Full wwPDB EM Validation Report ⓘ

Mar 20, 2026 – 10:29 AM UTC

PDB ID	:	9B1Y / pdb_00009b1y
EMDB ID	:	EMD-44092
Title	:	WT strain WT mycobacterial ribosome
Authors	:	Chen, Y.; Young, I.D.; Fraser, J.S.; Javid, B.
Deposited on	:	2024-03-14
Resolution	:	2.47 Å(reported)
Based on initial models	:	5o5j, 5o60

This is a Full wwPDB EM Validation Report for a publicly released PDB entry.

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/EMValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

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

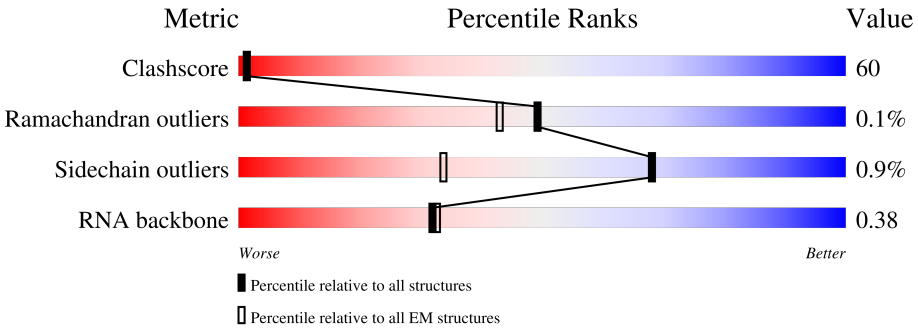
EMDB validation analysis	:	0.0.1.dev132
Mogul	:	2022.3.0, CSD as543be (2022)
MolProbity	:	4-5-2 with Phenix2.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics	:	202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

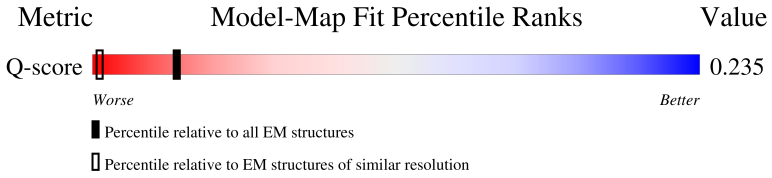
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 2.47 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)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	6086 (1.98 - 2.97)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion < 40%). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	1511	10% 11% 68% 21%
2	C	208	44% 29% 70% .
3	D	200	46% 21% 78%

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Mol	Chain	Length	Quality of chain
4	E	180	32% 29% 68%
5	F	96	29% 20% 78%
6	G	155	53% 30% 69%
7	H	131	34% 27% 71%
8	I	126	29% 23% 77%
9	J	99	66% 25% 71%
10	K	115	17% 28% 70%
11	L	122	29% 25% 75%
12	M	116	42% 26% 74%
13	N	60	43% 22% 77%
14	O	88	20% 25% 75%
15	P	96	51% 22% 78%
16	Q	94	44% 19% 80%
17	R	65	20% 28% 71%
18	T	85	18% 26% 74%
19	V	228	44% 25% 74%
20	Y	3038	8% 9% 67% 24%
21	U	118	5% 75% 20%
22	Z	275	32% 68%
23	a	214	6% 32% 68%
24	b	209	8% 32% 67%
25	c	182	8% 17% 81%
26	d	176	5% 25% 75%
27	e	133	24% 25% 75%
28	f	146	5% 32% 66%

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Mol	Chain	Length	Quality of chain
29	g	122	6% 23% 75%
30	h	145	14% 26% 72%
31	i	136	5% 28% 71%
32	j	118	7% 26% 72%
33	k	126	11% 27% 73%
34	l	113	27% 10% 88%
35	m	124	8% 31% 69%
36	n	100	30% 70%
37	o	114	40% 60%
38	p	97	5% 38% 61%
39	q	97	28% 71%
40	r	192	52% 45% 55%
41	s	79	8% 41% 59%
42	t	63	5% 24% 76%
43	u	64	20% 22% 77%
44	v	126	5% 32% 67%
45	w	59	37% 63%
46	x	54	11% 30% 70%
47	y	49	8% 31% 67%
48	z	46	7% 26% 72%
49	1	63	29% 67% 5%
50	2	37	24% 76%
51	4	81	9% 62% 30%

2 Entry composition

There are 53 unique types of molecules in this entry. The entry contains 146984 atoms, of which 3 are hydrogens and 0 are deuteriums.

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

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

Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	H	N	O	P		
1	A	1511	32443	14449	3	5930	10550	1511	0	0

- Molecule 2 is a protein called Small ribosomal subunit protein uS3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	C	208	1660	1036	322	298	4	0	0

- Molecule 3 is a protein called Small ribosomal subunit protein uS4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	D	200	1641	1028	316	295	2	0	0

- Molecule 4 is a protein called Small ribosomal subunit protein uS5.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	E	180	1296	812	245	235	4	0	0

- Molecule 5 is a protein called Small ribosomal subunit protein bS6.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	F	96	771	486	138	145	2	0	0

- Molecule 6 is a protein called Small ribosomal subunit protein uS7.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	G	155	1232	768	241	221	2	0	0

- Molecule 7 is a protein called Small ribosomal subunit protein uS8.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	H	131	Total	C	N	O	S	0	0
			1010	633	189	187	1		

- Molecule 8 is a protein called Small ribosomal subunit protein uS9.

Mol	Chain	Residues	Atoms				AltConf	Trace
8	I	126	Total	C	N	O	0	0
			994	630	194	170		

- Molecule 9 is a protein called Small ribosomal subunit protein uS10.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	J	99	Total	C	N	O	S	0	0
			788	495	146	144	3		

- Molecule 10 is a protein called Small ribosomal subunit protein uS11.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	K	115	Total	C	N	O	S	0	0
			855	528	170	156	1		

- Molecule 11 is a protein called Small ribosomal subunit protein uS12.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	L	122	Total	C	N	O	S	0	0
			958	594	197	165	2		

- Molecule 12 is a protein called Small ribosomal subunit protein uS13.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	M	116	Total	C	N	O	S	0	0
			935	572	191	169	3		

- Molecule 13 is a protein called Small ribosomal subunit protein uS14B.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	N	60	Total	C	N	O	S	0	0
			477	302	97	73	5		

- Molecule 14 is a protein called Small ribosomal subunit protein uS15.

Mol	Chain	Residues	Atoms				AltConf	Trace
14	O	88	Total 720	C 449	N 147	O 124	0	0

- Molecule 15 is a protein called Small ribosomal subunit protein bS16.

Mol	Chain	Residues	Atoms				AltConf	Trace
15	P	96	Total 764	C 488	N 142	O 134	0	0

- Molecule 16 is a protein called Small ribosomal subunit protein uS17.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	Q	94	Total 748	C 469	N 142	O 135	S 2	0	0

- Molecule 17 is a protein called Small ribosomal subunit protein bS18B.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	R	65	Total 513	C 318	N 102	O 90	S 3	0	0

- Molecule 18 is a protein called Small ribosomal subunit protein bS20.

Mol	Chain	Residues	Atoms				AltConf	Trace
18	T	85	Total 660	C 402	N 139	O 119	0	0

- Molecule 19 is a protein called Small ribosomal subunit protein uS2.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	V	228	Total 1793	C 1132	N 322	O 330	S 9	0	0

- Molecule 20 is a RNA chain called 23S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	Y	3038	Total 65241	C 29079	N 12000	O 21124	P 3038	0	0

- Molecule 21 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	U	118	Total	C	N	O	P	0	0
			2522	1126	468	810	118		

- Molecule 22 is a protein called Large ribosomal subunit protein uL2.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	Z	275	Total	C	N	O	S	0	0
			2110	1298	438	370	4		

- Molecule 23 is a protein called Large ribosomal subunit protein uL3.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	a	214	Total	C	N	O	S	0	0
			1587	982	310	290	5		

- Molecule 24 is a protein called Large ribosomal subunit protein uL4.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	b	209	Total	C	N	O	S	0	0
			1569	969	295	303	2		

- Molecule 25 is a protein called Large ribosomal subunit protein uL5.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	c	182	Total	C	N	O	S	0	0
			1445	907	271	261	6		

- Molecule 26 is a protein called Large ribosomal subunit protein uL6.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	d	176	Total	C	N	O	S	0	0
			1348	845	249	253	1		

- Molecule 27 is a protein called Large ribosomal subunit protein uL11.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	e	133	Total	C	N	O	S	0	0
			990	625	175	187	3		

- Molecule 28 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	f	146	Total	C	N	O	S	0	0
			1130	722	207	200	1		

- Molecule 29 is a protein called Large ribosomal subunit protein uL14.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	g	122	Total	C	N	O	S	0	0
			938	586	179	170	3		

- Molecule 30 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	h	145	Total	C	N	O	S	0	0
			1078	676	205	194	3		

- Molecule 31 is a protein called Large ribosomal subunit protein uL16.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	i	136	Total	C	N	O	S	0	0
			1092	690	213	187	2		

- Molecule 32 is a protein called Large ribosomal subunit protein bL17.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	j	118	Total	C	N	O	S	0	0
			928	583	180	163	2		

- Molecule 33 is a protein called Large ribosomal subunit protein uL18.

Mol	Chain	Residues	Atoms				AltConf	Trace
33	k	126	Total	C	N	O	0	0
			956	586	199	171		

- Molecule 34 is a protein called Large ribosomal subunit protein bL19.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	l	113	Total	C	N	O	S	0	0
			907	570	171	165	1		

- Molecule 35 is a protein called Large ribosomal subunit protein bL20.

Mol	Chain	Residues	Atoms				AltConf	Trace
35	m	124	Total 988	C 613	N 203	O 172	0	0

- Molecule 36 is a protein called Large ribosomal subunit protein bL21.

Mol	Chain	Residues	Atoms				AltConf	Trace
36	n	100	Total 754	C 478	N 137	O 139	0	0

- Molecule 37 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms				AltConf	Trace
37	o	114	Total 873	C 543	N 171	O 159	0	0

- Molecule 38 is a protein called Large ribosomal subunit protein uL23.

Mol	Chain	Residues	Atoms				AltConf	Trace
38	p	97	Total 756	C 479	N 138	O 139	0	0

- Molecule 39 is a protein called Large ribosomal subunit protein uL24.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	q	97	Total 732	C 456	N 137	O 137	S 2	0	0

There are 8 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
q	?	-	SER	deletion	UNP A0QSG0
q	?	-	ALA	deletion	UNP A0QSG0
q	?	-	ASN	deletion	UNP A0QSG0
q	?	-	GLU	deletion	UNP A0QSG0
q	?	-	ARG	deletion	UNP A0QSG0
q	?	-	GLY	deletion	UNP A0QSG0
q	?	-	ALA	deletion	UNP A0QSG0
q	?	-	SER	deletion	UNP A0QSG0

- Molecule 40 is a protein called Large ribosomal subunit protein bL25.

Mol	Chain	Residues	Atoms				AltConf	Trace
40	r	192	Total 1428	C 881	N 255	O 292	0	0

- Molecule 41 is a protein called Large ribosomal subunit protein bL27.

Mol	Chain	Residues	Atoms				AltConf	Trace
41	s	79	Total 586	C 361	N 123	O 102	0	0

- Molecule 42 is a protein called Large ribosomal subunit protein bL28.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	t	63	Total 470	C 283	N 103	O 80	S 4	0	0

- Molecule 43 is a protein called Large ribosomal subunit protein uL29.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	u	64	Total 531	C 324	N 103	O 103	S 1	0	0

- Molecule 44 is a protein called Large ribosomal subunit protein uL10.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	v	126	Total 918	C 580	N 156	O 180	S 2	0	0

- Molecule 45 is a protein called Large ribosomal subunit protein uL30.

Mol	Chain	Residues	Atoms				AltConf	Trace
45	w	59	Total 474	C 292	N 95	O 87	0	0

- Molecule 46 is a protein called Large ribosomal subunit protein bL32.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	x	54	Total 423	C 260	N 93	O 69	S 1	0	0

- Molecule 47 is a protein called Large ribosomal subunit protein bL33A.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	y	49	Total 405	C 248	N 82	O 71	S 4	0	0

- Molecule 48 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	z	46	Total 377	C 225	N 97	O 54	S 1	0	0

- Molecule 49 is a protein called Large ribosomal subunit protein bL35.

Mol	Chain	Residues	Atoms				AltConf	Trace
49	1	63	Total 502	C 302	N 115	O 85	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
50	2	37	Total 299	C 181	N 66	O 47	S 5	0	0

- Molecule 51 is a RNA chain called 23S rRNA fragment.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	4	81	Total 1740	C 775	N 313	O 571	P 81	0	0

- Molecule 52 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
52	A	208	Total 208	Mg 208	0
52	E	2	Total 2	Mg 2	0
52	H	1	Total 1	Mg 1	0
52	K	1	Total 1	Mg 1	0
52	N	1	Total 1	Mg 1	0
52	Q	1	Total 1	Mg 1	0

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Mol	Chain	Residues	Atoms	AltConf
52	R	1	Total Mg 1 1	0
52	T	2	Total Mg 2 2	0
52	Y	376	Total Mg 376 376	0
52	U	10	Total Mg 10 10	0
52	Z	10	Total Mg 10 10	0
52	b	1	Total Mg 1 1	0
52	c	1	Total Mg 1 1	0
52	h	1	Total Mg 1 1	0
52	i	2	Total Mg 2 2	0
52	o	1	Total Mg 1 1	0
52	p	1	Total Mg 1 1	0
52	t	1	Total Mg 1 1	0
52	y	2	Total Mg 2 2	0
52	1	1	Total Mg 1 1	0

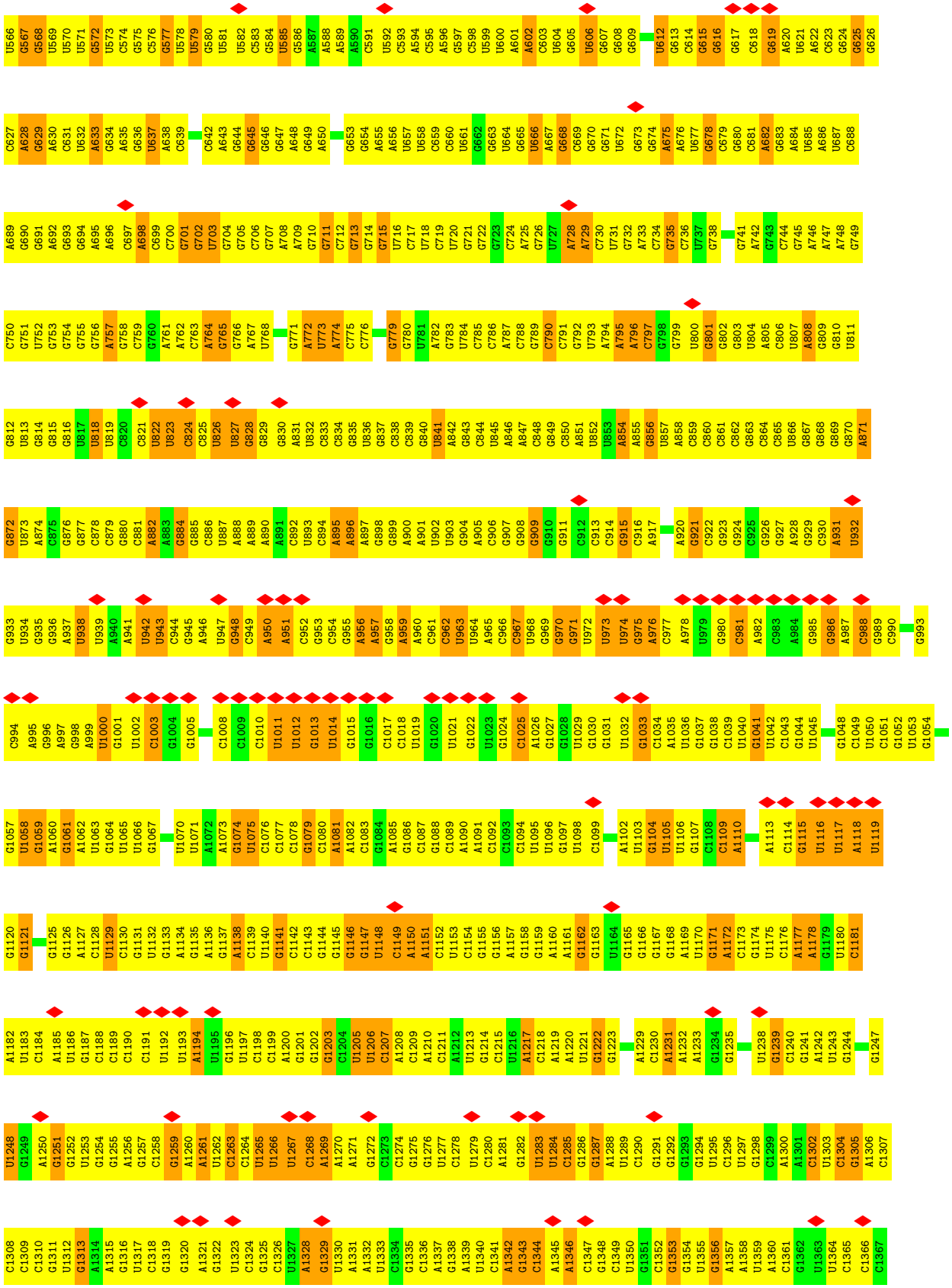
- Molecule 53 is ZINC ION (CCD ID: ZN) (formula: Zn).

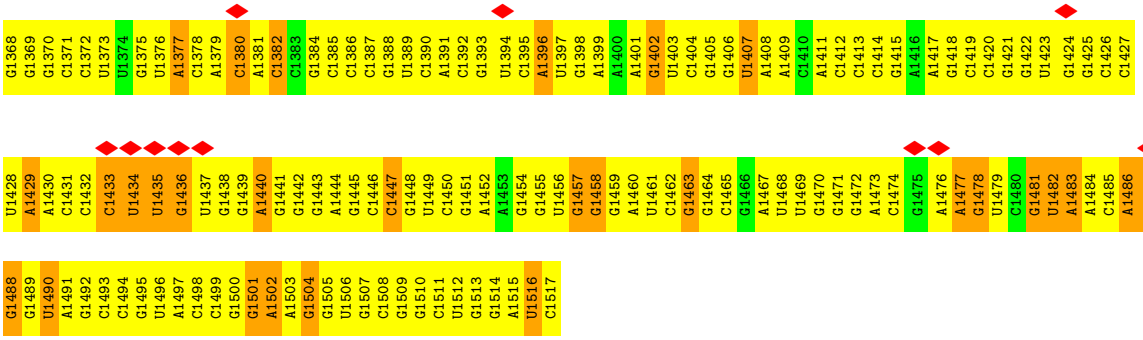
Mol	Chain	Residues	Atoms	AltConf
53	N	1	Total Zn 1 1	0
53	R	1	Total Zn 1 1	0
53	t	1	Total Zn 1 1	0
53	y	1	Total Zn 1 1	0
53	2	1	Total Zn 1 1	0

3 Residue-property plots (i)

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 atom inclusion in map 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 diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

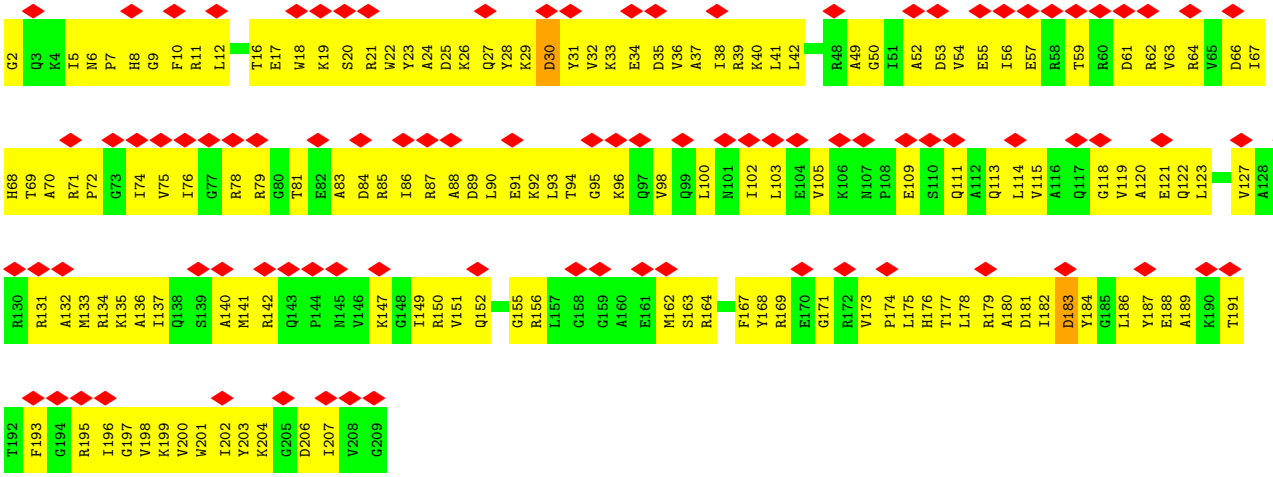
- Molecule 1: 16S rRNA





• Molecule 2: Small ribosomal subunit protein uS3

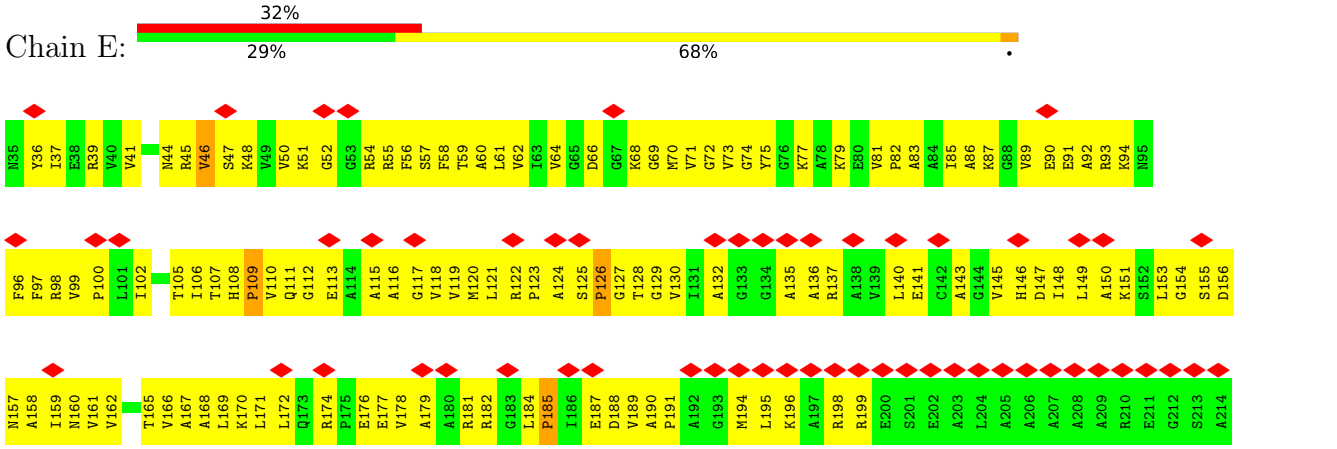
Chain C:



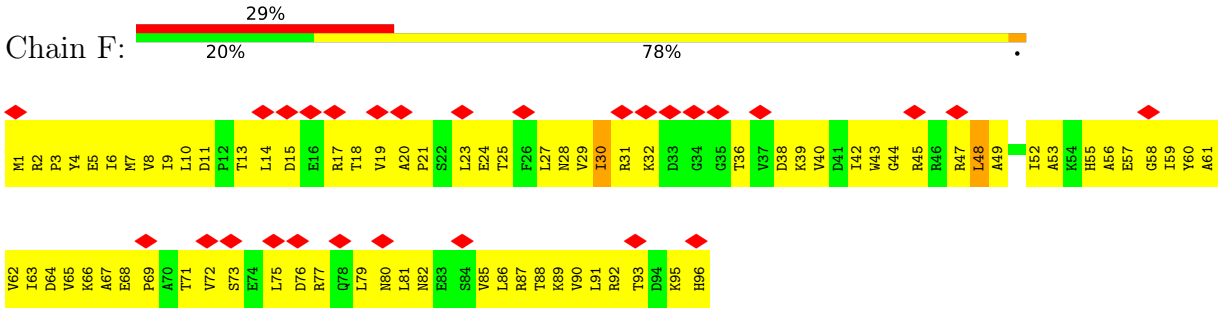
• Molecule 3: Small ribosomal subunit protein uS4

Chain D:

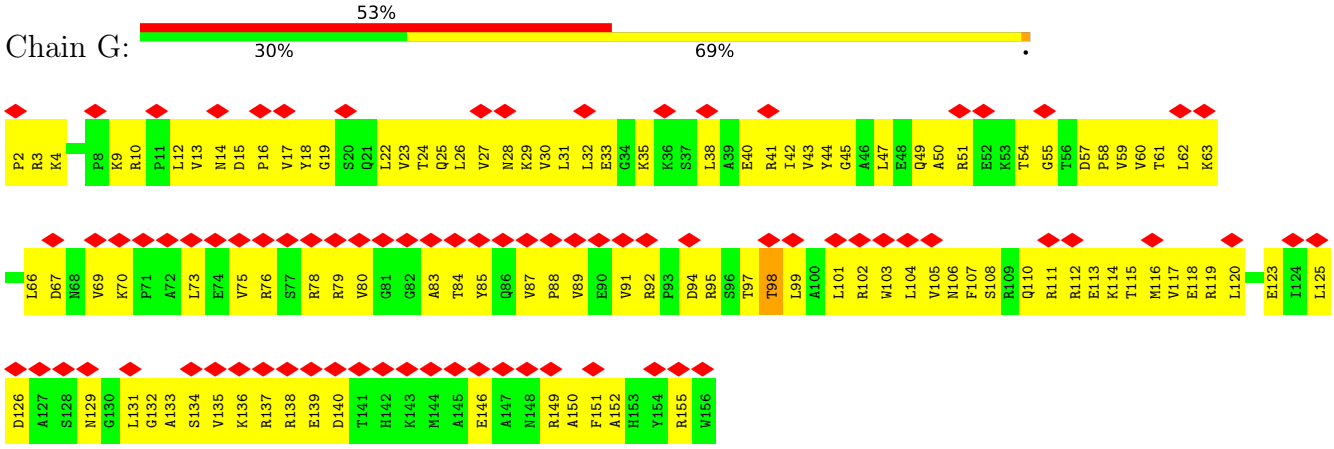
• Molecule 4: Small ribosomal subunit protein uS5



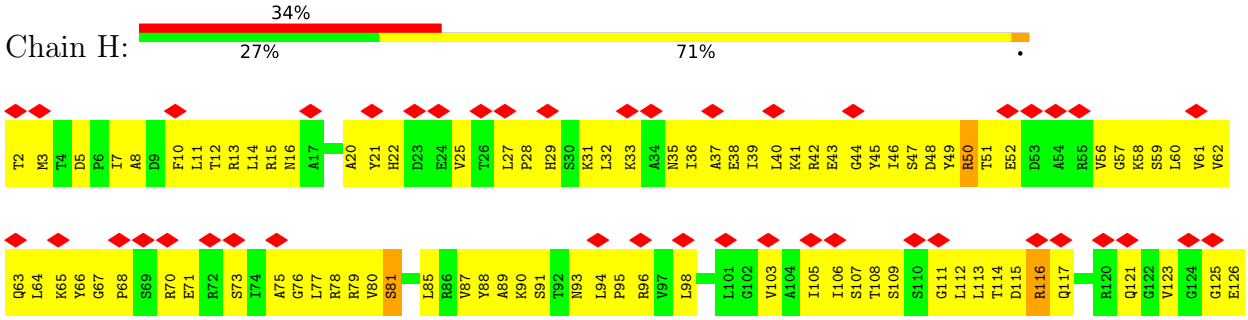
• Molecule 5: Small ribosomal subunit protein bS6

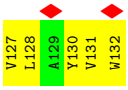


• Molecule 6: Small ribosomal subunit protein uS7

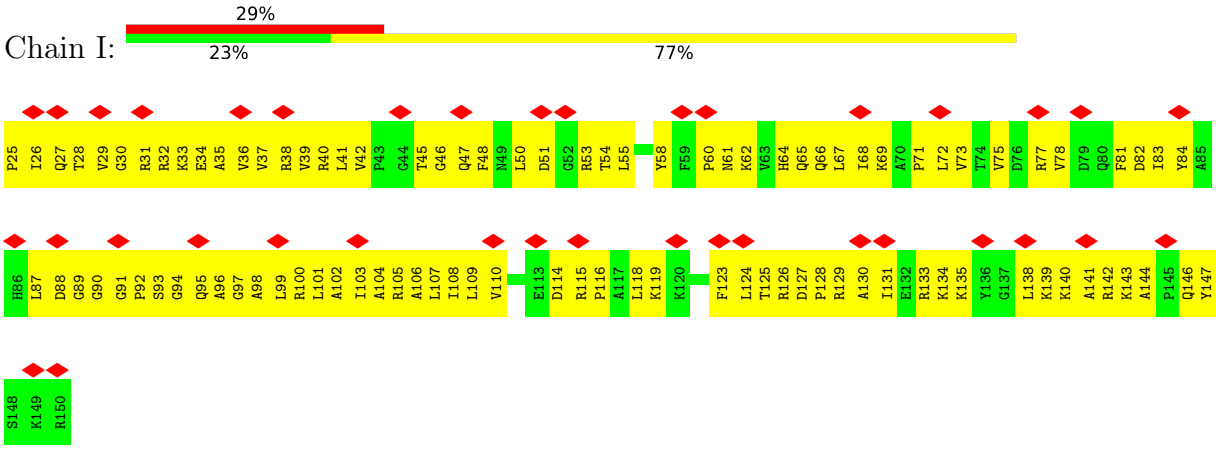


• Molecule 7: Small ribosomal subunit protein uS8

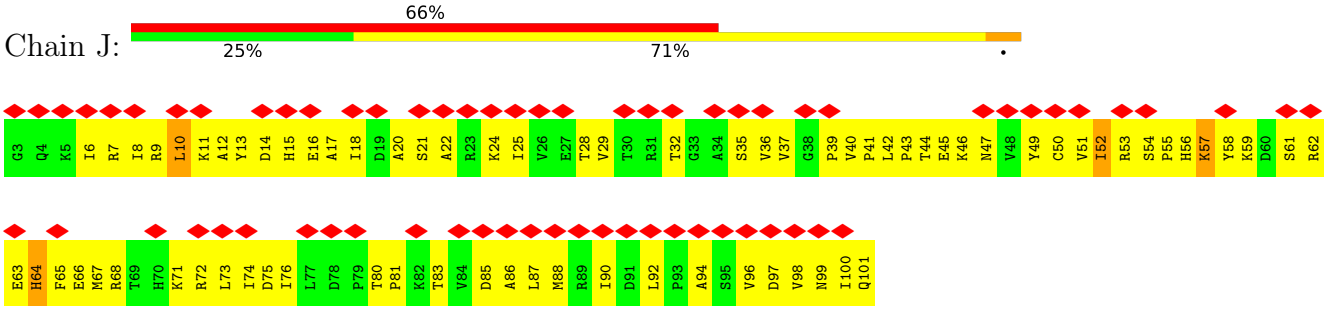




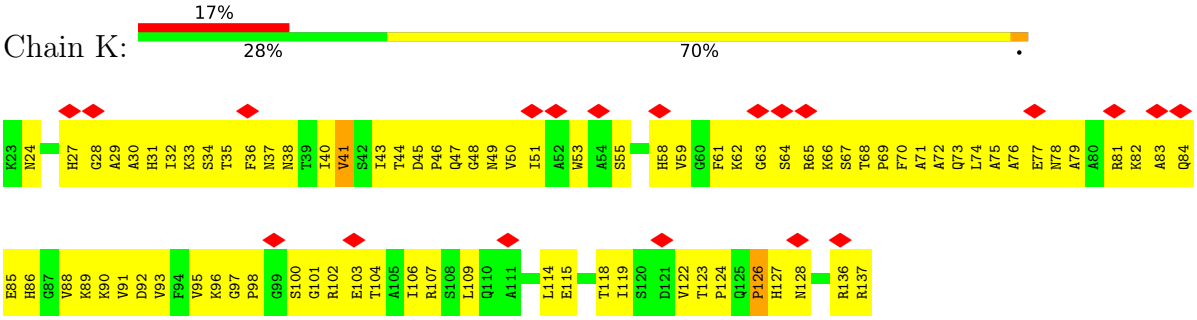
• Molecule 8: Small ribosomal subunit protein uS9



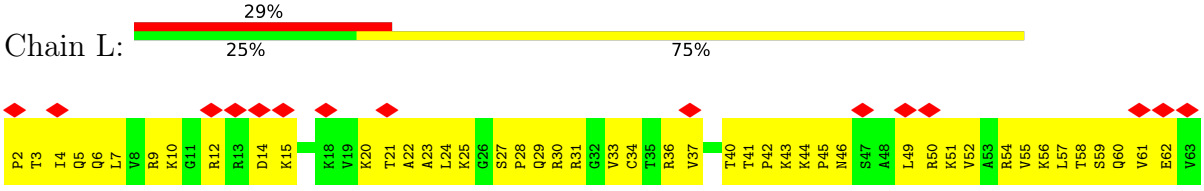
• Molecule 9: Small ribosomal subunit protein uS10

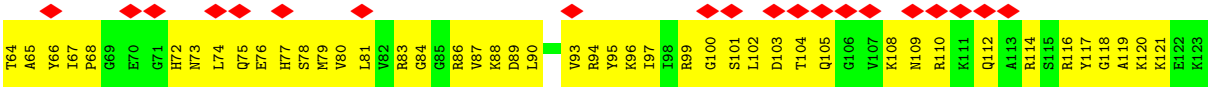


• Molecule 10: Small ribosomal subunit protein uS11

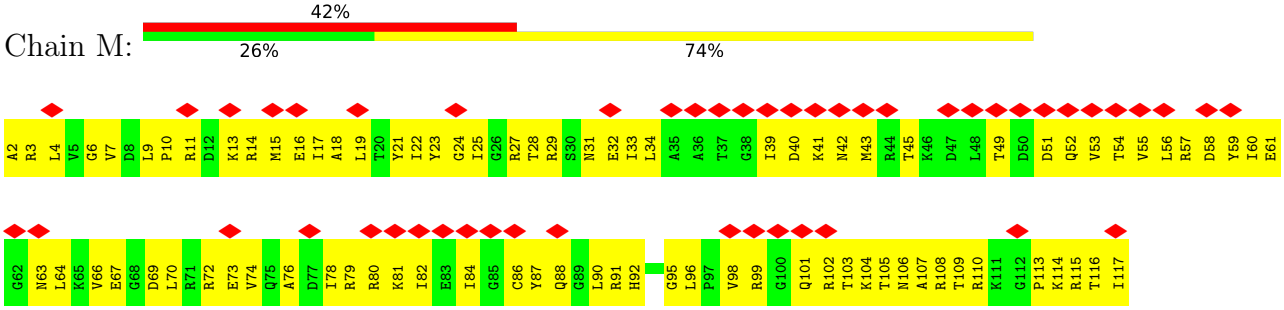


• Molecule 11: Small ribosomal subunit protein uS12

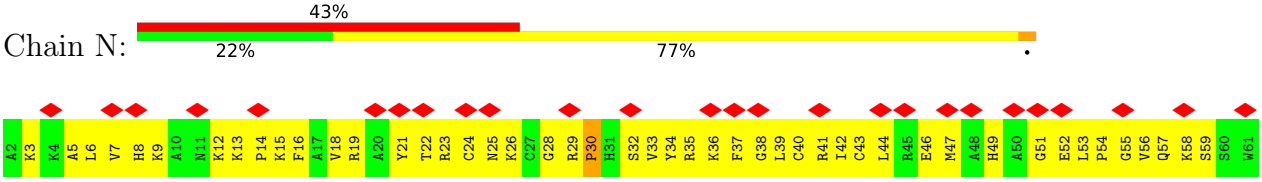




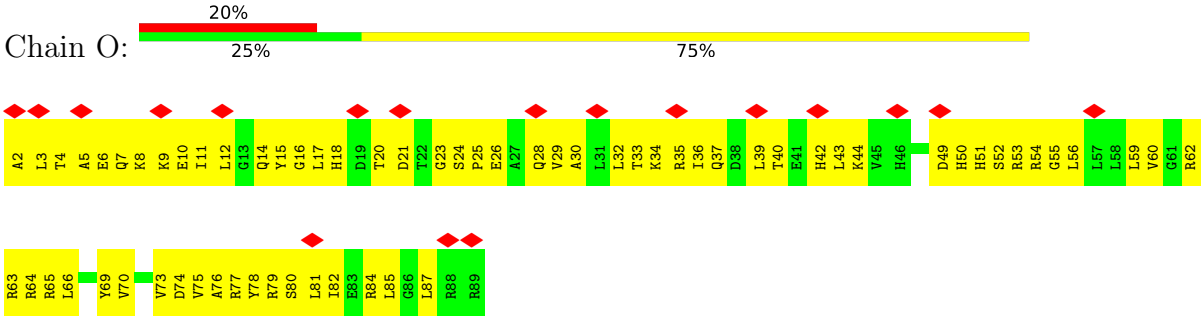
• Molecule 12: Small ribosomal subunit protein uS13



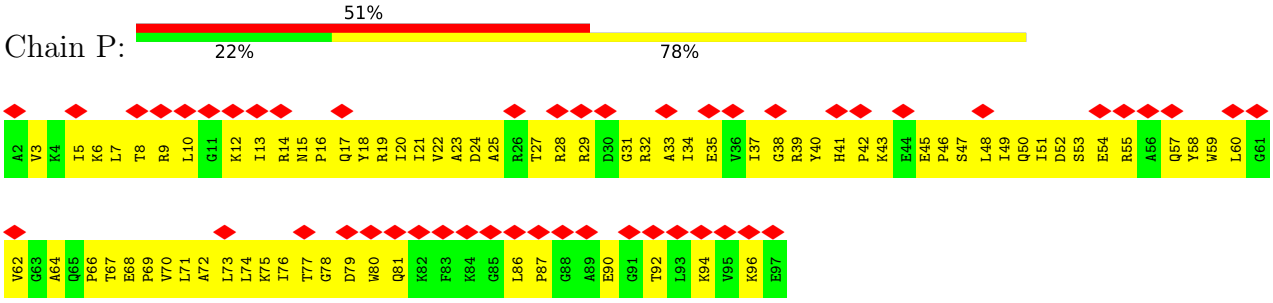
• Molecule 13: Small ribosomal subunit protein uS14B



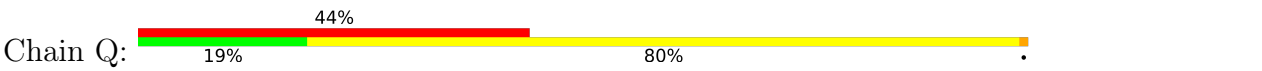
• Molecule 14: Small ribosomal subunit protein uS15

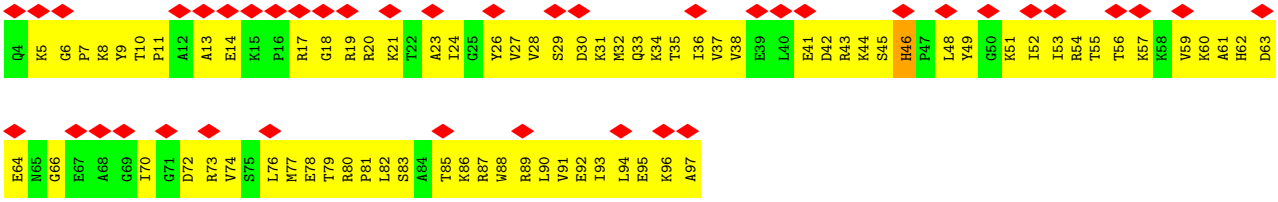


• Molecule 15: Small ribosomal subunit protein bS16

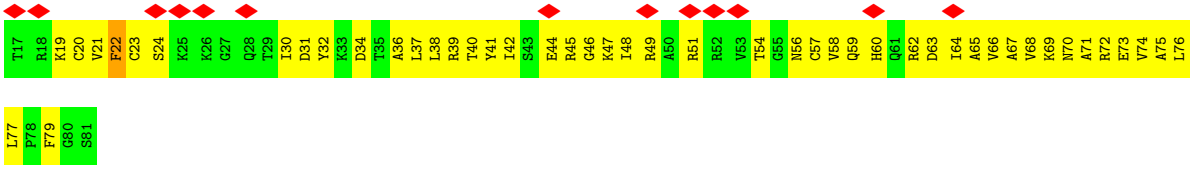


• Molecule 16: Small ribosomal subunit protein uS17

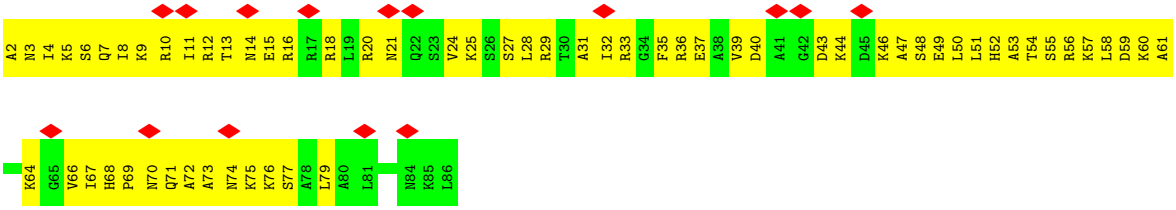




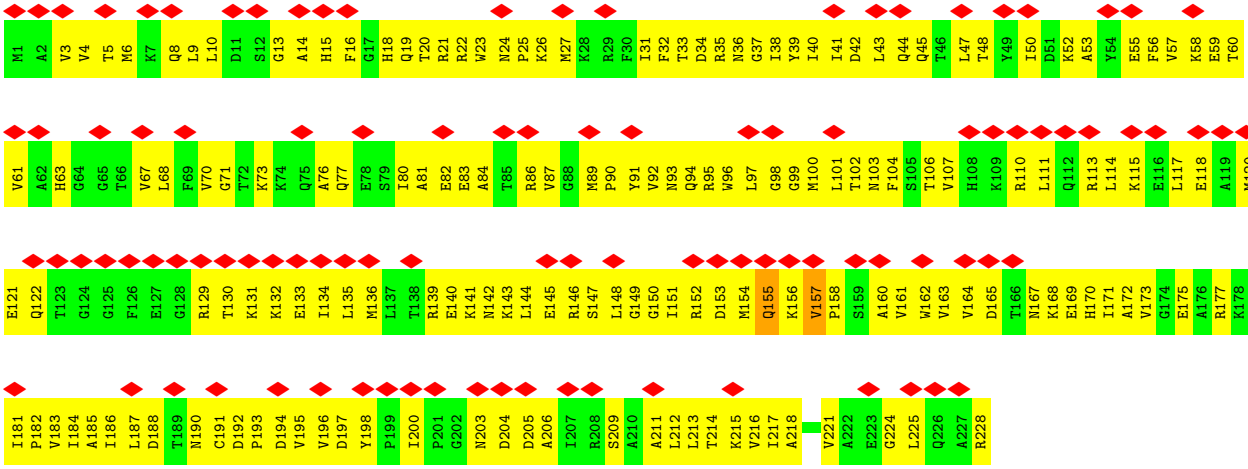
• Molecule 17: Small ribosomal subunit protein bS18B



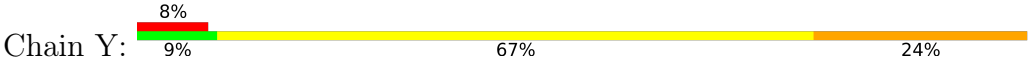
• Molecule 18: Small ribosomal subunit protein bS20

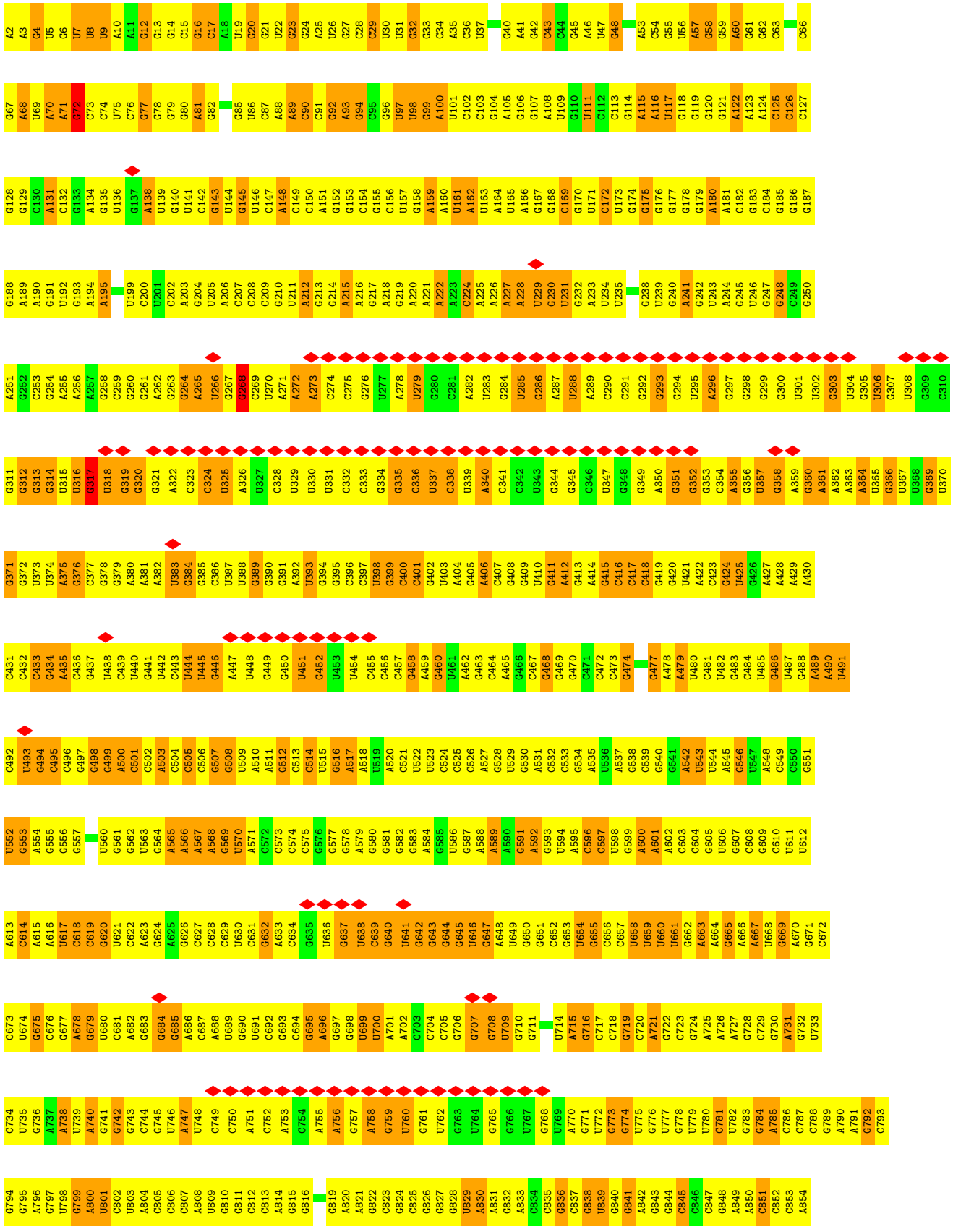


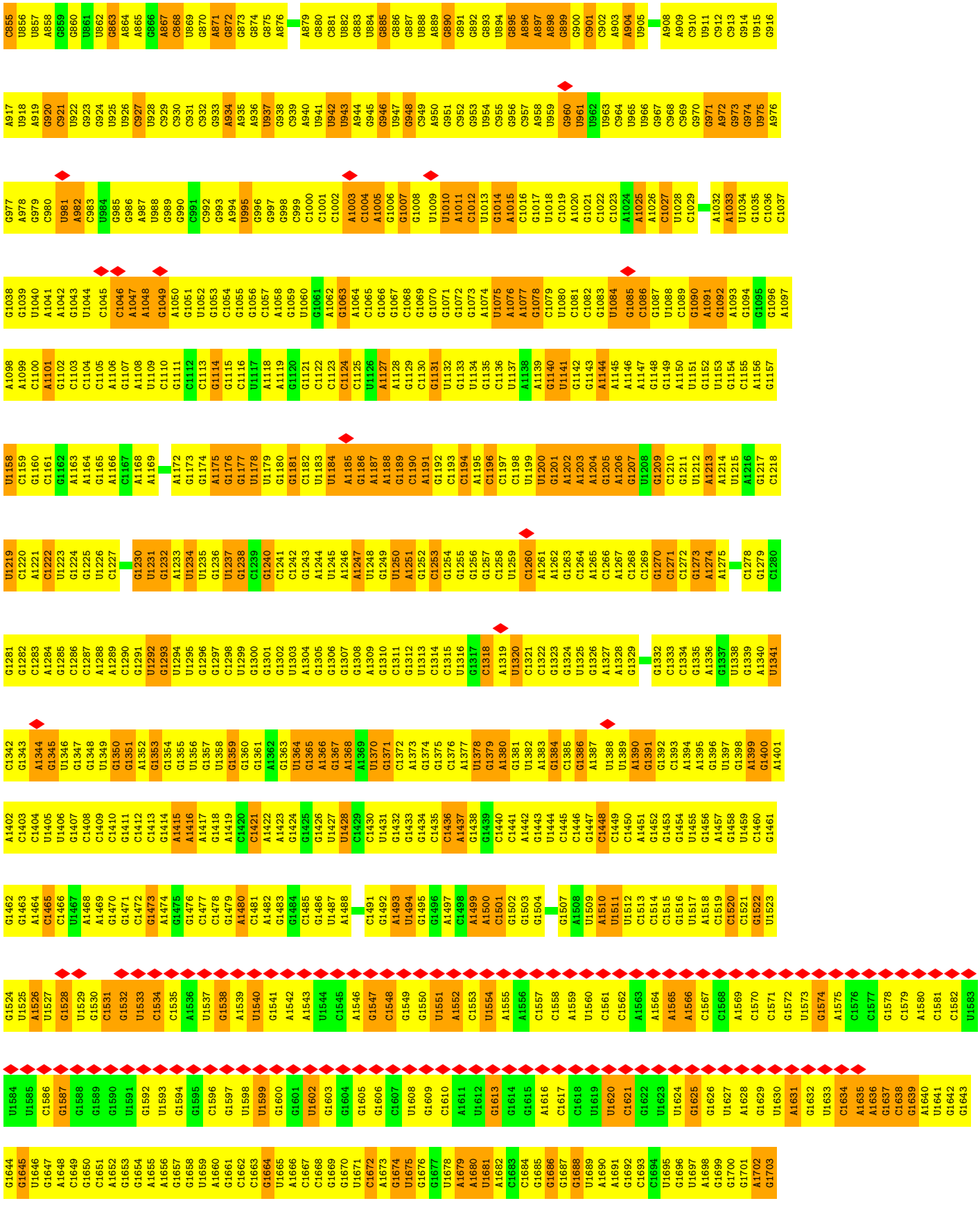
• Molecule 19: Small ribosomal subunit protein uS2

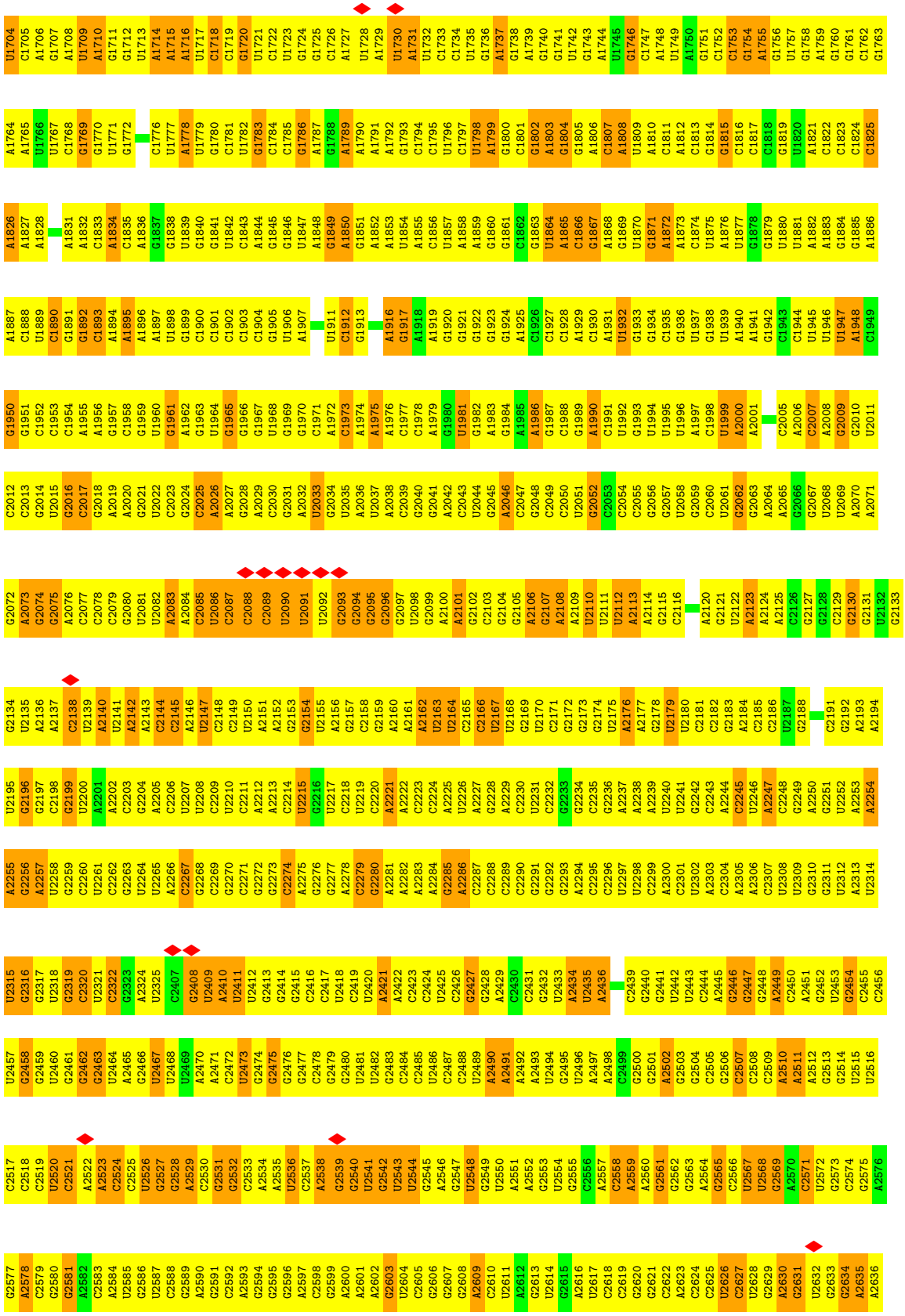


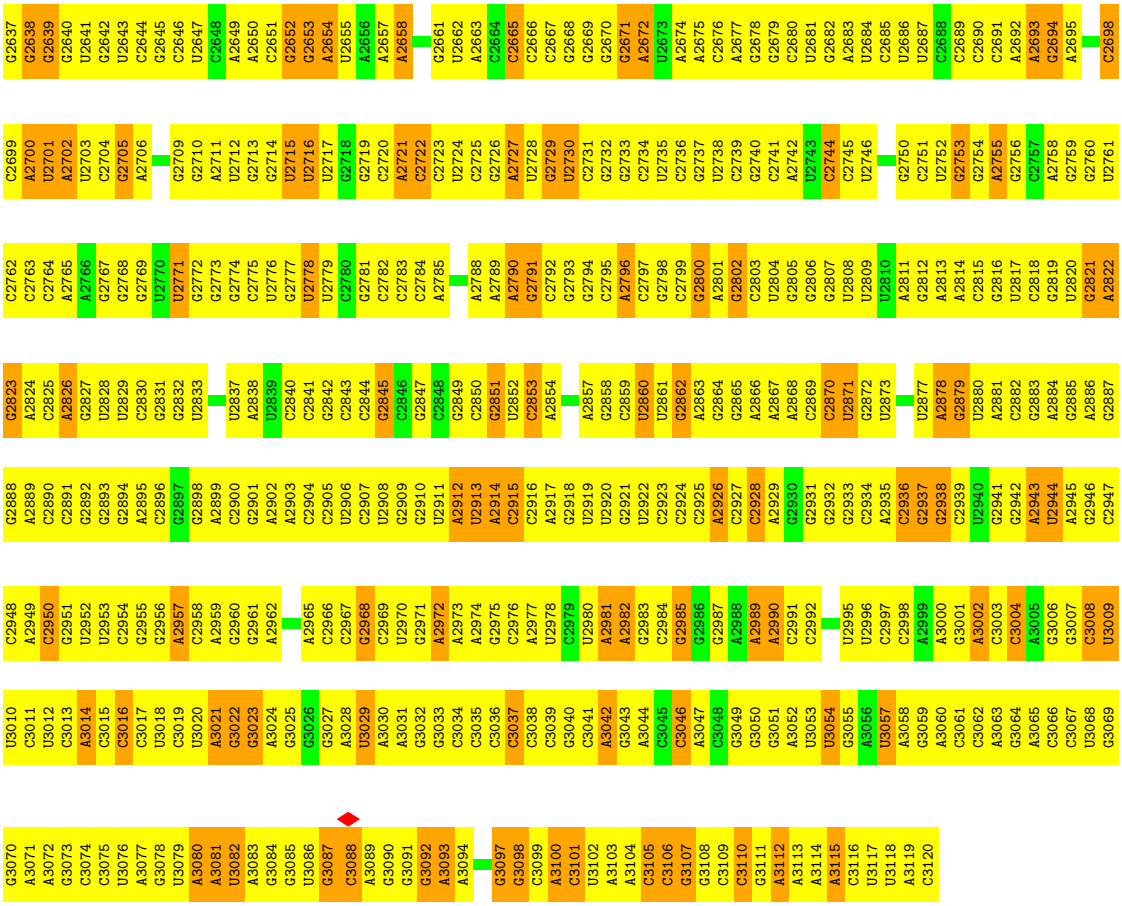
• Molecule 20: 23S rRNA









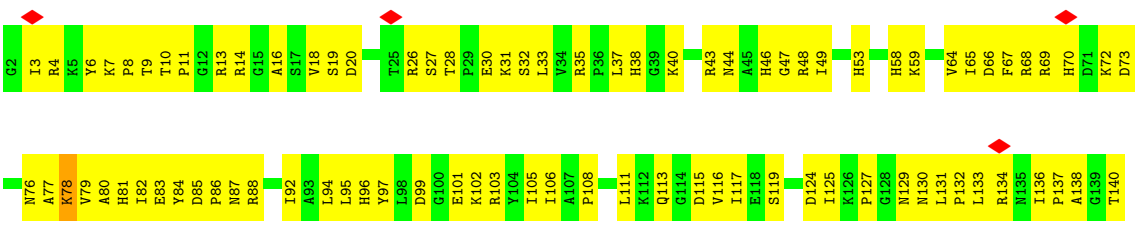


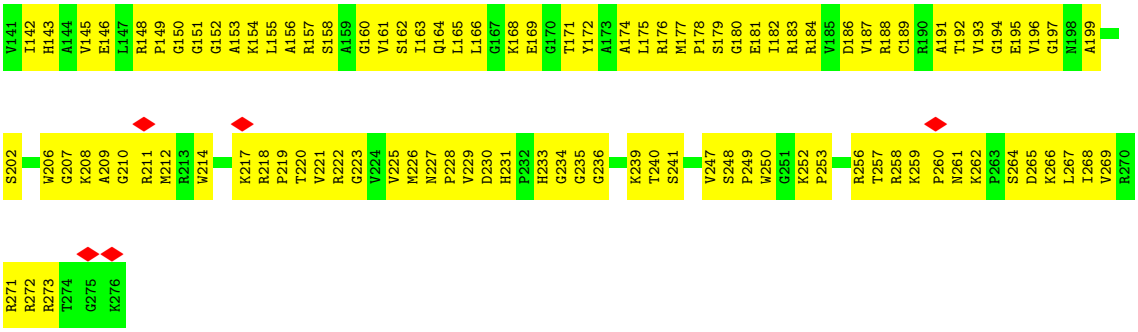
• Molecule 21: 5S rRNA

Chain U:

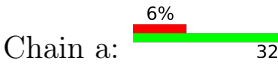
• Molecule 22: Large ribosomal subunit protein uL2

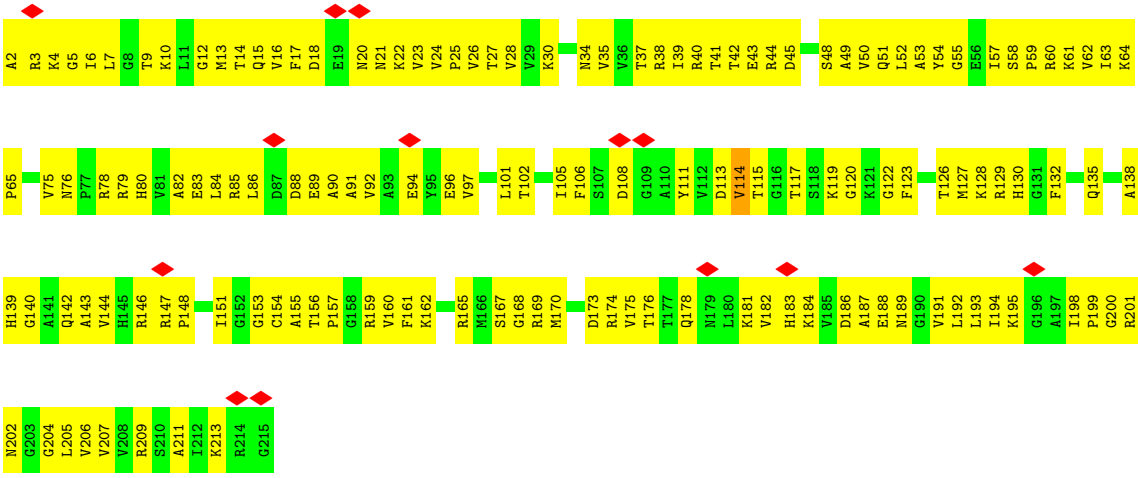
Chain Z:



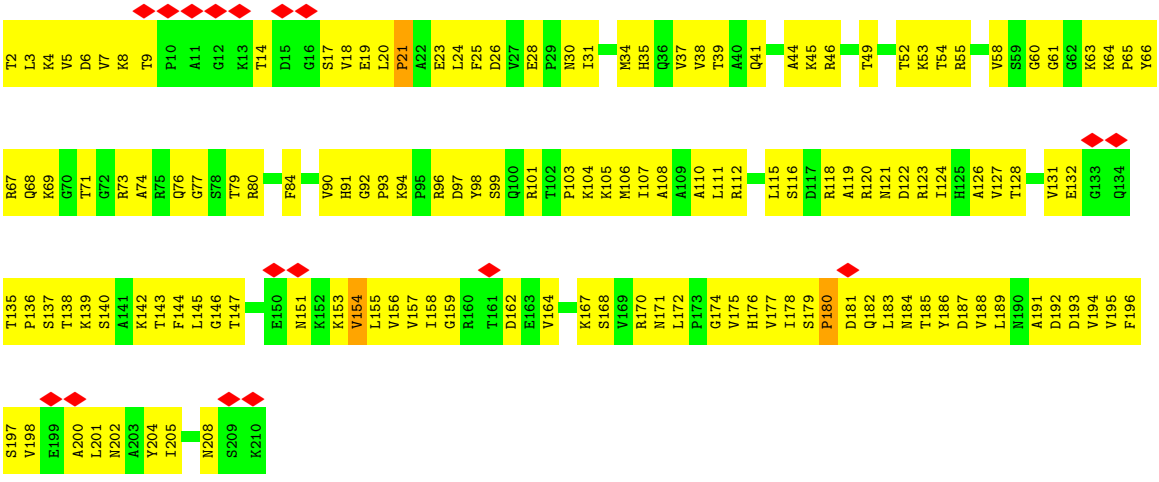


• Molecule 23: Large ribosomal subunit protein uL3





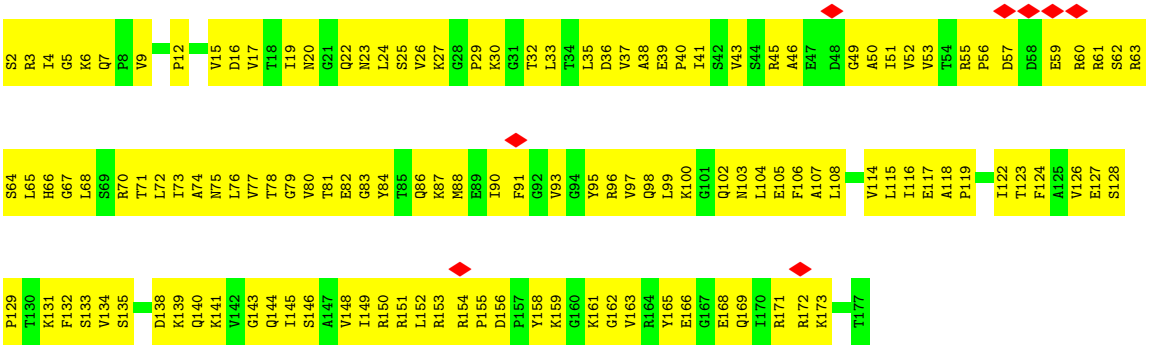
• Molecule 24: Large ribosomal subunit protein uL4



• Molecule 25: Large ribosomal subunit protein uL5

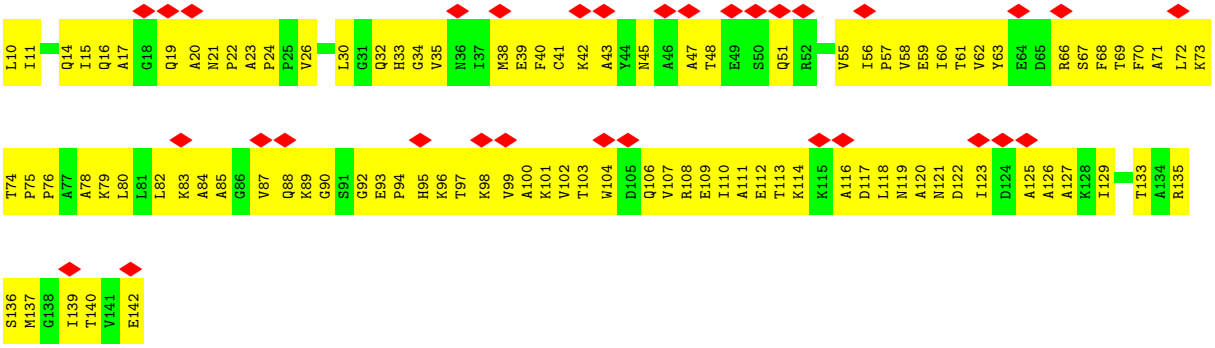
• Molecule 26: Large ribosomal subunit protein uL6

Chain d:



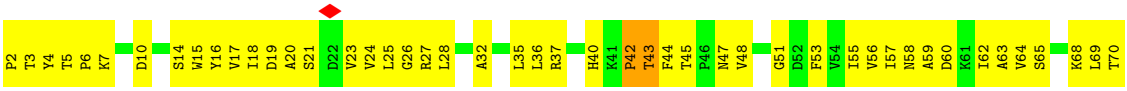
• Molecule 27: Large ribosomal subunit protein uL11

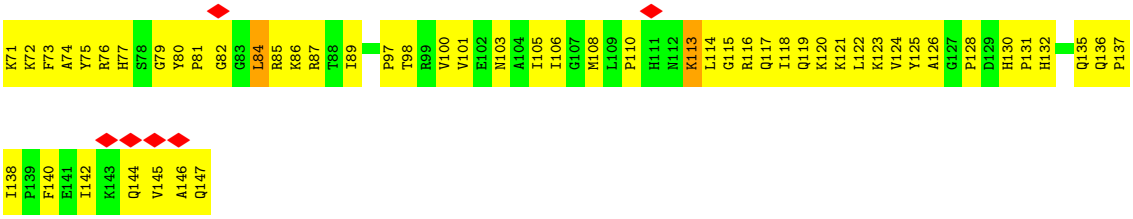
Chain e:



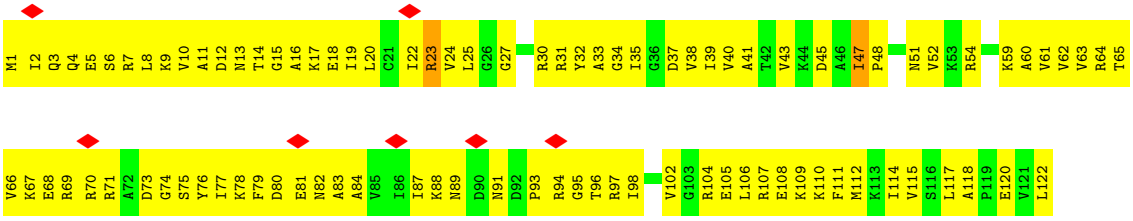
• Molecule 28: 50S ribosomal protein L13

Chain f:

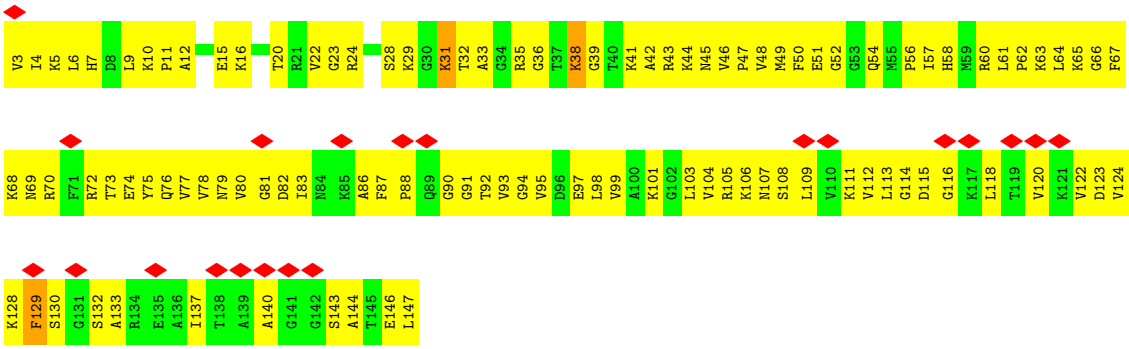




• Molecule 29: Large ribosomal subunit protein uL14

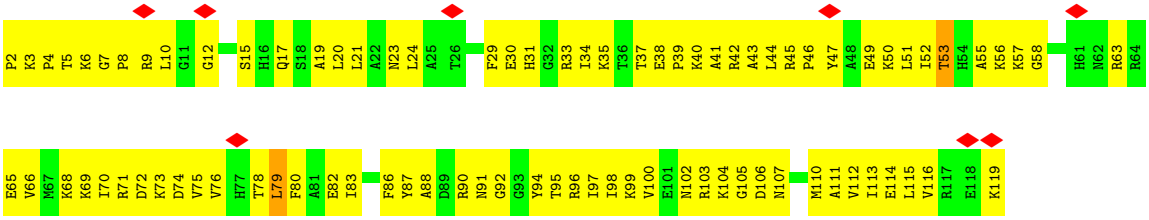


• Molecule 30: 50S ribosomal protein L15



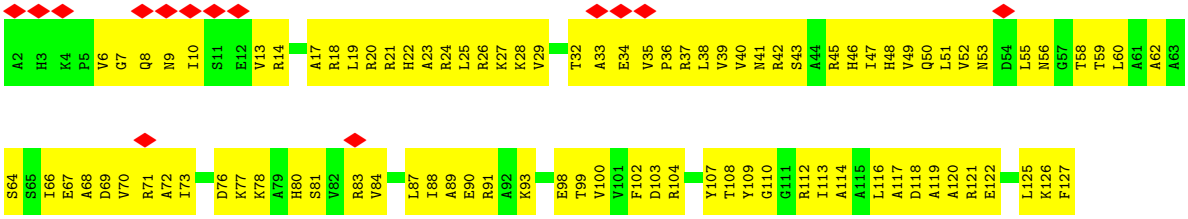
• Molecule 31: Large ribosomal subunit protein uL16

• Molecule 32: Large ribosomal subunit protein bL17



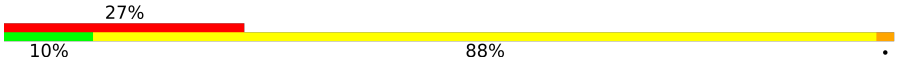
• Molecule 33: Large ribosomal subunit protein uL18

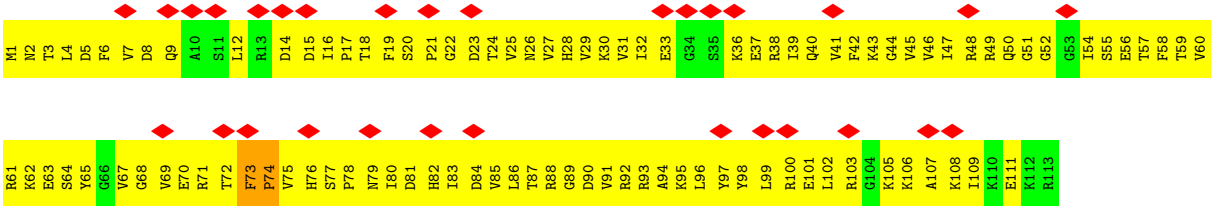
Chain k:



• Molecule 34: Large ribosomal subunit protein bL19

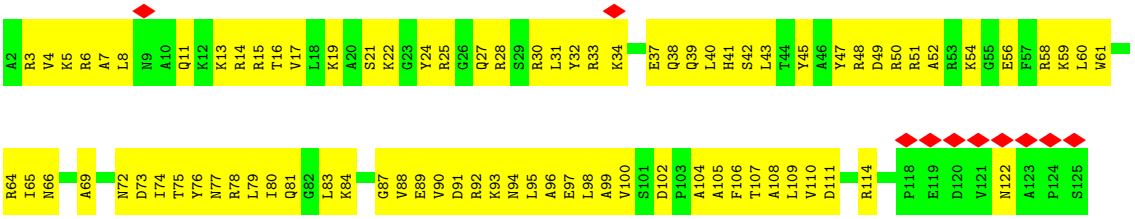
Chain l:





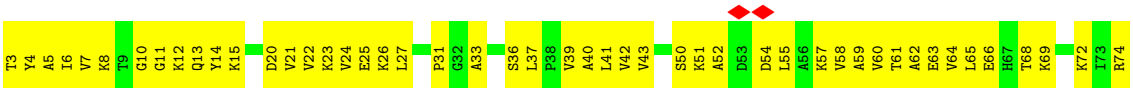
• Molecule 35: Large ribosomal subunit protein bL20

Chain m:

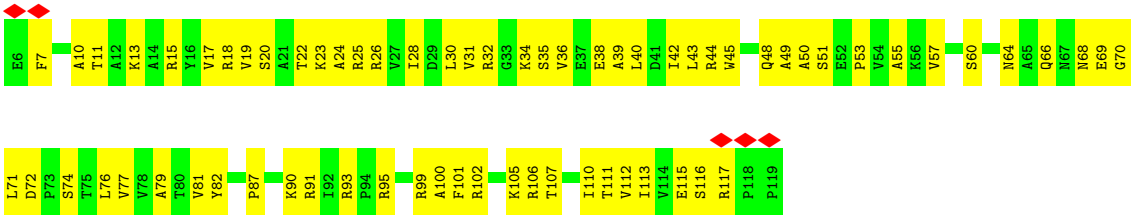


• Molecule 36: Large ribosomal subunit protein bL21

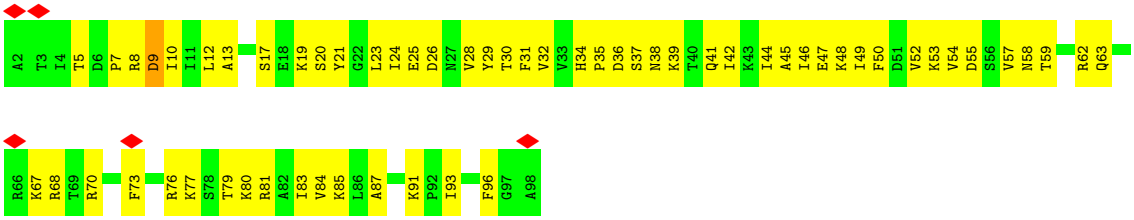
Chain n:



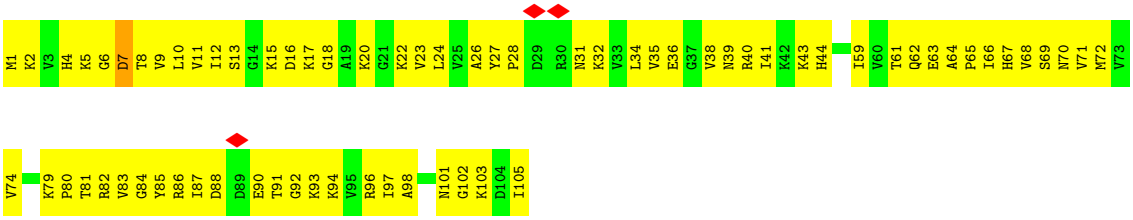
• Molecule 37: 50S ribosomal protein L22



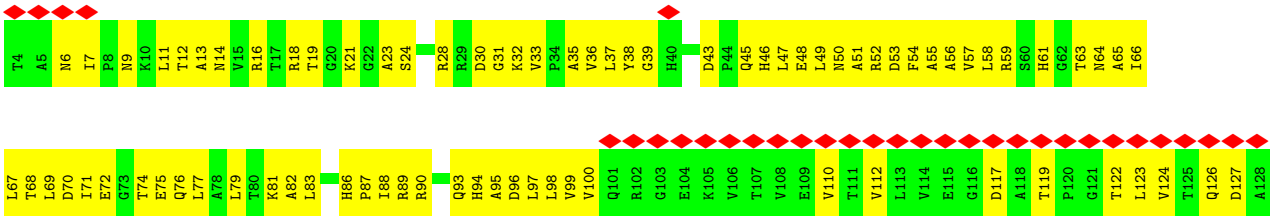
• Molecule 38: Large ribosomal subunit protein uL23

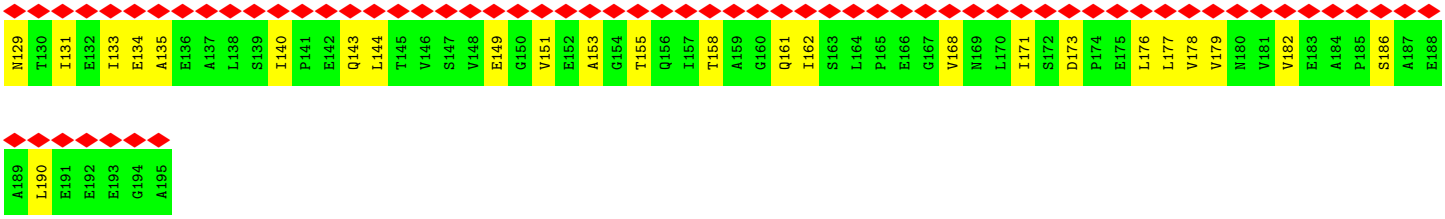


• Molecule 39: Large ribosomal subunit protein uL24

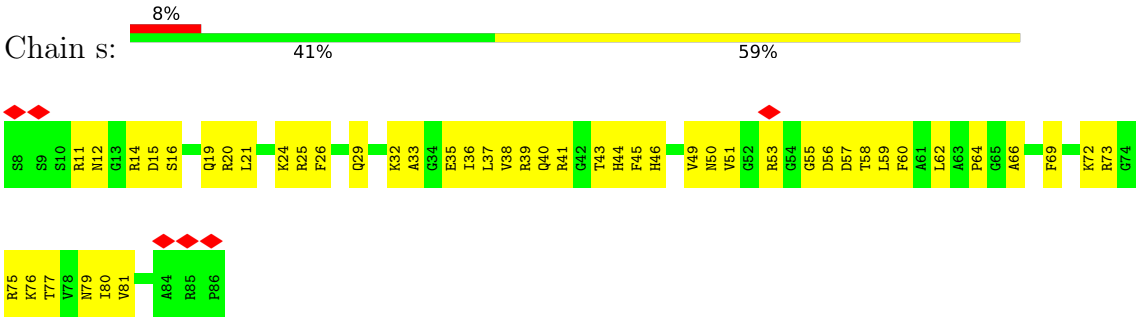


• Molecule 40: Large ribosomal subunit protein bL25

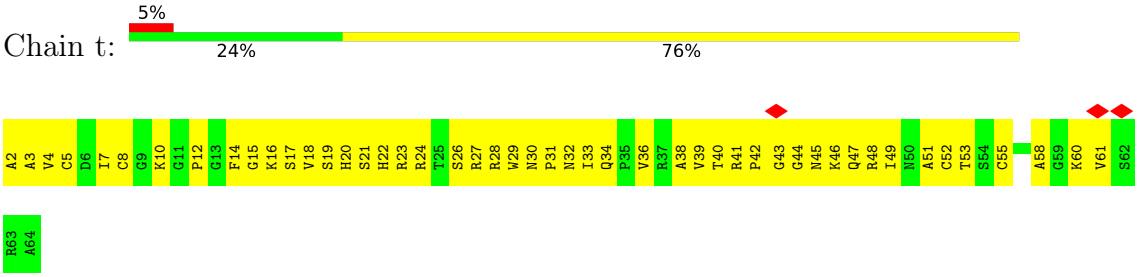




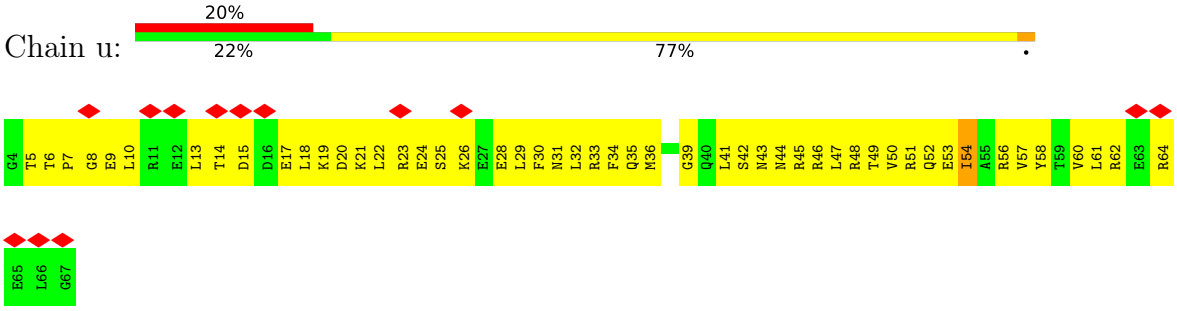
• Molecule 41: Large ribosomal subunit protein bL27



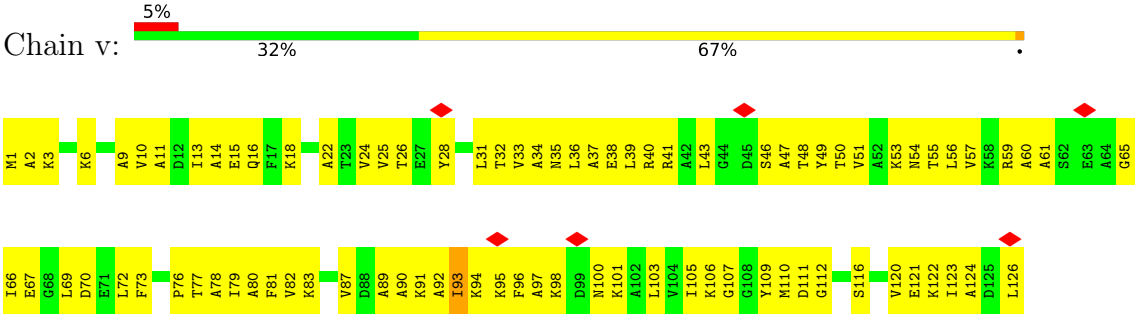
• Molecule 42: Large ribosomal subunit protein bL28



• Molecule 43: Large ribosomal subunit protein uL29

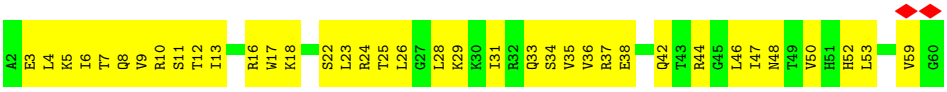


• Molecule 44: Large ribosomal subunit protein uL10



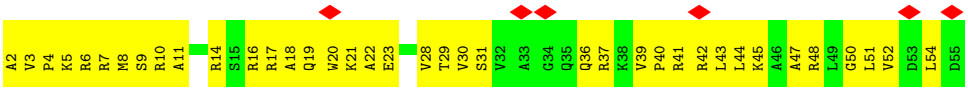
• Molecule 45: Large ribosomal subunit protein uL30

Chain w:



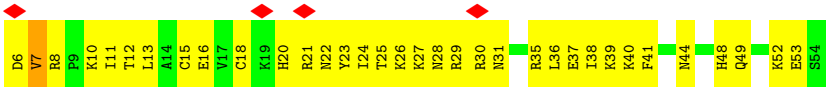
• Molecule 46: Large ribosomal subunit protein bL32

Chain x:



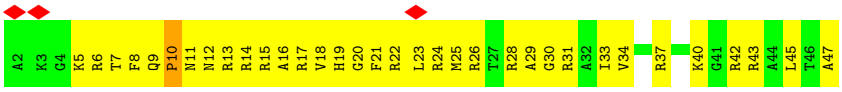
• Molecule 47: Large ribosomal subunit protein bL33A

Chain y:



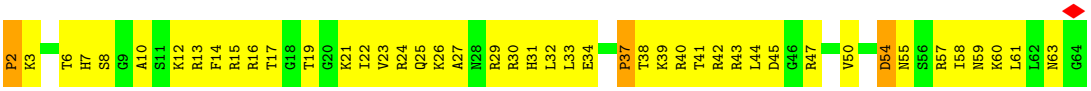
• Molecule 48: 50S ribosomal protein L34

Chain z:



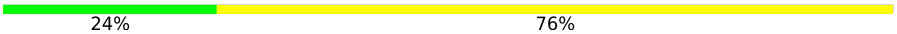
• Molecule 49: Large ribosomal subunit protein bL35

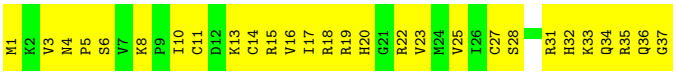
Chain 1:



• Molecule 50: 50S ribosomal protein L36

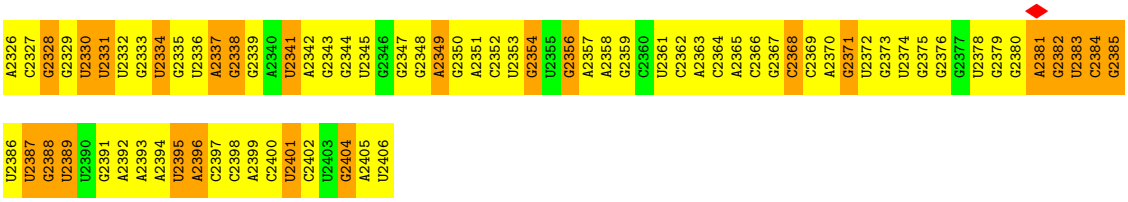
Chain 2:





• Molecule 51: 23S rRNA fragment

Chain 4:


A2326
C2327
G2328
G2329
U2330
U2331
U2332
G2333
U2334
G2335
U2336
A2337
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G2339
A2340
U2341
A2342
G2343
G2344
U2345
G2346
G2347
G2348
A2349
G2350
A2351
C2352
U2353
G2354
U2355
G2356
A2357
A2358
G2359
C2360
U2361
C2362
A2363
C2364
A2365
C2366
G2367
C2368
C2369
A2370
G2371
U2372
G2373
U2374
G2375
G2376
G2377
U2378
G2379
G2380
A2381
G2382
U2383
C2384
G2385

U2386
U2387
G2388
U2389
U2390
G2391
A2392
A2393
A2394
U2395
A2396
C2397
C2398
A2399
C2400
U2401
C2402
U2403
G2404
A2405
U2406

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	1466881	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	901.165	Depositor
Minimum defocus (nm)	400	Depositor
Maximum defocus (nm)	1400	Depositor
Magnification	96000	Depositor
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	17.420	Depositor
Minimum map value	-9.464	Depositor
Average map value	-0.007	Depositor
Map value standard deviation	0.487	Depositor
Recommended contour level	0.968	Depositor
Map size (Å)	539.784, 539.784, 539.784	wwPDB
Map dimensions	648, 648, 648	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.833, 0.833, 0.833	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: G7M, ZN, MG

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	A	0.13	0/36278	0.25	0/56596
2	C	0.15	0/1684	0.37	0/2261
3	D	0.19	0/1672	0.53	1/2251 (0.0%)
4	E	0.24	0/1312	0.57	3/1772 (0.2%)
5	F	0.15	0/782	0.36	0/1059
6	G	0.15	0/1252	0.40	0/1690
7	H	0.16	0/1025	0.41	0/1385
8	I	0.13	0/1012	0.34	0/1362
9	J	0.16	0/802	0.42	0/1086
10	K	0.27	0/873	0.55	2/1180 (0.2%)
11	L	0.16	0/969	0.39	0/1294
12	M	0.38	2/942 (0.2%)	0.64	3/1260 (0.2%)
13	N	0.63	2/488 (0.4%)	1.31	4/650 (0.6%)
14	O	0.17	0/729	0.46	0/977
15	P	0.17	0/778	0.39	0/1049
16	Q	0.15	0/759	0.42	0/1016
17	R	0.24	0/518	0.74	2/693 (0.3%)
18	T	0.20	0/663	0.51	0/882
19	V	0.14	0/1822	0.38	0/2457
20	Y	0.31	9/73003 (0.0%)	0.32	13/113787 (0.0%)
21	U	0.18	0/2821	0.27	0/4396
22	Z	0.27	0/2153	0.51	0/2895
23	a	0.25	0/1609	0.47	0/2165
24	b	0.29	1/1592 (0.1%)	0.57	3/2153 (0.1%)
25	c	0.39	3/1467 (0.2%)	0.80	6/1973 (0.3%)
26	d	0.20	0/1369	0.38	0/1848
27	e	0.10	0/986	0.24	0/1303
28	f	0.28	0/1157	0.53	1/1567 (0.1%)
29	g	0.30	0/946	0.51	0/1268
30	h	0.25	0/1091	0.53	1/1457 (0.1%)
31	i	0.25	0/1118	0.49	0/1506
32	j	0.24	0/945	0.49	0/1267

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
33	k	0.19	0/966	0.39	0/1298
34	l	1.20	3/921 (0.3%)	1.31	6/1236 (0.5%)
35	m	0.28	0/1000	0.47	0/1341
36	n	0.21	0/764	0.36	0/1030
37	o	0.23	0/887	0.38	0/1204
38	p	0.26	0/766	0.45	0/1030
39	q	0.19	0/738	0.36	0/987
40	r	0.18	0/1443	0.43	1/1970 (0.1%)
41	s	0.25	0/595	0.42	0/798
42	t	0.24	0/478	0.44	0/641
43	u	0.24	0/534	0.59	0/713
44	v	0.13	0/925	0.37	0/1246
45	w	0.24	0/477	0.40	0/640
46	x	0.28	0/427	0.55	0/572
47	y	0.26	0/413	0.55	0/553
48	z	0.32	0/380	0.58	1/500 (0.2%)
49	1	0.33	0/507	0.61	2/672 (0.3%)
50	2	0.23	0/303	0.41	0/401
51	4	0.07	0/1943	0.19	0/3020
All	All	0.27	20/159084 (0.0%)	0.37	49/238357 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
9	J	0	1
29	g	0	1
30	h	0	1
All	All	0	3

All (20) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
20	Y	268	G	C1'-N9	33.53	1.98	1.48
34	l	74	PRO	CG-CD	-33.32	0.37	1.50
20	Y	360	G	N1-C2	21.73	1.81	1.37
20	Y	360	G	C6-N1	20.57	1.80	1.39
20	Y	360	G	C2-N3	17.48	1.67	1.32
20	Y	360	G	N3-C4	17.23	1.70	1.35
20	Y	360	G	C5-C6	15.36	1.73	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
20	Y	360	G	C5-C4	13.79	1.66	1.38
13	N	30	PRO	CG-CD	-10.83	1.14	1.50
20	Y	268	G	N9-C4	10.07	1.58	1.38
34	l	74	PRO	CB-CG	9.14	1.95	1.49
20	Y	268	G	N9-C8	8.82	1.55	1.37
12	M	113	PRO	CG-CD	-7.29	1.25	1.50
25	c	9	PRO	CG-CD	-7.20	1.26	1.50
34	l	74	PRO	N-CD	6.75	1.57	1.47
12	M	113	PRO	N-CD	6.47	1.56	1.47
13	N	30	PRO	CB-CG	-6.37	1.17	1.49
25	c	9	PRO	N-CD	5.85	1.55	1.47
25	c	126	PRO	CG-CD	-5.57	1.31	1.50
24	b	21	PRO	N-CD	-5.49	1.40	1.47

All (49) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	l	74	PRO	N-CD-CG	-36.18	48.92	103.20
13	N	30	PRO	N-CD-CG	-19.39	74.12	103.20
25	c	126	PRO	CA-N-CD	-16.94	88.28	112.00
13	N	30	PRO	CA-N-CD	-15.42	90.41	112.00
13	N	30	PRO	CA-CB-CG	-14.18	77.55	104.50
24	b	21	PRO	CA-N-CD	-14.03	92.36	112.00
34	l	74	PRO	CA-CB-CG	-13.70	78.46	104.50
25	c	9	PRO	CA-N-CD	-13.64	92.90	112.00
12	M	113	PRO	CA-N-CD	-13.29	93.40	112.00
20	Y	268	G	N9-C1'-C2'	11.29	128.94	112.00
13	N	30	PRO	CB-CG-CD	11.24	142.07	106.10
3	D	189	PRO	CA-N-CD	-11.17	96.36	112.00
25	c	9	PRO	N-CD-CG	-10.89	86.87	103.20
4	E	126	PRO	CA-N-CD	-10.87	96.79	112.00
12	M	113	PRO	N-CD-CG	-10.13	88.00	103.20
34	l	74	PRO	CB-CG-CD	-10.04	73.99	106.10
10	K	126	PRO	CA-N-CD	-10.02	97.97	112.00
28	f	42	PRO	CA-N-CD	-9.86	98.19	112.00
20	Y	268	G	C8-N9-C4	-9.67	77.39	106.40
34	l	74	PRO	CA-N-CD	-9.39	98.86	112.00
4	E	185	PRO	CA-N-CD	-9.13	99.21	112.00
20	Y	72	G	OP2-P-O3'	-8.89	81.31	108.00
20	Y	799	G	OP1-P-O3'	-8.86	81.43	108.00
20	Y	800	A	OP1-P-O3'	-8.86	81.43	108.00
20	Y	800	A	OP2-P-O3'	-8.84	81.48	108.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
20	Y	799	G	OP2-P-O3'	-8.72	81.83	108.00
20	Y	72	G	OP1-P-O3'	-8.46	82.61	108.00
34	l	74	PRO	N-CA-CB	-8.33	96.11	103.35
20	Y	268	G	N7-C8-N9	8.08	137.33	113.10
24	b	180	PRO	CA-N-CD	-7.85	101.02	112.00
17	R	22	PHE	CA-C-N	-7.75	110.89	122.83
17	R	22	PHE	C-N-CA	-7.75	110.89	122.83
20	Y	268	G	C4-N9-C1'	7.04	147.60	126.50
25	c	126	PRO	N-CD-CG	-6.67	93.20	103.20
20	Y	317	G	N1-C6-O6	-6.55	100.25	119.90
25	c	9	PRO	CA-CB-CG	-6.44	92.26	104.50
12	M	113	PRO	CA-CB-CG	-6.16	92.81	104.50
49	1	37	PRO	CA-N-CD	-5.89	103.75	112.00
30	h	31	LYS	N-CA-CB	-5.88	107.46	114.17
40	r	153	ALA	CB-CA-C	-5.68	110.00	116.54
49	1	2	PRO	CA-N-CD	-5.67	104.07	112.00
10	K	126	PRO	N-CD-CG	-5.55	94.88	103.20
20	Y	317	G	C5-C6-O6	5.24	144.32	128.60
4	E	109	PRO	CA-N-CD	-5.23	104.68	112.00
48	z	10	PRO	CA-N-CD	-5.07	104.90	112.00
24	b	21	PRO	CB-CG-CD	-5.04	89.95	106.10
34	l	73	PHE	N-CA-C	5.04	112.76	108.22
25	c	126	PRO	CA-CB-CG	-5.04	94.93	104.50
20	Y	495	C	N3-C4-N4	-5.01	102.98	118.00

There are no chirality outliers.

All (3) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
9	J	10	LEU	Peptide
29	g	23	ARG	Sidechain
30	h	129	PHE	Peptide

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	A	32440	3	16321	2414	0
2	C	1660	0	1707	245	0
3	D	1641	0	1668	328	0
4	E	1296	0	1359	234	0
5	F	771	0	797	143	0
6	G	1232	0	1282	186	0
7	H	1010	0	1046	184	0
8	I	994	0	1050	206	0
9	J	788	0	819	147	0
10	K	855	0	863	133	0
11	L	958	0	1045	166	0
12	M	935	0	986	194	0
13	N	477	0	499	98	0
14	O	720	0	760	127	0
15	P	764	0	805	161	0
16	Q	748	0	795	163	0
17	R	513	0	537	122	0
18	T	660	0	711	140	0
19	V	1793	0	1839	270	0
20	Y	65241	0	32854	5581	0
21	U	2522	0	1284	195	0
22	Z	2110	0	2165	344	0
23	a	1587	0	1630	296	0
24	b	1569	0	1607	264	0
25	c	1445	0	1476	402	0
26	d	1348	0	1399	216	0
27	e	990	0	1002	132	0
28	f	1130	0	1167	174	0
29	g	938	0	1000	219	0
30	h	1078	0	1151	247	0
31	i	1092	0	1128	177	0
32	j	928	0	972	187	0
33	k	956	0	991	163	0
34	l	907	0	938	306	0
35	m	988	0	1038	169	0
36	n	754	0	802	122	0
37	o	873	0	909	93	0
38	p	756	0	802	122	0
39	q	732	0	782	137	0
40	r	1428	0	1443	150	0
41	s	586	0	601	103	0
42	t	470	0	480	86	0
43	u	531	0	541	118	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
44	v	918	0	959	147	0
45	w	474	0	500	77	0
46	x	423	0	463	102	0
47	y	405	0	407	79	0
48	z	377	0	411	64	0
49	1	502	0	540	89	0
50	2	299	0	321	57	0
51	4	1740	0	874	115	0
52	1	1	0	0	0	0
52	A	208	0	0	0	0
52	E	2	0	0	0	0
52	H	1	0	0	0	0
52	K	1	0	0	0	0
52	N	1	0	0	0	0
52	Q	1	0	0	0	0
52	R	1	0	0	0	0
52	T	2	0	0	0	0
52	U	10	0	0	0	0
52	Y	376	0	0	0	0
52	Z	10	0	0	0	0
52	b	1	0	0	0	0
52	c	1	0	0	0	0
52	h	1	0	0	0	0
52	i	2	0	0	0	0
52	o	1	0	0	0	0
52	p	1	0	0	0	0
52	t	1	0	0	0	0
52	y	2	0	0	0	0
53	2	1	0	0	0	0
53	N	1	0	0	0	0
53	R	1	0	0	0	0
53	t	1	0	0	0	0
53	y	1	0	0	0	0
All	All	146981	3	97526	14548	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 60.

