



# Full wwPDB X-ray Structure Validation Report ⓘ

Oct 24, 2023 – 06:12 AM EDT

PDB ID : 2ZJQ  
Title : Interaction of L7 with L11 induced by Micrococin binding to the Deinococcus radiodurans 50S subunit  
Authors : Harms, J.M.; Wilson, D.N.; Schluenzen, F.; Connell, S.R.; Stachelhaus, T.; Zaborowska, Z.; Spahn, C.M.T.; Fucini, P.  
Deposited on : 2008-03-08  
Resolution : 3.30 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

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

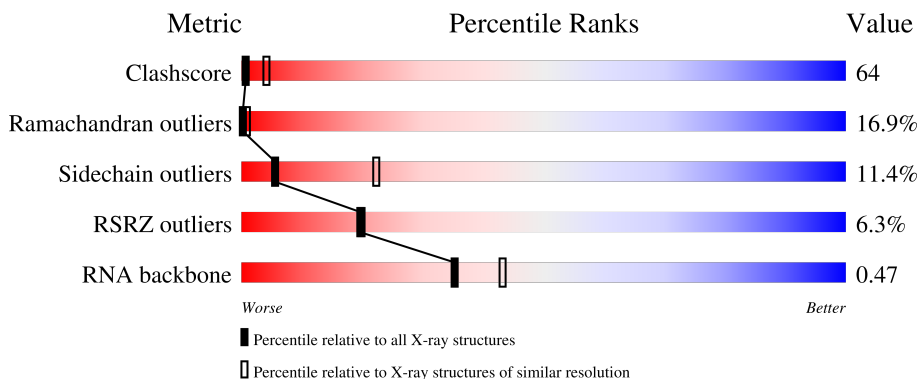
# 1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 3.30 Å.

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



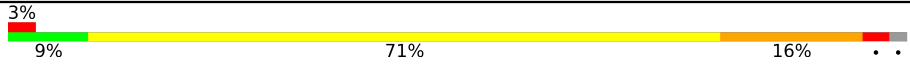
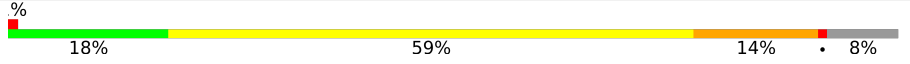
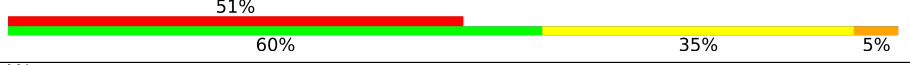
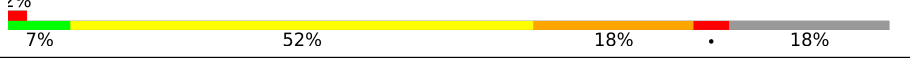
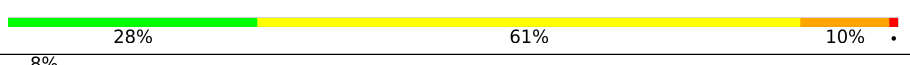
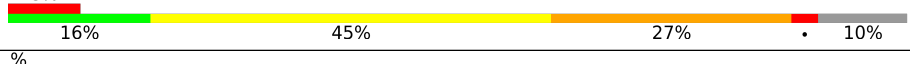
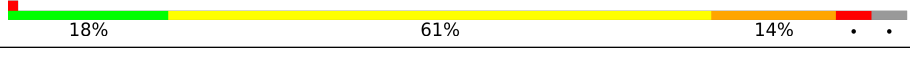
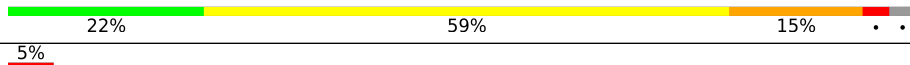
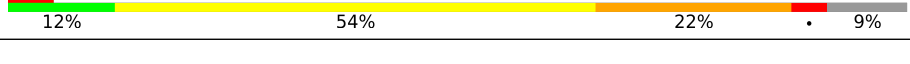

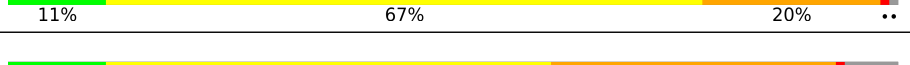
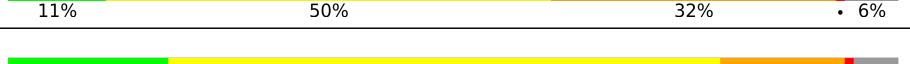
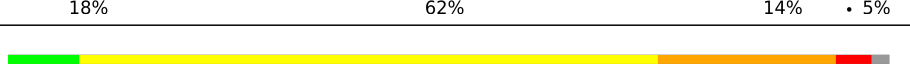
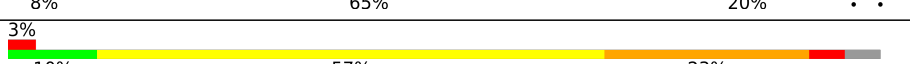
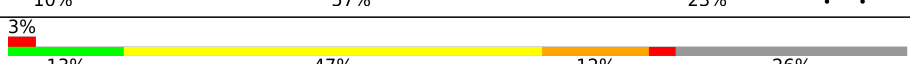
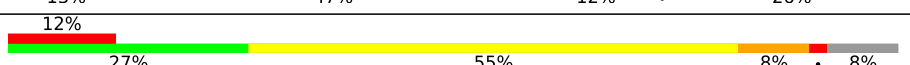
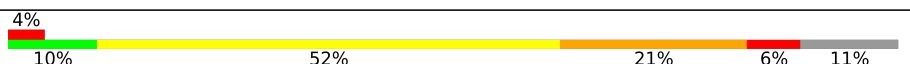
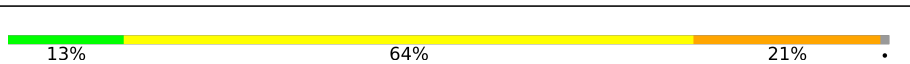
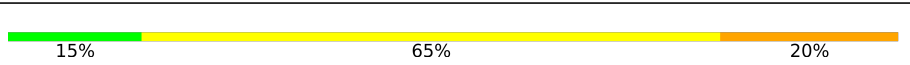
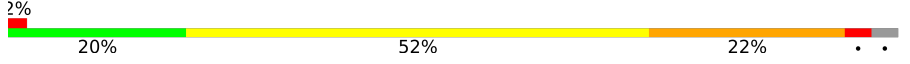
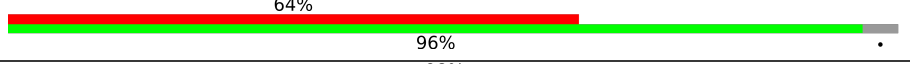
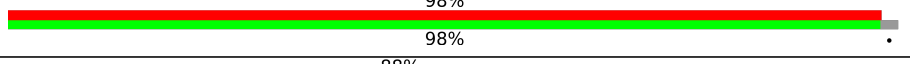
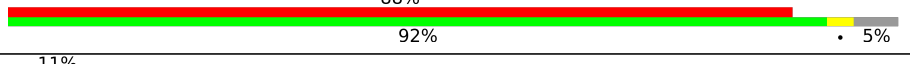
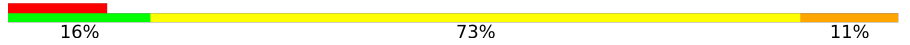

Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
Clashscore	141614	1205 (3.34-3.26)
Ramachandran outliers	138981	1183 (3.34-3.26)
Sidechain outliers	138945	1182 (3.34-3.26)
RSRZ outliers	127900	1115 (3.34-3.26)
RNA backbone	3102	1117 (3.70-2.90)

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

Mol	Chain	Length	Quality of chain
1	X	2880	<div style="display: flex; align-items: center;"> <div style="width: 10%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 11%; height: 10px; background-color: green; margin-right: 5px;"></div> <div style="width: 50%; height: 10px; background-color: yellow; margin-right: 5px;"></div> <div style="width: 23%; height: 10px; background-color: orange; margin-right: 5px;"></div> <div style="width: 10%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 7%; height: 10px; background-color: grey;"></div> </div> <p style="margin-top: 5px;">11% 50% 23% 10% 7%</p>
2	Y	122	<div style="display: flex; align-items: center;"> <div style="width: 2%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 16%; height: 10px; background-color: green; margin-right: 5px;"></div> <div style="width: 69%; height: 10px; background-color: yellow; margin-right: 5px;"></div> <div style="width: 14%; height: 10px; background-color: orange; margin-right: 5px;"></div> <div style="width: 1%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 1%; height: 10px; background-color: grey;"></div> </div> <p style="margin-top: 5px;">16% 69% 14%</p>
3	A	274	<div style="display: flex; align-items: center;"> <div style="width: 2%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 19%; height: 10px; background-color: green; margin-right: 5px;"></div> <div style="width: 55%; height: 10px; background-color: yellow; margin-right: 5px;"></div> <div style="width: 14%; height: 10px; background-color: orange; margin-right: 5px;"></div> <div style="width: 12%; height: 10px; background-color: grey;"></div> </div> <p style="margin-top: 5px;">19% 55% 14% 12%</p>
4	B	211	<div style="display: flex; align-items: center;"> <div style="width: 1%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 25%; height: 10px; background-color: green; margin-right: 5px;"></div> <div style="width: 56%; height: 10px; background-color: yellow; margin-right: 5px;"></div> <div style="width: 13%; height: 10px; background-color: orange; margin-right: 5px;"></div> <div style="width: 3%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 3%; height: 10px; background-color: grey;"></div> </div> <p style="margin-top: 5px;">25% 56% 13%</p>
5	C	205	<div style="display: flex; align-items: center;"> <div style="width: 1%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 14%; height: 10px; background-color: green; margin-right: 5px;"></div> <div style="width: 54%; height: 10px; background-color: yellow; margin-right: 5px;"></div> <div style="width: 24%; height: 10px; background-color: orange; margin-right: 5px;"></div> <div style="width: 5%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 4%; height: 10px; background-color: grey;"></div> </div> <p style="margin-top: 5px;">14% 54% 24% 5%</p>

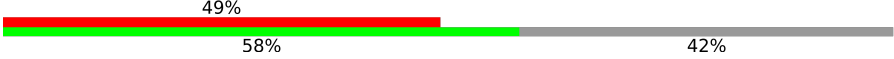
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Mol	Chain	Length	Quality of chain
6	D	180	
7	E	185	
8	F	144	
9	G	174	
10	H	134	
11	I	156	
12	J	142	
13	K	116	
14	L	114	
15	M	166	
16	N	118	
17	O	100	
18	P	134	
19	Q	95	
20	R	115	
21	S	237	
22	T	91	
23	U	81	
24	V	67	
25	W	55	
26	Z	60	
27	1	55	
28	2	47	
29	3	66	
30	4	37	

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Mol	Chain	Length	Quality of chain
31	5	122	 <p>A horizontal bar chart representing the quality of chain. The bar is divided into three segments: a red segment on the left labeled '49%', a green segment in the middle labeled '58%', and a grey segment on the right labeled '42%'. The segments are stacked horizontally, with the red segment starting from the left, followed by the green segment, and then the grey segment.</p>

## 2 Entry composition [i](#)

There are 31 unique types of molecules in this entry. The entry contains 84395 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a RNA chain called ribosomal 23S RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
1	X	2686	57651	25718	10642	18606	2685	0	0	0

- Molecule 2 is a RNA chain called ribosomal 5S RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
2	Y	122	2598	1161	476	840	121	0	0	0

- Molecule 3 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
3	A	240	1826	1137	366	321	2	0	0	0

- Molecule 4 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
4	B	205	1539	965	295	271	8	0	0	0

- Molecule 5 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
5	C	197	1506	935	287	282	2	0	0	0

- Molecule 6 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
6	D	177	1400	892	247	254	7	0	0	0

- Molecule 7 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
7	E	171	1286	812	237	236	1	0	0	0

- Molecule 8 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
8	F	144	1043	663	179	196	5	0	0	0

- Molecule 9 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
9	G	142	1114	704	209	198	3	0	0	0

- Molecule 10 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
10	H	134	997	614	198	180	5	0	0	0

- Molecule 11 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
			Total	C	N	O			
11	I	141	1067	655	216	196	0	0	0

- Molecule 12 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
12	J	136	1090	696	202	185	7	0	0	0

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
J	1	MET	-	initiating methionine	UNP Q9RXJ5

- Molecule 13 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
13	K	113	878	541	178	157	2	0	0	0

- Molecule 14 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
14	L	104	779	476	161	142		0	0	0

- Molecule 15 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
15	M	108	871	543	172	156		0	0	0

- Molecule 16 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
16	N	117	978	608	210	159	1	0	0	0

- Molecule 17 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
17	O	94	741	465	139	137		0	0	0

- Molecule 18 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
18	P	127	1014	639	199	174	2	0	0	0

- Molecule 19 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
19	Q	93	726	458	136	130	2	0	0	0

- Molecule 20 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	R	110	Total	C	N	O	S	0	0	0
			825	513	160	151	1			

- Molecule 21 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	S	175	Total	C	N	O	S	0	0	0
			1345	849	236	254	6			

- Molecule 22 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	T	84	Total	C	N	O	S	0	0	0
			625	393	122	109	1			

- Molecule 23 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
23	U	72	Total	C	N	O	0	0	0
			552	341	116	95			

- Molecule 24 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	V	66	Total	C	N	O	S	0	0	0
			533	327	107	96	3			

- Molecule 25 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	W	55	Total	C	N	O	S	0	0	0
			424	264	82	76	2			

- Molecule 26 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	Z	58	Total	C	N	O	S	0	0	0
			457	281	94	77	5			

- Molecule 27 is a protein called 50S ribosomal protein L33.



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
27	1	53	Total C 53 53	0	0	53

- Molecule 28 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
28	2	46	Total C 46 46	0	0	46

- Molecule 29 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
29	3	63	Total C 63 63	0	0	63

- Molecule 30 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
30	4	37	Total C N O S 297 179 66 47 5	0	0	0

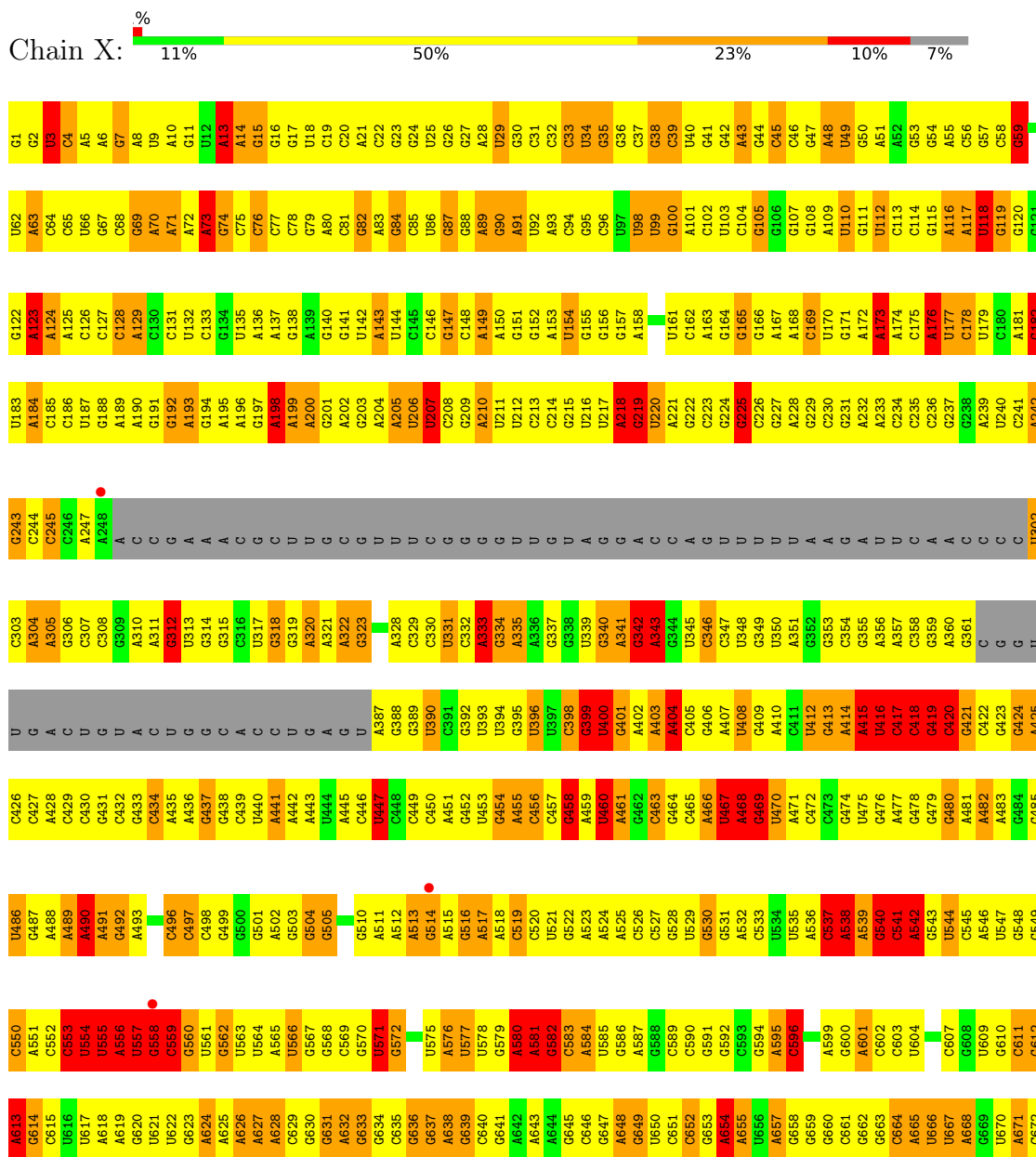
- Molecule 31 is a protein called 50S ribosomal protein L7/L12.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
31	5	71	Total C 71 71	0	0	71

### 3 Residue-property plots

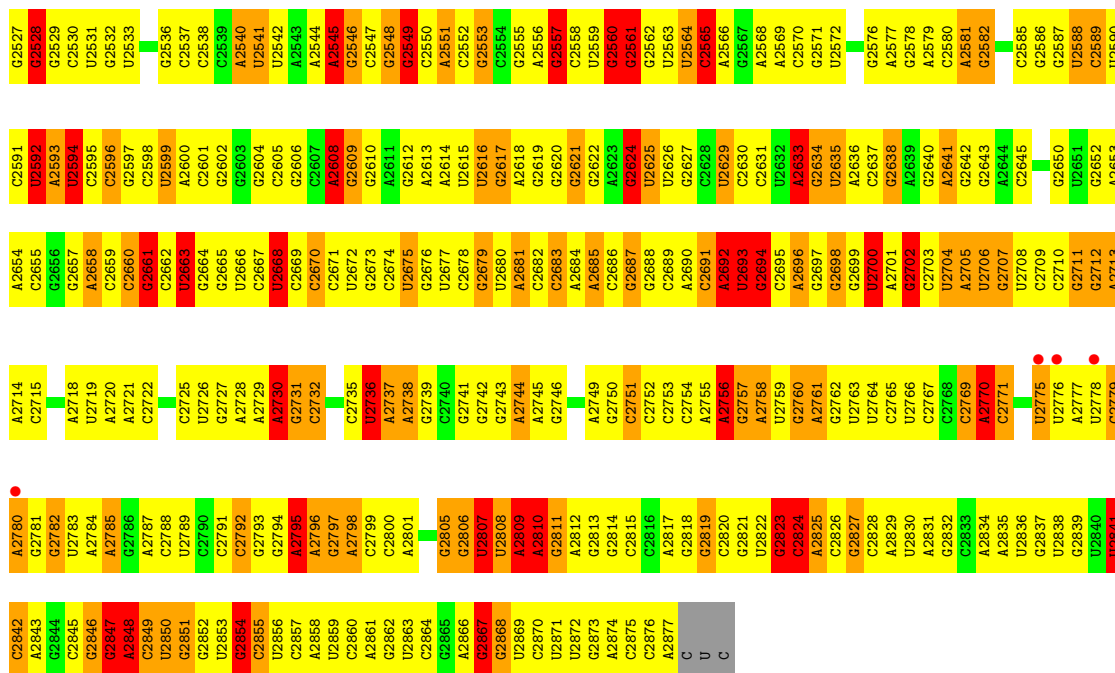
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density.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

- Molecule 1: ribosomal 23S RNA

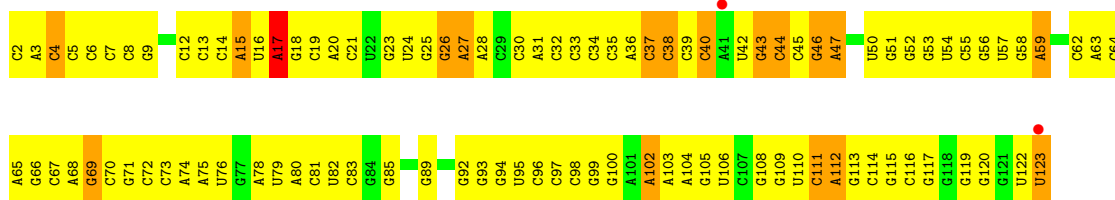




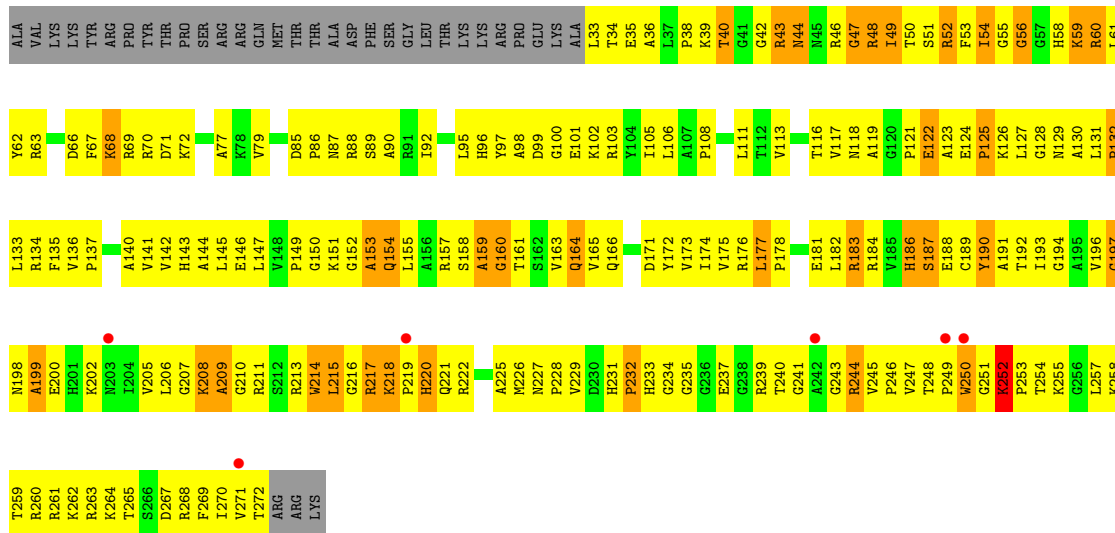
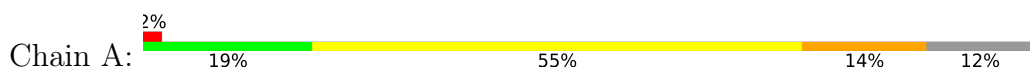




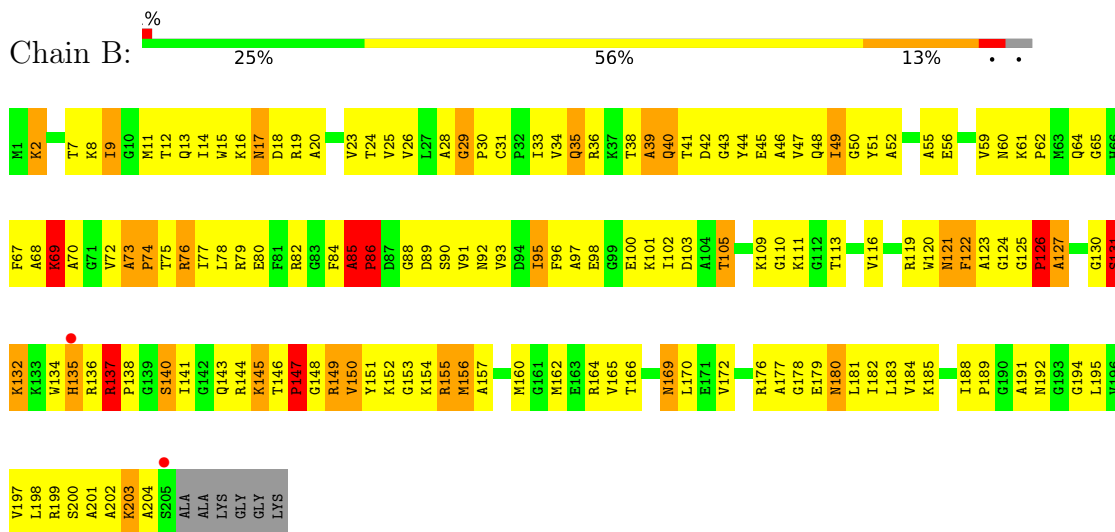
• Molecule 2: ribosomal 5S RNA



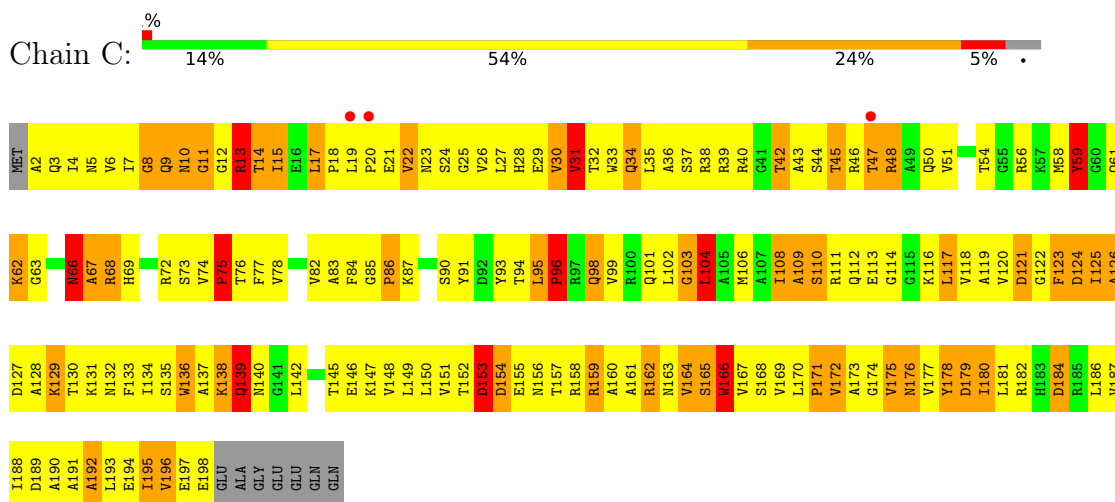
• Molecule 3: 50S ribosomal protein L2



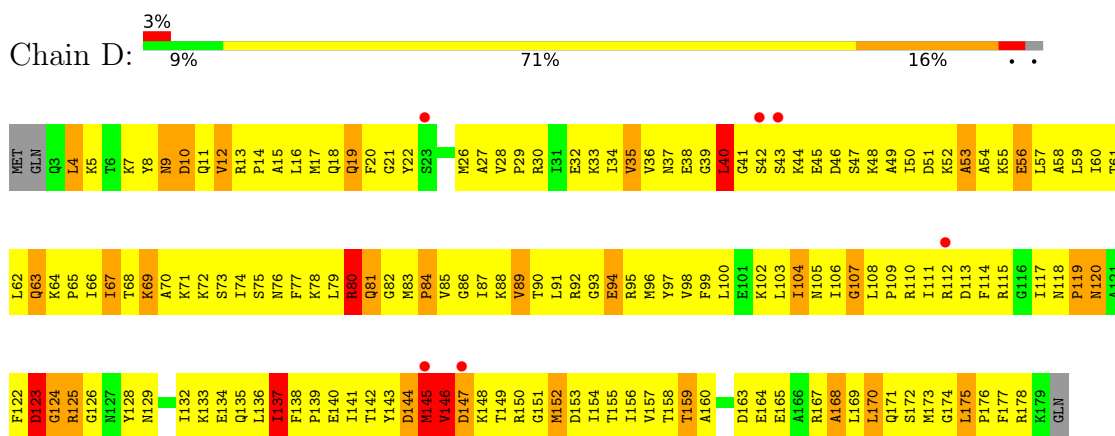
- Molecule 4: 50S ribosomal protein L3



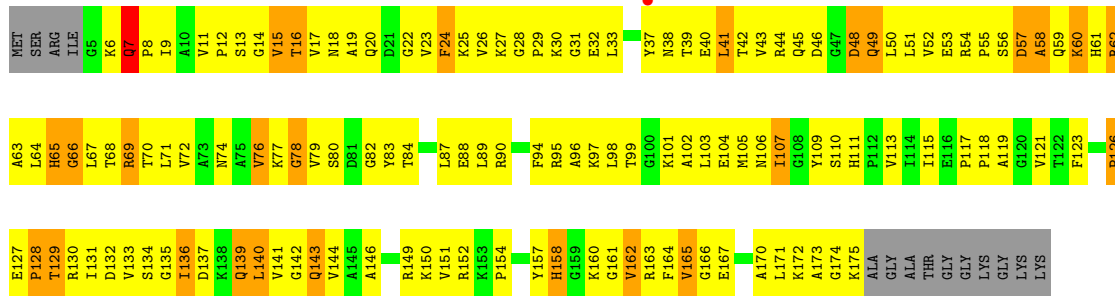
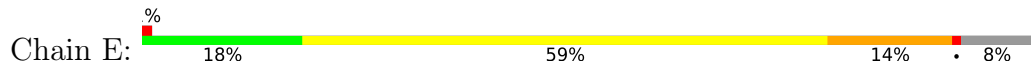
- Molecule 5: 50S ribosomal protein L4



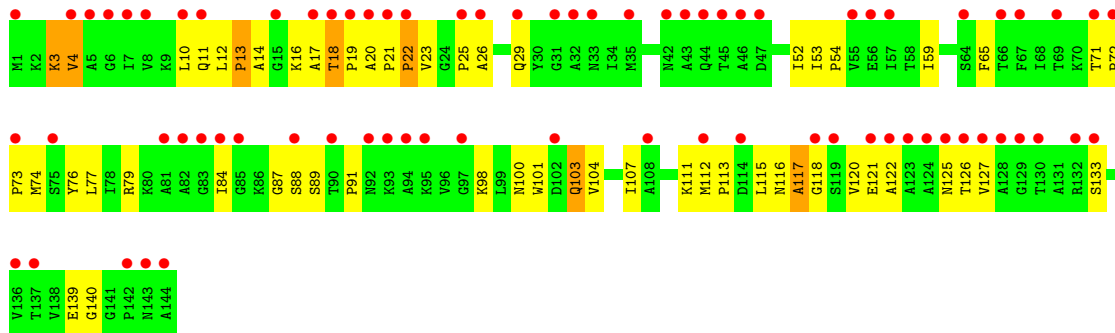
- Molecule 6: 50S ribosomal protein L5



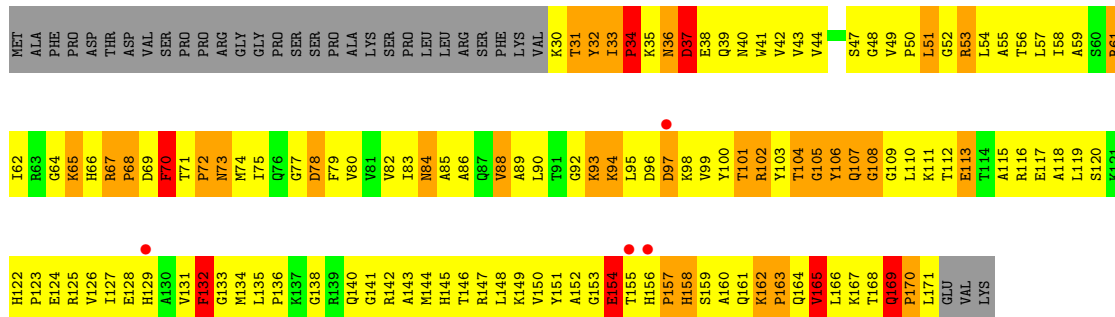
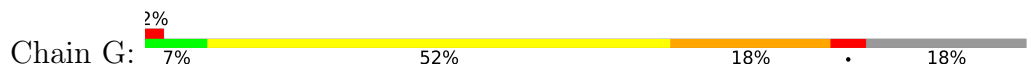
- Molecule 7: 50S ribosomal protein L6



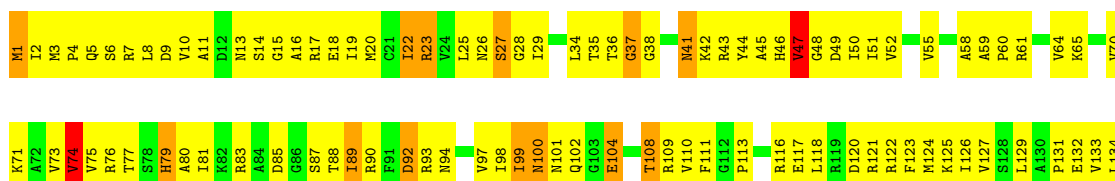
• Molecule 8: 50S ribosomal protein L11



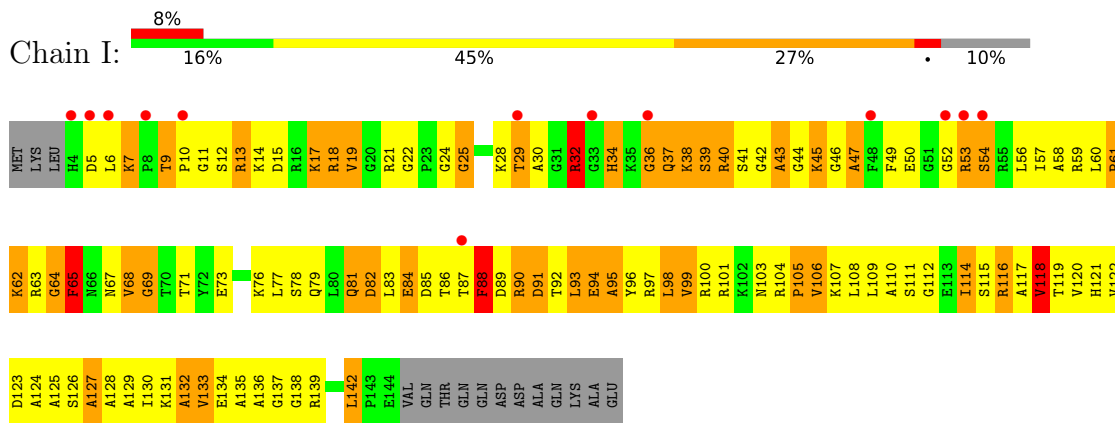
• Molecule 9: 50S ribosomal protein L13



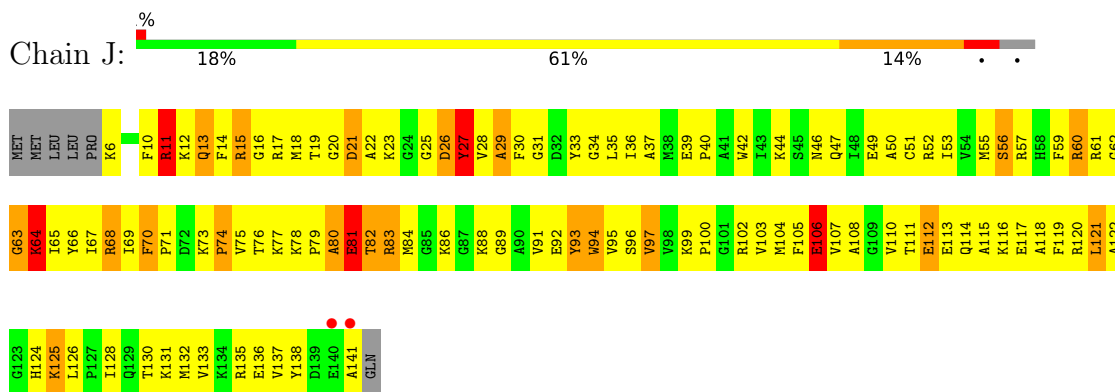
• Molecule 10: 50S ribosomal protein L14



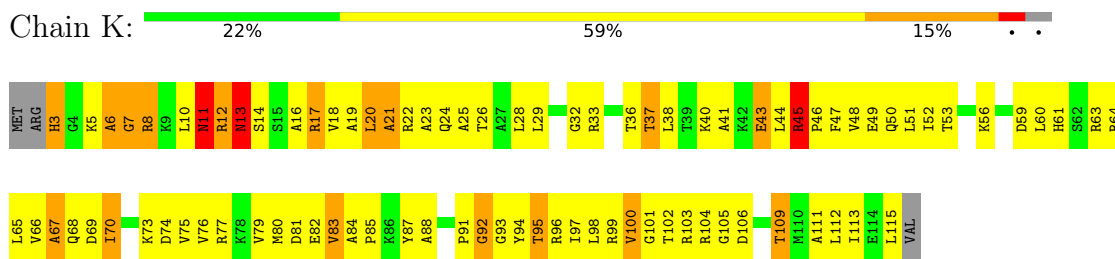
- Molecule 11: 50S ribosomal protein L15



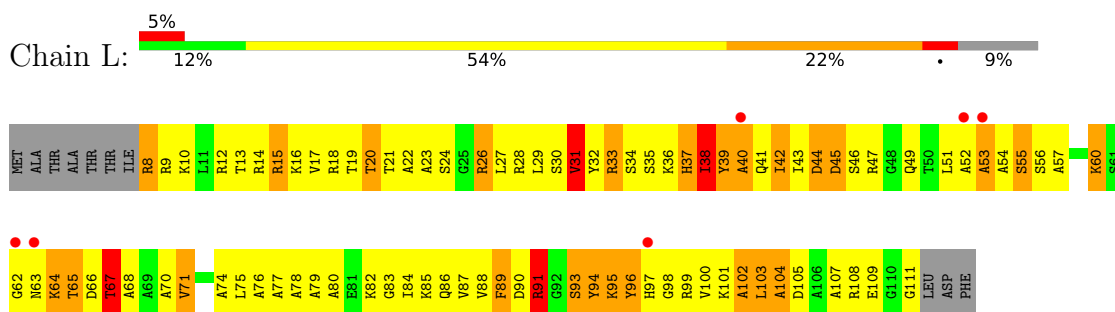
- Molecule 12: 50S ribosomal protein L16



- Molecule 13: 50S ribosomal protein L17

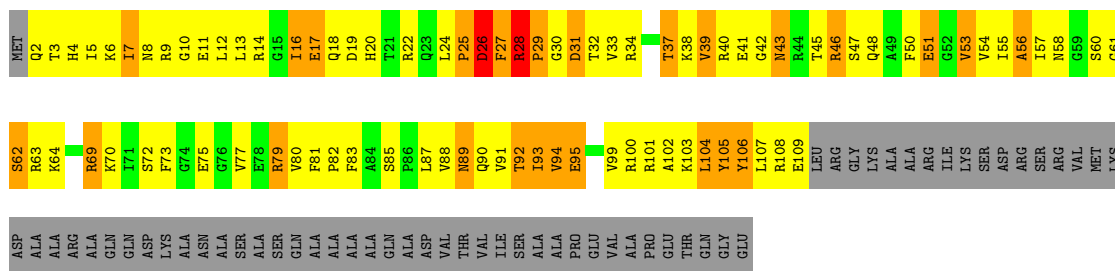
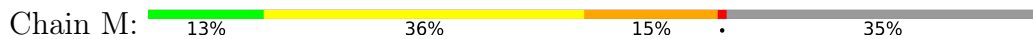


- Molecule 14: 50S ribosomal protein L18

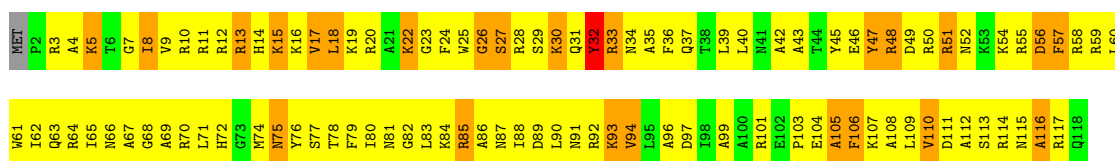
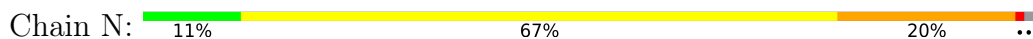


- Molecule 15: 50S ribosomal protein L19

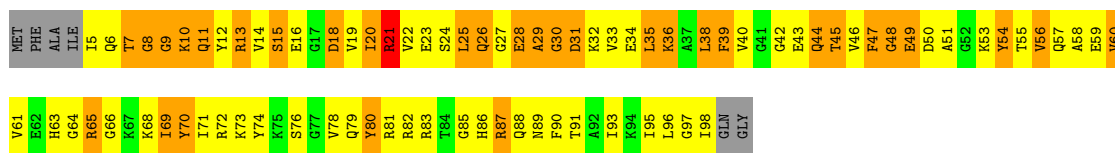
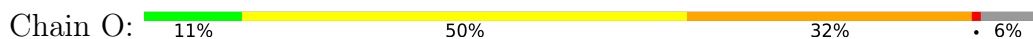




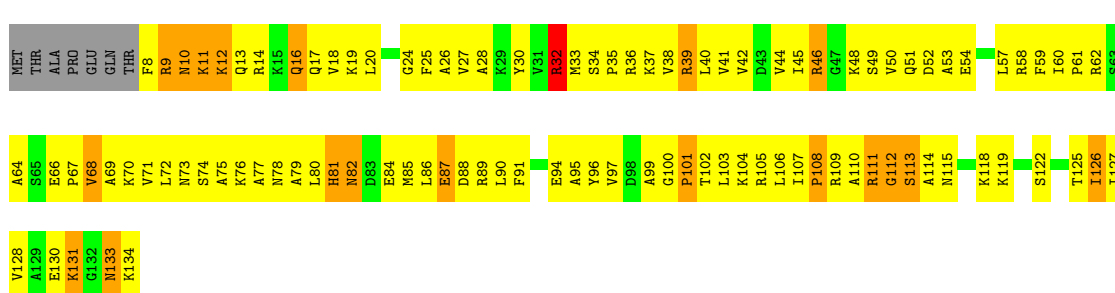
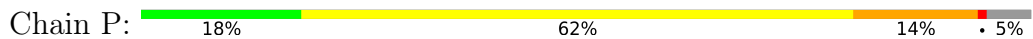
• Molecule 16: 50S ribosomal protein L20



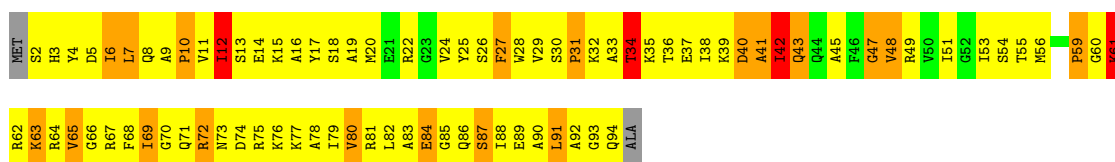
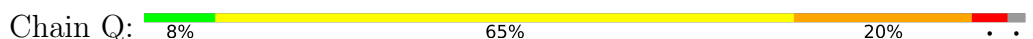
• Molecule 17: 50S ribosomal protein L21



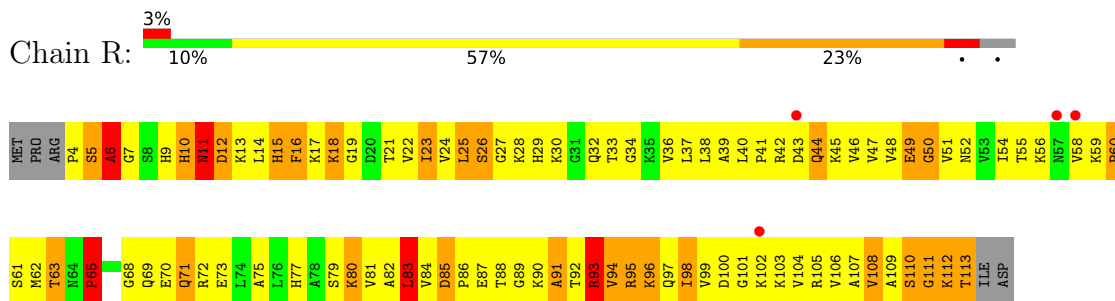
• Molecule 18: 50S ribosomal protein L22



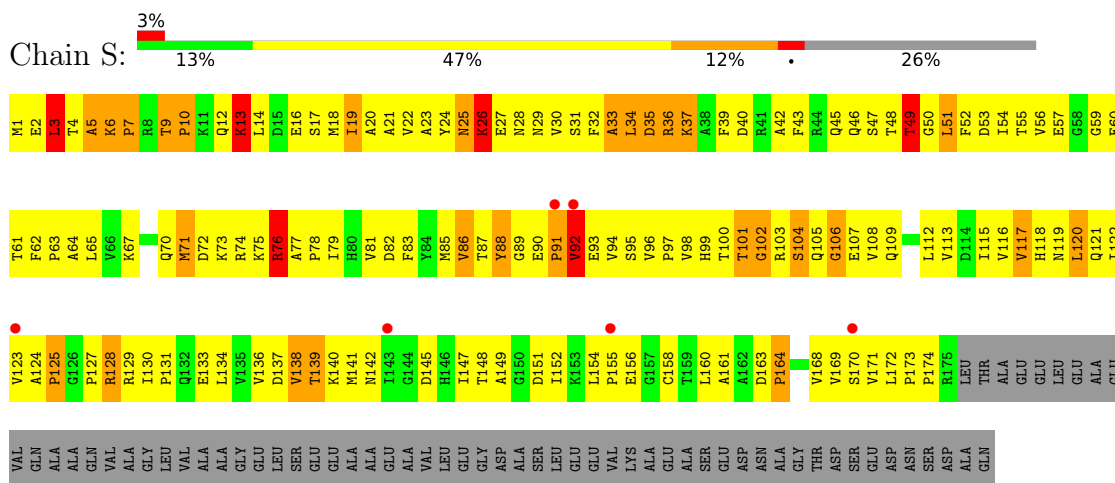
• Molecule 19: 50S ribosomal protein L23



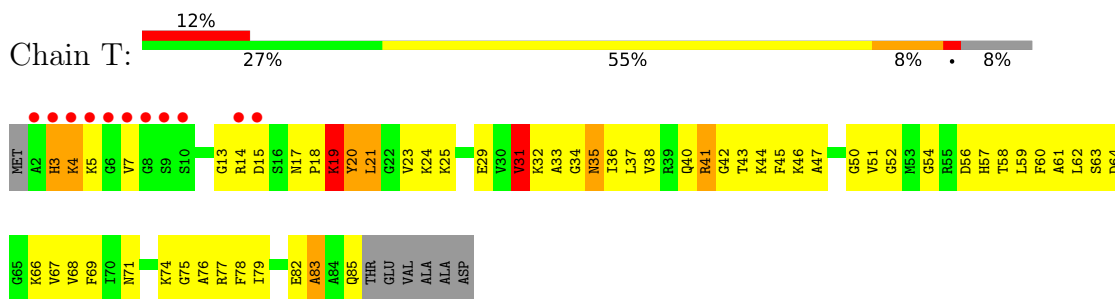
- Molecule 20: 50S ribosomal protein L24



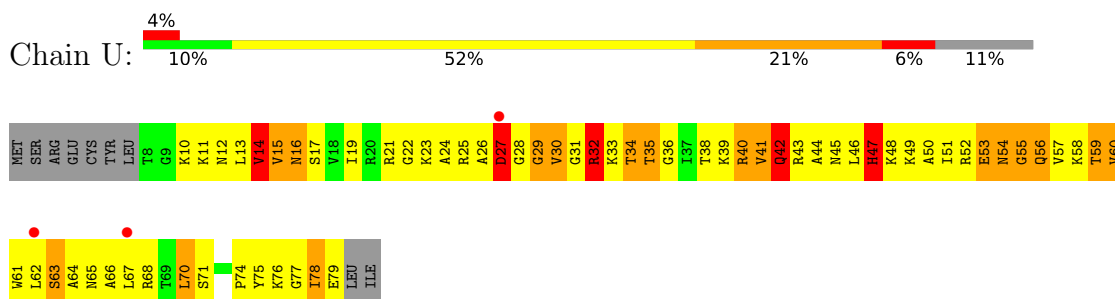
- Molecule 21: 50S ribosomal protein L25



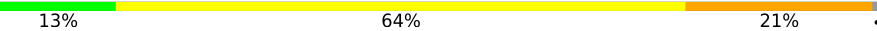
- Molecule 22: 50S ribosomal protein L27

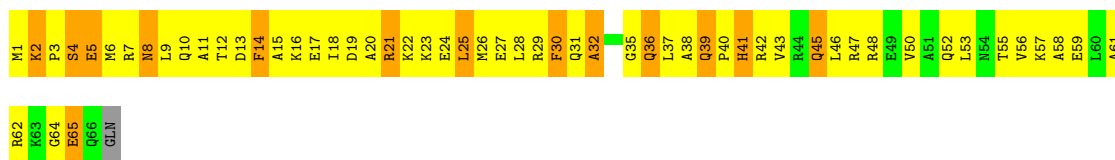


- Molecule 23: 50S ribosomal protein L28



- Molecule 24: 50S ribosomal protein L29

Chain V: 

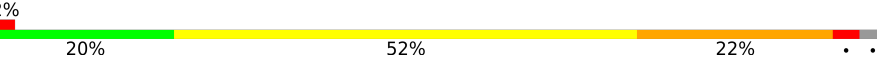


- Molecule 25: 50S ribosomal protein L30

Chain W: 



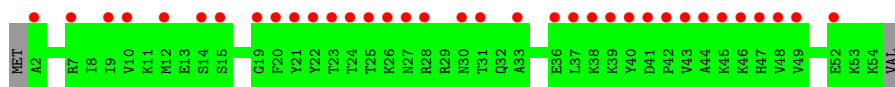
- Molecule 26: 50S ribosomal protein L32

Chain Z: 



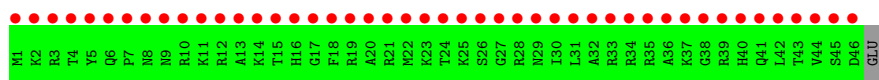
- Molecule 27: 50S ribosomal protein L33

Chain 1: 

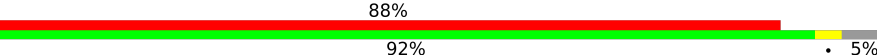


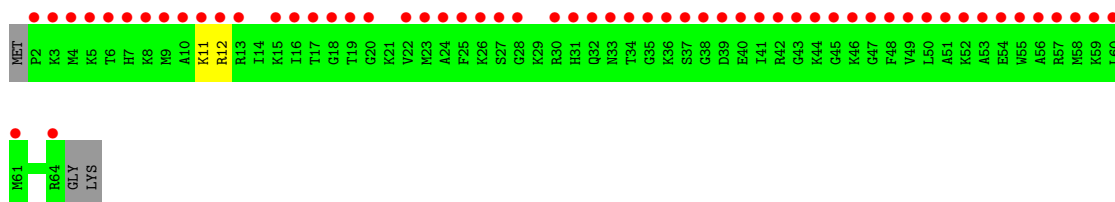
- Molecule 28: 50S ribosomal protein L34

Chain 2: 

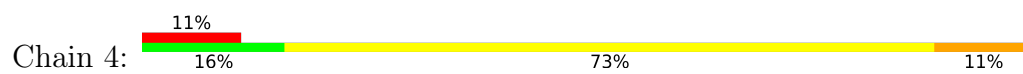


- Molecule 29: 50S ribosomal protein L35

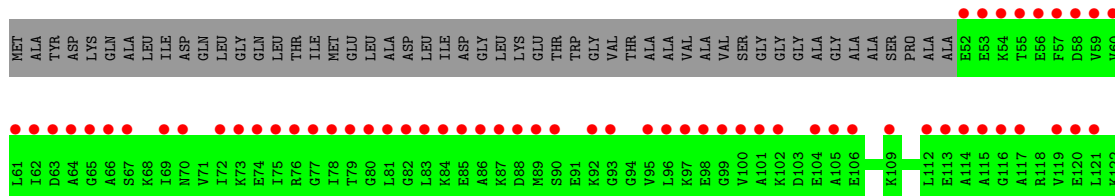
Chain 3: 



- Molecule 30: 50S ribosomal protein L36



- Molecule 31: 50S ribosomal protein L7/L12



## 4 Data and refinement statistics

Property	Value	Source
Space group	I 2 2 2	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	169.90Å 408.90Å 694.50Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	30.00 – 3.30 29.92 – 3.31	Depositor EDS
% Data completeness (in resolution range)	97.8 (30.00-3.30) 97.2 (29.92-3.31)	Depositor EDS
$R_{merge}$	(Not available)	Depositor
$R_{sym}$	0.13	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	2.26 (at 3.31Å)	Xtrriage
Refinement program	CNS	Depositor
R, $R_{free}$	0.302 , 0.339 0.274 , (Not available)	Depositor DCC
$R_{free}$ test set	No test flags present.	wwPDB-VP
Wilson B-factor (Å <sup>2</sup> )	73.4	Xtrriage
Anisotropy	0.201	Xtrriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.17 , 64.1	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.42$ , $\langle L^2 \rangle = 0.24$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
$F_o, F_c$ correlation	0.85	EDS
Total number of atoms	84395	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	59.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.69% of the height of the origin peak. No significant pseudotranslation is detected.*

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

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

## 5 Model quality i

### 5.1 Standard geometry i

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	X	0.90	77/64561 (0.1%)	1.04	462/100708 (0.5%)
2	Y	0.60	0/2904	0.77	0/4525
3	A	0.60	0/1862	0.83	0/2510
4	B	0.72	0/1567	0.95	2/2105 (0.1%)
5	C	0.63	0/1529	0.86	0/2070
6	D	0.60	0/1419	0.77	0/1903
7	E	0.55	0/1308	0.82	0/1771
8	F	0.23	0/1062	0.41	0/1440
9	G	0.65	0/1138	0.93	2/1539 (0.1%)
10	H	0.77	0/1007	0.85	0/1352
11	I	0.65	0/1081	0.93	1/1448 (0.1%)
12	J	0.68	0/1113	0.87	0/1486
13	K	0.80	0/886	0.95	0/1188
14	L	0.56	0/785	0.83	0/1048
15	M	0.73	0/884	0.97	2/1186 (0.2%)
16	N	0.60	0/994	0.81	0/1323
17	O	0.62	0/750	0.85	1/1000 (0.1%)
18	P	0.78	0/1027	0.89	0/1373
19	Q	0.67	0/737	0.94	1/988 (0.1%)
20	R	0.57	0/835	0.90	1/1121 (0.1%)
21	S	0.56	0/1370	0.79	0/1862
22	T	0.62	0/633	0.81	1/838 (0.1%)
23	U	0.58	0/556	0.94	0/741
24	V	0.54	0/537	0.75	0/714
25	W	0.55	0/426	0.82	0/568
26	Z	0.62	0/469	0.87	0/629
30	4	0.54	0/298	0.75	0/390
All	All	0.83	77/91738 (0.1%)	0.99	473/137826 (0.3%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	X	2	281
2	Y	0	2
5	C	0	1
9	G	0	1
16	N	0	1
17	O	0	1
22	T	0	1
All	All	2	288

All (77) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	X	1056	U	P-O5'	8.88	1.68	1.59
1	X	1750	A	C5-C6	-7.65	1.34	1.41
1	X	1688	U	C4-O4	7.39	1.29	1.23
1	X	2189	A	N9-C4	7.30	1.42	1.37
1	X	1981	A	C5-C6	-7.18	1.34	1.41
1	X	2001	G	C5-C6	-7.17	1.35	1.42
1	X	1974	U	N3-C4	-7.09	1.32	1.38
1	X	2681	A	C5-C6	-6.94	1.34	1.41
1	X	796	A	C5-C6	-6.91	1.34	1.41
1	X	2034	A	C5-C6	-6.90	1.34	1.41
1	X	774	A	C5-C6	-6.83	1.34	1.41
1	X	2687	G	C5-C6	-6.77	1.35	1.42
1	X	1666	G	C5-C6	-6.64	1.35	1.42
1	X	1333	G	N9-C4	-6.61	1.32	1.38
1	X	2549	G	C2-N3	-6.51	1.27	1.32
1	X	2006	G	C5-C6	-6.51	1.35	1.42
1	X	420	C	N1-C2	-6.36	1.33	1.40
1	X	737	C	N1-C2	-6.25	1.33	1.40
1	X	1858	C	N1-C2	-6.25	1.33	1.40
1	X	2322	U	P-O5'	6.24	1.66	1.59
1	X	550	C	N1-C2	-6.22	1.33	1.40
1	X	1774	A	C5-C6	-6.17	1.35	1.41
1	X	2488	G	C5-C6	-6.17	1.36	1.42
1	X	1862	C	N1-C2	-6.12	1.34	1.40
1	X	1974	U	C2-N3	-6.10	1.33	1.37
1	X	2199	C	N1-C2	-6.10	1.34	1.40
1	X	699	G	N9-C4	-6.09	1.33	1.38
1	X	557	U	C2'-C1'	5.99	1.59	1.53
1	X	2190	A	C4'-C3'	5.93	1.59	1.53
1	X	1052	C	N1-C2	-5.93	1.34	1.40
1	X	722	C	N1-C2	-5.79	1.34	1.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	X	1853	C	N1-C2	-5.79	1.34	1.40
1	X	556	A	N7-C5	-5.75	1.35	1.39
1	X	1691	G	C5-C6	-5.75	1.36	1.42
1	X	499	G	C5-C6	-5.74	1.36	1.42
1	X	1632	A	C5-C6	-5.67	1.35	1.41
1	X	1373	G	C6-N1	5.64	1.43	1.39
1	X	1676	U	N1-C2	-5.63	1.33	1.38
1	X	725	C	N1-C2	-5.62	1.34	1.40
1	X	1688	U	N3-C4	5.57	1.43	1.38
1	X	2851	G	C5-C6	-5.57	1.36	1.42
1	X	2001	G	N9-C4	-5.57	1.33	1.38
1	X	417	C	C2'-C1'	5.55	1.59	1.53
1	X	2592	U	C5-C6	-5.55	1.29	1.34
1	X	2612	G	C5-C6	-5.54	1.36	1.42
1	X	954	U	N1-C2	-5.50	1.33	1.38
1	X	723	C	N1-C2	-5.50	1.34	1.40
1	X	2195	C	N1-C2	-5.43	1.34	1.40
1	X	1056	U	C4'-C3'	5.43	1.59	1.53
1	X	1991	C	C4-N4	-5.42	1.29	1.33
1	X	2326	C	N1-C2	-5.40	1.34	1.40
1	X	557	U	C1'-N1	5.39	1.56	1.48
1	X	552	C	N1-C2	-5.38	1.34	1.40
1	X	2675	U	N1-C2	-5.37	1.33	1.38
1	X	1054	C	N1-C2	-5.37	1.34	1.40
1	X	1282	A	C5-C6	-5.36	1.36	1.41
1	X	2189	A	C3'-O3'	5.33	1.49	1.42
1	X	2005	U	N3-C4	-5.32	1.33	1.38
1	X	478	G	C5-C6	5.30	1.47	1.42
1	X	2484	G	C5-C6	-5.30	1.37	1.42
1	X	542	A	N9-C4	-5.27	1.34	1.37
1	X	721	C	N1-C2	-5.24	1.34	1.40
1	X	1312	G	C5-C6	-5.22	1.37	1.42
1	X	2189	A	C2'-C1'	5.21	1.59	1.53
1	X	1056	U	O5'-C5'	5.16	1.52	1.44
1	X	177	U	N3-C4	5.16	1.43	1.38
1	X	1337	G	N3-C4	-5.15	1.31	1.35
1	X	1055	A	C3'-O3'	5.12	1.49	1.42
1	X	730	C	N1-C2	-5.12	1.35	1.40
1	X	537	C	N1-C2	5.11	1.45	1.40
1	X	2561	G	C5-C6	-5.11	1.37	1.42
1	X	2322	U	C3'-C2'	5.05	1.58	1.52
1	X	1992	G	N1-C2	-5.04	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	X	1278	A	C5-C6	-5.04	1.36	1.41
1	X	699	G	C5-C6	-5.03	1.37	1.42
1	X	2189	A	C8-N7	-5.01	1.28	1.31
1	X	2032	G	C5-C6	-5.00	1.37	1.42

All (473) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	X	1055	A	N9-C1'-C2'	-32.03	72.36	114.00
1	X	557	U	N1-C1'-C2'	19.61	139.50	114.00
1	X	417	C	N1-C1'-C2'	17.87	137.24	114.00
1	X	2323	U	O4'-C1'-N1	13.98	119.39	108.20
1	X	558	G	C3'-C2'-C1'	-13.92	90.37	101.50
1	X	2195	C	N1-C1'-C2'	-13.67	96.23	114.00
1	X	2319	G	P-O3'-C3'	-13.17	103.90	119.70
1	X	556	A	N9-C1'-C2'	12.66	130.46	114.00
1	X	1055	A	P-O3'-C3'	12.28	134.43	119.70
1	X	728	G	C3'-C2'-C1'	-11.82	92.05	101.50
1	X	557	U	C6-N1-C2	-11.69	113.98	121.00
1	X	1278	A	N9-C1'-C2'	11.69	129.19	114.00
1	X	2324	G	N9-C1'-C2'	11.59	129.07	114.00
1	X	1056	U	O4'-C1'-N1	11.56	117.45	108.20
1	X	2854	G	N9-C1'-C2'	11.53	128.99	114.00
1	X	1052	C	C6-N1-C2	11.50	124.90	120.30
1	X	1056	U	O4'-C4'-C3'	-11.42	92.58	104.00
1	X	2034	A	N9-C1'-C2'	11.39	128.80	114.00
1	X	556	A	P-O3'-C3'	10.97	132.87	119.70
1	X	1664	G	O5'-P-OP1	-10.96	95.84	105.70
1	X	1632	A	N9-C1'-C2'	10.95	128.24	114.00
1	X	554	U	C6-N1-C2	10.92	127.55	121.00
1	X	1854	G	P-O3'-C3'	-10.86	106.67	119.70
1	X	2197	U	C3'-C2'-C1'	-10.82	92.84	101.50
1	X	1865	C	O4'-C4'-C3'	-10.72	93.28	104.00
1	X	557	U	C3'-C2'-C1'	10.53	109.92	101.50
1	X	1288	A	N9-C1'-C2'	10.45	127.58	114.00
1	X	1337	G	N9-C1'-C2'	10.33	127.43	114.00
1	X	1853	C	P-O3'-C3'	-9.96	107.75	119.70
1	X	728	G	O4'-C4'-C3'	-9.94	94.06	104.00
1	X	1853	C	C6-N1-C2	9.81	124.23	120.30
1	X	2189	A	P-O3'-C3'	9.81	131.47	119.70
1	X	1975	G	C2'-C3'-O3'	9.77	130.99	109.50
1	X	1142	G	N9-C1'-C2'	9.46	126.29	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	X	2795	A	N9-C1'-C2'	9.40	126.22	114.00
1	X	2323	U	P-O3'-C3'	9.38	130.95	119.70
1	X	1314	A	N9-C1'-C2'	9.22	125.99	114.00
1	X	1979	C	N1-C1'-C2'	9.19	125.94	114.00
1	X	415	A	N9-C1'-C2'	9.12	125.85	114.00
1	X	417	C	C3'-C2'-C1'	9.06	108.75	101.50
1	X	2693	U	N1-C1'-C2'	9.04	125.75	114.00
1	X	2322	U	P-O3'-C3'	9.04	130.55	119.70
1	X	968	C	N1-C1'-C2'	8.99	125.69	114.00
1	X	1285	A	N9-C1'-C2'	8.98	125.67	114.00
1	X	1845	A	O4'-C4'-C3'	-8.84	95.16	104.00
1	X	1052	C	O4'-C1'-N1	-8.83	101.14	108.20
1	X	1852	G	P-O3'-C3'	-8.72	109.24	119.70
1	X	555	U	C3'-C2'-C1'	-8.69	94.55	101.50
1	X	2823	G	N9-C1'-C2'	8.60	125.19	114.00
1	X	1664	G	N9-C1'-C2'	8.45	124.98	114.00
1	X	683	A	N9-C1'-C2'	8.38	124.89	114.00
1	X	557	U	C5-C6-N1	8.35	126.87	122.70
1	X	218	A	N9-C1'-C2'	8.34	124.84	114.00
1	X	2189	A	N9-C4-C5	-8.31	102.48	105.80
1	X	1057	A	N9-C4-C5	8.27	109.11	105.80
1	X	1353	A	N9-C1'-C2'	8.26	124.74	114.00
1	X	596	C	N1-C1'-C2'	8.21	124.67	114.00
1	X	985	G	N9-C1'-C2'	8.21	124.67	114.00
1	X	1167	A	N9-C1'-C2'	8.20	124.66	114.00
1	X	554	U	N1-C2-N3	-8.11	110.04	114.90
1	X	2827	G	O5'-P-OP1	-8.07	98.43	105.70
1	X	1975	G	N9-C1'-C2'	8.05	124.46	114.00
1	X	729	A	C3'-C2'-C1'	-7.97	95.13	101.50
1	X	731	A	N9-C1'-C2'	7.95	124.33	114.00
1	X	1856	U	P-O3'-C3'	-7.94	110.18	119.70
1	X	1845	A	C3'-C2'-C1'	-7.90	95.18	101.50
1	X	1807	A	N9-C1'-C2'	7.89	124.25	114.00
1	X	2313	G	N9-C1'-C2'	7.88	124.24	114.00
1	X	555	U	O4'-C4'-C3'	-7.71	96.29	104.00
1	X	1859	A	P-O3'-C3'	-7.71	110.45	119.70
1	X	2190	A	N9-C1'-C2'	-7.70	103.53	112.00
1	X	1265	G	N9-C1'-C2'	7.65	123.95	114.00
1	X	418	C	N1-C1'-C2'	7.63	123.92	114.00
1	X	2841	U	C2'-C3'-O3'	7.61	126.25	109.50
1	X	541	C	N1-C1'-C2'	7.60	123.89	114.00
1	X	2196	U	P-O3'-C3'	7.60	128.81	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	X	417	C	O4'-C1'-N1	-7.54	102.17	108.20
1	X	554	U	N1-C2-O2	7.54	128.08	122.80
1	X	417	C	P-O3'-C3'	7.54	128.75	119.70
1	X	2560	G	N9-C1'-C2'	7.50	123.74	114.00
1	X	460	U	N1-C1'-C2'	7.48	123.73	114.00
1	X	1872	A	P-O3'-C3'	7.47	128.66	119.70
4	B	85	ALA	C-N-CD	-7.43	104.25	120.60
1	X	1927	U	N1-C1'-C2'	7.42	123.65	114.00
1	X	818	G	N9-C1'-C2'	7.39	123.61	114.00
1	X	1582	A	N9-C1'-C2'	7.39	123.61	114.00
1	X	2195	C	C6-N1-C2	7.39	123.25	120.30
1	X	490	A	N9-C1'-C2'	7.36	123.56	114.00
1	X	2824	C	N1-C1'-C2'	7.33	123.53	114.00
1	X	804	C	C4'-C3'-O3'	-7.32	94.02	109.40
1	X	804	C	N1-C1'-C2'	7.32	123.51	114.00
1	X	2198	U	P-O5'-C5'	-7.32	109.19	120.90
1	X	557	U	P-O3'-C3'	7.30	128.46	119.70
1	X	780	U	N1-C1'-C2'	-7.28	103.99	112.00
1	X	2327	U	P-O3'-C3'	-7.27	110.98	119.70
1	X	724	C	C6-N1-C2	7.24	123.20	120.30
1	X	1407	G	N9-C1'-C2'	7.23	123.39	114.00
1	X	1665	C	O5'-P-OP2	-7.20	99.22	105.70
1	X	1858	C	C6-N1-C2	7.20	123.18	120.30
1	X	312	G	N9-C1'-C2'	7.20	123.36	114.00
1	X	955	G	N9-C1'-C2'	7.18	123.33	114.00
1	X	1054	C	N3-C4-C5	-7.17	119.03	121.90
1	X	2328	G	OP1-P-OP2	-7.15	108.87	119.60
1	X	2326	C	P-O3'-C3'	-7.10	111.18	119.70
1	X	555	U	OP1-P-OP2	-7.09	108.97	119.60
1	X	1850	G	C8-N9-C4	-7.07	103.57	106.40
1	X	1716	G	N9-C1'-C2'	7.07	123.18	114.00
1	X	2327	U	OP1-P-OP2	-7.06	109.01	119.60
1	X	2197	U	OP1-P-OP2	-7.04	109.04	119.60
1	X	2320	G	P-O3'-C3'	-7.03	111.26	119.70
1	X	1854	G	OP1-P-OP2	-7.03	109.06	119.60
1	X	1812	U	N1-C1'-C2'	7.02	123.12	114.00
1	X	1861	G	P-O3'-C3'	-7.02	111.28	119.70
1	X	1033	G	N9-C1'-C2'	7.01	123.11	114.00
1	X	2322	U	OP1-P-OP2	-7.01	109.09	119.60
1	X	733	G	OP1-P-OP2	-6.95	109.18	119.60
1	X	1864	G	OP1-P-OP2	-6.95	109.18	119.60
1	X	777	A	C2'-C3'-O3'	6.92	124.78	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	X	1855	G	OP1-P-OP2	-6.91	109.24	119.60
1	X	1410	U	N1-C1'-C2'	6.90	122.97	114.00
1	X	2823	G	C2'-C3'-O3'	6.89	124.73	113.70
1	X	558	G	O4'-C1'-N9	6.89	113.71	108.20
1	X	1631	C	N1-C1'-C2'	6.87	122.94	114.00
1	X	1060	C	OP1-P-OP2	-6.86	109.31	119.60
1	X	1057	A	P-O3'-C3'	6.85	127.92	119.70
1	X	2633	A	N9-C1'-C2'	6.85	122.91	114.00
1	X	2756	A	N9-C1'-C2'	6.81	122.86	114.00
1	X	1867	A	P-O3'-C3'	6.81	127.87	119.70
1	X	2321	C	OP1-P-OP2	-6.79	109.41	119.60
1	X	1856	U	OP1-P-OP2	-6.79	109.42	119.60
1	X	2184	C	OP1-P-OP2	-6.79	109.42	119.60
1	X	2188	A	OP1-P-OP2	-6.78	109.43	119.60
15	M	28	ARG	C-N-CD	-6.78	105.69	120.60
1	X	2469	G	N9-C1'-C2'	6.78	122.81	114.00
1	X	414	A	OP1-P-OP2	-6.76	109.46	119.60
1	X	738	G	OP1-P-OP2	-6.76	109.47	119.60
1	X	557	U	N3-C4-O4	6.75	124.12	119.40
1	X	1847	G	OP1-P-OP2	-6.74	109.49	119.60
1	X	1052	C	OP1-P-OP2	-6.74	109.49	119.60
1	X	2320	G	OP1-P-OP2	-6.74	109.50	119.60
1	X	718	A	OP1-P-OP2	-6.73	109.50	119.60
1	X	1052	C	N1-C2-O2	6.72	122.93	118.90
1	X	1871	G	OP1-P-OP2	-6.71	109.53	119.60
1	X	1850	G	OP1-P-OP2	-6.71	109.54	119.60
1	X	2370	G	N9-C1'-C2'	6.71	122.72	114.00
1	X	2190	A	C3'-C2'-C1'	-6.69	96.14	101.50
1	X	741	G	OP1-P-OP2	-6.69	109.56	119.60
1	X	2195	C	O4'-C1'-C2'	6.68	113.61	107.60
1	X	1057	A	OP1-P-OP2	-6.68	109.59	119.60
1	X	726	G	OP1-P-OP2	-6.67	109.60	119.60
1	X	1873	A	OP1-P-OP2	-6.66	109.62	119.60
1	X	722	C	OP1-P-OP2	-6.65	109.62	119.60
1	X	69	G	N9-C1'-C2'	6.65	122.65	114.00
1	X	557	U	OP1-P-OP2	-6.65	109.62	119.60
1	X	2322	U	N1-C1'-C2'	6.65	122.65	114.00
1	X	1050	G	OP1-P-OP2	-6.65	109.63	119.60
1	X	878	C	N1-C1'-C2'	6.64	122.64	114.00
1	X	1044	U	OP1-P-OP2	-6.64	109.63	119.60
1	X	2323	U	OP1-P-OP2	-6.64	109.64	119.60
1	X	1723	U	C2'-C3'-O3'	6.64	124.32	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	X	2521	A	N9-C1'-C2'	6.63	122.61	114.00
1	X	2199	C	OP1-P-OP2	-6.62	109.66	119.60
1	X	2428	U	N1-C1'-C2'	6.62	122.61	114.00
1	X	721	C	C6-N1-C2	6.62	122.95	120.30
1	X	553	C	OP1-P-OP2	-6.62	109.67	119.60
1	X	1051	U	O4'-C1'-N1	-6.62	102.91	108.20
1	X	1056	U	OP1-P-OP2	-6.61	109.68	119.60
1	X	1851	A	OP1-P-OP2	-6.61	109.69	119.60
1	X	1373	G	C5-C6-O6	-6.60	124.64	128.60
1	X	2201	G	OP1-P-OP2	-6.60	109.70	119.60
1	X	740	A	OP1-P-OP2	-6.60	109.70	119.60
1	X	2323	U	N1-C1'-C2'	-6.59	104.75	112.00
1	X	1618	U	N1-C1'-C2'	6.58	122.55	114.00
1	X	2187	A	OP1-P-OP2	-6.58	109.73	119.60
1	X	1843	U	OP1-P-OP2	-6.56	109.76	119.60
1	X	732	G	OP1-P-OP2	-6.56	109.76	119.60
1	X	1049	C	OP1-P-OP2	-6.56	109.76	119.60
1	X	2190	A	OP1-P-OP2	-6.55	109.77	119.60
1	X	1045	G	OP1-P-OP2	-6.55	109.77	119.60
1	X	1857	G	OP1-P-OP2	-6.55	109.78	119.60
1	X	1583	A	N9-C1'-C2'	6.54	122.50	114.00
1	X	1675	C	O5'-P-OP1	-6.54	99.82	105.70
1	X	580	A	N9-C1'-C2'	6.53	122.49	114.00
1	X	562	G	OP1-P-OP2	-6.53	109.81	119.60
1	X	730	C	OP1-P-OP2	-6.52	109.81	119.60
1	X	719	A	OP1-P-OP2	-6.52	109.82	119.60
1	X	1858	C	OP1-P-OP2	-6.52	109.82	119.60
1	X	2769	C	O4'-C1'-N1	6.52	113.42	108.20
1	X	1772	C	N1-C1'-C2'	6.52	122.47	114.00
1	X	734	G	OP1-P-OP2	-6.51	109.83	119.60
1	X	1860	A	OP1-P-OP2	-6.51	109.83	119.60
1	X	1863	U	OP1-P-OP2	-6.51	109.84	119.60
1	X	1870	U	P-O3'-C3'	6.50	127.50	119.70
1	X	2190	A	O4'-C1'-N9	6.50	113.40	108.20
1	X	1947	G	N9-C1'-C2'	6.48	122.43	114.00
1	X	727	U	OP1-P-OP2	-6.48	109.88	119.60
1	X	554	U	OP1-P-OP2	-6.48	109.88	119.60
1	X	1859	A	OP1-P-OP2	-6.48	109.89	119.60
1	X	417	C	OP1-P-OP2	-6.47	109.89	119.60
1	X	1853	C	OP1-P-OP2	-6.47	109.90	119.60
1	X	736	G	OP1-P-OP2	-6.46	109.90	119.60
1	X	419	G	OP1-P-OP2	-6.46	109.91	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	X	1266	G	O4'-C1'-N9	6.46	113.37	108.20
1	X	1046	U	OP1-P-OP2	-6.46	109.92	119.60
1	X	1867	A	OP1-P-OP2	-6.45	109.92	119.60
1	X	1054	C	OP1-P-OP2	-6.45	109.92	119.60
1	X	1849	G	N9-C1'-C2'	6.45	122.38	114.00
1	X	1852	G	OP1-P-OP2	-6.45	109.93	119.60
1	X	558	G	OP1-P-OP2	-6.45	109.93	119.60
1	X	1865	C	P-O3'-C3'	-6.44	111.97	119.70
1	X	1874	G	OP1-P-OP2	-6.44	109.94	119.60
1	X	2016	A	N9-C1'-C2'	6.44	122.37	114.00
1	X	1862	C	OP1-P-OP2	-6.44	109.94	119.60
1	X	556	A	OP1-P-OP2	-6.43	109.95	119.60
1	X	1845	A	OP1-P-OP2	-6.42	109.97	119.60
1	X	1844	C	OP1-P-OP2	-6.41	109.99	119.60
1	X	1953	A	N9-C1'-C2'	6.41	122.33	114.00
1	X	1843	U	P-O3'-C3'	-6.40	112.02	119.70
1	X	1357	U	N1-C1'-C2'	6.40	122.32	114.00
1	X	458	G	N9-C1'-C2'	6.40	122.32	114.00
1	X	1872	A	C2'-C3'-O3'	6.40	123.94	113.70
1	X	2326	C	OP1-P-OP2	-6.40	110.00	119.60
1	X	418	C	OP1-P-OP2	-6.39	110.01	119.60
1	X	559	C	OP1-P-OP2	-6.38	110.02	119.60
1	X	1848	U	OP1-P-OP2	-6.38	110.03	119.60
1	X	538	A	C2'-C3'-O3'	6.38	123.91	113.70
1	X	558	G	C8-N9-C4	-6.38	103.85	106.40
1	X	1057	A	O4'-C1'-N9	6.38	113.30	108.20
1	X	731	A	OP1-P-OP2	-6.37	110.04	119.60
1	X	729	A	O4'-C4'-C3'	-6.37	97.63	104.00
1	X	413	G	N9-C1'-C2'	-6.37	105.00	112.00
1	X	2324	G	OP1-P-OP2	-6.36	110.07	119.60
1	X	2633	A	O4'-C1'-N9	6.35	113.28	108.20
1	X	551	A	OP1-P-OP2	-6.35	110.07	119.60
1	X	1855	G	P-O3'-C3'	-6.34	112.09	119.70
1	X	1051	U	OP1-P-OP2	-6.34	110.09	119.60
1	X	720	A	OP1-P-OP2	-6.33	110.11	119.60
1	X	728	G	N9-C1'-C2'	6.33	122.22	114.00
1	X	1866	G	OP1-P-OP2	-6.32	110.12	119.60
1	X	2608	A	N9-C1'-C2'	6.32	122.21	114.00
1	X	1937	G	N9-C1'-C2'	6.31	122.20	114.00
1	X	1872	A	OP1-P-OP2	-6.31	110.13	119.60
1	X	2854	G	C1'-O4'-C4'	-6.30	104.86	109.90
1	X	1868	A	OP1-P-OP2	-6.29	110.16	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	X	1059	A	OP1-P-OP2	-6.29	110.16	119.60
1	X	558	G	C1'-O4'-C4'	-6.29	104.87	109.90
1	X	415	A	OP1-P-OP2	-6.29	110.17	119.60
1	X	420	C	OP1-P-OP2	-6.29	110.17	119.60
1	X	737	C	OP1-P-OP2	-6.28	110.18	119.60
1	X	421	G	OP1-P-OP2	-6.28	110.18	119.60
1	X	1278	A	C2'-C3'-O3'	6.28	123.74	113.70
1	X	1771	A	N9-C1'-C2'	6.27	122.15	114.00
1	X	2191	A	OP1-P-OP2	-6.27	110.19	119.60
1	X	415	A	P-O3'-C3'	6.27	127.23	119.70
1	X	1861	G	OP1-P-OP2	-6.27	110.20	119.60
1	X	1212	U	C2'-C3'-O3'	6.26	123.71	113.70
19	Q	61	LYS	N-CA-C	6.26	127.90	111.00
1	X	552	C	OP1-P-OP2	-6.26	110.22	119.60
1	X	118	U	N1-C1'-C2'	6.25	122.13	114.00
1	X	1058	G	OP1-P-OP2	-6.25	110.22	119.60
1	X	721	C	OP1-P-OP2	-6.25	110.23	119.60
1	X	2195	C	OP1-P-OP2	-6.25	110.23	119.60
1	X	728	G	OP1-P-OP2	-6.25	110.23	119.60
1	X	1871	G	O4'-C4'-C3'	-6.24	97.76	104.00
1	X	2192	U	OP1-P-OP2	-6.24	110.23	119.60
1	X	731	A	O4'-C1'-N9	-6.23	103.22	108.20
1	X	725	C	OP1-P-OP2	-6.22	110.27	119.60
1	X	739	G	OP1-P-OP2	-6.22	110.28	119.60
1	X	1055	A	OP1-P-OP2	-6.21	110.29	119.60
1	X	2476	A	N9-C1'-C2'	6.20	122.06	114.00
1	X	723	C	OP1-P-OP2	-6.20	110.30	119.60
1	X	2186	G	OP1-P-OP2	-6.20	110.30	119.60
1	X	173	A	N9-C1'-C2'	6.18	122.03	114.00
1	X	1846	A	OP1-P-OP2	-6.17	110.34	119.60
1	X	2854	G	C4'-C3'-O3'	-6.17	96.44	109.40
1	X	735	G	OP1-P-OP2	-6.16	110.36	119.60
1	X	2185	U	OP1-P-OP2	-6.16	110.36	119.60
1	X	2322	U	C3'-C2'-C1'	6.16	106.43	101.50
1	X	2196	U	OP1-P-OP2	-6.16	110.37	119.60
1	X	1061	A	OP1-P-OP2	-6.15	110.37	119.60
15	M	3	THR	N-CA-C	-6.15	94.40	111.00
1	X	814	G	O4'-C1'-N9	6.14	113.11	108.20
1	X	560	G	OP1-P-OP2	-6.14	110.39	119.60
1	X	1857	G	P-O3'-C3'	-6.13	112.34	119.70
1	X	684	C	C5'-C4'-C3'	-6.13	106.20	116.00
1	X	780	U	C2'-C3'-O3'	6.12	123.50	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	X	550	C	OP1-P-OP2	-6.11	110.43	119.60
1	X	1250	A	N9-C1'-C2'	6.11	121.95	114.00
1	X	1057	A	N9-C1'-C2'	-6.10	105.29	112.00
1	X	1264	C	N1-C1'-C2'	6.10	121.93	114.00
1	X	2325	A	OP1-P-OP2	-6.10	110.45	119.60
1	X	1919	A	N9-C1'-C2'	6.09	121.91	114.00
1	X	729	A	OP1-P-OP2	-6.08	110.48	119.60
1	X	1870	U	OP1-P-OP2	-6.06	110.50	119.60
1	X	557	U	O4'-C1'-N1	-6.06	103.35	108.20
1	X	724	C	OP1-P-OP2	-6.05	110.52	119.60
1	X	556	A	C3'-C2'-C1'	6.05	106.34	101.50
9	G	108	GLY	N-CA-C	-6.04	98.00	113.10
1	X	1056	U	C5'-C4'-C3'	6.03	125.65	116.00
1	X	1865	C	OP1-P-OP2	-6.03	110.56	119.60
1	X	2194	A	OP1-P-OP2	-6.03	110.56	119.60
1	X	400	U	N1-C1'-C2'	6.03	121.83	114.00
1	X	416	U	OP1-P-OP2	-6.03	110.56	119.60
1	X	1863	U	P-O3'-C3'	-6.02	112.47	119.70
11	I	32	ARG	N-CA-C	-6.02	94.75	111.00
1	X	1871	G	P-O3'-C3'	-6.01	112.49	119.70
1	X	2668	U	O4'-C1'-N1	6.01	113.01	108.20
1	X	1055	A	C4'-C3'-O3'	6.01	125.01	113.00
1	X	1723	U	N1-C1'-C2'	6.00	121.80	114.00
1	X	1869	A	OP1-P-OP2	-6.00	110.60	119.60
1	X	2608	A	C2'-C3'-O3'	6.00	123.30	113.70
1	X	1475	U	N1-C1'-C2'	5.99	121.79	114.00
1	X	1048	U	OP1-P-OP2	-5.99	110.62	119.60
1	X	1671	A	N9-C1'-C2'	-5.99	105.41	112.00
1	X	2663	U	C5'-C4'-C3'	-5.99	106.42	116.00
1	X	841	G	N9-C1'-C2'	5.97	121.77	114.00
1	X	2196	U	N1-C1'-C2'	-5.97	105.44	112.00
1	X	1993	G	N9-C1'-C2'	-5.96	105.45	112.00
1	X	2057	U	C5'-C4'-C3'	-5.95	106.48	116.00
1	X	2193	C	OP1-P-OP2	-5.95	110.68	119.60
1	X	2496	C	N1-C1'-C2'	5.95	121.73	114.00
1	X	1047	G	OP1-P-OP2	-5.94	110.69	119.60
1	X	2189	A	OP1-P-OP2	-5.94	110.69	119.60
1	X	561	U	OP1-P-OP2	-5.93	110.70	119.60
1	X	984	A	N9-C1'-C2'	5.93	121.71	114.00
1	X	1866	G	C8-N9-C4	-5.93	104.03	106.40
1	X	1849	G	OP1-P-OP2	-5.92	110.72	119.60
1	X	742	G	N9-C1'-C2'	5.92	121.69	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	X	2198	U	N1-C1'-C2'	5.92	121.69	114.00
4	B	137	ARG	N-CA-C	-5.91	95.05	111.00
1	X	2252	A	N9-C1'-C2'	5.90	121.67	114.00
1	X	2323	U	C5'-C4'-O4'	-5.90	102.02	109.10
1	X	805	G	N9-C1'-C2'	5.89	121.66	114.00
1	X	1139	A	N9-C1'-C2'	5.88	121.65	114.00
1	X	2198	U	OP1-P-OP2	-5.87	110.79	119.60
1	X	413	G	OP1-P-OP2	-5.87	110.79	119.60
1	X	1053	G	OP1-P-OP2	-5.86	110.81	119.60
1	X	1281	A	OP2-P-O3'	5.86	118.09	105.20
1	X	177	U	N1-C1'-C2'	5.85	121.60	114.00
1	X	3	U	C2'-C3'-O3'	5.84	123.05	113.70
1	X	1684	G	OP2-P-O3'	5.84	118.05	105.20
1	X	2592	U	C5-C4-O4	-5.84	122.40	125.90
1	X	1056	U	N1-C1'-C2'	-5.83	105.58	112.00
1	X	1852	G	O4'-C4'-C3'	-5.83	98.17	104.00
1	X	1844	C	C6-N1-C2	5.83	122.63	120.30
1	X	1873	A	P-O3'-C3'	-5.81	112.73	119.70
1	X	2528	G	OP1-P-O3'	5.81	117.97	105.20
1	X	761	G	C1'-O4'-C4'	-5.79	105.27	109.90
1	X	717	G	OP1-P-OP2	-5.78	110.93	119.60
1	X	1854	G	O4'-C4'-C3'	-5.77	98.23	104.00
1	X	2848	A	N9-C1'-C2'	5.77	121.50	114.00
1	X	1873	A	N9-C1'-C2'	-5.76	105.66	112.00
1	X	2228	U	N1-C1'-C2'	5.75	121.48	114.00
1	X	1153	A	C2'-C3'-O3'	5.75	122.90	113.70
1	X	2323	U	C4'-C3'-O3'	5.74	124.48	113.00
1	X	555	U	N1-C1'-C2'	-5.73	105.69	112.00
1	X	2593	A	N9-C1'-C2'	5.72	121.44	114.00
1	X	1266	G	C1'-O4'-C4'	-5.72	105.32	109.90
1	X	343	A	N9-C1'-C2'	5.72	121.43	114.00
1	X	1301	U	O4'-C1'-N1	5.71	112.77	108.20
1	X	1978	U	O5'-P-OP2	-5.69	100.58	105.70
1	X	557	U	O4'-C1'-C2'	-5.68	100.12	105.80
1	X	2810	A	N9-C1'-C2'	5.67	121.38	114.00
1	X	2200	G	OP1-P-OP2	-5.67	111.10	119.60
1	X	1581	C	N1-C1'-C2'	5.64	121.34	114.00
1	X	1057	A	N3-C4-N9	-5.64	122.89	127.40
1	X	1980	A	O4'-C4'-C3'	-5.63	98.37	104.00
1	X	1249	G	N9-C1'-C2'	5.63	121.31	114.00
1	X	557	U	N3-C4-C5	-5.62	111.23	114.60
22	T	19	LYS	N-CA-C	5.62	126.17	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	X	1467	U	O4'-C1'-N1	-5.62	103.71	108.20
1	X	434	C	N1-C1'-C2'	5.61	121.30	114.00
1	X	2188	A	C4'-C3'-C2'	5.58	108.18	102.60
1	X	468	A	N9-C1'-C2'	5.58	121.25	114.00
1	X	1055	A	C3'-C2'-C1'	-5.57	97.04	101.50
1	X	1062	G	OP1-P-OP2	-5.57	111.25	119.60
1	X	1923	U	N1-C1'-C2'	5.57	121.24	114.00
1	X	13	A	N9-C1'-C2'	5.56	121.23	114.00
1	X	2075	U	N1-C1'-C2'	5.56	121.23	114.00
1	X	2810	A	OP1-P-O3'	5.56	117.43	105.20
1	X	1987	G	O5'-P-OP2	-5.55	100.70	105.70
1	X	2189	A	C2'-C3'-O3'	5.55	122.58	113.70
1	X	1288	A	C5'-C4'-C3'	5.54	124.87	116.00
1	X	731	A	P-O3'-C3'	5.54	126.34	119.70
1	X	176	A	N9-C1'-C2'	5.53	121.19	114.00
1	X	1871	G	C3'-C2'-C1'	-5.53	97.08	101.50
1	X	801	A	N9-C1'-C2'	5.51	121.17	114.00
1	X	1846	A	P-O5'-C5'	-5.51	112.09	120.90
1	X	1468	A	O4'-C1'-C2'	-5.51	100.29	105.80
1	X	418	C	C3'-C2'-C1'	5.50	105.90	101.50
1	X	728	G	C2'-C3'-O3'	5.47	122.46	113.70
1	X	1333	G	C5'-C4'-O4'	-5.47	102.53	109.10
1	X	2668	U	C5'-C4'-C3'	-5.46	107.26	116.00
1	X	1873	A	P-O5'-C5'	-5.46	112.16	120.90
1	X	1339	U	OP2-P-O3'	5.45	117.19	105.20
1	X	1266	G	N9-C1'-C2'	5.40	121.03	114.00
1	X	699	G	O4'-C1'-N9	5.40	112.52	108.20
1	X	557	U	N1-C2-N3	5.39	118.13	114.90
1	X	2196	U	C3'-C2'-C1'	5.38	105.81	101.50
1	X	7	G	C5'-C4'-C3'	-5.38	107.39	116.00
1	X	2188	A	N9-C1'-C2'	-5.37	106.09	112.00
1	X	580	A	C4'-C3'-O3'	-5.37	98.12	109.40
1	X	1873	A	O4'-C1'-N9	5.37	112.50	108.20
1	X	2189	A	C4'-C3'-C2'	-5.37	97.23	102.60
1	X	1862	C	C4'-C3'-C2'	5.36	107.96	102.60
1	X	2694	G	OP2-P-O3'	5.35	116.97	105.20
1	X	2321	C	O3'-P-O5'	5.35	114.16	104.00
1	X	2624	G	N9-C1'-C2'	5.33	120.93	114.00
1	X	2848	A	C1'-O4'-C4'	-5.33	105.64	109.90
1	X	2549	G	N9-C1'-C2'	-5.32	106.14	112.00
1	X	1439	G	C2'-C3'-O3'	5.32	122.21	113.70
1	X	727	U	N1-C1'-C2'	-5.32	106.15	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	X	2589	C	N1-C1'-C2'	5.32	120.91	114.00
1	X	1850	G	O4'-C1'-N9	5.30	112.44	108.20
1	X	789	G	N9-C1'-C2'	5.30	120.89	114.00
17	O	38	LEU	CA-CB-CG	5.30	127.48	115.30
1	X	1775	A	C2'-C3'-O3'	5.29	122.16	113.70
1	X	1057	A	C8-N9-C4	-5.29	103.69	105.80
1	X	2200	G	P-O5'-C5'	-5.29	112.44	120.90
1	X	747	A	C5'-C4'-C3'	5.29	124.46	116.00
1	X	2229	G	N9-C1'-C2'	5.28	120.87	114.00
1	X	59	G	N9-C1'-C2'	5.28	120.87	114.00
1	X	416	U	N1-C1'-C2'	5.28	120.86	114.00
1	X	1666	G	O4'-C4'-C3'	-5.27	98.73	104.00
1	X	1412	C	C2'-C3'-O3'	5.27	122.13	113.70
1	X	73	A	N9-C1'-C2'	5.26	120.84	114.00
1	X	1844	C	P-O3'-C3'	-5.26	113.39	119.70
1	X	2199	C	C5'-C4'-C3'	-5.26	107.59	116.00
1	X	2592	U	C2-N1-C1'	5.26	124.01	117.70
1	X	613	A	N9-C1'-C2'	5.25	120.83	114.00
1	X	2191	A	O4'-C1'-N9	-5.25	104.00	108.20
1	X	723	C	C5-C6-N1	5.25	123.62	121.00
1	X	2594	U	O5'-P-OP2	-5.25	100.98	105.70
1	X	1710	U	N1-C1'-C2'	5.24	120.82	114.00
1	X	2330	G	N9-C1'-C2'	5.24	120.81	114.00
1	X	557	U	C1'-O4'-C4'	5.24	114.09	109.90
1	X	558	G	C4'-C3'-O3'	5.24	123.48	113.00
1	X	582	G	N9-C1'-C2'	5.24	120.81	114.00
1	X	2193	C	C6-N1-C2	5.24	122.39	120.30
1	X	1338	G	C1'-O4'-C4'	-5.19	105.75	109.90
1	X	2427	A	N9-C1'-C2'	5.18	120.73	114.00
1	X	758	G	C2'-C3'-O3'	5.17	121.97	113.70
1	X	469	G	N9-C1'-C2'	5.17	120.72	114.00
1	X	123	A	N9-C1'-C2'	5.16	120.71	114.00
1	X	2229	G	C4'-C3'-O3'	-5.16	98.57	109.40
1	X	2617	G	N9-C1'-C2'	5.15	120.69	114.00
9	G	94	LYS	N-CA-C	-5.15	97.11	111.00
1	X	1975	G	C5'-C4'-O4'	-5.14	102.93	109.10
1	X	552	C	C6-N1-C2	5.13	122.35	120.30
1	X	1373	G	C6-N1-C2	-5.13	122.02	125.10
1	X	2191	A	N9-C1'-C2'	5.11	120.65	114.00
1	X	1274	C	N1-C1'-C2'	-5.11	106.38	112.00
1	X	1251	G	N9-C1'-C2'	-5.11	106.38	112.00
1	X	2188	A	P-O3'-C3'	-5.10	113.58	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	X	1845	A	C2'-C3'-O3'	5.10	121.86	113.70
1	X	2005	U	C2'-C3'-O3'	-5.10	98.28	109.50
1	X	1152	C	N1-C1'-C2'	5.10	120.63	114.00
20	R	6	ALA	N-CA-C	5.08	124.73	111.00
1	X	2841	U	C5'-C4'-C3'	-5.06	107.90	116.00
1	X	765	C	OP2-P-O3'	5.05	116.31	105.20
1	X	1000	G	N9-C1'-C2'	5.05	120.57	114.00
1	X	1980	A	O5'-P-OP2	-5.05	101.16	105.70
1	X	1052	C	P-O5'-C5'	-5.05	112.82	120.90
1	X	2545	A	N9-C1'-C2'	5.04	120.56	114.00
1	X	333	A	N9-C1'-C2'	5.04	120.56	114.00
1	X	1633	C	N1-C1'-C2'	5.04	120.55	114.00
1	X	1194	U	C2'-C3'-O3'	5.03	121.75	113.70
1	X	1811	A	N9-C1'-C2'	5.03	120.53	114.00
1	X	399	G	N9-C1'-C2'	5.02	120.53	114.00
1	X	1057	A	C3'-C2'-C1'	5.01	105.51	101.50
1	X	571	U	N1-C1'-C2'	5.01	120.51	114.00
1	X	1800	A	N9-C1'-C2'	5.00	120.51	114.00
1	X	1055	A	O4'-C1'-C2'	5.00	112.10	107.60

All (2) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
1	X	1278	A	C1'
1	X	2592	U	C1'

All (288) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
5	C	59	TYR	Sidechain
9	G	32	TYR	Sidechain
16	N	32	TYR	Sidechain
17	O	80	TYR	Sidechain
22	T	20	TYR	Sidechain
1	X	1000	G	Sidechain
1	X	1030	U	Sidechain
1	X	1033	G	Sidechain
1	X	1040	A	Sidechain
1	X	1054	C	Sidechain
1	X	1056	U	Sidechain
1	X	112	U	Sidechain
1	X	1142	G	Sidechain

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>Group</b>
1	X	1152	C	Sidechain
1	X	1153	A	Sidechain
1	X	1167	A	Sidechain
1	X	1173	G	Sidechain
1	X	1177	U	Sidechain
1	X	118	U	Sidechain
1	X	1193	G	Sidechain
1	X	1200	G	Sidechain
1	X	1202	U	Sidechain
1	X	1204	G	Sidechain
1	X	1205	G	Sidechain
1	X	1208	A	Sidechain
1	X	1214	C	Sidechain
1	X	1224	A	Sidechain
1	X	1230	C	Sidechain
1	X	1240	G	Sidechain
1	X	1250	A	Sidechain
1	X	1251	G	Sidechain
1	X	1265	G	Sidechain
1	X	1267	A	Sidechain
1	X	1268	U	Sidechain
1	X	1276	U	Sidechain
1	X	128	C	Sidechain
1	X	1280	U	Sidechain
1	X	1281	A	Sidechain
1	X	1282	A	Sidechain
1	X	1284	G	Sidechain
1	X	1293	A	Sidechain
1	X	1294	G	Sidechain
1	X	1296	G	Sidechain
1	X	13	A	Sidechain
1	X	1313	U	Sidechain
1	X	1322	G	Sidechain
1	X	1325	U	Sidechain
1	X	1326	U	Sidechain
1	X	1338	G	Sidechain
1	X	1342	U	Sidechain
1	X	1356	G	Sidechain
1	X	1357	U	Sidechain
1	X	1373	G	Sidechain
1	X	1429	A	Sidechain
1	X	1467	U	Sidechain

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>Group</b>
1	X	1469	U	Sidechain
1	X	1482	U	Sidechain
1	X	15	G	Sidechain
1	X	1566	G	Sidechain
1	X	1583	A	Sidechain
1	X	1618	U	Sidechain
1	X	1631	C	Sidechain
1	X	1632	A	Sidechain
1	X	1637	U	Sidechain
1	X	165	G	Sidechain
1	X	1659	G	Sidechain
1	X	1662	G	Sidechain
1	X	1671	A	Sidechain
1	X	1675	C	Sidechain
1	X	1677	C	Sidechain
1	X	1679	U	Sidechain
1	X	1683	G	Sidechain
1	X	1684	G	Sidechain
1	X	169	C	Sidechain
1	X	1690	U	Sidechain
1	X	1710	U	Sidechain
1	X	1716	G	Sidechain
1	X	1717	A	Sidechain
1	X	1747	G	Sidechain
1	X	1748	U	Sidechain
1	X	1749	G	Sidechain
1	X	1768	U	Sidechain
1	X	1771	A	Sidechain
1	X	178	C	Sidechain
1	X	1807	A	Sidechain
1	X	182	G	Sidechain
1	X	184	A	Sidechain
1	X	1849	G	Sidechain
1	X	1851	A	Sidechain
1	X	1920	A	Sidechain
1	X	1923	U	Sidechain
1	X	1930	C	Sidechain
1	X	1938	U	Sidechain
1	X	1975	G	Sidechain
1	X	1979	C	Sidechain
1	X	198	A	Sidechain
1	X	1987	G	Sidechain

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>Group</b>
1	X	1993	G	Sidechain
1	X	1994	U	Sidechain
1	X	1996	A	Sidechain
1	X	2000	U	Sidechain
1	X	2003	A	Sidechain
1	X	2007	G	Sidechain
1	X	2014	A	Sidechain
1	X	2023	C	Sidechain
1	X	2028	C	Sidechain
1	X	2046	C	Sidechain
1	X	2047	C	Sidechain
1	X	2058	U	Sidechain
1	X	207	U	Sidechain
1	X	218	A	Sidechain
1	X	2189	A	Sidechain
1	X	219	G	Sidechain
1	X	2192	U	Sidechain
1	X	2195	C	Sidechain
1	X	2196	U	Sidechain
1	X	2235	G	Sidechain
1	X	2239	C	Sidechain
1	X	225	G	Sidechain
1	X	2258	G	Sidechain
1	X	2275	U	Sidechain
1	X	2311	U	Sidechain
1	X	2315	A	Sidechain
1	X	2323	U	Sidechain
1	X	2324	G	Sidechain
1	X	2363	G	Sidechain
1	X	2369	U	Sidechain
1	X	2371	A	Sidechain
1	X	2391	A	Sidechain
1	X	2416	U	Sidechain
1	X	2427	A	Sidechain
1	X	2432	A	Sidechain
1	X	2433	G	Sidechain
1	X	2447	G	Sidechain
1	X	2456	U	Sidechain
1	X	2460	G	Sidechain
1	X	2463	G	Sidechain
1	X	2469	G	Sidechain
1	X	2482	A	Sidechain

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>Group</b>
1	X	2485	U	Sidechain
1	X	2487	G	Sidechain
1	X	2496	C	Sidechain
1	X	2498	U	Sidechain
1	X	2508	G	Sidechain
1	X	2525	U	Sidechain
1	X	2526	U	Sidechain
1	X	2528	G	Sidechain
1	X	2540	A	Sidechain
1	X	2541	U	Sidechain
1	X	2542	U	Sidechain
1	X	2548	G	Sidechain
1	X	2549	G	Sidechain
1	X	2557	G	Sidechain
1	X	2565	C	Sidechain
1	X	2588	U	Sidechain
1	X	2590	U	Sidechain
1	X	2592	U	Sidechain
1	X	2594	U	Sidechain
1	X	2596	C	Sidechain
1	X	2599	U	Sidechain
1	X	2621	G	Sidechain
1	X	2624	G	Sidechain
1	X	2629	U	Sidechain
1	X	2633	A	Sidechain
1	X	2635	U	Sidechain
1	X	2638	G	Sidechain
1	X	2658	A	Sidechain
1	X	2661	G	Sidechain
1	X	2663	U	Sidechain
1	X	2679	G	Sidechain
1	X	2683	C	Sidechain
1	X	2685	A	Sidechain
1	X	2692	A	Sidechain
1	X	2694	G	Sidechain
1	X	2696	A	Sidechain
1	X	2698	G	Sidechain
1	X	2700	U	Sidechain
1	X	2702	G	Sidechain
1	X	2704	U	Sidechain
1	X	2711	G	Sidechain
1	X	2730	A	Sidechain

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>Group</b>
1	X	2736	U	Sidechain
1	X	2751	C	Sidechain
1	X	2770	A	Sidechain
1	X	2785	A	Sidechain
1	X	2792	C	Sidechain
1	X	2797	G	Sidechain
1	X	2805	G	Sidechain
1	X	2806	G	Sidechain
1	X	2807	U	Sidechain
1	X	2809	A	Sidechain
1	X	2819	G	Sidechain
1	X	2824	C	Sidechain
1	X	2846	G	Sidechain
1	X	2847	G	Sidechain
1	X	2849	C	Sidechain
1	X	2855	C	Sidechain
1	X	2867	G	Sidechain
1	X	29	U	Sidechain
1	X	302	U	Sidechain
1	X	320	A	Sidechain
1	X	331	U	Sidechain
1	X	342	G	Sidechain
1	X	346	C	Sidechain
1	X	390	U	Sidechain
1	X	396	U	Sidechain
1	X	398	C	Sidechain
1	X	399	G	Sidechain
1	X	400	U	Sidechain
1	X	404	A	Sidechain
1	X	408	U	Sidechain
1	X	412	U	Sidechain
1	X	415	A	Sidechain
1	X	43	A	Sidechain
1	X	437	G	Sidechain
1	X	447	U	Sidechain
1	X	460	U	Sidechain
1	X	467	U	Sidechain
1	X	474	G	Sidechain
1	X	475	U	Sidechain
1	X	480	G	Sidechain
1	X	482	A	Sidechain
1	X	486	U	Sidechain

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>Group</b>
1	X	489	A	Sidechain
1	X	490	A	Sidechain
1	X	496	C	Sidechain
1	X	505	G	Sidechain
1	X	513	A	Sidechain
1	X	530	G	Sidechain
1	X	540	G	Sidechain
1	X	544	U	Sidechain
1	X	557	U	Sidechain
1	X	566	U	Sidechain
1	X	576	A	Sidechain
1	X	581	A	Sidechain
1	X	59	G	Sidechain
1	X	596	C	Sidechain
1	X	612	G	Sidechain
1	X	654	A	Sidechain
1	X	671	A	Sidechain
1	X	681	A	Sidechain
1	X	683	A	Sidechain
1	X	685	U	Sidechain
1	X	706	A	Sidechain
1	X	712	A	Sidechain
1	X	743	A	Sidechain
1	X	757	U	Sidechain
1	X	760	U	Sidechain
1	X	761	G	Sidechain
1	X	765	C	Sidechain
1	X	766	A	Sidechain
1	X	767	G	Sidechain
1	X	770	U	Sidechain
1	X	774	A	Sidechain
1	X	780	U	Sidechain
1	X	792	U	Sidechain
1	X	800	U	Sidechain
1	X	801	A	Sidechain
1	X	804	C	Sidechain
1	X	813	A	Sidechain
1	X	814	G	Sidechain
1	X	816	U	Sidechain
1	X	820	U	Sidechain
1	X	823	U	Sidechain
1	X	824	U	Sidechain

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Mol	Chain	Res	Type	Group
1	X	825	C	Sidechain
1	X	831	G	Sidechain
1	X	840	U	Sidechain
1	X	847	C	Sidechain
1	X	852	U	Sidechain
1	X	859	U	Sidechain
1	X	873	U	Sidechain
1	X	878	C	Sidechain
1	X	919	U	Sidechain
1	X	924	C	Sidechain
1	X	956	A	Sidechain
1	X	958	G	Sidechain
1	X	967	G	Sidechain
1	X	969	U	Sidechain
1	X	974	U	Sidechain
1	X	978	U	Sidechain
1	X	991	A	Sidechain
1	X	992	A	Sidechain
1	X	993	C	Sidechain
1	X	998	C	Sidechain
1	X	999	A	Sidechain
2	Y	17	A	Sidechain
2	Y	89	G	Sidechain

## 5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	X	57651	0	29046	4354	0
2	Y	2598	0	1328	184	0
3	A	1826	0	1885	379	0
4	B	1539	0	1600	236	0
5	C	1506	0	1525	356	0
6	D	1400	0	1481	400	0
7	E	1286	0	1336	249	0
8	F	1043	0	1088	71	0
9	G	1114	0	1144	282	0
10	H	997	0	1046	167	1

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
11	I	1067	0	1103	286	0
12	J	1090	0	1125	268	0
13	K	878	0	930	131	1
14	L	779	0	820	227	0
15	M	871	0	894	183	0
16	N	978	0	1020	234	0
17	O	741	0	756	200	0
18	P	1014	0	1096	184	0
19	Q	726	0	753	159	0
20	R	825	0	881	266	0
21	S	1345	0	1372	276	0
22	T	625	0	655	99	0
23	U	552	0	604	209	0
24	V	533	0	558	86	0
25	W	424	0	470	84	0
26	Z	457	0	464	81	0
27	1	53	0	0	0	0
28	2	46	0	0	0	0
29	3	63	0	0	2	0
30	4	297	0	330	69	0
31	5	71	0	0	0	0
All	All	84395	0	55310	8913	1

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 64.

