Full wwPDB EM Validation Report ⓘ

Dec 12, 2022 – 10:40 AM EST

PDB ID	:	5KPX
EMDB ID	:	EMD-8282
Title	:	Structure of RelA bound to ribosome in presence of A/R tRNA (Structure IV)
Authors	:	Loveland, A.B.; Bah, E.; Madireddy, R.; Zhang, Y.; Brilot, A.F.; Grigorieff, N.; Korostelev, A.A.
Deposited on	:	2016-07-05
Resolution	:	3.90 Å(reported)

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:

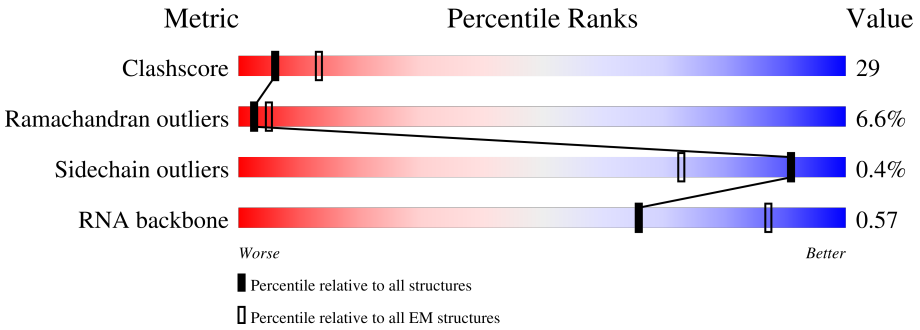
EMDB validation analysis	:	0.0.1.dev43
MolProbity	:	4.02b-467
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.9
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.31.2

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 3.90 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)
Clashscore	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826
RNA backbone	4643	859

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	273	44% 51%
2	B	209	44% 56%
3	C	201	5% 36% 58% 6%
4	D	179	39% 57%
5	E	177	45% 53%
6	F	149	53% 38% 55% 7%
7	G	165	56% 24% 50% 21%

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Mol	Chain	Length	Quality of chain
8	H	142	56% 34% 59% 6%
9	I	142	49% 49%
10	J	123	48% 50%
11	K	144	51% 39% 8%
12	L	136	47% 47% 6%
13	M	127	46% 45% 6%
14	N	117	43% 53%
15	O	115	45% 52%
16	P	118	49% 48%
17	Q	103	31% 61% 8%
18	R	110	53% 42% 5%
19	S	100	43% 49% 7%
20	T	104	37% 58%
21	U	94	47% 50%
22	V	85	42% 42% 12%
23	W	78	44% 53%
24	X	63	38% 54% 8%
25	Y	59	56% 36% 7%
26	Z	70	37% 50% 7% 6%
27	1	57	39% 53% 7%
28	2	55	45% 44% 9%
29	3	46	50% 48%
30	4	65	43% 54%
31	5	38	47% 50%
32	6	241	27% 38% 49% 10%

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Mol	Chain	Length	Quality of chain
33	7	233	39% 47% 12%
34	8	206	39% 58%
35	9	167	31% 57% 5% 6%
36	10	135	27% 42% 5% 26%
37	11	179	41% 40% 16%
38	12	130	53% 43%
39	13	130	22% 66% 9%
40	14	103	27% 59% 9% 5%
41	15	129	29% 55% 5% 10%
42	16	124	43% 50% 6%
43	17	118	44% 48%
44	18	101	25% 67% 7%
45	19	89	56% 42%
46	20	82	41% 57%
47	21	84	37% 52% 6% 5%
48	22	75	32% 44% 11% 13%
49	23	92	34% 50% 14%
50	24	87	43% 52%
51	25	71	23% 55% 13% 8%
52	26	1539	24% 67% 9%
53	27	2903	26% 62% 11%
54	28	120	25% 67% 8%
55	29	20	5% 40% 50% 10%
56	30	76	25% 51% 21%
57	31	77	35% 60%

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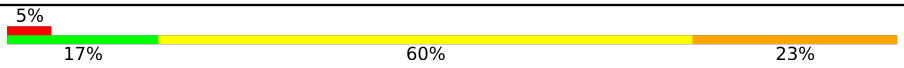
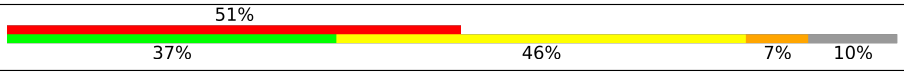
Mol	Chain	Length	Quality of chain
58	32	77	
59	33	750	

2 Entry composition (i)

There are 59 unique types of molecules in this entry. The entry contains 154603 atoms, of which 0 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 protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	271	2082	1288	423	364	7	0	0

- Molecule 2 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	B	209	1565	979	288	294	4	0	0

- Molecule 3 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	C	201	1552	974	283	290	5	0	0

- Molecule 4 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	D	177	1410	899	249	256	6	0	0

- Molecule 5 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	E	176	1323	832	243	246	2	0	0

- Molecule 6 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	F	149	1111	699	197	214	1	0	0

- Molecule 7 is a protein called 50S ribosomal protein L10.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	G	131	Total	C	N	O	S	0	0
			988	625	175	183	5		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
8	H	141	Total	C	N	O	S	0	0
			1032	651	179	196	6		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
9	I	142	Total	C	N	O	S	0	0
			1129	714	212	199	4		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
10	J	122	Total	C	N	O	S	0	0
			938	587	180	165	6		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
11	K	143	Total	C	N	O	S	0	0
			1045	649	206	189	1		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
12	L	136	Total	C	N	O	S	0	0
			1074	686	205	177	6		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
13	M	120	Total	C	N	O	S	0	0
			960	593	196	166	5		

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

Mol	Chain	Residues	Atoms				AltConf	Trace
14	N	116	Total 892	C 552	N 178	O 162	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
15	O	114	Total 917	C 574	N 179	O 163	S 1	0	0

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

Mol	Chain	Residues	Atoms				AltConf	Trace
16	P	117	Total 947	C 604	N 192	O 151	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
17	Q	103	Total 816	C 516	N 153	O 145	S 2	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
18	R	110	Total 857	C 532	N 166	O 156	S 3	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
19	S	93	Total 738	C 466	N 139	O 131	S 2	0	0

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

Mol	Chain	Residues	Atoms				AltConf	Trace
20	T	102	Total 779	C 492	N 146	O 141	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
21	U	94	Total	C	N	O	S	0	0
			753	479	137	134	3		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
22	V	75	Total	C	N	O	S	0	0
			575	356	116	102	1		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
23	W	77	Total	C	N	O	S	0	0
			625	388	129	106	2		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
24	X	63	Total	C	N	O	S	0	0
			509	313	99	95	2		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
25	Y	58	Total	C	N	O	S	0	0
			449	281	87	79	2		

- Molecule 26 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	Z	66	Total	C	N	O	S	0	0
			522	323	99	94	6		

- Molecule 27 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	1	56	Total	C	N	O	S	0	0
			444	269	94	80	1		

- Molecule 28 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms				AltConf	Trace
28	2	50	Total	C	N	O	0	0
			409	263	75	71		

- Molecule 29 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	3	46	Total	C	N	O	S	0	0
			377	228	90	57	2		

- Molecule 30 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	4	64	Total	C	N	O	S	0	0
			504	323	105	74	2		

- Molecule 31 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	5	38	Total	C	N	O	S	0	0
			302	185	65	48	4		

- Molecule 32 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	6	218	Total	C	N	O	S	0	0
			1704	1081	305	311	7		

- Molecule 33 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	7	206	Total	C	N	O	S	0	0
			1624	1028	305	288	3		

- Molecule 34 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	8	205	Total	C	N	O	S	0	0
			1643	1026	315	298	4		

- Molecule 35 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	9	157	Total	C	N	O	S	0	0
			1156	719	218	213	6		

- Molecule 36 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	10	100	Total	C	N	O	S	0	0
			817	515	148	148	6		

- Molecule 37 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	11	151	Total	C	N	O	S	0	0
			1181	735	227	215	4		

- Molecule 38 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	12	129	Total	C	N	O	S	0	0
			979	616	173	184	6		

- Molecule 39 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	13	127	Total	C	N	O	S	0	0
			1022	634	206	179	3		

- Molecule 40 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	14	98	Total	C	N	O	S	0	0
			786	493	150	142	1		

- Molecule 41 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	15	116	Total	C	N	O	S	0	0
			869	535	173	158	3		

- Molecule 42 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	16	123	Total	C	N	O	S	0	0
			955	590	196	165	4		

- Molecule 43 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	17	114	Total	C	N	O	S	0	0
			883	546	178	156	3		

- Molecule 44 is a protein called 30S ribosomal protein S14.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	18	100	Total	C	N	O	S	0	0
			805	499	164	139	3		

- Molecule 45 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	19	88	Total	C	N	O	S	0	0
			714	439	144	130	1		

- Molecule 46 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	20	82	Total	C	N	O	S	0	0
			649	406	128	114	1		

- Molecule 47 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	21	80	Total	C	N	O	S	0	0
			648	411	121	113	3		

- Molecule 48 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	22	65	Total	C	N	O	S	0	0
			535	339	100	95	1		

- Molecule 49 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	23	79	Total	C	N	O	S	0	0
			637	408	120	107	2		

- Molecule 50 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	24	85	Total	C	N	O	S	0	0
			665	411	137	114	3		

- Molecule 51 is a protein called 30S ribosomal protein S21.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	25	65	Total	C	N	O	S	0	0
			544	335	117	91	1		

- Molecule 52 is a RNA chain called 16S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	26	1539	Total	C	N	O	P	0	0
			33016	14725	6052	10700	1539		

- Molecule 53 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	27	2903	Total	C	N	O	P	0	0
			62322	27801	11468	20150	2903		

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
27	747	C	U	conflict	GB 802133627
27	1847	G	A	conflict	GB 802133627

- Molecule 54 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	28	120	Total	C	N	O	P	0	0
			2572	1145	471	836	120		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
28	120	A	-	conflict	GB 1028475309

- Molecule 55 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	29	20	Total	C	N	O	P	0	0
			432	195	86	132	19		

- Molecule 56 is a RNA chain called A-site tRNAPhe.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	30	76	Total	C	N	O	P	0	0
			1623	723	290	534	76		

- Molecule 57 is a RNA chain called P-site tRNAfMet.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	31	77	Total	C	N	O	P	0	0
			1644	732	297	538	77		

- Molecule 58 is a RNA chain called E-site tRNAfMet.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	32	77	Total	C	N	O	P	0	0
			1643	732	297	537	77		

- Molecule 59 is a protein called GTP pyrophosphokinase.

Mol	Chain	Residues	Atoms					AltConf	Trace
59	33	675	Total	C	N	O	S	0	0
			4911	3070	904	915	22		

There are 7 discrepancies between the modelled and reference sequences:

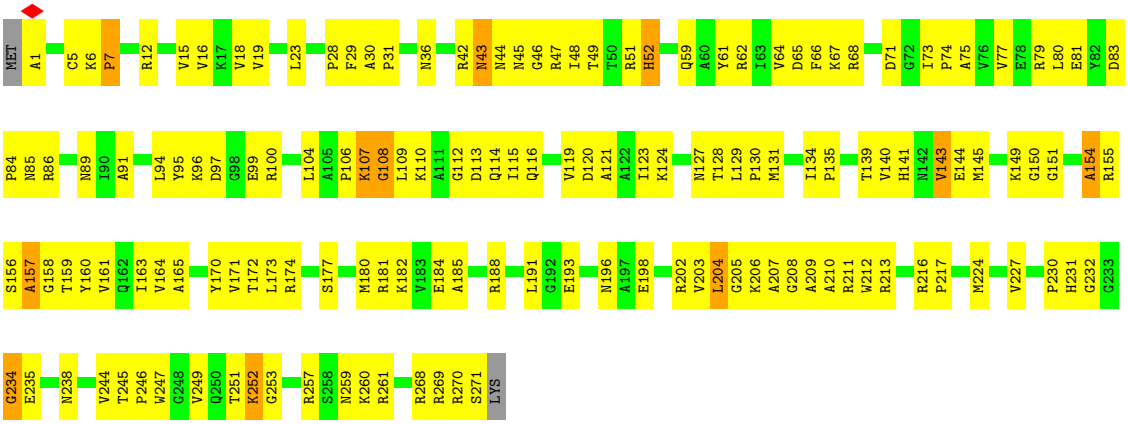
Chain	Residue	Modelled	Actual	Comment	Reference
33	-5	MET	-	expression tag	UNP P0AG20
33	-4	HIS	-	expression tag	UNP P0AG20
33	-3	HIS	-	expression tag	UNP P0AG20
33	-2	HIS	-	expression tag	UNP P0AG20
33	-1	HIS	-	expression tag	UNP P0AG20
33	0	HIS	-	expression tag	UNP P0AG20
33	1	HIS	-	expression tag	UNP P0AG20

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.

