:VAL:HG23	1.65	0.76
11:A:2305:A:H3'	11:A:2306:C:H5''	1.68	0.76
8:7:10:ARG:HH11	8:7:10:ARG:HG2	1.51	0.76
11:A:1681:G:O2'	11:A:1762:A:H2'	1.85	0.76
26:S:66:ALA:HA	26:S:69:VAL:HG12	1.66	0.76
14:D:30:GLU:CB	14:D:35:LYS:HZ3	1.99	0.76
16:F:132:VAL:HG13	16:F:133:ASN:ND2	2.00	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:S:30:ARG:HH22	26:S:62:LYS:CD	1.98	0.76
26:S:13:ARG:CG	26:S:14:VAL:H	1.99	0.76
11:A:2875:C:H4'	27:T:5:ALA:CB	2.15	0.76
12:B:20:C:C2'	12:B:21:G:H5''	2.16	0.76
15:E:35:GLN:HB3	15:E:48:GLN:HB3	1.68	0.76
11:A:2796:U:H3'	11:A:2799:C:H5'	1.67	0.76
22:O:76:ALA:HB3	27:T:75:ILE:HD13	1.67	0.76
11:A:2853:C:H2'	11:A:2854:G:H8	1.50	0.76
9:8:15:LYS:CD	23:P:65:ARG:HH22	1.97	0.76
33:Z:24:LEU:HD21	33:Z:86:VAL:HG23	1.66	0.76
14:D:44:ASN:HB3	14:D:49:ILE:HA	1.65	0.76
21:N:46:VAL:HG13	21:N:48:MET:HG3	1.67	0.76
11:A:650:C:H3'	11:A:651:G:H5''	1.68	0.76
13:C:77:ILE:HB	13:C:115:ALA:HB2	1.68	0.76
13:C:82:LYS:HE2	13:C:82:LYS:HA	1.68	0.76
27:T:65:LYS:HE3	27:T:67:SER:HB2	1.68	0.76
6:5:29:THR:HG21	11:A:2814:C:O2'	1.86	0.76
14:D:31:LYS:NZ	14:D:33:LEU:HG	2.00	0.76
5:4:12:ALA:HB1	5:4:29:PRO:O	1.86	0.76
3:2:40:SER:HB3	31:X:13:LEU:HD11	1.68	0.76
15:E:101:ARG:CZ	15:E:171:GLU:HB2	2.16	0.76
11:A:2875:C:H4'	27:T:5:ALA:HB3	1.65	0.76
18:H:28:GLY:HA3	18:H:79:VAL:HB	1.68	0.76
33:Z:114:GLY:O	33:Z:146:ILE:HB	1.85	0.76
18:H:158:HIS:O	18:H:159:GLU:HB2	1.85	0.76
11:A:330:A:O2'	11:A:331:A:H8	1.69	0.76
11:A:1542:A:H5'	11:A:1543:C:OP2	1.86	0.76
23:P:47:ASP:HB3	23:P:48:PRO:HA	1.68	0.76
25:R:103:ARG:HG3	30:W:40:ASN:OD1	1.85	0.76
4:3:15:TYR:HD2	4:3:19:GLN:HE22	1.34	0.76
11:A:1059:G:H5'	11:A:1060:U:H2'	1.67	0.75
11:A:1434:A:H61	11:A:1558:A:N6	1.84	0.75
28:U:85:LYS:HD3	28:U:117:GLN:HE22	1.51	0.75
27:T:39:ARG:H	27:T:39:ARG:HD2	1.51	0.75
14:D:25:THR:HG22	14:D:26:LYS:HE2	1.68	0.75
17:G:83:ARG:HB2	17:G:84:LYS:HD2	1.68	0.75
21:N:129:PRO:O	21:N:130:HIS:HB3	1.86	0.75
9:8:54:GLU:O	9:8:58:ILE:HG12	1.86	0.75
12:B:40:U:H3'	12:B:41:U:H5''	1.68	0.75
11:A:760:G:C2'	11:A:761:A:H5'	2.16	0.75
11:A:1040:C:H2'	11:A:1041:G:C8	2.21	0.75
11:A:2523:G:C2'	11:A:2524:G:H5''	2.15	0.75