All (8913) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1854:G:O2'	1:X:1855:G:H5'	1.31	1.28
1:X:2195:C:C5	1:X:2196:U:C5	2.22	1.28
1:X:729:A:H2'	1:X:730:C:O4'	1.19	1.25
1:X:2196:U:H2'	1:X:2197:U:C6	1.74	1.21
1:X:731:A:H2'	1:X:732:G:O4'	1.34	1.21
4:B:116:VAL:H	4:B:136:ARG:NE	1.38	1.20
4:B:116:VAL:N	4:B:136:ARG:HE	1.37	1.20
1:X:2736:U:O2'	1:X:2737:A:H5''	1.39	1.19
1:X:304:A:H2'	1:X:305:A:H5''	1.22	1.19
13:K:3:HIS:ND1	13:K:5:LYS:HD2	1.58	1.19
1:X:333:A:H3'	5:C:162:ARG:CZ	1.74	1.16
23:U:51:ILE:HG23	23:U:59:THR:HA	1.27	1.16

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:75:THR:O	4:B:76:ARG:HB3	1.44	1.15
23:U:62:LEU:HD23	23:U:67:LEU:CD1	1.77	1.15
21:S:97:PRO:HA	21:S:119:ASN:HA	1.28	1.14
1:X:2323:U:O2	1:X:2323:U:H2'	1.36	1.14
26:Z:4:HIS:HB3	26:Z:5:PRO:CD	1.75	1.14
20:R:23:ILE:HD12	20:R:23:ILE:H	1.10	1.13
23:U:31:GLY:HA2	23:U:32:ARG:HH11	0.98	1.13
2:Y:43:G:H5''	6:D:66:ILE:HD11	1.27	1.13
20:R:40:LEU:HB2	20:R:45:LYS:HB2	1.26	1.13
23:U:41:VAL:HG23	23:U:42:GLN:H	0.98	1.12
7:E:57:ASP:HB3	7:E:62:ARG:HE	1.06	1.12
19:Q:51:ILE:HD11	19:Q:83:ALA:HA	1.16	1.12
12:J:34:GLY:HA2	12:J:106:GLU:HA	1.30	1.12
25:W:4:LYS:HG3	25:W:52:GLU:HB3	1.26	1.12
7:E:98:LEU:HD12	7:E:99:THR:H	1.07	1.11
17:O:5:ILE:HG13	17:O:6:GLN:H	1.09	1.11
15:M:28:ARG:HB2	15:M:29:PRO:HD3	1.28	1.11
14:L:40:ALA:HB2	14:L:103:LEU:HD11	1.27	1.11
3:A:43:ARG:H	3:A:43:ARG:HD2	1.07	1.11
5:C:148:VAL:HB	5:C:167:VAL:HG12	1.22	1.11
1:X:1279:G:H22	18:P:37:LYS:HB2	1.16	1.10
3:A:149:PRO:HA	3:A:189:CYS:SG	1.91	1.10
1:X:1268:U:H2'	5:C:66:ASN:HB3	1.32	1.10
21:S:113:VAL:HG13	21:S:171:VAL:HG22	1.24	1.10
1:X:2194:A:H3'	1:X:2195:C:H5''	1.31	1.10
1:X:1072:U:O4	8:F:10:LEU:HA	1.52	1.09
1:X:623:G:H3'	1:X:624:A:H5''	1.31	1.09
1:X:1052:C:C2'	1:X:1053:G:H5''	1.82	1.09
1:X:1052:C:C3'	1:X:1053:G:H5''	1.83	1.09
26:Z:4:HIS:HB3	26:Z:5:PRO:HD3	1.23	1.09
14:L:33:ARG:HH11	14:L:100:VAL:HA	1.09	1.09
1:X:2482:A:H4'	1:X:2483:U:OP1	1.38	1.09
10:H:23:ARG:NH2	10:H:23:ARG:HB3	1.68	1.09
1:X:788:G:H5'	1:X:790:A:H1'	1.33	1.08
1:X:2796:A:H5''	4:B:162:MET:HE1	1.35	1.08
9:G:61:ARG:NE	9:G:65:LYS:HD2	1.68	1.08
1:X:1107:A:H3'	1:X:1108:U:H5''	1.36	1.08
2:Y:46:G:H4'	6:D:92:ARG:HH12	1.13	1.08
1:X:2170:C:H3'	1:X:2171:U:H5''	1.35	1.08
9:G:103:TYR:HB3	9:G:107:GLN:HE21	1.14	1.07
1:X:558:G:H3'	1:X:558:G:N3	1.70	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:176:ASN:HD21	5:C:178:TYR:HB3	1.04	1.07
23:U:32:ARG:H	23:U:32:ARG:NE	1.51	1.07
23:U:48:LYS:HG2	23:U:49:LYS:N	1.67	1.07
1:X:1279:G:N2	18:P:37:LYS:HB2	1.70	1.07
1:X:2310:G:H4'	22:T:43:THR:H	1.16	1.07
1:X:886:A:H1'	12:J:30:PHE:HE1	1.19	1.06
1:X:2672:U:H2'	1:X:2673:G:H8	1.20	1.06
1:X:2198:U:H2'	1:X:2199:C:O4'	1.53	1.06
1:X:2332:G:H1'	22:T:34:GLY:HA3	1.32	1.06
10:H:116:ARG:HD2	15:M:38:LYS:HE2	1.37	1.06
1:X:1550:C:H2'	1:X:1553:G:N2	1.70	1.06
4:B:116:VAL:HG13	4:B:136:ARG:HH21	1.15	1.06
10:H:23:ARG:HB3	10:H:23:ARG:HH21	1.14	1.06
1:X:1056:U:O2	1:X:1056:U:C2'	2.00	1.06
1:X:1142:G:H4'	9:G:103:TYR:HE2	1.18	1.05
9:G:132:PHE:CZ	9:G:145:HIS:HB2	1.91	1.05
21:S:100:THR:HG23	21:S:138:VAL:HG21	1.38	1.05
1:X:1508:G:H5'	1:X:1509:A:H5''	1.38	1.05
1:X:1698:C:O2'	1:X:1753:A:H2'	1.56	1.05
22:T:71:ASN:HD22	22:T:77:ARG:HD3	0.91	1.05
1:X:1919:A:H2	1:X:1926:U:N3	1.54	1.05
22:T:71:ASN:ND2	22:T:77:ARG:HD3	1.71	1.05
24:V:2:LYS:HA	24:V:6:MET:HE2	1.36	1.05
10:H:83:ARG:HD2	10:H:89:ILE:HD11	1.33	1.04
12:J:12:LYS:O	12:J:13:GLN:HB2	1.52	1.04
1:X:2796:A:H2'	1:X:2797:G:C8	1.90	1.04
1:X:2194:A:H2'	1:X:2195:C:O4'	1.56	1.04
1:X:2796:A:H2'	1:X:2797:G:H8	1.23	1.04
6:D:65:PRO:HB3	6:D:89:VAL:HG22	1.34	1.04
15:M:34:ARG:CZ	15:M:88:VAL:HG11	1.88	1.04
1:X:2581:A:H3'	1:X:2582:G:H5''	1.40	1.03
3:A:142:VAL:HG12	3:A:193:ILE:HA	1.40	1.03
1:X:317:U:H2'	1:X:318:G:H5''	1.36	1.03
1:X:1885:C:H5'	3:A:244:ARG:HD2	1.40	1.03
5:C:197:GLU:HG2	5:C:198:GLU:HG3	1.41	1.03
21:S:46:GLN:HB3	21:S:50:GLY:HA3	1.37	1.03
1:X:347:C:H4'	20:R:15:HIS:CD2	1.93	1.03
20:R:96:LYS:HG3	20:R:97:GLN:H	1.22	1.03
1:X:1053:G:H2'	1:X:1054:C:H6	1.22	1.03
1:X:2195:C:C4	1:X:2196:U:C4	2.45	1.03
24:V:50:VAL:HA	24:V:53:LEU:HD12	1.35	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:108:VAL:HG12	20:R:109:ALA:H	1.19	1.03
1:X:1185:C:H2'	1:X:1186:G:H3'	1.39	1.02
6:D:106:ILE:HG23	6:D:110:ARG:HD2	1.40	1.02
20:R:105:ARG:HH22	20:R:112:LYS:HA	1.19	1.02
1:X:886:A:H1'	12:J:30:PHE:CE1	1.92	1.02
7:E:50:LEU:HD23	7:E:51:LEU:H	1.24	1.02
20:R:90:LYS:HB2	20:R:108:VAL:HG21	1.41	1.02
21:S:113:VAL:HA	21:S:171:VAL:HA	1.37	1.02
19:Q:69:ILE:CD1	19:Q:70:GLY:H	1.71	1.02
23:U:32:ARG:HE	23:U:32:ARG:N	1.56	1.02
25:W:2:LYS:HB3	25:W:54:GLN:HB3	1.40	1.02
5:C:110:SER:HA	5:C:113:GLU:OE1	1.59	1.02
5:C:176:ASN:ND2	5:C:178:TYR:HB3	1.75	1.02
11:I:30:ALA:HB3	11:I:34:HIS:CE1	1.92	1.02
1:X:1386:A:H5''	1:X:2191:A:N6	1.75	1.02
23:U:62:LEU:CD2	23:U:67:LEU:HD12	1.88	1.02
1:X:517:A:H5''	1:X:518:A:H5'	1.41	1.01
1:X:663:G:H3'	1:X:664:C:H5''	1.39	1.01
1:X:1978:U:H3'	1:X:1979:C:H5''	1.38	1.01
14:L:55:SER:O	14:L:71:VAL:HB	1.59	1.01
30:4:9:LYS:H	30:4:9:LYS:HD2	1.23	1.01
1:X:653:G:H2'	1:X:654:A:H5''	1.41	1.01
1:X:1631:C:H1'	18:P:108:PRO:HG2	1.41	1.01
1:X:1790:G:H5''	3:A:261:ARG:HH22	1.20	1.01
7:E:43:VAL:HG21	7:E:52:VAL:HG22	1.42	1.01
1:X:1466:C:H2'	1:X:1467:U:O4'	1.60	1.01
1:X:2194:A:C3'	1:X:2195:C:H5''	1.89	1.01
1:X:2781:G:H2'	1:X:2782:G:H5''	1.37	1.01
14:L:33:ARG:HG3	14:L:38:ILE:HB	1.42	1.01
1:X:1052:C:H2'	1:X:1053:G:H5''	1.41	1.01
23:U:48:LYS:CG	23:U:49:LYS:H	1.72	1.01
4:B:150:VAL:HG21	4:B:154:LYS:HE2	1.40	1.00
4:B:152:LYS:HB2	9:G:106:TYR:HB3	1.43	1.00
1:X:1053:G:H2'	1:X:1054:C:C6	1.95	1.00
14:L:33:ARG:CZ	14:L:103:LEU:HB2	1.91	1.00
15:M:38:LYS:HB3	15:M:46:ARG:HB3	1.38	1.00
1:X:729:A:C2'	1:X:730:C:O4'	2.08	1.00
12:J:28:VAL:HB	12:J:137:VAL:HB	1.41	1.00
21:S:10:PRO:O	21:S:13:LYS:HG3	1.61	1.00
23:U:49:LYS:HB2	23:U:61:TRP:HA	1.41	1.00
15:M:46:ARG:HG3	15:M:47:SER:H	1.21	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:43:ARG:N	3:A:43:ARG:HH11	1.59	1.00
18:P:37:LYS:HE2	18:P:64:ALA:HB2	1.43	1.00
21:S:64:ALA:HA	21:S:86:VAL:H	1.25	1.00
1:X:2212:U:H2'	1:X:2213:G:C8	1.96	1.00
1:X:2767:C:H1'	4:B:62:PRO:HG3	1.42	0.99
6:D:13:ARG:NH1	6:D:14:PRO:HG3	1.76	0.99
23:U:48:LYS:HG2	23:U:49:LYS:H	0.84	0.99
1:X:1072:U:H1'	1:X:1081:A:H1'	1.44	0.99
5:C:7:ILE:HB	5:C:120:VAL:H	1.25	0.99
1:X:1057:A:H2'	1:X:1057:A:N3	1.76	0.99
3:A:67:PHE:HB3	3:A:153:ALA:H	1.26	0.99
6:D:150:ARG:HG2	6:D:151:GLY:H	1.25	0.99
21:S:127:PRO:O	21:S:128:ARG:HG2	1.61	0.99
9:G:93:LYS:N	9:G:93:LYS:HD2	1.78	0.99
12:J:28:VAL:HG21	12:J:135:ARG:HA	1.41	0.99
15:M:99:VAL:HG21	15:M:104:LEU:HD21	1.44	0.99
1:X:1850:G:N2	1:X:1867:A:N7	2.08	0.99
3:A:252:LYS:N	3:A:252:LYS:HE3	1.77	0.99
6:D:122:PHE:HB3	6:D:129:ASN:HD22	1.24	0.99
16:N:66:ASN:HB2	16:N:70:ARG:HH12	1.26	0.99
1:X:402:A:C8	1:X:2392:G:H4'	1.98	0.98
1:X:558:G:N3	1:X:558:G:C5'	2.26	0.98
1:X:2075:U:O2'	1:X:2076:G:H5''	1.63	0.98
1:X:2083:G:H1	1:X:2172:U:H3	1.09	0.98
4:B:116:VAL:HG22	4:B:136:ARG:NE	1.77	0.98
20:R:107:ALA:HB1	20:R:111:GLY:HA2	1.43	0.98
23:U:62:LEU:HD23	23:U:67:LEU:HD12	0.99	0.98
2:Y:43:G:H5'	2:Y:44:C:H5'	1.46	0.98
23:U:13:LEU:HG	23:U:14:VAL:H	1.29	0.98
1:X:1854:G:H2'	1:X:1855:G:OP2	1.61	0.98
6:D:40:LEU:HA	6:D:150:ARG:NH2	1.78	0.98
12:J:79:PRO:HD3	12:J:88:LYS:HZ2	1.28	0.98
1:X:731:A:O2'	1:X:732:G:H5'	1.64	0.98
3:A:183:ARG:HB3	3:A:183:ARG:HH11	1.26	0.98
7:E:43:VAL:HB	7:E:52:VAL:HG13	1.45	0.98
1:X:1313:U:H4'	1:X:1314:A:O5'	1.63	0.98
14:L:16:LYS:HE2	14:L:28:ARG:HH12	1.22	0.98
20:R:38:LEU:HD12	20:R:47:VAL:HG21	1.43	0.98
1:X:813:A:H4'	1:X:814:G:O5'	1.64	0.97
1:X:1542:G:N2	1:X:1562:G:H1	1.61	0.97
11:I:81:GLN:HE22	11:I:115:SER:HA	1.29	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Z:6:VAL:HG22	26:Z:7:PRO:HD2	1.46	0.97
30:4:19:ARG:NH1	30:4:24:LEU:HD22	1.78	0.97
1:X:1850:G:O2'	1:X:1851:A:H8	1.46	0.97
22:T:71:ASN:HD22	22:T:77:ARG:CD	1.77	0.97
23:U:31:GLY:HA2	23:U:32:ARG:NH1	1.77	0.97
1:X:75:C:H2'	1:X:76:C:H5''	1.43	0.97
1:X:1573:G:H3'	1:X:1574:A:H5''	1.42	0.97
1:X:1173:G:H4'	17:O:22:VAL:HG22	1.44	0.97
20:R:80:LYS:HE3	20:R:80:LYS:O	1.64	0.97
1:X:693:A:H2'	1:X:694:G:H8	1.30	0.97
1:X:729:A:H3'	1:X:729:A:N3	1.79	0.97
3:A:133:LEU:HB2	3:A:187:SER:HB2	1.47	0.97
9:G:33:ILE:HB	9:G:34:PRO:CD	1.92	0.97
10:H:27:SER:HB3	10:H:50:ILE:H	1.27	0.97
4:B:154:LYS:HE3	4:B:156:MET:SD	2.04	0.96
9:G:33:ILE:HB	9:G:34:PRO:HD2	1.44	0.96
1:X:1067:G:H21	1:X:1114:A:H62	1.14	0.96
1:X:2807:U:H5'	1:X:2807:U:H6	1.30	0.96
1:X:333:A:H5''	5:C:162:ARG:NH1	1.78	0.96
1:X:652:C:N4	1:X:657:A:H61	1.62	0.96
3:A:183:ARG:HB3	3:A:183:ARG:NH1	1.80	0.96
13:K:79:VAL:HA	13:K:83:VAL:HG13	1.47	0.96
1:X:731:A:C2'	1:X:732:G:O4'	2.13	0.96
1:X:542:A:C2	1:X:2004:U:H2'	2.00	0.96
11:I:93:LEU:O	11:I:97:ARG:HG3	1.66	0.96
1:X:219:G:N2	1:X:231:G:H2'	1.81	0.96
1:X:652:C:H42	1:X:657:A:N6	1.62	0.96
1:X:757:U:H2'	1:X:758:G:H5'	1.48	0.96
1:X:1790:G:H5''	3:A:261:ARG:NH2	1.80	0.96
6:D:57:LEU:O	6:D:60:ILE:HG12	1.63	0.96
14:L:40:ALA:HB1	14:L:75:LEU:HD22	1.45	0.96
3:A:43:ARG:HD2	3:A:43:ARG:N	1.79	0.96
15:M:102:ALA:O	15:M:103:LYS:HD2	1.64	0.96
11:I:94:GLU:HA	11:I:97:ARG:NE	1.81	0.95
1:X:1052:C:H3'	1:X:1053:G:C5'	1.95	0.95
23:U:29:GLY:C	23:U:31:GLY:H	1.61	0.95
3:A:42:GLY:C	3:A:43:ARG:HH11	1.70	0.95
5:C:95:LEU:HD23	5:C:96:PRO:HD2	1.48	0.95
1:X:34:U:HO2'	20:R:4:PRO:N	1.64	0.95
1:X:1193:G:H2'	1:X:1194:U:H5''	1.49	0.95
1:X:1231:A:H2'	1:X:1232:U:C6	2.01	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1919:A:C2	1:X:1926:U:N3	2.35	0.95
15:M:28:ARG:CB	15:M:29:PRO:HD3	1.90	0.95
23:U:41:VAL:HG23	23:U:42:GLN:N	1.80	0.95
1:X:2074:U:H3'	1:X:2075:U:H5''	1.48	0.95
9:G:155:THR:HA	9:G:158:HIS:HD2	1.31	0.95
24:V:41:HIS:HD2	24:V:42:ARG:H	1.14	0.95
1:X:528:G:H5'	18:P:39:ARG:HH22	1.29	0.94
1:X:1091:C:H1'	8:F:126:THR:HA	1.45	0.94
1:X:1281:A:H1'	1:X:2592:U:C4	2.02	0.94
19:Q:25:TYR:OH	19:Q:87:SER:HA	1.66	0.94
13:K:79:VAL:HA	13:K:83:VAL:CG1	1.96	0.94
16:N:66:ASN:HB3	16:N:76:TYR:HB2	1.48	0.94
9:G:61:ARG:NH2	9:G:61:ARG:HB3	1.81	0.94
20:R:25:LEU:HD12	20:R:81:VAL:H	1.32	0.94
3:A:177:LEU:HD12	3:A:181:GLU:HB3	1.45	0.94
3:A:247:VAL:HG23	3:A:248:THR:HG23	1.47	0.94
12:J:15:ARG:HD2	12:J:73:LYS:HG3	1.46	0.94
1:X:1142:G:H4'	9:G:103:TYR:CE2	2.03	0.94
1:X:2551:A:C8	4:B:144:ARG:HD3	2.01	0.94
1:X:757:U:C2'	1:X:758:G:H5'	1.96	0.94
1:X:857:U:H3'	1:X:858:G:H8	1.28	0.94
1:X:2563:U:H2'	1:X:2564:U:H5''	1.47	0.94
1:X:796:A:C8	1:X:797:A:H4'	2.02	0.94
9:G:61:ARG:HE	9:G:65:LYS:HD2	1.22	0.94
17:O:5:ILE:HG13	17:O:6:GLN:N	1.76	0.94
20:R:95:ARG:H	20:R:95:ARG:HD2	1.29	0.94
11:I:13:ARG:HG2	11:I:13:ARG:HH21	1.30	0.93
1:X:501:G:H2'	1:X:502:A:C8	2.03	0.93
1:X:516:G:HO2'	1:X:517:A:H8	0.95	0.93
1:X:2307:A:H2'	1:X:2308:A:C8	2.03	0.93
1:X:2447:G:O2'	1:X:2448:A:H5'	1.68	0.93
4:B:116:VAL:HG22	4:B:136:ARG:CZ	1.99	0.93
15:M:79:ARG:HH11	15:M:79:ARG:HG3	1.32	0.93
11:I:11:GLY:H	11:I:14:LYS:HB3	1.31	0.93
1:X:940:G:OP1	25:W:37:THR:HG21	1.68	0.93
16:N:72:HIS:HD2	16:N:110:VAL:HG21	1.31	0.93
1:X:1231:A:H2'	1:X:1232:U:H6	1.28	0.93
7:E:9:ILE:HG21	7:E:50:LEU:HB3	1.51	0.93
14:L:27:LEU:HD22	14:L:44:ASP:HA	1.46	0.93
1:X:558:G:H3'	1:X:558:G:C4	2.00	0.93
17:O:36:LYS:HZ2	17:O:54:TYR:HB3	1.28	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1056:U:O2	1:X:1056:U:H2'	1.14	0.93
6:D:79:LEU:HA	6:D:80:ARG:CZ	2.00	0.92
1:X:476:G:H2'	1:X:477:A:C8	2.04	0.92
1:X:1448:A:H61	1:X:1574:A:H61	1.08	0.92
16:N:93:LYS:HD2	17:O:10:LYS:HZ3	1.35	0.92
20:R:15:HIS:HD1	20:R:16:PHE:HD2	1.10	0.92
2:Y:46:G:C4'	6:D:92:ARG:HH12	1.81	0.92
5:C:112:GLN:O	5:C:116:LYS:HE2	1.69	0.92
11:I:94:GLU:HB3	11:I:97:ARG:HH11	1.34	0.92
1:X:98:U:H5'	1:X:99:U:H5''	1.52	0.92
5:C:48:ARG:H	5:C:48:ARG:HD2	1.34	0.92
24:V:41:HIS:CD2	24:V:42:ARG:H	1.86	0.92
1:X:493:A:H4'	20:R:56:LYS:HE3	1.50	0.92
1:X:1501:C:H2'	1:X:1502:G:O4'	1.70	0.92
5:C:3:GLN:HG2	5:C:116:LYS:HD2	1.51	0.92
1:X:1441:A:H1'	1:X:1442:C:C5	2.05	0.92
3:A:33:LEU:HD12	3:A:63:ARG:HH22	1.35	0.91
16:N:61:TRP:HZ3	16:N:94:VAL:H	0.93	0.91
22:T:41:ARG:HH11	22:T:41:ARG:HG3	1.32	0.91
1:X:1468:A:H5''	1:X:1472:C:N4	1.85	0.91
19:Q:65:VAL:HG12	19:Q:66:GLY:H	1.33	0.91
23:U:28:GLY:HA3	23:U:32:ARG:HB3	1.52	0.91
1:X:1440:G:H3'	1:X:1441:A:H5''	1.52	0.91
1:X:1656:U:O2'	1:X:1657:A:H5''	1.69	0.91
21:S:62:PHE:HB3	21:S:85:MET:SD	2.11	0.91
30:4:1:MET:HE2	30:4:33:LYS:HB3	1.53	0.91
1:X:1223:G:H4'	1:X:1224:A:H5''	1.52	0.91
1:X:1586:A:H5'	3:A:38:PRO:HG3	1.51	0.91
1:X:208:C:H2'	1:X:209:G:H5'	1.52	0.91
1:X:333:A:H5'	5:C:162:ARG:HG3	1.50	0.91
1:X:1849:G:N3	1:X:1868:A:N6	2.19	0.91
3:A:42:GLY:H	3:A:43:ARG:NH1	1.67	0.91
14:L:33:ARG:CG	14:L:38:ILE:HB	1.99	0.91
1:X:824:U:H1'	1:X:1264:C:H1'	1.52	0.91
1:X:1075:C:C5'	8:F:87:GLY:HA3	2.01	0.91
1:X:1281:A:H1'	1:X:2592:U:O4	1.71	0.91
1:X:224:G:H4'	1:X:399:G:C6	2.05	0.91
1:X:1623:C:H4'	1:X:1624:A:O5'	1.69	0.91
14:L:33:ARG:NH1	14:L:100:VAL:HA	1.86	0.91
20:R:18:LYS:HB3	20:R:39:ALA:HB2	1.52	0.91
25:W:12:ARG:HG2	25:W:12:ARG:HH11	1.33	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Y:36:A:HO2'	2:Y:37:C:H5	1.13	0.90
9:G:158:HIS:HA	9:G:161:GLN:CD	1.91	0.90
1:X:347:C:H4'	20:R:15:HIS:HD2	1.33	0.90
1:X:1052:C:H3'	1:X:1053:G:H5''	1.48	0.90
21:S:10:PRO:HG2	21:S:14:LEU:HD11	1.51	0.90
24:V:1:MET:HG3	24:V:2:LYS:HG2	1.51	0.90
1:X:1166:A:H2'	1:X:1167:A:H5''	1.53	0.90
1:X:1173:G:H4'	17:O:22:VAL:CG2	2.01	0.90
1:X:1744:G:OP1	15:M:100:ARG:HD2	1.72	0.90
1:X:2541:U:H4'	10:H:23:ARG:NH1	1.85	0.90
1:X:482:A:H2'	1:X:483:A:O4'	1.71	0.90
10:H:13:ASN:ND2	10:H:109:ARG:HG2	1.86	0.90
25:W:46:THR:HG22	25:W:47:VAL:HG13	1.52	0.90
2:Y:46:G:H4'	6:D:92:ARG:NH1	1.86	0.90
1:X:2796:A:OP2	13:K:3:HIS:CE1	2.24	0.90
22:T:71:ASN:HB2	22:T:77:ARG:HH11	1.35	0.90
23:U:49:LYS:HB3	23:U:61:TRP:CE3	2.07	0.90
1:X:1218:C:C4'	11:I:13:ARG:HH11	1.84	0.90
17:O:65:ARG:HH11	17:O:65:ARG:HG3	1.34	0.90
3:A:252:LYS:HE3	3:A:252:LYS:H	1.35	0.90
3:A:270:ILE:HG13	3:A:271:VAL:H	1.35	0.90
1:X:693:A:H2'	1:X:694:G:C8	2.07	0.90
1:X:1252:C:O2'	1:X:1253:C:H5''	1.72	0.90
1:X:2222:U:H2'	1:X:2223:U:C6	2.06	0.90
1:X:2616:U:H5''	4:B:82:ARG:NH2	1.85	0.90
1:X:2781:G:C2'	1:X:2782:G:H5''	2.01	0.90
15:M:93:ILE:HG22	15:M:94:VAL:H	1.36	0.90
16:N:61:TRP:HZ3	16:N:94:VAL:N	1.69	0.90
20:R:108:VAL:HG12	20:R:109:ALA:N	1.82	0.90
1:X:228:A:H5'	11:I:53:ARG:NH2	1.86	0.89
1:X:538:A:H3'	1:X:538:A:N3	1.86	0.89
1:X:939:C:H5''	1:X:940:G:O5'	1.71	0.89
1:X:2417:U:O2'	1:X:2418:A:H5''	1.72	0.89
3:A:243:GLY:H	3:A:244:ARG:HH11	1.17	0.89
17:O:13:ARG:HG2	17:O:14:VAL:H	1.35	0.89
1:X:1086:C:H3'	1:X:1087:C:H5''	1.53	0.89
13:K:91:PRO:O	13:K:92:GLY:O	1.90	0.89
1:X:172:A:C5	1:X:175:C:H5	1.90	0.89
13:K:32:GLY:HA2	13:K:115:LEU:HD12	1.54	0.89
1:X:2496:C:O2'	1:X:2497:A:H3'	1.72	0.89
10:H:23:ARG:HH21	10:H:23:ARG:CB	1.83	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1118:G:H2'	1:X:1119:U:H5''	1.53	0.89
1:X:1859:A:H2'	1:X:1860:A:C8	2.08	0.89
1:X:2828:C:H2'	1:X:2829:A:H8	1.36	0.89
20:R:18:LYS:H	20:R:18:LYS:HD3	1.36	0.89
1:X:1312:G:H5''	1:X:1313:U:OP1	1.72	0.89
16:N:101:ARG:O	16:N:103:PRO:HD3	1.73	0.89
21:S:134:LEU:HD21	21:S:152:ILE:HG21	1.54	0.89
1:X:516:G:O2'	1:X:517:A:H8	1.56	0.89
7:E:11:VAL:HG12	7:E:15:VAL:HG21	1.55	0.89
10:H:25:LEU:HD11	10:H:52:VAL:HG23	1.55	0.89
14:L:34:SER:HB2	14:L:94:TYR:OH	1.73	0.89
16:N:61:TRP:CZ3	16:N:94:VAL:N	2.41	0.89
16:N:61:TRP:O	16:N:65:ILE:HG13	1.73	0.89
17:O:5:ILE:CG1	17:O:6:GLN:H	1.80	0.89
1:X:2195:C:C6	1:X:2196:U:C6	2.61	0.89
1:X:987:G:H4'	1:X:1167:A:N7	1.88	0.89
1:X:1281:A:H1'	1:X:2592:U:C5	2.08	0.89
3:A:250:TRP:O	3:A:255:LYS:NZ	2.05	0.89
5:C:148:VAL:CB	5:C:167:VAL:HG12	2.03	0.89
6:D:13:ARG:HB3	6:D:14:PRO:HD3	1.54	0.89
6:D:79:LEU:HA	6:D:80:ARG:NH1	1.88	0.89
6:D:171:GLN:HA	6:D:175:LEU:HB3	1.51	0.89
9:G:67:ARG:HB3	9:G:70:PHE:HA	1.53	0.89
1:X:1782:A:H1'	3:A:208:LYS:HE3	1.55	0.88
20:R:17:LYS:HB3	20:R:18:LYS:NZ	1.88	0.88
1:X:1092:U:H4'	8:F:122:ALA:HB1	1.54	0.88
1:X:1745:C:P	15:M:101:ARG:HH22	1.96	0.88
1:X:2726:U:H2'	1:X:2727:G:H5'	1.56	0.88
16:N:88:ILE:HG23	17:O:49:GLU:HB2	1.53	0.88
25:W:4:LYS:CG	25:W:52:GLU:HB3	2.03	0.88
14:L:60:LYS:HG2	14:L:62:GLY:H	1.37	0.88
12:J:125:LYS:HD2	12:J:125:LYS:N	1.88	0.88
1:X:310:A:H61	5:C:162:ARG:HH22	1.17	0.88
1:X:427:C:H2'	1:X:428:A:C8	2.09	0.88
4:B:194:GLY:HA2	15:M:2:GLN:HB3	1.54	0.88
6:D:4:LEU:HG	6:D:5:LYS:H	1.35	0.88
1:X:98:U:C5'	1:X:99:U:H5''	2.03	0.88
1:X:304:A:C2'	1:X:305:A:H5''	2.03	0.88
18:P:109:ARG:HG3	18:P:110:ALA:H	1.39	0.88
1:X:116:A:H5'	1:X:117:A:H8	1.36	0.88
1:X:1448:A:N6	1:X:1574:A:H61	1.71	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2063:A:H2'	1:X:2064:U:C6	2.07	0.88
11:I:117:ALA:O	11:I:118:VAL:HG13	1.73	0.88
1:X:27:G:H1'	1:X:523:A:N6	1.88	0.88
5:C:2:ALA:HB1	5:C:13:ARG:HA	1.54	0.88
6:D:12:VAL:O	6:D:16:LEU:HG	1.74	0.88
15:M:106:TYR:CE1	15:M:107:LEU:CD2	2.57	0.88
1:X:623:G:C3'	1:X:624:A:H5''	2.03	0.88
2:Y:30:C:OP1	14:L:37:HIS:HB3	1.72	0.88
6:D:4:LEU:CG	6:D:5:LYS:H	1.87	0.88
20:R:22:VAL:HG11	20:R:80:LYS:HD2	1.54	0.88
13:K:13:ASN:HD22	13:K:14:SER:N	1.71	0.88
15:M:104:LEU:O	15:M:106:TYR:N	2.07	0.88
16:N:82:GLY:HA3	16:N:113:SER:OG	1.74	0.88
23:U:23:LYS:HD2	23:U:35:THR:CG2	2.02	0.88
1:X:687:G:O2'	1:X:688:A:H5'	1.74	0.87
1:X:1052:C:C3'	1:X:1053:G:C5'	2.52	0.87
19:Q:34:THR:O	19:Q:38:ILE:HG22	1.74	0.87
1:X:501:G:H2'	1:X:502:A:H8	1.39	0.87
16:N:75:ASN:ND2	16:N:77:SER:HB3	1.89	0.87
7:E:30:LYS:HB2	7:E:79:VAL:HA	1.56	0.87
1:X:1781:C:OP1	3:A:219:PRO:HB2	1.73	0.87
9:G:115:ALA:O	9:G:118:ALA:HB3	1.72	0.87
20:R:10:HIS:O	20:R:11:ASN:HB2	1.72	0.87
1:X:635:C:H2'	1:X:636:G:H5''	1.55	0.87
1:X:1474:A:H4'	1:X:1475:U:O5'	1.75	0.87
1:X:1747:G:H4'	1:X:1749:G:H1'	1.56	0.87
3:A:258:LYS:NZ	3:A:261:ARG:HH21	1.72	0.87
23:U:53:GLU:O	23:U:78:ILE:HG22	1.74	0.87
1:X:37:C:H2'	1:X:38:G:C8	2.09	0.87
1:X:208:C:C2'	1:X:209:G:H5'	2.04	0.87
16:N:22:LYS:HG3	16:N:23:GLY:H	1.40	0.87
23:U:27:ASP:HA	23:U:32:ARG:NH2	1.89	0.87
11:I:98:LEU:O	11:I:99:VAL:HG13	1.73	0.87
14:L:33:ARG:NH1	14:L:103:LEU:HB2	1.89	0.87
21:S:3:LEU:HD21	21:S:32:PHE:HB3	1.54	0.87
23:U:13:LEU:HG	23:U:14:VAL:N	1.90	0.87
1:X:682:G:H2'	1:X:682:G:N3	1.86	0.86
1:X:833:A:H1'	1:X:954:U:O2'	1.75	0.86
6:D:29:PRO:HG2	6:D:165:GLU:HB3	1.53	0.86
6:D:75:SER:H	6:D:79:LEU:HD22	1.38	0.86
11:I:18:ARG:HB2	11:I:21:ARG:HB2	1.55	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:M:33:VAL:HA	15:M:51:GLU:HB2	1.57	0.86
17:O:38:LEU:HD13	17:O:39:PHE:N	1.89	0.86
19:Q:68:PHE:O	19:Q:69:ILE:HD12	1.75	0.86
20:R:17:LYS:HB3	20:R:18:LYS:HZ3	1.40	0.86
1:X:1128:G:H3'	1:X:1129:A:H5''	1.57	0.86
1:X:1584:G:H4'	3:A:59:LYS:CG	2.04	0.86
23:U:41:VAL:CG2	23:U:42:GLN:H	1.84	0.86
1:X:128:C:H2'	1:X:129:A:H5''	1.56	0.86
1:X:663:G:C3'	1:X:664:C:H5''	2.05	0.86
1:X:796:A:H8	1:X:797:A:H4'	1.37	0.86
23:U:51:ILE:HG12	23:U:59:THR:HG22	1.57	0.86
1:X:555:U:H3'	1:X:555:U:H6	1.40	0.86
1:X:824:U:H1'	1:X:1264:C:C1'	2.05	0.86
3:A:132:PRO:HD3	3:A:190:TYR:CD2	2.10	0.86
1:X:1075:C:O2'	8:F:89:SER:HB3	1.74	0.86
10:H:116:ARG:HH22	15:M:41:GLU:HG2	1.40	0.86
18:P:36:ARG:NH2	26:Z:20:ARG:CZ	2.38	0.86
1:X:857:U:H3'	1:X:858:G:C8	2.11	0.86
1:X:1095:A:H2'	1:X:1096:A:H5''	1.56	0.86
3:A:258:LYS:HZ2	3:A:261:ARG:HH21	1.21	0.86
19:Q:51:ILE:CD1	19:Q:83:ALA:HA	2.03	0.86
1:X:914:C:H2'	1:X:915:C:H6	1.41	0.86
1:X:1095:A:C3'	1:X:1096:A:H5''	2.06	0.86
3:A:153:ALA:O	3:A:154:GLN:HG3	1.75	0.86
1:X:2581:A:H5'	1:X:2582:G:OP2	1.74	0.86
20:R:98:ILE:HG22	20:R:99:VAL:H	1.39	0.86
20:R:105:ARG:NH2	20:R:112:LYS:HA	1.90	0.86
1:X:333:A:H3'	5:C:162:ARG:NH2	1.90	0.86
1:X:333:A:H5''	5:C:162:ARG:HH11	1.37	0.86
6:D:115:ARG:HB2	6:D:178:ARG:HD2	1.58	0.86
21:S:19:ILE:HG22	21:S:20:ALA:H	1.41	0.86
1:X:1166:A:C2'	1:X:1167:A:H5''	2.05	0.86
1:X:2239:C:H2'	1:X:2240:C:H6	1.40	0.86
15:M:106:TYR:CE1	15:M:107:LEU:HD21	2.11	0.86
1:X:1448:A:H61	1:X:1574:A:N6	1.73	0.85
1:X:168:A:O2'	1:X:169:C:H5'	1.76	0.85
9:G:55:ALA:HB1	9:G:134:MET:HE1	1.58	0.85
1:X:755:C:H2'	1:X:756:C:C6	2.11	0.85
1:X:1993:G:O2'	1:X:1994:U:H5'	1.74	0.85
1:X:2736:U:HO2'	1:X:2737:A:H5''	1.34	0.85
5:C:7:ILE:HG21	5:C:121:ASP:O	1.76	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:70:ALA:HB3	6:D:83:MET:H	1.39	0.85
15:M:99:VAL:HG22	15:M:100:ARG:H	1.41	0.85
30:4:25:VAL:HG21	30:4:34:GLN:HE21	1.41	0.85
1:X:1539:U:H2'	1:X:1540:C:H6	1.40	0.85
12:J:77:LYS:HG3	12:J:78:LYS:H	1.40	0.85
18:P:8:PHE:O	18:P:9:ARG:HB2	1.75	0.85
30:4:9:LYS:HD2	30:4:9:LYS:N	1.89	0.85
6:D:13:ARG:CZ	6:D:14:PRO:HG3	2.06	0.85
7:E:38:ASN:HB2	7:E:41:LEU:HB2	1.59	0.85
7:E:126:PRO:HG2	7:E:127:GLU:H	1.41	0.85
12:J:62:GLY:HA3	12:J:64:LYS:CE	2.06	0.85
1:X:1117:G:H2'	1:X:1118:G:C8	2.12	0.85
1:X:2241:U:H5	22:T:17:ASN:HD21	1.24	0.85
7:E:98:LEU:HD12	7:E:99:THR:N	1.90	0.85
7:E:136:ILE:H	7:E:136:ILE:HD12	1.41	0.85
15:M:34:ARG:NE	15:M:88:VAL:HG11	1.90	0.85
16:N:88:ILE:HG12	17:O:49:GLU:OE1	1.77	0.85
1:X:2661:G:O6	1:X:2708:U:H1'	1.76	0.85
1:X:1526:U:H2'	1:X:1527:G:O4'	1.75	0.84
9:G:61:ARG:HE	9:G:65:LYS:CD	1.90	0.84
18:P:106:LEU:HD23	18:P:107:ILE:N	1.92	0.84
3:A:243:GLY:H	3:A:244:ARG:NH1	1.74	0.84
16:N:66:ASN:HB2	16:N:70:ARG:NH1	1.90	0.84
19:Q:7:LEU:HD22	19:Q:7:LEU:C	1.98	0.84
23:U:11:LYS:HZ1	23:U:75:TYR:HB2	1.42	0.84
1:X:1268:U:C2'	5:C:66:ASN:HB3	2.07	0.84
1:X:1681:A:H61	1:X:1979:C:H42	1.23	0.84
12:J:63:GLY:O	12:J:65:ILE:N	2.09	0.84
16:N:3:ARG:HG2	16:N:3:ARG:HH11	1.42	0.84
1:X:143:A:H2'	1:X:144:U:C6	2.12	0.84
1:X:1016:C:C5	1:X:1154:A:H1'	2.13	0.84
23:U:70:LEU:HB3	23:U:79:GLU:OE2	1.76	0.84
30:4:25:VAL:HB	30:4:34:GLN:HB2	1.58	0.84
1:X:2787:A:H2'	1:X:2788:C:H6	1.41	0.84
5:C:5:ASN:HA	5:C:118:VAL:HG21	1.59	0.84
6:D:36:VAL:HG22	6:D:154:ILE:HG13	1.58	0.84
23:U:52:ARG:HD2	23:U:79:GLU:HA	1.59	0.84
1:X:427:C:H1'	1:X:1856:U:H1'	1.60	0.84
14:L:54:ALA:H	14:L:75:LEU:HD13	1.43	0.84
26:Z:8:LYS:O	26:Z:9:LYS:HG2	1.78	0.84
6:D:4:LEU:HD11	6:D:173:MET:HE1	1.60	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1670:G:H4'	1:X:1671:A:OP1	1.75	0.84
5:C:26:VAL:O	5:C:30:VAL:HG23	1.76	0.84
6:D:65:PRO:HB2	6:D:87:ILE:HG22	1.60	0.84
6:D:167:ARG:HA	6:D:170:LEU:HD12	1.59	0.84
13:K:13:ASN:ND2	13:K:16:ALA:H	1.76	0.84
1:X:2293:G:H4'	6:D:155:THR:HG21	1.60	0.84
11:I:108:LEU:HB2	11:I:122:VAL:HG11	1.59	0.84
1:X:2291:U:OP1	6:D:71:LYS:HB2	1.78	0.83
9:G:110:LEU:N	9:G:110:LEU:HD23	1.91	0.83
1:X:871:U:O2'	1:X:2247:A:H2'	1.78	0.83
2:Y:16:U:H1'	2:Y:109:G:H21	1.42	0.83
14:L:16:LYS:HE2	14:L:28:ARG:NH1	1.94	0.83
7:E:50:LEU:HD23	7:E:51:LEU:N	1.92	0.83
1:X:1472:C:H3'	1:X:1473:U:H6	1.43	0.83
1:X:1658:A:H2'	1:X:1659:G:O4'	1.77	0.83
1:X:2177:U:H2'	1:X:2178:U:C6	2.14	0.83
1:X:2195:C:C6	1:X:2196:U:C5	2.66	0.83
5:C:164:VAL:O	5:C:166:TRP:N	2.12	0.83
1:X:88:G:H3'	1:X:89:A:H5''	1.58	0.83
1:X:2263:C:H1'	1:X:2304:G:N2	1.93	0.83
4:B:116:VAL:HG13	4:B:136:ARG:NH2	1.94	0.83
1:X:558:G:C8	1:X:559:C:C5	2.66	0.83
18:P:27:VAL:HG23	18:P:125:THR:HG22	1.59	0.83
21:S:123:VAL:HG23	21:S:161:ALA:CB	2.08	0.83
1:X:95:G:H4'	24:V:41:HIS:ND1	1.94	0.83
1:X:553:C:H5'	1:X:554:U:OP1	1.77	0.83
4:B:136:ARG:HG2	4:B:137:ARG:N	1.91	0.83
13:K:100:VAL:HG12	13:K:101:GLY:N	1.94	0.83
16:N:7:GLY:O	16:N:8:ILE:HG13	1.77	0.83
21:S:6:LYS:H	21:S:7:PRO:HD3	1.43	0.83
21:S:123:VAL:N	21:S:161:ALA:HB2	1.93	0.83
24:V:37:LEU:HD21	24:V:40:PRO:HA	1.60	0.83
1:X:1506:C:H2'	3:A:99:ASP:OD1	1.78	0.83
4:B:152:LYS:HD2	9:G:106:TYR:H	1.41	0.83
19:Q:63:LYS:HG3	19:Q:64:ARG:N	1.91	0.83
23:U:29:GLY:O	23:U:31:GLY:N	2.10	0.83
24:V:41:HIS:CD2	24:V:42:ARG:N	2.46	0.83
1:X:555:U:H3'	1:X:555:U:C6	2.14	0.83
1:X:2177:U:H2'	1:X:2178:U:H6	1.44	0.83
1:X:2261:G:H4'	1:X:2262:C:OP2	1.78	0.83
4:B:136:ARG:HG2	4:B:137:ARG:H	1.43	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:H:116:ARG:HH21	15:M:40:ARG:HB2	1.41	0.83
10:H:132:GLU:HG2	10:H:134:LEU:HG	1.61	0.83
19:Q:7:LEU:O	19:Q:7:LEU:HD13	1.77	0.83
20:R:23:ILE:HD12	20:R:23:ILE:N	1.87	0.83
1:X:755:C:H2'	1:X:756:C:H6	1.42	0.83
1:X:1391:A:O2'	1:X:1392:U:C6	2.31	0.83
1:X:1508:G:H5'	1:X:1509:A:C5'	2.08	0.83
1:X:2210:C:H2'	1:X:2211:U:C6	2.13	0.83
9:G:103:TYR:HB3	9:G:107:GLN:NE2	1.94	0.83
14:L:15:ARG:HD2	14:L:91:ARG:HH11	1.44	0.83
17:O:12:TYR:O	17:O:13:ARG:HB2	1.77	0.83
20:R:93:ARG:HH22	20:R:108:VAL:HA	1.43	0.83
25:W:9:VAL:O	25:W:12:ARG:HB2	1.79	0.83
1:X:1467:U:H3'	1:X:1467:U:H6	1.44	0.82
5:C:48:ARG:HB2	5:C:51:VAL:HG22	1.61	0.82
6:D:135:GLN:HG3	6:D:151:GLY:HA2	1.59	0.82
1:X:33:C:O2'	1:X:34:U:H5''	1.77	0.82
1:X:490:A:O2'	1:X:491:A:H5'	1.78	0.82
1:X:752:G:H4'	1:X:753:U:OP1	1.77	0.82
1:X:1075:C:O2'	8:F:89:SER:CB	2.27	0.82
3:A:66:ASP:OD1	3:A:69:ARG:HG3	1.79	0.82
9:G:51:LEU:CD1	9:G:88:VAL:HG21	2.09	0.82
1:X:1075:C:H5''	8:F:87:GLY:HA3	1.62	0.82
5:C:3:GLN:HE22	5:C:4:ILE:HG12	1.45	0.82
16:N:70:ARG:HG3	16:N:70:ARG:HH11	1.43	0.82
1:X:332:C:C1'	5:C:159:ARG:HE	1.92	0.82
1:X:1077:U:H2'	1:X:1079:G:OP2	1.79	0.82
1:X:1626:A:H5''	1:X:1627:C:OP2	1.78	0.82
1:X:2672:U:H2'	1:X:2673:G:C8	2.11	0.82
1:X:2795:A:H4'	13:K:5:LYS:HE3	1.61	0.82
1:X:627:A:H2'	1:X:628:A:C8	2.14	0.82
5:C:153:ASP:OD1	5:C:172:VAL:HA	1.80	0.82
7:E:76:VAL:C	7:E:78:GLY:H	1.80	0.82
7:E:89:LEU:HD21	7:E:131:ILE:HD11	1.60	0.82
12:J:125:LYS:NZ	12:J:125:LYS:HB3	1.94	0.82
15:M:50:PHE:CZ	15:M:70:LYS:HB3	2.14	0.82
23:U:51:ILE:CG2	23:U:59:THR:HA	2.09	0.82
20:R:90:LYS:CB	20:R:108:VAL:HG21	2.09	0.82
1:X:116:A:H5'	1:X:117:A:C8	2.13	0.82
1:X:1051:U:H2'	1:X:1052:C:H6	1.45	0.82
1:X:1734:C:H5''	1:X:1735:G:C8	2.14	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:65:PRO:HB3	6:D:89:VAL:CG2	2.09	0.82
20:R:85:ASP:H	20:R:86:PRO:CD	1.91	0.82
21:S:3:LEU:HD13	21:S:33:ALA:C	1.98	0.82
21:S:7:PRO:HG2	21:S:9:THR:O	1.79	0.82
1:X:73:A:H5''	1:X:74:G:O4'	1.79	0.82
1:X:558:G:N3	1:X:558:G:H5''	1.93	0.82
7:E:45:GLN:HG3	7:E:49:GLN:O	1.80	0.82
7:E:57:ASP:HB3	7:E:62:ARG:NE	1.92	0.82
18:P:32:ARG:C	18:P:32:ARG:HE	1.82	0.82
1:X:1193:G:C2'	1:X:1194:U:H5''	2.10	0.82
1:X:2306:A:H2'	1:X:2307:A:C8	2.14	0.82
1:X:2375:G:H4'	23:U:32:ARG:O	1.79	0.82
6:D:74:ILE:HG23	6:D:80:ARG:HA	1.60	0.82
6:D:152:MET:HE3	6:D:154:ILE:HD11	1.61	0.82
1:X:1281:A:C1'	1:X:2592:U:H5	1.93	0.81
1:X:2498:U:H4'	1:X:2499:C:OP1	1.77	0.81
7:E:131:ILE:HG22	7:E:132:ASP:H	1.45	0.81
7:E:131:ILE:HG22	7:E:132:ASP:N	1.95	0.81
1:X:1064:C:O5'	1:X:1064:C:H6	1.63	0.81
1:X:1218:C:H5'	11:I:13:ARG:HH11	1.44	0.81
6:D:108:LEU:HA	6:D:111:ILE:HD12	1.60	0.81
6:D:122:PHE:HB3	6:D:129:ASN:ND2	1.94	0.81
19:Q:66:GLY:O	19:Q:68:PHE:N	2.13	0.81
24:V:50:VAL:CA	24:V:53:LEU:HD12	2.10	0.81
1:X:317:U:C2'	1:X:318:G:H5''	2.09	0.81
1:X:427:C:O2	1:X:1856:U:H4'	1.80	0.81
1:X:1778:U:H2'	1:X:1779:C:H6	1.46	0.81
1:X:1922:U:H4'	1:X:1923:U:OP2	1.80	0.81
1:X:2237:C:H4'	1:X:2238:G:OP2	1.80	0.81
1:X:2266:A:N6	1:X:2323:U:H3	1.77	0.81
1:X:2288:A:H2'	1:X:2289:A:H8	1.44	0.81
1:X:2850:U:H5'	1:X:2850:U:H6	1.44	0.81
9:G:154:GLU:C	9:G:157:PRO:HD2	2.01	0.81
12:J:69:ILE:CG2	12:J:104:MET:HA	2.09	0.81
1:X:1095:A:C2'	1:X:1096:A:H5''	2.10	0.81
5:C:2:ALA:CB	5:C:13:ARG:HA	2.10	0.81
21:S:141:MET:HB3	21:S:171:VAL:CG2	2.10	0.81
1:X:471:A:H2'	1:X:472:C:O4'	1.80	0.81
1:X:1452:U:O2'	1:X:1453:A:H5'	1.80	0.81
1:X:2322:U:H2'	1:X:2323:U:C6	2.14	0.81
1:X:2581:A:H3'	1:X:2582:G:C5'	2.11	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2726:U:H1'	7:E:139:GLN:HE21	1.45	0.81
1:X:2811:G:H2'	1:X:2812:A:C8	2.16	0.81
3:A:164:GLN:HE22	3:A:166:GLN:HE22	1.27	0.81
4:B:75:THR:O	4:B:76:ARG:CB	2.29	0.81
13:K:7:GLY:O	13:K:8:ARG:HG2	1.81	0.81
15:M:102:ALA:C	15:M:103:LYS:HD2	2.01	0.81
19:Q:12:ILE:H	19:Q:12:ILE:HD13	1.44	0.81
21:S:64:ALA:HA	21:S:86:VAL:N	1.95	0.81
1:X:559:C:H2'	1:X:560:G:O4'	1.80	0.81
1:X:609:U:H4'	11:I:18:ARG:CZ	2.10	0.81
1:X:1849:G:H1'	1:X:1868:A:H61	1.45	0.81
5:C:26:VAL:HG22	11:I:18:ARG:HH11	1.45	0.81
5:C:28:HIS:CE1	11:I:21:ARG:HH11	1.98	0.81
7:E:9:ILE:HD12	7:E:51:LEU:HA	1.63	0.81
12:J:35:LEU:HD23	12:J:105:PHE:HD2	1.44	0.81
19:Q:38:ILE:O	19:Q:42:ILE:HG22	1.80	0.81
21:S:113:VAL:CG1	21:S:171:VAL:HG22	2.10	0.81
1:X:400:U:O2'	1:X:401:G:H5''	1.80	0.81
1:X:1218:C:C5'	11:I:13:ARG:HH11	1.93	0.81
1:X:1339:U:H5''	1:X:1994:U:H1'	1.62	0.81
1:X:2867:G:OP2	1:X:2867:G:H8	1.64	0.81
17:O:65:ARG:HG2	17:O:87:ARG:HD2	1.62	0.81
20:R:48:VAL:O	20:R:50:GLY:N	2.14	0.81
1:X:1072:U:C1'	1:X:1081:A:H1'	2.10	0.81
6:D:46:ASP:C	6:D:48:LYS:H	1.83	0.81
7:E:105:MET:HB2	7:E:113:VAL:HB	1.63	0.81
11:I:120:VAL:HG12	11:I:122:VAL:HG13	1.63	0.81
20:R:105:ARG:HH22	20:R:112:LYS:CA	1.93	0.81
1:X:2482:A:C4'	1:X:2483:U:OP1	2.27	0.81
9:G:36:ASN:O	9:G:38:GLU:N	2.13	0.81
15:M:46:ARG:HG3	15:M:47:SER:N	1.95	0.81
21:S:127:PRO:HA	21:S:130:ILE:HD11	1.62	0.81
30:4:9:LYS:H	30:4:9:LYS:CD	1.93	0.81
1:X:645:G:H2'	1:X:646:C:C6	2.15	0.81
1:X:653:G:C2'	1:X:654:A:H5''	2.10	0.81
1:X:1857:G:N2	1:X:1860:A:OP2	2.14	0.81
1:X:2395:C:C2'	1:X:2396:C:H5''	2.10	0.81
1:X:2441:U:H2'	1:X:2442:C:C6	2.15	0.81
15:M:27:PHE:HB3	15:M:93:ILE:HD12	1.62	0.81
20:R:18:LYS:HD3	20:R:18:LYS:N	1.96	0.81
1:X:1074:G:O2'	1:X:1075:C:H5'	1.80	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2796:A:H5''	4:B:162:MET:CE	2.10	0.80
2:Y:112:A:H2'	2:Y:113:G:C8	2.16	0.80
7:E:94:PHE:CD2	7:E:107:ILE:HG22	2.16	0.80
7:E:139:GLN:HB3	7:E:143:GLN:CD	2.01	0.80
9:G:51:LEU:HD12	9:G:88:VAL:HG21	1.63	0.80
18:P:126:ILE:HD12	18:P:127:ILE:N	1.97	0.80
1:X:403:A:H3'	1:X:403:A:OP2	1.80	0.80
1:X:2343:C:H4'	22:T:56:ASP:OD1	1.81	0.80
1:X:2640:G:H2'	1:X:2641:A:C8	2.15	0.80
2:Y:25:G:H2'	2:Y:26:G:N7	1.96	0.80
5:C:134:ILE:O	5:C:137:ALA:HB3	1.81	0.80
6:D:108:LEU:HA	6:D:111:ILE:CD1	2.11	0.80
19:Q:29:VAL:HG11	19:Q:38:ILE:HD12	1.62	0.80
21:S:70:GLN:NE2	21:S:70:GLN:HA	1.94	0.80
1:X:1517:C:H2'	1:X:1518:C:H6	1.46	0.80
21:S:3:LEU:HB2	21:S:34:LEU:HB3	1.62	0.80
30:4:19:ARG:HH11	30:4:24:LEU:HD22	1.42	0.80
1:X:2617:G:P	4:B:82:ARG:HH22	2.04	0.80
3:A:132:PRO:HA	3:A:190:TYR:HA	1.62	0.80
9:G:116:ARG:HD2	9:G:119:LEU:HD12	1.63	0.80
11:I:28:LYS:HZ2	11:I:37:GLN:H	1.27	0.80
14:L:27:LEU:CD2	14:L:44:ASP:HA	2.11	0.80
20:R:80:LYS:HZ2	20:R:82:ALA:HA	1.44	0.80
20:R:93:ARG:HH12	20:R:108:VAL:CA	1.95	0.80
21:S:23:ALA:HA	21:S:83:PHE:O	1.80	0.80
1:X:155:G:O2'	1:X:156:G:H5'	1.81	0.80
1:X:1745:C:OP1	15:M:101:ARG:NH2	2.15	0.80
1:X:2557:G:N7	4:B:140:SER:HB2	1.95	0.80
7:E:43:VAL:CG2	7:E:52:VAL:HG22	2.10	0.80
11:I:86:THR:OG1	11:I:118:VAL:HG12	1.79	0.80
12:J:44:LYS:HB2	12:J:47:GLN:HG3	1.64	0.80
13:K:13:ASN:HD21	13:K:16:ALA:H	1.28	0.80
20:R:55:THR:HG21	20:R:72:ARG:NH1	1.97	0.80
23:U:22:GLY:HA3	23:U:39:LYS:HE2	1.64	0.80
25:W:16:GLN:O	25:W:20:VAL:HG23	1.81	0.80
1:X:691:C:H2'	1:X:692:C:H6	1.45	0.80
1:X:704:G:H2'	1:X:705:C:H6	1.46	0.80
1:X:1574:A:H2'	1:X:1575:C:H5''	1.63	0.80
1:X:2196:U:C2'	1:X:2197:U:C6	2.62	0.80
1:X:2266:A:H62	1:X:2323:U:H3	1.29	0.80
1:X:2516:U:H2'	1:X:2517:C:C6	2.17	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2616:U:H5''	4:B:82:ARG:HH21	1.44	0.80
5:C:130:THR:HA	5:C:160:ALA:HB1	1.62	0.80
11:I:13:ARG:HH21	11:I:13:ARG:CG	1.95	0.80
16:N:33:ARG:HH11	16:N:33:ARG:HG3	1.47	0.80
1:X:645:G:H2'	1:X:646:C:H6	1.47	0.80
1:X:1281:A:C1'	1:X:2592:U:C5	2.65	0.80
1:X:1810:U:H5''	3:A:158:SER:HB3	1.64	0.80
6:D:60:ILE:HG13	6:D:61:THR:HG23	1.62	0.80
14:L:66:ASP:C	14:L:68:ALA:H	1.82	0.80
14:L:68:ALA:HB1	14:L:102:ALA:CB	2.11	0.80
19:Q:10:PRO:HA	19:Q:27:PHE:HB3	1.64	0.80
22:T:40:GLN:HE21	22:T:57:HIS:HB3	1.44	0.80
1:X:227:G:O2'	11:I:53:ARG:NE	2.14	0.80
1:X:666:U:H2'	1:X:667:U:H4'	1.63	0.80
1:X:1508:G:C5'	1:X:1509:A:H5''	2.12	0.80
3:A:183:ARG:HH11	3:A:183:ARG:CB	1.94	0.80
4:B:67:PHE:CZ	4:B:75:THR:HG22	2.16	0.80
10:H:27:SER:HB3	10:H:50:ILE:N	1.96	0.80
11:I:53:ARG:HG3	11:I:53:ARG:HH21	1.45	0.80
11:I:81:GLN:HB3	11:I:114:ILE:HG22	1.64	0.80
12:J:20:GLY:C	12:J:99:LYS:HE2	2.02	0.80
19:Q:7:LEU:HD11	24:V:26:MET:HG3	1.64	0.80
19:Q:66:GLY:C	19:Q:68:PHE:H	1.82	0.80
22:T:3:HIS:HD2	22:T:5:LYS:HD3	1.46	0.80
1:X:542:A:N1	1:X:2004:U:H2'	1.96	0.80
1:X:1021:A:N3	1:X:1164:C:H1'	1.97	0.80
9:G:61:ARG:HB3	9:G:61:ARG:HH21	1.42	0.80
17:O:12:TYR:HB2	17:O:39:PHE:HA	1.64	0.80
21:S:100:THR:OG1	21:S:138:VAL:HG11	1.81	0.80
22:T:31:VAL:HG11	22:T:37:LEU:HD21	1.63	0.80
6:D:60:ILE:HG22	6:D:140:GLU:HB2	1.61	0.80
21:S:18:MET:HA	21:S:36:ARG:H	1.46	0.80
21:S:105:GLN:O	21:S:142:ASN:HA	1.82	0.80
23:U:31:GLY:CA	23:U:32:ARG:HH11	1.89	0.80
1:X:652:C:H42	1:X:657:A:H61	0.83	0.79
1:X:729:A:H2'	1:X:730:C:C1'	2.12	0.79
1:X:1468:A:C8	1:X:1468:A:O5'	2.36	0.79
1:X:1542:G:N2	1:X:1562:G:H22	1.80	0.79
1:X:2210:C:H2'	1:X:2211:U:H6	1.47	0.79
6:D:35:VAL:HG23	6:D:155:THR:HB	1.63	0.79
14:L:64:LYS:H	14:L:64:LYS:HD3	1.47	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:75:C:C2'	1:X:76:C:H5''	2.12	0.79
1:X:109:A:H2'	1:X:110:U:H5''	1.61	0.79
7:E:9:ILE:CG2	7:E:50:LEU:HB3	2.10	0.79
21:S:23:ALA:HB2	21:S:83:PHE:HB2	1.62	0.79
21:S:30:VAL:HB	21:S:32:PHE:CZ	2.17	0.79
1:X:1007:A:H1'	17:O:6:GLN:HG2	1.62	0.79
1:X:1051:U:H2'	1:X:1052:C:C6	2.16	0.79
5:C:166:TRP:N	5:C:166:TRP:HE3	1.80	0.79
9:G:90:LEU:HB2	9:G:94:LYS:HE3	1.63	0.79
14:L:36:LYS:HA	14:L:36:LYS:HE3	1.62	0.79
23:U:11:LYS:NZ	23:U:75:TYR:HB2	1.97	0.79
24:V:7:ARG:HD2	24:V:8:ASN:N	1.97	0.79
1:X:2302:G:H1	1:X:2311:U:H5	1.28	0.79
23:U:70:LEU:HD21	23:U:77:GLY:O	1.82	0.79
1:X:525:A:H2'	1:X:526:C:H5'	1.64	0.79
6:D:11:GLN:O	6:D:15:ALA:HB3	1.82	0.79
17:O:20:ILE:HD12	17:O:21:ARG:N	1.98	0.79
17:O:25:LEU:HB2	17:O:32:LYS:HZ1	1.47	0.79
1:X:503:G:H2'	1:X:504:G:O4'	1.82	0.79
1:X:1436:G:H2'	1:X:1437:A:H8	1.47	0.79
4:B:31:CYS:HB3	4:B:49:ILE:HG12	1.64	0.79
9:G:132:PHE:CE1	9:G:145:HIS:HB2	2.18	0.79
14:L:15:ARG:HD2	14:L:91:ARG:HD3	1.65	0.79
16:N:66:ASN:CB	16:N:70:ARG:HH12	1.96	0.79
21:S:18:MET:SD	21:S:35:ASP:HA	2.22	0.79
1:X:105:G:H5'	1:X:105:G:H8	1.47	0.79
2:Y:108:G:O2'	2:Y:109:G:H5'	1.83	0.79
21:S:120:LEU:HD23	21:S:121:GLN:H	1.48	0.79
1:X:305:A:H2'	1:X:306:G:H5'	1.64	0.79
1:X:2357:A:H4'	14:L:26:ARG:NH1	1.98	0.79
3:A:125:PRO:HG3	3:A:131:LEU:CD1	2.13	0.79
11:I:134:GLU:HG2	11:I:138:GLY:O	1.82	0.79
20:R:40:LEU:CB	20:R:45:LYS:HB2	2.11	0.79
1:X:409:G:O2'	1:X:410:A:H5'	1.83	0.79
1:X:537:C:H1'	1:X:538:A:C6	2.18	0.79
1:X:1736:C:H2'	1:X:1737:G:C8	2.18	0.79
18:P:126:ILE:HD12	18:P:127:ILE:H	1.48	0.79
1:X:862:A:H2'	1:X:863:C:C6	2.17	0.79
1:X:1584:G:H4'	3:A:59:LYS:HG2	1.63	0.79
1:X:2225:G:C2	1:X:2405:A:H1'	2.18	0.79
3:A:164:GLN:OE1	3:A:176:ARG:HB3	1.83	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:M:79:ARG:HH11	15:M:79:ARG:CG	1.95	0.79
24:V:2:LYS:CG	24:V:3:PRO:HD3	2.13	0.79
1:X:969:U:H5''	12:J:17:ARG:NH1	1.98	0.78
1:X:1223:G:H4'	1:X:1224:A:C5'	2.12	0.78
1:X:2787:A:H2'	1:X:2788:C:C6	2.18	0.78
6:D:8:TYR:O	6:D:12:VAL:HB	1.83	0.78
6:D:74:ILE:HG12	6:D:80:ARG:HA	1.63	0.78
14:L:54:ALA:O	14:L:71:VAL:HG23	1.83	0.78
20:R:95:ARG:NH1	20:R:106:VAL:HA	1.98	0.78
1:X:1118:G:C2'	1:X:1119:U:H5''	2.14	0.78
1:X:1854:G:C2'	1:X:1855:G:OP2	2.27	0.78
1:X:1885:C:C5'	3:A:244:ARG:HD2	2.14	0.78
12:J:34:GLY:HA2	12:J:106:GLU:CA	2.13	0.78
17:O:35:LEU:HD22	17:O:36:LYS:O	1.83	0.78
9:G:100:TYR:HB2	9:G:116:ARG:NH1	1.98	0.78
11:I:10:PRO:HA	11:I:14:LYS:HB2	1.65	0.78
15:M:82:PRO:HB2	15:M:85:SER:HB2	1.66	0.78
1:X:2310:G:H4'	22:T:43:THR:N	1.94	0.78
18:P:41:VAL:HG21	18:P:64:ALA:HB3	1.64	0.78
1:X:1286:U:H4'	1:X:1288:A:OP2	1.83	0.78
11:I:120:VAL:CG1	11:I:122:VAL:HG13	2.13	0.78
12:J:35:LEU:HB3	12:J:105:PHE:HB2	1.65	0.78
15:M:103:LYS:O	15:M:104:LEU:HB2	1.83	0.78
21:S:141:MET:HA	21:S:145:ASP:OD1	1.82	0.78
23:U:52:ARG:HH12	23:U:67:LEU:HD11	1.49	0.78
1:X:150:A:H2'	1:X:151:G:O4'	1.82	0.78
1:X:872:G:HO2'	1:X:873:U:H6	1.29	0.78
1:X:1058:G:H2'	1:X:1121:G:H1	1.48	0.78
6:D:32:GLU:HB3	6:D:157:VAL:HG12	1.64	0.78
6:D:108:LEU:CD1	6:D:117:ILE:HD11	2.13	0.78
6:D:132:ILE:HB	6:D:152:MET:O	1.84	0.78
7:E:126:PRO:HG3	7:E:130:ARG:HD3	1.65	0.78
11:I:82:ASP:H	11:I:114:ILE:HG21	1.49	0.78
12:J:27:TYR:HB3	12:J:137:VAL:HG21	1.64	0.78
13:K:16:ALA:C	13:K:18:VAL:H	1.83	0.78
1:X:788:G:H5'	1:X:790:A:C1'	2.10	0.78
10:H:7:ARG:HH12	10:H:20:MET:HE1	1.48	0.78
19:Q:90:ALA:C	19:Q:92:ALA:H	1.85	0.78
1:X:155:G:C2'	1:X:156:G:H5'	2.13	0.78
1:X:1031:C:H41	1:X:1153:A:N6	1.81	0.78
1:X:2036:G:O2'	1:X:2037:A:H5'	1.83	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2080:U:H2'	1:X:2081:U:C6	2.19	0.78
1:X:172:A:C6	1:X:175:C:H5	2.01	0.78
1:X:555:U:OP2	1:X:556:A:H2'	1.83	0.78
1:X:1075:C:H5'	8:F:87:GLY:HA3	1.65	0.78
1:X:2195:C:C5	1:X:2196:U:C4	2.68	0.78
12:J:22:ALA:HB2	12:J:100:PRO:O	1.83	0.78
19:Q:4:TYR:HE1	19:Q:45:ALA:HA	1.49	0.78
1:X:421:G:H2'	1:X:422:C:H6	1.48	0.78
1:X:558:G:N3	1:X:558:G:C3'	2.46	0.78
1:X:1075:C:H5''	8:F:87:GLY:CA	2.14	0.78
7:E:76:VAL:C	7:E:78:GLY:N	2.34	0.78
10:H:7:ARG:NH1	10:H:20:MET:HE1	1.98	0.78
1:X:583:C:H1'	1:X:2038:C:C6	2.19	0.77
12:J:44:LYS:HB2	12:J:47:GLN:CG	2.13	0.77
1:X:824:U:C1'	1:X:1264:C:H1'	2.14	0.77
1:X:832:A:OP2	1:X:1201:G:N2	2.17	0.77
1:X:1275:A:C2	26:Z:10:LYS:HE2	2.19	0.77
5:C:3:GLN:NE2	5:C:4:ILE:HG12	1.99	0.77
9:G:62:ILE:O	9:G:77:GLY:HA3	1.85	0.77
15:M:34:ARG:NH1	15:M:81:PHE:HB3	1.99	0.77
17:O:36:LYS:HZ2	17:O:54:TYR:CB	1.97	0.77
1:X:1061:A:O2'	1:X:1062:G:H5'	1.83	0.77
1:X:1711:C:H4'	1:X:1712:G:H5''	1.65	0.77
1:X:2769:C:H2'	1:X:2770:A:C8	2.19	0.77
9:G:100:TYR:HB2	9:G:116:ARG:HH11	1.49	0.77
11:I:86:THR:C	11:I:88:PHE:H	1.86	0.77
12:J:62:GLY:HA3	12:J:64:LYS:HE3	1.66	0.77
21:S:3:LEU:HD12	21:S:4:THR:N	1.99	0.77
25:W:40:VAL:HA	25:W:43:MET:HG3	1.65	0.77
1:X:954:U:H2'	1:X:955:G:H5''	1.66	0.77
1:X:1525:A:H3'	1:X:1526:U:H6	1.48	0.77
1:X:2323:U:O2	1:X:2323:U:C2'	2.17	0.77
1:X:2356:A:H1'	14:L:89:PHE:CE2	2.20	0.77
1:X:2710:C:O2'	1:X:2711:G:H5'	1.84	0.77
6:D:7:LYS:HA	6:D:10:ASP:HB2	1.67	0.77
6:D:46:ASP:O	6:D:50:ILE:HG13	1.85	0.77
7:E:44:ARG:HH22	7:E:46:ASP:HB2	1.49	0.77
14:L:64:LYS:HD3	14:L:64:LYS:N	1.98	0.77
1:X:560:G:O2'	1:X:1233:A:N3	2.16	0.77
1:X:1053:G:H1	1:X:1124:U:H3	1.31	0.77
1:X:1513:U:OP2	1:X:1514:C:H5	1.66	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:I:76:LYS:HG3	11:I:111:SER:HB2	1.65	0.77
20:R:96:LYS:CG	20:R:97:GLN:H	1.93	0.77
23:U:28:GLY:HA3	23:U:32:ARG:CB	2.14	0.77
1:X:1071:U:H4'	1:X:1072:U:O5'	1.82	0.77
1:X:1264:C:H5''	16:N:13:ARG:NE	2.00	0.77
3:A:42:GLY:H	3:A:43:ARG:HH12	1.32	0.77
6:D:16:LEU:HD22	6:D:20:PHE:CE1	2.20	0.77
16:N:85:ARG:HH21	16:N:85:ARG:HG3	1.50	0.77
23:U:28:GLY:HA3	23:U:32:ARG:CA	2.15	0.77
1:X:810:U:H6	1:X:810:U:H3'	1.49	0.77
13:K:28:LEU:CD2	13:K:115:LEU:HG	2.15	0.77
23:U:49:LYS:HB3	23:U:61:TRP:CD2	2.20	0.77
1:X:647:G:O6	11:I:107:LYS:HE3	1.85	0.77
6:D:150:ARG:HG2	6:D:151:GLY:N	2.00	0.77
16:N:74:MET:HE1	16:N:79:PHE:HA	1.65	0.77
1:X:1107:A:C3'	1:X:1108:U:H5''	2.14	0.77
1:X:1179:A:H2'	1:X:1180:A:C8	2.20	0.77
1:X:1610:A:H2'	1:X:1611:U:C6	2.19	0.77
1:X:2286:G:C6	1:X:2287:G:H1'	2.20	0.77
9:G:92:GLY:C	9:G:93:LYS:HD2	2.05	0.77
11:I:126:SER:OG	11:I:129:ALA:HB2	1.84	0.77
14:L:33:ARG:HH11	14:L:100:VAL:CA	1.94	0.77
1:X:1608:U:H2'	1:X:1609:G:H8	1.50	0.76
1:X:1953:A:H5'	1:X:1954:A:OP1	1.85	0.76
1:X:2170:C:H3'	1:X:2171:U:C5'	2.12	0.76
1:X:2195:C:C4	1:X:2196:U:C5	2.72	0.76
1:X:2569:A:H2'	1:X:2570:C:H6	1.48	0.76
1:X:2653:A:O2'	10:H:41:ASN:ND2	2.18	0.76
1:X:2712:G:H3'	1:X:2713:A:H5'	1.67	0.76
7:E:68:THR:O	7:E:72:VAL:HG23	1.85	0.76
9:G:104:THR:OG1	9:G:110:LEU:HB3	1.84	0.76
21:S:73:LYS:O	21:S:74:ARG:HB2	1.85	0.76
23:U:19:ILE:HA	23:U:42:GLN:HA	1.66	0.76
26:Z:16:ARG:HD3	26:Z:20:ARG:CZ	2.15	0.76
1:X:1128:G:C3'	1:X:1129:A:H5''	2.14	0.76
5:C:132:ASN:O	5:C:135:SER:HB3	1.85	0.76
19:Q:75:ARG:HH11	19:Q:75:ARG:HG3	1.49	0.76
1:X:1373:G:O6	1:X:1385:C:C4	2.39	0.76
1:X:1539:U:H2'	1:X:1540:C:C6	2.20	0.76
1:X:1644:G:H2'	1:X:1645:U:C6	2.19	0.76
1:X:1737:G:H2'	1:X:1738:U:H6	1.50	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1914:U:H6	1:X:1914:U:H5'	1.50	0.76
1:X:2054:A:H2'	1:X:2055:G:H8	1.51	0.76
3:A:182:LEU:HD12	3:A:269:PHE:CD2	2.20	0.76
15:M:99:VAL:HG22	15:M:100:ARG:N	1.99	0.76
17:O:26:GLN:HG2	17:O:27:GLY:H	1.50	0.76
21:S:113:VAL:HG13	21:S:171:VAL:CG2	2.11	0.76
1:X:460:U:O4	1:X:592:G:H1'	1.85	0.76
1:X:814:G:OP1	5:C:50:GLN:HB2	1.85	0.76
1:X:1573:G:H3'	1:X:1574:A:C5'	2.14	0.76
1:X:2617:G:OP2	4:B:82:ARG:NH2	2.18	0.76
2:Y:31:A:H2'	2:Y:32:C:C6	2.20	0.76
6:D:106:ILE:HG23	6:D:110:ARG:CD	2.16	0.76
10:H:109:ARG:HG3	10:H:111:PHE:HE1	1.50	0.76
13:K:13:ASN:HD21	13:K:16:ALA:N	1.83	0.76
23:U:27:ASP:H	23:U:32:ARG:HH21	1.32	0.76
1:X:71:A:N6	1:X:110:U:H4'	2.00	0.76
1:X:843:G:H1'	1:X:2427:A:C6	2.20	0.76
1:X:1486:A:H2'	1:X:1487:C:C6	2.20	0.76
1:X:2352:A:H2'	1:X:2353:G:H8	1.50	0.76
1:X:2630:C:O2'	1:X:2631:C:H5'	1.85	0.76
3:A:164:GLN:HE22	3:A:166:GLN:NE2	1.81	0.76
24:V:2:LYS:HG2	24:V:3:PRO:HD3	1.68	0.76
1:X:333:A:H5'	5:C:162:ARG:CG	2.16	0.76
1:X:585:U:H2'	1:X:586:G:C8	2.20	0.76
1:X:1324:G:H1'	1:X:1326:U:C5	2.20	0.76
1:X:2691:C:HO2'	1:X:2692:A:H8	1.33	0.76
3:A:42:GLY:C	3:A:43:ARG:NH1	2.39	0.76
3:A:143:HIS:ND1	3:A:194:GLY:O	2.17	0.76
6:D:30:ARG:HE	6:D:159:THR:HG21	1.49	0.76
10:H:73:VAL:HG21	10:H:123:PHE:CE2	2.20	0.76
21:S:117:VAL:CG2	21:S:168:VAL:HA	2.15	0.76
23:U:23:LYS:HB2	23:U:35:THR:HG23	1.67	0.76
1:X:451:A:H2'	1:X:452:G:C8	2.20	0.76
1:X:1794:A:O2'	3:A:257:LEU:HD12	1.85	0.76
1:X:2713:A:O2'	1:X:2714:A:H5'	1.85	0.76
5:C:112:GLN:HA	5:C:116:LYS:HB3	1.66	0.76
6:D:83:MET:O	6:D:85:VAL:HG13	1.85	0.76
20:R:93:ARG:HH22	20:R:108:VAL:HG13	1.50	0.76
1:X:766:A:O2'	1:X:767:G:H5'	1.86	0.76
1:X:925:U:H4'	1:X:926:C:OP1	1.85	0.76
1:X:2212:U:H2'	1:X:2213:G:H8	1.51	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:178:GLY:O	4:B:179:GLU:HG2	1.86	0.76
9:G:44:VAL:HG11	9:G:54:LEU:HD11	1.66	0.76
13:K:16:ALA:O	13:K:18:VAL:N	2.19	0.76
1:X:543:G:H5'	16:N:24:PHE:CE1	2.20	0.76
1:X:2084:G:H2'	1:X:2085:G:H8	1.51	0.76
6:D:46:ASP:HB2	6:D:49:ALA:CB	2.16	0.76
17:O:25:LEU:HB2	17:O:32:LYS:NZ	2.00	0.76
17:O:29:ALA:O	17:O:31:ASP:N	2.19	0.76
24:V:35:GLY:O	24:V:36:GLN:HB2	1.86	0.76
1:X:340:G:OP2	1:X:340:G:H8	1.68	0.76
1:X:2811:G:H2'	1:X:2812:A:H8	1.50	0.76
10:H:116:ARG:CD	15:M:38:LYS:HE2	2.13	0.76
14:L:101:LYS:O	14:L:104:ALA:HB3	1.86	0.76
20:R:25:LEU:CD1	20:R:81:VAL:H	1.98	0.76
23:U:22:GLY:HA3	23:U:39:LYS:CD	2.15	0.76
23:U:52:ARG:HD2	23:U:79:GLU:C	2.05	0.76
1:X:820:U:H2'	1:X:821:A:H8	1.51	0.75
3:A:127:LEU:HD23	3:A:193:ILE:HG22	1.67	0.75
6:D:75:SER:HB2	6:D:79:LEU:HD13	1.67	0.75
20:R:108:VAL:CG1	20:R:109:ALA:H	1.91	0.75
23:U:27:ASP:HA	23:U:32:ARG:CZ	2.16	0.75
1:X:1542:G:H21	1:X:1562:G:H22	1.34	0.75
1:X:2326:C:H2'	1:X:2327:U:H6	1.51	0.75
9:G:132:PHE:HB2	9:G:145:HIS:CE1	2.21	0.75
11:I:76:LYS:HB3	11:I:79:GLN:HG2	1.66	0.75
14:L:33:ARG:NH2	14:L:103:LEU:HB2	2.01	0.75
17:O:44:GLN:O	17:O:46:VAL:HG23	1.84	0.75
19:Q:69:ILE:CD1	19:Q:70:GLY:N	2.49	0.75
21:S:51:LEU:HD23	21:S:51:LEU:H	1.50	0.75
21:S:70:GLN:O	21:S:79:ILE:HG22	1.86	0.75
24:V:50:VAL:HA	24:V:53:LEU:CD1	2.15	0.75
1:X:1051:U:H2'	1:X:1052:C:O4'	1.85	0.75
1:X:1292:A:C2'	1:X:1293:A:H5'	2.16	0.75
1:X:2405:A:H4'	1:X:2406:C:OP2	1.85	0.75
2:Y:43:G:C5'	6:D:66:ILE:HD11	2.14	0.75
3:A:149:PRO:CA	3:A:189:CYS:SG	2.73	0.75
7:E:51:LEU:HD12	7:E:52:VAL:H	1.52	0.75
12:J:75:VAL:HB	12:J:93:TYR:HE2	1.52	0.75
17:O:36:LYS:NZ	17:O:54:TYR:HB3	2.01	0.75
1:X:124:A:H2'	1:X:125:A:C8	2.20	0.75
1:X:1069:G:H2'	1:X:1070:G:H5''	1.68	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2023:C:H2'	1:X:2024:U:C6	2.21	0.75
1:X:2035:G:O2'	1:X:2036:G:H5'	1.86	0.75
1:X:2275:U:H4'	1:X:2276:C:OP1	1.85	0.75
3:A:33:LEU:CD1	3:A:63:ARG:HH22	1.99	0.75
18:P:66:GLU:HB3	18:P:67:PRO:HD3	1.67	0.75
1:X:416:U:O2'	1:X:417:C:H5	1.70	0.75
1:X:648:A:H4'	1:X:649:G:O4'	1.86	0.75
1:X:2796:A:C5'	4:B:162:MET:HE1	2.15	0.75
6:D:80:ARG:HD3	6:D:83:MET:HB3	1.68	0.75
6:D:111:ILE:HA	6:D:137:ILE:CG2	2.16	0.75
13:K:49:GLU:O	13:K:52:ILE:HG12	1.86	0.75
21:S:141:MET:HG2	21:S:145:ASP:HB3	1.67	0.75
1:X:16:G:C2	1:X:535:U:O2	2.39	0.75
1:X:389:G:H2'	1:X:390:U:C6	2.21	0.75
1:X:1514:C:O4'	1:X:1593:C:H4'	1.87	0.75
1:X:1979:C:H2'	1:X:1980:A:O4'	1.86	0.75
4:B:146:THR:HB	4:B:147:PRO:HD2	1.69	0.75
7:E:84:THR:HA	7:E:134:SER:HA	1.68	0.75
9:G:116:ARG:NE	9:G:126:VAL:HG13	2.02	0.75
11:I:97:ARG:O	11:I:98:LEU:HB3	1.86	0.75
20:R:25:LEU:CD1	20:R:81:VAL:HG23	2.16	0.75
21:S:71:MET:HA	21:S:78:PRO:HA	1.69	0.75
21:S:91:PRO:HD3	21:S:127:PRO:HD3	1.68	0.75
1:X:731:A:H2'	1:X:732:G:C4'	2.15	0.75
1:X:1218:C:H5'	11:I:13:ARG:NH1	2.01	0.75
1:X:1851:A:H62	1:X:1866:G:H21	1.35	0.75
1:X:2564:U:H5'	1:X:2565:C:OP1	1.86	0.75
3:A:252:LYS:H	3:A:253:PRO:HD2	1.50	0.75
6:D:72:LYS:HA	6:D:81:GLN:C	2.06	0.75
6:D:108:LEU:HD13	6:D:117:ILE:HD11	1.66	0.75
6:D:128:TYR:O	6:D:156:ILE:HB	1.87	0.75
9:G:116:ARG:HE	9:G:126:VAL:HG13	1.51	0.75
21:S:3:LEU:HD21	21:S:32:PHE:CB	2.16	0.75
1:X:13:A:O2'	1:X:15:G:N7	2.18	0.75
1:X:638:A:O2'	1:X:639:G:C8	2.40	0.75
1:X:2619:G:C6	1:X:2755:A:C2	2.74	0.75
12:J:28:VAL:CG2	12:J:135:ARG:HA	2.16	0.75
12:J:40:PRO:HG3	12:J:99:LYS:NZ	2.01	0.75
14:L:10:LYS:O	14:L:14:ARG:HG3	1.86	0.75
19:Q:10:PRO:HD3	24:V:30:PHE:CD2	2.21	0.75
21:S:3:LEU:CD2	21:S:32:PHE:HB3	2.16	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:7:THR:HG22	4:B:8:LYS:O	1.86	0.75
18:P:33:MET:CE	18:P:37:LYS:HZ3	1.99	0.75
1:X:787:A:H5''	3:A:48:ARG:NH2	2.02	0.74
1:X:2322:U:O2'	1:X:2323:U:H1'	1.87	0.74
13:K:49:GLU:OE1	13:K:95:THR:HG22	1.87	0.74
16:N:47:TYR:O	16:N:49:ASP:N	2.20	0.74
17:O:68:LYS:HD2	17:O:86:HIS:O	1.87	0.74
21:S:113:VAL:HG22	21:S:171:VAL:HG13	1.68	0.74
1:X:174:A:C2	1:X:175:C:O2	2.40	0.74
1:X:709:A:O2'	1:X:710:C:H5'	1.87	0.74
1:X:757:U:H2'	1:X:758:G:C5'	2.17	0.74
1:X:1354:A:H3'	1:X:1410:U:O2	1.87	0.74
3:A:244:ARG:N	3:A:244:ARG:HD3	2.03	0.74
6:D:38:GLU:HG2	6:D:57:LEU:HD11	1.68	0.74
12:J:79:PRO:HD3	12:J:88:LYS:NZ	2.02	0.74
19:Q:61:LYS:H	19:Q:72:ARG:HA	1.51	0.74
20:R:38:LEU:HB2	20:R:47:VAL:CG2	2.17	0.74
22:T:51:VAL:HG21	22:T:79:ILE:O	1.85	0.74
1:X:63:A:O2'	19:Q:70:GLY:HA2	1.86	0.74
1:X:1090:C:O2'	1:X:1091:C:H5'	1.87	0.74
1:X:1850:G:N2	1:X:1867:A:C8	2.54	0.74
1:X:2691:C:OP1	1:X:2694:G:H4'	1.87	0.74
1:X:2870:C:H2'	1:X:2871:U:H6	1.50	0.74
2:Y:50:U:O3'	14:L:97:HIS:CD2	2.40	0.74
3:A:231:HIS:CD2	3:A:233:HIS:H	2.04	0.74
6:D:38:GLU:HB3	6:D:87:ILE:HD12	1.69	0.74
6:D:136:LEU:O	6:D:137:ILE:HG23	1.87	0.74
9:G:84:ASN:O	9:G:152:ALA:HA	1.86	0.74
10:H:75:VAL:HG12	10:H:118:LEU:HD21	1.68	0.74
12:J:99:LYS:HE3	12:J:100:PRO:HD2	1.69	0.74
1:X:2218:G:O4'	3:A:249:PRO:HG3	1.86	0.74
1:X:2708:U:H2'	1:X:2709:C:C6	2.22	0.74
5:C:22:VAL:HG13	5:C:106:MET:HG2	1.69	0.74
5:C:27:LEU:O	5:C:31:VAL:HG22	1.87	0.74
12:J:28:VAL:H	12:J:137:VAL:HG21	1.52	0.74
13:K:10:LEU:HD23	13:K:17:ARG:CB	2.17	0.74
20:R:82:ALA:O	20:R:83:LEU:O	2.04	0.74
25:W:23:LEU:HD21	25:W:43:MET:HB3	1.70	0.74
1:X:3:U:H2'	1:X:4:C:C6	2.23	0.74
1:X:2563:U:C2'	1:X:2564:U:H5''	2.18	0.74
7:E:9:ILE:HD12	7:E:51:LEU:CA	2.18	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:N:22:LYS:C	16:N:24:PHE:H	1.90	0.74
16:N:74:MET:CE	16:N:79:PHE:HA	2.15	0.74
1:X:1337:G:H1'	1:X:1632:A:N6	2.03	0.74
1:X:1775:A:H4'	1:X:1776:A:O5'	1.84	0.74
1:X:2286:G:N2	1:X:2290:A:H61	1.86	0.74
1:X:2289:A:H2	6:D:79:LEU:HD21	1.52	0.74
9:G:164:GLN:O	9:G:165:VAL:HG13	1.88	0.74
25:W:40:VAL:HA	25:W:43:MET:CG	2.17	0.74
1:X:202:A:H2'	1:X:203:G:O4'	1.87	0.74
1:X:788:G:C5'	1:X:790:A:H1'	2.17	0.74
1:X:1018:C:H3'	1:X:1019:U:H5''	1.70	0.74
1:X:1430:G:H2'	1:X:1431:U:C6	2.22	0.74
17:O:39:PHE:CE1	17:O:46:VAL:HB	2.22	0.74
19:Q:62:ARG:HH12	19:Q:73:ASN:ND2	1.84	0.74
19:Q:69:ILE:HD13	19:Q:70:GLY:H	1.49	0.74
26:Z:51:TYR:CE1	26:Z:55:ARG:HB2	2.21	0.74
1:X:1057:A:N3	1:X:1057:A:C2'	2.50	0.74
1:X:1119:U:H5'	1:X:1119:U:H6	1.52	0.74
1:X:1845:A:N1	1:X:2070:G:H1'	2.03	0.74
1:X:2217:G:H5''	1:X:2218:G:OP1	1.87	0.74
1:X:2634:G:H2'	1:X:2643:G:O6	1.87	0.74
1:X:2812:A:H2'	1:X:2813:G:H8	1.51	0.74
5:C:102:LEU:O	5:C:102:LEU:HD23	1.88	0.74
5:C:179:ASP:O	5:C:182:ARG:HB3	1.88	0.74
16:N:93:LYS:HD2	16:N:93:LYS:O	1.88	0.74
18:P:87:GLU:HA	18:P:90:LEU:HG	1.69	0.74
25:W:1:MET:C	25:W:34:VAL:HG12	2.08	0.74
1:X:947:C:H2'	1:X:948:C:C6	2.23	0.74
1:X:1194:U:H2'	1:X:1195:U:C6	2.23	0.74
1:X:1656:U:C2'	1:X:1657:A:H5''	2.16	0.74
6:D:45:GLU:HB2	6:D:78:LYS:NZ	2.03	0.74
6:D:106:ILE:HG21	6:D:139:PRO:HB3	1.68	0.74
14:L:28:ARG:HA	14:L:88:VAL:O	1.88	0.74
15:M:28:ARG:HB2	15:M:29:PRO:CD	2.15	0.74
18:P:95:ALA:HB2	18:P:126:ILE:HD13	1.70	0.74
30:4:15:LYS:O	30:4:17:VAL:HG23	1.87	0.74
1:X:542:A:N6	1:X:2003:A:N3	2.36	0.74
1:X:1314:A:O2'	1:X:1315:A:H3'	1.86	0.74
1:X:1404:C:H5'	1:X:1405:A:OP2	1.88	0.74
1:X:1782:A:N1	1:X:1821:A:H5'	2.02	0.74
1:X:1811:A:H4'	1:X:1812:U:H5''	1.70	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:113:GLU:HA	12:J:116:LYS:HB2	1.70	0.74
6:D:5:LYS:O	6:D:8:TYR:HB3	1.87	0.73
12:J:44:LYS:HB2	12:J:47:GLN:CD	2.07	0.73
14:L:83:GLY:C	14:L:84:ILE:HD12	2.09	0.73
15:M:79:ARG:HG3	15:M:79:ARG:NH1	1.92	0.73
20:R:85:ASP:H	20:R:86:PRO:HD3	1.51	0.73
20:R:106:VAL:HG23	20:R:113:THR:HG21	1.69	0.73
23:U:13:LEU:O	23:U:14:VAL:HG13	1.88	0.73
1:X:964:A:OP1	12:J:18:MET:SD	2.46	0.73
1:X:1226:A:N6	1:X:1249:G:H1'	2.02	0.73
4:B:183:LEU:HD11	15:M:16:ILE:CG2	2.18	0.73
16:N:72:HIS:CD2	16:N:110:VAL:HG21	2.21	0.73
17:O:39:PHE:CE2	17:O:51:ALA:HB1	2.22	0.73
19:Q:69:ILE:HD12	19:Q:70:GLY:H	1.49	0.73
20:R:11:ASN:O	20:R:13:LYS:N	2.21	0.73
1:X:1018:C:H3'	1:X:1019:U:C5'	2.19	0.73
15:M:34:ARG:NH1	15:M:88:VAL:HG21	2.04	0.73
16:N:79:PHE:HD2	16:N:80:ILE:HD13	1.52	0.73
20:R:60:PRO:O	20:R:62:MET:N	2.21	0.73
21:S:64:ALA:N	21:S:86:VAL:HG23	2.03	0.73
23:U:10:LYS:HG2	23:U:11:LYS:N	2.04	0.73
1:X:890:U:H2'	1:X:891:A:H8	1.53	0.73
1:X:2404:A:H1'	1:X:2406:C:C4	2.23	0.73
2:Y:36:A:O2'	2:Y:37:C:H5	1.71	0.73
9:G:105:GLY:C	9:G:110:LEU:HD12	2.09	0.73
10:H:7:ARG:NH1	10:H:20:MET:CE	2.52	0.73
23:U:53:GLU:HB2	23:U:56:GLN:O	1.87	0.73
1:X:1075:C:O2'	8:F:89:SER:CA	2.36	0.73
1:X:1142:G:C4'	9:G:103:TYR:HE2	2.01	0.73
1:X:1512:A:H2'	1:X:1514:C:C5	2.23	0.73
1:X:1804:U:H2'	1:X:1805:G:H8	1.54	0.73
1:X:2023:C:H2'	1:X:2024:U:H6	1.54	0.73
1:X:2082:C:H2'	1:X:2083:G:H5'	1.71	0.73
1:X:2522:G:H2'	1:X:2523:G:O4'	1.89	0.73
5:C:24:SER:HB2	11:I:15:ASP:OD1	1.89	0.73
6:D:38:GLU:HB3	6:D:87:ILE:HB	1.69	0.73
11:I:81:GLN:NE2	11:I:115:SER:HA	2.01	0.73
1:X:954:U:OP2	11:I:38:LYS:NZ	2.19	0.73
1:X:1018:C:C4	1:X:1019:U:H5	2.07	0.73
1:X:1268:U:C2	5:C:66:ASN:HA	2.24	0.73
1:X:2325:A:O2'	1:X:2326:C:OP2	2.06	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2511:G:H2'	1:X:2512:A:H8	1.53	0.73
1:X:2691:C:O2'	1:X:2692:A:H8	1.72	0.73
2:Y:9:G:H5'	14:L:32:TYR:CE2	2.22	0.73
3:A:54:ILE:HG23	3:A:54:ILE:O	1.88	0.73
13:K:73:LYS:O	13:K:76:VAL:HG12	1.88	0.73
21:S:13:LYS:HB2	21:S:13:LYS:NZ	2.04	0.73
21:S:24:TYR:O	21:S:85:MET:HB2	1.88	0.73
1:X:76:C:H5'	1:X:76:C:H6	1.54	0.73
1:X:332:C:H5''	1:X:333:A:OP2	1.88	0.73
1:X:525:A:H2	1:X:1273:G:N3	1.87	0.73
1:X:554:U:O2	1:X:554:U:H2'	1.87	0.73
1:X:760:U:C5	26:Z:3:LYS:HG3	2.22	0.73
1:X:1171:A:H2'	1:X:1172:U:C6	2.24	0.73
1:X:1277:G:OP1	26:Z:19:ARG:NH2	2.22	0.73
1:X:1644:G:H2'	1:X:1645:U:H6	1.54	0.73
1:X:2195:C:H2'	1:X:2196:U:O4'	1.89	0.73
1:X:2629:U:O2'	1:X:2630:C:H5'	1.88	0.73
11:I:92:THR:O	11:I:94:GLU:N	2.22	0.73
17:O:28:GLU:O	17:O:30:GLY:N	2.21	0.73
18:P:45:ILE:HD11	18:P:57:LEU:HG	1.71	0.73
23:U:11:LYS:NZ	23:U:75:TYR:CD1	2.56	0.73
1:X:171:G:O2'	1:X:172:A:H5'	1.88	0.73
1:X:224:G:H4'	1:X:399:G:C5	2.23	0.73
1:X:1075:C:O2'	8:F:89:SER:HA	1.89	0.73
1:X:1699:A:H2'	1:X:1700:C:C6	2.24	0.73
3:A:88:ARG:HG2	3:A:90:ALA:HB3	1.69	0.73
6:D:81:GLN:HG2	6:D:82:GLY:H	1.54	0.73
19:Q:29:VAL:HG11	19:Q:38:ILE:CD1	2.19	0.73
21:S:54:ILE:HG22	21:S:54:ILE:O	1.88	0.73
1:X:417:C:O3'	1:X:418:C:H4'	1.87	0.73
1:X:528:G:H5'	18:P:39:ARG:NH2	2.01	0.73
1:X:590:C:OP2	16:N:33:ARG:HG3	1.89	0.73
1:X:1710:U:H4'	1:X:1711:C:OP2	1.88	0.73
1:X:2195:C:N4	1:X:2196:U:C4	2.56	0.73
1:X:2198:U:H2'	1:X:2199:C:C1'	2.18	0.73
1:X:2326:C:H2'	1:X:2327:U:C6	2.24	0.73
10:H:28:GLY:O	10:H:35:THR:N	2.18	0.73
23:U:29:GLY:C	23:U:31:GLY:N	2.37	0.73
1:X:172:A:N1	1:X:178:C:N3	2.37	0.73
1:X:972:C:H5'	1:X:973:U:OP2	1.87	0.73
1:X:1142:G:O2'	1:X:1143:A:O5'	2.07	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1166:A:H5''	16:N:55:ARG:HD3	1.70	0.73
1:X:2448:A:H2'	1:X:2449:G:O4'	1.89	0.73
1:X:48:A:H1'	1:X:50:G:C2	2.23	0.72
1:X:100:G:O6	20:R:102:LYS:HE2	1.88	0.72
1:X:678:G:O2'	1:X:679:C:H5'	1.89	0.72
3:A:132:PRO:HD3	3:A:190:TYR:CE2	2.23	0.72
5:C:26:VAL:HG22	11:I:18:ARG:NH1	2.04	0.72
6:D:50:ILE:O	6:D:53:ALA:HB3	1.88	0.72
9:G:33:ILE:HD11	9:G:35:LYS:HZ3	1.54	0.72
10:H:25:LEU:HD12	10:H:51:ILE:HA	1.71	0.72
11:I:11:GLY:H	11:I:14:LYS:CB	2.01	0.72
11:I:17:LYS:O	11:I:18:ARG:HG3	1.88	0.72
19:Q:53:ILE:HD13	19:Q:80:VAL:HG13	1.70	0.72
19:Q:69:ILE:HD12	19:Q:70:GLY:N	2.03	0.72
20:R:93:ARG:HH12	20:R:108:VAL:HA	1.52	0.72
23:U:52:ARG:HD2	23:U:79:GLU:CA	2.18	0.72
25:W:36:ASP:CG	25:W:41:ARG:HH12	1.92	0.72
26:Z:4:HIS:CB	26:Z:5:PRO:HD3	2.13	0.72
1:X:356:A:H2'	1:X:357:A:C8	2.24	0.72
1:X:731:A:O2'	1:X:732:G:C5'	2.35	0.72
1:X:2228:U:H5''	1:X:2229:G:OP2	1.89	0.72
1:X:2400:G:H21	23:U:33:LYS:NZ	1.87	0.72
3:A:172:TYR:HA	3:A:186:HIS:HA	1.70	0.72
23:U:50:ALA:CB	23:U:52:ARG:HH22	2.02	0.72
1:X:403:A:H3'	1:X:403:A:P	2.28	0.72
1:X:1125:G:H2'	1:X:1126:A:H8	1.53	0.72
1:X:1223:G:C5'	1:X:1224:A:H5''	2.18	0.72
1:X:2375:G:H1'	23:U:33:LYS:NZ	2.04	0.72
1:X:2691:C:H4'	1:X:2692:A:OP1	1.88	0.72
5:C:3:GLN:CG	5:C:116:LYS:HD2	2.19	0.72
5:C:102:LEU:HD21	5:C:106:MET:CE	2.19	0.72
9:G:66:HIS:CG	16:N:71:LEU:HD13	2.24	0.72
10:H:75:VAL:HG23	10:H:76:ARG:HG3	1.70	0.72
11:I:28:LYS:HZ2	11:I:37:GLN:N	1.87	0.72
11:I:86:THR:H	11:I:116:ARG:HH12	1.36	0.72
12:J:36:ILE:HG23	12:J:102:ARG:O	1.89	0.72
12:J:136:GLU:HA	12:J:138:TYR:HE2	1.53	0.72
21:S:10:PRO:HG2	21:S:14:LEU:CD1	2.20	0.72
21:S:18:MET:HA	21:S:36:ARG:N	2.03	0.72
1:X:636:G:H5'	1:X:636:G:H8	1.54	0.72
1:X:1006:C:H4'	1:X:1007:A:OP1	1.89	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1705:U:O2	1:X:1717:A:H5''	1.89	0.72
1:X:1933:G:C8	1:X:1934:U:H5	2.06	0.72
1:X:2364:C:H2'	1:X:2365:U:H6	1.54	0.72
3:A:184:ARG:NH2	3:A:268:ARG:HH11	1.88	0.72
3:A:246:PRO:HD3	3:A:251:GLY:H	1.54	0.72
11:I:77:LEU:HB2	11:I:111:SER:H	1.52	0.72
20:R:25:LEU:CD1	20:R:25:LEU:H	2.02	0.72
1:X:689:A:H2'	1:X:690:A:H5'	1.71	0.72
1:X:1092:U:O2'	8:F:117:ALA:HB1	1.88	0.72
1:X:1167:A:H61	16:N:48:ARG:HD3	1.55	0.72
1:X:48:A:H4'	1:X:49:U:C5'	2.20	0.72
1:X:757:U:O2'	1:X:758:G:H5'	1.89	0.72
1:X:777:A:H62	1:X:1766:U:H3	1.35	0.72
1:X:1791:C:OP1	3:A:263:ARG:HG3	1.89	0.72
1:X:2325:A:HO2'	1:X:2326:C:P	2.12	0.72
1:X:2404:A:H4'	1:X:2405:A:C5'	2.20	0.72
3:A:145:LEU:HD12	3:A:146:GLU:N	2.03	0.72
4:B:141:ILE:HG21	4:B:154:LYS:HZ3	1.54	0.72
5:C:173:ALA:HB1	5:C:193:LEU:CD1	2.20	0.72
6:D:33:LYS:HB2	6:D:91:LEU:O	1.89	0.72
11:I:53:ARG:HD2	11:I:53:ARG:O	1.90	0.72
20:R:96:LYS:HG3	20:R:97:GLN:N	2.03	0.72
1:X:2084:G:H2'	1:X:2085:G:C8	2.25	0.72
1:X:2167:A:H2'	1:X:2168:A:C8	2.25	0.72
1:X:2266:A:C2	1:X:2268:G:H1'	2.25	0.72
1:X:2522:G:H21	1:X:2625:U:H5''	1.54	0.72
2:Y:27:A:H61	2:Y:55:C:H3'	1.53	0.72
17:O:22:VAL:HA	17:O:91:THR:OG1	1.89	0.72
19:Q:69:ILE:HD13	19:Q:70:GLY:O	1.89	0.72
20:R:22:VAL:HG22	20:R:83:LEU:H	1.55	0.72
20:R:93:ARG:NH2	20:R:108:VAL:HA	2.04	0.72
1:X:868:U:H3	1:X:934:G:H1	1.37	0.72
1:X:958:G:H2'	1:X:959:C:H6	1.55	0.72
1:X:1050:G:H2'	1:X:1051:U:H5'	1.71	0.72
1:X:1091:C:O2	8:F:126:THR:HG23	1.90	0.72
1:X:1850:G:HO2'	1:X:1851:A:H8	0.73	0.72
1:X:2236:U:H2'	1:X:2237:C:H6	1.54	0.72
2:Y:3:A:H2'	2:Y:4:C:H5'	1.72	0.72
2:Y:53:G:H5'	14:L:64:LYS:HZ1	1.53	0.72
6:D:134:GLU:HG2	6:D:136:LEU:H	1.54	0.72
23:U:54:ASN:O	23:U:56:GLN:N	2.21	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:208:C:N4	1:X:209:G:H21	1.87	0.72
1:X:617:U:H3'	1:X:617:U:O2	1.89	0.72
3:A:38:PRO:HA	3:A:61:LEU:HD22	1.71	0.72
4:B:9:ILE:HG22	15:M:13:LEU:HD11	1.72	0.72
6:D:111:ILE:HA	6:D:137:ILE:HG22	1.69	0.72
14:L:97:HIS:O	14:L:101:LYS:HB2	1.90	0.72
18:P:35:PRO:HG2	18:P:99:ALA:HB2	1.71	0.72
20:R:93:ARG:HG2	20:R:93:ARG:HH11	1.54	0.72
1:X:1348:C:H2'	1:X:1349:A:H8	1.55	0.72
1:X:1475:U:OP2	1:X:1475:U:H4'	1.90	0.72
1:X:2440:C:H2'	1:X:2441:U:H6	1.55	0.72
20:R:93:ARG:NH2	20:R:108:VAL:HG13	2.05	0.72
20:R:110:SER:OG	20:R:112:LYS:HE3	1.90	0.72
21:S:36:ARG:HG2	21:S:40:ASP:OD1	1.90	0.72
21:S:92:VAL:HG23	21:S:93:GLU:H	1.54	0.72
1:X:187:U:O2'	1:X:188:G:H5'	1.89	0.71
1:X:706:A:O2'	1:X:707:U:H5'	1.90	0.71
1:X:1092:U:O2'	8:F:117:ALA:CB	2.38	0.71
1:X:1542:G:H22	1:X:1562:G:H1	0.77	0.71
1:X:1573:G:C3'	1:X:1574:A:H5''	2.18	0.71
3:A:246:PRO:CD	3:A:251:GLY:H	2.03	0.71
7:E:11:VAL:CG1	7:E:15:VAL:HG21	2.20	0.71
7:E:126:PRO:HD2	7:E:130:ARG:O	1.90	0.71
15:M:104:LEU:O	15:M:107:LEU:N	2.23	0.71
22:T:46:LYS:HB2	22:T:78:PHE:CE2	2.25	0.71
1:X:417:C:N1	1:X:419:G:C8	2.58	0.71
1:X:2053:G:C2	1:X:2054:A:C4	2.79	0.71
1:X:2280:A:H2'	1:X:2281:C:C6	2.25	0.71
1:X:2441:U:H2'	1:X:2442:C:H6	1.55	0.71
1:X:2736:U:H4'	1:X:2737:A:OP1	1.87	0.71
1:X:2812:A:H2'	1:X:2813:G:C8	2.24	0.71
17:O:48:GLY:O	17:O:50:ASP:N	2.22	0.71
19:Q:19:ALA:O	19:Q:22:ARG:HG2	1.90	0.71
1:X:956:A:C4	1:X:2427:A:C2	2.79	0.71
1:X:1144:U:H2'	1:X:1147:G:OP1	1.90	0.71
5:C:28:HIS:ND1	11:I:17:LYS:HA	2.04	0.71
12:J:71:PRO:HA	12:J:96:SER:HB2	1.71	0.71
1:X:504:G:H4'	18:P:27:VAL:HG13	1.72	0.71
1:X:542:A:H2	1:X:2004:U:H2'	1.52	0.71
1:X:666:U:H2'	1:X:667:U:C4'	2.20	0.71
1:X:958:G:H2'	1:X:959:C:C6	2.25	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2794:G:C6	1:X:2796:A:C2	2.79	0.71
11:I:30:ALA:H	11:I:34:HIS:CD2	2.08	0.71
12:J:99:LYS:HG3	12:J:100:PRO:HD2	1.71	0.71
17:O:11:GLN:HE22	17:O:38:LEU:HB3	1.54	0.71
20:R:59:LYS:HB3	20:R:62:MET:HB2	1.71	0.71
25:W:2:LYS:HD2	25:W:32:ARG:O	1.90	0.71
1:X:37:C:H2'	1:X:38:G:H8	1.54	0.71
1:X:517:A:C5'	1:X:518:A:H5'	2.20	0.71
6:D:88:LYS:HE2	6:D:90:THR:OG1	1.90	0.71
17:O:69:ILE:O	17:O:69:ILE:HG22	1.89	0.71
21:S:64:ALA:CA	21:S:86:VAL:HG23	2.21	0.71
23:U:51:ILE:HG23	23:U:59:THR:CA	2.14	0.71
1:X:1071:U:H1'	1:X:1073:G:C5'	2.19	0.71
1:X:2795:A:H4'	13:K:5:LYS:CE	2.20	0.71
5:C:7:ILE:HB	5:C:120:VAL:N	2.03	0.71
6:D:171:GLN:HG3	6:D:175:LEU:O	1.90	0.71
12:J:122:ALA:HA	12:J:125:LYS:HD3	1.72	0.71
16:N:91:ASN:O	16:N:93:LYS:N	2.22	0.71
21:S:3:LEU:HD21	21:S:32:PHE:CD2	2.26	0.71
1:X:589:C:H4'	16:N:31:GLN:NE2	2.05	0.71
1:X:1283:C:H5''	1:X:1284:G:H5'	1.72	0.71
1:X:2301:A:H2'	1:X:2302:G:H8	1.55	0.71
2:Y:19:C:H2'	2:Y:20:A:O4'	1.90	0.71
11:I:104:ARG:HB3	11:I:105:PRO:HD2	1.73	0.71
19:Q:63:LYS:HB3	19:Q:69:ILE:O	1.90	0.71
21:S:89:GLY:O	21:S:127:PRO:HD2	1.90	0.71
23:U:32:ARG:HG2	23:U:34:THR:H	1.56	0.71
1:X:222:G:O2'	1:X:223:C:H5'	1.91	0.71
1:X:1072:U:O4	8:F:10:LEU:CA	2.35	0.71
1:X:2081:U:H2'	1:X:2082:C:O4'	1.90	0.71
1:X:2240:C:O2'	1:X:2241:U:H5'	1.90	0.71
3:A:44:ASN:HB3	3:A:49:ILE:HA	1.72	0.71
12:J:69:ILE:HG21	12:J:104:MET:HG2	1.71	0.71
15:M:108:ARG:O	15:M:109:GLU:HG3	1.91	0.71
17:O:20:ILE:HD12	17:O:21:ARG:HG2	1.71	0.71
20:R:83:LEU:O	20:R:84:VAL:HG23	1.91	0.71
1:X:109:A:C2'	1:X:110:U:H5''	2.20	0.71
1:X:1834:G:H2'	1:X:1835:C:C6	2.26	0.71
1:X:2063:A:H2'	1:X:2064:U:H6	1.53	0.71
1:X:2200:G:O2'	3:A:149:PRO:HG2	1.91	0.71
1:X:2241:U:C5	22:T:17:ASN:ND2	2.59	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:163:VAL:HG22	3:A:177:LEU:HA	1.73	0.71
5:C:104:LEU:N	5:C:104:LEU:HD23	2.06	0.71
6:D:92:ARG:CA	6:D:96:MET:HB2	2.21	0.71
6:D:106:ILE:O	6:D:110:ARG:HB2	1.90	0.71
14:L:10:LYS:HB3	14:L:14:ARG:HE	1.55	0.71
21:S:34:LEU:HD13	21:S:35:ASP:O	1.90	0.71
1:X:841:G:H2'	1:X:842:A:C8	2.26	0.71
1:X:1031:C:O2	1:X:1031:C:H2'	1.89	0.71
1:X:2286:G:C5	1:X:2287:G:H1'	2.26	0.71
4:B:181:LEU:CD1	15:M:16:ILE:HD11	2.20	0.71
1:X:403:A:H5''	1:X:404:A:OP1	1.90	0.70
1:X:416:U:O2'	1:X:417:C:C5	2.43	0.70
1:X:558:G:C4	1:X:558:G:C3'	2.74	0.70
1:X:760:U:C6	26:Z:3:LYS:HG3	2.26	0.70
1:X:1168:G:O2'	25:W:28:ILE:HD11	1.91	0.70
1:X:1173:G:H2'	1:X:1174:G:H8	1.56	0.70
1:X:1629:G:H2'	1:X:1633:C:H42	1.55	0.70
1:X:2338:C:O2'	11:I:56:LEU:HD11	1.91	0.70
3:A:49:ILE:HG12	3:A:50:THR:N	2.05	0.70
4:B:105:THR:HG23	4:B:197:VAL:HB	1.72	0.70
5:C:128:ALA:O	5:C:130:THR:N	2.23	0.70
6:D:123:ASP:O	6:D:125:ARG:N	2.24	0.70
14:L:38:ILE:HD12	14:L:39:TYR:H	1.55	0.70
1:X:558:G:N3	1:X:558:G:O5'	2.24	0.70
1:X:689:A:C8	1:X:2422:C:H1'	2.26	0.70
1:X:1117:G:H2'	1:X:1118:G:H8	1.55	0.70
1:X:2170:C:H2'	1:X:2171:U:H4'	1.71	0.70
1:X:2198:U:C2	1:X:2199:C:C6	2.79	0.70
6:D:10:ASP:HA	6:D:14:PRO:HG2	1.72	0.70
7:E:54:ARG:NE	7:E:57:ASP:OD2	2.25	0.70
9:G:140:GLN:HG2	9:G:144:MET:HE2	1.73	0.70
11:I:119:THR:HG23	11:I:139:ARG:O	1.91	0.70
12:J:27:TYR:HB3	12:J:137:VAL:CG2	2.21	0.70
23:U:62:LEU:HD23	23:U:67:LEU:CG	2.20	0.70
1:X:172:A:C5	1:X:175:C:C5	2.76	0.70
1:X:320:A:N3	1:X:340:G:O2'	2.23	0.70
1:X:1630:A:N1	18:P:114:ALA:HB2	2.06	0.70
1:X:2195:C:H2'	1:X:2196:U:C1'	2.22	0.70
1:X:2691:C:H2'	1:X:2692:A:H5''	1.73	0.70
11:I:28:LYS:HZ2	11:I:36:GLY:CA	2.03	0.70
12:J:136:GLU:HA	12:J:138:TYR:CE2	2.26	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:107:ALA:CB	20:R:111:GLY:HA2	2.20	0.70
1:X:166:G:H2'	1:X:182:G:N2	2.06	0.70
1:X:192:G:H4'	1:X:193:A:O5'	1.91	0.70
1:X:554:U:O2	1:X:554:U:C2'	2.38	0.70
1:X:1179:A:H2'	1:X:1180:A:H8	1.56	0.70
1:X:1182:U:H5'	1:X:1182:U:H6	1.56	0.70
1:X:1629:G:C6	1:X:1635:G:O6	2.44	0.70
1:X:2252:A:C2	1:X:2253:A:C5	2.79	0.70
1:X:2307:A:H2'	1:X:2308:A:H8	1.53	0.70
1:X:2395:C:O2'	1:X:2396:C:H5''	1.91	0.70
5:C:173:ALA:HB1	5:C:193:LEU:HD13	1.72	0.70
11:I:108:LEU:HB3	11:I:125:ALA:HB2	1.71	0.70
14:L:38:ILE:CD1	14:L:40:ALA:H	2.04	0.70
19:Q:62:ARG:O	19:Q:63:LYS:HB3	1.89	0.70
21:S:37:LYS:O	21:S:40:ASP:HB2	1.90	0.70
1:X:428:A:H2'	1:X:429:C:C6	2.26	0.70
1:X:2236:U:H2'	1:X:2237:C:C6	2.25	0.70
1:X:2663:U:C4	1:X:2664:G:N7	2.59	0.70
1:X:2691:C:C2'	1:X:2692:A:H5''	2.21	0.70
1:X:2757:G:OP2	1:X:2761:A:O2'	2.08	0.70
6:D:123:ASP:C	6:D:125:ARG:N	2.44	0.70
6:D:135:GLN:HG3	6:D:151:GLY:CA	2.20	0.70
10:H:41:ASN:O	10:H:42:LYS:HB3	1.90	0.70
13:K:81:ASP:O	13:K:85:PRO:HG2	1.92	0.70
1:X:490:A:O2'	1:X:492:G:H5''	1.92	0.70
1:X:971:A:H4'	1:X:2436:U:H5'	1.73	0.70
1:X:1066:G:H2'	1:X:1067:G:C8	2.26	0.70
1:X:1073:G:OP2	1:X:1081:A:H4'	1.91	0.70
1:X:1122:A:O2'	1:X:1123:G:H4'	1.91	0.70
1:X:2511:G:H2'	1:X:2512:A:C8	2.27	0.70
1:X:2828:C:H2'	1:X:2829:A:C8	2.25	0.70
9:G:105:GLY:O	9:G:106:TYR:C	2.30	0.70
18:P:69:ALA:O	18:P:72:LEU:N	2.25	0.70
20:R:93:ARG:O	20:R:95:ARG:HD2	1.92	0.70
21:S:70:GLN:HA	21:S:70:GLN:HE21	1.56	0.70
23:U:22:GLY:HA3	23:U:39:LYS:CE	2.20	0.70
24:V:38:ALA:C	24:V:40:PRO:HD3	2.11	0.70
1:X:2074:U:H3'	1:X:2075:U:C5'	2.21	0.70
1:X:2509:A:N7	7:E:172:LYS:HE2	2.04	0.70
4:B:181:LEU:HD13	15:M:16:ILE:HD11	1.72	0.70
6:D:4:LEU:HG	6:D:5:LYS:N	2.05	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:22:TYR:CE2	6:D:28:VAL:HA	2.27	0.70
6:D:78:LYS:O	6:D:80:ARG:NH1	2.25	0.70
9:G:98:LYS:NZ	9:G:116:ARG:CZ	2.54	0.70
22:T:47:ALA:HB1	22:T:51:VAL:O	1.90	0.70
25:W:9:VAL:CG1	25:W:17:VAL:HG22	2.22	0.70
1:X:333:A:H3'	5:C:162:ARG:NH1	2.05	0.70
1:X:621:U:H2'	1:X:622:U:C6	2.26	0.70
1:X:1135:C:H2'	1:X:1136:G:H8	1.56	0.70
1:X:1716:G:H4'	1:X:1717:A:OP1	1.92	0.70
1:X:2043:A:OP1	5:C:63:GLY:N	2.24	0.70
11:I:108:LEU:HB3	11:I:125:ALA:CB	2.21	0.70
19:Q:7:LEU:HD22	19:Q:8:GLN:N	2.06	0.70