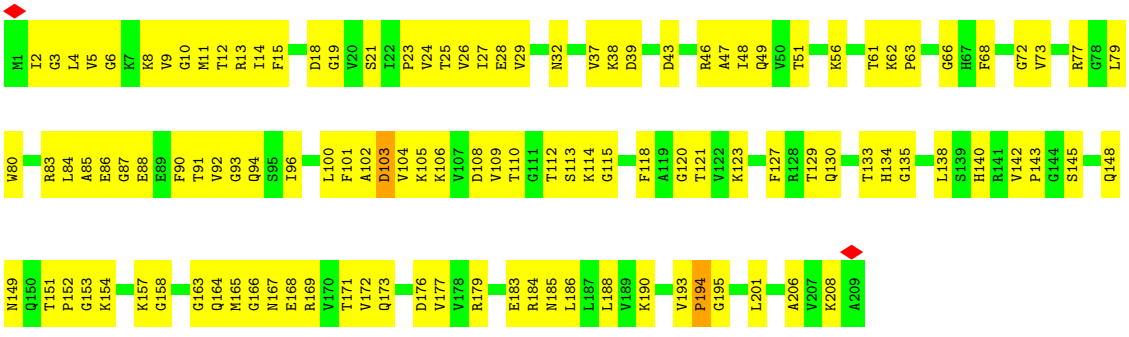
• Molecule 1: 50S ribosomal protein L2

Chain A:



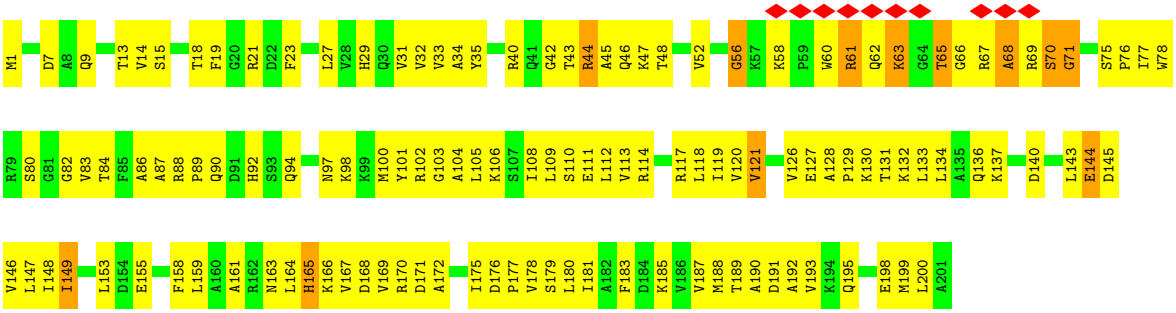
• Molecule 2: 50S ribosomal protein L3

Chain B:



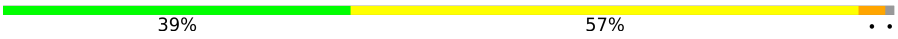
• Molecule 3: 50S ribosomal protein L4

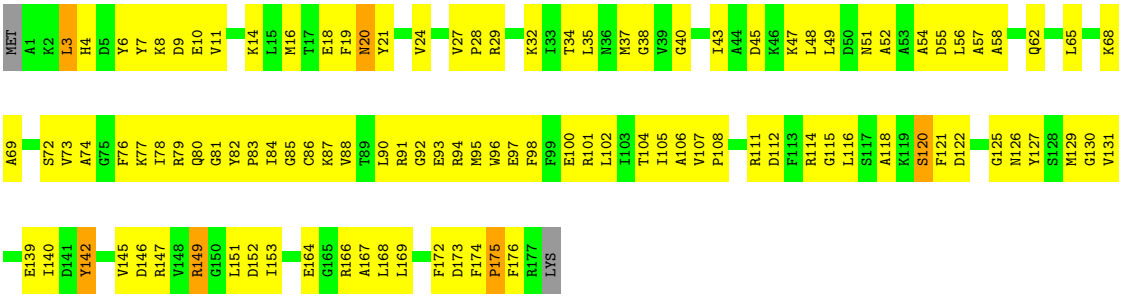
Chain C:



• Molecule 4: 50S ribosomal protein L5

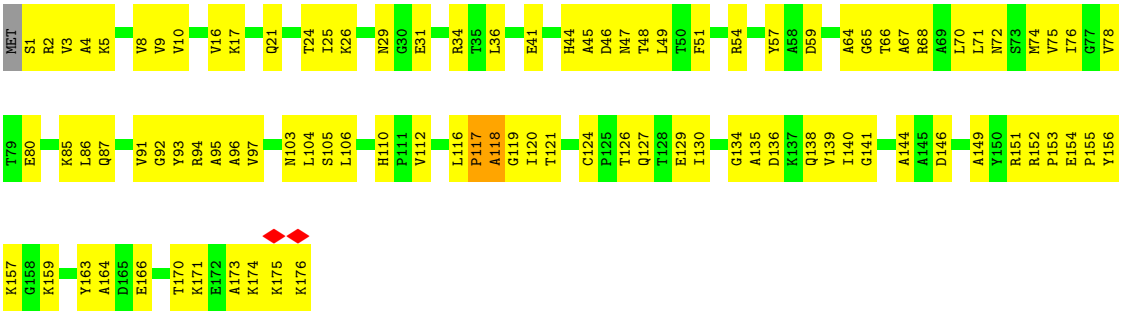
Chain D:





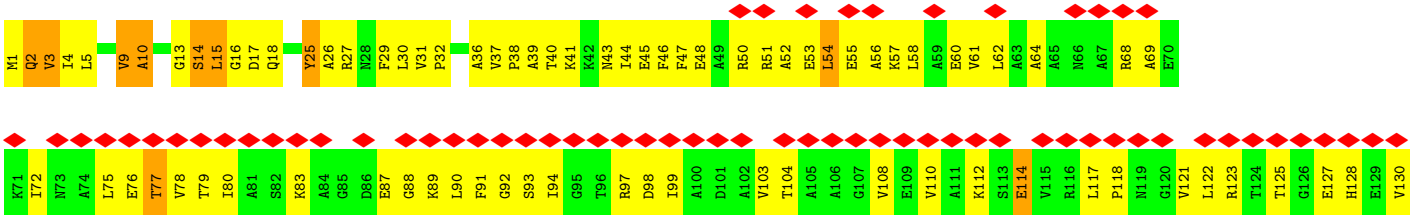
• Molecule 5: 50S ribosomal protein L6

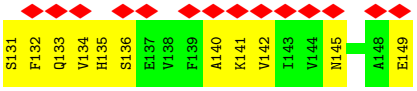
Chain E:



• Molecule 6: 50S ribosomal protein L9

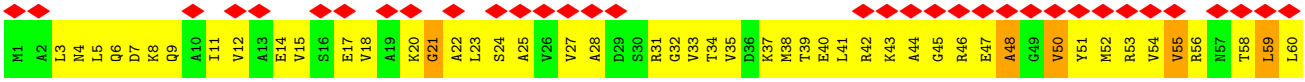
Chain F:

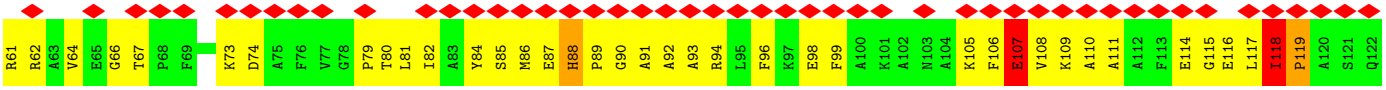


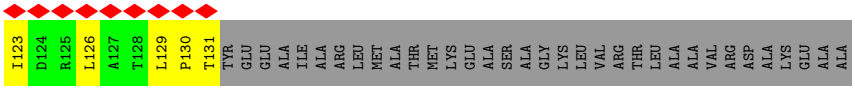


• Molecule 7: 50S ribosomal protein L10

Chain G:

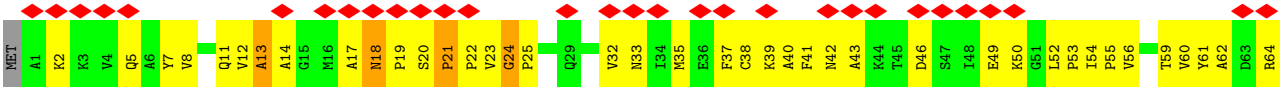


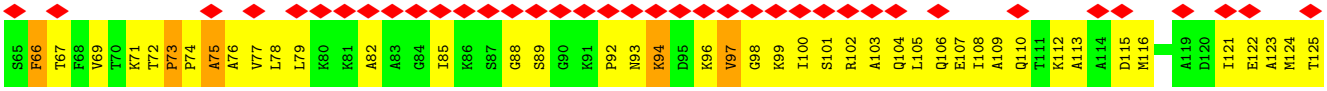


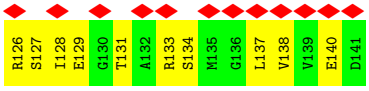


• Molecule 8: 50S ribosomal protein L11

Chain H:





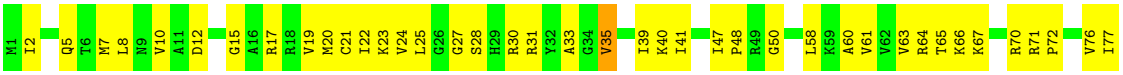


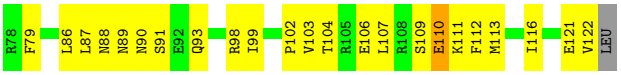
• Molecule 9: 50S ribosomal protein L13

Chain I:

• Molecule 10: 50S ribosomal protein L14

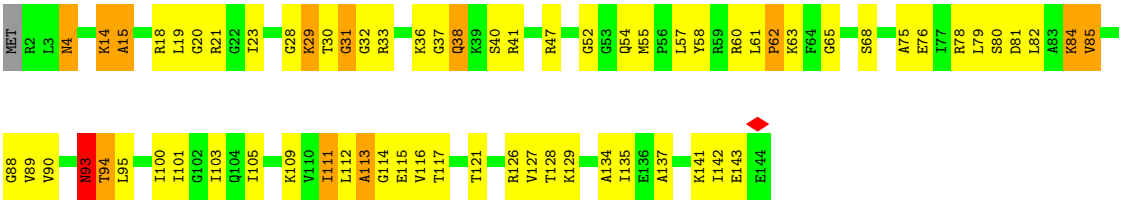
Chain J:





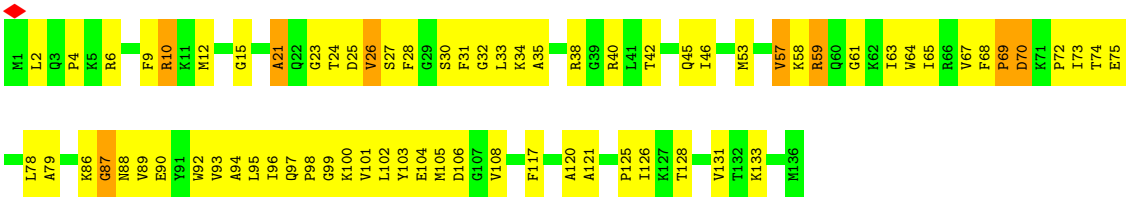
• Molecule 11: 50S ribosomal protein L15

Chain K:



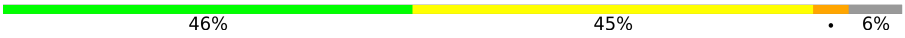
• Molecule 12: 50S ribosomal protein L16