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:T:58:ASN:H	27:T:58:ASN:HD22	1.33	0.75
16:F:3:GLU:CA	16:F:24:LEU:HG	2.17	0.75
9:8:33:ASN:HB3	9:8:36:LYS:HD2	1.69	0.75
11:A:2160:G:H5'	11:A:2160:G:C8	2.21	0.75
26:S:56:LEU:O	26:S:56:LEU:HD23	1.86	0.75
25:R:14:SER:HA	25:R:17:ARG:HH12	1.50	0.75
14:D:43:ARG:HE	14:D:44:ASN:ND2	1.82	0.75
32:Y:36:ALA:HB1	32:Y:67:LEU:O	1.86	0.75
11:A:1899:G:O2'	11:A:1900:A:H5''	1.86	0.75
27:T:85:LYS:HZ3	27:T:85:LYS:HB3	1.49	0.75
13:C:119:VAL:HG23	13:C:120:MET:CE	2.17	0.75
11:A:1061:U:H4'	11:A:1070:A:H1'	1.69	0.75
29:V:15:GLU:HB3	29:V:16:PRO:CD	2.16	0.75
7:6:53:LYS:HG2	7:6:54:ILE:N	2.01	0.75
11:A:272(D):G:H1	11:A:364:C:H42	1.35	0.75
11:A:760:G:H2'	11:A:761:A:H5'	1.68	0.75
28:U:3:ARG:HH12	28:U:5:LYS:HB3	1.51	0.75
11:A:2036:C:H6	11:A:2036:C:H5'	1.51	0.75
14:D:34:VAL:HG23	14:D:35:LYS:N	2.00	0.75
11:A:2645:G:C3'	11:A:2646:C:H5'	2.12	0.75
31:X:55:ASN:HB2	31:X:80:ILE:HG12	1.68	0.75
9:8:34:TRP:HB2	11:A:2420:C:OP1	1.87	0.75
18:H:118:PRO:HG2	18:H:121:ILE:HD12	1.68	0.75
13:C:10:LEU:HD12	13:C:32:LEU:HA	1.69	0.75
11:A:1880:C:C3'	11:A:1881:C:H5''	2.17	0.75
14:D:226:MET:CE	14:D:231:HIS:HB2	2.16	0.75
2:1:29:GLY:O	2:1:30:VAL:HG22	1.87	0.75
27:T:29:ARG:HB3	27:T:85:LYS:HA	1.69	0.74
33:Z:37:VAL:HG23	33:Z:38:TYR:N	2.00	0.74
15:E:128:SER:OG	15:E:129:HIS:N	2.19	0.74
27:T:27:THR:HG23	27:T:28:VAL:H	1.52	0.74
23:P:38:GLN:HG3	23:P:39:LYS:H	1.51	0.74
29:V:35:LEU:HD23	29:V:57:VAL:HG13	1.69	0.74
11:A:271(L):U:H4'	11:A:271(M):G:C8	2.22	0.74
33:Z:126:VAL:HA	33:Z:163:LEU:HA	1.68	0.74
11:A:2523:G:H2'	11:A:2524:G:H5''	1.68	0.74
11:A:1221(A):C:H2'	11:A:1222:C:C6	2.22	0.74
11:A:2668:G:O2'	11:A:2669:G:H5'	1.87	0.74
27:T:82:LEU:N	27:T:82:LEU:HD12	2.01	0.74
6:5:40:LYS:HE2	6:5:46:CYS:HB3	1.67	0.74
23:P:16:ARG:O	23:P:16:ARG:HD3	1.86	0.74
28:U:90:VAL:O	28:U:92:ARG:N	2.20	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:F:57:VAL:HG21	16:F:87:GLY:HA2	1.69	0.74
11:A:500:G:N2	11:A:502:A:H3'	2.01	0.74
22:O:87:ILE:CG2	22:O:91:LEU:HA	2.17	0.74
15:E:33:VAL:HG13	15:E:69:LYS:HE3	1.69	0.74
11:A:2179:C:H5''	11:A:2180:U:OP1	1.87	0.74
12:B:17:C:H2'	12:B:18:G:O4'	1.87	0.74
18:H:156:ALA:C	18:H:158:HIS:H	1.89	0.74
11:A:1683:C:H2'	11:A:1684:C:C6	2.22	0.74
32:Y:90:LEU:HD23	32:Y:90:LEU:H	1.53	0.74
11:A:970:C:H2'	11:A:971:C:H6	1.50	0.74
26:S:101:LEU:O	26:S:101:LEU:HD12	1.87	0.74
11:A:1494:A:C2'	11:A:1495:A:H5''	2.17	0.74
2:1:13:ILE:CD1	11:A:396:G:H5'	2.18	0.74
17:G:34:LEU:HA	17:G:161:THR:HA	1.68	0.74
23:P:62:LEU:H	23:P:62:LEU:CD2	1.99	0.74
16:F:177:ALA:HB1	16:F:178:PRO:HD2	1.70	0.74
11:A:1543:C:H3'	11:A:1544:A:C5'	2.17	0.74
27:T:23:ARG:HG2	27:T:120:ARG:NH1	2.02	0.74
11:A:1880:C:H3'	11:A:1881:C:H5''	1.70	0.74
31:X:29:TRP:CZ3	31:X:78:LYS:HB3	2.23	0.74
33:Z:69:THR:CG2	33:Z:90:VAL:HA	2.10	0.74
25:R:27:SER:O	25:R:30:THR:HG23	1.88	0.74
11:A:614(A):U:H4'	11:A:614(B):G:H5''	1.69	0.74
15:E:116:VAL:O	15:E:117:MET:HB2	1.88	0.74
26:S:83:LYS:HG2	26:S:105:ALA:HB3	1.69	0.74
11:A:1899:G:H21	11:A:1902:C:N4	1.81	0.73
16:F:7:TYR:HB3	16:F:16:GLY:O	1.88	0.73
18:H:117:PRO:HB3	18:H:123:PHE:CE1	2.22	0.73
21:N:107:LEU:HB3	21:N:108:PRO:HD2	1.70	0.73
2:1:37:ILE:H	2:1:37:ILE:HD13	1.52	0.73
11:A:1599:C:H2'	11:A:1600:C:H6	1.54	0.73
11:A:2604:U:C6	11:A:2604:U:H5'	2.22	0.73
11:A:1301:A:O2'	11:A:1302:A:C2'	2.35	0.73
13:C:175:VAL:CG1	13:C:188:ASN:HB3	2.15	0.73
13:C:53:ARG:HB3	13:C:53:ARG:NH1	2.01	0.73
33:Z:114:GLY:H	33:Z:146:ILE:HG21	1.53	0.73
17:G:46:ALA:HB2	17:G:88:ILE:HG13	1.70	0.73
17:G:73:ALA:H	17:G:87:PRO:CG	2.01	0.73
11:A:2100:G:H2'	11:A:2101:G:C8	2.24	0.73
13:C:127:LEU:O	13:C:129:ARG:N	2.22	0.73
11:A:442:G:C4'	16:F:46:ARG:HD3	2.18	0.73
11:A:2378:A:N1	26:S:19:LYS:HE3	2.03	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:6:42:TRP:CE3	7:6:42:TRP:HA	2.22	0.73
6:5:50:GLY:HA3	6:5:56:LYS:CD	2.18	0.73
9:8:49:VAL:HG12	9:8:53:PRO:HD3	1.69	0.73
29:V:29:PRO:HB3	29:V:63:GLY:HA2	1.70	0.73
27:T:92:GLY:O	27:T:94:ALA:N	2.22	0.73
28:U:24:TYR:HB2	28:U:29:SER:HB3	1.69	0.73
14:D:35:LYS:HD2	14:D:36:PRO:CD	2.18	0.73
4:3:35:ARG:CB	4:3:35:ARG:HH11	1.96	0.73
28:U:3:ARG:HH11	28:U:3:ARG:HG2	1.54	0.73
11:A:2591:C:H2'	11:A:2592:G:C8	2.23	0.73
26:S:49:VAL:HG12	26:S:50:SER:N	2.01	0.73
11:A:1960:A:H5'	11:A:1960:A:H8	1.52	0.73
27:T:83:ILE:HG13	27:T:84:GLN:N	2.02	0.73
25:R:117:VAL:HG22	25:R:118:GLU:H	1.52	0.73
11:A:2853:C:H2'	11:A:2854:G:C8	2.23	0.73
11:A:2360:A:C2	11:A:2361:A:H1'	2.24	0.73
11:A:2408:U:H2'	11:A:2409:G:C8	2.23	0.73
9:8:6:THR:HB	9:8:11:LYS:HZ1	1.52	0.73
17:G:138:GLN:OE1	17:G:153:ARG:HG2	1.88	0.73
11:A:1190:G:H5'	23:P:35:HIS:N	2.02	0.73
29:V:13:ARG:HG3	29:V:13:ARG:HH11	1.53	0.73
23:P:148:LEU:O	23:P:149:GLU:HB2	1.87	0.73
33:Z:72:ARG:CG	33:Z:89:PHE:HB2	2.19	0.73
31:X:49:VAL:HG12	31:X:87:GLN:HE21	1.54	0.73
18:H:83:TYR:CB	18:H:135:GLY:H	2.02	0.72
15:E:36:ARG:NH2	15:E:88:GLY:HA2	2.04	0.72
30:W:29:LEU:HG	30:W:33:ARG:HD2	1.69	0.72
13:C:132:GLY:N	13:C:133:PRO:HD2	2.03	0.72
7:6:15:GLU:HG2	7:6:18:ARG:NH1	2.04	0.72
6:5:41:PRO:HG2	6:5:44:THR:OG1	1.89	0.72
15:E:171:GLU:HB3	15:E:185:LYS:HG2	1.71	0.72
15:E:132:HIS:HA	15:E:135:HIS:HE1	1.54	0.72
23:P:101:VAL:HA	23:P:105:LEU:O	1.88	0.72
27:T:58:ASN:HD22	27:T:58:ASN:N	1.87	0.72
32:Y:87:LYS:HG3	32:Y:88:LYS:H	1.55	0.72
31:X:40:LYS:HG2	31:X:51:VAL:HB	1.70	0.72
11:A:676:A:H8	11:A:2069:G:H21	1.37	0.72
2:1:18:ILE:HG23	2:1:37:ILE:HG22	1.70	0.72
11:A:1019:U:H3	11:A:1142(A):A:H62	1.37	0.72
22:O:63:VAL:HG23	22:O:64:ARG:HG3	1.70	0.72
11:A:2781:A:C5'	11:A:2782:G:H5'	2.19	0.72
11:A:2307:G:N2	11:A:2308:G:H5''	2.02	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:1:45:ASN:ND2	11:A:2090:G:H21	1.86	0.72
18:H:20:ALA:HB1	18:H:21:PRO:CD	2.20	0.72
21:N:23:LEU:HD23	21:N:24:GLY:H	1.50	0.72
26:S:36:TYR:N	26:S:36:TYR:CD1	2.50	0.72
18:H:42:ARG:HG2	18:H:43:VAL:H	1.55	0.72
16:F:196:LEU:O	16:F:200:GLU:HB2	1.89	0.72
23:P:41:ARG:HA	23:P:41:ARG:HH11	1.55	0.72
33:Z:81:ARG:O	33:Z:82:ARG:HB2	1.89	0.72
9:8:59:LYS:HB2	9:8:59:LYS:HZ2	1.53	0.72
28:U:92:ARG:NH2	29:V:11:GLN:H	1.86	0.72
13:C:78:ALA:HA	13:C:116:THR:H	1.54	0.72
11:A:672:C:H2'	11:A:673:C:C5'	2.20	0.72
3:2:38:GLN:HB3	3:2:44:LEU:HB2	1.71	0.72
11:A:2291:U:H2'	11:A:2292:C:C6	2.23	0.72
29:V:18:LEU:HD23	29:V:19:LYS:N	2.05	0.72
11:A:1053:C:H2'	11:A:1054:A:C8	2.25	0.72
8:7:22:MET:HE2	8:7:28:ARG:HG2	1.70	0.72
16:F:25:PRO:HB3	16:F:119:ARG:HB2	1.72	0.72
23:P:58:THR:O	23:P:61:ARG:NE	2.23	0.72
26:S:106:ARG:NH1	26:S:108:GLY:H	1.87	0.72
14:D:37:LEU:HD12	14:D:64:ILE:HD11	1.71	0.72
5:4:40:HIS:HA	5:4:42:PHE:HD1	1.55	0.72
17:G:47:LYS:HE3	17:G:81:LYS:HB2	1.72	0.71
33:Z:168:GLU:HG3	33:Z:168:GLU:O	1.88	0.71
25:R:92:GLY:N	25:R:94:TYR:HE1	1.86	0.71
13:C:77:ILE:HD13	13:C:95:GLY:HA3	1.71	0.71
31:X:57:LEU:HD22	31:X:57:LEU:O	1.89	0.71
3:2:32:LEU:O	3:2:35:LEU:HB3	1.90	0.71
15:E:57:LYS:CE	15:E:57:LYS:HA	2.18	0.71
26:S:30:ARG:NH2	26:S:62:LYS:HD3	1.97	0.71
30:W:6:ILE:HG12	30:W:104:THR:CG2	2.19	0.71
23:P:64:LYS:C	23:P:66:GLY:H	1.94	0.71
26:S:12:PHE:HD1	26:S:13:ARG:N	1.88	0.71
4:3:43:ILE:O	4:3:47:VAL:HG23	1.89	0.71
11:A:1341:U:H4'	31:X:57:LEU:HB3	1.71	0.71
15:E:9:VAL:CG1	15:E:25:VAL:HB	2.20	0.71
18:H:12:PRO:N	18:H:48:GLY:HA2	2.04	0.71
17:G:76:SER:OG	17:G:84:LYS:N	2.23	0.71
25:R:55:ALA:HB2	25:R:79:LEU:HD11	1.73	0.71
14:D:186:HIS:CD2	14:D:188:GLU:H	2.07	0.71
11:A:1652:A:H2'	11:A:1653:G:H5'	1.72	0.71
11:A:2401:U:H2'	11:A:2402:C:H5''	1.72	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:2298:A:H62	11:A:2318:G:H8	1.35	0.71
25:R:2:ARG:HD2	25:R:2:ARG:C	2.10	0.71
14:D:43:ARG:HH21	14:D:44:ASN:HD21	1.39	0.71
33:Z:113:ALA:HB1	33:Z:146:ILE:HD13	1.72	0.71
11:A:1409:C:H2'	11:A:1410:G:C8	2.25	0.71
11:A:1170:G:H1	11:A:1179:C:H42	1.36	0.71
17:G:34:LEU:HD12	17:G:34:LEU:O	1.90	0.71
18:H:51:ARG:HG3	18:H:52:VAL:H	1.56	0.71
17:G:139:LEU:CA	17:G:144:ILE:HG12	2.16	0.71
3:2:25:VAL:O	3:2:28:LYS:HB2	1.91	0.71
11:A:1539:G:C2'	11:A:1540:U:H5'	2.20	0.71
1:0:42:GLY:HA3	11:A:2331:G:O4'	1.89	0.71
25:R:117:VAL:HG22	25:R:118:GLU:N	2.05	0.71
9:8:50:LEU:HD12	9:8:51:ALA:N	2.05	0.71
10:9:10:ILE:O	10:9:14:CYS:SG	2.49	0.71
15:E:79:ARG:HH11	15:E:79:ARG:HG2	1.55	0.71
11:A:984:A:H5''	11:A:985:C:H5	1.56	0.71
11:A:661:C:O3'	23:P:18:ARG:HD2	1.90	0.71
11:A:1803:A:O3'	14:D:259:THR:CG2	2.38	0.71
3:2:51:ARG:HB2	3:2:55:ARG:HH12	1.54	0.71
11:A:991:C:H5'	11:A:991:C:H6	1.55	0.71
23:P:75:ILE:HD13	23:P:77:ARG:NH2	2.06	0.71
14:D:158:ALA:HB3	14:D:161:THR:HG21	1.73	0.71
17:G:99:MET:O	17:G:103:LEU:HB2	1.91	0.71
18:H:46:GLU:OE1	18:H:50:VAL:HG13	1.90	0.71
18:H:88:LEU:HD23	18:H:164:TYR:O	1.90	0.71
11:A:2801(A):A:C4'	11:A:2802:G:H5'	2.20	0.71
14:D:28:GLU:H	14:D:29:PRO:CD	2.03	0.71
11:A:2657:A:H5''	11:A:2658:C:H5	1.55	0.71
15:E:28:ALA:HB3	15:E:93:VAL:HG22	1.72	0.71
18:H:66:GLY:HA2	18:H:69:ARG:HB3	1.73	0.71
11:A:2455:G:H2'	11:A:2456:C:C6	2.26	0.71
11:A:2866:U:C6	11:A:2868:A:H1'	2.26	0.71
7:6:8:LYS:HE3	7:6:25:LYS:HD3	1.73	0.71
28:U:90:VAL:HG12	28:U:91:ASP:N	2.06	0.71
11:A:2134:A:N6	11:A:2157:G:H1'	2.06	0.71
11:A:444:C:OP2	28:U:2:PRO:HD3	1.89	0.71
10:9:15:LYS:HB3	10:9:15:LYS:NZ	2.06	0.71
11:A:197:A:H5'	11:A:197:A:H8	1.54	0.71
21:N:58:ASP:C	21:N:60:ILE:H	1.93	0.70
17:G:5:VAL:HB	17:G:8:LYS:CB	2.20	0.70
11:A:633:A:H2'	11:A:634:C:H5'	1.73	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:1293:C:C2'	11:A:1294:U:H5''	2.20	0.70
15:E:132:HIS:CA	15:E:135:HIS:HE1	2.03	0.70
18:H:70:THR:HG22	18:H:74:ASN:ND2	2.06	0.70
2:1:90:ILE:O	2:1:94:LEU:HD13	1.91	0.70
24:Q:43:THR:HG22	24:Q:94:VAL:HG12	1.72	0.70
11:A:2136:C:H2'	11:A:2137:C:H6	1.54	0.70
14:D:30:GLU:HB3	14:D:35:LYS:NZ	2.04	0.70
11:A:2103:C:H2'	11:A:2186:G:N2	2.06	0.70
23:P:16:ARG:HB2	23:P:16:ARG:HH11	1.52	0.70
24:Q:134:ARG:NE	33:Z:122:ARG:HH21	1.89	0.70
22:O:8:LEU:HD23	22:O:8:LEU:N	2.06	0.70
11:A:1709:U:H2'	11:A:1710:C:C6	2.26	0.70
11:A:271(C):C:H2'	11:A:271(D):G:H8	1.56	0.70
17:G:101:ILE:O	17:G:105:LYS:HG2	1.91	0.70
23:P:30:THR:CG2	23:P:31:ALA:N	2.53	0.70
33:Z:153:SER:HB2	33:Z:167:PRO:CB	2.21	0.70
24:Q:134:ARG:HD2	33:Z:122:ARG:NH2	2.06	0.70
26:S:12:PHE:C	26:S:12:PHE:CD1	2.60	0.70
29:V:35:LEU:O	29:V:37:VAL:N	2.17	0.70
17:G:145:THR:HB	17:G:148:MET:HB3	1.72	0.70
27:T:30:VAL:HG12	27:T:44:ASP:CG	2.11	0.70
17:G:177:GLY:O	17:G:179:PRO:HD3	1.91	0.70
29:V:47:VAL:HG12	29:V:52:VAL:HB	1.73	0.70
11:A:1400:G:H2'	11:A:1401:G:C8	2.26	0.70
12:B:30:C:H1'	12:B:57:A:H61	1.55	0.70
11:A:747:U:O2	11:A:2014:A:H1'	1.91	0.70
11:A:2392:A:H2	11:A:2424:C:H42	1.38	0.70
17:G:42:GLY:O	17:G:89:GLY:HA2	1.90	0.70
18:H:85:LYS:NZ	18:H:132:ARG:HA	2.07	0.70
18:H:54:ARG:HB2	18:H:55:PRO:HD2	1.72	0.70
11:A:549:G:O2'	11:A:551:G:H5'	1.91	0.70
28:U:92:ARG:HH21	29:V:10:LYS:HB3	1.54	0.70
23:P:126:VAL:HA	23:P:145:PRO:CG	2.20	0.70
6:5:25:LEU:HD12	30:W:19:LEU:HG	1.73	0.70
11:A:2796:U:H3'	11:A:2799:C:C5'	2.22	0.70
14:D:28:GLU:N	14:D:29:PRO:CD	2.54	0.70
27:T:12:SER:O	27:T:15:VAL:HG12	1.91	0.70
11:A:1348:G:C2'	11:A:1349:A:H5''	2.22	0.70
22:O:104:ARG:HH21	27:T:33:LYS:CE	2.03	0.70
16:F:103:LYS:HG3	16:F:106:ARG:NH2	2.07	0.70
11:A:1540:U:H3'	11:A:1541:G:H3'	1.71	0.70
11:A:1105:U:H2'	11:A:1106:G:C8	2.26	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:2:41:ILE:HD11	3:2:44:LEU:HD12	1.72	0.70
11:A:581:C:H2'	11:A:582:G:H8	1.57	0.70
25:R:12:ARG:HD3	25:R:16:HIS:ND1	2.06	0.70
11:A:2472:G:H5'	11:A:2473:U:H5''	1.72	0.70
21:N:3:THR:HG22	21:N:4:TYR:H	1.57	0.70
17:G:83:ARG:HD2	17:G:84:LYS:NZ	2.07	0.70
11:A:2108:C:H2'	11:A:2108:C:O2	1.90	0.70
31:X:8:ILE:CD1	31:X:8:ILE:H	2.05	0.70
11:A:674:G:H1'	16:F:74:ARG:HD2	1.72	0.70
18:H:50:VAL:HG12	18:H:52:VAL:HG23	1.73	0.70
33:Z:9:TYR:OH	33:Z:35:ARG:HG3	1.91	0.70
4:3:8:LEU:HD22	4:3:31:LEU:HD23	1.72	0.70
14:D:70:TRP:CH2	14:D:150:LYS:HA	2.26	0.70
17:G:39:ILE:HD12	17:G:60:LEU:HD11	1.74	0.70
7:6:25:LYS:HD2	11:A:2285:C:H41	1.57	0.70
11:A:2761:G:H2'	11:A:2762:G:C5'	2.18	0.70
23:P:95:VAL:HG23	23:P:125:VAL:HA	1.72	0.70
23:P:122:PRO:HA	23:P:141:ALA:O	1.92	0.70
11:A:1817:G:H2'	11:A:1818:U:H5'	1.73	0.70
33:Z:144:LEU:HD12	33:Z:174:VAL:HG23	1.74	0.70
32:Y:28:LYS:HG2	32:Y:39:VAL:HA	1.74	0.70
26:S:99:LYS:HG2	26:S:99:LYS:O	1.92	0.70
2:1:13:ILE:HD11	11:A:396:G:H5'	1.73	0.70
11:A:1141:U:H2'	21:N:63:THR:CG2	2.22	0.70
9:8:32:LEU:HB3	9:8:36:LYS:NZ	2.07	0.69
26:S:30:ARG:NH2	26:S:62:LYS:HB3	2.07	0.69
27:T:56:GLY:O	27:T:59:THR:HG23	1.92	0.69
9:8:8:LYS:O	9:8:12:LYS:HG3	1.91	0.69
22:O:94:ARG:HH11	22:O:94:ARG:HG2	1.57	0.69
11:A:1779:U:C5	11:A:1784:A:N7	2.59	0.69
23:P:85:LEU:HA	23:P:88:LEU:CB	2.21	0.69
11:A:1107:G:H4'	19:J:81:UNK:CB	2.22	0.69
18:H:98:LEU:HD12	18:H:102:ALA:O	1.92	0.69
11:A:914:C:H2'	11:A:915:C:H5'	1.72	0.69
17:G:73:ALA:O	17:G:85:GLY:HA2	1.92	0.69
17:G:73:ALA:HB3	17:G:87:PRO:HG3	1.74	0.69
18:H:158:HIS:ND1	18:H:168:PRO:HB2	2.06	0.69
11:A:298:G:H5'	11:A:299:A:OP1	1.91	0.69
15:E:48:GLN:HB2	15:E:80:GLU:HG2	1.74	0.69
27:T:58:ASN:ND2	27:T:58:ASN:H	1.89	0.69
25:R:44:LEU:HD13	25:R:44:LEU:O	1.92	0.69
32:Y:75:ILE:HG23	32:Y:76:CYS:N	2.05	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:1068:G:H1'	11:A:1069:A:OP2	1.92	0.69
11:A:1188:U:O2'	11:A:1189:A:H5'	1.91	0.69
23:P:112:LEU:H	23:P:128:HIS:CD2	2.09	0.69
23:P:81:GLN:NE2	23:P:106:LEU:HA	2.07	0.69
7:6:42:TRP:HE3	7:6:42:TRP:HA	1.56	0.69
29:V:49:THR:HB	29:V:50:PRO:HD2	1.75	0.69
17:G:20:ILE:O	17:G:24:GLY:HA2	1.92	0.69
11:A:479:A:O2'	11:A:481:G:H5'	1.92	0.69
14:D:26:LYS:O	14:D:27:THR:HG22	1.92	0.69
16:F:157:VAL:HG22	16:F:194:MET:HA	1.73	0.69
23:P:30:THR:HG22	23:P:31:ALA:N	2.06	0.69
12:B:3:C:N4	12:B:118:G:H1	1.90	0.69
27:T:96:ARG:NH1	27:T:96:ARG:HB2	2.06	0.69
11:A:1005:C:H2'	11:A:1006:C:H6	1.56	0.69
11:A:2050:C:H1'	15:E:156:MET:CE	2.21	0.69
15:E:38:THR:HB	15:E:41:LYS:HE2	1.74	0.69
29:V:72:VAL:HG23	29:V:85:LYS:HB3	1.72	0.69
16:F:113:ALA:HB1	16:F:186:ILE:HG21	1.73	0.69
27:T:3:ARG:O	27:T:6:LEU:HD12	1.93	0.69
14:D:33:LEU:O	14:D:36:PRO:HD2	1.92	0.69
16:F:127:GLU:HB2	16:F:196:LEU:HD12	1.74	0.69
26:S:89:ARG:O	26:S:92:TYR:HB3	1.92	0.69
9:8:50:LEU:HD12	9:8:51:ALA:H	1.58	0.69
33:Z:29:TYR:HB3	33:Z:34:ASN:HB2	1.75	0.69
11:A:519:U:H2'	11:A:520:G:H8	1.56	0.69
11:A:244:A:H4'	23:P:74:GLU:CG	2.23	0.69
11:A:127:A:H5''	11:A:128:C:O4'	1.92	0.69
11:A:2502:G:H5''	11:A:2503:A:H5''	1.74	0.69
32:Y:27:VAL:HG12	32:Y:29:GLU:H	1.57	0.69
3:2:68:ARG:HH11	3:2:68:ARG:CB	1.98	0.69
26:S:28:VAL:HG12	26:S:29:PHE:N	2.08	0.69
6:5:50:GLY:HA3	6:5:56:LYS:CE	2.23	0.69
29:V:21:ARG:HG2	29:V:91:TYR:HD2	1.58	0.69
11:A:1223:G:H8	11:A:1223:G:H5'	1.56	0.69
15:E:181:LEU:HD21	27:T:7:ILE:CG2	2.23	0.69
11:A:581:C:H2'	11:A:582:G:C8	2.27	0.69
15:E:30:PRO:HD3	15:E:180:ASN:ND2	2.08	0.69
16:F:41:LEU:HD23	16:F:44:ARG:HD3	1.73	0.69
11:A:2396:G:O2'	11:A:2397:G:H5'	1.92	0.69
1:0:7:LEU:HD13	24:Q:85:LYS:HD2	1.73	0.69
9:8:11:LYS:NZ	9:8:63:PRO:HG3	2.08	0.69
15:E:38:THR:CB	15:E:41:LYS:HE2	2.23	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:P:64:LYS:O	23:P:66:GLY:N	2.22	0.69
33:Z:23:LYS:HD3	33:Z:38:TYR:CE1	2.28	0.69
22:O:4:PRO:O	22:O:5:GLN:HB2	1.93	0.69
11:A:425:G:H2'	11:A:426:C:H6	1.57	0.69
26:S:17:ARG:O	26:S:20:ARG:HG2	1.93	0.69
14:D:30:GLU:CB	14:D:35:LYS:NZ	2.56	0.68
8:7:34:ARG:HH11	8:7:34:ARG:HG3	1.58	0.68
11:A:811:U:O2'	11:A:812:C:H5''	1.92	0.68
11:A:1115:G:H2'	11:A:1116:C:C6	2.28	0.68
11:A:1409:C:H2'	11:A:1410:G:H8	1.58	0.68
9:8:16:ILE:HD12	9:8:57:ARG:HG2	1.75	0.68
14:D:124:PRO:HG2	14:D:129:ASN:ND2	2.08	0.68
11:A:2145:C:H5''	11:A:2146:C:OP2	1.92	0.68
11:A:672:C:H2'	11:A:673:C:H5''	1.75	0.68
11:A:2125:G:OP1	13:C:40:THR:HG21	1.93	0.68
21:N:46:VAL:O	21:N:47:ALA:HB3	1.93	0.68
11:A:583:G:OP2	28:U:10:ARG:HD2	1.93	0.68
11:A:852:G:O2'	11:A:853:G:H5'	1.92	0.68
14:D:45:ASN:CG	14:D:46:GLN:H	1.95	0.68
11:A:2811:G:OP1	15:E:60:ASN:HB2	1.94	0.68
11:A:2557:G:H2'	11:A:2558:C:C6	2.28	0.68
23:P:80:TYR:HD1	23:P:111:ARG:HB3	1.58	0.68
26:S:28:VAL:HG12	26:S:29:PHE:H	1.58	0.68
14:D:226:MET:HE2	14:D:231:HIS:HB2	1.75	0.68
11:A:139:G:C6	11:A:140:G:H2'	2.28	0.68
14:D:94:LEU:HB2	14:D:104:TYR:HE1	1.56	0.68
6:5:3:LYS:HE3	6:5:3:LYS:HA	1.75	0.68
32:Y:9:LYS:HG2	32:Y:10:GLY:H	1.58	0.68
12:B:8:U:C6	12:B:8:U:H5'	2.21	0.68
11:A:2689:U:H5''	11:A:2690:C:H5'	1.74	0.68
21:N:119:ARG:CB	21:N:119:ARG:HH11	2.05	0.68
14:D:25:THR:HG22	14:D:26:LYS:CE	2.23	0.68
33:Z:126:VAL:HG12	33:Z:163:LEU:HB3	1.74	0.68
24:Q:56:ARG:HH11	24:Q:56:ARG:CG	2.05	0.68
23:P:101:VAL:HG12	23:P:106:LEU:HB2	1.74	0.68
17:G:60:LEU:O	17:G:63:ILE:HG12	1.93	0.68
11:A:2110:G:N1	11:A:2178:C:H5	1.91	0.68
11:A:528:A:H2	11:A:2043:C:O5'	1.76	0.68
22:O:107:ARG:NH1	27:T:36:GLU:HG2	2.09	0.68
11:A:2312:U:H2'	11:A:2313:C:C5'	2.24	0.68
1:0:62:LEU:HD23	1:0:62:LEU:N	2.09	0.68
23:P:66:GLY:O	23:P:67:MET:HB2	1.92	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:G:120:LEU:HD21	17:G:133:LEU:HD22	1.74	0.68
11:A:674:G:H1'	16:F:74:ARG:CD	2.23	0.68
11:A:1494:A:H2'	11:A:1495:A:H5''	1.73	0.68
5:4:40:HIS:HA	5:4:42:PHE:H	1.57	0.68
15:E:63:LEU:HD23	15:E:63:LEU:O	1.93	0.68
27:T:50:ILE:HD11	27:T:102:ILE:HD11	1.75	0.68
23:P:135:LEU:HD13	23:P:135:LEU:O	1.94	0.68
11:A:143:G:H2'	11:A:143(A):C:C6	2.29	0.68
25:R:45:ARG:HG3	25:R:46:GLY:H	1.57	0.68
31:X:12:VAL:CB	31:X:17:ALA:HB1	2.20	0.68
23:P:147:LEU:HG	23:P:148:LEU:N	2.08	0.68
15:E:101:ARG:NH1	15:E:171:GLU:HB2	2.09	0.68
32:Y:2:ARG:CD	32:Y:3:VAL:HG23	2.23	0.68
23:P:105:LEU:HD12	23:P:105:LEU:N	2.09	0.68
27:T:90:GLN:O	27:T:92:GLY:N	2.26	0.68
13:C:83:ILE:HD11	13:C:97:GLU:OE2	1.94	0.68
26:S:40:ILE:HG13	26:S:41:ASP:N	2.08	0.68
11:A:863:A:O2'	11:A:864:G:H5'	1.94	0.68
6:5:48:GLU:O	6:5:49:CYS:SG	2.52	0.68
14:D:241:PRO:O	14:D:242:ARG:HB2	1.93	0.68
33:Z:99:TYR:HD2	33:Z:123:ASP:HB3	1.58	0.68
29:V:49:THR:HB	29:V:50:PRO:CD	2.24	0.68
23:P:41:ARG:HA	23:P:41:ARG:NH1	2.09	0.68
11:A:2472:G:C5'	11:A:2473:U:H5''	2.24	0.68
11:A:302:C:H2'	11:A:303:U:C6	2.28	0.68
24:Q:6:ARG:O	24:Q:7:MET:HG3	1.94	0.68
11:A:1600:C:O2'	11:A:1601:G:H5'	1.94	0.68
11:A:1301:A:H4'	11:A:1302:A:OP1	1.93	0.68
17:G:91:ARG:HD2	17:G:92:VAL:N	2.09	0.68
33:Z:18:LEU:CD1	33:Z:18:LEU:H	2.06	0.68
13:C:94:VAL:HG12	13:C:95:GLY:N	2.09	0.68
18:H:144:VAL:O	18:H:148:ILE:HG12	1.94	0.67
25:R:100:LEU:N	25:R:100:LEU:HD13	2.09	0.67
11:A:657:U:H2'	11:A:658:C:C6	2.29	0.67
15:E:117:MET:HA	15:E:122:PHE:H	1.58	0.67
29:V:72:VAL:CG2	29:V:85:LYS:HB3	2.24	0.67
30:W:22:ASP:HA	30:W:25:ARG:HH12	1.58	0.67
11:A:1503:U:O2'	11:A:1504:C:H5'	1.94	0.67
11:A:322:A:H5'	11:A:340:A:H1'	1.74	0.67
6:5:46:CYS:SG	6:5:47:PRO:HD2	2.34	0.67
12:B:106:G:H5''	33:Z:31:ARG:HG2	1.76	0.67
11:A:2159:G:O2'	11:A:2160:G:H5''	1.94	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:3:8:LEU:HD22	4:3:31:LEU:CD2	2.24	0.67
11:A:402:A:O2'	11:A:403:U:H5'	1.94	0.67
16:F:185:ASP:HA	16:F:188:ARG:CD	2.25	0.67
7:6:7:ILE:HB	7:6:27:LYS:NZ	2.09	0.67
11:A:2604:U:H6	11:A:2604:U:C5'	2.07	0.67
6:5:55:ARG:C	6:5:56:LYS:HG3	2.13	0.67
16:F:101:LEU:HD12	16:F:102:PRO:CD	2.24	0.67
15:E:16:ARG:CD	15:E:21:VAL:HG11	2.24	0.67
18:H:41:MET:HG3	18:H:42:ARG:N	2.09	0.67
11:A:1208:C:H2'	11:A:1208:C:O2	1.94	0.67
11:A:1536:C:H2'	11:A:1537:G:H4'	1.75	0.67
11:A:59:U:H3	11:A:68:G:H1	1.42	0.67
17:G:60:LEU:O	17:G:64:THR:HG22	1.94	0.67
18:H:83:TYR:HB2	18:H:134:SER:HA	1.76	0.67
11:A:2334:G:H5'	26:S:13:ARG:HD3	1.75	0.67
33:Z:141:VAL:HG13	33:Z:144:LEU:HB2	1.76	0.67
12:B:82:G:O2'	12:B:83:G:H5'	1.95	0.67
24:Q:79:LEU:HD23	24:Q:80:GLU:H	1.58	0.67
25:R:116:LEU:O	25:R:117:VAL:HG12	1.93	0.67
21:N:47:ALA:HB2	21:N:112:LEU:CD1	2.25	0.67
11:A:2557:G:O2'	11:A:2558:C:H5'	1.95	0.67
27:T:107:ASP:H	27:T:110:ILE:HG12	1.60	0.67
25:R:29:LEU:HD11	25:R:52:ILE:HD11	1.75	0.67
11:A:2524:G:C8	11:A:2524:G:H5'	2.29	0.67
11:A:106:C:H2'	11:A:107:C:H6	1.59	0.67
15:E:116:VAL:O	15:E:117:MET:CB	2.42	0.67
33:Z:141:VAL:HG13	33:Z:144:LEU:CB	2.25	0.67
11:A:267:C:H2'	11:A:268:C:H6	1.58	0.67
11:A:130:C:O3'	11:A:1349:A:H1'	1.94	0.67
17:G:67:LYS:CD	17:G:67:LYS:H	2.01	0.67
11:A:860:U:C5	11:A:917:A:N7	2.62	0.67
11:A:6:A:O2'	21:N:130:HIS:HB2	1.95	0.67
11:A:34:C:H41	11:A:447:A:H61	1.43	0.67
11:A:484:C:H2'	11:A:485:C:C6	2.30	0.67
14:D:34:VAL:CG2	14:D:35:LYS:H	2.06	0.67
27:T:27:THR:O	27:T:28:VAL:CB	2.42	0.67
23:P:84:ASN:CG	23:P:116:GLY:HA2	2.15	0.67
26:S:15:ARG:O	26:S:15:ARG:HD2	1.94	0.67
21:N:10:GLU:OE2	21:N:11:PRO:HD2	1.94	0.67
14:D:261:LYS:HZ1	14:D:263:ARG:NH2	1.92	0.67
2:1:67:ILE:N	2:1:68:PRO:HD2	2.10	0.67
11:A:1810:A:H2'	11:A:1811:G:O4'	1.95	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:H:83:TYR:HB3	18:H:135:GLY:H	1.60	0.67
11:A:1465:G:H5'	11:A:1528:A:H1'	1.76	0.67
23:P:23:PRO:O	23:P:33:ARG:HD2	1.95	0.67
16:F:154:VAL:HG22	16:F:191:ARG:HB3	1.77	0.67
11:A:1050:A:C2'	11:A:1051:G:H5'	2.25	0.67
33:Z:10:ARG:HH21	33:Z:26:GLY:H	1.40	0.67
32:Y:88:LYS:NZ	32:Y:93:GLY:HA3	2.10	0.67
11:A:1331:A:O2'	11:A:1332:G:H8	1.78	0.67
11:A:1242:A:H5'	11:A:1243:G:OP2	1.94	0.67
11:A:2185:C:H2'	11:A:2186:G:C5'	2.24	0.67
21:N:58:ASP:O	21:N:60:ILE:N	2.28	0.67
23:P:146:VAL:HG22	23:P:147:LEU:N	2.06	0.67
11:A:654(C):G:C2'	11:A:654(D):G:H5'	2.24	0.67
11:A:2756:U:H1'	11:A:2757:A:C5'	2.24	0.67
13:C:120:MET:HA	13:C:123:VAL:HG12	1.75	0.67
27:T:78:LEU:O	27:T:79:HIS:HD2	1.77	0.67
21:N:76:SER:HB3	21:N:81:GLY:HA3	1.77	0.67
27:T:129:ARG:CZ	27:T:131:ALA:HB3	2.25	0.67
11:A:325:G:H2'	11:A:326:G:H8	1.59	0.67
11:A:64:A:C4	31:X:66:LEU:HD12	2.30	0.67
32:Y:73:ARG:HE	32:Y:73:ARG:HA	1.59	0.66
30:W:107:LEU:HD12	30:W:107:LEU:N	2.09	0.66
11:A:612:C:H2'	11:A:613:G:H5''	1.76	0.66
18:H:41:MET:CG	18:H:42:ARG:H	2.07	0.66
9:8:52:LYS:N	9:8:53:PRO:CD	2.57	0.66
11:A:1332:G:N2	11:A:1610:A:C8	2.62	0.66
11:A:234:C:H2'	11:A:235:U:C6	2.30	0.66
11:A:2463:C:O2'	11:A:2464:C:H5'	1.94	0.66
13:C:72:VAL:HG23	13:C:111:ASP:HB3	1.77	0.66
6:5:3:LYS:HG3	11:A:2611:U:O2'	1.95	0.66
6:5:33:CYS:HB3	6:5:36:CYS:O	1.95	0.66
11:A:259:G:N2	11:A:621:A:H8	1.87	0.66
13:C:40:THR:HG22	13:C:177:LYS:HD2	1.77	0.66
23:P:46:LYS:HB2	23:P:52:GLU:HG2	1.78	0.66
18:H:68:THR:O	18:H:72:ILE:HG12	1.95	0.66
5:4:12:ALA:CB	5:4:29:PRO:HA	2.25	0.66
2:1:65:SER:O	2:1:66:HIS:CB	2.40	0.66
15:E:4:ILE:HG21	15:E:96:PHE:HE2	1.60	0.66
11:A:2491:U:H4'	11:A:2570:G:OP1	1.96	0.66
11:A:1353:A:H2'	11:A:1354:A:C8	2.30	0.66
27:T:60:THR:HG22	27:T:77:PRO:HA	1.77	0.66
30:W:82:LEU:HB3	30:W:84:ARG:NH1	2.10	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:5:39:MET:HG3	30:W:34:ASN:OD1	1.93	0.66
6:5:44:THR:HG23	25:R:101:ALA:N	2.11	0.66
11:A:1294:U:H5'	11:A:1294:U:H6	1.60	0.66
11:A:585:G:H2'	11:A:1251:C:H42	1.61	0.66
10:9:17:ILE:HG22	10:9:18:ARG:N	2.09	0.66
14:D:162:SER:O	14:D:178:PRO:HG3	1.96	0.66
11:A:2312:U:H2'	11:A:2313:C:H5''	1.78	0.66
11:A:1543:C:C3'	11:A:1544:A:H5''	2.23	0.66
11:A:2852:G:H2'	11:A:2853:C:C6	2.31	0.66
2:1:50:ARG:HG2	2:1:59:THR:HG22	1.76	0.66
11:A:2192:G:H2'	11:A:2193:G:H5''	1.78	0.66
17:G:106:LEU:HD12	17:G:110:ALA:HB3	1.78	0.66
27:T:82:LEU:H	27:T:82:LEU:CD1	2.02	0.66
16:F:160:ASN:OD1	16:F:163:VAL:HG23	1.94	0.66
21:N:43:THR:O	21:N:46:VAL:HG12	1.95	0.66
29:V:61:VAL:HG23	29:V:61:VAL:O	1.94	0.66
2:1:82:LEU:HD21	2:1:90:ILE:HG23	1.77	0.66
11:A:582:G:H2'	11:A:583:G:C8	2.31	0.66
23:P:80:TYR:CD1	23:P:111:ARG:HB3	2.30	0.66
13:C:107:TRP:CZ2	13:C:109:ASP:HA	2.31	0.66
7:6:26:ASN:ND2	7:6:32:ASN:HD21	1.94	0.66
2:1:7:ILE:HD11	2:1:70:VAL:HG22	1.78	0.66
7:6:22:ALA:HB2	7:6:39:TYR:CE2	2.31	0.66
27:T:28:VAL:O	27:T:29:ARG:HB2	1.95	0.66
33:Z:24:LEU:HD21	33:Z:86:VAL:CG2	2.25	0.66
25:R:94:TYR:CD1	25:R:94:TYR:N	2.62	0.66
11:A:481:G:OP2	32:Y:47:LYS:HD3	1.95	0.66
27:T:106:SER:C	27:T:107:ASP:OD1	2.34	0.66
11:A:234:C:H2'	11:A:235:U:H6	1.61	0.66
11:A:83:G:N2	11:A:102:G:H2'	2.10	0.66
11:A:2022:U:O2'	11:A:2617:C:H5'	1.96	0.66
11:A:2023:G:H5'	11:A:2617:C:H4'	1.76	0.66
7:6:5:VAL:N	7:6:9:LEU:H	1.94	0.66
30:W:73:ALA:HB3	30:W:106:ILE:HD11	1.76	0.66
16:F:39:TRP:CD1	16:F:101:LEU:HB2	2.31	0.66
23:P:24:GLY:CA	23:P:33:ARG:NH1	2.59	0.66
15:E:101:ARG:CB	15:E:201:THR:HG21	2.26	0.66
13:C:78:ALA:HA	13:C:116:THR:N	2.10	0.66
28:U:3:ARG:NH1	28:U:3:ARG:HG2	2.11	0.66
25:R:51:LEU:HD23	25:R:70:LEU:HD11	1.77	0.66
17:G:87:PRO:O	17:G:88:ILE:HG12	1.95	0.66
27:T:23:ARG:O	27:T:25:GLY:N	2.28	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:S:42:ASP:O	26:S:43:GLU:HB3	1.95	0.66
11:A:2467:C:H4'	24:Q:123:HIS:ND1	2.11	0.66
18:H:136:ILE:HD12	18:H:136:ILE:N	2.11	0.66
7:6:30:THR:O	7:6:31:PRO:C	2.34	0.66
6:5:49:CYS:O	6:5:56:LYS:HD3	1.96	0.66
17:G:121:ASN:HB3	17:G:124:SER:HB2	1.78	0.66
11:A:996:A:H4'	28:U:92:ARG:NE	2.11	0.66
23:P:40:SER:O	23:P:41:ARG:NH1	2.28	0.66
27:T:62:THR:HG22	27:T:75:ILE:HG13	1.77	0.66
15:E:9:VAL:HG12	15:E:25:VAL:O	1.96	0.66
11:A:1453:U:H5'	25:R:63:ARG:NE	2.11	0.66
11:A:1947:C:C2'	11:A:1948:G:H5''	2.26	0.65
16:F:32:LEU:HD21	16:F:105:VAL:HG13	1.78	0.65
14:D:183:ARG:HD2	14:D:269:PHE:O	1.95	0.65
11:A:654(P):C:H2'	11:A:654(Q):C:O4'	1.96	0.65
33:Z:151:HIS:HB2	33:Z:169:GLU:O	1.96	0.65
16:F:185:ASP:HA	16:F:188:ARG:HG2	1.78	0.65
11:A:145:G:H2'	11:A:146:G:H5''	1.78	0.65
11:A:2720:U:O2	11:A:2720:U:H2'	1.95	0.65
22:O:35:VAL:HG21	22:O:69:ILE:HD13	1.78	0.65
25:R:62:ALA:O	25:R:66:VAL:HG23	1.96	0.65
29:V:51:VAL:HG12	29:V:52:VAL:H	1.62	0.65
11:A:2334:G:H21	26:S:18:ILE:HG23	1.61	0.65
11:A:1720:U:C3'	11:A:1721:G:H5''	2.25	0.65
28:U:85:LYS:CD	28:U:117:GLN:HE22	2.08	0.65
11:A:2408:U:H2'	11:A:2409:G:H8	1.61	0.65
11:A:140:G:H1'	11:A:141:A:C2	2.30	0.65
15:E:203:LYS:O	15:E:203:LYS:HD2	1.95	0.65
3:2:2:LYS:HB2	11:A:97:C:H5''	1.76	0.65
11:A:1473:G:H2'	11:A:1474:C:O4'	1.96	0.65
3:2:39:ALA:HA	3:2:45:SER:HB3	1.77	0.65
32:Y:6:HIS:HE1	32:Y:30:VAL:HG11	1.61	0.65
14:D:267:SER:HA	14:D:270:ILE:HG13	1.77	0.65
11:A:612:C:C2'	11:A:613:G:H5''	2.26	0.65
2:1:13:ILE:N	2:1:13:ILE:HD12	2.11	0.65
11:A:2781:A:H5'	11:A:2782:G:H5'	1.77	0.65
11:A:1337:G:H2'	11:A:1338:G:H8	1.61	0.65
32:Y:74:PRO:O	32:Y:75:ILE:HB	1.97	0.65
18:H:121:ILE:HD13	18:H:144:VAL:HG21	1.79	0.65
16:F:132:VAL:HG22	16:F:133:ASN:N	2.07	0.65
26:S:89:ARG:HG2	26:S:92:TYR:HA	1.78	0.65
33:Z:123:ASP:O	33:Z:124:ILE:HG23	1.95	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:T:98:LYS:HB3	27:T:100:TYR:CE1	2.31	0.65
11:A:106:C:H1'	32:Y:2:ARG:NH2	2.11	0.65
11:A:140:G:H1'	11:A:141:A:H2	1.62	0.65
11:A:2443:C:O2'	11:A:2444:G:H5'	1.95	0.65
2:1:84:GLY:O	2:1:90:ILE:HD11	1.97	0.65
11:A:83:G:HO2'	11:A:84:A:H8	1.41	0.65
11:A:89:G:H3'	11:A:90:U:C5'	2.27	0.65
11:A:813:U:H2'	11:A:814:C:C6	2.32	0.65
7:6:5:VAL:HG11	11:A:2283:C:H5'	1.78	0.65
3:2:35:LEU:CD1	3:2:50:ILE:HG13	2.20	0.65
7:6:17:LYS:HB3	7:6:18:ARG:NH1	2.11	0.65
11:A:744:G:OP1	15:E:132:HIS:HB3	1.96	0.65
11:A:108:U:H2'	11:A:109:G:H8	1.61	0.65
18:H:18:GLU:HB2	18:H:25:LYS:HB2	1.79	0.65
11:A:2138:C:H2'	11:A:2139:C:C6	2.31	0.65
11:A:2760:C:C2'	11:A:2761:G:H5''	2.27	0.65
17:G:173:LEU:O	17:G:178:PHE:HB2	1.96	0.65
25:R:2:ARG:N	25:R:2:ARG:HH11	1.95	0.65
11:A:2712:U:H1'	11:A:2712(A):A:C8	2.31	0.65
29:V:40:LEU:H	29:V:47:VAL:HG13	1.60	0.65
30:W:59:VAL:HG21	30:W:66:GLU:N	2.12	0.65
11:A:2790:A:H2'	11:A:2791:C:H5''	1.77	0.65
22:O:104:ARG:HE	27:T:33:LYS:HE3	1.61	0.65
7:6:14:THR:O	7:6:49:HIS:HA	1.96	0.65
15:E:11:MET:HB2	15:E:23:VAL:O	1.97	0.65
11:A:244:A:H4'	23:P:74:GLU:HG3	1.78	0.65
11:A:944:G:H5'	11:A:945:A:O5'	1.96	0.65
1:0:27:GLU:OE1	11:A:856:C:H1'	1.96	0.65
11:A:448:U:H1'	16:F:84:VAL:HG13	1.78	0.65
17:G:139:LEU:HD11	17:G:149:VAL:HG11	1.78	0.65
33:Z:30:ASN:C	33:Z:30:ASN:HD22	2.00	0.65
24:Q:141:GLN:HG2	33:Z:72:ARG:HD3	1.78	0.65
33:Z:123:ASP:O	33:Z:124:ILE:HG12	1.97	0.65
18:H:52:VAL:HG21	18:H:69:ARG:CG	2.27	0.65
32:Y:46:LYS:HG2	32:Y:47:LYS:N	2.12	0.65
33:Z:133:ILE:N	33:Z:134:PRO:HD3	2.11	0.65
17:G:2:PRO:O	17:G:3:LEU:HB2	1.97	0.65
23:P:58:THR:C	23:P:60:MET:N	2.50	0.65
2:1:8:SER:HB3	2:1:66:HIS:NE2	2.12	0.65
27:T:27:THR:H	27:T:49:VAL:HG12	1.62	0.65
17:G:12:TYR:HA	17:G:16:ARG:HG2	1.78	0.65
11:A:2777:G:H5''	11:A:2778:A:C5'	2.26	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:1499:C:O2'	11:A:1500:G:H5'	1.97	0.65
12:B:25:A:H2'	12:B:25:A:N3	2.12	0.65
11:A:774:A:H2	11:A:787:U:HO2'	1.44	0.65
14:D:148:GLU:HB2	14:D:151:LYS:HD2	1.79	0.65
23:P:58:THR:O	23:P:60:MET:N	2.29	0.65
15:E:57:LYS:HE3	15:E:57:LYS:CA	2.21	0.65
18:H:85:LYS:O	18:H:85:LYS:HE2	1.96	0.65
30:W:4:LYS:HG2	30:W:5:ALA:N	2.11	0.65
16:F:201:VAL:HA	16:F:204:ASN:HD22	1.62	0.65
15:E:51:PHE:O	15:E:74:PRO:HB2	1.96	0.65
11:A:1658:C:OP1	15:E:132:HIS:ND1	2.30	0.65
11:A:197:A:H5'	11:A:197:A:C8	2.32	0.65
23:P:45:LEU:HD13	23:P:46:LYS:H	1.62	0.65
11:A:191:A:H2'	11:A:192:C:C6	2.32	0.65
11:A:1666:G:H2'	11:A:1667:G:H5'	1.78	0.64
7:6:11:LEU:HB3	7:6:24:GLU:O	1.97	0.64
27:T:32:TYR:O	27:T:33:LYS:HB2	1.96	0.64
27:T:48:ILE:HD12	27:T:49:VAL:N	2.12	0.64
14:D:186:HIS:CD2	14:D:188:GLU:HB2	2.32	0.64
24:Q:101:ARG:HD2	24:Q:102:VAL:H	1.62	0.64
11:A:176:G:O2'	11:A:177:G:H5'	1.98	0.64
13:C:43:VAL:HG23	13:C:175:VAL:HG21	1.80	0.64
32:Y:75:ILE:HG13	32:Y:76:CYS:H	1.62	0.64
11:A:1858:G:H2'	11:A:1883:G:H22	1.62	0.64
23:P:23:PRO:HB2	23:P:33:ARG:CD	2.27	0.64
33:Z:89:PHE:CE2	33:Z:96:VAL:HG21	2.29	0.64
28:U:61:TRP:O	28:U:65:ILE:HD13	1.96	0.64
11:A:1516:C:C2'	11:A:1517:G:H5''	2.27	0.64
11:A:2801(A):A:H5'	11:A:2802:G:C8	2.32	0.64
11:A:1221(A):C:H2'	11:A:1222:C:H6	1.60	0.64
11:A:208:C:H2'	11:A:209:C:C6	2.33	0.64
18:H:105:LEU:H	18:H:105:LEU:HD23	1.62	0.64
18:H:89:ILE:HG13	18:H:89:ILE:O	1.97	0.64
11:A:1813:G:H1'	14:D:50:THR:OG1	1.97	0.64
13:C:214:VAL:CG2	13:C:224:ILE:HD13	2.26	0.64
7:6:15:GLU:OE1	7:6:18:ARG:NE	2.30	0.64
27:T:27:THR:HG23	27:T:28:VAL:N	2.12	0.64
23:P:23:PRO:CD	23:P:33:ARG:HE	2.11	0.64
11:A:2635:C:OP1	15:E:77:ILE:HG21	1.97	0.64
15:E:33:VAL:HG12	15:E:90:THR:HA	1.78	0.64
11:A:2580:U:H4'	15:E:130:GLY:HA3	1.80	0.64
25:R:28:LEU:O	25:R:30:THR:N	2.29	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:1278:A:H5''	25:R:36:THR:HG22	1.80	0.64
17:G:114:ILE:HG23	17:G:116:ASP:O	1.98	0.64
11:A:2377:A:O2'	11:A:2378:A:H5'	1.97	0.64
31:X:64:LYS:NZ	31:X:73:ARG:HH21	1.95	0.64
13:C:190:ARG:O	13:C:194:ARG:HG3	1.97	0.64
11:A:902:C:H2'	11:A:903:C:C6	2.32	0.64
11:A:708:C:H42	11:A:723:G:H1	1.45	0.64
11:A:1290:C:H2'	11:A:1291:C:C6	2.32	0.64
11:A:2870:C:H5''	25:R:65:LEU:HD21	1.79	0.64
9:8:6:THR:HG23	9:8:62:LEU:HD12	1.78	0.64
11:A:2308:G:N7	11:A:2310:A:H5'	2.12	0.64
18:H:169:VAL:HG22	18:H:170:ARG:N	2.08	0.64
11:A:1542:A:C8	11:A:1544:A:H5'	2.32	0.64
23:P:33:ARG:O	23:P:34:GLY:C	2.35	0.64
13:C:34:THR:HG22	13:C:34:THR:O	1.97	0.64
11:A:105:C:O2'	32:Y:2:ARG:HG3	1.97	0.64
11:A:969:U:H2'	11:A:970:C:C6	2.33	0.64
11:A:970:C:H2'	11:A:971:C:C6	2.32	0.64
15:E:61:ARG:HB3	15:E:62:PRO:HD3	1.78	0.64
27:T:78:LEU:C	27:T:79:HIS:HD2	2.00	0.64
11:A:709:U:H2'	11:A:710:G:C8	2.32	0.64
11:A:2208:A:H1'	11:A:2219:G:C5	2.33	0.64
11:A:1639:U:C2'	11:A:1640:C:H5''	2.28	0.64
11:A:286:C:H2'	11:A:287:C:C6	2.32	0.64
32:Y:84:ARG:CZ	32:Y:97:ARG:HB3	2.28	0.64
11:A:26:G:OP1	30:W:80:PRO:HB3	1.98	0.64
33:Z:72:ARG:HG3	33:Z:89:PHE:HB2	1.79	0.64
23:P:96:THR:HG22	23:P:126:VAL:HB	1.79	0.64
21:N:73:THR:HG22	21:N:82:LEU:HD11	1.80	0.64
11:A:907:U:OP1	24:Q:24:GLY:N	2.24	0.64
11:A:2219:G:O2'	11:A:2220:G:H5'	1.97	0.64
29:V:68:LYS:HE2	29:V:68:LYS:HA	1.78	0.64
11:A:958:U:H5''	24:Q:14:ARG:CD	2.27	0.64
14:D:26:LYS:HE2	14:D:26:LYS:N	2.12	0.64
14:D:30:GLU:CD	14:D:63:ARG:HH21	2.01	0.64
11:A:2309:A:H2'	11:A:2310:A:H5''	1.79	0.64
11:A:2377:A:H4'	26:S:107:GLU:O	1.97	0.64
2:1:88:LYS:O	2:1:91:LYS:HB3	1.97	0.64
3:2:3:LEU:HB3	11:A:98:G:OP1	1.98	0.64
9:8:30:ARG:HE	9:8:30:ARG:HA	1.62	0.64
30:W:69:LEU:HA	30:W:108:GLY:O	1.98	0.64
11:A:645:C:H5'	11:A:646:A:OP2	1.97	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:D:31:LYS:HZ1	14:D:33:LEU:HG	1.62	0.64
6:5:3:LYS:O	6:5:4:HIS:C	2.35	0.64
16:F:25:PRO:HB3	16:F:119:ARG:HD3	1.79	0.64
27:T:33:LYS:NZ	27:T:43:GLN:HE21	1.95	0.64
27:T:84:GLN:O	27:T:85:LYS:HG3	1.97	0.64
16:F:125:LEU:N	16:F:125:LEU:HD23	2.13	0.64
25:R:117:VAL:O	25:R:118:GLU:HB2	1.97	0.64
33:Z:60:GLU:HA	33:Z:60:GLU:OE1	1.97	0.64
13:C:78:ALA:O	13:C:79:LYS:HB2	1.98	0.64
11:A:943:U:OP2	23:P:38:GLN:CD	2.36	0.64
28:U:3:ARG:HH12	28:U:5:LYS:HE2	1.62	0.64
25:R:12:ARG:HD3	25:R:16:HIS:CE1	2.32	0.64
11:A:329:G:H22	32:Y:19:LYS:HE3	1.62	0.64
14:D:63:ARG:HG3	14:D:63:ARG:NH1	2.13	0.64
11:A:2189:U:H2'	11:A:2190:G:C4'	2.27	0.64
11:A:259:G:H1'	11:A:621:A:O2'	1.98	0.64
8:7:34:ARG:HG3	8:7:34:ARG:NH1	2.12	0.64
11:A:1294:U:C5'	11:A:1294:U:H6	2.10	0.64
15:E:2:LYS:HD3	15:E:95:ILE:HG22	1.80	0.64
28:U:91:ASP:OD1	28:U:96:ALA:HB2	1.98	0.64
25:R:96:ARG:HH12	25:R:117:VAL:HG23	1.63	0.64
11:A:1019:U:O2'	11:A:1021:A:H2	1.79	0.64
11:A:2657:A:H5''	11:A:2658:C:C5	2.33	0.64
23:P:121:LYS:O	23:P:123:LEU:HD23	1.96	0.64
1:0:27:GLU:N	1:0:27:GLU:OE1	2.25	0.64
23:P:49:ARG:HG3	23:P:49:ARG:HH11	1.61	0.64
11:A:1301:A:HO2'	11:A:1302:A:H2'	1.58	0.64
3:2:63:VAL:HA	3:2:66:GLU:HG2	1.80	0.64
1:0:51:VAL:HG21	1:0:79:VAL:O	1.96	0.64
6:5:44:THR:CG2	25:R:101:ALA:N	2.61	0.64
14:D:267:SER:HB3	14:D:270:ILE:HD11	1.80	0.64
11:A:2101:G:C3'	11:A:2102:U:H5''	2.28	0.64
29:V:99:ILE:N	29:V:99:ILE:HD13	2.13	0.64
3:2:52:ASP:HA	3:2:55:ARG:HB2	1.80	0.64
11:A:2688:U:H1'	11:A:2721:A:N6	2.12	0.64
11:A:2629:A:H2'	11:A:2629:A:N3	2.11	0.64
11:A:848:G:C4	11:A:933:A:H8	2.16	0.64
13:C:30:LYS:HE2	13:C:180:PHE:O	1.97	0.64
6:5:4:HIS:C	11:A:2056:G:H22	2.00	0.64
11:A:833:U:H5''	23:P:48:PRO:HB2	1.78	0.64
30:W:14:PRO:HG2	30:W:78:GLU:HG3	1.78	0.64
17:G:86:MET:N	17:G:87:PRO:HD3	2.13	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:2186:G:H2'	11:A:2187:G:N9	2.13	0.63
11:A:1887:C:C3'	11:A:1888:G:H5''	2.28	0.63
11:A:2138:C:H2'	11:A:2139:C:H6	1.61	0.63
16:F:104:LYS:O	16:F:108:LYS:HG2	1.98	0.63
17:G:64:THR:HG23	17:G:66:GLN:H	1.62	0.63
17:G:136:ARG:O	17:G:154:GLY:HA2	1.99	0.63
32:Y:7:VAL:HG12	32:Y:83:THR:HG21	1.80	0.63
17:G:8:LYS:O	17:G:11:TYR:HB3	1.98	0.63
29:V:52:VAL:HG13	29:V:55:ALA:HB3	1.80	0.63
27:T:115:ARG:HG3	27:T:115:ARG:NH1	2.13	0.63
26:S:15:ARG:O	26:S:18:ILE:HD11	1.99	0.63
29:V:34:GLU:HG3	29:V:58:VAL:HG22	1.80	0.63
10:9:7:VAL:HG22	10:9:34:GLN:HG2	1.81	0.63
11:A:2313:C:H6	11:A:2313:C:H5'	1.62	0.63
11:A:110:G:O2'	11:A:111:A:H5'	1.99	0.63
17:G:16:ARG:N	17:G:17:PRO:HD2	2.14	0.63
11:A:2303:G:H4'	17:G:124:SER:O	1.97	0.63
29:V:19:LYS:NZ	29:V:20:LEU:H	1.96	0.63
29:V:39:LEU:HA	29:V:47:VAL:CG1	2.27	0.63
24:Q:135:ASP:H	24:Q:137:TYR:HD2	1.44	0.63
11:A:2201:C:O2'	11:A:2202:C:H5'	1.99	0.63
23:P:20:GLY:O	23:P:21:ARG:HB2	1.97	0.63
11:A:2389:G:H5''	11:A:2390:U:O4'	1.99	0.63
17:G:13:GLU:HG3	17:G:14:GLU:HG3	1.81	0.63
15:E:4:ILE:HD11	15:E:28:ALA:CB	2.27	0.63
23:P:97:PRO:O	23:P:98:GLU:HB3	1.98	0.63
10:9:14:CYS:SG	10:9:27:CYS:HB2	2.38	0.63
17:G:86:MET:O	17:G:86:MET:HG2	1.99	0.63
32:Y:13:VAL:O	32:Y:24:VAL:HG13	1.98	0.63
16:F:135:LYS:HB3	16:F:138:GLU:CD	2.19	0.63
26:S:89:ARG:HB3	26:S:92:TYR:CB	2.28	0.63
29:V:2:PHE:CB	29:V:42:GLY:HA2	2.27	0.63
13:C:119:VAL:O	13:C:123:VAL:HG12	1.98	0.63
16:F:89:VAL:HG12	16:F:90:PHE:N	2.14	0.63
14:D:273:ARG:HH11	14:D:273:ARG:HG2	1.62	0.63
11:A:693:C:O2'	11:A:694:U:H5'	1.98	0.63
14:D:108:PRO:HD2	14:D:111:LEU:HD12	1.81	0.63
11:A:2672:G:C3'	11:A:2673:G:H5''	2.29	0.63
11:A:2314:C:O2'	11:A:2315:G:H5'	1.98	0.63
16:F:103:LYS:HG3	16:F:106:ARG:HH21	1.64	0.63
11:A:1058:G:C2'	11:A:1059:G:H5''	2.27	0.63
25:R:52:ILE:HB	25:R:94:TYR:HD2	1.63	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
33:Z:9:TYR:CE1	33:Z:35:ARG:CZ	2.82	0.63
14:D:37:LEU:HD23	14:D:38:LYS:N	2.14	0.63
11:A:2199:A:H5'	11:A:2200:C:OP2	1.98	0.63
13:C:81:GLU:O	13:C:84:LYS:HD3	1.98	0.63
17:G:72:ARG:HB2	17:G:87:PRO:CD	2.22	0.63
7:6:12:GLU:HG3	7:6:23:THR:HG22	1.80	0.63
26:S:52:SER:CB	26:S:55:ALA:HB3	2.27	0.63
11:A:2636:U:H4'	15:E:80:GLU:OE1	1.98	0.63
33:Z:81:ARG:NH1	33:Z:81:ARG:HB3	2.13	0.63
27:T:90:GLN:C	27:T:92:GLY:H	2.02	0.63
11:A:1314:C:H5'	11:A:1314:C:H6	1.62	0.63
9:8:32:LEU:HD22	11:A:2392:A:OP1	1.99	0.63
6:5:44:THR:HG21	25:R:101:ALA:CB	2.28	0.63
11:A:1057:A:H2'	11:A:1058:G:H8	1.63	0.63
25:R:14:SER:HA	25:R:17:ARG:NH1	2.14	0.63
33:Z:79:ARG:HB3	33:Z:79:ARG:NH1	2.13	0.63
25:R:28:LEU:HD13	25:R:114:VAL:HG23	1.80	0.63
23:P:105:LEU:O	23:P:106:LEU:HB2	1.97	0.63
26:S:66:ALA:HA	26:S:69:VAL:CG1	2.28	0.63
11:A:2050:C:H1'	15:E:156:MET:HE1	1.78	0.63
24:Q:66:ILE:HA	24:Q:104:PHE:HB3	1.81	0.63
11:A:597:U:O2'	23:P:15:ARG:HG2	1.98	0.63
6:5:52:TYR:HE2	11:A:2884:U:H1'	1.63	0.63
5:4:12:ALA:HB2	5:4:29:PRO:HA	1.81	0.63
7:6:32:ASN:O	7:6:33:LYS:HG2	1.99	0.63
17:G:82:LEU:HD13	17:G:87:PRO:CA	2.28	0.63
11:A:1068:G:H2'	11:A:1068:G:N3	2.14	0.63
23:P:115:LEU:HA	23:P:131:SER:OG	1.99	0.63
14:D:48:ARG:HG3	14:D:48:ARG:HH11	1.64	0.63
24:Q:134:ARG:CD	33:Z:122:ARG:HH21	2.12	0.63
21:N:31:ALA:O	21:N:34:LEU:HB3	1.99	0.63
11:A:2852:G:H2'	11:A:2853:C:H6	1.64	0.63
11:A:2512:C:H2'	11:A:2513:G:O4'	1.98	0.63
11:A:1569:A:O2'	14:D:38:LYS:HG3	1.98	0.63
16:F:185:ASP:HA	16:F:188:ARG:HD3	1.81	0.63
16:F:5:ALA:HB3	16:F:18:ARG:O	1.98	0.63
14:D:65:ILE:HG22	14:D:104:TYR:HB3	1.81	0.62
15:E:33:VAL:HG13	15:E:69:LYS:CE	2.27	0.62
11:A:613:G:H8	11:A:613:G:H5'	1.64	0.62