21:S:71:MET:CB	21:S:78:PRO:HA	2.22	0.70
22:T:3:HIS:CD2	22:T:5:LYS:HD3	2.26	0.70
1:X:433:G:N2	1:X:434:C:H1'	2.07	0.70
1:X:1129:A:OP1	1:X:1129:A:H4'	1.91	0.70
1:X:1314:A:C2'	1:X:1315:A:H3'	2.21	0.70
1:X:1342:U:C5'	1:X:1343:C:H5	2.05	0.70
1:X:1513:U:H5''	1:X:1514:C:OP2	1.91	0.70
1:X:2426:G:H3'	1:X:2479:U:OP2	1.92	0.70
5:C:166:TRP:N	5:C:166:TRP:CE3	2.60	0.70
14:L:60:LYS:HG2	14:L:62:GLY:N	2.06	0.70
15:M:93:ILE:O	15:M:94:VAL:HG23	1.91	0.70
15:M:99:VAL:CG2	15:M:100:ARG:H	2.04	0.70
21:S:149:ALA:HB3	21:S:164:PRO:HA	1.74	0.70
1:X:674:U:H1'	11:I:22:GLY:HA2	1.72	0.70
1:X:1342:U:H5'	1:X:1343:C:H5	1.56	0.70
1:X:1838:G:H2'	1:X:1839:A:O4'	1.92	0.70
1:X:1882:G:H21	1:X:1885:C:H41	1.40	0.70
1:X:2199:C:C2	1:X:2200:G:C8	2.80	0.70
2:Y:2:C:HO5'	2:Y:2:C:H6	1.38	0.70
3:A:42:GLY:N	3:A:43:ARG:NH1	2.39	0.70
3:A:206:LEU:C	3:A:211:ARG:HD3	2.11	0.70
5:C:180:ILE:HG23	5:C:181:LEU:H	1.56	0.70
16:N:79:PHE:CD2	16:N:80:ILE:HD13	2.26	0.70
20:R:25:LEU:HD11	20:R:81:VAL:HG23	1.74	0.70
21:S:142:ASN:H	21:S:145:ASP:CG	1.95	0.70
1:X:17:G:H2'	1:X:18:U:C6	2.27	0.69
1:X:930:A:H8	1:X:930:A:O5'	1.75	0.69
12:J:76:THR:HB	12:J:88:LYS:O	1.91	0.69
1:X:1016:C:O2'	9:G:56:THR:HG21	1.91	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1092:U:O2'	8:F:117:ALA:HA	1.91	0.69
1:X:1998:A:N3	26:Z:6:VAL:HG23	2.06	0.69
6:D:111:ILE:CD1	6:D:137:ILE:HD12	2.22	0.69
6:D:134:GLU:HG2	6:D:136:LEU:HB2	1.74	0.69
6:D:134:GLU:CG	6:D:136:LEU:HB2	2.22	0.69
13:K:13:ASN:HD22	13:K:13:ASN:C	1.95	0.69
14:L:21:THR:HG22	14:L:22:ALA:N	2.06	0.69
14:L:87:VAL:HG12	14:L:88:VAL:H	1.55	0.69
1:X:651:C:H2'	1:X:652:C:H5''	1.75	0.69
1:X:687:G:C2'	1:X:688:A:H5'	2.22	0.69
1:X:969:U:C5	12:J:17:ARG:HB2	2.27	0.69
1:X:1074:G:H2'	1:X:1075:C:O4'	1.91	0.69
1:X:2198:U:C2'	1:X:2199:C:O4'	2.38	0.69
1:X:2256:G:OP2	12:J:86:LYS:HD2	1.93	0.69
1:X:2431:C:H2'	1:X:2432:A:C8	2.27	0.69
6:D:45:GLU:HB2	6:D:78:LYS:HZ3	1.55	0.69
6:D:47:SER:HA	6:D:50:ILE:CD1	2.23	0.69
7:E:98:LEU:CD1	7:E:99:THR:H	1.95	0.69
9:G:32:TYR:OH	9:G:35:LYS:HE3	1.93	0.69
16:N:91:ASN:O	16:N:93:LYS:HG3	1.90	0.69
19:Q:91:LEU:HD22	19:Q:91:LEU:N	2.07	0.69
21:S:100:THR:HG23	21:S:138:VAL:CG2	2.21	0.69
23:U:28:GLY:O	23:U:31:GLY:N	2.25	0.69
30:4:22:ARG:HG2	30:4:22:ARG:HH11	1.57	0.69
1:X:199:A:N6	1:X:209:G:H1'	2.07	0.69
1:X:417:C:C2	1:X:419:G:C5	2.80	0.69
1:X:1292:A:H2'	1:X:1293:A:H5'	1.74	0.69
1:X:2352:A:H2'	1:X:2353:G:C8	2.27	0.69
1:X:2779:C:H2'	1:X:2780:A:C8	2.27	0.69
2:Y:68:A:H4'	2:Y:69:G:N7	2.06	0.69
6:D:74:ILE:HG12	6:D:80:ARG:CA	2.22	0.69
9:G:93:LYS:N	9:G:93:LYS:CD	2.54	0.69
11:I:63:ARG:O	11:I:64:GLY:C	2.31	0.69
13:K:13:ASN:ND2	13:K:14:SER:N	2.39	0.69
16:N:96:ALA:O	16:N:99:ALA:HB3	1.92	0.69
1:X:403:A:H4'	1:X:404:A:O5'	1.93	0.69
1:X:1017:C:O2	9:G:134:MET:HG2	1.93	0.69
1:X:1919:A:H2	1:X:1926:U:C2	2.11	0.69
1:X:2297:G:O2'	1:X:2300:G:O6	2.10	0.69
1:X:2356:A:H2	14:L:91:ARG:HH22	1.37	0.69
1:X:2735:C:H2'	30:4:19:ARG:HD3	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Y:17:A:H1'	2:Y:112:A:C8	2.28	0.69
2:Y:25:G:H2'	2:Y:26:G:C5	2.28	0.69
2:Y:106:U:O3'	21:S:67:LYS:NZ	2.25	0.69
7:E:30:LYS:HG2	7:E:79:VAL:O	1.91	0.69
21:S:3:LEU:HD21	21:S:32:PHE:CG	2.27	0.69
1:X:673:G:H5'	5:C:93:TYR:CD1	2.28	0.69
1:X:862:A:H2'	1:X:863:C:H6	1.56	0.69
1:X:1241:G:O2'	1:X:1242:A:H5'	1.93	0.69
1:X:2598:C:O2'	1:X:2599:U:H5'	1.93	0.69
1:X:2847:G:H2'	1:X:2848:A:C8	2.27	0.69
3:A:88:ARG:O	3:A:89:SER:HB3	1.93	0.69
4:B:120:TRP:CD1	4:B:155:ARG:HB3	2.28	0.69
4:B:146:THR:O	4:B:147:PRO:C	2.27	0.69
9:G:61:ARG:CZ	9:G:65:LYS:HD2	2.22	0.69
18:P:14:ARG:HA	18:P:17:GLN:HG2	1.73	0.69
1:X:171:G:H2'	1:X:172:A:O4'	1.93	0.69
1:X:765:C:O2'	1:X:766:A:OP2	2.11	0.69
1:X:2546:G:H2'	1:X:2547:C:C6	2.27	0.69
1:X:2769:C:H2'	1:X:2770:A:H8	1.57	0.69
1:X:2795:A:O2'	13:K:5:LYS:NZ	2.25	0.69
13:K:3:HIS:ND1	13:K:5:LYS:CD	2.49	0.69
1:X:305:A:C2'	1:X:306:G:H5'	2.23	0.69
1:X:451:A:H2'	1:X:452:G:H8	1.58	0.69
1:X:568:G:H2'	1:X:569:C:H6	1.56	0.69
1:X:731:A:C2'	1:X:732:G:C4'	2.70	0.69
1:X:982:C:H2'	1:X:983:G:H5'	1.75	0.69
1:X:1072:U:H4'	1:X:1073:G:OP2	1.92	0.69
1:X:1415:C:O2'	1:X:1416:A:H5'	1.92	0.69
1:X:2198:U:C4	1:X:2199:C:C5	2.81	0.69
1:X:2507:U:OP1	30:4:31:LYS:HE3	1.93	0.69
1:X:2795:A:O3'	13:K:3:HIS:HE1	1.75	0.69
5:C:158:ARG:O	5:C:160:ALA:N	2.26	0.69
6:D:79:LEU:O	6:D:80:ARG:HB3	1.92	0.69
6:D:92:ARG:HH21	6:D:92:ARG:HG3	1.57	0.69
7:E:109:TYR:HE1	7:E:152:ARG:CZ	2.05	0.69
7:E:127:GLU:O	7:E:129:THR:N	2.22	0.69
10:H:73:VAL:HG22	10:H:73:VAL:O	1.92	0.69
11:I:76:LYS:HD3	11:I:79:GLN:NE2	2.08	0.69
12:J:80:ALA:O	12:J:81:GLU:HB3	1.93	0.69
13:K:11:ASN:OD1	13:K:17:ARG:NH2	2.26	0.69
14:L:13:THR:O	14:L:17:VAL:HG12	1.93	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:64:ALA:O	18:P:68:VAL:HG23	1.93	0.69
20:R:25:LEU:HG	20:R:81:VAL:HG23	1.74	0.69
22:T:3:HIS:CG	22:T:4:LYS:H	2.10	0.69
23:U:10:LYS:HG2	23:U:11:LYS:HG3	1.74	0.69
30:4:1:MET:CE	30:4:33:LYS:HB3	2.21	0.69
1:X:460:U:O2'	1:X:461:A:OP1	2.11	0.69
1:X:839:U:OP1	1:X:2408:G:OP2	2.10	0.69
1:X:1515:U:H2'	1:X:1516:A:H8	1.58	0.69
1:X:1734:C:C4	1:X:1735:G:H1'	2.27	0.69
1:X:2034:A:OP1	4:B:137:ARG:NH2	2.25	0.69
1:X:2272:A:P	14:L:18:ARG:HH12	2.16	0.69
6:D:152:MET:CE	6:D:154:ILE:HD11	2.23	0.69
14:L:101:LYS:HG2	14:L:105:ASP:OD2	1.92	0.69
1:X:830:C:H2'	1:X:831:G:C8	2.28	0.69
1:X:925:U:O2'	1:X:926:C:H5'	1.93	0.69
6:D:74:ILE:HA	6:D:79:LEU:HB3	1.73	0.69
14:L:38:ILE:HD11	14:L:40:ALA:H	1.58	0.69
15:M:37:THR:CG2	15:M:39:VAL:HG13	2.23	0.69
20:R:15:HIS:ND1	20:R:16:PHE:HD2	1.87	0.69
23:U:32:ARG:H	23:U:32:ARG:HE	0.75	0.69
1:X:333:A:H2'	1:X:350:U:O2	1.92	0.68
1:X:637:G:H1	11:I:101:ARG:CD	2.05	0.68
1:X:1118:G:C3'	1:X:1119:U:H5''	2.23	0.68
1:X:1467:U:H3'	1:X:1468:A:H5'	1.74	0.68
1:X:2027:C:N3	1:X:2028:C:C5	2.61	0.68
1:X:2725:C:H2'	1:X:2726:U:C6	2.28	0.68
5:C:148:VAL:HB	5:C:167:VAL:CG1	2.12	0.68
11:I:94:GLU:HB3	11:I:97:ARG:NH1	2.06	0.68
12:J:78:LYS:HE3	12:J:81:GLU:HA	1.74	0.68
15:M:24:LEU:O	15:M:25:PRO:O	2.11	0.68
24:V:4:SER:C	24:V:6:MET:H	1.95	0.68
24:V:55:THR:O	24:V:59:GLU:HG3	1.93	0.68
1:X:748:A:H5'	1:X:749:C:OP2	1.93	0.68
1:X:861:G:H2'	1:X:862:A:H5'	1.75	0.68
1:X:1094:C:H2'	1:X:1096:A:C5'	2.23	0.68
1:X:1472:C:H3'	1:X:1473:U:C6	2.26	0.68
1:X:2395:C:H2'	1:X:2396:C:H5''	1.74	0.68
6:D:4:LEU:HD21	6:D:173:MET:HE3	1.76	0.68
19:Q:14:GLU:HG3	19:Q:15:LYS:N	2.09	0.68
20:R:93:ARG:HH22	20:R:108:VAL:CA	2.07	0.68
24:V:13:ASP:OD1	24:V:16:LYS:HD3	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Z:42:SER:O	26:Z:43:HIS:HB2	1.93	0.68
1:X:654:A:H2'	1:X:654:A:N3	2.08	0.68
1:X:876:A:P	12:J:23:LYS:HD3	2.33	0.68
1:X:1012:A:H2'	1:X:1013:G:O4'	1.93	0.68
1:X:1188:A:H8	1:X:1188:A:O5'	1.77	0.68
1:X:1514:C:H4'	1:X:1593:C:H5'	1.75	0.68
1:X:1770:U:O2	1:X:1774:A:C5	2.46	0.68
1:X:2756:A:O2'	1:X:2757:G:OP2	2.10	0.68
4:B:109:LYS:HE2	4:B:191:ALA:HB2	1.76	0.68
5:C:23:ASN:O	5:C:27:LEU:HD12	1.94	0.68
7:E:76:VAL:O	7:E:78:GLY:N	2.26	0.68
7:E:117:PRO:HD3	7:E:123:PHE:CE1	2.29	0.68
11:I:73:GLU:OE1	11:I:73:GLU:N	2.26	0.68
15:M:39:VAL:HA	15:M:45:THR:HG23	1.74	0.68
15:M:43:ASN:ND2	15:M:43:ASN:C	2.44	0.68
17:O:86:HIS:CG	17:O:87:ARG:N	2.60	0.68
19:Q:63:LYS:CB	19:Q:69:ILE:O	2.42	0.68
20:R:59:LYS:O	20:R:60:PRO:O	2.11	0.68
20:R:84:VAL:HA	20:R:90:LYS:HE2	1.75	0.68
1:X:62:U:H5''	1:X:63:A:OP1	1.93	0.68
1:X:227:G:O3'	11:I:53:ARG:HG2	1.93	0.68
1:X:1092:U:O2'	8:F:117:ALA:CA	2.41	0.68
1:X:1277:G:H8	1:X:1277:G:O5'	1.75	0.68
1:X:1279:G:O2'	1:X:1995:G:N1	2.24	0.68
1:X:1856:U:C2'	1:X:1857:G:O5'	2.42	0.68
1:X:2311:U:O2	1:X:2311:U:H3'	1.93	0.68
9:G:104:THR:O	9:G:105:GLY:O	2.12	0.68
12:J:77:LYS:HG3	12:J:78:LYS:N	2.07	0.68
14:L:43:ILE:HG23	14:L:49:GLN:O	1.94	0.68
19:Q:37:GLU:O	19:Q:40:ASP:HB3	1.93	0.68
20:R:91:ALA:O	20:R:92:THR:HG23	1.94	0.68
21:S:6:LYS:HB3	21:S:32:PHE:HA	1.74	0.68
1:X:389:G:H2'	1:X:390:U:C5	2.29	0.68
1:X:465:C:O2'	1:X:467:U:H1'	1.94	0.68
1:X:1342:U:H5''	1:X:1343:C:C5	2.29	0.68
1:X:1427:G:H2'	1:X:1428:G:H1'	1.76	0.68
1:X:1468:A:H5''	1:X:1472:C:H41	1.59	0.68
1:X:2372:A:H5''	11:I:61:PRO:HB3	1.74	0.68
1:X:2665:G:C6	1:X:2666:U:N3	2.61	0.68
1:X:2799:C:C5	1:X:2800:C:C4	2.82	0.68
5:C:194:GLU:O	5:C:195:ILE:HG12	1.94	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:136:ILE:HD12	7:E:136:ILE:N	2.08	0.68
9:G:70:PHE:HB2	16:N:64:ARG:HG2	1.76	0.68
13:K:74:ASP:OD1	13:K:77:ARG:NH2	2.26	0.68
14:L:21:THR:O	14:L:24:SER:HB2	1.93	0.68
16:N:14:HIS:O	16:N:17:VAL:N	2.24	0.68
18:P:10:ASN:OD1	18:P:13:GLN:HG2	1.93	0.68
1:X:103:U:H2'	1:X:104:C:H6	1.59	0.68
1:X:208:C:N4	1:X:209:G:N2	2.41	0.68
1:X:1151:U:H5''	1:X:1153:A:H5''	1.75	0.68
1:X:2309:G:H2'	1:X:2310:G:H5'	1.75	0.68
4:B:154:LYS:CE	4:B:156:MET:SD	2.80	0.68
5:C:12:GLY:O	5:C:14:THR:N	2.26	0.68
13:K:10:LEU:HD23	13:K:17:ARG:HB2	1.73	0.68
17:O:86:HIS:CD2	17:O:87:ARG:N	2.62	0.68
21:S:21:ALA:O	21:S:32:PHE:HB2	1.94	0.68
21:S:123:VAL:HG23	21:S:161:ALA:HB2	1.76	0.68
23:U:27:ASP:C	23:U:32:ARG:HD3	2.14	0.68
23:U:52:ARG:NH1	23:U:67:LEU:HD11	2.09	0.68
1:X:191:G:O2'	1:X:192:G:H5'	1.94	0.68
1:X:421:G:H2'	1:X:422:C:C6	2.27	0.68
1:X:1107:A:H3'	1:X:1108:U:C5'	2.20	0.68
1:X:2286:G:H21	1:X:2290:A:H61	1.39	0.68
5:C:117:LEU:HD22	5:C:187:VAL:HG22	1.76	0.68
5:C:130:THR:O	5:C:134:ILE:HG13	1.92	0.68
12:J:75:VAL:HB	12:J:93:TYR:CE2	2.29	0.68
12:J:79:PRO:CD	12:J:88:LYS:HZ2	2.06	0.68
13:K:20:LEU:O	13:K:23:ALA:N	2.26	0.68
19:Q:35:LYS:O	19:Q:38:ILE:HG23	1.94	0.68
21:S:48:THR:O	21:S:49:THR:HG23	1.94	0.68
1:X:219:G:H22	1:X:231:G:H2'	1.59	0.68
1:X:564:U:H2'	1:X:565:A:C8	2.29	0.68
1:X:984:A:H1'	1:X:1202:U:C5	2.28	0.68
1:X:1142:G:C4'	9:G:103:TYR:CE2	2.76	0.68
5:C:136:TRP:CD1	5:C:137:ALA:N	2.62	0.68
9:G:36:ASN:CG	9:G:37:ASP:H	1.95	0.68
18:P:67:PRO:O	18:P:69:ALA:N	2.27	0.68
22:T:71:ASN:HD21	22:T:74:LYS:HD3	1.59	0.68
1:X:761:G:P	18:P:110:ALA:HB2	2.33	0.68
1:X:1780:A:H2'	1:X:1781:C:O4'	1.93	0.68
3:A:133:LEU:CB	3:A:187:SER:HB2	2.23	0.68
3:A:218:LYS:HD2	3:A:218:LYS:C	2.13	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:109:ALA:O	5:C:112:GLN:N	2.27	0.68
11:I:30:ALA:H	11:I:34:HIS:CG	2.12	0.68
14:L:15:ARG:HA	14:L:15:ARG:HH11	1.59	0.68
21:S:117:VAL:HG23	21:S:168:VAL:HA	1.76	0.68
1:X:225:G:C6	1:X:2410:U:H5'	2.29	0.68
1:X:1342:U:C5'	1:X:1343:C:C5	2.77	0.68
1:X:1347:C:O2'	1:X:1348:C:H5'	1.93	0.68
1:X:1525:A:H3'	1:X:1526:U:C6	2.28	0.68
1:X:1816:G:O2'	1:X:1817:U:H5'	1.94	0.68
1:X:2848:A:H2	13:K:6:ALA:HB1	1.59	0.68
1:X:2867:G:OP2	1:X:2867:G:C8	2.45	0.68
7:E:9:ILE:HD12	7:E:51:LEU:N	2.09	0.68
11:I:62:LYS:HD3	29:3:12:ARG:CA	2.23	0.68
18:P:37:LYS:CE	18:P:64:ALA:HB2	2.22	0.68
22:T:31:VAL:HG22	22:T:67:VAL:HG23	1.76	0.68
23:U:58:LYS:O	23:U:59:THR:HG23	1.94	0.68
1:X:417:C:C2	1:X:419:G:N7	2.62	0.67
1:X:1511:A:H2'	1:X:1512:A:C8	2.28	0.67
1:X:1851:A:H62	1:X:1866:G:N2	1.91	0.67
1:X:2429:A:C2	1:X:2430:A:C4	2.81	0.67
11:I:56:LEU:O	11:I:58:ALA:O	2.12	0.67
19:Q:76:LYS:HG2	19:Q:76:LYS:O	1.94	0.67
20:R:18:LYS:HA	20:R:36:VAL:CG1	2.23	0.67
20:R:93:ARG:HH12	20:R:108:VAL:C	1.96	0.67
23:U:49:LYS:CB	23:U:61:TRP:HA	2.19	0.67
25:W:44:VAL:HG12	25:W:45:LYS:HZ1	1.58	0.67
1:X:402:A:C8	1:X:2392:G:C4'	2.76	0.67
1:X:634:G:H2'	1:X:635:C:H6	1.59	0.67
1:X:729:A:H2'	1:X:730:C:C4'	2.24	0.67
1:X:1072:U:H1'	1:X:1081:A:C1'	2.23	0.67
1:X:1978:U:C3'	1:X:1979:C:H5''	2.19	0.67
1:X:2870:C:H2'	1:X:2871:U:C6	2.28	0.67
5:C:22:VAL:HG12	5:C:23:ASN:N	2.08	0.67
10:H:100:ASN:C	10:H:100:ASN:OD1	2.32	0.67
15:M:106:TYR:CE1	15:M:107:LEU:HD23	2.29	0.67
21:S:43:PHE:CE1	21:S:47:SER:HA	2.29	0.67
26:Z:45:ILE:HG21	26:Z:57:VAL:CG2	2.23	0.67
1:X:717:G:H2'	1:X:739:G:H22	1.58	0.67
6:D:107:GLY:O	6:D:111:ILE:HG13	1.94	0.67
11:I:77:LEU:HD22	11:I:110:ALA:HA	1.75	0.67
11:I:94:GLU:O	11:I:99:VAL:HG22	1.95	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:18:LYS:HA	20:R:36:VAL:HG12	1.76	0.67
20:R:46:VAL:HG12	20:R:48:VAL:HG23	1.75	0.67
1:X:105:G:H5'	1:X:105:G:C8	2.30	0.67
1:X:635:C:C2'	1:X:636:G:H5''	2.24	0.67
1:X:2229:G:O2'	1:X:2230:G:OP2	2.12	0.67
1:X:2508:G:OP2	7:E:172:LYS:HD3	1.94	0.67
3:A:243:GLY:N	3:A:244:ARG:NH1	2.41	0.67
6:D:12:VAL:HG11	6:D:169:LEU:HD13	1.77	0.67
9:G:55:ALA:HB1	9:G:134:MET:CE	2.23	0.67
11:I:28:LYS:NZ	11:I:37:GLN:H	1.93	0.67
12:J:125:LYS:HD2	12:J:125:LYS:H	1.54	0.67
16:N:66:ASN:ND2	16:N:70:ARG:HH12	1.91	0.67
18:P:37:LYS:HE2	18:P:64:ALA:CB	2.21	0.67
19:Q:65:VAL:HG12	19:Q:66:GLY:N	2.08	0.67
19:Q:88:ILE:HD12	19:Q:88:ILE:O	1.94	0.67
21:S:112:LEU:O	21:S:172:LEU:N	2.27	0.67
1:X:70:A:OP1	1:X:110:U:H2'	1.95	0.67
1:X:98:U:H3'	1:X:98:U:H6	1.60	0.67
1:X:306:G:N2	1:X:355:G:H1'	2.10	0.67
1:X:712:A:H2'	1:X:713:G:O4'	1.95	0.67
1:X:1040:A:C8	1:X:1041:G:C8	2.83	0.67
1:X:1121:G:H2'	1:X:1122:A:C8	2.29	0.67
1:X:1123:G:H2'	1:X:1124:U:O4'	1.93	0.67
1:X:1128:G:H3'	1:X:1129:A:C5'	2.24	0.67
1:X:1221:C:H2'	1:X:1222:G:H8	1.59	0.67
1:X:1507:A:O2'	3:A:101:GLU:HB3	1.94	0.67
1:X:1745:C:O2'	1:X:1746:A:H5'	1.95	0.67
1:X:1783:G:O2'	1:X:1784:C:H5'	1.94	0.67
18:P:14:ARG:HA	18:P:17:GLN:CG	2.25	0.67
20:R:90:LYS:O	20:R:91:ALA:O	2.12	0.67
1:X:50:G:H1'	1:X:116:A:H61	1.59	0.67
1:X:1223:G:C4'	1:X:1224:A:H5''	2.25	0.67
1:X:2440:C:H2'	1:X:2441:U:C6	2.30	0.67
2:Y:56:G:H2'	2:Y:57:U:O4'	1.94	0.67
9:G:131:VAL:C	9:G:133:GLY:H	1.96	0.67
10:H:76:ARG:O	10:H:94:ASN:HA	1.95	0.67
16:N:3:ARG:HG2	16:N:3:ARG:NH1	2.09	0.67
21:S:141:MET:HB3	21:S:171:VAL:HG23	1.75	0.67
1:X:350:U:H6	1:X:350:U:O5'	1.78	0.67
1:X:400:U:HO2'	1:X:401:G:H5''	1.60	0.67
1:X:568:G:H2'	1:X:569:C:C6	2.30	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:914:C:H2'	1:X:915:C:C6	2.29	0.67
1:X:2263:C:H1'	1:X:2304:G:H22	1.60	0.67
1:X:2873:G:H21	9:G:162:LYS:NZ	1.92	0.67
3:A:184:ARG:NH2	3:A:268:ARG:NH1	2.42	0.67
5:C:129:LYS:C	5:C:131:LYS:H	1.98	0.67
13:K:87:TYR:CE1	13:K:94:TYR:HD2	2.12	0.67
15:M:55:ILE:O	15:M:56:ALA:HB2	1.93	0.67
23:U:70:LEU:HD22	23:U:79:GLU:HG2	1.75	0.67
1:X:497:C:H5'	1:X:497:C:H6	1.60	0.67
1:X:2333:A:H4'	22:T:35:ASN:OD1	1.94	0.67
2:Y:53:G:P	14:L:64:LYS:HZ3	2.17	0.67
6:D:46:ASP:C	6:D:48:LYS:N	2.48	0.67
7:E:38:ASN:HB2	7:E:41:LEU:CD2	2.25	0.67
13:K:100:VAL:HG12	13:K:101:GLY:H	1.59	0.67
16:N:93:LYS:CD	17:O:10:LYS:HZ3	2.06	0.67
22:T:54:GLY:N	22:T:60:PHE:HE1	1.93	0.67
23:U:51:ILE:HA	23:U:59:THR:O	1.95	0.67
1:X:173:A:H61	1:X:844:G:H21	1.43	0.67
1:X:765:C:C4	1:X:1772:C:H1'	2.30	0.67
1:X:1075:C:HO2'	8:F:89:SER:HB3	1.59	0.67
1:X:1324:G:H1'	1:X:1326:U:C4	2.30	0.67
1:X:2273:C:H5'	14:L:95:LYS:CE	2.24	0.67
1:X:2400:G:H21	23:U:33:LYS:CE	2.07	0.67
3:A:90:ALA:HA	3:A:198:ASN:HB2	1.77	0.67
9:G:109:GLY:C	9:G:110:LEU:HD23	2.16	0.67
11:I:45:LYS:HE3	11:I:47:ALA:HB3	1.76	0.67
12:J:35:LEU:HD23	12:J:105:PHE:CD2	2.28	0.67
12:J:40:PRO:HG3	12:J:99:LYS:HZ1	1.58	0.67
16:N:47:TYR:CE1	17:O:73:LYS:NZ	2.63	0.67
18:P:9:ARG:HB3	18:P:13:GLN:HG3	1.77	0.67
21:S:3:LEU:HD13	21:S:33:ALA:O	1.95	0.67
21:S:141:MET:HB3	21:S:171:VAL:HG21	1.75	0.67
30:4:25:VAL:CB	30:4:34:GLN:HB2	2.24	0.67
1:X:810:U:H3'	1:X:810:U:C6	2.30	0.67
1:X:888:G:H2'	1:X:889:C:O4'	1.95	0.67
1:X:984:A:H1'	1:X:1202:U:C6	2.29	0.67
3:A:118:ASN:HD22	3:A:123:ALA:HB2	1.59	0.67
4:B:188:ILE:HG23	4:B:189:PRO:HD2	1.77	0.67
6:D:104:ILE:HG21	6:D:174:GLY:HA3	1.77	0.67
9:G:79:PHE:CE2	9:G:147:ARG:HG2	2.28	0.67
17:O:13:ARG:HE	17:O:95:ILE:HG21	1.60	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:93:ARG:NH1	20:R:108:VAL:HA	2.10	0.67
23:U:41:VAL:O	23:U:42:GLN:HB2	1.94	0.67
1:X:568:G:O2'	1:X:569:C:H5'	1.94	0.66
1:X:1055:A:C4	1:X:1055:A:H3'	2.28	0.66
1:X:1058:G:H2'	1:X:1121:G:N1	2.10	0.66
1:X:1233:A:O2'	1:X:1234:C:OP1	2.13	0.66
1:X:1493:A:H2'	1:X:1494:G:O4'	1.95	0.66
1:X:2024:U:O2'	1:X:2025:A:H5'	1.95	0.66
1:X:2344:G:H4'	22:T:60:PHE:CZ	2.30	0.66
1:X:2672:U:O2	1:X:2697:G:C2	2.47	0.66
1:X:2741:G:O2'	1:X:2742:G:H5'	1.94	0.66
4:B:61:LYS:HB3	4:B:62:PRO:HD3	1.76	0.66
6:D:70:ALA:CB	6:D:83:MET:H	2.08	0.66
1:X:177:U:C4	1:X:225:G:N2	2.63	0.66
1:X:746:G:N7	1:X:774:A:C6	2.64	0.66
1:X:824:U:H1'	1:X:1264:C:N1	2.10	0.66
1:X:982:C:H2'	1:X:983:G:C5'	2.25	0.66
1:X:995:A:OP2	1:X:996:C:N4	2.27	0.66
1:X:1736:C:H2'	1:X:1737:G:H8	1.60	0.66
1:X:2222:U:H2'	1:X:2223:U:H6	1.55	0.66
1:X:2304:G:P	1:X:2304:G:H8	2.18	0.66
2:Y:30:C:OP1	14:L:37:HIS:CB	2.42	0.66
3:A:67:PHE:HB3	3:A:153:ALA:N	2.05	0.66
5:C:45:THR:HG22	5:C:47:THR:H	1.60	0.66
7:E:96:ALA:HA	7:E:104:GLU:O	1.95	0.66
14:L:54:ALA:N	14:L:75:LEU:HD13	2.09	0.66
15:M:22:ARG:HD3	15:M:24:LEU:HD21	1.77	0.66
15:M:103:LYS:O	15:M:104:LEU:CB	2.43	0.66
19:Q:51:ILE:HD11	19:Q:83:ALA:CA	2.10	0.66
20:R:23:ILE:H	20:R:23:ILE:CD1	1.80	0.66
21:S:51:LEU:HD23	21:S:51:LEU:N	2.09	0.66
1:X:760:U:O2	1:X:1997:A:H1'	1.96	0.66
1:X:1095:A:H3'	1:X:1096:A:H5''	1.76	0.66
1:X:1795:C:OP1	3:A:257:LEU:HD22	1.96	0.66
1:X:1854:G:HO2'	1:X:1855:G:H5'	1.56	0.66
1:X:2169:A:H2'	1:X:2170:C:C6	2.28	0.66
1:X:2708:U:H2'	1:X:2709:C:H6	1.57	0.66
5:C:5:ASN:HA	5:C:118:VAL:CG2	2.26	0.66
11:I:42:GLY:O	11:I:43:ALA:HB2	1.93	0.66
20:R:82:ALA:O	20:R:83:LEU:HD12	1.96	0.66
21:S:100:THR:O	21:S:101:THR:HG23	1.94	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:176:A:H3'	1:X:177:U:C5	2.29	0.66
1:X:417:C:C5	1:X:419:G:C4	2.84	0.66
1:X:417:C:C6	1:X:419:G:N9	2.64	0.66
1:X:731:A:N3	1:X:731:A:H5''	2.10	0.66
1:X:797:A:H5''	3:A:227:ASN:HD21	1.61	0.66
1:X:1468:A:C8	1:X:1468:A:P	2.88	0.66
1:X:1469:U:O2	13:K:63:ARG:HD3	1.96	0.66
1:X:2821:G:H2'	1:X:2822:U:C6	2.31	0.66
2:Y:112:A:H2'	2:Y:113:G:H8	1.59	0.66
11:I:71:THR:HG21	11:I:104:ARG:CZ	2.26	0.66
30:4:31:LYS:H	30:4:31:LYS:HD2	1.61	0.66
1:X:736:G:H2'	1:X:737:C:O4'	1.96	0.66
1:X:1095:A:H2'	1:X:1096:A:O4'	1.94	0.66
1:X:1448:A:H2'	1:X:1449:C:C6	2.30	0.66
1:X:1705:U:H2'	1:X:1715:A:N1	2.11	0.66
5:C:5:ASN:HD22	5:C:5:ASN:N	1.93	0.66
7:E:43:VAL:HB	7:E:52:VAL:HA	1.77	0.66
12:J:19:THR:HG23	12:J:99:LYS:HD3	1.77	0.66
15:M:33:VAL:HG22	15:M:51:GLU:OE1	1.96	0.66
21:S:3:LEU:HB2	21:S:34:LEU:CA	2.25	0.66
1:X:919:U:O2'	1:X:920:G:H5'	1.95	0.66
1:X:1105:U:N3	1:X:1107:A:H5''	2.10	0.66
1:X:1226:A:H62	1:X:1249:G:H1'	1.59	0.66
3:A:163:VAL:CG2	3:A:177:LEU:HA	2.24	0.66
16:N:32:TYR:O	16:N:35:ALA:N	2.29	0.66
18:P:9:ARG:HD2	18:P:13:GLN:HG3	1.76	0.66
20:R:84:VAL:HA	20:R:90:LYS:CD	2.25	0.66
20:R:93:ARG:N	20:R:95:ARG:NH2	2.43	0.66
1:X:538:A:C2	1:X:2025:A:C6	2.84	0.66
1:X:1778:U:H2'	1:X:1779:C:C6	2.30	0.66
1:X:1850:G:C2'	1:X:1851:A:H8	2.06	0.66
3:A:244:ARG:N	3:A:244:ARG:CD	2.59	0.66
6:D:134:GLU:CD	6:D:136:LEU:HB2	2.15	0.66
7:E:172:LYS:HZ2	7:E:172:LYS:HB2	1.61	0.66
15:M:60:SER:HA	15:M:64:LYS:HD2	1.77	0.66
17:O:36:LYS:HD2	17:O:54:TYR:C	2.15	0.66
21:S:21:ALA:HB2	21:S:81:VAL:HB	1.77	0.66
1:X:305:A:H2'	1:X:306:G:C5'	2.26	0.66
1:X:627:A:OP1	5:C:34:GLN:OE1	2.13	0.66
1:X:793:G:H2'	1:X:795:A:N7	2.11	0.66
1:X:1068:A:C8	1:X:1097:A:H2'	2.31	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1166:A:C3'	1:X:1167:A:H5''	2.26	0.66
1:X:1287:A:N3	1:X:1310:C:H1'	2.11	0.66
1:X:1332:G:H2'	1:X:1333:G:O4'	1.96	0.66
1:X:1337:G:O2'	1:X:1632:A:C6	2.48	0.66
1:X:2780:A:H2'	1:X:2781:G:H8	1.61	0.66
6:D:46:ASP:HB2	6:D:49:ALA:HB3	1.76	0.66
14:L:75:LEU:O	14:L:78:ALA:HB3	1.94	0.66
22:T:42:GLY:O	22:T:57:HIS:CD2	2.48	0.66
1:X:192:G:C4'	1:X:193:A:H4'	2.25	0.66
1:X:636:G:H2'	1:X:637:G:H5'	1.78	0.66
1:X:738:G:H8	1:X:738:G:O5'	1.78	0.66
1:X:1073:G:H1'	1:X:1099:A:N7	2.11	0.66
1:X:1135:C:C2	1:X:1136:G:C8	2.84	0.66
1:X:1359:G:H5'	1:X:1359:G:H8	1.60	0.66
1:X:1625:A:H4'	1:X:1626:A:OP1	1.95	0.66
1:X:1794:A:O3'	3:A:257:LEU:HB3	1.94	0.66
1:X:2713:A:N1	4:B:203:LYS:HG2	2.10	0.66
1:X:2796:A:P	13:K:3:HIS:HE1	2.19	0.66
7:E:6:LYS:HB3	7:E:69:ARG:HD2	1.77	0.66
8:F:53:ILE:HG12	8:F:72:PRO:HG3	1.76	0.66
14:L:27:LEU:O	14:L:88:VAL:N	2.28	0.66
16:N:86:ALA:C	16:N:88:ILE:N	2.49	0.66
18:P:103:LEU:HB2	18:P:119:LYS:HB2	1.78	0.66
23:U:28:GLY:CA	23:U:32:ARG:HB3	2.25	0.66
23:U:51:ILE:CG1	23:U:59:THR:HG22	2.24	0.66
25:W:37:THR:HA	25:W:41:ARG:NH2	2.10	0.66
1:X:758:G:H2'	1:X:759:C:H5''	1.76	0.66
1:X:1734:C:C5	1:X:1735:G:H1'	2.30	0.66
3:A:147:LEU:HD21	3:A:155:LEU:HD11	1.78	0.66
5:C:19:LEU:HB3	5:C:20:PRO:HA	1.78	0.66
5:C:154:ASP:HB2	5:C:157:THR:CG2	2.26	0.66
10:H:116:ARG:HH22	15:M:41:GLU:CG	2.07	0.66
12:J:66:TYR:HB2	12:J:106:GLU:OE1	1.96	0.66
16:N:89:ASP:O	16:N:90:LEU:HG	1.95	0.66
20:R:25:LEU:CD1	20:R:81:VAL:N	2.59	0.66
23:U:52:ARG:CD	23:U:79:GLU:HA	2.25	0.66
25:W:38:PRO:N	25:W:41:ARG:NE	2.44	0.66
1:X:566:U:O2'	1:X:567:G:H5'	1.95	0.65
1:X:683:A:H5''	11:I:45:LYS:CA	2.25	0.65
1:X:1253:C:H5'	1:X:1253:C:H6	1.61	0.65
1:X:1716:G:O3'	1:X:1717:A:H4'	1.95	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:88:ARG:HH11	3:A:88:ARG:HG3	1.61	0.65
3:A:181:GLU:O	3:A:182:LEU:HD23	1.96	0.65
5:C:165:SER:HB3	5:C:166:TRP:CZ3	2.31	0.65
14:L:20:THR:HG21	14:L:23:ALA:HB3	1.78	0.65
15:M:104:LEU:C	15:M:106:TYR:N	2.49	0.65
17:O:64:GLY:HA3	17:O:90:PHE:CZ	2.31	0.65
18:P:10:ASN:O	18:P:11:LYS:C	2.34	0.65
22:T:31:VAL:HG13	22:T:67:VAL:CG2	2.25	0.65
23:U:23:LYS:HD2	23:U:35:THR:HG21	1.78	0.65
25:W:12:ARG:HH11	25:W:12:ARG:CG	2.09	0.65
1:X:689:A:C2'	1:X:690:A:H5'	2.26	0.65
1:X:1429:A:O2'	1:X:1430:G:H4'	1.96	0.65
1:X:1507:A:O4'	3:A:99:ASP:HB3	1.95	0.65
1:X:1918:G:C4	1:X:1945:C:N4	2.64	0.65
3:A:46:ARG:HD3	3:A:47:GLY:N	2.11	0.65
5:C:58:MET:SD	5:C:69:HIS:HB2	2.36	0.65
12:J:28:VAL:N	12:J:137:VAL:HG11	2.10	0.65
12:J:42:TRP:HB3	12:J:95:VAL:HG11	1.78	0.65
14:L:30:SER:C	14:L:31:VAL:HG12	2.17	0.65
15:M:32:THR:HG22	15:M:33:VAL:N	2.10	0.65
22:T:74:LYS:O	22:T:76:ALA:N	2.20	0.65
23:U:14:VAL:HB	23:U:47:HIS:CE1	2.31	0.65
23:U:17:SER:OG	23:U:45:ASN:N	2.29	0.65
23:U:27:ASP:CA	23:U:32:ARG:HD3	2.27	0.65
1:X:409:G:H1'	23:U:45:ASN:HD22	1.61	0.65
1:X:794:A:H5'	3:A:218:LYS:NZ	2.11	0.65
1:X:813:A:C2	1:X:815:A:C8	2.85	0.65
1:X:824:U:H4'	1:X:1264:C:O2'	1.96	0.65
1:X:826:U:C2	1:X:827:C:C5	2.84	0.65
1:X:871:U:C2'	1:X:2247:A:H2'	2.27	0.65
1:X:1517:C:H2'	1:X:1518:C:C6	2.29	0.65
1:X:1522:C:H2'	1:X:1523:A:C4'	2.27	0.65
1:X:1675:C:OP1	4:B:134:TRP:NE1	2.29	0.65
1:X:2194:A:C3'	1:X:2195:C:C5'	2.73	0.65
1:X:2379:G:O2'	1:X:2380:U:H5'	1.95	0.65
1:X:2395:C:H2'	1:X:2396:C:C5'	2.27	0.65
1:X:2659:C:N4	1:X:2660:C:H41	1.95	0.65
3:A:166:GLN:HB2	3:A:174:ILE:HG22	1.78	0.65
9:G:94:LYS:O	9:G:117:GLU:HB2	1.96	0.65
13:K:69:ASP:O	13:K:70:ILE:HG12	1.97	0.65
19:Q:25:TYR:HH	19:Q:87:SER:HA	1.62	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:Q:55:THR:O	19:Q:56:MET:HG2	1.96	0.65
30:4:30:VAL:O	30:4:32:HIS:N	2.29	0.65
1:X:918:A:H2'	1:X:919:U:H5''	1.77	0.65
1:X:1264:C:H5'	16:N:13:ARG:NH1	2.12	0.65
1:X:2256:G:P	12:J:86:LYS:HD2	2.36	0.65
1:X:2613:A:H2'	1:X:2614:A:H8	1.61	0.65
1:X:2824:C:H1'	1:X:2843:A:C4	2.31	0.65
5:C:22:VAL:HA	5:C:106:MET:HG3	1.79	0.65
6:D:15:ALA:O	6:D:19:GLN:HB2	1.97	0.65
9:G:77:GLY:O	9:G:78:ASP:O	2.15	0.65
17:O:25:LEU:HD12	17:O:32:LYS:HZ3	1.62	0.65
21:S:10:PRO:HB2	21:S:13:LYS:HE3	1.77	0.65
23:U:53:GLU:OE2	23:U:57:VAL:HA	1.97	0.65
1:X:229:G:H2'	1:X:230:C:H6	1.61	0.65
1:X:683:A:H5''	11:I:45:LYS:HA	1.79	0.65
1:X:1467:U:H3'	1:X:1467:U:C6	2.28	0.65
11:I:28:LYS:HD2	11:I:36:GLY:HA3	1.78	0.65
11:I:107:LYS:HG3	11:I:108:LEU:N	2.12	0.65
21:S:3:LEU:HA	21:S:34:LEU:HA	1.76	0.65
22:T:41:ARG:HG3	22:T:41:ARG:NH1	2.06	0.65
23:U:23:LYS:HD2	23:U:35:THR:HG23	1.77	0.65
1:X:163:A:H2'	1:X:164:G:C8	2.32	0.65
1:X:940:G:OP1	1:X:940:G:H4'	1.96	0.65
1:X:1032:A:O2'	1:X:1134:C:H5''	1.96	0.65
1:X:1053:G:C5	1:X:1054:C:C5	2.85	0.65
1:X:1238:A:H5'	17:O:85:GLY:H	1.61	0.65
1:X:1281:A:O4'	1:X:2592:U:H5	1.78	0.65
1:X:1841:G:H2'	1:X:1842:G:H5'	1.78	0.65
1:X:2760:G:H22	9:G:125:ARG:HH12	1.43	0.65
3:A:271:VAL:O	3:A:272:THR:OG1	2.12	0.65
4:B:120:TRP:CE2	4:B:155:ARG:HD2	2.32	0.65
4:B:120:TRP:CD2	4:B:155:ARG:HD2	2.32	0.65
7:E:127:GLU:C	7:E:129:THR:H	1.99	0.65
10:H:10:VAL:HG23	10:H:17:ARG:O	1.96	0.65
14:L:37:HIS:ND1	14:L:37:HIS:O	2.29	0.65
15:M:33:VAL:HA	15:M:51:GLU:CB	2.25	0.65
21:S:3:LEU:HB2	21:S:34:LEU:CB	2.27	0.65
21:S:106:GLY:HA2	21:S:109:GLN:OE1	1.96	0.65
21:S:120:LEU:HD23	21:S:121:GLN:N	2.12	0.65
30:4:3:VAL:HA	30:4:35:ARG:O	1.97	0.65
1:X:5:A:O2'	1:X:6:A:H5'	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:136:A:H2'	1:X:137:A:O4'	1.97	0.65
1:X:704:G:O2'	1:X:705:C:H5'	1.97	0.65
1:X:863:C:H2'	1:X:864:C:C6	2.31	0.65
1:X:1069:G:C2'	1:X:1070:G:H5''	2.25	0.65
1:X:1113:C:H2'	1:X:1114:A:H8	1.62	0.65
1:X:2615:U:H4'	4:B:80:GLU:OE2	1.97	0.65
1:X:2676:G:C2	1:X:2690:A:C2	2.84	0.65
7:E:38:ASN:O	7:E:41:LEU:HB3	1.96	0.65
15:M:104:LEU:O	15:M:105:TYR:C	2.34	0.65
1:X:48:A:H4'	1:X:49:U:O5'	1.96	0.65
1:X:48:A:C8	1:X:50:G:N2	2.65	0.65
1:X:359:G:H2'	1:X:360:A:H8	1.62	0.65
1:X:648:A:H5'	1:X:649:G:H4'	1.78	0.65
1:X:659:G:H2'	1:X:660:G:C8	2.31	0.65
1:X:718:A:H62	1:X:739:G:H1'	1.62	0.65
6:D:5:LYS:C	6:D:8:TYR:HB3	2.17	0.65
6:D:36:VAL:HG22	6:D:154:ILE:CG1	2.27	0.65
6:D:38:GLU:N	6:D:87:ILE:O	2.25	0.65
7:E:131:ILE:CG2	7:E:132:ASP:H	2.09	0.65
7:E:139:GLN:C	7:E:143:GLN:HG3	2.17	0.65
9:G:40:ASN:HB3	9:G:78:ASP:OD1	1.97	0.65
11:I:39:SER:O	11:I:40:ARG:HB2	1.97	0.65
12:J:62:GLY:HA3	12:J:64:LYS:NZ	2.11	0.65
23:U:70:LEU:HD23	23:U:74:PRO:HA	1.78	0.65
30:4:2:LYS:HG2	30:4:4:ARG:HD3	1.77	0.65
1:X:482:A:C2'	1:X:483:A:O4'	2.45	0.65
1:X:648:A:H4'	1:X:649:G:O5'	1.95	0.65
1:X:1101:U:O2	1:X:1113:C:H1'	1.97	0.65
1:X:2055:G:O2'	1:X:2056:C:H5'	1.95	0.65
1:X:2245:A:H1'	1:X:2251:U:O4	1.96	0.65
1:X:2322:U:C2'	1:X:2323:U:C6	2.80	0.65
1:X:2334:C:O2'	22:T:24:LYS:HE3	1.96	0.65
6:D:135:GLN:HA	6:D:138:PHE:CE1	2.32	0.65
10:H:16:ALA:HB2	10:H:64:VAL:HG11	1.78	0.65
10:H:60:PRO:O	10:H:61:ARG:HB2	1.96	0.65
21:S:120:LEU:CD2	21:S:121:GLN:N	2.59	0.65
23:U:17:SER:OG	23:U:44:ALA:HA	1.97	0.65
23:U:35:THR:HG22	23:U:35:THR:O	1.95	0.65
1:X:333:A:C3'	5:C:162:ARG:CZ	2.65	0.65
1:X:1504:G:H2'	1:X:1505:U:C2	2.30	0.65
1:X:2061:C:H2'	1:X:2062:U:O4'	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2210:C:OP1	23:U:45:ASN:HA	1.96	0.65
1:X:2322:U:C3'	1:X:2323:U:C6	2.79	0.65
1:X:2382:C:N4	1:X:2394:G:C6	2.65	0.65
1:X:2561:G:H8	1:X:2561:G:H5'	1.62	0.65
1:X:2720:A:H2'	1:X:2721:A:C8	2.32	0.65
4:B:15:TRP:NE1	4:B:20:ALA:HB2	2.12	0.65
4:B:34:VAL:O	4:B:35:GLN:HB2	1.97	0.65
6:D:75:SER:HB2	6:D:79:LEU:CD1	2.26	0.65
11:I:73:GLU:HG2	11:I:101:ARG:CB	2.27	0.65
16:N:70:ARG:NH1	16:N:70:ARG:HG3	2.06	0.65
1:X:76:C:H5'	1:X:76:C:C6	2.31	0.64
1:X:482:A:O2'	1:X:483:A:H5'	1.97	0.64
1:X:537:C:O2'	1:X:538:A:C2	2.49	0.64
1:X:704:G:H2'	1:X:705:C:C6	2.30	0.64
1:X:1039:A:C5	1:X:1136:G:N2	2.65	0.64
1:X:1142:G:C8	9:G:107:GLN:HG2	2.32	0.64
1:X:1218:C:O2'	1:X:1219:C:H5'	1.97	0.64
1:X:1513:U:OP2	1:X:1514:C:C5	2.48	0.64
1:X:1524:C:H5''	1:X:1525:A:H8	1.62	0.64
1:X:2074:U:H1'	23:U:48:LYS:HE3	1.79	0.64
1:X:2468:G:H2'	1:X:2469:G:O4'	1.97	0.64
1:X:2586:G:N1	1:X:2587:G:C2	2.65	0.64
3:A:206:LEU:O	3:A:211:ARG:HD3	1.97	0.64
5:C:48:ARG:NE	5:C:87:LYS:HE2	2.11	0.64
5:C:128:ALA:HB2	5:C:159:ARG:CZ	2.26	0.64
5:C:150:LEU:N	5:C:150:LEU:HD12	2.12	0.64
6:D:122:PHE:CB	6:D:129:ASN:HD22	2.06	0.64
6:D:123:ASP:C	6:D:125:ARG:H	1.98	0.64
9:G:105:GLY:O	9:G:110:LEU:HD12	1.97	0.64
1:X:732:G:H8	1:X:732:G:O5'	1.80	0.64
1:X:2167:A:H2'	1:X:2168:A:H8	1.61	0.64
1:X:2196:U:H2'	1:X:2197:U:N1	2.12	0.64
3:A:132:PRO:O	3:A:136:VAL:HG23	1.98	0.64
11:I:76:LYS:HG3	11:I:111:SER:CB	2.26	0.64
11:I:128:ALA:O	11:I:132:ALA:HB2	1.97	0.64
16:N:8:ILE:HG22	16:N:11:ARG:HH21	1.62	0.64
16:N:31:GLN:O	16:N:35:ALA:HB2	1.97	0.64
18:P:13:GLN:O	18:P:16:GLN:HG3	1.96	0.64
20:R:84:VAL:HG11	20:R:88:THR:N	2.11	0.64
1:X:149:A:H2'	1:X:150:A:C8	2.32	0.64
1:X:189:A:O2'	1:X:190:A:H5'	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:592:G:P	16:N:10:ARG:HH11	2.20	0.64
1:X:760:U:C5	26:Z:3:LYS:HA	2.32	0.64
1:X:857:U:H2'	1:X:858:G:O4'	1.97	0.64
1:X:1046:U:H3	1:X:1131:G:H1	1.45	0.64
1:X:1770:U:C5	1:X:1775:A:N7	2.65	0.64
1:X:2627:G:O2'	10:H:38:GLY:HA2	1.98	0.64
3:A:121:PRO:HG2	3:A:122:GLU:OE1	1.98	0.64
5:C:193:LEU:O	5:C:193:LEU:HD23	1.97	0.64
7:E:67:LEU:O	7:E:71:LEU:HG	1.96	0.64
14:L:37:HIS:O	14:L:37:HIS:CG	2.50	0.64
14:L:79:ALA:O	14:L:82:LYS:HB2	1.96	0.64
16:N:58:ARG:O	16:N:62:ILE:HG13	1.96	0.64
16:N:105:ALA:O	16:N:108:ALA:N	2.30	0.64
21:S:154:LEU:HD13	21:S:158:CYS:O	1.96	0.64
1:X:387:A:H2'	1:X:387:A:N3	2.11	0.64
1:X:922:A:H2'	1:X:923:A:C8	2.33	0.64
1:X:1544:A:C2	1:X:1560:A:C4	2.85	0.64
1:X:1683:G:O2'	1:X:1684:G:H5'	1.96	0.64
1:X:1737:G:H2'	1:X:1738:U:C6	2.33	0.64
1:X:2570:C:OP1	3:A:239:ARG:HD3	1.97	0.64
1:X:2852:G:O2'	1:X:2853:U:H5'	1.97	0.64
1:X:2871:U:H2'	1:X:2872:U:C6	2.32	0.64
5:C:187:VAL:O	5:C:187:VAL:HG12	1.95	0.64
6:D:37:ASN:HA	6:D:87:ILE:O	1.97	0.64
6:D:47:SER:HA	6:D:50:ILE:HD12	1.79	0.64
7:E:64:LEU:HA	7:E:67:LEU:HD12	1.78	0.64
9:G:159:SER:C	9:G:161:GLN:H	2.00	0.64
10:H:1:MET:SD	10:H:1:MET:N	2.69	0.64
15:M:95:GLU:HG3	15:M:95:GLU:O	1.96	0.64
19:Q:42:ILE:HG23	19:Q:43:GLN:H	1.61	0.64
1:X:25:U:H5'	18:P:99:ALA:O	1.97	0.64
1:X:168:A:H2'	1:X:169:C:H6	1.62	0.64
1:X:394:U:OP1	23:U:19:ILE:HD11	1.96	0.64
1:X:487:G:H4'	1:X:512:A:N1	2.13	0.64
1:X:1069:G:C3'	1:X:1070:G:H5''	2.28	0.64
1:X:1424:U:H2'	1:X:1425:G:C8	2.32	0.64
1:X:2243:C:H2'	1:X:2244:C:O4'	1.98	0.64
1:X:2429:A:OP1	1:X:2476:A:C8	2.51	0.64
1:X:2701:A:C2	1:X:2702:G:H1'	2.33	0.64
4:B:49:ILE:HG23	4:B:50:GLY:N	2.12	0.64
5:C:48:ARG:C	5:C:50:GLN:H	2.01	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:87:LEU:HD22	7:E:162:VAL:HG12	1.79	0.64
9:G:67:ARG:HB3	9:G:70:PHE:CA	2.26	0.64
9:G:168:THR:O	9:G:169:GLN:O	2.16	0.64
12:J:56:SER:O	12:J:57:ARG:C	2.36	0.64
13:K:45:ARG:HB3	13:K:46:PRO:HD3	1.80	0.64
14:L:66:ASP:C	14:L:68:ALA:N	2.51	0.64
21:S:3:LEU:HD13	21:S:33:ALA:H	1.62	0.64
1:X:457:C:O3'	16:N:3:ARG:HD3	1.96	0.64
1:X:463:C:OP1	5:C:46:ARG:NH1	2.30	0.64
1:X:2451:G:O6	1:X:2455:A:H4'	1.98	0.64
2:Y:42:U:H2'	2:Y:45:C:H5	1.62	0.64
4:B:14:ILE:HD12	4:B:23:VAL:HG21	1.79	0.64
7:E:7:GLN:O	7:E:51:LEU:HD13	1.98	0.64
11:I:17:LYS:HA	11:I:21:ARG:HE	1.62	0.64
17:O:42:GLY:O	17:O:43:GLU:HB2	1.98	0.64
20:R:55:THR:O	20:R:70:GLU:N	2.30	0.64
21:S:154:LEU:HD21	21:S:160:LEU:HD21	1.80	0.64
25:W:23:LEU:HD21	25:W:43:MET:CB	2.27	0.64
1:X:27:G:H1'	1:X:523:A:H61	1.61	0.64
1:X:321:A:OP1	20:R:27:GLY:N	2.30	0.64
1:X:497:C:H5'	1:X:497:C:C6	2.32	0.64
1:X:1273:G:H2'	1:X:1274:C:O4'	1.97	0.64
1:X:1342:U:O4'	1:X:1342:U:OP1	2.16	0.64
1:X:1373:G:H2'	1:X:1374:G:H5'	1.79	0.64
1:X:1416:A:H2'	1:X:1417:C:H6	1.61	0.64
1:X:1436:G:H2'	1:X:1437:A:C8	2.31	0.64
1:X:2054:A:H2'	1:X:2055:G:C8	2.33	0.64
1:X:2281:C:H1'	6:D:125:ARG:HH22	1.62	0.64
4:B:59:VAL:HG12	4:B:64:GLN:HG3	1.79	0.64
6:D:32:GLU:HB3	6:D:157:VAL:CG1	2.28	0.64
9:G:36:ASN:CG	9:G:37:ASP:N	2.51	0.64
10:H:29:ILE:HG21	10:H:123:PHE:CE1	2.33	0.64
11:I:108:LEU:O	11:I:109:LEU:HD23	1.97	0.64
12:J:21:ASP:N	12:J:99:LYS:HE2	2.12	0.64
13:K:51:LEU:HD11	13:K:66:VAL:HG13	1.80	0.64
16:N:66:ASN:HD22	16:N:70:ARG:HH12	1.44	0.64
16:N:82:GLY:O	16:N:85:ARG:HB2	1.97	0.64
17:O:65:ARG:HH11	17:O:65:ARG:CG	2.08	0.64
19:Q:14:GLU:HG3	19:Q:15:LYS:HD2	1.79	0.64
25:W:45:LYS:HA	25:W:45:LYS:HE3	1.78	0.64
1:X:50:G:H1'	1:X:116:A:N6	2.13	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:104:C:H2'	1:X:105:G:H5''	1.80	0.64
1:X:542:A:H5'	1:X:543:G:O4'	1.98	0.64
1:X:618:A:C2	1:X:632:A:N7	2.66	0.64
1:X:1053:G:C2'	1:X:1054:C:H6	2.06	0.64
1:X:1468:A:P	1:X:1468:A:H8	2.19	0.64
1:X:1598:C:O5'	1:X:1598:C:H6	1.81	0.64
1:X:2364:C:H2'	1:X:2365:U:C6	2.32	0.64
1:X:2594:U:C2	1:X:2595:C:C5	2.86	0.64
1:X:2725:C:H1'	7:E:143:GLN:HG2	1.78	0.64
3:A:72:LYS:HE2	3:A:97:TYR:CD2	2.32	0.64
6:D:39:GLY:HA2	6:D:86:GLY:HA2	1.80	0.64
7:E:27:LYS:HA	7:E:32:GLU:HA	1.79	0.64
7:E:117:PRO:HD3	7:E:123:PHE:CD1	2.33	0.64
9:G:68:PRO:O	9:G:70:PHE:CE2	2.50	0.64
13:K:11:ASN:OD1	13:K:17:ARG:CZ	2.46	0.64
14:L:30:SER:O	14:L:31:VAL:HG12	1.97	0.64
14:L:33:ARG:HH12	14:L:103:LEU:H	1.44	0.64
16:N:26:GLY:O	16:N:28:ARG:N	2.31	0.64
18:P:102:THR:HG21	18:P:104:LYS:NZ	2.12	0.64
20:R:27:GLY:O	20:R:30:LYS:HG2	1.98	0.64
1:X:1804:U:H2'	1:X:1805:G:C8	2.33	0.64
1:X:2080:U:H2'	1:X:2081:U:H6	1.61	0.64
1:X:2296:U:H2'	1:X:2297:G:H5'	1.80	0.64
1:X:2569:A:H2'	1:X:2570:C:C6	2.32	0.64
1:X:2859:U:N3	26:Z:52:TYR:CE1	2.66	0.64
3:A:108:PRO:HG2	3:A:111:LEU:HG	1.80	0.64
3:A:231:HIS:ND1	3:A:247:VAL:HA	2.12	0.64
3:A:237:GLU:O	3:A:237:GLU:HG2	1.98	0.64
5:C:158:ARG:HD3	5:C:169:VAL:HG13	1.78	0.64
6:D:41:GLY:HA2	6:D:44:LYS:O	1.98	0.64
6:D:92:ARG:HG3	6:D:92:ARG:NH2	2.13	0.64
7:E:76:VAL:O	7:E:80:SER:HB3	1.97	0.64
9:G:154:GLU:N	9:G:157:PRO:HG2	2.13	0.64
1:X:460:U:C4	1:X:592:G:H1'	2.32	0.64
1:X:1504:G:H2'	1:X:1505:U:O2	1.98	0.64
1:X:1816:G:O2'	3:A:252:LYS:HG2	1.98	0.64
1:X:1816:G:OP1	3:A:52:ARG:HD3	1.98	0.64
1:X:2043:A:H1'	1:X:2481:G:O4'	1.98	0.64
1:X:2490:U:H2'	1:X:2491:C:O4'	1.97	0.64
1:X:2550:C:N4	1:X:2553:G:C8	2.66	0.64
1:X:2690:A:OP1	1:X:2692:A:OP2	2.16	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Y:4:C:H3'	2:Y:4:C:C6	2.32	0.64
3:A:163:VAL:HG22	3:A:177:LEU:CA	2.27	0.64
5:C:31:VAL:HG23	5:C:32:THR:H	1.62	0.64
9:G:33:ILE:HD11	9:G:35:LYS:NZ	2.13	0.64
10:H:13:ASN:HD21	10:H:109:ARG:HG2	1.63	0.64
11:I:107:LYS:HA	11:I:124:ALA:O	1.97	0.64
15:M:17:GLU:HG3	15:M:62:SER:OG	1.98	0.64
18:P:109:ARG:HG3	18:P:110:ALA:N	2.13	0.64
21:S:3:LEU:HD13	21:S:33:ALA:N	2.12	0.64
21:S:19:ILE:HG12	21:S:36:ARG:HA	1.80	0.64
24:V:37:LEU:HD22	24:V:40:PRO:HG3	1.79	0.64
1:X:84:G:N3	1:X:101:A:C2	2.66	0.63
1:X:244:C:H2'	1:X:245:C:O4'	1.99	0.63
1:X:1288:A:H2'	1:X:1289:A:O4'	1.98	0.63
1:X:1855:G:O2'	1:X:1856:U:H5'	1.99	0.63
1:X:2003:A:O2'	1:X:2004:U:H3'	1.97	0.63
1:X:2314:A:O2'	1:X:2315:A:H8	1.80	0.63
6:D:65:PRO:CB	6:D:89:VAL:HG22	2.19	0.63
9:G:49:VAL:HG13	9:G:50:PRO:HD2	1.80	0.63
9:G:162:LYS:N	9:G:163:PRO:CD	2.61	0.63
20:R:44:GLN:O	20:R:77:HIS:HA	1.97	0.63
1:X:26:G:N1	1:X:27:G:N2	2.46	0.63
1:X:33:C:N4	1:X:458:G:O2'	2.30	0.63
1:X:198:A:N7	1:X:243:G:C5	2.66	0.63
1:X:889:C:H2'	1:X:890:U:C6	2.34	0.63
1:X:1238:A:H5'	17:O:85:GLY:N	2.13	0.63
1:X:1324:G:H2'	1:X:1325:U:C6	2.33	0.63
1:X:1594:U:H2'	1:X:1595:A:H8	1.62	0.63
1:X:1812:U:O2	3:A:159:ALA:HB1	1.98	0.63
1:X:2511:G:O2'	1:X:2512:A:H5'	1.97	0.63
2:Y:46:G:C5'	6:D:92:ARG:HH12	2.10	0.63
4:B:121:ASN:O	4:B:122:PHE:O	2.15	0.63
6:D:69:LYS:HE2	6:D:84:PRO:HG3	1.80	0.63
11:I:122:VAL:HG21	11:I:125:ALA:HB2	1.80	0.63
12:J:21:ASP:HA	12:J:99:LYS:HG3	1.80	0.63
12:J:69:ILE:HG21	12:J:104:MET:HA	1.78	0.63
20:R:41:PRO:HG2	20:R:42:ARG:H	1.63	0.63
23:U:51:ILE:HG12	23:U:59:THR:CG2	2.26	0.63
25:W:2:LYS:HB3	25:W:54:GLN:CB	2.24	0.63
26:Z:8:LYS:O	26:Z:9:LYS:CG	2.45	0.63
1:X:34:U:H1'	20:R:4:PRO:HA	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1518:C:H2'	1:X:1519:G:C8	2.33	0.63
3:A:118:ASN:ND2	3:A:123:ALA:HB2	2.12	0.63
11:I:105:PRO:O	11:I:106:VAL:CG2	2.46	0.63
20:R:93:ARG:HH22	20:R:108:VAL:CG1	2.12	0.63
25:W:12:ARG:HG2	25:W:12:ARG:NH1	2.12	0.63
1:X:1:G:H2'	1:X:2:G:C8	2.33	0.63
1:X:346:C:H2'	1:X:347:C:H6	1.62	0.63
1:X:357:A:N7	1:X:358:C:H1'	2.14	0.63
1:X:822:G:C2'	1:X:823:U:H5'	2.28	0.63
1:X:1949:A:O2'	1:X:2572:U:H5'	1.97	0.63
1:X:2065:A:H3'	1:X:2066:G:H8	1.62	0.63
1:X:2433:G:O2'	1:X:2434:G:H5'	1.98	0.63
3:A:244:ARG:C	3:A:252:LYS:HE2	2.18	0.63
11:I:76:LYS:HB3	11:I:79:GLN:CG	2.28	0.63
15:M:89:ASN:HB3	15:M:90:GLN:OE1	1.99	0.63
21:S:71:MET:CA	21:S:78:PRO:HA	2.28	0.63
24:V:29:ARG:O	24:V:32:ALA:HB3	1.99	0.63
1:X:168:A:H2'	1:X:169:C:C6	2.33	0.63
1:X:314:G:H2'	1:X:315:G:C8	2.34	0.63
1:X:322:A:O2'	1:X:343:A:H4'	1.98	0.63
1:X:417:C:H4'	1:X:418:C:H5'	1.79	0.63
1:X:1279:G:C2	18:P:37:LYS:HB2	2.32	0.63
1:X:1369:G:N2	1:X:1370:U:H1'	2.14	0.63
1:X:1766:U:H2'	1:X:1767:G:H5'	1.79	0.63
1:X:1998:A:O5'	1:X:1998:A:H8	1.82	0.63
1:X:2327:U:O2'	1:X:2328:G:H5'	1.99	0.63
2:Y:20:A:H2'	2:Y:21:C:C6	2.34	0.63
4:B:149:ARG:NH1	9:G:106:TYR:HD1	1.96	0.63
5:C:119:ALA:HB3	5:C:189:ASP:OD2	1.98	0.63
6:D:55:LYS:O	6:D:58:ALA:HB3	1.98	0.63
11:I:64:GLY:O	11:I:65:PHE:HB3	1.98	0.63
17:O:36:LYS:HD2	17:O:55:THR:N	2.12	0.63
20:R:25:LEU:CG	20:R:81:VAL:HG23	2.27	0.63
21:S:154:LEU:HD21	21:S:160:LEU:CG	2.28	0.63
25:W:19:THR:O	25:W:23:LEU:HG	1.98	0.63
1:X:728:G:C8	1:X:730:C:OP1	2.52	0.63
1:X:774:A:H8	1:X:774:A:O5'	1.80	0.63
1:X:1416:A:H2'	1:X:1417:C:C6	2.33	0.63
1:X:2264:C:H5'	1:X:2267:A:N6	2.13	0.63
1:X:2679:G:N2	1:X:2687:G:C4	2.66	0.63
1:X:2807:U:H5'	1:X:2807:U:C6	2.23	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2823:G:O2'	1:X:2824:C:OP2	2.15	0.63
3:A:249:PRO:O	3:A:250:TRP:HB2	1.99	0.63
4:B:30:PRO:N	4:B:180:ASN:ND2	2.47	0.63
5:C:187:VAL:HG12	5:C:189:ASP:HB2	1.78	0.63
8:F:25:PRO:HB3	8:F:29:GLN:HE21	1.62	0.63
18:P:66:GLU:O	18:P:69:ALA:HB3	1.98	0.63
21:S:100:THR:CG2	21:S:101:THR:N	2.61	0.63
1:X:431:G:H2'	1:X:432:C:C6	2.34	0.63
1:X:553:C:C5'	1:X:554:U:OP1	2.46	0.63
1:X:626:A:O2'	5:C:176:ASN:HB2	1.99	0.63
1:X:670:U:H2'	1:X:671:A:C8	2.34	0.63
1:X:689:A:H8	1:X:2422:C:H1'	1.64	0.63
1:X:746:G:N7	1:X:774:A:C5	2.67	0.63
1:X:822:G:H2'	1:X:823:U:H5'	1.80	0.63
1:X:1440:G:H3'	1:X:1441:A:C5'	2.27	0.63
1:X:1468:A:H5''	1:X:1472:C:H42	1.62	0.63
1:X:2707:G:H8	1:X:2707:G:H5'	1.63	0.63
3:A:218:LYS:HD2	3:A:219:PRO:O	1.98	0.63
5:C:117:LEU:HD23	5:C:117:LEU:C	2.19	0.63
7:E:12:PRO:O	7:E:15:VAL:HG13	1.99	0.63
9:G:154:GLU:H	9:G:157:PRO:CD	2.11	0.63
9:G:156:HIS:HB2	9:G:157:PRO:HD3	1.79	0.63
11:I:18:ARG:HB2	11:I:21:ARG:HD3	1.80	0.63
12:J:36:ILE:CD1	12:J:133:VAL:HG11	2.29	0.63
13:K:48:VAL:O	13:K:52:ILE:HG23	1.98	0.63
16:N:93:LYS:HE2	17:O:5:ILE:HG21	1.80	0.63
19:Q:92:ALA:O	19:Q:94:GLN:N	2.32	0.63
21:S:3:LEU:CD1	21:S:33:ALA:H	2.11	0.63
21:S:138:VAL:O	21:S:141:MET:HB2	1.97	0.63
1:X:223:C:H2'	1:X:224:G:H5'	1.81	0.63
1:X:691:C:H2'	1:X:692:C:C6	2.32	0.63
1:X:828:C:H2'	1:X:829:C:H6	1.64	0.63
1:X:2324:G:O2'	1:X:2325:A:OP2	2.16	0.63
1:X:2357:A:H61	14:L:18:ARG:CZ	2.12	0.63
3:A:142:VAL:CG1	3:A:193:ILE:HD13	2.29	0.63
4:B:188:ILE:HG23	4:B:189:PRO:CD	2.29	0.63
14:L:33:ARG:HH22	14:L:103:LEU:H	1.47	0.63
21:S:51:LEU:HB3	21:S:64:ALA:O	1.98	0.63
30:4:34:GLN:O	30:4:35:ARG:HB2	1.98	0.63
1:X:48:A:H1'	1:X:50:G:N3	2.14	0.63
1:X:109:A:C3'	1:X:110:U:H5''	2.29	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:417:C:H1'	1:X:419:G:C8	2.34	0.63
1:X:872:G:O2'	1:X:873:U:H6	1.82	0.63
1:X:1426:U:H2'	1:X:1427:G:O4'	1.98	0.63
1:X:1502:G:O2'	1:X:1503:G:H5'	1.98	0.63
1:X:1979:C:C2'	1:X:1980:A:O4'	2.47	0.63
1:X:2205:C:H2'	1:X:2206:C:H5'	1.81	0.63
1:X:2825:A:C2	1:X:2826:C:C2	2.87	0.63
2:Y:16:U:C1'	2:Y:109:G:H21	2.12	0.63
9:G:132:PHE:CE2	9:G:145:HIS:HB2	2.34	0.63
10:H:100:ASN:OD1	10:H:102:GLN:HG2	1.99	0.63
11:I:52:GLY:O	11:I:57:ILE:HG13	1.98	0.63
11:I:94:GLU:HA	11:I:97:ARG:HE	1.60	0.63
17:O:36:LYS:HD2	17:O:55:THR:HA	1.79	0.63
18:P:87:GLU:HG3	18:P:88:ASP:OD2	1.98	0.63
20:R:16:PHE:HB3	20:R:82:ALA:HB1	1.79	0.63
20:R:29:HIS:CD2	20:R:51:VAL:HG22	2.33	0.63
30:4:10:MET:HE3	30:4:32:HIS:HA	1.81	0.63
30:4:13:ASN:O	30:4:14:CYS:C	2.37	0.63
1:X:757:U:C2'	1:X:758:G:C5'	2.76	0.62
1:X:929:A:H2	2:Y:81:C:O2	1.82	0.62
1:X:1467:U:C6	1:X:1467:U:C3'	2.81	0.62
1:X:1486:A:H2'	1:X:1487:C:H6	1.63	0.62
1:X:2598:C:H2'	1:X:2599:U:H6	1.64	0.62
1:X:2700:U:C2	1:X:2701:A:C8	2.87	0.62
7:E:87:LEU:HD22	7:E:162:VAL:CG1	2.29	0.62
11:I:32:ARG:NH1	17:O:81:ARG:NH2	2.46	0.62
11:I:134:GLU:C	11:I:136:ALA:H	2.02	0.62
13:K:10:LEU:HD22	13:K:13:ASN:O	1.98	0.62
22:T:32:LYS:HG2	22:T:33:ALA:H	1.64	0.62
1:X:2:G:H2'	1:X:3:U:C6	2.34	0.62
1:X:1726:C:O2'	1:X:2834:A:N3	2.29	0.62
3:A:72:LYS:NZ	3:A:99:ASP:OD2	2.32	0.62
3:A:145:LEU:HD12	3:A:146:GLU:H	1.62	0.62
4:B:11:MET:HA	4:B:23:VAL:O	1.99	0.62
4:B:103:ASP:OD2	4:B:202:ALA:N	2.31	0.62
6:D:74:ILE:HA	6:D:79:LEU:CB	2.29	0.62
9:G:66:HIS:O	9:G:70:PHE:CE1	2.53	0.62
17:O:28:GLU:C	17:O:30:GLY:H	2.01	0.62
1:X:620:G:N2	1:X:630:G:H1'	2.14	0.62
1:X:967:G:O6	12:J:17:ARG:NH1	2.31	0.62
1:X:2334:C:H4'	22:T:24:LYS:HD2	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2824:C:OP1	15:M:100:ARG:NH1	2.32	0.62
3:A:261:ARG:O	3:A:264:LYS:CB	2.47	0.62
6:D:10:ASP:O	6:D:14:PRO:HD2	1.98	0.62
6:D:74:ILE:CG2	6:D:80:ARG:HA	2.28	0.62
8:F:59:ILE:HG12	8:F:65:PHE:HB3	1.82	0.62
10:H:83:ARG:CD	10:H:89:ILE:HD11	2.20	0.62
15:M:108:ARG:O	15:M:109:GLU:CG	2.47	0.62
16:N:66:ASN:ND2	16:N:70:ARG:NH1	2.47	0.62
19:Q:55:THR:O	19:Q:56:MET:CG	2.47	0.62
30:4:29:ASN:HD21	30:4:31:LYS:HD3	1.64	0.62
1:X:3:U:H2'	1:X:4:C:H6	1.63	0.62
1:X:303:C:O5'	1:X:303:C:H6	1.81	0.62
1:X:860:U:O2	1:X:860:U:H2'	1.99	0.62
1:X:1065:A:O2'	1:X:1066:G:H5'	1.97	0.62
1:X:2396:C:H5'	1:X:2396:C:H6	1.63	0.62
10:H:88:THR:HB	15:M:80:VAL:HB	1.82	0.62
10:H:113:PRO:HB2	10:H:134:LEU:HD12	1.82	0.62
20:R:22:VAL:CG1	20:R:80:LYS:HD2	2.29	0.62
21:S:6:LYS:HB2	21:S:31:SER:C	2.19	0.62
23:U:50:ALA:HB1	23:U:52:ARG:HH22	1.64	0.62
1:X:566:U:H2'	1:X:567:G:H8	1.64	0.62
1:X:1094:C:H2'	1:X:1096:A:H5'	1.82	0.62
1:X:1339:U:H5	1:X:1664:G:O2'	1.82	0.62
1:X:1466:C:C2'	1:X:1467:U:O4'	2.43	0.62
1:X:1474:A:O2'	1:X:1475:U:H5'	1.99	0.62
1:X:2075:U:O2	1:X:2075:U:H2'	1.99	0.62
1:X:2375:G:H1'	23:U:33:LYS:HZ2	1.63	0.62
1:X:2540:A:O2'	10:H:23:ARG:NH2	2.33	0.62
5:C:43:ALA:HB3	5:C:87:LYS:C	2.19	0.62
5:C:102:LEU:HD23	5:C:106:MET:HB2	1.80	0.62
5:C:116:LYS:O	5:C:117:LEU:HB2	1.99	0.62
9:G:72:PRO:O	9:G:73:ASN:C	2.38	0.62
11:I:14:LYS:HG3	11:I:14:LYS:O	1.97	0.62
20:R:17:LYS:C	20:R:19:GLY:H	2.01	0.62
1:X:70:A:H4'	1:X:71:A:H3'	1.81	0.62
1:X:417:C:C1'	1:X:419:G:C8	2.82	0.62
1:X:880:C:O5'	1:X:880:C:H6	1.82	0.62
1:X:2178:U:H2'	1:X:2179:C:H6	1.64	0.62
3:A:186:HIS:O	3:A:186:HIS:ND1	2.32	0.62
3:A:251:GLY:HA3	3:A:255:LYS:NZ	2.15	0.62
6:D:111:ILE:HG12	6:D:137:ILE:HB	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:53:ARG:HH22	9:G:171:LEU:HB2	1.64	0.62
16:N:75:ASN:HD21	16:N:77:SER:HB3	1.62	0.62
17:O:11:GLN:NE2	17:O:38:LEU:HB3	2.14	0.62
18:P:27:VAL:CG2	18:P:125:THR:HG22	2.29	0.62
19:Q:75:ARG:HG3	19:Q:75:ARG:NH1	2.14	0.62
1:X:155:G:H2'	1:X:156:G:H5'	1.81	0.62
1:X:531:G:H2'	1:X:532:A:H8	1.63	0.62
1:X:582:G:H5'	1:X:583:C:OP2	1.99	0.62
1:X:1128:G:C2'	1:X:1129:A:H5''	2.29	0.62
1:X:1279:G:OP2	18:P:36:ARG:NH2	2.32	0.62
1:X:2288:A:H2'	1:X:2289:A:C8	2.30	0.62
1:X:2687:G:O2'	1:X:2688:G:H5'	1.99	0.62
1:X:2699:G:O2'	1:X:2700:U:H5'	1.99	0.62
1:X:2764:U:H2'	1:X:2765:C:C6	2.34	0.62
1:X:2863:U:H2'	1:X:2864:C:H6	1.62	0.62
3:A:215:LEU:HD12	3:A:215:LEU:N	2.14	0.62
10:H:122:ARG:HH11	10:H:124:MET:CE	2.13	0.62
14:L:102:ALA:O	14:L:103:LEU:C	2.37	0.62
19:Q:53:ILE:HD12	19:Q:79:ILE:O	2.00	0.62
20:R:15:HIS:O	20:R:16:PHE:HB3	1.98	0.62
20:R:46:VAL:CG1	20:R:48:VAL:HG23	2.30	0.62
21:S:36:ARG:O	21:S:40:ASP:OD2	2.18	0.62
23:U:78:ILE:HD13	23:U:79:GLU:N	2.15	0.62
1:X:104:C:C2'	1:X:105:G:H5''	2.30	0.62
1:X:490:A:O2'	1:X:491:A:C5'	2.48	0.62
1:X:981:C:O2'	1:X:995:A:H4'	1.98	0.62
1:X:1062:G:H4'	1:X:2732:C:O2'	2.00	0.62
1:X:1128:G:H2'	1:X:1129:A:H5''	1.80	0.62
1:X:1299:A:H2'	1:X:1301:U:OP2	1.99	0.62
1:X:1394:G:O2'	1:X:1395:A:H5'	1.99	0.62
1:X:2013:A:H5''	1:X:2014:A:OP1	1.99	0.62
1:X:2484:G:O2'	1:X:2485:U:H5'	2.00	0.62
1:X:2664:G:O2'	1:X:2665:G:H5'	2.00	0.62
7:E:131:ILE:CG2	7:E:132:ASP:N	2.63	0.62
9:G:117:GLU:O	9:G:120:SER:OG	2.16	0.62
11:I:89:ASP:O	11:I:90:ARG:HB2	2.00	0.62
14:L:8:ARG:HB3	14:L:8:ARG:HH11	1.64	0.62
19:Q:53:ILE:HD13	19:Q:80:VAL:CG1	2.28	0.62
22:T:21:LEU:CD1	22:T:41:ARG:HG2	2.30	0.62
24:V:37:LEU:HD21	24:V:40:PRO:CA	2.27	0.62
1:X:773:G:C2'	1:X:774:A:H5'	2.30	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1673:C:C2	1:X:1674:C:C5	2.88	0.62
1:X:1682:A:O2'	1:X:1683:G:H5'	2.00	0.62
1:X:2239:C:H2'	1:X:2240:C:C6	2.28	0.62
1:X:2725:C:O2'	7:E:143:GLN:CG	2.48	0.62
3:A:117:VAL:HG13	3:A:128:GLY:O	2.00	0.62
6:D:111:ILE:CG2	6:D:114:PHE:HB2	2.30	0.62
7:E:154:PRO:HA	7:E:160:LYS:O	2.00	0.62
10:H:29:ILE:HA	10:H:34:LEU:HD23	1.81	0.62
11:I:53:ARG:O	11:I:53:ARG:CD	2.47	0.62
12:J:66:TYR:HB2	12:J:106:GLU:CD	2.20	0.62
12:J:77:LYS:O	12:J:79:PRO:HD3	1.99	0.62
14:L:60:LYS:HB2	14:L:63:ASN:O	1.99	0.62
16:N:60:LEU:O	16:N:60:LEU:HD22	1.99	0.62
16:N:66:ASN:HD22	16:N:70:ARG:NH1	1.98	0.62
18:P:87:GLU:HA	18:P:90:LEU:CG	2.29	0.62
23:U:28:GLY:H	23:U:32:ARG:NE	1.97	0.62
1:X:132:U:O2'	1:X:133:C:H5'	2.00	0.62
1:X:1167:A:N6	16:N:48:ARG:HD3	2.14	0.62
1:X:1258:G:P	11:I:17:LYS:HE2	2.39	0.62
1:X:1474:A:C2	1:X:1476:G:C6	2.88	0.62
1:X:1630:A:N6	18:P:112:GLY:O	2.32	0.62
1:X:1631:C:H1'	18:P:108:PRO:CG	2.25	0.62
1:X:2741:G:H21	7:E:150:LYS:NZ	1.97	0.62
3:A:36:ALA:HB1	3:A:62:TYR:O	2.00	0.62
7:E:139:GLN:O	7:E:142:GLY:N	2.32	0.62
30:4:1:MET:HE2	30:4:1:MET:HA	1.81	0.62
1:X:10:A:O2'	1:X:11:G:H5'	2.00	0.61
1:X:34:U:H1'	20:R:4:PRO:CA	2.30	0.61
1:X:477:A:C2	1:X:809:C:O4'	2.53	0.61
1:X:490:A:HO2'	1:X:492:G:H5''	1.64	0.61
1:X:840:U:O2	1:X:2225:G:H4'	1.99	0.61
1:X:1031:C:O2'	1:X:1032:A:H5''	1.99	0.61
1:X:1248:G:C2	1:X:1249:G:N2	2.69	0.61
1:X:2235:G:N2	1:X:2254:C:C4	2.68	0.61
1:X:2324:G:C6	1:X:2326:C:N4	2.68	0.61
4:B:72:VAL:O	4:B:73:ALA:CB	2.48	0.61
9:G:69:ASP:C	9:G:70:PHE:HD2	2.03	0.61
16:N:8:ILE:HG22	16:N:11:ARG:NH2	2.15	0.61
23:U:21:ARG:C	23:U:39:LYS:HD2	2.19	0.61
23:U:49:LYS:HA	23:U:62:LEU:H	1.64	0.61
24:V:11:ALA:O	24:V:14:PHE:HB2	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:544:U:H2'	1:X:545:C:C6	2.35	0.61
1:X:1102:G:O2'	1:X:1103:C:H5'	2.00	0.61
1:X:1383:C:C2	1:X:1384:G:C8	2.88	0.61
1:X:2282:G:H4'	6:D:122:PHE:HD1	1.65	0.61
1:X:2728:A:H2'	1:X:2729:A:H8	1.65	0.61
1:X:2796:A:OP2	13:K:3:HIS:NE2	2.33	0.61
3:A:70:ARG:HH22	3:A:149:PRO:HA	1.65	0.61
6:D:67:ILE:HG21	6:D:84:PRO:HB3	1.81	0.61
7:E:43:VAL:HB	7:E:52:VAL:CG1	2.24	0.61
10:H:79:HIS:CG	10:H:80:ALA:H	2.17	0.61
13:K:45:ARG:HB3	13:K:46:PRO:CD	2.30	0.61
15:M:104:LEU:HD23	15:M:106:TYR:CE2	2.34	0.61
22:T:17:ASN:O	22:T:19:LYS:HG2	2.00	0.61
23:U:46:LEU:C	23:U:47:HIS:ND1	2.54	0.61
23:U:63:SER:O	23:U:64:ALA:C	2.37	0.61
30:4:25:VAL:HG21	30:4:34:GLN:NE2	2.13	0.61
1:X:540:G:O2'	1:X:542:A:C2	2.45	0.61
1:X:1448:A:H2'	1:X:1449:C:H6	1.64	0.61
1:X:1553:G:H2'	1:X:1554:G:C8	2.35	0.61
1:X:1745:C:N4	1:X:1746:A:N6	2.48	0.61
1:X:2033:C:O2'	4:B:141:ILE:HD11	1.99	0.61
1:X:2082:C:H2'	1:X:2083:G:C5'	2.30	0.61
1:X:2234:G:H2'	1:X:2235:G:O4'	2.00	0.61
1:X:2324:G:H4'	1:X:2326:C:H5''	1.81	0.61
1:X:2343:C:O2	22:T:36:ILE:HD11	1.99	0.61
1:X:2404:A:H1'	1:X:2406:C:C5	2.35	0.61
3:A:258:LYS:HZ2	3:A:261:ARG:NH2	1.94	0.61
7:E:17:VAL:HG12	7:E:18:ASN:N	2.15	0.61
9:G:52:GLY:O	9:G:53:ARG:C	2.39	0.61
9:G:61:ARG:NH1	9:G:78:ASP:OD2	2.34	0.61
12:J:19:THR:HG22	12:J:20:GLY:N	2.14	0.61
16:N:76:TYR:O	16:N:80:ILE:HG12	1.99	0.61
1:X:172:A:C2	1:X:227:G:N2	2.67	0.61
1:X:692:C:O2'	1:X:693:A:H5'	1.99	0.61
1:X:731:A:O2'	1:X:732:G:C4'	2.49	0.61
1:X:794:A:H5'	3:A:218:LYS:HZ2	1.65	0.61
1:X:801:A:O2'	1:X:802:A:OP2	2.17	0.61
1:X:1372:A:N7	1:X:1373:G:N7	2.48	0.61
1:X:1517:C:H4'	3:A:96:HIS:CD2	2.35	0.61
1:X:1812:U:C4	3:A:160:GLY:O	2.54	0.61
1:X:2178:U:O2'	1:X:2179:C:H5'	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2471:U:O2'	1:X:2472:U:H5'	2.00	0.61
1:X:2615:U:OP1	4:B:80:GLU:N	2.33	0.61
1:X:2726:U:C2'	1:X:2727:G:H5'	2.30	0.61
3:A:142:VAL:HG11	3:A:193:ILE:HD13	1.81	0.61
3:A:231:HIS:HD1	3:A:247:VAL:HA	1.64	0.61
4:B:12:THR:OG1	15:M:17:GLU:OE1	2.17	0.61
5:C:48:ARG:HD2	5:C:48:ARG:N	2.13	0.61
6:D:74:ILE:HG23	6:D:80:ARG:CA	2.30	0.61
6:D:174:GLY:O	6:D:175:LEU:HB2	1.99	0.61
10:H:70:VAL:HG22	10:H:71:LYS:N	2.16	0.61
11:I:45:LYS:CE	11:I:47:ALA:HB3	2.30	0.61
11:I:54:SER:OG	11:I:59:ARG:NH1	2.34	0.61
12:J:125:LYS:HB3	12:J:125:LYS:HZ3	1.64	0.61
13:K:10:LEU:HD23	13:K:17:ARG:HG2	1.81	0.61
17:O:13:ARG:HG2	17:O:14:VAL:N	2.10	0.61
19:Q:72:ARG:O	19:Q:73:ASN:OD1	2.17	0.61
20:R:91:ALA:O	20:R:108:VAL:HG22	2.01	0.61
21:S:123:VAL:HG23	21:S:161:ALA:CA	2.30	0.61
23:U:11:LYS:HZ1	23:U:75:TYR:HD1	1.45	0.61
24:V:2:LYS:HA	24:V:6:MET:CE	2.21	0.61
1:X:864:C:O2'	25:W:42:GLY:HA3	2.01	0.61
1:X:1394:G:H2'	1:X:1395:A:H8	1.65	0.61
1:X:1428:G:H22	1:X:1602:G:C5'	2.14	0.61
1:X:1573:G:O5'	1:X:1574:A:H5''	2.00	0.61
1:X:1732:U:H4'	1:X:1733:U:OP2	2.00	0.61
1:X:2201:G:H2'	1:X:2202:G:H8	1.65	0.61
1:X:2517:C:O2'	1:X:2518:C:H5'	1.99	0.61
1:X:2753:C:OP1	4:B:164:ARG:HD3	2.01	0.61
2:Y:58:G:H4'	2:Y:59:A:H5''	1.81	0.61
5:C:136:TRP:HD1	5:C:137:ALA:N	1.98	0.61
6:D:4:LEU:CD1	6:D:5:LYS:H	2.11	0.61
6:D:136:LEU:C	6:D:137:ILE:HG12	2.20	0.61
6:D:144:ASP:O	6:D:145:MET:HB2	2.01	0.61
8:F:18:THR:HB	8:F:19:PRO:HD3	1.82	0.61
11:I:76:LYS:CG	11:I:111:SER:HB2	2.30	0.61
16:N:17:VAL:O	16:N:18:LEU:C	2.39	0.61
16:N:66:ASN:HA	16:N:69:ALA:HB3	1.82	0.61
21:S:96:VAL:O	21:S:120:LEU:N	2.27	0.61
21:S:127:PRO:O	21:S:128:ARG:CG	2.43	0.61
1:X:173:A:H5'	1:X:174:A:OP2	1.99	0.61
1:X:527:C:O2'	18:P:39:ARG:NH2	2.33	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1094:C:C2'	1:X:1096:A:H5'	2.29	0.61
1:X:1805:G:N3	3:A:50:THR:HG21	2.16	0.61
1:X:2313:G:H1'	14:L:13:THR:HB	1.83	0.61
1:X:2356:A:HO2'	14:L:89:PHE:HZ	1.47	0.61
1:X:2541:U:O2'	10:H:23:ARG:NH1	2.33	0.61
3:A:132:PRO:CA	3:A:190:TYR:HA	2.28	0.61
6:D:33:LYS:HA	6:D:96:MET:SD	2.41	0.61
7:E:9:ILE:CD1	7:E:51:LEU:HA	2.29	0.61
11:I:86:THR:H	11:I:116:ARG:NH1	1.98	0.61
14:L:66:ASP:O	14:L:68:ALA:N	2.33	0.61
20:R:98:ILE:C	20:R:100:ASP:H	2.04	0.61
24:V:50:VAL:HA	24:V:53:LEU:HB2	1.82	0.61
30:4:29:ASN:OD1	30:4:31:LYS:N	2.34	0.61
1:X:39:C:O2	5:C:40:ARG:NH2	2.34	0.61
1:X:717:G:O2'	1:X:718:A:P	2.58	0.61
1:X:1053:G:H4'	1:X:1054:C:OP1	2.01	0.61
1:X:1628:C:C4	1:X:1629:G:N7	2.69	0.61
1:X:2194:A:H2'	1:X:2195:C:C4'	2.31	0.61
1:X:2311:U:H5'	1:X:2315:A:N6	2.15	0.61
1:X:2548:G:O2'	1:X:2549:G:H5'	2.00	0.61
2:Y:53:G:N2	2:Y:54:U:H5	1.99	0.61
6:D:108:LEU:HD23	6:D:111:ILE:HD12	1.83	0.61
9:G:142:ARG:O	9:G:144:MET:N	2.33	0.61
12:J:55:MET:HG2	12:J:118:ALA:O	2.01	0.61
12:J:116:LYS:HG2	12:J:132:MET:HE1	1.83	0.61
1:X:213:C:H2'	1:X:214:C:H6	1.66	0.61
1:X:651:C:C2'	1:X:652:C:H5''	2.30	0.61
1:X:2662:C:H2'	1:X:2663:U:C6	2.36	0.61
1:X:2819:G:H2'	1:X:2820:C:H6	1.66	0.61
2:Y:25:G:H2'	2:Y:26:G:C8	2.35	0.61
5:C:138:LYS:C	5:C:140:ASN:H	2.04	0.61
9:G:131:VAL:C	9:G:133:GLY:N	2.53	0.61
12:J:26:ASP:HB3	12:J:68:ARG:HH22	1.66	0.61
15:M:99:VAL:CG2	15:M:100:ARG:N	2.64	0.61
21:S:6:LYS:H	21:S:7:PRO:CD	2.12	0.61
1:X:78:C:O2'	1:X:79:G:H5'	2.00	0.61
1:X:401:G:OP1	23:U:35:THR:HB	2.01	0.61
1:X:600:G:C6	1:X:602:C:C4	2.89	0.61
1:X:754:G:C6	1:X:770:U:O2	2.54	0.61
1:X:1091:C:H4'	8:F:125:ASN:HB3	1.83	0.61
1:X:1391:A:O2'	1:X:1392:U:P	2.59	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2436:U:O2	1:X:2474:G:C2	2.54	0.61
9:G:113:GLU:CD	9:G:113:GLU:H	2.03	0.61
9:G:162:LYS:H	9:G:163:PRO:CD	2.14	0.61
12:J:68:ARG:HD3	12:J:106:GLU:OE2	2.01	0.61
15:M:34:ARG:NE	15:M:88:VAL:CG1	2.63	0.61
17:O:13:ARG:CG	17:O:14:VAL:H	2.06	0.61
20:R:93:ARG:HG2	20:R:93:ARG:NH1	2.16	0.61
1:X:34:U:H1'	20:R:4:PRO:N	2.16	0.61
1:X:555:U:C6	1:X:555:U:C3'	2.84	0.61
1:X:558:G:N3	1:X:558:G:C4'	2.63	0.61
1:X:674:U:H2'	1:X:675:C:O4'	2.00	0.61
1:X:717:G:C2'	1:X:739:G:H22	2.12	0.61
1:X:1997:A:H2'	1:X:1998:A:C8	2.35	0.61
1:X:2252:A:O2'	1:X:2253:A:H5'	2.00	0.61
4:B:14:ILE:HG12	15:M:20:HIS:CD2	2.36	0.61
6:D:35:VAL:HG13	6:D:90:THR:HA	1.83	0.61
7:E:44:ARG:HH21	7:E:44:ARG:HG3	1.64	0.61
9:G:53:ARG:NH2	9:G:171:LEU:HB2	2.15	0.61
9:G:72:PRO:O	9:G:74:MET:N	2.33	0.61
11:I:81:GLN:NE2	11:I:115:SER:CA	2.63	0.61
17:O:9:GLY:O	17:O:10:LYS:HB3	2.00	0.61
18:P:17:GLN:HG3	18:P:18:VAL:HG23	1.83	0.61
19:Q:20:MET:SD	19:Q:92:ALA:HA	2.41	0.61
22:T:71:ASN:CB	22:T:77:ARG:HH11	2.11	0.61
23:U:46:LEU:O	23:U:47:HIS:ND1	2.32	0.61
24:V:56:VAL:HA	24:V:59:GLU:OE1	2.01	0.61
25:W:38:PRO:HD3	25:W:41:ARG:HE	1.66	0.61
30:4:1:MET:SD	30:4:2:LYS:N	2.73	0.61
1:X:208:C:H2'	1:X:209:G:C5'	2.28	0.60
1:X:402:A:H8	1:X:2392:G:H4'	1.57	0.60
1:X:525:A:C2'	1:X:526:C:H5'	2.31	0.60
1:X:774:A:O5'	1:X:774:A:C8	2.53	0.60
1:X:820:U:H2'	1:X:821:A:C8	2.35	0.60
1:X:1095:A:H2'	1:X:1096:A:C5'	2.30	0.60
1:X:1142:G:C1'	9:G:103:TYR:CD2	2.84	0.60
1:X:1181:C:H2'	1:X:1182:U:H5''	1.82	0.60
1:X:1238:A:C6	1:X:1239:A:N1	2.69	0.60
1:X:1673:C:H5''	4:B:136:ARG:HD3	1.82	0.60
1:X:2586:G:C2	1:X:2587:G:C4	2.89	0.60
1:X:2698:G:H4'	15:M:103:LYS:HG2	1.83	0.60
3:A:142:VAL:CG1	3:A:193:ILE:HA	2.24	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:61:GLN:NE2	5:C:61:GLN:HA	2.15	0.60
5:C:102:LEU:HD21	5:C:106:MET:HE3	1.82	0.60
5:C:194:GLU:O	5:C:195:ILE:HG23	2.01	0.60
6:D:56:GLU:O	6:D:57:LEU:C	2.40	0.60
6:D:67:ILE:O	6:D:69:LYS:N	2.34	0.60
6:D:74:ILE:CG1	6:D:80:ARG:HA	2.31	0.60
11:I:19:VAL:O	11:I:19:VAL:HG12	2.01	0.60
11:I:76:LYS:HD3	11:I:79:GLN:HE21	1.65	0.60
12:J:35:LEU:HD11	12:J:130:THR:OG1	2.00	0.60
12:J:69:ILE:HG23	12:J:104:MET:HA	1.82	0.60
1:X:695:G:O2'	1:X:696:U:H5'	2.00	0.60
1:X:947:C:H2'	1:X:948:C:H6	1.63	0.60
1:X:1141:U:O2'	1:X:1142:G:O5'	2.19	0.60
1:X:1182:U:H2'	1:X:1183:C:O4'	2.00	0.60
1:X:1661:C:O2'	1:X:1662:G:H5'	2.01	0.60
6:D:80:ARG:HD3	6:D:83:MET:CB	2.30	0.60
7:E:54:ARG:HG2	7:E:54:ARG:HH21	1.64	0.60
7:E:172:LYS:O	7:E:173:ALA:HB3	1.99	0.60
8:F:13:PRO:HB2	8:F:16:LYS:HD3	1.83	0.60
13:K:20:LEU:O	13:K:22:ARG:N	2.34	0.60
14:L:87:VAL:HG12	14:L:88:VAL:N	2.16	0.60
18:P:36:ARG:NH2	26:Z:20:ARG:NH2	2.49	0.60
20:R:39:ALA:O	20:R:41:PRO:HD3	2.00	0.60
20:R:95:ARG:HD2	20:R:95:ARG:N	2.08	0.60
26:Z:35:GLN:O	26:Z:37:HIS:N	2.34	0.60
1:X:65:C:H1'	1:X:88:G:N2	2.15	0.60
1:X:224:G:N2	1:X:227:G:H3'	2.16	0.60
1:X:1053:G:C4	1:X:1054:C:C5	2.89	0.60
1:X:1119:U:H6	1:X:1119:U:C5'	2.14	0.60
1:X:1374:G:O2'	1:X:1375:C:H5'	2.02	0.60
1:X:1569:A:H2'	1:X:1570:C:H5''	1.83	0.60
1:X:2372:A:O2'	1:X:2373:C:H5'	2.01	0.60
1:X:2537:C:H2'	1:X:2538:C:O4'	2.00	0.60
9:G:35:LYS:HG2	9:G:69:ASP:OD2	2.00	0.60
10:H:73:VAL:HG21	10:H:123:PHE:CD2	2.36	0.60
12:J:102:ARG:HG3	12:J:103:VAL:N	2.16	0.60
18:P:36:ARG:NH2	26:Z:20:ARG:NE	2.49	0.60
23:U:27:ASP:N	23:U:32:ARG:HD3	2.16	0.60
1:X:82:G:N1	1:X:100:G:H2'	2.17	0.60
1:X:172:A:C6	1:X:175:C:C5	2.87	0.60
1:X:1850:G:O2'	1:X:1851:A:O4'	2.20	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2736:U:O2'	1:X:2737:A:C5'	2.32	0.60
6:D:13:ARG:HH21	6:D:17:MET:HE2	1.67	0.60
6:D:46:ASP:HB2	6:D:49:ALA:H	1.66	0.60
6:D:171:GLN:HA	6:D:175:LEU:CB	2.30	0.60
7:E:84:THR:HB	7:E:134:SER:CB	2.31	0.60
10:H:41:ASN:ND2	10:H:41:ASN:H	1.99	0.60
10:H:70:VAL:HG21	10:H:98:ILE:HG23	1.82	0.60
12:J:77:LYS:CG	12:J:78:LYS:H	2.13	0.60
16:N:93:LYS:O	16:N:94:VAL:HB	2.01	0.60
1:X:342:G:H4'	1:X:343:A:OP1	2.01	0.60
1:X:433:G:H21	1:X:434:C:H1'	1.67	0.60
1:X:864:C:H5''	25:W:46:THR:OG1	2.01	0.60
1:X:1007:A:H1'	17:O:6:GLN:CG	2.30	0.60
1:X:1430:G:H2'	1:X:1431:U:H6	1.62	0.60
1:X:1597:A:H2'	1:X:1598:C:C6	2.36	0.60
1:X:2029:G:H2'	1:X:2030:U:H6	1.67	0.60
1:X:2035:G:H4'	4:B:143:GLN:O	2.01	0.60
1:X:2445:C:H5''	30:4:6:SER:HB2	1.82	0.60
1:X:2473:G:H2'	1:X:2474:G:H8	1.67	0.60
1:X:2642:G:O2'	1:X:2643:G:H5'	2.01	0.60
4:B:95:ILE:HG22	4:B:96:PHE:N	2.15	0.60
6:D:63:GLN:HG3	6:D:95:ARG:HH21	1.66	0.60
6:D:111:ILE:HG22	6:D:114:PHE:HB2	1.82	0.60
9:G:35:LYS:O	9:G:36:ASN:HB3	2.00	0.60
11:I:81:GLN:HE22	11:I:115:SER:CA	2.09	0.60
12:J:14:PHE:O	12:J:15:ARG:HG3	2.01	0.60
20:R:56:LYS:HA	20:R:68:GLY:O	2.02	0.60
21:S:3:LEU:HD12	21:S:3:LEU:C	2.21	0.60
1:X:28:A:H1'	1:X:523:A:C2	2.35	0.60
1:X:198:A:H4'	1:X:199:A:OP2	2.02	0.60
1:X:611:C:H6	1:X:611:C:H5''	1.67	0.60
1:X:1288:A:N6	1:X:1309:G:H5'	2.17	0.60
1:X:2725:C:O2'	7:E:143:GLN:HG2	2.02	0.60
1:X:2795:A:H4'	13:K:5:LYS:NZ	2.17	0.60
3:A:111:LEU:HD21	3:A:127:LEU:O	2.02	0.60
14:L:42:ILE:HG22	14:L:52:ALA:H	1.67	0.60
20:R:24:VAL:HB	20:R:29:HIS:O	2.01	0.60
20:R:92:THR:HB	20:R:95:ARG:HH22	1.67	0.60
23:U:22:GLY:N	23:U:39:LYS:HB2	2.16	0.60
1:X:967:G:O6	12:J:17:ARG:NH2	2.34	0.60
1:X:1474:A:H1'	1:X:1475:U:H5'	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2388:G:C4	1:X:2389:G:C8	2.90	0.60
1:X:2712:G:H3'	1:X:2713:A:C5'	2.32	0.60
4:B:116:VAL:HG22	4:B:136:ARG:NH2	2.17	0.60
4:B:183:LEU:HD11	15:M:16:ILE:HG21	1.83	0.60
4:B:201:ALA:HB1	4:B:204:ALA:HB2	1.82	0.60
5:C:104:LEU:HD23	5:C:104:LEU:H	1.66	0.60
6:D:138:PHE:HB2	6:D:141:ILE:HB	1.82	0.60
12:J:52:ARG:HG3	12:J:67:ILE:HD11	1.83	0.60
13:K:69:ASP:C	13:K:70:ILE:HG12	2.21	0.60
15:M:55:ILE:HG22	15:M:104:LEU:HB2	1.82	0.60
17:O:36:LYS:HD2	17:O:55:THR:CA	2.30	0.60
20:R:80:LYS:HZ2	20:R:82:ALA:CA	2.12	0.60
1:X:698:A:C8	1:X:787:A:C6	2.90	0.60
1:X:749:C:H2'	1:X:750:C:H6	1.66	0.60
1:X:1061:A:C2'	1:X:1062:G:H5'	2.32	0.60
1:X:1275:A:H2	26:Z:10:LYS:HE2	1.66	0.60
1:X:1787:U:H4'	3:A:254:THR:H	1.67	0.60
1:X:2322:U:H3'	1:X:2323:U:C6	2.37	0.60
1:X:2437:G:O2'	1:X:2438:A:N7	2.31	0.60
1:X:2522:G:H5'	1:X:2522:G:H8	1.67	0.60
5:C:3:GLN:OE1	5:C:3:GLN:HA	2.01	0.60
7:E:57:ASP:CB	7:E:62:ARG:HE	1.97	0.60
9:G:103:TYR:O	9:G:107:GLN:NE2	2.34	0.60
11:I:77:LEU:HB3	11:I:112:GLY:N	2.16	0.60
11:I:126:SER:O	11:I:129:ALA:HB3	2.01	0.60
14:L:52:ALA:O	14:L:53:ALA:HB3	2.01	0.60
23:U:17:SER:CB	23:U:44:ALA:HA	2.32	0.60
23:U:53:GLU:CD	23:U:57:VAL:HA	2.22	0.60
1:X:103:U:H2'	1:X:104:C:C6	2.37	0.60
1:X:492:G:H2'	1:X:517:A:N6	2.17	0.60
1:X:958:G:C4	1:X:959:C:C5	2.90	0.60
1:X:1838:G:H3'	1:X:1839:A:H8	1.67	0.60
1:X:2036:G:C2'	1:X:2037:A:H5'	2.32	0.60
2:Y:46:G:H5'	6:D:92:ARG:HH22	1.67	0.60
3:A:52:ARG:NH2	3:A:53:PHE:CZ	2.70	0.60
4:B:51:TYR:N	4:B:75:THR:OG1	2.34	0.60
5:C:104:LEU:CD1	5:C:175:VAL:HG21	2.32	0.60
5:C:173:ALA:CB	5:C:193:LEU:HB2	2.32	0.60
5:C:176:ASN:O	5:C:180:ILE:HG22	2.01	0.60
7:E:38:ASN:HB2	7:E:41:LEU:HD22	1.83	0.60
7:E:38:ASN:ND2	7:E:64:LEU:HD13	2.16	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:22:ALA:CB	12:J:100:PRO:O	2.48	0.60
14:L:33:ARG:HG2	14:L:38:ILE:HB	1.82	0.60
18:P:28:ALA:HB2	18:P:71:VAL:HG22	1.83	0.60
19:Q:11:VAL:HG23	19:Q:27:PHE:HA	1.84	0.60
21:S:91:PRO:HG2	21:S:92:VAL:H	1.67	0.60
1:X:174:A:H8	1:X:2051:U:N3	1.99	0.60
1:X:1218:C:C1'	11:I:13:ARG:HE	2.14	0.60
1:X:1283:C:H5''	1:X:1284:G:C5'	2.31	0.60
1:X:1439:G:H2'	1:X:1440:G:C8	2.37	0.60
1:X:1741:G:O2'	1:X:1742:G:H5'	2.01	0.60
1:X:2709:C:H5''	4:B:185:LYS:HE3	1.83	0.60
1:X:2796:A:P	13:K:3:HIS:CE1	2.95	0.60
5:C:149:LEU:C	5:C:150:LEU:HD12	2.22	0.60
6:D:8:TYR:O	6:D:12:VAL:CB	2.49	0.60
6:D:73:SER:O	6:D:79:LEU:HB3	2.02	0.60
12:J:19:THR:CG2	12:J:20:GLY:N	2.64	0.60
15:M:43:ASN:C	15:M:43:ASN:HD22	2.03	0.60
16:N:7:GLY:O	16:N:9:VAL:HG23	2.02	0.60
17:O:14:VAL:O	17:O:15:SER:CB	2.50	0.60
17:O:19:VAL:HG13	17:O:90:PHE:CD1	2.37	0.60
21:S:55:THR:CG2	21:S:59:GLY:HA2	2.32	0.60
1:X:37:C:H4'	1:X:463:C:OP1	2.02	0.59
1:X:165:G:H2'	1:X:166:G:H5'	1.85	0.59
1:X:233:A:O2'	1:X:234:C:H5'	2.02	0.59
1:X:1026:U:O2'	1:X:1027:C:H5'	2.01	0.59
1:X:1332:G:C6	1:X:1333:G:N1	2.70	0.59
1:X:2018:G:O2'	1:X:2019:C:OP1	2.19	0.59
1:X:2400:G:H21	23:U:33:LYS:HE3	1.66	0.59
4:B:52:ALA:O	4:B:75:THR:O	2.20	0.59
5:C:148:VAL:O	5:C:167:VAL:HA	2.02	0.59
5:C:154:ASP:HB2	5:C:157:THR:HG23	1.84	0.59
6:D:16:LEU:HD12	6:D:28:VAL:HG13	1.84	0.59
6:D:111:ILE:HD13	6:D:137:ILE:HD12	1.82	0.59
21:S:92:VAL:O	21:S:93:GLU:HG3	2.02	0.59
21:S:123:VAL:HG23	21:S:161:ALA:HA	1.84	0.59
24:V:18:ILE:HG23	24:V:50:VAL:HG13	1.84	0.59
26:Z:6:VAL:CG2	26:Z:7:PRO:HD2	2.28	0.59
1:X:1033:G:O2'	1:X:1034:U:H5'	2.02	0.59
1:X:1385:C:H1'	1:X:2192:U:C5	2.36	0.59
1:X:1505:U:H2'	1:X:1506:C:H5''	1.83	0.59
1:X:2186:G:O3'	3:A:151:LYS:HD3	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2516:U:H2'	1:X:2517:C:H6	1.61	0.59
1:X:2586:G:C2	1:X:2587:G:N3	2.70	0.59
1:X:2640:G:H2'	1:X:2641:A:H8	1.66	0.59
6:D:40:LEU:HA	6:D:150:ARG:CZ	2.32	0.59
6:D:75:SER:N	6:D:79:LEU:HD22	2.15	0.59
12:J:113:GLU:C	12:J:115:ALA:H	2.03	0.59
17:O:36:LYS:HD3	17:O:39:PHE:CE2	2.37	0.59
21:S:25:ASN:OD1	21:S:26:LYS:N	2.32	0.59
21:S:168:VAL:HG12	21:S:169:VAL:HG13	1.83	0.59
25:W:1:MET:O	25:W:34:VAL:HG12	2.01	0.59
1:X:174:A:C8	1:X:2051:U:N3	2.71	0.59
1:X:218:A:H5'	1:X:220:U:H1'	1.83	0.59
1:X:617:U:H5	1:X:632:A:C2	2.19	0.59
1:X:857:U:C3'	1:X:858:G:H8	2.09	0.59
1:X:1031:C:H41	1:X:1153:A:H61	1.47	0.59
1:X:1503:G:H2'	1:X:1504:G:C8	2.38	0.59
1:X:1684:G:O2'	1:X:1974:U:O4	2.18	0.59
2:Y:12:C:H2'	2:Y:13:C:O4'	2.03	0.59
6:D:38:GLU:CB	6:D:87:ILE:HB	2.31	0.59
9:G:32:TYR:CZ	9:G:35:LYS:HE3	2.38	0.59
12:J:77:LYS:O	12:J:88:LYS:NZ	2.35	0.59
14:L:28:ARG:O	14:L:42:ILE:HD13	2.02	0.59
15:M:22:ARG:NH2	15:M:89:ASN:O	2.34	0.59
15:M:70:LYS:O	15:M:77:VAL:N	2.32	0.59
16:N:47:TYR:C	16:N:49:ASP:H	2.04	0.59
17:O:57:GLN:H	17:O:97:GLY:CA	2.15	0.59
17:O:63:HIS:CE1	17:O:91:THR:HG23	2.38	0.59
21:S:72:ASP:OD1	21:S:75:LYS:HD2	2.03	0.59
21:S:97:PRO:CA	21:S:119:ASN:HA	2.19	0.59
25:W:44:VAL:HG12	25:W:45:LYS:NZ	2.17	0.59
1:X:32:C:OP1	1:X:1251:G:H5'	2.02	0.59
1:X:163:A:H2'	1:X:164:G:H8	1.68	0.59
1:X:615:C:H41	11:I:100:ARG:HH12	1.50	0.59
1:X:871:U:O2'	1:X:2247:A:C2'	2.50	0.59
1:X:1059:A:N6	1:X:1122:A:C2	2.70	0.59
1:X:1071:U:H5''	1:X:1072:U:OP1	2.02	0.59
1:X:1474:A:C1'	1:X:1475:U:H5'	2.32	0.59
1:X:1831:G:C4	1:X:1832:G:C8	2.91	0.59
1:X:1854:G:C6	1:X:1864:G:C6	2.90	0.59
1:X:1856:U:O2'	1:X:1857:G:O5'	2.21	0.59
1:X:1926:U:H4'	1:X:1927:U:O5'	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2195:C:N4	1:X:2196:U:O4	2.35	0.59
1:X:2217:G:H5'	1:X:2218:G:N7	2.18	0.59
1:X:2620:G:OP2	9:G:102:ARG:NH2	2.36	0.59
2:Y:58:G:H4'	2:Y:59:A:C5'	2.32	0.59
7:E:51:LEU:HD12	7:E:52:VAL:N	2.16	0.59
7:E:84:THR:CA	7:E:134:SER:HA	2.31	0.59
7:E:90:ARG:NH2	7:E:163:ARG:NH1	2.50	0.59
9:G:88:VAL:HG22	9:G:89:ALA:H	1.67	0.59
13:K:102:THR:HA	13:K:109:THR:HA	1.82	0.59
16:N:86:ALA:C	16:N:88:ILE:H	2.06	0.59
16:N:110:VAL:HG12	16:N:111:ASP:N	2.17	0.59
20:R:98:ILE:HG22	20:R:99:VAL:N	2.16	0.59
25:W:14:GLY:O	25:W:18:LYS:HG2	2.03	0.59
1:X:826:U:H2'	1:X:827:C:C6	2.37	0.59
1:X:1004:A:OP2	16:N:51:ARG:NH1	2.36	0.59
1:X:1550:C:H2'	1:X:1553:G:H21	1.63	0.59
1:X:2041:A:H8	1:X:2041:A:O5'	1.85	0.59
1:X:2420:C:O2'	1:X:2421:C:H5'	2.02	0.59
1:X:2594:U:H2'	1:X:2595:C:H6	1.68	0.59
2:Y:116:C:H2'	2:Y:117:G:O4'	2.03	0.59
3:A:261:ARG:O	3:A:264:LYS:HB2	2.02	0.59
6:D:65:PRO:CA	6:D:89:VAL:HG13	2.31	0.59
6:D:103:LEU:HD11	6:D:108:LEU:HG	1.82	0.59
7:E:157:TYR:O	7:E:171:LEU:HD23	2.02	0.59
11:I:86:THR:C	11:I:88:PHE:N	2.55	0.59
12:J:11:ARG:NH2	12:J:15:ARG:HH22	2.00	0.59
20:R:40:LEU:HB2	20:R:45:LYS:CB	2.17	0.59
20:R:80:LYS:O	20:R:80:LYS:CE	2.47	0.59
20:R:84:VAL:HA	20:R:90:LYS:CE	2.32	0.59
21:S:13:LYS:O	21:S:16:GLU:O	2.21	0.59
21:S:94:VAL:HG21	21:S:130:ILE:HG21	1.84	0.59
1:X:807:A:H2'	1:X:808:C:H6	1.67	0.59
1:X:1250:A:HO2'	1:X:1251:G:C4'	2.14	0.59
1:X:1391:A:H1'	1:X:1392:U:C4	2.37	0.59
1:X:1391:A:H1'	1:X:1392:U:N3	2.18	0.59
1:X:1681:A:N6	1:X:1979:C:H42	1.98	0.59
1:X:2175:A:H2'	1:X:2176:U:C6	2.37	0.59
1:X:2301:A:H2'	1:X:2302:G:C8	2.36	0.59
1:X:2400:G:N2	23:U:33:LYS:NZ	2.49	0.59
1:X:2541:U:H4'	10:H:23:ARG:HH12	1.66	0.59
1:X:2736:U:H1'	1:X:2737:A:C8	2.38	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:172:TYR:CE1	3:A:186:HIS:HB3	2.36	0.59
3:A:243:GLY:C	3:A:244:ARG:NE	2.56	0.59
3:A:268:ARG:HB3	3:A:269:PHE:CD2	2.38	0.59
4:B:136:ARG:O	4:B:137:ARG:HB2	2.03	0.59
9:G:155:THR:HA	9:G:158:HIS:CD2	2.24	0.59
10:H:116:ARG:NH2	15:M:40:ARG:HB2	2.16	0.59
11:I:7:LYS:O	11:I:9:THR:HG23	2.02	0.59
14:L:37:HIS:CE1	14:L:39:TYR:CZ	2.91	0.59
20:R:22:VAL:HG11	20:R:80:LYS:CD	2.28	0.59
24:V:42:ARG:NH1	24:V:45:GLN:NE2	2.51	0.59
25:W:2:LYS:HD3	25:W:33:GLU:OE2	2.01	0.59
1:X:1034:U:H5'	1:X:1034:U:H6	1.67	0.59
1:X:1681:A:C2	1:X:2706:U:C2	2.90	0.59
1:X:1998:A:C2	26:Z:6:VAL:HG23	2.38	0.59