All (14548) 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)
20:Y:268:G:H1’	20:Y:360:G:C5	1.30	1.59
20:Y:360:G:C2	20:Y:360:G:N3	1.67	1.57
20:Y:360:G:N3	20:Y:360:G:C4	1.69	1.56
20:Y:360:G:C2	20:Y:360:G:N1	1.81	1.48
20:Y:360:G:N1	20:Y:360:G:C6	1.80	1.47
20:Y:268:G:C1’	20:Y:360:G:C2	1.99	1.45
20:Y:268:G:N9	20:Y:360:G:C2	1.87	1.42
20:Y:268:G:C1’	20:Y:360:G:N1	1.80	1.42
20:Y:268:G:C1’	20:Y:360:G:C6	2.05	1.39
20:Y:268:G:C1’	20:Y:360:G:C4	2.11	1.32
20:Y:268:G:H1’	20:Y:360:G:C4	1.65	1.31
20:Y:268:G:N9	20:Y:360:G:N1	1.77	1.30
20:Y:268:G:C1’	20:Y:360:G:C5	2.13	1.29
20:Y:268:G:O4’	20:Y:360:G:N1	1.64	1.28
20:Y:268:G:N9	20:Y:360:G:C6	2.02	1.28
20:Y:268:G:C1’	20:Y:268:G:N9	1.98	1.26
20:Y:355:A:N6	20:Y:441:G:C2	2.05	1.25
20:Y:268:G:N9	20:Y:360:G:C4	2.09	1.21
1:A:698:A:H5’	10:K:128:ASN:HD21	1.04	1.20
20:Y:268:G:C8	20:Y:360:G:N1	2.11	1.18
2:C:89:ASP:HA	2:C:92:LYS:HE3	1.23	1.18
20:Y:268:G:N9	20:Y:360:G:N3	1.91	1.18
1:A:410:G:N2	1:A:432:A:H62	1.39	1.18
20:Y:2971:G:H21	20:Y:2981:A:N6	1.40	1.18
20:Y:2971:G:N2	20:Y:2981:A:H62	1.39	1.18
1:A:410:G:H21	1:A:432:A:N6	1.40	1.17
20:Y:268:G:C1’	20:Y:360:G:N3	2.08	1.17
34:l:56:GLU:HG2	34:l:75:VAL:HG21	1.27	1.16
20:Y:2975:G:H4’	26:d:4:ILE:HD11	1.20	1.15
3:D:63:MET:HE3	3:D:65:LYS:H	1.08	1.15
20:Y:1187:A:H4’	20:Y:1188:A:H5”	1.28	1.15
9:J:64:HIS:HB3	13:N:59:SER:HB3	1.18	1.15
34:l:51:GLY:HA2	34:l:56:GLU:HA	1.24	1.15
20:Y:268:G:N9	20:Y:360:G:C5	2.15	1.14
29:g:24:VAL:HG12	29:g:33:ALA:HB2	1.29	1.14
43:u:29:LEU:HB2	43:u:50:VAL:HG11	1.25	1.14
20:Y:979:G:H21	20:Y:982:A:N6	1.44	1.13
34:l:61:ARG:HB2	34:l:70:GLU:HG2	1.31	1.12
25:c:111:ILE:HA	25:c:115:LEU:HD23	1.20	1.12
23:a:63:ILE:HG22	23:a:65:PRO:HD2	1.28	1.12
29:g:22:ILE:HD12	29:g:40:VAL:HG22	1.28	1.12
20:Y:1370:U:H5”	20:Y:1371:G:H5”	1.27	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:2086:U:H2'	20:Y:2087:C:H5	1.03	1.11
1:A:1132:U:H5"	9:J:44:THR:HG23	1.29	1.11
20:Y:355:A:C6	20:Y:441:G:N2	2.19	1.10
29:g:22:ILE:HB	29:g:40:VAL:HG13	1.19	1.10
2:C:133:MET:HE3	2:C:151:VAL:HG23	1.25	1.10
1:A:1141:G:H1	1:A:1157:A:N6	1.49	1.10
10:K:43:ILE:HD11	10:K:79:ALA:HB1	1.23	1.10
23:a:5:GLY:HA3	23:a:84:LEU:HD22	1.20	1.10
30:h:77:VAL:HA	30:h:112:VAL:HG12	1.24	1.10
27:e:67:SER:HG	27:e:68:PHE:N	1.49	1.10
20:Y:1393:C:H4'	32:j:34:ILE:HD11	1.20	1.09
20:Y:1666:A:N6	20:Y:1687:G:N2	2.01	1.09
20:Y:1939:U:H3	20:Y:1955:A:N6	1.50	1.09
20:Y:268:G:C8	20:Y:360:G:C2	2.41	1.09
1:A:1303:U:H3'	1:A:1304:C:H2'	1.30	1.09
20:Y:561:G:H2'	20:Y:562:G:H5"	1.35	1.09
29:g:17:LYS:HE3	29:g:47:ILE:HD11	1.30	1.09
29:g:75:SER:HA	34:l:72:THR:HB	1.31	1.09
2:C:41:LEU:HD21	2:C:93:LEU:HD11	1.34	1.08
3:D:102:LEU:HD13	3:D:175:ILE:HD11	1.29	1.08
17:R:69:LYS:HA	17:R:72:ARG:HG3	1.35	1.08
27:e:59:GLU:HB2	27:e:71:ALA:HB3	1.35	1.08
30:h:77:VAL:HG22	30:h:112:VAL:HA	1.14	1.08
1:A:41:U:H5"	11:L:121:LYS:HE2	1.33	1.08
51:4:2383:U:H3'	51:4:2384:C:H4'	1.27	1.08
20:Y:337:U:H5'	20:Y:338:C:H5"	1.36	1.08
1:A:137:C:H2'	16:Q:7:PRO:HD2	1.34	1.08
1:A:1324:C:H4'	8:I:147:TYR:HB3	1.29	1.07
20:Y:2106:A:H3'	20:Y:2107:G:H5"	1.35	1.07
22:Z:43:ARG:HE	22:Z:49:ILE:HG13	1.15	1.07
29:g:110:LYS:HE2	29:g:110:LYS:HA	1.35	1.07
35:m:83:LEU:HD22	35:m:88:VAL:HG11	1.16	1.07
4:E:99:VAL:HG21	4:E:169:LEU:HD22	1.30	1.07
13:N:47:MET:HG3	13:N:53:LEU:HD21	1.30	1.07
1:A:276:G:H5'	16:Q:32:MET:HE3	1.36	1.07
32:j:79:LEU:HA	32:j:83:ILE:HD13	1.33	1.07
7:H:67:GLY:HA3	7:H:71:GLU:HB2	1.37	1.06
20:Y:1547:G:H5"	20:Y:1620:U:H3'	1.35	1.06
20:Y:2996:U:H4'	23:a:176:THR:HG21	1.38	1.06
39:q:86:ARG:HD3	39:q:97:ILE:HD11	1.32	1.06
32:j:38:GLU:HG3	32:j:39:PRO:HD3	1.38	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:j:99:LYS:HE2	46:x:43:LEU:HD21	1.35	1.05
33:k:120:ALA:HB1	33:k:125:LEU:HD23	1.37	1.05
1:A:225:G:H5'	16:Q:11:PRO:HB3	1.38	1.05
28:f:36:LEU:HD23	28:f:121:LYS:HZ2	1.21	1.05
38:p:57:VAL:HG23	38:p:84:VAL:HG12	1.32	1.05
20:Y:677:G:H2'	20:Y:1366:A:H61	1.21	1.05
20:Y:714:U:H4'	20:Y:715:A:H5"	1.35	1.05
20:Y:1178:U:H4'	20:Y:1179:U:H3'	1.34	1.05
1:A:223:G:H1'	16:Q:8:LYS:HB2	1.37	1.05
29:g:80:ASP:HB3	34:l:67:VAL:HG13	1.39	1.05
12:M:24:GLY:HA3	12:M:66:VAL:HG12	1.37	1.04
20:Y:857:U:H2'	20:Y:858:A:H8	1.15	1.04
20:Y:2640:G:H5'	30:h:65:LYS:HB2	1.39	1.04
1:A:808:A:H62	1:A:840:G:N2	1.54	1.04
7:H:80:VAL:HG21	7:H:127:VAL:HG23	1.39	1.04
1:A:1354:G:H5"	8:I:90:GLY:HA2	1.38	1.04
12:M:52:GLN:O	12:M:56:LEU:HD12	1.57	1.03
20:Y:268:G:C2'	20:Y:360:G:N3	2.21	1.03
14:O:32:LEU:HD11	14:O:59:LEU:HB3	1.40	1.03
42:t:39:VAL:HA	42:t:46:LYS:HD2	1.36	1.03
1:A:1403:U:H3	1:A:1464:G:H1	1.04	1.03
1:A:1409:A:N6	1:A:1458:G:H1	1.55	1.03
29:g:77:ILE:HG23	34:l:70:GLU:H	1.18	1.03
30:h:93:VAL:HG22	30:h:124:VAL:HA	1.41	1.03
2:C:150:ARG:HE	2:C:169:ARG:HB3	1.24	1.03
20:Y:355:A:N6	20:Y:441:G:N2	2.06	1.03
26:d:55:ARG:HB2	26:d:62:SER:HB2	1.34	1.03
1:A:1041:G:H5'	9:J:58:TYR:HB3	1.39	1.02
1:A:48:G:H5'	15:P:12:LYS:HB2	1.41	1.02
9:J:67:MET:HA	9:J:67:MET:HE3	1.37	1.02
20:Y:1666:A:N6	20:Y:1687:G:C2	2.28	1.02
22:Z:124:ASP:OD1	22:Z:125:ILE:N	1.92	1.02
35:m:83:LEU:CD2	35:m:88:VAL:HG11	1.88	1.02
35:m:74:ILE:HD11	35:m:78:ARG:HB3	1.39	1.02
4:E:41:VAL:HG21	4:E:61:LEU:HD22	1.39	1.02
20:Y:1992:U:H2'	20:Y:1993:G:H5'	1.41	1.02
25:c:47:VAL:HG23	25:c:49:ASP:H	1.19	1.02
31:i:1:MET:HA	31:i:1:MET:HE3	1.41	1.02
1:A:808:A:N6	1:A:840:G:H21	1.57	1.01
3:D:186:ILE:HG22	3:D:188:VAL:HG23	1.40	1.01
2:C:151:VAL:HG12	2:C:200:VAL:HG22	1.42	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:1546:A:H2'	20:Y:1621:C:H5"	1.41	1.01
20:Y:2575:G:N2	20:Y:2590:A:H62	1.57	1.01
23:a:38:ARG:HG2	23:a:40:ARG:HH12	1.22	1.01
25:c:24:GLN:HE22	25:c:29:TYR:HB2	1.24	1.01
20:Y:219:G:H22	20:Y:515:U:H2'	1.23	1.01
20:Y:2176:A:H2	29:g:22:ILE:HG23	1.24	1.01
20:Y:2086:U:H2'	20:Y:2087:C:C5	1.96	1.01
24:b:3:LEU:HD11	24:b:5:VAL:HG23	1.43	1.01
33:k:52:VAL:HG12	33:k:59:THR:HA	1.42	1.01
9:J:12:ALA:HB2	9:J:96:VAL:HA	1.39	1.00
20:Y:604:C:OP2	46:x:10:ARG:NH1	1.93	1.00
28:f:118:ILE:HG23	28:f:121:LYS:HE3	1.41	1.00
34:l:96:LEU:HB3	34:l:99:LEU:HG	1.40	1.00
14:O:70:VAL:HG12	14:O:78:TYR:HB2	1.42	1.00
22:Z:177:MET:HG3	22:Z:178:PRO:HD2	1.44	1.00
12:M:81:LYS:HD2	12:M:88:GLN:HG2	1.44	1.00
20:Y:730:G:H3'	30:h:113:LEU:HD13	1.42	1.00
24:b:172:LEU:HB2	24:b:175:VAL:HG12	1.42	1.00
51:4:2361:U:H3	51:4:2376:G:H1	1.10	1.00
1:A:1266:U:H3'	1:A:1268:C:H5'	1.37	1.00
3:D:172:ARG:HB3	3:D:174:ARG:HH11	1.26	1.00
12:M:91:ARG:HB2	12:M:98:VAL:HG22	1.44	0.99
20:Y:681:C:H2'	20:Y:682:A:H8	1.26	0.99
22:Z:161:VAL:HG11	22:Z:178:PRO:HB3	1.44	0.99
20:Y:1433:G:H2'	20:Y:1434:G:C8	1.97	0.99
48:z:28:ARG:HA	48:z:31:ARG:HD2	1.44	0.99
15:P:67:THR:HG22	15:P:69:PRO:HD2	1.40	0.99
1:A:822:U:H2'	1:A:824:C:H1'	1.45	0.99
14:O:76:ALA:HA	14:O:79:ARG:HE	1.23	0.99
20:Y:78:G:N2	20:Y:103:C:C2	2.30	0.99
47:y:39:LYS:HE2	47:y:48:HIS:HB3	1.44	0.99
20:Y:1526:A:H2'	20:Y:1527:U:C6	1.97	0.99
3:D:112:LEU:HB3	3:D:118:PHE:HZ	1.25	0.99
17:R:57:CYS:HB2	17:R:60:HIS:HB2	1.45	0.99
23:a:79:ARG:HG3	23:a:80:HIS:ND1	1.77	0.99
2:C:119:VAL:HG11	2:C:136:ALA:HB2	1.45	0.98
11:L:56:LYS:HA	11:L:56:LYS:HE3	1.46	0.98
20:Y:3:A:H2'	20:Y:4:G:C4	1.97	0.98
1:A:502:C:OP2	11:L:66:TYR:OH	1.82	0.98
19:V:177:ARG:NH1	19:V:197:ASP:OD1	1.96	0.98
20:Y:1186:G:N2	20:Y:1213:A:O2'	1.95	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:407:A:H4'	3:D:108:MET:HE1	1.45	0.98
20:Y:2147:U:H2'	20:Y:2148:C:C6	1.97	0.98
1:A:936:G:N2	1:A:1207:C:O2	1.96	0.98
31:i:116:ASP:OD1	31:i:120:ARG:NH1	1.95	0.98
46:x:39:VAL:HG12	46:x:54:LEU:HD21	1.42	0.98
1:A:322:C:H4'	18:T:18:ARG:NE	1.76	0.97
20:Y:268:G:H2'	20:Y:360:G:N3	1.79	0.97
29:g:71:ARG:HG2	29:g:75:SER:HB2	1.41	0.97
20:Y:736:G:N2	20:Y:739:U:OP2	1.96	0.97
20:Y:2629:G:H22	20:Y:2635:A:H5"	1.28	0.97
36:n:69:LYS:HG2	36:n:93:GLN:HG2	1.45	0.97
44:v:72:LEU:HD11	44:v:107:GLY:HA3	1.45	0.97
19:V:179:LEU:HG	19:V:181:ILE:HD11	1.47	0.97
20:Y:27:G:OP2	35:m:5:LYS:NZ	1.98	0.97
20:Y:899:G:H5"	22:Z:227:ASN:HD21	1.29	0.97
25:c:20:ARG:HD3	25:c:35:ILE:HG21	1.42	0.97
20:Y:2881:A:H62	20:Y:2888:G:H21	1.02	0.97
26:d:88:MET:HE1	26:d:146:SER:HA	1.44	0.97
20:Y:2080:G:H2'	20:Y:2081:U:H6	1.30	0.97
22:Z:138:ALA:HA	22:Z:165:LEU:HD23	1.46	0.97
7:H:77:LEU:HD11	7:H:131:VAL:HG22	1.47	0.97
9:J:8:ILE:HD11	9:J:98:VAL:HG12	1.45	0.97
29:g:75:SER:HA	34:l:72:THR:CB	1.94	0.97
40:r:90:ARG:O	40:r:90:ARG:NH1	1.95	0.97
1:A:927:G:N2	1:A:1316:G:O2'	1.97	0.96
20:Y:1333:C:OP2	35:m:19:LYS:NZ	1.97	0.96
20:Y:2575:G:H21	20:Y:2590:A:N6	1.60	0.96
20:Y:3070:G:H1'	20:Y:3087:G:H22	1.27	0.96
29:g:9:LYS:HE3	29:g:9:LYS:HA	1.45	0.96
6:G:16:PRO:HG3	8:I:66:GLN:HB2	1.45	0.96
17:R:30:ILE:HG12	17:R:63:ASP:HB3	1.43	0.96
20:Y:772:U:H2'	20:Y:773:G:H8	1.31	0.96
20:Y:843:G:HO2'	20:Y:845:C:H6	1.08	0.96
20:Y:2772:G:N3	29:g:23:ARG:NH2	2.14	0.96
23:a:129:ARG:HA	23:a:170:MET:HE1	1.44	0.96
30:h:124:VAL:HB	30:h:144:ALA:HA	1.43	0.96
40:r:135:ALA:HB2	40:r:168:VAL:HG12	1.43	0.96
1:A:1291:G:N2	1:A:1310:C:O2	1.98	0.96
20:Y:2633:G:H2'	20:Y:2634:G:H1'	1.46	0.96
29:g:19:ILE:HG22	29:g:43:VAL:HA	1.44	0.96
20:Y:1673:A:OP2	20:Y:1679:A:N6	1.99	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:c:9:PRO:HD2	25:c:12:LYS:HB2	1.47	0.96
20:Y:383:U:H3'	20:Y:384:G:H5"	1.48	0.96
34:l:24:THR:HG22	34:l:86:LEU:HD12	1.47	0.96
20:Y:268:G:C4	20:Y:360:G:C4	2.52	0.96
9:J:42:LEU:HD21	9:J:73:LEU:HG	1.45	0.96
14:O:39:LEU:HD21	14:O:56:LEU:HD21	1.43	0.96
4:E:64:VAL:HG12	4:E:92:ALA:HB1	1.47	0.96
1:A:524:C:OP1	3:D:54:GLN:NE2	1.99	0.95
20:Y:1651:C:H42	20:Y:1783:G:H1	1.12	0.95
1:A:1265:U:H5"	1:A:1266:U:H4'	1.46	0.95
17:R:51:ARG:HA	17:R:54:THR:HG22	1.49	0.95
20:Y:316:U:C4	20:Y:492:C:N4	2.34	0.95
15:P:37:ILE:HD12	15:P:52:ASP:HB3	1.45	0.95
20:Y:1464:A:H3'	20:Y:1465:C:H5"	1.45	0.95
30:h:16:LYS:HA	30:h:16:LYS:HE3	1.46	0.95
1:A:138:A:H5"	16:Q:5:LYS:HB2	1.44	0.95
20:Y:1871:G:H4'	32:j:7:GLY:HA2	1.47	0.95
20:Y:1938:G:N2	20:Y:1955:A:OP2	1.99	0.95
18:T:11:ILE:HB	18:T:12:ARG:HH12	1.30	0.95
20:Y:1675:U:O5'	32:j:63:ARG:NH2	1.99	0.95
20:Y:2017:C:H4'	20:Y:2018:G:H5'	1.49	0.95
20:Y:2510:A:N7	47:y:27:LYS:NZ	2.14	0.95
20:Y:3105:C:N4	46:x:41:ARG:O	1.98	0.95
20:Y:2541:U:H5"	33:k:7:GLY:O	1.65	0.95
24:b:71:THR:HG23	24:b:73:ARG:H	1.30	0.95
20:Y:228:A:H2'	20:Y:230:G:OP1	1.66	0.95
26:d:2:SER:OG	26:d:55:ARG:NH1	2.00	0.95
20:Y:979:G:N2	20:Y:982:A:H61	1.65	0.94
20:Y:2081:U:H4'	20:Y:2634:G:H21	1.31	0.94
1:A:577:G:H2'	1:A:624:G:H21	1.32	0.94
20:Y:2070:A:H2'	20:Y:2071:A:C8	2.02	0.94
25:c:78:ARG:HG2	25:c:79:LYS:HD3	1.49	0.94
30:h:95:VAL:O	30:h:99:VAL:HG23	1.67	0.94
11:L:108:LYS:HD3	11:L:109:ASN:H	1.30	0.94
20:Y:1250:U:H3'	20:Y:1251:A:H5"	1.46	0.94
21:U:31:C:H2'	21:U:32:C:H5'	1.48	0.94
1:A:122:G:H2'	1:A:123:G:H5"	1.47	0.94
3:D:71:TYR:HE1	3:D:196:VAL:HA	1.28	0.94
20:Y:724:G:N2	20:Y:727:A:OP2	1.99	0.94
5:F:19:VAL:HG12	5:F:23:LEU:HD11	1.50	0.94
20:Y:959:U:H3	20:Y:1051:G:H1	1.14	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:1268:C:H2'	20:Y:1269:C:C6	2.02	0.94
1:A:1077:C:H5"	19:V:143:LYS:HZ1	1.33	0.94
4:E:174:ARG:HB3	4:E:177:GLU:HG3	1.48	0.94
20:Y:1316:U:H3	20:Y:1359:G:H1	0.95	0.94
20:Y:1787:A:H2'	22:Z:86:PRO:HG3	1.48	0.94
20:Y:2166:C:O2'	20:Y:2167:U:OP1	1.84	0.94
22:Z:142:ILE:HD12	22:Z:191:ALA:HB1	1.50	0.94
29:g:2:ILE:HD12	29:g:8:LEU:HD11	1.46	0.94
20:Y:268:G:C2'	20:Y:360:G:C4	2.51	0.94
20:Y:1049:G:H4'	20:Y:1050:A:H5'	1.50	0.94
20:Y:1905:G:H21	20:Y:1919:A:H62	1.15	0.94
23:a:144:VAL:HG22	23:a:147:ARG:HH21	1.31	0.94
1:A:1349:C:O2'	9:J:62:ARG:NH1	2.00	0.94
20:Y:2709:G:H5"	31:i:46:GLN:HE21	1.28	0.94
25:c:155:ARG:HH21	25:c:157:ARG:HB3	1.28	0.94
20:Y:2248:C:H4'	23:a:159:ARG:HH22	1.28	0.93
20:Y:2870:C:OP2	20:Y:2956:G:O2'	1.87	0.93
23:a:4:LYS:HD3	23:a:105:ILE:HD11	1.50	0.93
1:A:1243:U:O4	1:A:1254:G:N2	2.01	0.93
8:I:67:LEU:HD11	8:I:96:ALA:HB1	1.49	0.93
29:g:64:ARG:HG3	29:g:79:PHE:CD2	2.02	0.93
40:r:37:LEU:HD11	40:r:45:GLN:NE2	1.84	0.93
17:R:38:LEU:HD13	17:R:68:VAL:HA	1.48	0.93
20:Y:1811:C:H2'	20:Y:1812:A:C5	2.04	0.93
42:t:8:CYS:HB3	42:t:55:CYS:SG	2.09	0.93
20:Y:420:G:O2'	20:Y:421:U:O4'	1.85	0.93
20:Y:2640:G:H5'	30:h:65:LYS:CB	1.99	0.93
20:Y:3070:G:H1'	20:Y:3087:G:N2	1.82	0.93
1:A:969:G:H21	1:A:1200:A:H3'	1.34	0.93
6:G:22:LEU:HD23	6:G:62:LEU:HD21	1.49	0.93
20:Y:3009:U:H1'	23:a:38:ARG:HH22	1.33	0.93
20:Y:772:U:H2'	20:Y:773:G:C8	2.04	0.93
21:U:7:G:H4'	33:k:41:ASN:HD22	1.33	0.93
34:l:25:VAL:HG23	34:l:85:VAL:HA	1.48	0.93
43:u:10:LEU:HD23	43:u:13:LEU:HD12	1.50	0.93
3:D:147:THR:HG22	3:D:149:PRO:HD2	1.48	0.93
20:Y:554:A:OP1	48:z:37:ARG:NH2	2.01	0.93
20:Y:979:G:H21	20:Y:982:A:H61	1.01	0.93
20:Y:2539:G:O2'	25:c:134:ASN:ND2	2.02	0.93
9:J:18:ILE:HD11	9:J:72:ARG:HG2	1.48	0.93
20:Y:553:G:O2'	20:Y:554:A:O4'	1.86	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:j:103:ARG:HB2	32:j:110:MET:HE2	1.50	0.93
13:N:14:PRO:HA	13:N:19:ARG:HH21	1.34	0.93
20:Y:1674:G:H21	32:j:73:LYS:HD3	1.34	0.93
1:A:1405:G:H5'	29:g:48:PRO:HB3	1.51	0.92
20:Y:2628:U:N3	20:Y:2637:G:N1	2.13	0.92
46:x:30:VAL:HG11	46:x:47:ALA:HB1	1.50	0.92
11:L:74:LEU:HD21	11:L:104:THR:HG22	1.51	0.92
20:Y:614:C:O3'	28:f:113:LYS:NZ	2.01	0.92
25:c:12:LYS:HD2	25:c:104:TRP:CZ3	2.04	0.92
41:s:46:HIS:HB2	41:s:77:THR:HG22	1.50	0.92
20:Y:32:G:H1'	20:Y:542:A:N3	1.85	0.92
20:Y:1393:C:C4'	32:j:34:ILE:HD11	1.98	0.92
20:Y:1393:C:H2'	20:Y:1394:A:H8	1.33	0.92
20:Y:1699:G:H1	20:Y:1735:U:H3	0.93	0.92
10:K:33:LYS:HD3	10:K:40:ILE:HD11	1.49	0.92
18:T:11:ILE:HB	18:T:12:ARG:NH1	1.85	0.92
20:Y:316:U:H2'	20:Y:509:U:C5	2.04	0.92
32:j:55:ALA:HB2	32:j:79:LEU:HD21	1.48	0.92
34:l:61:ARG:HA	34:l:70:GLU:HA	1.49	0.92
1:A:26:G:H4'	1:A:867:G:C8	2.04	0.92
8:I:99:LEU:O	8:I:103:ILE:HD12	1.68	0.92
20:Y:879:A:H5"	22:Z:210:GLY:HA2	1.48	0.92
1:A:297:G:N2	1:A:300:A:OP2	2.02	0.92
20:Y:2569:G:N3	20:Y:2605:C:H2'	1.85	0.92
6:G:79:ARG:HA	6:G:84:THR:HA	1.52	0.92
8:I:72:LEU:HD11	8:I:78:VAL:HA	1.50	0.92
20:Y:2692:A:H2'	20:Y:2700:A:N1	1.83	0.92
14:O:4:THR:H	14:O:7:GLN:HE22	1.17	0.92
20:Y:857:U:H2'	20:Y:858:A:C8	2.05	0.92
20:Y:1178:U:H5'	20:Y:1180:G:H5"	1.47	0.92
20:Y:2528:G:O6	25:c:161:ILE:N	2.03	0.92
20:Y:2860:U:H3	20:Y:3006:G:H1	0.96	0.92
26:d:37:VAL:HG11	26:d:41:ILE:HD11	1.51	0.92
3:D:15:LEU:HD11	3:D:55:LYS:HB3	1.52	0.92
23:a:21:ASN:O	34:l:79:ASN:ND2	2.03	0.92
1:A:553:A:O2'	1:A:554:A:O4'	1.88	0.92
20:Y:999:C:O2	20:Y:1007:G:N2	2.03	0.92
20:Y:3013:C:O2	20:Y:3113:A:N6	2.02	0.92
34:l:96:LEU:HD13	34:l:99:LEU:HD11	1.51	0.92
51:4:2345:U:C4	51:4:2399:A:H1'	2.05	0.92
4:E:121:LEU:HD12	4:E:148:ILE:HD11	1.49	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:2072:G:H1	20:Y:2111:U:H3	1.17	0.91
19:V:43:LEU:O	19:V:47:LEU:HD12	1.70	0.91
20:Y:1442:A:H2'	20:Y:1443:G:O4'	1.69	0.91
25:c:80:SER:OG	25:c:88:GLU:N	2.03	0.91
44:v:95:LYS:HE2	44:v:96:PHE:HE2	1.35	0.91
20:Y:355:A:O2'	20:Y:358:G:N2	2.03	0.91
20:Y:2008:A:O2'	22:Z:207:GLY:HA2	1.69	0.91
20:Y:316:U:N3	20:Y:492:C:C4	2.38	0.91
34:l:61:ARG:CB	34:l:70:GLU:HG2	2.00	0.91
1:A:150:G:H1	1:A:165:U:H3	0.98	0.91
20:Y:1704:U:H3	20:Y:1725:G:H1	0.95	0.91
31:i:21:ALA:HB2	31:i:98:LYS:HB2	1.50	0.91
1:A:108:G:H21	1:A:354:G:H5'	1.34	0.91
19:V:76:ALA:O	19:V:80:ILE:HG12	1.70	0.91
20:Y:615:A:H5"	28:f:113:LYS:HZ2	1.33	0.91
20:Y:1525:U:H3	20:Y:1811:C:H42	0.95	0.91
28:f:73:PHE:CE1	28:f:86:LYS:HD2	2.06	0.91
1:A:82:U:H3	1:A:87:G:H1	1.18	0.91
1:A:322:C:H4'	18:T:18:ARG:HE	1.28	0.91
1:A:416:G:H2'	1:A:417:G:H8	1.34	0.91
2:C:33:LYS:HE2	13:N:25:ASN:HB3	1.50	0.91
17:R:57:CYS:HB3	17:R:60:HIS:H	1.35	0.91
19:V:60:THR:HA	19:V:63:HIS:CE1	2.06	0.91
20:Y:941:U:O2'	30:h:52:GLY:O	1.89	0.91
1:A:526:G:OP1	3:D:63:MET:HE1	1.71	0.91
20:Y:1258:C:OP2	28:f:68:LYS:NZ	2.03	0.91
31:i:110:ASP:OD1	31:i:113:THR:HB	1.71	0.91
20:Y:987:A:OP2	31:i:5:ARG:NH2	2.02	0.91
31:i:37:LEU:HD22	40:r:88:ILE:HG23	1.49	0.91
35:m:72:ASN:HD22	35:m:110:VAL:HG21	1.35	0.91
1:A:744:C:H5"	14:O:50:HIS:HD2	1.33	0.90
1:A:762:A:H62	1:A:780:G:H21	1.13	0.90
20:Y:1934:G:O6	20:Y:1960:U:O2	1.89	0.90
24:b:183:LEU:HD11	24:b:188:VAL:HG23	1.53	0.90
1:A:153:U:H3	1:A:162:G:H1	1.13	0.90
20:Y:324:C:O2'	20:Y:325:U:O4'	1.89	0.90
20:Y:760:U:H2'	20:Y:761:G:H8	1.34	0.90
20:Y:1200:U:O2'	44:v:41:ARG:NH2	2.04	0.90
20:Y:1661:G:H22	20:Y:1771:U:H3	1.16	0.90
26:d:158:TYR:O	26:d:172:ARG:NH2	2.04	0.90
28:f:6:PRO:HD3	28:f:45:THR:HG21	1.53	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:571:U:H3	1:A:629:G:H1	0.97	0.90
19:V:117:LEU:HD22	19:V:141:LYS:HE3	1.54	0.90
1:A:79:C:H2'	1:A:80:C:C6	2.07	0.90
1:A:1141:G:H1	1:A:1157:A:H61	0.90	0.90
20:Y:1637:G:OP1	20:Y:1805:G:N2	2.04	0.90
1:A:1408:A:N1	1:A:1459:G:O6	2.04	0.90
20:Y:90:C:H2'	20:Y:91:C:C6	2.05	0.90
20:Y:503:A:N1	20:Y:2633:G:O6	2.03	0.90
12:M:91:ARG:CB	12:M:98:VAL:HG22	2.02	0.90
20:Y:152:G:H1	20:Y:172:C:H42	1.18	0.90
20:Y:672:C:O2	20:Y:1375:G:N2	2.03	0.90
20:Y:2294:A:H2'	20:Y:2295:C:H6	1.36	0.90
25:c:77:ALA:HB3	25:c:88:GLU:HA	1.51	0.90
1:A:517:G:H5"	11:L:110:ARG:HH12	1.37	0.90
4:E:191:PRO:HG2	4:E:194:MET:HG3	1.54	0.90
13:N:47:MET:CG	13:N:53:LEU:HD21	2.01	0.90
16:Q:83:SER:HB3	16:Q:86:LYS:HE3	1.51	0.90
17:R:57:CYS:HB2	17:R:60:HIS:CB	2.02	0.90
20:Y:1111:G:H1'	36:n:92:GLN:OE1	1.72	0.90
20:Y:2843:C:O5'	23:a:162:LYS:NZ	2.05	0.90
37:o:44:ARG:HB2	37:o:45:TRP:CE3	2.07	0.90
38:p:30:THR:HG22	38:p:83:ILE:HD13	1.51	0.90
39:q:40:ARG:NH2	39:q:61:THR:OG1	2.04	0.90
1:A:233:C:H2'	1:A:234:C:C6	2.07	0.90
2:C:155:GLY:HA3	2:C:196:ILE:HG23	1.53	0.90
18:T:31:ALA:HB1	18:T:54:THR:HG22	1.51	0.90
20:Y:2617:U:H2'	20:Y:2618:C:H6	1.35	0.90
20:Y:2861:U:H5"	23:a:85:ARG:HH22	1.36	0.90
1:A:463:C:OP2	1:A:464:G:O2'	1.88	0.90
1:A:582:U:O2	1:A:617:G:N2	2.04	0.90
6:G:3:ARG:HB3	6:G:4:LYS:HZ1	1.37	0.90
20:Y:1984:G:N2	20:Y:2209:C:O2	2.03	0.90
20:Y:2014:G:H5"	22:Z:256:ARG:HH21	1.36	0.90
6:G:135:VAL:HG13	6:G:138:ARG:HH12	1.34	0.90
11:L:24:LEU:HG	11:L:30:ARG:HG2	1.53	0.90
13:N:24:CYS:O	13:N:28:GLY:N	2.05	0.90
20:Y:513:C:H2'	20:Y:514:C:C6	2.06	0.90
26:d:45:ARG:HH22	26:d:49:GLY:HA2	1.35	0.90
1:A:698:A:H5'	10:K:128:ASN:ND2	1.86	0.89
1:A:1409:A:N1	1:A:1458:G:N2	2.19	0.89
3:D:51:GLN:O	3:D:55:LYS:HG3	1.70	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:l:45:VAL:H	34:l:61:ARG:H	1.17	0.89
38:p:10:ILE:HG21	38:p:37:SER:HB2	1.55	0.89
1:A:107:G:H5"	15:P:28:ARG:HA	1.52	0.89
1:A:569:U:O2'	1:A:570:U:O4'	1.90	0.89
20:Y:889:A:H5"	22:Z:48:ARG:HH12	1.37	0.89
1:A:398:C:H2'	1:A:399:G:H8	1.35	0.89
5:F:76:ASP:HA	5:F:79:LEU:HG	1.52	0.89
12:M:60:ILE:HD13	12:M:64:LEU:HD13	1.53	0.89
20:Y:1206:A:H4'	20:Y:1207:G:H5"	1.53	0.89
20:Y:1433:G:H2'	20:Y:1434:G:H8	1.32	0.89
20:Y:2522:A:H2'	20:Y:2523:A:H5'	1.54	0.89
35:m:27:GLN:HG3	35:m:34:LYS:HZ3	1.36	0.89
13:N:47:MET:HE3	13:N:47:MET:O	1.71	0.89
18:T:68:HIS:O	18:T:71:GLN:NE2	2.05	0.89
20:Y:251:A:H5"	30:h:49:MET:SD	2.11	0.89
20:Y:1527:U:H2'	20:Y:1528:G:C8	2.07	0.89
1:A:676:A:N3	1:A:766:G:O2'	2.05	0.89
2:C:23:TYR:HB2	9:J:13:TYR:CE2	2.06	0.89
20:Y:3008:C:O3'	23:a:44:ARG:NH2	2.05	0.89
22:Z:169:GLU:N	22:Z:169:GLU:OE1	2.05	0.89
29:g:7:ARG:HH21	29:g:20:LEU:HD21	1.33	0.89
51:4:2388:G:H2'	51:4:2389:U:H5'	1.54	0.89
16:Q:74:VAL:HG12	16:Q:93:ILE:HD13	1.52	0.89
20:Y:1046:C:O2'	20:Y:1287:C:O2	1.89	0.89
34:l:48:ARG:HD2	34:l:95:LYS:HE3	1.52	0.89
1:A:1014:U:H2'	1:A:1015:G:H8	1.38	0.89
1:A:1477:A:H4'	1:A:1478:G:OP1	1.68	0.89
19:V:129:ARG:HB2	19:V:134:ILE:HD11	1.53	0.89
33:k:76:ASP:OD1	33:k:77:LYS:N	2.05	0.89
46:x:37:ARG:NH2	46:x:54:LEU:HB2	1.87	0.89
1:A:1408:A:H2	1:A:1459:G:N1	1.69	0.89
20:Y:967:G:H1	20:Y:1040:U:H3	0.99	0.89
20:Y:999:C:N3	20:Y:1007:G:N1	2.20	0.89
51:4:2391:G:H2'	51:4:2392:A:H5'	1.53	0.89
1:A:113:G:N2	1:A:313:A:O2'	2.06	0.89
1:A:653:G:H2'	1:A:654:G:H8	1.38	0.89
18:T:67:ILE:HG13	18:T:71:GLN:NE2	1.88	0.89
20:Y:251:A:OP1	49:1:7:HIS:NE2	2.05	0.89
20:Y:948:G:H1'	30:h:51:GLU:OE2	1.73	0.89
20:Y:2288:C:H2'	20:Y:2289:C:H6	1.37	0.89
20:Y:3037:C:H5"	46:x:42:ARG:HG3	1.52	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:a:26:VAL:HG21	23:a:193:LEU:HB3	1.55	0.89
20:Y:3:A:H2'	20:Y:4:G:C5	2.08	0.89
20:Y:2558:C:O2'	33:k:27:LYS:NZ	2.06	0.89
29:g:63:VAL:HG21	29:g:102:VAL:HG12	1.55	0.89
1:A:24:U:O2	1:A:898:G:N2	2.05	0.88
29:g:64:ARG:HB3	29:g:83:ALA:HB3	1.54	0.88
20:Y:268:G:O4'	20:Y:360:G:C6	2.26	0.88
20:Y:1259:U:O3'	20:Y:1260:C:H3'	1.72	0.88
38:p:8:ARG:HG3	43:u:34:PHE:HD1	1.37	0.88
43:u:36:MET:CE	43:u:44:ASN:HA	2.02	0.88
1:A:949:C:OP2	1:A:950:A:O2'	1.90	0.88
20:Y:883:G:H2'	20:Y:884:U:O4'	1.74	0.88
20:Y:2575:G:H21	20:Y:2590:A:H62	0.89	0.88
4:E:125:SER:OG	4:E:126:PRO:HD3	1.72	0.88
20:Y:621:U:O2'	35:m:49:ASP:OD2	1.90	0.88
20:Y:1075:U:O4	31:i:18:ARG:NH2	2.06	0.88
21:U:40:A:H2'	21:U:41:U:C6	2.08	0.88
6:G:113:GLU:HB3	6:G:119:ARG:CZ	2.03	0.88
15:P:19:ARG:HA	15:P:39:ARG:HA	1.56	0.88
20:Y:1939:U:H3	20:Y:1955:A:H62	0.98	0.88
20:Y:2294:A:H2'	20:Y:2295:C:C6	2.08	0.88
20:Y:2410:A:N6	51:4:2405:A:N7	2.21	0.88
29:g:12:ASP:OD1	29:g:13:ASN:N	2.07	0.88
34:l:56:GLU:CG	34:l:75:VAL:HG21	2.03	0.88
44:v:123:ILE:HA	44:v:126:LEU:HD12	1.54	0.88
1:A:75:A:H61	1:A:95:C:H1'	1.39	0.88
1:A:147:U:O4	1:A:168:A:N7	2.06	0.88
7:H:22:HIS:O	7:H:66:TYR:OH	1.90	0.88
8:I:42:VAL:HG23	8:I:82:ASP:HB3	1.54	0.88
20:Y:1674:G:N2	32:j:73:LYS:HD3	1.89	0.88
32:j:63:ARG:HG2	32:j:80:PHE:CE1	2.08	0.88
34:l:28:HIS:ND1	34:l:40:GLN:O	2.07	0.88
1:A:147:U:N3	1:A:168:A:N6	2.21	0.88
1:A:157:A:H61	1:A:343:U:H1'	1.37	0.88
1:A:813:U:H3	1:A:835:G:H1	1.13	0.88
19:V:118:GLU:OE1	19:V:141:LYS:NZ	2.06	0.88
20:Y:267:G:N2	20:Y:359:A:C6	2.41	0.88
20:Y:503:A:N1	20:Y:2633:G:C6	2.42	0.88
20:Y:2262:C:H2'	20:Y:2263:G:C8	2.08	0.88
20:Y:2909:G:H2'	20:Y:2910:G:H8	1.39	0.88
43:u:6:THR:O	43:u:56:ARG:NH2	2.06	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:1320:U:O2	20:Y:1355:G:N2	2.06	0.88
20:Y:1320:U:H3	20:Y:1355:G:H1	0.92	0.88
20:Y:2166:C:OP2	20:Y:2167:U:O2'	1.90	0.88
20:Y:2447:G:O3'	22:Z:266:LYS:NZ	2.06	0.88
26:d:12:PRO:HD2	26:d:15:VAL:HG21	1.54	0.88
43:u:17:GLU:OE1	43:u:21:LYS:NZ	2.06	0.88
1:A:927:G:H21	1:A:1316:G:HO2'	1.22	0.88
6:G:115:THR:H	6:G:119:ARG:HH12	1.18	0.88
7:H:70:ARG:O	7:H:70:ARG:HD2	1.73	0.88
20:Y:890:G:H4'	20:Y:891:G:H5'	1.55	0.88
30:h:113:LEU:HD23	30:h:130:SER:OG	1.74	0.88
31:i:101:ARG:HH11	31:i:101:ARG:HG3	1.39	0.88
1:A:407:A:H4'	3:D:108:MET:CE	2.05	0.88
20:Y:1593:U:H2'	20:Y:1594:G:H8	1.36	0.88
20:Y:2161:A:O2'	20:Y:2162:A:O5'	1.92	0.88
29:g:24:VAL:CG1	29:g:33:ALA:HB2	2.04	0.88
4:E:190:ALA:HB1	4:E:194:MET:SD	2.14	0.87
20:Y:2865:G:OP1	28:f:76:ARG:NH1	2.07	0.87
16:Q:44:LYS:O	16:Q:53:ILE:N	2.07	0.87
20:Y:323:C:OP2	20:Y:324:C:N4	2.06	0.87
20:Y:2914:A:H3'	20:Y:2915:C:H5'	1.56	0.87
20:Y:3105:C:O2	46:x:48:ARG:NH2	2.05	0.87
1:A:585:U:O2	1:A:614:C:N3	2.08	0.87
20:Y:715:A:OP2	30:h:105:ARG:NH2	2.06	0.87
26:d:53:VAL:O	26:d:66:HIS:NE2	2.07	0.87
4:E:68:LYS:O	4:E:98:ARG:NH2	2.07	0.87
18:T:68:HIS:HE1	18:T:70:ASN:HB2	1.38	0.87
20:Y:267:G:C2	20:Y:359:A:N1	2.41	0.87
20:Y:1578:G:H1	20:Y:1593:U:H3	1.20	0.87
21:U:52:G:H2'	21:U:53:A:C8	2.09	0.87
30:h:80:VAL:HG21	30:h:114:GLY:HA2	1.56	0.87
10:K:95:VAL:HG21	10:K:102:ARG:HD3	1.53	0.87
20:Y:1466:C:O2'	20:Y:1791:A:O2'	1.92	0.87
20:Y:1888:C:H2'	20:Y:1889:U:O4'	1.75	0.87
20:Y:2142:A:O2'	20:Y:2144:C:N4	2.07	0.87
37:o:79:ALA:HB2	37:o:115:GLU:HB3	1.57	0.87
1:A:301:G:H5"	16:Q:48:LEU:HD22	1.56	0.87
20:Y:561:G:C2'	20:Y:562:G:H5"	2.04	0.87
20:Y:2257:A:O2'	20:Y:2259:G:OP2	1.92	0.87
22:Z:30:GLU:OE2	22:Z:32:SER:OG	1.91	0.87
33:k:90:GLU:OE1	33:k:91:ARG:HG3	1.73	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:n:51:LYS:O	36:n:55:LEU:HG	1.75	0.87
1:A:1355:U:OP1	8:I:94:GLY:N	2.07	0.87
10:K:70:PHE:CE1	10:K:74:LEU:HD21	2.09	0.87
19:V:27:MET:HE1	19:V:193:PRO:HD3	1.55	0.87
20:Y:1109:U:H3	20:Y:1282:G:H1	0.87	0.87
20:Y:1996:U:OP2	20:Y:2001:A:N6	2.06	0.87
41:s:56:ASP:OD1	41:s:58:THR:OG1	1.90	0.87
4:E:161:VAL:O	4:E:165:THR:HG23	1.73	0.87
20:Y:357:U:H4'	20:Y:358:G:H5'	1.57	0.87
30:h:113:LEU:HA	30:h:130:SER:HB3	1.57	0.87
5:F:6:ILE:HG13	5:F:63:ILE:HB	1.56	0.87
20:Y:402:G:OP2	24:b:139:LYS:HE3	1.75	0.87
20:Y:673:C:OP2	35:m:33:ARG:NH1	2.08	0.87
20:Y:1463:G:N2	20:Y:1817:C:O2	2.08	0.87
40:r:86:HIS:HA	40:r:93:GLN:HE22	1.39	0.87
1:A:227:G:H2'	1:A:228:A:C8	2.10	0.86
1:A:275:G:O2'	16:Q:32:MET:HE1	1.75	0.86
20:Y:232:G:H22	20:Y:508:G:H5'	1.39	0.86
20:Y:1035:G:OP1	45:w:18:LYS:NZ	2.07	0.86
1:A:157:A:N6	1:A:346:G:O6	2.06	0.86
16:Q:37:VAL:HG12	16:Q:60:LYS:HB3	1.57	0.86
20:Y:500:A:N6	20:Y:2636:A:O2'	2.08	0.86
25:c:118:ILE:HA	25:c:144:MET:HE3	1.57	0.86
43:u:45:ARG:HH12	43:u:46:ARG:HD3	1.38	0.86
1:A:73:G:N2	1:A:96:G:O6	2.07	0.86
1:A:573:U:H2'	1:A:574:C:C6	2.10	0.86
1:A:1403:U:O2	1:A:1464:G:N2	2.07	0.86
20:Y:959:U:O4	20:Y:1051:G:O6	1.94	0.86
20:Y:1525:U:O2	20:Y:1811:C:N3	2.08	0.86
20:Y:2028:G:H2'	20:Y:2029:A:H8	1.39	0.86
20:Y:400:C:H2'	20:Y:401:C:C6	2.10	0.86
20:Y:682:A:H5'	24:b:96:ARG:NH1	1.89	0.86
42:t:39:VAL:HG13	42:t:46:LYS:HZ2	1.40	0.86
20:Y:981:U:H4'	20:Y:982:A:H5"	1.56	0.86
20:Y:1638:C:H2'	20:Y:1639:G:H5"	1.57	0.86
20:Y:2474:G:C5	31:i:83:MET:HE1	2.10	0.86
20:Y:2527:G:O2'	25:c:137:PHE:HB3	1.75	0.86
20:Y:2635:A:H3'	20:Y:2636:A:H8	1.36	0.86
22:Z:134:ARG:HD3	22:Z:188:ARG:NH2	1.90	0.86
1:A:196:G:H2'	1:A:197:G:H8	1.39	0.86
1:A:733:A:H4'	1:A:734:C:H5"	1.57	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:354:C:N4	20:Y:442:U:O2	2.08	0.86
20:Y:551:G:N2	20:Y:554:A:OP2	2.08	0.86
20:Y:1939:U:O4	20:Y:1955:A:N7	2.09	0.86
20:Y:2033:U:OP2	22:Z:40:LYS:NZ	2.09	0.86
22:Z:134:ARG:HD3	22:Z:188:ARG:HH22	1.41	0.86
29:g:105:GLU:N	29:g:105:GLU:OE1	2.07	0.86
3:D:63:MET:HE3	3:D:65:LYS:N	1.91	0.86
12:M:54:THR:O	12:M:57:ARG:HG3	1.76	0.86
15:P:72:ALA:O	15:P:76:ILE:HG13	1.76	0.86
20:Y:273:A:N6	20:Y:313:G:O2'	2.07	0.86
20:Y:844:G:O4'	22:Z:208:LYS:NZ	2.07	0.86
20:Y:964:C:H2'	20:Y:965:U:C6	2.09	0.86
20:Y:2082:U:O2	20:Y:2100:A:N7	2.09	0.86
20:Y:2579:C:O3'	41:s:24:LYS:NZ	2.08	0.86
20:Y:2942:G:O2'	20:Y:3068:U:OP1	1.94	0.86
29:g:71:ARG:CG	29:g:75:SER:HB2	2.05	0.86
30:h:118:LEU:CD2	30:h:137:ILE:HD13	2.06	0.86
4:E:130:VAL:HG12	4:E:148:ILE:HG22	1.56	0.86
9:J:10:LEU:HD12	9:J:96:VAL:HG11	1.58	0.86
20:Y:684:G:H3'	20:Y:685:G:H5"	1.56	0.86
20:Y:1046:C:O2	20:Y:1296:G:N2	2.08	0.86
32:j:50:LYS:HA	32:j:50:LYS:HE3	1.58	0.86
11:L:43:LYS:NZ	11:L:88:LYS:O	2.09	0.86
17:R:64:ILE:O	17:R:68:VAL:HG12	1.76	0.86
20:Y:739:U:O3'	20:Y:740:A:H2'	1.74	0.86
20:Y:1994:U:O2'	20:Y:1995:U:H5'	1.76	0.86
20:Y:2932:G:H1'	32:j:71:ARG:HH12	1.40	0.86
25:c:67:ILE:HG12	25:c:106:PHE:HZ	1.41	0.86
34:l:58:PHE:HE1	34:l:75:VAL:HA	1.39	0.86
1:A:594:A:H2	1:A:607:G:H22	1.22	0.86
1:A:715:G:H5'	17:R:69:LYS:HZ3	1.40	0.86
20:Y:1073:G:O2'	20:Y:1076:A:N6	2.08	0.86
20:Y:2016:G:OP1	22:Z:258:ARG:HD2	1.76	0.86
23:a:14:THR:O	23:a:26:VAL:N	2.07	0.86
34:l:20:SER:OG	34:l:89:GLY:O	1.92	0.86
4:E:70:MET:HG2	4:E:98:ARG:HD3	1.57	0.85
19:V:154:MET:HE1	19:V:157:VAL:HA	1.58	0.85
20:Y:682:A:H5'	24:b:96:ARG:HH12	1.39	0.85
20:Y:2089:C:O2'	20:Y:2090:U:O4'	1.92	0.85
32:j:99:LYS:CE	46:x:43:LEU:HD21	2.06	0.85
38:p:7:PRO:HB2	38:p:45:ALA:HB2	1.58	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:103:G:O6	18:T:10:ARG:NE	2.09	0.85
1:A:363:A:H5'	11:L:29:GLN:HE22	1.41	0.85
14:O:15:TYR:HE2	14:O:85:LEU:HD21	1.41	0.85
20:Y:1033:A:H2'	20:Y:1034:U:O4'	1.77	0.85
20:Y:1320:U:H2'	20:Y:1321:C:C6	2.11	0.85
20:Y:1358:U:O3'	30:h:10:LYS:NZ	2.09	0.85
24:b:4:LYS:NZ	24:b:6:ASP:OD1	2.09	0.85
1:A:251:G:H4'	1:A:252:U:H5'	1.58	0.85
14:O:29:VAL:HG21	14:O:81:LEU:HD21	1.56	0.85
15:P:53:SER:OG	15:P:79:ASP:OD1	1.94	0.85
17:R:70:ASN:ND2	17:R:73:GLU:OE2	2.09	0.85
20:Y:2009:G:H1	20:Y:2044:U:H3	1.24	0.85
20:Y:2314:U:OP2	20:Y:2315:U:H2'	1.75	0.85
4:E:106:ILE:HD12	4:E:106:ILE:H	1.42	0.85
29:g:64:ARG:HG3	29:g:79:PHE:HD2	1.42	0.85
1:A:171:A:H2'	1:A:172:C:H5'	1.57	0.85
1:A:561:G:OP1	14:O:65:ARG:NH2	2.09	0.85
51:4:2367:G:N2	51:4:2369:C:O2'	2.08	0.85
1:A:207:G:H4'	18:T:56:ARG:HD2	1.58	0.85
2:C:21:ARG:NH2	2:C:55:GLU:OE2	2.09	0.85
10:K:74:LEU:HA	10:K:77:GLU:OE2	1.77	0.85
20:Y:403:U:H5"	24:b:138:THR:HG23	1.57	0.85
20:Y:1711:G:O2'	22:Z:101:GLU:OE1	1.92	0.85
20:Y:1900:C:N3	20:Y:1924:G:N2	2.24	0.85
25:c:8:LEU:HG	25:c:9:PRO:HD3	1.58	0.85
29:g:35:ILE:HA	29:g:62:VAL:HG13	1.57	0.85
20:Y:267:G:N2	20:Y:515:U:O2	2.10	0.85
20:Y:355:A:N6	20:Y:441:G:N1	2.23	0.85
20:Y:693:G:H1'	24:b:106:MET:HE1	1.59	0.85
20:Y:2248:C:H2'	20:Y:2249:G:C8	2.12	0.85
25:c:40:LYS:HD3	25:c:99:ARG:HD3	1.57	0.85
26:d:105:GLU:N	26:d:105:GLU:OE1	2.09	0.85
51:4:2333:G:O2'	51:4:2343:G:O5'	1.95	0.85
1:A:1040:U:H5"	9:J:53:ARG:HE	1.40	0.85
1:A:1432:C:H2'	1:A:1433:C:C6	2.12	0.85
20:Y:489:A:H2'	20:Y:490:A:H8	1.42	0.85
20:Y:1549:G:H5'	20:Y:1550:G:H22	1.42	0.85
20:Y:2101:A:H2'	20:Y:2102:G:C8	2.12	0.85
35:m:65:ILE:HD12	35:m:95:LEU:HB3	1.58	0.85
1:A:223:G:H1'	16:Q:8:LYS:CB	2.07	0.85
1:A:487:C:OP2	1:A:488:C:O2'	1.94	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1395:C:H42	1:A:1472:G:H22	1.20	0.85
5:F:5:GLU:HG2	5:F:93:THR:HG22	1.57	0.85
12:M:15:MET:HG2	12:M:34:LEU:HD11	1.57	0.85
15:P:17:GLN:HA	15:P:41:HIS:HD1	1.41	0.85
20:Y:87:C:H3'	20:Y:88:A:H2'	1.57	0.85
20:Y:1461:G:H2'	20:Y:1462:G:C8	2.12	0.85
20:Y:1533:U:O2'	20:Y:1803:A:N6	2.09	0.85
20:Y:1635:A:OP2	20:Y:1802:G:N1	2.10	0.85
1:A:154:G:N2	1:A:161:U:O2	2.10	0.84
1:A:958:G:N2	1:A:1345:A:OP2	2.10	0.84
3:D:50:LEU:O	3:D:54:GLN:HG3	1.75	0.84
20:Y:2971:G:O6	20:Y:2978:U:H2'	1.76	0.84
20:Y:3022:G:H2'	20:Y:3023:G:C8	2.12	0.84
20:Y:3105:C:C2	46:x:44:LEU:HB3	2.12	0.84
24:b:28:GLU:N	24:b:28:GLU:OE1	2.09	0.84
33:k:47:ILE:HD11	33:k:84:VAL:HG11	1.58	0.84
34:l:45:VAL:N	34:l:61:ARG:O	2.10	0.84
50:2:1:MET:SD	50:2:33:LYS:NZ	2.50	0.84
51:4:2343:G:H1	51:4:2401:U:H3	0.85	0.84
10:K:76:ALA:HB1	10:K:109:LEU:HD13	1.59	0.84
20:Y:663:A:H3'	36:n:81:LYS:NZ	1.92	0.84
1:A:1353:G:H5"	8:I:131:ILE:HG13	1.60	0.84
3:D:83:ASP:HA	3:D:86:LEU:HG	1.56	0.84
20:Y:1982:G:N1	20:Y:2212:A:N6	2.25	0.84
20:Y:2997:C:OP1	23:a:174:ARG:NH2	2.10	0.84
1:A:434:C:H2'	1:A:435:U:C6	2.13	0.84
1:A:818:U:H3	1:A:830:G:H1	0.85	0.84
1:A:996:G:N2	1:A:999:A:OP2	2.10	0.84
9:J:47:ASN:HB2	9:J:67:MET:HB2	1.59	0.84
15:P:55:ARG:NE	15:P:55:ARG:HA	1.89	0.84
20:Y:494:G:H1	20:Y:509:U:H3	1.19	0.84
20:Y:981:U:N3	20:Y:1019:C:OP2	2.10	0.84
20:Y:2288:C:H2'	20:Y:2289:C:C6	2.12	0.84
20:Y:3037:C:OP1	46:x:42:ARG:NH1	2.11	0.84
20:Y:306:U:H2'	20:Y:307:G:C8	2.12	0.84
20:Y:973:G:OP1	41:s:76:LYS:NZ	2.10	0.84
20:Y:2550:U:H3	20:Y:2613:G:H1	1.21	0.84
20:Y:2628:U:O4	20:Y:2637:G:O6	1.94	0.84
20:Y:681:C:H2'	20:Y:682:A:C8	2.13	0.84
20:Y:1320:U:H2'	20:Y:1321:C:H6	1.41	0.84
20:Y:2860:U:O4	20:Y:3006:G:O6	1.95	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:l:61:ARG:HB2	34:l:70:GLU:CG	2.07	0.84
1:A:721:G:OP1	14:O:35:ARG:NH2	2.11	0.84
1:A:1305:G:H4'	1:A:1345:A:N7	1.92	0.84
3:D:145:LEU:HD12	3:D:150:PHE:HE2	1.40	0.84
4:E:81:VAL:O	4:E:85:ILE:HG23	1.78	0.84
20:Y:1930:C:OP2	20:Y:1931:A:O2'	1.94	0.84
20:Y:2861:U:OP1	23:a:85:ARG:NH2	2.10	0.84
25:c:45:MET:HE2	25:c:158:GLY:HA3	1.58	0.84
38:p:62:ARG:NH1	38:p:79:THR:OG1	2.10	0.84
43:u:36:MET:HE2	43:u:43:ASN:O	1.76	0.84
1:A:990:C:O2	1:A:1005:G:N2	2.11	0.84
10:K:92:ASP:OD1	10:K:118:THR:OG1	1.94	0.84
20:Y:553:G:H21	20:Y:799:G:H1'	1.43	0.84
20:Y:972:A:O2'	20:Y:973:G:O5'	1.96	0.84
20:Y:2047:C:H2'	20:Y:2048:G:H8	1.43	0.84
21:U:48:C:H5'	33:k:14:ARG:HH22	1.40	0.84
26:d:106:PHE:HB2	26:d:114:VAL:HG13	1.60	0.84
43:u:10:LEU:HD23	43:u:13:LEU:CD1	2.06	0.84
1:A:1054:G:OP1	4:E:94:LYS:NZ	2.11	0.84
17:R:74:VAL:HG13	17:R:76:LEU:HG	1.59	0.84
21:U:60:G:H5'	33:k:9:ASN:HD22	1.42	0.84
1:A:137:C:C2'	16:Q:7:PRO:HD2	2.07	0.84
1:A:1041:G:H2'	1:A:1042:U:C6	2.12	0.84
1:A:1415:G:O2'	1:A:1452:A:N6	2.11	0.84
7:H:95:PRO:HG3	7:H:127:VAL:HG11	1.59	0.84
20:Y:268:G:H1'	20:Y:360:G:C6	1.85	0.84
20:Y:399:G:H2'	20:Y:400:C:H5"	1.57	0.84
20:Y:621:U:H5'	35:m:42:SER:OG	1.78	0.84
20:Y:1883:A:H1'	29:g:1:MET:SD	2.17	0.84
20:Y:2645:G:OP1	47:y:10:LYS:NZ	2.09	0.84
20:Y:3073:G:H2'	20:Y:3074:C:C6	2.12	0.84
23:a:135:GLN:HE22	23:a:144:VAL:HG12	1.41	0.84
24:b:151:ASN:ND2	24:b:193:ASP:OD2	2.11	0.84
26:d:122:ILE:HG13	26:d:124:PHE:HE1	1.43	0.84
34:l:49:ARG:O	34:l:49:ARG:HD3	1.76	0.84
20:Y:999:C:O2'	20:Y:1008:G:O6	1.94	0.83
20:Y:1033:A:H2	21:U:81:U:H4'	1.43	0.83
20:Y:3015:C:H2'	20:Y:3016:C:H5"	1.59	0.83
28:f:53:PHE:HD1	28:f:121:LYS:HB2	1.39	0.83
47:y:16:GLU:HB2	47:y:49:GLN:NE2	1.93	0.83
8:I:32:ARG:HH21	8:I:97:GLY:HA3	1.44	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:320:G:N2	20:Y:492:C:OP2	2.12	0.83
28:f:19:ASP:OD2	28:f:21:SER:N	2.09	0.83
29:g:24:VAL:CG2	29:g:30:ARG:HD3	2.08	0.83
29:g:87:ILE:HD11	29:g:91:ASN:HA	1.57	0.83
48:z:11:ASN:OD1	48:z:13:ARG:N	2.09	0.83
1:A:208:G:O3'	18:T:60:LYS:NZ	2.12	0.83
1:A:1515:A:H2'	1:A:1516:U:C6	2.13	0.83
5:F:27:LEU:HA	5:F:30:ILE:HD12	1.61	0.83
14:O:15:TYR:CE2	14:O:85:LEU:HD21	2.13	0.83
16:Q:92:GLU:OE2	16:Q:92:GLU:N	2.11	0.83
19:V:114:LEU:HD12	19:V:144:LEU:HD11	1.60	0.83
19:V:141:LYS:O	19:V:145:GLU:HG3	1.78	0.83
19:V:213:LEU:O	19:V:217:ILE:HG12	1.76	0.83
20:Y:801:U:O4	48:z:15:ARG:HD2	1.77	0.83
20:Y:2306:A:H61	20:Y:2460:U:H3	1.26	0.83
26:d:24:LEU:HD21	26:d:73:ILE:HD11	1.60	0.83
35:m:73:ASP:O	35:m:114:ARG:NH2	2.11	0.83
1:A:143:G:H2'	1:A:144:G:H8	1.42	0.83
1:A:496:U:H3'	1:A:497:G:H21	1.42	0.83
1:A:847:A:H2'	1:A:848:C:C6	2.14	0.83
1:A:1339:A:H4'	13:N:34:TYR:HE1	1.40	0.83
16:Q:62:HIS:HB2	16:Q:89:ARG:HG3	1.59	0.83
18:T:5:LYS:HA	18:T:8:ILE:HD11	1.59	0.83
20:Y:268:G:C2'	20:Y:360:G:C2	2.60	0.83
20:Y:981:U:O2'	20:Y:982:A:OP2	1.94	0.83
20:Y:2535:A:H4'	25:c:78:ARG:HH12	1.44	0.83
22:Z:162:SER:OG	22:Z:195:GLU:OE1	1.94	0.83
25:c:39:VAL:HG12	25:c:40:LYS:HG2	1.57	0.83
1:A:1306:A:H5"	1:A:1345:A:H5"	1.60	0.83
4:E:121:LEU:HD12	4:E:148:ILE:CD1	2.07	0.83
6:G:95:ARG:NH1	6:G:99:LEU:HG	1.93	0.83
19:V:6:MET:HE2	19:V:6:MET:N	1.92	0.83
20:Y:1367:G:N2	35:m:33:ARG:O	2.11	0.83
20:Y:1379:G:OP2	20:Y:1380:A:H2'	1.79	0.83
20:Y:1755:A:O2'	20:Y:1758:G:N2	2.12	0.83
20:Y:2694:G:OP1	31:i:56:ARG:NH2	2.11	0.83
20:Y:2866:A:H5"	28:f:80:TYR:CE2	2.14	0.83
20:Y:2881:A:H62	20:Y:2888:G:N2	1.76	0.83
20:Y:3057:U:O4	20:Y:3104:A:N6	2.12	0.83
1:A:819:U:O2	1:A:829:G:N2	2.11	0.83
6:G:69:VAL:HA	6:G:138:ARG:HH21	1.43	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:V:151:ILE:HA	19:V:154:MET:HG3	1.59	0.83
20:Y:316:U:H2'	20:Y:509:U:H5	1.42	0.83
20:Y:336:C:O2'	20:Y:337:U:OP1	1.97	0.83
20:Y:2318:U:H2'	20:Y:2319:G:H8	1.43	0.83
20:Y:2536:U:H4'	25:c:75:ARG:HD2	1.60	0.83
31:i:110:ASP:HB2	31:i:112:LYS:NZ	1.93	0.83
32:j:9:ARG:HD2	32:j:17:GLN:OE1	1.78	0.83
39:q:97:ILE:HG23	39:q:102:GLY:HA2	1.57	0.83
1:A:150:G:O6	1:A:165:U:O4	1.96	0.83
1:A:270:A:H2'	1:A:271:C:C6	2.14	0.83
6:G:60:VAL:HA	6:G:63:LYS:HE3	1.59	0.83
9:J:51:VAL:O	9:J:63:GLU:N	2.11	0.83
20:Y:747:A:H2'	20:Y:748:U:O4'	1.78	0.83
20:Y:994:A:H2'	20:Y:995:U:H5'	1.60	0.83
20:Y:1047:A:OP2	20:Y:1287:C:O2'	1.95	0.83
20:Y:1500:A:O2'	20:Y:1511:U:O2	1.95	0.83
32:j:55:ALA:HA	32:j:80:PHE:CE2	2.14	0.83
37:o:38:GLU:N	37:o:38:GLU:OE1	2.11	0.83
43:u:58:TYR:O	43:u:61:LEU:HG	1.79	0.83
48:z:25:MET:CE	48:z:31:ARG:HG2	2.08	0.83
1:A:997:A:H2	1:A:1200:A:H4'	1.42	0.83
11:L:2:PRO:HB2	11:L:7:LEU:HD21	1.58	0.83
20:Y:122:A:OP2	48:z:22:ARG:HD2	1.79	0.83
20:Y:1177:G:C3'	20:Y:1178:U:H2'	2.08	0.83
20:Y:1231:U:O2'	20:Y:1232:G:OP1	1.95	0.83
20:Y:1674:G:H22	32:j:74:ASP:HA	1.42	0.83
1:A:172:C:O3'	18:T:20:ARG:NH2	2.09	0.83
1:A:1058:U:O2'	1:A:1059:G:O5'	1.97	0.83
1:A:1231:A:H2'	1:A:1232:A:C8	2.14	0.83
20:Y:1137:U:OP1	20:Y:1153:U:O2'	1.96	0.83
20:Y:1157:G:H2'	20:Y:1158:U:H5"	1.58	0.83
20:Y:2248:C:H4'	23:a:159:ARG:NH2	1.94	0.83
44:v:35:ASN:HA	44:v:38:GLU:OE1	1.78	0.83
1:A:32:G:H21	1:A:296:U:H5'	1.42	0.83
5:F:15:ASP:OD2	5:F:18:THR:OG1	1.97	0.83
8:I:105:ARG:O	8:I:109:LEU:HG	1.78	0.83
20:Y:495:C:H2'	20:Y:496:C:C6	2.14	0.83
20:Y:567:A:H4'	20:Y:568:A:H5'	1.60	0.83
20:Y:1066:G:O2'	20:Y:1067:G:H5'	1.79	0.83
20:Y:2740:G:O2'	20:Y:2741:C:H5'	1.79	0.83
50:2:13:LYS:O	50:2:15:ARG:NH1	2.12	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1304:C:H4’	1:A:1305:G:H5’	1.58	0.82
20:Y:1200:U:H5’	27:e:121:ASN:H	1.43	0.82
26:d:169:GLN:N	26:d:169:GLN:OE1	2.12	0.82
1:A:383:A:H3’	1:A:384:G:H8	1.44	0.82
1:A:1290:C:O2	1:A:1311:G:N2	2.12	0.82
4:E:187:GLU:N	4:E:187:GLU:OE2	2.12	0.82
20:Y:21:G:N1	20:Y:604:C:N3	2.27	0.82
20:Y:176:G:OP2	20:Y:176:G:N2	2.09	0.82
20:Y:622:C:H5’	35:m:49:ASP:OD2	1.78	0.82
20:Y:2628:U:O2	20:Y:2637:G:N2	2.11	0.82
20:Y:2915:C:H4’	20:Y:3092:G:O2’	1.79	0.82
34:l:61:ARG:HH12	34:l:68:GLY:HA3	1.42	0.82
1:A:143:G:H2’	1:A:144:G:C8	2.14	0.82
1:A:666:U:H1’	10:K:53:TRP:HE1	1.42	0.82
1:A:1385:C:H2’	1:A:1386:C:C6	2.13	0.82
2:C:57:GLU:HG2	2:C:64:ARG:HB2	1.59	0.82
7:H:115:ASP:OD2	7:H:116:ARG:N	2.13	0.82
14:O:32:LEU:O	14:O:36:ILE:HG12	1.79	0.82
19:V:60:THR:HA	19:V:63:HIS:HE1	1.44	0.82
20:Y:2070:A:H2’	20:Y:2071:A:H8	1.44	0.82
20:Y:2865:G:OP2	28:f:76:ARG:NH2	2.11	0.82
1:A:1442:G:H2’	1:A:1443:G:H8	1.43	0.82
2:C:25:ASP:OD1	2:C:26:LYS:NZ	2.11	0.82
7:H:32:LEU:HD12	7:H:33:LYS:N	1.94	0.82
12:M:15:MET:SD	12:M:15:MET:N	2.51	0.82
18:T:8:ILE:O	18:T:12:ARG:NH1	2.13	0.82
20:Y:268:G:N3	20:Y:360:G:C4	2.48	0.82
20:Y:1933:G:N2	20:Y:1961:G:O6	2.12	0.82
24:b:155:LEU:HB3	24:b:194:VAL:HG12	1.62	0.82
34:l:107:ALA:O	34:l:108:LYS:HE2	1.79	0.82
1:A:1499:C:H2’	1:A:1500:G:H8	1.43	0.82
14:O:79:ARG:HA	14:O:82:ILE:HD12	1.58	0.82
20:Y:1249:G:H4’	28:f:84:LEU:HD22	1.62	0.82
20:Y:2016:G:O6	22:Z:179:SER:OG	1.97	0.82
20:Y:2130:G:H2’	20:Y:2131:G:C8	2.13	0.82
25:c:70:GLN:O	25:c:72:PRO:HD3	1.78	0.82
38:p:42:ILE:O	38:p:46:ILE:HG22	1.79	0.82
1:A:123:G:N2	16:Q:78:GLU:OE2	2.13	0.82
1:A:489:A:H4’	3:D:47:ARG:HG3	1.58	0.82
1:A:1454:G:O2’	1:A:1455:G:H5’	1.79	0.82
20:Y:92:G:H2’	20:Y:93:A:C8	2.15	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:159:A:H2'	20:Y:160:A:C8	2.12	0.82
20:Y:1008:G:H1'	20:Y:1010:U:H2'	1.61	0.82
20:Y:1825:C:N4	20:Y:1840:G:OP2	2.12	0.82
20:Y:2024:G:O2'	20:Y:2026:A:N6	2.11	0.82
20:Y:3073:G:H2'	20:Y:3074:C:H6	1.43	0.82
1:A:593:C:H2'	1:A:594:A:C8	2.14	0.82
4:E:121:LEU:HD13	4:E:150:ALA:HB2	1.61	0.82
15:P:35:GLU:OE2	15:P:55:ARG:NH1	2.13	0.82
20:Y:27:G:N1	20:Y:598:U:O2	2.12	0.82
20:Y:1520:C:H2'	20:Y:1521:C:H6	1.43	0.82
20:Y:1532:G:O2'	20:Y:1533:U:O4'	1.98	0.82
20:Y:1533:U:H3'	20:Y:1534:C:H5"	1.59	0.82
20:Y:2883:G:N2	20:Y:2886:A:OP2	2.12	0.82
25:c:130:ASP:OD1	25:c:132:THR:OG1	1.97	0.82
34:l:60:VAL:N	34:l:71:ARG:O	2.11	0.82
39:q:91:THR:HG22	39:q:93:LYS:HD3	1.61	0.82
1:A:595:C:H2'	1:A:596:A:C8	2.15	0.82
1:A:914:C:H5"	6:G:4:LYS:HE3	1.59	0.82
20:Y:154:C:H2'	20:Y:155:G:C8	2.15	0.82
20:Y:1782:U:H2'	20:Y:1783:G:C8	2.14	0.82
25:c:9:PRO:HD2	25:c:9:PRO:O	1.78	0.82
1:A:758:G:O6	1:A:784:U:O2	1.98	0.82
5:F:44:GLY:HA3	5:F:59:ILE:HA	1.61	0.82
14:O:6:GLU:N	14:O:6:GLU:OE1	2.12	0.82
20:Y:62:G:H1	20:Y:86:U:H3	0.82	0.82
20:Y:384:G:OP1	20:Y:384:G:H3'	1.80	0.82
20:Y:679:G:H2'	30:h:22:VAL:HG12	1.60	0.82
20:Y:1107:G:N7	45:w:13:ILE:HD11	1.94	0.82
45:w:23:LEU:HD11	45:w:28:LEU:HB2	1.62	0.82
1:A:1235:G:OP1	9:J:47:ASN:ND2	2.12	0.82
15:P:18:TYR:O	15:P:40:TYR:N	2.11	0.82
20:Y:78:G:N2	20:Y:103:C:O2	2.13	0.82
20:Y:639:C:O2'	20:Y:640:G:O5'	1.97	0.82
20:Y:662:G:H4'	20:Y:1101:A:C2	2.15	0.82
22:Z:206:TRP:HA	22:Z:211:ARG:HD3	1.60	0.82
24:b:3:LEU:HD12	24:b:4:LYS:N	1.95	0.82
25:c:125:SER:OG	25:c:127:LYS:HG2	1.79	0.82
39:q:32:LYS:HG2	39:q:65:PRO:HB2	1.61	0.82
39:q:35:VAL:HB	39:q:38:VAL:CG2	2.10	0.82
41:s:19:GLN:N	41:s:19:GLN:OE1	2.13	0.82
42:t:14:PHE:CE1	42:t:28:ARG:HB3	2.15	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:363:A:N1	11:L:28:PRO:HD2	1.95	0.81
2:C:111:GLN:OE1	2:C:114:LEU:N	2.10	0.81
12:M:57:ARG:NH1	12:M:61:GLU:OE2	2.13	0.81
25:c:12:LYS:HA	25:c:104:TRP:CZ3	2.14	0.81
26:d:5:GLY:HA2	26:d:70:ARG:HD2	1.61	0.81
28:f:18:ILE:HD11	28:f:140:PHE:HD2	1.44	0.81
44:v:70:ASP:HA	44:v:73:PHE:CE2	2.15	0.81
51:4:2332:U:O2	51:4:2404:G:N2	2.13	0.81
1:A:438:U:OP2	3:D:143:LYS:NZ	2.10	0.81
1:A:731:U:H2'	1:A:732:G:O4'	1.80	0.81
20:Y:242:G:O5'	49:1:3:LYS:NZ	2.13	0.81
20:Y:664:A:H5"	20:Y:665:G:OP2	1.79	0.81
23:a:44:ARG:O	23:a:44:ARG:NH1	2.12	0.81
35:m:47:TYR:HA	35:m:50:ARG:HH12	1.44	0.81
1:A:242:U:O4	1:A:284:G:O6	1.97	0.81
1:A:814:G:H5"	17:R:58:VAL:CG2	2.10	0.81
1:A:879:C:H2'	1:A:880:G:H8	1.45	0.81
1:A:1221:U:C2	6:G:32:LEU:HD21	2.16	0.81
1:A:1231:A:H4'	8:I:89:GLY:HA2	1.60	0.81
6:G:76:ARG:N	6:G:87:VAL:O	2.12	0.81
10:K:97:GLY:O	10:K:102:ARG:NH2	2.14	0.81
12:M:40:ASP:HB3	12:M:43:MET:SD	2.21	0.81
15:P:20:ILE:N	15:P:38:GLY:O	2.12	0.81
19:V:156:LYS:O	19:V:157:VAL:HG22	1.79	0.81
20:Y:139:U:H2'	20:Y:140:G:O4'	1.79	0.81
20:Y:489:A:H2'	20:Y:490:A:C8	2.15	0.81
20:Y:676:C:N4	20:Y:677:G:O6	2.14	0.81
20:Y:2009:G:N2	20:Y:2044:U:O2	2.11	0.81
22:Z:26:ARG:HD3	22:Z:28:THR:O	1.80	0.81
31:i:118:LEU:O	31:i:122:ILE:HG12	1.79	0.81
37:o:44:ARG:NH1	37:o:55:ALA:HB1	1.95	0.81
43:u:5:THR:O	43:u:56:ARG:NH1	2.14	0.81
49:1:37:PRO:HD2	49:1:40:ARG:HB3	1.63	0.81
1:A:490:A:N3	1:A:523:U:H1'	1.96	0.81
5:F:68:GLU:HB2	5:F:71:THR:HG23	1.62	0.81
14:O:39:LEU:HD22	14:O:56:LEU:HD11	1.59	0.81
16:Q:38:VAL:N	16:Q:59:VAL:O	2.13	0.81
20:Y:1101:A:O2'	20:Y:1102:G:H5'	1.81	0.81
20:Y:1379:G:O5'	46:x:8:MET:HE1	1.80	0.81
20:Y:1674:G:H4'	20:Y:1675:U:OP2	1.78	0.81
20:Y:1871:G:C4'	32:j:7:GLY:HA2	2.10	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:2019:A:H2'	20:Y:2020:A:H8	1.45	0.81
20:Y:2410:A:O2'	51:4:2326:A:N7	2.12	0.81
20:Y:2508:C:OP2	47:y:8:ARG:HG3	1.79	0.81
25:c:67:ILE:HG23	25:c:68:THR:HG23	1.62	0.81
31:i:134:ARG:O	31:i:134:ARG:NH1	2.13	0.81
34:l:21:PRO:HG3	34:l:94:ALA:HA	1.60	0.81
49:1:39:LYS:HD3	49:1:43:ARG:HH22	1.43	0.81
1:A:1063:U:H3'	1:A:1064:G:C8	2.15	0.81
1:A:1202:G:H5"	1:A:1303:U:H5	1.46	0.81
1:A:1265:U:OP1	1:A:1266:U:O2'	1.97	0.81
3:D:10:ARG:HD3	3:D:33:PRO:HG3	1.63	0.81
20:Y:482:U:H2'	20:Y:483:G:O4'	1.81	0.81
20:Y:981:U:H4'	20:Y:982:A:C5'	2.11	0.81
20:Y:2563:G:H2'	20:Y:2564:A:H8	1.45	0.81
20:Y:3008:C:O2'	20:Y:3009:U:OP1	1.99	0.81
21:U:9:G:OP1	33:k:37:ARG:NH2	2.13	0.81
26:d:67:GLY:O	26:d:71:THR:HG22	1.80	0.81
2:C:89:ASP:CA	2:C:92:LYS:HE3	2.07	0.81
4:E:99:VAL:CG2	4:E:169:LEU:HD22	2.11	0.81
7:H:36:ILE:HA	7:H:39:ILE:HD12	1.63	0.81
9:J:11:LYS:HG3	9:J:97:ASP:HB2	1.63	0.81
16:Q:34:LYS:HE2	16:Q:34:LYS:H	1.43	0.81
18:T:68:HIS:CE1	18:T:70:ASN:HB2	2.16	0.81
20:Y:565:A:H2'	20:Y:566:A:C8	2.14	0.81
20:Y:2528:G:H3'	25:c:138:GLY:O	1.80	0.81
32:j:83:ILE:H	32:j:83:ILE:HD12	1.46	0.81
1:A:1160:A:O2'	1:A:1161:A:O4'	1.98	0.81
6:G:16:PRO:HD2	8:I:62:LYS:NZ	1.95	0.81
20:Y:190:A:H2'	20:Y:191:G:N3	1.96	0.81
20:Y:506:C:H2'	20:Y:507:G:C8	2.16	0.81
20:Y:556:G:N7	48:z:42:ARG:NH2	2.27	0.81
20:Y:614:C:N4	20:Y:3003:C:OP2	2.14	0.81
20:Y:693:G:C1'	24:b:106:MET:HE1	2.11	0.81
20:Y:867:A:P	48:z:6:ARG:HH22	2.04	0.81
20:Y:1939:U:N3	20:Y:1955:A:N6	2.20	0.81
20:Y:2915:C:H3'	20:Y:2915:C:OP2	1.80	0.81
20:Y:2975:G:H4'	26:d:4:ILE:CD1	2.08	0.81
32:j:87:TYR:OH	32:j:116:VAL:O	1.96	0.81
45:w:28:LEU:HD11	45:w:35:VAL:HG11	1.63	0.81
47:y:25:THR:HG22	47:y:27:LYS:HE2	1.62	0.81
51:4:2343:G:O6	51:4:2401:U:O4	1.98	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:715:G:H5'	17:R:69:LYS:NZ	1.96	0.81
3:D:160:ARG:HH11	3:D:161:PRO:HD2	1.44	0.81
5:F:3:PRO:HD3	5:F:66:LYS:HE2	1.63	0.81
16:Q:24:ILE:HG13	16:Q:74:VAL:O	1.80	0.81
18:T:31:ALA:CB	18:T:57:LYS:HE3	2.10	0.81
18:T:35:PHE:O	18:T:39:VAL:HG13	1.79	0.81
19:V:26:LYS:C	19:V:27:MET:HE2	2.06	0.81
20:Y:199:U:H2'	20:Y:200:C:H5'	1.61	0.81
20:Y:523:U:H2'	20:Y:524:C:H5'	1.63	0.81
20:Y:1733:C:H2'	20:Y:1734:C:H6	1.45	0.81
20:Y:2051:U:H5"	20:Y:2052:G:H5'	1.61	0.81
25:c:12:LYS:HA	25:c:104:TRP:HZ3	1.46	0.81
26:d:87:LYS:N	26:d:166:GLU:OE2	2.13	0.81
31:i:29:PHE:HB2	31:i:105:GLU:OE2	1.80	0.81
34:l:103:ARG:H	34:l:106:LYS:HD2	1.46	0.81
1:A:81:C:H3'	1:A:82:U:H5"	1.63	0.81
1:A:422:C:H4'	1:A:423:G:O5'	1.81	0.81
1:A:1456:U:H5'	1:A:1457:G:OP2	1.80	0.81
3:D:189:PRO:O	3:D:189:PRO:HD2	1.80	0.81
8:I:68:ILE:HG12	8:I:99:LEU:HD11	1.62	0.81
20:Y:571:A:N3	39:q:59:ILE:HD11	1.96	0.81
20:Y:922:U:OP1	30:h:38:LYS:NZ	2.11	0.81
20:Y:1381:G:H5"	46:x:20:TRP:CZ3	2.16	0.81
20:Y:1993:G:N2	20:Y:2005:C:O2	2.13	0.81
28:f:4:TYR:CD2	35:m:100:VAL:HG21	2.16	0.81
28:f:75:TYR:CE1	28:f:86:LYS:HE2	2.15	0.81
30:h:87:PHE:HB3	30:h:90:GLY:HA2	1.61	0.81
3:D:52:GLU:HA	3:D:55:LYS:NZ	1.96	0.81
20:Y:1748:A:H2'	20:Y:1749:U:O4'	1.80	0.81
20:Y:1864:U:H4'	20:Y:1865:A:H5'	1.63	0.81
20:Y:2035:U:OP2	22:Z:157:ARG:HD2	1.81	0.81
20:Y:2548:U:O2'	20:Y:2561:G:OP1	1.98	0.81
20:Y:2630:A:H4'	20:Y:2631:G:O5'	1.79	0.81
23:a:129:ARG:HA	23:a:170:MET:CE	2.10	0.81
25:c:115:LEU:HA	25:c:118:ILE:HD12	1.63	0.81
26:d:45:ARG:NH1	26:d:46:ALA:O	2.13	0.81
33:k:14:ARG:HD3	33:k:14:ARG:O	1.79	0.81
34:l:47:ILE:HG23	34:l:96:LEU:HB2	1.62	0.81
46:x:52:VAL:HG13	46:x:54:LEU:HD13	1.62	0.81
17:R:54:THR:OG1	17:R:56:ASN:OD1	1.98	0.80
19:V:5:THR:O	19:V:9:LEU:HG	1.81	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:406:A:H2'	20:Y:407:C:H5'	1.63	0.80
20:Y:947:U:H2'	20:Y:948:G:H8	1.45	0.80
20:Y:2089:C:O2'	20:Y:2090:U:O5'	1.98	0.80
32:j:103:ARG:HD3	32:j:110:MET:HE3	1.62	0.80
43:u:22:LEU:HB2	43:u:57:VAL:HG21	1.61	0.80
1:A:53:U:H3'	1:A:54:A:H5"	1.63	0.80
1:A:653:G:H2'	1:A:654:G:C8	2.16	0.80
1:A:1277:U:O3'	12:M:14:ARG:NH2	2.13	0.80
20:Y:577:G:N2	20:Y:1436:C:OP1	2.14	0.80
20:Y:615:A:OP2	28:f:113:LYS:HD3	1.80	0.80
24:b:103:PRO:HB2	24:b:106:MET:HG2	1.63	0.80
43:u:36:MET:HE1	43:u:44:ASN:HA	1.61	0.80
1:A:226:G:OP2	16:Q:11:PRO:HB2	1.81	0.80
3:D:87:ARG:NH2	3:D:181:PRO:HD2	1.97	0.80
3:D:112:LEU:HB3	3:D:118:PHE:CZ	2.13	0.80
3:D:138:ILE:CG2	3:D:175:ILE:HB	2.11	0.80
4:E:108:HIS:HB2	4:E:109:PRO:HD3	1.64	0.80
19:V:216:VAL:HG13	19:V:217:ILE:HD13	1.63	0.80
20:Y:138:A:H2'	20:Y:139:U:O2	1.80	0.80
20:Y:494:G:O2'	20:Y:495:C:H5'	1.82	0.80
20:Y:2243:C:H5'	35:m:27:GLN:HE22	1.45	0.80
20:Y:2599:G:N2	20:Y:2602:A:OP2	2.14	0.80
11:L:57:LEU:HD12	11:L:61:VAL:HB	1.64	0.80
14:O:33:THR:HA	14:O:36:ILE:HD11	1.62	0.80
20:Y:383:U:H3'	20:Y:384:G:C5'	2.10	0.80
20:Y:1699:G:N2	20:Y:1735:U:O2	2.12	0.80
30:h:12:ALA:O	30:h:15:GLU:HG2	1.81	0.80
34:l:61:ARG:NH1	34:l:68:GLY:HA3	1.97	0.80
42:t:41:ARG:HE	42:t:43:GLY:HA3	1.43	0.80
51:4:2358:A:O2'	51:4:2382:G:O2'	1.98	0.80
1:A:804:U:H2'	1:A:805:A:H8	1.47	0.80
1:A:1289:U:OP1	12:M:101:GLN:NE2	2.14	0.80
1:A:1428:U:H3	1:A:1441:G:H1	1.28	0.80
7:H:107:SER:O	7:H:125:GLY:HA3	1.82	0.80
20:Y:1396:G:H2'	20:Y:1397:U:C6	2.17	0.80
20:Y:2564:A:O2'	20:Y:2565:G:H5'	1.79	0.80
22:Z:134:ARG:HA	22:Z:168:LYS:HZ1	1.46	0.80
26:d:3:ARG:HA	26:d:6:LYS:HD3	1.63	0.80
36:n:41:LEU:HD12	36:n:42:VAL:N	1.96	0.80
1:A:772:A:O2'	1:A:774:A:N7	2.15	0.80
20:Y:1999:U:O2'	20:Y:2000:A:OP1	1.99	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:d:106:PHE:HB3	26:d:108:LEU:HD13	1.64	0.80
1:A:1291:G:N1	1:A:1310:C:N3	2.29	0.80
1:A:1488:G:OP1	1:A:1491:A:H4'	1.82	0.80
20:Y:1493:A:O2'	20:Y:1494:U:OP2	1.99	0.80
20:Y:2969:C:O2	26:d:140:GLN:NE2	2.15	0.80
24:b:183:LEU:HD11	24:b:188:VAL:CG2	2.11	0.80
25:c:9:PRO:CD	25:c:12:LYS:HB2	2.11	0.80
35:m:27:GLN:HG3	35:m:34:LYS:NZ	1.95	0.80
1:A:663:G:N2	10:K:48:GLY:O	2.14	0.80
1:A:1501:G:O2'	1:A:1502:A:O5'	1.98	0.80
3:D:51:GLN:HA	3:D:54:GLN:OE1	1.82	0.80
20:Y:26:U:H4'	35:m:7:ALA:HB1	1.62	0.80
20:Y:154:C:H2'	20:Y:155:G:H8	1.47	0.80
20:Y:227:A:C3'	20:Y:228:A:H5'	2.12	0.80
20:Y:679:G:OP2	30:h:24:ARG:NH1	2.15	0.80
23:a:35:VAL:HG11	23:a:78:ARG:NH2	1.97	0.80
25:c:64:LEU:HB3	25:c:72:PRO:HG2	1.63	0.80
31:i:70:PRO:HA	31:i:95:ALA:HB2	1.61	0.80
33:k:67:GLU:HG3	33:k:69:ASP:OD1	1.82	0.80
1:A:577:G:H21	1:A:624:G:H2'	1.47	0.80
1:A:1141:G:N2	1:A:1157:A:N1	2.30	0.80
8:I:42:VAL:CG2	8:I:82:ASP:HB3	2.12	0.80
20:Y:1345:G:H2'	20:Y:1346:U:H6	1.47	0.80
20:Y:1743:G:OP2	20:Y:1744:A:O2'	1.98	0.80
20:Y:2685:C:H2'	20:Y:2686:U:C6	2.17	0.80
21:U:10:G:O2'	21:U:11:U:H5'	1.80	0.80
23:a:54:TYR:HA	23:a:78:ARG:HD2	1.63	0.80
24:b:158:ILE:HA	24:b:197:SER:OG	1.81	0.80
24:b:201:LEU:O	24:b:205:ILE:HG12	1.82	0.80
29:g:31:ARG:HD2	29:g:32:TYR:HE1	1.46	0.80
38:p:8:ARG:HB3	43:u:30:PHE:CE2	2.16	0.80
39:q:93:LYS:HE3	39:q:93:LYS:HA	1.62	0.80
1:A:276:G:H5'	16:Q:32:MET:CE	2.12	0.80
1:A:390:U:H4'	15:P:9:ARG:HH12	1.47	0.80
1:A:551:U:H4'	1:A:799:G:C5	2.16	0.80
1:A:744:C:H5"	14:O:50:HIS:CD2	2.16	0.80
1:A:933:G:O2'	1:A:952:C:O2'	1.99	0.80
1:A:963:U:H2'	1:A:964:U:C5	2.17	0.80
1:A:1306:A:C5'	1:A:1345:A:H5"	2.11	0.80
2:C:123:LEU:HD21	2:C:129:PHE:HA	1.64	0.80
5:F:53:ALA:HB3	5:F:55:HIS:HE1	1.45	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:G:146:GLU:O	6:G:149:ARG:NH1	2.14	0.80
15:P:71:LEU:O	15:P:75:LYS:HG3	1.82	0.80
20:Y:229:U:H5"	20:Y:230:G:OP1	1.80	0.80
20:Y:2176:A:C2	29:g:22:ILE:HG23	2.15	0.80
20:Y:2807:G:H2'	20:Y:2808:U:O4'	1.81	0.80
20:Y:3085:G:H2'	20:Y:3086:U:C6	2.17	0.80
38:p:63:GLN:N	38:p:63:GLN:OE1	2.15	0.80
1:A:745:G:H1	1:A:792:G:HO2'	0.80	0.79
5:F:79:LEU:HD12	5:F:80:ASN:N	1.96	0.79
20:Y:124:A:H5"	20:Y:125:C:H5'	1.63	0.79
20:Y:1033:A:C2	21:U:81:U:H4'	2.16	0.79
20:Y:2173:G:H2'	20:Y:2174:G:H8	1.46	0.79
20:Y:2724:U:O2'	20:Y:2728:U:OP1	1.99	0.79
31:i:71:ASP:OD1	31:i:72:ARG:N	2.15	0.79
1:A:1077:C:OP1	19:V:143:LYS:NZ	2.15	0.79
10:K:102:ARG:O	10:K:106:ILE:HG12	1.83	0.79
12:M:2:ALA:O	12:M:9:LEU:N	2.16	0.79
17:R:70:ASN:O	17:R:74:VAL:HG12	1.82	0.79
19:V:89:MET:SD	19:V:90:PRO:HD2	2.22	0.79
20:Y:76:C:H2'	20:Y:77:G:C8	2.16	0.79
20:Y:490:A:C2'	20:Y:491:U:H5'	2.12	0.79
20:Y:531:A:C5	24:b:46:ARG:HD2	2.17	0.79
20:Y:2518:C:H2'	20:Y:2519:C:C6	2.18	0.79
20:Y:2542:G:OP2	33:k:8:GLN:NE2	2.15	0.79
28:f:37:ARG:HH21	28:f:110:PRO:HG3	1.45	0.79
1:A:61:G:H2'	1:A:62:C:C6	2.18	0.79
7:H:7:ILE:HD11	7:H:32:LEU:HD13	1.64	0.79
11:L:14:ASP:OD1	11:L:15:LYS:N	2.16	0.79
20:Y:2524:C:H1'	20:Y:2541:U:O4	1.81	0.79
22:Z:95:LEU:HD11	22:Z:105:ILE:HD13	1.64	0.79
3:D:104:ARG:NH2	3:D:149:PRO:O	2.11	0.79
12:M:25:ILE:HA	12:M:29:ARG:HH21	1.48	0.79
14:O:33:THR:HG23	14:O:63:ARG:NH2	1.98	0.79
20:Y:760:U:H2'	20:Y:761:G:C8	2.16	0.79
20:Y:1201:G:N2	20:Y:1204:A:OP2	2.14	0.79
20:Y:1265:A:O2'	20:Y:1266:C:H5'	1.82	0.79
20:Y:1448:C:H2'	20:Y:1449:C:C6	2.17	0.79
20:Y:2934:C:OP1	32:j:15:SER:OG	2.01	0.79
21:U:48:C:OP1	33:k:14:ARG:NH1	2.16	0.79
22:Z:161:VAL:CG1	22:Z:178:PRO:HB3	2.13	0.79
26:d:55:ARG:HB2	26:d:62:SER:CB	2.12	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:f:97:PRO:O	28:f:100:VAL:HG12	1.83	0.79
29:g:78:LYS:NZ	34:l:100:ARG:HE	1.80	0.79
47:y:41:PHE:HB2	47:y:48:HIS:CE1	2.17	0.79
1:A:1259:G:C8	2:C:26:LYS:HE2	2.18	0.79
11:L:34:CYS:SG	11:L:78:SER:N	2.55	0.79
12:M:33:ILE:HG12	12:M:59:TYR:OH	1.83	0.79
20:Y:357:U:H4'	20:Y:358:G:C5'	2.12	0.79
20:Y:662:G:H2'	20:Y:2254:A:N7	1.98	0.79
20:Y:875:G:H2'	20:Y:876:A:O4'	1.81	0.79
20:Y:2008:A:C2	20:Y:2046:A:H4'	2.18	0.79
20:Y:2482:U:O2'	20:Y:2651:C:OP2	2.00	0.79
20:Y:2684:U:H2'	20:Y:2685:C:H5'	1.64	0.79
20:Y:3105:C:N3	46:x:44:LEU:HB3	1.98	0.79
22:Z:137:PRO:HG2	22:Z:140:THR:HG21	1.61	0.79
25:c:24:GLN:NE2	25:c:29:TYR:HB2	1.98	0.79
46:x:45:LYS:HA	46:x:48:ARG:NE	1.97	0.79
49:1:24:ARG:NH1	49:1:26:LYS:HD3	1.98	0.79
51:4:2344:G:H3'	51:4:2391:G:C6	2.18	0.79
1:A:990:C:N3	1:A:1005:G:N1	2.30	0.79
20:Y:269:C:C1'	20:Y:360:G:H1'	2.13	0.79
20:Y:1876:A:O2'	20:Y:1877:U:H5'	1.81	0.79
20:Y:2244:A:N6	20:Y:2259:G:O6	2.16	0.79
20:Y:2434:A:O2'	20:Y:2435:U:O4'	1.99	0.79
34:l:74:PRO:HB2	34:l:77:SER:CA	2.12	0.79
38:p:57:VAL:CG2	38:p:84:VAL:HG12	2.11	0.79
40:r:16:ARG:NH2	40:r:19:THR:HA	1.98	0.79
1:A:616:G:H4'	16:Q:19:ARG:HH12	1.48	0.79
2:C:67:ILE:HD11	2:C:102:ILE:HD12	1.63	0.79
3:D:72:GLU:HA	3:D:75:ASN:HD22	1.48	0.79
13:N:53:LEU:HB2	13:N:56:VAL:HG22	1.64	0.79
20:Y:69:U:C1'	43:u:51:ARG:HD3	2.12	0.79
20:Y:93:A:H3'	20:Y:94:G:H5"	1.65	0.79
20:Y:382:A:OP2	39:q:82:ARG:NH2	2.10	0.79
20:Y:500:A:H2'	20:Y:501:C:H5'	1.63	0.79
20:Y:808:A:H2'	20:Y:809:U:C6	2.18	0.79
20:Y:1456:G:OP2	20:Y:1509:U:O2'	2.00	0.79
20:Y:2470:A:H2'	20:Y:2471:A:H8	1.45	0.79
20:Y:2640:G:H4'	30:h:65:LYS:HZ2	1.47	0.79
23:a:20:ASN:HB3	23:a:22:LYS:HE2	1.65	0.79
23:a:24:VAL:HG21	23:a:183:HIS:NE2	1.97	0.79
24:b:103:PRO:HD2	24:b:106:MET:HG3	1.63	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:c:43:VAL:HG22	25:c:161:ILE:HA	1.63	0.79
28:f:53:PHE:CD1	28:f:121:LYS:HB2	2.18	0.79
30:h:118:LEU:HD22	30:h:137:ILE:HD13	1.64	0.79
1:A:571:U:O2	1:A:629:G:N2	2.14	0.79
9:J:55:PRO:HB3	13:N:42:ILE:HD11	1.65	0.79
20:Y:21:G:C2	20:Y:604:C:O2	2.36	0.79
20:Y:1003:A:OP1	20:Y:1005:A:N6	2.15	0.79
20:Y:1937:U:H2'	20:Y:1938:G:O4'	1.82	0.79
20:Y:2630:A:N1	30:h:70:ARG:NH1	2.30	0.79
20:Y:2784:C:H2'	20:Y:2785:A:C8	2.17	0.79
22:Z:95:LEU:HD11	22:Z:105:ILE:CD1	2.12	0.79
29:g:3:GLN:O	29:g:6:SER:OG	2.00	0.79
1:A:485:G:H2'	1:A:486:G:C8	2.18	0.79
1:A:850:C:H2'	1:A:851:A:O4'	1.82	0.79
4:E:85:ILE:O	4:E:89:VAL:HG23	1.82	0.79
20:Y:745:G:OP1	49:1:19:THR:HG22	1.82	0.79
20:Y:2470:A:H2'	20:Y:2471:A:C8	2.18	0.79
20:Y:2528:G:H5"	25:c:138:GLY:H	1.47	0.79
23:a:38:ARG:HG2	23:a:40:ARG:NH1	1.97	0.79
32:j:63:ARG:HG2	32:j:80:PHE:CD1	2.17	0.79
1:A:637:U:H4'	14:O:28:GLN:HE22	1.48	0.79
1:A:1057:G:H3'	1:A:1058:U:H5"	1.64	0.79
3:D:170:GLY:O	3:D:173:GLN:NE2	2.15	0.79
20:Y:24:G:O2'	20:Y:599:G:N2	2.15	0.79
20:Y:268:G:C4	20:Y:360:G:C5	2.70	0.79
20:Y:608:C:H2'	20:Y:609:G:C8	2.18	0.79
20:Y:786:C:O2	20:Y:924:G:N2	2.16	0.79
20:Y:1527:U:H2'	20:Y:1528:G:H8	1.46	0.79
20:Y:2180:U:H2'	20:Y:2181:C:H5'	1.62	0.79
20:Y:2211:C:H2'	20:Y:2212:A:C8	2.18	0.79
20:Y:2585:U:OP1	49:1:24:ARG:NH1	2.14	0.79
20:Y:2640:G:C5'	30:h:65:LYS:HB2	2.13	0.79
20:Y:2908:U:OP2	34:l:48:ARG:NH2	2.15	0.79
22:Z:146:GLU:OE2	22:Z:152:GLY:N	2.15	0.79
22:Z:206:TRP:CA	22:Z:211:ARG:HD3	2.13	0.79
1:A:7:U:O4	7:H:96:ARG:NH2	2.16	0.78
2:C:119:VAL:O	2:C:122:GLN:HG2	1.81	0.78
20:Y:487:U:H2'	20:Y:488:G:C8	2.18	0.78
20:Y:616:A:H4'	20:Y:617:U:C4	2.18	0.78
20:Y:1091:A:H5'	20:Y:1303:U:H1'	1.65	0.78
20:Y:1118:A:OP2	20:Y:1273:G:N1	2.14	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:1921:G:H2'	20:Y:1922:G:H8	1.48	0.78
20:Y:2540:G:O2'	33:k:8:GLN:N	2.16	0.78
20:Y:2772:G:H1'	29:g:23:ARG:HH12	1.46	0.78
25:c:131:GLY:HA2	25:c:170:ASP:HB3	1.64	0.78
29:g:78:LYS:O	34:l:61:ARG:NH2	2.16	0.78
38:p:8:ARG:HB3	43:u:30:PHE:CZ	2.19	0.78
38:p:29:TYR:HB2	38:p:84:VAL:CG2	2.12	0.78
41:s:72:LYS:NZ	41:s:77:THR:HG21	1.98	0.78
1:A:147:U:H3	1:A:168:A:N6	1.80	0.78
4:E:83:ALA:O	4:E:87:LYS:HG2	1.83	0.78
18:T:54:THR:HA	18:T:57:LYS:HE2	1.64	0.78
20:Y:615:A:H5"	28:f:113:LYS:NZ	1.98	0.78
20:Y:1000:C:H2'	20:Y:1001:C:H1'	1.64	0.78
20:Y:2932:G:H1'	32:j:71:ARG:NH1	1.97	0.78
22:Z:68:ARG:NH1	22:Z:150:GLY:O	2.16	0.78
23:a:14:THR:N	23:a:26:VAL:O	2.13	0.78
25:c:36:PRO:HG2	25:c:176:LEU:HD23	1.64	0.78
34:l:49:ARG:HH11	34:l:50:GLN:HA	1.47	0.78
42:t:17:SER:HB3	42:t:27:ARG:HD2	1.64	0.78
1:A:58:C:N4	1:A:353:A:OP2	2.17	0.78
1:A:264:U:O2	16:Q:81:PRO:HG2	1.83	0.78
1:A:407:A:O2'	3:D:108:MET:SD	2.41	0.78
1:A:715:G:P	17:R:69:LYS:HZ1	2.06	0.78
1:A:931:A:H2'	1:A:932:U:C6	2.18	0.78
1:A:1207:C:OP1	12:M:91:ARG:NH2	2.16	0.78
20:Y:552:U:O2'	20:Y:553:G:OP1	1.99	0.78
20:Y:688:A:O2'	20:Y:689:U:H5'	1.83	0.78
20:Y:2537:C:H4'	25:c:95:ARG:HH22	1.47	0.78
20:Y:2623:A:H2'	20:Y:2624:C:C6	2.18	0.78
21:U:48:C:H5"	33:k:14:ARG:HH12	1.49	0.78
34:l:15:ASP:O	34:l:17:PRO:HD3	1.83	0.78
39:q:32:LYS:HD3	39:q:65:PRO:HG2	1.65	0.78
1:A:724:C:H2'	1:A:725:A:H8	1.48	0.78
1:A:1087:C:OP1	2:C:174:PRO:HD3	1.82	0.78
4:E:50:VAL:HG22	4:E:55:ARG:HE	1.48	0.78
5:F:30:ILE:HD11	5:F:75:LEU:HD22	1.65	0.78
7:H:32:LEU:HA	7:H:35:ASN:OD1	1.82	0.78
9:J:52:ILE:N	13:N:41:ARG:HH12	1.80	0.78
14:O:39:LEU:CD2	14:O:56:LEU:HD11	2.12	0.78
17:R:57:CYS:CB	17:R:60:HIS:H	1.97	0.78
20:Y:268:G:H8	20:Y:360:G:N1	1.78	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:775:U:H2'	20:Y:776:G:C8	2.17	0.78
20:Y:1899:G:H21	20:Y:1979:A:H3'	1.47	0.78
22:Z:72:LYS:NZ	22:Z:101:GLU:HB2	1.97	0.78
30:h:114:GLY:H	30:h:132:SER:HB3	1.48	0.78
32:j:90:ARG:HH21	32:j:119:LYS:HB2	1.49	0.78
34:l:48:ARG:CD	34:l:95:LYS:HE3	2.13	0.78
37:o:53:PRO:O	37:o:57:VAL:HG23	1.82	0.78
38:p:70:ARG:HA	38:p:70:ARG:NE	1.97	0.78
1:A:600:U:H3	3:D:127:ILE:HG13	1.46	0.78
1:A:1014:U:H2'	1:A:1015:G:C8	2.19	0.78
6:G:87:VAL:HG22	6:G:151:PHE:HB3	1.64	0.78
7:H:32:LEU:HD12	7:H:33:LYS:HG2	1.65	0.78
12:M:19:LEU:HD12	12:M:22:ILE:HD13	1.64	0.78
20:Y:630:U:O2	20:Y:642:G:N2	2.15	0.78
20:Y:832:G:H3'	20:Y:833:A:H8	1.48	0.78
20:Y:2148:C:H2'	20:Y:2149:C:C6	2.18	0.78
20:Y:3009:U:H1'	23:a:38:ARG:NH2	1.96	0.78
26:d:104:LEU:HD11	26:d:124:PHE:CD2	2.18	0.78
30:h:66:GLY:O	30:h:68:LYS:NZ	2.16	0.78
45:w:5:LYS:HE2	45:w:5:LYS:HA	1.66	0.78
1:A:814:G:H5"	17:R:58:VAL:HG21	1.64	0.78
9:J:64:HIS:CB	13:N:59:SER:HB3	2.09	0.78
20:Y:321:G:H1'	20:Y:456:C:H42	1.49	0.78
20:Y:366:G:O2'	20:Y:367:U:O4'	2.01	0.78
20:Y:608:C:H2'	20:Y:609:G:H8	1.48	0.78
20:Y:1377:A:O2'	46:x:7:ARG:NH2	2.16	0.78
20:Y:1551:U:H2'	20:Y:1552:A:H5'	1.66	0.78
20:Y:1883:A:O2'	20:Y:1884:G:H5'	1.83	0.78
20:Y:2314:U:P	20:Y:2315:U:H2'	2.24	0.78
23:a:48:SER:OG	23:a:89:GLU:OE2	2.02	0.78
24:b:37:VAL:HG11	24:b:110:ALA:HB1	1.64	0.78
25:c:27:PHE:HB2	25:c:29:TYR:HE2	1.48	0.78
25:c:40:LYS:H	25:c:164:VAL:HG12	1.47	0.78
37:o:40:LEU:O	37:o:44:ARG:HG2	1.84	0.78
1:A:485:G:H2'	1:A:486:G:H8	1.49	0.78
1:A:967:C:N3	1:A:1201:G:N1	2.26	0.78
20:Y:789:G:O2'	20:Y:790:A:H5'	1.83	0.78
20:Y:1007:G:H1'	20:Y:1009:U:C5	2.19	0.78
20:Y:1934:G:H2'	20:Y:1935:C:H5'	1.64	0.78
20:Y:1958:C:H2'	20:Y:1959:G:C8	2.19	0.78
20:Y:2915:C:O2'	20:Y:2916:C:H5'	1.83	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:b:205:ILE:HA	24:b:208:ASN:HD22	1.48	0.78
25:c:14:ARG:HH12	25:c:19:ILE:HD11	1.48	0.78
30:h:126:ALA:HB3	30:h:129:PHE:CZ	2.19	0.78
39:q:88:ASP:O	39:q:92:GLY:N	2.15	0.78
41:s:12:ASN:HA	41:s:14:ARG:HH12	1.48	0.78
46:x:37:ARG:CZ	46:x:54:LEU:HB2	2.14	0.78
1:A:1324:C:H4'	8:I:147:TYR:CB	2.11	0.78
1:A:1408:A:C2	1:A:1459:G:N1	2.47	0.78
2:C:32:VAL:O	2:C:36:VAL:HG22	1.84	0.78
13:N:47:MET:HG3	13:N:53:LEU:CD2	2.13	0.78
14:O:33:THR:O	14:O:37:GLN:HG2	1.84	0.78
20:Y:831:A:C2	20:Y:832:G:H1'	2.18	0.78
20:Y:1173:G:H1	20:Y:1222:C:H42	1.28	0.78
20:Y:2173:G:H2'	20:Y:2174:G:C8	2.17	0.78
20:Y:2536:U:O2'	25:c:75:ARG:NH1	2.17	0.78
20:Y:3042:A:OP2	23:a:120:GLY:N	2.15	0.78
25:c:177:LEU:HG	25:c:182:PHE:CD2	2.18	0.78
26:d:39:GLU:OE2	26:d:39:GLU:N	2.15	0.78
27:e:23:ALA:HB3	27:e:24:PRO:HD3	1.64	0.78
1:A:23:C:H2'	1:A:24:U:C6	2.19	0.78
1:A:962:C:H3'	1:A:963:U:C5	2.18	0.78
16:Q:21:LYS:N	16:Q:78:GLU:OE2	2.15	0.78
20:Y:398:U:H5'	20:Y:399:G:OP2	1.84	0.78
20:Y:679:G:C2	20:Y:786:C:H1'	2.19	0.78
20:Y:1047:A:H1'	20:Y:1048:A:C8	2.19	0.78
20:Y:1177:G:H3'	20:Y:1178:U:H2'	1.66	0.78
20:Y:2140:A:N6	20:Y:2141:U:O2	2.11	0.78
25:c:40:LYS:HD3	25:c:99:ARG:HH11	1.48	0.78
29:g:8:LEU:HD23	29:g:84:ALA:HB2	1.65	0.78
29:g:22:ILE:CD1	29:g:40:VAL:HG22	2.10	0.78
43:u:60:VAL:HG22	43:u:64:ARG:NH1	1.99	0.78
1:A:1243:U:H2'	1:A:1244:G:H5'	1.64	0.78
9:J:83:THR:O	9:J:87:LEU:HD22	1.85	0.78
20:Y:62:G:N2	20:Y:86:U:O2	2.11	0.78
20:Y:730:G:C3'	30:h:113:LEU:HD13	2.14	0.78
20:Y:899:G:O6	22:Z:229:VAL:HG21	1.83	0.78
20:Y:1132:U:O2'	35:m:122:ASN:OD1	2.00	0.78
20:Y:1225:G:OP2	44:v:53:LYS:NZ	2.12	0.78
20:Y:2542:G:N7	33:k:8:GLN:HB2	1.98	0.78
20:Y:2589:G:H4'	41:s:60:PHE:CZ	2.19	0.78
20:Y:2866:A:H5"	28:f:80:TYR:HE2	1.48	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:2906:U:C6	23:a:13:MET:HE1	2.17	0.78
25:c:10:ARG:O	25:c:14:ARG:HG3	1.84	0.78
40:r:86:HIS:HA	40:r:93:GLN:NE2	1.96	0.78
42:t:39:VAL:HG22	42:t:46:LYS:HE3	1.66	0.78
46:x:28:VAL:HG21	46:x:41:ARG:HG3	1.66	0.78
1:A:762:A:H62	1:A:780:G:N2	1.81	0.77
3:D:154:ARG:NH2	3:D:171:GLU:O	2.17	0.77
10:K:126:PRO:O	10:K:126:PRO:HD2	1.84	0.77
15:P:73:LEU:HD13	15:P:76:ILE:HD12	1.67	0.77
20:Y:357:U:H1'	20:Y:358:G:OP2	1.84	0.77
20:Y:663:A:H3'	36:n:81:LYS:HZ2	1.47	0.77
20:Y:2036:A:H5"	22:Z:158:SER:CB	2.14	0.77
20:Y:2080:G:H2'	20:Y:2081:U:C6	2.18	0.77
20:Y:2671:G:N2	20:Y:2674:A:OP2	2.15	0.77
1:A:1371:C:H2'	1:A:1372:C:C6	2.19	0.77
3:D:195:ILE:HD13	3:D:198:LEU:HD21	1.65	0.77
8:I:29:VAL:O	8:I:105:ARG:NH2	2.17	0.77
8:I:104:ALA:HB1	8:I:123:PHE:HB3	1.65	0.77
10:K:38:ASN:OD1	10:K:66:LYS:NZ	2.16	0.77
20:Y:21:G:N2	20:Y:604:C:C2	2.52	0.77
20:Y:127:C:OP1	20:Y:1463:G:N2	2.16	0.77
20:Y:231:U:H5'	20:Y:232:G:OP2	1.84	0.77
20:Y:665:G:N1	20:Y:2255:A:OP1	2.15	0.77
20:Y:964:C:H2'	20:Y:965:U:H6	1.46	0.77
20:Y:1115:G:OP1	35:m:92:ARG:HG2	1.84	0.77
20:Y:2318:U:H2'	20:Y:2319:G:C8	2.18	0.77
20:Y:3069:G:H3'	34:l:92:ARG:NH2	1.98	0.77
21:U:62:C:H2'	21:U:63:U:H6	1.48	0.77
25:c:27:PHE:HB2	25:c:29:TYR:CE2	2.19	0.77
27:e:67:SER:OG	27:e:68:PHE:N	2.16	0.77
34:l:92:ARG:C	34:l:93:ARG:HD3	2.10	0.77
8:I:39:VAL:HG13	8:I:83:ILE:HD11	1.64	0.77
15:P:86:LEU:HB2	15:P:87:PRO:HD3	1.66	0.77
20:Y:141:U:H2'	20:Y:142:C:H6	1.47	0.77
20:Y:1784:C:H2'	20:Y:1785:C:C6	2.19	0.77
20:Y:3061:C:O2'	20:Y:3062:C:H5'	1.84	0.77
30:h:124:VAL:HG11	30:h:129:PHE:HE1	1.49	0.77
36:n:68:THR:HG23	36:n:94:LEU:HB2	1.67	0.77
20:Y:91:C:O2'	20:Y:92:G:H5'	1.83	0.77
20:Y:136:U:O2	20:Y:139:U:N3	2.18	0.77
20:Y:503:A:C2	20:Y:2633:G:N1	2.53	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:2028:G:H2'	20:Y:2029:A:C8	2.20	0.77
20:Y:2702:A:H5'	50:2:31:ARG:HE	1.49	0.77
25:c:50:ALA:HA	25:c:53:ASP:O	1.84	0.77
33:k:17:ALA:O	33:k:21:ARG:HG3	1.84	0.77
33:k:28:LYS:O	33:k:28:LYS:HD2	1.83	0.77
35:m:102:ASP:OD2	35:m:105:ALA:N	2.11	0.77
1:A:699:C:OP2	1:A:700:C:N4	2.18	0.77
2:C:88:ALA:HA	2:C:91:GLU:HG2	1.64	0.77
17:R:62:ARG:O	17:R:66:VAL:HG13	1.84	0.77
19:V:4:VAL:HG13	19:V:9:LEU:HD21	1.65	0.77
19:V:32:PHE:HB3	19:V:40:ILE:HG13	1.64	0.77
20:Y:294:G:N7	20:Y:341:C:O2'	2.17	0.77
20:Y:1092:G:OP1	20:Y:1302:G:O2'	2.01	0.77
20:Y:1900:C:H42	20:Y:1924:G:H1	1.28	0.77
32:j:72:ASP:HB3	32:j:75:VAL:CG1	2.14	0.77
35:m:31:LEU:HD12	35:m:34:LYS:HE3	1.67	0.77
1:A:647:G:H4'	14:O:51:HIS:ND1	2.00	0.77
1:A:682:A:OP2	20:Y:2065:A:O2'	2.03	0.77
1:A:985:G:N2	1:A:1018:C:O2	2.17	0.77
6:G:26:LEU:O	6:G:30:VAL:HG23	1.84	0.77
6:G:133:ALA:O	6:G:137:ARG:HD3	1.85	0.77
20:Y:316:U:O2	20:Y:319:G:N2	2.18	0.77
20:Y:1178:U:C4'	20:Y:1179:U:H3'	2.11	0.77
24:b:20:LEU:HD23	24:b:25:PHE:CD1	2.20	0.77
25:c:54:ALA:O	25:c:57:ILE:HG22	1.83	0.77
30:h:78:VAL:CG1	30:h:103:LEU:HD22	2.15	0.77
32:j:104:LYS:HD3	32:j:104:LYS:C	2.08	0.77
36:n:66:GLU:N	36:n:66:GLU:OE2	2.16	0.77
39:q:1:MET:HE2	39:q:1:MET:HA	1.65	0.77
1:A:107:G:OP1	15:P:28:ARG:HD3	1.85	0.77
1:A:1160:A:N3	8:I:126:ARG:NH2	2.32	0.77
2:C:111:GLN:O	2:C:115:VAL:HG22	1.84	0.77
20:Y:13:G:O6	20:Y:611:U:O4	2.03	0.77
20:Y:73:C:O2	20:Y:107:G:N2	2.13	0.77
20:Y:355:A:C6	20:Y:441:G:C2	2.70	0.77
20:Y:1635:A:H5"	20:Y:1636:A:OP2	1.85	0.77
20:Y:1758:G:H2'	20:Y:1759:A:C8	2.20	0.77
20:Y:2299:C:OP2	20:Y:2462:G:N2	2.15	0.77
20:Y:2596:G:O2'	20:Y:2597:A:H5'	1.85	0.77
27:e:10:LEU:HD21	27:e:62:VAL:HG22	1.65	0.77
27:e:76:PRO:HG2	27:e:79:LYS:NZ	2.00	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:e:102:VAL:HG23	27:e:139:ILE:HG21	1.66	0.77
29:g:77:ILE:HD12	34:l:70:GLU:C	2.10	0.77
44:v:65:GLY:O	44:v:109:TYR:OH	2.01	0.77
1:A:122:G:C2'	1:A:123:G:H5"	2.15	0.77
1:A:234:C:O3'	16:Q:87:ARG:NH2	2.18	0.77
1:A:585:U:N3	1:A:614:C:N4	2.31	0.77
1:A:1499:C:H2'	1:A:1500:G:C8	2.19	0.77
7:H:10:PHE:HD1	7:H:27:LEU:HD22	1.50	0.77
10:K:82:LYS:HD3	10:K:82:LYS:N	2.00	0.77
20:Y:136:U:N3	20:Y:139:U:OP2	2.18	0.77
20:Y:306:U:H2'	20:Y:307:G:H8	1.45	0.77
20:Y:1092:G:O5'	36:n:79:LYS:NZ	2.14	0.77
20:Y:2106:A:C3'	20:Y:2107:G:H5"	2.14	0.77
20:Y:2538:A:OP1	25:c:95:ARG:NH2	2.17	0.77
20:Y:2702:A:H8	50:2:31:ARG:HH22	1.31	0.77
24:b:201:LEU:HD12	24:b:202:ASN:N	2.00	0.77
25:c:98:LEU:HB2	25:c:103:MET:HE2	1.66	0.77
34:l:31:VAL:O	34:l:38:ARG:NH1	2.18	0.77
40:r:74:THR:HB	40:r:76:GLN:HE22	1.50	0.77
1:A:203:U:H2'	1:A:204:A:C8	2.19	0.77
1:A:542:U:O2'	11:L:12:ARG:NE	2.18	0.77
1:A:694:G:H2'	1:A:695:A:C8	2.19	0.77
1:A:954:C:O2'	9:J:57:LYS:HG3	1.84	0.77
2:C:167:PHE:HE2	2:C:169:ARG:HD3	1.50	0.77
20:Y:843:G:H4'	22:Z:13:ARG:NH1	2.00	0.77
20:Y:2075:G:N2	20:Y:2108:A:OP2	2.17	0.77
20:Y:2906:U:O2'	20:Y:2907:C:H5'	1.85	0.77
30:h:61:LEU:HD13	49:1:24:ARG:HG3	1.66	0.77
43:u:50:VAL:O	43:u:54:ILE:HG22	1.85	0.77
48:z:29:ALA:O	48:z:33:ILE:HG12	1.84	0.77
51:4:2353:U:H5'	51:4:2354:G:OP1	1.85	0.77
1:A:426:U:OP1	3:D:29:ARG:NH1	2.16	0.77
1:A:821:C:N4	1:A:823:U:O4	2.17	0.77
1:A:1115:G:H1'	1:A:1121:G:N2	2.00	0.77
3:D:80:LYS:HD3	3:D:83:ASP:OD2	1.84	0.77
3:D:189:PRO:O	3:D:190:LEU:HB2	1.85	0.77
4:E:167:ALA:O	4:E:171:LEU:HD23	1.84	0.77
14:O:3:LEU:HG	14:O:35:ARG:CD	2.15	0.77
20:Y:412:A:O2'	20:Y:413:G:N2	2.18	0.77
20:Y:659:U:O2'	20:Y:660:U:O5'	2.03	0.77
20:Y:693:G:H1'	24:b:106:MET:CE	2.15	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:2685:C:H2'	20:Y:2686:U:H6	1.48	0.77
20:Y:2861:U:H5"	23:a:85:ARG:NH2	2.00	0.77
34:l:62:LYS:N	34:l:69:VAL:O	2.16	0.77
43:u:60:VAL:HG22	43:u:64:ARG:HH12	1.49	0.77
51:4:2389:U:O4	51:4:2394:A:H5'	1.83	0.77
1:A:124:G:O2'	1:A:125:U:OP1	2.02	0.76
12:M:29:ARG:HD2	12:M:64:LEU:HD21	1.67	0.76
20:Y:17:C:OP1	35:m:22:LYS:NZ	2.18	0.76
20:Y:357:U:O4	20:Y:363:A:N6	2.17	0.76
20:Y:1146:A:H2'	20:Y:1147:A:C8	2.20	0.76
20:Y:1186:G:H4'	20:Y:1187:A:OP1	1.85	0.76
20:Y:1466:C:HO2'	20:Y:1791:A:HO2'	1.33	0.76
20:Y:2055:C:N4	20:Y:2123:A:OP2	2.18	0.76
20:Y:2265:U:H2'	20:Y:2266:A:H8	1.50	0.76
20:Y:2844:C:P	23:a:162:LYS:HD3	2.23	0.76
20:Y:2971:G:O2'	26:d:68:LEU:HD22	1.84	0.76
31:i:125:LEU:CD1	31:i:126:PRO:HD2	2.14	0.76
1:A:149:A:N6	1:A:166:C:O2	2.19	0.76
1:A:237:C:H2'	1:A:238:G:C8	2.20	0.76
1:A:586:G:H1'	1:A:613:G:N1	2.00	0.76
1:A:1508:C:H2'	1:A:1509:G:C8	2.19	0.76
6:G:14:ASN:O	8:I:66:GLN:NE2	2.18	0.76
8:I:64:HIS:O	8:I:67:LEU:HG	1.84	0.76
20:Y:1758:G:H2'	20:Y:1759:A:H8	1.49	0.76
20:Y:2018:G:H1'	20:Y:2426:C:C2	2.20	0.76
20:Y:2019:A:H2'	20:Y:2020:A:C8	2.20	0.76
20:Y:2973:A:H5'	26:d:2:SER:N	2.01	0.76
24:b:4:LYS:HA	24:b:18:VAL:O	1.84	0.76
24:b:108:ALA:O	24:b:112:ARG:HG2	1.84	0.76
26:d:104:LEU:HB2	26:d:116:ILE:CG2	2.16	0.76
36:n:52:ALA:HA	36:n:55:LEU:HD12	1.66	0.76
1:A:585:U:H3	1:A:614:C:N4	1.81	0.76
1:A:858:A:H1'	7:H:12:THR:HG21	1.68	0.76
1:A:860:C:H2'	1:A:861:C:C6	2.20	0.76
1:A:931:A:OP1	12:M:101:GLN:NE2	2.18	0.76
1:A:1271:A:H2'	1:A:1272:G:H5'	1.65	0.76
3:D:147:THR:CG2	3:D:149:PRO:HD2	2.15	0.76
4:E:184:LEU:HG	4:E:185:PRO:HD3	1.65	0.76
20:Y:403:U:H5"	24:b:138:THR:CG2	2.15	0.76
20:Y:835:C:H2'	20:Y:836:G:C8	2.19	0.76
20:Y:1000:C:H2'	20:Y:1001:C:C1'	2.15	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:l:4:LEU:HD13	34:l:7:VAL:HB	1.68	0.76
39:q:27:TYR:O	39:q:31:ASN:N	2.18	0.76
40:r:86:HIS:CE1	40:r:89:ARG:HG2	2.19	0.76
1:A:1077:C:H5"	19:V:143:LYS:NZ	2.00	0.76
6:G:3:ARG:HB3	6:G:4:LYS:NZ	2.00	0.76
11:L:68:PRO:O	11:L:99:ARG:NH2	2.16	0.76
20:Y:674:U:H2'	20:Y:675:G:H8	1.48	0.76
20:Y:1520:C:H2'	20:Y:1521:C:C6	2.20	0.76
20:Y:2771:U:H2'	20:Y:2772:G:C8	2.20	0.76
20:Y:3023:G:H2'	20:Y:3024:A:H8	1.48	0.76
20:Y:3107:G:O2'	20:Y:3108:G:OP2	2.01	0.76
40:r:70:ASP:O	40:r:71:ILE:HD13	1.85	0.76
1:A:600:U:O2	3:D:127:ILE:HG21	1.85	0.76
1:A:647:G:H4'	14:O:51:HIS:CE1	2.20	0.76
1:A:1516:U:H2'	1:A:1517:C:C2	2.20	0.76
3:D:160:ARG:NH1	3:D:161:PRO:HD2	1.99	0.76
5:F:52:ILE:O	5:F:55:HIS:ND1	2.16	0.76
8:I:91:GLY:O	8:I:95:GLN:HG3	1.84	0.76
17:R:60:HIS:O	17:R:64:ILE:HG12	1.86	0.76
19:V:18:HIS:NE2	19:V:188:ASP:OD2	2.17	0.76
19:V:24:ASN:OD1	19:V:26:LYS:N	2.18	0.76
19:V:27:MET:CE	19:V:193:PRO:HD3	2.16	0.76
20:Y:2075:G:N2	20:Y:2107:G:H2'	2.00	0.76
20:Y:2634:G:H3'	20:Y:2635:A:H8	1.49	0.76
42:t:39:VAL:HG22	42:t:46:LYS:CE	2.16	0.76
44:v:6:LYS:O	44:v:10:VAL:HG23	1.85	0.76
1:A:410:G:H21	1:A:432:A:H62	0.77	0.76
1:A:1276:G:O2'	1:A:1277:U:H5'	1.86	0.76
1:A:1289:U:O4	1:A:1312:U:N3	2.17	0.76
2:C:6:ASN:HD22	13:N:49:HIS:HB3	1.49	0.76
11:L:50:ARG:HD2	11:L:90:LEU:HD11	1.65	0.76
15:P:6:LYS:HB2	15:P:21:ILE:HG23	1.66	0.76
20:Y:73:C:OP1	43:u:48:ARG:HD3	1.86	0.76
20:Y:651:G:H1'	35:m:56:GLU:OE1	1.86	0.76
20:Y:821:A:H61	20:Y:840:G:H1'	1.51	0.76
20:Y:2563:G:H2'	20:Y:2564:A:C8	2.21	0.76
20:Y:2924:C:H2'	20:Y:2925:C:H6	1.51	0.76
33:k:84:VAL:O	33:k:88:ILE:HG12	1.85	0.76
1:A:338:A:H2'	1:A:339:C:C6	2.19	0.76
1:A:373:A:H61	1:A:391:G:H1'	1.50	0.76
19:V:71:GLY:O	19:V:93:ASN:HA	1.85	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:157:U:O2'	20:Y:158:G:H5'	1.86	0.76
20:Y:227:A:C4'	20:Y:228:A:H5'	2.16	0.76
20:Y:1017:G:H2'	20:Y:1018:U:C6	2.20	0.76
23:a:38:ARG:HB3	23:a:51:GLN:HB3	1.68	0.76
32:j:5:THR:HG21	32:j:10:LEU:HD23	1.65	0.76
38:p:21:TYR:HA	38:p:24:ILE:HG22	1.68	0.76
43:u:9:GLU:O	43:u:13:LEU:HG	1.85	0.76
1:A:146:A:H1'	1:A:1429:A:C2	2.21	0.76
1:A:1408:A:H2	1:A:1459:G:H1	0.85	0.76
1:A:1413:C:H2'	1:A:1414:C:O4'	1.86	0.76
3:D:84:ASN:O	3:D:88:ILE:HG22	1.86	0.76
6:G:22:LEU:O	6:G:26:LEU:HG	1.85	0.76
16:Q:43:ARG:HD2	16:Q:54:ARG:HG2	1.68	0.76
20:Y:21:G:C2	20:Y:604:C:C2	2.73	0.76
20:Y:2640:G:H4'	30:h:65:LYS:NZ	2.01	0.76
20:Y:2831:G:O2'	20:Y:2832:G:H5'	1.84	0.76
23:a:157:PRO:HG3	23:a:161:PHE:CZ	2.20	0.76
23:a:193:LEU:O	23:a:194:ILE:HD13	1.86	0.76
28:f:72:LYS:NZ	28:f:74:ALA:HB2	2.01	0.76
47:y:36:LEU:HD12	47:y:37:GLU:N	2.01	0.76
1:A:160:C:O2'	1:A:161:U:H5'	1.86	0.76
1:A:730:C:O2	14:O:23:GLY:HA3	1.85	0.76
9:J:52:ILE:HG12	13:N:41:ARG:NH1	2.01	0.76
17:R:69:LYS:HA	17:R:72:ARG:CG	2.13	0.76
20:Y:708:G:O2'	24:b:182:GLN:NE2	2.19	0.76
20:Y:734:C:O2'	20:Y:735:U:H5'	1.85	0.76
20:Y:891:G:N7	20:Y:908:A:O2'	2.17	0.76
20:Y:979:G:H2'	20:Y:980:C:C6	2.20	0.76
20:Y:1178:U:H5'	20:Y:1180:G:C5'	2.15	0.76
20:Y:1885:G:O2'	20:Y:2215:U:O4	2.02	0.76
20:Y:2102:G:H2'	20:Y:2103:C:C6	2.21	0.76
20:Y:2166:C:H3'	20:Y:2167:U:H2'	1.67	0.76
20:Y:2515:U:H2'	20:Y:2516:U:C6	2.20	0.76
20:Y:2527:G:O2'	25:c:136:THR:O	2.02	0.76
20:Y:2847:G:OP1	20:Y:3047:A:O2'	2.01	0.76
20:Y:3041:C:O2'	20:Y:3042:A:OP1	2.03	0.76
23:a:130:HIS:CD2	23:a:165:ARG:HD2	2.20	0.76
24:b:121:ASN:HB3	24:b:123:ARG:CZ	2.16	0.76
25:c:40:LYS:CD	25:c:99:ARG:HD3	2.14	0.76
33:k:67:GLU:OE1	33:k:68:ALA:N	2.18	0.76
1:A:575:G:N2	1:A:625:G:O6	2.19	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:94:ASP:OD1	3:D:110:ARG:HG3	1.86	0.76
5:F:63:ILE:HG22	5:F:65:VAL:HG13	1.68	0.76
19:V:139:ARG:HA	19:V:139:ARG:NH1	2.01	0.76
20:Y:565:A:H2'	20:Y:566:A:H8	1.51	0.76
20:Y:1461:G:H2'	20:Y:1462:G:H8	1.49	0.76
20:Y:2530:C:H42	25:c:45:MET:HE1	1.50	0.76
20:Y:2796:A:OP2	23:a:156:THR:OG1	2.04	0.76
20:Y:3058:A:O2'	20:Y:3059:G:H5'	1.86	0.76
31:i:15:PRO:HB3	31:i:72:ARG:NH1	2.01	0.76
34:l:50:GLN:N	34:l:57:THR:O	2.18	0.76
1:A:60:U:H2'	1:A:61:G:C8	2.21	0.75
1:A:128:U:H2'	1:A:129:C:C6	2.21	0.75
1:A:969:G:H2'	1:A:1200:A:H2'	1.66	0.75
20:Y:337:U:H5'	20:Y:338:C:C5'	2.13	0.75
20:Y:674:U:H2'	20:Y:675:G:C8	2.22	0.75
20:Y:887:G:O2'	20:Y:888:U:H5'	1.86	0.75
20:Y:904:A:O2'	20:Y:905:U:H5'	1.85	0.75
20:Y:1036:C:H2'	20:Y:1037:C:C6	2.21	0.75
20:Y:3086:U:H3'	20:Y:3087:G:C8	2.20	0.75
22:Z:172:TYR:HD1	22:Z:186:ASP:HA	1.51	0.75
24:b:97:ASP:OD1	24:b:98:TYR:N	2.18	0.75
25:c:47:VAL:HG21	25:c:56:LEU:CD1	2.15	0.75
26:d:104:LEU:HB2	26:d:116:ILE:HG23	1.67	0.75
51:4:2351:A:H2'	51:4:2352:C:C6	2.22	0.75
1:A:1501:G:O6	20:Y:2144:C:H5'	1.86	0.75
2:C:8:HIS:HE1	13:N:51:GLY:HA3	1.49	0.75
4:E:116:ALA:HB3	4:E:160:ASN:HD22	1.51	0.75
7:H:67:GLY:N	7:H:71:GLU:O	2.18	0.75
8:I:119:LYS:HB3	8:I:124:LEU:HD21	1.67	0.75
19:V:53:ALA:O	19:V:57:VAL:HG22	1.84	0.75
20:Y:639:C:HO2'	20:Y:640:G:P	2.08	0.75
20:Y:677:G:H2'	20:Y:1366:A:N6	2.00	0.75
20:Y:891:G:N1	20:Y:2295:C:OP1	2.14	0.75
20:Y:949:C:H2'	20:Y:950:A:C8	2.20	0.75
20:Y:2007:C:O2'	22:Z:209:ALA:HB2	1.85	0.75
20:Y:2800:G:O2'	20:Y:2803:C:OP2	2.04	0.75
23:a:126:THR:HB	23:a:132:PHE:HE2	1.50	0.75
29:g:75:SER:CA	34:l:72:THR:HB	2.13	0.75
32:j:79:LEU:HA	32:j:83:ILE:CD1	2.14	0.75
43:u:58:TYR:HE1	43:u:62:ARG:NH2	1.84	0.75
1:A:1342:A:H2'	1:A:1343:G:C8	2.20	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:74:ALA:HA	3:D:77:GLN:OE1	1.86	0.75
8:I:26:ILE:HG21	8:I:110:VAL:HG13	1.66	0.75
20:Y:27:G:H2'	20:Y:28:C:C6	2.22	0.75
20:Y:979:G:N2	20:Y:982:A:N6	2.25	0.75
20:Y:1787:A:H2'	22:Z:86:PRO:CG	2.17	0.75
31:i:43:THR:HG23	31:i:46:GLN:OE1	1.85	0.75
41:s:35:GLU:OE2	41:s:36:ILE:N	2.19	0.75
1:A:1145:G:O6	1:A:1153:U:O4	2.04	0.75
2:C:27:GLN:HB2	2:C:31:TYR:CE1	2.22	0.75
9:J:66:GLU:OE2	13:N:59:SER:HA	1.85	0.75
20:Y:160:A:OP2	20:Y:161:U:O2'	2.03	0.75
20:Y:190:A:O2'	20:Y:191:G:O4'	2.03	0.75
20:Y:1242:C:H1'	50:2:36:GLN:OE1	1.87	0.75
20:Y:1646:U:H2'	20:Y:1647:G:C1'	2.16	0.75
20:Y:2635:A:H3'	20:Y:2636:A:C8	2.21	0.75
20:Y:2676:C:O2'	20:Y:2677:A:O5'	2.03	0.75
30:h:106:LYS:HD3	30:h:106:LYS:C	2.11	0.75
36:n:64:VAL:HG12	36:n:97:LEU:HD21	1.68	0.75
41:s:51:VAL:HG23	41:s:80:ILE:HD11	1.66	0.75
47:y:38:ILE:HG22	47:y:40:LYS:HG3	1.67	0.75
1:A:865:C:H2'	1:A:866:U:C6	2.21	0.75
1:A:1154:C:H2'	1:A:1155:G:H8	1.51	0.75
3:D:4:TYR:O	3:D:107:ARG:NH2	2.18	0.75
10:K:103:GLU:HA	10:K:106:ILE:HD11	1.68	0.75
20:Y:209:C:H2'	20:Y:210:G:H8	1.50	0.75
20:Y:243:U:P	49:1:6:THR:HG21	2.27	0.75
20:Y:409:G:N2	39:q:69:SER:OG	2.20	0.75
20:Y:1063:G:O6	20:Y:1090:G:N2	2.19	0.75
20:Y:1367:G:O2'	20:Y:1368:A:O4'	2.04	0.75
20:Y:1519:C:H2'	20:Y:1520:C:C6	2.22	0.75
23:a:91:ALA:O	23:a:94:GLU:HG2	1.86	0.75
24:b:136:PRO:HB3	24:b:168:SER:HB3	1.67	0.75
43:u:18:LEU:HD11	43:u:19:LYS:NZ	2.01	0.75
48:z:13:ARG:HD3	48:z:17:ARG:HH12	1.52	0.75
1:A:322:C:O2	18:T:14:ASN:ND2	2.19	0.75
11:L:7:LEU:HB3	16:Q:49:TYR:HE2	1.51	0.75
20:Y:1919:A:H2'	20:Y:1920:G:H5'	1.68	0.75
20:Y:2973:A:OP2	20:Y:2974:A:O2'	2.02	0.75
20:Y:3024:A:H2'	20:Y:3025:G:H8	1.51	0.75
21:U:96:A:O2'	21:U:97:A:O4'	2.03	0.75
29:g:7:ARG:O	29:g:8:LEU:HD12	1.87	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:g:122:LEU:HD22	34:l:42:PHE:CD1	2.22	0.75
32:j:5:THR:HB	32:j:9:ARG:HG3	1.68	0.75
34:l:43:LYS:O	34:l:62:LYS:HB3	1.86	0.75
34:l:49:ARG:HD3	34:l:49:ARG:C	2.12	0.75
34:l:73:PHE:HB3	34:l:80:ILE:HD11	1.67	0.75
43:u:14:THR:O	43:u:17:GLU:HG3	1.85	0.75
44:v:95:LYS:HE2	44:v:96:PHE:CE2	2.20	0.75
3:D:104:ARG:NH2	3:D:152:ILE:HB	2.02	0.75
4:E:176:GLU:OE2	4:E:198:ARG:NH1	2.20	0.75
20:Y:142:C:H2'	20:Y:143:G:C8	2.22	0.75
20:Y:184:C:H2'	20:Y:185:G:C8	2.21	0.75
20:Y:458:G:H4'	20:Y:459:A:OP2	1.85	0.75
20:Y:487:U:H2'	20:Y:488:G:H8	1.51	0.75
20:Y:1741:G:H2'	20:Y:1742:U:C6	2.22	0.75
20:Y:2220:C:OP1	29:g:31:ARG:NH1	2.20	0.75
20:Y:2248:C:H2'	20:Y:2249:G:H8	1.51	0.75
20:Y:2541:U:H2'	20:Y:2542:G:H5'	1.67	0.75
21:U:29:C:N4	21:U:57:U:O4	2.15	0.75
35:m:74:ILE:HD11	35:m:78:ARG:CB	2.15	0.75
43:u:10:LEU:HD21	43:u:21:LYS:HD2	1.68	0.75
43:u:13:LEU:HD13	43:u:21:LYS:HZ3	1.51	0.75
51:4:2374:U:H2'	51:4:2375:G:C8	2.22	0.75
1:A:1354:G:H5"	8:I:90:GLY:CA	2.16	0.75
3:D:15:LEU:HD11	3:D:55:LYS:CB	2.16	0.75
3:D:70:TYR:CE1	3:D:88:ILE:HG12	2.22	0.75
3:D:104:ARG:HH21	3:D:152:ILE:HB	1.52	0.75
3:D:154:ARG:HG3	3:D:155:GLU:OE1	1.87	0.75
9:J:42:LEU:HD12	9:J:71:LYS:HB3	1.67	0.75
17:R:63:ASP:O	17:R:66:VAL:HG22	1.87	0.75
20:Y:971:G:H21	41:s:26:PHE:HB3	1.52	0.75
20:Y:1154:G:O2'	20:Y:1155:C:H5'	1.87	0.75
20:Y:1456:G:C2	38:p:83:ILE:HG21	2.21	0.75
20:Y:2514:G:H2'	20:Y:2515:U:C6	2.21	0.75
20:Y:2572:U:O4	20:Y:2606:G:N1	2.20	0.75
26:d:75:ASN:O	26:d:84:TYR:OH	2.04	0.75
36:n:68:THR:CG2	36:n:94:LEU:HB2	2.17	0.75
46:x:5:LYS:C	46:x:6:ARG:HG3	2.10	0.75
1:A:168:A:H2'	1:A:169:A:C8	2.22	0.75
1:A:1132:U:H5"	9:J:44:THR:CG2	2.16	0.75
3:D:100:ALA:HB2	3:D:166:LEU:HD21	1.68	0.75
3:D:166:LEU:HD11	3:D:175:ILE:HG23	1.68	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:J:52:ILE:HA	9:J:62:ARG:HA	1.66	0.75
9:J:64:HIS:HB3	13:N:59:SER:CB	2.09	0.75
20:Y:1416:A:O2'	20:Y:1417:A:H3'	1.87	0.75
20:Y:2026:A:O2'	20:Y:2027:A:O4'	2.03	0.75
20:Y:2555:G:O3'	41:s:43:THR:OG1	2.05	0.75
20:Y:2895:A:H2'	20:Y:2896:C:C6	2.22	0.75
20:Y:2923:C:O2'	20:Y:2924:C:H5'	1.87	0.75
20:Y:3061:C:OP2	32:j:50:LYS:NZ	2.20	0.75
32:j:29:PHE:CE2	32:j:79:LEU:HD12	2.22	0.75
34:l:20:SER:N	34:l:23:ASP:OD1	2.18	0.75
39:q:87:ILE:HG12	39:q:94:LYS:CE	2.17	0.75
43:u:58:TYR:HA	43:u:61:LEU:CD2	2.16	0.75
1:A:152:C:O2'	1:A:153:U:H5'	1.87	0.74
1:A:1500:G:N2	1:A:1502:A:OP2	2.19	0.74
3:D:14:ARG:HA	3:D:32:PRO:HB3	1.68	0.74
7:H:21:TYR:OH	7:H:70:ARG:HD3	1.86	0.74
20:Y:731:A:H4'	20:Y:732:G:O5'	1.87	0.74
20:Y:2007:C:H2'	20:Y:2008:A:C8	2.22	0.74
20:Y:2633:G:H2'	20:Y:2634:G:C1'	2.17	0.74
24:b:157:VAL:HG12	24:b:200:ALA:HB1	1.68	0.74
25:c:35:ILE:O	25:c:35:ILE:HG13	1.85	0.74
26:d:122:ILE:HG13	26:d:124:PHE:CE1	2.21	0.74
31:i:21:ALA:HB2	31:i:98:LYS:CB	2.17	0.74
31:i:136:GLU:HG2	40:r:58:LEU:HD11	1.68	0.74
37:o:38:GLU:O	37:o:42:ILE:HG12	1.87	0.74
43:u:6:THR:HB	43:u:9:GLU:HG3	1.69	0.74
43:u:18:LEU:HD12	43:u:19:LYS:HD3	1.69	0.74
1:A:816:G:H1	1:A:832:U:H3	1.32	0.74
1:A:1325:G:H2'	1:A:1326:C:H6	1.52	0.74
1:A:1342:A:O2'	1:A:1343:G:O5'	2.05	0.74
20:Y:166:A:H2'	20:Y:167:G:O4'	1.85	0.74
20:Y:1301:G:H2'	20:Y:1302:G:O4'	1.86	0.74
20:Y:1393:C:H4'	32:j:34:ILE:CD1	2.09	0.74
20:Y:1526:A:H2'	20:Y:1527:U:C5	2.21	0.74
20:Y:2565:G:O2'	20:Y:2566:C:H5'	1.88	0.74
20:Y:2693:A:O2'	20:Y:2694:G:OP1	2.05	0.74
20:Y:2755:A:H5"	26:d:158:TYR:CZ	2.21	0.74
27:e:11:ILE:HG12	27:e:62:VAL:HG13	1.69	0.74
40:r:64:ASN:ND2	40:r:140:ILE:HB	2.01	0.74
49:1:39:LYS:HG2	49:1:43:ARG:HH12	1.51	0.74
20:Y:69:U:H1'	43:u:51:ARG:CD	2.18	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:69:U:H1'	43:u:51:ARG:HD3	1.68	0.74
20:Y:90:C:H2'	20:Y:91:C:H6	1.52	0.74
20:Y:96:G:N2	20:Y:97:U:O4	2.21	0.74
20:Y:209:C:H2'	20:Y:210:G:C8	2.22	0.74
20:Y:2713:G:O2'	20:Y:2714:G:H5'	1.88	0.74
35:m:74:ILE:HD12	35:m:75:THR:H	1.51	0.74
48:z:13:ARG:NE	48:z:13:ARG:HA	2.02	0.74
1:A:492:U:H2'	1:A:493:A:C8	2.22	0.74
20:Y:669:G:H2'	20:Y:670:A:C8	2.22	0.74
20:Y:1007:G:H1'	20:Y:1009:U:C6	2.23	0.74
20:Y:1146:A:H2'	20:Y:1147:A:H8	1.53	0.74
20:Y:1667:C:N3	20:Y:1687:G:N2	2.36	0.74
20:Y:1695:U:H3	20:Y:1739:A:H61	1.35	0.74
22:Z:67:PHE:CZ	22:Z:106:ILE:HD11	2.23	0.74
25:c:101:ASP:OD1	25:c:102:ARG:N	2.20	0.74
29:g:94:ARG:HA	29:g:94:ARG:NE	2.02	0.74
35:m:90:VAL:HG23	35:m:95:LEU:HD21	1.68	0.74
1:A:664:U:H2'	1:A:665:G:O4'	1.87	0.74
1:A:776:C:O3'	10:K:136:ARG:NH1	2.20	0.74
1:A:932:U:H2'	1:A:933:G:H8	1.51	0.74
1:A:1338:G:H2'	1:A:1339:A:O4'	1.88	0.74
4:E:46:VAL:O	4:E:57:SER:N	2.20	0.74
7:H:90:LYS:HA	7:H:90:LYS:HE2	1.69	0.74
10:K:81:ARG:HG3	10:K:82:LYS:HD3	1.68	0.74
14:O:78:TYR:CE1	14:O:82:ILE:HD11	2.23	0.74
19:V:192:ASP:O	19:V:195:VAL:HG22	1.87	0.74
20:Y:227:A:H4'	20:Y:228:A:H5'	1.68	0.74
20:Y:525:C:O2'	20:Y:526:C:H5'	1.86	0.74
20:Y:526:C:H2'	20:Y:527:A:H8	1.52	0.74
20:Y:582:G:H1'	37:o:64:ASN:OD1	1.87	0.74
20:Y:930:C:OP2	36:n:86:LYS:NZ	2.21	0.74
20:Y:1742:U:H2'	20:Y:1743:G:O4'	1.87	0.74
20:Y:1999:U:O2	20:Y:2832:G:O2'	2.05	0.74
20:Y:2652:G:H5"	20:Y:2653:G:OP1	1.86	0.74
20:Y:2909:G:H4'	34:l:100:ARG:HH12	1.53	0.74
24:b:93:PRO:O	24:b:94:LYS:HD2	1.86	0.74
26:d:23:ASN:OD1	26:d:24:LEU:N	2.20	0.74
31:i:34:ILE:HD11	31:i:118:LEU:HB3	1.69	0.74
43:u:53:GLU:O	43:u:57:VAL:HG12	1.87	0.74
48:z:37:ARG:NH1	48:z:45:LEU:O	2.20	0.74
1:A:642:C:OP2	5:F:95:LYS:HD2	1.86	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:750:C:O2'	1:A:751:G:H5'	1.88	0.74
1:A:1370:G:H2'	1:A:1371:C:C6	2.22	0.74
11:L:86:ARG:NH1	11:L:93:VAL:O	2.19	0.74
20:Y:679:G:N7	30:h:35:ARG:NH1	2.35	0.74
20:Y:885:G:P	48:z:14:ARG:HH12	2.10	0.74
20:Y:1370:U:C5'	20:Y:1371:G:H5"	2.11	0.74
26:d:128:SER:HB3	26:d:131:LYS:HB3	1.69	0.74
31:i:15:PRO:HB3	31:i:72:ARG:HH12	1.50	0.74
33:k:18:ARG:HG2	33:k:21:ARG:NH2	2.02	0.74
42:t:39:VAL:HG13	42:t:46:LYS:NZ	2.03	0.74
46:x:37:ARG:NH2	46:x:52:VAL:HG13	2.02	0.74
1:A:1131:G:H4'	9:J:43:PRO:HG3	1.69	0.74
2:C:50:GLY:O	2:C:69:THR:HG23	1.88	0.74
3:D:52:GLU:HA	3:D:55:LYS:HZ2	1.52	0.74
3:D:93:LEU:O	3:D:97:VAL:HG22	1.87	0.74
18:T:7:GLN:O	18:T:11:ILE:HG13	1.87	0.74
19:V:52:LYS:HA	19:V:55:GLU:OE1	1.88	0.74
20:Y:1356:U:H3'	20:Y:1357:G:H8	1.52	0.74
20:Y:1379:G:P	46:x:8:MET:HE1	2.27	0.74
20:Y:1808:A:H2'	20:Y:1809:U:C6	2.23	0.74
29:g:35:ILE:HG23	29:g:63:VAL:HA	1.70	0.74
31:i:97:VAL:C	31:i:98:LYS:HD3	2.12	0.74
34:l:73:PHE:HE2	34:l:79:ASN:CB	2.00	0.74
40:r:90:ARG:O	40:r:90:ARG:HD2	1.88	0.74
42:t:41:ARG:HG2	42:t:42:PRO:HD2	1.70	0.74
45:w:10:ARG:HB2	45:w:53:LEU:HD22	1.69	0.74
1:A:716:U:H4'	5:F:89:LYS:HE3	1.67	0.74
1:A:1218:C:OP1	1:A:1219:A:H1'	1.88	0.74
20:Y:175:G:O2'	20:Y:176:G:H5'	1.86	0.74
20:Y:552:U:H2'	20:Y:553:G:H5'	1.70	0.74
20:Y:1378:U:H2'	20:Y:1379:G:C8	2.22	0.74
20:Y:2528:G:O5'	25:c:137:PHE:HB2	1.87	0.74
20:Y:3078:G:H2'	20:Y:3080:A:OP2	1.87	0.74
22:Z:79:VAL:HG12	22:Z:113:GLN:HA	1.67	0.74
22:Z:261:ASN:N	22:Z:265:ASP:OD2	2.16	0.74
30:h:28:SER:O	30:h:29:LYS:HD2	1.88	0.74
31:i:70:PRO:CA	31:i:95:ALA:HB2	2.18	0.74
38:p:32:VAL:HG22	38:p:81:ARG:NH1	2.03	0.74
44:v:72:LEU:HD21	44:v:106:LYS:HG3	1.70	0.74
1:A:328:U:H2'	1:A:329:A:H5'	1.70	0.74
1:A:1092:C:H1'	2:C:179:ARG:HD3	1.67	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:55:LYS:HE3	3:D:190:LEU:HD11	1.69	0.74
4:E:184:LEU:CD2	4:E:189:VAL:HB	2.18	0.74
6:G:103:TRP:HA	6:G:106:ASN:ND2	2.02	0.74
13:N:34:TYR:CE2	13:N:36:LYS:HB3	2.23	0.74
15:P:67:THR:CG2	15:P:69:PRO:HD2	2.18	0.74
20:Y:842:A:O2'	20:Y:843:G:H5'	1.88	0.74
20:Y:1092:G:O4'	20:Y:1301:G:N2	2.20	0.74
20:Y:2218:C:O2'	20:Y:2219:U:H5'	1.88	0.74
20:Y:2451:A:H4'	22:Z:261:ASN:OD1	1.88	0.74
20:Y:2691:C:O2'	20:Y:2692:A:H5'	1.86	0.74
21:U:62:C:H2'	21:U:63:U:C6	2.23	0.74
27:e:57:PRO:HG2	27:e:73:LYS:HB3	1.70	0.74
29:g:17:LYS:HE3	29:g:47:ILE:CD1	2.14	0.74
34:l:24:THR:O	34:l:86:LEU:N	2.20	0.74
36:n:5:ALA:C	36:n:6:ILE:HD13	2.12	0.74
42:t:47:GLN:N	42:t:47:GLN:OE1	2.20	0.74
48:z:25:MET:HE3	48:z:25:MET:O	1.88	0.74
51:4:2374:U:H2'	51:4:2375:G:H8	1.53	0.74
1:A:879:C:H2'	1:A:880:G:C8	2.23	0.74
1:A:1283:U:H2'	1:A:1285:C:C5	2.23	0.74
3:D:141:LYS:NZ	3:D:143:LYS:HB3	2.03	0.74
20:Y:504:C:H2'	20:Y:505:C:C1'	2.18	0.74
20:Y:2087:C:H2'	20:Y:2088:C:C6	2.23	0.74
20:Y:2152:A:H3'	20:Y:2153:G:H5"	1.69	0.74
20:Y:2985:G:H1'	26:d:144:GLN:HE22	1.52	0.74
22:Z:6:TYR:CE1	22:Z:18:VAL:HG12	2.22	0.74
24:b:121:ASN:OD1	30:h:3:VAL:HA	1.87	0.74
25:c:47:VAL:HG21	25:c:56:LEU:HD11	1.68	0.74
27:e:30:LEU:HD12	27:e:35:VAL:HG11	1.69	0.74
29:g:77:ILE:HG23	34:l:70:GLU:N	2.00	0.74
31:i:34:ILE:HD11	31:i:118:LEU:HD22	1.70	0.74
34:l:46:VAL:HG22	34:l:59:THR:O	1.88	0.74
38:p:49:ILE:HG22	38:p:50:PHE:CD1	2.22	0.74
1:A:92:A:O2'	1:A:93:C:O5'	2.05	0.73
1:A:322:C:H5"	18:T:18:ARG:NH2	2.03	0.73
1:A:822:U:O2	1:A:824:C:O2'	2.05	0.73
3:D:93:LEU:HB2	3:D:130:TYR:HB3	1.70	0.73
3:D:162:ILE:H	3:D:162:ILE:HD12	1.52	0.73
5:F:76:ASP:HA	5:F:79:LEU:CG	2.18	0.73
9:J:57:LYS:N	9:J:57:LYS:HD2	2.03	0.73
19:V:23:TRP:CZ3	19:V:25:PRO:HA	2.23	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:4:G:H2'	20:Y:5:U:C6	2.23	0.73
20:Y:350:A:H3'	20:Y:351:G:H21	1.52	0.73
20:Y:542:A:H3'	20:Y:543:U:H5"	1.69	0.73
20:Y:1656:A:O2'	20:Y:1657:G:H5'	1.88	0.73
20:Y:2628:U:H2'	20:Y:2629:G:O4'	1.88	0.73
25:c:8:LEU:HD21	25:c:16:ARG:NH2	2.04	0.73
25:c:110:LEU:HD23	25:c:111:ILE:HD13	1.69	0.73
28:f:76:ARG:HE	28:f:87:ARG:NH1	1.85	0.73
29:g:15:GLY:HA2	29:g:47:ILE:HG12	1.70	0.73
35:m:27:GLN:NE2	35:m:34:LYS:HE2	2.03	0.73
48:z:30:GLY:O	48:z:34:VAL:HG22	1.87	0.73
1:A:238:G:H2'	1:A:239:G:C4	2.22	0.73
3:D:163:PRO:HB2	3:D:165:TRP:CZ3	2.23	0.73
8:I:115:ARG:HA	8:I:118:LEU:HD11	1.70	0.73
9:J:55:PRO:HB3	13:N:42:ILE:CD1	2.18	0.73
16:Q:46:HIS:CG	16:Q:53:ILE:HD11	2.22	0.73
20:Y:811:G:O2'	20:Y:812:C:H5'	1.88	0.73
20:Y:966:U:H4'	45:w:46:LEU:HD23	1.69	0.73
20:Y:1662:C:O2'	20:Y:1663:C:H5'	1.87	0.73
20:Y:1993:G:N1	20:Y:2005:C:N3	2.33	0.73
20:Y:2640:G:H5'	30:h:65:LYS:CG	2.18	0.73
20:Y:2644:C:OP1	49:1:34:GLU:HG3	1.88	0.73
24:b:21:PRO:HG2	24:b:24:LEU:HD12	1.69	0.73
24:b:153:LYS:HE3	24:b:191:ALA:CB	2.17	0.73
27:e:38:MET:HA	27:e:38:MET:HE3	1.70	0.73
34:l:21:PRO:CG	34:l:94:ALA:HA	2.17	0.73
35:m:65:ILE:CD1	35:m:95:LEU:HB3	2.17	0.73
1:A:538:G:H3'	1:A:539:A:H5'	1.69	0.73
1:A:860:C:H2'	1:A:861:C:H6	1.52	0.73
1:A:1290:C:OP2	12:M:99:ARG:HD3	1.88	0.73
1:A:1310:C:OP1	12:M:28:THR:HG21	1.88	0.73
3:D:69:ARG:HH11	3:D:72:GLU:HG3	1.54	0.73
10:K:62:LYS:HA	10:K:62:LYS:HE3	1.69	0.73
19:V:32:PHE:HD2	19:V:40:ILE:HD11	1.52	0.73
20:Y:183:G:O2'	20:Y:184:C:H5'	1.88	0.73
20:Y:1347:G:H2'	20:Y:1348:G:H8	1.53	0.73
20:Y:1393:C:H2'	20:Y:1394:A:C8	2.22	0.73
20:Y:2043:C:O2'	20:Y:2195:U:OP2	2.05	0.73
20:Y:2145:C:H2'	20:Y:2146:A:H8	1.53	0.73
20:Y:2624:C:H2'	20:Y:2625:C:C6	2.23	0.73
29:g:87:ILE:HD11	29:g:91:ASN:CA	2.17	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:h:113:LEU:HA	30:h:130:SER:CB	2.18	0.73
32:j:72:ASP:HB3	32:j:75:VAL:HG12	1.71	0.73
44:v:87:VAL:HG21	44:v:91:LYS:HE2	1.70	0.73
1:A:1002:U:H2'	1:A:1003:C:C6	2.24	0.73
1:A:1057:G:N2	1:A:1060:A:OP2	2.17	0.73
3:D:117:HIS:HB3	3:D:144:SER:HB3	1.70	0.73
3:D:186:ILE:CG2	3:D:188:VAL:HG23	2.16	0.73
8:I:39:VAL:HG13	8:I:83:ILE:CD1	2.17	0.73
8:I:106:ALA:O	8:I:110:VAL:HG22	1.87	0.73
11:L:29:GLN:O	11:L:30:ARG:HD2	1.88	0.73
20:Y:240:G:N2	20:Y:258:G:O6	2.21	0.73
20:Y:967:G:O6	20:Y:1040:U:O4	2.06	0.73
20:Y:1955:A:H2'	20:Y:1956:A:H5'	1.68	0.73
20:Y:2524:C:H2'	20:Y:2525:C:C5	2.23	0.73
20:Y:2668:G:OP2	24:b:69:LYS:NZ	2.22	0.73
21:U:22:A:H2'	21:U:23:G:C8	2.24	0.73
21:U:56:C:O3'	25:c:31:ASN:ND2	2.22	0.73
27:e:106:GLN:O	27:e:110:ILE:HG13	1.88	0.73
34:l:25:VAL:HG23	34:l:85:VAL:CA	2.19	0.73
36:n:20:ASP:OD1	36:n:21:VAL:N	2.20	0.73
39:q:65:PRO:O	39:q:66:ILE:HD13	1.89	0.73
48:z:28:ARG:HA	48:z:31:ARG:CD	2.18	0.73
1:A:12:A:N6	3:D:201:LYS:HB2	2.03	0.73
1:A:1505:G:H2'	1:A:1506:U:C6	2.24	0.73
2:C:9:GLY:O	2:C:12:LEU:HG	1.88	0.73
2:C:59:THR:OG1	2:C:62:ARG:NE	2.21	0.73
3:D:195:ILE:O	3:D:198:LEU:HG	1.87	0.73
4:E:184:LEU:HD22	4:E:189:VAL:HB	1.69	0.73
7:H:39:ILE:O	7:H:43:GLU:HG2	1.88	0.73
12:M:18:ALA:O	12:M:21:TYR:HB2	1.89	0.73
18:T:73:ALA:HA	18:T:76:LYS:HG2	1.69	0.73
20:Y:259:C:H2'	20:Y:260:G:H8	1.53	0.73
20:Y:265:A:O2'	20:Y:516:G:O6	2.01	0.73
20:Y:775:U:H2'	20:Y:776:G:H8	1.51	0.73
20:Y:990:G:O2'	40:r:127:ASP:OD2	2.04	0.73
20:Y:1194:C:H2'	20:Y:1195:A:C8	2.24	0.73
20:Y:1209:G:O6	20:Y:1218:C:N4	2.20	0.73
20:Y:1649:C:O2'	20:Y:1789:A:OP2	2.03	0.73
20:Y:2439:C:H2'	20:Y:2440:G:H8	1.53	0.73
20:Y:2667:C:H2'	20:Y:2668:G:H8	1.53	0.73
20:Y:2739:C:H2'	20:Y:2740:G:H8	1.54	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:2761:U:H2'	20:Y:2762:C:C6	2.22	0.73
24:b:205:ILE:HA	24:b:208:ASN:ND2	2.03	0.73
29:g:34:GLY:N	29:g:37:ASP:OD2	2.22	0.73
33:k:52:VAL:HG12	33:k:59:THR:CA	2.18	0.73
34:l:30:LYS:HE3	34:l:81:ASP:OD1	1.88	0.73
34:l:50:GLN:HB2	34:l:57:THR:OG1	1.88	0.73
38:p:48:LYS:NZ	38:p:49:ILE:HG12	2.04	0.73
39:q:8:THR:OG1	39:q:22:LYS:NZ	2.21	0.73
46:x:5:LYS:O	46:x:6:ARG:HG3	1.88	0.73
1:A:49:U:H3	1:A:396:G:H1	0.79	0.73
1:A:232:G:O2'	1:A:233:C:H5'	1.88	0.73
1:A:791:C:O2	1:A:791:C:H2'	1.89	0.73
1:A:1066:U:H2'	1:A:1067:G:H8	1.54	0.73
20:Y:673:C:H2'	20:Y:674:U:H6	1.53	0.73
20:Y:788:C:O2'	20:Y:789:G:H5'	1.88	0.73
20:Y:947:U:H2'	20:Y:948:G:C8	2.23	0.73
20:Y:949:C:H2'	20:Y:950:A:H8	1.53	0.73
20:Y:1408:C:H2'	20:Y:1409:C:C6	2.24	0.73
20:Y:2578:A:P	41:s:32:LYS:HZ1	2.12	0.73
20:Y:3034:C:H2'	20:Y:3035:C:C6	2.23	0.73
20:Y:3108:G:H1'	46:x:41:ARG:HH12	1.53	0.73
23:a:51:GLN:HA	23:a:83:GLU:HB2	1.68	0.73
25:c:14:ARG:HA	25:c:18:GLU:OE1	1.87	0.73
29:g:107:ARG:NH1	34:l:33:GLU:OE1	2.22	0.73
34:l:40:GLN:HG2	34:l:41:VAL:H	1.53	0.73
2:C:94:THR:HG22	2:C:94:THR:O	1.87	0.73
3:D:105:THR:CG2	3:D:108:MET:HG2	2.18	0.73
6:G:78:ARG:O	6:G:85:TYR:N	2.18	0.73
20:Y:539:C:OP1	24:b:53:LYS:NZ	2.22	0.73
20:Y:1131:G:O2'	20:Y:1132:U:H5'	1.89	0.73
20:Y:1200:U:O5'	27:e:120:ALA:HA	1.89	0.73
20:Y:2881:A:N6	20:Y:2888:G:H21	1.81	0.73
20:Y:3069:G:N2	20:Y:3088:C:O2	2.20	0.73
21:U:7:G:H4'	33:k:41:ASN:ND2	2.04	0.73
23:a:86:LEU:HD12	23:a:92:VAL:HG22	1.67	0.73
30:h:57:ILE:HG22	49:1:57:ARG:HH22	1.53	0.73
38:p:8:ARG:HD3	38:p:49:ILE:CD1	2.17	0.73
38:p:8:ARG:HD3	38:p:49:ILE:HD12	1.70	0.73
1:A:693:G:H2'	1:A:694:G:C8	2.24	0.73
1:A:1501:G:C6	20:Y:2144:C:H5'	2.22	0.73
2:C:131:ARG:HH21	3:D:40:ARG:HH22	1.36	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:71:TYR:CE1	3:D:196:VAL:HA	2.20	0.73
10:K:68:THR:HG23	10:K:71:ALA:H	1.54	0.73
16:Q:64:GLU:N	16:Q:64:GLU:OE2	2.22	0.73
19:V:141:LYS:HD3	19:V:144:LEU:HD21	1.70	0.73
20:Y:268:G:OP2	20:Y:360:G:N1	2.18	0.73
20:Y:1356:U:H3'	20:Y:1357:G:C8	2.24	0.73
20:Y:1637:G:H2'	20:Y:1638:C:C6	2.23	0.73
20:Y:1715:A:H2'	20:Y:1716:A:C8	2.24	0.73
20:Y:1869:G:N2	20:Y:2230:C:O2	2.17	0.73
20:Y:1958:C:H2'	20:Y:1959:G:H8	1.54	0.73
20:Y:2172:G:H2'	20:Y:2173:G:H8	1.54	0.73
20:Y:2219:U:H1'	29:g:3:GLN:HE22	1.53	0.73
20:Y:2601:A:H2'	20:Y:2602:A:C8	2.23	0.73
20:Y:3097:G:H5'	34:l:1:MET:HB3	1.71	0.73
21:U:96:A:N1	40:r:21:LYS:HE3	2.04	0.73
22:Z:182:ILE:CG2	22:Z:269:VAL:HB	2.18	0.73
24:b:58:VAL:CG1	24:b:80:ARG:HD2	2.18	0.73
51:4:2358:A:HO2'	51:4:2382:G:HO2'	1.35	0.73
1:A:1075:U:H2'	1:A:1076:C:C6	2.23	0.73
1:A:1178:A:H3'	1:A:1178:A:OP2	1.88	0.73
2:C:90:LEU:HD13	2:C:98:VAL:HG11	1.70	0.73
2:C:115:VAL:O	2:C:119:VAL:HG22	1.88	0.73
10:K:70:PHE:O	10:K:74:LEU:HG	1.87	0.73
12:M:87:TYR:HA	12:M:90:LEU:HD12	1.71	0.73
20:Y:91:C:H2'	20:Y:92:G:C8	2.23	0.73
20:Y:1666:A:C6	20:Y:1687:G:N2	2.56	0.73
20:Y:1782:U:H2'	20:Y:1783:G:H8	1.54	0.73
20:Y:1967:G:O2'	20:Y:1968:U:H5'	1.89	0.73
21:U:6:G:H2'	21:U:7:G:H8	1.53	0.73
31:i:23:GLY:O	31:i:101:ARG:NH1	2.21	0.73
31:i:40:ALA:HB3	31:i:127:ILE:HG21	1.69	0.73
35:m:61:TRP:CZ2	35:m:93:LYS:HG3	2.23	0.73
41:s:25:ARG:HB2	41:s:37:LEU:HD13	1.70	0.73
1:A:960:A:N6	1:A:1298:G:H1'	2.03	0.73
1:A:1324:C:C4'	8:I:147:TYR:HB3	2.16	0.73
2:C:9:GLY:HA2	2:C:12:LEU:HD21	1.70	0.73
6:G:44:TYR:OH	8:I:62:LYS:HE3	1.88	0.73
7:H:80:VAL:HG11	7:H:130:TYR:CZ	2.24	0.73
10:K:70:PHE:HA	10:K:73:GLN:OE1	1.89	0.73
20:Y:321:G:H21	20:Y:456:C:H5	1.35	0.73
20:Y:1073:G:H21	20:Y:1076:A:H8	1.37	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:1186:G:H2'	20:Y:1187:A:N7	2.04	0.73
20:Y:1226:U:H2'	20:Y:1227:C:C6	2.24	0.73
20:Y:2731:C:O2	20:Y:2807:G:N2	2.22	0.73
20:Y:2917:A:O2'	20:Y:2918:G:H5'	1.89	0.73
26:d:102:GLN:OE1	26:d:118:ALA:HB3	1.87	0.73
31:i:27:VAL:CG1	31:i:134:ARG:HA	2.19	0.73
31:i:44:ASN:OD1	31:i:45:ARG:N	2.21	0.73
39:q:22:LYS:O	39:q:35:VAL:HG13	1.89	0.73
42:t:8:CYS:SG	42:t:10:LYS:HB2	2.28	0.73
43:u:24:GLU:O	43:u:28:GLU:HG2	1.88	0.73
44:v:53:LYS:CB	44:v:56:LEU:HD23	2.18	0.73
50:2:13:LYS:HD2	50:2:27:CYS:SG	2.29	0.73
1:A:207:G:H4'	18:T:56:ARG:CD	2.19	0.72
1:A:236:G:H5"	16:Q:57:LYS:NZ	2.04	0.72
11:L:94:ARG:HG3	11:L:95:TYR:CE2	2.23	0.72
12:M:2:ALA:HB3	12:M:9:LEU:HB3	1.71	0.72
20:Y:263:G:O2'	20:Y:517:A:H1'	1.89	0.72
20:Y:1044:U:O2	45:w:24:ARG:NH2	2.21	0.72
20:Y:1316:U:O4	20:Y:1359:G:O6	2.07	0.72
20:Y:1525:U:H3	20:Y:1811:C:N4	1.80	0.72
20:Y:1905:G:N2	20:Y:1919:A:H62	1.85	0.72
20:Y:2686:U:O2'	20:Y:2687:U:H5'	1.89	0.72
23:a:21:ASN:OD1	34:l:78:PRO:HG2	1.89	0.72
26:d:150:ARG:NH1	26:d:168:GLU:OE1	2.14	0.72
27:e:16:GLN:HB2	27:e:19:GLN:HG2	1.71	0.72
32:j:97:ILE:HD13	32:j:113:ILE:HD13	1.71	0.72
43:u:6:THR:N	43:u:9:GLU:OE1	2.18	0.72
1:A:161:U:H2'	1:A:162:G:C8	2.24	0.72
1:A:1081:A:N3	1:A:1082:A:H1'	2.04	0.72
1:A:1502:A:OP2	1:A:1502:A:H3'	1.89	0.72
1:A:1515:A:O2'	1:A:1516:U:O5'	2.06	0.72
3:D:92:ARG:HH12	3:D:129:SER:HB2	1.53	0.72
5:F:42:ILE:HD11	5:F:59:ILE:HD11	1.70	0.72
7:H:36:ILE:O	7:H:40:LEU:HD13	1.89	0.72
11:L:79:MET:CE	11:L:102:LEU:HD12	2.19	0.72
20:Y:840:G:O2'	20:Y:841:G:H5'	1.90	0.72
20:Y:996:G:H5"	20:Y:997:G:C2	2.24	0.72
20:Y:1131:G:OP1	28:f:144:GLN:NE2	2.22	0.72
20:Y:2505:C:O2'	20:Y:2506:G:H5'	1.90	0.72
24:b:76:GLN:HG3	24:b:84:PHE:CZ	2.23	0.72
35:m:47:TYR:HA	35:m:50:ARG:NH1	2.03	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:1:29:ARG:HH12	49:1:45:ASP:HA	1.54	0.72
1:A:631:C:O2'	1:A:632:U:H5'	1.89	0.72
1:A:808:A:N6	1:A:840:G:N2	2.22	0.72
5:F:3:PRO:HB2	5:F:93:THR:OG1	1.88	0.72
7:H:112:LEU:O	7:H:113:LEU:HD13	1.89	0.72
14:O:3:LEU:HD22	14:O:7:GLN:HE21	1.54	0.72
14:O:33:THR:HG23	14:O:63:ARG:HH22	1.54	0.72
18:T:36:ARG:O	18:T:39:VAL:HG22	1.90	0.72
18:T:72:ALA:HA	18:T:75:LYS:NZ	2.03	0.72
20:Y:825:C:H2'	20:Y:826:G:H8	1.53	0.72
20:Y:3023:G:H2'	20:Y:3024:A:C8	2.24	0.72
22:Z:8:PRO:HB3	22:Z:14:ARG:HG3	1.70	0.72
22:Z:146:GLU:OE2	22:Z:151:GLY:N	2.22	0.72
25:c:72:PRO:HG3	25:c:96:VAL:HB	1.70	0.72
25:c:155:ARG:HD2	25:c:156:PRO:HD2	1.71	0.72
35:m:83:LEU:O	35:m:88:VAL:HG12	1.89	0.72
38:p:55:ASP:OD2	38:p:87:ALA:HA	1.88	0.72
1:A:178:A:H3'	1:A:179:C:O4'	1.88	0.72
1:A:1497:A:H2'	1:A:1498:C:H6	1.53	0.72
8:I:118:LEU:HD13	8:I:124:LEU:HD23	1.72	0.72
15:P:20:ILE:HD12	15:P:38:GLY:HA3	1.71	0.72
15:P:52:ASP:OD2	15:P:55:ARG:HG2	1.88	0.72
19:V:44:GLN:HA	19:V:47:LEU:CD1	2.20	0.72
20:Y:78:G:HO2'	20:Y:376:G:HO2'	1.36	0.72
20:Y:1043:G:H21	45:w:25:THR:HG23	1.54	0.72
20:Y:1934:G:O6	20:Y:1960:U:C2	2.42	0.72
20:Y:2409:U:H5"	51:4:2406:U:H3	1.53	0.72
20:Y:2456:C:O2'	20:Y:2457:U:H5'	1.88	0.72
20:Y:2495:G:H5'	41:s:20:ARG:HG2	1.72	0.72
23:a:38:ARG:O	23:a:39:ILE:HD13	1.88	0.72
23:a:181:LYS:HD2	23:a:195:LYS:HD2	1.72	0.72
39:q:11:VAL:HG21	39:q:16:ASP:O	1.88	0.72
46:x:44:LEU:O	46:x:48:ARG:HG3	1.88	0.72
1:A:270:A:H2'	1:A:271:C:H6	1.54	0.72
1:A:1207:C:C6	12:M:104:LYS:HD3	2.25	0.72
8:I:32:ARG:HH21	8:I:97:GLY:CA	2.02	0.72
17:R:69:LYS:CA	17:R:72:ARG:HG3	2.17	0.72
20:Y:81:A:H4'	20:Y:82:G:O5'	1.90	0.72
20:Y:271:A:H2'	20:Y:272:A:H2	1.54	0.72
20:Y:1080:U:O2'	20:Y:1081:C:H5'	1.88	0.72
20:Y:1932:U:H2'	20:Y:1932:U:OP1	1.89	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:2536:U:H2'	20:Y:2537:C:C6	2.25	0.72
28:f:70:THR:O	28:f:71:LYS:HD2	1.90	0.72
29:g:68:GLU:HG2	29:g:78:LYS:HG3	1.71	0.72
30:h:61:LEU:HD22	49:1:24:ARG:HE	1.54	0.72
33:k:49:VAL:HG11	33:k:116:LEU:HD21	1.70	0.72
40:r:64:ASN:HD21	40:r:140:ILE:HB	1.54	0.72
45:w:3:GLU:O	45:w:4:LEU:HD23	1.90	0.72
1:A:82:U:O2	1:A:87:G:N2	2.22	0.72
1:A:416:G:H2'	1:A:417:G:C8	2.22	0.72
1:A:687:U:H4'	10:K:31:HIS:ND1	2.03	0.72
1:A:964:U:H5'	1:A:965:A:C8	2.25	0.72
1:A:1325:G:H2'	1:A:1326:C:C6	2.23	0.72
2:C:83:ALA:O	2:C:87:ARG:HG2	1.88	0.72
3:D:141:LYS:O	3:D:144:SER:OG	2.05	0.72
4:E:66:ASP:CG	4:E:70:MET:HB2	2.14	0.72
4:E:93:ARG:HA	4:E:96:PHE:CE1	2.24	0.72
19:V:142:ASN:HA	19:V:145:GLU:OE1	1.90	0.72
20:Y:91:C:C2'	20:Y:92:G:H5'	2.18	0.72
20:Y:632:G:H2'	20:Y:633:A:C8	2.24	0.72
20:Y:935:A:N3	20:Y:1060:U:O2'	2.22	0.72
20:Y:973:G:H3'	20:Y:974:G:C8	2.25	0.72
20:Y:1871:G:N1	32:j:6:LYS:HE2	2.03	0.72
20:Y:2081:U:H4'	20:Y:2634:G:N2	2.02	0.72
20:Y:2581:G:H2'	20:Y:2583:C:OP2	1.89	0.72
20:Y:2924:C:H2'	20:Y:2925:C:C6	2.24	0.72
26:d:87:LYS:HG3	26:d:133:SER:HB3	1.72	0.72
33:k:18:ARG:HG2	33:k:21:ARG:HH21	1.54	0.72
48:z:17:ARG:HB2	48:z:17:ARG:NH1	2.05	0.72
1:A:205:G:H2'	1:A:206:G:C8	2.24	0.72
1:A:236:G:H5"	16:Q:57:LYS:HZ3	1.54	0.72
1:A:596:A:O2'	1:A:605:G:N2	2.23	0.72
1:A:717:C:H5'	5:F:90:VAL:HG23	1.72	0.72
2:C:36:VAL:O	2:C:40:LYS:HG3	1.89	0.72
11:L:25:LYS:HE3	11:L:59:SER:OG	1.90	0.72
12:M:29:ARG:HA	12:M:32:GLU:HG2	1.70	0.72
16:Q:34:LYS:HE2	16:Q:34:LYS:N	2.04	0.72
20:Y:901:C:O2'	20:Y:902:C:H5'	1.88	0.72
20:Y:1076:A:O2'	20:Y:1077:A:O4'	2.06	0.72
20:Y:1787:A:OP2	22:Z:86:PRO:HB3	1.89	0.72
20:Y:2303:A:H1'	42:t:23:ARG:HH21	1.53	0.72
23:a:89:GLU:HA	23:a:92:VAL:CG2	2.18	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:c:78:ARG:HG2	25:c:79:LYS:CD	2.19	0.72
29:g:15:GLY:O	29:g:47:ILE:N	2.21	0.72
32:j:99:LYS:HE2	46:x:43:LEU:CD2	2.15	0.72
33:k:80:HIS:O	33:k:84:VAL:HG12	1.90	0.72
34:l:51:GLY:HA2	34:l:56:GLU:CA	2.11	0.72
36:n:23:LYS:HE3	36:n:68:THR:HG21	1.70	0.72
1:A:1414:C:H2'	1:A:1415:G:O4'	1.88	0.72
1:A:1455:G:H2'	1:A:1456:U:O4'	1.89	0.72
2:C:57:GLU:CG	2:C:64:ARG:HB2	2.19	0.72
4:E:130:VAL:CG1	4:E:148:ILE:HG22	2.19	0.72
6:G:24:THR:O	6:G:27:VAL:HG22	1.89	0.72
8:I:39:VAL:HG21	8:I:102:ALA:CB	2.20	0.72
13:N:3:LYS:O	13:N:7:VAL:HG23	1.90	0.72
20:Y:376:G:H1	20:Y:425:U:H3	1.38	0.72
20:Y:616:A:H4'	20:Y:617:U:C5	2.25	0.72
20:Y:696:A:H4'	20:Y:697:G:O5'	1.89	0.72
20:Y:2005:C:H5"	22:Z:225:VAL:HG11	1.72	0.72
20:Y:2317:G:H1	20:Y:2418:U:H3	0.84	0.72
20:Y:2452:G:P	22:Z:261:ASN:HD21	2.12	0.72
22:Z:37:LEU:HD11	22:Z:40:LYS:HZ1	1.54	0.72
25:c:176:LEU:HD12	25:c:177:LEU:N	2.04	0.72
29:g:97:ARG:O	29:g:98:ILE:HG13	1.90	0.72
34:l:8:ASP:O	34:l:12:LEU:HG	1.89	0.72
34:l:58:PHE:CE1	34:l:75:VAL:HA	2.25	0.72
38:p:68:ARG:HH12	38:p:73:PHE:HD1	1.38	0.72
44:v:83:LYS:HA	44:v:83:LYS:HE3	1.72	0.72
51:4:2367:G:H4'	51:4:2368:C:C5	2.24	0.72
1:A:932:U:OP2	12:M:102:ARG:HB2	1.90	0.72
3:D:86:LEU:CD2	3:D:183:ARG:HD3	2.20	0.72
3:D:140:VAL:O	3:D:172:ARG:NH2	2.19	0.72
8:I:69:LYS:HE2	8:I:72:LEU:HD23	1.71	0.72
20:Y:369:G:O2'	20:Y:371:G:O5'	2.08	0.72
20:Y:969:C:H2'	20:Y:970:G:C8	2.24	0.72
20:Y:1516:G:H2'	20:Y:1517:U:C6	2.24	0.72
33:k:9:ASN:O	33:k:13:VAL:HG22	1.90	0.72
1:A:903:U:H2'	1:A:904:G:H8	1.54	0.72
1:A:1188:C:H2'	1:A:1189:C:H6	1.55	0.72
2:C:24:ALA:HB3	2:C:31:TYR:HE2	1.54	0.72
10:K:43:ILE:CD1	10:K:79:ALA:HB1	2.13	0.72
15:P:74:LEU:HG	15:P:79:ASP:HB2	1.70	0.72
19:V:48:THR:O	19:V:52:LYS:HG2	1.88	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:953:G:O2'	20:Y:954:U:H5'	1.89	0.72
20:Y:1500:A:H4'	20:Y:1501:C:OP1	1.87	0.72
20:Y:1501:C:H2'	20:Y:1502:G:C8	2.25	0.72
20:Y:1633:U:H2'	20:Y:1634:C:C2	2.25	0.72
20:Y:1944:C:H2'	20:Y:1945:U:C6	2.24	0.72
20:Y:2883:G:P	26:d:159:LYS:HZ1	2.13	0.72
23:a:4:LYS:CD	23:a:105:ILE:HD11	2.20	0.72
23:a:186:ASP:OD1	23:a:187:ALA:N	2.23	0.72
27:e:59:GLU:O	27:e:71:ALA:N	2.19	0.72
30:h:105:ARG:HB3	30:h:108:SER:OG	1.89	0.72
31:i:34:ILE:CG2	31:i:129:ALA:HB1	2.20	0.72
31:i:125:LEU:HD13	31:i:126:PRO:HD2	1.71	0.72
40:r:48:GLU:O	40:r:49:LEU:HD23	1.90	0.72
41:s:51:VAL:HG23	41:s:80:ILE:CD1	2.20	0.72
1:A:115:A:H4'	1:A:116:A:C4	2.25	0.71
1:A:533:G:H2'	1:A:534:U:C6	2.24	0.71
1:A:716:U:H2'	1:A:717:C:C6	2.23	0.71
1:A:1079:G:H2'	1:A:1080:C:C6	2.25	0.71
1:A:1154:C:H2'	1:A:1155:G:C8	2.25	0.71
2:C:24:ALA:HB3	2:C:31:TYR:CE2	2.25	0.71
8:I:83:ILE:HD12	8:I:84:TYR:H	1.55	0.71
10:K:95:VAL:CG2	10:K:102:ARG:HD3	2.20	0.71
15:P:55:ARG:HA	15:P:55:ARG:HE	1.54	0.71
19:V:177:ARG:NH2	19:V:194:ASP:O	2.23	0.71
20:Y:199:U:O4	20:Y:250:G:N2	2.18	0.71
20:Y:681:C:H4'	24:b:96:ARG:NH2	2.05	0.71
20:Y:725:A:OP1	49:1:47:ARG:NH1	2.23	0.71
20:Y:1084:U:O2'	20:Y:1086:C:H5"	1.90	0.71
20:Y:2996:U:H4'	23:a:176:THR:CG2	2.18	0.71
20:Y:3097:G:O2'	20:Y:3098:G:O5'	2.07	0.71
21:U:64:G:O2'	21:U:65:C:H5'	1.90	0.71
24:b:9:THR:HG22	24:b:128:THR:CG2	2.19	0.71
42:t:5:CYS:SG	42:t:52:CYS:N	2.62	0.71
10:K:61:PHE:HD2	10:K:71:ALA:HB2	1.55	0.71
20:Y:477:G:O2'	20:Y:478:A:H5'	1.90	0.71
20:Y:517:A:H3'	20:Y:517:A:OP2	1.89	0.71
20:Y:867:A:OP2	48:z:6:ARG:NH2	2.22	0.71
20:Y:894:U:H2'	20:Y:895:G:C8	2.25	0.71
20:Y:1396:G:H2'	20:Y:1397:U:H6	1.55	0.71
20:Y:1406:U:O2'	20:Y:1407:G:H5'	1.90	0.71
25:c:41:VAL:HB	25:c:98:LEU:HD12	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:c:45:MET:CE	25:c:158:GLY:HA3	2.19	0.71
32:j:41:ALA:HB1	32:j:97:ILE:HD12	1.73	0.71
32:j:115:LEU:HD12	32:j:115:LEU:H	1.55	0.71
34:l:16:ILE:HD11	34:l:76:HIS:ND1	2.05	0.71
50:2:13:LYS:HZ1	50:2:28:SER:HB3	1.54	0.71
1:A:692:A:H2'	1:A:693:G:C8	2.24	0.71
3:D:145:LEU:HD12	3:D:150:PHE:CE2	2.25	0.71
8:I:64:HIS:HA	8:I:67:LEU:CD2	2.20	0.71
9:J:67:MET:HE1	13:N:55:GLY:C	2.16	0.71
20:Y:829:U:H1'	20:Y:832:G:C8	2.26	0.71
20:Y:1269:C:C3'	20:Y:1270:G:H5"	2.19	0.71
20:Y:1523:U:H1'	20:Y:1814:G:N2	2.06	0.71
20:Y:1651:C:N4	20:Y:1783:G:H1	1.88	0.71
20:Y:2541:U:H5"	33:k:7:GLY:C	2.14	0.71
20:Y:2577:G:O3'	41:s:32:LYS:NZ	2.23	0.71
20:Y:2850:C:O2'	20:Y:2851:G:O5'	2.07	0.71
20:Y:2911:U:C2'	20:Y:2912:A:H5'	2.21	0.71
25:c:150:VAL:O	25:c:153:ILE:HG22	1.90	0.71
29:g:107:ARG:HA	29:g:112:MET:HE1	1.73	0.71
32:j:97:ILE:C	32:j:98:ILE:HD12	2.15	0.71
39:q:22:LYS:HE2	39:q:22:LYS:HA	1.73	0.71
39:q:41:ILE:HD13	39:q:64:ALA:HB2	1.71	0.71
39:q:81:THR:HG22	39:q:82:ARG:O	1.90	0.71
40:r:12:THR:HA	40:r:70:ASP:HB3	1.72	0.71
43:u:45:ARG:HG2	43:u:45:ARG:O	1.90	0.71
44:v:37:ALA:O	44:v:41:ARG:HG2	1.88	0.71
45:w:3:GLU:OE2	45:w:36:VAL:HG22	1.91	0.71
50:2:17:ILE:HD11	50:2:19:ARG:NE	2.05	0.71
2:C:70:ALA:HA	2:C:105:VAL:HG22	1.72	0.71
5:F:79:LEU:HD13	5:F:88:THR:HG21	1.73	0.71
15:P:40:TYR:CZ	15:P:42:PRO:HG3	2.25	0.71
20:Y:506:C:H2'	20:Y:507:G:H8	1.55	0.71
20:Y:795:G:O2'	20:Y:796:A:H5'	1.89	0.71
20:Y:804:A:O2'	20:Y:805:C:H5'	1.91	0.71
20:Y:1089:C:H2'	20:Y:1090:G:O4'	1.89	0.71
20:Y:1529:U:O3'	20:Y:1530:G:H5'	1.90	0.71
20:Y:1721:U:H2'	20:Y:1722:C:H6	1.54	0.71
20:Y:2273:G:O2'	20:Y:2274:C:H5'	1.90	0.71
20:Y:2849:G:H2'	20:Y:2850:C:C6	2.24	0.71
22:Z:67:PHE:CE2	22:Z:157:ARG:HD3	2.25	0.71
25:c:20:ARG:CD	25:c:35:ILE:HG21	2.19	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:c:111:ILE:HA	25:c:115:LEU:CD2	2.12	0.71
25:c:117:ARG:NH1	25:c:144:MET:SD	2.64	0.71
34:l:20:SER:OG	34:l:23:ASP:OD2	2.08	0.71
39:q:98:ALA:O	39:q:102:GLY:N	2.18	0.71
1:A:237:C:OP1	16:Q:57:LYS:HD2	1.90	0.71
1:A:242:U:O2	1:A:284:G:N2	2.17	0.71
1:A:620:A:O2'	1:A:621:U:H5'	1.90	0.71
6:G:25:GLN:HG3	6:G:101:LEU:CD2	2.21	0.71
14:O:39:LEU:CD2	14:O:56:LEU:HD21	2.20	0.71
20:Y:141:U:H2'	20:Y:142:C:C6	2.26	0.71
20:Y:243:U:OP1	49:1:6:THR:HG21	1.89	0.71
20:Y:700:U:OP2	24:b:104:LYS:NZ	2.23	0.71
20:Y:932:C:O2'	20:Y:933:G:H5'	1.91	0.71
20:Y:2969:C:H2'	20:Y:2970:U:C6	2.25	0.71
20:Y:3015:C:C2'	20:Y:3016:C:H5"	2.20	0.71
23:a:83:GLU:N	23:a:83:GLU:OE1	2.22	0.71
23:a:144:VAL:HG22	23:a:147:ARG:NH2	2.04	0.71
43:u:29:LEU:CB	43:u:50:VAL:HG11	2.13	0.71
43:u:58:TYR:HA	43:u:61:LEU:HD21	1.70	0.71
3:D:86:LEU:HD12	3:D:87:ARG:N	2.05	0.71
4:E:151:LYS:HG3	4:E:153:LEU:CD2	2.20	0.71
14:O:28:GLN:HG2	14:O:66:LEU:HD11	1.71	0.71
20:Y:105:A:H2'	20:Y:106:G:H8	1.54	0.71
20:Y:183:G:H1	20:Y:211:U:H3	1.36	0.71
20:Y:529:U:H2'	20:Y:530:G:C8	2.25	0.71
20:Y:1653:G:H2'	20:Y:1654:G:C8	2.26	0.71
20:Y:1729:A:H2'	20:Y:1731:A:H5'	1.72	0.71
20:Y:2539:G:O4'	25:c:164:VAL:HG21	1.89	0.71
24:b:21:PRO:O	24:b:21:PRO:HD2	1.90	0.71
34:l:102:LEU:HD23	34:l:106:LYS:O	1.89	0.71
39:q:41:ILE:CD1	39:q:64:ALA:HB2	2.20	0.71
1:A:157:A:N6	1:A:343:U:H1'	2.04	0.71
1:A:577:G:H5"	1:A:578:U:OP2	1.91	0.71
1:A:1091:A:N1	2:C:177:THR:HG23	2.05	0.71
4:E:93:ARG:HA	4:E:96:PHE:HE1	1.56	0.71
5:F:89:LYS:NZ	5:F:91:LEU:HD11	2.04	0.71
7:H:10:PHE:O	7:H:14:LEU:HG	1.89	0.71
12:M:115:ARG:HH12	12:M:117:ILE:HD13	1.54	0.71
20:Y:181:A:O2'	20:Y:182:C:H5'	1.91	0.71
20:Y:207:C:H2'	20:Y:208:C:H6	1.54	0.71
20:Y:1022:C:O2'	31:i:101:ARG:NH2	2.23	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:1040:U:H2'	20:Y:1041:A:C8	2.26	0.71
20:Y:1225:G:H5"	44:v:54:ASN:HD21	1.55	0.71
20:Y:2850:C:H2'	20:Y:2851:G:C8	2.25	0.71
24:b:63:LYS:HE2	24:b:64:LYS:O	1.91	0.71
26:d:104:LEU:HD11	26:d:124:PHE:CE2	2.25	0.71
32:j:43:ALA:O	32:j:46:PRO:HD2	1.90	0.71
40:r:119:THR:OG1	40:r:122:THR:OG1	2.03	0.71
1:A:230:G:H5"	15:P:32:ARG:HH21	1.56	0.71
1:A:826:U:H4'	17:R:19:LYS:CE	2.21	0.71
1:A:1253:U:H2'	1:A:1254:G:O4'	1.89	0.71
1:A:1290:C:OP1	12:M:98:VAL:N	2.21	0.71
2:C:12:LEU:HA	2:C:16:THR:HG23	1.71	0.71
7:H:85:LEU:HB2	11:L:4:ILE:CD1	2.21	0.71
20:Y:479:A:O2'	20:Y:480:U:H5'	1.89	0.71
20:Y:1048:A:H3'	20:Y:1049:G:C4'	2.21	0.71
20:Y:1515:C:N4	20:Y:1516:G:O6	2.23	0.71
20:Y:1637:G:H5'	20:Y:1805:G:N3	2.05	0.71
20:Y:2025:C:N3	42:t:28:ARG:NH1	2.39	0.71
20:Y:2535:A:H5"	25:c:78:ARG:HH22	1.56	0.71
20:Y:2594:G:H2'	20:Y:2595:G:H8	1.56	0.71
20:Y:2912:A:H2'	20:Y:2943:A:N6	2.05	0.71
21:U:55:G:H2'	21:U:56:C:C6	2.25	0.71
23:a:38:ARG:HB3	23:a:51:GLN:CB	2.20	0.71
29:g:7:ARG:HH21	29:g:20:LEU:CD2	2.03	0.71
29:g:97:ARG:HA	29:g:117:LEU:HD11	1.72	0.71
34:l:49:ARG:NH1	34:l:50:GLN:HA	2.06	0.71
44:v:1:MET:SD	44:v:6:LYS:NZ	2.64	0.71
44:v:40:ARG:NH1	44:v:49:TYR:O	2.15	0.71
1:A:338:A:O2'	1:A:339:C:H5'	1.91	0.71
1:A:622:A:H1'	7:H:111:GLY:HA2	1.73	0.71
1:A:829:G:O2'	1:A:830:G:H5'	1.91	0.71
2:C:11:ARG:NH2	2:C:175:LEU:O	2.22	0.71
4:E:126:PRO:O	4:E:126:PRO:HD2	1.89	0.71
9:J:8:ILE:CG2	9:J:74:ILE:HB	2.20	0.71
9:J:12:ALA:CB	9:J:96:VAL:HA	2.17	0.71
9:J:65:PHE:HA	13:N:57:GLN:O	1.91	0.71
10:K:28:GLY:O	10:K:91:VAL:HA	1.91	0.71
17:R:45:ARG:NE	17:R:45:ARG:O	2.23	0.71
20:Y:473:C:H5"	20:Y:474:G:OP1	1.91	0.71
20:Y:602:A:O2'	20:Y:672:C:O2'	2.09	0.71
20:Y:630:U:O4	20:Y:642:G:O6	2.09	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:937:U:H2'	20:Y:938:G:H8	1.55	0.71
20:Y:1532:G:O2'	20:Y:1533:U:O5'	2.07	0.71
20:Y:1963:G:H2'	20:Y:1964:U:C6	2.26	0.71
22:Z:145:VAL:HG13	22:Z:155:LEU:HB2	1.72	0.71
25:c:41:VAL:H	25:c:103:MET:HE1	1.55	0.71
26:d:57:ASP:OD2	26:d:61:ARG:NH1	2.24	0.71
26:d:104:LEU:O	26:d:115:LEU:HD13	1.91	0.71
28:f:125:TYR:HE2	28:f:131:PRO:HD2	1.56	0.71
29:g:35:ILE:HG12	29:g:65:THR:HG23	1.71	0.71
29:g:97:ARG:HA	29:g:117:LEU:CD1	2.20	0.71
31:i:122:ILE:HD12	31:i:129:ALA:HB3	1.71	0.71
33:k:28:LYS:HD2	33:k:28:LYS:C	2.13	0.71
34:l:4:LEU:CD1	34:l:7:VAL:HB	2.21	0.71
40:r:35:ALA:O	40:r:47:LEU:HD23	1.91	0.71
45:w:50:VAL:O	45:w:50:VAL:HG12	1.91	0.71
1:A:338:A:H2'	1:A:339:C:H6	1.54	0.71
1:A:363:A:H5'	11:L:29:GLN:NE2	2.04	0.71
1:A:501:G:OP1	11:L:51:LYS:NZ	2.18	0.71
1:A:600:U:N3	3:D:127:ILE:HG13	2.06	0.71
1:A:654:G:H2'	1:A:655:A:C8	2.26	0.71
1:A:717:C:H2'	1:A:718:U:C6	2.26	0.71
1:A:955:G:H3'	1:A:956:A:H5'	1.71	0.71
1:A:987:A:H62	1:A:1008:C:H1'	1.56	0.71
1:A:1051:C:H2'	1:A:1052:G:H8	1.54	0.71
1:A:1244:G:O6	1:A:1253:U:O4	2.09	0.71
3:D:67:PHE:CE2	3:D:199:TYR:HE2	2.08	0.71
5:F:1:MET:HE2	5:F:1:MET:N	2.06	0.71
7:H:113:LEU:HB3	7:H:117:GLN:HG3	1.72	0.71
8:I:47:GLN:HB2	8:I:82:ASP:OD2	1.91	0.71
8:I:118:LEU:CD1	8:I:124:LEU:HD23	2.21	0.71
19:V:56:PHE:CE2	19:V:184:ILE:HD11	2.25	0.71
20:Y:320:G:C6	20:Y:492:C:H2'	2.26	0.71
20:Y:350:A:N6	20:Y:445:U:OP2	2.24	0.71
20:Y:1285:G:H2'	20:Y:1286:C:H6	1.56	0.71
20:Y:1867:G:O2'	32:j:106:ASP:OD2	2.06	0.71
20:Y:2222:A:H2'	20:Y:2223:C:H6	1.55	0.71
23:a:5:GLY:C	23:a:6:ILE:HG13	2.16	0.71
28:f:4:TYR:CE2	35:m:100:VAL:HG21	2.26	0.71
31:i:120:ARG:HH11	31:i:120:ARG:HG3	1.56	0.71
34:l:103:ARG:O	34:l:106:LYS:HE2	1.90	0.71
1:A:128:U:H2'	1:A:129:C:H6	1.56	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:642:C:H2'	1:A:643:A:C8	2.26	0.70
1:A:1497:A:H2'	1:A:1498:C:C6	2.26	0.70
11:L:2:PRO:HB2	11:L:7:LEU:CD2	2.21	0.70
19:V:20:THR:HG23	19:V:39:TYR:OH	1.91	0.70
19:V:90:PRO:HB3	19:V:150:GLY:O	1.92	0.70
20:Y:12:G:H4'	46:x:18:ALA:HB1	1.72	0.70
20:Y:183:G:H22	20:Y:211:U:H3	1.39	0.70
20:Y:273:A:O2'	20:Y:455:C:O2	2.07	0.70
20:Y:533:C:O2'	20:Y:534:G:H5'	1.90	0.70
20:Y:997:G:N2	20:Y:1014:G:O2'	2.24	0.70
20:Y:1017:G:H2'	20:Y:1018:U:H6	1.56	0.70
20:Y:1234:U:H2'	20:Y:1235:U:H5'	1.71	0.70
20:Y:1524:G:H22	20:Y:1812:A:H61	1.38	0.70
20:Y:1547:G:O2'	20:Y:1548:C:O4'	2.06	0.70
20:Y:1899:G:O2'	20:Y:1979:A:N3	2.22	0.70
30:h:111:LYS:HG3	30:h:128:LYS:O	1.90	0.70
39:q:35:VAL:HB	39:q:38:VAL:HG21	1.73	0.70
51:4:2331:U:H2'	51:4:2332:U:N1	2.05	0.70
1:A:261:U:H2'	1:A:263:A:OP2	1.92	0.70
1:A:839:C:H2'	1:A:840:G:O4'	1.91	0.70
1:A:1000:U:H2'	1:A:1001:G:C8	2.26	0.70
1:A:1283:U:H2'	1:A:1285:C:H5	1.57	0.70
3:D:107:ARG:O	3:D:111:GLN:HG3	1.91	0.70
8:I:32:ARG:HH11	8:I:33:LYS:HG2	1.56	0.70
9:J:49:TYR:HE2	9:J:67:MET:HG2	1.55	0.70
11:L:29:GLN:HG3	11:L:81:LEU:HD11	1.71	0.70
20:Y:129:G:H1	20:Y:146:U:H3	1.37	0.70
20:Y:272:A:N7	20:Y:313:G:N2	2.39	0.70
20:Y:276:G:OP1	20:Y:336:C:O2'	2.08	0.70
20:Y:784:G:H5"	20:Y:785:A:OP2	1.91	0.70
20:Y:1674:G:H3'	32:j:63:ARG:HH22	1.56	0.70
20:Y:2694:G:O2'	20:Y:2695:A:H5'	1.90	0.70
20:Y:2819:G:H2'	20:Y:2821:G:OP2	1.90	0.70
26:d:96:ARG:H	26:d:107:ALA:HB3	1.57	0.70
28:f:56:VAL:HB	28:f:124:VAL:HG23	1.72	0.70
30:h:72:ARG:NH1	30:h:72:ARG:HB2	2.05	0.70
42:t:45:ASN:C	42:t:46:LYS:HD3	2.16	0.70
44:v:43:LEU:HD12	44:v:47:ALA:HB3	1.73	0.70
45:w:7:THR:HG22	45:w:34:SER:HA	1.71	0.70
47:y:35:ARG:HD2	47:y:36:LEU:N	2.05	0.70
1:A:193:C:N4	16:Q:18:GLY:O	2.19	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:227:G:OP2	16:Q:14:GLU:N	2.24	0.70
1:A:237:C:H2'	1:A:238:G:N9	2.06	0.70
1:A:582:U:H2'	1:A:583:C:C6	2.25	0.70
2:C:37:ALA:O	2:C:41:LEU:HG	1.91	0.70
20:Y:73:C:N3	20:Y:107:G:N1	2.36	0.70
20:Y:99:G:H5"	20:Y:100:A:OP1	1.91	0.70
20:Y:617:U:H1'	20:Y:618:C:OP1	1.91	0.70
20:Y:718:C:H2'	20:Y:719:G:C8	2.26	0.70
20:Y:1046:C:H1'	20:Y:1288:A:C1'	2.22	0.70
20:Y:1387:A:N6	20:Y:1836:A:H1'	2.07	0.70
20:Y:2531:G:H4'	20:Y:2532:G:H5"	1.73	0.70
20:Y:2541:U:C5'	33:k:7:GLY:H	2.04	0.70
21:U:50:C:H2'	21:U:51:G:H8	1.56	0.70
25:c:43:VAL:HA	25:c:160:ASP:O	1.90	0.70
25:c:110:LEU:HD23	25:c:115:LEU:HD21	1.72	0.70
28:f:45:THR:HG22	35:m:64:ARG:HH21	1.56	0.70
29:g:117:LEU:O	29:g:117:LEU:HD12	1.91	0.70
34:l:45:VAL:H	34:l:61:ARG:N	1.89	0.70
1:A:654:G:H1	1:A:696:A:H2	1.38	0.70
1:A:1248:U:H3	1:A:1309:C:H4'	1.56	0.70
11:L:7:LEU:HB3	16:Q:49:TYR:CE2	2.26	0.70
12:M:7:VAL:HG11	12:M:22:ILE:HG13	1.73	0.70
19:V:27:MET:O	19:V:31:ILE:HG13	1.91	0.70
20:Y:219:G:N2	20:Y:515:U:H2'	2.04	0.70
20:Y:498:G:H5'	20:Y:499:G:C5'	2.21	0.70
20:Y:619:C:H1'	20:Y:2245:C:H42	1.55	0.70
20:Y:1298:C:H4'	45:w:29:LYS:NZ	2.06	0.70
20:Y:2310:G:O2'	20:Y:2311:G:H5'	1.91	0.70
23:a:15:GLN:HE21	34:l:57:THR:HG21	1.55	0.70
25:c:141:GLU:OE2	25:c:142:GLN:HG2	1.91	0.70
26:d:106:PHE:HB3	26:d:108:LEU:CD1	2.21	0.70
30:h:127:ASN:OD1	30:h:128:LYS:N	2.22	0.70
36:n:64:VAL:HA	36:n:97:LEU:HD23	1.73	0.70
40:r:82:ALA:HB3	40:r:96:ASP:OD2	1.90	0.70
45:w:5:LYS:C	45:w:6:ILE:HD13	2.16	0.70
47:y:12:THR:OG1	47:y:21:ARG:NH2	2.24	0.70
1:A:404:G:OP2	3:D:110:ARG:NH2	2.23	0.70
1:A:1270:A:N1	1:A:1354:G:H1'	2.06	0.70
2:C:90:LEU:CD1	2:C:98:VAL:HG11	2.21	0.70
11:L:56:LYS:HA	11:L:56:LYS:CE	2.18	0.70
12:M:69:ASP:OD1	12:M:70:LEU:N	2.24	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:464:C:H2'	20:Y:465:A:H8	1.56	0.70
20:Y:1890:C:H2'	20:Y:1891:G:O4'	1.91	0.70
20:Y:3071:A:N7	20:Y:3089:A:O2'	2.18	0.70
23:a:44:ARG:HD3	23:a:45:ASP:OD2	1.91	0.70
23:a:86:LEU:CD1	23:a:92:VAL:HG22	2.21	0.70
25:c:75:ARG:O	25:c:91:PRO:HA	1.92	0.70
25:c:143:SER:HA	25:c:148:ILE:HD11	1.74	0.70
27:e:87:VAL:O	27:e:89:LYS:N	2.24	0.70
30:h:114:GLY:HA3	30:h:133:ALA:N	2.05	0.70
33:k:83:ARG:O	33:k:87:LEU:HG	1.91	0.70
34:l:73:PHE:CB	34:l:80:ILE:HD11	2.20	0.70
4:E:191:PRO:HG2	4:E:194:MET:CG	2.21	0.70
5:F:3:PRO:CD	5:F:66:LYS:HE2	2.22	0.70
6:G:57:ASP:O	6:G:61:THR:HG22	1.92	0.70
6:G:131:LEU:O	6:G:131:LEU:HD12	1.91	0.70
9:J:20:ALA:O	9:J:24:LYS:HG3	1.91	0.70
11:L:94:ARG:HG3	11:L:95:TYR:CD2	2.26	0.70
14:O:25:PRO:O	14:O:29:VAL:HG22	1.91	0.70
16:Q:87:ARG:HH11	16:Q:87:ARG:HG2	1.57	0.70
19:V:96:TRP:CZ3	19:V:98:GLY:HA2	2.26	0.70
20:Y:778:G:O2'	20:Y:779:U:H5'	1.91	0.70
20:Y:971:G:H5'	20:Y:972:A:OP1	1.91	0.70
20:Y:1077:A:O2'	20:Y:2680:C:O2'	2.09	0.70
20:Y:1757:U:O2	20:Y:1757:U:H2'	1.91	0.70
20:Y:1869:G:N1	20:Y:2230:C:N3	2.30	0.70
21:U:90:G:O2'	21:U:91:G:O5'	2.08	0.70
32:j:53:THR:O	32:j:56:LYS:HB2	1.92	0.70
34:l:21:PRO:O	34:l:91:VAL:HG22	1.91	0.70
34:l:58:PHE:HE1	34:l:75:VAL:CA	2.03	0.70
41:s:43:THR:HG22	41:s:53:ARG:NH2	2.05	0.70
44:v:49:TYR:HE2	44:v:93:ILE:HD11	1.55	0.70
46:x:28:VAL:HB	46:x:39:VAL:O	1.91	0.70
1:A:976:A:H2'	1:A:977:C:O4'	1.92	0.70
1:A:1077:C:H2'	1:A:1078:C:C6	2.27	0.70
1:A:1188:C:H2'	1:A:1189:C:C6	2.26	0.70
1:A:1232:A:H2'	1:A:1233:A:C8	2.27	0.70
18:T:15:GLU:HB3	18:T:16:ARG:NH2	2.06	0.70
20:Y:87:C:OP2	20:Y:88:A:O2'	2.08	0.70
20:Y:673:C:O2'	20:Y:674:U:H5'	1.92	0.70
20:Y:720:C:P	20:Y:721:A:H5'	2.31	0.70
20:Y:1079:C:O2'	20:Y:1080:U:H5'	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:1176:G:N1	20:Y:1177:G:O6	2.25	0.70
24:b:34:MET:O	24:b:38:VAL:HG12	1.91	0.70
24:b:64:LYS:NZ	24:b:76:GLN:O	2.24	0.70
25:c:67:ILE:HD11	25:c:145:PHE:CE1	2.26	0.70
34:l:51:GLY:CA	34:l:56:GLU:HA	2.14	0.70
40:r:112:VAL:HA	40:r:144:LEU:HB2	1.73	0.70
1:A:161:U:H2'	1:A:162:G:H8	1.56	0.70
1:A:813:U:O2	1:A:835:G:N2	2.23	0.70
2:C:191:THR:HG22	2:C:193:PHE:H	1.56	0.70
6:G:69:VAL:HG11	6:G:134:SER:HB2	1.72	0.70
15:P:7:LEU:HB3	15:P:18:TYR:HB3	1.74	0.70
17:R:57:CYS:HB2	17:R:60:HIS:CG	2.27	0.70
20:Y:21:G:H2'	20:Y:22:U:C6	2.27	0.70
20:Y:687:C:H2'	20:Y:688:A:H8	1.56	0.70
20:Y:986:G:H1	20:Y:1022:C:H42	1.40	0.70
20:Y:1271:C:O2'	20:Y:1272:C:H5'	1.90	0.70
20:Y:1411:G:OP1	20:Y:2933:G:O2'	2.08	0.70
20:Y:1890:C:O2'	20:Y:1891:G:H5'	1.90	0.70
20:Y:2043:C:H2'	20:Y:2044:U:H6	1.55	0.70
20:Y:2536:U:C4'	25:c:75:ARG:HD2	2.21	0.70
22:Z:72:LYS:HG3	22:Z:103:ARG:NH2	2.07	0.70
24:b:31:ILE:HA	24:b:34:MET:HE3	1.74	0.70
24:b:137:SER:HG	24:b:140:SER:HG	0.70	0.70
28:f:7:LYS:HB2	28:f:10:ASP:HB2	1.74	0.70
28:f:98:THR:HB	28:f:124:VAL:CG1	2.22	0.70
38:p:38:ASN:O	38:p:41:GLN:HG2	1.92	0.70
1:A:228:A:H2'	1:A:229:U:C6	2.27	0.70
1:A:235:C:H5'	16:Q:87:ARG:CZ	2.21	0.70
1:A:322:C:H2'	1:A:323:U:C6	2.26	0.70
1:A:409:G:H2'	1:A:410:G:C8	2.27	0.70
1:A:1506:U:OP1	10:K:137:ARG:NH2	2.25	0.70
2:C:33:LYS:HE2	13:N:25:ASN:CB	2.20	0.70
2:C:89:ASP:O	2:C:93:LEU:HG	1.91	0.70
13:N:53:LEU:HB2	13:N:56:VAL:CG2	2.21	0.70
14:O:3:LEU:HG	14:O:35:ARG:HD3	1.72	0.70
14:O:50:HIS:HA	14:O:53:ARG:NH1	2.07	0.70
20:Y:802:C:O2'	20:Y:803:U:H5'	1.91	0.70
20:Y:808:A:O2'	20:Y:809:U:H5'	1.92	0.70
20:Y:948:G:H1'	30:h:51:GLU:CD	2.16	0.70
20:Y:1180:G:H2'	20:Y:1181:G:H8	1.57	0.70
20:Y:1184:U:H2'	20:Y:1186:G:C8	2.27	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:2036:A:H5"	22:Z:158:SER:HB2	1.72	0.70
20:Y:2516:U:H2'	20:Y:2517:C:H6	1.57	0.70
20:Y:2841:C:H2'	20:Y:2842:G:H5'	1.74	0.70
20:Y:2972:A:H5'	26:d:4:ILE:HD12	1.71	0.70
20:Y:3073:G:O2'	20:Y:3074:C:H5'	1.92	0.70
26:d:5:GLY:HA3	26:d:67:GLY:HA2	1.74	0.70
27:e:59:GLU:N	27:e:71:ALA:O	2.20	0.70
29:g:70:ARG:HB2	29:g:76:TYR:HE1	1.57	0.70
32:j:103:ARG:HB2	32:j:110:MET:CE	2.21	0.70
44:v:9:ALA:O	44:v:13:ILE:HG22	1.90	0.70
44:v:26:THR:HG22	44:v:78:ALA:HB3	1.73	0.70
1:A:35:G:O2'	1:A:52:U:O4	2.09	0.70
1:A:49:U:H2'	1:A:50:G:C8	2.26	0.70
9:J:8:ILE:HD11	9:J:98:VAL:CG1	2.18	0.70
16:Q:51:LYS:HD2	16:Q:52:ILE:N	2.07	0.70
20:Y:1987:G:H4'	20:Y:2162:A:OP1	1.91	0.70
20:Y:2211:C:N3	20:Y:2212:A:N6	2.40	0.70
20:Y:2428:G:N2	20:Y:2443:U:O2	2.23	0.70
20:Y:2530:C:H5"	20:Y:2531:G:H2'	1.74	0.70
20:Y:2537:C:H4'	25:c:95:ARG:NH2	2.07	0.70
25:c:70:GLN:NE2	25:c:97:THR:O	2.20	0.70
25:c:115:LEU:HA	25:c:118:ILE:CD1	2.20	0.70
31:i:1:MET:HE3	31:i:1:MET:CA	2.22	0.70
32:j:96:ARG:HH12	32:j:116:VAL:HG13	1.57	0.70
1:A:486:G:H2'	1:A:487:C:C6	2.27	0.69
1:A:930:C:H2'	1:A:931:A:C8	2.27	0.69
1:A:988:C:O2'	1:A:1018:C:O4'	2.10	0.69
1:A:1166:G:H2'	1:A:1167:G:H8	1.57	0.69
1:A:1210:A:H2'	1:A:1211:C:C6	2.27	0.69
1:A:1516:U:H2'	1:A:1517:C:N1	2.07	0.69
4:E:111:GLN:NE2	4:E:113:GLU:OE2	2.25	0.69
6:G:94:ASP:O	6:G:98:THR:OG1	2.10	0.69
9:J:47:ASN:HB2	9:J:67:MET:HG2	1.74	0.69
11:L:54:ARG:HE	11:L:64:THR:HG22	1.55	0.69
12:M:15:MET:HE1	12:M:43:MET:O	1.91	0.69
18:T:31:ALA:HB1	18:T:57:LYS:HE3	1.73	0.69
20:Y:175:G:H3'	20:Y:176:G:N2	2.07	0.69
20:Y:397:C:H2'	20:Y:398:U:C6	2.26	0.69
20:Y:781:C:H2'	20:Y:782:U:C6	2.27	0.69
20:Y:1025:A:H2'	20:Y:1026:A:C8	2.27	0.69
20:Y:1047:A:HO2'	20:Y:1049:G:H8	1.40	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:1109:U:O2	20:Y:1282:G:N2	2.20	0.69
20:Y:1982:G:H1	20:Y:2212:A:N6	1.90	0.69
22:Z:172:TYR:CD1	22:Z:186:ASP:HA	2.27	0.69
24:b:31:ILE:HD13	24:b:34:MET:CE	2.22	0.69
25:c:41:VAL:HG13	25:c:162:THR:O	1.91	0.69
45:w:23:LEU:CD1	45:w:28:LEU:HB2	2.22	0.69
1:A:114:U:OP2	1:A:288:A:N6	2.25	0.69
1:A:179:C:HO2'	1:A:180:A:H2	1.40	0.69
1:A:939:U:H2'	1:A:941:A:OP2	1.91	0.69
1:A:1091:A:H2'	1:A:1092:C:C6	2.27	0.69
15:P:42:PRO:HA	15:P:47:SER:OG	1.91	0.69
16:Q:61:ALA:HA	16:Q:88:TRP:O	1.93	0.69
20:Y:27:G:H2'	20:Y:28:C:H6	1.56	0.69
20:Y:55:G:H2'	20:Y:56:U:C6	2.27	0.69
20:Y:448:U:H2'	20:Y:449:G:C8	2.28	0.69
20:Y:731:A:OP1	30:h:115:ASP:HB3	1.91	0.69
20:Y:1715:A:H2'	20:Y:1716:A:H8	1.56	0.69
20:Y:1822:C:H2'	20:Y:1823:C:H6	1.56	0.69
20:Y:2409:U:H3'	51:4:2406:U:H3	1.58	0.69
20:Y:2984:C:H2'	20:Y:2985:G:H5"	1.74	0.69
20:Y:3009:U:O2'	23:a:38:ARG:NH1	2.25	0.69
20:Y:3033:G:O2'	20:Y:3034:C:H5'	1.93	0.69
23:a:14:THR:HG22	23:a:15:GLN:H	1.56	0.69
33:k:77:LYS:HD3	33:k:80:HIS:ND1	2.07	0.69
35:m:28:ARG:NH1	35:m:38:GLN:OE1	2.25	0.69
1:A:458:A:H4'	1:A:459:G:O4'	1.92	0.69
1:A:843:G:O2'	1:A:844:C:H5'	1.92	0.69
1:A:1341:C:P	13:N:35:ARG:HD3	2.32	0.69
3:D:188:VAL:HG13	3:D:189:PRO:HD3	1.73	0.69
4:E:79:LYS:HE3	4:E:79:LYS:O	1.92	0.69
20:Y:269:C:H2'	20:Y:270:U:C6	2.27	0.69
20:Y:316:U:N3	20:Y:492:C:N4	2.38	0.69
20:Y:679:G:H2'	30:h:22:VAL:CG1	2.22	0.69
20:Y:779:U:O2'	20:Y:780:U:O4'	2.07	0.69
20:Y:825:C:H2'	20:Y:826:G:C8	2.27	0.69
20:Y:1086:C:H2'	20:Y:1087:G:H8	1.57	0.69
20:Y:1721:U:H2'	20:Y:1722:C:C6	2.26	0.69
20:Y:2443:U:H2'	20:Y:2444:C:C6	2.27	0.69
20:Y:2712:U:H2'	20:Y:2713:G:C8	2.27	0.69
20:Y:3054:U:O2'	23:a:60:ARG:NH2	2.25	0.69
21:U:50:C:O3'	33:k:78:LYS:NZ	2.23	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:c:39:VAL:CG1	25:c:40:LYS:HG2	2.21	0.69
1:A:605:G:H5"	15:P:41:HIS:CD2	2.27	0.69
1:A:955:G:C8	1:A:956:A:H2'	2.27	0.69
1:A:1232:A:N6	1:A:1268:C:O2	2.26	0.69
3:D:13:ARG:HB3	3:D:33:PRO:HD3	1.74	0.69
5:F:8:VAL:HG22	5:F:61:ALA:HB3	1.73	0.69
12:M:49:THR:HB	12:M:52:GLN:HG3	1.74	0.69
15:P:53:SER:O	15:P:57:GLN:HG2	1.91	0.69
20:Y:844:G:O5'	22:Z:208:LYS:NZ	2.26	0.69
20:Y:936:A:H5"	20:Y:937:U:O5'	1.93	0.69
20:Y:1418:G:O2'	20:Y:1419:A:H5'	1.93	0.69
20:Y:1501:C:H2'	20:Y:1502:G:H8	1.57	0.69
20:Y:1817:C:OP1	38:p:39:LYS:HG3	1.91	0.69
20:Y:2454:G:H2'	20:Y:2454:G:N3	2.04	0.69
30:h:77:VAL:HG22	30:h:112:VAL:CA	2.08	0.69
32:j:113:ILE:HD12	32:j:114:GLU:H	1.57	0.69
34:l:60:VAL:CG2	34:l:71:ARG:HB2	2.22	0.69
44:v:32:THR:HG23	44:v:35:ASN:H	1.57	0.69
1:A:49:U:O4	1:A:396:G:O6	2.10	0.69
1:A:322:C:H5"	18:T:18:ARG:HH21	1.58	0.69
1:A:363:A:OP1	11:L:29:GLN:NE2	2.26	0.69
1:A:559:U:O2'	14:O:54:ARG:NH2	2.25	0.69
1:A:763:C:H2'	1:A:764:A:H8	1.56	0.69
1:A:900:A:H2'	1:A:901:A:O4'	1.92	0.69
3:D:142:GLU:N	3:D:142:GLU:OE1	2.25	0.69
8:I:30:GLY:HA3	8:I:101:LEU:HD11	1.75	0.69
11:L:90:LEU:HD23	11:L:93:VAL:HG21	1.73	0.69
20:Y:978:A:H2'	20:Y:979:G:H8	1.57	0.69
20:Y:1157:G:C2'	20:Y:1158:U:H5"	2.23	0.69
20:Y:1223:U:H2'	20:Y:1224:G:H8	1.56	0.69
20:Y:1523:U:O2'	20:Y:1524:G:H5'	1.91	0.69
20:Y:2638:G:H2'	20:Y:2639:G:H5"	1.75	0.69
29:g:68:GLU:HG2	29:g:78:LYS:CG	2.23	0.69
33:k:69:ASP:OD1	33:k:70:VAL:N	2.26	0.69
35:m:65:ILE:HD11	35:m:96:ALA:N	2.07	0.69
37:o:90:LYS:O	37:o:91:ARG:HD3	1.93	0.69
1:A:672:U:OP2	10:K:37:ASN:ND2	2.26	0.69
1:A:1235:G:N2	1:A:1240:C:O2'	2.26	0.69
2:C:19:LYS:O	2:C:55:GLU:HA	1.93	0.69
6:G:25:GLN:OE1	6:G:29:LYS:HG2	1.93	0.69
18:T:35:PHE:HE2	18:T:51:LEU:HD12	1.57	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:189:A:OP2	20:Y:204:G:N2	2.25	0.69
20:Y:318:U:H3'	20:Y:319:G:H4'	1.74	0.69
20:Y:1072:G:OP1	31:i:87:LYS:NZ	2.25	0.69
20:Y:1079:C:H2'	20:Y:1080:U:H6	1.56	0.69
20:Y:2037:U:H4'	20:Y:2038:A:OP2	1.91	0.69
20:Y:2238:A:H2'	20:Y:2239:A:C8	2.27	0.69
20:Y:2667:C:H2'	20:Y:2668:G:C8	2.27	0.69
20:Y:2813:A:O2'	20:Y:2814:A:H5'	1.93	0.69
22:Z:67:PHE:HE2	22:Z:157:ARG:HD3	1.57	0.69
24:b:172:LEU:HB2	24:b:175:VAL:CG1	2.19	0.69
25:c:36:PRO:HG2	25:c:176:LEU:CD2	2.22	0.69
27:e:121:ASN:O	27:e:122:ASP:N	2.26	0.69
28:f:117:GLN:HA	28:f:120:LYS:HZ2	1.58	0.69
34:l:73:PHE:HE2	34:l:79:ASN:HB3	1.58	0.69
1:A:254:G:OP2	16:Q:83:SER:OG	2.10	0.69
1:A:909:G:OP2	1:A:1487:A:O2'	2.10	0.69
1:A:1206:U:O2	1:A:1206:U:H2'	1.92	0.69
3:D:4:TYR:CE2	3:D:11:LYS:HD3	2.28	0.69
9:J:47:ASN:O	9:J:66:GLU:HA	1.93	0.69
13:N:52:GLU:C	13:N:53:LEU:HD23	2.18	0.69
20:Y:401:C:H3'	24:b:139:LYS:HZ1	1.58	0.69
20:Y:401:C:H3'	24:b:139:LYS:NZ	2.08	0.69
20:Y:835:C:H2'	20:Y:836:G:H8	1.56	0.69
20:Y:1605:G:H2'	20:Y:1606:G:C8	2.27	0.69
20:Y:1704:U:O2	20:Y:1725:G:N2	2.21	0.69
20:Y:2007:C:H2'	20:Y:2007:C:O2	1.91	0.69
20:Y:2514:G:H2'	20:Y:2515:U:H6	1.54	0.69
20:Y:2972:A:HO2'	26:d:2:SER:N	1.90	0.69
25:c:98:LEU:O	25:c:99:ARG:HG2	1.92	0.69
26:d:73:ILE:O	26:d:76:LEU:HD12	1.93	0.69
26:d:156:ASP:OD2	26:d:161:LYS:N	2.25	0.69
34:l:45:VAL:N	34:l:61:ARG:H	1.90	0.69
36:n:62:ALA:HA	36:n:100:THR:HG23	1.74	0.69
43:u:31:ASN:O	43:u:35:GLN:HG2	1.92	0.69
44:v:87:VAL:CG2	44:v:91:LYS:HE2	2.23	0.69
1:A:190:U:H3	1:A:197:G:H1	1.39	0.69
1:A:214:U:H2'	1:A:215:U:C5'	2.23	0.69
1:A:339:C:P	29:g:97:ARG:HH22	2.15	0.69
1:A:363:A:N6	11:L:27:SER:OG	2.25	0.69
1:A:404:G:O2'	1:A:478:A:N1	2.20	0.69
1:A:862:C:H2'	1:A:863:G:H8	1.58	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1248:U:O4	1:A:1309:C:O2'	2.11	0.69
3:D:90:GLU:O	3:D:99:ARG:NH2	2.21	0.69
4:E:50:VAL:HG23	4:E:55:ARG:HH21	1.57	0.69
4:E:89:VAL:HG12	4:E:93:ARG:NE	2.08	0.69
5:F:24:GLU:CD	5:F:27:LEU:HD11	2.17	0.69
8:I:64:HIS:O	8:I:68:ILE:HG13	1.93	0.69
16:Q:37:VAL:HA	16:Q:60:LYS:HA	1.75	0.69
17:R:39:ARG:HA	17:R:42:ILE:HG22	1.74	0.69
18:T:8:ILE:O	18:T:12:ARG:HG2	1.93	0.69
18:T:48:SER:O	18:T:52:HIS:ND1	2.25	0.69
19:V:24:ASN:OD1	19:V:26:LYS:HG2	1.92	0.69
19:V:163:VAL:HB	19:V:185:ALA:HB2	1.75	0.69
20:Y:71:A:H4'	20:Y:72:G:O5'	1.92	0.69
20:Y:124:A:C5'	20:Y:125:C:H5'	2.22	0.69
20:Y:268:G:C8	20:Y:360:G:C6	2.81	0.69
20:Y:271:A:H3'	20:Y:272:A:C2	2.28	0.69
20:Y:387:U:H3	20:Y:394:G:H1	1.40	0.69
20:Y:401:C:O5'	24:b:139:LYS:NZ	2.25	0.69
20:Y:481:C:O2'	20:Y:482:U:H5'	1.93	0.69
20:Y:485:U:OP2	42:t:10:LYS:NZ	2.24	0.69
20:Y:617:U:H4'	20:Y:618:C:OP2	1.91	0.69
20:Y:657:C:H2'	20:Y:658:U:H6	1.58	0.69
20:Y:774:G:C4'	24:b:101:ARG:HH21	2.06	0.69
20:Y:885:G:O5'	48:z:14:ARG:NH2	2.25	0.69
20:Y:1008:G:H1'	20:Y:1010:U:C2'	2.23	0.69
20:Y:1557:C:H2'	20:Y:1558:C:C6	2.27	0.69
20:Y:1638:C:C2'	20:Y:1639:G:H5"	2.22	0.69
20:Y:2083:A:H2'	20:Y:2084:A:O4'	1.92	0.69
20:Y:2234:G:H2'	20:Y:2235:C:H6	1.57	0.69
20:Y:2245:C:OP1	35:m:25:ARG:NH2	2.25	0.69
20:Y:2644:C:O2'	20:Y:2645:G:H5'	1.93	0.69
20:Y:2704:C:H5'	20:Y:2705:G:OP2	1.92	0.69
20:Y:3117:U:O2'	20:Y:3118:U:H5'	1.92	0.69
22:Z:211:ARG:HA	22:Z:214:TRP:CD2	2.28	0.69
23:a:14:THR:HG22	23:a:15:GLN:N	2.07	0.69
23:a:129:ARG:HE	23:a:130:HIS:CE1	2.10	0.69
25:c:20:ARG:O	25:c:20:ARG:HD2	1.93	0.69
25:c:107:LEU:HD21	25:c:180:LEU:HD21	1.75	0.69
26:d:53:VAL:HG23	26:d:66:HIS:CE1	2.28	0.69
30:h:32:THR:OG1	30:h:36:GLY:O	2.10	0.69
33:k:109:TYR:CE1	33:k:114:ALA:HA	2.28	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:l:74:PRO:HB2	34:l:77:SER:N	2.08	0.69
34:l:74:PRO:HB2	34:l:77:SER:HA	1.75	0.69
40:r:11:LEU:HD11	40:r:69:LEU:HD22	1.75	0.69
44:v:10:VAL:HG13	44:v:60:ALA:HB2	1.73	0.69
1:A:29:C:H2'	1:A:30:A:H8	1.58	0.69
1:A:127:A:N3	1:A:263:A:O2'	2.19	0.69
1:A:196:G:H2'	1:A:197:G:C8	2.27	0.69
1:A:698:A:H2'	1:A:699:C:O4'	1.92	0.69
11:L:21:THR:HG22	11:L:21:THR:O	1.91	0.69
11:L:54:ARG:HD2	11:L:62:GLU:HG2	1.74	0.69
14:O:42:HIS:ND1	14:O:43:LEU:HD12	2.07	0.69
20:Y:107:G:H2'	20:Y:108:A:H8	1.58	0.69
20:Y:774:G:H4'	24:b:101:ARG:HH21	1.57	0.69
20:Y:966:U:O2	45:w:42:GLN:NE2	2.26	0.69
20:Y:1992:U:C2'	20:Y:1993:G:H5'	2.20	0.69
20:Y:2408:G:H5"	51:4:2406:U:H1'	1.73	0.69
20:Y:2693:A:HO2'	20:Y:2694:G:P	2.15	0.69
20:Y:2909:G:H2'	20:Y:2910:G:C8	2.27	0.69
25:c:169:ASN:OD1	25:c:171:ALA:N	2.26	0.69
27:e:104:TRP:CE3	27:e:107:VAL:HG21	2.28	0.69
33:k:23:ALA:O	33:k:26:ARG:HG3	1.92	0.69
44:v:25:VAL:HB	44:v:106:LYS:HE2	1.75	0.69
1:A:273:A:O2'	1:A:274:A:H5'	1.90	0.69
1:A:277:C:H3'	1:A:278:G:H5"	1.75	0.69
1:A:282:A:H2'	1:A:283:C:O4'	1.92	0.69
3:D:182:GLU:O	3:D:185:GLN:HG3	1.93	0.69
16:Q:62:HIS:CD2	16:Q:79:THR:HG21	2.28	0.69
20:Y:743:G:H2'	20:Y:744:C:C6	2.28	0.69
20:Y:1177:G:N1	20:Y:1198:C:O2	2.26	0.69
20:Y:1225:G:O3'	44:v:54:ASN:ND2	2.25	0.69
20:Y:1778:A:H4'	20:Y:1779:U:O5'	1.93	0.69
20:Y:2041:G:H2'	20:Y:2042:A:H8	1.57	0.69
20:Y:2244:A:OP1	35:m:27:GLN:HG2	1.92	0.69
20:Y:2298:U:O2'	20:Y:2821:G:N2	2.26	0.69
23:a:192:LEU:HD12	23:a:193:LEU:N	2.07	0.69
29:g:80:ASP:CB	34:l:67:VAL:HG13	2.21	0.69
36:n:23:LYS:CE	36:n:68:THR:HG21	2.22	0.69
36:n:90:HIS:HE1	36:n:92:GLN:HB2	1.58	0.69
1:A:28:U:H2'	1:A:29:C:C6	2.28	0.68
1:A:207:G:H4'	18:T:56:ARG:CZ	2.24	0.68
1:A:427:U:H5"	3:D:10:ARG:NH2	2.06	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:660:C:O2'	1:A:661:U:H5'	1.92	0.68
1:A:815:G:O2'	1:A:816:G:H5'	1.93	0.68
2:C:187:TYR:CZ	2:C:189:ALA:HA	2.27	0.68
8:I:108:ILE:HD12	8:I:118:LEU:HD11	1.75	0.68
10:K:51:ILE:H	10:K:51:ILE:HD12	1.58	0.68
19:V:131:LYS:O	19:V:135:LEU:HD23	1.93	0.68
20:Y:1282:G:P	36:n:26:LYS:HZ1	2.16	0.68
20:Y:2788:A:C2	20:Y:2871:U:H4'	2.28	0.68
21:U:31:C:C2'	21:U:32:C:H5'	2.20	0.68
22:Z:176:ARG:HA	22:Z:182:ILE:HD12	1.76	0.68
28:f:98:THR:HB	28:f:124:VAL:HG13	1.75	0.68
34:l:12:LEU:HD23	34:l:54:ILE:HG13	1.76	0.68
36:n:68:THR:O	36:n:94:LEU:N	2.14	0.68
37:o:44:ARG:HB2	37:o:45:TRP:CZ3	2.28	0.68
1:A:955:G:H1'	9:J:57:LYS:HZ2	1.59	0.68
1:A:1445:G:O2'	1:A:1446:C:H5'	1.93	0.68
3:D:44:SER:HB3	3:D:47:ARG:CB	2.23	0.68
3:D:138:ILE:HG23	3:D:175:ILE:HB	1.73	0.68
7:H:76:GLY:N	7:H:132:TRP:O	2.23	0.68
20:Y:649:U:H2'	20:Y:650:G:C8	2.29	0.68
20:Y:1125:C:H5"	28:f:37:ARG:NH2	2.08	0.68
20:Y:1133:G:O2'	20:Y:1134:U:H5'	1.93	0.68
20:Y:1283:C:H2'	20:Y:1284:A:H8	1.59	0.68
20:Y:1363:G:C4	35:m:3:ARG:HB2	2.27	0.68
20:Y:2036:A:H5"	22:Z:158:SER:OG	1.94	0.68
20:Y:2574:C:H2'	20:Y:2575:G:O4'	1.93	0.68
20:Y:3019:C:O5'	20:Y:3020:U:N3	2.26	0.68
21:U:17:G:N2	21:U:70:G:H1'	2.08	0.68
23:a:126:THR:HB	23:a:132:PHE:CE2	2.27	0.68
42:t:45:ASN:O	42:t:46:LYS:HD3	1.92	0.68
49:1:37:PRO:HD2	49:1:40:ARG:CB	2.24	0.68
1:A:92:A:H1'	1:A:93:C:H5	1.59	0.68
1:A:160:C:C2'	1:A:161:U:H5'	2.23	0.68
1:A:390:U:H4'	15:P:9:ARG:NH1	2.08	0.68
1:A:1304:C:H4'	1:A:1305:G:C5'	2.23	0.68
3:D:89:LEU:HD12	3:D:90:GLU:N	2.08	0.68
20:Y:6:G:H2'	20:Y:2853:C:H42	1.58	0.68
20:Y:581:G:OP1	37:o:15:ARG:HD3	1.94	0.68
20:Y:667:A:O2'	20:Y:668:U:H5'	1.94	0.68
20:Y:677:G:H5"	20:Y:678:A:OP1	1.93	0.68
20:Y:1040:U:H2'	20:Y:1041:A:H8	1.59	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:1047:A:OP1	20:Y:1047:A:H3'	1.94	0.68
20:Y:1250:U:C3'	20:Y:1251:A:H5"	2.23	0.68
20:Y:1430:C:O2'	20:Y:1431:U:H5'	1.94	0.68
20:Y:1487:U:O2'	20:Y:1488:A:H5'	1.92	0.68
20:Y:1858:A:O2'	20:Y:1859:A:H5'	1.94	0.68
20:Y:1920:G:O2'	20:Y:1921:G:H5'	1.93	0.68
20:Y:2106:A:H3'	20:Y:2107:G:C5'	2.19	0.68
20:Y:2542:G:H5"	20:Y:2543:U:OP1	1.92	0.68
20:Y:2666:C:O2'	20:Y:2667:C:H5'	1.93	0.68
20:Y:2877:U:H3'	20:Y:2878:A:H8	1.58	0.68
20:Y:2995:U:O2'	23:a:178:GLN:NE2	2.23	0.68
20:Y:3107:G:N3	46:x:41:ARG:NH1	2.41	0.68
26:d:43:VAL:HG23	26:d:53:VAL:HA	1.75	0.68
28:f:28:LEU:HD12	28:f:28:LEU:O	1.93	0.68
28:f:117:GLN:HA	28:f:120:LYS:NZ	2.09	0.68
30:h:124:VAL:HB	30:h:144:ALA:CA	2.22	0.68
32:j:90:ARG:NH2	32:j:119:LYS:HB2	2.07	0.68
34:l:73:PHE:CD2	34:l:80:ILE:HG13	2.27	0.68
38:p:10:ILE:O	38:p:12:LEU:HD22	1.93	0.68
1:A:23:C:OP1	4:E:155:SER:OG	2.11	0.68
1:A:645:G:C1'	1:A:713:G:H1'	2.23	0.68
1:A:903:U:C1'	4:E:48:LYS:HZ1	2.07	0.68
1:A:971:G:O2'	1:A:972:U:H5'	1.93	0.68
6:G:98:THR:HG22	6:G:102:ARG:HH22	1.58	0.68
10:K:61:PHE:CD2	10:K:71:ALA:HB2	2.28	0.68
14:O:4:THR:HG23	14:O:6:GLU:OE1	1.94	0.68
16:Q:34:LYS:HZ3	16:Q:66:GLY:HA3	1.59	0.68
20:Y:258:G:O2'	20:Y:259:C:H5'	1.92	0.68
20:Y:773:G:O2'	24:b:101:ARG:NH2	2.25	0.68
20:Y:972:A:H2'	20:Y:973:G:C8	2.29	0.68
20:Y:1884:G:O2'	20:Y:1885:G:H5'	1.94	0.68
20:Y:2075:G:H21	20:Y:2107:G:H2'	1.59	0.68
20:Y:2553:G:O2'	20:Y:2554:U:H5'	1.93	0.68
20:Y:2771:U:H2'	20:Y:2772:G:H8	1.58	0.68
21:U:55:G:H2'	21:U:56:C:H6	1.59	0.68
21:U:61:C:O2'	21:U:62:C:H5'	1.92	0.68
25:c:111:ILE:CA	25:c:115:LEU:HD23	2.12	0.68
28:f:62:ILE:HD12	28:f:63:ALA:H	1.58	0.68
34:l:24:THR:CG2	34:l:86:LEU:HD12	2.24	0.68
38:p:17:SER:N	38:p:20:SER:OG	2.26	0.68
1:A:958:G:OP2	1:A:1340:U:O2'	2.05	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1066:U:H2'	1:A:1067:G:C8	2.28	0.68
1:A:1332:A:OP2	8:I:140:LYS:NZ	2.24	0.68
8:I:26:ILE:HG21	8:I:41:LEU:HD21	1.76	0.68
10:K:85:GLU:OE1	10:K:86:HIS:ND1	2.26	0.68
11:L:3:THR:HG23	11:L:6:GLN:OE1	1.93	0.68
12:M:80:ARG:O	12:M:84:ILE:HG23	1.94	0.68
20:Y:1259:U:H4'	20:Y:1261:A:O5'	1.94	0.68
20:Y:1390:A:H4'	20:Y:1391:G:OP1	1.90	0.68
20:Y:2577:G:H2'	20:Y:2578:A:O4'	1.94	0.68
20:Y:2861:U:C5'	23:a:85:ARG:HH22	2.06	0.68
20:Y:2953:U:O2'	20:Y:2954:C:H5'	1.93	0.68
22:Z:13:ARG:HG3	22:Z:13:ARG:O	1.93	0.68
22:Z:72:LYS:HZ3	22:Z:101:GLU:HB2	1.59	0.68
24:b:180:PRO:HD2	24:b:181:ASP:H	1.59	0.68
25:c:45:MET:N	25:c:94:ALA:O	2.27	0.68
25:c:64:LEU:CB	25:c:72:PRO:HG2	2.23	0.68
27:e:104:TRP:HA	27:e:107:VAL:HG22	1.74	0.68
27:e:108:ARG:NH1	27:e:108:ARG:HA	2.09	0.68
29:g:31:ARG:HD2	29:g:32:TYR:CE1	2.27	0.68
31:i:74:LEU:O	31:i:90:PRO:HA	1.94	0.68
32:j:97:ILE:CD1	32:j:113:ILE:HD13	2.23	0.68
41:s:79:ASN:OD1	41:s:80:ILE:N	2.26	0.68
4:E:81:VAL:CG2	4:E:82:PRO:HD3	2.23	0.68
10:K:34:SER:OG	10:K:100:SER:HB3	1.94	0.68
12:M:70:LEU:HA	12:M:73:GLU:CD	2.18	0.68
18:T:35:PHE:CE2	18:T:51:LEU:HD12	2.27	0.68
20:Y:184:C:H2'	20:Y:185:G:H8	1.56	0.68
20:Y:239:U:H3'	20:Y:240:G:C8	2.29	0.68
20:Y:832:G:C2	20:Y:833:A:H1'	2.28	0.68
20:Y:1233:A:H2'	20:Y:1234:U:C6	2.29	0.68
20:Y:1674:G:N2	32:j:74:ASP:HA	2.09	0.68
20:Y:1873:A:H3'	20:Y:1874:C:H6	1.56	0.68
20:Y:1912:C:H1'	20:Y:1913:G:N2	2.09	0.68
20:Y:1982:G:N1	20:Y:2212:A:C6	2.62	0.68
20:Y:2043:C:H2'	20:Y:2044:U:C6	2.28	0.68
20:Y:2043:C:OP2	22:Z:223:GLY:N	2.27	0.68
20:Y:2310:G:H2'	20:Y:2311:G:C8	2.29	0.68
20:Y:2610:C:H2'	20:Y:2611:U:C6	2.28	0.68
20:Y:3105:C:C2	46:x:44:LEU:HD23	2.28	0.68
22:Z:142:ILE:HD12	22:Z:191:ALA:CB	2.23	0.68
22:Z:177:MET:HG3	22:Z:178:PRO:CD	2.23	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:b:145:LEU:HD12	24:b:146:GLY:N	2.09	0.68
25:c:71:LYS:HD2	25:c:71:LYS:N	2.09	0.68
25:c:75:ARG:HH22	25:c:95:ARG:HB2	1.59	0.68
26:d:45:ARG:NH2	26:d:49:GLY:HA2	2.07	0.68
29:g:88:LYS:HE3	29:g:89:ASN:N	2.08	0.68
38:p:8:ARG:HG3	43:u:34:PHE:CD1	2.26	0.68
44:v:15:GLU:HA	44:v:18:LYS:HG2	1.76	0.68
1:A:50:G:HO2'	1:A:365:U:C2'	2.07	0.68
1:A:363:A:O2'	1:A:364:A:O4'	2.11	0.68
1:A:380:G:N2	1:A:382:A:H3'	2.08	0.68
1:A:967:C:N4	1:A:1201:G:O6	2.15	0.68
2:C:119:VAL:CG1	2:C:136:ALA:HB2	2.23	0.68
2:C:120:ALA:HB1	2:C:187:TYR:HE2	1.59	0.68
3:D:43:GLU:HA	3:D:47:ARG:NH2	2.09	0.68
4:E:64:VAL:CG1	4:E:92:ALA:HB1	2.24	0.68
4:E:122:ARG:NH1	4:E:123:PRO:HG2	2.08	0.68
10:K:31:HIS:O	10:K:32:ILE:HD13	1.94	0.68
11:L:66:TYR:O	11:L:97:ILE:HG13	1.94	0.68
15:P:59:TRP:HA	15:P:62:VAL:HG12	1.76	0.68
16:Q:76:LEU:HD22	16:Q:88:TRP:HE3	1.59	0.68
18:T:46:LYS:O	18:T:49:GLU:HG3	1.94	0.68
19:V:31:ILE:CG2	19:V:39:TYR:HB3	2.23	0.68
19:V:179:LEU:HG	19:V:181:ILE:CD1	2.21	0.68
20:Y:17:C:P	35:m:22:LYS:HZ1	2.17	0.68
20:Y:484:C:OP1	42:t:10:LYS:NZ	2.26	0.68
20:Y:494:G:C2'	20:Y:495:C:H5'	2.23	0.68
20:Y:598:U:H5	20:Y:599:G:C5	2.11	0.68
20:Y:1530:G:H2'	20:Y:1531:C:C6	2.29	0.68
20:Y:2264:U:H2'	20:Y:2265:U:C6	2.27	0.68
20:Y:2458:G:H2'	20:Y:2459:G:H8	1.59	0.68
20:Y:2502:A:OP1	31:i:10:ARG:NH2	2.26	0.68
20:Y:2578:A:O5'	41:s:32:LYS:NZ	2.20	0.68
20:Y:2812:G:O2'	20:Y:2813:A:H5'	1.93	0.68
20:Y:3061:C:H2'	20:Y:3062:C:H6	1.56	0.68
22:Z:133:LEU:HA	22:Z:136:ILE:HG22	1.76	0.68
24:b:142:LYS:HD3	24:b:142:LYS:C	2.19	0.68
42:t:18:VAL:HG22	42:t:24:ARG:HD3	1.74	0.68
1:A:398:C:H2'	1:A:399:G:C8	2.26	0.68
1:A:694:G:H2'	1:A:695:A:H8	1.58	0.68
1:A:930:C:H3'	12:M:106:ASN:HD22	1.59	0.68
2:C:30:ASP:O	2:C:34:GLU:HG2	1.92	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:53:LYS:HD3	3:D:57:ARG:HH21	1.58	0.68
6:G:111:ARG:NH2	6:G:123:GLU:HG3	2.09	0.68
12:M:2:ALA:N	12:M:9:LEU:O	2.26	0.68
19:V:34:ASP:OD2	19:V:35:ARG:N	2.26	0.68
19:V:213:LEU:CD1	19:V:217:ILE:HD11	2.23	0.68
19:V:218:ALA:O	19:V:221:VAL:HG22	1.94	0.68
20:Y:615:A:H5'	28:f:113:LYS:HD2	1.75	0.68
20:Y:924:G:H2'	20:Y:925:U:C6	2.29	0.68
20:Y:1148:G:O2'	20:Y:1149:G:H5'	1.93	0.68
20:Y:1522:G:N3	20:Y:1522:G:H2'	2.09	0.68
20:Y:1708:A:O2'	20:Y:1709:U:OP1	2.11	0.68
20:Y:2015:U:H2'	20:Y:2036:A:N6	2.09	0.68
20:Y:2674:A:O2'	20:Y:2675:A:H5'	1.94	0.68
20:Y:2722:C:O2'	20:Y:2723:C:H5'	1.94	0.68
27:e:76:PRO:HG2	27:e:79:LYS:HZ3	1.58	0.68
29:g:10:VAL:HG11	29:g:16:ALA:HB3	1.75	0.68
43:u:26:LYS:NZ	43:u:54:ILE:HD12	2.09	0.68
51:4:2345:U:OP2	51:4:2392:A:O2'	2.11	0.68
1:A:363:A:C5'	11:L:29:GLN:HE22	2.07	0.68
1:A:390:U:O3'	15:P:9:ARG:NH1	2.25	0.68
1:A:420:U:O2'	1:A:423:G:O6	2.09	0.68
1:A:826:U:OP1	17:R:24:SER:HB2	1.94	0.68
1:A:1476:A:H2'	1:A:1477:A:H2'	1.76	0.68
2:C:52:ALA:N	2:C:68:HIS:O	2.25	0.68
10:K:90:LYS:HE2	10:K:115:GLU:OE2	1.94	0.68
20:Y:2:A:H2'	20:Y:3:A:C5	2.28	0.68
20:Y:999:C:N4	20:Y:1007:G:O6	2.27	0.68
20:Y:1392:G:O2'	20:Y:1393:C:H5'	1.94	0.68
20:Y:1871:G:C2	32:j:6:LYS:HE2	2.29	0.68
20:Y:2085:C:O2'	20:Y:2086:U:O5'	2.08	0.68
20:Y:2265:U:H2'	20:Y:2266:A:C8	2.28	0.68
20:Y:2522:A:N6	20:Y:2542:G:O2'	2.22	0.68
28:f:135:GLN:N	28:f:135:GLN:OE1	2.27	0.68
34:l:49:ARG:NH1	34:l:51:GLY:H	1.92	0.68
38:p:49:ILE:HG22	38:p:50:PHE:HD1	1.59	0.68
1:A:411:A:C8	1:A:413:G:H1'	2.29	0.68
1:A:556:A:HO2'	1:A:557:G:P	2.16	0.68
1:A:560:C:H2'	1:A:561:G:O4'	1.94	0.68
1:A:1341:C:OP2	13:N:35:ARG:HD3	1.94	0.68
5:F:40:VAL:HG13	5:F:63:ILE:HD11	1.74	0.68
5:F:43:TRP:O	5:F:60:TYR:HB2	1.94	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:I:114:ASP:O	8:I:118:LEU:HG	1.94	0.68
9:J:7:ARG:N	9:J:101:GLN:O	2.25	0.68
10:K:78:ASN:O	10:K:82:LYS:HE2	1.94	0.68
11:L:90:LEU:CD2	11:L:93:VAL:HG21	2.23	0.68
16:Q:76:LEU:HD21	16:Q:88:TRP:HB3	1.74	0.68
18:T:67:ILE:HG13	18:T:68:HIS:H	1.58	0.68
20:Y:598:U:H4'	20:Y:1350:G:H4'	1.74	0.68
20:Y:837:C:H2'	20:Y:838:G:C8	2.28	0.68
20:Y:1283:C:H2'	20:Y:1284:A:C8	2.29	0.68
20:Y:1372:C:H2'	20:Y:1373:A:H8	1.59	0.68
20:Y:1652:A:O2'	20:Y:1653:G:H5'	1.94	0.68
20:Y:1963:G:O2'	20:Y:1964:U:H5'	1.94	0.68
20:Y:2223:C:O2'	20:Y:2224:C:H5'	1.94	0.68
20:Y:2243:C:N4	20:Y:2244:A:H62	1.92	0.68
20:Y:2559:A:P	33:k:24:ARG:HE	2.17	0.68
22:Z:3:ILE:O	22:Z:4:ARG:HD3	1.94	0.68
22:Z:68:ARG:O	22:Z:70:HIS:N	2.26	0.68
25:c:75:ARG:NH2	25:c:95:ARG:HB2	2.08	0.68
34:l:45:VAL:HG12	34:l:47:ILE:HD13	1.74	0.68
1:A:225:G:H3'	16:Q:11:PRO:HG3	1.75	0.67
1:A:749:G:H4'	1:A:1497:A:H4'	1.75	0.67
1:A:827:U:OP2	1:A:827:U:H4'	1.95	0.67
1:A:1378:C:O2'	1:A:1379:A:H5'	1.94	0.67
1:A:1409:A:H61	1:A:1458:G:H1	0.77	0.67
6:G:67:ASP:OD1	6:G:70:LYS:NZ	2.23	0.67
11:L:29:GLN:HG2	11:L:30:ARG:N	2.09	0.67
17:R:48:ILE:CG1	17:R:72:ARG:HH22	2.07	0.67
19:V:4:VAL:CG1	19:V:9:LEU:HD21	2.24	0.67
19:V:151:ILE:HB	19:V:152:ARG:HH22	1.59	0.67
20:Y:968:C:O2'	20:Y:969:C:H5'	1.94	0.67
20:Y:1408:C:H2'	20:Y:1409:C:H6	1.59	0.67
20:Y:1428:U:H2'	20:Y:1828:A:C2	2.28	0.67
20:Y:1514:C:O2'	20:Y:1515:C:H5'	1.94	0.67
20:Y:1736:G:H5"	20:Y:1737:A:OP1	1.94	0.67
20:Y:2427:G:O2'	20:Y:2428:G:H5'	1.94	0.67
23:a:37:THR:HG22	23:a:75:VAL:HG11	1.76	0.67
26:d:37:VAL:CG1	26:d:41:ILE:HD11	2.23	0.67
34:l:55:SER:O	34:l:57:THR:HG23	1.94	0.67
35:m:83:LEU:HD22	35:m:88:VAL:CG1	2.09	0.67
1:A:165:U:H2'	1:A:166:C:C6	2.29	0.67
1:A:214:U:H2'	1:A:215:U:H5"	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:591:C:H2'	1:A:592:U:C6	2.29	0.67
1:A:1058:U:O4	4:E:115:ALA:HA	1.93	0.67
3:D:67:PHE:HA	3:D:70:TYR:HD2	1.59	0.67
6:G:16:PRO:HD3	8:I:66:GLN:NE2	2.10	0.67
19:V:36:ASN:O	19:V:38:ILE:HG22	1.95	0.67
20:Y:92:G:H2'	20:Y:93:A:H8	1.58	0.67
20:Y:503:A:C2	20:Y:2633:G:C6	2.82	0.67
20:Y:678:A:H5'	20:Y:679:G:OP1	1.94	0.67
20:Y:687:C:H2'	20:Y:688:A:C8	2.28	0.67
20:Y:751:A:O2'	20:Y:752:C:H5'	1.94	0.67
20:Y:1632:G:H2'	20:Y:1633:U:C5	2.29	0.67
20:Y:1809:U:H2'	20:Y:1810:A:C8	2.29	0.67
20:Y:2279:C:H5'	20:Y:2280:G:H5"	1.75	0.67
20:Y:2487:C:O2'	20:Y:2488:C:H5'	1.94	0.67
20:Y:3017:C:H2'	20:Y:3018:U:O4'	1.94	0.67
22:Z:88:ARG:CZ	22:Z:88:ARG:HB2	2.22	0.67
24:b:127:VAL:O	24:b:198:VAL:HG23	1.92	0.67
32:j:3:LYS:HG2	32:j:4:PRO:HD2	1.76	0.67
34:l:98:TYR:HD2	34:l:102:LEU:HD13	1.59	0.67
1:A:556:A:O2'	1:A:557:G:O5'	2.06	0.67
1:A:725:A:H2'	1:A:726:G:C8	2.29	0.67
1:A:920:A:C2	1:A:1359:U:H1'	2.28	0.67
1:A:1043:C:H3'	1:A:1044:G:H8	1.60	0.67
7:H:70:ARG:NH1	7:H:71:GLU:HA	2.09	0.67
8:I:119:LYS:CB	8:I:124:LEU:HD21	2.23	0.67
11:L:103:ASP:O	11:L:105:GLN:NE2	2.28	0.67
17:R:51:ARG:HA	17:R:54:THR:CG2	2.22	0.67
18:T:4:ILE:O	18:T:8:ILE:HG12	1.95	0.67
18:T:43:ASP:OD2	18:T:47:ALA:HB2	1.93	0.67
20:Y:27:G:O2'	20:Y:28:C:H5'	1.93	0.67
20:Y:107:G:H2'	20:Y:108:A:C8	2.29	0.67
20:Y:269:C:H2'	20:Y:270:U:H6	1.58	0.67
20:Y:359:A:H1'	20:Y:514:C:O2	1.95	0.67
20:Y:504:C:H2'	20:Y:505:C:H1'	1.75	0.67
20:Y:526:C:H2'	20:Y:527:A:C8	2.29	0.67
20:Y:691:U:O2'	30:h:15:GLU:OE1	2.09	0.67
20:Y:2060:C:O2'	20:Y:2061:U:H5'	1.94	0.67
20:Y:2560:A:H61	41:s:43:THR:HG21	1.59	0.67
20:Y:2916:C:O2'	20:Y:2917:A:H5'	1.94	0.67
20:Y:2957:A:C5	23:a:213:LYS:HE3	2.29	0.67
21:U:68:G:O2'	21:U:69:C:H5'	1.93	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:a:157:PRO:HG3	23:a:161:PHE:CE1	2.30	0.67
27:e:104:TRP:HE3	27:e:107:VAL:HG21	1.60	0.67
27:e:108:ARG:HA	27:e:108:ARG:CZ	2.24	0.67
33:k:47:ILE:HD11	33:k:81:SER:HA	1.75	0.67
38:p:8:ARG:CZ	43:u:34:PHE:HB3	2.23	0.67
48:z:24:ARG:HG3	48:z:24:ARG:HH11	1.59	0.67
1:A:42:G:OP1	11:L:121:LYS:NZ	2.27	0.67
1:A:110:U:H2'	1:A:111:G:C8	2.29	0.67
1:A:390:U:C4'	15:P:9:ARG:HH12	2.07	0.67
1:A:580:G:OP2	7:H:90:LYS:NZ	2.27	0.67
1:A:735:G:H2'	1:A:736:C:C6	2.30	0.67
1:A:856:G:H2'	1:A:857:U:C6	2.30	0.67
1:A:1290:C:N3	1:A:1311:G:N1	2.43	0.67
4:E:140:LEU:HD13	4:E:148:ILE:HG21	1.75	0.67
8:I:69:LYS:NZ	8:I:73:VAL:HG13	2.10	0.67
15:P:19:ARG:HG3	15:P:38:GLY:O	1.93	0.67
18:T:5:LYS:HA	18:T:8:ILE:CD1	2.24	0.67
19:V:94:GLN:N	19:V:94:GLN:OE1	2.27	0.67
20:Y:6:G:H21	20:Y:3114:A:H62	1.42	0.67
20:Y:21:G:N2	20:Y:604:C:O2	2.26	0.67
20:Y:68:A:H4'	20:Y:69:U:H3'	1.75	0.67
20:Y:126:C:O2'	20:Y:127:C:H5'	1.95	0.67
20:Y:673:C:H2'	20:Y:674:U:C6	2.29	0.67
20:Y:758:A:H5"	41:s:64:PRO:HG2	1.75	0.67
20:Y:759:G:H1	41:s:64:PRO:HB3	1.59	0.67
20:Y:1663:C:H2'	20:Y:1664:G:C8	2.29	0.67
20:Y:1897:A:H2'	20:Y:1898:U:H6	1.57	0.67
20:Y:3024:A:H2'	20:Y:3025:G:C8	2.28	0.67
48:z:13:ARG:CD	48:z:17:ARG:HH12	2.06	0.67
1:A:69:A:C4	1:A:214:U:H4'	2.29	0.67
1:A:107:G:C5'	15:P:28:ARG:HA	2.24	0.67
1:A:383:A:C5	1:A:384:G:H1'	2.30	0.67
1:A:762:A:N6	1:A:780:G:H21	1.91	0.67
1:A:803:G:O2'	1:A:804:U:H5'	1.94	0.67
1:A:937:A:H2'	1:A:938:U:C6	2.28	0.67
1:A:1172:A:OP2	1:A:1172:A:H3'	1.95	0.67
3:D:53:LYS:HA	3:D:195:ILE:HD11	1.75	0.67
12:M:29:ARG:HG2	12:M:33:ILE:HD11	1.77	0.67
20:Y:124:A:H5"	20:Y:125:C:C5'	2.24	0.67
20:Y:250:G:O2'	20:Y:251:A:H5'	1.95	0.67
20:Y:435:A:H2'	20:Y:436:C:C6	2.29	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:773:G:O3'	24:b:101:ARG:NH2	2.24	0.67
20:Y:1012:C:H3'	20:Y:1013:U:C6	2.29	0.67
20:Y:1940:A:H2'	20:Y:1941:A:O4'	1.95	0.67
20:Y:2166:C:C3'	20:Y:2167:U:H2'	2.25	0.67
20:Y:2517:C:H2'	20:Y:2518:C:C6	2.28	0.67
20:Y:2528:G:H1	25:c:162:THR:CA	2.08	0.67
20:Y:2594:G:H2'	20:Y:2595:G:C8	2.28	0.67
20:Y:2702:A:H5'	50:2:31:ARG:HH21	1.60	0.67
20:Y:3074:C:H2'	20:Y:3075:C:H6	1.58	0.67
21:U:8:C:H3'	21:U:9:G:H5"	1.77	0.67
25:c:43:VAL:HG13	25:c:160:ASP:O	1.93	0.67
28:f:117:GLN:OE1	28:f:120:LYS:NZ	2.17	0.67
31:i:101:ARG:HG3	31:i:101:ARG:NH1	2.06	0.67
44:v:35:ASN:OD1	44:v:36:LEU:HD23	1.94	0.67
1:A:1350:U:H5'	9:J:62:ARG:CZ	2.25	0.67
1:A:1414:C:H3'	1:A:1415:G:H8	1.60	0.67
1:A:1442:G:H2'	1:A:1443:G:C8	2.28	0.67
7:H:35:ASN:O	7:H:39:ILE:HG13	1.95	0.67
8:I:98:ALA:HA	8:I:101:LEU:HD21	1.77	0.67
9:J:16:GLU:OE2	9:J:16:GLU:N	2.27	0.67
18:T:35:PHE:CD1	18:T:79:LEU:HD13	2.30	0.67
20:Y:714:U:H4'	20:Y:715:A:C5'	2.19	0.67
20:Y:879:A:H5"	22:Z:210:GLY:CA	2.24	0.67
20:Y:1149:G:N2	50:2:36:GLN:HE22	1.93	0.67
20:Y:1372:C:H2'	20:Y:1373:A:C8	2.30	0.67
20:Y:1883:A:H4'	29:g:1:MET:HE1	1.77	0.67
20:Y:2441:G:O2'	20:Y:2442:U:H5'	1.94	0.67
20:Y:2528:G:N3	25:c:137:PHE:CD1	2.63	0.67
21:U:110:G:O2'	21:U:111:C:H5'	1.95	0.67
22:Z:77:ALA:HB2	22:Z:97:TYR:CD1	2.30	0.67
30:h:78:VAL:HG13	30:h:103:LEU:HD22	1.76	0.67
34:l:25:VAL:CA	34:l:86:LEU:HG	2.23	0.67
39:q:10:LEU:HD12	39:q:11:VAL:N	2.10	0.67
48:z:25:MET:HE3	48:z:31:ARG:HG2	1.74	0.67
49:1:17:THR:HG22	49:1:21:LYS:O	1.94	0.67
1:A:566:U:H3	1:A:736:C:H42	1.42	0.67
1:A:717:C:H2'	1:A:718:U:H6	1.60	0.67
1:A:962:C:H2'	1:A:962:C:O2	1.94	0.67
1:A:1106:U:OP1	9:J:7:ARG:NH2	2.26	0.67
1:A:1422:G:OP1	18:T:33:ARG:NE	2.27	0.67
7:H:38:GLU:HB3	7:H:42:ARG:HH22	1.60	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:Q:62:HIS:CE1	16:Q:86:LYS:HD3	2.29	0.67
19:V:96:TRP:CH2	19:V:98:GLY:HA2	2.30	0.67
19:V:228:ARG:C	19:V:228:ARG:HD2	2.20	0.67
20:Y:72:G:H4'	43:u:48:ARG:HH12	1.59	0.67
20:Y:704:C:H2'	20:Y:705:C:C6	2.30	0.67
20:Y:1127:A:H5'	35:m:59:LYS:CG	2.25	0.67
20:Y:1900:C:P	20:Y:1917:G:H22	2.18	0.67
20:Y:2619:C:O2'	20:Y:2620:G:H5'	1.95	0.67
20:Y:2634:G:H3'	20:Y:2635:A:C8	2.29	0.67
20:Y:2860:U:H4'	23:a:83:GLU:OE2	1.95	0.67
20:Y:2927:C:H2'	20:Y:2928:C:C6	2.30	0.67
20:Y:3106:C:H5'	20:Y:3107:G:OP2	1.94	0.67
28:f:72:LYS:HZ2	28:f:74:ALA:HB2	1.59	0.67
31:i:34:ILE:HD12	31:i:122:ILE:HD11	1.75	0.67
32:j:94:TYR:O	32:j:116:VAL:HG23	1.94	0.67
34:l:62:LYS:HE2	34:l:63:GLU:O	1.95	0.67
1:A:44:C:H2'	1:A:45:G:H8	1.60	0.67
1:A:370:C:H2'	1:A:371:A:C8	2.30	0.67
1:A:499:C:H41	1:A:509:G:H8	1.40	0.67
1:A:923:G:H2'	1:A:924:G:O4'	1.95	0.67
1:A:1075:U:OP1	1:A:1088:G:N2	2.24	0.67
6:G:40:GLU:HA	6:G:43:VAL:HG12	1.77	0.67
7:H:77:LEU:CD1	7:H:131:VAL:HG22	2.22	0.67
8:I:72:LEU:O	8:I:75:VAL:HG12	1.94	0.67
10:K:70:PHE:CD1	10:K:74:LEU:HD21	2.30	0.67
20:Y:611:U:H2'	20:Y:612:U:C6	2.30	0.67
20:Y:631:C:H2'	20:Y:632:G:C8	2.29	0.67
20:Y:1187:A:C2	20:Y:1214:A:H5"	2.30	0.67
20:Y:1363:G:C5	35:m:3:ARG:HB2	2.29	0.67
20:Y:1485:C:H3'	20:Y:1486:G:C8	2.29	0.67
20:Y:1628:A:H4'	20:Y:1630:U:C4	2.30	0.67
20:Y:1923:G:O2'	20:Y:1924:G:H5'	1.95	0.67
20:Y:1990:A:N7	20:Y:2046:A:H1'	2.09	0.67
20:Y:2016:G:N2	20:Y:2036:A:OP2	2.21	0.67
20:Y:2047:C:H2'	20:Y:2048:G:C8	2.27	0.67
20:Y:2481:U:O2'	20:Y:2482:U:H5'	1.94	0.67
20:Y:2490:A:H4'	20:Y:2491:A:N3	2.10	0.67
20:Y:2598:C:H2'	20:Y:2599:G:C8	2.30	0.67
20:Y:2629:G:O2'	20:Y:2636:A:N6	2.27	0.67
20:Y:2803:C:H2'	20:Y:2804:U:C6	2.30	0.67
24:b:76:GLN:HG3	24:b:84:PHE:HZ	1.59	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:c:69:GLY:O	25:c:71:LYS:NZ	2.27	0.67
25:c:77:ALA:O	25:c:88:GLU:HG3	1.95	0.67
27:e:15:ILE:O	27:e:55:VAL:HA	1.95	0.67
29:g:24:VAL:HG21	29:g:30:ARG:HD3	1.74	0.67
32:j:5:THR:HB	32:j:9:ARG:CG	2.24	0.67
32:j:100:VAL:HG23	32:j:110:MET:HB3	1.76	0.67
1:A:43:G:O6	1:A:527:A:H2'	1.94	0.67
1:A:427:U:H5"	3:D:10:ARG:HH22	1.60	0.67
1:A:1035:A:H1'	2:C:156:ARG:NH2	2.10	0.67
1:A:1071:U:H2'	1:A:1073:A:OP2	1.95	0.67
1:A:1104:G:N2	1:A:1105:U:O4	2.28	0.67
2:C:173:VAL:O	2:C:175:LEU:HD22	1.94	0.67
3:D:108:MET:HE2	3:D:108:MET:N	2.10	0.67
4:E:41:VAL:HG21	4:E:61:LEU:CD2	2.19	0.67
5:F:23:LEU:O	5:F:27:LEU:HG	1.95	0.67
5:F:45:ARG:N	5:F:58:GLY:O	2.27	0.67
15:P:34:ILE:H	15:P:34:ILE:HD12	1.59	0.67
20:Y:422:A:H2'	20:Y:423:C:O4'	1.95	0.67
20:Y:552:U:H2'	20:Y:553:G:C5'	2.25	0.67
20:Y:581:G:H4'	37:o:13:LYS:O	1.94	0.67
20:Y:1957:G:O2'	20:Y:1958:C:H5'	1.95	0.67
20:Y:2653:G:H5"	20:Y:2654:A:OP2	1.95	0.67
20:Y:2799:C:H5"	20:Y:2800:G:OP2	1.95	0.67
26:d:32:THR:C	26:d:33:LEU:HD22	2.19	0.67
28:f:73:PHE:HD1	28:f:75:TYR:HH	1.43	0.67
30:h:64:LEU:HD21	49:1:25:GLN:HB2	1.77	0.67
30:h:80:VAL:CG2	30:h:114:GLY:HA2	2.25	0.67
37:o:15:ARG:HH11	37:o:15:ARG:HG2	1.59	0.67
44:v:53:LYS:O	44:v:57:VAL:HG13	1.95	0.67
1:A:550:G:O2'	1:A:551:U:O4'	2.10	0.67
1:A:618:C:N4	1:A:619:G:O6	2.28	0.67
1:A:1114:C:H3'	1:A:1115:G:H5"	1.76	0.67
1:A:1160:A:O4'	8:I:126:ARG:NH1	2.28	0.67
1:A:1464:G:H2'	1:A:1465:C:C6	2.30	0.67
3:D:55:LYS:NZ	3:D:190:LEU:HG	2.10	0.67
4:E:185:PRO:O	4:E:185:PRO:HD2	1.95	0.67
17:R:71:ALA:HA	17:R:74:VAL:CG1	2.25	0.67
18:T:72:ALA:HA	18:T:75:LYS:HZ3	1.58	0.67
20:Y:629:C:O2'	20:Y:630:U:H5'	1.95	0.67
20:Y:739:U:H4'	20:Y:740:A:H2'	1.77	0.67
20:Y:1127:A:O2'	20:Y:1128:A:O4'	2.11	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:1408:C:H2'	20:Y:1409:C:O4'	1.95	0.67
20:Y:1632:G:H2'	20:Y:1633:U:C6	2.29	0.67
20:Y:2464:U:O2'	20:Y:2465:A:H5'	1.95	0.67
20:Y:2552:A:H2'	20:Y:2553:G:H8	1.58	0.67
20:Y:2776:U:H3'	20:Y:2778:U:OP2	1.95	0.67
20:Y:2815:C:N4	20:Y:2816:G:O6	2.27	0.67
20:Y:2936:C:OP1	20:Y:2938:G:H4'	1.94	0.67
22:Z:67:PHE:HZ	22:Z:106:ILE:HD11	1.59	0.67
23:a:127:MET:SD	23:a:128:LYS:N	2.68	0.67
23:a:169:ARG:HH12	23:a:170:MET:C	2.03	0.67
25:c:119:ARG:HD2	25:c:144:MET:HE1	1.76	0.67
25:c:125:SER:HG	25:c:127:LYS:HG2	1.60	0.67
26:d:98:GLN:HB2	26:d:105:GLU:OE2	1.94	0.67
34:l:48:ARG:CG	34:l:95:LYS:HG2	2.24	0.67
39:q:40:ARG:NH1	39:q:63:GLU:OE2	2.28	0.67
1:A:265:G:H4'	16:Q:82:LEU:HA	1.77	0.66
1:A:821:C:C5	1:A:822:U:H1'	2.30	0.66
1:A:1186:U:H4'	2:C:195:ARG:HH11	1.60	0.66
1:A:1506:U:H2'	1:A:1507:G:H8	1.60	0.66
2:C:39:ARG:NE	2:C:54:VAL:HG21	2.10	0.66
2:C:137:ILE:O	2:C:141:MET:HG3	1.96	0.66
3:D:4:TYR:HE2	3:D:11:LYS:HD3	1.58	0.66
3:D:44:SER:HB3	3:D:47:ARG:HB3	1.76	0.66
5:F:8:VAL:CG2	5:F:61:ALA:HB3	2.25	0.66
6:G:95:ARG:HH12	6:G:99:LEU:HG	1.58	0.66
6:G:111:ARG:HE	6:G:119:ARG:HD3	1.59	0.66
11:L:73:ASN:ND2	11:L:105:GLN:OE1	2.27	0.66
20:Y:185:G:H2'	20:Y:186:G:H8	1.59	0.66
20:Y:464:C:H2'	20:Y:465:A:C8	2.30	0.66
20:Y:2640:G:P	30:h:66:GLY:H	2.18	0.66
20:Y:2970:U:N3	20:Y:2980:U:O4	2.24	0.66
20:Y:3057:U:O2'	20:Y:3058:A:H5'	1.95	0.66
32:j:34:ILE:HG23	32:j:113:ILE:HG23	1.75	0.66
34:l:21:PRO:HG3	34:l:94:ALA:CA	2.24	0.66
1:A:75:A:O2'	1:A:76:A:H5'	1.96	0.66
1:A:248:C:H2'	1:A:249:U:C6	2.29	0.66
1:A:746:A:C2	1:A:747:A:H1'	2.29	0.66
1:A:1500:G:H2'	1:A:1501:G:H5'	1.77	0.66
7:H:7:ILE:CD1	7:H:32:LEU:HD13	2.25	0.66
12:M:53:VAL:HA	12:M:56:LEU:HD13	1.77	0.66
14:O:39:LEU:HD23	14:O:39:LEU:C	2.20	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:R:21:VAL:HG22	17:R:56:ASN:ND2	2.10	0.66
19:V:68:LEU:CG	19:V:158:PRO:HB3	2.25	0.66
19:V:82:GLU:O	19:V:86:ARG:HG3	1.95	0.66
19:V:152:ARG:O	19:V:155:GLN:NE2	2.27	0.66
20:Y:337:U:H3	20:Y:344:G:H1	1.42	0.66
20:Y:522:U:O2	20:Y:524:C:N4	2.29	0.66
20:Y:844:G:N2	20:Y:1992:U:O4'	2.29	0.66
20:Y:1173:G:H2'	20:Y:1174:G:O4'	1.95	0.66
20:Y:1342:C:H2'	20:Y:1343:G:H8	1.60	0.66
20:Y:1345:G:H2'	20:Y:1346:U:C6	2.29	0.66
20:Y:1364:U:O2'	20:Y:1365:G:O5'	2.13	0.66
20:Y:1624:U:HO2'	20:Y:1625:G:H8	1.42	0.66
20:Y:1660:A:H3'	20:Y:1661:G:H8	1.60	0.66
20:Y:2113:A:H2'	20:Y:2114:A:C8	2.30	0.66
20:Y:2515:U:H2'	20:Y:2516:U:H6	1.60	0.66
20:Y:2841:C:C2'	20:Y:2842:G:H5'	2.25	0.66
20:Y:3028:A:H2'	20:Y:3029:U:H1'	1.76	0.66
24:b:60:GLY:O	24:b:80:ARG:NH1	2.26	0.66
25:c:41:VAL:H	25:c:103:MET:CE	2.08	0.66
29:g:77:ILE:HA	34:l:70:GLU:HB2	1.76	0.66
30:h:67:PHE:C	30:h:68:LYS:HD3	2.21	0.66
33:k:76:ASP:CG	33:k:77:LYS:H	2.02	0.66
34:l:39:ILE:HD12	34:l:81:ASP:OD2	1.94	0.66
35:m:40:LEU:HD13	36:n:78:PHE:CD2	2.30	0.66
37:o:69:GLU:N	37:o:69:GLU:OE2	2.28	0.66
38:p:21:TYR:O	38:p:24:ILE:HG22	1.95	0.66
1:A:255:G:O4'	16:Q:33:GLN:NE2	2.22	0.66
1:A:452:A:N6	15:P:92:THR:HB	2.10	0.66
2:C:127:VAL:CG1	2:C:132:ALA:HB2	2.24	0.66
4:E:174:ARG:HB3	4:E:177:GLU:CG	2.24	0.66
5:F:36:THR:HG21	5:F:67:ALA:HB2	1.76	0.66
20:Y:400:C:H2'	20:Y:401:C:H6	1.54	0.66
20:Y:1248:U:N3	20:Y:2249:G:H5"	2.11	0.66
20:Y:1879:G:O2'	20:Y:1880:U:H5'	1.94	0.66
20:Y:2054:C:O2'	20:Y:2151:A:H1'	1.95	0.66
20:Y:2276:G:OP1	23:a:151:ILE:HG22	1.96	0.66
20:Y:2692:A:P	20:Y:2700:A:H61	2.18	0.66
22:Z:43:ARG:HG2	22:Z:47:GLY:O	1.95	0.66
24:b:3:LEU:HG	24:b:20:LEU:HD13	1.77	0.66
25:c:117:ARG:HH11	25:c:117:ARG:HB3	1.60	0.66
31:i:1:MET:HA	31:i:1:MET:CE	2.18	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:n:31:PRO:HA	36:n:64:VAL:HG23	1.76	0.66
39:q:4:HIS:N	39:q:7:ASP:OD1	2.25	0.66
42:t:5:CYS:HB3	42:t:8:CYS:SG	2.34	0.66
48:z:28:ARG:CA	48:z:31:ARG:HD2	2.23	0.66
1:A:962:C:H3'	1:A:963:U:H5	1.60	0.66
4:E:120:MET:C	4:E:121:LEU:HD22	2.20	0.66
7:H:38:GLU:HB3	7:H:42:ARG:NH2	2.11	0.66
8:I:126:ARG:O	8:I:128:PRO:HD3	1.94	0.66
9:J:11:LYS:O	9:J:97:ASP:HB2	1.95	0.66
20:Y:34:C:O2'	20:Y:35:A:H5'	1.95	0.66
20:Y:115:A:H5'	20:Y:116:A:C8	2.30	0.66
20:Y:681:C:O2'	24:b:96:ARG:NH2	2.27	0.66
20:Y:937:U:H2'	20:Y:938:G:C8	2.29	0.66
20:Y:1127:A:H5'	35:m:59:LYS:HG2	1.76	0.66
20:Y:2093:G:O2'	20:Y:2094:G:H5"	1.96	0.66
20:Y:2213:A:O2'	20:Y:2214:C:H5'	1.95	0.66
20:Y:2620:G:O2'	20:Y:2621:G:H5'	1.94	0.66
24:b:155:LEU:HD12	24:b:156:VAL:H	1.59	0.66
25:c:139:LEU:HB3	25:c:159:MET:O	1.94	0.66
28:f:76:ARG:HE	28:f:87:ARG:HH12	1.41	0.66
29:g:120:GLU:OE1	29:g:122:LEU:HD21	1.95	0.66
30:h:82:ASP:OD1	30:h:83:ILE:N	2.28	0.66
30:h:91:GLY:O	30:h:122:VAL:HG13	1.96	0.66
38:p:17:SER:O	38:p:20:SER:OG	2.14	0.66
43:u:36:MET:HE2	43:u:44:ASN:HA	1.73	0.66
47:y:36:LEU:HD11	47:y:38:ILE:HG13	1.77	0.66
1:A:141:U:H2'	1:A:142:U:O4'	1.96	0.66
1:A:468:U:H2'	1:A:469:G:H8	1.60	0.66
1:A:815:G:OP1	17:R:59:GLN:HG2	1.93	0.66
1:A:884:G:H2'	1:A:885:G:H8	1.60	0.66
1:A:1385:C:O2'	1:A:1386:C:O4'	2.12	0.66
3:D:104:ARG:NH1	3:D:153:ALA:HB2	2.10	0.66
3:D:109:ALA:O	3:D:113:VAL:HG22	1.96	0.66
5:F:19:VAL:HG12	5:F:23:LEU:CD1	2.25	0.66
18:T:31:ALA:HB2	18:T:57:LYS:HE3	1.78	0.66
20:Y:267:G:C2	20:Y:359:A:C6	2.82	0.66
20:Y:271:A:C2'	20:Y:272:A:H2	2.08	0.66
20:Y:618:C:O2'	20:Y:655:G:H5"	1.94	0.66
20:Y:730:G:H3'	30:h:113:LEU:CD1	2.21	0.66
20:Y:1083:G:C2'	20:Y:1084:U:H5'	2.26	0.66
20:Y:1721:U:O2'	20:Y:1722:C:H5'	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:2113:A:H2'	20:Y:2114:A:H8	1.58	0.66
20:Y:2421:A:H4'	20:Y:2422:A:OP1	1.95	0.66
20:Y:2485:C:O2'	20:Y:2486:U:H5'	1.94	0.66
20:Y:2518:C:H2'	20:Y:2519:C:H6	1.56	0.66
20:Y:2528:G:H5'	20:Y:2529:A:H5"	1.76	0.66
20:Y:2745:C:O2'	20:Y:2746:U:H5'	1.94	0.66
20:Y:3043:G:OP1	23:a:122:GLY:N	2.20	0.66
22:Z:138:ALA:HA	22:Z:165:LEU:CD2	2.23	0.66
22:Z:256:ARG:HH12	22:Z:271:ARG:HH21	1.43	0.66
22:Z:260:PRO:O	22:Z:261:ASN:HB3	1.94	0.66
23:a:50:VAL:O	23:a:83:GLU:HB2	1.96	0.66
23:a:142:GLN:O	23:a:144:VAL:HG23	1.94	0.66
31:i:27:VAL:HG22	31:i:105:GLU:OE1	1.95	0.66
46:x:30:VAL:O	46:x:36:GLN:HA	1.96	0.66
1:A:145:G:HO2'	1:A:1429:A:HO2'	1.42	0.66
1:A:251:G:H4'	1:A:252:U:C5'	2.25	0.66
1:A:488:C:H4'	3:D:46:TYR:CE2	2.31	0.66
1:A:815:G:P	17:R:59:GLN:HG2	2.35	0.66
1:A:832:U:H2'	1:A:833:C:C6	2.30	0.66
1:A:949:C:H5"	1:A:950:A:OP2	1.96	0.66
1:A:954:C:O2	9:J:57:LYS:HE2	1.96	0.66
1:A:1062:A:H2'	1:A:1063:U:C6	2.30	0.66
2:C:149:ILE:O	2:C:150:ARG:HD2	1.96	0.66
2:C:150:ARG:HH11	2:C:173:VAL:HG13	1.60	0.66
3:D:38:ARG:HA	3:D:38:ARG:HE	1.60	0.66
13:N:38:GLY:O	13:N:39:LEU:HD23	1.95	0.66
15:P:75:LYS:O	15:P:81:GLN:NE2	2.20	0.66
16:Q:26:TYR:O	16:Q:38:VAL:HG13	1.95	0.66
19:V:31:ILE:HG23	19:V:39:TYR:HB3	1.78	0.66
20:Y:69:U:O4'	43:u:51:ARG:HD3	1.94	0.66
20:Y:801:U:H5"	20:Y:903:A:N6	2.11	0.66
20:Y:899:G:C6	22:Z:229:VAL:HG21	2.31	0.66
20:Y:1047:A:O2'	20:Y:1049:G:H8	1.79	0.66
20:Y:1065:C:H2'	20:Y:1066:G:H8	1.60	0.66
20:Y:1366:A:H4'	20:Y:1367:G:OP1	1.96	0.66
20:Y:1381:G:OP2	46:x:17:ARG:NH2	2.29	0.66
20:Y:1938:G:H21	20:Y:1956:A:H62	1.42	0.66
20:Y:2167:U:O4'	20:Y:2169:G:H5'	1.96	0.66
20:Y:2181:C:O2'	20:Y:2182:C:H5'	1.96	0.66
20:Y:2297:U:H2'	20:Y:2298:U:C6	2.31	0.66
20:Y:2310:G:H2'	20:Y:2311:G:H8	1.60	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:2529:A:O2'	20:Y:2530:C:O4'	2.13	0.66
24:b:97:ASP:OD1	24:b:99:SER:N	2.23	0.66
25:c:46:GLY:HA2	25:c:92:ILE:O	1.95	0.66
25:c:130:ASP:OD2	25:c:134:ASN:HB2	1.95	0.66
32:j:73:LYS:HA	32:j:76:VAL:HG12	1.78	0.66
34:l:60:VAL:HG23	34:l:71:ARG:HB2	1.76	0.66
35:m:90:VAL:HG23	35:m:95:LEU:CD2	2.25	0.66
42:t:39:VAL:HA	42:t:46:LYS:CD	2.20	0.66
44:v:32:THR:O	44:v:36:LEU:HG	1.96	0.66
44:v:87:VAL:HG22	44:v:91:LYS:HG3	1.77	0.66
50:2:13:LYS:HZ2	50:2:28:SER:H	1.43	0.66
1:A:233:C:O2'	1:A:234:C:O4'	2.12	0.66
1:A:339:C:OP2	29:g:97:ARG:NH2	2.28	0.66
1:A:582:U:N3	1:A:617:G:N1	2.43	0.66
1:A:724:C:H2'	1:A:725:A:C8	2.30	0.66
1:A:767:A:H2'	1:A:768:U:H6	1.60	0.66
1:A:997:A:C2	1:A:1200:A:H4'	2.29	0.66
1:A:1156:G:H2'	1:A:1157:A:H8	1.60	0.66
1:A:1166:G:H2'	1:A:1167:G:C8	2.30	0.66
1:A:1169:A:H2'	1:A:1170:U:O4'	1.96	0.66
1:A:1330:U:H4'	8:I:142:ARG:NE	2.11	0.66
1:A:1331:A:OP1	8:I:141:ALA:HB3	1.95	0.66
1:A:1501:G:HO2'	1:A:1502:A:C5'	2.08	0.66
4:E:182:ARG:HG3	7:H:44:GLY:O	1.95	0.66
5:F:14:LEU:HD13	5:F:18:THR:HG21	1.77	0.66
6:G:16:PRO:HG3	8:I:66:GLN:CB	2.22	0.66
6:G:16:PRO:HD2	8:I:62:LYS:HZ1	1.61	0.66
6:G:108:SER:OG	6:G:120:LEU:HD22	1.95	0.66
8:I:127:ASP:OD2	8:I:129:ARG:HG2	1.95	0.66
19:V:18:HIS:HB3	19:V:22:ARG:HH11	1.60	0.66
20:Y:610:C:O2'	20:Y:611:U:H5'	1.95	0.66
20:Y:620:G:H2'	20:Y:621:U:C6	2.30	0.66
20:Y:693:G:H2'	20:Y:694:C:C6	2.31	0.66
20:Y:948:G:H2'	20:Y:949:C:C6	2.31	0.66
20:Y:1085:G:OP1	20:Y:1085:G:H3'	1.95	0.66
20:Y:1533:U:H2'	20:Y:1803:A:N7	2.10	0.66
20:Y:1565:A:N6	20:Y:1603:G:OP2	2.27	0.66
20:Y:2261:U:H2'	20:Y:2262:C:H6	1.60	0.66
23:a:17:PHE:CE2	34:l:74:PRO:HB3	2.31	0.66
27:e:104:TRP:O	27:e:107:VAL:HG22	1.96	0.66
29:g:22:ILE:HB	29:g:40:VAL:CG1	2.11	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:h:93:VAL:CG2	30:h:124:VAL:HA	2.23	0.66
32:j:41:ALA:HB1	32:j:97:ILE:CD1	2.25	0.66
34:l:52:GLY:HA3	34:l:55:SER:HB2	1.77	0.66
41:s:72:LYS:HE3	41:s:77:THR:OG1	1.96	0.66
42:t:8:CYS:SG	42:t:10:LYS:HD3	2.36	0.66
1:A:517:G:H5"	11:L:110:ARG:NH1	2.10	0.66
1:A:517:G:C5'	11:L:110:ARG:HH12	2.08	0.66
1:A:553:A:H3'	1:A:553:A:OP2	1.96	0.66
1:A:637:U:P	14:O:62:ARG:HH12	2.18	0.66
1:A:654:G:H4'	17:R:79:PHE:CD2	2.30	0.66
1:A:812:G:O2'	1:A:813:U:H5'	1.96	0.66
1:A:1468:U:O2'	1:A:1469:U:H5'	1.96	0.66
15:P:15:ASN:O	15:P:15:ASN:ND2	2.29	0.66
19:V:121:GLU:OE2	19:V:122:GLN:HG3	1.96	0.66
20:Y:239:U:H2'	20:Y:240:G:O4'	1.96	0.66
20:Y:387:U:H2'	20:Y:388:U:C6	2.31	0.66
20:Y:510:A:H2'	20:Y:511:A:N9	2.10	0.66
20:Y:657:C:H2'	20:Y:658:U:C6	2.31	0.66
20:Y:1646:U:H2'	20:Y:1647:G:N9	2.10	0.66
20:Y:2679:G:H2'	20:Y:2680:C:C6	2.31	0.66
20:Y:2702:A:C5'	50:2:31:ARG:HH21	2.09	0.66
20:Y:2881:A:H2'	20:Y:2882:C:H5'	1.78	0.66
22:Z:256:ARG:NE	22:Z:256:ARG:HA	2.11	0.66
25:c:177:LEU:HG	25:c:182:PHE:HD2	1.58	0.66
28:f:19:ASP:OD2	28:f:20:ALA:N	2.28	0.66
30:h:22:VAL:HG22	30:h:33:ALA:HA	1.78	0.66
48:z:18:VAL:HG12	48:z:19:HIS:HD2	1.61	0.66
1:A:705:G:O2'	1:A:706:C:H5'	1.94	0.66
3:D:160:ARG:HD2	3:D:161:PRO:HD3	1.77	0.66
7:H:7:ILE:HB	7:H:79:ARG:NH1	2.11	0.66
15:P:9:ARG:HA	15:P:17:GLN:O	1.96	0.66
18:T:32:ILE:CD1	18:T:79:LEU:HD11	2.26	0.66
20:Y:25:A:H2'	20:Y:26:U:O4'	1.96	0.66
20:Y:619:C:H1'	20:Y:2245:C:N3	2.11	0.66
20:Y:1036:C:H2'	20:Y:1037:C:H6	1.58	0.66
20:Y:1816:C:H2'	20:Y:1817:C:C6	2.31	0.66
25:c:43:VAL:HG22	25:c:161:ILE:HG13	1.78	0.66
27:e:108:ARG:HH12	27:e:111:ALA:HB3	1.61	0.66
34:l:27:VAL:CG2	34:l:80:ILE:HG12	2.26	0.66
1:A:1011:U:H1'	1:A:1013:G:O6	1.96	0.66
1:A:1109:C:O2'	1:A:1110:A:O5'	2.13	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1274:C:H2'	1:A:1275:G:H8	1.61	0.66
1:A:1418:G:H2'	1:A:1419:C:C6	2.30	0.66
1:A:1476:A:C2'	1:A:1477:A:H2'	2.26	0.66
2:C:135:LYS:HD3	2:C:135:LYS:C	2.21	0.66
8:I:68:ILE:HG23	8:I:99:LEU:CD1	2.26	0.66
15:P:5:ILE:HG12	15:P:22:VAL:HG12	1.77	0.66
19:V:47:LEU:O	19:V:50:ILE:HG22	1.96	0.66
20:Y:266:U:H3'	20:Y:267:G:H5'	1.76	0.66
20:Y:734:C:H2'	20:Y:735:U:C6	2.30	0.66
20:Y:2796:A:OP1	20:Y:2798:G:H4'	1.96	0.66
20:Y:2920:U:O2'	20:Y:2921:G:H5'	1.96	0.66
20:Y:2922:U:H2'	20:Y:2923:C:C6	2.30	0.66
20:Y:2972:A:H5'	26:d:4:ILE:CD1	2.26	0.66
22:Z:43:ARG:NE	22:Z:49:ILE:HG13	2.00	0.66
26:d:22:GLN:NE2	26:d:41:ILE:O	2.29	0.66
29:g:64:ARG:O	29:g:82:ASN:HA	1.95	0.66
34:l:30:LYS:HG2	34:l:37:GLU:OE1	1.96	0.66
51:4:2389:U:N3	51:4:2394:A:C8	2.64	0.66
1:A:363:A:O2'	1:A:364:A:H5'	1.95	0.65
1:A:579:U:O2'	1:A:580:G:H5'	1.96	0.65
1:A:686:A:H2'	1:A:687:U:O4'	1.96	0.65
1:A:733:A:H4'	1:A:734:C:C5'	2.25	0.65
1:A:945:G:H22	9:J:57:LYS:HE2	1.60	0.65
1:A:1075:U:H2'	1:A:1076:C:H6	1.59	0.65
2:C:37:ALA:HA	2:C:40:LYS:HE3	1.79	0.65
3:D:52:GLU:OE1	3:D:194:LEU:HD12	1.97	0.65
3:D:65:LYS:HZ1	3:D:68:ARG:HH21	1.43	0.65
4:E:121:LEU:CD1	4:E:150:ALA:HB2	2.26	0.65
5:F:89:LYS:CE	5:F:91:LEU:HD11	2.26	0.65
6:G:150:ALA:HB1	10:K:68:THR:CB	2.26	0.65
17:R:39:ARG:O	17:R:39:ARG:HD2	1.95	0.65
20:Y:686:A:O2'	20:Y:687:C:H5'	1.95	0.65
20:Y:741:G:H2'	20:Y:742:G:C8	2.30	0.65
20:Y:987:A:P	31:i:5:ARG:HH22	2.19	0.65
20:Y:1502:G:H2'	20:Y:1503:G:H8	1.60	0.65
20:Y:1825:C:H4'	20:Y:1826:A:O5'	1.96	0.65
20:Y:1834:A:H4'	20:Y:1835:C:OP2	1.96	0.65
20:Y:2264:U:H2'	20:Y:2265:U:H6	1.61	0.65
20:Y:2411:U:H5'	20:Y:2412:U:C5	2.31	0.65
23:a:186:ASP:HB3	23:a:191:VAL:H	1.59	0.65
24:b:180:PRO:HD2	24:b:181:ASP:N	2.11	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:k:14:ARG:HD3	33:k:14:ARG:C	2.20	0.65
34:l:6:PHE:CE2	34:l:7:VAL:HG23	2.32	0.65
34:l:45:VAL:HG11	34:l:109:ILE:CD1	2.25	0.65
43:u:5:THR:C	43:u:56:ARG:HH12	2.02	0.65
1:A:375:U:OP1	15:P:69:PRO:HB3	1.96	0.65
1:A:1371:C:H2'	1:A:1372:C:C5	2.30	0.65
4:E:70:MET:HE3	4:E:96:PHE:HD2	1.61	0.65
4:E:132:ALA:HB2	4:E:150:ALA:HB3	1.78	0.65
5:F:75:LEU:HD12	5:F:75:LEU:O	1.95	0.65
6:G:106:ASN:O	6:G:110:GLN:NE2	2.29	0.65
8:I:105:ARG:O	8:I:108:ILE:HG22	1.96	0.65
19:V:70:VAL:HG12	19:V:92:VAL:CG1	2.26	0.65
20:Y:621:U:H5'	35:m:42:SER:HG	1.60	0.65
20:Y:774:G:P	24:b:101:ARG:HH22	2.19	0.65
20:Y:963:U:O2'	20:Y:964:C:H5'	1.96	0.65
20:Y:1016:C:H2'	20:Y:1017:G:O4'	1.97	0.65
20:Y:1795:C:O2'	20:Y:1796:U:H5'	1.95	0.65
20:Y:2017:C:H4'	20:Y:2018:G:C5'	2.25	0.65
20:Y:2803:C:H5'	23:a:144:VAL:HG21	1.77	0.65
25:c:164:VAL:HG22	25:c:165:THR:H	1.61	0.65
29:g:35:ILE:HD12	29:g:69:ARG:CD	2.27	0.65
32:j:24:LEU:HB3	32:j:44:LEU:HD12	1.78	0.65
32:j:65:GLU:O	32:j:68:LYS:HG2	1.97	0.65
35:m:28:ARG:HD3	35:m:38:GLN:OE1	1.96	0.65
38:p:39:LYS:NZ	38:p:58:ASN:HA	2.10	0.65
39:q:62:GLN:NE2	39:q:63:GLU:O	2.29	0.65
44:v:11:ALA:O	44:v:15:GLU:HG2	1.96	0.65
1:A:687:U:H2'	1:A:688:C:H6	1.60	0.65
1:A:873:U:H2'	1:A:874:A:H8	1.60	0.65
2:C:70:ALA:HB2	2:C:114:LEU:HD13	1.78	0.65
2:C:87:ARG:HH12	2:C:98:VAL:HG13	1.61	0.65
3:D:182:GLU:H	3:D:185:GLN:HE21	1.41	0.65
9:J:67:MET:HA	9:J:67:MET:CE	2.19	0.65
15:P:20:ILE:HD12	15:P:38:GLY:CA	2.26	0.65
19:V:103:ASN:OD1	19:V:106:THR:OG1	2.07	0.65
20:Y:1044:U:H5'	45:w:37:ARG:HH12	1.61	0.65
20:Y:1149:G:H21	50:2:36:GLN:HE22	1.43	0.65
20:Y:1644:G:H2'	20:Y:1645:G:H8	1.61	0.65
20:Y:2234:G:H2'	20:Y:2235:C:C6	2.31	0.65
20:Y:2308:U:O2'	20:Y:2309:U:H5'	1.96	0.65
20:Y:2508:C:O2'	20:Y:2509:C:H5'	1.95	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:2536:U:H4'	25:c:75:ARG:CD	2.27	0.65
20:Y:2981:A:H2'	20:Y:2982:A:H5"	1.78	0.65
23:a:126:THR:HG22	23:a:167:SER:N	2.11	0.65
24:b:9:THR:HG22	24:b:128:THR:HG22	1.78	0.65
26:d:87:LYS:HB3	26:d:131:LYS:HZ2	1.59	0.65
28:f:4:TYR:O	35:m:64:ARG:NH2	2.23	0.65
34:l:103:ARG:O	34:l:106:LYS:HG3	1.96	0.65
36:n:54:ASP:HA	36:n:57:LYS:CG	2.25	0.65
36:n:61:THR:HG23	36:n:100:THR:OG1	1.96	0.65
40:r:71:ILE:O	40:r:74:THR:OG1	2.11	0.65
1:A:936:G:H2'	1:A:937:A:C8	2.31	0.65
2:C:11:ARG:O	2:C:16:THR:HG22	1.96	0.65
6:G:44:TYR:HA	6:G:47:LEU:HD21	1.77	0.65
6:G:54:THR:CG2	6:G:125:LEU:HD11	2.26	0.65
7:H:85:LEU:HB2	11:L:4:ILE:HD13	1.77	0.65
10:K:35:THR:HA	10:K:98:PRO:HD2	1.79	0.65
14:O:69:TYR:O	14:O:73:VAL:HG12	1.96	0.65
16:Q:60:LYS:NZ	16:Q:85:THR:HG22	2.11	0.65
20:Y:217:G:H22	20:Y:235:U:H4'	1.60	0.65
20:Y:969:C:H2'	20:Y:970:G:H8	1.61	0.65
20:Y:1198:C:H4'	27:e:135:ARG:HH11	1.60	0.65
20:Y:1547:G:H8	20:Y:1620:U:H2'	1.61	0.65
20:Y:1729:A:C2'	20:Y:1731:A:H5'	2.27	0.65
20:Y:2208:U:O2'	20:Y:2209:C:H5'	1.97	0.65
20:Y:2271:C:O2'	20:Y:2272:G:H5'	1.96	0.65
20:Y:2572:U:H1'	47:y:41:PHE:CE1	2.31	0.65