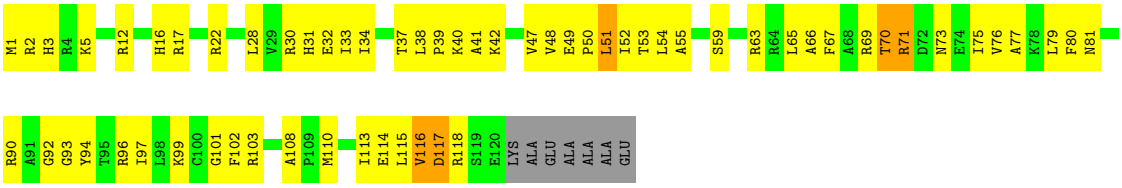
Chain L:



• Molecule 13: 50S ribosomal protein L17

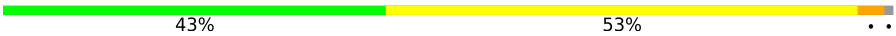
Chain M:

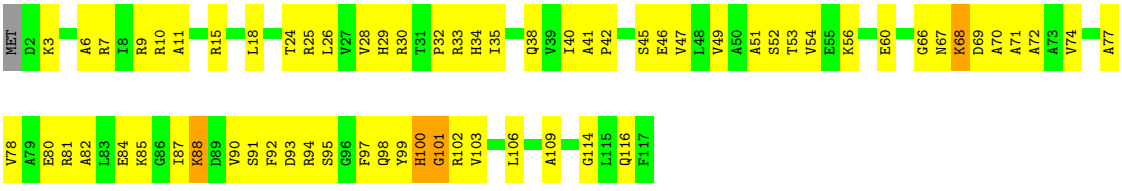




• Molecule 14: 50S ribosomal protein L18

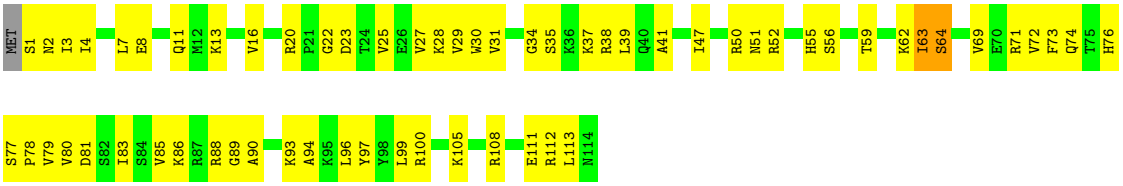
Chain N:





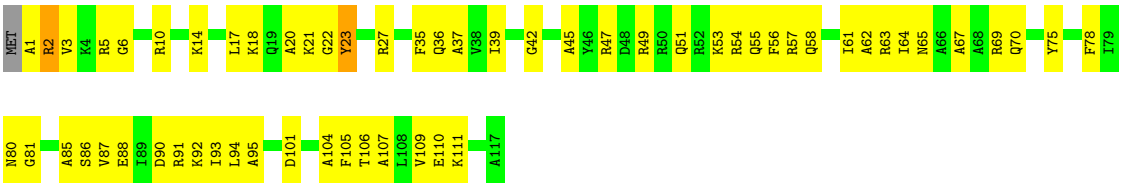
• Molecule 15: 50S ribosomal protein L19

Chain O:



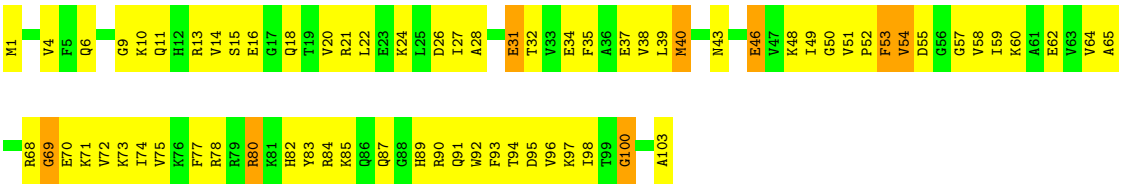
• Molecule 16: 50S ribosomal protein L20

Chain P:



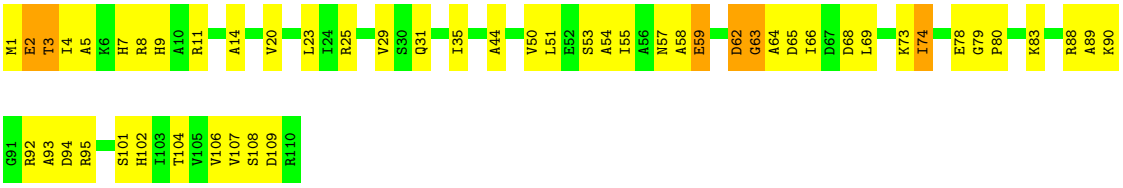
• Molecule 17: 50S ribosomal protein L21

Chain Q:



• Molecule 18: 50S ribosomal protein L22

Chain R:

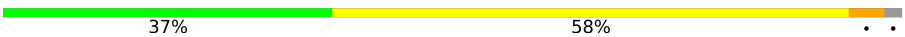


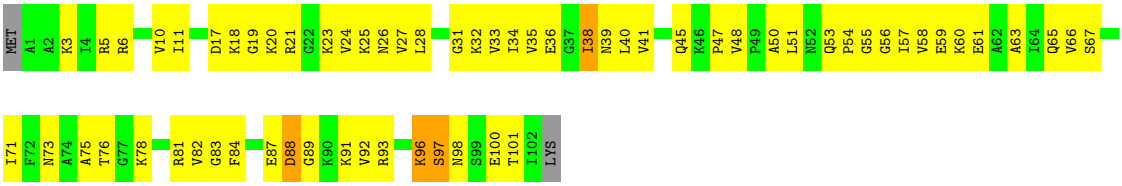
• Molecule 19: 50S ribosomal protein L23

Chain S:

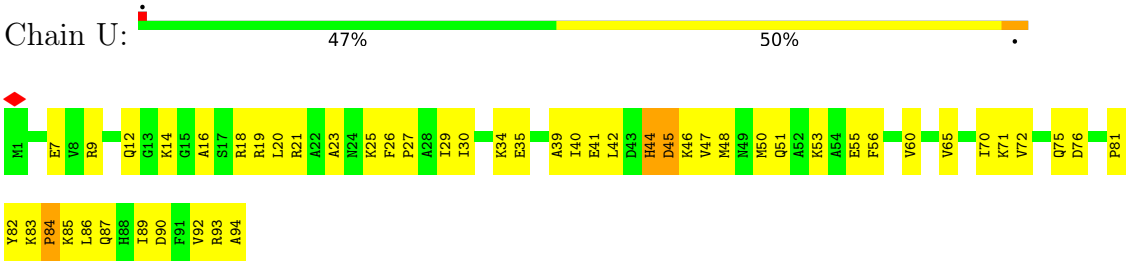
• Molecule 20: 50S ribosomal protein L24

Chain T:

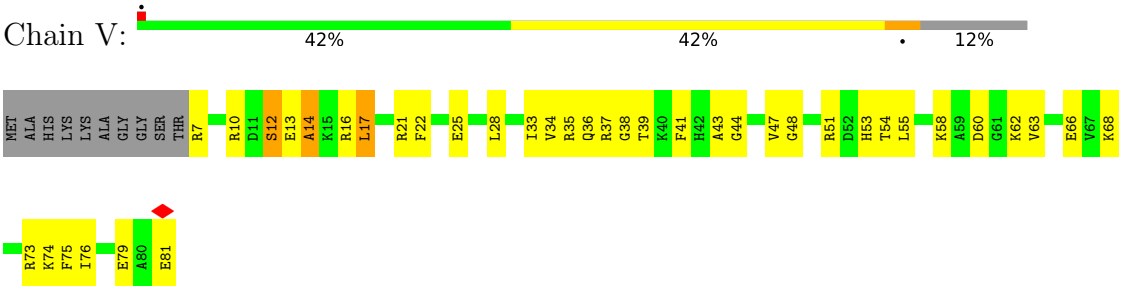




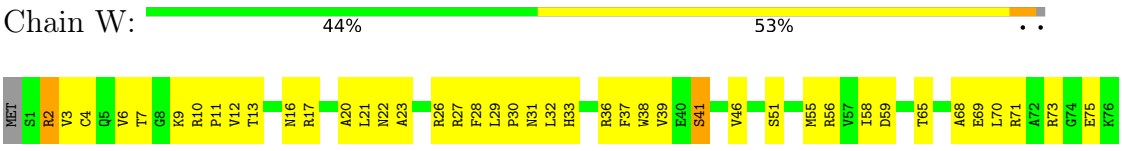
• Molecule 21: 50S ribosomal protein L25



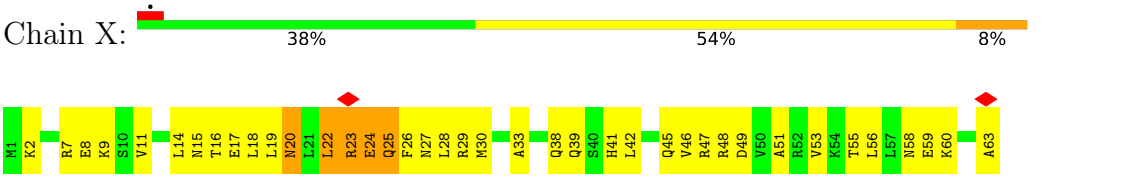
• Molecule 22: 50S ribosomal protein L27



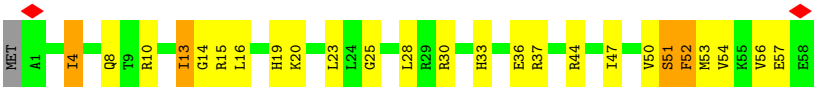
• Molecule 23: 50S ribosomal protein L28



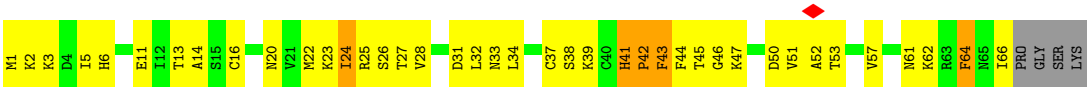
• Molecule 24: 50S ribosomal protein L29



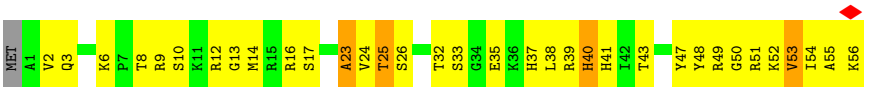
• Molecule 25: 50S ribosomal protein L30



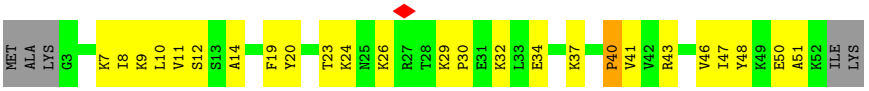
• Molecule 26: 50S ribosomal protein L31



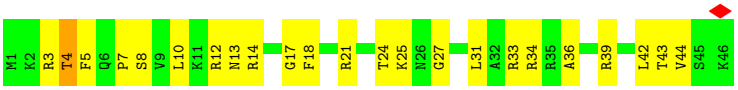
• Molecule 27: 50S ribosomal protein L32



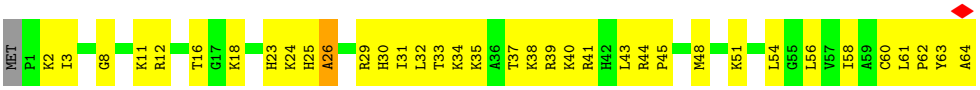
• Molecule 28: 50S ribosomal protein L33



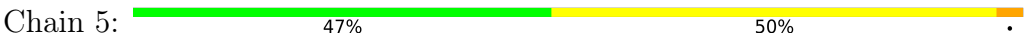
• Molecule 29: 50S ribosomal protein L34