1:X:2698:G:O2'	1:X:2699:G:H5'	2.03	0.59
1:X:2827:G:C6	1:X:2828:C:N3	2.71	0.59
1:X:2829:A:C6	1:X:2839:G:C6	2.90	0.59
3:A:124:GLU:O	3:A:126:LYS:HG3	2.03	0.59
3:A:142:VAL:HB	3:A:192:THR:O	2.02	0.59
6:D:8:TYR:HD1	6:D:173:MET:SD	2.26	0.59
7:E:43:VAL:CB	7:E:52:VAL:HG13	2.28	0.59
11:I:13:ARG:CG	11:I:13:ARG:NH2	2.60	0.59
11:I:32:ARG:NH2	17:O:79:GLN:HA	2.18	0.59
20:R:15:HIS:ND1	20:R:16:PHE:CD2	2.66	0.59
21:S:105:GLN:OE1	21:S:140:LYS:HA	2.02	0.59
1:X:665:A:H2	1:X:666:U:H5''	1.67	0.59
1:X:1052:C:H3'	1:X:1053:G:H5'	1.82	0.59
1:X:1265:G:O2'	1:X:1266:G:O4'	2.19	0.59
1:X:2369:U:O2	1:X:2369:U:H2'	2.03	0.59
4:B:38:THR:O	4:B:40:GLN:N	2.32	0.59
4:B:183:LEU:HD11	15:M:16:ILE:HG23	1.84	0.59
5:C:58:MET:SD	5:C:69:HIS:CB	2.91	0.59
6:D:13:ARG:CB	6:D:14:PRO:HD3	2.32	0.59
7:E:37:TYR:CD2	7:E:68:THR:HG23	2.38	0.59
8:F:104:VAL:HG13	8:F:127:VAL:HG11	1.83	0.59
13:K:45:ARG:O	13:K:48:VAL:HG12	2.02	0.59
17:O:87:ARG:O	17:O:87:ARG:HG3	2.01	0.59
1:X:148:C:H3'	1:X:149:A:C8	2.38	0.59
1:X:641:G:H4'	1:X:651:C:O2'	2.03	0.59
1:X:1301:U:C2	1:X:1340:C:O2	2.55	0.59
1:X:2184:C:C4	1:X:2185:U:C4	2.91	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2309:G:C2'	1:X:2310:G:H5'	2.33	0.59
1:X:2484:G:O2'	1:X:2485:U:C5'	2.51	0.59
1:X:2494:C:O2'	1:X:2495:G:H5'	2.02	0.59
10:H:26:ASN:HB3	10:H:38:GLY:H	1.66	0.59
15:M:93:ILE:HG22	15:M:94:VAL:N	2.15	0.59
20:R:25:LEU:H	20:R:25:LEU:HD13	1.67	0.59
20:R:60:PRO:O	20:R:65:PRO:HG3	2.02	0.59
20:R:86:PRO:HD3	20:R:90:LYS:HD3	1.84	0.59
1:X:202:A:C2	1:X:203:G:H1'	2.38	0.59
1:X:431:G:H2'	1:X:432:C:H6	1.66	0.59
1:X:861:G:C2'	1:X:862:A:H5'	2.32	0.59
1:X:1279:G:OP1	26:Z:23:HIS:HE1	1.86	0.59
1:X:1281:A:H2'	1:X:1282:A:O4'	2.03	0.59
1:X:1372:A:C5	1:X:1373:G:N7	2.71	0.59
1:X:1685:A:H2'	1:X:1691:G:N7	2.18	0.59
1:X:1985:G:OP1	13:K:10:LEU:HD13	2.02	0.59
1:X:1994:U:O4	1:X:1995:G:C5	2.56	0.59
1:X:2194:A:C2'	1:X:2195:C:H5''	2.32	0.59
1:X:2691:C:O2'	1:X:2692:A:P	2.60	0.59
3:A:131:LEU:N	3:A:131:LEU:HD23	2.17	0.59
4:B:152:LYS:CB	9:G:106:TYR:HB3	2.25	0.59
5:C:122:GLY:C	5:C:124:ASP:N	2.55	0.59
10:H:2:ILE:HB	10:H:45:ALA:HB3	1.85	0.59
20:R:5:SER:O	20:R:6:ALA:HB3	2.02	0.59
20:R:10:HIS:O	20:R:11:ASN:CB	2.48	0.59
20:R:38:LEU:HB2	20:R:47:VAL:HG23	1.85	0.59
26:Z:44:HIS:N	26:Z:44:HIS:CD2	2.71	0.59
1:X:76:C:H6	1:X:76:C:C5'	2.16	0.58
1:X:225:G:C5	1:X:2410:U:H5'	2.38	0.58
1:X:1142:G:H1'	9:G:103:TYR:CD2	2.38	0.58
1:X:1542:G:N2	1:X:1562:G:N2	2.49	0.58
1:X:1971:C:O2'	1:X:1972:G:H5'	2.02	0.58
2:Y:15:A:C6	2:Y:72:C:H5'	2.38	0.58
3:A:39:LYS:HE3	3:A:40:THR:O	2.03	0.58
3:A:222:ARG:HH22	3:A:225:ALA:HB2	1.68	0.58
12:J:97:VAL:O	12:J:97:VAL:HG23	2.02	0.58
13:K:43:GLU:O	13:K:46:PRO:HD2	2.03	0.58
14:L:33:ARG:HH12	14:L:103:LEU:N	2.01	0.58
15:M:26:ASP:CG	15:M:27:PHE:N	2.53	0.58
16:N:17:VAL:CG1	16:N:39:LEU:HD12	2.33	0.58
16:N:75:ASN:O	16:N:76:TYR:C	2.41	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:O:21:ARG:HD2	17:O:21:ARG:H	1.68	0.58
20:R:52:ASN:OD1	20:R:71:GLN:HG2	2.03	0.58
20:R:96:LYS:CG	20:R:97:GLN:N	2.64	0.58
30:4:29:ASN:OD1	30:4:30:VAL:N	2.36	0.58
1:X:469:G:O2'	1:X:470:U:OP2	2.20	0.58
1:X:541:C:H4'	1:X:542:A:C8	2.39	0.58
1:X:830:C:H2'	1:X:831:G:H8	1.67	0.58
1:X:1050:G:H2'	1:X:1051:U:C5'	2.33	0.58
1:X:1300:A:C2	1:X:1301:U:C2	2.90	0.58
1:X:1781:C:H2'	1:X:1782:A:C5	2.38	0.58
1:X:2015:G:N1	1:X:2551:A:C8	2.71	0.58
1:X:2200:G:H2'	1:X:2201:G:H8	1.68	0.58
1:X:2689:C:H2'	1:X:2690:A:C8	2.38	0.58
1:X:2849:C:H2'	1:X:2850:U:H5'	1.85	0.58
4:B:67:PHE:CZ	4:B:78:LEU:HD11	2.39	0.58
5:C:31:VAL:O	5:C:34:GLN:N	2.36	0.58
5:C:197:GLU:HG2	5:C:198:GLU:N	2.17	0.58
7:E:126:PRO:HG2	7:E:127:GLU:N	2.17	0.58
13:K:100:VAL:O	26:Z:44:HIS:HB3	2.03	0.58
19:Q:11:VAL:HB	19:Q:26:SER:O	2.03	0.58
20:R:84:VAL:HG22	20:R:90:LYS:HG2	1.86	0.58
20:R:90:LYS:CG	20:R:108:VAL:HG21	2.33	0.58
1:X:94:C:H2'	1:X:95:G:O4'	2.04	0.58
1:X:340:G:OP1	1:X:340:G:H3'	2.04	0.58
1:X:728:G:O2'	1:X:729:A:OP1	2.17	0.58
1:X:1003:C:O2'	17:O:71:ILE:HD11	2.03	0.58
1:X:1105:U:H3	1:X:1107:A:H5''	1.66	0.58
1:X:1250:A:O2'	1:X:1251:G:O4'	2.20	0.58
1:X:1292:A:H2'	1:X:1293:A:C5'	2.33	0.58
1:X:1782:A:H1'	3:A:208:LYS:CE	2.30	0.58
1:X:1921:A:O2'	1:X:1922:U:OP1	2.21	0.58
1:X:1978:U:H3'	1:X:1979:C:C5'	2.25	0.58
1:X:2226:A:H2'	1:X:2227:C:C6	2.39	0.58
1:X:2527:G:C6	1:X:2540:A:N1	2.72	0.58
1:X:2556:A:H5''	1:X:2557:G:H5'	1.85	0.58
9:G:39:GLN:HG3	9:G:39:GLN:O	2.03	0.58
14:L:33:ARG:HH22	14:L:103:LEU:N	2.01	0.58
17:O:12:TYR:O	17:O:13:ARG:CB	2.51	0.58
17:O:65:ARG:HG2	17:O:87:ARG:CD	2.30	0.58
20:R:52:ASN:HD21	20:R:71:GLN:CD	2.06	0.58
21:S:25:ASN:OD1	21:S:27:GLU:N	2.34	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:T:40:GLN:OE1	22:T:45:PHE:N	2.28	0.58
23:U:27:ASP:CA	23:U:32:ARG:NH2	2.66	0.58
1:X:415:A:C2'	1:X:416:U:H5'	2.33	0.58
1:X:982:C:C2'	1:X:983:G:H5'	2.33	0.58
1:X:996:C:O5'	1:X:996:C:H6	1.86	0.58
1:X:1134:C:H2'	1:X:1135:C:H6	1.68	0.58
1:X:1424:U:H2'	1:X:1425:G:H8	1.68	0.58
1:X:1781:C:O2'	3:A:209:ALA:HB2	2.04	0.58
3:A:59:LYS:O	3:A:60:ARG:O	2.22	0.58
6:D:16:LEU:HD12	6:D:28:VAL:CG1	2.33	0.58
7:E:27:LYS:HG2	7:E:32:GLU:HB3	1.85	0.58
9:G:44:VAL:CG1	9:G:54:LEU:HD11	2.34	0.58
14:L:42:ILE:C	14:L:43:ILE:HD12	2.24	0.58
15:M:39:VAL:HG12	15:M:45:THR:CG2	2.33	0.58
16:N:66:ASN:HA	16:N:69:ALA:CB	2.34	0.58
20:R:93:ARG:NH1	20:R:108:VAL:O	2.36	0.58
20:R:93:ARG:CA	20:R:95:ARG:CZ	2.82	0.58
21:S:89:GLY:C	21:S:127:PRO:HD2	2.23	0.58
21:S:103:ARG:HD3	21:S:108:VAL:HG23	1.84	0.58
22:T:21:LEU:HD11	22:T:41:ARG:NE	2.17	0.58
26:Z:17:ASP:O	26:Z:18:MET:C	2.42	0.58
1:X:341:A:O2'	1:X:342:G:OP1	2.22	0.58
1:X:427:C:O2	1:X:1856:U:C4'	2.51	0.58
1:X:988:G:N3	1:X:1012:A:H2	2.02	0.58
1:X:1018:C:C4	1:X:1019:U:C5	2.90	0.58
1:X:1075:C:C5'	8:F:87:GLY:CA	2.77	0.58
1:X:1770:U:C2	1:X:1774:A:N7	2.72	0.58
1:X:1807:A:P	1:X:1814:G:H4'	2.44	0.58
1:X:1939:U:H1'	1:X:2531:U:OP1	2.04	0.58
1:X:2247:A:H5'	1:X:2248:A:OP2	2.03	0.58
1:X:2681:A:O2'	1:X:2682:C:H5'	2.04	0.58
3:A:126:LYS:O	3:A:193:ILE:HB	2.03	0.58
4:B:97:ALA:O	4:B:100:GLU:HG3	2.04	0.58
7:E:44:ARG:HH22	7:E:46:ASP:CB	2.17	0.58
10:H:2:ILE:HD12	10:H:8:LEU:HD21	1.86	0.58
10:H:23:ARG:NH2	10:H:23:ARG:CB	2.51	0.58
19:Q:43:GLN:OE1	19:Q:49:ARG:HA	2.04	0.58
20:R:25:LEU:O	20:R:26:SER:O	2.20	0.58
20:R:52:ASN:ND2	20:R:71:GLN:NE2	2.51	0.58
20:R:54:ILE:HD13	20:R:71:GLN:HA	1.83	0.58
23:U:21:ARG:HA	23:U:40:ARG:H	1.67	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:U:33:LYS:O	23:U:34:THR:HB	2.03	0.58
1:X:236:C:H2'	1:X:237:G:H8	1.69	0.58
1:X:584:A:C2	1:X:585:U:C5	2.90	0.58
1:X:698:A:H5''	1:X:699:G:OP1	2.03	0.58
1:X:1301:U:H5''	1:X:1302:C:OP2	2.02	0.58
1:X:1472:C:C3'	1:X:1473:U:H6	2.16	0.58
1:X:1737:G:O2'	1:X:1738:U:H5'	2.03	0.58
1:X:2171:U:H4'	1:X:2171:U:OP1	2.03	0.58
1:X:2190:A:C8	1:X:2190:A:H3'	2.39	0.58
2:Y:75:A:C2	2:Y:76:U:H1'	2.38	0.58
3:A:53:PHE:HD1	3:A:217:ARG:HH21	1.50	0.58
4:B:59:VAL:CG1	4:B:64:GLN:HG3	2.34	0.58
4:B:101:LYS:HA	4:B:170:LEU:O	2.04	0.58
6:D:74:ILE:HG12	6:D:80:ARG:C	2.24	0.58
11:I:73:GLU:HG2	11:I:101:ARG:HB2	1.84	0.58
21:S:49:THR:HG22	21:S:94:VAL:HG11	1.85	0.58
23:U:70:LEU:HB3	23:U:79:GLU:CD	2.23	0.58
1:X:140:G:H2'	1:X:141:G:H8	1.69	0.58
1:X:677:G:O2'	1:X:678:G:H5'	2.03	0.58
1:X:1069:G:O2'	8:F:116:ASN:OD1	2.12	0.58
1:X:1275:A:N3	26:Z:10:LYS:HE2	2.18	0.58
1:X:1782:A:N6	1:X:1820:G:O2'	2.37	0.58
1:X:2691:C:H5''	1:X:2694:G:H5''	1.86	0.58
4:B:19:ARG:HG3	4:B:19:ARG:O	2.04	0.58
5:C:67:ALA:O	5:C:68:ARG:CB	2.51	0.58
5:C:150:LEU:HA	5:C:187:VAL:HB	1.84	0.58
10:H:116:ARG:HD2	15:M:38:LYS:CE	2.24	0.58
11:I:7:LYS:HD3	11:I:7:LYS:N	2.19	0.58
12:J:15:ARG:CD	12:J:73:LYS:HG3	2.28	0.58
19:Q:27:PHE:N	19:Q:27:PHE:CD1	2.71	0.58
22:T:46:LYS:HD2	22:T:76:ALA:HB1	1.85	0.58
23:U:78:ILE:HD13	23:U:79:GLU:H	1.68	0.58
1:X:17:G:H2'	1:X:18:U:H6	1.66	0.58
1:X:66:U:H1'	1:X:87:G:N2	2.19	0.58
1:X:424:G:H4'	1:X:425:A:O5'	2.03	0.58
1:X:1053:G:C4	1:X:1054:C:C6	2.92	0.58
1:X:1522:C:H2'	1:X:1523:A:H4'	1.85	0.58
1:X:1562:G:H5''	1:X:1563:U:H5'	1.85	0.58
1:X:2356:A:H1'	14:L:89:PHE:CZ	2.38	0.58
1:X:2594:U:O2	1:X:2595:C:C6	2.57	0.58
1:X:2850:U:H5'	1:X:2850:U:C6	2.32	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Y:34:C:H2'	2:Y:35:C:C6	2.39	0.58
2:Y:92:G:H22	12:J:39:GLU:HG2	1.68	0.58
10:H:2:ILE:CD1	10:H:8:LEU:HD21	2.33	0.58
12:J:78:LYS:HE2	12:J:80:ALA:O	2.04	0.58
21:S:148:THR:HB	21:S:164:PRO:O	2.03	0.58
22:T:32:LYS:O	22:T:61:ALA:HB3	2.03	0.58
22:T:44:LYS:HE3	22:T:45:PHE:HE1	1.69	0.58
24:V:45:GLN:O	24:V:46:LEU:C	2.42	0.58
26:Z:45:ILE:HD13	26:Z:57:VAL:HG22	1.85	0.58
1:X:1033:G:N2	1:X:1035:G:C2	2.72	0.58
1:X:1933:G:N7	1:X:1934:U:C5	2.72	0.58
1:X:2011:U:H2'	1:X:2012:A:C8	2.39	0.58
1:X:2063:A:C2	1:X:2064:U:C2	2.92	0.58
1:X:2544:A:H2'	1:X:2545:A:H1'	1.86	0.58
1:X:2576:G:C6	1:X:2577:A:C6	2.92	0.58
1:X:2695:C:H3'	1:X:2695:C:H6	1.69	0.58
3:A:117:VAL:HG22	3:A:128:GLY:HA3	1.84	0.58
7:E:18:ASN:C	7:E:20:GLN:H	2.06	0.58
9:G:84:ASN:O	9:G:85:ALA:HB3	2.04	0.58
10:H:132:GLU:HG3	10:H:133:VAL:N	2.19	0.58
11:I:32:ARG:NH2	17:O:81:ARG:NE	2.51	0.58
11:I:130:ILE:O	11:I:132:ALA:N	2.37	0.58
16:N:40:LEU:HB3	17:O:74:TYR:CE2	2.39	0.58
16:N:81:ASN:HD21	16:N:85:ARG:HE	1.51	0.58
19:Q:13:SER:HG	19:Q:16:ALA:HB3	1.68	0.58
20:R:84:VAL:CA	20:R:90:LYS:HE2	2.33	0.58
21:S:100:THR:HG22	21:S:101:THR:N	2.19	0.58
24:V:42:ARG:NH1	24:V:45:GLN:OE1	2.37	0.58
25:W:27:LYS:O	25:W:28:ILE:C	2.41	0.58
30:4:19:ARG:O	30:4:20:HIS:C	2.43	0.58
1:X:609:U:C4'	11:I:18:ARG:CZ	2.82	0.58
1:X:787:A:H5''	3:A:48:ARG:HH22	1.69	0.58
1:X:805:G:N7	1:X:2419:C:H1'	2.18	0.58
1:X:1404:C:N4	1:X:1407:G:C8	2.72	0.58
1:X:1557:G:O2'	1:X:1558:C:H5'	2.04	0.58
1:X:1979:C:H6	1:X:1979:C:OP1	1.87	0.58
1:X:2205:C:H2'	1:X:2206:C:C5'	2.34	0.58
1:X:2837:G:O2'	1:X:2838:U:H5'	2.03	0.58
6:D:15:ALA:HA	6:D:18:GLN:HB2	1.85	0.58
6:D:75:SER:CB	6:D:79:LEU:HD22	2.34	0.58
12:J:121:LEU:O	12:J:124:HIS:N	2.37	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:Q:6:ILE:HG22	19:Q:7:LEU:N	2.18	0.58
19:Q:62:ARG:NH1	19:Q:73:ASN:ND2	2.52	0.58
1:X:310:A:H61	5:C:162:ARG:NH2	1.96	0.57
1:X:540:G:O6	1:X:2006:G:OP1	2.22	0.57
1:X:558:G:P	1:X:558:G:O4'	2.62	0.57
1:X:617:U:C5	1:X:632:A:C2	2.92	0.57
1:X:729:A:H3'	1:X:729:A:C4	2.38	0.57
1:X:754:G:C6	1:X:755:C:N4	2.72	0.57
1:X:953:G:H1'	1:X:1203:A:C2	2.38	0.57
1:X:1071:U:H1'	1:X:1073:G:H5''	1.87	0.57
1:X:1242:A:O2'	1:X:1243:G:H5'	2.03	0.57
1:X:1432:G:H2'	1:X:1594:U:O4	2.03	0.57
1:X:2195:C:C2'	1:X:2196:U:O4'	2.52	0.57
1:X:2551:A:N7	4:B:144:ARG:HD3	2.18	0.57
1:X:2596:C:O2'	1:X:2597:G:H5'	2.04	0.57
1:X:2678:C:O2'	1:X:2679:G:H5'	2.04	0.57
1:X:2764:U:H2'	1:X:2765:C:H6	1.69	0.57
2:Y:30:C:H2'	2:Y:31:A:C8	2.38	0.57
3:A:71:ASP:CG	3:A:103:ARG:HH12	2.06	0.57
4:B:116:VAL:CG1	4:B:136:ARG:HH21	2.04	0.57
5:C:195:ILE:O	5:C:195:ILE:HG13	2.03	0.57
12:J:15:ARG:HG3	12:J:15:ARG:HH11	1.69	0.57
16:N:47:TYR:CE2	16:N:51:ARG:HD3	2.38	0.57
17:O:26:GLN:HA	17:O:63:HIS:NE2	2.18	0.57
17:O:61:VAL:HG23	17:O:93:ILE:HA	1.86	0.57
21:S:22:VAL:HA	21:S:32:PHE:HD1	1.68	0.57
21:S:23:ALA:CB	21:S:83:PHE:HB2	2.31	0.57
23:U:50:ALA:HB3	23:U:52:ARG:HH22	1.69	0.57
24:V:42:ARG:NH1	24:V:45:GLN:HE22	2.02	0.57
1:X:150:A:H3'	1:X:151:G:H8	1.69	0.57
1:X:458:G:P	16:N:3:ARG:HD3	2.44	0.57
1:X:628:A:OP2	1:X:628:A:H8	1.86	0.57
1:X:698:A:C2	1:X:702:A:C6	2.91	0.57
1:X:1981:A:HO2'	1:X:2704:U:HO2'	1.51	0.57
1:X:2011:U:H2'	1:X:2012:A:H8	1.68	0.57
1:X:2326:C:C2	1:X:2327:U:C5	2.92	0.57
3:A:154:GLN:O	3:A:155:LEU:HD23	2.04	0.57
4:B:121:ASN:O	4:B:122:PHE:C	2.39	0.57
5:C:189:ASP:OD1	5:C:190:ALA:N	2.37	0.57
6:D:108:LEU:HD11	6:D:117:ILE:HD11	1.86	0.57
6:D:114:PHE:C	6:D:115:ARG:HG3	2.24	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:61:ARG:HH22	9:G:78:ASP:HB2	1.68	0.57
12:J:44:LYS:HD3	12:J:47:GLN:NE2	2.19	0.57
13:K:16:ALA:O	13:K:19:ALA:N	2.36	0.57
25:W:38:PRO:CD	25:W:41:ARG:HE	2.17	0.57
1:X:554:U:H5''	1:X:556:A:C2	2.39	0.57
1:X:664:C:H5'	1:X:664:C:H6	1.69	0.57
1:X:769:C:H2'	1:X:770:U:H5'	1.87	0.57
1:X:986:A:H2'	1:X:987:G:H5'	1.85	0.57
1:X:1006:C:N3	9:G:31:THR:OG1	2.31	0.57
1:X:1141:U:HO2'	1:X:1142:G:P	2.27	0.57
1:X:1231:A:C4	1:X:1232:U:C5	2.91	0.57
1:X:1391:A:H1'	1:X:1392:U:C2	2.39	0.57
3:A:217:ARG:O	3:A:218:LYS:C	2.42	0.57
4:B:134:TRP:O	4:B:135:HIS:C	2.41	0.57
7:E:18:ASN:O	7:E:20:GLN:N	2.37	0.57
10:H:116:ARG:NH1	15:M:38:LYS:HZ3	2.02	0.57
10:H:122:ARG:HH11	10:H:124:MET:HE2	1.68	0.57
11:I:54:SER:O	11:I:59:ARG:NH2	2.37	0.57
12:J:69:ILE:O	12:J:70:PHE:O	2.22	0.57
12:J:80:ALA:HB1	12:J:81:GLU:OE1	2.04	0.57
12:J:116:LYS:HE2	12:J:132:MET:HE2	1.86	0.57
15:M:105:TYR:O	15:M:107:LEU:N	2.37	0.57
16:N:24:PHE:HB2	16:N:29:SER:HB3	1.86	0.57
18:P:80:LEU:O	18:P:84:GLU:N	2.36	0.57
20:R:59:LYS:HD3	20:R:62:MET:HG3	1.86	0.57
21:S:64:ALA:CB	21:S:85:MET:HA	2.33	0.57
23:U:10:LYS:NZ	23:U:77:GLY:HA3	2.18	0.57
24:V:30:PHE:O	24:V:31:GLN:C	2.42	0.57
1:X:176:A:H2'	1:X:177:U:H5	1.69	0.57
1:X:417:C:C6	1:X:419:G:C8	2.93	0.57
1:X:510:G:N2	1:X:512:A:H3'	2.19	0.57
1:X:863:C:H4'	25:W:18:LYS:HB2	1.86	0.57
1:X:1033:G:N2	1:X:1035:G:N2	2.51	0.57
1:X:1252:C:C2'	1:X:1253:C:H5''	2.34	0.57
1:X:1314:A:H2'	1:X:1315:A:H3'	1.84	0.57
1:X:2053:G:N2	1:X:2054:A:N3	2.53	0.57
1:X:2284:U:H2'	1:X:2285:U:H5''	1.85	0.57
6:D:16:LEU:O	6:D:20:PHE:CD1	2.57	0.57
6:D:33:LYS:HD2	6:D:90:THR:CG2	2.34	0.57
6:D:92:ARG:HA	6:D:96:MET:HB2	1.87	0.57
7:E:43:VAL:HG23	7:E:51:LEU:O	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:71:LEU:O	7:E:74:ASN:HB2	2.04	0.57
9:G:106:TYR:O	9:G:110:LEU:CD1	2.53	0.57
14:L:27:LEU:HD13	14:L:51:LEU:HD22	1.87	0.57
16:N:22:LYS:O	16:N:24:PHE:N	2.36	0.57
1:X:82:G:C2	1:X:100:G:H2'	2.40	0.57
1:X:449:C:H2'	1:X:450:C:H6	1.69	0.57
1:X:620:G:O2'	1:X:621:U:H5'	2.02	0.57
1:X:759:C:H6	1:X:759:C:H5'	1.70	0.57
1:X:796:A:H2'	1:X:797:A:O3'	2.04	0.57
1:X:957:G:H2'	1:X:958:G:H8	1.69	0.57
1:X:999:A:H5''	25:W:8:SER:HB2	1.87	0.57
1:X:1391:A:O2'	1:X:1392:U:O5'	2.22	0.57
1:X:1459:U:H4'	1:X:1460:G:OP1	2.04	0.57
1:X:1525:A:C5	1:X:1526:U:H1'	2.38	0.57
1:X:1561:A:H2'	1:X:1562:G:O4'	2.04	0.57
1:X:1608:U:H2'	1:X:1609:G:C8	2.36	0.57
1:X:1626:A:C5'	1:X:1627:C:OP2	2.50	0.57
1:X:1831:G:C5	1:X:1832:G:N7	2.73	0.57
1:X:1996:A:OP1	18:P:118:LYS:HE3	2.04	0.57
1:X:2014:A:H1'	1:X:2434:G:O2'	2.04	0.57
1:X:2292:C:O2'	1:X:2293:G:H5'	2.04	0.57
1:X:2299:A:H2'	1:X:2299:A:N3	2.19	0.57
1:X:2323:U:O2'	1:X:2324:G:H5'	2.05	0.57
1:X:2720:A:C6	1:X:2744:A:C8	2.93	0.57
5:C:151:VAL:CG1	5:C:173:ALA:HA	2.34	0.57
6:D:70:ALA:HB3	6:D:83:MET:N	2.14	0.57
7:E:38:ASN:CB	7:E:41:LEU:HB2	2.33	0.57
7:E:44:ARG:HG3	7:E:44:ARG:NH2	2.20	0.57
7:E:157:TYR:C	7:E:171:LEU:HD23	2.25	0.57
10:H:117:GLU:HA	10:H:120:ASP:OD2	2.04	0.57
11:I:13:ARG:NH2	11:I:13:ARG:H	2.02	0.57
12:J:15:ARG:HD3	12:J:73:LYS:NZ	2.18	0.57
12:J:20:GLY:O	12:J:99:LYS:HG2	2.05	0.57
12:J:128:ILE:O	12:J:128:ILE:HD12	2.04	0.57
19:Q:11:VAL:HG23	19:Q:27:PHE:CA	2.35	0.57
1:X:176:A:H2'	1:X:177:U:C5	2.40	0.57
1:X:467:U:O2	1:X:467:U:H2'	2.04	0.57
1:X:504:G:H4'	18:P:27:VAL:CG1	2.34	0.57
1:X:618:A:C4	1:X:632:A:N6	2.73	0.57
1:X:760:U:O3'	18:P:110:ALA:CB	2.52	0.57
1:X:871:U:OP1	22:T:44:LYS:NZ	2.35	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1188:A:H3'	1:X:1189:G:C8	2.40	0.57
1:X:1206:G:O2'	1:X:1207:G:H5'	2.04	0.57
1:X:2319:G:H2'	1:X:2320:G:H8	1.67	0.57
1:X:2356:A:O2'	14:L:89:PHE:HZ	1.87	0.57
1:X:2475:C:C2'	1:X:2476:A:H5'	2.33	0.57
1:X:2532:G:C6	1:X:2533:U:C2	2.93	0.57
1:X:2753:C:O2'	1:X:2754:C:H5'	2.04	0.57
4:B:67:PHE:CD2	4:B:74:PRO:HA	2.40	0.57
4:B:183:LEU:HD21	15:M:16:ILE:HD13	1.86	0.57
5:C:126:ALA:O	5:C:127:ASP:HB2	2.03	0.57
7:E:28:GLY:HA3	7:E:79:VAL:CG2	2.35	0.57
9:G:42:VAL:HG13	9:G:166:LEU:O	2.04	0.57
20:R:85:ASP:H	20:R:90:LYS:HD3	1.69	0.57
24:V:35:GLY:O	24:V:36:GLN:CB	2.51	0.57
1:X:192:G:O4'	1:X:193:A:H4'	2.05	0.57
1:X:446:C:H2'	1:X:447:U:O4'	2.04	0.57
1:X:497:C:C6	1:X:497:C:H3'	2.40	0.57
1:X:765:C:C5	1:X:1772:C:C2	2.93	0.57
1:X:1060:C:H2'	1:X:1061:A:C8	2.40	0.57
1:X:1289:A:C2	1:X:1290:A:C8	2.93	0.57
1:X:1350:G:H2'	1:X:1351:G:H8	1.69	0.57
1:X:1422:C:O2'	1:X:1423:A:H5'	2.04	0.57
1:X:1468:A:C5'	1:X:1472:C:N4	2.64	0.57
1:X:1675:C:OP1	4:B:134:TRP:CE2	2.58	0.57
1:X:1686:A:H5''	1:X:1687:C:OP2	2.04	0.57
1:X:1811:A:H5''	3:A:161:THR:CG2	2.34	0.57
2:Y:80:A:H2'	2:Y:81:C:O4'	2.04	0.57
5:C:61:GLN:HA	5:C:61:GLN:HE21	1.69	0.57
5:C:139:GLN:CA	5:C:139:GLN:HE21	2.16	0.57
9:G:33:ILE:CB	9:G:34:PRO:CD	2.75	0.57
9:G:142:ARG:C	9:G:144:MET:H	2.07	0.57
11:I:123:ASP:OD1	11:I:123:ASP:O	2.22	0.57
18:P:67:PRO:C	18:P:69:ALA:N	2.57	0.57
20:R:97:GLN:HB2	20:R:101:GLY:HA2	1.86	0.57
21:S:6:LYS:N	21:S:7:PRO:HD3	2.18	0.57
1:X:546:A:H2'	1:X:547:U:C6	2.40	0.57
1:X:807:A:H2'	1:X:808:C:C6	2.39	0.57
1:X:1056:U:C2'	1:X:1057:A:OP2	2.53	0.57
1:X:1418:C:H2'	1:X:1419:G:C8	2.40	0.57
1:X:1724:C:N3	1:X:1747:G:C6	2.72	0.57
1:X:1808:C:C5	3:A:62:TYR:CE2	2.93	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1868:A:H2'	1:X:1869:A:O4'	2.04	0.57
1:X:2424:G:OP1	5:C:68:ARG:NH2	2.35	0.57
1:X:2609:G:H2'	1:X:2610:G:H8	1.70	0.57
5:C:138:LYS:O	5:C:140:ASN:N	2.37	0.57
9:G:90:LEU:HD23	9:G:93:LYS:O	2.04	0.57
10:H:8:LEU:HD22	10:H:94:ASN:HB3	1.87	0.57
12:J:95:VAL:HG12	12:J:96:SER:N	2.18	0.57
13:K:47:PHE:C	13:K:47:PHE:CD2	2.78	0.57
13:K:49:GLU:OE1	13:K:95:THR:CG2	2.52	0.57
14:L:101:LYS:HE2	14:L:105:ASP:OD2	2.04	0.57
16:N:75:ASN:OD1	16:N:78:THR:HB	2.05	0.57
17:O:14:VAL:O	17:O:15:SER:HB2	2.04	0.57
18:P:50:VAL:HB	18:P:90:LEU:O	2.05	0.57
24:V:28:LEU:O	24:V:31:GLN:HB2	2.05	0.57
25:W:31:SER:O	25:W:32:ARG:HB3	2.03	0.57
1:X:28:A:C2	1:X:523:A:C1'	2.87	0.57
1:X:28:A:C2	1:X:523:A:H1'	2.40	0.57
1:X:1514:C:C4'	1:X:1593:C:H5'	2.35	0.57
1:X:1972:G:H2'	1:X:1973:C:H6	1.70	0.57
1:X:2335:U:P	22:T:24:LYS:HZ2	2.28	0.57
1:X:2448:A:H61	1:X:2460:G:H1'	1.70	0.57
1:X:2551:A:N7	4:B:145:LYS:HB2	2.19	0.57
3:A:70:ARG:NH2	3:A:189:CYS:SG	2.78	0.57
3:A:181:GLU:C	3:A:182:LEU:HD23	2.25	0.57
6:D:63:GLN:HE21	6:D:95:ARG:HD2	1.68	0.57
9:G:83:ILE:HG13	9:G:84:ASN:ND2	2.19	0.57
11:I:86:THR:HG1	11:I:118:VAL:HG12	1.69	0.57
12:J:79:PRO:O	12:J:80:ALA:HB3	2.03	0.57
16:N:17:VAL:HG12	16:N:39:LEU:HD12	1.87	0.57
16:N:33:ARG:HG3	16:N:33:ARG:NH1	2.14	0.57
17:O:57:GLN:H	17:O:97:GLY:HA3	1.70	0.57
18:P:44:VAL:HG21	18:P:60:ILE:HD11	1.86	0.57
1:X:192:G:C1'	1:X:193:A:H4'	2.35	0.57
1:X:572:G:N3	16:N:37:GLN:NE2	2.52	0.57
1:X:1004:A:H2	17:O:21:ARG:HH21	1.53	0.57
1:X:1235:C:H2'	1:X:1236:G:C8	2.40	0.57
1:X:1339:U:H5''	1:X:1994:U:C1'	2.35	0.57
1:X:1477:C:O2'	1:X:2681:A:H1'	2.05	0.57
1:X:1482:U:OP2	1:X:1562:G:O2'	2.23	0.57
1:X:1570:C:H5'	1:X:1571:G:OP2	2.05	0.57
1:X:2387:U:H2'	1:X:2388:G:H8	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2698:G:H2'	1:X:2699:G:C8	2.40	0.57
1:X:2792:C:H2'	1:X:2793:G:O5'	2.05	0.57
5:C:104:LEU:N	5:C:177:VAL:HG22	2.20	0.57
5:C:112:GLN:HA	5:C:116:LYS:CB	2.32	0.57
5:C:112:GLN:HA	5:C:116:LYS:CG	2.34	0.57
6:D:86:GLY:C	6:D:87:ILE:HG13	2.24	0.57
9:G:108:GLY:N	9:G:110:LEU:HG	2.19	0.57
11:I:58:ALA:C	11:I:60:LEU:H	2.08	0.57
11:I:71:THR:HG21	11:I:104:ARG:NH2	2.20	0.57
12:J:76:THR:HG22	12:J:89:GLY:O	2.05	0.57
13:K:60:LEU:O	13:K:61:HIS:C	2.38	0.57
20:R:11:ASN:C	20:R:11:ASN:HD22	2.09	0.57
21:S:122:ILE:HA	21:S:161:ALA:H	1.69	0.57
24:V:14:PHE:CD2	24:V:57:LYS:HB2	2.40	0.57
25:W:16:GLN:HG2	25:W:47:VAL:HG12	1.85	0.57
1:X:192:G:H4'	1:X:193:A:H4'	1.86	0.56
1:X:458:G:OP1	16:N:3:ARG:HD3	2.05	0.56
1:X:615:C:H41	11:I:100:ARG:NH1	2.02	0.56
1:X:678:G:H4'	11:I:50:GLU:OE1	2.05	0.56
1:X:1345:G:N7	1:X:1625:A:H2'	2.20	0.56
1:X:2042:A:O3'	5:C:63:GLY:HA2	2.05	0.56
1:X:2665:G:C2	1:X:2704:U:O2	2.58	0.56
1:X:2714:A:H2'	1:X:2715:C:H6	1.68	0.56
5:C:153:ASP:C	5:C:154:ASP:OD1	2.42	0.56
6:D:34:ILE:O	6:D:91:LEU:HB2	2.05	0.56
6:D:69:LYS:HG2	6:D:84:PRO:HA	1.87	0.56
6:D:72:LYS:HA	6:D:81:GLN:CA	2.35	0.56
6:D:93:GLY:O	6:D:96:MET:HB3	2.05	0.56
9:G:169:GLN:HE21	9:G:171:LEU:N	2.03	0.56
10:H:13:ASN:ND2	10:H:108:THR:OG1	2.38	0.56
12:J:28:VAL:CB	12:J:137:VAL:HB	2.27	0.56
14:L:29:LEU:HD13	14:L:75:LEU:HD21	1.87	0.56
19:Q:90:ALA:C	19:Q:92:ALA:N	2.57	0.56
20:R:25:LEU:HG	20:R:81:VAL:CG2	2.35	0.56
21:S:93:GLU:HA	21:S:125:PRO:HD3	1.86	0.56
24:V:2:LYS:HG3	24:V:3:PRO:HD3	1.87	0.56
1:X:1332:G:C5	1:X:1333:G:C6	2.93	0.56
1:X:1371:G:O5'	1:X:1371:G:H8	1.88	0.56
1:X:1556:A:H2'	1:X:1557:G:H8	1.69	0.56
1:X:2302:G:H21	1:X:2316:G:H5'	1.69	0.56
1:X:2473:G:O2'	12:J:81:GLU:HB2	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2699:G:O2'	1:X:2700:U:C5'	2.53	0.56
1:X:2851:G:OP1	15:M:8:ASN:HA	2.05	0.56
5:C:129:LYS:O	5:C:131:LYS:N	2.31	0.56
6:D:170:LEU:HB3	6:D:175:LEU:HD23	1.87	0.56
9:G:113:GLU:CD	9:G:113:GLU:N	2.56	0.56
10:H:70:VAL:CG2	10:H:71:LYS:N	2.67	0.56
10:H:132:GLU:HG3	10:H:133:VAL:H	1.70	0.56
12:J:79:PRO:O	12:J:80:ALA:CB	2.54	0.56
14:L:75:LEU:O	14:L:78:ALA:N	2.37	0.56
15:M:94:VAL:O	15:M:95:GLU:HB3	2.04	0.56
20:R:34:GLY:O	20:R:48:VAL:HG13	2.05	0.56
22:T:37:LEU:O	22:T:38:VAL:CG2	2.53	0.56
1:X:75:C:H2'	1:X:76:C:C5'	2.28	0.56
1:X:333:A:C2'	1:X:350:U:O2	2.52	0.56
1:X:706:A:H2'	1:X:707:U:H6	1.71	0.56
1:X:729:A:C2'	1:X:730:C:C4'	2.83	0.56
1:X:752:G:C4'	1:X:753:U:OP1	2.49	0.56
1:X:815:A:H2'	1:X:816:U:C6	2.39	0.56
1:X:886:A:C1'	12:J:30:PHE:HE1	2.06	0.56
1:X:1094:C:O5'	1:X:1094:C:H6	1.89	0.56
1:X:1223:G:H5''	1:X:1224:A:H5''	1.85	0.56
1:X:1256:C:O2'	1:X:1257:U:H5'	2.05	0.56
1:X:1629:G:C4	1:X:1633:C:C4	2.93	0.56
1:X:1747:G:H4'	1:X:1749:G:C1'	2.33	0.56
1:X:1941:C:O2'	1:X:1942:G:H5'	2.06	0.56
1:X:2071:G:O2'	1:X:2072:C:H5'	2.06	0.56
1:X:2282:G:H4'	6:D:122:PHE:HA	1.86	0.56
1:X:2431:C:C4	1:X:2432:A:C6	2.94	0.56
1:X:2604:G:H2'	1:X:2605:C:O4'	2.05	0.56
1:X:2702:G:C6	1:X:2703:C:N3	2.73	0.56
1:X:2799:C:C4	1:X:2800:C:N3	2.74	0.56
2:Y:4:C:C6	2:Y:4:C:C3'	2.88	0.56
2:Y:16:U:H1'	2:Y:109:G:N2	2.17	0.56
3:A:198:ASN:O	3:A:199:ALA:HB3	2.06	0.56
4:B:76:ARG:NH1	15:M:4:HIS:HB2	2.21	0.56
5:C:90:SER:O	5:C:91:TYR:C	2.44	0.56
5:C:165:SER:HB3	5:C:166:TRP:CE3	2.40	0.56
5:C:166:TRP:HE3	5:C:166:TRP:H	1.49	0.56
5:C:180:ILE:HG23	5:C:181:LEU:N	2.20	0.56
6:D:4:LEU:HD11	6:D:173:MET:CE	2.32	0.56
6:D:30:ARG:HB2	6:D:159:THR:CG2	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:151:GLY:O	6:D:152:MET:HB3	2.05	0.56
7:E:11:VAL:HG21	7:E:50:LEU:HB2	1.86	0.56
7:E:105:MET:HE1	7:E:131:ILE:CD1	2.35	0.56
7:E:140:LEU:HA	7:E:143:GLN:HB2	1.86	0.56
9:G:106:TYR:O	9:G:108:GLY:N	2.38	0.56
11:I:28:LYS:NZ	11:I:36:GLY:HA2	2.20	0.56
11:I:108:LEU:HD23	11:I:129:ALA:HB1	1.86	0.56
12:J:62:GLY:HA3	12:J:64:LYS:HZ2	1.69	0.56
12:J:137:VAL:O	12:J:138:TYR:CD1	2.58	0.56
16:N:36:PHE:O	16:N:39:LEU:HB2	2.04	0.56
17:O:78:VAL:HG13	17:O:78:VAL:O	2.05	0.56
20:R:38:LEU:HB2	20:R:47:VAL:HB	1.88	0.56
23:U:11:LYS:NZ	23:U:75:TYR:HD1	1.99	0.56
1:X:553:C:H2'	1:X:557:U:C5	2.41	0.56
1:X:876:A:OP2	12:J:23:LYS:HD3	2.05	0.56
1:X:1467:U:C4	1:X:1473:U:N3	2.58	0.56
1:X:1917:C:H2'	1:X:1918:G:H5'	1.86	0.56
1:X:1933:G:C8	1:X:1934:U:C5	2.91	0.56
1:X:2081:U:H2'	1:X:2082:C:H6	1.70	0.56
1:X:2229:G:H5'	12:J:84:MET:HG2	1.87	0.56
1:X:2324:G:C4	1:X:2326:C:C5	2.94	0.56
1:X:2873:G:N2	9:G:162:LYS:NZ	2.54	0.56
4:B:149:ARG:HH12	9:G:106:TYR:HD1	1.53	0.56
5:C:162:ARG:HG2	5:C:162:ARG:O	2.05	0.56
5:C:169:VAL:HG12	5:C:170:LEU:N	2.20	0.56
8:F:20:ALA:HB3	8:F:21:PRO:HD3	1.86	0.56
9:G:67:ARG:O	9:G:70:PHE:CE1	2.58	0.56
10:H:13:ASN:HD22	10:H:109:ARG:HG2	1.67	0.56
14:L:43:ILE:HD12	14:L:43:ILE:N	2.20	0.56
19:Q:4:TYR:CD2	24:V:23:LYS:HB2	2.40	0.56
23:U:46:LEU:C	23:U:47:HIS:CG	2.77	0.56
30:4:10:MET:N	30:4:14:CYS:SG	2.72	0.56
1:X:1:G:H2'	1:X:2:G:H8	1.70	0.56
1:X:242:A:H61	1:X:440:U:H2'	1.70	0.56
1:X:810:U:C5	1:X:811:G:N7	2.73	0.56
1:X:938:G:H2'	1:X:940:G:C8	2.41	0.56
1:X:953:G:H8	1:X:953:G:O5'	1.88	0.56
1:X:1223:G:H5'	1:X:1225:G:O4'	2.06	0.56
1:X:1681:A:H61	1:X:1979:C:N4	1.98	0.56
1:X:1710:U:H5'	1:X:1711:C:H5	1.71	0.56
1:X:1835:C:O2'	3:A:254:THR:OG1	2.15	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1951:G:O2'	1:X:1952:A:O4'	2.19	0.56
1:X:2000:U:O2'	1:X:2002:A:OP2	2.22	0.56
1:X:2194:A:H3'	1:X:2195:C:C5'	2.22	0.56
1:X:2331:A:H2	22:T:33:ALA:HB1	1.70	0.56
1:X:2392:G:H2'	1:X:2393:G:O4'	2.04	0.56
1:X:2426:G:H4'	1:X:2427:A:O5'	2.06	0.56
1:X:2610:G:N3	1:X:2785:A:H2	2.03	0.56
1:X:2736:U:O5'	30:4:19:ARG:HG2	2.06	0.56
5:C:122:GLY:O	5:C:124:ASP:N	2.38	0.56
7:E:22:GLY:O	7:E:24:PHE:HD1	1.89	0.56
9:G:73:ASN:O	9:G:140:GLN:OE1	2.23	0.56
13:K:10:LEU:HD23	13:K:17:ARG:CG	2.35	0.56
15:M:5:ILE:CD1	15:M:7:ILE:HB	2.35	0.56
17:O:54:TYR:CD1	17:O:54:TYR:N	2.73	0.56
23:U:27:ASP:N	23:U:32:ARG:HH21	2.01	0.56
1:X:46:C:O2'	1:X:47:G:H5'	2.06	0.56
1:X:143:A:H2'	1:X:144:U:H6	1.68	0.56
1:X:155:G:H2'	1:X:156:G:C5'	2.36	0.56
1:X:467:U:O2'	1:X:468:A:OP1	2.24	0.56
1:X:689:A:C2	1:X:815:A:N6	2.71	0.56
1:X:1099:A:N6	8:F:133:SER:HB3	2.20	0.56
1:X:1221:C:H2'	1:X:1222:G:C8	2.41	0.56
1:X:1764:A:H2'	1:X:1765:C:H5'	1.86	0.56
1:X:1845:A:C2'	1:X:1846:A:O5'	2.53	0.56
1:X:1856:U:H3	1:X:1861:G:H1	1.54	0.56
1:X:1913:G:H5''	1:X:1914:U:OP1	2.05	0.56
1:X:1953:A:C5'	1:X:1954:A:OP1	2.53	0.56
11:I:105:PRO:O	11:I:106:VAL:HG23	2.05	0.56
16:N:61:TRP:CZ3	16:N:93:LYS:HA	2.40	0.56
16:N:88:ILE:HG22	17:O:48:GLY:C	2.25	0.56
18:P:109:ARG:HD3	18:P:115:ASN:ND2	2.20	0.56
19:Q:22:ARG:HG3	19:Q:24:VAL:HG23	1.88	0.56
20:R:98:ILE:CG2	20:R:99:VAL:H	2.03	0.56
23:U:52:ARG:O	23:U:53:GLU:HB3	2.06	0.56
30:4:22:ARG:HD2	30:4:37:GLY:HA3	1.86	0.56
1:X:340:G:OP2	1:X:340:G:C8	2.56	0.56
1:X:525:A:C2	1:X:1273:G:N3	2.71	0.56
1:X:542:A:N6	1:X:2003:A:H1'	2.21	0.56
1:X:1399:C:O2'	1:X:1400:A:H5'	2.05	0.56
1:X:1757:C:O2	1:X:1970:G:C2	2.58	0.56
1:X:2322:U:H2'	1:X:2323:U:N1	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:176:ARG:HE	15:M:16:ILE:HG12	1.70	0.56
7:E:24:PHE:N	7:E:24:PHE:CD1	2.72	0.56
7:E:54:ARG:NE	7:E:62:ARG:HG2	2.21	0.56
7:E:59:GLN:O	7:E:61:HIS:N	2.39	0.56
11:I:68:VAL:O	11:I:68:VAL:HG12	2.05	0.56
13:K:28:LEU:HD21	13:K:115:LEU:HG	1.87	0.56
14:L:68:ALA:HB1	14:L:102:ALA:HB1	1.86	0.56
16:N:65:ILE:HG12	16:N:96:ALA:HB2	1.88	0.56
16:N:88:ILE:HG22	17:O:48:GLY:O	2.06	0.56
18:P:13:GLN:HA	18:P:16:GLN:OE1	2.06	0.56
20:R:93:ARG:CZ	20:R:108:VAL:HA	2.36	0.56
21:S:75:LYS:C	21:S:77:ALA:H	2.09	0.56
21:S:103:ARG:HD3	21:S:108:VAL:CG2	2.35	0.56
22:T:50:GLY:C	22:T:62:LEU:HD23	2.26	0.56
1:X:20:C:H2'	1:X:21:A:H8	1.71	0.56
1:X:81:C:H5''	1:X:307:C:H5'	1.88	0.56
1:X:131:C:O2'	1:X:132:U:H5'	2.06	0.56
1:X:405:C:H2'	1:X:406:G:H8	1.69	0.56
1:X:577:U:O2	1:X:579:G:C8	2.59	0.56
1:X:890:U:H2'	1:X:891:A:C8	2.39	0.56
1:X:1830:C:N4	1:X:1881:U:H2'	2.21	0.56
1:X:1974:U:H2'	1:X:1975:G:H5'	1.88	0.56
1:X:2273:C:H5'	14:L:95:LYS:HD2	1.88	0.56
1:X:2340:C:H2'	1:X:2341:G:H5'	1.88	0.56
1:X:2448:A:N6	1:X:2460:G:H1'	2.21	0.56
1:X:2728:A:OP1	7:E:70:THR:HG21	2.05	0.56
3:A:43:ARG:N	3:A:43:ARG:CD	2.59	0.56
4:B:91:VAL:HB	4:B:93:VAL:HG12	1.86	0.56
5:C:129:LYS:C	5:C:131:LYS:N	2.58	0.56
6:D:108:LEU:HD22	6:D:114:PHE:CE1	2.41	0.56
7:E:172:LYS:HB2	7:E:172:LYS:NZ	2.18	0.56
9:G:95:LEU:HD21	9:G:117:GLU:OE2	2.06	0.56
9:G:155:THR:O	9:G:158:HIS:HB2	2.06	0.56
10:H:76:ARG:NH2	15:M:75:GLU:OE2	2.38	0.56
13:K:98:LEU:HD22	26:Z:56:GLN:HG2	1.87	0.56
13:K:100:VAL:CG1	13:K:101:GLY:H	2.16	0.56
14:L:36:LYS:N	14:L:36:LYS:HD2	2.20	0.56
18:P:111:ARG:O	18:P:113:SER:N	2.37	0.56
19:Q:4:TYR:CE1	19:Q:45:ALA:HA	2.37	0.56
19:Q:81:ARG:HG3	19:Q:81:ARG:HH11	1.70	0.56
1:X:221:A:C6	1:X:232:A:C8	2.94	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:333:A:OP1	5:C:162:ARG:HB2	2.05	0.56
1:X:689:A:C2	1:X:690:A:C8	2.94	0.56
1:X:844:G:O3'	11:I:41:SER:HB2	2.05	0.56
1:X:1003:C:O2'	17:O:71:ILE:CD1	2.54	0.56
1:X:1007:A:H4'	16:N:93:LYS:HB3	1.88	0.56
1:X:1585:A:N1	1:X:1586:A:C2	2.74	0.56
1:X:1672:A:H3'	1:X:1673:C:H6	1.70	0.56
1:X:1734:C:H5''	1:X:1735:G:H8	1.70	0.56
1:X:2190:A:H8	1:X:2191:A:OP2	1.89	0.56
1:X:2422:C:O2'	1:X:2423:G:H5'	2.05	0.56
1:X:2585:C:H2'	1:X:2586:G:H5'	1.88	0.56
4:B:85:ALA:N	4:B:86:PRO:HD2	2.21	0.56
5:C:135:SER:O	5:C:138:LYS:HB2	2.04	0.56
5:C:139:GLN:HE21	5:C:139:GLN:HA	1.70	0.56
7:E:95:ARG:HG3	7:E:106:ASN:HB3	1.86	0.56
9:G:51:LEU:HD13	9:G:88:VAL:HG21	1.85	0.56
9:G:66:HIS:CB	16:N:71:LEU:HD13	2.36	0.56
17:O:15:SER:HA	17:O:95:ILE:HG22	1.87	0.56
20:R:105:ARG:HH12	20:R:112:LYS:HA	1.70	0.56
21:S:141:MET:HG2	21:S:145:ASP:CB	2.33	0.56
22:T:37:LEU:O	22:T:38:VAL:HG23	2.06	0.56
24:V:38:ALA:O	24:V:40:PRO:HD3	2.04	0.56
1:X:162:C:H2'	1:X:163:A:H8	1.71	0.56
1:X:353:G:H2'	1:X:354:C:H6	1.71	0.56
1:X:649:G:N1	1:X:660:G:N1	2.54	0.56
1:X:666:U:OP1	1:X:666:U:H4'	2.05	0.56
1:X:1183:C:H2'	1:X:1184:G:C8	2.41	0.56
1:X:2081:U:H2'	1:X:2082:C:C6	2.40	0.56
1:X:2271:C:P	14:L:18:ARG:HH21	2.29	0.56
1:X:2271:C:H2'	1:X:2272:A:H8	1.71	0.56
1:X:2431:C:O2'	1:X:2432:A:H5'	2.05	0.56
3:A:164:GLN:NE2	3:A:166:GLN:NE2	2.52	0.56
4:B:105:THR:CG2	4:B:197:VAL:HB	2.36	0.56
11:I:76:LYS:CB	11:I:79:GLN:HG2	2.36	0.56
11:I:107:LYS:HG3	11:I:108:LEU:H	1.71	0.56
16:N:17:VAL:HG21	16:N:32:TYR:HE1	1.71	0.56
17:O:6:GLN:O	17:O:7:THR:CB	2.54	0.56
24:V:13:ASP:O	24:V:17:GLU:HG2	2.06	0.56
1:X:110:U:H6	1:X:110:U:H5'	1.70	0.55
1:X:401:G:H5'	1:X:402:A:OP2	2.05	0.55
1:X:810:U:C6	1:X:810:U:C3'	2.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:930:A:N7	1:X:931:G:C8	2.74	0.55
1:X:1007:A:C2	1:X:1008:G:C8	2.95	0.55
1:X:1060:C:H2'	1:X:1061:A:H8	1.71	0.55
1:X:1086:C:C3'	1:X:1087:C:H5''	2.34	0.55
1:X:1673:C:C5'	4:B:136:ARG:HD3	2.36	0.55
1:X:1794:A:O3'	3:A:257:LEU:HD13	2.06	0.55
1:X:1947:G:N1	1:X:1950:C:C4	2.74	0.55
5:C:104:LEU:HD12	5:C:175:VAL:HG21	1.88	0.55
7:E:171:LEU:N	7:E:171:LEU:HD12	2.21	0.55
9:G:154:GLU:N	9:G:154:GLU:OE1	2.39	0.55
12:J:19:THR:CG2	12:J:99:LYS:NZ	2.69	0.55
14:L:33:ARG:NH2	14:L:103:LEU:CB	2.68	0.55
15:M:6:LYS:O	15:M:7:ILE:HG12	2.06	0.55
19:Q:15:LYS:O	19:Q:18:SER:N	2.39	0.55
20:R:48:VAL:C	20:R:50:GLY:H	2.07	0.55
20:R:111:GLY:C	20:R:112:LYS:HD2	2.26	0.55
23:U:19:ILE:HG22	23:U:42:GLN:HG3	1.89	0.55
1:X:427:C:H1'	1:X:1856:U:C1'	2.36	0.55
1:X:665:A:C2	1:X:666:U:H6	2.23	0.55
1:X:836:G:H2'	1:X:837:U:H6	1.72	0.55
1:X:2325:A:O2'	1:X:2326:C:P	2.61	0.55
1:X:2336:G:N2	1:X:2338:C:H3'	2.22	0.55
1:X:2519:C:O2'	1:X:2520:A:H5'	2.06	0.55
1:X:2728:A:H4'	7:E:66:GLY:O	2.06	0.55
2:Y:92:G:N2	12:J:39:GLU:HG2	2.21	0.55
3:A:46:ARG:HD3	3:A:46:ARG:C	2.26	0.55
3:A:166:GLN:HB2	3:A:174:ILE:CG2	2.35	0.55
3:A:184:ARG:HH21	3:A:268:ARG:HH11	1.52	0.55
5:C:108:ILE:HG22	5:C:109:ALA:N	2.20	0.55
6:D:111:ILE:HG12	6:D:137:ILE:CB	2.35	0.55
18:P:32:ARG:HH21	18:P:33:MET:HA	1.71	0.55
18:P:80:LEU:HD21	18:P:87:GLU:HB3	1.87	0.55
19:Q:12:ILE:HG12	19:Q:13:SER:H	1.70	0.55
21:S:55:THR:HG22	21:S:59:GLY:HA2	1.88	0.55
1:X:23:G:C6	1:X:528:G:C6	2.94	0.55
1:X:1096:A:H2'	1:X:1097:A:O4'	2.06	0.55
1:X:1683:G:O3'	10:H:6:SER:OG	2.23	0.55
1:X:1982:C:H4'	1:X:2703:C:O2	2.06	0.55
1:X:2273:C:H5'	14:L:95:LYS:HE3	1.88	0.55
1:X:2524:G:O2'	1:X:2525:U:H5'	2.06	0.55
4:B:25:VAL:HG13	4:B:183:LEU:HD21	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:84:PHE:CD2	4:B:85:ALA:N	2.74	0.55
6:D:124:GLY:HA2	6:D:163:ASP:OD2	2.07	0.55
7:E:84:THR:CB	7:E:134:SER:HA	2.37	0.55
9:G:162:LYS:N	9:G:163:PRO:HD2	2.20	0.55
10:H:1:MET:CB	10:H:44:TYR:HB3	2.36	0.55
10:H:25:LEU:HD12	10:H:51:ILE:CA	2.36	0.55
19:Q:8:GLN:O	19:Q:9:ALA:HB2	2.05	0.55
19:Q:62:ARG:NH1	19:Q:73:ASN:HD21	2.05	0.55
25:W:34:VAL:HG22	25:W:40:VAL:HG11	1.87	0.55
1:X:84:G:N3	1:X:101:A:H2	2.02	0.55
1:X:409:G:C2'	1:X:410:A:H5'	2.36	0.55
1:X:455:A:N7	5:C:39:ARG:HG3	2.21	0.55
1:X:886:A:C1'	12:J:30:PHE:CE1	2.79	0.55
1:X:1096:A:H2'	1:X:1097:A:C4	2.41	0.55
1:X:1324:G:H2'	1:X:1325:U:H6	1.69	0.55
1:X:1729:C:H2'	1:X:1730:G:C8	2.41	0.55
1:X:1929:U:H2'	1:X:1930:C:C6	2.42	0.55
1:X:2009:U:O2	1:X:2021:G:N2	2.40	0.55
3:A:67:PHE:CE1	3:A:157:ARG:NH2	2.74	0.55
4:B:25:VAL:HG13	4:B:183:LEU:CD2	2.36	0.55
6:D:94:GLU:O	6:D:98:VAL:HG23	2.07	0.55
7:E:58:ALA:H	7:E:62:ARG:HG3	1.71	0.55
12:J:26:ASP:HB3	12:J:68:ARG:NH2	2.21	0.55
12:J:81:GLU:HG2	12:J:82:THR:N	2.21	0.55
14:L:71:VAL:HG22	14:L:103:LEU:HG	1.88	0.55
15:M:34:ARG:HH21	15:M:91:VAL:CG2	2.20	0.55
19:Q:48:VAL:HG22	19:Q:49:ARG:N	2.21	0.55
21:S:19:ILE:HG22	21:S:20:ALA:N	2.18	0.55
21:S:91:PRO:CG	21:S:92:VAL:H	2.19	0.55
22:T:52:GLY:N	22:T:62:LEU:HD21	2.22	0.55
26:Z:19:ARG:O	26:Z:21:SER:N	2.40	0.55
1:X:318:G:N2	1:X:321:A:O4'	2.39	0.55
1:X:612:G:H2'	1:X:668:A:H61	1.70	0.55
1:X:640:C:H4'	1:X:660:G:H21	1.71	0.55
1:X:760:U:O3'	18:P:110:ALA:HB2	2.06	0.55
1:X:801:A:O2'	1:X:802:A:P	2.64	0.55
1:X:913:A:N7	1:X:914:C:C5	2.74	0.55
1:X:1287:A:C2'	1:X:1288:A:H5''	2.36	0.55
1:X:1354:A:H1'	19:Q:54:SER:HB2	1.89	0.55
1:X:1869:A:H2'	1:X:1870:U:O4'	2.06	0.55
1:X:2684:A:H2'	1:X:2685:A:H8	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2691:C:O2'	1:X:2692:A:O5'	2.24	0.55
3:A:68:LYS:HD3	3:A:68:LYS:H	1.70	0.55
6:D:53:ALA:O	6:D:57:LEU:HG	2.05	0.55
9:G:128:GLU:O	9:G:145:HIS:CE1	2.59	0.55
11:I:28:LYS:HZ2	11:I:36:GLY:HA2	1.70	0.55
16:N:59:ARG:O	16:N:63:GLN:HG3	2.06	0.55
16:N:86:ALA:O	16:N:89:ASP:N	2.40	0.55
21:S:154:LEU:HD21	21:S:160:LEU:CD2	2.36	0.55
22:T:56:ASP:OD2	22:T:58:THR:OG1	2.24	0.55
23:U:23:LYS:CB	23:U:35:THR:HG23	2.36	0.55
25:W:39:ALA:O	25:W:43:MET:HG2	2.06	0.55
1:X:86:U:P	20:R:42:ARG:HH21	2.29	0.55
1:X:470:U:C5	1:X:480:G:N2	2.75	0.55
1:X:692:C:O2	1:X:693:A:C8	2.60	0.55
1:X:793:G:H21	1:X:796:A:H62	1.55	0.55
1:X:1003:C:H4'	17:O:71:ILE:HD13	1.89	0.55
1:X:1811:A:H5'	3:A:158:SER:OG	2.06	0.55
1:X:1831:G:C5	1:X:1832:G:C8	2.95	0.55
1:X:2395:C:HO2'	1:X:2396:C:H5''	1.72	0.55
1:X:2397:A:H2'	1:X:2398:U:O4'	2.07	0.55
1:X:2585:C:C2'	1:X:2586:G:H5'	2.37	0.55
1:X:2594:U:O2	1:X:2595:C:C5	2.60	0.55
3:A:105:ILE:HG22	3:A:106:LEU:O	2.07	0.55
5:C:54:THR:CB	5:C:73:SER:HB3	2.36	0.55
6:D:13:ARG:CG	6:D:17:MET:HE1	2.37	0.55
6:D:35:VAL:O	6:D:154:ILE:HG13	2.06	0.55
8:F:11:GLN:HG2	8:F:54:PRO:HB3	1.89	0.55
11:I:24:GLY:O	11:I:25:GLY:O	2.25	0.55
18:P:14:ARG:HA	18:P:17:GLN:NE2	2.21	0.55
21:S:91:PRO:CG	21:S:125:PRO:HG2	2.37	0.55
22:T:42:GLY:O	22:T:57:HIS:HD2	1.86	0.55
23:U:15:VAL:HG23	23:U:16:ASN:N	2.21	0.55
1:X:114:C:H2'	1:X:115:G:C8	2.42	0.55
1:X:203:G:N2	1:X:204:A:C2	2.75	0.55
1:X:546:A:H2'	1:X:547:U:H6	1.72	0.55
1:X:732:G:H8	1:X:732:G:P	2.29	0.55
1:X:739:G:O2'	1:X:740:A:O5'	2.25	0.55
1:X:1003:C:O3'	17:O:71:ILE:HD13	2.05	0.55
1:X:1145:C:C6	1:X:1147:G:OP2	2.60	0.55
1:X:1314:A:H2	1:X:1642:G:H21	1.52	0.55
1:X:1909:U:H5	1:X:1911:A:N6	2.04	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2029:G:N3	1:X:2602:G:C2	2.75	0.55
1:X:2044:G:O2'	1:X:2045:A:OP2	2.21	0.55
1:X:2199:C:N3	1:X:2200:G:N7	2.55	0.55
1:X:2310:G:C4'	22:T:42:GLY:HA3	2.36	0.55
1:X:2662:C:H2'	1:X:2663:U:H6	1.71	0.55
1:X:2685:A:C2	1:X:2686:C:C2	2.95	0.55
2:Y:95:U:H2'	2:Y:96:C:C6	2.42	0.55
3:A:163:VAL:HG22	3:A:176:ARG:O	2.07	0.55
3:A:208:LYS:O	3:A:209:ALA:O	2.24	0.55
4:B:153:GLY:O	4:B:154:LYS:C	2.43	0.55
6:D:16:LEU:O	6:D:20:PHE:HB2	2.06	0.55
6:D:58:ALA:HA	6:D:63:GLN:O	2.05	0.55
9:G:159:SER:O	9:G:161:GLN:N	2.36	0.55
12:J:42:TRP:HB3	12:J:95:VAL:CG1	2.37	0.55
12:J:119:PHE:CD1	12:J:132:MET:SD	3.00	0.55
13:K:21:ALA:O	13:K:25:ALA:HB2	2.06	0.55
15:M:33:VAL:HG22	15:M:51:GLU:HB2	1.89	0.55
23:U:24:ALA:C	23:U:26:ALA:H	2.09	0.55
24:V:4:SER:HB3	24:V:7:ARG:CZ	2.37	0.55
25:W:38:PRO:HD3	25:W:41:ARG:HH21	1.71	0.55
1:X:215:G:H2'	1:X:216:U:O4'	2.07	0.55
1:X:357:A:H2'	1:X:358:C:H5'	1.89	0.55
1:X:679:C:H2'	1:X:680:U:C6	2.41	0.55
1:X:954:U:C2'	1:X:955:G:H5''	2.34	0.55
1:X:1004:A:O2'	1:X:1005:U:H5'	2.07	0.55
1:X:1038:U:C5	1:X:1137:A:C2	2.94	0.55
1:X:1672:A:H3'	1:X:1673:C:C6	2.41	0.55
1:X:1745:C:P	15:M:101:ARG:NH2	2.73	0.55
1:X:1769:U:C5	1:X:1775:A:N3	2.75	0.55
1:X:1810:U:H3'	3:A:157:ARG:HG3	1.88	0.55
1:X:2007:G:C2	1:X:2023:C:O2	2.60	0.55
1:X:2174:G:H2'	1:X:2175:A:C8	2.42	0.55
1:X:2187:A:H2'	1:X:2188:A:C8	2.42	0.55
1:X:2198:U:C6	1:X:2198:U:OP2	2.60	0.55
1:X:2262:C:C5	1:X:2368:G:C4	2.95	0.55
1:X:2394:G:H2'	1:X:2395:C:C6	2.42	0.55
1:X:2532:G:N1	1:X:2533:U:O2	2.40	0.55
3:A:160:GLY:H	3:A:196:VAL:HG23	1.72	0.55
3:A:271:VAL:HG12	3:A:272:THR:HG23	1.88	0.55
5:C:24:SER:O	5:C:28:HIS:N	2.34	0.55
5:C:112:GLN:HB3	5:C:116:LYS:NZ	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:107:GLN:HA	9:G:110:LEU:HG	1.87	0.55
10:H:65:LYS:N	10:H:65:LYS:HD2	2.21	0.55
11:I:68:VAL:O	11:I:69:GLY:O	2.24	0.55
14:L:40:ALA:CB	14:L:103:LEU:HD11	2.19	0.55
14:L:80:ALA:C	14:L:82:LYS:H	2.10	0.55
15:M:106:TYR:HE1	15:M:107:LEU:HD21	1.71	0.55
1:X:167:A:C6	1:X:168:A:C6	2.95	0.55
1:X:416:U:O2'	1:X:419:G:H1'	2.06	0.55
1:X:632:A:H2'	1:X:633:G:H5'	1.88	0.55
1:X:1000:G:C8	25:W:10:ILE:HD11	2.41	0.55
1:X:1088:A:H2'	1:X:1089:C:O4'	2.06	0.55
1:X:1374:G:C2	1:X:1375:C:C6	2.95	0.55
1:X:2202:G:O2'	3:A:262:LYS:HD3	2.07	0.55
5:C:30:VAL:O	5:C:31:VAL:C	2.45	0.55
5:C:104:LEU:H	5:C:104:LEU:CD2	2.20	0.55
7:E:22:GLY:O	7:E:24:PHE:CD1	2.59	0.55
9:G:57:LEU:HD22	9:G:170:PRO:HA	1.89	0.55
10:H:48:GLY:O	10:H:121:ARG:HG3	2.07	0.55
10:H:97:VAL:O	10:H:97:VAL:HG12	2.06	0.55
10:H:100:ASN:O	10:H:102:GLN:N	2.35	0.55
14:L:68:ALA:HB1	14:L:102:ALA:HB2	1.88	0.55
16:N:22:LYS:HG3	16:N:23:GLY:N	2.18	0.55
16:N:65:ILE:CG1	16:N:96:ALA:HB2	2.37	0.55
20:R:37:LEU:HB2	20:R:47:VAL:O	2.07	0.55
24:V:13:ASP:O	24:V:17:GLU:N	2.40	0.55
30:4:7:VAL:HG13	30:4:25:VAL:HG21	1.87	0.55
1:X:113:C:O2'	1:X:114:C:H5'	2.07	0.55
1:X:1099:A:H61	8:F:133:SER:HB3	1.71	0.55
1:X:1189:G:H2'	1:X:1190:C:O4'	2.07	0.55
1:X:1215:A:H2'	1:X:1216:G:C8	2.42	0.55
1:X:1917:C:C2'	1:X:1918:G:H5'	2.36	0.55
1:X:1994:U:H2'	1:X:1995:G:H5'	1.89	0.55
4:B:125:GLY:O	4:B:126:PRO:O	2.25	0.55
4:B:149:ARG:NH1	9:G:106:TYR:CD1	2.75	0.55
5:C:117:LEU:HD22	5:C:187:VAL:HA	1.87	0.55
11:I:90:ARG:HA	11:I:121:HIS:ND1	2.21	0.55
19:Q:33:ALA:O	19:Q:34:THR:O	2.25	0.55
21:S:137:ASP:HB3	21:S:140:LYS:HE2	1.88	0.55
1:X:107:G:N2	1:X:108:G:H1'	2.22	0.54
1:X:583:C:H4'	1:X:584:A:O5'	2.07	0.54
1:X:636:G:H8	1:X:636:G:C5'	2.20	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:837:U:H2'	1:X:838:A:H8	1.73	0.54
1:X:1053:G:H1'	1:X:1125:G:N2	2.22	0.54
1:X:1149:G:O2'	1:X:1150:C:H5'	2.07	0.54
1:X:1313:U:HO2'	1:X:1314:A:P	2.30	0.54
1:X:1332:G:H2'	1:X:1333:G:C1'	2.38	0.54
1:X:1746:A:H2'	1:X:1747:G:O5'	2.07	0.54
1:X:2505:G:C2'	30:4:1:MET:H1	2.21	0.54
1:X:2856:U:C2	1:X:2857:C:C5	2.95	0.54
2:Y:68:A:H4'	2:Y:69:G:C8	2.42	0.54
4:B:144:ARG:O	4:B:146:THR:N	2.40	0.54
5:C:33:TRP:O	5:C:36:ALA:HB3	2.07	0.54
5:C:48:ARG:C	5:C:50:GLN:N	2.60	0.54
10:H:83:ARG:HH11	15:M:40:ARG:NE	2.04	0.54
13:K:113:ILE:HG23	13:K:113:ILE:O	2.06	0.54
15:M:61:GLY:O	15:M:63:ARG:N	2.40	0.54
17:O:13:ARG:HB2	17:O:13:ARG:NH2	2.21	0.54
23:U:67:LEU:O	23:U:71:SER:HB3	2.08	0.54
1:X:469:G:O2'	1:X:470:U:P	2.65	0.54
1:X:539:A:H5'	1:X:540:G:OP1	2.08	0.54
1:X:1122:A:C2	1:X:1123:G:H1'	2.42	0.54
1:X:1515:U:H2'	1:X:1516:A:C8	2.42	0.54
1:X:1551:U:H5'	1:X:1552:C:C6	2.42	0.54
1:X:1629:G:C2'	1:X:1633:C:H42	2.20	0.54
4:B:47:VAL:HG12	4:B:48:GLN:N	2.22	0.54
4:B:75:THR:HG23	4:B:76:ARG:N	2.22	0.54
6:D:7:LYS:O	6:D:11:GLN:N	2.40	0.54
6:D:40:LEU:HD12	6:D:85:VAL:O	2.07	0.54
6:D:52:LYS:HG2	6:D:147:ASP:OD1	2.07	0.54
9:G:141:GLY:O	9:G:144:MET:HB2	2.07	0.54
11:I:71:THR:HG22	11:I:104:ARG:HD3	1.89	0.54
12:J:59:PHE:CD1	12:J:65:ILE:HD11	2.41	0.54
14:L:8:ARG:NH1	14:L:8:ARG:CB	2.70	0.54
16:N:86:ALA:O	16:N:88:ILE:N	2.40	0.54
18:P:32:ARG:HE	18:P:32:ARG:CA	2.19	0.54
20:R:85:ASP:CG	20:R:86:PRO:HD3	2.28	0.54
20:R:93:ARG:HG2	20:R:94:VAL:HG23	1.90	0.54
20:R:100:ASP:C	20:R:102:LYS:N	2.59	0.54
20:R:108:VAL:CG1	20:R:109:ALA:N	2.52	0.54
21:S:64:ALA:HA	21:S:85:MET:HA	1.90	0.54
1:X:497:C:H6	1:X:497:C:H3'	1.72	0.54
1:X:688:A:C6	1:X:689:A:N6	2.76	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:971:A:H4'	1:X:2436:U:C5'	2.37	0.54
1:X:1655:C:H4'	1:X:2689:C:O2	2.08	0.54
1:X:2240:C:OP2	22:T:18:PRO:HD2	2.06	0.54
1:X:2541:U:C4'	10:H:23:ARG:NH1	2.64	0.54
1:X:2817:A:H2'	1:X:2818:G:O4'	2.07	0.54
5:C:122:GLY:HA2	5:C:124:ASP:OD1	2.07	0.54
5:C:147:LYS:HB2	5:C:184:ASP:H	1.71	0.54
9:G:132:PHE:CG	9:G:145:HIS:ND1	2.75	0.54
9:G:146:THR:O	9:G:149:LYS:HE3	2.07	0.54
12:J:82:THR:O	12:J:83:ARG:CB	2.55	0.54
13:K:43:GLU:OE1	13:K:44:LEU:HA	2.07	0.54
14:L:84:ILE:HD12	14:L:84:ILE:N	2.23	0.54
16:N:78:THR:HG23	16:N:117:ARG:CZ	2.36	0.54
20:R:11:ASN:O	20:R:12:ASP:C	2.46	0.54
30:4:15:LYS:HB2	30:4:26:ILE:HG13	1.89	0.54
1:X:437:G:O2'	1:X:438:G:H5'	2.07	0.54
1:X:617:U:C5	1:X:632:A:N1	2.76	0.54
1:X:665:A:C2	1:X:666:U:C6	2.96	0.54
1:X:1071:U:H4'	1:X:1072:U:C5'	2.36	0.54
1:X:1091:C:O2'	8:F:126:THR:N	2.41	0.54
1:X:1538:A:H2'	1:X:1539:U:C6	2.42	0.54
1:X:1685:A:C8	1:X:1691:G:C6	2.95	0.54
1:X:1933:G:N7	1:X:1934:U:H5	2.05	0.54
1:X:2038:C:H2'	1:X:2483:U:H4'	1.89	0.54
1:X:2407:G:H5''	1:X:2408:G:OP1	2.07	0.54
1:X:2414:A:C2'	1:X:2415:G:O5'	2.55	0.54
1:X:2701:A:H2'	1:X:2702:G:O5'	2.08	0.54
1:X:2722:C:H5''	30:4:35:ARG:HH12	1.73	0.54
2:Y:59:A:C2	6:D:26:MET:HB3	2.42	0.54
3:A:248:THR:HB	3:A:249:PRO:HD2	1.88	0.54
4:B:152:LYS:HD2	9:G:106:TYR:N	2.18	0.54
6:D:81:GLN:CG	6:D:82:GLY:H	2.15	0.54
6:D:106:ILE:CG2	6:D:110:ARG:HD2	2.25	0.54
12:J:79:PRO:HD2	12:J:88:LYS:HD2	1.89	0.54
16:N:66:ASN:HD22	16:N:70:ARG:HH22	1.54	0.54
23:U:28:GLY:O	23:U:29:GLY:C	2.46	0.54
26:Z:35:GLN:C	26:Z:37:HIS:H	2.10	0.54
1:X:89:A:H8	1:X:89:A:OP1	1.90	0.54
1:X:558:G:H8	1:X:559:C:C5	2.23	0.54
1:X:737:C:H2'	1:X:738:G:C8	2.42	0.54
1:X:773:G:H2'	1:X:774:A:O4'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1036:G:C4	1:X:1145:C:H1'	2.42	0.54
1:X:1089:C:H1'	1:X:1099:A:C2	2.42	0.54
1:X:1096:A:H4'	1:X:1097:A:OP1	2.07	0.54
1:X:1141:U:H4'	1:X:1142:G:OP1	2.06	0.54
1:X:1154:A:O2'	1:X:1155:G:OP1	2.24	0.54
1:X:1757:C:N3	1:X:1970:G:C6	2.76	0.54
1:X:1933:G:C5	1:X:1934:U:C5	2.96	0.54
1:X:2178:U:H2'	1:X:2179:C:C6	2.42	0.54
1:X:2690:A:OP1	1:X:2692:A:P	2.65	0.54
1:X:2691:C:O2'	1:X:2692:A:C5'	2.55	0.54
1:X:2779:C:H2'	1:X:2780:A:O4'	2.07	0.54
2:Y:108:G:C2'	2:Y:109:G:H5'	2.38	0.54
3:A:86:PRO:O	3:A:87:ASN:HB2	2.07	0.54
3:A:263:ARG:O	3:A:267:ASP:HB2	2.07	0.54
5:C:62:LYS:HD3	5:C:62:LYS:C	2.28	0.54
5:C:148:VAL:N	5:C:166:TRP:O	2.33	0.54
6:D:142:THR:O	6:D:146:VAL:HG13	2.07	0.54
6:D:168:ALA:O	6:D:169:LEU:C	2.45	0.54
7:E:24:PHE:HD1	7:E:24:PHE:H	1.54	0.54
9:G:67:ARG:HH21	9:G:70:PHE:C	2.11	0.54
10:H:49:ASP:O	10:H:74:VAL:HG23	2.08	0.54
11:I:29:THR:HA	11:I:34:HIS:HB2	1.90	0.54
14:L:102:ALA:O	14:L:104:ALA:N	2.40	0.54
15:M:105:TYR:C	15:M:107:LEU:N	2.61	0.54
16:N:13:ARG:O	16:N:16:LYS:HB2	2.08	0.54
20:R:33:THR:OG1	20:R:34:GLY:N	2.40	0.54
22:T:41:ARG:HH11	22:T:41:ARG:CG	2.11	0.54
24:V:3:PRO:O	24:V:5:GLU:N	2.40	0.54
24:V:32:ALA:HA	24:V:37:LEU:HB2	1.89	0.54
1:X:224:G:C4'	1:X:399:G:C6	2.86	0.54
1:X:497:C:C6	1:X:497:C:C3'	2.90	0.54
1:X:715:U:O2'	1:X:716:U:H5'	2.08	0.54
1:X:879:A:H2'	1:X:879:A:N3	2.23	0.54
1:X:1053:G:H2'	1:X:1054:C:O4'	2.07	0.54
1:X:1142:G:C8	1:X:2008:C:H4'	2.43	0.54
1:X:1339:U:O2	1:X:1339:U:C2'	2.56	0.54
1:X:1386:A:H5''	1:X:2191:A:C6	2.42	0.54
1:X:1631:C:H2'	1:X:1631:C:O2	2.08	0.54
1:X:2250:G:H8	1:X:2250:G:O5'	1.91	0.54
1:X:2312:A:H4'	1:X:2313:G:O5'	2.08	0.54
1:X:2527:G:C2	1:X:2540:A:C2	2.95	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2861:A:C2	1:X:2862:G:C4	2.96	0.54
3:A:227:ASN:O	3:A:228:PRO:C	2.45	0.54
9:G:67:ARG:HE	9:G:70:PHE:HA	1.73	0.54
9:G:142:ARG:C	9:G:144:MET:N	2.61	0.54
11:I:13:ARG:HG2	11:I:14:LYS:N	2.22	0.54
13:K:11:ASN:ND2	13:K:12:ARG:HG2	2.22	0.54
14:L:27:LEU:HD22	14:L:44:ASP:CA	2.29	0.54
17:O:10:LYS:HE3	17:O:11:GLN:HG2	1.90	0.54
19:Q:63:LYS:HD3	19:Q:69:ILE:O	2.08	0.54
20:R:38:LEU:HD12	20:R:47:VAL:CG2	2.27	0.54
20:R:106:VAL:CG2	20:R:113:THR:HG21	2.37	0.54
23:U:52:ARG:NH1	23:U:67:LEU:CD1	2.70	0.54
30:4:30:VAL:C	30:4:32:HIS:H	2.11	0.54
1:X:577:U:P	11:I:40:ARG:NH2	2.80	0.54
1:X:1038:U:H5	1:X:1137:A:C2	2.25	0.54
1:X:1347:C:N3	1:X:1348:C:C5	2.76	0.54
1:X:1483:G:N2	1:X:1541:G:H1'	2.23	0.54
1:X:2795:A:C2	15:M:2:GLN:N	2.76	0.54
1:X:2806:G:O4'	1:X:2858:A:C2	2.61	0.54
6:D:19:GLN:HB3	6:D:20:PHE:CD1	2.43	0.54
7:E:59:GLN:C	7:E:61:HIS:N	2.59	0.54
9:G:150:VAL:HG12	9:G:151:TYR:N	2.22	0.54
12:J:28:VAL:H	12:J:137:VAL:HG11	1.72	0.54
12:J:28:VAL:O	12:J:29:ALA:HB2	2.07	0.54
12:J:34:GLY:C	12:J:119:PHE:HE1	2.10	0.54
12:J:37:ALA:HA	12:J:130:THR:HG22	1.90	0.54
13:K:36:THR:OG1	13:K:37:THR:N	2.40	0.54
14:L:20:THR:CG2	14:L:23:ALA:HB3	2.37	0.54
18:P:87:GLU:HA	18:P:90:LEU:CD1	2.38	0.54
19:Q:91:LEU:N	19:Q:91:LEU:CD2	2.70	0.54
22:T:44:LYS:HG2	22:T:45:PHE:CE1	2.43	0.54
23:U:22:GLY:HA3	23:U:39:LYS:HG3	1.89	0.54
1:X:683:A:H5''	11:I:45:LYS:N	2.22	0.54
1:X:729:A:O2'	1:X:730:C:H4'	2.07	0.54
1:X:777:A:C3'	1:X:778:G:H5'	2.38	0.54
1:X:795:A:C2	3:A:226:MET:HE2	2.42	0.54
1:X:1234:C:H2'	1:X:1235:C:H6	1.73	0.54
1:X:1264:C:C5'	16:N:13:ARG:CZ	2.86	0.54
1:X:1304:U:H2'	1:X:1305:C:C6	2.43	0.54
1:X:1443:G:H2'	1:X:1444:C:H6	1.71	0.54
1:X:1541:G:H2'	1:X:1542:G:O4'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1918:G:C5	1:X:1945:C:N4	2.76	0.54
1:X:2292:C:H5'	6:D:37:ASN:ND2	2.23	0.54
1:X:2356:A:C2	14:L:91:ARG:NH2	2.73	0.54
1:X:2624:G:H4'	1:X:2712:G:O2'	2.08	0.54
1:X:2625:U:H6	1:X:2625:U:OP2	1.91	0.54
1:X:2679:G:O2'	1:X:2680:U:H5'	2.08	0.54
1:X:2797:G:C2'	1:X:2798:A:O5'	2.56	0.54
1:X:2873:G:H2'	1:X:2874:A:C8	2.43	0.54
2:Y:72:C:O2'	2:Y:73:C:H5'	2.07	0.54
3:A:268:ARG:HB3	3:A:269:PHE:CE2	2.42	0.54
6:D:170:LEU:HB3	6:D:175:LEU:CD2	2.38	0.54
7:E:164:PHE:O	7:E:165:VAL:C	2.46	0.54
9:G:101:THR:CG2	9:G:102:ARG:N	2.70	0.54
11:I:53:ARG:NH2	11:I:53:ARG:HG3	2.21	0.54
13:K:52:ILE:HG13	13:K:53:THR:N	2.22	0.54
14:L:15:ARG:HD2	14:L:91:ARG:CD	2.37	0.54
14:L:34:SER:HB2	14:L:94:TYR:CZ	2.42	0.54
14:L:94:TYR:CD2	14:L:94:TYR:N	2.74	0.54
20:R:24:VAL:HG23	20:R:32:GLN:O	2.08	0.54
20:R:90:LYS:O	20:R:90:LYS:HG3	2.08	0.54
21:S:6:LYS:N	21:S:7:PRO:CD	2.71	0.54
23:U:32:ARG:HG2	23:U:34:THR:N	2.23	0.54
26:Z:12:SER:HB2	26:Z:15:LYS:H	1.72	0.54
1:X:322:A:O2'	1:X:343:A:C4'	2.55	0.54
1:X:614:G:O2'	1:X:615:C:H5'	2.07	0.54
1:X:882:C:H2'	1:X:883:A:H8	1.71	0.54
1:X:1586:A:H5'	3:A:38:PRO:CG	2.32	0.54
1:X:1587:A:C2	1:X:1588:A:C5	2.96	0.54
1:X:1801:C:N4	23:U:48:LYS:HG3	2.22	0.54
1:X:2031:A:C2	1:X:2600:A:C2	2.96	0.54
1:X:2226:A:H2'	1:X:2227:C:H6	1.71	0.54
1:X:2395:C:C2'	1:X:2396:C:C5'	2.82	0.54
1:X:2508:G:O5'	1:X:2509:A:H5''	2.08	0.54
1:X:2519:C:H2'	1:X:2520:A:O4'	2.08	0.54
2:Y:53:G:H21	2:Y:54:U:H5	1.53	0.54
3:A:208:LYS:CE	3:A:208:LYS:HA	2.38	0.54
11:I:11:GLY:O	11:I:14:LYS:N	2.41	0.54
14:L:42:ILE:CG2	14:L:52:ALA:H	2.20	0.54
18:P:66:GLU:HB3	18:P:67:PRO:CD	2.37	0.54
20:R:96:LYS:O	20:R:104:VAL:HG12	2.08	0.54
21:S:92:VAL:C	21:S:93:GLU:HG3	2.28	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:55:A:C2	1:X:56:C:C2	2.96	0.54
1:X:971:A:H61	12:J:83:ARG:HH22	1.56	0.54
1:X:1134:C:O2'	1:X:1135:C:H5'	2.08	0.54
1:X:1218:C:O4'	11:I:13:ARG:NE	2.36	0.54
1:X:1301:U:N1	1:X:1340:C:O2	2.41	0.54
1:X:1601:U:H4'	1:X:1602:G:OP2	2.07	0.54
1:X:1795:C:H5'	3:A:257:LEU:HD13	1.89	0.54
1:X:1802:A:H2'	1:X:1803:G:O4'	2.08	0.54
1:X:2771:C:C6	1:X:2771:C:H5''	2.43	0.54
2:Y:30:C:H2'	2:Y:31:A:H8	1.73	0.54
3:A:231:HIS:HD2	3:A:233:HIS:H	1.54	0.54
5:C:39:ARG:NH1	5:C:39:ARG:HG2	2.23	0.54
7:E:65:HIS:C	7:E:67:LEU:H	2.11	0.54
9:G:124:GLU:HG3	9:G:152:ALA:HB2	1.91	0.54
10:H:23:ARG:HH12	10:H:25:LEU:HD23	1.73	0.54
12:J:64:LYS:HD2	12:J:64:LYS:N	2.23	0.54
17:O:74:TYR:OH	17:O:76:SER:HB3	2.07	0.54
19:Q:42:ILE:O	19:Q:43:GLN:C	2.47	0.54
21:S:109:GLN:NE2	21:S:142:ASN:OD1	2.41	0.54
1:X:165:G:H1'	1:X:1378:A:C6	2.43	0.53
1:X:392:G:N2	1:X:409:G:C4	2.76	0.53
1:X:1053:G:C6	1:X:1054:C:C4	2.96	0.53
1:X:1188:A:H8	1:X:1188:A:P	2.31	0.53
1:X:1246:G:C5	1:X:1247:U:C5	2.95	0.53
1:X:1280:U:C5	1:X:1995:G:N2	2.76	0.53
1:X:1289:A:C2	1:X:1290:A:N7	2.76	0.53
1:X:1442:C:O2'	1:X:1443:G:OP1	2.18	0.53
1:X:1522:C:H2'	1:X:1523:A:C5'	2.38	0.53
1:X:1582:A:C6	3:A:214:TRP:CZ2	2.96	0.53
1:X:1914:U:O4	1:X:1952:A:N7	2.41	0.53
1:X:2495:G:O2'	1:X:2496:C:H5'	2.07	0.53
1:X:2496:C:C5	1:X:2521:A:C5	2.96	0.53
1:X:2666:U:H2'	1:X:2667:C:O4'	2.07	0.53
3:A:108:PRO:HA	3:A:196:VAL:HA	1.89	0.53
4:B:116:VAL:CG2	4:B:136:ARG:NE	2.64	0.53
5:C:108:ILE:O	5:C:109:ALA:O	2.26	0.53
5:C:158:ARG:HD3	5:C:169:VAL:CG1	2.38	0.53
6:D:97:TYR:HD2	6:D:100:LEU:HD23	1.73	0.53
8:F:16:LYS:HD2	8:F:16:LYS:N	2.23	0.53
9:G:58:ILE:HG23	9:G:80:VAL:HG11	1.90	0.53
9:G:67:ARG:O	9:G:70:PHE:CD1	2.61	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:H:28:GLY:O	10:H:35:THR:OG1	2.25	0.53
12:J:78:LYS:CE	12:J:81:GLU:HA	2.39	0.53
14:L:107:ALA:C	14:L:109:GLU:H	2.11	0.53
15:M:27:PHE:C	15:M:28:ARG:HG2	2.27	0.53
18:P:94:GLU:O	18:P:126:ILE:HD12	2.08	0.53
21:S:13:LYS:HB2	21:S:13:LYS:HZ2	1.71	0.53
21:S:120:LEU:CD2	21:S:121:GLN:H	2.17	0.53
21:S:155:PRO:HD2	21:S:158:CYS:HB2	1.90	0.53
22:T:45:PHE:HA	22:T:77:ARG:HB2	1.90	0.53
24:V:42:ARG:NE	24:V:46:LEU:HD21	2.22	0.53
1:X:39:C:H2'	1:X:40:U:C6	2.43	0.53
1:X:204:A:N6	1:X:2386:G:C8	2.76	0.53
1:X:219:G:H2'	1:X:231:G:O6	2.08	0.53
1:X:356:A:H2'	1:X:357:A:N7	2.23	0.53
1:X:661:C:C2	1:X:662:G:C8	2.96	0.53
1:X:731:A:C2'	1:X:732:G:H5'	2.36	0.53
1:X:777:A:OP2	3:A:214:TRP:CH2	2.61	0.53
1:X:1149:G:N3	1:X:1154:A:H2	2.05	0.53
1:X:1264:C:H5''	16:N:13:ARG:CZ	2.38	0.53
1:X:1367:A:H2'	1:X:1368:G:O4'	2.08	0.53
1:X:1467:U:H6	1:X:1467:U:C3'	2.15	0.53
1:X:1609:G:H3'	1:X:1610:A:H8	1.73	0.53
1:X:2284:U:H4'	6:D:133:LYS:HE2	1.89	0.53
1:X:2387:U:H2'	1:X:2388:G:C8	2.43	0.53
1:X:2444:C:O2'	1:X:2445:C:H5'	2.08	0.53
1:X:2497:A:H5''	1:X:2498:U:OP2	2.07	0.53
1:X:2598:C:H2'	1:X:2599:U:C6	2.41	0.53
2:Y:56:G:H2'	2:Y:57:U:H6	1.72	0.53
2:Y:110:U:C3'	2:Y:111:C:H5''	2.39	0.53
7:E:136:ILE:H	7:E:136:ILE:CD1	2.16	0.53
8:F:79:ARG:HG2	8:F:84:ILE:HB	1.90	0.53
9:G:131:VAL:O	9:G:133:GLY:N	2.41	0.53
18:P:71:VAL:HG12	18:P:126:ILE:CG2	2.38	0.53
20:R:52:ASN:HD21	20:R:71:GLN:NE2	2.05	0.53
23:U:22:GLY:HA3	23:U:39:LYS:CG	2.38	0.53
23:U:28:GLY:HA3	23:U:32:ARG:HA	1.90	0.53
23:U:64:ALA:O	23:U:66:ALA:N	2.37	0.53
1:X:242:A:C2'	1:X:243:G:H4'	2.38	0.53
1:X:404:A:C5	1:X:405:C:C4	2.96	0.53
1:X:631:G:H4'	1:X:632:A:H5''	1.90	0.53
1:X:860:U:O2	1:X:860:U:C2'	2.57	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:914:C:O2'	1:X:915:C:H5'	2.09	0.53
1:X:1339:U:H5	1:X:1664:G:HO2'	1.51	0.53
1:X:1433:A:C2	1:X:1435:G:C8	2.97	0.53
1:X:1558:C:O2'	1:X:1559:G:H5'	2.09	0.53
1:X:1611:U:H2'	1:X:1612:U:O4'	2.07	0.53
1:X:1935:A:C6	1:X:1936:A:N1	2.76	0.53
1:X:2197:U:H5'	1:X:2198:U:OP1	2.08	0.53
1:X:2301:A:C4	1:X:2302:G:C8	2.97	0.53
1:X:2382:C:O2	1:X:2382:C:H2'	2.07	0.53
3:A:208:LYS:HE3	3:A:208:LYS:HA	1.91	0.53
5:C:22:VAL:CG1	5:C:23:ASN:N	2.71	0.53
5:C:109:ALA:O	5:C:111:ARG:N	2.41	0.53
6:D:16:LEU:O	6:D:20:PHE:HD1	1.90	0.53
9:G:169:GLN:HE21	9:G:170:PRO:C	2.11	0.53
17:O:35:LEU:HD22	17:O:36:LYS:N	2.24	0.53
20:R:38:LEU:HB2	20:R:47:VAL:CB	2.38	0.53
20:R:94:VAL:O	20:R:94:VAL:HG12	2.08	0.53
1:X:70:A:H4'	1:X:71:A:O5'	2.08	0.53
1:X:98:U:H3'	1:X:98:U:C6	2.42	0.53
1:X:428:A:H1'	1:X:1857:G:H5'	1.91	0.53
1:X:599:A:H2'	1:X:600:G:C8	2.44	0.53
1:X:651:C:C3'	1:X:652:C:H5''	2.39	0.53
1:X:1212:U:H2'	1:X:1213:U:H6	1.73	0.53
1:X:1235:C:H2'	1:X:1236:G:H8	1.73	0.53
1:X:1745:C:N4	1:X:1746:A:C6	2.76	0.53
1:X:1774:A:C2	1:X:2566:A:C5	2.97	0.53
1:X:1840:A:H2'	1:X:1841:G:O4'	2.08	0.53
1:X:2056:C:H2'	1:X:2057:U:H6	1.74	0.53
1:X:2058:U:C4	1:X:2217:G:C6	2.97	0.53
1:X:2085:G:H2'	1:X:2086:U:C6	2.43	0.53
1:X:2247:A:H5''	1:X:2247:A:C8	2.44	0.53
1:X:2620:G:OP1	9:G:104:THR:HG22	2.07	0.53
1:X:2695:C:H3'	1:X:2695:C:C6	2.43	0.53
1:X:2725:C:H2'	1:X:2726:U:H6	1.71	0.53
2:Y:15:A:C2'	2:Y:16:U:H5''	2.39	0.53
3:A:132:PRO:CD	3:A:190:TYR:CD2	2.88	0.53
5:C:117:LEU:HD23	5:C:118:VAL:N	2.23	0.53
6:D:92:ARG:C	6:D:96:MET:HB2	2.29	0.53
7:E:140:LEU:O	7:E:144:VAL:HG23	2.09	0.53
15:M:24:LEU:HB3	15:M:25:PRO:HD2	1.91	0.53
19:Q:9:ALA:HB1	19:Q:10:PRO:HD2	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:55:THR:O	20:R:69:GLN:HA	2.08	0.53
24:V:58:ALA:O	24:V:61:ALA:HB3	2.09	0.53
1:X:148:C:H3'	1:X:149:A:H8	1.73	0.53
1:X:165:G:C2'	1:X:166:G:H5'	2.38	0.53
1:X:653:G:C3'	1:X:654:A:H5''	2.38	0.53
1:X:770:U:O2'	1:X:771:C:H5'	2.08	0.53
1:X:863:C:H4'	25:W:18:LYS:CB	2.38	0.53
1:X:1339:U:O2	1:X:1339:U:H2'	2.08	0.53
1:X:1984:A:H4'	1:X:2668:U:H2'	1.90	0.53
1:X:2019:C:O2'	1:X:2020:G:H5'	2.08	0.53
1:X:2273:C:C5'	14:L:95:LYS:HD2	2.39	0.53
1:X:2691:C:O2'	1:X:2692:A:C8	2.52	0.53
1:X:2769:C:C2'	1:X:2770:A:C8	2.89	0.53
5:C:176:ASN:ND2	5:C:179:ASP:H	2.07	0.53
8:F:21:PRO:HB2	8:F:22:PRO:HD3	1.90	0.53
9:G:140:GLN:HG2	9:G:144:MET:CE	2.38	0.53
11:I:98:LEU:O	11:I:99:VAL:CG1	2.53	0.53
13:K:103:ARG:NH2	13:K:106:ASP:OD2	2.29	0.53
16:N:14:HIS:O	16:N:16:LYS:N	2.42	0.53
17:O:12:TYR:CG	17:O:13:ARG:N	2.75	0.53
18:P:52:ASP:O	18:P:53:ALA:C	2.46	0.53
20:R:17:LYS:HB3	20:R:18:LYS:HZ2	1.71	0.53
20:R:93:ARG:O	20:R:95:ARG:CD	2.57	0.53
23:U:11:LYS:HZ1	23:U:75:TYR:CB	2.15	0.53
23:U:15:VAL:HG23	23:U:16:ASN:H	1.74	0.53
26:Z:3:LYS:O	26:Z:4:HIS:C	2.47	0.53
1:X:219:G:C2'	1:X:220:U:OP2	2.57	0.53
1:X:314:G:H2'	1:X:315:G:H8	1.72	0.53
1:X:322:A:C2	1:X:342:G:H3'	2.44	0.53
1:X:332:C:H1'	5:C:159:ARG:HE	1.73	0.53
1:X:396:U:O4	1:X:398:C:C2	2.62	0.53
1:X:1268:U:N3	5:C:66:ASN:HA	2.23	0.53
1:X:1292:A:O2'	1:X:1293:A:H5'	2.08	0.53
1:X:1406:A:N6	19:Q:15:LYS:HD3	2.22	0.53
1:X:1519:G:H2'	1:X:1520:G:H8	1.73	0.53
1:X:1690:U:H2'	1:X:1691:G:H5'	1.89	0.53
1:X:2048:C:H1'	1:X:2428:U:N3	2.24	0.53
1:X:2213:G:N2	1:X:2214:G:C4	2.76	0.53
1:X:2306:A:H2'	1:X:2307:A:H8	1.68	0.53
1:X:2404:A:H4'	1:X:2405:A:H5'	1.91	0.53
1:X:2807:U:HO2'	1:X:2808:U:P	2.32	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:198:LEU:HD12	4:B:198:LEU:N	2.24	0.53
6:D:5:LYS:HA	6:D:8:TYR:HB3	1.90	0.53
7:E:39:THR:C	7:E:41:LEU:H	2.10	0.53
8:F:54:PRO:HD3	8:F:73:PRO:HD3	1.90	0.53
9:G:47:SER:O	9:G:49:VAL:N	2.42	0.53
10:H:29:ILE:HG21	10:H:123:PHE:HE1	1.73	0.53
10:H:46:HIS:O	10:H:47:VAL:C	2.46	0.53
12:J:36:ILE:HD11	12:J:133:VAL:HG11	1.90	0.53
16:N:31:GLN:O	16:N:32:TYR:O	2.26	0.53
16:N:66:ASN:HD22	16:N:70:ARG:NH2	2.06	0.53
17:O:15:SER:HA	17:O:95:ILE:CG2	2.39	0.53
18:P:62:ARG:NH1	26:Z:25:LEU:HD11	2.24	0.53
19:Q:66:GLY:C	19:Q:68:PHE:N	2.52	0.53
20:R:93:ARG:HA	20:R:95:ARG:CZ	2.38	0.53
20:R:100:ASP:C	20:R:102:LYS:H	2.12	0.53
21:S:94:VAL:HG23	21:S:125:PRO:HG3	1.90	0.53
23:U:52:ARG:NH1	23:U:79:GLU:OE1	2.39	0.53
1:X:71:A:C6	1:X:110:U:H4'	2.43	0.53
1:X:177:U:H2'	1:X:178:C:O4'	2.09	0.53
1:X:463:C:C2	1:X:465:C:C5	2.96	0.53
1:X:762:A:H4'	1:X:1284:G:N3	2.23	0.53
1:X:969:U:H5''	12:J:17:ARG:HH11	1.71	0.53
1:X:1142:G:HO2'	1:X:1143:A:P	2.31	0.53
1:X:1970:G:O2'	1:X:1971:C:H5'	2.07	0.53
1:X:2048:C:O2	1:X:2428:U:N3	2.35	0.53
1:X:2080:U:C4	1:X:2081:U:C4	2.97	0.53
1:X:2324:G:C2'	1:X:2325:A:OP2	2.57	0.53
1:X:2703:C:H2'	1:X:2704:U:O4'	2.09	0.53
1:X:2850:U:O2'	15:M:10:GLY:HA3	2.07	0.53
4:B:31:CYS:HB3	4:B:49:ILE:CG1	2.36	0.53
6:D:16:LEU:HD22	6:D:20:PHE:HE1	1.69	0.53
6:D:71:LYS:HB3	6:D:73:SER:OG	2.08	0.53
7:E:29:PRO:HG2	7:E:79:VAL:O	2.08	0.53
7:E:103:LEU:HB2	7:E:123:PHE:CD2	2.43	0.53
9:G:154:GLU:H	9:G:157:PRO:HD2	1.72	0.53
12:J:35:LEU:HB2	12:J:119:PHE:CD1	2.44	0.53
14:L:17:VAL:HG13	14:L:18:ARG:N	2.24	0.53
17:O:32:LYS:O	17:O:57:GLN:HA	2.08	0.53
19:Q:54:SER:OG	19:Q:79:ILE:HB	2.09	0.53
20:R:85:ASP:N	20:R:86:PRO:CD	2.63	0.53
21:S:100:THR:CG2	21:S:138:VAL:HG21	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:119:G:H2'	1:X:120:G:H8	1.74	0.53
1:X:688:A:N6	1:X:689:A:N6	2.57	0.53
1:X:986:A:O3'	16:N:48:ARG:NH2	2.41	0.53
1:X:1443:G:H2'	1:X:1444:C:C6	2.44	0.53
1:X:2265:A:H4'	1:X:2266:A:O5'	2.07	0.53
1:X:2299:A:O2'	1:X:2312:A:N6	2.42	0.53
1:X:2310:G:O4'	22:T:42:GLY:HA3	2.07	0.53
1:X:2344:G:H4'	22:T:60:PHE:CE2	2.44	0.53
1:X:2404:A:H4'	1:X:2405:A:H5''	1.91	0.53
1:X:2527:G:C6	1:X:2540:A:C2	2.97	0.53
1:X:2800:C:H3'	1:X:2801:A:H8	1.73	0.53
4:B:84:PHE:CZ	4:B:86:PRO:HG2	2.44	0.53
5:C:8:GLY:O	5:C:9:GLN:HB3	2.09	0.53
5:C:35:LEU:O	5:C:39:ARG:N	2.37	0.53
6:D:70:ALA:C	6:D:72:LYS:H	2.13	0.53
10:H:100:ASN:ND2	10:H:104:GLU:HG3	2.24	0.53
12:J:128:ILE:HD12	12:J:128:ILE:C	2.29	0.53
17:O:56:VAL:HA	17:O:97:GLY:HA3	1.91	0.53
24:V:24:GLU:OE2	24:V:46:LEU:HD11	2.07	0.53
26:Z:33:CYS:O	26:Z:37:HIS:HA	2.09	0.53
1:X:104:C:H2'	1:X:105:G:C5'	2.38	0.53
1:X:418:C:OP2	1:X:418:C:O4'	2.27	0.53
1:X:592:G:P	16:N:10:ARG:NH1	2.82	0.53
1:X:610:G:H1	1:X:670:U:H3	1.57	0.53
1:X:611:C:H5''	1:X:611:C:C6	2.43	0.53
1:X:629:C:H2'	1:X:630:G:O4'	2.08	0.53
1:X:698:A:N7	1:X:787:A:C5	2.77	0.53
1:X:975:C:O2'	1:X:2252:A:H1'	2.08	0.53
1:X:1034:U:H2'	1:X:1035:G:H5'	1.91	0.53
1:X:1105:U:O2	1:X:1107:A:C8	2.62	0.53
1:X:1296:G:H22	1:X:1299:A:H5''	1.74	0.53
1:X:1467:U:H3'	1:X:1468:A:C5'	2.38	0.53
1:X:1651:U:H4'	1:X:1652:G:OP2	2.02	0.53
1:X:1744:G:OP1	15:M:100:ARG:CD	2.52	0.53
1:X:1919:A:H2	1:X:1926:U:H3	1.23	0.53
1:X:2201:G:H5''	3:A:188:GLU:OE2	2.09	0.53
1:X:2245:A:H4'	1:X:2246:A:OP2	2.09	0.53
1:X:2382:C:C4	1:X:2394:G:C2	2.97	0.53
8:F:3:LYS:HD3	8:F:3:LYS:H	1.73	0.53
9:G:68:PRO:O	9:G:70:PHE:CD2	2.62	0.53
10:H:121:ARG:O	10:H:122:ARG:HB2	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:89:PHE:CD1	14:L:89:PHE:N	2.74	0.53
16:N:30:LYS:NZ	16:N:30:LYS:HB3	2.23	0.53
19:Q:61:LYS:HB2	19:Q:72:ARG:HD3	1.91	0.53
20:R:59:LYS:CD	20:R:62:MET:HG3	2.39	0.53
21:S:30:VAL:HG12	21:S:31:SER:O	2.08	0.53
21:S:91:PRO:HG3	21:S:125:PRO:HG2	1.90	0.53
1:X:48:A:O2'	1:X:49:U:OP2	2.26	0.53
1:X:318:G:H21	1:X:341:A:H62	1.57	0.53
1:X:329:C:O2'	1:X:330:C:H5'	2.09	0.53
1:X:417:C:C4	1:X:419:G:C4	2.97	0.53
1:X:969:U:C5'	12:J:17:ARG:NH1	2.71	0.53
1:X:1622:G:H4'	1:X:1624:A:C2	2.43	0.53
1:X:2187:A:C6	1:X:2188:A:C6	2.97	0.53
1:X:2306:A:C5	1:X:2367:A:N1	2.77	0.53
1:X:2735:C:H3'	30:4:19:ARG:HE	1.73	0.53
1:X:2845:C:H5''	13:K:65:LEU:HD11	1.91	0.53
3:A:177:LEU:HB3	3:A:178:PRO:HD2	1.91	0.53
5:C:104:LEU:N	5:C:104:LEU:CD2	2.72	0.53
6:D:13:ARG:HH21	6:D:17:MET:CE	2.22	0.53
6:D:81:GLN:HG2	6:D:82:GLY:N	2.22	0.53
6:D:118:ASN:HD21	6:D:120:ASN:ND2	2.07	0.53
9:G:122:HIS:O	9:G:123:PRO:C	2.45	0.53
9:G:169:GLN:NE2	9:G:171:LEU:O	2.42	0.53
12:J:55:MET:HB3	12:J:65:ILE:HD13	1.90	0.53
14:L:54:ALA:HB3	14:L:75:LEU:CA	2.39	0.53
20:R:105:ARG:NH2	20:R:112:LYS:CA	2.64	0.53
22:T:71:ASN:HB2	22:T:77:ARG:HD2	1.91	0.53
25:W:45:LYS:HA	25:W:45:LYS:CE	2.39	0.53
1:X:174:A:H8	1:X:2051:U:C4	2.27	0.52
1:X:304:A:H2'	1:X:305:A:C5'	2.15	0.52
1:X:428:A:H2'	1:X:429:C:O4'	2.09	0.52
1:X:520:C:O2	1:X:520:C:H2'	2.08	0.52
1:X:719:A:H2'	1:X:720:A:H5'	1.90	0.52
1:X:857:U:O5'	1:X:857:U:H6	1.92	0.52
1:X:971:A:C4'	1:X:2436:U:H4'	2.39	0.52
1:X:1089:C:H5''	1:X:1090:C:OP1	2.09	0.52
1:X:1179:A:C2	1:X:1196:G:C2	2.97	0.52
1:X:1386:A:H5''	1:X:2191:A:H62	1.68	0.52
1:X:1710:U:H5'	1:X:1711:C:C5	2.44	0.52
1:X:1841:G:C2'	1:X:1842:G:H5'	2.39	0.52
1:X:2475:C:O2'	1:X:2476:A:H5'	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2596:C:C2'	1:X:2597:G:H5'	2.39	0.52
3:A:149:PRO:HG3	3:A:186:HIS:NE2	2.24	0.52
5:C:33:TRP:CE3	5:C:34:GLN:HG2	2.44	0.52
5:C:189:ASP:O	5:C:190:ALA:C	2.47	0.52
6:D:97:TYR:HA	6:D:100:LEU:HB3	1.91	0.52
7:E:7:GLN:H	7:E:8:PRO:CD	2.22	0.52
7:E:101:LYS:O	7:E:123:PHE:HB2	2.09	0.52
12:J:86:LYS:O	12:J:88:LYS:HG3	2.09	0.52
20:R:93:ARG:N	20:R:95:ARG:HH2	2.06	0.52
21:S:54:ILE:HD12	21:S:85:MET:HE1	1.92	0.52
22:T:82:GLU:O	22:T:83:ALA:O	2.27	0.52
1:X:194:G:H2'	1:X:195:A:O4'	2.09	0.52
1:X:476:G:C6	1:X:477:A:N6	2.78	0.52
1:X:777:A:OP2	3:A:214:TRP:HH2	1.91	0.52
1:X:1629:G:C6	1:X:1633:C:C5	2.97	0.52
1:X:1658:A:N6	1:X:1659:G:C2	2.77	0.52
1:X:2625:U:OP2	1:X:2625:U:C6	2.62	0.52
1:X:2780:A:H2'	1:X:2781:G:C8	2.43	0.52
1:X:2796:A:O2'	1:X:2797:G:H5'	2.08	0.52
6:D:72:LYS:HA	6:D:81:GLN:O	2.08	0.52
9:G:61:ARG:HE	9:G:65:LYS:CE	2.22	0.52
9:G:88:VAL:HG13	9:G:89:ALA:N	2.22	0.52
11:I:56:LEU:O	11:I:57:ILE:C	2.47	0.52
11:I:58:ALA:O	11:I:59:ARG:HB2	2.08	0.52
11:I:61:PRO:O	11:I:62:LYS:HB2	2.09	0.52
12:J:62:GLY:C	12:J:64:LYS:H	2.12	0.52
19:Q:6:ILE:O	19:Q:7:LEU:C	2.48	0.52
19:Q:63:LYS:HE3	19:Q:65:VAL:HA	1.91	0.52
20:R:105:ARG:CZ	20:R:112:LYS:HA	2.40	0.52
26:Z:45:ILE:HG21	26:Z:57:VAL:HG23	1.89	0.52
1:X:743:A:C2	1:X:744:C:C2	2.97	0.52
1:X:832:A:H2'	1:X:833:A:H5'	1.91	0.52
1:X:1253:C:H2'	1:X:1254:G:O5'	2.09	0.52
1:X:1348:C:H2'	1:X:1349:A:C8	2.40	0.52
1:X:1542:G:N2	1:X:1562:G:N1	2.37	0.52
1:X:1583:A:H8	1:X:1583:A:OP2	1.92	0.52
1:X:1886:G:H2'	1:X:1887:G:H8	1.73	0.52
1:X:1911:A:H2'	1:X:1912:G:H1'	1.91	0.52
1:X:2001:G:H2'	1:X:2002:A:O4'	2.09	0.52
1:X:2052:G:C2	1:X:2053:G:C8	2.97	0.52
2:Y:44:C:O2	6:D:90:THR:N	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:35:GLU:HG3	3:A:35:GLU:O	2.10	0.52
3:A:44:ASN:N	3:A:44:ASN:ND2	2.53	0.52
5:C:45:THR:HG21	5:C:85:GLY:HA3	1.89	0.52
6:D:47:SER:HA	6:D:50:ILE:HD11	1.91	0.52
6:D:108:LEU:HA	6:D:111:ILE:CG1	2.39	0.52
6:D:118:ASN:ND2	6:D:119:PRO:HD2	2.25	0.52
6:D:175:LEU:HD12	6:D:176:PRO:HD2	1.90	0.52
7:E:95:ARG:HA	7:E:128:PRO:O	2.09	0.52
10:H:110:VAL:HG12	10:H:111:PHE:N	2.24	0.52
12:J:31:GLY:CA	12:J:108:ALA:HB2	2.40	0.52
12:J:36:ILE:HD12	12:J:133:VAL:HG11	1.91	0.52
19:Q:59:PRO:O	19:Q:75:ARG:NH2	2.42	0.52
1:X:210:A:H61	1:X:441:A:H62	1.57	0.52
1:X:463:C:N4	1:X:466:A:OP2	2.29	0.52
1:X:538:A:H5'	9:G:142:ARG:HH12	1.75	0.52
1:X:965:G:H2'	1:X:966:A:O4'	2.09	0.52
1:X:972:C:C5'	1:X:973:U:OP2	2.57	0.52
1:X:1378:A:H2'	1:X:1379:A:H8	1.74	0.52
1:X:1968:G:O2'	1:X:1969:G:H5'	2.10	0.52
1:X:2076:G:N3	1:X:2181:A:N6	2.57	0.52
1:X:2171:U:C4	1:X:2172:U:C4	2.98	0.52
1:X:2652:G:C2	1:X:2653:A:C8	2.97	0.52
5:C:74:VAL:HB	5:C:75:PRO:HD2	1.90	0.52
5:C:154:ASP:O	5:C:157:THR:OG1	2.27	0.52
9:G:65:LYS:C	9:G:67:ARG:H	2.12	0.52
10:H:13:ASN:C	10:H:15:GLY:N	2.62	0.52
14:L:64:LYS:HG2	14:L:65:THR:HG23	1.91	0.52
18:P:69:ALA:O	18:P:71:VAL:N	2.43	0.52
20:R:93:ARG:HA	20:R:95:ARG:NH2	2.24	0.52
1:X:4:C:O2'	1:X:5:A:H5'	2.09	0.52
1:X:19:C:H5'	1:X:563:U:OP1	2.10	0.52
1:X:89:A:OP1	1:X:89:A:O4'	2.27	0.52
1:X:172:A:C2	1:X:178:C:O2	2.62	0.52
1:X:422:C:H2'	1:X:423:G:H8	1.74	0.52
1:X:543:G:H5'	16:N:24:PHE:CD1	2.43	0.52
1:X:623:G:H3'	1:X:624:A:C5'	2.22	0.52
1:X:1656:U:H2'	1:X:1657:A:C5'	2.39	0.52
1:X:1747:G:C4'	1:X:1749:G:H1'	2.35	0.52
1:X:1909:U:H5'	1:X:1911:A:OP2	2.09	0.52
1:X:2005:U:H4'	1:X:2006:G:OP1	2.10	0.52
1:X:2055:G:C2	1:X:2417:U:O2	2.62	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2562:G:C6	1:X:2563:U:N3	2.77	0.52
3:A:96:HIS:CE1	3:A:97:TYR:O	2.63	0.52
3:A:231:HIS:CD2	3:A:233:HIS:HB2	2.45	0.52
5:C:82:VAL:O	5:C:83:ALA:C	2.47	0.52
9:G:65:LYS:HG2	9:G:66:HIS:N	2.24	0.52
9:G:99:VAL:O	9:G:99:VAL:HG12	2.09	0.52
11:I:64:GLY:O	11:I:65:PHE:CB	2.58	0.52
14:L:10:LYS:C	14:L:14:ARG:HG3	2.30	0.52
17:O:34:GLU:O	17:O:35:LEU:O	2.28	0.52
18:P:81:HIS:HD2	18:P:82:ASN:OD1	1.93	0.52
19:Q:6:ILE:CG2	19:Q:7:LEU:N	2.72	0.52
20:R:84:VAL:HG13	20:R:86:PRO:HD2	1.90	0.52
1:X:930:A:H5''	2:Y:100:G:O2'	2.10	0.52
1:X:983:G:H3'	1:X:984:A:H5''	1.92	0.52
1:X:1093:U:H2'	1:X:1094:C:O4'	2.10	0.52
1:X:1128:G:C3'	1:X:1129:A:C5'	2.86	0.52
1:X:1212:U:H2'	1:X:1213:U:C6	2.44	0.52
1:X:1301:U:O2'	1:X:1664:G:N2	2.40	0.52
1:X:1336:G:OP1	18:P:105:ARG:NH1	2.41	0.52
1:X:1534:A:H2'	1:X:1535:C:H6	1.75	0.52
1:X:1574:A:O2'	1:X:1575:C:H3'	2.10	0.52
1:X:1662:G:H5''	1:X:1663:C:H5'	1.91	0.52