20:Y:2903:A:H2'	20:Y:2904:C:C6	2.31	0.65
21:U:48:C:C5'	33:k:14:ARG:HH12	2.08	0.65
22:Z:127:PRO:HA	22:Z:193:VAL:HG23	1.79	0.65
24:b:103:PRO:CD	24:b:106:MET:HG3	2.26	0.65
24:b:155:LEU:HD13	24:b:176:HIS:HB3	1.77	0.65
48:z:8:PHE:CE2	48:z:10:PRO:HB3	2.31	0.65
1:A:209:A:O2'	1:A:210:A:O5'	2.14	0.65
1:A:375:U:H2'	1:A:376:G:H8	1.62	0.65
1:A:406:G:O2'	3:D:111:GLN:OE1	2.13	0.65
1:A:929:G:H2'	1:A:930:C:O4'	1.96	0.65
1:A:1114:C:H2'	1:A:1115:G:H4'	1.79	0.65
1:A:1311:G:OP1	12:M:29:ARG:NH2	2.29	0.65
1:A:1424:G:H1'	1:A:1444:A:H61	1.61	0.65
4:E:129:GLY:O	4:E:147:ASP:HA	1.95	0.65
6:G:41:ARG:HD3	6:G:41:ARG:C	2.21	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:K:69:PRO:O	10:K:72:ALA:HB3	1.97	0.65
15:P:54:GLU:OE1	15:P:55:ARG:HD2	1.96	0.65
20:Y:4:G:O2'	20:Y:5:U:O4'	2.08	0.65
20:Y:955:C:O2'	20:Y:956:G:H5'	1.95	0.65
20:Y:1341:U:O2'	20:Y:1342:C:H5'	1.97	0.65
20:Y:1653:G:O2'	20:Y:1654:G:H5'	1.97	0.65
20:Y:1848:A:H5'	20:Y:1849:G:OP2	1.96	0.65
20:Y:1983:A:O2'	20:Y:1984:G:H5'	1.96	0.65
20:Y:2661:G:H2'	20:Y:2662:U:O4'	1.96	0.65
21:U:49:C:P	33:k:42:ARG:HH22	2.19	0.65
23:a:6:ILE:HG23	23:a:34:ASN:ND2	2.12	0.65
26:d:96:ARG:HB2	26:d:107:ALA:HB3	1.78	0.65
28:f:125:TYR:CE2	28:f:131:PRO:HD2	2.31	0.65
29:g:88:LYS:HE3	29:g:89:ASN:H	1.60	0.65
1:A:31:G:H2'	1:A:32:G:C8	2.32	0.65
1:A:577:G:H2'	1:A:624:G:N2	2.07	0.65
1:A:993:G:H2'	1:A:994:C:C6	2.32	0.65
1:A:1077:C:H2'	1:A:1078:C:H6	1.60	0.65
1:A:1242:A:N6	1:A:1255:G:O2'	2.30	0.65
3:D:15:LEU:CD2	3:D:17:VAL:HB	2.26	0.65
6:G:92:ARG:NH2	6:G:95:ARG:HB2	2.11	0.65
8:I:118:LEU:HD12	8:I:119:LYS:N	2.12	0.65
11:L:29:GLN:CG	11:L:81:LEU:HD11	2.26	0.65
20:Y:823:C:H2'	20:Y:824:G:H8	1.61	0.65
20:Y:1025:A:H2'	20:Y:1026:A:H8	1.60	0.65
20:Y:1401:A:H4'	20:Y:1402:A:OP1	1.96	0.65
20:Y:2010:G:O2'	20:Y:2011:U:H5'	1.97	0.65
20:Y:2249:G:H5'	23:a:159:ARG:NH1	2.11	0.65
20:Y:2268:G:C2'	20:Y:2269:C:H5'	2.26	0.65
20:Y:2552:A:H2'	20:Y:2553:G:C8	2.30	0.65
23:a:6:ILE:HA	23:a:34:ASN:ND2	2.11	0.65
24:b:31:ILE:HD13	24:b:34:MET:HE3	1.76	0.65
24:b:118:ARG:HH11	24:b:123:ARG:HG3	1.60	0.65
24:b:132:GLU:OE2	24:b:135:THR:HB	1.97	0.65
25:c:139:LEU:HD23	25:c:159:MET:HB2	1.79	0.65
25:c:155:ARG:HD2	25:c:156:PRO:CD	2.26	0.65
29:g:18:GLU:HB2	29:g:45:ASP:OD1	1.96	0.65
33:k:81:SER:HA	33:k:84:VAL:CG1	2.27	0.65
36:n:7:VAL:HG21	36:n:37:LEU:HD22	1.77	0.65
40:r:18:ARG:HB2	40:r:23:ALA:HB2	1.78	0.65
40:r:37:LEU:O	40:r:37:LEU:HD12	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:t:41:ARG:HG2	42:t:42:PRO:CD	2.26	0.65
44:v:24:VAL:CG1	44:v:80:ALA:HB3	2.26	0.65
1:A:718:U:P	5:F:92:ARG:HH12	2.19	0.65
1:A:949:C:H4'	8:I:147:TYR:OH	1.96	0.65
1:A:1511:C:O2'	1:A:1512:U:H5'	1.97	0.65
8:I:68:ILE:HG23	8:I:99:LEU:HD13	1.76	0.65
10:K:78:ASN:C	10:K:82:LYS:HE2	2.22	0.65
20:Y:125:C:O2'	20:Y:126:C:OP2	2.12	0.65
20:Y:1510:A:O2'	20:Y:1511:U:H5'	1.97	0.65
20:Y:1539:A:H2'	20:Y:1540:U:H1'	1.79	0.65
20:Y:1964:U:H2'	20:Y:1965:G:H8	1.61	0.65
20:Y:1982:G:C2	20:Y:2212:A:C6	2.85	0.65
20:Y:2454:G:N3	42:t:32:ASN:ND2	2.44	0.65
20:Y:2573:G:P	49:1:42:ARG:HH22	2.20	0.65
20:Y:2577:G:O2'	41:s:32:LYS:NZ	2.30	0.65
20:Y:2788:A:H2	20:Y:2871:U:H4'	1.61	0.65
20:Y:3037:C:H2'	20:Y:3038:C:C6	2.30	0.65
23:a:5:GLY:CA	23:a:84:LEU:HD22	2.12	0.65
24:b:136:PRO:CB	24:b:168:SER:HB3	2.26	0.65
32:j:3:LYS:HG2	32:j:4:PRO:CD	2.27	0.65
50:2:17:ILE:HD11	50:2:19:ARG:HE	1.62	0.65
1:A:48:G:OP1	15:P:12:LYS:HG3	1.97	0.65
1:A:145:G:O2'	1:A:1429:A:O2'	2.11	0.65
1:A:224:U:H1'	16:Q:8:LYS:O	1.97	0.65
1:A:862:C:O2'	1:A:863:G:H5'	1.97	0.65
1:A:941:A:H5"	1:A:942:U:OP2	1.97	0.65
1:A:986:G:N2	1:A:987:A:N3	2.45	0.65
3:D:85:LEU:O	3:D:89:LEU:HG	1.95	0.65
5:F:1:MET:HG2	5:F:68:GLU:CD	2.21	0.65
8:I:72:LEU:HD11	8:I:78:VAL:CA	2.26	0.65
13:N:7:VAL:HG22	13:N:23:ARG:NH2	2.12	0.65
15:P:67:THR:HG22	15:P:69:PRO:CD	2.23	0.65
20:Y:741:G:H2'	20:Y:742:G:H8	1.61	0.65
20:Y:1323:G:H2'	20:Y:1324:G:H21	1.62	0.65
20:Y:1846:G:O2'	20:Y:1847:U:H5'	1.96	0.65
20:Y:2167:U:H4'	20:Y:2168:U:H3'	1.79	0.65
20:Y:2617:U:H2'	20:Y:2618:C:C6	2.26	0.65
20:Y:2914:A:H3'	20:Y:2915:C:C5'	2.26	0.65
21:U:76:G:C1'	40:r:36:VAL:HG21	2.26	0.65
22:Z:137:PRO:HG2	22:Z:140:THR:CG2	2.26	0.65
23:a:40:ARG:O	23:a:48:SER:HA	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:b:58:VAL:HG11	24:b:80:ARG:HB2	1.78	0.65
25:c:74:VAL:HA	25:c:93:GLY:O	1.96	0.65
26:d:86:GLN:O	26:d:134:VAL:HG22	1.96	0.65
30:h:16:LYS:HA	30:h:16:LYS:CE	2.11	0.65
32:j:38:GLU:CG	32:j:39:PRO:HD3	2.22	0.65
33:k:47:ILE:HG22	33:k:112:ARG:HH21	1.61	0.65
34:l:47:ILE:HD12	34:l:99:LEU:HD12	1.78	0.65
38:p:34:HIS:CD2	38:p:35:PRO:HD2	2.32	0.65
42:t:44:GLY:HA2	42:t:46:LYS:HZ1	1.61	0.65
48:z:25:MET:HE1	48:z:31:ARG:HG2	1.78	0.65
1:A:339:C:OP2	29:g:97:ARG:NH1	2.30	0.65
1:A:406:G:O2'	1:A:407:A:H5'	1.97	0.65
1:A:411:A:O2'	1:A:413:G:O4'	2.09	0.65
1:A:498:C:H4'	1:A:499:C:O5'	1.95	0.65
1:A:675:A:O2'	1:A:676:A:H5'	1.97	0.65
3:D:70:TYR:HE1	3:D:88:ILE:HG12	1.61	0.65
3:D:151:GLN:OE1	3:D:154:ARG:HD3	1.97	0.65
5:F:5:GLU:HG2	5:F:93:THR:CG2	2.27	0.65
7:H:90:LYS:HD3	7:H:91:SER:H	1.60	0.65
8:I:98:ALA:O	8:I:101:LEU:HG	1.96	0.65
9:J:45:GLU:OE2	9:J:47:ASN:ND2	2.30	0.65
11:L:108:LYS:HE2	11:L:108:LYS:HA	1.78	0.65
17:R:22:PHE:CE1	17:R:37:LEU:HD21	2.32	0.65
19:V:213:LEU:O	19:V:216:VAL:HG12	1.96	0.65
20:Y:23:G:H4'	20:Y:1375:G:H4'	1.79	0.65
20:Y:253:C:O2'	20:Y:254:G:H5'	1.96	0.65
20:Y:658:U:OP1	30:h:31:LYS:HE2	1.96	0.65
20:Y:1177:G:O2'	20:Y:1178:U:OP1	2.14	0.65
20:Y:1188:A:N7	20:Y:1214:A:O2'	2.28	0.65
20:Y:2843:C:O3'	23:a:162:LYS:HD3	1.97	0.65
20:Y:3060:A:H2'	20:Y:3061:C:H5'	1.78	0.65
21:U:79:A:H2'	21:U:80:C:H5'	1.78	0.65
23:a:101:LEU:HD23	23:a:102:THR:N	2.10	0.65
23:a:129:ARG:NH1	23:a:168:GLY:O	2.30	0.65
31:i:75:THR:HG22	31:i:90:PRO:HA	1.78	0.65
32:j:96:ARG:NH1	32:j:116:VAL:HG13	2.11	0.65
43:u:18:LEU:HD11	43:u:19:LYS:HZ2	1.60	0.65
1:A:654:G:O6	1:A:696:A:N1	2.30	0.65
1:A:714:G:O2'	17:R:69:LYS:HE3	1.96	0.65
1:A:1177:A:O2'	1:A:1178:A:OP1	2.15	0.65
1:A:1291:G:O2'	1:A:1292:G:H5'	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1350:U:H5'	9:J:62:ARG:NH1	2.12	0.65
1:A:1427:C:H2'	1:A:1428:U:C6	2.32	0.65
1:A:1508:C:H2'	1:A:1509:G:H8	1.61	0.65
2:C:17:GLU:HG2	2:C:19:LYS:NZ	2.12	0.65
3:D:89:LEU:O	3:D:92:ARG:HG3	1.97	0.65
5:F:53:ALA:HB3	5:F:55:HIS:CE1	2.30	0.65
6:G:60:VAL:HA	6:G:63:LYS:CE	2.27	0.65
9:J:80:THR:HB	9:J:83:THR:OG1	1.96	0.65
14:O:76:ALA:HA	14:O:79:ARG:NE	2.04	0.65
20:Y:15:C:H2'	20:Y:16:G:C8	2.31	0.65
20:Y:413:G:O2'	20:Y:414:A:H5'	1.97	0.65
20:Y:821:A:N6	20:Y:840:G:H1'	2.12	0.65
20:Y:936:A:H5"	20:Y:937:U:C5'	2.26	0.65
20:Y:1064:A:H2'	20:Y:1065:C:C6	2.32	0.65
20:Y:1407:G:O2'	20:Y:1408:C:H5'	1.97	0.65
20:Y:2597:A:H2'	20:Y:2598:C:C6	2.32	0.65
20:Y:2843:C:H3'	23:a:162:LYS:HZ2	1.62	0.65
20:Y:2954:C:O2'	20:Y:2955:G:H5'	1.97	0.65
20:Y:2967:C:H2'	20:Y:2968:G:H5"	1.79	0.65
31:i:34:ILE:HG22	31:i:129:ALA:HB1	1.79	0.65
38:p:12:LEU:HB2	38:p:32:VAL:O	1.97	0.65
39:q:93:LYS:N	39:q:93:LYS:HD2	2.11	0.65
44:v:77:THR:HA	44:v:106:LYS:HZ2	1.61	0.65
47:y:13:LEU:N	47:y:23:TYR:O	2.30	0.65
1:A:139:C:H5	16:Q:5:LYS:HD2	1.62	0.64
1:A:158:A:N6	1:A:346:G:N7	2.45	0.64
1:A:711:G:H2'	1:A:712:C:C6	2.31	0.64
1:A:1139:C:H4'	19:V:132:LYS:NZ	2.12	0.64
2:C:89:ASP:O	2:C:92:LYS:HD2	1.97	0.64
3:D:12:SER:OG	3:D:19:LEU:HG	1.98	0.64
3:D:69:ARG:O	3:D:69:ARG:NH1	2.29	0.64
4:E:70:MET:CG	4:E:98:ARG:HD3	2.26	0.64
11:L:116:ARG:HG2	11:L:117:TYR:CE1	2.32	0.64
20:Y:500:A:H62	20:Y:2636:A:HO2'	1.45	0.64
20:Y:886:G:OP1	48:z:17:ARG:HD2	1.97	0.64
20:Y:1502:G:O2'	20:Y:1503:G:H5'	1.97	0.64
20:Y:2080:G:O2'	20:Y:2081:U:H5'	1.96	0.64
20:Y:2295:C:O2'	20:Y:2296:C:H5'	1.97	0.64
20:Y:2600:A:H3'	20:Y:2601:A:H8	1.61	0.64
24:b:3:LEU:HD11	24:b:5:VAL:CG2	2.24	0.64
28:f:47:ASN:OD1	28:f:48:VAL:HG23	1.96	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:h:94:GLY:HA2	30:h:125:THR:OG1	1.97	0.64
32:j:35:LYS:HB2	32:j:112:VAL:HG22	1.79	0.64
32:j:65:GLU:OE1	32:j:69:LYS:NZ	2.26	0.64
34:l:94:ALA:O	34:l:95:LYS:HG3	1.95	0.64
1:A:235:C:H2'	1:A:236:G:C8	2.32	0.64
1:A:481:G:H2'	1:A:482:A:C8	2.33	0.64
1:A:1222:G:H2'	1:A:1223:G:H8	1.61	0.64
1:A:1336:C:H2'	1:A:1337:A:C8	2.32	0.64
2:C:41:LEU:HD12	2:C:42:LEU:N	2.11	0.64
2:C:86:ILE:HA	2:C:89:ASP:OD2	1.98	0.64
8:I:39:VAL:HG21	8:I:102:ALA:HB1	1.80	0.64
14:O:40:THR:O	14:O:44:LYS:HG3	1.96	0.64
18:T:18:ARG:HH12	18:T:25:LYS:NZ	1.95	0.64
20:Y:105:A:H2'	20:Y:106:G:C8	2.32	0.64
20:Y:366:G:N2	20:Y:438:U:O4	2.30	0.64
20:Y:490:A:H2'	20:Y:491:U:H5'	1.78	0.64
20:Y:1038:G:H4'	41:s:29:GLN:HG2	1.79	0.64
20:Y:1342:C:H2'	20:Y:1343:G:C8	2.32	0.64
20:Y:1838:G:O2'	20:Y:1839:U:H5'	1.97	0.64
20:Y:1962:A:O2'	20:Y:1963:G:H5'	1.98	0.64
20:Y:2814:A:H2'	20:Y:2815:C:H6	1.61	0.64
20:Y:3101:C:H1'	32:j:92:GLY:O	1.97	0.64
25:c:128:GLN:HG3	25:c:137:PHE:CE2	2.32	0.64
26:d:57:ASP:O	26:d:62:SER:OG	2.12	0.64
29:g:122:LEU:HD22	34:l:42:PHE:CE1	2.33	0.64
30:h:79:ASN:N	30:h:82:ASP:OD2	2.30	0.64
30:h:86:ALA:O	30:h:88:PRO:HD3	1.97	0.64
36:n:7:VAL:CG2	36:n:37:LEU:HD22	2.27	0.64
38:p:52:VAL:HA	38:p:91:LYS:HE2	1.78	0.64
1:A:44:C:H2'	1:A:45:G:C8	2.32	0.64
1:A:462:A:H2'	1:A:463:C:O4'	1.97	0.64
1:A:495:G:H2'	1:A:496:U:H6	1.61	0.64
1:A:626:G:H2'	1:A:627:C:O4'	1.98	0.64
1:A:867:G:O2'	1:A:868:G:H5'	1.97	0.64
1:A:1149:C:H1'	1:A:1150:A:OP2	1.97	0.64
1:A:1325:G:O2'	1:A:1326:C:H5'	1.97	0.64
1:A:1353:G:H5'	8:I:34:GLU:CD	2.22	0.64
1:A:1489:G:H5"	1:A:1490:U:O5'	1.97	0.64
6:G:79:ARG:CA	6:G:84:THR:HA	2.24	0.64
9:J:47:ASN:HB2	9:J:67:MET:CB	2.26	0.64
20:Y:458:G:O2'	20:Y:512:G:OP1	2.13	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:823:C:H2'	20:Y:824:G:C8	2.32	0.64
20:Y:1085:G:H1'	45:w:17:TRP:CZ3	2.32	0.64
20:Y:1569:A:H2'	20:Y:1570:C:C6	2.32	0.64
20:Y:2504:G:O2'	20:Y:2505:C:H5'	1.97	0.64
20:Y:2579:C:H2'	20:Y:2580:G:C8	2.32	0.64
20:Y:2866:A:C5'	28:f:80:TYR:HE2	2.09	0.64
22:Z:266:LYS:HG3	22:Z:267:LEU:HD23	1.78	0.64
24:b:202:ASN:HA	24:b:205:ILE:HD11	1.79	0.64
28:f:42:PRO:HD2	28:f:43:THR:N	2.13	0.64
30:h:101:LYS:HB3	30:h:103:LEU:HD12	1.80	0.64
34:l:59:THR:HA	34:l:72:THR:HA	1.79	0.64
44:v:67:GLU:OE1	44:v:67:GLU:N	2.25	0.64
45:w:7:THR:HA	45:w:33:GLN:O	1.96	0.64
1:A:129:C:H2'	1:A:130:U:C6	2.33	0.64
1:A:562:U:OP2	1:A:738:G:N1	2.27	0.64
1:A:687:U:H2'	1:A:688:C:C6	2.32	0.64
1:A:858:A:O2'	1:A:859:C:H5'	1.96	0.64
2:C:31:TYR:O	2:C:34:GLU:HG3	1.97	0.64
4:E:102:ILE:HD13	4:E:107:THR:HA	1.79	0.64
6:G:26:LEU:HD23	6:G:101:LEU:CD2	2.28	0.64
14:O:9:LYS:O	14:O:9:LYS:HD2	1.97	0.64
19:V:80:ILE:O	19:V:83:GLU:HG3	1.98	0.64
20:Y:32:G:O2'	20:Y:542:A:O4'	2.15	0.64
20:Y:35:A:N3	24:b:49:THR:OG1	2.28	0.64
20:Y:953:G:H22	20:Y:1058:A:H2	1.46	0.64
20:Y:1115:G:O2'	20:Y:1116:C:H5'	1.97	0.64
20:Y:1636:A:C2	20:Y:1805:G:H1'	2.33	0.64
20:Y:1659:U:H2'	20:Y:1660:A:H8	1.63	0.64
20:Y:2885:G:H2'	20:Y:2886:A:C8	2.33	0.64
20:Y:2903:A:H2'	20:Y:2904:C:H6	1.62	0.64
21:U:8:C:C3'	21:U:9:G:H5"	2.27	0.64
23:a:35:VAL:O	23:a:52:LEU:HD23	1.98	0.64
24:b:142:LYS:HA	24:b:145:LEU:HD21	1.78	0.64
25:c:121:PHE:O	25:c:122:ARG:HD3	1.98	0.64
26:d:12:PRO:CD	26:d:15:VAL:HG21	2.25	0.64
26:d:100:LYS:HG3	26:d:105:GLU:OE2	1.97	0.64
28:f:75:TYR:CZ	28:f:86:LYS:HE2	2.32	0.64
44:v:36:LEU:O	44:v:39:LEU:HG	1.98	0.64
1:A:89:G:H3'	1:A:90:G:H8	1.63	0.64
1:A:425:G:H2'	1:A:426:U:C6	2.33	0.64
1:A:756:G:N2	1:A:782:A:OP2	2.29	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1138:A:H61	1:A:1159:G:H1'	1.63	0.64
1:A:1291:G:H5'	12:M:78:ILE:HD11	1.79	0.64
1:A:1349:C:OP2	8:I:139:LYS:NZ	2.30	0.64
2:C:162:MET:HE2	2:C:163:SER:N	2.12	0.64
5:F:92:ARG:HH11	5:F:92:ARG:HG2	1.63	0.64
13:N:22:THR:HG21	13:N:35:ARG:HD2	1.78	0.64
13:N:26:LYS:HD3	13:N:43:CYS:SG	2.37	0.64
20:Y:140:G:H2'	20:Y:141:U:H5'	1.80	0.64
20:Y:444:U:OP1	20:Y:446:G:H4'	1.97	0.64
20:Y:971:G:H21	41:s:26:PHE:CB	2.10	0.64
20:Y:972:A:HO2'	20:Y:973:G:P	2.19	0.64
20:Y:1281:G:O2'	20:Y:1282:G:H5'	1.98	0.64
20:Y:1822:C:H2'	20:Y:1823:C:C6	2.32	0.64
20:Y:1992:U:H2'	20:Y:1993:G:C5'	2.25	0.64
20:Y:2154:G:O2'	20:Y:2155:U:OP2	2.14	0.64
20:Y:2529:A:O2'	20:Y:2530:C:O5'	2.15	0.64
20:Y:2910:G:H2'	20:Y:2911:U:C6	2.32	0.64
23:a:57:ILE:HG13	23:a:79:ARG:HA	1.78	0.64
24:b:172:LEU:HD12	24:b:175:VAL:HG11	1.79	0.64
25:c:8:LEU:HD21	25:c:16:ARG:HH22	1.61	0.64
25:c:45:MET:O	25:c:94:ALA:N	2.27	0.64
25:c:77:ALA:HB3	25:c:88:GLU:CA	2.24	0.64
25:c:139:LEU:HD12	25:c:140:ASN:N	2.12	0.64
29:g:35:ILE:HD12	29:g:69:ARG:HD3	1.79	0.64
30:h:129:PHE:CE1	30:h:144:ALA:HB1	2.33	0.64
36:n:6:ILE:HG12	36:n:41:LEU:HB3	1.80	0.64
43:u:29:LEU:HB2	43:u:50:VAL:CG1	2.16	0.64
44:v:25:VAL:CG2	44:v:106:LYS:HE2	2.28	0.64
44:v:37:ALA:O	44:v:41:ARG:NE	2.27	0.64
1:A:1040:U:H4'	9:J:54:SER:HB3	1.78	0.64
1:A:1277:U:H4'	12:M:14:ARG:HE	1.62	0.64
1:A:1336:C:H2'	1:A:1337:A:H8	1.62	0.64
5:F:7:MET:HE1	17:R:32:TYR:OH	1.98	0.64
6:G:50:ALA:O	6:G:54:THR:HG23	1.98	0.64
6:G:115:THR:H	6:G:119:ARG:NH1	1.92	0.64
8:I:30:GLY:HA2	8:I:105:ARG:NH2	2.13	0.64
13:N:40:CYS:SG	13:N:43:CYS:HB3	2.25	0.64
20:Y:689:U:H3	20:Y:776:G:H22	1.46	0.64
20:Y:932:C:O2'	20:Y:954:U:OP1	2.15	0.64
20:Y:943:U:H4'	20:Y:946:G:C6	2.31	0.64
20:Y:996:G:P	20:Y:997:G:H3'	2.38	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:1199:U:O2'	27:e:129:ILE:HD11	1.97	0.64
20:Y:1670:G:O2'	20:Y:1671:U:H5'	1.98	0.64
20:Y:1900:C:OP2	20:Y:1917:G:N2	2.31	0.64
22:Z:69:ARG:O	22:Z:130:ASN:ND2	2.30	0.64
22:Z:79:VAL:CG1	22:Z:113:GLN:HA	2.28	0.64
25:c:18:GLU:HG2	25:c:19:ILE:N	2.11	0.64
26:d:30:LYS:HD3	26:d:30:LYS:N	2.11	0.64
27:e:87:VAL:HB	27:e:99:VAL:HG21	1.79	0.64
29:g:12:ASP:OD2	29:g:95:GLY:HA3	1.97	0.64
38:p:8:ARG:CB	38:p:49:ILE:HD11	2.28	0.64
39:q:40:ARG:HD2	39:q:63:GLU:OE2	1.97	0.64
44:v:26:THR:O	44:v:106:LYS:NZ	2.31	0.64
1:A:327:A:H1'	1:A:329:A:O4'	1.97	0.64
1:A:523:U:H5'	3:D:14:ARG:NH2	2.13	0.64
1:A:748:A:H4'	1:A:1507:G:N2	2.11	0.64
1:A:1040:U:H5'	9:J:53:ARG:O	1.97	0.64
1:A:1081:A:H4'	1:A:1082:A:O5'	1.97	0.64
7:H:32:LEU:HD12	7:H:33:LYS:H	1.61	0.64
8:I:30:GLY:O	8:I:36:VAL:HA	1.97	0.64
11:L:78:SER:O	11:L:80:VAL:HG13	1.98	0.64
14:O:39:LEU:O	14:O:43:LEU:HD13	1.98	0.64
20:Y:199:U:C2'	20:Y:200:C:H5'	2.28	0.64
20:Y:732:G:H2'	20:Y:733:U:C6	2.33	0.64
20:Y:1129:G:OP1	35:m:77:ASN:ND2	2.30	0.64
20:Y:1537:U:H2'	20:Y:1538:G:H8	1.62	0.64
20:Y:1760:G:H2'	20:Y:1761:G:C8	2.33	0.64
20:Y:2295:C:H2'	20:Y:2296:C:H6	1.63	0.64
20:Y:2297:U:H2'	20:Y:2298:U:H6	1.63	0.64
20:Y:2303:A:C1'	42:t:23:ARG:HH21	2.09	0.64
20:Y:2565:G:H2'	20:Y:2566:C:C6	2.32	0.64
20:Y:2812:G:C2	20:Y:2831:G:N2	2.66	0.64
22:Z:53:HIS:O	22:Z:218:ARG:N	2.27	0.64
23:a:34:ASN:HB3	23:a:52:LEU:CD2	2.28	0.64
32:j:66:VAL:HG11	32:j:76:VAL:HG23	1.78	0.64
34:l:80:ILE:HG21	34:l:83:ILE:HG13	1.80	0.64
37:o:44:ARG:HB2	37:o:45:TRP:HE3	1.61	0.64
39:q:5:LYS:NZ	39:q:24:LEU:HA	2.12	0.64
40:r:86:HIS:NE2	40:r:89:ARG:HG2	2.12	0.64
43:u:18:LEU:HD12	43:u:19:LYS:N	2.13	0.64
47:y:24:ILE:HD13	49:1:34:GLU:HG2	1.79	0.64
51:4:2384:C:H3'	51:4:2385:G:C5'	2.27	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:25:G:H2'	1:A:26:G:H8	1.62	0.64
1:A:89:G:H2'	1:A:90:G:C8	2.32	0.64
1:A:122:G:OP1	1:A:586:G:H5'	1.98	0.64
1:A:955:G:H1'	9:J:57:LYS:NZ	2.13	0.64
1:A:1461:U:H2'	1:A:1462:C:C6	2.32	0.64
3:D:132:VAL:HG13	3:D:136:ASP:OD2	1.97	0.64
12:M:11:ARG:O	12:M:11:ARG:NH1	2.30	0.64
12:M:34:LEU:HD22	12:M:39:ILE:O	1.98	0.64
12:M:86:CYS:O	12:M:90:LEU:HG	1.97	0.64
12:M:115:ARG:NH2	12:M:116:THR:O	2.30	0.64
20:Y:242:G:C8	49:1:3:LYS:HD3	2.33	0.64
20:Y:655:G:O2'	20:Y:656:C:H5'	1.97	0.64
20:Y:1481:C:H2'	20:Y:1482:A:O4'	1.98	0.64
20:Y:1849:G:H21	20:Y:1853:A:H62	1.46	0.64
20:Y:2135:U:H3'	20:Y:2142:A:H61	1.63	0.64
20:Y:2197:G:O2'	20:Y:2198:C:H5'	1.98	0.64
20:Y:2420:U:O2'	20:Y:2421:A:H2'	1.98	0.64
20:Y:2811:A:H5"	20:Y:2812:G:OP2	1.97	0.64
20:Y:2955:G:O2'	20:Y:2956:G:H5'	1.97	0.64
23:a:115:THR:OG1	23:a:175:VAL:O	2.12	0.64
25:c:65:ALA:O	25:c:69:GLY:N	2.27	0.64
29:g:17:LYS:HB2	29:g:45:ASP:OD2	1.96	0.64
30:h:61:LEU:O	49:1:13:ARG:HD2	1.97	0.64
32:j:46:PRO:O	32:j:50:LYS:HG2	1.97	0.64
34:l:24:THR:HG23	34:l:43:LYS:NZ	2.13	0.64
43:u:29:LEU:HD13	43:u:50:VAL:CG1	2.28	0.64
1:A:36:A:H2'	1:A:37:A:C8	2.33	0.64
1:A:421:U:H5"	1:A:422:C:C5	2.33	0.64
1:A:439:U:O2'	3:D:114:SER:O	2.08	0.64
1:A:857:U:O2	7:H:16:ASN:ND2	2.25	0.64
1:A:1092:C:O2	2:C:179:ARG:HB2	1.98	0.64
1:A:1392:C:H2'	1:A:1393:G:C8	2.32	0.64
2:C:150:ARG:NE	2:C:169:ARG:HB3	2.07	0.64
3:D:120:VAL:O	3:D:123:VAL:HG22	1.98	0.64
12:M:88:GLN:HA	12:M:98:VAL:HG11	1.79	0.64
14:O:33:THR:HA	14:O:36:ILE:CD1	2.28	0.64
18:T:35:PHE:CZ	18:T:79:LEU:HB3	2.33	0.64
19:V:56:PHE:O	19:V:60:THR:HG23	1.97	0.64
19:V:101:LEU:HD23	19:V:101:LEU:H	1.63	0.64
20:Y:28:C:H5"	20:Y:1354:G:OP1	1.98	0.64
20:Y:679:G:O6	30:h:35:ARG:HD2	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:1177:G:H2'	20:Y:1178:U:C6	2.32	0.64
20:Y:1224:G:C5'	44:v:53:LYS:HZ3	2.11	0.64
20:Y:1667:C:O2'	20:Y:1668:C:H5'	1.97	0.64
20:Y:2274:C:H3'	20:Y:2274:C:OP2	1.98	0.64
20:Y:2443:U:H2'	20:Y:2444:C:H6	1.61	0.64
20:Y:2894:G:H2'	20:Y:2895:A:H8	1.63	0.64
24:b:3:LEU:HD12	24:b:4:LYS:H	1.60	0.64
24:b:153:LYS:HA	24:b:174:GLY:O	1.98	0.64
26:d:138:ASP:OD1	26:d:140:GLN:N	2.28	0.64
28:f:57:ILE:CG2	28:f:128:PRO:HA	2.27	0.64
29:g:64:ARG:O	29:g:83:ALA:N	2.30	0.64
30:h:67:PHE:O	30:h:68:LYS:HD3	1.98	0.64
35:m:11:GLN:HG3	35:m:15:ARG:HH21	1.62	0.64
35:m:97:GLU:CD	36:n:15:LYS:HD3	2.23	0.64
39:q:86:ARG:HD3	39:q:97:ILE:CD1	2.19	0.64
51:4:2387:U:OP2	51:4:2396:A:N6	2.30	0.64
1:A:71:C:H2'	1:A:72:G:C8	2.33	0.64
1:A:818:U:O4	1:A:830:G:O6	2.16	0.64
1:A:977:C:H4'	13:N:8:HIS:NE2	2.13	0.64
3:D:106:ARG:HD3	3:D:106:ARG:H	1.62	0.64
10:K:33:LYS:CD	10:K:40:ILE:HD11	2.27	0.64
11:L:79:MET:HE3	11:L:102:LEU:HB3	1.80	0.64
11:L:86:ARG:O	11:L:96:LYS:NZ	2.30	0.64
12:M:25:ILE:CA	12:M:29:ARG:HH21	2.11	0.64
15:P:6:LYS:N	15:P:21:ILE:O	2.31	0.64
18:T:54:THR:HA	18:T:57:LYS:CE	2.26	0.64
19:V:81:ALA:HB2	19:V:93:ASN:ND2	2.13	0.64
19:V:217:ILE:O	19:V:221:VAL:HG13	1.96	0.64
20:Y:919:A:H5'	20:Y:920:G:OP1	1.97	0.64
20:Y:1064:A:H2'	20:Y:1065:C:H6	1.63	0.64
20:Y:1255:G:O2'	20:Y:1256:G:H5'	1.98	0.64
20:Y:1850:A:O2'	20:Y:1851:G:O4'	2.13	0.64
20:Y:2738:U:H2'	20:Y:2739:C:C6	2.32	0.64
20:Y:2791:G:H2'	20:Y:2792:C:C6	2.33	0.64
20:Y:2815:C:H2'	20:Y:2816:G:C8	2.33	0.64
20:Y:3013:C:H2'	20:Y:3113:A:H61	1.63	0.64
21:U:43:C:O2'	25:c:70:GLN:HG3	1.97	0.64
21:U:102:A:P	40:r:81:LYS:HZ1	2.21	0.64
25:c:55:LYS:HA	25:c:58:ASN:ND2	2.13	0.64
27:e:104:TRP:O	27:e:108:ARG:HG2	1.98	0.64
34:l:27:VAL:HG23	34:l:80:ILE:HG12	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:l:64:SER:HG	34:l:65:TYR:HD1	1.45	0.64
34:l:80:ILE:HG21	34:l:83:ILE:CG1	2.28	0.64
35:m:28:ARG:HA	35:m:34:LYS:NZ	2.13	0.64
40:r:90:ARG:O	40:r:90:ARG:CD	2.46	0.64
48:z:14:ARG:H	48:z:14:ARG:HD2	1.63	0.64
49:1:39:LYS:CD	49:1:43:ARG:HH22	2.11	0.64
51:4:2367:G:H1'	51:4:2371:G:N2	2.12	0.64
1:A:538:G:H3'	1:A:539:A:C5'	2.28	0.63
1:A:616:G:H2'	1:A:617:G:C8	2.33	0.63
1:A:637:U:H4'	14:O:28:GLN:NE2	2.12	0.63
1:A:799:G:H4'	1:A:800:U:OP2	1.99	0.63
1:A:1207:C:H2'	1:A:1207:C:OP2	1.98	0.63
5:F:27:LEU:HA	5:F:30:ILE:CD1	2.28	0.63
5:F:62:VAL:O	5:F:63:ILE:HD13	1.98	0.63
6:G:44:TYR:HA	6:G:47:LEU:CD2	2.28	0.63
11:L:31:ARG:O	11:L:58:THR:HG23	1.98	0.63
19:V:114:LEU:HD12	19:V:144:LEU:CD1	2.26	0.63
20:Y:85:G:O2'	20:Y:86:U:H5'	1.99	0.63
20:Y:89:A:H2'	20:Y:90:C:H5'	1.80	0.63
20:Y:390:G:H21	20:Y:411:G:H21	1.44	0.63
20:Y:411:G:H4'	20:Y:412:A:OP2	1.96	0.63
20:Y:616:A:O2'	20:Y:617:U:OP1	2.16	0.63
20:Y:641:U:H5'	36:n:21:VAL:CG1	2.28	0.63
20:Y:1210:C:H3'	20:Y:1211:G:P	2.38	0.63
20:Y:1285:G:H2'	20:Y:1286:C:C6	2.32	0.63
20:Y:1927:C:O2'	20:Y:1928:C:H5'	1.98	0.63
20:Y:1939:U:C2	20:Y:1955:A:N6	2.67	0.63
20:Y:2060:C:C2'	20:Y:2061:U:H5'	2.28	0.63
20:Y:2141:U:H2'	20:Y:2142:A:H5'	1.80	0.63
20:Y:2744:C:O2'	20:Y:2745:C:H5'	1.98	0.63
20:Y:2761:U:H2'	20:Y:2762:C:H6	1.63	0.63
24:b:143:THR:O	24:b:147:THR:HG23	1.98	0.63
26:d:9:VAL:O	26:d:51:ILE:N	2.31	0.63
29:g:78:LYS:HZ2	34:l:100:ARG:HE	1.44	0.63
37:o:18:ARG:O	37:o:19:VAL:HG13	1.98	0.63
37:o:50:ALA:O	37:o:53:PRO:HD2	1.96	0.63
40:r:16:ARG:HG3	40:r:48:GLU:HG2	1.78	0.63
1:A:227:G:O2'	1:A:228:A:H5'	1.98	0.63
1:A:308:C:H2'	1:A:309:G:O4'	1.98	0.63
1:A:429:U:H1'	1:A:430:A:OP2	1.98	0.63
1:A:492:U:H2'	1:A:493:A:H8	1.60	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1133:G:H4'	9:J:15:HIS:NE2	2.12	0.63
1:A:1510:G:H2'	1:A:1511:C:C6	2.32	0.63
2:C:180:ALA:HB3	2:C:182:ILE:HD11	1.80	0.63
4:E:162:VAL:O	4:E:166:VAL:HG23	1.97	0.63
6:G:67:ASP:HA	6:G:70:LYS:HD3	1.79	0.63
8:I:61:ASN:HB2	8:I:64:HIS:ND1	2.12	0.63
11:L:79:MET:HE3	11:L:102:LEU:HD12	1.80	0.63
12:M:104:LYS:HA	12:M:104:LYS:HE3	1.79	0.63
15:P:48:LEU:O	15:P:49:ILE:HD13	1.98	0.63
19:V:27:MET:HE2	19:V:27:MET:N	2.12	0.63
20:Y:138:A:O2'	20:Y:139:U:H5'	1.99	0.63
20:Y:374:U:O4	20:Y:375:A:N6	2.30	0.63
20:Y:389:G:N1	20:Y:392:A:OP2	2.27	0.63
20:Y:790:A:O2'	20:Y:791:A:O4'	2.12	0.63
20:Y:924:G:H2'	20:Y:925:U:H6	1.63	0.63
20:Y:1087:G:H2'	20:Y:1088:U:C6	2.33	0.63
20:Y:1706:A:O2'	20:Y:1707:G:H5'	1.97	0.63
20:Y:1816:C:H2'	20:Y:1817:C:N1	2.13	0.63
20:Y:2076:A:O2'	20:Y:2077:C:H5'	1.99	0.63
20:Y:2280:G:N2	46:x:2:ALA:HA	2.12	0.63
20:Y:2419:C:H2'	20:Y:2420:U:C6	2.32	0.63
20:Y:2528:G:H5'	20:Y:2529:A:C5'	2.28	0.63
20:Y:2618:C:OP1	49:1:30:ARG:NH2	2.32	0.63
20:Y:2794:G:C2'	20:Y:2795:C:H5'	2.28	0.63
20:Y:2961:G:H2'	20:Y:2962:A:C8	2.33	0.63
23:a:35:VAL:HG21	23:a:75:VAL:HG21	1.80	0.63
25:c:17:GLU:HG2	25:c:18:GLU:OE1	1.98	0.63
25:c:117:ARG:NH1	25:c:117:ARG:HB3	2.13	0.63
25:c:141:GLU:HG3	25:c:143:SER:H	1.63	0.63
28:f:36:LEU:O	28:f:51:GLY:HA3	1.98	0.63
29:g:7:ARG:HA	29:g:7:ARG:HE	1.63	0.63
32:j:65:GLU:OE2	32:j:68:LYS:HD3	1.97	0.63
33:k:26:ARG:HD2	33:k:26:ARG:C	2.22	0.63
37:o:81:VAL:HG23	37:o:112:VAL:HG22	1.80	0.63
38:p:39:LYS:HA	38:p:42:ILE:HD12	1.79	0.63
38:p:44:ILE:HA	38:p:47:GLU:OE1	1.98	0.63
1:A:147:U:C2	1:A:168:A:N6	2.67	0.63
1:A:578:U:H4'	7:H:88:TYR:CE2	2.33	0.63
1:A:790:C:H5'	1:A:791:C:OP2	1.97	0.63
1:A:1030:G:H2'	1:A:1031:G:H8	1.63	0.63
1:A:1307:C:O2'	1:A:1308:C:H5'	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1358:A:H2'	1:A:1359:U:C6	2.33	0.63
1:A:1434:U:O2'	1:A:1435:U:H5"	1.98	0.63
2:C:8:HIS:O	2:C:12:LEU:HD23	1.98	0.63
7:H:35:ASN:ND2	7:H:112:LEU:HD12	2.13	0.63
19:V:129:ARG:HB2	19:V:134:ILE:CD1	2.27	0.63
19:V:187:LEU:HD12	19:V:191:CYS:HB2	1.79	0.63
20:Y:42:G:H5'	20:Y:43:C:O5'	1.99	0.63
20:Y:307:G:H2'	20:Y:308:U:C6	2.33	0.63
20:Y:362:A:O2'	20:Y:363:A:O4'	2.09	0.63
20:Y:1224:G:OP1	44:v:53:LYS:HE2	1.98	0.63
20:Y:1450:C:OP1	38:p:68:ARG:HB3	1.99	0.63
20:Y:1666:A:H62	20:Y:1687:G:N2	1.93	0.63
20:Y:1843:C:H2'	20:Y:1844:A:H5'	1.80	0.63
20:Y:1944:C:H2'	20:Y:1945:U:H6	1.63	0.63
20:Y:1953:C:H2'	20:Y:1954:C:O4'	1.98	0.63
20:Y:2080:G:O3'	20:Y:2635:A:O2'	2.17	0.63
20:Y:2516:U:H2'	20:Y:2517:C:C6	2.32	0.63
20:Y:2547:G:O2'	20:Y:2548:U:O5'	2.12	0.63
22:Z:228:PRO:HD3	22:Z:235:GLY:CA	2.28	0.63
23:a:114:VAL:HG21	23:a:198:ILE:HB	1.80	0.63
27:e:82:LEU:HD11	27:e:89:LYS:N	2.13	0.63
27:e:108:ARG:NH1	27:e:127:ALA:HB2	2.13	0.63
34:l:9:GLN:HA	34:l:12:LEU:HD12	1.80	0.63
35:m:11:GLN:HG3	35:m:15:ARG:NH2	2.13	0.63
1:A:223:G:C1'	16:Q:8:LYS:HB2	2.22	0.63
1:A:493:A:H2'	1:A:494:C:C6	2.34	0.63
1:A:807:U:H2'	1:A:852:U:O4	1.99	0.63
1:A:968:U:H2'	1:A:969:G:O4'	1.98	0.63
2:C:17:GLU:HG2	2:C:19:LYS:HZ2	1.63	0.63
3:D:45:GLU:O	3:D:48:GLN:HG2	1.98	0.63
20:Y:537:A:C2'	20:Y:538:G:H5'	2.29	0.63
20:Y:851:C:O2'	20:Y:852:C:H5'	1.98	0.63
20:Y:889:A:OP1	22:Z:48:ARG:NH2	2.32	0.63
20:Y:1177:G:C2'	20:Y:1178:U:H2'	2.29	0.63
20:Y:1180:G:H2'	20:Y:1181:G:C8	2.32	0.63
20:Y:1224:G:N3	44:v:28:TYR:OH	2.31	0.63
20:Y:1479:G:OP1	42:t:2:ALA:N	2.32	0.63
20:Y:2251:G:O2'	20:Y:2252:U:H5'	1.99	0.63
20:Y:2471:A:H2'	20:Y:2472:C:H6	1.63	0.63
20:Y:2530:C:H3'	20:Y:2531:G:H8	1.63	0.63
20:Y:2537:C:H4'	25:c:95:ARG:HH12	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:2684:U:C2'	20:Y:2685:C:H5'	2.28	0.63
20:Y:2755:A:H5"	26:d:158:TYR:CE1	2.33	0.63
22:Z:181:GLU:OE2	22:Z:272:ARG:HA	1.99	0.63
23:a:35:VAL:HG11	23:a:78:ARG:HH21	1.61	0.63
23:a:51:GLN:OE1	23:a:52:LEU:N	2.30	0.63
24:b:158:ILE:HA	24:b:197:SER:HG	1.60	0.63
29:g:9:LYS:HE3	29:g:9:LYS:CA	2.21	0.63
29:g:104:ARG:HH11	29:g:104:ARG:HG2	1.63	0.63
43:u:36:MET:O	43:u:39:GLY:N	2.29	0.63
50:2:25:VAL:CG2	50:2:34:GLN:HG2	2.27	0.63
1:A:137:C:H2'	16:Q:6:GLY:HA2	1.80	0.63
1:A:221:G:H2'	1:A:222:U:C6	2.33	0.63
1:A:700:C:OP2	1:A:701:G:O2'	2.10	0.63
1:A:1295:U:H2'	1:A:1296:C:C6	2.33	0.63
1:A:1420:C:OP1	18:T:29:ARG:NH2	2.31	0.63
2:C:63:VAL:O	2:C:98:VAL:HA	1.99	0.63
6:G:17:VAL:HG23	8:I:62:LYS:HE2	1.80	0.63
9:J:47:ASN:CB	9:J:67:MET:HB2	2.28	0.63
12:M:29:ARG:HD2	12:M:64:LEU:CD2	2.28	0.63
19:V:154:MET:O	19:V:156:LYS:N	2.30	0.63
19:V:213:LEU:HD12	19:V:217:ILE:HD11	1.80	0.63
20:Y:529:U:H2'	20:Y:530:G:H8	1.60	0.63
20:Y:564:G:N2	20:Y:566:A:H3'	2.13	0.63
20:Y:771:G:O2'	20:Y:772:U:H5'	1.98	0.63
20:Y:1013:U:H5"	20:Y:1014:G:OP2	1.98	0.63
20:Y:1458:G:N3	20:Y:1458:G:H2'	2.13	0.63
20:Y:2013:C:H2'	20:Y:2014:G:H8	1.63	0.63
20:Y:2444:C:O2'	20:Y:2445:A:H5'	1.98	0.63
20:Y:2528:G:C5'	25:c:138:GLY:H	2.11	0.63
22:Z:134:ARG:HA	22:Z:168:LYS:NZ	2.13	0.63
23:a:186:ASP:HB3	23:a:191:VAL:O	1.98	0.63
24:b:176:HIS:CD2	24:b:178:ILE:HG12	2.33	0.63
26:d:138:ASP:OD2	26:d:141:LYS:HG2	1.98	0.63
28:f:17:VAL:HG23	28:f:55:ILE:HG23	1.80	0.63
29:g:68:GLU:OE2	34:l:100:ARG:NH2	2.30	0.63
34:l:25:VAL:N	34:l:86:LEU:HG	2.13	0.63
40:r:66:ILE:HG22	40:r:140:ILE:HD11	1.79	0.63
51:4:2389:U:O2	51:4:2394:A:C5	2.52	0.63
1:A:334:C:H2'	1:A:335:C:H6	1.61	0.63
1:A:421:U:H5"	1:A:422:C:H5	1.64	0.63
1:A:701:G:H5'	1:A:702:G:C5	2.34	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1139:C:H4'	19:V:132:LYS:HZ3	1.64	0.63
1:A:1209:C:OP1	12:M:108:ARG:NH2	2.31	0.63
3:D:105:THR:HG23	3:D:108:MET:H	1.62	0.63
10:K:30:ALA:HA	10:K:43:ILE:HA	1.80	0.63
11:L:24:LEU:CD1	11:L:95:TYR:HE1	2.12	0.63
15:P:19:ARG:HD2	15:P:39:ARG:HB3	1.81	0.63
17:R:46:GLY:C	17:R:47:LYS:HD3	2.24	0.63
20:Y:227:A:C2	20:Y:506:C:H4'	2.33	0.63
20:Y:732:G:H2'	20:Y:733:U:H6	1.63	0.63
20:Y:965:U:H1'	45:w:25:THR:OG1	1.98	0.63
20:Y:1053:G:H2'	20:Y:1054:C:C6	2.33	0.63
20:Y:1735:U:H2'	20:Y:1736:G:O4'	1.99	0.63
20:Y:1880:U:O2'	20:Y:1881:U:H5'	1.98	0.63
20:Y:2528:G:N2	25:c:136:THR:HA	2.13	0.63
20:Y:2573:G:OP2	49:1:42:ARG:NH2	2.32	0.63
20:Y:2729:G:O2'	20:Y:2730:U:O5'	2.14	0.63
20:Y:2949:A:O2'	20:Y:2950:C:OP2	2.13	0.63
20:Y:3084:G:H2'	20:Y:3085:G:H8	1.62	0.63
20:Y:3086:U:H5"	20:Y:3087:G:O5'	1.97	0.63
22:Z:130:ASN:HA	22:Z:191:ALA:O	1.99	0.63
24:b:93:PRO:C	24:b:94:LYS:HD2	2.24	0.63
25:c:20:ARG:HD2	25:c:20:ARG:C	2.23	0.63
27:e:87:VAL:HB	27:e:99:VAL:CG2	2.28	0.63
27:e:103:THR:O	27:e:107:VAL:HG13	1.98	0.63
27:e:108:ARG:HH12	27:e:111:ALA:CB	2.10	0.63
29:g:13:ASN:ND2	29:g:97:ARG:HG3	2.14	0.63
35:m:83:LEU:HD11	35:m:109:LEU:HD21	1.80	0.63
36:n:23:LYS:HD2	36:n:96:VAL:HG23	1.81	0.63
38:p:34:HIS:CE1	38:p:36:ASP:H	2.17	0.63
39:q:20:LYS:NZ	39:q:74:VAL:HG21	2.12	0.63
40:r:39:GLY:HA3	40:r:99:VAL:HG22	1.81	0.63
1:A:64:A:N7	1:A:104:A:H4'	2.13	0.63
1:A:542:U:C5	11:L:15:LYS:HD3	2.34	0.63
1:A:896:A:H2'	1:A:897:A:C8	2.33	0.63
1:A:1365:C:H2'	1:A:1366:C:C6	2.34	0.63
5:F:47:ARG:HD2	5:F:48:LEU:N	2.14	0.63
14:O:55:GLY:O	14:O:59:LEU:HG	1.99	0.63
19:V:68:LEU:HD21	19:V:158:PRO:HB3	1.81	0.63
20:Y:399:G:C2'	20:Y:400:C:H5"	2.29	0.63
20:Y:597:C:H2'	20:Y:598:U:O4'	1.99	0.63
20:Y:611:U:H2'	20:Y:612:U:H6	1.64	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:709:U:O4	24:b:45:LYS:HB2	1.97	0.63
20:Y:1058:A:O2'	20:Y:1059:G:O4'	2.13	0.63
20:Y:1128:A:H5"	20:Y:1129:G:OP2	1.99	0.63
20:Y:1225:G:H5"	44:v:54:ASN:ND2	2.14	0.63
20:Y:1445:C:O2'	20:Y:1446:C:H5'	1.99	0.63
20:Y:1827:A:O2'	20:Y:1834:A:O4'	2.16	0.63
20:Y:1955:A:C2'	20:Y:1956:A:H5'	2.28	0.63
20:Y:2146:A:H2'	20:Y:2147:U:H5'	1.79	0.63
20:Y:2238:A:O2'	20:Y:2239:A:O4'	2.12	0.63
20:Y:2692:A:H2'	20:Y:2700:A:C6	2.33	0.63
20:Y:2731:C:H1'	20:Y:2807:G:H22	1.64	0.63
20:Y:3074:C:O2'	20:Y:3075:C:H5'	1.99	0.63
22:Z:6:TYR:HE1	22:Z:18:VAL:HG12	1.62	0.63
22:Z:67:PHE:HE2	22:Z:157:ARG:CD	2.12	0.63
25:c:67:ILE:HD11	25:c:145:PHE:CD1	2.33	0.63
26:d:103:ASN:C	26:d:104:LEU:HD12	2.24	0.63
29:g:87:ILE:CD1	29:g:91:ASN:HA	2.28	0.63
32:j:82:GLU:O	32:j:86:PHE:HB2	1.98	0.63
33:k:18:ARG:HA	33:k:21:ARG:HE	1.63	0.63
36:n:41:LEU:HD12	36:n:42:VAL:H	1.63	0.63
40:r:39:GLY:HA3	40:r:99:VAL:CG2	2.29	0.63
1:A:538:G:O5'	1:A:539:A:H3'	1.99	0.63
1:A:1280:C:C2	6:G:114:LYS:HG3	2.34	0.63
1:A:1375:G:H2'	1:A:1376:U:C6	2.33	0.63
12:M:87:TYR:HA	12:M:90:LEU:CD1	2.29	0.63
13:N:53:LEU:HD12	13:N:56:VAL:HG21	1.79	0.63
15:P:19:ARG:HA	15:P:39:ARG:CA	2.29	0.63
19:V:73:LYS:NZ	19:V:204:ASP:O	2.23	0.63
19:V:165:ASP:OD2	19:V:169:GLU:HG2	1.98	0.63
20:Y:93:A:H2'	20:Y:94:G:O4'	1.99	0.63
20:Y:1022:C:H4'	31:i:101:ARG:HH22	1.64	0.63
20:Y:1039:G:O2'	20:Y:1040:U:H5'	1.99	0.63
20:Y:1045:C:H3'	20:Y:1045:C:O2	1.99	0.63
20:Y:1373:A:H2'	20:Y:1374:G:H8	1.63	0.63
20:Y:1421:C:H2'	20:Y:1422:A:H8	1.63	0.63
20:Y:1549:G:H5'	20:Y:1550:G:N2	2.13	0.63
20:Y:1718:C:O2'	20:Y:1719:C:H5'	1.99	0.63
20:Y:2313:A:H2'	20:Y:2314:U:C6	2.34	0.63
20:Y:2536:U:H5"	25:c:75:ARG:HD2	1.81	0.63
20:Y:2558:C:H1'	33:k:27:LYS:HE2	1.81	0.63
20:Y:2891:C:H2'	20:Y:2892:G:H5'	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:2902:A:O2'	20:Y:2903:A:H5'	1.99	0.63
20:Y:3015:C:C3'	20:Y:3016:C:H5"	2.29	0.63
25:c:111:ILE:HD11	25:c:182:PHE:HE1	1.62	0.63
26:d:59:GLU:OE2	26:d:61:ARG:HG2	1.97	0.63
28:f:60:ASP:OD1	28:f:60:ASP:N	2.32	0.63
30:h:76:GLN:NE2	30:h:77:VAL:O	2.32	0.63
38:p:93:ILE:HD11	38:p:96:PHE:HB2	1.80	0.63
43:u:36:MET:HG3	43:u:41:LEU:HD23	1.81	0.63
44:v:72:LEU:CD1	44:v:107:GLY:HA3	2.25	0.63
45:w:26:LEU:HD21	45:w:46:LEU:HB3	1.80	0.63
1:A:154:G:H1	1:A:161:U:H3	0.72	0.63
1:A:1483:A:O2'	1:A:1484:A:H5'	1.98	0.63
6:G:16:PRO:HD2	8:I:62:LYS:HZ3	1.62	0.63
7:H:113:LEU:HB3	7:H:117:GLN:CG	2.27	0.63
12:M:81:LYS:HD2	12:M:88:GLN:CG	2.25	0.63
13:N:23:ARG:HD2	13:N:30:PRO:HD3	1.80	0.63
17:R:38:LEU:HD13	17:R:68:VAL:CA	2.25	0.63
19:V:89:MET:HE2	19:V:89:MET:HA	1.81	0.63
20:Y:164:A:H2'	20:Y:165:U:C6	2.33	0.63
20:Y:406:A:C2'	20:Y:407:C:H5'	2.28	0.63
20:Y:1042:A:O2'	20:Y:1043:G:H5'	1.98	0.63
20:Y:1874:C:H2'	20:Y:1875:U:H6	1.64	0.63
20:Y:1897:A:H2'	20:Y:1898:U:C6	2.33	0.63
23:a:51:GLN:HA	23:a:83:GLU:CB	2.28	0.63
26:d:102:GLN:NE2	26:d:103:ASN:OD1	2.32	0.63
30:h:127:ASN:HA	30:h:147:LEU:O	1.98	0.63
36:n:23:LYS:NZ	36:n:68:THR:HG21	2.14	0.63
36:n:78:PHE:HE1	36:n:80:ASN:HA	1.64	0.63
1:A:175:A:O2'	1:A:176:A:H5'	1.99	0.62
1:A:889:A:H2'	1:A:890:A:C8	2.33	0.62
2:C:78:ARG:HB3	2:C:79:ARG:HH21	1.64	0.62
6:G:111:ARG:HH22	6:G:123:GLU:HG3	1.64	0.62
10:K:45:ASP:HB2	10:K:46:PRO:HD2	1.81	0.62
12:M:25:ILE:HA	12:M:29:ARG:HE	1.64	0.62
14:O:84:ARG:HG2	14:O:84:ARG:O	1.99	0.62
16:Q:32:MET:HB3	16:Q:35:THR:OG1	1.99	0.62
20:Y:552:U:HO2'	20:Y:553:G:P	2.22	0.62
20:Y:736:G:N2	20:Y:738:A:H3'	2.13	0.62
20:Y:1071:G:H1	20:Y:1080:U:H3	1.46	0.62
20:Y:1256:G:H2'	20:Y:1257:G:O4'	1.99	0.62
20:Y:1259:U:OP2	28:f:65:SER:OG	2.17	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:1374:G:H2'	20:Y:1375:G:H8	1.63	0.62
20:Y:1547:G:O2'	20:Y:1548:C:O5'	2.15	0.62
20:Y:1675:U:H6	32:j:63:ARG:HH21	1.46	0.62
20:Y:2048:G:O2'	20:Y:2049:C:H5'	1.98	0.62
20:Y:2088:C:H1'	20:Y:2089:C:OP1	1.99	0.62
20:Y:2416:C:O2'	20:Y:2417:C:H5'	1.99	0.62
20:Y:2529:A:H2'	20:Y:2530:C:C6	2.33	0.62
20:Y:2657:A:H5"	20:Y:2658:A:OP1	2.00	0.62
20:Y:2767:G:H2'	20:Y:2768:G:H8	1.63	0.62
20:Y:2814:A:H2'	20:Y:2815:C:C6	2.33	0.62
24:b:153:LYS:HE3	24:b:191:ALA:HA	1.81	0.62
26:d:106:PHE:CD2	26:d:108:LEU:HD11	2.34	0.62
28:f:36:LEU:O	28:f:121:LYS:NZ	2.23	0.62
28:f:114:LEU:HD23	28:f:114:LEU:C	2.24	0.62
34:l:24:THR:C	34:l:86:LEU:HG	2.24	0.62
35:m:28:ARG:HA	35:m:34:LYS:HZ1	1.64	0.62
44:v:43:LEU:HD21	44:v:92:ALA:HB1	1.80	0.62
46:x:39:VAL:CG1	46:x:54:LEU:HD21	2.25	0.62
49:1:6:THR:OG1	49:1:7:HIS:N	2.29	0.62
51:4:2375:G:H2'	51:4:2376:G:H8	1.62	0.62
1:A:452:A:H62	15:P:92:THR:HB	1.63	0.62
1:A:827:U:H5'	17:R:19:LYS:NZ	2.14	0.62
1:A:1391:A:O2'	20:Y:2139:U:O4	2.16	0.62
7:H:11:LEU:O	7:H:15:ARG:HG2	1.98	0.62
16:Q:60:LYS:HZ3	16:Q:85:THR:HG22	1.62	0.62
16:Q:76:LEU:HD22	16:Q:88:TRP:CE3	2.33	0.62
18:T:67:ILE:HG13	18:T:71:GLN:HE22	1.63	0.62
19:V:18:HIS:HB3	19:V:22:ARG:NH1	2.14	0.62
19:V:135:LEU:O	19:V:139:ARG:HG2	1.99	0.62
20:Y:16:G:H5'	35:m:22:LYS:NZ	2.14	0.62
20:Y:334:G:O2'	20:Y:335:G:H5'	1.99	0.62
20:Y:1650:G:O2'	20:Y:1651:C:H5'	1.99	0.62
20:Y:1733:C:H2'	20:Y:1734:C:C6	2.31	0.62
20:Y:1794:C:O2'	20:Y:1795:C:H5'	1.99	0.62
20:Y:2008:A:HO2'	22:Z:207:GLY:HA2	1.62	0.62
20:Y:2221:A:O2'	20:Y:2222:A:H5'	1.99	0.62
20:Y:2317:G:O2'	20:Y:2318:U:H5'	1.99	0.62
20:Y:2540:G:H1'	33:k:7:GLY:HA3	1.80	0.62
20:Y:2541:U:O5'	33:k:7:GLY:N	2.29	0.62
20:Y:2702:A:H8	50:2:31:ARG:NH2	1.97	0.62
20:Y:2867:A:H2'	20:Y:2868:A:H8	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:2895:A:H2'	20:Y:2896:C:H6	1.63	0.62
20:Y:3041:C:OP2	32:j:6:LYS:NZ	2.31	0.62
21:U:95:G:O6	40:r:21:LYS:NZ	2.22	0.62
22:Z:85:ASP:OD1	22:Z:87:ASN:N	2.31	0.62
39:q:12:ILE:HD12	39:q:12:ILE:N	2.14	0.62
40:r:48:GLU:C	40:r:49:LEU:HD23	2.23	0.62
42:t:39:VAL:CA	42:t:46:LYS:HD2	2.22	0.62
45:w:4:LEU:HD11	45:w:44:ARG:NH2	2.14	0.62
46:x:37:ARG:HH21	46:x:52:VAL:HG13	1.62	0.62
48:z:18:VAL:HG12	48:z:19:HIS:CD2	2.33	0.62
1:A:365:U:H3'	1:A:365:U:O2	1.98	0.62
1:A:416:G:H1	1:A:427:U:H3	1.46	0.62
1:A:477:G:H2'	1:A:478:A:C8	2.34	0.62
1:A:858:A:H4'	7:H:15:ARG:HH22	1.65	0.62
2:C:8:HIS:CE1	13:N:51:GLY:HA3	2.33	0.62
5:F:89:LYS:HE2	5:F:91:LEU:HD11	1.81	0.62
10:K:122:VAL:O	10:K:122:VAL:HG13	1.99	0.62
12:M:14:ARG:HB2	12:M:17:ILE:CD1	2.29	0.62
12:M:57:ARG:HD2	12:M:58:ASP:N	2.13	0.62
17:R:23:CYS:CA	17:R:60:HIS:NE2	2.61	0.62
17:R:70:ASN:HA	17:R:73:GLU:OE2	1.99	0.62
20:Y:25:A:H2'	20:Y:26:U:C6	2.35	0.62
20:Y:311:G:H2'	20:Y:312:G:C8	2.34	0.62
20:Y:643:G:H2'	20:Y:644:G:C8	2.34	0.62
20:Y:1456:G:N2	20:Y:1513:C:H4'	2.15	0.62
20:Y:1634:C:H5"	20:Y:1802:G:N1	2.14	0.62
20:Y:2700:A:O2'	20:Y:2701:U:O4'	2.18	0.62
22:Z:163:ILE:HG21	22:Z:175:LEU:HD23	1.81	0.62
23:a:2:ALA:O	23:a:4:LYS:HG3	1.99	0.62
27:e:10:LEU:N	27:e:60:ILE:O	2.33	0.62
27:e:74:THR:HG21	27:e:117:ASP:HB2	1.81	0.62
32:j:63:ARG:HA	32:j:80:PHE:HE1	1.64	0.62
34:l:61:ARG:CG	34:l:70:GLU:HG2	2.29	0.62
36:n:74:ARG:HB3	36:n:76:HIS:HE1	1.64	0.62
37:o:36:VAL:HG13	37:o:76:LEU:O	1.99	0.62
39:q:32:LYS:CG	39:q:65:PRO:HB2	2.29	0.62
47:y:12:THR:O	47:y:13:LEU:HD23	1.99	0.62
1:A:951:A:H2'	1:A:952:C:O4'	1.99	0.62
1:A:1077:C:C5'	19:V:143:LYS:HZ1	2.09	0.62
1:A:1146:G:H5'	1:A:1147:G:OP2	1.99	0.62
1:A:1213:U:OP1	8:I:146:GLN:NE2	2.32	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:64:GLU:OE2	3:D:199:TYR:OH	2.16	0.62
20:Y:531:A:H5"	20:Y:532:C:O5'	1.98	0.62
20:Y:1124:C:O2'	20:Y:1125:C:H5'	1.99	0.62
20:Y:1246:A:O2'	20:Y:1247:A:H5"	2.00	0.62
20:Y:1586:C:H3'	20:Y:1587:G:H5"	1.80	0.62
20:Y:2243:C:H5'	35:m:27:GLN:NE2	2.13	0.62
22:Z:37:LEU:HG	22:Z:38:HIS:H	1.63	0.62
23:a:14:THR:HG23	34:l:55:SER:OG	1.99	0.62
27:e:39:GLU:OE2	27:e:42:LYS:HE2	2.00	0.62
30:h:20:THR:O	30:h:20:THR:HG23	1.99	0.62
30:h:82:ASP:OD1	30:h:83:ILE:HG12	1.99	0.62
30:h:118:LEU:HD23	30:h:137:ILE:HA	1.80	0.62
31:i:34:ILE:CD1	31:i:118:LEU:HB3	2.30	0.62
39:q:67:HIS:HB2	39:q:70:ASN:HD21	1.63	0.62
39:q:97:ILE:CG2	39:q:102:GLY:HA2	2.26	0.62
40:r:89:ARG:O	40:r:90:ARG:HB3	1.98	0.62
42:t:32:ASN:O	42:t:52:CYS:HA	1.98	0.62
47:y:16:GLU:HB2	47:y:49:GLN:HE22	1.64	0.62
47:y:41:PHE:HB2	47:y:48:HIS:ND1	2.15	0.62
1:A:627:C:H5"	1:A:628:A:OP2	1.99	0.62
1:A:716:U:H2'	1:A:717:C:H6	1.63	0.62
1:A:945:G:N2	9:J:57:LYS:HE2	2.14	0.62
2:C:63:VAL:O	2:C:98:VAL:HG23	2.00	0.62
3:D:97:VAL:CG2	3:D:109:ALA:HB1	2.30	0.62
4:E:64:VAL:N	4:E:72:GLY:O	2.25	0.62
5:F:63:ILE:CG2	5:F:65:VAL:HG13	2.29	0.62
7:H:107:SER:HA	7:H:112:LEU:HD23	1.82	0.62
14:O:36:ILE:O	14:O:40:THR:HG22	1.99	0.62
20:Y:418:C:H2'	20:Y:419:G:H8	1.64	0.62
20:Y:758:A:H5"	41:s:64:PRO:CG	2.29	0.62
20:Y:881:C:O2'	20:Y:882:U:H5'	2.00	0.62
20:Y:1110:C:O3'	36:n:75:ILE:HD11	1.99	0.62
20:Y:2124:A:O2'	20:Y:2125:A:OP1	2.16	0.62
20:Y:2480:G:H2'	20:Y:2481:U:C6	2.35	0.62
20:Y:2528:G:H5"	25:c:138:GLY:O	1.98	0.62
20:Y:2530:C:H42	25:c:45:MET:CE	2.12	0.62
20:Y:2985:G:H1'	26:d:144:GLN:NE2	2.15	0.62
20:Y:3050:G:H2'	20:Y:3051:G:C8	2.34	0.62
20:Y:3061:C:H2'	20:Y:3062:C:C6	2.34	0.62
20:Y:3086:U:H3'	20:Y:3087:G:H8	1.63	0.62
25:c:40:LYS:H	25:c:164:VAL:CG1	2.13	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:c:80:SER:HA	25:c:86:LEU:HD12	1.81	0.62
25:c:178:ARG:HH11	25:c:184:PHE:HB2	1.64	0.62
26:d:33:LEU:HD23	26:d:80:VAL:HG22	1.80	0.62
36:n:54:ASP:HA	36:n:57:LYS:HG2	1.79	0.62
44:v:36:LEU:HA	44:v:39:LEU:CD2	2.29	0.62
47:y:24:ILE:CD1	49:1:34:GLU:HG2	2.30	0.62
1:A:691:G:O2'	1:A:692:A:H5'	1.99	0.62
1:A:717:C:C5'	5:F:90:VAL:HG23	2.29	0.62
1:A:858:A:H4'	7:H:15:ARG:NH2	2.15	0.62
1:A:893:U:OP2	11:L:94:ARG:NH2	2.32	0.62
1:A:1243:U:C2'	1:A:1244:G:H5'	2.30	0.62
15:P:55:ARG:NH2	15:P:58:TYR:HD2	1.97	0.62
16:Q:81:PRO:C	16:Q:82:LEU:HD23	2.24	0.62
18:T:61:ALA:HB1	18:T:66:VAL:HG21	1.82	0.62
20:Y:387:U:O4	20:Y:394:G:O6	2.16	0.62
20:Y:409:G:H2'	20:Y:410:U:C6	2.34	0.62
20:Y:500:A:N6	20:Y:2636:A:HO2'	1.98	0.62
20:Y:1184:U:C2	20:Y:1186:G:H3'	2.35	0.62
20:Y:1189:G:OP1	20:Y:1189:G:H3'	2.00	0.62
20:Y:2286:A:HO2'	20:Y:2287:C:H6	1.48	0.62
20:Y:2613:G:H5"	20:Y:2614:U:O4'	2.00	0.62
20:Y:2698:C:O2	20:Y:2698:C:H2'	1.98	0.62
20:Y:2843:C:O2'	20:Y:2844:C:H5'	1.99	0.62
20:Y:2887:G:H2'	20:Y:2888:G:O4'	1.99	0.62
20:Y:3037:C:C5'	46:x:42:ARG:HG3	2.27	0.62
21:U:49:C:O2'	21:U:50:C:H5'	1.98	0.62
31:i:61:GLY:HA3	31:i:108:TYR:HE1	1.63	0.62
34:l:45:VAL:HG21	34:l:109:ILE:HG13	1.79	0.62
36:n:40:ALA:O	36:n:55:LEU:HD22	1.99	0.62
50:2:1:MET:SD	50:2:33:LYS:HG2	2.40	0.62
1:A:11:G:H5"	4:E:149:LEU:HD13	1.82	0.62
1:A:203:U:H2'	1:A:204:A:H8	1.60	0.62
1:A:321:A:O2'	1:A:322:C:H5'	1.99	0.62
2:C:38:ILE:O	2:C:41:LEU:HD12	1.99	0.62
8:I:72:LEU:CD1	8:I:78:VAL:HA	2.27	0.62
20:Y:415:G:H2'	20:Y:416:C:H5"	1.81	0.62
20:Y:911:U:O2'	20:Y:912:C:H5'	2.00	0.62
20:Y:1571:C:H2'	20:Y:1572:G:H8	1.64	0.62
20:Y:1680:A:O2'	20:Y:1682:A:N7	2.28	0.62
20:Y:2098:U:H2'	20:Y:2099:G:O4'	2.00	0.62
20:Y:2245:C:H3'	20:Y:2245:C:O2	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:2700:A:H2'	20:Y:2701:U:C6	2.33	0.62
20:Y:2784:C:O2'	20:Y:2785:A:H5'	1.99	0.62
20:Y:2877:U:H3'	20:Y:2878:A:C8	2.35	0.62
21:U:47:A:H2'	21:U:48:C:O4'	2.00	0.62
24:b:121:ASN:O	24:b:123:ARG:NE	2.33	0.62
29:g:110:LYS:HE2	29:g:110:LYS:CA	2.20	0.62
29:g:110:LYS:HA	29:g:110:LYS:CE	2.21	0.62
31:i:37:LEU:HD22	40:r:88:ILE:CG2	2.26	0.62
35:m:97:GLU:OE1	36:n:15:LYS:HD3	1.99	0.62
39:q:24:LEU:HB2	39:q:34:LEU:CD2	2.30	0.62
40:r:53:ASP:O	40:r:57:VAL:HG23	2.00	0.62
40:r:117:ASP:HB2	40:r:149:GLU:OE1	1.99	0.62
42:t:41:ARG:CZ	42:t:41:ARG:HB3	2.30	0.62
51:4:2391:G:C2'	51:4:2392:A:H5'	2.28	0.62
1:A:66:U:H3	1:A:101:G:H1	1.46	0.62
1:A:328:U:H3'	1:A:328:U:O2	2.00	0.62
1:A:548:G:O2'	1:A:554:A:N6	2.33	0.62
1:A:671:G:O5'	10:K:37:ASN:ND2	2.25	0.62
1:A:794:A:H2'	1:A:796:A:OP1	2.00	0.62
1:A:1035:A:O2'	2:C:156:ARG:NE	2.32	0.62
1:A:1091:A:C2	2:C:177:THR:HG23	2.34	0.62
4:E:102:ILE:HG12	4:E:105:THR:O	2.00	0.62
8:I:31:ARG:HG2	8:I:36:VAL:HG12	1.82	0.62
9:J:52:ILE:H	13:N:41:ARG:HH12	1.46	0.62
16:Q:79:THR:CG2	16:Q:89:ARG:HB2	2.29	0.62
18:T:9:LYS:NZ	18:T:13:THR:OG1	2.27	0.62
19:V:55:GLU:O	19:V:58:LYS:HG2	1.99	0.62
20:Y:897:A:N7	22:Z:221:VAL:HG21	2.15	0.62
20:Y:951:G:O2'	20:Y:952:C:H5'	2.00	0.62
20:Y:1085:G:H1'	45:w:17:TRP:CE3	2.35	0.62
20:Y:1272:C:H2'	20:Y:1273:G:C8	2.35	0.62
20:Y:1325:U:H3'	20:Y:1326:G:H5'	1.81	0.62
20:Y:1813:C:N4	20:Y:1814:G:O6	2.32	0.62
20:Y:2528:G:H1	25:c:162:THR:CB	2.13	0.62
24:b:23:GLU:HA	24:b:26:ASP:OD2	1.99	0.62
25:c:107:LEU:O	25:c:111:ILE:HG12	1.98	0.62
26:d:153:ARG:HG3	26:d:162:GLY:HA3	1.81	0.62
28:f:18:ILE:HG12	28:f:140:PHE:O	1.99	0.62
28:f:100:VAL:HG13	28:f:101:VAL:H	1.65	0.62
34:l:61:ARG:HA	34:l:69:VAL:O	1.99	0.62
44:v:25:VAL:HA	44:v:78:ALA:O	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:v:66:ILE:HG22	44:v:109:TYR:CE2	2.34	0.62
1:A:613:G:O2'	1:A:614:C:H5'	2.00	0.62
1:A:672:U:H2'	1:A:674:G:OP2	2.00	0.62
1:A:826:U:H4'	17:R:19:LYS:HE2	1.79	0.62
1:A:1377:A:N6	1:A:1484:A:O2'	2.33	0.62
2:C:90:LEU:CD2	2:C:98:VAL:HG11	2.29	0.62
4:E:50:VAL:HG22	4:E:55:ARG:NE	2.15	0.62
4:E:99:VAL:HG11	4:E:169:LEU:CD2	2.30	0.62
13:N:29:ARG:HH22	13:N:42:ILE:HD12	1.64	0.62
20:Y:76:C:H2'	20:Y:77:G:H8	1.63	0.62
20:Y:529:U:O2'	20:Y:530:G:H5'	2.00	0.62
20:Y:778:G:OP1	30:h:20:THR:HG22	1.99	0.62
20:Y:932:C:HO2'	20:Y:933:G:H5'	1.65	0.62
20:Y:1008:G:O2'	20:Y:1011:A:H5"	1.99	0.62
20:Y:1368:A:OP1	20:Y:1368:A:H4'	1.98	0.62
20:Y:2320:C:H2'	20:Y:2320:C:O2	1.99	0.62
20:Y:2439:C:H2'	20:Y:2440:G:C8	2.34	0.62
20:Y:2528:G:H5"	25:c:138:GLY:N	2.14	0.62
23:a:30:LYS:O	23:a:30:LYS:HG3	2.00	0.62
24:b:153:LYS:HD2	24:b:154:VAL:N	2.14	0.62
25:c:178:ARG:NH1	25:c:184:PHE:HB2	2.15	0.62
26:d:146:SER:HB2	26:d:165:TYR:HE1	1.64	0.62
29:g:66:VAL:CG2	29:g:81:GLU:HA	2.30	0.62
30:h:99:VAL:HG11	30:h:106:LYS:HG2	1.80	0.62
31:i:78:PRO:O	31:i:81:THR:HG22	1.98	0.62
39:q:11:VAL:HG23	39:q:17:LYS:HA	1.81	0.62
39:q:72:MET:HE2	39:q:81:THR:N	2.15	0.62
1:A:26:G:H2'	1:A:27:C:H6	1.65	0.62
1:A:112:A:H3'	1:A:112:A:OP2	1.99	0.62
1:A:136:G:H2'	1:A:137:C:O4'	2.00	0.62
1:A:146:A:H4'	1:A:1429:A:H1'	1.82	0.62
1:A:275:G:H5'	16:Q:31:LYS:HD2	1.82	0.62
1:A:510:G:H2'	1:A:510:G:N3	2.14	0.62
1:A:767:A:H2'	1:A:768:U:C6	2.34	0.62
1:A:1207:C:N1	12:M:104:LYS:HD3	2.15	0.62
2:C:90:LEU:HD22	2:C:98:VAL:HG11	1.79	0.62
5:F:9:ILE:HG22	5:F:87:ARG:O	2.00	0.62
19:V:41:ILE:H	19:V:41:ILE:HD12	1.64	0.62
20:Y:321:G:H1'	20:Y:456:C:N4	2.15	0.62
20:Y:729:C:O2'	20:Y:733:U:OP1	2.17	0.62
20:Y:973:G:H22	20:Y:1035:G:H1	1.48	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:1177:G:H2'	20:Y:1178:U:H2'	1.82	0.62
20:Y:1827:A:H1'	20:Y:1834:A:H1'	1.81	0.62
20:Y:2182:C:O2'	20:Y:2183:G:H5'	1.99	0.62
20:Y:2211:C:H2'	20:Y:2212:A:H8	1.64	0.62
20:Y:2222:A:H2'	20:Y:2223:C:C6	2.33	0.62
20:Y:2996:U:H5'	23:a:178:GLN:HE21	1.65	0.62
20:Y:3022:G:O2'	20:Y:3023:G:O5'	2.16	0.62
21:U:92:G:H2'	21:U:93:U:C6	2.34	0.62
22:Z:6:TYR:HD2	22:Z:13:ARG:HE	1.47	0.62
23:a:4:LYS:HD3	23:a:105:ILE:CD1	2.29	0.62
25:c:59:GLY:HA3	25:c:157:ARG:HH12	1.65	0.62
25:c:79:LYS:HD3	25:c:79:LYS:N	2.14	0.62
34:l:33:GLU:HB2	34:l:38:ARG:NH2	2.15	0.62
34:l:47:ILE:O	34:l:95:LYS:HA	1.99	0.62
37:o:77:VAL:HG11	37:o:117:ARG:NH1	2.15	0.62
37:o:81:VAL:CG2	37:o:112:VAL:HG22	2.30	0.62
40:r:31:GLY:HA3	40:r:52:ARG:NH2	2.15	0.62
40:r:55:ALA:HB1	40:r:90:ARG:HH22	1.63	0.62
45:w:5:LYS:O	45:w:6:ILE:HD13	2.00	0.62
1:A:24:U:H2'	1:A:25:G:O4'	2.00	0.61
1:A:550:G:H5'	1:A:800:U:O4'	2.00	0.61
1:A:706:C:O2'	1:A:707:G:H5'	2.00	0.61
1:A:858:A:O3'	7:H:78:ARG:NH1	2.31	0.61
1:A:862:C:P	11:L:5:GLN:HG3	2.40	0.61
5:F:19:VAL:O	5:F:23:LEU:HG	1.99	0.61
7:H:11:LEU:HD12	7:H:79:ARG:HD2	1.82	0.61
7:H:68:PRO:HD2	7:H:71:GLU:OE1	2.00	0.61
15:P:37:ILE:HD11	15:P:55:ARG:CB	2.30	0.61
20:Y:75:U:OP1	43:u:7:PRO:HG3	2.00	0.61
20:Y:136:U:H3	20:Y:138:A:H3'	1.65	0.61
20:Y:788:C:C2'	20:Y:789:G:H5'	2.30	0.61
20:Y:985:G:H2'	20:Y:986:G:O4'	2.00	0.61
20:Y:1672:C:C2	20:Y:1680:A:N6	2.68	0.61
20:Y:2005:C:H2'	20:Y:2006:A:O4'	2.00	0.61
20:Y:2453:U:O2	42:t:34:GLN:NE2	2.33	0.61
20:Y:2509:C:OP2	47:y:8:ARG:NH2	2.30	0.61
20:Y:2609:A:O2'	20:Y:2610:C:H5'	1.99	0.61
20:Y:2879:G:H1'	20:Y:2880:U:H5	1.65	0.61
23:a:101:LEU:HD23	23:a:102:THR:H	1.65	0.61
31:i:21:ALA:CB	31:i:98:LYS:HB2	2.26	0.61
44:v:31:LEU:HD21	44:v:103:LEU:HG	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:31:G:H2'	1:A:32:G:H8	1.64	0.61
1:A:269:U:H2'	1:A:270:A:H8	1.65	0.61
1:A:863:G:OP1	11:L:9:ARG:NH2	2.33	0.61
1:A:872:G:H1'	1:A:873:U:H5	1.64	0.61
1:A:1064:G:H3'	1:A:1065:U:C6	2.35	0.61
1:A:1085:A:O2'	1:A:1086:G:H5'	1.99	0.61
6:G:23:VAL:HA	6:G:26:LEU:CD1	2.30	0.61
14:O:3:LEU:HG	14:O:35:ARG:HD2	1.81	0.61
20:Y:152:G:H1	20:Y:172:C:N4	1.95	0.61
20:Y:319:G:O6	20:Y:493:U:H5"	2.00	0.61
20:Y:620:G:H2'	20:Y:621:U:H6	1.65	0.61
20:Y:663:A:H2'	20:Y:663:A:N3	2.15	0.61
20:Y:1921:G:H2'	20:Y:1922:G:C8	2.34	0.61
20:Y:2011:U:H2'	20:Y:2012:C:H6	1.65	0.61
20:Y:2016:G:N2	22:Z:155:LEU:HD23	2.15	0.61
20:Y:2161:A:HO2'	20:Y:2162:A:P	2.23	0.61
20:Y:2408:G:OP1	51:4:2406:U:H4'	2.00	0.61
20:Y:2702:A:O4'	50:2:31:ARG:NH2	2.33	0.61
20:Y:2972:A:H2'	20:Y:2973:A:O4'	2.01	0.61
22:Z:125:ILE:HG22	22:Z:125:ILE:O	2.00	0.61
24:b:197:SER:O	24:b:201:LEU:HG	2.01	0.61
25:c:49:ASP:HB2	25:c:56:LEU:HD21	1.81	0.61
26:d:40:PRO:O	26:d:56:PRO:HG3	2.00	0.61
28:f:71:LYS:HE3	28:f:71:LYS:HA	1.81	0.61
31:i:117:ALA:HA	31:i:120:ARG:NH2	2.15	0.61
32:j:66:VAL:CG1	32:j:76:VAL:HG23	2.30	0.61
34:l:12:LEU:HD21	34:l:54:ILE:HA	1.82	0.61
36:n:52:ALA:HA	36:n:55:LEU:CD1	2.30	0.61
47:y:35:ARG:NH1	47:y:36:LEU:O	2.29	0.61
51:4:2351:A:N6	51:4:2387:U:O4	2.33	0.61
1:A:230:G:H5"	15:P:32:ARG:NH2	2.14	0.61
1:A:343:U:O2'	1:A:344:A:H5"	1.99	0.61
1:A:586:G:H1'	1:A:613:G:H1	1.65	0.61
1:A:1095:U:O2'	1:A:1096:U:H5'	2.00	0.61
3:D:83:ASP:O	3:D:86:LEU:HD12	2.00	0.61
8:I:72:LEU:HG	8:I:78:VAL:HG12	1.83	0.61
8:I:83:ILE:HD12	8:I:84:TYR:N	2.15	0.61
19:V:203:ASN:OD1	19:V:205:ASP:N	2.31	0.61
20:Y:101:U:H2'	20:Y:102:C:C6	2.36	0.61
20:Y:113:C:H2'	20:Y:114:G:O4'	2.01	0.61
20:Y:159:A:O2'	20:Y:160:A:O4'	2.10	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:693:G:H2'	20:Y:694:C:H6	1.64	0.61
20:Y:1063:G:O2'	20:Y:1064:A:H5'	1.99	0.61
20:Y:1235:U:H2'	20:Y:1236:G:C8	2.35	0.61
20:Y:1245:U:H5	20:Y:2712:U:HO2'	1.47	0.61
20:Y:1547:G:OP2	20:Y:1620:U:H5"	2.00	0.61
20:Y:1637:G:H5"	20:Y:1806:A:O4'	2.00	0.61
20:Y:1811:C:H2'	20:Y:1812:A:C4	2.35	0.61
20:Y:1930:C:H3'	20:Y:1931:A:H8	1.66	0.61
20:Y:2011:U:H2'	20:Y:2012:C:C6	2.34	0.61
20:Y:2303:A:OP1	42:t:19:SER:HB2	2.00	0.61
20:Y:2679:G:H2'	20:Y:2680:C:H6	1.63	0.61
20:Y:2908:U:P	34:l:48:ARG:HH21	2.24	0.61
24:b:156:VAL:CG2	24:b:177:VAL:HG22	2.30	0.61
25:c:14:ARG:NH1	25:c:19:ILE:HD11	2.14	0.61
25:c:17:GLU:HG2	25:c:18:GLU:N	2.15	0.61
26:d:70:ARG:HH12	26:d:74:ALA:CB	2.13	0.61
26:d:122:ILE:CG1	26:d:124:PHE:HE1	2.10	0.61
38:p:38:ASN:O	38:p:42:ILE:HG13	2.00	0.61
1:A:69:A:N3	1:A:214:U:H4'	2.15	0.61
1:A:657:U:O2	1:A:757:A:O2'	2.16	0.61
1:A:1251:G:H4'	1:A:1295:U:O2'	2.00	0.61
3:D:160:ARG:HD2	3:D:161:PRO:CD	2.30	0.61
5:F:42:ILE:HD11	5:F:59:ILE:CD1	2.30	0.61
6:G:69:VAL:CA	6:G:138:ARG:HH21	2.13	0.61
13:N:12:LYS:HD3	13:N:13:LYS:O	2.00	0.61
14:O:78:TYR:CZ	14:O:82:ILE:HD11	2.35	0.61
18:T:67:ILE:CG1	18:T:68:HIS:H	2.13	0.61
20:Y:571:A:O4'	39:q:44:HIS:HB3	2.01	0.61
20:Y:893:G:C5'	22:Z:48:ARG:HH11	2.13	0.61
20:Y:953:G:N1	20:Y:1058:A:N1	2.49	0.61
20:Y:989:G:O3'	31:i:63:LYS:NZ	2.32	0.61
20:Y:1816:C:O2'	20:Y:1817:C:O4'	2.17	0.61
20:Y:2246:U:H3	46:x:6:ARG:HH12	1.49	0.61
20:Y:2296:C:O2'	20:Y:2297:U:H5'	2.00	0.61
20:Y:2812:G:C2'	20:Y:2813:A:H5'	2.31	0.61
20:Y:3076:U:H2'	20:Y:3077:A:H8	1.65	0.61
21:U:66:C:H3'	21:U:106:C:N4	2.16	0.61
22:Z:166:LEU:HB2	22:Z:174:ALA:O	2.00	0.61
23:a:57:ILE:HG22	23:a:61:LYS:HB2	1.82	0.61
23:a:135:GLN:NE2	23:a:144:VAL:O	2.33	0.61
24:b:3:LEU:HB3	24:b:20:LEU:HD22	1.80	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:b:153:LYS:CE	24:b:191:ALA:HA	2.30	0.61
30:h:62:PRO:HG2	49:1:25:GLN:OE1	1.99	0.61
31:i:11:LYS:HD2	31:i:87:LYS:HG2	1.81	0.61
34:l:48:ARG:HG3	34:l:95:LYS:HZ2	1.65	0.61
43:u:6:THR:H	43:u:9:GLU:CD	2.06	0.61
43:u:24:GLU:OE2	43:u:25:SER:OG	2.14	0.61
43:u:29:LEU:HD13	43:u:50:VAL:HB	1.83	0.61
1:A:23:C:O2'	1:A:24:U:H5'	2.01	0.61
1:A:312:C:H2'	1:A:313:A:C8	2.36	0.61
1:A:967:C:H2'	1:A:968:U:C6	2.35	0.61
1:A:1506:U:O2'	1:A:1507:G:H5'	2.01	0.61
3:D:55:LYS:HZ3	3:D:190:LEU:HG	1.64	0.61
4:E:184:LEU:HD23	4:E:185:PRO:CD	2.30	0.61
8:I:64:HIS:HA	8:I:67:LEU:HD21	1.82	0.61
20:Y:55:G:H2'	20:Y:56:U:H6	1.64	0.61
20:Y:617:U:H2'	20:Y:617:U:OP2	2.01	0.61
20:Y:885:G:O2'	20:Y:886:G:H5'	2.00	0.61
20:Y:2081:U:O2'	20:Y:2082:U:H5'	2.01	0.61
20:Y:2176:A:H2'	20:Y:2177:A:O4'	2.00	0.61
20:Y:2262:C:H2'	20:Y:2263:G:H8	1.60	0.61
20:Y:2628:U:O2'	30:h:69:ASN:OD1	2.18	0.61
20:Y:2685:C:O2'	20:Y:2686:U:H5'	2.00	0.61
20:Y:2899:A:O2'	20:Y:2900:C:H5'	1.99	0.61
21:U:19:G:H2'	21:U:20:G:H8	1.65	0.61
21:U:60:G:H5'	33:k:9:ASN:ND2	2.14	0.61
22:Z:53:HIS:CD2	22:Z:220:THR:HG1	2.16	0.61
22:Z:218:ARG:HB3	22:Z:219:PRO:CD	2.31	0.61
30:h:111:LYS:HD2	30:h:128:LYS:HB2	1.82	0.61
49:1:38:THR:O	49:1:42:ARG:HG2	2.00	0.61
51:4:2399:A:H2'	51:4:2400:C:C5	2.35	0.61
1:A:49:U:H2'	1:A:50:G:H8	1.64	0.61
1:A:452:A:C4	15:P:76:ILE:HG23	2.35	0.61
1:A:1322:G:H2'	1:A:1323:U:C6	2.34	0.61
2:C:23:TYR:CE2	9:J:11:LYS:HD2	2.35	0.61
12:M:29:ARG:HG3	12:M:32:GLU:OE2	1.98	0.61
13:N:34:TYR:HE2	13:N:36:LYS:HB3	1.66	0.61
17:R:22:PHE:HB2	17:R:60:HIS:CD2	2.36	0.61
20:Y:70:A:O5'	43:u:51:ARG:NH2	2.34	0.61
20:Y:424:G:H5"	20:Y:425:U:OP2	2.00	0.61
20:Y:922:U:O2'	20:Y:923:G:H5'	2.00	0.61
20:Y:1156:A:H2'	20:Y:1157:G:H8	1.66	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:1226:U:H2'	20:Y:1227:C:H6	1.66	0.61
20:Y:1823:C:H2'	20:Y:1824:C:O4'	2.00	0.61
20:Y:1875:U:H2'	20:Y:1876:A:H8	1.65	0.61
20:Y:2597:A:H2'	20:Y:2598:C:H6	1.66	0.61
26:d:55:ARG:CB	26:d:62:SER:HB2	2.21	0.61
29:g:13:ASN:ND2	29:g:96:THR:OG1	2.33	0.61
34:l:32:ILE:HA	34:l:36:LYS:O	2.00	0.61
38:p:52:VAL:CA	38:p:91:LYS:HE2	2.31	0.61
42:t:44:GLY:O	42:t:46:LYS:HE2	2.01	0.61
1:A:388:G:H4'	1:A:390:U:C5	2.35	0.61
1:A:481:G:H2'	1:A:482:A:H8	1.63	0.61
1:A:513:A:O2'	1:A:515:A:OP1	2.17	0.61
1:A:623:C:H2'	1:A:624:G:C8	2.34	0.61
1:A:715:G:O2'	17:R:73:GLU:OE1	2.15	0.61
1:A:787:A:O2'	1:A:788:C:H5'	1.99	0.61
1:A:962:C:H1'	13:N:19:ARG:HG3	1.82	0.61
1:A:962:C:O2'	1:A:963:U:OP1	2.17	0.61
2:C:122:GLN:NE2	2:C:127:VAL:HG11	2.15	0.61
3:D:102:LEU:CD1	3:D:175:ILE:HD11	2.18	0.61
4:E:41:VAL:CG2	4:E:61:LEU:HD22	2.23	0.61
4:E:179:ALA:HB1	4:E:184:LEU:O	2.01	0.61
5:F:76:ASP:OD1	5:F:77:ARG:N	2.33	0.61
7:H:10:PHE:CE1	7:H:27:LEU:HD13	2.35	0.61
13:N:47:MET:HE2	13:N:53:LEU:CD2	2.31	0.61
15:P:90:GLU:OE2	15:P:92:THR:OG1	2.14	0.61
17:R:59:GLN:CD	17:R:59:GLN:H	2.08	0.61
18:T:24:VAL:O	18:T:27:SER:OG	2.17	0.61
19:V:111:LEU:HD22	19:V:151:ILE:CG2	2.31	0.61
20:Y:189:A:H62	20:Y:205:U:H3	1.48	0.61
20:Y:316:U:C4	20:Y:492:C:C4	2.85	0.61
20:Y:442:U:H2'	20:Y:443:C:C1'	2.31	0.61
20:Y:517:A:O2'	20:Y:518:A:O4'	2.09	0.61
20:Y:1402:A:O2'	20:Y:1403:C:H5'	2.00	0.61
20:Y:1524:G:O2'	20:Y:1525:U:O4'	2.16	0.61
20:Y:1768:C:H3'	20:Y:1769:G:H8	1.65	0.61
20:Y:2048:G:C6	20:Y:2199:G:N1	2.69	0.61
20:Y:2521:C:H1'	20:Y:2546:A:H2	1.66	0.61
20:Y:2996:U:H5'	23:a:178:GLN:NE2	2.15	0.61
25:c:57:ILE:O	25:c:61:ILE:HG12	2.01	0.61
26:d:74:ALA:O	26:d:77:VAL:HG12	2.01	0.61
26:d:118:ALA:HB2	26:d:124:PHE:CE2	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:i:110:ASP:HB2	31:i:112:LYS:HZ3	1.65	0.61
34:l:31:VAL:HG13	34:l:38:ARG:CZ	2.30	0.61
41:s:72:LYS:HZ1	41:s:77:THR:HG21	1.65	0.61
43:u:6:THR:HB	43:u:9:GLU:CG	2.31	0.61
44:v:94:LYS:HE2	44:v:121:GLU:HA	1.81	0.61
1:A:165:U:H2'	1:A:166:C:H6	1.66	0.61
1:A:502:C:H41	11:L:50:ARG:HH22	1.49	0.61
1:A:636:G:H2'	1:A:637:U:C6	2.36	0.61
1:A:725:A:H2'	1:A:726:G:H8	1.63	0.61
1:A:1153:U:H2'	1:A:1154:C:C6	2.36	0.61
1:A:1355:U:C5'	8:I:92:PRO:HD2	2.31	0.61
2:C:147:LYS:HE2	2:C:203:TYR:CE2	2.36	0.61
2:C:184:TYR:HE2	2:C:186:LEU:HD23	1.65	0.61
4:E:61:LEU:HD23	4:E:62:VAL:N	2.16	0.61
9:J:20:ALA:C	9:J:24:LYS:HZ2	2.07	0.61
11:L:4:ILE:HG21	16:Q:51:LYS:HG2	1.82	0.61
17:R:37:LEU:O	17:R:40:THR:OG1	2.17	0.61
20:Y:78:G:N1	20:Y:103:C:N3	2.48	0.61
20:Y:242:G:O2'	49:1:6:THR:HG22	2.01	0.61
20:Y:401:C:H3'	24:b:139:LYS:CE	2.31	0.61
20:Y:554:A:N3	20:Y:798:U:H1'	2.16	0.61
20:Y:604:C:O2'	37:o:25:ARG:NH2	2.27	0.61
20:Y:956:G:O2'	20:Y:957:C:H5'	2.01	0.61
20:Y:1037:C:H1'	41:s:26:PHE:CD2	2.35	0.61
20:Y:1459:U:H4'	20:Y:1460:C:OP2	2.00	0.61
20:Y:1521:C:H2'	20:Y:1522:G:H8	1.64	0.61
20:Y:2054:C:N4	20:Y:2123:A:N7	2.49	0.61
20:Y:2068:U:H2'	20:Y:2069:U:C6	2.35	0.61
20:Y:2193:A:N3	20:Y:2193:A:H2'	2.16	0.61
20:Y:2522:A:H2'	20:Y:2523:A:C5'	2.28	0.61
20:Y:2537:C:O2'	25:c:42:VAL:HG11	2.01	0.61
20:Y:2566:C:O2'	20:Y:2567:U:H5'	2.00	0.61
20:Y:3064:G:H2'	20:Y:3065:A:H8	1.65	0.61
21:U:6:G:H2'	21:U:7:G:C8	2.34	0.61
21:U:46:A:H2'	21:U:46:A:N3	2.15	0.61
21:U:50:C:H2'	21:U:51:G:C8	2.35	0.61
22:Z:195:GLU:OE1	22:Z:195:GLU:HA	2.00	0.61
24:b:24:LEU:C	24:b:25:PHE:HD2	2.09	0.61
25:c:132:THR:HG21	33:k:6:VAL:HG21	1.83	0.61
27:e:17:ALA:HA	27:e:48:THR:HG21	1.81	0.61
31:i:120:ARG:NH1	31:i:120:ARG:HG3	2.16	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:t:14:PHE:CD1	42:t:28:ARG:HB3	2.35	0.61
1:A:22:C:O2'	1:A:23:C:H5'	2.01	0.61
1:A:262:G:H4'	18:T:68:HIS:CE1	2.36	0.61
1:A:710:G:N2	1:A:746:A:OP1	2.27	0.61
1:A:741:G:H2'	1:A:742:A:C8	2.35	0.61
1:A:1043:C:OP2	1:A:1044:G:O2'	2.18	0.61
1:A:1368:G:H2'	1:A:1369:G:H8	1.65	0.61
1:A:1408:A:H2'	1:A:1409:A:H8	1.66	0.61
1:A:1503:A:H2'	1:A:1504:G:H5'	1.82	0.61
3:D:38:ARG:HA	3:D:38:ARG:NE	2.15	0.61
12:M:33:ILE:HG12	12:M:59:TYR:CZ	2.36	0.61
14:O:4:THR:N	14:O:7:GLN:HE22	1.92	0.61
14:O:39:LEU:HD11	14:O:56:LEU:HD21	1.83	0.61
20:Y:177:G:O2'	20:Y:178:G:H5'	2.00	0.61
20:Y:1083:G:O2'	20:Y:1084:U:H5'	2.01	0.61
20:Y:1090:G:OP2	20:Y:1092:G:H5"	2.00	0.61
20:Y:1399:A:O2'	20:Y:1400:G:H5'	2.01	0.61
20:Y:2151:A:H2'	20:Y:2152:A:O4'	2.01	0.61
20:Y:2303:A:O2'	42:t:23:ARG:NE	2.33	0.61
20:Y:3104:A:OP2	46:x:45:LYS:HD2	2.00	0.61
25:c:131:GLY:CA	25:c:170:ASP:HB3	2.31	0.61
30:h:124:VAL:N	30:h:143:SER:O	2.33	0.61
36:n:54:ASP:O	36:n:58:VAL:HG23	2.01	0.61
39:q:39:ASN:CB	39:q:66:ILE:HD11	2.31	0.61
40:r:70:ASP:C	40:r:71:ILE:HD13	2.26	0.61
40:r:123:LEU:HD23	40:r:182:VAL:HG23	1.82	0.61
45:w:28:LEU:HD11	45:w:35:VAL:CG1	2.31	0.61
1:A:376:G:P	15:P:69:PRO:HG2	2.40	0.61
1:A:846:A:H2'	1:A:847:A:C8	2.35	0.61
1:A:1128:C:H2'	1:A:1129:U:H6	1.66	0.61
1:A:1498:C:O2'	1:A:1499:C:H5'	2.00	0.61
2:C:41:LEU:HD21	2:C:93:LEU:CD1	2.23	0.61
2:C:119:VAL:HA	2:C:122:GLN:OE1	2.00	0.61
2:C:123:LEU:HD23	2:C:127:VAL:O	2.00	0.61
14:O:2:ALA:HA	14:O:35:ARG:CZ	2.31	0.61
15:P:14:ARG:O	15:P:43:LYS:HE3	2.01	0.61
20:Y:21:G:C6	20:Y:22:U:O4	2.54	0.61
20:Y:59:G:H5'	20:Y:60:A:OP2	2.00	0.61
20:Y:66:C:O2'	20:Y:67:G:H5'	2.01	0.61
20:Y:268:G:O4'	20:Y:360:G:C2	2.54	0.61
20:Y:317:G:H1	20:Y:495:C:N4	1.98	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:394:G:H2'	20:Y:395:G:H8	1.66	0.61
20:Y:663:A:H4'	20:Y:664:A:OP1	2.01	0.61
20:Y:987:A:O2'	20:Y:988:U:O4'	2.18	0.61
20:Y:1269:C:H3'	20:Y:1270:G:H5"	1.82	0.61
20:Y:1301:G:O2'	20:Y:1302:G:H5'	2.01	0.61
20:Y:1697:U:H3	20:Y:1737:A:H62	1.47	0.61
20:Y:1934:G:C2'	20:Y:1935:C:H5'	2.30	0.61
20:Y:2261:U:H2'	20:Y:2262:C:C6	2.35	0.61
20:Y:2521:C:H1'	20:Y:2546:A:C2	2.36	0.61
20:Y:2900:C:O2'	20:Y:2901:G:H5'	2.01	0.61
22:Z:43:ARG:HE	22:Z:49:ILE:CG1	2.01	0.61
22:Z:182:ILE:HG23	22:Z:269:VAL:HB	1.83	0.61
23:a:89:GLU:HA	23:a:92:VAL:HG23	1.83	0.61
24:b:3:LEU:HD23	24:b:20:LEU:HD22	1.81	0.61
31:i:10:ARG:HH11	31:i:10:ARG:HG3	1.65	0.61
39:q:84:GLY:CA	39:q:97:ILE:HB	2.30	0.61
51:4:2366:C:H2'	51:4:2367:G:O4'	2.01	0.61
1:A:115:A:N7	1:A:240:C:N4	2.48	0.60
1:A:179:C:H4'	1:A:180:A:C2	2.36	0.60
1:A:555:G:H4'	1:A:556:A:C5'	2.30	0.60
1:A:1207:C:C2	12:M:104:LYS:HD3	2.36	0.60
1:A:1340:U:O2	1:A:1340:U:H2'	1.98	0.60
1:A:1355:U:H5'	8:I:92:PRO:HD2	1.82	0.60
6:G:60:VAL:O	6:G:63:LYS:HG2	2.01	0.60
7:H:33:LYS:O	7:H:36:ILE:HG13	2.00	0.60
16:Q:87:ARG:HG2	16:Q:87:ARG:NH1	2.16	0.60
17:R:21:VAL:HG22	17:R:56:ASN:HD22	1.64	0.60
17:R:38:LEU:CD1	17:R:68:VAL:HA	2.26	0.60
17:R:74:VAL:HG22	17:R:74:VAL:O	2.01	0.60
19:V:4:VAL:HG21	19:V:212:LEU:HD21	1.83	0.60
20:Y:90:C:H2'	20:Y:91:C:O4'	2.01	0.60
20:Y:128:G:H2'	20:Y:129:G:H8	1.65	0.60
20:Y:611:U:O2'	20:Y:612:U:H5'	2.01	0.60
20:Y:828:G:O2'	20:Y:829:U:H5'	2.01	0.60
20:Y:921:C:H2'	20:Y:922:U:H6	1.65	0.60
20:Y:978:A:H2'	20:Y:979:G:C8	2.35	0.60
20:Y:1086:C:H2'	20:Y:1087:G:C8	2.36	0.60
20:Y:1269:C:H2'	20:Y:1270:G:O4'	2.01	0.60
20:Y:1434:G:O2'	20:Y:1435:C:H5'	2.00	0.60
20:Y:1580:A:N6	20:Y:1592:G:O6	2.34	0.60
20:Y:1886:A:H4'	20:Y:1887:A:O5'	1.99	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:2517:C:H2'	20:Y:2518:C:H6	1.66	0.60
22:Z:32:SER:C	22:Z:33:LEU:HD22	2.26	0.60
26:d:145:ILE:O	26:d:149:ILE:HG12	2.00	0.60
27:e:87:VAL:HG22	27:e:88:GLN:H	1.65	0.60
31:i:34:ILE:HD13	31:i:118:LEU:HD13	1.83	0.60
36:n:39:VAL:CG2	36:n:60:VAL:HG23	2.31	0.60
36:n:87:ARG:NH1	36:n:87:ARG:HB2	2.16	0.60
1:A:390:U:H2'	1:A:391:G:C8	2.36	0.60
1:A:862:C:OP2	11:L:6:GLN:NE2	2.34	0.60
1:A:1114:C:H2'	1:A:1115:G:C4'	2.31	0.60
1:A:1152:C:H2'	1:A:1153:U:C6	2.35	0.60
1:A:1162:G:H1'	1:A:1163:G:C4	2.36	0.60
1:A:1219:A:N7	1:A:1285:C:H1'	2.17	0.60
1:A:1387:C:H42	1:A:1481:G:H1	1.49	0.60
2:C:175:LEU:HD11	2:C:201:TRP:CD1	2.36	0.60
2:C:191:THR:O	2:C:195:ARG:NH2	2.33	0.60
4:E:196:LYS:HG3	4:E:199:ARG:NH2	2.16	0.60
6:G:54:THR:HG22	6:G:125:LEU:HD11	1.82	0.60
6:G:152:ALA:HB1	6:G:155:ARG:NH1	2.16	0.60
8:I:26:ILE:HB	8:I:41:LEU:HD11	1.83	0.60
13:N:23:ARG:CD	13:N:30:PRO:HD3	2.31	0.60
15:P:21:ILE:CD1	15:P:33:ALA:HB1	2.30	0.60
20:Y:369:G:OP2	20:Y:434:G:N2	2.34	0.60
20:Y:479:A:H2'	20:Y:480:U:O4'	2.01	0.60
20:Y:567:A:H4'	20:Y:568:A:C5'	2.30	0.60
20:Y:885:G:OP2	48:z:14:ARG:NH1	2.31	0.60
20:Y:910:C:H2'	20:Y:911:U:C6	2.36	0.60
20:Y:1224:G:O5'	44:v:53:LYS:NZ	2.33	0.60
20:Y:1278:C:O2'	20:Y:1279:G:H5'	2.01	0.60
20:Y:1989:G:H5"	20:Y:1990:A:OP2	2.01	0.60
20:Y:2074:G:H1	20:Y:2108:A:P	2.23	0.60
20:Y:2654:A:H5'	20:Y:2655:U:OP2	2.00	0.60
20:Y:2788:A:OP1	20:Y:2872:G:H4'	2.02	0.60
21:U:42:C:H41	25:c:76:ARG:NH2	2.00	0.60
22:Z:163:ILE:HD13	22:Z:177:MET:HB2	1.83	0.60
23:a:7:LEU:H	23:a:34:ASN:HD21	1.48	0.60
24:b:58:VAL:HG13	24:b:80:ARG:HD2	1.83	0.60
27:e:10:LEU:CD2	27:e:62:VAL:HG22	2.30	0.60
27:e:96:LYS:HD3	27:e:97:THR:OG1	2.01	0.60
30:h:113:LEU:HD23	30:h:130:SER:CB	2.31	0.60
33:k:43:SER:OG	33:k:46:HIS:N	2.34	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:q:101:ASN:ND2	39:q:103:LYS:HD3	2.16	0.60
43:u:15:ASP:O	43:u:18:LEU:HG	2.00	0.60
49:1:14:PHE:CE1	49:1:58:ILE:HD13	2.37	0.60
1:A:92:A:H1'	1:A:93:C:C5	2.35	0.60
1:A:99:U:H2'	1:A:99:U:O2	2.00	0.60
1:A:390:U:C3'	15:P:9:ARG:HH12	2.13	0.60
1:A:448:A:H3'	1:A:449:C:C6	2.35	0.60
1:A:502:C:H41	11:L:50:ARG:NH2	1.99	0.60
1:A:865:C:O2'	1:A:866:U:O4'	2.12	0.60
1:A:1196:G:H2'	1:A:1197:U:H5'	1.83	0.60
1:A:1332:A:H2'	1:A:1333:U:C6	2.36	0.60
1:A:1467:A:H2'	1:A:1468:U:H5'	1.82	0.60
7:H:105:ILE:O	7:H:128:LEU:N	2.28	0.60
15:P:94:LYS:O	15:P:94:LYS:HD2	2.02	0.60
16:Q:60:LYS:HE2	16:Q:85:THR:O	2.00	0.60
16:Q:79:THR:HG21	16:Q:89:ARG:HB2	1.81	0.60
18:T:54:THR:O	18:T:58:LEU:HD23	2.00	0.60
20:Y:225:A:C2'	20:Y:226:A:H5'	2.31	0.60
20:Y:960:G:OP1	20:Y:960:G:H4'	2.00	0.60
20:Y:1064:A:O2'	20:Y:1065:C:H5'	2.01	0.60
20:Y:1539:A:H2'	20:Y:1540:U:C1'	2.30	0.60
20:Y:1732:U:O2'	20:Y:1733:C:H5'	2.00	0.60
20:Y:1754:G:H1	20:Y:1759:A:H61	1.48	0.60
20:Y:2842:G:O2'	23:a:160:VAL:HG12	2.01	0.60
20:Y:2843:C:C5'	23:a:162:LYS:HZ3	2.12	0.60
21:U:60:G:C5'	33:k:9:ASN:HD22	2.12	0.60
24:b:46:ARG:HD3	24:b:98:TYR:HD2	1.66	0.60
25:c:115:LEU:HD13	25:c:118:ILE:HD11	1.82	0.60
25:c:139:LEU:HD11	25:c:141:GLU:O	2.01	0.60
28:f:58:ASN:HA	28:f:126:ALA:O	2.00	0.60
31:i:108:TYR:CG	31:i:109:PRO:HD2	2.36	0.60
35:m:88:VAL:HG22	35:m:90:VAL:H	1.67	0.60
39:q:40:ARG:HH12	39:q:61:THR:C	2.08	0.60
40:r:68:THR:C	40:r:69:LEU:HD23	2.26	0.60
45:w:23:LEU:O	45:w:23:LEU:HD12	2.01	0.60
47:y:35:ARG:HH12	47:y:37:GLU:CD	2.08	0.60
1:A:25:G:N2	1:A:896:A:H62	1.98	0.60
1:A:409:G:H2'	1:A:410:G:O4'	2.01	0.60
1:A:1148:U:H2'	1:A:1148:U:OP1	2.00	0.60
1:A:1192:U:H1'	1:A:1194:A:C2	2.36	0.60
1:A:1446:C:H2'	1:A:1447:C:H6	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:28:TYR:HA	2:C:31:TYR:CD2	2.35	0.60
2:C:122:GLN:HE21	2:C:127:VAL:HG11	1.66	0.60
6:G:26:LEU:HD23	6:G:101:LEU:HD23	1.83	0.60
8:I:25:PRO:HA	8:I:40:ARG:NH2	2.16	0.60
17:R:39:ARG:HH22	17:R:44:GLU:HG2	1.67	0.60
20:Y:352:G:H5"	20:Y:444:U:O4	2.02	0.60
20:Y:912:C:O2'	20:Y:913:C:H5'	2.02	0.60
20:Y:1103:C:H2'	20:Y:1103:C:O2	2.02	0.60
20:Y:2246:U:H3	46:x:6:ARG:HH22	1.46	0.60
21:U:51:G:OP1	33:k:78:LYS:HD2	2.02	0.60
22:Z:148:ARG:HB2	22:Z:149:PRO:HD2	1.83	0.60
26:d:30:LYS:HG2	26:d:80:VAL:O	2.00	0.60
30:h:67:PHE:HD2	30:h:69:ASN:H	1.48	0.60
37:o:26:ARG:HH22	46:x:17:ARG:HG2	1.65	0.60
42:t:7:ILE:HD11	42:t:55:CYS:HB3	1.83	0.60
49:1:13:ARG:HB3	49:1:14:PHE:CD2	2.36	0.60
1:A:622:A:C5	7:H:109:SER:HA	2.36	0.60
1:A:903:U:H1'	4:E:48:LYS:CE	2.31	0.60
1:A:1311:G:H5"	12:M:29:ARG:HH22	1.66	0.60
1:A:1384:G:O2'	1:A:1385:C:H5'	2.00	0.60
1:A:1420:C:H2'	1:A:1421:G:H8	1.64	0.60
4:E:36:TYR:C	4:E:37:ILE:HD13	2.26	0.60
6:G:75:VAL:HA	6:G:88:PRO:HA	1.83	0.60
8:I:139:LYS:HE2	8:I:139:LYS:HA	1.84	0.60
12:M:52:GLN:HA	12:M:55:VAL:HG12	1.84	0.60
17:R:51:ARG:HD3	17:R:51:ARG:O	2.01	0.60
19:V:16:PHE:HB3	19:V:38:ILE:HD11	1.83	0.60
20:Y:150:C:O2'	20:Y:151:A:H5'	2.02	0.60
20:Y:654:U:O4	20:Y:2260:C:H1'	2.00	0.60
20:Y:684:G:H3'	20:Y:685:G:C5'	2.28	0.60
20:Y:759:G:N1	41:s:64:PRO:HB3	2.16	0.60
20:Y:856:U:O2'	20:Y:857:U:H5'	2.02	0.60
20:Y:1156:A:H2'	20:Y:1157:G:C8	2.37	0.60
20:Y:1177:G:HO2'	20:Y:1178:U:P	2.25	0.60
20:Y:1646:U:OP2	22:Z:31:LYS:NZ	2.34	0.60
20:Y:1841:G:O2'	20:Y:1842:U:H5'	2.02	0.60
20:Y:2039:C:O2'	20:Y:2040:G:H5'	2.01	0.60
20:Y:2082:U:P	20:Y:2633:G:H21	2.25	0.60
20:Y:2617:U:O2'	20:Y:2618:C:H5'	2.01	0.60
20:Y:2818:C:H2'	20:Y:2819:G:C8	2.36	0.60
20:Y:3012:U:H2'	20:Y:3112:A:C2	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:Z:18:VAL:HG22	22:Z:19:SER:N	2.16	0.60
25:c:143:SER:HA	25:c:148:ILE:CD1	2.31	0.60
26:d:166:GLU:N	26:d:166:GLU:OE1	2.33	0.60
1:A:28:U:H2'	1:A:29:C:H6	1.65	0.60
1:A:58:C:H41	1:A:352:C:H3'	1.65	0.60
1:A:99:U:H3'	1:A:100:G:H8	1.65	0.60
1:A:140:U:H3	1:A:220:G:H1	1.50	0.60
1:A:404:G:H4'	1:A:439:U:C5	2.35	0.60
1:A:826:U:P	17:R:24:SER:HB2	2.41	0.60
3:D:191:THR:HG22	3:D:193:GLN:H	1.67	0.60
7:H:10:PHE:CE2	7:H:14:LEU:HD11	2.37	0.60
8:I:69:LYS:CE	8:I:72:LEU:HD23	2.31	0.60
20:Y:958:A:O2'	20:Y:959:U:H5'	2.02	0.60
20:Y:1025:A:H62	31:i:12:GLN:HA	1.66	0.60
20:Y:1326:G:O2'	20:Y:1327:A:OP2	2.19	0.60
20:Y:1710:A:N6	20:Y:1716:A:OP1	2.34	0.60
20:Y:1783:G:O2'	20:Y:1784:C:H5'	2.02	0.60
20:Y:3074:C:H2'	20:Y:3075:C:C6	2.37	0.60
20:Y:3106:C:N4	46:x:31:SER:H	1.99	0.60
21:U:76:G:H1'	40:r:36:VAL:HG21	1.83	0.60
23:a:15:GLN:NE2	34:l:57:THR:HG21	2.17	0.60
23:a:130:HIS:CD2	23:a:165:ARG:HB3	2.37	0.60
25:c:124:LEU:O	25:c:184:PHE:HA	2.00	0.60
25:c:132:THR:OG1	25:c:134:ASN:OD1	2.19	0.60
26:d:153:ARG:HD3	26:d:153:ARG:O	2.01	0.60
31:i:15:PRO:HG3	31:i:72:ARG:NH2	2.16	0.60
1:A:207:G:H4'	18:T:56:ARG:NE	2.17	0.60
1:A:265:G:N2	1:A:267:C:H5'	2.17	0.60
1:A:1337:A:H2'	1:A:1338:G:C8	2.37	0.60
1:A:1342:A:O2'	1:A:1343:G:O4'	2.14	0.60
1:A:1439:G:H2'	1:A:1440:A:O4'	2.02	0.60
3:D:68:ARG:HG3	3:D:199:TYR:CE1	2.37	0.60
6:G:98:THR:HG22	6:G:102:ARG:NH2	2.16	0.60
7:H:80:VAL:HG11	7:H:130:TYR:CE1	2.37	0.60
14:O:53:ARG:O	14:O:56:LEU:HB2	2.02	0.60
19:V:110:ARG:NH1	19:V:111:LEU:HA	2.16	0.60
20:Y:12:G:H4'	46:x:18:ALA:CB	2.32	0.60
20:Y:864:A:H1'	20:Y:1836:A:C8	2.37	0.60
20:Y:1661:G:N2	20:Y:1771:U:H3	1.95	0.60
20:Y:2147:U:OP2	20:Y:2147:U:H3'	2.01	0.60
20:Y:2158:C:O2'	20:Y:2159:G:H5'	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:2432:G:OP2	20:Y:2433:U:O2'	2.17	0.60
20:Y:2772:G:H1'	29:g:23:ARG:NH1	2.16	0.60
21:U:32:C:H2'	21:U:33:C:C6	2.37	0.60
22:Z:177:MET:CG	22:Z:178:PRO:HD2	2.25	0.60
25:c:43:VAL:CG2	25:c:161:ILE:HG13	2.32	0.60
25:c:170:ASP:O	25:c:174:ARG:NE	2.33	0.60
36:n:25:GLU:O	36:n:95:THR:OG1	2.20	0.60
44:v:49:TYR:OH	44:v:93:ILE:HG12	2.02	0.60
51:4:2381:A:H4'	51:4:2382:G:O5'	2.02	0.60
1:A:125:U:H5"	16:Q:17:ARG:HG3	1.83	0.60
1:A:608:G:H3'	1:A:609:G:H8	1.67	0.60
1:A:719:C:O2'	1:A:720:U:H5'	2.02	0.60
1:A:814:G:C5'	17:R:58:VAL:HG21	2.32	0.60
1:A:1203:G:OP2	1:A:1304:C:N4	2.34	0.60
1:A:1329:G:H22	1:A:1356:G:H3'	1.65	0.60
3:D:193:GLN:O	3:D:196:VAL:HG12	2.01	0.60
5:F:1:MET:HG2	5:F:68:GLU:OE2	2.01	0.60
17:R:45:ARG:CG	17:R:47:LYS:HE2	2.32	0.60
17:R:74:VAL:HG13	17:R:76:LEU:CG	2.32	0.60
20:Y:62:G:H2'	20:Y:63:C:H6	1.67	0.60
20:Y:499:G:OP2	20:Y:2630:A:H1'	2.02	0.60
20:Y:1044:U:H5'	45:w:37:ARG:NH1	2.16	0.60
20:Y:1249:G:OP1	28:f:82:GLY:N	2.19	0.60
20:Y:1503:G:O2'	20:Y:1504:G:H5'	2.02	0.60
20:Y:1653:G:H2'	20:Y:1654:G:H8	1.65	0.60
20:Y:1752:C:H2'	20:Y:1753:C:C6	2.36	0.60
20:Y:1872:A:OP1	20:Y:1872:A:H8	1.85	0.60
20:Y:1989:G:N2	20:Y:1991:C:H5'	2.17	0.60
20:Y:2070:A:N7	20:Y:2112:U:O2	2.34	0.60
20:Y:2127:G:OP1	22:Z:241:SER:OG	2.11	0.60
20:Y:2528:G:H1	25:c:162:THR:HA	1.67	0.60
20:Y:2536:U:C5'	25:c:75:ARG:HD2	2.32	0.60
20:Y:2911:U:H2'	20:Y:2912:A:H5'	1.83	0.60
20:Y:3015:C:H2'	20:Y:3016:C:C5'	2.29	0.60
24:b:157:VAL:HG11	24:b:180:PRO:HB3	1.83	0.60
27:e:57:PRO:O	27:e:73:LYS:N	2.35	0.60
35:m:61:TRP:O	35:m:65:ILE:HG12	2.02	0.60
36:n:69:LYS:HG2	36:n:93:GLN:CG	2.28	0.60
43:u:13:LEU:HB3	43:u:17:GLU:CD	2.26	0.60
51:4:2382:G:H2'	51:4:2383:U:C6	2.36	0.60
1:A:138:A:H8	16:Q:6:GLY:H	1.48	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:806:C:O2'	1:A:807:U:H5'	2.02	0.60
1:A:861:C:H2'	1:A:862:C:C6	2.37	0.60
1:A:1129:U:H3'	1:A:1130:C:H6	1.66	0.60
1:A:1260:A:H3'	1:A:1260:A:N3	2.16	0.60
1:A:1478:G:O4'	20:Y:2137:A:H1'	2.02	0.60
1:A:1494:C:H2'	1:A:1495:G:H8	1.66	0.60
3:D:29:ARG:HD2	3:D:31:TYR:OH	2.02	0.60
12:M:60:ILE:CD1	12:M:64:LEU:HD13	2.29	0.60
16:Q:83:SER:CB	16:Q:86:LYS:HE3	2.30	0.60
17:R:22:PHE:CZ	17:R:37:LEU:HD21	2.37	0.60
19:V:94:GLN:HB3	19:V:146:ARG:NH2	2.17	0.60
20:Y:78:G:C2	20:Y:103:C:C2	2.89	0.60
20:Y:567:A:C4'	20:Y:568:A:H5'	2.32	0.60
20:Y:1072:G:H5"	31:i:87:LYS:NZ	2.16	0.60
20:Y:2079:C:O2'	20:Y:2080:G:H5'	2.02	0.60
20:Y:2142:A:H4'	20:Y:2143:A:H5'	1.83	0.60
20:Y:2301:C:H2'	20:Y:2302:U:H6	1.65	0.60
20:Y:2927:C:H2'	20:Y:2928:C:C1'	2.32	0.60
20:Y:2971:G:P	26:d:139:LYS:HZ3	2.25	0.60
20:Y:3084:G:H2'	20:Y:3085:G:C8	2.37	0.60
20:Y:3119:A:H2'	20:Y:3120:C:H5'	1.84	0.60
25:c:43:VAL:HB	25:c:96:VAL:HG13	1.84	0.60
26:d:144:GLN:HA	26:d:144:GLN:OE1	2.02	0.60
27:e:98:LYS:HE3	27:e:140:THR:OG1	2.02	0.60
34:l:91:VAL:HG23	34:l:93:ARG:O	2.02	0.60
34:l:94:ALA:C	34:l:95:LYS:HG3	2.27	0.60
47:y:8:ARG:NH1	47:y:27:LYS:HA	2.17	0.60
1:A:82:U:H2'	1:A:83:U:O4'	2.02	0.60
1:A:125:U:C5'	16:Q:17:ARG:HG3	2.32	0.60
1:A:813:U:O4	1:A:835:G:O6	2.20	0.60
1:A:941:A:O2'	1:A:966:C:H1'	2.02	0.60
1:A:1258:C:O3'	1:A:1260:A:H1'	2.01	0.60
1:A:1311:G:C5'	12:M:29:ARG:HH22	2.14	0.60
4:E:107:THR:HG23	4:E:108:HIS:N	2.16	0.60
5:F:45:ARG:H	5:F:59:ILE:HA	1.66	0.60
7:H:121:GLN:HG3	7:H:123:VAL:HG13	1.84	0.60
8:I:143:LYS:NZ	8:I:144:ALA:O	2.26	0.60
12:M:79:ARG:HA	12:M:82:ILE:HG22	1.83	0.60
13:N:32:SER:O	13:N:41:ARG:HB2	2.02	0.60
20:Y:89:A:OP1	20:Y:89:A:H4'	1.99	0.60
20:Y:406:A:H2'	20:Y:407:C:C5'	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:542:A:H3'	20:Y:543:U:C5'	2.30	0.60
20:Y:662:G:H4'	20:Y:1101:A:H2	1.63	0.60
20:Y:1196:C:H2'	20:Y:1206:A:H5"	1.84	0.60
20:Y:1873:A:H5"	20:Y:1874:C:OP2	2.01	0.60
20:Y:1947:U:H1'	20:Y:1948:A:C2	2.37	0.60
20:Y:2268:G:O2'	20:Y:2269:C:H5'	2.02	0.60
20:Y:3004:C:H2'	20:Y:3004:C:OP1	2.02	0.60
20:Y:3086:U:P	20:Y:3087:G:H2'	2.42	0.60
20:Y:3092:G:H5"	20:Y:3093:A:OP1	2.02	0.60
21:U:88:C:H3'	21:U:89:C:C6	2.36	0.60
22:Z:80:ALA:HB1	22:Z:81:HIS:CE1	2.36	0.60
22:Z:259:LYS:O	22:Z:262:LYS:HG2	2.01	0.60
25:c:142:GLN:OE1	25:c:157:ARG:HG2	2.02	0.60
27:e:16:GLN:N	27:e:19:GLN:HB2	2.17	0.60
30:h:114:GLY:N	30:h:132:SER:HB3	2.16	0.60
31:i:36:ALA:O	31:i:37:LEU:HD23	2.02	0.60
33:k:25:LEU:HD12	33:k:25:LEU:O	2.02	0.60
39:q:65:PRO:C	39:q:66:ILE:HD13	2.27	0.60
41:s:12:ASN:N	41:s:12:ASN:HD22	2.00	0.60
1:A:427:U:H5"	3:D:10:ARG:NH1	2.17	0.59
1:A:517:G:O2'	1:A:518:U:H5'	2.02	0.59
1:A:893:U:O2'	1:A:894:C:H5'	2.01	0.59
1:A:1070:U:H2'	1:A:1071:U:C6	2.37	0.59
5:F:1:MET:N	5:F:68:GLU:OE2	2.34	0.59
11:L:33:VAL:C	11:L:55:VAL:HG23	2.27	0.59
11:L:44:LYS:CG	11:L:45:PRO:HD3	2.32	0.59
20:Y:9:U:H2'	20:Y:10:A:H5'	1.84	0.59
20:Y:108:A:H2'	20:Y:109:U:C6	2.37	0.59
20:Y:680:U:H2'	20:Y:681:C:H6	1.67	0.59
20:Y:1375:G:O2'	20:Y:1376:C:H5'	2.02	0.59
20:Y:1382:U:O2	20:Y:1382:U:H2'	2.01	0.59
20:Y:1398:G:N1	20:Y:1400:G:OP1	2.35	0.59
20:Y:1664:G:O2'	20:Y:1665:U:H5'	2.02	0.59
20:Y:2480:G:H2'	20:Y:2481:U:H6	1.66	0.59
20:Y:2528:G:H8	25:c:139:LEU:HA	1.67	0.59
20:Y:2792:C:H2'	20:Y:2793:G:O4'	2.02	0.59
22:Z:261:ASN:OD1	22:Z:261:ASN:O	2.20	0.59
28:f:36:LEU:HD23	28:f:121:LYS:NZ	2.07	0.59
29:g:2:ILE:CD1	29:g:8:LEU:HD11	2.28	0.59
31:i:66:ILE:HG22	31:i:68:ILE:O	2.01	0.59
32:j:34:ILE:CG2	32:j:113:ILE:HG23	2.32	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:k:98:GLU:OE2	33:k:99:THR:HB	2.00	0.59
36:n:23:LYS:HD2	36:n:96:VAL:CG2	2.32	0.59
37:o:72:ASP:OD1	37:o:74:SER:N	2.35	0.59
37:o:91:ARG:HG3	37:o:91:ARG:HH11	1.67	0.59
1:A:464:G:O3'	1:A:465:G:H4'	2.02	0.59
1:A:520:G:H3'	1:A:521:G:H8	1.66	0.59
1:A:550:G:N1	1:A:855:A:N1	2.50	0.59
1:A:746:A:H62	1:A:793:U:H3	1.47	0.59
1:A:1380:C:OP2	4:E:54:ARG:NH2	2.36	0.59
3:D:155:GLU:OE1	3:D:155:GLU:N	2.35	0.59
6:G:137:ARG:HA	6:G:140:ASP:OD2	2.00	0.59
19:V:117:LEU:HD22	19:V:141:LYS:CE	2.30	0.59
19:V:212:LEU:HA	19:V:215:LYS:HZ3	1.66	0.59
20:Y:69:U:O3'	43:u:51:ARG:NE	2.35	0.59
20:Y:435:A:H2'	20:Y:436:C:H6	1.66	0.59
20:Y:1027:C:P	31:i:8:LYS:HZ2	2.25	0.59
20:Y:2121:G:H2'	20:Y:2122:U:C6	2.38	0.59
20:Y:2147:U:H2'	20:Y:2148:C:H6	1.63	0.59
20:Y:2409:U:H3'	51:4:2406:U:N3	2.16	0.59
24:b:3:LEU:HD23	24:b:20:LEU:CD2	2.32	0.59
28:f:103:ASN:O	28:f:106:ILE:HG22	2.02	0.59
32:j:34:ILE:HG23	32:j:113:ILE:CG2	2.32	0.59
35:m:58:ARG:HE	35:m:92:ARG:HD2	1.67	0.59
39:q:26:ALA:C	39:q:28:PRO:HD3	2.27	0.59
40:r:6:ASN:OD1	40:r:140:ILE:HG13	2.03	0.59
40:r:98:LEU:HD23	40:r:100:VAL:HG23	1.83	0.59
43:u:18:LEU:CD1	43:u:19:LYS:HD3	2.32	0.59
44:v:77:THR:HA	44:v:106:LYS:NZ	2.16	0.59
1:A:108:G:O2'	1:A:109:G:H5'	2.02	0.59
1:A:496:U:H3'	1:A:497:G:N2	2.14	0.59
1:A:566:U:H3	1:A:736:C:N4	2.00	0.59
1:A:699:C:H5"	1:A:700:C:OP2	2.01	0.59
1:A:863:G:C2'	1:A:864:C:H5'	2.31	0.59
1:A:1043:C:H3'	1:A:1044:G:C8	2.38	0.59
14:O:39:LEU:HD11	14:O:56:LEU:CD2	2.32	0.59
15:P:21:ILE:HD12	15:P:35:GLU:O	2.02	0.59
15:P:40:TYR:OH	15:P:42:PRO:HG3	2.02	0.59
20:Y:1059:G:H5"	20:Y:1060:U:OP2	2.01	0.59
20:Y:1305:G:H2'	20:Y:1306:G:H8	1.67	0.59
20:Y:1393:C:C3'	32:j:34:ILE:HD11	2.32	0.59
20:Y:1873:A:H3'	20:Y:1874:C:C6	2.36	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:2500:G:OP2	31:i:86:GLY:N	2.26	0.59
20:Y:2634:G:H2'	20:Y:2634:G:N3	2.17	0.59
20:Y:2692:A:H2'	20:Y:2700:A:C2	2.37	0.59
20:Y:2731:C:H1'	20:Y:2807:G:N2	2.17	0.59
20:Y:2815:C:H2'	20:Y:2816:G:H8	1.65	0.59
20:Y:2884:A:H2'	20:Y:2885:G:C8	2.36	0.59
20:Y:2997:C:H2'	20:Y:2998:C:H6	1.66	0.59
20:Y:3030:A:H2'	20:Y:3031:A:H8	1.67	0.59
22:Z:73:ASP:HA	22:Z:119:SER:O	2.02	0.59
22:Z:212:MET:HE3	22:Z:217:LYS:NZ	2.17	0.59
24:b:4:LYS:HE2	24:b:17:SER:CB	2.32	0.59
25:c:97:THR:HG22	25:c:98:LEU:H	1.67	0.59
31:i:125:LEU:HD12	31:i:126:PRO:HD2	1.84	0.59
35:m:94:ASN:O	35:m:98:LEU:HG	2.03	0.59
38:p:9:ASP:HA	43:u:34:PHE:CE1	2.37	0.59
41:s:51:VAL:CG2	41:s:80:ILE:HD11	2.31	0.59
1:A:56:C:H2'	1:A:57:A:C8	2.37	0.59
1:A:236:G:H2'	1:A:237:C:C6	2.37	0.59
1:A:376:G:OP2	15:P:67:THR:HG21	2.03	0.59
1:A:474:G:O2'	1:A:476:A:H1'	2.03	0.59
1:A:565:G:H2'	1:A:566:U:O4'	2.02	0.59
1:A:1098:U:H2'	1:A:1099:C:H6	1.67	0.59
1:A:1446:C:H2'	1:A:1447:C:C6	2.37	0.59
2:C:92:LYS:HZ3	2:C:93:LEU:HD21	1.68	0.59
2:C:164:ARG:HB3	2:C:164:ARG:CZ	2.31	0.59
2:C:175:LEU:HD11	2:C:201:TRP:HD1	1.68	0.59
2:C:178:LEU:HD12	2:C:179:ARG:N	2.18	0.59
17:R:74:VAL:HG22	17:R:76:LEU:HD21	1.84	0.59
20:Y:284:G:H1'	20:Y:300:G:OP2	2.02	0.59
20:Y:357:U:H4'	20:Y:358:G:O5'	2.01	0.59
20:Y:487:U:O2'	20:Y:488:G:H5'	2.02	0.59
20:Y:555:G:O2'	20:Y:556:G:H5'	2.02	0.59
20:Y:602:A:H2'	20:Y:603:C:H5'	1.84	0.59
20:Y:794:G:H2'	20:Y:795:G:H8	1.67	0.59
20:Y:821:A:H2'	20:Y:822:G:O4'	2.03	0.59
20:Y:1077:A:H5"	20:Y:1078:G:P	2.43	0.59
20:Y:1860:G:O2'	20:Y:1861:G:H5'	2.03	0.59
20:Y:2008:A:C2	20:Y:2046:A:C4'	2.85	0.59
30:h:127:ASN:O	30:h:128:LYS:HD3	2.03	0.59
41:s:38:VAL:O	41:s:58:THR:HG23	2.02	0.59
1:A:931:A:O2'	1:A:1346:A:OP1	2.21	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:151:VAL:HG12	2:C:200:VAL:CG2	2.25	0.59
5:F:90:VAL:C	5:F:91:LEU:HD12	2.28	0.59
6:G:54:THR:CG2	6:G:125:LEU:HD21	2.33	0.59
7:H:80:VAL:CG2	7:H:127:VAL:HG23	2.25	0.59
18:T:35:PHE:HA	18:T:50:LEU:HD23	1.85	0.59
19:V:165:ASP:OD2	19:V:165:ASP:O	2.20	0.59
20:Y:78:G:N1	20:Y:79:G:N2	2.50	0.59
20:Y:135:G:N2	20:Y:140:G:N7	2.51	0.59
20:Y:181:A:H2'	20:Y:182:C:H6	1.67	0.59
20:Y:268:G:C4	20:Y:360:G:N3	2.70	0.59
20:Y:313:G:H2'	20:Y:314:G:C8	2.38	0.59
20:Y:316:U:C2	20:Y:492:C:N3	2.71	0.59
20:Y:566:A:C6	20:Y:568:A:C6	2.90	0.59
20:Y:570:U:H5"	20:Y:571:A:OP1	2.03	0.59
20:Y:787:C:H2'	20:Y:788:C:H6	1.68	0.59
20:Y:815:G:O2'	20:Y:816:G:H5'	2.03	0.59
20:Y:948:G:H2'	20:Y:949:C:H6	1.67	0.59
20:Y:1131:G:H4'	28:f:147:GLN:NE2	2.17	0.59
20:Y:1142:G:OP2	20:Y:1143:G:O2'	2.15	0.59
20:Y:1442:A:H1'	32:j:104:LYS:NZ	2.17	0.59
20:Y:1963:G:H2'	20:Y:1964:U:H6	1.67	0.59
20:Y:2007:C:OP1	22:Z:220:THR:N	2.31	0.59
20:Y:2012:C:O2'	20:Y:2013:C:H5'	2.03	0.59
20:Y:2573:G:P	49:1:42:ARG:NH2	2.76	0.59
20:Y:2791:G:O2'	20:Y:2792:C:H5'	2.03	0.59
20:Y:2821:G:H5"	20:Y:2822:A:P	2.41	0.59
22:Z:101:GLU:OE2	22:Z:101:GLU:N	2.35	0.59
25:c:87:ARG:HB3	25:c:90:MET:HE3	1.84	0.59
25:c:99:ARG:CA	25:c:103:MET:HG2	2.32	0.59
25:c:100:GLY:H	25:c:103:MET:HG3	1.67	0.59
26:d:96:ARG:HB2	26:d:107:ALA:CB	2.33	0.59
28:f:69:LEU:HA	28:f:89:ILE:HG21	1.84	0.59
29:g:51:ASN:OD1	29:g:52:VAL:HG13	2.02	0.59
32:j:37:THR:OG1	32:j:40:LYS:HD2	2.03	0.59
40:r:7:ILE:O	40:r:7:ILE:HG13	2.01	0.59
45:w:52:HIS:CE1	45:w:53:LEU:HG	2.36	0.59
48:z:24:ARG:HG3	48:z:24:ARG:NH1	2.16	0.59
1:A:103:G:O2'	1:A:378:G:O2'	2.09	0.59
1:A:416:G:O2'	1:A:417:G:H5'	2.02	0.59
1:A:458:A:H4'	1:A:459:G:C1'	2.31	0.59
1:A:608:G:C2	1:A:609:G:H1'	2.36	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:827:U:H5'	17:R:19:LYS:HZ2	1.66	0.59
1:A:1052:G:H21	19:V:106:THR:HG21	1.67	0.59
2:C:87:ARG:HH12	2:C:98:VAL:CG1	2.15	0.59
3:D:71:TYR:O	3:D:75:ASN:ND2	2.36	0.59
4:E:81:VAL:HG23	4:E:82:PRO:HD3	1.84	0.59
10:K:61:PHE:C	10:K:62:LYS:HD2	2.27	0.59
11:L:56:LYS:HE3	11:L:56:LYS:CA	2.23	0.59
12:M:70:LEU:O	12:M:73:GLU:HG2	2.02	0.59
15:P:20:ILE:HD12	15:P:38:GLY:C	2.27	0.59
19:V:5:THR:HG23	19:V:8:GLN:H	1.66	0.59
20:Y:325:U:H2'	20:Y:452:G:H21	1.65	0.59
20:Y:741:G:N2	20:Y:2574:C:O2'	2.36	0.59
20:Y:806:C:C4'	22:Z:43:ARG:HH12	2.16	0.59
20:Y:808:A:H2'	20:Y:809:U:H6	1.65	0.59
20:Y:892:G:H2'	20:Y:893:G:H8	1.66	0.59
20:Y:1658:G:H2'	20:Y:1659:U:H6	1.68	0.59
20:Y:2044:U:O2'	20:Y:2045:G:H5'	2.03	0.59
20:Y:2537:C:C5'	25:c:95:ARG:HH12	2.16	0.59
20:Y:2773:G:H2'	20:Y:2774:G:H8	1.67	0.59
20:Y:2850:C:HO2'	20:Y:2851:G:C5'	2.16	0.59
20:Y:2965:A:H2'	20:Y:2966:C:O4'	2.01	0.59
20:Y:3069:G:H4'	20:Y:3070:G:OP1	2.02	0.59
21:U:63:U:H2'	21:U:64:G:H8	1.68	0.59
21:U:107:A:H2'	21:U:108:C:C6	2.38	0.59
25:c:67:ILE:HG12	25:c:106:PHE:CZ	2.31	0.59
25:c:155:ARG:HD2	25:c:156:PRO:N	2.18	0.59
26:d:35:LEU:CD1	26:d:72:LEU:HD11	2.32	0.59
26:d:76:LEU:HD12	26:d:77:VAL:N	2.17	0.59
26:d:98:GLN:N	26:d:98:GLN:OE1	2.35	0.59
29:g:7:ARG:HA	29:g:7:ARG:NE	2.15	0.59
31:i:57:HIS:O	31:i:59:LYS:HG3	2.02	0.59
32:j:39:PRO:O	32:j:42:ARG:HG2	2.02	0.59
51:4:2337:A:H3'	51:4:2337:A:N3	2.17	0.59
1:A:731:U:O2'	1:A:732:G:H5'	2.03	0.59
1:A:1205:U:O2'	1:A:1206:U:OP1	2.19	0.59
1:A:1248:U:N3	1:A:1309:C:H4'	2.18	0.59
1:A:1281:A:C8	1:A:1283:U:H1'	2.37	0.59
1:A:1425:G:P	1:A:1426:C:H41	2.26	0.59
3:D:23:ASP:HB3	3:D:26:PHE:HB3	1.83	0.59
4:E:167:ALA:HA	4:E:170:LYS:HZ2	1.68	0.59
7:H:113:LEU:CB	7:H:117:GLN:HG3	2.33	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:K:73:GLN:NE2	10:K:104:THR:OG1	2.33	0.59
16:Q:32:MET:HB2	16:Q:35:THR:O	2.03	0.59
17:R:72:ARG:HB3	17:R:79:PHE:CE1	2.37	0.59
20:Y:335:G:O2'	20:Y:336:C:OP1	2.18	0.59
20:Y:935:A:H2'	20:Y:936:A:C8	2.38	0.59
20:Y:966:U:O4'	45:w:46:LEU:HD21	2.03	0.59
20:Y:1183:U:H2'	20:Y:1184:U:H1'	1.84	0.59
20:Y:1298:C:H4'	45:w:29:LYS:HZ3	1.67	0.59
20:Y:1308:G:O2'	20:Y:1309:A:H5'	2.03	0.59
20:Y:1855:A:O2'	20:Y:1856:C:H5'	2.02	0.59
20:Y:2472:C:H5"	20:Y:2473:U:OP2	2.03	0.59
20:Y:2517:C:O2'	20:Y:2518:C:H5'	2.02	0.59
20:Y:2691:C:C2'	20:Y:2692:A:H5'	2.32	0.59
20:Y:2859:C:H2'	20:Y:2860:U:O4'	2.02	0.59
22:Z:137:PRO:O	22:Z:140:THR:HG23	2.02	0.59
36:n:40:ALA:C	36:n:55:LEU:HD22	2.27	0.59
41:s:53:ARG:NH2	41:s:57:ASP:OD1	2.36	0.59
44:v:61:ALA:HB1	44:v:66:ILE:HG13	1.85	0.59
50:2:14:CYS:HA	50:2:27:CYS:SG	2.43	0.59
1:A:254:G:O6	1:A:273:A:N6	2.36	0.59
1:A:393:A:OP2	15:P:14:ARG:NH1	2.31	0.59
1:A:586:G:N2	1:A:612:U:OP1	2.32	0.59
1:A:665:G:H5"	1:A:666:U:OP1	2.03	0.59
2:C:20:SER:HB2	2:C:22:TRP:CZ3	2.38	0.59
10:K:64:SER:O	10:K:67:SER:OG	2.19	0.59
11:L:116:ARG:HG2	11:L:117:TYR:CD1	2.38	0.59
20:Y:15:C:OP1	35:m:30:ARG:NH2	2.36	0.59
20:Y:317:G:N1	20:Y:495:C:N4	2.51	0.59
20:Y:397:C:H2'	20:Y:398:U:H6	1.64	0.59
20:Y:607:G:H2'	20:Y:608:C:C6	2.37	0.59
20:Y:698:G:H2'	20:Y:699:U:O4'	2.03	0.59
20:Y:774:G:P	24:b:101:ARG:NH2	2.75	0.59
20:Y:869:U:O2'	20:Y:870:G:H5'	2.01	0.59
20:Y:1293:G:H1'	20:Y:1294:U:C5	2.37	0.59
20:Y:1554:U:O4	20:Y:1613:G:H3'	2.02	0.59
20:Y:2473:U:H4'	20:Y:2474:G:OP2	2.02	0.59
28:f:100:VAL:HG13	28:f:101:VAL:N	2.18	0.59
31:i:110:ASP:HB2	31:i:112:LYS:HZ2	1.67	0.59
32:j:70:ILE:CD1	32:j:75:VAL:HG13	2.33	0.59
34:l:22:GLY:HA2	34:l:109:ILE:CG2	2.33	0.59
34:l:84:ASP:O	34:l:86:LEU:HD23	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:n:72:LYS:NZ	36:n:89:GLY:HA3	2.17	0.59
1:A:115:A:H4'	1:A:116:A:C5	2.38	0.59
1:A:606:U:OP2	15:P:39:ARG:NE	2.27	0.59
1:A:664:U:O2	10:K:50:VAL:HG12	2.03	0.59
1:A:931:A:N7	12:M:106:ASN:ND2	2.50	0.59
1:A:1271:A:H61	8:I:92:PRO:HD3	1.68	0.59
2:C:23:TYR:O	9:J:11:LYS:NZ	2.36	0.59
4:E:54:ARG:C	4:E:55:ARG:HD3	2.27	0.59
4:E:130:VAL:HG13	4:E:146:HIS:C	2.28	0.59
4:E:174:ARG:O	4:E:178:VAL:HG23	2.03	0.59
7:H:108:THR:CG2	7:H:113:LEU:HD23	2.33	0.59
14:O:78:TYR:CD1	14:O:82:ILE:HD11	2.38	0.59
16:Q:21:LYS:HG2	16:Q:78:GLU:OE2	2.03	0.59
20:Y:136:U:H2'	20:Y:138:A:N7	2.18	0.59
20:Y:478:A:H4'	20:Y:500:A:O2'	2.03	0.59
20:Y:643:G:H4'	20:Y:644:G:OP1	2.02	0.59
20:Y:1084:U:H2'	20:Y:1086:C:C6	2.37	0.59
20:Y:1411:G:H2'	20:Y:1412:C:C6	2.38	0.59
20:Y:1593:U:H2'	20:Y:1594:G:C8	2.27	0.59
20:Y:1893:C:H2'	20:Y:1894:A:O4'	2.03	0.59
20:Y:1969:G:H2'	20:Y:1970:G:C8	2.38	0.59
20:Y:2044:U:OP2	22:Z:222:ARG:NH2	2.36	0.59
20:Y:2048:G:C6	20:Y:2049:C:N4	2.71	0.59
20:Y:2133:G:H2'	20:Y:2134:G:C8	2.38	0.59
20:Y:2139:U:H5"	20:Y:2140:A:OP1	2.02	0.59
20:Y:2482:U:H4'	20:Y:2483:G:OP2	2.03	0.59
20:Y:2537:C:H5'	20:Y:2538:A:OP1	2.02	0.59
20:Y:2583:C:O2'	20:Y:2584:A:H5'	2.03	0.59
20:Y:2990:A:H2'	20:Y:2990:A:N3	2.17	0.59
20:Y:3064:G:H2'	20:Y:3065:A:C8	2.37	0.59
21:U:114:A:C4'	33:k:66:ILE:HD12	2.33	0.59
24:b:58:VAL:HG11	24:b:80:ARG:CB	2.33	0.59
27:e:114:LYS:O	27:e:118:LEU:N	2.27	0.59
29:g:94:ARG:O	29:g:94:ARG:HD3	2.03	0.59
30:h:93:VAL:O	30:h:125:THR:HG23	2.02	0.59
31:i:75:THR:HG22	31:i:90:PRO:CA	2.33	0.59
33:k:48:HIS:HA	33:k:64:SER:OG	2.03	0.59
34:l:46:VAL:HG23	34:l:60:VAL:HG12	1.84	0.59
34:l:73:PHE:HE2	34:l:79:ASN:HB2	1.67	0.59
38:p:53:LYS:HD2	38:p:87:ALA:HB2	1.85	0.59
1:A:125:U:OP2	16:Q:17:ARG:HA	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:483:C:OP1	11:L:116:ARG:NH1	2.36	0.59
1:A:1063:U:O2'	1:A:1082:A:OP2	2.19	0.59
1:A:1266:U:H3'	1:A:1268:C:C5'	2.25	0.59
1:A:1398:G:H2'	1:A:1399:A:O4'	2.03	0.59
2:C:20:SER:HB2	2:C:22:TRP:HZ3	1.68	0.59
5:F:87:ARG:NH2	17:R:73:GLU:HB2	2.18	0.59
6:G:135:VAL:CG1	6:G:138:ARG:HH12	2.11	0.59
19:V:185:ALA:HB3	19:V:196:VAL:HG21	1.83	0.59
19:V:216:VAL:HG13	19:V:217:ILE:CD1	2.33	0.59
20:Y:59:G:H5'	20:Y:60:A:P	2.42	0.59
20:Y:189:A:N6	20:Y:205:U:H3	2.00	0.59
20:Y:842:A:H2	22:Z:9:THR:HG21	1.67	0.59
20:Y:953:G:N2	20:Y:1058:A:H2	2.00	0.59
20:Y:967:G:O2'	20:Y:968:C:H5'	2.03	0.59
20:Y:1410:C:O2'	20:Y:1411:G:H5'	2.03	0.59
20:Y:1411:G:O2'	20:Y:1412:C:H5'	2.02	0.59
20:Y:2085:C:HO2'	20:Y:2086:U:P	2.25	0.59
20:Y:2179:U:H2'	20:Y:2775:C:O2'	2.03	0.59
20:Y:2409:U:H3'	51:4:2406:U:C4	2.38	0.59
21:U:90:G:H2'	21:U:91:G:C8	2.38	0.59
22:Z:212:MET:HE3	22:Z:217:LYS:HZ2	1.67	0.59
26:d:150:ARG:HA	26:d:163:VAL:CG1	2.33	0.59
27:e:20:ALA:HB1	27:e:41:CYS:SG	2.43	0.59
31:i:4:PRO:HD3	31:i:69:PHE:CE2	2.37	0.59
35:m:27:GLN:HE21	35:m:34:LYS:HE2	1.67	0.59
36:n:69:LYS:CG	36:n:93:GLN:HG2	2.25	0.59
40:r:66:ILE:N	40:r:140:ILE:HD11	2.18	0.59
40:r:98:LEU:CD2	40:r:100:VAL:HG23	2.33	0.59
41:s:46:HIS:CB	41:s:77:THR:HG22	2.29	0.59
1:A:39:G:O2'	11:L:118:GLY:HA2	2.03	0.58
1:A:108:G:N2	1:A:354:G:H5'	2.13	0.58
1:A:252:U:O2'	1:A:253:U:H5'	2.03	0.58
1:A:310:G:OP1	15:P:31:GLY:HA2	2.03	0.58
1:A:493:A:H2'	1:A:494:C:H6	1.68	0.58
1:A:1464:G:H2'	1:A:1465:C:H6	1.67	0.58
1:A:1510:G:H2'	1:A:1511:C:C5	2.38	0.58
4:E:73:VAL:O	4:E:92:ALA:HA	2.02	0.58
4:E:108:HIS:HB2	4:E:109:PRO:CD	2.33	0.58
7:H:33:LYS:HA	7:H:36:ILE:HG12	1.85	0.58
9:J:11:LYS:HB3	9:J:97:ASP:O	2.03	0.58
9:J:15:HIS:O	9:J:18:ILE:HG22	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:L:29:GLN:HE21	11:L:81:LEU:CD1	2.15	0.58
12:M:27:ARG:HD3	12:M:31:ASN:OD1	2.03	0.58
17:R:70:ASN:O	17:R:73:GLU:HG2	2.03	0.58
19:V:70:VAL:HG12	19:V:92:VAL:HG12	1.85	0.58
20:Y:149:C:O2'	20:Y:150:C:H5'	2.03	0.58
20:Y:339:U:H3	20:Y:340:A:H62	1.49	0.58
20:Y:1305:G:O2'	20:Y:1306:G:H5'	2.02	0.58
20:Y:2084:A:H2'	20:Y:2085:C:O4'	2.02	0.58
20:Y:2712:U:H2'	20:Y:2713:G:H8	1.68	0.58
20:Y:2981:A:H2'	20:Y:2981:A:N3	2.18	0.58
20:Y:3098:G:H2'	20:Y:3099:C:C6	2.38	0.58
21:U:41:U:N3	21:U:45:G:OP2	2.24	0.58
22:Z:206:TRP:C	22:Z:211:ARG:HD3	2.28	0.58
26:d:119:PRO:CD	26:d:145:ILE:HD11	2.32	0.58
26:d:153:ARG:HH12	26:d:155:PRO:HA	1.68	0.58
35:m:106:PHE:O	35:m:110:VAL:HG22	2.03	0.58
44:v:43:LEU:HD12	44:v:47:ALA:CB	2.32	0.58
45:w:38:GLU:N	45:w:38:GLU:OE1	2.34	0.58
46:x:42:ARG:HB3	46:x:43:LEU:CD2	2.33	0.58
1:A:12:A:N7	3:D:201:LYS:HA	2.18	0.58
1:A:585:U:C2	1:A:614:C:N3	2.71	0.58
1:A:621:U:O2'	1:A:622:A:OP2	2.21	0.58
1:A:779:G:H2'	1:A:780:G:O4'	2.03	0.58
1:A:1196:G:C2'	1:A:1197:U:H5'	2.33	0.58
2:C:5:ILE:HD13	13:N:58:LYS:NZ	2.18	0.58
3:D:55:LYS:NZ	3:D:55:LYS:HB2	2.18	0.58
5:F:20:ALA:HA	5:F:23:LEU:HD12	1.86	0.58
7:H:89:ALA:HB1	7:H:93:ASN:OD1	2.04	0.58
20:Y:694:C:H4'	24:b:105:LYS:HZ1	1.69	0.58
20:Y:1250:U:H3'	20:Y:1251:A:C5'	2.29	0.58
20:Y:2540:G:O2'	20:Y:2541:U:OP2	2.21	0.58
20:Y:2782:C:O2'	20:Y:2783:C:H5'	2.02	0.58
25:c:27:PHE:CB	25:c:29:TYR:HE2	2.15	0.58
25:c:41:VAL:HA	25:c:162:THR:O	2.02	0.58
29:g:77:ILE:CG2	34:l:70:GLU:H	2.05	0.58
30:h:29:LYS:HE2	30:h:29:LYS:HA	1.84	0.58
31:i:34:ILE:HD11	31:i:118:LEU:CB	2.32	0.58
34:l:18:THR:O	34:l:88:ARG:NH1	2.22	0.58
34:l:25:VAL:HG22	34:l:26:ASN:H	1.67	0.58
34:l:98:TYR:CD2	34:l:102:LEU:HD13	2.39	0.58
35:m:91:ASP:O	35:m:95:LEU:HD23	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:n:74:ARG:HB3	36:n:76:HIS:CE1	2.38	0.58
38:p:39:LYS:HB3	38:p:57:VAL:CG1	2.32	0.58
41:s:45:PHE:O	41:s:46:HIS:ND1	2.36	0.58
42:t:39:VAL:CG1	42:t:46:LYS:HZ2	2.15	0.58
47:y:10:LYS:HD3	49:1:34:GLU:OE1	2.02	0.58
1:A:1131:G:O3'	9:J:43:PRO:HA	2.03	0.58
1:A:1265:U:C5'	1:A:1266:U:H4'	2.28	0.58
1:A:1450:C:H2'	1:A:1451:G:O4'	2.02	0.58
2:C:88:ALA:HA	2:C:91:GLU:CG	2.31	0.58
7:H:13:ARG:HD3	7:H:27:LEU:HD21	1.85	0.58
12:M:53:VAL:HA	12:M:56:LEU:CD1	2.33	0.58
18:T:35:PHE:CG	18:T:79:LEU:HD13	2.38	0.58
20:Y:62:G:O6	20:Y:86:U:O4	2.21	0.58
20:Y:240:G:H3'	20:Y:241:A:H8	1.69	0.58
20:Y:269:C:H1'	20:Y:360:G:H1'	1.85	0.58
20:Y:383:U:O4	39:q:79:LYS:HE3	2.04	0.58
20:Y:678:A:O5'	24:b:90:VAL:HG21	2.03	0.58
20:Y:1178:U:C5'	20:Y:1179:U:H3'	2.33	0.58
20:Y:1263:G:O2'	20:Y:1264:C:H5'	2.03	0.58
20:Y:1537:U:H2'	20:Y:1538:G:C8	2.38	0.58
20:Y:1674:G:N3	32:j:73:LYS:NZ	2.49	0.58
20:Y:2008:A:H2	20:Y:2046:A:C4'	2.16	0.58
20:Y:2029:A:O2'	20:Y:2030:C:H5'	2.03	0.58
20:Y:2244:A:O2'	20:Y:2245:C:OP2	2.21	0.58
20:Y:2301:C:O2'	20:Y:2302:U:H5'	2.03	0.58
20:Y:2409:U:H3'	51:4:2406:U:O4	2.03	0.58
20:Y:2435:U:O2	20:Y:2435:U:H3'	2.03	0.58
20:Y:2506:G:H21	20:Y:2614:U:H3	1.50	0.58
20:Y:2702:A:H5'	50:2:31:ARG:NE	2.17	0.58
20:Y:2868:A:H2'	20:Y:2869:C:O2	2.04	0.58
20:Y:3076:U:H2'	20:Y:3077:A:C8	2.37	0.58
21:U:28:A:H2'	21:U:29:C:H5'	1.83	0.58
21:U:74:A:N3	21:U:74:A:H2'	2.17	0.58
23:a:147:ARG:HB3	23:a:148:PRO:HD2	1.85	0.58
25:c:20:ARG:HE	25:c:32:VAL:HG23	1.69	0.58
25:c:177:LEU:HG	25:c:182:PHE:CE2	2.38	0.58
26:d:104:LEU:HD11	26:d:124:PHE:HD2	1.68	0.58
31:i:110:ASP:OD1	31:i:110:ASP:O	2.21	0.58
32:j:57:LYS:HD3	32:j:58:GLY:N	2.17	0.58
40:r:83:LEU:HD23	40:r:95:ALA:HA	1.85	0.58
45:w:8:GLN:OE1	45:w:31:ILE:HA	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:373:A:N6	1:A:391:G:H1'	2.16	0.58
1:A:717:C:OP1	5:F:91:LEU:HA	2.02	0.58
1:A:841:U:O2	1:A:841:U:H2'	2.02	0.58
1:A:1172:A:H3'	1:A:1172:A:P	2.44	0.58
1:A:1385:C:H2'	1:A:1386:C:N1	2.18	0.58
5:F:6:ILE:HG12	5:F:63:ILE:O	2.03	0.58
10:K:103:GLU:HA	10:K:106:ILE:CG1	2.33	0.58
11:L:44:LYS:HG3	11:L:45:PRO:HD3	1.85	0.58
14:O:11:ILE:HA	14:O:14:GLN:OE1	2.03	0.58
16:Q:24:ILE:HD13	16:Q:73:ARG:NH2	2.18	0.58
16:Q:74:VAL:HG12	16:Q:93:ILE:CD1	2.30	0.58
20:Y:264:G:H4'	20:Y:516:G:H22	1.68	0.58
20:Y:380:A:H2'	20:Y:381:A:C8	2.38	0.58
20:Y:438:U:H3'	20:Y:439:C:H6	1.67	0.58
20:Y:732:G:O2'	20:Y:733:U:H5'	2.03	0.58
20:Y:894:U:H5"	22:Z:49:ILE:CD1	2.33	0.58
20:Y:1080:U:H1'	20:Y:2474:G:O6	2.03	0.58
20:Y:1442:A:O2'	20:Y:1443:G:H5'	2.03	0.58
20:Y:1499:A:O3'	20:Y:1500:A:H5"	2.03	0.58
20:Y:1886:A:N3	20:Y:1888:C:N4	2.51	0.58
20:Y:2271:C:H2'	20:Y:2272:G:H8	1.68	0.58
20:Y:2301:C:H2'	20:Y:2302:U:C6	2.38	0.58
20:Y:2474:G:C6	31:i:83:MET:HE1	2.39	0.58
20:Y:3035:C:O2'	20:Y:3036:C:H5'	2.02	0.58
20:Y:3102:U:O2'	20:Y:3103:A:H5'	2.03	0.58
21:U:10:G:H4'	21:U:11:U:OP1	2.01	0.58
25:c:87:ARG:O	25:c:90:MET:HG2	2.02	0.58
25:c:125:SER:H	25:c:128:GLN:HE22	1.51	0.58
25:c:145:PHE:O	25:c:148:ILE:HG12	2.04	0.58
26:d:24:LEU:HD21	26:d:73:ILE:CD1	2.32	0.58
29:g:106:LEU:N	29:g:106:LEU:HD23	2.19	0.58
30:h:51:GLU:HA	30:h:51:GLU:OE1	2.04	0.58
30:h:78:VAL:HG11	30:h:103:LEU:HD22	1.86	0.58
39:q:96:ARG:HB2	39:q:105:ILE:HB	1.86	0.58
1:A:608:G:H3'	1:A:609:G:C8	2.38	0.58
1:A:1427:C:H2'	1:A:1428:U:H6	1.66	0.58
3:D:151:GLN:NE2	3:D:155:GLU:OE2	2.37	0.58
4:E:190:ALA:HB3	4:E:195:LEU:HD21	1.85	0.58
5:F:4:TYR:HB2	5:F:65:VAL:HG23	1.83	0.58
17:R:68:VAL:HG23	17:R:77:LEU:HD22	1.86	0.58
20:Y:91:C:H2'	20:Y:92:G:H8	1.64	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:658:U:H3'	20:Y:659:U:C5	2.38	0.58
20:Y:680:U:H2'	20:Y:681:C:C6	2.39	0.58
20:Y:722:G:O2'	20:Y:723:C:H5'	2.02	0.58
20:Y:746:U:OP1	20:Y:747:A:H4'	2.03	0.58
20:Y:1019:C:H2'	20:Y:1020:A:O4'	2.02	0.58
20:Y:1230:G:O2'	20:Y:1231:U:H5'	2.02	0.58
20:Y:2015:U:OP1	22:Z:271:ARG:NH2	2.37	0.58
20:Y:2497:A:H2'	20:Y:2498:A:H8	1.68	0.58
20:Y:2523:A:H2'	20:Y:2524:C:C5'	2.32	0.58
20:Y:2907:C:H5"	34:l:50:GLN:OE1	2.03	0.58
25:c:87:ARG:HB3	25:c:90:MET:CE	2.32	0.58
30:h:111:LYS:HE3	30:h:129:PHE:O	2.04	0.58
34:l:96:LEU:HB3	34:l:99:LEU:CG	2.23	0.58
1:A:43:G:H2'	1:A:44:C:H6	1.69	0.58
1:A:255:G:O2'	1:A:256:U:H5'	2.03	0.58
1:A:288:A:O2'	1:A:289:G:H5'	2.03	0.58
1:A:358:U:H2'	1:A:359:G:H8	1.67	0.58
1:A:577:G:N2	1:A:624:G:H2'	2.16	0.58
3:D:195:ILE:HA	3:D:198:LEU:CD2	2.32	0.58
12:M:19:LEU:HA	12:M:22:ILE:CD1	2.33	0.58
20:Y:36:C:H2'	20:Y:37:U:C6	2.39	0.58
20:Y:374:U:H5"	20:Y:375:A:OP2	2.03	0.58
20:Y:889:A:C5'	22:Z:48:ARG:HH12	2.14	0.58
20:Y:1377:A:OP2	37:o:106:ARG:NH2	2.37	0.58
20:Y:1762:C:H2'	20:Y:1763:G:O4'	2.04	0.58
20:Y:1854:U:H2'	20:Y:1855:A:H8	1.69	0.58
23:a:58:SER:OG	23:a:61:LYS:HG3	2.04	0.58
25:c:100:GLY:N	25:c:103:MET:HG3	2.18	0.58
31:i:131:ILE:HG13	31:i:132:VAL:N	2.19	0.58
34:l:29:VAL:O	34:l:29:VAL:HG13	2.04	0.58
1:A:149:A:H2'	1:A:150:G:H5'	1.84	0.58
1:A:498:C:H5"	1:A:499:C:C6	2.39	0.58
1:A:967:C:H2'	1:A:968:U:C5	2.38	0.58
1:A:1419:C:H2'	1:A:1420:C:H6	1.68	0.58
1:A:1482:U:O2'	1:A:1483:A:OP2	2.13	0.58
2:C:22:TRP:CE2	13:N:54:PRO:HG2	2.39	0.58
3:D:70:TYR:HB3	3:D:85:LEU:CD1	2.33	0.58
9:J:42:LEU:CD2	9:J:73:LEU:HG	2.27	0.58
11:L:79:MET:HE1	11:L:102:LEU:HD12	1.86	0.58
11:L:100:GLY:N	11:L:104:THR:O	2.35	0.58
14:O:11:ILE:HD11	14:O:30:ALA:HB1	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:P:8:THR:N	15:P:19:ARG:O	2.36	0.58
20:Y:441:G:H2'	20:Y:442:U:C6	2.38	0.58
20:Y:759:G:C6	41:s:64:PRO:HG3	2.38	0.58
20:Y:1079:C:H2'	20:Y:1080:U:C6	2.37	0.58
20:Y:1464:A:H3'	20:Y:1465:C:C5'	2.26	0.58
20:Y:1644:G:H2'	20:Y:1645:G:C8	2.38	0.58
20:Y:1655:A:O2'	20:Y:1656:A:H5'	2.04	0.58
20:Y:1833:C:O2'	20:Y:1834:A:H5"	2.03	0.58
20:Y:2008:A:O3'	22:Z:206:TRP:HE3	1.86	0.58
20:Y:2147:U:O2'	20:Y:2148:C:H5'	2.03	0.58
20:Y:2264:U:O2'	20:Y:2265:U:H5'	2.03	0.58
20:Y:2587:U:O2'	20:Y:2588:C:H5'	2.03	0.58
20:Y:2894:G:H2'	20:Y:2895:A:C8	2.38	0.58
20:Y:3034:C:O2'	20:Y:3035:C:H5'	2.02	0.58
24:b:4:LYS:HE2	24:b:17:SER:OG	2.03	0.58
28:f:51:GLY:HA3	28:f:121:LYS:HZ1	1.69	0.58
29:g:76:TYR:C	29:g:77:ILE:HD13	2.28	0.58
34:l:99:LEU:HD11	34:l:109:ILE:HD11	1.84	0.58
35:m:91:ASP:C	35:m:91:ASP:OD2	2.47	0.58
39:q:94:LYS:HD3	39:q:94:LYS:N	2.19	0.58
51:4:2393:A:O2'	51:4:2395:U:OP2	2.18	0.58
1:A:49:U:O2	1:A:396:G:N2	2.27	0.58
1:A:612:U:H5'	1:A:613:G:C8	2.38	0.58
1:A:677:U:H5'	1:A:678:G:OP2	2.04	0.58
1:A:996:G:N2	1:A:998:G:H3'	2.18	0.58
1:A:1297:U:H1'	1:A:1343:G:H1'	1.86	0.58
1:A:1322:G:H2'	1:A:1323:U:H6	1.69	0.58
1:A:1405:G:C5'	29:g:48:PRO:HB3	2.27	0.58
3:D:69:ARG:NH1	3:D:72:GLU:HG3	2.17	0.58
8:I:75:VAL:HG21	8:I:107:LEU:HD11	1.86	0.58
9:J:11:LYS:HG3	9:J:97:ASP:CB	2.33	0.58
10:K:103:GLU:HA	10:K:106:ILE:CD1	2.33	0.58
13:N:22:THR:OG1	13:N:33:VAL:HG11	2.03	0.58
20:Y:459:A:H61	20:Y:489:A:H3'	1.68	0.58
20:Y:1751:G:O2'	20:Y:1752:C:H5'	2.04	0.58
20:Y:2465:A:H2'	20:Y:2466:G:C8	2.38	0.58
20:Y:2474:G:H8	20:Y:2721:A:OP1	1.87	0.58
20:Y:3011:C:H2'	20:Y:3012:U:C6	2.37	0.58
25:c:10:ARG:HA	25:c:13:GLN:OE1	2.02	0.58
26:d:127:GLU:N	26:d:127:GLU:OE2	2.37	0.58
27:e:109:GLU:O	27:e:113:THR:HG23	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:h:114:GLY:O	30:h:132:SER:OG	2.19	0.58
36:n:64:VAL:HA	36:n:97:LEU:CD2	2.33	0.58
37:o:26:ARG:NH2	46:x:17:ARG:HG2	2.19	0.58
40:r:16:ARG:HG3	40:r:48:GLU:CG	2.33	0.58
42:t:3:ALA:O	42:t:4:VAL:HG23	2.04	0.58
45:w:5:LYS:HE3	45:w:36:VAL:HB	1.86	0.58
1:A:48:G:P	15:P:14:ARG:HB3	2.44	0.58
1:A:361:G:H2'	1:A:362:G:O4'	2.04	0.58
1:A:401:C:H2'	1:A:402:G:C8	2.39	0.58
1:A:405:U:H1'	1:A:478:A:H2'	1.86	0.58
5:F:48:LEU:HD13	5:F:52:ILE:HG22	1.85	0.58
8:I:115:ARG:HA	8:I:118:LEU:CD1	2.33	0.58
11:L:44:LYS:HG3	11:L:45:PRO:CD	2.34	0.58
12:M:104:LYS:HA	12:M:104:LYS:CE	2.30	0.58
20:Y:261:G:H2'	20:Y:262:A:H8	1.68	0.58
20:Y:269:C:O4'	20:Y:360:G:H1'	2.04	0.58
20:Y:319:G:N1	20:Y:492:C:H1'	2.19	0.58
20:Y:778:G:H5"	30:h:20:THR:HG21	1.85	0.58
20:Y:1008:G:H2'	20:Y:1012:C:C5	2.39	0.58
20:Y:1284:A:H2'	20:Y:1285:G:H8	1.69	0.58
20:Y:1347:G:H2'	20:Y:1348:G:C8	2.38	0.58
20:Y:1936:G:O2'	20:Y:1937:U:H5'	2.02	0.58
20:Y:2203:C:O2'	20:Y:2204:G:H5'	2.02	0.58
20:Y:2551:A:H2'	20:Y:2552:A:C8	2.39	0.58
20:Y:2564:A:C2'	20:Y:2565:G:H5'	2.34	0.58
20:Y:2624:C:H2'	20:Y:2625:C:H6	1.69	0.58
20:Y:2739:C:H2'	20:Y:2740:G:C8	2.39	0.58
20:Y:2958:C:H2'	20:Y:2959:A:H5'	1.84	0.58
22:Z:134:ARG:HB2	22:Z:188:ARG:HH22	1.69	0.58
23:a:114:VAL:HG21	23:a:198:ILE:CG2	2.33	0.58
26:d:35:LEU:HD13	26:d:72:LEU:HD11	1.84	0.58
34:l:23:ASP:OD2	34:l:89:GLY:N	2.35	0.58
37:o:20:SER:HB3	37:o:23:LYS:HE2	1.86	0.58
37:o:90:LYS:CE	37:o:102:ARG:HE	2.16	0.58
40:r:28:ARG:HB2	40:r:28:ARG:NH1	2.18	0.58
41:s:11:ARG:O	41:s:14:ARG:NH1	2.36	0.58
1:A:48:G:O5'	15:P:12:LYS:HD3	2.04	0.58
1:A:228:A:H2'	1:A:229:U:N1	2.19	0.58
1:A:345:C:H1'	1:A:346:G:N2	2.19	0.58
1:A:477:G:H3'	1:A:477:G:OP2	2.04	0.58
1:A:906:C:O2'	1:A:907:G:H5'	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:988:C:O2'	1:A:1017:C:O2'	1.98	0.58
1:A:1104:G:O2'	1:A:1126:G:N1	2.35	0.58
1:A:1424:G:N2	1:A:1443:G:N7	2.51	0.58
2:C:127:VAL:HG12	2:C:132:ALA:HB2	1.85	0.58
2:C:150:ARG:NH1	2:C:173:VAL:HG13	2.19	0.58
2:C:174:PRO:HB3	2:C:177:THR:OG1	2.04	0.58
2:C:191:THR:HG22	2:C:193:PHE:N	2.17	0.58
3:D:53:LYS:HA	3:D:195:ILE:CD1	2.33	0.58
3:D:86:LEU:HD12	3:D:87:ARG:H	1.67	0.58
4:E:130:VAL:CB	4:E:148:ILE:HG22	2.34	0.58
5:F:48:LEU:HD21	5:F:57:GLU:HA	1.86	0.58
20:Y:159:A:H3'	20:Y:159:A:OP2	2.04	0.58
20:Y:645:G:H2'	20:Y:646:U:C6	2.39	0.58
20:Y:664:A:H3'	20:Y:665:G:H8	1.68	0.58
20:Y:1294:U:H2'	20:Y:1295:U:C6	2.39	0.58
20:Y:2040:G:O2'	20:Y:2041:G:H5'	2.03	0.58
20:Y:2496:U:H5"	20:Y:2497:A:OP1	2.03	0.58
20:Y:2529:A:OP1	25:c:140:ASN:ND2	2.37	0.58
20:Y:2633:G:H3'	20:Y:2634:G:O4'	2.04	0.58
20:Y:2701:U:H5"	20:Y:2702:A:OP1	2.04	0.58
20:Y:2937:G:H3'	20:Y:2938:G:H5"	1.85	0.58
22:Z:156:ALA:HB2	22:Z:163:ILE:HG13	1.86	0.58
29:g:64:ARG:HB3	29:g:83:ALA:CB	2.30	0.58
29:g:109:LYS:O	29:g:110:LYS:HB3	2.04	0.58
35:m:104:ALA:O	35:m:107:THR:OG1	2.21	0.58
40:r:16:ARG:HB2	40:r:46:HIS:ND1	2.19	0.58
40:r:37:LEU:HD11	40:r:45:GLN:HE21	1.69	0.58
51:4:2389:U:C2	51:4:2394:A:N7	2.72	0.58
1:A:48:G:H5'	15:P:12:LYS:CB	2.27	0.57
1:A:630:A:H2'	1:A:631:C:C6	2.39	0.57
1:A:1209:C:H41	12:M:104:LYS:NZ	2.02	0.57
1:A:1308:C:O2'	1:A:1309:C:H5'	2.03	0.57
3:D:45:GLU:HA	3:D:48:GLN:OE1	2.04	0.57
8:I:40:ARG:O	8:I:83:ILE:HD12	2.03	0.57
9:J:92:LEU:HD12	9:J:98:VAL:HG21	1.86	0.57
17:R:48:ILE:HG13	17:R:72:ARG:HH22	1.68	0.57
20:Y:185:G:H2'	20:Y:186:G:C8	2.39	0.57
20:Y:268:G:H2'	20:Y:360:G:C4	2.37	0.57
20:Y:746:U:C5'	20:Y:747:A:H5"	2.33	0.57
20:Y:855:C:OP1	20:Y:2001:A:H2'	2.03	0.57
20:Y:986:G:O6	20:Y:987:A:N6	2.37	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:1077:A:C8	20:Y:1079:C:C6	2.91	0.57
20:Y:1503:G:H2'	20:Y:1504:G:H8	1.68	0.57
20:Y:1636:A:H2'	20:Y:1636:A:N3	2.18	0.57
20:Y:2427:G:OP2	22:Z:154:LYS:NZ	2.37	0.57
20:Y:2918:G:O2'	20:Y:2919:U:H5'	2.04	0.57
21:U:58:A:C2	25:c:33:MET:HE1	2.39	0.57
21:U:102:A:H5'	40:r:81:LYS:NZ	2.18	0.57
25:c:84:PHE:CB	25:c:86:LEU:HD23	2.34	0.57
26:d:122:ILE:HD12	26:d:123:THR:H	1.68	0.57
29:g:110:LYS:O	29:g:110:LYS:HD3	2.03	0.57
31:i:34:ILE:HG23	31:i:122:ILE:HD11	1.84	0.57
32:j:51:LEU:HD21	32:j:70:ILE:CG2	2.34	0.57
33:k:116:LEU:HD12	33:k:116:LEU:O	2.03	0.57
39:q:39:ASN:CG	39:q:66:ILE:HD11	2.29	0.57
39:q:40:ARG:HH12	39:q:62:GLN:N	2.02	0.57
40:r:131:ILE:HD11	40:r:133:ILE:HD11	1.85	0.57
43:u:6:THR:O	43:u:9:GLU:HB2	2.03	0.57
1:A:171:A:C2'	1:A:172:C:H5'	2.29	0.57
1:A:519:A:H3'	1:A:520:G:H8	1.69	0.57
1:A:659:C:O2'	1:A:660:C:H5'	2.03	0.57
1:A:1030:G:H2'	1:A:1031:G:C8	2.38	0.57
2:C:191:THR:H	2:C:195:ARG:HH21	1.50	0.57
3:D:97:VAL:HG21	3:D:109:ALA:HB1	1.85	0.57
3:D:183:ARG:HA	3:D:186:ILE:HD12	1.85	0.57
4:E:36:TYR:HE1	4:E:66:ASP:HB3	1.69	0.57
7:H:67:GLY:CA	7:H:71:GLU:HB2	2.25	0.57
15:P:13:ILE:HG13	15:P:14:ARG:N	2.19	0.57
15:P:40:TYR:HA	15:P:49:ILE:CD1	2.35	0.57
19:V:184:ILE:HG22	19:V:200:ILE:HD11	1.86	0.57
20:Y:23:G:O2'	20:Y:24:G:H5'	2.03	0.57
20:Y:268:G:C3'	20:Y:360:G:C2	2.87	0.57
20:Y:378:G:H2'	20:Y:379:G:O4'	2.03	0.57
20:Y:810:G:H1'	20:Y:883:G:H22	1.68	0.57
20:Y:895:G:N2	22:Z:230:ASP:OD2	2.37	0.57
20:Y:922:U:H1'	20:Y:2669:G:OP1	2.04	0.57
20:Y:1521:C:H2'	20:Y:1522:G:C8	2.39	0.57
20:Y:1809:U:H2'	20:Y:1810:A:N7	2.19	0.57
20:Y:1966:G:O2'	20:Y:1967:G:H5'	2.04	0.57
20:Y:2037:U:H5	22:Z:161:VAL:HG23	1.69	0.57
20:Y:2041:G:H2'	20:Y:2042:A:C8	2.40	0.57
20:Y:2142:A:O3'	20:Y:2143:A:H3'	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:3012:U:H2'	20:Y:3112:A:H2	1.68	0.57
22:Z:163:ILE:CD1	22:Z:177:MET:HB2	2.34	0.57
23:a:59:PRO:HA	23:a:62:VAL:HG12	1.85	0.57
24:b:157:VAL:CG1	24:b:180:PRO:HB3	2.34	0.57
25:c:64:LEU:O	25:c:67:ILE:HG22	2.03	0.57
25:c:73:GLU:O	25:c:94:ALA:HA	2.04	0.57
30:h:105:ARG:HB3	30:h:108:SER:CB	2.34	0.57
30:h:114:GLY:HA3	30:h:132:SER:C	2.29	0.57
34:l:49:ARG:HA	34:l:57:THR:O	2.05	0.57
37:o:72:ASP:OD1	37:o:74:SER:OG	2.21	0.57
41:s:72:LYS:HZ2	41:s:77:THR:HG21	1.65	0.57
44:v:109:TYR:CZ	44:v:112:GLY:HA2	2.38	0.57
1:A:116:A:C2	1:A:118:A:H1'	2.39	0.57
1:A:383:A:H3'	1:A:384:G:C8	2.33	0.57
1:A:1397:U:H2'	1:A:1398:G:C8	2.39	0.57
2:C:142:ARG:HE	2:C:142:ARG:C	2.12	0.57
5:F:79:LEU:O	5:F:85:VAL:HG11	2.03	0.57
7:H:52:GLU:N	7:H:52:GLU:OE1	2.37	0.57
9:J:47:ASN:HB2	9:J:67:MET:CG	2.34	0.57
10:K:59:VAL:HG11	10:K:74:LEU:HD12	1.86	0.57
11:L:50:ARG:CD	11:L:90:LEU:HD11	2.33	0.57
12:M:14:ARG:HB2	12:M:17:ILE:HD13	1.86	0.57
13:N:47:MET:HE2	13:N:53:LEU:HD21	1.86	0.57
16:Q:30:ASP:H	16:Q:70:ILE:HD11	1.70	0.57
20:Y:169:C:O2	20:Y:169:C:H2'	2.03	0.57
20:Y:191:G:O2'	20:Y:917:A:N3	2.36	0.57
20:Y:419:G:OP1	39:q:2:LYS:NZ	2.30	0.57
20:Y:430:A:H2'	20:Y:431:C:C6	2.40	0.57
20:Y:488:G:C2'	20:Y:489:A:H5"	2.34	0.57
20:Y:667:A:OP2	20:Y:2723:C:O2'	2.22	0.57
20:Y:910:C:C2	20:Y:911:U:C5	2.92	0.57
20:Y:986:G:H22	20:Y:1022:C:H42	1.52	0.57
20:Y:992:C:H2'	20:Y:993:G:H5'	1.86	0.57
20:Y:1044:U:C5'	45:w:37:ARG:HH12	2.17	0.57
20:Y:1225:G:C1'	44:v:76:PRO:HD3	2.35	0.57
20:Y:1525:U:H3'	20:Y:1526:A:C8	2.39	0.57
20:Y:1678:U:H5'	20:Y:1679:A:OP2	2.04	0.57
20:Y:1947:U:O2'	20:Y:1948:A:O5'	2.20	0.57
20:Y:2166:C:HO2'	20:Y:2167:U:P	2.27	0.57
20:Y:2471:A:H2'	20:Y:2472:C:C6	2.39	0.57
20:Y:2767:G:H2'	20:Y:2768:G:C8	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:2944:U:H2'	20:Y:2944:U:O2	2.04	0.57
20:Y:2957:A:H2'	20:Y:2958:C:H5'	1.87	0.57
22:Z:94:LEU:C	22:Z:95:LEU:HD23	2.29	0.57
23:a:55:GLY:HA3	23:a:79:ARG:HB3	1.87	0.57
23:a:129:ARG:CA	23:a:170:MET:HE1	2.27	0.57
25:c:64:LEU:HD22	25:c:159:MET:HE3	1.85	0.57
28:f:24:VAL:CG1	28:f:27:ARG:HG2	2.34	0.57
30:h:111:LYS:NZ	30:h:128:LYS:HB3	2.19	0.57
34:l:6:PHE:O	34:l:9:GLN:HG3	2.05	0.57
34:l:30:LYS:HG2	34:l:39:ILE:CD1	2.34	0.57
38:p:7:PRO:HG2	38:p:45:ALA:HA	1.86	0.57
39:q:87:ILE:HG12	39:q:94:LYS:HD2	1.86	0.57
43:u:18:LEU:HD12	43:u:18:LEU:C	2.29	0.57
44:v:77:THR:HG23	44:v:106:LYS:CE	2.34	0.57
45:w:9:VAL:HG13	45:w:10:ARG:HG2	1.87	0.57
50:2:13:LYS:O	50:2:13:LYS:HD3	2.04	0.57
1:A:79:C:H2'	1:A:80:C:H6	1.65	0.57
1:A:82:U:N3	1:A:88:G:O6	2.37	0.57
1:A:158:A:H2'	1:A:159:A:C4	2.40	0.57
1:A:943:U:H2'	1:A:944:C:O4'	2.04	0.57
1:A:996:G:H2'	1:A:998:G:OP2	2.04	0.57
1:A:1128:C:H2'	1:A:1129:U:C6	2.39	0.57
6:G:22:LEU:CD2	6:G:62:LEU:HD21	2.31	0.57
7:H:106:ILE:HD11	7:H:115:ASP:HA	1.84	0.57
20:Y:1096:G:O2'	20:Y:1097:A:H5'	2.04	0.57
20:Y:1566:A:H1'	20:Y:1602:U:H1'	1.86	0.57
20:Y:1597:G:H2'	20:Y:1598:U:H5'	1.87	0.57
20:Y:1924:G:N3	20:Y:1974:A:H5'	2.19	0.57
20:Y:2121:G:H2'	20:Y:2122:U:H6	1.70	0.57
20:Y:2280:G:H21	46:x:2:ALA:HA	1.69	0.57
20:Y:2634:G:H5'	20:Y:2635:A:OP2	2.04	0.57
20:Y:2784:C:H2'	20:Y:2785:A:H8	1.63	0.57
25:c:114:ALA:O	25:c:118:ILE:HG13	2.04	0.57
34:l:25:VAL:HA	34:l:86:LEU:HG	1.85	0.57
34:l:59:THR:OG1	34:l:71:ARG:O	2.22	0.57
35:m:49:ASP:HA	35:m:52:ALA:HB3	1.86	0.57
44:v:46:SER:O	44:v:83:LYS:HB2	2.04	0.57
51:4:2334:U:H4'	51:4:2341:U:O2'	2.05	0.57
1:A:251:G:C4'	1:A:252:U:H5'	2.32	0.57
1:A:433:C:H2'	1:A:434:C:C5	2.40	0.57
1:A:592:U:H3	1:A:609:G:H21	1.53	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:835:G:O2'	1:A:836:U:H5'	2.03	0.57
1:A:1051:C:H2'	1:A:1052:G:C8	2.37	0.57
1:A:1460:A:H2'	1:A:1461:U:C6	2.39	0.57
2:C:23:TYR:HD2	9:J:12:ALA:HA	1.68	0.57
2:C:63:VAL:HG13	2:C:98:VAL:HG23	1.86	0.57
4:E:182:ARG:NH2	4:E:189:VAL:HG23	2.20	0.57
6:G:103:TRP:HB3	6:G:107:PHE:HE2	1.69	0.57
6:G:150:ALA:HB1	10:K:68:THR:OG1	2.04	0.57
7:H:5:ASP:OD1	7:H:79:ARG:NH1	2.37	0.57
10:K:62:LYS:HD2	10:K:62:LYS:N	2.20	0.57
12:M:104:LYS:HE3	12:M:104:LYS:CA	2.34	0.57
16:Q:27:VAL:HG12	16:Q:72:ASP:H	1.69	0.57
16:Q:72:ASP:CG	16:Q:96:LYS:HA	2.30	0.57
20:Y:288:U:H4'	20:Y:289:A:O4'	2.04	0.57
20:Y:303:G:O2'	20:Y:304:U:H5'	2.04	0.57
20:Y:336:C:O2'	20:Y:337:U:P	2.62	0.57
20:Y:916:G:H3'	20:Y:917:A:C5'	2.34	0.57
20:Y:924:G:O2'	20:Y:925:U:H5'	2.04	0.57
20:Y:981:U:H4'	20:Y:982:A:O5'	2.02	0.57
20:Y:1157:G:H2'	20:Y:1158:U:C5'	2.32	0.57
20:Y:1630:U:O4	20:Y:1631:A:N6	2.37	0.57
20:Y:1715:A:N3	20:Y:1798:U:O2'	2.35	0.57
20:Y:2180:U:C2'	20:Y:2181:C:H5'	2.33	0.57
20:Y:2528:G:C1'	25:c:137:PHE:HD1	2.18	0.57
25:c:40:LYS:HE3	25:c:99:ARG:HG2	1.86	0.57
26:d:72:LEU:O	26:d:76:LEU:HG	2.05	0.57
26:d:95:TYR:HA	26:d:107:ALA:O	2.05	0.57
32:j:99:LYS:HA	32:j:111:ALA:HA	1.87	0.57
34:l:44:GLY:HA2	34:l:61:ARG:C	2.30	0.57
39:q:11:VAL:CG2	39:q:17:LYS:HA	2.34	0.57
46:x:29:THR:HA	46:x:37:ARG:O	2.04	0.57
1:A:41:U:H5"	11:L:121:LYS:CE	2.21	0.57
1:A:144:G:H2'	1:A:145:G:C8	2.40	0.57
2:C:41:LEU:HD12	2:C:42:LEU:H	1.69	0.57
2:C:90:LEU:CD1	2:C:98:VAL:HG21	2.34	0.57
2:C:118:GLY:O	2:C:121:GLU:HG3	2.04	0.57
3:D:151:GLN:O	3:D:154:ARG:HG2	2.04	0.57
6:G:107:PHE:HA	6:G:110:GLN:OE1	2.05	0.57
8:I:32:ARG:NH1	8:I:33:LYS:HG2	2.18	0.57
8:I:99:LEU:HD12	8:I:100:ARG:N	2.20	0.57
14:O:3:LEU:HD11	14:O:34:LYS:HG2	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:P:7:LEU:HA	15:P:19:ARG:O	2.05	0.57
15:P:74:LEU:HG	15:P:79:ASP:CB	2.34	0.57
16:Q:26:TYR:C	16:Q:38:VAL:HG13	2.28	0.57
16:Q:41:GLU:HA	16:Q:56:THR:HG22	1.86	0.57
20:Y:372:G:O2'	20:Y:373:U:H5'	2.05	0.57
20:Y:1102:G:OP1	20:Y:1103:C:N4	2.38	0.57
20:Y:1241:C:O2'	20:Y:1242:C:H5'	2.05	0.57
20:Y:1559:A:H2'	20:Y:1560:U:C6	2.40	0.57
20:Y:1832:A:N1	37:o:100:ALA:HB2	2.20	0.57
20:Y:1858:A:H2'	20:Y:1859:A:O4'	2.05	0.57
20:Y:1870:U:C4	32:j:8:PRO:HG2	2.39	0.57
20:Y:2005:C:C2	20:Y:2006:A:C8	2.92	0.57
20:Y:2007:C:OP1	22:Z:220:THR:HG22	2.04	0.57
20:Y:2121:G:O2'	20:Y:2122:U:H5'	2.04	0.57
20:Y:2135:U:H3'	20:Y:2142:A:N6	2.18	0.57
20:Y:2256:G:H21	23:a:156:THR:HG21	1.68	0.57
20:Y:2325:U:H2'	51:4:2326:A:P	2.44	0.57
20:Y:2519:C:H2'	20:Y:2520:U:H6	1.68	0.57
20:Y:2535:A:C4'	25:c:78:ARG:HH12	2.14	0.57
23:a:4:LYS:CB	23:a:105:ILE:HD11	2.34	0.57
23:a:53:ALA:HB1	23:a:78:ARG:HB2	1.86	0.57
25:c:48:GLY:HA2	25:c:92:ILE:CD1	2.35	0.57
27:e:121:ASN:OD1	44:v:41:ARG:NH1	2.37	0.57
28:f:18:ILE:HD11	28:f:140:PHE:CD2	2.34	0.57
28:f:59:ALA:O	28:f:62:ILE:HG22	2.05	0.57
28:f:103:ASN:HA	28:f:106:ILE:HG22	1.86	0.57
33:k:56:ASN:HB2	33:k:58:THR:HG22	1.87	0.57
34:l:45:VAL:HG11	34:l:109:ILE:HG13	1.87	0.57
34:l:80:ILE:HD13	34:l:83:ILE:HG12	1.86	0.57
1:A:119:C:OP1	1:A:312:C:H5'	2.04	0.57
1:A:233:C:H2'	1:A:234:C:N1	2.19	0.57
1:A:255:G:H2'	1:A:256:U:C6	2.40	0.57
1:A:550:G:H4'	1:A:799:G:O2'	2.05	0.57
1:A:1098:U:H2'	1:A:1099:C:C6	2.40	0.57
1:A:1303:U:OP2	1:A:1304:C:O2'	2.21	0.57
1:A:1420:C:H2'	1:A:1421:G:C8	2.39	0.57
1:A:1422:G:P	18:T:33:ARG:HE	2.26	0.57
2:C:85:ARG:O	2:C:89:ASP:OD2	2.23	0.57
4:E:132:ALA:CB	4:E:150:ALA:HB3	2.35	0.57
8:I:33:LYS:HA	8:I:130:ALA:HB1	1.86	0.57
8:I:96:ALA:O	8:I:99:LEU:HG	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:P:9:ARG:O	15:P:10:LEU:HD12	2.04	0.57
18:T:15:GLU:HB3	18:T:16:ARG:HH21	1.68	0.57
19:V:56:PHE:CG	19:V:198:TYR:HE2	2.22	0.57
19:V:68:LEU:HG	19:V:158:PRO:HB3	1.86	0.57
20:Y:619:C:H1'	20:Y:2245:C:N4	2.20	0.57
20:Y:656:C:H2'	20:Y:657:C:C6	2.39	0.57
20:Y:680:U:O2'	20:Y:681:C:H5'	2.05	0.57
20:Y:928:U:O2'	20:Y:929:C:H5'	2.04	0.57
20:Y:1177:G:O2'	20:Y:1178:U:P	2.63	0.57
20:Y:1200:U:H4'	27:e:121:ASN:OD1	2.04	0.57
20:Y:1269:C:C2'	20:Y:1270:G:H5"	2.35	0.57
20:Y:1336:A:P	36:n:91:ARG:HH22	2.27	0.57
20:Y:1399:A:H2'	20:Y:1400:G:O4'	2.05	0.57
20:Y:1888:C:H6	20:Y:1888:C:O5'	1.87	0.57
20:Y:2044:U:P	22:Z:222:ARG:HH21	2.28	0.57
20:Y:2248:C:O3'	23:a:159:ARG:NH1	2.37	0.57
20:Y:2495:G:H2'	20:Y:2496:U:C6	2.40	0.57
20:Y:2537:C:H4'	25:c:95:ARG:NH1	2.19	0.57
20:Y:2823:G:O2'	20:Y:2824:A:H5'	2.04	0.57
20:Y:3108:G:C1'	46:x:41:ARG:HH12	2.17	0.57
22:Z:130:ASN:OD1	22:Z:131:LEU:N	2.36	0.57
23:a:13:MET:HB2	23:a:27:THR:HA	1.87	0.57
35:m:11:GLN:HA	35:m:11:GLN:OE1	2.04	0.57
36:n:6:ILE:HA	36:n:14:TYR:O	2.05	0.57
38:p:8:ARG:HB2	38:p:49:ILE:CD1	2.35	0.57
38:p:48:LYS:HD3	38:p:48:LYS:C	2.30	0.57
40:r:9:ASN:OD1	40:r:61:HIS:NE2	2.37	0.57
40:r:37:LEU:HA	40:r:97:LEU:O	2.05	0.57
42:t:31:PRO:O	42:t:33:ILE:HG23	2.04	0.57
1:A:282:A:H3'	1:A:283:C:H6	1.69	0.57
1:A:642:C:O5'	5:F:95:LYS:HE3	2.05	0.57
1:A:938:U:O2'	1:A:939:U:H5'	2.04	0.57
1:A:1287:G:O2'	1:A:1288:A:O4'	2.21	0.57
1:A:1494:C:H2'	1:A:1495:G:C8	2.39	0.57
3:D:92:ARG:O	3:D:96:VAL:HG23	2.04	0.57
8:I:26:ILE:CG2	8:I:41:LEU:HD21	2.35	0.57
8:I:72:LEU:HD21	8:I:78:VAL:HA	1.85	0.57
9:J:18:ILE:CD1	9:J:72:ARG:HG2	2.28	0.57
12:M:25:ILE:HA	12:M:29:ARG:NH2	2.19	0.57
15:P:23:ALA:HA	15:P:34:ILE:CD1	2.35	0.57
15:P:51:ILE:HD12	15:P:52:ASP:H	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:V:73:LYS:NZ	19:V:205:ASP:HA	2.19	0.57
20:Y:384:G:O2'	20:Y:385:G:H5'	2.05	0.57
20:Y:770:A:O3'	20:Y:771:G:H8	1.87	0.57
20:Y:1470:G:H2'	20:Y:1471:G:H8	1.70	0.57
20:Y:2231:U:O2'	20:Y:2232:C:H5'	2.04	0.57
20:Y:2254:A:C2	20:Y:2723:C:H5"	2.38	0.57
20:Y:2501:G:C3'	20:Y:2502:A:H5"	2.34	0.57
20:Y:2643:U:OP2	49:1:33:LEU:HD23	2.04	0.57
21:U:46:A:H1'	25:c:40:LYS:NZ	2.20	0.57
29:g:1:MET:CE	29:g:67:LYS:HB2	2.35	0.57
30:h:77:VAL:CG2	30:h:112:VAL:HA	2.09	0.57
33:k:104:ARG:HG2	33:k:107:TYR:O	2.04	0.57
38:p:48:LYS:HZ3	38:p:49:ILE:HG12	1.69	0.57
40:r:176:LEU:HD12	40:r:177:LEU:H	1.69	0.57
44:v:53:LYS:HB2	44:v:56:LEU:HD23	1.87	0.57
1:A:314:C:H2'	1:A:315:A:C8	2.39	0.57
1:A:578:U:H4'	7:H:88:TYR:CD2	2.40	0.57
1:A:787:A:H2'	1:A:788:C:C6	2.39	0.57
1:A:1144:G:O2'	1:A:1145:G:H5'	2.05	0.57
1:A:1286:G:H5"	1:A:1287:G:OP1	2.04	0.57
1:A:1355:U:OP2	8:I:33:LYS:NZ	2.38	0.57
3:D:73:GLU:OE1	3:D:76:ARG:NE	2.35	0.57
3:D:83:ASP:HA	3:D:86:LEU:CG	2.30	0.57
3:D:110:ARG:HA	3:D:113:VAL:CG2	2.35	0.57
4:E:158:ALA:O	4:E:162:VAL:HG23	2.05	0.57
5:F:81:LEU:CD1	22:Z:137:PRO:HG3	2.35	0.57
7:H:98:LEU:HD11	7:H:132:TRP:HB2	1.86	0.57
7:H:107:SER:OG	7:H:126:GLU:HB3	2.04	0.57
20:Y:400:C:O2'	20:Y:401:C:H5'	2.03	0.57
20:Y:409:G:H2'	20:Y:410:U:H6	1.70	0.57
20:Y:951:G:H2'	20:Y:952:C:C6	2.40	0.57
20:Y:1070:G:H2'	20:Y:1071:G:H8	1.70	0.57
20:Y:1213:A:H2'	20:Y:1213:A:N3	2.20	0.57
20:Y:1217:G:H2'	20:Y:1218:C:H5'	1.87	0.57
20:Y:1902:C:H2'	20:Y:1903:C:H6	1.69	0.57
20:Y:2261:U:O2'	20:Y:2262:C:H5'	2.05	0.57
20:Y:2521:C:HO2'	20:Y:2546:A:H2	1.51	0.57
20:Y:2821:G:H5"	20:Y:2822:A:OP2	2.04	0.57
20:Y:2900:C:H2'	20:Y:2901:G:H8	1.69	0.57
20:Y:2966:C:OP1	50:2:35:ARG:NH2	2.37	0.57
20:Y:3090:G:H2'	20:Y:3091:G:C8	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:b:65:PRO:HB2	24:b:66:TYR:CD2	2.40	0.57
24:b:111:LEU:CD2	24:b:185:THR:HG22	2.34	0.57
24:b:118:ARG:HH22	30:h:5:LYS:NZ	2.02	0.57
25:c:169:ASN:N	25:c:172:GLU:OE2	2.37	0.57
26:d:70:ARG:HH12	26:d:74:ALA:HB2	1.70	0.57
29:g:24:VAL:CB	29:g:30:ARG:HD3	2.35	0.57
29:g:68:GLU:HA	29:g:77:ILE:O	2.04	0.57
34:l:24:THR:HG23	34:l:43:LYS:HZ2	1.68	0.57
37:o:10:ALA:O	37:o:113:ILE:HG13	2.05	0.57
37:o:18:ARG:NH2	37:o:105:LYS:HD2	2.19	0.57
37:o:25:ARG:HA	37:o:28:ILE:HD12	1.87	0.57
38:p:8:ARG:HG3	38:p:8:ARG:O	2.03	0.57
47:y:11:ILE:CG2	47:y:53:GLU:HG2	2.34	0.57
47:y:15:CYS:SG	47:y:16:GLU:N	2.78	0.57
1:A:48:G:OP2	15:P:14:ARG:HB3	2.04	0.57
1:A:143:G:O2'	1:A:144:G:H5'	2.05	0.57
1:A:183:C:O4'	18:T:76:LYS:NZ	2.37	0.57
1:A:304:U:H2'	1:A:305:G:C8	2.40	0.57
1:A:428:G:H5'	1:A:430:A:H1'	1.87	0.57
1:A:960:A:H61	1:A:1298:G:H1'	1.68	0.57
1:A:1186:U:O2'	2:C:195:ARG:HG2	2.05	0.57
1:A:1398:G:H2'	1:A:1399:A:C8	2.40	0.57
3:D:54:GLN:HB3	3:D:58:PHE:CZ	2.40	0.57
4:E:37:ILE:O	4:E:64:VAL:HA	2.04	0.57
7:H:8:ALA:O	7:H:12:THR:HG23	2.04	0.57
7:H:10:PHE:CE1	7:H:14:LEU:HD21	2.40	0.57
7:H:107:SER:HA	7:H:112:LEU:CD2	2.34	0.57
18:T:68:HIS:CD2	18:T:69:PRO:HD2	2.40	0.57
19:V:161:VAL:HG22	19:V:182:PRO:O	2.05	0.57
20:Y:6:G:N2	20:Y:3114:A:H62	2.02	0.57
20:Y:113:C:O2'	20:Y:114:G:H5'	2.04	0.57
20:Y:486:G:OP2	42:t:53:THR:HB	2.05	0.57
20:Y:600:A:O2'	20:Y:601:A:P	2.63	0.57
20:Y:953:G:N2	20:Y:1058:A:C2	2.73	0.57
20:Y:1092:G:O2'	20:Y:1093:A:OP2	2.21	0.57
20:Y:1118:A:H2'	20:Y:1119:A:C8	2.40	0.57
20:Y:1313:U:H2'	20:Y:1314:C:H6	1.70	0.57
20:Y:1366:A:OP2	35:m:6:ARG:HD2	2.05	0.57
20:Y:1565:A:H2'	20:Y:1602:U:H5	1.68	0.57
20:Y:1674:G:H3'	32:j:63:ARG:NH2	2.20	0.57
20:Y:1688:G:C6	20:Y:1748:A:C2	2.93	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:1741:G:O2'	20:Y:1742:U:H5'	2.05	0.57
20:Y:2424:C:O2'	20:Y:2425:U:H5'	2.04	0.57
20:Y:2465:A:H2'	20:Y:2466:G:H8	1.70	0.57
20:Y:2528:G:H8	25:c:139:LEU:CA	2.18	0.57
20:Y:2684:U:H2'	20:Y:2685:C:C5'	2.33	0.57
20:Y:3079:U:H2'	20:Y:3080:A:N3	2.20	0.57
21:U:96:A:C2	40:r:21:LYS:HE3	2.40	0.57
24:b:20:LEU:HD23	24:b:25:PHE:CE1	2.39	0.57
24:b:124:ILE:HD12	24:b:124:ILE:N	2.20	0.57
26:d:33:LEU:HD23	26:d:80:VAL:CG2	2.34	0.57
26:d:35:LEU:HD23	26:d:36:ASP:N	2.19	0.57
32:j:99:LYS:HD3	46:x:42:ARG:HG2	1.87	0.57
33:k:38:LEU:HD22	33:k:102:PHE:CD1	2.39	0.57
50:2:8:LYS:HZ3	50:2:8:LYS:HB2	1.70	0.57
51:4:2393:A:O3'	51:4:2397:C:N4	2.35	0.57
1:A:626:G:O2'	1:A:627:C:H5'	2.05	0.56
1:A:1201:G:H2'	1:A:1202:G:O4'	2.05	0.56
1:A:1277:U:H4'	12:M:14:ARG:HH21	1.70	0.56
1:A:1361:C:O2	6:G:76:ARG:NH2	2.36	0.56
1:A:1377:A:N6	1:A:1484:A:HO2'	2.03	0.56
1:A:1421:G:O2'	1:A:1422:G:H5'	2.04	0.56
4:E:70:MET:HE3	4:E:96:PHE:CD2	2.39	0.56
5:F:47:ARG:HD2	5:F:48:LEU:H	1.69	0.56
20:Y:78:G:C2	20:Y:103:C:O2	2.58	0.56
20:Y:239:U:H2'	20:Y:240:G:C1'	2.35	0.56
20:Y:567:A:H4'	20:Y:568:A:OP1	2.05	0.56
20:Y:840:G:C2'	20:Y:841:G:H5'	2.35	0.56
20:Y:870:G:H2'	20:Y:871:A:H8	1.70	0.56
20:Y:1291:G:C2	20:Y:1292:U:H1'	2.40	0.56
20:Y:1367:G:OP2	35:m:14:ARG:NH2	2.37	0.56
20:Y:1438:G:H5'	37:o:91:ARG:NH1	2.20	0.56
20:Y:1465:C:H4'	20:Y:1465:C:OP1	2.03	0.56
20:Y:2516:U:O2'	20:Y:2517:C:H5'	2.05	0.56
20:Y:2583:C:H2'	20:Y:2584:A:C8	2.40	0.56
20:Y:2594:G:O2'	20:Y:2595:G:H5'	2.05	0.56
20:Y:2843:C:H3'	23:a:162:LYS:NZ	2.20	0.56
20:Y:3107:G:H1'	46:x:41:ARG:NH2	2.20	0.56
21:U:47:A:O3'	33:k:14:ARG:NH2	2.37	0.56
21:U:90:G:O2'	21:U:91:G:O4'	2.23	0.56
28:f:125:TYR:OH	28:f:132:HIS:NE2	2.37	0.56
30:h:6:LEU:HD23	30:h:6:LEU:O	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:l:56:GLU:HG2	34:l:75:VAL:CG2	2.19	0.56
38:p:67:LYS:HG3	38:p:76:ARG:HH21	1.70	0.56
39:q:10:LEU:HD12	39:q:11:VAL:H	1.68	0.56
40:r:151:VAL:CG1	40:r:155:THR:HG21	2.35	0.56
1:A:895:A:H4'	1:A:896:A:O5'	2.04	0.56
1:A:922:C:H2'	1:A:923:G:C8	2.40	0.56
1:A:1501:G:C2'	1:A:1502:A:O5'	2.52	0.56
2:C:55:GLU:HB3	2:C:66:ASP:HB3	1.87	0.56
2:C:127:VAL:HG11	2:C:132:ALA:HB2	1.87	0.56
3:D:86:LEU:O	3:D:89:LEU:HD12	2.05	0.56
6:G:22:LEU:HD11	6:G:101:LEU:HD11	1.87	0.56
14:O:3:LEU:HD11	14:O:34:LYS:CG	2.34	0.56
16:Q:38:VAL:O	16:Q:59:VAL:HG12	2.04	0.56
19:V:21:ARG:HD3	19:V:21:ARG:N	2.20	0.56
20:Y:587:G:H5"	20:Y:588:A:OP2	2.05	0.56
20:Y:700:U:O2'	20:Y:701:A:H5'	2.04	0.56
20:Y:1149:G:O2'	20:Y:1150:A:H5'	2.04	0.56
20:Y:1374:G:H2'	20:Y:1375:G:C8	2.40	0.56
20:Y:1922:G:H2'	20:Y:1923:G:H8	1.70	0.56
20:Y:2095:G:O2'	20:Y:2096:G:P	2.62	0.56
20:Y:2166:C:O2'	20:Y:2167:U:P	2.63	0.56
20:Y:2420:U:H1'	20:Y:2421:A:C8	2.39	0.56
20:Y:2686:U:H2'	20:Y:2687:U:H6	1.69	0.56
20:Y:2690:C:OP1	50:2:4:ASN:HB2	2.05	0.56
20:Y:2768:G:H2'	20:Y:2769:G:C8	2.40	0.56
20:Y:2781:G:H2'	20:Y:2782:C:C6	2.41	0.56
20:Y:2984:C:C2'	20:Y:2985:G:H5"	2.34	0.56
20:Y:3029:U:O4	20:Y:3112:A:H5"	2.04	0.56
28:f:15:TRP:HH2	28:f:123:LYS:HE3	1.70	0.56
29:g:34:GLY:HA3	29:g:69:ARG:NH1	2.21	0.56
34:l:56:GLU:CB	34:l:75:VAL:HG21	2.34	0.56
34:l:102:LEU:CB	34:l:107:ALA:HB2	2.35	0.56
38:p:37:SER:HA	38:p:41:GLN:OE1	2.04	0.56
39:q:87:ILE:HG12	39:q:94:LYS:CD	2.34	0.56
41:s:19:GLN:CB	41:s:21:LEU:HD21	2.35	0.56
1:A:127:A:P	16:Q:80:ARG:HH22	2.28	0.56
1:A:392:C:H2'	1:A:392:C:O2	2.04	0.56
1:A:490:A:O2'	1:A:522:G:O2'	2.09	0.56
1:A:648:A:H2'	1:A:649:G:H8	1.69	0.56
1:A:673:G:H2'	1:A:674:G:C8	2.40	0.56
1:A:971:G:H2'	1:A:972:U:C6	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1115:G:H22	1:A:1119:U:H3	1.52	0.56
1:A:1152:C:H2'	1:A:1153:U:H6	1.71	0.56
1:A:1298:G:N2	1:A:1300:A:H3'	2.20	0.56
1:A:1305:G:H2'	1:A:1306:A:H8	1.69	0.56
2:C:39:ARG:HE	2:C:54:VAL:HG21	1.68	0.56
4:E:46:VAL:CG2	4:E:57:SER:HB2	2.35	0.56
4:E:151:LYS:HG3	4:E:153:LEU:HD22	1.86	0.56
6:G:69:VAL:HG12	6:G:69:VAL:O	2.06	0.56
7:H:48:ASP:OD2	7:H:50:ARG:NH2	2.38	0.56
7:H:76:GLY:HA3	7:H:132:TRP:CE2	2.40	0.56
12:M:40:ASP:H	12:M:43:MET:HE1	1.71	0.56
12:M:84:ILE:HG13	12:M:86:CYS:H	1.69	0.56
13:N:37:PHE:HD2	13:N:44:LEU:HD13	1.71	0.56
15:P:74:LEU:HA	15:P:77:THR:CG2	2.36	0.56
19:V:68:LEU:CD2	19:V:158:PRO:HB3	2.35	0.56
19:V:161:VAL:HG23	19:V:183:VAL:HA	1.87	0.56
20:Y:80:G:H2'	20:Y:81:A:C8	2.41	0.56
20:Y:183:G:N2	20:Y:211:U:H3	2.03	0.56
20:Y:189:A:N6	20:Y:205:U:N3	2.53	0.56
20:Y:189:A:O2'	20:Y:190:A:O5'	2.22	0.56
20:Y:377:C:H2'	20:Y:378:G:H8	1.69	0.56
20:Y:423:C:H2'	20:Y:424:G:O4'	2.06	0.56
20:Y:510:A:H2'	20:Y:511:A:C8	2.41	0.56
20:Y:942:U:H4'	20:Y:943:U:C6	2.41	0.56
20:Y:972:A:O2'	20:Y:973:G:O4'	2.23	0.56
20:Y:1042:A:H2'	20:Y:1043:G:H8	1.69	0.56
20:Y:1546:A:H3'	20:Y:1621:C:OP2	2.05	0.56
20:Y:1688:G:O2'	20:Y:1689:U:H5'	2.05	0.56
20:Y:1688:G:C2'	20:Y:1689:U:H5'	2.36	0.56
20:Y:1703:G:O2'	20:Y:1731:A:N1	2.37	0.56
20:Y:1885:G:N2	20:Y:2218:C:H42	2.03	0.56
20:Y:2030:C:O2'	20:Y:2031:G:H5'	2.06	0.56
20:Y:2047:C:O2'	20:Y:2048:G:H5'	2.05	0.56
20:Y:2863:A:H2'	20:Y:2864:G:H5'	1.87	0.56
20:Y:2922:U:H2'	20:Y:2923:C:H6	1.71	0.56
20:Y:3009:U:C1'	23:a:38:ARG:HH22	2.13	0.56
20:Y:3118:U:H2'	20:Y:3119:A:H8	1.69	0.56
23:a:130:HIS:CE1	23:a:165:ARG:HB3	2.41	0.56
24:b:111:LEU:HD23	24:b:185:THR:HG22	1.86	0.56
24:b:142:LYS:HA	24:b:145:LEU:CD2	2.35	0.56
25:c:167:ALA:HB1	25:c:172:GLU:HG2	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:e:22:PRO:HD2	27:e:26:VAL:HB	1.86	0.56
28:f:4:TYR:HD2	35:m:100:VAL:HG21	1.65	0.56
29:g:22:ILE:O	29:g:23:ARG:HG3	2.05	0.56
30:h:63:LYS:HA	49:1:13:ARG:HD3	1.87	0.56
30:h:77:VAL:CA	30:h:112:VAL:HG12	2.17	0.56
32:j:94:TYR:C	32:j:116:VAL:HG23	2.30	0.56
34:l:22:GLY:HA2	34:l:109:ILE:HG21	1.88	0.56
35:m:97:GLU:OE2	36:n:15:LYS:HD3	2.05	0.56
37:o:66:GLN:O	37:o:70:GLY:HA2	2.04	0.56
38:p:5:THR:O	38:p:5:THR:HG23	2.05	0.56
38:p:9:ASP:OD1	38:p:9:ASP:N	2.38	0.56
38:p:79:THR:OG1	38:p:81:ARG:NH1	2.39	0.56
39:q:1:MET:HE2	39:q:1:MET:CA	2.34	0.56
39:q:66:ILE:HG22	39:q:70:ASN:HD22	1.70	0.56
41:s:25:ARG:HA	41:s:29:GLN:HE22	1.69	0.56
44:v:48:THR:HG22	44:v:81:PHE:HB2	1.86	0.56
45:w:26:LEU:CD2	45:w:46:LEU:HD13	2.35	0.56
47:y:16:GLU:N	47:y:16:GLU:OE1	2.38	0.56
51:4:2336:U:H5”	51:4:2338:G:N1	2.21	0.56
1:A:205:G:H2’	1:A:206:G:N9	2.20	0.56
1:A:473:A:H2’	1:A:474:G:C8	2.41	0.56
1:A:616:G:C6	1:A:617:G:O6	2.58	0.56
1:A:980:G:H2’	1:A:981:C:C6	2.41	0.56
1:A:1118:A:H1’	1:A:1119:U:C6	2.40	0.56
1:A:1129:U:H3’	1:A:1130:C:C6	2.40	0.56
1:A:1284:U:H5	12:M:13:LYS:HZ2	1.53	0.56
1:A:1395:C:H2’	1:A:1396:A:H8	1.70	0.56
3:D:11:LYS:HZ1	3:D:58:PHE:HB3	1.71	0.56
17:R:30:ILE:HD13	17:R:64:ILE:HD13	1.86	0.56
17:R:75:ALA:C	17:R:76:LEU:HD23	2.30	0.56
20:Y:79:G:H2’	20:Y:80:G:O4’	2.05	0.56
20:Y:225:A:O2’	20:Y:226:A:H5’	2.05	0.56
20:Y:1065:C:H2’	20:Y:1066:G:C8	2.40	0.56
20:Y:1282:G:O2’	20:Y:1283:C:H5’	2.05	0.56
20:Y:1803:A:H4’	20:Y:1804:G:OP1	2.06	0.56
20:Y:1869:G:H5”	32:j:39:PRO:HG2	1.88	0.56
20:Y:1874:C:P	23:a:146:ARG:HH12	2.28	0.56
20:Y:2083:A:O2’	20:Y:2084:A:H5’	2.05	0.56
20:Y:2583:C:H2’	20:Y:2584:A:H8	1.70	0.56
20:Y:2603:G:H2’	20:Y:2604:U:C6	2.39	0.56
22:Z:88:ARG:HB2	22:Z:88:ARG:NH1	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:b:178:ILE:HG22	24:b:179:SER:O	2.05	0.56
25:c:110:LEU:CD2	25:c:115:LEU:HD21	2.34	0.56
28:f:77:HIS:CD2	28:f:79:GLY:H	2.24	0.56
28:f:147:GLN:OE1	35:m:78:ARG:NH2	2.38	0.56
31:i:17:GLN:NE2	31:i:96:ASN:OD1	2.39	0.56
32:j:75:VAL:HA	32:j:78:THR:HG22	1.87	0.56
34:l:63:GLU:HG2	34:l:67:VAL:O	2.04	0.56
36:n:50:SER:O	36:n:55:LEU:HD21	2.06	0.56
40:r:28:ARG:HH21	40:r:93:GLN:CA	2.19	0.56
46:x:37:ARG:HH21	46:x:54:LEU:HD13	1.70	0.56
51:4:2331:U:H2'	51:4:2332:U:C2	2.39	0.56
1:A:234:C:O2'	16:Q:87:ARG:NE	2.39	0.56
1:A:313:A:O2'	1:A:314:C:H5'	2.05	0.56
1:A:668:G:OP1	10:K:58:HIS:HA	2.04	0.56
1:A:753:G:O6	1:A:787:A:N6	2.39	0.56
1:A:1106:U:H2'	1:A:1106:U:O2	2.05	0.56
1:A:1145:G:H1	1:A:1153:U:H3	0.69	0.56
1:A:1231:A:H4'	8:I:89:GLY:CA	2.32	0.56
3:D:195:ILE:HA	3:D:198:LEU:HD21	1.86	0.56
6:G:66:LEU:CD1	6:G:97:THR:HG23	2.35	0.56
9:J:88:MET:HE3	9:J:88:MET:O	2.06	0.56
20:Y:215:A:C2	20:Y:216:A:H1'	2.41	0.56
20:Y:377:C:H2'	20:Y:378:G:C8	2.41	0.56
20:Y:843:G:H4'	22:Z:13:ARG:HH12	1.71	0.56
20:Y:947:U:O3'	30:h:41:LYS:NZ	2.39	0.56
20:Y:986:G:H22	20:Y:1022:C:N4	2.02	0.56
20:Y:1008:G:H1'	20:Y:1010:U:C3'	2.36	0.56
20:Y:1043:G:N2	45:w:25:THR:HG23	2.21	0.56
20:Y:1129:G:H4'	35:m:77:ASN:HD21	1.71	0.56
20:Y:1950:G:H2'	20:Y:1951:G:H8	1.71	0.56
20:Y:2037:U:C5	22:Z:161:VAL:HG23	2.40	0.56
20:Y:2508:C:OP1	47:y:7:VAL:HG12	2.06	0.56
20:Y:2719:G:H5"	31:i:82:ARG:HA	1.88	0.56
20:Y:2996:U:C4'	23:a:176:THR:HG21	2.26	0.56
20:Y:3037:C:P	46:x:42:ARG:HH11	2.29	0.56
20:Y:3119:A:C2'	20:Y:3120:C:H5'	2.35	0.56
22:Z:273:ARG:O	22:Z:273:ARG:HD2	2.05	0.56
26:d:5:GLY:CA	26:d:67:GLY:HA2	2.36	0.56
27:e:41:CYS:HB2	27:e:42:LYS:HG2	1.87	0.56
31:i:40:ALA:CB	31:i:127:ILE:HG21	2.35	0.56
32:j:72:ASP:CB	32:j:75:VAL:HG12	2.34	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:j:73:LYS:O	32:j:76:VAL:HG12	2.04	0.56
34:l:18:THR:C	34:l:88:ARG:HH12	2.10	0.56
42:t:15:GLY:HA3	42:t:29:TRP:CZ3	2.40	0.56
44:v:35:ASN:OD1	44:v:36:LEU:N	2.38	0.56
1:A:502:C:H2'	1:A:503:A:C8	2.41	0.56
1:A:545:U:H3'	1:A:546:G:H2'	1.88	0.56
1:A:647:G:OP1	1:A:712:C:O2'	2.23	0.56
1:A:756:G:H22	1:A:782:A:P	2.28	0.56
1:A:809:G:O2'	1:A:810:G:H5'	2.06	0.56
1:A:1206:U:H3'	1:A:1207:C:H6	1.69	0.56
1:A:1221:U:O2	6:G:32:LEU:HD21	2.05	0.56
3:D:69:ARG:HH11	3:D:72:GLU:CG	2.19	0.56
3:D:135:TYR:CD1	3:D:135:TYR:O	2.58	0.56
4:E:51:LYS:HG2	4:E:52:GLY:N	2.20	0.56
4:E:61:LEU:HD23	4:E:61:LEU:C	2.31	0.56
5:F:44:GLY:HA3	5:F:60:TYR:H	1.70	0.56
6:G:69:VAL:HA	6:G:138:ARG:NH2	2.16	0.56
6:G:126:ASP:HB3	6:G:132:GLY:HA2	1.87	0.56
12:M:69:ASP:O	12:M:72:ARG:HG3	2.06	0.56
14:O:32:LEU:HD21	14:O:59:LEU:O	2.06	0.56
14:O:63:ARG:HG2	14:O:64:ARG:N	2.20	0.56
16:Q:73:ARG:HB3	16:Q:95:GLU:HG3	1.88	0.56
17:R:72:ARG:HB3	17:R:79:PHE:HE1	1.71	0.56
20:Y:88:A:H4'	20:Y:89:A:O4'	2.06	0.56
20:Y:189:A:N7	20:Y:205:U:O4	2.39	0.56
20:Y:316:U:H2'	20:Y:509:U:C4	2.40	0.56
20:Y:932:C:H2'	20:Y:933:G:H8	1.70	0.56
20:Y:1198:C:H2'	20:Y:1199:U:H6	1.70	0.56
20:Y:1269:C:H2'	20:Y:1270:G:H5"	1.86	0.56
20:Y:1529:U:HO3'	20:Y:1530:G:H5'	1.70	0.56
20:Y:2011:U:O2'	20:Y:2012:C:H5'	2.06	0.56
20:Y:2296:C:H5"	22:Z:229:VAL:HG22	1.87	0.56
20:Y:2529:A:N6	25:c:45:MET:HE1	2.21	0.56
20:Y:2878:A:O2'	20:Y:2879:G:OP2	2.23	0.56
20:Y:2904:C:H5'	23:a:199:PRO:HA	1.88	0.56
20:Y:2924:C:O2'	20:Y:2925:C:H5'	2.06	0.56
20:Y:3068:U:P	34:l:93:ARG:HG2	2.45	0.56
21:U:49:C:OP2	33:k:42:ARG:NH2	2.37	0.56
22:Z:175:LEU:O	22:Z:182:ILE:HA	2.05	0.56
23:a:89:GLU:OE1	23:a:92:VAL:HG21	2.05	0.56
26:d:29:PRO:C	26:d:30:LYS:HD3	2.30	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:g:24:VAL:HB	29:g:30:ARG:HD3	1.86	0.56
30:h:67:PHE:HA	30:h:68:LYS:HZ3	1.71	0.56
32:j:5:THR:HG21	32:j:10:LEU:CD2	2.34	0.56
38:p:7:PRO:HD2	38:p:8:ARG:H	1.69	0.56
45:w:9:VAL:HG12	45:w:53:LEU:O	2.04	0.56
1:A:26:G:H2'	1:A:27:C:C6	2.41	0.56
1:A:248:C:H2'	1:A:249:U:H6	1.71	0.56
1:A:597:G:O2'	15:P:96:LYS:NZ	2.38	0.56
1:A:637:U:C4'	14:O:28:GLN:HE22	2.17	0.56
1:A:717:C:O2'	1:A:718:U:H5'	2.05	0.56
1:A:746:A:H2'	1:A:747:A:O4'	2.05	0.56
1:A:974:U:O4	1:A:1025:C:C4	2.59	0.56
2:C:152:GLN:HG2	2:C:167:PHE:CB	2.35	0.56
3:D:62:VAL:HG11	3:D:67:PHE:HB2	1.87	0.56
4:E:50:VAL:HG23	4:E:55:ARG:NH2	2.20	0.56
7:H:67:GLY:HA3	7:H:71:GLU:OE1	2.06	0.56
12:M:15:MET:CE	12:M:15:MET:H	2.18	0.56
19:V:118:GLU:O	19:V:121:GLU:HG3	2.06	0.56
20:Y:513:C:H2'	20:Y:514:C:C1'	2.36	0.56
20:Y:661:U:H2'	20:Y:662:G:O4'	2.05	0.56
20:Y:1182:C:H5"	27:e:89:LYS:NZ	2.21	0.56
20:Y:1539:A:H5"	20:Y:1540:U:OP2	2.06	0.56
20:Y:1868:A:O2'	20:Y:1869:G:H5'	2.05	0.56
20:Y:1912:C:O2	20:Y:1913:G:N2	2.36	0.56
20:Y:2142:A:H3'	20:Y:2143:A:P	2.46	0.56
20:Y:2480:G:O2'	20:Y:2481:U:H5'	2.06	0.56
20:Y:2633:G:C2'	20:Y:2634:G:H1'	2.26	0.56
20:Y:2861:U:H2'	20:Y:2862:G:O4'	2.06	0.56
22:Z:95:LEU:HD11	22:Z:105:ILE:HD11	1.87	0.56
24:b:123:ARG:C	24:b:124:ILE:HD12	2.31	0.56
28:f:6:PRO:CD	28:f:45:THR:HG21	2.31	0.56
31:i:64:VAL:HG12	31:i:106:LEU:CD2	2.36	0.56
35:m:27:GLN:HG3	35:m:34:LYS:CE	2.35	0.56
38:p:68:ARG:NH1	38:p:73:PHE:HD1	2.03	0.56
39:q:13:SER:HA	39:q:17:LYS:NZ	2.21	0.56
46:x:3:VAL:HB	46:x:4:PRO:HD3	1.88	0.56
47:y:39:LYS:HE3	47:y:49:GLN:HA	1.86	0.56
51:4:2357:A:O2'	51:4:2382:G:N2	2.38	0.56
1:A:427:U:H5"	3:D:10:ARG:CZ	2.34	0.56
1:A:573:U:O2'	1:A:574:C:O4'	2.23	0.56
1:A:1315:A:H3'	1:A:1316:G:C8	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1349:C:O3'	9:J:62:ARG:NH2	2.39	0.56
2:C:49:ALA:HB2	2:C:74:ILE:CG2	2.36	0.56
3:D:165:TRP:H	3:D:165:TRP:HE3	1.54	0.56
4:E:36:TYR:CE1	4:E:66:ASP:HB3	2.41	0.56
14:O:33:THR:HA	14:O:36:ILE:CG1	2.36	0.56
19:V:42:ASP:OD2	19:V:45:GLN:HG2	2.06	0.56
19:V:44:GLN:HA	19:V:47:LEU:HD13	1.88	0.56
19:V:196:VAL:HG12	19:V:198:TYR:H	1.71	0.56
19:V:225:LEU:O	19:V:228:ARG:HB3	2.05	0.56
20:Y:14:G:H2'	20:Y:15:C:H6	1.70	0.56
20:Y:149:C:H2'	20:Y:150:C:C6	2.41	0.56
20:Y:366:G:HO2'	20:Y:367:U:C1'	2.19	0.56
20:Y:1018:U:C2	20:Y:1019:C:C5	2.94	0.56
20:Y:1113:C:OP2	35:m:54:LYS:NZ	2.37	0.56
20:Y:1274:A:O2'	20:Y:1275:A:H2'	2.06	0.56
20:Y:1737:A:H2'	20:Y:1738:G:O4'	2.05	0.56
20:Y:2014:G:H2'	20:Y:2015:U:C6	2.40	0.56
20:Y:2115:G:H2'	20:Y:2116:C:C6	2.41	0.56
20:Y:2145:C:H2'	20:Y:2146:A:C8	2.37	0.56
22:Z:9:THR:OG1	22:Z:10:THR:HG23	2.06	0.56
23:a:15:GLN:HE21	34:l:57:THR:CG2	2.17	0.56
24:b:3:LEU:O	24:b:19:GLU:HA	2.05	0.56
33:k:110:GLY:O	33:k:113:ILE:HG22	2.05	0.56
36:n:68:THR:HG22	36:n:94:LEU:O	2.05	0.56
38:p:58:ASN:O	38:p:83:ILE:N	2.39	0.56
39:q:84:GLY:HA3	39:q:97:ILE:HB	1.86	0.56
42:t:10:LYS:O	42:t:31:PRO:HG3	2.06	0.56
44:v:25:VAL:CB	44:v:106:LYS:HE2	2.36	0.56
1:A:298:A:H3'	1:A:299:G:H8	1.70	0.56
1:A:784:U:H5"	1:A:785:C:OP2	2.05	0.56
1:A:957:A:O2'	1:A:1340:U:H1'	2.06	0.56
1:A:1205:U:H4'	12:M:102:ARG:HH12	1.71	0.56
1:A:1478:G:O2'	1:A:1479:U:H5'	2.05	0.56
4:E:69:GLY:HA3	4:E:98:ARG:NH1	2.21	0.56
5:F:5:GLU:O	5:F:90:VAL:HA	2.06	0.56
7:H:36:ILE:HA	7:H:39:ILE:CD1	2.35	0.56
8:I:133:ARG:O	8:I:135:LYS:HE3	2.05	0.56
11:L:24:LEU:HD11	11:L:95:TYR:HE1	1.71	0.56
17:R:34:ASP:HB3	17:R:37:LEU:HB3	1.87	0.56
19:V:27:MET:HE1	19:V:193:PRO:CD	2.33	0.56
20:Y:123:A:O2'	20:Y:124:A:H5'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:153:G:H1	20:Y:171:U:H3	1.52	0.56
20:Y:259:C:O2'	20:Y:260:G:H5'	2.06	0.56
20:Y:720:C:O5'	20:Y:721:A:H5'	2.04	0.56
20:Y:1027:C:O2'	20:Y:1028:U:H5'	2.06	0.56
20:Y:1320:U:O4	20:Y:1355:G:O6	2.23	0.56
20:Y:1672:C:O2'	20:Y:1679:A:N7	2.27	0.56
20:Y:1889:U:H2'	20:Y:1891:G:OP2	2.06	0.56
20:Y:2454:G:C4	42:t:32:ASN:ND2	2.74	0.56
20:Y:2536:U:O2'	20:Y:2537:C:O5'	2.24	0.56
20:Y:2686:U:H2'	20:Y:2687:U:C6	2.41	0.56
20:Y:2981:A:OP2	50:2:20:HIS:ND1	2.38	0.56
20:Y:3050:G:H2'	20:Y:3051:G:H8	1.70	0.56
24:b:183:LEU:HD12	24:b:184:ASN:N	2.21	0.56
28:f:57:ILE:HG22	28:f:128:PRO:HA	1.88	0.56
29:g:96:THR:O	29:g:97:ARG:HG2	2.06	0.56
29:g:122:LEU:CD1	34:l:69:VAL:HG21	2.35	0.56
34:l:22:GLY:HA3	34:l:91:VAL:HG13	1.87	0.56
39:q:82:ARG:HG3	39:q:82:ARG:HH11	1.71	0.56
1:A:209:A:O2'	1:A:210:A:O4'	2.22	0.56
1:A:678:G:H2'	1:A:679:C:C6	2.41	0.56
1:A:746:A:N7	1:A:793:U:O4	2.39	0.56
1:A:861:C:H2'	1:A:862:C:H6	1.70	0.56
1:A:920:A:H2	1:A:1359:U:H1'	1.71	0.56
1:A:1040:U:H4'	9:J:54:SER:CB	2.36	0.56
1:A:1289:U:H2'	1:A:1290:C:C6	2.41	0.56
1:A:1330:U:H1'	8:I:142:ARG:HH21	1.71	0.56
3:D:77:GLN:OE1	3:D:84:ASN:HB3	2.05	0.56
4:E:45:ARG:HH11	4:E:45:ARG:HG2	1.71	0.56
4:E:89:VAL:HG12	4:E:93:ARG:CZ	2.36	0.56
7:H:10:PHE:CZ	7:H:14:LEU:HD21	2.41	0.56
20:Y:20:G:H2'	20:Y:21:G:H8	1.70	0.56
20:Y:89:A:C2'	20:Y:90:C:H5'	2.35	0.56
20:Y:537:A:H2'	20:Y:538:G:H5'	1.88	0.56
20:Y:993:G:H1'	20:Y:1015:A:N6	2.20	0.56
20:Y:1052:U:O2'	20:Y:1053:G:H5'	2.06	0.56
20:Y:1291:G:H2'	20:Y:1292:U:O4'	2.06	0.56
20:Y:1800:G:H2'	20:Y:1801:C:P	2.46	0.56
20:Y:2042:A:O2'	20:Y:2043:C:H5'	2.06	0.56
20:Y:2508:C:C2'	20:Y:2509:C:H5'	2.36	0.56
20:Y:2530:C:H3'	20:Y:2531:G:C8	2.41	0.56
20:Y:2538:A:H5'	25:c:95:ARG:HH21	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:2693:A:O2'	31:i:56:ARG:NH2	2.38	0.56
20:Y:2738:U:H2'	20:Y:2739:C:H6	1.71	0.56
21:U:93:U:O2'	21:U:94:G:H5'	2.06	0.56
22:Z:68:ARG:O	22:Z:68:ARG:HG3	2.05	0.56
24:b:153:LYS:HE3	24:b:191:ALA:CA	2.36	0.56
25:c:87:ARG:H	25:c:90:MET:CE	2.18	0.56
29:g:71:ARG:HD2	34:l:71:ARG:CZ	2.36	0.56
30:h:123:ASP:OD1	30:h:143:SER:HB3	2.06	0.56
33:k:38:LEU:HD23	33:k:38:LEU:O	2.05	0.56
44:v:15:GLU:HA	44:v:18:LYS:CG	2.35	0.56
49:1:7:HIS:CG	49:1:61:LEU:HD21	2.41	0.56
1:A:105:A:C8	1:A:326:G:H2'	2.41	0.55
1:A:449:C:H1'	15:P:45:GLU:OE1	2.06	0.55
1:A:526:G:P	3:D:63:MET:HE1	2.45	0.55
1:A:599:U:H2'	1:A:600:U:C5	2.41	0.55
1:A:774:A:O2'	1:A:775:C:H5'	2.06	0.55
1:A:1457:G:H2'	1:A:1458:G:C8	2.41	0.55
3:D:90:GLU:C	3:D:99:ARG:HH22	2.13	0.55
6:G:18:TYR:CE2	6:G:44:TYR:HE2	2.23	0.55
8:I:42:VAL:HG23	8:I:82:ASP:CB	2.31	0.55
12:M:9:LEU:HD23	12:M:10:PRO:O	2.05	0.55
12:M:66:VAL:HA	12:M:70:LEU:HD11	1.87	0.55
18:T:29:ARG:O	18:T:32:ILE:HG22	2.05	0.55
20:Y:151:A:H2'	20:Y:152:G:H8	1.71	0.55
20:Y:672:C:H2'	20:Y:673:C:C6	2.40	0.55
20:Y:714:U:O2	20:Y:714:U:H2'	2.07	0.55
20:Y:988:U:H3'	20:Y:989:G:OP1	2.05	0.55
20:Y:1242:C:H2'	20:Y:1243:G:O4'	2.06	0.55
20:Y:1322:C:N4	20:Y:1323:G:O6	2.39	0.55
20:Y:1646:U:O2	20:Y:1793:G:O6	2.24	0.55
20:Y:1669:G:O2'	20:Y:1670:G:H5'	2.06	0.55
20:Y:1930:C:H3'	20:Y:1931:A:C8	2.41	0.55
20:Y:2288:C:O2'	20:Y:2289:C:H5'	2.06	0.55
20:Y:2511:A:C5	20:Y:2513:G:C8	2.94	0.55
20:Y:2767:G:O2'	20:Y:2768:G:H5'	2.06	0.55
20:Y:3060:A:C2'	20:Y:3061:C:H5'	2.36	0.55
25:c:43:VAL:HB	25:c:96:VAL:O	2.06	0.55
31:i:98:LYS:HD3	31:i:98:LYS:N	2.20	0.55
34:l:48:ARG:HG3	34:l:95:LYS:HG2	1.88	0.55
35:m:83:LEU:HD21	35:m:109:LEU:HD21	1.87	0.55
35:m:92:ARG:HA	35:m:95:LEU:HB2	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:r:98:LEU:HD23	40:r:98:LEU:C	2.31	0.55
51:4:2357:A:H2	51:4:2382:G:O4'	1.88	0.55
1:A:280:C:O2	16:Q:55:THR:OG1	2.09	0.55
1:A:771:G:H22	1:A:1482:U:P	2.29	0.55
8:I:30:GLY:HA2	8:I:105:ARG:HH21	1.71	0.55
9:J:6:ILE:HD12	9:J:101:GLN:O	2.06	0.55
10:K:82:LYS:HD3	10:K:82:LYS:H	1.69	0.55
11:L:42:PRO:HB3	11:L:89:ASP:HB3	1.88	0.55
12:M:81:LYS:HB2	12:M:81:LYS:NZ	2.20	0.55
13:N:52:GLU:O	13:N:53:LEU:HD23	2.06	0.55
14:O:10:GLU:O	14:O:14:GLN:OE1	2.25	0.55
17:R:76:LEU:C	17:R:77:LEU:HD12	2.32	0.55
20:Y:144:U:H3'	20:Y:145:G:H8	1.70	0.55
20:Y:269:C:C1'	20:Y:360:G:O2'	2.54	0.55
20:Y:402:G:O2'	20:Y:404:A:OP2	2.13	0.55
20:Y:523:U:C2'	20:Y:524:C:H5'	2.34	0.55
20:Y:644:G:C2'	20:Y:645:G:H5'	2.36	0.55
20:Y:1046:C:H1'	20:Y:1288:A:O4'	2.05	0.55
20:Y:1072:G:H5"	31:i:87:LYS:HZ2	1.70	0.55
20:Y:1971:C:O2'	20:Y:1972:A:H5'	2.06	0.55
20:Y:2009:G:H4'	20:Y:2047:C:OP1	2.07	0.55
20:Y:2409:U:H5"	51:4:2406:U:N3	2.21	0.55
20:Y:2693:A:H1'	31:i:56:ARG:HH12	1.70	0.55
20:Y:2972:A:C4	26:d:68:LEU:HD21	2.41	0.55
21:U:58:A:H3'	21:U:58:A:OP2	2.06	0.55
29:g:34:GLY:HA3	29:g:69:ARG:CZ	2.36	0.55
30:h:7:HIS:ND1	30:h:7:HIS:O	2.40	0.55
30:h:92:THR:HA	30:h:123:ASP:O	2.06	0.55
39:q:86:ARG:O	39:q:94:LYS:HA	2.07	0.55
48:z:43:ARG:HD2	48:z:43:ARG:C	2.31	0.55
1:A:543:A:H2'	1:A:547:G:C8	2.42	0.55
1:A:1057:G:O2'	1:A:1059:G:O6	2.21	0.55
3:D:100:ALA:CB	3:D:166:LEU:HD21	2.37	0.55
4:E:167:ALA:HA	4:E:170:LYS:NZ	2.21	0.55
7:H:49:TYR:O	7:H:50:ARG:NE	2.39	0.55
10:K:96:LYS:NZ	10:K:96:LYS:HB3	2.19	0.55
12:M:70:LEU:O	12:M:74:VAL:HG12	2.06	0.55
14:O:36:ILE:HD11	14:O:63:ARG:NH2	2.22	0.55
15:P:40:TYR:HD2	15:P:49:ILE:HD11	1.71	0.55
17:R:30:ILE:HD13	17:R:64:ILE:CD1	2.36	0.55
18:T:35:PHE:CE1	18:T:79:LEU:HD13	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:V:22:ARG:O	19:V:190:ASN:ND2	2.31	0.55
19:V:104:PHE:HA	19:V:107:VAL:CG2	2.37	0.55
20:Y:719:G:O2'	20:Y:720:C:H5'	2.07	0.55
20:Y:739:U:C4'	20:Y:740:A:H2'	2.35	0.55
20:Y:787:C:H2'	20:Y:788:C:C6	2.41	0.55
20:Y:801:U:H2'	20:Y:903:A:N1	2.22	0.55
20:Y:928:U:O2'	20:Y:1339:G:H1'	2.06	0.55
20:Y:1053:G:H2'	20:Y:1054:C:H6	1.72	0.55
20:Y:1374:G:O2'	20:Y:1375:G:H5'	2.07	0.55
20:Y:1535:C:H3'	20:Y:1535:C:O2	2.06	0.55
20:Y:2008:A:OP1	22:Z:212:MET:HG2	2.06	0.55
20:Y:2321:U:H2'	20:Y:2322:C:C6	2.41	0.55
20:Y:2501:G:H3'	20:Y:2502:A:H5"	1.88	0.55
20:Y:2815:C:OP1	22:Z:239:LYS:HD2	2.07	0.55
20:Y:2990:A:C2	20:Y:2991:C:C6	2.94	0.55
20:Y:3008:C:H5"	23:a:44:ARG:HH12	1.71	0.55
21:U:72:C:O2'	21:U:73:G:H5'	2.06	0.55
21:U:79:A:C2'	21:U:80:C:H5'	2.36	0.55
22:Z:111:LEU:HD23	22:Z:111:LEU:C	2.31	0.55
22:Z:143:HIS:NE2	22:Z:192:THR:OG1	2.39	0.55
23:a:5:GLY:O	23:a:6:ILE:HG13	2.05	0.55
24:b:123:ARG:HH12	30:h:3:VAL:HG13	1.71	0.55
25:c:98:LEU:C	25:c:103:MET:HE2	2.31	0.55
26:d:7:GLN:HE21	26:d:70:ARG:NE	2.04	0.55
30:h:101:LYS:HB3	30:h:103:LEU:CD1	2.37	0.55
35:m:91:ASP:HB3	36:n:13:GLN:NE2	2.21	0.55
39:q:87:ILE:HG12	39:q:94:LYS:HE2	1.88	0.55
43:u:13:LEU:HD13	43:u:21:LYS:NZ	2.19	0.55
44:v:22:ALA:O	44:v:82:VAL:HG22	2.07	0.55
44:v:24:VAL:HG13	44:v:80:ALA:HB3	1.87	0.55
44:v:97:ALA:HA	44:v:103:LEU:HB2	1.88	0.55
49:1:13:ARG:HB3	49:1:14:PHE:CE2	2.40	0.55
50:2:1:MET:O	50:2:3:VAL:HG23	2.06	0.55
1:A:298:A:H2'	1:A:299:G:C8	2.42	0.55
1:A:333:C:H2'	1:A:334:C:H6	1.70	0.55
1:A:456:C:H1'	1:A:457:A:C8	2.42	0.55
1:A:633:A:OP1	7:H:56:VAL:HG22	2.06	0.55
1:A:922:C:H2'	1:A:923:G:O4'	2.06	0.55
1:A:1043:C:O5'	1:A:1044:G:H2'	2.07	0.55
1:A:1063:U:H2'	1:A:1064:G:C1'	2.37	0.55
1:A:1387:C:O2	1:A:1503:A:O2'	2.20	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:62:ARG:HD2	2:C:62:ARG:C	2.31	0.55
9:J:52:ILE:H	13:N:41:ARG:NH1	2.04	0.55
12:M:3:ARG:NH2	12:M:6:GLY:HA2	2.21	0.55
19:V:77:GLN:HG2	19:V:93:ASN:O	2.07	0.55
20:Y:656:C:H2'	20:Y:657:C:H6	1.71	0.55
20:Y:746:U:H5"	20:Y:747:A:H5"	1.87	0.55
20:Y:750:C:H2'	20:Y:751:A:H8	1.70	0.55
20:Y:787:C:O2'	20:Y:788:C:H5'	2.07	0.55
20:Y:987:A:H5"	31:i:69:PHE:CE1	2.41	0.55
20:Y:1366:A:C4'	20:Y:1367:G:OP1	2.55	0.55
20:Y:1658:G:O2'	20:Y:1738:G:O2'	2.20	0.55
20:Y:1663:C:H2'	20:Y:1664:G:H8	1.70	0.55
20:Y:2537:C:H1'	25:c:44:ASN:HD21	1.70	0.55
20:Y:2628:U:H2'	20:Y:2629:G:C5'	2.36	0.55
20:Y:2640:G:H5'	30:h:65:LYS:HD2	1.87	0.55
20:Y:3062:C:O2'	20:Y:3063:A:H5'	2.07	0.55
21:U:13:C:C2	41:s:73:ARG:HD2	2.40	0.55
23:a:34:ASN:HB3	23:a:52:LEU:HD22	1.89	0.55
25:c:41:VAL:N	25:c:103:MET:HE1	2.21	0.55
25:c:109:ARG:O	25:c:113:ILE:HG12	2.05	0.55
25:c:124:LEU:O	25:c:184:PHE:HD1	1.88	0.55
26:d:75:ASN:OD1	26:d:139:LYS:HD2	2.07	0.55
29:g:110:LYS:NZ	29:g:112:MET:HG2	2.22	0.55
31:i:34:ILE:CD1	31:i:118:LEU:HD13	2.36	0.55
32:j:30:GLU:HB3	32:j:31:HIS:HD2	1.70	0.55
33:k:40:VAL:HG11	33:k:113:ILE:CD1	2.37	0.55
34:l:5:ASP:OD1	34:l:6:PHE:N	2.39	0.55
40:r:71:ILE:HB	40:r:74:THR:OG1	2.06	0.55
1:A:227:G:H3'	16:Q:13:ALA:CB	2.37	0.55
1:A:370:C:H2'	1:A:371:A:H8	1.69	0.55
1:A:372:C:H5	1:A:387:U:C5	2.25	0.55
1:A:584:G:C2	1:A:616:G:C6	2.95	0.55
1:A:594:A:H2	1:A:607:G:N2	1.98	0.55
1:A:1291:G:OP1	12:M:92:HIS:NE2	2.37	0.55
1:A:1441:G:H2'	1:A:1442:G:C8	2.42	0.55
2:C:59:THR:O	2:C:62:ARG:HG3	2.07	0.55
2:C:70:ALA:HB2	2:C:114:LEU:CD1	2.36	0.55
2:C:120:ALA:HB1	2:C:187:TYR:CE2	2.40	0.55
3:D:144:SER:O	3:D:150:PHE:HD2	1.90	0.55
4:E:69:GLY:O	4:E:98:ARG:HD2	2.07	0.55
11:L:74:LEU:HD23	11:L:74:LEU:N	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:V:94:GLN:HG3	19:V:146:ARG:O	2.06	0.55
19:V:117:LEU:O	19:V:120:MET:HG3	2.07	0.55
20:Y:334:G:H2'	20:Y:335:G:H8	1.72	0.55
20:Y:806:C:P	22:Z:218:ARG:HH21	2.29	0.55
20:Y:1049:G:C4'	20:Y:1050:A:H5'	2.30	0.55
20:Y:1747:C:O2'	20:Y:1748:A:H5'	2.07	0.55
20:Y:1901:C:O2'	20:Y:1902:C:H5'	2.07	0.55
20:Y:2013:C:O2'	20:Y:2014:G:H5'	2.05	0.55
20:Y:2014:G:O3'	22:Z:256:ARG:NH2	2.39	0.55
20:Y:2428:G:H1	20:Y:2443:U:H3	0.73	0.55
20:Y:2538:A:H5'	25:c:95:ARG:NH2	2.22	0.55
20:Y:2598:C:H2'	20:Y:2599:G:H8	1.72	0.55
20:Y:2804:U:H6	20:Y:2804:U:O5'	1.89	0.55
20:Y:2879:G:N2	20:Y:2888:G:H2'	2.22	0.55
22:Z:264:SER:HA	22:Z:267:LEU:HG	1.88	0.55
28:f:14:SER:HG	28:f:16:TYR:HE1	1.53	0.55
28:f:110:PRO:O	28:f:115:GLY:HA3	2.07	0.55
31:i:100:GLY:HA3	40:r:87:PRO:HB2	1.89	0.55
35:m:43:LEU:HD13	36:n:76:HIS:CE1	2.42	0.55
44:v:100:ASN:O	44:v:101:LYS:HB3	2.06	0.55
46:x:37:ARG:NH2	46:x:54:LEU:HD13	2.21	0.55
51:4:2345:U:N3	51:4:2399:A:O2'	2.37	0.55
51:4:2384:C:H3'	51:4:2385:G:H5'	1.88	0.55
1:A:401:C:H2'	1:A:402:G:H8	1.72	0.55
1:A:437:U:O4	1:A:475:A:N7	2.40	0.55
1:A:628:A:H5'	1:A:629:G:OP1	2.06	0.55
1:A:758:G:O2'	1:A:759:C:H5'	2.05	0.55
1:A:882:A:H8	1:A:882:A:OP2	1.89	0.55
1:A:892:C:O2'	1:A:893:U:H5'	2.06	0.55
2:C:61:ASP:OD1	2:C:96:LYS:HG2	2.07	0.55
4:E:46:VAL:HG23	4:E:57:SER:HB2	1.88	0.55
8:I:87:LEU:HD22	8:I:95:GLN:HE21	1.71	0.55
12:M:81:LYS:O	12:M:84:ILE:HG12	2.06	0.55
14:O:8:LYS:O	14:O:12:LEU:HD23	2.06	0.55
14:O:39:LEU:HD21	14:O:56:LEU:CD2	2.26	0.55
19:V:161:VAL:HG21	19:V:183:VAL:HG22	1.89	0.55
20:Y:591:G:O2'	20:Y:592:A:OP2	2.22	0.55
20:Y:704:C:H2'	20:Y:705:C:H6	1.68	0.55
20:Y:820:A:H2'	20:Y:821:A:O4'	2.07	0.55
20:Y:1225:G:H1'	44:v:76:PRO:HD3	1.89	0.55
20:Y:1905:G:H21	20:Y:1919:A:N6	1.96	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:2213:A:H2'	20:Y:2214:C:O4'	2.06	0.55
20:Y:2547:G:H2'	20:Y:2548:U:C6	2.41	0.55
20:Y:2731:C:C2	20:Y:2807:G:N2	2.74	0.55
20:Y:2777:G:H2'	20:Y:2778:U:C1'	2.37	0.55
20:Y:2877:U:O5'	20:Y:2878:A:H2'	2.06	0.55
21:U:10:G:O2'	21:U:11:U:OP1	2.20	0.55
22:Z:108:PRO:HD2	22:Z:111:LEU:HD13	1.86	0.55
29:g:70:ARG:CB	29:g:76:TYR:HE1	2.18	0.55
29:g:122:LEU:HD13	34:l:69:VAL:HG11	1.89	0.55
36:n:12:LYS:HB2	36:n:14:TYR:OH	2.07	0.55
38:p:29:TYR:HB3	38:p:31:PHE:HE1	1.70	0.55
47:y:30:ARG:CZ	47:y:30:ARG:HB2	2.37	0.55
1:A:25:G:H21	1:A:896:A:H62	1.55	0.55
1:A:480:G:O2'	1:A:481:G:H5'	2.07	0.55
1:A:755:G:H2'	1:A:756:G:O4'	2.07	0.55
1:A:961:C:N4	1:A:1342:A:H61	2.05	0.55
1:A:967:C:O2	1:A:1201:G:N2	2.21	0.55
1:A:975:G:H2'	1:A:977:C:H41	1.72	0.55
1:A:1395:C:H2'	1:A:1396:A:C8	2.41	0.55
1:A:1502:A:OP2	1:A:1502:A:H8	1.88	0.55
2:C:111:GLN:HE22	2:C:113:GLN:HB2	1.72	0.55
3:D:112:LEU:HD13	3:D:118:PHE:CE2	2.41	0.55
3:D:166:LEU:HD11	3:D:175:ILE:CG2	2.34	0.55
6:G:23:VAL:HA	6:G:26:LEU:HD12	1.88	0.55
6:G:25:GLN:HG3	6:G:101:LEU:HD22	1.86	0.55
6:G:135:VAL:O	6:G:139:GLU:HG2	2.07	0.55
7:H:7:ILE:O	7:H:11:LEU:HG	2.06	0.55
7:H:49:TYR:O	7:H:50:ARG:HG2	2.05	0.55
7:H:106:ILE:CD1	7:H:115:ASP:HA	2.36	0.55
15:P:37:ILE:HD11	15:P:55:ARG:HB2	1.88	0.55
16:Q:62:HIS:HB2	16:Q:89:ARG:CG	2.33	0.55
18:T:61:ALA:O	18:T:66:VAL:HG22	2.07	0.55
19:V:81:ALA:HA	19:V:91:TYR:CE2	2.42	0.55
20:Y:62:G:H2'	20:Y:63:C:C6	2.41	0.55
20:Y:897:A:O2'	22:Z:225:VAL:HG12	2.07	0.55
20:Y:987:A:P	31:i:5:ARG:NH2	2.79	0.55
20:Y:1438:G:P	37:o:91:ARG:HH12	2.30	0.55
20:Y:1555:A:H62	20:Y:1613:G:H1	1.54	0.55
20:Y:1602:U:H2'	20:Y:1603:G:C8	2.41	0.55
20:Y:1654:G:H2'	20:Y:1655:A:C8	2.42	0.55
20:Y:1970:G:N2	20:Y:1973:C:OP2	2.27	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:1999:U:HO2'	20:Y:2000:A:P	2.30	0.55
20:Y:2916:C:C2	20:Y:2942:G:N2	2.75	0.55
25:c:31:ASN:HB3	25:c:34:GLN:OE1	2.07	0.55
27:e:38:MET:HE3	27:e:38:MET:CA	2.36	0.55
27:e:108:ARG:NH1	27:e:111:ALA:HB3	2.21	0.55
28:f:73:PHE:CD1	28:f:86:LYS:HD2	2.42	0.55
30:h:57:ILE:HB	30:h:60:ARG:NH2	2.21	0.55
30:h:99:VAL:HG13	30:h:106:LYS:HA	1.88	0.55
31:i:27:VAL:HG11	31:i:134:ARG:HA	1.89	0.55
32:j:98:ILE:HD12	32:j:98:ILE:N	2.22	0.55
33:k:89:ALA:O	33:k:93:LYS:HG2	2.06	0.55
39:q:5:LYS:HD2	39:q:6:GLY:N	2.22	0.55
40:r:58:LEU:HD23	40:r:58:LEU:C	2.32	0.55
41:s:40:GLN:NE2	41:s:43:THR:HA	2.22	0.55
43:u:29:LEU:O	43:u:33:ARG:HB2	2.07	0.55
47:y:25:THR:CG2	47:y:27:LYS:HE2	2.35	0.55
1:A:339:C:O2	1:A:351:G:N2	2.36	0.55
1:A:492:U:O4'	3:D:36:HIS:NE2	2.39	0.55
1:A:647:G:H4'	14:O:51:HIS:CG	2.41	0.55
1:A:955:G:H3'	1:A:956:A:C5'	2.35	0.55
2:C:22:TRP:CD2	13:N:54:PRO:HG2	2.41	0.55
3:D:141:LYS:CE	3:D:143:LYS:HB3	2.37	0.55
4:E:85:ILE:HG13	4:E:86:ALA:N	2.21	0.55
4:E:98:ARG:NH1	4:E:99:VAL:O	2.40	0.55
6:G:79:ARG:HG3	6:G:83:ALA:C	2.31	0.55
8:I:37:VAL:HG13	8:I:39:VAL:HG23	1.88	0.55
11:L:108:LYS:HD3	11:L:109:ASN:N	2.10	0.55
20:Y:7:U:H2'	20:Y:8:U:H5'	1.89	0.55
20:Y:20:G:H2'	20:Y:21:G:C8	2.41	0.55
20:Y:164:A:H2'	20:Y:165:U:H6	1.71	0.55
20:Y:394:G:H2'	20:Y:395:G:C8	2.41	0.55
20:Y:408:G:O2'	20:Y:409:G:H5'	2.07	0.55
20:Y:733:U:H2'	20:Y:734:C:C6	2.41	0.55
20:Y:978:A:O2'	20:Y:979:G:H5'	2.06	0.55
20:Y:1022:C:OP1	31:i:23:GLY:HA2	2.07	0.55
20:Y:1084:U:C2'	20:Y:1086:C:H5"	2.36	0.55
20:Y:1195:A:C5	20:Y:1196:C:H1'	2.41	0.55
20:Y:1225:G:C5'	44:v:54:ASN:HD21	2.19	0.55
20:Y:1241:C:H2'	20:Y:1242:C:H6	1.71	0.55
20:Y:1801:C:H3'	20:Y:1802:G:C8	2.41	0.55
20:Y:2227:A:OP1	32:j:12:GLY:HA3	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:2541:U:H6	33:k:6:VAL:C	2.15	0.55
20:Y:2628:U:C2'	20:Y:2629:G:H5'	2.36	0.55
20:Y:2794:G:O2'	20:Y:2795:C:H5'	2.07	0.55
20:Y:2984:C:C3'	20:Y:2985:G:H5"	2.37	0.55
20:Y:3041:C:N3	23:a:202:ASN:ND2	2.52	0.55
21:U:73:G:O2'	21:U:74:A:O4'	2.23	0.55
21:U:75:U:C2'	21:U:76:G:H5'	2.37	0.55
21:U:97:A:H2'	21:U:97:A:N3	2.22	0.55
22:Z:79:VAL:HG12	22:Z:79:VAL:O	2.07	0.55
26:d:90:ILE:HD13	26:d:97:VAL:HG11	1.89	0.55
35:m:108:ALA:HA	35:m:111:ASP:OD2	2.07	0.55
36:n:27:LEU:N	36:n:27:LEU:HD23	2.22	0.55
43:u:45:ARG:HH22	43:u:46:ARG:NE	2.05	0.55
50:2:36:GLN:HG2	50:2:37:GLY:N	2.21	0.55
1:A:53:U:H3'	1:A:54:A:C5'	2.35	0.55
1:A:60:U:O2'	1:A:61:G:H5'	2.05	0.55
1:A:227:G:C8	16:Q:13:ALA:HB2	2.42	0.55
1:A:668:G:H2'	1:A:669:C:C6	2.41	0.55
1:A:749:G:O2'	1:A:750:C:H5'	2.06	0.55
2:C:12:LEU:HA	2:C:16:THR:CG2	2.36	0.55
2:C:27:GLN:HB2	2:C:31:TYR:CZ	2.41	0.55
4:E:122:ARG:HD2	4:E:123:PRO:CD	2.36	0.55
9:J:51:VAL:HA	13:N:41:ARG:HH22	1.72	0.55
10:K:43:ILE:HD11	10:K:79:ALA:CB	2.15	0.55
12:M:115:ARG:HG3	12:M:115:ARG:O	2.07	0.55
19:V:61:VAL:HG11	19:V:224:GLY:HA3	1.88	0.55
19:V:94:GLN:HG2	19:V:95:ARG:N	2.22	0.55
19:V:113:ARG:NH1	19:V:117:LEU:HD12	2.22	0.55
19:V:167:ASN:N	19:V:191:CYS:SG	2.80	0.55
20:Y:217:G:N2	20:Y:235:U:H4'	2.22	0.55
20:Y:303:G:C2'	20:Y:304:U:H5'	2.37	0.55
20:Y:385:G:H2'	20:Y:386:C:C6	2.42	0.55
20:Y:385:G:H2'	20:Y:386:C:H6	1.72	0.55
20:Y:516:G:C2'	20:Y:517:A:O5'	2.55	0.55
20:Y:776:G:H4'	30:h:16:LYS:NZ	2.22	0.55
20:Y:1343:G:H2'	20:Y:1345:G:H8	1.72	0.55
20:Y:1655:A:H2'	20:Y:1656:A:H8	1.71	0.55
20:Y:1781:C:H2'	20:Y:1782:U:H6	1.71	0.55
20:Y:1787:A:P	22:Z:86:PRO:HB3	2.47	0.55
20:Y:1923:G:C6	20:Y:1924:G:C6	2.95	0.55
20:Y:2014:G:H5"	22:Z:256:ARG:NH2	2.13	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:2441:G:P	42:t:48:ARG:HH22	2.30	0.55
20:Y:2693:A:H4'	31:i:56:ARG:CZ	2.37	0.55
20:Y:2913:U:O4	20:Y:2937:G:N2	2.40	0.55
21:U:10:G:C2'	21:U:11:U:H5'	2.36	0.55
22:Z:66:ASP:HB2	22:Z:103:ARG:HD2	1.88	0.55
25:c:60:ALA:O	25:c:64:LEU:HD23	2.06	0.55
25:c:131:GLY:HA2	25:c:170:ASP:CB	2.37	0.55
31:i:42:ILE:H	31:i:94:VAL:HG23	1.72	0.55
38:p:39:LYS:HZ2	38:p:58:ASN:HA	1.70	0.55
40:r:64:ASN:OD1	40:r:65:ALA:N	2.40	0.55
51:4:2400:C:H5"	51:4:2401:U:OP2	2.07	0.55
1:A:524:C:H2'	1:A:525:C:O4'	2.07	0.55
1:A:573:U:H2'	1:A:574:C:H6	1.69	0.55
1:A:622:A:C6	7:H:109:SER:HA	2.41	0.55
1:A:933:G:O6	12:M:105:THR:HG21	2.07	0.55
1:A:990:C:C2	1:A:1005:G:N2	2.74	0.55
1:A:1168:G:H2'	1:A:1169:A:C8	2.41	0.55
4:E:106:ILE:HD13	4:E:148:ILE:HG13	1.89	0.55
5:F:5:GLU:N	5:F:91:LEU:O	2.40	0.55
9:J:29:VAL:HG11	9:J:36:VAL:HB	1.89	0.55
19:V:212:LEU:HA	19:V:215:LYS:NZ	2.21	0.55
20:Y:93:A:H5"	20:Y:94:G:OP2	2.07	0.55
20:Y:418:C:H2'	20:Y:419:G:C8	2.42	0.55
20:Y:813:C:O2'	20:Y:849:A:N6	2.40	0.55
20:Y:825:C:O2'	20:Y:826:G:H5'	2.06	0.55
20:Y:1010:U:O2'	20:Y:1011:A:OP1	2.21	0.55
20:Y:1092:G:C6	20:Y:1107:G:C6	2.95	0.55
20:Y:1196:C:H5'	20:Y:1197:C:P	2.47	0.55
20:Y:1366:A:H2	35:m:6:ARG:NH2	2.05	0.55
20:Y:1373:A:O2'	20:Y:1374:G:H5'	2.07	0.55
20:Y:1381:G:N2	20:Y:2236:G:H2'	2.22	0.55
20:Y:1987:G:H2'	20:Y:1988:C:H6	1.71	0.55
20:Y:2038:A:O2'	20:Y:2039:C:H5'	2.07	0.55
20:Y:2130:G:H2'	20:Y:2131:G:O4'	2.07	0.55
20:Y:2185:C:C2'	20:Y:2186:C:H5'	2.37	0.55
20:Y:2254:A:H2	20:Y:2723:C:H5"	1.72	0.55
20:Y:2483:G:O2'	20:Y:2484:C:H5'	2.07	0.55
20:Y:2540:G:OP2	20:Y:2540:G:H2'	2.07	0.55
20:Y:2689:C:H2'	20:Y:2690:C:C6	2.42	0.55
20:Y:2753:G:O6	50:2:31:ARG:NH1	2.33	0.55
20:Y:2820:U:H2'	20:Y:2821:G:C4	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:Z:187:VAL:C	22:Z:188:ARG:HE	2.15	0.55
25:c:55:LYS:NZ	25:c:58:ASN:HD22	2.04	0.55
32:j:96:ARG:HD3	32:j:98:ILE:HD11	1.89	0.55
34:l:102:LEU:HD23	34:l:106:LYS:C	2.32	0.55
36:n:101:GLY:C	36:n:102:ILE:HD12	2.32	0.55
44:v:48:THR:CG2	44:v:81:PHE:HB2	2.37	0.55
51:4:2330:U:H2'	51:4:2331:U:C4	2.42	0.55
1:A:323:U:O5'	1:A:323:U:H6	1.90	0.54
1:A:633:A:C6	7:H:57:GLY:HA3	2.42	0.54
1:A:639:C:OP1	14:O:8:LYS:HD3	2.07	0.54
1:A:716:U:C4'	5:F:89:LYS:HE3	2.36	0.54
1:A:771:G:N1	1:A:1482:U:OP1	2.31	0.54
1:A:773:U:O2	1:A:1500:G:H4'	2.07	0.54
1:A:849:G:H2'	1:A:850:C:C6	2.42	0.54
1:A:1339:A:N1	1:A:1348:G:O6	2.40	0.54
8:I:32:ARG:HH12	8:I:94:GLY:HA2	1.72	0.54
9:J:66:GLU:CD	13:N:59:SER:HA	2.32	0.54
12:M:66:VAL:HA	12:M:70:LEU:CD1	2.37	0.54
12:M:76:ALA:O	12:M:79:ARG:HG3	2.07	0.54
13:N:24:CYS:SG	13:N:39:LEU:HA	2.47	0.54
14:O:17:LEU:HD22	14:O:26:GLU:CD	2.32	0.54
15:P:59:TRP:O	15:P:62:VAL:HG12	2.07	0.54
20:Y:242:G:C2'	49:1:6:THR:HG22	2.37	0.54
20:Y:481:C:C2'	20:Y:482:U:H5'	2.37	0.54
20:Y:648:A:N3	20:Y:648:A:H2'	2.22	0.54
20:Y:759:G:H3'	20:Y:760:U:O4'	2.07	0.54
20:Y:761:G:O2'	20:Y:762:U:H5'	2.07	0.54
20:Y:847:C:H2'	20:Y:848:G:O4'	2.07	0.54
20:Y:905:U:H2'	20:Y:905:U:O2	2.07	0.54
20:Y:934:A:H5"	20:Y:1091:A:N1	2.22	0.54
20:Y:1074:A:N6	20:Y:1076:A:C2	2.74	0.54
20:Y:2537:C:C4'	25:c:95:ARG:HH12	2.19	0.54
20:Y:2865:G:C2'	20:Y:2866:A:H5'	2.37	0.54
20:Y:2928:C:O2	20:Y:2928:C:H2'	2.06	0.54
20:Y:3021:A:H4'	20:Y:3021:A:OP1	2.06	0.54
21:U:30:G:H21	21:U:58:A:H62	1.55	0.54
25:c:55:LYS:HA	25:c:58:ASN:HD21	1.71	0.54
26:d:38:ALA:HB3	26:d:65:LEU:HD23	1.89	0.54
30:h:16:LYS:HE3	30:h:16:LYS:CA	2.19	0.54
30:h:123:ASP:HA	30:h:143:SER:O	2.05	0.54
33:k:81:SER:HA	33:k:84:VAL:HG12	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:l:32:ILE:HD13	34:l:37:GLU:HA	1.88	0.54
48:z:5:LYS:HG3	48:z:9:GLN:HE21	1.72	0.54
1:A:180:A:C5	16:Q:8:LYS:HE2	2.42	0.54
1:A:205:G:H2'	1:A:206:G:C1'	2.36	0.54
1:A:389:A:C5	1:A:390:U:H1'	2.42	0.54
1:A:526:G:OP2	3:D:64:GLU:HB3	2.08	0.54
1:A:603:C:H4'	15:P:12:LYS:NZ	2.23	0.54
1:A:654:G:N2	10:K:127:HIS:HB2	2.22	0.54
1:A:670:G:OP2	10:K:38:ASN:ND2	2.40	0.54
1:A:690:G:O2'	1:A:691:G:H5'	2.08	0.54
1:A:814:G:H5"	17:R:58:VAL:HG22	1.87	0.54
1:A:915:G:P	6:G:4:LYS:HZ3	2.30	0.54
2:C:102:ILE:O	2:C:103:LEU:HD22	2.07	0.54
3:D:53:LYS:HE2	3:D:64:GLU:OE1	2.08	0.54
4:E:178:VAL:O	4:E:181:ARG:HG2	2.07	0.54
6:G:66:LEU:HD11	6:G:97:THR:HG23	1.89	0.54
6:G:149:ARG:HG2	10:K:70:PHE:CE2	2.42	0.54
8:I:37:VAL:HG23	8:I:87:LEU:HA	1.87	0.54
8:I:75:VAL:CB	8:I:107:LEU:HD11	2.37	0.54
14:O:85:LEU:HB3	14:O:87:LEU:CD2	2.37	0.54
15:P:40:TYR:HA	15:P:49:ILE:HD12	1.88	0.54
18:T:5:LYS:HA	18:T:8:ILE:CG1	2.36	0.54
19:V:161:VAL:CG2	19:V:183:VAL:HA	2.38	0.54
20:Y:82:G:OP1	39:q:5:LYS:N	2.40	0.54
20:Y:247:G:O2'	20:Y:250:G:O6	2.24	0.54
20:Y:419:G:N7	20:Y:420:G:C2	2.75	0.54
20:Y:494:G:O6	20:Y:509:U:O4	2.26	0.54
20:Y:745:G:O2'	20:Y:746:U:H5'	2.07	0.54
20:Y:1157:G:C3'	20:Y:1158:U:H5"	2.37	0.54
20:Y:1184:U:H2'	20:Y:1186:G:H8	1.70	0.54
20:Y:1225:G:H5"	44:v:54:ASN:OD1	2.07	0.54
20:Y:1409:C:H2'	20:Y:1409:C:O2	2.06	0.54
20:Y:1444:U:O2'	20:Y:1445:C:H5'	2.08	0.54
20:Y:1491:C:H2'	20:Y:1492:G:C8	2.42	0.54
20:Y:1710:A:O2'	20:Y:1711:G:H5"	2.06	0.54
20:Y:2255:A:H4'	20:Y:2256:G:OP2	2.08	0.54
20:Y:2640:G:O3'	30:h:65:LYS:HD2	2.08	0.54
20:Y:2731:C:O5'	20:Y:2731:C:H6	1.90	0.54
20:Y:2777:G:H2'	20:Y:2778:U:H1'	1.90	0.54
20:Y:2863:A:H2	20:Y:3002:A:O4'	1.90	0.54
20:Y:2958:C:H2'	20:Y:2959:A:C5'	2.36	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:3049:G:O2'	20:Y:3050:G:H5'	2.08	0.54
23:a:3:ARG:HH12	23:a:209:ARG:HD3	1.72	0.54
24:b:132:GLU:N	24:b:132:GLU:OE1	2.38	0.54
27:e:10:LEU:HD23	27:e:62:VAL:N	2.21	0.54
30:h:80:VAL:HB	30:h:116:GLY:H	1.71	0.54
32:j:79:LEU:HD23	32:j:79:LEU:C	2.32	0.54
38:p:44:ILE:HD13	38:p:47:GLU:OE1	2.08	0.54
38:p:62:ARG:HD3	38:p:81:ARG:CZ	2.37	0.54
47:y:26:LYS:O	47:y:27:LYS:HE2	2.07	0.54
47:y:35:ARG:CG	47:y:53:GLU:HB3	2.37	0.54
50:2:13:LYS:NZ	50:2:28:SER:H	2.05	0.54
1:A:268:C:O2'	1:A:269:U:H5'	2.08	0.54
1:A:564:G:O6	1:A:738:G:N2	2.40	0.54
1:A:1449:U:H2'	1:A:1450:C:C6	2.42	0.54
5:F:38:ASP:HB3	5:F:65:VAL:HG12	1.88	0.54
7:H:35:ASN:O	7:H:38:GLU:HB2	2.07	0.54
9:J:14:ASP:CG	9:J:17:ALA:H	2.14	0.54
12:M:16:GLU:HG3	12:M:17:ILE:HD12	1.88	0.54
15:P:73:LEU:O	15:P:77:THR:HG22	2.07	0.54
20:Y:170:G:H2'	20:Y:171:U:H6	1.71	0.54
20:Y:332:C:O2'	20:Y:333:C:H5'	2.07	0.54
20:Y:681:C:O3'	24:b:96:ARG:NH1	2.40	0.54
20:Y:681:C:C3'	24:b:96:ARG:HH22	2.21	0.54
20:Y:694:C:H2'	20:Y:695:G:C8	2.42	0.54
20:Y:778:G:H8	20:Y:778:G:O5'	1.90	0.54
20:Y:1181:G:O2'	27:e:90:GLY:O	2.25	0.54
20:Y:2693:A:H4'	31:i:56:ARG:NH2	2.22	0.54
20:Y:2808:U:H5"	20:Y:2809:U:OP2	2.08	0.54
20:Y:2852:U:P	20:Y:2853:C:H5'	2.48	0.54
21:U:65:C:H2'	21:U:66:C:H6	1.72	0.54
22:Z:132:PRO:HA	22:Z:189:CYS:O	2.07	0.54
24:b:9:THR:HG22	24:b:128:THR:HG21	1.90	0.54
25:c:55:LYS:NZ	25:c:55:LYS:O	2.36	0.54
31:i:103:LEU:HD23	31:i:103:LEU:N	2.21	0.54
37:o:30:LEU:HD21	46:x:22:ALA:HB3	1.88	0.54
40:r:67:LEU:HD12	40:r:67:LEU:N	2.22	0.54
48:z:31:ARG:O	48:z:34:VAL:HG23	2.07	0.54
1:A:254:G:H5'	16:Q:86:LYS:HE3	1.89	0.54
1:A:1403:U:H2'	1:A:1404:C:C6	2.43	0.54
3:D:70:TYR:CD1	3:D:88:ILE:HG12	2.42	0.54
3:D:80:LYS:HD3	3:D:83:ASP:CG	2.32	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:176:LEU:HD23	3:D:177:VAL:N	2.23	0.54
6:G:118:GLU:HB2	6:G:119:ARG:NH2	2.22	0.54
14:O:7:GLN:O	14:O:11:ILE:HG22	2.08	0.54
20:Y:98:U:C3'	20:Y:99:G:H5'	2.38	0.54
20:Y:175:G:H2'	20:Y:176:G:N3	2.22	0.54
20:Y:627:C:O2'	20:Y:628:C:H5'	2.07	0.54
20:Y:682:A:C5'	24:b:96:ARG:HH12	2.17	0.54
20:Y:884:U:O2'	20:Y:1494:U:O4'	2.24	0.54
20:Y:956:G:H2'	20:Y:957:C:C6	2.42	0.54
20:Y:965:U:O2	45:w:25:THR:HG21	2.07	0.54
20:Y:1113:C:N3	28:f:2:PRO:HA	2.23	0.54
20:Y:1193:C:H2'	20:Y:1194:C:C6	2.42	0.54
20:Y:1732:U:H2'	20:Y:1733:C:C6	2.42	0.54
20:Y:2497:A:H2'	20:Y:2498:A:C8	2.42	0.54
20:Y:2514:G:O2'	20:Y:2515:U:H5'	2.08	0.54
20:Y:2558:C:O5'	20:Y:2558:C:H6	1.90	0.54
21:U:36:U:O2'	21:U:37:C:H5'	2.07	0.54
21:U:67:A:H61	21:U:105:A:H2'	1.72	0.54
22:Z:171:THR:O	22:Z:187:VAL:HG22	2.07	0.54
25:c:64:LEU:HB3	25:c:72:PRO:CG	2.35	0.54
30:h:76:GLN:OE1	30:h:78:VAL:HG23	2.08	0.54
34:l:61:ARG:HG3	34:l:69:VAL:O	2.08	0.54
39:q:91:THR:HG22	39:q:93:LYS:CD	2.36	0.54
40:r:74:THR:HB	40:r:76:GLN:NE2	2.21	0.54
51:4:2362:C:H2'	51:4:2363:A:C8	2.42	0.54
51:4:2364:C:H2'	51:4:2365:A:H8	1.72	0.54
1:A:48:G:O2'	1:A:49:U:H5'	2.07	0.54
1:A:109:G:HO2'	1:A:353:A:HO2'	1.56	0.54
1:A:386:C:O2'	1:A:387:U:H5'	2.07	0.54
1:A:645:G:O4'	1:A:713:G:H1'	2.07	0.54
1:A:816:G:N2	1:A:832:U:O2	2.34	0.54
1:A:1408:A:N1	1:A:1459:G:C6	2.74	0.54
2:C:55:GLU:O	2:C:56:ILE:HD13	2.07	0.54
8:I:30:GLY:CA	8:I:101:LEU:HD11	2.36	0.54
8:I:32:ARG:HD3	8:I:35:ALA:HB3	1.88	0.54
8:I:139:LYS:O	8:I:139:LYS:HD3	2.07	0.54
13:N:14:PRO:HA	13:N:19:ARG:NH2	2.15	0.54
16:Q:41:GLU:HG3	16:Q:54:ARG:HD3	1.89	0.54
19:V:6:MET:SD	19:V:47:LEU:HD21	2.47	0.54
19:V:172:ALA:O	19:V:175:GLU:HG2	2.07	0.54
20:Y:180:A:O2'	20:Y:181:A:H5'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:600:A:O2'	20:Y:601:A:OP1	2.23	0.54
20:Y:600:A:HO2'	20:Y:601:A:P	2.29	0.54
20:Y:652:C:H2'	20:Y:653:G:O4'	2.06	0.54
20:Y:700:U:OP2	24:b:103:PRO:HA	2.07	0.54
20:Y:746:U:H5"	20:Y:747:A:C5'	2.37	0.54
20:Y:820:A:O2'	20:Y:821:A:H5'	2.06	0.54
20:Y:873:G:H2'	20:Y:873:G:N3	2.21	0.54
20:Y:1056:G:O2'	20:Y:1057:C:H5'	2.08	0.54
20:Y:1211:G:OP1	20:Y:1211:G:H3'	2.07	0.54
20:Y:1907:A:OP2	20:Y:1916:A:N6	2.41	0.54
20:Y:2205:A:H5"	20:Y:2206:C:OP2	2.07	0.54
20:Y:2303:A:H1'	42:t:23:ARG:NH2	2.22	0.54
20:Y:2313:A:C6	20:Y:2454:G:O6	2.60	0.54
20:Y:3037:C:H2'	20:Y:3038:C:H6	1.70	0.54
20:Y:3069:G:H3'	34:l:92:ARG:CZ	2.37	0.54
20:Y:3079:U:H2'	20:Y:3080:A:C4	2.42	0.54
21:U:90:G:H2'	21:U:91:G:H8	1.72	0.54
22:Z:26:ARG:HG2	22:Z:28:THR:H	1.71	0.54
22:Z:227:ASN:C	22:Z:234:GLY:HA3	2.33	0.54
34:l:70:GLU:O	34:l:71:ARG:HG2	2.07	0.54
42:t:17:SER:N	42:t:27:ARG:HG2	2.23	0.54
43:u:21:LYS:HA	43:u:24:GLU:HG3	1.90	0.54
44:v:36:LEU:HA	44:v:39:LEU:HD21	1.89	0.54
1:A:25:G:H21	1:A:896:A:N6	2.06	0.54
1:A:136:G:N2	1:A:225:G:O6	2.40	0.54
1:A:287:U:H2'	1:A:288:A:C8	2.43	0.54
1:A:685:U:H2'	1:A:686:A:H5'	1.89	0.54
1:A:801:G:H2'	1:A:802:G:H8	1.71	0.54
1:A:1375:G:H2'	1:A:1376:U:H6	1.71	0.54
3:D:107:ARG:C	3:D:108:MET:HE2	2.32	0.54
4:E:45:ARG:HG2	4:E:58:PHE:HE1	1.73	0.54
6:G:49:GLN:NE2	6:G:117:VAL:HG12	2.22	0.54
7:H:39:ILE:HA	7:H:42:ARG:HH11	1.72	0.54
10:K:78:ASN:CA	10:K:82:LYS:HE2	2.37	0.54
10:K:85:GLU:OE1	10:K:86:HIS:N	2.41	0.54
11:L:114:ARG:HH12	11:L:121:LYS:CA	2.20	0.54
12:M:51:ASP:O	12:M:54:THR:OG1	2.22	0.54
16:Q:28:VAL:HG12	16:Q:37:VAL:HG23	1.89	0.54
18:T:53:ALA:O	18:T:57:LYS:HG2	2.08	0.54
19:V:5:THR:C	19:V:6:MET:HE2	2.32	0.54
20:Y:21:G:C4	20:Y:22:U:C5	2.95	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:108:A:H4'	43:u:62:ARG:NH2	2.22	0.54
20:Y:149:C:H2'	20:Y:150:C:H6	1.71	0.54
20:Y:629:C:C2'	20:Y:630:U:H5'	2.38	0.54
20:Y:966:U:H4'	45:w:46:LEU:CD2	2.37	0.54
20:Y:1016:C:H3'	20:Y:1017:G:H8	1.72	0.54
20:Y:1289:A:H2'	20:Y:1290:C:O4'	2.08	0.54
20:Y:1402:A:N6	20:Y:1867:G:O2'	2.41	0.54
20:Y:1527:U:C2	20:Y:1528:G:N7	2.76	0.54
20:Y:1869:G:OP1	32:j:40:LYS:NZ	2.37	0.54
20:Y:1996:U:H3'	20:Y:1996:U:O2	2.07	0.54
20:Y:2771:U:O2'	20:Y:2772:G:H5'	2.06	0.54
20:Y:2814:A:O2'	20:Y:2815:C:H5'	2.07	0.54
21:U:102:A:H5'	40:r:81:LYS:HZ1	1.71	0.54
23:a:13:MET:CB	23:a:27:THR:HA	2.38	0.54
23:a:144:VAL:HG12	23:a:144:VAL:O	2.07	0.54
23:a:186:ASP:OD2	23:a:191:VAL:HG23	2.07	0.54
24:b:121:ASN:ND2	30:h:3:VAL:HG22	2.23	0.54
26:d:40:PRO:HB3	26:d:61:ARG:HD2	1.90	0.54
29:g:35:ILE:HG23	29:g:63:VAL:CA	2.37	0.54
36:n:50:SER:O	36:n:55:LEU:HD11	2.07	0.54
38:p:29:TYR:HB2	38:p:84:VAL:HG23	1.88	0.54
39:q:88:ASP:OD2	39:q:90:GLU:HB2	2.08	0.54
39:q:98:ALA:HB3	39:q:103:LYS:HG2	1.88	0.54
51:4:2347:G:H2'	51:4:2348:G:H5'	1.87	0.54
1:A:68:G:H4'	1:A:69:A:H3'	1.89	0.54
1:A:112:A:O2'	1:A:113:G:H5'	2.07	0.54
1:A:352:C:O2'	1:A:354:G:OP1	2.21	0.54
1:A:933:G:OP2	12:M:102:ARG:NH1	2.41	0.54
1:A:1030:G:O2'	1:A:1031:G:H5'	2.08	0.54
1:A:1035:A:H1'	2:C:156:ARG:CZ	2.37	0.54
1:A:1075:U:OP2	1:A:1088:G:N1	2.30	0.54
1:A:1137:G:H5"	1:A:1138:A:OP2	2.07	0.54
3:D:119:LEU:CD2	3:D:124:LYS:HD3	2.38	0.54
4:E:64:VAL:O	4:E:72:GLY:N	2.40	0.54
6:G:108:SER:HA	6:G:123:GLU:OE2	2.07	0.54
12:M:102:ARG:HH21	12:M:104:LYS:HG2	1.72	0.54
14:O:7:GLN:OE1	14:O:7:GLN:N	2.39	0.54
20:Y:69:U:H1'	43:u:51:ARG:HD2	1.89	0.54
20:Y:93:A:H3'	20:Y:94:G:C5'	2.37	0.54
20:Y:258:G:C2'	20:Y:259:C:H5'	2.38	0.54
20:Y:1114:G:OP2	35:m:93:LYS:NZ	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:1550:G:O2'	20:Y:1551:U:OP2	2.24	0.54
20:Y:2274:C:O2'	20:Y:2275:A:O5'	2.19	0.54
20:Y:2286:A:O2'	20:Y:2287:C:O4'	2.26	0.54
20:Y:2528:G:OP2	25:c:138:GLY:N	2.41	0.54
20:Y:2818:C:H2'	20:Y:2819:G:H8	1.72	0.54
20:Y:3068:U:OP2	34:l:93:ARG:HB3	2.07	0.54
20:Y:3097:G:H2'	20:Y:3098:G:C8	2.43	0.54
24:b:35:HIS:CE1	30:h:11:PRO:HB3	2.42	0.54
25:c:20:ARG:NH1	25:c:24:GLN:CB	2.70	0.54
26:d:88:MET:SD	26:d:149:ILE:HD11	2.48	0.54
30:h:118:LEU:HG	30:h:140:ALA:CB	2.37	0.54
40:r:50:ASN:OD1	40:r:52:ARG:N	2.41	0.54
40:r:86:HIS:CD2	40:r:89:ARG:HG2	2.43	0.54
42:t:12:PRO:HB3	42:t:30:ASN:HA	1.90	0.54
51:4:2339:G:H22	51:4:2385:G:H3'	1.73	0.54
1:A:89:G:H3'	1:A:90:G:C8	2.43	0.54
1:A:103:G:OP1	1:A:131:G:N2	2.41	0.54
1:A:133:C:H2'	1:A:134:C:C6	2.42	0.54
1:A:407:A:H5"	3:D:107:ARG:HD3	1.89	0.54
1:A:468:U:H2'	1:A:469:G:C8	2.41	0.54
1:A:493:A:O2'	1:A:494:C:H5'	2.07	0.54
1:A:532:U:C5'	11:L:83:ARG:HH21	2.21	0.54
1:A:555:G:O2'	1:A:801:G:H5'	2.08	0.54
1:A:863:G:O2'	1:A:864:C:H5'	2.07	0.54
1:A:1162:G:H4'	1:A:1163:G:H5'	1.90	0.54
1:A:1294:G:O2'	1:A:1295:U:H5'	2.07	0.54
1:A:1405:G:OP1	29:g:48:PRO:HA	2.07	0.54
1:A:1413:C:H2'	1:A:1414:C:H6	1.72	0.54
4:E:99:VAL:HG11	4:E:169:LEU:HD22	1.90	0.54
4:E:106:ILE:CD1	4:E:148:ILE:HD12	2.38	0.54
5:F:1:MET:HE2	5:F:1:MET:H1	1.72	0.54
5:F:3:PRO:HA	5:F:65:VAL:O	2.07	0.54
6:G:111:ARG:HE	6:G:119:ARG:CD	2.21	0.54
9:J:42:LEU:HD12	9:J:71:LYS:CB	2.34	0.54
19:V:90:PRO:HG3	19:V:153:ASP:HB2	1.90	0.54
20:Y:259:C:H2'	20:Y:260:G:C8	2.40	0.54
20:Y:292:G:N3	20:Y:292:G:H2'	2.22	0.54
20:Y:417:C:H2'	20:Y:418:C:H6	1.73	0.54
20:Y:1002:C:H2'	20:Y:1003:A:H5"	1.90	0.54
20:Y:1268:C:H2'	20:Y:1269:C:H6	1.63	0.54
20:Y:1338:U:H4'	36:n:89:GLY:O	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:1381:G:N7	37:o:22:THR:HG21	2.23	0.54
20:Y:1654:G:O2'	20:Y:1655:A:H5'	2.08	0.54
20:Y:1658:G:H2'	20:Y:1659:U:C6	2.42	0.54
20:Y:1688:G:H2'	20:Y:1689:U:C5'	2.38	0.54
20:Y:2149:C:H2'	20:Y:2150:U:C6	2.42	0.54
20:Y:2159:G:H1'	20:Y:2188:G:N2	2.21	0.54
20:Y:2246:U:O4	46:x:6:ARG:NH2	2.41	0.54
20:Y:2293:G:H2'	20:Y:2294:A:C8	2.42	0.54
20:Y:2527:G:O2'	25:c:137:PHE:CB	2.51	0.54
20:Y:2898:G:H2'	20:Y:2899:A:C8	2.43	0.54
20:Y:3032:G:H5"	23:a:63:ILE:HG23	1.90	0.54
21:U:47:A:H2'	21:U:48:C:H6	1.73	0.54
21:U:71:C:H2'	21:U:72:C:C6	2.43	0.54
23:a:4:LYS:HB3	23:a:105:ILE:HD11	1.88	0.54
26:d:99:LEU:HD23	26:d:99:LEU:C	2.33	0.54
27:e:55:VAL:HB	27:e:79:LYS:CD	2.38	0.54
28:f:147:GLN:HB2	35:m:78:ARG:HH12	1.72	0.54
29:g:77:ILE:HD12	34:l:70:GLU:O	2.07	0.54
31:i:55:ASN:HD21	40:r:190:LEU:HD22	1.71	0.54
33:k:25:LEU:HD12	33:k:29:VAL:HG23	1.88	0.54
35:m:60:LEU:O	35:m:60:LEU:HD23	2.08	0.54
38:p:12:LEU:HB2	38:p:32:VAL:HG12	1.88	0.54
41:s:38:VAL:HG12	41:s:39:ARG:N	2.23	0.54
43:u:10:LEU:CD2	43:u:21:LYS:HD2	2.36	0.54
44:v:72:LEU:HD23	44:v:106:LYS:HD2	1.90	0.54
47:y:28:ASN:OD1	47:y:31:ASN:N	2.23	0.54
51:4:2367:G:H1'	51:4:2371:G:H22	1.72	0.54
1:A:813:U:H2'	1:A:814:G:O4'	2.08	0.54
1:A:1202:G:H5"	1:A:1303:U:C5	2.36	0.54
2:C:90:LEU:HD11	2:C:98:VAL:HG21	1.90	0.54
2:C:181:ASP:HB2	2:C:204:LYS:O	2.08	0.54
3:D:44:SER:HB3	3:D:47:ARG:HB2	1.89	0.54
3:D:60:TYR:CZ	3:D:89:LEU:HD13	2.43	0.54
10:K:65:ARG:O	10:K:68:THR:HG22	2.08	0.54
13:N:14:PRO:HB2	13:N:16:PHE:O	2.07	0.54
15:P:8:THR:O	15:P:18:TYR:HA	2.08	0.54
15:P:37:ILE:CG2	15:P:37:ILE:O	2.56	0.54
19:V:32:PHE:N	19:V:40:ILE:O	2.22	0.54
19:V:148:LEU:HD23	19:V:152:ARG:HH12	1.73	0.54
20:Y:328:C:H2'	20:Y:329:U:O4'	2.08	0.54
20:Y:615:A:C5'	28:f:113:LYS:HD2	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:682:A:P	24:b:96:ARG:HH12	2.30	0.54
20:Y:1083:G:H2'	20:Y:1084:U:H5'	1.89	0.54
20:Y:1502:G:H2'	20:Y:1503:G:C8	2.42	0.54
20:Y:1516:G:O2'	20:Y:1517:U:H5'	2.08	0.54
20:Y:2573:G:O6	20:Y:2593:A:N6	2.41	0.54
20:Y:2909:G:O5'	34:l:100:ARG:NH2	2.40	0.54
20:Y:2921:G:H2'	20:Y:2922:U:O4'	2.07	0.54
20:Y:2959:A:O2'	20:Y:2960:G:H5'	2.08	0.54
20:Y:2971:G:OP1	26:d:139:LYS:NZ	2.41	0.54
21:U:46:A:H1'	25:c:40:LYS:HZ2	1.73	0.54
21:U:49:C:H2'	21:U:50:C:C6	2.43	0.54
25:c:14:ARG:NH1	25:c:14:ARG:HB3	2.23	0.54
29:g:98:ILE:HD12	29:g:117:LEU:CD1	2.38	0.54
30:h:47:PRO:HG2	30:h:50:PHE:CE1	2.42	0.54
34:l:54:ILE:HG13	34:l:76:HIS:HD2	1.73	0.54
37:o:95:ARG:HD3	37:o:101:PHE:CD2	2.42	0.54
40:r:52:ARG:N	40:r:52:ARG:HD3	2.23	0.54
48:z:5:LYS:HG3	48:z:9:GLN:NE2	2.22	0.54
1:A:226:G:H5"	16:Q:14:GLU:HG3	1.90	0.54
1:A:235:C:H2'	1:A:236:G:H8	1.71	0.54
1:A:334:C:O2'	1:A:335:C:H5'	2.09	0.54
1:A:489:A:H5'	3:D:46:TYR:HE2	1.73	0.54
1:A:571:U:OP1	7:H:31:LYS:HD2	2.08	0.54
1:A:1070:U:H2'	1:A:1071:U:H6	1.72	0.54
1:A:1086:G:H4'	2:C:171:GLY:O	2.08	0.54
1:A:1116:U:H1'	1:A:1117:U:C4	2.43	0.54
1:A:1222:G:H2'	1:A:1223:G:C8	2.43	0.54
1:A:1306:A:H4'	1:A:1344:C:O3'	2.08	0.54
1:A:1408:A:H2'	1:A:1409:A:C8	2.43	0.54
2:C:88:ALA:O	2:C:92:LYS:HG3	2.08	0.54
3:D:171:GLU:O	3:D:173:GLN:HG2	2.08	0.54
8:I:55:LEU:HD11	8:I:68:ILE:CD1	2.38	0.54
8:I:62:LYS:HA	8:I:65:GLN:OE1	2.08	0.54
9:J:86:ALA:O	9:J:90:ILE:HG13	2.08	0.54
11:L:52:VAL:HG23	11:L:65:ALA:O	2.08	0.54
14:O:73:VAL:HG13	14:O:74:ASP:H	1.73	0.54
20:Y:219:G:H1	20:Y:515:U:H3'	1.72	0.54
20:Y:410:U:O2'	20:Y:411:G:OP1	2.25	0.54
20:Y:535:A:H4'	20:Y:537:A:N7	2.23	0.54
20:Y:699:U:O2'	20:Y:773:G:H4'	2.07	0.54
20:Y:701:A:H2'	20:Y:702:A:O4'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:1042:A:H2'	20:Y:1043:G:C8	2.42	0.54
20:Y:1561:C:H2'	20:Y:1562:C:C6	2.43	0.54
20:Y:1667:C:C4	20:Y:1687:G:N2	2.76	0.54
20:Y:1690:A:H2'	20:Y:1691:A:H8	1.72	0.54
20:Y:2076:A:C2'	20:Y:2077:C:H5'	2.38	0.54
20:Y:2628:U:C4	20:Y:2637:G:O6	2.60	0.54
20:Y:2881:A:C2'	20:Y:2882:C:H5'	2.37	0.54
20:Y:2905:C:OP2	23:a:119:LYS:NZ	2.34	0.54
20:Y:2946:G:H2'	20:Y:2947:C:C6	2.42	0.54
20:Y:3027:G:H2'	20:Y:3028:A:H5'	1.90	0.54
23:a:35:VAL:HG11	23:a:78:ARG:CZ	2.38	0.54
23:a:189:ASN:HB2	34:l:6:PHE:CZ	2.43	0.54
25:c:24:GLN:OE1	25:c:29:TYR:N	2.41	0.54
29:g:60:ALA:HA	29:g:87:ILE:HG22	1.89	0.54
29:g:122:LEU:HD22	34:l:42:PHE:HD1	1.69	0.54
32:j:73:LYS:HA	32:j:76:VAL:CG1	2.37	0.54
33:k:20:ARG:O	33:k:23:ALA:HB3	2.08	0.54
39:q:12:ILE:HD11	39:q:72:MET:HG2	1.90	0.54
43:u:49:THR:O	43:u:52:GLN:HB2	2.08	0.54
49:1:59:ASN:OD1	49:1:59:ASN:C	2.51	0.54
1:A:87:G:H2'	1:A:88:G:H8	1.72	0.53
1:A:242:U:H3	1:A:284:G:H1	0.64	0.53
1:A:357:G:H2'	1:A:358:U:C6	2.43	0.53
1:A:360:G:O2'	1:A:361:G:H5'	2.08	0.53
1:A:545:U:OP2	1:A:546:G:O2'	2.18	0.53
1:A:1132:U:C5'	9:J:44:THR:HG23	2.21	0.53
1:A:1206:U:H3'	1:A:1207:C:C6	2.43	0.53
1:A:1392:C:H2'	1:A:1393:G:H8	1.72	0.53
1:A:1424:G:H1'	1:A:1444:A:N6	2.22	0.53
3:D:52:GLU:HA	3:D:55:LYS:HZ1	1.73	0.53
3:D:82:GLY:HA3	3:D:192:GLU:HG3	1.89	0.53
3:D:154:ARG:CG	3:D:155:GLU:OE1	2.55	0.53
4:E:70:MET:SD	4:E:98:ARG:HD3	2.48	0.53
9:J:14:ASP:OD2	9:J:17:ALA:N	2.40	0.53
11:L:36:ARG:HG3	11:L:37:VAL:N	2.23	0.53
11:L:57:LEU:HG	11:L:61:VAL:O	2.07	0.53
12:M:2:ALA:CB	12:M:9:LEU:HB3	2.37	0.53
16:Q:62:HIS:CD2	16:Q:89:ARG:HB2	2.43	0.53
19:V:3:VAL:CG2	19:V:216:VAL:HG23	2.38	0.53
20:Y:215:A:H2'	20:Y:216:A:O4'	2.08	0.53
20:Y:403:U:C2	24:b:167:LYS:HE2	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:410:U:O2'	39:q:70:ASN:OD1	2.26	0.53
20:Y:535:A:C6	20:Y:561:G:C4	2.96	0.53
20:Y:556:G:C2'	20:Y:557:G:H5'	2.38	0.53
20:Y:1044:U:O2'	45:w:24:ARG:NH1	2.41	0.53
20:Y:1349:U:C2'	20:Y:1350:G:O5'	2.55	0.53
20:Y:1349:U:H2'	20:Y:1350:G:O5'	2.08	0.53
20:Y:1358:U:H5"	30:h:10:LYS:HZ1	1.73	0.53
20:Y:1637:G:H4'	20:Y:1805:G:C2'	2.38	0.53
20:Y:1975:A:C2	20:Y:2920:U:H5'	2.43	0.53
20:Y:2095:G:O2'	20:Y:2096:G:OP2	2.18	0.53
20:Y:2477:G:O2'	20:Y:2478:C:H5'	2.08	0.53
20:Y:2494:U:H2'	20:Y:2495:G:O4'	2.08	0.53
20:Y:2523:A:H2'	20:Y:2524:C:H5'	1.90	0.53
20:Y:2564:A:H2'	20:Y:2565:G:H8	1.73	0.53
20:Y:2589:G:OP1	41:s:55:GLY:N	2.41	0.53
20:Y:3110:C:H3'	20:Y:3111:G:C8	2.44	0.53
22:Z:188:ARG:HA	22:Z:188:ARG:NE	2.23	0.53
24:b:37:VAL:HG11	24:b:110:ALA:CB	2.38	0.53
25:c:169:ASN:OD1	25:c:169:ASN:C	2.51	0.53