11:A:310:A:OP1	32:Y:18:GLY:HA2	1.99	0.62
11:A:2206:G:N3	11:A:2206:G:H3'	2.14	0.62
11:A:958:U:H5''	24:Q:14:ARG:HD3	1.79	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:2262:U:H2'	11:A:2263:C:H6	1.64	0.62
11:A:845:G:OP2	11:A:845:G:H8	1.82	0.62
32:Y:13:VAL:HA	32:Y:74:PRO:O	1.99	0.62
32:Y:27:VAL:HG12	32:Y:29:GLU:OE1	1.99	0.62
15:E:3:GLY:H	15:E:81:ILE:HG21	1.64	0.62
11:A:1131:G:H21	21:N:73:THR:HG21	1.64	0.62
28:U:85:LYS:HD3	28:U:117:GLN:NE2	2.14	0.62
11:A:141:A:H8	11:A:1408:C:HO2'	1.46	0.62
14:D:109:ASP:HB2	14:D:197:GLY:HA2	1.79	0.62
14:D:130:ALA:C	14:D:131:LEU:HD12	2.19	0.62
11:A:745:G:H2'	11:A:746:A:H5'	1.81	0.62
28:U:56:ASP:O	28:U:59:ARG:HB2	1.98	0.62
11:A:2092:U:H4'	11:A:2093:G:C5'	2.11	0.62
27:T:85:LYS:CB	27:T:85:LYS:NZ	2.60	0.62
24:Q:140:ALA:O	24:Q:141:GLN:HB2	1.99	0.62
15:E:33:VAL:HG11	15:E:89:ASP:O	1.98	0.62
33:Z:122:ARG:HG2	33:Z:122:ARG:NH1	2.14	0.62
11:A:598:G:H5'	23:P:15:ARG:HB3	1.79	0.62
11:A:203:C:H3'	11:A:204:A:H5''	1.81	0.62
24:Q:136:ALA:O	24:Q:138:ASP:N	2.32	0.62
27:T:80:SER:CB	27:T:81:PRO:HD3	2.25	0.62
23:P:34:GLY:O	23:P:35:HIS:HB2	1.99	0.62
11:A:611:C:H2'	11:A:612:C:C6	2.35	0.62
18:H:127:GLU:HB2	18:H:130:ARG:HB2	1.80	0.62
21:N:6:PRO:HB2	21:N:9:VAL:CG2	2.28	0.62
11:A:1290:C:H2'	11:A:1291:C:H6	1.65	0.62
23:P:6:LEU:HD23	23:P:6:LEU:H	1.65	0.62
11:A:1075:C:H2'	11:A:1076:C:C6	2.33	0.62
27:T:38:ASN:O	27:T:38:ASN:ND2	2.33	0.62
23:P:23:PRO:C	23:P:33:ARG:CZ	2.67	0.62
15:E:77:ILE:HG22	15:E:78:LEU:H	1.64	0.62
28:U:95:LEU:O	28:U:98:LEU:HG	2.00	0.62
13:C:114:VAL:HG12	13:C:144:THR:HB	1.79	0.62
26:S:11:LYS:N	26:S:11:LYS:HD2	2.14	0.62
11:A:2630:G:H21	11:A:2892:A:H1'	1.64	0.62
24:Q:68:ILE:HG23	24:Q:103:MET:HA	1.81	0.62
14:D:77:ALA:HB2	14:D:97:TYR:CD2	2.35	0.62
32:Y:33:LYS:C	32:Y:35:TYR:H	2.03	0.62
12:B:34:U:H5''	12:B:35:U:OP1	1.99	0.62
32:Y:81:LYS:HE2	32:Y:97:ARG:NH2	2.14	0.62
33:Z:23:LYS:O	33:Z:39:VAL:O	2.18	0.62
32:Y:31:LEU:HB2	32:Y:32:PRO:HA	1.82	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:2472:G:H5'	11:A:2473:U:C5'	2.29	0.62
14:D:181:GLU:HA	14:D:273:ARG:O	1.99	0.62
28:U:108:GLU:OE2	29:V:44:LYS:HB3	1.99	0.62
2:1:44:PRO:HG2	2:1:46:LEU:CD1	2.29	0.62
12:B:65:C:O2'	12:B:66:A:H5'	1.99	0.62
11:A:2845:G:O2'	11:A:2846:G:H5'	1.99	0.62
11:A:1592:C:H2'	11:A:1593:G:C8	2.34	0.62
11:A:1516:C:H2'	11:A:1517:G:C5'	2.30	0.62
11:A:1652:A:C2'	11:A:1653:G:H5'	2.29	0.62
14:D:70:TRP:O	14:D:73:VAL:HG23	2.00	0.62
5:4:28:LYS:HE3	5:4:28:LYS:HA	1.82	0.62
16:F:192:LEU:C	16:F:192:LEU:HD23	2.19	0.62
15:E:38:THR:HB	15:E:41:LYS:HG2	1.79	0.62
16:F:6:VAL:HG12	16:F:7:TYR:N	2.11	0.62
11:A:2415:G:H4'	23:P:66:GLY:C	2.20	0.62
11:A:2842:G:O2'	11:A:2843:G:H5'	2.00	0.62
11:A:1248:G:OP1	28:U:2:PRO:HD2	2.00	0.62
4:3:31:LEU:HD12	11:A:1157:G:O2'	1.99	0.62
33:Z:108:PRO:HB3	33:Z:141:VAL:HG11	1.82	0.62
11:A:83:G:O2'	11:A:84:A:H8	1.81	0.62
27:T:64:ARG:HD2	27:T:73:GLU:OE1	2.00	0.62
28:U:110:VAL:O	28:U:113:ALA:HB3	1.99	0.62
23:P:85:LEU:HA	23:P:88:LEU:HB3	1.78	0.62
21:N:61:ARG:HG3	21:N:61:ARG:HH11	1.63	0.62
32:Y:36:ALA:HA	32:Y:69:ALA:N	2.15	0.62
11:A:2787:C:O2'	15:E:61:ARG:HD3	2.00	0.62
16:F:164:ARG:HH11	16:F:164:ARG:HG2	1.64	0.62
11:A:2894:G:H2'	11:A:2894:G:N3	2.14	0.62
30:W:11:ARG:HG2	30:W:11:ARG:HH11	1.65	0.62
23:P:50:ARG:HH11	23:P:50:ARG:HG2	1.65	0.62
11:A:1517:G:C8	11:A:1517:G:H5'	2.29	0.62
31:X:28:PHE:CD1	31:X:28:PHE:N	2.68	0.62
11:A:268:C:O2	11:A:268:C:H2'	1.99	0.62
28:U:34:LYS:HA	28:U:34:LYS:HE2	1.80	0.62
11:A:2287:A:H2	11:A:2346:A:N1	1.97	0.62
21:N:55:VAL:HG22	21:N:126:PRO:HA	1.82	0.62
11:A:2762:G:C8	11:A:2762:G:H5'	2.29	0.61
32:Y:73:ARG:HH22	32:Y:82:PRO:HA	1.64	0.61
32:Y:86:ARG:HH21	32:Y:95:LYS:NZ	1.97	0.61
27:T:28:VAL:CG1	27:T:46:GLU:HA	2.28	0.61
11:A:2098:U:H3	11:A:2191:G:H1	1.46	0.61
30:W:4:LYS:HG2	30:W:5:ALA:H	1.64	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:P:126:VAL:CA	23:P:145:PRO:HG2	2.30	0.61
28:U:79:PHE:O	28:U:83:LEU:HD13	2.00	0.61
11:A:2741:A:H2'	11:A:2742:C:O4'	2.00	0.61
16:F:160:ASN:ND2	16:F:162:LEU:HB2	2.14	0.61
15:E:52:LEU:HB3	15:E:75:VAL:HB	1.82	0.61
23:P:125:VAL:O	23:P:145:PRO:HD2	2.00	0.61
25:R:96:ARG:NH1	25:R:117:VAL:HG23	2.14	0.61
25:R:94:TYR:HD1	25:R:94:TYR:N	1.98	0.61
11:A:2523:G:H2'	11:A:2524:G:C5'	2.30	0.61
11:A:122:G:H1	11:A:129:C:N4	1.98	0.61
21:N:21:LYS:HD3	21:N:22:THR:H	1.65	0.61
21:N:108:PRO:HG2	21:N:113:GLY:CA	2.29	0.61
11:A:848:G:H5'	11:A:848:G:H8	1.65	0.61
11:A:2176:A:O5'	11:A:2176:A:H8	1.83	0.61
11:A:1328:G:H2'	11:A:1330:C:C5	2.35	0.61
7:6:15:GLU:OE2	7:6:18:ARG:NH2	2.33	0.61
21:N:23:LEU:CD1	21:N:98:VAL:HG12	2.31	0.61
5:4:6:HIS:HB3	17:G:67:LYS:NZ	2.16	0.61
11:A:1854:A:H62	11:A:1888:G:H8	1.48	0.61
24:Q:140:ALA:HB1	33:Z:99:TYR:CE2	2.35	0.61
11:A:1658:C:OP1	15:E:132:HIS:O	2.18	0.61
24:Q:109:VAL:CG1	24:Q:113:GLN:HB2	2.29	0.61
11:A:745:G:C2'	11:A:746:A:H5'	2.31	0.61
1:0:20:ARG:HH11	1:0:20:ARG:HG2	1.64	0.61
13:C:68:LEU:HD11	13:C:161:ILE:CG2	2.30	0.61
11:A:1270:C:H5''	11:A:1271:G:O5'	2.00	0.61
7:6:12:GLU:HG3	7:6:23:THR:HG21	1.82	0.61
11:A:2101:G:H2'	11:A:2102:U:C5'	2.28	0.61
11:A:1053:C:H2'	11:A:1054:A:H8	1.63	0.61
18:H:52:VAL:HB	18:H:69:ARG:HD3	1.82	0.61
11:A:2840:C:H5''	25:R:53:HIS:CD2	2.35	0.61
11:A:1018:C:H2'	11:A:1019:U:H6	1.65	0.61
24:Q:79:LEU:HD22	24:Q:80:GLU:HG3	1.82	0.61
14:D:125:ILE:O	14:D:125:ILE:HG22	2.01	0.61
11:A:1718:G:H2'	11:A:1719:G:H8	1.64	0.61
33:Z:105:VAL:O	33:Z:140:ASP:HA	2.01	0.61
9:8:32:LEU:CD2	9:8:36:LYS:HZ1	2.11	0.61
11:A:1960:A:C5'	11:A:1960:A:H8	2.13	0.61
11:A:2107:C:C1'	11:A:2182:G:H22	2.13	0.61
30:W:4:LYS:HA	30:W:106:ILE:HG22	1.83	0.61
25:R:3:HIS:O	25:R:5:LYS:N	2.32	0.61
29:V:18:LEU:CD2	29:V:19:LYS:H	2.10	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:1516:C:H2'	11:A:1517:G:H5'	1.82	0.61
11:A:1105:U:H2'	11:A:1106:G:H8	1.64	0.61
11:A:310:A:OP1	32:Y:17:SER:O	2.18	0.61
32:Y:67:LEU:HD21	32:Y:71:LYS:HE2	1.81	0.61
3:2:51:ARG:HB2	3:2:55:ARG:NH1	2.16	0.61
33:Z:150:LEU:H	33:Z:150:LEU:CD2	2.14	0.61
11:A:2262:U:O2'	11:A:2263:C:H5'	2.00	0.61
5:4:13:ARG:C	5:4:14:ILE:HD12	2.20	0.61
28:U:16:LYS:O	28:U:20:LEU:HD23	2.01	0.61
33:Z:23:LYS:HD3	33:Z:38:TYR:CZ	2.36	0.61
28:U:91:ASP:O	28:U:95:LEU:HB2	2.00	0.61
11:A:2854:G:H2'	11:A:2855:C:C6	2.36	0.61
11:A:824:A:H1'	11:A:2358:G:N7	2.15	0.61
11:A:482:A:H4'	32:Y:47:LYS:HG2	1.82	0.61
11:A:848:G:N3	11:A:933:A:H1'	2.16	0.61
11:A:2287:A:C2	11:A:2346:A:N1	2.68	0.61
21:N:13:TRP:O	21:N:135:PRO:HD2	1.99	0.61
11:A:1151:G:H5''	28:U:81:HIS:CE1	2.35	0.61
11:A:2025:C:H2'	11:A:2026:C:H6	1.66	0.61
6:5:36:CYS:C	6:5:38:ALA:H	2.04	0.61
11:A:2416:C:P	23:P:66:GLY:HA3	2.41	0.61
15:E:36:ARG:HH21	15:E:88:GLY:HA2	1.64	0.61
17:G:178:PHE:HB3	17:G:180:PHE:HE1	1.65	0.61
25:R:103:ARG:NE	30:W:40:ASN:HD21	1.97	0.61
13:C:91:ALA:HB2	13:C:153:ILE:HD13	1.83	0.61
27:T:104:ASN:O	27:T:105:LEU:HB2	2.00	0.61
22:O:69:ILE:HG13	22:O:77:ILE:HG23	1.81	0.61
30:W:36:LEU:HD11	30:W:47:VAL:HG12	1.83	0.61
22:O:43:VAL:HG21	22:O:52:VAL:HG11	1.82	0.61
26:S:34:HIS:HB3	26:S:53:SER:HB3	1.82	0.61
33:Z:162:GLU:C	33:Z:163:LEU:HD23	2.21	0.61
17:G:178:PHE:HB3	17:G:180:PHE:CE1	2.36	0.61
11:A:612:C:C2'	11:A:613:G:C5'	2.77	0.61
22:O:47:ILE:CG2	22:O:48:PRO:HD2	2.30	0.61
21:N:49:GLY:H	21:N:119:ARG:HH22	1.48	0.61
11:A:1827:C:C2'	11:A:1828:G:H5'	2.30	0.61
11:A:547:A:H2'	11:A:548:A:C8	2.35	0.61
33:Z:144:LEU:HD12	33:Z:174:VAL:CG2	2.31	0.61
11:A:882:G:H2'	11:A:883:G:H8	1.65	0.61
31:X:35:THR:HB	31:X:38:GLU:CB	2.30	0.61
7:6:33:LYS:CE	7:6:33:LYS:HA	2.29	0.61
11:A:2159:G:H2'	11:A:2160:G:C5'	2.30	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:2851:A:H2'	11:A:2852:G:C8	2.35	0.61
14:D:224:ALA:O	14:D:225:ALA:HB3	2.00	0.61
21:N:126:PRO:O	21:N:127:ASP:HB2	2.01	0.61
14:D:35:LYS:HG3	14:D:104:TYR:CD2	2.34	0.61
9:8:6:THR:HB	9:8:11:LYS:HZ3	1.64	0.61
18:H:103:LEU:HB2	18:H:123:PHE:CD2	2.30	0.61
26:S:15:ARG:O	26:S:15:ARG:CD	2.49	0.61
28:U:101:ARG:HH11	28:U:101:ARG:HG3	1.66	0.61
11:A:2309:A:C2'	11:A:2310:A:H5''	2.31	0.60
32:Y:95:LYS:HG3	32:Y:100:ALA:HA	1.82	0.60
33:Z:152:ALA:HB3	33:Z:167:PRO:O	2.01	0.60
33:Z:72:ARG:HG2	33:Z:89:PHE:HB2	1.83	0.60
6:5:16:ARG:HH11	6:5:20:ARG:NH1	1.98	0.60
11:A:2840:C:H2'	11:A:2841:C:C6	2.36	0.60
14:D:28:GLU:N	14:D:29:PRO:HD2	2.15	0.60
11:A:1963:U:O2	11:A:1963:U:H2'	1.99	0.60
15:E:152:LYS:HG2	21:N:78:TYR:CE1	2.36	0.60
21:N:19:GLU:HA	21:N:59:LYS:HB2	1.81	0.60
11:A:201:C:O2'	11:A:202:U:H5'	2.01	0.60
5:4:7:PRO:O	5:4:8:LYS:HB3	1.99	0.60
33:Z:57:ILE:HD12	33:Z:57:ILE:N	2.15	0.60
6:5:3:LYS:HD2	6:5:3:LYS:N	2.15	0.60
32:Y:86:ARG:HH21	32:Y:95:LYS:HZ3	1.48	0.60
11:A:1665:A:C3'	11:A:1666:G:H5''	2.31	0.60
16:F:39:TRP:CH2	16:F:106:ARG:HD3	2.37	0.60
31:X:8:ILE:N	31:X:8:ILE:HD12	2.08	0.60
13:C:123:VAL:O	13:C:127:LEU:HB3	2.01	0.60
11:A:672:C:O2'	11:A:673:C:H5''	2.01	0.60
18:H:44:VAL:HG12	18:H:45:VAL:N	2.16	0.60
21:N:22:THR:CA	21:N:61:ARG:HB2	2.30	0.60
32:Y:42:VAL:CG2	32:Y:67:LEU:HD12	2.31	0.60
11:A:2192:G:C3'	11:A:2193:G:H5''	2.31	0.60
11:A:2341:G:H2'	11:A:2342:C:C6	2.37	0.60
11:A:654(L):G:H2'	11:A:654(M):C:H4'	1.83	0.60
11:A:573:G:O2'	11:A:574:C:H3'	2.02	0.60
12:B:61:G:O2'	12:B:62:C:H5'	2.01	0.60
8:7:37:LYS:HD2	8:7:39:ARG:CD	2.27	0.60
23:P:90:ARG:HD2	23:P:90:ARG:O	2.01	0.60
7:6:52:VAL:HG22	7:6:53:LYS:HD3	1.82	0.60
13:C:40:THR:HG22	13:C:177:LYS:CD	2.31	0.60
27:T:34:VAL:HG22	27:T:39:ARG:HA	1.82	0.60
4:3:17:LYS:HG2	11:A:969:U:OP1	2.02	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:W:82:LEU:HB3	30:W:84:ARG:HH12	1.66	0.60
11:A:207:A:H2'	11:A:208:C:O4'	2.00	0.60
14:D:131:LEU:HB2	14:D:136:ILE:HD11	1.83	0.60
5:4:5:ILE:HG12	5:4:5:ILE:O	2.01	0.60
24:Q:21:THR:HG22	24:Q:23:GLY:O	2.01	0.60
16:F:157:VAL:HG23	16:F:198:ALA:HB1	1.83	0.60
23:P:30:THR:CG2	23:P:31:ALA:H	2.15	0.60
33:Z:161:VAL:HG12	33:Z:162:GLU:N	2.17	0.60
16:F:143:ALA:HB1	16:F:148:LEU:HB2	1.82	0.60
11:A:2469:A:O2'	24:Q:56:ARG:HD2	2.02	0.60
11:A:803:U:O2'	11:A:804:A:H5'	2.01	0.60
12:B:16:G:O2'	12:B:17:C:H6	1.84	0.60
27:T:25:GLY:O	27:T:26:ASP:HB2	2.00	0.60
10:9:10:ILE:HD12	10:9:10:ILE:N	2.16	0.60
32:Y:42:VAL:HG21	32:Y:67:LEU:HD12	1.83	0.60
32:Y:87:LYS:O	32:Y:88:LYS:HB2	2.02	0.60
31:X:50:LYS:H	31:X:87:GLN:HE22	1.49	0.60
11:A:1510:G:O2'	11:A:1511:C:H5'	2.01	0.60
13:C:122:ALA:O	13:C:126:LYS:HB2	2.01	0.60
11:A:1375:C:H2'	11:A:1376:C:H6	1.66	0.60
3:2:48:HIS:CE1	3:2:49:LYS:HG2	2.36	0.60
27:T:88:ILE:O	27:T:89:VAL:C	2.40	0.60
23:P:85:LEU:HB3	23:P:114:ILE:HD11	1.83	0.60
28:U:3:ARG:NH1	28:U:5:LYS:HB3	2.17	0.60
11:A:1222:C:H2'	11:A:1223:G:H5''	1.82	0.60
8:7:22:MET:HA	8:7:22:MET:CE	2.32	0.60
12:B:29:A:H2'	12:B:30:C:C6	2.37	0.60
23:P:102:ARG:HB2	23:P:102:ARG:HH11	1.65	0.60
16:F:167:ALA:O	16:F:170:LEU:HB2	2.01	0.60
18:H:149:ARG:HG3	18:H:162:ILE:HG12	1.83	0.60
11:A:521:G:H2'	11:A:522:G:H8	1.66	0.60
13:C:59:ARG:HG3	13:C:164:ARG:HB3	1.83	0.60
14:D:31:LYS:O	14:D:35:LYS:HE3	2.01	0.60
32:Y:7:VAL:HB	32:Y:8:LYS:HD2	1.84	0.60
27:T:28:VAL:CG1	27:T:46:GLU:HG3	2.29	0.60
16:F:160:ASN:HD21	16:F:162:LEU:CB	2.13	0.60
15:E:75:VAL:O	15:E:77:ILE:N	2.34	0.60
11:A:651:G:H2'	11:A:652:C:H5'	1.83	0.60
17:G:77:ILE:HD13	17:G:77:ILE:N	2.14	0.60
21:N:22:THR:HG22	21:N:61:ARG:HB2	1.83	0.60
31:X:49:VAL:HG12	31:X:87:GLN:NE2	2.17	0.60
11:A:2400:G:C4	11:A:2401:U:O2	2.54	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:1907:G:O2'	11:A:1908:C:H5'	2.02	0.60
11:A:1192:G:O2'	11:A:1193:G:H5'	2.01	0.60
17:G:102:PHE:CZ	17:G:106:LEU:HD22	2.37	0.60
17:G:120:LEU:HB2	17:G:179:PRO:O	2.01	0.60
25:R:2:ARG:NH1	25:R:2:ARG:HG3	2.15	0.60
11:A:1038:C:C2'	11:A:1039:G:H5''	2.32	0.60
33:Z:9:TYR:CE1	33:Z:35:ARG:NH1	2.69	0.60
14:D:226:MET:HE3	14:D:231:HIS:HB2	1.82	0.60
11:A:118:A:N3	11:A:178:G:H1'	2.16	0.60
11:A:2822:G:H2'	11:A:2823:A:H5''	1.83	0.60
11:A:11:G:H2'	11:A:12:U:C6	2.37	0.60
11:A:2744:G:N2	18:H:143:GLN:OE1	2.35	0.60
25:R:33:ARG:HG2	25:R:113:LEU:HD11	1.83	0.60
17:G:141:PHE:HB3	17:G:142:PRO:HD2	1.84	0.60
32:Y:7:VAL:HG21	32:Y:8:LYS:HZ2	1.66	0.60
18:H:118:PRO:CG	18:H:121:ILE:HD12	2.32	0.60
11:A:761:A:C8	11:A:761:A:O5'	2.45	0.60
11:A:2303:G:O2'	17:G:132:ASN:HB2	2.02	0.60
29:V:39:LEU:N	29:V:39:LEU:HD22	2.17	0.60
29:V:39:LEU:CD1	29:V:51:VAL:HA	2.32	0.60
5:4:14:ILE:N	5:4:14:ILE:HD12	2.17	0.60
15:E:107:THR:O	15:E:190:GLY:HA2	2.00	0.60
11:A:1599:C:H2'	11:A:1600:C:C6	2.35	0.60
7:6:9:LEU:HD13	7:6:9:LEU:O	2.01	0.60
32:Y:7:VAL:HG21	32:Y:8:LYS:HZ3	1.66	0.60
11:A:1960:A:H5'	11:A:1960:A:C8	2.36	0.60
11:A:2184:G:H2'	11:A:2185:C:C1'	2.31	0.60
26:S:88:ASP:OD2	26:S:89:ARG:N	2.31	0.60
22:O:86:ILE:HD12	22:O:86:ILE:N	2.16	0.60
29:V:38:LEU:HD23	29:V:39:LEU:N	2.16	0.60
11:A:1516:C:O2'	11:A:1517:G:H5''	2.02	0.60
13:C:118:ASP:C	13:C:120:MET:H	2.05	0.60
9:8:17:THR:HG21	9:8:21:LYS:HB2	1.82	0.60
24:Q:101:ARG:HD2	24:Q:102:VAL:N	2.17	0.60
11:A:559:G:H22	28:U:49:HIS:CD2	2.19	0.60
14:D:248:SER:HB2	14:D:249:PRO:HD2	1.82	0.60
14:D:35:LYS:CG	14:D:104:TYR:CE2	2.71	0.60
17:G:138:GLN:HB3	17:G:153:ARG:O	2.02	0.60
11:A:666:G:H4'	23:P:49:ARG:NH1	2.17	0.60
17:G:47:LYS:CD	17:G:81:LYS:HG3	2.32	0.60
27:T:85:LYS:HB3	27:T:85:LYS:HZ2	1.62	0.60
11:A:1040:C:H2'	11:A:1041:G:H8	1.66	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:C:76:ALA:HB1	13:C:149:ILE:HD11	1.84	0.60
9:8:14:VAL:HG21	9:8:22:VAL:CG1	2.31	0.60
11:A:1362:C:O2'	11:A:1363:C:H5'	2.01	0.60
14:D:158:ALA:HB3	14:D:161:THR:CG2	2.31	0.60
3:2:7:ARG:N	3:2:7:ARG:HD3	2.17	0.60
11:A:1231:G:H2'	11:A:1232:G:C8	2.37	0.60
8:7:26:GLY:O	8:7:30:VAL:HG23	2.02	0.60
11:A:1842:G:H2'	11:A:1843:C:C6	2.36	0.60
11:A:1024:G:C3'	11:A:1025:G:H5''	2.23	0.59
26:S:92:TYR:CG	26:S:93:LYS:N	2.69	0.59
11:A:1311:G:H21	11:A:1603:A:H62	1.49	0.59
29:V:21:ARG:HG2	29:V:91:TYR:CD2	2.37	0.59
11:A:611:C:H2'	11:A:612:C:H6	1.65	0.59
18:H:52:VAL:HG21	18:H:69:ARG:HG3	1.83	0.59
27:T:24:PRO:HD3	27:T:52:ILE:CD1	2.32	0.59
17:G:51:ARG:HD3	17:G:53:LEU:CD2	2.32	0.59
11:A:442:G:H4'	16:F:46:ARG:HD3	1.83	0.59
4:3:44:ARG:O	4:3:48:GLU:HG2	2.02	0.59
15:E:9:VAL:HG13	15:E:25:VAL:HB	1.84	0.59
21:N:6:PRO:HB2	21:N:9:VAL:HG21	1.84	0.59
25:R:21:TYR:OH	25:R:43:GLU:HG2	2.02	0.59
11:A:93:G:H2'	11:A:94:C:C6	2.37	0.59
17:G:102:PHE:CE2	17:G:106:LEU:HD22	2.37	0.59
26:S:36:TYR:HD1	26:S:36:TYR:H	1.43	0.59
18:H:50:VAL:CG1	18:H:52:VAL:HG23	2.32	0.59
17:G:52:ILE:HB	17:G:54:GLU:HG3	1.83	0.59
23:P:83:VAL:HG11	23:P:112:LEU:HD21	1.83	0.59
11:A:141:A:H1'	11:A:1408:C:O2'	2.02	0.59
15:E:199:ARG:HH11	15:E:199:ARG:HB3	1.66	0.59
30:W:55:ALA:C	30:W:57:ASN:H	2.05	0.59
11:A:1567:A:H5'	14:D:58:HIS:CD2	2.37	0.59
9:8:4:MET:CE	11:A:666:G:H1'	2.32	0.59
16:F:123:LEU:HD12	16:F:124:LEU:H	1.66	0.59
27:T:28:VAL:HG12	27:T:29:ARG:HD2	1.85	0.59
11:A:1210:A:H5''	11:A:1212:G:O4'	2.02	0.59
23:P:23:PRO:HD2	23:P:33:ARG:NE	2.14	0.59
11:A:1677:A:H2'	11:A:1678:G:C8	2.37	0.59
23:P:101:VAL:HG12	23:P:106:LEU:CB	2.31	0.59
31:X:49:VAL:HG12	31:X:87:GLN:HB3	1.83	0.59
12:B:30:C:H2'	12:B:31:C:O4'	2.02	0.59
32:Y:46:LYS:HG2	32:Y:47:LYS:H	1.67	0.59
11:A:214:G:H1'	11:A:216:A:O2'	2.03	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:729:G:C5	14:D:208:LYS:HB2	2.37	0.59
15:E:14:ILE:HD11	15:E:173:VAL:CG1	2.33	0.59
15:E:59:VAL:HG21	15:E:63:LEU:HA	1.84	0.59
11:A:208:C:H2'	11:A:209:C:H6	1.65	0.59
13:C:75:LEU:O	13:C:113:VAL:HA	2.02	0.59
12:B:13:A:O2'	12:B:14:U:H3'	2.01	0.59
11:A:1590:U:H2'	11:A:1591:G:C8	2.38	0.59
11:A:2393:A:H5'	23:P:62:LEU:HB3	1.84	0.59
23:P:65:ARG:HB3	23:P:68:GLN:NE2	2.13	0.59
26:S:96:GLY:O	26:S:98:VAL:N	2.31	0.59
33:Z:152:ALA:O	33:Z:154:ASP:N	2.36	0.59
24:Q:52:VAL:O	24:Q:56:ARG:HB2	2.02	0.59
11:A:1278:A:O2'	11:A:1279:G:H5'	2.01	0.59
25:R:36:THR:O	25:R:111:LEU:HB3	2.02	0.59
18:H:76:VAL:O	18:H:79:VAL:HG22	2.03	0.59
32:Y:42:VAL:HG12	32:Y:65:ALA:HB3	1.84	0.59
18:H:20:ALA:HB1	18:H:21:PRO:HD2	1.83	0.59
21:N:6:PRO:HB3	21:N:41:ASP:OD2	2.03	0.59
6:5:52:TYR:CE2	11:A:2884:U:H1'	2.38	0.59
11:A:1582:C:H2'	11:A:1583:A:H8	1.66	0.59
5:4:20:ASN:HD22	5:4:21:VAL:N	2.00	0.59
11:A:280:C:H3'	11:A:281:G:H8	1.67	0.59
11:A:2406:U:N3	23:P:72:PRO:HB2	2.17	0.59
11:A:1203:G:H3'	11:A:1204:A:H5''	1.83	0.59
11:A:1210:A:H8	11:A:1210:A:H5'	1.65	0.59
25:R:100:LEU:HD13	25:R:100:LEU:H	1.67	0.59
12:B:40:U:O2	12:B:43:C:H5''	2.03	0.59
11:A:1784:A:H4'	11:A:1785:A:O5'	2.02	0.59
26:S:59:LYS:HG2	26:S:60:GLY:N	2.13	0.59
11:A:2712:U:O2'	11:A:2713:A:H5'	2.01	0.59
28:U:92:ARG:NH1	28:U:94:ASN:HD22	1.99	0.59
11:A:1049:C:H2'	11:A:1050:A:H8	1.68	0.59
11:A:1817:G:C2'	11:A:1818:U:H5'	2.32	0.59
11:A:877:U:O2'	11:A:878:A:H5''	2.02	0.59
18:H:94:TYR:HB3	18:H:107:VAL:HG12	1.84	0.59
14:D:233:HIS:CE1	14:D:247:ALA:H	2.21	0.59
33:Z:40:ASP:OD2	33:Z:43:GLU:HG2	2.01	0.59
22:O:24:VAL:HB	22:O:33:ALA:HB2	1.85	0.59
27:T:28:VAL:O	27:T:29:ARG:CB	2.50	0.59
26:S:97:ARG:NH2	26:S:98:VAL:CA	2.64	0.59
11:A:2248:C:H2'	11:A:2249:U:C5'	2.29	0.59
23:P:16:ARG:NE	23:P:18:ARG:HG2	2.18	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:997:G:OP1	28:U:93:LYS:HD3	2.02	0.59
23:P:40:SER:O	23:P:41:ARG:HD2	2.01	0.59
11:A:1222:C:C2'	11:A:1223:G:H5''	2.33	0.59
27:T:106:SER:O	27:T:107:ASP:CB	2.50	0.59
11:A:1773:A:C2'	11:A:1774:C:H5'	2.32	0.59
7:6:27:LYS:HE3	7:6:27:LYS:C	2.23	0.59
15:E:170:LEU:HB3	15:E:184:VAL:CG1	2.32	0.59
28:U:90:VAL:HG12	28:U:91:ASP:H	1.65	0.59
2:1:3:LYS:HG3	11:A:1364:G:OP2	2.02	0.59
31:X:29:TRP:CE3	31:X:78:LYS:HB3	2.38	0.59
11:A:2781:A:H5''	11:A:2782:G:H5'	1.85	0.59
11:A:302:C:H2'	11:A:303:U:H6	1.68	0.59
8:7:19:ARG:HH11	8:7:19:ARG:HG2	1.68	0.59
2:1:75:GLU:O	2:1:78:LYS:HG2	2.02	0.59
11:A:1090:U:H3'	11:A:1090:U:OP2	2.02	0.59
5:4:9:LEU:HD13	5:4:26:SER:O	2.03	0.59
31:X:80:ILE:HG13	31:X:80:ILE:O	2.02	0.59
17:G:71:THR:HG23	17:G:71:THR:O	2.02	0.59
32:Y:86:ARG:NH2	32:Y:95:LYS:NZ	2.50	0.59
18:H:85:LYS:CE	18:H:133:VAL:H	2.15	0.59
5:4:6:HIS:HB3	17:G:67:LYS:HZ1	1.68	0.59
11:A:1947:C:C3'	11:A:1948:G:H5''	2.32	0.59
24:Q:141:GLN:HG3	33:Z:72:ARG:CZ	2.32	0.59
15:E:188:VAL:HG23	15:E:189:PRO:HD2	1.85	0.59
15:E:101:ARG:HB2	15:E:201:THR:HG21	1.84	0.59
23:P:84:ASN:ND2	23:P:116:GLY:HA2	2.18	0.59
33:Z:18:LEU:N	33:Z:18:LEU:HD12	2.14	0.59
13:C:123:VAL:CG2	13:C:127:LEU:HD13	2.32	0.59
13:C:116:THR:HG22	13:C:147:PHE:HA	1.85	0.59
27:T:100:TYR:HD2	27:T:103:ARG:NH2	1.97	0.59
15:E:116:VAL:HG22	15:E:122:PHE:CG	2.38	0.59
14:D:45:ASN:CG	14:D:46:GLN:N	2.56	0.59
18:H:136:ILE:HD12	18:H:136:ILE:H	1.67	0.59
33:Z:30:ASN:HD22	33:Z:32:HIS:N	1.97	0.59
11:A:2305:A:C4	17:G:154:GLY:HA3	2.37	0.59
18:H:157:TYR:O	18:H:158:HIS:CD2	2.56	0.59
23:P:97:PRO:HD3	23:P:126:VAL:O	2.02	0.59
11:A:1678:G:N2	11:A:1989:G:N2	2.51	0.59
1:0:14:ARG:HD2	11:A:2279:G:O6	2.03	0.59
33:Z:9:TYR:HE1	33:Z:35:ARG:NH1	2.00	0.59
27:T:39:ARG:N	27:T:39:ARG:HD2	2.18	0.59
11:A:363(E):U:H2'	11:A:363(F):A:C1'	2.33	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:2360:A:O2'	11:A:2361:A:O4'	2.21	0.59
11:A:139(A):G:H22	31:X:44:GLU:CD	2.05	0.59
11:A:1582:C:H2'	11:A:1583:A:C8	2.38	0.59
11:A:512:G:O2'	11:A:513:A:H8	1.86	0.58
33:Z:18:LEU:HB3	33:Z:23:LYS:HB2	1.85	0.58
25:R:55:ALA:CB	25:R:79:LEU:HD11	2.33	0.58
13:C:87:GLU:HG2	13:C:94:VAL:CG2	2.33	0.58
14:D:48:ARG:HG3	14:D:48:ARG:NH1	2.18	0.58
18:H:74:ASN:HB3	18:H:138:LYS:HD3	1.85	0.58
9:8:14:VAL:HG23	9:8:24:ALA:HB2	1.85	0.58
9:8:50:LEU:C	9:8:53:PRO:HD2	2.24	0.58
9:8:52:LYS:O	9:8:55:ALA:HB3	2.03	0.58
21:N:22:THR:HG22	21:N:61:ARG:CB	2.32	0.58
12:B:75:G:O2'	33:Z:27:VAL:HG23	2.03	0.58
27:T:50:ILE:O	27:T:99:LEU:HD12	2.03	0.58
11:A:2140:C:H2'	11:A:2141:G:H8	1.68	0.58
11:A:2121:G:O4'	13:C:167:LYS:HE2	2.02	0.58
11:A:523:C:C2'	11:A:524:U:H5'	2.33	0.58
11:A:361:G:H2'	11:A:362:U:H4'	1.84	0.58
7:6:25:LYS:HD2	11:A:2285:C:N4	2.17	0.58
32:Y:28:LYS:CB	32:Y:37:VAL:HB	2.33	0.58
15:E:34:VAL:O	15:E:35:GLN:HB2	2.02	0.58
29:V:91:TYR:HD1	29:V:91:TYR:H	1.49	0.58
11:A:654(M):C:H2'	11:A:654(N):G:N7	2.18	0.58
23:P:59:LEU:HA	23:P:61:ARG:NH1	2.18	0.58
11:A:2183:C:H2'	11:A:2184:G:H8	1.68	0.58
18:H:156:ALA:C	18:H:158:HIS:N	2.56	0.58
11:A:1061:U:H4'	11:A:1070:A:C1'	2.32	0.58
25:R:99:LYS:N	25:R:99:LYS:HD2	2.15	0.58
8:7:22:MET:CE	8:7:31:LEU:HD12	2.34	0.58
29:V:41:GLY:HA3	29:V:45:THR:OG1	2.04	0.58
10:9:22:ARG:HB2	10:9:24:TYR:HE1	1.68	0.58
11:A:236:C:H2'	11:A:237:C:C6	2.38	0.58
9:8:62:LEU:N	9:8:63:PRO:HD2	2.19	0.58
27:T:28:VAL:O	27:T:28:VAL:HG12	2.03	0.58
11:A:2317:C:H2'	11:A:2318:G:C5'	2.27	0.58
11:A:1446:C:H42	11:A:1465:G:H1	1.51	0.58
15:E:92:THR:O	15:E:95:ILE:HG12	2.03	0.58
15:E:23:VAL:HG12	15:E:173:VAL:HG21	1.85	0.58
11:A:2228:G:OP2	14:D:261:LYS:HE3	2.04	0.58
11:A:218:A:C2	11:A:235:U:H4'	2.39	0.58
3:2:2:LYS:O	3:2:6:VAL:HG23	2.02	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:8:42:ARG:O	9:8:44:LYS:N	2.33	0.58
27:T:61:PHE:CE1	27:T:76:PHE:HB2	2.37	0.58
11:A:898:C:H2'	11:A:899:A:O4'	2.03	0.58
9:8:61:LEU:HD12	9:8:61:LEU:N	2.13	0.58
26:S:98:VAL:HG12	26:S:100:ALA:H	1.68	0.58
15:E:105:THR:HB	15:E:197:ILE:CG2	2.32	0.58
22:O:64:ARG:CZ	27:T:70:VAL:HG21	2.34	0.58
11:A:1146:C:O2'	11:A:1147:C:H5'	2.04	0.58
16:F:10:PRO:HD2	16:F:13:SER:O	2.04	0.58
30:W:1:MET:HB3	30:W:64:MET:HE3	1.85	0.58
11:A:953:A:OP2	24:Q:16:ARG:HD2	2.03	0.58
11:A:1001:A:H2'	11:A:1002:G:O4'	2.03	0.58
5:4:28:LYS:O	5:4:31:ILE:HD11	2.03	0.58
5:4:30:GLU:C	5:4:31:ILE:HD12	2.24	0.58
11:A:1902:C:H4'	14:D:244:ARG:CB	2.33	0.58
11:A:2415:G:H2'	11:A:2416:C:C6	2.38	0.58
11:A:1049:C:O2	11:A:1113:U:H4'	2.04	0.58
14:D:44:ASN:HB2	14:D:48:ARG:O	2.04	0.58
15:E:181:LEU:HD21	27:T:7:ILE:HG23	1.84	0.58
13:C:73:ARG:O	13:C:111:ASP:HB2	2.04	0.58
11:A:2192:G:C2'	11:A:2193:G:H5''	2.33	0.58
11:A:1076:C:H42	11:A:1088:A:H61	1.50	0.58
12:B:65:C:H41	12:B:109:C:H2'	1.66	0.58
11:A:1592:C:H2'	11:A:1593:G:H8	1.69	0.58
28:U:111:GLU:C	28:U:113:ALA:H	2.07	0.58
21:N:62:VAL:HG22	21:N:66:LYS:HB2	1.85	0.58
25:R:7:GLY:O	25:R:8:ARG:CZ	2.51	0.58
25:R:59:ASP:O	25:R:60:LEU:HB3	2.03	0.58
11:A:8:A:H2'	11:A:9:U:C5	2.39	0.58
7:6:15:GLU:HG3	7:6:47:THR:OG1	2.04	0.58
11:A:2309:A:H2'	11:A:2310:A:C5'	2.34	0.58
11:A:2189:U:H3'	11:A:2190:G:H4'	1.86	0.58
11:A:672:C:H2'	11:A:673:C:H5'	1.85	0.58
17:G:53:LEU:HD22	17:G:53:LEU:N	2.18	0.58
11:A:1639:U:O2'	11:A:1640:C:H5''	2.03	0.58
11:A:285:C:H2'	11:A:286:C:C6	2.39	0.58
28:U:70:ARG:HA	28:U:74:LEU:O	2.04	0.58
14:D:275:LYS:HD2	14:D:275:LYS:C	2.24	0.58
33:Z:73:GLN:HE21	33:Z:75:ASN:HD21	1.51	0.58
29:V:62:LEU:HD21	29:V:95:LEU:CB	2.21	0.58
32:Y:30:VAL:HA	32:Y:37:VAL:HG12	1.86	0.58
11:A:28:A:H61	11:A:512:G:H1'	1.68	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:833:U:H5''	23:P:48:PRO:CB	2.33	0.58
23:P:16:ARG:CZ	23:P:18:ARG:HG2	2.34	0.58
29:V:21:ARG:CG	29:V:91:TYR:HD2	2.16	0.58
32:Y:63:LYS:HG2	32:Y:64:GLU:H	1.68	0.58
16:F:110:LEU:HD12	16:F:206:ILE:HD11	1.86	0.58
25:R:47:PHE:O	25:R:51:LEU:HD13	2.03	0.58
14:D:4:LYS:NZ	14:D:20:ASP:HA	2.19	0.58
11:A:363:G:H2'	11:A:363(A):A:H8	1.69	0.58
11:A:1274:A:N3	11:A:1297:C:H1'	2.18	0.58
11:A:1932:A:H2'	11:A:1933:G:O4'	2.04	0.58
11:A:1389:G:H2'	11:A:1390:U:C6	2.38	0.58
14:D:32:SER:O	14:D:33:LEU:O	2.21	0.58
7:6:30:THR:CG2	7:6:31:PRO:HD2	2.20	0.58
7:6:26:ASN:ND2	7:6:32:ASN:ND2	2.52	0.58
7:6:13:CYS:O	7:6:21:TYR:HA	2.04	0.58
7:6:45:LYS:O	7:6:46:HIS:HB3	2.04	0.58
11:A:650:C:C3'	11:A:651:G:H5''	2.32	0.58
11:A:2580:U:C5'	15:E:131:ALA:HB2	2.31	0.58
23:P:41:ARG:NH1	23:P:41:ARG:CA	2.67	0.58
15:E:132:HIS:C	15:E:135:HIS:HE1	2.07	0.58
27:T:23:ARG:HB2	27:T:24:PRO:HD2	1.86	0.58
24:Q:45:GLN:NE2	24:Q:45:GLN:H	2.01	0.58
11:A:325:G:H2'	11:A:326:G:C8	2.38	0.58
13:C:106:GLY:O	13:C:107:TRP:HB3	2.03	0.58
11:A:108:U:H2'	11:A:109:G:C8	2.39	0.58
14:D:27:THR:O	14:D:27:THR:HG23	2.03	0.58
3:2:47:ASN:O	3:2:49:LYS:N	2.37	0.58
11:A:2820:A:H4'	25:R:5:LYS:HE2	1.86	0.58
29:V:19:LYS:CE	29:V:20:LEU:H	2.17	0.58
18:H:41:MET:SD	18:H:53:GLU:O	2.62	0.58
11:A:2402:C:H2'	11:A:2403:C:H5'	1.85	0.58
11:A:862:G:H2'	11:A:863:A:O4'	2.04	0.58
31:X:31:HIS:ND1	31:X:32:PRO:HD2	2.18	0.58
11:A:20:C:O2'	11:A:21:A:H5'	2.04	0.58
14:D:30:GLU:HG3	14:D:63:ARG:HH21	1.68	0.57
2:1:7:ILE:HG22	2:1:8:SER:N	2.19	0.57
11:A:1666:G:C2'	11:A:1667:G:H5'	2.34	0.57
22:O:94:ARG:NH1	22:O:94:ARG:HG2	2.19	0.57
23:P:85:LEU:HA	23:P:88:LEU:HB2	1.84	0.57
25:R:29:LEU:O	25:R:75:LEU:HD21	2.04	0.57
13:C:78:ALA:H	13:C:115:ALA:HA	1.69	0.57
27:T:75:ILE:HD12	27:T:75:ILE:N	2.19	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:2023:G:H4'	11:A:2617:C:O3'	2.04	0.57
16:F:108:LYS:HD3	16:F:108:LYS:N	2.18	0.57
22:O:2:ILE:HD12	22:O:6:THR:HG21	1.85	0.57
15:E:108:SER:HB3	15:E:165:VAL:HG21	1.86	0.57
11:A:1771:C:H1'	11:A:1786:A:C8	2.39	0.57
32:Y:6:HIS:CE1	32:Y:30:VAL:HG11	2.38	0.57
27:T:33:LYS:HE2	27:T:43:GLN:NE2	2.19	0.57
11:A:2108:C:C2'	11:A:2108:C:O2	2.52	0.57
15:E:38:THR:OG1	15:E:41:LYS:HE2	2.04	0.57
23:P:16:ARG:CB	23:P:16:ARG:HH11	2.15	0.57
11:A:2469:A:H2'	11:A:2470:G:H5'	1.86	0.57
14:D:176:ARG:NH1	14:D:176:ARG:HG2	2.15	0.57
18:H:43:VAL:HG12	18:H:46:GLU:OE2	2.03	0.57
11:A:782:A:C2	14:D:226:MET:SD	2.98	0.57
32:Y:88:LYS:HZ2	32:Y:93:GLY:HA3	1.69	0.57
11:A:139(A):G:H3'	11:A:140:G:H8	1.69	0.57
1:O:7:LEU:HD21	24:Q:81:VAL:CG1	2.33	0.57
11:A:143:G:H2'	11:A:143(A):C:H6	1.69	0.57
22:O:98:VAL:HG12	22:O:117:LEU:HB3	1.86	0.57
17:G:63:ILE:CA	17:G:143:GLU:HG3	2.29	0.57
16:F:24:LEU:O	16:F:26:ALA:N	2.37	0.57
27:T:29:ARG:CB	27:T:85:LYS:HA	2.33	0.57
2:1:45:ASN:HD21	11:A:2090:G:N2	1.95	0.57
25:R:52:ILE:HB	25:R:94:TYR:CD2	2.40	0.57
13:C:87:GLU:HG2	13:C:94:VAL:HG23	1.84	0.57
23:P:41:ARG:NH1	23:P:41:ARG:HB3	2.19	0.57
18:H:98:LEU:H	18:H:125:VAL:HG21	1.69	0.57
26:S:12:PHE:CD1	26:S:13:ARG:N	2.70	0.57
26:S:13:ARG:HG3	26:S:14:VAL:N	2.18	0.57
11:A:1019:U:HO2'	11:A:1021:A:H2	1.42	0.57
11:A:527:C:H4'	11:A:528:A:O4'	2.05	0.57
21:N:3:THR:HG22	21:N:4:TYR:N	2.18	0.57
11:A:2139:C:O2'	11:A:2140:C:H5'	2.03	0.57
11:A:2206:G:N2	11:A:2207:G:H5'	2.19	0.57
21:N:125:GLY:HA2	21:N:126:PRO:O	2.04	0.57
11:A:1101:U:H2'	11:A:1102:C:H6	1.69	0.57
14:D:27:THR:HG23	14:D:83:GLU:HG2	1.86	0.57
9:8:6:THR:HG21	9:8:63:PRO:HD3	1.85	0.57
11:A:1959:G:C3'	11:A:1960:A:H5''	2.33	0.57
28:U:65:ILE:HD11	28:U:96:ALA:CB	2.31	0.57
32:Y:17:SER:OG	32:Y:18:GLY:N	2.38	0.57
10:9:25:VAL:HB	10:9:34:GLN:HB2	1.85	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:F:139:PHE:HB2	16:F:166:ALA:HB1	1.86	0.57
22:O:80:ASP:OD2	27:T:71:GLY:HA3	2.03	0.57
11:A:1260:G:H2'	11:A:1261:C:C6	2.38	0.57
11:A:2312:U:C2'	11:A:2313:C:H5''	2.34	0.57
26:S:49:VAL:CG1	26:S:50:SER:H	2.03	0.57
11:A:2107:C:H1'	11:A:2182:G:N2	2.19	0.57
24:Q:141:GLN:CG	33:Z:72:ARG:HD3	2.35	0.57
11:A:1311:G:N2	11:A:1603:A:H62	2.03	0.57
21:N:32:THR:C	21:N:34:LEU:H	2.08	0.57
4:3:40:THR:OG1	4:3:43:ILE:HG12	2.04	0.57
3:2:41:ILE:HD11	3:2:44:LEU:CD1	2.34	0.57
11:A:1005:C:H2'	11:A:1006:C:C6	2.38	0.57
11:A:99:U:H4'	11:A:102:G:H1'	1.85	0.57
17:G:30:GLU:HG2	17:G:30:GLU:O	2.05	0.57
11:A:756:C:O2'	11:A:757:U:H5'	2.05	0.57
26:S:73:LEU:HD23	26:S:73:LEU:C	2.25	0.57
31:X:27:THR:HG22	31:X:80:ILE:HB	1.85	0.57
11:A:1209:G:H21	11:A:1210:A:H62	1.50	0.57
11:A:297:C:H2'	11:A:298:G:O4'	2.05	0.57
11:A:1070:A:H2'	11:A:1097:U:OP1	2.05	0.57
6:5:48:GLU:C	6:5:49:CYS:SG	2.83	0.57
24:Q:134:ARG:HA	24:Q:137:TYR:CD2	2.39	0.57
11:A:1248:G:C2	28:U:3:ARG:HD2	2.40	0.57
11:A:141:A:H8	11:A:1408:C:O2'	1.87	0.57
33:Z:149:SER:CB	33:Z:173:ALA:HA	2.34	0.57
11:A:2140:C:H2'	11:A:2141:G:C8	2.39	0.57
31:X:33:LYS:HE2	31:X:33:LYS:HA	1.85	0.57
11:A:2240:C:O2'	11:A:2241:A:H5'	2.04	0.57
1:0:36:ILE:HD11	11:A:2355:C:H4'	1.86	0.57
5:4:28:LYS:HE2	5:4:29:PRO:HD2	1.85	0.57
17:G:34:LEU:HD11	17:G:99:MET:HE3	1.87	0.57
11:A:1947:C:H2'	11:A:1948:G:H5''	1.87	0.57
6:5:57:VAL:C	6:5:58:LEU:HD12	2.24	0.57
17:G:107:LEU:HD22	17:G:177:GLY:O	2.04	0.57
26:S:85:VAL:O	26:S:106:ARG:HG2	2.05	0.57
26:S:24:LEU:O	26:S:85:VAL:HB	2.05	0.57
33:Z:6:LYS:HG3	33:Z:60:GLU:CB	2.34	0.57
23:P:81:GLN:HE22	23:P:106:LEU:HA	1.70	0.57
11:A:1495:A:H8	11:A:1495:A:OP2	1.88	0.57
11:A:1018:C:H2'	11:A:1019:U:C6	2.39	0.57
14:D:24:ILE:HD11	14:D:28:GLU:HB3	1.87	0.57
24:Q:35:VAL:HG12	24:Q:130:LYS:O	2.04	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:C:74:VAL:HG12	13:C:75:LEU:N	2.20	0.57
13:C:42:GLU:HG3	13:C:215:THR:HG23	1.86	0.57
14:D:23:GLU:O	14:D:25:THR:N	2.37	0.57
14:D:30:GLU:HG3	14:D:63:ARG:NH2	2.20	0.57
14:D:27:THR:HG23	14:D:83:GLU:CG	2.35	0.57
5:4:11:PRO:HB3	5:4:25:TYR:CE2	2.40	0.57
6:5:4:HIS:O	11:A:2056:G:N2	2.38	0.57
15:E:56:PRO:O	15:E:57:LYS:HD2	2.04	0.57
3:2:25:VAL:HG13	3:2:57:ILE:HG23	1.86	0.57
11:A:2103:C:H2'	11:A:2186:G:H22	1.69	0.57
11:A:833:U:H2'	11:A:834:C:H6	1.69	0.57
29:V:2:PHE:CZ	29:V:13:ARG:NH1	2.73	0.57
1:0:43:THR:HG23	1:0:43:THR:O	2.05	0.57
25:R:52:ILE:CG2	25:R:94:TYR:HD2	2.17	0.57
21:N:34:LEU:HD13	21:N:34:LEU:O	2.05	0.57
21:N:48:MET:CE	21:N:48:MET:H	2.17	0.57
26:S:66:ALA:CA	26:S:69:VAL:HG12	2.35	0.57
11:A:614(A):U:H4'	11:A:614(B):G:C5'	2.35	0.57
11:A:2200:C:H5'	11:A:2201:C:OP2	2.05	0.57
30:W:14:PRO:HG2	30:W:78:GLU:CG	2.35	0.57
11:A:1607:C:H4'	11:A:1608:A:O5'	2.05	0.57
24:Q:1:MET:HE3	24:Q:44:ALA:HB1	1.85	0.57
11:A:2027:G:H2'	11:A:2028:U:H6	1.70	0.57
12:B:49:C:H2'	12:B:50:G:C8	2.40	0.57
32:Y:13:VAL:HG22	32:Y:14:LEU:N	2.20	0.57
18:H:153:LYS:N	18:H:153:LYS:HD3	2.08	0.57
32:Y:50:ARG:HB3	32:Y:53:PRO:HG3	1.86	0.57
11:A:321:G:O4'	16:F:165:ARG:HD3	2.05	0.57
11:A:1448:G:H5'	11:A:1449:A:OP1	2.05	0.57
25:R:30:THR:HG23	25:R:31:HIS:H	1.69	0.57
13:C:114:VAL:HG12	13:C:144:THR:CB	2.34	0.57
23:P:41:ARG:CZ	23:P:41:ARG:HB3	2.35	0.57
18:H:51:ARG:HG3	18:H:52:VAL:N	2.19	0.57
11:A:2591:C:H2'	11:A:2592:G:H8	1.67	0.57
11:A:1019:U:H3	11:A:1142(A):A:N6	2.03	0.57
18:H:20:ALA:HB3	18:H:23:ARG:HB2	1.86	0.57
21:N:9:VAL:HG12	21:N:10:GLU:N	2.19	0.57
2:1:52:ARG:NH1	2:1:57:GLU:HB2	2.19	0.57
11:A:703:U:C2'	11:A:704:G:H5'	2.35	0.57
11:A:2009:G:O2'	11:A:2010:G:H5'	2.04	0.57
27:T:16:ARG:HD2	27:T:18:ASP:OD1	2.04	0.57
11:A:1902:C:O2'	14:D:244:ARG:HD3	2.05	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:6:25:LYS:HE2	9:8:34:TRP:HZ2	1.69	0.57
21:N:23:LEU:HB2	21:N:60:ILE:HG21	1.85	0.57
18:H:44:VAL:HG12	18:H:45:VAL:HG23	1.86	0.57
11:A:1567:A:C5'	14:D:58:HIS:CD2	2.88	0.57
5:4:16:CYS:SG	5:4:17:GLY:N	2.78	0.57
20:K:32:UNK:HA	20:K:63:UNK:CB	2.35	0.57
29:V:82:ARG:HG2	29:V:82:ARG:HH11	1.68	0.57
21:N:58:ASP:O	21:N:60:ILE:HG13	2.05	0.56
25:R:52:ILE:CB	25:R:94:TYR:HD2	2.18	0.56
14:D:44:ASN:N	14:D:44:ASN:OD1	2.38	0.56
14:D:124:PRO:HG2	14:D:129:ASN:HD21	1.70	0.56
11:A:438:G:O2'	11:A:440:G:H5'	2.04	0.56
16:F:157:VAL:HG23	16:F:198:ALA:CB	2.34	0.56
26:S:50:SER:O	26:S:51:ALA:HB2	2.05	0.56
32:Y:96:ILE:HG13	32:Y:99:CYS:HB2	1.87	0.56
1:0:50:ASN:C	1:0:62:LEU:HD21	2.26	0.56
24:Q:141:GLN:C	33:Z:53:ILE:HD12	2.26	0.56
29:V:19:LYS:HD2	29:V:96:ILE:HD11	1.87	0.56
14:D:70:TRP:CZ3	14:D:150:LYS:HA	2.39	0.56
16:F:185:ASP:HA	16:F:188:ARG:CG	2.34	0.56
11:A:2287:A:H62	11:A:2344:U:H3	1.51	0.56
11:A:1405:U:H2'	11:A:1406:U:C6	2.40	0.56
24:Q:17:LEU:HD13	24:Q:39:PRO:HB2	1.87	0.56
11:A:1010:A:H1'	11:A:1153:C:H1'	1.86	0.56
14:D:35:LYS:HD2	14:D:36:PRO:HD3	1.85	0.56
11:A:1598:C:H5'	31:X:36:LYS:HG2	1.86	0.56
11:A:1598:C:H5'	31:X:36:LYS:CG	2.34	0.56
29:V:59:ALA:HB1	29:V:95:LEU:O	2.05	0.56
7:6:11:LEU:HD21	7:6:51:GLU:HG3	1.87	0.56
15:E:38:THR:HG23	15:E:39:PRO:HD2	1.87	0.56
12:B:44:G:H1'	12:B:47:C:N4	2.20	0.56
23:P:23:PRO:HG2	23:P:33:ARG:HG3	1.87	0.56
22:O:86:ILE:HD12	22:O:86:ILE:H	1.69	0.56
23:P:114:ILE:HD12	23:P:115:LEU:N	2.20	0.56
15:E:111:ARG:HG2	15:E:160:TYR:O	2.05	0.56
18:H:54:ARG:HG2	18:H:54:ARG:HH11	1.70	0.56
24:Q:134:ARG:HD2	33:Z:122:ARG:HH21	1.67	0.56
17:G:51:ARG:HH11	17:G:53:LEU:HD13	1.71	0.56
21:N:46:VAL:HG11	21:N:48:MET:HG3	1.85	0.56
27:T:91:ARG:O	27:T:92:GLY:C	2.44	0.56
14:D:70:TRP:HZ3	14:D:146:GLU:OE2	1.87	0.56
14:D:73:VAL:HG13	14:D:120:GLY:CA	2.36	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:1331:A:HO2'	11:A:1332:G:H8	1.51	0.56
11:A:848:G:N9	11:A:933:A:H8	2.02	0.56
9:8:43:GLN:C	9:8:44:LYS:HD2	2.26	0.56
11:A:2679:A:H4'	15:E:165:VAL:HG11	1.87	0.56
22:O:114:ILE:N	22:O:114:ILE:HD12	2.21	0.56
21:N:89:LYS:O	21:N:93:THR:HG22	2.05	0.56
11:A:893:C:H2'	11:A:894:C:C6	2.40	0.56
14:D:72:LYS:HE2	14:D:101:GLU:OE1	2.05	0.56
29:V:12:TYR:CD1	29:V:12:TYR:N	2.73	0.56
11:A:669:G:H2'	11:A:669:G:N3	2.21	0.56
14:D:30:GLU:CG	14:D:63:ARG:HH21	2.18	0.56
30:W:73:ALA:O	30:W:106:ILE:HG12	2.05	0.56
15:E:101:ARG:HB3	15:E:201:THR:HG21	1.87	0.56
33:Z:60:GLU:O	33:Z:61:LEU:HB2	2.05	0.56
12:B:65:C:N4	12:B:109:C:H2'	2.21	0.56
30:W:11:ARG:NH1	30:W:98:LYS:HB3	2.20	0.56
11:A:654(N):G:H2'	11:A:654(O):G:O4'	2.05	0.56
11:A:181:A:H5'	11:A:181:A:H8	1.70	0.56
11:A:2543:G:H2'	11:A:2544:G:C8	2.40	0.56
11:A:1268:A:H2'	11:A:1269:A:O4'	2.05	0.56
5:4:31:ILE:N	5:4:31:ILE:HD12	2.21	0.56
23:P:50:ARG:HG2	23:P:50:ARG:NH1	2.21	0.56
15:E:77:ILE:HG22	15:E:78:LEU:N	2.19	0.56
3:2:51:ARG:HD3	3:2:55:ARG:NH1	2.19	0.56
2:1:82:LEU:HD11	2:1:90:ILE:CD1	2.35	0.56
10:9:17:ILE:CG2	10:9:18:ARG:N	2.68	0.56
11:A:11:G:H2'	11:A:12:U:H6	1.69	0.56
11:A:1187:G:H5''	29:V:81:TYR:CE2	2.40	0.56
11:A:222:A:H5''	11:A:421:U:OP1	2.06	0.56
13:C:139:ASN:OD1	13:C:140:PRO:HD2	2.04	0.56
11:A:2316:C:H1'	17:G:128:ARG:CZ	2.36	0.56
27:T:54:ARG:HA	27:T:59:THR:HB	1.87	0.56
11:A:654(H):G:C3'	11:A:654(I):C:H5'	2.36	0.56
23:P:147:LEU:O	23:P:148:LEU:HB2	2.06	0.56
22:O:87:ILE:HG22	22:O:88:ASN:O	2.05	0.56
23:P:100:LEU:O	23:P:103:ALA:HB3	2.06	0.56
11:A:2029:G:H2'	11:A:2031:A:OP2	2.06	0.56
21:N:1:MET:C	21:N:2:LYS:HD2	2.26	0.56
9:8:32:LEU:HB3	9:8:36:LYS:HZ2	1.71	0.56
32:Y:29:GLU:N	32:Y:29:GLU:OE1	2.38	0.56
7:6:11:LEU:HD11	7:6:51:GLU:HG3	1.88	0.56
1:0:49:LYS:H	1:0:80:HIS:HD1	0.79	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:5:50:GLY:CA	6:5:56:LYS:HD3	2.33	0.56
16:F:160:ASN:ND2	16:F:162:LEU:H	2.02	0.56
24:Q:141:GLN:NE2	33:Z:72:ARG:HA	2.16	0.56
15:E:4:ILE:HG21	15:E:96:PHE:CE2	2.40	0.56
11:A:2127:G:O2'	11:A:2128:C:H5'	2.06	0.56
8:7:10:ARG:NH1	8:7:10:ARG:HG2	2.20	0.56
26:S:15:ARG:HG2	26:S:15:ARG:HH11	1.69	0.56
21:N:43:THR:HB	21:N:46:VAL:HG12	1.87	0.56
33:Z:10:ARG:O	33:Z:35:ARG:NH2	2.39	0.56
32:Y:90:LEU:HG	32:Y:91:GLU:H	1.71	0.56
30:W:82:LEU:HD23	30:W:84:ARG:NH2	2.21	0.56
21:N:62:VAL:CG2	21:N:66:LYS:HB2	2.36	0.56
11:A:1165:U:H2'	11:A:1166:C:C6	2.41	0.56
11:A:993:G:OP1	28:U:50:ARG:NH1	2.39	0.56
25:R:87:TYR:O	25:R:89:ASP:N	2.39	0.56
14:D:23:GLU:C	14:D:25:THR:N	2.59	0.56
14:D:30:GLU:O	14:D:32:SER:N	2.39	0.56
3:2:18:PRO:HD3	3:2:67:LYS:HD3	1.87	0.56
18:H:85:LYS:HZ1	18:H:132:ARG:HA	1.70	0.56
29:V:38:LEU:O	29:V:39:LEU:HD13	2.06	0.56
21:N:108:PRO:HG2	21:N:113:GLY:HA3	1.87	0.56
18:H:19:VAL:HG12	18:H:20:ALA:N	2.20	0.56
33:Z:150:LEU:H	33:Z:150:LEU:HD23	1.70	0.56
11:A:1805:U:O2	14:D:50:THR:HB	2.06	0.56
11:A:287:C:H2'	11:A:288:C:C6	2.41	0.56
33:Z:40:ASP:OD2	33:Z:42:VAL:HG12	2.05	0.56
4:3:26:LEU:O	4:3:27:GLY:C	2.43	0.56
11:A:2647:U:H2'	11:A:2648:C:C6	2.40	0.56
31:X:12:VAL:HG12	31:X:27:THR:O	2.06	0.56
31:X:53:LYS:HB3	31:X:82:GLN:HB3	1.88	0.56
9:8:11:LYS:CE	9:8:63:PRO:HG3	2.36	0.56
17:G:76:SER:HA	17:G:83:ARG:HA	1.88	0.56
12:B:7:G:H4'	26:S:29:PHE:CD2	2.41	0.56
26:S:15:ARG:HG2	26:S:15:ARG:NH1	2.21	0.56
16:F:107:LYS:O	16:F:110:LEU:N	2.39	0.56
11:A:1335:U:H2'	11:A:1336:A:H8	1.71	0.56
11:A:956:G:OP2	24:Q:14:ARG:NH2	2.39	0.56
13:C:113:VAL:HG12	13:C:138:PRO:HG3	1.87	0.56
11:A:2027:G:O2'	11:A:2028:U:H5'	2.06	0.56
33:Z:128:VAL:HG23	33:Z:160:GLY:O	2.06	0.56
9:8:4:MET:HE1	11:A:666:G:H1'	1.87	0.56
32:Y:75:ILE:HG23	32:Y:76:CYS:H	1.70	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
32:Y:85:VAL:HG12	32:Y:86:ARG:N	2.21	0.56
6:5:40:LYS:HE2	6:5:46:CYS:CB	2.34	0.56
33:Z:166:SER:H	33:Z:167:PRO:HA	1.69	0.56
11:A:672:C:C2'	11:A:673:C:C5'	2.81	0.56
11:A:2777:G:C5'	11:A:2778:A:H5'	2.32	0.56
18:H:66:GLY:CA	18:H:69:ARG:HB3	2.36	0.56
32:Y:43:ASN:C	32:Y:44:ILE:HD12	2.26	0.56
11:A:1614:A:C2	30:W:93:ALA:HB2	2.41	0.55
11:A:2282:G:OP1	11:A:2283:C:H1'	2.05	0.55
3:2:25:VAL:HG22	3:2:60:LEU:CD1	2.33	0.55
26:S:35:ILE:H	26:S:53:SER:HB2	1.71	0.55
25:R:2:ARG:HH11	25:R:2:ARG:HG3	1.71	0.55
28:U:88:ILE:C	28:U:90:VAL:H	2.10	0.55
26:S:74:ALA:HB2	26:S:101:LEU:HD22	1.88	0.55
11:A:89:G:H3'	11:A:90:U:H5'	1.87	0.55
33:Z:68:PRO:O	33:Z:91:LEU:HB2	2.06	0.55
22:O:111:PHE:O	22:O:115:VAL:HG23	2.06	0.55
11:A:16:G:O2'	11:A:17:G:H5'	2.05	0.55
12:B:40:U:C2	12:B:43:C:H5''	2.42	0.55
17:G:31:VAL:HG23	17:G:32:PRO:HD2	1.87	0.55
16:F:28:ILE:CD1	16:F:28:ILE:H	2.13	0.55
15:E:34:VAL:HG22	15:E:34:VAL:O	2.06	0.55
23:P:16:ARG:HD3	23:P:16:ARG:C	2.26	0.55
33:Z:24:LEU:HD12	33:Z:41:LEU:HD23	1.88	0.55
13:C:76:ALA:H	13:C:94:VAL:HA	1.71	0.55
32:Y:2:ARG:N	32:Y:4:LYS:HG2	2.21	0.55
4:3:1:MET:HE1	4:3:40:THR:HA	1.87	0.55
2:1:20:ARG:HB3	2:1:32:LYS:HB3	1.87	0.55
2:1:84:GLY:C	2:1:86:SER:H	2.10	0.55
31:X:64:LYS:HE2	31:X:73:ARG:HE	1.71	0.55
11:A:2199:A:H3'	11:A:2200:C:H6	1.71	0.55
11:A:2672:G:H3'	11:A:2673:G:H5''	1.88	0.55
11:A:521:G:H2'	11:A:522:G:C8	2.41	0.55
15:E:202:LYS:N	15:E:202:LYS:HD2	2.21	0.55
11:A:1344:G:H4'	11:A:1384:A:C5	2.41	0.55
19:J:25:UNK:O	19:J:84:UNK:HA	2.05	0.55
7:6:15:GLU:OE2	7:6:41:PRO:HG3	2.06	0.55
9:8:26:LYS:NZ	9:8:47:LYS:HD3	2.21	0.55
9:8:7:HIS:CD2	23:P:50:ARG:HD3	2.41	0.55