1:X:1856:U:H2'	1:X:1857:G:O5'	2.09	0.52
1:X:2258:G:C6	1:X:2259:G:N7	2.78	0.52
2:Y:35:C:O2'	2:Y:36:A:H5'	2.09	0.52
4:B:75:THR:HG23	4:B:76:ARG:H	1.74	0.52
4:B:141:ILE:CG2	4:B:154:LYS:HZ3	2.22	0.52
4:B:147:PRO:C	4:B:149:ARG:H	2.12	0.52
4:B:184:VAL:HG12	4:B:185:LYS:O	2.10	0.52
5:C:28:HIS:HA	11:I:15:ASP:OD2	2.09	0.52
6:D:52:LYS:NZ	6:D:149:THR:HA	2.24	0.52
6:D:70:ALA:HB3	6:D:81:GLN:O	2.09	0.52
7:E:7:GLN:H	7:E:8:PRO:HD3	1.75	0.52
7:E:24:PHE:HD1	7:E:24:PHE:N	2.06	0.52
7:E:38:ASN:OD1	7:E:64:LEU:HD22	2.09	0.52
12:J:28:VAL:HG23	12:J:137:VAL:CG2	2.39	0.52
18:P:67:PRO:C	18:P:69:ALA:H	2.13	0.52
19:Q:55:THR:O	19:Q:56:MET:SD	2.68	0.52
19:Q:64:ARG:O	19:Q:65:VAL:CG2	2.58	0.52
20:R:105:ARG:HH12	20:R:112:LYS:CA	2.22	0.52
23:U:22:GLY:CA	23:U:39:LYS:HD2	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:196:A:H2	1:X:211:U:O2	1.91	0.52
1:X:490:A:O2'	1:X:491:A:H3'	2.09	0.52
1:X:739:G:O2'	1:X:740:A:H8	1.93	0.52
1:X:771:C:O2'	1:X:772:G:H5'	2.09	0.52
1:X:777:A:O2'	1:X:778:G:OP1	2.24	0.52
1:X:827:C:O2'	1:X:828:C:H5'	2.09	0.52
1:X:829:C:O2'	1:X:830:C:H5'	2.10	0.52
1:X:965:G:H1'	1:X:2253:A:N1	2.25	0.52
1:X:1332:G:C2'	1:X:1333:G:O4'	2.57	0.52
1:X:1794:A:O2'	3:A:257:LEU:CD1	2.56	0.52
1:X:2811:G:C6	1:X:2858:A:C6	2.98	0.52
1:X:2852:G:C2'	1:X:2853:U:H5'	2.39	0.52
2:Y:15:A:H2	2:Y:71:G:N3	2.06	0.52
2:Y:46:G:H5'	6:D:92:ARG:HH12	1.72	0.52
5:C:48:ARG:O	5:C:51:VAL:HG22	2.09	0.52
12:J:33:TYR:O	12:J:106:GLU:HA	2.10	0.52
13:K:26:THR:HG23	13:K:75:VAL:HG11	1.92	0.52
14:L:22:ALA:C	14:L:24:SER:N	2.63	0.52
14:L:28:ARG:NH1	14:L:90:ASP:OD2	2.43	0.52
14:L:85:LYS:HG2	14:L:86:GLN:HG2	1.92	0.52
15:M:104:LEU:HA	15:M:106:TYR:CD2	2.45	0.52
16:N:32:TYR:O	16:N:34:ASN:N	2.43	0.52
16:N:40:LEU:HB3	17:O:74:TYR:CD2	2.44	0.52
18:P:25:PHE:HD1	18:P:127:ILE:HD11	1.75	0.52
1:X:88:G:H2'	1:X:89:A:C8	2.45	0.52
1:X:537:C:O2	1:X:537:C:H2'	2.10	0.52
1:X:589:C:H4'	16:N:31:GLN:HE22	1.75	0.52
1:X:632:A:H2'	1:X:633:G:C5'	2.40	0.52
1:X:648:A:H5''	1:X:649:G:OP1	2.09	0.52
1:X:1011:A:C6	1:X:1166:A:C5	2.98	0.52
1:X:1086:C:H3'	1:X:1087:C:C5'	2.34	0.52
1:X:1267:A:N1	5:C:76:THR:HG21	2.24	0.52
1:X:1281:A:C4'	1:X:2592:U:H5	2.22	0.52
1:X:1375:C:N3	1:X:1376:C:C5	2.77	0.52
1:X:1707:A:H3'	1:X:1708:C:H6	1.75	0.52
1:X:1767:G:N2	1:X:1768:U:H1'	2.25	0.52
1:X:1965:U:C2	1:X:1966:C:C5	2.98	0.52
1:X:1966:C:H4'	1:X:2585:C:H4'	1.92	0.52
1:X:2074:U:C3'	1:X:2075:U:H5''	2.32	0.52
1:X:2673:G:H2'	1:X:2674:C:H6	1.75	0.52
2:Y:9:G:H5'	14:L:32:TYR:CD2	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Y:63:A:O2'	2:Y:64:C:H5'	2.10	0.52
3:A:124:GLU:O	3:A:126:LYS:N	2.42	0.52
5:C:13:ARG:H	5:C:13:ARG:HD2	1.75	0.52
5:C:148:VAL:CG1	5:C:167:VAL:HG12	2.40	0.52
6:D:4:LEU:HD21	6:D:173:MET:CE	2.39	0.52
6:D:143:TYR:HA	6:D:146:VAL:CG2	2.39	0.52
11:I:78:SER:N	11:I:112:GLY:HA3	2.25	0.52
11:I:90:ARG:O	11:I:121:HIS:HB2	2.10	0.52
13:K:60:LEU:HG	13:K:64:ARG:HD2	1.92	0.52
13:K:97:ILE:HA	13:K:112:LEU:O	2.10	0.52
14:L:39:TYR:O	14:L:41:GLN:N	2.43	0.52
16:N:20:ARG:NH1	17:O:83:ARG:NH2	2.58	0.52
16:N:88:ILE:O	17:O:48:GLY:HA3	2.10	0.52
16:N:91:ASN:HA	16:N:93:LYS:HZ2	1.73	0.52
17:O:40:VAL:HG12	17:O:45:THR:HA	1.91	0.52
17:O:43:GLU:O	17:O:45:THR:N	2.43	0.52
21:S:39:PHE:HA	21:S:42:ALA:HB3	1.92	0.52
21:S:104:SER:OG	21:S:113:VAL:HG21	2.09	0.52
1:X:140:G:H2'	1:X:141:G:C8	2.45	0.52
1:X:356:A:C2'	1:X:357:A:C8	2.93	0.52
1:X:709:A:C2'	1:X:710:C:H5'	2.39	0.52
1:X:1042:G:H2'	1:X:1043:A:C8	2.45	0.52
1:X:1200:G:H2'	1:X:1201:G:H8	1.75	0.52
1:X:1707:A:C8	1:X:1708:C:C5	2.98	0.52
1:X:1808:C:C5	3:A:62:TYR:CD2	2.97	0.52
1:X:1927:U:O2	1:X:1938:U:H5''	2.09	0.52
1:X:2058:U:H1'	1:X:2576:G:H21	1.74	0.52
1:X:2240:C:C6	22:T:17:ASN:OD1	2.62	0.52
1:X:2689:C:H2'	1:X:2690:A:H8	1.75	0.52
1:X:2779:C:C6	1:X:2779:C:H3'	2.44	0.52
1:X:2795:A:H4'	13:K:5:LYS:HZ2	1.74	0.52
2:Y:46:G:C2	2:Y:50:U:O2	2.62	0.52
2:Y:75:A:C6	2:Y:76:U:C2	2.98	0.52
2:Y:123:U:OP1	2:Y:123:U:H3'	2.09	0.52
3:A:221:GLN:O	3:A:222:ARG:C	2.48	0.52
4:B:31:CYS:O	4:B:90:SER:N	2.43	0.52
5:C:127:ASP:CB	5:C:129:LYS:HE2	2.40	0.52
6:D:5:LYS:CA	6:D:8:TYR:HB3	2.39	0.52
6:D:13:ARG:HG2	6:D:17:MET:HE1	1.92	0.52
6:D:35:VAL:O	6:D:154:ILE:HA	2.10	0.52
7:E:31:GLY:O	7:E:79:VAL:HG12	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:F:112:MET:N	8:F:113:PRO:CD	2.73	0.52
9:G:159:SER:C	9:G:161:GLN:N	2.64	0.52
10:H:70:VAL:HG21	10:H:98:ILE:CG2	2.39	0.52
10:H:97:VAL:HG11	10:H:126:ILE:CD1	2.40	0.52
12:J:69:ILE:O	12:J:70:PHE:C	2.48	0.52
12:J:113:GLU:C	12:J:115:ALA:N	2.62	0.52
17:O:13:ARG:HB2	17:O:13:ARG:CZ	2.39	0.52
18:P:51:GLN:O	18:P:54:GLU:HB2	2.09	0.52
18:P:97:VAL:CG1	18:P:122:SER:HB3	2.40	0.52
19:Q:28:TRP:CE3	19:Q:75:ARG:HB3	2.44	0.52
21:S:64:ALA:HB2	21:S:85:MET:HE2	1.92	0.52
21:S:100:THR:CG2	21:S:101:THR:H	2.23	0.52
1:X:35:G:O2'	1:X:36:G:O5'	2.19	0.52
1:X:197:G:N3	1:X:210:A:H2	2.07	0.52
1:X:235:C:N4	1:X:236:C:N3	2.58	0.52
1:X:333:A:H5''	5:C:162:ARG:HD2	1.92	0.52
1:X:525:A:H2'	1:X:526:C:C5'	2.38	0.52
1:X:531:G:H2'	1:X:532:A:C8	2.43	0.52
1:X:988:G:N3	1:X:1012:A:C2	2.77	0.52
1:X:1287:A:H2'	1:X:1288:A:H5''	1.92	0.52
1:X:1656:U:C2'	1:X:1657:A:C5'	2.86	0.52
1:X:1811:A:H5''	3:A:161:THR:HG21	1.91	0.52
1:X:1813:A:H2'	1:X:1814:G:H8	1.75	0.52
1:X:2205:C:C2'	1:X:2206:C:H5'	2.40	0.52
1:X:2298:U:O2'	1:X:2299:A:C4	2.63	0.52
1:X:2310:G:C6	1:X:2311:U:C5	2.98	0.52
1:X:2351:G:C2	1:X:2352:A:C5	2.98	0.52
1:X:2505:G:O2'	30:4:1:MET:N	2.39	0.52
1:X:2741:G:N2	7:E:150:LYS:NZ	2.58	0.52
1:X:2788:C:O2'	1:X:2789:U:H5'	2.10	0.52
1:X:2874:A:H2'	1:X:2875:C:C6	2.44	0.52
2:Y:65:A:H2'	2:Y:66:G:H8	1.73	0.52
3:A:130:ALA:HA	3:A:191:ALA:O	2.10	0.52
4:B:144:ARG:O	4:B:146:THR:O	2.28	0.52
5:C:46:ARG:O	5:C:47:THR:C	2.47	0.52
5:C:158:ARG:CD	5:C:169:VAL:CG1	2.87	0.52
9:G:169:GLN:O	9:G:170:PRO:O	2.28	0.52
10:H:42:LYS:NZ	10:H:44:TYR:O	2.43	0.52
11:I:18:ARG:O	11:I:19:VAL:HB	2.09	0.52
12:J:64:LYS:N	12:J:64:LYS:CD	2.73	0.52
16:N:52:ASN:O	16:N:54:LYS:N	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:N:91:ASN:HA	16:N:93:LYS:NZ	2.25	0.52
18:P:89:ARG:CG	18:P:89:ARG:O	2.58	0.52
20:R:85:ASP:C	20:R:87:GLU:H	2.14	0.52
21:S:3:LEU:HB2	21:S:34:LEU:HA	1.91	0.52
21:S:62:PHE:HB3	21:S:85:MET:CE	2.39	0.52
30:4:7:VAL:HG13	30:4:25:VAL:CG2	2.39	0.52
1:X:128:C:C2'	1:X:129:A:H5''	2.33	0.51
1:X:167:A:C2	1:X:168:A:C4	2.98	0.51
1:X:514:G:H2'	1:X:514:G:N3	2.26	0.51
1:X:541:C:OP1	1:X:570:G:N1	2.43	0.51
1:X:600:G:O6	1:X:602:C:N4	2.44	0.51
1:X:610:G:O3'	5:C:98:GLN:NE2	2.43	0.51
1:X:1071:U:H1'	1:X:1073:G:H5'	1.92	0.51
1:X:1337:G:C2	1:X:1341:G:N1	2.78	0.51
1:X:1339:U:C5	1:X:1664:G:O2'	2.61	0.51
1:X:1372:A:C8	1:X:1373:G:N7	2.78	0.51
1:X:1426:U:C2'	1:X:1427:G:H5'	2.39	0.51
1:X:1432:G:H21	1:X:1596:A:H62	1.58	0.51
1:X:1448:A:N6	1:X:1574:A:N6	2.43	0.51
1:X:1499:A:H2'	1:X:1500:U:O4'	2.10	0.51
1:X:1656:U:HO2'	1:X:1657:A:H5''	1.73	0.51
1:X:1811:A:O2'	1:X:1812:U:P	2.68	0.51
1:X:1949:A:H1'	1:X:2572:U:C5'	2.40	0.51
1:X:2551:A:C4	4:B:144:ARG:NH1	2.78	0.51
1:X:2629:U:H5'	10:H:35:THR:HG21	1.92	0.51
1:X:2698:G:H2'	1:X:2699:G:H8	1.75	0.51
1:X:2849:C:O2'	1:X:2850:U:H5''	2.10	0.51
2:Y:44:C:N4	6:D:88:LYS:NZ	2.58	0.51
3:A:270:ILE:HG13	3:A:271:VAL:N	2.16	0.51
4:B:2:LYS:HD3	4:B:95:ILE:HD12	1.91	0.51
5:C:5:ASN:HB2	5:C:10:ASN:HA	1.92	0.51
5:C:33:TRP:CD1	5:C:95:LEU:HB2	2.45	0.51
6:D:52:LYS:O	6:D:56:GLU:HB2	2.10	0.51
6:D:111:ILE:HA	6:D:137:ILE:HG21	1.90	0.51
10:H:133:VAL:HG12	10:H:133:VAL:O	2.08	0.51
11:I:28:LYS:NZ	11:I:36:GLY:CA	2.72	0.51
12:J:39:GLU:HG2	12:J:40:PRO:HD2	1.92	0.51
13:K:66:VAL:HG12	13:K:70:ILE:HG13	1.93	0.51
20:R:52:ASN:ND2	20:R:73:GLU:OE1	2.43	0.51
20:R:71:GLN:O	20:R:72:ARG:HG3	2.10	0.51
21:S:46:GLN:CB	21:S:50:GLY:HA3	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:123:VAL:H	21:S:161:ALA:HB2	1.71	0.51
21:S:128:ARG:N	21:S:130:ILE:HD11	2.25	0.51
1:X:137:A:C2	1:X:138:G:H1'	2.45	0.51
1:X:311:A:C8	1:X:345:U:O2'	2.59	0.51
1:X:595:A:C2	1:X:823:U:O4'	2.63	0.51
1:X:940:G:O2'	25:W:40:VAL:HG23	2.10	0.51
1:X:1092:U:C4'	8:F:122:ALA:HB1	2.36	0.51
1:X:1470:G:C2	1:X:1471:G:C8	2.99	0.51
1:X:1807:A:OP2	1:X:1814:G:H5''	2.09	0.51
1:X:1845:A:H2'	1:X:1846:A:C8	2.45	0.51
1:X:2247:A:H5''	1:X:2247:A:H8	1.75	0.51
2:Y:37:C:H2'	2:Y:38:C:O4'	2.10	0.51
5:C:191:ALA:O	5:C:194:GLU:O	2.29	0.51
6:D:12:VAL:CG1	6:D:169:LEU:HD13	2.40	0.51
6:D:30:ARG:HB2	6:D:159:THR:HG23	1.92	0.51
9:G:90:LEU:HB2	9:G:94:LYS:CE	2.37	0.51
10:H:73:VAL:CG2	10:H:123:PHE:CE2	2.91	0.51
11:I:118:VAL:O	11:I:138:GLY:HA3	2.11	0.51
12:J:71:PRO:CA	12:J:96:SER:HB2	2.40	0.51
15:M:55:ILE:HA	15:M:104:LEU:HD12	1.92	0.51
16:N:66:ASN:HB3	16:N:76:TYR:CB	2.32	0.51
17:O:90:PHE:CD1	17:O:90:PHE:C	2.83	0.51
20:R:29:HIS:NE2	20:R:51:VAL:HG22	2.26	0.51
24:V:56:VAL:O	24:V:59:GLU:N	2.43	0.51
25:W:10:ILE:HG22	25:W:11:GLY:N	2.24	0.51
1:X:165:G:H1'	1:X:1378:A:N6	2.25	0.51
1:X:318:G:N1	1:X:321:A:OP2	2.44	0.51
1:X:333:A:H5''	5:C:162:ARG:CZ	2.39	0.51
1:X:610:G:O2'	5:C:98:GLN:NE2	2.44	0.51
1:X:649:G:O2'	1:X:650:U:H5'	2.10	0.51
1:X:687:G:H2'	1:X:817:A:H61	1.75	0.51
1:X:843:G:O2'	1:X:844:G:OP1	2.28	0.51
1:X:969:U:C4	12:J:17:ARG:HB2	2.45	0.51
1:X:1020:A:C6	1:X:1021:A:N1	2.78	0.51
1:X:1329:U:H2'	1:X:1330:G:H8	1.75	0.51
1:X:1425:G:O2'	1:X:1426:U:H5'	2.09	0.51
1:X:1479:G:H2'	1:X:1480:G:C8	2.45	0.51
1:X:1544:A:C2	1:X:1560:A:C5	2.98	0.51
1:X:1584:G:H4'	3:A:59:LYS:CB	2.40	0.51
1:X:1603:A:H8	1:X:1603:A:OP2	1.94	0.51
1:X:1730:G:O2'	1:X:1731:C:H5'	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1979:C:O2'	1:X:1980:A:C4'	2.59	0.51
1:X:2371:A:C8	1:X:2372:A:C8	2.98	0.51
1:X:2429:A:H2	1:X:2430:A:C4	2.28	0.51
1:X:2819:G:H2'	1:X:2820:C:C6	2.43	0.51
5:C:30:VAL:O	5:C:32:THR:N	2.44	0.51
5:C:39:ARG:HG2	5:C:39:ARG:HH11	1.74	0.51
5:C:109:ALA:O	5:C:110:SER:C	2.49	0.51
7:E:158:HIS:HA	7:E:171:LEU:HD21	1.91	0.51
9:G:36:ASN:C	9:G:38:GLU:H	2.09	0.51
9:G:92:GLY:CA	9:G:93:LYS:HD2	2.40	0.51
12:J:60:ARG:HG2	12:J:60:ARG:HH11	1.76	0.51
12:J:76:THR:CB	12:J:88:LYS:O	2.58	0.51
13:K:76:VAL:O	13:K:79:VAL:CG1	2.57	0.51
16:N:47:TYR:HD2	16:N:48:ARG:N	2.08	0.51
17:O:23:GLU:O	17:O:25:LEU:N	2.44	0.51
18:P:107:ILE:O	18:P:107:ILE:HG23	2.10	0.51
20:R:93:ARG:C	20:R:95:ARG:CZ	2.78	0.51
23:U:10:LYS:HG2	23:U:11:LYS:CG	2.40	0.51
1:X:31:C:H2'	1:X:32:C:O4'	2.11	0.51
1:X:112:U:C2	1:X:113:C:C5	2.98	0.51
1:X:221:A:H2'	1:X:222:G:O4'	2.10	0.51
1:X:339:U:O4	1:X:343:A:H8	1.93	0.51
1:X:460:U:HO2'	1:X:461:A:P	2.33	0.51
1:X:538:A:H2'	1:X:2025:A:H2	1.75	0.51
1:X:637:G:H1	11:I:101:ARG:HD3	1.74	0.51
1:X:719:A:C2'	1:X:720:A:H5'	2.41	0.51
1:X:1135:C:H2'	1:X:1136:G:C8	2.41	0.51
1:X:1293:A:H2'	1:X:1294:G:O5'	2.11	0.51
1:X:1478:U:O2'	1:X:1479:G:H5'	2.11	0.51
1:X:1705:U:O2'	1:X:1717:A:N7	2.38	0.51
1:X:1985:G:H5''	13:K:13:ASN:HA	1.92	0.51
1:X:2199:C:H5''	1:X:2200:G:OP2	2.10	0.51
1:X:2282:G:H4'	6:D:122:PHE:CD1	2.46	0.51
1:X:2356:A:N3	14:L:89:PHE:CE1	2.79	0.51
1:X:2594:U:H2'	1:X:2595:C:C6	2.45	0.51
1:X:2600:A:C5	1:X:2601:C:C5	2.98	0.51
1:X:2667:C:C5	1:X:2699:G:C6	2.99	0.51
1:X:2814:G:N2	1:X:2815:C:H1'	2.25	0.51
2:Y:45:C:H2'	6:D:92:ARG:NE	2.25	0.51
3:A:79:VAL:O	3:A:79:VAL:HG12	2.08	0.51
7:E:43:VAL:CB	7:E:52:VAL:HA	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:56:SER:C	7:E:57:ASP:OD1	2.48	0.51
7:E:89:LEU:CD2	7:E:131:ILE:HD11	2.37	0.51
7:E:105:MET:HE1	7:E:131:ILE:HD11	1.92	0.51
9:G:106:TYR:CE2	9:G:108:GLY:CA	2.94	0.51
16:N:81:ASN:O	16:N:84:LYS:HB3	2.09	0.51
17:O:14:VAL:O	17:O:14:VAL:HG12	2.11	0.51
17:O:40:VAL:CG1	17:O:45:THR:HA	2.41	0.51
18:P:105:ARG:CZ	18:P:119:LYS:HE3	2.40	0.51
20:R:25:LEU:HD13	20:R:25:LEU:N	2.24	0.51
21:S:1:MET:HG3	21:S:52:PHE:CE2	2.46	0.51
1:X:303:C:H2'	1:X:304:A:H5''	1.93	0.51
1:X:357:A:H3'	1:X:358:C:H6	1.74	0.51
1:X:412:U:H5	23:U:68:ARG:NH1	2.08	0.51
1:X:663:G:C2'	1:X:664:C:H5''	2.41	0.51
1:X:701:U:O2	1:X:800:U:H4'	2.10	0.51
1:X:1019:U:O2'	1:X:1020:A:O5'	2.28	0.51
1:X:1122:A:H2	1:X:1123:G:H1'	1.75	0.51
1:X:1314:A:H2	1:X:1642:G:N3	2.08	0.51
1:X:1399:C:H2'	1:X:1400:A:H8	1.74	0.51
1:X:1479:G:H2'	1:X:1480:G:H8	1.75	0.51
1:X:1748:U:O4	1:X:1753:A:H2	1.93	0.51
1:X:2662:C:N4	1:X:2707:G:H21	2.09	0.51
5:C:191:ALA:O	5:C:194:GLU:C	2.48	0.51
6:D:38:GLU:HB3	6:D:87:ILE:CD1	2.40	0.51
6:D:108:LEU:HB3	6:D:114:PHE:CZ	2.45	0.51
9:G:59:ALA:HB1	9:G:134:MET:O	2.11	0.51
16:N:47:TYR:C	16:N:49:ASP:N	2.62	0.51
18:P:9:ARG:O	18:P:10:ASN:HB3	2.10	0.51
19:Q:63:LYS:CG	19:Q:64:ARG:N	2.69	0.51
19:Q:92:ALA:C	19:Q:94:GLN:H	2.13	0.51
1:X:38:G:H1	1:X:453:U:H3	1.59	0.51
1:X:93:A:O2'	1:X:94:C:H5'	2.11	0.51
1:X:216:U:H2'	1:X:217:U:O4'	2.11	0.51
1:X:404:A:C6	1:X:405:C:N3	2.78	0.51
1:X:449:C:O2'	1:X:450:C:H5'	2.09	0.51
1:X:632:A:C2	1:X:633:G:C4	2.98	0.51
1:X:774:A:C8	1:X:774:A:H3'	2.46	0.51
1:X:790:A:H62	1:X:806:A:H2	1.59	0.51
1:X:979:A:O2'	1:X:980:G:H5'	2.11	0.51
1:X:1323:G:H3'	1:X:1324:G:N2	2.24	0.51
1:X:1668:G:OP1	13:K:40:LYS:HG3	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1819:U:O2'	1:X:1820:G:H5'	2.10	0.51
1:X:2046:C:O2	1:X:2430:A:C2	2.64	0.51
1:X:2065:A:H3'	1:X:2066:G:C8	2.44	0.51
1:X:2246:A:N6	1:X:2251:U:H3	2.09	0.51
1:X:2289:A:H3'	1:X:2290:A:H8	1.75	0.51
1:X:2368:G:H5''	1:X:2369:U:O5'	2.10	0.51
1:X:2423:G:C6	1:X:2424:G:N7	2.79	0.51
1:X:2464:G:OP1	12:J:47:GLN:NE2	2.39	0.51
1:X:2701:A:C2'	1:X:2702:G:O5'	2.59	0.51
1:X:2705:A:O2'	1:X:2706:U:C6	2.64	0.51
5:C:47:THR:OG1	5:C:87:LYS:HD3	2.10	0.51
5:C:136:TRP:CD1	5:C:136:TRP:C	2.83	0.51
7:E:40:GLU:OE2	7:E:61:HIS:CE1	2.63	0.51
12:J:119:PHE:O	12:J:120:ARG:C	2.49	0.51
16:N:20:ARG:HD2	16:N:39:LEU:HD13	1.93	0.51
20:R:106:VAL:O	20:R:107:ALA:HB2	2.11	0.51
21:S:2:GLU:O	21:S:3:LEU:C	2.49	0.51
21:S:73:LYS:O	21:S:74:ARG:CB	2.51	0.51
23:U:21:ARG:HA	23:U:39:LYS:HB2	1.92	0.51
25:W:40:VAL:HA	25:W:43:MET:HG2	1.92	0.51
1:X:455:A:H2	1:X:1258:G:N3	2.09	0.51
1:X:717:G:O2'	1:X:718:A:O5'	2.29	0.51
1:X:849:G:C5	1:X:850:C:C4	2.99	0.51
1:X:994:A:O2'	1:X:995:A:P	2.68	0.51
1:X:1219:C:H2'	1:X:1220:G:O4'	2.11	0.51
1:X:1237:G:O3'	17:O:85:GLY:HA3	2.11	0.51
1:X:1337:G:O2'	1:X:1632:A:N1	2.44	0.51
1:X:1373:G:H2'	1:X:1374:G:C5'	2.41	0.51
1:X:2210:C:C2	1:X:2211:U:C5	2.99	0.51
1:X:2302:G:C6	1:X:2303:C:C4	2.99	0.51
1:X:2334:C:O5'	1:X:2334:C:H6	1.93	0.51
1:X:2484:G:C6	1:X:2555:G:C4	2.99	0.51
2:Y:122:U:H5''	2:Y:123:U:OP1	2.11	0.51
3:A:72:LYS:HG2	3:A:103:ARG:NH1	2.25	0.51
5:C:112:GLN:CD	5:C:116:LYS:HD3	2.31	0.51
5:C:127:ASP:CB	5:C:129:LYS:HG2	2.41	0.51
5:C:195:ILE:O	5:C:196:VAL:HB	2.11	0.51
6:D:35:VAL:CG2	6:D:155:THR:HB	2.36	0.51
6:D:60:ILE:HA	6:D:140:GLU:HG3	1.93	0.51
6:D:111:ILE:HG12	6:D:137:ILE:CG2	2.41	0.51
6:D:128:TYR:HB3	6:D:156:ILE:HD12	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:F:10:LEU:N	8:F:10:LEU:HD23	2.26	0.51
9:G:108:GLY:H	9:G:110:LEU:HG	1.74	0.51
10:H:9:ASP:OD1	10:H:93:ARG:NH2	2.43	0.51
12:J:95:VAL:CG1	12:J:96:SER:N	2.73	0.51
15:M:106:TYR:CD1	15:M:107:LEU:HD23	2.45	0.51
16:N:93:LYS:HE2	17:O:10:LYS:CE	2.40	0.51
19:Q:40:ASP:O	19:Q:41:ALA:C	2.48	0.51
20:R:43:ASP:O	20:R:44:GLN:HB2	2.10	0.51
21:S:115:ILE:HA	21:S:169:VAL:HG12	1.93	0.51
1:X:43:A:N1	1:X:44:G:C6	2.79	0.51
1:X:227:G:O2'	11:I:53:ARG:CZ	2.58	0.51
1:X:417:C:N3	1:X:419:G:C5	2.79	0.51
1:X:664:C:O3'	1:X:665:A:H3'	2.11	0.51
1:X:769:C:C2'	1:X:770:U:H5'	2.40	0.51
1:X:1517:C:C6	1:X:1518:C:H5	2.28	0.51
1:X:1574:A:C2'	1:X:1575:C:H5''	2.39	0.51
1:X:1602:G:H5'	1:X:1603:A:OP2	2.11	0.51
1:X:2014:A:C5	1:X:2477:C:H1'	2.45	0.51
1:X:2055:G:C2'	1:X:2056:C:H5'	2.40	0.51
1:X:2272:A:P	14:L:15:ARG:HH21	2.34	0.51
1:X:2429:A:O2'	1:X:2430:A:H5'	2.11	0.51
4:B:97:ALA:N	4:B:100:GLU:OE2	2.43	0.51
6:D:80:ARG:O	6:D:81:GLN:O	2.29	0.51
7:E:9:ILE:HG22	7:E:11:VAL:HG23	1.92	0.51
10:H:7:ARG:HD3	10:H:18:GLU:OE1	2.11	0.51
12:J:44:LYS:HD3	12:J:47:GLN:CD	2.32	0.51
13:K:103:ARG:HG2	13:K:104:ARG:H	1.76	0.51
21:S:98:VAL:HG21	21:S:168:VAL:HG13	1.93	0.51
22:T:52:GLY:N	22:T:62:LEU:CD2	2.74	0.51
23:U:17:SER:HB2	23:U:44:ALA:HA	1.92	0.51
1:X:165:G:H2'	1:X:166:G:C5'	2.41	0.51
1:X:209:G:N2	1:X:433:G:OP1	2.44	0.51
1:X:706:A:H2'	1:X:707:U:C6	2.45	0.51
1:X:759:C:H5'	1:X:759:C:C6	2.46	0.51
1:X:824:U:O2	1:X:1263:G:H3'	2.09	0.51
1:X:827:C:OP1	17:O:82:ARG:HA	2.11	0.51
1:X:865:A:H2'	1:X:866:U:C6	2.46	0.51
1:X:1088:A:N6	1:X:1100:G:OP1	2.44	0.51
1:X:1601:U:O5'	1:X:1601:U:H6	1.94	0.51
1:X:1619:A:C5	1:X:1620:C:C5	2.99	0.51
1:X:2074:U:OP2	1:X:2075:U:H3'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2170:C:H2'	1:X:2171:U:C4'	2.39	0.51
1:X:2273:C:H5'	14:L:95:LYS:CD	2.41	0.51
1:X:2400:G:N2	23:U:33:LYS:HZ2	2.09	0.51
3:A:52:ARG:NH2	3:A:53:PHE:HZ	2.09	0.51
3:A:97:TYR:O	3:A:98:ALA:C	2.50	0.51
3:A:166:GLN:HB2	3:A:174:ILE:O	2.09	0.51
5:C:6:VAL:HG23	5:C:118:VAL:HG23	1.92	0.51
5:C:139:GLN:CA	5:C:139:GLN:NE2	2.74	0.51
5:C:163:ASN:ND2	5:C:166:TRP:HB2	2.26	0.51
5:C:169:VAL:CG1	5:C:170:LEU:N	2.73	0.51
6:D:9:ASN:O	6:D:14:PRO:HD2	2.10	0.51
9:G:101:THR:HG23	9:G:103:TYR:CD1	2.46	0.51
9:G:158:HIS:HA	9:G:161:GLN:NE2	2.26	0.51
16:N:50:ARG:C	16:N:52:ASN:N	2.62	0.51
17:O:15:SER:HB3	17:O:95:ILE:O	2.11	0.51
17:O:65:ARG:HG3	17:O:65:ARG:NH1	2.12	0.51
19:Q:88:ILE:HD12	19:Q:88:ILE:C	2.31	0.51
26:Z:35:GLN:C	26:Z:37:HIS:N	2.64	0.51
1:X:102:C:C5	1:X:103:U:C4	2.99	0.51
1:X:408:U:O2'	1:X:409:G:C8	2.63	0.51
1:X:631:G:O2'	1:X:632:A:O5'	2.22	0.51
1:X:666:U:H3'	1:X:667:U:H5''	1.92	0.51
1:X:871:U:O2'	1:X:2248:A:H5''	2.11	0.51
1:X:1031:C:O2	1:X:1031:C:C2'	2.54	0.51
1:X:1043:A:H5''	30:4:9:LYS:NZ	2.26	0.51
1:X:1411:C:O2'	1:X:1412:C:H5'	2.11	0.51
1:X:1552:C:H1'	1:X:1553:G:N3	2.26	0.51
1:X:1579:G:O2'	1:X:1580:C:H5'	2.11	0.51
1:X:1757:C:C2	1:X:1970:G:C2	2.99	0.51
1:X:1770:U:O2	1:X:1774:A:C6	2.64	0.51
1:X:1777:A:O2'	1:X:1778:U:OP1	2.25	0.51
1:X:2335:U:O2'	1:X:2336:G:H5'	2.10	0.51
1:X:2507:U:O3'	1:X:2508:G:H8	1.93	0.51
1:X:2729:A:C2	1:X:2730:A:N7	2.79	0.51
1:X:2814:G:C4	1:X:2815:C:C6	2.99	0.51
3:A:252:LYS:N	3:A:253:PRO:HD2	2.23	0.51
4:B:120:TRP:O	4:B:121:ASN:HB2	2.10	0.51
4:B:150:VAL:CG2	4:B:154:LYS:HE2	2.29	0.51
5:C:35:LEU:HA	5:C:38:ARG:HG3	1.93	0.51
6:D:5:LYS:HA	6:D:8:TYR:CB	2.41	0.51
6:D:38:GLU:HB3	6:D:87:ILE:CB	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:83:TYR:O	7:E:135:GLY:N	2.44	0.51
11:I:71:THR:O	11:I:104:ARG:HB3	2.11	0.51
11:I:117:ALA:C	11:I:118:VAL:HG22	2.31	0.51
13:K:24:GLN:HB3	13:K:44:LEU:HD22	1.93	0.51
16:N:93:LYS:O	16:N:94:VAL:CB	2.58	0.51
17:O:30:GLY:O	17:O:31:ASP:C	2.48	0.51
17:O:53:LYS:HB2	17:O:54:TYR:CD1	2.46	0.51
19:Q:88:ILE:O	19:Q:88:ILE:CD1	2.59	0.51
19:Q:92:ALA:C	19:Q:94:GLN:N	2.65	0.51
20:R:105:ARG:NH1	20:R:112:LYS:HA	2.26	0.51
21:S:6:LYS:HA	21:S:32:PHE:O	2.10	0.51
23:U:28:GLY:O	23:U:30:VAL:N	2.44	0.51
1:X:101:A:C6	1:X:102:C:C2	2.99	0.50
1:X:172:A:N7	1:X:175:C:C5	2.79	0.50
1:X:330:C:C2	1:X:331:U:C6	2.99	0.50
1:X:333:A:O4'	1:X:351:A:H1'	2.10	0.50
1:X:339:U:O4	1:X:343:A:C8	2.64	0.50
1:X:837:U:O2'	1:X:838:A:H5'	2.11	0.50
1:X:1556:A:H2'	1:X:1557:G:C8	2.45	0.50
1:X:1791:C:H5'	1:X:1792:C:OP1	2.11	0.50
1:X:1935:A:C4	10:H:22:ILE:HD11	2.46	0.50
1:X:2048:C:H2'	1:X:2049:C:H6	1.74	0.50
7:E:126:PRO:HG3	7:E:130:ARG:CD	2.40	0.50
12:J:73:LYS:O	12:J:94:TRP:CD1	2.65	0.50
12:J:136:GLU:CA	12:J:138:TYR:CE2	2.94	0.50
16:N:52:ASN:C	16:N:54:LYS:N	2.64	0.50
23:U:17:SER:HB2	23:U:43:ARG:O	2.11	0.50
23:U:22:GLY:HA3	23:U:39:LYS:HD2	1.93	0.50
23:U:66:ALA:O	23:U:70:LEU:HB2	2.11	0.50
26:Z:36:CYS:O	26:Z:36:CYS:SG	2.69	0.50
30:4:1:MET:CE	30:4:1:MET:HA	2.41	0.50
1:X:334:G:H5'	5:C:162:ARG:HH21	1.76	0.50
1:X:546:A:N6	1:X:565:A:N6	2.59	0.50
1:X:664:C:H3'	1:X:665:A:C2	2.46	0.50
1:X:676:G:N2	1:X:950:G:O3'	2.44	0.50
1:X:1465:G:H2'	1:X:1466:C:C6	2.46	0.50
1:X:1467:U:C6	1:X:1467:U:H5''	2.46	0.50
1:X:1810:U:OP2	3:A:157:ARG:HD3	2.11	0.50
1:X:1926:U:OP1	1:X:1926:U:H6	1.95	0.50
1:X:1934:U:C2	1:X:1936:A:OP2	2.64	0.50
1:X:2405:A:H2'	1:X:2405:A:N3	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2592:U:C6	1:X:2592:U:O2'	2.57	0.50
1:X:2779:C:H3'	1:X:2779:C:H6	1.76	0.50
3:A:95:LEU:HD12	3:A:105:ILE:HD12	1.93	0.50
5:C:48:ARG:HB2	5:C:51:VAL:CG2	2.37	0.50
7:E:40:GLU:OE2	7:E:61:HIS:HE1	1.94	0.50
7:E:137:ASP:OD2	7:E:139:GLN:HB2	2.11	0.50
12:J:49:GLU:OE1	12:J:52:ARG:NH2	2.44	0.50
13:K:66:VAL:O	13:K:68:GLN:N	2.44	0.50
13:K:95:THR:CG2	13:K:95:THR:O	2.59	0.50
14:L:79:ALA:O	14:L:83:GLY:N	2.41	0.50
17:O:70:TYR:HD1	17:O:70:TYR:H	1.57	0.50
20:R:15:HIS:O	20:R:16:PHE:CB	2.59	0.50
23:U:28:GLY:N	23:U:32:ARG:NE	2.59	0.50
24:V:4:SER:HB3	24:V:7:ARG:NE	2.26	0.50
1:X:412:U:C5	23:U:68:ARG:NH1	2.79	0.50
1:X:516:G:O2'	1:X:517:A:C8	2.46	0.50
1:X:1142:G:O4'	9:G:103:TYR:HD2	1.94	0.50
1:X:1344:C:H2'	1:X:1346:C:C5	2.47	0.50
1:X:1683:G:N2	1:X:1978:U:C2	2.79	0.50
1:X:1767:G:N2	1:X:1768:U:C1'	2.74	0.50
1:X:1794:A:H2	1:X:1814:G:N3	2.09	0.50
1:X:1811:A:H1'	1:X:1813:A:C5	2.47	0.50
1:X:1964:A:H5''	1:X:1965:U:OP2	2.11	0.50
1:X:2246:A:H61	1:X:2251:U:H3	1.60	0.50
1:X:2728:A:H2'	1:X:2729:A:C8	2.44	0.50
1:X:2791:C:O2	1:X:2858:A:O2'	2.26	0.50
1:X:2797:G:O2'	1:X:2798:A:O5'	2.25	0.50
3:A:42:GLY:CA	3:A:43:ARG:NH1	2.74	0.50
4:B:39:ALA:HA	4:B:44:TYR:N	2.27	0.50
5:C:102:LEU:CD2	5:C:106:MET:CE	2.89	0.50
6:D:65:PRO:HB3	6:D:89:VAL:HG13	1.92	0.50
7:E:28:GLY:HA3	7:E:79:VAL:HB	1.93	0.50
9:G:40:ASN:OD1	9:G:42:VAL:HG23	2.10	0.50
9:G:132:PHE:CD2	9:G:145:HIS:CG	3.00	0.50
14:L:38:ILE:HD12	14:L:39:TYR:N	2.25	0.50
16:N:66:ASN:CB	16:N:76:TYR:HB2	2.32	0.50
16:N:91:ASN:C	16:N:93:LYS:N	2.63	0.50
17:O:16:GLU:H	17:O:95:ILE:HB	1.75	0.50
17:O:36:LYS:HE3	17:O:55:THR:C	2.31	0.50
23:U:53:GLU:HB3	23:U:58:LYS:HB2	1.94	0.50
23:U:59:THR:O	23:U:60:VAL:O	2.29	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:20:C:O2'	1:X:21:A:H5'	2.10	0.50
1:X:136:A:H3'	1:X:137:A:H8	1.75	0.50
1:X:201:G:N2	1:X:202:A:C4	2.79	0.50
1:X:302:U:N3	1:X:361:G:N2	2.59	0.50
1:X:719:A:H2'	1:X:720:A:C5'	2.41	0.50
1:X:982:C:H2'	1:X:983:G:O5'	2.11	0.50
1:X:1075:C:HO2'	8:F:89:SER:CA	2.23	0.50
1:X:1139:A:O2'	1:X:1140:A:P	2.70	0.50
1:X:1312:G:C5'	1:X:1313:U:OP1	2.51	0.50
1:X:1385:C:H1'	1:X:2192:U:C6	2.46	0.50
1:X:1469:U:P	1:X:1470:G:OP2	2.69	0.50
1:X:1744:G:H5''	15:M:100:ARG:HD3	1.93	0.50
1:X:2212:U:C2'	1:X:2213:G:H8	2.23	0.50
1:X:2276:C:O5'	1:X:2276:C:H6	1.94	0.50
1:X:2856:U:N3	1:X:2857:C:C4	2.80	0.50
2:Y:4:C:H5'	2:Y:4:C:H6	1.77	0.50
2:Y:46:G:H5'	6:D:92:ARG:NH2	2.26	0.50
3:A:68:LYS:O	3:A:70:ARG:HG3	2.11	0.50
3:A:247:VAL:HG23	3:A:248:THR:N	2.26	0.50
5:C:173:ALA:HB1	5:C:193:LEU:HB2	1.93	0.50
6:D:108:LEU:HD22	6:D:114:PHE:HE1	1.75	0.50
7:E:26:VAL:HB	7:E:33:LEU:O	2.12	0.50
9:G:33:ILE:C	9:G:33:ILE:HD12	2.32	0.50
10:H:79:HIS:O	10:H:90:ARG:HB3	2.12	0.50
12:J:99:LYS:CG	12:J:100:PRO:HD2	2.39	0.50
14:L:43:ILE:HG22	14:L:44:ASP:N	2.27	0.50
14:L:97:HIS:O	14:L:101:LYS:CB	2.59	0.50
15:M:32:THR:CG2	15:M:33:VAL:N	2.74	0.50
18:P:9:ARG:HB3	18:P:13:GLN:HB2	1.93	0.50
23:U:48:LYS:O	23:U:61:TRP:HE3	1.95	0.50
1:X:346:C:H2'	1:X:347:C:C6	2.46	0.50
1:X:518:A:N6	18:P:30:TYR:CG	2.79	0.50
1:X:1524:C:H3'	1:X:1525:A:O4'	2.10	0.50
1:X:1569:A:C2'	1:X:1570:C:H5''	2.41	0.50
1:X:2033:C:H1'	4:B:156:MET:HE1	1.94	0.50
1:X:2079:A:H61	1:X:2175:A:N6	2.10	0.50
1:X:2280:A:H2'	1:X:2281:C:H6	1.73	0.50
1:X:2291:U:O2'	6:D:37:ASN:ND2	2.44	0.50
1:X:2521:A:N1	1:X:2546:G:C6	2.79	0.50
1:X:2633:A:C2	1:X:2635:U:O4	2.64	0.50
2:Y:44:C:H4'	6:D:64:LYS:O	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:53:PHE:O	3:A:54:ILE:C	2.49	0.50
3:A:125:PRO:HG3	3:A:131:LEU:HD11	1.92	0.50
3:A:243:GLY:CA	3:A:244:ARG:NH1	2.74	0.50
4:B:16:LYS:O	4:B:17:ASN:HB2	2.12	0.50
4:B:141:ILE:HG23	4:B:154:LYS:HD3	1.92	0.50
5:C:153:ASP:CG	5:C:172:VAL:HA	2.32	0.50
6:D:22:TYR:CZ	6:D:29:PRO:HD3	2.46	0.50
6:D:41:GLY:O	6:D:43:SER:N	2.45	0.50
7:E:65:HIS:O	7:E:67:LEU:N	2.44	0.50
7:E:72:VAL:O	7:E:76:VAL:HG23	2.12	0.50
7:E:87:LEU:HD13	7:E:162:VAL:HG11	1.93	0.50
9:G:69:ASP:C	9:G:70:PHE:CD2	2.85	0.50
10:H:55:VAL:HG11	10:H:58:ALA:HB2	1.93	0.50
10:H:70:VAL:CG2	10:H:98:ILE:HG23	2.42	0.50
11:I:9:THR:O	11:I:13:ARG:HD2	2.11	0.50
11:I:78:SER:CA	11:I:112:GLY:HA3	2.40	0.50
11:I:117:ALA:HA	11:I:137:GLY:HA3	1.93	0.50
14:L:20:THR:HG22	14:L:21:THR:N	2.27	0.50
15:M:55:ILE:O	15:M:56:ALA:CB	2.60	0.50
17:O:11:GLN:HA	17:O:38:LEU:O	2.11	0.50
17:O:36:LYS:HZ1	17:O:98:ILE:HB	1.76	0.50
18:P:106:LEU:HD23	18:P:107:ILE:H	1.76	0.50
19:Q:17:TYR:HE1	19:Q:94:GLN:HB2	1.75	0.50
20:R:22:VAL:HG13	20:R:81:VAL:O	2.11	0.50
21:S:71:MET:H	21:S:71:MET:HE2	1.76	0.50
22:T:14:ARG:HG3	22:T:15:ASP:CG	2.32	0.50
23:U:63:SER:O	23:U:66:ALA:N	2.44	0.50
26:Z:45:ILE:HG21	26:Z:57:VAL:HG21	1.94	0.50
1:X:37:C:H1'	5:C:44:SER:OG	2.12	0.50
1:X:45:C:OP2	1:X:192:G:H3'	2.12	0.50
1:X:201:G:C2	1:X:202:A:C4	3.00	0.50
1:X:417:C:C6	1:X:419:G:C4	2.99	0.50
1:X:469:G:N2	1:X:480:G:H2'	2.27	0.50
1:X:659:G:C6	1:X:660:G:C6	2.99	0.50
1:X:663:G:H2'	1:X:664:C:C4'	2.41	0.50
1:X:1247:U:OP2	18:P:11:LYS:CE	2.59	0.50
1:X:1885:C:C4'	3:A:244:ARG:HD2	2.42	0.50
1:X:2198:U:N3	1:X:2199:C:C5	2.79	0.50
1:X:2377:U:O5'	1:X:2377:U:H6	1.95	0.50
1:X:2527:G:N1	1:X:2540:A:C2	2.80	0.50
1:X:2760:G:C2'	1:X:2761:A:OP1	2.60	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2863:U:H2'	1:X:2864:C:O4'	2.12	0.50
2:Y:54:U:H2'	2:Y:55:C:O4'	2.12	0.50
3:A:132:PRO:HB3	3:A:190:TYR:HD2	1.77	0.50
3:A:141:VAL:HG22	3:A:164:GLN:HB3	1.93	0.50
3:A:219:PRO:O	3:A:220:HIS:O	2.29	0.50
6:D:13:ARG:HB3	6:D:14:PRO:CD	2.36	0.50
6:D:40:LEU:HD23	6:D:53:ALA:HB2	1.93	0.50
9:G:150:VAL:CG1	9:G:151:TYR:N	2.74	0.50
11:I:62:LYS:HE2	29:3:11:LYS:CA	2.41	0.50
14:L:76:ALA:HB1	14:L:111:GLY:N	2.27	0.50
14:L:93:SER:O	14:L:95:LYS:N	2.45	0.50
16:N:12:ARG:HA	16:N:15:LYS:NZ	2.26	0.50
16:N:14:HIS:O	16:N:15:LYS:C	2.48	0.50
21:S:24:TYR:O	21:S:85:MET:N	2.44	0.50
22:T:51:VAL:CG2	22:T:79:ILE:O	2.59	0.50
23:U:51:ILE:HG12	23:U:59:THR:CB	2.41	0.50
25:W:38:PRO:N	25:W:41:ARG:HE	2.07	0.50
1:X:38:G:N3	5:C:42:THR:HG22	2.27	0.50
1:X:357:A:O5'	1:X:357:A:H8	1.95	0.50
1:X:422:C:O2'	1:X:423:G:H5'	2.10	0.50
1:X:748:A:C5'	1:X:749:C:OP2	2.59	0.50
1:X:816:U:C2'	1:X:817:A:H5'	2.42	0.50
1:X:1324:G:O2'	1:X:1325:U:O5'	2.29	0.50
1:X:1513:U:H2'	1:X:1594:U:OP1	2.11	0.50
1:X:1529:C:O2'	1:X:1530:U:H5'	2.11	0.50
1:X:1888:C:H2'	1:X:1913:G:N7	2.25	0.50
1:X:2329:C:H2'	1:X:2330:G:O4'	2.11	0.50
1:X:2332:G:H2'	1:X:2333:A:O4'	2.11	0.50
1:X:2447:G:HO2'	1:X:2448:A:H8	1.58	0.50
1:X:2562:G:C5	1:X:2563:U:C4	3.00	0.50
1:X:2727:G:O3'	7:E:70:THR:HG21	2.11	0.50
1:X:2845:C:O2'	1:X:2846:G:H5'	2.11	0.50
1:X:2867:G:O2'	1:X:2868:G:OP2	2.26	0.50
7:E:54:ARG:HG2	7:E:54:ARG:NH2	2.27	0.50
7:E:87:LEU:HB2	7:E:131:ILE:HB	1.93	0.50
7:E:118:PRO:HG2	7:E:121:VAL:CG2	2.42	0.50
9:G:64:GLY:C	9:G:67:ARG:HG3	2.32	0.50
11:I:18:ARG:HB2	11:I:21:ARG:CB	2.34	0.50
13:K:33:ARG:HD3	13:K:112:LEU:HD22	1.92	0.50
14:L:28:ARG:HD2	14:L:90:ASP:CG	2.31	0.50
16:N:104:GLU:O	16:N:107:LYS:HB3	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:66:GLU:O	18:P:69:ALA:N	2.41	0.50
23:U:64:ALA:C	23:U:66:ALA:H	2.14	0.50
24:V:47:ARG:O	24:V:48:ARG:C	2.50	0.50
25:W:4:LYS:CD	25:W:52:GLU:HB3	2.42	0.50
1:X:79:G:O2'	1:X:80:A:H5'	2.11	0.50
1:X:91:A:H2'	1:X:92:U:C6	2.46	0.50
1:X:350:U:O5'	1:X:350:U:C6	2.62	0.50
1:X:671:A:H2'	1:X:672:C:C6	2.47	0.50
1:X:678:G:O3'	11:I:50:GLU:OE1	2.29	0.50
1:X:1494:G:O2'	1:X:1574:A:H2	1.94	0.50
1:X:1707:A:C8	1:X:1708:C:C6	3.00	0.50
1:X:2185:U:H2'	1:X:2186:G:C8	2.47	0.50
1:X:2204:A:H4'	1:X:2205:C:O5'	2.12	0.50
1:X:2546:G:H2'	1:X:2547:C:H6	1.73	0.50
1:X:2714:A:H2'	1:X:2715:C:C6	2.46	0.50
1:X:2849:C:C2	1:X:2850:U:C5	2.99	0.50
3:A:182:LEU:O	3:A:268:ARG:HB2	2.12	0.50
6:D:12:VAL:HG22	6:D:172:SER:OG	2.12	0.50
6:D:172:SER:OG	6:D:173:MET:N	2.45	0.50
7:E:23:VAL:O	7:E:25:LYS:N	2.42	0.50
7:E:109:TYR:CE1	7:E:152:ARG:CZ	2.92	0.50
14:L:39:TYR:O	14:L:40:ALA:C	2.49	0.50
14:L:77:ALA:O	14:L:80:ALA:HB3	2.12	0.50
16:N:82:GLY:HA3	16:N:113:SER:HG	1.73	0.50
17:O:11:GLN:OE1	17:O:38:LEU:HD12	2.12	0.50
20:R:91:ALA:O	20:R:92:THR:CG2	2.58	0.50
1:X:48:A:N7	1:X:154:U:C4	2.80	0.50
1:X:168:A:O2'	1:X:169:C:C5'	2.55	0.50
1:X:171:G:C2'	1:X:172:A:H5'	2.41	0.50
1:X:486:U:H4'	1:X:519:C:H2'	1.93	0.50
1:X:731:A:C2'	1:X:732:G:C5'	2.90	0.50
1:X:871:U:H2'	1:X:2247:A:N3	2.27	0.50
1:X:889:C:H2'	1:X:890:U:O4'	2.11	0.50
1:X:1189:G:H8	1:X:1189:G:O5'	1.94	0.50
1:X:1356:G:H1'	1:X:1613:G:C2	2.47	0.50
1:X:1699:A:H2'	1:X:1700:C:H6	1.75	0.50
1:X:2015:G:H4'	1:X:2016:A:OP1	2.12	0.50
1:X:2060:A:H1'	1:X:2414:A:O4'	2.12	0.50
1:X:2174:G:C6	1:X:2175:A:C6	2.99	0.50
1:X:2293:G:H21	6:D:123:ASP:CG	2.14	0.50
1:X:2394:G:OP1	11:I:63:ARG:CZ	2.59	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2484:G:O6	1:X:2555:G:H2'	2.12	0.50
1:X:2642:G:H2'	1:X:2643:G:C5'	2.41	0.50
1:X:2686:C:H2'	1:X:2687:G:H8	1.77	0.50
2:Y:9:G:H5'	14:L:32:TYR:CZ	2.46	0.50
2:Y:52:G:N2	2:Y:53:G:H1'	2.26	0.50
3:A:133:LEU:O	3:A:136:VAL:HB	2.12	0.50
4:B:33:ILE:HG13	4:B:89:ASP:HA	1.92	0.50
6:D:118:ASN:HD21	6:D:120:ASN:HD22	1.59	0.50
6:D:169:LEU:O	6:D:170:LEU:C	2.50	0.50
7:E:45:GLN:NE2	7:E:48:ASP:O	2.44	0.50
7:E:84:THR:HB	7:E:134:SER:HA	1.93	0.50
7:E:144:VAL:C	7:E:146:ALA:N	2.60	0.50
9:G:95:LEU:CD2	9:G:117:GLU:OE2	2.59	0.50
10:H:25:LEU:HD21	10:H:52:VAL:HG23	1.94	0.50
10:H:117:GLU:O	10:H:120:ASP:HB2	2.12	0.50
13:K:76:VAL:O	13:K:79:VAL:HG12	2.12	0.50
16:N:79:PHE:CD2	16:N:79:PHE:C	2.85	0.50
17:O:28:GLU:C	17:O:30:GLY:N	2.65	0.50
20:R:93:ARG:N	20:R:107:ALA:O	2.45	0.50
22:T:37:LEU:C	22:T:38:VAL:HG23	2.32	0.50
22:T:46:LYS:O	22:T:78:PHE:CD2	2.64	0.50
23:U:22:GLY:N	23:U:39:LYS:HD2	2.26	0.50
23:U:41:VAL:CG2	23:U:42:GLN:N	2.54	0.50
1:X:177:U:H3'	1:X:178:C:C6	2.46	0.49
1:X:539:A:N6	1:X:2025:A:H1'	2.26	0.49
1:X:622:U:O2	1:X:628:A:H2	1.95	0.49
1:X:717:G:C2'	1:X:739:G:N2	2.75	0.49
1:X:718:A:C8	1:X:740:A:C4	3.00	0.49
1:X:954:U:P	11:I:38:LYS:HZ3	2.32	0.49
1:X:1051:U:C2'	1:X:1052:C:O4'	2.59	0.49
1:X:1089:C:O4'	1:X:1099:A:H2	1.95	0.49
1:X:1557:G:H2'	1:X:1558:C:H6	1.76	0.49
1:X:1661:C:O2	1:X:1661:C:H2'	2.12	0.49
1:X:1774:A:N1	1:X:2566:A:C4	2.80	0.49
1:X:2223:U:H2'	1:X:2224:U:C6	2.47	0.49
1:X:2642:G:C2'	1:X:2643:G:H5'	2.41	0.49
1:X:2703:C:P	4:B:109:LYS:HZ3	2.35	0.49
1:X:2799:C:H2'	1:X:2800:C:O4'	2.11	0.49
1:X:2817:A:C2	1:X:2851:G:C2	3.00	0.49
2:Y:39:C:H5'	2:Y:40:C:OP2	2.11	0.49
5:C:178:TYR:O	5:C:179:ASP:C	2.50	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:F:112:MET:CG	8:F:113:PRO:HD3	2.42	0.49
10:H:36:THR:O	10:H:37:GLY:O	2.30	0.49
11:I:81:GLN:O	11:I:83:LEU:N	2.45	0.49
12:J:64:LYS:HE2	12:J:110:VAL:HG13	1.94	0.49
13:K:45:ARG:HD3	13:K:97:ILE:HD11	1.93	0.49
14:L:37:HIS:CE1	14:L:39:TYR:CE2	3.00	0.49
16:N:94:VAL:O	16:N:97:ASP:N	2.45	0.49
17:O:33:VAL:HG23	17:O:33:VAL:O	2.12	0.49
19:Q:20:MET:C	19:Q:22:ARG:H	2.15	0.49
19:Q:78:ALA:C	19:Q:79:ILE:HG13	2.32	0.49
23:U:34:THR:HG23	23:U:35:THR:N	2.27	0.49
24:V:42:ARG:NH2	24:V:46:LEU:HD21	2.26	0.49
30:4:17:VAL:HG12	30:4:18:ARG:N	2.26	0.49
1:X:415:A:C3'	1:X:416:U:H5'	2.43	0.49
1:X:543:G:C5	1:X:544:U:C4	3.00	0.49
1:X:623:G:C2	1:X:627:A:C5	3.00	0.49
1:X:773:G:O2'	1:X:774:A:H5'	2.12	0.49
1:X:1056:U:H2'	1:X:1057:A:OP2	2.11	0.49
1:X:1355:A:O2'	1:X:1356:G:OP1	2.30	0.49
1:X:1525:A:H2'	1:X:1526:U:O4'	2.13	0.49
1:X:1699:A:H61	1:X:1723:U:H3	1.58	0.49
1:X:1958:G:H2'	1:X:1959:U:C6	2.47	0.49
1:X:2048:C:H5'	1:X:2230:G:H21	1.76	0.49
1:X:2053:G:N2	1:X:2054:A:H1'	2.27	0.49
1:X:2684:A:C4	1:X:2685:A:C8	3.01	0.49
1:X:2829:A:C6	1:X:2839:G:N1	2.80	0.49
1:X:2841:U:H4'	1:X:2842:C:H5'	1.94	0.49
3:A:133:LEU:HB2	3:A:187:SER:CB	2.31	0.49
3:A:222:ARG:HB3	3:A:222:ARG:HH21	1.75	0.49
4:B:33:ILE:HG21	4:B:36:ARG:NH1	2.27	0.49
5:C:152:THR:OG1	5:C:154:ASP:OD1	2.26	0.49
7:E:58:ALA:N	7:E:62:ARG:HG3	2.26	0.49
8:F:76:TYR:HA	8:F:79:ARG:HE	1.77	0.49
9:G:52:GLY:O	9:G:55:ALA:HB3	2.12	0.49
13:K:98:LEU:O	13:K:99:ARG:C	2.51	0.49
14:L:35:SER:C	14:L:36:LYS:HD2	2.33	0.49
16:N:45:TYR:O	16:N:46:GLU:C	2.49	0.49
17:O:20:ILE:CD1	17:O:21:ARG:HG2	2.41	0.49
19:Q:83:ALA:C	19:Q:85:GLY:N	2.66	0.49
20:R:25:LEU:HD12	20:R:25:LEU:H	1.77	0.49
21:S:64:ALA:CA	21:S:86:VAL:H	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:130:ILE:N	21:S:130:ILE:HD12	2.27	0.49
22:T:3:HIS:CG	22:T:4:LYS:N	2.78	0.49
22:T:37:LEU:N	22:T:37:LEU:HD12	2.27	0.49
24:V:4:SER:HA	24:V:7:ARG:HG3	1.93	0.49
1:X:454:G:H4'	1:X:455:A:OP1	2.12	0.49
1:X:455:A:C2	1:X:1258:G:N3	2.80	0.49
1:X:481:A:C6	1:X:482:A:C6	3.00	0.49
1:X:545:C:O2'	1:X:546:A:H5'	2.12	0.49
1:X:689:A:N1	1:X:815:A:N1	2.61	0.49
1:X:1142:G:O4'	9:G:103:TYR:CD2	2.65	0.49
1:X:1240:G:OP2	16:N:16:LYS:HE3	2.12	0.49
1:X:1406:A:H62	19:Q:15:LYS:HD3	1.77	0.49
1:X:1418:C:H2'	1:X:1419:G:H8	1.77	0.49
1:X:1711:C:H4'	1:X:1712:G:OP1	2.10	0.49
1:X:1786:C:C4	1:X:1787:U:C5	3.00	0.49
1:X:2035:G:H1'	4:B:149:ARG:O	2.11	0.49
1:X:2073:A:C6	1:X:2074:U:C4	3.00	0.49
1:X:2484:G:C6	1:X:2555:G:C5	3.01	0.49
1:X:2496:C:O2'	1:X:2497:A:O5'	2.29	0.49
1:X:2616:U:H2'	1:X:2617:G:O4'	2.13	0.49
1:X:2769:C:C2'	1:X:2770:A:H8	2.25	0.49
1:X:2871:U:H2'	1:X:2872:U:H6	1.74	0.49
2:Y:5:C:H2'	2:Y:6:C:O4'	2.13	0.49
4:B:25:VAL:HG11	15:M:16:ILE:HD12	1.94	0.49
4:B:151:TYR:HB3	9:G:106:TYR:CD2	2.47	0.49
5:C:84:PHE:CD2	5:C:84:PHE:N	2.78	0.49
5:C:117:LEU:O	5:C:188:ILE:HG13	2.12	0.49
5:C:149:LEU:O	5:C:187:VAL:HB	2.12	0.49
5:C:154:ASP:OD1	5:C:154:ASP:N	2.45	0.49
5:C:187:VAL:CG1	5:C:189:ASP:HB2	2.43	0.49
6:D:135:GLN:O	6:D:138:PHE:CD1	2.65	0.49
7:E:164:PHE:O	7:E:167:GLU:N	2.45	0.49
9:G:132:PHE:CB	9:G:145:HIS:CE1	2.94	0.49
9:G:154:GLU:O	9:G:157:PRO:HD2	2.11	0.49
10:H:7:ARG:NH1	10:H:20:MET:HE3	2.25	0.49
11:I:86:THR:N	11:I:116:ARG:HH12	2.07	0.49
14:L:51:LEU:N	14:L:51:LEU:CD1	2.74	0.49
15:M:99:VAL:HG21	15:M:104:LEU:CD2	2.29	0.49
17:O:70:TYR:N	17:O:70:TYR:CD1	2.80	0.49
20:R:93:ARG:NH1	20:R:108:VAL:C	2.65	0.49
21:S:51:LEU:N	21:S:65:LEU:CD1	2.75	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:87:THR:HG22	21:S:88:TYR:N	2.28	0.49
1:X:445:A:H2'	1:X:446:C:C6	2.46	0.49
1:X:496:C:C2'	1:X:497:C:H5''	2.42	0.49
1:X:510:G:C2	1:X:512:A:H3'	2.48	0.49
1:X:553:C:C4	1:X:557:U:C2	3.01	0.49
1:X:847:C:C2	1:X:848:A:C8	3.00	0.49
1:X:969:U:C5'	12:J:17:ARG:HH11	2.25	0.49
1:X:1336:G:O2'	1:X:1337:G:H5'	2.12	0.49
1:X:1442:C:H2'	1:X:1585:A:OP2	2.11	0.49
1:X:2270:U:OP1	1:X:2359:U:O2'	2.30	0.49
2:Y:31:A:H2'	2:Y:32:C:H6	1.75	0.49
2:Y:53:G:H5'	14:L:64:LYS:NZ	2.26	0.49
3:A:125:PRO:HG3	3:A:131:LEU:HD13	1.90	0.49
3:A:134:ARG:NE	3:A:135:PHE:CE2	2.81	0.49
6:D:35:VAL:HG12	6:D:36:VAL:H	1.76	0.49
7:E:17:VAL:CG1	7:E:18:ASN:N	2.75	0.49
9:G:102:ARG:HG3	9:G:112:THR:O	2.12	0.49
11:I:53:ARG:HH21	11:I:53:ARG:CG	2.19	0.49
12:J:15:ARG:HB3	12:J:73:LYS:HZ2	1.77	0.49
12:J:106:GLU:CD	12:J:106:GLU:N	2.65	0.49
15:M:105:TYR:C	15:M:107:LEU:H	2.15	0.49
18:P:134:LYS:OXT	18:P:134:LYS:HG2	2.11	0.49
20:R:85:ASP:N	20:R:86:PRO:HD3	2.23	0.49
21:S:4:THR:HG22	21:S:57:GLU:HB2	1.94	0.49
23:U:41:VAL:HG21	23:U:43:ARG:HH22	1.76	0.49
23:U:46:LEU:HA	23:U:47:HIS:CE1	2.47	0.49
1:X:27:G:O2'	1:X:28:A:O5'	2.30	0.49
1:X:603:C:H2'	1:X:604:U:C6	2.47	0.49
1:X:829:C:C4	1:X:1206:G:N1	2.80	0.49
1:X:1044:U:H4'	1:X:1045:G:OP1	2.11	0.49
1:X:1089:C:C5'	1:X:1090:C:OP1	2.60	0.49
1:X:1211:G:C4	1:X:1212:U:C5	3.00	0.49
1:X:1329:U:O2'	1:X:1330:G:H5'	2.12	0.49
1:X:1534:A:H2'	1:X:1535:C:C6	2.47	0.49
1:X:1552:C:O2'	1:X:1553:G:O5'	2.29	0.49
1:X:1594:U:H2'	1:X:1595:A:C8	2.45	0.49
1:X:1621:C:O4'	1:X:1626:A:C6	2.65	0.49
1:X:1815:G:O2'	1:X:1816:G:H5'	2.13	0.49
1:X:1919:A:C6	1:X:1928:G:C4	3.00	0.49
1:X:1920:A:C2	1:X:1922:U:C5	3.01	0.49
1:X:2083:G:H2'	1:X:2084:G:C8	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2509:A:H62	7:E:172:LYS:HZ3	1.61	0.49
3:A:105:ILE:CG2	3:A:106:LEU:N	2.75	0.49
5:C:34:GLN:OE1	5:C:176:ASN:OD1	2.29	0.49
6:D:122:PHE:HD2	6:D:129:ASN:H	1.59	0.49
9:G:84:ASN:N	9:G:153:GLY:O	2.45	0.49
9:G:94:LYS:O	9:G:117:GLU:CB	2.60	0.49
9:G:115:ALA:O	9:G:118:ALA:CB	2.54	0.49
9:G:162:LYS:H	9:G:163:PRO:HD2	1.75	0.49
10:H:22:ILE:HG22	10:H:23:ARG:N	2.27	0.49
10:H:46:HIS:O	10:H:47:VAL:O	2.31	0.49
10:H:73:VAL:O	10:H:73:VAL:HG13	2.12	0.49
12:J:15:ARG:HD3	12:J:73:LYS:HZ2	1.78	0.49
15:M:34:ARG:HH21	15:M:91:VAL:HG23	1.78	0.49
18:P:50:VAL:CG1	18:P:90:LEU:O	2.60	0.49
18:P:59:PHE:O	18:P:60:ILE:C	2.51	0.49
18:P:76:LYS:O	18:P:79:ALA:N	2.46	0.49
18:P:106:LEU:HD23	18:P:106:LEU:C	2.32	0.49
20:R:17:LYS:C	20:R:19:GLY:N	2.66	0.49
20:R:59:LYS:HB3	20:R:62:MET:CB	2.41	0.49
21:S:18:MET:N	21:S:36:ARG:HB2	2.27	0.49
21:S:19:ILE:HB	21:S:34:LEU:HD11	1.93	0.49
22:T:23:VAL:HG13	22:T:38:VAL:HG22	1.95	0.49
1:X:357:A:H3'	1:X:358:C:C6	2.47	0.49
1:X:357:A:C5	1:X:358:C:H1'	2.47	0.49
1:X:791:G:C5	1:X:792:U:C5	3.00	0.49
1:X:817:A:H2'	1:X:819:C:C4	2.47	0.49
1:X:861:G:H1'	1:X:944:A:N3	2.28	0.49
1:X:1086:C:H2'	1:X:1086:C:O2	2.11	0.49
1:X:1087:C:O2'	8:F:91:PRO:HG2	2.12	0.49
1:X:1089:C:C1'	1:X:1099:A:H2	2.25	0.49
1:X:1092:U:H4'	8:F:122:ALA:CB	2.37	0.49
1:X:1218:C:C4'	11:I:13:ARG:NH1	2.66	0.49
1:X:1247:U:H2'	1:X:1248:G:O4'	2.12	0.49
1:X:1687:C:OP2	1:X:2529:G:OP1	2.31	0.49
1:X:1710:U:O2'	1:X:1711:C:P	2.71	0.49
1:X:2031:A:C6	1:X:2600:A:N1	2.80	0.49
1:X:2084:G:O2'	1:X:2085:G:H5'	2.12	0.49
1:X:2284:U:C3'	1:X:2285:U:H5''	2.42	0.49
1:X:2473:G:H2'	1:X:2474:G:C8	2.47	0.49
2:Y:15:A:H2'	2:Y:16:U:H5''	1.95	0.49
2:Y:50:U:O3'	14:L:97:HIS:HD2	1.92	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:33:LEU:HD12	3:A:63:ARG:NH2	2.14	0.49
4:B:40:GLN:O	4:B:40:GLN:HG2	2.12	0.49
5:C:173:ALA:C	5:C:175:VAL:H	2.16	0.49
9:G:67:ARG:HE	9:G:70:PHE:CA	2.26	0.49
10:H:77:THR:C	10:H:79:HIS:H	2.15	0.49
10:H:79:HIS:CD2	10:H:80:ALA:H	2.31	0.49
12:J:79:PRO:CD	12:J:88:LYS:HD2	2.42	0.49
14:L:67:THR:O	14:L:70:ALA:HB3	2.13	0.49
14:L:97:HIS:CG	14:L:98:GLY:H	2.30	0.49
15:M:82:PRO:O	15:M:83:PHE:C	2.50	0.49
16:N:47:TYR:CD2	16:N:48:ARG:N	2.80	0.49
17:O:9:GLY:O	17:O:10:LYS:CB	2.60	0.49
18:P:80:LEU:O	18:P:81:HIS:O	2.31	0.49
19:Q:2:SER:OG	19:Q:3:HIS:N	2.40	0.49
19:Q:84:GLU:HA	19:Q:84:GLU:OE2	2.13	0.49
22:T:4:LYS:C	22:T:5:LYS:HD2	2.32	0.49
23:U:10:LYS:CG	23:U:11:LYS:N	2.70	0.49
23:U:22:GLY:CA	23:U:39:LYS:CD	2.89	0.49
23:U:53:GLU:HB3	23:U:58:LYS:N	2.27	0.49
25:W:5:LEU:HB2	25:W:25:LEU:HD13	1.94	0.49
25:W:46:THR:HG22	25:W:47:VAL:N	2.26	0.49
1:X:53:G:N2	1:X:54:G:H1'	2.28	0.49
1:X:208:C:H41	1:X:209:G:N2	2.09	0.49
1:X:467:U:O2	1:X:467:U:C2'	2.61	0.49
1:X:805:G:N7	1:X:2419:C:C1'	2.76	0.49
1:X:836:G:H2'	1:X:837:U:C6	2.47	0.49
1:X:1074:G:C2'	1:X:1075:C:H5'	2.42	0.49
1:X:1105:U:C2	1:X:1107:A:H5''	2.48	0.49
1:X:1105:U:C2	1:X:1107:A:OP2	2.65	0.49
1:X:1171:A:H2'	1:X:1172:U:H6	1.74	0.49
1:X:1323:G:H3'	1:X:1324:G:H21	1.77	0.49
1:X:1510:A:C8	1:X:1511:A:N7	2.81	0.49
1:X:2216:G:H8	1:X:2216:G:O5'	1.96	0.49
1:X:2255:G:C2	1:X:2256:G:C8	3.00	0.49
1:X:2275:U:C4'	1:X:2276:C:OP1	2.57	0.49
1:X:2426:G:O2'	1:X:2427:A:OP2	2.30	0.49
1:X:2484:G:HO2'	1:X:2485:U:H6	1.59	0.49
1:X:2703:C:O2'	1:X:2704:U:H5'	2.12	0.49
3:A:153:ALA:O	3:A:154:GLN:CG	2.57	0.49
3:A:243:GLY:CA	3:A:244:ARG:CZ	2.90	0.49
6:D:46:ASP:O	6:D:48:LYS:N	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:133:LYS:O	6:D:134:GLU:C	2.51	0.49
9:G:66:HIS:HB3	16:N:71:LEU:HD13	1.94	0.49
12:J:79:PRO:CD	12:J:88:LYS:NZ	2.72	0.49
15:M:14:ARG:NH2	15:M:18:GLN:OE1	2.45	0.49
18:P:71:VAL:CG1	18:P:126:ILE:HG22	2.43	0.49
19:Q:90:ALA:O	19:Q:92:ALA:N	2.38	0.49
21:S:24:TYR:HB3	21:S:29:ASN:HA	1.94	0.49
22:T:32:LYS:CG	22:T:33:ALA:H	2.25	0.49
24:V:1:MET:HG3	24:V:3:PRO:HD3	1.94	0.49
1:X:314:G:H2'	1:X:315:G:O4'	2.13	0.49
1:X:501:G:C2'	1:X:502:A:H8	2.19	0.49
1:X:617:U:O2	1:X:617:U:C3'	2.59	0.49
1:X:729:A:O2'	1:X:730:C:C4'	2.60	0.49
1:X:769:C:H2'	1:X:770:U:C5'	2.43	0.49
1:X:789:G:H4'	1:X:790:A:O5'	2.12	0.49
1:X:1536:G:H2'	1:X:1537:U:H6	1.78	0.49
1:X:1587:A:N1	1:X:1588:A:C6	2.80	0.49
1:X:1745:C:N3	1:X:1746:A:C5	2.81	0.49
1:X:2015:G:N2	1:X:2551:A:OP2	2.46	0.49
1:X:2335:U:H4'	22:T:20:TYR:CE2	2.48	0.49
1:X:2791:C:H2'	1:X:2792:C:H6	1.77	0.49
3:A:123:ALA:O	3:A:125:PRO:HD3	2.12	0.49
5:C:35:LEU:O	5:C:38:ARG:N	2.46	0.49
6:D:73:SER:O	6:D:80:ARG:N	2.42	0.49
7:E:126:PRO:CG	7:E:127:GLU:H	2.15	0.49
9:G:98:LYS:HZ1	9:G:116:ARG:CZ	2.24	0.49
11:I:85:ASP:HA	11:I:116:ARG:NH1	2.28	0.49
15:M:34:ARG:HE	15:M:91:VAL:HG22	1.77	0.49
15:M:37:THR:HG23	15:M:39:VAL:HG13	1.95	0.49
15:M:39:VAL:CG1	15:M:45:THR:HG23	2.42	0.49
16:N:105:ALA:O	16:N:106:PHE:C	2.50	0.49
16:N:108:ALA:O	16:N:112:ALA:HB2	2.13	0.49
17:O:49:GLU:C	17:O:51:ALA:N	2.65	0.49
18:P:49:SER:OG	18:P:51:GLN:HB2	2.12	0.49
19:Q:43:GLN:O	19:Q:47:GLY:N	2.46	0.49
20:R:22:VAL:HG12	20:R:23:ILE:N	2.27	0.49
23:U:41:VAL:O	23:U:42:GLN:CB	2.60	0.49
26:Z:20:ARG:C	26:Z:22:HIS:H	2.16	0.49
1:X:14:A:N6	1:X:15:G:C2	2.81	0.49
1:X:110:U:H5'	1:X:110:U:C6	2.47	0.49
1:X:428:A:N1	1:X:2388:G:C6	2.81	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:488:A:H2'	1:X:489:A:C8	2.48	0.49
1:X:492:G:OP1	1:X:492:G:H4'	2.13	0.49
1:X:501:G:C2'	1:X:502:A:C8	2.89	0.49
1:X:828:C:H2'	1:X:829:C:C6	2.46	0.49
1:X:985:G:C4	1:X:1000:G:C2	3.01	0.49
1:X:986:A:C2'	1:X:987:G:H5'	2.43	0.49
1:X:1204:G:H2'	1:X:1205:G:H8	1.78	0.49
1:X:1210:C:H1'	1:X:1239:A:C4	2.48	0.49
1:X:1427:G:H2'	1:X:1428:G:C1'	2.41	0.49
1:X:1455:C:O2'	1:X:1456:C:H5'	2.13	0.49
1:X:1536:G:H2'	1:X:1537:U:C6	2.47	0.49
1:X:1810:U:C6	3:A:157:ARG:HD2	2.48	0.49
1:X:2035:G:N2	1:X:2036:G:C4	2.81	0.49
1:X:2307:A:N1	1:X:2308:A:C6	2.81	0.49
1:X:2529:G:C6	1:X:2530:C:N4	2.80	0.49
1:X:2561:G:H5'	1:X:2561:G:C8	2.45	0.49
3:A:56:GLY:H	3:A:217:ARG:H	1.61	0.49
5:C:5:ASN:N	5:C:5:ASN:ND2	2.59	0.49
6:D:80:ARG:N	6:D:80:ARG:HD2	2.28	0.49
6:D:105:ASN:C	6:D:109:PRO:HG2	2.32	0.49
6:D:110:ARG:HG2	6:D:110:ARG:HH21	1.78	0.49
7:E:70:THR:O	7:E:74:ASN:ND2	2.46	0.49
10:H:97:VAL:O	10:H:99:ILE:HG23	2.13	0.49
11:I:77:LEU:CB	11:I:111:SER:H	2.25	0.49
13:K:76:VAL:HA	13:K:79:VAL:HG12	1.94	0.49
14:L:8:ARG:HH11	14:L:8:ARG:CB	2.24	0.49
15:M:41:GLU:O	15:M:42:GLY:C	2.50	0.49
23:U:75:TYR:C	23:U:77:GLY:H	2.15	0.49
24:V:42:ARG:CZ	24:V:46:LEU:HD21	2.43	0.49
1:X:155:G:C2'	1:X:156:G:C5'	2.89	0.49
1:X:242:A:O2'	1:X:243:G:H4'	2.12	0.49
1:X:471:A:C2	1:X:481:A:C4	3.01	0.49
1:X:728:G:C2'	1:X:729:A:OP1	2.60	0.49
1:X:844:G:H5''	11:I:41:SER:HB3	1.95	0.49
1:X:872:G:N2	1:X:928:G:H2'	2.27	0.49
1:X:913:A:H2'	1:X:914:C:O5'	2.13	0.49
1:X:1383:C:H2'	1:X:1384:G:H8	1.78	0.49
1:X:1494:G:H2'	1:X:1495:G:O4'	2.13	0.49
1:X:1629:G:C2	1:X:1633:C:C2	3.01	0.49
1:X:1922:U:HO2'	1:X:2571:G:C1'	2.26	0.49
1:X:2434:G:C2	1:X:2477:C:N4	2.81	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2670:C:C2	1:X:2671:C:C5	3.00	0.49
1:X:2673:G:C6	1:X:2696:A:C6	3.01	0.49
1:X:2709:C:O2	1:X:2709:C:H2'	2.13	0.49
2:Y:64:C:H2'	2:Y:65:A:H8	1.77	0.49
4:B:55:ALA:O	4:B:59:VAL:HG23	2.13	0.49
6:D:72:LYS:HA	6:D:81:GLN:HA	1.93	0.49
6:D:134:GLU:OE2	6:D:136:LEU:HD12	2.13	0.49
7:E:37:TYR:CZ	7:E:72:VAL:HG22	2.48	0.49
13:K:49:GLU:O	13:K:50:GLN:C	2.51	0.49
15:M:26:ASP:OD1	15:M:27:PHE:N	2.45	0.49
15:M:57:ILE:O	15:M:58:ASN:C	2.50	0.49
16:N:7:GLY:C	16:N:9:VAL:H	2.16	0.49
16:N:78:THR:HG23	16:N:117:ARG:NE	2.28	0.49
16:N:81:ASN:ND2	16:N:85:ARG:HE	2.10	0.49
16:N:91:ASN:C	16:N:93:LYS:H	2.11	0.49
17:O:65:ARG:CG	17:O:65:ARG:NH1	2.68	0.49
1:X:169:C:H2'	1:X:170:U:O4'	2.12	0.48
1:X:518:A:OP2	1:X:518:A:C4'	2.60	0.48
1:X:638:A:H4'	1:X:639:G:H5'	1.95	0.48
1:X:665:A:H3'	1:X:665:A:N3	2.28	0.48
1:X:703:A:O2'	1:X:793:G:OP1	2.29	0.48
1:X:760:U:H5	26:Z:3:LYS:HA	1.77	0.48
1:X:838:A:H2'	1:X:839:U:O4'	2.13	0.48
1:X:1162:A:H2'	1:X:1163:C:C6	2.48	0.48
1:X:2014:A:C6	1:X:2477:C:H1'	2.48	0.48
1:X:2170:C:C3'	1:X:2171:U:C5'	2.89	0.48
1:X:2212:U:C2'	1:X:2213:G:C8	2.85	0.48
1:X:2271:C:OP1	14:L:18:ARG:NH2	2.43	0.48
1:X:2621:G:O2'	1:X:2622:G:H5'	2.12	0.48
1:X:2687:G:C2'	1:X:2688:G:H5'	2.43	0.48
1:X:2813:G:H2'	1:X:2814:G:O4'	2.13	0.48
2:Y:35:C:H2'	2:Y:36:A:O4'	2.13	0.48
3:A:126:LYS:HB2	3:A:129:ASN:HD22	1.78	0.48
5:C:45:THR:CB	5:C:86:PRO:HD2	2.43	0.48
5:C:119:ALA:HB3	5:C:189:ASP:CG	2.34	0.48
5:C:129:LYS:O	5:C:130:THR:HB	2.11	0.48
6:D:56:GLU:O	6:D:59:LEU:N	2.46	0.48
6:D:74:ILE:HA	6:D:80:ARG:N	2.27	0.48
6:D:111:ILE:HG12	6:D:137:ILE:HG21	1.94	0.48
8:F:74:MET:HG3	8:F:111:LYS:HE2	1.95	0.48
10:H:92:ASP:OD1	15:M:69:ARG:NH2	2.45	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:62:GLY:C	12:J:64:LYS:HD2	2.33	0.48
15:M:31:ASP:OD2	15:M:31:ASP:N	2.46	0.48
16:N:8:ILE:O	16:N:12:ARG:HG3	2.13	0.48
18:P:89:ARG:O	18:P:89:ARG:HG2	2.13	0.48
20:R:93:ARG:C	20:R:95:ARG:NH1	2.66	0.48
23:U:10:LYS:NZ	23:U:70:LEU:HD11	2.28	0.48
25:W:38:PRO:CD	25:W:41:ARG:HH21	2.26	0.48
25:W:42:GLY:O	25:W:43:MET:C	2.52	0.48
1:X:84:G:H5'	20:R:39:ALA:O	2.13	0.48
1:X:387:A:C2	1:X:388:G:C8	3.01	0.48
1:X:419:G:O2'	1:X:420:C:H5'	2.13	0.48
1:X:459:A:C2	1:X:466:A:C8	3.01	0.48
1:X:541:C:C4'	1:X:542:A:C8	2.96	0.48
1:X:609:U:C1'	11:I:18:ARG:NH2	2.76	0.48
1:X:622:U:O2	1:X:628:A:C2	2.66	0.48
1:X:637:G:N1	11:I:101:ARG:HD3	2.27	0.48
1:X:682:G:H5''	1:X:683:A:OP2	2.12	0.48
1:X:826:U:O2'	1:X:1238:A:H1'	2.12	0.48
1:X:969:U:H5''	12:J:17:ARG:HH12	1.77	0.48
1:X:993:C:O5'	1:X:993:C:H6	1.96	0.48
1:X:1004:A:C4	1:X:1005:U:C5	3.01	0.48
1:X:1053:G:C4	1:X:1125:G:C2	3.01	0.48
1:X:1464:A:H2'	1:X:1465:G:O4'	2.13	0.48
1:X:1830:C:H42	1:X:1881:U:H2'	1.78	0.48
1:X:2039:G:H2'	1:X:2039:G:N3	2.28	0.48
1:X:2052:G:C6	1:X:2053:G:N7	2.80	0.48
1:X:2524:G:C2	1:X:2525:U:C2	3.01	0.48
2:Y:67:C:O2'	2:Y:68:A:H5'	2.12	0.48
2:Y:69:G:O2'	2:Y:70:C:H5'	2.12	0.48
3:A:88:ARG:HG3	3:A:88:ARG:NH1	2.27	0.48
3:A:244:ARG:O	3:A:252:LYS:HE2	2.13	0.48
4:B:85:ALA:H	4:B:86:PRO:HD2	1.78	0.48
4:B:192:ASN:HB2	15:M:9:ARG:NH1	2.28	0.48
10:H:13:ASN:C	10:H:15:GLY:H	2.16	0.48
10:H:109:ARG:HA	10:H:129:LEU:HD13	1.95	0.48
11:I:116:ARG:HG2	11:I:117:ALA:O	2.14	0.48
12:J:33:TYR:O	12:J:106:GLU:CA	2.62	0.48
12:J:91:VAL:HG12	12:J:91:VAL:O	2.13	0.48
14:L:33:ARG:NH1	14:L:103:LEU:H	2.09	0.48
16:N:66:ASN:CG	16:N:70:ARG:HH12	2.16	0.48
19:Q:33:ALA:O	19:Q:34:THR:C	2.52	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:46:VAL:O	20:R:75:ALA:HA	2.13	0.48
21:S:64:ALA:HB2	21:S:85:MET:HA	1.95	0.48
23:U:28:GLY:N	23:U:32:ARG:HD3	2.27	0.48
1:X:169:C:H2'	1:X:170:U:H5'	1.95	0.48
1:X:220:U:O2	1:X:220:U:H2'	2.12	0.48
1:X:322:A:H2	1:X:342:G:H3'	1.78	0.48
1:X:603:C:H2'	1:X:603:C:O2	2.12	0.48
1:X:636:G:H5'	1:X:636:G:C8	2.42	0.48
1:X:648:A:H5'	1:X:649:G:C4'	2.43	0.48
1:X:871:U:H2'	1:X:2247:A:H2'	1.95	0.48
1:X:1140:A:C4	1:X:2549:G:H1'	2.47	0.48
1:X:1186:G:N2	1:X:1187:A:H62	2.12	0.48
1:X:1188:A:H2'	1:X:1189:G:O4'	2.13	0.48
1:X:1215:A:C2	1:X:1258:G:C4	3.01	0.48
1:X:1352:G:OP2	19:Q:77:LYS:NZ	2.46	0.48
1:X:1491:C:C2	1:X:1492:A:C8	3.01	0.48
1:X:1623:C:C4'	1:X:1624:A:O5'	2.52	0.48
1:X:1744:G:O6	1:X:1747:G:C6	2.66	0.48
1:X:2235:G:N2	1:X:2254:C:N4	2.61	0.48
1:X:2279:G:H2'	1:X:2280:A:C8	2.48	0.48
1:X:2335:U:OP1	22:T:24:LYS:NZ	2.45	0.48
1:X:2506:C:H5''	30:4:30:VAL:HB	1.96	0.48
1:X:2691:C:C2'	1:X:2692:A:C5'	2.91	0.48
2:Y:59:A:H1'	6:D:27:ALA:HB2	1.95	0.48
3:A:160:GLY:HA2	3:A:196:VAL:CG2	2.43	0.48
4:B:56:GLU:HA	4:B:59:VAL:CG2	2.43	0.48
4:B:72:VAL:O	4:B:73:ALA:HB2	2.13	0.48
4:B:195:LEU:H	15:M:2:GLN:HG2	1.78	0.48
9:G:47:SER:C	9:G:49:VAL:H	2.16	0.48
11:I:96:TYR:N	11:I:96:TYR:CD1	2.81	0.48
12:J:25:GLY:O	12:J:26:ASP:O	2.31	0.48
12:J:35:LEU:HB2	12:J:119:PHE:CE1	2.49	0.48
14:L:41:GLN:HA	14:L:53:ALA:CB	2.43	0.48
16:N:85:ARG:HG3	16:N:85:ARG:NH2	2.25	0.48
17:O:12:TYR:HB2	17:O:39:PHE:CA	2.38	0.48
19:Q:68:PHE:O	19:Q:69:ILE:C	2.50	0.48
20:R:77:HIS:C	20:R:79:SER:H	2.15	0.48
20:R:82:ALA:C	20:R:83:LEU:HD12	2.33	0.48
21:S:115:ILE:HG23	21:S:169:VAL:HG12	1.95	0.48
22:T:31:VAL:CG1	22:T:37:LEU:HD21	2.39	0.48
25:W:44:VAL:CG1	25:W:45:LYS:NZ	2.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:742:G:O2'	1:X:776:G:H4'	2.12	0.48
1:X:835:U:O2'	1:X:836:G:H5'	2.14	0.48
1:X:861:G:N2	1:X:943:U:H1'	2.29	0.48
1:X:1096:A:H2'	1:X:1097:A:N9	2.28	0.48
1:X:1187:A:C6	1:X:1188:A:C2	3.01	0.48
1:X:1189:G:O2'	1:X:1190:C:H5'	2.13	0.48
1:X:1393:G:C2	1:X:1394:G:C8	3.01	0.48
1:X:1452:U:C5	1:X:1568:A:C2	3.01	0.48
1:X:1468:A:C5'	1:X:1472:C:H42	2.25	0.48
1:X:1584:G:H4'	3:A:59:LYS:HB3	1.95	0.48
1:X:1790:G:C5'	3:A:261:ARG:NH2	2.67	0.48
1:X:1871:G:H3'	1:X:1871:G:N3	2.28	0.48
1:X:1937:G:O2'	1:X:1939:U:C5	2.63	0.48
1:X:1969:G:C2	1:X:1970:G:C8	3.02	0.48
1:X:2029:G:C2	1:X:2602:G:C2	3.01	0.48
1:X:2325:A:C2	1:X:2362:G:C6	3.02	0.48
1:X:2355:A:H2'	1:X:2356:A:O4'	2.12	0.48
1:X:2550:C:O2	4:B:143:GLN:HG2	2.13	0.48
1:X:2738:A:O2'	1:X:2739:G:H5'	2.13	0.48
1:X:2766:U:O2	4:B:62:PRO:HB3	2.14	0.48
1:X:2825:A:O2'	1:X:2826:C:H5'	2.13	0.48
3:A:262:LYS:C	3:A:264:LYS:N	2.65	0.48
9:G:66:HIS:HB3	16:N:67:ALA:O	2.12	0.48
9:G:169:GLN:NE2	9:G:171:LEU:C	2.65	0.48
11:I:11:GLY:O	11:I:12:SER:C	2.51	0.48
12:J:19:THR:HG21	12:J:99:LYS:HZ2	1.78	0.48
12:J:99:LYS:HE3	12:J:100:PRO:CD	2.41	0.48
14:L:60:LYS:CG	14:L:62:GLY:H	2.18	0.48
16:N:85:ARG:HG2	16:N:116:ALA:O	2.14	0.48
18:P:27:VAL:HA	18:P:125:THR:HA	1.96	0.48
21:S:3:LEU:HD13	21:S:33:ALA:CA	2.43	0.48
21:S:3:LEU:CD1	21:S:33:ALA:N	2.74	0.48
23:U:13:LEU:CG	23:U:14:VAL:N	2.71	0.48
24:V:18:ILE:HG12	24:V:53:LEU:HB3	1.95	0.48
1:X:312:G:C5	1:X:328:A:C6	3.02	0.48
1:X:435:A:N1	1:X:436:A:C6	2.81	0.48
1:X:953:G:H1'	1:X:1203:A:H2	1.78	0.48
1:X:956:A:C5	1:X:2427:A:C2	3.01	0.48
1:X:1077:U:N3	1:X:1079:G:H5''	2.29	0.48
1:X:1874:G:H8	1:X:1874:G:OP2	1.96	0.48
1:X:2190:A:C8	1:X:2190:A:C3'	2.88	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2209:G:C5	1:X:2210:C:C5	3.01	0.48
1:X:2296:U:C2'	1:X:2297:G:H5'	2.44	0.48
1:X:2356:A:N3	14:L:89:PHE:CZ	2.82	0.48
1:X:2685:A:C2	1:X:2686:C:N1	2.81	0.48
1:X:2792:C:C2'	1:X:2793:G:O5'	2.62	0.48
2:Y:56:G:N2	6:D:26:MET:HE1	2.28	0.48
3:A:152:GLY:O	3:A:153:ALA:O	2.32	0.48
4:B:131:SER:O	4:B:132:LYS:HG2	2.14	0.48
5:C:122:GLY:C	5:C:124:ASP:H	2.15	0.48
6:D:138:PHE:HB2	6:D:141:ILE:CB	2.42	0.48
6:D:156:ILE:CG2	6:D:158:THR:HG23	2.43	0.48
6:D:171:GLN:CA	6:D:175:LEU:HB3	2.34	0.48
9:G:127:ILE:HG22	9:G:128:GLU:N	2.27	0.48
9:G:169:GLN:NE2	9:G:171:LEU:N	2.62	0.48
10:H:46:HIS:N	10:H:49:ASP:OD2	2.32	0.48
11:I:89:ASP:N	11:I:89:ASP:OD1	2.45	0.48
18:P:71:VAL:HG12	18:P:126:ILE:HG22	1.95	0.48
18:P:79:ALA:O	18:P:85:MET:CG	2.61	0.48
21:S:94:VAL:HG12	21:S:95:SER:N	2.29	0.48
22:T:21:LEU:HD11	22:T:41:ARG:CD	2.43	0.48
22:T:57:HIS:N	22:T:57:HIS:ND1	2.62	0.48
25:W:22:ALA:O	25:W:24:GLY:N	2.46	0.48
1:X:674:U:H1'	11:I:22:GLY:CA	2.42	0.48
1:X:862:A:H2'	1:X:863:C:O4'	2.13	0.48
1:X:1583:A:H5'	3:A:58:HIS:ND1	2.28	0.48
1:X:2011:U:O2'	1:X:2012:A:H5'	2.13	0.48
1:X:2195:C:C4	1:X:2196:U:N3	2.82	0.48
1:X:2308:A:H2'	1:X:2309:G:C8	2.49	0.48
1:X:2570:C:OP1	3:A:239:ARG:CD	2.62	0.48
1:X:2823:G:O2'	1:X:2824:C:P	2.72	0.48
5:C:35:LEU:CA	5:C:38:ARG:HG3	2.44	0.48
5:C:186:LEU:HD12	5:C:187:VAL:N	2.29	0.48
6:D:54:ALA:O	6:D:55:LYS:C	2.51	0.48
6:D:91:LEU:HB3	6:D:96:MET:HA	1.95	0.48
7:E:9:ILE:HB	7:E:50:LEU:O	2.14	0.48
10:H:25:LEU:HD21	10:H:52:VAL:CG2	2.43	0.48
10:H:70:VAL:HG22	10:H:71:LYS:O	2.13	0.48
10:H:116:ARG:NH1	15:M:38:LYS:CE	2.76	0.48
11:I:120:VAL:HG11	11:I:122:VAL:HG13	1.92	0.48
12:J:112:GLU:O	12:J:115:ALA:HB3	2.14	0.48
16:N:52:ASN:O	16:N:55:ARG:N	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:N:85:ARG:HH21	16:N:85:ARG:CG	2.18	0.48
17:O:29:ALA:HA	17:O:59:GLU:HB3	1.95	0.48
17:O:35:LEU:CD2	17:O:36:LYS:N	2.76	0.48
17:O:59:GLU:O	17:O:60:VAL:C	2.51	0.48
19:Q:4:TYR:CE2	24:V:23:LYS:HD2	2.49	0.48
19:Q:62:ARG:O	19:Q:70:GLY:HA3	2.14	0.48
20:R:88:THR:O	20:R:89:GLY:C	2.49	0.48
23:U:11:LYS:O	23:U:12:ASN:ND2	2.47	0.48
24:V:50:VAL:O	24:V:53:LEU:HB2	2.14	0.48
24:V:64:GLY:O	24:V:65:GLU:CB	2.62	0.48
1:X:239:A:C2	1:X:443:A:N3	2.82	0.48
1:X:393:U:H4'	23:U:19:ILE:O	2.12	0.48
1:X:493:A:H4'	20:R:56:LYS:CE	2.35	0.48
1:X:540:G:C6	1:X:2006:G:OP1	2.66	0.48
1:X:985:G:C4	1:X:1200:G:N2	2.81	0.48
1:X:1002:C:H2'	1:X:1003:C:H6	1.78	0.48
1:X:1105:U:O2	1:X:1107:A:H8	1.97	0.48
1:X:1238:A:C2	1:X:1239:A:C2	3.01	0.48
1:X:1257:U:H2'	1:X:1258:G:H8	1.78	0.48
1:X:2423:G:C6	1:X:2424:G:C5	3.02	0.48
1:X:2784:A:C6	1:X:2866:A:C8	3.01	0.48
4:B:28:ALA:O	4:B:29:GLY:O	2.32	0.48
5:C:3:GLN:NE2	5:C:4:ILE:CG1	2.75	0.48
5:C:72:ARG:HG3	5:C:77:PHE:CE2	2.48	0.48
5:C:101:GLN:C	5:C:103:GLY:H	2.17	0.48
6:D:106:ILE:O	6:D:110:ARG:CB	2.60	0.48
6:D:138:PHE:HB2	6:D:141:ILE:HG12	1.95	0.48
7:E:22:GLY:HA2	7:E:24:PHE:HE1	1.78	0.48
10:H:100:ASN:HD21	10:H:104:GLU:HG3	1.79	0.48
11:I:81:GLN:HB3	11:I:114:ILE:CG2	2.39	0.48
11:I:96:TYR:N	11:I:96:TYR:HD1	2.11	0.48
12:J:34:GLY:O	12:J:132:MET:HG3	2.14	0.48
14:L:29:LEU:C	14:L:90:ASP:OD1	2.52	0.48
16:N:32:TYR:O	16:N:33:ARG:C	2.51	0.48
16:N:88:ILE:HG23	17:O:49:GLU:CB	2.37	0.48
16:N:105:ALA:O	16:N:107:LYS:N	2.47	0.48
18:P:18:VAL:HG12	18:P:19:LYS:N	2.29	0.48
21:S:51:LEU:H	21:S:51:LEU:CD2	2.17	0.48
21:S:72:ASP:O	21:S:75:LYS:O	2.31	0.48
1:X:30:G:O2'	1:X:31:C:H5'	2.14	0.48
1:X:199:A:N1	1:X:201:G:C2	2.82	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:219:G:O2'	1:X:220:U:P	2.72	0.48
1:X:657:A:N3	1:X:2329:C:O2'	2.45	0.48
1:X:812:G:C4	1:X:813:A:N7	2.81	0.48
1:X:868:U:H2'	1:X:869:C:C6	2.49	0.48
1:X:939:C:OP2	1:X:940:G:H8	1.96	0.48
1:X:1038:U:H5	1:X:1137:A:N3	2.12	0.48
1:X:1091:C:O2'	8:F:125:ASN:HB2	2.12	0.48
1:X:1102:G:C6	1:X:1103:C:C4	3.02	0.48
1:X:1498:G:N2	1:X:1523:A:H1'	2.29	0.48
1:X:1918:G:C2	1:X:1947:G:C4	3.01	0.48
1:X:1972:G:H2'	1:X:1973:C:C6	2.49	0.48
1:X:1982:C:OP1	1:X:2704:U:H5'	2.14	0.48
1:X:2063:A:H5'	23:U:38:THR:O	2.14	0.48
1:X:2199:C:O2	1:X:2199:C:H2'	2.13	0.48
1:X:2597:G:O2'	1:X:2598:C:H5'	2.14	0.48
2:Y:2:C:H6	2:Y:2:C:O5'	1.94	0.48
2:Y:27:A:H61	2:Y:55:C:C3'	2.24	0.48
4:B:92:ASN:HA	4:B:95:ILE:HB	1.96	0.48
5:C:108:ILE:O	5:C:109:ALA:C	2.50	0.48
5:C:165:SER:HB3	5:C:166:TRP:HZ3	1.77	0.48
7:E:146:ALA:O	7:E:150:LYS:HG3	2.14	0.48
8:F:3:LYS:HG2	8:F:4:VAL:N	2.27	0.48
11:I:87:THR:O	11:I:93:LEU:HD13	2.14	0.48
14:L:64:LYS:N	14:L:64:LYS:CD	2.74	0.48
15:M:108:ARG:C	15:M:109:GLU:HG3	2.34	0.48
17:O:38:LEU:O	17:O:39:PHE:HB3	2.14	0.48
21:S:3:LEU:O	21:S:56:VAL:HA	2.14	0.48
30:4:11:CYS:HG	30:4:32:HIS:CE1	2.31	0.48
1:X:242:A:O3'	1:X:243:G:H4'	2.14	0.48
1:X:492:G:O2'	1:X:493:A:H8	1.97	0.48
1:X:538:A:H2'	1:X:2025:A:C2	2.49	0.48
1:X:663:G:C3'	1:X:664:C:C5'	2.86	0.48
1:X:759:C:C1'	1:X:761:G:N2	2.77	0.48
1:X:1200:G:O2'	1:X:1201:G:H5'	2.13	0.48
1:X:1264:C:H5'	16:N:13:ARG:CZ	2.44	0.48
1:X:1321:A:H2'	1:X:1322:G:O4'	2.14	0.48
1:X:1352:G:C6	1:X:1353:A:N6	2.81	0.48
1:X:1373:G:N2	1:X:1374:G:H1'	2.29	0.48
1:X:1386:A:C5'	1:X:2191:A:N6	2.63	0.48
1:X:1475:U:O2	1:X:1475:U:H2'	2.13	0.48
1:X:1621:C:H5'	1:X:1626:A:N6	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1673:C:H2'	1:X:1674:C:H6	1.79	0.48
1:X:1984:A:H2'	1:X:1985:G:O4'	2.14	0.48
1:X:2007:G:C2	1:X:2023:C:C2	3.02	0.48
1:X:2175:A:H2'	1:X:2176:U:H6	1.79	0.48
1:X:2262:C:H2'	1:X:2263:C:O4'	2.14	0.48
1:X:2288:A:C4	1:X:2289:A:N7	2.82	0.48
1:X:2447:G:H22	1:X:2460:G:H2'	1.78	0.48
1:X:2581:A:C3'	1:X:2582:G:H5''	2.29	0.48
1:X:2683:C:C5	1:X:2684:A:N7	2.82	0.48
2:Y:53:G:H5''	14:L:64:LYS:CE	2.44	0.48
2:Y:108:G:H4'	21:S:26:LYS:HE3	1.96	0.48
3:A:44:ASN:CB	3:A:49:ILE:HA	2.43	0.48
3:A:208:LYS:N	3:A:208:LYS:HZ2	2.12	0.48
3:A:257:LEU:HD23	3:A:257:LEU:HA	1.66	0.48
4:B:9:ILE:HB	4:B:25:VAL:O	2.14	0.48
4:B:134:TRP:O	4:B:135:HIS:O	2.31	0.48
5:C:127:ASP:HB2	5:C:129:LYS:HG2	1.95	0.48
6:D:4:LEU:O	6:D:5:LYS:HB3	2.14	0.48
6:D:114:PHE:HZ	6:D:176:PRO:HG3	1.78	0.48
6:D:156:ILE:HG22	6:D:158:THR:HG23	1.96	0.48
7:E:39:THR:C	7:E:41:LEU:N	2.67	0.48
7:E:74:ASN:O	7:E:78:GLY:N	2.47	0.48
9:G:104:THR:O	9:G:107:GLN:NE2	2.46	0.48
13:K:38:LEU:HD12	13:K:38:LEU:O	2.14	0.48
16:N:3:ARG:HH12	16:N:5:LYS:HG2	1.78	0.48
16:N:65:ILE:HG12	16:N:96:ALA:CB	2.44	0.48
16:N:117:ARG:NH2	16:N:117:ARG:HG3	2.29	0.48
17:O:74:TYR:CZ	17:O:76:SER:HB3	2.49	0.48
18:P:10:ASN:OD1	18:P:10:ASN:O	2.31	0.48
21:S:128:ARG:H	21:S:130:ILE:HD11	1.79	0.48
25:W:37:THR:O	25:W:38:PRO:C	2.53	0.48
1:X:319:G:H1'	1:X:511:A:O4'	2.14	0.48
1:X:521:U:H5''	1:X:522:G:OP2	2.13	0.48
1:X:543:G:C5	1:X:544:U:C5	3.02	0.48
1:X:683:A:O2'	1:X:684:C:O5'	2.30	0.48
1:X:683:A:O2'	1:X:684:C:P	2.71	0.48
1:X:760:U:C4	26:Z:3:LYS:HG3	2.49	0.48
1:X:826:U:N3	1:X:827:C:C4	2.82	0.48
1:X:840:U:H4'	1:X:841:G:C2	2.49	0.48
1:X:917:U:H5''	12:J:141:ALA:C	2.34	0.48
1:X:1173:G:H2'	1:X:1174:G:C8	2.42	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1321:A:C2	1:X:1322:G:H1'	2.49	0.48
1:X:1354:A:P	1:X:1410:U:H3	2.37	0.48
1:X:1787:U:H2'	1:X:1788:C:C6	2.49	0.48
1:X:1982:C:OP1	1:X:2703:C:O2'	2.31	0.48
1:X:2013:A:C5'	1:X:2014:A:OP1	2.62	0.48
1:X:2274:C:H2'	1:X:2275:U:H6	1.79	0.48
1:X:2311:U:C4'	1:X:2315:A:N6	2.76	0.48
1:X:2629:U:H2'	1:X:2630:C:O5'	2.13	0.48
1:X:2850:U:H6	1:X:2850:U:C5'	2.19	0.48
1:X:2863:U:H2'	1:X:2864:C:C6	2.45	0.48
2:Y:3:A:C2'	2:Y:4:C:H5'	2.41	0.48
3:A:265:THR:C	3:A:267:ASP:H	2.18	0.48
4:B:51:TYR:CG	4:B:52:ALA:N	2.81	0.48
4:B:93:VAL:C	4:B:95:ILE:H	2.17	0.48
4:B:120:TRP:O	4:B:121:ASN:CB	2.62	0.48
4:B:188:ILE:CG2	4:B:189:PRO:CD	2.92	0.48
7:E:9:ILE:HG22	7:E:11:VAL:CG2	2.43	0.48
7:E:84:THR:HB	7:E:134:SER:OG	2.14	0.48
7:E:99:THR:HB	7:E:102:ALA:HB3	1.95	0.48
9:G:157:PRO:C	9:G:161:GLN:NE2	2.67	0.48
10:H:2:ILE:HD13	10:H:2:ILE:HA	1.72	0.48
10:H:110:VAL:CG1	10:H:111:PHE:N	2.76	0.48
12:J:6:LYS:O	12:J:71:PRO:HD2	2.14	0.48
12:J:30:PHE:HB3	12:J:66:TYR:CD2	2.49	0.48
12:J:61:ARG:O	12:J:64:LYS:NZ	2.41	0.48
13:K:10:LEU:CD2	13:K:17:ARG:HB2	2.41	0.48
13:K:59:ASP:O	13:K:60:LEU:C	2.52	0.48
13:K:60:LEU:O	13:K:63:ARG:HB3	2.12	0.48
13:K:84:ALA:N	13:K:85:PRO:CD	2.76	0.48
14:L:33:ARG:HH22	14:L:103:LEU:CA	2.27	0.48
15:M:39:VAL:HG12	15:M:45:THR:HG23	1.94	0.48
16:N:85:ARG:NH2	16:N:85:ARG:CG	2.76	0.48
17:O:68:LYS:CE	17:O:86:HIS:H	2.27	0.48
19:Q:12:ILE:HG12	19:Q:13:SER:N	2.29	0.48
19:Q:88:ILE:O	19:Q:89:GLU:C	2.52	0.48
24:V:4:SER:C	24:V:6:MET:N	2.65	0.48
24:V:41:HIS:O	24:V:42:ARG:C	2.51	0.48
30:4:30:VAL:C	30:4:32:HIS:N	2.66	0.48
1:X:197:G:H22	1:X:242:A:H62	1.62	0.47
1:X:518:A:OP2	1:X:518:A:H4'	2.13	0.47
1:X:683:A:C5'	11:I:45:LYS:HA	2.43	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:922:A:N1	1:X:2256:G:H1'	2.29	0.47
1:X:994:A:HO2'	1:X:995:A:P	2.37	0.47
1:X:1028:G:C6	1:X:1157:G:C6	3.02	0.47
1:X:1165:G:H8	1:X:1165:G:O5'	1.96	0.47
1:X:1547:U:H2'	1:X:1548:U:C6	2.49	0.47
1:X:1675:C:O5'	1:X:1675:C:H6	1.96	0.47
1:X:1725:C:O2'	1:X:1726:C:H5'	2.14	0.47
1:X:1812:U:C2	3:A:159:ALA:O	2.67	0.47
1:X:1855:G:C2	1:X:1863:U:O2	2.67	0.47
1:X:2036:G:C2	1:X:2596:C:C2	3.02	0.47
1:X:2178:U:C2	1:X:2179:C:C5	3.02	0.47
1:X:2351:G:C2	1:X:2352:A:N7	2.82	0.47
1:X:2422:C:O2	1:X:2423:G:C8	2.67	0.47
1:X:2463:G:H5''	12:J:46:ASN:OD1	2.14	0.47
1:X:2471:U:H2'	1:X:2472:U:C6	2.49	0.47
1:X:2637:C:H2'	1:X:2638:G:O4'	2.14	0.47
1:X:2720:A:C6	1:X:2721:A:C6	3.02	0.47
1:X:2725:C:O2'	7:E:143:GLN:HG3	2.13	0.47
2:Y:7:C:C2	2:Y:8:C:C5	3.02	0.47
2:Y:82:U:O2	2:Y:83:C:C5	2.67	0.47
3:A:102:LYS:O	3:A:103:ARG:HG3	2.14	0.47
4:B:144:ARG:C	4:B:146:THR:H	2.18	0.47
5:C:9:GLN:HG2	5:C:120:VAL:HG21	1.94	0.47
5:C:48:ARG:CB	5:C:51:VAL:HG22	2.38	0.47
5:C:112:GLN:HA	5:C:116:LYS:CD	2.43	0.47
5:C:125:ILE:HG22	5:C:126:ALA:N	2.29	0.47
6:D:52:LYS:HZ1	6:D:149:THR:HA	1.79	0.47
7:E:115:ILE:HD11	7:E:151:VAL:HG21	1.96	0.47
7:E:172:LYS:O	7:E:173:ALA:CB	2.62	0.47
11:I:76:LYS:O	11:I:79:GLN:HB2	2.14	0.47
12:J:44:LYS:CB	12:J:47:GLN:HG3	2.41	0.47
12:J:64:LYS:HG2	12:J:108:ALA:O	2.14	0.47
12:J:128:ILE:CD1	12:J:130:THR:HG23	2.44	0.47
20:R:18:LYS:HZ3	20:R:19:GLY:N	2.12	0.47
21:S:54:ILE:O	21:S:54:ILE:CG2	2.60	0.47
21:S:75:LYS:O	21:S:77:ALA:N	2.47	0.47
21:S:98:VAL:HG21	21:S:168:VAL:CG1	2.44	0.47
21:S:172:LEU:HD22	21:S:173:PRO:HD2	1.96	0.47
22:T:46:LYS:HE3	22:T:76:ALA:HA	1.95	0.47
24:V:62:ARG:HG2	24:V:62:ARG:NH1	2.28	0.47
26:Z:40:LYS:HE3	26:Z:42:SER:HA	1.94	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Z:45:ILE:HD13	26:Z:57:VAL:CG2	2.44	0.47
30:4:4:ARG:O	30:4:36:GLN:HA	2.14	0.47
30:4:29:ASN:HD21	30:4:31:LYS:CD	2.27	0.47
1:X:73:A:H4'	1:X:74:G:O5'	2.14	0.47
1:X:205:A:H2'	1:X:206:U:H5'	1.97	0.47
1:X:230:C:C2'	1:X:231:G:H5'	2.43	0.47
1:X:361:G:H8	1:X:361:G:O5'	1.96	0.47
1:X:392:G:N2	1:X:409:G:C5	2.81	0.47
1:X:558:G:H2'	1:X:559:C:O4'	2.13	0.47
1:X:816:U:H2'	1:X:817:A:H5'	1.96	0.47
1:X:931:G:H5'	2:Y:83:C:O4'	2.14	0.47
1:X:1017:C:O4'	9:G:56:THR:HG23	2.14	0.47
1:X:1324:G:C8	1:X:1326:U:O4	2.67	0.47
1:X:1811:A:H1'	1:X:1813:A:C6	2.49	0.47
1:X:2271:C:P	14:L:18:ARG:NH2	2.87	0.47
1:X:2285:U:H5'	1:X:2286:G:O4'	2.14	0.47
1:X:2307:A:C6	1:X:2308:A:N6	2.82	0.47
1:X:2311:U:O2	1:X:2311:U:C3'	2.61	0.47
1:X:2472:U:C4	1:X:2473:G:C8	3.02	0.47
1:X:2696:A:O2'	1:X:2697:G:H5'	2.14	0.47
1:X:2714:A:N1	4:B:203:LYS:HE3	2.29	0.47
5:C:34:GLN:O	5:C:37:SER:N	2.45	0.47
5:C:136:TRP:O	5:C:137:ALA:C	2.52	0.47
6:D:35:VAL:O	6:D:154:ILE:HG23	2.13	0.47
6:D:65:PRO:CB	6:D:89:VAL:HG13	2.44	0.47
9:G:64:GLY:HA3	9:G:67:ARG:HD2	1.95	0.47
10:H:98:ILE:HG22	10:H:99:ILE:N	2.28	0.47
11:I:17:LYS:C	11:I:21:ARG:HD3	2.35	0.47
11:I:90:ARG:HH21	11:I:93:LEU:HD12	1.79	0.47
12:J:61:ARG:HG2	12:J:61:ARG:HH11	1.79	0.47
16:N:40:LEU:O	16:N:43:ALA:HB3	2.13	0.47
17:O:40:VAL:HG12	17:O:45:THR:N	2.29	0.47
18:P:50:VAL:HG12	18:P:90:LEU:O	2.14	0.47
21:S:52:PHE:O	21:S:54:ILE:HG13	2.14	0.47
30:4:22:ARG:HH11	30:4:22:ARG:CG	2.25	0.47
1:X:26:G:O5'	1:X:26:G:H8	1.97	0.47
1:X:199:A:H62	1:X:209:G:H1'	1.78	0.47
1:X:863:C:H5'	25:W:18:LYS:HG3	1.96	0.47
1:X:1121:G:C2'	1:X:1122:A:C8	2.97	0.47
1:X:1142:G:O2'	1:X:1143:A:H8	1.97	0.47
1:X:1264:C:C5'	16:N:13:ARG:NH1	2.76	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1490:U:H2'	1:X:1491:C:H6	1.78	0.47
1:X:1496:G:C2'	1:X:1497:C:O5'	2.62	0.47
1:X:1585:A:C6	1:X:1586:A:C6	3.03	0.47
1:X:1686:A:C2	1:X:1977:C:H1'	2.49	0.47
1:X:1786:C:O5'	1:X:1786:C:H6	1.97	0.47
1:X:1830:C:H41	1:X:1881:U:H3'	1.77	0.47
1:X:2200:G:H2'	1:X:2201:G:C8	2.49	0.47
1:X:2299:A:C2	1:X:2312:A:C5	3.02	0.47
1:X:2598:C:P	4:B:152:LYS:HZ3	2.37	0.47
1:X:2714:A:H2'	1:X:2715:C:O4'	2.13	0.47
1:X:2762:G:O2'	1:X:2763:U:H5'	2.14	0.47
2:Y:98:C:O5'	2:Y:98:C:H6	1.97	0.47
3:A:213:ARG:C	3:A:215:LEU:N	2.68	0.47
4:B:25:VAL:HA	4:B:183:LEU:HD23	1.96	0.47
4:B:131:SER:C	4:B:132:LYS:HG2	2.34	0.47
4:B:179:GLU:O	4:B:181:LEU:N	2.48	0.47
5:C:153:ASP:OD1	5:C:153:ASP:N	2.47	0.47
5:C:177:VAL:O	5:C:180:ILE:HG23	2.13	0.47
6:D:16:LEU:O	6:D:20:PHE:CB	2.63	0.47
6:D:75:SER:HB2	6:D:79:LEU:HD22	1.95	0.47
7:E:15:VAL:O	7:E:16:THR:OG1	2.27	0.47
7:E:162:VAL:HG12	7:E:163:ARG:N	2.29	0.47
7:E:164:PHE:HB2	7:E:167:GLU:OE1	2.13	0.47
10:H:1:MET:HB3	10:H:44:TYR:HB3	1.96	0.47
11:I:73:GLU:OE2	11:I:105:PRO:O	2.32	0.47
13:K:99:ARG:HA	13:K:111:ALA:CB	2.45	0.47
14:L:63:ASN:HB2	14:L:67:THR:HG23	1.95	0.47
17:O:5:ILE:CG1	17:O:6:GLN:N	2.51	0.47
18:P:35:PRO:O	18:P:39:ARG:CD	2.63	0.47
21:S:154:LEU:HD21	21:S:160:LEU:HG	1.95	0.47
1:X:228:A:P	11:I:53:ARG:HG2	2.55	0.47
1:X:402:A:N7	1:X:2392:G:H4'	2.27	0.47
1:X:488:A:C6	1:X:489:A:C6	3.02	0.47
1:X:704:G:C4	1:X:705:C:C6	3.02	0.47
1:X:1352:G:H2'	1:X:1353:A:C8	2.49	0.47
1:X:1837:G:O2'	1:X:1838:G:H5'	2.14	0.47
1:X:1974:U:H2'	1:X:1975:G:C5'	2.45	0.47
1:X:2294:U:O2'	6:D:125:ARG:HG3	2.14	0.47
1:X:2509:A:N6	7:E:172:LYS:HZ3	2.12	0.47
1:X:2594:U:H2'	1:X:2594:U:O2	2.14	0.47