27:e:101:LYS:HZ2	27:e:103:THR:HG22	1.72	0.53
30:h:127:ASN:C	30:h:128:LYS:HD3	2.33	0.53
34:l:52:GLY:HA3	34:l:55:SER:CB	2.38	0.53
37:o:17:VAL:O	37:o:107:THR:HG23	2.08	0.53
39:q:39:ASN:OD1	39:q:64:ALA:HB3	2.08	0.53
1:A:551:U:H4'	1:A:799:G:C6	2.42	0.53
1:A:732:G:H4'	14:O:69:TYR:OH	2.08	0.53
1:A:904:G:H3'	1:A:905:A:H8	1.73	0.53
1:A:1026:A:H2'	1:A:1027:G:H5'	1.90	0.53
1:A:1119:U:N3	1:A:1121:G:O4'	2.41	0.53
1:A:1511:C:H2'	1:A:1512:U:C6	2.43	0.53
5:F:79:LEU:HD12	5:F:80:ASN:H	1.72	0.53
9:J:40:VAL:N	9:J:73:LEU:O	2.37	0.53
11:L:4:ILE:CG2	16:Q:51:LYS:HG2	2.38	0.53
11:L:24:LEU:HD22	11:L:27:SER:O	2.08	0.53
11:L:114:ARG:NH2	11:L:119:ALA:O	2.41	0.53
12:M:15:MET:SD	12:M:41:LYS:HA	2.47	0.53
12:M:59:TYR:CZ	12:M:64:LEU:HD11	2.43	0.53
15:P:81:GLN:OE1	15:P:81:GLN:N	2.37	0.53
19:V:84:ALA:HA	19:V:87:VAL:HG22	1.90	0.53
20:Y:657:C:OP2	36:n:81:LYS:N	2.34	0.53
20:Y:739:U:H4'	20:Y:740:A:C2'	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:780:U:C2'	20:Y:781:C:H5'	2.38	0.53
20:Y:889:A:H5"	22:Z:48:ARG:NH1	2.17	0.53
20:Y:1234:U:C2'	20:Y:1235:U:H5'	2.38	0.53
20:Y:1634:C:H3'	20:Y:1802:G:H22	1.73	0.53
20:Y:1853:A:H2'	20:Y:1854:U:O4'	2.08	0.53
20:Y:1875:U:O3'	23:a:143:ALA:HA	2.08	0.53
20:Y:1968:U:O2'	20:Y:1969:G:H5'	2.07	0.53
20:Y:1971:C:H2'	20:Y:1972:A:C8	2.43	0.53
20:Y:2006:A:H2'	20:Y:2007:C:O4'	2.08	0.53
20:Y:2013:C:H2'	20:Y:2014:G:C8	2.43	0.53
20:Y:2140:A:H3'	20:Y:2141:U:P	2.48	0.53
20:Y:2579:C:C2	20:Y:2580:G:C8	2.96	0.53
20:Y:3009:U:C2	20:Y:3010:U:C5	2.96	0.53
20:Y:3075:C:H2'	20:Y:3076:U:H6	1.73	0.53
21:U:92:G:H2'	21:U:93:U:H6	1.73	0.53
22:Z:96:HIS:NE2	22:Z:102:LYS:HD3	2.23	0.53
22:Z:146:GLU:HA	22:Z:153:ALA:HA	1.90	0.53
28:f:25:LEU:O	28:f:25:LEU:HD12	2.09	0.53
28:f:147:GLN:CD	35:m:78:ARG:HH22	2.16	0.53
31:i:28:SER:O	31:i:29:PHE:HB2	2.07	0.53
32:j:79:LEU:HD23	32:j:80:PHE:N	2.23	0.53
39:q:101:ASN:HD21	39:q:103:LYS:NZ	2.05	0.53
40:r:135:ALA:CB	40:r:168:VAL:HG12	2.28	0.53
43:u:15:ASP:HA	43:u:18:LEU:CD2	2.38	0.53
46:x:42:ARG:C	46:x:43:LEU:HD22	2.32	0.53
47:y:12:THR:CG2	47:y:21:ARG:HH21	2.22	0.53
1:A:105:A:H2'	1:A:326:G:N2	2.24	0.53
1:A:333:C:O2'	1:A:334:C:H5'	2.07	0.53
1:A:427:U:H5"	3:D:10:ARG:HH12	1.73	0.53
1:A:685:U:C2'	1:A:686:A:H5'	2.38	0.53
1:A:715:G:C4'	17:R:69:LYS:HE2	2.38	0.53
1:A:924:G:H2'	1:A:924:G:N3	2.22	0.53
2:C:137:ILE:HD12	2:C:149:ILE:HD11	1.89	0.53
3:D:99:ARG:HG3	3:D:166:LEU:HD22	1.90	0.53
4:E:184:LEU:HD22	4:E:189:VAL:CB	2.37	0.53
5:F:2:ARG:HG3	5:F:4:TYR:HE1	1.72	0.53
7:H:70:ARG:HD2	7:H:70:ARG:C	2.33	0.53
8:I:51:ASP:OD2	8:I:58:TYR:OH	2.12	0.53
11:L:23:ALA:HB3	11:L:95:TYR:OH	2.08	0.53
15:P:78:GLY:HA2	15:P:81:GLN:CD	2.33	0.53
16:Q:90:LEU:HD23	16:Q:90:LEU:C	2.33	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:V:58:LYS:HG3	19:V:59:GLU:N	2.24	0.53
20:Y:78:G:C6	20:Y:79:G:N1	2.76	0.53
20:Y:747:A:H2'	20:Y:748:U:C6	2.44	0.53
20:Y:836:G:H2'	20:Y:837:C:C6	2.44	0.53
20:Y:1312:G:O2'	20:Y:1313:U:H5'	2.08	0.53
20:Y:1674:G:C2	32:j:73:LYS:NZ	2.73	0.53
20:Y:1680:A:O2'	20:Y:1682:A:N6	2.38	0.53
20:Y:1822:C:C2	20:Y:1823:C:C5	2.95	0.53
20:Y:2306:A:H2'	20:Y:2307:C:H6	1.73	0.53
20:Y:2521:C:H3'	20:Y:2522:A:C8	2.44	0.53
20:Y:2830:C:O2'	20:Y:2831:G:O5'	2.27	0.53
20:Y:2938:G:O2'	20:Y:2939:C:H5'	2.08	0.53
20:Y:2953:U:H2'	20:Y:2954:C:C6	2.43	0.53
20:Y:3067:C:H2'	20:Y:3068:U:O4'	2.09	0.53
24:b:7:VAL:HG13	24:b:127:VAL:C	2.33	0.53
26:d:59:GLU:OE1	26:d:60:ARG:N	2.41	0.53
29:g:70:ARG:HG2	29:g:71:ARG:N	2.24	0.53
30:h:39:GLY:O	30:h:42:ALA:HB3	2.09	0.53
34:l:101:GLU:HA	34:l:103:ARG:NH1	2.23	0.53
40:r:51:ALA:HB3	40:r:52:ARG:NH1	2.23	0.53
43:u:10:LEU:HD12	43:u:56:ARG:NE	2.23	0.53
44:v:72:LEU:HD11	44:v:107:GLY:CA	2.30	0.53
49:1:29:ARG:NH1	49:1:45:ASP:HA	2.22	0.53
51:4:2399:A:H2'	51:4:2400:C:C6	2.42	0.53
1:A:22:C:OP1	4:E:157:ASN:ND2	2.41	0.53
1:A:321:A:H2'	1:A:322:C:H6	1.74	0.53
1:A:813:U:H2'	1:A:814:G:C8	2.43	0.53
1:A:987:A:N6	1:A:1008:C:H1'	2.21	0.53
3:D:119:LEU:HD22	3:D:124:LYS:HD3	1.90	0.53
4:E:105:THR:HG23	4:E:147:ASP:O	2.08	0.53
5:F:49:ALA:HB1	17:R:77:LEU:C	2.33	0.53
12:M:2:ALA:CA	12:M:9:LEU:HB3	2.39	0.53
12:M:115:ARG:HH22	12:M:117:ILE:HA	1.73	0.53
14:O:87:LEU:H	14:O:87:LEU:HD22	1.73	0.53
19:V:179:LEU:HD12	19:V:179:LEU:O	2.08	0.53
20:Y:178:G:O2'	20:Y:179:G:H5'	2.09	0.53
20:Y:632:G:H2'	20:Y:633:A:H8	1.69	0.53
20:Y:974:G:O2'	20:Y:975:U:H6	1.92	0.53
20:Y:1037:C:H1'	41:s:26:PHE:HD2	1.73	0.53
20:Y:1359:G:C2'	20:Y:1360:G:H5'	2.38	0.53
20:Y:1381:G:P	46:x:17:ARG:HH21	2.32	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:1412:C:H2'	20:Y:1413:C:H6	1.73	0.53
20:Y:1742:U:C2'	20:Y:1743:G:H5'	2.37	0.53
20:Y:1790:A:H2'	20:Y:1791:A:O4'	2.08	0.53
20:Y:1900:C:H2'	20:Y:1901:C:H6	1.73	0.53
20:Y:2067:G:H2'	20:Y:2068:U:C6	2.43	0.53
20:Y:2095:G:HO2'	20:Y:2096:G:P	2.31	0.53
20:Y:2525:C:O5'	20:Y:2525:C:H6	1.91	0.53
20:Y:2751:C:H2'	20:Y:2752:U:H6	1.74	0.53
20:Y:2840:C:O2'	20:Y:2841:C:H5'	2.09	0.53
20:Y:3069:G:P	34:l:92:ARG:HH21	2.31	0.53
23:a:193:LEU:HD21	34:l:4:LEU:HD11	1.91	0.53
25:c:77:ALA:O	25:c:88:GLU:HA	2.07	0.53
33:k:98:GLU:OE2	33:k:99:THR:N	2.42	0.53
34:l:60:VAL:HG22	34:l:71:ARG:O	2.07	0.53
34:l:73:PHE:HD2	34:l:77:SER:OG	1.92	0.53
34:l:98:TYR:HD2	34:l:102:LEU:CD1	2.22	0.53
35:m:97:GLU:OE2	35:m:98:LEU:HD23	2.09	0.53
36:n:4:TYR:CZ	36:n:43:VAL:HG21	2.43	0.53
37:o:30:LEU:HD11	46:x:22:ALA:HB3	1.90	0.53
38:p:68:ARG:HH12	38:p:73:PHE:HA	1.73	0.53
49:1:24:ARG:HH12	49:1:26:LYS:HD3	1.72	0.53
1:A:959:A:H3'	1:A:959:A:N3	2.23	0.53
1:A:1263:C:H2'	1:A:1264:C:C6	2.44	0.53
1:A:1515:A:H2'	1:A:1516:U:C5	2.44	0.53
3:D:86:LEU:HD21	3:D:183:ARG:HD3	1.90	0.53
4:E:110:VAL:CG1	4:E:168:ALA:HB1	2.39	0.53
7:H:115:ASP:OD2	7:H:115:ASP:C	2.50	0.53
9:J:41:PRO:HB3	9:J:72:ARG:NH1	2.24	0.53
11:L:54:ARG:HE	11:L:64:THR:CG2	2.22	0.53
11:L:90:LEU:HD12	11:L:90:LEU:N	2.23	0.53
12:M:3:ARG:HH21	12:M:6:GLY:HA2	1.72	0.53
16:Q:23:ALA:O	16:Q:76:LEU:N	2.38	0.53
19:V:152:ARG:HH11	19:V:152:ARG:HG2	1.73	0.53
20:Y:40:G:H2'	20:Y:41:A:O4'	2.08	0.53
20:Y:193:G:O2'	20:Y:194:A:H5'	2.07	0.53
20:Y:490:A:O2'	20:Y:491:U:H5'	2.07	0.53
20:Y:539:C:H4'	24:b:53:LYS:HZ3	1.74	0.53
20:Y:860:G:O2'	20:Y:863:G:H1'	2.09	0.53
20:Y:1046:C:H4'	20:Y:1047:A:OP2	2.07	0.53
20:Y:1083:G:C1'	20:Y:2491:A:H62	2.22	0.53
20:Y:1311:C:H2'	20:Y:1312:G:H8	1.72	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:1356:U:C3'	20:Y:1357:G:H8	2.21	0.53
20:Y:2089:C:H2'	20:Y:2090:U:C6	2.44	0.53
20:Y:2135:U:H2'	20:Y:2142:A:N1	2.24	0.53
20:Y:2302:U:H2'	20:Y:2303:A:O4'	2.08	0.53
21:U:19:G:H2'	21:U:20:G:C8	2.43	0.53
21:U:53:A:O2'	33:k:45:ARG:NH2	2.42	0.53
23:a:88:ASP:OD2	23:a:90:ALA:HB3	2.08	0.53
24:b:183:LEU:CD1	24:b:188:VAL:HG23	2.34	0.53
26:d:24:LEU:C	26:d:24:LEU:HD12	2.34	0.53
31:i:15:PRO:HG3	31:i:72:ARG:CZ	2.39	0.53
34:l:45:VAL:CG2	34:l:109:ILE:HG13	2.39	0.53
37:o:26:ARG:NH2	46:x:20:TRP:O	2.41	0.53
37:o:34:LYS:C	37:o:77:VAL:HG23	2.33	0.53
38:p:9:ASP:CA	43:u:34:PHE:HE1	2.22	0.53
39:q:5:LYS:HZ3	39:q:24:LEU:HA	1.72	0.53
40:r:50:ASN:OD1	40:r:50:ASN:C	2.51	0.53
44:v:31:LEU:HB3	44:v:36:LEU:CD2	2.38	0.53
50:2:35:ARG:HG3	50:2:36:GLN:N	2.22	0.53
1:A:346:G:OP1	34:l:40:GLN:NE2	2.41	0.53
1:A:648:A:O2'	1:A:649:G:H5'	2.08	0.53
1:A:734:C:H3'	1:A:734:C:O2	2.08	0.53
1:A:999:A:H2'	1:A:1000:U:C5'	2.38	0.53
1:A:1058:U:H1'	1:A:1059:G:P	2.48	0.53
2:C:19:LYS:HB2	13:N:52:GLU:HG2	1.89	0.53
3:D:99:ARG:HG3	3:D:166:LEU:CD2	2.39	0.53
6:G:58:PRO:HA	6:G:61:THR:CG2	2.39	0.53
9:J:81:PRO:O	9:J:85:ASP:OD1	2.27	0.53
15:P:6:LYS:HB2	15:P:21:ILE:CG2	2.36	0.53
15:P:74:LEU:HA	15:P:77:THR:HG22	1.90	0.53
20:Y:140:G:C2'	20:Y:141:U:H5'	2.38	0.53
20:Y:187:G:H2'	20:Y:188:G:O4'	2.07	0.53
20:Y:734:C:H2'	20:Y:735:U:H6	1.71	0.53
20:Y:910:C:H2'	20:Y:911:U:H6	1.73	0.53
20:Y:987:A:H5"	31:i:69:PHE:CZ	2.43	0.53
20:Y:1436:C:O2'	20:Y:1437:A:OP1	2.22	0.53
20:Y:1456:G:O6	38:p:23:LEU:HD11	2.09	0.53
20:Y:1542:A:H2'	20:Y:1543:A:N7	2.23	0.53
20:Y:1883:A:C4'	29:g:1:MET:HE1	2.38	0.53
20:Y:2087:C:H3'	20:Y:2088:C:H5	1.74	0.53
20:Y:2133:G:H2'	20:Y:2134:G:H8	1.74	0.53
20:Y:2311:G:O2'	20:Y:2312:U:H5'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:2531:G:H5'	20:Y:2532:G:C4	2.42	0.53
20:Y:2537:C:H1'	25:c:44:ASN:ND2	2.23	0.53
20:Y:2591:G:O2'	20:Y:2592:C:H5'	2.09	0.53
25:c:14:ARG:HH22	25:c:19:ILE:HD11	1.72	0.53
25:c:43:VAL:O	25:c:96:VAL:N	2.37	0.53
28:f:23:VAL:O	28:f:62:ILE:HD12	2.08	0.53
28:f:51:GLY:HA3	28:f:121:LYS:NZ	2.24	0.53
31:i:110:ASP:CG	31:i:113:THR:HB	2.33	0.53
33:k:49:VAL:HG21	33:k:88:ILE:HG13	1.89	0.53
33:k:119:ALA:HA	33:k:122:GLU:OE1	2.07	0.53
34:l:26:ASN:OD1	34:l:84:ASP:HB2	2.09	0.53
37:o:11:THR:HB	37:o:113:ILE:HD12	1.90	0.53
37:o:28:ILE:CG2	37:o:81:VAL:HG22	2.38	0.53
37:o:28:ILE:HG21	37:o:81:VAL:HG22	1.89	0.53
41:s:50:ASN:O	41:s:80:ILE:HD13	2.09	0.53
44:v:3:LYS:O	44:v:3:LYS:HD2	2.09	0.53
46:x:52:VAL:HG22	46:x:54:LEU:CD1	2.39	0.53
49:1:58:ILE:O	49:1:61:LEU:N	2.37	0.53
1:A:178:A:O2'	1:A:180:A:N1	2.42	0.53
1:A:355:C:H2'	1:A:356:A:O4'	2.09	0.53
1:A:373:A:N1	1:A:391:G:H1'	2.24	0.53
1:A:448:A:H3'	1:A:449:C:H6	1.74	0.53
1:A:648:A:H2'	1:A:649:G:C8	2.44	0.53
1:A:1229:A:O2'	1:A:1230:C:O5'	2.26	0.53
1:A:1324:C:O2'	1:A:1325:G:H5'	2.08	0.53
1:A:1358:A:H2'	1:A:1359:U:H6	1.74	0.53
1:A:1413:C:H2'	1:A:1414:C:C6	2.44	0.53
3:D:31:TYR:HB3	3:D:38:ARG:HH12	1.74	0.53
4:E:70:MET:HG2	4:E:98:ARG:CD	2.32	0.53
4:E:90:GLU:OE1	4:E:91:GLU:N	2.42	0.53
4:E:126:PRO:HA	4:E:147:ASP:OD2	2.09	0.53
4:E:184:LEU:CG	4:E:185:PRO:HD3	2.38	0.53
15:P:18:TYR:CE2	15:P:42:PRO:HD3	2.44	0.53
19:V:83:GLU:O	19:V:87:VAL:HG22	2.09	0.53
19:V:130:THR:OG1	19:V:133:GLU:HG2	2.08	0.53
19:V:139:ARG:HH12	19:V:142:ASN:CB	2.22	0.53
19:V:151:ILE:HA	19:V:154:MET:CG	2.34	0.53
20:Y:1013:U:H3'	20:Y:1014:G:O4'	2.08	0.53
20:Y:1668:C:H2'	20:Y:1669:G:C8	2.44	0.53
20:Y:1903:C:C2	20:Y:1904:C:C5	2.97	0.53
20:Y:1982:G:C6	20:Y:2212:A:N6	2.76	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:2108:A:H3'	20:Y:2109:A:H8	1.73	0.53
20:Y:2192:G:O2'	20:Y:2193:A:O4'	2.21	0.53
20:Y:2578:A:P	41:s:32:LYS:NZ	2.82	0.53
20:Y:2591:G:H2'	20:Y:2592:C:H6	1.73	0.53
20:Y:2805:G:N3	20:Y:2805:G:H2'	2.24	0.53
20:Y:2841:C:H2'	20:Y:2842:G:C5'	2.39	0.53
20:Y:2843:C:P	23:a:162:LYS:HZ3	2.29	0.53
20:Y:2910:G:OP2	34:l:97:TYR:HE2	1.91	0.53
20:Y:2958:C:C2'	20:Y:2959:A:H5'	2.39	0.53
21:U:36:U:H2'	21:U:37:C:C6	2.44	0.53
24:b:136:PRO:HG3	24:b:164:VAL:HG23	1.91	0.53
26:d:76:LEU:HD12	26:d:77:VAL:H	1.74	0.53
28:f:4:TYR:CD1	28:f:5:THR:N	2.77	0.53
30:h:112:VAL:O	30:h:130:SER:HB2	2.08	0.53
31:i:134:ARG:O	31:i:134:ARG:HD2	2.08	0.53
44:v:24:VAL:CG2	44:v:105:ILE:HD11	2.39	0.53
1:A:54:A:O2'	1:A:360:G:N2	2.40	0.53
1:A:549:C:H1'	1:A:554:A:N7	2.24	0.53
1:A:803:G:H2'	1:A:804:U:C6	2.44	0.53
1:A:976:A:O2'	1:A:977:C:H5'	2.08	0.53
1:A:1119:U:H3'	1:A:1119:U:O2	2.09	0.53
1:A:1136:A:H2'	1:A:1137:G:C8	2.44	0.53
1:A:1306:A:H4'	1:A:1345:A:H5"	1.91	0.53
5:F:29:VAL:HA	5:F:32:LYS:HG2	1.89	0.53
8:I:96:ALA:HA	8:I:99:LEU:HD21	1.90	0.53
9:J:10:LEU:HD12	9:J:96:VAL:CG1	2.36	0.53
12:M:29:ARG:HA	12:M:32:GLU:CG	2.36	0.53
12:M:95:GLY:HA2	12:M:110:ARG:NH1	2.23	0.53
19:V:100:MET:O	19:V:107:VAL:HG21	2.09	0.53
19:V:211:ALA:HA	19:V:214:THR:HG22	1.91	0.53
20:Y:69:U:C5	20:Y:109:U:H4'	2.44	0.53
20:Y:159:A:OP2	20:Y:159:A:H8	1.92	0.53
20:Y:1079:C:C2	20:Y:1080:U:C5	2.96	0.53
20:Y:1083:G:O4'	20:Y:2491:A:N6	2.42	0.53
20:Y:1189:G:H2'	20:Y:1190:C:C6	2.44	0.53
20:Y:1370:U:H5"	20:Y:1371:G:C5'	2.20	0.53
20:Y:1602:U:H2'	20:Y:1603:G:H8	1.73	0.53
20:Y:1760:G:H2'	20:Y:1761:G:H8	1.71	0.53
20:Y:1831:A:H3'	20:Y:1832:A:C5'	2.38	0.53
20:Y:2087:C:H3'	20:Y:2088:C:C5	2.44	0.53
20:Y:2245:C:OP1	46:x:9:SER:OG	2.26	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:2309:U:H2'	20:Y:2310:G:C8	2.44	0.53
20:Y:2585:U:P	49:1:24:ARG:HH22	2.32	0.53
20:Y:3105:C:N1	46:x:44:LEU:HD23	2.23	0.53
20:Y:3110:C:H3'	20:Y:3111:G:H8	1.74	0.53
21:U:51:G:H3'	33:k:76:ASP:OD2	2.09	0.53
21:U:75:U:H2'	21:U:76:G:H5'	1.91	0.53
23:a:9:THR:OG1	23:a:79:ARG:NH2	2.41	0.53
24:b:142:LYS:HA	24:b:145:LEU:CG	2.39	0.53
26:d:103:ASN:OD1	26:d:117:GLU:HA	2.09	0.53
29:g:24:VAL:HG12	29:g:33:ALA:CB	2.21	0.53
32:j:103:ARG:O	32:j:107:ASN:HA	2.09	0.53
34:l:102:LEU:HB3	34:l:107:ALA:HB2	1.90	0.53
35:m:72:ASN:HD21	35:m:107:THR:CG2	2.22	0.53
44:v:2:ALA:O	44:v:6:LYS:HG3	2.09	0.53
1:A:40:C:H2'	1:A:41:U:O4'	2.09	0.53
1:A:269:U:H2'	1:A:270:A:C8	2.44	0.53
1:A:409:G:H2'	1:A:410:G:H8	1.70	0.53
1:A:705:G:H2'	1:A:706:C:C6	2.43	0.53
1:A:1057:G:H3'	1:A:1058:U:C5'	2.36	0.53
1:A:1062:A:H2'	1:A:1063:U:H6	1.70	0.53
1:A:1139:C:H3'	1:A:1139:C:O2	2.09	0.53
1:A:1185:A:H2'	1:A:1186:U:O4'	2.09	0.53
1:A:1426:C:O2'	1:A:1427:C:H5'	2.09	0.53
1:A:1492:G:H2'	1:A:1493:C:C6	2.44	0.53
4:E:107:THR:HG23	4:E:108:HIS:CD2	2.44	0.53
4:E:136:ALA:O	4:E:140:LEU:HG	2.09	0.53
6:G:69:VAL:HG22	6:G:138:ARG:NH2	2.24	0.53
11:L:51:LYS:HD3	11:L:72:HIS:CE1	2.43	0.53
12:M:11:ARG:O	12:M:45:THR:HB	2.09	0.53
12:M:19:LEU:CD2	12:M:25:ILE:HD13	2.39	0.53
17:R:45:ARG:HG3	17:R:47:LYS:HE2	1.90	0.53
18:T:28:LEU:HD23	18:T:28:LEU:C	2.33	0.53
19:V:44:GLN:HA	19:V:47:LEU:HD12	1.89	0.53
20:Y:169:C:H3'	20:Y:170:G:H8	1.74	0.53
20:Y:565:A:O2'	20:Y:566:A:O5'	2.20	0.53
20:Y:717:C:H2'	20:Y:718:C:C6	2.44	0.53
20:Y:851:C:H2'	20:Y:852:C:C6	2.44	0.53
20:Y:1212:U:H3'	20:Y:1213:A:C5'	2.39	0.53
20:Y:1232:G:H2'	20:Y:1233:A:C8	2.44	0.53
20:Y:1668:C:H2'	20:Y:1669:G:H8	1.72	0.53
20:Y:1690:A:H2'	20:Y:1691:A:C8	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:1875:U:O2'	20:Y:1876:A:H5'	2.09	0.53
20:Y:1919:A:C2'	20:Y:1920:G:H5'	2.38	0.53
20:Y:1981:U:O2'	20:Y:1982:G:H5'	2.08	0.53
20:Y:2056:G:C5	20:Y:2151:A:N1	2.77	0.53
20:Y:2083:A:H2'	20:Y:2084:A:C8	2.44	0.53
20:Y:2151:A:O2'	20:Y:2152:A:H5'	2.09	0.53
20:Y:2572:U:H5'	47:y:23:TYR:OH	2.08	0.53
20:Y:2584:A:O3'	49:1:24:ARG:NH2	2.41	0.53
20:Y:2801:A:H2	46:x:2:ALA:HB2	1.74	0.53
20:Y:2903:A:O2'	20:Y:2904:C:H5'	2.09	0.53
20:Y:2906:U:C2	23:a:25:PRO:HB3	2.44	0.53
23:a:161:PHE:O	23:a:162:LYS:C	2.52	0.53
24:b:142:LYS:HD3	24:b:142:LYS:O	2.09	0.53
25:c:48:GLY:HA2	25:c:92:ILE:HD11	1.91	0.53
26:d:46:ALA:HB3	26:d:50:ALA:O	2.09	0.53
26:d:95:TYR:CD2	26:d:108:LEU:HA	2.44	0.53
28:f:146:ALA:O	28:f:147:GLN:HB3	2.08	0.53
29:g:63:VAL:CG2	29:g:102:VAL:HG12	2.35	0.53
34:l:77:SER:HB3	34:l:80:ILE:HD12	1.91	0.53
40:r:16:ARG:CG	40:r:48:GLU:HG2	2.38	0.53
47:y:6:ASP:O	47:y:7:VAL:HB	2.08	0.53
47:y:16:GLU:H	47:y:49:GLN:HE21	1.57	0.53
1:A:65:G:H2'	1:A:66:U:C6	2.44	0.53
1:A:332:G:OP2	18:T:4:ILE:HD12	2.08	0.53
1:A:344:A:H5'	1:A:345:C:C6	2.44	0.53
1:A:556:A:H3'	1:A:557:G:H5"	1.91	0.53
1:A:691:G:H2'	1:A:692:A:H8	1.74	0.53
1:A:718:U:OP1	5:F:92:ARG:NH2	2.40	0.53
1:A:904:G:H3'	1:A:905:A:C8	2.44	0.53
1:A:1091:A:O2'	1:A:1092:C:H5'	2.09	0.53
8:I:28:THR:HG21	8:I:106:ALA:HB2	1.91	0.53
8:I:106:ALA:HA	8:I:109:LEU:HD12	1.89	0.53
12:M:25:ILE:HG12	12:M:29:ARG:HE	1.73	0.53
20:Y:492:C:O2'	20:Y:493:U:OP2	2.27	0.53
20:Y:545:A:OP1	20:Y:545:A:H3'	2.09	0.53
20:Y:787:C:C2	20:Y:788:C:C5	2.97	0.53
20:Y:979:G:H2'	20:Y:980:C:H6	1.72	0.53
20:Y:981:U:H3	20:Y:1018:U:H3'	1.74	0.53
20:Y:1223:U:H2'	20:Y:1224:G:C8	2.40	0.53
20:Y:1265:A:C2'	20:Y:1266:C:H5'	2.39	0.53
20:Y:1285:G:O2'	20:Y:1286:C:H5'	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:1287:C:H2'	20:Y:1288:A:C8	2.44	0.53
20:Y:1311:C:C2	20:Y:1312:G:C8	2.96	0.53
20:Y:1414:G:H5"	20:Y:1415:A:OP1	2.08	0.53
20:Y:1674:G:C3'	32:j:63:ARG:HH22	2.22	0.53
20:Y:1686:G:H3'	20:Y:1687:G:C8	2.44	0.53
20:Y:1714:A:N3	20:Y:1714:A:H2'	2.24	0.53
20:Y:1742:U:O2'	20:Y:1743:G:H5'	2.09	0.53
20:Y:2276:G:H4'	23:a:153:GLY:O	2.09	0.53
20:Y:2559:A:OP1	33:k:24:ARG:NE	2.42	0.53
20:Y:2967:C:C2'	20:Y:2968:G:H5"	2.39	0.53
20:Y:2967:C:C3'	20:Y:2968:G:H5"	2.39	0.53
21:U:49:C:H2'	21:U:50:C:H6	1.74	0.53
22:Z:133:LEU:HA	22:Z:136:ILE:CG2	2.39	0.53
22:Z:231:HIS:HE1	22:Z:233:HIS:CE1	2.27	0.53
23:a:6:ILE:HG23	23:a:34:ASN:HD21	1.73	0.53
29:g:61:VAL:O	29:g:61:VAL:HG23	2.08	0.53
30:h:87:PHE:CZ	30:h:93:VAL:HG12	2.43	0.53
34:l:87:THR:HG21	34:l:111:GLU:OE2	2.09	0.53
34:l:92:ARG:HB2	34:l:93:ARG:HH11	1.73	0.53
40:r:11:LEU:CD1	40:r:69:LEU:HD22	2.39	0.53
43:u:10:LEU:HA	43:u:13:LEU:HB2	1.91	0.53
46:x:10:ARG:O	46:x:14:ARG:HG2	2.08	0.53
47:y:35:ARG:HD3	47:y:53:GLU:HB3	1.91	0.53
49:1:16:ARG:NH1	49:1:63:ASN:HD21	2.06	0.53
51:4:2364:C:H2'	51:4:2365:A:C8	2.43	0.53
51:4:2384:C:N4	51:4:2385:G:N7	2.56	0.53
1:A:172:C:O2'	1:A:173:C:H5'	2.08	0.52
1:A:237:C:C2'	1:A:238:G:C8	2.91	0.52
1:A:341:C:O2'	1:A:342:C:H5'	2.09	0.52
1:A:353:A:OP1	1:A:353:A:H8	1.92	0.52
1:A:373:A:H2'	1:A:374:A:H8	1.74	0.52
1:A:636:G:O3'	14:O:62:ARG:NH1	2.42	0.52
1:A:815:G:P	17:R:59:GLN:HE21	2.32	0.52
1:A:903:U:H1'	4:E:48:LYS:HZ1	1.74	0.52
1:A:998:G:H2'	1:A:999:A:H8	1.73	0.52
1:A:1059:G:H5"	4:E:75:TYR:CE2	2.44	0.52
6:G:44:TYR:CD2	6:G:47:LEU:HD21	2.44	0.52
6:G:152:ALA:HB1	6:G:155:ARG:HH12	1.73	0.52
8:I:36:VAL:HG23	8:I:88:ASP:HB3	1.91	0.52
11:L:3:THR:O	11:L:7:LEU:HD23	2.09	0.52
17:R:36:ALA:O	17:R:40:THR:HG23	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:390:G:H2'	20:Y:391:G:C8	2.44	0.52
20:Y:504:C:N3	20:Y:2632:U:O4	2.41	0.52
20:Y:660:U:H5'	20:Y:1062:A:C5	2.44	0.52
20:Y:749:C:H2'	20:Y:750:C:C6	2.43	0.52
20:Y:847:C:O2'	20:Y:848:G:H5'	2.09	0.52
20:Y:938:G:O2'	20:Y:939:C:H5'	2.09	0.52
20:Y:1098:A:O2'	20:Y:1099:A:H5'	2.09	0.52
20:Y:1163:A:H4'	20:Y:1165:G:C8	2.43	0.52
20:Y:1648:A:H1'	20:Y:1649:C:C5	2.44	0.52
20:Y:1808:A:H8	20:Y:1808:A:OP2	1.92	0.52
20:Y:2435:U:H3'	20:Y:2436:A:H5"	1.91	0.52
20:Y:2444:C:H2'	20:Y:2445:A:H8	1.74	0.52
20:Y:2528:G:H5'	20:Y:2529:A:P	2.50	0.52
20:Y:2543:U:H4'	20:Y:2545:G:O6	2.09	0.52
20:Y:2879:G:O2'	20:Y:2888:G:O6	2.19	0.52
20:Y:3028:A:H2'	20:Y:3029:U:C1'	2.39	0.52
21:U:112:C:H2'	21:U:113:G:H8	1.74	0.52
23:a:192:LEU:HD12	23:a:193:LEU:H	1.73	0.52
27:e:104:TRP:HA	27:e:107:VAL:CG2	2.39	0.52
29:g:35:ILE:CG1	29:g:65:THR:HG23	2.39	0.52
32:j:74:ASP:OD1	32:j:74:ASP:C	2.51	0.52
32:j:96:ARG:O	32:j:113:ILE:HD12	2.09	0.52
32:j:98:ILE:O	32:j:112:VAL:N	2.42	0.52
40:r:21:LYS:HA	40:r:24:SER:OG	2.10	0.52
41:s:73:ARG:HH22	41:s:75:ARG:HH12	1.56	0.52
44:v:40:ARG:HB2	44:v:41:ARG:NH2	2.23	0.52
45:w:26:LEU:HD11	45:w:47:ILE:HD11	1.90	0.52
47:y:35:ARG:HD3	47:y:53:GLU:CB	2.39	0.52
48:z:11:ASN:OD1	48:z:11:ASN:C	2.52	0.52
1:A:172:C:H5"	18:T:20:ARG:HH12	1.74	0.52
1:A:478:A:H5'	1:A:479:A:OP1	2.09	0.52
1:A:828:G:OP1	1:A:828:G:H3'	2.10	0.52
1:A:854:A:O2'	1:A:855:A:O5'	2.27	0.52
1:A:858:A:H2'	1:A:859:C:C6	2.44	0.52
1:A:1159:G:OP2	8:I:119:LYS:NZ	2.41	0.52
2:C:133:MET:CE	2:C:168:TYR:HD2	2.22	0.52
4:E:106:ILE:HD11	4:E:148:ILE:HD12	1.91	0.52
5:F:7:MET:HA	5:F:62:VAL:HA	1.89	0.52
8:I:46:GLY:HA2	8:I:81:PHE:O	2.08	0.52
14:O:87:LEU:HD22	14:O:87:LEU:N	2.24	0.52
15:P:37:ILE:CD1	15:P:52:ASP:HB3	2.29	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:145:G:H2'	20:Y:145:G:N3	2.24	0.52
20:Y:204:G:O2'	20:Y:205:U:OP2	2.28	0.52
20:Y:293:G:H2'	20:Y:293:G:N3	2.24	0.52
20:Y:776:G:O2'	20:Y:777:U:H5'	2.09	0.52
20:Y:854:A:H2	20:Y:873:G:N1	2.07	0.52
20:Y:985:G:H3'	20:Y:986:G:H8	1.73	0.52
20:Y:987:A:OP1	31:i:4:PRO:HA	2.09	0.52
20:Y:1241:C:H2'	20:Y:1242:C:C6	2.44	0.52
20:Y:1438:G:OP1	37:o:91:ARG:NH1	2.41	0.52
20:Y:1479:G:H5"	20:Y:1480:A:OP2	2.09	0.52
20:Y:1813:C:H3'	20:Y:1814:G:C8	2.43	0.52
20:Y:2745:C:C2	20:Y:2769:G:N2	2.77	0.52
20:Y:2850:C:C2'	20:Y:2851:G:O5'	2.57	0.52
20:Y:2861:U:P	23:a:85:ARG:HH22	2.33	0.52
20:Y:2867:A:C4	20:Y:2868:A:C8	2.97	0.52
20:Y:2889:A:H2'	20:Y:2890:C:H6	1.73	0.52
21:U:50:C:P	33:k:112:ARG:HD3	2.50	0.52
22:Z:175:LEU:HD12	22:Z:175:LEU:N	2.23	0.52
22:Z:206:TRP:HA	22:Z:211:ARG:NH1	2.24	0.52
24:b:65:PRO:HB2	24:b:66:TYR:CE2	2.44	0.52
25:c:64:LEU:C	25:c:67:ILE:HG22	2.34	0.52
26:d:55:ARG:NH1	26:d:63:ARG:HD2	2.25	0.52
26:d:106:PHE:HD2	26:d:108:LEU:HD11	1.73	0.52
30:h:124:VAL:HG11	30:h:129:PHE:CE1	2.38	0.52
31:i:111:GLU:OE2	31:i:115:ARG:NH2	2.42	0.52
32:j:113:ILE:HD12	32:j:114:GLU:N	2.22	0.52
35:m:21:SER:HA	35:m:39:GLN:OE1	2.10	0.52
37:o:15:ARG:HG2	37:o:15:ARG:NH1	2.24	0.52
42:t:41:ARG:HH22	42:t:45:ASN:HB2	1.74	0.52
43:u:10:LEU:HD23	43:u:13:LEU:HD13	1.89	0.52
44:v:10:VAL:O	44:v:13:ILE:HG23	2.09	0.52
1:A:23:C:O2	1:A:552:A:H2	1.92	0.52
1:A:106:C:H3'	1:A:107:G:C8	2.45	0.52
1:A:787:A:H2'	1:A:788:C:H6	1.74	0.52
1:A:815:G:OP2	17:R:59:GLN:NE2	2.42	0.52
1:A:819:U:H3	1:A:829:G:H1	1.57	0.52
1:A:1037:G:H2'	1:A:1038:G:O4'	2.09	0.52
1:A:1360:A:N3	6:G:2:PRO:HG3	2.25	0.52
7:H:8:ALA:HA	7:H:79:ARG:HD2	1.90	0.52
7:H:76:GLY:HA3	7:H:132:TRP:NE1	2.25	0.52
8:I:69:LYS:HZ3	8:I:72:LEU:HB3	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:T:67:ILE:CG1	18:T:68:HIS:N	2.73	0.52
19:V:213:LEU:HD11	19:V:217:ILE:HD11	1.91	0.52
20:Y:6:G:C2'	20:Y:2853:C:H42	2.23	0.52
20:Y:218:A:N3	20:Y:234:U:O2'	2.35	0.52
20:Y:227:A:H2	20:Y:506:C:H4'	1.71	0.52
20:Y:265:A:C4	20:Y:516:G:C6	2.97	0.52
20:Y:417:C:H2'	20:Y:418:C:C6	2.44	0.52
20:Y:498:G:H5'	20:Y:499:G:H4'	1.90	0.52
20:Y:619:C:O2	20:Y:619:C:H2'	2.08	0.52
20:Y:1077:A:H5"	20:Y:1078:G:OP2	2.10	0.52
20:Y:1163:A:N3	20:Y:1165:G:N1	2.58	0.52
20:Y:1177:G:N2	27:e:129:ILE:O	2.42	0.52
20:Y:1206:A:H62	27:e:136:SER:HB2	1.74	0.52
20:Y:1360:G:O2'	20:Y:1361:G:H5'	2.10	0.52
20:Y:2064:A:H2'	20:Y:2064:A:N3	2.23	0.52
20:Y:2294:A:O2'	20:Y:2295:C:H5'	2.10	0.52
20:Y:2509:C:P	47:y:8:ARG:HH21	2.32	0.52
20:Y:2702:A:H5'	50:2:31:ARG:NH2	2.23	0.52
20:Y:2890:C:H3'	20:Y:2891:C:H6	1.73	0.52
20:Y:3031:A:H2'	20:Y:3032:G:O4'	2.09	0.52
26:d:23:ASN:OD1	26:d:23:ASN:C	2.51	0.52
27:e:76:PRO:HD2	27:e:79:LYS:HE2	1.91	0.52
29:g:7:ARG:NH2	29:g:20:LEU:HD21	2.14	0.52
38:p:62:ARG:HH11	38:p:81:ARG:NH1	2.07	0.52
42:t:33:ILE:C	42:t:33:ILE:HD12	2.34	0.52
44:v:31:LEU:HB3	44:v:36:LEU:HD21	1.91	0.52
1:A:965:A:H3'	1:A:965:A:N3	2.24	0.52
1:A:1082:A:H2'	1:A:1083:C:C6	2.45	0.52
1:A:1461:U:H2'	1:A:1462:C:H6	1.73	0.52
1:A:1472:G:H2'	1:A:1473:A:C8	2.43	0.52
1:A:1484:A:H2'	1:A:1485:C:O4'	2.10	0.52
3:D:136:ASP:O	3:D:176:LEU:HG	2.10	0.52
6:G:25:GLN:HG3	6:G:101:LEU:HD23	1.92	0.52
7:H:85:LEU:HB2	11:L:4:ILE:HD11	1.91	0.52
8:I:126:ARG:HD3	8:I:126:ARG:H	1.74	0.52
12:M:23:TYR:CD2	12:M:70:LEU:HD12	2.45	0.52
20:Y:140:G:OP2	20:Y:141:U:H5	1.91	0.52
20:Y:431:C:H2'	20:Y:432:C:C5	2.44	0.52
20:Y:605:G:H4'	37:o:25:ARG:NH2	2.24	0.52
20:Y:718:C:O2'	20:Y:719:G:O5'	2.24	0.52
20:Y:772:U:C2	20:Y:773:G:N7	2.77	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:1087:G:H2'	20:Y:1088:U:H6	1.75	0.52
20:Y:1159:C:O2'	20:Y:1160:G:H5'	2.09	0.52
20:Y:1166:A:H2'	20:Y:1166:A:N3	2.23	0.52
20:Y:1273:G:H5"	20:Y:1274:A:OP2	2.09	0.52
20:Y:1295:U:H2'	20:Y:1296:G:C8	2.43	0.52
20:Y:1298:C:H4'	45:w:29:LYS:HZ2	1.75	0.52
20:Y:1344:A:OP2	20:Y:1345:G:H3'	2.08	0.52
20:Y:1441:C:N4	20:Y:1865:A:O2'	2.37	0.52
20:Y:1574:G:H3'	20:Y:1575:A:H8	1.74	0.52
20:Y:2080:G:HO2'	20:Y:2081:U:H5'	1.74	0.52
20:Y:2223:C:H2'	20:Y:2224:C:H6	1.74	0.52
20:Y:2572:U:H1'	47:y:41:PHE:HE1	1.74	0.52
20:Y:2693:A:O2'	31:i:56:ARG:NH1	2.40	0.52
20:Y:2755:A:C4	20:Y:2756:G:C8	2.98	0.52
20:Y:2802:G:C2	20:Y:2803:C:C5	2.97	0.52
20:Y:2889:A:H2'	20:Y:2890:C:C6	2.45	0.52
20:Y:2890:C:O2	20:Y:2890:C:H2'	2.08	0.52
20:Y:3022:G:O2'	20:Y:3023:G:O4'	2.26	0.52
21:U:43:C:H2'	21:U:44:C:O4'	2.09	0.52
22:Z:143:HIS:HB3	22:Z:162:SER:HB3	1.91	0.52
22:Z:231:HIS:CE1	22:Z:233:HIS:HD1	2.27	0.52
23:a:40:ARG:HB2	23:a:49:ALA:N	2.25	0.52
26:d:86:GLN:HB2	26:d:134:VAL:CG2	2.39	0.52
31:i:17:GLN:HE22	31:i:96:ASN:CG	2.17	0.52
31:i:57:HIS:CE1	31:i:113:THR:HG23	2.45	0.52
32:j:56:LYS:NZ	32:j:87:TYR:O	2.29	0.52
34:l:74:PRO:CG	34:l:77:SER:HB2	2.40	0.52
37:o:24:ALA:O	37:o:28:ILE:HG13	2.10	0.52
38:p:21:TYR:HA	38:p:24:ILE:CG2	2.38	0.52
39:q:5:LYS:HD2	39:q:23:VAL:O	2.09	0.52
44:v:24:VAL:HG12	44:v:80:ALA:HB3	1.90	0.52
48:z:10:PRO:O	48:z:10:PRO:HD2	2.10	0.52
49:1:17:THR:HG23	49:1:19:THR:H	1.74	0.52
1:A:82:U:O4	1:A:87:G:O6	2.28	0.52
1:A:106:C:H3'	1:A:107:G:H8	1.74	0.52
1:A:410:G:H5"	1:A:411:A:OP1	2.10	0.52
1:A:568:G:H3'	1:A:733:A:N1	2.24	0.52
1:A:1037:G:H4'	2:C:197:GLY:N	2.24	0.52
1:A:1132:U:HO2'	1:A:1133:G:H8	1.56	0.52
1:A:1209:C:H41	12:M:104:LYS:CE	2.22	0.52
1:A:1311:G:H5"	12:M:29:ARG:NH2	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1388:G:HO2'	1:A:1503:A:H5'	1.75	0.52
1:A:1392:C:H4'	20:Y:2138:C:N4	2.24	0.52
3:D:15:LEU:HD13	3:D:19:LEU:HD21	1.91	0.52
9:J:8:ILE:HD13	9:J:100:ILE:HG13	1.91	0.52
16:Q:77:MET:HB3	16:Q:91:VAL:CG2	2.39	0.52
19:V:6:MET:HA	19:V:9:LEU:HD12	1.90	0.52
20:Y:19:U:H3	20:Y:605:G:H1	1.57	0.52
20:Y:131:A:O2'	20:Y:132:C:H5'	2.09	0.52
20:Y:431:C:H2'	20:Y:432:C:C6	2.44	0.52
20:Y:660:U:H2'	20:Y:662:G:OP2	2.10	0.52
20:Y:709:U:O2	24:b:44:ALA:HB3	2.09	0.52
20:Y:739:U:C3'	20:Y:740:A:H2'	2.39	0.52
20:Y:851:C:H2'	20:Y:852:C:H6	1.74	0.52
20:Y:1452:G:O2'	20:Y:1453:G:H5'	2.09	0.52
20:Y:1523:U:C1'	20:Y:1814:G:H22	2.22	0.52
20:Y:1651:C:O2'	20:Y:1652:A:H5'	2.10	0.52
20:Y:1842:U:O2'	20:Y:1843:C:H5'	2.10	0.52
20:Y:1874:C:O2'	20:Y:1875:U:H5'	2.10	0.52
20:Y:2542:G:H4'	20:Y:2543:U:OP1	2.10	0.52
20:Y:2641:U:O5'	20:Y:2641:U:H6	1.92	0.52
23:a:6:ILE:HD12	23:a:106:PHE:CZ	2.44	0.52
23:a:9:THR:HG23	23:a:204:GLY:O	2.09	0.52
25:c:20:ARG:NH1	25:c:24:GLN:HB2	2.24	0.52
28:f:17:VAL:HA	28:f:55:ILE:HG23	1.91	0.52
30:h:111:LYS:CD	30:h:128:LYS:HB2	2.40	0.52
31:i:15:PRO:CB	31:i:72:ARG:HH12	2.22	0.52
34:l:73:PHE:HB3	34:l:80:ILE:CD1	2.36	0.52
35:m:99:ALA:HB2	35:m:106:PHE:CE1	2.44	0.52
38:p:37:SER:OG	38:p:38:ASN:N	2.42	0.52
39:q:36:GLU:N	39:q:36:GLU:OE2	2.43	0.52
48:z:8:PHE:CZ	48:z:10:PRO:HB3	2.45	0.52
51:4:2336:U:H5"	51:4:2338:G:H1	1.75	0.52
1:A:127:A:P	16:Q:80:ARG:NH2	2.83	0.52
1:A:407:A:H2'	1:A:408:G:C8	2.45	0.52
1:A:479:A:H4'	1:A:480:G:OP1	2.08	0.52
1:A:605:G:N3	1:A:605:G:H2'	2.23	0.52
1:A:998:G:H2'	1:A:999:A:C8	2.45	0.52
1:A:1051:C:O2'	1:A:1052:G:H5'	2.09	0.52
1:A:1271:A:C2'	1:A:1272:G:H5'	2.38	0.52
1:A:1425:G:OP2	1:A:1426:C:N4	2.42	0.52
2:C:90:LEU:HD23	2:C:90:LEU:C	2.33	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:G:18:TYR:HE2	6:G:44:TYR:HE2	1.57	0.52
11:L:51:LYS:HG3	11:L:67:ILE:HB	1.90	0.52
11:L:110:ARG:HD2	11:L:112:GLN:O	2.10	0.52
12:M:34:LEU:CD1	12:M:41:LYS:HB3	2.39	0.52
17:R:57:CYS:HB3	17:R:59:GLN:OE1	2.09	0.52
18:T:11:ILE:CG2	18:T:12:ARG:HH22	2.22	0.52
18:T:12:ARG:O	18:T:16:ARG:HG2	2.09	0.52
19:V:114:LEU:O	19:V:118:GLU:OE2	2.27	0.52
20:Y:60:A:H61	20:Y:88:A:H61	1.56	0.52
20:Y:226:A:H2	20:Y:227:A:N6	2.07	0.52
20:Y:273:A:N6	20:Y:314:G:O4’	2.42	0.52
20:Y:566:A:H2’	20:Y:567:A:H5’	1.91	0.52
20:Y:569:G:OP2	39:q:43:LYS:HD3	2.10	0.52
20:Y:890:G:C4	20:Y:909:A:C8	2.98	0.52
20:Y:932:C:H2’	20:Y:933:G:C8	2.44	0.52
20:Y:993:G:H1’	20:Y:1015:A:H61	1.73	0.52
20:Y:1245:U:H5	20:Y:2712:U:O2’	1.92	0.52
20:Y:1313:U:H2’	20:Y:1314:C:C6	2.44	0.52
20:Y:1387:A:H62	20:Y:1836:A:H1’	1.73	0.52
20:Y:1560:U:H2’	20:Y:1561:C:C5	2.43	0.52
20:Y:1672:C:C2	20:Y:1679:A:C8	2.98	0.52
20:Y:1853:A:C2’	20:Y:1854:U:H5’	2.40	0.52
20:Y:2130:G:H2’	20:Y:2131:G:H8	1.73	0.52
20:Y:2529:A:H2’	20:Y:2530:C:H6	1.74	0.52
20:Y:2709:G:H5”	31:i:46:GLN:NE2	2.10	0.52
22:Z:134:ARG:CB	22:Z:188:ARG:HH22	2.23	0.52
25:c:67:ILE:O	25:c:106:PHE:HE1	1.92	0.52
25:c:87:ARG:O	25:c:90:MET:HE3	2.09	0.52
26:d:122:ILE:HD12	26:d:135:SER:O	2.10	0.52
27:e:26:VAL:O	27:e:30:LEU:HD23	2.10	0.52
27:e:104:TRP:CA	27:e:107:VAL:HG22	2.40	0.52
29:g:22:ILE:O	29:g:23:ARG:CG	2.58	0.52
29:g:64:ARG:CB	29:g:83:ALA:HB3	2.35	0.52
33:k:73:ILE:N	33:k:73:ILE:HD13	2.23	0.52
36:n:11:GLY:O	36:n:12:LYS:HD3	2.10	0.52
38:p:54:VAL:HG23	38:p:85:LYS:O	2.09	0.52
51:4:2361:U:O4	51:4:2376:G:O6	2.28	0.52
1:A:79:C:H2’	1:A:80:C:O4’	2.10	0.52
1:A:394:G:O2’	1:A:395:C:H5’	2.10	0.52
1:A:630:A:O2’	1:A:631:C:H5’	2.10	0.52
1:A:681:C:OP1	1:A:682:A:H2’	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:969:G:H2'	1:A:1200:A:N3	2.24	0.52
3:D:182:GLU:O	3:D:186:ILE:HG13	2.09	0.52
4:E:54:ARG:HD3	4:E:56:PHE:HE1	1.75	0.52
4:E:55:ARG:HD3	4:E:55:ARG:N	2.25	0.52
4:E:125:SER:O	4:E:128:THR:HG23	2.10	0.52
6:G:31:LEU:HD11	6:G:35:LYS:N	2.25	0.52
8:I:33:LYS:O	8:I:33:LYS:HG3	2.09	0.52
10:K:76:ALA:CB	10:K:109:LEU:HD13	2.35	0.52
16:Q:24:ILE:HG21	16:Q:73:ARG:HH21	1.73	0.52
18:T:67:ILE:HG13	18:T:68:HIS:N	2.24	0.52
20:Y:53:A:O2'	20:Y:54:C:H5'	2.09	0.52
20:Y:101:U:O2'	20:Y:102:C:H5'	2.10	0.52
20:Y:107:G:O2'	20:Y:108:A:H5'	2.10	0.52
20:Y:199:U:H3	20:Y:250:G:H1	1.56	0.52
20:Y:615:A:H3'	20:Y:615:A:N3	2.25	0.52
20:Y:710:G:H2'	20:Y:711:G:H8	1.73	0.52
20:Y:1000:C:H2'	20:Y:1001:C:O4'	2.09	0.52
20:Y:1036:C:C2	20:Y:1037:C:C5	2.98	0.52
20:Y:1377:A:N3	20:Y:1377:A:H2'	2.23	0.52
20:Y:1638:C:C3'	20:Y:1639:G:H5"	2.39	0.52
20:Y:2016:G:O2'	22:Z:183:ARG:HD2	2.10	0.52
20:Y:2087:C:O5'	20:Y:2087:C:H6	1.92	0.52
20:Y:2211:C:C4	20:Y:2212:A:N6	2.70	0.52
20:Y:2268:G:H2'	20:Y:2269:C:H5'	1.90	0.52
20:Y:2722:C:OP2	20:Y:2722:C:H3'	2.10	0.52
20:Y:2812:G:H2'	20:Y:2813:A:C5'	2.40	0.52
21:U:71:C:H2'	21:U:72:C:H6	1.73	0.52
23:a:161:PHE:CD1	28:f:81:PRO:HG3	2.45	0.52
23:a:169:ARG:NH1	23:a:170:MET:O	2.39	0.52
26:d:20:ASN:OD1	26:d:20:ASN:C	2.53	0.52
27:e:101:LYS:NZ	27:e:103:THR:HG22	2.25	0.52
29:g:107:ARG:HA	29:g:112:MET:CE	2.39	0.52
33:k:109:TYR:HA	33:k:113:ILE:HG21	1.91	0.52
36:n:39:VAL:HG22	36:n:60:VAL:HG23	1.91	0.52
37:o:72:ASP:OD1	37:o:72:ASP:C	2.52	0.52
42:t:41:ARG:NH2	42:t:45:ASN:H	2.08	0.52
45:w:7:THR:CG2	45:w:34:SER:HA	2.40	0.52
1:A:461:G:H21	1:A:462:A:N6	2.08	0.52
1:A:491:C:H1'	3:D:36:HIS:CD2	2.45	0.52
1:A:711:G:H2'	1:A:712:C:H6	1.72	0.52
1:A:896:A:H2'	1:A:897:A:H8	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:903:U:O2'	1:A:904:G:O5'	2.16	0.52
1:A:1172:A:H2'	1:A:1173:C:C6	2.44	0.52
1:A:1302:C:H2'	1:A:1303:U:C2	2.44	0.52
2:C:11:ARG:C	2:C:16:THR:HG22	2.35	0.52
3:D:10:ARG:HH11	3:D:33:PRO:HB3	1.74	0.52
15:P:19:ARG:HA	15:P:39:ARG:CB	2.39	0.52
16:Q:73:ARG:NH1	16:Q:94:LEU:HD23	2.25	0.52
17:R:71:ALA:O	17:R:76:LEU:HG	2.09	0.52
18:T:71:GLN:HA	18:T:74:ASN:OD1	2.10	0.52
19:V:139:ARG:HA	19:V:139:ARG:CZ	2.40	0.52
20:Y:828:G:C2'	20:Y:829:U:H5'	2.40	0.52
20:Y:1111:G:H5"	35:m:50:ARG:HD3	1.91	0.52
20:Y:1691:A:O2'	20:Y:1692:G:H5'	2.10	0.52
20:Y:1928:C:O2'	20:Y:1929:A:H5'	2.10	0.52
20:Y:1987:G:H2'	20:Y:1988:C:C6	2.44	0.52
20:Y:2152:A:C3'	20:Y:2153:G:H5"	2.40	0.52
20:Y:2273:G:H2'	20:Y:2274:C:C6	2.45	0.52
20:Y:2303:A:H1'	42:t:23:ARG:HE	1.74	0.52
20:Y:2415:G:O2'	20:Y:2416:C:H5'	2.09	0.52
20:Y:2526:U:H2'	20:Y:2527:G:C1'	2.40	0.52
20:Y:2559:A:C5'	33:k:24:ARG:HH21	2.22	0.52
21:U:111:C:H2'	21:U:112:C:C6	2.45	0.52
22:Z:143:HIS:HD2	22:Z:194:GLY:O	1.92	0.52
22:Z:175:LEU:O	22:Z:182:ILE:HD12	2.10	0.52
30:h:129:PHE:CE2	30:h:146:GLU:HB3	2.45	0.52
31:i:64:VAL:HG12	31:i:106:LEU:HD21	1.91	0.52
31:i:136:GLU:HB2	40:r:63:THR:HG23	1.91	0.52
38:p:13:ALA:O	38:p:32:VAL:HB	2.09	0.52
38:p:34:HIS:CG	38:p:35:PRO:HD2	2.44	0.52
38:p:93:ILE:CG1	38:p:96:PHE:HB2	2.40	0.52
39:q:5:LYS:HD2	39:q:6:GLY:H	1.75	0.52
42:t:39:VAL:HG22	42:t:46:LYS:CD	2.40	0.52
49:1:45:ASP:OD1	49:1:45:ASP:N	2.43	0.52
49:1:55:ASN:OD1	49:1:55:ASN:C	2.53	0.52
1:A:543:A:OP2	11:L:12:ARG:HD2	2.09	0.52
1:A:1223:G:H1	1:A:1277:U:H3	1.54	0.52
4:E:119:VAL:HG12	4:E:121:LEU:CD2	2.40	0.52
4:E:122:ARG:HD2	4:E:123:PRO:HD2	1.91	0.52
5:F:10:LEU:C	5:F:10:LEU:HD12	2.35	0.52
7:H:32:LEU:CD1	7:H:33:LYS:HG2	2.37	0.52
11:L:79:MET:HE3	11:L:102:LEU:CB	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:M:19:LEU:HD21	12:M:25:ILE:HD13	1.90	0.52
15:P:21:ILE:HG12	15:P:33:ALA:CB	2.40	0.52
20:Y:106:G:O2'	20:Y:107:G:H5'	2.09	0.52
20:Y:139:U:C2'	20:Y:140:G:H5'	2.40	0.52
20:Y:307:G:H2'	20:Y:308:U:H6	1.75	0.52
20:Y:543:U:H3	20:Y:560:U:H2'	1.75	0.52
20:Y:588:A:H2'	20:Y:589:A:C8	2.45	0.52
20:Y:772:U:O2'	20:Y:773:G:O5'	2.26	0.52
20:Y:894:U:H2'	20:Y:895:G:H8	1.72	0.52
20:Y:948:G:O2'	20:Y:949:C:H5'	2.09	0.52
20:Y:1085:G:OP1	20:Y:1086:C:H5"	2.10	0.52
20:Y:1431:U:H2'	20:Y:1432:G:H8	1.75	0.52
20:Y:1649:C:N4	20:Y:1790:A:OP2	2.43	0.52
20:Y:1873:A:H2'	20:Y:1873:A:N3	2.24	0.52
20:Y:2088:C:C1'	20:Y:2089:C:OP1	2.57	0.52
20:Y:2587:U:H2'	20:Y:2588:C:H6	1.73	0.52
20:Y:2622:C:H2'	20:Y:2623:A:H8	1.74	0.52
20:Y:2628:U:O2'	20:Y:2629:G:H5'	2.08	0.52
20:Y:2629:G:N2	20:Y:2635:A:H5"	2.10	0.52
20:Y:2689:C:O2'	20:Y:2690:C:H5'	2.09	0.52
20:Y:2944:U:C2	20:Y:2945:A:C8	2.98	0.52
20:Y:3062:C:C2	20:Y:3098:G:N2	2.77	0.52
21:U:62:C:C2	21:U:63:U:C5	2.98	0.52
21:U:89:C:OP2	21:U:89:C:H6	1.92	0.52
22:Z:37:LEU:HD11	22:Z:40:LYS:NZ	2.22	0.52
23:a:38:ARG:HG3	23:a:39:ILE:N	2.25	0.52
23:a:57:ILE:CG1	23:a:79:ARG:HA	2.39	0.52
23:a:198:ILE:CD1	23:a:206:VAL:HG11	2.39	0.52
24:b:2:THR:HA	24:b:19:GLU:OE2	2.10	0.52
25:c:135:TYR:CZ	25:c:137:PHE:HZ	2.27	0.52
25:c:141:GLU:OE1	25:c:156:PRO:HB3	2.10	0.52
33:k:77:LYS:HG3	33:k:112:ARG:NH1	2.25	0.52
34:l:21:PRO:HB3	34:l:94:ALA:O	2.09	0.52
36:n:54:ASP:HA	36:n:57:LYS:HG3	1.92	0.52
43:u:7:PRO:HA	43:u:56:ARG:CZ	2.40	0.52
44:v:79:ILE:HD11	44:v:81:PHE:CE1	2.45	0.52
46:x:45:LYS:HG3	46:x:48:ARG:CZ	2.40	0.52
1:A:26:G:H5'	1:A:867:G:O4'	2.10	0.52
1:A:230:G:H5"	15:P:32:ARG:HE	1.75	0.52
1:A:277:C:C3'	1:A:278:G:H5"	2.39	0.52
1:A:485:G:O2'	1:A:486:G:P	2.68	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:534:U:H2'	1:A:535:C:H6	1.76	0.52
1:A:626:G:H2'	1:A:627:C:C6	2.45	0.52
1:A:970:G:C5	1:A:1200:A:C5	2.98	0.52
1:A:987:A:H2	1:A:1017:C:H1'	1.73	0.52
1:A:1075:U:P	1:A:1088:G:H1	2.33	0.52
1:A:1425:G:H5'	1:A:1426:C:H5	1.74	0.52
2:C:37:ALA:HA	2:C:40:LYS:CE	2.39	0.52
3:D:117:HIS:CE1	3:D:143:LYS:HG2	2.44	0.52
6:G:135:VAL:HA	6:G:138:ARG:NH1	2.25	0.52
12:M:106:ASN:O	12:M:107:ALA:HB3	2.10	0.52
14:O:52:SER:O	14:O:56:LEU:HD23	2.10	0.52
17:R:58:VAL:O	17:R:62:ARG:HG3	2.09	0.52
19:V:148:LEU:HD23	19:V:152:ARG:NH1	2.24	0.52
20:Y:234:U:C2'	20:Y:235:U:H5'	2.40	0.52
20:Y:401:C:H3'	24:b:139:LYS:HE3	1.92	0.52
20:Y:720:C:OP1	20:Y:721:A:H5'	2.10	0.52
20:Y:1199:U:H1'	27:e:129:ILE:CD1	2.40	0.52
20:Y:1427:U:H4'	20:Y:1428:U:O5'	2.10	0.52
20:Y:1781:C:H2'	20:Y:1782:U:C6	2.44	0.52
20:Y:1783:G:H2'	20:Y:1784:C:C6	2.45	0.52
20:Y:1825:C:H42	20:Y:1839:U:H3'	1.73	0.52
20:Y:1898:U:C2'	20:Y:1899:G:H5'	2.40	0.52
20:Y:1959:G:C2'	20:Y:1960:U:H5'	2.40	0.52
20:Y:2037:U:O2	22:Z:202:SER:N	2.42	0.52
20:Y:2114:A:C2	20:Y:2115:G:H1'	2.44	0.52
20:Y:2275:A:N6	20:Y:2838:A:O2'	2.41	0.52
20:Y:2427:G:OP1	22:Z:148:ARG:NH1	2.43	0.52
20:Y:2831:G:C2'	20:Y:2832:G:H5'	2.40	0.52
22:Z:228:PRO:HB3	22:Z:234:GLY:O	2.10	0.52
34:l:64:SER:OG	34:l:65:TYR:HD1	1.92	0.52
41:s:40:GLN:OE1	41:s:44:HIS:N	2.43	0.52
44:v:77:THR:HG23	44:v:106:LYS:HZ1	1.73	0.52
47:y:20:HIS:HB2	47:y:22:ASN:OD1	2.10	0.52
48:z:15:ARG:NH2	48:z:47:ALA:HB2	2.25	0.52
1:A:150:G:H2'	1:A:151:C:C6	2.44	0.51
1:A:150:G:H2'	1:A:151:C:H6	1.75	0.51
1:A:164:G:O2'	1:A:165:U:H5'	2.10	0.51
1:A:616:G:C6	1:A:617:G:C6	2.98	0.51
1:A:938:U:H2'	1:A:939:U:C6	2.46	0.51
4:E:184:LEU:HD23	4:E:185:PRO:O	2.09	0.51
6:G:23:VAL:O	6:G:27:VAL:HG13	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:H:75:ALA:N	7:H:132:TRP:O	2.43	0.51
20:Y:26:U:H4'	35:m:7:ALA:CB	2.35	0.51
20:Y:72:G:O3'	43:u:48:ARG:NH1	2.43	0.51
20:Y:171:U:C2	20:Y:172:C:C5	2.98	0.51
20:Y:314:G:H8	20:Y:314:G:O5'	1.93	0.51
20:Y:359:A:H4'	20:Y:514:C:O2'	2.10	0.51
20:Y:371:G:H2'	20:Y:372:G:C8	2.45	0.51
20:Y:470:G:N2	20:Y:481:C:C2	2.78	0.51
20:Y:773:G:C2	20:Y:774:G:C8	2.97	0.51
20:Y:1142:G:OP1	20:Y:1144:A:H5'	2.10	0.51
20:Y:1282:G:OP1	36:n:26:LYS:NZ	2.43	0.51
20:Y:1312:G:H2'	20:Y:1313:U:H6	1.75	0.51
20:Y:1471:G:O2'	20:Y:1472:C:H5'	2.10	0.51
20:Y:1729:A:H2'	20:Y:1731:A:C5'	2.40	0.51
20:Y:2059:G:H2'	20:Y:2060:C:C6	2.45	0.51
20:Y:2286:A:O2'	20:Y:2287:C:H6	1.93	0.51
20:Y:2461:G:H2'	20:Y:2463:G:O6	2.10	0.51
20:Y:2640:G:H5'	30:h:65:LYS:CD	2.40	0.51
20:Y:2942:G:H5'	20:Y:2943:A:OP2	2.10	0.51
20:Y:3106:C:H41	46:x:30:VAL:HG23	1.75	0.51
23:a:182:VAL:HA	23:a:194:ILE:HD12	1.91	0.51
25:c:64:LEU:HD22	25:c:159:MET:CE	2.40	0.51
26:d:3:ARG:HA	26:d:6:LYS:CD	2.37	0.51
26:d:151:ARG:NE	26:d:151:ARG:HA	2.24	0.51
28:f:6:PRO:HD3	28:f:45:THR:CG2	2.34	0.51
29:g:10:VAL:HG21	29:g:16:ALA:C	2.34	0.51
31:i:1:MET:HE1	31:i:44:ASN:CG	2.35	0.51
36:n:22:VAL:HG13	36:n:24:VAL:HG13	1.92	0.51
51:4:2375:G:H2'	51:4:2376:G:C8	2.43	0.51
1:A:333:C:C2	1:A:334:C:C5	2.98	0.51
1:A:333:C:H5'	18:T:11:ILE:HD13	1.92	0.51
1:A:388:G:H3'	1:A:389:A:H5'	1.93	0.51
1:A:451:A:H1'	1:A:453:G:N7	2.25	0.51
1:A:831:A:O2'	1:A:832:U:H5'	2.10	0.51
1:A:1018:C:H2'	1:A:1019:U:C6	2.44	0.51
1:A:1388:G:H1'	1:A:1502:A:O2'	2.10	0.51
1:A:1482:U:H1'	1:A:1483:A:OP2	2.10	0.51
1:A:1501:G:C5	20:Y:2144:C:H5'	2.45	0.51
3:D:148:LEU:O	3:D:152:ILE:HG12	2.10	0.51
6:G:103:TRP:HB3	6:G:107:PHE:CE2	2.46	0.51
8:I:33:LYS:HA	8:I:130:ALA:CB	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:L:24:LEU:CG	11:L:30:ARG:HG2	2.32	0.51
12:M:33:ILE:HG12	12:M:59:TYR:HH	1.71	0.51
16:Q:34:LYS:HB3	16:Q:63:ASP:O	2.10	0.51
17:R:51:ARG:CA	17:R:54:THR:HG22	2.33	0.51
19:V:83:GLU:HG2	19:V:214:THR:OG1	2.11	0.51
19:V:129:ARG:HB3	19:V:133:GLU:OE2	2.11	0.51
20:Y:269:C:H1'	20:Y:360:G:O2'	2.09	0.51
20:Y:486:G:OP1	42:t:53:THR:HG21	2.11	0.51
20:Y:893:G:H5"	22:Z:48:ARG:HD3	1.92	0.51
20:Y:1009:U:H5'	20:Y:1010:U:OP2	2.10	0.51
20:Y:1019:C:O3'	20:Y:1020:A:H5'	2.09	0.51
20:Y:1299:U:O2'	20:Y:1300:G:H5'	2.11	0.51
20:Y:1393:C:O3'	32:j:34:ILE:HD11	2.10	0.51
20:Y:1778:A:OP1	20:Y:1778:A:H8	1.92	0.51
20:Y:1864:U:H4'	20:Y:1865:A:C5'	2.36	0.51
20:Y:1872:A:H2'	20:Y:1873:A:H8	1.75	0.51
20:Y:1874:C:C2	20:Y:1875:U:C5	2.98	0.51
20:Y:2207:U:O2'	20:Y:2208:U:H5'	2.10	0.51
20:Y:2611:U:O2'	41:s:41:ARG:NH1	2.43	0.51
20:Y:2693:A:C1'	31:i:56:ARG:HH12	2.23	0.51
20:Y:2901:G:O2'	20:Y:2902:A:H5'	2.10	0.51
20:Y:2931:G:H2'	20:Y:2932:G:C8	2.45	0.51
22:Z:44:ASN:OD1	22:Z:46:HIS:HB2	2.10	0.51
22:Z:58:HIS:ND1	22:Z:59:LYS:O	2.42	0.51
24:b:189:LEU:CD1	30:h:4:ILE:HG22	2.40	0.51
25:c:43:VAL:HB	25:c:96:VAL:CG1	2.40	0.51
37:o:99:ARG:HH12	37:o:101:PHE:HZ	1.57	0.51
41:s:19:GLN:HB2	41:s:21:LEU:HD21	1.92	0.51
43:u:5:THR:HB	43:u:9:GLU:OE1	2.09	0.51
44:v:53:LYS:HB3	44:v:56:LEU:HD23	1.92	0.51
51:4:2358:A:H3'	51:4:2359:G:H8	1.75	0.51
1:A:113:G:O2'	1:A:114:U:H5'	2.09	0.51
1:A:207:G:H4'	18:T:56:ARG:NH1	2.26	0.51
1:A:331:G:O2'	18:T:3:ASN:OD1	2.28	0.51
1:A:579:U:C3'	7:H:90:LYS:HZ3	2.23	0.51
1:A:644:G:O2'	1:A:646:G:OP2	2.24	0.51
1:A:702:G:O2'	1:A:703:U:H4'	2.09	0.51
1:A:871:A:O2'	1:A:872:G:OP2	2.25	0.51
1:A:974:U:C4	1:A:1025:C:N3	2.78	0.51
1:A:1145:G:N2	1:A:1153:U:O2	2.25	0.51
1:A:1241:G:H4'	1:A:1264:C:O2'	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:133:MET:O	2:C:137:ILE:HG22	2.09	0.51
7:H:13:ARG:HD3	7:H:27:LEU:CD2	2.40	0.51
7:H:40:LEU:CB	7:H:46:ILE:HD12	2.41	0.51
9:J:21:SER:O	9:J:25:ILE:HD13	2.10	0.51
19:V:185:ALA:O	19:V:200:ILE:HG13	2.10	0.51
20:Y:126:C:C2'	20:Y:127:C:H5'	2.41	0.51
20:Y:229:U:OP1	20:Y:229:U:H3'	2.10	0.51
20:Y:336:C:HO2'	20:Y:337:U:P	2.30	0.51
20:Y:607:G:H2'	20:Y:608:C:H6	1.75	0.51
20:Y:780:U:H1'	49:1:60:LYS:NZ	2.26	0.51
20:Y:1155:C:O2'	20:Y:1156:A:H5'	2.10	0.51
20:Y:1160:G:H1	20:Y:1231:U:H3	1.58	0.51
20:Y:1177:G:H21	27:e:133:THR:N	2.08	0.51
20:Y:1353:G:N2	20:Y:1354:G:H1'	2.26	0.51
20:Y:1740:G:O2'	20:Y:1741:G:H5'	2.09	0.51
20:Y:2021:G:OP1	22:Z:257:THR:OG1	2.28	0.51
20:Y:2298:U:H2'	20:Y:2462:G:N2	2.26	0.51
20:Y:2408:G:H2'	20:Y:2408:G:N3	2.24	0.51
20:Y:2410:A:H2'	20:Y:2411:U:C6	2.46	0.51
20:Y:2522:A:H61	20:Y:2542:G:C2'	2.21	0.51
20:Y:2628:U:N3	20:Y:2637:G:C6	2.72	0.51
20:Y:2764:C:O2'	20:Y:2765:A:H5'	2.11	0.51
20:Y:3117:U:C2'	20:Y:3118:U:H5'	2.41	0.51
22:Z:85:ASP:HB3	22:Z:92:ILE:CD1	2.41	0.51
24:b:31:ILE:HD13	24:b:34:MET:HE1	1.92	0.51
28:f:36:LEU:HD11	28:f:122:LEU:HB2	1.91	0.51
29:g:71:ARG:HH11	34:l:71:ARG:NH1	2.08	0.51
30:h:87:PHE:CE2	30:h:93:VAL:HG12	2.46	0.51
32:j:9:ARG:HD2	32:j:17:GLN:CD	2.36	0.51
35:m:72:ASN:HD21	35:m:107:THR:HG22	1.75	0.51
51:4:2394:A:H4'	51:4:2395:U:OP1	2.11	0.51
1:A:523:U:H2'	1:A:524:C:C6	2.45	0.51
1:A:537:G:H2'	1:A:538:G:C8	2.46	0.51
1:A:729:A:H2'	1:A:730:C:C6	2.45	0.51
1:A:929:G:OP1	12:M:108:ARG:HB3	2.10	0.51
1:A:1115:G:N2	1:A:1119:U:H3	2.08	0.51
1:A:1125:G:C2'	1:A:1126:G:H5"	2.40	0.51
1:A:1210:A:H2'	1:A:1211:C:H6	1.73	0.51
1:A:1389:U:H2'	1:A:1390:C:C6	2.46	0.51
1:A:1462:C:H2'	1:A:1463:G:O4'	2.10	0.51
3:D:95:ASN:CG	3:D:99:ARG:HH21	2.18	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:F:76:ASP:CA	5:F:79:LEU:HG	2.34	0.51
6:G:16:PRO:HD3	8:I:66:GLN:CD	2.35	0.51
7:H:7:ILE:HD11	7:H:32:LEU:HD22	1.92	0.51
8:I:26:ILE:HG21	8:I:110:VAL:CG1	2.39	0.51
12:M:15:MET:CG	12:M:34:LEU:HD11	2.34	0.51
12:M:23:TYR:HD2	12:M:70:LEU:HD12	1.75	0.51
12:M:52:GLN:C	12:M:56:LEU:HD12	2.33	0.51
15:P:22:VAL:HG23	15:P:22:VAL:O	2.11	0.51
18:T:56:ARG:NE	18:T:56:ARG:HA	2.25	0.51
19:V:211:ALA:O	19:V:214:THR:HG22	2.11	0.51
20:Y:16:G:H5'	35:m:22:LYS:HZ3	1.73	0.51
20:Y:21:G:H2'	20:Y:22:U:H6	1.72	0.51
20:Y:272:A:N6	20:Y:314:G:C6	2.78	0.51
20:Y:399:G:H3'	20:Y:400:C:C5'	2.40	0.51
20:Y:498:G:H5'	20:Y:499:G:H5"	1.92	0.51
20:Y:739:U:H5"	20:Y:740:A:H8	1.75	0.51
20:Y:1033:A:H5"	21:U:95:G:O2'	2.10	0.51
20:Y:1249:G:C4'	28:f:84:LEU:HD22	2.37	0.51
20:Y:1727:A:O2'	20:Y:1729:A:N1	2.43	0.51
20:Y:1905:G:N2	20:Y:1920:G:C6	2.79	0.51
20:Y:2453:U:H2'	20:Y:2454:G:H8	1.75	0.51
20:Y:2644:C:O5'	20:Y:2644:C:H6	1.94	0.51
20:Y:2711:A:O2'	20:Y:2712:U:H5'	2.10	0.51
20:Y:2750:G:C2'	20:Y:2751:C:H5'	2.40	0.51
20:Y:2913:U:OP1	20:Y:2913:U:H3'	2.11	0.51
20:Y:3013:C:C2'	20:Y:3113:A:H61	2.21	0.51
23:a:88:ASP:O	23:a:92:VAL:HG23	2.10	0.51
25:c:97:THR:HG22	25:c:98:LEU:N	2.25	0.51
25:c:177:LEU:CG	25:c:182:PHE:HD2	2.23	0.51
26:d:87:LYS:HA	26:d:133:SER:HA	1.92	0.51
26:d:97:VAL:HG22	26:d:129:PRO:O	2.10	0.51
31:i:28:SER:O	31:i:29:PHE:CB	2.58	0.51
32:j:51:LEU:HD21	32:j:70:ILE:HG21	1.92	0.51
33:k:70:VAL:CG1	33:k:87:LEU:HD11	2.40	0.51
38:p:44:ILE:O	38:p:47:GLU:HG2	2.10	0.51
43:u:21:LYS:HA	43:u:24:GLU:CG	2.40	0.51
47:y:25:THR:HG22	47:y:27:LYS:CE	2.39	0.51
47:y:36:LEU:HD11	47:y:38:ILE:CG1	2.39	0.51
49:1:17:THR:HG21	49:1:21:LYS:HB2	1.92	0.51
51:4:2330:U:H2'	51:4:2331:U:C5	2.46	0.51
1:A:208:G:H22	16:Q:8:LYS:HZ1	1.58	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:328:U:C2'	1:A:329:A:H5'	2.39	0.51
1:A:404:G:H2'	1:A:405:U:H6	1.76	0.51
1:A:406:G:H2'	1:A:407:A:H8	1.75	0.51
1:A:445:C:H2'	1:A:446:A:C8	2.46	0.51
1:A:1214:G:H2'	1:A:1215:C:H6	1.74	0.51
2:C:134:ARG:HG3	2:C:135:LYS:N	2.26	0.51
2:C:152:GLN:HG2	2:C:167:PHE:HB3	1.93	0.51
3:D:10:ARG:HH11	3:D:33:PRO:CB	2.23	0.51
4:E:135:ALA:HB1	4:E:162:VAL:HG22	1.91	0.51
8:I:53:ARG:HE	8:I:58:TYR:HD1	1.59	0.51
8:I:134:LYS:NZ	8:I:138:LEU:O	2.30	0.51
14:O:50:HIS:HA	14:O:53:ARG:HH12	1.74	0.51
18:T:61:ALA:HB1	18:T:66:VAL:CG2	2.40	0.51
19:V:170:HIS:HA	19:V:173:VAL:HG22	1.93	0.51
20:Y:81:A:OP1	39:q:4:HIS:NE2	2.43	0.51
20:Y:159:A:H1'	20:Y:2431:C:O2'	2.10	0.51
20:Y:390:G:N2	20:Y:411:G:H21	2.08	0.51
20:Y:901:C:C2'	20:Y:902:C:H5'	2.40	0.51
20:Y:972:A:H8	20:Y:972:A:OP2	1.93	0.51
20:Y:1022:C:O2'	20:Y:1023:C:H5'	2.11	0.51
20:Y:1053:G:O2'	20:Y:1054:C:H5'	2.10	0.51
20:Y:1074:A:C6	20:Y:2683:A:O4'	2.63	0.51
20:Y:1198:C:H2'	20:Y:1199:U:C6	2.44	0.51
20:Y:1658:G:O2'	20:Y:1738:G:H4'	2.11	0.51
20:Y:1707:G:O2'	20:Y:1708:A:H5'	2.11	0.51
20:Y:2022:U:H4'	22:Z:250:TRP:CH2	2.44	0.51
20:Y:2056:G:C5	20:Y:2057:G:C8	2.98	0.51
20:Y:2175:U:OP1	29:g:54:ARG:NH1	2.40	0.51
20:Y:2301:C:H1'	20:Y:2658:A:N3	2.25	0.51
20:Y:2629:G:H1'	20:Y:2637:G:C2	2.45	0.51
20:Y:2638:G:C2'	20:Y:2639:G:H5"	2.40	0.51
20:Y:2750:G:O2'	20:Y:2751:C:H5'	2.10	0.51
22:Z:3:ILE:C	22:Z:4:ARG:HD3	2.35	0.51
23:a:130:HIS:CG	23:a:165:ARG:HB3	2.45	0.51
25:c:84:PHE:HB2	25:c:86:LEU:HD23	1.92	0.51
26:d:95:TYR:HD2	26:d:108:LEU:HA	1.75	0.51
28:f:57:ILE:HD11	28:f:130:HIS:CD2	2.46	0.51
33:k:23:ALA:HA	33:k:26:ARG:CG	2.40	0.51
33:k:59:THR:C	33:k:60:LEU:HD22	2.36	0.51
34:l:52:GLY:H	34:l:56:GLU:N	2.07	0.51
39:q:31:ASN:O	39:q:68:VAL:HG12	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:s:53:ARG:CZ	41:s:57:ASP:HA	2.40	0.51
50:2:11:CYS:SG	50:2:32:HIS:HE1	2.28	0.51
1:A:125:U:O4'	16:Q:20:ARG:NH2	2.44	0.51
1:A:357:G:H2'	1:A:358:U:H6	1.76	0.51
1:A:366:A:H1'	1:A:395:C:O2	2.10	0.51
1:A:375:U:H2'	1:A:376:G:C8	2.43	0.51
1:A:448:A:H2'	1:A:448:A:N3	2.25	0.51
1:A:1011:U:H2'	1:A:1011:U:O2	2.10	0.51
1:A:1239:G:H2'	1:A:1240:C:H6	1.75	0.51
1:A:1308:C:H2'	1:A:1309:C:H6	1.76	0.51
1:A:1339:A:H2	1:A:1348:G:H1	1.57	0.51
1:A:1384:G:H2'	1:A:1385:C:C6	2.45	0.51
2:C:151:VAL:CG1	2:C:200:VAL:HG22	2.27	0.51
3:D:73:GLU:O	3:D:77:GLN:NE2	2.44	0.51
3:D:192:GLU:OE2	3:D:193:GLN:NE2	2.43	0.51
6:G:23:VAL:HA	6:G:26:LEU:HG	1.92	0.51
8:I:69:LYS:O	8:I:73:VAL:HG22	2.10	0.51
8:I:99:LEU:O	8:I:103:ILE:CD1	2.51	0.51
16:Q:43:ARG:CD	16:Q:54:ARG:HG2	2.38	0.51
19:V:6:MET:O	19:V:10:LEU:HD13	2.09	0.51
20:Y:986:G:N3	20:Y:986:G:H2'	2.26	0.51
20:Y:1004:C:H1'	20:Y:1005:A:P	2.50	0.51
20:Y:1008:G:C1'	20:Y:1010:U:H3'	2.40	0.51
20:Y:1234:U:H2'	20:Y:1234:U:O2	2.10	0.51
20:Y:1457:A:C2	20:Y:1460:C:C5	2.99	0.51
20:Y:1959:G:O2'	20:Y:1960:U:H5'	2.11	0.51
20:Y:2150:U:H2'	20:Y:2151:A:C8	2.45	0.51
20:Y:2173:G:C4	20:Y:2174:G:N7	2.79	0.51
20:Y:2204:G:O2'	20:Y:2206:C:OP2	2.26	0.51
20:Y:2434:A:H2'	20:Y:2435:U:C6	2.45	0.51
20:Y:2493:A:C2'	20:Y:2494:U:H5'	2.41	0.51
21:U:104:G:H2'	21:U:105:A:O4'	2.11	0.51
22:Z:65:ILE:HD11	22:Z:67:PHE:CE1	2.46	0.51
22:Z:247:VAL:HA	22:Z:253:PRO:HA	1.93	0.51
24:b:176:HIS:HD2	24:b:178:ILE:HG12	1.74	0.51
32:j:70:ILE:HD11	32:j:75:VAL:HG13	1.92	0.51
36:n:39:VAL:HG11	36:n:42:VAL:HG23	1.92	0.51
38:p:10:ILE:HD12	38:p:10:ILE:N	2.25	0.51
40:r:86:HIS:CA	40:r:93:GLN:HE22	2.17	0.51
43:u:21:LYS:O	43:u:24:GLU:HG3	2.10	0.51
50:2:4:ASN:ND2	50:2:6:SER:O	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:4:2367:G:H4'	51:4:2368:C:H5	1.74	0.51
1:A:783:G:H2'	1:A:784:U:C6	2.45	0.51
1:A:797:C:N4	1:A:799:G:N3	2.59	0.51
1:A:1191:C:H2'	1:A:1192:U:C6	2.46	0.51
3:D:65:LYS:HZ3	3:D:68:ARG:HE	1.59	0.51
6:G:40:GLU:HA	6:G:43:VAL:CG1	2.40	0.51
6:G:57:ASP:OD1	6:G:59:VAL:HG12	2.10	0.51
6:G:101:LEU:O	6:G:105:VAL:HG23	2.10	0.51
6:G:103:TRP:O	6:G:104:LEU:C	2.54	0.51
8:I:98:ALA:HA	8:I:101:LEU:CD2	2.40	0.51
11:L:20:LYS:NZ	11:L:21:THR:H	2.08	0.51
14:O:14:GLN:OE1	14:O:14:GLN:N	2.42	0.51
18:T:11:ILE:HB	18:T:12:ARG:CZ	2.40	0.51
18:T:35:PHE:CE1	18:T:39:VAL:HG11	2.46	0.51
19:V:33:THR:HG22	19:V:34:ASP:N	2.26	0.51
20:Y:181:A:H2'	20:Y:182:C:C6	2.45	0.51
20:Y:271:A:C3'	20:Y:272:A:C2	2.93	0.51
20:Y:356:G:H4'	20:Y:358:G:N3	2.26	0.51
20:Y:404:A:OP1	24:b:171:ASN:HB2	2.11	0.51
20:Y:613:A:H5"	20:Y:614:C:OP1	2.11	0.51
20:Y:673:C:C2	20:Y:674:U:C5	2.99	0.51
20:Y:780:U:O2	49:1:60:LYS:NZ	2.43	0.51
20:Y:810:G:C4	20:Y:883:G:N1	2.79	0.51
20:Y:916:G:H3'	20:Y:917:A:H5'	1.93	0.51
20:Y:1662:C:H2'	20:Y:1663:C:C6	2.45	0.51
20:Y:2105:G:H2'	20:Y:2106:A:C8	2.46	0.51
20:Y:2234:G:H5"	37:o:49:ALA:HB2	1.93	0.51
20:Y:2423:C:OP1	42:t:36:VAL:HA	2.11	0.51
20:Y:2467:U:H2'	20:Y:2468:U:H6	1.75	0.51
20:Y:2948:C:O2'	20:Y:2949:A:H5'	2.11	0.51
20:Y:3016:C:C2'	20:Y:3017:C:H5'	2.41	0.51
24:b:54:THR:HG22	24:b:92:GLY:HA3	1.91	0.51
24:b:119:ALA:HA	24:b:124:ILE:HD13	1.91	0.51
25:c:40:LYS:HA	25:c:103:MET:HE1	1.92	0.51
30:h:47:PRO:HG2	30:h:50:PHE:CD1	2.46	0.51
31:i:12:GLN:HG3	31:i:73:PRO:HD2	1.92	0.51
33:k:18:ARG:HA	33:k:21:ARG:HH21	1.76	0.51
33:k:22:HIS:NE2	33:k:103:ASP:OD2	2.43	0.51
38:p:8:ARG:HB2	38:p:49:ILE:HD11	1.91	0.51
38:p:48:LYS:HZ2	38:p:49:ILE:HG12	1.74	0.51
38:p:70:ARG:NE	38:p:70:ARG:CA	2.72	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:r:47:LEU:HD23	40:r:47:LEU:N	2.25	0.51
40:r:131:ILE:HD11	40:r:133:ILE:CD1	2.41	0.51
42:t:39:VAL:HG22	42:t:46:LYS:HD2	1.92	0.51
43:u:10:LEU:CD2	43:u:13:LEU:HD12	2.31	0.51
44:v:79:ILE:HD11	44:v:81:PHE:HE1	1.74	0.51
46:x:16:ARG:HH11	46:x:16:ARG:HG3	1.75	0.51
51:4:2370:A:H5"	51:4:2371:G:OP2	2.11	0.51
1:A:32:G:N2	1:A:296:U:H5'	2.19	0.51
1:A:100:G:H2'	1:A:101:G:O4'	2.11	0.51
1:A:523:U:H5'	3:D:14:ARG:HH21	1.74	0.51
1:A:1038:G:OP1	2:C:199:LYS:HE2	2.11	0.51
1:A:1420:C:C5'	18:T:29:ARG:HH12	2.24	0.51
3:D:67:PHE:HA	3:D:70:TYR:CD2	2.43	0.51
3:D:98:TYR:CE1	3:D:105:THR:HA	2.45	0.51
5:F:48:LEU:HD21	5:F:57:GLU:CA	2.41	0.51
9:J:6:ILE:HD11	9:J:100:ILE:HG22	1.92	0.51
9:J:52:ILE:HG12	13:N:41:ARG:CZ	2.41	0.51
12:M:91:ARG:HB3	12:M:98:VAL:HG22	1.90	0.51
15:P:51:ILE:HD12	15:P:52:ASP:N	2.25	0.51
19:V:141:LYS:HA	19:V:144:LEU:HD23	1.93	0.51
20:Y:698:G:H2'	20:Y:699:U:C1'	2.41	0.51
20:Y:905:U:O2	20:Y:905:U:C2'	2.58	0.51
20:Y:956:G:H2'	20:Y:957:C:H6	1.75	0.51
20:Y:1092:G:C5'	36:n:79:LYS:HZ3	2.19	0.51
20:Y:1817:C:H5'	38:p:38:ASN:OD1	2.10	0.51
20:Y:1950:G:H2'	20:Y:1951:G:C8	2.45	0.51
20:Y:2044:U:OP2	22:Z:222:ARG:NE	2.42	0.51
20:Y:2761:U:C2	20:Y:2762:C:C5	2.99	0.51
20:Y:2773:G:H2'	20:Y:2774:G:C8	2.45	0.51
20:Y:2861:U:H5"	23:a:85:ARG:HH12	1.76	0.51
20:Y:2915:C:H4'	20:Y:3092:G:HO2'	1.74	0.51
23:a:17:PHE:CD2	34:l:74:PRO:HB3	2.45	0.51
24:b:158:ILE:C	24:b:200:ALA:HB2	2.36	0.51
25:c:29:TYR:CE1	25:c:35:ILE:HG22	2.46	0.51
26:d:76:LEU:O	26:d:80:VAL:HG23	2.11	0.51
34:l:49:ARG:HH11	34:l:50:GLN:CA	2.22	0.51
39:q:34:LEU:HD23	39:q:34:LEU:C	2.35	0.51
45:w:5:LYS:HG2	45:w:59:VAL:HG23	1.93	0.51
1:A:63:A:H2'	1:A:63:A:N3	2.25	0.51
1:A:322:C:C5'	18:T:18:ARG:HH21	2.22	0.51
1:A:546:G:OP1	1:A:546:G:H8	1.94	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:930:C:H3'	12:M:106:ASN:ND2	2.23	0.51
5:F:43:TRP:HE1	5:F:62:VAL:HG12	1.76	0.51
6:G:40:GLU:HG3	6:G:44:TYR:CE1	2.46	0.51
8:I:68:ILE:O	8:I:71:PRO:HD2	2.10	0.51
17:R:47:LYS:HD3	17:R:47:LYS:N	2.25	0.51
20:Y:79:G:O2'	20:Y:80:G:H5'	2.11	0.51
20:Y:98:U:O2'	20:Y:99:G:H5'	2.10	0.51
20:Y:151:A:H2'	20:Y:152:G:C8	2.46	0.51
20:Y:270:U:H3'	20:Y:271:A:C8	2.45	0.51
20:Y:315:U:C6	20:Y:457:C:H1'	2.46	0.51
20:Y:483:G:C2	20:Y:484:C:C5	2.98	0.51
20:Y:715:A:H5'	20:Y:716:G:OP2	2.10	0.51
20:Y:1022:C:OP1	31:i:24:GLY:N	2.33	0.51
20:Y:1046:C:O2'	20:Y:1047:A:OP2	2.28	0.51
20:Y:1231:U:H2'	20:Y:1232:G:H8	1.75	0.51
20:Y:1469:A:H2'	20:Y:1470:G:O4'	2.10	0.51
20:Y:1518:A:HO2'	20:Y:1692:G:HO2'	1.58	0.51
20:Y:1549:G:OP1	20:Y:1550:G:N1	2.44	0.51
20:Y:1901:C:H2'	20:Y:1902:C:H6	1.76	0.51
20:Y:2224:C:H2'	20:Y:2225:A:C8	2.45	0.51
20:Y:2317:G:O6	20:Y:2418:U:O4	2.29	0.51
20:Y:2486:U:O2'	20:Y:2487:C:H5'	2.11	0.51
20:Y:2558:C:H1'	33:k:27:LYS:CE	2.41	0.51
20:Y:2931:G:H2'	20:Y:2932:G:H8	1.76	0.51
21:U:20:G:O2'	21:U:21:C:H5'	2.10	0.51
23:a:14:THR:CG2	23:a:15:GLN:H	2.22	0.51
24:b:183:LEU:HD12	24:b:184:ASN:H	1.75	0.51
29:g:1:MET:HE2	29:g:67:LYS:HB2	1.91	0.51
30:h:67:PHE:HD2	30:h:69:ASN:N	2.09	0.51
31:i:83:MET:SD	31:i:83:MET:C	2.94	0.51
36:n:5:ALA:O	36:n:6:ILE:HD13	2.10	0.51
36:n:78:PHE:CE1	36:n:80:ASN:HA	2.44	0.51
42:t:15:GLY:O	42:t:27:ARG:HG3	2.10	0.51
46:x:29:THR:OG1	46:x:36:GLN:HB3	2.11	0.51
49:1:32:LEU:HD12	49:1:32:LEU:N	2.26	0.51
1:A:350:G:H5'	1:A:351:G:P	2.49	0.51
1:A:748:A:N3	1:A:1496:U:O2'	2.44	0.51
1:A:808:A:C2	19:V:25:PRO:HG2	2.46	0.51
1:A:935:G:H2'	1:A:936:G:O4'	2.11	0.51
1:A:1096:U:H2'	1:A:1097:G:C8	2.46	0.51
6:G:54:THR:HG21	6:G:125:LEU:HD21	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:G:94:ASP:OD1	6:G:94:ASP:C	2.54	0.51
7:H:50:ARG:HB3	7:H:52:GLU:OE2	2.11	0.51
11:L:31:ARG:HG3	11:L:58:THR:CG2	2.41	0.51
12:M:9:LEU:HD23	12:M:10:PRO:HD2	1.93	0.51
19:V:111:LEU:HD13	19:V:151:ILE:HG22	1.93	0.51
20:Y:228:A:H3'	20:Y:229:U:C5'	2.41	0.51
20:Y:637:G:O2'	20:Y:638:U:H5'	2.11	0.51
20:Y:644:G:H2'	20:Y:645:G:H5'	1.93	0.51
20:Y:664:A:H2'	20:Y:664:A:N3	2.25	0.51
20:Y:672:C:H2'	20:Y:673:C:H6	1.75	0.51
20:Y:710:G:H2'	20:Y:711:G:C8	2.45	0.51
20:Y:759:G:O6	41:s:33:ALA:N	2.39	0.51
20:Y:812:C:H2'	20:Y:813:C:C6	2.46	0.51
20:Y:893:G:H5'	22:Z:48:ARG:HH11	1.76	0.51
20:Y:895:G:H5"	20:Y:896:A:P	2.51	0.51
20:Y:947:U:O2'	20:Y:948:G:O5'	2.28	0.51
20:Y:1092:G:N9	20:Y:1301:G:N2	2.58	0.51
20:Y:1199:U:O2'	27:e:120:ALA:N	2.44	0.51
20:Y:2009:G:OP2	22:Z:206:TRP:HZ3	1.95	0.51
20:Y:2163:U:H3'	20:Y:2164:U:C5'	2.39	0.51
20:Y:2260:C:H2'	20:Y:2260:C:O2	2.11	0.51
20:Y:2279:C:H5'	20:Y:2280:G:C5'	2.41	0.51
20:Y:2309:U:O2'	20:Y:2310:G:H5'	2.11	0.51
20:Y:2316:G:H1'	20:Y:2421:A:N1	2.25	0.51
20:Y:2424:C:H2'	20:Y:2425:U:O4'	2.11	0.51
20:Y:2734:C:C4	20:Y:2735:U:C4	2.99	0.51
20:Y:2740:G:C2'	20:Y:2741:C:H5'	2.41	0.51
25:c:20:ARG:HH21	25:c:32:VAL:HG23	1.76	0.51
25:c:29:TYR:HE1	25:c:35:ILE:HA	1.75	0.51
27:e:40:PHE:N	27:e:42:LYS:HZ1	2.09	0.51
29:g:38:VAL:HG22	29:g:61:VAL:HG12	1.92	0.51
30:h:46:VAL:HG23	30:h:47:PRO:HD2	1.92	0.51
30:h:118:LEU:HG	30:h:140:ALA:HB2	1.93	0.51
32:j:38:GLU:OE2	32:j:39:PRO:HG3	2.11	0.51
35:m:31:LEU:HD12	35:m:34:LYS:CE	2.36	0.51
37:o:50:ALA:C	37:o:53:PRO:HD2	2.36	0.51
38:p:29:TYR:OH	38:p:93:ILE:HG23	2.11	0.51
43:u:13:LEU:HB3	43:u:17:GLU:HG2	1.92	0.51
48:z:16:ALA:O	48:z:20:GLY:HA3	2.10	0.51
48:z:23:LEU:HD23	48:z:23:LEU:C	2.36	0.51
1:A:108:G:H21	1:A:354:G:C5'	2.15	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:190:U:O4	1:A:197:G:O6	2.29	0.50
1:A:238:G:H5"	1:A:239:G:OP1	2.10	0.50
1:A:334:C:C2	1:A:335:C:C5	2.99	0.50
1:A:463:C:H5"	1:A:464:G:OP2	2.10	0.50
1:A:550:G:O2'	1:A:799:G:H2'	2.11	0.50
1:A:557:G:H2'	1:A:558:C:H6	1.76	0.50
1:A:809:G:C2'	1:A:810:G:H5'	2.41	0.50
1:A:847:A:O2'	1:A:848:C:O4'	2.27	0.50
1:A:873:U:H2'	1:A:874:A:C8	2.42	0.50
1:A:972:U:H2'	1:A:973:U:N1	2.26	0.50
1:A:1369:G:O2'	1:A:1370:G:H5'	2.11	0.50
1:A:1439:G:H2'	1:A:1440:A:C1'	2.40	0.50
1:A:1467:A:H8	1:A:1468:U:C6	2.29	0.50
1:A:1497:A:O2'	1:A:1498:C:H5'	2.11	0.50
2:C:199:LYS:HB2	2:C:201:TRP:CZ3	2.46	0.50
4:E:129:GLY:HA2	4:E:146:HIS:O	2.10	0.50
7:H:29:HIS:CE1	7:H:51:THR:HB	2.45	0.50
8:I:134:LYS:HD3	8:I:134:LYS:C	2.36	0.50
10:K:41:VAL:CG1	10:K:75:ALA:HB1	2.41	0.50
10:K:104:THR:HA	10:K:107:ARG:HH21	1.76	0.50
15:P:37:ILE:CD1	15:P:55:ARG:HB2	2.41	0.50
17:R:42:ILE:HD11	17:R:46:GLY:O	2.10	0.50
19:V:95:ARG:HD3	19:V:96:TRP:O	2.11	0.50
19:V:151:ILE:HB	19:V:152:ARG:NH2	2.25	0.50
20:Y:144:U:H2'	20:Y:145:G:C8	2.45	0.50
20:Y:269:C:H1'	20:Y:360:G:C1'	2.40	0.50
20:Y:581:G:O2'	20:Y:582:G:H5'	2.11	0.50
20:Y:603:C:O2'	20:Y:604:C:H5'	2.11	0.50
20:Y:626:G:H2'	20:Y:627:C:H6	1.76	0.50
20:Y:633:A:H2'	20:Y:634:C:O4'	2.11	0.50
20:Y:658:U:H5'	30:h:31:LYS:HE3	1.93	0.50
20:Y:973:G:C5	20:Y:2492:A:H2	2.29	0.50
20:Y:1180:G:OP1	20:Y:1188:A:H4'	2.12	0.50
20:Y:1202:A:P	44:v:50:THR:HG1	2.34	0.50
20:Y:1294:U:H2'	20:Y:1295:U:H6	1.75	0.50
20:Y:1746:G:O2'	20:Y:1747:C:H5'	2.11	0.50
20:Y:1827:A:H1'	20:Y:1834:A:C1'	2.41	0.50
20:Y:1875:U:H2'	20:Y:1876:A:C8	2.46	0.50
20:Y:2067:G:H2'	20:Y:2068:U:H6	1.75	0.50
20:Y:2530:C:N4	25:c:45:MET:HE1	2.21	0.50
20:Y:2579:C:H2'	20:Y:2580:G:H8	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:2650:A:H4'	20:Y:2651:C:OP2	2.11	0.50
20:Y:2736:C:H2'	20:Y:2737:G:O4'	2.10	0.50
20:Y:2746:U:O2'	20:Y:2871:U:H5'	2.11	0.50
20:Y:3016:C:O2'	20:Y:3017:C:H5'	2.12	0.50
20:Y:3106:C:N4	46:x:30:VAL:HG23	2.26	0.50
21:U:56:C:C3'	25:c:31:ASN:HD21	2.24	0.50
21:U:65:C:H2'	21:U:66:C:C6	2.47	0.50
22:Z:49:ILE:H	22:Z:49:ILE:HD12	1.76	0.50
23:a:140:GLY:O	23:a:142:GLN:NE2	2.44	0.50
30:h:57:ILE:CG2	49:1:57:ARG:HH22	2.20	0.50
30:h:99:VAL:HG11	30:h:106:LYS:CG	2.41	0.50
32:j:20:LEU:HD22	32:j:21:LEU:HD22	1.92	0.50
40:r:82:ALA:O	40:r:83:LEU:HD23	2.11	0.50
46:x:45:LYS:NZ	46:x:48:ARG:HH12	2.08	0.50
1:A:136:G:O6	16:Q:10:THR:HG23	2.11	0.50
1:A:539:A:OP2	4:E:151:LYS:NZ	2.40	0.50
7:H:67:GLY:HA3	7:H:71:GLU:CB	2.25	0.50
15:P:14:ARG:HH11	15:P:14:ARG:HG3	1.77	0.50
15:P:71:LEU:HG	15:P:75:LYS:HE3	1.92	0.50
17:R:20:CYS:HA	17:R:56:ASN:HA	1.93	0.50
19:V:95:ARG:HH11	19:V:97:LEU:HD23	1.76	0.50
20:Y:138:A:H2'	20:Y:139:U:O4'	2.11	0.50
20:Y:498:G:H5'	20:Y:499:G:C4'	2.41	0.50
20:Y:716:G:H2'	20:Y:717:C:C6	2.45	0.50
20:Y:717:C:C2	20:Y:718:C:C5	2.99	0.50
20:Y:792:G:O2'	20:Y:2294:A:H5'	2.11	0.50
20:Y:1192:G:C2	20:Y:1193:C:C5	3.00	0.50
20:Y:1460:C:O2'	20:Y:1461:G:H5'	2.11	0.50
20:Y:1871:G:C6	32:j:6:LYS:HE2	2.47	0.50
20:Y:1922:G:C2	20:Y:1923:G:C5	2.99	0.50
20:Y:2057:G:O2'	20:Y:2058:U:H5'	2.11	0.50
20:Y:2252:U:H2'	20:Y:2253:A:C8	2.45	0.50
20:Y:2973:A:O5'	20:Y:2974:A:H2'	2.11	0.50
22:Z:206:TRP:HA	22:Z:211:ARG:HH11	1.75	0.50
23:a:102:THR:O	23:a:105:ILE:HG22	2.11	0.50
23:a:108:ASP:N	23:a:108:ASP:OD1	2.44	0.50
25:c:81:ILE:HG22	25:c:84:PHE:H	1.76	0.50
25:c:121:PHE:C	25:c:122:ARG:HD3	2.36	0.50
25:c:167:ALA:HB1	25:c:172:GLU:CG	2.41	0.50
26:d:88:MET:CE	26:d:146:SER:HA	2.29	0.50
26:d:150:ARG:HA	26:d:163:VAL:HG11	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:e:104:TRP:C	27:e:107:VAL:HG22	2.35	0.50
34:l:48:ARG:HD3	34:l:95:LYS:HG2	1.93	0.50
35:m:84:LYS:O	35:m:87:GLY:N	2.40	0.50
37:o:13:LYS:HB3	37:o:111:THR:HA	1.93	0.50
37:o:32:ARG:NH1	37:o:81:VAL:O	2.40	0.50
45:w:36:VAL:O	45:w:37:ARG:HD3	2.11	0.50
1:A:655:A:H1'	10:K:127:HIS:CD2	2.46	0.50
1:A:927:G:N2	1:A:1316:G:HO2'	1.92	0.50
1:A:1064:G:H3'	1:A:1065:U:H6	1.75	0.50
1:A:1113:A:H2'	1:A:1114:C:C6	2.46	0.50
1:A:1291:G:H5'	12:M:78:ILE:CD1	2.41	0.50
1:A:1337:A:H2'	1:A:1338:G:H8	1.75	0.50
1:A:1447:C:H2'	1:A:1448:G:C8	2.46	0.50
1:A:1469:U:O2'	1:A:1470:G:H5'	2.10	0.50
1:A:1490:U:O2'	1:A:1491:A:H5'	2.12	0.50
3:D:60:TYR:CE2	3:D:89:LEU:HD13	2.46	0.50
3:D:98:TYR:HA	3:D:103:ALA:HB3	1.93	0.50
3:D:110:ARG:HA	3:D:113:VAL:HG22	1.94	0.50
6:G:49:GLN:OE1	6:G:118:GLU:HA	2.12	0.50
7:H:36:ILE:HG13	7:H:37:ALA:N	2.27	0.50
20:Y:72:G:H2'	20:Y:72:G:N3	2.25	0.50
20:Y:271:A:P	20:Y:271:A:H8	2.35	0.50
20:Y:552:U:O4	20:Y:903:A:C5	2.65	0.50
20:Y:556:G:H2'	20:Y:557:G:H5'	1.93	0.50
20:Y:732:G:C5	20:Y:733:U:C4	3.00	0.50
20:Y:806:C:O2'	20:Y:807:C:H5'	2.11	0.50
20:Y:822:G:O6	20:Y:840:G:C2	2.65	0.50
20:Y:993:G:N1	20:Y:1014:G:N7	2.60	0.50
20:Y:993:G:H22	20:Y:1014:G:H3'	1.75	0.50
20:Y:1058:A:HO2'	20:Y:1059:G:C4'	2.24	0.50
20:Y:1243:G:H5'	50:2:37:GLY:HA2	1.94	0.50
20:Y:1343:G:H2'	20:Y:1345:G:C8	2.46	0.50
20:Y:1384:G:H2'	20:Y:1385:C:C6	2.47	0.50
20:Y:1394:A:H2'	20:Y:1395:A:C8	2.46	0.50
20:Y:1938:G:N2	20:Y:1956:A:H62	2.07	0.50
20:Y:2074:G:C2'	20:Y:2109:A:H61	2.23	0.50
20:Y:2235:C:C2'	20:Y:2236:G:H5'	2.41	0.50
20:Y:2901:G:H2'	20:Y:2902:A:H8	1.76	0.50
20:Y:2906:U:O2	23:a:25:PRO:HB3	2.11	0.50
22:Z:82:ILE:O	22:Z:82:ILE:HG23	2.12	0.50
23:a:6:ILE:CG2	23:a:34:ASN:HD21	2.23	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:c:99:ARG:HA	25:c:103:MET:HG2	1.93	0.50
28:f:19:ASP:OD2	28:f:19:ASP:C	2.55	0.50
28:f:142:ILE:H	28:f:142:ILE:HD12	1.77	0.50
29:g:2:ILE:HB	29:g:33:ALA:O	2.11	0.50
29:g:27:GLY:HA3	29:g:30:ARG:HB2	1.94	0.50
32:j:114:GLU:HG3	32:j:115:LEU:N	2.25	0.50
34:l:96:LEU:HD13	34:l:109:ILE:CD1	2.42	0.50
35:m:13:LYS:O	35:m:16:THR:HG22	2.12	0.50
41:s:80:ILE:N	41:s:80:ILE:HD12	2.27	0.50
51:4:2383:U:H5"	51:4:2384:C:O5'	2.10	0.50
1:A:105:A:H3'	1:A:106:C:H5'	1.93	0.50
1:A:168:A:H2'	1:A:169:A:N9	2.25	0.50
1:A:404:G:P	3:D:110:ARG:HH12	2.35	0.50
1:A:701:G:H5'	1:A:702:G:C4	2.47	0.50
1:A:955:G:OP1	9:J:59:LYS:HE2	2.12	0.50
1:A:1058:U:H6	1:A:1058:U:O5'	1.95	0.50
1:A:1125:G:H2'	1:A:1126:G:H5"	1.93	0.50
1:A:1174:G:H2'	1:A:1175:U:H6	1.77	0.50
3:D:69:ARG:HH12	3:D:73:GLU:HB2	1.75	0.50
4:E:81:VAL:HG22	4:E:82:PRO:HD3	1.92	0.50
4:E:113:GLU:HG2	4:E:118:VAL:HG13	1.93	0.50
7:H:28:PRO:O	7:H:33:LYS:NZ	2.44	0.50
7:H:29:HIS:HA	7:H:60:LEU:HD23	1.93	0.50
8:I:62:LYS:HD3	8:I:62:LYS:C	2.37	0.50
9:J:46:LYS:HD3	9:J:68:ARG:HD3	1.93	0.50
17:R:48:ILE:H	17:R:48:ILE:HD12	1.77	0.50
18:T:67:ILE:HG13	18:T:71:GLN:CD	2.37	0.50
20:Y:206:A:O2'	20:Y:207:C:H5'	2.11	0.50
20:Y:548:A:H2'	20:Y:549:C:H5'	1.94	0.50
20:Y:660:U:H5'	20:Y:1062:A:C6	2.45	0.50
20:Y:750:C:H2'	20:Y:751:A:C8	2.46	0.50
20:Y:948:G:H1'	30:h:51:GLU:OE1	2.11	0.50
20:Y:1178:U:H4'	20:Y:1179:U:C3'	2.24	0.50
20:Y:1195:A:N6	20:Y:1206:A:H2'	2.27	0.50
20:Y:1284:A:H2'	20:Y:1285:G:C8	2.45	0.50
20:Y:1602:U:O2'	20:Y:1603:G:O5'	2.28	0.50
20:Y:1636:A:N6	20:Y:1803:A:H2	2.10	0.50
20:Y:1636:A:H2	20:Y:1805:G:H1'	1.75	0.50
20:Y:1902:C:H2'	20:Y:1903:C:C6	2.46	0.50
20:Y:2206:C:H2'	20:Y:2206:C:O2	2.11	0.50
20:Y:2860:U:O2'	20:Y:2861:U:H5'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:b:137:SER:O	24:b:140:SER:OG	2.29	0.50
25:c:12:LYS:HD2	25:c:104:TRP:CH2	2.43	0.50
25:c:64:LEU:HA	25:c:67:ILE:HG22	1.94	0.50
29:g:70:ARG:HA	29:g:76:TYR:CD1	2.46	0.50
31:i:2:LEU:N	31:i:2:LEU:HD23	2.26	0.50
39:q:86:ARG:NE	39:q:97:ILE:HG12	2.26	0.50
40:r:86:HIS:N	40:r:93:GLN:OE1	2.45	0.50
43:u:10:LEU:HD12	43:u:56:ARG:CZ	2.41	0.50
43:u:26:LYS:HZ3	43:u:54:ILE:HD12	1.77	0.50
43:u:36:MET:HE1	43:u:44:ASN:CA	2.38	0.50
44:v:122:LYS:O	44:v:126:LEU:HG	2.12	0.50
47:y:23:TYR:CD1	47:y:40:LYS:HE2	2.46	0.50
1:A:225:G:H5'	16:Q:11:PRO:CB	2.26	0.50
1:A:237:C:H3'	1:A:238:G:C8	2.46	0.50
1:A:254:G:H5"	16:Q:83:SER:OG	2.11	0.50
1:A:414:A:C2	1:A:415:C:H1'	2.47	0.50
1:A:452:A:C5	15:P:76:ILE:HG23	2.47	0.50
1:A:532:U:H5'	11:L:83:ARG:HH21	1.75	0.50
1:A:549:C:H1'	1:A:554:A:C8	2.46	0.50
1:A:567:G:N2	1:A:733:A:H1'	2.26	0.50
1:A:955:G:C1'	9:J:57:LYS:NZ	2.75	0.50
1:A:1058:U:H1'	1:A:1059:G:O5'	2.12	0.50
3:D:45:GLU:HA	3:D:48:GLN:CD	2.35	0.50
3:D:162:ILE:HG21	3:D:167:GLN:HA	1.92	0.50
4:E:121:LEU:HA	4:E:149:LEU:O	2.12	0.50
4:E:137:ARG:O	4:E:141:GLU:HG2	2.12	0.50
6:G:40:GLU:O	6:G:43:VAL:HG12	2.11	0.50
6:G:103:TRP:HE3	6:G:106:ASN:HD21	1.60	0.50
8:I:69:LYS:NZ	8:I:69:LYS:O	2.44	0.50
11:L:22:ALA:O	11:L:25:LYS:HD3	2.11	0.50
15:P:23:ALA:HA	15:P:34:ILE:HD13	1.94	0.50
19:V:110:ARG:O	19:V:110:ARG:HD2	2.11	0.50
20:Y:88:A:H4'	20:Y:89:A:C1'	2.41	0.50
20:Y:150:C:H2'	20:Y:151:A:H8	1.77	0.50
20:Y:278:A:H2'	20:Y:279:U:C1'	2.40	0.50
20:Y:643:G:O2'	20:Y:644:G:OP1	2.22	0.50
20:Y:1008:G:H1'	20:Y:1010:U:H3'	1.93	0.50
20:Y:1074:A:H8	20:Y:1074:A:P	2.35	0.50
20:Y:1231:U:HO2'	20:Y:1232:G:P	2.26	0.50
20:Y:1268:C:O2'	20:Y:1269:C:O4'	2.25	0.50
20:Y:1281:G:HO2'	20:Y:1282:G:H5'	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:1339:G:O2'	20:Y:1340:A:H5'	2.12	0.50
20:Y:1408:C:C2	20:Y:1409:C:C6	3.00	0.50
20:Y:1703:G:N2	20:Y:1727:A:H1'	2.26	0.50
20:Y:2006:A:C4	20:Y:2007:C:C6	3.00	0.50
20:Y:2474:G:N7	31:i:83:MET:HE1	2.25	0.50
20:Y:2661:G:C2'	20:Y:2662:U:O4'	2.59	0.50
20:Y:2866:A:C5'	28:f:80:TYR:CE2	2.89	0.50
23:a:40:ARG:HA	23:a:40:ARG:NE	2.26	0.50
23:a:96:GLU:OE2	23:a:97:VAL:HG12	2.11	0.50
25:c:84:PHE:HB3	25:c:86:LEU:HD23	1.94	0.50
26:d:106:PHE:HB2	26:d:114:VAL:CG1	2.39	0.50
27:e:78:ALA:HB1	27:e:137:MET:CE	2.41	0.50
31:i:34:ILE:HD11	31:i:118:LEU:CD2	2.40	0.50
34:l:59:THR:OG1	34:l:60:VAL:N	2.44	0.50
34:l:99:LEU:CD1	34:l:109:ILE:HD11	2.41	0.50
36:n:102:ILE:HD12	36:n:102:ILE:N	2.26	0.50
38:p:52:VAL:HB	38:p:91:LYS:HE2	1.94	0.50
39:q:26:ALA:O	39:q:28:PRO:HD3	2.12	0.50
40:r:31:GLY:HA3	40:r:52:ARG:HH22	1.75	0.50
43:u:18:LEU:HD11	43:u:19:LYS:HZ3	1.77	0.50
1:A:40:C:H4'	11:L:114:ARG:HH21	1.77	0.50
1:A:235:C:O2	16:Q:21:LYS:NZ	2.45	0.50
1:A:575:G:H2'	1:A:621:U:O4	2.12	0.50
1:A:645:G:H1'	1:A:713:G:H1'	1.92	0.50
1:A:681:C:H5"	1:A:682:A:O5'	2.11	0.50
1:A:686:A:H4'	10:K:33:LYS:HD3	1.94	0.50
2:C:88:ALA:CA	2:C:91:GLU:HG2	2.38	0.50
2:C:182:ILE:HA	2:C:202:ILE:O	2.12	0.50
3:D:63:MET:SD	3:D:64:GLU:N	2.84	0.50
3:D:73:GLU:HG3	3:D:77:GLN:NE2	2.27	0.50
4:E:70:MET:CE	4:E:96:PHE:HD2	2.24	0.50
4:E:182:ARG:NH1	7:H:45:TYR:OH	2.45	0.50
5:F:27:LEU:HD13	5:F:31:ARG:NH2	2.27	0.50
7:H:10:PHE:CD1	7:H:27:LEU:HD22	2.40	0.50
8:I:69:LYS:CE	8:I:73:VAL:HG13	2.42	0.50
11:L:23:ALA:O	11:L:25:LYS:HG2	2.12	0.50
12:M:96:LEU:C	12:M:110:ARG:HD3	2.37	0.50
14:O:28:GLN:HG2	14:O:66:LEU:CD1	2.41	0.50
15:P:14:ARG:O	15:P:14:ARG:HG2	2.12	0.50
15:P:22:VAL:HG22	15:P:35:GLU:O	2.11	0.50
15:P:46:PRO:HA	15:P:94:LYS:HZ1	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:Q:41:GLU:CG	16:Q:54:ARG:HD3	2.42	0.50
16:Q:86:LYS:O	16:Q:86:LYS:HD2	2.11	0.50
19:V:6:MET:O	19:V:10:LEU:CD1	2.59	0.50
19:V:67:VAL:HG22	19:V:160:ALA:HB3	1.94	0.50
19:V:104:PHE:CD1	19:V:104:PHE:C	2.89	0.50
19:V:110:ARG:HH21	19:V:151:ILE:HD13	1.77	0.50
20:Y:97:U:H4'	20:Y:98:U:OP2	2.11	0.50
20:Y:174:G:H2'	20:Y:175:G:C8	2.46	0.50
20:Y:225:A:N6	20:Y:498:G:H21	2.10	0.50
20:Y:398:U:O2	20:Y:398:U:H2'	2.11	0.50
20:Y:805:C:H2'	20:Y:806:C:C6	2.47	0.50
20:Y:842:A:C2'	20:Y:843:G:H5'	2.42	0.50
20:Y:1032:A:C2'	20:Y:1033:A:O5'	2.60	0.50
20:Y:1307:G:O2'	20:Y:1308:G:H5'	2.10	0.50
20:Y:1314:C:H2'	20:Y:1315:C:C6	2.47	0.50
20:Y:1385:C:H5"	20:Y:1386:G:H5'	1.94	0.50
20:Y:1431:U:H2'	20:Y:1432:G:C8	2.47	0.50
20:Y:1900:C:H2'	20:Y:1901:C:C6	2.46	0.50
20:Y:1941:A:H61	20:Y:1953:C:H42	1.60	0.50
20:Y:2030:C:H2'	20:Y:2031:G:O4'	2.11	0.50
20:Y:2298:U:H2'	20:Y:2300:A:OP1	2.11	0.50
20:Y:2408:G:O2'	20:Y:2409:U:OP1	2.24	0.50
20:Y:2528:G:N1	25:c:162:THR:HA	2.27	0.50
20:Y:2595:G:O2'	20:Y:2596:G:H5'	2.11	0.50
20:Y:2611:U:H4'	41:s:41:ARG:HH12	1.77	0.50
20:Y:2623:A:H2'	20:Y:2624:C:H6	1.71	0.50
20:Y:2881:A:H5"	26:d:93:VAL:HG11	1.93	0.50
20:Y:3079:U:H6	20:Y:3079:U:H3'	1.76	0.50
21:U:32:C:H2'	21:U:33:C:H6	1.75	0.50
22:Z:258:ARG:O	22:Z:260:PRO:HD3	2.11	0.50
23:a:7:LEU:H	23:a:34:ASN:ND2	2.08	0.50
23:a:35:VAL:HG22	23:a:53:ALA:O	2.12	0.50
25:c:12:LYS:HD2	25:c:104:TRP:CE3	2.47	0.50
28:f:6:PRO:HG3	28:f:45:THR:CG2	2.42	0.50
28:f:73:PHE:HD1	28:f:75:TYR:OH	1.94	0.50
29:g:12:ASP:OD1	29:g:14:THR:HG23	2.11	0.50
29:g:12:ASP:OD1	29:g:14:THR:N	2.45	0.50
30:h:12:ALA:HB3	30:h:15:GLU:CG	2.42	0.50
32:j:73:LYS:C	32:j:76:VAL:HG12	2.36	0.50
34:l:16:ILE:HG22	34:l:16:ILE:O	2.12	0.50
35:m:39:GLN:O	35:m:43:LEU:HG	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:o:90:LYS:HZ1	37:o:102:ARG:HG2	1.76	0.50
38:p:7:PRO:CB	38:p:45:ALA:HB2	2.37	0.50
39:q:2:LYS:CD	39:q:83:VAL:HB	2.42	0.50
44:v:101:LYS:O	44:v:101:LYS:HD2	2.12	0.50
1:A:225:G:H3'	16:Q:11:PRO:CG	2.39	0.50
1:A:312:C:H2'	1:A:313:A:H8	1.77	0.50
1:A:744:C:H2'	1:A:745:G:O4'	2.11	0.50
1:A:1394:U:H2'	1:A:1395:C:H6	1.75	0.50
2:C:92:LYS:NZ	2:C:93:LEU:HD21	2.27	0.50
3:D:3:ARG:HH21	3:D:5:THR:HA	1.76	0.50
3:D:54:GLN:O	3:D:58:PHE:CD2	2.65	0.50
4:E:126:PRO:HA	4:E:147:ASP:CG	2.37	0.50
10:K:81:ARG:CG	10:K:82:LYS:HD3	2.39	0.50
12:M:22:ILE:H	12:M:22:ILE:HD12	1.76	0.50
12:M:29:ARG:HA	12:M:32:GLU:OE2	2.12	0.50
13:N:7:VAL:HG22	13:N:23:ARG:HH22	1.77	0.50
20:Y:40:G:H2'	20:Y:41:A:C8	2.47	0.50
20:Y:162:A:H2'	20:Y:163:U:C6	2.46	0.50
20:Y:166:A:C2	20:Y:167:G:H1'	2.46	0.50
20:Y:226:A:C2	20:Y:2631:G:H1'	2.46	0.50
20:Y:325:U:H2'	20:Y:452:G:N2	2.26	0.50
20:Y:622:C:H2'	20:Y:623:A:O4'	2.11	0.50
20:Y:626:G:H2'	20:Y:627:C:C6	2.47	0.50
20:Y:693:G:O4'	24:b:106:MET:HE1	2.12	0.50
20:Y:1046:C:H1'	20:Y:1288:A:H1'	1.92	0.50
20:Y:1131:G:C2'	20:Y:1132:U:H5'	2.42	0.50
20:Y:1250:U:C1'	28:f:75:TYR:HD2	2.24	0.50
20:Y:1380:A:OP1	20:Y:1382:U:H1'	2.12	0.50
20:Y:1674:G:N2	32:j:73:LYS:CD	2.68	0.50
20:Y:1731:A:O2'	20:Y:1732:U:H5'	2.11	0.50
20:Y:1739:A:H2'	20:Y:1740:G:H8	1.76	0.50
20:Y:1816:C:C2'	20:Y:1817:C:O4'	2.60	0.50
20:Y:1824:C:H5"	20:Y:1825:C:OP1	2.11	0.50
20:Y:1832:A:P	20:Y:1832:A:H8	2.35	0.50
20:Y:2247:A:O2'	20:Y:2248:C:H5'	2.11	0.50
20:Y:2528:G:O4'	25:c:137:PHE:HD1	1.95	0.50
20:Y:2554:U:O3'	41:s:44:HIS:NE2	2.40	0.50
20:Y:2851:G:N2	20:Y:3001:G:C4	2.80	0.50
20:Y:2943:A:O2'	20:Y:3067:C:H4'	2.11	0.50
22:Z:85:ASP:HB3	22:Z:92:ILE:HD11	1.94	0.50
23:a:111:TYR:C	23:a:211:ALA:HB2	2.37	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:a:135:GLN:NE2	23:a:144:VAL:HG12	2.19	0.50
24:b:116:SER:O	24:b:120:ARG:HG3	2.11	0.50
25:c:87:ARG:CB	25:c:90:MET:HE3	2.41	0.50
27:e:80:LEU:HD13	27:e:110:ILE:HG23	1.93	0.50
33:k:117:ALA:O	33:k:121:ARG:HG3	2.11	0.50
34:l:105:LYS:O	34:l:105:LYS:HG3	2.11	0.50
36:n:6:ILE:CG1	36:n:41:LEU:HB3	2.41	0.50
37:o:31:VAL:HG23	37:o:39:ALA:HA	1.93	0.50
51:4:2333:G:H4'	51:4:2334:U:O5'	2.11	0.50
1:A:25:G:H2'	1:A:26:G:C8	2.45	0.50
1:A:71:C:H2'	1:A:72:G:H8	1.75	0.50
1:A:122:G:OP1	1:A:585:U:O2'	2.18	0.50
1:A:389:A:H2'	15:P:29:ARG:HH12	1.77	0.50
1:A:588:A:H3'	1:A:589:A:H8	1.76	0.50
1:A:936:G:H2'	1:A:937:A:H8	1.77	0.50
1:A:955:G:C1'	9:J:57:LYS:HZ2	2.24	0.50
1:A:970:G:C6	1:A:971:G:C5	3.00	0.50
1:A:1371:C:H2'	1:A:1372:C:H6	1.76	0.50
1:A:1419:C:H2'	1:A:1420:C:C6	2.46	0.50
5:F:11:ASP:CG	5:F:13:THR:HG23	2.36	0.50
6:G:38:LEU:C	6:G:38:LEU:HD23	2.37	0.50
7:H:80:VAL:HG21	7:H:127:VAL:CG2	2.27	0.50
13:N:39:LEU:HD13	13:N:43:CYS:SG	2.52	0.50
16:Q:76:LEU:CD2	16:Q:88:TRP:HB3	2.41	0.50
18:T:29:ARG:HA	18:T:32:ILE:HG22	1.94	0.50
20:Y:6:G:N2	20:Y:3115:A:N7	2.59	0.50
20:Y:248:G:C5	20:Y:250:G:N2	2.80	0.50
20:Y:347:U:O4	20:Y:445:U:O2'	2.28	0.50
20:Y:361:A:H2'	20:Y:362:A:C4	2.47	0.50
20:Y:513:C:H2'	20:Y:514:C:N1	2.27	0.50
20:Y:942:U:H4'	20:Y:943:U:H6	1.76	0.50
20:Y:1062:A:C5	20:Y:2672:A:C2	3.00	0.50
20:Y:1189:G:OP1	20:Y:1189:G:H8	1.93	0.50
20:Y:1377:A:P	37:o:106:ARG:HH21	2.35	0.50
20:Y:1524:G:O2'	20:Y:1525:U:H5'	2.11	0.50
20:Y:1711:G:H2'	20:Y:1712:G:H8	1.74	0.50
20:Y:1999:U:O2'	20:Y:2000:A:P	2.69	0.50
20:Y:2628:U:H1'	30:h:67:PHE:CZ	2.45	0.50
20:Y:2738:U:O2'	20:Y:2739:C:H5'	2.12	0.50
22:Z:26:ARG:HG2	22:Z:27:SER:N	2.27	0.50
24:b:35:HIS:O	24:b:39:THR:HG23	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:c:41:VAL:HG23	25:c:103:MET:SD	2.52	0.50
25:c:78:ARG:HG2	25:c:79:LYS:CE	2.40	0.50
27:e:57:PRO:CG	27:e:73:LYS:HB3	2.40	0.50
28:f:35:LEU:HD13	28:f:40:HIS:ND1	2.27	0.50
28:f:37:ARG:HE	28:f:110:PRO:CG	2.25	0.50
33:k:47:ILE:CD1	33:k:81:SER:HA	2.41	0.50
33:k:125:LEU:HG	33:k:127:PHE:HD1	1.77	0.50
34:l:98:TYR:HE2	34:l:102:LEU:HD22	1.75	0.50
36:n:6:ILE:HG22	36:n:13:GLN:HB2	1.93	0.50
36:n:23:LYS:HE3	36:n:94:LEU:HD12	1.93	0.50
38:p:21:TYR:CA	38:p:24:ILE:HG22	2.38	0.50
38:p:52:VAL:CB	38:p:91:LYS:HE2	2.41	0.50
42:t:19:SER:OG	42:t:22:HIS:N	2.45	0.50
50:2:13:LYS:HE3	50:2:28:SER:OG	2.12	0.50
1:A:162:G:H2'	1:A:163:G:H8	1.76	0.50
1:A:450:G:OP1	1:A:451:A:H3'	2.11	0.50
1:A:513:A:O2'	1:A:514:U:H5"	2.11	0.50
1:A:539:A:H5'	1:A:539:A:N3	2.27	0.50
1:A:539:A:H4'	1:A:540:A:H3'	1.94	0.50
1:A:801:G:H2'	1:A:802:G:C8	2.46	0.50
1:A:915:G:P	6:G:4:LYS:NZ	2.85	0.50
1:A:1011:U:HO2'	1:A:1012:U:P	2.35	0.50
1:A:1026:A:C2'	1:A:1027:G:H5'	2.42	0.50
4:E:58:PHE:HE2	4:E:81:VAL:HG13	1.77	0.50
6:G:44:TYR:O	6:G:47:LEU:HG	2.12	0.50
7:H:13:ARG:HH11	7:H:27:LEU:HD23	1.75	0.50
20:Y:214:G:H4'	20:Y:215:A:OP1	2.12	0.50
20:Y:419:G:N7	20:Y:420:G:N2	2.60	0.50
20:Y:479:A:O2'	20:Y:498:G:OP1	2.23	0.50
20:Y:499:G:P	20:Y:2630:A:HO2'	2.35	0.50
20:Y:773:G:C3'	24:b:101:ARG:HH22	2.23	0.50
20:Y:898:A:H2'	20:Y:898:A:N3	2.26	0.50
20:Y:1680:A:H4'	20:Y:1681:U:H5	1.76	0.50
20:Y:1849:G:N2	20:Y:1851:G:C8	2.80	0.50
20:Y:2791:G:H2'	20:Y:2792:C:H6	1.76	0.50
21:U:71:C:C2	21:U:72:C:C5	3.00	0.50
21:U:105:A:O2'	21:U:106:C:H5'	2.12	0.50
21:U:107:A:H2'	21:U:108:C:H6	1.77	0.50
22:Z:211:ARG:HA	22:Z:214:TRP:CG	2.47	0.50
23:a:40:ARG:HB2	23:a:49:ALA:O	2.12	0.50
25:c:11:LEU:HD12	25:c:107:LEU:HD23	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:c:99:ARG:HA	25:c:103:MET:CG	2.41	0.50
27:e:55:VAL:HB	27:e:79:LYS:HE3	1.94	0.50
29:g:122:LEU:CD1	34:l:69:VAL:HG11	2.41	0.50
31:i:48:GLU:OE2	31:i:48:GLU:HA	2.11	0.50
31:i:121:ALA:O	31:i:125:LEU:HD23	2.12	0.50
32:j:38:GLU:HG3	32:j:39:PRO:CD	2.27	0.50
34:l:1:MET:SD	34:l:3:THR:HA	2.52	0.50
41:s:12:ASN:HA	41:s:14:ARG:NH1	2.23	0.50
43:u:14:THR:HG23	43:u:17:GLU:H	1.76	0.50
44:v:91:LYS:NZ	44:v:124:ALA:O	2.37	0.50
47:y:20:HIS:O	47:y:22:ASN:N	2.45	0.50
51:4:2400:C:H3'	51:4:2401:U:O4'	2.12	0.50
1:A:407:A:H4'	3:D:108:MET:SD	2.52	0.49
1:A:432:A:C2	1:A:433:C:H1'	2.46	0.49
1:A:522:G:O2'	3:D:14:ARG:NH2	2.45	0.49
1:A:588:A:C2	1:A:589:A:H1'	2.47	0.49
1:A:876:G:H2'	1:A:877:G:H8	1.76	0.49
1:A:1214:G:H2'	1:A:1215:C:C6	2.46	0.49
1:A:1505:G:O2'	1:A:1506:U:H5'	2.12	0.49
3:D:69:ARG:HA	3:D:72:GLU:OE2	2.12	0.49
3:D:166:LEU:CD1	3:D:175:ILE:HG23	2.38	0.49
8:I:87:LEU:CD2	8:I:95:GLN:HE21	2.25	0.49
11:L:108:LYS:O	11:L:109:ASN:HB2	2.12	0.49
14:O:49:ASP:OD2	14:O:52:SER:OG	2.28	0.49
14:O:50:HIS:CE1	14:O:53:ARG:HH22	2.30	0.49
19:V:186:ILE:HG13	19:V:200:ILE:O	2.11	0.49
20:Y:108:A:O2'	20:Y:109:U:H5'	2.11	0.49
20:Y:708:G:H21	24:b:184:ASN:HD21	1.60	0.49
20:Y:1198:C:H4'	27:e:135:ARG:NH1	2.27	0.49
20:Y:1320:U:O2'	20:Y:1321:C:O4'	2.17	0.49
20:Y:1659:U:H2'	20:Y:1660:A:C8	2.44	0.49
20:Y:1680:A:H4'	20:Y:1681:U:C5	2.46	0.49
20:Y:1802:G:N2	20:Y:1803:A:H61	2.10	0.49
20:Y:2016:G:H21	22:Z:155:LEU:HD23	1.77	0.49
20:Y:2069:U:O2'	20:Y:2070:A:H5'	2.12	0.49
20:Y:2088:C:O2'	20:Y:2089:C:C6	2.65	0.49
20:Y:2306:A:H2'	20:Y:2307:C:C6	2.47	0.49
20:Y:2420:U:O2	20:Y:2421:A:O2'	2.24	0.49
20:Y:2731:C:C1'	20:Y:2807:G:H22	2.25	0.49
20:Y:2884:A:H2'	20:Y:2885:G:O4'	2.12	0.49
20:Y:2893:G:H2'	20:Y:2894:G:H8	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:2968:G:O2'	20:Y:2969:C:H5'	2.12	0.49
21:U:24:G:N2	21:U:62:C:C2	2.80	0.49
23:a:16:VAL:HG12	23:a:17:PHE:N	2.27	0.49
25:c:111:ILE:CD1	25:c:182:PHE:HE1	2.25	0.49
26:d:40:PRO:CB	26:d:61:ARG:HD2	2.42	0.49
33:k:70:VAL:HG11	33:k:87:LEU:HD11	1.92	0.49
34:l:24:THR:HG22	34:l:86:LEU:CD1	2.30	0.49
34:l:77:SER:CB	34:l:80:ILE:HD12	2.41	0.49
44:v:10:VAL:HA	44:v:13:ILE:CG2	2.41	0.49
46:x:52:VAL:CG1	46:x:54:LEU:HD13	2.38	0.49
48:z:21:PHE:CD1	48:z:21:PHE:C	2.90	0.49
1:A:150:G:O6	1:A:165:U:C4	2.65	0.49
1:A:215:U:O2'	1:A:216:U:OP2	2.26	0.49
1:A:539:A:H1'	1:A:541:U:O2'	2.11	0.49
1:A:634:G:H2'	1:A:635:A:H5'	1.94	0.49
1:A:654:G:H21	10:K:127:HIS:HB2	1.76	0.49
1:A:804:U:H2'	1:A:805:A:C8	2.38	0.49
1:A:1308:C:H2'	1:A:1309:C:C6	2.47	0.49
1:A:1502:A:H3'	1:A:1502:A:P	2.52	0.49
3:D:134:GLN:O	3:D:135:TYR:HB3	2.11	0.49
10:K:107:ARG:NH2	10:K:107:ARG:HB2	2.27	0.49
15:P:9:ARG:C	15:P:10:LEU:HD12	2.37	0.49
19:V:94:GLN:NE2	19:V:146:ARG:O	2.44	0.49
20:Y:7:U:H2'	20:Y:8:U:C5'	2.42	0.49
20:Y:77:G:C2	20:Y:78:G:C5	3.00	0.49
20:Y:171:U:H2'	20:Y:172:C:H6	1.76	0.49
20:Y:271:A:C3'	20:Y:272:A:H2	2.25	0.49
20:Y:493:U:O2'	20:Y:494:G:P	2.70	0.49
20:Y:552:U:O5'	20:Y:552:U:H6	1.95	0.49
20:Y:694:C:H2'	20:Y:695:G:H8	1.76	0.49
20:Y:715:A:N3	20:Y:715:A:H2'	2.26	0.49
20:Y:751:A:HO2'	20:Y:752:C:H5'	1.75	0.49
20:Y:799:G:N2	20:Y:903:A:OP2	2.40	0.49
20:Y:897:A:H3'	20:Y:2005:C:H4'	1.94	0.49
20:Y:898:A:H2'	20:Y:899:G:H4'	1.94	0.49
20:Y:1048:A:C8	20:Y:1049:G:H1'	2.47	0.49
20:Y:1288:A:O2'	20:Y:1289:A:H5'	2.11	0.49
20:Y:1893:C:C2'	20:Y:1894:A:H5'	2.42	0.49
20:Y:1923:G:H2'	20:Y:1924:G:C8	2.46	0.49
20:Y:2148:C:H2'	20:Y:2149:C:O4'	2.11	0.49
20:Y:2513:G:O2'	20:Y:2514:G:H5'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:3062:C:C2'	20:Y:3063:A:H5'	2.42	0.49
21:U:100:G:O2'	21:U:101:U:H5'	2.12	0.49
23:a:3:ARG:HH12	23:a:209:ARG:CD	2.26	0.49
24:b:189:LEU:HD11	30:h:4:ILE:HG22	1.95	0.49
25:c:45:MET:HE2	25:c:158:GLY:CA	2.35	0.49
28:f:28:LEU:HD12	28:f:28:LEU:C	2.37	0.49
28:f:77:HIS:NE2	28:f:80:TYR:O	2.45	0.49
34:l:45:VAL:HG12	34:l:47:ILE:CD1	2.42	0.49
34:l:61:ARG:HB2	34:l:70:GLU:CD	2.37	0.49
34:l:98:TYR:HE2	34:l:102:LEU:CD2	2.26	0.49
38:p:9:ASP:OD1	38:p:10:ILE:HD12	2.12	0.49
41:s:51:VAL:HG11	41:s:59:LEU:HD12	1.94	0.49
43:u:6:THR:HG22	43:u:8:GLY:H	1.76	0.49
43:u:29:LEU:HD13	43:u:50:VAL:CB	2.41	0.49
44:v:25:VAL:HB	44:v:106:LYS:CE	2.42	0.49
47:y:18:CYS:SG	47:y:44:ASN:OD1	2.71	0.49
51:4:2331:U:O2'	51:4:2332:U:O4'	2.26	0.49
1:A:478:A:H8	1:A:478:A:OP2	1.95	0.49
1:A:785:C:O2'	1:A:786:C:H5'	2.12	0.49
1:A:962:C:HO2'	1:A:963:U:P	2.36	0.49
1:A:1060:A:C8	1:A:1061:G:H1'	2.47	0.49
1:A:1089:C:P	2:C:176:HIS:HD1	2.35	0.49
1:A:1188:C:O2'	1:A:1189:C:H5'	2.13	0.49
1:A:1274:C:H2'	1:A:1275:G:C8	2.46	0.49
1:A:1277:U:C4'	12:M:14:ARG:HH21	2.25	0.49
1:A:1407:U:H3'	1:A:1408:A:H8	1.78	0.49
1:A:1492:G:H2'	1:A:1493:C:H6	1.75	0.49
2:C:38:ILE:HG13	2:C:39:ARG:N	2.27	0.49
4:E:117:GLY:HA2	4:E:154:GLY:O	2.12	0.49
11:L:73:ASN:C	11:L:74:LEU:HD23	2.36	0.49
18:T:68:HIS:O	18:T:71:GLN:HG3	2.12	0.49
19:V:148:LEU:HD23	19:V:148:LEU:C	2.37	0.49
20:Y:297:G:H2'	20:Y:298:G:O4'	2.12	0.49
20:Y:472:C:H2'	20:Y:472:C:O2	2.12	0.49
20:Y:663:A:H3'	36:n:81:LYS:HZ3	1.71	0.49
20:Y:922:U:C2	20:Y:923:G:C8	3.00	0.49
20:Y:974:G:HO2'	20:Y:975:U:P	2.35	0.49
20:Y:1176:G:N2	20:Y:1199:U:O2	2.44	0.49
20:Y:1524:G:H22	20:Y:1812:A:N6	2.06	0.49
20:Y:1752:C:H2'	20:Y:1753:C:H6	1.76	0.49
20:Y:1777:U:P	20:Y:1778:A:H3'	2.53	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:1784:C:O2'	20:Y:1785:C:H5'	2.12	0.49
20:Y:1800:G:H2'	20:Y:1801:C:O5'	2.12	0.49
20:Y:2641:U:H2'	20:Y:2642:G:H8	1.77	0.49
20:Y:2732:G:O2'	20:Y:2778:U:O2'	2.20	0.49
20:Y:2745:C:H2'	20:Y:2746:U:O4'	2.12	0.49
20:Y:2997:C:O2'	20:Y:2998:C:H5'	2.12	0.49
20:Y:3010:U:C2	20:Y:3011:C:C5	2.99	0.49
20:Y:3022:G:H2'	20:Y:3023:G:O4'	2.12	0.49
21:U:1:G:O2'	21:U:2:U:H5'	2.12	0.49
21:U:79:A:H2'	21:U:80:C:C5'	2.42	0.49
21:U:114:A:H4'	33:k:66:ILE:HD12	1.95	0.49
22:Z:258:ARG:NH2	22:Z:268:ILE:HD12	2.27	0.49
24:b:23:GLU:OE2	24:b:24:LEU:HD23	2.12	0.49
25:c:80:SER:HA	25:c:86:LEU:CD1	2.42	0.49
26:d:43:VAL:HG23	26:d:52:VAL:O	2.13	0.49
27:e:57:PRO:HG2	27:e:73:LYS:CB	2.40	0.49
29:g:80:ASP:OD1	34:l:103:ARG:NH2	2.40	0.49
30:h:9:LEU:HD22	30:h:9:LEU:H	1.77	0.49
32:j:20:LEU:HD23	32:j:20:LEU:C	2.36	0.49
35:m:33:ARG:NH1	35:m:33:ARG:HB2	2.27	0.49
35:m:60:LEU:HD23	35:m:60:LEU:C	2.37	0.49
40:r:70:ASP:C	40:r:70:ASP:OD1	2.55	0.49
43:u:15:ASP:HA	43:u:18:LEU:HG	1.93	0.49
47:y:15:CYS:HB3	47:y:18:CYS:HB2	1.94	0.49
49:1:10:ALA:O	49:1:13:ARG:N	2.43	0.49
1:A:120:G:O2'	1:A:121:U:H5'	2.11	0.49
1:A:178:A:H61	1:A:208:G:H3'	1.76	0.49
1:A:696:A:O2'	1:A:697:C:O5'	2.28	0.49
1:A:702:G:H2'	1:A:702:G:N3	2.27	0.49
1:A:1280:C:N4	6:G:114:LYS:O	2.45	0.49
7:H:10:PHE:HE1	7:H:27:LEU:HD13	1.77	0.49
7:H:58:LYS:N	7:H:58:LYS:HD3	2.27	0.49
8:I:50:LEU:HD12	8:I:58:TYR:HB3	1.93	0.49
11:L:42:PRO:HB2	11:L:46:ASN:O	2.13	0.49
16:Q:63:ASP:O	16:Q:63:ASP:OD1	2.30	0.49
16:Q:63:ASP:OD2	16:Q:66:GLY:HA2	2.12	0.49
19:V:31:ILE:HG21	19:V:39:TYR:HB3	1.95	0.49
19:V:139:ARG:HA	19:V:139:ARG:HH11	1.78	0.49
19:V:196:VAL:HG12	19:V:198:TYR:N	2.26	0.49
19:V:211:ALA:O	19:V:215:LYS:HG2	2.13	0.49
20:Y:2:A:H2'	20:Y:3:A:C4	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:2:A:C3'	20:Y:3:A:C8	2.95	0.49
20:Y:479:A:N1	20:Y:499:G:C5	2.80	0.49
20:Y:486:G:C2'	20:Y:487:U:H5'	2.43	0.49
20:Y:716:G:C4	20:Y:717:C:C5	3.01	0.49
20:Y:934:A:N6	20:Y:1304:A:H1'	2.28	0.49
20:Y:1934:G:H2'	20:Y:1935:C:C5'	2.37	0.49
20:Y:2009:G:OP2	20:Y:2009:G:H8	1.95	0.49
20:Y:2015:U:P	22:Z:256:ARG:HH22	2.36	0.49
20:Y:2408:G:C2'	20:Y:2409:U:OP1	2.60	0.49
20:Y:2583:C:H4'	49:1:54:ASP:OD2	2.12	0.49
20:Y:2640:G:O3'	30:h:65:LYS:NZ	2.44	0.49
20:Y:2689:C:H2'	20:Y:2690:C:H6	1.78	0.49
20:Y:2891:C:C2'	20:Y:2892:G:H5'	2.42	0.49
21:U:67:A:N6	21:U:105:A:H2'	2.27	0.49
23:a:6:ILE:HA	23:a:34:ASN:HD21	1.77	0.49
23:a:38:ARG:C	23:a:39:ILE:HD13	2.37	0.49
24:b:153:LYS:HE3	24:b:191:ALA:HB2	1.94	0.49
27:e:20:ALA:HB2	27:e:45:ASN:OD1	2.13	0.49
28:f:4:TYR:CE2	28:f:43:THR:HG23	2.48	0.49
30:h:124:VAL:HB	30:h:144:ALA:CB	2.43	0.49
36:n:23:LYS:HZ2	36:n:68:THR:HG21	1.75	0.49
36:n:31:PRO:HA	36:n:64:VAL:CG2	2.42	0.49
38:p:9:ASP:HA	43:u:34:PHE:HE1	1.74	0.49
43:u:58:TYR:CE1	43:u:62:ARG:NH2	2.74	0.49
45:w:4:LEU:O	45:w:36:VAL:HA	2.12	0.49
45:w:9:VAL:HG22	45:w:9:VAL:O	2.12	0.49
47:y:16:GLU:H	47:y:49:GLN:NE2	2.11	0.49
47:y:35:ARG:HD2	47:y:35:ARG:C	2.37	0.49
49:1:24:ARG:HG2	49:1:25:GLN:N	2.27	0.49
1:A:43:G:H2'	1:A:44:C:C6	2.47	0.49
1:A:210:A:O2'	1:A:221:G:H1'	2.12	0.49
1:A:475:A:H1'	1:A:476:A:C2	2.47	0.49
1:A:489:A:N6	1:A:490:A:N1	2.61	0.49
1:A:685:U:H2'	1:A:686:A:C5'	2.43	0.49
1:A:750:C:O4'	1:A:882:A:H2	1.96	0.49
1:A:1198:C:O2'	1:A:1199:C:H5'	2.12	0.49
1:A:1231:A:N3	1:A:1353:G:O2'	2.33	0.49
1:A:1449:U:H2'	1:A:1450:C:H6	1.76	0.49
5:F:40:VAL:HG22	5:F:63:ILE:HD12	1.94	0.49
12:M:19:LEU:HA	12:M:22:ILE:HD13	1.94	0.49
20:Y:101:U:H2'	20:Y:102:C:O4'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:314:G:C6	20:Y:315:U:H5	2.31	0.49
20:Y:483:G:N3	20:Y:484:C:C5	2.81	0.49
20:Y:710:G:O5'	20:Y:710:G:C8	2.65	0.49
20:Y:1381:G:H22	20:Y:2236:G:H2'	1.77	0.49
20:Y:1479:G:P	42:t:3:ALA:HB2	2.52	0.49
20:Y:1776:C:H2'	20:Y:1777:U:C6	2.47	0.49
20:Y:2453:U:H2'	20:Y:2454:G:C8	2.48	0.49
20:Y:2633:G:C4	20:Y:2634:G:H1'	2.48	0.49
20:Y:2827:G:O2'	20:Y:2828:U:H5'	2.13	0.49
20:Y:3052:A:H1'	20:Y:3104:A:C2	2.48	0.49
24:b:156:VAL:HG21	24:b:177:VAL:HG22	1.94	0.49
25:c:56:LEU:HD12	25:c:57:ILE:N	2.28	0.49
27:e:10:LEU:O	27:e:11:ILE:HD13	2.12	0.49
27:e:56:ILE:HG23	27:e:73:LYS:O	2.12	0.49
30:h:78:VAL:HG12	30:h:82:ASP:OD1	2.11	0.49
34:l:99:LEU:HD11	34:l:109:ILE:CD1	2.43	0.49
35:m:66:ASN:HA	35:m:76:TYR:HB2	1.94	0.49
38:p:52:VAL:HG12	38:p:91:LYS:HG3	1.95	0.49
41:s:40:GLN:OE1	41:s:44:HIS:HB2	2.11	0.49
43:u:48:ARG:O	43:u:51:ARG:HB3	2.12	0.49
46:x:50:GLY:C	46:x:51:LEU:HD12	2.36	0.49
47:y:38:ILE:HG22	47:y:40:LYS:CG	2.39	0.49
1:A:162:G:H2'	1:A:163:G:C8	2.48	0.49
1:A:577:G:H21	1:A:624:G:C2'	2.23	0.49
1:A:593:C:P	3:D:76:ARG:HH11	2.34	0.49
1:A:636:G:H2'	1:A:637:U:O4'	2.12	0.49
1:A:954:C:H2'	9:J:57:LYS:HE3	1.94	0.49
1:A:1330:U:C1'	8:I:142:ARG:HH21	2.25	0.49
2:C:206:ASP:C	2:C:207:ILE:HD13	2.37	0.49
6:G:113:GLU:HB3	6:G:119:ARG:NH2	2.27	0.49
7:H:7:ILE:HG22	7:H:11:LEU:HD11	1.94	0.49
7:H:80:VAL:HG23	7:H:81:SER:H	1.78	0.49
8:I:40:ARG:HB3	8:I:84:TYR:HD2	1.77	0.49
8:I:69:LYS:HE3	8:I:73:VAL:HG13	1.95	0.49
8:I:75:VAL:CG2	8:I:107:LEU:HD11	2.42	0.49
11:L:23:ALA:HB3	11:L:95:TYR:CZ	2.48	0.49
17:R:23:CYS:HA	17:R:60:HIS:NE2	2.26	0.49
19:V:23:TRP:HZ3	19:V:25:PRO:HA	1.74	0.49
19:V:24:ASN:OD1	19:V:24:ASN:C	2.55	0.49
20:Y:469:G:OP1	42:t:24:ARG:NH2	2.43	0.49
20:Y:568:A:O5'	39:q:43:LYS:NZ	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:681:C:C2'	24:b:96:ARG:HH22	2.25	0.49
20:Y:860:G:HO2'	20:Y:863:G:H1'	1.77	0.49
20:Y:940:A:H2'	20:Y:941:U:O4'	2.13	0.49
20:Y:996:G:OP2	20:Y:997:G:H3'	2.12	0.49
20:Y:1057:C:C2	20:Y:1058:A:C2	3.00	0.49
20:Y:1143:G:N2	20:Y:1257:G:O6	2.44	0.49
20:Y:1206:A:H4'	20:Y:1207:G:C5'	2.34	0.49
20:Y:1378:U:H2'	20:Y:1379:G:N7	2.28	0.49
20:Y:1442:A:H1'	32:j:104:LYS:HZ2	1.76	0.49
20:Y:1472:C:H2'	20:Y:1473:G:C8	2.48	0.49
20:Y:1540:U:H2'	20:Y:1541:G:C8	2.48	0.49
20:Y:1885:G:C4	20:Y:2215:U:H5	2.31	0.49
20:Y:2016:G:C4	22:Z:177:MET:CE	2.95	0.49
20:Y:2812:G:C6	20:Y:2813:A:C5	3.00	0.49
20:Y:2938:G:H2'	20:Y:2939:C:C6	2.48	0.49
20:Y:2969:C:H2'	20:Y:2970:U:H6	1.74	0.49
20:Y:2969:C:O2'	20:Y:2970:U:H5'	2.12	0.49
20:Y:3068:U:OP1	34:l:93:ARG:HG2	2.13	0.49
23:a:23:VAL:HG12	29:g:73:ASP:HA	1.95	0.49
24:b:97:ASP:OD1	24:b:97:ASP:C	2.55	0.49
24:b:189:LEU:HD11	30:h:4:ILE:CG2	2.41	0.49
29:g:93:PRO:HG3	29:g:114:ILE:HG13	1.94	0.49
30:h:106:LYS:CD	30:h:107:ASN:OD1	2.61	0.49
32:j:75:VAL:HA	32:j:78:THR:CG2	2.43	0.49
34:l:93:ARG:HH12	34:l:98:TYR:HE1	1.60	0.49
38:p:25:GLU:OE2	38:p:26:ASP:HB3	2.12	0.49
39:q:82:ARG:HG3	39:q:82:ARG:NH1	2.27	0.49
40:r:162:ILE:HD11	40:r:178:VAL:HG11	1.94	0.49
45:w:4:LEU:HD11	45:w:44:ARG:HH21	1.77	0.49
45:w:24:ARG:O	45:w:24:ARG:HD2	2.11	0.49
51:4:2378:U:C2	51:4:2379:G:C8	3.01	0.49
51:4:2389:U:C2	51:4:2394:A:C5	3.01	0.49
1:A:518:U:H2'	1:A:519:A:H8	1.78	0.49
1:A:568:G:H3'	1:A:733:A:C2	2.47	0.49
1:A:591:C:H2'	1:A:592:U:H6	1.75	0.49
1:A:649:G:H2'	1:A:650:A:C8	2.48	0.49
1:A:911:G:H1	1:A:1372:C:N4	2.09	0.49
1:A:934:U:H3	1:A:1211:C:H42	1.59	0.49
1:A:1102:A:H2'	1:A:1103:U:O4'	2.12	0.49
1:A:1149:C:H1'	1:A:1150:A:P	2.53	0.49
3:D:105:THR:HG22	3:D:108:MET:HG2	1.91	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:107:ARG:HG2	3:D:108:MET:CE	2.42	0.49
4:E:109:PRO:O	4:E:109:PRO:HD2	2.13	0.49
7:H:93:ASN:OD1	7:H:93:ASN:C	2.55	0.49
10:K:62:LYS:HE3	10:K:62:LYS:CA	2.37	0.49
11:L:79:MET:HE3	11:L:102:LEU:CG	2.43	0.49
12:M:60:ILE:HA	12:M:64:LEU:HD13	1.95	0.49
20:Y:291:C:H1'	20:Y:340:A:OP2	2.12	0.49
20:Y:794:G:H2'	20:Y:795:G:C8	2.47	0.49
20:Y:1073:G:HO2'	20:Y:1076:A:N6	2.08	0.49
20:Y:1225:G:H5"	44:v:54:ASN:CG	2.38	0.49
20:Y:1366:A:N3	20:Y:1366:A:H2'	2.27	0.49
20:Y:1770:G:H2'	20:Y:1771:U:C6	2.48	0.49
20:Y:1781:C:C2	20:Y:1782:U:C5	3.00	0.49
20:Y:1814:G:H5"	20:Y:1815:G:OP2	2.12	0.49
20:Y:2185:C:O2'	20:Y:2186:C:H5'	2.13	0.49
20:Y:2578:A:O2'	41:s:35:GLU:OE1	2.27	0.49
20:Y:2640:G:OP1	30:h:66:GLY:N	2.41	0.49
20:Y:2804:U:H5'	23:a:140:GLY:O	2.13	0.49
20:Y:2898:G:H2'	20:Y:2899:A:H8	1.78	0.49
20:Y:2944:U:C6	20:Y:3093:A:N6	2.81	0.49
20:Y:2996:U:H2'	20:Y:2997:C:C6	2.48	0.49
21:U:70:G:H2'	21:U:71:C:H5'	1.95	0.49
23:a:126:THR:CG2	23:a:167:SER:HB3	2.43	0.49
25:c:113:ILE:O	25:c:117:ARG:HG3	2.13	0.49
28:f:24:VAL:HG11	28:f:27:ARG:HG2	1.94	0.49
28:f:118:ILE:O	28:f:121:LYS:HG2	2.13	0.49
29:g:64:ARG:CG	29:g:79:PHE:HD2	2.21	0.49
30:h:47:PRO:HB2	30:h:50:PHE:CD1	2.48	0.49
30:h:72:ARG:HB2	30:h:72:ARG:HH11	1.76	0.49
31:i:34:ILE:HG23	31:i:122:ILE:CD1	2.43	0.49
33:k:33:ALA:O	33:k:36:PRO:HD3	2.13	0.49
34:l:19:PHE:N	34:l:88:ARG:HH22	2.09	0.49
35:m:74:ILE:HD12	35:m:75:THR:N	2.23	0.49
43:u:41:LEU:HG	43:u:42:SER:H	1.77	0.49
45:w:3:GLU:OE1	45:w:38:GLU:HA	2.13	0.49
48:z:15:ARG:HH21	48:z:47:ALA:HB2	1.77	0.49
1:A:28:U:O2'	1:A:29:C:H5'	2.12	0.49
1:A:524:C:O2'	1:A:525:C:H5'	2.12	0.49
1:A:528:G:H2'	1:A:529:C:H6	1.78	0.49
1:A:715:G:H4'	17:R:69:LYS:HE2	1.95	0.49
1:A:751:G:O2'	1:A:752:U:H5'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1368:G:H2'	1:A:1369:G:C8	2.46	0.49
2:C:94:THR:O	2:C:94:THR:CG2	2.59	0.49
4:E:47:SER:HA	4:E:55:ARG:O	2.13	0.49
5:F:40:VAL:HA	5:F:63:ILE:HD12	1.95	0.49
5:F:69:PRO:O	5:F:72:VAL:HG12	2.13	0.49
8:I:127:ASP:OD1	8:I:129:ARG:NE	2.46	0.49
17:R:68:VAL:HG22	17:R:72:ARG:NE	2.28	0.49
19:V:140:GLU:HA	19:V:140:GLU:OE1	2.13	0.49
20:Y:90:C:C2'	20:Y:91:C:O4'	2.60	0.49
20:Y:242:G:O4'	49:1:3:LYS:NZ	2.46	0.49
20:Y:267:G:C2	20:Y:359:A:C2	2.99	0.49
20:Y:435:A:H2'	20:Y:436:C:O4'	2.13	0.49
20:Y:472:C:C2	20:Y:473:C:C6	3.00	0.49
20:Y:805:C:H2'	20:Y:806:C:H6	1.77	0.49
20:Y:965:U:O2'	45:w:22:SER:HA	2.12	0.49
20:Y:992:C:H42	20:Y:1016:C:H42	1.61	0.49
20:Y:1314:C:H2'	20:Y:1315:C:H6	1.77	0.49
20:Y:1318:C:H2'	20:Y:1318:C:O2	2.11	0.49
20:Y:1385:C:N4	20:Y:1866:C:H41	2.11	0.49
20:Y:1456:G:H3'	20:Y:1512:U:O2	2.12	0.49
20:Y:1754:G:H1	20:Y:1759:A:N6	2.10	0.49
20:Y:1899:G:N3	20:Y:1979:A:H2'	2.27	0.49
20:Y:2181:C:H2'	20:Y:2182:C:C6	2.47	0.49
20:Y:2270:G:C1'	46:x:19:GLN:OE1	2.60	0.49
20:Y:2495:G:H5'	41:s:20:ARG:CG	2.41	0.49
20:Y:2578:A:H4'	41:s:35:GLU:OE1	2.13	0.49
20:Y:2702:A:H2'	20:Y:2703:U:O4'	2.13	0.49
20:Y:3046:C:O2	20:Y:3046:C:O4'	2.31	0.49
22:Z:18:VAL:HG22	22:Z:19:SER:H	1.77	0.49
22:Z:184:ARG:HH11	22:Z:184:ARG:HG3	1.76	0.49
24:b:25:PHE:O	24:b:116:SER:OG	2.26	0.49
24:b:131:VAL:HG23	24:b:132:GLU:OE1	2.12	0.49
27:e:11:ILE:CG1	27:e:62:VAL:HG13	2.41	0.49
27:e:17:ALA:HA	27:e:48:THR:CG2	2.42	0.49
27:e:55:VAL:HB	27:e:79:LYS:HD2	1.94	0.49
28:f:37:ARG:NH2	28:f:110:PRO:HG3	2.22	0.49
31:i:75:THR:HG22	31:i:89:SER:C	2.38	0.49
32:j:44:LEU:HD23	32:j:44:LEU:C	2.37	0.49
34:l:31:VAL:HG22	34:l:38:ARG:NH2	2.28	0.49
35:m:28:ARG:CZ	35:m:38:GLN:OE1	2.61	0.49
35:m:58:ARG:HH21	35:m:92:ARG:CZ	2.26	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:o:36:VAL:HG11	37:o:76:LEU:HB3	1.94	0.49
49:1:37:PRO:HD2	49:1:37:PRO:O	2.11	0.49
1:A:22:C:H5"	4:E:157:ASN:ND2	2.27	0.49
1:A:225:G:C8	16:Q:11:PRO:HG3	2.48	0.49
1:A:633:A:N6	7:H:57:GLY:HA3	2.28	0.49
1:A:797:C:C2	1:A:799:G:O4'	2.66	0.49
1:A:803:G:H2'	1:A:804:U:H6	1.76	0.49
1:A:813:U:H2'	1:A:814:G:H8	1.78	0.49
1:A:932:U:H2'	1:A:933:G:C8	2.41	0.49
1:A:969:G:N2	1:A:1200:A:H3'	2.16	0.49
1:A:1184:C:H2'	1:A:1185:A:C8	2.48	0.49
3:D:92:ARG:HG2	3:D:92:ARG:HH11	1.78	0.49
4:E:151:LYS:HG3	4:E:153:LEU:HD21	1.93	0.49
6:G:107:PHE:CZ	6:G:137:ARG:HG2	2.48	0.49
7:H:41:LYS:HD2	7:H:48:ASP:OD2	2.12	0.49
11:L:66:TYR:N	11:L:95:TYR:O	2.39	0.49
15:P:13:ILE:HG13	15:P:14:ARG:H	1.78	0.49
16:Q:45:SER:HA	16:Q:52:ILE:HA	1.94	0.49
17:R:42:ILE:HD11	17:R:46:GLY:C	2.37	0.49
18:T:12:ARG:HB3	18:T:16:ARG:HH12	1.78	0.49
20:Y:669:G:O2'	20:Y:670:A:O4'	2.22	0.49
20:Y:700:U:O5'	24:b:104:LYS:NZ	2.45	0.49
20:Y:805:C:H2'	20:Y:806:C:O4'	2.13	0.49
20:Y:1202:A:O5'	44:v:51:VAL:HG12	2.13	0.49
20:Y:1406:U:H2'	20:Y:1407:G:H8	1.77	0.49
20:Y:1530:G:H5"	20:Y:1531:C:OP1	2.13	0.49
20:Y:1793:G:C5	20:Y:1794:C:C5	3.01	0.49
20:Y:1874:C:H2'	20:Y:1875:U:C6	2.46	0.49
20:Y:1961:G:H2'	20:Y:1962:A:H5'	1.95	0.49
20:Y:3065:A:H2'	20:Y:3066:C:C6	2.47	0.49
22:Z:28:THR:O	22:Z:28:THR:HG23	2.12	0.49
25:c:55:LYS:HZ2	25:c:58:ASN:HD22	1.60	0.49
29:g:74:GLY:O	34:l:72:THR:HB	2.12	0.49
30:h:77:VAL:HA	30:h:112:VAL:CG1	2.18	0.49
35:m:102:ASP:OD2	35:m:102:ASP:C	2.55	0.49
40:r:66:ILE:HD12	40:r:79:LEU:HD11	1.94	0.49
48:z:14:ARG:HD2	48:z:14:ARG:N	2.27	0.49
1:A:424:G:H2'	1:A:425:G:H8	1.77	0.49
1:A:597:G:H4'	15:P:96:LYS:CE	2.43	0.49
1:A:689:A:O2'	1:A:690:G:H5'	2.13	0.49
1:A:844:C:H2'	1:A:845:U:O4'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:971:G:H1	1:A:1197:U:H3	1.59	0.49
1:A:1082:A:O2'	1:A:1083:C:H5'	2.13	0.49
1:A:1311:G:P	12:M:29:ARG:HH22	2.36	0.49
3:D:198:LEU:HD12	3:D:199:TYR:N	2.27	0.49
7:H:80:VAL:HG23	7:H:81:SER:N	2.27	0.49
9:J:8:ILE:HG22	9:J:74:ILE:O	2.12	0.49
18:T:5:LYS:HD2	18:T:6:SER:N	2.28	0.49
19:V:141:LYS:CD	19:V:144:LEU:HD21	2.40	0.49
20:Y:271:A:H2'	20:Y:272:A:C2	2.42	0.49
20:Y:334:G:H2'	20:Y:335:G:C8	2.47	0.49
20:Y:630:U:H2'	20:Y:631:C:H6	1.78	0.49
20:Y:774:G:H2'	20:Y:774:G:N3	2.28	0.49
20:Y:992:C:C2'	20:Y:993:G:H5'	2.42	0.49
20:Y:1204:A:H5'	20:Y:1205:G:OP1	2.13	0.49
20:Y:1454:G:N1	20:Y:1455:U:O4	2.46	0.49
20:Y:1651:C:C2	20:Y:1652:A:C8	3.00	0.49
20:Y:1866:C:H2'	20:Y:1867:G:O4'	2.12	0.49
20:Y:1880:U:C2'	20:Y:1881:U:H5'	2.43	0.49
20:Y:2147:U:H2'	20:Y:2148:C:C5	2.45	0.49
20:Y:2240:U:H2'	20:Y:2241:U:H6	1.77	0.49
20:Y:2630:A:H61	30:h:70:ARG:NH2	2.11	0.49
20:Y:2890:C:H3'	20:Y:2891:C:C6	2.48	0.49
20:Y:3022:G:C2'	20:Y:3023:G:O4'	2.61	0.49
20:Y:3090:G:H2'	20:Y:3091:G:O4'	2.12	0.49
21:U:58:A:C6	25:c:33:MET:HE1	2.47	0.49
23:a:183:HIS:O	23:a:184:LYS:HG3	2.13	0.49
25:c:87:ARG:HG3	25:c:88:GLU:O	2.11	0.49
31:i:108:TYR:CD1	31:i:109:PRO:HD2	2.48	0.49
31:i:122:ILE:HD12	31:i:129:ALA:CB	2.42	0.49
31:i:134:ARG:HH22	40:r:63:THR:HG21	1.78	0.49
39:q:98:ALA:HB3	39:q:101:ASN:OD1	2.13	0.49
44:v:90:ALA:O	44:v:94:LYS:HG2	2.13	0.49
1:A:380:G:N2	1:A:383:A:OP2	2.38	0.48
1:A:565:G:OP1	16:Q:54:ARG:NH2	2.46	0.48
1:A:631:C:C2'	1:A:632:U:H5'	2.42	0.48
1:A:830:G:O2'	1:A:831:A:H5'	2.13	0.48
1:A:975:G:C2'	1:A:977:C:H41	2.26	0.48
1:A:1262:U:H2'	1:A:1263:C:C5	2.48	0.48
2:C:140:ALA:CB	2:C:149:ILE:HD13	2.43	0.48
3:D:26:PHE:CD1	3:D:26:PHE:C	2.90	0.48
6:G:18:TYR:HE2	6:G:44:TYR:CE2	2.30	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:J:56:HIS:O	9:J:57:LYS:HB2	2.13	0.48
10:K:81:ARG:HE	10:K:81:ARG:C	2.20	0.48
12:M:40:ASP:N	12:M:43:MET:HE1	2.28	0.48
12:M:49:THR:O	12:M:53:VAL:HG23	2.13	0.48
18:T:32:ILE:HD11	18:T:36:ARG:NH2	2.28	0.48
19:V:68:LEU:HD11	19:V:158:PRO:HG3	1.95	0.48
19:V:110:ARG:HD2	19:V:110:ARG:C	2.37	0.48
20:Y:286:G:H1'	20:Y:300:G:OP1	2.13	0.48
20:Y:417:C:C2	20:Y:418:C:C5	3.00	0.48
20:Y:643:G:C3'	20:Y:644:G:H8	2.25	0.48
20:Y:870:G:H2'	20:Y:871:A:C8	2.48	0.48
20:Y:882:U:O2'	20:Y:883:G:H5'	2.12	0.48
20:Y:1022:C:C2'	20:Y:1023:C:H5'	2.42	0.48
20:Y:1557:C:H2'	20:Y:1558:C:H6	1.77	0.48
20:Y:1575:A:H61	20:Y:1596:C:N4	2.11	0.48
20:Y:1654:G:H2'	20:Y:1655:A:H8	1.78	0.48
20:Y:1875:U:C2	20:Y:1876:A:C8	3.01	0.48
20:Y:2181:C:H2'	20:Y:2182:C:H6	1.77	0.48
20:Y:2409:U:H4'	51:4:2328:G:H1	1.77	0.48
20:Y:2540:G:N3	33:k:6:VAL:O	2.46	0.48
20:Y:2578:A:HO2'	41:s:35:GLU:CD	2.21	0.48
20:Y:2772:G:H1'	29:g:23:ARG:HH22	1.77	0.48
20:Y:2857:A:H2'	20:Y:2858:G:O4'	2.13	0.48
20:Y:2953:U:H2'	20:Y:2954:C:H6	1.77	0.48
21:U:3:U:H5"	21:U:4:A:OP1	2.12	0.48
22:Z:186:ASP:OD1	22:Z:186:ASP:C	2.56	0.48
22:Z:211:ARG:O	22:Z:214:TRP:HB2	2.13	0.48
23:a:26:VAL:HA	23:a:194:ILE:O	2.12	0.48
25:c:115:LEU:CD1	25:c:118:ILE:HD11	2.43	0.48
30:h:22:VAL:HG22	30:h:33:ALA:CA	2.41	0.48
31:i:74:LEU:HD12	31:i:92:TRP:HE1	1.78	0.48
38:p:48:LYS:HD3	38:p:49:ILE:N	2.28	0.48
39:q:84:GLY:O	39:q:97:ILE:N	2.46	0.48
42:t:41:ARG:HE	42:t:43:GLY:CA	2.19	0.48
48:z:40:LYS:HE3	48:z:42:ARG:NH1	2.28	0.48
1:A:266:G:N2	1:A:266:G:OP1	2.46	0.48
1:A:531:U:H2'	1:A:532:U:O4'	2.14	0.48
1:A:830:G:H2'	1:A:831:A:C8	2.48	0.48
1:A:1052:G:H2'	1:A:1053:U:C6	2.48	0.48
1:A:1259:G:H4'	1:A:1260:A:N9	2.28	0.48
3:D:11:LYS:NZ	3:D:58:PHE:HB3	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:E:106:ILE:HD11	4:E:148:ILE:HB	1.95	0.48
11:L:68:PRO:C	11:L:99:ARG:HE	2.21	0.48
18:T:36:ARG:CZ	18:T:36:ARG:HB2	2.43	0.48
18:T:43:ASP:C	18:T:44:LYS:HD3	2.38	0.48
20:Y:14:G:H2'	20:Y:15:C:C6	2.48	0.48
20:Y:36:C:H2'	20:Y:37:U:H6	1.77	0.48
20:Y:645:G:H2'	20:Y:646:U:H6	1.76	0.48
20:Y:728:G:O2'	20:Y:729:C:H5'	2.13	0.48
20:Y:967:G:H2'	20:Y:968:C:C6	2.48	0.48
20:Y:1254:G:O2'	20:Y:1255:G:H5'	2.13	0.48
20:Y:1375:G:H2'	20:Y:1376:C:C6	2.49	0.48
20:Y:1637:G:H4'	20:Y:1805:G:O2'	2.13	0.48
20:Y:1714:A:H3'	20:Y:1715:A:C8	2.48	0.48
20:Y:1890:C:C2'	20:Y:1891:G:H5'	2.42	0.48
20:Y:2007:C:C2'	20:Y:2008:A:C8	2.95	0.48
20:Y:2167:U:C4'	20:Y:2168:U:H3'	2.42	0.48
20:Y:2681:U:O2'	20:Y:2682:G:H5'	2.12	0.48
20:Y:2907:C:O2	20:Y:2907:C:H2'	2.12	0.48
21:U:63:U:H2'	21:U:64:G:C8	2.48	0.48
25:c:104:TRP:N	25:c:104:TRP:CD1	2.79	0.48
30:h:15:GLU:CD	30:h:15:GLU:N	2.71	0.48
30:h:67:PHE:HA	30:h:68:LYS:NZ	2.27	0.48
39:q:91:THR:CG2	39:q:93:LYS:HD3	2.37	0.48
45:w:8:GLN:HE22	45:w:12:THR:HG22	1.78	0.48
1:A:158:A:H2'	1:A:159:A:N9	2.28	0.48
1:A:572:G:N2	1:A:629:G:N7	2.61	0.48
1:A:616:G:H2'	1:A:617:G:H8	1.79	0.48
1:A:736:C:O4'	7:H:2:THR:HG21	2.13	0.48
1:A:1414:C:H3'	1:A:1415:G:C8	2.46	0.48
2:C:5:ILE:HD12	2:C:10:PHE:HB2	1.95	0.48
2:C:131:ARG:HA	2:C:134:ARG:HG2	1.94	0.48
3:D:113:VAL:HG21	3:D:128:PRO:HA	1.96	0.48
4:E:106:ILE:HG23	4:E:172:LEU:HD21	1.96	0.48
6:G:9:LYS:NZ	6:G:94:ASP:OD2	2.46	0.48
6:G:112:ARG:NE	6:G:112:ARG:HA	2.29	0.48
10:K:81:ARG:HG2	10:K:82:LYS:NZ	2.28	0.48
11:L:76:GLU:HG2	11:L:77:HIS:ND1	2.27	0.48
11:L:108:LYS:HA	11:L:108:LYS:CE	2.38	0.48
15:P:6:LYS:O	15:P:7:LEU:HD12	2.12	0.48
20:Y:29:C:H2'	20:Y:30:U:C6	2.49	0.48
20:Y:216:A:H2'	20:Y:217:G:O4'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:508:G:H8	20:Y:508:G:OP2	1.96	0.48
20:Y:609:G:H2'	20:Y:610:C:H6	1.78	0.48
20:Y:775:U:C2	20:Y:776:G:N7	2.80	0.48
20:Y:786:C:O2'	20:Y:787:C:H5'	2.13	0.48
20:Y:819:G:N2	20:Y:841:G:O2'	2.47	0.48
20:Y:996:G:O5'	20:Y:997:G:H2'	2.12	0.48
20:Y:1047:A:OP2	20:Y:1287:C:H1'	2.14	0.48
20:Y:1118:A:H2'	20:Y:1119:A:H8	1.78	0.48
20:Y:1333:C:O2'	20:Y:1334:C:H5'	2.13	0.48
20:Y:1660:A:H3'	20:Y:1661:G:C8	2.45	0.48
20:Y:1753:C:H3'	20:Y:1754:G:H8	1.78	0.48
20:Y:1771:U:O2'	20:Y:1772:G:H5'	2.13	0.48
20:Y:1811:C:H2'	20:Y:1812:A:N7	2.27	0.48
20:Y:1890:C:H6	20:Y:1890:C:H3'	1.78	0.48
20:Y:2046:A:H2'	20:Y:2046:A:N3	2.28	0.48
20:Y:2196:G:O2'	20:Y:2197:G:H5'	2.13	0.48
20:Y:2247:A:C2'	20:Y:2248:C:H5'	2.43	0.48
20:Y:2435:U:H3'	20:Y:2436:A:C5'	2.43	0.48
20:Y:2580:G:P	41:s:24:LYS:NZ	2.87	0.48
20:Y:2596:G:O4'	47:y:48:HIS:HD2	1.97	0.48
20:Y:2818:C:N4	20:Y:2819:G:O6	2.46	0.48
24:b:122:ASP:O	24:b:123:ARG:HD3	2.12	0.48
31:i:3:ILE:HD13	31:i:93:TRP:CZ3	2.49	0.48
31:i:62:GLY:H	40:r:124:VAL:CG2	2.26	0.48
34:l:98:TYR:CE2	34:l:102:LEU:HD22	2.48	0.48
44:v:77:THR:HG23	44:v:106:LYS:NZ	2.29	0.48
47:y:16:GLU:OE1	47:y:49:GLN:NE2	2.36	0.48
1:A:280:C:O2	16:Q:56:THR:N	2.41	0.48
1:A:388:G:H4'	1:A:390:U:H5	1.75	0.48
1:A:487:C:P	1:A:488:C:HO2'	2.27	0.48
1:A:786:C:N4	1:A:787:A:H62	2.12	0.48
1:A:969:G:C6	1:A:1200:A:C6	3.02	0.48
1:A:1115:G:H1'	1:A:1121:G:C2	2.48	0.48
1:A:1150:A:H2'	1:A:1151:A:C8	2.48	0.48
1:A:1482:U:H1'	1:A:1483:A:P	2.54	0.48
2:C:69:THR:HG22	2:C:71:ARG:H	1.79	0.48
3:D:87:ARG:CZ	3:D:181:PRO:HD2	2.43	0.48
4:E:191:PRO:O	4:E:195:LEU:HD23	2.13	0.48
8:I:60:PRO:HA	8:I:65:GLN:NE2	2.28	0.48
15:P:52:ASP:OD1	15:P:52:ASP:C	2.56	0.48
19:V:73:LYS:HZ2	19:V:205:ASP:HA	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:319:G:H1	20:Y:492:C:H1'	1.77	0.48
20:Y:1156:A:O2'	20:Y:1157:G:H5'	2.12	0.48
20:Y:1189:G:N2	20:Y:1207:G:N3	2.62	0.48
20:Y:1219:U:H2'	20:Y:1220:C:H5'	1.95	0.48
20:Y:1253:C:O2'	20:Y:1254:G:OP1	2.22	0.48
20:Y:1423:A:H2'	20:Y:1424:G:O4'	2.14	0.48
20:Y:1732:U:H2'	20:Y:1733:C:H6	1.76	0.48
20:Y:1848:A:C6	20:Y:1855:A:N6	2.81	0.48
20:Y:1882:A:H2'	20:Y:1882:A:N3	2.28	0.48
20:Y:2094:G:C4'	20:Y:2095:G:OP1	2.61	0.48
20:Y:2244:A:C6	46:x:6:ARG:NH1	2.81	0.48
20:Y:2302:U:O3'	42:t:21:SER:HB3	2.14	0.48
20:Y:2304:C:H2'	20:Y:2305:A:H8	1.78	0.48
20:Y:2530:C:H5"	20:Y:2531:G:C2'	2.43	0.48
20:Y:2566:C:C2'	20:Y:2567:U:H5'	2.43	0.48
20:Y:3107:G:H1'	20:Y:3108:G:C8	2.48	0.48
22:Z:66:ASP:C	22:Z:66:ASP:OD2	2.55	0.48
23:a:17:PHE:CZ	34:l:74:PRO:HB3	2.49	0.48
24:b:118:ARG:NH1	24:b:123:ARG:HG3	2.27	0.48
26:d:64:SER:O	26:d:68:LEU:HG	2.13	0.48
27:e:93:GLU:CB	27:e:96:LYS:HD2	2.43	0.48
28:f:122:LEU:HD12	28:f:123:LYS:H	1.79	0.48
30:h:31:LYS:HG2	30:h:31:LYS:O	2.13	0.48
30:h:126:ALA:HB3	30:h:129:PHE:CE1	2.47	0.48
37:o:68:ASN:HB2	37:o:69:GLU:OE2	2.13	0.48
43:u:51:ARG:HA	43:u:54:ILE:CG2	2.44	0.48
48:z:14:ARG:O	48:z:15:ARG:C	2.55	0.48
1:A:23:C:N3	1:A:899:G:N1	2.62	0.48
1:A:254:G:H5"	16:Q:83:SER:CB	2.44	0.48
1:A:269:U:O2'	1:A:270:A:H5'	2.13	0.48
1:A:298:A:OP1	1:A:298:A:H8	1.96	0.48
1:A:566:U:O2	1:A:736:C:N3	2.46	0.48
1:A:783:G:H2'	1:A:784:U:H6	1.78	0.48
1:A:858:A:H2'	1:A:859:C:H6	1.78	0.48
2:C:55:GLU:C	2:C:56:ILE:HD13	2.38	0.48
3:D:86:LEU:O	3:D:90:GLU:HG3	2.13	0.48
7:H:47:SER:HA	7:H:65:LYS:HZ1	1.78	0.48
11:L:44:LYS:HG3	11:L:45:PRO:N	2.28	0.48
11:L:56:LYS:NZ	11:L:62:GLU:HG3	2.28	0.48
12:M:34:LEU:CD2	12:M:39:ILE:HB	2.44	0.48
13:N:47:MET:CE	13:N:53:LEU:HD21	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:P:39:ARG:H	15:P:50:GLN:HE22	1.61	0.48
15:P:55:ARG:NE	15:P:55:ARG:CA	2.67	0.48
15:P:71:LEU:CG	15:P:75:LYS:HE3	2.44	0.48
17:R:39:ARG:HD2	17:R:39:ARG:C	2.38	0.48
20:Y:251:A:OP1	30:h:49:MET:CE	2.61	0.48
20:Y:442:U:H2'	20:Y:443:C:O4'	2.13	0.48
20:Y:483:G:H2'	20:Y:484:C:C5	2.48	0.48
20:Y:520:A:O2'	20:Y:521:C:H5'	2.14	0.48
20:Y:591:G:HO2'	20:Y:592:A:P	2.37	0.48
20:Y:777:U:H2'	20:Y:778:G:C8	2.49	0.48
20:Y:879:A:OP1	22:Z:210:GLY:HA3	2.13	0.48
20:Y:1325:U:H3'	20:Y:1326:G:C5'	2.43	0.48
20:Y:1328:A:H61	20:Y:1350:G:H1'	1.78	0.48
20:Y:1884:G:C2'	20:Y:1885:G:H5'	2.43	0.48
20:Y:1884:G:H2'	20:Y:1885:G:O4'	2.13	0.48
20:Y:2163:U:H3'	20:Y:2164:U:H5'	1.95	0.48
20:Y:2231:U:H2'	20:Y:2232:C:H6	1.79	0.48
20:Y:2313:A:O2'	20:Y:2314:U:H5'	2.12	0.48
20:Y:2506:G:H4'	20:Y:2613:G:O2'	2.12	0.48
20:Y:2739:C:O2'	20:Y:2740:G:H5'	2.13	0.48
20:Y:2915:C:N3	20:Y:2943:A:H2	2.12	0.48
20:Y:3022:G:H3'	20:Y:3022:G:OP2	2.14	0.48
21:U:42:C:O2'	21:U:43:C:OP2	2.30	0.48
22:Z:176:ARG:CA	22:Z:182:ILE:HD12	2.43	0.48
23:a:26:VAL:HG23	23:a:194:ILE:N	2.29	0.48
25:c:72:PRO:HA	25:c:95:ARG:O	2.13	0.48
26:d:96:ARG:N	26:d:107:ALA:HB3	2.26	0.48
29:g:34:GLY:HA3	29:g:69:ARG:NH2	2.29	0.48
29:g:122:LEU:HD12	34:l:69:VAL:HG21	1.94	0.48
35:m:79:LEU:HD23	35:m:79:LEU:C	2.38	0.48
36:n:12:LYS:HB2	36:n:14:TYR:CZ	2.49	0.48
36:n:27:LEU:HD23	36:n:27:LEU:H	1.78	0.48
37:o:26:ARG:HD2	37:o:26:ARG:HA	1.60	0.48
47:y:10:LYS:HD3	49:1:34:GLU:CD	2.38	0.48
1:A:152:C:C2'	1:A:153:U:H5'	2.42	0.48
1:A:214:U:H2'	1:A:215:U:C4'	2.43	0.48
1:A:254:G:O2'	1:A:255:G:H5'	2.13	0.48
1:A:354:G:C2	1:A:355:C:C5	3.01	0.48
1:A:636:G:H2'	1:A:637:U:H6	1.77	0.48
1:A:1064:G:H21	1:A:1082:A:N6	2.11	0.48
1:A:1302:C:H2'	1:A:1303:U:O2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:41:ILE:HB	3:D:47:ARG:HH11	1.78	0.48
4:E:106:ILE:CG2	4:E:172:LEU:HD21	2.43	0.48
6:G:10:ARG:HH11	6:G:10:ARG:HG3	1.78	0.48
6:G:119:ARG:NH1	6:G:119:ARG:HG2	2.28	0.48
12:M:88:GLN:HG3	12:M:92:HIS:CE1	2.48	0.48
17:R:34:ASP:HB3	17:R:37:LEU:CB	2.44	0.48
20:Y:60:A:H61	20:Y:88:A:N6	2.11	0.48
20:Y:199:U:H2'	20:Y:200:C:C5'	2.37	0.48
20:Y:316:U:C2	20:Y:492:C:C4	3.00	0.48
20:Y:926:U:O2	20:Y:1366:A:C4	2.67	0.48
20:Y:1058:A:C2'	20:Y:1059:G:O4'	2.61	0.48
20:Y:1101:A:N6	20:Y:1102:G:O6	2.47	0.48
20:Y:1185:A:H2'	20:Y:1186:G:C8	2.49	0.48
20:Y:1220:C:H2'	20:Y:1221:A:H8	1.79	0.48
20:Y:1404:C:O2'	20:Y:1405:U:H5'	2.14	0.48
20:Y:1531:C:O2	20:Y:1531:C:H2'	2.12	0.48
20:Y:2037:U:C4	22:Z:160:GLY:HA3	2.49	0.48
20:Y:2788:A:H2'	20:Y:2789:A:O4'	2.14	0.48
20:Y:3098:G:O2'	20:Y:3099:C:H5'	2.14	0.48
22:Z:99:ASP:OD1	22:Z:99:ASP:C	2.57	0.48
22:Z:130:ASN:OD1	22:Z:130:ASN:C	2.56	0.48
22:Z:188:ARG:HE	22:Z:188:ARG:N	2.11	0.48
23:a:127:MET:SD	23:a:127:MET:C	2.97	0.48
24:b:52:THR:OG1	24:b:93:PRO:HD2	2.14	0.48
24:b:155:LEU:HD12	24:b:156:VAL:N	2.26	0.48
25:c:97:THR:C	25:c:98:LEU:HD23	2.38	0.48
25:c:166:THR:HG22	25:c:166:THR:O	2.12	0.48
26:d:96:ARG:O	26:d:107:ALA:N	2.47	0.48
28:f:135:GLN:N	28:f:135:GLN:CD	2.71	0.48
29:g:23:ARG:O	29:g:39:ILE:HB	2.12	0.48
29:g:75:SER:CB	34:l:72:THR:H	2.26	0.48
32:j:70:ILE:HD12	32:j:75:VAL:CG1	2.44	0.48
40:r:186:SER:O	40:r:190:LEU:HG	2.12	0.48
1:A:32:G:O2'	1:A:296:U:OP1	2.23	0.48
1:A:214:U:H2'	1:A:215:U:H4'	1.96	0.48
1:A:433:C:N3	1:A:434:C:N4	2.60	0.48
1:A:839:C:H2'	1:A:840:G:C8	2.49	0.48
1:A:929:G:O3'	12:M:109:THR:HG23	2.14	0.48
1:A:1002:U:H2'	1:A:1003:C:H6	1.74	0.48
1:A:1205:U:O3'	12:M:102:ARG:NH2	2.47	0.48
2:C:2:GLY:HA3	9:J:53:ARG:HH21	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:72:PRO:HA	2:C:75:VAL:CG2	2.43	0.48
3:D:52:GLU:CD	3:D:190:LEU:HD12	2.39	0.48
3:D:62:VAL:CG1	3:D:67:PHE:HB2	2.42	0.48
3:D:131:ARG:CZ	3:D:131:ARG:HA	2.43	0.48
7:H:32:LEU:O	7:H:36:ILE:HG23	2.13	0.48
9:J:51:VAL:CA	13:N:41:ARG:HH12	2.27	0.48
12:M:22:ILE:HG23	12:M:67:GLU:OE2	2.13	0.48
14:O:26:GLU:HA	14:O:29:VAL:CG2	2.43	0.48
16:Q:85:THR:HG22	16:Q:85:THR:O	2.13	0.48
16:Q:91:VAL:HB	16:Q:92:GLU:OE2	2.13	0.48
19:V:36:ASN:O	19:V:36:ASN:OD1	2.32	0.48
19:V:80:ILE:HA	19:V:83:GLU:CG	2.43	0.48
20:Y:266:U:H5"	20:Y:267:G:O4'	2.13	0.48
20:Y:400:C:H5'	20:Y:400:C:H6	1.79	0.48
20:Y:806:C:C1'	22:Z:43:ARG:HH12	2.26	0.48
20:Y:821:A:H5'	22:Z:7:LYS:HZ3	1.79	0.48
20:Y:881:C:H2'	20:Y:882:U:C6	2.48	0.48
20:Y:994:A:H2'	20:Y:995:U:C5'	2.40	0.48
20:Y:1008:G:O4'	20:Y:1010:U:H3'	2.14	0.48
20:Y:1092:G:HO2'	20:Y:1093:A:P	2.37	0.48
20:Y:1651:C:H2'	20:Y:1652:A:O4'	2.12	0.48
20:Y:1764:A:H2'	20:Y:1765:A:C8	2.49	0.48
20:Y:2073:A:H8	20:Y:2073:A:OP2	1.97	0.48
20:Y:2154:G:HO2'	20:Y:2155:U:P	2.33	0.48
20:Y:2250:A:O2'	20:Y:2251:G:H5'	2.13	0.48
20:Y:2527:G:H8	20:Y:2527:G:OP2	1.97	0.48
20:Y:2562:G:H2'	20:Y:2563:G:H8	1.77	0.48
20:Y:3108:G:C6	20:Y:3109:C:C4	3.01	0.48
22:Z:35:ARG:NH2	22:Z:64:VAL:HG21	2.28	0.48
24:b:196:PHE:N	24:b:196:PHE:CD2	2.81	0.48
26:d:87:LYS:HB2	26:d:166:GLU:CG	2.43	0.48
29:g:111:PHE:N	29:g:111:PHE:CD1	2.80	0.48
31:i:102:VAL:C	31:i:103:LEU:HD23	2.38	0.48
32:j:99:LYS:O	46:x:43:LEU:HD11	2.14	0.48
33:k:69:ASP:O	33:k:72:ALA:HB3	2.14	0.48
34:l:46:VAL:CG2	34:l:60:VAL:HG12	2.44	0.48
34:l:61:ARG:CZ	34:l:68:GLY:HA3	2.43	0.48
36:n:87:ARG:HB2	36:n:87:ARG:CZ	2.44	0.48
47:y:39:LYS:HE3	47:y:49:GLN:CA	2.42	0.48
1:A:322:C:H4'	18:T:18:ARG:CZ	2.40	0.48
1:A:810:G:O2'	1:A:811:U:H5'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:838:C:O2'	1:A:839:C:H5'	2.14	0.48
1:A:902:U:O2'	1:A:903:U:H5'	2.13	0.48
1:A:948:G:H2'	1:A:949:C:C6	2.48	0.48
1:A:1079:G:H2'	1:A:1080:C:H6	1.78	0.48
1:A:1435:U:O3'	1:A:1436:G:H2'	2.14	0.48
3:D:15:LEU:HD21	3:D:17:VAL:HB	1.95	0.48
3:D:66:GLN:HA	3:D:69:ARG:HB2	1.95	0.48
3:D:131:ARG:HA	3:D:131:ARG:NE	2.29	0.48
3:D:138:ILE:HG21	3:D:175:ILE:HB	1.94	0.48
4:E:73:VAL:C	4:E:92:ALA:HA	2.39	0.48
4:E:185:PRO:HD2	4:E:188:ASP:HB3	1.96	0.48
5:F:1:MET:H1	5:F:1:MET:CE	2.26	0.48
7:H:75:ALA:H	7:H:132:TRP:C	2.21	0.48
7:H:107:SER:HG	7:H:126:GLU:HB3	1.79	0.48
8:I:104:ALA:CB	8:I:123:PHE:HB3	2.41	0.48
9:J:63:GLU:HG2	9:J:64:HIS:N	2.27	0.48
10:K:74:LEU:HD23	10:K:74:LEU:N	2.29	0.48
15:P:6:LYS:CE	15:P:25:ALA:HA	2.43	0.48
15:P:60:LEU:HD12	15:P:64:ALA:O	2.12	0.48
17:R:71:ALA:HA	17:R:74:VAL:HG12	1.95	0.48
18:T:25:LYS:O	18:T:29:ARG:HG3	2.13	0.48
20:Y:124:A:O5'	20:Y:125:C:H5'	2.14	0.48
20:Y:242:G:N2	20:Y:254:G:H2'	2.29	0.48
20:Y:244:A:H62	20:Y:254:G:H21	1.60	0.48
20:Y:485:U:H2'	20:Y:486:G:H8	1.79	0.48
20:Y:631:C:H2'	20:Y:632:G:H8	1.73	0.48
20:Y:736:G:H22	20:Y:739:U:P	2.34	0.48
20:Y:976:A:C4	20:Y:1032:A:N6	2.82	0.48
20:Y:1048:A:H3'	20:Y:1049:G:H4'	1.96	0.48
20:Y:1272:C:H2'	20:Y:1273:G:O4'	2.13	0.48
20:Y:2032:A:OP1	20:Y:2032:A:H8	1.95	0.48
20:Y:2041:G:O2'	20:Y:2042:A:H5'	2.14	0.48
20:Y:2055:C:H42	20:Y:2122:U:H2'	1.78	0.48
20:Y:2325:U:O4	20:Y:2410:A:O2'	2.31	0.48
20:Y:2638:G:H2'	20:Y:2638:G:N3	2.29	0.48
20:Y:2735:U:O2'	20:Y:2736:C:H5'	2.14	0.48
20:Y:2751:C:H2'	20:Y:2752:U:C6	2.48	0.48
20:Y:2768:G:O2'	20:Y:2769:G:H5'	2.14	0.48
20:Y:2781:G:H2'	20:Y:2782:C:H6	1.79	0.48
20:Y:2816:G:H2'	20:Y:2817:U:H6	1.79	0.48
20:Y:3023:G:O2'	20:Y:3024:A:H5'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:U:58:A:C4	25:c:33:MET:HE1	2.49	0.48
22:Z:85:ASP:OD1	22:Z:85:ASP:C	2.56	0.48
25:c:172:GLU:O	25:c:176:LEU:HG	2.13	0.48
26:d:127:GLU:N	26:d:127:GLU:CD	2.72	0.48
27:e:102:VAL:CG2	27:e:139:ILE:HG21	2.39	0.48
29:g:70:ARG:HA	29:g:75:SER:O	2.14	0.48
29:g:104:ARG:HG2	29:g:104:ARG:NH1	2.28	0.48
31:i:64:VAL:CG1	31:i:106:LEU:HD21	2.44	0.48
35:m:72:ASN:ND2	35:m:110:VAL:HG21	2.16	0.48
43:u:60:VAL:CG2	43:u:64:ARG:HH12	2.23	0.48
45:w:35:VAL:CG2	45:w:37:ARG:HE	2.26	0.48
1:A:325:A:H2'	1:A:326:G:C8	2.49	0.48
1:A:519:A:H2'	1:A:520:G:C8	2.48	0.48
1:A:582:U:O2	1:A:617:G:C2	2.66	0.48
1:A:776:C:C3'	10:K:136:ARG:HH12	2.26	0.48
1:A:998:G:N2	1:A:1200:A:O4'	2.47	0.48
1:A:1011:U:H1'	1:A:1013:G:C6	2.48	0.48
1:A:1032:U:O4	1:A:1181:C:O2'	2.25	0.48
1:A:1259:G:H4'	1:A:1260:A:C8	2.49	0.48
1:A:1388:G:O2'	1:A:1503:A:H5'	2.14	0.48
1:A:1440:A:H5'	1:A:1441:G:OP2	2.13	0.48
7:H:10:PHE:HB2	7:H:33:LYS:HE3	1.96	0.48
15:P:59:TRP:CA	15:P:62:VAL:HG12	2.44	0.48
20:Y:25:A:C2'	20:Y:26:U:O4'	2.61	0.48
20:Y:87:C:H2'	20:Y:88:A:C8	2.49	0.48
20:Y:188:G:H2'	20:Y:204:G:N2	2.29	0.48
20:Y:207:C:H2'	20:Y:208:C:C6	2.42	0.48
20:Y:287:A:H4'	20:Y:288:U:OP1	2.14	0.48
20:Y:643:G:H2'	20:Y:644:G:H8	1.74	0.48
20:Y:708:G:H21	24:b:184:ASN:ND2	2.11	0.48
20:Y:808:A:OP1	22:Z:38:HIS:HB2	2.13	0.48
20:Y:845:C:O2	20:Y:845:C:H2'	2.13	0.48
20:Y:1081:C:O2'	20:Y:2497:A:N3	2.38	0.48
20:Y:1176:G:H21	27:e:119:ASN:N	2.11	0.48
20:Y:1177:G:N3	27:e:133:THR:OG1	2.47	0.48
20:Y:1565:A:H2'	20:Y:1602:U:C5	2.48	0.48
20:Y:1625:G:O2'	20:Y:1626:G:H5'	2.13	0.48
20:Y:2537:C:H4'	25:c:95:ARG:CZ	2.43	0.48
20:Y:2702:A:C8	20:Y:2753:G:C5	3.02	0.48
20:Y:2860:U:C4	20:Y:3006:G:O6	2.67	0.48
20:Y:2991:C:C2	20:Y:2992:C:C5	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:U:13:C:H3'	21:U:13:C:OP1	2.13	0.48
21:U:42:C:H41	25:c:76:ARG:HH22	1.61	0.48
21:U:70:G:C5	21:U:71:C:C6	3.02	0.48
25:c:14:ARG:HA	25:c:18:GLU:CD	2.38	0.48
25:c:43:VAL:HG13	25:c:161:ILE:HG13	1.96	0.48
26:d:81:THR:HG23	26:d:82:GLU:N	2.29	0.48
28:f:62:ILE:HD12	28:f:63:ALA:N	2.26	0.48
30:h:47:PRO:HB2	30:h:50:PHE:HD1	1.77	0.48
30:h:72:ARG:NH1	30:h:74:GLU:OE2	2.47	0.48
34:l:103:ARG:H	34:l:106:LYS:CD	2.20	0.48
36:n:10:GLY:O	36:n:12:LYS:HE2	2.14	0.48
39:q:32:LYS:CD	39:q:65:PRO:HB2	2.43	0.48
40:r:71:ILE:C	40:r:72:GLU:HG3	2.38	0.48
44:v:110:MET:SD	44:v:111:ASP:N	2.87	0.48
1:A:10:G:H22	4:E:128:THR:HG21	1.78	0.48
1:A:89:G:C3'	1:A:90:G:H8	2.27	0.48
1:A:138:A:H5"	16:Q:5:LYS:CB	2.31	0.48
1:A:262:G:H2'	1:A:262:G:N3	2.28	0.48
1:A:265:G:H22	1:A:267:C:H5'	1.78	0.48
1:A:311:C:H2'	1:A:311:C:O2	2.14	0.48
1:A:434:C:H2'	1:A:435:U:H6	1.69	0.48
1:A:731:U:H2'	1:A:732:G:C8	2.49	0.48
1:A:824:C:H5'	1:A:825:C:O4'	2.14	0.48
1:A:870:G:H3'	1:A:871:A:H8	1.79	0.48
4:E:174:ARG:N	4:E:177:GLU:OE2	2.47	0.48
6:G:38:LEU:CD2	6:G:42:ILE:HD12	2.44	0.48
9:J:8:ILE:HD12	9:J:99:ASN:O	2.14	0.48
9:J:35:SER:O	9:J:76:ILE:HG13	2.13	0.48
14:O:53:ARG:HA	14:O:56:LEU:HB2	1.95	0.48
15:P:71:LEU:HD11	15:P:75:LYS:HE3	1.95	0.48
16:Q:51:LYS:HD2	16:Q:51:LYS:C	2.39	0.48
17:R:42:ILE:C	17:R:49:ARG:HH21	2.22	0.48
19:V:192:ASP:OD2	19:V:194:ASP:N	2.37	0.48
20:Y:13:G:OP1	46:x:14:ARG:HB3	2.14	0.48
20:Y:23:G:H8	20:Y:23:G:OP2	1.97	0.48
20:Y:187:G:O2'	20:Y:188:G:H5'	2.14	0.48
20:Y:396:C:H2'	20:Y:397:C:H6	1.79	0.48
20:Y:485:U:H2'	20:Y:486:G:C8	2.49	0.48
20:Y:844:G:C2	20:Y:1992:U:C1'	2.96	0.48
20:Y:923:G:O2'	20:Y:924:G:H5'	2.14	0.48
20:Y:1451:A:O2'	20:Y:1452:G:H5'	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:1519:C:H2'	20:Y:1520:C:C5	2.49	0.48
20:Y:1650:G:H2'	20:Y:1651:C:H6	1.77	0.48
20:Y:1699:G:H2'	20:Y:1700:G:H8	1.79	0.48
20:Y:2129:C:H5"	20:Y:2130:G:OP1	2.14	0.48
20:Y:2519:C:H2'	20:Y:2520:U:C6	2.49	0.48
20:Y:2588:C:H2'	20:Y:2589:G:O4'	2.13	0.48
20:Y:2690:C:C2	20:Y:2691:C:C5	3.02	0.48
20:Y:2777:G:H2'	20:Y:2778:U:O4'	2.14	0.48
20:Y:2932:G:H1'	32:j:71:ARG:CZ	2.43	0.48
22:Z:78:LYS:NZ	22:Z:116:VAL:HG13	2.28	0.48
23:a:115:THR:HG22	23:a:207:VAL:HG13	1.94	0.48
24:b:3:LEU:CG	24:b:20:LEU:HD13	2.43	0.48
24:b:155:LEU:O	24:b:194:VAL:HA	2.14	0.48
24:b:158:ILE:CA	24:b:200:ALA:HB2	2.44	0.48
24:b:204:TYR:O	24:b:208:ASN:ND2	2.47	0.48
25:c:20:ARG:NH1	25:c:21:GLU:HA	2.29	0.48
25:c:76:ARG:HA	25:c:90:MET:O	2.14	0.48
29:g:87:ILE:CG1	29:g:91:ASN:HA	2.43	0.48
30:h:127:ASN:CG	30:h:128:LYS:N	2.71	0.48
31:i:81:THR:O	31:i:81:THR:HG23	2.14	0.48
36:n:78:PHE:C	36:n:78:PHE:CD1	2.92	0.48
45:w:23:LEU:HD11	45:w:28:LEU:CB	2.41	0.48
50:2:10:ILE:HB	50:2:32:HIS:CD2	2.49	0.48
51:4:2329:G:H2'	51:4:2330:U:O4'	2.14	0.48
51:4:2331:U:H2'	51:4:2332:U:C6	2.47	0.48
51:4:2345:U:O4	51:4:2399:A:H1'	2.11	0.48
1:A:108:G:H5'	1:A:389:A:H4'	1.96	0.47
1:A:112:A:H2'	1:A:113:G:C8	2.49	0.47
1:A:117:C:H41	1:A:235:C:H3'	1.79	0.47
1:A:502:C:H2'	1:A:503:A:O4'	2.14	0.47
1:A:584:G:N2	1:A:615:G:C5	2.82	0.47
1:A:674:G:C2'	1:A:675:A:O5'	2.62	0.47
1:A:686:A:H2'	1:A:687:U:C6	2.49	0.47
1:A:1089:C:H2'	1:A:1090:A:H8	1.80	0.47
1:A:1243:U:H2'	1:A:1244:G:C5'	2.40	0.47
1:A:1375:G:O2'	1:A:1376:U:H5'	2.14	0.47
2:C:22:TRP:O	13:N:54:PRO:HB3	2.14	0.47
2:C:133:MET:HE1	2:C:168:TYR:H	1.79	0.47
4:E:48:LYS:N	4:E:55:ARG:O	2.38	0.47
4:E:81:VAL:HG23	4:E:82:PRO:CD	2.44	0.47
4:E:87:LYS:N	4:E:87:LYS:HD2	2.28	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:E:100:PRO:HB3	4:E:174:ARG:HH21	1.78	0.47
5:F:27:LEU:C	5:F:27:LEU:HD12	2.38	0.47
9:J:51:VAL:HA	13:N:41:ARG:NH2	2.28	0.47
15:P:73:LEU:HA	15:P:76:ILE:HD12	1.96	0.47
16:Q:72:ASP:OD1	16:Q:97:ALA:N	2.47	0.47
17:R:31:ASP:O	17:R:67:ALA:HB1	2.13	0.47
19:V:35:ARG:CZ	19:V:40:ILE:HD13	2.44	0.47
20:Y:320:G:C5	20:Y:492:C:H2'	2.48	0.47
20:Y:503:A:C6	20:Y:504:C:N4	2.82	0.47
20:Y:533:C:H2'	20:Y:534:G:C8	2.49	0.47
20:Y:654:U:C4	20:Y:2260:C:H1'	2.49	0.47
20:Y:736:G:N1	20:Y:738:A:H5"	2.28	0.47
20:Y:778:G:C2'	20:Y:779:U:O5'	2.62	0.47
20:Y:1014:G:H5'	20:Y:1015:A:OP1	2.13	0.47
20:Y:1035:G:H2'	20:Y:1036:C:H6	1.79	0.47
20:Y:1103:C:N3	20:Y:1104:C:C5	2.82	0.47
20:Y:1226:U:O5'	20:Y:1226:U:H6	1.97	0.47
20:Y:1248:U:C2	20:Y:2249:G:H5"	2.49	0.47
20:Y:1341:U:H2'	20:Y:1342:C:H6	1.79	0.47
20:Y:2007:C:O2	20:Y:2007:C:C2'	2.61	0.47
20:Y:2037:U:C2	22:Z:202:SER:HB3	2.49	0.47
20:Y:2087:C:O2'	20:Y:2088:C:H5"	2.13	0.47
20:Y:2222:A:O2'	20:Y:2223:C:H5'	2.13	0.47
20:Y:2502:A:H5'	41:s:12:ASN:OD1	2.14	0.47
20:Y:2507:C:C4	20:Y:2508:C:C4	3.03	0.47
20:Y:2555:G:H4'	41:s:43:THR:H	1.79	0.47
20:Y:2600:A:H3'	20:Y:2601:A:C8	2.44	0.47
20:Y:2967:C:OP1	50:2:33:LYS:HE3	2.14	0.47
20:Y:3069:G:N1	20:Y:3088:C:O2	2.47	0.47
20:Y:3105:C:O2	46:x:44:LEU:HB3	2.12	0.47
22:Z:26:ARG:NH1	22:Z:81:HIS:HB2	2.29	0.47
22:Z:68:ARG:NH2	22:Z:152:GLY:HA3	2.28	0.47
23:a:14:THR:CG2	23:a:15:GLN:N	2.74	0.47
25:c:9:PRO:O	25:c:13:GLN:OE1	2.32	0.47
25:c:118:ILE:HB	25:c:121:PHE:HB3	1.96	0.47
25:c:123:GLY:C	25:c:124:LEU:HD22	2.39	0.47
26:d:35:LEU:HD23	26:d:36:ASP:C	2.39	0.47
27:e:112:GLU:HA	27:e:112:GLU:OE1	2.14	0.47
28:f:6:PRO:HG3	28:f:45:THR:HG23	1.95	0.47
29:g:12:ASP:CG	29:g:14:THR:HG23	2.39	0.47
30:h:6:LEU:HD23	30:h:6:LEU:C	2.39	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:i:1:MET:HE1	31:i:44:ASN:ND2	2.30	0.47
31:i:61:GLY:HA3	31:i:108:TYR:CE1	2.46	0.47
32:j:52:ILE:HG21	32:j:94:TYR:CG	2.49	0.47
32:j:86:PHE:C	32:j:87:TYR:HD1	2.22	0.47
34:l:96:LEU:CD1	34:l:99:LEU:HD11	2.34	0.47
35:m:73:ASP:O	35:m:73:ASP:OD1	2.32	0.47
36:n:50:SER:C	36:n:55:LEU:HD21	2.39	0.47
38:p:93:ILE:CD1	38:p:96:PHE:HB2	2.43	0.47
39:q:10:LEU:HD11	39:q:18:GLY:HA2	1.96	0.47
40:r:11:LEU:O	40:r:11:LEU:HD12	2.14	0.47
40:r:13:ALA:HB1	40:r:47:LEU:HD12	1.96	0.47
40:r:47:LEU:HD23	40:r:47:LEU:H	1.79	0.47
40:r:143:GLN:O	40:r:144:LEU:HD23	2.14	0.47
42:t:18:VAL:CG2	42:t:24:ARG:HD3	2.41	0.47
44:v:83:LYS:HA	44:v:83:LYS:CE	2.38	0.47
49:1:8:SER:O	49:1:12:LYS:HD2	2.14	0.47
51:4:2372:U:H2'	51:4:2373:G:C8	2.49	0.47
51:4:2396:A:O2'	51:4:2397:C:H5'	2.13	0.47
1:A:23:C:C2	1:A:899:G:N1	2.82	0.47
1:A:123:G:H21	16:Q:20:ARG:HA	1.78	0.47
1:A:185:G:O6	1:A:204:A:C6	2.67	0.47
1:A:333:C:H2'	1:A:334:C:C6	2.48	0.47
1:A:383:A:H2'	1:A:384:G:O4'	2.13	0.47
1:A:550:G:H4'	1:A:799:G:C2'	2.44	0.47
1:A:596:A:H2'	1:A:605:G:H1	1.79	0.47
1:A:938:U:H2'	1:A:939:U:H6	1.79	0.47
1:A:1176:C:H5"	1:A:1177:A:OP2	2.15	0.47
1:A:1456:U:H3'	1:A:1457:G:H5"	1.96	0.47
2:C:34:GLU:O	2:C:38:ILE:HG23	2.14	0.47
2:C:173:VAL:O	2:C:175:LEU:CD2	2.61	0.47
4:E:120:MET:O	4:E:150:ALA:HA	2.14	0.47
5:F:3:PRO:HD3	5:F:66:LYS:CE	2.40	0.47
5:F:6:ILE:HD11	5:F:63:ILE:CG2	2.44	0.47
5:F:11:ASP:OD1	5:F:13:THR:HG23	2.14	0.47
7:H:87:VAL:C	7:H:88:TYR:HD1	2.22	0.47
10:K:43:ILE:O	10:K:51:ILE:HD12	2.14	0.47
10:K:71:ALA:HA	10:K:74:LEU:HG	1.96	0.47
10:K:88:VAL:C	10:K:89:LYS:HD2	2.40	0.47
12:M:81:LYS:HG3	12:M:84:ILE:HD11	1.95	0.47
19:V:56:PHE:CD1	19:V:198:TYR:HE2	2.32	0.47
20:Y:304:U:H2'	20:Y:305:G:H8	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:305:G:H2'	20:Y:306:U:C6	2.49	0.47
20:Y:401:C:O2'	20:Y:402:G:H5'	2.14	0.47
20:Y:810:G:H1'	20:Y:883:G:N2	2.28	0.47
20:Y:843:G:H4'	22:Z:13:ARG:HH11	1.76	0.47
20:Y:961:U:O2'	20:Y:963:U:O4	2.32	0.47
20:Y:1187:A:O2'	20:Y:1192:G:O6	2.31	0.47
20:Y:1225:G:H2'	20:Y:1226:U:C6	2.49	0.47
20:Y:1379:G:C5'	46:x:8:MET:HE1	2.44	0.47
20:Y:1734:C:O2'	20:Y:1735:U:H5'	2.14	0.47
20:Y:1932:U:H2'	20:Y:1932:U:P	2.54	0.47
20:Y:1936:G:C2'	20:Y:1937:U:H5'	2.43	0.47
20:Y:2490:A:H4'	20:Y:2491:A:C2	2.49	0.47
20:Y:2528:G:C4	25:c:137:PHE:O	2.67	0.47
20:Y:2591:G:H2'	20:Y:2592:C:C6	2.49	0.47
20:Y:2700:A:C2'	20:Y:2701:U:O4'	2.62	0.47
20:Y:2976:C:H2'	20:Y:2977:A:O4'	2.14	0.47
20:Y:3084:G:O2'	20:Y:3085:G:H5'	2.13	0.47
22:Z:228:PRO:HD3	22:Z:235:GLY:N	2.28	0.47
23:a:147:ARG:CB	23:a:148:PRO:HD2	2.43	0.47
24:b:4:LYS:HE2	24:b:17:SER:HB3	1.96	0.47
27:e:74:THR:HB	27:e:75:PRO:CD	2.44	0.47
31:i:40:ALA:O	31:i:97:VAL:HG22	2.13	0.47
33:k:26:ARG:HD2	33:k:27:LYS:N	2.28	0.47
45:w:8:GLN:NE2	45:w:23:LEU:HD21	2.29	0.47
45:w:23:LEU:HD12	45:w:23:LEU:C	2.39	0.47
47:y:23:TYR:HD1	47:y:40:LYS:HZ1	1.62	0.47
1:A:173:C:P	18:T:20:ARG:HH22	2.37	0.47
1:A:289:G:H2'	1:A:290:C:C6	2.49	0.47
1:A:517:G:C4'	11:L:110:ARG:HH12	2.27	0.47
1:A:648:A:N6	1:A:719:C:H42	2.12	0.47
1:A:815:G:P	17:R:59:GLN:CG	3.01	0.47
1:A:946:A:O4'	9:J:56:HIS:HE1	1.97	0.47
1:A:1058:U:C1'	1:A:1059:G:P	3.02	0.47
1:A:1177:A:HO2'	1:A:1178:A:P	2.34	0.47
1:A:1218:C:H5"	1:A:1219:A:C8	2.49	0.47
1:A:1247:G:N2	1:A:1250:A:OP2	2.42	0.47
1:A:1412:C:O2'	1:A:1413:C:H5'	2.14	0.47
2:C:186:LEU:C	2:C:186:LEU:HD12	2.40	0.47
3:D:73:GLU:OE1	3:D:76:ARG:NH2	2.48	0.47
4:E:178:VAL:HG13	4:E:181:ARG:HE	1.80	0.47
4:E:190:ALA:HB1	4:E:194:MET:CE	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:H:49:TYR:O	7:H:50:ARG:CZ	2.62	0.47
7:H:121:GLN:HA	7:H:121:GLN:OE1	2.15	0.47
8:I:41:LEU:O	8:I:42:VAL:HG13	2.14	0.47
8:I:115:ARG:O	8:I:118:LEU:HD12	2.15	0.47
12:M:78:ILE:HD12	12:M:92:HIS:CD2	2.49	0.47
12:M:92:HIS:CE1	12:M:98:VAL:HG21	2.49	0.47
14:O:11:ILE:HA	14:O:14:GLN:HE22	1.79	0.47
14:O:85:LEU:HB3	14:O:87:LEU:HD21	1.96	0.47
19:V:15:HIS:O	19:V:41:ILE:HD12	2.14	0.47
19:V:149:GLY:O	19:V:152:ARG:HG2	2.13	0.47
19:V:162:TRP:HA	19:V:184:ILE:O	2.14	0.47
19:V:163:VAL:O	19:V:185:ALA:HA	2.15	0.47
20:Y:729:C:H2'	20:Y:730:G:O4'	2.14	0.47
20:Y:929:C:H2'	20:Y:930:C:H6	1.78	0.47
20:Y:1106:A:O3'	45:w:11:SER:HB3	2.15	0.47
20:Y:1129:G:OP2	35:m:66:ASN:ND2	2.47	0.47
20:Y:1346:U:H2'	20:Y:1347:G:C8	2.49	0.47
20:Y:1436:C:HO2'	20:Y:1437:A:P	2.35	0.47
20:Y:2050:C:H2'	20:Y:2051:U:O4'	2.14	0.47
20:Y:2219:U:H1'	29:g:3:GLN:NE2	2.24	0.47
20:Y:3109:C:C2	20:Y:3110:C:C5	3.02	0.47
22:Z:174:ALA:C	22:Z:175:LEU:HD12	2.40	0.47
24:b:184:ASN:OD1	24:b:184:ASN:C	2.56	0.47
26:d:26:VAL:HG21	26:d:76:LEU:HD13	1.95	0.47
26:d:78:THR:O	26:d:81:THR:HG22	2.14	0.47
27:e:84:ALA:O	27:e:106:GLN:NE2	2.47	0.47
29:g:25:LEU:HB2	29:g:38:VAL:O	2.14	0.47
30:h:98:LEU:HD23	30:h:98:LEU:HA	1.69	0.47
31:i:35:GLN:HG3	31:i:101:ARG:O	2.14	0.47
35:m:102:ASP:CG	35:m:105:ALA:H	2.15	0.47
36:n:51:LYS:C	36:n:55:LEU:HG	2.37	0.47
40:r:30:ASP:OD1	40:r:30:ASP:C	2.57	0.47
40:r:64:ASN:HD21	40:r:140:ILE:CB	2.24	0.47
41:s:12:ASN:CA	41:s:14:ARG:HH12	2.24	0.47
1:A:246:A:N6	1:A:279:A:O4'	2.47	0.47
1:A:415:C:H3'	1:A:416:G:H8	1.79	0.47
1:A:957:A:C8	1:A:1339:A:H2'	2.49	0.47
1:A:1118:A:H2'	1:A:1118:A:OP1	2.15	0.47
1:A:1150:A:H2'	1:A:1151:A:H8	1.79	0.47
1:A:1472:G:O2'	1:A:1473:A:H5'	2.14	0.47
2:C:167:PHE:CE2	2:C:169:ARG:HD3	2.40	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:182:GLU:N	3:D:185:GLN:HE21	2.10	0.47
4:E:107:THR:HG23	4:E:108:HIS:H	1.80	0.47
4:E:112:GLY:CA	4:E:168:ALA:HB2	2.45	0.47
4:E:122:ARG:NE	4:E:123:PRO:O	2.47	0.47
6:G:115:THR:OG1	6:G:118:GLU:HG3	2.15	0.47
8:I:28:THR:CG2	8:I:106:ALA:HB2	2.44	0.47
12:M:103:THR:HG22	12:M:103:THR:O	2.14	0.47
15:P:3:VAL:O	15:P:64:ALA:HA	2.14	0.47
15:P:17:GLN:CA	15:P:41:HIS:HD1	2.20	0.47
15:P:37:ILE:HD12	15:P:52:ASP:CB	2.32	0.47
17:R:42:ILE:HD13	17:R:77:LEU:HD23	1.96	0.47
19:V:96:TRP:NE1	19:V:172:ALA:HB2	2.30	0.47
20:Y:580:G:O2'	20:Y:581:G:H5'	2.14	0.47
20:Y:619:C:H5'	35:m:38:GLN:HE22	1.79	0.47
20:Y:726:A:H2'	20:Y:727:A:C8	2.49	0.47
20:Y:738:A:C2	20:Y:2593:A:H1'	2.50	0.47
20:Y:774:G:C4	20:Y:775:U:C5	3.02	0.47
20:Y:884:U:H5"	20:Y:885:G:OP2	2.15	0.47
20:Y:899:G:O4'	22:Z:227:ASN:ND2	2.47	0.47
20:Y:917:A:N3	20:Y:917:A:H2'	2.28	0.47
20:Y:1152:G:H2'	20:Y:1153:U:O4'	2.13	0.47
20:Y:1599:U:H5'	20:Y:1600:G:C8	2.50	0.47
20:Y:1637:G:H4'	20:Y:1805:G:H2'	1.95	0.47
20:Y:1729:A:O2'	20:Y:1731:A:H5'	2.14	0.47
20:Y:1791:A:H2'	20:Y:1792:A:O4'	2.14	0.47
20:Y:1816:C:H2'	20:Y:1817:C:O4'	2.14	0.47
20:Y:2068:U:H2'	20:Y:2069:U:H6	1.77	0.47
20:Y:2206:C:N3	20:Y:2207:U:C5	2.83	0.47
20:Y:2279:C:C5'	20:Y:2280:G:H5"	2.43	0.47
20:Y:2442:U:O2'	20:Y:2443:U:H5'	2.14	0.47
20:Y:2467:U:H2'	20:Y:2468:U:C6	2.49	0.47
20:Y:2494:U:C4	20:Y:2495:G:C5	3.03	0.47
20:Y:2529:A:N1	25:c:158:GLY:HA2	2.29	0.47
20:Y:2558:C:O2	33:k:27:LYS:HE2	2.14	0.47
20:Y:2633:G:C3'	20:Y:2634:G:O4'	2.62	0.47
20:Y:2829:U:H3	20:Y:2830:C:H41	1.62	0.47
20:Y:2861:U:H5"	23:a:85:ARG:NH1	2.29	0.47
21:U:61:C:C2'	21:U:62:C:H5'	2.44	0.47
21:U:112:C:H2'	21:U:113:G:C8	2.49	0.47
22:Z:130:ASN:HB2	22:Z:192:THR:HG22	1.96	0.47
22:Z:206:TRP:HD1	22:Z:211:ARG:NH1	2.12	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:Z:206:TRP:O	22:Z:211:ARG:HD3	2.15	0.47
23:a:12:GLY:O	23:a:13:MET:HB3	2.13	0.47
23:a:76:ASN:OD1	23:a:76:ASN:C	2.57	0.47
23:a:201:ARG:O	23:a:204:GLY:N	2.41	0.47
24:b:74:ALA:C	24:b:76:GLN:HE21	2.21	0.47
24:b:90:VAL:HG23	24:b:91:HIS:CD2	2.49	0.47
24:b:120:ARG:HB2	24:b:120:ARG:HH11	1.78	0.47
25:c:77:ALA:CB	25:c:88:GLU:HA	2.36	0.47
25:c:177:LEU:HD22	25:c:184:PHE:CZ	2.49	0.47
26:d:104:LEU:HD12	26:d:104:LEU:N	2.29	0.47
27:e:74:THR:HB	27:e:75:PRO:HD2	1.96	0.47
28:f:16:TYR:HD2	28:f:140:PHE:HB2	1.79	0.47
28:f:86:LYS:O	28:f:87:ARG:HG2	2.15	0.47
32:j:37:THR:HA	32:j:110:MET:SD	2.54	0.47
32:j:70:ILE:HD12	32:j:75:VAL:HG13	1.95	0.47
33:k:122:GLU:CD	33:k:122:GLU:H	2.22	0.47
39:q:72:MET:HE2	39:q:80:PRO:C	2.39	0.47
1:A:344:A:OP2	1:A:345:C:N4	2.48	0.47
1:A:766:G:C2'	1:A:767:A:H5'	2.44	0.47
1:A:1040:U:O3'	9:J:53:ARG:NE	2.47	0.47
1:A:1174:G:O2'	1:A:1175:U:H5'	2.14	0.47
1:A:1298:G:H4'	13:N:18:VAL:CG1	2.45	0.47
3:D:80:LYS:HZ2	3:D:83:ASP:CG	2.21	0.47
4:E:122:ARG:HD2	4:E:123:PRO:N	2.30	0.47
5:F:1:MET:HE2	5:F:1:MET:H2	1.80	0.47
18:T:64:LYS:HE2	18:T:64:LYS:HB3	1.71	0.47
19:V:179:LEU:CG	19:V:181:ILE:HD11	2.33	0.47
20:Y:9:U:C2'	20:Y:10:A:H5'	2.44	0.47
20:Y:801:U:H5"	20:Y:903:A:H61	1.78	0.47
20:Y:944:A:N7	20:Y:2472:C:H5'	2.29	0.47
20:Y:947:U:C2'	20:Y:948:G:O5'	2.62	0.47
20:Y:987:A:H2	20:Y:1021:G:H1	1.61	0.47
20:Y:1145:A:HO2'	20:Y:1146:A:C5'	2.28	0.47
20:Y:1145:A:O2'	20:Y:1146:A:O5'	2.30	0.47
20:Y:1321:C:H2'	20:Y:1322:C:H6	1.78	0.47
20:Y:1691:A:H2'	20:Y:1692:G:O4'	2.15	0.47
20:Y:1921:G:O2'	20:Y:1922:G:H5'	2.14	0.47
20:Y:1964:U:H2'	20:Y:1965:G:C8	2.46	0.47
20:Y:2075:G:O5'	20:Y:2108:A:N6	2.47	0.47
20:Y:2427:G:C2'	20:Y:2428:G:H5'	2.44	0.47
20:Y:2534:A:C5	25:c:84:PHE:HZ	2.32	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:2750:G:H1'	50:2:1:MET:HB2	1.97	0.47
20:Y:2870:C:H2'	20:Y:2871:U:O4'	2.14	0.47
20:Y:2905:C:N3	20:Y:2951:G:N2	2.63	0.47
23:a:21:ASN:OD1	34:l:79:ASN:N	2.47	0.47
25:c:74:VAL:HG21	25:c:91:PRO:HB2	1.96	0.47
27:e:22:PRO:CG	27:e:26:VAL:HB	2.44	0.47
29:g:11:ALA:O	29:g:98:ILE:HG23	2.14	0.47
29:g:31:ARG:CD	29:g:32:TYR:HE1	2.22	0.47
29:g:107:ARG:CA	29:g:112:MET:HE1	2.41	0.47
33:k:50:GLN:HG3	33:k:62:ALA:HB2	1.95	0.47
40:r:18:ARG:HB2	40:r:23:ALA:CB	2.45	0.47
51:4:2330:U:H3'	51:4:2331:U:C6	2.50	0.47
1:A:495:G:H2'	1:A:496:U:C6	2.46	0.47
1:A:563:A:C2	1:A:564:G:H1'	2.50	0.47
1:A:575:G:C4'	1:A:576:C:H5	2.27	0.47
1:A:635:A:O2'	1:A:636:G:H5'	2.14	0.47
1:A:721:G:N2	1:A:722:G:H1'	2.29	0.47
1:A:1158:G:H3'	1:A:1159:G:C8	2.49	0.47
1:A:1338:G:H8	1:A:1338:G:O5'	1.97	0.47
1:A:1352:C:H2'	1:A:1353:G:O4'	2.15	0.47
2:C:76:ILE:HG13	2:C:83:ALA:HB2	1.96	0.47
10:K:33:LYS:HG3	10:K:33:LYS:O	2.13	0.47
20:Y:123:A:C2	48:z:21:PHE:CE2	3.02	0.47
20:Y:265:A:C4	20:Y:516:G:O6	2.68	0.47
20:Y:539:C:P	24:b:53:LYS:NZ	2.87	0.47
20:Y:579:A:H2'	20:Y:580:G:H5'	1.96	0.47
20:Y:718:C:C2'	20:Y:719:G:O5'	2.63	0.47
20:Y:850:A:H2'	20:Y:851:C:H5'	1.97	0.47
20:Y:950:A:N6	20:Y:951:G:O6	2.48	0.47
20:Y:976:A:H2'	20:Y:977:G:C5'	2.44	0.47
20:Y:1048:A:H3'	20:Y:1049:G:O4'	2.15	0.47
20:Y:1235:U:H2'	20:Y:1236:G:H8	1.80	0.47
20:Y:1521:C:C2	20:Y:1522:G:C8	3.01	0.47
20:Y:1670:G:C2'	20:Y:1671:U:H5'	2.44	0.47
20:Y:2007:C:H5"	20:Y:2008:A:OP2	2.15	0.47
20:Y:2044:U:H2'	20:Y:2045:G:O4'	2.14	0.47
20:Y:2165:C:C4	20:Y:2166:C:N4	2.83	0.47
20:Y:2731:C:O2	20:Y:2807:G:C2	2.67	0.47
20:Y:2877:U:H5"	20:Y:2878:A:O5'	2.15	0.47
20:Y:2881:A:H4'	26:d:93:VAL:CG1	2.45	0.47
20:Y:3030:A:H2'	20:Y:3031:A:C8	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:3115:A:C2	20:Y:3116:C:C6	3.02	0.47
22:Z:13:ARG:O	22:Z:13:ARG:CG	2.62	0.47
22:Z:96:HIS:CD2	22:Z:102:LYS:HG2	2.49	0.47
23:a:4:LYS:HG3	23:a:4:LYS:H	1.44	0.47
24:b:142:LYS:HA	24:b:145:LEU:HG	1.97	0.47
24:b:179:SER:OG	24:b:180:PRO:HD3	2.14	0.47
25:c:133:GLY:O	25:c:134:ASN:ND2	2.48	0.47
26:d:45:ARG:HH22	26:d:49:GLY:CA	2.17	0.47
26:d:150:ARG:HA	26:d:163:VAL:HG13	1.96	0.47
28:f:122:LEU:HD12	28:f:123:LYS:N	2.29	0.47
31:i:69:PHE:CD2	31:i:69:PHE:C	2.92	0.47
32:j:3:LYS:CG	32:j:4:PRO:CD	2.92	0.47
32:j:73:LYS:CA	32:j:76:VAL:HG12	2.43	0.47
34:l:74:PRO:CB	34:l:77:SER:HA	2.44	0.47
36:n:36:SER:C	36:n:37:LEU:HD12	2.40	0.47
36:n:63:GLU:C	36:n:63:GLU:OE1	2.58	0.47
39:q:24:LEU:HB2	39:q:34:LEU:HD23	1.95	0.47
40:r:28:ARG:HB2	40:r:28:ARG:HH11	1.78	0.47
40:r:98:LEU:HD23	40:r:98:LEU:O	2.15	0.47
40:r:126:GLN:NE2	40:r:129:ASN:OD1	2.48	0.47
41:s:19:GLN:HB3	41:s:21:LEU:HD21	1.96	0.47
1:A:334:C:H2'	1:A:335:C:C6	2.46	0.47
1:A:335:C:C2	1:A:336:A:C8	3.03	0.47
1:A:339:C:OP2	29:g:97:ARG:CZ	2.62	0.47
1:A:363:A:OP1	11:L:31:ARG:HB3	2.15	0.47
1:A:525:C:P	3:D:57:ARG:HH12	2.38	0.47
1:A:528:G:H2'	1:A:529:C:C6	2.50	0.47
1:A:531:U:O2'	1:A:532:U:H5'	2.14	0.47
1:A:567:G:C4	1:A:735:G:C6	3.03	0.47
1:A:567:G:H1'	1:A:735:G:C2	2.50	0.47
1:A:616:G:O6	1:A:617:G:O6	2.31	0.47
1:A:655:A:H1'	10:K:127:HIS:CE1	2.50	0.47
1:A:920:A:N3	1:A:1359:U:H1'	2.28	0.47
1:A:926:G:H5"	1:A:927:G:OP2	2.14	0.47
1:A:937:A:H2'	1:A:938:U:H6	1.77	0.47
1:A:1021:U:H2'	1:A:1022:G:O4'	2.14	0.47
1:A:1091:A:H2'	1:A:1092:C:H6	1.75	0.47
1:A:1113:A:H2'	1:A:1114:C:H6	1.79	0.47
1:A:1134:A:O2'	1:A:1135:G:H5'	2.15	0.47
1:A:1221:U:O4'	6:G:38:LEU:HD21	2.15	0.47
1:A:1395:C:C2'	1:A:1396:A:H8	2.28	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1436:G:O3'	1:A:1437:U:H4'	2.14	0.47
2:C:81:THR:O	2:C:84:ASP:OD1	2.33	0.47
3:D:193:GLN:O	3:D:197:GLU:HG2	2.15	0.47
4:E:52:GLY:HA3	4:E:55:ARG:HH22	1.79	0.47
4:E:64:VAL:HG12	4:E:72:GLY:O	2.14	0.47
5:F:3:PRO:CG	5:F:66:LYS:HE2	2.45	0.47
6:G:32:LEU:HD23	6:G:32:LEU:N	2.30	0.47
6:G:40:GLU:CA	6:G:43:VAL:HG12	2.43	0.47
6:G:97:THR:O	6:G:101:LEU:HD13	2.15	0.47
7:H:3:MET:SD	7:H:3:MET:N	2.87	0.47
7:H:85:LEU:HD23	7:H:85:LEU:C	2.38	0.47
8:I:72:LEU:HD11	8:I:77:ARG:O	2.14	0.47
8:I:75:VAL:HB	8:I:107:LEU:HD11	1.96	0.47
10:K:46:PRO:HG2	10:K:47:GLN:NE2	2.29	0.47
11:L:56:LYS:HZ2	11:L:62:GLU:HG3	1.79	0.47
14:O:4:THR:OG1	14:O:5:ALA:N	2.41	0.47
14:O:29:VAL:HG21	14:O:81:LEU:CD2	2.38	0.47
16:Q:8:LYS:O	16:Q:9:TYR:HD2	1.98	0.47
20:Y:104:G:H2'	20:Y:105:A:H8	1.79	0.47
20:Y:248:G:C6	20:Y:250:G:N2	2.82	0.47
20:Y:272:A:N6	20:Y:313:G:N1	2.62	0.47
20:Y:275:C:H41	20:Y:311:G:H21	1.62	0.47
20:Y:317:G:C6	20:Y:509:U:C4	3.02	0.47
20:Y:364:A:H2'	20:Y:365:U:C6	2.49	0.47
20:Y:402:G:N3	24:b:171:ASN:ND2	2.62	0.47
20:Y:499:G:P	20:Y:2630:A:O2'	2.72	0.47
20:Y:514:C:O2	20:Y:514:C:H2'	2.14	0.47
20:Y:526:C:O2'	20:Y:527:A:H5'	2.14	0.47
20:Y:569:G:C2	20:Y:594:U:C2	3.02	0.47
20:Y:638:U:O2'	20:Y:639:C:P	2.72	0.47
20:Y:640:G:C6	20:Y:642:G:N7	2.83	0.47
20:Y:674:U:C2	20:Y:675:G:N7	2.82	0.47
20:Y:683:G:O2'	20:Y:685:G:H5'	2.15	0.47
20:Y:688:A:C2	20:Y:778:G:N1	2.83	0.47
20:Y:932:C:C2	20:Y:933:G:C8	3.03	0.47
20:Y:954:U:H2'	20:Y:955:C:C6	2.50	0.47
20:Y:1139:A:H3'	20:Y:1139:A:N3	2.29	0.47
20:Y:1180:G:O6	20:Y:1206:A:O2'	2.33	0.47
20:Y:1183:U:H2'	20:Y:1184:U:C1'	2.44	0.47
20:Y:1483:G:H8	20:Y:1483:G:OP2	1.97	0.47
20:Y:1655:A:H2'	20:Y:1656:A:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:1703:G:C2	20:Y:1727:A:H1'	2.49	0.47
20:Y:1729:A:H2'	20:Y:1731:A:O4'	2.14	0.47
20:Y:1787:A:H3'	22:Z:86:PRO:HG2	1.97	0.47
20:Y:1805:G:C6	20:Y:1806:A:N7	2.82	0.47
20:Y:1885:G:H21	20:Y:2218:C:H42	1.62	0.47
20:Y:1968:U:H2'	20:Y:1969:G:C8	2.50	0.47
20:Y:2007:C:C2	20:Y:2008:A:N7	2.83	0.47
20:Y:2034:G:OP1	22:Z:88:ARG:NH2	2.47	0.47
20:Y:2148:C:C4	20:Y:2149:C:N4	2.82	0.47
20:Y:2245:C:O2	20:Y:2245:C:C3'	2.63	0.47
20:Y:2488:C:O2'	20:Y:2489:U:H5'	2.14	0.47
20:Y:2528:G:O4'	25:c:137:PHE:CD1	2.67	0.47
20:Y:2544:U:O2	20:Y:2545:G:N2	2.47	0.47
20:Y:2586:G:OP1	49:1:40:ARG:NH2	2.47	0.47
20:Y:2683:A:C5	20:Y:2684:U:C5	3.03	0.47
20:Y:2762:C:N3	20:Y:2763:C:C5	2.83	0.47
20:Y:2960:G:O2'	20:Y:2961:G:H5'	2.14	0.47
20:Y:2972:A:C2	20:Y:2981:A:C6	3.03	0.47
20:Y:3007:G:O2'	20:Y:3008:C:H5'	2.14	0.47
20:Y:3009:U:O2	20:Y:3009:U:H2'	2.15	0.47
20:Y:3084:G:C2	20:Y:3085:G:C5	3.03	0.47
22:Z:127:PRO:HA	22:Z:193:VAL:O	2.15	0.47
23:a:40:ARG:HA	23:a:45:ASP:OD1	2.15	0.47
23:a:114:VAL:CG2	23:a:198:ILE:HB	2.44	0.47
24:b:3:LEU:CB	24:b:20:LEU:HD13	2.45	0.47
24:b:71:THR:CG2	24:b:73:ARG:H	2.13	0.47
24:b:158:ILE:HG22	24:b:159:GLY:N	2.29	0.47
25:c:143:SER:CA	25:c:148:ILE:HD11	2.44	0.47
26:d:126:VAL:HA	26:d:132:PHE:HB2	1.97	0.47
29:g:24:VAL:HG23	29:g:30:ARG:HB3	1.95	0.47
29:g:66:VAL:HG23	29:g:81:GLU:HA	1.94	0.47
30:h:98:LEU:HD22	30:h:103:LEU:HD13	1.95	0.47
33:k:47:ILE:HD11	33:k:84:VAL:CG1	2.37	0.47
33:k:118:ASP:O	33:k:121:ARG:N	2.48	0.47
34:l:1:MET:HE2	34:l:1:MET:O	2.15	0.47
34:l:45:VAL:HG11	34:l:109:ILE:CG1	2.43	0.47
34:l:102:LEU:HB3	34:l:106:LYS:HB2	1.97	0.47
38:p:67:LYS:HA	38:p:67:LYS:CE	2.45	0.47
39:q:67:HIS:HB2	39:q:70:ASN:ND2	2.30	0.47
39:q:74:VAL:HA	39:q:80:PRO:HA	1.95	0.47
40:r:178:VAL:HG13	40:r:179:VAL:N	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:s:53:ARG:NH1	41:s:59:LEU:HD21	2.30	0.47
44:v:69:LEU:HD21	44:v:109:TYR:HB2	1.96	0.47
44:v:123:ILE:O	44:v:126:LEU:HB2	2.14	0.47
46:x:30:VAL:CG1	46:x:47:ALA:HB1	2.34	0.47
47:y:11:ILE:HD12	47:y:27:LYS:CG	2.45	0.47
48:z:17:ARG:HH11	48:z:17:ARG:CB	2.27	0.47
51:4:2336:U:H5'	51:4:2337:A:OP1	2.14	0.47
51:4:2348:G:H5"	51:4:2349:A:OP1	2.14	0.47
51:4:2385:G:O4'	51:4:2387:U:O2'	2.31	0.47
1:A:146:A:C4'	1:A:1429:A:H1'	2.44	0.47
1:A:184:U:OP1	18:T:77:SER:OG	2.32	0.47
1:A:377:G:H5"	15:P:25:ALA:HB1	1.97	0.47
1:A:880:G:N2	1:A:882:A:H5"	2.30	0.47
1:A:888:A:O2'	1:A:889:A:O5'	2.29	0.47
1:A:905:A:H2'	1:A:906:C:C6	2.50	0.47
1:A:961:C:H42	1:A:1342:A:H61	1.61	0.47
1:A:1405:G:H4'	29:g:48:PRO:HB3	1.95	0.47
1:A:1411:A:N6	1:A:1457:G:O6	2.48	0.47
1:A:1467:A:C8	1:A:1468:U:C6	3.03	0.47
1:A:1494:C:O2'	1:A:1495:G:H5'	2.15	0.47
4:E:45:ARG:HG2	4:E:58:PHE:CE1	2.49	0.47
5:F:48:LEU:HD21	5:F:57:GLU:C	2.39	0.47
9:J:52:ILE:N	13:N:41:ARG:NH1	2.56	0.47
9:J:53:ARG:HD3	9:J:61:SER:HB2	1.96	0.47
10:K:84:GLN:OE1	10:K:114:LEU:HG	2.15	0.47
11:L:20:LYS:HD2	11:L:21:THR:H	1.80	0.47
12:M:34:LEU:HD12	12:M:41:LYS:HB3	1.97	0.47
12:M:88:GLN:OE1	12:M:98:VAL:HG21	2.14	0.47
14:O:40:THR:OG1	14:O:44:LYS:HE2	2.15	0.47
19:V:203:ASN:OD1	19:V:203:ASN:C	2.57	0.47
20:Y:432:C:H2'	20:Y:433:C:C6	2.50	0.47
20:Y:897:A:H2	22:Z:230:ASP:OD2	1.98	0.47
20:Y:911:U:C2	20:Y:912:C:C5	3.03	0.47
20:Y:976:A:H2'	20:Y:977:G:H5'	1.97	0.47
20:Y:1177:G:OP2	20:Y:1178:U:O2'	2.23	0.47
20:Y:1210:C:H2'	20:Y:1211:G:C5'	2.45	0.47
20:Y:1407:G:C2'	20:Y:1408:C:H5'	2.45	0.47
20:Y:1711:G:O2'	20:Y:1712:G:H5'	2.14	0.47
20:Y:1770:G:O2'	20:Y:1771:U:H5'	2.15	0.47
20:Y:2428:G:H2'	20:Y:2429:A:C8	2.50	0.47
20:Y:2564:A:C2	20:Y:2565:G:C5	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:2719:G:H2'	20:Y:2720:C:C6	2.49	0.47
20:Y:3075:C:H2'	20:Y:3076:U:C6	2.49	0.47
21:U:61:C:H2'	21:U:62:C:H6	1.79	0.47
22:Z:188:ARG:NE	22:Z:188:ARG:CA	2.78	0.47
24:b:64:LYS:HZ3	24:b:77:GLY:HA2	1.80	0.47
25:c:40:LYS:HA	25:c:103:MET:CE	2.45	0.47
28:f:37:ARG:HG2	28:f:37:ARG:NH1	2.30	0.47
30:h:80:VAL:HB	30:h:116:GLY:CA	2.44	0.47
32:j:63:ARG:HA	32:j:80:PHE:CE1	2.46	0.47
33:k:25:LEU:HD12	33:k:25:LEU:C	2.40	0.47
39:q:34:LEU:HD23	39:q:34:LEU:O	2.15	0.47
40:r:32:LYS:HB3	40:r:49:LEU:O	2.15	0.47
45:w:9:VAL:C	45:w:10:ARG:HG2	2.40	0.47
46:x:45:LYS:HA	46:x:48:ARG:CZ	2.44	0.47
49:1:15:ARG:O	49:1:23:VAL:HG12	2.14	0.47
1:A:35:G:N3	1:A:306:A:O2'	2.48	0.47
1:A:38:C:H2'	1:A:39:G:H8	1.80	0.47
1:A:105:A:H3'	1:A:106:C:C5'	2.45	0.47
1:A:110:U:H2'	1:A:111:G:H8	1.79	0.47
1:A:227:G:H3'	16:Q:13:ALA:HB2	1.96	0.47
1:A:400:C:O2	1:A:602:A:O2'	2.32	0.47
1:A:423:G:H2'	1:A:424:G:O4'	2.15	0.47
1:A:445:C:H2'	1:A:446:A:H8	1.79	0.47
1:A:764:A:N6	1:A:779:G:C6	2.83	0.47
1:A:965:A:H2	1:A:966:C:C6	2.33	0.47
1:A:1281:A:H2'	1:A:1281:A:N3	2.29	0.47
1:A:1396:A:O2'	1:A:1397:U:H5'	2.15	0.47
1:A:1463:G:H2'	1:A:1463:G:N3	2.30	0.47
1:A:1500:G:C2'	1:A:1501:G:H5'	2.44	0.47
3:D:97:VAL:HG23	3:D:109:ALA:HB1	1.97	0.47
3:D:179:GLN:N	3:D:179:GLN:OE1	2.45	0.47
5:F:3:PRO:HB3	5:F:66:LYS:HE2	1.96	0.47
5:F:75:LEU:HD12	5:F:75:LEU:C	2.38	0.47
9:J:47:ASN:OD1	9:J:67:MET:HB2	2.15	0.47
9:J:49:TYR:CE2	9:J:67:MET:HG2	2.43	0.47
12:M:57:ARG:HD2	12:M:57:ARG:C	2.39	0.47
13:N:21:TYR:CD2	13:N:23:ARG:HG3	2.50	0.47
19:V:19:GLN:HA	19:V:37:GLY:O	2.15	0.47
19:V:41:ILE:HD12	19:V:41:ILE:N	2.30	0.47
20:Y:68:A:OP1	20:Y:109:U:O2'	2.29	0.47
20:Y:189:A:N6	20:Y:206:A:C4	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:322:A:H2	20:Y:323:C:C5	2.33	0.47
20:Y:494:G:H2'	20:Y:495:C:H5'	1.97	0.47
20:Y:551:G:H3'	20:Y:552:U:H5"	1.96	0.47
20:Y:588:A:H2'	20:Y:589:A:H8	1.79	0.47
20:Y:658:U:H2'	20:Y:659:U:C5	2.50	0.47
20:Y:717:C:N3	20:Y:718:C:N4	2.63	0.47
20:Y:732:G:C4	20:Y:745:G:N2	2.83	0.47
20:Y:867:A:O2'	20:Y:868:C:OP1	2.27	0.47
20:Y:909:A:C4	20:Y:910:C:C5	3.02	0.47
20:Y:1006:G:N2	20:Y:1009:U:H3	2.12	0.47
20:Y:1175:A:H2'	20:Y:1176:G:C8	2.50	0.47
20:Y:1185:A:H2'	20:Y:1185:A:OP1	2.14	0.47
20:Y:1359:G:P	30:h:10:LYS:HZ3	2.33	0.47
20:Y:1426:G:N2	20:Y:1426:G:OP2	2.48	0.47
20:Y:1463:G:N1	20:Y:1817:C:N3	2.63	0.47
20:Y:1472:C:O2'	20:Y:1473:G:H5'	2.15	0.47
20:Y:1672:C:O2'	20:Y:1673:A:OP2	2.32	0.47
20:Y:1890:C:H3'	20:Y:1890:C:C6	2.50	0.47
20:Y:2240:U:H2'	20:Y:2241:U:C6	2.50	0.47
20:Y:2455:C:O2'	20:Y:2456:C:H5'	2.15	0.47
20:Y:2484:C:O2'	20:Y:2485:C:H5'	2.15	0.47
20:Y:2528:G:C8	25:c:139:LEU:N	2.83	0.47
20:Y:2788:A:N1	20:Y:2871:U:O2'	2.39	0.47
20:Y:2807:G:C2'	20:Y:2808:U:O4'	2.59	0.47
20:Y:2872:G:H2'	20:Y:2873:U:H6	1.79	0.47
20:Y:3060:A:H4'	32:j:49:GLU:OE1	2.15	0.47
21:U:40:A:H2'	21:U:41:U:C5	2.48	0.47
22:Z:226:MET:O	22:Z:234:GLY:HA2	2.15	0.47
24:b:103:PRO:CB	24:b:106:MET:HG2	2.39	0.47
25:c:76:ARG:HG2	25:c:89:GLY:HA2	1.97	0.47
25:c:125:SER:O	25:c:128:GLN:NE2	2.48	0.47
27:e:61:THR:HB	27:e:69:THR:N	2.29	0.47
30:h:72:ARG:HH11	30:h:72:ARG:CB	2.28	0.47
30:h:80:VAL:HG23	30:h:113:LEU:O	2.15	0.47
35:m:40:LEU:HD23	35:m:40:LEU:HA	1.54	0.47
37:o:100:ALA:C	37:o:101:PHE:HD1	2.22	0.47
39:q:39:ASN:CG	39:q:39:ASN:O	2.58	0.47
40:r:33:VAL:HG22	40:r:49:LEU:HB2	1.96	0.47
40:r:50:ASN:ND2	40:r:53:ASP:OD2	2.48	0.47
40:r:72:GLU:OE2	40:r:72:GLU:O	2.33	0.47
49:1:57:ARG:HH11	49:1:57:ARG:HB3	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:104:A:N3	18:T:7:GLN:NE2	2.49	0.47
1:A:207:G:C4'	18:T:56:ARG:HD2	2.38	0.47
1:A:456:C:H1'	1:A:457:A:C5	2.50	0.47
1:A:499:C:C2'	1:A:500:A:H5'	2.45	0.47
1:A:668:G:C6	1:A:680:G:C6	3.03	0.47
1:A:670:G:H2'	1:A:671:G:C8	2.50	0.47
1:A:962:C:O2	1:A:962:C:C2'	2.63	0.47
1:A:1037:G:O3'	2:C:197:GLY:HA3	2.14	0.47
1:A:1262:U:H2'	1:A:1263:C:H5	1.80	0.47
1:A:1508:C:C2	1:A:1509:G:C8	3.03	0.47
2:C:178:LEU:HD12	2:C:179:ARG:H	1.79	0.47
3:D:13:ARG:O	3:D:32:PRO:HA	2.15	0.47
4:E:112:GLY:N	4:E:119:VAL:O	2.45	0.47
5:F:25:THR:HA	5:F:28:ASN:OD1	2.15	0.47
5:F:75:LEU:O	5:F:79:LEU:HG	2.15	0.47
6:G:57:ASP:CG	6:G:59:VAL:HG12	2.39	0.47
6:G:60:VAL:HA	6:G:63:LYS:HG2	1.97	0.47
6:G:108:SER:HA	6:G:123:GLU:CD	2.40	0.47
8:I:26:ILE:H	8:I:40:ARG:CZ	2.28	0.47
11:L:66:TYR:CD1	11:L:66:TYR:C	2.92	0.47
11:L:75:GLN:N	11:L:75:GLN:OE1	2.48	0.47
15:P:59:TRP:HA	15:P:62:VAL:CG1	2.44	0.47
19:V:68:LEU:HD11	19:V:158:PRO:CG	2.45	0.47
20:Y:77:G:O5'	20:Y:428:A:H1'	2.15	0.47
20:Y:162:A:H2'	20:Y:162:A:N3	2.30	0.47
20:Y:170:G:H2'	20:Y:171:U:C6	2.50	0.47
20:Y:173:U:H2'	20:Y:174:G:H8	1.79	0.47
20:Y:911:U:H2'	20:Y:912:C:H6	1.79	0.47
20:Y:1106:A:P	45:w:11:SER:OG	2.73	0.47
20:Y:1127:A:H3'	20:Y:1127:A:OP2	2.15	0.47
20:Y:1141:U:H2'	20:Y:1142:G:H5'	1.97	0.47
20:Y:1383:A:H1'	20:Y:2237:A:N6	2.30	0.47
20:Y:1394:A:H2'	20:Y:1395:A:H8	1.79	0.47
20:Y:1637:G:H5'	20:Y:1805:G:H21	1.80	0.47
20:Y:1662:C:H2'	20:Y:1663:C:H6	1.79	0.47
20:Y:1679:A:H4'	20:Y:1679:A:OP1	2.15	0.47
20:Y:1692:G:O2'	20:Y:1693:C:H5'	2.15	0.47
20:Y:1771:U:H2'	20:Y:1772:G:C8	2.50	0.47
20:Y:1845:G:C4	20:Y:1858:A:N1	2.83	0.47
20:Y:2062:G:C6	20:Y:2120:A:C6	3.03	0.47
20:Y:2517:C:C2	20:Y:2518:C:C5	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:2572:U:H1'	47:y:41:PHE:CD1	2.49	0.47
20:Y:2693:A:O2'	20:Y:2694:G:P	2.68	0.47
20:Y:2932:G:C1'	32:j:71:ARG:HH22	2.28	0.47
20:Y:3015:C:H3'	20:Y:3016:C:H5"	1.97	0.47
22:Z:236:GLY:HA3	22:Z:240:THR:OG1	2.15	0.47
23:a:96:GLU:OE2	23:a:97:VAL:N	2.47	0.47
23:a:173:ASP:N	23:a:173:ASP:OD1	2.47	0.47
23:a:181:LYS:HD2	23:a:195:LYS:CD	2.44	0.47
24:b:35:HIS:HD2	24:b:39:THR:HG23	1.79	0.47
31:i:134:ARG:HH22	40:r:63:THR:CG2	2.26	0.47
34:l:45:VAL:CG1	34:l:109:ILE:HG13	2.45	0.47
35:m:76:TYR:C	35:m:76:TYR:CD1	2.93	0.47
36:n:4:TYR:CE2	36:n:43:VAL:HG21	2.50	0.47
38:p:8:ARG:O	38:p:8:ARG:CG	2.63	0.47
47:y:37:GLU:OE2	47:y:37:GLU:HA	2.14	0.47
49:1:57:ARG:HB3	49:1:57:ARG:NH1	2.29	0.47
50:2:16:VAL:HA	50:2:25:VAL:HG12	1.96	0.47
1:A:125:U:P	16:Q:17:ARG:HA	2.55	0.46
1:A:205:G:C6	1:A:206:G:C6	3.03	0.46
1:A:220:G:H2'	1:A:220:G:N3	2.30	0.46
1:A:247:G:H2'	1:A:248:C:C6	2.50	0.46
1:A:532:U:H5"	11:L:84:GLY:O	2.15	0.46
1:A:834:C:H2'	1:A:835:G:C8	2.50	0.46
1:A:943:U:O2'	1:A:944:C:H5'	2.15	0.46
1:A:1037:G:H2'	1:A:1038:G:C8	2.51	0.46
1:A:1079:G:O2'	1:A:1080:C:H5'	2.14	0.46
1:A:1285:C:H2'	1:A:1285:C:O2	2.15	0.46
1:A:1355:U:H5"	8:I:93:SER:H	1.80	0.46
2:C:184:TYR:CE2	2:C:186:LEU:HD23	2.48	0.46
6:G:116:MET:HA	6:G:119:ARG:HB2	1.97	0.46
7:H:48:ASP:O	7:H:63:GLN:HB2	2.15	0.46
12:M:9:LEU:CD2	12:M:10:PRO:HD2	2.45	0.46
12:M:79:ARG:HA	12:M:82:ILE:CG2	2.45	0.46
12:M:115:ARG:NH1	12:M:117:ILE:HD13	2.26	0.46
19:V:33:THR:O	19:V:40:ILE:HG12	2.15	0.46
19:V:77:GLN:OE1	19:V:94:GLN:HA	2.15	0.46
20:Y:77:G:H2'	20:Y:78:G:C8	2.50	0.46
20:Y:193:G:H2'	20:Y:194:A:O4'	2.14	0.46
20:Y:231:U:O4	20:Y:232:G:N1	2.48	0.46
20:Y:322:A:H2'	20:Y:322:A:N3	2.29	0.46
20:Y:393:U:O4'	20:Y:414:A:C4	2.67	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:470:G:O5'	20:Y:470:G:H8	1.97	0.46
20:Y:539:C:C5'	24:b:53:LYS:HZ3	2.28	0.46
20:Y:545:A:O3'	20:Y:546:G:H4'	2.14	0.46
20:Y:552:U:O4	20:Y:903:A:C4	2.67	0.46
20:Y:601:A:O2'	20:Y:602:A:H5'	2.14	0.46
20:Y:606:U:O2'	20:Y:607:G:H5'	2.15	0.46
20:Y:643:G:C2'	20:Y:644:G:H8	2.29	0.46
20:Y:836:G:H2'	20:Y:837:C:H6	1.79	0.46
20:Y:1225:G:C3'	44:v:54:ASN:HD21	2.28	0.46
20:Y:1310:G:O2'	20:Y:1311:C:H5'	2.15	0.46
20:Y:1402:A:C2'	20:Y:1403:C:H5'	2.45	0.46
20:Y:1438:G:H2'	20:Y:1438:G:N3	2.30	0.46
20:Y:1493:A:C6	20:Y:1495:G:C4	3.03	0.46
20:Y:1532:G:N2	20:Y:1804:G:N2	2.63	0.46
20:Y:2009:G:O2'	20:Y:2010:G:H5'	2.15	0.46
20:Y:2010:G:C2'	20:Y:2011:U:H5'	2.45	0.46
20:Y:2408:G:H2'	51:4:2329:G:H1	1.79	0.46
20:Y:2539:G:C6	20:Y:2540:G:C6	3.03	0.46
20:Y:3119:A:H2'	20:Y:3120:C:C5'	2.45	0.46
21:U:12:C:H4'	21:U:13:C:OP2	2.15	0.46
22:Z:85:ASP:OD1	22:Z:87:ASN:HB3	2.15	0.46
22:Z:145:VAL:HG22	22:Z:146:GLU:N	2.30	0.46
23:a:127:MET:CE	23:a:146:ARG:HE	2.28	0.46
25:c:125:SER:N	25:c:128:GLN:HE22	2.13	0.46
26:d:148:VAL:O	26:d:152:LEU:HD23	2.14	0.46
31:i:134:ARG:NH2	40:r:63:THR:HG21	2.29	0.46
35:m:47:TYR:CE1	35:m:51:ARG:NH1	2.84	0.46
36:n:65:LEU:HB3	36:n:66:GLU:OE2	2.15	0.46
40:r:76:GLN:N	40:r:76:GLN:CD	2.73	0.46
45:w:7:THR:HG22	45:w:34:SER:CA	2.42	0.46
49:1:17:THR:HG22	49:1:21:LYS:N	2.31	0.46
50:2:22:ARG:HD3	50:2:35:ARG:HH11	1.79	0.46
51:4:2330:U:H2'	51:4:2331:U:C6	2.50	0.46
1:A:148:A:C6	1:A:168:A:N1	2.83	0.46
1:A:165:U:H2'	1:A:166:C:O4'	2.15	0.46
1:A:298:A:H3'	1:A:299:G:C8	2.50	0.46
1:A:320:G:H2'	1:A:321:A:C8	2.50	0.46
1:A:380:G:H2'	1:A:382:A:OP2	2.15	0.46
1:A:485:G:C2	1:A:486:G:C5	3.03	0.46
1:A:505:C:OP1	11:L:88:LYS:NZ	2.48	0.46
1:A:705:G:H2'	1:A:706:C:H6	1.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:718:U:P	5:F:92:ARG:HH22	2.38	0.46
1:A:813:U:N3	1:A:835:G:N1	2.34	0.46
1:A:995:A:N6	1:A:1001:G:O6	2.49	0.46
1:A:1290:C:H3'	12:M:99:ARG:HH12	1.81	0.46
1:A:1339:A:H4'	13:N:34:TYR:CE1	2.33	0.46
1:A:1473:A:O2'	1:A:1474:C:H5'	2.15	0.46
3:D:92:ARG:HH22	3:D:129:SER:HB3	1.79	0.46
8:I:87:LEU:C	8:I:87:LEU:HD12	2.40	0.46
15:P:27:THR:HG22	15:P:32:ARG:NH2	2.30	0.46
16:Q:62:HIS:CB	16:Q:89:ARG:HG3	2.39	0.46
19:V:84:ALA:HA	19:V:87:VAL:CG2	2.44	0.46
20:Y:232:G:N2	20:Y:508:G:H5'	2.18	0.46
20:Y:609:G:H2'	20:Y:610:C:C6	2.50	0.46
20:Y:1181:G:N3	27:e:92:GLY:HA2	2.29	0.46
20:Y:1326:G:HO2'	20:Y:1327:A:P	2.38	0.46
20:Y:1727:A:C3'	20:Y:1728:U:H5"	2.46	0.46
20:Y:1757:U:O2	20:Y:1757:U:C2'	2.61	0.46
20:Y:1869:G:O6	20:Y:2230:C:N4	2.28	0.46
20:Y:2036:A:H1'	20:Y:2038:A:N6	2.30	0.46
20:Y:2081:U:O3'	20:Y:2633:G:N2	2.48	0.46
20:Y:2129:C:O2'	20:Y:2154:G:H5"	2.14	0.46
20:Y:2538:A:P	25:c:95:ARG:HH22	2.38	0.46
20:Y:2564:A:H2'	20:Y:2565:G:C8	2.50	0.46
20:Y:2586:G:H2'	20:Y:2586:G:N3	2.31	0.46
20:Y:2629:G:H1'	20:Y:2636:A:N6	2.30	0.46
20:Y:2806:G:H2'	20:Y:2806:G:N3	2.31	0.46
20:Y:3082:U:H2'	20:Y:3083:A:H8	1.80	0.46
21:U:111:C:H2'	21:U:112:C:H6	1.78	0.46
24:b:103:PRO:O	24:b:106:MET:HB2	2.15	0.46
30:h:80:VAL:HB	30:h:116:GLY:N	2.31	0.46
32:j:29:PHE:HZ	32:j:52:ILE:HG12	1.80	0.46
32:j:55:ALA:HB2	32:j:79:LEU:CD2	2.32	0.46
34:l:20:SER:O	34:l:23:ASP:OD1	2.34	0.46
39:q:8:THR:CA	39:q:22:LYS:HZ3	2.28	0.46
1:A:21:U:H1'	1:A:1060:A:H1'	1.97	0.46
1:A:48:G:C5'	15:P:12:LYS:HD3	2.45	0.46
1:A:105:A:H2'	1:A:326:G:H21	1.81	0.46
1:A:153:U:O2'	1:A:154:G:H5'	2.15	0.46
1:A:163:G:H2'	1:A:164:G:H8	1.80	0.46
1:A:283:C:N3	1:A:284:G:C8	2.83	0.46
1:A:476:A:H5"	1:A:476:A:N3	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1114:C:C3'	1:A:1115:G:H5"	2.45	0.46
2:C:7:PRO:HB3	2:C:11:ARG:NH1	2.31	0.46
3:D:159:GLU:OE2	3:D:159:GLU:N	2.45	0.46
5:F:3:PRO:HB3	5:F:66:LYS:CE	2.46	0.46
5:F:10:LEU:HD12	5:F:11:ASP:O	2.15	0.46
6:G:23:VAL:HA	6:G:26:LEU:CG	2.46	0.46
7:H:46:ILE:HG23	7:H:64:LEU:HD13	1.98	0.46
8:I:55:LEU:CD1	8:I:68:ILE:HD13	2.46	0.46
11:L:54:ARG:HG2	11:L:54:ARG:HH11	1.80	0.46
12:M:29:ARG:CA	12:M:32:GLU:HG2	2.43	0.46
15:P:16:PRO:HB2	15:P:18:TYR:CZ	2.49	0.46
16:Q:17:ARG:HH21	16:Q:20:ARG:HG3	1.81	0.46
20:Y:74:C:C2	20:Y:75:U:C5	3.04	0.46
20:Y:134:A:H2'	20:Y:135:G:C8	2.51	0.46
20:Y:317:G:O2'	20:Y:318:U:OP2	2.31	0.46
20:Y:362:A:H3'	20:Y:362:A:N3	2.29	0.46
20:Y:395:G:C4	20:Y:396:C:C5	3.03	0.46
20:Y:401:C:H2'	20:Y:402:G:C8	2.50	0.46
20:Y:429:A:H2'	20:Y:430:A:H8	1.81	0.46
20:Y:656:C:H1'	35:m:37:GLU:OE2	2.15	0.46
20:Y:687:C:O2'	20:Y:688:A:H5'	2.14	0.46
20:Y:800:A:H5"	20:Y:903:A:H62	1.81	0.46
20:Y:808:A:N6	20:Y:885:G:O6	2.49	0.46
20:Y:822:G:H2'	20:Y:823:C:H5'	1.96	0.46
20:Y:865:A:H2	20:Y:867:A:H4'	1.80	0.46
20:Y:920:G:OP2	30:h:43:ARG:HD2	2.14	0.46
20:Y:935:A:H2'	20:Y:936:A:H8	1.78	0.46
20:Y:945:G:H4'	20:Y:946:G:OP2	2.15	0.46
20:Y:1320:U:C2'	20:Y:1321:C:H6	2.18	0.46
20:Y:1364:U:O4'	35:m:4:VAL:HG11	2.14	0.46
20:Y:1728:U:H4'	20:Y:1729:A:C8	2.50	0.46
20:Y:1871:G:N2	20:Y:3043:G:O6	2.49	0.46
20:Y:1883:A:O2'	29:g:1:MET:SD	2.64	0.46
20:Y:2199:G:O2'	20:Y:2200:U:H5'	2.14	0.46
20:Y:2212:A:H2'	20:Y:2213:A:C8	2.50	0.46
20:Y:2510:A:H62	47:y:27:LYS:NZ	2.14	0.46
20:Y:2772:G:C1'	29:g:23:ARG:HH12	2.20	0.46
21:U:22:A:H2'	21:U:23:G:H8	1.75	0.46
21:U:34:G:O2'	21:U:35:G:O5'	2.30	0.46
21:U:47:A:H2'	21:U:48:C:C6	2.50	0.46
21:U:51:G:OP1	33:k:78:LYS:CD	2.64	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:a:114:VAL:HG21	23:a:198:ILE:CB	2.43	0.46
24:b:58:VAL:HG12	24:b:80:ARG:HD2	1.97	0.46
25:c:31:ASN:OD1	25:c:33:MET:HG3	2.16	0.46
25:c:110:LEU:HD23	25:c:115:LEU:CD2	2.44	0.46
25:c:164:VAL:HG22	25:c:165:THR:N	2.30	0.46
26:d:159:LYS:HB2	26:d:161:LYS:HG3	1.97	0.46
27:e:114:LYS:O	27:e:117:ASP:N	2.45	0.46
34:l:96:LEU:CD1	34:l:109:ILE:HD12	2.45	0.46
41:s:60:PHE:N	41:s:60:PHE:CD1	2.83	0.46
47:y:38:ILE:HG21	47:y:40:LYS:HD2	1.95	0.46
49:1:29:ARG:NH1	49:1:44:LEU:O	2.48	0.46
1:A:69:A:C2	1:A:214:U:H4'	2.51	0.46
1:A:230:G:H5"	15:P:32:ARG:NE	2.30	0.46
1:A:681:C:H5"	1:A:682:A:C5'	2.45	0.46
1:A:688:C:O2'	1:A:689:A:H5'	2.15	0.46
1:A:859:C:N4	1:A:860:C:H41	2.14	0.46
1:A:972:U:H6	1:A:972:U:O5'	1.98	0.46
1:A:1039:C:OP2	2:C:199:LYS:NZ	2.33	0.46
1:A:1229:A:O2'	1:A:1230:C:O4'	2.32	0.46
1:A:1341:C:OP1	13:N:35:ARG:HD3	2.16	0.46
1:A:1469:U:H2'	1:A:1470:G:H8	1.79	0.46
1:A:1491:A:H2'	1:A:1492:G:C8	2.51	0.46
1:A:1506:U:H2'	1:A:1507:G:C8	2.47	0.46
2:C:23:TYR:CD1	2:C:23:TYR:C	2.93	0.46
3:D:45:GLU:N	3:D:45:GLU:OE1	2.47	0.46
4:E:184:LEU:CD2	4:E:185:PRO:CD	2.94	0.46
5:F:3:PRO:CB	5:F:66:LYS:HE2	2.45	0.46
6:G:113:GLU:C	6:G:114:LYS:HE2	2.40	0.46
7:H:12:THR:HA	7:H:15:ARG:HE	1.81	0.46
15:P:92:THR:HG22	15:P:92:THR:O	2.15	0.46
18:T:20:ARG:HH21	18:T:64:LYS:NZ	2.13	0.46
20:Y:460:G:N2	20:Y:488:G:H2'	2.30	0.46
20:Y:844:G:N3	20:Y:1992:U:H1'	2.29	0.46
20:Y:961:U:C2	20:Y:1050:A:N1	2.83	0.46
20:Y:966:U:C4'	45:w:46:LEU:CD2	2.94	0.46
20:Y:1017:G:C4	20:Y:1018:U:C5	3.03	0.46
20:Y:1129:G:H5"	35:m:77:ASN:HD22	1.81	0.46
20:Y:1256:G:C5	20:Y:1257:G:H1'	2.50	0.46
20:Y:1428:U:H3'	20:Y:1428:U:O2	2.16	0.46
20:Y:1806:A:C2'	20:Y:1807:C:O5'	2.64	0.46
20:Y:2058:U:C4	20:Y:2059:G:N7	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:2174:G:N2	20:Y:2178:G:C4	2.83	0.46
20:Y:2495:G:H2'	20:Y:2496:U:H6	1.78	0.46
20:Y:2573:G:O5'	49:1:42:ARG:NH1	2.48	0.46
20:Y:2693:A:H1'	31:i:56:ARG:NH1	2.31	0.46
20:Y:2861:U:H5"	23:a:85:ARG:CZ	2.45	0.46
20:Y:2908:U:C4'	29:g:76:TYR:HD2	2.28	0.46
20:Y:3008:C:C5'	23:a:44:ARG:HH12	2.28	0.46
22:Z:38:HIS:O	22:Z:40:LYS:HD3	2.16	0.46
22:Z:160:GLY:HA2	22:Z:199:ALA:HA	1.97	0.46
23:a:18:ASP:HB2	23:a:22:LYS:H	1.80	0.46
25:c:47:VAL:HG21	25:c:56:LEU:HD13	1.95	0.46
25:c:131:GLY:O	25:c:170:ASP:N	2.48	0.46
25:c:135:TYR:CE2	25:c:137:PHE:HZ	2.34	0.46
29:g:4:GLN:O	29:g:5:GLU:HB2	2.14	0.46
32:j:42:ARG:HG3	32:j:43:ALA:N	2.30	0.46
33:k:53:ASN:OD1	33:k:55:LEU:HG	2.15	0.46
39:q:2:LYS:CG	39:q:83:VAL:HB	2.46	0.46
40:r:28:ARG:HH21	40:r:93:GLN:HA	1.81	0.46
41:s:51:VAL:C	41:s:62:LEU:HD11	2.41	0.46
44:v:54:ASN:O	44:v:57:VAL:HG22	2.15	0.46
46:x:3:VAL:HG23	46:x:4:PRO:O	2.16	0.46
48:z:17:ARG:HB2	48:z:17:ARG:HH11	1.75	0.46
1:A:128:U:O2'	1:A:129:C:H5'	2.15	0.46
1:A:489:A:H5'	3:D:46:TYR:CE2	2.51	0.46
1:A:783:G:H2'	1:A:784:U:O4'	2.16	0.46
1:A:795:A:H4'	1:A:797:C:C5	2.51	0.46
1:A:876:G:H2'	1:A:877:G:C8	2.51	0.46
1:A:1033:G:O2'	1:A:1180:U:H5	1.98	0.46
1:A:1386:C:O2'	1:A:1387:C:H5'	2.16	0.46
1:A:1483:A:C2'	1:A:1484:A:H5'	2.46	0.46
3:D:90:GLU:HB2	3:D:99:ARG:NH2	2.31	0.46
4:E:105:THR:HG22	4:E:106:ILE:N	2.30	0.46
5:F:48:LEU:CD2	5:F:57:GLU:HA	2.44	0.46
9:J:32:THR:HG21	9:J:83:THR:OG1	2.15	0.46
11:L:5:GLN:O	11:L:9:ARG:HG3	2.16	0.46
19:V:42:ASP:CG	19:V:45:GLN:HG2	2.41	0.46
19:V:152:ARG:HG2	19:V:152:ARG:NH1	2.29	0.46
19:V:197:ASP:C	19:V:198:TYR:CD1	2.93	0.46
20:Y:173:U:C2	20:Y:174:G:C8	3.02	0.46
20:Y:507:G:C2	20:Y:508:G:C5	3.02	0.46
20:Y:593:G:H5"	20:Y:596:C:O2'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:606:U:C2	20:Y:607:G:C8	3.03	0.46
20:Y:606:U:H2'	20:Y:607:G:C8	2.50	0.46
20:Y:657:C:O2'	20:Y:658:U:O5'	2.31	0.46
20:Y:658:U:P	30:h:31:LYS:NZ	2.88	0.46
20:Y:710:G:O5'	20:Y:710:G:H8	1.98	0.46
20:Y:857:U:O2'	20:Y:858:A:H5'	2.16	0.46
20:Y:858:A:O2'	20:Y:1877:U:OP1	2.33	0.46
20:Y:892:G:O2'	20:Y:893:G:H5'	2.16	0.46
20:Y:969:C:H42	20:Y:1038:G:H1	1.63	0.46
20:Y:1022:C:P	31:i:24:GLY:H	2.38	0.46
20:Y:1326:G:N2	20:Y:1351:G:H1'	2.31	0.46
20:Y:1367:G:C2	35:m:33:ARG:O	2.68	0.46
20:Y:1633:U:O5'	20:Y:1633:U:H6	1.98	0.46
20:Y:1743:G:P	20:Y:1744:A:HO2'	2.31	0.46
20:Y:1768:C:H2'	20:Y:1769:G:C1'	2.46	0.46
20:Y:1771:U:H2'	20:Y:1772:G:O4'	2.14	0.46
20:Y:1801:C:H3'	20:Y:1802:G:H8	1.78	0.46
20:Y:2204:G:C4	20:Y:2206:C:C5	3.04	0.46
20:Y:2515:U:C2	20:Y:2516:U:C5	3.03	0.46
20:Y:2523:A:N6	20:Y:2542:G:H1'	2.30	0.46
20:Y:2600:A:H2'	20:Y:2601:A:C8	2.50	0.46
20:Y:2629:G:C2	20:Y:2637:G:O6	2.68	0.46
20:Y:2866:A:H5"	28:f:80:TYR:CD2	2.49	0.46
20:Y:3018:U:H2'	20:Y:3019:C:C6	2.50	0.46
20:Y:3107:G:HO2'	20:Y:3108:G:P	2.32	0.46
21:U:102:A:H1'	40:r:38:TYR:CE1	2.50	0.46
22:Z:20:ASP:OD1	22:Z:20:ASP:N	2.33	0.46
22:Z:218:ARG:HB3	22:Z:219:PRO:HD3	1.98	0.46
24:b:198:VAL:HA	24:b:201:LEU:HD21	1.98	0.46
25:c:17:GLU:HG2	25:c:18:GLU:H	1.79	0.46
28:f:3:THR:HG21	35:m:61:TRP:HE1	1.80	0.46
29:g:94:ARG:NE	29:g:94:ARG:CA	2.72	0.46
31:i:17:GLN:HE22	31:i:96:ASN:HB3	1.80	0.46
33:k:126:LYS:HD2	33:k:126:LYS:HA	1.79	0.46
34:l:48:ARG:CB	34:l:95:LYS:HG2	2.46	0.46
34:l:56:GLU:O	34:l:75:VAL:HG23	2.16	0.46
34:l:102:LEU:O	34:l:103:ARG:HD3	2.16	0.46
39:q:86:ARG:HE	39:q:97:ILE:HG12	1.81	0.46
39:q:86:ARG:CD	39:q:97:ILE:HD11	2.23	0.46
43:u:10:LEU:HD12	43:u:56:ARG:NH2	2.30	0.46
43:u:51:ARG:O	43:u:54:ILE:HG23	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:v:66:ILE:HA	44:v:109:TYR:CZ	2.49	0.46
51:4:2354:G:O4'	51:4:2356:G:H1'	2.16	0.46
1:A:240:C:H2'	1:A:241:C:C6	2.50	0.46
1:A:333:C:OP1	18:T:2:ALA:N	2.48	0.46
1:A:593:C:OP1	3:D:76:ARG:HG2	2.16	0.46
1:A:715:G:C5'	17:R:69:LYS:NZ	2.74	0.46
1:A:826:U:H2'	1:A:828:G:H8	1.80	0.46
1:A:1059:G:H5'	4:E:159:ILE:HG21	1.97	0.46
1:A:1306:A:C4'	1:A:1345:A:H5"	2.46	0.46
1:A:1335:G:O2'	1:A:1336:C:H5'	2.16	0.46
1:A:1460:A:O2'	1:A:1461:U:H5'	2.16	0.46
3:D:67:PHE:O	3:D:70:TYR:HB2	2.15	0.46
3:D:145:LEU:HD21	3:D:172:ARG:CZ	2.45	0.46
3:D:148:LEU:HB2	3:D:149:PRO:HD3	1.98	0.46
4:E:59:THR:HA	4:E:77:LYS:HA	1.97	0.46
7:H:10:PHE:CD1	7:H:27:LEU:HD13	2.50	0.46
8:I:72:LEU:HD11	8:I:77:ARG:C	2.40	0.46
9:J:15:HIS:HA	9:J:18:ILE:HG22	1.98	0.46
9:J:28:THR:HG21	9:J:90:ILE:HD11	1.97	0.46
10:K:41:VAL:HG12	10:K:75:ALA:HB1	1.96	0.46
10:K:44:THR:HG23	10:K:50:VAL:HA	1.97	0.46
13:N:24:CYS:CB	13:N:40:CYS:HB3	2.46	0.46
15:P:71:LEU:CD1	15:P:75:LYS:HE3	2.46	0.46
17:R:45:ARG:CD	17:R:47:LYS:HE2	2.46	0.46
17:R:69:LYS:HA	17:R:72:ARG:CD	2.46	0.46
19:V:181:ILE:N	19:V:181:ILE:HD13	2.30	0.46
20:Y:58:G:H2'	20:Y:59:G:O4'	2.15	0.46
20:Y:122:A:C6	48:z:13:ARG:NH2	2.84	0.46
20:Y:184:C:O2'	20:Y:185:G:H5'	2.16	0.46
20:Y:290:C:O2'	20:Y:338:C:OP1	2.33	0.46
20:Y:670:A:OP1	20:Y:1370:U:O2'	2.32	0.46
20:Y:733:U:C2	20:Y:734:C:C5	3.03	0.46
20:Y:798:U:H6	20:Y:798:U:O5'	1.99	0.46
20:Y:1092:G:N1	20:Y:1107:G:C4	2.83	0.46
20:Y:1092:G:C4	20:Y:1301:G:C2	3.02	0.46
20:Y:1200:U:OP1	27:e:125:ALA:N	2.48	0.46
20:Y:1284:A:O2'	20:Y:1285:G:H5'	2.16	0.46
20:Y:1388:U:H5"	20:Y:1389:U:H5'	1.97	0.46
20:Y:1703:G:N3	20:Y:1703:G:H2'	2.30	0.46
20:Y:1821:A:N3	20:Y:1821:A:H2'	2.30	0.46
20:Y:1825:C:H4'	20:Y:1826:A:C5'	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:1893:C:O5'	20:Y:1893:C:H6	1.98	0.46
20:Y:1986:A:H2'	20:Y:1986:A:N3	2.30	0.46
20:Y:2228:G:H2'	20:Y:2229:A:O4'	2.15	0.46
20:Y:2246:U:H3	46:x:6:ARG:NH2	2.12	0.46
20:Y:2682:G:H21	20:Y:2683:A:N6	2.14	0.46
20:Y:2783:C:H2'	20:Y:2784:C:H6	1.81	0.46
20:Y:2965:A:O3'	50:2:35:ARG:NH2	2.49	0.46
20:Y:3040:G:H2'	20:Y:3042:A:N7	2.30	0.46
20:Y:3072:A:O2'	20:Y:3073:G:H5'	2.15	0.46
20:Y:3091:G:H2'	20:Y:3092:G:O4'	2.15	0.46
22:Z:184:ARG:CZ	22:Z:184:ARG:HB2	2.46	0.46
25:c:67:ILE:CD1	25:c:145:PHE:CD1	2.99	0.46
25:c:100:GLY:O	25:c:103:MET:HB2	2.16	0.46
25:c:103:MET:HB2	25:c:104:TRP:CD1	2.51	0.46
28:f:114:LEU:HD21	28:f:118:ILE:HD11	1.97	0.46
29:g:7:ARG:HD2	29:g:18:GLU:HB3	1.98	0.46
30:h:12:ALA:HB3	30:h:15:GLU:CD	2.41	0.46
34:l:50:GLN:O	34:l:57:THR:N	2.48	0.46
37:o:93:ARG:NH1	37:o:95:ARG:HE	2.13	0.46
40:r:16:ARG:CB	40:r:46:HIS:CE1	2.98	0.46
1:A:91:U:H5"	1:A:92:A:OP1	2.16	0.46
1:A:293:G:H2'	1:A:293:G:N3	2.31	0.46
1:A:423:G:N2	1:A:423:G:OP2	2.48	0.46
1:A:571:U:O2	1:A:571:U:H2'	2.16	0.46
1:A:688:C:H2'	1:A:689:A:H8	1.80	0.46
1:A:708:A:O2'	1:A:709:A:H5'	2.14	0.46
1:A:738:G:H8	1:A:738:G:O5'	1.98	0.46
1:A:741:G:H2'	1:A:742:A:H8	1.81	0.46
1:A:762:A:O3'	1:A:1499:C:H4'	2.16	0.46
1:A:1050:U:O2'	1:A:1051:C:H5'	2.16	0.46
1:A:1076:C:H2'	1:A:1077:C:C6	2.50	0.46
1:A:1352:C:H2'	1:A:1353:G:C8	2.51	0.46
1:A:1427:C:O2'	1:A:1428:U:H5'	2.16	0.46
2:C:57:GLU:N	2:C:57:GLU:OE1	2.48	0.46
3:D:73:GLU:CD	3:D:76:ARG:HE	2.22	0.46
4:E:130:VAL:O	4:E:130:VAL:HG23	2.15	0.46
6:G:97:THR:HG22	6:G:101:LEU:HD13	1.98	0.46
6:G:136:LYS:HD2	6:G:137:ARG:NH1	2.31	0.46
7:H:47:SER:N	7:H:63:GLN:O	2.49	0.46
8:I:39:VAL:HG13	8:I:83:ILE:HD13	1.96	0.46
10:K:122:VAL:O	10:K:122:VAL:CG1	2.62	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:M:29:ARG:HG2	12:M:33:ILE:CD1	2.43	0.46
12:M:52:GLN:HA	12:M:55:VAL:CG1	2.45	0.46
16:Q:36:ILE:O	16:Q:36:ILE:HG13	2.12	0.46
18:T:37:GLU:HA	18:T:40:ASP:OD2	2.15	0.46
18:T:72:ALA:HA	18:T:75:LYS:HZ1	1.80	0.46
18:T:73:ALA:HA	18:T:76:LYS:CE	2.46	0.46
20:Y:79:G:C2'	20:Y:80:G:O4'	2.63	0.46
20:Y:316:U:N3	20:Y:492:C:N3	2.64	0.46
20:Y:396:C:C2	20:Y:397:C:C5	3.04	0.46
20:Y:445:U:H4'	20:Y:446:G:OP1	2.15	0.46
20:Y:531:A:C6	24:b:46:ARG:HD2	2.50	0.46
20:Y:927:C:H1'	20:Y:1365:G:N2	2.31	0.46
20:Y:974:G:O2'	20:Y:975:U:O5'	2.33	0.46
20:Y:1199:U:N3	20:Y:1200:U:O4	2.48	0.46
20:Y:1204:A:H4'	20:Y:1205:G:C8	2.50	0.46
20:Y:1275:A:C8	35:m:51:ARG:HD3	2.51	0.46
20:Y:1313:U:C2	20:Y:1314:C:C5	3.04	0.46
20:Y:1850:A:C2'	20:Y:1851:G:O4'	2.64	0.46
20:Y:1941:A:C2'	20:Y:1942:G:H5'	2.45	0.46
20:Y:1976:A:H1'	20:Y:2920:U:O2	2.15	0.46
20:Y:2293:G:H2'	20:Y:2294:A:H8	1.81	0.46
20:Y:2465:A:O2'	20:Y:2466:G:H5'	2.16	0.46
20:Y:2475:G:OP1	31:i:82:ARG:HD3	2.16	0.46
20:Y:2482:U:O2'	20:Y:2650:A:H4'	2.16	0.46
20:Y:2768:G:H2'	20:Y:2769:G:H8	1.81	0.46
20:Y:2863:A:C2'	20:Y:2864:G:H5'	2.46	0.46
20:Y:2980:U:H4'	20:Y:2981:A:OP1	2.16	0.46
20:Y:3011:C:H2'	20:Y:3012:U:H6	1.77	0.46
22:Z:26:ARG:HH12	22:Z:81:HIS:HB2	1.80	0.46
22:Z:129:ASN:O	22:Z:192:THR:HA	2.15	0.46
23:a:63:ILE:CG2	23:a:65:PRO:HD2	2.20	0.46
24:b:34:MET:O	24:b:37:VAL:HG12	2.16	0.46
24:b:120:ARG:HB2	24:b:120:ARG:NH1	2.30	0.46
25:c:42:VAL:HB	25:c:162:THR:HG22	1.97	0.46
27:e:32:GLN:O	27:e:33:HIS:HB2	2.16	0.46
28:f:136:GLN:N	28:f:136:GLN:OE1	2.49	0.46
30:h:114:GLY:CA	30:h:133:ALA:N	2.78	0.46
31:i:63:LYS:HE2	31:i:65:TRP:CZ2	2.50	0.46
34:l:59:THR:OG1	34:l:70:GLU:OE1	2.27	0.46
36:n:84:TYR:CE2	36:n:86:LYS:HB2	2.51	0.46
38:p:62:ARG:HG2	38:p:79:THR:O	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:r:173:ASP:OD1	40:r:173:ASP:N	2.49	0.46
43:u:26:LYS:CE	43:u:54:ILE:HD12	2.46	0.46
43:u:29:LEU:CD1	43:u:50:VAL:HB	2.46	0.46
48:z:7:THR:OG1	48:z:8:PHE:N	2.49	0.46
1:A:208:G:H22	16:Q:8:LYS:NZ	2.14	0.46
1:A:289:G:H2'	1:A:290:C:H6	1.81	0.46
1:A:344:A:H5'	1:A:345:C:C5	2.50	0.46
1:A:497:G:O2'	1:A:510:G:H5"	2.16	0.46
1:A:634:G:C6	1:A:635:A:C4	3.04	0.46
1:A:747:A:C4	1:A:748:A:C8	3.04	0.46
1:A:1059:G:H5"	4:E:75:TYR:HE2	1.80	0.46
1:A:1065:U:OP1	1:A:1074:G:N2	2.49	0.46
1:A:1508:C:C2	1:A:1509:G:N7	2.84	0.46
2:C:67:ILE:O	2:C:67:ILE:HG13	2.16	0.46
2:C:152:GLN:O	2:C:198:VAL:HG23	2.16	0.46
2:C:188:GLU:N	2:C:188:GLU:OE1	2.48	0.46
2:C:196:ILE:HD12	2:C:196:ILE:N	2.30	0.46
3:D:41:ILE:HB	3:D:47:ARG:NH1	2.31	0.46
3:D:144:SER:O	3:D:147:THR:HB	2.16	0.46
4:E:120:MET:O	4:E:121:LEU:HD22	2.16	0.46
4:E:148:ILE:O	4:E:149:LEU:HD23	2.16	0.46
6:G:24:THR:O	6:G:28:ASN:OD1	2.33	0.46
6:G:25:GLN:OE1	6:G:25:GLN:O	2.34	0.46
8:I:69:LYS:NZ	8:I:72:LEU:HD23	2.31	0.46
8:I:92:PRO:HA	8:I:95:GLN:OE1	2.16	0.46
10:K:30:ALA:O	10:K:93:VAL:HA	2.16	0.46
10:K:123:THR:HG23	10:K:124:PRO:HD2	1.98	0.46
11:L:14:ASP:OD1	11:L:14:ASP:C	2.59	0.46
19:V:101:LEU:HG	19:V:102:THR:N	2.31	0.46
20:Y:120:G:H2'	20:Y:121:G:C8	2.50	0.46
20:Y:172:C:C2	20:Y:173:U:C5	3.03	0.46
20:Y:642:G:H2'	20:Y:643:G:H8	1.81	0.46
20:Y:710:G:H5"	24:b:107:ILE:HD13	1.97	0.46
20:Y:805:C:O2'	20:Y:806:C:H5'	2.16	0.46
20:Y:863:G:P	37:o:95:ARG:HH12	2.39	0.46
20:Y:895:G:C2	20:Y:897:A:C2	3.03	0.46
20:Y:922:U:H2'	20:Y:923:G:H8	1.80	0.46
20:Y:930:C:P	36:n:86:LYS:NZ	2.89	0.46
20:Y:932:C:C2'	20:Y:933:G:H5'	2.45	0.46
20:Y:1201:G:H2'	20:Y:1202:A:H2'	1.98	0.46
20:Y:1266:C:H2'	20:Y:1267:A:H8	1.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:1457:A:HO2'	20:Y:1459:U:P	2.39	0.46
20:Y:1989:G:H21	20:Y:1991:C:H5'	1.81	0.46
20:Y:1993:G:O6	20:Y:2005:C:N4	2.48	0.46
20:Y:2090:U:H2'	20:Y:2091:U:C1'	2.46	0.46
20:Y:2151:A:C2'	20:Y:2152:A:O4'	2.63	0.46
20:Y:2542:G:C5'	20:Y:2543:U:OP1	2.62	0.46
20:Y:2547:G:C2'	20:Y:2548:U:O5'	2.63	0.46
20:Y:2849:G:H2'	20:Y:2850:C:H6	1.76	0.46
20:Y:3052:A:H1'	20:Y:3104:A:N3	2.31	0.46
21:U:58:A:C5	25:c:33:MET:HE1	2.51	0.46
22:Z:72:LYS:HG3	22:Z:103:ARG:HH22	1.77	0.46
23:a:4:LYS:HB3	23:a:105:ILE:CD1	2.45	0.46
23:a:14:THR:O	23:a:26:VAL:O	2.34	0.46
26:d:173:LYS:HB3	26:d:173:LYS:HE2	1.73	0.46
27:e:38:MET:HA	27:e:38:MET:CE	2.37	0.46
28:f:73:PHE:HB3	28:f:75:TYR:CE1	2.50	0.46
31:i:57:HIS:CE1	31:i:117:ALA:HB2	2.50	0.46
32:j:104:LYS:C	32:j:104:LYS:CD	2.83	0.46
33:k:66:ILE:HA	33:k:71:ARG:NH2	2.30	0.46
34:l:61:ARG:CD	34:l:70:GLU:HG2	2.46	0.46
41:s:21:LEU:HB3	41:s:39:ARG:O	2.16	0.46
41:s:49:VAL:HG22	41:s:79:ASN:ND2	2.30	0.46
46:x:3:VAL:HB	46:x:4:PRO:CD	2.45	0.46
51:4:2334:U:C4	51:4:2368:C:H1'	2.50	0.46
51:4:2357:A:HO2'	51:4:2382:G:N2	2.13	0.46
51:4:2372:U:H2'	51:4:2373:G:H8	1.81	0.46
1:A:343:U:C2'	1:A:344:A:H5"	2.46	0.46
1:A:373:A:N3	1:A:374:A:C8	2.84	0.46
1:A:485:G:O2'	1:A:486:G:OP1	2.29	0.46
1:A:622:A:H2	7:H:107:SER:HB2	1.81	0.46
1:A:903:U:H2'	1:A:904:G:C8	2.41	0.46
1:A:975:G:H2'	1:A:975:G:N3	2.31	0.46
1:A:1098:U:C1'	1:A:1160:A:C2	2.98	0.46
1:A:1104:G:H8	1:A:1104:G:OP2	1.98	0.46
1:A:1198:C:OP1	13:N:9:LYS:HD3	2.16	0.46
1:A:1221:U:O4'	6:G:42:ILE:HD11	2.16	0.46
1:A:1306:A:O4'	1:A:1344:C:O2'	2.30	0.46
1:A:1394:U:O2'	1:A:1395:C:O5'	2.31	0.46
1:A:1476:A:O2'	1:A:1477:A:O5'	2.34	0.46
7:H:13:ARG:HH11	7:H:27:LEU:CD2	2.29	0.46
10:K:44:THR:HA	10:K:51:ILE:HD12	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:K:61:PHE:O	10:K:66:LYS:HB3	2.15	0.46
14:O:4:THR:HG23	14:O:6:GLU:CD	2.40	0.46
14:O:36:ILE:HG13	14:O:37:GLN:OE1	2.16	0.46
15:P:8:THR:O	15:P:19:ARG:N	2.47	0.46
18:T:21:ASN:OD1	18:T:66:VAL:HG12	2.16	0.46
18:T:32:ILE:HD11	18:T:79:LEU:HD11	1.97	0.46
19:V:26:LYS:HB2	19:V:27:MET:CE	2.45	0.46
20:Y:2:A:OP2	20:Y:2:A:H8	1.99	0.46
20:Y:45:G:N1	20:Y:176:G:OP2	2.49	0.46
20:Y:108:A:H2'	20:Y:109:U:H6	1.78	0.46
20:Y:289:A:C6	20:Y:290:C:H5	2.33	0.46
20:Y:290:C:O2'	20:Y:339:U:OP2	2.27	0.46
20:Y:483:G:C2	20:Y:484:C:C4	3.03	0.46
20:Y:504:C:H2'	20:Y:505:C:O4'	2.16	0.46
20:Y:507:G:H2'	20:Y:508:G:C8	2.51	0.46
20:Y:566:A:N6	20:Y:568:A:C6	2.83	0.46
20:Y:620:G:H5'	35:m:24:TYR:CD1	2.51	0.46
20:Y:700:U:P	24:b:104:LYS:NZ	2.89	0.46
20:Y:835:C:O2'	20:Y:836:G:O5'	2.32	0.46
20:Y:1206:A:N6	27:e:136:SER:HB2	2.31	0.46
20:Y:1233:A:H2'	20:Y:1234:U:H6	1.76	0.46
20:Y:1283:C:O2'	20:Y:1284:A:H5'	2.16	0.46
20:Y:1375:G:H2'	20:Y:1376:C:H6	1.80	0.46
20:Y:1464:A:C3'	20:Y:1465:C:H5"	2.31	0.46
20:Y:1695:U:H3	20:Y:1739:A:N6	2.09	0.46
20:Y:1768:C:H2'	20:Y:1769:G:C8	2.51	0.46
20:Y:1872:A:O2'	20:Y:1873:A:H5'	2.15	0.46
20:Y:1901:C:H2'	20:Y:1902:C:C6	2.51	0.46
20:Y:1932:U:H4'	20:Y:1933:G:OP2	2.16	0.46
20:Y:2105:G:H5"	20:Y:2106:A:P	2.56	0.46
20:Y:2456:C:H2'	20:Y:2457:U:O4'	2.15	0.46
20:Y:2600:A:C3'	20:Y:2601:A:H8	2.28	0.46
20:Y:2973:A:OP1	20:Y:2974:A:H3'	2.16	0.46
20:Y:2980:U:OP2	50:2:19:ARG:NE	2.48	0.46
20:Y:3042:A:H2'	20:Y:3043:G:O4'	2.16	0.46
21:U:98:A:C4	21:U:99:A:C8	3.04	0.46
21:U:101:U:O3'	40:r:81:LYS:NZ	2.48	0.46
23:a:14:THR:O	23:a:26:VAL:HG12	2.15	0.46
23:a:113:ASP:OD1	23:a:113:ASP:C	2.57	0.46
24:b:79:THR:HG22	24:b:79:THR:O	2.15	0.46
24:b:198:VAL:O	24:b:201:LEU:HG	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:d:117:GLU:C	26:d:117:GLU:OE1	2.59	0.46
28:f:4:TYR:CD1	28:f:4:TYR:C	2.94	0.46
31:i:27:VAL:HG12	31:i:134:ARG:HA	1.97	0.46
34:l:28:HIS:HB3	34:l:81:ASP:OD2	2.16	0.46
39:q:13:SER:HA	39:q:17:LYS:HZ1	1.81	0.46
44:v:69:LEU:HD11	44:v:109:TYR:CD1	2.50	0.46
47:y:35:ARG:HD2	47:y:36:LEU:O	2.15	0.46
1:A:19:G:N2	4:E:48:LYS:HZ2	2.13	0.46
1:A:147:U:O2'	1:A:148:A:H5'	2.16	0.46
1:A:1058:U:O4	4:E:115:ALA:CA	2.63	0.46
1:A:1460:A:H2'	1:A:1461:U:H6	1.80	0.46
2:C:88:ALA:O	2:C:91:GLU:HG3	2.16	0.46
3:D:154:ARG:HH21	3:D:173:GLN:HG2	1.81	0.46
4:E:105:THR:OG1	4:E:147:ASP:HB2	2.15	0.46
4:E:167:ALA:O	4:E:170:LYS:HG2	2.16	0.46
5:F:17:ARG:O	5:F:21:PRO:CD	2.65	0.46
6:G:73:LEU:HD12	6:G:89:VAL:O	2.16	0.46
7:H:128:LEU:HD23	7:H:128:LEU:C	2.41	0.46
9:J:24:LYS:HD2	9:J:92:LEU:CD2	2.46	0.46
10:K:69:PRO:HB2	10:K:73:GLN:HE22	1.80	0.46
11:L:20:LYS:CD	11:L:21:THR:H	2.29	0.46
11:L:57:LEU:CD1	11:L:61:VAL:HB	2.41	0.46
18:T:9:LYS:HD3	18:T:9:LYS:C	2.41	0.46
20:Y:316:U:C5	20:Y:492:C:N4	2.83	0.46
20:Y:357:U:C4'	20:Y:358:G:O5'	2.64	0.46
20:Y:394:G:C4	20:Y:395:G:N7	2.84	0.46
20:Y:502:C:H2'	20:Y:503:A:C8	2.51	0.46