22:O:86:ILE:O	22:O:87:ILE:HD13	2.06	0.55
29:V:52:VAL:HG22	29:V:52:VAL:O	2.05	0.55
18:H:41:MET:SD	18:H:54:ARG:HA	2.46	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:3:7:LYS:O	4:3:54:VAL:HG13	2.05	0.55
5:4:40:HIS:HD2	5:4:42:PHE:CE1	2.25	0.55
27:T:50:ILE:HA	27:T:99:LEU:CD1	2.36	0.55
31:X:31:HIS:HB3	31:X:34:ALA:HB2	1.88	0.55
11:A:414:C:O2'	11:A:415:A:H5'	2.07	0.55
11:A:2584:U:H2'	11:A:2585:U:H5'	1.88	0.55
22:O:28:SER:O	22:O:29:ASN:HB3	2.06	0.55
16:F:157:VAL:CG2	16:F:194:MET:HG2	2.36	0.55
27:T:55:ASN:H	27:T:59:THR:CG2	2.18	0.55
11:A:1722:A:O2'	11:A:1739:U:H5'	2.07	0.55
21:N:43:THR:HB	21:N:46:VAL:CG1	2.36	0.55
11:A:363(E):U:H2'	11:A:363(F):A:H1'	1.88	0.55
11:A:533:G:H5'	28:U:24:TYR:CE1	2.41	0.55
11:A:1019:U:H2'	11:A:1021:A:C2	2.42	0.55
15:E:176:ILE:HG23	15:E:178:GLU:HB3	1.88	0.55
27:T:78:LEU:C	27:T:79:HIS:CD2	2.79	0.55
11:A:2823:A:OP1	15:E:113:PHE:HB2	2.06	0.55
13:C:33:ALA:HA	13:C:39:GLU:OE2	2.06	0.55
13:C:99:ILE:O	13:C:99:ILE:HG22	2.07	0.55
24:Q:27:VAL:O	24:Q:28:ALA:HB3	2.06	0.55
20:K:3:UNK:O	20:K:4:UNK:C	2.54	0.55
11:A:45:C:H2'	11:A:47:C:C6	2.42	0.55
31:X:35:THR:HG22	31:X:36:LYS:N	2.22	0.55
23:P:58:THR:CB	23:P:61:ARG:HH21	2.17	0.55
7:6:26:ASN:HD22	7:6:32:ASN:ND2	2.04	0.55
1:0:10:THR:HG21	11:A:2277:G:OP2	2.06	0.55
16:F:123:LEU:CD1	16:F:192:LEU:HD22	2.37	0.55
28:U:88:ILE:HG22	28:U:88:ILE:O	2.06	0.55
13:C:116:THR:HG22	13:C:146:GLY:O	2.05	0.55
18:H:52:VAL:CB	18:H:69:ARG:HD3	2.37	0.55
10:9:29:ASN:N	10:9:29:ASN:HD22	2.04	0.55
11:A:1754:C:OP1	27:T:96:ARG:NH1	2.33	0.55
11:A:1400:G:H2'	11:A:1401:G:H8	1.71	0.55
11:A:2811:G:H1	11:A:2889:C:H42	1.54	0.55
30:W:22:ASP:HA	30:W:25:ARG:NH1	2.22	0.55
11:A:83:G:H5''	11:A:84:A:OP2	2.05	0.55
14:D:77:ALA:HA	14:D:97:TYR:HA	1.87	0.55
11:A:1523:U:H2'	11:A:1524:G:H8	1.72	0.55
11:A:1257:C:H4'	16:F:83:PHE:CD1	2.42	0.55
11:A:2603:G:C3'	11:A:2604:U:H5''	2.35	0.55
17:G:128:ARG:O	17:G:130:ASN:N	2.40	0.55
11:A:271(L):U:C5'	11:A:271(M):G:H5'	2.30	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:607:U:H3	11:A:621:A:H2	1.54	0.55
26:S:88:ASP:CG	26:S:89:ARG:N	2.59	0.55
33:Z:126:VAL:HA	33:Z:163:LEU:CA	2.37	0.55
11:A:195:A:H5''	11:A:196:A:OP2	2.06	0.55
32:Y:47:LYS:HG3	32:Y:60:PHE:CE1	2.41	0.55
27:T:102:ILE:O	27:T:106:SER:HB3	2.07	0.55
11:A:786:C:C2'	11:A:787:U:H5'	2.36	0.55
13:C:25:ALA:O	13:C:29:VAL:HG22	2.07	0.55
4:3:26:LEU:O	4:3:28:LEU:N	2.40	0.55
12:B:111:G:C2'	12:B:112:U:H5'	2.36	0.55
13:C:210:ARG:NH1	13:C:210:ARG:HG2	2.22	0.55
32:Y:8:LYS:HE2	32:Y:72:VAL:HG23	1.88	0.55
17:G:77:ILE:H	17:G:77:ILE:CD1	2.16	0.55
27:T:23:ARG:HA	27:T:52:ILE:CD1	2.36	0.55
11:A:1141:U:H2'	21:N:63:THR:HG21	1.89	0.55
11:A:2401:U:C2'	11:A:2402:C:H5''	2.35	0.55
11:A:642:G:H21	11:A:646:A:H2	1.55	0.55
11:A:894:C:O2'	11:A:895:U:H5'	2.06	0.55
11:A:2584:U:C2'	11:A:2585:U:H5'	2.37	0.55
11:A:1638:C:H5''	11:A:2710:C:O2'	2.06	0.55
1:0:37:LEU:N	1:0:59:LEU:O	2.32	0.55
9:8:32:LEU:HD13	11:A:2392:A:OP1	2.07	0.55
3:2:35:LEU:HD13	3:2:36:ARG:N	2.22	0.55
16:F:152:GLU:O	16:F:154:VAL:HG23	2.06	0.55
11:A:2128:C:O2'	11:A:2129:C:P	2.64	0.55
31:X:57:LEU:HD13	31:X:78:LYS:O	2.07	0.55
11:A:2657:A:H2	11:A:2664:G:H21	1.54	0.55
25:R:12:ARG:HH11	25:R:12:ARG:HG3	1.71	0.55
21:N:41:ASP:C	28:U:64:ARG:HH12	2.10	0.55
11:A:481:G:H1'	11:A:506:G:H21	1.72	0.55
11:A:309:G:N3	11:A:329:G:O2'	2.39	0.55
11:A:2262:U:H4'	11:A:2328:A:H2	1.72	0.55
23:P:102:ARG:CB	23:P:102:ARG:HH11	2.19	0.55
11:A:116:C:H2'	11:A:117:G:O4'	2.06	0.55
13:C:210:ARG:HH11	13:C:210:ARG:CG	2.20	0.55
8:7:43:THR:HG23	8:7:44:PRO:HD2	1.88	0.55
14:D:257:LEU:HD23	14:D:257:LEU:C	2.27	0.55
11:A:556:G:H2'	11:A:557:U:C6	2.42	0.55
30:W:92:ARG:O	30:W:93:ALA:HB3	2.05	0.55
11:A:1858:G:O2'	11:A:1884:A:N6	2.40	0.55
18:H:158:HIS:O	18:H:159:GLU:CB	2.53	0.55
11:A:1209:G:N2	11:A:1210:A:H62	2.05	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:494:G:O2'	30:W:5:ALA:O	2.23	0.55
17:G:25:TYR:CE2	17:G:31:VAL:HA	2.42	0.55
16:F:28:ILE:O	16:F:30:PRO:HD3	2.07	0.55
3:2:10:LEU:HD23	3:2:10:LEU:C	2.26	0.55
1:0:14:ARG:NH1	1:0:14:ARG:HG3	2.20	0.55
11:A:1019:U:C2'	11:A:1021:A:H2	2.20	0.55
12:B:96:U:H2'	12:B:97:G:H8	1.72	0.55
11:A:2790:A:H2'	11:A:2791:C:C5'	2.37	0.55
11:A:200:U:H2'	11:A:201:C:H5'	1.89	0.55
16:F:4:VAL:HG22	16:F:19:GLU:OE1	2.07	0.55
10:9:30:PRO:HB2	11:A:2527:C:H5'	1.89	0.55
13:C:151:GLU:HA	13:C:154:ARG:HH11	1.70	0.55
28:U:6:THR:O	28:U:9:VAL:HG22	2.06	0.55
32:Y:28:LYS:HB2	32:Y:37:VAL:HB	1.88	0.55
32:Y:85:VAL:O	32:Y:86:ARG:HB2	2.07	0.55
17:G:40:ASN:HD22	17:G:91:ARG:HB2	1.72	0.55
17:G:119:GLY:O	17:G:120:LEU:O	2.25	0.55
25:R:76:VAL:O	25:R:79:LEU:HB3	2.07	0.55
11:A:885:C:H2'	11:A:886:C:C6	2.41	0.55
11:A:654(V):A:H8	11:A:655:A:H2'	1.71	0.55
10:9:31:LYS:HE2	11:A:2478:A:H5'	1.89	0.55
14:D:69:ARG:HH22	14:D:117:VAL:CG2	2.20	0.55
29:V:35:LEU:HD23	29:V:57:VAL:CG1	2.36	0.55
11:A:500:G:H22	11:A:502:A:H3'	1.72	0.55
11:A:479:A:HO2'	11:A:481:G:H8	1.55	0.55
11:A:2557:G:H2'	11:A:2558:C:H6	1.70	0.55
11:A:1536:C:H2'	11:A:1537:G:C4'	2.37	0.55
28:U:101:ARG:HG3	28:U:101:ARG:NH1	2.22	0.55
21:N:19:GLU:HG3	21:N:20:GLY:N	2.22	0.55
11:A:2195:C:O2'	11:A:2196:C:H5'	2.07	0.55
11:A:373:U:H2'	11:A:374:A:H8	1.72	0.55
11:A:654(R):C:H2'	11:A:654(S):G:C8	2.42	0.55
7:6:36:LEU:HD12	7:6:50:ARG:CZ	2.38	0.54
23:P:9:ASN:H	23:P:10:PRO:CD	2.13	0.54
12:B:7:G:H2'	12:B:8:U:H5''	1.89	0.54
25:R:5:LYS:O	25:R:6:SER:HB2	2.07	0.54
23:P:91:PHE:CE2	23:P:95:VAL:HG12	2.42	0.54
25:R:75:LEU:O	25:R:75:LEU:HD13	2.07	0.54
17:G:51:ARG:NH1	17:G:53:LEU:HD13	2.21	0.54
33:Z:172:ALA:O	33:Z:173:ALA:HB2	2.06	0.54
33:Z:149:SER:OG	33:Z:173:ALA:HA	2.07	0.54
1:0:7:LEU:HB3	24:Q:85:LYS:HD2	1.89	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:H:163:TYR:N	18:H:163:TYR:CD1	2.75	0.54
11:A:675:A:OP1	16:F:63:LYS:HE2	2.07	0.54
11:A:564:C:O2'	11:A:565:C:H5'	2.05	0.54
14:D:81:ALA:HA	14:D:113:VAL:CG2	2.36	0.54
27:T:83:ILE:HG13	27:T:84:GLN:H	1.70	0.54
33:Z:166:SER:HB2	33:Z:167:PRO:C	2.28	0.54
33:Z:18:LEU:HA	33:Z:21:ALA:HB3	1.89	0.54
29:V:19:LYS:HE2	29:V:19:LYS:HA	1.89	0.54
11:A:2001:A:H4'	11:A:2689:U:H2'	1.90	0.54
29:V:47:VAL:HB	29:V:51:VAL:O	2.06	0.54
16:F:53:THR:HG23	16:F:55:GLY:N	2.18	0.54
11:A:2485:G:H5''	24:Q:46:GLN:NE2	2.21	0.54
14:D:132:PRO:HG3	14:D:190:TYR:CE1	2.41	0.54
33:Z:149:SER:HB3	33:Z:173:ALA:HA	1.89	0.54
11:A:2839:G:H5'	25:R:46:GLY:HA2	1.88	0.54
1:0:20:ARG:HH11	1:0:20:ARG:CG	2.21	0.54
11:A:18:C:O3'	28:U:23:GLY:HA2	2.07	0.54
19:J:45:UNK:C	19:J:47:UNK:H	2.20	0.54
11:A:2619:C:O2'	11:A:2620:C:H5'	2.07	0.54
11:A:2538:C:H2'	11:A:2539:C:H6	1.72	0.54
24:Q:64:ILE:HG22	24:Q:65:PHE:N	2.21	0.54
11:A:589:C:H2'	11:A:590:A:C8	2.42	0.54
12:B:21:G:H2'	12:B:22:U:H5'	1.89	0.54
18:H:121:ILE:CD1	18:H:144:VAL:HG21	2.36	0.54
11:A:2185:C:C2'	11:A:2186:G:H5'	2.35	0.54
30:W:4:LYS:HD3	30:W:6:ILE:CD1	2.38	0.54
29:V:21:ARG:H	29:V:21:ARG:HD3	1.72	0.54
11:A:2712(A):A:H5'	11:A:2713:A:OP2	2.06	0.54
28:U:90:VAL:HG21	29:V:47:VAL:CG2	2.38	0.54
13:C:114:VAL:HG23	13:C:149:ILE:HD11	1.88	0.54
13:C:53:ARG:HH12	13:C:55:ASP:CG	2.11	0.54
23:P:39:LYS:HD2	23:P:40:SER:H	1.72	0.54
14:D:223:GLY:C	14:D:224:ALA:O	2.39	0.54
11:A:271(E):U:H2'	11:A:271(F):C:C6	2.42	0.54
11:A:1472:A:C2'	11:A:1473:G:H5'	2.38	0.54
13:C:68:LEU:HD11	13:C:161:ILE:HG23	1.87	0.54
26:S:73:LEU:O	26:S:73:LEU:HD23	2.07	0.54
13:C:98:GLU:O	13:C:98:GLU:HG3	2.07	0.54
11:A:910:A:H2'	11:A:911:A:C8	2.42	0.54
18:H:85:LYS:C	18:H:85:LYS:HE2	2.28	0.54
27:T:28:VAL:O	27:T:29:ARG:CD	2.46	0.54
8:7:34:ARG:CG	8:7:34:ARG:HH11	2.19	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
33:Z:24:LEU:HD23	33:Z:24:LEU:C	2.27	0.54
25:R:103:ARG:O	25:R:111:LEU:HD11	2.07	0.54
9:8:17:THR:HG22	9:8:21:LYS:O	2.07	0.54
21:N:43:THR:HG22	21:N:45:ASN:ND2	2.22	0.54
23:P:112:LEU:HD22	23:P:113:LYS:N	2.22	0.54
11:A:1762:A:H8	11:A:1762:A:O5'	1.90	0.54
11:A:992:C:O3'	29:V:72:VAL:HG11	2.07	0.54
21:N:133:GLN:C	21:N:135:PRO:HD3	2.27	0.54
11:A:1786:A:C2	11:A:2606:C:H1'	2.43	0.54
14:D:6:PHE:N	14:D:6:PHE:CD1	2.75	0.54
11:A:32:C:H5'	11:A:33:U:OP2	2.08	0.54
32:Y:13:VAL:HG21	32:Y:72:VAL:HB	1.90	0.54
11:A:621:A:H2'	11:A:622:G:C5'	2.37	0.54
26:S:53:SER:C	26:S:55:ALA:H	2.10	0.54
11:A:654(E):G:H22	11:A:654(Q):C:C1'	2.16	0.54
33:Z:123:ASP:C	33:Z:124:ILE:HG12	2.27	0.54
11:A:2134:A:H62	11:A:2157:G:H1'	1.73	0.54
11:A:2223:G:C2'	11:A:2224:G:H5'	2.38	0.54
11:A:1305:C:O2'	11:A:1306:C:H5'	2.07	0.54
11:A:1921:G:O2'	11:A:1922:G:H5'	2.08	0.54
11:A:1013:C:H2'	11:A:1014:U:H6	1.72	0.54
11:A:752:A:O2'	11:A:753:C:OP2	2.24	0.54
31:X:53:LYS:HD2	31:X:55:ASN:HD21	1.73	0.54
9:8:11:LYS:HE3	9:8:63:PRO:HG3	1.89	0.54
11:A:2183:C:H2'	11:A:2184:G:C8	2.43	0.54
30:W:8:ARG:HG2	30:W:8:ARG:HH11	1.73	0.54
14:D:270:ILE:H	14:D:270:ILE:HD12	1.71	0.54
15:E:33:VAL:CG1	15:E:69:LYS:HE3	2.36	0.54
11:A:657:U:C2	11:A:658:C:C5	2.96	0.54
10:9:1:MET:HG3	11:A:2478:A:OP2	2.08	0.54
11:A:1880:C:C2'	11:A:1881:C:H5''	2.38	0.54
11:A:1495:A:H2'	11:A:1496:A:C2	2.43	0.54
16:F:170:LEU:CB	16:F:173:VAL:HB	2.37	0.54
11:A:1029:A:H2'	11:A:1030:G:O4'	2.08	0.54
11:A:272(J):C:H2'	11:A:274:G:H5''	1.90	0.54
32:Y:84:ARG:HG2	32:Y:85:VAL:H	1.71	0.54
18:H:83:TYR:HB3	18:H:135:GLY:O	2.08	0.54
27:T:80:SER:HB3	27:T:81:PRO:CD	2.27	0.54
11:A:1541:G:O3'	11:A:1541:G:OP2	2.26	0.54
28:U:95:LEU:HD12	29:V:11:GLN:HG3	1.90	0.54
21:N:73:THR:HG23	21:N:82:LEU:HD11	1.88	0.54
5:4:39:CYS:O	5:4:40:HIS:HB2	2.08	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:D:129:ASN:O	14:D:193:VAL:HG12	2.08	0.54
27:T:106:SER:O	27:T:107:ASP:OD1	2.24	0.54
11:A:2720:U:H5'	11:A:2721:A:OP2	2.07	0.54
11:A:1335:U:H2'	11:A:1336:A:C8	2.43	0.54
15:E:198:VAL:HG12	15:E:199:ARG:N	2.22	0.54
11:A:2348:U:O2'	11:A:2349:G:H5'	2.07	0.54
11:A:1970:A:H5''	11:A:1971:A:OP1	2.08	0.54
1:O:73:GLY:O	1:O:75:LEU:N	2.40	0.54
17:G:46:ALA:HB2	17:G:88:ILE:CG1	2.37	0.54
16:F:156:LEU:HD12	16:F:193:VAL:O	2.08	0.54
16:F:160:ASN:C	16:F:160:ASN:HD22	2.11	0.54
11:A:2099:U:H2'	11:A:2100:G:C8	2.43	0.54
22:O:88:ASN:HD21	22:O:92:GLU:HB2	1.73	0.54
24:Q:141:GLN:HB3	33:Z:99:TYR:CE1	2.43	0.54
1:O:42:GLY:HA3	11:A:2331:G:C4'	2.38	0.54
11:A:691:C:O2'	11:A:692:C:H5'	2.07	0.54
33:Z:151:HIS:HB2	33:Z:170:THR:HA	1.90	0.54
21:N:71:ILE:N	21:N:71:ILE:HD12	2.23	0.54
13:C:132:GLY:N	13:C:133:PRO:CD	2.69	0.54
11:A:141:A:C8	11:A:1408:C:O2'	2.59	0.54
32:Y:62:GLU:OE1	32:Y:62:GLU:N	2.41	0.54
15:E:61:ARG:CB	15:E:62:PRO:HD3	2.37	0.54
11:A:2631:G:N2	15:E:61:ARG:NH1	2.55	0.54
18:H:37:VAL:HG11	18:H:68:THR:HG21	1.90	0.54
11:A:2025:C:H2'	11:A:2026:C:C6	2.41	0.54
11:A:320:A:C8	16:F:136:THR:HG21	2.42	0.54
6:5:22:HIS:CE1	11:A:2624:G:H1'	2.43	0.54
14:D:133:LEU:HB3	14:D:173:VAL:HG11	1.88	0.54
17:G:33:ARG:O	17:G:34:LEU:HG	2.07	0.54
9:8:11:LYS:HZ2	9:8:60:LEU:HD22	1.72	0.54
9:8:32:LEU:CD1	11:A:2391:G:H3'	2.36	0.54
27:T:29:ARG:HG2	27:T:86:ILE:HG22	1.88	0.54
17:G:40:ASN:ND2	17:G:91:ARG:HB2	2.23	0.54
23:P:64:LYS:C	23:P:66:GLY:N	2.59	0.54
15:E:81:ILE:O	15:E:81:ILE:HG22	2.07	0.54
18:H:41:MET:CG	18:H:42:ARG:N	2.70	0.54
29:V:35:LEU:N	29:V:35:LEU:HD22	2.22	0.54
30:W:59:VAL:O	30:W:59:VAL:HG12	2.08	0.54
21:N:55:VAL:HG22	21:N:56:ASN:N	2.23	0.54
16:F:170:LEU:HB3	16:F:173:VAL:HB	1.90	0.54
11:A:1411:C:H2'	11:A:1412:A:C8	2.42	0.54
17:G:139:LEU:O	17:G:144:ILE:HG21	2.08	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:926:A:H8	11:A:926:A:H5'	1.73	0.54
7:6:8:LYS:O	7:6:9:LEU:HB3	2.06	0.54
3:2:35:LEU:HD13	3:2:35:LEU:C	2.28	0.54
32:Y:51:VAL:O	32:Y:53:PRO:HD3	2.08	0.54
15:E:111:ARG:HD2	25:R:2:ARG:NH2	2.23	0.54
11:A:2133:G:N1	11:A:2157:G:O6	2.41	0.54
33:Z:29:TYR:HB3	33:Z:34:ASN:CB	2.38	0.54
11:A:2856:C:C2	11:A:2862:G:N2	2.76	0.54
33:Z:113:ALA:CB	33:Z:146:ILE:HD13	2.38	0.54
32:Y:43:ASN:CB	32:Y:64:GLU:HA	2.38	0.54
11:A:480:A:H3'	11:A:481:G:H5''	1.90	0.54
33:Z:133:ILE:N	33:Z:134:PRO:CD	2.70	0.54
14:D:10:THR:HG23	14:D:13:ARG:HB2	1.90	0.54
12:B:111:G:O2'	12:B:112:U:H5'	2.08	0.54
13:C:166:ASP:O	13:C:168:THR:N	2.41	0.54
11:A:1013:C:H2'	11:A:1014:U:C6	2.43	0.54
11:A:1839:G:H8	11:A:1839:G:H5'	1.72	0.54
11:A:1790:C:H5''	11:A:1791:A:OP1	2.08	0.54
11:A:1103:A:H5'	11:A:1104:C:OP2	2.08	0.54
5:4:9:LEU:HD13	5:4:10:VAL:N	2.19	0.53
16:F:175:THR:OG1	16:F:176:LEU:N	2.41	0.53
17:G:8:LYS:HE3	17:G:12:TYR:OH	2.08	0.53
11:A:2635:C:H5''	15:E:78:LEU:O	2.08	0.53
11:A:661:C:H4'	23:P:16:ARG:NH1	2.23	0.53
25:R:24:GLN:HE22	25:R:36:THR:HG21	1.68	0.53
26:S:16:ASN:C	26:S:18:ILE:HD12	2.28	0.53
27:T:62:THR:CG2	27:T:75:ILE:HG13	2.38	0.53
2:1:12:PRO:C	2:1:13:ILE:HD12	2.28	0.53
30:W:25:ARG:NH1	30:W:25:ARG:HB2	2.23	0.53
11:A:2464:C:O2'	11:A:2465:C:H6	1.91	0.53
22:O:43:VAL:HG23	22:O:56:ASP:O	2.08	0.53
11:A:315:G:H2'	11:A:316:C:C6	2.43	0.53
11:A:142:A:H8	11:A:1595:G:H21	1.56	0.53
29:V:38:LEU:HD22	29:V:52:VAL:HG11	1.90	0.53
11:A:2128:C:HO2'	11:A:2129:C:P	2.31	0.53
11:A:2128:C:HO2'	11:A:2129:C:C5'	2.20	0.53
11:A:2572:A:H62	15:E:145:LYS:CG	2.22	0.53
13:C:40:THR:HA	13:C:177:LYS:HA	1.89	0.53
11:A:2840:C:H2'	11:A:2841:C:H6	1.72	0.53
32:Y:36:ALA:HB1	32:Y:67:LEU:C	2.28	0.53
11:A:2136:C:H2'	11:A:2137:C:C6	2.40	0.53
11:A:1331:A:O2'	11:A:1332:G:H5''	2.08	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:O:35:VAL:HG13	22:O:65:THR:HG23	1.90	0.53
11:A:880:G:H1	11:A:897:C:H42	1.56	0.53
11:A:2807:G:H2'	11:A:2808:U:H5''	1.89	0.53
11:A:1320:C:C5	11:A:1329:U:H5''	2.43	0.53
11:A:156:U:H2'	11:A:157:U:O4'	2.08	0.53
6:5:2:ALA:N	11:A:747:U:C4	2.77	0.53
32:Y:81:LYS:O	32:Y:82:PRO:O	2.26	0.53
11:A:2107:C:H1'	11:A:2182:G:H22	1.73	0.53
23:P:34:GLY:O	23:P:35:HIS:CB	2.56	0.53
28:U:92:ARG:HH21	29:V:10:LYS:CB	2.21	0.53
11:A:2127:G:H4'	13:C:37:PHE:CD1	2.43	0.53
1:0:43:THR:HG21	11:A:2336:A:H61	1.73	0.53
11:A:659:C:H4'	16:F:100:THR:O	2.09	0.53
17:G:114:ILE:O	17:G:114:ILE:HG23	2.08	0.53
11:A:1827:C:O2'	11:A:1828:G:H5'	2.09	0.53
11:A:543:C:H42	11:A:549:G:H1	1.57	0.53
11:A:1272:A:OP2	11:A:1647:G:OP1	2.24	0.53
11:A:1952:A:C5	22:O:22:ILE:HD12	2.43	0.53
24:Q:118:LEU:HD12	24:Q:131:ILE:HG23	1.90	0.53
11:A:2174:C:H1'	13:C:217:THR:O	2.07	0.53
7:6:19:ARG:O	7:6:20:ASN:O	2.26	0.53
32:Y:28:LYS:HE3	32:Y:37:VAL:HG11	1.88	0.53
16:F:39:TRP:CG	16:F:101:LEU:HB2	2.43	0.53
26:S:34:HIS:HB2	26:S:36:TYR:CE1	2.31	0.53
11:A:940:G:H2'	11:A:941:A:O4'	2.09	0.53
12:B:105:A:H2'	12:B:106:G:O4'	2.08	0.53
11:A:634:C:H2'	11:A:635:C:C6	2.43	0.53
11:A:651:G:C2'	11:A:652:C:H5'	2.38	0.53
23:P:83:VAL:HG12	23:P:113:LYS:O	2.08	0.53
31:X:49:VAL:CG1	31:X:87:GLN:HE21	2.21	0.53
11:A:271(Q):G:H1'	11:A:271(R):G:C8	2.43	0.53
11:A:438:G:H2'	11:A:440:G:H8	1.74	0.53
1:0:40:GLN:OE1	1:0:44:ARG:N	2.42	0.53
11:A:1782:C:H1'	11:A:2609:U:H5''	1.90	0.53
11:A:608:A:H2'	11:A:609:A:C8	2.43	0.53
5:4:45:GLY:O	5:4:46:GLN:HB2	2.08	0.53
14:D:23:GLU:C	14:D:25:THR:H	2.11	0.53
9:8:62:LEU:N	9:8:63:PRO:CD	2.71	0.53
23:P:147:LEU:O	23:P:148:LEU:CB	2.57	0.53
33:Z:16:SER:O	33:Z:17:ALA:C	2.46	0.53
11:A:1516:C:C2'	11:A:1517:G:C5'	2.85	0.53
11:A:1112:G:O2'	11:A:1113:U:H5'	2.09	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:C:72:VAL:CG1	13:C:157:LYS:HA	2.39	0.53
11:A:1337:G:H2'	11:A:1338:G:C8	2.42	0.53
11:A:8:A:H2'	11:A:9:U:C6	2.43	0.53
14:D:276:LYS:HE2	14:D:276:LYS:HA	1.91	0.53
11:A:184:C:H2'	11:A:185:U:C6	2.44	0.53
14:D:96:HIS:CE1	14:D:102:LYS:HE2	2.44	0.53
31:X:12:VAL:HG12	31:X:27:THR:OG1	2.08	0.53
7:6:45:LYS:O	7:6:46:HIS:ND1	2.42	0.53
11:A:2307:G:H3'	11:A:2307:G:N3	2.23	0.53
32:Y:6:HIS:CD2	32:Y:6:HIS:H	2.26	0.53
32:Y:98:VAL:O	32:Y:99:CYS:SG	2.67	0.53
11:A:1538:G:H2'	11:A:1539:G:C8	2.44	0.53
26:S:58:LEU:HG	26:S:59:LYS:H	1.74	0.53
13:C:10:LEU:HA	13:C:13:LYS:HE3	1.90	0.53
18:H:44:VAL:HG12	18:H:45:VAL:H	1.74	0.53
11:A:2178:C:O4'	11:A:2178:C:O2	2.26	0.53
9:8:50:LEU:N	9:8:53:PRO:HD3	2.24	0.53
11:A:1142(A):A:H5'	11:A:1142(A):A:H8	1.73	0.53
11:A:1354:A:H2'	11:A:1355:G:O4'	2.09	0.53
11:A:271(C):C:H2'	11:A:271(D):G:C8	2.40	0.53
28:U:8:VAL:O	28:U:12:ARG:HG3	2.09	0.53
18:H:91:GLY:HA3	18:H:94:TYR:CD2	2.44	0.53
11:A:304:G:C2	11:A:314:A:C2	2.97	0.53
33:Z:101:PRO:HG2	33:Z:135:GLU:O	2.09	0.53
7:6:27:LYS:HG3	7:6:30:THR:CB	2.39	0.53
26:S:87:PHE:CG	26:S:88:ASP:N	2.77	0.53
11:A:833:U:H2'	11:A:834:C:C6	2.44	0.53
11:A:633:A:C2'	11:A:634:C:H5'	2.38	0.53
23:P:115:LEU:HG	23:P:116:GLY:H	1.73	0.53
15:E:98:PRO:HD3	15:E:175:VAL:HG12	1.89	0.53
11:A:2875:C:H4'	27:T:5:ALA:HB2	1.90	0.53
29:V:57:VAL:HG22	29:V:58:VAL:N	2.23	0.53
14:D:37:LEU:HD23	14:D:38:LYS:H	1.74	0.53
11:A:271(R):G:O2'	11:A:271(S):G:H5'	2.08	0.53
25:R:51:LEU:CD2	25:R:70:LEU:HD11	2.39	0.53
10:9:19:ARG:O	10:9:20:HIS:HB2	2.08	0.53
5:4:10:VAL:HG23	5:4:11:PRO:HD2	1.90	0.53
17:G:125:PHE:HD1	17:G:126:ASP:N	1.94	0.53
32:Y:37:VAL:HG23	32:Y:39:VAL:HG23	1.91	0.53
7:6:11:LEU:HD22	7:6:12:GLU:N	2.21	0.53
22:O:104:ARG:HE	27:T:33:LYS:CE	2.22	0.53
11:A:2469:A:H2	11:A:2481:G:H21	1.55	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:Q:51:ARG:NH1	24:Q:51:ARG:HG3	2.24	0.53
27:T:104:ASN:O	27:T:105:LEU:CB	2.57	0.53
18:H:124:GLU:HB3	18:H:126:PRO:HD3	1.89	0.53
21:N:46:VAL:O	21:N:47:ALA:CB	2.55	0.53
27:T:78:LEU:O	27:T:79:HIS:CD2	2.61	0.53
26:S:39:ILE:HD11	26:S:73:LEU:HD21	1.90	0.53
11:A:212:G:O2'	11:A:213:A:H5'	2.09	0.53
33:Z:103:ARG:O	33:Z:138:GLU:HA	2.09	0.53
11:A:1417:C:H2'	11:A:1418:G:O4'	2.09	0.53
11:A:644:A:C2	11:A:2369:A:H1'	2.44	0.53
17:G:39:ILE:HG13	17:G:39:ILE:O	2.09	0.53
11:A:2312:U:H2'	11:A:2313:C:H5'	1.89	0.53
17:G:125:PHE:O	17:G:126:ASP:O	2.27	0.53
11:A:272(H):C:C3'	11:A:272(I):U:H5''	2.38	0.53
11:A:1885:A:H8	11:A:1885:A:H5'	1.72	0.53
1:0:50:ASN:HD22	1:0:63:VAL:CG2	2.14	0.53
25:R:101:ALA:HB1	30:W:38:TYR:HE1	1.73	0.53
26:S:35:ILE:HD11	26:S:99:LYS:NZ	2.23	0.53
11:A:1109:C:C2'	11:A:1110:G:H5'	2.39	0.53
17:G:77:ILE:HG12	17:G:77:ILE:O	2.09	0.53
29:V:13:ARG:HG3	29:V:13:ARG:NH1	2.24	0.53
11:A:1479:G:H5'	11:A:1558:A:H2	1.74	0.53
33:Z:151:HIS:HA	33:Z:171:ILE:HG12	1.91	0.53
30:W:11:ARG:HH12	30:W:98:LYS:HB3	1.74	0.53
1:0:36:ILE:HG13	1:0:36:ILE:O	2.09	0.53
11:A:2808:U:O2'	11:A:2809:A:H5'	2.08	0.53
32:Y:52:SER:O	32:Y:54:LYS:N	2.39	0.53
11:A:1756:G:H4'	11:A:1758:G:O4'	2.09	0.53
3:2:50:ILE:HD12	3:2:50:ILE:N	2.23	0.53
27:T:30:VAL:HG22	27:T:84:GLN:HG3	1.91	0.53
1:0:51:VAL:N	1:0:62:LEU:HD21	2.24	0.53
15:E:186:GLY:O	15:E:187:ALA:HB3	2.09	0.53
17:G:52:ILE:HG12	17:G:53:LEU:N	2.23	0.53
11:A:106:C:H2'	11:A:107:C:C6	2.42	0.53
11:A:2840:C:H5''	25:R:53:HIS:HD2	1.74	0.53
11:A:1495:A:N3	11:A:1496:A:C2	2.77	0.53
11:A:67:U:H2'	11:A:68:G:H8	1.74	0.53
11:A:201:C:C2'	11:A:202:U:H5'	2.38	0.53
13:C:75:LEU:HG	13:C:112:ALA:O	2.09	0.53
1:0:36:ILE:HD11	11:A:2355:C:C4'	2.38	0.53
11:A:438:G:H2'	11:A:440:G:C8	2.43	0.53
7:6:27:LYS:O	7:6:29:ASN:N	2.42	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:T:28:VAL:HG11	27:T:46:GLU:CG	2.35	0.52
15:E:38:THR:HG22	15:E:40:GLU:N	2.10	0.52
7:6:14:THR:HG23	7:6:16:CYS:H	1.74	0.52
16:F:39:TRP:CB	16:F:101:LEU:HD22	2.39	0.52
11:A:1188:U:C2'	11:A:1189:A:H5'	2.39	0.52
33:Z:17:ALA:O	33:Z:20:ARG:HG2	2.09	0.52
13:C:100:ILE:O	13:C:104:LEU:HD23	2.09	0.52
11:A:1558:A:O2'	11:A:1559:G:OP2	2.25	0.52
11:A:1880:C:H2'	11:A:1881:C:H5''	1.89	0.52
33:Z:139:VAL:HG11	33:Z:150:LEU:HD11	1.92	0.52
14:D:142:VAL:HG22	14:D:143:HIS:N	2.24	0.52
11:A:1718:G:H2'	11:A:1719:G:C8	2.43	0.52
11:A:877:U:C2'	11:A:878:A:H5''	2.38	0.52
31:X:54:VAL:C	31:X:55:ASN:HD22	2.12	0.52
6:5:4:HIS:HB3	11:A:2577:A:H1'	1.91	0.52
9:8:11:LYS:HZ2	9:8:63:PRO:HG3	1.71	0.52
27:T:53:ARG:HH11	27:T:53:ARG:CB	2.12	0.52
21:N:58:ASP:C	21:N:60:ILE:N	2.61	0.52
30:W:6:ILE:HG12	30:W:104:THR:HG22	1.90	0.52
33:Z:23:LYS:O	33:Z:24:LEU:CB	2.53	0.52
4:3:54:VAL:HG12	4:3:55:ARG:N	2.24	0.52
29:V:5:VAL:HG22	29:V:6:LYS:N	2.24	0.52
12:B:55:U:H2'	12:B:56:G:C8	2.44	0.52
11:A:519:U:H2'	11:A:520:G:C8	2.43	0.52
15:E:108:SER:O	15:E:162:ALA:HA	2.09	0.52
22:O:98:VAL:HG13	22:O:118:ALA:HA	1.91	0.52
5:4:37:SER:O	5:4:38:LYS:HB3	2.10	0.52
11:A:994:C:OP2	28:U:54:LYS:NZ	2.43	0.52
23:P:58:THR:HB	23:P:61:ARG:NH2	2.20	0.52
7:6:19:ARG:CD	7:6:20:ASN:H	2.22	0.52
7:6:22:ALA:C	7:6:23:THR:HG23	2.28	0.52
11:A:2711:A:OP1	11:A:2712(A):A:OP1	2.26	0.52
11:A:996:A:O3'	28:U:92:ARG:HG2	2.09	0.52
18:H:42:ARG:HG2	18:H:43:VAL:N	2.22	0.52
13:C:181:PRO:HB2	13:C:183:GLU:OE2	2.09	0.52
26:S:13:ARG:CG	26:S:14:VAL:N	2.68	0.52
11:A:328:U:H4'	32:Y:68:HIS:NE2	2.25	0.52
16:F:185:ASP:O	16:F:188:ARG:HG2	2.09	0.52
11:A:267:C:H2'	11:A:268:C:C6	2.43	0.52
11:A:1642:G:O2'	11:A:1643:G:H5'	2.09	0.52
14:D:27:THR:HG21	14:D:81:ALA:CB	2.40	0.52
7:6:45:LYS:O	7:6:46:HIS:CB	2.58	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:2308:G:O6	11:A:2310:A:H2'	2.08	0.52
11:A:2312:U:O3'	17:G:71:THR:OG1	2.28	0.52
17:G:78:SER:C	17:G:80:PHE:H	2.13	0.52
3:2:63:VAL:O	3:2:66:GLU:HG2	2.08	0.52
9:8:15:LYS:CB	9:8:46:ARG:HH22	2.23	0.52
33:Z:127:LYS:O	33:Z:127:LYS:HG3	2.08	0.52
11:A:1246:A:OP1	23:P:16:ARG:NH2	2.42	0.52
21:N:21:LYS:HD3	21:N:22:THR:N	2.24	0.52
28:U:3:ARG:HH11	28:U:3:ARG:CG	2.22	0.52
15:E:79:ARG:CG	15:E:79:ARG:HH11	2.22	0.52
23:P:46:LYS:CB	23:P:52:GLU:HG2	2.38	0.52
11:A:832:G:O2'	23:P:52:GLU:HB3	2.09	0.52
22:O:107:ARG:HD3	27:T:36:GLU:H	1.75	0.52
27:T:106:SER:O	27:T:107:ASP:HB3	2.10	0.52
11:A:2688:U:H3'	11:A:2688:U:O2	2.10	0.52
11:A:2869:G:H2'	11:A:2870:C:C6	2.44	0.52
14:D:111:LEU:HD23	14:D:115:GLN:OE1	2.10	0.52
2:1:49:VAL:CG1	2:1:60:PHE:HB2	2.40	0.52
11:A:2562:U:H4'	22:O:25:LEU:HD21	1.91	0.52
20:K:55:UNK:HA	20:K:69:UNK:HA	1.92	0.52
11:A:1651:G:C2	11:A:2007:C:C2	2.98	0.52
9:8:61:LEU:N	9:8:63:PRO:HD2	2.24	0.52
2:1:70:VAL:O	2:1:74:VAL:HG23	2.10	0.52
27:T:31:SER:OG	27:T:32:TYR:CE1	2.62	0.52
22:O:104:ARG:NH2	27:T:33:LYS:HE2	2.12	0.52
27:T:88:ILE:O	27:T:89:VAL:O	2.28	0.52
21:N:91:LEU:CD2	21:N:98:VAL:HG21	2.39	0.52
12:B:48:A:H4'	26:S:95:HIS:HD2	1.73	0.52
29:V:19:LYS:HZ1	29:V:20:LEU:H	1.56	0.52
24:Q:56:ARG:CG	24:Q:56:ARG:NH1	2.67	0.52
4:3:7:LYS:O	4:3:54:VAL:HA	2.10	0.52
27:T:94:ALA:C	27:T:96:ARG:H	2.13	0.52
11:A:2358:G:H2'	11:A:2359:C:H6	1.75	0.52
4:3:31:LEU:C	4:3:33:GLN:H	2.13	0.52
11:A:83:G:O2'	11:A:84:A:C8	2.58	0.52
13:C:214:VAL:HG23	13:C:224:ILE:HD13	1.90	0.52
11:A:2262:U:H4'	11:A:2328:A:C2	2.44	0.52
24:Q:21:THR:O	24:Q:22:LYS:HB3	2.07	0.52
11:A:703:U:H2'	11:A:704:G:H5'	1.92	0.52
10:9:3:VAL:HG21	11:A:2539:C:H4'	1.91	0.52
11:A:1411:C:H2'	11:A:1412:A:H8	1.75	0.52
16:F:50:SER:HB2	16:F:94:PRO:HD3	1.91	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
32:Y:10:GLY:C	32:Y:27:VAL:HG22	2.30	0.52
18:H:155:SER:O	18:H:157:TYR:N	2.35	0.52
24:Q:140:ALA:HB1	33:Z:99:TYR:CZ	2.45	0.52
15:E:50:GLY:HA2	15:E:78:LEU:HB3	1.90	0.52
17:G:133:LEU:CD1	17:G:157:ILE:HD12	2.35	0.52
23:P:84:ASN:C	23:P:86:LYS:N	2.61	0.52
11:A:779:U:OP1	14:D:49:ILE:HG13	2.10	0.52
9:8:51:ALA:N	9:8:53:PRO:HD2	2.25	0.52
2:1:30:VAL:HG23	2:1:31:GLY:N	2.25	0.52
14:D:24:ILE:HD13	14:D:24:ILE:C	2.29	0.52
12:B:56:G:H4'	12:B:57:A:O5'	2.10	0.52
14:D:132:PRO:HD2	14:D:135:PHE:HD2	1.74	0.52
32:Y:61:ILE:O	32:Y:62:GLU:HB2	2.10	0.52
3:2:24:LEU:C	3:2:24:LEU:HD23	2.30	0.52
11:A:2168:G:N2	11:A:2170:A:H3'	2.25	0.52
11:A:2386:C:H2'	11:A:2387:U:C6	2.45	0.52
11:A:2392:A:H8	23:P:60:MET:HG2	1.74	0.52
11:A:2315:G:N3	17:G:128:ARG:HG3	2.25	0.52
27:T:22:PHE:HE2	27:T:85:LYS:HZ1	1.57	0.52
27:T:53:ARG:O	27:T:59:THR:HB	2.10	0.52
16:F:133:ASN:HB2	16:F:138:GLU:OE2	2.09	0.52
33:Z:124:ILE:HG13	33:Z:124:ILE:O	2.10	0.52
33:Z:163:LEU:CG	33:Z:165:VAL:HG13	2.40	0.52
33:Z:5:LEU:HD11	33:Z:39:VAL:HB	1.91	0.52
11:A:1131:G:H21	21:N:73:THR:CG2	2.22	0.52
11:A:2110:G:H22	11:A:2178:C:H5	1.55	0.52
26:S:14:VAL:O	26:S:15:ARG:HG3	2.10	0.52
11:A:1403:C:H5''	11:A:1471:A:C1'	2.39	0.52
2:1:82:LEU:HD12	2:1:83:GLU:H	1.74	0.52
23:P:122:PRO:HB3	23:P:141:ALA:HB3	1.91	0.52
29:V:72:VAL:O	29:V:72:VAL:HG23	2.10	0.52
16:F:139:PHE:CB	16:F:166:ALA:HB1	2.40	0.52
3:2:16:LEU:O	3:2:20:GLU:HB3	2.10	0.52
11:A:1315:C:H2'	11:A:1316:U:H6	1.75	0.52
13:C:199:HIS:O	13:C:201:PRO:HD3	2.10	0.52
11:A:1751:C:O2'	11:A:1752:C:H5'	2.10	0.52
5:4:7:PRO:HD2	17:G:65:GLY:O	2.09	0.52
17:G:93:THR:O	17:G:94:LEU:HD23	2.09	0.52
9:8:61:LEU:CD2	11:A:593:G:H4'	2.40	0.52
7:6:30:THR:HG22	7:6:31:PRO:CD	2.21	0.52
7:6:20:ASN:C	7:6:21:TYR:CG	2.83	0.52
16:F:192:LEU:CD2	16:F:194:MET:HG3	2.27	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:2:18:PRO:HG3	3:2:72:ALA:HA	1.92	0.52
21:N:91:LEU:HD23	21:N:98:VAL:HG21	1.91	0.52
11:A:623:G:H2'	11:A:624:C:C6	2.45	0.52
23:P:24:GLY:HA3	23:P:33:ARG:NH1	2.24	0.52
15:E:3:GLY:N	15:E:81:ILE:HG21	2.25	0.52
11:A:1478:G:HO2'	11:A:1558:A:H2	1.58	0.52
11:A:814:C:H2'	11:A:815:C:C6	2.44	0.52
14:D:109:ASP:HB2	14:D:197:GLY:CA	2.40	0.52
28:U:57:PHE:CD1	28:U:60:LEU:HD12	2.45	0.52
21:N:67:LEU:O	21:N:68:GLU:HB2	2.10	0.52
25:R:7:GLY:O	25:R:8:ARG:NH2	2.43	0.52
21:N:2:LYS:HZ3	29:V:12:TYR:HA	1.75	0.52
11:A:184:C:H2'	11:A:185:U:H6	1.74	0.52
11:A:1579:A:H2'	11:A:1580:A:O4'	2.10	0.52
17:G:37:VAL:HA	17:G:158:ALA:O	2.10	0.52
11:A:2153:G:H2'	11:A:2154:G:H8	1.74	0.52
11:A:469:G:C2'	11:A:470:A:H5''	2.40	0.52
22:O:26:LYS:HE3	22:O:37:ASP:OD2	2.10	0.52
19:J:12:UNK:C	19:J:14:UNK:N	2.72	0.52
23:P:58:THR:O	23:P:58:THR:HG22	2.09	0.52
17:G:86:MET:N	17:G:87:PRO:CD	2.72	0.52
18:H:83:TYR:HB3	18:H:135:GLY:N	2.24	0.52
6:5:45:VAL:HG22	6:5:51:TYR:HB2	1.91	0.52
11:A:250:G:H2'	11:A:251:A:C8	2.45	0.52
29:V:38:LEU:C	29:V:38:LEU:HD23	2.31	0.52
11:A:1278:A:OP1	25:R:36:THR:HA	2.09	0.52
23:P:38:GLN:HG3	23:P:39:LYS:N	2.21	0.52
28:U:105:VAL:O	28:U:108:GLU:HB2	2.10	0.52
11:A:88:G:N3	11:A:88:G:H2'	2.24	0.52
11:A:1788:C:O2'	11:A:1789:A:H5'	2.09	0.52
11:A:1801:G:OP2	14:D:154:LYS:HE3	2.09	0.52
7:6:44:ARG:C	7:6:45:LYS:HD2	2.30	0.52
17:G:130:ASN:OD1	17:G:160:VAL:HG13	2.09	0.52
11:A:1109:C:H2'	11:A:1110:G:H5'	1.92	0.52
23:P:84:ASN:C	23:P:86:LYS:H	2.11	0.52
11:A:2155:G:H3'	11:A:2156:G:H8	1.75	0.52
27:T:103:ARG:O	27:T:105:LEU:N	2.43	0.52
26:S:16:ASN:O	26:S:18:ILE:HD12	2.10	0.52
14:D:131:LEU:HD12	14:D:131:LEU:N	2.25	0.52
3:2:7:ARG:H	3:2:7:ARG:HD3	1.75	0.52
11:A:61:G:H1	11:A:94:C:H42	1.58	0.52
11:A:1952:A:C6	22:O:22:ILE:HD12	2.45	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:492:A:H2'	11:A:493:G:O4'	2.09	0.52
29:V:67:GLY:O	29:V:88:ARG:HD2	2.10	0.52
11:A:1598:C:H5'	31:X:36:LYS:HD3	1.90	0.51
18:H:85:LYS:C	18:H:85:LYS:CE	2.79	0.51
25:R:2:ARG:HG2	25:R:5:LYS:HD3	1.91	0.51
28:U:88:ILE:HG23	28:U:90:VAL:CG2	2.40	0.51
25:R:37:THR:HA	25:R:111:LEU:HA	1.90	0.51
33:Z:7:ALA:HB3	33:Z:61:LEU:CD2	2.35	0.51
9:8:50:LEU:C	9:8:52:LYS:H	2.13	0.51
21:N:61:ARG:NH1	21:N:61:ARG:HG3	2.25	0.51
11:A:2657:A:H3'	11:A:2658:C:H6	1.75	0.51
21:N:10:GLU:CD	21:N:11:PRO:HD2	2.30	0.51
11:A:1331:A:H2'	11:A:1333:C:C5	2.44	0.51
11:A:2152:G:O2'	11:A:2153:G:H5'	2.09	0.51
33:Z:51:ALA:HB1	33:Z:57:ILE:CD1	2.33	0.51
3:2:35:LEU:CD1	3:2:50:ILE:HG23	2.40	0.51
17:G:83:ARG:HD2	17:G:84:LYS:HZ2	1.74	0.51
22:O:104:ARG:NE	27:T:33:LYS:HD2	2.25	0.51
11:A:1948:G:C8	11:A:1948:G:C5'	2.88	0.51
23:P:106:LEU:HD21	23:P:112:LEU:HB2	1.92	0.51
11:A:1827:C:H2'	11:A:1828:G:H5'	1.91	0.51
11:A:2591:C:P	14:D:239:ARG:HG2	2.51	0.51
25:R:41:ALA:O	25:R:44:LEU:N	2.42	0.51
22:O:107:ARG:HA	22:O:112:MET:HE1	1.92	0.51
27:T:123:GLN:HA	27:T:126:ALA:HB3	1.92	0.51
11:A:2199:A:N3	11:A:2199:A:H2'	2.25	0.51
9:8:41:ILE:HD12	11:A:2419:U:OP1	2.10	0.51
11:A:1773:A:H2'	11:A:1774:C:H5'	1.92	0.51
14:D:4:LYS:HZ1	14:D:20:ASP:HA	1.75	0.51
11:A:1889:A:O2'	11:A:2087:G:H5'	2.11	0.51
11:A:796:C:H2'	11:A:797:C:C6	2.45	0.51
11:A:2887:U:O2'	11:A:2888:C:H5'	2.10	0.51
31:X:35:THR:O	31:X:39:ILE:HG13	2.10	0.51
16:F:3:GLU:CB	16:F:24:LEU:HG	2.39	0.51
9:8:62:LEU:CD1	11:A:242:G:H5''	2.21	0.51
9:8:62:LEU:HB3	11:A:242:G:H5'	1.92	0.51
30:W:4:LYS:HD3	30:W:6:ILE:HD11	1.92	0.51
6:5:36:CYS:O	6:5:38:ALA:N	2.42	0.51
14:D:267:SER:C	14:D:269:PHE:N	2.52	0.51
17:G:5:VAL:HG11	17:G:100:TRP:HB3	1.91	0.51
24:Q:141:GLN:OXT	33:Z:53:ILE:HD12	2.10	0.51
9:8:49:VAL:CG1	9:8:52:LYS:HB3	2.40	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:5:24:ALA:O	6:5:25:LEU:CB	2.57	0.51
32:Y:17:SER:HB2	32:Y:71:LYS:CE	2.40	0.51
2:1:4:VAL:HG23	2:1:10:LYS:O	2.10	0.51
11:A:528:A:C2	11:A:2043:C:O5'	2.61	0.51
33:Z:141:VAL:HG13	33:Z:144:LEU:HB3	1.92	0.51
14:D:131:LEU:HB2	14:D:136:ILE:CD1	2.40	0.51
14:D:9:TYR:CD1	14:D:10:THR:HG22	2.45	0.51
11:A:2746:U:H2'	11:A:2747:G:O4'	2.10	0.51
15:E:44:TYR:O	15:E:45:THR:CB	2.59	0.51
11:A:1514:U:H2'	11:A:1515:G:C8	2.46	0.51
11:A:1477:A:C2	11:A:1515:G:C2	2.98	0.51
17:G:150:ASP:O	17:G:151:ALA:HB2	2.10	0.51
23:P:65:ARG:O	23:P:67:MET:N	2.43	0.51
26:S:97:ARG:NH1	26:S:98:VAL:O	2.44	0.51
23:P:23:PRO:HB2	23:P:33:ARG:HD2	1.92	0.51
23:P:30:THR:HG23	23:P:31:ALA:H	1.75	0.51
33:Z:53:ILE:HG22	33:Z:71:VAL:O	2.10	0.51
29:V:39:LEU:O	29:V:40:LEU:HB2	2.10	0.51
25:R:117:VAL:CG2	25:R:118:GLU:N	2.74	0.51
11:A:657:U:H2'	11:A:658:C:H6	1.75	0.51
10:9:1:MET:HB3	10:9:31:LYS:O	2.10	0.51
11:A:1141:U:H6	21:N:63:THR:CG2	2.23	0.51
23:P:77:ARG:HD3	23:P:78:PRO:HD2	1.92	0.51
23:P:45:LEU:CD1	23:P:46:LYS:H	2.22	0.51
22:O:43:VAL:HG21	22:O:52:VAL:CG1	2.39	0.51
14:D:16:MET:HE1	14:D:208:LYS:HG2	1.92	0.51
11:A:1090:U:H2'	11:A:1091:G:O4'	2.10	0.51
11:A:363(A):A:C2	11:A:363(B):G:C8	2.98	0.51
11:A:1771:C:C1'	11:A:1786:A:C8	2.94	0.51
11:A:15:G:O2'	11:A:16:G:H5'	2.11	0.51
17:G:106:LEU:HA	17:G:110:ALA:HB3	1.93	0.51
7:6:27:LYS:HG3	7:6:30:THR:HB	1.93	0.51
7:6:18:ARG:HG3	7:6:19:ARG:H	1.75	0.51
27:T:83:ILE:CG1	27:T:84:GLN:N	2.73	0.51
11:A:1858:G:H2'	11:A:1883:G:N2	2.25	0.51
23:P:62:LEU:N	23:P:62:LEU:HD23	2.04	0.51
21:N:23:LEU:HD21	21:N:102:ALA:HB1	1.92	0.51
17:G:32:PRO:HB3	17:G:163:ALA:HB2	1.91	0.51
15:E:93:VAL:C	15:E:95:ILE:H	2.14	0.51
25:R:115:GLU:HG2	25:R:117:VAL:H	1.75	0.51
31:X:10:ALA:O	31:X:28:PHE:HB3	2.10	0.51
11:A:671:C:H2'	11:A:672:C:H6	1.75	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:Q:109:VAL:HG13	24:Q:113:GLN:OE1	2.09	0.51
33:Z:145:GLU:HG3	33:Z:146:ILE:N	2.26	0.51
32:Y:43:ASN:HB2	32:Y:64:GLU:HA	1.92	0.51
11:A:580:C:H2'	11:A:581:C:H6	1.75	0.51
22:O:4:PRO:O	22:O:5:GLN:CB	2.59	0.51
27:T:50:ILE:HD11	27:T:102:ILE:CD1	2.40	0.51
18:H:33:LEU:HD21	18:H:136:ILE:HG22	1.93	0.51
11:A:1288:U:C2	11:A:1327:C:O2	2.63	0.51
11:A:523:C:H2'	11:A:524:U:H5'	1.93	0.51
11:A:359:A:H3'	11:A:360:G:H8	1.75	0.51
29:V:82:ARG:HG2	29:V:82:ARG:NH1	2.25	0.51
11:A:1257:C:O2'	16:F:83:PHE:HA	2.10	0.51
11:A:2726:U:H6	22:O:67:LYS:HZ3	1.58	0.51
11:A:2295:C:O2'	11:A:2296:U:H5'	2.10	0.51
15:E:47:VAL:HG21	15:E:86:PRO:CD	2.40	0.51
5:4:27:THR:O	5:4:28:LYS:HB3	2.10	0.51
25:R:101:ALA:O	25:R:102:GLU:HB2	2.09	0.51
9:8:12:LYS:O	23:P:65:ARG:HB2	2.11	0.51
23:P:24:GLY:HA3	23:P:33:ARG:HH12	1.76	0.51
7:6:53:LYS:CG	7:6:54:ILE:N	2.67	0.51
27:T:100:TYR:O	27:T:103:ARG:HG3	2.11	0.51
16:F:183:VAL:O	16:F:187:VAL:HG23	2.10	0.51
11:A:425:G:O2'	11:A:426:C:H5'	2.10	0.51
18:H:105:LEU:N	18:H:105:LEU:HD23	2.24	0.51
30:W:11:ARG:HG2	30:W:11:ARG:NH1	2.24	0.51
18:H:146:ALA:O	18:H:149:ARG:N	2.43	0.51
11:A:1231:G:H2'	11:A:1232:G:H8	1.75	0.51
11:A:1523:U:H2'	11:A:1524:G:C8	2.45	0.51
17:G:149:VAL:O	17:G:149:VAL:HG23	2.10	0.51
3:2:35:LEU:HD11	3:2:50:ILE:HG23	1.92	0.51
32:Y:85:VAL:HG12	32:Y:86:ARG:H	1.74	0.51
16:F:138:GLU:O	16:F:142:TRP:HB2	2.11	0.51
11:A:1517:G:O2'	11:A:1518:U:H5'	2.11	0.51
11:A:2133:G:C6	11:A:2157:G:O6	2.64	0.51
27:T:98:LYS:HB3	27:T:100:TYR:HE1	1.76	0.51
9:8:14:VAL:HG21	9:8:22:VAL:HG13	1.91	0.51
21:N:21:LYS:HE3	21:N:25:ARG:HB3	1.93	0.51
11:A:1264:G:C3'	11:A:1265:A:H5''	2.38	0.51
11:A:863:A:H61	11:A:913:U:H3	1.59	0.51
5:4:5:ILE:HD13	5:4:5:ILE:H	1.76	0.51
11:A:1101:U:H2'	11:A:1102:C:C6	2.46	0.51
11:A:1162:G:H4'	29:V:24:LYS:HB2	1.93	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:W:95:ILE:O	30:W:95:ILE:HG13	2.11	0.51
11:A:2074:U:H2'	11:A:2075:U:C6	2.45	0.51
11:A:773:U:H4'	14:D:47:GLY:HA3	1.93	0.51
11:A:1525:G:H2'	11:A:1526:G:C8	2.46	0.51
31:X:45:THR:OG1	31:X:46:ALA:N	2.44	0.51
9:8:32:LEU:HB3	9:8:36:LYS:HZ1	1.76	0.51
1:0:10:THR:HG22	1:0:11:ARG:N	2.26	0.51
11:A:2308:G:N2	17:G:79:ASN:CG	2.64	0.51
11:A:2184:G:H2'	11:A:2185:C:O4'	2.09	0.51
11:A:2128:C:O2'	11:A:2129:C:O5'	2.24	0.51
11:A:1682:G:H2'	11:A:1683:C:C6	2.46	0.51
31:X:57:LEU:HD13	31:X:57:LEU:N	2.25	0.51
11:A:1151:G:H2'	11:A:1152:C:C6	2.46	0.51
11:A:1508:A:H4'	11:A:1509(A):A:C2	2.46	0.51
11:A:1688:U:H1'	11:A:1701:A:C6	2.46	0.51
24:Q:3:MET:HB2	24:Q:4:PRO:HD2	1.93	0.51
11:A:1999:C:H4'	11:A:2723:C:O2	2.10	0.51
11:A:465:G:H2'	11:A:466:A:C8	2.46	0.51
32:Y:76:CYS:SG	32:Y:77:PRO:HD2	2.51	0.51
32:Y:77:PRO:O	32:Y:78:ALA:HB2	2.10	0.51
11:A:1665:A:H2'	11:A:1666:G:C5'	2.26	0.51
30:W:8:ARG:NH1	30:W:8:ARG:HG2	2.25	0.51
11:A:1190:G:C5'	23:P:35:HIS:H	2.15	0.51
11:A:638:G:N2	11:A:651:G:H1'	2.26	0.51
11:A:1041:G:H2'	11:A:1042:G:H5'	1.93	0.51
12:B:68:C:H2'	12:B:69:G:O4'	2.10	0.51
11:A:1681:G:O2'	11:A:1762:A:C2'	2.56	0.51
9:8:58:ILE:HG22	9:8:58:ILE:O	2.11	0.51
25:R:13:HIS:CE1	25:R:16:HIS:HB2	2.46	0.51
11:A:220:G:H2'	11:A:427:U:O4	2.10	0.51
11:A:469:G:H2'	11:A:470:A:H5''	1.93	0.51
11:A:1796:U:H2'	11:A:1797:C:C6	2.46	0.51
31:X:56:THR:HG22	31:X:79:ALA:HB2	1.93	0.51
14:D:27:THR:CG2	14:D:81:ALA:HB1	2.41	0.51
11:A:2832:U:C2	11:A:2834:G:N2	2.79	0.51
7:6:15:GLU:OE2	7:6:41:PRO:CG	2.58	0.51
14:D:241:PRO:O	14:D:242:ARG:CB	2.59	0.51
33:Z:166:SER:HB2	33:Z:168:GLU:H	1.69	0.51
11:A:2579:C:O2'	15:E:131:ALA:HB3	2.11	0.51
23:P:125:VAL:HG13	23:P:125:VAL:O	2.11	0.51
13:C:10:LEU:CD1	13:C:32:LEU:HA	2.40	0.51
25:R:117:VAL:CG2	25:R:118:GLU:H	2.21	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:C:76:ALA:HB2	13:C:153:ILE:HD11	1.93	0.51
11:A:673:C:C2'	11:A:674:G:H5'	2.41	0.51
16:F:88:VAL:O	16:F:88:VAL:CG1	2.59	0.51
31:X:40:LYS:O	31:X:44:GLU:HB2	2.11	0.51
16:F:113:ALA:HB2	16:F:183:VAL:HG12	1.93	0.51
25:R:45:ARG:CG	25:R:46:GLY:H	2.23	0.51
30:W:82:LEU:HD23	30:W:84:ARG:HH22	1.76	0.51
24:Q:14:ARG:HG2	24:Q:41:TRP:HH2	1.75	0.51
14:D:206:LEU:HD22	14:D:211:ARG:HG2	1.93	0.51
11:A:2682:U:H5'	11:A:2682:U:H6	1.76	0.51
11:A:2828:C:O2'	11:A:2829:C:H5'	2.11	0.51
14:D:81:ALA:HA	14:D:113:VAL:HG22	1.93	0.50
27:T:28:VAL:HG22	27:T:46:GLU:HA	1.94	0.50
11:A:2185:C:C2'	11:A:2186:G:C5'	2.89	0.50
23:P:146:VAL:O	23:P:148:LEU:HG	2.12	0.50
11:A:321:G:H5''	11:A:322:A:OP2	2.11	0.50
11:A:612:C:O2'	11:A:613:G:H5''	2.11	0.50
27:T:94:ALA:O	27:T:96:ARG:N	2.45	0.50
32:Y:46:LYS:HB3	32:Y:62:GLU:HG2	1.92	0.50
14:D:72:LYS:HE3	14:D:101:GLU:HB3	1.92	0.50
13:C:163:PHE:O	13:C:163:PHE:CD1	2.64	0.50
12:B:5:C:O2'	12:B:6:C:H5'	2.10	0.50
5:4:22:ILE:HG22	5:4:24:THR:HG23	1.92	0.50
11:A:686:G:N2	11:A:788:A:H61	2.09	0.50
9:8:32:LEU:HD11	11:A:2391:G:O5'	2.11	0.50
32:Y:13:VAL:CG2	32:Y:72:VAL:HB	2.41	0.50
23:P:9:ASN:N	23:P:10:PRO:HD2	2.15	0.50
33:Z:16:SER:O	33:Z:18:LEU:N	2.43	0.50
23:P:41:ARG:NH1	23:P:41:ARG:CB	2.74	0.50
9:8:49:VAL:O	9:8:50:LEU:HB3	2.12	0.50
11:A:2853:C:O2'	11:A:2854:G:H5'	2.11	0.50
11:A:782:A:H5'	11:A:783:A:C2	2.46	0.50
11:A:2651:C:O2'	11:A:2652:C:H5'	2.11	0.50
11:A:1754:C:OP2	27:T:113:LYS:NZ	2.42	0.50
25:R:9:LYS:HD2	25:R:43:GLU:OE1	2.12	0.50
31:X:61:GLY:HA3	31:X:73:ARG:O	2.11	0.50
23:P:6:LEU:N	23:P:6:LEU:HD23	2.25	0.50
11:A:419:C:H2'	11:A:420:C:H6	1.76	0.50
11:A:153:C:H2'	11:A:154:G:C8	2.46	0.50
11:A:1163:G:O2'	11:A:1164:G:H5'	2.10	0.50
11:A:2653:U:H5''	11:A:2654:A:H2'	1.92	0.50
11:A:247:G:H4'	11:A:386:G:C5	2.46	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:D:31:LYS:C	14:D:35:LYS:HE3	2.32	0.50
3:2:68:ARG:NH1	3:2:68:ARG:HB2	2.03	0.50
18:H:85:LYS:HD3	18:H:133:VAL:HB	1.94	0.50
33:Z:99:TYR:CE1	33:Z:125:LEU:HD13	2.45	0.50
16:F:148:LEU:HD23	16:F:191:ARG:HH11	1.76	0.50
13:C:118:ASP:OD2	13:C:119:VAL:HG13	2.11	0.50
17:G:45:GLU:HA	17:G:45:GLU:OE1	2.09	0.50
11:A:1722:A:O2'	11:A:1739:U:C5'	2.59	0.50
13:C:40:THR:HG22	13:C:177:LYS:CE	2.41	0.50
11:A:1993:U:H4'	15:E:128:SER:HB3	1.92	0.50
14:D:239:ARG:HG3	14:D:239:ARG:O	2.10	0.50
14:D:24:ILE:HG13	14:D:84:TYR:HB2	1.91	0.50
10:9:15:LYS:HB3	10:9:15:LYS:HZ3	1.75	0.50
11:A:1486:A:N6	11:A:1504:C:H42	2.09	0.50
11:A:2326:C:N4	11:A:2389:G:H1	2.08	0.50
18:H:143:GLN:HA	18:H:143:GLN:NE2	2.26	0.50
11:A:17:G:H4'	28:U:25:TRP:CH2	2.45	0.50
11:A:495:G:H21	30:W:61:ASN:HD21	1.58	0.50
19:J:57:UNK:O	19:J:58:UNK:O	2.29	0.50
24:Q:32:TYR:O	24:Q:105:GLU:HB2	2.11	0.50
32:Y:14:LEU:HD12	32:Y:15:VAL:H	1.75	0.50
11:A:322:A:C5'	11:A:340:A:H1'	2.39	0.50
15:E:35:GLN:O	15:E:36:ARG:O	2.30	0.50
26:S:85:VAL:C	26:S:106:ARG:HG2	2.32	0.50
33:Z:14:LYS:O	33:Z:18:LEU:HD13	2.10	0.50
15:E:132:HIS:CD2	15:E:135:HIS:HE2	2.30	0.50
11:A:1131:G:C4	21:N:75:TYR:HB2	2.46	0.50
28:U:11:ARG:O	28:U:15:LYS:HG2	2.10	0.50
26:S:15:ARG:O	26:S:18:ILE:CD1	2.60	0.50
11:A:363(F):A:O2'	11:A:364:C:H5	1.94	0.50
11:A:2036:C:C6	11:A:2036:C:H5'	2.38	0.50
2:1:3:LYS:HG3	11:A:1364:G:H5''	1.93	0.50
2:1:13:ILE:HD13	11:A:396:G:H5'	1.91	0.50
14:D:132:PRO:HG3	14:D:190:TYR:CZ	2.46	0.50
15:E:179:GLU:O	15:E:180:ASN:HB2	2.11	0.50
11:A:2166:G:H2'	11:A:2167:U:C6	2.46	0.50
29:V:79:VAL:O	29:V:80:GLN:HB2	2.11	0.50
13:C:45:ALA:HB3	13:C:171:ILE:CG2	2.41	0.50
11:A:827:U:H5'	11:A:828:U:O5'	2.12	0.50
16:F:65:TRP:CZ3	16:F:75:HIS:HD2	2.29	0.50