2:Y:17:A:HO2'	2:Y:112:A:H8	1.60	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:43:ALA:HB1	5:C:86:PRO:C	2.34	0.47
6:D:175:LEU:HG	6:D:177:PHE:CE1	2.49	0.47
7:E:37:TYR:CE2	7:E:68:THR:HG23	2.50	0.47
9:G:41:TRP:CZ3	9:G:79:PHE:CG	3.02	0.47
9:G:102:ARG:NH2	9:G:112:THR:HG21	2.29	0.47
10:H:122:ARG:NH1	10:H:124:MET:CE	2.75	0.47
11:I:71:THR:O	11:I:104:ARG:HD3	2.14	0.47
13:K:83:VAL:HG23	13:K:87:TYR:CE2	2.49	0.47
14:L:32:TYR:C	14:L:34:SER:H	2.17	0.47
15:M:34:ARG:NH2	15:M:88:VAL:HG11	2.26	0.47
16:N:12:ARG:O	16:N:16:LYS:HG3	2.14	0.47
16:N:93:LYS:CE	17:O:5:ILE:HG21	2.44	0.47
17:O:36:LYS:HZ2	17:O:55:THR:N	2.13	0.47
18:P:103:LEU:O	18:P:104:LYS:C	2.53	0.47
21:S:71:MET:H	21:S:71:MET:CE	2.26	0.47
1:X:10:A:H2'	1:X:11:G:C8	2.49	0.47
1:X:332:C:H5'	5:C:128:ALA:HB1	1.97	0.47
1:X:466:A:O2'	1:X:467:U:OP2	2.23	0.47
1:X:538:A:C4	1:X:2025:A:C2	3.03	0.47
1:X:543:G:C6	1:X:544:U:C4	3.02	0.47
1:X:558:G:H8	1:X:559:C:C4	2.32	0.47
1:X:583:C:C1'	1:X:2038:C:C6	2.94	0.47
1:X:663:G:H3'	1:X:664:C:C5'	2.27	0.47
1:X:761:G:C8	1:X:763:A:C8	3.03	0.47
1:X:957:G:O2'	1:X:958:G:H5'	2.15	0.47
1:X:984:A:H1'	1:X:1202:U:C4	2.49	0.47
1:X:994:A:O2'	1:X:995:A:OP1	2.28	0.47
1:X:1032:A:C8	1:X:1032:A:H3'	2.49	0.47
1:X:1050:G:C2'	1:X:1051:U:C5'	2.92	0.47
1:X:1066:G:H2'	1:X:1067:G:H8	1.79	0.47
1:X:1078:A:OP1	1:X:1078:A:H3'	2.15	0.47
1:X:1092:U:HO2'	8:F:117:ALA:HA	1.79	0.47
1:X:1211:G:N2	1:X:1263:G:C5	2.83	0.47
1:X:1368:G:C6	1:X:1390:G:N2	2.82	0.47
1:X:1411:C:H2'	1:X:1412:C:O5'	2.14	0.47
1:X:1505:U:C2	1:X:1506:C:C5	3.02	0.47
1:X:1668:G:OP1	13:K:40:LYS:HE3	2.15	0.47
1:X:1707:A:H3'	1:X:1708:C:C6	2.49	0.47
1:X:1790:G:C8	3:A:181:GLU:OE1	2.67	0.47
1:X:1873:A:C8	1:X:1874:G:C8	3.03	0.47
1:X:1949:A:N3	1:X:2572:U:C4'	2.77	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2020:G:H2'	1:X:2021:G:C8	2.49	0.47
1:X:2184:C:H2'	1:X:2185:U:C6	2.49	0.47
1:X:2258:G:C2'	1:X:2259:G:O5'	2.62	0.47
1:X:2492:G:C2	1:X:2493:U:C2	3.02	0.47
1:X:2695:C:C6	1:X:2695:C:C3'	2.97	0.47
1:X:2700:U:O2'	1:X:2701:A:H5'	2.14	0.47
1:X:2827:G:O2'	1:X:2828:C:H5'	2.15	0.47
2:Y:64:C:C2	2:Y:65:A:C8	3.03	0.47
2:Y:119:G:H4'	14:L:57:ALA:HB1	1.96	0.47
4:B:105:THR:HG21	4:B:199:ARG:NH2	2.30	0.47
4:B:141:ILE:CG2	4:B:154:LYS:NZ	2.77	0.47
4:B:181:LEU:HD12	15:M:16:ILE:HD11	1.96	0.47
5:C:31:VAL:O	5:C:32:THR:C	2.51	0.47
5:C:112:GLN:C	5:C:114:GLY:N	2.68	0.47
5:C:128:ALA:HB2	5:C:159:ARG:NE	2.29	0.47
7:E:172:LYS:HZ2	7:E:172:LYS:CB	2.26	0.47
9:G:67:ARG:HH21	9:G:71:THR:N	2.12	0.47
9:G:132:PHE:CZ	9:G:142:ARG:HA	2.49	0.47
9:G:158:HIS:O	9:G:161:GLN:HB2	2.15	0.47
14:L:15:ARG:CD	14:L:91:ARG:HD3	2.41	0.47
15:M:39:VAL:CA	15:M:45:THR:HG23	2.44	0.47
17:O:13:ARG:CB	17:O:13:ARG:CZ	2.92	0.47
18:P:37:LYS:HG2	18:P:38:VAL:N	2.30	0.47
19:Q:71:GLN:HG2	19:Q:72:ARG:N	2.29	0.47
20:R:16:PHE:HB3	20:R:82:ALA:CB	2.45	0.47
20:R:93:ARG:CA	20:R:95:ARG:NH2	2.78	0.47
20:R:110:SER:OG	20:R:111:GLY:N	2.47	0.47
21:S:96:VAL:N	21:S:120:LEU:O	2.40	0.47
21:S:141:MET:HA	21:S:145:ASP:CG	2.35	0.47
26:Z:32:GLU:HG3	26:Z:37:HIS:O	2.15	0.47
1:X:17:G:C4	1:X:18:U:C5	3.02	0.47
1:X:317:U:C3'	1:X:318:G:H5''	2.45	0.47
1:X:319:G:OP1	18:P:12:LYS:HE3	2.13	0.47
1:X:549:G:C6	1:X:550:C:C4	3.03	0.47
1:X:913:A:O5'	1:X:913:A:H8	1.96	0.47
1:X:982:C:N4	1:X:983:G:C6	2.83	0.47
1:X:1016:C:C5	1:X:1154:A:C1'	2.91	0.47
1:X:1068:A:H8	1:X:1097:A:H2'	1.78	0.47
1:X:1141:U:C4	4:B:147:PRO:HD3	2.50	0.47
1:X:1459:U:C2	1:X:1475:U:H1'	2.49	0.47
1:X:2009:U:H2'	1:X:2010:G:O4'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2431:C:N4	1:X:2432:A:C6	2.83	0.47
1:X:2558:C:O2'	1:X:2559:U:H5'	2.14	0.47
1:X:2690:A:H5''	1:X:2691:C:H5'	1.96	0.47
1:X:2779:C:C6	1:X:2779:C:C3'	2.98	0.47
2:Y:73:C:C5	2:Y:74:A:N7	2.83	0.47
5:C:10:ASN:OD1	5:C:10:ASN:O	2.33	0.47
6:D:46:ASP:CB	6:D:49:ALA:H	2.27	0.47
9:G:84:ASN:HA	9:G:153:GLY:O	2.15	0.47
11:I:13:ARG:HB3	11:I:13:ARG:CZ	2.44	0.47
13:K:45:ARG:HG3	13:K:95:THR:HG21	1.96	0.47
16:N:25:TRP:O	16:N:26:GLY:O	2.31	0.47
17:O:18:ASP:OD1	17:O:20:ILE:HG22	2.14	0.47
17:O:36:LYS:HE3	17:O:55:THR:O	2.15	0.47
20:R:51:VAL:HG12	20:R:52:ASN:N	2.29	0.47
20:R:55:THR:HG21	20:R:72:ARG:HH11	1.79	0.47
21:S:32:PHE:O	21:S:33:ALA:HB2	2.15	0.47
21:S:54:ILE:HB	21:S:62:PHE:O	2.14	0.47
24:V:31:GLN:O	24:V:32:ALA:C	2.53	0.47
1:X:29:U:C4'	16:N:11:ARG:HH22	2.28	0.47
1:X:125:A:H5''	1:X:126:C:O4'	2.14	0.47
1:X:127:C:O2'	1:X:128:C:H5'	2.15	0.47
1:X:196:A:O2'	1:X:197:G:H5'	2.14	0.47
1:X:334:G:O2'	1:X:335:A:P	2.72	0.47
1:X:340:G:O4'	1:X:488:A:H1'	2.15	0.47
1:X:405:C:H2'	1:X:406:G:C8	2.49	0.47
1:X:633:G:H8	1:X:633:G:O5'	1.98	0.47
1:X:654:A:N3	1:X:654:A:C2'	2.78	0.47
1:X:682:G:N3	1:X:682:G:C2'	2.66	0.47
1:X:689:A:H2	1:X:690:A:C8	2.32	0.47
1:X:692:C:H2'	1:X:693:A:H8	1.79	0.47
1:X:837:U:H2'	1:X:838:A:C8	2.49	0.47
1:X:838:A:O2'	1:X:839:U:H5'	2.13	0.47
1:X:1031:C:O2'	1:X:1032:A:C5'	2.62	0.47
1:X:1032:A:H3'	1:X:1032:A:H8	1.79	0.47
1:X:1131:G:C6	1:X:1132:C:C4	3.02	0.47
1:X:1301:U:O4	13:K:105:GLY:HA3	2.15	0.47
1:X:1337:G:C4	1:X:1341:G:O6	2.68	0.47
1:X:1383:C:H5'	3:A:46:ARG:HG3	1.96	0.47
1:X:1474:A:C2'	1:X:1475:U:H5'	2.43	0.47
1:X:1476:G:C6	1:X:1477:C:C4	3.03	0.47
1:X:1482:U:H2'	1:X:1483:G:C8	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1501:C:C2'	1:X:1502:G:O4'	2.54	0.47
1:X:1564:U:H2'	1:X:1565:G:O4'	2.15	0.47
1:X:1637:U:O2'	1:X:1638:G:C8	2.62	0.47
1:X:1711:C:H5''	1:X:1712:G:OP1	2.14	0.47
1:X:1728:A:C2	1:X:1739:G:C2	3.03	0.47
1:X:2375:G:H1'	23:U:33:LYS:HZ3	1.80	0.47
1:X:2381:A:C2'	1:X:2382:C:OP2	2.62	0.47
1:X:2576:G:C5	1:X:2577:A:C6	3.03	0.47
1:X:2664:G:C2	1:X:2665:G:C8	3.02	0.47
1:X:2706:U:O2'	1:X:2707:G:H5''	2.15	0.47
1:X:2862:G:C2	1:X:2863:U:C2	3.03	0.47
2:Y:110:U:H3'	2:Y:111:C:H5''	1.95	0.47
4:B:9:ILE:HG22	4:B:9:ILE:O	2.15	0.47
4:B:164:ARG:HG2	4:B:165:VAL:N	2.29	0.47
5:C:19:LEU:HA	5:C:20:PRO:C	2.35	0.47
5:C:45:THR:HG21	5:C:86:PRO:HD2	1.96	0.47
5:C:102:LEU:HD21	5:C:106:MET:HE1	1.94	0.47
6:D:13:ARG:NH2	6:D:17:MET:HE2	2.30	0.47
6:D:29:PRO:HB3	6:D:160:ALA:HB2	1.96	0.47
6:D:113:ASP:O	6:D:115:ARG:NH2	2.48	0.47
6:D:167:ARG:O	6:D:170:LEU:HB2	2.14	0.47
7:E:7:GLN:OE1	7:E:8:PRO:HD3	2.13	0.47
7:E:37:TYR:HD2	7:E:68:THR:HG1	1.62	0.47
7:E:44:ARG:NH2	7:E:46:ASP:HB2	2.25	0.47
7:E:118:PRO:HG2	7:E:121:VAL:HG21	1.97	0.47
9:G:67:ARG:HB2	9:G:70:PHE:CD1	2.49	0.47
9:G:96:ASP:CG	9:G:97:ASP:H	2.18	0.47
11:I:18:ARG:CB	11:I:21:ARG:HD3	2.44	0.47
11:I:117:ALA:HA	11:I:137:GLY:CA	2.45	0.47
12:J:76:THR:CG2	12:J:88:LYS:O	2.63	0.47
12:J:131:LYS:HD2	21:S:76:ARG:NH2	2.29	0.47
13:K:63:ARG:CZ	13:K:80:MET:HG2	2.45	0.47
13:K:94:TYR:CZ	13:K:115:LEU:O	2.68	0.47
14:L:40:ALA:O	14:L:53:ALA:HA	2.14	0.47
14:L:71:VAL:O	14:L:75:LEU:HB2	2.15	0.47
15:M:22:ARG:HD3	15:M:24:LEU:CD2	2.43	0.47
15:M:33:VAL:HG22	15:M:51:GLU:CD	2.34	0.47
16:N:66:ASN:C	16:N:68:GLY:H	2.14	0.47
16:N:75:ASN:OD1	16:N:78:THR:CB	2.63	0.47
18:P:100:GLY:C	18:P:101:PRO:O	2.52	0.47
20:R:38:LEU:CD1	20:R:47:VAL:HG21	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:60:PRO:C	20:R:62:MET:N	2.68	0.47
20:R:84:VAL:CG1	20:R:88:THR:N	2.77	0.47
20:R:90:LYS:HB2	20:R:108:VAL:CG2	2.30	0.47
21:S:19:ILE:CD1	21:S:36:ARG:HA	2.44	0.47
21:S:100:THR:HG23	21:S:101:THR:H	1.80	0.47
22:T:32:LYS:O	22:T:61:ALA:CB	2.63	0.47
26:Z:4:HIS:CB	26:Z:5:PRO:CD	2.66	0.47
1:X:38:G:C2'	1:X:39:C:O5'	2.62	0.47
1:X:204:A:N7	1:X:2386:G:C4'	2.78	0.47
1:X:229:G:N3	1:X:230:C:C6	2.83	0.47
1:X:566:U:H2'	1:X:567:G:C8	2.47	0.47
1:X:654:A:N3	1:X:655:A:H5'	2.30	0.47
1:X:1402:G:O6	1:X:1408:A:N7	2.48	0.47
1:X:1407:G:C6	1:X:1408:A:C6	3.03	0.47
1:X:1435:G:O2'	1:X:1436:G:H5'	2.14	0.47
1:X:1569:A:N1	1:X:1571:G:H1'	2.30	0.47
1:X:1629:G:H2'	1:X:1633:C:N4	2.24	0.47
1:X:1724:C:C2	1:X:1747:G:C6	3.03	0.47
1:X:1766:U:C2'	1:X:1767:G:H5'	2.44	0.47
1:X:1812:U:O2	1:X:1812:U:H2'	2.14	0.47
1:X:2379:G:N2	1:X:2380:U:H1'	2.30	0.47
1:X:2414:A:H2'	1:X:2415:G:O5'	2.14	0.47
1:X:2431:C:H2'	1:X:2432:A:H8	1.75	0.47
1:X:2528:G:C2	1:X:2529:G:N7	2.83	0.47
1:X:2663:U:N3	1:X:2664:G:C8	2.83	0.47
2:Y:44:C:H2'	2:Y:45:C:O4'	2.14	0.47
3:A:210:GLY:O	3:A:213:ARG:HB2	2.15	0.47
5:C:112:GLN:C	5:C:114:GLY:H	2.18	0.47
5:C:162:ARG:CG	5:C:162:ARG:O	2.62	0.47
6:D:80:ARG:N	6:D:80:ARG:CD	2.77	0.47
6:D:119:PRO:HG2	6:D:120:ASN:H	1.79	0.47
12:J:33:TYR:CE2	12:J:112:GLU:HA	2.49	0.47
12:J:70:PHE:HA	12:J:71:PRO:HD3	1.62	0.47
14:L:37:HIS:O	14:L:38:ILE:O	2.33	0.47
20:R:112:LYS:O	20:R:113:THR:OG1	2.31	0.47
22:T:41:ARG:HD3	22:T:41:ARG:HA	1.73	0.47
23:U:13:LEU:CG	23:U:14:VAL:H	2.15	0.47
23:U:24:ALA:O	23:U:25:ARG:HB2	2.15	0.47
26:Z:52:TYR:O	26:Z:53:ASP:HB2	2.14	0.47
1:X:98:U:H5''	1:X:99:U:OP1	2.15	0.47
1:X:428:A:H2'	1:X:429:C:H6	1.77	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:527:C:OP2	26:Z:13:LYS:HD3	2.14	0.47
1:X:691:C:C2	1:X:692:C:C5	3.02	0.47
1:X:732:G:O5'	1:X:732:G:C8	2.65	0.47
1:X:761:G:H1	18:P:111:ARG:HH21	1.61	0.47
1:X:791:G:O5'	1:X:791:G:H8	1.98	0.47
1:X:1050:G:C2'	1:X:1051:U:H5'	2.43	0.47
1:X:1583:A:OP1	3:A:60:ARG:NH2	2.48	0.47
1:X:1607:A:H2'	1:X:1608:U:C6	2.49	0.47
1:X:2002:A:N7	26:Z:9:LYS:HE2	2.29	0.47
1:X:2081:U:H3	1:X:2174:G:H1	1.63	0.47
1:X:2211:U:O2'	1:X:2212:U:H5'	2.14	0.47
2:Y:39:C:H5''	2:Y:40:C:C5	2.50	0.47
2:Y:68:A:C2	2:Y:111:C:C2	3.03	0.47
4:B:84:PHE:CG	4:B:85:ALA:N	2.83	0.47
5:C:186:LEU:HG	5:C:188:ILE:HG12	1.96	0.47
6:D:77:PHE:N	6:D:77:PHE:CD1	2.83	0.47
7:E:117:PRO:HD3	7:E:123:PHE:HE1	1.77	0.47
7:E:174:GLY:O	7:E:175:LYS:O	2.32	0.47
9:G:61:ARG:NH2	9:G:78:ASP:OD2	2.47	0.47
9:G:75:ILE:HG21	9:G:144:MET:SD	2.55	0.47
10:H:109:ARG:HG3	10:H:111:PHE:CE1	2.39	0.47
11:I:76:LYS:O	11:I:79:GLN:HG2	2.14	0.47
11:I:94:GLU:HA	11:I:97:ARG:CZ	2.44	0.47
12:J:27:TYR:HB3	12:J:28:VAL:H	1.62	0.47
12:J:69:ILE:HG21	12:J:104:MET:CG	2.42	0.47
17:O:40:VAL:HG12	17:O:45:THR:CA	2.44	0.47
17:O:49:GLU:C	17:O:51:ALA:H	2.18	0.47
18:P:62:ARG:CZ	26:Z:25:LEU:HD11	2.45	0.47
19:Q:9:ALA:O	19:Q:28:TRP:N	2.46	0.47
19:Q:65:VAL:CG1	19:Q:66:GLY:H	2.14	0.47
21:S:36:ARG:C	21:S:40:ASP:OD2	2.54	0.47
21:S:37:LYS:N	21:S:40:ASP:OD1	2.47	0.47
21:S:136:VAL:HG12	21:S:137:ASP:N	2.29	0.47
26:Z:36:CYS:C	26:Z:38:GLY:H	2.18	0.47
1:X:197:G:N2	1:X:242:A:H62	2.12	0.47
1:X:210:A:C2'	1:X:211:U:H5'	2.45	0.47
1:X:416:U:H4'	1:X:419:G:O2'	2.15	0.47
1:X:471:A:C8	1:X:472:C:C6	3.03	0.47
1:X:649:G:C5	1:X:650:U:C5	3.03	0.47
1:X:704:G:C5	1:X:705:C:C5	3.02	0.47
1:X:746:G:C8	1:X:774:A:C6	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:862:A:C2	1:X:863:C:C2	3.03	0.47
1:X:958:G:C2	1:X:959:C:C4	3.02	0.47
1:X:1142:G:H1'	9:G:103:TYR:CE2	2.50	0.47
1:X:1142:G:OP1	9:G:107:GLN:O	2.32	0.47
1:X:1830:C:N4	1:X:1881:U:H3'	2.30	0.47
1:X:2027:C:C4	1:X:2028:C:C5	3.04	0.47
1:X:2652:G:N3	1:X:2653:A:C8	2.83	0.47
2:Y:46:G:H5'	6:D:92:ARG:NH1	2.30	0.47
4:B:50:GLY:HA2	4:B:78:LEU:HD23	1.96	0.47
5:C:119:ALA:N	5:C:189:ASP:HA	2.30	0.47
6:D:22:TYR:OH	6:D:29:PRO:HD3	2.15	0.47
12:J:125:LYS:HB3	12:J:125:LYS:HZ2	1.73	0.47
14:L:33:ARG:NH2	14:L:103:LEU:H	2.11	0.47
14:L:100:VAL:C	14:L:102:ALA:N	2.67	0.47
14:L:104:ALA:O	14:L:105:ASP:C	2.52	0.47
15:M:53:VAL:CG1	15:M:54:VAL:N	2.77	0.47
16:N:108:ALA:HB1	17:O:47:PHE:CE2	2.50	0.47
18:P:9:ARG:HB3	18:P:13:GLN:CG	2.44	0.47
18:P:36:ARG:HH21	26:Z:20:ARG:NE	2.13	0.47
18:P:62:ARG:NH2	26:Z:25:LEU:HD11	2.29	0.47
20:R:84:VAL:HA	20:R:90:LYS:HD3	1.95	0.47
21:S:4:THR:HB	21:S:57:GLU:HB2	1.96	0.47
22:T:66:LYS:CE	22:T:68:VAL:HG22	2.45	0.47
23:U:15:VAL:O	23:U:16:ASN:O	2.33	0.47
25:W:37:THR:O	25:W:40:VAL:N	2.48	0.47
1:X:187:U:H2'	1:X:188:G:H8	1.79	0.46
1:X:199:A:C2	1:X:201:G:C4	3.03	0.46
1:X:225:G:C2	1:X:2410:U:H4'	2.51	0.46
1:X:490:A:C2'	1:X:491:A:H5'	2.45	0.46
1:X:540:G:N3	1:X:2004:U:O2'	2.48	0.46
1:X:613:A:C2	1:X:636:G:N3	2.82	0.46
1:X:632:A:C2	1:X:633:G:C8	3.03	0.46
1:X:654:A:O4'	1:X:654:A:OP1	2.33	0.46
1:X:1007:A:C6	1:X:1171:A:C2	3.03	0.46
1:X:1515:U:O2'	1:X:1516:A:H5'	2.15	0.46
1:X:1585:A:N6	1:X:1586:A:C6	2.83	0.46
1:X:1599:G:N2	1:X:1600:U:H1'	2.30	0.46
1:X:1673:C:N3	1:X:1674:C:C5	2.82	0.46
1:X:1681:A:H2'	1:X:1682:A:H8	1.80	0.46
1:X:1872:A:H1'	1:X:2070:G:H5'	1.96	0.46
1:X:1873:A:H4'	1:X:2069:U:H4'	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1986:G:C6	1:X:1987:G:C5	3.03	0.46
1:X:2043:A:O2'	1:X:2044:G:OP2	2.33	0.46
1:X:2238:G:C6	1:X:2239:C:C4	3.03	0.46
1:X:2410:U:O2	1:X:2412:A:C8	2.68	0.46
1:X:2633:A:N6	1:X:2645:C:OP2	2.48	0.46
1:X:2667:C:H5	1:X:2699:G:C6	2.33	0.46
1:X:2861:A:O2'	26:Z:31:THR:HG23	2.15	0.46
3:A:105:ILE:HG22	3:A:106:LEU:N	2.29	0.46
4:B:144:ARG:C	4:B:146:THR:N	2.68	0.46
5:C:14:THR:O	5:C:15:ILE:HB	2.16	0.46
6:D:57:LEU:HA	6:D:60:ILE:CD1	2.44	0.46
6:D:132:ILE:O	6:D:152:MET:O	2.33	0.46
7:E:139:GLN:HB3	7:E:143:GLN:OE1	2.15	0.46
10:H:13:ASN:O	10:H:15:GLY:N	2.48	0.46
11:I:18:ARG:HD2	11:I:21:ARG:HD2	1.97	0.46
11:I:83:LEU:HD23	11:I:83:LEU:HA	1.74	0.46
11:I:117:ALA:CB	11:I:137:GLY:HA3	2.44	0.46
12:J:19:THR:HG22	12:J:99:LYS:NZ	2.31	0.46
14:L:33:ARG:NH1	14:L:100:VAL:CA	2.67	0.46
15:M:50:PHE:CE1	15:M:70:LYS:HD3	2.49	0.46
16:N:93:LYS:HE2	17:O:10:LYS:HD3	1.96	0.46
17:O:66:GLY:O	17:O:87:ARG:NH1	2.48	0.46
18:P:41:VAL:O	18:P:42:VAL:C	2.51	0.46
18:P:66:GLU:O	18:P:67:PRO:C	2.53	0.46
18:P:67:PRO:O	18:P:68:VAL:C	2.53	0.46
20:R:24:VAL:O	20:R:30:LYS:HA	2.14	0.46
20:R:25:LEU:HD11	20:R:81:VAL:N	2.30	0.46
24:V:12:THR:O	24:V:15:ALA:HB3	2.15	0.46
1:X:98:U:C6	1:X:98:U:C3'	2.97	0.46
1:X:200:A:C6	1:X:435:A:C5	3.04	0.46
1:X:516:G:O2'	1:X:517:A:P	2.73	0.46
1:X:559:C:C2	1:X:560:G:H1'	2.50	0.46
1:X:627:A:C2	1:X:628:A:C2	3.03	0.46
1:X:640:C:C4	1:X:641:G:N7	2.83	0.46
1:X:697:G:C2	1:X:807:A:C2	3.04	0.46
1:X:706:A:C6	1:X:783:G:N1	2.83	0.46
1:X:729:A:N3	1:X:729:A:C3'	2.66	0.46
1:X:886:A:C2	1:X:917:U:C2	3.03	0.46
1:X:1068:A:H3'	1:X:1069:G:H8	1.79	0.46
1:X:1075:C:HO2'	8:F:89:SER:CB	2.21	0.46
1:X:1082:G:H1'	1:X:1100:G:C4	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1139:A:O2'	1:X:1140:A:O4'	2.34	0.46
1:X:1313:U:O2'	1:X:1314:A:OP2	2.33	0.46
1:X:1549:C:H2'	1:X:1550:C:C6	2.50	0.46
1:X:1695:U:O2	1:X:1974:U:H1'	2.14	0.46
1:X:1916:G:H2'	1:X:1917:C:H6	1.80	0.46
1:X:2031:A:H2'	1:X:2032:G:O4'	2.15	0.46
1:X:2322:U:H3'	1:X:2323:U:H6	1.80	0.46
1:X:2756:A:C2'	1:X:2757:G:OP2	2.63	0.46
4:B:165:VAL:CG1	4:B:166:THR:N	2.76	0.46
5:C:34:GLN:NE2	5:C:176:ASN:OD1	2.47	0.46
7:E:7:GLN:O	7:E:9:ILE:HG13	2.15	0.46
7:E:97:LYS:O	7:E:98:LEU:HB2	2.15	0.46
9:G:32:TYR:OH	9:G:35:LYS:CE	2.62	0.46
9:G:86:ALA:HA	9:G:123:PRO:HB3	1.96	0.46
11:I:67:ASN:O	11:I:68:VAL:HB	2.15	0.46
12:J:27:TYR:HB3	12:J:137:VAL:HG11	1.98	0.46
12:J:53:ILE:O	12:J:53:ILE:HG22	2.15	0.46
12:J:113:GLU:O	12:J:115:ALA:N	2.49	0.46
14:L:36:LYS:NZ	14:L:99:ARG:HD2	2.30	0.46
14:L:47:ARG:O	14:L:49:GLN:N	2.47	0.46
15:M:11:GLU:O	15:M:12:LEU:C	2.50	0.46
19:Q:76:LYS:O	19:Q:76:LYS:CG	2.57	0.46
23:U:50:ALA:HB3	23:U:52:ARG:NH2	2.30	0.46
23:U:54:ASN:CG	23:U:55:GLY:N	2.69	0.46
24:V:42:ARG:NH1	24:V:45:GLN:CD	2.69	0.46
1:X:198:A:C8	1:X:243:G:N7	2.83	0.46
1:X:230:C:H2'	1:X:231:G:H5'	1.97	0.46
1:X:310:A:O2'	1:X:311:A:H5'	2.15	0.46
1:X:540:G:O6	1:X:2006:G:P	2.73	0.46
1:X:973:U:O2'	1:X:974:U:H5'	2.14	0.46
1:X:1257:U:O2'	1:X:1258:G:H5'	2.15	0.46
1:X:1916:G:O2'	1:X:1917:C:H5'	2.14	0.46
1:X:2014:A:HO2'	1:X:2015:G:P	2.38	0.46
1:X:2701:A:C2	1:X:2702:G:C1'	2.98	0.46
2:Y:15:A:C2	2:Y:71:G:H2'	2.51	0.46
3:A:116:THR:O	3:A:117:VAL:HG23	2.15	0.46
3:A:200:GLU:HG3	3:A:202:LYS:HB3	1.97	0.46
5:C:22:VAL:CG1	5:C:23:ASN:H	2.29	0.46
7:E:127:GLU:C	7:E:129:THR:N	2.66	0.46
10:H:10:VAL:HG23	10:H:17:ARG:C	2.36	0.46
10:H:113:PRO:HD3	15:M:72:SER:O	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:I:54:SER:OG	11:I:59:ARG:CZ	2.64	0.46
11:I:86:THR:HG22	11:I:86:THR:O	2.15	0.46
12:J:28:VAL:HG23	12:J:137:VAL:HG21	1.97	0.46
14:L:102:ALA:C	14:L:104:ALA:N	2.66	0.46
15:M:91:VAL:HG12	15:M:92:THR:N	2.30	0.46
16:N:93:LYS:HD3	17:O:5:ILE:HG22	1.98	0.46
17:O:6:GLN:O	17:O:7:THR:OG1	2.29	0.46
17:O:54:TYR:H	17:O:54:TYR:HD1	1.64	0.46
18:P:32:ARG:NH1	18:P:119:LYS:HB3	2.30	0.46
19:Q:35:LYS:HD3	19:Q:53:ILE:HG23	1.98	0.46
21:S:147:ILE:HB	21:S:169:VAL:HG22	1.97	0.46
23:U:15:VAL:HG12	23:U:46:LEU:CD2	2.45	0.46
24:V:62:ARG:HG2	24:V:62:ARG:HH11	1.80	0.46
1:X:122:G:C2'	1:X:123:A:H5''	2.45	0.46
1:X:492:G:HO2'	1:X:493:A:H8	1.64	0.46
1:X:637:G:C6	11:I:101:ARG:HD3	2.50	0.46
1:X:765:C:N4	1:X:1772:C:O2	2.48	0.46
1:X:793:G:OP1	3:A:217:ARG:NH1	2.49	0.46
1:X:1234:C:O2	1:X:1242:A:C2	2.68	0.46
1:X:1399:C:H2'	1:X:1400:A:C8	2.50	0.46
1:X:1567:A:H2'	1:X:1568:A:O4'	2.15	0.46
1:X:1625:A:H1'	1:X:1632:A:O2'	2.14	0.46
1:X:1634:A:O2'	1:X:1635:G:H5'	2.15	0.46
1:X:1744:G:C6	1:X:1747:G:N1	2.83	0.46
1:X:1786:C:C5	1:X:1787:U:C5	3.04	0.46
1:X:2029:G:O2'	1:X:2030:U:H5'	2.15	0.46
1:X:2314:A:C4	1:X:2316:G:C8	3.04	0.46
1:X:2500:C:H2'	1:X:2501:U:C6	2.50	0.46
1:X:2796:A:O5'	1:X:2796:A:H8	1.99	0.46
1:X:2809:A:H2'	1:X:2854:G:O6	2.15	0.46
2:Y:44:C:N3	6:D:90:THR:HB	2.31	0.46
3:A:53:PHE:CE2	3:A:220:HIS:HA	2.50	0.46
3:A:121:PRO:HB2	3:A:135:PHE:CE1	2.51	0.46
3:A:246:PRO:N	3:A:252:LYS:HD3	2.31	0.46
4:B:130:GLY:O	4:B:131:SER:CB	2.62	0.46
5:C:17:LEU:HA	5:C:18:PRO:HD3	1.79	0.46
5:C:74:VAL:O	5:C:77:PHE:N	2.47	0.46
9:G:95:LEU:HD21	9:G:117:GLU:CD	2.36	0.46
10:H:113:PRO:CB	10:H:134:LEU:HD12	2.44	0.46
12:J:50:ALA:O	12:J:125:LYS:HG3	2.15	0.46
12:J:62:GLY:O	12:J:64:LYS:HG3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:K:66:VAL:O	13:K:69:ASP:N	2.47	0.46
14:L:60:LYS:HD3	14:L:60:LYS:N	2.30	0.46
14:L:101:LYS:O	14:L:101:LYS:HG2	2.15	0.46
15:M:32:THR:HG22	15:M:33:VAL:H	1.81	0.46
18:P:66:GLU:O	18:P:69:ALA:CB	2.61	0.46
18:P:75:ALA:O	18:P:128:VAL:CG2	2.64	0.46
20:R:92:THR:C	20:R:95:ARG:NH2	2.68	0.46
22:T:58:THR:HG22	22:T:59:LEU:N	2.31	0.46
1:X:42:G:H2'	1:X:43:A:C8	2.50	0.46
1:X:413:G:H8	1:X:413:G:O5'	1.99	0.46
1:X:431:G:C4	1:X:432:C:C5	3.04	0.46
1:X:505:G:N3	18:P:82:ASN:ND2	2.60	0.46
1:X:813:A:C2	1:X:815:A:H8	2.34	0.46
1:X:813:A:C4'	1:X:814:G:O5'	2.49	0.46
1:X:871:U:H1'	1:X:2248:A:H5'	1.96	0.46
1:X:1068:A:H3'	1:X:1069:G:C8	2.51	0.46
1:X:1191:G:C6	1:X:1192:A:C6	3.03	0.46
1:X:1300:A:N7	13:K:106:ASP:HB3	2.30	0.46
1:X:1361:G:C6	1:X:1615:C:N4	2.84	0.46
1:X:1436:G:C4	1:X:1437:A:C8	3.04	0.46
1:X:1773:C:H2'	1:X:2587:G:O2'	2.15	0.46
1:X:1858:C:H2'	1:X:1859:A:O4'	2.15	0.46
1:X:1872:A:H1'	1:X:2070:G:O4'	2.15	0.46
1:X:1873:A:C4'	1:X:2069:U:H4'	2.46	0.46
1:X:2080:U:O2'	1:X:2081:U:H5'	2.16	0.46
1:X:2228:U:C5'	1:X:2229:G:OP2	2.61	0.46
1:X:2431:C:H42	1:X:2483:U:H3	1.61	0.46
1:X:2728:A:P	7:E:70:THR:HG21	2.56	0.46
1:X:2755:A:O2'	1:X:2756:A:H5'	2.15	0.46
1:X:2810:A:C2	1:X:2853:U:C4	3.04	0.46
1:X:2856:U:O4	1:X:2857:C:N4	2.48	0.46
2:Y:27:A:N6	2:Y:55:C:H3'	2.25	0.46
2:Y:32:C:H2'	2:Y:33:C:H5'	1.96	0.46
2:Y:111:C:H6	2:Y:111:C:H5'	1.81	0.46
3:A:134:ARG:HB3	3:A:187:SER:OG	2.14	0.46
3:A:246:PRO:HG2	3:A:248:THR:O	2.16	0.46
4:B:79:ARG:HD3	4:B:79:ARG:HA	1.49	0.46
5:C:7:ILE:HG22	5:C:8:GLY:N	2.31	0.46
5:C:24:SER:O	5:C:25:GLY:C	2.54	0.46
6:D:13:ARG:O	6:D:16:LEU:HB2	2.14	0.46
6:D:74:ILE:HG23	6:D:79:LEU:O	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:106:ILE:O	6:D:107:GLY:O	2.33	0.46
6:D:151:GLY:O	6:D:152:MET:CB	2.63	0.46
7:E:65:HIS:C	7:E:67:LEU:N	2.69	0.46
9:G:33:ILE:O	9:G:69:ASP:HB3	2.15	0.46
10:H:79:HIS:CG	10:H:80:ALA:N	2.82	0.46
18:P:50:VAL:CB	18:P:90:LEU:O	2.64	0.46
18:P:60:ILE:HA	18:P:61:PRO:HD3	1.65	0.46
20:R:55:THR:N	20:R:70:GLU:O	2.48	0.46
21:S:36:ARG:C	21:S:40:ASP:CG	2.74	0.46
21:S:105:GLN:O	21:S:141:MET:O	2.34	0.46
22:T:25:LYS:HA	22:T:29:GLU:OE1	2.15	0.46
23:U:24:ALA:C	23:U:26:ALA:N	2.67	0.46
23:U:66:ALA:O	23:U:70:LEU:N	2.49	0.46
24:V:4:SER:O	24:V:6:MET:N	2.48	0.46
24:V:13:ASP:HA	24:V:16:LYS:HB3	1.97	0.46
30:4:29:ASN:OD1	30:4:29:ASN:C	2.54	0.46
1:X:24:G:H2'	1:X:25:U:O4'	2.15	0.46
1:X:43:A:C6	1:X:44:G:C6	3.03	0.46
1:X:65:C:C4	1:X:66:U:C5	3.03	0.46
1:X:330:C:H2'	1:X:331:U:O4'	2.16	0.46
1:X:340:G:H4'	1:X:341:A:OP1	2.11	0.46
1:X:415:A:O2'	1:X:416:U:H5'	2.16	0.46
1:X:558:G:H5''	1:X:558:G:C2	2.49	0.46
1:X:648:A:H4'	1:X:649:G:C4'	2.45	0.46
1:X:717:G:HO2'	1:X:718:A:P	2.39	0.46
1:X:946:U:C2	1:X:947:C:C5	3.03	0.46
1:X:947:C:C2	1:X:948:C:C5	3.03	0.46
1:X:1360:G:C6	1:X:1361:G:N7	2.84	0.46
1:X:1588:A:C5	1:X:1589:G:N7	2.84	0.46
1:X:1597:A:C2	1:X:1598:C:N3	2.84	0.46
1:X:1769:U:C5	1:X:1775:A:C4	3.04	0.46
1:X:1770:U:O4	1:X:1776:A:C6	2.69	0.46
1:X:2015:G:H1	1:X:2551:A:C1'	2.29	0.46
1:X:2068:C:H2'	1:X:2069:U:O4'	2.15	0.46
1:X:2194:A:H2'	1:X:2195:C:H5''	1.98	0.46
1:X:2284:U:C2'	1:X:2285:U:H5''	2.45	0.46
1:X:2604:G:H2'	1:X:2605:C:C6	2.50	0.46
1:X:2663:U:C2	1:X:2664:G:C8	3.04	0.46
3:A:122:GLU:OE1	3:A:122:GLU:N	2.49	0.46
3:A:213:ARG:C	3:A:215:LEU:H	2.18	0.46
6:D:63:GLN:HB3	6:D:89:VAL:HG12	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:41:LEU:HD21	7:E:68:THR:OG1	2.16	0.46
7:E:95:ARG:O	7:E:106:ASN:HB3	2.16	0.46
11:I:5:ASP:HB3	11:I:6:LEU:H	1.57	0.46
12:J:37:ALA:HB2	12:J:104:MET:CE	2.45	0.46
13:K:20:LEU:O	13:K:21:ALA:C	2.53	0.46
14:L:37:HIS:NE2	14:L:39:TYR:CZ	2.83	0.46
14:L:41:GLN:HA	14:L:53:ALA:HB2	1.98	0.46
14:L:42:ILE:HD13	14:L:43:ILE:H	1.80	0.46
15:M:80:VAL:O	15:M:82:PRO:HD3	2.16	0.46
16:N:83:LEU:HD23	16:N:89:ASP:HB3	1.97	0.46
18:P:26:ALA:HB2	18:P:75:ALA:HA	1.96	0.46
20:R:15:HIS:O	20:R:82:ALA:CB	2.63	0.46
24:V:42:ARG:HH12	24:V:45:GLN:HE22	1.61	0.46
26:Z:16:ARG:HD3	26:Z:20:ARG:NH2	2.30	0.46
1:X:166:G:H1	1:X:182:G:HO2'	1.60	0.46
1:X:184:A:C8	1:X:185:C:C5	3.04	0.46
1:X:454:G:C6	1:X:456:C:N4	2.83	0.46
1:X:594:G:H2'	1:X:595:A:N7	2.30	0.46
1:X:646:C:O2'	1:X:650:U:OP1	2.23	0.46
1:X:666:U:C2'	1:X:667:U:H4'	2.41	0.46
1:X:801:A:C2'	1:X:802:A:OP2	2.64	0.46
1:X:872:G:OP2	1:X:872:G:C8	2.68	0.46
1:X:938:G:O2'	1:X:939:C:O5'	2.32	0.46
1:X:1011:A:C4	1:X:1166:A:N6	2.84	0.46
1:X:1032:A:C2	1:X:1034:U:C2	3.03	0.46
1:X:1092:U:H2'	1:X:1093:U:C6	2.50	0.46
1:X:1290:A:O2'	1:X:1291:G:H5'	2.16	0.46
1:X:1350:G:H2'	1:X:1351:G:C8	2.50	0.46
1:X:1394:G:H2'	1:X:1395:A:C8	2.47	0.46
1:X:1476:G:C6	1:X:1477:C:N3	2.83	0.46
1:X:1993:G:C2'	1:X:1994:U:H5'	2.45	0.46
1:X:1996:A:C2'	1:X:1997:A:H5'	2.45	0.46
1:X:2437:G:O2'	1:X:2438:A:C8	2.65	0.46
1:X:2490:U:H2'	1:X:2491:C:C6	2.50	0.46
1:X:2692:A:H5'	1:X:2693:U:OP2	2.16	0.46
1:X:2823:G:N3	1:X:2824:C:C5	2.84	0.46
3:A:160:GLY:HA2	3:A:196:VAL:HG22	1.97	0.46
4:B:88:GLY:O	4:B:89:ASP:OD1	2.34	0.46
5:C:158:ARG:C	5:C:160:ALA:N	2.68	0.46
6:D:136:LEU:O	6:D:137:ILE:HG12	2.16	0.46
7:E:61:HIS:O	7:E:63:ALA:N	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:89:LEU:HD21	7:E:105:MET:HE2	1.98	0.46
9:G:138:GLY:O	9:G:142:ARG:HG3	2.16	0.46
10:H:108:THR:O	10:H:109:ARG:HB3	2.15	0.46
11:I:142:LEU:N	11:I:142:LEU:HD23	2.30	0.46
12:J:116:LYS:NZ	12:J:132:MET:HB3	2.31	0.46
14:L:27:LEU:HD13	14:L:51:LEU:CD2	2.45	0.46
16:N:93:LYS:CE	17:O:10:LYS:NZ	2.78	0.46
17:O:18:ASP:OD1	17:O:18:ASP:C	2.54	0.46
19:Q:9:ALA:O	19:Q:27:PHE:CB	2.63	0.46
21:S:120:LEU:HD22	21:S:121:GLN:N	2.29	0.46
21:S:128:ARG:HG3	21:S:129:ARG:N	2.31	0.46
1:X:38:G:O2'	1:X:39:C:H5'	2.15	0.46
1:X:78:C:O2	1:X:357:A:H2	1.99	0.46
1:X:176:A:C2'	1:X:177:U:H5	2.29	0.46
1:X:426:C:H4'	1:X:1863:U:O2'	2.14	0.46
1:X:577:U:OP1	11:I:40:ARG:NH2	2.49	0.46
1:X:589:C:H4'	16:N:31:GLN:CD	2.35	0.46
1:X:735:G:O2'	1:X:736:G:H5'	2.15	0.46
1:X:754:G:O2'	1:X:755:C:H5'	2.16	0.46
1:X:829:C:C2	1:X:1206:G:N2	2.83	0.46
1:X:1114:A:N3	1:X:1114:A:H2'	2.30	0.46
1:X:1159:U:O2'	1:X:1160:C:H5'	2.15	0.46
1:X:1206:G:C2'	1:X:1207:G:H5'	2.45	0.46
1:X:1224:A:O2'	1:X:1225:G:P	2.74	0.46
1:X:1331:G:N2	1:X:1332:G:H1'	2.31	0.46
1:X:1715:A:C8	1:X:1717:A:H1'	2.50	0.46
1:X:1882:G:H21	1:X:1885:C:N4	2.09	0.46
1:X:1910:A:H8	1:X:1910:A:O5'	1.98	0.46
1:X:2498:U:C5	1:X:2520:A:C6	3.04	0.46
1:X:2673:G:H2'	1:X:2674:C:C6	2.51	0.46
1:X:2867:G:O2'	1:X:2868:G:P	2.74	0.46
3:A:247:VAL:CG2	3:A:248:THR:HG23	2.34	0.46
4:B:91:VAL:HG12	4:B:92:ASN:H	1.81	0.46
4:B:154:LYS:O	4:B:154:LYS:HG3	2.14	0.46
6:D:88:LYS:CE	6:D:90:THR:OG1	2.63	0.46
6:D:148:LYS:CG	6:D:149:THR:H	2.29	0.46
7:E:126:PRO:CG	7:E:127:GLU:N	2.77	0.46
8:F:103:GLN:N	8:F:103:GLN:OE1	2.49	0.46
9:G:123:PRO:O	9:G:124:GLU:C	2.54	0.46
11:I:92:THR:C	11:I:94:GLU:N	2.70	0.46
11:I:122:VAL:HG23	11:I:124:ALA:H	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:K:48:VAL:O	13:K:52:ILE:N	2.46	0.46
15:M:103:LYS:HG3	15:M:105:TYR:CE2	2.50	0.46
16:N:14:HIS:C	16:N:16:LYS:N	2.67	0.46
17:O:38:LEU:HD13	17:O:39:PHE:H	1.77	0.46
21:S:64:ALA:CA	21:S:85:MET:HA	2.46	0.46
21:S:104:SER:CB	21:S:113:VAL:HG21	2.45	0.46
22:T:50:GLY:O	22:T:62:LEU:HD23	2.15	0.46
24:V:6:MET:HE3	24:V:52:GLN:HB3	1.97	0.46
1:X:408:U:H2'	1:X:409:G:N7	2.31	0.46
1:X:423:G:C6	1:X:431:G:C6	3.03	0.46
1:X:596:C:C4	1:X:684:C:C2	3.03	0.46
1:X:717:G:N3	1:X:739:G:C2	2.84	0.46
1:X:1299:A:O2'	1:X:1300:A:OP1	2.30	0.46
1:X:1419:G:H2'	1:X:1420:A:C8	2.50	0.46
1:X:1433:A:H2'	1:X:1433:A:N3	2.31	0.46
1:X:1552:C:H4'	1:X:1553:G:OP1	2.15	0.46
1:X:1693:A:N6	1:X:1694:A:C6	2.84	0.46
1:X:1839:A:O2'	1:X:1840:A:C8	2.68	0.46
1:X:2302:G:C5	1:X:2303:C:C5	3.03	0.46
1:X:2328:G:OP2	1:X:2328:G:H8	1.99	0.46
2:Y:23:G:C6	2:Y:24:U:C4	3.04	0.46
3:A:164:GLN:NE2	3:A:166:GLN:HE22	2.03	0.46
3:A:243:GLY:C	3:A:244:ARG:CD	2.84	0.46
6:D:52:LYS:HG3	6:D:147:ASP:HB2	1.97	0.46
9:G:105:GLY:CA	9:G:110:LEU:HD12	2.45	0.46
11:I:82:ASP:H	11:I:114:ILE:CG2	2.23	0.46
11:I:101:ARG:NH1	11:I:104:ARG:NH2	2.64	0.46
12:J:62:GLY:O	12:J:64:LYS:N	2.43	0.46
15:M:38:LYS:O	15:M:40:ARG:N	2.49	0.46
16:N:107:LYS:O	16:N:110:VAL:HB	2.15	0.46
18:P:75:ALA:O	18:P:128:VAL:HG21	2.16	0.46
19:Q:63:LYS:HG3	19:Q:64:ARG:H	1.74	0.46
20:R:16:PHE:HZ	20:R:46:VAL:HG22	1.80	0.46
20:R:51:VAL:CG1	20:R:52:ASN:N	2.79	0.46
21:S:104:SER:HA	21:S:139:THR:HA	1.96	0.46
23:U:51:ILE:CD1	23:U:59:THR:HG22	2.45	0.46
1:X:400:U:H4'	1:X:401:G:O4'	2.15	0.46
1:X:684:C:H41	11:I:43:ALA:CB	2.28	0.46
1:X:754:G:H2'	1:X:755:C:H6	1.80	0.46
1:X:759:C:O2'	1:X:760:U:OP2	2.29	0.46
1:X:810:U:H2'	1:X:811:G:H8	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:945:G:O2'	1:X:946:U:H5'	2.16	0.46
1:X:1174:G:C2	1:X:1175:A:N7	2.84	0.46
1:X:1309:G:H2'	1:X:1310:C:H6	1.80	0.46
1:X:1417:C:O2'	1:X:1418:C:H5'	2.15	0.46
1:X:1777:A:C2	1:X:1921:A:C5	3.03	0.46
1:X:1919:A:C2	1:X:1928:G:C8	3.03	0.46
1:X:1938:U:O2'	1:X:1939:U:H5'	2.16	0.46
1:X:2061:C:C2	1:X:2062:U:C6	3.03	0.46
1:X:2310:G:N2	1:X:2364:C:C4	2.84	0.46
1:X:2323:U:P	1:X:2323:U:O4'	2.74	0.46
1:X:2487:G:H1'	1:X:2561:G:N2	2.30	0.46
1:X:2660:C:C4	1:X:2704:U:C5	3.03	0.46
1:X:2684:A:H2'	1:X:2685:A:C8	2.51	0.46
1:X:2771:C:H5''	1:X:2771:C:H6	1.78	0.46
3:A:33:LEU:CD1	3:A:63:ARG:NH2	2.75	0.46
3:A:245:VAL:HA	3:A:251:GLY:HA2	1.98	0.46
4:B:105:THR:O	4:B:105:THR:OG1	2.32	0.46
6:D:108:LEU:HA	6:D:111:ILE:HG13	1.98	0.46
6:D:108:LEU:N	6:D:109:PRO:CD	2.79	0.46
6:D:111:ILE:HB	6:D:114:PHE:HB2	1.97	0.46
7:E:71:LEU:HA	7:E:74:ASN:HD22	1.81	0.46
12:J:17:ARG:HG3	12:J:17:ARG:O	2.16	0.46
14:L:42:ILE:HD13	14:L:43:ILE:N	2.31	0.46
15:M:63:ARG:HB2	15:M:63:ARG:HH11	1.80	0.46
17:O:39:PHE:HE2	17:O:51:ALA:HB1	1.79	0.46
18:P:14:ARG:HA	18:P:17:GLN:HE21	1.80	0.46
18:P:96:TYR:CZ	18:P:125:THR:OG1	2.64	0.46
19:Q:13:SER:OG	19:Q:16:ALA:HB3	2.16	0.46
21:S:13:LYS:HB2	21:S:13:LYS:HZ3	1.81	0.46
1:X:116:A:C5'	1:X:117:A:H8	2.20	0.45
1:X:184:A:N7	1:X:185:C:C5	2.84	0.45
1:X:207:U:O2'	1:X:208:C:H5'	2.16	0.45
1:X:212:U:C2	1:X:443:A:N1	2.83	0.45
1:X:304:A:N7	1:X:356:A:N6	2.64	0.45
1:X:322:A:O2'	1:X:323:G:P	2.73	0.45
1:X:538:A:N3	1:X:538:A:C3'	2.70	0.45
1:X:649:G:C2	1:X:661:C:C2	3.04	0.45
1:X:843:G:H1'	1:X:2427:A:N1	2.30	0.45
1:X:932:G:H2'	1:X:933:G:C8	2.51	0.45
1:X:1112:U:O2'	1:X:1113:C:H5'	2.16	0.45
1:X:1125:G:O2'	1:X:1126:A:H5'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1304:U:H2'	1:X:1305:C:H6	1.79	0.45
1:X:1439:G:O5'	1:X:1439:G:H8	1.98	0.45
1:X:1733:U:O4'	1:X:1733:U:OP1	2.34	0.45
1:X:1838:G:C2	1:X:1878:C:N3	2.85	0.45
1:X:2024:U:HO2'	1:X:2025:A:H5'	1.81	0.45
1:X:2043:A:C2	1:X:2481:G:C5	3.04	0.45
1:X:2352:A:C4	1:X:2353:G:N7	2.84	0.45
1:X:2498:U:C4'	1:X:2499:C:OP1	2.55	0.45
1:X:2526:U:C6	1:X:2545:A:C5	3.04	0.45
1:X:2775:U:H5'	1:X:2776:U:H5''	1.98	0.45
1:X:2861:A:C2	1:X:2862:G:C5	3.04	0.45
2:Y:20:A:C2	2:Y:69:G:C6	3.03	0.45
3:A:55:GLY:O	3:A:56:GLY:O	2.33	0.45
3:A:79:VAL:CG1	3:A:113:VAL:HA	2.46	0.45
3:A:143:HIS:O	3:A:144:ALA:HB3	2.16	0.45
4:B:47:VAL:O	4:B:80:GLU:HA	2.16	0.45
4:B:126:PRO:O	4:B:127:ALA:HB2	2.15	0.45
5:C:30:VAL:HG12	5:C:31:VAL:N	2.30	0.45
5:C:34:GLN:O	5:C:38:ARG:HG3	2.16	0.45
6:D:9:ASN:O	6:D:12:VAL:N	2.48	0.45
6:D:57:LEU:HA	6:D:60:ILE:HD11	1.98	0.45
6:D:153:ASP:C	6:D:154:ILE:HD12	2.36	0.45
7:E:142:GLY:C	7:E:144:VAL:H	2.19	0.45
9:G:135:LEU:O	9:G:136:PRO:C	2.54	0.45
11:I:7:LYS:O	11:I:7:LYS:HG2	2.15	0.45
11:I:28:LYS:CD	11:I:36:GLY:HA3	2.45	0.45
11:I:30:ALA:HB3	11:I:34:HIS:NE2	2.28	0.45
11:I:32:ARG:NH2	17:O:79:GLN:CA	2.80	0.45
11:I:134:GLU:C	11:I:136:ALA:N	2.69	0.45
13:K:113:ILE:O	13:K:113:ILE:CG2	2.64	0.45
14:L:31:VAL:HG23	14:L:38:ILE:HD13	1.97	0.45
14:L:33:ARG:NH1	14:L:100:VAL:O	2.49	0.45
16:N:93:LYS:CE	17:O:10:LYS:HZ3	2.28	0.45
17:O:36:LYS:NZ	17:O:55:THR:O	2.48	0.45
21:S:77:ALA:HA	21:S:78:PRO:HD3	1.76	0.45
21:S:149:ALA:C	21:S:151:ASP:H	2.20	0.45
1:X:89:A:H4'	1:X:90:G:O4'	2.16	0.45
1:X:240:U:H2'	1:X:241:C:O4'	2.16	0.45
1:X:465:C:C2'	1:X:467:U:H1'	2.47	0.45
1:X:488:A:C2	1:X:489:A:C4	3.04	0.45
1:X:743:A:N3	1:X:744:C:C6	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1088:A:H2	1:X:1099:A:N3	2.13	0.45
1:X:1187:A:H3'	1:X:1188:A:C8	2.51	0.45
1:X:1198:C:O5'	1:X:1198:C:H6	2.00	0.45
1:X:1258:G:OP2	11:I:17:LYS:HE2	2.17	0.45
1:X:1437:A:O2'	1:X:1438:G:H5'	2.16	0.45
1:X:1660:G:C5	1:X:1661:C:C5	3.03	0.45
1:X:1699:A:C6	1:X:1700:C:C4	3.05	0.45
1:X:1914:U:H3	1:X:1952:A:H62	1.62	0.45
1:X:2027:C:C2	1:X:2028:C:C6	3.04	0.45
1:X:2196:U:C4	1:X:2197:U:C4	3.05	0.45
1:X:2208:U:O2	23:U:48:LYS:NZ	2.49	0.45
1:X:2311:U:H5'	1:X:2315:A:H61	1.79	0.45
1:X:2735:C:H2'	30:4:19:ARG:CD	2.46	0.45
1:X:2749:A:H2'	1:X:2750:G:O4'	2.16	0.45
2:Y:44:C:OP1	6:D:64:LYS:HE2	2.17	0.45
2:Y:54:U:H2'	2:Y:55:C:C6	2.51	0.45
4:B:9:ILE:HG22	15:M:13:LEU:CD1	2.43	0.45
4:B:13:GLN:O	4:B:14:ILE:HG13	2.16	0.45
4:B:65:GLY:O	4:B:69:LYS:N	2.48	0.45
5:C:7:ILE:C	5:C:120:VAL:HB	2.36	0.45
6:D:50:ILE:HG13	6:D:50:ILE:H	1.39	0.45
6:D:52:LYS:HD3	6:D:56:GLU:OE1	2.17	0.45
8:F:73:PRO:O	8:F:77:LEU:HG	2.17	0.45
8:F:121:GLU:CD	8:F:121:GLU:H	2.19	0.45
9:G:61:ARG:HH22	9:G:78:ASP:CB	2.29	0.45
13:K:66:VAL:O	13:K:67:ALA:C	2.53	0.45
15:M:38:LYS:C	15:M:40:ARG:H	2.19	0.45
17:O:51:ALA:C	17:O:53:LYS:N	2.69	0.45
19:Q:88:ILE:O	19:Q:88:ILE:CG1	2.64	0.45
21:S:35:ASP:O	21:S:36:ARG:O	2.35	0.45
22:T:74:LYS:C	22:T:76:ALA:H	2.15	0.45
23:U:26:ALA:HB1	23:U:27:ASP:OD1	2.16	0.45
1:X:28:A:C2	1:X:523:A:N9	2.85	0.45
1:X:154:U:H5'	1:X:155:G:OP2	2.16	0.45
1:X:178:C:O2'	1:X:179:U:H5'	2.16	0.45
1:X:242:A:N6	1:X:441:A:C8	2.83	0.45
1:X:546:A:N6	1:X:565:A:H61	2.13	0.45
1:X:609:U:H1'	11:I:18:ARG:NH2	2.31	0.45
1:X:632:A:H3'	1:X:632:A:N3	2.30	0.45
1:X:673:G:C5'	5:C:93:TYR:CD1	2.96	0.45
1:X:711:C:O2'	1:X:747:A:N6	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:761:G:H2'	1:X:763:A:N7	2.31	0.45
1:X:837:U:H1'	1:X:2337:A:N7	2.31	0.45
1:X:872:G:OP2	1:X:872:G:H8	1.99	0.45
1:X:2002:A:OP2	26:Z:9:LYS:HD2	2.16	0.45
1:X:2047:C:H1'	1:X:2429:A:C5	2.51	0.45
1:X:2320:G:H2'	1:X:2321:C:H6	1.81	0.45
1:X:2615:U:HO2'	4:B:44:TYR:HH	1.52	0.45
1:X:2705:A:O2'	1:X:2706:U:P	2.74	0.45
1:X:2708:U:C2	1:X:2709:C:C5	3.04	0.45
2:Y:53:G:OP2	14:L:64:LYS:HE2	2.17	0.45
3:A:50:THR:HG22	3:A:51:SER:N	2.31	0.45
3:A:133:LEU:HB3	3:A:173:VAL:HG21	1.97	0.45
4:B:56:GLU:HA	4:B:59:VAL:HG23	1.98	0.45
5:C:28:HIS:O	5:C:31:VAL:HG23	2.16	0.45
6:D:8:TYR:HB2	6:D:173:MET:CE	2.46	0.45
6:D:115:ARG:HB2	6:D:178:ARG:CD	2.39	0.45
6:D:123:ASP:O	6:D:126:GLY:N	2.50	0.45
7:E:163:ARG:HD3	7:E:167:GLU:HB3	1.98	0.45
11:I:18:ARG:HD2	11:I:21:ARG:CD	2.47	0.45
11:I:86:THR:N	11:I:116:ARG:NH1	2.64	0.45
12:J:36:ILE:HD11	12:J:133:VAL:HG21	1.98	0.45
13:K:12:ARG:HB2	13:K:16:ALA:HB3	1.98	0.45
13:K:91:PRO:O	13:K:92:GLY:C	2.50	0.45
14:L:54:ALA:CB	14:L:75:LEU:HA	2.47	0.45
16:N:56:ASP:O	16:N:59:ARG:HB3	2.16	0.45
20:R:4:PRO:O	20:R:5:SER:C	2.54	0.45
21:S:4:THR:CB	21:S:57:GLU:HB2	2.46	0.45
21:S:73:LYS:C	21:S:75:LYS:H	2.20	0.45
22:T:71:ASN:HD21	22:T:74:LYS:HA	1.81	0.45
23:U:41:VAL:HG21	23:U:43:ARG:NH2	2.31	0.45
25:W:37:THR:C	25:W:41:ARG:HG3	2.36	0.45
1:X:40:U:C4	1:X:41:G:N7	2.85	0.45
1:X:349:G:H2'	1:X:350:U:C6	2.52	0.45
1:X:804:C:O2'	1:X:805:G:C5'	2.64	0.45
1:X:815:A:C2	1:X:816:U:C2	3.05	0.45
1:X:922:A:C6	1:X:923:A:C6	3.05	0.45
1:X:969:U:O2	2:Y:92:G:H5''	2.15	0.45
1:X:1191:G:H2'	1:X:1192:A:O4'	2.15	0.45
1:X:1355:A:C2'	1:X:1357:U:OP2	2.64	0.45
1:X:1376:C:O2'	1:X:1800:A:H1'	2.15	0.45
1:X:1419:G:H2'	1:X:1420:A:H8	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1769:U:N3	1:X:1778:U:N3	2.65	0.45
1:X:2027:C:C2	1:X:2604:G:C2	3.04	0.45
1:X:2321:C:O2'	1:X:2353:G:H5''	2.16	0.45
1:X:2526:U:H2'	1:X:2527:G:C8	2.52	0.45
1:X:2605:C:H2'	1:X:2606:G:O4'	2.17	0.45
2:Y:7:C:H2'	2:Y:8:C:C6	2.51	0.45
2:Y:15:A:C2	2:Y:71:G:N3	2.85	0.45
4:B:11:MET:HG2	4:B:24:THR:OG1	2.16	0.45
4:B:76:ARG:HG2	4:B:77:ILE:HG13	1.97	0.45
5:C:197:GLU:CG	5:C:198:GLU:N	2.78	0.45
9:G:103:TYR:CE2	9:G:111:LYS:HB3	2.52	0.45
9:G:103:TYR:CZ	9:G:111:LYS:CB	3.00	0.45
10:H:83:ARG:NH1	15:M:40:ARG:NE	2.65	0.45
12:J:10:PHE:CD1	12:J:11:ARG:N	2.84	0.45
14:L:9:ARG:O	14:L:10:LYS:C	2.55	0.45
16:N:62:ILE:HG23	16:N:76:TYR:CE1	2.52	0.45
16:N:66:ASN:HB2	16:N:76:TYR:H	1.81	0.45
16:N:68:GLY:O	16:N:71:LEU:HB3	2.16	0.45
18:P:41:VAL:O	18:P:44:VAL:HG22	2.17	0.45
18:P:59:PHE:CG	26:Z:30:LEU:HD21	2.51	0.45
20:R:37:LEU:N	20:R:47:VAL:O	2.49	0.45
21:S:25:ASN:O	21:S:26:LYS:HB3	2.17	0.45
23:U:50:ALA:CB	23:U:52:ARG:NH2	2.76	0.45
25:W:38:PRO:HA	25:W:41:ARG:HD2	1.98	0.45
30:4:1:MET:CE	30:4:35:ARG:NH2	2.80	0.45
1:X:527:C:O2'	1:X:528:G:H5'	2.15	0.45
1:X:704:G:C6	1:X:705:C:C4	3.05	0.45
1:X:736:G:C2	1:X:737:C:H1'	2.51	0.45
1:X:1064:C:O5'	1:X:1064:C:C6	2.55	0.45
1:X:1075:C:H4'	8:F:88:SER:O	2.16	0.45
1:X:1186:G:H21	1:X:1187:A:H62	1.62	0.45
1:X:1200:G:H2'	1:X:1201:G:O4'	2.16	0.45
1:X:1526:U:H3'	1:X:1527:G:H8	1.82	0.45
1:X:1811:A:O2'	1:X:1812:U:O5'	2.33	0.45
1:X:1851:A:N6	1:X:1866:G:H21	2.09	0.45
1:X:1973:C:H2'	1:X:1974:U:O4'	2.17	0.45
1:X:2035:G:C2'	1:X:2036:G:H5'	2.47	0.45
1:X:2266:A:C2	1:X:2325:A:N7	2.85	0.45
1:X:2526:U:C5	1:X:2545:A:C5	3.05	0.45
1:X:2657:G:H2'	1:X:2658:A:C8	2.51	0.45
1:X:2659:C:N4	1:X:2660:C:N4	2.63	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2824:C:H4'	1:X:2825:A:H5'	1.98	0.45
3:A:231:HIS:HA	3:A:232:PRO:HD3	1.85	0.45
5:C:67:ALA:O	5:C:68:ARG:HB2	2.17	0.45
6:D:4:LEU:HD12	6:D:5:LYS:H	1.80	0.45
6:D:134:GLU:HG2	6:D:136:LEU:N	2.28	0.45
7:E:89:LEU:HD21	7:E:105:MET:CE	2.46	0.45
8:F:98:LYS:HZ3	8:F:139:GLU:HB2	1.81	0.45
9:G:69:ASP:O	16:N:64:ARG:CZ	2.65	0.45
9:G:101:THR:C	9:G:102:ARG:CG	2.85	0.45
10:H:85:ASP:HB3	15:M:87:LEU:HG	1.99	0.45
11:I:85:ASP:HA	11:I:116:ARG:HH12	1.80	0.45
12:J:19:THR:CG2	12:J:20:GLY:H	2.29	0.45
12:J:111:THR:O	12:J:112:GLU:C	2.54	0.45
15:M:55:ILE:HG22	15:M:104:LEU:CB	2.47	0.45
16:N:109:LEU:O	16:N:110:VAL:C	2.55	0.45
20:R:25:LEU:CD1	20:R:25:LEU:N	2.70	0.45
21:S:19:ILE:CG1	21:S:36:ARG:HA	2.47	0.45
23:U:54:ASN:OD1	23:U:55:GLY:N	2.49	0.45
1:X:142:U:H5''	1:X:143:A:OP2	2.17	0.45
1:X:228:A:H8	1:X:228:A:O5'	2.00	0.45
1:X:405:C:C2	1:X:406:G:C8	3.04	0.45
1:X:408:U:HO2'	1:X:409:G:H8	1.59	0.45
1:X:487:G:N2	1:X:490:A:O4'	2.50	0.45
1:X:571:U:O2'	1:X:581:A:O4'	2.28	0.45
1:X:580:A:C8	1:X:584:A:N6	2.85	0.45
1:X:810:U:C4	1:X:811:G:N7	2.84	0.45
1:X:879:A:OP1	1:X:879:A:C8	2.70	0.45
1:X:1095:A:H2'	1:X:1096:A:C4'	2.46	0.45
1:X:1261:G:O2'	1:X:1262:U:P	2.75	0.45
1:X:1428:G:N2	1:X:1602:G:C5'	2.79	0.45
1:X:1728:A:H2'	1:X:1729:C:O4'	2.17	0.45
1:X:1778:U:C2'	1:X:1779:C:H6	2.22	0.45
1:X:2053:G:N2	1:X:2054:A:C4	2.85	0.45
1:X:2642:G:H2'	1:X:2643:G:H5'	1.99	0.45
1:X:2681:A:C2'	1:X:2682:C:H5'	2.46	0.45
1:X:2831:A:N6	1:X:2832:G:C6	2.84	0.45
2:Y:37:C:H2'	2:Y:38:C:C1'	2.47	0.45
3:A:108:PRO:HB3	3:A:143:HIS:CE1	2.51	0.45
4:B:67:PHE:HZ	4:B:75:THR:HG22	1.74	0.45
5:C:3:GLN:CD	5:C:4:ILE:N	2.70	0.45
7:E:94:PHE:CG	7:E:107:ILE:HG22	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:103:LEU:HB2	7:E:123:PHE:CG	2.52	0.45
11:I:134:GLU:O	11:I:136:ALA:N	2.49	0.45
15:M:16:ILE:O	15:M:16:ILE:HG22	2.16	0.45
18:P:80:LEU:O	18:P:81:HIS:C	2.55	0.45
18:P:102:THR:HG21	18:P:104:LYS:HZ2	1.81	0.45
20:R:21:THR:O	20:R:83:LEU:HA	2.15	0.45
20:R:23:ILE:HD11	20:R:84:VAL:HG23	1.98	0.45
20:R:28:LYS:O	20:R:29:HIS:HB2	2.16	0.45
21:S:70:GLN:HE21	21:S:70:GLN:CA	2.21	0.45
23:U:28:GLY:N	23:U:32:ARG:CD	2.79	0.45
23:U:52:ARG:NH1	23:U:67:LEU:HG	2.31	0.45
25:W:15:ASN:O	25:W:18:LYS:HB2	2.16	0.45
1:X:24:G:C6	1:X:25:U:N3	2.85	0.45
1:X:318:G:H21	1:X:341:A:N6	2.14	0.45
1:X:427:C:H2'	1:X:428:A:H8	1.71	0.45
1:X:491:A:C2	1:X:510:G:O4'	2.70	0.45
1:X:716:U:C5	1:X:717:G:C5	3.05	0.45
1:X:826:U:O2	1:X:827:C:C6	2.70	0.45
1:X:861:G:H22	1:X:943:U:H1'	1.82	0.45
1:X:954:U:H2'	1:X:955:G:C5'	2.41	0.45
1:X:1076:U:H2'	1:X:1077:U:O4'	2.16	0.45
1:X:1211:G:H2'	1:X:1212:U:C6	2.52	0.45
1:X:1238:A:O2'	1:X:1239:A:H5'	2.16	0.45
1:X:1505:U:H3'	1:X:1505:U:H6	1.80	0.45
1:X:1552:C:O2	1:X:1553:G:C2	2.70	0.45
1:X:1715:A:H4'	1:X:1716:G:H3'	1.99	0.45
1:X:2029:G:H2'	1:X:2030:U:C6	2.49	0.45
1:X:2199:C:C4	1:X:2200:G:N7	2.85	0.45
1:X:2294:U:H1'	6:D:123:ASP:OD1	2.17	0.45
1:X:2302:G:N1	1:X:2311:U:C5	2.80	0.45
1:X:2312:A:O2'	1:X:2313:G:OP2	2.31	0.45
1:X:2327:U:O4	1:X:2361:G:C2	2.70	0.45
1:X:2340:C:C2'	1:X:2341:G:H5'	2.47	0.45
1:X:2484:G:N7	1:X:2555:G:C2	2.85	0.45
1:X:2670:C:C6	1:X:2847:G:N1	2.84	0.45
1:X:2677:U:H2'	1:X:2678:C:C6	2.52	0.45
1:X:2710:C:C2'	1:X:2711:G:H5'	2.46	0.45
3:A:72:LYS:CG	3:A:103:ARG:NH1	2.80	0.45
3:A:262:LYS:C	3:A:264:LYS:H	2.19	0.45
5:C:7:ILE:CG2	5:C:120:VAL:O	2.65	0.45
5:C:153:ASP:OD2	5:C:172:VAL:HG13	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:8:TYR:HA	6:D:173:MET:SD	2.56	0.45
9:G:70:PHE:CD2	9:G:70:PHE:N	2.85	0.45
14:L:52:ALA:O	14:L:53:ALA:CB	2.64	0.45
16:N:15:LYS:O	16:N:19:LYS:HB3	2.15	0.45
18:P:46:ARG:HH11	18:P:46:ARG:HG2	1.82	0.45
19:Q:5:ASP:OD2	19:Q:5:ASP:N	2.43	0.45
21:S:10:PRO:HB2	21:S:14:LEU:HG	1.98	0.45
25:W:36:ASP:CG	25:W:41:ARG:NH1	2.68	0.45
30:4:35:ARG:HG2	30:4:37:GLY:O	2.17	0.45
1:X:189:A:C2'	1:X:190:A:H5'	2.46	0.45
1:X:229:G:H2'	1:X:230:C:C6	2.46	0.45
1:X:242:A:H61	1:X:440:U:C2'	2.29	0.45
1:X:548:G:C2	1:X:549:G:C8	3.05	0.45
1:X:684:C:O3'	5:C:84:PHE:HZ	2.00	0.45
1:X:743:A:C2	1:X:744:C:C6	3.05	0.45
1:X:751:G:H2'	1:X:752:G:C8	2.52	0.45
1:X:1017:C:H1'	9:G:134:MET:HB3	1.98	0.45
1:X:1314:A:H2	1:X:1642:G:N2	2.14	0.45
1:X:1544:A:C8	1:X:1545:G:H1'	2.52	0.45
1:X:1714:A:OP2	1:X:1715:A:H3'	2.16	0.45
1:X:1801:C:H42	23:U:48:LYS:HG3	1.81	0.45
1:X:1861:G:O2'	1:X:1862:C:H5'	2.17	0.45
1:X:1947:G:C6	1:X:1950:C:N4	2.85	0.45
1:X:2201:G:O2'	1:X:2202:G:H5'	2.17	0.45
2:Y:68:A:H61	2:Y:110:U:H3'	1.81	0.45
3:A:77:ALA:HA	3:A:96:HIS:O	2.17	0.45
3:A:165:VAL:HG13	3:A:173:VAL:CG1	2.46	0.45
4:B:155:ARG:HG3	4:B:155:ARG:NH1	2.31	0.45
5:C:50:GLN:O	5:C:50:GLN:HG3	2.15	0.45
6:D:58:ALA:O	6:D:62:LEU:N	2.50	0.45
7:E:59:GLN:C	7:E:61:HIS:H	2.19	0.45
9:G:51:LEU:HD13	9:G:88:VAL:HG11	1.97	0.45
9:G:125:ARG:O	9:G:129:HIS:N	2.41	0.45
12:J:27:TYR:HB3	12:J:137:VAL:CG1	2.47	0.45
17:O:7:THR:HG22	17:O:8:GLY:N	2.31	0.45
17:O:15:SER:HA	17:O:95:ILE:HB	1.99	0.45
21:S:90:GLU:OE1	21:S:90:GLU:HA	2.17	0.45
21:S:91:PRO:CG	21:S:125:PRO:CG	2.94	0.45
23:U:15:VAL:HG12	23:U:46:LEU:HD22	1.98	0.45
23:U:32:ARG:HG2	23:U:33:LYS:N	2.32	0.45
1:X:684:C:H41	11:I:43:ALA:HB1	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:720:A:H2'	1:X:721:C:C6	2.52	0.45
1:X:749:C:O5'	1:X:749:C:H6	2.00	0.45
1:X:774:A:C8	1:X:774:A:C3'	3.00	0.45
1:X:793:G:H2'	1:X:795:A:C5	2.52	0.45
1:X:982:C:C4	1:X:983:G:C5	3.05	0.45
1:X:1011:A:C4	1:X:1166:A:C6	3.04	0.45
1:X:1105:U:H3	1:X:1107:A:C5'	2.28	0.45
1:X:1200:G:H2'	1:X:1201:G:C8	2.52	0.45
1:X:1228:G:C6	1:X:1229:C:C4	3.05	0.45
1:X:1351:G:C2	1:X:1352:G:C4	3.04	0.45
1:X:1393:G:N3	1:X:1393:G:H2'	2.32	0.45
1:X:1419:G:H2'	1:X:1420:A:O4'	2.16	0.45
1:X:1733:U:H2'	1:X:1734:C:H6	1.81	0.45
1:X:1785:A:H2'	1:X:1786:C:C6	2.52	0.45
1:X:2282:G:H1'	6:D:129:ASN:ND2	2.32	0.45
1:X:2509:A:N7	7:E:172:LYS:CE	2.76	0.45
1:X:2562:G:C6	1:X:2563:U:C4	3.04	0.45
1:X:2615:U:O2'	4:B:44:TYR:OH	2.26	0.45
1:X:2630:C:C2'	1:X:2631:C:H5'	2.46	0.45
1:X:2630:C:H2'	1:X:2631:C:H6	1.82	0.45
1:X:2686:C:H2'	1:X:2687:G:C8	2.52	0.45
1:X:2700:U:N3	1:X:2701:A:N7	2.63	0.45
2:Y:50:U:H2'	2:Y:51:G:H8	1.82	0.45
2:Y:55:C:H2'	2:Y:56:G:C5'	2.47	0.45
2:Y:110:U:O2	2:Y:110:U:H2'	2.17	0.45
2:Y:119:G:C2	2:Y:120:G:C4	3.05	0.45
3:A:200:GLU:HG3	3:A:202:LYS:CB	2.47	0.45
5:C:104:LEU:O	5:C:108:ILE:HB	2.17	0.45
5:C:148:VAL:HG12	5:C:150:LEU:HD11	1.99	0.45
6:D:4:LEU:HD12	6:D:5:LYS:N	2.32	0.45
6:D:79:LEU:CA	6:D:80:ARG:CZ	2.85	0.45
6:D:111:ILE:CB	6:D:114:PHE:HB2	2.47	0.45
6:D:134:GLU:HG2	6:D:136:LEU:CB	2.44	0.45
9:G:43:VAL:O	9:G:167:LYS:HG3	2.17	0.45
9:G:50:PRO:O	9:G:51:LEU:C	2.55	0.45
9:G:61:ARG:NE	9:G:65:LYS:CD	2.55	0.45
9:G:105:GLY:O	9:G:107:GLN:N	2.49	0.45
12:J:19:THR:HG22	12:J:99:LYS:HZ3	1.82	0.45
12:J:121:LEU:O	12:J:122:ALA:C	2.53	0.45
16:N:24:PHE:CB	16:N:29:SER:HB3	2.47	0.45
16:N:91:ASN:O	16:N:92:ARG:HB2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:14:ARG:CA	18:P:17:GLN:HG2	2.46	0.45
20:R:103:LYS:HG2	20:R:104:VAL:H	1.82	0.45
21:S:148:THR:HA	21:S:168:VAL:HG23	1.99	0.45
22:T:56:ASP:CG	22:T:58:THR:HG1	2.19	0.45
1:X:42:G:H2'	1:X:43:A:O4'	2.16	0.45
1:X:161:U:C4	1:X:190:A:N6	2.84	0.45
1:X:169:C:C2'	1:X:170:U:H5'	2.47	0.45
1:X:795:A:C2	3:A:226:MET:HG2	2.52	0.45
1:X:874:A:H2'	1:X:875:G:O4'	2.16	0.45
1:X:939:C:C5'	1:X:940:G:O5'	2.54	0.45
1:X:1073:G:C1'	1:X:1099:A:N7	2.80	0.45
1:X:1175:A:C2	1:X:1176:U:C2	3.04	0.45
1:X:1659:G:C6	1:X:1660:G:C5	3.05	0.45
1:X:1711:C:C4'	1:X:1712:G:OP1	2.65	0.45
1:X:1916:G:H2'	1:X:1917:C:C6	2.52	0.45
1:X:2057:U:H1'	1:X:2577:A:H1'	1.98	0.45
1:X:2070:G:H8	1:X:2070:G:O5'	2.00	0.45
1:X:2219:U:C2	1:X:2220:A:C8	3.05	0.45
1:X:2824:C:O2	1:X:2824:C:H2'	2.16	0.45
1:X:2824:C:O2'	1:X:2825:A:P	2.75	0.45
2:Y:42:U:N3	2:Y:45:C:H5''	2.31	0.45
3:A:216:GLY:O	3:A:217:ARG:O	2.34	0.45
3:A:258:LYS:NZ	3:A:261:ARG:NH2	2.54	0.45
3:A:270:ILE:HG13	3:A:271:VAL:HG23	1.98	0.45
4:B:45:GLU:O	4:B:46:ALA:HB2	2.17	0.45
4:B:75:THR:HG23	4:B:77:ILE:H	1.82	0.45
4:B:152:LYS:H	9:G:106:TYR:HB3	1.81	0.45
5:C:7:ILE:CB	5:C:120:VAL:H	2.13	0.45
5:C:22:VAL:HG12	5:C:23:ASN:H	1.76	0.45
5:C:150:LEU:N	5:C:150:LEU:CD1	2.79	0.45
5:C:191:ALA:HA	5:C:194:GLU:HB3	1.98	0.45
6:D:30:ARG:HB2	6:D:159:THR:HG21	1.99	0.45
6:D:143:TYR:HA	6:D:146:VAL:HG21	1.99	0.45
7:E:88:GLU:OE2	7:E:90:ARG:HD2	2.18	0.45
9:G:33:ILE:CD1	9:G:35:LYS:HZ3	2.27	0.45
9:G:61:ARG:HH21	9:G:61:ARG:CB	2.22	0.45
12:J:40:PRO:HG3	12:J:99:LYS:HZ2	1.79	0.45
12:J:106:GLU:OE1	12:J:106:GLU:N	2.50	0.45
13:K:60:LEU:O	13:K:63:ARG:N	2.49	0.45
19:Q:35:LYS:HA	19:Q:38:ILE:CG2	2.47	0.45
19:Q:83:ALA:O	19:Q:85:GLY:N	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:15:HIS:ND1	20:R:15:HIS:O	2.48	0.45
21:S:65:LEU:HA	21:S:65:LEU:HD12	1.64	0.45
21:S:92:VAL:HG23	21:S:93:GLU:N	2.28	0.45
1:X:98:U:OP2	1:X:99:U:H5	2.00	0.44
1:X:408:U:O2'	1:X:409:G:H8	2.00	0.44
1:X:810:U:C6	1:X:811:G:C8	3.05	0.44
1:X:830:C:H2'	1:X:831:G:O4'	2.17	0.44
1:X:877:G:N2	1:X:925:U:C2	2.85	0.44
1:X:1147:G:H2'	1:X:1148:G:H8	1.82	0.44
1:X:1391:A:N3	1:X:1392:U:C2	2.86	0.44
1:X:1445:A:H2'	1:X:1446:U:O4'	2.17	0.44
1:X:1527:G:H2'	1:X:1528:C:C6	2.52	0.44
1:X:2039:G:C2	1:X:2040:A:C8	3.05	0.44
1:X:2058:U:H3'	1:X:2217:G:N2	2.31	0.44
1:X:2206:C:N4	1:X:2207:G:C6	2.85	0.44
1:X:2256:G:OP2	12:J:86:LYS:CD	2.64	0.44
1:X:2399:C:O5'	1:X:2399:C:H6	1.99	0.44
1:X:2536:G:C6	1:X:2537:C:N4	2.85	0.44
1:X:2799:C:C4	1:X:2800:C:C4	3.05	0.44
1:X:2812:A:C2	1:X:2813:G:C5	3.05	0.44
2:Y:93:G:H2'	2:Y:94:G:O4'	2.17	0.44
3:A:63:ARG:NE	3:A:85:ASP:OD1	2.50	0.44
3:A:131:LEU:N	3:A:131:LEU:CD2	2.80	0.44
3:A:211:ARG:O	3:A:214:TRP:N	2.47	0.44
3:A:246:PRO:HD2	3:A:251:GLY:H	1.77	0.44
3:A:270:ILE:O	3:A:271:VAL:C	2.56	0.44
5:C:26:VAL:CG2	11:I:18:ARG:HH11	2.24	0.44
6:D:99:PHE:O	6:D:102:LYS:HB2	2.18	0.44
8:F:71:THR:OG1	8:F:111:LYS:HG2	2.16	0.44
9:G:49:VAL:HG21	9:G:170:PRO:HG2	1.98	0.44
9:G:70:PHE:CB	16:N:64:ARG:HG2	2.46	0.44
11:I:32:ARG:CZ	17:O:81:ARG:CZ	2.95	0.44
14:L:68:ALA:O	14:L:71:VAL:HG13	2.17	0.44
20:R:54:ILE:CD1	20:R:71:GLN:HB2	2.47	0.44
20:R:62:MET:O	20:R:63:THR:C	2.55	0.44
23:U:23:LYS:HB2	23:U:36:GLY:O	2.17	0.44
24:V:32:ALA:HB2	24:V:37:LEU:HD12	1.99	0.44
1:X:39:C:H2'	1:X:40:U:H6	1.82	0.44
1:X:95:G:H4'	24:V:41:HIS:CE1	2.50	0.44
1:X:192:G:O2'	1:X:193:A:OP2	2.35	0.44
1:X:492:G:H2'	1:X:517:A:H61	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:774:A:H8	1:X:774:A:H3'	1.81	0.44
1:X:802:A:H4'	1:X:803:C:OP1	2.16	0.44
1:X:1325:U:H4'	1:X:1326:U:O5'	2.16	0.44
1:X:1412:C:O2'	1:X:1413:U:H5'	2.17	0.44
1:X:1573:G:C5'	1:X:1574:A:H5''	2.48	0.44
1:X:1587:A:C2	1:X:1588:A:C4	3.04	0.44
1:X:1751:A:O5'	1:X:1751:A:H8	2.00	0.44
1:X:1766:U:H2'	1:X:1767:G:C5'	2.44	0.44
1:X:1923:U:O2'	1:X:1924:C:P	2.75	0.44
1:X:2284:U:H6	1:X:2284:U:H5''	1.82	0.44
1:X:2372:A:H2'	1:X:2373:C:H6	1.82	0.44
1:X:2447:G:O2'	1:X:2448:A:H8	2.00	0.44
1:X:2484:G:O2'	1:X:2485:U:H5''	2.17	0.44
1:X:2578:G:C6	1:X:2579:A:N7	2.85	0.44
1:X:2598:C:H1'	4:B:154:LYS:CE	2.47	0.44
1:X:2722:C:H5''	30:4:35:ARG:NH1	2.31	0.44
1:X:2753:C:H2'	1:X:2754:C:H6	1.82	0.44
1:X:2834:A:O2'	1:X:2835:A:H5'	2.17	0.44
2:Y:7:C:H2'	2:Y:8:C:H6	1.81	0.44
2:Y:75:A:N3	2:Y:75:A:H2'	2.32	0.44
3:A:79:VAL:HG12	3:A:113:VAL:HA	1.99	0.44
3:A:85:ASP:HB2	3:A:92:ILE:HD12	1.99	0.44
5:C:34:GLN:NE2	5:C:178:TYR:HB2	2.32	0.44
5:C:148:VAL:HG12	5:C:150:LEU:CD1	2.47	0.44
6:D:138:PHE:HB2	6:D:141:ILE:CG1	2.47	0.44
7:E:50:LEU:CD2	7:E:51:LEU:N	2.73	0.44
12:J:44:LYS:HE3	12:J:93:TYR:HE1	1.82	0.44
12:J:64:LYS:HD2	12:J:64:LYS:H	1.81	0.44
13:K:44:LEU:O	13:K:44:LEU:HD12	2.17	0.44
14:L:97:HIS:CG	14:L:98:GLY:N	2.82	0.44
16:N:66:ASN:HD22	16:N:70:ARG:CZ	2.29	0.44
17:O:38:LEU:HA	17:O:46:VAL:O	2.17	0.44
17:O:63:HIS:ND1	17:O:91:THR:HG23	2.32	0.44
19:Q:32:LYS:H	19:Q:32:LYS:HG3	1.53	0.44
19:Q:68:PHE:O	19:Q:70:GLY:N	2.50	0.44
20:R:54:ILE:HA	20:R:70:GLU:O	2.17	0.44
21:S:101:THR:O	21:S:102:GLY:O	2.35	0.44
21:S:106:GLY:HA2	21:S:109:GLN:CD	2.37	0.44
24:V:39:GLN:HB3	24:V:42:ARG:HB2	2.00	0.44
1:X:28:A:H2	1:X:523:A:H1'	1.82	0.44
1:X:199:A:C2	1:X:201:G:N3	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:415:A:H2'	1:X:416:U:O4'	2.18	0.44
1:X:461:A:H4'	16:N:3:ARG:HE	1.82	0.44
1:X:466:A:H4'	1:X:467:U:O5'	2.16	0.44
1:X:745:C:H2'	1:X:746:G:O4'	2.17	0.44
1:X:759:C:C2'	1:X:760:U:OP2	2.66	0.44
1:X:812:G:N1	1:X:813:A:N6	2.65	0.44
1:X:1022:A:H2'	1:X:1024:G:O4'	2.17	0.44
1:X:1186:G:O2'	1:X:1187:A:O5'	2.26	0.44
1:X:1331:G:H2'	1:X:1331:G:N3	2.33	0.44
1:X:1332:G:H2'	1:X:1333:G:N9	2.33	0.44
1:X:1363:C:O2'	1:X:1364:C:H5'	2.17	0.44
1:X:1534:A:C6	1:X:1535:C:C4	3.06	0.44
1:X:1685:A:C8	1:X:1691:G:C5	3.05	0.44
1:X:1764:A:C8	1:X:1764:A:H3'	2.53	0.44
1:X:1845:A:N3	1:X:2212:U:O2'	2.46	0.44
1:X:2197:U:C4	1:X:2198:U:C4	3.06	0.44
1:X:2518:C:H4'	30:4:3:VAL:HG21	1.99	0.44
2:Y:78:A:H2'	2:Y:79:U:O4'	2.18	0.44
2:Y:92:G:H22	12:J:39:GLU:CG	2.30	0.44
3:A:186:HIS:CD2	3:A:188:GLU:HB2	2.52	0.44
4:B:68:ALA:C	4:B:70:ALA:H	2.21	0.44
5:C:3:GLN:OE1	5:C:3:GLN:CA	2.66	0.44
5:C:102:LEU:O	5:C:102:LEU:CD2	2.61	0.44
7:E:45:GLN:CG	7:E:49:GLN:O	2.58	0.44
8:F:13:PRO:O	8:F:52:ILE:HA	2.18	0.44
8:F:77:LEU:HD11	8:F:111:LYS:HD2	1.99	0.44
9:G:65:LYS:CG	9:G:66:HIS:N	2.80	0.44
12:J:92:GLU:HG3	12:J:93:TYR:CD2	2.53	0.44
15:M:104:LEU:HD23	15:M:106:TYR:HE2	1.80	0.44
17:O:36:LYS:NZ	17:O:55:THR:N	2.65	0.44
18:P:9:ARG:HD2	18:P:13:GLN:CG	2.46	0.44
18:P:72:LEU:C	18:P:74:SER:H	2.20	0.44
20:R:36:VAL:O	20:R:37:LEU:HD23	2.17	0.44
20:R:59:LYS:HA	20:R:62:MET:HG3	1.99	0.44
20:R:105:ARG:NH1	20:R:112:LYS:C	2.71	0.44
23:U:52:ARG:O	23:U:53:GLU:CB	2.64	0.44
24:V:22:LYS:HG2	24:V:25:LEU:HD23	1.98	0.44
1:X:32:C:H5'	1:X:1251:G:O5'	2.17	0.44
1:X:48:A:OP1	1:X:49:U:H5''	2.18	0.44
1:X:115:G:C6	1:X:117:A:N6	2.85	0.44
1:X:172:A:N6	1:X:175:C:H5	2.15	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:343:A:H3'	1:X:343:A:N3	2.32	0.44
1:X:476:G:H2'	1:X:477:A:H8	1.74	0.44
1:X:490:A:O2'	1:X:491:A:P	2.76	0.44
1:X:528:G:H5''	18:P:39:ARG:HH12	1.82	0.44
1:X:529:U:H2'	1:X:530:G:H8	1.82	0.44
1:X:637:G:O6	11:I:101:ARG:HD3	2.18	0.44
1:X:825:C:H2'	1:X:826:U:H6	1.82	0.44
1:X:1031:C:H4'	1:X:1032:A:O5'	2.18	0.44
1:X:1249:G:HO2'	1:X:1250:A:P	2.41	0.44
1:X:1758:C:C2	1:X:1969:G:C2	3.06	0.44
1:X:1782:A:C2	1:X:1821:A:H4'	2.52	0.44
1:X:1918:G:C6	1:X:1945:C:C5	3.05	0.44
1:X:2199:C:C3'	1:X:2200:G:H5'	2.34	0.44
1:X:2256:G:OP1	12:J:86:LYS:HD2	2.16	0.44
1:X:2494:C:O2'	1:X:2495:G:C5'	2.66	0.44
1:X:2666:U:C5	1:X:2667:C:C4	3.06	0.44
4:B:105:THR:HG21	4:B:199:ARG:HH21	1.81	0.44
4:B:120:TRP:CG	4:B:155:ARG:HB3	2.53	0.44
5:C:30:VAL:O	5:C:33:TRP:N	2.48	0.44
5:C:138:LYS:C	5:C:140:ASN:N	2.71	0.44
5:C:156:ASN:O	5:C:159:ARG:HB3	2.18	0.44
8:F:19:PRO:HB2	8:F:22:PRO:CD	2.47	0.44
9:G:106:TYR:O	9:G:110:LEU:HD11	2.15	0.44
9:G:157:PRO:C	9:G:159:SER:H	2.19	0.44
10:H:29:ILE:CG2	10:H:123:PHE:HE1	2.30	0.44
11:I:91:ASP:HA	11:I:94:GLU:OE2	2.18	0.44
13:K:10:LEU:O	13:K:11:ASN:OD1	2.35	0.44
17:O:66:GLY:O	17:O:87:ARG:CZ	2.65	0.44
18:P:96:TYR:CD1	18:P:96:TYR:C	2.90	0.44
19:Q:12:ILE:CG1	19:Q:13:SER:H	2.30	0.44
19:Q:75:ARG:NH1	19:Q:75:ARG:CG	2.80	0.44
20:R:14:LEU:HG	20:R:41:PRO:HB3	1.98	0.44
20:R:16:PHE:CD2	20:R:80:LYS:NZ	2.65	0.44
20:R:92:THR:C	20:R:95:ARG:HH22	2.20	0.44
21:S:49:THR:CG2	21:S:94:VAL:HG11	2.47	0.44
21:S:113:VAL:HG22	21:S:171:VAL:CG1	2.45	0.44
24:V:21:ARG:O	24:V:25:LEU:HB2	2.18	0.44
26:Z:36:CYS:HB3	26:Z:49:CYS:SG	2.57	0.44
1:X:333:A:C5'	5:C:162:ARG:CD	2.95	0.44
1:X:341:A:HO2'	1:X:342:G:P	2.40	0.44
1:X:631:G:H4'	1:X:632:A:C5'	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:855:G:N2	1:X:948:C:C2	2.85	0.44
1:X:932:G:H2'	1:X:933:G:H8	1.81	0.44
1:X:999:A:C5'	25:W:8:SER:HB2	2.47	0.44
1:X:1188:A:P	1:X:1188:A:C8	3.10	0.44
1:X:1342:U:H5'	1:X:1343:C:C5	2.42	0.44
1:X:1345:G:C8	1:X:1625:A:H2'	2.53	0.44
1:X:1359:G:C6	1:X:1617:G:C6	3.06	0.44
1:X:1385:C:H2'	1:X:1386:A:O4'	2.18	0.44
1:X:1698:C:O2'	1:X:1753:A:C2'	2.46	0.44
1:X:1713:G:C6	1:X:1714:A:C4	3.05	0.44
1:X:1785:A:O4'	1:X:1883:A:C2	2.70	0.44
1:X:2289:A:H3'	1:X:2290:A:C8	2.51	0.44
1:X:2495:G:C4	1:X:2548:G:N2	2.85	0.44
1:X:2564:U:C5'	1:X:2565:C:OP1	2.62	0.44
1:X:2597:G:H21	4:B:150:VAL:HG11	1.82	0.44
1:X:2634:G:C2'	1:X:2643:G:O6	2.62	0.44
1:X:2793:G:N1	1:X:2794:G:C5	2.85	0.44
4:B:179:GLU:C	4:B:181:LEU:N	2.69	0.44
5:C:46:ARG:HB3	5:C:51:VAL:HG23	2.00	0.44
9:G:155:THR:HG23	9:G:156:HIS:N	2.33	0.44
11:I:45:LYS:HD3	11:I:46:GLY:N	2.33	0.44
12:J:21:ASP:HA	12:J:99:LYS:CG	2.46	0.44
19:Q:81:ARG:HG3	19:Q:81:ARG:NH1	2.33	0.44
23:U:27:ASP:N	23:U:32:ARG:CD	2.79	0.44
1:X:496:C:H2'	1:X:497:C:C5'	2.48	0.44
1:X:583:C:O2'	1:X:584:A:OP2	2.36	0.44
1:X:623:G:C3'	1:X:624:A:C5'	2.86	0.44
1:X:679:C:OP1	11:I:50:GLU:HG3	2.18	0.44
1:X:1035:G:C6	1:X:1036:G:C6	3.05	0.44
1:X:1068:A:H2'	1:X:1068:A:N3	2.33	0.44
1:X:1211:G:C2	1:X:1263:G:C5	3.06	0.44
1:X:1246:G:C6	1:X:1247:U:C5	3.06	0.44
1:X:1356:G:O4'	1:X:1613:G:H2'	2.18	0.44
1:X:1511:A:H2'	1:X:1512:A:H8	1.80	0.44
1:X:1514:C:C4'	1:X:1593:C:C5'	2.96	0.44
1:X:1550:C:C2'	1:X:1553:G:N2	2.61	0.44
1:X:1573:G:O5'	1:X:1574:A:C5'	2.65	0.44
1:X:1944:C:H2'	1:X:1945:C:O4'	2.17	0.44
1:X:2279:G:H2'	1:X:2280:A:H8	1.80	0.44
1:X:2395:C:H2'	1:X:2396:C:H5'	1.99	0.44
1:X:2429:A:C2	1:X:2430:A:C5	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2760:G:H2'	1:X:2761:A:OP1	2.18	0.44
1:X:2823:G:HO2'	1:X:2824:C:P	2.37	0.44
3:A:126:LYS:HB2	3:A:129:ASN:ND2	2.32	0.44
5:C:72:ARG:HG3	5:C:77:PHE:CD2	2.53	0.44
6:D:114:PHE:HZ	6:D:176:PRO:CG	2.31	0.44
7:E:18:ASN:C	7:E:20:GLN:N	2.71	0.44
7:E:64:LEU:O	7:E:67:LEU:HB2	2.17	0.44
8:F:111:LYS:O	8:F:115:LEU:HG	2.17	0.44
9:G:54:LEU:HD13	9:G:170:PRO:HG3	2.00	0.44
9:G:157:PRO:C	9:G:159:SER:N	2.71	0.44
11:I:73:GLU:OE2	11:I:104:ARG:C	2.56	0.44
11:I:85:ASP:O	11:I:86:THR:C	2.56	0.44
12:J:26:ASP:CB	12:J:68:ARG:HH22	2.30	0.44
13:K:79:VAL:HG13	13:K:80:MET:N	2.33	0.44
14:L:33:ARG:NH2	14:L:68:ALA:O	2.51	0.44
14:L:101:LYS:HE2	14:L:105:ASP:CG	2.37	0.44
15:M:24:LEU:C	15:M:25:PRO:O	2.53	0.44
15:M:104:LEU:C	15:M:106:TYR:H	2.21	0.44
20:R:101:GLY:C	20:R:103:LYS:H	2.21	0.44
21:S:53:ASP:OD2	21:S:53:ASP:N	2.50	0.44
1:X:26:G:C6	1:X:27:G:N2	2.86	0.44
1:X:242:A:N6	1:X:440:U:H2'	2.33	0.44
1:X:318:G:H5'	1:X:318:G:H8	1.82	0.44
1:X:337:G:O2'	20:R:9:HIS:ND1	2.51	0.44
1:X:445:A:H2'	1:X:446:C:H6	1.83	0.44
1:X:490:A:HO2'	1:X:491:A:P	2.38	0.44
1:X:531:G:O2'	1:X:532:A:H5'	2.18	0.44
1:X:575:U:O2'	1:X:822:G:OP2	2.33	0.44
1:X:632:A:C2	1:X:633:G:C5	3.05	0.44
1:X:718:A:C2	1:X:719:A:C4	3.06	0.44
1:X:739:G:O2'	1:X:740:A:P	2.75	0.44
1:X:804:C:HO2'	1:X:805:G:P	2.40	0.44
1:X:972:C:C4'	1:X:973:U:OP2	2.66	0.44
1:X:1051:U:C6	1:X:1051:U:H3'	2.52	0.44
1:X:1189:G:C2'	1:X:1190:C:H5'	2.47	0.44
1:X:1359:G:O2'	1:X:1360:G:H5'	2.17	0.44
1:X:1473:U:O2'	1:X:1474:A:OP2	2.30	0.44
1:X:1714:A:OP2	1:X:1715:A:C3'	2.65	0.44
1:X:1723:U:O2'	1:X:1724:C:OP1	2.35	0.44
1:X:1804:U:O2'	1:X:1805:G:H5'	2.17	0.44
1:X:2718:A:H2'	1:X:2719:U:O5'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2825:A:H2'	1:X:2826:C:C6	2.52	0.44
2:Y:26:G:H2'	2:Y:58:G:O6	2.17	0.44
2:Y:47:A:H8	6:D:92:ARG:NH1	2.16	0.44
2:Y:50:U:H3'	2:Y:50:U:C6	2.52	0.44
3:A:143:HIS:ND1	3:A:194:GLY:C	2.71	0.44
6:D:4:LEU:CG	6:D:5:LYS:N	2.58	0.44
6:D:70:ALA:N	6:D:85:VAL:HG22	2.33	0.44
6:D:75:SER:HB2	6:D:79:LEU:CD2	2.47	0.44
6:D:175:LEU:HG	6:D:177:PHE:HE1	1.83	0.44
7:E:103:LEU:HD22	7:E:123:PHE:CE2	2.53	0.44
7:E:107:ILE:HD11	7:E:151:VAL:HG12	2.00	0.44
11:I:30:ALA:CB	11:I:34:HIS:CE1	2.82	0.44
12:J:31:GLY:HA3	12:J:108:ALA:HB2	1.99	0.44
14:L:94:TYR:O	14:L:96:TYR:N	2.50	0.44
16:N:27:SER:C	16:N:29:SER:H	2.21	0.44
16:N:50:ARG:O	16:N:52:ASN:N	2.50	0.44
17:O:74:TYR:OH	17:O:76:SER:CB	2.65	0.44
18:P:24:GLY:O	18:P:127:ILE:HA	2.17	0.44
18:P:86:LEU:N	18:P:130:GLU:OE2	2.49	0.44
21:S:1:MET:HG3	21:S:52:PHE:CD2	2.53	0.44
21:S:86:VAL:HG12	21:S:87:THR:N	2.32	0.44
23:U:10:LYS:HZ1	23:U:77:GLY:HA3	1.81	0.44
30:4:30:VAL:HG23	30:4:31:LYS:N	2.33	0.44
1:X:62:U:H4'	1:X:63:A:H8	1.83	0.44
1:X:115:G:N1	1:X:117:A:N6	2.66	0.44
1:X:302:U:C4	1:X:361:G:N2	2.86	0.44
1:X:498:C:O2'	18:P:73:ASN:O	2.29	0.44
1:X:575:U:H2'	1:X:576:A:H8	1.82	0.44
1:X:628:A:C8	1:X:628:A:OP2	2.67	0.44
1:X:734:G:H2'	1:X:735:G:H8	1.83	0.44
1:X:759:C:C1'	1:X:761:G:H21	2.31	0.44
1:X:847:C:C4	1:X:848:A:N7	2.86	0.44
1:X:1173:G:N3	17:O:88:GLN:NE2	2.66	0.44
1:X:1188:A:C8	1:X:1188:A:OP2	2.71	0.44
1:X:1359:G:C6	1:X:1617:G:N1	2.85	0.44
1:X:1636:G:C5	1:X:1637:U:C5	3.06	0.44
1:X:1813:A:H2'	1:X:1814:G:C8	2.52	0.44
1:X:1837:G:C2	1:X:1879:G:C2	3.06	0.44
1:X:2175:A:O2'	1:X:2176:U:H5'	2.18	0.44
1:X:2340:C:H2'	1:X:2341:G:C5'	2.48	0.44
1:X:2654:A:H5'	10:H:42:LYS:H	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2676:G:C6	1:X:2690:A:N1	2.86	0.44
1:X:2799:C:N4	1:X:2800:C:N3	2.66	0.44
2:Y:71:G:C5	2:Y:72:C:C5	3.06	0.44
2:Y:75:A:C2	2:Y:76:U:C1'	3.00	0.44
3:A:98:ALA:O	3:A:99:ASP:C	2.56	0.44
3:A:218:LYS:CD	3:A:219:PRO:O	2.66	0.44
3:A:243:GLY:C	3:A:244:ARG:HD3	2.38	0.44
7:E:146:ALA:O	7:E:149:ARG:N	2.51	0.44
11:I:47:ALA:HA	11:I:49:PHE:CE2	2.53	0.44
11:I:95:ALA:O	11:I:98:LEU:N	2.44	0.44
12:J:64:LYS:O	12:J:107:VAL:HA	2.18	0.44
13:K:41:ALA:O	13:K:44:LEU:N	2.51	0.44
14:L:8:ARG:NH1	14:L:8:ARG:HB2	2.32	0.44
14:L:29:LEU:O	14:L:90:ASP:OD1	2.36	0.44
16:N:52:ASN:C	16:N:54:LYS:H	2.21	0.44
17:O:39:PHE:CE1	17:O:46:VAL:CB	2.98	0.44
22:T:21:LEU:HD12	22:T:41:ARG:HG2	1.99	0.44
23:U:19:ILE:HD12	23:U:40:ARG:HG3	2.00	0.44
1:X:26:G:C2	1:X:27:G:N2	2.85	0.44
1:X:172:A:N6	1:X:175:C:C5	2.86	0.44
1:X:313:U:H2'	1:X:314:G:C8	2.53	0.44
1:X:404:A:C6	1:X:405:C:C4	3.06	0.44
1:X:471:A:H3'	1:X:472:C:H6	1.83	0.44
1:X:566:U:O2'	1:X:567:G:C5'	2.64	0.44
1:X:967:G:O6	12:J:17:ARG:CZ	2.66	0.44
1:X:1019:U:O2'	1:X:1020:A:C5'	2.66	0.44
1:X:1118:G:H2'	1:X:1119:U:C5'	2.37	0.44
1:X:1123:G:C5	1:X:1124:U:C5	3.06	0.44
1:X:1147:G:C4	1:X:1148:G:C8	3.06	0.44
1:X:1494:G:HO2'	1:X:1574:A:H2	1.65	0.44
1:X:1505:U:H2'	1:X:1506:C:C5'	2.48	0.44
1:X:1552:C:H1'	1:X:1553:G:C4	2.53	0.44
1:X:1685:A:N7	1:X:1691:G:C6	2.86	0.44
1:X:1754:G:H2'	1:X:1755:G:H5'	1.99	0.44
1:X:1917:C:H2'	1:X:1918:G:C5'	2.48	0.44
1:X:2086:U:H6	1:X:2086:U:O5'	2.00	0.44
1:X:2166:G:H2'	1:X:2167:A:H5'	1.98	0.44
1:X:2200:G:C5	1:X:2201:G:N7	2.86	0.44
1:X:2256:G:P	12:J:86:LYS:HB2	2.58	0.44
1:X:2395:C:O5'	1:X:2395:C:H6	2.00	0.44
1:X:2508:G:C5'	1:X:2509:A:H5''	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2550:C:C4	1:X:2553:G:C8	3.06	0.44
1:X:2660:C:C2	1:X:2704:U:O4	2.70	0.44
1:X:2697:G:O2'	1:X:2698:G:H5'	2.18	0.44
1:X:2751:C:H2'	1:X:2752:C:C6	2.52	0.44
3:A:228:PRO:HD3	3:A:235:GLY:N	2.33	0.44
3:A:243:GLY:C	3:A:244:ARG:CZ	2.86	0.44
4:B:176:ARG:C	4:B:177:ALA:O	2.53	0.44
4:B:176:ARG:NH2	15:M:19:ASP:OD2	2.51	0.44
5:C:154:ASP:OD2	5:C:157:THR:OG1	2.32	0.44
8:F:12:LEU:HD13	8:F:17:ALA:HB2	2.00	0.44
10:H:85:ASP:OD2	10:H:87:SER:HB3	2.18	0.44
11:I:117:ALA:O	11:I:118:VAL:CG1	2.56	0.44
12:J:99:LYS:HD2	12:J:100:PRO:HD3	2.00	0.44
14:L:54:ALA:HB3	14:L:75:LEU:HA	1.99	0.44
14:L:104:ALA:O	14:L:108:ARG:N	2.34	0.44
15:M:43:ASN:ND2	15:M:43:ASN:O	2.43	0.44
16:N:88:ILE:CG2	17:O:48:GLY:O	2.65	0.44
17:O:20:ILE:HD12	17:O:20:ILE:C	2.37	0.44
18:P:9:ARG:HB3	18:P:13:GLN:CB	2.48	0.44
18:P:46:ARG:HD3	18:P:95:ALA:H	1.83	0.44
19:Q:12:ILE:O	19:Q:16:ALA:HB3	2.18	0.44
19:Q:20:MET:C	19:Q:22:ARG:N	2.71	0.44
24:V:26:MET:O	24:V:27:GLU:C	2.57	0.44
26:Z:19:ARG:HB2	26:Z:19:ARG:HH11	1.83	0.44
1:X:406:G:C5	1:X:407:A:N7	2.86	0.43
1:X:603:C:O2	1:X:603:C:C2'	2.65	0.43
1:X:691:C:O2'	1:X:692:C:H5'	2.17	0.43
1:X:888:G:O2'	1:X:889:C:H5'	2.17	0.43
1:X:940:G:N2	25:W:43:MET:SD	2.90	0.43
1:X:980:G:O3'	25:W:11:GLY:HA2	2.18	0.43
1:X:1075:C:H5''	8:F:87:GLY:C	2.38	0.43
1:X:1186:G:H21	1:X:1187:A:N6	2.16	0.43
1:X:1325:U:O2'	1:X:1327:C:C5	2.71	0.43
1:X:1333:G:N2	1:X:1344:C:N4	2.65	0.43
1:X:1411:C:C2'	1:X:1412:C:O5'	2.66	0.43
1:X:1777:A:H1'	1:X:1921:A:N6	2.33	0.43
1:X:1914:U:H6	1:X:1914:U:C5'	2.25	0.43
1:X:2082:C:C2'	1:X:2083:G:C5'	2.96	0.43
1:X:2372:A:H5''	11:I:61:PRO:CB	2.44	0.43
1:X:2415:G:N3	1:X:2577:A:H2	2.16	0.43
1:X:2617:G:O2'	1:X:2618:A:H8	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2695:C:H2'	1:X:2696:A:H8	1.83	0.43
1:X:2824:C:H4'	1:X:2825:A:C5'	2.48	0.43
2:Y:95:U:H2'	2:Y:96:C:H6	1.81	0.43
3:A:96:HIS:HE1	3:A:100:GLY:CA	2.31	0.43
3:A:208:LYS:C	3:A:209:ALA:O	2.55	0.43
4:B:155:ARG:HG3	4:B:155:ARG:HH11	1.82	0.43
5:C:28:HIS:O	5:C:29:GLU:C	2.57	0.43
5:C:77:PHE:O	5:C:78:VAL:C	2.56	0.43
6:D:74:ILE:CA	6:D:79:LEU:HB3	2.44	0.43
6:D:106:ILE:CG2	6:D:139:PRO:HB3	2.43	0.43
6:D:132:ILE:HG22	6:D:133:LYS:N	2.33	0.43
7:E:109:TYR:N	7:E:109:TYR:CD1	2.85	0.43
8:F:79:ARG:HA	8:F:84:ILE:HB	2.00	0.43
9:G:101:THR:HG23	9:G:102:ARG:N	2.33	0.43
9:G:125:ARG:NH1	9:G:128:GLU:OE1	2.49	0.43
11:I:105:PRO:O	11:I:106:VAL:HG22	2.17	0.43
11:I:129:ALA:O	11:I:133:VAL:HG23	2.18	0.43
12:J:44:LYS:O	12:J:47:GLN:N	2.47	0.43
12:J:125:LYS:NZ	12:J:125:LYS:CB	2.74	0.43
13:K:100:VAL:HG22	26:Z:45:ILE:HD12	2.00	0.43
14:L:38:ILE:HD11	14:L:103:LEU:CD1	2.48	0.43
15:M:63:ARG:HB2	15:M:63:ARG:NH1	2.33	0.43
18:P:27:VAL:HG13	18:P:27:VAL:O	2.18	0.43
20:R:25:LEU:HD13	20:R:79:SER:O	2.18	0.43
21:S:155:PRO:HG2	21:S:158:CYS:SG	2.58	0.43
23:U:22:GLY:CA	23:U:39:LYS:HG3	2.47	0.43
23:U:70:LEU:CD2	23:U:74:PRO:HA	2.47	0.43
1:X:4:C:C2	1:X:2874:A:C2	3.06	0.43
1:X:20:C:H2'	1:X:21:A:C8	2.51	0.43
1:X:1081:A:C6	1:X:1108:U:H4'	2.53	0.43
1:X:1200:G:C2'	1:X:1201:G:H5'	2.48	0.43
1:X:1230:C:C2	1:X:1246:G:C2	3.06	0.43
1:X:1271:C:H2'	1:X:1272:G:O4'	2.18	0.43
1:X:1425:G:C2'	1:X:1426:U:H5'	2.48	0.43
1:X:1505:U:H3'	1:X:1505:U:C6	2.53	0.43
1:X:1629:G:C6	1:X:1635:G:C6	3.06	0.43
1:X:1735:G:C6	1:X:1736:C:C4	3.06	0.43
1:X:1791:C:H4'	1:X:1792:C:OP1	2.18	0.43
1:X:1918:G:H1'	1:X:1947:G:N2	2.33	0.43
1:X:1918:G:N2	1:X:1947:G:N9	2.65	0.43
1:X:1924:C:C6	1:X:1948:C:C2	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2036:G:H2'	1:X:2037:A:C5'	2.48	0.43
1:X:2225:G:N1	1:X:2405:A:H1'	2.34	0.43
1:X:2313:G:N3	14:L:13:THR:HB	2.33	0.43
1:X:2578:G:C5	1:X:2579:A:N7	2.86	0.43
1:X:2741:G:N2	7:E:150:LYS:HZ3	2.16	0.43
1:X:2770:A:O2'	1:X:2771:C:OP2	2.34	0.43
1:X:2797:G:H8	1:X:2797:G:O5'	2.01	0.43
2:Y:53:G:C5'	14:L:64:LYS:NZ	2.82	0.43
3:A:182:LEU:HB2	3:A:268:ARG:HB2	2.00	0.43
3:A:245:VAL:N	3:A:252:LYS:HE2	2.33	0.43
4:B:151:TYR:CD1	9:G:106:TYR:CZ	3.06	0.43
6:D:92:ARG:HH21	6:D:92:ARG:CG	2.28	0.43
6:D:148:LYS:HG3	6:D:149:THR:N	2.34	0.43
7:E:37:TYR:HE2	7:E:71:LEU:HB2	1.84	0.43
9:G:54:LEU:O	9:G:57:LEU:HB3	2.18	0.43
9:G:55:ALA:O	9:G:56:THR:C	2.56	0.43
10:H:3:MET:HB2	10:H:4:PRO:HD2	2.00	0.43
10:H:25:LEU:HD11	10:H:52:VAL:CG2	2.38	0.43
12:J:62:GLY:CA	12:J:64:LYS:HE3	2.44	0.43
17:O:13:ARG:CG	17:O:14:VAL:N	2.75	0.43
20:R:22:VAL:HG22	20:R:83:LEU:N	2.29	0.43
21:S:137:ASP:OD2	21:S:138:VAL:N	2.51	0.43
23:U:52:ARG:NH1	23:U:67:LEU:CG	2.81	0.43
25:W:34:VAL:HG22	25:W:40:VAL:CG1	2.48	0.43
30:4:22:ARG:HG2	30:4:22:ARG:NH1	2.27	0.43
1:X:85:C:H2'	1:X:86:U:O4'	2.19	0.43
1:X:416:U:H4'	1:X:419:G:C1'	2.48	0.43
1:X:417:C:H4'	1:X:418:C:C5'	2.47	0.43
1:X:647:G:C6	11:I:107:LYS:HE3	2.54	0.43
1:X:742:G:H2'	1:X:1766:U:H1'	2.01	0.43
1:X:1291:G:O2'	1:X:1292:A:H5'	2.18	0.43
1:X:1373:G:C2'	1:X:1374:G:H5'	2.48	0.43
1:X:1629:G:N2	1:X:1633:C:C2	2.86	0.43
1:X:1938:U:O2'	1:X:1939:U:OP1	2.30	0.43
1:X:1996:A:O2'	1:X:1997:A:H5'	2.18	0.43
1:X:2262:C:C2	1:X:2368:G:C2	3.07	0.43
1:X:2276:C:C5	1:X:2297:G:N2	2.86	0.43
1:X:2383:C:O2	1:X:2383:C:H2'	2.17	0.43
1:X:2609:G:H2'	1:X:2610:G:C8	2.51	0.43
1:X:2685:A:H8	1:X:2685:A:O5'	2.02	0.43
2:Y:71:G:N3	2:Y:71:G:H2'	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Y:85:G:C5'	25:W:49:HIS:CD2	3.02	0.43
3:A:135:PHE:O	3:A:137:PRO:HD3	2.19	0.43
3:A:166:GLN:CB	3:A:174:ILE:HG22	2.46	0.43
5:C:34:GLN:O	5:C:35:LEU:C	2.55	0.43
5:C:192:ALA:C	5:C:194:GLU:N	2.72	0.43
6:D:40:LEU:CD2	6:D:53:ALA:HB2	2.48	0.43
10:H:116:ARG:NH1	15:M:38:LYS:HE2	2.33	0.43
10:H:116:ARG:HH11	15:M:38:LYS:HZ3	1.62	0.43
11:I:36:GLY:O	11:I:37:GLN:HB2	2.18	0.43
11:I:73:GLU:CG	11:I:101:ARG:HG3	2.49	0.43
12:J:30:PHE:HB3	12:J:66:TYR:CE2	2.54	0.43
14:L:30:SER:C	14:L:31:VAL:CG1	2.86	0.43
15:M:12:LEU:HD23	15:M:12:LEU:HA	1.83	0.43
15:M:26:ASP:O	15:M:27:PHE:CD2	2.71	0.43
16:N:4:ALA:O	16:N:5:LYS:O	2.37	0.43
19:Q:14:GLU:CG	19:Q:15:LYS:N	2.80	0.43
19:Q:39:LYS:O	19:Q:42:ILE:HG23	2.18	0.43
20:R:93:ARG:CG	20:R:94:VAL:N	2.81	0.43
21:S:16:GLU:O	21:S:18:MET:HG2	2.18	0.43
23:U:75:TYR:O	23:U:76:LYS:HB2	2.18	0.43
30:4:10:MET:O	30:4:11:CYS:HB3	2.18	0.43