20:Y:759:G:O6	41:s:64:PRO:HG3	2.16	0.46
20:Y:776:G:C4'	30:h:16:LYS:NZ	2.79	0.46
20:Y:778:G:H2'	20:Y:779:U:O5'	2.16	0.46
20:Y:803:U:O2'	20:Y:804:A:H5'	2.16	0.46
20:Y:1324:G:C6	20:Y:1352:A:C5	3.04	0.46
20:Y:1385:C:H5"	20:Y:1386:G:C5'	2.46	0.46
20:Y:1398:G:H1'	20:Y:1444:U:O2	2.16	0.46
20:Y:1472:C:H2'	20:Y:1473:G:H8	1.80	0.46
20:Y:1733:C:O2'	20:Y:1734:C:H5'	2.16	0.46
20:Y:2015:U:H5'	22:Z:257:THR:CG2	2.46	0.46
20:Y:2083:A:H2'	20:Y:2084:A:H8	1.81	0.46
20:Y:2270:G:H2'	20:Y:2271:C:C6	2.50	0.46
20:Y:2299:C:C4	20:Y:2820:U:N3	2.84	0.46
20:Y:2489:U:H3'	20:Y:2490:A:H8	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:2515:U:O2'	20:Y:2516:U:H5'	2.16	0.46
20:Y:2573:G:P	49:1:42:ARG:HH12	2.38	0.46
20:Y:2600:A:OP1	20:Y:2600:A:H8	1.99	0.46
20:Y:2635:A:C3'	20:Y:2636:A:H8	2.17	0.46
20:Y:2640:G:C4'	30:h:65:LYS:HD2	2.46	0.46
20:Y:2735:U:H2'	20:Y:2736:C:C6	2.51	0.46
20:Y:2816:G:H2'	20:Y:2817:U:C6	2.50	0.46
20:Y:2957:A:C2'	20:Y:2958:C:H5'	2.45	0.46
21:U:108:C:H2'	21:U:109:C:C6	2.50	0.46
22:Z:178:PRO:C	22:Z:180:GLY:H	2.24	0.46
23:a:52:LEU:HD23	23:a:52:LEU:HA	1.70	0.46
24:b:121:ASN:HD21	30:h:3:VAL:N	2.14	0.46
25:c:177:LEU:CG	25:c:182:PHE:CD2	2.96	0.46
26:d:96:ARG:HA	26:d:96:ARG:NE	2.31	0.46
29:g:13:ASN:HD22	29:g:97:ARG:HG3	1.81	0.46
29:g:22:ILE:HG13	29:g:41:ALA:HA	1.98	0.46
30:h:48:VAL:HG22	30:h:48:VAL:O	2.15	0.46
32:j:19:ALA:O	32:j:20:LEU:C	2.59	0.46
32:j:103:ARG:HD3	32:j:110:MET:CE	2.38	0.46
34:l:38:ARG:O	34:l:39:ILE:HD13	2.15	0.46
34:l:61:ARG:CA	34:l:69:VAL:O	2.64	0.46
35:m:107:THR:HA	35:m:110:VAL:CG2	2.46	0.46
38:p:39:LYS:HB3	38:p:57:VAL:HG12	1.97	0.46
39:q:72:MET:HE2	39:q:80:PRO:HB2	1.97	0.46
41:s:40:GLN:HE21	41:s:53:ARG:HH12	1.64	0.46
42:t:60:LYS:HE2	42:t:60:LYS:HB2	1.69	0.46
43:u:13:LEU:HB3	43:u:17:GLU:CG	2.45	0.46
43:u:22:LEU:HD12	43:u:57:VAL:HG21	1.98	0.46
45:w:10:ARG:HG3	45:w:10:ARG:HH11	1.81	0.46
49:1:14:PHE:CE1	49:1:58:ILE:CD1	2.99	0.46
1:A:434:C:H2'	1:A:435:U:C5	2.50	0.45
1:A:470:U:C2	1:A:471:G:C8	3.05	0.45
1:A:700:C:H3'	1:A:701:G:H2'	1.97	0.45
1:A:1421:G:O3'	18:T:33:ARG:NH2	2.37	0.45
3:D:111:GLN:O	3:D:115:HIS:ND1	2.31	0.45
4:E:106:ILE:HD13	4:E:148:ILE:CG1	2.46	0.45
4:E:185:PRO:HB2	4:E:187:GLU:OE2	2.16	0.45
6:G:103:TRP:HA	6:G:106:ASN:HD22	1.77	0.45
7:H:81:SER:OG	7:H:87:VAL:N	2.39	0.45
8:I:32:ARG:NH2	8:I:94:GLY:O	2.49	0.45
8:I:48:PHE:O	8:I:54:THR:HA	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:I:82:ASP:OD1	8:I:83:ILE:N	2.47	0.45
15:P:75:LYS:HA	15:P:80:TRP:HB3	1.98	0.45
18:T:76:LYS:HG3	18:T:77:SER:N	2.31	0.45
19:V:132:LYS:O	19:V:136:MET:HE2	2.16	0.45
20:Y:15:C:H2'	20:Y:16:G:H8	1.80	0.45
20:Y:167:G:HO2'	20:Y:2432:G:HO2'	1.64	0.45
20:Y:759:G:C6	41:s:32:LYS:HB2	2.52	0.45
20:Y:899:G:C5'	22:Z:227:ASN:HD21	2.14	0.45
20:Y:1308:G:H2'	20:Y:1309:A:H8	1.81	0.45
20:Y:1527:U:O5'	20:Y:1527:U:H6	1.99	0.45
20:Y:1575:A:H61	20:Y:1596:C:H42	1.63	0.45
20:Y:1645:G:N1	20:Y:1795:C:N3	2.64	0.45
20:Y:1770:G:H2'	20:Y:1771:U:H6	1.80	0.45
20:Y:1781:C:O2'	20:Y:1782:U:H5'	2.16	0.45
20:Y:1802:G:H21	20:Y:1803:A:H61	1.64	0.45
20:Y:2152:A:H2'	20:Y:2153:G:H4'	1.97	0.45
20:Y:2428:G:H2'	20:Y:2429:A:H8	1.80	0.45
20:Y:2455:C:H2'	20:Y:2456:C:C6	2.51	0.45
20:Y:2455:C:OP1	42:t:29:TRP:HA	2.16	0.45
20:Y:2580:G:N2	20:Y:2585:U:C4	2.82	0.45
20:Y:2702:A:OP1	50:2:31:ARG:NH2	2.49	0.45
20:Y:2801:A:C2	46:x:2:ALA:HB2	2.50	0.45
20:Y:2899:A:C2'	20:Y:2900:C:H5'	2.45	0.45
22:Z:80:ALA:HB1	22:Z:81:HIS:ND1	2.31	0.45
22:Z:133:LEU:HD12	22:Z:133:LEU:N	2.32	0.45
22:Z:247:VAL:HG22	22:Z:248:SER:O	2.16	0.45
23:a:40:ARG:HB2	23:a:49:ALA:H	1.81	0.45
23:a:154:CYS:O	23:a:155:ALA:HB3	2.17	0.45
24:b:118:ARG:HH22	30:h:5:LYS:HZ1	1.64	0.45
25:c:25:GLN:C	25:c:25:GLN:OE1	2.59	0.45
25:c:44:ASN:HA	25:c:95:ARG:HA	1.97	0.45
27:e:32:GLN:HG3	27:e:33:HIS:N	2.30	0.45
27:e:41:CYS:HB3	27:e:45:ASN:OD1	2.16	0.45
33:k:23:ALA:HA	33:k:26:ARG:HG3	1.98	0.45
34:l:91:VAL:HG11	34:l:96:LEU:HD11	1.98	0.45
36:n:57:LYS:HE3	36:n:58:VAL:HG22	1.97	0.45
37:o:90:LYS:NZ	37:o:102:ARG:HE	2.13	0.45
37:o:99:ARG:NH1	37:o:101:PHE:HZ	2.14	0.45
41:s:37:LEU:HD23	41:s:60:PHE:HA	1.97	0.45
43:u:6:THR:C	43:u:56:ARG:NH2	2.74	0.45
47:y:29:ARG:O	47:y:29:ARG:NH1	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:4:2330:U:H2'	51:4:2331:U:C2	2.51	0.45
1:A:146:A:H2'	1:A:147:U:C6	2.51	0.45
1:A:157:A:H2'	1:A:158:A:O4'	2.16	0.45
1:A:973:U:O2	1:A:1196:G:N2	2.50	0.45
1:A:977:C:H4'	13:N:8:HIS:CD2	2.50	0.45
1:A:1239:G:O2'	1:A:1240:C:H5'	2.16	0.45
1:A:1377:A:H61	1:A:1484:A:HO2'	1.62	0.45
1:A:1471:G:O2'	1:A:1472:G:H5'	2.17	0.45
3:D:92:ARG:HH12	3:D:129:SER:CB	2.23	0.45
5:F:27:LEU:CA	5:F:30:ILE:HD12	2.40	0.45
7:H:49:TYR:O	7:H:50:ARG:CG	2.64	0.45
7:H:106:ILE:HD11	7:H:115:ASP:CA	2.47	0.45
8:I:87:LEU:HD13	8:I:95:GLN:HE21	1.80	0.45
9:J:83:THR:HG22	9:J:87:LEU:CD2	2.46	0.45
11:L:87:VAL:HG11	11:L:90:LEU:HD13	1.97	0.45
13:N:23:ARG:O	13:N:24:CYS:C	2.59	0.45
15:P:18:TYR:HE2	15:P:42:PRO:CD	2.30	0.45
19:V:14:ALA:HA	19:V:203:ASN:HB3	1.98	0.45
20:Y:108:A:H4'	43:u:62:ARG:HH22	1.81	0.45
20:Y:203:A:O3'	20:Y:204:G:H4'	2.16	0.45
20:Y:313:G:O2'	20:Y:314:G:O5'	2.23	0.45
20:Y:319:G:N2	20:Y:494:G:N7	2.64	0.45
20:Y:375:A:C6	20:Y:427:A:C5	3.04	0.45
20:Y:388:U:C2	20:Y:389:G:H1'	2.52	0.45
20:Y:484:C:N3	20:Y:485:U:C5	2.83	0.45
20:Y:749:C:H2'	20:Y:750:C:H6	1.80	0.45
20:Y:844:G:H5'	20:Y:845:C:H5"	1.97	0.45
20:Y:1066:G:C2'	20:Y:1067:G:H5'	2.45	0.45
20:Y:1164:A:N7	44:v:59:ARG:NH1	2.64	0.45
20:Y:1204:A:H5'	20:Y:1205:G:P	2.56	0.45
20:Y:1319:A:H8	20:Y:1319:A:O5'	1.99	0.45
20:Y:1334:C:H2'	20:Y:1335:G:C8	2.51	0.45
20:Y:1411:G:H2'	20:Y:1412:C:H6	1.79	0.45
20:Y:1730:U:O2'	20:Y:1731:A:OP2	2.30	0.45
20:Y:2270:G:H1'	46:x:19:GLN:OE1	2.17	0.45
20:Y:2558:C:O2	33:k:27:LYS:CE	2.64	0.45
20:Y:2819:G:N2	20:Y:2822:A:OP2	2.49	0.45
20:Y:2867:A:H2'	20:Y:2868:A:C8	2.49	0.45
20:Y:3062:C:C2	20:Y:3063:A:C8	3.04	0.45
21:U:90:G:C2'	21:U:91:G:O5'	2.65	0.45
23:a:126:THR:HG23	23:a:167:SER:HB3	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:a:138:ALA:O	23:a:139:HIS:HB2	2.16	0.45
25:c:43:VAL:CG1	25:c:161:ILE:HG13	2.46	0.45
25:c:80:SER:HG	25:c:88:GLU:H	1.51	0.45
25:c:111:ILE:HD13	25:c:115:LEU:HD21	1.98	0.45
26:d:35:LEU:HD13	26:d:72:LEU:HD21	1.98	0.45
27:e:22:PRO:HG2	27:e:26:VAL:HB	1.98	0.45
34:l:50:GLN:O	34:l:57:THR:OG1	2.20	0.45
34:l:60:VAL:O	34:l:71:ARG:N	2.44	0.45
40:r:14:ASN:O	40:r:47:LEU:HB2	2.15	0.45
44:v:43:LEU:HD21	44:v:92:ALA:CB	2.45	0.45
47:y:15:CYS:CB	47:y:18:CYS:HB2	2.41	0.45
1:A:238:G:H5"	1:A:239:G:P	2.57	0.45
1:A:333:C:C5'	18:T:11:ILE:HD13	2.46	0.45
1:A:411:A:N6	1:A:430:A:H62	2.14	0.45
1:A:437:U:H3	1:A:475:A:H62	1.63	0.45
1:A:745:G:H2'	1:A:792:G:H21	1.82	0.45
1:A:773:U:O2	1:A:1500:G:O2'	2.12	0.45
1:A:886:C:C2	1:A:887:U:C5	3.04	0.45
1:A:1027:G:O2'	1:A:1196:G:O2'	2.18	0.45
1:A:1038:G:P	2:C:199:LYS:HZ3	2.39	0.45
1:A:1191:C:O2'	1:A:1192:U:H5'	2.16	0.45
2:C:150:ARG:HD3	2:C:173:VAL:HG11	1.98	0.45
3:D:93:LEU:HD22	3:D:113:VAL:HG11	1.99	0.45
4:E:98:ARG:HD2	4:E:98:ARG:HA	1.71	0.45
5:F:7:MET:HA	5:F:61:ALA:O	2.16	0.45
5:F:44:GLY:CA	5:F:60:TYR:H	2.29	0.45
6:G:66:LEU:O	6:G:70:LYS:HB3	2.16	0.45
8:I:32:ARG:NH1	8:I:94:GLY:HA2	2.30	0.45
8:I:32:ARG:NH2	8:I:97:GLY:HA3	2.23	0.45
9:J:57:LYS:O	9:J:58:TYR:HB2	2.17	0.45
11:L:79:MET:HE3	11:L:102:LEU:CD1	2.45	0.45
12:M:28:THR:HG23	12:M:29:ARG:N	2.31	0.45
12:M:52:GLN:O	12:M:55:VAL:CG1	2.64	0.45
13:N:23:ARG:HH11	13:N:30:PRO:HD2	1.81	0.45
14:O:60:VAL:HG11	20:Y:830:A:C8	2.51	0.45
15:P:37:ILE:HD11	15:P:55:ARG:CG	2.47	0.45
18:T:60:LYS:HA	18:T:60:LYS:HE2	1.99	0.45
19:V:36:ASN:OD1	19:V:36:ASN:C	2.58	0.45
19:V:187:LEU:HD11	19:V:191:CYS:O	2.16	0.45
19:V:212:LEU:HD23	19:V:212:LEU:C	2.41	0.45
20:Y:163:U:H3'	20:Y:164:A:H8	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:271:A:H2	20:Y:458:G:C2	2.34	0.45
20:Y:284:G:H2'	20:Y:286:G:O4'	2.16	0.45
20:Y:369:G:HO2'	20:Y:371:G:C5'	2.29	0.45
20:Y:485:U:OP2	42:t:10:LYS:CE	2.64	0.45
20:Y:503:A:H1'	20:Y:2082:U:H4'	1.97	0.45
20:Y:583:G:C4	20:Y:584:A:C8	3.05	0.45
20:Y:694:C:H4'	24:b:105:LYS:NZ	2.29	0.45
20:Y:725:A:OP1	20:Y:725:A:H8	1.98	0.45
20:Y:755:A:H2'	20:Y:756:A:C8	2.51	0.45
20:Y:987:A:H4'	31:i:69:PHE:CD1	2.51	0.45
20:Y:1107:G:P	45:w:11:SER:HB3	2.56	0.45
20:Y:1202:A:C4	44:v:51:VAL:HG11	2.52	0.45
20:Y:1461:G:C6	20:Y:1819:G:C6	3.05	0.45
20:Y:1539:A:H2'	20:Y:1540:U:O4'	2.16	0.45
20:Y:1546:A:C4	20:Y:1621:C:H5'	2.51	0.45
20:Y:1672:C:O2	20:Y:1680:A:N6	2.48	0.45
20:Y:1854:U:H2'	20:Y:1855:A:C8	2.51	0.45
20:Y:1922:G:H2'	20:Y:1923:G:C8	2.50	0.45
20:Y:2528:G:H5'	20:Y:2529:A:OP2	2.17	0.45
20:Y:2528:G:H4'	20:Y:2529:A:OP2	2.17	0.45
20:Y:2730:U:O2'	20:Y:2731:C:H5'	2.16	0.45
20:Y:2788:A:O2'	20:Y:2789:A:H5'	2.16	0.45
20:Y:2812:G:H2'	20:Y:2813:A:O4'	2.16	0.45
20:Y:2867:A:C5	20:Y:2868:A:N7	2.84	0.45
20:Y:2889:A:H2'	20:Y:2889:A:N3	2.31	0.45
20:Y:2995:U:H2'	20:Y:2996:U:C6	2.51	0.45
20:Y:3015:C:H2'	20:Y:3016:C:C4'	2.45	0.45
23:a:181:LYS:HG3	23:a:181:LYS:O	2.16	0.45
23:a:188:GLU:OE1	34:l:6:PHE:CE2	2.68	0.45
24:b:67:ARG:HH11	24:b:67:ARG:HG2	1.80	0.45
24:b:126:ALA:O	24:b:127:VAL:HG23	2.16	0.45
24:b:142:LYS:C	24:b:142:LYS:CD	2.88	0.45
25:c:43:VAL:HG22	25:c:161:ILE:CG1	2.45	0.45
26:d:73:ILE:HA	26:d:76:LEU:HD11	1.97	0.45
27:e:111:ALA:HB1	27:e:126:ALA:HB1	1.99	0.45
28:f:72:LYS:HZ3	28:f:74:ALA:HB2	1.79	0.45
30:h:57:ILE:HG23	30:h:58:HIS:N	2.32	0.45
30:h:98:LEU:CD2	30:h:103:LEU:HD13	2.46	0.45
33:k:34:GLU:OE1	33:k:34:GLU:N	2.39	0.45
33:k:50:GLN:C	33:k:51:LEU:HD12	2.42	0.45
34:l:14:ASP:O	34:l:15:ASP:OD1	2.33	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:q:2:LYS:HG2	39:q:83:VAL:HB	1.98	0.45
39:q:41:ILE:HG13	39:q:62:GLN:O	2.17	0.45
42:t:55:CYS:O	42:t:58:ALA:HB3	2.16	0.45
47:y:13:LEU:HA	47:y:52:LYS:O	2.17	0.45
1:A:542:U:H5	11:L:15:LYS:HD3	1.81	0.45
1:A:813:U:O2'	1:A:814:G:H5'	2.16	0.45
1:A:1252:G:O2'	1:A:1253:U:H5'	2.16	0.45
1:A:1425:G:C5'	1:A:1426:C:H5	2.29	0.45
2:C:183:ASP:N	2:C:202:ILE:O	2.40	0.45
2:C:187:TYR:CE2	2:C:189:ALA:HA	2.51	0.45
3:D:54:GLN:HB3	3:D:58:PHE:CE2	2.51	0.45
3:D:163:PRO:HB2	3:D:165:TRP:HZ3	1.78	0.45
5:F:36:THR:HG21	5:F:67:ALA:CB	2.46	0.45
5:F:95:LYS:HD3	5:F:96:HIS:CD2	2.52	0.45
6:G:135:VAL:HG13	6:G:138:ARG:NH1	2.17	0.45
7:H:7:ILE:HD11	7:H:32:LEU:CD1	2.39	0.45
7:H:103:VAL:HG13	7:H:114:THR:OG1	2.17	0.45
10:K:45:ASP:OD1	10:K:49:ASN:N	2.45	0.45
11:L:54:ARG:NE	11:L:64:THR:HG22	2.29	0.45
19:V:67:VAL:HA	19:V:160:ALA:O	2.16	0.45
19:V:96:TRP:CD1	19:V:172:ALA:HB2	2.51	0.45
20:Y:628:C:H2'	20:Y:629:C:C6	2.51	0.45
20:Y:628:C:H2'	20:Y:629:C:H6	1.81	0.45
20:Y:655:G:C6	20:Y:2242:G:C4	3.04	0.45
20:Y:790:A:O2'	20:Y:791:A:C5'	2.64	0.45
20:Y:814:A:H4'	20:Y:1852:A:N7	2.30	0.45
20:Y:820:A:HO2'	20:Y:821:A:H5'	1.80	0.45
20:Y:853:C:N3	20:Y:874:G:C6	2.85	0.45
20:Y:1048:A:C6	20:Y:1050:A:C8	3.04	0.45
20:Y:1058:A:O2'	20:Y:1059:G:C5'	2.65	0.45
20:Y:1066:G:C6	20:Y:1087:G:C6	3.05	0.45
20:Y:1637:G:O3'	20:Y:1806:A:H4'	2.16	0.45
20:Y:1698:A:H2'	20:Y:1699:G:H5'	1.99	0.45
20:Y:1786:G:C6	22:Z:214:TRP:CZ2	3.04	0.45
20:Y:2014:G:H2'	20:Y:2015:U:H6	1.81	0.45
20:Y:2056:G:H1'	20:Y:2151:A:OP1	2.16	0.45
20:Y:2142:A:C2'	20:Y:2144:C:H41	2.24	0.45
20:Y:2324:A:N6	20:Y:2411:U:H3'	2.30	0.45
20:Y:2507:C:C5	20:Y:2613:G:C4	3.04	0.45
20:Y:2625:C:C6	20:Y:2625:C:O5'	2.70	0.45
20:Y:2758:A:C2	20:Y:2759:G:H1'	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:2927:C:H2'	20:Y:2928:C:O4'	2.15	0.45
20:Y:2928:C:H5"	20:Y:2929:A:OP2	2.17	0.45
22:Z:6:TYR:HD2	22:Z:13:ARG:NE	2.11	0.45
22:Z:172:TYR:CD2	22:Z:184:ARG:HD3	2.51	0.45
22:Z:187:VAL:O	22:Z:188:ARG:NH2	2.46	0.45
23:a:7:LEU:HD21	23:a:82:ALA:HB3	1.98	0.45
23:a:10:LYS:NZ	23:a:198:ILE:HG13	2.32	0.45
23:a:14:THR:CG2	34:l:55:SER:OG	2.64	0.45
25:c:72:PRO:HB3	25:c:95:ARG:O	2.17	0.45
25:c:105:GLU:O	25:c:109:ARG:HG2	2.15	0.45
26:d:153:ARG:NH1	26:d:154:ARG:O	2.49	0.45
27:e:74:THR:CG2	27:e:117:ASP:HB2	2.45	0.45
28:f:42:PRO:CD	28:f:43:THR:N	2.79	0.45
28:f:113:LYS:HE3	28:f:116:ARG:HH11	1.82	0.45
28:f:114:LEU:HD23	28:f:114:LEU:O	2.16	0.45
30:h:78:VAL:HG13	30:h:103:LEU:CD2	2.43	0.45
31:i:133:THR:OG1	31:i:134:ARG:N	2.50	0.45
33:k:38:LEU:O	33:k:103:ASP:HB3	2.15	0.45
39:q:72:MET:SD	39:q:80:PRO:HB2	2.57	0.45
40:r:12:THR:HG22	40:r:70:ASP:OD2	2.16	0.45
40:r:50:ASN:O	40:r:54:PHE:HB2	2.15	0.45
40:r:134:GLU:O	40:r:168:VAL:HA	2.16	0.45
42:t:17:SER:H	42:t:27:ARG:HG2	1.81	0.45
51:4:2333:G:P	51:4:2341:U:H3	2.40	0.45
51:4:2354:G:N3	51:4:2381:A:N6	2.64	0.45
51:4:2389:U:O2	51:4:2394:A:C6	2.69	0.45
1:A:129:C:O2'	1:A:130:U:H5'	2.16	0.45
1:A:475:A:H4'	1:A:476:A:O4'	2.16	0.45
1:A:550:G:O3'	1:A:799:G:O2'	2.33	0.45
1:A:622:A:C2	7:H:107:SER:HB2	2.51	0.45
1:A:804:U:O4'	7:H:2:THR:N	2.50	0.45
1:A:1057:G:C4	1:A:1058:U:H3'	2.51	0.45
1:A:1239:G:H2'	1:A:1240:C:C6	2.51	0.45
1:A:1318:C:H4'	1:A:1319:G:N3	2.32	0.45
1:A:1458:G:H8	1:A:1458:G:OP2	2.00	0.45
1:A:1473:A:H2'	1:A:1474:C:C6	2.51	0.45
1:A:1476:A:O2'	1:A:1477:A:H2'	2.17	0.45
1:A:1507:G:C4	1:A:1508:C:C5	3.05	0.45
2:C:149:ILE:C	2:C:150:ARG:HD2	2.42	0.45
3:D:70:TYR:OH	3:D:92:ARG:HD2	2.16	0.45
4:E:107:THR:CG2	4:E:108:HIS:N	2.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:E:190:ALA:HB3	4:E:195:LEU:CD2	2.47	0.45
7:H:46:ILE:CG2	7:H:62:VAL:HG22	2.46	0.45
13:N:22:THR:HG21	13:N:35:ARG:CD	2.45	0.45
16:Q:36:ILE:O	16:Q:61:ALA:N	2.45	0.45
20:Y:189:A:N6	20:Y:206:A:C5	2.84	0.45
20:Y:244:A:H2'	20:Y:245:G:O5'	2.16	0.45
20:Y:364:A:N1	20:Y:440:U:H1'	2.31	0.45
20:Y:555:G:C2'	20:Y:556:G:H5'	2.47	0.45
20:Y:729:C:O2'	20:Y:730:G:H5'	2.16	0.45
20:Y:1004:C:C1'	20:Y:1005:A:P	3.05	0.45
20:Y:1172:A:H2'	20:Y:1173:G:C8	2.51	0.45
20:Y:1177:G:H3'	20:Y:1178:U:C2'	2.43	0.45
20:Y:1183:U:O3'	20:Y:1184:U:O4'	2.34	0.45
20:Y:1373:A:H2'	20:Y:1374:G:C8	2.47	0.45
20:Y:1480:A:H2'	20:Y:1480:A:N3	2.30	0.45
20:Y:1522:G:N2	20:Y:1814:G:C2	2.83	0.45
20:Y:1633:U:H2'	20:Y:1634:C:N3	2.31	0.45
20:Y:1769:G:H3'	20:Y:1770:G:H8	1.82	0.45
20:Y:1871:G:H5'	20:Y:1872:A:OP2	2.16	0.45
20:Y:1874:C:P	23:a:146:ARG:NH1	2.89	0.45
20:Y:1900:C:C2	20:Y:1974:A:H1'	2.52	0.45
20:Y:2097:G:O2'	20:Y:2098:U:H5'	2.16	0.45
20:Y:2528:G:C8	25:c:139:LEU:CA	2.97	0.45
20:Y:2578:A:N3	20:Y:2578:A:H2'	2.32	0.45
20:Y:2803:C:H2'	20:Y:2804:U:C5	2.51	0.45
20:Y:2882:C:O3'	26:d:159:LYS:NZ	2.50	0.45
20:Y:2900:C:H2'	20:Y:2901:G:C8	2.49	0.45
20:Y:3008:C:H2'	20:Y:3009:U:H6	1.82	0.45
20:Y:3076:U:C2	20:Y:3077:A:N7	2.84	0.45
23:a:127:MET:HE2	23:a:146:ARG:HE	1.80	0.45
23:a:173:ASP:O	23:a:175:VAL:HG23	2.16	0.45
25:c:49:ASP:HB2	25:c:56:LEU:CD2	2.45	0.45
25:c:59:GLY:HA3	25:c:157:ARG:NH1	2.29	0.45
25:c:170:ASP:C	25:c:174:ARG:HE	2.22	0.45
26:d:38:ALA:HB3	26:d:65:LEU:CD2	2.46	0.45
26:d:138:ASP:OD1	26:d:138:ASP:C	2.60	0.45
28:f:113:LYS:O	28:f:113:LYS:HG3	2.16	0.45
29:g:97:ARG:CA	29:g:117:LEU:HD11	2.44	0.45
30:h:61:LEU:HD13	49:1:24:ARG:CG	2.41	0.45
32:j:99:LYS:HA	32:j:111:ALA:CB	2.46	0.45
34:l:63:GLU:HA	34:l:67:VAL:O	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:n:3:THR:HA	36:n:43:VAL:O	2.17	0.45
39:q:5:LYS:HZ2	39:q:24:LEU:HA	1.81	0.45
42:t:38:ALA:HB1	42:t:61:VAL:HG12	1.99	0.45
43:u:22:LEU:CD2	43:u:23:ARG:NH1	2.80	0.45
1:A:34:C:H4'	1:A:35:G:OP2	2.17	0.45
1:A:117:C:N4	1:A:237:C:H41	2.14	0.45
1:A:255:G:H2'	1:A:256:U:H6	1.81	0.45
1:A:496:U:C4	1:A:497:G:C6	3.05	0.45
1:A:686:A:O2'	1:A:687:U:H5'	2.17	0.45
1:A:806:C:H2'	1:A:807:U:C6	2.51	0.45
1:A:822:U:H4'	1:A:822:U:OP1	2.17	0.45
1:A:877:G:C6	1:A:878:C:C4	3.05	0.45
1:A:922:C:H2'	1:A:923:G:H8	1.81	0.45
1:A:1128:C:O2'	8:I:27:GLN:NE2	2.49	0.45
1:A:1191:C:H2'	1:A:1192:U:H6	1.82	0.45
1:A:1253:U:H2'	1:A:1254:G:C8	2.51	0.45
1:A:1331:A:P	8:I:141:ALA:HB3	2.57	0.45
2:C:57:GLU:CD	2:C:64:ARG:HB2	2.41	0.45
2:C:59:THR:HG23	2:C:62:ARG:NH2	2.32	0.45
2:C:95:GLY:O	2:C:96:LYS:HB2	2.17	0.45
3:D:69:ARG:HA	3:D:72:GLU:CD	2.42	0.45
8:I:69:LYS:HZ2	8:I:73:VAL:HG13	1.81	0.45
8:I:75:VAL:HG21	8:I:107:LEU:HD21	1.98	0.45
12:M:70:LEU:HA	12:M:73:GLU:CG	2.47	0.45
12:M:102:ARG:HH21	12:M:104:LYS:CG	2.30	0.45
18:T:55:SER:HB2	18:T:56:ARG:NH2	2.31	0.45
19:V:110:ARG:HH22	19:V:151:ILE:CG2	2.30	0.45
19:V:139:ARG:HH12	19:V:142:ASN:HB2	1.82	0.45
20:Y:2:A:H3'	20:Y:3:A:N7	2.32	0.45
20:Y:25:A:O2'	20:Y:26:U:H5'	2.17	0.45
20:Y:57:A:O2'	20:Y:59:G:OP2	2.31	0.45
20:Y:202:C:H3'	20:Y:203:A:H8	1.82	0.45
20:Y:255:A:C2	20:Y:256:A:H1'	2.51	0.45
20:Y:278:A:H2'	20:Y:279:U:O4'	2.16	0.45
20:Y:300:G:N2	20:Y:303:G:H5'	2.32	0.45
20:Y:390:G:H2'	20:Y:391:G:N9	2.31	0.45
20:Y:512:G:O2'	20:Y:513:C:H5'	2.16	0.45
20:Y:665:G:H22	20:Y:2255:A:P	2.39	0.45
20:Y:674:U:C2	20:Y:675:G:C8	3.04	0.45
20:Y:688:A:C2	20:Y:778:G:C6	3.05	0.45
20:Y:894:U:OP1	22:Z:49:ILE:CD1	2.65	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:930:C:P	36:n:86:LYS:HZ2	2.39	0.45
20:Y:1025:A:C6	20:Y:1026:A:N6	2.85	0.45
20:Y:1059:G:C8	20:Y:1060:U:C2	3.04	0.45
20:Y:1360:G:H2'	20:Y:1361:G:H8	1.82	0.45
20:Y:1476:G:H2'	20:Y:1477:C:H6	1.81	0.45
20:Y:1534:C:H3'	20:Y:1534:C:O2	2.17	0.45
20:Y:1769:G:H2'	20:Y:1769:G:N3	2.32	0.45
20:Y:2016:G:C5	22:Z:177:MET:HE2	2.51	0.45
20:Y:2089:C:HO2'	20:Y:2090:U:C4'	2.24	0.45
20:Y:2455:C:C4	20:Y:2456:C:N4	2.84	0.45
20:Y:2493:A:H2'	20:Y:2494:U:H5'	1.98	0.45
20:Y:2529:A:N1	25:c:158:GLY:CA	2.80	0.45
20:Y:2553:G:C2'	20:Y:2554:U:H5'	2.47	0.45
20:Y:2709:G:O2'	20:Y:2710:G:H5'	2.16	0.45
20:Y:2872:G:O2'	20:Y:2873:U:H5'	2.16	0.45
20:Y:2989:A:H3'	20:Y:2989:A:N3	2.31	0.45
21:U:78:U:O2'	21:U:79:A:H5'	2.17	0.45
22:Z:87:ASN:OD1	22:Z:87:ASN:O	2.34	0.45
25:c:80:SER:O	25:c:81:ILE:HD13	2.16	0.45
26:d:12:PRO:O	26:d:15:VAL:HG23	2.16	0.45
26:d:37:VAL:HG12	26:d:38:ALA:N	2.32	0.45
26:d:149:ILE:O	26:d:163:VAL:HG11	2.17	0.45
30:h:124:VAL:CG1	30:h:129:PHE:HE1	2.26	0.45
31:i:37:LEU:HB3	31:i:38:GLU:OE2	2.17	0.45
32:j:50:LYS:HA	32:j:50:LYS:CE	2.38	0.45
35:m:32:TYR:CD1	35:m:32:TYR:C	2.94	0.45
37:o:77:VAL:HG11	37:o:117:ARG:CZ	2.46	0.45
40:r:55:ALA:HB1	40:r:90:ARG:NH2	2.31	0.45
41:s:81:VAL:O	41:s:81:VAL:HG23	2.16	0.45
1:A:57:A:N6	1:A:359:G:C6	2.85	0.45
1:A:424:G:O2'	1:A:425:G:H5'	2.17	0.45
1:A:425:G:C2'	1:A:426:U:O5'	2.65	0.45
1:A:578:U:H2'	1:A:579:U:C6	2.51	0.45
1:A:596:A:H2	1:A:606:U:N3	2.15	0.45
1:A:710:G:H2'	1:A:746:A:H5'	1.99	0.45
1:A:751:G:H2'	1:A:752:U:C6	2.52	0.45
1:A:833:C:O2'	1:A:834:C:H5'	2.17	0.45
1:A:945:G:N2	9:J:57:LYS:CE	2.80	0.45
2:C:18:TRP:CZ3	13:N:55:GLY:N	2.84	0.45
3:D:52:GLU:OE2	3:D:190:LEU:HB3	2.17	0.45
3:D:87:ARG:HD3	3:D:90:GLU:OE2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:145:LEU:HA	3:D:150:PHE:CE2	2.51	0.45
7:H:46:ILE:HG21	7:H:62:VAL:CG2	2.47	0.45
8:I:28:THR:HG21	8:I:102:ALA:O	2.16	0.45
10:K:83:ALA:C	10:K:88:VAL:HG12	2.42	0.45
12:M:55:VAL:HA	12:M:58:ASP:OD1	2.17	0.45
12:M:63:ASN:O	12:M:64:LEU:HG	2.16	0.45
12:M:69:ASP:OD1	12:M:70:LEU:HG	2.16	0.45
14:O:26:GLU:O	14:O:29:VAL:HG23	2.17	0.45
14:O:29:VAL:O	14:O:33:THR:OG1	2.29	0.45
15:P:66:PRO:HB2	15:P:70:VAL:HG12	1.99	0.45
18:T:35:PHE:CD1	18:T:35:PHE:C	2.93	0.45
19:V:94:GLN:CD	19:V:146:ARG:HH21	2.25	0.45
20:Y:135:G:H2'	20:Y:136:U:C6	2.52	0.45
20:Y:267:G:N2	20:Y:359:A:C5	2.84	0.45
20:Y:468:G:O2'	42:t:29:TRP:HH2	2.00	0.45
20:Y:606:U:H2'	20:Y:607:G:H8	1.82	0.45
20:Y:1102:G:H2'	20:Y:1102:G:N3	2.32	0.45
20:Y:1201:G:H2'	20:Y:1202:A:C2'	2.46	0.45
20:Y:1608:U:H6	20:Y:1608:U:O5'	2.00	0.45
20:Y:1782:U:C2'	20:Y:1783:G:O5'	2.64	0.45
20:Y:1883:A:O2'	29:g:1:MET:HE1	2.17	0.45
20:Y:2009:G:OP2	20:Y:2009:G:H3'	2.17	0.45
20:Y:2152:A:H2'	20:Y:2153:G:C4'	2.46	0.45
20:Y:2263:G:O2'	20:Y:2264:U:H5'	2.17	0.45
20:Y:2426:C:O2'	20:Y:2427:G:OP1	2.23	0.45
20:Y:2552:A:O2'	20:Y:2553:G:H5'	2.16	0.45
20:Y:2670:G:O3'	20:Y:2671:G:H4'	2.17	0.45
20:Y:3004:C:OP2	28:f:120:LYS:HG2	2.17	0.45
21:U:82:A:H2'	21:U:83:C:C6	2.51	0.45
22:Z:37:LEU:HG	22:Z:38:HIS:N	2.32	0.45
22:Z:206:TRP:CB	22:Z:211:ARG:HH11	2.29	0.45
25:c:112:SER:C	25:c:113:ILE:HD13	2.41	0.45
29:g:80:ASP:OD1	34:l:103:ARG:NE	2.49	0.45
30:h:79:ASN:O	30:h:83:ILE:HG12	2.17	0.45
31:i:42:ILE:HG21	31:i:47:ILE:HD11	1.99	0.45
34:l:26:ASN:HA	34:l:42:PHE:O	2.17	0.45
34:l:48:ARG:CD	34:l:95:LYS:HG2	2.46	0.45
35:m:28:ARG:CA	35:m:34:LYS:NZ	2.80	0.45
35:m:107:THR:O	35:m:111:ASP:OD2	2.34	0.45
36:n:6:ILE:HD13	36:n:6:ILE:N	2.30	0.45
50:2:23:VAL:O	50:2:23:VAL:HG23	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:4:2393:A:H2'	51:4:2394:A:OP1	2.17	0.45
1:A:40:C:H5"	11:L:120:LYS:CE	2.47	0.45
1:A:205:G:C2'	1:A:206:G:C8	2.99	0.45
1:A:275:G:O3'	16:Q:32:MET:HE2	2.17	0.45
1:A:296:U:H2'	1:A:297:G:C8	2.51	0.45
1:A:325:A:H2'	1:A:326:G:H8	1.82	0.45
1:A:394:G:C2'	1:A:395:C:H5'	2.47	0.45
1:A:429:U:H1'	1:A:430:A:P	2.57	0.45
1:A:575:G:O4'	1:A:576:C:H5	2.00	0.45
1:A:654:G:H2'	1:A:655:A:H8	1.79	0.45
1:A:821:C:N4	1:A:826:U:H3	2.15	0.45
1:A:975:G:O2'	1:A:977:C:N4	2.50	0.45
1:A:1126:G:N3	1:A:1126:G:H5'	2.32	0.45
1:A:1209:C:H41	12:M:104:LYS:HE2	1.82	0.45
1:A:1259:G:N3	1:A:1259:G:H2'	2.31	0.45
1:A:1441:G:H2'	1:A:1442:G:H8	1.81	0.45
4:E:36:TYR:OH	4:E:96:PHE:HE2	1.98	0.45
4:E:71:VAL:CG2	4:E:143:ALA:HB2	2.47	0.45
4:E:106:ILE:CD1	4:E:148:ILE:HB	2.47	0.45
4:E:111:GLN:HE21	4:E:113:GLU:CG	2.29	0.45
5:F:68:GLU:HB2	5:F:71:THR:CG2	2.41	0.45
5:F:73:SER:O	5:F:76:ASP:OD1	2.35	0.45
8:I:45:THR:OG1	8:I:46:GLY:N	2.50	0.45
10:K:101:GLY:O	10:K:102:ARG:C	2.60	0.45
11:L:74:LEU:HD21	11:L:104:THR:CG2	2.36	0.45
20:Y:89:A:C3'	20:Y:90:C:H5'	2.46	0.45
20:Y:421:U:H5"	20:Y:422:A:OP2	2.17	0.45
20:Y:619:C:H1'	20:Y:2245:C:C4	2.52	0.45
20:Y:658:U:H3'	20:Y:659:U:C6	2.52	0.45
20:Y:691:U:C1'	30:h:15:GLU:OE1	2.65	0.45
20:Y:1092:G:P	36:n:79:LYS:HZ3	2.36	0.45
20:Y:1393:C:O2'	20:Y:1394:A:H5'	2.17	0.45
20:Y:1646:U:P	22:Z:31:LYS:NZ	2.90	0.45
20:Y:1753:C:H3'	20:Y:1754:G:C8	2.52	0.45
20:Y:1895:A:C4	20:Y:1896:A:C8	3.05	0.45
20:Y:2110:U:O5'	20:Y:2110:U:H6	2.00	0.45
20:Y:2134:G:N1	20:Y:2145:C:N3	2.65	0.45
20:Y:2214:C:O3'	20:Y:2215:U:O4'	2.34	0.45
20:Y:2225:A:C2'	20:Y:2226:U:O5'	2.65	0.45
20:Y:2235:C:O2'	20:Y:2236:G:H5'	2.17	0.45
20:Y:2277:G:H2'	20:Y:2278:A:O4'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:2523:A:C6	20:Y:2542:G:H1'	2.52	0.45
20:Y:2536:U:H4'	25:c:75:ARG:CZ	2.46	0.45
20:Y:2628:U:O4'	30:h:67:PHE:HZ	2.00	0.45
20:Y:2927:C:H3'	20:Y:2928:C:H6	1.82	0.45
20:Y:2928:C:H3'	20:Y:2929:A:C8	2.52	0.45
20:Y:2965:A:H61	20:Y:2987:G:H1'	1.81	0.45
20:Y:2980:U:H5"	50:2:19:ARG:HG2	1.99	0.45
20:Y:2989:A:H3'	20:Y:2990:A:H5'	1.99	0.45
23:a:41:THR:N	23:a:45:ASP:OD1	2.50	0.45
23:a:117:THR:O	23:a:200:GLY:HA2	2.17	0.45
26:d:61:ARG:O	26:d:65:LEU:HD13	2.17	0.45
30:h:106:LYS:C	30:h:106:LYS:CD	2.84	0.45
31:i:10:ARG:C	31:i:11:LYS:HG2	2.42	0.45
32:j:56:LYS:NZ	32:j:88:ALA:HA	2.31	0.45
32:j:65:GLU:CD	32:j:68:LYS:HD3	2.41	0.45
38:p:8:ARG:CB	43:u:30:PHE:CE2	2.95	0.45
44:v:109:TYR:OH	44:v:112:GLY:HA2	2.17	0.45
44:v:116:SER:O	44:v:120:VAL:HG23	2.17	0.45
46:x:42:ARG:HB3	46:x:43:LEU:HD23	1.99	0.45
1:A:167:U:H2'	1:A:168:A:C8	2.51	0.45
1:A:533:G:H2'	1:A:534:U:H6	1.74	0.45
1:A:655:A:H1'	10:K:127:HIS:CG	2.52	0.45
1:A:782:A:H3'	1:A:783:G:H8	1.81	0.45
1:A:1058:U:H1'	1:A:1059:G:OP1	2.15	0.45
1:A:1171:G:P	2:C:5:ILE:HG12	2.57	0.45
1:A:1242:A:H1'	1:A:1256:A:C2	2.52	0.45
1:A:1259:G:H4'	1:A:1260:A:O4'	2.17	0.45
1:A:1394:U:H2'	1:A:1395:C:C6	2.51	0.45
2:C:147:LYS:HE2	2:C:203:TYR:OH	2.17	0.45
3:D:112:LEU:HD13	3:D:118:PHE:HE2	1.80	0.45
5:F:77:ARG:HH11	5:F:81:LEU:CD2	2.29	0.45
6:G:113:GLU:O	6:G:114:LYS:HB2	2.17	0.45
8:I:39:VAL:HG21	8:I:102:ALA:HB3	1.95	0.45
11:L:114:ARG:NH1	11:L:121:LYS:HA	2.32	0.45
13:N:6:LEU:HA	13:N:9:LYS:HE3	1.99	0.45
14:O:3:LEU:CD2	14:O:7:GLN:HE21	2.26	0.45
14:O:70:VAL:HA	14:O:73:VAL:CG1	2.47	0.45
20:Y:2:A:N1	20:Y:3119:A:C6	2.85	0.45
20:Y:17:C:P	35:m:22:LYS:NZ	2.86	0.45
20:Y:42:G:H5'	20:Y:43:C:P	2.57	0.45
20:Y:88:A:H1'	20:Y:89:A:H8	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:92:G:H3'	20:Y:92:G:OP2	2.16	0.45
20:Y:169:C:H2'	20:Y:170:G:C8	2.51	0.45
20:Y:598:U:H5"	20:Y:599:G:OP2	2.17	0.45
20:Y:662:G:H4'	20:Y:1101:A:N1	2.32	0.45
20:Y:693:G:OP1	24:b:30:ASN:ND2	2.50	0.45
20:Y:730:G:OP2	30:h:113:LEU:HD21	2.16	0.45
20:Y:807:C:H2'	20:Y:808:A:C8	2.52	0.45
20:Y:909:A:H2'	20:Y:910:C:H6	1.82	0.45
20:Y:1270:G:H2'	20:Y:1271:C:H6	1.82	0.45
20:Y:1354:G:H2'	20:Y:1355:G:O4'	2.17	0.45
20:Y:1398:G:H21	20:Y:1400:G:H8	1.64	0.45
20:Y:1666:A:O2'	20:Y:1667:C:H5'	2.17	0.45
20:Y:1708:A:O2'	20:Y:1709:U:H5'	2.17	0.45
20:Y:1900:C:C2	20:Y:1901:C:C5	3.04	0.45
20:Y:1905:G:N2	20:Y:1920:G:C5	2.85	0.45
20:Y:2051:U:O2	20:Y:2196:G:N1	2.49	0.45
20:Y:2230:C:H2'	20:Y:2231:U:C6	2.51	0.45
20:Y:2248:C:C4'	23:a:159:ARG:HH22	2.15	0.45
20:Y:2285:G:H2'	20:Y:2725:C:O2'	2.16	0.45
20:Y:2306:A:O2'	20:Y:2307:C:H5'	2.17	0.45
20:Y:2454:G:C6	20:Y:2455:C:C4	3.05	0.45
20:Y:2541:U:H6	33:k:7:GLY:N	2.15	0.45
20:Y:2542:G:C4'	20:Y:2543:U:OP1	2.64	0.45
20:Y:2624:C:H6	20:Y:2624:C:O5'	2.00	0.45
20:Y:2628:U:C2'	20:Y:2629:G:C5'	2.95	0.45
20:Y:2683:A:C4	20:Y:2684:U:C6	3.05	0.45
20:Y:2906:U:C2'	20:Y:2907:C:H5'	2.47	0.45
22:Z:211:ARG:HA	22:Z:214:TRP:CE3	2.51	0.45
24:b:155:LEU:O	24:b:195:VAL:N	2.48	0.45
24:b:170:ARG:C	24:b:170:ARG:HD2	2.42	0.45
25:c:78:ARG:C	25:c:79:LYS:HD3	2.41	0.45
30:h:38:LYS:HB2	30:h:43:ARG:HH22	1.82	0.45
31:i:70:PRO:HA	31:i:95:ALA:CB	2.39	0.45
31:i:136:GLU:HG3	40:r:83:LEU:CD1	2.47	0.45
33:k:38:LEU:HD23	33:k:38:LEU:C	2.42	0.45
33:k:41:ASN:OD1	33:k:42:ARG:N	2.50	0.45
35:m:89:GLU:OE2	35:m:89:GLU:N	2.50	0.45
35:m:102:ASP:OD1	35:m:105:ALA:HB2	2.16	0.45
36:n:52:ALA:HA	36:n:55:LEU:CG	2.47	0.45
44:v:39:LEU:HD12	44:v:40:ARG:N	2.32	0.45
50:2:16:VAL:CB	50:2:25:VAL:HG12	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:256:U:O2'	1:A:257:G:H5'	2.17	0.45
1:A:275:G:H2'	1:A:276:G:C8	2.52	0.45
1:A:649:G:H2'	1:A:650:A:O4'	2.17	0.45
1:A:764:A:H2'	1:A:765:G:C8	2.52	0.45
1:A:805:A:N6	1:A:858:A:C6	2.85	0.45
1:A:807:U:C2	1:A:856:G:N2	2.85	0.45
1:A:955:G:H5"	1:A:956:A:H3'	1.99	0.45
1:A:1393:G:O2'	1:A:1394:U:H5'	2.17	0.45
2:C:140:ALA:HB3	2:C:149:ILE:CD1	2.47	0.45
3:D:87:ARG:NH2	3:D:180:LEU:HD23	2.32	0.45
3:D:92:ARG:HH22	3:D:129:SER:CB	2.30	0.45
3:D:151:GLN:CD	3:D:154:ARG:HD3	2.41	0.45
3:D:188:VAL:HG13	3:D:189:PRO:CD	2.45	0.45
4:E:106:ILE:HG22	4:E:107:THR:H	1.82	0.45
5:F:77:ARG:O	5:F:77:ARG:HD2	2.17	0.45
8:I:32:ARG:HH12	8:I:33:LYS:HD3	1.82	0.45
8:I:119:LYS:HB3	8:I:124:LEU:CD2	2.43	0.45
10:K:68:THR:HG21	10:K:70:PHE:HB3	1.99	0.45
14:O:8:LYS:HA	14:O:11:ILE:HG22	1.99	0.45
17:R:22:PHE:HE2	17:R:41:TYR:CE2	2.34	0.45
18:T:31:ALA:HB2	18:T:57:LYS:CE	2.46	0.45
19:V:73:LYS:NZ	19:V:205:ASP:OD1	2.50	0.45
19:V:104:PHE:O	19:V:107:VAL:HG23	2.17	0.45
20:Y:56:U:O2'	20:Y:70:A:H2'	2.17	0.45
20:Y:569:G:O2'	20:Y:570:U:OP2	2.35	0.45
20:Y:617:U:C4'	20:Y:618:C:OP2	2.64	0.45
20:Y:774:G:C5	20:Y:775:U:C5	3.05	0.45
20:Y:784:G:N3	20:Y:784:G:H2'	2.32	0.45
20:Y:815:G:O2'	20:Y:1850:A:H1'	2.17	0.45
20:Y:916:G:O4'	24:b:55:ARG:HD3	2.16	0.45
20:Y:988:U:O3'	20:Y:989:G:H5'	2.16	0.45
20:Y:1033:A:C2'	20:Y:1034:U:O5'	2.65	0.45
20:Y:1083:G:C6	20:Y:1084:U:C4	3.05	0.45
20:Y:1096:G:O4'	20:Y:1119:A:H2	2.00	0.45
20:Y:1140:G:C6	20:Y:1258:C:C4	3.05	0.45
20:Y:1160:G:H2'	20:Y:1161:C:C6	2.51	0.45
20:Y:1187:A:H4'	20:Y:1188:A:C5'	2.21	0.45
20:Y:1219:U:C2'	20:Y:1220:C:H5'	2.47	0.45
20:Y:1843:C:C2'	20:Y:1844:A:H5'	2.46	0.45
20:Y:1870:U:C5	32:j:8:PRO:HG2	2.51	0.45
20:Y:1921:G:C2	20:Y:1922:G:C5	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:2206:C:C2	20:Y:2207:U:C5	3.05	0.45
20:Y:2256:G:N2	23:a:156:THR:HG21	2.31	0.45
20:Y:2272:G:C2'	20:Y:2273:G:O5'	2.65	0.45
20:Y:2413:G:H2'	20:Y:2414:G:H8	1.82	0.45
20:Y:2518:C:H2'	20:Y:2519:C:O4'	2.17	0.45
20:Y:2541:U:C2'	20:Y:2542:G:H5'	2.42	0.45
20:Y:2616:A:H2'	20:Y:2616:A:N3	2.32	0.45
20:Y:2715:U:H5"	20:Y:2794:G:H5"	1.98	0.45
20:Y:2913:U:O2	20:Y:2913:U:H5'	2.17	0.45
20:Y:2933:G:O2'	20:Y:2934:C:H5'	2.17	0.45
20:Y:3044:A:OP1	23:a:123:PHE:HB2	2.17	0.45
21:U:47:A:C4	21:U:48:C:C6	3.05	0.45
21:U:48:C:C5'	33:k:14:ARG:HH22	2.21	0.45
23:a:15:GLN:NE2	34:l:57:THR:CG2	2.77	0.45
23:a:129:ARG:HG2	23:a:130:HIS:N	2.31	0.45
23:a:186:ASP:HB3	23:a:191:VAL:N	2.30	0.45
26:d:3:ARG:CA	26:d:6:LYS:HD3	2.40	0.45
29:g:71:ARG:HD2	34:l:71:ARG:NE	2.32	0.45
30:h:74:GLU:H	30:h:74:GLU:HG2	1.63	0.45
30:h:105:ARG:HB3	30:h:108:SER:HB2	1.99	0.45
31:i:70:PRO:N	31:i:95:ALA:HB2	2.32	0.45
32:j:95:THR:HB	32:j:113:ILE:HD11	2.00	0.45
32:j:100:VAL:N	32:j:110:MET:O	2.29	0.45
33:k:104:ARG:HH11	33:k:108:THR:HA	1.81	0.45
34:l:92:ARG:HB2	34:l:93:ARG:NH1	2.31	0.45
39:q:22:LYS:HE2	39:q:22:LYS:CA	2.43	0.45
44:v:14:ALA:O	44:v:18:LYS:HG2	2.17	0.45
46:x:45:LYS:HG3	46:x:48:ARG:NH1	2.32	0.45
1:A:286:G:H2'	1:A:287:U:C6	2.53	0.44
1:A:373:A:H2'	1:A:374:A:C8	2.52	0.44
1:A:383:A:C4	1:A:384:G:H1'	2.52	0.44
1:A:426:U:OP1	3:D:31:TYR:OH	2.35	0.44
1:A:659:C:H2'	1:A:660:C:C6	2.52	0.44
1:A:764:A:H3'	1:A:765:G:H8	1.82	0.44
1:A:811:U:H3	1:A:837:G:H1	1.63	0.44
1:A:840:G:O6	1:A:851:A:H3'	2.17	0.44
1:A:1207:C:C5	12:M:104:LYS:HD3	2.52	0.44
1:A:1208:A:C2'	12:M:117:ILE:HD11	2.46	0.44
1:A:1221:U:OP1	6:G:116:MET:HG3	2.17	0.44
1:A:1509:G:C2	1:A:1510:G:C8	3.05	0.44
3:D:18:ASP:C	3:D:18:ASP:OD2	2.60	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:67:PHE:CE2	3:D:199:TYR:CE2	2.97	0.44
3:D:86:LEU:HA	3:D:89:LEU:HG	1.99	0.44
4:E:105:THR:HG21	4:E:124:ALA:H	1.82	0.44
5:F:24:GLU:HA	5:F:24:GLU:OE1	2.17	0.44
5:F:92:ARG:HG2	5:F:92:ARG:NH1	2.31	0.44
6:G:23:VAL:HG13	6:G:26:LEU:HD12	1.99	0.44
7:H:50:ARG:NE	7:H:50:ARG:HA	2.31	0.44
8:I:118:LEU:HD12	8:I:119:LYS:H	1.83	0.44
13:N:47:MET:HE1	13:N:52:GLU:HB2	1.98	0.44
15:P:55:ARG:HH21	15:P:58:TYR:HD2	1.62	0.44
17:R:68:VAL:O	17:R:72:ARG:CG	2.64	0.44
19:V:97:LEU:HD11	19:V:148:LEU:HB2	1.99	0.44
19:V:141:LYS:O	19:V:144:LEU:HG	2.16	0.44
20:Y:81:A:C2	20:Y:96:G:H1’	2.52	0.44
20:Y:355:A:N1	20:Y:441:G:N2	2.60	0.44
20:Y:506:C:O2’	20:Y:507:G:O5’	2.32	0.44
20:Y:604:C:P	46:x:10:ARG:HH12	2.31	0.44
20:Y:665:G:O2’	20:Y:666:A:H3’	2.18	0.44
20:Y:732:G:C6	20:Y:745:G:N1	2.85	0.44
20:Y:755:A:C6	20:Y:756:A:N6	2.85	0.44
20:Y:900:G:O2’	20:Y:901:C:H5’	2.17	0.44
20:Y:934:A:C2	20:Y:935:A:C4	3.05	0.44
20:Y:976:A:H1’	20:Y:1032:A:H61	1.82	0.44
20:Y:1146:A:N3	20:Y:2710:G:O2’	2.43	0.44
20:Y:1160:G:H2’	20:Y:1161:C:H6	1.82	0.44
20:Y:1305:G:P	30:h:32:THR:HG21	2.56	0.44
20:Y:1558:C:N4	20:Y:1559:A:H62	2.15	0.44
20:Y:2207:U:C2	20:Y:2208:U:C5	3.05	0.44
20:Y:2241:U:H5”	20:Y:2242:G:P	2.57	0.44
20:Y:2273:G:C2’	20:Y:2274:C:H5’	2.47	0.44
20:Y:2540:G:O2’	33:k:7:GLY:HA3	2.16	0.44
20:Y:2629:G:N3	20:Y:2637:G:C6	2.85	0.44
20:Y:2684:U:C4	20:Y:2685:C:C5	3.05	0.44
20:Y:2840:C:C2	20:Y:2841:C:C6	3.05	0.44
20:Y:2943:A:OP1	34:l:97:TYR:CG	2.70	0.44
20:Y:3113:A:H2’	20:Y:3113:A:N3	2.31	0.44
22:Z:94:LEU:HD12	22:Z:94:LEU:HA	1.75	0.44
22:Z:145:VAL:CG2	22:Z:146:GLU:N	2.80	0.44
23:a:21:ASN:HD21	34:l:79:ASN:HA	1.81	0.44
23:a:182:VAL:HA	23:a:194:ILE:CD1	2.47	0.44
24:b:7:VAL:HG13	24:b:127:VAL:CA	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:c:55:LYS:HZ3	25:c:58:ASN:HB2	1.81	0.44
25:c:76:ARG:HB3	25:c:89:GLY:CA	2.47	0.44
25:c:128:GLN:HG3	25:c:137:PHE:HE2	1.79	0.44
26:d:73:ILE:HD13	26:d:76:LEU:HD21	1.98	0.44
33:k:42:ARG:HG3	33:k:112:ARG:HH21	1.81	0.44
34:l:32:ILE:CA	34:l:38:ARG:HH12	2.31	0.44
34:l:91:VAL:HB	34:l:96:LEU:HD21	1.99	0.44
36:n:12:LYS:HD3	36:n:12:LYS:HA	1.87	0.44
37:o:82:TYR:CD1	37:o:82:TYR:N	2.86	0.44
38:p:59:THR:OG1	38:p:80:LYS:HD3	2.16	0.44
38:p:81:ARG:HD3	38:p:81:ARG:N	2.32	0.44
39:q:32:LYS:HD3	39:q:65:PRO:CG	2.43	0.44
40:r:13:ALA:CB	40:r:47:LEU:HD12	2.47	0.44
44:v:15:GLU:CA	44:v:18:LYS:HG2	2.45	0.44
45:w:50:VAL:O	45:w:50:VAL:CG1	2.59	0.44
47:y:25:THR:CG2	47:y:26:LYS:N	2.80	0.44
1:A:122:G:H21	16:Q:21:LYS:HZ3	1.66	0.44
1:A:123:G:N2	16:Q:20:ARG:HD3	2.32	0.44
1:A:145:G:H21	1:A:1429:A:H2	1.65	0.44
1:A:180:A:C6	16:Q:8:LYS:HE2	2.52	0.44
1:A:210:A:HO2'	1:A:211:A:H8	1.65	0.44
1:A:211:A:N6	1:A:221:G:H5'	2.32	0.44
1:A:414:A:C2	1:A:415:C:C2	3.06	0.44
1:A:555:G:H4'	1:A:556:A:H5"	1.94	0.44
1:A:593:C:OP1	3:D:76:ARG:NH1	2.50	0.44
1:A:598:C:H3'	1:A:599:U:C5'	2.47	0.44
1:A:845:U:H2'	1:A:847:A:OP2	2.18	0.44
1:A:1221:U:H4'	6:G:38:LEU:HD11	1.98	0.44
1:A:1298:G:H4'	13:N:18:VAL:HG12	1.99	0.44
1:A:1356:G:H8	1:A:1356:G:OP2	2.00	0.44
2:C:28:TYR:HD1	2:C:28:TYR:O	2.00	0.44
4:E:66:ASP:OD2	4:E:70:MET:HB2	2.17	0.44
4:E:111:GLN:HG3	4:E:113:GLU:HG3	1.98	0.44
6:G:126:ASP:CB	6:G:132:GLY:HA2	2.47	0.44
11:L:30:ARG:HA	11:L:30:ARG:NE	2.32	0.44
13:N:29:ARG:HH22	13:N:42:ILE:HB	1.82	0.44
13:N:46:GLU:OE1	13:N:46:GLU:C	2.61	0.44
15:P:14:ARG:CZ	15:P:14:ARG:HB2	2.47	0.44
15:P:39:ARG:HB2	15:P:41:HIS:NE2	2.33	0.44
18:T:28:LEU:HG	18:T:58:LEU:CD1	2.47	0.44
19:V:32:PHE:HB3	19:V:40:ILE:CG1	2.41	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:V:154:MET:CE	19:V:157:VAL:HA	2.39	0.44
20:Y:22:U:C2'	20:Y:23:G:O5'	2.65	0.44
20:Y:68:A:N1	20:Y:111:U:H1'	2.32	0.44
20:Y:81:A:N6	20:Y:99:G:O2'	2.50	0.44
20:Y:159:A:N6	20:Y:166:A:C4	2.85	0.44
20:Y:206:A:C2'	20:Y:207:C:H5'	2.47	0.44
20:Y:435:A:O2'	20:Y:436:C:H5'	2.16	0.44
20:Y:553:G:H2'	20:Y:554:A:C8	2.52	0.44
20:Y:658:U:O5'	30:h:31:LYS:NZ	2.50	0.44
20:Y:1042:A:C2	20:Y:1043:G:C4	3.05	0.44
20:Y:1084:U:H2'	20:Y:1086:C:O4'	2.17	0.44
20:Y:1178:U:O4'	20:Y:1180:G:H5'	2.17	0.44
20:Y:1234:U:C4	20:Y:1235:U:C5	3.05	0.44
20:Y:1336:A:P	36:n:91:ARG:HH12	2.40	0.44
20:Y:1412:C:O2'	20:Y:1413:C:H5'	2.16	0.44
20:Y:1546:A:N3	20:Y:1621:C:H5'	2.32	0.44
20:Y:1730:U:H4'	20:Y:1731:A:OP2	2.16	0.44
20:Y:1797:C:H2'	20:Y:1798:U:O4'	2.18	0.44
20:Y:1886:A:C2	20:Y:1892:G:C4	3.05	0.44
20:Y:1996:U:H1'	20:Y:2000:A:H62	1.81	0.44
20:Y:2074:G:N1	20:Y:2108:A:OP2	2.50	0.44
20:Y:2281:A:C6	20:Y:2282:A:C6	3.05	0.44
20:Y:2509:C:N3	20:Y:2608:G:N1	2.65	0.44
20:Y:2511:A:N7	20:Y:2513:G:C8	2.85	0.44
20:Y:2881:A:N1	20:Y:2889:A:H1'	2.33	0.44
22:Z:9:THR:OG1	22:Z:10:THR:N	2.50	0.44
23:a:4:LYS:CG	23:a:105:ILE:HD11	2.48	0.44
27:e:85:ALA:HB1	27:e:100:ALA:HB3	1.99	0.44
32:j:55:ALA:HA	32:j:80:PHE:HE2	1.77	0.44
33:k:40:VAL:HG11	33:k:113:ILE:HD13	1.99	0.44
41:s:62:LEU:HD12	41:s:62:LEU:N	2.32	0.44
44:v:82:VAL:CG1	44:v:89:ALA:HB3	2.47	0.44
45:w:37:ARG:HD3	45:w:37:ARG:HA	1.74	0.44
1:A:272:C:N4	1:A:273:A:H62	2.15	0.44
1:A:332:G:C2	1:A:333:C:C6	3.06	0.44
1:A:384:G:H2'	1:A:385:C:H6	1.82	0.44
1:A:409:G:O2'	1:A:410:G:H5'	2.17	0.44
1:A:427:U:C5'	3:D:10:ARG:HH12	2.28	0.44
1:A:516:C:H2'	1:A:517:G:C8	2.53	0.44
1:A:518:U:H2'	1:A:519:A:C8	2.52	0.44
1:A:532:U:H5'	11:L:83:ARG:HE	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:543:A:O2'	1:A:546:G:O3'	2.35	0.44
1:A:604:U:O5'	1:A:604:U:H6	2.00	0.44
1:A:675:A:H2'	1:A:676:A:C8	2.52	0.44
1:A:858:A:OP1	7:H:15:ARG:NH1	2.49	0.44
1:A:997:A:OP1	1:A:997:A:H8	2.00	0.44
1:A:1257:G:O2'	1:A:1263:C:O4'	2.34	0.44
1:A:1338:G:H2'	1:A:1339:A:C8	2.53	0.44
1:A:1342:A:H2'	1:A:1343:G:H8	1.78	0.44
1:A:1420:C:H5"	18:T:29:ARG:HH12	1.81	0.44
1:A:1425:G:H3'	1:A:1425:G:N3	2.32	0.44
4:E:140:LEU:HD13	4:E:148:ILE:HD13	1.99	0.44
6:G:54:THR:HG21	6:G:125:LEU:HD11	1.97	0.44
8:I:124:LEU:HD12	8:I:125:THR:N	2.32	0.44
9:J:40:VAL:HB	9:J:73:LEU:HB2	1.99	0.44
10:K:63:GLY:O	10:K:66:LYS:HG2	2.17	0.44
11:L:33:VAL:O	11:L:55:VAL:HG23	2.16	0.44
13:N:29:ARG:NH2	13:N:42:ILE:HB	2.31	0.44
15:P:78:GLY:HA2	15:P:81:GLN:OE1	2.18	0.44
16:Q:34:LYS:O	16:Q:35:THR:HG23	2.17	0.44
16:Q:46:HIS:CD2	16:Q:53:ILE:HD11	2.51	0.44
17:R:65:ALA:HA	17:R:68:VAL:CG1	2.48	0.44
17:R:68:VAL:O	17:R:72:ARG:HG2	2.18	0.44
19:V:154:MET:SD	19:V:155:GLN:N	2.90	0.44
20:Y:6:G:H2'	20:Y:2853:C:N4	2.26	0.44
20:Y:216:A:C4	20:Y:217:G:C8	3.05	0.44
20:Y:322:A:H2	20:Y:323:C:H5	1.65	0.44
20:Y:577:G:H8	20:Y:577:G:P	2.40	0.44
20:Y:645:G:H2'	20:Y:646:U:O4'	2.18	0.44
20:Y:656:C:C2	20:Y:657:C:C5	3.05	0.44
20:Y:728:G:H2'	20:Y:729:C:H6	1.83	0.44
20:Y:779:U:O2'	20:Y:780:U:H5'	2.17	0.44
20:Y:792:G:C2	20:Y:793:C:C5	3.05	0.44
20:Y:804:A:C2'	20:Y:805:C:H5'	2.47	0.44
20:Y:982:A:O2'	20:Y:983:C:H5'	2.18	0.44
20:Y:1019:C:C2	20:Y:1020:A:C8	3.06	0.44
20:Y:1037:C:H1'	41:s:26:PHE:CE2	2.52	0.44
20:Y:1043:G:H21	45:w:25:THR:CG2	2.26	0.44
20:Y:1465:C:N4	20:Y:1497:A:N6	2.65	0.44
20:Y:1711:G:H2'	20:Y:1712:G:C8	2.52	0.44
20:Y:1898:U:C4	20:Y:1899:G:C5	3.06	0.44
20:Y:1941:A:O2'	20:Y:1942:G:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:2460:U:H2'	20:Y:2461:G:O4'	2.16	0.44
20:Y:2528:G:O6	25:c:160:ASP:C	2.59	0.44
20:Y:2569:G:OP1	20:Y:2569:G:H8	2.01	0.44
20:Y:3008:C:H4'	23:a:44:ARG:NH1	2.32	0.44
21:U:43:C:OP1	25:c:73:GLU:HG3	2.17	0.44
22:Z:115:ASP:N	22:Z:115:ASP:OD2	2.51	0.44
22:Z:172:TYR:HD2	22:Z:184:ARG:HD3	1.82	0.44
24:b:66:TYR:OH	24:b:76:GLN:HG2	2.18	0.44
24:b:202:ASN:HA	24:b:205:ILE:CD1	2.46	0.44
25:c:9:PRO:O	25:c:9:PRO:CD	2.58	0.44
25:c:64:LEU:O	25:c:67:ILE:CG2	2.66	0.44
25:c:71:LYS:N	25:c:71:LYS:CD	2.79	0.44
26:d:123:THR:C	26:d:124:PHE:CD1	2.96	0.44
27:e:58:VAL:HG23	27:e:72:LEU:HD23	2.00	0.44
28:f:16:TYR:O	28:f:55:ILE:HG22	2.17	0.44
29:g:98:ILE:HD13	29:g:118:ALA:HA	1.98	0.44
34:l:12:LEU:HD22	34:l:76:HIS:HE2	1.82	0.44
34:l:80:ILE:HG21	34:l:83:ILE:HG12	1.98	0.44
37:o:69:GLU:HB3	37:o:71:LEU:HD13	1.99	0.44
39:q:9:VAL:HG11	39:q:71:VAL:CG2	2.47	0.44
39:q:20:LYS:HZ1	39:q:74:VAL:HG21	1.81	0.44
43:u:36:MET:HE1	43:u:44:ASN:O	2.17	0.44
49:1:39:LYS:CE	49:1:43:ARG:HH22	2.29	0.44
1:A:141:U:H6	1:A:141:U:O5'	2.00	0.44
1:A:202:G:C6	1:A:203:U:C5	3.05	0.44
1:A:404:G:H2'	1:A:405:U:C6	2.52	0.44
1:A:1349:C:HO2'	9:J:62:ARG:HH12	1.51	0.44
2:C:31:TYR:N	2:C:31:TYR:CD1	2.85	0.44
4:E:130:VAL:HG11	4:E:145:VAL:HG23	1.98	0.44
5:F:39:LYS:HE3	5:F:64:ASP:OD2	2.17	0.44
12:M:25:ILE:HA	12:M:29:ARG:NE	2.32	0.44
19:V:94:GLN:HE21	19:V:147:SER:C	2.25	0.44
20:Y:22:U:C4	20:Y:23:G:N1	2.86	0.44
20:Y:106:G:C2'	20:Y:107:G:H5'	2.47	0.44
20:Y:199:U:H4'	42:t:22:HIS:O	2.17	0.44
20:Y:326:A:C6	20:Y:451:U:C4	3.06	0.44
20:Y:369:G:H3'	20:Y:369:G:P	2.57	0.44
20:Y:441:G:H2'	20:Y:442:U:O4'	2.17	0.44
20:Y:538:G:H1	20:Y:542:A:P	2.41	0.44
20:Y:539:C:P	24:b:53:LYS:HZ3	2.41	0.44
20:Y:546:G:C5	48:z:40:LYS:NZ	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:566:A:C2'	20:Y:567:A:H5'	2.47	0.44
20:Y:579:A:C2	20:Y:580:G:H1'	2.52	0.44
20:Y:582:G:OP1	37:o:13:LYS:NZ	2.50	0.44
20:Y:623:A:C6	20:Y:624:G:C4	3.05	0.44
20:Y:709:U:O2	24:b:41:GLN:HG2	2.18	0.44
20:Y:849:A:H2'	20:Y:849:A:N3	2.32	0.44
20:Y:974:G:H2'	20:Y:975:U:OP2	2.17	0.44
20:Y:1018:U:O2	20:Y:1019:C:C5	2.70	0.44
20:Y:1094:G:H4'	20:Y:1275:A:C5	2.52	0.44
20:Y:1243:G:H3'	20:Y:1244:A:H8	1.82	0.44
20:Y:1248:U:C2	23:a:157:PRO:HB3	2.52	0.44
20:Y:1347:G:C4	20:Y:1348:G:N7	2.85	0.44
20:Y:1524:G:O2'	20:Y:1525:U:C5'	2.66	0.44
20:Y:1532:G:C2'	20:Y:1533:U:O4'	2.66	0.44
20:Y:1634:C:H5"	20:Y:1802:G:H1	1.83	0.44
20:Y:1655:A:C2	20:Y:1656:A:C5	3.05	0.44
20:Y:1726:C:H2'	20:Y:1727:A:O5'	2.18	0.44
20:Y:2023:C:H2'	20:Y:2024:G:O4'	2.18	0.44
20:Y:2108:A:H2'	20:Y:2109:A:C8	2.52	0.44
20:Y:2251:G:H2'	20:Y:2252:U:C6	2.53	0.44
20:Y:2522:A:C2'	20:Y:2523:A:H5'	2.36	0.44
20:Y:2536:U:H1'	25:c:44:ASN:ND2	2.32	0.44
20:Y:2573:G:P	49:1:42:ARG:NH1	2.91	0.44
20:Y:2598:C:N4	20:Y:2599:G:O6	2.51	0.44
20:Y:2626:U:H4'	20:Y:2627:C:OP1	2.17	0.44
20:Y:2634:G:C6	20:Y:2635:A:C6	3.05	0.44
20:Y:2915:C:C2'	20:Y:2916:C:H5'	2.47	0.44
20:Y:3088:C:O2'	20:Y:3089:A:OP2	2.34	0.44
20:Y:3092:G:N3	20:Y:3092:G:H2'	2.31	0.44
22:Z:133:LEU:N	22:Z:133:LEU:CD1	2.80	0.44
22:Z:196:VAL:HG12	22:Z:197:GLY:N	2.33	0.44
24:b:180:PRO:CD	24:b:181:ASP:N	2.78	0.44
28:f:117:GLN:OE1	28:f:120:LYS:HD2	2.18	0.44
29:g:7:ARG:C	29:g:8:LEU:HD12	2.42	0.44
29:g:10:VAL:HG23	29:g:17:LYS:O	2.18	0.44
29:g:40:VAL:HG13	29:g:40:VAL:O	2.18	0.44
29:g:70:ARG:HA	29:g:76:TYR:HD1	1.83	0.44
30:h:97:GLU:O	30:h:101:LYS:HD3	2.17	0.44
31:i:48:GLU:OE2	31:i:48:GLU:CA	2.65	0.44
32:j:97:ILE:CD1	32:j:113:ILE:HB	2.48	0.44
33:k:110:GLY:H	33:k:113:ILE:CG2	2.30	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:q:27:TYR:HB2	39:q:32:LYS:O	2.17	0.44
47:y:12:THR:HG21	47:y:21:ARG:HH21	1.82	0.44
1:A:141:U:O2'	1:A:142:U:H5'	2.17	0.44
1:A:399:G:C2	1:A:400:C:C5	3.06	0.44
1:A:413:G:H2'	1:A:428:G:H21	1.83	0.44
1:A:517:G:O3'	11:L:110:ARG:NH1	2.50	0.44
1:A:579:U:C2'	1:A:580:G:H5'	2.48	0.44
1:A:602:A:OP2	1:A:603:C:N4	2.51	0.44
1:A:659:C:H2'	1:A:660:C:H6	1.82	0.44
1:A:955:G:H2'	1:A:956:A:C2	2.53	0.44
1:A:988:C:N3	1:A:989:G:H1'	2.32	0.44
1:A:1037:G:H4'	2:C:197:GLY:H	1.83	0.44
1:A:1053:U:H2'	1:A:1054:G:O4'	2.18	0.44
1:A:1147:G:N3	1:A:1147:G:H2'	2.33	0.44
1:A:1328:A:O5'	8:I:142:ARG:NH2	2.50	0.44
1:A:1339:A:H2'	1:A:1340:U:C5	2.53	0.44
1:A:1382:C:N4	1:A:1488:G:O6	2.50	0.44
1:A:1397:U:H2'	1:A:1398:G:H8	1.80	0.44
1:A:1505:G:H2'	1:A:1506:U:H6	1.78	0.44
2:C:109:GLU:O	2:C:115:VAL:HG11	2.16	0.44
4:E:48:LYS:HA	4:E:48:LYS:HD2	1.61	0.44
5:F:9:ILE:HD12	5:F:60:TYR:CE2	2.53	0.44
5:F:52:ILE:O	5:F:52:ILE:HG23	2.18	0.44
8:I:115:ARG:HB3	8:I:116:PRO:HD3	1.99	0.44
11:L:66:TYR:HE1	11:L:68:PRO:HA	1.81	0.44
15:P:45:GLU:HB2	15:P:46:PRO:HD3	2.00	0.44
17:R:22:PHE:CZ	17:R:37:LEU:HD11	2.52	0.44
19:V:56:PHE:HE2	19:V:184:ILE:HD11	1.79	0.44
20:Y:54:C:O2'	20:Y:55:G:H5'	2.17	0.44
20:Y:225:A:H2'	20:Y:226:A:H5'	1.98	0.44
20:Y:267:G:N2	20:Y:359:A:N1	2.60	0.44
20:Y:284:G:H5"	20:Y:285:U:OP1	2.17	0.44
20:Y:552:U:O2	48:z:19:HIS:HE1	2.00	0.44
20:Y:649:U:H2'	20:Y:650:G:H8	1.76	0.44
20:Y:671:G:C2	20:Y:1377:A:C5	3.05	0.44
20:Y:732:G:H2'	20:Y:733:U:O4'	2.17	0.44
20:Y:890:G:C5	20:Y:909:A:C8	3.06	0.44
20:Y:894:U:H5"	22:Z:49:ILE:HD13	1.99	0.44
20:Y:900:G:C2'	20:Y:901:C:H5'	2.48	0.44
20:Y:1037:C:H2'	20:Y:1038:G:H8	1.82	0.44
20:Y:1072:G:OP1	31:i:13:HIS:HA	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:1093:A:H62	20:Y:1107:G:H21	1.65	0.44
20:Y:1144:A:OP2	20:Y:1252:G:H1'	2.17	0.44
20:Y:1145:A:N6	20:Y:1244:A:N3	2.65	0.44
20:Y:1181:G:C6	20:Y:1182:C:N4	2.86	0.44
20:Y:1191:A:C5	20:Y:1192:G:C8	3.05	0.44
20:Y:1344:A:P	20:Y:1345:G:H5'	2.57	0.44
20:Y:1455:U:OP1	38:p:19:LYS:NZ	2.37	0.44
20:Y:1664:G:C2'	20:Y:1665:U:H5'	2.47	0.44
20:Y:1718:C:H2'	20:Y:1719:C:C6	2.53	0.44
20:Y:2474:G:N2	20:Y:2500:G:OP1	2.44	0.44
20:Y:2586:G:C2	20:Y:2587:U:C6	3.05	0.44
20:Y:2634:G:H3'	20:Y:2635:A:O4'	2.18	0.44
20:Y:2668:G:C2'	20:Y:2669:G:O5'	2.66	0.44
20:Y:2813:A:C2'	20:Y:2814:A:H5'	2.48	0.44
20:Y:3053:U:O2'	20:Y:3054:U:P	2.75	0.44
20:Y:3061:C:P	32:j:50:LYS:NZ	2.91	0.44
20:Y:3108:G:C5	20:Y:3109:C:C5	3.06	0.44
21:U:25:G:N7	21:U:57:U:H2'	2.33	0.44
22:Z:182:ILE:HG22	22:Z:269:VAL:HB	1.96	0.44
22:Z:195:GLU:OE1	22:Z:195:GLU:CA	2.64	0.44
23:a:64:LYS:HB3	23:a:65:PRO:HD3	2.00	0.44
23:a:169:ARG:HH11	23:a:169:ARG:HG2	1.82	0.44
34:l:47:ILE:HG22	34:l:96:LEU:H	1.82	0.44
34:l:73:PHE:CE2	34:l:79:ASN:HB3	2.45	0.44
47:y:11:ILE:HD12	47:y:27:LYS:HG2	2.00	0.44
1:A:124:G:H4'	1:A:125:U:OP1	2.16	0.44
1:A:241:C:C2'	1:A:242:U:H5'	2.47	0.44
1:A:242:U:C4	1:A:284:G:O6	2.71	0.44
1:A:250:U:O2	1:A:252:U:N3	2.50	0.44
1:A:332:G:O2'	18:T:11:ILE:HG12	2.18	0.44
1:A:927:G:H2'	1:A:928:A:H8	1.81	0.44
1:A:1013:G:H2'	1:A:1014:U:O4'	2.18	0.44
1:A:1129:U:H2'	1:A:1130:C:O4'	2.18	0.44
1:A:1356:G:P	8:I:93:SER:HB2	2.58	0.44
3:D:189:PRO:O	3:D:189:PRO:CD	2.58	0.44
6:G:12:LEU:HD12	6:G:13:VAL:H	1.82	0.44
7:H:105:ILE:HG22	7:H:128:LEU:CB	2.47	0.44
9:J:28:THR:OG1	9:J:90:ILE:HD11	2.18	0.44
10:K:34:SER:O	10:K:98:PRO:HD2	2.17	0.44
11:L:60:GLN:HA	11:L:60:GLN:OE1	2.18	0.44
13:N:47:MET:SD	13:N:53:LEU:HD21	2.58	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:R:30:ILE:CD1	17:R:64:ILE:HD13	2.48	0.44
18:T:18:ARG:HH12	18:T:25:LYS:HZ2	1.63	0.44
19:V:13:GLY:HA2	19:V:15:HIS:CE1	2.53	0.44
19:V:57:VAL:O	19:V:61:VAL:HG23	2.17	0.44
19:V:80:ILE:HD11	19:V:93:ASN:HB2	1.99	0.44
20:Y:46:A:H2'	20:Y:46:A:N3	2.33	0.44
20:Y:224:C:C2'	20:Y:225:A:H5'	2.47	0.44
20:Y:253:C:C2'	20:Y:254:G:H5'	2.47	0.44
20:Y:311:G:H2'	20:Y:312:G:N7	2.32	0.44
20:Y:319:G:C6	20:Y:492:C:H1'	2.52	0.44
20:Y:390:G:C2	20:Y:588:A:N7	2.86	0.44
20:Y:619:C:C1'	20:Y:2245:C:H42	2.29	0.44
20:Y:720:C:H3'	20:Y:721:A:H5"	1.99	0.44
20:Y:1141:U:C2'	20:Y:1142:G:H5'	2.48	0.44
20:Y:1203:A:O2'	20:Y:1221:A:N1	2.50	0.44
20:Y:1270:G:H2'	20:Y:1271:C:C6	2.53	0.44
20:Y:1295:U:H2'	20:Y:1296:G:H8	1.82	0.44
20:Y:1421:C:N3	20:Y:1841:G:C6	2.86	0.44
20:Y:1796:U:O2'	20:Y:1797:C:H5'	2.17	0.44
20:Y:2009:G:H2'	20:Y:2010:G:C8	2.53	0.44
20:Y:2018:G:H1'	20:Y:2426:C:N3	2.32	0.44
20:Y:2020:A:H2	20:Y:2040:G:O4'	2.00	0.44
20:Y:2090:U:H2'	20:Y:2091:U:O4'	2.17	0.44
20:Y:2130:G:C2'	20:Y:2131:G:O4'	2.65	0.44
20:Y:2286:A:O2'	20:Y:2287:C:O5'	2.36	0.44
20:Y:2428:G:O6	20:Y:2443:U:O4	2.36	0.44
20:Y:2526:U:O2'	20:Y:2527:G:H1'	2.17	0.44
20:Y:3053:U:C3'	20:Y:3054:U:H2'	2.48	0.44
20:Y:3077:A:N6	20:Y:3083:A:N6	2.65	0.44
21:U:11:U:O2'	21:U:13:C:H5"	2.18	0.44
21:U:28:A:C2'	21:U:29:C:H5'	2.47	0.44
21:U:50:C:OP1	33:k:112:ARG:HD3	2.16	0.44
21:U:61:C:C2	21:U:62:C:C6	3.05	0.44
22:Z:69:ARG:HB3	22:Z:130:ASN:HD22	1.82	0.44
23:a:54:TYR:CA	23:a:78:ARG:HD2	2.42	0.44
26:d:9:VAL:HB	26:d:51:ILE:HB	2.00	0.44
34:l:12:LEU:HD21	34:l:54:ILE:CA	2.47	0.44
35:m:15:ARG:HH11	35:m:15:ARG:HG2	1.82	0.44
42:t:7:ILE:CG1	42:t:55:CYS:SG	3.05	0.44
44:v:49:TYR:CE2	44:v:93:ILE:HD11	2.41	0.44
46:x:21:LYS:HG3	46:x:22:ALA:O	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:89:G:C2'	1:A:90:G:C8	2.98	0.44
1:A:538:G:OP2	1:A:539:A:O2'	2.33	0.44
1:A:751:G:H2'	1:A:752:U:H6	1.82	0.44
1:A:776:C:H4'	10:K:136:ARG:NH2	2.32	0.44
1:A:1048:G:H2'	1:A:1049:C:H6	1.81	0.44
1:A:1290:C:P	12:M:99:ARG:HD3	2.57	0.44
1:A:1387:C:O2	1:A:1503:A:H1'	2.17	0.44
1:A:1403:U:H2'	1:A:1404:C:H6	1.82	0.44
1:A:1423:U:H3	1:A:1445:G:H1	1.66	0.44
6:G:78:ARG:NH1	6:G:80:VAL:HG11	2.32	0.44
7:H:77:LEU:HD12	7:H:77:LEU:HA	1.75	0.44
9:J:8:ILE:CD1	9:J:100:ILE:HG13	2.48	0.44
10:K:107:ARG:HH21	10:K:107:ARG:HB2	1.82	0.44
14:O:39:LEU:HD22	14:O:56:LEU:CD1	2.39	0.44
18:T:67:ILE:CD1	18:T:68:HIS:H	2.31	0.44
18:T:68:HIS:CE1	18:T:70:ASN:H	2.36	0.44
19:V:110:ARG:NH2	19:V:151:ILE:HG21	2.33	0.44
20:Y:91:C:H2'	20:Y:92:G:H5'	1.99	0.44
20:Y:120:G:H2'	20:Y:121:G:H8	1.83	0.44
20:Y:272:A:N7	20:Y:314:G:C2	2.85	0.44
20:Y:921:C:C2	20:Y:922:U:C5	3.06	0.44
20:Y:926:U:C6	30:h:24:ARG:HD3	2.53	0.44
20:Y:934:A:H2'	20:Y:934:A:N3	2.32	0.44
20:Y:1104:C:N3	20:Y:1105:C:C5	2.86	0.44
20:Y:1164:A:H5'	44:v:55:THR:HG21	2.00	0.44
20:Y:1320:U:N3	20:Y:1355:G:N1	2.26	0.44
20:Y:1357:G:N3	30:h:7:HIS:CE1	2.85	0.44
20:Y:1409:C:O2	20:Y:1409:C:C2'	2.65	0.44
20:Y:1410:C:H2'	20:Y:1411:G:H8	1.83	0.44
20:Y:1532:G:N2	20:Y:1804:G:C2	2.86	0.44
20:Y:1688:G:H2'	20:Y:1689:U:H5'	1.98	0.44
20:Y:1988:C:C2	20:Y:1989:G:C8	3.06	0.44
20:Y:2018:G:H21	20:Y:2426:C:N4	2.15	0.44
20:Y:2029:A:C2	20:Y:2030:C:C5	3.06	0.44
20:Y:2056:G:H2'	20:Y:2057:G:H5'	1.98	0.44
20:Y:2087:C:O5'	20:Y:2087:C:C6	2.70	0.44
20:Y:2100:A:H3'	20:Y:2101:A:C8	2.53	0.44
20:Y:2161:A:O2'	20:Y:2162:A:H3'	2.18	0.44
20:Y:2161:A:N7	20:Y:2163:U:H2'	2.32	0.44
20:Y:2202:A:O2'	20:Y:2203:C:H5'	2.18	0.44
20:Y:2296:C:C2	20:Y:2661:G:N2	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:2477:G:C5	20:Y:2478:C:C5	3.06	0.44
20:Y:2541:U:C6	33:k:6:VAL:C	2.94	0.44
20:Y:2679:G:C4	20:Y:2680:C:C5	3.06	0.44
20:Y:2782:C:H2'	20:Y:2783:C:C6	2.53	0.44
20:Y:2812:G:C2'	20:Y:2813:A:C5'	2.94	0.44
20:Y:2906:U:H2'	20:Y:2907:C:H6	1.83	0.44
20:Y:2980:U:C4	20:Y:2983:G:O6	2.71	0.44
22:Z:208:LYS:O	22:Z:211:ARG:HG2	2.17	0.44
23:a:75:VAL:HG22	23:a:76:ASN:N	2.33	0.44
23:a:85:ARG:HE	23:a:85:ARG:HB2	1.47	0.44
23:a:191:VAL:HG11	34:l:4:LEU:HD21	1.99	0.44
23:a:198:ILE:HD12	23:a:206:VAL:HG11	1.99	0.44
25:c:14:ARG:NH2	25:c:19:ILE:HD11	2.31	0.44
26:d:27:LYS:HZ3	26:d:32:THR:HG21	1.81	0.44
29:g:35:ILE:HG12	29:g:65:THR:CG2	2.45	0.44
41:s:37:LEU:HD13	41:s:37:LEU:HA	1.86	0.44
44:v:26:THR:CG2	44:v:78:ALA:HB3	2.44	0.44
48:z:17:ARG:NH1	48:z:17:ARG:CB	2.80	0.44
50:2:17:ILE:HD11	50:2:19:ARG:CZ	2.48	0.44
50:2:17:ILE:CD1	50:2:19:ARG:HE	2.29	0.44
1:A:365:U:O2	1:A:365:U:C3'	2.65	0.44
1:A:505:C:H5"	11:L:88:LYS:HZ1	1.83	0.44
1:A:525:C:OP1	3:D:53:LYS:NZ	2.51	0.44
1:A:584:G:H1'	1:A:616:G:N2	2.32	0.44
1:A:932:U:C5	12:M:102:ARG:HG2	2.53	0.44
1:A:980:G:H2'	1:A:981:C:H6	1.83	0.44
1:A:1115:G:H1'	1:A:1121:G:H22	1.81	0.44
1:A:1131:G:O2'	9:J:43:PRO:HD3	2.18	0.44
1:A:1143:C:H2'	1:A:1144:G:H8	1.82	0.44
1:A:1183:U:C2'	1:A:1184:C:H5'	2.48	0.44
1:A:1266:U:H5"	1:A:1268:C:H4'	2.00	0.44
1:A:1287:G:H2'	1:A:1288:A:H8	1.82	0.44
1:A:1401:A:C2	1:A:1467:A:H2	2.34	0.44
1:A:1510:G:C2	1:A:1511:C:C4	3.06	0.44
3:D:57:ARG:HG2	3:D:62:VAL:O	2.17	0.44
3:D:110:ARG:HG2	3:D:128:PRO:HB3	1.99	0.44
3:D:141:LYS:HZ2	3:D:143:LYS:HB3	1.81	0.44
8:I:26:ILE:H	8:I:40:ARG:NH2	2.16	0.44
8:I:55:LEU:HD11	8:I:68:ILE:HD13	1.98	0.44
11:L:40:THR:HG22	11:L:41:THR:N	2.33	0.44
12:M:10:PRO:CD	12:M:18:ALA:HB1	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:V:110:ARG:HH22	19:V:151:ILE:HG21	1.82	0.44
20:Y:148:A:O2'	20:Y:149:C:H5'	2.18	0.44
20:Y:157:U:C2'	20:Y:158:G:H5'	2.47	0.44
20:Y:269:C:O4'	20:Y:360:G:O2'	2.35	0.44
20:Y:318:U:C3'	20:Y:319:G:H4'	2.44	0.44
20:Y:566:A:C6	20:Y:568:A:C5	3.06	0.44
20:Y:579:A:H2'	20:Y:580:G:O4'	2.18	0.44
20:Y:948:G:C1'	30:h:51:GLU:OE1	2.65	0.44
20:Y:978:A:C2	20:Y:979:G:C5	3.05	0.44
20:Y:1038:G:H5'	41:s:29:GLN:OE1	2.18	0.44
20:Y:1086:C:O4'	45:w:16:ARG:NH2	2.50	0.44
20:Y:1123:C:C2	20:Y:1124:C:C5	3.05	0.44
20:Y:1297:G:H2'	20:Y:1298:C:O4'	2.18	0.44
20:Y:1348:G:C2	20:Y:1349:U:C5	3.06	0.44
20:Y:1559:A:H2'	20:Y:1560:U:H6	1.82	0.44
20:Y:1609:G:H2'	20:Y:1610:C:C6	2.53	0.44
20:Y:1761:G:O2'	20:Y:1762:C:H5'	2.18	0.44
20:Y:1890:C:C6	20:Y:1890:C:C3'	3.00	0.44
20:Y:2037:U:O2	22:Z:202:SER:HB3	2.18	0.44
20:Y:2076:A:N6	20:Y:2107:G:C2'	2.81	0.44
20:Y:2167:U:H4'	20:Y:2168:U:C3'	2.48	0.44
20:Y:2176:A:O2'	20:Y:2177:A:H5'	2.17	0.44
20:Y:2468:U:H1'	20:Y:2658:A:C5	2.52	0.44
20:Y:2558:C:H1'	33:k:27:LYS:NZ	2.32	0.44
20:Y:2628:U:H2'	20:Y:2629:G:C4'	2.47	0.44
20:Y:2628:U:C2	20:Y:2637:G:N1	2.77	0.44
20:Y:2640:G:OP1	30:h:65:LYS:HB2	2.17	0.44
20:Y:2641:U:H2'	20:Y:2642:G:C8	2.52	0.44
20:Y:2820:U:H2'	20:Y:2821:G:C1'	2.48	0.44
20:Y:2916:C:H1'	20:Y:3068:U:O2'	2.17	0.44
20:Y:2922:U:C2	20:Y:2923:C:C5	3.06	0.44
20:Y:2927:C:C2'	20:Y:2928:C:C6	3.00	0.44
23:a:28:VAL:O	23:a:28:VAL:HG12	2.17	0.44
23:a:38:ARG:HG3	23:a:39:ILE:H	1.83	0.44
25:c:64:LEU:HA	25:c:67:ILE:CG2	2.48	0.44
28:f:44:PHE:CD1	28:f:45:THR:N	2.85	0.44
32:j:57:LYS:HD3	32:j:58:GLY:H	1.82	0.44
36:n:54:ASP:O	36:n:57:LYS:HG3	2.17	0.44
38:p:32:VAL:O	38:p:32:VAL:HG12	2.16	0.44
42:t:20:HIS:ND1	42:t:20:HIS:O	2.50	0.44
44:v:70:ASP:HA	44:v:73:PHE:HE2	1.76	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:y:29:ARG:NH1	47:y:30:ARG:HA	2.33	0.44
1:A:59:A:H2'	1:A:59:A:N3	2.32	0.44
1:A:173:C:P	18:T:20:ARG:NH2	2.91	0.44
1:A:291:C:O2'	1:A:292:G:H5'	2.17	0.44
1:A:365:U:O3'	1:A:366:A:H8	1.99	0.44
1:A:596:A:H2	1:A:606:U:H3	1.64	0.44
1:A:657:U:C2'	1:A:658:U:H5'	2.47	0.44
1:A:667:A:H2	1:A:684:A:C4	2.36	0.44
1:A:903:U:H1'	4:E:48:LYS:HE3	1.98	0.44
1:A:920:A:C2	1:A:1358:A:H2	2.35	0.44
1:A:1052:G:H2'	1:A:1053:U:H6	1.82	0.44
1:A:1135:G:H2'	1:A:1136:A:H8	1.82	0.44
1:A:1142:C:O2'	1:A:1143:C:H5'	2.18	0.44
1:A:1223:G:O6	1:A:1277:U:O4	2.35	0.44
1:A:1385:C:C2'	1:A:1386:C:O4'	2.65	0.44
4:E:184:LEU:HD23	4:E:185:PRO:HD2	1.99	0.44
6:G:135:VAL:HG22	6:G:138:ARG:HH22	1.83	0.44
7:H:13:ARG:HH12	7:H:27:LEU:HA	1.82	0.44
9:J:46:LYS:HD3	9:J:68:ARG:CD	2.48	0.44
9:J:67:MET:HE1	13:N:55:GLY:O	2.16	0.44
11:L:10:LYS:HB2	11:L:10:LYS:HE3	1.63	0.44
12:M:59:TYR:CE2	12:M:60:ILE:HD13	2.53	0.44
12:M:88:GLN:OE1	12:M:98:VAL:HG11	2.18	0.44
18:T:20:ARG:HH21	18:T:64:LYS:HZ2	1.66	0.44
20:Y:271:A:C2	20:Y:458:G:C2	3.06	0.44
20:Y:429:A:H2'	20:Y:430:A:C8	2.53	0.44
20:Y:504:C:C3'	20:Y:505:C:O4'	2.66	0.44
20:Y:517:A:H3'	20:Y:517:A:P	2.58	0.44
20:Y:624:G:C5'	28:f:5:THR:HG21	2.48	0.44
20:Y:688:A:N1	20:Y:778:G:O6	2.51	0.44
20:Y:739:U:H4'	20:Y:740:A:O2'	2.18	0.44
20:Y:780:U:O2'	49:1:60:LYS:HD2	2.18	0.44
20:Y:916:G:C4	24:b:55:ARG:HD3	2.53	0.44
20:Y:931:C:H2'	20:Y:932:C:H6	1.82	0.44
20:Y:1240:G:N3	20:Y:1240:G:H2'	2.33	0.44
20:Y:1311:C:H2'	20:Y:1312:G:C8	2.51	0.44
20:Y:1364:U:HO2'	20:Y:1365:G:H8	1.66	0.44
20:Y:1379:G:OP2	20:Y:1380:A:C2'	2.59	0.44
20:Y:1952:C:H6	20:Y:1952:C:O5'	2.01	0.44
20:Y:2057:G:C2'	20:Y:2058:U:H5'	2.48	0.44
20:Y:2105:G:H3'	20:Y:2106:A:H8	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:2209:C:O2'	20:Y:2210:U:H5'	2.18	0.44
20:Y:2260:C:C2	20:Y:2261:U:C5	3.06	0.44
20:Y:2274:C:OP2	20:Y:2274:C:H6	2.01	0.44
20:Y:2443:U:H2'	20:Y:2444:C:O4'	2.18	0.44
20:Y:2716:U:O2'	20:Y:2717:U:H5'	2.17	0.44
20:Y:2753:G:OP1	26:d:173:LYS:NZ	2.31	0.44
20:Y:2866:A:O2'	20:Y:2867:A:H5'	2.18	0.44
21:U:52:G:O2'	21:U:53:A:H5'	2.18	0.44
21:U:82:A:H2'	21:U:83:C:H6	1.83	0.44
24:b:23:GLU:CD	24:b:23:GLU:C	2.85	0.44
24:b:67:ARG:HG2	24:b:69:LYS:O	2.18	0.44
25:c:39:VAL:HG12	25:c:40:LYS:CG	2.40	0.44
25:c:131:GLY:O	25:c:169:ASN:HA	2.18	0.44
26:d:90:ILE:C	26:d:91:PHE:HD1	2.26	0.44
27:e:58:VAL:HA	27:e:71:ALA:O	2.18	0.44
27:e:113:THR:O	27:e:116:ALA:HB3	2.18	0.44
28:f:37:ARG:HE	28:f:110:PRO:HG2	1.82	0.44
28:f:113:LYS:HE3	28:f:116:ARG:HD2	2.00	0.44
33:k:48:HIS:HA	33:k:64:SER:HG	1.82	0.44
33:k:52:VAL:HG12	33:k:59:THR:CB	2.48	0.44
33:k:102:PHE:HZ	33:k:113:ILE:HD11	1.83	0.44
33:k:125:LEU:HG	33:k:125:LEU:O	2.17	0.44
34:l:30:LYS:HG2	34:l:39:ILE:HD11	2.00	0.44
37:o:34:LYS:N	37:o:34:LYS:HD2	2.33	0.44
37:o:113:ILE:O	37:o:113:ILE:HG23	2.18	0.44
40:r:134:GLU:HB2	40:r:171:ILE:HD11	2.00	0.44
44:v:34:ALA:O	44:v:38:GLU:CD	2.60	0.44
45:w:12:THR:HG22	45:w:23:LEU:CD2	2.48	0.44
1:A:119:C:OP1	1:A:311:C:O2'	2.33	0.43
1:A:182:C:O5'	1:A:182:C:H6	2.01	0.43
1:A:201:G:C2	1:A:202:G:C8	3.06	0.43
1:A:212:G:C2	1:A:220:G:H1'	2.54	0.43
1:A:254:G:H5'	16:Q:86:LYS:CE	2.47	0.43
1:A:363:A:C2	11:L:28:PRO:HD2	2.51	0.43
1:A:480:G:H2'	1:A:481:G:H8	1.83	0.43
1:A:500:A:OP1	11:L:49:LEU:HB3	2.17	0.43
1:A:728:A:H5'	1:A:729:A:OP1	2.18	0.43
1:A:748:A:H4'	1:A:1507:G:H22	1.82	0.43
1:A:974:U:C4	1:A:1025:C:C4	3.06	0.43
1:A:1511:C:O5'	1:A:1511:C:H6	2.01	0.43
2:C:29:LYS:HA	2:C:32:VAL:HG22	1.98	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:35:ASP:O	2:C:38:ILE:HG12	2.17	0.43
2:C:122:GLN:HE21	2:C:127:VAL:HG21	1.83	0.43
3:D:112:LEU:HD23	3:D:112:LEU:HA	1.88	0.43
4:E:58:PHE:CE2	4:E:81:VAL:HG13	2.53	0.43
14:O:24:SER:OG	14:O:26:GLU:HG3	2.17	0.43
16:Q:24:ILE:HG12	16:Q:73:ARG:HE	1.83	0.43
17:R:40:THR:C	17:R:41:TYR:HD1	2.26	0.43
17:R:71:ALA:HB1	17:R:76:LEU:HB2	1.99	0.43
17:R:74:VAL:O	17:R:74:VAL:CG2	2.65	0.43
19:V:154:MET:CE	19:V:158:PRO:HD3	2.47	0.43
20:Y:88:A:H4'	20:Y:89:A:H1'	2.00	0.43
20:Y:261:G:H2'	20:Y:262:A:C8	2.51	0.43
20:Y:399:G:C6	20:Y:400:C:C5	3.06	0.43
20:Y:420:G:H2'	20:Y:421:U:C6	2.53	0.43
20:Y:682:A:H2	49:1:2:PRO:CG	2.30	0.43
20:Y:751:A:N6	20:Y:765:G:O6	2.51	0.43
20:Y:802:C:C2'	20:Y:803:U:H5'	2.48	0.43
20:Y:850:A:H2'	20:Y:851:C:C5'	2.47	0.43
20:Y:894:U:H2'	20:Y:895:G:O4'	2.18	0.43
20:Y:953:G:C2'	20:Y:954:U:H5'	2.48	0.43
20:Y:976:A:C6	20:Y:977:G:C4	3.06	0.43
20:Y:1146:A:C2	20:Y:1147:A:C5	3.06	0.43
20:Y:1256:G:N2	28:f:108:MET:SD	2.83	0.43
20:Y:1354:G:C2	20:Y:1355:G:H1'	2.53	0.43
20:Y:1383:A:H1'	20:Y:2237:A:H61	1.83	0.43
20:Y:1399:A:C2'	20:Y:1400:G:O4'	2.66	0.43
20:Y:1472:C:H4'	48:z:26:ARG:NH1	2.33	0.43
20:Y:1526:A:C2'	20:Y:1527:U:C6	2.87	0.43
20:Y:1843:C:N4	20:Y:1844:A:N1	2.66	0.43
20:Y:1871:G:OP1	20:Y:3043:G:N1	2.43	0.43
20:Y:1959:G:H2'	20:Y:1960:U:H5'	2.00	0.43
20:Y:2134:G:H3'	20:Y:2135:U:C6	2.52	0.43
20:Y:2223:C:H2'	20:Y:2224:C:C6	2.53	0.43
20:Y:2244:A:P	35:m:27:GLN:NE2	2.91	0.43
20:Y:2318:U:C2	20:Y:2319:G:C8	3.06	0.43
20:Y:2539:G:N2	25:c:130:ASP:OD2	2.51	0.43
20:Y:2917:A:N1	20:Y:2941:G:C6	2.86	0.43
20:Y:2928:C:O2	20:Y:2928:C:C2'	2.63	0.43
21:U:108:C:H2'	21:U:109:C:O4'	2.18	0.43
23:a:42:THR:HG23	23:a:43:GLU:N	2.31	0.43
24:b:46:ARG:HD3	24:b:98:TYR:CD2	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:b:153:LYS:HG3	24:b:192:ASP:OD1	2.18	0.43
25:c:72:PRO:HG3	25:c:96:VAL:CB	2.44	0.43
25:c:120:ASP:HB2	25:c:122:ARG:HH21	1.83	0.43
27:e:47:ALA:O	27:e:51:GLN:HG2	2.18	0.43
28:f:3:THR:CG2	35:m:61:TRP:HE1	2.31	0.43
28:f:24:VAL:HG12	28:f:27:ARG:H	1.83	0.43
30:h:76:GLN:OE1	30:h:104:VAL:HG12	2.17	0.43
30:h:82:ASP:OD1	30:h:82:ASP:C	2.60	0.43
31:i:42:ILE:O	31:i:94:VAL:HG23	2.18	0.43
33:k:28:LYS:O	33:k:29:VAL:C	2.60	0.43
33:k:100:VAL:HG22	33:k:125:LEU:HD11	1.99	0.43
39:q:101:ASN:HD21	39:q:103:LYS:HD3	1.82	0.43
40:r:90:ARG:O	40:r:90:ARG:CG	2.65	0.43
41:s:58:THR:C	41:s:59:LEU:HD22	2.42	0.43
42:t:40:THR:OG1	42:t:47:GLN:NE2	2.51	0.43
44:v:43:LEU:HD13	44:v:43:LEU:HA	1.87	0.43
44:v:48:THR:C	44:v:49:TYR:HD1	2.26	0.43
44:v:49:TYR:CE1	44:v:80:ALA:HB1	2.53	0.43
50:2:1:MET:HE3	50:2:34:GLN:HA	2.00	0.43
1:A:228:A:OP2	1:A:228:A:H8	2.00	0.43
1:A:339:C:H2'	1:A:340:U:C6	2.53	0.43
1:A:976:A:H2	13:N:5:ALA:HA	1.83	0.43
1:A:1354:G:H2'	1:A:1355:U:C6	2.53	0.43
3:D:80:LYS:HE2	4:E:127:GLY:N	2.33	0.43
3:D:141:LYS:HD2	3:D:143:LYS:H	1.82	0.43
4:E:189:VAL:CG1	4:E:190:ALA:N	2.82	0.43
7:H:35:ASN:HD22	7:H:112:LEU:HD12	1.81	0.43
8:I:32:ARG:O	8:I:33:LYS:HG2	2.18	0.43
8:I:67:LEU:HD12	8:I:68:ILE:N	2.33	0.43
10:K:102:ARG:HG3	10:K:102:ARG:HH11	1.83	0.43
10:K:119:ILE:HD12	10:K:119:ILE:HA	1.87	0.43
11:L:3:THR:OG1	11:L:5:GLN:NE2	2.51	0.43
12:M:57:ARG:NE	12:M:58:ASP:OD2	2.52	0.43
12:M:91:ARG:HG3	12:M:98:VAL:HG13	1.99	0.43
13:N:47:MET:HG3	13:N:53:LEU:HD11	2.00	0.43
19:V:156:LYS:O	19:V:157:VAL:CG2	2.59	0.43
20:Y:79:G:O2'	20:Y:80:G:C5'	2.66	0.43
20:Y:192:U:H4'	20:Y:918:U:C4'	2.48	0.43
20:Y:495:C:O2'	20:Y:496:C:H5'	2.18	0.43
20:Y:600:A:O2'	20:Y:601:A:H5'	2.18	0.43
20:Y:800:A:N1	20:Y:902:C:H1'	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:824:G:O2'	20:Y:825:C:H5'	2.19	0.43
20:Y:885:G:P	48:z:14:ARG:NH1	2.85	0.43
20:Y:1128:A:N3	20:Y:1272:C:H1'	2.33	0.43
20:Y:1697:U:O2'	20:Y:1698:A:H5'	2.18	0.43
20:Y:1889:U:C2'	20:Y:1891:G:OP2	2.66	0.43
20:Y:2018:G:H21	20:Y:2426:C:H41	1.66	0.43
20:Y:2220:C:P	29:g:31:ARG:NH1	2.90	0.43
20:Y:2297:U:C2	20:Y:2298:U:C5	3.06	0.43
20:Y:2414:G:N3	20:Y:2414:G:H2'	2.33	0.43
20:Y:2441:G:OP1	42:t:48:ARG:NH1	2.51	0.43
20:Y:2590:A:H4'	41:s:62:LEU:HD23	2.00	0.43
20:Y:2678:G:C5	20:Y:2679:G:C8	3.06	0.43
20:Y:2694:G:C6	20:Y:2705:G:N2	2.86	0.43
20:Y:2736:C:H5"	23:a:132:PHE:CD1	2.54	0.43
20:Y:2883:G:N2	20:Y:2885:G:H3'	2.33	0.43
23:a:39:ILE:O	23:a:40:ARG:NH2	2.51	0.43
23:a:129:ARG:HG2	23:a:130:HIS:ND1	2.33	0.43
25:c:8:LEU:CD2	25:c:16:ARG:HH22	2.30	0.43
25:c:87:ARG:CA	25:c:90:MET:HE3	2.48	0.43
26:d:73:ILE:CD1	26:d:76:LEU:HD21	2.48	0.43
26:d:143:GLY:O	26:d:146:SER:OG	2.30	0.43
28:f:47:ASN:CG	28:f:48:VAL:HG23	2.43	0.43
30:h:118:LEU:HD11	30:h:120:VAL:O	2.17	0.43
32:j:72:ASP:CG	32:j:75:VAL:HG12	2.43	0.43
32:j:102:ASN:HB3	32:j:107:ASN:O	2.18	0.43
33:k:8:GLN:HG3	33:k:9:ASN:H	1.83	0.43
33:k:66:ILE:HG13	33:k:67:GLU:N	2.33	0.43
34:l:25:VAL:HG22	34:l:26:ASN:N	2.31	0.43
35:m:107:THR:O	35:m:110:VAL:HG23	2.18	0.43
38:p:67:LYS:HA	38:p:67:LYS:HE2	2.00	0.43
39:q:32:LYS:CD	39:q:65:PRO:HG2	2.43	0.43
40:r:51:ALA:HB3	40:r:52:ARG:HH11	1.82	0.43
49:1:22:ILE:O	49:1:50:VAL:HG23	2.17	0.43
51:4:2327:C:N4	51:4:2328:G:O6	2.51	0.43
51:4:2365:A:N6	51:4:2373:G:O6	2.51	0.43
1:A:115:A:H5'	1:A:116:A:N3	2.32	0.43
1:A:933:G:O2'	1:A:954:C:H5	2.01	0.43
1:A:1017:C:H2'	1:A:1018:C:C6	2.53	0.43
1:A:1275:G:C2	1:A:1276:G:C5	3.06	0.43
1:A:1372:C:H2'	1:A:1373:U:C6	2.53	0.43
2:C:16:THR:OG1	2:C:17:GLU:N	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:26:LYS:HB2	2:C:27:GLN:NE2	2.33	0.43
7:H:117:GLN:OE1	7:H:117:GLN:O	2.36	0.43
8:I:103:ILE:HD12	8:I:103:ILE:H	1.83	0.43
12:M:4:LEU:HD23	12:M:22:ILE:HD11	2.00	0.43
12:M:60:ILE:HD13	12:M:60:ILE:HA	1.90	0.43
14:O:6:GLU:CD	14:O:7:GLN:H	2.26	0.43
14:O:18:HIS:ND1	14:O:20:THR:OG1	2.50	0.43
20:Y:42:G:H3'	20:Y:214:G:H2'	2.00	0.43
20:Y:268:G:N3	20:Y:360:G:N9	2.65	0.43
20:Y:337:U:O4	20:Y:344:G:O6	2.37	0.43
20:Y:393:U:H5'	20:Y:414:A:C2	2.53	0.43
20:Y:579:A:C2'	20:Y:580:G:H5'	2.48	0.43
20:Y:790:A:H61	20:Y:919:A:H1'	1.83	0.43
20:Y:946:G:C5	20:Y:947:U:C5	3.07	0.43
20:Y:967:G:H2'	20:Y:968:C:H6	1.84	0.43
20:Y:972:A:H5"	41:s:69:PHE:CD2	2.53	0.43
20:Y:1131:G:C4'	28:f:147:GLN:NE2	2.80	0.43
20:Y:1920:G:N1	20:Y:1921:G:C5	2.86	0.43
20:Y:2014:G:O2'	22:Z:257:THR:CG2	2.66	0.43
20:Y:2141:U:C2'	20:Y:2142:A:H5'	2.46	0.43
20:Y:2249:G:H2'	20:Y:2250:A:C8	2.53	0.43
20:Y:2566:C:H2'	20:Y:2567:U:O4'	2.17	0.43
20:Y:2629:G:H1'	20:Y:2637:G:N1	2.33	0.43
20:Y:2661:G:O2'	20:Y:2662:U:H5'	2.18	0.43
20:Y:2803:C:O2'	20:Y:2804:U:H5'	2.18	0.43
20:Y:2908:U:O4'	29:g:76:TYR:CD2	2.72	0.43
20:Y:2972:A:C1'	26:d:68:LEU:HD21	2.49	0.43
22:Z:145:VAL:HG22	22:Z:146:GLU:O	2.18	0.43
26:d:122:ILE:HD12	26:d:123:THR:N	2.32	0.43
26:d:124:PHE:CD1	26:d:124:PHE:N	2.84	0.43
27:e:22:PRO:CD	27:e:26:VAL:HB	2.48	0.43
28:f:113:LYS:HA	28:f:116:ARG:NH1	2.34	0.43
29:g:35:ILE:HG13	29:g:69:ARG:HD2	2.00	0.43
29:g:98:ILE:HD12	29:g:117:LEU:HD12	2.00	0.43
30:h:49:MET:HE2	49:1:7:HIS:HE2	1.83	0.43
30:h:61:LEU:CD2	49:1:24:ARG:HE	2.26	0.43
31:i:39:HIS:O	31:i:40:ALA:HB2	2.18	0.43
32:j:38:GLU:N	32:j:39:PRO:CD	2.81	0.43
32:j:73:LYS:HD3	32:j:73:LYS:C	2.43	0.43
34:l:61:ARG:CA	34:l:70:GLU:HA	2.34	0.43
35:m:25:ARG:HD3	35:m:25:ARG:C	2.43	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:n:39:VAL:HG11	36:n:42:VAL:CG2	2.49	0.43
38:p:8:ARG:HG2	43:u:30:PHE:CZ	2.53	0.43
38:p:30:THR:C	38:p:31:PHE:HD1	2.25	0.43
49:1:38:THR:HA	49:1:41:THR:OG1	2.18	0.43
1:A:125:U:OP2	16:Q:18:GLY:N	2.51	0.43
1:A:862:C:H2'	1:A:863:G:C8	2.45	0.43
1:A:862:C:O2	1:A:863:G:C8	2.72	0.43
1:A:927:G:O6	1:A:1217:A:N1	2.51	0.43
1:A:1037:G:O2'	1:A:1038:G:H5'	2.19	0.43
2:C:38:ILE:HA	2:C:41:LEU:HD11	2.00	0.43
5:F:40:VAL:HA	5:F:63:ILE:CD1	2.47	0.43
6:G:40:GLU:C	6:G:43:VAL:HG12	2.43	0.43
7:H:39:ILE:HA	7:H:42:ARG:NH1	2.33	0.43
7:H:70:ARG:C	7:H:70:ARG:CD	2.92	0.43
10:K:27:HIS:CE1	10:K:46:PRO:HD3	2.53	0.43
10:K:40:ILE:HG22	10:K:55:SER:HB3	2.00	0.43
11:L:29:GLN:HE21	11:L:81:LEU:HD11	1.83	0.43
14:O:77:ARG:HA	14:O:80:SER:OG	2.17	0.43
18:T:37:GLU:O	18:T:40:ASP:OD2	2.36	0.43
19:V:14:ALA:HB2	19:V:209:SER:HB3	2.00	0.43
19:V:117:LEU:CD2	19:V:141:LYS:HG2	2.48	0.43
20:Y:143:G:H3'	20:Y:144:U:H6	1.84	0.43
20:Y:260:G:O4'	20:Y:715:A:O2'	2.33	0.43
20:Y:371:G:N1	20:Y:433:C:N3	2.65	0.43
20:Y:398:U:C2	20:Y:399:G:C8	3.06	0.43
20:Y:438:U:H3'	20:Y:439:C:C6	2.51	0.43
20:Y:527:A:H2'	20:Y:528:G:H8	1.84	0.43
20:Y:607:G:O2'	20:Y:608:C:H5'	2.19	0.43
20:Y:700:U:OP1	24:b:101:ARG:HD2	2.19	0.43
20:Y:806:C:H4'	22:Z:43:ARG:HH12	1.82	0.43
20:Y:826:G:C6	20:Y:827:G:N7	2.87	0.43
20:Y:956:G:C6	20:Y:1055:G:C6	3.07	0.43
20:Y:1089:C:O2'	20:Y:1090:G:H5'	2.19	0.43
20:Y:1175:A:H1'	44:v:33:VAL:HG11	2.00	0.43
20:Y:1195:A:H3'	20:Y:1196:C:O4'	2.19	0.43
20:Y:1249:G:H4'	28:f:84:LEU:CD2	2.40	0.43
20:Y:1260:C:H3'	20:Y:1260:C:P	2.57	0.43
20:Y:1468:A:C8	20:Y:1469:A:N7	2.86	0.43
20:Y:1638:C:H2'	20:Y:1639:G:C5'	2.36	0.43
20:Y:1982:G:C2	20:Y:2212:A:N1	2.87	0.43
20:Y:2000:A:C2	20:Y:2811:A:C4	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:2108:A:H3'	20:Y:2109:A:C8	2.53	0.43
20:Y:2115:G:H2'	20:Y:2116:C:H6	1.81	0.43
20:Y:2409:U:H5"	51:4:2406:U:C2	2.53	0.43
20:Y:2541:U:O5'	33:k:6:VAL:N	2.51	0.43
20:Y:2567:U:O2'	20:Y:2597:A:H4'	2.18	0.43
20:Y:2568:U:OP2	20:Y:2568:U:H6	2.00	0.43
20:Y:2640:G:C5'	30:h:65:LYS:HD2	2.49	0.43
20:Y:2640:G:O3'	30:h:65:LYS:CE	2.66	0.43
20:Y:2654:A:C5'	20:Y:2655:U:OP2	2.67	0.43
20:Y:2690:C:OP1	50:2:5:PRO:HD2	2.18	0.43
20:Y:2762:C:C2	20:Y:2763:C:C5	3.06	0.43
20:Y:2828:U:O2'	20:Y:2829:U:H5'	2.18	0.43
20:Y:2952:U:H2'	20:Y:2953:U:C6	2.54	0.43
21:U:72:C:H2'	21:U:73:G:H8	1.82	0.43
22:Z:26:ARG:HD2	22:Z:83:GLU:OE1	2.18	0.43
23:a:14:THR:C	23:a:26:VAL:HG12	2.43	0.43
24:b:115:LEU:HD23	24:b:115:LEU:HA	1.85	0.43
26:d:146:SER:HB2	26:d:165:TYR:CE1	2.50	0.43
26:d:171:ARG:HD3	26:d:172:ARG:H	1.82	0.43
33:k:25:LEU:CD1	33:k:29:VAL:HG23	2.47	0.43
34:l:73:PHE:CE2	34:l:79:ASN:HB2	2.50	0.43
39:q:1:MET:O	39:q:2:LYS:HB2	2.18	0.43
45:w:35:VAL:HG22	45:w:37:ARG:HE	1.84	0.43
1:A:29:C:H2'	1:A:30:A:C8	2.45	0.43
1:A:45:G:H2'	1:A:46:G:H8	1.82	0.43
1:A:66:U:O4	1:A:101:G:O6	2.37	0.43
1:A:122:G:C3'	1:A:123:G:H5"	2.47	0.43
1:A:180:A:C2	1:A:181:C:C5	3.07	0.43
1:A:262:G:H4'	18:T:68:HIS:ND1	2.34	0.43
1:A:653:G:O2'	1:A:654:G:H5'	2.19	0.43
1:A:903:U:C1'	4:E:48:LYS:NZ	2.80	0.43
1:A:976:A:C2'	1:A:977:C:H5'	2.49	0.43
1:A:1048:G:N7	1:A:1074:G:H2'	2.34	0.43
1:A:1098:U:H1'	1:A:1160:A:C2	2.53	0.43
1:A:1169:A:O2'	13:N:58:LYS:HE2	2.19	0.43
1:A:1295:U:H2'	1:A:1296:C:O4'	2.18	0.43
1:A:1354:G:O3'	8:I:91:GLY:N	2.51	0.43
2:C:133:MET:CE	2:C:168:TYR:H	2.31	0.43
2:C:187:TYR:OH	2:C:189:ALA:HA	2.19	0.43
3:D:18:ASP:OD2	3:D:18:ASP:O	2.35	0.43
6:G:38:LEU:HD21	6:G:42:ILE:HD12	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:G:69:VAL:HA	6:G:138:ARG:HE	1.83	0.43
10:K:43:ILE:HD12	10:K:43:ILE:N	2.33	0.43
11:L:110:ARG:HE	11:L:117:TYR:HD2	1.64	0.43
12:M:72:ARG:HD2	12:M:73:GLU:N	2.34	0.43
14:O:75:VAL:HG22	14:O:79:ARG:HD3	1.99	0.43
15:P:19:ARG:HA	15:P:39:ARG:HB3	2.01	0.43
15:P:59:TRP:CE3	15:P:62:VAL:HG11	2.54	0.43
19:V:167:ASN:OD1	19:V:168:LYS:N	2.52	0.43
20:Y:57:A:H61	20:Y:63:C:N4	2.17	0.43
20:Y:139:U:O2'	20:Y:140:G:H5'	2.19	0.43
20:Y:807:C:N4	20:Y:808:A:H62	2.17	0.43
20:Y:852:C:C2	20:Y:875:G:N2	2.87	0.43
20:Y:883:G:O2'	20:Y:884:U:H5'	2.18	0.43
20:Y:974:G:C2'	20:Y:975:U:OP2	2.67	0.43
20:Y:1027:C:OP1	31:i:8:LYS:NZ	2.52	0.43
20:Y:1236:G:H2'	20:Y:1237:U:O4'	2.18	0.43
20:Y:1338:U:O2'	20:Y:1339:G:H5'	2.18	0.43
20:Y:1821:A:C5	20:Y:1822:C:C5	3.07	0.43
20:Y:1855:A:H2'	20:Y:1856:C:C6	2.53	0.43
20:Y:1974:A:C2'	20:Y:1975:A:OP1	2.67	0.43
20:Y:2045:G:O6	22:Z:222:ARG:HD2	2.18	0.43
20:Y:2163:U:O2	20:Y:2816:G:H5'	2.18	0.43
20:Y:2248:C:OP2	20:Y:2258:U:H4'	2.19	0.43
20:Y:2256:G:OP1	20:Y:2679:G:H5'	2.19	0.43
20:Y:2277:G:O2'	20:Y:2278:A:H5'	2.18	0.43
20:Y:2516:U:C2	20:Y:2517:C:C5	3.06	0.43
20:Y:2536:U:H4'	25:c:75:ARG:NE	2.34	0.43
20:Y:2569:G:H21	20:Y:2605:C:H3'	1.83	0.43
20:Y:2619:C:O5'	20:Y:2619:C:H6	2.00	0.43
20:Y:2694:G:H2'	20:Y:2695:A:H8	1.83	0.43
20:Y:2694:G:C2'	20:Y:2695:A:H5'	2.49	0.43
20:Y:2878:A:HO2'	20:Y:2879:G:P	2.39	0.43
20:Y:2891:C:H2'	20:Y:2891:C:O2	2.17	0.43
21:U:60:G:C4'	33:k:9:ASN:HD22	2.32	0.43
21:U:77:A:H2'	21:U:78:U:H6	1.82	0.43
22:Z:163:ILE:CG2	22:Z:164:GLN:N	2.81	0.43
22:Z:206:TRP:CD1	22:Z:211:ARG:NH1	2.86	0.43
25:c:76:ARG:HB3	25:c:89:GLY:HA2	2.01	0.43
28:f:76:ARG:NE	28:f:87:ARG:HH12	2.09	0.43
29:g:88:LYS:HE3	29:g:88:LYS:CA	2.49	0.43
30:h:73:THR:O	30:h:75:TYR:CE2	2.71	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:h:75:TYR:HD1	30:h:109:LEU:O	2.02	0.43
32:j:38:GLU:HB3	32:j:111:ALA:HB2	2.01	0.43
33:k:118:ASP:O	33:k:122:GLU:OE2	2.37	0.43
34:l:56:GLU:HB3	34:l:75:VAL:HG21	1.99	0.43
34:l:61:ARG:HD2	34:l:70:GLU:CG	2.49	0.43
36:n:23:LYS:HE3	36:n:68:THR:CG2	2.46	0.43
37:o:43:LEU:HD13	37:o:43:LEU:HA	1.82	0.43
38:p:21:TYR:C	38:p:24:ILE:HG22	2.43	0.43
42:t:5:CYS:SG	42:t:51:ALA:HA	2.58	0.43
43:u:47:LEU:C	43:u:47:LEU:HD12	2.44	0.43
44:v:25:VAL:HG23	44:v:106:LYS:HE2	1.99	0.43
44:v:77:THR:HG23	44:v:106:LYS:HE3	2.00	0.43
46:x:23:GLU:N	46:x:23:GLU:CD	2.77	0.43
1:A:453:G:H2'	1:A:453:G:N3	2.34	0.43
1:A:1192:U:H1'	1:A:1194:A:N3	2.33	0.43
1:A:1206:U:O2	1:A:1206:U:C2'	2.65	0.43
1:A:1231:A:N7	1:A:1269:A:N7	2.67	0.43
2:C:131:ARG:HH11	2:C:134:ARG:NH1	2.16	0.43
2:C:147:LYS:HE2	2:C:203:TYR:CZ	2.53	0.43
3:D:53:LYS:CA	3:D:195:ILE:HD11	2.46	0.43
3:D:83:ASP:O	3:D:86:LEU:CD1	2.64	0.43
3:D:156:THR:HG22	3:D:156:THR:O	2.18	0.43
6:G:16:PRO:HG3	8:I:66:GLN:CG	2.48	0.43
7:H:25:VAL:O	7:H:61:VAL:HA	2.19	0.43
11:L:100:GLY:HA2	11:L:105:GLN:HA	2.00	0.43
14:O:15:TYR:CZ	14:O:85:LEU:HD21	2.52	0.43
14:O:76:ALA:O	14:O:79:ARG:HG2	2.18	0.43
17:R:22:PHE:HE1	17:R:37:LEU:HD21	1.78	0.43
20:Y:156:C:N3	20:Y:157:U:C5	2.86	0.43
20:Y:195:A:N7	20:Y:920:G:C5	2.86	0.43
20:Y:244:A:C2	20:Y:255:A:C4	3.07	0.43
20:Y:502:C:H5'	20:Y:2103:C:O2'	2.19	0.43
20:Y:808:A:O2'	20:Y:809:U:C5'	2.64	0.43
20:Y:976:A:C2'	20:Y:977:G:H5'	2.49	0.43
20:Y:1098:A:H8	20:Y:1098:A:P	2.41	0.43
20:Y:1341:U:H2'	20:Y:1342:C:C6	2.53	0.43
20:Y:1411:G:C4	20:Y:1863:G:N2	2.87	0.43
20:Y:1492:G:H5"	20:Y:1493:A:P	2.57	0.43
20:Y:1547:G:H8	20:Y:1620:U:C2'	2.31	0.43
20:Y:1628:A:H4'	20:Y:1630:U:C5	2.53	0.43
20:Y:1646:U:C2'	20:Y:1647:G:O4'	2.67	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:1684:C:H2'	20:Y:1685:G:C8	2.53	0.43
20:Y:1871:G:O5'	32:j:7:GLY:CA	2.67	0.43
20:Y:1898:U:H2'	20:Y:1899:G:H5'	1.99	0.43
20:Y:2038:A:H8	20:Y:2038:A:O5'	2.01	0.43
20:Y:2043:C:OP1	22:Z:223:GLY:HA3	2.18	0.43
20:Y:2486:U:P	41:s:19:GLN:HE22	2.41	0.43
20:Y:2493:A:C6	20:Y:2494:U:C5	3.07	0.43
20:Y:2528:G:H5'	20:Y:2529:A:O5'	2.19	0.43
20:Y:2622:C:H2'	20:Y:2623:A:C8	2.53	0.43
20:Y:2733:G:C2'	20:Y:2734:C:H5'	2.48	0.43
21:U:59:A:H5"	21:U:60:G:OP2	2.18	0.43
26:d:73:ILE:HA	26:d:76:LEU:CD1	2.48	0.43
26:d:78:THR:HA	26:d:81:THR:HG22	2.00	0.43
27:e:94:PRO:O	27:e:95:HIS:HB2	2.18	0.43
28:f:84:LEU:C	28:f:85:ARG:HD3	2.44	0.43
29:g:78:LYS:HD2	34:l:100:ARG:HG2	1.99	0.43
30:h:28:SER:C	30:h:29:LYS:HD2	2.44	0.43
33:k:39:VAL:CG1	33:k:50:GLN:HB2	2.49	0.43
33:k:50:GLN:HG3	33:k:62:ALA:CB	2.49	0.43
34:l:33:GLU:N	34:l:38:ARG:HH12	2.17	0.43
37:o:36:VAL:CG1	37:o:76:LEU:HB3	2.49	0.43
39:q:20:LYS:HZ2	39:q:74:VAL:HG21	1.84	0.43
39:q:85:TYR:N	39:q:97:ILE:HD12	2.34	0.43
44:v:82:VAL:HG12	44:v:89:ALA:HB3	2.00	0.43
1:A:20:A:N1	1:A:902:U:C4	2.87	0.43
1:A:93:C:H2'	1:A:94:U:H5'	2.00	0.43
1:A:115:A:H62	1:A:287:U:H3	1.65	0.43
1:A:321:A:H2'	1:A:322:C:C6	2.52	0.43
1:A:355:C:C4	1:A:356:A:N7	2.86	0.43
1:A:374:A:C6	1:A:375:U:C4	3.07	0.43
1:A:390:U:H2'	1:A:391:G:H8	1.82	0.43
1:A:520:G:H3'	1:A:521:G:C8	2.51	0.43
1:A:582:U:C2	1:A:617:G:N1	2.86	0.43
1:A:1186:U:H4'	2:C:195:ARG:NH1	2.30	0.43
1:A:1222:G:O2'	1:A:1223:G:H5'	2.19	0.43
1:A:1305:G:H2'	1:A:1306:A:C8	2.52	0.43
1:A:1395:C:H42	1:A:1472:G:N2	2.00	0.43
1:A:1503:A:C8	1:A:1504:G:O4'	2.72	0.43
3:D:15:LEU:HD23	3:D:15:LEU:C	2.44	0.43
3:D:87:ARG:O	3:D:90:GLU:HG3	2.19	0.43
4:E:107:THR:HG22	4:E:172:LEU:HD11	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:E:135:ALA:HB1	4:E:162:VAL:CG2	2.48	0.43
7:H:40:LEU:HB2	7:H:46:ILE:HD12	2.01	0.43
7:H:105:ILE:CG2	7:H:128:LEU:HB3	2.49	0.43
14:O:11:ILE:HD12	14:O:15:TYR:CD1	2.54	0.43
19:V:114:LEU:HD23	19:V:115:LYS:N	2.33	0.43
20:Y:871:A:H2'	20:Y:872:G:O4'	2.18	0.43
20:Y:936:A:H5"	20:Y:937:U:H5"	2.01	0.43
20:Y:946:G:C6	20:Y:947:U:C4	3.07	0.43
20:Y:1273:G:OP2	35:m:58:ARG:NH1	2.51	0.43
20:Y:1381:G:N7	37:o:22:THR:CG2	2.81	0.43
20:Y:1513:C:OP1	38:p:58:ASN:ND2	2.48	0.43
20:Y:1706:A:H2'	20:Y:1707:G:H8	1.82	0.43
20:Y:1925:A:H1'	20:Y:1973:C:O2	2.19	0.43
20:Y:2246:U:H3	46:x:6:ARG:NH1	2.14	0.43
20:Y:2530:C:OP2	20:Y:2531:G:O2'	2.27	0.43
20:Y:2559:A:OP1	33:k:24:ARG:HB2	2.19	0.43
20:Y:2624:C:C6	20:Y:2624:C:O5'	2.72	0.43
20:Y:2652:G:H5"	20:Y:2653:G:P	2.59	0.43
20:Y:2680:C:C4	20:Y:2681:U:C4	3.07	0.43
20:Y:2802:G:OP2	20:Y:2802:G:H4'	2.18	0.43
20:Y:2820:U:C5	20:Y:2821:G:N1	2.87	0.43
20:Y:2825:C:H5"	20:Y:2826:A:OP1	2.19	0.43
20:Y:2973:A:P	20:Y:2974:A:HO2'	2.34	0.43
20:Y:3008:C:C2	20:Y:3009:U:C6	3.07	0.43
23:a:35:VAL:HG21	23:a:78:ARG:HE	1.84	0.43
23:a:157:PRO:HG2	23:a:159:ARG:HG2	2.01	0.43
24:b:7:VAL:O	24:b:14:THR:HA	2.18	0.43
25:c:87:ARG:H	25:c:90:MET:HE3	1.82	0.43
30:h:93:VAL:HG13	30:h:122:VAL:CG1	2.48	0.43
32:j:97:ILE:HD13	32:j:113:ILE:HB	2.00	0.43
35:m:47:TYR:O	35:m:51:ARG:NH1	2.52	0.43
38:p:34:HIS:CG	38:p:35:PRO:CD	3.02	0.43
44:v:95:LYS:HG3	44:v:96:PHE:CD2	2.53	0.43
51:4:2370:A:N6	51:4:2371:G:H21	2.16	0.43
1:A:24:U:H1'	1:A:552:A:C2	2.54	0.43
1:A:43:G:O2'	1:A:44:C:H5'	2.18	0.43
1:A:64:A:H62	1:A:104:A:H5"	1.84	0.43
1:A:233:C:C4	1:A:234:C:N4	2.86	0.43
1:A:321:A:N1	1:A:332:G:N2	2.63	0.43
1:A:339:C:P	29:g:97:ARG:HH12	2.42	0.43
1:A:424:G:H2'	1:A:425:G:C8	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:428:G:O5'	3:D:10:ARG:NH2	2.52	0.43
1:A:499:C:O2'	1:A:500:A:H5'	2.19	0.43
1:A:626:G:H2'	1:A:627:C:H6	1.83	0.43
1:A:657:U:O2'	1:A:658:U:H5'	2.19	0.43
1:A:690:G:H2'	1:A:691:G:H8	1.83	0.43
1:A:803:G:O6	1:A:860:C:N4	2.52	0.43
1:A:934:U:H5"	1:A:946:A:H61	1.84	0.43
1:A:936:G:H21	1:A:1208:A:H62	1.67	0.43
1:A:987:A:N6	1:A:1008:C:O2	2.51	0.43
1:A:1149:C:C1'	1:A:1150:A:P	3.07	0.43
1:A:1189:C:H2'	1:A:1190:C:C6	2.53	0.43
1:A:1284:U:C2	12:M:17:ILE:HD11	2.54	0.43
1:A:1313:G:OP1	12:M:23:TYR:HE1	2.01	0.43
1:A:1401:A:C2	1:A:1467:A:C2	3.07	0.43
2:C:53:ASP:HB2	2:C:68:HIS:HB2	2.01	0.43
2:C:134:ARG:HA	2:C:137:ILE:HG22	2.01	0.43
3:D:55:LYS:CE	3:D:190:LEU:HD11	2.46	0.43
9:J:13:TYR:HD1	9:J:68:ARG:O	2.01	0.43
10:K:59:VAL:HG21	10:K:74:LEU:HB2	2.01	0.43
10:K:81:ARG:HG3	10:K:82:LYS:N	2.33	0.43
10:K:97:GLY:H	10:K:123:THR:HG23	1.82	0.43
13:N:15:LYS:HA	13:N:15:LYS:HD2	1.87	0.43
14:O:4:THR:H	14:O:7:GLN:NE2	1.98	0.43
15:P:22:VAL:HG21	15:P:59:TRP:NE1	2.33	0.43
18:T:28:LEU:HG	18:T:58:LEU:HD11	2.00	0.43
19:V:148:LEU:HD21	19:V:152:ARG:HH22	1.84	0.43
20:Y:25:A:C4	20:Y:600:A:C6	3.06	0.43
20:Y:125:C:C2	20:Y:126:C:C5	3.05	0.43
20:Y:314:G:C6	20:Y:315:U:C5	3.07	0.43
20:Y:366:G:H2'	20:Y:367:U:C6	2.53	0.43
20:Y:369:G:H3'	20:Y:369:G:OP1	2.19	0.43
20:Y:414:A:C2	20:Y:417:C:C5	3.06	0.43
20:Y:462:A:C2	20:Y:463:G:H1'	2.53	0.43
20:Y:553:G:HO2'	20:Y:554:A:C1'	2.16	0.43
20:Y:738:A:H8	20:Y:738:A:OP2	2.01	0.43
20:Y:784:G:C2	20:Y:916:G:N1	2.86	0.43
20:Y:865:A:C2	20:Y:868:C:H1'	2.53	0.43
20:Y:976:A:H2'	20:Y:977:G:O4'	2.19	0.43
20:Y:992:C:H3'	20:Y:993:G:H8	1.84	0.43
20:Y:1004:C:H1'	20:Y:1005:A:OP1	2.18	0.43
20:Y:1014:G:H5'	20:Y:1015:A:P	2.58	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:1306:G:O2'	20:Y:1307:G:H5'	2.19	0.43
20:Y:1472:C:H4'	48:z:26:ARG:HH11	1.83	0.43
20:Y:1764:A:H2'	20:Y:1764:A:N3	2.33	0.43
20:Y:1768:C:C2	20:Y:1769:G:C8	3.07	0.43
20:Y:1983:A:H2'	20:Y:1984:G:H8	1.84	0.43
20:Y:2009:G:H2'	20:Y:2010:G:O4'	2.18	0.43
20:Y:2268:G:C6	20:Y:2849:G:C6	3.07	0.43
20:Y:2479:G:C6	20:Y:2480:G:C5	3.07	0.43
20:Y:2538:A:N6	20:Y:2539:G:O6	2.52	0.43
20:Y:2610:C:O2'	20:Y:2611:U:H5'	2.19	0.43
20:Y:2971:G:H5'	20:Y:2972:A:OP1	2.19	0.43
21:U:4:A:N1	21:U:23:G:O2'	2.43	0.43
21:U:22:A:C6	21:U:64:G:C6	3.07	0.43
21:U:36:U:H2'	21:U:37:C:H6	1.82	0.43
21:U:48:C:H5"	33:k:14:ARG:NH1	2.25	0.43
23:a:182:VAL:HG23	23:a:192:LEU:HD11	2.00	0.43
24:b:46:ARG:CZ	24:b:98:TYR:HE2	2.32	0.43
25:c:78:ARG:HE	25:c:79:LYS:HE2	1.83	0.43
25:c:177:LEU:CD2	25:c:182:PHE:HD2	2.31	0.43
30:h:44:LYS:O	30:h:45:ASN:HB2	2.19	0.43
34:l:22:GLY:O	34:l:109:ILE:HG22	2.19	0.43
34:l:42:PHE:CE2	34:l:71:ARG:HG2	2.53	0.43
36:n:11:GLY:C	36:n:12:LYS:HE2	2.44	0.43
38:p:38:ASN:HB2	38:p:41:GLN:NE2	2.33	0.43
41:s:11:ARG:HH11	41:s:11:ARG:HG2	1.83	0.43
42:t:23:ARG:O	42:t:23:ARG:HG3	2.19	0.43
44:v:70:ASP:HA	44:v:73:PHE:CD2	2.53	0.43
49:1:13:ARG:C	49:1:14:PHE:CD2	2.97	0.43
51:4:2349:A:C4	51:4:2350:G:H4'	2.53	0.43
1:A:45:G:N3	1:A:46:G:C8	2.87	0.43
1:A:146:A:H2'	1:A:147:U:H6	1.84	0.43
1:A:209:A:OP1	1:A:209:A:H3'	2.19	0.43
1:A:373:A:C6	1:A:391:G:H1'	2.54	0.43
1:A:407:A:H2'	1:A:408:G:H8	1.81	0.43
1:A:488:C:H5"	3:D:46:TYR:CD2	2.54	0.43
1:A:654:G:H4'	17:R:79:PHE:HD2	1.80	0.43
1:A:656:A:O2'	10:K:126:PRO:HB3	2.19	0.43
1:A:659:C:C2	1:A:660:C:C5	3.06	0.43
1:A:698:A:C2'	1:A:699:C:O4'	2.63	0.43
1:A:1205:U:O2'	1:A:1206:U:P	2.77	0.43
1:A:1291:G:C6	1:A:1311:G:C6	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1396:A:H2'	1:A:1397:U:C6	2.54	0.43
1:A:1482:U:C1'	1:A:1483:A:P	3.06	0.43
4:E:39:ARG:HD3	4:E:39:ARG:HA	1.79	0.43
4:E:118:VAL:O	4:E:153:LEU:N	2.45	0.43
6:G:35:LYS:HE2	6:G:35:LYS:HB3	1.71	0.43
6:G:116:MET:O	6:G:120:LEU:HD23	2.19	0.43
6:G:119:ARG:HG2	6:G:119:ARG:HH11	1.84	0.43
7:H:94:LEU:CD1	7:H:95:PRO:HD2	2.49	0.43
9:J:67:MET:HE1	13:N:55:GLY:HA3	2.01	0.43
11:L:68:PRO:HG2	11:L:99:ARG:HG3	2.01	0.43
12:M:2:ALA:C	12:M:9:LEU:HB3	2.44	0.43
14:O:33:THR:O	14:O:36:ILE:HG13	2.18	0.43
17:R:21:VAL:HG23	17:R:22:PHE:N	2.34	0.43
19:V:70:VAL:CG2	19:V:163:VAL:HG22	2.48	0.43
19:V:164:VAL:HG12	19:V:165:ASP:N	2.34	0.43
20:Y:56:U:OP2	38:p:77:LYS:NZ	2.46	0.43
20:Y:151:A:O2'	20:Y:152:G:H5'	2.19	0.43
20:Y:242:G:P	49:1:3:LYS:HZ3	2.39	0.43
20:Y:314:G:N1	20:Y:315:U:H5	2.16	0.43
20:Y:404:A:H5'	20:Y:422:A:H1'	2.00	0.43
20:Y:574:C:H2'	20:Y:575:C:H6	1.84	0.43
20:Y:689:U:C4	20:Y:690:G:N7	2.87	0.43
20:Y:780:U:C5	20:Y:781:C:H5	2.36	0.43
20:Y:836:G:H2'	20:Y:837:C:O4'	2.19	0.43
20:Y:973:G:C4	20:Y:2492:A:C2	3.07	0.43
20:Y:1099:A:H5"	20:Y:1100:C:OP2	2.19	0.43
20:Y:1204:A:H4'	20:Y:1205:G:H8	1.84	0.43
20:Y:1433:G:O6	20:Y:1450:C:N4	2.51	0.43
20:Y:1478:C:H2'	20:Y:1479:G:O4'	2.18	0.43
20:Y:1720:G:C2	20:Y:1721:U:C6	3.06	0.43
20:Y:1810:A:C2'	20:Y:1811:C:H5'	2.49	0.43
20:Y:1816:C:O3'	38:p:38:ASN:OD1	2.37	0.43
20:Y:1929:A:H2'	20:Y:1930:C:C6	2.54	0.43
20:Y:2032:A:C1'	20:Y:2034:G:C8	3.02	0.43
20:Y:2094:G:H1'	20:Y:2095:G:O5'	2.18	0.43
20:Y:2102:G:H2'	20:Y:2103:C:O4'	2.18	0.43
20:Y:2135:U:H2'	20:Y:2142:A:C2	2.54	0.43
20:Y:2521:C:H3'	20:Y:2522:A:H8	1.82	0.43
20:Y:2528:G:C5'	25:c:138:GLY:O	2.66	0.43
20:Y:2594:G:C2	20:Y:2595:G:C4	3.06	0.43
20:Y:2794:G:H2'	20:Y:2795:C:H5'	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:2828:U:H2'	20:Y:2829:U:C6	2.54	0.43
20:Y:2893:G:H2'	20:Y:2894:G:C8	2.52	0.43
23:a:154:CYS:C	23:a:156:THR:H	2.25	0.43
25:c:16:ARG:HG3	25:c:16:ARG:HH11	1.83	0.43
25:c:44:ASN:OD1	25:c:44:ASN:C	2.61	0.43
25:c:118:ILE:HA	25:c:144:MET:CE	2.39	0.43
26:d:27:LYS:HE3	26:d:27:LYS:HB3	1.68	0.43
27:e:62:VAL:HG23	27:e:63:TYR:N	2.34	0.43
27:e:140:THR:HG22	27:e:142:GLU:HG2	2.01	0.43
29:g:5:GLU:OE1	29:g:5:GLU:HA	2.18	0.43
32:j:99:LYS:HG3	46:x:43:LEU:HD11	2.01	0.43
34:l:48:ARG:HB2	34:l:95:LYS:HG2	2.01	0.43
35:m:79:LEU:HD12	35:m:110:VAL:HG12	2.00	0.43
37:o:30:LEU:HD21	46:x:22:ALA:C	2.43	0.43
37:o:115:GLU:HG3	37:o:116:SER:N	2.33	0.43
40:r:89:ARG:NE	40:r:89:ARG:HA	2.33	0.43
40:r:151:VAL:HG12	40:r:155:THR:HG21	2.01	0.43
41:s:15:ASP:CG	41:s:16:SER:H	2.25	0.43
41:s:29:GLN:O	41:s:66:ALA:HA	2.19	0.43
43:u:10:LEU:HD21	43:u:21:LYS:CD	2.43	0.43
44:v:96:PHE:CD2	44:v:96:PHE:N	2.85	0.43
46:x:4:PRO:O	46:x:4:PRO:HD2	2.19	0.43
46:x:21:LYS:HG3	46:x:22:ALA:N	2.31	0.43
50:2:25:VAL:HG22	50:2:34:GLN:O	2.19	0.43
51:4:2394:A:O2'	51:4:2396:A:OP1	2.32	0.43
1:A:105:A:N7	1:A:326:G:H2'	2.34	0.43
1:A:157:A:N6	1:A:343:U:O2'	2.52	0.43
1:A:236:G:H3'	1:A:237:C:C5	2.53	0.43
1:A:237:C:C3'	1:A:238:G:C8	3.01	0.43
1:A:282:A:H3'	1:A:283:C:C6	2.52	0.43
1:A:371:A:H5"	1:A:372:C:OP2	2.19	0.43
1:A:389:A:C6	1:A:390:U:H1'	2.54	0.43
1:A:664:U:H1'	10:K:49:ASN:HA	2.01	0.43
1:A:842:A:C2'	1:A:843:G:H5'	2.49	0.43
1:A:862:C:H6	1:A:862:C:O5'	2.02	0.43
1:A:1062:A:C4	1:A:1063:U:C5	3.06	0.43
1:A:1082:A:H2'	1:A:1083:C:H6	1.81	0.43
1:A:1220:A:H62	1:A:1281:A:N6	2.17	0.43
1:A:1354:G:OP1	8:I:90:GLY:HA2	2.19	0.43
1:A:1420:C:O2'	1:A:1421:G:H5'	2.19	0.43
4:E:57:SER:O	4:E:58:PHE:HD1	2.02	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:G:15:ASP:O	6:G:19:GLY:HA2	2.19	0.43
6:G:29:LYS:HD3	6:G:29:LYS:HA	1.83	0.43
7:H:13:ARG:HH11	7:H:27:LEU:CG	2.32	0.43
9:J:8:ILE:O	9:J:8:ILE:HG23	2.19	0.43
12:M:70:LEU:HA	12:M:73:GLU:HG2	2.00	0.43
15:P:6:LYS:HZ1	15:P:25:ALA:HA	1.84	0.43
17:R:45:ARG:HG3	17:R:47:LYS:HG2	2.01	0.43
19:V:48:THR:O	19:V:52:LYS:HE2	2.19	0.43
19:V:89:MET:HA	19:V:89:MET:CE	2.48	0.43
20:Y:683:G:O2'	20:Y:685:G:H8	2.01	0.43
20:Y:783:G:C2	20:Y:785:A:C6	3.06	0.43
20:Y:843:G:C8	20:Y:845:C:C5	3.07	0.43
20:Y:1068:C:O2	20:Y:1068:C:H2'	2.19	0.43
20:Y:1447:G:C6	20:Y:1827:A:C5	3.07	0.43
20:Y:1637:G:H5'	20:Y:1805:G:C2	2.53	0.43
20:Y:1639:G:H2'	20:Y:1799:A:N6	2.34	0.43
20:Y:1652:A:C2'	20:Y:1653:G:H5'	2.48	0.43
20:Y:1714:A:H3'	20:Y:1715:A:H8	1.83	0.43
20:Y:1876:A:C2'	20:Y:1877:U:H5'	2.49	0.43
20:Y:2296:C:H2'	20:Y:2297:U:H6	1.83	0.43
20:Y:2476:G:C4	20:Y:2477:G:C8	3.06	0.43
20:Y:2727:A:O2'	20:Y:2729:G:OP2	2.37	0.43
20:Y:2819:G:C2	20:Y:2821:G:O5'	2.72	0.43
20:Y:2926:A:C2	20:Y:2927:C:C6	3.07	0.43
20:Y:2927:C:C4	20:Y:2928:C:C4	3.07	0.43
21:U:43:C:O2'	21:U:44:C:H5'	2.18	0.43
23:a:34:ASN:HB3	23:a:52:LEU:HD21	2.00	0.43
23:a:123:PHE:HE1	23:a:168:GLY:CA	2.31	0.43
25:c:37:GLY:H	25:c:166:THR:HB	1.84	0.43
25:c:47:VAL:HG23	25:c:49:ASP:N	2.05	0.43
25:c:81:ILE:H	25:c:86:LEU:CD1	2.31	0.43
26:d:79:GLY:HA2	26:d:83:GLY:HA2	2.00	0.43
29:g:98:ILE:HD12	29:g:117:LEU:HD11	2.01	0.43
29:g:107:ARG:HG3	29:g:112:MET:HE1	2.01	0.43
31:i:75:THR:HG22	31:i:90:PRO:N	2.34	0.43
35:m:90:VAL:CG2	35:m:95:LEU:HD21	2.44	0.43
43:u:22:LEU:HD12	43:u:57:VAL:CG2	2.49	0.43
45:w:6:ILE:O	45:w:35:VAL:HG12	2.18	0.43
1:A:148:A:H2'	1:A:149:A:H5'	2.00	0.42
1:A:620:A:C2'	1:A:621:U:H5'	2.49	0.42
1:A:638:A:O3'	14:O:8:LYS:HE2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:658:U:O2'	1:A:659:C:H5'	2.18	0.42
1:A:731:U:H3'	1:A:732:G:C8	2.54	0.42
1:A:761:A:N3	1:A:761:A:H2'	2.34	0.42
1:A:814:G:O2'	1:A:815:G:H5'	2.19	0.42
2:C:120:ALA:CB	2:C:187:TYR:CE2	3.01	0.42
2:C:131:ARG:HD2	2:C:134:ARG:NH2	2.34	0.42
3:D:31:TYR:HB3	3:D:38:ARG:HH22	1.84	0.42
3:D:99:ARG:NH1	3:D:165:TRP:HZ2	2.17	0.42
3:D:123:VAL:O	3:D:125:VAL:HG13	2.19	0.42
3:D:195:ILE:CD1	3:D:198:LEU:HD21	2.43	0.42
4:E:110:VAL:HG11	4:E:168:ALA:HB1	2.01	0.42
5:F:24:GLU:O	5:F:27:LEU:HD12	2.18	0.42
7:H:47:SER:OG	7:H:63:GLN:O	2.36	0.42
13:N:47:MET:CE	13:N:52:GLU:HB2	2.48	0.42
14:O:73:VAL:HG13	14:O:74:ASP:N	2.33	0.42
19:V:132:LYS:O	19:V:136:MET:CE	2.67	0.42
20:Y:77:G:N1	20:Y:104:G:C6	2.87	0.42
20:Y:189:A:O2'	20:Y:190:A:C5'	2.66	0.42
20:Y:314:G:N1	20:Y:315:U:C5	2.86	0.42
20:Y:388:U:H3'	20:Y:389:G:O4'	2.18	0.42
20:Y:467:C:H4'	20:Y:2456:C:H5"	2.01	0.42
20:Y:658:U:C5'	30:h:31:LYS:CE	2.97	0.42
20:Y:747:A:O2'	20:Y:748:U:H5'	2.19	0.42
20:Y:792:G:N3	20:Y:792:G:H2'	2.33	0.42
20:Y:881:C:H2'	20:Y:882:U:H6	1.84	0.42
20:Y:945:G:O4'	20:Y:2672:A:C2	2.72	0.42
20:Y:1741:G:H2'	20:Y:1742:U:H6	1.74	0.42
20:Y:1921:G:N3	20:Y:1922:G:C8	2.87	0.42
20:Y:2238:A:H4'	37:o:101:PHE:CD2	2.54	0.42
20:Y:2239:A:H5"	20:Y:2240:U:OP2	2.18	0.42
20:Y:2454:G:C6	20:Y:2455:C:N4	2.87	0.42
20:Y:2531:G:H5'	20:Y:2532:G:C5	2.54	0.42
24:b:67:ARG:NH1	24:b:69:LYS:O	2.45	0.42
25:c:128:GLN:HG3	25:c:137:PHE:CD2	2.54	0.42
26:d:96:ARG:HH12	26:d:129:PRO:CB	2.32	0.42
26:d:154:ARG:HA	26:d:154:ARG:HD2	1.84	0.42
27:e:34:GLY:HA3	27:e:66:ARG:HG2	1.99	0.42
28:f:17:VAL:HA	28:f:55:ILE:O	2.19	0.42
28:f:37:ARG:HG2	28:f:37:ARG:HH11	1.84	0.42
31:i:36:ALA:C	31:i:37:LEU:HD23	2.44	0.42
31:i:116:ASP:OD1	31:i:116:ASP:C	2.61	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:j:29:PHE:HE2	32:j:79:LEU:HD12	1.80	0.42
33:k:118:ASP:O	33:k:119:ALA:C	2.62	0.42
36:n:7:VAL:O	36:n:13:GLN:HA	2.19	0.42
36:n:40:ALA:HA	36:n:55:LEU:HB3	2.00	0.42
37:o:87:PRO:O	37:o:107:THR:HB	2.19	0.42
39:q:91:THR:HG22	39:q:91:THR:O	2.18	0.42
40:r:56:ALA:HA	40:r:59:ARG:HH21	1.84	0.42
44:v:72:LEU:HD23	44:v:72:LEU:C	2.43	0.42
1:A:109:G:O2'	1:A:353:A:O2'	2.28	0.42
1:A:184:U:H2'	1:A:185:G:C8	2.54	0.42
1:A:383:A:C6	1:A:384:G:H1'	2.53	0.42
1:A:685:U:H2'	1:A:686:A:O4'	2.18	0.42
1:A:687:U:C2	1:A:688:C:C5	3.07	0.42
1:A:775:C:O2'	1:A:1490:U:O2	2.17	0.42
1:A:826:U:C2	1:A:828:G:C8	3.08	0.42
1:A:1040:U:C1'	9:J:54:SER:HB2	2.49	0.42
1:A:1265:U:H5"	1:A:1266:U:C4'	2.32	0.42
1:A:1288:A:H2'	1:A:1289:U:H6	1.84	0.42
1:A:1298:G:H22	1:A:1300:A:H3'	1.83	0.42
1:A:1491:A:H2'	1:A:1492:G:H8	1.83	0.42
3:D:150:PHE:CD1	3:D:150:PHE:C	2.96	0.42
9:J:29:VAL:CG2	9:J:76:ILE:HD12	2.50	0.42
10:K:24:ASN:HA	10:K:86:HIS:O	2.18	0.42
10:K:68:THR:CG2	10:K:70:PHE:HB3	2.49	0.42
11:L:90:LEU:HD22	11:L:93:VAL:HG21	2.01	0.42
13:N:23:ARG:HD3	13:N:30:PRO:HD3	2.00	0.42
15:P:72:ALA:HA	15:P:75:LYS:HD2	2.00	0.42
16:Q:45:SER:HB3	16:Q:52:ILE:HD13	2.00	0.42
19:V:152:ARG:CZ	19:V:152:ARG:N	2.83	0.42
20:Y:419:G:H2'	20:Y:420:G:H5'	2.02	0.42
20:Y:571:A:C2	39:q:59:ILE:HD11	2.52	0.42
20:Y:577:G:C5	20:Y:1399:A:C2	3.07	0.42
20:Y:605:G:C4'	37:o:25:ARG:NH2	2.83	0.42
20:Y:656:C:C4	20:Y:657:C:N4	2.87	0.42
20:Y:690:G:H21	30:h:15:GLU:HA	1.84	0.42
20:Y:793:C:H5'	20:Y:2294:A:H5"	2.00	0.42
20:Y:899:G:O6	22:Z:229:VAL:CG2	2.63	0.42
20:Y:921:C:C5	30:h:43:ARG:HD3	2.54	0.42
20:Y:975:U:O2	20:Y:975:U:H2'	2.18	0.42
20:Y:1111:G:OP2	35:m:51:ARG:NH2	2.52	0.42
20:Y:1202:A:H2	20:Y:1224:G:H1'	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:1205:G:H5"	20:Y:1206:A:OP2	2.18	0.42
20:Y:1217:G:C2'	20:Y:1218:C:H5'	2.48	0.42
20:Y:1524:G:H2'	20:Y:1525:U:C6	2.53	0.42
20:Y:1637:G:O2'	20:Y:1638:C:O4'	2.37	0.42
20:Y:1780:G:C2	20:Y:1781:C:C6	3.06	0.42
20:Y:1825:C:N4	20:Y:1839:U:H3'	2.34	0.42
20:Y:2157:G:C5	20:Y:2158:C:C5	3.07	0.42
20:Y:2251:G:H2'	20:Y:2252:U:H6	1.84	0.42
20:Y:2289:C:H2'	20:Y:2290:C:H6	1.84	0.42
20:Y:2443:U:O2'	20:Y:2444:C:H5'	2.19	0.42
20:Y:2455:C:O2'	20:Y:2456:C:C5'	2.68	0.42
20:Y:2840:C:N3	20:Y:2841:C:C5	2.87	0.42
20:Y:2845:G:OP1	23:a:129:ARG:NH2	2.52	0.42
20:Y:2904:C:O2'	20:Y:2905:C:H5'	2.19	0.42
20:Y:2908:U:O2'	29:g:68:GLU:OE2	2.35	0.42
20:Y:3061:C:P	32:j:50:LYS:HZ1	2.41	0.42
21:U:113:G:H2'	21:U:113:G:N3	2.34	0.42
22:Z:125:ILE:O	22:Z:125:ILE:CG2	2.66	0.42
22:Z:131:LEU:N	22:Z:131:LEU:HD23	2.34	0.42
22:Z:256:ARG:HA	22:Z:256:ARG:HE	1.81	0.42
23:a:15:GLN:HB3	23:a:25:PRO:HA	2.01	0.42
23:a:130:HIS:NE2	23:a:165:ARG:HB3	2.33	0.42
25:c:11:LEU:HD23	25:c:11:LEU:HA	1.76	0.42
25:c:182:PHE:HB3	25:c:183:PRO:HD3	2.00	0.42
29:g:114:ILE:HG22	29:g:115:VAL:N	2.34	0.42
30:h:124:VAL:HG23	30:h:137:ILE:HD12	2.00	0.42
31:i:118:LEU:HD23	31:i:118:LEU:HA	1.86	0.42
33:k:100:VAL:O	33:k:127:PHE:HB2	2.18	0.42
35:m:58:ARG:HH21	35:m:92:ARG:NH1	2.17	0.42
35:m:73:ASP:OD1	35:m:73:ASP:C	2.61	0.42
36:n:87:ARG:NH1	36:n:87:ARG:CB	2.80	0.42
42:t:14:PHE:HE1	42:t:28:ARG:HB3	1.77	0.42
42:t:16:LYS:HD3	42:t:26:SER:HA	2.00	0.42
44:v:61:ALA:HA	44:v:66:ILE:HD11	2.00	0.42
49:1:31:HIS:CD2	49:1:32:LEU:CD1	3.02	0.42
50:2:13:LYS:O	50:2:13:LYS:CD	2.67	0.42
1:A:10:G:H3'	1:A:10:G:N3	2.34	0.42
1:A:92:A:O2'	1:A:93:C:P	2.78	0.42
1:A:315:A:O2'	1:A:330:C:O2'	2.32	0.42
1:A:438:U:OP1	3:D:143:LYS:HE3	2.19	0.42
1:A:597:G:O2'	1:A:598:C:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:884:G:C4	1:A:885:G:C8	3.07	0.42
1:A:1277:U:H2'	1:A:1278:C:O4'	2.19	0.42
2:C:191:THR:CG2	2:C:193:PHE:H	2.29	0.42
6:G:91:VAL:HB	6:G:95:ARG:HB3	2.00	0.42
7:H:106:ILE:HA	7:H:126:GLU:O	2.19	0.42
13:N:53:LEU:HD23	13:N:53:LEU:N	2.33	0.42
16:Q:42:ASP:OD1	16:Q:42:ASP:N	2.52	0.42
18:T:46:LYS:HA	18:T:49:GLU:HG3	2.00	0.42
20:Y:2:A:H3'	20:Y:3:A:C8	2.54	0.42
20:Y:45:G:N2	20:Y:176:G:OP2	2.52	0.42
20:Y:146:U:H2'	20:Y:147:C:C6	2.54	0.42
20:Y:232:G:H4'	20:Y:233:A:OP1	2.18	0.42
20:Y:502:C:O2'	20:Y:2080:G:N2	2.52	0.42
20:Y:539:C:H4'	24:b:53:LYS:NZ	2.33	0.42
20:Y:552:U:H2'	20:Y:553:G:O5'	2.18	0.42
20:Y:553:G:H1'	20:Y:798:U:O2'	2.20	0.42
20:Y:605:G:C4	20:Y:606:U:C5	3.08	0.42
20:Y:643:G:C2	20:Y:644:G:C5	3.07	0.42
20:Y:784:G:C2	20:Y:916:G:C6	3.07	0.42
20:Y:1318:C:H1'	30:h:6:LEU:HD22	2.01	0.42
20:Y:1379:G:OP2	20:Y:1379:G:C8	2.72	0.42
20:Y:1784:C:O5'	20:Y:1784:C:H6	2.02	0.42
20:Y:1900:C:O2'	20:Y:1901:C:H5'	2.20	0.42
20:Y:1900:C:N4	20:Y:1924:G:H1	2.08	0.42
20:Y:2454:G:H5'	20:Y:2455:C:OP2	2.19	0.42
20:Y:2638:G:C3'	20:Y:2639:G:H5"	2.48	0.42
20:Y:2788:A:O2'	20:Y:2789:A:O4'	2.37	0.42
20:Y:2824:A:O2'	20:Y:2825:C:H5'	2.18	0.42
20:Y:2966:C:P	50:2:35:ARG:NH2	2.93	0.42
20:Y:3072:A:C6	20:Y:3073:G:C5	3.08	0.42
22:Z:78:LYS:HZ3	22:Z:116:VAL:HG13	1.83	0.42
22:Z:231:HIS:CD2	22:Z:249:PRO:HB3	2.54	0.42
24:b:118:ARG:HA	24:b:118:ARG:HD3	1.74	0.42
26:d:88:MET:HE1	26:d:146:SER:CA	2.30	0.42
29:g:10:VAL:HG23	29:g:17:LYS:C	2.44	0.42
29:g:35:ILE:HG13	29:g:35:ILE:H	1.54	0.42
33:k:102:PHE:HB2	33:k:127:PHE:CE2	2.55	0.42
35:m:8:LEU:HD22	35:m:8:LEU:H	1.84	0.42
35:m:16:THR:CG2	35:m:17:VAL:N	2.82	0.42
35:m:73:ASP:O	35:m:73:ASP:CG	2.62	0.42
36:n:8:LYS:HA	36:n:12:LYS:O	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:p:79:THR:HG1	38:p:81:ARG:NH1	2.16	0.42
39:q:20:LYS:NZ	39:q:74:VAL:HG11	2.33	0.42
41:s:53:ARG:HH11	41:s:59:LEU:CD2	2.33	0.42
47:y:35:ARG:HG2	47:y:53:GLU:HB3	2.01	0.42
48:z:11:ASN:OD1	48:z:12:ASN:N	2.52	0.42
1:A:89:G:C3'	1:A:90:G:C8	3.02	0.42
1:A:160:C:H2'	1:A:161:U:H5'	1.98	0.42
1:A:275:G:O3'	16:Q:32:MET:CE	2.67	0.42
1:A:321:A:N6	1:A:332:G:H1	2.17	0.42
1:A:581:U:C2	1:A:619:G:N1	2.88	0.42
1:A:757:A:C2'	1:A:758:G:H5'	2.49	0.42
1:A:763:C:H2'	1:A:764:A:C8	2.44	0.42
1:A:776:C:O3'	10:K:136:ARG:NH2	2.52	0.42
1:A:812:G:C2'	1:A:813:U:H5'	2.49	0.42
1:A:818:U:O2	1:A:818:U:H2'	2.18	0.42
1:A:869:G:H2'	1:A:870:G:O4'	2.19	0.42
1:A:1135:G:O2'	1:A:1136:A:H5'	2.20	0.42
1:A:1295:U:H2'	1:A:1296:C:H6	1.82	0.42
3:D:51:GLN:HA	3:D:51:GLN:OE1	2.18	0.42
6:G:126:ASP:HA	6:G:129:ASN:OD1	2.19	0.42
7:H:32:LEU:CA	7:H:35:ASN:OD1	2.62	0.42
8:I:25:PRO:HA	8:I:40:ARG:HH21	1.84	0.42
9:J:50:CYS:SG	9:J:64:HIS:CE1	3.12	0.42
12:M:81:LYS:CD	12:M:88:GLN:HB3	2.50	0.42
19:V:99:GLY:HA2	19:V:175:GLU:OE1	2.19	0.42
20:Y:23:G:OP2	20:Y:23:G:C8	2.73	0.42
20:Y:106:G:C2	20:Y:107:G:C8	3.08	0.42
20:Y:263:G:H1'	20:Y:518:A:N3	2.35	0.42
20:Y:379:G:N1	20:Y:421:U:OP2	2.50	0.42
20:Y:383:U:C6	39:q:80:PRO:HG2	2.54	0.42
20:Y:578:G:H2'	20:Y:579:A:H8	1.84	0.42
20:Y:655:G:C6	20:Y:2242:G:C5	3.07	0.42
20:Y:718:C:HO2'	20:Y:719:G:C5'	2.32	0.42
20:Y:806:C:C1'	22:Z:43:ARG:NH1	2.83	0.42
20:Y:837:C:H3'	20:Y:838:G:H8	1.85	0.42
20:Y:894:U:C5'	22:Z:49:ILE:HD13	2.49	0.42
20:Y:976:A:N9	20:Y:1032:A:N6	2.67	0.42
20:Y:1114:G:H2'	20:Y:1115:G:H8	1.82	0.42
20:Y:1135:G:O2'	20:Y:1136:C:H5'	2.20	0.42
20:Y:1201:G:C2'	20:Y:1202:A:H2'	2.48	0.42
20:Y:1453:G:O2'	20:Y:1454:G:H5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:1681:U:H6	20:Y:1681:U:H2'	1.68	0.42
20:Y:1702:A:N3	20:Y:1702:A:H2'	2.34	0.42
20:Y:1883:A:C2'	20:Y:1884:G:H5'	2.49	0.42
20:Y:1928:C:H2'	20:Y:1929:A:C8	2.55	0.42
20:Y:2014:G:C6	20:Y:2040:G:C6	3.07	0.42
20:Y:2056:G:C6	20:Y:2151:A:N1	2.87	0.42
20:Y:2134:G:C5	20:Y:2135:U:C4	3.07	0.42
20:Y:2662:U:O3'	20:Y:2663:A:H3'	2.19	0.42
20:Y:2817:U:C2	20:Y:2818:C:C5	3.08	0.42
21:U:63:U:C2	21:U:64:G:C8	3.07	0.42
22:Z:84:TYR:CD1	22:Z:85:ASP:N	2.87	0.42
22:Z:162:SER:OG	22:Z:196:VAL:HG23	2.20	0.42
22:Z:184:ARG:HB3	22:Z:267:LEU:O	2.20	0.42
24:b:162:ASP:C	24:b:162:ASP:OD2	2.62	0.42
26:d:151:ARG:NH2	26:d:155:PRO:HD3	2.33	0.42
27:e:93:GLU:HB3	27:e:96:LYS:HD2	2.00	0.42
30:h:114:GLY:CA	30:h:132:SER:HB3	2.49	0.42
33:k:81:SER:CA	33:k:84:VAL:HG12	2.49	0.42
35:m:34:LYS:O	35:m:34:LYS:CG	2.66	0.42
35:m:48:ARG:HH11	35:m:48:ARG:HG3	1.84	0.42
41:s:49:VAL:O	41:s:50:ASN:HB2	2.19	0.42
1:A:70:A:H5'	1:A:170:U:O4	2.20	0.42
1:A:230:G:C5	1:A:231:G:C8	3.08	0.42
1:A:502:C:H2'	1:A:503:A:H8	1.82	0.42
1:A:543:A:H5"	1:A:544:C:OP1	2.20	0.42
1:A:580:G:P	7:H:90:LYS:HZ3	2.42	0.42
1:A:774:A:H2'	1:A:775:C:H6	1.85	0.42
1:A:974:U:H1'	1:A:975:G:C2	2.55	0.42
1:A:1405:G:O2'	1:A:1406:G:H5'	2.19	0.42
1:A:1487:A:C4	1:A:1515:A:C2	3.08	0.42
2:C:29:LYS:HG2	13:N:38:GLY:HA3	2.02	0.42
5:F:48:LEU:HD13	5:F:52:ILE:CG2	2.49	0.42
8:I:72:LEU:CG	8:I:78:VAL:HA	2.50	0.42
14:O:39:LEU:CD1	14:O:56:LEU:HD21	2.48	0.42
15:P:18:TYR:HE2	15:P:42:PRO:HD3	1.84	0.42
16:Q:24:ILE:HG12	16:Q:73:ARG:NE	2.35	0.42
16:Q:82:LEU:HB2	16:Q:86:LYS:NZ	2.35	0.42
19:V:110:ARG:C	19:V:110:ARG:CD	2.92	0.42
20:Y:6:G:N2	20:Y:3115:A:C8	2.87	0.42
20:Y:103:C:H2'	20:Y:104:G:H8	1.83	0.42
20:Y:187:G:H5"	42:t:14:PHE:HD2	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:190:A:H2'	20:Y:191:G:C2	2.53	0.42
20:Y:380:A:C8	20:Y:404:A:C6	3.07	0.42
20:Y:531:A:H5"	20:Y:532:C:C5'	2.49	0.42
20:Y:555:G:C2	20:Y:556:G:C8	3.08	0.42
20:Y:629:C:N3	20:Y:630:U:C5	2.88	0.42
20:Y:630:U:H3	20:Y:642:G:H1	0.61	0.42
20:Y:679:G:P	30:h:24:ARG:HH22	2.43	0.42
20:Y:691:U:H4'	30:h:15:GLU:OE1	2.19	0.42
20:Y:699:U:OP2	24:b:105:LYS:HD2	2.19	0.42
20:Y:857:U:C2	20:Y:858:A:C8	3.07	0.42
20:Y:951:G:H8	20:Y:951:G:O5'	2.02	0.42
20:Y:1312:G:H2'	20:Y:1313:U:C6	2.53	0.42
20:Y:1412:C:H2'	20:Y:1413:C:C6	2.52	0.42
20:Y:1684:C:H2'	20:Y:1685:G:H8	1.84	0.42
20:Y:1902:C:C2	20:Y:1903:C:C5	3.07	0.42
20:Y:2075:G:OP2	20:Y:2075:G:C8	2.73	0.42
20:Y:2212:A:C2'	20:Y:2213:A:O5'	2.68	0.42
20:Y:2244:A:C2	20:Y:2246:U:C2	3.08	0.42
20:Y:2267:C:OP1	20:Y:3001:G:O2'	2.16	0.42
20:Y:2445:A:H2'	20:Y:2446:G:H8	1.84	0.42
20:Y:2569:G:H5'	20:Y:2571:C:O4'	2.20	0.42
21:U:94:G:C4	21:U:95:G:C8	3.07	0.42
23:a:123:PHE:HA	23:a:169:ARG:HA	2.02	0.42
25:c:64:LEU:CA	25:c:67:ILE:HG22	2.48	0.42
25:c:133:GLY:HA3	25:c:167:ALA:HB3	2.00	0.42
25:c:182:PHE:HB3	25:c:183:PRO:CD	2.49	0.42
26:d:5:GLY:HA2	26:d:70:ARG:CD	2.41	0.42
32:j:2:PRO:HD3	32:j:46:PRO:HB3	2.01	0.42
34:l:12:LEU:CD2	34:l:76:HIS:HE2	2.32	0.42
37:o:36:VAL:HG13	37:o:76:LEU:C	2.44	0.42
39:q:10:LEU:HD23	39:q:80:PRO:HB3	2.00	0.42
1:A:23:C:H2'	1:A:24:U:H6	1.79	0.42
1:A:64:A:H62	1:A:104:A:C5'	2.32	0.42
1:A:486:G:C5	1:A:487:C:C4	3.08	0.42
1:A:795:A:H5"	1:A:797:C:H41	1.85	0.42
1:A:929:G:OP1	12:M:108:ARG:CB	2.68	0.42
1:A:936:G:N1	1:A:1207:C:N3	2.45	0.42
1:A:998:G:N3	1:A:1200:A:H5'	2.35	0.42
1:A:1058:U:C2'	1:A:1059:G:O5'	2.67	0.42
1:A:1288:A:H62	1:A:1313:G:H21	1.67	0.42
1:A:1339:A:H2'	1:A:1340:U:C6	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:57:GLU:O	2:C:62:ARG:NH1	2.53	0.42
2:C:140:ALA:HB3	2:C:149:ILE:HD13	2.02	0.42
4:E:60:ALA:O	4:E:75:TYR:HD1	2.01	0.42
7:H:13:ARG:HH11	7:H:27:LEU:HG	1.85	0.42
7:H:88:TYR:CE1	7:H:126:GLU:HB2	2.55	0.42
10:K:24:ASN:N	10:K:24:ASN:OD1	2.52	0.42
10:K:85:GLU:CD	10:K:85:GLU:C	2.88	0.42
20:Y:148:A:C2'	20:Y:149:C:H5'	2.49	0.42
20:Y:184:C:C2	20:Y:185:G:C8	3.06	0.42
20:Y:355:A:N6	20:Y:441:G:H22	2.11	0.42
20:Y:390:G:H2'	20:Y:391:G:O4'	2.20	0.42
20:Y:399:G:C3'	20:Y:400:C:C5'	2.97	0.42
20:Y:432:C:H2'	20:Y:433:C:H6	1.84	0.42
20:Y:469:G:P	42:t:24:ARG:HH21	2.42	0.42
20:Y:483:G:H2'	20:Y:484:C:H5	1.84	0.42
20:Y:618:C:C5	20:Y:2259:G:C2	3.07	0.42
20:Y:729:C:C2	20:Y:730:G:C8	3.07	0.42
20:Y:926:U:H5	30:h:24:ARG:NH1	2.17	0.42
20:Y:1200:U:H5'	27:e:121:ASN:CG	2.44	0.42
20:Y:1399:A:O2'	20:Y:1400:G:C5'	2.68	0.42
20:Y:1449:C:H2'	20:Y:1450:C:H6	1.83	0.42
20:Y:1479:G:N3	20:Y:1483:G:C2	2.88	0.42
20:Y:1503:G:H2'	20:Y:1504:G:C8	2.52	0.42
20:Y:1700:G:O3'	20:Y:1701:G:P	2.77	0.42
20:Y:1722:C:H2'	20:Y:1723:U:H6	1.85	0.42
20:Y:1739:A:N3	20:Y:1740:G:C8	2.88	0.42
20:Y:1795:C:H2'	20:Y:1796:U:C6	2.55	0.42
20:Y:1813:C:H3'	20:Y:1814:G:H8	1.84	0.42
20:Y:1934:G:C6	20:Y:1960:U:O2	2.70	0.42
20:Y:2040:G:C2'	20:Y:2041:G:H5'	2.50	0.42
20:Y:2279:C:H4'	20:Y:2280:G:H5"	2.02	0.42
20:Y:2435:U:O2	20:Y:2435:U:C3'	2.67	0.42
20:Y:2540:G:C1'	33:k:7:GLY:HA3	2.48	0.42
20:Y:2689:C:O3'	50:2:5:PRO:CD	2.67	0.42
20:Y:2702:A:OP2	50:2:31:ARG:NE	2.52	0.42
20:Y:2783:C:H2'	20:Y:2784:C:C6	2.54	0.42
20:Y:2906:U:C6	23:a:13:MET:CE	2.97	0.42
20:Y:2932:G:H1'	32:j:71:ARG:NH2	2.35	0.42
20:Y:2957:A:C6	23:a:213:LYS:HE3	2.55	0.42
20:Y:3060:A:C5	20:Y:3061:C:C5	3.07	0.42
21:U:43:C:O4'	25:c:73:GLU:OE2	2.38	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:U:90:G:HO2'	21:U:91:G:C5'	2.33	0.42
22:Z:183:ARG:HE	22:Z:183:ARG:HB3	1.71	0.42
22:Z:222:ARG:NH1	22:Z:225:VAL:HG21	2.34	0.42
25:c:86:LEU:HD12	25:c:86:LEU:O	2.19	0.42
26:d:2:SER:HB2	26:d:63:ARG:O	2.20	0.42
26:d:55:ARG:HH12	26:d:63:ARG:CZ	2.33	0.42
27:e:83:LYS:HE3	27:e:83:LYS:HB3	1.89	0.42
32:j:98:ILE:O	32:j:111:ALA:HB1	2.20	0.42
34:l:6:PHE:CD2	34:l:7:VAL:HG23	2.55	0.42
34:l:22:GLY:CA	34:l:109:ILE:CG2	2.97	0.42
36:n:80:ASN:OD1	36:n:80:ASN:N	2.50	0.42
41:s:73:ARG:HB3	41:s:73:ARG:CZ	2.49	0.42
1:A:112:A:H8	1:A:112:A:O5'	2.02	0.42
1:A:504:G:H2'	1:A:505:C:C6	2.55	0.42
1:A:642:C:P	5:F:95:LYS:HD2	2.59	0.42
1:A:660:C:C2'	1:A:661:U:H5'	2.50	0.42
1:A:744:C:C5'	14:O:50:HIS:HD2	2.18	0.42
1:A:972:U:H2'	1:A:973:U:C1'	2.50	0.42
1:A:1210:A:OP1	12:M:114:LYS:HE2	2.20	0.42
1:A:1213:U:H5"	8:I:146:GLN:O	2.19	0.42
1:A:1219:A:C5	1:A:1285:C:H1'	2.55	0.42
1:A:1235:G:O5'	1:A:1235:G:H8	2.03	0.42
1:A:1388:G:H1'	1:A:1503:A:O4'	2.20	0.42
1:A:1407:U:H2'	1:A:1408:A:C8	2.54	0.42
1:A:1439:G:H2'	1:A:1440:A:H1'	2.00	0.42
3:D:66:GLN:C	3:D:66:GLN:OE1	2.63	0.42
4:E:122:ARG:HD2	4:E:122:ARG:C	2.45	0.42
6:G:43:VAL:O	6:G:47:LEU:HD23	2.20	0.42
6:G:45:GLY:O	6:G:49:GLN:HG3	2.20	0.42
7:H:40:LEU:HB3	7:H:46:ILE:HD12	2.02	0.42
7:H:65:LYS:O	7:H:73:SER:HB3	2.19	0.42
10:K:32:ILE:O	10:K:96:LYS:HG2	2.20	0.42
11:L:79:MET:HG2	11:L:103:ASP:OD1	2.19	0.42
12:M:76:ALA:HA	12:M:79:ARG:CZ	2.49	0.42
18:T:73:ALA:CA	18:T:76:LYS:HG2	2.44	0.42
19:V:103:ASN:OD1	19:V:103:ASN:C	2.62	0.42
20:Y:77:G:C2	20:Y:104:G:N1	2.88	0.42
20:Y:184:C:H2'	20:Y:185:G:O4'	2.20	0.42
20:Y:238:G:H1'	20:Y:701:A:C2	2.55	0.42
20:Y:486:G:H2'	20:Y:487:U:H5'	2.02	0.42
20:Y:669:G:O2'	20:Y:670:A:H5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:701:A:H2'	20:Y:702:A:C8	2.55	0.42
20:Y:796:A:H2'	20:Y:797:G:O4'	2.19	0.42
20:Y:830:A:H8	20:Y:830:A:OP1	2.03	0.42
20:Y:894:U:O5'	22:Z:49:ILE:HD13	2.19	0.42
20:Y:909:A:H2'	20:Y:910:C:C6	2.54	0.42
20:Y:1069:G:C2'	20:Y:1070:G:O5'	2.67	0.42
20:Y:1154:G:C6	20:Y:1238:G:C6	3.07	0.42
20:Y:1402:A:H2'	20:Y:1403:C:C2	2.55	0.42
20:Y:1696:G:O2'	20:Y:1736:G:O6	2.37	0.42
20:Y:1753:C:H2'	20:Y:1754:G:C8	2.55	0.42
20:Y:1805:G:C5	20:Y:1806:A:N7	2.88	0.42
20:Y:1838:G:H2'	20:Y:1839:U:H6	1.84	0.42
20:Y:1889:U:C6	20:Y:1891:G:OP2	2.72	0.42
20:Y:1941:A:N6	20:Y:1953:C:H42	2.18	0.42
20:Y:2009:G:P	22:Z:206:TRP:CE3	3.13	0.42
20:Y:2031:G:OP2	20:Y:2032:A:O2'	2.22	0.42
20:Y:2134:G:C6	20:Y:2135:U:N3	2.88	0.42
20:Y:2211:C:N4	20:Y:2212:A:N6	2.67	0.42
20:Y:2413:G:H8	20:Y:2413:G:OP2	2.02	0.42
20:Y:2693:A:C1'	31:i:56:ARG:NH1	2.82	0.42
20:Y:3055:G:O6	20:Y:3100:A:H2'	2.19	0.42
20:Y:3118:U:H2'	20:Y:3119:A:C8	2.53	0.42
22:Z:6:TYR:CE1	22:Z:18:VAL:CG1	3.00	0.42
22:Z:143:HIS:CB	22:Z:162:SER:HB3	2.50	0.42
25:c:76:ARG:CG	25:c:89:GLY:HA2	2.49	0.42
25:c:101:ASP:OD1	25:c:101:ASP:C	2.62	0.42
25:c:145:PHE:N	25:c:145:PHE:CD2	2.88	0.42
27:e:10:LEU:C	27:e:11:ILE:HD13	2.44	0.42
27:e:21:ASN:CB	27:e:38:MET:HE1	2.49	0.42
27:e:78:ALA:HB1	27:e:137:MET:HE3	2.02	0.42
27:e:101:LYS:HZ2	27:e:103:THR:HA	1.84	0.42
28:f:23:VAL:HG11	28:f:28:LEU:HB2	2.01	0.42
29:g:12:ASP:OD1	29:g:12:ASP:C	2.60	0.42
30:h:122:VAL:O	30:h:137:ILE:HD12	2.19	0.42
32:j:9:ARG:O	32:j:10:LEU:C	2.63	0.42
32:j:44:LEU:HD23	32:j:45:ARG:N	2.35	0.42
33:k:23:ALA:HA	33:k:26:ARG:HG2	1.99	0.42
38:p:8:ARG:CB	38:p:49:ILE:CD1	2.94	0.42
38:p:8:ARG:HB2	38:p:49:ILE:HD12	2.01	0.42
39:q:40:ARG:HD2	39:q:63:GLU:CD	2.44	0.42
40:r:28:ARG:NH2	40:r:93:GLN:O	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:r:71:ILE:HG22	40:r:72:GLU:HG3	2.02	0.42
51:4:2345:U:H3	51:4:2399:A:HO2'	1.59	0.42
1:A:48:G:C4	1:A:49:U:C6	3.08	0.42
1:A:256:U:C2'	1:A:257:G:H5'	2.50	0.42
1:A:333:C:OP1	18:T:2:ALA:HB2	2.19	0.42
1:A:359:G:C4	1:A:360:G:C8	3.08	0.42
1:A:456:C:H1'	1:A:457:A:N7	2.35	0.42
1:A:560:C:H2'	1:A:561:G:C8	2.54	0.42
1:A:592:U:H3	1:A:609:G:N2	2.15	0.42
1:A:622:A:C2	7:H:107:SER:C	2.97	0.42
1:A:668:G:C4	1:A:669:C:C5	3.07	0.42
1:A:715:G:OP1	17:R:69:LYS:NZ	2.47	0.42
1:A:775:C:H4'	1:A:1490:U:O2	2.19	0.42
1:A:1033:G:H2'	1:A:1180:U:OP2	2.20	0.42
2:C:111:GLN:OE1	2:C:113:GLN:N	2.52	0.42
3:D:107:ARG:HG2	3:D:108:MET:HE1	2.01	0.42
4:E:44:ASN:OD1	4:E:45:ARG:N	2.53	0.42
5:F:82:ASN:O	5:F:85:VAL:HG12	2.20	0.42
6:G:49:GLN:HE22	6:G:117:VAL:HG12	1.84	0.42
7:H:112:LEU:C	7:H:113:LEU:HD13	2.43	0.42
14:O:78:TYR:O	14:O:82:ILE:HD12	2.20	0.42
19:V:170:HIS:HA	19:V:173:VAL:CG2	2.48	0.42
20:Y:97:U:H5"	20:Y:98:U:H2'	2.02	0.42
20:Y:171:U:H2'	20:Y:172:C:C6	2.54	0.42
20:Y:504:C:C4	20:Y:505:C:C4	3.07	0.42
20:Y:641:U:H5'	36:n:21:VAL:HG11	2.01	0.42
20:Y:778:G:H5"	30:h:20:THR:CG2	2.48	0.42
20:Y:943:U:H3'	20:Y:943:U:OP2	2.19	0.42
20:Y:986:G:N2	20:Y:1022:C:H42	2.16	0.42
20:Y:1047:A:H1'	20:Y:1048:A:N9	2.33	0.42
20:Y:1050:A:C8	20:Y:1050:A:O5'	2.73	0.42
20:Y:1321:C:H2'	20:Y:1322:C:C6	2.54	0.42
20:Y:1393:C:O3'	32:j:34:ILE:CD1	2.68	0.42
20:Y:1436:C:H2'	20:Y:1437:A:O5'	2.19	0.42
20:Y:1441:C:O2'	20:Y:1442:A:H5'	2.20	0.42
20:Y:1451:A:H2'	20:Y:1452:G:H8	1.85	0.42
20:Y:1513:C:H2'	20:Y:1514:C:C6	2.55	0.42
20:Y:1523:U:C1'	20:Y:1814:G:N2	2.75	0.42
20:Y:1633:U:H2'	20:Y:1634:C:C4	2.54	0.42
20:Y:1650:G:H2'	20:Y:1651:C:C6	2.53	0.42
20:Y:1814:G:H5"	20:Y:1815:G:P	2.60	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:1905:G:C2	20:Y:1920:G:C6	3.08	0.42
20:Y:2090:U:H3'	20:Y:2090:U:H6	1.84	0.42
20:Y:2134:G:N2	20:Y:2145:C:C2	2.88	0.42
20:Y:2324:A:N7	20:Y:2411:U:N3	2.68	0.42
20:Y:2486:U:N3	20:Y:2487:C:C5	2.88	0.42
20:Y:2526:U:H2'	20:Y:2527:G:H1'	2.02	0.42
20:Y:2917:A:H2'	20:Y:2918:G:H8	1.84	0.42
20:Y:3060:A:C4'	32:j:49:GLU:OE1	2.68	0.42
26:d:73:ILE:HA	26:d:76:LEU:HG	2.00	0.42
29:g:94:ARG:HA	29:g:94:ARG:HE	1.80	0.42
30:h:81:GLY:N	30:h:116:GLY:HA3	2.35	0.42
37:o:74:SER:H	37:o:74:SER:HG	1.63	0.42
37:o:91:ARG:HH11	37:o:91:ARG:CG	2.31	0.42
48:z:5:LYS:HD2	48:z:9:GLN:NE2	2.35	0.42
1:A:137:C:H2'	16:Q:7:PRO:CD	2.26	0.42
1:A:321:A:H61	1:A:332:G:H1	1.67	0.42
1:A:539:A:P	4:E:151:LYS:HZ1	2.42	0.42
1:A:698:A:N1	10:K:127:HIS:CE1	2.88	0.42
1:A:705:G:H8	1:A:705:G:O5'	2.03	0.42
1:A:758:G:C2'	1:A:759:C:H5'	2.49	0.42
1:A:861:C:C2	1:A:862:C:C5	3.07	0.42
1:A:904:G:C3'	1:A:905:A:H8	2.32	0.42
1:A:1037:G:H2'	1:A:1038:G:H8	1.85	0.42
1:A:1067:G:C6	1:A:1079:G:N1	2.87	0.42
1:A:1076:C:H2'	1:A:1077:C:H6	1.85	0.42
1:A:1305:G:C4	1:A:1306:A:C8	3.07	0.42
1:A:1315:A:H2'	1:A:1316:G:O4'	2.19	0.42
1:A:1370:G:H2'	1:A:1371:C:C5	2.54	0.42
1:A:1420:C:H5"	18:T:29:ARG:NH1	2.35	0.42
1:A:1485:C:C4	1:A:1488:G:C5	3.07	0.42
2:C:9:GLY:HA2	2:C:12:LEU:CD2	2.46	0.42
3:D:10:ARG:NH1	3:D:33:PRO:HB3	2.35	0.42
3:D:98:TYR:HE1	3:D:105:THR:HA	1.85	0.42
9:J:6:ILE:HG23	9:J:76:ILE:HG23	2.01	0.42
13:N:37:PHE:N	13:N:37:PHE:CD1	2.88	0.42
18:T:18:ARG:HH12	18:T:25:LYS:HZ1	1.66	0.42
19:V:118:GLU:OE2	19:V:118:GLU:N	2.52	0.42
20:Y:117:U:H5"	20:Y:119:G:OP2	2.20	0.42
20:Y:157:U:H2'	20:Y:158:G:C8	2.55	0.42
20:Y:157:U:H2'	20:Y:158:G:H8	1.85	0.42
20:Y:169:C:C3'	20:Y:170:G:H8	2.32	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:531:A:C4	20:Y:1316:U:H1'	2.55	0.42
20:Y:630:U:O2'	20:Y:631:C:H5'	2.20	0.42
20:Y:677:G:C2'	20:Y:1366:A:H61	2.10	0.42
20:Y:779:U:H2'	20:Y:780:U:C6	2.55	0.42
20:Y:832:G:H3'	20:Y:833:A:C8	2.40	0.42
20:Y:931:C:C2	20:Y:932:C:C5	3.08	0.42
20:Y:1046:C:H2'	20:Y:1296:G:N2	2.35	0.42
20:Y:1048:A:H3'	20:Y:1049:G:C5'	2.50	0.42
20:Y:1214:A:H2'	20:Y:1215:U:O4'	2.20	0.42
20:Y:1287:C:H2'	20:Y:1288:A:H8	1.85	0.42
20:Y:1456:G:C6	38:p:23:LEU:HD11	2.55	0.42
20:Y:1500:A:N6	20:Y:1518:A:C6	2.88	0.42
20:Y:1520:C:C2	20:Y:1521:C:C5	3.07	0.42
20:Y:1856:C:H1'	20:Y:2922:U:O2'	2.19	0.42
20:Y:1872:A:O2'	20:Y:1873:A:O4'	2.37	0.42
20:Y:2134:G:H2'	20:Y:2135:U:C6	2.55	0.42
20:Y:2235:C:H2'	20:Y:2236:G:H5'	2.02	0.42
20:Y:2240:U:C2	20:Y:2241:U:C6	3.07	0.42
20:Y:2309:U:C5	20:Y:2458:G:N1	2.88	0.42
20:Y:2563:G:C2	20:Y:2564:A:C5	3.08	0.42
20:Y:2733:G:C6	20:Y:2734:C:C5	3.07	0.42
20:Y:2778:U:C6	20:Y:2779:U:H5	2.38	0.42
20:Y:2803:C:C2	20:Y:2804:U:C5	3.07	0.42
21:U:72:C:C2	21:U:73:G:C8	3.08	0.42
23:a:26:VAL:HG23	23:a:194:ILE:O	2.19	0.42
23:a:59:PRO:O	23:a:62:VAL:HG12	2.20	0.42
25:c:78:ARG:HG3	25:c:79:LYS:NZ	2.35	0.42
29:g:105:GLU:HA	29:g:108:GLU:OE1	2.20	0.42
31:i:34:ILE:HD11	31:i:118:LEU:CG	2.50	0.42
33:k:116:LEU:HD12	33:k:116:LEU:C	2.43	0.42
34:l:28:HIS:CB	34:l:81:ASP:OD2	2.68	0.42
41:s:53:ARG:HH11	41:s:59:LEU:HD21	1.85	0.42
46:x:3:VAL:CB	46:x:4:PRO:CD	2.98	0.42
47:y:20:HIS:CE1	47:y:44:ASN:HD21	2.38	0.42
49:1:47:ARG:HH11	49:1:47:ARG:HG3	1.84	0.42
50:2:18:ARG:O	50:2:19:ARG:HG3	2.19	0.42
1:A:235:C:C5'	16:Q:87:ARG:NH1	2.83	0.42
1:A:425:G:O2'	1:A:426:U:O5'	2.33	0.42
1:A:786:C:H2'	1:A:787:A:H8	1.85	0.42
1:A:903:U:H1'	4:E:48:LYS:NZ	2.33	0.42
1:A:965:A:O2'	1:A:1029:U:O3'	2.38	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:972:U:O3'	1:A:973:U:O4'	2.37	0.42
1:A:1103:U:H2'	1:A:1104:G:N7	2.35	0.42
1:A:1343:G:H5"	1:A:1344:C:OP2	2.20	0.42
3:D:92:ARG:HA	3:D:131:ARG:HH12	1.85	0.42
3:D:119:LEU:HD13	3:D:123:VAL:C	2.45	0.42
5:F:88:THR:O	5:F:89:LYS:HG2	2.19	0.42
6:G:32:LEU:HD23	6:G:32:LEU:H	1.83	0.42
7:H:31:LYS:O	7:H:35:ASN:OD1	2.38	0.42
8:I:54:THR:O	8:I:58:TYR:HB2	2.20	0.42
9:J:37:VAL:HB	9:J:75:ASP:OD2	2.19	0.42
9:J:39:PRO:HA	9:J:74:ILE:CG1	2.50	0.42
9:J:41:PRO:O	9:J:42:LEU:HD23	2.19	0.42
9:J:57:LYS:N	9:J:57:LYS:CD	2.78	0.42
11:L:75:GLN:O	11:L:76:GLU:C	2.63	0.42
15:P:55:ARG:NH2	15:P:58:TYR:CD2	2.83	0.42
16:Q:73:ARG:N	16:Q:95:GLU:OE2	2.52	0.42
17:R:39:ARG:HH12	17:R:44:GLU:N	2.17	0.42
18:T:12:ARG:CZ	18:T:12:ARG:N	2.83	0.42
19:V:6:MET:N	19:V:6:MET:CE	2.74	0.42
19:V:96:TRP:CH2	19:V:171:ILE:HG12	2.55	0.42
20:Y:27:G:C2	20:Y:598:U:O2	2.72	0.42
20:Y:138:A:H2'	20:Y:139:U:C2	2.53	0.42
20:Y:140:G:C3'	20:Y:141:U:H5'	2.49	0.42
20:Y:268:G:C5	20:Y:359:A:H2	2.38	0.42
20:Y:420:G:HO2'	20:Y:421:U:C1'	2.15	0.42
20:Y:505:C:C4	20:Y:506:C:H5	2.38	0.42
20:Y:1125:C:H5"	28:f:37:ARG:HH21	1.83	0.42
20:Y:1197:C:C2	27:e:136:SER:HB3	2.55	0.42
20:Y:1224:G:H3'	44:v:53:LYS:NZ	2.34	0.42
20:Y:1232:G:H2'	20:Y:1233:A:H8	1.83	0.42
20:Y:1357:G:H2'	20:Y:1358:U:C6	2.55	0.42
20:Y:1359:G:H2'	20:Y:1360:G:H5'	2.01	0.42
20:Y:1566:A:HO2'	20:Y:1567:C:C5'	2.32	0.42
20:Y:1667:C:N4	20:Y:1687:G:H22	2.17	0.42
20:Y:1793:G:H2'	20:Y:1794:C:H5'	2.02	0.42
20:Y:1872:A:N3	20:Y:1873:A:C8	2.88	0.42
20:Y:1947:U:HO2'	20:Y:1948:A:P	2.42	0.42
20:Y:1977:C:H2'	20:Y:1978:C:O4'	2.20	0.42
20:Y:2014:G:C5	20:Y:2015:U:C4	3.08	0.42
20:Y:2056:G:N7	20:Y:2151:A:C2	2.88	0.42
20:Y:2078:C:N3	20:Y:2106:A:N1	2.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:2081:U:H5'	20:Y:2635:A:O2'	2.19	0.42
20:Y:2210:U:O2'	20:Y:2211:C:H5'	2.20	0.42
20:Y:2503:G:O6	41:s:14:ARG:HG3	2.20	0.42
20:Y:2602:A:H3'	20:Y:2603:G:O4'	2.20	0.42
20:Y:2831:G:C2'	20:Y:2832:G:C5'	2.98	0.42
20:Y:2843:C:H5"	23:a:162:LYS:HE2	2.02	0.42
20:Y:2972:A:O3'	26:d:4:ILE:HD12	2.20	0.42
20:Y:3041:C:O2'	23:a:201:ARG:HD2	2.20	0.42
20:Y:3107:G:C4	20:Y:3108:G:N7	2.88	0.42
21:U:101:U:O2'	40:r:81:LYS:HE2	2.20	0.42
24:b:67:ARG:HG3	24:b:68:GLN:N	2.34	0.42
24:b:121:ASN:CG	30:h:3:VAL:HA	2.45	0.42
24:b:195:VAL:C	24:b:196:PHE:HD2	2.28	0.42
25:c:11:LEU:HG	25:c:108:ASP:OD1	2.20	0.42
26:d:33:LEU:HD22	26:d:33:LEU:N	2.34	0.42
32:j:51:LEU:HD21	32:j:70:ILE:HG22	2.01	0.42
32:j:55:ALA:O	32:j:56:LYS:C	2.63	0.42
32:j:104:LYS:HD3	32:j:105:GLY:N	2.33	0.42
34:l:25:VAL:HG23	34:l:85:VAL:N	2.35	0.42
35:m:65:ILE:HD11	35:m:95:LEU:C	2.45	0.42
36:n:58:VAL:HG12	36:n:59:ALA:H	1.84	0.42
36:n:62:ALA:HB2	36:n:99:VAL:HA	2.02	0.42
40:r:69:LEU:O	40:r:75:GLU:HA	2.20	0.42
44:v:38:GLU:HA	44:v:41:ARG:HG2	2.02	0.42
47:y:36:LEU:HD12	47:y:36:LEU:C	2.41	0.42
48:z:8:PHE:CD2	48:z:8:PHE:C	2.98	0.42
1:A:40:C:H2'	1:A:41:U:C6	2.55	0.41
1:A:78:G:C2'	1:A:79:C:H5'	2.50	0.41
1:A:134:C:H2'	1:A:135:U:O4'	2.20	0.41
1:A:156:G:H2'	1:A:158:A:OP2	2.19	0.41
1:A:235:C:H5'	16:Q:87:ARG:NH1	2.34	0.41
1:A:246:A:C2	1:A:282:A:C5	3.08	0.41
1:A:358:U:O2'	1:A:359:G:H5'	2.19	0.41
1:A:561:G:H3'	1:A:738:G:O6	2.20	0.41
1:A:887:U:H2'	1:A:888:A:O4'	2.19	0.41
1:A:1152:C:O2'	1:A:1153:U:H5'	2.20	0.41
1:A:1470:G:H2'	1:A:1471:G:O4'	2.20	0.41
1:A:1478:G:C2	1:A:1479:U:C5	3.07	0.41
2:C:90:LEU:HD22	2:C:98:VAL:CG1	2.46	0.41
4:E:98:ARG:HH11	4:E:99:VAL:H	1.68	0.41
4:E:124:ALA:HB3	4:E:147:ASP:HB3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:G:44:TYR:HA	6:G:47:LEU:CG	2.50	0.41
6:G:58:PRO:O	6:G:61:THR:HG23	2.19	0.41
8:I:45:THR:O	8:I:82:ASP:HB2	2.20	0.41
12:M:2:ALA:HB3	12:M:9:LEU:CB	2.44	0.41
12:M:33:ILE:HG12	12:M:59:TYR:CE2	2.55	0.41
14:O:3:LEU:HA	14:O:7:GLN:NE2	2.35	0.41
14:O:11:ILE:HA	14:O:14:GLN:NE2	2.35	0.41
14:O:39:LEU:HD21	14:O:56:LEU:HD11	2.01	0.41
15:P:21:ILE:HD12	15:P:22:VAL:H	1.84	0.41
17:R:31:ASP:OD2	17:R:31:ASP:C	2.63	0.41
20:Y:88:A:H1'	20:Y:89:A:C8	2.55	0.41
20:Y:89:A:C8	20:Y:90:C:C5	3.08	0.41
20:Y:493:U:O5'	20:Y:493:U:H6	2.03	0.41
20:Y:688:A:N1	20:Y:689:U:C4	2.88	0.41
20:Y:723:C:H2'	20:Y:724:G:C8	2.55	0.41
20:Y:747:A:H2'	20:Y:748:U:H6	1.84	0.41
20:Y:771:G:H2'	20:Y:772:U:H6	1.85	0.41
20:Y:829:U:O2'	20:Y:831:A:N7	2.34	0.41
20:Y:844:G:C2	20:Y:1992:U:H1'	2.55	0.41
20:Y:890:G:OP1	20:Y:892:G:O2'	2.23	0.41
20:Y:912:C:H2'	20:Y:913:C:C6	2.55	0.41
20:Y:973:G:H8	20:Y:973:G:OP2	2.02	0.41
20:Y:1154:G:C5	20:Y:1238:G:C6	3.07	0.41
20:Y:1224:G:H3'	44:v:53:LYS:HZ3	1.85	0.41
20:Y:1258:C:H5'	28:f:26:GLY:HA3	2.01	0.41
20:Y:1270:G:O2'	35:m:81:GLN:HG3	2.20	0.41
20:Y:1346:U:H2'	20:Y:1347:G:H8	1.85	0.41
20:Y:1410:C:C2	20:Y:1411:G:C8	3.08	0.41
20:Y:1903:C:H2'	20:Y:1904:C:C6	2.54	0.41
20:Y:2022:U:H2'	20:Y:2023:C:C6	2.55	0.41
20:Y:2113:A:H1'	20:Y:2309:U:O2'	2.20	0.41
20:Y:2272:G:O6	20:Y:2845:G:C6	2.73	0.41
20:Y:2301:C:H1'	20:Y:2658:A:C2	2.55	0.41
20:Y:2510:A:C5	47:y:27:LYS:NZ	2.84	0.41
20:Y:2668:G:P	24:b:69:LYS:HZ1	2.42	0.41
20:Y:2990:A:C6	20:Y:2991:C:C5	3.07	0.41
21:U:84:C:H2'	21:U:85:C:C6	2.54	0.41
22:Z:125:ILE:O	22:Z:193:VAL:HG21	2.20	0.41
22:Z:231:HIS:CE1	22:Z:233:HIS:ND1	2.88	0.41
24:b:25:PHE:N	24:b:25:PHE:CD2	2.87	0.41
24:b:76:GLN:HG3	24:b:84:PHE:CE1	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:b:186:TYR:HD2	24:b:187:ASP:OD1	2.03	0.41
25:c:117:ARG:HH22	25:c:119:ARG:HH22	1.68	0.41
25:c:157:ARG:HG2	25:c:157:ARG:H	1.75	0.41
26:d:87:LYS:C	26:d:88:MET:HG3	2.45	0.41
29:g:35:ILE:HD12	29:g:69:ARG:HD2	2.00	0.41
30:h:106:LYS:HD3	30:h:107:ASN:N	2.34	0.41
30:h:115:ASP:OD1	30:h:115:ASP:N	2.46	0.41
31:i:35:GLN:HA	31:i:101:ARG:O	2.20	0.41
37:o:48:GLN:O	37:o:51:SER:N	2.46	0.41
37:o:57:VAL:O	37:o:60:SER:OG	2.31	0.41
39:q:101:ASN:CG	39:q:103:LYS:HD3	2.45	0.41
44:v:69:LEU:HB2	44:v:73:PHE:CZ	2.55	0.41
47:y:11:ILE:HD11	47:y:27:LYS:HB2	2.02	0.41
49:1:44:LEU:HD12	49:1:44:LEU:HA	1.70	0.41
1:A:92:A:O2'	1:A:93:C:C6	2.72	0.41
1:A:236:G:H5"	16:Q:57:LYS:HZ2	1.85	0.41
1:A:523:U:H2'	1:A:524:C:H6	1.84	0.41
1:A:553:A:HO2'	1:A:554:A:C4'	2.18	0.41
1:A:632:U:C5	1:A:732:G:N3	2.88	0.41
1:A:637:U:O2'	14:O:28:GLN:NE2	2.53	0.41
1:A:654:G:H21	10:K:127:HIS:CB	2.33	0.41
1:A:776:C:O3'	10:K:136:ARG:CZ	2.68	0.41
1:A:1250:A:H5'	1:A:1251:G:OP2	2.20	0.41
1:A:1430:A:P	1:A:1431:C:H5	2.43	0.41
1:A:1489:G:H4'	1:A:1490:U:H5"	2.01	0.41
1:A:1503:A:H8	1:A:1504:G:O4'	2.03	0.41
3:D:69:ARG:HA	3:D:72:GLU:CG	2.50	0.41
6:G:99:LEU:O	6:G:103:TRP:CD1	2.74	0.41
7:H:49:TYR:HD1	7:H:50:ARG:N	2.18	0.41
8:I:41:LEU:C	8:I:41:LEU:HD12	2.45	0.41
11:L:20:LYS:HD2	11:L:20:LYS:HA	1.69	0.41
11:L:101:SER:HB3	11:L:102:LEU:HD22	2.00	0.41
12:M:79:ARG:O	12:M:82:ILE:HG22	2.20	0.41
12:M:102:ARG:HE	12:M:104:LYS:HB2	1.85	0.41
16:Q:81:PRO:O	16:Q:82:LEU:HD23	2.20	0.41
18:T:36:ARG:O	18:T:40:ASP:OD2	2.39	0.41
18:T:73:ALA:HA	18:T:76:LYS:HE3	2.02	0.41
20:Y:21:G:C2	20:Y:22:U:C4	3.08	0.41
20:Y:87:C:P	20:Y:88:A:O2'	2.79	0.41
20:Y:136:U:N3	20:Y:138:A:H3'	2.33	0.41
20:Y:167:G:C4	20:Y:168:G:C8	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:182:C:O2	20:Y:214:G:N2	2.49	0.41
20:Y:268:G:H3'	20:Y:360:G:C2	2.54	0.41
20:Y:349:G:H2'	20:Y:350:A:H8	1.86	0.41
20:Y:352:G:C8	20:Y:444:U:C2	3.08	0.41
20:Y:538:G:N2	20:Y:542:A:OP2	2.51	0.41
20:Y:781:C:H2'	20:Y:782:U:H6	1.78	0.41
20:Y:1140:G:O2'	20:Y:1141:U:OP2	2.38	0.41
20:Y:1145:A:C6	20:Y:1244:A:C4	3.08	0.41
20:Y:1242:C:O2'	20:Y:1243:G:H5'	2.20	0.41
20:Y:1304:A:H2'	20:Y:1305:G:H5'	2.00	0.41
20:Y:1435:C:N4	20:Y:1446:C:H41	2.18	0.41
20:Y:1855:A:H5'	20:Y:1977:C:O2'	2.20	0.41
20:Y:2043:C:P	22:Z:223:GLY:HA3	2.59	0.41
20:Y:2100:A:H2'	20:Y:2101:A:C8	2.55	0.41
20:Y:2196:G:C2	20:Y:2197:G:N7	2.88	0.41
20:Y:2249:G:H5'	23:a:159:ARG:HH12	1.85	0.41
20:Y:2528:G:C5	25:c:137:PHE:O	2.73	0.41
20:Y:2547:G:H2'	20:Y:2548:U:H6	1.84	0.41
20:Y:2589:G:H4'	41:s:60:PHE:CE2	2.55	0.41
20:Y:2772:G:C6	20:Y:2773:G:C5	3.08	0.41
20:Y:2828:U:H2'	20:Y:2829:U:H6	1.85	0.41
20:Y:2843:C:O4'	23:a:160:VAL:CG1	2.68	0.41
20:Y:2861:U:H6	20:Y:2861:U:O5'	2.04	0.41
20:Y:2880:U:O2	20:Y:2880:U:H2'	2.19	0.41
20:Y:3027:G:C2'	20:Y:3028:A:H5'	2.50	0.41
20:Y:3104:A:OP2	46:x:45:LYS:HB3	2.20	0.41
20:Y:3105:C:C6	20:Y:3105:C:O5'	2.73	0.41
21:U:94:G:N2	21:U:95:G:H1'	2.35	0.41
22:Z:76:ASN:HA	22:Z:117:ILE:O	2.21	0.41
22:Z:182:ILE:CG2	22:Z:182:ILE:O	2.67	0.41
23:a:57:ILE:CD1	23:a:79:ARG:HA	2.50	0.41
23:a:79:ARG:HH21	23:a:205:LEU:HD11	1.85	0.41
23:a:129:ARG:HE	23:a:130:HIS:HE1	1.64	0.41
24:b:23:GLU:OE2	24:b:24:LEU:N	2.53	0.41
25:c:72:PRO:CA	25:c:95:ARG:O	2.69	0.41
27:e:110:ILE:O	27:e:113:THR:OG1	2.32	0.41
32:j:47:TYR:O	32:j:51:LEU:HD13	2.20	0.41
34:l:32:ILE:HA	34:l:38:ARG:HH12	1.84	0.41
35:m:25:ARG:HH11	35:m:25:ARG:HG2	1.85	0.41
38:p:9:ASP:C	38:p:10:ILE:HD12	2.45	0.41
41:s:38:VAL:CG1	41:s:39:ARG:N	2.82	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:u:22:LEU:C	43:u:22:LEU:HD23	2.45	0.41
43:u:44:ASN:HD21	43:u:47:LEU:HD21	1.85	0.41
48:z:43:ARG:C	48:z:43:ARG:CD	2.91	0.41
51:4:2369:C:P	51:4:2369:C:H6	2.43	0.41
1:A:45:G:C2	1:A:46:G:C8	3.08	0.41
1:A:176:A:O3'	1:A:177:U:O4'	2.38	0.41
1:A:195:U:C5	1:A:196:G:H1'	2.55	0.41
1:A:321:A:C2	1:A:322:C:C5	3.08	0.41
1:A:363:A:P	11:L:29:GLN:HE22	2.43	0.41
1:A:789:G:H2'	1:A:790:C:O4'	2.20	0.41
1:A:808:A:N3	19:V:25:PRO:HG2	2.35	0.41
1:A:897:A:H2'	1:A:898:G:O4'	2.20	0.41
1:A:1302:C:H2'	1:A:1302:C:O2	2.19	0.41
3:D:55:LYS:HE2	3:D:190:LEU:HD21	2.02	0.41
5:F:2:ARG:O	5:F:4:TYR:HD1	2.01	0.41
5:F:47:ARG:NH1	5:F:56:ALA:HA	2.36	0.41
6:G:108:SER:HB2	6:G:123:GLU:OE1	2.20	0.41
7:H:51:THR:O	7:H:51:THR:HG23	2.20	0.41
8:I:37:VAL:HG11	8:I:99:LEU:HA	2.02	0.41
9:J:39:PRO:HA	9:J:74:ILE:HG12	2.01	0.41
9:J:67:MET:HE1	13:N:55:GLY:CA	2.51	0.41
10:K:73:GLN:O	10:K:76:ALA:HB3	2.20	0.41
12:M:51:ASP:OD1	12:M:52:GLN:N	2.53	0.41
12:M:88:GLN:HA	12:M:98:VAL:CG1	2.49	0.41
15:P:60:LEU:CD1	15:P:66:PRO:HD3	2.50	0.41
19:V:161:VAL:CG2	19:V:183:VAL:HG22	2.50	0.41
20:Y:2:A:H2'	20:Y:3:A:C8	2.54	0.41
20:Y:273:A:H61	20:Y:313:G:C2'	2.33	0.41
20:Y:369:G:OP1	20:Y:369:G:H8	2.04	0.41
20:Y:372:G:H2'	20:Y:373:U:C6	2.56	0.41
20:Y:438:U:C6	20:Y:439:C:C6	3.08	0.41
20:Y:469:G:OP1	42:t:24:ARG:NE	2.51	0.41
20:Y:562:G:O2'	20:Y:563:U:H5"	2.19	0.41
20:Y:788:C:H2'	20:Y:789:G:H5'	2.00	0.41
20:Y:872:G:N3	20:Y:872:G:H2'	2.35	0.41
20:Y:948:G:P	30:h:41:LYS:CE	3.08	0.41
20:Y:1408:C:C2'	20:Y:1409:C:O4'	2.67	0.41
20:Y:1523:U:H1'	20:Y:1814:G:H22	1.77	0.41
20:Y:1528:G:C6	20:Y:1529:U:C4	3.08	0.41
20:Y:1549:G:C5'	20:Y:1550:G:H22	2.22	0.41
20:Y:1721:U:C2	20:Y:1722:C:C5	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:1794:C:C2	20:Y:1795:C:C5	3.09	0.41
20:Y:2872:G:H2'	20:Y:2873:U:C6	2.54	0.41
20:Y:2916:C:C2	20:Y:2942:G:C2	3.09	0.41
20:Y:2945:A:C6	20:Y:2946:G:C5	3.08	0.41
23:a:162:LYS:HG2	28:f:80:TYR:CE1	2.55	0.41
24:b:8:LYS:O	24:b:127:VAL:HG13	2.20	0.41
24:b:31:ILE:HG22	30:h:10:LYS:O	2.19	0.41
24:b:153:LYS:HD3	24:b:174:GLY:O	2.20	0.41
25:c:11:LEU:CD1	25:c:108:ASP:OD1	2.69	0.41
25:c:49:ASP:CB	25:c:56:LEU:HD21	2.48	0.41
25:c:64:LEU:HD12	25:c:96:VAL:HG11	2.02	0.41
25:c:117:ARG:HH22	25:c:119:ARG:NH2	2.17	0.41
26:d:45:ARG:HH12	26:d:50:ALA:N	2.18	0.41
28:f:32:ALA:HB3	28:f:105:ILE:HD11	2.02	0.41
28:f:103:ASN:CA	28:f:106:ILE:HG22	2.50	0.41
33:k:32:THR:O	33:k:36:PRO:HD3	2.20	0.41
33:k:39:VAL:HG13	33:k:50:GLN:HB2	2.03	0.41
34:l:43:LYS:C	34:l:62:LYS:HB3	2.45	0.41
35:m:27:GLN:HG3	35:m:34:LYS:HE2	2.01	0.41
37:o:81:VAL:HG23	37:o:112:VAL:CG2	2.50	0.41
39:q:93:LYS:HA	39:q:93:LYS:CE	2.42	0.41
44:v:101:LYS:HD2	44:v:101:LYS:HA	1.89	0.41
51:4:2365:A:H2'	51:4:2366:C:C6	2.54	0.41
1:A:283:C:C2	1:A:284:G:C8	3.08	0.41
1:A:502:C:H5	11:L:50:ARG:HH21	1.69	0.41
1:A:1038:G:O2'	1:A:1039:C:H5'	2.21	0.41
1:A:1089:C:OP1	2:C:176:HIS:ND1	2.49	0.41
1:A:1205:U:HO2'	1:A:1206:U:P	2.41	0.41
1:A:1307:C:N3	1:A:1308:C:C5	2.88	0.41
1:A:1395:C:H3'	1:A:1396:A:H8	1.85	0.41
2:C:67:ILE:CD1	2:C:102:ILE:HD12	2.44	0.41
4:E:122:ARG:CZ	4:E:123:PRO:HG2	2.51	0.41
5:F:10:LEU:HA	5:F:86:LEU:HD23	2.02	0.41
6:G:126:ASP:HB3	6:G:132:GLY:CA	2.48	0.41
7:H:40:LEU:CD1	7:H:105:ILE:HD11	2.50	0.41
7:H:49:TYR:CD1	7:H:50:ARG:N	2.88	0.41
16:Q:82:LEU:HB2	16:Q:86:LYS:HZ2	1.85	0.41
19:V:56:PHE:CG	19:V:198:TYR:CE2	3.07	0.41
19:V:80:ILE:HA	19:V:83:GLU:HG3	2.02	0.41
20:Y:227:A:C3'	20:Y:228:A:C5'	2.92	0.41
20:Y:250:G:O2'	20:Y:251:A:C5'	2.64	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:262:A:N3	20:Y:518:A:O2'	2.41	0.41
20:Y:409:G:H21	39:q:69:SER:CB	2.34	0.41
20:Y:442:U:C2'	20:Y:443:C:O4'	2.68	0.41
20:Y:619:C:O2	20:Y:619:C:C2'	2.69	0.41
20:Y:676:C:H2'	20:Y:677:G:C8	2.55	0.41
20:Y:681:C:C4'	24:b:96:ARG:NH2	2.81	0.41
20:Y:708:G:H22	24:b:187:ASP:CG	2.26	0.41
20:Y:722:G:C6	20:Y:723:C:C4	3.08	0.41
20:Y:993:G:N2	20:Y:1014:G:H3'	2.34	0.41
20:Y:1092:G:C4	20:Y:1301:G:N2	2.88	0.41
20:Y:1250:U:C1'	28:f:75:TYR:CD2	3.03	0.41
20:Y:1258:C:OP1	28:f:26:GLY:N	2.53	0.41
20:Y:1329:G:O6	20:Y:1350:G:C2	2.73	0.41
20:Y:1479:G:OP2	42:t:3:ALA:HB2	2.20	0.41
20:Y:1565:A:H5"	20:Y:1602:U:OP2	2.19	0.41
20:Y:1569:A:H2'	20:Y:1570:C:H6	1.83	0.41
20:Y:1637:G:C4'	20:Y:1805:G:O2'	2.69	0.41
20:Y:1651:C:C2'	20:Y:1652:A:H5'	2.50	0.41
20:Y:1804:G:C2	20:Y:1805:G:C5	3.07	0.41
20:Y:1813:C:C4	20:Y:1814:G:O6	2.73	0.41
20:Y:2007:C:C3'	20:Y:2008:A:H8	2.33	0.41
20:Y:2016:G:C2	22:Z:177:MET:HE3	2.55	0.41
20:Y:2021:G:C6	20:Y:2022:U:C5	3.08	0.41
20:Y:2022:U:OP1	22:Z:252:LYS:NZ	2.53	0.41
20:Y:2134:G:H2'	20:Y:2135:U:O4'	2.19	0.41
20:Y:2172:G:N3	20:Y:2173:G:C8	2.89	0.41
20:Y:2238:A:H4'	37:o:101:PHE:CE2	2.55	0.41
20:Y:2700:A:H2'	20:Y:2701:U:O4'	2.20	0.41
21:U:26:A:H2'	21:U:27:A:C8	2.56	0.41
21:U:38:C:H2'	21:U:39:C:O4'	2.20	0.41
22:Z:145:VAL:CG1	22:Z:155:LEU:HB2	2.45	0.41
22:Z:206:TRP:O	22:Z:211:ARG:CD	2.69	0.41
23:a:54:TYR:N	23:a:78:ARG:HB3	2.35	0.41
25:c:23:LEU:HD12	25:c:29:TYR:OH	2.20	0.41
27:e:112:GLU:OE2	27:e:123:ILE:HG23	2.20	0.41
28:f:103:ASN:HA	28:f:106:ILE:CG2	2.50	0.41
29:g:12:ASP:CG	29:g:95:GLY:HA3	2.45	0.41
31:i:74:LEU:HD23	31:i:74:LEU:HA	1.74	0.41
32:j:19:ALA:O	32:j:23:ASN:OD1	2.37	0.41
35:m:107:THR:HA	35:m:110:VAL:HG22	2.01	0.41
39:q:15:LYS:HG3	39:q:16:ASP:N	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:q:72:MET:CE	39:q:80:PRO:HB2	2.51	0.41
40:r:110:VAL:HG11	40:r:133:ILE:HD12	2.01	0.41
42:t:38:ALA:CB	42:t:61:VAL:HG12	2.49	0.41
44:v:15:GLU:HA	44:v:18:LYS:CD	2.50	0.41
44:v:31:LEU:HA	44:v:35:ASN:HD21	1.84	0.41
44:v:40:ARG:CB	44:v:41:ARG:NH2	2.83	0.41
51:4:2365:A:H2'	51:4:2366:C:O4'	2.19	0.41
1:A:227:G:H3'	16:Q:13:ALA:HB1	2.02	0.41
1:A:307:C:C2	1:A:308:C:C6	3.09	0.41
1:A:635:A:C6	1:A:636:G:C5	3.08	0.41
1:A:848:C:O2	1:A:900:A:H4'	2.20	0.41
1:A:896:A:C2'	1:A:897:A:O5'	2.68	0.41
1:A:988:C:C4	1:A:989:G:H1'	2.56	0.41
1:A:1132:U:O2'	1:A:1133:G:H8	2.03	0.41
1:A:1356:G:H4'	6:G:31:LEU:HD21	2.01	0.41
1:A:1405:G:C4'	29:g:48:PRO:HB3	2.50	0.41
1:A:1478:G:C4	20:Y:2137:A:C5	3.09	0.41
2:C:62:ARG:HH22	9:J:94:ALA:HB2	1.85	0.41
2:C:187:TYR:CE1	2:C:188:GLU:O	2.73	0.41
3:D:138:ILE:HG22	3:D:175:ILE:O	2.19	0.41
3:D:188:VAL:CG1	3:D:189:PRO:CD	2.98	0.41
4:E:66:ASP:OD1	4:E:70:MET:HB2	2.19	0.41
5:F:44:GLY:HA3	5:F:59:ILE:CA	2.40	0.41
6:G:51:ARG:HH21	6:G:55:GLY:HA2	1.85	0.41
9:J:22:ALA:HB1	9:J:39:PRO:HG3	2.01	0.41
10:K:62:LYS:N	10:K:62:LYS:CD	2.82	0.41
10:K:104:THR:HA	10:K:107:ARG:NH2	2.35	0.41
13:N:21:TYR:CE2	13:N:23:ARG:HG3	2.55	0.41
14:O:17:LEU:HD22	14:O:26:GLU:OE1	2.20	0.41
20:Y:261:G:C6	20:Y:262:A:N6	2.88	0.41
20:Y:337:U:C5'	20:Y:338:C:H5"	2.27	0.41
20:Y:459:A:N6	20:Y:489:A:H3'	2.34	0.41
20:Y:497:G:N1	20:Y:507:G:C2	2.88	0.41
20:Y:755:A:H3'	20:Y:756:A:H8	1.85	0.41
20:Y:937:U:C4	20:Y:951:G:N1	2.88	0.41
20:Y:978:A:H8	20:Y:978:A:O5'	2.03	0.41
20:Y:1015:A:H2'	20:Y:1016:C:O4'	2.19	0.41
20:Y:1205:G:H2'	20:Y:1207:G:O4'	2.21	0.41
20:Y:1476:G:C4	20:Y:1477:C:C5	3.08	0.41
20:Y:1516:G:O2'	20:Y:1517:U:O4'	2.35	0.41
20:Y:1755:A:C2'	20:Y:1758:G:H22	2.31	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:1879:G:C2'	20:Y:1880:U:H5'	2.50	0.41
20:Y:1890:C:O2	20:Y:2806:G:O4'	2.39	0.41
20:Y:1976:A:N3	20:Y:1976:A:H2'	2.36	0.41
20:Y:2034:G:N3	20:Y:2034:G:H2'	2.36	0.41
20:Y:2048:G:C4	20:Y:2199:G:N2	2.89	0.41
20:Y:2070:A:O2'	20:Y:2071:A:H5'	2.19	0.41
20:Y:2206:C:O2	20:Y:2206:C:C2'	2.68	0.41
20:Y:2211:C:N4	20:Y:2212:A:H62	2.17	0.41
20:Y:2211:C:C2	20:Y:2212:A:N7	2.88	0.41
20:Y:2309:U:H2'	20:Y:2310:G:H8	1.83	0.41
20:Y:2448:G:H5'	22:Z:266:LYS:NZ	2.36	0.41
20:Y:2562:G:H2'	20:Y:2563:G:C8	2.55	0.41
20:Y:2634:G:C3'	20:Y:2635:A:O4'	2.68	0.41
20:Y:2665:C:O2'	20:Y:2666:C:H5'	2.21	0.41
20:Y:2760:G:H2'	20:Y:2761:U:C6	2.55	0.41
20:Y:2802:G:C2	20:Y:2803:C:C4	3.08	0.41
20:Y:2865:G:O2'	20:Y:2866:A:H5'	2.20	0.41
20:Y:2957:A:C5	23:a:213:LYS:CE	3.02	0.41
20:Y:2972:A:C5'	26:d:4:ILE:HD12	2.45	0.41
20:Y:3091:G:H2'	20:Y:3092:G:C1'	2.51	0.41
21:U:46:A:H4'	25:c:99:ARG:HH22	1.86	0.41
21:U:114:A:C5'	33:k:66:ILE:HD12	2.51	0.41
23:a:34:ASN:HD22	23:a:52:LEU:CD1	2.33	0.41
23:a:198:ILE:HD11	23:a:206:VAL:HG11	2.02	0.41
26:d:6:LYS:NZ	26:d:6:LYS:HB3	2.36	0.41
27:e:14:GLN:OE1	27:e:57:PRO:HB3	2.20	0.41
29:g:2:ILE:N	29:g:33:ALA:O	2.52	0.41
29:g:15:GLY:CA	29:g:47:ILE:HG12	2.43	0.41
30:h:23:GLY:HA2	30:h:29:LYS:O	2.21	0.41
32:j:44:LEU:O	32:j:45:ARG:C	2.63	0.41
33:k:33:ALA:C	33:k:36:PRO:HD3	2.45	0.41
34:l:45:VAL:HG11	34:l:109:ILE:HD12	2.02	0.41
34:l:90:ASP:O	34:l:91:VAL:HG13	2.20	0.41
34:l:93:ARG:HD3	34:l:93:ARG:N	2.35	0.41
40:r:77:LEU:HD12	40:r:77:LEU:N	2.35	0.41
40:r:86:HIS:CA	40:r:93:GLN:NE2	2.77	0.41
51:4:2380:G:H4'	51:4:2381:A:OP1	2.21	0.41
1:A:431:A:H2'	1:A:432:A:C8	2.55	0.41
1:A:499:C:C2	1:A:500:A:C8	3.08	0.41
1:A:550:G:C3'	1:A:799:G:HO2'	2.32	0.41
1:A:794:A:H3'	1:A:796:A:H5'	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1012:U:O2	1:A:1012:U:H2'	2.19	0.41
1:A:1094:C:O2'	1:A:1095:U:H5'	2.21	0.41
1:A:1261:A:P	9:J:9:ARG:HH22	2.44	0.41
1:A:1401:A:H5"	1:A:1402:G:OP2	2.20	0.41
2:C:87:ARG:O	2:C:91:GLU:HG2	2.20	0.41
3:D:87:ARG:HG3	3:D:88:ILE:N	2.35	0.41
3:D:110:ARG:O	3:D:113:VAL:HG23	2.20	0.41
4:E:106:ILE:O	4:E:123:PRO:HB3	2.20	0.41
4:E:178:VAL:HG13	4:E:181:ARG:HH21	1.86	0.41
7:H:39:ILE:O	7:H:42:ARG:HG2	2.21	0.41
7:H:49:TYR:CD1	7:H:49:TYR:C	2.99	0.41
16:Q:45:SER:CB	16:Q:52:ILE:HD13	2.50	0.41
17:R:45:ARG:HD3	17:R:47:LYS:HE2	2.02	0.41
18:T:11:ILE:HG22	18:T:12:ARG:HH22	1.86	0.41
19:V:206:ALA:HB3	19:V:209:SER:OG	2.21	0.41
20:Y:14:G:O2'	20:Y:15:C:H5'	2.20	0.41
20:Y:78:G:H1'	20:Y:427:A:N1	2.35	0.41
20:Y:141:U:C2	20:Y:142:C:C5	3.09	0.41
20:Y:459:A:N6	20:Y:490:A:OP2	2.53	0.41
20:Y:540:G:C4	20:Y:546:G:C6	3.09	0.41
20:Y:654:U:C2	20:Y:664:A:C8	3.09	0.41
20:Y:794:G:C2	20:Y:914:G:C2	3.09	0.41
20:Y:982:A:H62	20:Y:1029:C:N4	2.19	0.41
20:Y:1077:A:N7	20:Y:1079:C:C6	2.88	0.41
20:Y:1195:A:N7	20:Y:1196:C:H1'	2.35	0.41
20:Y:1225:G:C4'	44:v:54:ASN:HD21	2.33	0.41
20:Y:1261:A:O2'	20:Y:1262:A:H3'	2.21	0.41
20:Y:1379:G:OP2	20:Y:1379:G:H8	2.03	0.41
20:Y:1456:G:C2	20:Y:1513:C:H4'	2.56	0.41
20:Y:1616:A:O2'	20:Y:1617:C:H5'	2.21	0.41
20:Y:1666:A:H2'	20:Y:1667:C:H6	1.85	0.41
20:Y:2089:C:O2'	20:Y:2090:U:P	2.79	0.41
20:Y:2148:C:H2'	20:Y:2149:C:N1	2.36	0.41
20:Y:2316:G:C5	20:Y:2449:A:N7	2.89	0.41
20:Y:2552:A:O5'	20:Y:2552:A:H8	2.03	0.41
20:Y:2668:G:P	24:b:69:LYS:NZ	2.93	0.41
20:Y:2840:C:H2'	20:Y:2841:C:H6	1.85	0.41
20:Y:2935:A:OP2	20:Y:2938:G:OP2	2.38	0.41
20:Y:3063:A:C6	20:Y:3064:G:C5	3.09	0.41
20:Y:3084:G:N1	20:Y:3085:G:C6	2.89	0.41
23:a:7:LEU:N	23:a:34:ASN:HD21	2.14	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:a:193:LEU:C	23:a:194:ILE:HD13	2.45	0.41
24:b:121:ASN:HB3	24:b:123:ARG:NH2	2.36	0.41
24:b:153:LYS:HE2	24:b:191:ALA:HA	1.99	0.41
26:d:108:LEU:CD1	26:d:108:LEU:N	2.84	0.41
28:f:144:GLN:HG2	28:f:145:VAL:N	2.35	0.41
29:g:35:ILE:HB	29:g:69:ARG:HD3	2.01	0.41
29:g:59:LYS:HE3	29:g:59:LYS:HB2	1.87	0.41
30:h:22:VAL:CG2	30:h:33:ALA:HB1	2.51	0.41
31:i:17:GLN:HE22	31:i:96:ASN:CB	2.34	0.41
31:i:22:SER:O	31:i:25:THR:OG1	2.29	0.41
35:m:8:LEU:HD13	35:m:8:LEU:HA	1.82	0.41
36:n:26:LYS:HB3	36:n:26:LYS:HE2	1.83	0.41
40:r:69:LEU:HD23	40:r:69:LEU:N	2.36	0.41
40:r:112:VAL:CA	40:r:144:LEU:HB2	2.48	0.41
44:v:16:GLN:C	44:v:81:PHE:HE2	2.28	0.41
44:v:48:THR:O	44:v:49:TYR:HD1	2.04	0.41
49:1:24:ARG:NE	49:1:25:GLN:O	2.53	0.41
1:A:64:A:N6	1:A:106:C:C2	2.89	0.41
1:A:125:U:HO2'	1:A:127:A:H8	1.65	0.41
1:A:186:C:N3	1:A:203:U:C2	2.89	0.41
1:A:360:G:H2'	1:A:361:G:H8	1.86	0.41
1:A:634:G:C2'	1:A:635:A:H5'	2.50	0.41
1:A:671:G:P	10:K:37:ASN:HD21	2.41	0.41
1:A:776:C:H4'	10:K:136:ARG:HH22	1.85	0.41
1:A:810:G:C2'	1:A:811:U:H5'	2.50	0.41
1:A:969:G:H3'	1:A:1200:A:H2	1.86	0.41
1:A:1040:U:O2'	9:J:54:SER:CB	2.68	0.41
1:A:1109:C:HO2'	1:A:1110:A:H8	1.66	0.41
1:A:1117:U:H1'	1:A:1118:A:H3'	2.03	0.41
1:A:1493:C:O2'	1:A:1494:C:H5'	2.19	0.41
2:C:59:THR:HG23	9:J:94:ALA:HB2	2.03	0.41
2:C:133:MET:HE2	2:C:168:TYR:HD2	1.86	0.41
3:D:60:TYR:HB3	3:D:62:VAL:HG23	2.03	0.41
3:D:113:VAL:CG1	3:D:118:PHE:HE1	2.34	0.41
3:D:172:ARG:O	3:D:172:ARG:HG3	2.19	0.41
3:D:178:HIS:HB2	3:D:179:GLN:OE1	2.19	0.41
4:E:130:VAL:HB	4:E:148:ILE:HG22	2.01	0.41
5:F:89:LYS:HE2	5:F:91:LEU:CD1	2.49	0.41
7:H:107:SER:HB3	7:H:112:LEU:CD2	2.51	0.41
8:I:68:ILE:HG13	8:I:68:ILE:H	1.70	0.41
10:K:27:HIS:HE1	10:K:46:PRO:HB3	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:M:79:ARG:CA	12:M:82:ILE:HG22	2.49	0.41
14:O:49:ASP:C	14:O:49:ASP:OD1	2.62	0.41
14:O:70:VAL:HA	14:O:73:VAL:HG12	2.01	0.41
15:P:6:LYS:NZ	15:P:25:ALA:HA	2.36	0.41
15:P:59:TRP:C	15:P:62:VAL:HG12	2.46	0.41
19:V:95:ARG:NH1	19:V:97:LEU:HD23	2.35	0.41
19:V:117:LEU:HD23	19:V:117:LEU:C	2.46	0.41
19:V:213:LEU:HA	19:V:216:VAL:HG12	2.01	0.41
20:Y:160:A:P	20:Y:161:U:HO2'	2.43	0.41
20:Y:185:G:C2	20:Y:210:G:C6	3.09	0.41
20:Y:227:A:N1	20:Y:506:C:O4'	2.54	0.41
20:Y:326:A:C2	20:Y:451:U:H2'	2.56	0.41
20:Y:491:U:OP2	20:Y:491:U:H6	2.03	0.41
20:Y:564:G:H22	20:Y:566:A:H3'	1.85	0.41
20:Y:578:G:H2'	20:Y:579:A:C8	2.55	0.41
20:Y:688:A:C2'	20:Y:689:U:H5'	2.51	0.41
20:Y:875:G:O2'	20:Y:876:A:H5'	2.20	0.41
20:Y:963:U:C2'	20:Y:964:C:H5'	2.50	0.41
20:Y:1045:C:O2	20:Y:1045:C:C3'	2.66	0.41
20:Y:1157:G:H2'	20:Y:1158:U:O4'	2.19	0.41
20:Y:1203:A:H4'	20:Y:1222:C:O2'	2.20	0.41
20:Y:1273:G:H5"	20:Y:1274:A:P	2.61	0.41
20:Y:1430:C:H2'	20:Y:1431:U:H6	1.85	0.41
20:Y:1476:G:C6	20:Y:1486:G:N2	2.89	0.41
20:Y:1646:U:H2'	20:Y:1647:G:H1'	2.01	0.41
20:Y:1887:A:O3'	20:Y:2773:G:H5'	2.21	0.41
20:Y:2108:A:C3'	20:Y:2109:A:H8	2.33	0.41
20:Y:2173:G:C6	20:Y:2174:G:C6	3.09	0.41
20:Y:2573:G:C6	20:Y:2593:A:N6	2.87	0.41
20:Y:2686:U:C2'	20:Y:2687:U:H5'	2.50	0.41
20:Y:2771:U:H5"	20:Y:2790:A:C2	2.56	0.41
20:Y:2824:A:H2'	20:Y:2825:C:C6	2.56	0.41
20:Y:2928:C:H3'	20:Y:2929:A:H8	1.84	0.41
21:U:51:G:C3'	33:k:76:ASP:OD2	2.68	0.41
21:U:72:C:H2'	21:U:73:G:C8	2.55	0.41
21:U:77:A:O4'	40:r:94:HIS:HD2	2.03	0.41
21:U:109:C:O2'	21:U:110:G:H5'	2.20	0.41
22:Z:65:ILE:CD1	22:Z:67:PHE:CE1	3.03	0.41
23:a:113:ASP:OD1	23:a:114:VAL:N	2.54	0.41
24:b:46:ARG:CD	24:b:98:TYR:HD2	2.32	0.41
25:c:133:GLY:O	25:c:165:THR:OG1	2.26	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:d:2:SER:HG	26:d:55:ARG:NH1	2.12	0.41
29:g:1:MET:HG3	29:g:67:LYS:NZ	2.35	0.41
29:g:43:VAL:CG1	29:g:54:ARG:HA	2.50	0.41
33:k:19:LEU:HD12	33:k:19:LEU:HA	1.83	0.41
34:l:45:VAL:HB	34:l:61:ARG:O	2.21	0.41
34:l:82:HIS:HB3	34:l:84:ASP:OD1	2.21	0.41
35:m:4:VAL:O	35:m:4:VAL:HG13	2.20	0.41
35:m:69:ALA:HB1	35:m:74:ILE:HG23	2.01	0.41
38:p:62:ARG:O	38:p:62:ARG:HG3	2.21	0.41
38:p:68:ARG:HD2	38:p:70:ARG:NH2	2.35	0.41
42:t:49:ILE:O	42:t:49:ILE:HG13	2.20	0.41
45:w:4:LEU:C	45:w:5:LYS:HD2	2.46	0.41
49:1:25:GLN:OE1	49:1:26:LYS:O	2.39	0.41
51:4:2393:A:O3'	51:4:2398:C:N4	2.54	0.41
1:A:120:G:P	1:A:310:G:H21	2.44	0.41
1:A:120:G:H2'	1:A:121:U:C6	2.56	0.41
1:A:495:G:C4	1:A:496:U:C5	3.09	0.41
1:A:528:G:O2'	1:A:529:C:H5'	2.21	0.41
1:A:863:G:C6	1:A:864:C:C4	3.09	0.41
1:A:872:G:N2	1:A:888:A:H2'	2.36	0.41
1:A:969:G:H3'	1:A:1200:A:C2	2.56	0.41
1:A:1433:C:H6	1:A:1433:C:OP2	2.04	0.41
3:D:140:VAL:HG12	3:D:144:SER:OG	2.21	0.41
4:E:82:PRO:O	4:E:85:ILE:HG12	2.20	0.41
6:G:33:GLU:HB2	6:G:35:LYS:HE3	2.02	0.41
7:H:29:HIS:HB2	7:H:59:SER:C	2.46	0.41
8:I:28:THR:CG2	8:I:39:VAL:HB	2.51	0.41
8:I:87:LEU:CD1	8:I:95:GLN:HE21	2.33	0.41
10:K:29:ALA:N	10:K:44:THR:O	2.26	0.41
14:O:29:VAL:CG2	14:O:81:LEU:HD21	2.38	0.41
19:V:5:THR:HA	19:V:6:MET:HE2	2.03	0.41
19:V:130:THR:N	19:V:133:GLU:OE2	2.47	0.41
20:Y:12:G:C2'	20:Y:13:G:H5'	2.51	0.41
20:Y:105:A:C2	20:Y:106:G:C5	3.09	0.41
20:Y:222:A:N6	20:Y:510:A:N3	2.69	0.41
20:Y:234:U:H2'	20:Y:235:U:H5'	2.03	0.41
20:Y:245:G:C6	20:Y:246:U:C4	3.09	0.41
20:Y:484:C:P	42:t:10:LYS:NZ	2.93	0.41
20:Y:879:A:O2'	20:Y:880:G:H5'	2.20	0.41
20:Y:1015:A:H2'	20:Y:1016:C:C6	2.56	0.41
20:Y:1048:A:H2'	20:Y:1050:A:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:1071:G:C4	20:Y:1072:G:C8	3.09	0.41
20:Y:1083:G:H1'	20:Y:2491:A:H62	1.85	0.41
20:Y:1187:A:C5	20:Y:1191:A:H2	2.39	0.41
20:Y:1202:A:H2	20:Y:1224:G:C1'	2.33	0.41
20:Y:1232:G:C2	20:Y:1233:A:C5	3.09	0.41
20:Y:1394:A:N6	20:Y:1407:G:O6	2.54	0.41
20:Y:1546:A:C2	20:Y:1621:C:H5'	2.56	0.41
20:Y:1599:U:H5'	20:Y:1600:G:N7	2.35	0.41
20:Y:1656:A:C2'	20:Y:1657:G:H5'	2.50	0.41
20:Y:1809:U:C2'	20:Y:1810:A:C8	3.01	0.41
20:Y:1870:U:C4	32:j:8:PRO:CG	3.04	0.41
20:Y:1933:G:N3	20:Y:1933:G:H2'	2.35	0.41
20:Y:1935:C:O2'	20:Y:1936:G:H5'	2.21	0.41
20:Y:1986:A:N1	20:Y:2208:U:C4	2.89	0.41
20:Y:2076:A:H2'	20:Y:2077:C:C5'	2.50	0.41
20:Y:2295:C:H2'	20:Y:2296:C:C6	2.49	0.41
20:Y:2446:G:H2'	20:Y:2447:G:O4'	2.20	0.41
20:Y:2511:A:O2'	20:Y:2512:A:O5'	2.36	0.41
20:Y:2563:G:C4	20:Y:2564:A:C8	3.09	0.41
20:Y:2587:U:H2'	20:Y:2588:C:C6	2.54	0.41
20:Y:2628:U:C1'	30:h:67:PHE:CZ	3.03	0.41
20:Y:2755:A:H2'	20:Y:2756:G:C8	2.56	0.41
20:Y:2788:A:C2'	20:Y:2789:A:O4'	2.69	0.41
20:Y:2950:C:HO2'	20:Y:2951:G:C5'	2.33	0.41
20:Y:3018:U:C2	20:Y:3025:G:N1	2.89	0.41
20:Y:3042:A:O2'	20:Y:3043:G:H5'	2.21	0.41
20:Y:3114:A:C8	20:Y:3115:A:O4'	2.73	0.41
21:U:89:C:C6	21:U:89:C:OP2	2.73	0.41
23:a:37:THR:O	23:a:38:ARG:HB2	2.21	0.41
24:b:144:PHE:CD1	24:b:144:PHE:C	2.99	0.41
25:c:12:LYS:O	25:c:16:ARG:HG3	2.20	0.41
25:c:29:TYR:HE1	25:c:35:ILE:CA	2.33	0.41
25:c:55:LYS:O	25:c:58:ASN:ND2	2.53	0.41
28:f:15:TRP:CH2	28:f:123:LYS:HE3	2.53	0.41
29:g:24:VAL:HG23	29:g:24:VAL:O	2.21	0.41
32:j:72:ASP:HB3	32:j:75:VAL:HG11	1.98	0.41
34:l:2:ASN:C	34:l:4:LEU:H	2.28	0.41
34:l:58:PHE:HZ	34:l:83:ILE:HD13	1.86	0.41
39:q:101:ASN:HD21	39:q:103:LYS:CE	2.33	0.41
41:s:11:ARG:HG3	41:s:12:ASN:ND2	2.36	0.41
1:A:121:U:N3	1:A:122:G:N7	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:139:C:C5	16:Q:5:LYS:HD2	2.48	0.41
1:A:282:A:C4	1:A:283:C:C6	3.09	0.41
1:A:336:A:H2'	1:A:337:G:H8	1.86	0.41
1:A:345:C:H1'	1:A:346:G:H22	1.85	0.41
1:A:485:G:HO2'	1:A:486:G:P	2.38	0.41
1:A:495:G:C6	1:A:517:G:C6	3.09	0.41
1:A:547:G:N2	1:A:866:U:H3	2.19	0.41
1:A:567:G:H22	1:A:733:A:H1'	1.86	0.41
1:A:686:A:H4'	10:K:40:ILE:HD11	2.02	0.41
1:A:921:G:H4'	6:G:102:ARG:NE	2.35	0.41
1:A:928:A:C2	1:A:929:G:C5	3.08	0.41
1:A:929:G:C4	1:A:930:C:C6	3.08	0.41
1:A:948:G:H5"	1:A:951:A:H8	1.86	0.41
1:A:949:C:O5'	1:A:950:A:H2'	2.20	0.41
1:A:962:C:O2'	1:A:963:U:P	2.79	0.41
1:A:1080:C:OP2	19:V:95:ARG:HG2	2.21	0.41
1:A:1104:G:HO2'	1:A:1126:G:H1	1.58	0.41
1:A:1128:C:H1'	8:I:27:GLN:NE2	2.36	0.41
1:A:1183:U:H2'	1:A:1184:C:C5'	2.51	0.41
1:A:1287:G:N2	1:A:1313:G:N3	2.69	0.41
1:A:1354:G:H5"	8:I:90:GLY:C	2.45	0.41
1:A:1391:A:C5	20:Y:2137:A:N6	2.89	0.41
1:A:1417:A:H62	1:A:1451:G:H21	1.68	0.41
2:C:92:LYS:HD2	2:C:93:LEU:N	2.35	0.41
4:E:132:ALA:HB1	4:E:136:ALA:HB3	2.02	0.41
4:E:132:ALA:HB1	4:E:136:ALA:CB	2.51	0.41
4:E:151:LYS:O	4:E:153:LEU:HD23	2.20	0.41
4:E:194:MET:SD	4:E:195:LEU:HD22	2.61	0.41
5:F:27:LEU:HD13	5:F:31:ARG:HH22	1.85	0.41
5:F:48:LEU:CD1	5:F:52:ILE:HG22	2.51	0.41
5:F:69:PRO:HA	5:F:72:VAL:HG12	2.02	0.41
6:G:44:TYR:HA	6:G:47:LEU:HG	2.03	0.41
6:G:58:PRO:HA	6:G:61:THR:HG22	2.03	0.41
7:H:35:ASN:ND2	7:H:112:LEU:CD1	2.83	0.41
7:H:93:ASN:OD1	7:H:93:ASN:O	2.38	0.41
8:I:26:ILE:O	8:I:40:ARG:NH1	2.54	0.41
8:I:32:ARG:HH22	8:I:94:GLY:HA2	1.85	0.41
8:I:39:VAL:CG2	8:I:102:ALA:HB1	2.48	0.41
8:I:40:ARG:HH11	8:I:41:LEU:H	1.69	0.41
9:J:76:ILE:HG23	9:J:76:ILE:O	2.20	0.41
11:L:42:PRO:HG3	11:L:50:ARG:HH11	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:M:2:ALA:N	12:M:9:LEU:HB3	2.36	0.41
14:O:74:ASP:HB3	14:O:77:ARG:HD3	2.03	0.41
16:Q:28:VAL:HG13	16:Q:29:SER:N	2.35	0.41
16:Q:76:LEU:HD13	16:Q:88:TRP:CD2	2.55	0.41
17:R:23:CYS:O	17:R:23:CYS:SG	2.79	0.41
17:R:41:TYR:N	17:R:41:TYR:CD1	2.89	0.41
18:T:35:PHE:CD2	18:T:79:LEU:HD13	2.56	0.41
18:T:43:ASP:O	18:T:44:LYS:HD3	2.20	0.41
18:T:67:ILE:HD12	18:T:68:HIS:N	2.36	0.41
20:Y:16:G:H5'	35:m:22:LYS:HZ2	1.84	0.41
20:Y:89:A:H2'	20:Y:89:A:N3	2.36	0.41
20:Y:174:G:C2	20:Y:175:G:C5	3.09	0.41
20:Y:183:G:C2	20:Y:212:A:N1	2.89	0.41
20:Y:207:C:O2'	20:Y:208:C:H5'	2.21	0.41
20:Y:268:G:C4	20:Y:359:A:C2	3.09	0.41
20:Y:268:G:N3	20:Y:360:G:C5	2.85	0.41
20:Y:356:G:H5"	20:Y:357:U:OP1	2.20	0.41
20:Y:366:G:H2'	20:Y:367:U:C5	2.56	0.41
20:Y:395:G:H2'	20:Y:396:C:C6	2.55	0.41
20:Y:399:G:C3'	20:Y:400:C:H5"	2.51	0.41
20:Y:444:U:O2'	20:Y:446:G:N2	2.53	0.41
20:Y:516:G:O2'	20:Y:517:A:O5'	2.39	0.41
20:Y:537:A:H2'	20:Y:538:G:O4'	2.20	0.41
20:Y:563:U:O2	20:Y:563:U:H2'	2.20	0.41
20:Y:574:C:C2	20:Y:575:C:C5	3.09	0.41
20:Y:605:G:H2'	20:Y:606:U:C6	2.56	0.41
20:Y:614:C:H1'	28:f:113:LYS:HZ1	1.86	0.41
20:Y:616:A:O2'	20:Y:617:U:P	2.79	0.41
20:Y:622:C:H5'	35:m:49:ASP:CG	2.44	0.41
20:Y:676:C:H2'	20:Y:677:G:H8	1.86	0.41
20:Y:730:G:C2'	30:h:113:LEU:HD13	2.51	0.41
20:Y:780:U:H2'	20:Y:781:C:H5'	2.03	0.41
20:Y:784:G:C6	20:Y:916:G:O6	2.74	0.41
20:Y:831:A:C4	20:Y:832:G:H1'	2.56	0.41
20:Y:880:G:C6	20:Y:881:C:C4	3.09	0.41
20:Y:928:U:N3	20:Y:1310:G:C2	2.89	0.41
20:Y:971:G:C6	20:Y:972:A:N6	2.89	0.41
20:Y:1034:U:C5	20:Y:1035:G:N7	2.88	0.41
20:Y:1042:A:C2	45:w:42:GLN:NE2	2.89	0.41
20:Y:1102:G:N3	20:Y:1102:G:C2'	2.84	0.41
20:Y:1133:G:C2'	20:Y:1134:U:H5'	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:1168:A:C2	20:Y:1169:A:H1'	2.56	0.41
20:Y:1249:G:C5	28:f:77:HIS:ND1	2.88	0.41
20:Y:1270:G:O3'	35:m:81:GLN:OE1	2.39	0.41
20:Y:1310:G:C2	20:Y:1311:C:C5	3.09	0.41
20:Y:1394:A:C6	20:Y:1407:G:C6	3.08	0.41
20:Y:1438:G:H5'	37:o:91:ARG:HH12	1.85	0.41
20:Y:1464:A:H5"	20:Y:1465:C:C5'	2.51	0.41
20:Y:1499:A:O3'	20:Y:1500:A:C5'	2.68	0.41
20:Y:1547:G:H3'	20:Y:1620:U:H2'	2.02	0.41
20:Y:1833:C:O2'	20:Y:1834:A:H3'	2.20	0.41
20:Y:1956:A:C4	20:Y:1957:G:C8	3.09	0.41
20:Y:1990:A:C2	20:Y:1991:C:H1'	2.55	0.41
20:Y:2007:C:O2	20:Y:2008:A:N7	2.54	0.41
20:Y:2024:G:H2'	20:Y:2025:C:H5'	2.03	0.41
20:Y:2054:C:C4	20:Y:2123:A:N7	2.89	0.41
20:Y:2133:G:C6	20:Y:2146:A:C6	3.09	0.41
20:Y:2144:C:H2'	20:Y:2145:C:C6	2.56	0.41
20:Y:2172:G:C6	20:Y:2183:G:C6	3.08	0.41
20:Y:2307:C:C4	20:Y:2308:U:C4	3.09	0.41
20:Y:2316:G:H1'	20:Y:2421:A:C2	2.56	0.41
20:Y:2433:U:O3'	20:Y:2435:U:P	2.79	0.41
20:Y:2450:C:H2'	20:Y:2451:A:H5'	2.02	0.41
20:Y:2610:C:H2'	20:Y:2611:U:O4'	2.21	0.41
20:Y:2640:G:H2'	20:Y:2641:U:C6	2.55	0.41
20:Y:2641:U:P	30:h:65:LYS:HD2	2.61	0.41
20:Y:2763:C:N3	20:Y:2764:C:C5	2.89	0.41
20:Y:2812:G:N3	20:Y:2831:G:N2	2.67	0.41
20:Y:2890:C:C3'	20:Y:2891:C:H6	2.34	0.41
20:Y:2968:G:C5	20:Y:2985:G:C6	3.09	0.41
20:Y:2995:U:C2	20:Y:2996:U:C5	3.09	0.41
20:Y:3014:A:N7	20:Y:3113:A:H2	2.19	0.41
20:Y:3075:C:C2	20:Y:3076:U:C5	3.08	0.41
20:Y:3081:A:H8	20:Y:3082:U:O4'	2.04	0.41
20:Y:3098:G:OP2	20:Y:3098:G:H8	2.04	0.41
21:U:16:A:H4'	21:U:17:G:OP2	2.21	0.41
21:U:39:C:H2'	21:U:40:A:C8	2.55	0.41
21:U:51:G:OP1	33:k:76:ASP:OD1	2.39	0.41
21:U:66:C:N4	21:U:106:C:O2	2.54	0.41
22:Z:84:TYR:CD1	22:Z:84:TYR:C	2.97	0.41
23:a:75:VAL:CG2	23:a:76:ASN:N	2.84	0.41
23:a:192:LEU:HD12	23:a:192:LEU:C	2.46	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:b:111:LEU:HD23	24:b:111:LEU:HA	1.79	0.41
24:b:158:ILE:HG22	24:b:159:GLY:O	2.21	0.41
26:d:16:ASP:OD1	26:d:17:VAL:N	2.54	0.41
26:d:16:ASP:OD1	26:d:16:ASP:C	2.64	0.41
26:d:20:ASN:OD1	26:d:20:ASN:O	2.38	0.41
26:d:24:LEU:HD12	26:d:25:SER:N	2.36	0.41
26:d:45:ARG:HH12	26:d:50:ALA:H	1.68	0.41
26:d:73:ILE:O	26:d:76:LEU:CD1	2.64	0.41
26:d:82:GLU:CD	26:d:82:GLU:C	2.89	0.41
26:d:123:THR:C	26:d:124:PHE:HD1	2.28	0.41
28:f:37:ARG:O	28:f:37:ARG:HG3	2.21	0.41
28:f:64:VAL:HG23	28:f:68:LYS:HB2	2.02	0.41
28:f:103:ASN:C	28:f:106:ILE:HG22	2.46	0.41
28:f:124:VAL:C	28:f:125:TYR:HD1	2.29	0.41
30:h:73:THR:HB	30:h:75:TYR:OH	2.21	0.41
31:i:57:HIS:HE1	31:i:113:THR:CG2	2.34	0.41
31:i:57:HIS:CG	31:i:120:ARG:NH2	2.89	0.41
32:j:45:ARG:HB3	32:j:46:PRO:HD3	2.03	0.41
32:j:56:LYS:NZ	32:j:88:ALA:O	2.54	0.41
32:j:73:LYS:O	32:j:76:VAL:CG1	2.67	0.41
33:k:10:ILE:O	33:k:13:VAL:HG23	2.20	0.41
33:k:67:GLU:O	33:k:70:VAL:HG23	2.21	0.41
33:k:126:LYS:NZ	33:k:127:PHE:OXT	2.53	0.41
34:l:2:ASN:C	34:l:4:LEU:N	2.78	0.41
34:l:25:VAL:HG11	34:l:60:VAL:HG11	2.03	0.41
34:l:48:ARG:HG3	34:l:95:LYS:NZ	2.35	0.41
34:l:108:LYS:C	34:l:109:ILE:HG12	2.45	0.41
35:m:80:ILE:HD13	35:m:80:ILE:HA	1.98	0.41
36:n:21:VAL:HA	36:n:97:LEU:O	2.20	0.41
36:n:61:THR:HG23	36:n:100:THR:HG1	1.84	0.41
38:p:62:ARG:NH1	38:p:79:THR:CG2	2.84	0.41
40:r:140:ILE:HG13	40:r:140:ILE:O	2.20	0.41
41:s:39:ARG:HD2	41:s:58:THR:HG23	2.03	0.41
47:y:25:THR:HG22	47:y:26:LYS:N	2.35	0.41
48:z:5:LYS:CG	48:z:9:GLN:HE21	2.33	0.41
1:A:28:U:O2'	1:A:504:G:O2'	2.31	0.41
1:A:48:G:C2	1:A:399:G:C6	3.10	0.41
1:A:113:G:H1	1:A:313:A:H1'	1.84	0.41
1:A:230:G:H5'	15:P:24:ASP:OD2	2.21	0.41
1:A:422:C:H1'	1:A:423:G:OP2	2.21	0.41
1:A:424:G:C2	1:A:425:G:C5	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:855:A:OP1	1:A:855:A:H8	2.04	0.41
1:A:884:G:O2'	1:A:885:G:H5'	2.20	0.41
1:A:955:G:H2'	1:A:956:A:H2	1.85	0.41
1:A:1174:G:H2'	1:A:1175:U:C6	2.55	0.41
1:A:1281:A:C5	1:A:1283:U:H1'	2.56	0.41
1:A:1303:U:H3'	1:A:1304:C:C2'	2.22	0.41
3:D:31:TYR:CB	3:D:38:ARG:HH22	2.33	0.41
3:D:95:ASN:O	3:D:99:ARG:HG2	2.20	0.41
4:E:126:PRO:O	4:E:126:PRO:CD	2.64	0.41
5:F:6:ILE:HA	5:F:89:LYS:O	2.21	0.41
5:F:27:LEU:HD12	5:F:28:ASN:N	2.36	0.41
6:G:111:ARG:HB3	6:G:119:ARG:HD2	2.02	0.41
8:I:32:ARG:HD3	8:I:32:ARG:O	2.21	0.41
8:I:116:PRO:O	8:I:119:LYS:HG2	2.21	0.41
10:K:73:GLN:HE21	10:K:104:THR:CB	2.34	0.41
10:K:109:LEU:HA	10:K:109:LEU:HD12	1.70	0.41
11:L:24:LEU:C	11:L:25:LYS:HG2	2.45	0.41
11:L:83:ARG:NH1	11:L:96:LYS:HG2	2.35	0.41
12:M:78:ILE:HD13	12:M:78:ILE:HA	1.97	0.41
19:V:214:THR:HG23	19:V:215:LYS:N	2.36	0.41
20:Y:7:U:C4	20:Y:3114:A:C6	3.09	0.41
20:Y:77:G:HO2'	20:Y:427:A:H2	1.61	0.41
20:Y:244:A:C2'	20:Y:245:G:O5'	2.69	0.41
20:Y:376:G:H8	20:Y:376:G:OP2	2.02	0.41
20:Y:458:G:O6	20:Y:512:G:C6	2.74	0.41
20:Y:497:G:C2	20:Y:507:G:C2	3.09	0.41
20:Y:586:U:H2'	20:Y:587:G:O4'	2.21	0.41
20:Y:707:G:N3	20:Y:707:G:H2'	2.36	0.41
20:Y:814:A:H1'	20:Y:1852:A:O2'	2.20	0.41
20:Y:831:A:N1	20:Y:832:G:H1'	2.36	0.41
20:Y:838:G:C6	20:Y:839:U:C4	3.09	0.41
20:Y:844:G:OP1	22:Z:10:THR:OG1	2.39	0.41
20:Y:874:G:O2'	20:Y:875:G:H5'	2.21	0.41
20:Y:1025:A:C4	31:i:13:HIS:CE1	3.08	0.41
20:Y:1043:G:H2'	20:Y:1044:U:H6	1.86	0.41
20:Y:1048:A:H8	20:Y:1049:G:C1'	2.34	0.41
20:Y:1048:A:H8	20:Y:1049:G:H1'	1.85	0.41
20:Y:1052:U:H2'	20:Y:1053:G:H8	1.85	0.41
20:Y:1196:C:H4'	20:Y:1197:C:H5"	2.03	0.41
20:Y:1278:C:C2	20:Y:1279:G:C8	3.09	0.41
20:Y:1378:U:O2'	46:x:8:MET:HE2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:1470:G:N3	20:Y:1471:G:C8	2.88	0.41
20:Y:1493:A:C2	20:Y:1495:G:C8	3.09	0.41
20:Y:1500:A:C2	20:Y:1501:C:C4	3.09	0.41
20:Y:1522:G:N2	20:Y:1814:G:N2	2.69	0.41
20:Y:1550:G:O2'	20:Y:1551:U:P	2.78	0.41
20:Y:1666:A:H2'	20:Y:1667:C:C6	2.55	0.41
20:Y:2235:C:H2'	20:Y:2236:G:C5'	2.51	0.41
20:Y:2409:U:N3	20:Y:2410:A:N7	2.69	0.41
20:Y:2418:U:H2'	20:Y:2419:C:C6	2.56	0.41
20:Y:2610:C:H2'	20:Y:2611:U:H6	1.81	0.41
20:Y:2782:C:H2'	20:Y:2783:C:H6	1.86	0.41
20:Y:3041:C:N4	23:a:202:ASN:HD21	2.19	0.41
20:Y:3077:A:H2'	20:Y:3078:G:C8	2.56	0.41
20:Y:3107:G:C1'	46:x:41:ARG:NH2	2.83	0.41
21:U:76:G:H2'	21:U:77:A:O4'	2.21	0.41
22:Z:6:TYR:HB2	22:Z:16:ALA:O	2.20	0.41
22:Z:18:VAL:CG2	22:Z:19:SER:N	2.82	0.41
22:Z:143:HIS:HB3	22:Z:162:SER:CB	2.50	0.41
23:a:26:VAL:HG11	23:a:193:LEU:HD12	2.03	0.41
25:c:11:LEU:HD12	25:c:108:ASP:OD1	2.21	0.41
25:c:43:VAL:HG22	25:c:161:ILE:CA	2.43	0.41
26:d:154:ARG:HE	26:d:155:PRO:HD2	1.86	0.41
28:f:25:LEU:HD12	28:f:25:LEU:C	2.46	0.41
28:f:125:TYR:HH	28:f:132:HIS:CD2	2.38	0.41
29:g:74:GLY:C	34:l:72:THR:HB	2.46	0.41
30:h:54:GLN:O	30:h:56:PRO:HD3	2.21	0.41
35:m:41:HIS:O	35:m:45:TYR:HD1	2.04	0.41
38:p:24:ILE:HD12	38:p:24:ILE:HA	1.87	0.41
38:p:35:PRO:HA	38:p:80:LYS:HE2	2.02	0.41
39:q:12:ILE:HD12	39:q:12:ILE:H	1.86	0.41
40:r:43:ASP:OD1	40:r:43:ASP:N	2.53	0.41
47:y:29:ARG:HH12	47:y:30:ARG:HA	1.85	0.41
51:4:2350:G:H1'	51:4:2386:U:P	2.61	0.41
51:4:2393:A:H1'	51:4:2398:C:H41	1.86	0.41
1:A:81:C:H3'	1:A:82:U:C5'	2.44	0.40
1:A:156:G:N3	1:A:158:A:OP2	2.53	0.40
1:A:216:U:O2	1:A:216:U:O4'	2.39	0.40
1:A:227:G:H2'	1:A:228:A:N7	2.35	0.40
1:A:402:G:H2'	1:A:403:C:C6	2.56	0.40
1:A:719:C:H2'	1:A:720:U:C6	2.56	0.40
1:A:728:A:O2'	1:A:729:A:N7	2.34	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:754:G:C2	1:A:786:C:C2	3.09	0.40
1:A:1035:A:N3	2:C:156:ARG:NH1	2.69	0.40
1:A:1229:A:HO2'	1:A:1230:C:C4'	2.32	0.40
1:A:1296:C:H2'	1:A:1297:U:H6	1.86	0.40
2:C:38:ILE:HG22	2:C:93:LEU:CD1	2.51	0.40
2:C:119:VAL:HG11	2:C:136:ALA:CB	2.33	0.40
3:D:136:ASP:C	3:D:137:ILE:HG13	2.46	0.40
3:D:191:THR:CG2	3:D:193:GLN:HG2	2.51	0.40
5:F:45:ARG:N	5:F:59:ILE:HA	2.34	0.40
6:G:115:THR:OG1	6:G:118:GLU:CG	2.69	0.40
7:H:47:SER:HA	7:H:65:LYS:NZ	2.36	0.40
8:I:37:VAL:HG23	8:I:87:LEU:CA	2.51	0.40
10:K:36:PHE:N	10:K:36:PHE:CD1	2.89	0.40
12:M:76:ALA:HA	12:M:79:ARG:HG2	2.03	0.40
12:M:81:LYS:HA	12:M:84:ILE:HG12	2.02	0.40
15:P:67:THR:CG2	15:P:68:GLU:N	2.84	0.40
17:R:45:ARG:CG	17:R:47:LYS:HG2	2.51	0.40
18:T:46:LYS:HA	18:T:49:GLU:CG	2.51	0.40
20:Y:81:A:O5'	39:q:4:HIS:HD2	2.03	0.40
20:Y:128:G:H2'	20:Y:129:G:C8	2.51	0.40
20:Y:142:C:H2'	20:Y:142:C:O2	2.21	0.40
20:Y:371:G:H2'	20:Y:372:G:H8	1.86	0.40
20:Y:408:G:C6	20:Y:419:G:C6	3.09	0.40
20:Y:437:G:H2'	20:Y:438:U:P	2.61	0.40
20:Y:445:U:H4'	20:Y:446:G:O5'	2.19	0.40
20:Y:548:A:C2'	20:Y:549:C:H5'	2.52	0.40
20:Y:553:G:H5'	48:z:19:HIS:CE1	2.56	0.40
20:Y:646:U:H2'	20:Y:647:G:H1'	2.03	0.40
20:Y:720:C:C5'	20:Y:721:A:H5'	2.51	0.40
20:Y:739:U:H5"	20:Y:740:A:C8	2.54	0.40
20:Y:786:C:H2'	20:Y:787:C:H6	1.85	0.40
20:Y:826:G:N1	20:Y:836:G:C6	2.89	0.40
20:Y:1068:C:N4	20:Y:1069:G:O6	2.54	0.40
20:Y:1107:G:C5	45:w:13:ILE:HD11	2.56	0.40
20:Y:1123:C:H2'	20:Y:1124:C:C6	2.56	0.40
20:Y:1129:G:C4'	35:m:77:ASN:HD21	2.34	0.40
20:Y:1542:A:H2'	20:Y:1543:A:C8	2.56	0.40
20:Y:1686:G:H2'	20:Y:1687:G:C8	2.55	0.40
20:Y:1859:A:H5"	20:Y:1860:G:OP2	2.21	0.40
20:Y:1957:G:H2'	20:Y:1958:C:H6	1.86	0.40
20:Y:2007:C:C3'	20:Y:2008:A:C8	3.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:2043:C:P	22:Z:223:GLY:H	2.42	0.40
20:Y:2076:A:H61	20:Y:2107:G:C2'	2.32	0.40
20:Y:2124:A:HO2'	20:Y:2125:A:P	2.40	0.40
20:Y:2183:G:C4	20:Y:2184:A:C8	3.10	0.40
20:Y:2268:G:H2'	20:Y:2269:C:C5'	2.51	0.40
20:Y:2477:G:H2'	20:Y:2478:C:H6	1.86	0.40
20:Y:2511:A:C8	20:Y:2513:G:C8	3.09	0.40
20:Y:2515:U:H2'	20:Y:2516:U:C5	2.56	0.40
20:Y:2661:G:H2'	20:Y:2662:U:O5'	2.21	0.40
20:Y:2690:C:H2'	20:Y:2691:C:H6	1.87	0.40
20:Y:2759:G:N3	20:Y:2759:G:H2'	2.36	0.40
20:Y:3023:G:H2'	20:Y:3024:A:O4'	2.21	0.40
22:Z:88:ARG:NH1	22:Z:88:ARG:CB	2.84	0.40
22:Z:175:LEU:C	22:Z:182:ILE:HD12	2.47	0.40
22:Z:178:PRO:C	22:Z:180:GLY:N	2.79	0.40
25:c:25:GLN:C	25:c:25:GLN:CD	2.89	0.40
25:c:63:ASP:O	25:c:67:ILE:HG22	2.21	0.40
26:d:141:LYS:N	26:d:141:LYS:HD2	2.35	0.40
27:e:43:ALA:HB1	27:e:70:PHE:CE1	2.55	0.40
28:f:113:LYS:HB2	28:f:116:ARG:HH12	1.86	0.40
30:h:111:LYS:HZ1	30:h:128:LYS:HB3	1.85	0.40
32:j:41:ALA:HB1	32:j:97:ILE:HD11	2.01	0.40
34:l:45:VAL:H	34:l:61:ARG:C	2.28	0.40
36:n:97:LEU:HD23	36:n:97:LEU:HA	1.83	0.40
37:o:7:PHE:HD2	37:o:115:GLU:OE2	2.03	0.40
43:u:32:LEU:HD22	43:u:32:LEU:N	2.35	0.40
45:w:44:ARG:HA	45:w:44:ARG:HD3	1.81	0.40
46:x:40:PRO:C	46:x:42:ARG:N	2.78	0.40
51:4:2362:C:H2'	51:4:2363:A:H8	1.84	0.40
1:A:120:G:H2'	1:A:121:U:H6	1.86	0.40
1:A:166:C:H2'	1:A:167:U:C6	2.57	0.40
1:A:181:C:H2'	1:A:182:C:C6	2.56	0.40
1:A:185:G:C6	1:A:186:C:C5	3.09	0.40
1:A:322:C:O2'	18:T:18:ARG:HD3	2.21	0.40
1:A:380:G:H22	1:A:382:A:H3'	1.82	0.40
1:A:569:U:H2'	1:A:570:U:C6	2.56	0.40
1:A:988:C:H3'	1:A:989:G:H8	1.86	0.40
1:A:1041:G:H2'	1:A:1042:U:H6	1.74	0.40
1:A:1127:A:N3	1:A:1127:A:H2'	2.36	0.40
1:A:1143:C:H2'	1:A:1144:G:C8	2.56	0.40
1:A:1277:U:H4'	12:M:42:ASN:OD1	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1303:U:O5'	1:A:1304:C:O2'	2.39	0.40
3:D:159:GLU:O	3:D:160:ARG:C	2.64	0.40
4:E:50:VAL:CG2	4:E:55:ARG:HH21	2.30	0.40
4:E:97:PHE:CE2	4:E:99:VAL:HG23	2.55	0.40
16:Q:79:THR:OG1	16:Q:80:ARG:N	2.49	0.40
17:R:30:ILE:HG21	17:R:63:ASP:OD2	2.21	0.40
20:Y:47:U:H3'	20:Y:48:G:C5'	2.50	0.40
20:Y:157:U:C2	20:Y:158:G:C8	3.09	0.40
20:Y:298:G:N2	20:Y:339:U:O2'	2.51	0.40
20:Y:317:G:C6	20:Y:508:G:C6	3.09	0.40
20:Y:319:G:C2	20:Y:494:G:N7	2.88	0.40
20:Y:334:G:H1	20:Y:347:U:H3	1.69	0.40
20:Y:396:C:H2'	20:Y:397:C:C6	2.56	0.40
20:Y:472:C:C4	20:Y:473:C:C5	3.09	0.40
20:Y:573:C:H2'	20:Y:574:C:H6	1.85	0.40
20:Y:706:G:H5"	20:Y:706:G:N3	2.36	0.40
20:Y:716:G:H2'	20:Y:717:C:H6	1.83	0.40
20:Y:838:G:C4	20:Y:839:U:C5	3.10	0.40
20:Y:951:G:H2'	20:Y:952:C:O4'	2.21	0.40
20:Y:958:A:H2'	20:Y:959:U:H6	1.85	0.40
20:Y:969:C:N4	20:Y:1038:G:H1	2.19	0.40
20:Y:1043:G:H2'	20:Y:1044:U:C6	2.57	0.40
20:Y:1123:C:H2'	20:Y:1124:C:H6	1.85	0.40
20:Y:1231:U:H2'	20:Y:1232:G:C8	2.56	0.40
20:Y:1402:A:H2'	20:Y:1403:C:O2	2.20	0.40
20:Y:1464:A:OP2	20:Y:1465:C:H5	2.04	0.40
20:Y:1673:A:H3'	20:Y:1673:A:N3	2.36	0.40
20:Y:1941:A:H2'	20:Y:1942:G:O4'	2.20	0.40
20:Y:2009:G:H2'	20:Y:2010:G:H8	1.86	0.40
20:Y:2063:G:N7	20:Y:2064:A:N6	2.69	0.40
20:Y:2074:G:H2'	20:Y:2109:A:N6	2.36	0.40
20:Y:2135:U:C4	20:Y:2142:A:N7	2.90	0.40
20:Y:2447:G:H5'	20:Y:2448:G:OP2	2.21	0.40
20:Y:2478:C:C4	20:Y:2479:G:C8	3.09	0.40
20:Y:2483:G:C8	20:Y:2651:C:C4	3.09	0.40
20:Y:2559:A:N6	20:Y:2561:G:O4'	2.54	0.40
20:Y:2913:U:H3'	20:Y:2913:U:P	2.62	0.40
20:Y:2981:A:N1	26:d:68:LEU:CD1	2.84	0.40
20:Y:3077:A:C6	20:Y:3078:G:C6	3.09	0.40
21:U:95:G:C5	21:U:96:A:C8	3.09	0.40
22:Z:10:THR:HB	22:Z:11:PRO:HD2	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:Z:165:LEU:O	22:Z:166:LEU:HD22	2.22	0.40
27:e:87:VAL:HG13	27:e:88:GLN:N	2.36	0.40
29:g:10:VAL:HB	29:g:16:ALA:O	2.21	0.40
29:g:80:ASP:H	34:l:67:VAL:CG1	2.34	0.40
30:h:61:LEU:HD23	49:1:27:ALA:HB2	2.03	0.40
32:j:17:GLN:O	32:j:21:LEU:HD23	2.21	0.40
35:m:21:SER:HG	35:m:24:TYR:HD2	1.68	0.40
35:m:60:LEU:HD21	35:m:64:ARG:NE	2.36	0.40
36:n:39:VAL:O	36:n:55:LEU:HB3	2.21	0.40
37:o:24:ALA:HB1	37:o:110:ILE:HD11	2.04	0.40
37:o:35:SER:HA	37:o:77:VAL:HA	2.03	0.40
38:p:23:LEU:HB3	38:p:28:VAL:HB	2.03	0.40
39:q:74:VAL:O	39:q:74:VAL:HG13	2.21	0.40
39:q:103:LYS:HG2	39:q:103:LYS:H	1.75	0.40
40:r:47:LEU:N	40:r:47:LEU:CD2	2.83	0.40
43:u:10:LEU:HA	43:u:13:LEU:HD12	2.03	0.40
1:A:60:U:H2'	1:A:61:G:H8	1.78	0.40
1:A:84:U:O2'	1:A:85:C:H5'	2.20	0.40
1:A:223:G:N3	16:Q:8:LYS:HB3	2.37	0.40
1:A:337:G:C2	1:A:338:A:C5	3.09	0.40
1:A:402:G:O2'	1:A:403:C:H5'	2.21	0.40
1:A:437:U:H5"	1:A:438:U:OP2	2.21	0.40
1:A:748:A:H1'	1:A:1496:U:O2'	2.22	0.40
1:A:782:A:H5'	1:A:783:G:OP2	2.22	0.40
1:A:924:G:C6	1:A:1324:C:N4	2.89	0.40
1:A:1187:G:O2'	1:A:1188:C:H5'	2.21	0.40
1:A:1405:G:C6	1:A:1463:G:C6	3.09	0.40
2:C:87:ARG:HD3	2:C:100:LEU:HD13	2.03	0.40
4:E:74:GLY:HA3	4:E:91:GLU:HB3	2.03	0.40
4:E:74:GLY:HA2	4:E:91:GLU:HG2	2.03	0.40
4:E:156:ASP:O	4:E:156:ASP:CG	2.64	0.40
5:F:43:TRP:NE1	5:F:62:VAL:HG12	2.36	0.40
6:G:111:ARG:HH12	6:G:123:GLU:HG2	1.86	0.40
7:H:20:ALA:O	7:H:21:TYR:HB2	2.20	0.40
7:H:39:ILE:HG13	7:H:39:ILE:H	1.60	0.40
9:J:10:LEU:CD1	9:J:96:VAL:CG1	2.99	0.40
18:T:43:ASP:OD1	18:T:46:LYS:HB3	2.21	0.40
20:Y:14:G:H5'	46:x:11:ALA:HB2	2.03	0.40
20:Y:73:C:O3'	43:u:52:GLN:HG2	2.21	0.40
20:Y:118:G:H2'	20:Y:119:G:H8	1.86	0.40
20:Y:190:A:O2'	20:Y:191:G:C5'	2.68	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:401:C:P	24:b:139:LYS:NZ	2.94	0.40
20:Y:658:U:H2'	20:Y:659:U:C6	2.56	0.40
20:Y:1076:A:O2'	20:Y:1077:A:C5'	2.69	0.40
20:Y:1076:A:C2'	20:Y:1077:A:O5'	2.69	0.40
20:Y:1082:C:H2'	20:Y:1083:G:H8	1.87	0.40
20:Y:1121:G:H2'	20:Y:1122:C:C6	2.56	0.40
20:Y:1122:C:H1'	20:Y:1128:A:C8	2.56	0.40
20:Y:1266:C:H2'	20:Y:1267:A:C8	2.55	0.40
20:Y:1290:C:O5'	20:Y:1290:C:H6	2.05	0.40
20:Y:1318:C:O2	20:Y:1318:C:C2'	2.68	0.40
20:Y:1332:G:C6	20:Y:1347:G:C6	3.09	0.40
20:Y:1510:A:C8	20:Y:1513:C:N4	2.89	0.40
20:Y:1642:G:C2	20:Y:1643:G:C8	3.09	0.40
20:Y:1839:U:H5"	20:Y:1840:G:OP1	2.21	0.40
20:Y:1867:G:O6	20:Y:1868:A:N6	2.54	0.40
20:Y:1990:A:C8	20:Y:2046:A:H1'	2.56	0.40
20:Y:2076:A:H61	20:Y:2107:G:H1'	1.85	0.40
20:Y:2085:C:HO2'	20:Y:2086:U:C5'	2.28	0.40
20:Y:2156:A:C5	20:Y:2157:G:C8	3.10	0.40
20:Y:2174:G:N2	20:Y:2178:G:C5	2.89	0.40
20:Y:2276:G:O2'	20:Y:2277:G:H5'	2.21	0.40
20:Y:2448:G:P	22:Z:266:LYS:NZ	2.93	0.40
20:Y:2645:G:P	47:y:10:LYS:HZ1	2.36	0.40
20:Y:2693:A:C6	20:Y:2706:A:C8	3.10	0.40
20:Y:2961:G:C6	20:Y:2962:A:C6	3.10	0.40
20:Y:3015:C:C4	20:Y:3028:A:C2	3.10	0.40
21:U:76:G:O4'	40:r:36:VAL:HG21	2.21	0.40
24:b:156:VAL:HG23	24:b:177:VAL:HG13	2.03	0.40
25:c:102:ARG:O	25:c:103:MET:C	2.63	0.40
25:c:123:GLY:CA	25:c:183:PRO:O	2.70	0.40
25:c:171:ALA:HA	25:c:174:ARG:HH21	1.86	0.40
26:d:153:ARG:HG2	26:d:154:ARG:O	2.21	0.40
27:e:82:LEU:HD11	27:e:89:LYS:CA	2.52	0.40
28:f:21:SER:OG	28:f:58:ASN:ND2	2.54	0.40
28:f:117:GLN:C	28:f:117:GLN:CD	2.89	0.40
28:f:137:PRO:C	28:f:138:ILE:HD13	2.45	0.40
30:h:129:PHE:HE2	30:h:146:GLU:HB3	1.84	0.40
31:i:10:ARG:HH11	31:i:10:ARG:CG	2.34	0.40
31:i:67:ASN:HD22	31:i:67:ASN:HA	1.70	0.40
33:k:93:LYS:HD2	33:k:93:LYS:HA	1.80	0.40
34:l:12:LEU:HD23	34:l:76:HIS:CD2	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:m:92:ARG:HG2	35:m:92:ARG:H	1.67	0.40
35:m:107:THR:O	35:m:110:VAL:CG2	2.68	0.40
39:q:84:GLY:C	39:q:97:ILE:HD12	2.46	0.40
39:q:92:GLY:C	39:q:93:LYS:HD2	2.46	0.40
40:r:16:ARG:H	40:r:47:LEU:HA	1.86	0.40
40:r:158:THR:HB	40:r:161:GLN:HB2	2.01	0.40
41:s:32:LYS:O	41:s:35:GLU:HB2	2.21	0.40
44:v:72:LEU:O	44:v:106:LYS:HD2	2.21	0.40
44:v:94:LYS:O	44:v:98:LYS:HG2	2.20	0.40
47:y:39:LYS:HD2	47:y:40:LYS:N	2.36	0.40
50:2:8:LYS:HB2	50:2:8:LYS:NZ	2.33	0.40
1:A:7:U:H2'	1:A:8:U:C6	2.56	0.40
1:A:137:C:O2'	16:Q:7:PRO:HD2	2.22	0.40
1:A:208:G:H4'	18:T:59:ASP:OD1	2.21	0.40
1:A:236:G:H3'	1:A:237:C:C6	2.57	0.40
1:A:422:C:O4'	1:A:423:G:C2	2.74	0.40
1:A:505:C:H2'	1:A:506:C:C6	2.57	0.40
1:A:568:G:C5	1:A:733:A:C5	3.09	0.40
1:A:847:A:O2'	1:A:848:C:H5'	2.21	0.40
1:A:1241:G:H4'	1:A:1264:C:HO2'	1.87	0.40
1:A:1266:U:O2'	1:A:1267:U:OP1	2.39	0.40
2:C:147:LYS:HE2	2:C:203:TYR:HE2	1.85	0.40
3:D:98:TYR:CE2	3:D:106:ARG:HD2	2.57	0.40
5:F:6:ILE:O	5:F:63:ILE:N	2.29	0.40
5:F:17:ARG:O	5:F:21:PRO:HD3	2.22	0.40
5:F:66:LYS:HE3	5:F:66:LYS:HB2	1.92	0.40
8:I:38:ARG:HH12	8:I:39:VAL:C	2.29	0.40
8:I:40:ARG:HH12	8:I:41:LEU:HD12	1.86	0.40
11:L:24:LEU:HD12	11:L:95:TYR:HE1	1.86	0.40
14:O:16:GLY:HA2	14:O:26:GLU:OE1	2.21	0.40
14:O:17:LEU:HB2	14:O:21:ASP:OD2	2.21	0.40
15:P:21:ILE:HD12	15:P:22:VAL:N	2.35	0.40
19:V:94:GLN:HB3	19:V:146:ARG:CZ	2.51	0.40
19:V:198:TYR:N	19:V:198:TYR:CD1	2.88	0.40
20:Y:12:G:C4'	46:x:18:ALA:HB1	2.47	0.40
20:Y:77:G:C2	20:Y:104:G:C2	3.09	0.40
20:Y:192:U:O3'	20:Y:918:U:H4'	2.21	0.40
20:Y:222:A:C6	20:Y:510:A:C4	3.09	0.40
20:Y:295:U:H2'	20:Y:296:A:C1'	2.52	0.40
20:Y:321:G:N2	20:Y:456:C:H5	2.10	0.40
20:Y:441:G:H2'	20:Y:442:U:H6	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:488:G:O2'	20:Y:489:A:H5"	2.21	0.40
20:Y:615:A:C6	20:Y:2266:A:C5	3.10	0.40
20:Y:655:G:C6	20:Y:656:C:C4	3.10	0.40
20:Y:658:U:H5'	30:h:31:LYS:CE	2.51	0.40
20:Y:658:U:O5'	30:h:31:LYS:CE	2.69	0.40
20:Y:663:A:N3	20:Y:663:A:C2'	2.82	0.40
20:Y:691:U:H2'	20:Y:692:C:C6	2.57	0.40
20:Y:844:G:N2	20:Y:1992:U:C1'	2.85	0.40
20:Y:1074:A:C2	20:Y:2683:A:H5'	2.56	0.40
20:Y:1089:C:C2'	20:Y:1090:G:O5'	2.69	0.40
20:Y:1200:U:H4'	44:v:41:ARG:HH12	1.87	0.40
20:Y:1307:G:C2	20:Y:1308:G:C8	3.09	0.40
20:Y:1356:U:C2	20:Y:1357:G:C8	3.08	0.40
20:Y:1358:U:H2'	20:Y:1359:G:O4'	2.22	0.40
20:Y:1451:A:OP2	38:p:67:LYS:NZ	2.41	0.40
20:Y:1493:A:HO2'	20:Y:1494:U:P	2.35	0.40
20:Y:1581:C:H2'	20:Y:1582:C:C6	2.56	0.40
20:Y:1637:G:H5'	20:Y:1805:G:N2	2.36	0.40
20:Y:1845:G:H1	20:Y:1857:U:H3	1.68	0.40
20:Y:1850:A:H2'	20:Y:1851:G:O4'	2.22	0.40
20:Y:1969:G:H2'	20:Y:1970:G:O4'	2.21	0.40
20:Y:2071:A:N6	20:Y:2112:U:C2	2.88	0.40
20:Y:2170:U:H2'	20:Y:2171:C:H6	1.86	0.40
20:Y:2451:A:O3'	22:Z:261:ASN:ND2	2.40	0.40
20:Y:2459:G:H2'	20:Y:2459:G:N3	2.37	0.40
20:Y:2526:U:C2'	20:Y:2527:G:C1'	2.99	0.40
20:Y:2536:U:H2'	20:Y:2537:C:H6	1.84	0.40
20:Y:2959:A:C2'	20:Y:2960:G:H5'	2.52	0.40
20:Y:2965:A:C2'	20:Y:2966:C:H5'	2.52	0.40
20:Y:3024:A:C2	20:Y:3025:G:C5	3.10	0.40
20:Y:3040:G:C6	20:Y:3042:A:C2	3.10	0.40
21:U:3:U:H2'	21:U:5:C:OP2	2.21	0.40
21:U:43:C:H6	25:c:73:GLU:OE2	2.04	0.40
22:Z:108:PRO:HD2	22:Z:111:LEU:CD1	2.51	0.40
22:Z:176:ARG:HA	22:Z:182:ILE:CD1	2.50	0.40
23:a:126:THR:HG22	23:a:167:SER:CA	2.51	0.40
23:a:194:ILE:HD13	23:a:194:ILE:HA	1.84	0.40
24:b:179:SER:OG	24:b:180:PRO:CD	2.70	0.40
25:c:39:VAL:HG12	25:c:40:LYS:N	2.37	0.40
25:c:98:LEU:CB	25:c:103:MET:HE2	2.46	0.40
26:d:41:ILE:HA	26:d:56:PRO:HD3	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:f:14:SER:OG	28:f:16:TYR:HE1	2.05	0.40
28:f:85:ARG:HD2	28:f:85:ARG:HA	1.90	0.40
30:h:91:GLY:O	30:h:122:VAL:HA	2.21	0.40
31:i:34:ILE:CG2	31:i:122:ILE:CD1	2.99	0.40
32:j:87:TYR:HD2	32:j:94:TYR:HD1	1.70	0.40
33:k:35:VAL:O	33:k:35:VAL:HG12	2.20	0.40
33:k:81:SER:O	33:k:84:VAL:HG13	2.22	0.40
48:z:19:HIS:CD2	48:z:19:HIS:N	2.89	0.40
1:A:78:G:H2'	1:A:79:C:H5'	2.03	0.40
1:A:230:G:H5"	15:P:32:ARG:CZ	2.52	0.40
1:A:271:C:H2'	1:A:272:C:C6	2.56	0.40
1:A:389:A:H2'	15:P:29:ARG:NH1	2.37	0.40
1:A:427:U:C5'	3:D:10:ARG:HH22	2.31	0.40
1:A:903:U:C1'	4:E:48:LYS:CE	2.99	0.40
1:A:1107:G:N2	1:A:1126:G:O6	2.50	0.40
1:A:1392:C:O2'	1:A:1393:G:H5'	2.21	0.40
1:A:1486:A:H2	1:A:1489:G:H22	1.67	0.40
2:C:35:ASP:OD1	2:C:38:ILE:HD11	2.22	0.40
2:C:59:THR:HG23	9:J:94:ALA:CB	2.52	0.40
4:E:108:HIS:CB	4:E:109:PRO:CD	2.98	0.40
5:F:92:ARG:HH11	5:F:92:ARG:CG	2.33	0.40
6:G:41:ARG:C	6:G:41:ARG:CD	2.92	0.40
9:J:6:ILE:HG23	9:J:76:ILE:CG2	2.51	0.40
11:L:54:ARG:HH21	11:L:64:THR:CG2	2.34	0.40
12:M:34:LEU:HD22	12:M:39:ILE:C	2.46	0.40
20:Y:139:U:H2'	20:Y:140:G:C5'	2.51	0.40
20:Y:273:A:N1	20:Y:314:G:C4	2.90	0.40
20:Y:356:G:N2	20:Y:363:A:H61	2.20	0.40
20:Y:389:G:C4	20:Y:391:G:OP2	2.74	0.40
20:Y:445:U:O2	20:Y:445:U:O4'	2.39	0.40
20:Y:539:C:C4'	24:b:53:LYS:HZ3	2.34	0.40
20:Y:557:G:OP1	24:b:61:GLY:HA3	2.21	0.40
20:Y:815:G:C2'	20:Y:816:G:H5'	2.52	0.40
20:Y:912:C:H2'	20:Y:913:C:H6	1.87	0.40
20:Y:966:U:H2'	20:Y:967:G:H8	1.86	0.40
20:Y:1074:A:C6	20:Y:1076:A:C2	3.10	0.40
20:Y:1097:A:C4	20:Y:1100:C:N4	2.89	0.40
20:Y:1118:A:C5	20:Y:1274:A:C6	3.10	0.40
20:Y:1199:U:HO2'	27:e:129:ILE:HD11	1.84	0.40
20:Y:1320:U:C2	20:Y:1321:C:C5	3.09	0.40
20:Y:1364:U:H5'	35:m:4:VAL:HG12	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:1380:A:O4'	20:Y:1382:U:C6	2.75	0.40
20:Y:1435:C:H42	20:Y:1446:C:H41	1.69	0.40
20:Y:1479:G:N2	20:Y:1482:A:OP2	2.53	0.40
20:Y:1688:G:N1	20:Y:1748:A:C2	2.90	0.40
20:Y:1708:A:O3'	20:Y:1709:U:P	2.79	0.40
20:Y:2023:C:H1'	22:Z:44:ASN:HD21	1.86	0.40
20:Y:2242:G:C2'	20:Y:2243:C:O5'	2.69	0.40
20:Y:2281:A:H2'	20:Y:2282:A:C8	2.56	0.40
20:Y:2489:U:C2	20:Y:2490:A:N7	2.90	0.40
20:Y:2528:G:N3	25:c:137:PHE:HD1	2.16	0.40
20:Y:2555:G:H4'	41:s:43:THR:N	2.36	0.40
20:Y:2996:U:O2'	20:Y:2997:C:H5'	2.21	0.40
20:Y:3000:A:N7	20:Y:3006:G:C5	2.90	0.40
21:U:108:C:H2'	21:U:109:C:H6	1.87	0.40
22:Z:146:GLU:HG3	22:Z:153:ALA:N	2.37	0.40
22:Z:148:ARG:O	22:Z:150:GLY:N	2.55	0.40
23:a:59:PRO:HA	23:a:62:VAL:CG1	2.49	0.40
25:c:139:LEU:CD1	25:c:141:GLU:H	2.34	0.40
27:e:95:HIS:NE2	27:e:135:ARG:HB3	2.37	0.40
29:g:22:ILE:N	29:g:40:VAL:O	2.50	0.40
30:h:146:GLU:HG3	30:h:146:GLU:O	2.21	0.40
31:i:57:HIS:CE1	31:i:113:THR:CG2	3.04	0.40
32:j:33:ARG:NH2	32:j:114:GLU:OE1	2.54	0.40
34:l:61:ARG:NH2	34:l:68:GLY:HA3	2.37	0.40
35:m:48:ARG:C	35:m:48:ARG:HD2	2.46	0.40
36:n:7:VAL:O	36:n:7:VAL:HG13	2.21	0.40
36:n:33:ALA:O	36:n:63:GLU:HB2	2.20	0.40
39:q:93:LYS:HE3	39:q:93:LYS:CA	2.36	0.40
40:r:64:ASN:HD21	40:r:140:ILE:CG2	2.34	0.40
40:r:93:GLN:OE1	40:r:93:GLN:N	2.55	0.40
41:s:25:ARG:HD3	41:s:29:GLN:HE22	1.87	0.40
45:w:6:ILE:HB	45:w:35:VAL:CG1	2.52	0.40
49:1:33:LEU:N	49:1:33:LEU:HD12	2.36	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	C	206/208 (99%)	192 (93%)	14 (7%)	0	100	100
3	D	198/200 (99%)	186 (94%)	12 (6%)	0	100	100
4	E	178/180 (99%)	167 (94%)	11 (6%)	0	100	100
5	F	94/96 (98%)	87 (93%)	7 (7%)	0	100	100
6	G	153/155 (99%)	145 (95%)	8 (5%)	0	100	100
7	H	129/131 (98%)	123 (95%)	6 (5%)	0	100	100
8	I	124/126 (98%)	116 (94%)	8 (6%)	0	100	100
9	J	97/99 (98%)	89 (92%)	7 (7%)	1 (1%)	12	22
10	K	113/115 (98%)	104 (92%)	9 (8%)	0	100	100
11	L	120/122 (98%)	109 (91%)	11 (9%)	0	100	100
12	M	114/116 (98%)	106 (93%)	8 (7%)	0	100	100
13	N	58/60 (97%)	50 (86%)	8 (14%)	0	100	100
14	O	86/88 (98%)	82 (95%)	4 (5%)	0	100	100
15	P	94/96 (98%)	90 (96%)	4 (4%)	0	100	100
16	Q	92/94 (98%)	84 (91%)	8 (9%)	0	100	100
17	R	63/65 (97%)	60 (95%)	3 (5%)	0	100	100
18	T	83/85 (98%)	81 (98%)	2 (2%)	0	100	100
19	V	226/228 (99%)	211 (93%)	13 (6%)	2 (1%)	14	25
22	Z	273/275 (99%)	242 (89%)	31 (11%)	0	100	100
23	a	212/214 (99%)	185 (87%)	27 (13%)	0	100	100
24	b	207/209 (99%)	197 (95%)	10 (5%)	0	100	100
25	c	180/182 (99%)	169 (94%)	11 (6%)	0	100	100
26	d	174/176 (99%)	166 (95%)	8 (5%)	0	100	100
27	e	96/133 (72%)	96 (100%)	0	0	100	100
28	f	144/146 (99%)	134 (93%)	10 (7%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
29	g	120/122 (98%)	109 (91%)	11 (9%)	0	100	100
30	h	143/145 (99%)	121 (85%)	22 (15%)	0	100	100
31	i	134/136 (98%)	124 (92%)	9 (7%)	1 (1%)	18	32
32	j	116/118 (98%)	104 (90%)	12 (10%)	0	100	100
33	k	124/126 (98%)	115 (93%)	9 (7%)	0	100	100
34	l	111/113 (98%)	92 (83%)	19 (17%)	0	100	100
35	m	122/124 (98%)	116 (95%)	6 (5%)	0	100	100
36	n	98/100 (98%)	89 (91%)	9 (9%)	0	100	100
37	o	112/114 (98%)	109 (97%)	3 (3%)	0	100	100
38	p	95/97 (98%)	88 (93%)	7 (7%)	0	100	100
39	q	93/97 (96%)	85 (91%)	8 (9%)	0	100	100
40	r	190/192 (99%)	184 (97%)	6 (3%)	0	100	100
41	s	77/79 (98%)	71 (92%)	6 (8%)	0	100	100
42	t	61/63 (97%)	55 (90%)	6 (10%)	0	100	100
43	u	62/64 (97%)	59 (95%)	3 (5%)	0	100	100
44	v	124/126 (98%)	120 (97%)	4 (3%)	0	100	100
45	w	57/59 (97%)	56 (98%)	1 (2%)	0	100	100
46	x	52/54 (96%)	45 (86%)	7 (14%)	0	100	100
47	y	47/49 (96%)	41 (87%)	5 (11%)	1 (2%)	5	8
48	z	44/46 (96%)	37 (84%)	7 (16%)	0	100	100
49	1	61/63 (97%)	47 (77%)	14 (23%)	0	100	100
50	2	35/37 (95%)	31 (89%)	4 (11%)	0	100	100
All	All	5592/5723 (98%)	5169 (92%)	418 (8%)	5 (0%)	49	66