29:V:62:LEU:N	29:V:62:LEU:HD22	2.26	0.50
11:A:2392:A:C8	23:P:60:MET:HG2	2.46	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:G:83:ARG:HD2	17:G:84:LYS:HZ1	1.77	0.50
27:T:30:VAL:HA	27:T:43:GLN:O	2.11	0.50
11:A:1070:A:H3'	11:A:1072:C:C5	2.46	0.50
33:Z:13:GLU:HG2	33:Z:14:LYS:HD3	1.92	0.50
25:R:96:ARG:O	25:R:114:VAL:HA	2.11	0.50
11:A:1721:G:C6	11:A:1739:U:H5'	2.47	0.50
10:9:29:ASN:H	10:9:29:ASN:HD22	1.60	0.50
32:Y:64:GLU:O	32:Y:65:ALA:HB2	2.11	0.50
27:T:128:GLU:CD	27:T:129:ARG:N	2.64	0.50
16:F:84:VAL:C	16:F:86:GLY:N	2.65	0.50
11:A:284:U:H2'	11:A:285:C:C6	2.45	0.50
11:A:2672:G:H2'	11:A:2673:G:H5''	1.94	0.50
21:N:12:ARG:CZ	21:N:135:PRO:HG2	2.41	0.50
3:2:7:ARG:H	3:2:7:ARG:CD	2.25	0.50
14:D:16:MET:HG3	14:D:206:LEU:O	2.12	0.50
11:A:2753:A:O2'	11:A:2754:U:H5'	2.11	0.50
33:Z:30:ASN:ND2	33:Z:32:HIS:N	2.56	0.50
16:F:24:LEU:O	16:F:115:ALA:HB1	2.12	0.50
11:A:2107:C:C5	11:A:2108:C:C5	2.99	0.50
21:N:23:LEU:HD11	21:N:98:VAL:HG12	1.94	0.50
29:V:17:GLY:C	29:V:18:LEU:HD13	2.31	0.50
24:Q:133:ARG:CB	24:Q:133:ARG:HH11	2.25	0.50
21:N:4:TYR:O	21:N:5:VAL:HB	2.11	0.50
11:A:2526:G:H5'	11:A:2742:C:O2'	2.12	0.50
11:A:1240:U:O2'	11:A:1241:A:H5'	2.11	0.50
21:N:62:VAL:HG22	21:N:66:LYS:HD2	1.92	0.50
13:C:45:ALA:O	13:C:171:ILE:HG22	2.11	0.50
11:A:158:U:H3'	11:A:158:U:O2	2.12	0.50
18:H:13:LYS:HE2	18:H:13:LYS:HA	1.94	0.50
11:A:2514:U:H2'	11:A:2515:C:C6	2.46	0.50
11:A:2553:G:H3'	11:A:2554:U:H5''	1.93	0.50
11:A:1214:A:H2'	11:A:1215:G:O4'	2.12	0.50
30:W:10:VAL:HG12	30:W:10:VAL:O	2.11	0.50
11:A:615:G:OP2	16:F:40:GLN:HG2	2.12	0.50
29:V:22:VAL:O	29:V:23:GLU:HB2	2.11	0.50
11:A:1378:A:O2'	11:A:1379:A:C5'	2.39	0.50
11:A:2014:A:H4'	30:W:92:ARG:HH22	1.76	0.50
11:A:2304:G:H22	11:A:2312:U:H3	1.59	0.50
7:6:11:LEU:HD13	7:6:12:GLU:N	2.27	0.50
11:A:27:G:N2	11:A:512:G:C2'	2.69	0.50
17:G:68:PRO:HB3	17:G:91:ARG:O	2.12	0.50
11:A:2415:G:H2'	11:A:2416:C:H6	1.76	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:U:92:ARG:HB2	29:V:11:GLN:NE2	2.27	0.50
25:R:32:GLY:O	25:R:115:GLU:HA	2.11	0.50
18:H:40:GLU:O	18:H:41:MET:HB2	2.12	0.50
11:A:1558:A:H4'	11:A:1559:G:O5'	2.12	0.50
6:5:23:HIS:O	6:5:24:ALA:C	2.50	0.50
32:Y:31:LEU:N	32:Y:31:LEU:HD22	2.26	0.50
11:A:2512:C:H4'	15:E:122:PHE:CE2	2.46	0.50
11:A:1142(A):A:H5'	11:A:1142(A):A:C8	2.47	0.50
23:P:75:ILE:HD13	23:P:77:ARG:HH22	1.74	0.50
11:A:2050:C:H2'	11:A:2051:A:O4'	2.12	0.50
11:A:1314:C:H5'	11:A:1314:C:C6	2.47	0.50
11:A:585:G:H2'	11:A:1251:C:N4	2.25	0.50
26:S:42:ASP:C	26:S:44:LYS:H	2.15	0.50
11:A:709:U:H2'	11:A:710:G:H8	1.77	0.50
12:B:65:C:C2'	12:B:66:A:H5'	2.42	0.50
11:A:1525:G:O2'	11:A:1526:G:H5'	2.11	0.50
21:N:121:LYS:HB3	21:N:123:TYR:CE1	2.47	0.50
11:A:2422:A:H4'	11:A:2423:U:OP1	2.11	0.50
11:A:1799:G:H5'	11:A:1819:A:N6	2.26	0.50
11:A:253:C:H2'	11:A:254:G:O4'	2.11	0.50
11:A:2681:C:H5	11:A:2725:A:H62	1.57	0.50
14:D:35:LYS:CG	14:D:104:TYR:HE2	2.15	0.50
14:D:30:GLU:C	14:D:35:LYS:HZ1	2.15	0.50
14:D:61:LEU:O	14:D:63:ARG:NH1	2.44	0.50
33:Z:56:VAL:HG13	33:Z:69:THR:O	2.11	0.50
15:E:55:ASN:O	15:E:56:PRO:C	2.49	0.50
17:G:125:PHE:CB	17:G:130:ASN:O	2.60	0.50
16:F:192:LEU:HD23	16:F:193:VAL:N	2.27	0.50
32:Y:83:THR:HA	32:Y:96:ILE:HG22	1.94	0.50
24:Q:59:ARG:O	24:Q:60:ARG:HB2	2.11	0.50
15:E:52:LEU:O	15:E:75:VAL:HG23	2.12	0.50
11:A:1047:G:H2'	11:A:1110:G:N2	2.13	0.50
11:A:1047:G:C2	11:A:1110:G:H2'	2.46	0.50
11:A:648:G:O2'	11:A:649:G:H5'	2.12	0.50
7:6:53:LYS:O	7:6:54:ILE:OXT	2.29	0.50
11:A:2713:A:H3'	11:A:2714:G:C5'	2.42	0.50
4:3:15:TYR:HB3	4:3:19:GLN:NE2	2.27	0.50
2:1:3:LYS:HG2	11:A:1365:A:OP2	2.12	0.50
11:A:852:G:H2'	11:A:853:G:H8	1.77	0.50
2:1:67:ILE:H	2:1:68:PRO:HD2	1.74	0.50
11:A:1639:U:H2'	11:A:1640:C:H5''	1.93	0.50
14:D:273:ARG:NH1	14:D:273:ARG:HG2	2.25	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:C:42:GLU:HG3	13:C:215:THR:CG2	2.42	0.50
5:4:22:ILE:HD12	5:4:22:ILE:N	2.26	0.50
14:D:26:LYS:HE2	14:D:26:LYS:H	1.76	0.50
7:6:19:ARG:H	7:6:19:ARG:HD2	1.77	0.50
11:A:628:G:C3'	11:A:629:G:H5''	2.42	0.50
32:Y:28:LYS:CD	32:Y:39:VAL:HG22	2.39	0.50
32:Y:6:HIS:CD2	32:Y:6:HIS:N	2.79	0.50
7:6:35:GLU:HB3	7:6:51:GLU:CB	2.25	0.50
27:T:32:TYR:N	27:T:32:TYR:CD1	2.77	0.50
27:T:33:LYS:HG3	27:T:43:GLN:HB2	1.94	0.50
23:P:146:VAL:CG2	23:P:147:LEU:H	2.05	0.50
16:F:134:GLY:O	16:F:135:LYS:HE3	2.12	0.50
9:8:23:VAL:HG13	9:8:46:ARG:HB3	1.92	0.50
15:E:5:LEU:HD12	15:E:51:PHE:HB2	1.93	0.50
11:A:2817:G:OP1	25:R:42:LYS:NZ	2.45	0.50
11:A:1049:C:O2'	11:A:1050:A:H5'	2.12	0.50
13:C:149:ILE:HG23	13:C:150:GLY:N	2.27	0.50
11:A:2110:G:N2	11:A:2178:C:H5	2.10	0.50
12:B:56:G:O2'	12:B:57:A:OP2	2.28	0.50
14:D:73:VAL:HG13	14:D:120:GLY:HA2	1.93	0.50
11:A:2839:G:C5'	25:R:46:GLY:HA2	2.42	0.50
11:A:1502:C:H5'	11:A:1503:U:OP2	2.11	0.50
25:R:59:ASP:O	25:R:60:LEU:CB	2.60	0.50
33:Z:128:VAL:HG22	33:Z:129:SER:N	2.27	0.50
19:J:33:UNK:O	19:J:34:UNK:C	2.59	0.50
30:W:12:ILE:HB	30:W:42:ARG:HH12	1.77	0.50
26:S:22:GLY:O	26:S:23:ARG:O	2.30	0.50
17:G:61:ALA:O	17:G:65:GLY:N	2.42	0.49
27:T:27:THR:CG2	27:T:28:VAL:H	2.17	0.49
27:T:33:LYS:HZ3	27:T:43:GLN:HG2	1.77	0.49
17:G:7:LEU:O	17:G:11:TYR:N	2.44	0.49
11:A:733:G:C8	11:A:761:A:N1	2.80	0.49
25:R:72:ASP:OD2	25:R:75:LEU:HB2	2.12	0.49
14:D:43:ARG:NH2	14:D:44:ASN:HD21	2.07	0.49
11:A:2485:G:C5'	24:Q:46:GLN:HE21	2.21	0.49
11:A:2855:C:O2'	11:A:2856:C:H5'	2.11	0.49
28:U:59:ARG:O	28:U:60:LEU:C	2.50	0.49
14:D:10:THR:HG23	14:D:13:ARG:CB	2.42	0.49
12:B:91:C:OP2	24:Q:16:ARG:NH2	2.45	0.49
11:A:1404:C:O2'	11:A:1405:U:H5'	2.12	0.49
11:A:300:A:H2'	11:A:334:C:O2'	2.12	0.49
11:A:2659:G:H2'	11:A:2660:A:H5''	1.94	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:1:93:GLU:O	2:1:95:LEU:N	2.40	0.49
11:A:451:C:C2	11:A:453:C:C5	2.99	0.49
20:K:92:UNK:C	20:K:94:UNK:H	2.25	0.49
32:Y:75:ILE:HG13	32:Y:76:CYS:N	2.26	0.49
11:A:1464:C:HO2'	11:A:1528:A:H8	1.56	0.49
26:S:98:VAL:O	26:S:99:LYS:C	2.49	0.49
15:E:65:GLY:HA2	15:E:70:ALA:HB1	1.94	0.49
15:E:98:PRO:HG3	15:E:174:ASP:HA	1.95	0.49
11:A:1697:G:C3'	11:A:1698:A:H5''	2.36	0.49
25:R:52:ILE:O	25:R:55:ALA:N	2.45	0.49
27:T:26:ASP:C	27:T:26:ASP:OD1	2.48	0.49
17:G:45:GLU:CA	17:G:45:GLU:OE1	2.60	0.49
11:A:2851:A:H2'	11:A:2852:G:H8	1.76	0.49
26:S:74:ALA:O	26:S:76:LYS:N	2.43	0.49
23:P:122:PRO:HB3	23:P:141:ALA:CB	2.42	0.49
11:A:2326:C:H41	11:A:2389:G:H1	1.60	0.49
11:A:2893:G:H5'	11:A:2894:G:H5'	1.94	0.49
11:A:2175:C:H2'	11:A:2176:A:C8	2.46	0.49
21:N:1:MET:SD	21:N:1:MET:C	2.91	0.49
11:A:590:A:H2'	11:A:591:C:C6	2.47	0.49
11:A:2257:U:O2'	11:A:2258:C:H5'	2.11	0.49
33:Z:177:PRO:O	33:Z:178:GLU:HB3	2.12	0.49
11:A:839:U:O2'	11:A:1191:G:H1'	2.11	0.49
17:G:88:ILE:CG2	17:G:89:GLY:N	2.75	0.49
32:Y:8:LYS:HE2	32:Y:72:VAL:O	2.12	0.49
16:F:175:THR:O	16:F:176:LEU:HB2	2.11	0.49
26:S:95:HIS:CG	26:S:96:GLY:N	2.80	0.49
23:P:132:LYS:HD2	23:P:132:LYS:N	2.15	0.49
11:A:1654:A:P	25:R:3:HIS:HB3	2.53	0.49
25:R:72:ASP:HB3	25:R:75:LEU:CB	2.38	0.49
30:W:40:ASN:O	30:W:41:LYS:HG2	2.11	0.49
16:F:46:ARG:HG2	16:F:46:ARG:NH1	2.20	0.49
23:P:112:LEU:HD13	23:P:112:LEU:O	2.13	0.49
27:T:39:ARG:H	27:T:39:ARG:CD	2.14	0.49
32:Y:60:PHE:CG	32:Y:60:PHE:O	2.66	0.49
18:H:37:VAL:HG11	18:H:68:THR:CG2	2.42	0.49
11:A:118:A:OP2	11:A:119:A:H5''	2.12	0.49
24:Q:39:PRO:O	24:Q:40:ALA:HB2	2.12	0.49
11:A:893:C:H2'	11:A:894:C:H6	1.77	0.49
11:A:1801:G:H3'	11:A:1802:A:H5'	1.95	0.49
28:U:62:ILE:HG23	28:U:76:TYR:CE2	2.47	0.49
21:N:134:ARG:O	21:N:136:GLU:N	2.45	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:2115:G:N3	11:A:2117:A:N7	2.61	0.49
14:D:65:ILE:CD1	14:D:88:ARG:CZ	2.90	0.49
31:X:14:SER:O	31:X:17:ALA:HB3	2.13	0.49
11:A:1598:C:H5'	31:X:36:LYS:CD	2.43	0.49
16:F:23:ASP:O	16:F:115:ALA:HA	2.13	0.49
11:A:2107:C:C2	11:A:2182:G:N1	2.80	0.49
9:8:8:LYS:HE3	11:A:245:G:O6	2.12	0.49
26:S:93:LYS:O	26:S:94:TYR:C	2.50	0.49
23:P:47:ASP:HB3	23:P:48:PRO:C	2.33	0.49
15:E:87:GLU:O	15:E:89:ASP:N	2.45	0.49
28:U:93:LYS:O	28:U:96:ALA:HB3	2.12	0.49
29:V:55:ALA:O	29:V:56:SER:HB3	2.12	0.49
11:A:671:C:H2'	11:A:672:C:C6	2.47	0.49
28:U:52:ARG:HH11	28:U:52:ARG:HB3	1.77	0.49
11:A:1142(A):A:OP1	11:A:1142(A):A:H3'	2.12	0.49
8:7:22:MET:HE3	8:7:31:LEU:HD12	1.93	0.49
1:0:7:LEU:HD13	24:Q:85:LYS:CD	2.41	0.49
11:A:949:C:H2'	11:A:950:G:H8	1.78	0.49
33:Z:85:HIS:HE1	33:Z:87:ASP:OD1	1.95	0.49
2:1:48:LYS:CE	2:1:61:ARG:HD3	2.43	0.49
16:F:181:LEU:CD2	16:F:202:PHE:HD2	2.25	0.49
11:A:445:C:H2'	11:A:446:G:C8	2.48	0.49
20:K:117:UNK:O	20:K:118:UNK:CB	2.60	0.49
11:A:473:G:H5''	11:A:508:G:N2	2.28	0.49
17:G:93:THR:HG22	17:G:94:LEU:H	1.76	0.49
11:A:1349:A:N6	11:A:1598:C:N4	2.61	0.49
9:8:5:LYS:HG2	11:A:242:G:C8	2.47	0.49
7:6:27:LYS:HE2	7:6:30:THR:H	1.76	0.49
17:G:131:TYR:CB	17:G:159:VAL:HG13	2.37	0.49
6:5:33:CYS:HG	6:5:49:CYS:CB	2.24	0.49
7:6:16:CYS:SG	7:6:49:HIS:N	2.85	0.49
16:F:160:ASN:ND2	16:F:162:LEU:HD13	2.27	0.49
26:S:85:VAL:HG23	26:S:106:ARG:CG	2.37	0.49
16:F:154:VAL:HG13	16:F:191:ARG:O	2.12	0.49
13:C:127:LEU:HD23	13:C:128:GLY:N	2.27	0.49
11:A:673:C:O2'	11:A:674:G:H5'	2.12	0.49
11:A:2801(A):A:C3'	11:A:2802:G:H5'	2.42	0.49
28:U:115:ALA:C	28:U:117:GLN:H	2.16	0.49
11:A:328:U:H4'	32:Y:68:HIS:CD2	2.48	0.49
2:1:13:ILE:CD1	2:1:13:ILE:N	2.76	0.49
11:A:2360:A:O2'	11:A:2361:A:P	2.70	0.49
11:A:1408:C:O2'	11:A:1409:C:H5'	2.13	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:H:23:ARG:O	18:H:24:VAL:HG23	2.13	0.49
12:B:81:G:O6	12:B:96:U:O2	2.29	0.49
22:O:2:ILE:HB	22:O:33:ALA:HB3	1.95	0.49
14:D:68:LYS:O	14:D:68:LYS:HG3	2.12	0.49
22:O:105:GLU:O	22:O:108:GLU:HG2	2.12	0.49
24:Q:10:ARG:HH21	24:Q:11:LYS:HE3	1.77	0.49
31:X:12:VAL:CG1	31:X:27:THR:H	2.25	0.49
7:6:45:LYS:N	7:6:45:LYS:HD2	2.27	0.49
3:2:69:ARG:HB2	3:2:70:GLN:HE22	1.77	0.49
1:0:49:LYS:O	1:0:50:ASN:HB2	2.12	0.49
32:Y:50:ARG:O	32:Y:51:VAL:C	2.51	0.49
11:A:607:U:OP1	16:F:102:PRO:HA	2.13	0.49
12:B:105:A:H4'	33:Z:89:PHE:CE1	2.47	0.49
11:A:2160:G:C5'	11:A:2160:G:H8	2.17	0.49
33:Z:24:LEU:HD23	33:Z:25:PRO:O	2.11	0.49
29:V:39:LEU:HD12	29:V:50:PRO:O	2.12	0.49
9:8:48:PHE:O	9:8:49:VAL:HG23	2.12	0.49
3:2:10:LEU:HD21	3:2:14:ARG:NE	2.27	0.49
16:F:87:GLY:O	16:F:88:VAL:HG12	2.13	0.49
11:A:139:G:H2'	11:A:139(A):G:H5''	1.94	0.49
11:A:1022:G:N2	11:A:1142(A):A:C2	2.81	0.49
22:O:8:LEU:CD2	22:O:8:LEU:N	2.75	0.49
21:N:42:TRP:CH2	21:N:44:PRO:HA	2.47	0.49
21:N:6:PRO:O	21:N:7:LYS:HB2	2.12	0.49
1:0:7:LEU:HD21	24:Q:81:VAL:HG13	1.94	0.49
9:8:41:ILE:HD12	11:A:2419:U:P	2.52	0.49
24:Q:66:ILE:HD12	24:Q:66:ILE:O	2.12	0.49
28:U:69:CYS:HG	28:U:79:PHE:HD2	1.59	0.49
11:A:644:A:H2	11:A:2369:A:H1'	1.77	0.49
17:G:115:ARG:HG3	17:G:137:GLU:OE2	2.11	0.49
11:A:1137:G:O2'	11:A:1138:G:H5'	2.12	0.49
11:A:660:G:H5'	16:F:99:TYR:CD2	2.47	0.49
11:A:2373:G:H2'	11:A:2374:C:C6	2.48	0.49
11:A:1124:C:H2'	11:A:1125:G:O4'	2.12	0.49
19:J:89:UNK:C	19:J:91:UNK:H	2.25	0.49
11:A:382:G:C2'	11:A:383:U:H5'	2.42	0.49
14:D:35:LYS:HE2	14:D:104:TYR:OH	2.12	0.49
11:A:2577:A:H5''	11:A:2578:G:H5'	1.95	0.49
3:2:32:LEU:HB2	3:2:53:LEU:HD22	1.94	0.49
32:Y:15:VAL:O	32:Y:21:LYS:HA	2.13	0.49
15:E:69:LYS:C	15:E:71:GLY:N	2.64	0.49
17:G:119:GLY:O	17:G:181:ARG:HB2	2.13	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:E:2:LYS:HD3	15:E:95:ILE:CG2	2.43	0.49
29:V:38:LEU:C	29:V:39:LEU:HD13	2.32	0.49
11:A:990:A:OP2	11:A:991:C:OP2	2.31	0.49
17:G:145:THR:CB	17:G:148:MET:HB3	2.41	0.49
32:Y:60:PHE:HA	32:Y:62:GLU:OE2	2.13	0.49
15:E:30:PRO:HD3	15:E:180:ASN:CG	2.32	0.49
11:A:848:G:C8	11:A:848:G:H5'	2.46	0.49
11:A:2389:G:H5''	11:A:2390:U:H5'	1.93	0.49
21:N:55:VAL:HG22	21:N:56:ASN:H	1.76	0.49
5:4:5:ILE:CG1	5:4:5:ILE:O	2.61	0.49
11:A:880:G:H22	11:A:897:C:H42	1.59	0.49
11:A:1638:C:H4'	11:A:2710:C:O2	2.13	0.49
8:7:47:ARG:O	8:7:48:LYS:HB3	2.12	0.49
11:A:1910:G:O2'	11:A:1911:U:H5'	2.13	0.49
5:4:28:LYS:CE	5:4:29:PRO:HD2	2.42	0.49
9:8:33:ASN:HA	9:8:36:LYS:HE3	1.94	0.49
32:Y:28:LYS:HB3	32:Y:39:VAL:N	2.14	0.49
27:T:54:ARG:O	27:T:55:ASN:HB2	2.13	0.49
11:A:252:G:P	23:P:50:ARG:HH21	2.36	0.49
17:G:15:VAL:O	17:G:18:GLU:HB3	2.12	0.49
15:E:76:ARG:O	15:E:77:ILE:O	2.31	0.49
15:E:88:GLY:O	15:E:89:ASP:HB2	2.11	0.49
22:O:47:ILE:O	22:O:48:PRO:C	2.51	0.49
11:A:2801(A):A:C5'	11:A:2802:G:H8	2.26	0.49
32:Y:2:ARG:HG2	32:Y:2:ARG:HH11	1.78	0.49
11:A:2223:G:O2'	11:A:2224:G:H5'	2.13	0.49
11:A:90:U:C2'	11:A:90:U:O2	2.61	0.49
11:A:1906:G:O2'	11:A:1907:G:H5'	2.12	0.49
11:A:237:C:H2'	11:A:238:C:H6	1.77	0.49
31:X:33:LYS:CA	31:X:33:LYS:HE2	2.43	0.49
11:A:2241:A:H2'	11:A:2242:G:C8	2.48	0.49
16:F:40:GLN:HE22	16:F:182:ASN:HB2	1.77	0.49
2:1:35:THR:HG23	2:1:35:THR:O	2.13	0.49
11:A:405:U:H3'	11:A:406:G:C5'	2.42	0.49
11:A:1092:C:H42	11:A:1100:C:H42	1.59	0.49
14:D:27:THR:O	14:D:27:THR:CG2	2.61	0.49
17:G:95:ARG:O	17:G:96:ARG:HG2	2.12	0.49
11:A:2428:G:H5''	11:A:2429:G:O5'	2.13	0.49
11:A:335:C:H2'	11:A:336:C:H6	1.77	0.49
12:B:22:U:H2'	12:B:23:G:C8	2.47	0.49
27:T:33:LYS:CE	27:T:43:GLN:HE21	2.26	0.49
11:A:690:G:H2'	11:A:691:C:C6	2.48	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:H:45:VAL:O	18:H:47:GLU:N	2.40	0.49
16:F:88:VAL:O	16:F:88:VAL:HG13	2.12	0.49
3:2:38:GLN:HB3	3:2:44:LEU:CB	2.41	0.49
11:A:2632:A:O2'	15:E:61:ARG:NH2	2.45	0.49
23:P:80:TYR:CD1	23:P:111:ARG:CB	2.96	0.49
11:A:145:G:C2'	11:A:146:G:H5''	2.41	0.49
11:A:1337:G:C4	11:A:1338:G:C8	3.01	0.49
11:A:523:C:O2'	11:A:524:U:H5'	2.13	0.49
11:A:1140:C:OP2	21:N:66:LYS:HE2	2.13	0.49
11:A:2824:C:H2'	11:A:2825:C:O4'	2.13	0.49
11:A:874:G:H5''	33:Z:175:VAL:HG11	1.95	0.49
11:A:2056:G:H2'	11:A:2056:G:N3	2.27	0.49
11:A:627:A:N6	23:P:115:LEU:HD12	2.28	0.49
33:Z:24:LEU:CD2	33:Z:24:LEU:O	2.58	0.49
28:U:52:ARG:NH1	28:U:52:ARG:HB3	2.26	0.49
14:D:117:VAL:HG22	14:D:118:VAL:N	2.28	0.49
11:A:2843:G:N2	11:A:2875:C:C2	2.81	0.49
11:A:271(D):G:O2'	11:A:271(E):U:H5'	2.13	0.49
11:A:78:A:H2'	11:A:79:G:H8	1.76	0.49
11:A:191:A:H2'	11:A:192:C:H6	1.75	0.49
28:U:104:GLN:HB3	29:V:44:LYS:NZ	2.28	0.49
14:D:17:THR:O	14:D:211:ARG:NH2	2.46	0.49
18:H:94:TYR:CB	18:H:107:VAL:HG12	2.43	0.49
11:A:2696:U:H2'	11:A:2697:G:C8	2.47	0.49
3:2:49:LYS:O	3:2:53:LEU:HB2	2.13	0.48
27:T:28:VAL:HG21	27:T:46:GLU:HG3	1.94	0.48
11:A:1069:A:C1'	11:A:1070:A:OP1	2.51	0.48
26:S:93:LYS:O	26:S:95:HIS:N	2.46	0.48
11:A:252:G:OP2	23:P:50:ARG:NH2	2.42	0.48
29:V:19:LYS:HE2	29:V:20:LEU:H	1.78	0.48
16:F:152:GLU:OE1	16:F:191:ARG:HD2	2.13	0.48
28:U:95:LEU:CD1	29:V:11:GLN:HG3	2.43	0.48
11:A:1051:G:C4	11:A:1052:C:N4	2.81	0.48
32:Y:2:ARG:N	32:Y:4:LYS:HE2	2.27	0.48
11:A:1248:G:N1	28:U:3:ARG:HD2	2.27	0.48
14:D:222:ARG:O	14:D:224:ALA:O	2.30	0.48
15:E:176:ILE:HG22	15:E:179:GLU:H	1.77	0.48
26:S:20:ARG:HA	26:S:20:ARG:NE	2.26	0.48
15:E:13:ARG:O	27:T:57:PHE:HE2	1.96	0.48
11:A:1286:A:H2'	11:A:1288:U:OP2	2.13	0.48
24:Q:21:THR:OG1	24:Q:99:PRO:O	2.30	0.48
23:P:102:ARG:NH1	23:P:102:ARG:CB	2.75	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:45:C:H2'	11:A:47:C:H6	1.77	0.48
16:F:78:ILE:HA	16:F:83:PHE:CE2	2.48	0.48
33:Z:137:ILE:O	33:Z:138:GLU:HB2	2.13	0.48
8:7:21:ARG:HH11	8:7:21:ARG:HG2	1.77	0.48
3:2:32:LEU:HA	3:2:53:LEU:HD13	1.94	0.48
12:B:43:C:H5'	12:B:44:G:OP2	2.14	0.48
17:G:16:ARG:HG3	17:G:16:ARG:HH11	1.78	0.48
24:Q:133:ARG:HH11	24:Q:133:ARG:HB2	1.78	0.48
26:S:18:ILE:H	26:S:18:ILE:HD12	1.78	0.48
32:Y:44:ILE:N	32:Y:44:ILE:HD12	2.28	0.48
11:A:363(F):A:HO2'	11:A:364:C:H5	1.59	0.48
29:V:35:LEU:H	29:V:35:LEU:HD22	1.78	0.48
14:D:261:LYS:NZ	14:D:263:ARG:NH2	2.61	0.48
11:A:2199:A:C5'	11:A:2200:C:OP2	2.61	0.48
23:P:6:LEU:H	23:P:6:LEU:CD2	2.26	0.48
11:A:2121:G:N1	11:A:2176:A:C2	2.79	0.48
29:V:80:GLN:OE1	29:V:80:GLN:HA	2.13	0.48
19:J:22:UNK:C	19:J:118:UNK:HA	2.44	0.48
30:W:37:ARG:HH11	30:W:37:ARG:HG3	1.78	0.48
18:H:97:ARG:NH2	18:H:99:VAL:HG21	2.29	0.48
11:A:436:C:H2'	11:A:437:G:H8	1.77	0.48
3:2:30:ARG:HH11	31:X:5:TYR:HE2	1.57	0.48
11:A:270:A:O2'	11:A:271:A:H5'	2.13	0.48
25:R:104:ARG:O	25:R:106:GLY:N	2.47	0.48
11:A:865:C:H4'	11:A:866:A:OP1	2.13	0.48
11:A:664:C:O2'	11:A:665:C:H5'	2.13	0.48
33:Z:30:ASN:C	33:Z:30:ASN:ND2	2.66	0.48
3:2:25:VAL:CG1	3:2:57:ILE:HG23	2.43	0.48
11:A:321:G:H21	16:F:165:ARG:NH2	2.02	0.48
23:P:24:GLY:N	23:P:33:ARG:CZ	2.77	0.48
15:E:68:ALA:O	15:E:70:ALA:N	2.46	0.48
16:F:125:LEU:CD2	16:F:125:LEU:H	2.20	0.48
23:P:126:VAL:HG22	23:P:145:PRO:HG2	1.94	0.48
23:P:96:THR:HG22	23:P:126:VAL:CB	2.42	0.48
13:C:125:SER:C	13:C:127:LEU:H	2.17	0.48
1:0:14:ARG:HH11	1:0:14:ARG:CG	2.23	0.48
32:Y:41:GLY:O	32:Y:42:VAL:O	2.31	0.48
11:A:2496:C:OP2	24:Q:82:ARG:HG2	2.13	0.48
11:A:1332:G:H5'	11:A:1333:C:H5	1.78	0.48
14:D:108:PRO:HB3	14:D:143:HIS:CE1	2.48	0.48
2:1:44:PRO:HG2	2:1:46:LEU:HD13	1.94	0.48
11:A:752:A:H4'	11:A:753:C:O5'	2.13	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:2087:G:O2'	11:A:2088:G:H5'	2.12	0.48
21:N:120:LEU:HD13	21:N:120:LEU:C	2.33	0.48
11:A:858:U:O2	11:A:2268:A:H2'	2.13	0.48
9:8:11:LYS:HZ2	9:8:60:LEU:CD2	2.26	0.48
23:P:49:ARG:HG3	23:P:49:ARG:NH1	2.27	0.48
11:A:1301:A:HO2'	11:A:1302:A:P	2.37	0.48
32:Y:81:LYS:NZ	32:Y:99:CYS:SG	2.85	0.48
11:A:2107:C:C5	11:A:2108:C:H5	2.31	0.48
12:B:8:U:H6	12:B:8:U:C5'	2.14	0.48
30:W:4:LYS:CG	30:W:5:ALA:H	2.26	0.48
11:A:1072:C:H5''	11:A:1073:A:OP1	2.13	0.48
11:A:1538:G:H2'	11:A:1539:G:H8	1.78	0.48
11:A:2293:C:H5''	26:S:92:TYR:OH	2.13	0.48
23:P:23:PRO:HB2	23:P:33:ARG:HG3	1.96	0.48
15:E:167:VAL:HG12	15:E:189:PRO:CD	2.38	0.48
29:V:19:LYS:HG2	29:V:94:LEU:CB	2.40	0.48
11:A:2713:A:H3'	11:A:2714:G:H5'	1.95	0.48
1:0:42:GLY:O	1:0:57:PHE:CG	2.66	0.48
1:0:43:THR:HG22	11:A:2331:G:O2'	2.13	0.48
31:X:28:PHE:CE2	31:X:92:LEU:HD11	2.48	0.48
23:P:38:GLN:CG	23:P:39:LYS:H	2.17	0.48
21:N:112:LEU:O	21:N:115:ARG:HB3	2.13	0.48
11:A:2864:G:O2'	11:A:2865:U:H5'	2.13	0.48
11:A:272(D):G:H1	11:A:364:C:N4	2.06	0.48
11:A:1352:U:O2'	11:A:1353:A:H5'	2.13	0.48
21:N:6:PRO:HG2	21:N:7:LYS:H	1.77	0.48
11:A:402:A:C2'	11:A:403:U:H5'	2.43	0.48
11:A:2464:C:O2'	11:A:2465:C:O5'	2.29	0.48
11:A:2200:C:H42	11:A:2223:G:H1	1.62	0.48
11:A:953:A:O2'	11:A:954:G:H5'	2.13	0.48
25:R:105:ARG:HD2	25:R:105:ARG:H	1.78	0.48
25:R:105:ARG:CD	25:R:105:ARG:H	2.26	0.48
11:A:95:G:H2'	11:A:96:G:O4'	2.13	0.48
21:N:96:GLU:HB2	21:N:100:GLU:OE2	2.13	0.48
11:A:706:A:H2'	11:A:707:G:O4'	2.14	0.48
28:U:99:ALA:HB2	28:U:106:PHE:CE1	2.48	0.48
6:5:27:PRO:HA	30:W:23:LEU:HD11	1.95	0.48
7:6:18:ARG:HH11	7:6:18:ARG:CG	2.04	0.48
11:A:2312:U:OP1	17:G:73:ALA:HA	2.13	0.48
32:Y:27:VAL:HG12	32:Y:28:LYS:N	2.28	0.48
12:B:22:U:H2'	12:B:23:G:H8	1.79	0.48
6:5:50:GLY:HA3	6:5:56:LYS:NZ	2.28	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:S:96:GLY:C	26:S:98:VAL:H	2.15	0.48
13:C:114:VAL:HG12	13:C:144:THR:HA	1.96	0.48
13:C:147:PHE:C	13:C:149:ILE:H	2.15	0.48
24:Q:26:TYR:HB2	24:Q:137:TYR:HD1	1.77	0.48
17:G:51:ARG:HH11	17:G:53:LEU:CD1	2.25	0.48
11:A:310:A:P	32:Y:18:GLY:HA2	2.53	0.48
11:A:1341:U:C4'	31:X:57:LEU:HB3	2.41	0.48
30:W:25:ARG:CB	30:W:25:ARG:HH11	2.27	0.48
2:1:50:ARG:HG3	11:A:2200:C:OP1	2.13	0.48
9:8:30:ARG:NH2	11:A:2419:U:O4	2.46	0.48
11:A:1771:C:O2'	11:A:1786:A:H8	1.96	0.48
11:A:1436:G:H1'	11:A:1477:A:O2'	2.12	0.48
11:A:405:U:H3'	11:A:406:G:H5'	1.94	0.48
11:A:740:U:H2'	11:A:741:G:C8	2.48	0.48
33:Z:47:VAL:HG12	33:Z:48:PHE:N	2.29	0.48
11:A:290:G:O2'	11:A:291:C:H5'	2.12	0.48
8:7:12:ARG:O	8:7:15:THR:O	2.31	0.48
11:A:2320:A:N3	11:A:2320:A:H2'	2.29	0.48
17:G:62:LEU:HD12	17:G:63:ILE:HG23	1.94	0.48
12:B:7:G:C2'	12:B:8:U:H5''	2.44	0.48
26:S:28:VAL:CG1	26:S:29:PHE:N	2.76	0.48
30:W:6:ILE:CG2	30:W:8:ARG:HD2	2.44	0.48
16:F:103:LYS:HA	16:F:106:ARG:HE	1.78	0.48
16:F:160:ASN:C	16:F:160:ASN:ND2	2.67	0.48
12:B:15:A:H3'	12:B:16:G:C5'	2.42	0.48
11:A:2030:A:H4'	11:A:2031:A:H8	1.77	0.48
16:F:107:LYS:HE3	16:F:205:ARG:CG	2.43	0.48
11:A:1472:A:O2'	11:A:1473:G:H5'	2.13	0.48
11:A:1750:G:H2'	11:A:1751:C:C6	2.49	0.48
2:1:27:GLU:O	2:1:28:GLY:C	2.52	0.48
17:G:149:VAL:C	17:G:151:ALA:H	2.17	0.48
11:A:2188:C:H2'	11:A:2189:U:C6	2.49	0.48
23:P:131:SER:OG	23:P:134:ALA:HB3	2.13	0.48
29:V:19:LYS:HB2	29:V:96:ILE:HG12	1.96	0.48
29:V:52:VAL:CG1	29:V:55:ALA:HB3	2.44	0.48
24:Q:134:ARG:HA	24:Q:137:TYR:CE2	2.48	0.48
11:A:1720:U:H2'	11:A:1721:G:C4'	2.43	0.48
21:N:32:THR:HG22	21:N:37:LYS:HD3	1.96	0.48
11:A:1022:G:H22	11:A:1142(A):A:H2	1.58	0.48
11:A:848:G:O6	11:A:928:G:H2'	2.14	0.48
11:A:118:A:H1'	11:A:178:G:O4'	2.14	0.48
11:A:1417:C:O2'	11:A:1418:G:H5'	2.14	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:875:G:H2'	11:A:876:C:C6	2.49	0.48
11:A:1386:C:H2'	11:A:1387:C:C6	2.49	0.48
33:Z:69:THR:HG22	33:Z:90:VAL:CA	2.16	0.48
11:A:910:A:N1	11:A:2277:G:H1'	2.28	0.48
6:5:40:LYS:NZ	6:5:44:THR:O	2.45	0.48
11:A:1539:G:C6	11:A:1540:U:H1'	2.49	0.48
23:P:66:GLY:O	23:P:67:MET:CB	2.59	0.48
15:E:49:LEU:O	15:E:78:LEU:HB3	2.13	0.48
28:U:92:ARG:CZ	29:V:11:GLN:H	2.27	0.48
18:H:125:VAL:HG12	18:H:125:VAL:O	2.13	0.48
18:H:19:VAL:CG1	18:H:20:ALA:N	2.77	0.48
18:H:89:ILE:HD11	18:H:129:THR:HA	1.94	0.48
30:W:64:MET:O	30:W:65:LEU:HB3	2.13	0.48
11:A:353:G:N3	11:A:353:G:H2'	2.29	0.48
2:1:80:LEU:C	2:1:80:LEU:HD23	2.34	0.48
11:A:1914:C:H2'	11:A:1915:U:O4'	2.13	0.48
11:A:2239:G:H5'	14:D:251:GLY:HA3	1.95	0.48
6:5:3:LYS:CD	6:5:3:LYS:H	2.20	0.48
29:V:62:LEU:HD22	29:V:62:LEU:H	1.79	0.48
11:A:2312:U:C2'	11:A:2313:C:C5'	2.92	0.48
1:0:51:VAL:HG22	1:0:81:VAL:HG23	1.96	0.48
26:S:89:ARG:CG	26:S:92:TYR:HA	2.42	0.48
26:S:104:GLY:O	26:S:106:ARG:N	2.40	0.48
13:C:76:ALA:O	13:C:94:VAL:O	2.32	0.48
11:A:2039:C:O2'	11:A:2040:C:H5'	2.14	0.48
4:3:6:VAL:HB	4:3:54:VAL:HG11	1.95	0.48
32:Y:87:LYS:HG3	32:Y:88:LYS:N	2.25	0.48
15:E:116:VAL:HG11	15:E:138:PRO:HB3	1.96	0.48
10:9:17:ILE:CG2	10:9:18:ARG:H	2.27	0.48
9:8:30:ARG:CZ	11:A:2419:U:O4	2.61	0.48
32:Y:33:LYS:C	32:Y:35:TYR:N	2.66	0.48
21:N:56:ASN:H	21:N:125:GLY:HA3	1.79	0.48
11:A:1286:A:N6	11:A:1289:C:N3	2.61	0.48
18:H:147:ASN:O	18:H:151:ILE:HG12	2.14	0.48
11:A:1525:G:H2'	11:A:1526:G:H8	1.77	0.48
25:R:88:ARG:O	25:R:88:ARG:HD2	2.14	0.48
11:A:460:A:H2'	11:A:461:C:O4'	2.14	0.48
14:D:31:LYS:HE3	14:D:33:LEU:HD12	1.95	0.48
11:A:1614:A:N1	30:W:93:ALA:HB2	2.29	0.48
17:G:46:ALA:O	17:G:47:LYS:HG3	2.14	0.48
26:S:28:VAL:CG1	26:S:29:PHE:H	2.25	0.48
11:A:2160:G:H2'	11:A:2161:C:O4'	2.14	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:S:57:LYS:O	26:S:58:LEU:HB2	2.14	0.48
25:R:86:ARG:HB3	25:R:118:GLU:OE2	2.14	0.48
33:Z:28:MET:HA	33:Z:88:PHE:O	2.14	0.48
10:9:29:ASN:O	10:9:29:ASN:ND2	2.47	0.48
23:P:101:VAL:HB	23:P:107:LYS:HA	1.96	0.48
21:N:107:LEU:HB3	21:N:108:PRO:CD	2.43	0.48
11:A:2779:U:H1'	11:A:2781:A:C5	2.49	0.48
11:A:271(E):U:H3	11:A:271(S):G:H1	1.61	0.48
11:A:2631:G:H21	15:E:61:ARG:HH12	1.59	0.48
11:A:1504:C:O2'	11:A:1505:C:C5'	2.62	0.48
11:A:414:C:H1'	11:A:1864:U:O2'	2.14	0.48
13:C:210:ARG:HH11	13:C:210:ARG:HG2	1.79	0.48
8:7:5:TRP:CD1	8:7:7:PRO:HD3	2.49	0.48
11:A:2554:U:H2'	11:A:2555:U:C6	2.49	0.48
22:O:11:ALA:HB1	22:O:99:PHE:O	2.14	0.48
11:A:1534:U:O2'	11:A:1535:A:H5'	2.13	0.48
11:A:37:C:H2'	11:A:38:A:C8	2.48	0.48
11:A:227:A:C2	11:A:2407:G:H1'	2.49	0.48
9:8:61:LEU:C	9:8:63:PRO:HD2	2.34	0.47
16:F:37:VAL:HG11	23:P:7:ARG:CZ	2.44	0.47
9:8:25:MET:HG3	23:P:64:LYS:HB2	1.95	0.47
17:G:11:TYR:O	17:G:15:VAL:N	2.47	0.47
12:B:104:U:O2'	12:B:105:A:H5'	2.14	0.47
12:B:104:U:O3'	33:Z:72:ARG:NH1	2.47	0.47
13:C:53:ARG:HH11	13:C:53:ARG:CB	2.18	0.47
24:Q:109:VAL:HG12	24:Q:113:GLN:HB2	1.96	0.47
11:A:1038:C:C3'	11:A:1039:G:H5''	2.43	0.47
11:A:1353:A:H4'	14:D:38:LYS:HE3	1.96	0.47
11:A:2472:G:H3'	11:A:2475:C:N4	2.29	0.47
21:N:7:LYS:O	21:N:9:VAL:N	2.47	0.47
11:A:84:A:H2	11:A:98:G:N3	2.12	0.47
11:A:2206:G:C2	11:A:2207:G:H5'	2.48	0.47
11:A:309:G:H1'	11:A:329:G:O2'	2.14	0.47
11:A:1376:C:O2'	11:A:1377:G:H5'	2.14	0.47
11:A:994:C:OP1	28:U:53:ARG:NH2	2.47	0.47
3:2:16:LEU:O	3:2:17:SER:O	2.32	0.47
11:A:1799:G:H5'	11:A:1819:A:H61	1.78	0.47
11:A:1099:G:O2'	11:A:1100:C:H5'	2.14	0.47
11:A:2064:C:H2'	11:A:2065:C:C6	2.49	0.47
7:6:22:ALA:HB2	7:6:39:TYR:CZ	2.49	0.47
11:A:2012:G:H4'	30:W:96:ILE:CD1	2.29	0.47
15:E:46:ALA:HB1	15:E:80:GLU:HB3	1.96	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:E:69:LYS:NZ	15:E:89:ASP:HA	2.29	0.47
25:R:29:LEU:C	25:R:30:THR:HG22	2.34	0.47
11:A:2777:G:C4'	11:A:2778:A:H5'	2.44	0.47
17:G:114:ILE:O	17:G:116:ASP:O	2.33	0.47
11:A:2801(A):A:H4'	11:A:2802:G:H2'	1.96	0.47
2:1:10:LYS:HE2	11:A:396:G:OP2	2.14	0.47
12:B:54:G:C2	12:B:55:U:C6	3.03	0.47
14:D:50:THR:O	14:D:51:VAL:HG23	2.14	0.47
11:A:2869:G:H2'	11:A:2870:C:O4'	2.14	0.47
11:A:2264:C:H2'	11:A:2265:U:C6	2.49	0.47
2:1:44:PRO:HG2	2:1:46:LEU:HD11	1.96	0.47
11:A:115:C:O2'	11:A:116:C:H5'	2.14	0.47
13:C:46:LYS:NZ	13:C:168:THR:O	2.47	0.47
11:A:272(J):C:C2'	11:A:274:G:H5''	2.44	0.47
14:D:196:VAL:HG12	14:D:196:VAL:O	2.15	0.47
33:Z:30:ASN:OD1	33:Z:90:VAL:HB	2.14	0.47
23:P:7:ARG:HB3	23:P:8:PRO:HD3	1.95	0.47
11:A:321:G:N2	16:F:165:ARG:NH2	2.54	0.47
11:A:2245:U:H5'	11:A:2246:G:C5'	2.33	0.47
15:E:24:THR:HG21	15:E:188:VAL:HG12	1.96	0.47
17:G:132:ASN:HA	17:G:157:ILE:O	2.14	0.47
12:B:15:A:H1'	12:B:110:G:C5	2.49	0.47
11:A:886:C:O2'	11:A:887:A:C4'	2.60	0.47
2:1:15:ALA:HB2	2:1:42:GLN:CG	2.40	0.47
14:D:28:GLU:H	14:D:29:PRO:HD3	1.78	0.47
11:A:914:C:C2'	11:A:915:C:H5'	2.44	0.47
17:G:20:ILE:HD13	17:G:28:VAL:HG22	1.96	0.47
32:Y:46:LYS:CG	32:Y:47:LYS:N	2.77	0.47
11:A:2341:G:H2'	11:A:2342:C:H6	1.77	0.47
11:A:1889:A:H1'	11:A:2087:G:O4'	2.15	0.47
16:F:40:GLN:NE2	16:F:182:ASN:HB2	2.29	0.47
33:Z:85:HIS:CE1	33:Z:87:ASP:OD1	2.67	0.47
27:T:42:ILE:O	27:T:42:ILE:HG13	2.14	0.47
14:D:76:PRO:HG2	14:D:98:VAL:HG21	1.96	0.47
11:A:1787:A:O4'	11:A:2589:A:H4'	2.15	0.47
26:S:64:GLU:HA	26:S:67:ARG:HG3	1.96	0.47
1:0:32:ARG:HA	1:0:64:ASP:OD1	2.14	0.47
11:A:2882:A:H5''	25:R:98:LEU:HD21	1.97	0.47
5:4:9:LEU:CD1	5:4:10:VAL:H	2.23	0.47
5:4:8:LYS:O	5:4:9:LEU:CB	2.62	0.47
17:G:96:ARG:O	17:G:99:MET:N	2.44	0.47
11:A:2308:G:H21	17:G:79:ASN:ND2	2.13	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:1888:G:H5'	11:A:1888:G:N3	2.29	0.47
15:E:65:GLY:O	15:E:67:PHE:N	2.47	0.47
33:Z:24:LEU:CD1	33:Z:41:LEU:HD23	2.44	0.47
11:A:1293:C:C3'	11:A:1294:U:H5''	2.45	0.47
7:6:53:LYS:HE2	7:6:54:ILE:CG1	2.44	0.47
11:A:2711:A:OP1	11:A:2712(A):A:P	2.73	0.47
28:U:88:ILE:HG23	28:U:90:VAL:HG23	1.96	0.47
23:P:96:THR:CG2	23:P:126:VAL:HB	2.45	0.47
11:A:674:G:H1'	16:F:74:ARG:HD3	1.94	0.47
4:3:15:TYR:CD2	4:3:19:GLN:NE2	2.82	0.47
11:A:78:A:C2	11:A:109:G:C6	3.02	0.47
11:A:856:C:H2'	11:A:857:C:C6	2.49	0.47
11:A:903:C:O2'	11:A:904:C:H5'	2.14	0.47
11:A:1786:A:H2	11:A:2606:C:H1'	1.78	0.47
2:1:52:ARG:HH11	2:1:57:GLU:HB2	1.78	0.47
11:A:1412:A:O2'	11:A:1413:G:H5'	2.14	0.47
14:D:152:GLY:O	14:D:154:LYS:HG3	2.13	0.47
11:A:2746:U:H5'	18:H:139:GLN:HA	1.95	0.47
11:A:660:G:H5'	16:F:99:TYR:CE2	2.49	0.47
11:A:291:C:H2'	11:A:292:C:C6	2.48	0.47
11:A:1914:C:O2	11:A:1914:C:O4'	2.32	0.47
11:A:2735:G:H2'	11:A:2736:G:H8	1.80	0.47
19:J:72:UNK:O	19:J:74:UNK:N	2.47	0.47
24:Q:120:ILE:O	24:Q:121:ALA:C	2.52	0.47
14:D:33:LEU:O	14:D:34:VAL:C	2.52	0.47
32:Y:85:VAL:O	32:Y:86:ARG:CB	2.62	0.47
18:H:83:TYR:O	18:H:84:SER:O	2.31	0.47
11:A:1946:U:H2'	11:A:1947:C:C6	2.48	0.47
6:5:47:PRO:C	6:5:49:CYS:H	2.17	0.47
7:6:37:ARG:O	7:6:48:VAL:O	2.32	0.47
22:O:14:THR:HG21	22:O:86:ILE:CD1	2.34	0.47
33:Z:153:SER:H	33:Z:167:PRO:HB2	1.79	0.47
29:V:20:LEU:HB3	29:V:21:ARG:HD3	1.97	0.47
31:X:10:ALA:O	31:X:28:PHE:CB	2.62	0.47
21:N:22:THR:HG1	21:N:25:ARG:HB2	1.80	0.47
17:G:51:ARG:CZ	17:G:52:ILE:HD13	2.44	0.47
11:A:823:G:H2'	11:A:824:A:C8	2.50	0.47
21:N:5:VAL:HG12	21:N:7:LYS:HG3	1.97	0.47
25:R:45:ARG:O	25:R:46:GLY:C	2.52	0.47
11:A:1151:G:H4'	28:U:81:HIS:CG	2.49	0.47
11:A:16:G:H2'	11:A:17:G:H8	1.80	0.47
11:A:1688:U:O2	11:A:1700:A:H5''	2.15	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:F:17:ARG:HH11	16:F:17:ARG:HG3	1.79	0.47
11:A:793:A:OP2	11:A:2072:G:H5'	2.14	0.47
28:U:14:HIS:CD2	28:U:36:ARG:NH2	2.83	0.47
5:4:25:TYR:O	5:4:26:SER:HB3	2.13	0.47
29:V:60:GLU:O	29:V:62:LEU:HD22	2.15	0.47
31:X:72:LYS:N	31:X:72:LYS:HD2	2.29	0.47
11:A:2603:G:H2'	11:A:2604:U:C5'	2.25	0.47
17:G:87:PRO:O	17:G:88:ILE:CG1	2.61	0.47
32:Y:96:ILE:O	32:Y:96:ILE:HG13	2.14	0.47
33:Z:97:GLU:HA	33:Z:126:VAL:O	2.14	0.47
15:E:76:ARG:O	15:E:77:ILE:C	2.53	0.47
23:P:91:PHE:N	23:P:91:PHE:CD1	2.82	0.47
33:Z:6:LYS:HG3	33:Z:60:GLU:HB2	1.97	0.47
11:A:1054:A:O2'	11:A:1055:G:H5'	2.14	0.47
21:N:129:PRO:O	21:N:130:HIS:CB	2.60	0.47
11:A:2069:G:O2'	11:A:2070:G:H5'	2.14	0.47
11:A:1019:U:C2'	11:A:1021:A:C2	2.97	0.47
11:A:426:C:O2'	11:A:427:U:H5'	2.14	0.47
11:A:814:C:H2'	11:A:815:C:H6	1.80	0.47
11:A:848:G:C4	11:A:933:A:C8	2.99	0.47
28:U:102:GLU:HB3	28:U:105:VAL:CG2	2.45	0.47
24:Q:27:VAL:HG12	24:Q:28:ALA:N	2.28	0.47
13:C:210:ARG:NH1	13:C:210:ARG:CG	2.78	0.47
14:D:6:PHE:N	14:D:6:PHE:HD1	2.12	0.47
11:A:1316:U:H2'	11:A:1317:A:C8	2.49	0.47
8:7:5:TRP:CZ3	11:A:464:U:H4'	2.49	0.47
2:1:23:LYS:CE	2:1:28:GLY:HA3	2.45	0.47
11:A:137:C:O2	11:A:137:C:H2'	2.15	0.47
11:A:2506:U:C6	11:A:2506:U:H5'	2.49	0.47
14:D:30:GLU:HA	14:D:83:GLU:OE1	2.15	0.47
31:X:36:LYS:HE2	31:X:54:VAL:O	2.14	0.47
11:A:925:C:H2'	11:A:926:A:C5'	2.21	0.47
9:8:11:LYS:HG3	9:8:60:LEU:CD2	2.44	0.47
32:Y:28:LYS:HD2	32:Y:37:VAL:HG21	1.96	0.47
11:A:2190:G:C2	11:A:2191:G:H1'	2.49	0.47
18:H:153:LYS:H	18:H:153:LYS:CD	2.08	0.47
11:A:2101:G:H3'	11:A:2102:U:H5''	1.97	0.47
11:A:1189:A:H2'	11:A:1190:G:O4'	2.15	0.47
22:O:86:ILE:C	22:O:87:ILE:HD13	2.34	0.47
15:E:68:ALA:C	15:E:70:ALA:H	2.17	0.47
15:E:48:GLN:HA	15:E:80:GLU:HA	1.96	0.47
29:V:91:TYR:N	29:V:91:TYR:CD1	2.83	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:2580:U:H4'	15:E:130:GLY:CA	2.44	0.47
11:A:2110:G:C2	11:A:2178:C:H5	2.33	0.47
11:A:29:U:C1'	28:U:11:ARG:HH22	2.28	0.47
16:F:89:VAL:HG12	16:F:90:PHE:H	1.79	0.47
11:A:2572:A:C4	15:E:144:ARG:NH1	2.82	0.47
11:A:2053:G:OP1	15:E:144:ARG:HG2	2.15	0.47
2:1:29:GLY:O	2:1:30:VAL:CG2	2.61	0.47
11:A:1495:A:N3	11:A:1496:A:H2	2.13	0.47
12:B:56:G:H4'	12:B:57:A:H8	1.80	0.47
28:U:64:ARG:HH11	28:U:64:ARG:HG2	1.80	0.47
11:A:2502:G:H5''	11:A:2503:A:C5'	2.45	0.47
24:Q:81:VAL:HG12	24:Q:82:ARG:O	2.15	0.47
12:B:81:G:H2'	12:B:82:G:H5'	1.97	0.47
24:Q:67:ARG:NH1	24:Q:102:VAL:HB	2.30	0.47
11:A:1270:C:H5''	11:A:1271:G:C5'	2.45	0.47
11:A:411:G:OP2	11:A:2406:U:O2'	2.32	0.47
29:V:81:TYR:C	29:V:82:ARG:HD2	2.35	0.47
11:A:30:G:O2'	11:A:31:C:H5'	2.15	0.47
11:A:31:C:H2'	11:A:32:C:O4'	2.15	0.47
11:A:1839:G:C8	11:A:1839:G:H5'	2.48	0.47
22:O:103:ALA:HB1	22:O:105:GLU:OE1	2.15	0.47
11:A:1386:C:H2'	11:A:1387:C:H6	1.80	0.47
11:A:1385:G:H4'	11:A:1386:C:OP1	2.14	0.47
11:A:1767:C:O2'	11:A:1768:U:H5'	2.15	0.47
11:A:1506:C:O2	11:A:1506:C:H2'	2.13	0.47
11:A:171:G:O2'	11:A:172:C:H5'	2.14	0.47
11:A:2540:C:H2'	11:A:2541:A:O4'	2.14	0.47
2:1:63:ALA:O	2:1:64:ALA:O	2.33	0.47
14:D:227:ASN:HB3	14:D:228:PRO:HD2	1.97	0.47
23:P:56:SER:O	23:P:57:THR:C	2.52	0.47
11:A:2762:G:H2'	11:A:2763:G:O4'	2.15	0.47
16:F:176:LEU:O	16:F:177:ALA:HB2	2.15	0.47
23:P:147:LEU:CG	23:P:148:LEU:H	2.03	0.47
30:W:6:ILE:HG22	30:W:8:ARG:HD2	1.95	0.47
16:F:126:VAL:HG21	16:F:129:PHE:CZ	2.49	0.47
33:Z:153:SER:HB2	33:Z:167:PRO:HB2	1.93	0.47
15:E:69:LYS:C	15:E:71:GLY:H	2.16	0.47
11:A:652:C:HO2'	11:A:653:A:P	2.37	0.47
11:A:1557:C:H5''	11:A:1558:A:OP2	2.15	0.47
32:Y:2:ARG:C	32:Y:4:LYS:H	2.17	0.47
11:A:1222:C:H2'	11:A:1223:G:C5'	2.45	0.47
27:T:96:ARG:HB2	27:T:96:ARG:CZ	2.44	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:1:90:ILE:O	2:1:94:LEU:CD1	2.60	0.47
15:E:176:ILE:CG2	15:E:178:GLU:HB3	2.44	0.47
11:A:2672:G:C2'	11:A:2673:G:H5''	2.45	0.47
14:D:136:ILE:HB	14:D:165:ILE:CD1	2.45	0.47
14:D:95:LEU:H	14:D:95:LEU:HD12	1.80	0.47
11:A:2286:A:H4'	11:A:2287:A:O4'	2.15	0.47
25:R:87:TYR:O	25:R:90:ARG:N	2.48	0.47
11:A:588:U:H2'	11:A:589:C:C6	2.50	0.47
11:A:753:C:O2'	11:A:754:C:H5'	2.15	0.47
11:A:142:A:H5''	11:A:142(A):C:H5	1.80	0.47
11:A:2807:G:H3'	11:A:2808:U:H5''	1.97	0.47
11:A:1782:C:H1'	11:A:2609:U:C5'	2.44	0.47
11:A:453:C:H4'	11:A:472:A:N6	2.29	0.47
27:T:134:GLU:O	27:T:135:ALA:HB3	2.14	0.47
11:A:807:U:O2'	11:A:808:G:H5'	2.15	0.47
11:A:603:A:N6	11:A:626:U:H4'	2.29	0.47
11:A:955:C:OP1	24:Q:87:LYS:HE2	2.15	0.47
15:E:147:PRO:HB2	15:E:149:ARG:HG2	1.96	0.47
6:5:3:LYS:CD	6:5:3:LYS:N	2.78	0.47
16:F:200:GLU:O	16:F:204:ASN:ND2	2.48	0.47
33:Z:166:SER:N	33:Z:167:PRO:HA	2.29	0.47
28:U:61:TRP:CD2	28:U:94:ASN:HA	2.50	0.47
11:A:1054:A:H2'	11:A:1054:A:N3	2.29	0.47
21:N:119:ARG:HB3	21:N:119:ARG:HH11	1.77	0.47
11:A:1221:C:H2'	11:A:1221(A):C:C6	2.49	0.47
11:A:1141:U:H6	21:N:63:THR:HG21	1.80	0.47
23:P:77:ARG:HH11	23:P:77:ARG:HG2	1.80	0.47
33:Z:144:LEU:HD21	33:Z:149:SER:HA	1.96	0.47
11:A:774:A:H2	11:A:787:U:O2'	1.97	0.47
8:7:19:ARG:HG2	8:7:19:ARG:NH1	2.30	0.47
24:Q:1:MET:CE	24:Q:44:ALA:HB1	2.44	0.47
16:F:63:LYS:HA	16:F:76:GLY:O	2.14	0.47
21:N:96:GLU:O	21:N:100:GLU:HG3	2.15	0.47
33:Z:67:LEU:HD12	33:Z:67:LEU:N	2.30	0.47
11:A:1777:U:O2'	11:A:1778:U:H5'	2.15	0.47
7:6:41:PRO:HD2	7:6:46:HIS:N	2.12	0.47
17:G:47:LYS:HE2	17:G:80:PHE:HE1	1.79	0.47
3:2:69:ARG:HH22	11:A:111:A:H4'	1.80	0.47
27:T:86:ILE:HG12	27:T:87:ASP:N	2.30	0.47
16:F:133:ASN:O	16:F:135:LYS:N	2.48	0.47
9:8:59:LYS:HB2	9:8:59:LYS:HZ3	1.72	0.47
17:G:16:ARG:NH1	17:G:16:ARG:HG3	2.30	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:P:16:ARG:CZ	23:P:16:ARG:HB2	2.45	0.47
11:A:2579:C:O2'	15:E:131:ALA:CB	2.63	0.47
11:A:2713:A:OP1	25:R:14:SER:HB3	2.15	0.47
13:C:114:VAL:HG12	13:C:144:THR:CA	2.45	0.47
33:Z:8:TYR:O	33:Z:9:TYR:C	2.52	0.47
11:A:139(A):G:H3'	11:A:140:G:C8	2.50	0.47
11:A:2464:C:O2'	11:A:2465:C:P	2.73	0.47
16:F:164:ARG:HG2	16:F:164:ARG:NH1	2.29	0.47
11:A:2121:G:N2	11:A:2176:A:C2	2.79	0.47
13:C:61:THR:HG22	13:C:162:GLU:HA	1.96	0.47
11:A:1526:G:O2'	11:A:1527:G:H5'	2.15	0.47
11:A:850:C:O2'	11:A:851:U:H5'	2.16	0.47
11:A:536:A:H2'	11:A:537:C:C6	2.50	0.47
6:5:3:LYS:O	6:5:5:PRO:HD2	2.13	0.46
3:2:36:ARG:HA	3:2:39:ALA:HB3	1.96	0.46
32:Y:15:VAL:HG22	32:Y:72:VAL:HG12	1.97	0.46
11:A:1960:A:C5'	11:A:1960:A:C8	2.95	0.46
27:T:33:LYS:HE2	27:T:43:GLN:HE21	1.79	0.46
14:D:267:SER:HA	14:D:270:ILE:CG1	2.42	0.46
23:P:84:ASN:HA	23:P:116:GLY:HA3	1.96	0.46
11:A:2724:C:P	25:R:2:ARG:HH21	2.38	0.46
15:E:3:GLY:HA3	15:E:81:ILE:CG2	2.45	0.46
13:C:76:ALA:CB	13:C:94:VAL:HG13	2.41	0.46
17:G:52:ILE:HB	17:G:54:GLU:CG	2.44	0.46
32:Y:3:VAL:O	32:Y:3:VAL:HG12	2.15	0.46
11:A:483:A:C2	11:A:484:C:H1'	2.49	0.46
11:A:1453:U:O4'	25:R:63:ARG:HD3	2.15	0.46
28:U:45:TYR:O	28:U:49:HIS:CG	2.68	0.46
8:7:43:THR:HG22	8:7:44:PRO:O	2.15	0.46
11:A:2170:A:OP1	13:C:134:ARG:NH1	2.48	0.46
11:A:383:U:H2'	11:A:385:C:H5	1.80	0.46
2:1:39:LYS:O	2:1:40:ARG:HG2	2.15	0.46
11:A:1432:C:H2'	11:A:1433:U:O4'	2.15	0.46
17:G:175:LEU:O	17:G:176:LEU:HG	2.15	0.46
31:X:35:THR:CG2	31:X:36:LYS:N	2.78	0.46
9:8:11:LYS:HG3	9:8:60:LEU:HD22	1.96	0.46
11:A:2602:A:H4'	11:A:2603:G:C5'	2.45	0.46
3:2:56:GLN:O	3:2:60:LEU:HG	2.14	0.46
23:P:7:ARG:HB3	23:P:8:PRO:CD	2.44	0.46
26:S:35:ILE:HG12	26:S:35:ILE:O	2.15	0.46
11:A:2579:C:C1'	15:E:134:ILE:HD13	2.45	0.46
18:H:50:VAL:HG12	18:H:51:ARG:N	2.30	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:1265:A:N1	11:A:2013:A:H5''	2.31	0.46
4:3:44:ARG:O	4:3:47:VAL:HB	2.15	0.46
11:A:1827:C:OP2	14:D:222:ARG:NH1	2.46	0.46
11:A:1652:A:C2	11:A:2006:C:N3	2.83	0.46
25:R:10:LEU:O	25:R:11:ASN:HB2	2.15	0.46
2:1:84:GLY:O	2:1:86:SER:N	2.47	0.46
21:N:9:VAL:HG12	21:N:10:GLU:H	1.80	0.46
27:T:106:SER:O	27:T:107:ASP:CG	2.54	0.46
11:A:2223:G:H2'	11:A:2224:G:H5'	1.97	0.46
9:8:30:ARG:NE	9:8:30:ARG:HA	2.27	0.46
11:A:756:C:C2'	11:A:757:U:H5'	2.45	0.46
11:A:2653:U:H3'	11:A:2654:A:C8	2.49	0.46
21:N:120:LEU:C	21:N:121:LYS:HD2	2.36	0.46
11:A:1287:A:OP1	25:R:104:ARG:HG2	2.15	0.46
12:B:76:G:OP1	33:Z:15:PRO:HB3	2.14	0.46
14:D:80:ALA:HB2	14:D:96:HIS:CD2	2.50	0.46
17:G:125:PHE:CD2	17:G:131:TYR:HD1	2.33	0.46
16:F:157:VAL:HG21	16:F:194:MET:HG2	1.98	0.46
32:Y:73:ARG:NH2	32:Y:82:PRO:HA	2.30	0.46
11:A:1543:C:C3'	11:A:1544:A:C5'	2.90	0.46
14:D:183:ARG:HD2	14:D:184:LYS:H	1.80	0.46
11:A:2157:G:H3'	11:A:2157:G:H8	1.80	0.46
25:R:26:LYS:O	25:R:30:THR:HG22	2.14	0.46
18:H:46:GLU:O	18:H:47:GLU:C	2.54	0.46
11:A:363(E):U:H2'	11:A:363(F):A:O4'	2.14	0.46
2:1:37:ILE:O	2:1:37:ILE:HG12	2.16	0.46
11:A:139(A):G:N2	31:X:44:GLU:OE1	2.40	0.46
11:A:990:A:N6	11:A:1186:G:H1'	2.31	0.46
32:Y:46:LYS:CG	32:Y:47:LYS:H	2.28	0.46
11:A:1314:C:OP1	11:A:1332:G:OP1	2.34	0.46
11:A:848:G:H2'	11:A:849:A:C8	2.51	0.46
11:A:845:G:O2'	11:A:846:C:H5	1.97	0.46
11:A:2289:G:H1'	11:A:2346:A:H2	1.80	0.46
11:A:1327:C:H2'	11:A:1328:G:O4'	2.15	0.46
18:H:149:ARG:HA	18:H:162:ILE:CD1	2.44	0.46
18:H:107:VAL:O	18:H:107:VAL:HG23	2.15	0.46
16:F:10:PRO:HG2	16:F:13:SER:OG	2.14	0.46
11:A:1138:G:C4	11:A:1139:G:H1'	2.50	0.46
17:G:152:LEU:H	17:G:152:LEU:HD23	1.80	0.46
29:V:3:ALA:HB3	29:V:14:VAL:HG23	1.97	0.46
11:A:1357:U:H2'	11:A:1358:G:O4'	2.15	0.46
30:W:70:TYR:OH	30:W:72:LYS:HG2	2.15	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:C:159:GLY:O	13:C:160:ARG:O	2.32	0.46
11:A:2033:A:O2'	11:A:2034:U:P	2.74	0.46
17:G:104:GLU:C	17:G:106:LEU:H	2.18	0.46
17:G:56:ALA:O	17:G:59:GLU:HG2	2.15	0.46
7:6:15:GLU:OE1	7:6:18:ARG:CD	2.64	0.46