1:X:84:G:C5'	20:R:39:ALA:HB3	2.48	0.43
1:X:216:U:OP1	1:X:601:A:C8	2.72	0.43
1:X:312:G:C6	1:X:328:A:C6	3.07	0.43
1:X:319:G:C1'	1:X:511:A:O4'	2.66	0.43
1:X:346:C:C2	1:X:347:C:C5	3.06	0.43
1:X:358:C:H6	1:X:358:C:O5'	2.02	0.43
1:X:607:C:O5'	1:X:607:C:H6	2.02	0.43
1:X:619:A:H2'	1:X:620:G:O4'	2.18	0.43
1:X:636:G:H2'	1:X:637:G:C5'	2.47	0.43
1:X:678:G:C5	1:X:679:C:C5	3.06	0.43
1:X:767:G:O2'	1:X:768:U:H5'	2.18	0.43
1:X:982:C:O2'	1:X:983:G:H5'	2.17	0.43
1:X:1015:U:O4'	1:X:1021:A:C5	2.71	0.43
1:X:1051:U:C6	1:X:1051:U:C3'	3.02	0.43
1:X:1094:C:H2'	1:X:1095:A:H3'	1.99	0.43
1:X:1329:U:C2	1:X:1330:G:C8	3.07	0.43
1:X:1349:A:H2'	1:X:1350:G:H8	1.82	0.43
1:X:1432:G:H21	1:X:1596:A:N6	2.16	0.43
1:X:1517:C:C2	1:X:1518:C:C5	3.06	0.43
1:X:1550:C:H4'	1:X:1551:U:H5	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1787:U:O2	1:X:1788:C:C6	2.71	0.43
1:X:1802:A:O2'	1:X:1803:G:H5'	2.18	0.43
1:X:1958:G:H2'	1:X:1959:U:H6	1.82	0.43
1:X:2029:G:C4	1:X:2602:G:C2	3.06	0.43
1:X:2065:A:OP1	23:U:43:ARG:NH1	2.51	0.43
1:X:2196:U:C2'	1:X:2197:U:H6	2.29	0.43
1:X:2395:C:OP2	11:I:63:ARG:NH1	2.51	0.43
1:X:2502:G:O2'	1:X:2503:G:H5'	2.19	0.43
1:X:2578:G:C4	1:X:2579:A:C8	3.07	0.43
1:X:2876:C:H2'	1:X:2877:A:C4	2.52	0.43
2:Y:62:C:C2	2:Y:63:A:N7	2.86	0.43
2:Y:96:C:H2'	2:Y:97:C:H6	1.82	0.43
3:A:131:LEU:HD21	3:A:193:ILE:HG12	2.00	0.43
3:A:140:ALA:O	3:A:164:GLN:HA	2.19	0.43
3:A:150:GLY:C	3:A:152:GLY:H	2.20	0.43
3:A:246:PRO:O	3:A:247:VAL:C	2.55	0.43
4:B:26:VAL:HB	4:B:182:ILE:HG23	2.01	0.43
4:B:93:VAL:O	4:B:95:ILE:N	2.51	0.43
5:C:8:GLY:O	5:C:9:GLN:CB	2.67	0.43
5:C:101:GLN:C	5:C:103:GLY:N	2.71	0.43
5:C:108:ILE:CG2	5:C:109:ALA:N	2.81	0.43
6:D:123:ASP:O	6:D:124:GLY:C	2.56	0.43
7:E:22:GLY:HA2	7:E:24:PHE:CE1	2.53	0.43
7:E:44:ARG:HH22	7:E:46:ASP:CA	2.31	0.43
9:G:66:HIS:O	9:G:67:ARG:O	2.36	0.43
9:G:83:ILE:O	9:G:84:ASN:HB2	2.18	0.43
11:I:90:ARG:HD2	11:I:93:LEU:HD12	2.00	0.43
12:J:81:GLU:O	12:J:82:THR:C	2.56	0.43
12:J:96:SER:O	12:J:96:SER:OG	2.35	0.43
13:K:73:LYS:O	13:K:76:VAL:CG1	2.63	0.43
15:M:33:VAL:CG2	15:M:51:GLU:OE1	2.65	0.43
15:M:72:SER:O	15:M:73:PHE:HB2	2.18	0.43
16:N:24:PHE:O	16:N:29:SER:HB3	2.18	0.43
16:N:66:ASN:CB	16:N:76:TYR:H	2.32	0.43
17:O:64:GLY:O	17:O:89:ASN:HA	2.17	0.43
18:P:94:GLU:CG	18:P:127:ILE:HB	2.48	0.43
20:R:85:ASP:N	20:R:90:LYS:HD3	2.32	0.43
20:R:100:ASP:O	20:R:100:ASP:OD1	2.36	0.43
21:S:141:MET:CE	21:S:169:VAL:HG23	2.48	0.43
25:W:4:LYS:HD2	25:W:52:GLU:CG	2.47	0.43
30:4:1:MET:HE3	30:4:35:ARG:NH2	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:4:22:ARG:CG	30:4:22:ARG:NH1	2.79	0.43
1:X:26:G:H1'	1:X:524:A:N6	2.33	0.43
1:X:33:C:O2'	1:X:34:U:C5'	2.60	0.43
1:X:75:C:OP1	24:V:48:ARG:NH2	2.51	0.43
1:X:77:C:H2'	1:X:78:C:C6	2.54	0.43
1:X:307:C:C4	1:X:308:C:H5	2.36	0.43
1:X:518:A:C6	18:P:30:TYR:CE2	3.07	0.43
1:X:610:G:C8	1:X:610:G:H3'	2.54	0.43
1:X:731:A:C3'	1:X:732:G:O4'	2.67	0.43
1:X:784:U:H2'	1:X:785:U:C6	2.53	0.43
1:X:831:G:N2	1:X:1204:G:C6	2.86	0.43
1:X:1213:U:H2'	1:X:1214:C:C6	2.53	0.43
1:X:1347:C:C2	1:X:1348:C:C5	3.06	0.43
1:X:1605:A:O2'	1:X:1606:C:H5'	2.19	0.43
1:X:1826:U:O4'	1:X:1952:A:C2	2.71	0.43
1:X:2036:G:H2'	1:X:2037:A:H5'	2.01	0.43
1:X:2044:G:H5''	1:X:2482:A:N1	2.34	0.43
1:X:2065:A:C8	1:X:2066:G:N7	2.86	0.43
1:X:2598:C:C4'	4:B:150:VAL:CG2	2.96	0.43
1:X:2655:C:O2	1:X:2712:G:N2	2.51	0.43
1:X:2718:A:C2	1:X:2719:U:H1'	2.53	0.43
2:Y:76:U:O4	2:Y:105:G:N2	2.49	0.43
4:B:2:LYS:HA	4:B:84:PHE:CD1	2.53	0.43
6:D:75:SER:CB	6:D:79:LEU:HD13	2.42	0.43
9:G:103:TYR:CZ	9:G:111:LYS:HA	2.53	0.43
9:G:119:LEU:HD23	9:G:119:LEU:HA	1.88	0.43
9:G:154:GLU:N	9:G:157:PRO:CD	2.80	0.43
9:G:154:GLU:N	9:G:157:PRO:HD2	2.34	0.43
11:I:32:ARG:CZ	17:O:79:GLN:HA	2.48	0.43
11:I:92:THR:C	11:I:94:GLU:H	2.22	0.43
12:J:19:THR:CG2	12:J:99:LYS:HZ2	2.30	0.43
15:M:5:ILE:HD12	15:M:5:ILE:O	2.19	0.43
16:N:47:TYR:C	16:N:47:TYR:CD2	2.91	0.43
16:N:74:MET:HB3	16:N:75:ASN:H	1.46	0.43
18:P:87:GLU:CG	18:P:88:ASP:OD2	2.64	0.43
19:Q:63:LYS:HB2	19:Q:69:ILE:O	2.17	0.43
20:R:18:LYS:N	20:R:18:LYS:CD	2.74	0.43
20:R:58:VAL:C	20:R:60:PRO:HD3	2.38	0.43
20:R:110:SER:HG	20:R:112:LYS:HE3	1.82	0.43
22:T:50:GLY:O	22:T:62:LEU:CD2	2.67	0.43
26:Z:42:SER:O	26:Z:43:HIS:CB	2.65	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:125:A:H5''	1:X:126:C:C6	2.54	0.43
1:X:165:G:C1'	1:X:1378:A:C6	3.01	0.43
1:X:223:C:H2'	1:X:224:G:C5'	2.47	0.43
1:X:318:G:H22	1:X:321:A:C5'	2.31	0.43
1:X:390:U:O5'	1:X:390:U:H6	2.02	0.43
1:X:719:A:H2'	1:X:720:A:O4'	2.19	0.43
1:X:731:A:O2'	1:X:732:G:H4'	2.18	0.43
1:X:805:G:C8	1:X:2419:C:H1'	2.54	0.43
1:X:872:G:H2'	1:X:873:U:OP2	2.18	0.43
1:X:1088:A:C2	1:X:1099:A:C2	3.07	0.43
1:X:1126:A:C2	1:X:1127:C:C2	3.06	0.43
1:X:1140:A:O2'	1:X:2494:C:H1'	2.17	0.43
1:X:1279:G:H1	18:P:37:LYS:HG3	1.83	0.43
1:X:1326:U:O2	1:X:1326:U:C2'	2.67	0.43
1:X:1441:A:O2'	1:X:1442:C:P	2.77	0.43
1:X:1742:G:C6	1:X:1743:C:N4	2.86	0.43
1:X:1835:C:O2'	3:A:254:THR:CB	2.66	0.43
1:X:1874:G:C6	1:X:1875:C:C4	3.07	0.43
1:X:2015:G:C8	4:B:145:LYS:NZ	2.76	0.43
1:X:2169:A:H2'	1:X:2170:C:H6	1.82	0.43
1:X:2271:C:H2'	1:X:2272:A:C8	2.53	0.43
1:X:2310:G:H4'	22:T:42:GLY:HA3	2.00	0.43
1:X:2314:A:O2'	1:X:2315:A:C8	2.67	0.43
1:X:2324:G:O2'	1:X:2325:A:P	2.77	0.43
1:X:2336:G:N2	1:X:2339:A:OP2	2.45	0.43
1:X:2382:C:C4	1:X:2394:G:N1	2.86	0.43
1:X:2731:G:O4'	1:X:2731:G:N3	2.51	0.43
1:X:2807:U:H6	1:X:2807:U:C5'	2.14	0.43
1:X:2807:U:O2'	1:X:2808:U:O5'	2.37	0.43
1:X:2831:A:C6	1:X:2837:G:C6	3.06	0.43
10:H:43:ARG:HD3	10:H:44:TYR:CE2	2.54	0.43
12:J:55:MET:CG	12:J:118:ALA:O	2.66	0.43
13:K:52:ILE:CG1	13:K:53:THR:N	2.82	0.43
14:L:33:ARG:HD2	14:L:100:VAL:HG23	2.01	0.43
16:N:32:TYR:CD2	16:N:33:ARG:N	2.86	0.43
18:P:45:ILE:HD11	18:P:57:LEU:CG	2.43	0.43
19:Q:25:TYR:CE2	19:Q:82:LEU:HD11	2.54	0.43
20:R:18:LYS:HA	20:R:36:VAL:HG11	1.97	0.43
21:S:141:MET:HA	21:S:145:ASP:CB	2.49	0.43
21:S:154:LEU:HD11	21:S:160:LEU:HG	2.00	0.43
30:4:22:ARG:HD2	30:4:37:GLY:CA	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:402:A:H2'	1:X:402:A:N3	2.33	0.43
1:X:455:A:H1'	1:X:1215:A:O4'	2.18	0.43
1:X:632:A:H3'	1:X:633:G:C8	2.53	0.43
1:X:716:U:O4	1:X:717:G:C2	2.71	0.43
1:X:810:U:H2'	1:X:811:G:O4'	2.19	0.43
1:X:872:G:C2'	1:X:873:U:OP2	2.67	0.43
1:X:886:A:C2	1:X:917:U:O2	2.72	0.43
1:X:953:G:H2'	1:X:954:U:O4'	2.18	0.43
1:X:1011:A:O2'	1:X:1012:A:H5'	2.19	0.43
1:X:1090:C:H2'	1:X:1091:C:H6	1.84	0.43
1:X:1279:G:O2'	1:X:1280:U:OP2	2.37	0.43
1:X:1391:A:N7	1:X:1393:G:C5	2.86	0.43
1:X:1399:C:O2'	1:X:1400:A:C5'	2.66	0.43
1:X:1402:G:H2'	1:X:1403:U:O4'	2.19	0.43
1:X:1461:C:H2'	1:X:1462:C:C6	2.53	0.43
1:X:1517:C:C4	1:X:1518:C:N4	2.87	0.43
1:X:1540:C:O2	1:X:1540:C:H2'	2.18	0.43
1:X:1745:C:H5'	15:M:106:TYR:CD2	2.52	0.43
1:X:1832:G:C6	1:X:1833:U:C4	3.06	0.43
1:X:1838:G:H3'	1:X:1839:A:C8	2.49	0.43
1:X:1909:U:H5	1:X:1911:A:H62	1.64	0.43
1:X:2037:A:N1	1:X:2595:C:C4	2.87	0.43
1:X:2272:A:P	14:L:15:ARG:NH2	2.92	0.43
1:X:2381:A:H2'	1:X:2382:C:OP2	2.18	0.43
1:X:2447:G:OP1	12:J:120:ARG:NH2	2.51	0.43
1:X:2568:A:O2'	1:X:2569:A:H5'	2.18	0.43
1:X:2586:G:N2	1:X:2587:G:N3	2.66	0.43
1:X:2586:G:C6	1:X:2587:G:C6	3.06	0.43
1:X:2700:U:O2	1:X:2701:A:C8	2.71	0.43
4:B:152:LYS:H	9:G:106:TYR:CB	2.31	0.43
5:C:10:ASN:O	5:C:11:GLY:O	2.37	0.43
5:C:130:THR:O	5:C:133:PHE:HB3	2.19	0.43
6:D:15:ALA:O	6:D:18:GLN:C	2.57	0.43
6:D:123:ASP:OD1	6:D:125:ARG:HG3	2.18	0.43
7:E:43:VAL:HG22	7:E:44:ARG:N	2.32	0.43
9:G:61:ARG:HB3	9:G:61:ARG:CZ	2.46	0.43
10:H:3:MET:O	10:H:6:SER:HB2	2.19	0.43
11:I:18:ARG:O	11:I:19:VAL:CB	2.67	0.43
11:I:83:LEU:O	11:I:84:GLU:HB2	2.18	0.43
12:J:66:TYR:O	12:J:106:GLU:OE1	2.36	0.43
12:J:93:TYR:CD2	12:J:93:TYR:N	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:K:94:TYR:CE2	13:K:115:LEU:O	2.71	0.43
23:U:50:ALA:HB3	23:U:67:LEU:CD1	2.49	0.43
24:V:42:ARG:HE	24:V:46:LEU:HD21	1.83	0.43
1:X:22:C:C2	1:X:23:G:C8	3.06	0.43
1:X:518:A:C5	18:P:30:TYR:CZ	3.06	0.43
1:X:649:G:N2	1:X:661:C:C2	2.86	0.43
1:X:699:G:H4'	1:X:700:C:OP2	2.18	0.43
1:X:743:A:C2	1:X:744:C:N1	2.87	0.43
1:X:936:A:H2'	1:X:937:C:C6	2.54	0.43
1:X:1053:G:C5	1:X:1054:C:C4	3.06	0.43
1:X:1287:A:C2	1:X:1315:A:H2	2.36	0.43
1:X:1526:U:H2'	1:X:1527:G:C8	2.53	0.43
1:X:1627:C:N4	1:X:1628:C:N4	2.67	0.43
1:X:1824:C:N4	1:X:1825:C:C4	2.87	0.43
1:X:1858:C:H2'	1:X:1859:A:C8	2.53	0.43
1:X:2046:C:O2	1:X:2429:A:N1	2.52	0.43
1:X:2238:G:C5	1:X:2406:C:N4	2.86	0.43
1:X:2344:G:H4'	22:T:60:PHE:CE1	2.54	0.43
1:X:2869:U:H2'	1:X:2870:C:O4'	2.18	0.43
2:Y:52:G:P	14:L:65:THR:HG1	2.42	0.43
3:A:49:ILE:CG1	3:A:50:THR:N	2.78	0.43
3:A:222:ARG:HB3	3:A:222:ARG:NH2	2.33	0.43
5:C:58:MET:SD	5:C:69:HIS:HB3	2.58	0.43
5:C:122:GLY:O	5:C:123:PHE:C	2.57	0.43
5:C:136:TRP:CD2	5:C:140:ASN:ND2	2.87	0.43
6:D:22:TYR:CE2	6:D:29:PRO:HD3	2.54	0.43
6:D:29:PRO:HB3	6:D:160:ALA:HA	2.00	0.43
6:D:33:LYS:CB	6:D:91:LEU:O	2.64	0.43
7:E:38:ASN:H	7:E:41:LEU:HD23	1.83	0.43
9:G:34:PRO:HA	9:G:69:ASP:CG	2.39	0.43
9:G:156:HIS:N	9:G:157:PRO:CD	2.81	0.43
11:I:32:ARG:NH2	17:O:81:ARG:HE	2.16	0.43
12:J:31:GLY:HA2	12:J:108:ALA:HB2	2.01	0.43
12:J:75:VAL:HG21	12:J:95:VAL:HG21	2.01	0.43
14:L:29:LEU:HD12	14:L:30:SER:N	2.34	0.43
14:L:63:ASN:HB3	14:L:67:THR:N	2.34	0.43
14:L:75:LEU:O	14:L:78:ALA:CB	2.62	0.43
14:L:97:HIS:CD2	14:L:98:GLY:H	2.36	0.43
16:N:75:ASN:O	16:N:78:THR:N	2.52	0.43
17:O:68:LYS:HA	17:O:87:ARG:HB3	2.00	0.43
18:P:112:GLY:O	18:P:113:SER:C	2.55	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:14:A:C6	1:X:536:A:C2	3.07	0.43
1:X:173:A:OP2	11:I:53:ARG:NH2	2.52	0.43
1:X:206:U:H3'	1:X:206:U:H6	1.84	0.43
1:X:591:G:H2'	1:X:592:G:C8	2.53	0.43
1:X:613:A:O2'	1:X:614:G:P	2.76	0.43
1:X:742:G:N3	1:X:1766:U:H1'	2.34	0.43
1:X:804:C:O2'	1:X:805:G:O5'	2.37	0.43
1:X:831:G:N2	1:X:1204:G:O6	2.51	0.43
1:X:931:G:H4'	2:Y:83:C:C4'	2.49	0.43
1:X:971:A:O4'	1:X:2436:U:H4'	2.19	0.43
1:X:1042:G:N1	1:X:1135:C:C4	2.87	0.43
1:X:1168:G:C2	1:X:1169:C:C2	3.07	0.43
1:X:1255:A:H2'	1:X:1256:C:C6	2.54	0.43
1:X:1313:U:H2'	1:X:1652:G:OP1	2.18	0.43
1:X:1375:C:C2	1:X:1376:C:C6	3.07	0.43
1:X:1569:A:C6	1:X:1571:G:C4	3.07	0.43
1:X:1727:C:C2	1:X:1740:G:N2	2.87	0.43
1:X:1779:C:O2	1:X:1779:C:H2'	2.19	0.43
1:X:1844:C:O2'	1:X:1845:A:O5'	2.37	0.43
1:X:1910:A:C2	1:X:1911:A:C2	3.07	0.43
1:X:1954:A:O2'	3:A:239:ARG:HB3	2.18	0.43
1:X:2197:U:C4	1:X:2198:U:C5	3.06	0.43
1:X:2237:C:O2'	1:X:2238:G:OP1	2.36	0.43
1:X:2247:A:H5'	1:X:2248:A:P	2.59	0.43
1:X:2293:G:C6	1:X:2294:U:C4	3.06	0.43
1:X:2487:G:C4	1:X:2561:G:N1	2.87	0.43
1:X:2608:A:O2'	1:X:2609:G:OP2	2.35	0.43
1:X:2691:C:O2'	1:X:2692:A:OP1	2.37	0.43
1:X:2738:A:OP2	1:X:2739:G:OP2	2.37	0.43
1:X:2779:C:C2'	1:X:2780:A:O4'	2.67	0.43
6:D:65:PRO:HB3	6:D:89:VAL:CG1	2.48	0.43
7:E:42:THR:O	7:E:53:GLU:N	2.52	0.43
7:E:164:PHE:O	7:E:167:GLU:HB2	2.19	0.43
8:F:23:VAL:HG13	8:F:26:ALA:HB3	2.01	0.43
8:F:100:ASN:HB3	8:F:103:GLN:HE22	1.84	0.43
9:G:35:LYS:HG2	9:G:69:ASP:CG	2.38	0.43
9:G:154:GLU:N	9:G:157:PRO:CG	2.81	0.43
11:I:36:GLY:O	11:I:37:GLN:CB	2.67	0.43
11:I:58:ALA:C	11:I:60:LEU:N	2.73	0.43
11:I:82:ASP:N	11:I:114:ILE:HG21	2.27	0.43
12:J:26:ASP:O	12:J:27:TYR:HD1	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:92:GLU:OE1	12:J:92:GLU:HA	2.18	0.43
14:L:51:LEU:N	14:L:51:LEU:HD12	2.34	0.43
15:M:27:PHE:HB3	15:M:93:ILE:CD1	2.39	0.43
16:N:50:ARG:O	16:N:51:ARG:C	2.57	0.43
19:Q:15:LYS:O	19:Q:16:ALA:C	2.56	0.43
19:Q:91:LEU:HD13	19:Q:91:LEU:HA	1.81	0.43
21:S:4:THR:CG2	21:S:57:GLU:HB2	2.48	0.43
21:S:50:GLY:C	21:S:65:LEU:HD11	2.39	0.43
21:S:61:THR:O	21:S:62:PHE:CD2	2.71	0.43
21:S:75:LYS:C	21:S:77:ALA:N	2.71	0.43
21:S:163:ASP:HA	21:S:164:PRO:HD3	1.75	0.43
23:U:51:ILE:O	23:U:52:ARG:HD3	2.19	0.43
23:U:62:LEU:HD23	23:U:67:LEU:CB	2.48	0.43
25:W:3:ILE:HG21	25:W:25:LEU:HD11	2.01	0.43
25:W:38:PRO:HA	25:W:41:ARG:CD	2.49	0.43
1:X:16:G:C2	1:X:17:G:C8	3.07	0.43
1:X:57:G:C4	1:X:58:C:C5	3.07	0.43
1:X:137:A:H2'	1:X:138:G:O4'	2.19	0.43
1:X:546:A:H61	1:X:565:A:N6	2.16	0.43
1:X:634:G:H2'	1:X:635:C:C6	2.46	0.43
1:X:734:G:O2'	1:X:735:G:H5'	2.18	0.43
1:X:819:C:O2'	1:X:820:U:H5'	2.19	0.43
1:X:1249:G:OP2	1:X:1249:G:C8	2.72	0.43
1:X:1330:G:C4	1:X:1331:G:C8	3.06	0.43
1:X:1424:U:C2	1:X:1425:G:C8	3.07	0.43
1:X:1474:A:H2'	1:X:1474:A:N3	2.34	0.43
1:X:1526:U:H3'	1:X:1527:G:C8	2.54	0.43
1:X:1549:C:H2'	1:X:1550:C:O4'	2.19	0.43
1:X:1573:G:C3'	1:X:1574:A:C5'	2.88	0.43
1:X:1602:G:P	1:X:1602:G:O4'	2.77	0.43
1:X:1636:G:H2'	1:X:1637:U:H6	1.83	0.43
1:X:1746:A:C2'	1:X:1747:G:O5'	2.67	0.43
1:X:1872:A:C1'	1:X:2070:G:H5'	2.49	0.43
1:X:2006:G:H4'	1:X:2596:C:O2'	2.19	0.43
1:X:2083:G:N2	1:X:2172:U:O2	2.51	0.43
1:X:2599:U:O4'	4:B:156:MET:HG3	2.18	0.43
2:Y:67:C:C5	2:Y:111:C:C5	3.07	0.43
3:A:131:LEU:HD23	3:A:131:LEU:H	1.83	0.43
3:A:155:LEU:HD13	3:A:177:LEU:HD21	2.01	0.43
3:A:171:ASP:O	3:A:186:HIS:HA	2.17	0.43
3:A:251:GLY:HA3	3:A:255:LYS:CE	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:39:ALA:HA	4:B:43:GLY:C	2.39	0.43
4:B:75:THR:HG21	4:B:78:LEU:HD21	2.01	0.43
6:D:114:PHE:O	6:D:115:ARG:HG3	2.19	0.43
10:H:116:ARG:NH1	15:M:38:LYS:NZ	2.67	0.43
14:L:27:LEU:HB3	14:L:42:ILE:CD1	2.48	0.43
15:M:100:ARG:O	15:M:101:ARG:HB3	2.19	0.43
18:P:76:LYS:O	18:P:78:ASN:N	2.52	0.43
19:Q:27:PHE:HZ	19:Q:42:ILE:HD13	1.83	0.43
19:Q:41:ALA:O	19:Q:42:ILE:C	2.58	0.43
21:S:52:PHE:CG	21:S:53:ASP:N	2.87	0.43
21:S:90:GLU:HA	21:S:127:PRO:HD3	2.00	0.43
21:S:145:ASP:O	21:S:170:SER:HA	2.19	0.43
21:S:154:LEU:HD21	21:S:160:LEU:HD11	2.01	0.43
1:X:80:A:C6	1:X:81:C:N3	2.87	0.42
1:X:331:U:O2'	5:C:162:ARG:HD2	2.18	0.42
1:X:393:U:O2'	1:X:394:U:H5'	2.18	0.42
1:X:421:G:C6	1:X:433:G:C6	3.07	0.42
1:X:497:C:H6	1:X:497:C:C3'	2.30	0.42
1:X:503:G:C4	1:X:504:G:C8	3.07	0.42
1:X:562:G:H2'	1:X:563:U:O4'	2.19	0.42
1:X:1314:A:C2	1:X:1642:G:N2	2.77	0.42
1:X:1330:G:H2'	1:X:1331:G:O4'	2.19	0.42
1:X:1389:C:N4	1:X:1390:G:N1	2.67	0.42
1:X:1514:C:O4'	1:X:1593:C:C4'	2.60	0.42
1:X:1551:U:H5'	1:X:1552:C:C5	2.53	0.42
1:X:1685:A:H4'	1:X:1686:A:O5'	2.19	0.42
1:X:1854:G:C2'	1:X:1855:G:H5'	2.40	0.42
1:X:1873:A:N7	1:X:1874:G:C8	2.87	0.42
1:X:2184:C:H2'	1:X:2185:U:H6	1.83	0.42
1:X:2209:G:H4'	23:U:46:LEU:C	2.39	0.42
1:X:2289:A:C2	6:D:79:LEU:HD11	2.54	0.42
1:X:2496:C:HO2'	1:X:2497:A:P	2.41	0.42
1:X:2637:C:N4	1:X:2643:G:N2	2.67	0.42
1:X:2818:G:C6	1:X:2819:G:C5	3.07	0.42
2:Y:62:C:H2'	2:Y:63:A:C8	2.54	0.42
3:A:211:ARG:HG2	3:A:211:ARG:HH11	1.84	0.42
3:A:222:ARG:NH2	3:A:222:ARG:CB	2.82	0.42
4:B:102:ILE:H	4:B:170:LEU:H	1.67	0.42
5:C:58:MET:HG2	5:C:59:TYR:N	2.34	0.42
7:E:61:HIS:C	7:E:63:ALA:H	2.22	0.42
11:I:32:ARG:CZ	17:O:81:ARG:NE	2.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:K:26:THR:O	13:K:29:LEU:N	2.52	0.42
13:K:66:VAL:C	13:K:68:GLN:N	2.71	0.42
14:L:8:ARG:HB3	14:L:8:ARG:NH1	2.31	0.42
17:O:32:LYS:N	17:O:58:ALA:O	2.40	0.42
18:P:74:SER:C	18:P:76:LYS:N	2.70	0.42
18:P:100:GLY:O	18:P:101:PRO:O	2.37	0.42
19:Q:88:ILE:HD11	19:Q:91:LEU:HB2	2.00	0.42
21:S:43:PHE:CD1	21:S:47:SER:HA	2.54	0.42
21:S:148:THR:CB	21:S:164:PRO:O	2.67	0.42
25:W:23:LEU:HD23	25:W:43:MET:HE2	2.00	0.42
26:Z:51:TYR:HA	26:Z:54:GLY:O	2.19	0.42
1:X:185:C:H2'	1:X:186:C:H6	1.84	0.42
1:X:413:G:C8	1:X:413:G:H3'	2.53	0.42
1:X:496:C:H2'	1:X:497:C:H5''	2.00	0.42
1:X:611:C:O4'	5:C:98:GLN:OE1	2.36	0.42
1:X:691:C:C4	1:X:692:C:C5	3.07	0.42
1:X:754:G:H2'	1:X:755:C:C6	2.54	0.42
1:X:1033:G:C6	1:X:1151:U:C5	3.07	0.42
1:X:1040:A:N7	1:X:1041:G:C8	2.87	0.42
1:X:1078:A:C2	1:X:1079:G:C4	3.07	0.42
1:X:1104:G:H1'	1:X:1109:A:H61	1.84	0.42
1:X:1226:A:C1'	1:X:1250:A:C2	3.02	0.42
1:X:1349:A:H2'	1:X:1350:G:C8	2.54	0.42
1:X:1368:G:C4	1:X:1369:G:C8	3.08	0.42
1:X:1661:C:O2	1:X:1661:C:C2'	2.68	0.42
1:X:1816:G:H2'	1:X:1817:U:H6	1.84	0.42
1:X:1949:A:H1'	1:X:2572:U:H5'	2.00	0.42
1:X:2015:G:O6	1:X:2551:A:C4	2.72	0.42
1:X:2027:C:C2	1:X:2604:G:N2	2.86	0.42
1:X:2048:C:H1'	1:X:2428:U:H3	1.83	0.42
1:X:2083:G:C8	1:X:2083:G:H3'	2.55	0.42
5:C:130:THR:O	5:C:131:LYS:C	2.58	0.42
5:C:130:THR:O	5:C:133:PHE:N	2.52	0.42
6:D:13:ARG:HG2	6:D:17:MET:CE	2.50	0.42
6:D:124:GLY:C	6:D:126:GLY:H	2.21	0.42
7:E:28:GLY:HA3	7:E:79:VAL:HG21	2.01	0.42
8:F:100:ASN:H	8:F:103:GLN:NE2	2.17	0.42
10:H:4:PRO:O	10:H:5:GLN:CB	2.67	0.42
10:H:25:LEU:HD11	10:H:52:VAL:N	2.34	0.42
10:H:116:ARG:HH11	15:M:38:LYS:NZ	2.17	0.42
11:I:77:LEU:HD23	11:I:112:GLY:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:15:ARG:HB3	12:J:16:GLY:H	1.41	0.42
12:J:42:TRP:CB	12:J:95:VAL:HG11	2.47	0.42
14:L:70:ALA:O	14:L:74:ALA:HB2	2.19	0.42
16:N:11:ARG:HB3	16:N:15:LYS:HZ2	1.84	0.42
16:N:76:TYR:O	16:N:77:SER:C	2.57	0.42
16:N:93:LYS:HD3	17:O:5:ILE:CG2	2.48	0.42
17:O:61:VAL:HG23	17:O:93:ILE:CA	2.49	0.42
19:Q:83:ALA:C	19:Q:85:GLY:H	2.22	0.42
21:S:63:PRO:O	21:S:86:VAL:N	2.52	0.42
30:4:19:ARG:H	30:4:24:LEU:CD1	2.32	0.42
30:4:25:VAL:CG2	30:4:34:GLN:HB2	2.49	0.42
1:X:174:A:H2'	1:X:174:A:N3	2.34	0.42
1:X:322:A:N3	1:X:322:A:H2'	2.35	0.42
1:X:396:U:N3	1:X:398:C:C4	2.87	0.42
1:X:417:C:N3	1:X:419:G:C6	2.87	0.42
1:X:773:G:H2'	1:X:774:A:H5'	1.99	0.42
1:X:991:A:C6	1:X:992:A:N1	2.87	0.42
1:X:1043:A:H5''	30:4:9:LYS:HZ2	1.84	0.42
1:X:1089:C:O2'	1:X:1099:A:OP1	2.37	0.42
1:X:1300:A:C8	13:K:106:ASP:OD2	2.73	0.42
1:X:1498:G:C4	1:X:1523:A:C2	3.07	0.42
1:X:1631:C:O2	1:X:1631:C:C2'	2.66	0.42
1:X:1728:A:O2'	1:X:1729:C:H5'	2.20	0.42
1:X:1847:G:H8	1:X:1847:G:O5'	2.02	0.42
1:X:2046:C:O2	1:X:2430:A:N1	2.51	0.42
1:X:2320:G:H2'	1:X:2321:C:C6	2.54	0.42
1:X:2323:U:O2'	1:X:2324:G:H3'	2.19	0.42
1:X:2470:U:H2'	1:X:2470:U:O2	2.19	0.42
1:X:2667:C:C5	1:X:2699:G:C5	3.07	0.42
1:X:2720:A:C8	1:X:2743:G:N2	2.88	0.42
1:X:2727:G:N2	1:X:2736:U:C6	2.87	0.42
2:Y:50:U:H2'	2:Y:51:G:C8	2.53	0.42
2:Y:62:C:C2	2:Y:63:A:C8	3.07	0.42
3:A:244:ARG:HB3	3:A:252:LYS:HZ1	1.84	0.42
4:B:123:ALA:O	4:B:124:GLY:C	2.57	0.42
6:D:13:ARG:O	6:D:17:MET:SD	2.77	0.42
6:D:32:GLU:HG2	6:D:33:LYS:HG2	2.02	0.42
6:D:65:PRO:HB2	6:D:87:ILE:CG2	2.41	0.42
7:E:126:PRO:CG	7:E:130:ARG:HB3	2.49	0.42
7:E:157:TYR:O	7:E:158:HIS:CG	2.72	0.42
9:G:42:VAL:HG12	9:G:43:VAL:N	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:85:ALA:O	9:G:88:VAL:N	2.50	0.42
11:I:105:PRO:C	11:I:106:VAL:HG23	2.39	0.42
14:L:16:LYS:O	14:L:19:THR:HB	2.19	0.42
15:M:29:PRO:O	15:M:30:GLY:O	2.37	0.42
17:O:7:THR:O	17:O:8:GLY:C	2.56	0.42
18:P:34:SER:O	18:P:35:PRO:C	2.54	0.42
20:R:16:PHE:CE2	20:R:80:LYS:NZ	2.87	0.42
20:R:95:ARG:HG3	20:R:105:ARG:O	2.18	0.42
20:R:98:ILE:HB	20:R:100:ASP:H	1.83	0.42
23:U:53:GLU:OE2	23:U:57:VAL:HG22	2.19	0.42
1:X:115:G:C6	1:X:117:A:C6	3.07	0.42
1:X:182:G:O2'	1:X:183:U:OP2	2.36	0.42
1:X:698:A:C2	1:X:702:A:N1	2.87	0.42
1:X:818:G:HO2'	1:X:844:G:HO2'	1.48	0.42
1:X:869:C:O2	1:X:934:G:C2	2.72	0.42
1:X:1016:C:O2	1:X:1016:C:H2'	2.18	0.42
1:X:1098:G:OP2	1:X:1098:G:H8	2.02	0.42
1:X:1236:G:N2	1:X:1239:A:OP2	2.48	0.42
1:X:1247:U:OP2	18:P:11:LYS:HE2	2.19	0.42
1:X:1332:G:N7	1:X:1333:G:C6	2.87	0.42
1:X:1705:U:O4'	1:X:1718:A:N6	2.52	0.42
1:X:1869:A:O2'	1:X:1870:U:H5'	2.19	0.42
1:X:1978:U:OP2	1:X:1979:C:H3'	2.19	0.42
1:X:1996:A:N6	1:X:2592:U:C4	2.87	0.42
1:X:2014:A:O2'	1:X:2015:G:P	2.77	0.42
1:X:2048:C:H2'	1:X:2049:C:C6	2.54	0.42
1:X:2229:G:N3	1:X:2229:G:O4'	2.51	0.42
1:X:2438:A:C6	1:X:2439:U:N3	2.88	0.42
1:X:2756:A:H4'	1:X:2758:A:OP1	2.20	0.42
1:X:2799:C:C5	1:X:2800:C:C5	3.08	0.42
1:X:2814:G:C2	1:X:2815:C:H1'	2.54	0.42
3:A:69:ARG:CZ	3:A:105:ILE:HD13	2.49	0.42
3:A:210:GLY:HA2	3:A:213:ARG:CG	2.50	0.42
3:A:214:TRP:HE3	3:A:214:TRP:HA	1.85	0.42
5:C:95:LEU:HD23	5:C:96:PRO:CD	2.34	0.42
6:D:11:GLN:O	6:D:15:ALA:CB	2.62	0.42
6:D:148:LYS:HG3	6:D:149:THR:H	1.83	0.42
7:E:109:TYR:HE1	7:E:152:ARG:NH1	2.16	0.42
8:F:101:TRP:HZ3	8:F:140:GLY:HA3	1.85	0.42
8:F:107:ILE:HG23	8:F:111:LYS:HD3	2.02	0.42
9:G:42:VAL:CG1	9:G:43:VAL:N	2.81	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:58:ILE:HG21	9:G:148:LEU:HD13	2.01	0.42
10:H:16:ALA:HA	10:H:58:ALA:HA	2.01	0.42
11:I:82:ASP:HA	11:I:114:ILE:CD1	2.49	0.42
11:I:120:VAL:HG12	11:I:122:VAL:H	1.83	0.42
12:J:106:GLU:OE1	12:J:106:GLU:O	2.38	0.42
14:L:89:PHE:HB2	14:L:91:ARG:HH21	1.85	0.42
17:O:42:GLY:O	17:O:43:GLU:CB	2.67	0.42
19:Q:11:VAL:H	19:Q:27:PHE:HA	1.84	0.42
19:Q:88:ILE:CD1	19:Q:91:LEU:HB2	2.50	0.42
21:S:5:ALA:O	21:S:6:LYS:HB3	2.19	0.42
21:S:98:VAL:C	21:S:99:HIS:ND1	2.73	0.42
23:U:23:LYS:HA	23:U:36:GLY:O	2.19	0.42
26:Z:29:ASN:HD22	26:Z:29:ASN:HA	1.51	0.42
1:X:162:C:H2'	1:X:163:A:C8	2.54	0.42
1:X:333:A:C5'	5:C:162:ARG:HD2	2.49	0.42
1:X:582:G:O4'	1:X:582:G:OP2	2.38	0.42
1:X:649:G:N2	1:X:660:G:N2	2.67	0.42
1:X:678:G:C6	1:X:679:C:C4	3.08	0.42
1:X:874:A:H1'	1:X:929:A:N6	2.34	0.42
1:X:1013:G:H8	1:X:1013:G:H5''	1.84	0.42
1:X:1017:C:O2'	1:X:1018:C:H5'	2.20	0.42
1:X:1025:A:C2	1:X:1160:C:C2	3.07	0.42
1:X:1053:G:C2	1:X:1054:C:C2	3.08	0.42
1:X:1101:U:C2	1:X:1113:C:H1'	2.53	0.42
1:X:1233:A:HO2'	1:X:1234:C:P	2.38	0.42
1:X:1234:C:H2'	1:X:1235:C:C6	2.53	0.42
1:X:1257:U:OP1	11:I:17:LYS:HE3	2.18	0.42
1:X:1293:A:O2'	1:X:1294:G:H5'	2.20	0.42
1:X:1377:G:H1'	1:X:1381:G:N2	2.35	0.42
1:X:1629:G:C4	1:X:1633:C:N4	2.87	0.42
1:X:2067:U:H2'	1:X:2068:C:C6	2.54	0.42
1:X:2262:C:H5''	1:X:2368:G:O2'	2.19	0.42
1:X:2289:A:C2	6:D:79:LEU:HD21	2.42	0.42
1:X:2468:G:C6	1:X:2469:G:N1	2.87	0.42
1:X:2526:U:H2'	1:X:2527:G:H8	1.84	0.42
1:X:2634:G:O2'	1:X:2643:G:N1	2.50	0.42
1:X:2823:G:O2'	1:X:2824:C:C6	2.72	0.42
1:X:2827:G:C5	1:X:2828:C:C4	3.08	0.42
2:Y:42:U:H1'	2:Y:47:A:N6	2.34	0.42
2:Y:45:C:H5'	2:Y:46:G:OP1	2.19	0.42
3:A:117:VAL:HG22	3:A:128:GLY:CA	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:155:LEU:HD13	3:A:177:LEU:CD2	2.50	0.42
3:A:268:ARG:C	3:A:269:PHE:CD2	2.93	0.42
4:B:17:ASN:C	4:B:18:ASP:OD2	2.58	0.42
4:B:31:CYS:HB3	4:B:49:ILE:CD1	2.49	0.42
5:C:43:ALA:HB1	5:C:86:PRO:HB2	2.01	0.42
5:C:47:THR:HB	5:C:48:ARG:HD2	2.00	0.42
5:C:151:VAL:HG11	5:C:173:ALA:HA	2.00	0.42
6:D:7:LYS:O	6:D:8:TYR:C	2.58	0.42
6:D:34:ILE:HD13	6:D:156:ILE:HA	2.02	0.42
6:D:40:LEU:HD21	6:D:87:ILE:HD11	2.01	0.42
6:D:52:LYS:HD3	6:D:56:GLU:CD	2.40	0.42
6:D:65:PRO:N	6:D:89:VAL:HG13	2.34	0.42
6:D:106:ILE:O	6:D:110:ARG:N	2.46	0.42
7:E:98:LEU:HD12	7:E:102:ALA:O	2.19	0.42
7:E:109:TYR:CE1	7:E:152:ARG:NH1	2.87	0.42
9:G:103:TYR:C	9:G:107:GLN:NE2	2.72	0.42
10:H:11:ALA:O	10:H:110:VAL:HA	2.20	0.42
11:I:76:LYS:C	11:I:79:GLN:HG2	2.40	0.42
11:I:90:ARG:NH2	11:I:93:LEU:HD12	2.34	0.42
12:J:97:VAL:O	12:J:97:VAL:CG2	2.67	0.42
14:L:42:ILE:HG23	14:L:51:LEU:HB2	2.01	0.42
18:P:36:ARG:CZ	26:Z:20:ARG:CZ	2.96	0.42
18:P:89:ARG:HG3	18:P:131:LYS:HB3	2.01	0.42
18:P:91:PHE:HD1	18:P:91:PHE:H	1.68	0.42
19:Q:29:VAL:HG23	19:Q:30:SER:N	2.33	0.42
20:R:105:ARG:HH12	20:R:112:LYS:C	2.23	0.42
21:S:97:PRO:HB2	21:S:99:HIS:HE1	1.84	0.42
21:S:98:VAL:HG11	21:S:168:VAL:CG1	2.50	0.42
21:S:131:PRO:C	21:S:133:GLU:H	2.22	0.42
21:S:141:MET:SD	21:S:147:ILE:HG12	2.60	0.42
22:T:40:GLN:NE2	22:T:42:GLY:O	2.53	0.42
23:U:19:ILE:H	23:U:19:ILE:HG23	1.58	0.42
24:V:22:LYS:HA	24:V:25:LEU:HB3	2.01	0.42
25:W:9:VAL:HG13	25:W:17:VAL:HG22	1.99	0.42
30:4:11:CYS:SG	30:4:32:HIS:CE1	3.12	0.42
1:X:24:G:C6	1:X:25:U:C2	3.07	0.42
1:X:303:C:O2	1:X:360:A:C2	2.73	0.42
1:X:697:G:C2	1:X:787:A:C2	3.08	0.42
1:X:794:A:H4'	3:A:221:GLN:OE1	2.19	0.42
1:X:833:A:N3	1:X:954:U:O2'	2.47	0.42
1:X:849:G:C5	1:X:850:C:C5	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1122:A:C2'	1:X:1123:G:O5'	2.67	0.42
1:X:1200:G:N7	1:X:1201:G:N7	2.68	0.42
1:X:1429:A:C2	1:X:1603:A:H1'	2.54	0.42
1:X:1673:C:C2	1:X:1674:C:H5	2.37	0.42
1:X:1733:U:H2'	1:X:1734:C:C6	2.55	0.42
1:X:1790:G:HO2'	1:X:1791:C:C5'	2.32	0.42
1:X:1811:A:H4'	1:X:1812:U:C5'	2.46	0.42
1:X:1947:G:O2'	1:X:1950:C:P	2.78	0.42
1:X:1971:C:C2'	1:X:1972:G:H5'	2.49	0.42
1:X:2043:A:HO2'	1:X:2044:G:P	2.43	0.42
1:X:2056:C:H2'	1:X:2057:U:C6	2.52	0.42
1:X:2196:U:C3'	1:X:2197:U:H6	2.33	0.42
1:X:2225:G:H2'	1:X:2226:A:C8	2.55	0.42
1:X:2258:G:C4	1:X:2259:G:C8	3.07	0.42
1:X:2269:G:H2'	1:X:2270:U:C6	2.55	0.42
1:X:2269:G:H2'	1:X:2270:U:H6	1.83	0.42
1:X:2494:C:N3	1:X:2549:G:C6	2.88	0.42
1:X:2608:A:O2'	1:X:2609:G:P	2.77	0.42
1:X:2691:C:H2'	1:X:2692:A:H3'	2.02	0.42
1:X:2707:G:C4	1:X:2708:U:C5	3.08	0.42
1:X:2856:U:N3	1:X:2857:C:C5	2.87	0.42
3:A:218:LYS:C	3:A:218:LYS:CD	2.82	0.42
4:B:110:GLY:O	13:K:3:HIS:CD2	2.73	0.42
5:C:20:PRO:HG2	5:C:21:GLU:H	1.85	0.42
6:D:71:LYS:O	6:D:72:LYS:HB2	2.20	0.42
9:G:61:ARG:HG2	9:G:65:LYS:HZ2	1.83	0.42
9:G:101:THR:HG23	9:G:103:TYR:CE1	2.55	0.42
9:G:157:PRO:O	9:G:159:SER:N	2.53	0.42
10:H:41:ASN:O	10:H:42:LYS:CB	2.61	0.42
10:H:59:ALA:HB1	10:H:60:PRO:CD	2.50	0.42
11:I:123:ASP:O	11:I:124:ALA:HB2	2.19	0.42
12:J:40:PRO:CG	12:J:99:LYS:NZ	2.79	0.42
12:J:128:ILE:CD1	12:J:130:THR:CG2	2.98	0.42
14:L:31:VAL:O	14:L:94:TYR:HE1	2.02	0.42
15:M:33:VAL:HG23	15:M:94:VAL:HG21	2.01	0.42
16:N:74:MET:SD	16:N:79:PHE:HB2	2.60	0.42
17:O:19:VAL:HG13	17:O:90:PHE:CG	2.55	0.42
19:Q:27:PHE:CZ	19:Q:42:ILE:HD13	2.55	0.42
19:Q:47:GLY:O	19:Q:48:VAL:HB	2.19	0.42
21:S:22:VAL:O	21:S:83:PHE:N	2.43	0.42
21:S:51:LEU:CA	21:S:65:LEU:HD13	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:128:ARG:CG	21:S:129:ARG:N	2.82	0.42
24:V:37:LEU:CD2	24:V:40:PRO:CA	2.97	0.42
25:W:12:ARG:HA	25:W:12:ARG:HD3	1.76	0.42
26:Z:14:SER:O	26:Z:17:ASP:HB2	2.19	0.42
1:X:172:A:N7	1:X:175:C:H5	2.12	0.42
1:X:204:A:N6	1:X:2386:G:H8	2.18	0.42
1:X:244:C:H3'	1:X:245:C:H5''	2.02	0.42
1:X:319:G:N7	18:P:12:LYS:NZ	2.64	0.42
1:X:504:G:N2	18:P:78:ASN:HD21	2.18	0.42
1:X:609:U:H4'	11:I:18:ARG:NH1	2.35	0.42
1:X:640:C:C4'	1:X:660:G:H21	2.32	0.42
1:X:665:A:C2	1:X:666:U:H5''	2.52	0.42
1:X:959:C:H2'	1:X:960:U:C6	2.54	0.42
1:X:1163:C:H2'	1:X:1164:C:H6	1.85	0.42
1:X:1414:G:H2'	1:X:1415:C:O4'	2.19	0.42
1:X:1544:A:C8	1:X:1545:G:C1'	3.03	0.42
1:X:1672:A:O4'	4:B:113:THR:HG22	2.18	0.42
1:X:1713:G:C5	1:X:1714:A:C8	3.08	0.42
1:X:1809:G:OP1	3:A:88:ARG:NH2	2.51	0.42
1:X:1956:G:C6	1:X:1957:C:C4	3.07	0.42
1:X:2082:C:C2'	1:X:2083:G:H5'	2.43	0.42
1:X:2209:G:H4'	23:U:46:LEU:HB2	2.01	0.42
1:X:2279:G:O2'	1:X:2280:A:H5'	2.19	0.42
1:X:2598:C:OP1	4:B:152:LYS:NZ	2.51	0.42
1:X:2667:C:H5	1:X:2699:G:C5	2.37	0.42
1:X:2738:A:C2'	1:X:2739:G:H5'	2.49	0.42
3:A:231:HIS:CE1	3:A:247:VAL:HA	2.55	0.42
7:E:38:ASN:ND2	7:E:64:LEU:CD1	2.81	0.42
9:G:66:HIS:HA	16:N:67:ALA:HB1	2.00	0.42
12:J:49:GLU:C	12:J:51:CYS:N	2.73	0.42
12:J:64:LYS:CB	12:J:108:ALA:O	2.68	0.42
14:L:37:HIS:O	14:L:38:ILE:C	2.57	0.42
14:L:54:ALA:N	14:L:75:LEU:CD1	2.81	0.42
14:L:98:GLY:O	14:L:101:LYS:N	2.53	0.42
16:N:12:ARG:O	16:N:13:ARG:C	2.58	0.42
16:N:114:ARG:NH1	16:N:115:ASN:OD1	2.52	0.42
18:P:35:PRO:O	18:P:39:ARG:HD2	2.19	0.42
19:Q:36:THR:O	19:Q:37:GLU:C	2.58	0.42
20:R:58:VAL:O	20:R:60:PRO:HD3	2.19	0.42
21:S:34:LEU:C	21:S:34:LEU:HD12	2.40	0.42
30:4:19:ARG:HH11	30:4:19:ARG:HG3	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:43:A:H8	1:X:43:A:O5'	2.02	0.42
1:X:322:A:C2'	1:X:323:G:OP1	2.67	0.42
1:X:559:C:O2	1:X:560:G:H1'	2.19	0.42
1:X:577:U:O2	1:X:579:G:H8	2.00	0.42
1:X:589:C:H5''	16:N:31:GLN:HE22	1.84	0.42
1:X:720:A:C5	1:X:721:C:C4	3.07	0.42
1:X:769:C:O2'	1:X:770:U:H5'	2.20	0.42
1:X:1061:A:N1	1:X:2731:G:C6	2.88	0.42
1:X:1250:A:O2'	1:X:1251:G:C1'	2.68	0.42
1:X:1301:U:H2'	1:X:1340:C:O2	2.19	0.42
1:X:1394:G:C4	1:X:1395:A:C8	3.08	0.42
1:X:1595:A:H2'	1:X:1596:A:C8	2.55	0.42
1:X:2477:C:H5'	1:X:2477:C:H6	1.85	0.42
1:X:2501:U:O2'	1:X:2626:U:OP1	2.30	0.42
1:X:2636:A:H2'	1:X:2637:C:H5'	2.01	0.42
1:X:2713:A:N1	4:B:203:LYS:CG	2.80	0.42
2:Y:78:A:O5'	2:Y:78:A:H8	2.02	0.42
2:Y:102:A:C4	2:Y:103:A:C8	3.08	0.42
3:A:70:ARG:C	3:A:72:LYS:H	2.23	0.42
5:C:158:ARG:HD2	5:C:169:VAL:CG1	2.50	0.42
9:G:132:PHE:CE2	9:G:145:HIS:CB	3.02	0.42
11:I:42:GLY:O	11:I:43:ALA:CB	2.60	0.42
12:J:128:ILE:C	12:J:128:ILE:CD1	2.88	0.42
13:K:45:ARG:CB	13:K:46:PRO:CD	2.94	0.42
16:N:7:GLY:O	16:N:9:VAL:N	2.52	0.42
17:O:10:LYS:HG3	17:O:11:GLN:HG2	2.01	0.42
20:R:11:ASN:C	20:R:13:LYS:N	2.73	0.42
21:S:3:LEU:CA	21:S:34:LEU:HA	2.48	0.42
22:T:41:ARG:NH1	22:T:41:ARG:CG	2.73	0.42
26:Z:3:LYS:HD2	26:Z:3:LYS:N	2.35	0.42
1:X:57:G:H2'	1:X:58:C:H6	1.85	0.42
1:X:318:G:H5'	1:X:318:G:C8	2.55	0.42
1:X:347:C:H2'	1:X:348:U:C6	2.54	0.42
1:X:528:G:C5'	18:P:39:ARG:HH12	2.33	0.42
1:X:528:G:H2'	1:X:529:U:C6	2.54	0.42
1:X:847:C:N3	1:X:848:A:N7	2.67	0.42
1:X:956:A:C2	1:X:2427:A:N3	2.88	0.42
1:X:1135:C:C2	1:X:1136:G:N7	2.88	0.42
1:X:1404:C:C2	1:X:1406:A:N7	2.87	0.42
1:X:1675:C:OP1	4:B:134:TRP:CD1	2.73	0.42
1:X:1750:A:N7	1:X:2675:U:H1'	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1781:C:H5''	3:A:219:PRO:HG2	2.02	0.42
1:X:1845:A:H2'	1:X:1846:A:O5'	2.20	0.42
1:X:1885:C:H5'	3:A:244:ARG:CD	2.28	0.42
1:X:2346:G:O2'	1:X:2347:C:H5'	2.20	0.42
1:X:2598:C:C4'	4:B:150:VAL:HG22	2.49	0.42
1:X:2836:U:O2'	1:X:2837:G:H5'	2.20	0.42
2:Y:15:A:O2'	2:Y:17:A:H5''	2.20	0.42
3:A:208:LYS:HA	3:A:208:LYS:NZ	2.34	0.42
5:C:22:VAL:HG22	5:C:106:MET:O	2.20	0.42
5:C:45:THR:CG2	5:C:47:THR:H	2.29	0.42
5:C:192:ALA:C	5:C:194:GLU:H	2.23	0.42
6:D:9:ASN:O	6:D:13:ARG:N	2.52	0.42
6:D:12:VAL:C	6:D:16:LEU:HG	2.37	0.42
6:D:32:GLU:O	6:D:33:LYS:HB3	2.20	0.42
6:D:122:PHE:O	6:D:124:GLY:N	2.53	0.42
7:E:28:GLY:HA3	7:E:79:VAL:CB	2.50	0.42
7:E:137:ASP:O	7:E:141:VAL:HG23	2.19	0.42
10:H:76:ARG:NH1	10:H:113:PRO:O	2.52	0.42
12:J:51:CYS:SG	12:J:126:LEU:HD21	2.60	0.42
16:N:65:ILE:HG22	16:N:65:ILE:O	2.20	0.42
17:O:40:VAL:HG12	17:O:43:GLU:O	2.20	0.42
17:O:64:GLY:HA3	17:O:90:PHE:CE2	2.54	0.42
17:O:86:HIS:CD2	17:O:86:HIS:C	2.93	0.42
18:P:102:THR:HG22	18:P:104:LYS:HD3	2.02	0.42
18:P:133:ASN:N	18:P:133:ASN:ND2	2.68	0.42
19:Q:35:LYS:O	19:Q:38:ILE:CG2	2.67	0.42
20:R:18:LYS:HE2	20:R:19:GLY:N	2.35	0.42
22:T:3:HIS:CD2	22:T:4:LYS:H	2.37	0.42
23:U:34:THR:OG1	23:U:35:THR:N	2.47	0.42
25:W:5:LEU:HG	25:W:28:ILE:HA	2.02	0.42
25:W:45:LYS:O	25:W:48:LYS:HB2	2.20	0.42
1:X:81:C:H2'	1:X:82:G:O4'	2.20	0.42
1:X:146:C:H2'	1:X:147:G:O4'	2.20	0.42
1:X:148:C:O2	1:X:148:C:H2'	2.19	0.42
1:X:173:A:H61	1:X:844:G:N2	2.13	0.42
1:X:333:A:H5''	5:C:162:ARG:CD	2.50	0.42
1:X:788:G:O2'	1:X:789:G:OP2	2.29	0.42
1:X:814:G:OP2	5:C:56:ARG:NH1	2.53	0.42
1:X:840:U:H4'	1:X:841:G:N2	2.35	0.42
1:X:1089:C:C1'	1:X:1099:A:C2	3.03	0.42
1:X:1279:G:OP1	26:Z:23:HIS:CE1	2.69	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1310:C:OP1	1:X:2689:C:H4'	2.20	0.42
1:X:1347:C:C2'	1:X:1348:C:H5'	2.48	0.42
1:X:1421:U:H2'	1:X:1422:C:H6	1.85	0.42
1:X:1439:G:C2	1:X:1440:G:C2	3.08	0.42
1:X:1588:A:O2'	1:X:1589:G:H5'	2.20	0.42
1:X:1681:A:C2	1:X:2706:U:N1	2.88	0.42
1:X:1824:C:H6	1:X:1824:C:O5'	2.03	0.42
1:X:2332:G:C6	1:X:2344:G:N2	2.88	0.42
1:X:2366:U:H6	1:X:2366:U:H3'	1.85	0.42
1:X:2376:G:C2	1:X:2399:C:C2	3.08	0.42
1:X:2500:C:H5'	1:X:2544:A:H4'	2.02	0.42
1:X:2559:U:H2'	1:X:2560:G:O4'	2.20	0.42
1:X:2586:G:N1	1:X:2587:G:N3	2.67	0.42
1:X:2614:A:H2'	1:X:2615:U:O5'	2.20	0.42
1:X:2661:G:N2	1:X:2662:C:C2	2.88	0.42
1:X:2692:A:C5'	1:X:2693:U:OP2	2.68	0.42
1:X:2765:C:O3'	4:B:69:LYS:NZ	2.52	0.42
1:X:2848:A:C2	13:K:6:ALA:HB1	2.47	0.42
2:Y:15:A:O2'	2:Y:16:U:H5''	2.20	0.42
2:Y:15:A:N1	2:Y:71:G:H2'	2.35	0.42
2:Y:25:G:C2'	2:Y:26:G:C8	3.02	0.42
2:Y:42:U:H2'	2:Y:45:C:C5	2.49	0.42
3:A:108:PRO:HD2	3:A:111:LEU:HD12	2.00	0.42
3:A:118:ASN:CG	3:A:119:ALA:N	2.74	0.42
3:A:134:ARG:HG3	3:A:135:PHE:CD2	2.55	0.42
5:C:56:ARG:HG2	5:C:56:ARG:HH21	1.85	0.42
5:C:61:GLN:NE2	5:C:61:GLN:CA	2.81	0.42
5:C:99:VAL:C	5:C:101:GLN:H	2.22	0.42
6:D:9:ASN:O	6:D:10:ASP:C	2.59	0.42
9:G:82:VAL:HB	9:G:150:VAL:HG22	2.02	0.42
14:L:22:ALA:O	14:L:24:SER:N	2.53	0.42
15:M:53:VAL:HG12	15:M:54:VAL:N	2.34	0.42
20:R:25:LEU:HD12	20:R:81:VAL:N	2.11	0.42
24:V:18:ILE:O	24:V:20:ALA:N	2.53	0.42
1:X:333:A:H5'	5:C:162:ARG:CD	2.50	0.41
1:X:353:G:H2'	1:X:354:C:C6	2.52	0.41
1:X:464:G:C4	1:X:469:G:C6	3.08	0.41
1:X:673:G:H5'	5:C:93:TYR:CE1	2.55	0.41
1:X:701:U:H5'	1:X:1771:A:H2	1.85	0.41
1:X:913:A:C5	1:X:914:C:C5	3.08	0.41
1:X:931:G:H4'	2:Y:83:C:H4'	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:977:G:H5'	1:X:2251:U:O2	2.20	0.41
1:X:1039:A:N6	1:X:1136:G:H2'	2.35	0.41
1:X:1098:G:C2'	1:X:1099:A:O5'	2.68	0.41
1:X:1156:U:H2'	1:X:1157:G:H8	1.85	0.41
1:X:1187:A:OP2	1:X:1188:A:OP2	2.38	0.41
1:X:1324:G:H1'	1:X:1326:U:O4	2.20	0.41
1:X:1750:A:C8	1:X:2675:U:H1'	2.56	0.41
1:X:1921:A:HO2'	1:X:1922:U:P	2.41	0.41
1:X:2006:G:N2	1:X:2024:U:C2	2.88	0.41
1:X:2073:A:C5	1:X:2074:U:C4	3.08	0.41
1:X:2290:A:C8	1:X:2290:A:O5'	2.73	0.41
1:X:2300:G:H3'	1:X:2300:G:N3	2.35	0.41
1:X:2345:A:H4'	22:T:62:LEU:HD12	2.02	0.41
1:X:2526:U:C4	1:X:2545:A:N7	2.88	0.41
1:X:2673:G:C6	1:X:2696:A:N1	2.88	0.41
1:X:2784:A:C2	1:X:2866:A:C4	3.08	0.41
1:X:2787:A:C4	1:X:2788:C:C5	3.08	0.41
1:X:2831:A:N1	1:X:2837:G:C6	2.88	0.41
3:A:67:PHE:CD1	3:A:157:ARG:NH2	2.88	0.41
3:A:197:GLY:C	3:A:199:ALA:N	2.71	0.41
3:A:206:LEU:O	3:A:211:ARG:CD	2.67	0.41
3:A:210:GLY:HA2	3:A:213:ARG:HG2	2.01	0.41
3:A:252:LYS:H	3:A:253:PRO:CD	2.26	0.41
4:B:34:VAL:O	4:B:34:VAL:HG23	2.18	0.41
4:B:49:ILE:HD11	4:B:90:SER:HB3	2.02	0.41
5:C:35:LEU:O	5:C:36:ALA:C	2.58	0.41
5:C:99:VAL:C	5:C:101:GLN:N	2.73	0.41
5:C:104:LEU:H	5:C:177:VAL:HG22	1.84	0.41
6:D:146:VAL:HB	6:D:147:ASP:H	1.56	0.41
7:E:150:LYS:C	7:E:152:ARG:N	2.72	0.41
7:E:164:PHE:O	7:E:166:GLY:N	2.53	0.41
10:H:13:ASN:HD22	10:H:109:ARG:CG	2.31	0.41
12:J:49:GLU:C	12:J:51:CYS:H	2.24	0.41
12:J:81:GLU:CD	12:J:81:GLU:N	2.74	0.41
15:M:107:LEU:C	15:M:109:GLU:H	2.23	0.41
18:P:11:LYS:O	18:P:12:LYS:C	2.57	0.41
18:P:110:ALA:O	18:P:111:ARG:O	2.38	0.41
20:R:23:ILE:CD1	20:R:81:VAL:O	2.68	0.41
21:S:37:LYS:HA	21:S:40:ASP:OD1	2.19	0.41
22:T:40:GLN:HE22	22:T:43:THR:HA	1.85	0.41
22:T:68:VAL:HG12	22:T:69:PHE:N	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Z:17:ASP:C	26:Z:19:ARG:N	2.72	0.41
26:Z:20:ARG:O	26:Z:22:HIS:N	2.53	0.41
30:4:19:ARG:NH1	30:4:19:ARG:HG3	2.34	0.41
1:X:65:C:C2	1:X:88:G:C2	3.08	0.41
1:X:88:G:C3'	1:X:89:A:H5''	2.39	0.41
1:X:119:G:H2'	1:X:120:G:C8	2.53	0.41
1:X:156:G:C6	1:X:157:G:N7	2.88	0.41
1:X:188:G:N1	1:X:189:A:C5	2.88	0.41
1:X:230:C:O2'	1:X:231:G:H5'	2.20	0.41
1:X:432:C:C2	1:X:433:G:C8	3.08	0.41
1:X:533:C:H1'	1:X:563:U:O2'	2.20	0.41
1:X:596:C:C2	1:X:684:C:O4'	2.72	0.41
1:X:614:G:C6	1:X:636:G:C6	3.08	0.41
1:X:689:A:H8	1:X:2052:G:H21	1.66	0.41
1:X:1148:G:H5''	1:X:1149:G:OP2	2.19	0.41
1:X:1153:A:O2'	1:X:1154:A:O5'	2.34	0.41
1:X:1289:A:N3	1:X:1290:A:C8	2.89	0.41
1:X:1467:U:C2'	1:X:1468:A:OP1	2.68	0.41
1:X:1549:C:H2'	1:X:1550:C:H6	1.84	0.41
1:X:1836:C:N3	1:X:1880:G:C2	2.88	0.41
1:X:1996:A:C2	18:P:109:ARG:NH2	2.87	0.41
1:X:2196:U:H3'	1:X:2197:U:H6	1.84	0.41
1:X:2576:G:C6	1:X:2577:A:N6	2.88	0.41
1:X:2614:A:C2'	1:X:2615:U:O5'	2.67	0.41
1:X:2795:A:N1	15:M:2:GLN:N	2.68	0.41
1:X:2811:G:C6	1:X:2812:A:N6	2.88	0.41
1:X:2814:G:C2	1:X:2815:C:C1'	3.03	0.41
2:Y:16:U:HO2'	2:Y:110:U:C2'	2.33	0.41
3:A:97:TYR:C	3:A:99:ASP:N	2.73	0.41
3:A:211:ARG:O	3:A:214:TRP:HB2	2.20	0.41
3:A:247:VAL:CG2	3:A:248:THR:N	2.82	0.41
7:E:61:HIS:C	7:E:63:ALA:N	2.73	0.41
7:E:109:TYR:O	7:E:111:HIS:N	2.53	0.41
10:H:133:VAL:O	15:M:38:LYS:NZ	2.38	0.41
11:I:29:THR:HA	11:I:34:HIS:CB	2.50	0.41
11:I:56:LEU:C	11:I:58:ALA:O	2.58	0.41
11:I:127:ALA:C	11:I:129:ALA:N	2.74	0.41
12:J:28:VAL:O	12:J:29:ALA:CB	2.68	0.41
12:J:81:GLU:CG	12:J:82:THR:N	2.82	0.41
12:J:125:LYS:N	12:J:125:LYS:CD	2.65	0.41
12:J:136:GLU:HA	12:J:136:GLU:OE1	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:K:24:GLN:O	13:K:25:ALA:C	2.58	0.41
13:K:28:LEU:O	13:K:28:LEU:HD23	2.19	0.41
17:O:66:GLY:O	17:O:87:ARG:HD3	2.20	0.41
18:P:41:VAL:CG2	18:P:64:ALA:HB3	2.43	0.41
20:R:112:LYS:O	20:R:113:THR:HG23	2.20	0.41
21:S:173:PRO:HB2	21:S:174:PRO:HD2	2.02	0.41
1:X:23:G:N2	1:X:24:G:C4	2.88	0.41
1:X:37:C:O2'	5:C:44:SER:CB	2.69	0.41
1:X:65:C:C2'	1:X:66:U:H5'	2.49	0.41
1:X:102:C:C5	1:X:103:U:C5	3.08	0.41
1:X:140:G:O2'	1:X:141:G:H5'	2.20	0.41
1:X:204:A:N6	1:X:2386:G:O4'	2.54	0.41
1:X:227:G:HO2'	11:I:53:ARG:NE	2.14	0.41
1:X:430:C:C2	1:X:431:G:C8	3.08	0.41
1:X:584:A:N3	1:X:585:U:C5	2.88	0.41
1:X:684:C:C5	11:I:43:ALA:HB1	2.55	0.41
1:X:691:C:C5	1:X:692:C:H5	2.39	0.41
1:X:918:A:C2'	1:X:919:U:H5''	2.47	0.41
1:X:987:G:C2	1:X:988:G:N7	2.88	0.41
1:X:1153:A:C2	1:X:1155:G:C4	3.09	0.41
1:X:1257:U:H2'	1:X:1258:G:C8	2.54	0.41
1:X:1290:A:C2	1:X:1291:G:C5	3.08	0.41
1:X:1400:A:H5'	1:X:1484:G:H4'	2.02	0.41
1:X:1554:G:O2'	1:X:1555:A:H5'	2.20	0.41
1:X:1619:A:C5	1:X:1620:C:C4	3.09	0.41
1:X:1715:A:H4'	1:X:1716:G:O5'	2.20	0.41
1:X:1782:A:O2'	3:A:207:GLY:O	2.34	0.41
1:X:1789:U:O2'	1:X:1793:A:H1'	2.21	0.41
1:X:1838:G:H2'	1:X:1839:A:C8	2.55	0.41
1:X:1855:G:C2'	1:X:1856:U:H5'	2.50	0.41
1:X:1909:U:C5	1:X:1911:A:N6	2.86	0.41
1:X:1961:A:O2'	1:X:1962:C:H5'	2.20	0.41
1:X:2014:A:C6	1:X:2477:C:C1'	3.04	0.41
1:X:2219:U:O2'	1:X:2220:A:H5'	2.19	0.41
1:X:2236:U:C2	1:X:2237:C:C5	3.09	0.41
1:X:2252:A:C2	1:X:2253:A:C4	3.07	0.41
1:X:2350:G:C6	1:X:2351:G:N7	2.88	0.41
1:X:2597:G:C2	1:X:2598:C:C2	3.09	0.41
1:X:2706:U:O2'	1:X:2707:G:C5'	2.68	0.41
2:Y:5:C:H2'	2:Y:6:C:C6	2.55	0.41
4:B:127:ALA:HB2	4:B:135:HIS:CE1	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:169:ASN:O	4:B:170:LEU:HD23	2.21	0.41
5:C:54:THR:OG1	5:C:73:SER:HB3	2.20	0.41
6:D:53:ALA:C	6:D:57:LEU:HG	2.40	0.41
9:G:108:GLY:O	9:G:110:LEU:CD2	2.68	0.41
10:H:77:THR:C	10:H:79:HIS:N	2.73	0.41
11:I:13:ARG:NH2	11:I:13:ARG:CB	2.83	0.41
13:K:29:LEU:HD21	13:K:48:VAL:CG2	2.50	0.41
14:L:41:GLN:HG2	14:L:43:ILE:HD11	2.01	0.41
16:N:43:ALA:HB3	17:O:74:TYR:HB3	2.02	0.41
16:N:56:ASP:O	16:N:57:PHE:C	2.55	0.41
16:N:57:PHE:O	16:N:60:LEU:N	2.51	0.41
16:N:61:TRP:CH2	16:N:94:VAL:N	2.79	0.41
16:N:74:MET:HE2	16:N:78:THR:HG22	2.02	0.41
17:O:35:LEU:O	17:O:36:LYS:CB	2.67	0.41
17:O:47:PHE:O	17:O:51:ALA:HB2	2.20	0.41
18:P:134:LYS:HE2	18:P:134:LYS:HB3	1.81	0.41
20:R:36:VAL:HG22	20:R:48:VAL:HG22	2.01	0.41
22:T:24:LYS:HA	22:T:24:LYS:HD3	1.93	0.41
23:U:62:LEU:HD23	23:U:67:LEU:HB2	2.02	0.41
25:W:18:LYS:O	25:W:21:GLN:N	2.53	0.41
26:Z:34:PRO:HB2	26:Z:35:GLN:HE21	1.85	0.41
26:Z:36:CYS:C	26:Z:38:GLY:N	2.73	0.41
1:X:115:G:C2	1:X:117:A:N6	2.89	0.41
1:X:312:G:C6	1:X:328:A:C5	3.08	0.41
1:X:409:G:H2'	1:X:410:A:C5'	2.50	0.41
1:X:479:G:H2'	1:X:480:G:O4'	2.21	0.41
1:X:643:A:H1'	1:X:2382:C:O2'	2.20	0.41
1:X:658:G:O2'	1:X:659:G:H5'	2.20	0.41
1:X:713:G:O2'	1:X:1649:A:N3	2.46	0.41
1:X:1079:G:C6	1:X:1080:A:C6	3.09	0.41
1:X:1125:G:H2'	1:X:1126:A:C8	2.44	0.41
1:X:1153:A:C4	1:X:1155:G:C5	3.08	0.41
1:X:1218:C:H4'	11:I:9:THR:OG1	2.20	0.41
1:X:1421:U:H2'	1:X:1422:C:C6	2.56	0.41
1:X:1693:A:C6	1:X:1694:A:C6	3.08	0.41
1:X:1872:A:O2'	1:X:2070:G:H5'	2.21	0.41
1:X:1888:C:H4'	1:X:1912:G:C8	2.55	0.41
1:X:1933:G:H2'	1:X:1934:U:H6	1.85	0.41
1:X:2166:G:C2'	1:X:2167:A:H5'	2.50	0.41
1:X:2302:G:C4	1:X:2303:C:C5	3.08	0.41
1:X:2352:A:C2	1:X:2353:G:C5	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2394:G:H2'	1:X:2395:C:H6	1.84	0.41
1:X:2492:G:C6	1:X:2493:U:C4	3.09	0.41
1:X:2502:G:O6	1:X:2520:A:C2	2.74	0.41
1:X:2661:G:O2'	1:X:2662:C:H5'	2.20	0.41
1:X:2796:A:C6	1:X:2797:G:C6	3.08	0.41
1:X:2856:U:O2'	1:X:2857:C:H5'	2.20	0.41
1:X:2873:G:H2'	1:X:2874:A:H8	1.82	0.41
2:Y:54:U:H2'	2:Y:55:C:H6	1.84	0.41
2:Y:64:C:O2'	2:Y:65:A:H5'	2.19	0.41
2:Y:112:A:H2'	2:Y:113:G:O4'	2.20	0.41
3:A:205:VAL:C	3:A:207:GLY:N	2.73	0.41
3:A:214:TRP:HA	3:A:214:TRP:CE3	2.55	0.41
4:B:39:ALA:HB3	4:B:45:GLU:OE2	2.20	0.41
4:B:119:ARG:HD2	4:B:160:MET:HB2	2.02	0.41
5:C:13:ARG:HD2	5:C:13:ARG:N	2.34	0.41
5:C:112:GLN:C	5:C:116:LYS:HE2	2.36	0.41
5:C:170:LEU:HD12	5:C:170:LEU:HA	1.58	0.41
5:C:173:ALA:HB1	5:C:193:LEU:CB	2.50	0.41
6:D:34:ILE:HD13	6:D:34:ILE:HA	1.91	0.41
6:D:38:GLU:OE1	6:D:38:GLU:HA	2.20	0.41
6:D:75:SER:H	6:D:79:LEU:CD2	2.22	0.41
7:E:72:VAL:C	7:E:74:ASN:N	2.72	0.41
10:H:116:ARG:NH1	10:H:116:ARG:HG3	2.35	0.41
10:H:132:GLU:HB2	15:M:73:PHE:HE1	1.84	0.41
12:J:82:THR:O	12:J:83:ARG:HB2	2.18	0.41
12:J:96:SER:O	12:J:97:VAL:C	2.58	0.41
16:N:83:LEU:HD21	16:N:109:LEU:HD22	2.02	0.41
17:O:26:GLN:HG2	17:O:27:GLY:N	2.26	0.41
19:Q:89:GLU:HB2	19:Q:91:LEU:HD23	2.01	0.41
20:R:93:ARG:NH1	20:R:108:VAL:CA	2.71	0.41
21:S:3:LEU:CB	21:S:34:LEU:HB3	2.41	0.41
21:S:63:PRO:C	21:S:86:VAL:HG23	2.40	0.41
21:S:91:PRO:CG	21:S:92:VAL:N	2.83	0.41
23:U:32:ARG:HG2	23:U:33:LYS:H	1.85	0.41
23:U:51:ILE:CB	23:U:59:THR:HA	2.51	0.41
24:V:24:GLU:O	24:V:26:MET:N	2.53	0.41
25:W:3:ILE:HG22	25:W:4:LYS:N	2.35	0.41
1:X:204:A:N7	1:X:2386:G:H5'	2.35	0.41
1:X:235:C:C5	1:X:236:C:C4	3.08	0.41
1:X:359:G:H2'	1:X:360:A:C8	2.48	0.41
1:X:532:A:C2	1:X:533:C:C2	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:541:C:N3	1:X:572:G:C8	2.89	0.41
1:X:610:G:O2'	5:C:98:GLN:CD	2.58	0.41
1:X:612:G:H2'	1:X:668:A:N6	2.34	0.41
1:X:653:G:C3'	1:X:654:A:C5'	2.98	0.41
1:X:705:C:OP1	3:A:55:GLY:O	2.37	0.41
1:X:794:A:C5'	3:A:218:LYS:HZ2	2.33	0.41
1:X:795:A:C2	3:A:226:MET:CE	3.03	0.41
1:X:913:A:C8	1:X:914:C:C5	3.09	0.41
1:X:987:G:H4'	1:X:1167:A:C5	2.54	0.41
1:X:1433:A:C5	1:X:1435:G:C5	3.09	0.41
1:X:1534:A:O2'	1:X:1535:C:H5'	2.19	0.41
1:X:1725:C:C2	1:X:1742:G:C2	3.09	0.41
1:X:1777:A:H4'	1:X:1778:U:OP1	2.20	0.41
1:X:1810:U:C5	3:A:157:ARG:CZ	3.03	0.41
1:X:1886:G:C2	1:X:1887:G:C8	3.08	0.41
1:X:2282:G:H2'	1:X:2283:G:H8	1.86	0.41
1:X:2351:G:H2'	1:X:2351:G:N3	2.36	0.41
1:X:2394:G:H3'	11:I:63:ARG:HH11	1.84	0.41
1:X:2670:C:N3	1:X:2671:C:C5	2.88	0.41
1:X:2697:G:C4	1:X:2698:G:C8	3.09	0.41
1:X:2775:U:H5'	1:X:2776:U:C5'	2.51	0.41
1:X:2826:C:O5'	1:X:2826:C:H6	2.04	0.41
1:X:2841:U:O2'	1:X:2842:C:OP2	2.35	0.41
2:Y:4:C:H3'	2:Y:4:C:H6	1.85	0.41
2:Y:36:A:C2	2:Y:46:G:C5	3.08	0.41
3:A:72:LYS:HZ2	3:A:99:ASP:CG	2.23	0.41
3:A:262:LYS:O	3:A:264:LYS:N	2.53	0.41
5:C:136:TRP:C	5:C:140:ASN:HD22	2.21	0.41
6:D:60:ILE:O	6:D:99:PHE:CD1	2.74	0.41
7:E:12:PRO:HD2	7:E:76:VAL:CG1	2.51	0.41
7:E:54:ARG:HE	7:E:57:ASP:HB3	1.86	0.41
11:I:104:ARG:HB3	11:I:105:PRO:CD	2.47	0.41
13:K:10:LEU:CD2	13:K:17:ARG:CB	2.93	0.41
16:N:68:GLY:O	16:N:71:LEU:CB	2.69	0.41
17:O:30:GLY:O	17:O:32:LYS:HG2	2.19	0.41
18:P:8:PHE:CG	18:P:9:ARG:N	2.89	0.41
19:Q:91:LEU:CD2	19:Q:91:LEU:H	2.33	0.41
23:U:21:ARG:O	23:U:39:LYS:HD2	2.21	0.41
25:W:12:ARG:CG	25:W:12:ARG:NH1	2.71	0.41
25:W:26:ARG:C	25:W:27:LYS:HG2	2.41	0.41
25:W:38:PRO:CD	25:W:41:ARG:NE	2.82	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Z:15:LYS:HA	26:Z:18:MET:CG	2.50	0.41
1:X:137:A:H2'	1:X:138:G:H5'	2.02	0.41
1:X:174:A:O2'	1:X:2223:U:OP1	2.37	0.41
1:X:223:C:C4	1:X:224:G:C8	3.08	0.41
1:X:310:A:H2	1:X:331:U:C4'	2.33	0.41
1:X:341:A:H2	1:X:1223:G:H2'	1.86	0.41
1:X:388:G:H2'	1:X:389:G:H8	1.85	0.41
1:X:423:G:C6	1:X:431:G:N1	2.89	0.41
1:X:681:A:C2	1:X:683:A:C6	3.08	0.41
1:X:716:U:C5	1:X:717:G:C6	3.08	0.41
1:X:814:G:H4'	1:X:815:A:OP2	2.21	0.41
1:X:1224:A:HO2'	1:X:1225:G:P	2.43	0.41
1:X:1257:U:O3'	11:I:17:LYS:HE2	2.21	0.41
1:X:1357:U:H4'	1:X:1397:A:C6	2.55	0.41
1:X:1411:C:H2'	1:X:1412:C:H6	1.85	0.41
1:X:1452:U:C2'	1:X:1453:A:H5'	2.50	0.41
1:X:1467:U:C3'	1:X:1468:A:H5'	2.46	0.41
1:X:1610:A:H2'	1:X:1611:U:H6	1.75	0.41
1:X:1850:G:H2'	1:X:1851:A:H8	1.84	0.41
1:X:1994:U:H2'	1:X:1995:G:C5'	2.50	0.41
1:X:2240:C:P	22:T:18:PRO:HD2	2.61	0.41
1:X:2350:G:H2'	1:X:2351:G:O4'	2.20	0.41
1:X:2449:G:C2	1:X:2450:A:C8	3.08	0.41
1:X:2524:G:C2'	1:X:2525:U:O5'	2.69	0.41
1:X:2619:G:O6	1:X:2755:A:C2	2.73	0.41
1:X:2810:A:H61	1:X:2853:U:H2'	1.86	0.41
3:A:118:ASN:ND2	3:A:119:ALA:O	2.54	0.41
3:A:207:GLY:C	3:A:208:LYS:NZ	2.74	0.41
3:A:209:ALA:O	3:A:211:ARG:N	2.52	0.41
4:B:105:THR:CG2	4:B:199:ARG:HH21	2.33	0.41
4:B:110:GLY:O	13:K:3:HIS:NE2	2.53	0.41
6:D:69:LYS:C	6:D:85:VAL:HG22	2.40	0.41
6:D:163:ASP:O	6:D:164:GLU:C	2.58	0.41
7:E:170:ALA:C	7:E:171:LEU:HD12	2.40	0.41
15:M:4:HIS:O	15:M:5:ILE:C	2.59	0.41
15:M:79:ARG:CG	15:M:79:ARG:NH1	2.61	0.41
17:O:93:ILE:HD12	17:O:93:ILE:O	2.20	0.41
18:P:79:ALA:HB2	18:P:128:VAL:HG21	2.02	0.41
18:P:79:ALA:HB1	18:P:85:MET:SD	2.60	0.41
18:P:87:GLU:HA	18:P:90:LEU:HD12	2.02	0.41
19:Q:31:PRO:O	19:Q:76:LYS:CD	2.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:Q:42:ILE:HG13	19:Q:43:GLN:N	2.36	0.41
21:S:149:ALA:C	21:S:151:ASP:N	2.73	0.41
22:T:66:LYS:HE3	22:T:68:VAL:HG22	2.02	0.41
26:Z:44:HIS:N	26:Z:44:HIS:HD2	2.17	0.41
1:X:7:G:C2	1:X:8:A:C4	3.09	0.41
1:X:55:A:O4'	1:X:125:A:C2	2.74	0.41
1:X:56:C:C2	1:X:57:G:C8	3.09	0.41
1:X:67:G:C2'	1:X:68:C:O5'	2.69	0.41
1:X:173:A:N6	1:X:844:G:H21	2.15	0.41
1:X:520:C:O2'	1:X:1249:G:H5''	2.21	0.41
1:X:542:A:C2	1:X:2004:U:C6	3.08	0.41
1:X:701:U:H4'	1:X:1771:A:C2	2.56	0.41
1:X:760:U:O3'	18:P:110:ALA:HB3	2.21	0.41
1:X:871:U:C6	1:X:2247:A:C2	3.09	0.41
1:X:931:G:C4	1:X:932:G:C8	3.08	0.41
1:X:1043:A:H5'	30:4:7:VAL:O	2.21	0.41
1:X:1253:C:H5'	1:X:1253:C:C6	2.48	0.41
1:X:1262:U:H5''	16:N:4:ALA:HB3	2.03	0.41
1:X:1314:A:C2'	1:X:1315:A:O5'	2.69	0.41
1:X:1391:A:N3	1:X:1392:U:O2	2.53	0.41
1:X:1412:C:C2'	1:X:1413:U:O5'	2.69	0.41
1:X:2404:A:O2'	1:X:2405:A:P	2.79	0.41
1:X:2596:C:H2'	1:X:2597:G:H5'	2.02	0.41
1:X:2704:U:OP2	4:B:111:LYS:HE2	2.21	0.41
1:X:2826:C:H2'	1:X:2827:G:O4'	2.20	0.41
2:Y:6:C:N4	2:Y:7:C:N4	2.69	0.41
2:Y:62:C:H2'	2:Y:63:A:H8	1.85	0.41
2:Y:67:C:H2'	2:Y:111:C:N4	2.34	0.41
3:A:39:LYS:HG3	3:A:40:THR:N	2.35	0.41
3:A:246:PRO:HD3	3:A:251:GLY:N	2.29	0.41
6:D:29:PRO:HB3	6:D:160:ALA:CA	2.51	0.41
6:D:104:ILE:HG21	6:D:174:GLY:CA	2.47	0.41
7:E:44:ARG:NH2	7:E:45:GLN:O	2.54	0.41
9:G:55:ALA:CB	9:G:134:MET:HE1	2.39	0.41
10:H:102:GLN:HB2	10:H:104:GLU:CG	2.50	0.41
18:P:106:LEU:C	18:P:106:LEU:CD2	2.89	0.41
19:Q:2:SER:N	19:Q:5:ASP:OD1	2.54	0.41
20:R:86:PRO:CD	20:R:90:LYS:HD3	2.50	0.41
26:Z:46:CYS:SG	26:Z:49:CYS:SG	3.13	0.41
30:4:26:ILE:HG13	30:4:26:ILE:O	2.20	0.41
1:X:67:G:H2'	1:X:68:C:H6	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:312:G:C4	1:X:313:U:C5	3.08	0.41
1:X:416:U:H5''	1:X:419:G:H4'	2.03	0.41
1:X:419:G:C2'	1:X:420:C:O5'	2.68	0.41
1:X:814:G:OP1	5:C:50:GLN:CD	2.59	0.41
1:X:848:A:C2	1:X:849:G:C1'	3.04	0.41
1:X:886:A:H1'	12:J:30:PHE:CD1	2.50	0.41
1:X:923:A:H2	1:X:2256:G:N3	2.18	0.41
1:X:1029:C:N3	1:X:1030:U:O4	2.54	0.41
1:X:1071:U:O2'	1:X:1072:U:H5''	2.21	0.41
1:X:1184:G:O6	1:X:1185:C:N4	2.53	0.41
1:X:1193:G:H2'	1:X:1194:U:C5'	2.36	0.41
1:X:1280:U:C4	1:X:1995:G:N2	2.89	0.41
1:X:1483:G:C2	1:X:1541:G:N3	2.88	0.41
1:X:1615:C:H2'	1:X:1616:C:H6	1.86	0.41
1:X:1687:C:O5'	1:X:1687:C:H6	2.04	0.41
1:X:1742:G:C2	1:X:1743:C:C4	3.08	0.41
1:X:1775:A:P	1:X:1775:A:H3'	2.61	0.41
1:X:2065:A:H2'	1:X:2066:G:O4'	2.21	0.41
1:X:2176:U:H6	1:X:2176:U:O5'	2.04	0.41
1:X:2657:G:H2'	1:X:2658:A:O4'	2.20	0.41
2:Y:96:C:H2'	2:Y:97:C:C6	2.55	0.41
3:A:34:THR:OG1	3:A:35:GLU:N	2.53	0.41
3:A:117:VAL:CG2	3:A:128:GLY:HA3	2.50	0.41
3:A:206:LEU:CA	3:A:211:ARG:HD3	2.51	0.41
4:B:41:THR:OG1	4:B:42:ASP:N	2.52	0.41
6:D:83:MET:HG3	6:D:84:PRO:HD2	2.03	0.41
6:D:108:LEU:HB3	6:D:114:PHE:CE1	2.55	0.41
7:E:17:VAL:CG1	7:E:18:ASN:H	2.34	0.41
7:E:43:VAL:CG2	7:E:44:ARG:N	2.83	0.41
7:E:103:LEU:HB3	7:E:115:ILE:HB	2.03	0.41
10:H:43:ARG:HG2	10:H:43:ARG:HH11	1.86	0.41
11:I:14:LYS:O	11:I:14:LYS:CG	2.63	0.41
12:J:69:ILE:HG21	12:J:104:MET:CA	2.48	0.41
12:J:93:TYR:N	12:J:93:TYR:HD2	2.19	0.41
12:J:120:ARG:O	12:J:121:LEU:C	2.57	0.41
14:L:47:ARG:H	14:L:47:ARG:HG3	1.63	0.41
14:L:89:PHE:CD1	14:L:91:ARG:NH2	2.89	0.41
15:M:5:ILE:HD12	15:M:5:ILE:C	2.40	0.41
18:P:57:LEU:O	18:P:58:ARG:C	2.59	0.41
18:P:80:LEU:CD2	18:P:87:GLU:HB3	2.49	0.41
19:Q:14:GLU:O	19:Q:15:LYS:C	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:11:G:H8	1:X:11:G:O5'	2.03	0.41
1:X:176:A:N6	1:X:2413:A:C5	2.89	0.41
1:X:223:C:C4	1:X:224:G:N7	2.88	0.41
1:X:437:G:N2	1:X:438:G:C4	2.88	0.41
1:X:537:C:O2	1:X:537:C:C2'	2.68	0.41
1:X:578:U:H2'	1:X:579:G:O4'	2.21	0.41
1:X:589:C:O3'	16:N:31:GLN:NE2	2.54	0.41
1:X:620:G:C6	1:X:621:U:C4	3.08	0.41
1:X:654:A:H2	1:X:655:A:H3'	1.85	0.41
1:X:789:G:O6	1:X:2055:G:OP1	2.38	0.41
1:X:824:U:O2	1:X:1264:C:C6	2.74	0.41
1:X:1156:U:C6	1:X:1156:U:H3'	2.56	0.41
1:X:1299:A:C8	1:X:1299:A:H3'	2.55	0.41
1:X:1366:A:C6	1:X:1367:A:C6	3.09	0.41
1:X:1456:C:C2	1:X:1566:G:C2	3.09	0.41
1:X:1468:A:C8	1:X:1468:A:OP2	2.73	0.41
1:X:1498:G:C5	1:X:1523:A:C5	3.08	0.41
1:X:1619:A:C4	1:X:1620:C:C6	3.09	0.41
1:X:1725:C:H2'	1:X:1726:C:H6	1.86	0.41
1:X:1742:G:O2'	1:X:1743:C:H5'	2.20	0.41
1:X:1938:U:H5	1:X:2536:G:N2	2.19	0.41
1:X:1965:U:H2'	1:X:1966:C:C6	2.56	0.41
1:X:2053:G:H21	1:X:2054:A:H1'	1.84	0.41
1:X:2185:U:H6	1:X:2185:U:O5'	2.04	0.41
1:X:2204:A:O2'	1:X:2205:C:OP2	2.25	0.41
1:X:2309:G:N2	1:X:2365:U:C2	2.89	0.41
1:X:2452:U:O2	1:X:2452:U:H2'	2.21	0.41
1:X:2526:U:C2	1:X:2545:A:N6	2.89	0.41
1:X:2576:G:C6	1:X:2577:A:N1	2.89	0.41
1:X:2703:C:P	4:B:109:LYS:NZ	2.94	0.41
1:X:2737:A:N3	1:X:2737:A:H2'	2.36	0.41
1:X:2791:C:O2'	1:X:2792:C:H5'	2.20	0.41
1:X:2795:A:C4'	13:K:5:LYS:HE3	2.41	0.41
1:X:2823:G:O2'	1:X:2824:C:H6	2.04	0.41
2:Y:64:C:H2'	2:Y:65:A:C8	2.56	0.41
2:Y:103:A:C6	2:Y:104:A:C5	3.09	0.41
3:A:121:PRO:HB2	3:A:135:PHE:HE1	1.86	0.41
3:A:243:GLY:N	3:A:244:ARG:HD3	2.35	0.41
4:B:34:VAL:HG11	4:B:67:PHE:HE1	1.86	0.41
4:B:121:ASN:C	4:B:122:PHE:O	2.59	0.41
5:C:86:PRO:HG2	5:C:86:PRO:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:149:LEU:HD12	5:C:150:LEU:N	2.36	0.41
5:C:172:VAL:O	5:C:172:VAL:HG12	2.21	0.41
5:C:174:GLY:O	5:C:175:VAL:O	2.39	0.41
5:C:176:ASN:HD22	5:C:179:ASP:H	1.67	0.41
6:D:45:GLU:HB2	6:D:78:LYS:HZ1	1.84	0.41
6:D:154:ILE:HD12	6:D:154:ILE:N	2.36	0.41
7:E:59:GLN:O	7:E:60:LYS:C	2.60	0.41
9:G:58:ILE:HG22	9:G:62:ILE:CD1	2.50	0.41
10:H:25:LEU:CD1	10:H:52:VAL:HG23	2.36	0.41
10:H:29:ILE:CG2	10:H:123:PHE:CE1	3.02	0.41
10:H:116:ARG:HG2	10:H:116:ARG:O	2.19	0.41
11:I:45:LYS:HG2	11:I:46:GLY:H	1.86	0.41
11:I:77:LEU:HA	11:I:77:LEU:HD12	1.76	0.41
12:J:23:LYS:HA	21:S:73:LYS:NZ	2.35	0.41
12:J:27:TYR:CB	12:J:137:VAL:HG11	2.51	0.41
12:J:78:LYS:HA	12:J:88:LYS:HZ3	1.85	0.41
12:J:99:LYS:CE	12:J:100:PRO:HD2	2.42	0.41
12:J:122:ALA:CA	12:J:125:LYS:HD3	2.46	0.41
13:K:74:ASP:O	13:K:75:VAL:C	2.56	0.41
14:L:42:ILE:CG2	14:L:51:LEU:HB2	2.51	0.41
15:M:26:ASP:CG	15:M:27:PHE:H	2.17	0.41
15:M:37:THR:HG21	15:M:39:VAL:HG13	2.02	0.41
16:N:14:HIS:CD2	16:N:32:TYR:CE1	3.08	0.41
16:N:17:VAL:O	16:N:20:ARG:N	2.53	0.41
16:N:39:LEU:HA	16:N:42:ALA:CB	2.51	0.41
16:N:117:ARG:HG3	16:N:117:ARG:HH21	1.85	0.41
17:O:21:ARG:H	17:O:21:ARG:CD	2.30	0.41
17:O:60:VAL:HA	17:O:93:ILE:HG22	2.03	0.41
17:O:72:ARG:HA	17:O:82:ARG:O	2.21	0.41
18:P:35:PRO:O	18:P:39:ARG:HD3	2.21	0.41
18:P:107:ILE:HG23	18:P:115:ASN:HB2	2.03	0.41
20:R:84:VAL:HG22	20:R:88:THR:O	2.21	0.41
21:S:64:ALA:C	21:S:86:VAL:HG23	2.41	0.41
24:V:37:LEU:CD2	24:V:40:PRO:N	2.84	0.41
25:W:5:LEU:HD23	25:W:28:ILE:N	2.36	0.41
25:W:37:THR:O	25:W:41:ARG:HG3	2.21	0.41
26:Z:13:LYS:O	26:Z:17:ASP:OD2	2.39	0.41
1:X:188:G:C2	1:X:189:A:C4	3.09	0.41
1:X:317:U:C3'	1:X:318:G:C5'	2.99	0.41
1:X:341:A:O2'	1:X:342:G:P	2.79	0.41
1:X:394:U:H2'	1:X:395:G:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:417:C:C4	1:X:419:G:C5	3.09	0.41
1:X:504:G:N3	1:X:504:G:H2'	2.36	0.41
1:X:511:A:C6	1:X:512:A:C6	3.08	0.41
1:X:609:U:H1'	11:I:18:ARG:HH22	1.86	0.41
1:X:618:A:OP1	5:C:94:THR:HG21	2.21	0.41
1:X:638:A:O4'	1:X:648:A:N6	2.54	0.41
1:X:725:C:H2'	1:X:726:G:C8	2.55	0.41
1:X:849:G:C8	1:X:850:C:C5	3.09	0.41
1:X:956:A:H5'	1:X:957:G:OP2	2.21	0.41
1:X:972:C:H4'	1:X:973:U:OP2	2.20	0.41
1:X:985:G:C6	1:X:1000:G:C6	3.08	0.41
1:X:1065:A:C2'	1:X:1066:G:H5'	2.51	0.41
1:X:1142:G:H8	1:X:2008:C:H4'	1.86	0.41
1:X:1227:A:H2'	1:X:1228:G:O4'	2.20	0.41
1:X:1249:G:O2'	1:X:1250:A:O5'	2.35	0.41
1:X:1264:C:H5''	16:N:13:ARG:HE	1.78	0.41
1:X:1383:C:C4	1:X:1384:G:N7	2.89	0.41
1:X:1450:G:O2'	1:X:1451:C:H5'	2.20	0.41
1:X:1596:A:H2'	1:X:1597:A:O4'	2.21	0.41
1:X:1683:G:H4'	10:H:6:SER:OG	2.22	0.41
1:X:1782:A:O3'	3:A:205:VAL:O	2.39	0.41
1:X:1938:U:C5	1:X:2536:G:N2	2.89	0.41
1:X:2012:A:H3'	1:X:2014:A:OP1	2.20	0.41
1:X:2187:A:N6	1:X:2188:A:N6	2.69	0.41
1:X:2235:G:N2	1:X:2254:C:C5	2.89	0.41
1:X:2454:C:O5'	1:X:2454:C:H6	2.03	0.41
1:X:2528:G:H2'	1:X:2529:G:H8	1.86	0.41
1:X:2661:G:C2	1:X:2662:C:C2	3.09	0.41
1:X:2829:A:C2	1:X:2830:U:C2	3.09	0.41
3:A:163:VAL:HG21	3:A:177:LEU:HA	2.00	0.41
4:B:95:ILE:HA	4:B:95:ILE:HD13	1.65	0.41
5:C:137:ALA:O	5:C:138:LYS:O	2.39	0.41
5:C:145:THR:HG22	5:C:146:GLU:OE2	2.21	0.41
6:D:147:ASP:HB2	6:D:148:LYS:H	1.70	0.41
7:E:57:ASP:OD1	7:E:57:ASP:N	2.54	0.41
8:F:112:MET:HG2	8:F:113:PRO:HD3	2.03	0.41
9:G:98:LYS:HG3	9:G:116:ARG:HB2	2.02	0.41
9:G:128:GLU:O	9:G:145:HIS:HE1	2.00	0.41
10:H:17:ARG:HE	10:H:59:ALA:HB2	1.86	0.41
10:H:131:PRO:HB2	15:M:73:PHE:CD1	2.56	0.41
12:J:99:LYS:CD	12:J:100:PRO:CD	2.99	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:107:ALA:C	14:L:109:GLU:N	2.73	0.41
17:O:38:LEU:HD22	17:O:46:VAL:O	2.21	0.41
19:Q:7:LEU:C	19:Q:7:LEU:CD2	2.71	0.41
19:Q:51:ILE:HD12	19:Q:82:LEU:O	2.21	0.41
24:V:4:SER:HB3	24:V:7:ARG:NH2	2.35	0.41
26:Z:15:LYS:C	26:Z:17:ASP:N	2.74	0.41
1:X:14:A:C5	1:X:536:A:C2	3.09	0.40
1:X:64:C:O2'	1:X:65:C:H5'	2.21	0.40
1:X:95:G:O2'	1:X:96:C:H5'	2.20	0.40
1:X:176:A:C3'	1:X:177:U:C5	3.03	0.40
1:X:188:G:O2'	1:X:189:A:H5'	2.21	0.40
1:X:609:U:O2'	11:I:18:ARG:NH1	2.54	0.40
1:X:617:U:H5	1:X:632:A:H2	1.66	0.40
1:X:825:C:OP1	16:N:13:ARG:NH1	2.46	0.40
1:X:1129:A:C5	1:X:1130:U:C4	3.08	0.40
1:X:1153:A:O2'	1:X:1154:A:C5'	2.69	0.40
1:X:1188:A:H2'	1:X:1189:G:C8	2.56	0.40
1:X:1332:G:C5	1:X:1333:G:N1	2.90	0.40
1:X:1443:G:O2'	1:X:1444:C:H5'	2.21	0.40
1:X:1505:U:C6	1:X:1505:U:C3'	3.05	0.40
1:X:1582:A:C5	3:A:214:TRP:CE2	3.09	0.40
1:X:1622:G:H4'	1:X:1624:A:N3	2.37	0.40
1:X:1690:U:C2'	1:X:1691:G:H5'	2.51	0.40
1:X:1872:A:N1	1:X:2213:G:H1'	2.35	0.40
1:X:1919:A:N1	1:X:1928:G:C1'	2.85	0.40
1:X:1963:G:O2'	1:X:1964:A:P	2.80	0.40
1:X:1999:U:O2'	26:Z:7:PRO:O	2.38	0.40
1:X:2080:U:N3	1:X:2081:U:C4	2.90	0.40
1:X:2195:C:H2'	1:X:2196:U:C6	2.56	0.40
1:X:2209:G:C5	1:X:2210:C:H5	2.39	0.40
1:X:2357:A:H4'	14:L:26:ARG:HH12	1.83	0.40
1:X:2357:A:H61	14:L:18:ARG:NH1	2.19	0.40
1:X:2401:A:N7	1:X:2403:C:N4	2.68	0.40
1:X:2495:G:OP1	9:G:111:LYS:NZ	2.54	0.40
1:X:2524:G:H2'	1:X:2525:U:O5'	2.21	0.40
1:X:2805:G:H2'	1:X:2806:G:O4'	2.21	0.40
2:Y:63:A:H2'	2:Y:64:C:H6	1.87	0.40
2:Y:63:A:C6	2:Y:64:C:C4	3.09	0.40
3:A:101:GLU:OE1	3:A:103:ARG:NE	2.49	0.40
5:C:137:ALA:HB1	5:C:142:LEU:HB2	2.04	0.40
5:C:149:LEU:HD12	5:C:168:SER:O	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:151:VAL:O	5:C:189:ASP:HB3	2.21	0.40
6:D:8:TYR:HA	6:D:173:MET:HE1	2.03	0.40
6:D:55:LYS:O	6:D:59:LEU:HG	2.21	0.40
7:E:139:GLN:HB3	7:E:143:GLN:NE2	2.35	0.40
9:G:30:LYS:HE3	9:G:30:LYS:HB2	1.89	0.40
10:H:7:ARG:HA	10:H:19:ILE:O	2.21	0.40
10:H:132:GLU:HB2	15:M:73:PHE:CE1	2.56	0.40
11:I:32:ARG:HH21	17:O:81:ARG:HG3	1.84	0.40
12:J:111:THR:O	12:J:114:GLN:N	2.53	0.40
14:L:12:ARG:O	14:L:16:LYS:N	2.44	0.40
14:L:89:PHE:HB2	14:L:91:ARG:NH2	2.35	0.40
16:N:22:LYS:CG	16:N:23:GLY:H	2.14	0.40
17:O:8:GLY:O	17:O:9:GLY:O	2.39	0.40
17:O:58:ALA:CB	17:O:93:ILE:HD13	2.51	0.40
21:S:28:ASN:OD1	21:S:28:ASN:N	2.54	0.40
21:S:60:GLU:O	21:S:61:THR:C	2.59	0.40
22:T:58:THR:O	22:T:59:LEU:HD23	2.21	0.40
23:U:48:LYS:C	23:U:61:TRP:CE3	2.94	0.40
26:Z:31:THR:HG22	26:Z:32:GLU:N	2.35	0.40
1:X:131:C:C4	1:X:132:U:C4	3.09	0.40
1:X:439:C:C4	1:X:440:U:C5	3.09	0.40
1:X:450:C:O2	1:X:450:C:H2'	2.21	0.40
1:X:486:U:C4'	1:X:519:C:H2'	2.51	0.40
1:X:692:C:C2	1:X:693:A:C8	3.09	0.40
1:X:698:A:H61	1:X:791:G:H1'	1.86	0.40
1:X:824:U:C4'	1:X:1264:C:H1'	2.51	0.40
1:X:922:A:C2	1:X:923:A:C2	3.09	0.40
1:X:1035:G:P	1:X:1036:G:O3'	2.79	0.40
1:X:1038:U:O2	1:X:2466:G:O3'	2.39	0.40
1:X:1153:A:H5'	1:X:1153:A:C8	2.56	0.40
1:X:1253:C:C2'	1:X:1254:G:O5'	2.69	0.40
1:X:1411:C:H2'	1:X:1412:C:C6	2.56	0.40
1:X:1428:G:N2	1:X:1602:G:O5'	2.50	0.40
1:X:1500:U:O2'	1:X:1501:C:H5'	2.21	0.40
1:X:1586:A:C5	1:X:1587:A:N7	2.89	0.40
1:X:1834:G:H2'	1:X:1835:C:H6	1.83	0.40
1:X:2009:U:O2	1:X:2021:G:C2	2.73	0.40
1:X:2026:C:C4	1:X:2757:G:C2	3.09	0.40
1:X:2027:C:N1	1:X:2604:G:N2	2.69	0.40
1:X:2293:G:H2'	1:X:2294:U:C6	2.56	0.40
1:X:2294:U:O2'	6:D:125:ARG:CG	2.68	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2364:C:OP1	1:X:2365:U:OP2	2.39	0.40
1:X:2674:C:H2'	1:X:2675:U:H6	1.85	0.40
1:X:2685:A:C2	1:X:2686:C:C6	3.10	0.40
1:X:2757:G:H5''	1:X:2758:A:H5''	2.02	0.40
1:X:2765:C:C1'	4:B:35:GLN:HE22	2.34	0.40
1:X:2821:G:H2'	1:X:2822:U:H6	1.84	0.40
1:X:2856:U:C4	1:X:2857:C:N4	2.89	0.40
2:Y:20:A:H2'	2:Y:21:C:H6	1.82	0.40
2:Y:114:C:H6	2:Y:114:C:O5'	2.04	0.40
3:A:173:VAL:HG23	3:A:187:SER:HB3	2.03	0.40
3:A:197:GLY:O	3:A:199:ALA:O	2.39	0.40
5:C:171:PRO:O	5:C:173:ALA:N	2.54	0.40
7:E:26:VAL:O	7:E:27:LYS:HG3	2.21	0.40
7:E:84:THR:HB	7:E:134:SER:CA	2.52	0.40
10:H:64:VAL:C	10:H:65:LYS:HD2	2.42	0.40
10:H:116:ARG:HH11	10:H:116:ARG:HG3	1.86	0.40
11:I:94:GLU:CA	11:I:97:ARG:HE	2.29	0.40
11:I:97:ARG:O	11:I:98:LEU:CB	2.62	0.40
14:L:36:LYS:N	14:L:36:LYS:CD	2.83	0.40
14:L:67:THR:O	14:L:68:ALA:C	2.60	0.40
16:N:113:SER:O	16:N:116:ALA:N	2.54	0.40
17:O:86:HIS:CG	17:O:87:ARG:H	2.39	0.40
18:P:33:MET:CE	18:P:37:LYS:NZ	2.78	0.40
19:Q:15:LYS:O	19:Q:19:ALA:N	2.49	0.40
19:Q:64:ARG:O	19:Q:65:VAL:HG23	2.21	0.40
20:R:70:GLU:OE1	20:R:72:ARG:HD2	2.22	0.40
1:X:8:A:C6	1:X:9:U:C4	3.10	0.40
1:X:428:A:C5	1:X:429:C:C4	3.09	0.40
1:X:492:G:C2'	1:X:517:A:N6	2.84	0.40
1:X:567:G:H2'	1:X:568:G:H8	1.86	0.40
1:X:595:A:H8	1:X:595:A:O5'	2.04	0.40
1:X:708:G:H1	1:X:780:U:H3	1.70	0.40
1:X:859:U:H1'	1:X:860:U:C4	2.56	0.40
1:X:930:A:C3'	1:X:930:A:C8	3.04	0.40
1:X:946:U:N3	1:X:947:C:C5	2.89	0.40
1:X:1368:G:H2'	1:X:1369:G:H8	1.86	0.40
1:X:1374:G:C2	1:X:1375:C:C5	3.09	0.40
1:X:1563:U:H2'	1:X:1564:U:C6	2.56	0.40
1:X:1689:U:N3	1:X:1690:U:C4	2.89	0.40
1:X:1780:A:C5	1:X:1781:C:C5	3.09	0.40
1:X:1781:C:OP1	3:A:219:PRO:CB	2.58	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2055:G:N1	1:X:2417:U:C2	2.89	0.40
1:X:2240:C:N4	1:X:2259:G:O6	2.55	0.40
1:X:2707:G:H5'	1:X:2707:G:C8	2.50	0.40
3:A:72:LYS:HE3	3:A:99:ASP:OD2	2.22	0.40
5:C:116:LYS:O	5:C:117:LEU:CB	2.65	0.40
7:E:74:ASN:C	7:E:76:VAL:N	2.75	0.40
8:F:14:ALA:HB3	8:F:16:LYS:HZ2	1.87	0.40
8:F:74:MET:HE1	8:F:127:VAL:HG22	2.03	0.40
9:G:122:HIS:HA	9:G:124:GLU:OE1	2.21	0.40
10:H:7:ARG:HD3	10:H:18:GLU:CD	2.42	0.40
10:H:97:VAL:HG11	10:H:126:ILE:HD12	2.02	0.40
11:I:82:ASP:HA	11:I:114:ILE:HD12	2.03	0.40
12:J:99:LYS:HG3	12:J:100:PRO:CD	2.46	0.40
13:K:28:LEU:HD23	13:K:28:LEU:C	2.42	0.40
14:L:55:SER:O	14:L:71:VAL:CB	2.49	0.40
15:M:39:VAL:HG12	15:M:45:THR:HG21	2.02	0.40
20:R:22:VAL:CG1	20:R:23:ILE:HD12	2.52	0.40
20:R:49:GLU:HA	20:R:73:GLU:OE2	2.21	0.40
20:R:54:ILE:HD12	20:R:71:GLN:HB2	2.04	0.40
20:R:91:ALA:O	20:R:108:VAL:CG2	2.67	0.40
21:S:24:TYR:HB2	21:S:29:ASN:OD1	2.21	0.40
21:S:163:ASP:CG	21:S:164:PRO:HD2	2.41	0.40
24:V:42:ARG:HD2	24:V:42:ARG:HA	1.79	0.40
1:X:77:C:H2'	1:X:78:C:H6	1.84	0.40
1:X:116:A:C8	1:X:118:U:C4	3.09	0.40
1:X:152:G:O2'	1:X:153:A:H5'	2.21	0.40
1:X:169:C:H2'	1:X:170:U:C5'	2.51	0.40
1:X:332:C:H1'	5:C:159:ARG:NE	2.35	0.40
1:X:468:A:H1'	1:X:470:U:C6	2.56	0.40
1:X:469:G:O2'	1:X:480:G:N1	2.54	0.40
1:X:559:C:H2'	1:X:560:G:C4'	2.52	0.40
1:X:592:G:OP2	16:N:10:ARG:NH1	2.39	0.40
1:X:610:G:C2	1:X:671:A:C2	3.09	0.40
1:X:699:G:C4'	1:X:700:C:OP2	2.70	0.40
1:X:758:G:C2'	1:X:759:C:H5''	2.46	0.40
1:X:797:A:N7	1:X:805:G:C4	2.90	0.40
1:X:820:U:OP1	11:I:40:ARG:NH1	2.55	0.40
1:X:1074:G:C2'	1:X:1075:C:C5'	3.00	0.40
1:X:1078:A:H2'	1:X:1079:G:C8	2.57	0.40
1:X:1106:A:P	1:X:1106:A:H8	2.44	0.40
1:X:1278:A:O2'	1:X:1279:G:P	2.79	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1409:U:H5''	1:X:1410:U:OP2	2.21	0.40
1:X:1478:U:H2'	1:X:1479:G:H8	1.86	0.40
1:X:1538:A:C6	1:X:1539:U:N3	2.89	0.40
1:X:1555:A:H2'	1:X:1556:A:C8	2.57	0.40
1:X:1609:G:C2	1:X:1610:A:C4	3.09	0.40
1:X:1621:C:H1'	1:X:1626:A:C4	2.57	0.40
1:X:1656:U:H2'	1:X:1657:A:H5''	1.94	0.40
1:X:1733:U:C2	1:X:1734:C:C5	3.09	0.40
1:X:1932:G:C6	1:X:1933:G:C6	3.09	0.40
1:X:2194:A:C2'	1:X:2195:C:O4'	2.48	0.40
1:X:2200:G:C4	1:X:2201:G:C8	3.10	0.40
1:X:2313:G:N2	14:L:17:VAL:HB	2.37	0.40
1:X:2324:G:N3	1:X:2360:C:H2'	2.35	0.40
1:X:2388:G:C5	1:X:2389:G:N7	2.90	0.40
1:X:2661:G:C6	1:X:2708:U:H1'	2.51	0.40
1:X:2824:C:O2'	1:X:2825:A:O5'	2.40	0.40
1:X:2861:A:H2'	1:X:2862:G:H8	1.86	0.40
2:Y:63:A:H2'	2:Y:64:C:C6	2.56	0.40
4:B:97:ALA:O	4:B:98:GLU:C	2.60	0.40
10:H:28:GLY:C	10:H:35:THR:HG1	2.21	0.40
12:J:107:VAL:HG13	12:J:119:PHE:CE2	2.57	0.40
15:M:26:ASP:O	15:M:27:PHE:CG	2.75	0.40
17:O:34:GLU:HB2	17:O:56:VAL:HG23	2.04	0.40
17:O:51:ALA:O	17:O:53:LYS:N	2.54	0.40
18:P:40:LEU:HD13	18:P:62:ARG:HH12	1.86	0.40
18:P:48:LYS:O	18:P:49:SER:C	2.57	0.40
20:R:24:VAL:HG13	20:R:80:LYS:HB3	2.03	0.40
20:R:90:LYS:C	20:R:91:ALA:O	2.60	0.40
21:S:71:MET:HB2	21:S:78:PRO:HA	2.01	0.40
21:S:122:ILE:HD12	21:S:122:ILE:C	2.41	0.40
21:S:154:LEU:HD23	21:S:154:LEU:HA	1.88	0.40
1:X:62:U:H4'	1:X:63:A:C8	2.56	0.40
1:X:131:C:O5'	1:X:131:C:H6	2.05	0.40
1:X:173:A:P	11:I:53:ARG:HH12	2.44	0.40
1:X:199:A:N1	1:X:201:G:N3	2.69	0.40
1:X:207:U:N3	1:X:208:C:C4	2.90	0.40
1:X:320:A:O2'	1:X:340:G:H2'	2.21	0.40
1:X:439:C:O5'	1:X:439:C:H6	2.05	0.40
1:X:441:A:C8	1:X:442:A:C8	3.10	0.40
1:X:481:A:N6	1:X:482:A:C6	2.89	0.40
1:X:610:G:C2'	5:C:98:GLN:NE2	2.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:836:G:C6	1:X:848:A:C6	3.09	0.40
1:X:876:A:H2'	1:X:877:G:C8	2.57	0.40
1:X:1117:G:O2'	1:X:1118:G:H5'	2.21	0.40
1:X:1118:G:H3'	1:X:1119:U:H5''	2.01	0.40
1:X:1173:G:H21	17:O:88:GLN:HE21	1.69	0.40
1:X:1336:G:C2'	1:X:1337:G:O5'	2.70	0.40
1:X:1367:A:C8	1:X:1368:G:C8	3.09	0.40
1:X:1474:A:H4'	1:X:1475:U:C5'	2.51	0.40
1:X:1498:G:C5	1:X:1523:A:C6	3.10	0.40
1:X:1613:G:H5''	1:X:1614:C:H5'	2.03	0.40
1:X:1656:U:H2'	1:X:1657:A:H5'	2.03	0.40
1:X:1850:G:C2'	1:X:1851:A:C8	2.95	0.40
1:X:2001:G:P	26:Z:9:LYS:HE3	2.62	0.40
1:X:2035:G:N3	4:B:149:ARG:HA	2.36	0.40
1:X:2065:A:C8	1:X:2066:G:C8	3.09	0.40
1:X:2171:U:C4	1:X:2172:U:O4	2.74	0.40
1:X:2307:A:C2	1:X:2308:A:C5	3.10	0.40
1:X:2585:C:O2'	1:X:2586:G:H5'	2.20	0.40
1:X:2659:C:H5'	4:B:189:PRO:HA	2.03	0.40
2:Y:94:G:OP1	12:J:20:GLY:HA2	2.21	0.40
3:A:55:GLY:H	3:A:217:ARG:H	1.70	0.40
3:A:72:LYS:CE	3:A:99:ASP:OD2	2.70	0.40
5:C:72:ARG:HA	5:C:77:PHE:CD2	2.56	0.40
6:D:5:LYS:O	6:D:9:ASN:ND2	2.54	0.40
6:D:119:PRO:HB2	6:D:167:ARG:NH1	2.36	0.40
9:G:72:PRO:HB2	9:G:73:ASN:H	1.59	0.40
9:G:84:ASN:CA	9:G:153:GLY:O	2.69	0.40
9:G:168:THR:O	9:G:169:GLN:C	2.59	0.40
11:I:127:ALA:C	11:I:129:ALA:H	2.25	0.40
12:J:137:VAL:C	12:J:138:TYR:CG	2.95	0.40
14:L:37:HIS:HE1	14:L:39:TYR:CE2	2.39	0.40
14:L:44:ASP:OD1	14:L:44:ASP:O	2.39	0.40
16:N:50:ARG:C	16:N:52:ASN:H	2.25	0.40
18:P:90:LEU:HD23	18:P:90:LEU:HA	1.86	0.40
19:Q:61:LYS:N	19:Q:72:ARG:HA	2.27	0.40
20:R:28:LYS:HG2	20:R:29:HIS:N	2.36	0.40
20:R:86:PRO:O	20:R:87:GLU:HB2	2.21	0.40
21:S:70:GLN:O	21:S:79:ILE:CG2	2.64	0.40
21:S:154:LEU:CD2	21:S:160:LEU:HD21	2.47	0.40
22:T:31:VAL:HG22	22:T:67:VAL:CG2	2.47	0.40
23:U:62:LEU:HG	23:U:67:LEU:HB2	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:V:7:ARG:HD2	24:V:8:ASN:H	1.83	0.40
24:V:7:ARG:C	24:V:9:LEU:N	2.75	0.40
25:W:14:GLY:O	25:W:17:VAL:HB	2.21	0.40
25:W:54:GLN:HG2	25:W:55:GLU:N	2.35	0.40