All (5) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
19	V	155	GLN
31	i	29	PHE
19	V	157	VAL
9	J	57	LYS
47	y	7	VAL

5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
2	C	170/170 (100%)	168 (99%)	2 (1%)	63 81
3	D	175/175 (100%)	174 (99%)	1 (1%)	78 90
4	E	127/127 (100%)	126 (99%)	1 (1%)	73 87
5	F	85/85 (100%)	83 (98%)	2 (2%)	43 67
6	G	131/131 (100%)	130 (99%)	1 (1%)	73 87
7	H	107/107 (100%)	104 (97%)	3 (3%)	38 63
8	I	102/102 (100%)	102 (100%)	0	100 100
9	J	89/89 (100%)	87 (98%)	2 (2%)	45 70
10	K	89/89 (100%)	88 (99%)	1 (1%)	65 83
11	L	103/103 (100%)	103 (100%)	0	100 100
12	M	99/99 (100%)	99 (100%)	0	100 100
13	N	49/49 (100%)	49 (100%)	0	100 100
14	O	76/76 (100%)	76 (100%)	0	100 100
15	P	79/79 (100%)	79 (100%)	0	100 100
16	Q	80/80 (100%)	79 (99%)	1 (1%)	61 80
17	R	55/55 (100%)	55 (100%)	0	100 100
18	T	69/69 (100%)	69 (100%)	0	100 100
19	V	191/191 (100%)	191 (100%)	0	100 100
22	Z	215/215 (100%)	214 (100%)	1 (0%)	81 91
23	a	160/160 (100%)	159 (99%)	1 (1%)	78 90
24	b	169/169 (100%)	168 (99%)	1 (1%)	78 90
25	c	151/151 (100%)	147 (97%)	4 (3%)	40 65
26	d	148/148 (100%)	147 (99%)	1 (1%)	76 88
27	e	102/102 (100%)	102 (100%)	0	100 100
28	f	119/119 (100%)	115 (97%)	4 (3%)	32 57
29	g	100/100 (100%)	99 (99%)	1 (1%)	68 84