11:A:336:C:H4'	32:Y:7:VAL:CG2	2.45	0.46
32:Y:98:VAL:HG12	32:Y:98:VAL:O	2.14	0.46
11:A:1747(A):G:C3'	11:A:1748:G:H5''	2.45	0.46
15:E:103:ASP:OD2	15:E:201:THR:HA	2.16	0.46
29:V:28:GLU:O	29:V:61:VAL:HG21	2.16	0.46
32:Y:31:LEU:HD23	32:Y:36:ALA:C	2.36	0.46
32:Y:36:ALA:HB2	32:Y:68:HIS:HA	1.96	0.46
27:T:10:VAL:C	27:T:12:SER:H	2.18	0.46
12:B:60:C:O2'	12:B:61:G:H5'	2.15	0.46
24:Q:64:ILE:CG2	24:Q:65:PHE:N	2.78	0.46
11:A:2766:G:N3	11:A:2766:G:H2'	2.30	0.46
11:A:370:G:C6	11:A:424:G:N7	2.84	0.46
2:1:77:ALA:C	2:1:79:GLY:H	2.19	0.46
11:A:720:C:H2'	11:A:721:C:H6	1.80	0.46
16:F:31:HIS:ND1	23:P:13:ASN:HB2	2.30	0.46
11:A:1668:A:H1'	11:A:1670:C:C5	2.50	0.46
17:G:39:ILE:CD1	17:G:60:LEU:HD11	2.44	0.46
7:6:5:VAL:HB	7:6:8:LYS:CB	2.45	0.46
27:T:28:VAL:HG13	27:T:46:GLU:CA	2.35	0.46
21:N:23:LEU:HD21	21:N:102:ALA:CB	2.45	0.46
26:S:29:PHE:C	26:S:29:PHE:CD1	2.88	0.46
11:A:1449:A:N3	11:A:1529:G:H1'	2.30	0.46
11:A:1528:A:N1	11:A:1542:A:H2	2.14	0.46
21:N:71:ILE:HG21	21:N:84:LYS:HB3	1.98	0.46
15:E:144:ARG:HB3	15:E:145:LYS:H	1.54	0.46
33:Z:110:GLY:HA2	33:Z:146:ILE:HG22	1.98	0.46
11:A:1495:A:C4	11:A:1496:A:H2	2.33	0.46
15:E:9:VAL:CG1	15:E:25:VAL:O	2.63	0.46
11:A:478:A:C6	11:A:480:A:C6	3.04	0.46
27:T:107:ASP:H	27:T:110:ILE:CG1	2.28	0.46
12:B:80:U:O2'	12:B:81:G:H5''	2.16	0.46
11:A:2688:U:H1'	11:A:2721:A:H62	1.81	0.46
11:A:2720:U:C2	11:A:2721:A:C8	3.04	0.46
33:Z:133:ILE:O	33:Z:133:ILE:HG22	2.16	0.46
13:C:84:LYS:N	13:C:84:LYS:HD2	2.30	0.46
16:F:167:ALA:HB1	16:F:173:VAL:CG1	2.46	0.46
11:A:2544:G:O5'	11:A:2544:G:H8	1.98	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:2807:G:C3'	11:A:2808:U:H5''	2.45	0.46
11:A:2886:G:H2'	11:A:2887:U:C6	2.50	0.46
21:N:15:LEU:HD13	21:N:16:ILE:N	2.31	0.46
11:A:1668:A:N3	11:A:1670:C:C4	2.84	0.46
11:A:2533:A:H2'	11:A:2534:A:O4'	2.15	0.46
11:A:57:C:H2'	11:A:58:G:O4'	2.14	0.46
32:Y:28:LYS:HB3	32:Y:37:VAL:HB	1.96	0.46
23:P:24:GLY:HA2	23:P:33:ARG:NH1	2.28	0.46
17:G:11:TYR:CG	17:G:12:TYR:N	2.83	0.46
24:Q:141:GLN:HB3	33:Z:99:TYR:CD1	2.50	0.46
11:A:1058:G:C3'	11:A:1059:G:H5''	2.46	0.46
28:U:90:VAL:CG1	28:U:91:ASP:H	2.23	0.46
16:F:100:THR:O	16:F:100:THR:HG22	2.16	0.46
18:H:88:LEU:HD13	18:H:130:ARG:HG2	1.96	0.46
18:H:20:ALA:CB	18:H:21:PRO:CD	2.92	0.46
14:D:112:GLN:O	14:D:115:GLN:HB2	2.16	0.46
14:D:142:VAL:HG21	14:D:191:ALA:HB1	1.98	0.46
6:5:52:TYR:CD1	6:5:52:TYR:O	2.68	0.46
15:E:199:ARG:HH11	15:E:199:ARG:CB	2.29	0.46
11:A:2406:U:C2	23:P:72:PRO:HB2	2.51	0.46
15:E:47:VAL:HG21	15:E:86:PRO:HD2	1.97	0.46
30:W:10:VAL:HG23	30:W:101:SER:O	2.15	0.46
11:A:1142:U:H6	11:A:1142:U:O5'	1.99	0.46
11:A:2750:A:OP2	18:H:62:LYS:HE2	2.16	0.46
21:N:27:ALA:HB3	21:N:106:MET:HE1	1.97	0.46
9:8:13:ARG:HA	23:P:63:PRO:HA	1.98	0.46
11:A:2392:A:H5'	11:A:2392:A:N3	2.30	0.46
32:Y:73:ARG:O	32:Y:74:PRO:O	2.33	0.46
18:H:157:TYR:O	18:H:158:HIS:CG	2.68	0.46
11:A:271(L):U:H5''	11:A:271(M):G:C5'	2.32	0.46
15:E:40:GLU:O	15:E:41:LYS:HB3	2.16	0.46
1:0:70:GLN:NE2	1:0:80:HIS:NE2	2.64	0.46
11:A:638:G:C6	11:A:639:U:N3	2.84	0.46
29:V:47:VAL:O	29:V:49:THR:O	2.34	0.46
9:8:14:VAL:CG2	9:8:22:VAL:HG13	2.45	0.46
11:A:2801(A):A:H5'	11:A:2802:G:H8	1.78	0.46
21:N:34:LEU:HD11	21:N:116:LEU:HB3	1.97	0.46
33:Z:28:MET:O	33:Z:34:ASN:HA	2.15	0.46
10:9:27:CYS:HB3	10:9:32:HIS:HB2	1.97	0.46
27:T:92:GLY:O	27:T:93:ARG:C	2.54	0.46
11:A:582:G:H2'	11:A:583:G:H8	1.81	0.46
33:Z:150:LEU:HD21	33:Z:172:ALA:HB3	1.97	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:T:3:ARG:HH11	27:T:6:LEU:HD13	1.80	0.46
9:8:20:GLY:O	9:8:57:ARG:HD3	2.16	0.46
11:A:535:C:O2'	11:A:536:A:H5'	2.15	0.46
13:C:130:ILE:O	13:C:130:ILE:HG22	2.14	0.46
11:A:1064:C:C3'	11:A:1065:U:C5'	2.94	0.46
11:A:189:G:H2'	11:A:205:G:N2	2.30	0.46
11:A:39:C:O2'	11:A:40:C:H5'	2.14	0.46
14:D:27:THR:HG21	14:D:81:ALA:HB3	1.97	0.46
31:X:27:THR:HG22	31:X:80:ILE:CB	2.46	0.46
7:6:45:LYS:HZ2	7:6:45:LYS:HB3	1.80	0.46
11:A:2312:U:H5'	17:G:73:ALA:HA	1.98	0.46
27:T:28:VAL:CG1	27:T:88:ILE:HD11	2.46	0.46
6:5:51:TYR:N	6:5:56:LYS:NZ	2.64	0.46
11:A:1464:C:C2	11:A:1465:G:C8	3.04	0.46
11:A:812:C:H5'	23:P:25:SER:HA	1.97	0.46
22:O:87:ILE:HG21	22:O:91:LEU:HA	1.96	0.46
15:E:167:VAL:HG11	15:E:188:VAL:HA	1.98	0.46
11:A:649:G:H2'	11:A:650:C:C6	2.51	0.46
23:P:84:ASN:HA	23:P:116:GLY:CA	2.45	0.46
15:E:96:PHE:O	15:E:175:VAL:HG11	2.16	0.46
23:P:95:VAL:O	23:P:125:VAL:HA	2.16	0.46
27:T:23:ARG:HA	27:T:52:ILE:HD11	1.98	0.46
11:A:1803:A:O3'	14:D:259:THR:HG22	2.16	0.46
16:F:84:VAL:C	16:F:86:GLY:H	2.19	0.46
11:A:192:C:O2'	11:A:802:A:N3	2.44	0.46
16:F:167:ALA:O	16:F:168:ARG:C	2.54	0.46
28:U:76:TYR:CD1	28:U:76:TYR:C	2.88	0.46
28:U:66:ASN:ND2	28:U:76:TYR:N	2.64	0.46
11:A:2171:A:O2'	11:A:2172:U:C5	2.67	0.46
31:X:14:SER:H	31:X:17:ALA:HB3	1.80	0.46
9:8:62:LEU:HG	9:8:62:LEU:H	1.55	0.46
1:0:10:THR:CG2	1:0:11:ARG:N	2.79	0.46
30:W:4:LYS:CG	30:W:5:ALA:N	2.77	0.46
11:A:321:G:OP2	16:F:135:LYS:HD3	2.16	0.46
11:A:339:U:O2'	11:A:340:A:H5'	2.15	0.46
6:5:42:PRO:HB2	11:A:2815:C:O2'	2.16	0.46
15:E:65:GLY:HA2	15:E:70:ALA:CB	2.45	0.46
15:E:114:ALA:HB3	15:E:160:TYR:HB3	1.98	0.46
9:8:50:LEU:C	9:8:53:PRO:CD	2.84	0.46
11:A:442:G:O4'	16:F:46:ARG:HD3	2.15	0.46
11:A:1009:A:OP2	21:N:37:LYS:NZ	2.38	0.46
15:E:117:MET:HA	15:E:122:PHE:N	2.29	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:1208:C:C2'	11:A:1208:C:O2	2.64	0.46
11:A:2219:G:C2'	11:A:2220:G:H5'	2.46	0.46
24:Q:1:MET:HE2	24:Q:44:ALA:O	2.15	0.46
11:A:1010:A:H1'	11:A:1153:C:C1'	2.46	0.46
14:D:276:LYS:HE2	14:D:276:LYS:CA	2.46	0.46
22:O:97:ARG:HH21	22:O:99:PHE:HE1	1.64	0.46
14:D:98:VAL:O	14:D:98:VAL:HG12	2.16	0.46
30:W:75:TYR:CD1	30:W:75:TYR:N	2.84	0.46
11:A:1983:C:O2'	11:A:1984:G:H5'	2.16	0.46
11:A:1469:A:O2'	11:A:1470:G:H5'	2.16	0.46
11:A:1600:C:C2'	11:A:1601:G:H5'	2.45	0.46
6:5:4:HIS:C	11:A:2056:G:N2	2.68	0.46
7:6:19:ARG:CG	7:6:20:ASN:N	2.53	0.46
24:Q:60:ARG:CB	24:Q:60:ARG:HH11	2.10	0.46
11:A:2416:C:H2'	11:A:2417:C:C6	2.51	0.46
11:A:363(F):A:O2'	11:A:364:C:C5	2.69	0.46
11:A:481:G:H1'	11:A:506:G:N2	2.30	0.46
12:B:96:U:H2'	12:B:97:G:C8	2.50	0.46
11:A:64:A:H5'	31:X:64:LYS:HE3	1.98	0.46
31:X:64:LYS:HD3	31:X:73:ARG:NH2	2.31	0.46
10:9:17:ILE:HG22	10:9:18:ARG:H	1.81	0.46
11:A:2176:A:H4'	13:C:213:TYR:CD1	2.51	0.46
11:A:878:A:H2'	11:A:879:G:O4'	2.16	0.46
11:A:2537:U:H2'	11:A:2538:C:C6	2.50	0.46
6:5:22:HIS:HE1	11:A:2624:G:H1'	1.81	0.46
11:A:2886:G:H2'	11:A:2887:U:H6	1.80	0.46
11:A:135:G:O2'	11:A:136:G:H5'	2.15	0.46
11:A:336:C:H4'	32:Y:7:VAL:HG21	1.96	0.45
27:T:32:TYR:HD2	27:T:81:PRO:HB2	1.78	0.45
11:A:1023:U:H2'	11:A:1024:G:H5'	1.97	0.45
11:A:1528(A):A:N6	11:A:1541:G:C2	2.84	0.45
17:G:10:LYS:O	17:G:15:VAL:HG23	2.16	0.45
15:E:16:ARG:NH1	15:E:171:GLU:OE1	2.49	0.45
26:S:106:ARG:HH11	26:S:108:GLY:H	1.59	0.45
29:V:29:PRO:HA	29:V:61:VAL:O	2.16	0.45
26:S:83:LYS:CG	26:S:105:ALA:HB3	2.42	0.45
17:G:28:VAL:HG12	17:G:28:VAL:O	2.16	0.45
22:O:69:ILE:HG13	22:O:77:ILE:O	2.15	0.45
14:D:95:LEU:HD12	14:D:103:ARG:O	2.16	0.45
11:A:2121:G:H22	11:A:2176:A:H2	1.61	0.45
11:A:2649:U:H2'	11:A:2650:U:C6	2.51	0.45
11:A:2583:G:H2'	11:A:2584:U:O2	2.16	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:1526:G:H2'	11:A:1527:G:O4'	2.17	0.45
11:A:445:C:O2'	11:A:446:G:H5'	2.16	0.45
11:A:1996:C:H5	22:O:32:TYR:OH	1.99	0.45
16:F:68:LYS:HB3	16:F:69:HIS:CD2	2.50	0.45
20:K:97:UNK:CB	20:K:134:UNK:HA	2.46	0.45
5:4:7:PRO:O	5:4:8:LYS:CB	2.64	0.45
17:G:63:ILE:HG22	17:G:143:GLU:CB	2.40	0.45
31:X:12:VAL:HA	31:X:27:THR:O	2.15	0.45
32:Y:95:LYS:HG3	32:Y:99:CYS:O	2.17	0.45
6:5:48:GLU:O	6:5:49:CYS:CB	2.64	0.45
15:E:52:LEU:CD1	27:T:1:MET:HG2	2.36	0.45
7:6:52:VAL:O	7:6:53:LYS:O	2.34	0.45
23:P:83:VAL:HG23	23:P:105:LEU:CD2	2.46	0.45
27:T:101:PHE:HE2	27:T:113:LYS:HG2	1.82	0.45
21:N:63:THR:O	21:N:64:GLY:O	2.34	0.45
11:A:271(F):C:O2'	11:A:271(G):C:H5'	2.16	0.45
11:A:481:G:P	32:Y:47:LYS:HD3	2.56	0.45
27:T:126:ALA:O	27:T:128:GLU:HG3	2.17	0.45
11:A:1272:A:C2	11:A:1618:A:C2	3.05	0.45
11:A:1259:G:O2'	11:A:1260:G:H5'	2.16	0.45
11:A:2584:U:O4'	11:A:2584:U:O2	2.34	0.45
22:O:105:GLU:O	22:O:109:LYS:HG2	2.16	0.45
11:A:1493:C:O2	11:A:1493:C:H2'	2.16	0.45
11:A:2032:G:OP2	11:A:2454:G:O2'	2.30	0.45
9:8:18:ALA:HB2	11:A:628:G:H5''	1.98	0.45
21:N:99:LEU:O	21:N:102:ALA:HB3	2.16	0.45
11:A:2298:A:H2'	11:A:2299:G:O4'	2.17	0.45
16:F:142:TRP:C	16:F:142:TRP:CE3	2.89	0.45
9:8:23:VAL:HA	9:8:47:LYS:O	2.15	0.45
33:Z:100:VAL:O	33:Z:124:ILE:HG12	2.16	0.45
12:B:106:G:C5'	33:Z:31:ARG:HG2	2.44	0.45
29:V:17:GLY:O	29:V:18:LEU:HD13	2.15	0.45
13:C:118:ASP:CG	13:C:119:VAL:H	2.20	0.45
11:A:860:U:O2	11:A:860:U:O4'	2.31	0.45
11:A:1479:G:H5'	11:A:1558:A:C2	2.51	0.45
27:T:117:ASP:OD2	27:T:120:ARG:HG3	2.17	0.45
11:A:887:A:H2'	11:A:887:A:N3	2.30	0.45
33:Z:27:VAL:HG22	33:Z:36:LYS:HA	1.99	0.45
30:W:17:VAL:O	30:W:19:LEU:N	2.50	0.45
11:A:2657:A:H5'	11:A:2658:C:OP2	2.16	0.45
25:R:21:TYR:HB3	25:R:47:PHE:CD2	2.51	0.45
2:1:67:ILE:N	2:1:68:PRO:CD	2.79	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:1331:A:C2'	11:A:1332:G:H5''	2.45	0.45
11:A:958:U:H5''	24:Q:14:ARG:HD2	1.99	0.45
11:A:7:G:H2'	11:A:8:A:C8	2.51	0.45
11:A:1771:C:C1'	11:A:1786:A:H8	2.30	0.45
11:A:221:A:O2'	11:A:222:A:OP2	2.28	0.45
22:O:26:LYS:HB2	22:O:30:ALA:HB2	1.98	0.45
11:A:603:A:H1'	11:A:604:G:OP1	2.17	0.45
21:N:70:LYS:O	21:N:86:PRO:HA	2.16	0.45
9:8:6:THR:CB	9:8:11:LYS:HZ1	2.26	0.45
23:P:57:THR:OG1	23:P:58:THR:N	2.49	0.45
18:H:84:SER:O	18:H:85:LYS:HB3	2.16	0.45
27:T:30:VAL:CG2	27:T:84:GLN:HG3	2.47	0.45
11:A:1884:A:C3'	11:A:1885:A:H5''	2.46	0.45
1:0:41:ARG:O	1:0:57:PHE:CD2	2.69	0.45
18:H:55:PRO:HG2	18:H:61:HIS:HD2	1.80	0.45
21:N:29:LYS:C	21:N:31:ALA:N	2.70	0.45
11:A:257:A:H2'	11:A:258:G:H5'	1.99	0.45
11:A:2485:G:O2'	11:A:2486:G:H5'	2.16	0.45
11:A:2864:G:OP1	27:T:119:LYS:HD2	2.17	0.45
3:2:52:ASP:OD1	3:2:55:ARG:HD2	2.16	0.45
10:9:15:LYS:HB3	10:9:15:LYS:HZ2	1.79	0.45
24:Q:43:THR:HB	24:Q:45:GLN:HE21	1.81	0.45
11:A:2787:C:H1'	15:E:61:ARG:CD	2.47	0.45
16:F:171:PRO:C	16:F:173:VAL:H	2.19	0.45
16:F:81:PRO:C	16:F:82:ILE:O	2.52	0.45
8:7:21:ARG:NH1	8:7:21:ARG:HG2	2.32	0.45
28:U:47:TYR:O	28:U:51:LYS:HG2	2.16	0.45
11:A:986:C:O2'	11:A:987:G:H5'	2.17	0.45
11:A:271(U):G:H2'	11:A:271(V):G:H8	1.81	0.45
11:A:811:U:OP2	23:P:30:THR:HG23	2.16	0.45
33:Z:99:TYR:CD2	33:Z:123:ASP:HB3	2.46	0.45
15:E:89:ASP:CG	15:E:90:THR:H	2.19	0.45
11:A:1045:A:N3	11:A:1047:G:N2	2.65	0.45
29:V:16:PRO:O	29:V:96:ILE:HB	2.17	0.45
11:A:2580:U:H5'	15:E:131:ALA:CB	2.38	0.45
14:D:43:ARG:NH2	14:D:44:ASN:ND2	2.55	0.45
11:A:2030:A:H5''	11:A:2031:A:OP1	2.16	0.45
23:P:92:GLU:HA	23:P:123:LEU:HD11	1.97	0.45
16:F:185:ASP:CA	16:F:188:ARG:HG2	2.45	0.45
13:C:90:GLY:O	13:C:157:LYS:HE3	2.17	0.45
13:C:189:ILE:O	13:C:193:ILE:HG13	2.16	0.45
11:A:1286:A:N6	11:A:1289:C:C2	2.85	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:2:7:ARG:CD	3:2:7:ARG:N	2.80	0.45
11:A:2648:C:H2'	11:A:2649:U:C6	2.51	0.45
8:7:1:MET:HA	11:A:1620:G:O4'	2.15	0.45
11:A:1199:U:H2'	11:A:1200:C:C6	2.52	0.45
33:Z:57:ILE:N	33:Z:69:THR:O	2.50	0.45
29:V:62:LEU:CD2	29:V:62:LEU:H	2.29	0.45
7:6:15:GLU:OE2	7:6:18:ARG:CZ	2.63	0.45
32:Y:77:PRO:O	32:Y:78:ALA:CB	2.64	0.45
16:F:36:VAL:HA	16:F:101:LEU:HD21	1.98	0.45
9:8:15:LYS:HB3	9:8:46:ARG:HH22	1.81	0.45
31:X:8:ILE:HD11	31:X:43:VAL:CG2	2.47	0.45
15:E:73:GLU:OE2	15:E:74:PRO:HD2	2.17	0.45
26:S:59:LYS:CG	26:S:60:GLY:H	2.14	0.45
11:A:2179:C:H4'	11:A:2180:U:N3	2.30	0.45
26:S:16:ASN:O	26:S:18:ILE:N	2.50	0.45
15:E:137:HIS:HB3	15:E:138:PRO:HD2	1.97	0.45
8:7:22:MET:HE2	8:7:22:MET:HA	1.98	0.45
25:R:10:LEU:HB2	25:R:11:ASN:H	1.55	0.45
14:D:70:TRP:CZ3	14:D:146:GLU:OE2	2.69	0.45
15:E:61:ARG:HB3	15:E:62:PRO:CD	2.46	0.45
16:F:185:ASP:OD1	16:F:188:ARG:HD3	2.16	0.45
26:S:25:ARG:HD3	26:S:42:ASP:OD1	2.17	0.45
3:2:6:VAL:HG13	3:2:59:ARG:NH1	2.32	0.45
11:A:1288:U:O2'	11:A:1647:G:N2	2.49	0.45
18:H:94:TYR:O	18:H:95:ARG:HB3	2.17	0.45
11:A:360:G:H2'	11:A:361:G:H8	1.81	0.45
11:A:880:G:H22	11:A:897:C:N4	2.15	0.45
11:A:696:G:C2	11:A:767:U:O2	2.70	0.45
11:A:332:A:O2'	11:A:333:G:O5'	2.34	0.45
11:A:1120:G:H2'	11:A:1121:C:C6	2.51	0.45
22:O:10:VAL:HG21	22:O:16:ALA:O	2.17	0.45
31:X:71:GLY:C	31:X:72:LYS:HD2	2.37	0.45
7:6:44:ARG:O	7:6:46:HIS:ND1	2.49	0.45
11:A:2306:C:H5	11:A:2307:G:HO2'	1.62	0.45
17:G:131:TYR:HB3	17:G:159:VAL:HG11	1.96	0.45
11:A:271(K):U:H3'	11:A:271(L):U:H5'	1.97	0.45
16:F:37:VAL:HG11	23:P:7:ARG:HH12	1.81	0.45
15:E:52:LEU:HD23	15:E:75:VAL:HB	1.99	0.45
28:U:61:TRP:C	28:U:65:ILE:HD13	2.36	0.45
28:U:92:ARG:CB	29:V:11:GLN:NE2	2.80	0.45
11:A:2131:G:C1'	11:A:2133:G:H21	2.25	0.45
11:A:1131:G:OP1	21:N:80:GLY:N	2.45	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
29:V:28:GLU:O	29:V:61:VAL:CG2	2.64	0.45
11:A:1827:C:H2'	11:A:1828:G:C5'	2.47	0.45
21:N:41:ASP:O	21:N:42:TRP:C	2.54	0.45
13:C:80:GLY:O	13:C:83:ILE:HG13	2.17	0.45
11:A:1313:U:H3'	11:A:1314:C:H5'	1.98	0.45
27:T:57:PHE:HE1	27:T:79:HIS:HD1	1.64	0.45
2:1:58:ILE:HD11	2:1:91:LYS:HB2	1.99	0.45
13:C:30:LYS:NZ	13:C:30:LYS:HB3	2.31	0.45
28:U:59:ARG:HG2	28:U:59:ARG:HH11	1.80	0.45
30:W:20:VAL:CG2	30:W:47:VAL:HG21	2.47	0.45
13:C:74:VAL:CG1	13:C:75:LEU:N	2.80	0.45
11:A:185:U:C2	11:A:212:G:N2	2.85	0.45
11:A:2792:G:O2'	11:A:2793:G:H5'	2.16	0.45
13:C:57:ASN:HD22	13:C:57:ASN:HA	1.53	0.45
11:A:1997:G:O2'	11:A:1998:G:H5'	2.17	0.45
11:A:2545:G:N3	11:A:2565:A:H2	2.14	0.45
18:H:65:HIS:O	18:H:67:LEU:N	2.40	0.45
11:A:380:U:H2'	11:A:381:G:H8	1.81	0.45
14:D:147:LEU:HA	14:D:147:LEU:HD12	1.79	0.45
17:G:139:LEU:HA	17:G:144:ILE:CG1	2.20	0.45
7:6:26:ASN:HB3	7:6:27:LYS:H	1.46	0.45
11:A:2762:G:H2'	11:A:2763:G:C5'	2.46	0.45
11:A:2188:C:H2'	11:A:2189:U:C5	2.52	0.45
11:A:271(K):U:C3'	11:A:271(L):U:H5'	2.47	0.45
31:X:7:VAL:HB	31:X:8:ILE:HD12	1.99	0.45
24:Q:51:ARG:HH11	24:Q:51:ARG:HG3	1.81	0.45
11:A:742:G:H2'	11:A:743:G:H8	1.81	0.45
11:A:1131:G:O6	11:A:2040:C:H1'	2.17	0.45
33:Z:122:ARG:CG	33:Z:122:ARG:NH1	2.77	0.45
33:Z:10:ARG:CZ	33:Z:36:LYS:HB2	2.46	0.45
6:5:16:ARG:NH1	6:5:17:ASP:OD1	2.50	0.45
11:A:562:U:O4	11:A:2036:C:H1'	2.16	0.45
16:F:110:LEU:HA	16:F:183:VAL:CG1	2.47	0.45
11:A:2464:C:HO2'	11:A:2465:C:P	2.39	0.45
14:D:142:VAL:HG22	14:D:143:HIS:H	1.82	0.45
11:A:1375:C:O2'	11:A:1376:C:H5'	2.17	0.45
11:A:320:A:H3'	16:F:136:THR:CG2	2.47	0.45
11:A:769:G:O2'	11:A:770:G:H5'	2.17	0.45
11:A:391:G:O2'	11:A:392:C:H5'	2.17	0.45
3:2:53:LEU:HD23	3:2:53:LEU:O	2.17	0.45
26:S:61:ASN:O	26:S:62:LYS:C	2.56	0.45
11:A:338:G:H2'	11:A:339:U:C6	2.52	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:O:12:ASP:OD1	22:O:14:THR:HG22	2.16	0.45
16:F:28:ILE:HG12	16:F:28:ILE:O	2.16	0.45
25:R:2:ARG:CG	25:R:2:ARG:HH11	2.30	0.45
11:A:2690:C:H5	25:R:14:SER:HG	1.62	0.45
28:U:95:LEU:HD13	29:V:4:ILE:HG23	1.99	0.45
23:P:95:VAL:HG23	23:P:125:VAL:CA	2.46	0.45
1:O:43:THR:HG22	11:A:2331:G:O3'	2.17	0.45
25:R:55:ALA:CB	25:R:79:LEU:CD1	2.95	0.45
11:A:586:A:H5'	16:F:89:VAL:CG2	2.42	0.45
17:G:51:ARG:NH1	17:G:52:ILE:HD13	2.32	0.45
12:B:29:A:C2	12:B:56:G:C2	3.05	0.45
15:E:60:ASN:OD1	15:E:62:PRO:HD2	2.17	0.45
11:A:863:A:H2'	11:A:864:G:C8	2.52	0.45
28:U:111:GLU:C	28:U:113:ALA:N	2.69	0.45
11:A:589:C:H2'	11:A:590:A:H8	1.81	0.45
18:H:109:PHE:CZ	18:H:152:ARG:NH1	2.85	0.45
3:2:48:HIS:CG	3:2:49:LYS:N	2.85	0.45
1:O:50:ASN:ND2	1:O:63:VAL:HG11	2.32	0.45
11:A:2724:C:OP1	25:R:2:ARG:NH2	2.50	0.45
28:U:61:TRP:CH2	28:U:94:ASN:HB2	2.52	0.45
13:C:78:ALA:H	13:C:115:ALA:CB	2.30	0.45
12:B:69:G:N2	12:B:70:C:H1'	2.32	0.45
24:Q:133:ARG:NH1	24:Q:133:ARG:HB2	2.32	0.45
6:5:20:ARG:HA	6:5:23:HIS:ND1	2.32	0.45
27:T:45:PHE:CE2	27:T:74:ARG:HG3	2.52	0.45
11:A:2376:A:H2'	11:A:2377:A:O4'	2.16	0.45
15:E:79:ARG:NH1	15:E:79:ARG:CG	2.78	0.45
14:D:70:TRP:C	14:D:70:TRP:CD1	2.89	0.45
11:A:2495:G:OP1	24:Q:82:ARG:NH1	2.50	0.45
11:A:958:U:C5'	24:Q:14:ARG:HD3	2.46	0.45
21:N:125:GLY:CA	21:N:126:PRO:O	2.65	0.45
25:R:87:TYR:C	25:R:89:ASP:N	2.70	0.45
13:C:151:GLU:HA	13:C:154:ARG:HG2	1.99	0.45
11:A:470:A:H2'	11:A:471:A:C8	2.51	0.45
22:O:26:LYS:HE3	22:O:37:ASP:CG	2.38	0.45
11:A:949:C:H2'	11:A:950:G:C8	2.50	0.45
14:D:227:ASN:HB3	14:D:228:PRO:CD	2.47	0.45
17:G:152:LEU:N	17:G:152:LEU:HD23	2.32	0.45
11:A:1064:C:H3'	11:A:1065:U:C5'	2.47	0.45
11:A:1855:G:O2'	11:A:1856:G:H5'	2.17	0.45
12:B:52:A:O2'	12:B:53:A:C8	2.70	0.45
11:A:269:U:H2'	11:A:269:U:O2	2.16	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:G:141:PHE:O	17:G:144:ILE:HG22	2.16	0.44
31:X:12:VAL:CG1	31:X:27:THR:O	2.65	0.44
6:5:3:LYS:HE3	6:5:3:LYS:CA	2.43	0.44
3:2:60:LEU:O	3:2:63:VAL:HB	2.17	0.44
11:A:1948:G:C5'	11:A:1948:G:H8	2.13	0.44
11:A:299:A:N1	11:A:322:A:O2'	2.43	0.44
11:A:622:G:O2'	11:A:623:G:H5'	2.16	0.44
16:F:32:LEU:HD23	16:F:32:LEU:O	2.17	0.44
17:G:16:ARG:C	17:G:18:GLU:H	2.18	0.44
17:G:9:ARG:O	17:G:11:TYR:N	2.50	0.44
11:A:2157:G:C8	11:A:2157:G:H3'	2.52	0.44
33:Z:60:GLU:O	33:Z:65:GLN:O	2.35	0.44
13:C:77:ILE:CG2	13:C:119:VAL:HG21	2.47	0.44
11:A:2110:G:N2	11:A:2178:C:C5	2.78	0.44
21:N:45:ASN:H	21:N:45:ASN:HD22	1.65	0.44
11:A:2358:G:H2'	11:A:2359:C:C6	2.51	0.44
14:D:146:GLU:OE1	14:D:190:TYR:HB2	2.17	0.44
11:A:64:A:H5'	31:X:64:LYS:CE	2.47	0.44
14:D:273:ARG:HB3	14:D:274:ARG:H	1.64	0.44
21:N:67:LEU:C	21:N:69:GLN:H	2.19	0.44
11:A:1304:C:O2'	11:A:1305:C:H5'	2.17	0.44
3:2:16:LEU:HD22	3:2:20:GLU:CG	2.46	0.44
28:U:66:ASN:HD21	28:U:76:TYR:H	1.63	0.44
11:A:1534:U:H2'	11:A:1535:A:O4'	2.16	0.44
11:A:1064:C:C3'	11:A:1065:U:H5''	2.47	0.44
11:A:332:A:O2'	11:A:333:G:P	2.75	0.44
19:J:35:UNK:C	19:J:37:UNK:N	2.80	0.44
17:G:127:GLY:O	17:G:129:GLY:N	2.50	0.44
11:A:2492:U:O2'	11:A:2493:U:H5'	2.17	0.44
17:G:93:THR:HG22	17:G:94:LEU:N	2.33	0.44
3:2:66:GLU:HG3	3:2:67:LYS:N	2.32	0.44
30:W:6:ILE:HA	30:W:104:THR:HG22	1.99	0.44
23:P:31:ALA:C	23:P:33:ARG:H	2.19	0.44
12:B:104:U:O2'	33:Z:72:ARG:HD2	2.17	0.44
33:Z:152:ALA:C	33:Z:154:ASP:H	2.20	0.44
11:A:1602:U:C3'	11:A:1603:A:C5'	2.90	0.44
1:0:41:ARG:HD3	1:0:41:ARG:HA	1.56	0.44
1:0:53:MET:CG	1:0:57:PHE:HA	2.47	0.44
13:C:78:ALA:CB	13:C:116:THR:HG23	2.46	0.44
32:Y:67:LEU:HD23	32:Y:67:LEU:C	2.38	0.44
15:E:79:ARG:NH1	15:E:79:ARG:HG2	2.29	0.44
11:A:2472:G:H5''	11:A:2473:U:H5''	1.95	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:F:110:LEU:HA	16:F:183:VAL:HG12	1.99	0.44
3:2:3:LEU:HD23	11:A:98:G:H5''	1.99	0.44
11:A:1640:C:H5'	11:A:1640:C:H6	1.81	0.44
11:A:2326:C:O4'	11:A:2326:C:O2	2.33	0.44
14:D:147:LEU:HD13	14:D:155:LEU:CD1	2.47	0.44
11:A:2474:C:O2	11:A:2474:C:H2'	2.17	0.44
29:V:74:LYS:HB2	29:V:83:ARG:HB2	1.99	0.44
11:A:764:A:H5''	14:D:210:GLY:HA2	1.99	0.44
11:A:1366:A:O2'	11:A:1367:A:H5'	2.17	0.44
17:G:106:LEU:HD13	17:G:141:PHE:HE1	1.81	0.44
7:6:15:GLU:O	7:6:17:LYS:N	2.51	0.44
11:A:1069:A:HO2'	11:A:1070:A:P	2.41	0.44
26:S:89:ARG:HH11	26:S:89:ARG:HG2	1.81	0.44
11:A:661:C:O2'	23:P:16:ARG:O	2.32	0.44
11:A:1877:A:C2'	11:A:1878:G:H5'	2.37	0.44
28:U:95:LEU:C	28:U:97:ASP:H	2.19	0.44
25:R:49:ASP:OD1	25:R:95:THR:HG22	2.17	0.44
11:A:1677:A:H2'	11:A:1678:G:H8	1.78	0.44
10:9:29:ASN:HD21	10:9:32:HIS:CE1	2.33	0.44
25:R:44:LEU:HD13	25:R:44:LEU:C	2.37	0.44
13:C:107:TRP:NE1	13:C:110:PHE:CE2	2.82	0.44
18:H:136:ILE:HG22	18:H:136:ILE:O	2.17	0.44
11:A:2869:G:H2'	11:A:2870:C:H6	1.81	0.44
28:U:109:LEU:O	28:U:113:ALA:HB2	2.17	0.44
11:A:654(M):C:H2'	11:A:654(N):G:C8	2.53	0.44
11:A:1192:G:O6	23:P:29:LYS:NZ	2.50	0.44
3:2:30:ARG:HG3	31:X:5:TYR:CE2	2.53	0.44
11:A:1096:A:H2'	11:A:1096:A:N3	2.32	0.44
1:0:26:TYR:N	1:0:26:TYR:CD1	2.86	0.44
11:A:1512:U:H2'	11:A:1513:C:C6	2.52	0.44
11:A:2364:C:O2'	11:A:2365:G:H5'	2.17	0.44
30:W:79:GLY:CA	30:W:100:THR:HG23	2.47	0.44
11:A:748:G:C8	30:W:89:ALA:HB1	2.52	0.44
11:A:654(A):G:H2'	11:A:654(B):C:H5'	2.00	0.44
11:A:2147:G:H2'	11:A:2148:G:O5'	2.17	0.44
7:6:26:ASN:HD22	7:6:32:ASN:HD21	1.63	0.44
26:S:97:ARG:NE	26:S:97:ARG:C	2.70	0.44
12:B:73:A:H2'	12:B:74:U:H5'	2.00	0.44
33:Z:100:VAL:HB	33:Z:124:ILE:HD11	1.99	0.44
15:E:69:LYS:HD3	15:E:90:THR:N	2.32	0.44
26:S:106:ARG:HH11	26:S:106:ARG:CB	2.22	0.44
11:A:2712(A):A:C5'	11:A:2713:A:OP2	2.65	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:C:34:THR:CG2	13:C:34:THR:O	2.65	0.44
11:A:2156:G:C6	11:A:2157:G:N2	2.85	0.44
18:H:70:THR:O	18:H:74:ASN:ND2	2.50	0.44
24:Q:111:GLU:OE1	24:Q:133:ARG:NH2	2.49	0.44
18:H:126:PRO:O	18:H:127:GLU:CG	2.58	0.44
16:F:107:LYS:HE3	16:F:205:ARG:HG2	1.98	0.44
15:E:60:ASN:OD1	15:E:61:ARG:N	2.50	0.44
27:T:107:ASP:OD2	27:T:109:GLU:HG3	2.17	0.44
22:O:34:THR:OG1	22:O:35:VAL:N	2.51	0.44
11:A:382:G:H2'	11:A:383:U:H5'	1.99	0.44
18:H:142:GLY:O	18:H:145:ALA:HB3	2.16	0.44
30:W:50:VAL:HG22	30:W:105:VAL:HG23	1.99	0.44
11:A:1036:G:O2'	11:A:1037:G:H5'	2.17	0.44
14:D:31:LYS:HE3	14:D:33:LEU:CD1	2.47	0.44
17:G:94:LEU:HB3	17:G:99:MET:HB2	2.00	0.44
11:A:593:G:O2'	11:A:594:U:H5'	2.18	0.44
16:F:133:ASN:HD22	16:F:133:ASN:N	2.15	0.44
26:S:95:HIS:CG	26:S:96:GLY:H	2.35	0.44
29:V:99:ILE:CD1	29:V:99:ILE:H	2.14	0.44
11:A:1721:G:C2	11:A:1739:U:OP2	2.70	0.44
12:B:28:C:O2'	12:B:29:A:H5'	2.17	0.44
25:R:45:ARG:O	25:R:48:VAL:HG12	2.17	0.44
11:A:302:C:O2'	11:A:303:U:H5'	2.17	0.44
11:A:2687:U:C4	11:A:2688:U:C5	3.05	0.44
11:A:1472:A:H2'	11:A:1473:G:H5'	1.98	0.44
21:N:55:VAL:CG2	21:N:126:PRO:HA	2.47	0.44
11:A:2678:C:H2'	11:A:2679:A:O4'	2.18	0.44
22:O:122:LEU:HD13	27:T:72:VAL:HG11	1.99	0.44
2:1:11:ARG:HH11	2:1:11:ARG:HG2	1.81	0.44
11:A:271(N):U:H5'	11:A:271(O):C:C5	2.53	0.44
25:R:78:LYS:O	25:R:83:ILE:HG12	2.17	0.44
11:A:1568:G:H4'	14:D:59:LYS:HB3	1.98	0.44
9:8:61:LEU:HD22	11:A:593:G:H4'	1.98	0.44
17:G:47:LYS:HE2	17:G:80:PHE:CE1	2.53	0.44
32:Y:28:LYS:C	32:Y:38:ILE:HG22	2.38	0.44
9:8:25:MET:CG	23:P:64:LYS:HB2	2.48	0.44
23:P:23:PRO:HB2	23:P:33:ARG:CG	2.47	0.44
11:A:652:C:O2'	11:A:653:A:O5'	2.35	0.44
11:A:2481:G:HO2'	11:A:2482:G:P	2.40	0.44
25:R:26:LYS:O	25:R:30:THR:CG2	2.66	0.44
25:R:52:ILE:O	25:R:55:ALA:HB3	2.18	0.44
29:V:36:PRO:O	29:V:37:VAL:HG13	2.17	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:E:31:CYS:HA	15:E:32:PRO:HD3	1.82	0.44
11:A:99:U:C4'	11:A:102:G:H1'	2.47	0.44
22:O:35:VAL:HA	22:O:62:VAL:O	2.16	0.44
33:Z:98:MET:SD	33:Z:133:ILE:HG23	2.58	0.44
11:A:1499:C:C2'	11:A:1500:G:H5'	2.48	0.44
24:Q:24:GLY:O	24:Q:102:VAL:HG23	2.17	0.44
11:A:1773:A:H2'	11:A:1774:C:O4'	2.17	0.44
11:A:2355:C:C4	11:A:2356:C:C4	3.06	0.44
11:A:2659:G:C2'	11:A:2660:A:H5''	2.47	0.44
11:A:57:C:O2'	11:A:58:G:H5'	2.18	0.44
17:G:43:LEU:HD22	17:G:43:LEU:N	2.33	0.44
33:Z:19:ARG:HH11	33:Z:19:ARG:HG2	1.83	0.44
12:B:78:A:H2'	12:B:79:C:O4'	2.17	0.44
12:B:94:C:O2'	12:B:95:C:H5'	2.18	0.44
14:D:62:TYR:HA	14:D:87:ASN:HD21	1.83	0.44
11:A:2850:A:N3	25:R:61:HIS:CE1	2.86	0.44
11:A:1596:A:O2'	11:A:1597:A:H5'	2.17	0.44
11:A:1598:C:O2	11:A:1598:C:H2'	2.17	0.44
9:8:36:LYS:HB3	9:8:40:GLU:HB3	1.99	0.44
1:0:10:THR:CG2	1:0:12:ASN:HB2	2.48	0.44
27:T:29:ARG:HD3	27:T:86:ILE:HG23	1.99	0.44
16:F:142:TRP:C	16:F:142:TRP:HE3	2.21	0.44
17:G:172:LEU:O	17:G:172:LEU:HD13	2.18	0.44
11:A:1053:C:O2'	11:A:1054:A:H5'	2.18	0.44
23:P:124:LYS:HA	23:P:142:GLY:O	2.18	0.44
23:P:83:VAL:CG1	23:P:112:LEU:HD21	2.46	0.44
3:2:38:GLN:O	3:2:41:ILE:HG12	2.18	0.44
21:N:4:TYR:O	21:N:5:VAL:CB	2.65	0.44
18:H:37:VAL:HG21	18:H:68:THR:HG23	1.99	0.44
11:A:2870:C:H2'	11:A:2871:C:O4'	2.18	0.44
11:A:181:A:C8	11:A:181:A:H5'	2.51	0.44
33:Z:135:GLU:N	33:Z:135:GLU:OE1	2.51	0.44
11:A:2369:A:O2'	11:A:2370:G:H5'	2.18	0.44
11:A:341:G:O2'	11:A:342:G:H5'	2.18	0.44
11:A:2758:A:C2	11:A:2759:G:H1'	2.52	0.44
11:A:1635:G:H2'	11:A:1636:C:C6	2.52	0.44
31:X:53:LYS:HB3	31:X:82:GLN:CB	2.48	0.44
11:A:925:C:C3'	11:A:926:A:H5''	2.46	0.44
12:B:7:G:C3'	12:B:8:U:C5'	2.96	0.44
11:A:1061:U:C4'	11:A:1070:A:H1'	2.43	0.44
14:D:240:ALA:HB1	14:D:241:PRO:HD2	2.00	0.44
12:B:42:C:O2'	12:B:43:C:P	2.76	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:G:11:TYR:O	17:G:15:VAL:HG23	2.17	0.44
33:Z:100:VAL:HG23	33:Z:126:VAL:HG22	2.00	0.44
28:U:92:ARG:HH22	29:V:10:LYS:HB3	1.75	0.44
29:V:47:VAL:O	29:V:47:VAL:HG23	2.17	0.44
11:A:2491:U:C5'	11:A:2570:G:H5''	2.36	0.44
1:O:53:MET:HA	1:O:58:THR:O	2.18	0.44
13:C:118:ASP:CG	13:C:119:VAL:N	2.70	0.44
13:C:76:ALA:O	13:C:77:ILE:HG12	2.18	0.44
11:A:806:C:C5	23:P:39:LYS:HE2	2.52	0.44
11:A:1479:G:O2'	11:A:1480:G:H5'	2.18	0.44
9:8:10:ALA:O	9:8:14:VAL:HG12	2.18	0.44
11:A:257:A:C2'	11:A:258:G:H5'	2.47	0.44
16:F:53:THR:O	16:F:57:VAL:HG23	2.18	0.44
4:3:47:VAL:HG11	4:3:56:VAL:HG21	1.98	0.44
11:A:2852:G:O2'	11:A:2853:C:H5'	2.17	0.44
11:A:1360:A:H5'	11:A:1361:G:OP2	2.18	0.44
11:A:67:U:H2'	11:A:68:G:C8	2.52	0.44
3:2:2:LYS:CB	11:A:97:C:H5''	2.44	0.44
11:A:534:U:O2'	28:U:49:HIS:CD2	2.71	0.44
11:A:1203:G:H3'	11:A:1204:A:C5'	2.47	0.44
16:F:82:ILE:O	16:F:83:PHE:HB2	2.17	0.44
21:N:16:ILE:HG23	21:N:54:VAL:HG22	2.00	0.44
22:O:71:ARG:NE	22:O:105:GLU:OE2	2.50	0.44
11:A:1916:A:H2'	11:A:1917:U:O4'	2.18	0.44
11:A:1466:G:H2'	11:A:1547:C:N4	2.33	0.44
11:A:2575:C:H2'	11:A:2578:G:O6	2.18	0.44
11:A:321:G:C1'	16:F:165:ARG:HD3	2.48	0.44
33:Z:161:VAL:CG1	33:Z:162:GLU:N	2.81	0.44
17:G:135:LEU:HD22	17:G:140:ILE:CD1	2.48	0.44
28:U:65:ILE:N	28:U:65:ILE:HD12	2.33	0.44
17:G:54:GLU:HA	17:G:57:ALA:CB	2.47	0.44
21:N:29:LYS:C	21:N:31:ALA:H	2.20	0.44
14:D:186:HIS:HD2	14:D:188:GLU:HB2	1.78	0.44
11:A:1494:A:H3'	11:A:1494:A:N3	2.32	0.44
26:S:20:ARG:HA	26:S:20:ARG:HE	1.82	0.44
15:E:59:VAL:O	15:E:60:ASN:CG	2.57	0.44
33:Z:132:ASN:C	33:Z:134:PRO:HD3	2.38	0.44
11:A:598:G:C5'	23:P:15:ARG:HB3	2.47	0.44
24:Q:138:ASP:C	24:Q:139:GLU:OE1	2.56	0.44
28:U:74:LEU:HD13	28:U:79:PHE:HB2	2.00	0.44
15:E:152:LYS:HG2	21:N:78:TYR:CZ	2.52	0.44
11:A:1389:G:H2'	11:A:1390:U:O4'	2.18	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:1101:U:O2'	11:A:1102:C:H5'	2.17	0.44
5:4:37:SER:O	5:4:38:LYS:CB	2.65	0.44
16:F:93:LYS:O	16:F:94:PRO:C	2.55	0.44
3:2:16:LEU:HD22	3:2:20:GLU:HG2	1.98	0.44
16:F:114:VAL:HG21	16:F:202:PHE:CE2	2.52	0.44
2:1:80:LEU:HD23	2:1:81:LYS:O	2.18	0.44
11:A:2457:U:C2'	11:A:2458:G:H5'	2.48	0.44
11:A:2461:C:H2'	11:A:2462:U:C6	2.53	0.44
11:A:1087:G:O2'	11:A:1089:G:H5'	2.18	0.44
11:A:1440:G:H2'	11:A:1441:G:H8	1.83	0.44
14:D:229:VAL:HG13	14:D:230:ASP:N	2.32	0.44
11:A:855:G:H1	11:A:922:U:H3	1.66	0.44
11:A:776:G:H4'	11:A:777:A:O5'	2.18	0.44
25:R:81:ASP:O	25:R:85:PRO:HG2	2.18	0.44
26:S:61:ASN:O	26:S:63:THR:N	2.51	0.43
18:H:83:TYR:HB2	18:H:135:GLY:H	1.82	0.43
16:F:178:PRO:HG2	16:F:179:GLU:H	1.82	0.43
6:5:36:CYS:HB3	6:5:49:CYS:SG	2.58	0.43
16:F:36:VAL:HA	16:F:101:LEU:CD2	2.48	0.43
11:A:973:A:O4'	11:A:1188:U:C6	2.70	0.43
11:A:2481:G:C2'	11:A:2482:G:OP2	2.66	0.43
25:R:75:LEU:HD13	25:R:75:LEU:C	2.37	0.43
11:A:606:U:H4'	11:A:658:C:H4'	2.00	0.43
11:A:2360:A:O2'	11:A:2361:A:C5'	2.66	0.43
21:N:3:THR:C	21:N:4:TYR:CG	2.92	0.43
11:A:1336:A:O2'	11:A:1337:G:H5'	2.18	0.43
11:A:25:U:H5'	30:W:78:GLU:O	2.18	0.43
11:A:2884:U:H2'	11:A:2885:C:H5'	2.00	0.43
28:U:69:CYS:O	28:U:74:LEU:HD12	2.18	0.43
11:A:2821:A:O2'	11:A:2822:G:H5'	2.17	0.43
28:U:66:ASN:ND2	28:U:76:TYR:HB2	2.33	0.43
11:A:1713:U:O2'	11:A:1714:G:H5'	2.18	0.43
11:A:541:C:O2'	11:A:542:C:H5'	2.18	0.43
32:Y:56:PRO:O	32:Y:57:GLN:C	2.56	0.43
32:Y:57:GLN:HA	32:Y:57:GLN:OE1	2.18	0.43
31:X:25:LYS:HA	31:X:81:VAL:O	2.18	0.43
16:F:21:ALA:HB3	16:F:23:ASP:OD2	2.18	0.43
9:8:36:LYS:O	9:8:37:SER:C	2.56	0.43
17:G:73:ALA:N	17:G:87:PRO:CG	2.76	0.43
32:Y:13:VAL:CG2	32:Y:73:ARG:O	2.58	0.43
2:1:53:VAL:HG22	2:1:74:VAL:HG13	2.00	0.43
18:H:85:LYS:HE3	18:H:86:GLU:N	2.33	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:X:41:ASN:C	31:X:43:VAL:H	2.21	0.43
26:S:89:ARG:CB	26:S:92:TYR:HB3	2.39	0.43
11:A:251:A:H5''	23:P:51:PHE:CZ	2.53	0.43
29:V:15:GLU:O	29:V:96:ILE:HG21	2.17	0.43
7:6:53:LYS:HE2	7:6:54:ILE:HG13	1.99	0.43
29:V:49:THR:CB	29:V:50:PRO:CD	2.96	0.43
25:R:118:GLU:HA	25:R:118:GLU:OE1	2.18	0.43
8:7:14:LYS:HB2	8:7:14:LYS:HE2	1.83	0.43
11:A:1042:G:H1	11:A:1112:G:H22	1.66	0.43
13:C:118:ASP:O	13:C:120:MET:N	2.50	0.43
11:A:1114:G:H2'	11:A:1115:G:H8	1.83	0.43
29:V:28:GLU:O	29:V:30:GLY:N	2.51	0.43
11:A:548:A:H2'	11:A:549:G:H5'	1.99	0.43
11:A:2494:G:O2'	24:Q:80:GLU:HA	2.18	0.43
13:C:72:VAL:HG13	13:C:72:VAL:O	2.17	0.43
11:A:2262:U:H2'	11:A:2263:C:C6	2.49	0.43
12:B:91:C:P	24:Q:16:ARG:HH21	2.40	0.43
11:A:2624:G:O2'	11:A:2625:G:H5'	2.17	0.43
11:A:1915:U:H3'	11:A:1916:A:H8	1.83	0.43
9:8:61:LEU:O	9:8:64:TYR:N	2.51	0.43
27:T:83:ILE:CG1	27:T:84:GLN:H	2.30	0.43
11:A:512:G:OP1	11:A:1235:G:H5'	2.18	0.43
22:O:60:ALA:HA	22:O:87:ILE:HG12	2.00	0.43
11:A:637:A:OP2	23:P:115:LEU:HB2	2.17	0.43
26:S:85:VAL:CG2	26:S:106:ARG:HG3	2.42	0.43
2:1:21:ARG:HH11	2:1:21:ARG:CB	2.19	0.43
11:A:673:C:H6	11:A:673:C:C5'	2.22	0.43
21:N:82:LEU:HA	21:N:82:LEU:HD12	1.80	0.43
14:D:8:PRO:HB3	14:D:14:ARG:CB	2.41	0.43
11:A:106:C:H1'	32:Y:2:ARG:HH21	1.81	0.43
11:A:1502:C:H2'	11:A:1502:C:O2	2.16	0.43
27:T:35:LYS:O	27:T:38:ASN:ND2	2.52	0.43
24:Q:21:THR:CG2	24:Q:23:GLY:O	2.65	0.43
15:E:107:THR:O	15:E:190:GLY:CA	2.66	0.43
14:D:12:SER:HB2	14:D:208:LYS:HB3	1.99	0.43
22:O:114:ILE:HD12	22:O:114:ILE:H	1.83	0.43
11:A:1416:G:HO2'	11:A:1417:C:H5	1.62	0.43
11:A:491:G:H2'	11:A:492:A:C8	2.53	0.43
11:A:2087:G:C2'	11:A:2088:G:H5'	2.47	0.43
11:A:133:C:H6	11:A:133:C:O5'	2.02	0.43
11:A:510:C:H2'	11:A:511:U:O4'	2.17	0.43
11:A:1438:U:O2'	11:A:1439:A:H5'	2.17	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:Q:18:LYS:O	24:Q:19:GLY:O	2.36	0.43
19:J:125:UNK:C	19:J:127:UNK:N	2.81	0.43
1:O:55:ARG:HE	1:O:55:ARG:HB3	1.70	0.43
9:8:4:MET:HE2	11:A:666:G:H1'	2.00	0.43
9:8:32:LEU:HD21	11:A:2391:G:OP1	2.19	0.43
11:A:2428:G:H21	23:P:60:MET:HE1	1.83	0.43
7:6:25:LYS:HE2	9:8:34:TRP:CZ2	2.52	0.43
7:6:30:THR:O	7:6:32:ASN:N	2.50	0.43
17:G:46:ALA:C	17:G:47:LYS:HG3	2.39	0.43
32:Y:13:VAL:CG2	32:Y:14:LEU:N	2.82	0.43
18:H:169:VAL:CG2	18:H:170:ARG:H	2.11	0.43
6:5:36:CYS:CB	6:5:49:CYS:HB3	2.49	0.43
11:A:1539:G:H2'	11:A:1540:U:C5'	2.38	0.43
15:E:36:ARG:NH1	15:E:85:ASN:OD1	2.50	0.43
26:S:56:LEU:O	26:S:57:LYS:O	2.36	0.43
29:V:19:LYS:HB3	29:V:94:LEU:O	2.17	0.43
28:U:91:ASP:O	28:U:92:ARG:HB3	2.18	0.43
12:B:17:C:O2'	12:B:18:G:H5'	2.19	0.43
18:H:137:ASP:O	18:H:138:LYS:HB2	2.19	0.43
9:8:21:LYS:HD3	9:8:48:PHE:CZ	2.53	0.43
9:8:22:VAL:CG2	9:8:53:PRO:HB2	2.48	0.43
9:8:50:LEU:H	9:8:53:PRO:HG3	1.83	0.43
18:H:27:LYS:HB3	18:H:27:LYS:HE2	1.88	0.43
11:A:583:G:H2'	11:A:584:C:H6	1.82	0.43
28:U:79:PHE:CE1	28:U:83:LEU:HD11	2.54	0.43
11:A:117:G:C6	11:A:119:A:C6	3.07	0.43
11:A:897:C:H2'	11:A:897:C:O2	2.18	0.43
11:A:2808:U:H5'	11:A:2891:G:O6	2.18	0.43
11:A:211:A:O2'	11:A:212:G:H5'	2.19	0.43
11:A:2626:C:O2'	11:A:2627:G:H5'	2.18	0.43
21:N:137:LYS:HG2	21:N:138:LEU:N	2.33	0.43
11:A:1844:C:O2'	11:A:1845:G:H5'	2.19	0.43
31:X:27:THR:CG2	31:X:80:ILE:HG22	2.48	0.43
7:6:20:ASN:O	7:6:21:TYR:CD2	2.72	0.43
17:G:78:SER:O	17:G:80:PHE:N	2.50	0.43
6:5:46:CYS:SG	6:5:47:PRO:CD	3.05	0.43
11:A:1541:G:O2'	11:A:1542:A:C5'	2.67	0.43
11:A:2416:C:H2'	11:A:2417:C:H6	1.84	0.43
11:A:1190:G:H5'	23:P:35:HIS:CA	2.48	0.43
17:G:16:ARG:C	17:G:18:GLU:N	2.71	0.43
15:E:77:ILE:CG2	15:E:78:LEU:H	2.26	0.43
11:A:2247:A:O2'	11:A:2248:C:H5'	2.18	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:R:52:ILE:CG2	25:R:94:TYR:CD2	3.00	0.43
13:C:78:ALA:H	13:C:115:ALA:CA	2.30	0.43
23:P:41:ARG:CB	23:P:41:ARG:HH11	2.32	0.43
21:N:34:LEU:HD13	21:N:34:LEU:C	2.39	0.43
14:D:223:GLY:O	14:D:226:MET:HG3	2.18	0.43
15:E:30:PRO:O	15:E:32:PRO:HD3	2.19	0.43
27:T:128:GLU:O	27:T:129:ARG:C	2.56	0.43
16:F:84:VAL:O	16:F:86:GLY:N	2.51	0.43
21:N:126:PRO:O	21:N:127:ASP:CB	2.65	0.43
18:H:147:ASN:HD22	18:H:147:ASN:N	2.16	0.43
11:A:559:G:N2	28:U:49:HIS:CD2	2.86	0.43
8:7:30:VAL:HA	8:7:33:ARG:HH21	1.83	0.43
11:A:2027:G:H2'	11:A:2028:U:C6	2.51	0.43
11:A:1649:G:C6	11:A:2009:G:C6	3.06	0.43
13:C:140:PRO:HA	13:C:145:VAL:HB	2.00	0.43
16:F:78:ILE:C	16:F:80:ALA:H	2.21	0.43
13:C:46:LYS:O	13:C:210:ARG:HB2	2.18	0.43
11:A:320:A:H3'	16:F:136:THR:HG22	2.00	0.43
11:A:1103:A:H5''	11:A:1104:C:H5	1.83	0.43
11:A:2788:C:O2'	11:A:2809:A:N3	2.51	0.43
22:O:26:LYS:HB2	22:O:30:ALA:CB	2.48	0.43
33:Z:19:ARG:NH1	33:Z:84:GLU:O	2.34	0.43
19:J:96:UNK:O	19:J:100:UNK:N	2.51	0.43
2:1:14:VAL:HG21	11:A:188:G:H5'	2.01	0.43
16:F:66:PRO:HD2	16:F:70:THR:HG21	2.00	0.43
11:A:60:G:C6	11:A:74:A:N6	2.86	0.43
14:D:65:ILE:HD11	14:D:88:ARG:CZ	2.49	0.43
17:G:143:GLU:HG2	17:G:143:GLU:H	1.57	0.43
17:G:82:LEU:HD13	17:G:87:PRO:CB	2.48	0.43
32:Y:7:VAL:CG2	32:Y:8:LYS:NZ	2.78	0.43
16:F:132:VAL:CG2	16:F:133:ASN:H	2.11	0.43
23:P:65:ARG:O	23:P:66:GLY:C	2.57	0.43
23:P:47:ASP:OD2	23:P:50:ARG:HG2	2.19	0.43
15:E:184:VAL:O	15:E:186:GLY:N	2.52	0.43
26:S:24:LEU:CB	26:S:85:VAL:HG12	2.41	0.43
11:A:2157:G:C8	11:A:2157:G:C3'	3.01	0.43
2:1:21:ARG:NH1	2:1:21:ARG:HB3	2.19	0.43
11:A:743:G:O2'	11:A:744:G:H5'	2.19	0.43
24:Q:137:TYR:CE1	33:Z:81:ARG:NH2	2.86	0.43
3:2:14:ARG:O	3:2:14:ARG:HG2	2.19	0.43
17:G:54:GLU:H	17:G:54:GLU:HG3	1.61	0.43
17:G:111:LEU:O	17:G:114:ILE:HG22	2.18	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
29:V:92:THR:O	29:V:93:GLU:C	2.57	0.43
11:A:845:G:HO2'	11:A:846:C:H5	1.61	0.43
15:E:107:THR:HA	15:E:163:GLU:O	2.17	0.43
1:0:54:GLY:O	1:0:55:ARG:C	2.57	0.43
16:F:150:GLY:HA2	16:F:172:TRP:CD2	2.54	0.43
21:N:38:HIS:O	28:U:67:ALA:HB1	2.19	0.43
11:A:231:C:O2'	11:A:232:G:H5'	2.19	0.43
21:N:94:HIS:N	21:N:95:PRO:CD	2.81	0.43
11:A:999:U:O2'	11:A:1000:A:H5'	2.19	0.43
11:A:2848:G:C8	27:T:97:ALA:HB2	2.54	0.43
17:G:34:LEU:CD1	17:G:99:MET:HE3	2.47	0.43
7:6:13:CYS:HA	7:6:50:ARG:O	2.19	0.43
27:T:28:VAL:HG23	27:T:47:GLY:O	2.18	0.43
16:F:37:VAL:HG11	23:P:7:ARG:NH1	2.33	0.43
16:F:28:ILE:N	16:F:28:ILE:HD13	2.17	0.43
26:S:103:GLU:HG2	26:S:104:GLY:N	2.34	0.43
25:R:17:ARG:O	25:R:20:LEU:HB3	2.19	0.43
25:R:95:THR:OG1	25:R:96:ARG:N	2.51	0.43
33:Z:81:ARG:O	33:Z:82:ARG:CB	2.65	0.43
11:A:885:C:H2'	11:A:886:C:H6	1.82	0.43
11:A:655:A:C4'	11:A:656:G:H5'	2.41	0.43
30:W:29:LEU:CG	30:W:33:ARG:HD2	2.43	0.43
11:A:1570:A:H2'	11:A:1571:A:C8	2.54	0.43
12:B:29:A:H2'	12:B:30:C:H6	1.83	0.43
33:Z:150:LEU:N	33:Z:150:LEU:HD23	2.32	0.43
30:W:25:ARG:CB	30:W:25:ARG:NH1	2.81	0.43
11:A:1332:G:N2	11:A:1609:A:O2'	2.52	0.43
11:A:2264:C:H2'	11:A:2265:U:H6	1.83	0.43
15:E:199:ARG:CB	15:E:199:ARG:NH1	2.81	0.43
30:W:56:ALA:C	30:W:57:ASN:HD22	2.21	0.43
25:R:4:LEU:HD12	25:R:7:GLY:H	1.83	0.43
11:A:2123:G:H1	11:A:2174:C:H42	1.67	0.43
28:U:66:ASN:ND2	28:U:76:TYR:H	2.17	0.43
2:1:6:GLU:HG3	2:1:61:ARG:HB2	1.99	0.43
11:A:1680:U:O2	11:A:1763:G:H3'	2.19	0.43
17:G:97:ASP:O	17:G:101:ILE:HG13	2.19	0.43
9:8:31:HIS:HE1	11:A:2392:A:OP2	2.02	0.43
3:2:47:ASN:O	3:2:50:ILE:HD13	2.18	0.43
11:A:2760:C:C3'	11:A:2761:G:H5''	2.49	0.43
11:A:1666:G:H5'	11:A:1666:G:H8	1.83	0.43
11:A:2292:C:O2'	11:A:2293:C:H5'	2.19	0.43
9:8:19:SER:CB	11:A:651:G:OP1	2.66	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:653:A:N3	11:A:653:A:H2'	2.33	0.43
11:A:2131:G:H5''	11:A:2132:U:O5'	2.18	0.43
14:D:176:ARG:NH1	14:D:176:ARG:CG	2.75	0.43
11:A:1558:A:O2'	11:A:1559:G:P	2.77	0.43
26:S:18:ILE:H	26:S:18:ILE:CD1	2.32	0.43
11:A:1721:G:H8	11:A:1741:A:H62	1.66	0.43
29:V:28:GLU:C	29:V:30:GLY:H	2.22	0.43
7:6:42:TRP:CZ2	11:A:643:A:N7	2.87	0.43
11:A:676:A:C8	11:A:2443:C:H1'	2.54	0.43
22:O:64:ARG:HD3	22:O:79:PHE:CD2	2.53	0.43
11:A:527:C:OP2	11:A:2779:U:H5	2.01	0.43
11:A:527:C:OP2	11:A:2779:U:C5	2.71	0.43
15:E:61:ARG:CB	15:E:62:PRO:CD	2.96	0.43
23:P:14:LYS:O	23:P:15:ARG:HB2	2.17	0.43
28:U:57:PHE:O	28:U:58:ARG:C	2.57	0.43
28:U:83:LEU:CD1	28:U:83:LEU:H	2.32	0.43
14:D:13:ARG:NH1	14:D:16:MET:SD	2.92	0.43
11:A:1771:C:HO2'	11:A:1786:A:C1'	2.32	0.43
11:A:1750:G:O2'	11:A:1751:C:H5'	2.19	0.43
11:A:292:C:O2'	11:A:293:U:H5'	2.19	0.43
11:A:850:C:H2'	11:A:851:U:H6	1.82	0.43
11:A:271(V):G:O2'	11:A:271(W):G:H5'	2.19	0.43
18:H:30:LYS:HE2	18:H:30:LYS:HA	2.01	0.43
7:6:8:LYS:HA	7:6:8:LYS:HD2	1.82	0.43
7:6:41:PRO:HD2	7:6:45:LYS:HA	2.01	0.43
32:Y:28:LYS:HB2	32:Y:28:LYS:HE3	1.88	0.43
32:Y:39:VAL:HG12	32:Y:40:GLU:N	2.34	0.43
32:Y:7:VAL:CB	32:Y:8:LYS:HD2	2.49	0.43
17:G:9:ARG:O	17:G:13:GLU:HG2	2.19	0.43
29:V:91:TYR:HD1	29:V:91:TYR:N	2.17	0.43
11:A:2579:C:H1'	15:E:134:ILE:HD13	2.01	0.43
25:R:116:LEU:O	25:R:117:VAL:CG1	2.66	0.43
11:A:674:G:H2'	11:A:804:A:H61	1.83	0.43
12:B:16:G:C6	12:B:69:G:C2	3.07	0.43
9:8:52:LYS:H	9:8:53:PRO:CD	2.32	0.43
26:S:15:ARG:HH11	26:S:15:ARG:CG	2.31	0.43
4:3:3:ARG:HG2	4:3:38:GLU:OE2	2.19	0.43
32:Y:88:LYS:HZ1	32:Y:93:GLY:HA3	1.84	0.43
11:A:1362:C:C2'	11:A:1363:C:H5'	2.48	0.43
31:X:57:LEU:N	31:X:57:LEU:CD1	2.81	0.43
27:T:90:GLN:C	27:T:92:GLY:N	2.67	0.43
24:Q:45:GLN:HE21	24:Q:45:GLN:H	1.67	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:64:A:N9	31:X:66:LEU:HD12	2.34	0.43
1:0:27:GLU:OE2	1:0:69:PHE:HB2	2.19	0.43
11:A:156:U:C2'	11:A:157:U:H5'	2.49	0.43
11:A:271(U):G:H2'	11:A:271(V):G:C8	2.54	0.43
19:J:35:UNK:O	19:J:37:UNK:N	2.52	0.43
11:A:2350:C:H2'	11:A:2351:G:O4'	2.18	0.43
11:A:1860:G:H1	11:A:1882:C:H42	1.67	0.43
11:A:378:C:O2'	11:A:379:G:H5'	2.19	0.43
17:G:138:GLN:HG3	17:G:139:LEU:HD12	2.01	0.43
11:A:2762:G:C2'	11:A:2763:G:H5'	2.49	0.43
7:6:35:GLU:HB2	7:6:51:GLU:OE1	2.18	0.43