All (1) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:H:125:LYS:NZ	13:K:82:GLU:OE2[8_555]	2.08	0.12

## 5.3 Torsion angles [i](#)

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

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
3	A	238/274 (87%)	150 (63%)	62 (26%)	26 (11%)	0	2
4	B	203/211 (96%)	143 (70%)	29 (14%)	31 (15%)	0	1
5	C	195/205 (95%)	89 (46%)	60 (31%)	46 (24%)	0	0
6	D	175/180 (97%)	101 (58%)	44 (25%)	30 (17%)	0	1
7	E	169/185 (91%)	98 (58%)	43 (25%)	28 (17%)	0	1
8	F	142/144 (99%)	113 (80%)	22 (16%)	7 (5%)	2	14
9	G	140/174 (80%)	76 (54%)	35 (25%)	29 (21%)	0	0
10	H	132/134 (98%)	108 (82%)	16 (12%)	8 (6%)	1	10
11	I	139/156 (89%)	63 (45%)	36 (26%)	40 (29%)	0	0
12	J	134/142 (94%)	74 (55%)	39 (29%)	21 (16%)	0	1
13	K	111/116 (96%)	75 (68%)	20 (18%)	16 (14%)	0	1
14	L	102/114 (90%)	52 (51%)	31 (30%)	19 (19%)	0	1
15	M	106/166 (64%)	57 (54%)	32 (30%)	17 (16%)	0	1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
16	N	115/118 (98%)	68 (59%)	30 (26%)	17 (15%)	0	1
17	O	92/100 (92%)	53 (58%)	14 (15%)	25 (27%)	0	0
18	P	125/134 (93%)	87 (70%)	20 (16%)	18 (14%)	0	1
19	Q	91/95 (96%)	46 (50%)	23 (25%)	22 (24%)	0	0
20	R	108/115 (94%)	57 (53%)	28 (26%)	23 (21%)	0	0
21	S	173/237 (73%)	99 (57%)	43 (25%)	31 (18%)	0	1
22	T	82/91 (90%)	48 (58%)	24 (29%)	10 (12%)	0	1
23	U	70/81 (86%)	35 (50%)	18 (26%)	17 (24%)	0	0
24	V	64/67 (96%)	32 (50%)	19 (30%)	13 (20%)	0	0
25	W	53/55 (96%)	36 (68%)	11 (21%)	6 (11%)	0	2
26	Z	56/60 (93%)	35 (62%)	13 (23%)	8 (14%)	0	1
30	4	35/37 (95%)	23 (66%)	6 (17%)	6 (17%)	0	1
All	All	3050/3391 (90%)	1818 (60%)	718 (24%)	514 (17%)	0	1

All (514) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	A	54	ILE
3	A	59	LYS
3	A	60	ARG
3	A	153	ALA
3	A	154	GLN
3	A	209	ALA
3	A	217	ARG
3	A	220	HIS
3	A	240	THR
4	B	40	GLN
4	B	73	ALA
4	B	74	PRO
4	B	76	ARG
4	B	85	ALA
4	B	86	PRO
4	B	122	PHE
4	B	126	PRO
4	B	127	ALA
4	B	132	LYS
4	B	135	HIS
4	B	137	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
4	B	147	PRO
5	C	9	GLN
5	C	10	ASN
5	C	13	ARG
5	C	22	VAL
5	C	30	VAL
5	C	31	VAL
5	C	67	ALA
5	C	109	ALA
5	C	129	LYS
5	C	138	LYS
5	C	139	GLN
5	C	153	ASP
5	C	159	ARG
5	C	164	VAL
5	C	165	SER
5	C	172	VAL
5	C	175	VAL
5	C	178	TYR
5	C	192	ALA
5	C	195	ILE
6	D	81	GLN
6	D	120	ASN
6	D	137	ILE
6	D	145	MET
6	D	168	ALA
7	E	15	VAL
7	E	19	ALA
7	E	55	PRO
7	E	119	ALA
7	E	126	PRO
7	E	139	GLN
7	E	165	VAL
9	G	37	ASP
9	G	67	ARG
9	G	73	ASN
9	G	78	ASP
9	G	97	ASP
9	G	104	THR
9	G	105	GLY
9	G	107	GLN
9	G	165	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
9	G	170	PRO
10	H	27	SER
10	H	37	GLY
10	H	47	VAL
10	H	101	ASN
11	I	17	LYS
11	I	39	SER
11	I	65	PHE
11	I	91	ASP
11	I	93	LEU
11	I	99	VAL
11	I	105	PRO
11	I	118	VAL
12	J	13	GLN
12	J	21	ASP
12	J	26	ASP
12	J	27	TYR
12	J	64	LYS
12	J	70	PHE
12	J	80	ALA
12	J	81	GLU
12	J	82	THR
12	J	83	ARG
13	K	11	ASN
13	K	21	ALA
13	K	92	GLY
14	L	31	VAL
14	L	38	ILE
14	L	40	ALA
14	L	45	ASP
14	L	46	SER
14	L	55	SER
14	L	56	SER
14	L	94	TYR
14	L	95	LYS
14	L	96	TYR
14	L	104	ALA
15	M	25	PRO
15	M	27	PHE
15	M	29	PRO
15	M	53	VAL
15	M	62	SER

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
15	M	105	TYR
16	N	5	LYS
16	N	8	ILE
16	N	27	SER
16	N	32	TYR
16	N	33	ARG
16	N	48	ARG
16	N	94	VAL
17	O	7	THR
17	O	9	GLY
17	O	10	LYS
17	O	13	ARG
17	O	29	ALA
17	O	30	GLY
17	O	35	LEU
17	O	36	LYS
17	O	44	GLN
17	O	49	GLU
18	P	9	ARG
18	P	11	LYS
18	P	81	HIS
18	P	87	GLU
18	P	131	LYS
19	Q	12	ILE
19	Q	34	THR
19	Q	63	LYS
19	Q	67	ARG
19	Q	69	ILE
19	Q	74	ASP
19	Q	86	GLN
20	R	5	SER
20	R	11	ASN
20	R	12	ASP
20	R	26	SER
20	R	49	GLU
20	R	60	PRO
20	R	63	THR
20	R	83	LEU
20	R	91	ALA
20	R	96	LYS
21	S	6	LYS
21	S	17	SER

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
21	S	26	LYS
21	S	33	ALA
21	S	36	ARG
21	S	37	LYS
21	S	49	THR
21	S	86	VAL
21	S	91	PRO
21	S	92	VAL
21	S	118	HIS
22	T	3	HIS
22	T	4	LYS
22	T	7	VAL
22	T	19	LYS
22	T	83	ALA
23	U	14	VAL
23	U	16	ASN
23	U	32	ARG
23	U	60	VAL
24	V	2	LYS
24	V	4	SER
24	V	32	ALA
24	V	36	GLN
24	V	65	GLU
25	W	53	VAL
26	Z	4	HIS
26	Z	20	ARG
3	A	52	ARG
3	A	56	GLY
3	A	159	ALA
3	A	197	GLY
3	A	234	GLY
3	A	250	TRP
4	B	17	ASN
4	B	29	GLY
4	B	35	GLN
4	B	145	LYS
4	B	180	ASN
5	C	8	GLY
5	C	11	GLY
5	C	66	ASN
5	C	68	ARG
5	C	110	SER

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
5	C	161	ALA
5	C	166	TRP
5	C	196	VAL
6	D	9	ASN
6	D	10	ASP
6	D	40	LEU
6	D	42	SER
6	D	68	THR
6	D	94	GLU
6	D	107	GLY
6	D	119	PRO
6	D	123	ASP
6	D	170	LEU
7	E	13	SER
7	E	16	THR
7	E	58	ALA
7	E	76	VAL
7	E	82	GLY
7	E	110	SER
7	E	140	LEU
7	E	143	GLN
7	E	161	GLY
7	E	162	VAL
8	F	13	PRO
9	G	33	ILE
9	G	36	ASN
9	G	48	GLY
9	G	65	LYS
9	G	68	PRO
9	G	72	PRO
9	G	169	GLN
11	I	18	ARG
11	I	19	VAL
11	I	25	GLY
11	I	36	GLY
11	I	37	GLN
11	I	44	GLY
11	I	47	ALA
11	I	62	LYS
11	I	64	GLY
11	I	68	VAL
11	I	69	GLY

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
11	I	98	LEU
11	I	106	VAL
11	I	127	ALA
11	I	131	LYS
11	I	135	ALA
12	J	11	ARG
12	J	29	ALA
12	J	112	GLU
13	K	6	ALA
13	K	17	ARG
13	K	20	LEU
13	K	56	LYS
13	K	70	ILE
13	K	95	THR
14	L	33	ARG
14	L	67	THR
14	L	91	ARG
14	L	102	ALA
15	M	17	GLU
15	M	28	ARG
15	M	39	VAL
15	M	94	VAL
15	M	95	GLU
16	N	26	GLY
16	N	47	TYR
16	N	110	VAL
16	N	116	ALA
17	O	8	GLY
17	O	15	SER
17	O	25	LEU
17	O	26	GLN
17	O	48	GLY
17	O	96	LEU
18	P	32	ARG
18	P	70	LYS
18	P	111	ARG
18	P	112	GLY
19	Q	41	ALA
19	Q	42	ILE
19	Q	47	GLY
19	Q	48	VAL
19	Q	61	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
19	Q	72	ARG
19	Q	93	GLY
20	R	7	GLY
20	R	16	PHE
20	R	65	PRO
20	R	110	SER
21	S	13	LYS
21	S	76	ARG
21	S	88	TYR
21	S	102	GLY
21	S	128	ARG
21	S	156	GLU
22	T	21	LEU
22	T	31	VAL
22	T	35	ASN
22	T	75	GLY
23	U	29	GLY
23	U	30	VAL
23	U	34	THR
23	U	42	GLN
23	U	47	HIS
23	U	55	GLY
23	U	59	THR
23	U	65	ASN
24	V	10	GLN
25	W	10	ILE
25	W	23	LEU
25	W	49	HIS
25	W	54	GLN
26	Z	36	CYS
30	4	14	CYS
30	4	20	HIS
30	4	21	GLY
30	4	31	LYS
30	4	35	ARG
3	A	47	GLY
3	A	125	PRO
3	A	190	TYR
3	A	199	ALA
3	A	241	GLY
4	B	169	ASN
5	C	14	THR

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
5	C	15	ILE
5	C	47	THR
5	C	104	LEU
5	C	171	PRO
5	C	176	ASN
5	C	179	ASP
6	D	19	GLN
6	D	53	ALA
6	D	69	LYS
6	D	76	ASN
6	D	80	ARG
6	D	84	PRO
6	D	124	GLY
6	D	152	MET
7	E	7	GLN
7	E	60	LYS
7	E	62	ARG
7	E	128	PRO
8	F	118	GLY
9	G	70	PHE
9	G	143	ALA
9	G	154	GLU
9	G	163	PRO
10	H	14	SER
10	H	79	HIS
11	I	29	THR
11	I	38	LYS
11	I	54	SER
11	I	82	ASP
11	I	116	ARG
11	I	132	ALA
12	J	15	ARG
12	J	56	SER
12	J	97	VAL
12	J	106	GLU
12	J	117	GLU
13	K	13	ASN
13	K	88	ALA
13	K	93	GLY
13	K	100	VAL
14	L	103	LEU
15	M	56	ALA

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
15	M	106	TYR
16	N	87	ASN
17	O	11	GLN
17	O	21	ARG
17	O	24	SER
17	O	31	ASP
17	O	80	TYR
18	P	10	ASN
18	P	12	LYS
19	Q	59	PRO
19	Q	60	GLY
19	Q	65	VAL
20	R	6	ALA
20	R	85	ASP
20	R	93	ARG
21	S	3	LEU
21	S	10	PRO
23	U	41	VAL
24	V	5	GLU
24	V	8	ASN
24	V	19	ASP
26	Z	21	SER
26	Z	52	TYR
3	A	160	GLY
4	B	2	LYS
4	B	39	ALA
4	B	60	ASN
4	B	131	SER
4	B	157	ALA
4	B	203	LYS
5	C	103	GLY
5	C	117	LEU
5	C	121	ASP
5	C	184	ASP
6	D	4	LEU
6	D	12	VAL
6	D	56	GLU
6	D	146	VAL
7	E	49	GLN
7	E	77	LYS
7	E	78	GLY
8	F	22	PRO

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
9	G	51	LEU
9	G	158	HIS
11	I	84	GLU
11	I	90	ARG
11	I	95	ALA
12	J	74	PRO
12	J	121	LEU
13	K	67	ALA
14	L	20	THR
15	M	26	ASP
15	M	104	LEU
16	N	15	LYS
16	N	56	ASP
16	N	75	ASN
16	N	105	ALA
16	N	106	PHE
17	O	39	PHE
17	O	45	THR
18	P	68	VAL
18	P	82	ASN
19	Q	91	LEU
20	R	61	SER
20	R	108	VAL
21	S	5	ALA
21	S	19	ILE
21	S	25	ASN
21	S	45	GLN
21	S	106	GLY
22	T	13	GLY
23	U	15	VAL
23	U	53	GLU
24	V	25	LEU
26	Z	53	ASP
3	A	177	LEU
3	A	252	LYS
4	B	69	LYS
4	B	121	ASN
5	C	34	GLN
5	C	96	PRO
5	C	98	GLN
5	C	126	ALA
7	E	65	HIS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
7	E	66	GLY
7	E	158	HIS
8	F	4	VAL
8	F	120	VAL
9	G	132	PHE
11	I	40	ARG
11	I	43	ALA
11	I	88	PHE
11	I	133	VAL
13	K	45	ARG
14	L	26	ARG
14	L	53	ALA
15	M	93	ILE
17	O	87	ARG
18	P	20	LEU
18	P	77	ALA
18	P	101	PRO
18	P	108	PRO
19	Q	40	ASP
19	Q	43	GLN
19	Q	87	SER
21	S	12	GLN
21	S	124	ALA
23	U	27	ASP
23	U	40	ARG
24	V	45	GLN
26	Z	19	ARG
5	C	123	PHE
6	D	21	GLY
7	E	14	GLY
8	F	117	ALA
9	G	84	ASN
9	G	160	ALA
11	I	81	GLN
15	M	16	ILE
17	O	60	VAL
18	P	113	SER
20	R	50	GLY
20	R	111	GLY
21	S	125	PRO
21	S	138	VAL
21	S	139	THR

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Mol	Chain	Res	Type
24	V	39	GLN
3	A	232	PRO
5	C	125	ILE
9	G	34	PRO
24	V	43	VAL
26	Z	28	PRO
3	A	49	ILE
4	B	95	ILE
6	D	67	ILE
6	D	175	LEU
10	H	74	VAL
10	H	99	ILE
12	J	63	GLY
13	K	7	GLY
20	R	94	VAL
4	B	9	ILE
8	F	18	THR
9	G	162	LYS
11	I	114	ILE
21	S	116	VAL
21	S	164	PRO
30	4	16	VAL
3	A	132	PRO
5	C	75	PRO
9	G	88	VAL
11	I	9	THR
19	Q	31	PRO
20	R	98	ILE
4	B	148	GLY
4	B	172	VAL
25	W	38	PRO

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

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

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

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
3	A	185/215 (86%)	165 (89%)	20 (11%)	6	24
4	B	155/157 (99%)	140 (90%)	15 (10%)	8	29
5	C	157/163 (96%)	133 (85%)	24 (15%)	2	12
6	D	153/156 (98%)	137 (90%)	16 (10%)	7	25
7	E	136/144 (94%)	126 (93%)	10 (7%)	13	40
8	F	107/107 (100%)	105 (98%)	2 (2%)	57	77
9	G	118/146 (81%)	102 (86%)	16 (14%)	3	16
10	H	103/103 (100%)	90 (87%)	13 (13%)	4	19
11	I	108/121 (89%)	95 (88%)	13 (12%)	5	20
12	J	110/116 (95%)	99 (90%)	11 (10%)	7	27
13	K	90/93 (97%)	79 (88%)	11 (12%)	5	20
14	L	74/82 (90%)	57 (77%)	17 (23%)	1	3
15	M	94/134 (70%)	82 (87%)	12 (13%)	4	18
16	N	96/97 (99%)	87 (91%)	9 (9%)	8	30
17	O	75/79 (95%)	65 (87%)	10 (13%)	4	17
18	P	109/115 (95%)	103 (94%)	6 (6%)	21	52
19	Q	75/76 (99%)	66 (88%)	9 (12%)	5	20
20	R	91/96 (95%)	76 (84%)	15 (16%)	2	10
21	S	149/192 (78%)	131 (88%)	18 (12%)	5	20
22	T	62/67 (92%)	57 (92%)	5 (8%)	11	36
23	U	57/66 (86%)	46 (81%)	11 (19%)	1	6
24	V	54/55 (98%)	50 (93%)	4 (7%)	13	40
25	W	48/48 (100%)	42 (88%)	6 (12%)	4	19
26	Z	51/53 (96%)	41 (80%)	10 (20%)	1	5
30	4	35/35 (100%)	35 (100%)	0	100	100
All	All	2492/2716 (92%)	2209 (89%)	283 (11%)	5	22

All (283) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
3	A	40	THR

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
3	A	43	ARG
3	A	44	ASN
3	A	48	ARG
3	A	68	LYS
3	A	122	GLU
3	A	164	GLN
3	A	175	VAL
3	A	183	ARG
3	A	186	HIS
3	A	187	SER
3	A	208	LYS
3	A	214	TRP
3	A	215	LEU
3	A	218	LYS
3	A	229	VAL
3	A	244	ARG
3	A	252	LYS
3	A	259	THR
3	A	260	ARG
4	B	49	ILE
4	B	69	LYS
4	B	86	PRO
4	B	105	THR
4	B	126	PRO
4	B	131	SER
4	B	137	ARG
4	B	138	PRO
4	B	140	SER
4	B	147	PRO
4	B	149	ARG
4	B	150	VAL
4	B	155	ARG
4	B	156	MET
4	B	200	SER
5	C	13	ARG
5	C	17	LEU
5	C	31	VAL
5	C	42	THR
5	C	45	THR
5	C	48	ARG
5	C	59	TYR
5	C	62	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
5	C	66	ASN
5	C	75	PRO
5	C	86	PRO
5	C	95	LEU
5	C	96	PRO
5	C	104	LEU
5	C	108	ILE
5	C	124	ASP
5	C	136	TRP
5	C	139	GLN
5	C	153	ASP
5	C	154	ASP
5	C	155	GLU
5	C	162	ARG
5	C	166	TRP
5	C	180	ILE
6	D	35	VAL
6	D	40	LEU
6	D	51	ASP
6	D	63	GLN
6	D	80	ARG
6	D	89	VAL
6	D	104	ILE
6	D	112	ARG
6	D	123	ASP
6	D	125	ARG
6	D	137	ILE
6	D	144	ASP
6	D	145	MET
6	D	146	VAL
6	D	147	ASP
6	D	159	THR
7	E	7	GLN
7	E	24	PHE
7	E	41	LEU
7	E	48	ASP
7	E	57	ASP
7	E	69	ARG
7	E	107	ILE
7	E	129	THR
7	E	133	VAL
7	E	136	ILE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
8	F	3	LYS
8	F	103	GLN
9	G	31	THR
9	G	34	PRO
9	G	37	ASP
9	G	53	ARG
9	G	61	ARG
9	G	70	PHE
9	G	93	LYS
9	G	101	THR
9	G	102	ARG
9	G	106	TYR
9	G	113	GLU
9	G	132	PHE
9	G	154	GLU
9	G	157	PRO
9	G	165	VAL
9	G	169	GLN
10	H	1	MET
10	H	22	ILE
10	H	23	ARG
10	H	41	ASN
10	H	47	VAL
10	H	74	VAL
10	H	81	ILE
10	H	89	ILE
10	H	92	ASP
10	H	100	ASN
10	H	104	GLU
10	H	108	THR
10	H	127	VAL
11	I	7	LYS
11	I	13	ARG
11	I	32	ARG
11	I	34	HIS
11	I	45	LYS
11	I	53	ARG
11	I	61	PRO
11	I	65	PHE
11	I	88	PHE
11	I	94	GLU
11	I	103	ASN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
11	I	118	VAL
11	I	142	LEU
12	J	11	ARG
12	J	27	TYR
12	J	60	ARG
12	J	64	LYS
12	J	68	ARG
12	J	74	PRO
12	J	81	GLU
12	J	93	TYR
12	J	94	TRP
12	J	106	GLU
12	J	125	LYS
13	K	3	HIS
13	K	8	ARG
13	K	11	ASN
13	K	12	ARG
13	K	13	ASN
13	K	37	THR
13	K	43	GLU
13	K	45	ARG
13	K	83	VAL
13	K	96	ARG
13	K	109	THR
14	L	8	ARG
14	L	15	ARG
14	L	31	VAL
14	L	37	HIS
14	L	38	ILE
14	L	39	TYR
14	L	42	ILE
14	L	44	ASP
14	L	45	ASP
14	L	60	LYS
14	L	64	LYS
14	L	65	THR
14	L	67	THR
14	L	71	VAL
14	L	89	PHE
14	L	91	ARG
14	L	93	SER
15	M	7	ILE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
15	M	26	ASP
15	M	31	ASP
15	M	37	THR
15	M	43	ASN
15	M	46	ARG
15	M	48	GLN
15	M	51	GLU
15	M	69	ARG
15	M	79	ARG
15	M	89	ASN
15	M	92	THR
16	N	13	ARG
16	N	17	VAL
16	N	18	LEU
16	N	22	LYS
16	N	30	LYS
16	N	51	ARG
16	N	57	PHE
16	N	85	ARG
16	N	93	LYS
17	O	18	ASP
17	O	20	ILE
17	O	21	ARG
17	O	28	GLU
17	O	47	PHE
17	O	54	TYR
17	O	56	VAL
17	O	65	ARG
17	O	69	ILE
17	O	70	TYR
18	P	16	GLN
18	P	32	ARG
18	P	39	ARG
18	P	46	ARG
18	P	126	ILE
18	P	133	ASN
19	Q	6	ILE
19	Q	7	LEU
19	Q	10	PRO
19	Q	12	ILE
19	Q	27	PHE
19	Q	34	THR

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
19	Q	42	ILE
19	Q	80	VAL
19	Q	84	GLU
20	R	10	HIS
20	R	11	ASN
20	R	15	HIS
20	R	18	LYS
20	R	23	ILE
20	R	25	LEU
20	R	44	GLN
20	R	65	PRO
20	R	71	GLN
20	R	80	LYS
20	R	83	LEU
20	R	93	ARG
20	R	95	ARG
20	R	112	LYS
20	R	113	THR
21	S	3	LEU
21	S	7	PRO
21	S	9	THR
21	S	13	LYS
21	S	26	LYS
21	S	34	LEU
21	S	35	ASP
21	S	49	THR
21	S	51	LEU
21	S	71	MET
21	S	76	ARG
21	S	82	ASP
21	S	92	VAL
21	S	101	THR
21	S	104	SER
21	S	107	GLU
21	S	117	VAL
21	S	120	LEU
22	T	31	VAL
22	T	41	ARG
22	T	63	SER
22	T	64	ASP
22	T	85	GLN
23	U	14	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
23	U	27	ASP
23	U	32	ARG
23	U	35	THR
23	U	42	GLN
23	U	47	HIS
23	U	54	ASN
23	U	56	GLN
23	U	63	SER
23	U	70	LEU
23	U	78	ILE
24	V	14	PHE
24	V	21	ARG
24	V	30	PHE
24	V	41	HIS
25	W	12	ARG
25	W	15	ASN
25	W	32	ARG
25	W	37	THR
25	W	45	LYS
25	W	46	THR
26	Z	3	LYS
26	Z	4	HIS
26	Z	6	VAL
26	Z	29	ASN
26	Z	32	GLU
26	Z	36	CYS
26	Z	44	HIS
26	Z	46	CYS
26	Z	55	ARG
26	Z	57	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (87) such sidechains are listed below:

<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
3	A	44	ASN
3	A	45	ASN
3	A	118	ASN
3	A	166	GLN
3	A	227	ASN
3	A	231	HIS
4	B	35	GLN
4	B	135	HIS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
4	B	180	ASN
5	C	3	GLN
5	C	10	ASN
5	C	34	GLN
5	C	61	GLN
5	C	66	ASN
5	C	112	GLN
5	C	132	ASN
5	C	139	GLN
5	C	140	ASN
6	D	9	ASN
6	D	19	GLN
6	D	63	GLN
6	D	120	ASN
6	D	129	ASN
7	E	20	GLN
7	E	45	GLN
7	E	61	HIS
7	E	74	ASN
7	E	111	HIS
7	E	139	GLN
7	E	147	ASN
8	F	29	GLN
9	G	66	HIS
9	G	84	ASN
9	G	129	HIS
9	G	140	GLN
9	G	158	HIS
9	G	169	GLN
10	H	41	ASN
10	H	79	HIS
11	I	34	HIS
11	I	37	GLN
11	I	67	ASN
11	I	79	GLN
11	I	81	GLN
11	I	121	HIS
12	J	13	GLN
13	K	13	ASN
14	L	49	GLN
14	L	63	ASN
14	L	86	GLN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
15	M	20	HIS
15	M	48	GLN
16	N	31	GLN
16	N	34	ASN
16	N	41	ASN
16	N	66	ASN
16	N	72	HIS
16	N	81	ASN
17	O	86	HIS
17	O	88	GLN
18	P	17	GLN
18	P	78	ASN
18	P	81	HIS
18	P	133	ASN
19	Q	8	GLN
19	Q	71	GLN
19	Q	73	ASN
20	R	11	ASN
20	R	32	GLN
20	R	71	GLN
21	S	45	GLN
21	S	70	GLN
21	S	146	HIS
22	T	3	HIS
22	T	17	ASN
22	T	57	HIS
22	T	71	ASN
23	U	42	GLN
23	U	45	ASN
24	V	41	HIS
24	V	52	GLN
26	Z	23	HIS
26	Z	29	ASN
26	Z	35	GLN
26	Z	43	HIS
30	4	34	GLN
30	4	36	GLN

### 5.3.3 RNA

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	X	2680/2880 (93%)	695 (25%)	301 (11%)
2	Y	121/122 (99%)	23 (19%)	0
All	All	2801/3002 (93%)	718 (25%)	301 (10%)

All (718) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	X	4	C
1	X	13	A
1	X	14	A
1	X	34	U
1	X	35	G
1	X	39	C
1	X	45	C
1	X	49	U
1	X	51	A
1	X	59	G
1	X	63	A
1	X	70	A
1	X	71	A
1	X	72	A
1	X	74	G
1	X	76	C
1	X	82	G
1	X	83	A
1	X	84	G
1	X	87	G
1	X	89	A
1	X	90	G
1	X	91	A
1	X	98	U
1	X	99	U
1	X	100	G
1	X	105	G
1	X	110	U
1	X	111	G
1	X	116	A
1	X	117	A
1	X	118	U
1	X	119	G
1	X	123	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	X	124	A
1	X	129	A
1	X	135	U
1	X	143	A
1	X	147	G
1	X	149	A
1	X	158	A
1	X	173	A
1	X	181	A
1	X	182	G
1	X	193	A
1	X	199	A
1	X	200	A
1	X	205	A
1	X	206	U
1	X	207	U
1	X	210	A
1	X	218	A
1	X	219	G
1	X	220	U
1	X	225	G
1	X	242	A
1	X	243	G
1	X	245	C
1	X	247	A
1	X	304	A
1	X	305	A
1	X	318	G
1	X	323	G
1	X	333	A
1	X	334	G
1	X	335	A
1	X	340	G
1	X	341	A
1	X	342	G
1	X	343	A
1	X	399	G
1	X	400	U
1	X	401	G
1	X	403	A
1	X	404	A
1	X	414	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	X	416	U
1	X	417	C
1	X	418	C
1	X	419	G
1	X	420	C
1	X	424	G
1	X	425	A
1	X	441	A
1	X	447	U
1	X	455	A
1	X	456	C
1	X	460	U
1	X	461	A
1	X	463	C
1	X	467	U
1	X	468	A
1	X	469	G
1	X	470	U
1	X	491	A
1	X	492	G
1	X	497	C
1	X	504	G
1	X	514	G
1	X	515	A
1	X	517	A
1	X	519	C
1	X	537	C
1	X	538	A
1	X	539	A
1	X	540	G
1	X	541	C
1	X	542	A
1	X	554	U
1	X	555	U
1	X	556	A
1	X	557	U
1	X	558	G
1	X	559	C
1	X	571	U
1	X	572	G
1	X	577	U
1	X	580	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	X	581	A
1	X	582	G
1	X	583	C
1	X	584	A
1	X	587	A
1	X	595	A
1	X	601	A
1	X	611	C
1	X	613	A
1	X	614	G
1	X	624	A
1	X	625	A
1	X	626	A
1	X	627	A
1	X	628	A
1	X	631	G
1	X	632	A
1	X	633	G
1	X	636	G
1	X	637	G
1	X	639	G
1	X	648	A
1	X	649	G
1	X	652	C
1	X	654	A
1	X	655	A
1	X	657	A
1	X	664	C
1	X	665	A
1	X	666	U
1	X	667	U
1	X	668	A
1	X	683	A
1	X	684	C
1	X	699	G
1	X	700	C
1	X	718	A
1	X	728	G
1	X	729	A
1	X	730	C
1	X	731	A
1	X	732	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	X	740	A
1	X	742	G
1	X	743	A
1	X	752	G
1	X	753	U
1	X	754	G
1	X	758	G
1	X	759	C
1	X	760	U
1	X	766	A
1	X	776	G
1	X	778	G
1	X	781	G
1	X	789	G
1	X	790	A
1	X	795	A
1	X	796	A
1	X	797	A
1	X	798	G
1	X	802	A
1	X	803	C
1	X	804	C
1	X	805	G
1	X	806	A
1	X	807	A
1	X	813	A
1	X	814	G
1	X	815	A
1	X	818	G
1	X	819	C
1	X	825	C
1	X	832	A
1	X	840	U
1	X	841	G
1	X	843	G
1	X	844	G
1	X	859	U
1	X	860	U
1	X	862	A
1	X	872	G
1	X	873	U
1	X	879	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	X	919	U
1	X	922	A
1	X	926	C
1	X	927	C
1	X	939	C
1	X	940	G
1	X	952	A
1	X	955	G
1	X	956	A
1	X	957	G
1	X	968	C
1	X	969	U
1	X	970	A
1	X	972	C
1	X	973	U
1	X	984	A
1	X	985	G
1	X	994	A
1	X	995	A
1	X	996	C
1	X	999	A
1	X	1006	C
1	X	1007	A
1	X	1016	C
1	X	1019	U
1	X	1023	U
1	X	1024	G
1	X	1032	A
1	X	1033	G
1	X	1034	U
1	X	1036	G
1	X	1037	U
1	X	1044	U
1	X	1045	G
1	X	1051	U
1	X	1053	G
1	X	1054	C
1	X	1055	A
1	X	1056	U
1	X	1057	A
1	X	1058	G
1	X	1059	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	X	1060	C
1	X	1070	G
1	X	1071	U
1	X	1072	U
1	X	1073	G
1	X	1078	A
1	X	1079	G
1	X	1081	A
1	X	1082	G
1	X	1086	C
1	X	1087	C
1	X	1090	C
1	X	1095	A
1	X	1096	A
1	X	1097	A
1	X	1098	G
1	X	1099	A
1	X	1108	U
1	X	1115	C
1	X	1119	U
1	X	1123	G
1	X	1128	G
1	X	1129	A
1	X	1137	A
1	X	1138	A
1	X	1139	A
1	X	1140	A
1	X	1142	G
1	X	1143	A
1	X	1145	C
1	X	1146	G
1	X	1152	C
1	X	1153	A
1	X	1154	A
1	X	1155	G
1	X	1167	A
1	X	1168	G
1	X	1182	U
1	X	1183	C
1	X	1185	C
1	X	1186	G
1	X	1187	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	X	1189	G
1	X	1192	A
1	X	1194	U
1	X	1195	U
1	X	1213	U
1	X	1220	G
1	X	1224	A
1	X	1225	G
1	X	1233	A
1	X	1234	C
1	X	1249	G
1	X	1250	A
1	X	1251	G
1	X	1253	C
1	X	1254	G
1	X	1262	U
1	X	1264	C
1	X	1265	G
1	X	1266	G
1	X	1267	A
1	X	1269	G
1	X	1278	A
1	X	1279	G
1	X	1284	G
1	X	1285	A
1	X	1286	U
1	X	1288	A
1	X	1289	A
1	X	1297	A
1	X	1300	A
1	X	1302	C
1	X	1313	U
1	X	1314	A
1	X	1315	A
1	X	1316	G
1	X	1319	C
1	X	1324	G
1	X	1325	U
1	X	1326	U
1	X	1334	A
1	X	1337	G
1	X	1338	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	X	1339	U
1	X	1342	U
1	X	1343	C
1	X	1345	G
1	X	1346	C
1	X	1353	A
1	X	1354	A
1	X	1355	A
1	X	1356	G
1	X	1358	C
1	X	1359	G
1	X	1365	U
1	X	1391	A
1	X	1392	U
1	X	1398	G
1	X	1410	U
1	X	1411	C
1	X	1413	U
1	X	1428	G
1	X	1429	A
1	X	1430	G
1	X	1432	G
1	X	1433	A
1	X	1434	U
1	X	1440	G
1	X	1441	A
1	X	1442	C
1	X	1443	G
1	X	1460	G
1	X	1465	G
1	X	1467	U
1	X	1468	A
1	X	1469	U
1	X	1470	G
1	X	1473	U
1	X	1474	A
1	X	1475	U
1	X	1476	G
1	X	1482	U
1	X	1490	U
1	X	1497	C
1	X	1498	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	X	1509	A
1	X	1513	U
1	X	1514	C
1	X	1523	A
1	X	1524	C
1	X	1525	A
1	X	1528	C
1	X	1551	U
1	X	1552	C
1	X	1553	G
1	X	1554	G
1	X	1562	G
1	X	1563	U
1	X	1570	C
1	X	1571	G
1	X	1574	A
1	X	1575	C
1	X	1576	G
1	X	1582	A
1	X	1583	A
1	X	1585	A
1	X	1601	U
1	X	1602	G
1	X	1603	A
1	X	1608	U
1	X	1619	A
1	X	1624	A
1	X	1625	A
1	X	1626	A
1	X	1627	C
1	X	1632	A
1	X	1633	C
1	X	1634	A
1	X	1635	G
1	X	1648	C
1	X	1651	U
1	X	1652	G
1	X	1657	A
1	X	1664	G
1	X	1665	C
1	X	1671	A
1	X	1685	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	X	1686	A
1	X	1691	G
1	X	1692	C
1	X	1699	A
1	X	1710	U
1	X	1711	C
1	X	1712	G
1	X	1713	G
1	X	1715	A
1	X	1716	G
1	X	1717	A
1	X	1724	C
1	X	1732	U
1	X	1733	U
1	X	1734	C
1	X	1747	G
1	X	1749	G
1	X	1750	A
1	X	1754	G
1	X	1755	G
1	X	1764	A
1	X	1771	A
1	X	1772	C
1	X	1776	A
1	X	1777	A
1	X	1778	U
1	X	1782	A
1	X	1790	G
1	X	1791	C
1	X	1792	C
1	X	1793	A
1	X	1800	A
1	X	1801	C
1	X	1802	A
1	X	1807	A
1	X	1808	C
1	X	1812	U
1	X	1813	A
1	X	1821	A
1	X	1822	C
1	X	1831	G
1	X	1842	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	X	1845	A
1	X	1846	A
1	X	1851	A
1	X	1852	G
1	X	1854	G
1	X	1855	G
1	X	1856	U
1	X	1857	G
1	X	1859	A
1	X	1861	G
1	X	1865	C
1	X	1867	A
1	X	1868	A
1	X	1871	G
1	X	1872	A
1	X	1873	A
1	X	1874	G
1	X	1883	A
1	X	1910	A
1	X	1912	G
1	X	1914	U
1	X	1919	A
1	X	1920	A
1	X	1922	U
1	X	1923	U
1	X	1924	C
1	X	1926	U
1	X	1927	U
1	X	1928	G
1	X	1938	U
1	X	1939	U
1	X	1946	U
1	X	1947	G
1	X	1948	C
1	X	1949	A
1	X	1950	C
1	X	1951	G
1	X	1953	A
1	X	1954	A
1	X	1955	G
1	X	1964	A
1	X	1965	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	X	1976	U
1	X	1979	C
1	X	1980	A
1	X	2004	U
1	X	2005	U
1	X	2006	G
1	X	2014	A
1	X	2015	G
1	X	2016	A
1	X	2017	U
1	X	2019	C
1	X	2026	C
1	X	2034	A
1	X	2035	G
1	X	2038	C
1	X	2039	G
1	X	2044	G
1	X	2045	A
1	X	2046	C
1	X	2050	G
1	X	2051	U
1	X	2052	G
1	X	2075	U
1	X	2076	G
1	X	2080	U
1	X	2083	G
1	X	2089	C
1	X	2171	U
1	X	2181	A
1	X	2190	A
1	X	2191	A
1	X	2192	U
1	X	2195	C
1	X	2196	U
1	X	2197	U
1	X	2198	U
1	X	2199	C
1	X	2200	G
1	X	2205	C
1	X	2217	G
1	X	2218	G
1	X	2229	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	X	2230	G
1	X	2237	C
1	X	2238	G
1	X	2245	A
1	X	2246	A
1	X	2247	A
1	X	2261	G
1	X	2262	C
1	X	2265	A
1	X	2266	A
1	X	2267	A
1	X	2268	G
1	X	2276	C
1	X	2284	U
1	X	2285	U
1	X	2286	G
1	X	2287	G
1	X	2288	A
1	X	2291	U
1	X	2298	U
1	X	2300	G
1	X	2306	A
1	X	2313	G
1	X	2314	A
1	X	2321	C
1	X	2322	U
1	X	2323	U
1	X	2324	G
1	X	2325	A
1	X	2326	C
1	X	2328	G
1	X	2333	A
1	X	2349	G
1	X	2351	G
1	X	2362	G
1	X	2364	C
1	X	2369	U
1	X	2386	G
1	X	2396	C
1	X	2397	A
1	X	2402	U
1	X	2403	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	X	2405	A
1	X	2406	C
1	X	2407	G
1	X	2408	G
1	X	2409	A
1	X	2410	U
1	X	2418	A
1	X	2419	C
1	X	2420	C
1	X	2427	A
1	X	2428	U
1	X	2448	A
1	X	2452	U
1	X	2455	A
1	X	2461	G
1	X	2469	G
1	X	2470	U
1	X	2476	A
1	X	2477	C
1	X	2481	G
1	X	2482	A
1	X	2483	U
1	X	2484	G
1	X	2485	U
1	X	2486	C
1	X	2488	G
1	X	2492	G
1	X	2497	A
1	X	2498	U
1	X	2499	C
1	X	2502	G
1	X	2508	G
1	X	2521	A
1	X	2522	G
1	X	2545	A
1	X	2546	G
1	X	2552	C
1	X	2553	G
1	X	2557	G
1	X	2561	G
1	X	2564	U
1	X	2565	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	X	2581	A
1	X	2582	G
1	X	2588	U
1	X	2591	C
1	X	2592	U
1	X	2593	A
1	X	2594	U
1	X	2608	A
1	X	2609	G
1	X	2616	U
1	X	2624	G
1	X	2625	U
1	X	2633	A
1	X	2634	G
1	X	2641	A
1	X	2650	G
1	X	2660	C
1	X	2661	G
1	X	2668	U
1	X	2669	C
1	X	2670	C
1	X	2691	C
1	X	2692	A
1	X	2693	U
1	X	2694	G
1	X	2700	U
1	X	2702	G
1	X	2706	U
1	X	2707	G
1	X	2712	G
1	X	2713	A
1	X	2730	A
1	X	2731	G
1	X	2732	C
1	X	2736	U
1	X	2737	A
1	X	2738	A
1	X	2744	A
1	X	2745	A
1	X	2746	G
1	X	2757	G
1	X	2758	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	X	2759	U
1	X	2760	G
1	X	2761	A
1	X	2770	A
1	X	2771	C
1	X	2775	U
1	X	2777	A
1	X	2778	U
1	X	2779	C
1	X	2780	A
1	X	2782	G
1	X	2783	U
1	X	2795	A
1	X	2796	A
1	X	2798	A
1	X	2807	U
1	X	2808	U
1	X	2809	A
1	X	2810	A
1	X	2811	G
1	X	2824	C
1	X	2825	A
1	X	2841	U
1	X	2842	C
1	X	2847	G
1	X	2850	U
1	X	2854	G
1	X	2855	C
1	X	2860	C
1	X	2867	G
1	X	2868	G
2	Y	4	C
2	Y	14	C
2	Y	15	A
2	Y	17	A
2	Y	18	G
2	Y	26	G
2	Y	27	A
2	Y	28	A
2	Y	37	C
2	Y	38	C
2	Y	40	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	Y	43	G
2	Y	44	C
2	Y	46	G
2	Y	47	A
2	Y	59	A
2	Y	69	G
2	Y	99	G
2	Y	102	A
2	Y	111	C
2	Y	112	A
2	Y	115	G
2	Y	123	U

All (301) RNA pucker outliers are listed below:

<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	X	3	U
1	X	13	A
1	X	33	C
1	X	38	G
1	X	48	A
1	X	69	G
1	X	70	A
1	X	71	A
1	X	73	A
1	X	117	A
1	X	118	U
1	X	154	U
1	X	173	A
1	X	176	A
1	X	181	A
1	X	192	G
1	X	198	A
1	X	199	A
1	X	218	A
1	X	219	G
1	X	226	C
1	X	312	G
1	X	322	A
1	X	334	G
1	X	340	G
1	X	341	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	X	342	G
1	X	399	G
1	X	400	U
1	X	403	A
1	X	417	C
1	X	424	G
1	X	454	G
1	X	458	G
1	X	460	U
1	X	466	A
1	X	467	U
1	X	468	A
1	X	469	G
1	X	485	G
1	X	490	A
1	X	513	A
1	X	516	G
1	X	538	A
1	X	539	A
1	X	541	C
1	X	542	A
1	X	553	C
1	X	554	U
1	X	555	U
1	X	556	A
1	X	557	U
1	X	580	A
1	X	582	G
1	X	583	C
1	X	596	C
1	X	613	A
1	X	631	G
1	X	638	A
1	X	648	A
1	X	664	C
1	X	682	G
1	X	683	A
1	X	698	A
1	X	699	G
1	X	717	G
1	X	728	G
1	X	729	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	X	730	C
1	X	739	G
1	X	741	G
1	X	751	G
1	X	752	G
1	X	759	C
1	X	765	C
1	X	775	U
1	X	777	A
1	X	780	U
1	X	788	G
1	X	789	G
1	X	795	A
1	X	801	A
1	X	802	A
1	X	803	C
1	X	804	C
1	X	805	G
1	X	806	A
1	X	813	A
1	X	814	G
1	X	818	G
1	X	824	U
1	X	842	A
1	X	843	G
1	X	872	G
1	X	878	C
1	X	925	U
1	X	938	G
1	X	939	C
1	X	955	G
1	X	956	A
1	X	969	U
1	X	972	C
1	X	984	A
1	X	985	G
1	X	994	A
1	X	1000	G
1	X	1006	C
1	X	1023	U
1	X	1031	C
1	X	1036	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	X	1044	U
1	X	1053	G
1	X	1055	A
1	X	1071	U
1	X	1072	U
1	X	1096	A
1	X	1122	A
1	X	1139	A
1	X	1141	U
1	X	1142	G
1	X	1152	C
1	X	1153	A
1	X	1154	A
1	X	1182	U
1	X	1186	G
1	X	1194	U
1	X	1212	U
1	X	1223	G
1	X	1224	A
1	X	1233	A
1	X	1249	G
1	X	1260	A
1	X	1261	G
1	X	1263	G
1	X	1265	G
1	X	1266	G
1	X	1278	A
1	X	1285	A
1	X	1299	A
1	X	1301	U
1	X	1313	U
1	X	1314	A
1	X	1315	A
1	X	1324	G
1	X	1325	U
1	X	1337	G
1	X	1338	G
1	X	1342	U
1	X	1345	G
1	X	1353	A
1	X	1354	A
1	X	1355	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	X	1357	U
1	X	1391	A
1	X	1409	U
1	X	1410	U
1	X	1412	C
1	X	1439	G
1	X	1441	A
1	X	1442	C
1	X	1459	U
1	X	1473	U
1	X	1474	A
1	X	1496	G
1	X	1552	C
1	X	1561	A
1	X	1562	G
1	X	1575	C
1	X	1581	C
1	X	1582	A
1	X	1583	A
1	X	1601	U
1	X	1607	A
1	X	1618	U
1	X	1623	C
1	X	1624	A
1	X	1625	A
1	X	1626	A
1	X	1632	A
1	X	1633	C
1	X	1634	A
1	X	1651	U
1	X	1664	G
1	X	1670	G
1	X	1685	A
1	X	1691	G
1	X	1698	C
1	X	1710	U
1	X	1711	C
1	X	1715	A
1	X	1716	G
1	X	1723	U
1	X	1732	U
1	X	1749	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	X	1771	A
1	X	1772	C
1	X	1775	A
1	X	1777	A
1	X	1790	G
1	X	1791	C
1	X	1799	A
1	X	1807	A
1	X	1811	A
1	X	1820	G
1	X	1830	C
1	X	1845	A
1	X	1867	A
1	X	1872	A
1	X	1913	G
1	X	1919	A
1	X	1920	A
1	X	1921	A
1	X	1922	U
1	X	1923	U
1	X	1926	U
1	X	1927	U
1	X	1938	U
1	X	1947	G
1	X	1953	A
1	X	1963	G
1	X	1975	G
1	X	1979	C
1	X	2004	U
1	X	2005	U
1	X	2014	A
1	X	2015	G
1	X	2016	A
1	X	2018	G
1	X	2034	A
1	X	2043	A
1	X	2044	G
1	X	2045	A
1	X	2050	G
1	X	2075	U
1	X	2088	U
1	X	2195	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	X	2196	U
1	X	2197	U
1	X	2204	A
1	X	2217	G
1	X	2228	U
1	X	2229	G
1	X	2237	C
1	X	2245	A
1	X	2254	C
1	X	2261	G
1	X	2265	A
1	X	2267	A
1	X	2275	U
1	X	2312	A
1	X	2313	G
1	X	2322	U
1	X	2323	U
1	X	2325	A
1	X	2370	G
1	X	2396	C
1	X	2404	A
1	X	2405	A
1	X	2418	A
1	X	2426	G
1	X	2427	A
1	X	2428	U
1	X	2460	G
1	X	2469	G
1	X	2482	A
1	X	2485	U
1	X	2496	C
1	X	2497	A
1	X	2498	U
1	X	2521	A
1	X	2551	A
1	X	2560	G
1	X	2580	C
1	X	2589	C
1	X	2592	U
1	X	2593	A
1	X	2608	A
1	X	2624	G

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Mol	Chain	Res	Type
1	X	2633	A
1	X	2660	C
1	X	2668	U
1	X	2669	C
1	X	2691	C
1	X	2693	U
1	X	2705	A
1	X	2706	U
1	X	2712	G
1	X	2736	U
1	X	2756	A
1	X	2758	A
1	X	2759	U
1	X	2760	G
1	X	2770	A
1	X	2807	U
1	X	2810	A
1	X	2823	G
1	X	2824	C
1	X	2841	U
1	X	2848	A
1	X	2854	G
1	X	2867	G

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

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

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

There are no monosaccharides in this entry.

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

There are no ligands in this entry.

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

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 i

### 6.1 Protein, DNA and RNA chains i

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
1	X	2686/2880 (93%)	-0.29	38 (1%) 75 75	11, 57, 103, 131	0
2	Y	122/122 (100%)	-0.04	2 (1%) 72 70	29, 81, 102, 108	0
3	A	240/274 (87%)	-0.04	6 (2%) 57 54	35, 65, 77, 90	0
4	B	205/211 (97%)	-0.27	2 (0%) 82 82	30, 53, 64, 77	0
5	C	197/205 (96%)	-0.25	3 (1%) 73 72	38, 60, 71, 83	0
6	D	177/180 (98%)	0.07	6 (3%) 45 43	54, 67, 76, 84	0
7	E	171/185 (92%)	-0.40	1 (0%) 89 90	50, 64, 75, 80	0
8	F	144/144 (100%)	2.13	74 (51%) 0 0	0, 0, 83, 88	0
9	G	142/174 (81%)	-0.15	4 (2%) 53 51	47, 59, 69, 77	0
10	H	134/134 (100%)	-0.29	0 100 100	27, 52, 62, 69	0
11	I	141/156 (90%)	0.34	13 (9%) 9 9	40, 63, 75, 83	0
12	J	136/142 (95%)	-0.22	2 (1%) 73 72	45, 61, 72, 78	0
13	K	113/116 (97%)	-0.24	0 100 100	37, 50, 60, 63	0
14	L	104/114 (91%)	0.04	6 (5%) 23 22	52, 63, 73, 78	0
15	M	108/166 (65%)	-0.33	0 100 100	23, 53, 65, 73	0
16	N	117/118 (99%)	-0.36	0 100 100	39, 57, 69, 75	0
17	O	94/100 (94%)	-0.40	0 100 100	42, 61, 72, 79	0
18	P	127/134 (94%)	-0.38	0 100 100	34, 52, 66, 76	0
19	Q	93/95 (97%)	-0.33	0 100 100	47, 58, 73, 78	0
20	R	110/115 (95%)	-0.05	4 (3%) 42 40	49, 62, 73, 85	0
21	S	175/237 (73%)	0.04	6 (3%) 45 43	55, 65, 76, 87	0
22	T	84/91 (92%)	0.27	11 (13%) 3 3	50, 61, 74, 80	0
23	U	72/81 (88%)	0.10	3 (4%) 36 34	52, 64, 73, 78	0
24	V	66/67 (98%)	-0.31	0 100 100	54, 63, 75, 81	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
25	W	55/55 (100%)	-0.51	0 100 100	48, 58, 70, 79	0
26	Z	58/60 (96%)	-0.26	1 (1%) 70 68	35, 53, 66, 69	0
27	1	53/55 (96%)	3.19	35 (66%) 0 0	53, 61, 68, 71	0
28	2	46/47 (97%)	6.59	46 (100%) 0 0	43, 56, 62, 63	0
29	3	63/66 (95%)	5.23	58 (92%) 0 0	50, 58, 65, 67	0
30	4	37/37 (100%)	0.34	4 (10%) 5 5	52, 63, 71, 76	0
31	5	71/122 (58%)	4.99	60 (84%) 0 0	0, 0, 0, 0	0
All	All	6141/6683 (91%)	0.04	385 (6%) 20 20	0, 60, 91, 131	0

All (385) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
31	5	101	ALA	22.2
29	3	37	SER	16.3
28	2	4	THR	13.3
31	5	97	LYS	12.9
31	5	104	GLU	12.8
31	5	70	ASN	12.6
29	3	7	HIS	11.7
31	5	53	GLU	11.3
31	5	105	ALA	11.1
31	5	55	THR	10.0
28	2	37	LYS	10.0
29	3	39	ASP	10.0
27	1	24	THR	9.7
29	3	31	HIS	9.7
28	2	24	THR	9.7
28	2	7	PRO	9.6
29	3	8	LYS	9.5
28	2	9	ASN	9.5
28	2	8	ASN	9.2
29	3	40	GLU	9.2
31	5	99	GLY	9.2
29	3	34	THR	9.1
28	2	2	LYS	9.1
29	3	42	ARG	9.0
29	3	6	THR	8.6
28	2	40	HIS	8.6
28	2	36	ALA	8.4
28	2	25	LYS	8.3

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Mol	Chain	Res	Type	RSRZ
29	3	41	ILE	8.3
31	5	52	GLU	8.3
31	5	73	LYS	8.2
27	1	25	THR	8.1
28	2	6	GLN	7.9
29	3	35	GLY	7.9
29	3	44	LYS	7.8
31	5	65	GLY	7.7
28	2	15	THR	7.7
28	2	22	MET	7.7
28	2	26	SER	7.7
28	2	3	ARG	7.7
31	5	116	GLY	7.6
28	2	32	ALA	7.5
27	1	43	VAL	7.5
29	3	30	ARG	7.5
31	5	117	ALA	7.4
28	2	35	ARG	7.4
31	5	96	LEU	7.4
29	3	36	LYS	7.3
28	2	23	LYS	7.3
29	3	32	GLN	7.1
28	2	29	ASN	7.0
31	5	86	ALA	7.0
29	3	10	ALA	7.0
27	1	7	ARG	7.0
31	5	69	ILE	6.8
31	5	56	GLU	6.8
29	3	11	LYS	6.7
29	3	43	GLY	6.7
28	2	45	SER	6.4
31	5	113	GLU	6.4
28	2	5	TYR	6.4
29	3	4	MET	6.3
28	2	17	GLY	6.3
28	2	27	GLY	6.3
28	2	43	THR	6.3
27	1	2	ALA	6.2
29	3	2	PRO	6.2
31	5	92	LYS	6.1
29	3	9	MET	6.1
31	5	88	ASP	6.0

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Mol	Chain	Res	Type	RSRZ
28	2	10	ARG	6.0
27	1	41	ASP	6.0
1	X	731	A	6.0
27	1	44	ALA	5.9
27	1	40	TYR	5.8
28	2	42	LEU	5.8
27	1	27	ASN	5.8
28	2	16	HIS	5.8
28	2	20	ALA	5.7
28	2	33	ARG	5.7
31	5	66	ALA	5.7
28	2	11	LYS	5.7
27	1	26	LYS	5.7
31	5	84	LYS	5.7
28	2	44	VAL	5.6
28	2	30	ILE	5.6
31	5	95	VAL	5.6
27	1	23	THR	5.5
28	2	28	ARG	5.5
29	3	46	LYS	5.5
31	5	64	ALA	5.5
28	2	41	GLN	5.4
29	3	18	GLY	5.4
31	5	121	LEU	5.4
29	3	58	MET	5.3
29	3	33	ASN	5.3
28	2	46	ASP	5.2
29	3	27	SER	5.2
28	2	18	PHE	5.2
9	G	97	ASP	5.2
29	3	51	ALA	5.2
29	3	3	LYS	5.1
31	5	112	LEU	5.1
29	3	54	GLU	5.1
31	5	82	GLY	5.0
31	5	90	SER	5.0
31	5	93	GLY	5.0
29	3	61	MET	5.0
28	2	31	LEU	5.0
1	X	514	G	5.0
31	5	62	ILE	4.9
27	1	47	HIS	4.9

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Mol	Chain	Res	Type	RSRZ
29	3	17	THR	4.9
28	2	13	ALA	4.8
21	S	92	VAL	4.8
27	1	42	PRO	4.8
29	3	5	LYS	4.8
31	5	74	GLU	4.8
29	3	25	PHE	4.7
31	5	100	VAL	4.7
29	3	53	ALA	4.7
22	T	15	ASP	4.7
11	I	29	THR	4.6
28	2	38	GLY	4.6
27	1	22	TYR	4.5
8	F	125	ASN	4.5
31	5	80	GLY	4.5
27	1	38	LYS	4.5
28	2	19	ARG	4.4
31	5	63	ASP	4.4
31	5	114	ALA	4.4
29	3	12	ARG	4.4
31	5	72	ILE	4.4
8	F	137	THR	4.4
29	3	19	THR	4.3
28	2	21	ARG	4.3
3	A	203	ASN	4.3
28	2	34	ARG	4.3
27	1	30	ASN	4.2
8	F	93	LYS	4.2
31	5	83	LEU	4.2
29	3	47	GLY	4.2
21	S	91	PRO	4.1
29	3	55	TRP	4.1
31	5	57	PHE	4.1
31	5	87	LYS	4.1
31	5	60	VAL	4.1
8	F	18	THR	4.1
3	A	219	PRO	4.1
8	F	19	PRO	4.1
1	X	2088	U	4.1
8	F	114	ASP	4.0
27	1	20	PHE	4.0
29	3	56	ALA	4.0

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Mol	Chain	Res	Type	RSRZ
28	2	12	ARG	4.0
29	3	45	GLY	3.9
29	3	57	ARG	3.9
8	F	102	ASP	3.9
31	5	75	ILE	3.9
28	2	14	LYS	3.8
27	1	31	THR	3.8
8	F	10	LEU	3.7
1	X	1085	G	3.7
27	1	9	ILE	3.7
2	Y	123	U	3.7
27	1	12	MET	3.7
3	A	250	TRP	3.6
8	F	133	SER	3.6
31	5	106	GLU	3.6
27	1	39	LYS	3.6
8	F	5	ALA	3.6
8	F	32	ALA	3.6
8	F	129	GLY	3.6
31	5	102	LYS	3.6
22	T	8	GLY	3.6
27	1	48	VAL	3.6
31	5	120	GLU	3.6
8	F	119	SER	3.5
31	5	115	ALA	3.5
8	F	7	ILE	3.5
31	5	59	VAL	3.5
29	3	16	ILE	3.5
1	X	248	A	3.5
8	F	6	GLY	3.5
8	F	132	ARG	3.5
27	1	10	VAL	3.5
11	I	5	ASP	3.5
22	T	9	SER	3.5
20	R	58	VAL	3.4
11	I	52	GLY	3.4
11	I	10	PRO	3.4
8	F	21	PRO	3.4
29	3	60	LEU	3.4
8	F	85	GLY	3.4
8	F	121	GLU	3.4
31	5	79	THR	3.4

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Mol	Chain	Res	Type	RSRZ
8	F	118	GLY	3.3
29	3	26	LYS	3.3
27	1	28	ARG	3.3
8	F	130	THR	3.3
29	3	24	ALA	3.3
8	F	108	ALA	3.3
8	F	17	ALA	3.2
8	F	47	ASP	3.2
6	D	43	SER	3.2
8	F	97	GLY	3.2
31	5	76	ARG	3.2
31	5	85	GLU	3.2
8	F	31	GLY	3.2
8	F	35	MET	3.1
11	I	4	HIS	3.1
8	F	94	ALA	3.1
5	C	19	LEU	3.1
29	3	64	ARG	3.1
1	X	1081	A	3.1
8	F	42	ASN	3.1
11	I	6	LEU	3.1
29	3	13	ARG	3.1
8	F	69	THR	3.1
5	C	20	PRO	3.0
22	T	10	SER	3.0
8	F	44	GLN	3.0
8	F	66	THR	3.0
28	2	39	ARG	3.0
27	1	46	LYS	3.0
8	F	88	SER	3.0
1	X	1057	A	3.0
1	X	1080	A	3.0
1	X	2409	A	3.0
6	D	112	ARG	3.0
27	1	14	SER	3.0
8	F	84	ILE	3.0
20	R	57	ASN	3.0
27	1	36	GLU	3.0
29	3	59	LYS	3.0
31	5	67	SER	3.0
1	X	1095	A	3.0
29	3	20	GLY	3.0

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Mol	Chain	Res	Type	RSRZ
1	X	558	G	2.9
1	X	1086	C	2.9
1	X	730	C	2.9
11	I	8	PRO	2.9
12	J	141	ALA	2.9
27	1	19	GLY	2.9
8	F	11	GLN	2.9
8	F	1	MET	2.9
31	5	119	VAL	2.9
1	X	2778	U	2.9
8	F	33	ASN	2.9
29	3	28	GLY	2.9
8	F	143	ASN	2.9
27	1	45	LYS	2.8
14	L	40	ALA	2.8
14	L	53	ALA	2.8
22	T	7	VAL	2.8
29	3	52	LYS	2.8
8	F	45	THR	2.8
31	5	58	ASP	2.8
1	X	2324	G	2.8
8	F	29	GLN	2.8
8	F	142	PRO	2.8
31	5	81	LEU	2.8
8	F	22	PRO	2.8
8	F	83	GLY	2.8
1	X	727	U	2.8
22	T	5	LYS	2.8
31	5	109	LYS	2.8
8	F	55	VAL	2.8
1	X	1107	A	2.7
31	5	89	MET	2.7
1	X	728	G	2.7
11	I	36	GLY	2.7
8	F	122	ALA	2.7
8	F	144	ALA	2.7
27	1	37	LEU	2.7
1	X	1058	G	2.7
8	F	126	THR	2.7
8	F	90	THR	2.7
11	I	48	PHE	2.7
1	X	1084	A	2.6

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Mol	Chain	Res	Type	RSRZ
1	X	2166	G	2.6
1	X	2775	U	2.6
8	F	43	ALA	2.6
21	S	143	ILE	2.6
27	1	21	TYR	2.6
1	X	2089	C	2.6
8	F	124	ALA	2.6
29	3	38	GLY	2.6
31	5	98	GLU	2.6
3	A	242	ALA	2.6
27	1	49	VAL	2.6
8	F	57	ILE	2.6
1	X	1037	U	2.6
4	B	205	SER	2.6
1	X	1187	A	2.5
23	U	27	ASP	2.5
8	F	128	ALA	2.5
14	L	52	ALA	2.5
8	F	136	VAL	2.5
3	A	271	VAL	2.5
11	I	87	THR	2.5
8	F	81	ALA	2.5
8	F	127	VAL	2.5
20	R	43	ASP	2.5
29	3	48	PHE	2.5
1	X	1734	C	2.5
1	X	2776	U	2.4
1	X	1104	G	2.4
8	F	4	VAL	2.4
8	F	64	SER	2.4
1	X	2170	C	2.4
8	F	56	GLU	2.4
2	Y	41	A	2.4
29	3	15	LYS	2.4
29	3	49	VAL	2.4
8	F	71	THR	2.4
22	T	14	ARG	2.4
29	3	23	MET	2.4
6	D	23	SER	2.4
23	U	62	LEU	2.4
6	D	147	ASP	2.3
5	C	47	THR	2.3

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Mol	Chain	Res	Type	RSRZ
8	F	92	ASN	2.3
1	X	1069	G	2.3
14	L	62	GLY	2.3
28	2	1	MET	2.3
1	X	1067	G	2.3
4	B	135	HIS	2.3
9	G	129	HIS	2.3
6	D	145	MET	2.3
1	X	2165	A	2.3
23	U	67	LEU	2.3
31	5	78	ILE	2.3
8	F	82	ALA	2.3
8	F	25	PRO	2.2
27	1	15	SER	2.2
8	F	95	LYS	2.2
30	4	22	ARG	2.2
8	F	75	SER	2.2
21	S	155	PRO	2.2
27	1	52	GLU	2.2
31	5	61	LEU	2.2
27	1	33	ALA	2.2
3	A	249	PRO	2.2
1	X	1522	C	2.2
14	L	63	ASN	2.2
31	5	54	LYS	2.2
9	G	156	HIS	2.2
12	J	140	GLU	2.1
21	S	123	VAL	2.1
1	X	1189	G	2.1
8	F	15	GLY	2.1
22	T	4	LYS	2.1
30	4	37	GLY	2.1
31	5	77	GLY	2.1
9	G	155	THR	2.1
8	F	123	ALA	2.1
22	T	2	ALA	2.1
7	E	37	TYR	2.1
21	S	170	SER	2.1
8	F	20	ALA	2.1
1	X	1524	C	2.1
8	F	67	PHE	2.1
11	I	53	ARG	2.1

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Mol	Chain	Res	Type	RSRZ
1	X	1098	G	2.1
22	T	6	GLY	2.1
8	F	73	PRO	2.1
8	F	26	ALA	2.1
1	X	2780	A	2.1
6	D	42	SER	2.1
26	Z	2	ALA	2.1
29	3	50	LEU	2.1
8	F	8	VAL	2.1
8	F	72	PRO	2.1
29	3	22	VAL	2.0
11	I	54	SER	2.0
22	T	3	HIS	2.0
1	X	729	A	2.0
30	4	16	VAL	2.0
20	R	102	LYS	2.0
14	L	97	HIS	2.0
30	4	17	VAL	2.0
8	F	46	ALA	2.0
11	I	33	GLY	2.0
8	F	112	MET	2.0

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

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

## 6.3 Carbohydrates [i](#)

There are no monosaccharides in this entry.

## 6.4 Ligands [i](#)

There are no ligands in this entry.

## 6.5 Other polymers [i](#)

There are no such residues in this entry.