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
30	h	112/112 (100%)	111 (99%)	1 (1%)	70 86
31	i	114/114 (100%)	112 (98%)	2 (2%)	51 74
32	j	97/97 (100%)	94 (97%)	3 (3%)	35 60
33	k	93/93 (100%)	93 (100%)	0	100 100
34	l	100/100 (100%)	100 (100%)	0	100 100
35	m	97/97 (100%)	97 (100%)	0	100 100
36	n	81/81 (100%)	81 (100%)	0	100 100
37	o	90/90 (100%)	90 (100%)	0	100 100
38	p	83/83 (100%)	82 (99%)	1 (1%)	63 81
39	q	81/81 (100%)	80 (99%)	1 (1%)	63 81
40	r	155/155 (100%)	155 (100%)	0	100 100
41	s	58/58 (100%)	58 (100%)	0	100 100
42	t	50/50 (100%)	50 (100%)	0	100 100
43	u	58/58 (100%)	56 (97%)	2 (3%)	32 57
44	v	89/89 (100%)	88 (99%)	1 (1%)	65 83
45	w	52/52 (100%)	51 (98%)	1 (2%)	50 73
46	x	43/43 (100%)	43 (100%)	0	100 100
47	y	47/47 (100%)	47 (100%)	0	100 100
48	z	35/35 (100%)	35 (100%)	0	100 100
49	1	53/53 (100%)	52 (98%)	1 (2%)	50 73
50	2	35/35 (100%)	35 (100%)	0	100 100
All	All	4663/4663 (100%)	4623 (99%)	40 (1%)	68 86