18:H:121:ILE:HG23	18:H:133:VAL:HG13	2.00	0.43
23:P:33:ARG:O	23:P:34:GLY:O	2.37	0.43
13:C:120:MET:O	13:C:124:GLY:HA3	2.19	0.43
18:H:54:ARG:CB	18:H:55:PRO:HD2	2.43	0.43
27:T:25:GLY:O	27:T:26:ASP:CB	2.64	0.43
10:9:1:MET:CG	11:A:2478:A:OP2	2.66	0.43
28:U:115:ALA:C	28:U:117:GLN:N	2.68	0.43
11:A:1496:A:H8	11:A:1498:C:N3	2.17	0.43
3:2:51:ARG:HD3	3:2:55:ARG:HH12	1.82	0.43
15:E:63:LEU:O	15:E:64:LYS:C	2.57	0.43
27:T:78:LEU:HD23	27:T:78:LEU:O	2.18	0.43
1:0:19:LYS:HD3	11:A:2262:U:OP1	2.19	0.43
11:A:2263:C:O2'	11:A:2264:C:H5'	2.18	0.43
11:A:2024:G:O2'	11:A:2025:C:H5'	2.19	0.43
11:A:1374:G:H2'	11:A:1375:C:C6	2.54	0.43
11:A:21:A:O2'	11:A:22:C:H5'	2.18	0.43
11:A:2153:G:O2'	11:A:2154:G:H5'	2.19	0.43
2:1:39:LYS:O	2:1:40:ARG:CG	2.66	0.43
11:A:640:C:N4	11:A:641:C:N4	2.66	0.43
6:5:4:HIS:CB	11:A:2577:A:H1'	2.49	0.42
16:F:25:PRO:HB3	16:F:119:ARG:CB	2.45	0.42
17:G:125:PHE:CD1	17:G:126:ASP:N	2.79	0.42
32:Y:13:VAL:HG23	32:Y:73:ARG:C	2.39	0.42
12:B:21:G:H2'	12:B:22:U:C5'	2.49	0.42
27:T:28:VAL:HG22	27:T:46:GLU:C	2.37	0.42
27:T:87:ASP:OD1	27:T:87:ASP:N	2.51	0.42
16:F:184:TYR:CE1	23:P:7:ARG:CZ	3.03	0.42
17:G:67:LYS:CD	17:G:67:LYS:N	2.72	0.42
11:A:2133:G:C2	11:A:2157:G:O6	2.72	0.42
11:A:2330:G:H2'	11:A:2331:G:O4'	2.18	0.42
11:A:742:G:O2'	11:A:743:G:H5'	2.18	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:N:34:LEU:CD1	21:N:116:LEU:HB3	2.49	0.42
21:N:51:PHE:CE1	21:N:119:ARG:HD2	2.53	0.42
18:H:76:VAL:C	18:H:78:GLY:H	2.22	0.42
30:W:29:LEU:HG	30:W:33:ARG:CD	2.43	0.42
11:A:65:C:H2'	11:A:66:C:H6	1.84	0.42
25:R:63:ARG:O	25:R:67:LEU:HD23	2.18	0.42
11:A:786:C:O2'	11:A:787:U:H5'	2.19	0.42
10:9:33:LYS:NZ	11:A:2743:C:OP1	2.41	0.42
1:0:17:GLN:O	1:0:19:LYS:HD2	2.19	0.42
30:W:55:ALA:C	30:W:57:ASN:N	2.71	0.42
13:C:75:LEU:HD11	13:C:113:VAL:HG13	2.01	0.42
15:E:47:VAL:HG23	15:E:84:PHE:O	2.18	0.42
11:A:496:G:H1'	30:W:61:ASN:ND2	2.34	0.42
16:F:65:TRP:CZ3	16:F:72:ARG:HB2	2.54	0.42
11:A:1358:G:O2'	11:A:1359:A:H5''	2.18	0.42
14:D:218:ARG:HG3	14:D:218:ARG:HH11	1.83	0.42
11:A:736:C:O2'	11:A:737:C:H5'	2.18	0.42
9:8:28:GLY:O	9:8:36:LYS:NZ	2.52	0.42
11:A:2604:U:C5'	11:A:2604:U:C6	2.92	0.42
17:G:87:PRO:C	17:G:88:ILE:HG12	2.39	0.42
12:B:7:G:C3'	12:B:8:U:H5''	2.48	0.42
32:Y:49:VAL:O	32:Y:50:ARG:CB	2.57	0.42
6:5:56:LYS:HE2	6:5:59:GLU:OE2	2.19	0.42
11:A:1448:G:H21	11:A:1528(A):A:H2	1.65	0.42
23:P:31:ALA:C	23:P:33:ARG:N	2.72	0.42
9:8:59:LYS:CE	23:P:50:ARG:HB3	2.36	0.42
17:G:107:LEU:HD21	17:G:178:PHE:CE1	2.53	0.42
29:V:18:LEU:CD2	29:V:19:LYS:N	2.76	0.42
25:R:99:LYS:HA	25:R:112:ALA:HA	2.01	0.42
28:U:91:ASP:CG	28:U:96:ALA:HB2	2.40	0.42
18:H:49:VAL:O	18:H:50:VAL:CG2	2.67	0.42
18:H:54:ARG:HB2	18:H:55:PRO:CD	2.45	0.42
24:Q:133:ARG:O	24:Q:134:ARG:HB2	2.19	0.42
17:G:51:ARG:NH2	17:G:52:ILE:CD1	2.83	0.42
33:Z:27:VAL:CG1	33:Z:28:MET:N	2.83	0.42
6:5:16:ARG:HH11	6:5:20:ARG:HH12	1.66	0.42
4:3:47:VAL:CG1	4:3:56:VAL:HG21	2.49	0.42
15:E:29:GLY:O	15:E:30:PRO:C	2.56	0.42
11:A:1192:G:C2'	11:A:1193:G:H5'	2.49	0.42
2:1:49:VAL:O	2:1:49:VAL:HG13	2.18	0.42
11:A:2115:G:C2	11:A:2117:A:N7	2.87	0.42
19:J:118:UNK:O	19:J:119:UNK:C	2.67	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:U:32:PHE:CB	28:U:36:ARG:HH22	2.31	0.42
2:1:39:LYS:HA	2:1:39:LYS:HD2	1.83	0.42
33:Z:70:LEU:H	33:Z:70:LEU:HD12	1.84	0.42
29:V:46:VAL:O	29:V:46:VAL:HG13	2.19	0.42
11:A:150:C:H2'	11:A:151:C:C6	2.54	0.42
11:A:271(H):G:O2'	11:A:271(I):G:C8	2.70	0.42
14:D:80:ALA:HB3	14:D:94:LEU:HD13	2.02	0.42
11:A:2394:C:OP1	23:P:63:PRO:HD2	2.18	0.42
32:Y:75:ILE:CG2	32:Y:76:CYS:N	2.75	0.42
3:2:21:LEU:HD23	3:2:21:LEU:HA	1.91	0.42
22:O:104:ARG:C	22:O:106:LEU:N	2.73	0.42
11:A:330:A:O2'	11:A:331:A:H2'	2.20	0.42
12:B:44:G:C2	12:B:48:A:C2	3.07	0.42
11:A:635:C:O2'	11:A:639:U:OP1	2.37	0.42
33:Z:39:VAL:CG2	33:Z:44:PHE:HB2	2.49	0.42
28:U:95:LEU:HD11	29:V:11:GLN:O	2.19	0.42
29:V:49:THR:O	29:V:50:PRO:C	2.57	0.42
31:X:10:ALA:HB1	31:X:11:PRO:CD	2.50	0.42
28:U:13:LYS:N	28:U:13:LYS:HD3	2.35	0.42
11:A:690:G:O2'	14:D:43:ARG:NH1	2.53	0.42
12:B:17:C:H2'	12:B:18:G:C8	2.54	0.42
24:Q:110:THR:OG1	24:Q:113:GLN:HG3	2.19	0.42
11:A:2841:C:H2'	11:A:2842:G:C8	2.54	0.42
32:Y:91:GLU:CG	32:Y:92:ASN:H	2.31	0.42
18:H:23:ARG:O	18:H:24:VAL:CG2	2.67	0.42
11:A:271(F):C:C2'	11:A:271(G):C:H5'	2.50	0.42
21:N:4:TYR:N	21:N:4:TYR:CD1	2.86	0.42
24:Q:82:ARG:HH11	24:Q:82:ARG:HG3	1.84	0.42
27:T:123:GLN:O	27:T:127:ALA:HB3	2.19	0.42
13:C:193:ILE:O	13:C:194:ARG:C	2.58	0.42
14:D:130:ALA:HA	14:D:192:THR:HA	2.02	0.42
11:A:18:C:O2'	28:U:23:GLY:HA2	2.18	0.42
11:A:1315:C:O2'	11:A:1316:U:H5'	2.19	0.42
13:C:163:PHE:CE1	13:C:196:LEU:HD23	2.53	0.42
11:A:719:C:O2'	11:A:720:C:H5'	2.20	0.42
11:A:640:C:N4	11:A:641:C:H41	2.17	0.42
22:O:49:ARG:HB2	22:O:50:GLY:H	1.62	0.42
11:A:1247:A:OP1	16:F:95:ARG:NH2	2.52	0.42
18:H:80:SER:O	18:H:81:GLU:CB	2.66	0.42
11:A:2345:G:N3	11:A:2381:C:H2'	2.34	0.42
25:R:56:LYS:HA	25:R:84:ALA:HB1	2.00	0.42
16:F:145:GLU:O	16:F:146:ALA:HB2	2.19	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:G:139:LEU:CD1	17:G:149:VAL:HG11	2.48	0.42
17:G:63:ILE:HD12	17:G:141:PHE:CD2	2.54	0.42
6:5:2:ALA:O	6:5:3:LYS:C	2.57	0.42
6:5:3:LYS:O	6:5:5:PRO:N	2.52	0.42
9:8:4:MET:HE1	11:A:592:G:H21	1.84	0.42
3:2:47:ASN:O	3:2:50:ILE:CD1	2.67	0.42
4:3:35:ARG:HD3	4:3:37:LEU:HD11	2.01	0.42
7:6:45:LYS:O	7:6:45:LYS:HG2	2.19	0.42
17:G:84:LYS:O	17:G:85:GLY:C	2.58	0.42
32:Y:85:VAL:CG1	32:Y:86:ARG:H	2.30	0.42
18:H:153:LYS:HB2	18:H:154:PRO:HD2	2.02	0.42
6:5:36:CYS:HB3	6:5:49:CYS:HB3	2.00	0.42
11:A:624:C:H5'	11:A:625:G:OP2	2.19	0.42
14:D:174:ILE:HG23	14:D:271:ILE:HD12	2.01	0.42
12:B:73:A:C2'	12:B:74:U:H5'	2.50	0.42
33:Z:166:SER:H	33:Z:167:PRO:CA	2.33	0.42
17:G:77:ILE:N	17:G:77:ILE:CD1	2.79	0.42
15:E:98:PRO:HD3	15:E:175:VAL:CG1	2.49	0.42
13:C:82:LYS:HB3	13:C:149:ILE:HG21	2.02	0.42
11:A:673:C:H2'	11:A:674:G:H5'	1.99	0.42
12:B:15:A:H3'	12:B:16:G:H5'	2.00	0.42
23:P:107:LYS:C	23:P:109:GLY:H	2.23	0.42
32:Y:42:VAL:HG23	32:Y:67:LEU:HD12	2.02	0.42
29:V:32:THR:CG2	29:V:58:VAL:HG12	2.50	0.42
11:A:1363:C:H2'	11:A:1364:G:H8	1.84	0.42
15:E:59:VAL:CG2	15:E:63:LEU:HA	2.50	0.42
25:R:21:TYR:HB3	25:R:47:PHE:CE2	2.54	0.42
25:R:48:VAL:O	25:R:51:LEU:HB2	2.20	0.42
11:A:65:C:H2'	11:A:66:C:C6	2.54	0.42
11:A:2721:A:H2'	11:A:2722:G:O4'	2.19	0.42
18:H:94:TYR:CD1	18:H:107:VAL:HA	2.55	0.42
11:A:491:G:H2'	11:A:492:A:H8	1.83	0.42
11:A:2514:U:H2'	11:A:2515:C:H6	1.82	0.42
27:T:11:GLU:OE1	27:T:11:GLU:N	2.52	0.42
28:U:44:ASN:HD21	29:V:75:PHE:HB3	1.83	0.42
14:D:3:VAL:HG21	14:D:203:ASN:HB2	2.02	0.42
13:C:131:LEU:HD22	13:C:136:LEU:HB2	2.02	0.42
11:A:1861:G:O2'	11:A:1862:G:H5'	2.20	0.42
13:C:22:ILE:HB	13:C:228:SER:OXT	2.20	0.42
7:6:7:ILE:CB	7:6:27:LYS:HZ2	2.26	0.42
22:O:104:ARG:CZ	27:T:33:LYS:HD2	2.49	0.42
18:H:157:TYR:CD1	18:H:157:TYR:O	2.72	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:260:G:H1'	11:A:621:A:H1'	2.02	0.42
11:A:1540:U:C4	11:A:1541:G:N7	2.88	0.42
14:D:184:LYS:HG3	14:D:271:ILE:HD11	2.02	0.42
16:F:196:LEU:HD23	16:F:196:LEU:HA	1.89	0.42
26:S:97:ARG:O	26:S:99:LYS:N	2.53	0.42
15:E:69:LYS:HD3	15:E:90:THR:H	1.85	0.42
15:E:89:ASP:CG	15:E:90:THR:N	2.73	0.42
15:E:101:ARG:HB2	15:E:201:THR:CG2	2.48	0.42
11:A:1517:G:H2'	11:A:1518:U:O4'	2.20	0.42
11:A:885:C:C2	11:A:886:C:C5	3.08	0.42
21:N:30:ILE:O	21:N:30:ILE:HG22	2.20	0.42
11:A:2400:G:C5	11:A:2401:U:O2	2.72	0.42
11:A:1170:G:N2	11:A:1180:C:C2	2.88	0.42
21:N:42:TRP:CZ2	21:N:44:PRO:HA	2.54	0.42
11:A:90:U:H4'	11:A:92:A:H8	1.85	0.42
11:A:191:A:O2'	11:A:192:C:H5'	2.20	0.42
11:A:723:G:C6	11:A:724:U:C4	3.07	0.42
11:A:284:U:H2'	11:A:285:C:H6	1.84	0.42
1:0:16:SER:HB2	11:A:2262:U:C5	2.55	0.42
11:A:1204:A:N1	11:A:1241:A:C2	2.88	0.42
11:A:894:C:C2'	11:A:895:U:H5'	2.50	0.42
8:7:43:THR:HG23	8:7:44:PRO:CD	2.48	0.42
11:A:2695:C:O2'	11:A:2696:U:H5'	2.20	0.42
23:P:12:ALA:O	23:P:13:ASN:O	2.38	0.42
11:A:2162:G:O2'	11:A:2163:C:H5'	2.18	0.42
17:G:165:THR:OG1	17:G:168:GLU:HG3	2.18	0.42
19:J:114:UNK:O	19:J:115:UNK:CB	2.67	0.42
5:4:25:TYR:CE2	17:G:2:PRO:HA	2.55	0.42
6:5:3:LYS:O	6:5:5:PRO:CD	2.68	0.42
7:6:27:LYS:HD3	11:A:2285:C:OP2	2.20	0.42
11:A:2313:C:O2'	11:A:2314:C:H5'	2.20	0.42
11:A:2184:G:H2'	11:A:2185:C:H1'	2.02	0.42
1:0:62:LEU:N	1:0:62:LEU:CD2	2.80	0.42
11:A:1070:A:H3'	11:A:1072:C:H5	1.83	0.42
26:S:88:ASP:CG	26:S:89:ARG:H	1.99	0.42
24:Q:141:GLN:O	33:Z:53:ILE:HB	2.20	0.42
11:A:1108:U:H6	11:A:1109:C:C6	2.37	0.42
11:A:1878:G:H2'	11:A:1879:C:C6	2.55	0.42
16:F:125:LEU:N	16:F:125:LEU:CD2	2.80	0.42
11:A:1106:G:H2'	11:A:1107:G:O4'	2.19	0.42
23:P:38:GLN:O	23:P:39:LYS:HB2	2.19	0.42
6:5:11:THR:OG1	11:A:1264:G:H5'	2.20	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:S:66:ALA:C	26:S:69:VAL:HG12	2.40	0.42
22:O:76:ALA:CB	27:T:75:ILE:HD13	2.45	0.42
33:Z:113:ALA:HB3	33:Z:146:ILE:HG21	2.01	0.42
11:A:1496:A:C8	11:A:1498:C:N3	2.87	0.42
11:A:2043:C:C2	11:A:2044:C:C5	3.07	0.42
3:2:41:ILE:HD11	3:2:44:LEU:CG	2.50	0.42
14:D:70:TRP:CD1	14:D:71:ASP:N	2.88	0.42
33:Z:144:LEU:CD1	33:Z:174:VAL:HG23	2.44	0.42
32:Y:59:GLY:O	32:Y:60:PHE:HB2	2.20	0.42
11:A:2811:G:O2'	11:A:2812:G:H5'	2.19	0.42
11:A:233:A:H2'	11:A:234:C:O4'	2.19	0.42
11:A:1336:A:H2'	11:A:1337:G:C8	2.54	0.42
14:D:79:VAL:HG21	14:D:111:LEU:HD22	2.01	0.42
12:B:66:A:H61	12:B:108:U:H2'	1.84	0.42
11:A:2893:G:H5'	11:A:2894:G:C5'	2.50	0.42
11:A:534:U:O2'	28:U:49:HIS:HD2	2.03	0.42
5:4:15:ILE:HD13	5:4:21:VAL:HG13	2.00	0.42
11:A:954:G:H4'	24:Q:13:GLN:NE2	2.35	0.42
21:N:68:GLU:HG2	21:N:88:GLU:OE1	2.19	0.42
11:A:1138:G:H2'	11:A:1139:G:O4'	2.18	0.42
11:A:2695:C:H2'	11:A:2696:U:C6	2.55	0.42
28:U:32:PHE:CB	28:U:36:ARG:HH12	2.32	0.42
27:T:133:GLU:O	27:T:133:GLU:HG2	2.19	0.42
31:X:18:TYR:O	31:X:20:GLY:N	2.52	0.42
11:A:888:C:H2'	11:A:889:C:O4'	2.20	0.42
19:J:27:UNK:HA	19:J:113:UNK:CB	2.49	0.42
5:4:9:LEU:HA	5:4:26:SER:O	2.19	0.42
7:6:8:LYS:CE	7:6:25:LYS:HD3	2.46	0.42
11:A:2277:G:C6	11:A:2278:A:N7	2.88	0.42
17:G:81:LYS:O	17:G:82:LEU:O	2.37	0.42
27:T:48:ILE:HD12	27:T:48:ILE:C	2.40	0.42
18:H:167:GLU:HB3	18:H:168:PRO:HD2	2.02	0.42
11:A:2415:G:H4'	23:P:66:GLY:O	2.18	0.42
17:G:16:ARG:NH1	17:G:31:VAL:HG11	2.34	0.42
15:E:21:VAL:HG23	15:E:21:VAL:O	2.20	0.42
11:A:444:C:H4'	16:F:49:ALA:HB2	2.01	0.42
11:A:271(B):C:O2'	11:A:271(C):C:H5'	2.20	0.42
28:U:83:LEU:HD12	28:U:83:LEU:N	2.35	0.42
29:V:82:ARG:HD2	29:V:82:ARG:N	2.35	0.42
11:A:2562:U:C2'	11:A:2563:U:H5'	2.50	0.42
11:A:2153:G:H2'	11:A:2154:G:C8	2.53	0.42
11:A:2726:U:H6	22:O:67:LYS:NZ	2.17	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:1425:G:H2'	11:A:1426:G:O4'	2.19	0.42
24:Q:48:GLU:O	24:Q:49:ALA:C	2.58	0.42
11:A:2639:A:H2'	11:A:2640:G:O4'	2.20	0.42
11:A:2113:U:H2'	11:A:2114:A:H8	1.84	0.42
17:G:49:ASP:O	17:G:50:ALA:HB3	2.19	0.42
1:0:33:ALA:O	11:A:2353:G:H1'	2.20	0.42
5:4:25:TYR:HB2	17:G:101:ILE:HD13	2.02	0.42
31:X:27:THR:HB	31:X:80:ILE:HG22	2.02	0.42
32:Y:8:LYS:HB2	32:Y:28:LYS:HZ1	1.85	0.42
3:2:63:VAL:C	3:2:65:ASN:N	2.73	0.42
27:T:88:ILE:N	27:T:88:ILE:HD13	2.35	0.42
21:N:23:LEU:CD2	21:N:24:GLY:N	2.68	0.42
11:A:941:A:H4'	23:P:35:HIS:CE1	2.54	0.42
11:A:2636:U:H1'	11:A:2783:G:N2	2.35	0.42
15:E:34:VAL:O	15:E:34:VAL:HG13	2.19	0.42
11:A:1779:U:C2	11:A:1783:A:N7	2.88	0.42
12:B:117:G:H2'	12:B:118:G:C8	2.55	0.42
15:E:81:ILE:O	15:E:82:ARG:O	2.37	0.42
23:P:39:LYS:HD2	23:P:40:SER:N	2.34	0.42
11:A:2572:A:N7	15:E:144:ARG:HD2	2.35	0.42
2:1:34:THR:HG21	2:1:37:ILE:HG23	2.02	0.42
15:E:9:VAL:HG11	15:E:25:VAL:HB	1.97	0.42
11:A:710:G:H2'	11:A:711:G:C8	2.55	0.42
16:F:108:LYS:H	16:F:108:LYS:HD3	1.85	0.42
1:0:15:ASP:OD1	1:0:16:SER:N	2.48	0.42
18:H:143:GLN:HE21	18:H:143:GLN:HA	1.85	0.42
11:A:1297:C:H2'	11:A:1298:C:H6	1.85	0.42
26:S:39:ILE:CD1	26:S:73:LEU:HD21	2.50	0.42
11:A:419:C:H2'	11:A:420:C:C6	2.54	0.42
11:A:404:C:H4'	11:A:405:U:H5'	2.02	0.42
33:Z:76:LEU:HD12	33:Z:76:LEU:N	2.35	0.42
11:A:408:G:C5	11:A:409:C:C5	3.07	0.42
11:A:514:A:O2'	11:A:515:A:H5'	2.17	0.42
11:A:2150:U:H2'	11:A:2151:G:C8	2.55	0.42
15:E:10:GLY:HA2	15:E:192:ASN:OD1	2.19	0.42
11:A:2300:G:O2'	11:A:2301:C:H5'	2.20	0.42
14:D:63:ARG:O	14:D:65:ILE:HG23	2.20	0.42
11:A:1484:G:C3'	11:A:1485:G:H5''	2.48	0.42
32:Y:13:VAL:CG1	32:Y:28:LYS:HD3	2.32	0.42
32:Y:81:LYS:HZ3	32:Y:98:VAL:HB	1.85	0.42
26:S:34:HIS:CB	26:S:36:TYR:HE1	2.20	0.42
23:P:97:PRO:O	23:P:98:GLU:CB	2.67	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:2155:G:H3'	11:A:2156:G:C8	2.53	0.42
23:P:41:ARG:HD2	23:P:41:ARG:N	2.34	0.42
13:C:66:HIS:CG	13:C:184:LYS:HD2	2.54	0.42
17:G:52:ILE:HD13	17:G:52:ILE:N	2.34	0.42
11:A:2802:G:C3'	11:A:2803:C:H5''	2.49	0.42
21:N:47:ALA:O	21:N:119:ARG:NH2	2.52	0.42
10:9:14:CYS:SG	10:9:27:CYS:CB	3.06	0.42
14:D:231:HIS:ND1	14:D:232:PRO:HD2	2.35	0.42
29:V:34:GLU:O	29:V:36:PRO:HD3	2.18	0.42
11:A:64:A:H2'	11:A:65:C:O4'	2.19	0.42
24:Q:35:VAL:HG23	24:Q:101:ARG:O	2.19	0.42
11:A:2121:G:C1'	13:C:167:LYS:HE2	2.50	0.42
11:A:1843:C:H5'	14:D:253:GLN:NE2	2.34	0.42
11:A:1204:A:N1	11:A:1241:A:H2	2.17	0.42
25:R:87:TYR:C	25:R:89:ASP:H	2.22	0.42
16:F:78:ILE:O	16:F:80:ALA:N	2.52	0.42
11:A:754:C:H2'	11:A:755:C:C6	2.55	0.42
11:A:2174:C:O4'	13:C:218:MET:HE2	2.20	0.42
13:C:196:LEU:O	13:C:199:HIS:N	2.51	0.42
11:A:470:A:OP1	16:F:59:TYR:CE1	2.73	0.42
29:V:76:LYS:HB3	29:V:79:VAL:HG21	2.01	0.42
13:C:63:SER:HA	13:C:160:ARG:HA	2.01	0.42
14:D:147:LEU:HD13	14:D:155:LEU:HD11	2.01	0.42
21:N:137:LYS:CG	21:N:138:LEU:N	2.82	0.42
15:E:183:LEU:HD12	15:E:183:LEU:N	2.35	0.42
1:0:18:ALA:HB2	11:A:2272:U:OP2	2.19	0.42
3:2:13:ALA:C	3:2:15:LYS:H	2.23	0.42
14:D:65:ILE:HD11	14:D:88:ARG:NH2	2.35	0.42
9:8:13:ARG:HD3	23:P:61:ARG:O	2.20	0.42
23:P:62:LEU:N	23:P:62:LEU:CD2	2.70	0.42
16:F:135:LYS:HB3	16:F:138:GLU:OE1	2.19	0.42
6:5:51:TYR:N	6:5:56:LYS:HZ1	2.18	0.42
16:F:129:PHE:CD2	16:F:163:VAL:HG21	2.55	0.42
26:S:53:SER:C	26:S:55:ALA:N	2.74	0.42
17:G:18:GLU:HA	17:G:18:GLU:OE1	2.20	0.42
25:R:103:ARG:NH1	25:R:110:PRO:HB3	2.35	0.42
13:C:118:ASP:C	13:C:120:MET:N	2.71	0.42
11:A:1657:C:H2'	11:A:1658:C:C6	2.54	0.42
11:A:2524:G:H2'	11:A:2525:G:O4'	2.20	0.42
33:Z:81:ARG:CZ	33:Z:81:ARG:HB3	2.50	0.42
11:A:2572:A:N7	15:E:145:LYS:HG2	2.35	0.42
14:D:223:GLY:O	14:D:224:ALA:O	2.38	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:E:126:PRO:C	15:E:128:SER:N	2.73	0.42
11:A:2359:C:O2'	11:A:2360:A:H5'	2.19	0.42
11:A:2455:G:H2'	11:A:2456:C:H6	1.84	0.42
3:2:59:ARG:O	3:2:62:THR:HB	2.20	0.42
18:H:105:LEU:N	18:H:105:LEU:CD2	2.83	0.42
18:H:146:ALA:O	18:H:147:ASN:C	2.57	0.42
22:O:23:ARG:HG3	22:O:24:VAL:N	2.35	0.42
11:A:1297:C:O2'	11:A:1298:C:H5'	2.20	0.42
25:R:106:GLY:O	25:R:107:ASP:HB3	2.20	0.42
14:D:76:PRO:HG2	14:D:98:VAL:CG2	2.50	0.42
19:J:71:UNK:O	19:J:72:UNK:CB	2.67	0.42
28:U:35:ALA:O	28:U:36:ARG:C	2.56	0.42
11:A:2171:A:O2'	11:A:2172:U:H5	2.02	0.42
11:A:1367:A:C5	11:A:1368:G:H1'	2.54	0.42
30:W:79:GLY:HA3	30:W:100:THR:HG23	2.01	0.42
18:H:80:SER:O	18:H:81:GLU:HB2	2.20	0.42
21:N:128:HIS:CG	21:N:128:HIS:O	2.72	0.42
11:A:975:C:OP2	11:A:975:C:H4'	2.20	0.42
11:A:2517:C:C2	11:A:2542:A:C6	3.08	0.42
11:A:1429:G:H2'	11:A:1430:C:C6	2.54	0.42
11:A:529:A:H4'	11:A:530:G:O5'	2.20	0.42
11:A:389:G:C6	23:P:70:GLN:HG3	2.54	0.42
11:A:2052:G:O4'	15:E:142:GLY:HA3	2.19	0.42
14:D:35:LYS:CD	14:D:36:PRO:HD3	2.49	0.41
5:4:26:SER:OG	5:4:27:THR:N	2.53	0.41
17:G:59:GLU:OE2	17:G:138:GLN:NE2	2.53	0.41
17:G:96:ARG:O	17:G:97:ASP:C	2.58	0.41
31:X:30:VAL:HG21	31:X:39:ILE:HD11	2.01	0.41
11:A:296:C:C2'	11:A:297:C:H5'	2.49	0.41
9:8:7:HIS:HD2	23:P:50:ARG:HD3	1.85	0.41
15:E:48:GLN:NE2	15:E:78:LEU:HD22	2.34	0.41
11:A:651:G:H2'	11:A:652:C:C5'	2.49	0.41
23:P:131:SER:O	23:P:132:LYS:C	2.57	0.41
26:S:58:LEU:CG	26:S:59:LYS:H	2.31	0.41
15:E:93:VAL:O	15:E:93:VAL:HG12	2.20	0.41
28:U:92:ARG:NE	29:V:11:GLN:HG2	2.35	0.41
11:A:2129:C:OP1	13:C:6:ARG:HB3	2.20	0.41
21:N:71:ILE:HG22	21:N:72:TYR:N	2.34	0.41
21:N:46:VAL:HG13	21:N:47:ALA:N	2.35	0.41
29:V:61:VAL:C	29:V:63:GLY:H	2.23	0.41
29:V:5:VAL:HG23	29:V:37:VAL:O	2.20	0.41
4:3:17:LYS:HA	4:3:17:LYS:HD3	1.61	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:2031:A:O2'	11:A:2455:G:H4'	2.20	0.41
15:E:59:VAL:HG13	15:E:60:ASN:N	2.34	0.41
11:A:79:G:H2'	11:A:80:G:H8	1.85	0.41
11:A:902:C:H2'	11:A:903:C:H6	1.81	0.41
11:A:286:C:H2'	11:A:287:C:H6	1.81	0.41
24:Q:97:VAL:HG21	24:Q:103:MET:CE	2.49	0.41
4:3:49:LYS:HD3	11:A:851:U:H5'	2.01	0.41
6:5:3:LYS:CD	11:A:747:U:OP1	2.57	0.41
21:N:57:ALA:O	21:N:58:ASP:O	2.38	0.41
22:O:86:ILE:HG22	22:O:94:ARG:HD3	2.03	0.41
15:E:70:ALA:O	15:E:71:GLY:C	2.58	0.41
28:U:90:VAL:HG11	29:V:40:LEU:HD23	2.01	0.41
23:P:126:VAL:HA	23:P:145:PRO:CB	2.49	0.41
11:A:1278:A:C5'	25:R:36:THR:HG22	2.49	0.41
11:A:605:C:H1'	11:A:657:U:O2'	2.19	0.41
9:8:49:VAL:HG11	9:8:52:LYS:HB3	2.01	0.41
15:E:12:THR:O	15:E:23:VAL:HG22	2.20	0.41
27:T:26:ASP:O	27:T:26:ASP:OD1	2.38	0.41
11:A:2801(A):A:C5'	11:A:2802:G:C8	3.00	0.41
1:0:14:ARG:NH1	1:0:14:ARG:CG	2.79	0.41
21:N:48:MET:HE3	21:N:48:MET:N	2.35	0.41
10:9:29:ASN:O	10:9:31:LYS:N	2.52	0.41
11:A:140:G:C1'	11:A:141:A:H2	2.32	0.41
12:B:35:U:H2'	12:B:36:C:H6	1.86	0.41
23:P:71:VAL:HG12	23:P:72:PRO:HD3	2.02	0.41
11:A:993:G:C6	11:A:1162:G:C6	3.08	0.41
22:O:1:MET:H1	22:O:67:LYS:HB3	1.85	0.41
11:A:464:U:H2'	11:A:465:G:O4'	2.20	0.41
11:A:455:C:N3	11:A:473:G:H5'	2.35	0.41
11:A:740:U:H2'	11:A:741:G:H8	1.85	0.41
11:A:36:G:H2'	11:A:37:C:H6	1.85	0.41
11:A:2612:C:C5	11:A:2613:U:H5	2.37	0.41
15:E:37:ARG:HA	15:E:42:ASP:OD2	2.20	0.41
11:A:1149:G:H2'	11:A:1150:C:C6	2.55	0.41
11:A:1837:C:H2'	11:A:1838:C:H5''	2.02	0.41
11:A:2599:G:O2'	11:A:2600:A:H5'	2.20	0.41
11:A:1847:A:H2'	11:A:1847:A:N3	2.35	0.41
5:4:31:ILE:CG2	17:G:142:PRO:HB2	2.43	0.41
31:X:12:VAL:HG21	31:X:21:PHE:HZ	1.84	0.41
31:X:21:PHE:O	31:X:22:ALA:C	2.58	0.41
17:G:128:ARG:HA	17:G:128:ARG:HD3	1.74	0.41
16:F:184:TYR:CE1	23:P:7:ARG:NH2	2.89	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:G:32:PRO:HB2	17:G:172:LEU:CG	2.34	0.41
33:Z:166:SER:HB2	33:Z:167:PRO:CA	2.51	0.41
15:E:24:THR:O	15:E:24:THR:HG23	2.20	0.41
15:E:111:ARG:CB	25:R:2:ARG:NH1	2.73	0.41
11:A:2126:A:H1'	11:A:2127:G:O4'	2.20	0.41
11:A:1352:U:O2	11:A:1570:A:H2	2.04	0.41
11:A:195:A:C8	11:A:197:A:OP1	2.73	0.41
27:T:10:VAL:O	27:T:12:SER:N	2.46	0.41
23:P:121:LYS:HA	23:P:122:PRO:HD3	1.93	0.41
32:Y:46:LYS:HB3	32:Y:62:GLU:CG	2.50	0.41
11:A:1314:C:C2	11:A:1339:G:N2	2.89	0.41
13:C:73:ARG:HH11	13:C:73:ARG:HG3	1.84	0.41
11:A:1076:C:C2'	11:A:1077:A:H5'	2.50	0.41
11:A:201:C:H2'	11:A:202:U:H5'	2.01	0.41
11:A:729:G:OP2	14:D:13:ARG:NH1	2.53	0.41
11:A:1773:A:H2'	11:A:1774:C:C5'	2.49	0.41
11:A:436:C:H2'	11:A:437:G:C8	2.55	0.41
8:7:12:ARG:O	8:7:12:ARG:HG3	2.20	0.41
19:J:72:UNK:C	19:J:74:UNK:N	2.82	0.41
29:V:46:VAL:O	29:V:48:GLY:N	2.53	0.41
11:A:431:U:H6	11:A:431:U:O5'	2.03	0.41
1:0:24:LYS:HD3	1:0:24:LYS:HA	1.81	0.41
14:D:41:GLY:O	14:D:42:GLY:C	2.57	0.41
11:A:1171:G:H1	11:A:1178:C:H42	1.68	0.41
11:A:908:C:O2'	11:A:909:A:H5'	2.20	0.41
11:A:687:C:H2'	11:A:688:U:O4'	2.20	0.41
11:A:2186:G:H2'	11:A:2187:G:C4	2.54	0.41
11:A:26:G:C6	11:A:27:G:N1	2.88	0.41
11:A:271(K):U:H3'	11:A:271(L):U:C5'	2.50	0.41
6:5:44:THR:HG23	25:R:100:LEU:C	2.40	0.41
6:5:57:VAL:HG12	6:5:58:LEU:HD12	2.03	0.41
11:A:1528:A:O2'	11:A:1528(A):A:H5'	2.20	0.41
11:A:1529:G:C2	11:A:1541:G:N2	2.89	0.41
8:7:39:ARG:HD2	11:A:458:G:O2'	2.20	0.41
12:B:106:G:O2'	12:B:107:G:H5'	2.21	0.41
11:A:997:G:O2'	11:A:998:C:H5'	2.21	0.41
13:C:128:GLY:HA2	13:C:137:LEU:CD2	2.50	0.41
11:A:806:C:OP2	23:P:39:LYS:HD2	2.20	0.41
11:A:691:C:O4'	14:D:43:ARG:NH1	2.53	0.41
9:8:48:PHE:HB3	9:8:49:VAL:H	1.63	0.41
1:0:7:LEU:CB	24:Q:85:LYS:HD2	2.50	0.41
11:A:118:A:H5'	11:A:119:A:H8	1.86	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:9:19:ARG:NH1	11:A:2755:C:C2	2.89	0.41
21:N:15:LEU:HD12	21:N:136:GLU:HG2	2.02	0.41
14:D:3:VAL:HG23	14:D:200:ASP:OD2	2.19	0.41
11:A:1847:A:H3'	11:A:1848:A:C5'	2.49	0.41
11:A:2716:U:O2'	11:A:2717:G:H5'	2.20	0.41
15:E:53:PRO:O	15:E:54:GLN:C	2.59	0.41
11:A:355:G:H2'	11:A:356:G:O4'	2.20	0.41
11:A:1011:G:OP1	28:U:75:ASN:HB2	2.20	0.41
5:4:27:THR:HG21	17:G:62:LEU:HB2	2.03	0.41
5:4:12:ALA:HB1	5:4:29:PRO:HA	2.00	0.41
11:A:1902:C:H1'	14:D:244:ARG:HD2	2.03	0.41
11:A:593:G:H2'	11:A:594:U:C6	2.55	0.41
7:6:10:LEU:HG	9:8:34:TRP:CD1	2.56	0.41
11:A:1948:G:O2'	11:A:1949:G:H5'	2.21	0.41
30:W:5:ALA:O	30:W:6:ILE:HB	2.21	0.41
6:5:56:LYS:O	6:5:57:VAL:O	2.38	0.41
11:A:2815:C:H2'	11:A:2816:C:O4'	2.20	0.41
11:A:1446:C:O2'	11:A:1447:G:H5'	2.20	0.41
16:F:6:VAL:CG1	16:F:7:TYR:H	2.15	0.41
11:A:1188:U:H2'	11:A:1189:A:H5'	2.02	0.41
15:E:167:VAL:CG1	15:E:189:PRO:HD3	2.42	0.41
9:8:48:PHE:O	9:8:49:VAL:CG2	2.68	0.41
23:P:121:LYS:O	23:P:123:LEU:N	2.52	0.41
9:8:56:GLU:O	9:8:57:ARG:C	2.58	0.41
14:D:127:VAL:HA	14:D:193:VAL:HG13	2.03	0.41
11:A:203:C:C3'	11:A:204:A:H5''	2.49	0.41
8:7:43:THR:CG2	8:7:44:PRO:N	2.83	0.41
13:C:62:VAL:O	13:C:160:ARG:HA	2.20	0.41
29:V:71:LEU:HA	29:V:71:LEU:HD23	1.89	0.41
29:V:89:GLN:HA	29:V:89:GLN:OE1	2.20	0.41
4:3:4:LEU:HD23	4:3:4:LEU:HA	1.90	0.41
6:5:19:ARG:HG3	11:A:2046:G:H5'	2.02	0.41
23:P:133:SER:O	23:P:136:GLU:HG2	2.19	0.41
11:A:1744:C:C2'	11:A:1745:C:H5'	2.49	0.41
11:A:759:G:O4'	11:A:1981:A:C2	2.73	0.41
31:X:37:THR:C	31:X:39:ILE:H	2.23	0.41
11:A:1899:G:H22	11:A:1902:C:N4	2.15	0.41
16:F:157:VAL:HG22	16:F:194:MET:HG2	2.00	0.41
32:Y:86:ARG:NH2	32:Y:95:LYS:HZ3	2.13	0.41
6:5:36:CYS:C	6:5:38:ALA:N	2.72	0.41
16:F:32:LEU:CD2	16:F:105:VAL:HG13	2.48	0.41
16:F:126:VAL:O	16:F:196:LEU:HG	2.21	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:F:7:TYR:CE1	16:F:196:LEU:HD11	2.56	0.41
33:Z:127:LYS:HE2	33:Z:162:GLU:OE2	2.20	0.41
33:Z:24:LEU:HD22	33:Z:39:VAL:HG22	2.03	0.41
26:S:58:LEU:HG	26:S:59:LYS:N	2.35	0.41
30:W:71:VAL:O	30:W:71:VAL:HG23	2.20	0.41
23:P:96:THR:O	23:P:100:LEU:HB2	2.21	0.41
13:C:82:LYS:HE2	13:C:82:LYS:CA	2.45	0.41
21:N:22:THR:CB	21:N:61:ARG:HB2	2.51	0.41
21:N:21:LYS:HD2	21:N:26:LEU:HB2	2.03	0.41
17:G:54:GLU:HA	17:G:57:ALA:HB3	2.02	0.41
23:P:107:LYS:O	23:P:107:LYS:HG3	2.20	0.41
11:A:2852:G:H1	11:A:2865:U:H3	1.69	0.41
2:1:37:ILE:H	2:1:37:ILE:CD1	2.28	0.41
11:A:832:G:N3	23:P:53:GLY:HA2	2.35	0.41
27:T:7:ILE:O	27:T:10:VAL:HB	2.21	0.41
30:W:59:VAL:O	30:W:60:ASN:HB2	2.21	0.41
14:D:107:ALA:HA	14:D:108:PRO:HD2	1.96	0.41
18:H:87:LEU:HD13	18:H:162:ILE:HD11	2.02	0.41
23:P:71:VAL:N	23:P:72:PRO:CD	2.83	0.41
12:B:49:C:H6	12:B:49:C:O5'	2.04	0.41
18:H:163:TYR:HD1	18:H:163:TYR:N	2.18	0.41
13:C:162:GLU:HG2	13:C:163:PHE:N	2.33	0.41
19:J:72:UNK:O	19:J:73:UNK:C	2.69	0.41
20:K:99:UNK:O	20:K:100:UNK:O	2.39	0.41
11:A:43:A:O2'	11:A:44:G:H5'	2.21	0.41
11:A:1599:C:OP2	31:X:36:LYS:HD2	2.21	0.41
3:2:47:ASN:C	3:2:50:ILE:HD13	2.41	0.41
17:G:76:SER:HB3	17:G:83:ARG:HB3	2.03	0.41
3:2:67:LYS:O	3:2:69:ARG:N	2.53	0.41
11:A:338:G:H2'	11:A:339:U:H6	1.85	0.41
11:A:1541:G:O2'	11:A:1542:A:H5''	2.21	0.41
15:E:67:PHE:O	15:E:70:ALA:HB2	2.21	0.41
29:V:19:LYS:HG3	29:V:20:LEU:N	2.35	0.41
11:A:1052:C:O2'	11:A:1053:C:P	2.79	0.41
11:A:674:G:H21	16:F:74:ARG:HH12	1.68	0.41
18:H:125:VAL:N	18:H:126:PRO:CD	2.84	0.41
17:G:45:GLU:O	17:G:51:ARG:HG3	2.20	0.41
21:N:115:ARG:HH11	21:N:115:ARG:HG3	1.84	0.41
27:T:65:LYS:HB2	27:T:65:LYS:NZ	2.36	0.41
32:Y:43:ASN:HA	32:Y:64:GLU:C	2.41	0.41
2:1:30:VAL:HG23	2:1:31:GLY:H	1.84	0.41
2:1:20:ARG:HG2	2:1:34:THR:HA	2.02	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:T:93:ARG:HD2	27:T:93:ARG:HA	1.82	0.41
11:A:2779:U:H1'	11:A:2781:A:C6	2.56	0.41
2:1:82:LEU:HD11	2:1:90:ILE:HD12	2.02	0.41
11:A:2199:A:C2	11:A:2200:C:H1'	2.55	0.41
13:C:29:VAL:HG11	13:C:214:VAL:HG12	2.02	0.41
11:A:848:G:C2	11:A:933:A:H1'	2.55	0.41
23:P:102:ARG:NH1	23:P:102:ARG:HB3	2.36	0.41
11:A:523:C:H2'	11:A:524:U:C5'	2.50	0.41
11:A:1790:C:H2'	11:A:1791:A:C4	2.55	0.41
11:A:751:A:C6	11:A:789:A:C5	3.09	0.41
11:A:2266:A:H4'	11:A:2267:A:N3	2.35	0.41
11:A:1820:U:O2	14:D:201:HIS:HB3	2.20	0.41
20:K:86:UNK:O	20:K:87:UNK:CB	2.68	0.41
19:J:8:UNK:C	19:J:10:UNK:N	2.81	0.41
14:D:27:THR:HG21	14:D:81:ALA:HB1	2.03	0.41
7:6:15:GLU:CG	7:6:15:GLU:O	2.68	0.41
7:6:45:LYS:C	7:6:46:HIS:HD1	2.24	0.41
3:2:18:PRO:HA	3:2:64:LEU:CD2	2.50	0.41
3:2:21:LEU:HB2	3:2:64:LEU:HD21	2.03	0.41
27:T:28:VAL:CG2	27:T:47:GLY:N	2.68	0.41
27:T:85:LYS:CB	27:T:85:LYS:HZ2	2.27	0.41
21:N:60:ILE:CD1	21:N:99:LEU:HD23	2.51	0.41
11:A:1887:C:H2'	11:A:1888:G:C5'	2.33	0.41
23:P:47:ASP:CB	23:P:48:PRO:HA	2.44	0.41
33:Z:152:ALA:C	33:Z:154:ASP:N	2.74	0.41
9:8:19:SER:HB2	11:A:651:G:OP1	2.20	0.41
23:P:88:LEU:C	23:P:90:ARG:H	2.24	0.41
28:U:65:ILE:HG13	28:U:96:ALA:HB1	2.03	0.41
23:P:125:VAL:O	23:P:145:PRO:CD	2.68	0.41
13:C:77:ILE:HB	13:C:115:ALA:CB	2.43	0.41
18:H:51:ARG:O	18:H:52:VAL:HB	2.21	0.41
11:A:1683:C:C2	11:A:1684:C:C5	3.09	0.41
2:1:3:LYS:HB3	2:1:4:VAL:H	1.41	0.41
8:7:22:MET:CE	8:7:28:ARG:HG2	2.43	0.41
11:A:480:A:H2	11:A:499:U:O2	2.04	0.41
11:A:2395:C:C2	11:A:2396:G:C8	3.09	0.41
11:A:366:C:H5	11:A:403:U:HO2'	1.69	0.41
30:W:34:ASN:HD22	30:W:34:ASN:HA	1.54	0.41
13:C:20:TYR:O	13:C:224:ILE:HA	2.21	0.41
11:A:708:C:N4	11:A:723:G:H1	2.12	0.41
11:A:1076:C:N4	11:A:1088:A:H61	2.16	0.41
2:1:46:LEU:N	2:1:46:LEU:HD12	2.34	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:C:161:ILE:O	13:C:161:ILE:HD12	2.20	0.41
11:A:729:G:C8	14:D:208:LYS:HD2	2.56	0.41
11:A:21:A:H2'	11:A:22:C:O4'	2.20	0.41
22:O:98:VAL:HG11	22:O:118:ALA:N	2.35	0.41
11:A:1103:A:H5''	11:A:1104:C:C5	2.56	0.41
24:Q:118:LEU:HD12	24:Q:131:ILE:CG2	2.50	0.41
13:C:45:ALA:HA	13:C:211:SER:O	2.21	0.41
2:1:27:GLU:HB3	2:1:28:GLY:H	1.64	0.41
8:7:4:THR:HG22	11:A:687:C:H1'	2.03	0.41
11:A:947:G:H2'	11:A:948:G:C8	2.56	0.41
11:A:318:C:H2'	11:A:319:C:H6	1.85	0.41
33:Z:156:LYS:O	33:Z:158:PRO:HD3	2.20	0.41
11:A:1450:G:O2'	11:A:1450(A):C:H5'	2.20	0.41
27:T:40:THR:O	27:T:41:ARG:O	2.38	0.41
11:A:2645:G:H4'	11:A:2646:C:OP2	2.21	0.41
17:G:144:ILE:O	17:G:144:ILE:HG23	2.19	0.41
31:X:80:ILE:CG1	31:X:80:ILE:O	2.69	0.41
9:8:32:LEU:CG	9:8:36:LYS:HZ1	2.33	0.41
7:6:33:LYS:O	7:6:34:LEU:HB2	2.21	0.41
7:6:32:ASN:O	7:6:33:LYS:CG	2.68	0.41
7:6:15:GLU:OE2	7:6:41:PRO:CB	2.69	0.41
17:G:83:ARG:O	17:G:84:LYS:C	2.59	0.41
13:C:175:VAL:HG12	13:C:188:ASN:CB	2.29	0.41
11:A:335:C:H2'	11:A:336:C:C6	2.54	0.41
7:6:11:LEU:O	7:6:23:THR:HB	2.21	0.41
11:A:1210:A:C8	11:A:1210:A:H5'	2.52	0.41
11:A:1210:A:O2'	11:A:1211:U:OP2	2.29	0.41
11:A:1234:U:H2'	11:A:1235:G:O4'	2.21	0.41
11:A:2297:C:O2'	11:A:2298:A:H5'	2.21	0.41
11:A:1068:G:N3	11:A:1068:G:C2'	2.83	0.41
12:B:73:A:C4	12:B:105:A:C2	3.09	0.41
11:A:2579:C:O2'	11:A:2580:U:H5'	2.21	0.41
31:X:10:ALA:HB1	31:X:11:PRO:HD2	2.01	0.41
11:A:861:A:C2	11:A:917:A:C4	3.09	0.41
11:A:2120:G:C2	11:A:2178:C:C5	3.08	0.41
9:8:49:VAL:CG1	9:8:53:PRO:HD3	2.42	0.41
9:8:14:VAL:CG2	9:8:22:VAL:CG1	2.99	0.41
11:A:654(U):A:O2'	11:A:654(V):A:H5'	2.21	0.41
11:A:2125:G:H21	11:A:2173:A:H61	1.68	0.41
11:A:2125:G:H21	11:A:2173:A:N6	2.19	0.41
33:Z:10:ARG:NH2	33:Z:26:GLY:O	2.54	0.41
32:Y:2:ARG:HG2	32:Y:2:ARG:NH1	2.36	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:3:38:GLU:HB3	4:3:40:THR:HG23	2.03	0.41
11:A:1762:A:O5'	11:A:1762:A:C8	2.73	0.41
11:A:327:G:C2	11:A:328:U:C2	3.09	0.41
11:A:444:C:C4'	16:F:49:ALA:HB2	2.50	0.41
32:Y:88:LYS:O	32:Y:90:LEU:HD23	2.20	0.41
26:S:75:GLU:O	26:S:76:LYS:HG2	2.20	0.41
31:X:87:GLN:O	31:X:88:LYS:HG3	2.20	0.41
8:7:22:MET:HE1	8:7:31:LEU:HD12	2.02	0.41
11:A:195:A:H5''	23:P:46:LYS:NZ	2.36	0.41
2:1:89:GLU:O	2:1:90:ILE:C	2.58	0.41
32:Y:47:LYS:HD2	32:Y:47:LYS:N	2.36	0.41
11:A:2631:G:N2	15:E:61:ARG:HH12	2.15	0.41
11:A:2460:U:H4'	24:Q:79:LEU:HD11	2.01	0.41
11:A:2463:C:C2'	11:A:2464:C:H5'	2.50	0.41
11:A:1291:C:H2'	11:A:1292:U:C6	2.56	0.41
11:A:2206:G:N2	11:A:2207:G:C5'	2.84	0.41
10:9:25:VAL:O	10:9:33:LYS:HA	2.21	0.41
11:A:2822:G:OP1	15:E:112:GLY:N	2.53	0.41
11:A:1260:G:H2'	11:A:1261:C:H6	1.84	0.41
11:A:221:A:H4'	11:A:222:A:O5'	2.21	0.41
11:A:272(J):C:H2'	11:A:274:G:C5'	2.51	0.41
11:A:156:U:H2'	11:A:157:U:H5'	2.02	0.41
11:A:2174:C:H1'	13:C:218:MET:HA	2.03	0.41
11:A:2370:G:H2'	11:A:2371:G:C8	2.56	0.41
16:F:65:TRP:CE3	16:F:72:ARG:HB2	2.55	0.41
18:H:97:ARG:HH21	18:H:99:VAL:HG21	1.85	0.41
11:A:333:G:H2'	11:A:333:G:N3	2.36	0.41
11:A:74:A:H5''	11:A:75:G:O4'	2.21	0.41
3:2:12:GLU:HA	3:2:15:LYS:HE2	2.03	0.41
33:Z:112:ARG:HB2	33:Z:112:ARG:NH1	2.35	0.41
11:A:516:C:O2'	11:A:517:C:H5'	2.21	0.41
11:A:2551:C:H2'	11:A:2552:U:C6	2.55	0.41
33:Z:59:LEU:O	33:Z:66:SER:HA	2.21	0.41
15:E:17:ASP:HB3	15:E:18:ASP:H	1.59	0.41
11:A:2707:G:H2'	11:A:2708:G:H8	1.86	0.41
11:A:1711:C:O2'	11:A:1712:C:H5'	2.21	0.41
14:D:60:ARG:HD3	14:D:86:PRO:O	2.21	0.41
19:J:99:UNK:C	19:J:101:UNK:N	2.83	0.41
14:D:27:THR:HG23	14:D:83:GLU:HG3	2.02	0.41
11:A:1902:C:H4'	14:D:244:ARG:CA	2.51	0.41
23:P:58:THR:O	23:P:58:THR:CG2	2.69	0.41
7:6:27:LYS:HG3	7:6:30:THR:OG1	2.21	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:6:41:PRO:HG2	7:6:41:PRO:O	2.21	0.41
26:S:61:ASN:H	26:S:65:VAL:CG2	2.34	0.41
11:A:2316:C:O2'	17:G:128:ARG:NH2	2.53	0.41
32:Y:11:ASP:HA	32:Y:27:VAL:HG22	2.03	0.41
32:Y:26:LYS:HB3	32:Y:27:VAL:H	1.78	0.41
32:Y:76:CYS:SG	32:Y:77:PRO:CD	3.08	0.41
11:A:1666:G:H1'	22:O:3:GLN:NE2	2.36	0.41
3:2:26:ARG:C	3:2:28:LYS:H	2.24	0.41
18:H:85:LYS:HZ3	18:H:132:ARG:C	2.19	0.41
6:5:41:PRO:HA	6:5:42:PRO:HD3	1.97	0.41
11:A:1876:A:H2'	11:A:1877:A:C5'	2.39	0.41
13:C:100:ILE:HD13	13:C:127:LEU:HB2	2.02	0.41
11:A:674:G:N3	16:F:74:ARG:NH1	2.69	0.41
33:Z:81:ARG:HH11	33:Z:81:ARG:CB	2.33	0.41
10:9:1:MET:N	10:9:1:MET:SD	2.86	0.41
27:T:128:GLU:CD	27:T:129:ARG:H	2.24	0.41
11:A:2327:A:H2'	11:A:2328:A:C8	2.56	0.41
24:Q:139:GLU:CA	24:Q:139:GLU:OE1	2.69	0.41
16:F:9:ILE:HG23	16:F:13:SER:O	2.20	0.41
21:N:87:LEU:O	21:N:88:GLU:C	2.59	0.41
11:A:1298:C:N4	11:A:1299:G:C6	2.89	0.41
12:B:111:G:H2'	12:B:112:U:H5'	2.02	0.41
11:A:470:A:OP1	16:F:59:TYR:HE1	2.04	0.41
11:A:1440:G:O6	11:A:1552:G:C2	2.74	0.41
11:A:640:C:C4	11:A:641:C:N4	2.89	0.41
1:0:46:LYS:HE3	1:0:46:LYS:HB2	1.84	0.41
11:A:2078:C:H2'	11:A:2079:U:C6	2.55	0.41
19:J:106:UNK:O	19:J:107:UNK:CB	2.68	0.41
11:A:1568:G:P	14:D:63:ARG:HH22	2.44	0.40
11:A:2428:G:H21	23:P:60:MET:CE	2.34	0.40
17:G:125:PHE:HB3	17:G:131:TYR:HD1	1.86	0.40
27:T:19:LEU:HD22	27:T:85:LYS:HD3	2.02	0.40
18:H:167:GLU:CB	18:H:168:PRO:HD2	2.51	0.40
11:A:1097:U:O2'	11:A:1098:A:H5'	2.20	0.40
16:F:39:TRP:CZ2	16:F:106:ARG:HD3	2.56	0.40
9:8:23:VAL:CG1	9:8:46:ARG:HB3	2.50	0.40
26:S:93:LYS:O	26:S:95:HIS:HB3	2.20	0.40
33:Z:99:TYR:HA	33:Z:124:ILE:O	2.22	0.40
15:E:184:VAL:HG12	15:E:185:LYS:N	2.36	0.40
11:A:637:A:C6	11:A:652:C:H4'	2.56	0.40
17:G:135:LEU:HD22	17:G:140:ILE:HD13	2.03	0.40
29:V:21:ARG:CG	29:V:91:TYR:CD2	3.02	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:2712:U:H5'	11:A:2712:U:O2	2.20	0.40
23:P:96:THR:HG22	23:P:126:VAL:CG2	2.51	0.40
24:Q:52:VAL:HA	24:Q:55:VAL:CG1	2.52	0.40
25:R:29:LEU:HD11	25:R:52:ILE:CD1	2.45	0.40
17:G:52:ILE:H	17:G:52:ILE:HD13	1.87	0.40
11:A:2173:A:N3	11:A:2173:A:C2'	2.79	0.40
4:3:54:VAL:CG1	4:3:55:ARG:N	2.84	0.40
11:A:2842:G:C2	11:A:2876:G:C2	3.09	0.40
3:2:43:GLN:HB3	3:2:44:LEU:H	1.48	0.40
11:A:1653:G:C5	25:R:10:LEU:CD1	3.04	0.40
12:B:31:C:H4'	17:G:29:TRP:HZ2	1.86	0.40
31:X:64:LYS:HE2	31:X:73:ARG:NE	2.36	0.40
24:Q:35:VAL:HA	24:Q:101:ARG:O	2.20	0.40
11:A:654(N):G:N7	11:A:654(O):G:C4	2.89	0.40
23:P:28:GLY:O	23:P:29:LYS:HB2	2.21	0.40
15:E:159:HIS:HE1	15:E:162:ALA:HB3	1.85	0.40
11:A:2807:G:C2'	11:A:2808:U:H5''	2.50	0.40
11:A:889:C:O2'	11:A:890:A:P	2.80	0.40
13:C:192:PHE:CG	13:C:192:PHE:O	2.73	0.40
20:K:30:UNK:O	20:K:31:UNK:O	2.38	0.40
12:B:87:G:N2	12:B:89:G:H3'	2.36	0.40
9:8:37:SER:O	9:8:38:GLY:C	2.58	0.40
11:A:2308:G:C2	11:A:2309:A:N6	2.89	0.40
17:G:73:ALA:N	17:G:87:PRO:HG2	2.18	0.40
32:Y:12:THR:CG2	32:Y:13:VAL:N	2.84	0.40
11:A:1023:U:C2'	11:A:1024:G:H5'	2.51	0.40
11:A:1947:C:C3'	11:A:1948:G:C5'	3.00	0.40
12:B:48:A:H4'	26:S:95:HIS:CD2	2.54	0.40
22:O:90:GLN:O	22:O:91:LEU:HB2	2.22	0.40
33:Z:165:VAL:HB	33:Z:166:SER:H	1.42	0.40
15:E:93:VAL:C	15:E:95:ILE:N	2.75	0.40
29:V:47:VAL:O	29:V:49:THR:N	2.54	0.40
25:R:38:VAL:O	25:R:42:LYS:HB2	2.21	0.40
13:C:79:LYS:HB2	13:C:118:ASP:OD2	2.21	0.40
24:Q:110:THR:O	24:Q:111:GLU:C	2.58	0.40
17:G:52:ILE:CG1	17:G:53:LEU:N	2.84	0.40
14:D:186:HIS:HD2	14:D:188:GLU:N	2.10	0.40
23:P:83:VAL:O	23:P:83:VAL:HG13	2.21	0.40
14:D:224:ALA:O	14:D:225:ALA:CB	2.65	0.40
11:A:1341:U:O4'	31:X:57:LEU:HG	2.21	0.40
11:A:271(F):C:H2'	11:A:271(G):C:O4'	2.21	0.40
25:R:12:ARG:HH11	25:R:12:ARG:CG	2.33	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:A:176:G:C2'	11:A:177:G:H5'	2.50	0.40
11:A:2207:G:O2'	11:A:2208:A:H5''	2.22	0.40
14:D:97:TYR:HE1	14:D:103:ARG:HB2	1.85	0.40
4:3:26:LEU:HB2	4:3:28:LEU:HD12	2.04	0.40
11:A:2585:U:O2	11:A:2585:U:O4'	2.39	0.40
5:4:36:CYS:SG	5:4:37:SER:O	2.63	0.40
11:A:1751:C:H2'	11:A:1752:C:C6	2.57	0.40
11:A:2320:A:C2	11:A:2333:A:C8	3.10	0.40
11:A:719:C:H2'	11:A:720:C:C6	2.57	0.40
7:6:20:ASN:O	7:6:21:TYR:CG	2.74	0.40
32:Y:8:LYS:HG2	32:Y:72:VAL:HG23	2.04	0.40
12:B:21:G:C2'	12:B:22:U:H5'	2.51	0.40
11:A:2182:G:O2'	11:A:2183:C:H5'	2.21	0.40
17:G:67:LYS:HA	17:G:68:PRO:HD3	1.79	0.40
6:5:44:THR:HG22	6:5:45:VAL:N	2.35	0.40
15:E:51:PHE:CG	15:E:52:LEU:N	2.90	0.40
15:E:69:LYS:CE	15:E:89:ASP:HA	2.52	0.40
23:P:100:LEU:HD13	23:P:100:LEU:C	2.41	0.40
18:H:103:LEU:CB	18:H:123:PHE:HD2	2.24	0.40
11:A:916:G:C2'	11:A:917:A:H5''	2.52	0.40
11:A:1131:G:O2'	11:A:1132:A:H8	2.03	0.40
11:A:605:C:C4	11:A:606:U:C5	3.10	0.40
11:A:2523:G:O2'	11:A:2524:G:H5''	2.20	0.40
17:G:114:ILE:O	17:G:114:ILE:HG12	2.20	0.40
11:A:1361:G:O2'	11:A:1362:C:H5'	2.21	0.40
11:A:984:A:H5''	11:A:985:C:C5	2.45	0.40
14:D:158:ALA:O	14:D:161:THR:HG23	2.21	0.40
4:3:31:LEU:C	4:3:33:GLN:N	2.74	0.40
23:P:110:TYR:O	23:P:111:ARG:C	2.59	0.40
2:1:59:THR:O	2:1:91:LYS:NZ	2.54	0.40
11:A:80:G:H2'	11:A:81:G:H8	1.86	0.40
11:A:598:G:H5'	23:P:15:ARG:CB	2.50	0.40
8:7:30:VAL:HG22	8:7:33:ARG:NH2	2.37	0.40
16:F:9:ILE:H	16:F:9:ILE:HG13	1.72	0.40
29:V:24:LYS:HG3	29:V:90:PRO:HB2	2.03	0.40
11:A:17:G:H2'	11:A:18:C:C6	2.56	0.40
11:A:1952:A:C2	22:O:22:ILE:HG23	2.55	0.40
31:X:45:THR:O	31:X:47:PHE:N	2.54	0.40
11:A:2149:G:O2'	11:A:2150:U:H5'	2.21	0.40
15:E:142:GLY:O	15:E:143:ASN:ND2	2.54	0.40
11:A:871:U:O2	11:A:871:U:H2'	2.20	0.40
19:J:102:UNK:C	19:J:104:UNK:H	2.34	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:3:50:VAL:O	4:3:52:HIS:N	2.54	0.40
11:A:825:C:H2'	11:A:826:U:O4'	2.21	0.40
13:C:21:THR:OG1	13:C:24:GLU:HG3	2.21	0.40
11:A:2693:A:H2'	11:A:2694:G:H8	1.86	0.40
14:D:33:LEU:HB3	14:D:34:VAL:H	1.58	0.40
9:8:4:MET:CE	11:A:592:G:H21	2.34	0.40
7:6:25:LYS:CE	9:8:34:TRP:HZ2	2.34	0.40
3:2:60:LEU:HA	3:2:60:LEU:HD23	1.94	0.40
11:A:2106:G:C5	11:A:2107:C:N3	2.89	0.40
18:H:154:PRO:HB2	18:H:155:SER:H	1.58	0.40
7:6:48:VAL:O	7:6:49:HIS:HB2	2.21	0.40
11:A:248:G:H5'	11:A:250:G:N7	2.37	0.40
33:Z:97:GLU:HA	33:Z:127:LYS:HA	2.02	0.40
15:E:101:ARG:HD2	15:E:169:ASN:O	2.22	0.40
13:C:6:ARG:HH11	13:C:34:THR:HB	1.87	0.40
18:H:44:VAL:CG1	18:H:45:VAL:H	2.33	0.40
27:T:62:THR:HA	27:T:74:ARG:O	2.21	0.40
11:A:780:G:H2'	11:A:782:A:N7	2.36	0.40
32:Y:91:GLU:HG2	32:Y:92:ASN:N	2.36	0.40
28:U:10:ARG:O	28:U:12:ARG:N	2.54	0.40
18:H:72:ILE:O	18:H:75:ALA:N	2.54	0.40
11:A:2467:C:C4'	24:Q:123:HIS:ND1	2.84	0.40
11:A:847:U:H2'	11:A:848:G:H5''	2.04	0.40
24:Q:1:MET:O	24:Q:2:LEU:HB2	2.21	0.40
8:7:48:LYS:HB3	8:7:48:LYS:HE2	1.90	0.40
11:A:2735:G:H2'	11:A:2736:G:C8	2.56	0.40
11:A:1424:G:H2'	11:A:1425:G:O4'	2.21	0.40
11:A:2738:A:H2'	11:A:2739:U:O5'	2.21	0.40
7:6:36:LEU:HD23	7:6:36:LEU:C	2.42	0.40
27:T:30:VAL:HA	27:T:44:ASP:HA	2.03	0.40
11:A:1544:A:O2'	11:A:1545:A:H5'	2.22	0.40
17:G:16:ARG:N	17:G:17:PRO:CD	2.83	0.40
11:A:2160:G:C5'	11:A:2160:G:C8	2.99	0.40
15:E:24:THR:HB	15:E:186:GLY:HA2	2.03	0.40
15:E:3:GLY:O	15:E:4:ILE:HB	2.21	0.40
11:A:1053:C:N4	11:A:1107:G:N2	2.69	0.40
13:C:116:THR:CG2	13:C:147:PHE:HA	2.49	0.40
13:C:77:ILE:HG22	13:C:119:VAL:HG21	2.04	0.40
13:C:79:LYS:HD3	13:C:119:VAL:CG1	2.51	0.40
33:Z:145:GLU:CG	33:Z:146:ILE:N	2.85	0.40
29:V:35:LEU:C	29:V:37:VAL:N	2.73	0.40
11:A:583:G:C5	11:A:584:C:C5	3.10	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:N:42:TRP:CD1	28:U:63:VAL:HG11	2.57	0.40
33:Z:107:THR:HA	33:Z:108:PRO:HD2	1.85	0.40
15:E:176:ILE:HG22	15:E:176:ILE:O	2.20	0.40
11:A:447:A:H4'	11:A:449:A:N7	2.37	0.40
11:A:2464:C:HO2'	11:A:2465:C:C5'	2.33	0.40
14:D:131:LEU:HD22	14:D:136:ILE:HD13	2.04	0.40
28:U:69:CYS:HB2	28:U:74:LEU:HD11	2.02	0.40
30:W:55:ALA:O	30:W:57:ASN:N	2.55	0.40
11:A:729:G:C6	14:D:208:LYS:HB2	2.57	0.40
21:N:62:VAL:HG11	21:N:67:LEU:HG	2.03	0.40
11:A:2008:C:H2'	11:A:2009:G:H8	1.87	0.40
22:O:28:SER:O	22:O:29:ASN:CB	2.67	0.40
30:W:35:ILE:C	30:W:37:ARG:N	2.75	0.40
3:2:30:ARG:NH1	31:X:5:TYR:HE2	2.20	0.40
17:G:152:LEU:O	17:G:152:LEU:HG	2.22	0.40
11:A:332:A:H4'	11:A:333:G:OP1	2.21	0.40
11:A:271(N):U:H5'	11:A:271(O):C:H5	1.86	0.40
12:B:78:A:C2	12:B:100:A:C4	3.10	0.40
11:A:1427:A:H4'	11:A:1428:C:O4'	2.22	0.40
11:A:2662:A:H2'	11:A:2663:G:O4'	2.21	0.40
11:A:2771:C:H2'	11:A:2772:C:C6	2.57	0.40

There are no symmetry-related clashes.

5.3 Torsion angles

5.3.1 Protein backbone ⓘ

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution. The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	0	82/85 (96%)	68 (83%)	10 (12%)	4 (5%)	3	23
2	1	91/98 (93%)	68 (75%)	13 (14%)	10 (11%)	1	5
3	2	69/72 (96%)	46 (67%)	17 (25%)	6 (9%)	1	9
4	3	57/60 (95%)	46 (81%)	6 (10%)	5 (9%)	1	8
5	4	42/71 (59%)	24 (57%)	11 (26%)	7 (17%)	0	0
6	5	57/60 (95%)	41 (72%)	7 (12%)	9 (16%)	0	1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
7	6	48/54 (89%)	23 (48%)	8 (17%)	17 (35%)	0	0
8	7	46/49 (94%)	39 (85%)	7 (15%)	0	100	100
9	8	61/65 (94%)	43 (70%)	12 (20%)	6 (10%)	1	6
10	9	35/37 (95%)	25 (71%)	7 (20%)	3 (9%)	1	9
13	C	226/229 (99%)	170 (75%)	40 (18%)	16 (7%)	2	12
14	D	273/276 (99%)	214 (78%)	33 (12%)	26 (10%)	1	7
15	E	202/206 (98%)	125 (62%)	46 (23%)	31 (15%)	0	1
16	F	205/210 (98%)	153 (75%)	23 (11%)	29 (14%)	0	2
17	G	179/182 (98%)	103 (58%)	45 (25%)	31 (17%)	0	0
18	H	157/180 (87%)	105 (67%)	28 (18%)	24 (15%)	0	1
21	N	136/140 (97%)	85 (62%)	32 (24%)	19 (14%)	0	2
22	O	120/122 (98%)	100 (83%)	15 (12%)	5 (4%)	4	27
23	P	144/150 (96%)	72 (50%)	31 (22%)	41 (28%)	0	0
24	Q	139/141 (99%)	108 (78%)	25 (18%)	6 (4%)	4	26
25	R	115/118 (98%)	81 (70%)	15 (13%)	19 (16%)	0	0
26	S	96/112 (86%)	44 (46%)	31 (32%)	21 (22%)	0	0
27	T	135/146 (92%)	85 (63%)	24 (18%)	26 (19%)	0	0
28	U	115/118 (98%)	82 (71%)	28 (24%)	5 (4%)	4	26
29	V	99/101 (98%)	67 (68%)	19 (19%)	13 (13%)	0	3
30	W	111/113 (98%)	82 (74%)	23 (21%)	6 (5%)	3	20
31	X	90/96 (94%)	63 (70%)	16 (18%)	11 (12%)	1	4
32	Y	98/110 (89%)	32 (33%)	36 (37%)	30 (31%)	0	0
33	Z	174/206 (84%)	111 (64%)	36 (21%)	27 (16%)	0	1
All	All	3402/3607 (94%)	2305 (68%)	644 (19%)	453 (13%)	0	2

All (453) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	1	39	LYS
2	1	64	ALA
2	1	66	HIS
2	1	83	GLU
3	2	48	HIS
3	2	68	ARG

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Mol	Chain	Res	Type
4	3	27	GLY
5	4	26	SER
6	5	4	HIS
6	5	24	ALA
6	5	25	LEU
6	5	49	CYS
6	5	57	VAL
7	6	16	CYS
7	6	18	ARG
7	6	20	ASN
7	6	27	LYS
7	6	28	ARG
7	6	31	PRO
7	6	33	LYS
7	6	45	LYS
7	6	53	LYS
9	8	31	HIS
9	8	34	TRP
9	8	43	GLN
9	8	49	VAL
13	C	128	GLY
13	C	160	ARG
13	C	167	LYS
14	D	31	LYS
14	D	33	LEU
14	D	42	GLY
14	D	58	HIS
14	D	246	PRO
14	D	267	SER
14	D	268	ARG
14	D	273	ARG
15	E	2	LYS
15	E	4	ILE
15	E	36	ARG
15	E	41	LYS
15	E	45	THR
15	E	53	PRO
15	E	66	HIS
15	E	69	LYS
15	E	76	ARG
15	E	77	ILE
15	E	82	ARG

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Mol	Chain	Res	Type
15	E	88	GLY
15	E	197	ILE
16	F	10	PRO
16	F	14	PRO
16	F	21	ALA
16	F	89	VAL
16	F	132	VAL
16	F	146	ALA
16	F	168	ARG
16	F	175	THR
16	F	176	LEU
17	G	3	LEU
17	G	11	TYR
17	G	25	TYR
17	G	71	THR
17	G	80	PHE
17	G	81	LYS
17	G	82	LEU
17	G	87	PRO
17	G	96	ARG
17	G	120	LEU
17	G	126	ASP
17	G	129	GLY
18	H	46	GLU
18	H	55	PRO
18	H	84	SER
18	H	138	LYS
18	H	158	HIS
18	H	159	GLU
18	H	169	VAL
21	N	8	GLN
21	N	42	TRP
21	N	58	ASP
21	N	64	GLY
21	N	130	HIS
22	O	29	ASN
22	O	48	PRO
23	P	10	PRO
23	P	13	ASN
23	P	17	LYS
23	P	19	VAL
23	P	21	ARG

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Mol	Chain	Res	Type
23	P	40	SER
23	P	47	ASP
23	P	52	GLU
23	P	58	THR
23	P	65	ARG
23	P	67	MET
23	P	107	LYS
23	P	111	ARG
23	P	132	LYS
23	P	146	VAL
23	P	147	LEU
23	P	149	GLU
24	Q	2	LEU
24	Q	19	GLY
24	Q	27	VAL
24	Q	137	TYR
25	R	4	LEU
25	R	6	SER
25	R	11	ASN
25	R	29	LEU
25	R	30	THR
25	R	117	VAL
26	S	23	ARG
26	S	51	ALA
26	S	57	LYS
26	S	59	LYS
26	S	62	LYS
26	S	94	TYR
26	S	97	ARG
26	S	98	VAL
27	T	2	ASN
27	T	24	PRO
27	T	26	ASP
27	T	27	THR
27	T	28	VAL
27	T	32	TYR
27	T	55	ASN
27	T	80	SER
27	T	89	VAL
27	T	91	ARG
27	T	92	GLY
27	T	93	ARG

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Mol	Chain	Res	Type
27	T	95	ARG
27	T	105	LEU
27	T	107	ASP
27	T	112	ARG
28	U	90	VAL
28	U	91	ASP
28	U	93	LYS
29	V	16	PRO
29	V	18	LEU
30	W	63	ASP
31	X	12	VAL
32	Y	3	VAL
32	Y	50	ARG
32	Y	51	VAL
32	Y	56	PRO
32	Y	60	PHE
32	Y	74	PRO
32	Y	75	ILE
32	Y	78	ALA
32	Y	82	PRO
32	Y	86	ARG
33	Z	17	ALA
33	Z	82	ARG
33	Z	113	ALA
33	Z	124	ILE
33	Z	145	GLU
33	Z	153	SER
33	Z	159	PRO
33	Z	163	LEU
33	Z	165	VAL
1	0	42	GLY
2	1	28	GLY
2	1	85	LEU
4	3	30	ARG
4	3	51	ALA
6	5	37	LYS
6	5	52	TYR
7	6	46	HIS
7	6	47	THR
9	8	3	LYS
9	8	33	ASN
13	C	36	LYS

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Mol	Chain	Res	Type
13	C	37	PHE
13	C	77	ILE
13	C	79	LYS
13	C	94	VAL
13	C	117	PRO
13	C	119	VAL
14	D	24	ILE
14	D	34	VAL
14	D	127	VAL
15	E	35	GLN
15	E	57	LYS
15	E	71	GLY
15	E	72	VAL
15	E	117	MET
15	E	130	GLY
15	E	185	LYS
15	E	189	PRO
16	F	7	TYR
16	F	26	ALA
16	F	82	ILE
16	F	83	PHE
16	F	86	GLY
16	F	88	VAL
16	F	134	GLY
16	F	169	ASN
17	G	35	GLU
17	G	75	LYS
17	G	79	ASN
17	G	84	LYS
17	G	97	ASP
17	G	115	ARG
17	G	127	GLY
17	G	128	ARG
17	G	151	ALA
18	H	24	VAL
18	H	44	VAL
18	H	81	GLU
18	H	154	PRO
21	N	23	LEU
21	N	47	ALA
21	N	63	THR
21	N	76	SER

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Mol	Chain	Res	Type
21	N	129	PRO
22	O	5	GLN
22	O	49	ARG
23	P	15	ARG
23	P	31	ALA
23	P	33	ARG
23	P	34	GLY
23	P	35	HIS
23	P	56	SER
23	P	59	LEU
23	P	116	GLY
23	P	148	LEU
25	R	3	HIS
25	R	45	ARG
25	R	57	ARG
25	R	60	LEU
25	R	88	ARG
25	R	104	ARG
25	R	107	ASP
26	S	13	ARG
26	S	17	ARG
26	S	63	THR
26	S	80	LEU
26	S	96	GLY
26	S	103	GLU
26	S	105	ALA
27	T	17	THR
27	T	41	ARG
27	T	104	ASN
27	T	129	ARG
28	U	77	SER
29	V	46	VAL
29	V	62	LEU
30	W	18	ARG
30	W	60	ASN
30	W	67	ASP
31	X	7	VAL
31	X	62	LYS
32	Y	8	LYS
32	Y	17	SER
32	Y	26	LYS
32	Y	39	VAL

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Mol	Chain	Res	Type
32	Y	42	VAL
32	Y	63	LYS
32	Y	65	ALA
32	Y	66	PRO
32	Y	68	HIS
32	Y	85	VAL
33	Z	9	TYR
33	Z	108	PRO
33	Z	110	GLY
33	Z	111	VAL
33	Z	177	PRO
1	0	20	ARG
1	0	75	LEU
2	1	52	ARG
2	1	53	VAL
2	1	91	LYS
3	2	22	GLU
3	2	35	LEU
3	2	69	ARG
5	4	8	LYS
5	4	34	GLU
6	5	53	ALA
7	6	17	LYS
7	6	23	THR
10	9	30	PRO
10	9	35	ARG
10	9	36	GLN
13	C	109	ASP
13	C	118	ASP
14	D	27	THR
14	D	30	GLU
14	D	35	LYS
14	D	242	ARG
15	E	54	GLN
15	E	56	PRO
15	E	61	ARG
15	E	68	ALA
15	E	75	VAL
16	F	79	GLY
16	F	127	GLU
16	F	133	ASN
16	F	178	PRO

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Mol	Chain	Res	Type
16	F	206	ILE
17	G	150	ASP
18	H	47	GLU
18	H	52	VAL
21	N	57	ALA
23	P	9	ASN
23	P	20	GLY
23	P	25	SER
23	P	39	LYS
23	P	57	THR
23	P	70	GLN
23	P	122	PRO
23	P	131	SER
24	Q	54	MET
25	R	14	SER
25	R	42	LYS
25	R	58	GLY
25	R	105	ARG
26	S	14	VAL
26	S	88	ASP
27	T	36	GLU
29	V	29	PRO
29	V	48	GLY
29	V	56	SER
30	W	56	ALA
31	X	4	ALA
31	X	11	PRO
31	X	19	ALA
32	Y	53	PRO
32	Y	77	PRO
32	Y	81	LYS
33	Z	24	LEU
33	Z	156	LYS
33	Z	166	SER
1	0	74	ARG
2	1	94	LEU
4	3	2	PRO
4	3	32	GLN
5	4	28	LYS
5	4	41	PRO
5	4	44	THR
6	5	36	CYS

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Mol	Chain	Res	Type
7	6	15	GLU
7	6	41	PRO
7	6	49	HIS
13	C	84	LYS
14	D	32	SER
14	D	156	ALA
14	D	224	ALA
14	D	245	PRO
15	E	62	PRO
16	F	94	PRO
16	F	171	PRO
16	F	177	ALA
17	G	10	LYS
17	G	32	PRO
18	H	25	LYS
18	H	41	MET
18	H	85	LYS
18	H	109	PHE
21	N	5	VAL
21	N	33	LEU
23	P	43	GLY
23	P	66	GLY
25	R	102	GLU
27	T	86	ILE
29	V	50	PRO
31	X	46	ALA
31	X	87	GLN
33	Z	18	LEU
33	Z	116	VAL
3	2	17	SER
13	C	55	ASP
14	D	3	VAL
14	D	26	LYS
14	D	28	GLU
14	D	241	PRO
15	E	34	VAL
15	E	135	HIS
16	F	25	PRO
16	F	172	TRP
17	G	50	ALA
18	H	21	PRO
18	H	49	VAL

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Mol	Chain	Res	Type
18	H	95	ARG
18	H	156	ALA
21	N	40	PRO
22	O	68	GLU
23	P	6	LEU
23	P	141	ALA
26	S	24	LEU
26	S	36	TYR
27	T	30	VAL
27	T	33	LYS
27	T	85	LYS
29	V	19	LYS
29	V	36	PRO
29	V	40	LEU
29	V	47	VAL
30	W	6	ILE
31	X	42	ALA
32	Y	57	GLN
33	Z	61	LEU
33	Z	78	LYS
33	Z	80	ARG
33	Z	134	PRO
33	Z	162	GLU
7	6	34	LEU
14	D	236	GLY
15	E	30	PRO
15	E	187	ALA
17	G	26	GLN
17	G	34	LEU
17	G	44	GLY
18	H	127	GLU
21	N	7	LYS
21	N	135	PRO
23	P	23	PRO
28	U	59	ARG
29	V	51	VAL
31	X	84	ALA
32	Y	7	VAL
32	Y	97	ARG
33	Z	142	SER
16	F	87	GLY
23	P	109	GLY

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Mol	Chain	Res	Type
24	Q	62	GLY
26	S	49	VAL
27	T	25	GLY
32	Y	27	VAL
33	Z	25	PRO
13	C	90	GLY
13	C	130	ILE
21	N	9	VAL
25	R	46	GLY
32	Y	76	CYS
14	D	244	ARG
16	F	126	VAL
17	G	52	ILE
17	G	70	VAL
26	S	22	GLY
33	Z	130	PRO
5	4	40	HIS
14	D	51	VAL
18	H	79	VAL
21	N	6	PRO
21	N	77	GLY
31	X	32	PRO
32	Y	31	LEU
32	Y	55	TYR
17	G	149	VAL
18	H	20	ALA
23	P	97	PRO

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	
1	0	66/67 (98%)	59 (89%)	7 (11%)	10	35
2	1	78/83 (94%)	67 (86%)	11 (14%)	5	20
3	2	66/67 (98%)	64 (97%)	2 (3%)	53	87
4	3	51/52 (98%)	45 (88%)	6 (12%)	8	29

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
5	4	39/63 (62%)	32 (82%)	7 (18%)	2	10
6	5	51/52 (98%)	45 (88%)	6 (12%)	8	29
7	6	49/52 (94%)	32 (65%)	17 (35%)	0	0
8	7	41/42 (98%)	38 (93%)	3 (7%)	20	59
9	8	53/55 (96%)	44 (83%)	9 (17%)	3	11
10	9	34/34 (100%)	31 (91%)	3 (9%)	14	49
13	C	180/181 (99%)	172 (96%)	8 (4%)	39	79
14	D	217/218 (100%)	186 (86%)	31 (14%)	5	19
15	E	165/166 (99%)	145 (88%)	20 (12%)	7	27
16	F	165/166 (99%)	152 (92%)	13 (8%)	18	55
17	G	155/156 (99%)	135 (87%)	20 (13%)	6	24
18	H	132/148 (89%)	118 (89%)	14 (11%)	10	35
21	N	117/119 (98%)	101 (86%)	16 (14%)	5	21
22	O	100/100 (100%)	93 (93%)	7 (7%)	21	61
23	P	112/116 (97%)	93 (83%)	19 (17%)	3	11
24	Q	111/111 (100%)	101 (91%)	10 (9%)	14	47
25	R	100/101 (99%)	87 (87%)	13 (13%)	6	23
26	S	77/88 (88%)	65 (84%)	12 (16%)	4	14
27	T	120/127 (94%)	97 (81%)	23 (19%)	2	9
28	U	92/94 (98%)	86 (94%)	6 (6%)	24	65
29	V	82/82 (100%)	67 (82%)	15 (18%)	2	10
30	W	91/92 (99%)	87 (96%)	4 (4%)	39	79
31	X	74/78 (95%)	67 (90%)	7 (10%)	12	42
32	Y	84/91 (92%)	71 (84%)	13 (16%)	4	14
33	Z	155/179 (87%)	130 (84%)	25 (16%)	3	13
All	All	2857/2980 (96%)	2510 (88%)	347 (12%)	7	27

All (347) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	0	14	ARG
1	0	16	SER
1	0	19	LYS

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Mol	Chain	Res	Type
1	0	20	ARG
1	0	62	LEU
1	0	75	LEU
1	0	84	LEU
2	1	3	LYS
2	1	21	ARG
2	1	26	ARG
2	1	33	LYS
2	1	37	ILE
2	1	45	ASN
2	1	67	ILE
2	1	69	LYS
2	1	73	LEU
2	1	75	GLU
2	1	83	GLU
3	2	7	ARG
3	2	68	ARG
4	3	18	ASP
4	3	35	ARG
4	3	36	VAL
4	3	38	GLU
4	3	46	ASN
4	3	48	GLU
5	4	5	ILE
5	4	9	LEU
5	4	20	ASN
5	4	28	LYS
5	4	32	TYR
5	4	43	TYR
5	4	47	GLN
6	5	3	LYS
6	5	11	THR
6	5	25	LEU
6	5	35	GLU
6	5	49	CYS
6	5	51	TYR
7	6	7	ILE
7	6	9	LEU
7	6	12	GLU
7	6	18	ARG
7	6	19	ARG
7	6	21	TYR

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Mol	Chain	Res	Type
7	6	23	THR
7	6	26	ASN
7	6	27	LYS
7	6	29	ASN
7	6	30	THR
7	6	31	PRO
7	6	41	PRO
7	6	42	TRP
7	6	44	ARG
7	6	45	LYS
7	6	53	LYS
8	7	1	MET
8	7	24	THR
8	7	34	ARG
9	8	30	ARG
9	8	34	TRP
9	8	35	GLN
9	8	40	GLU
9	8	41	ILE
9	8	44	LYS
9	8	47	LYS
9	8	61	LEU
9	8	64	TYR
10	9	11	CYS
10	9	29	ASN
10	9	34	GLN
13	C	11	LEU
13	C	55	ASP
13	C	57	ASN
13	C	81	GLU
13	C	93	TYR
13	C	134	ARG
13	C	210	ARG
13	C	218	MET
14	D	6	PHE
14	D	10	THR
14	D	24	ILE
14	D	26	LYS
14	D	27	THR
14	D	28	GLU
14	D	43	ARG
14	D	44	ASN

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Mol	Chain	Res	Type
14	D	46	GLN
14	D	95	LEU
14	D	104	TYR
14	D	106	ILE
14	D	111	LEU
14	D	112	GLN
14	D	155	LEU
14	D	157	ARG
14	D	166	GLN
14	D	176	ARG
14	D	192	THR
14	D	198	ASN
14	D	200	ASP
14	D	211	ARG
14	D	217	ARG
14	D	218	ARG
14	D	221	VAL
14	D	226	MET
14	D	241	PRO
14	D	246	PRO
14	D	270	ILE
14	D	275	LYS
14	D	276	LYS
15	E	17	ASP
15	E	18	ASP
15	E	25	VAL
15	E	33	VAL
15	E	55	ASN
15	E	56	PRO
15	E	57	LYS
15	E	62	PRO
15	E	67	PHE
15	E	76	ARG
15	E	78	LEU
15	E	79	ARG
15	E	121	ASN
15	E	144	ARG
15	E	146	THR
15	E	167	VAL
15	E	181	LEU
15	E	188	VAL
15	E	202	LYS

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Mol	Chain	Res	Type
15	E	203	LYS
16	F	19	GLU
16	F	23	ASP
16	F	28	ILE
16	F	72	ARG
16	F	88	VAL
16	F	98	SER
16	F	122	LYS
16	F	125	LEU
16	F	135	LYS
16	F	142	TRP
16	F	157	VAL
16	F	160	ASN
16	F	169	ASN
17	G	10	LYS
17	G	12	TYR
17	G	21	ARG
17	G	22	ARG
17	G	26	GLN
17	G	34	LEU
17	G	52	ILE
17	G	54	GLU
17	G	60	LEU
17	G	67	LYS
17	G	77	ILE
17	G	84	LYS
17	G	98	ARG
17	G	113	ARG
17	G	123	ASN
17	G	125	PHE
17	G	143	GLU
17	G	153	ARG
17	G	159	VAL
17	G	164	GLU
18	H	43	VAL
18	H	54	ARG
18	H	57	ASP
18	H	83	TYR
18	H	85	LYS
18	H	104	GLU
18	H	105	LEU
18	H	111	HIS

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Mol	Chain	Res	Type
18	H	139	GLN
18	H	152	ARG
18	H	153	LYS
18	H	157	TYR
18	H	162	ILE
18	H	163	TYR
21	N	1	MET
21	N	4	TYR
21	N	19	GLU
21	N	25	ARG
21	N	32	THR
21	N	38	HIS
21	N	45	ASN
21	N	48	MET
21	N	56	ASN
21	N	87	LEU
21	N	96	GLU
21	N	99	LEU
21	N	119	ARG
21	N	120	LEU
21	N	127	ASP
21	N	136	GLU
22	O	1	MET
22	O	8	LEU
22	O	23	ARG
22	O	24	VAL
22	O	48	PRO
22	O	69	ILE
22	O	94	ARG
23	P	6	LEU
23	P	16	ARG
23	P	32	THR
23	P	39	LYS
23	P	41	ARG
23	P	42	SER
23	P	45	LEU
23	P	57	THR
23	P	61	ARG
23	P	68	GLN
23	P	70	GLN
23	P	75	ILE
23	P	85	LEU

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Mol	Chain	Res	Type
23	P	91	PHE
23	P	112	LEU
23	P	114	ILE
23	P	115	LEU
23	P	136	GLU
23	P	149	GLU
24	Q	1	MET
24	Q	45	GLN
24	Q	54	MET
24	Q	55	VAL
24	Q	56	ARG
24	Q	58	PHE
24	Q	59	ARG
24	Q	79	LEU
24	Q	104	PHE
24	Q	139	GLU
25	R	2	ARG
25	R	4	LEU
25	R	5	LYS
25	R	10	LEU
25	R	30	THR
25	R	49	ASP
25	R	76	VAL
25	R	79	LEU
25	R	89	ASP
25	R	94	TYR
25	R	99	LYS
25	R	100	LEU
25	R	111	LEU
26	S	11	LYS
26	S	12	PHE
26	S	15	ARG
26	S	18	ILE
26	S	25	ARG
26	S	29	PHE
26	S	36	TYR
26	S	40	ILE
26	S	76	LYS
26	S	92	TYR
26	S	97	ARG
26	S	106	ARG
27	T	11	GLU

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Mol	Chain	Res	Type
27	T	24	PRO
27	T	29	ARG
27	T	32	TYR
27	T	38	ASN
27	T	39	ARG
27	T	41	ARG
27	T	43	GLN
27	T	44	ASP
27	T	48	ILE
27	T	49	VAL
27	T	50	ILE
27	T	53	ARG
27	T	58	ASN
27	T	65	LYS
27	T	78	LEU
27	T	82	LEU
27	T	88	ILE
27	T	99	LEU
27	T	108	ARG
27	T	115	ARG
27	T	124	ASP
27	T	128	GLU
28	U	9	VAL
28	U	66	ASN
28	U	74	LEU
28	U	78	THR
28	U	92	ARG
28	U	108	GLU
29	V	2	PHE
29	V	12	TYR
29	V	16	PRO
29	V	18	LEU
29	V	19	LYS
29	V	21	ARG
29	V	26	ASP
29	V	35	LEU
29	V	39	LEU
29	V	68	LYS
29	V	79	VAL
29	V	82	ARG
29	V	91	TYR
29	V	95	LEU

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Mol	Chain	Res	Type
29	V	99	ILE
30	W	8	ARG
30	W	11	ARG
30	W	34	ASN
30	W	107	LEU
31	X	11	PRO
31	X	28	PHE
31	X	37	THR
31	X	57	LEU
31	X	60	ARG
31	X	68	ARG
31	X	75	ASP
32	Y	2	ARG
32	Y	5	MET
32	Y	6	HIS
32	Y	7	VAL
32	Y	29	GLU
32	Y	32	PRO
32	Y	50	ARG
32	Y	62	GLU
32	Y	73	ARG
32	Y	76	CYS
32	Y	77	PRO
32	Y	90	LEU
32	Y	97	ARG
33	Z	6	LYS
33	Z	9	TYR
33	Z	11	GLU
33	Z	30	ASN
33	Z	38	TYR
33	Z	41	LEU
33	Z	55	HIS
33	Z	70	LEU
33	Z	76	LEU
33	Z	79	ARG
33	Z	87	ASP
33	Z	121	HIS
33	Z	122	ARG
33	Z	127	LYS
33	Z	130	PRO
33	Z	131	ARG
33	Z	132	ASN

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Mol	Chain	Res	Type
33	Z	136	PHE
33	Z	140	ASP
33	Z	144	LEU
33	Z	148	ASP
33	Z	150	LEU
33	Z	155	LEU
33	Z	165	VAL
33	Z	178	GLU

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (86) such sidechains are listed below:

Mol	Chain	Res	Type
1	0	12	ASN
1	0	29	GLN
1	0	50	ASN
1	0	70	GLN
2	1	16	ASN
2	1	45	ASN
3	2	43	GLN
3	2	46	GLN
3	2	47	ASN
3	2	56	GLN
3	2	70	GLN
4	3	19	GLN
4	3	46	ASN
4	3	52	HIS
5	4	20	ASN
5	4	40	HIS
5	4	47	GLN
7	6	26	ASN
10	9	29	ASN
13	C	57	ASN
14	D	44	ASN
14	D	58	HIS
14	D	116	GLN
14	D	126	GLN
14	D	166	GLN
14	D	186	HIS
14	D	198	ASN
14	D	233	HIS
14	D	253	GLN
15	E	48	GLN

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Mol	Chain	Res	Type
15	E	54	GLN
15	E	55	ASN
15	E	121	ASN
15	E	129	HIS
15	E	169	ASN
15	E	180	ASN
16	F	29	ASN
16	F	40	GLN
16	F	69	HIS
16	F	75	HIS
16	F	133	ASN
16	F	160	ASN
16	F	204	ASN
17	G	40	ASN
17	G	79	ASN
18	H	61	HIS
18	H	74	ASN
18	H	139	GLN
18	H	147	ASN
21	N	45	ASN
21	N	56	ASN
21	N	94	HIS
21	N	131	GLN
22	O	3	GLN
23	P	13	ASN
23	P	68	GLN
23	P	81	GLN
23	P	84	ASN
23	P	128	HIS
24	Q	45	GLN
24	Q	141	GLN
25	R	11	ASN
25	R	23	ASN
25	R	24	GLN
27	T	38	ASN
27	T	43	GLN
27	T	58	ASN
27	T	79	HIS
27	T	90	GLN
27	T	104	ASN
28	U	49	HIS
28	U	66	ASN

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Mol	Chain	Res	Type
28	U	117	GLN
29	V	11	GLN
30	W	57	ASN
30	W	61	ASN
30	W	102	HIS
31	X	41	ASN
31	X	55	ASN
31	X	82	GLN
31	X	87	GLN
32	Y	6	HIS
33	Z	30	ASN
33	Z	75	ASN
33	Z	118	GLN
33	Z	132	ASN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
11	A	2900/2915 (99%)	494 (17%)	45 (1%)
12	B	118/122 (96%)	22 (18%)	3 (2%)
All	All	3018/3037 (99%)	516 (17%)	48 (1%)

All (516) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
11	A	10	G
11	A	45	C
11	A	69	C
11	A	71	A
11	A	72	U
11	A	74	A
11	A	75	G
11	A	84	A
11	A	85	G
11	A	88	G
11	A	90	U
11	A	92	A
11	A	94	C
11	A	100	G
11	A	102	G
11	A	118	A

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Mol	Chain	Res	Type
11	A	119	A
11	A	120	U
11	A	129	C
11	A	139(A)	G
11	A	141	A
11	A	146	G
11	A	149	A
11	A	156	U
11	A	174	C
11	A	181	A
11	A	196	A
11	A	197	A
11	A	199	A
11	A	200	U
11	A	204	A
11	A	205	G
11	A	215	G
11	A	216	A
11	A	221	A
11	A	222	A
11	A	229	A
11	A	233	A
11	A	245	G
11	A	248	G
11	A	261	G
11	A	268	C
11	A	271(I)	G
11	A	271(K)	U
11	A	271(M)	G
11	A	271(O)	C
11	A	272(A)	U
11	A	272(B)	G
11	A	272(I)	U
11	A	276	A
11	A	278	A
11	A	288	C
11	A	322	A
11	A	324	A
11	A	329	G
11	A	330	A
11	A	333	G
11	A	338	G

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Mol	Chain	Res	Type
11	A	352	G
11	A	353	G
11	A	358	U
11	A	362	U
11	A	363	G
11	A	363(F)	A
11	A	386	G
11	A	388	G
11	A	396	G
11	A	405	U
11	A	406	G
11	A	411	G
11	A	428	A
11	A	448	U
11	A	451	C
11	A	457	A
11	A	458	G
11	A	470	A
11	A	480	A
11	A	481	G
11	A	494	G
11	A	505	A
11	A	508	G
11	A	509	C
11	A	512	G
11	A	513	A
11	A	529	A
11	A	530	G
11	A	531	C
11	A	532	A
11	A	533	G
11	A	537	C
11	A	556	G
11	A	563	G
11	A	573	G
11	A	575	A
11	A	586	A
11	A	587	C
11	A	588	U
11	A	603	A
11	A	604	G
11	A	607	U

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Mol	Chain	Res	Type
11	A	613	G
11	A	614(B)	G
11	A	615	G
11	A	622	G
11	A	624	C
11	A	627	A
11	A	629	G
11	A	637	A
11	A	645	C
11	A	646	A
11	A	651	G
11	A	653	A
11	A	654(J)	A
11	A	654(K)	C
11	A	654(M)	C
11	A	654(T)	C
11	A	655	A
11	A	656	G
11	A	669	G
11	A	673	C
11	A	686	G
11	A	708	C
11	A	722	A
11	A	730	C
11	A	753	C
11	A	765	G
11	A	776	G
11	A	782	A
11	A	784	A
11	A	785	G
11	A	790	C
11	A	791	C
11	A	792	G
11	A	805	G
11	A	812	C
11	A	819	A
11	A	827	U
11	A	828	U
11	A	830	G
11	A	848	G
11	A	857	C
11	A	859	G

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Mol	Chain	Res	Type
11	A	866	A
11	A	878	A
11	A	889	C
11	A	890	A
11	A	896	A
11	A	897	C
11	A	901	A
11	A	910	A
11	A	917	A
11	A	926	A
11	A	932	G
11	A	941	A
11	A	945	A
11	A	946	G
11	A	953	A
11	A	958	U
11	A	959	A
11	A	961	C
11	A	974	G
11	A	975	C
11	A	983	A
11	A	991	C
11	A	996	A
11	A	1011	G
11	A	1012	U
11	A	1013	C
11	A	1022	G
11	A	1025	G
11	A	1026	U
11	A	1034	G
11	A	1038	C
11	A	1039	G
11	A	1045	A
11	A	1046	A
11	A	1047	G
11	A	1053	C
11	A	1059	G
11	A	1061	U
11	A	1062	G
11	A	1065	U
11	A	1067	A
11	A	1068	G

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Mol	Chain	Res	Type
11	A	1069	A
11	A	1070	A
11	A	1071	G
11	A	1072	C
11	A	1073	A
11	A	1087	G
11	A	1088	A
11	A	1090	U
11	A	1094	U
11	A	1111	A
11	A	1112	G
11	A	1116	C
11	A	1135	C
11	A	1136	G
11	A	1143	A
11	A	1155	A
11	A	1174	A
11	A	1175	U
11	A	1176	G
11	A	1178	C
11	A	1205	U
11	A	1210	A
11	A	1211	U
11	A	1212	G
11	A	1223	G
11	A	1236	G
11	A	1244	G
11	A	1247	A
11	A	1248	G
11	A	1253	A
11	A	1256	G
11	A	1265	A
11	A	1271	G
11	A	1272	A
11	A	1273	U
11	A	1294	U
11	A	1300	U
11	A	1301	A
11	A	1302	A
11	A	1314	C
11	A	1319	G
11	A	1332	G

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Mol	Chain	Res	Type
11	A	1349	A
11	A	1359	A
11	A	1365	A
11	A	1368	G
11	A	1379	A
11	A	1380	G
11	A	1384	A
11	A	1385	G
11	A	1386	C
11	A	1396	U
11	A	1407	C
11	A	1416	G
11	A	1417	C
11	A	1427	A
11	A	1428	C
11	A	1437	C
11	A	1445	A
11	A	1449	A
11	A	1450	G
11	A	1455	G
11	A	1458	C
11	A	1460	A
11	A	1461	G
11	A	1467	C
11	A	1471	A
11	A	1475	G
11	A	1478	G
11	A	1482	G
11	A	1485	G
11	A	1490	A
11	A	1491	G
11	A	1493	C
11	A	1494	A
11	A	1495	A
11	A	1496	A
11	A	1497	U
11	A	1502	C
11	A	1505	C
11	A	1509	C
11	A	1509(A)	A
11	A	1517	G
11	A	1541	G

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Mol	Chain	Res	Type
11	A	1542	A
11	A	1544	A
11	A	1549	C
11	A	1554	A
11	A	1559	G
11	A	1569	A
11	A	1578	U
11	A	1579	A
11	A	1584	C
11	A	1586	A
11	A	1588	C
11	A	1591	G
11	A	1593	G
11	A	1603	A
11	A	1608	A
11	A	1616	A
11	A	1617	C
11	A	1618	A
11	A	1634	A
11	A	1635	G
11	A	1640	C
11	A	1648	C
11	A	1651	G
11	A	1654	A
11	A	1666	G
11	A	1674	G
11	A	1698	A
11	A	1699	G
11	A	1721	G
11	A	1722	A
11	A	1739	U
11	A	1742	G
11	A	1748	G
11	A	1756	G
11	A	1763	G
11	A	1764	G
11	A	1773	A
11	A	1780	A
11	A	1791	A
11	A	1799	G
11	A	1800	C
11	A	1801	G

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Mol	Chain	Res	Type
11	A	1816	G
11	A	1820	U
11	A	1821	A
11	A	1835	G
11	A	1847	A
11	A	1858	G
11	A	1865	G
11	A	1877	A
11	A	1878	G
11	A	1881	C
11	A	1885	A
11	A	1888	G
11	A	1889	A
11	A	1900	A
11	A	1906	G
11	A	1929	G
11	A	1930	G
11	A	1936	A
11	A	1938	A
11	A	1948	G
11	A	1955	U
11	A	1960	A
11	A	1963	U
11	A	1967	C
11	A	1969	A
11	A	1970	A
11	A	1971	A
11	A	1972	A
11	A	1982	C
11	A	1987	G
11	A	1992	G
11	A	1993	U
11	A	1997	G
11	A	2023	G
11	A	2031	A
11	A	2033	A
11	A	2034	U
11	A	2036	C
11	A	2043	C
11	A	2055	C
11	A	2056	G
11	A	2060	A

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Mol	Chain	Res	Type
11	A	2061	G
11	A	2062	A
11	A	2069	G
11	A	2093	G
11	A	2100	G
11	A	2102	U
11	A	2103	C
11	A	2104	G
11	A	2116	G
11	A	2117	A
11	A	2118	U
11	A	2127	G
11	A	2129	C
11	A	2131	G
11	A	2132	U
11	A	2133	G
11	A	2146	C
11	A	2148	G
11	A	2157	G
11	A	2159	G
11	A	2160	G
11	A	2172	U
11	A	2173	A
11	A	2174	C
11	A	2180	U
11	A	2185	C
11	A	2186	G
11	A	2187	G
11	A	2189	U
11	A	2190	G
11	A	2192	G
11	A	2193	G
11	A	2198	A
11	A	2199	A
11	A	2200	C
11	A	2207	G
11	A	2208	A
11	A	2218	U
11	A	2219	G
11	A	2225	A
11	A	2238	G
11	A	2239	G

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Mol	Chain	Res	Type
11	A	2275	C
11	A	2283	C
11	A	2287	A
11	A	2288	A
11	A	2305	A
11	A	2306	C
11	A	2307	G
11	A	2308	G
11	A	2313	C
11	A	2319	G
11	A	2320	A
11	A	2334	G
11	A	2336	A
11	A	2343	C
11	A	2347	C
11	A	2350	C
11	A	2361	A
11	A	2383	G
11	A	2385	C
11	A	2392	A
11	A	2400	G
11	A	2402	C
11	A	2403	C
11	A	2406	U
11	A	2423	U
11	A	2425	A
11	A	2429	G
11	A	2430	A
11	A	2431	U
11	A	2434	A
11	A	2439	A
11	A	2441	C
11	A	2448	A
11	A	2465	C
11	A	2469	A
11	A	2476	A
11	A	2484	G
11	A	2502	G
11	A	2505	G
11	A	2518	A
11	A	2524	G
11	A	2529	G

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Mol	Chain	Res	Type
11	A	2543	G
11	A	2554	U
11	A	2566	A
11	A	2567	G
11	A	2581	G
11	A	2582	G
11	A	2586	C
11	A	2602	A
11	A	2604	U
11	A	2609	U
11	A	2611	U
11	A	2612	C
11	A	2615	U
11	A	2630	G
11	A	2636	U
11	A	2646	C
11	A	2660	A
11	A	2673	G
11	A	2690	C
11	A	2702	U
11	A	2712	U
11	A	2712(A)	A
11	A	2713	A
11	A	2720	U
11	A	2726	U
11	A	2733	A
11	A	2750	A
11	A	2751	G
11	A	2752	C
11	A	2757	A
11	A	2759	G
11	A	2761	G
11	A	2762	G
11	A	2764	A
11	A	2765	A
11	A	2766	G
11	A	2778	A
11	A	2779	U
11	A	2780	G
11	A	2781	A
11	A	2790	A
11	A	2791	C

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Mol	Chain	Res	Type
11	A	2792	G
11	A	2794	C
11	A	2799	C
11	A	2802	G
11	A	2803	C
11	A	2808	U
11	A	2820	A
11	A	2821	A
11	A	2823	A
11	A	2833	G
11	A	2834	G
11	A	2849	U
11	A	2863	C
11	A	2872	G
11	A	2880	C
11	A	2894	G
12	B	8	U
12	B	13	A
12	B	15	A
12	B	16	G
12	B	17	C
12	B	21	G
12	B	25	A
12	B	27	C
12	B	35	U
12	B	41	U
12	B	42	C
12	B	43	C
12	B	45	A
12	B	53	A
12	B	57	A
12	B	66	A
12	B	67	G
12	B	73	A
12	B	81	G
12	B	82	G
12	B	88	C
12	B	110	G

All (48) RNA pucker outliers are listed below:

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Mol	Chain	Res	Type
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Mol	Chain	Res	Type
11	A	71	A
11	A	83	G
11	A	199	A
11	A	221	A
11	A	332	A
11	A	387	U
11	A	512	G
11	A	587	C
11	A	603	A
11	A	614(C)	A
11	A	752	A
11	A	790	C
11	A	811	U
11	A	856	C
11	A	1052	C
11	A	1060	U
11	A	1068	G
11	A	1069	A
11	A	1210	A
11	A	1300	U
11	A	1301	A
11	A	1378	A
11	A	1427	A
11	A	1541	G
11	A	1558	A
11	A	1653	G
11	A	1799	G
11	A	1819	A
11	A	1820	U
11	A	1948	G
11	A	1960	A
11	A	1970	A
11	A	2033	A
11	A	2126	A
11	A	2131	G
11	A	2145	C
11	A	2160	G
11	A	2422	A
11	A	2581	G
11	A	2610	C
11	A	2689	U

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Mol	Chain	Res	Type
11	A	2750	A
11	A	2756	U
11	A	2762	G
11	A	2779	U
12	B	34	U
12	B	56	G
12	B	66	A

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

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

5.5 Carbohydrates ⓘ

There are no carbohydrates in this entry.

5.6 Ligand geometry ⓘ

There are no ligands in this entry.

5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

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	0	84/85 (98%)	0.31	2 (2%) 56 9	77, 91, 118, 131	0
2	1	93/98 (94%)	0.14	1 (1%) 77 22	74, 95, 134, 143	0
3	2	71/72 (98%)	-0.01	1 (1%) 72 17	110, 133, 148, 157	0
4	3	59/60 (98%)	0.08	1 (1%) 67 15	81, 99, 120, 142	0
5	4	44/71 (61%)	0.41	3 (6%) 17 3	124, 149, 160, 163	0
6	5	59/60 (98%)	0.03	0 100 100	73, 105, 158, 176	0
7	6	50/54 (92%)	0.13	1 (2%) 62 12	74, 106, 116, 125	0
8	7	48/49 (97%)	0.43	4 (8%) 11 2	70, 79, 119, 139	0
9	8	63/65 (96%)	0.16	0 100 100	80, 90, 104, 131	0
10	9	37/37 (100%)	0.22	1 (2%) 52 8	76, 90, 104, 108	0
11	A	2901/2915 (99%)	0.02	40 (1%) 72 17	49, 95, 190, 200	0
12	B	119/122 (97%)	-0.01	4 (3%) 43 6	78, 108, 134, 157	0
13	C	228/229 (99%)	0.08	4 (1%) 65 14	69, 99, 177, 187	0
14	D	275/276 (99%)	-0.07	1 (0%) 90 45	50, 68, 98, 123	0
15	E	204/206 (99%)	0.06	0 100 100	64, 93, 141, 152	0
16	F	207/210 (98%)	0.40	7 (3%) 43 6	73, 128, 176, 184	0
17	G	181/182 (99%)	0.17	5 (2%) 50 8	97, 125, 147, 157	0
18	H	159/180 (88%)	0.19	6 (3%) 38 5	106, 142, 163, 165	0
19	J	0/173	-	-	-	-
20	K	0/147	-	-	-	-
21	N	138/140 (98%)	0.02	0 100 100	78, 104, 145, 148	0
22	O	122/122 (100%)	-0.21	0 100 100	58, 76, 90, 97	0
23	P	146/150 (97%)	0.42	7 (4%) 29 4	73, 121, 146, 162	0
24	Q	141/141 (100%)	-0.02	1 (0%) 84 32	61, 78, 107, 138	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
25	R	117/118 (99%)	0.09	0 100 100	76, 98, 114, 129	0
26	S	98/112 (87%)	0.43	6 (6%) 21 3	89, 112, 137, 141	0
27	T	137/146 (93%)	0.05	3 (2%) 59 11	74, 97, 155, 179	0
28	U	117/118 (99%)	0.13	0 100 100	81, 98, 125, 142	0
29	V	101/101 (100%)	0.25	3 (2%) 48 7	79, 130, 146, 150	0
30	W	113/113 (100%)	0.14	2 (1%) 65 14	85, 100, 133, 165	0
31	X	92/96 (95%)	0.30	1 (1%) 77 22	83, 109, 125, 134	0
32	Y	100/110 (90%)	0.62	6 (6%) 21 3	127, 146, 179, 187	0
33	Z	176/206 (85%)	0.00	0 100 100	75, 103, 135, 144	0
All	All	6480/6964 (93%)	0.09	110 (1%) 67 15	49, 99, 166, 200	0

All (110) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
11	A	1584	C	4.8
32	Y	82	PRO	4.8
26	S	59	LYS	4.5
11	A	1534	U	4.0
26	S	78	LEU	4.0
26	S	60	GLY	3.9
24	Q	141	GLN	3.8
16	F	173	VAL	3.7
17	G	84	LYS	3.6
17	G	2	PRO	3.5
11	A	1059	G	3.5
11	A	2802	G	3.5
16	F	19	GLU	3.5
18	H	138	LYS	3.4
11	A	389	G	3.4
11	A	505	A	3.3
11	A	504	U	3.3
11	A	279	C	3.2
5	4	25	TYR	3.2
11	A	1103	A	3.2
31	X	5	TYR	3.2
11	A	330	A	3.1
1	0	7	LEU	3.1
26	S	75	GLU	3.1
17	G	152	LEU	3.1

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Mol	Chain	Res	Type	RSRZ
29	V	101	GLY	3.0
12	B	65	C	3.0
11	A	1077	A	3.0
5	4	30	GLU	2.9
11	A	654(K)	C	2.9
11	A	75	G	2.8
11	A	1740	G	2.8
32	Y	19	LYS	2.8
26	S	33	LYS	2.8
11	A	100	G	2.8
16	F	174	VAL	2.7
26	S	79	ALA	2.7
11	A	2896	C	2.7
18	H	59	ARG	2.7
27	T	91	ARG	2.7
29	V	6	LYS	2.7
11	A	1328	G	2.7
11	A	1088	A	2.6
10	9	1	MET	2.6
16	F	194	MET	2.6
23	P	15	ARG	2.6
11	A	1205	U	2.6
11	A	1743	C	2.6
8	7	45	ALA	2.6
4	3	1	MET	2.6
11	A	523	C	2.5
23	P	90	ARG	2.5
11	A	271(S)	G	2.5
11	A	1097	U	2.4
2	1	81	LYS	2.4
23	P	14	LYS	2.4
16	F	92	PRO	2.4
30	W	6	ILE	2.4
23	P	27	HIS	2.4
13	C	39	GLU	2.4
11	A	1455	G	2.4
11	A	1839	G	2.4
32	Y	5	MET	2.4
11	A	1043	C	2.3
11	A	1049	C	2.3
3	2	54	LYS	2.3
16	F	175	THR	2.3

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Mol	Chain	Res	Type	RSRZ
16	F	171	PRO	2.3
11	A	1080	C	2.3
11	A	362	U	2.3
13	C	81	GLU	2.3
32	Y	83	THR	2.3
23	P	115	LEU	2.3
12	B	12	C	2.3
27	T	1	MET	2.2
11	A	351	G	2.2
17	G	177	GLY	2.2
7	6	50	ARG	2.2
8	7	46	VAL	2.2
5	4	47	GLN	2.2
18	H	60	ARG	2.2
18	H	128	PRO	2.2
29	V	71	LEU	2.2
11	A	1509	C	2.2
27	T	94	ALA	2.2
14	D	244	ARG	2.2
23	P	65	ARG	2.2
18	H	129	THR	2.1
11	A	654(A)	G	2.1
17	G	82	LEU	2.1
12	B	66	A	2.1
11	A	1467	C	2.1
8	7	42	LEU	2.1
1	0	3	HIS	2.1
23	P	22	GLY	2.1
11	A	1094	U	2.1
32	Y	80	GLY	2.1
11	A	654(H)	G	2.1
12	B	11	C	2.1
30	W	105	VAL	2.1
11	A	309	G	2.1
8	7	48	LYS	2.1
13	C	77	ILE	2.1
11	A	654(J)	A	2.1
13	C	1	PRO	2.1
11	A	1074	G	2.0
11	A	1508	A	2.0
11	A	614(A)	U	2.0
32	Y	71	LYS	2.0

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Mol	Chain	Res	Type	RSRZ
18	H	92	ILE	2.0

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

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

6.3 Carbohydrates ⓘ

There are no carbohydrates in this entry.

6.4 Ligands ⓘ

There are no ligands in this entry.

6.5 Other polymers ⓘ

There are no such residues in this entry.