All (40) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	C	30	ASP
2	C	183	ASP
3	D	146	ASN
4	E	46	VAL
5	F	30	ILE
5	F	48	LEU
6	G	98	THR
7	H	50	ARG
7	H	81	SER

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Mol	Chain	Res	Type
7	H	116	ARG
9	J	52	ILE
9	J	64	HIS
10	K	41	VAL
16	Q	46	HIS
22	Z	78	LYS
23	a	114	VAL
24	b	154	VAL
25	c	20	ARG
25	c	129	PHE
25	c	137	PHE
25	c	157	ARG
26	d	19	ILE
28	f	43	THR
28	f	84	LEU
28	f	113	LYS
28	f	119	GLN
29	g	47	ILE
30	h	38	LYS
31	i	14	HIS
31	i	68	ILE
32	j	53	THR
32	j	79	LEU
32	j	91	ASN
38	p	9	ASP
39	q	7	ASP
43	u	20	ASP
43	u	54	ILE
44	v	93	ILE
45	w	48	ASN
49	1	54	ASP

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (73) such sidechains are listed below:

Mol	Chain	Res	Type
2	C	145	ASN
3	D	75	ASN
3	D	185	GLN
4	E	111	GLN
6	G	106	ASN
8	I	27	GLN
8	I	61	ASN

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Mol	Chain	Res	Type
8	I	66	GLN
8	I	95	GLN
10	K	27	HIS
10	K	73	GLN
10	K	110	GLN
10	K	128	ASN
11	L	5	GLN
11	L	29	GLN
11	L	72	HIS
11	L	73	ASN
11	L	105	GLN
12	M	106	ASN
13	N	11	ASN
14	O	28	GLN
14	O	72	GLN
15	P	50	GLN
16	Q	62	HIS
22	Z	87	ASN
22	Z	135	ASN
22	Z	227	ASN
23	a	34	ASN
23	a	99	GLN
23	a	135	GLN
23	a	139	HIS
23	a	178	GLN
24	b	76	GLN
24	b	83	GLN
24	b	121	ASN
24	b	182	GLN
24	b	208	ASN
25	c	44	ASN
25	c	58	ASN
25	c	134	ASN
26	d	7	GLN
26	d	75	ASN
26	d	102	GLN
28	f	103	ASN
29	g	3	GLN
29	g	91	ASN
31	i	17	GLN
31	i	55	ASN
31	i	57	HIS

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Mol	Chain	Res	Type
32	j	31	HIS
32	j	62	ASN
33	k	8	GLN
33	k	9	ASN
34	l	79	ASN
35	m	27	GLN
35	m	72	ASN
35	m	77	ASN
36	n	90	HIS
37	o	97	GLN
38	p	41	GLN
39	q	4	HIS
39	q	67	HIS
39	q	70	ASN
40	r	76	GLN
40	r	126	GLN
40	r	129	ASN
40	r	180	ASN
43	u	44	ASN
47	y	51	HIS
48	z	9	GLN
48	z	19	HIS
50	2	32	HIS
50	2	36	GLN

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A	1508/1511 (99%)	367 (24%)	18 (1%)
20	Y	3012/3038 (99%)	790 (26%)	57 (1%)
21	U	117/118 (99%)	27 (23%)	2 (1%)
51	4	76/81 (93%)	26 (34%)	1 (1%)
All	All	4713/4748 (99%)	1210 (25%)	78 (1%)

All (1210) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	A	9	U
1	A	13	G
1	A	31	G
1	A	35	G

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Mol	Chain	Res	Type
1	A	36	A
1	A	43	G
1	A	51	C
1	A	52	U
1	A	53	U
1	A	54	A
1	A	55	A
1	A	58	C
1	A	59	A
1	A	62	C
1	A	67	C
1	A	68	G
1	A	74	A
1	A	75	A
1	A	81	C
1	A	82	U
1	A	87	G
1	A	89	G
1	A	92	A
1	A	93	C
1	A	99	U
1	A	101	G
1	A	112	A
1	A	116	A
1	A	117	C
1	A	123	G
1	A	125	U
1	A	126	G
1	A	128	U
1	A	136	G
1	A	139	C
1	A	141	U
1	A	172	C
1	A	177	U
1	A	178	A
1	A	179	C
1	A	180	A
1	A	181	C
1	A	192	G
1	A	194	A
1	A	199	C
1	A	200	U

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Mol	Chain	Res	Type
1	A	201	G
1	A	209	A
1	A	210	A
1	A	211	A
1	A	215	U
1	A	217	U
1	A	223	G
1	A	225	G
1	A	226	G
1	A	227	G
1	A	228	A
1	A	231	G
1	A	239	G
1	A	240	C
1	A	243	A
1	A	245	C
1	A	247	G
1	A	251	G
1	A	254	G
1	A	266	G
1	A	267	C
1	A	272	C
1	A	278	G
1	A	280	C
1	A	281	G
1	A	289	G
1	A	306	A
1	A	324	G
1	A	326	G
1	A	327	A
1	A	329	A
1	A	332	G
1	A	337	G
1	A	344	A
1	A	345	C
1	A	346	G
1	A	350	G
1	A	351	G
1	A	352	C
1	A	353	A
1	A	364	A
1	A	367	U

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Mol	Chain	Res	Type
1	A	371	A
1	A	372	C
1	A	373	A
1	A	376	G
1	A	388	G
1	A	389	A
1	A	397	A
1	A	398	C
1	A	406	G
1	A	414	A
1	A	421	U
1	A	422	C
1	A	423	G
1	A	426	U
1	A	427	U
1	A	429	U
1	A	430	A
1	A	433	C
1	A	434	C
1	A	435	U
1	A	438	U
1	A	439	U
1	A	452	A
1	A	453	G
1	A	456	C
1	A	457	A
1	A	458	A
1	A	459	G
1	A	464	G
1	A	465	G
1	A	466	U
1	A	469	G
1	A	477	G
1	A	478	A
1	A	482	A
1	A	486	G
1	A	489	A
1	A	491	C
1	A	492	U
1	A	496	U
1	A	497	G
1	A	498	C

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Mol	Chain	Res	Type
1	A	499	C
1	A	501	G
1	A	504	G
1	A	507	G7M
1	A	511	U
1	A	512	A
1	A	515	A
1	A	520	G
1	A	527	A
1	A	539	A
1	A	544	C
1	A	553	A
1	A	556	A
1	A	557	G
1	A	564	G
1	A	567	G
1	A	568	G
1	A	572	G
1	A	577	G
1	A	579	U
1	A	585	U
1	A	601	A
1	A	602	A
1	A	606	U
1	A	612	U
1	A	615	G
1	A	616	G
1	A	619	G
1	A	625	G
1	A	628	A
1	A	629	G
1	A	633	A
1	A	637	U
1	A	645	G
1	A	666	U
1	A	668	G
1	A	675	A
1	A	678	G
1	A	682	A
1	A	683	G
1	A	698	A
1	A	701	G

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Mol	Chain	Res	Type
1	A	702	G
1	A	703	U
1	A	704	G
1	A	711	G
1	A	713	G
1	A	715	G
1	A	728	A
1	A	729	A
1	A	735	G
1	A	757	A
1	A	764	A
1	A	765	G
1	A	772	A
1	A	773	U
1	A	774	A
1	A	779	G
1	A	790	C
1	A	795	A
1	A	796	A
1	A	797	C
1	A	801	G
1	A	808	A
1	A	818	U
1	A	822	U
1	A	823	U
1	A	824	C
1	A	826	U
1	A	827	U
1	A	828	G
1	A	841	U
1	A	854	A
1	A	856	G
1	A	871	A
1	A	872	G
1	A	881	C
1	A	882	A
1	A	884	G
1	A	896	A
1	A	908	G
1	A	909	G
1	A	913	C
1	A	915	G

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Mol	Chain	Res	Type
1	A	916	C
1	A	917	A
1	A	921	G
1	A	931	A
1	A	932	U
1	A	938	U
1	A	942	U
1	A	943	U
1	A	947	U
1	A	948	G
1	A	950	A
1	A	951	A
1	A	953	G
1	A	956	A
1	A	957	A
1	A	959	A
1	A	963	U
1	A	967	C
1	A	970	G
1	A	971	G
1	A	973	U
1	A	974	U
1	A	975	G
1	A	976	A
1	A	978	A
1	A	981	C
1	A	982	A
1	A	986	G
1	A	988	C
1	A	1000	U
1	A	1003	C
1	A	1010	C
1	A	1012	U
1	A	1013	G
1	A	1014	U
1	A	1024	G
1	A	1025	C
1	A	1033	G
1	A	1034	C
1	A	1036	U
1	A	1041	G
1	A	1045	U

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Mol	Chain	Res	Type
1	A	1058	U
1	A	1059	G
1	A	1061	G
1	A	1074	G
1	A	1075	U
1	A	1079	G
1	A	1081	A
1	A	1104	G
1	A	1105	U
1	A	1110	A
1	A	1115	G
1	A	1116	U
1	A	1117	U
1	A	1118	A
1	A	1119	U
1	A	1120	G
1	A	1121	G
1	A	1129	U
1	A	1138	A
1	A	1140	U
1	A	1141	G
1	A	1146	G
1	A	1147	G
1	A	1148	U
1	A	1149	C
1	A	1150	A
1	A	1151	A
1	A	1162	G
1	A	1165	G
1	A	1171	G
1	A	1172	A
1	A	1177	A
1	A	1178	A
1	A	1181	C
1	A	1182	A
1	A	1193	U
1	A	1194	A
1	A	1203	G
1	A	1205	U
1	A	1206	U
1	A	1207	C
1	A	1217	A

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Mol	Chain	Res	Type
1	A	1222	G
1	A	1231	A
1	A	1238	U
1	A	1239	G
1	A	1248	U
1	A	1251	G
1	A	1259	G
1	A	1261	A
1	A	1263	C
1	A	1265	U
1	A	1266	U
1	A	1267	U
1	A	1268	C
1	A	1269	A
1	A	1279	U
1	A	1282	G
1	A	1283	U
1	A	1284	U
1	A	1285	C
1	A	1287	G
1	A	1302	C
1	A	1304	C
1	A	1305	G
1	A	1313	G
1	A	1317	U
1	A	1320	G
1	A	1321	A
1	A	1328	A
1	A	1329	G
1	A	1342	A
1	A	1343	G
1	A	1344	C
1	A	1346	A
1	A	1347	C
1	A	1353	G
1	A	1356	G
1	A	1357	A
1	A	1364	U
1	A	1377	A
1	A	1380	C
1	A	1381	A
1	A	1382	C

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Mol	Chain	Res	Type
1	A	1396	A
1	A	1402	G
1	A	1407	U
1	A	1429	A
1	A	1433	C
1	A	1434	U
1	A	1435	U
1	A	1436	G
1	A	1438	G
1	A	1440	A
1	A	1447	C
1	A	1457	G
1	A	1458	G
1	A	1463	G
1	A	1478	G
1	A	1481	G
1	A	1483	A
1	A	1486	A
1	A	1487	A
1	A	1488	G
1	A	1490	U
1	A	1501	G
1	A	1502	A
1	A	1504	G
1	A	1513	G
1	A	1514	G
1	A	1516	U
20	Y	4	G
20	Y	7	U
20	Y	8	U
20	Y	9	U
20	Y	12	G
20	Y	16	G
20	Y	17	C
20	Y	20	G
20	Y	23	G
20	Y	29	C
20	Y	31	U
20	Y	32	G
20	Y	33	G
20	Y	43	C
20	Y	48	G

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Mol	Chain	Res	Type
20	Y	57	A
20	Y	58	G
20	Y	60	A
20	Y	61	G
20	Y	68	A
20	Y	70	A
20	Y	71	A
20	Y	72	G
20	Y	77	G
20	Y	81	A
20	Y	89	A
20	Y	90	C
20	Y	92	G
20	Y	93	A
20	Y	94	G
20	Y	97	U
20	Y	98	U
20	Y	99	G
20	Y	100	A
20	Y	111	U
20	Y	115	A
20	Y	116	A
20	Y	117	U
20	Y	122	A
20	Y	125	C
20	Y	126	C
20	Y	131	A
20	Y	138	A
20	Y	143	G
20	Y	145	G
20	Y	148	A
20	Y	159	A
20	Y	161	U
20	Y	162	A
20	Y	169	C
20	Y	172	C
20	Y	175	G
20	Y	180	A
20	Y	195	A
20	Y	212	A
20	Y	213	G
20	Y	215	A

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Mol	Chain	Res	Type
20	Y	220	A
20	Y	221	A
20	Y	222	A
20	Y	224	C
20	Y	227	A
20	Y	228	A
20	Y	229	U
20	Y	230	G
20	Y	231	U
20	Y	241	A
20	Y	248	G
20	Y	264	G
20	Y	265	A
20	Y	266	U
20	Y	268	G
20	Y	272	A
20	Y	273	A
20	Y	274	C
20	Y	279	U
20	Y	282	A
20	Y	283	U
20	Y	285	U
20	Y	286	G
20	Y	288	U
20	Y	293	G
20	Y	296	A
20	Y	299	G
20	Y	301	U
20	Y	302	U
20	Y	303	G
20	Y	306	U
20	Y	312	G
20	Y	313	G
20	Y	314	G
20	Y	316	U
20	Y	317	G
20	Y	318	U
20	Y	319	G
20	Y	320	G
20	Y	324	C
20	Y	325	U
20	Y	330	U

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Mol	Chain	Res	Type
20	Y	331	U
20	Y	336	C
20	Y	337	U
20	Y	338	C
20	Y	340	A
20	Y	345	G
20	Y	351	G
20	Y	352	G
20	Y	353	G
20	Y	355	A
20	Y	357	U
20	Y	358	G
20	Y	361	A
20	Y	364	A
20	Y	366	G
20	Y	369	G
20	Y	370	U
20	Y	371	G
20	Y	375	A
20	Y	376	G
20	Y	383	U
20	Y	384	G
20	Y	389	G
20	Y	393	U
20	Y	398	U
20	Y	399	G
20	Y	400	C
20	Y	401	C
20	Y	405	G
20	Y	406	A
20	Y	411	G
20	Y	412	A
20	Y	415	G
20	Y	416	C
20	Y	417	C
20	Y	418	C
20	Y	424	G
20	Y	425	U
20	Y	433	C
20	Y	434	G
20	Y	435	A
20	Y	444	U

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Mol	Chain	Res	Type
20	Y	445	U
20	Y	446	G
20	Y	447	A
20	Y	450	G
20	Y	451	U
20	Y	452	G
20	Y	454	U
20	Y	458	G
20	Y	460	G
20	Y	468	G
20	Y	474	G
20	Y	477	G
20	Y	479	A
20	Y	486	G
20	Y	489	A
20	Y	490	A
20	Y	491	U
20	Y	494	G
20	Y	498	G
20	Y	499	G
20	Y	500	A
20	Y	501	C
20	Y	503	A
20	Y	505	C
20	Y	507	G
20	Y	508	G
20	Y	512	G
20	Y	514	C
20	Y	516	G
20	Y	517	A
20	Y	542	A
20	Y	543	U
20	Y	544	U
20	Y	546	G
20	Y	552	U
20	Y	553	G
20	Y	565	A
20	Y	566	A
20	Y	568	A
20	Y	569	G
20	Y	570	U
20	Y	589	A

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Mol	Chain	Res	Type
20	Y	591	G
20	Y	592	A
20	Y	595	A
20	Y	596	C
20	Y	597	C
20	Y	600	A
20	Y	601	A
20	Y	614	C
20	Y	617	U
20	Y	618	C
20	Y	619	C
20	Y	620	G
20	Y	632	G
20	Y	636	U
20	Y	637	G
20	Y	638	U
20	Y	639	C
20	Y	640	G
20	Y	641	U
20	Y	642	G
20	Y	644	G
20	Y	645	G
20	Y	646	U
20	Y	647	G
20	Y	654	U
20	Y	655	G
20	Y	658	U
20	Y	659	U
20	Y	660	U
20	Y	661	U
20	Y	663	A
20	Y	665	G
20	Y	667	A
20	Y	669	G
20	Y	675	G
20	Y	678	A
20	Y	679	G
20	Y	684	G
20	Y	685	G
20	Y	696	A
20	Y	699	U
20	Y	700	U

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Mol	Chain	Res	Type
20	Y	707	G
20	Y	708	G
20	Y	709	U
20	Y	715	A
20	Y	716	G
20	Y	719	G
20	Y	721	A
20	Y	731	A
20	Y	738	A
20	Y	740	A
20	Y	742	G
20	Y	747	A
20	Y	753	A
20	Y	756	A
20	Y	757	G
20	Y	758	A
20	Y	759	G
20	Y	760	U
20	Y	768	G
20	Y	773	G
20	Y	774	G
20	Y	781	C
20	Y	784	G
20	Y	785	A
20	Y	792	G
20	Y	801	U
20	Y	829	U
20	Y	830	A
20	Y	836	G
20	Y	838	G
20	Y	839	U
20	Y	841	G
20	Y	845	C
20	Y	851	C
20	Y	855	C
20	Y	862	U
20	Y	863	G
20	Y	867	A
20	Y	868	C
20	Y	871	A
20	Y	872	G
20	Y	885	G

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Mol	Chain	Res	Type
20	Y	890	G
20	Y	896	A
20	Y	897	A
20	Y	898	A
20	Y	899	G
20	Y	901	C
20	Y	904	A
20	Y	915	U
20	Y	920	G
20	Y	921	C
20	Y	927	C
20	Y	934	A
20	Y	937	U
20	Y	942	U
20	Y	943	U
20	Y	946	G
20	Y	948	G
20	Y	960	G
20	Y	961	U
20	Y	971	G
20	Y	972	A
20	Y	973	G
20	Y	974	G
20	Y	975	U
20	Y	981	U
20	Y	982	A
20	Y	995	U
20	Y	998	G
20	Y	1003	A
20	Y	1004	C
20	Y	1005	A
20	Y	1007	G
20	Y	1010	U
20	Y	1011	A
20	Y	1012	C
20	Y	1014	G
20	Y	1015	A
20	Y	1025	A
20	Y	1027	C
20	Y	1033	A
20	Y	1046	C
20	Y	1047	A

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Mol	Chain	Res	Type
20	Y	1048	A
20	Y	1049	G
20	Y	1063	G
20	Y	1075	U
20	Y	1076	A
20	Y	1078	G
20	Y	1084	U
20	Y	1085	G
20	Y	1086	C
20	Y	1090	G
20	Y	1091	A
20	Y	1092	G
20	Y	1101	A
20	Y	1108	A
20	Y	1114	G
20	Y	1124	C
20	Y	1127	A
20	Y	1130	C
20	Y	1131	G
20	Y	1140	G
20	Y	1141	U
20	Y	1144	A
20	Y	1151	U
20	Y	1158	U
20	Y	1175	A
20	Y	1176	G
20	Y	1177	G
20	Y	1178	U
20	Y	1181	G
20	Y	1184	U
20	Y	1185	A
20	Y	1186	G
20	Y	1187	A
20	Y	1188	A
20	Y	1189	G
20	Y	1190	C
20	Y	1191	A
20	Y	1194	C
20	Y	1196	C
20	Y	1200	U
20	Y	1201	G
20	Y	1202	A

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Mol	Chain	Res	Type
20	Y	1203	A
20	Y	1204	A
20	Y	1205	G
20	Y	1206	A
20	Y	1207	G
20	Y	1209	G
20	Y	1213	A
20	Y	1219	U
20	Y	1222	C
20	Y	1230	G
20	Y	1232	G
20	Y	1234	U
20	Y	1237	U
20	Y	1238	G
20	Y	1240	G
20	Y	1247	A
20	Y	1250	U
20	Y	1251	A
20	Y	1253	C
20	Y	1260	C
20	Y	1270	G
20	Y	1271	C
20	Y	1273	G
20	Y	1274	A
20	Y	1292	U
20	Y	1293	G
20	Y	1318	C
20	Y	1320	U
20	Y	1341	U
20	Y	1344	A
20	Y	1345	G
20	Y	1350	G
20	Y	1351	G
20	Y	1353	G
20	Y	1359	G
20	Y	1364	U
20	Y	1365	G
20	Y	1367	G
20	Y	1368	A
20	Y	1370	U
20	Y	1371	G
20	Y	1378	U

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Mol	Chain	Res	Type
20	Y	1379	G
20	Y	1380	A
20	Y	1384	G
20	Y	1386	G
20	Y	1390	A
20	Y	1391	G
20	Y	1399	A
20	Y	1400	G
20	Y	1415	A
20	Y	1416	A
20	Y	1421	C
20	Y	1428	U
20	Y	1436	C
20	Y	1437	A
20	Y	1440	C
20	Y	1448	C
20	Y	1465	C
20	Y	1474	A
20	Y	1480	A
20	Y	1493	A
20	Y	1494	U
20	Y	1499	A
20	Y	1501	C
20	Y	1507	G
20	Y	1510	A
20	Y	1511	U
20	Y	1520	C
20	Y	1522	G
20	Y	1526	A
20	Y	1528	G
20	Y	1531	C
20	Y	1532	G
20	Y	1533	U
20	Y	1534	C
20	Y	1538	G
20	Y	1540	U
20	Y	1548	C
20	Y	1551	U
20	Y	1552	A
20	Y	1553	C
20	Y	1554	U
20	Y	1564	A

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Mol	Chain	Res	Type
20	Y	1565	A
20	Y	1566	A
20	Y	1574	G
20	Y	1579	C
20	Y	1587	G
20	Y	1599	U
20	Y	1602	U
20	Y	1613	G
20	Y	1620	U
20	Y	1621	C
20	Y	1625	G
20	Y	1627	U
20	Y	1629	G
20	Y	1631	A
20	Y	1634	C
20	Y	1635	A
20	Y	1636	A
20	Y	1637	G
20	Y	1638	C
20	Y	1639	G
20	Y	1640	A
20	Y	1641	U
20	Y	1645	G
20	Y	1664	G
20	Y	1672	C
20	Y	1674	G
20	Y	1675	U
20	Y	1676	G
20	Y	1679	A
20	Y	1680	A
20	Y	1681	U
20	Y	1686	G
20	Y	1688	G
20	Y	1702	A
20	Y	1703	G
20	Y	1704	U
20	Y	1705	C
20	Y	1709	U
20	Y	1710	A
20	Y	1713	U
20	Y	1714	A
20	Y	1715	A

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Mol	Chain	Res	Type
20	Y	1716	A
20	Y	1717	U
20	Y	1718	C
20	Y	1720	G
20	Y	1724	G
20	Y	1731	A
20	Y	1737	A
20	Y	1746	G
20	Y	1753	C
20	Y	1754	G
20	Y	1755	A
20	Y	1756	G
20	Y	1767	U
20	Y	1769	G
20	Y	1778	A
20	Y	1783	G
20	Y	1786	G
20	Y	1789	A
20	Y	1798	U
20	Y	1799	A
20	Y	1802	G
20	Y	1804	G
20	Y	1807	C
20	Y	1808	A
20	Y	1815	G
20	Y	1825	C
20	Y	1826	A
20	Y	1834	A
20	Y	1849	G
20	Y	1850	A
20	Y	1864	U
20	Y	1865	A
20	Y	1866	C
20	Y	1867	G
20	Y	1871	G
20	Y	1872	A
20	Y	1890	C
20	Y	1892	G
20	Y	1893	C
20	Y	1895	A
20	Y	1906	U
20	Y	1911	U

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Mol	Chain	Res	Type
20	Y	1912	C
20	Y	1916	A
20	Y	1917	G
20	Y	1932	U
20	Y	1946	U
20	Y	1947	U
20	Y	1948	A
20	Y	1950	G
20	Y	1961	G
20	Y	1965	G
20	Y	1973	C
20	Y	1975	A
20	Y	1981	U
20	Y	1986	A
20	Y	1990	A
20	Y	1997	A
20	Y	1998	C
20	Y	1999	U
20	Y	2000	A
20	Y	2007	C
20	Y	2009	G
20	Y	2016	G
20	Y	2017	C
20	Y	2025	C
20	Y	2026	A
20	Y	2033	U
20	Y	2046	A
20	Y	2052	G
20	Y	2062	G
20	Y	2073	A
20	Y	2074	G
20	Y	2075	G
20	Y	2083	A
20	Y	2085	C
20	Y	2086	U
20	Y	2087	C
20	Y	2089	C
20	Y	2090	U
20	Y	2091	U
20	Y	2092	U
20	Y	2093	G
20	Y	2094	G

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Mol	Chain	Res	Type
20	Y	2095	G
20	Y	2096	G
20	Y	2101	A
20	Y	2104	G
20	Y	2106	A
20	Y	2107	G
20	Y	2108	A
20	Y	2110	U
20	Y	2112	U
20	Y	2113	A
20	Y	2123	A
20	Y	2130	G
20	Y	2136	A
20	Y	2138	C
20	Y	2140	A
20	Y	2142	A
20	Y	2144	C
20	Y	2145	C
20	Y	2147	U
20	Y	2154	G
20	Y	2160	A
20	Y	2162	A
20	Y	2163	U
20	Y	2164	U
20	Y	2166	C
20	Y	2167	U
20	Y	2176	A
20	Y	2179	U
20	Y	2191	C
20	Y	2194	A
20	Y	2196	G
20	Y	2199	G
20	Y	2215	U
20	Y	2217	U
20	Y	2221	A
20	Y	2245	C
20	Y	2247	A
20	Y	2254	A
20	Y	2255	A
20	Y	2256	G
20	Y	2257	A
20	Y	2267	C

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Mol	Chain	Res	Type
20	Y	2274	C
20	Y	2279	C
20	Y	2280	G
20	Y	2283	A
20	Y	2284	A
20	Y	2285	G
20	Y	2286	A
20	Y	2291	G
20	Y	2292	G
20	Y	2315	U
20	Y	2316	G
20	Y	2319	G
20	Y	2320	C
20	Y	2322	C
20	Y	2408	G
20	Y	2409	U
20	Y	2410	A
20	Y	2411	U
20	Y	2421	A
20	Y	2427	G
20	Y	2434	A
20	Y	2435	U
20	Y	2436	A
20	Y	2446	G
20	Y	2447	G
20	Y	2449	A
20	Y	2454	G
20	Y	2458	G
20	Y	2462	G
20	Y	2463	G
20	Y	2467	U
20	Y	2473	U
20	Y	2475	G
20	Y	2490	A
20	Y	2491	A
20	Y	2502	A
20	Y	2507	C
20	Y	2510	A
20	Y	2511	A
20	Y	2520	U
20	Y	2521	C
20	Y	2523	A

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Mol	Chain	Res	Type
20	Y	2524	C
20	Y	2526	U
20	Y	2527	G
20	Y	2528	G
20	Y	2529	A
20	Y	2531	G
20	Y	2532	G
20	Y	2533	C
20	Y	2536	U
20	Y	2538	A
20	Y	2539	G
20	Y	2540	G
20	Y	2541	U
20	Y	2542	G
20	Y	2543	U
20	Y	2544	U
20	Y	2548	U
20	Y	2549	G
20	Y	2557	A
20	Y	2558	C
20	Y	2559	A
20	Y	2561	G
20	Y	2565	G
20	Y	2568	U
20	Y	2569	G
20	Y	2571	C
20	Y	2578	A
20	Y	2581	G
20	Y	2603	G
20	Y	2607	G
20	Y	2609	A
20	Y	2626	U
20	Y	2627	C
20	Y	2630	A
20	Y	2631	G
20	Y	2634	G
20	Y	2635	A
20	Y	2638	G
20	Y	2639	G
20	Y	2646	C
20	Y	2647	U
20	Y	2649	A

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Mol	Chain	Res	Type
20	Y	2652	G
20	Y	2653	G
20	Y	2654	A
20	Y	2658	A
20	Y	2665	C
20	Y	2671	G
20	Y	2672	A
20	Y	2693	A
20	Y	2694	G
20	Y	2698	C
20	Y	2699	C
20	Y	2700	A
20	Y	2701	U
20	Y	2702	A
20	Y	2705	G
20	Y	2715	U
20	Y	2716	U
20	Y	2721	A
20	Y	2722	C
20	Y	2726	G
20	Y	2727	A
20	Y	2729	G
20	Y	2730	U
20	Y	2742	A
20	Y	2744	C
20	Y	2753	G
20	Y	2754	G
20	Y	2755	A
20	Y	2771	U
20	Y	2778	U
20	Y	2790	A
20	Y	2791	G
20	Y	2796	A
20	Y	2797	C
20	Y	2800	G
20	Y	2802	G
20	Y	2822	A
20	Y	2823	G
20	Y	2826	A
20	Y	2833	U
20	Y	2837	U
20	Y	2845	G

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Mol	Chain	Res	Type
20	Y	2851	G
20	Y	2853	C
20	Y	2854	A
20	Y	2860	U
20	Y	2862	G
20	Y	2870	C
20	Y	2871	U
20	Y	2878	A
20	Y	2879	G
20	Y	2912	A
20	Y	2913	U
20	Y	2914	A
20	Y	2915	C
20	Y	2926	A
20	Y	2928	C
20	Y	2936	C
20	Y	2937	G
20	Y	2938	G
20	Y	2943	A
20	Y	2944	U
20	Y	2950	C
20	Y	2957	A
20	Y	2968	G
20	Y	2972	A
20	Y	2981	A
20	Y	2982	A
20	Y	2985	G
20	Y	2989	A
20	Y	2990	A
20	Y	3002	A
20	Y	3004	C
20	Y	3009	U
20	Y	3014	A
20	Y	3016	C
20	Y	3021	A
20	Y	3022	G
20	Y	3023	G
20	Y	3029	U
20	Y	3037	C
20	Y	3039	C
20	Y	3042	A
20	Y	3046	C

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Mol	Chain	Res	Type
20	Y	3054	U
20	Y	3057	U
20	Y	3080	A
20	Y	3081	A
20	Y	3082	U
20	Y	3087	G
20	Y	3088	C
20	Y	3092	G
20	Y	3093	A
20	Y	3094	A
20	Y	3098	G
20	Y	3100	A
20	Y	3101	C
20	Y	3105	C
20	Y	3106	C
20	Y	3107	G
20	Y	3110	C
20	Y	3112	A
20	Y	3115	A
21	U	4	A
21	U	5	C
21	U	7	G
21	U	9	G
21	U	11	U
21	U	13	C
21	U	14	A
21	U	25	G
21	U	36	U
21	U	43	C
21	U	46	A
21	U	47	A
21	U	52	G
21	U	54	A
21	U	57	U
21	U	58	A
21	U	59	A
21	U	67	A
21	U	68	G
21	U	86	A
21	U	87	U
21	U	89	C
21	U	90	G

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Mol	Chain	Res	Type
21	U	91	G
21	U	103	G
21	U	107	A
21	U	114	A
51	4	2328	G
51	4	2330	U
51	4	2331	U
51	4	2334	U
51	4	2335	G
51	4	2337	A
51	4	2338	G
51	4	2341	U
51	4	2342	A
51	4	2349	A
51	4	2354	G
51	4	2356	G
51	4	2368	C
51	4	2371	G
51	4	2382	G
51	4	2383	U
51	4	2384	C
51	4	2385	G
51	4	2387	U
51	4	2388	G
51	4	2389	U
51	4	2395	U
51	4	2396	A
51	4	2401	U
51	4	2402	C
51	4	2404	G

All (78) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	A	92	A
1	A	124	G
1	A	209	A
1	A	350	G
1	A	422	C
1	A	429	U
1	A	485	G
1	A	498	C

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Mol	Chain	Res	Type
1	A	895	A
1	A	962	C
1	A	1011	U
1	A	1058	U
1	A	1109	C
1	A	1117	U
1	A	1149	C
1	A	1342	A
1	A	1477	A
1	A	1482	U
20	Y	97	U
20	Y	324	C
20	Y	335	G
20	Y	336	C
20	Y	357	U
20	Y	416	C
20	Y	445	U
20	Y	493	U
20	Y	552	U
20	Y	567	A
20	Y	591	G
20	Y	600	A
20	Y	617	U
20	Y	643	G
20	Y	695	G
20	Y	895	G
20	Y	972	A
20	Y	974	G
20	Y	981	U
20	Y	1004	C
20	Y	1010	U
20	Y	1046	C
20	Y	1077	A
20	Y	1084	U
20	Y	1177	G
20	Y	1186	G
20	Y	1205	G
20	Y	1231	U
20	Y	1364	U
20	Y	1366	A
20	Y	1390	A
20	Y	1436	C

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Mol	Chain	Res	Type
20	Y	1473	G
20	Y	1500	A
20	Y	1532	G
20	Y	1547	G
20	Y	1573	U
20	Y	1730	U
20	Y	1803	A
20	Y	1947	U
20	Y	1999	U
20	Y	2088	C
20	Y	2089	C
20	Y	2094	G
20	Y	2095	G
20	Y	2166	C
20	Y	2408	G
20	Y	2528	G
20	Y	2542	G
20	Y	2567	U
20	Y	2630	A
20	Y	2652	G
20	Y	2693	A
20	Y	2729	G
20	Y	2821	G
20	Y	3008	C
20	Y	3097	G
21	U	10	G
21	U	42	C
51	4	2381	A

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

1 non-standard protein/DNA/RNA residue is modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. 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 $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
1	G7M	A	507	1	23,26,27	0.53	0	34,39,42	0.92	2 (5%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	G7M	A	507	1	-	3/7/25/26	0/3/3/3

There are no bond length outliers.

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	507	G7M	C8-N7-C5	-3.15	103.84	107.78
1	A	507	G7M	CN7-N7-C8	2.20	128.13	124.79

There are no chirality outliers.

All (3) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
1	A	507	G7M	O4'-C4'-C5'-O5'
1	A	507	G7M	C3'-C4'-C5'-O5'
1	A	507	G7M	C4'-C5'-O5'-P

There are no ring outliers.

No monomer is involved in short contacts.

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 629 ligands modelled in this entry, 629 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

The following chains have linkage breaks:

Mol	Chain	Number of breaks
20	Y	50
27	e	20
1	A	5
51	4	4
39	q	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	Y	2325:U	O3'	2407:C	P	19.51
1	4	2385:G	O3'	2386:U	P	13.58
1	Y	1549:G	O3'	1550:G	P	13.38
1	Y	1600:G	O3'	1601:G	P	12.25
1	Y	1008:G	O3'	1009:U	P	11.11
1	Y	1622:G	O3'	1623:U	P	10.68
1	Y	454:U	O3'	455:C	P	10.20
1	e	22:PRO	C	23:ALA	N	9.59
1	Y	299:G	O3'	300:G	P	9.56
1	e	15:ILE	C	16:GLN	N	9.39
1	Y	996:G	O3'	997:G	P	8.61
1	4	2344:G	O3'	2345:U	P	8.25
1	e	54:ASN	C	55:VAL	N	8.02
1	Y	2096:G	O3'	2097:G	P	7.93
1	e	118:LEU	C	119:ASN	N	7.77
1	Y	1001:C	O3'	1002:C	P	7.54
1	q	47:VAL	C	56:SER	N	7.27
1	A	1200:A	O3'	1201:G	P	7.21
1	4	2349:A	O3'	2350:G	P	7.06

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	e	25:PRO	C	26:VAL	N	6.89
1	e	125:ALA	C	126:ALA	N	6.57
1	Y	2411:U	O3'	2412:U	P	6.50
1	Y	995:U	O3'	996:G	P	6.32
1	e	124:ASP	C	125:ALA	N	6.10
1	e	42:LYS	C	43:ALA	N	6.07
1	4	2393:A	O3'	2394:A	P	5.94
1	Y	367:U	O3'	368:U	P	5.38
1	A	1199:C	O3'	1200:A	P	5.35
1	e	24:PRO	C	25:PRO	N	5.26
1	e	88:GLN	C	89:LYS	N	4.95
1	Y	1631:A	O3'	1632:G	P	4.91
1	Y	1545:C	O3'	1546:A	P	4.90
1	Y	1534:C	O3'	1535:C	P	4.76
1	Y	1196:C	O3'	1197:C	P	4.60
1	Y	999:C	O3'	1000:C	P	4.56
1	e	61:THR	C	62:VAL	N	4.54
1	Y	2087:C	O3'	2088:C	P	4.49
1	e	39:GLU	C	40:PHE	N	4.46
1	e	41:CYS	C	42:LYS	N	4.32
1	e	68:PHE	C	69:THR	N	4.26
1	Y	1000:C	O3'	1001:C	P	4.22
1	Y	1599:U	O3'	1600:G	P	4.09
1	Y	1005:A	O3'	1006:G	P	4.08
1	Y	2323:G	O3'	2324:A	P	3.94
1	e	55:VAL	C	56:ILE	N	3.71
1	e	67:SER	C	68:PHE	N	3.69
1	Y	1529:U	O3'	1530:G	P	3.66
1	Y	1542:A	O3'	1543:A	P	3.62
1	Y	1210:C	O3'	1211:G	P	3.57
1	Y	1543:A	O3'	1544:U	P	3.40
1	Y	1170:C	O3'	1171:C	P	3.39
1	Y	2142:A	O3'	2143:A	P	3.32
1	A	1000:U	O3'	1001:G	P	3.31
1	e	86:GLY	C	87:VAL	N	3.31
1	Y	437:G	O3'	438:U	P	3.26
1	A	1130:C	O3'	1131:G	P	3.20
1	e	63:TYR	C	64:GLU	N	3.18
1	Y	1800:G	O3'	1801:C	P	3.16
1	e	13:LEU	C	14:GLN	N	3.09
1	Y	2140:A	O3'	2141:U	P	3.08
1	Y	1019:C	O3'	1020:A	P	3.06

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	e	121:ASN	C	122:ASP	N	3.05
1	A	999:A	O3'	1000:U	P	3.03
1	Y	400:C	O3'	401:C	P	3.03
1	Y	1200:U	O3'	1201:G	P	3.03
1	Y	279:U	O3'	280:G	P	2.98
1	Y	2100:A	O3'	2101:A	P	2.96
1	Y	2415:G	O3'	2416:C	P	2.95
1	Y	988:U	O3'	989:G	P	2.94
1	Y	1016:C	O3'	1017:G	P	2.92
1	Y	500:A	O3'	501:C	P	2.91
1	Y	1499:A	O3'	1500:A	P	2.89
1	Y	2135:U	O3'	2136:A	P	2.88
1	Y	2143:A	O3'	2144:C	P	2.88
1	Y	2146:A	O3'	2147:U	P	2.88
1	Y	160:A	O3'	161:U	P	2.85
1	Y	1399:A	O3'	1400:G	P	2.81
1	Y	499:G	O3'	500:A	P	2.80
1	Y	1708:A	O3'	1709:U	P	2.79
1	Y	1700:G	O3'	1701:G	P	2.77

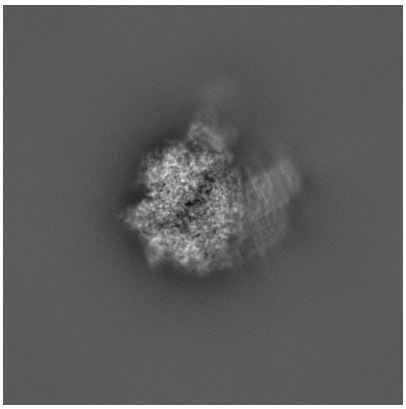
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-44092. These allow visual inspection of the internal detail of the map and identification of artifacts.

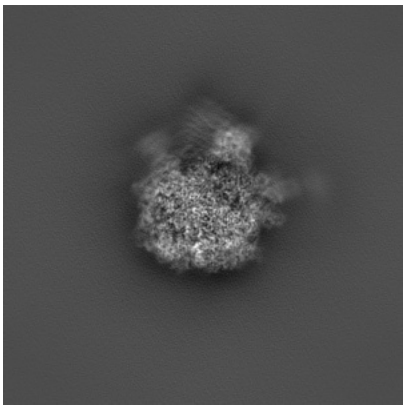
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

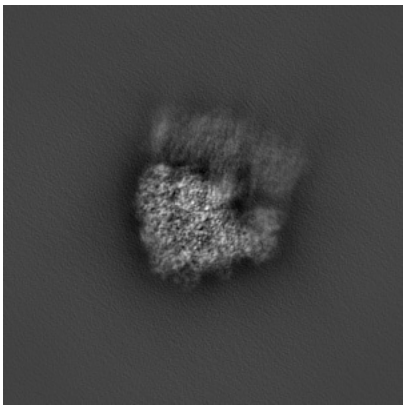
6.1.1 Primary map



X

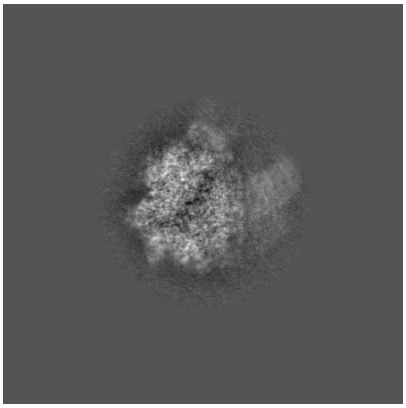


Y

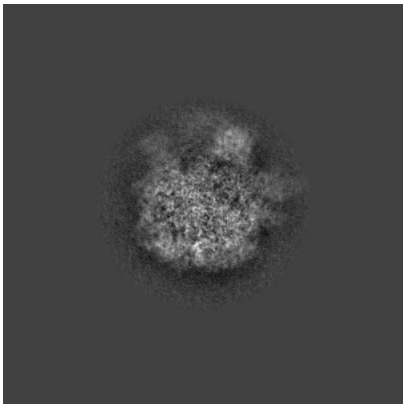


Z

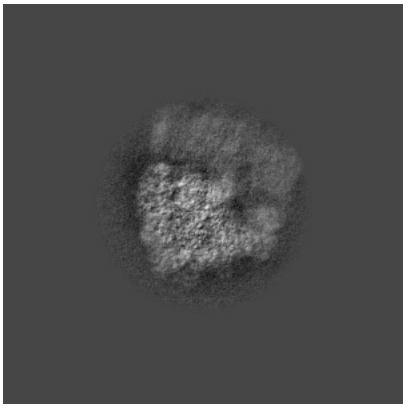
6.1.2 Raw map



X



Y

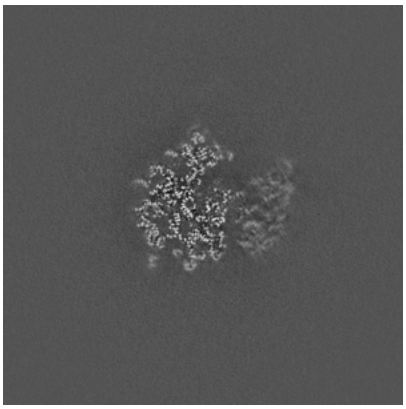


Z

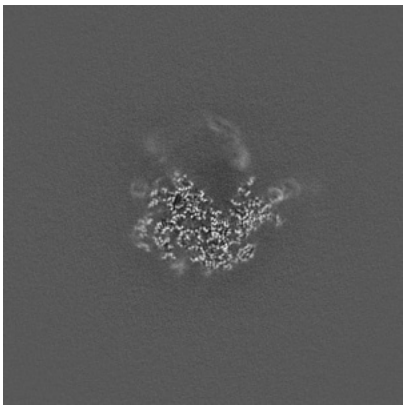
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

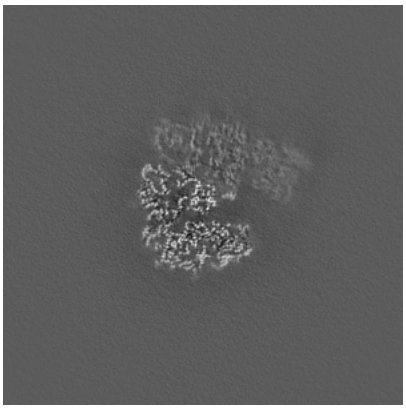
6.2.1 Primary map



X Index: 324

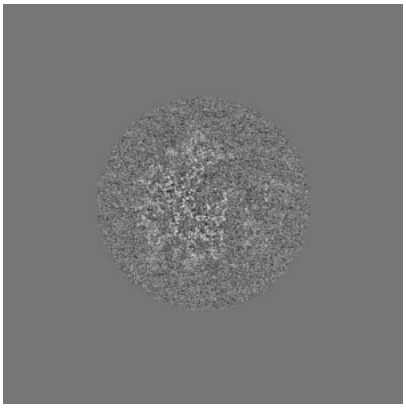


Y Index: 324

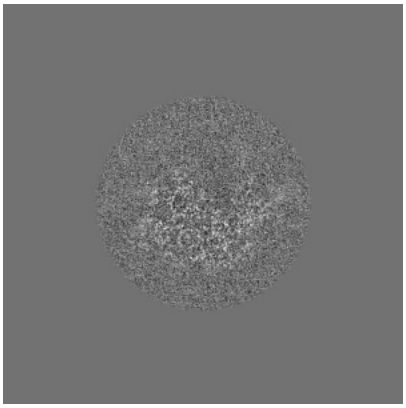


Z Index: 324

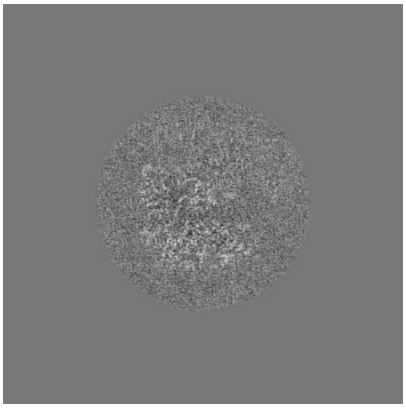
6.2.2 Raw map



X Index: 324



Y Index: 324

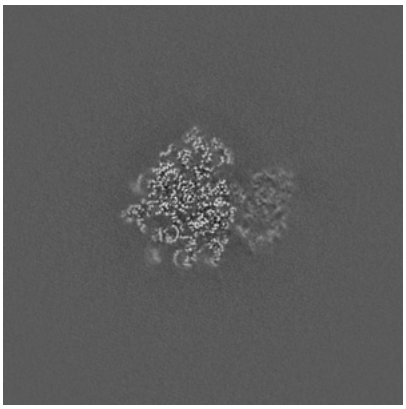


Z Index: 324

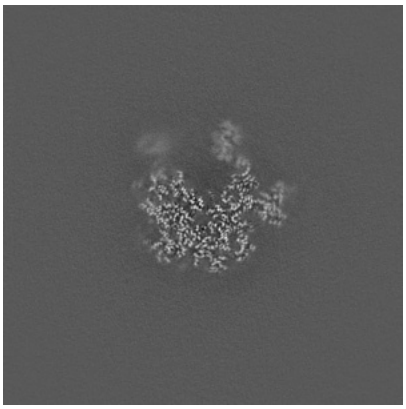
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

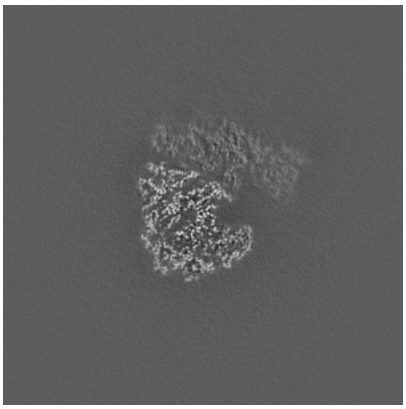
6.3.1 Primary map



X Index: 312

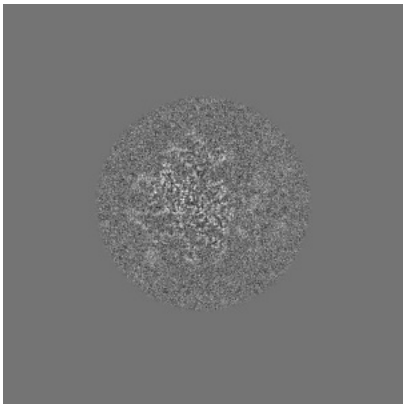


Y Index: 310

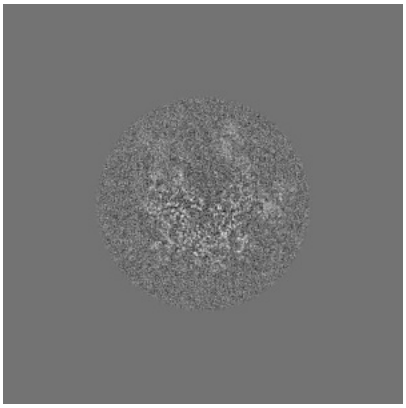


Z Index: 318

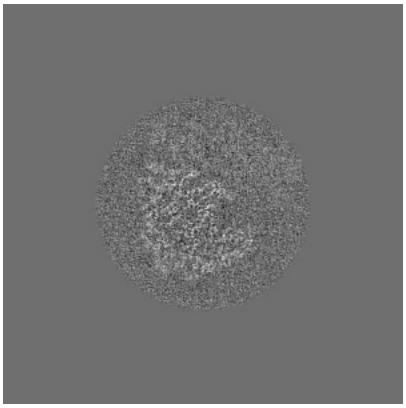
6.3.2 Raw map



X Index: 317



Y Index: 311

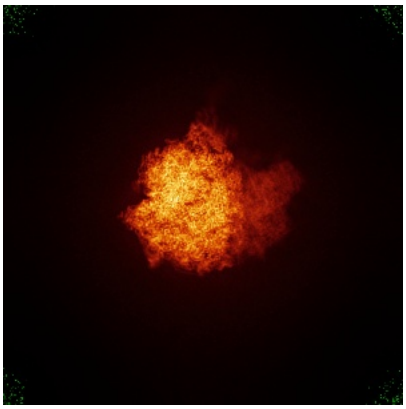


Z Index: 317

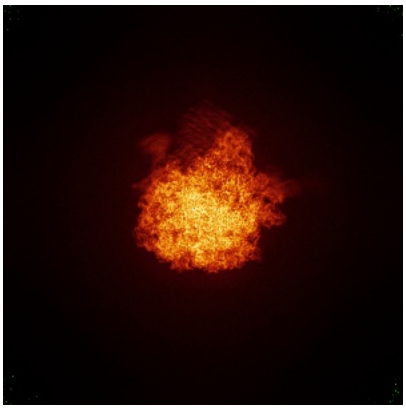
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) (i)

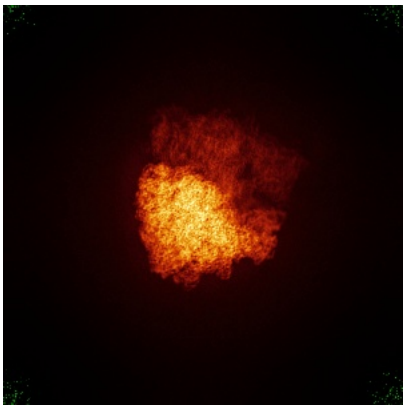
6.4.1 Primary map



X

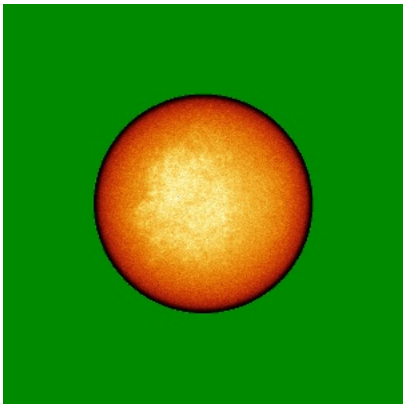


Y

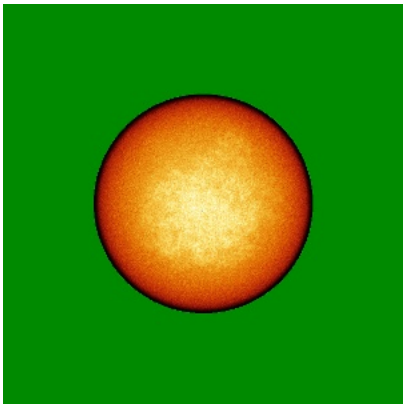


Z

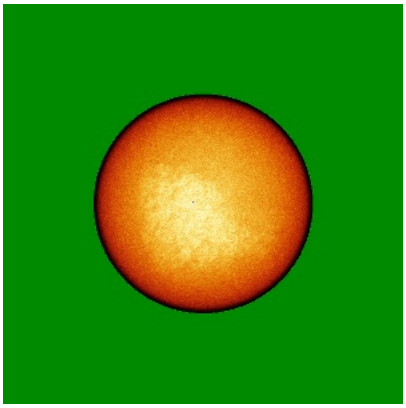
6.4.2 Raw map



X



Y

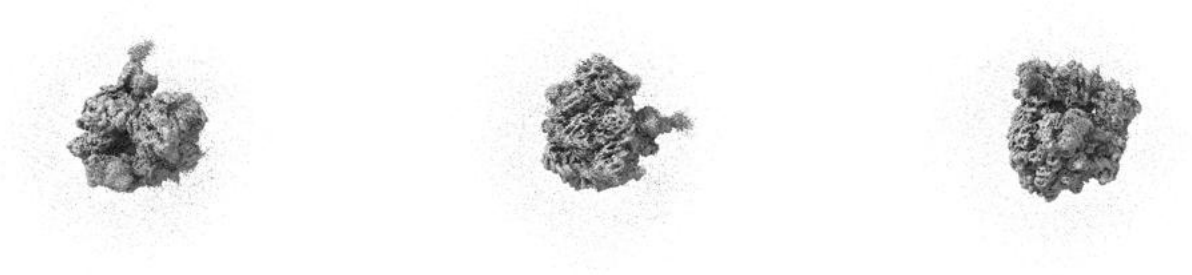


Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views (i)

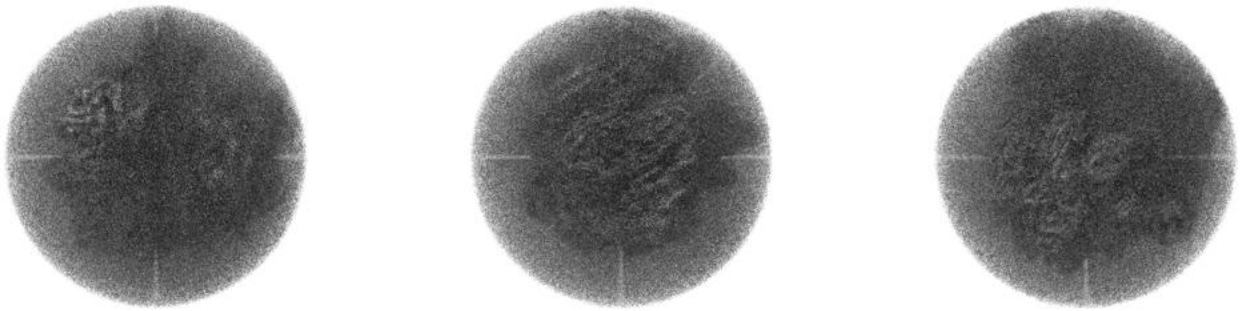
6.5.1 Primary map



X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.968. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



X Y Z

These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

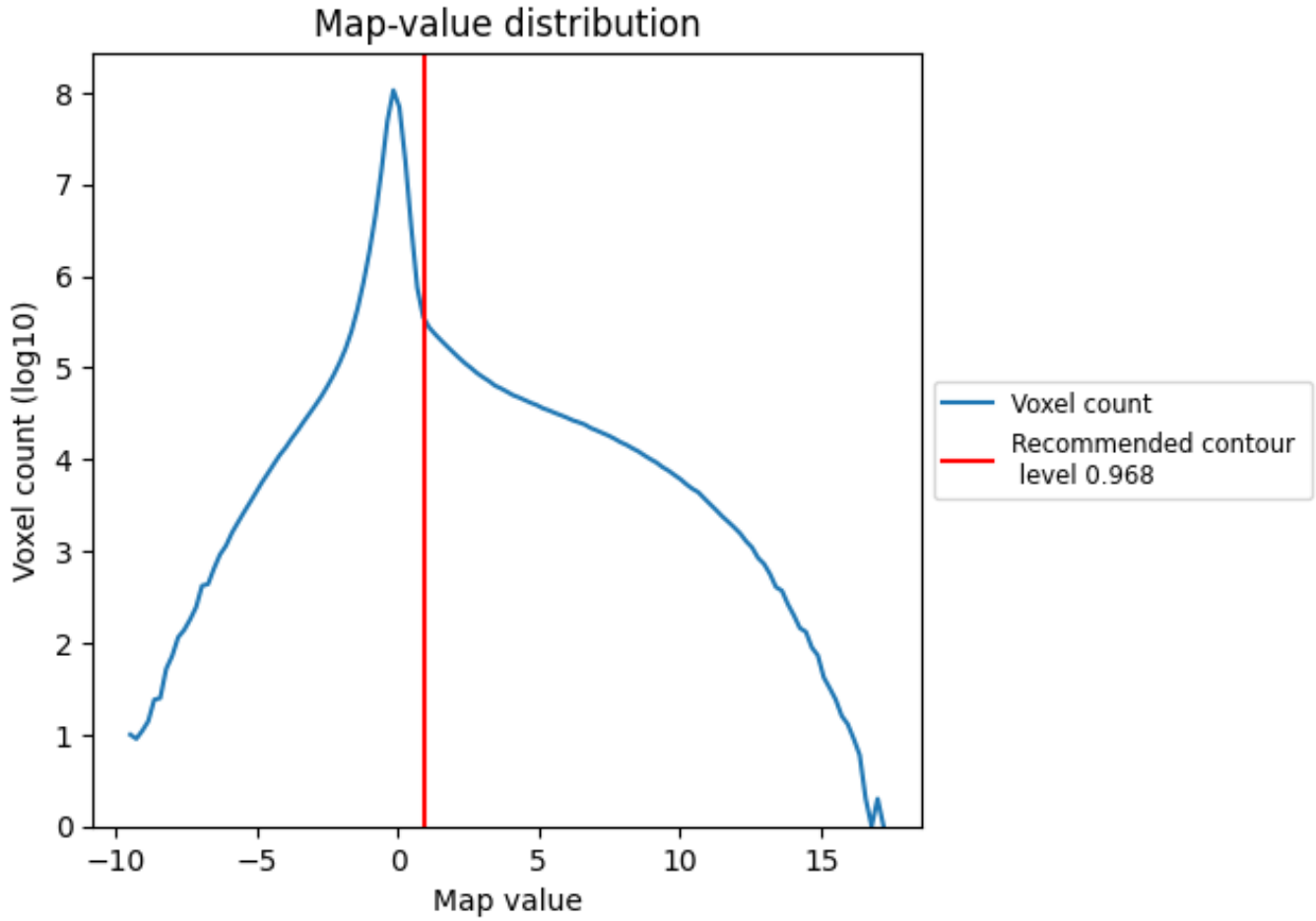
6.6 Mask visualisation (i)

This section was not generated. No masks/segmentation were deposited.

7 Map analysis

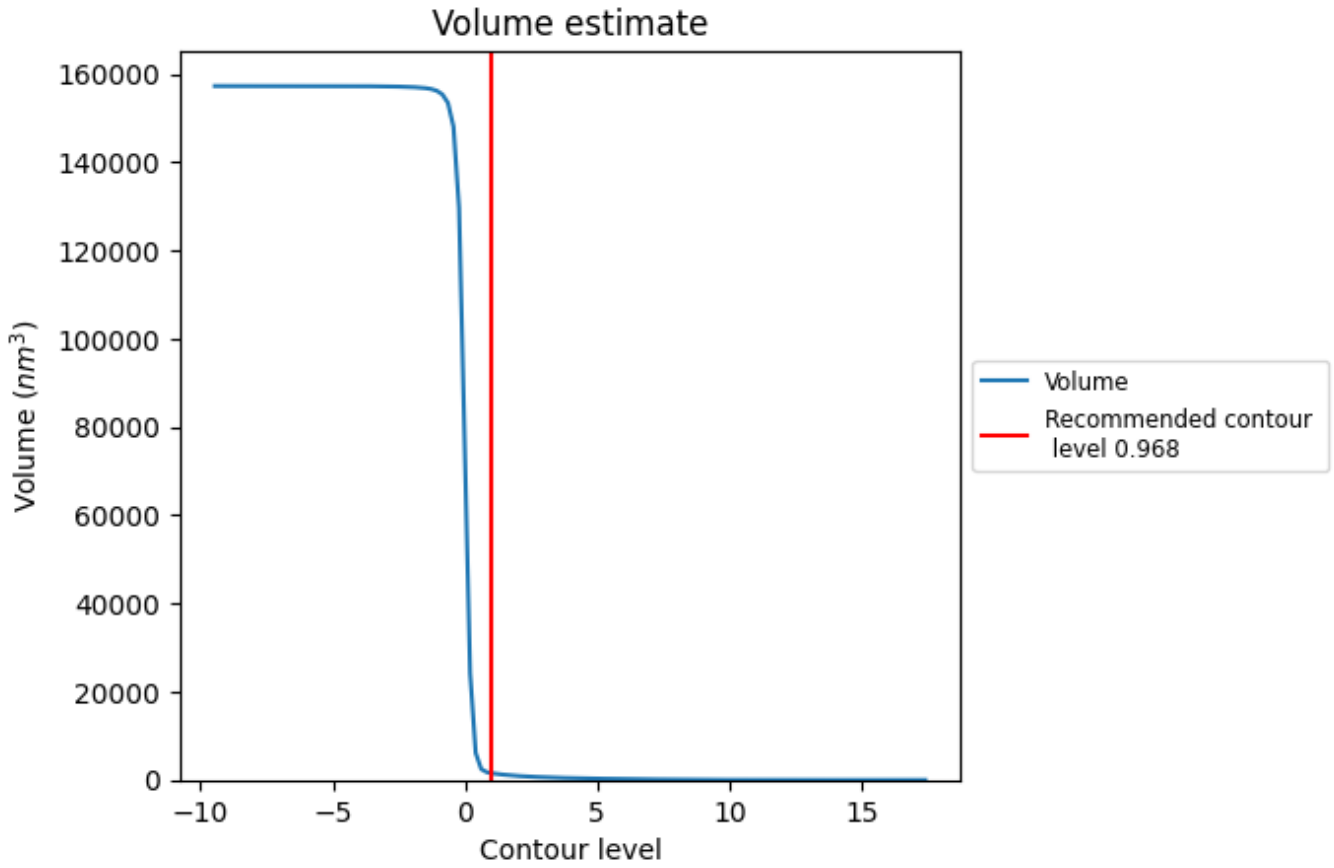
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

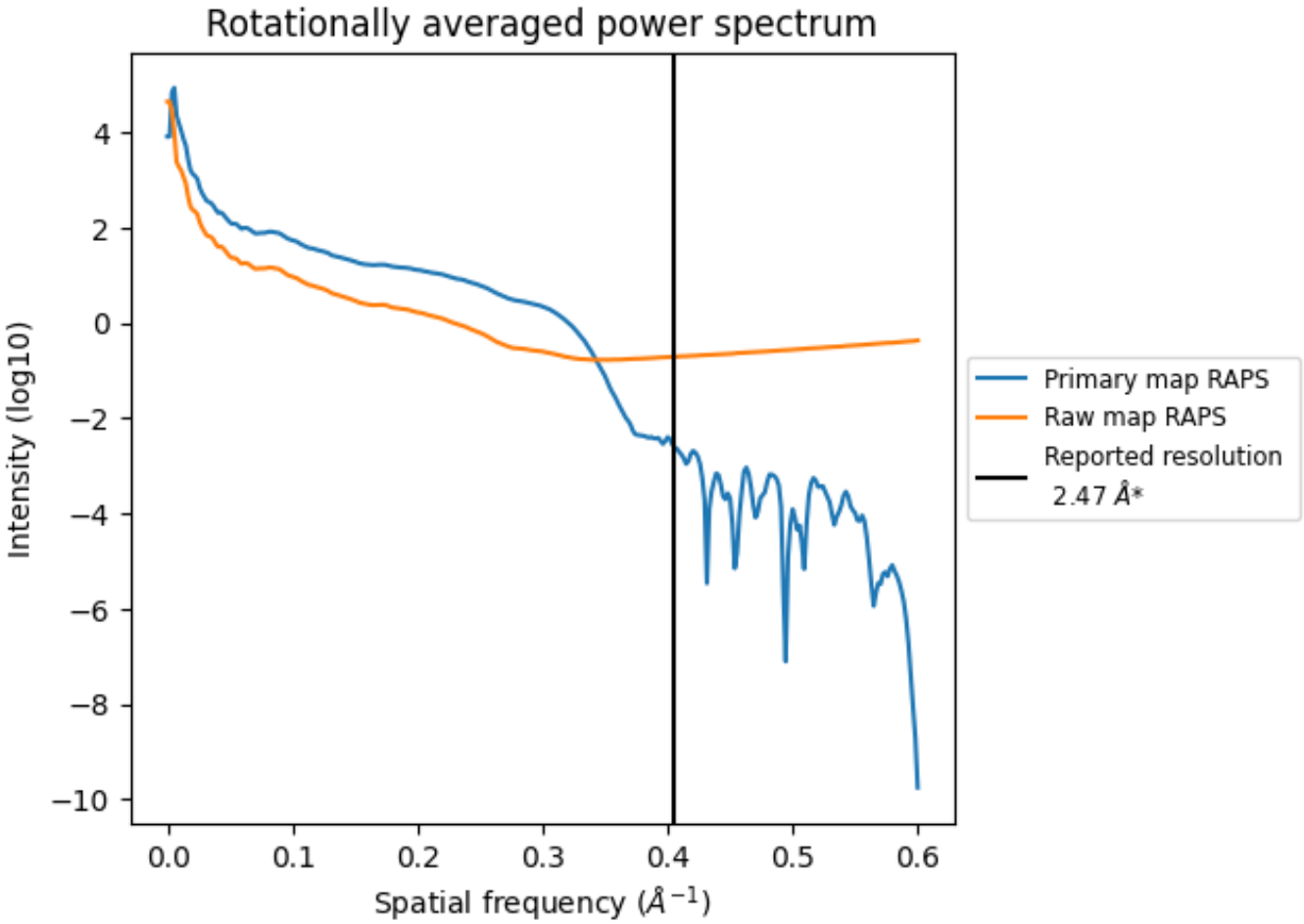
7.2 Volume estimate



The volume at the recommended contour level is 1591 nm^3; this corresponds to an approximate mass of 1437 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum (i)

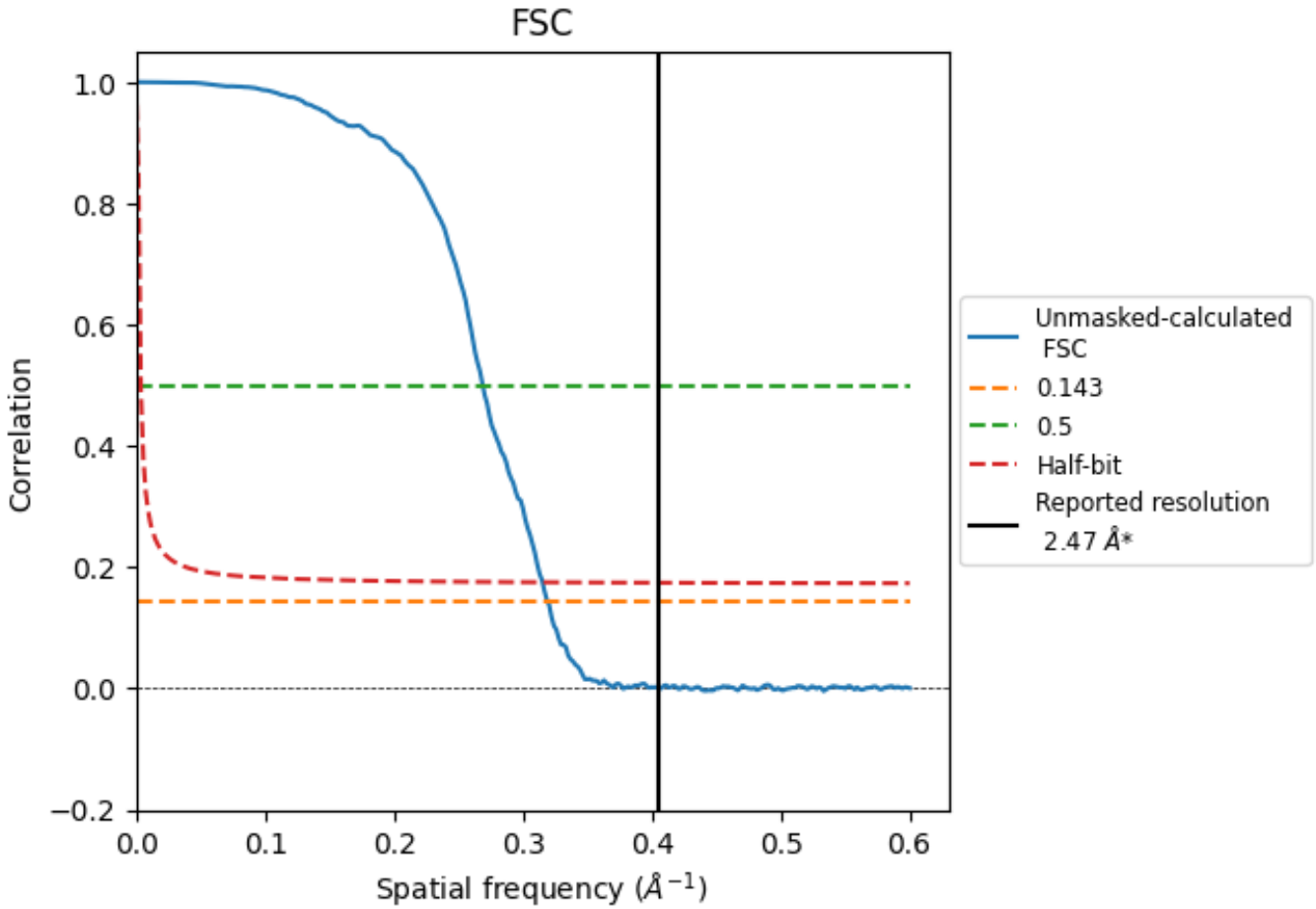


*Reported resolution corresponds to spatial frequency of 0.405 Å^{-1}

8 Fourier-Shell correlation

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC



*Reported resolution corresponds to spatial frequency of 0.405 Å^{-1}

8.2 Resolution estimates (i)

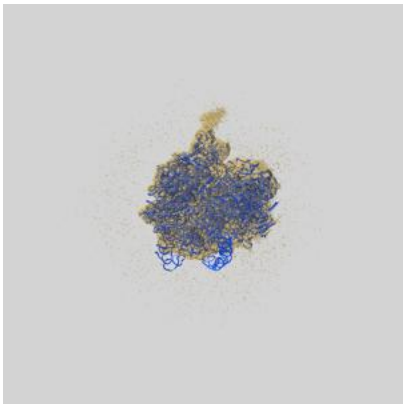
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.47	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	3.13	3.72	3.17

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 3.13 differs from the reported value 2.47 by more than 10 %

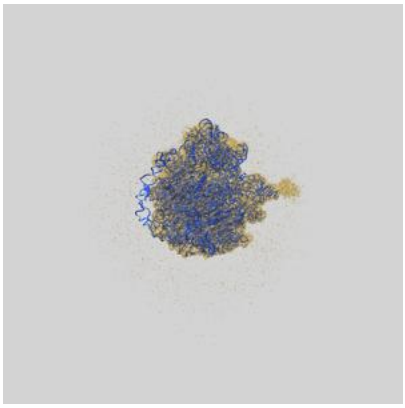
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-44092 and PDB model 9B1Y. Per-residue inclusion information can be found in section 3 on page 14.

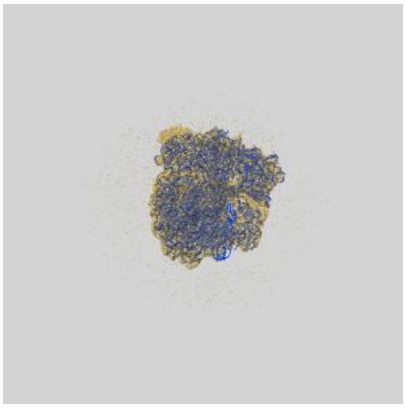
9.1 Map-model overlay



X



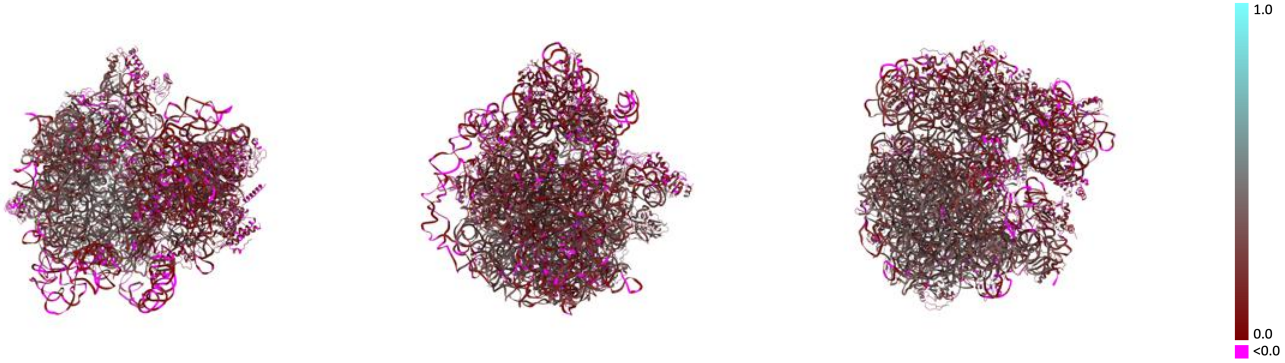
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.968 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

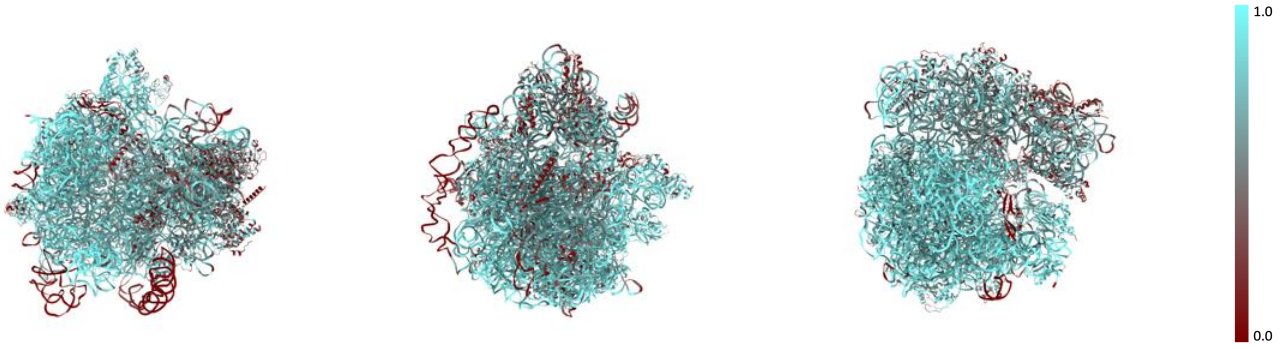
9.2 Q-score mapped to coordinate model



X Y Z

The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

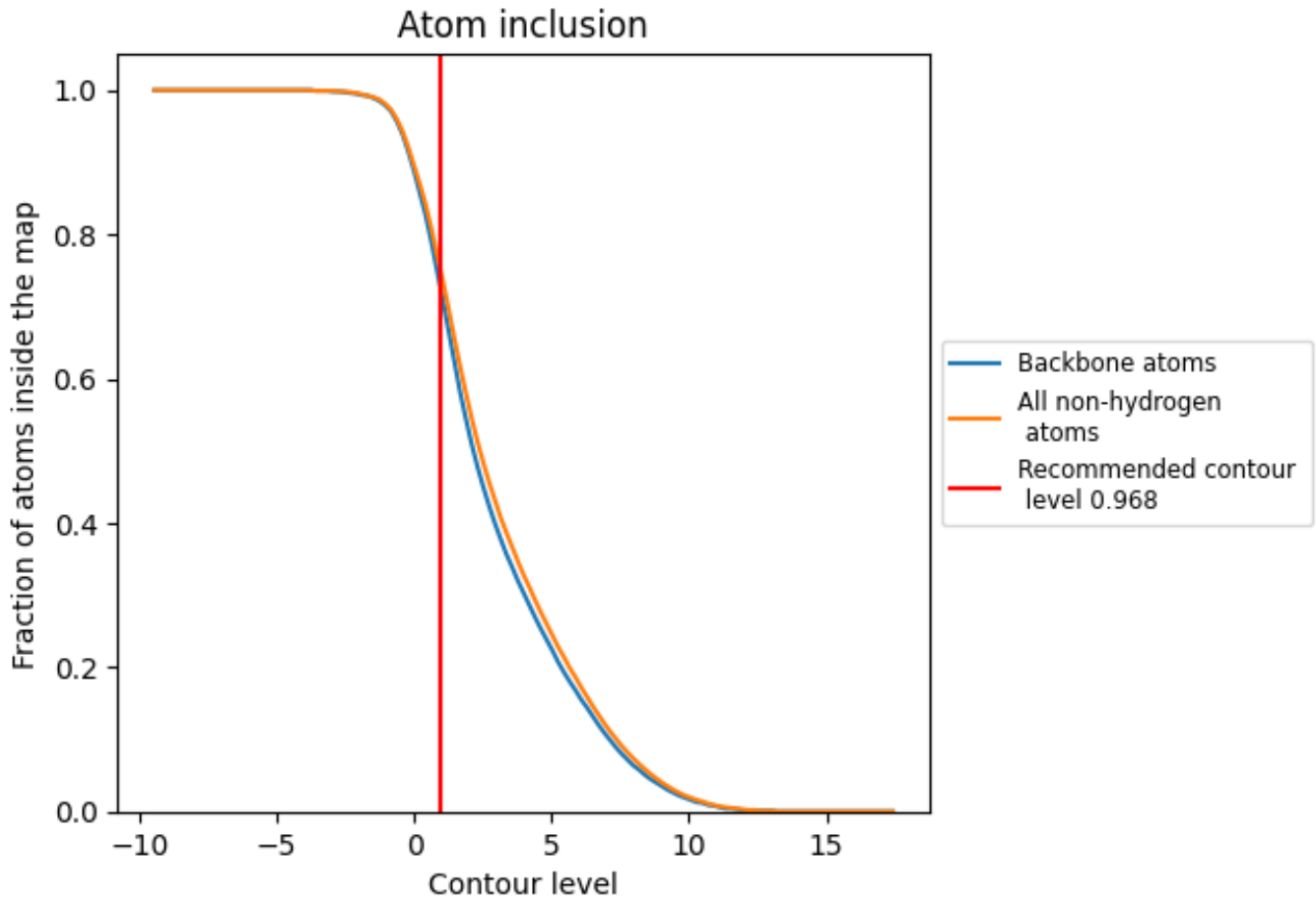
9.3 Atom inclusion mapped to coordinate model



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.968).

9.4 Atom inclusion (i)



At the recommended contour level, 72% of all backbone atoms, 75% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.968) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.7490	0.2350
1	0.8070	0.3320
2	0.8580	0.3260
4	0.8940	0.0730
A	0.6890	0.1760
C	0.4590	0.1440
D	0.4610	0.1290
E	0.5590	0.1700
F	0.6250	0.1990
G	0.3960	0.1300
H	0.5540	0.1860
I	0.5690	0.1350
J	0.3330	0.1210
K	0.6440	0.1920
L	0.5560	0.1880
M	0.4870	0.1230
N	0.5090	0.1060
O	0.6310	0.2320
P	0.4260	0.1280
Q	0.4760	0.1330
R	0.6840	0.1650
T	0.6460	0.1870
U	0.9250	0.2900
V	0.4720	0.1510
Y	0.8340	0.2800
Z	0.7890	0.2840
a	0.7930	0.2890
b	0.7630	0.2680
c	0.8250	0.1780
d	0.8580	0.2980
e	0.6400	0.0800
f	0.8110	0.3270
g	0.7910	0.2700
h	0.6860	0.2130
i	0.7750	0.2900

Continued on next page...

Continued from previous page...

Chain	Atom inclusion	Q-score
j	0.7750	0.2820
k	0.7850	0.2490
l	0.6170	0.1510
m	0.7950	0.3210
n	0.8540	0.3370
o	0.7630	0.3270
p	0.7890	0.2720
q	0.8600	0.3110
r	0.4240	0.1450
s	0.7840	0.3170
t	0.8070	0.2940
u	0.7060	0.1860
v	0.8340	0.1870
w	0.8020	0.3090
x	0.6970	0.2420
y	0.7860	0.2570
z	0.7540	0.3040