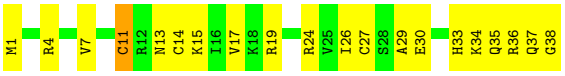


• Molecule 30: 50S ribosomal protein L35

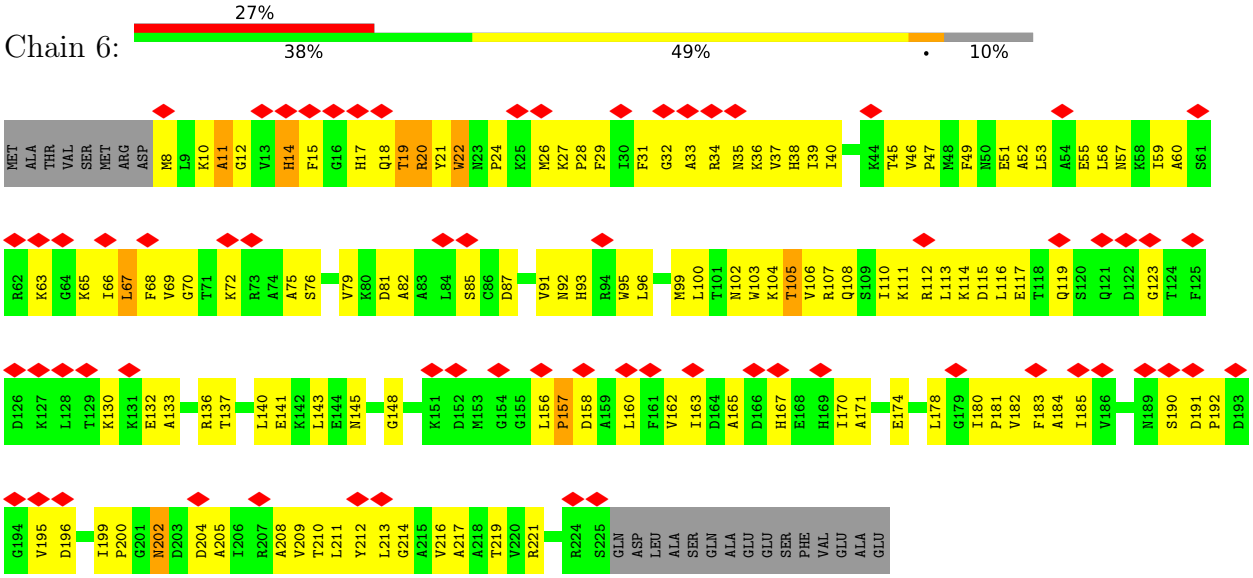


• Molecule 31: 50S ribosomal protein L36

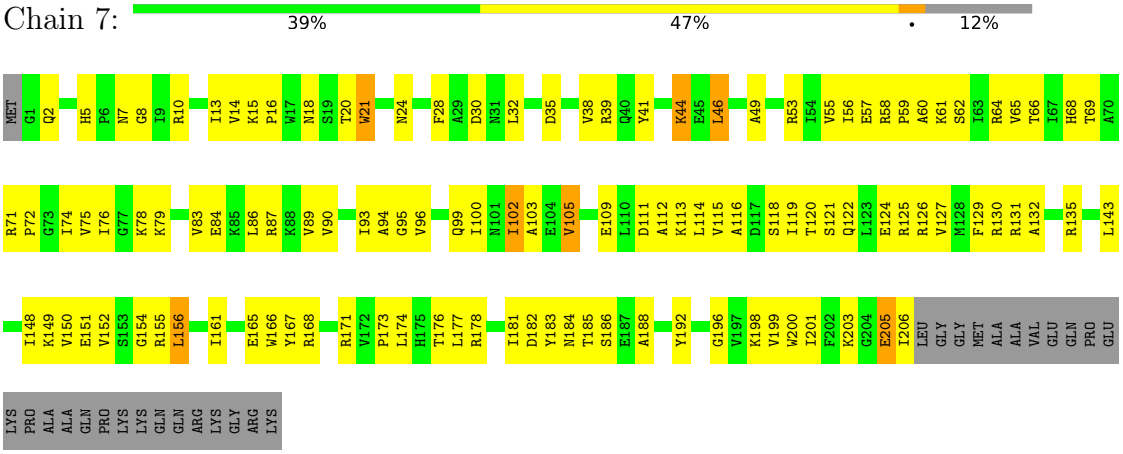




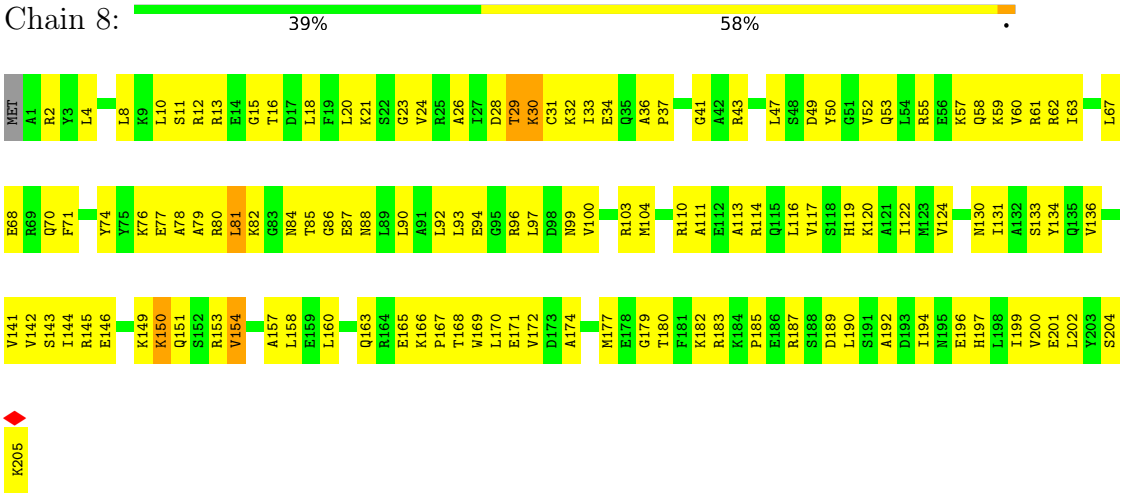
• Molecule 32: 30S ribosomal protein S2



• Molecule 33: 30S ribosomal protein S3

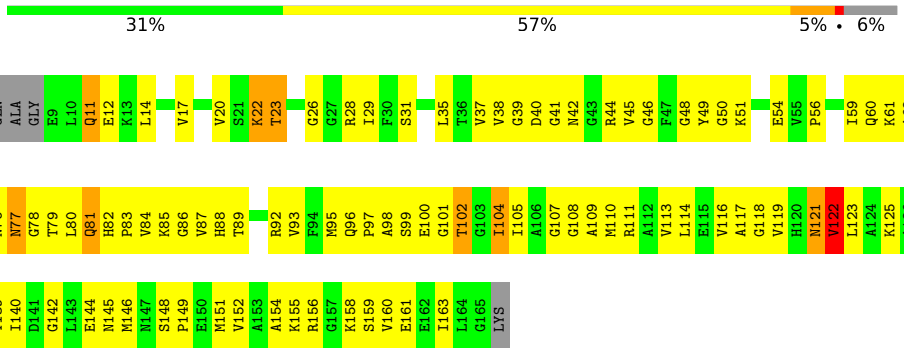


• Molecule 34: 30S ribosomal protein S4



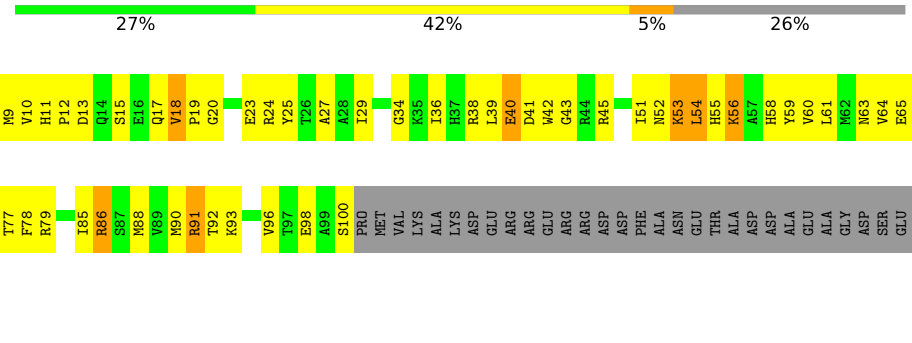
• Molecule 35: 30S ribosomal protein S5

Chain 9:



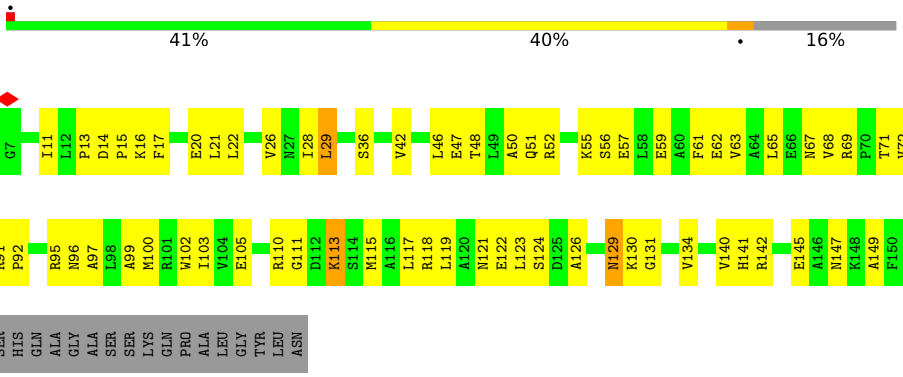
• Molecule 36: 30S ribosomal protein S6

Chain 10:



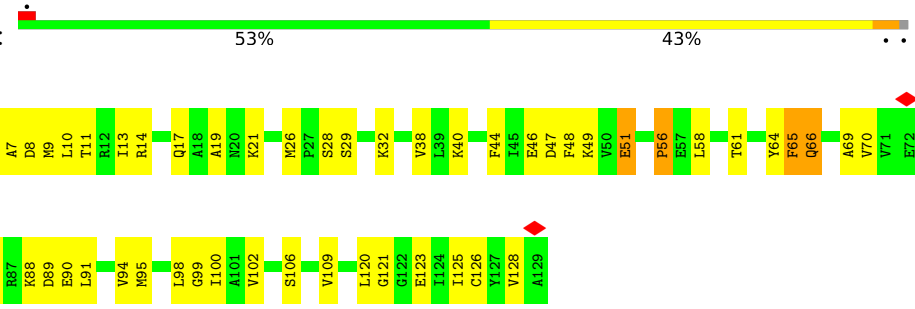
• Molecule 37: 30S ribosomal protein S7

Chain 11:



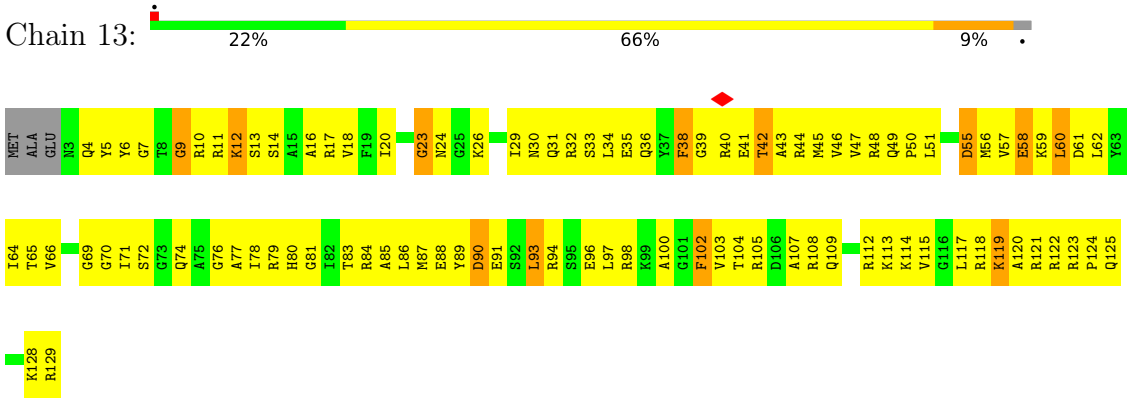
• Molecule 38: 30S ribosomal protein S8

Chain 12:



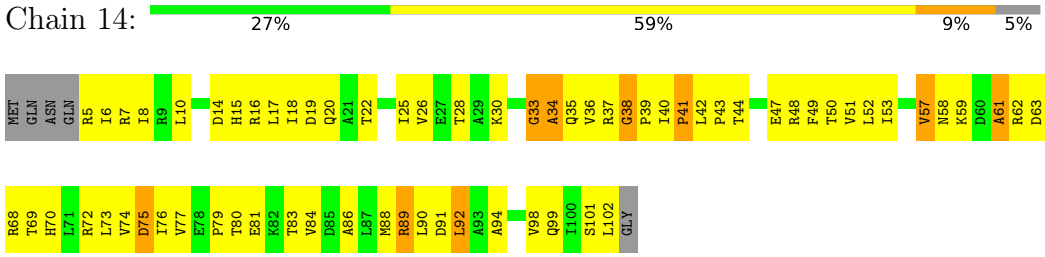
• Molecule 39: 30S ribosomal protein S9

Chain 13:



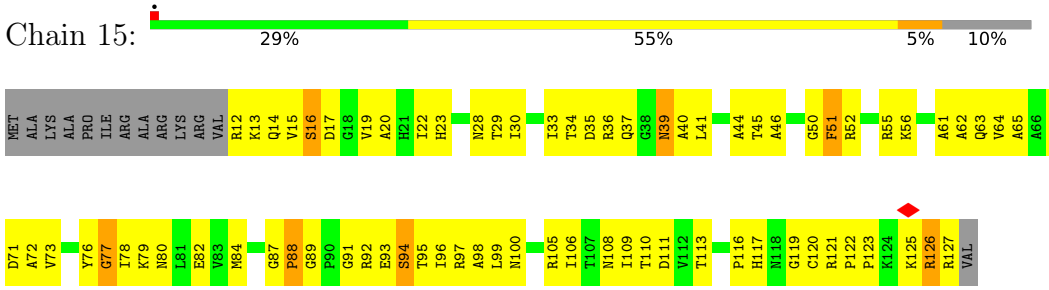
• Molecule 40: 30S ribosomal protein S10

Chain 14:



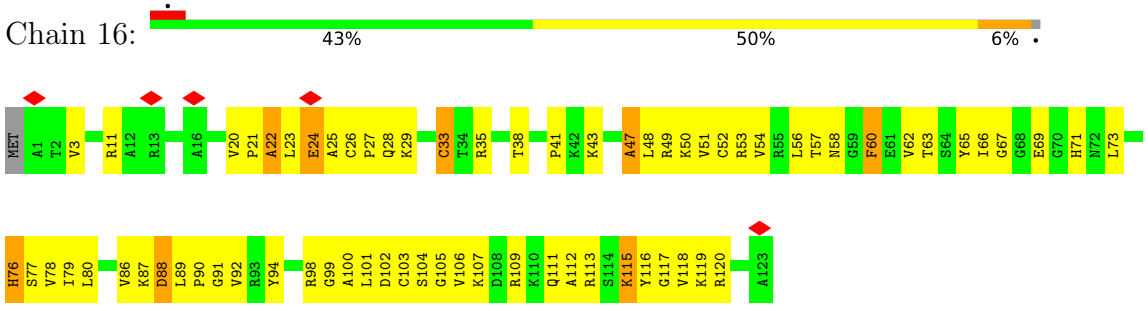
• Molecule 41: 30S ribosomal protein S11

Chain 15:



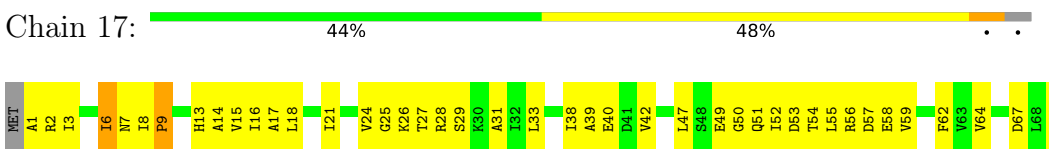
• Molecule 42: 30S ribosomal protein S12

Chain 16:



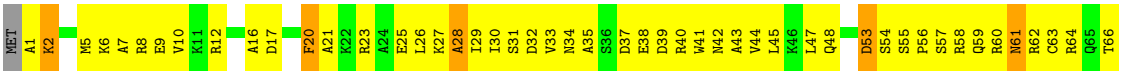
• Molecule 43: 30S ribosomal protein S13

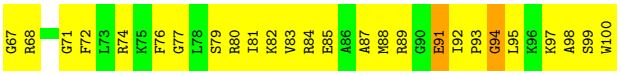
Chain 17:



• Molecule 44: 30S ribosomal protein S14

Chain 18:



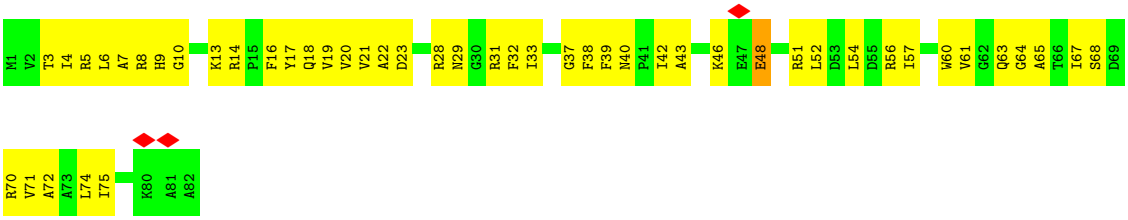


• Molecule 45: 30S ribosomal protein S15

Chain 19:

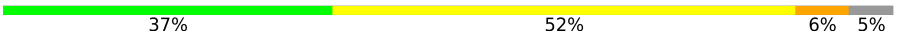
• Molecule 46: 30S ribosomal protein S16

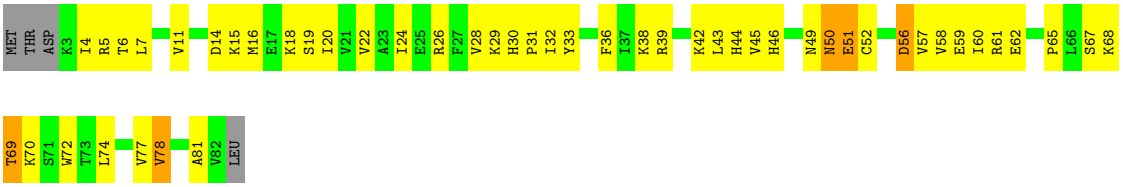
Chain 20:



• Molecule 47: 30S ribosomal protein S17

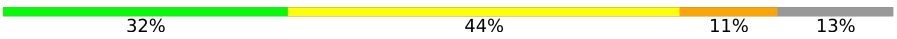
Chain 21:

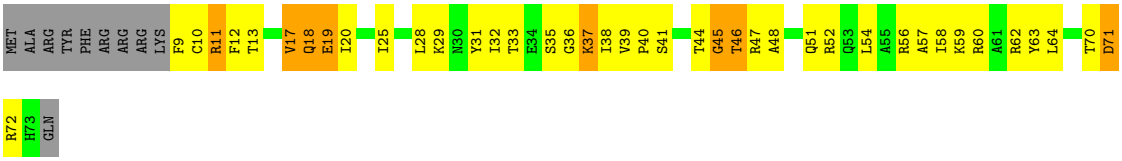




• Molecule 48: 30S ribosomal protein S18

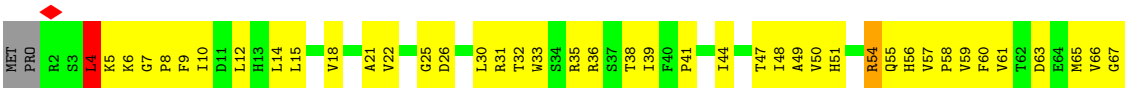
Chain 22:





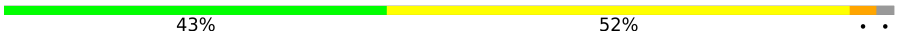
• Molecule 49: 30S ribosomal protein S19

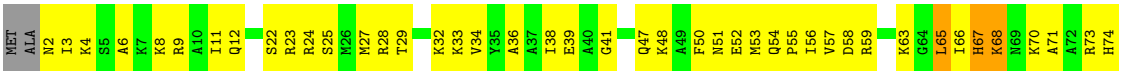
Chain 23:

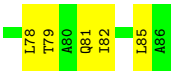


• Molecule 50: 30S ribosomal protein S20

Chain 24:

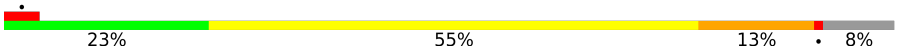






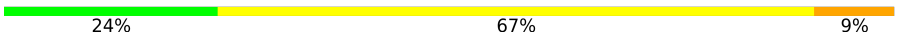
• Molecule 51: 30S ribosomal protein S21

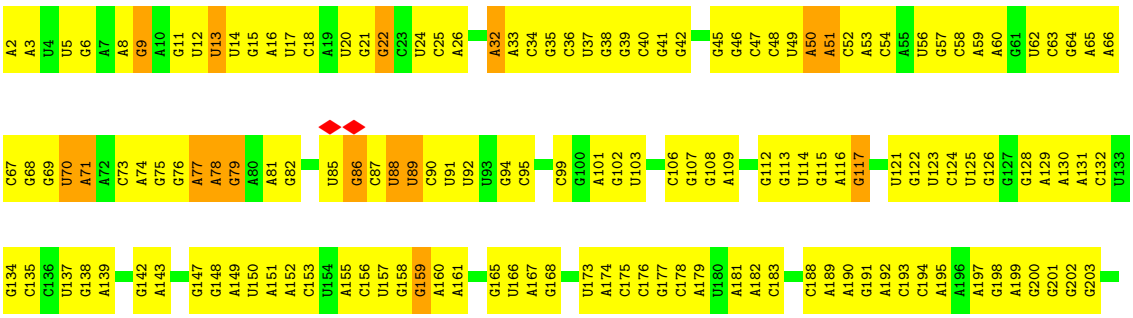
Chain 25:

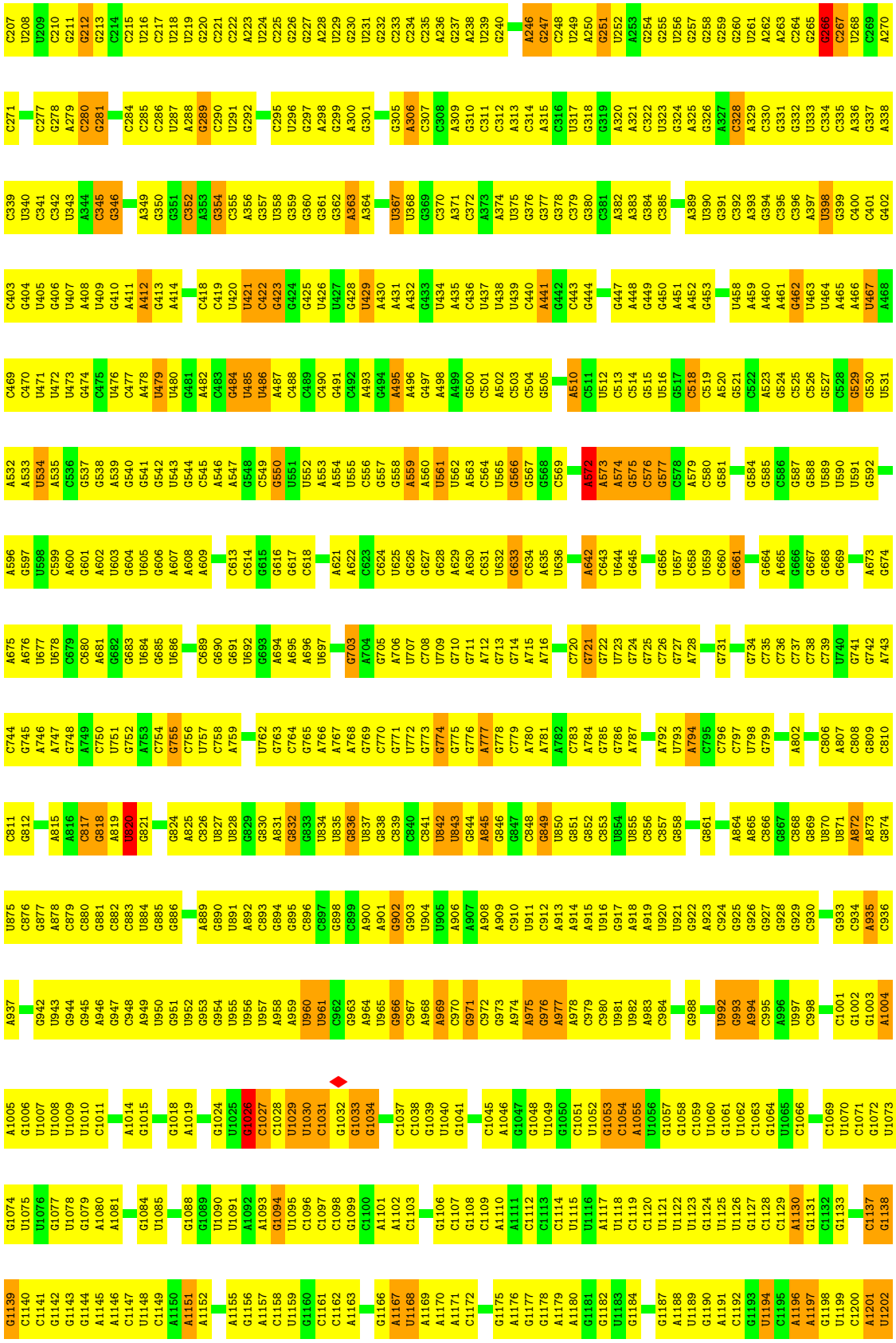


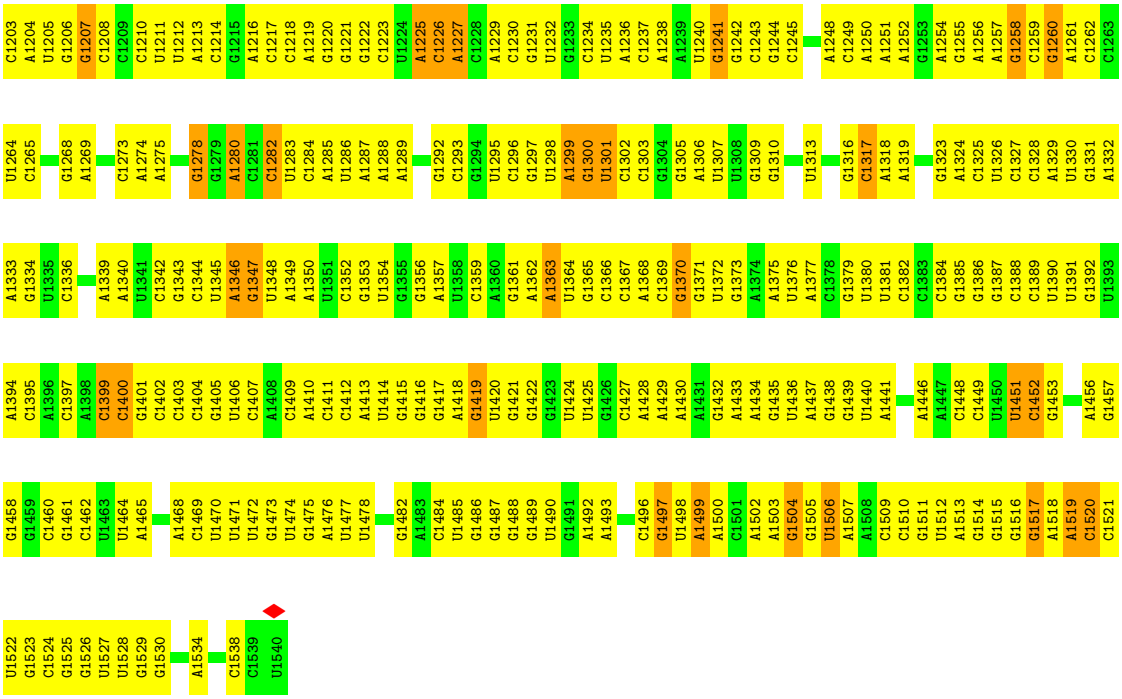
• Molecule 52: 16S ribosomal RNA

Chain 26:



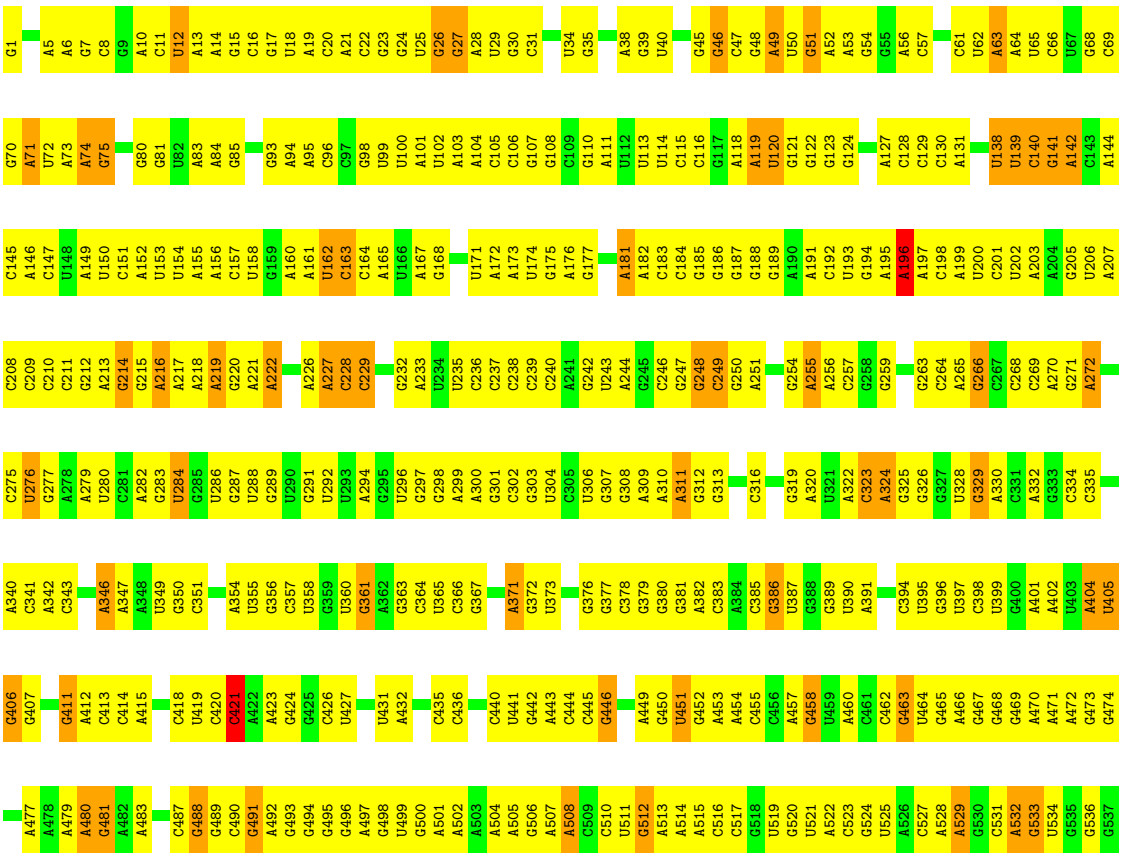


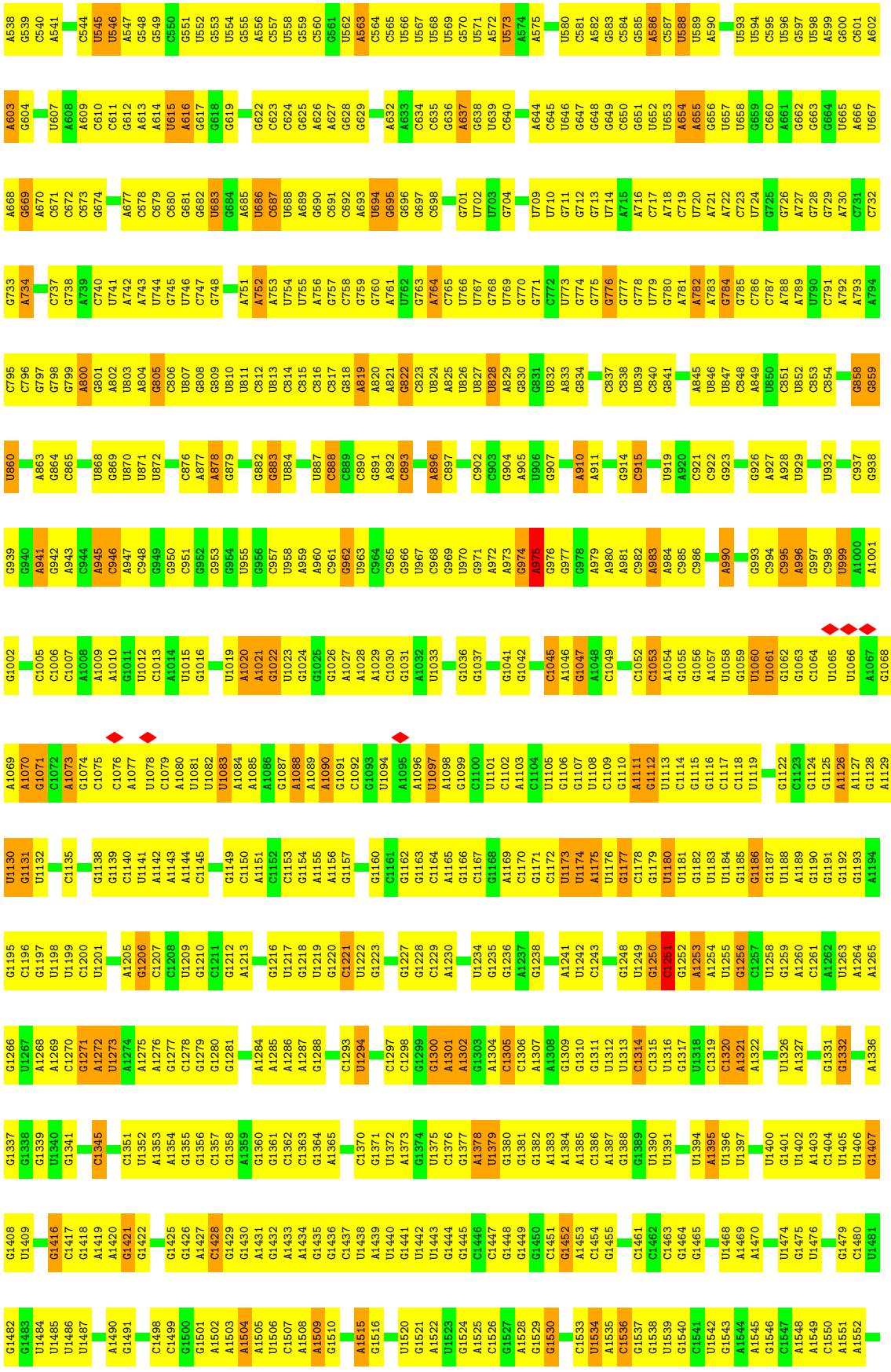


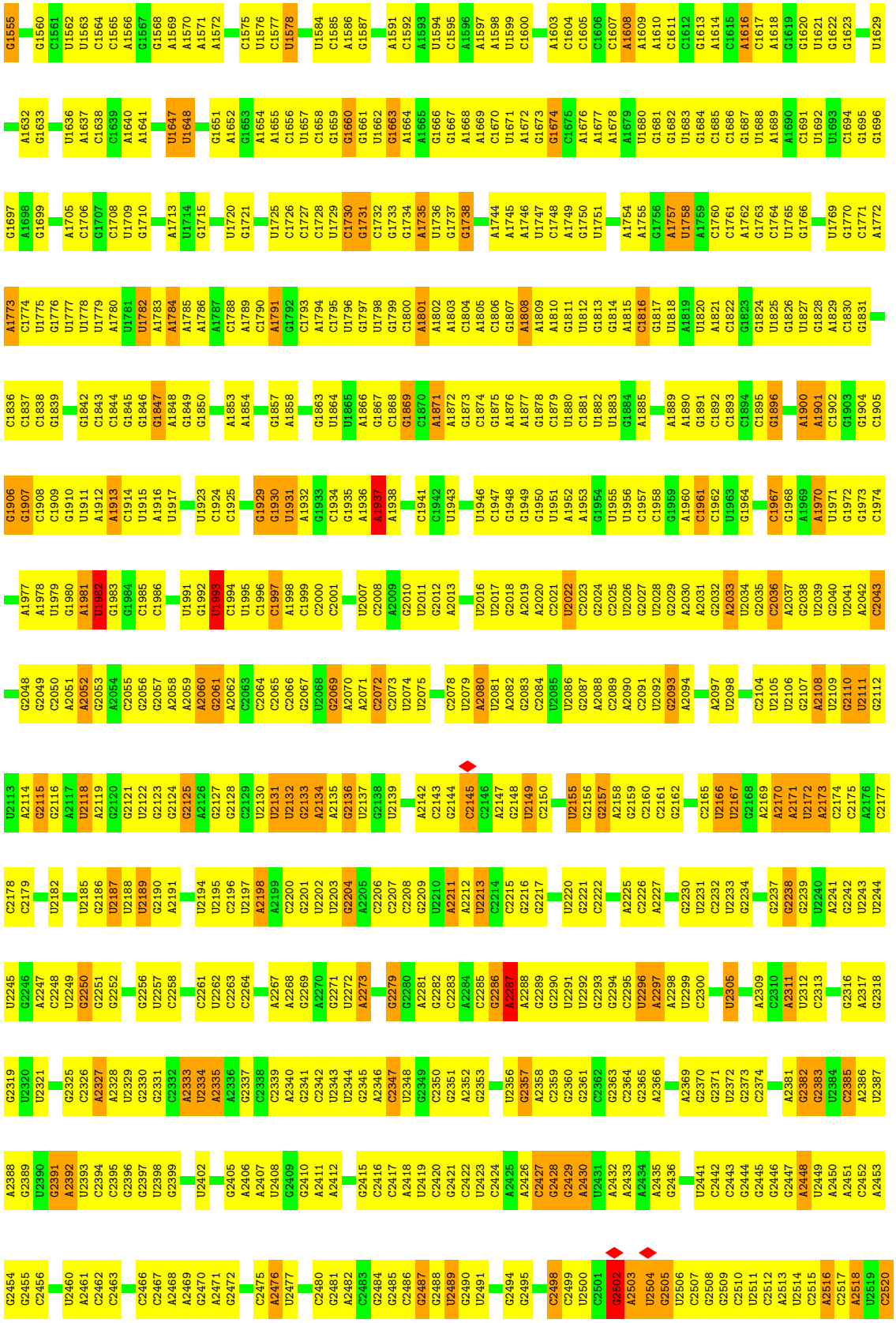


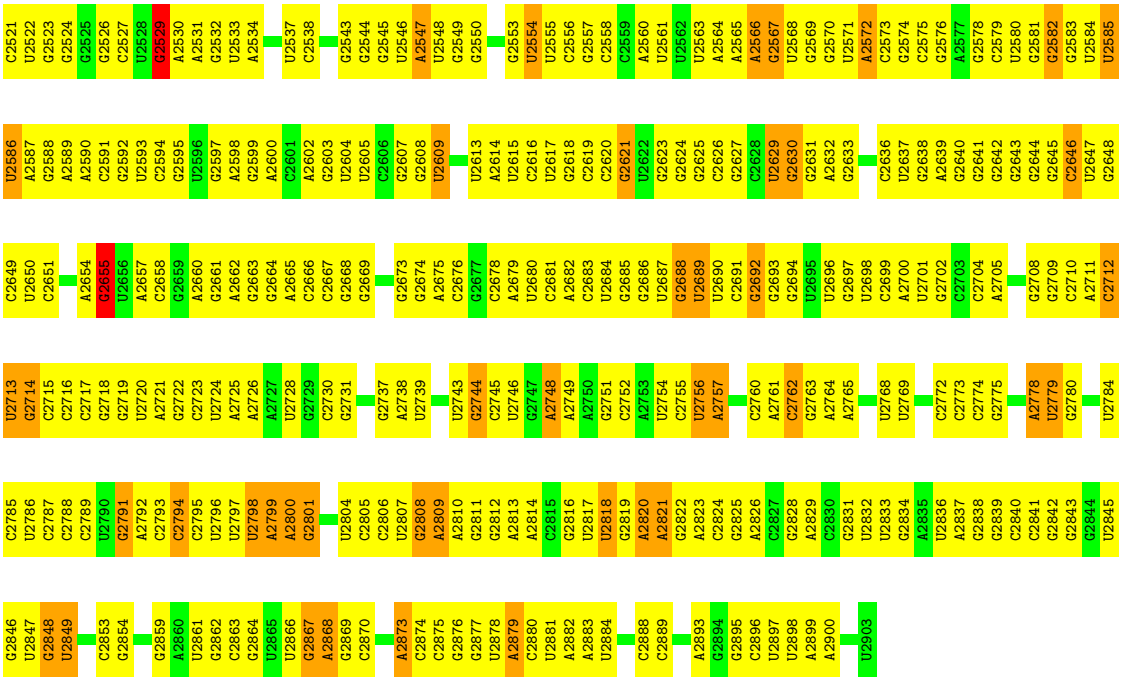
• Molecule 53: 23S ribosomal RNA

Chain 27:



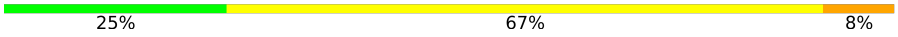






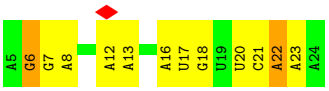
• Molecule 54: 5S ribosomal RNA

Chain 28:



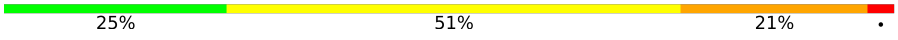
• Molecule 55: mRNA

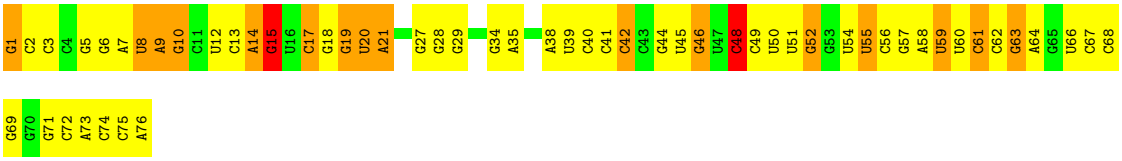
Chain 29:



• Molecule 56: A-site tRNAPhe

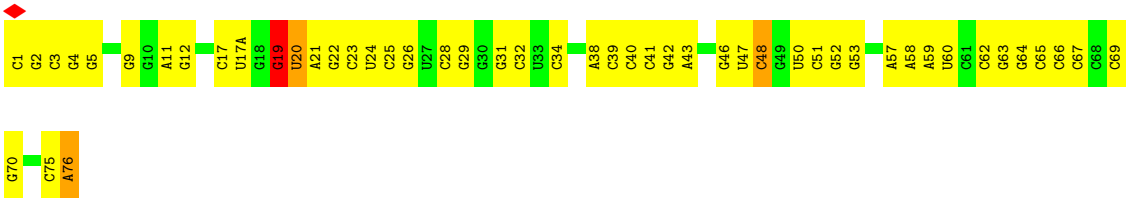
Chain 30:



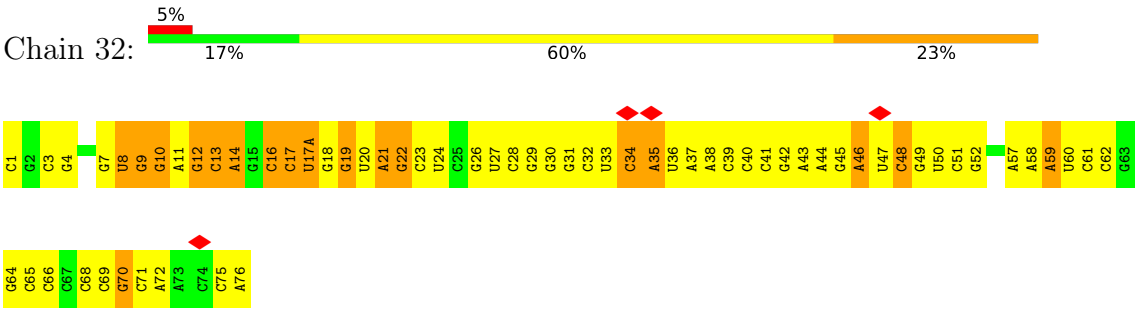


• Molecule 57: P-site tRNAfMet

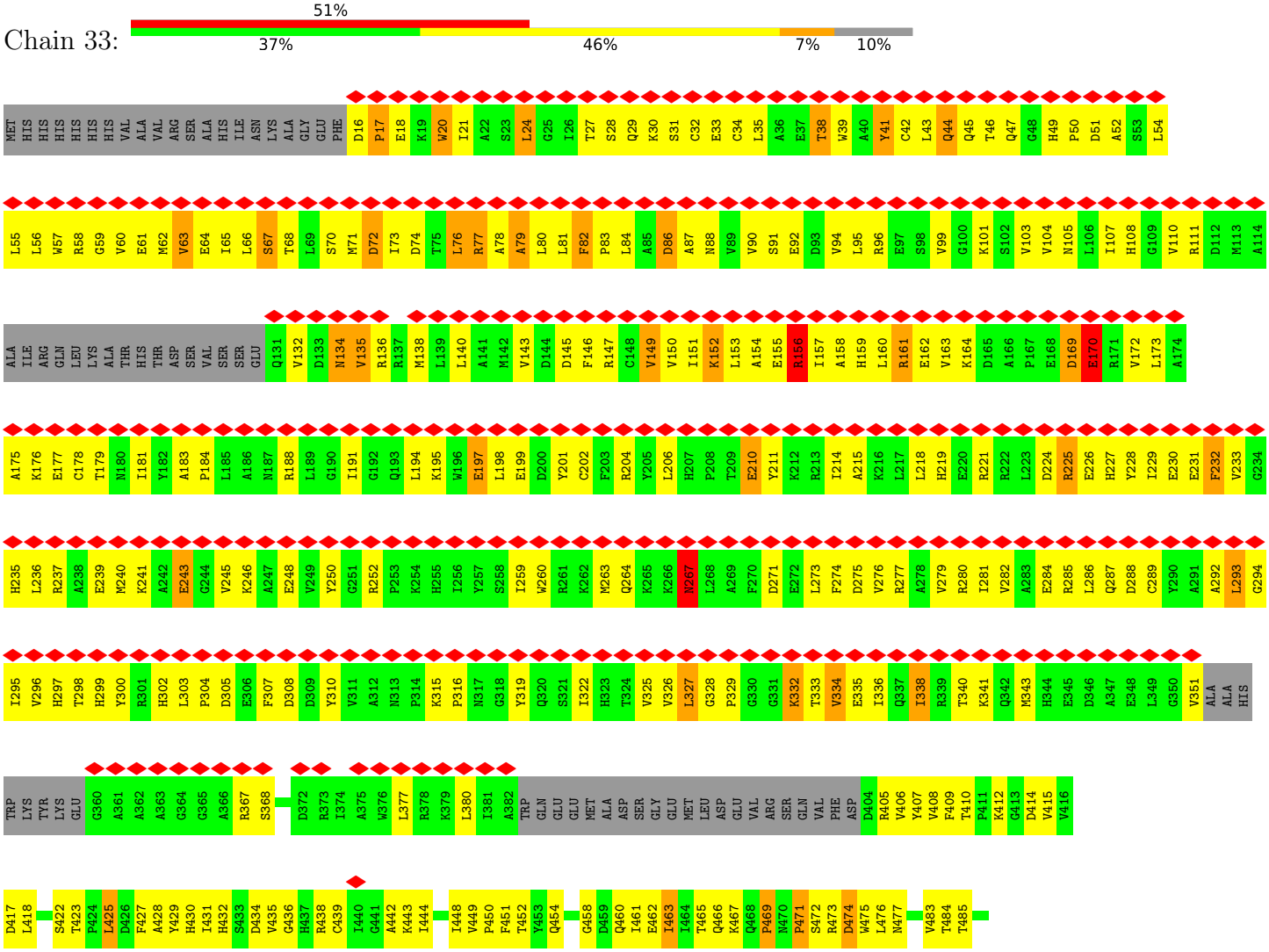
Chain 31:

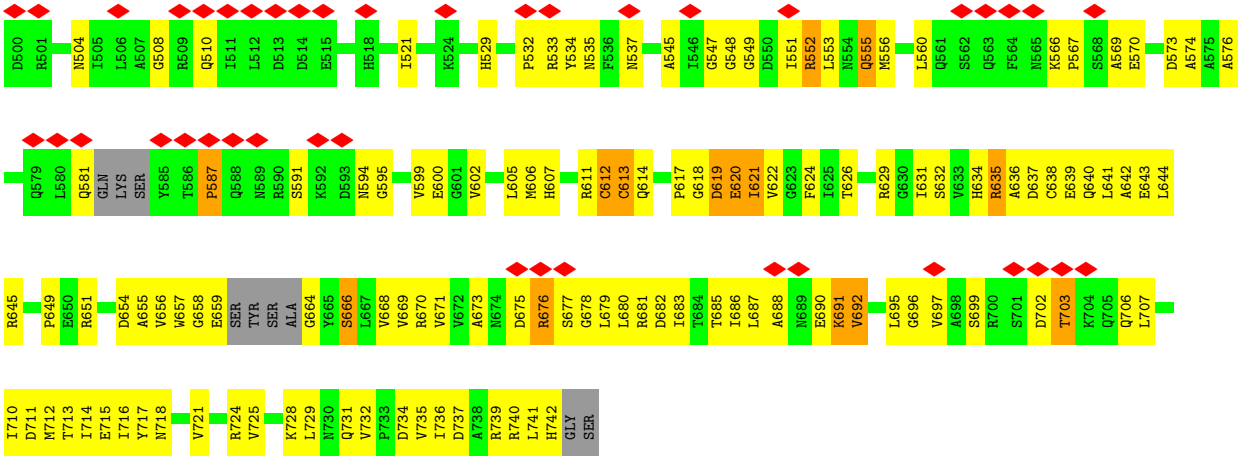


• Molecule 58: E-site tRNAfMet



• Molecule 59: GTP pyrophosphokinase




D500 R501 N504 I505 L506 A507 G508 R509 Q510 I511 L512 D513 D514 E515 H518 I521 K524 H529 P532 R533 Y534 N535 F536 N537 A545 I546 G547 G548 G549 D550 I551 R552 L553 N554 Q555 M556 L560 Q561 S562 Q563 F564 N565 K566 P567 S568 A569 E570 D573 A574 A575 A576
Q579 L580 Q581 GLN LYS SER Y585 T586 P587 Q588 N589 R590 S591 K592 D593 N594 G595 V599 E600 G601 V602 L605 M606 H607 R611 C612 C613 Q614 P617 G618 D619 E620 I621 V622 G623 F624 I625 T626 R629 G630 I631 S632 V633 H634 R635 A636 D637 C638 E639 Q640 L641 A642 E643 L644
R645 P649 E650 R651 D654 A655 V656 W657 G658 E659 SER TYR SER ALA G664 Y665 S666 L667 V668 V669 R670 V671 V672 A673 H674 D675 R676 S677 G678 L679 L680 R681 D682 I683 T684 T685 I686 L687 A688 N689 E690 K691 V692 L695 G696 V697 A698 S699 R700 S701 D702 T703 K704 Q705 Q706 L707
I710 D711 M712 T713 I714 E715 I716 Y717 N718 V721 R724 V725 K728 L729 N730 Q731 V732 P733 D734 V735 I736 D737 A738 R739 R740 L741 H742 GLY SER

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	57430	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 ($e^-/Å^2$)	1.6	Depositor
Minimum defocus (nm)	500	Depositor
Maximum defocus (nm)	2200	Depositor
Magnification	30488	Depositor
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.490	Depositor
Minimum map value	-0.157	Depositor
Average map value	-0.006	Depositor
Map value standard deviation	0.043	Depositor
Recommended contour level	0.1	Depositor
Map size (Å)	393.6, 393.6, 393.6	wwPDB
Map dimensions	480, 480, 480	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.82, 0.82, 0.82	Depositor

5 Model quality

5.1 Standard geometry

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	A	0.34	0/2121	0.70	0/2852
2	B	0.37	0/1586	0.67	0/2134
3	C	0.39	0/1571	0.71	1/2113 (0.0%)
4	D	0.36	0/1434	0.66	0/1926
5	E	0.35	0/1343	0.69	0/1816
6	F	0.44	0/1122	0.64	0/1515
7	G	0.50	0/1001	0.79	2/1350 (0.1%)
8	H	0.49	0/1046	0.69	1/1410 (0.1%)
9	I	0.33	0/1152	0.63	0/1551
10	J	0.35	0/947	0.68	0/1268
11	K	0.36	0/1054	0.71	1/1403 (0.1%)
12	L	0.35	0/1093	0.64	0/1460
13	M	0.33	0/973	0.64	0/1301
14	N	0.32	0/902	0.63	0/1209
15	O	0.34	0/929	0.73	1/1242 (0.1%)
16	P	0.37	0/960	0.57	0/1278
17	Q	0.39	0/829	0.77	1/1107 (0.1%)
18	R	0.33	0/864	0.68	0/1156
19	S	0.34	0/744	0.66	0/994
20	T	0.35	0/787	0.76	1/1051 (0.1%)
21	U	0.36	0/766	0.63	0/1025
22	V	0.37	0/582	0.62	0/769
23	W	0.37	0/635	0.70	0/848
24	X	0.36	0/510	0.62	0/677
25	Y	0.34	0/453	0.62	0/605
26	Z	0.42	0/531	0.71	1/709 (0.1%)
27	1	0.35	0/450	0.72	0/599
28	2	0.37	0/416	0.60	0/554
29	3	0.41	0/380	0.64	0/498
30	4	0.35	0/513	0.70	0/676
31	5	0.33	0/303	0.68	0/397
32	6	0.42	0/1735	0.68	1/2338 (0.0%)
33	7	0.35	0/1651	0.63	1/2225 (0.0%)
34	8	0.36	0/1665	0.64	0/2227

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
35	9	0.35	0/1169	0.69	0/1573
36	10	0.38	0/835	0.69	0/1128
37	11	0.34	0/1195	0.65	0/1602
38	12	0.34	0/989	0.68	0/1326
39	13	0.36	0/1034	0.72	0/1375
40	14	0.38	0/796	0.72	1/1077 (0.1%)
41	15	0.36	0/885	0.75	0/1195
42	16	0.36	0/969	0.76	3/1300 (0.2%)
43	17	0.32	0/892	0.62	0/1193
44	18	0.33	0/817	0.58	0/1088
45	19	0.33	0/722	0.60	0/964
46	20	0.39	0/659	0.67	0/884
47	21	0.36	0/657	0.71	0/881
48	22	0.38	0/544	0.73	0/731
49	23	0.37	0/652	0.70	1/877 (0.1%)
50	24	0.32	0/671	0.56	0/888
51	25	0.42	0/550	0.73	1/728 (0.1%)
52	26	0.55	1/36967 (0.0%)	0.71	3/57666 (0.0%)
53	27	0.60	1/69801 (0.0%)	0.72	10/108894 (0.0%)
54	28	0.45	1/2876 (0.0%)	0.69	1/4483 (0.0%)
55	29	0.63	0/486	0.67	0/757
56	30	0.67	1/1813 (0.1%)	0.78	1/2823 (0.0%)
57	31	0.49	1/1836 (0.1%)	0.69	1/2859 (0.0%)
58	32	0.87	1/1835 (0.1%)	0.78	0/2857
59	33	0.67	6/4985 (0.1%)	1.09	37/6770 (0.5%)
All	All	0.54	12/167683 (0.0%)	0.72	70/250202 (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
52	26	0	16
53	27	0	37
56	30	0	2
58	32	0	1
59	33	0	2
All	All	0	58

All (12) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
59	33	156	ARG	CZ-NH2	-10.57	1.19	1.33
59	33	152	LYS	CD-CE	-7.77	1.31	1.51
59	33	17	PRO	CA-CB	-7.25	1.39	1.53
57	31	1	C	OP3-P	-6.97	1.52	1.61
56	30	1	G	OP3-P	-6.93	1.52	1.61
53	27	1	G	OP3-P	-6.90	1.52	1.61
52	26	2	A	OP3-P	-6.89	1.52	1.61
54	28	1	U	OP3-P	-6.82	1.52	1.61
58	32	1	C	OP3-P	-6.72	1.53	1.61
59	33	20	TRP	NE1-CE2	-6.56	1.29	1.37
59	33	20	TRP	CG-CD1	-6.00	1.28	1.36
59	33	20	TRP	CD2-CE2	-5.19	1.35	1.41

All (70) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
59	33	156	ARG	NE-CZ-NH1	19.92	130.26	120.30
59	33	156	ARG	NH1-CZ-NH2	-13.88	104.13	119.40
59	33	17	PRO	N-CA-CB	-11.14	89.93	103.30
59	33	17	PRO	CA-CB-CG	10.28	124.33	104.80
59	33	63	VAL	CG1-CB-CG2	-9.24	96.12	110.90
59	33	156	ARG	NE-CZ-NH2	-9.19	115.71	120.30
56	30	15	G	N9-C1'-C2'	8.98	125.67	114.00
59	33	152	LYS	CD-CE-NZ	8.56	131.38	111.70
59	33	38	THR	CA-CB-CG2	-8.37	100.69	112.40
59	33	332	LYS	CA-CB-CG	8.33	131.72	113.40
59	33	197	GLU	OE1-CD-OE2	-8.24	113.41	123.30
59	33	232	PHE	CD1-CE1-CZ	7.83	129.49	120.10
59	33	24	LEU	CB-CG-CD2	-7.69	97.93	111.00
59	33	327	LEU	CD1-CG-CD2	-7.29	88.62	110.50
53	27	2502	G	N9-C1'-C2'	7.26	123.44	114.00
59	33	152	LYS	CB-CG-CD	-7.26	92.71	111.60
52	26	89	U	N1-C1'-C2'	7.19	123.35	114.00
59	33	17	PRO	CB-CA-C	-6.89	94.78	112.00
59	33	169	ASP	CB-CG-OD1	6.59	124.23	118.30
59	33	351	VAL	CB-CA-C	6.33	123.43	111.40
59	33	86	ASP	CB-CG-OD1	-6.30	112.63	118.30
59	33	225	ARG	NE-CZ-NH2	-6.10	117.25	120.30
59	33	469	PRO	N-CA-CB	6.08	110.60	103.30
51	25	20	ARG	N-CA-C	-6.03	94.73	111.00
59	33	170	GLU	OE1-CD-OE2	6.02	130.52	123.30
59	33	76	LEU	N-CA-CB	-5.94	98.53	110.40
59	33	79	ALA	CB-CA-C	5.93	118.99	110.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	27	421	C	N1-C1'-C2'	5.92	121.70	114.00
53	27	2287	A	N9-C1'-C2'	5.89	121.66	114.00
59	33	587	PRO	N-CA-CB	5.86	110.33	103.30
59	33	149	VAL	CA-CB-CG1	-5.82	102.17	110.90
42	16	22	ALA	N-CA-C	-5.81	95.32	111.00
59	33	77	ARG	NE-CZ-NH2	5.76	123.18	120.30
40	14	38	GLY	N-CA-C	5.74	127.44	113.10
53	27	1320	C	N1-C1'-C2'	5.74	121.46	114.00
59	33	82	PHE	CB-CG-CD2	5.65	124.76	120.80
59	33	225	ARG	NE-CZ-NH1	5.49	123.05	120.30
3	C	56	GLY	N-CA-C	5.49	126.82	113.10
53	27	301	G	N9-C1'-C2'	5.45	121.09	114.00
59	33	293	LEU	CB-CG-CD1	-5.43	101.76	111.00
32	6	32	GLY	N-CA-C	-5.42	99.55	113.10
17	Q	46	GLU	N-CA-C	5.38	125.53	111.00
59	33	243	GLU	OE1-CD-OE2	5.36	129.73	123.30
20	T	96	LYS	N-CA-C	-5.35	96.55	111.00
8	H	66	PHE	N-CA-C	5.35	125.44	111.00
59	33	232	PHE	CG-CD1-CE1	-5.34	114.93	120.80
57	31	19	G	N9-C1'-C2'	5.29	120.87	114.00
49	23	4	LEU	CA-CB-CG	5.29	127.46	115.30
59	33	210	GLU	CA-CB-CG	-5.27	101.81	113.40
42	16	105	GLY	N-CA-C	-5.25	99.97	113.10
53	27	746	U	N1-C1'-C2'	5.25	120.83	114.00
52	26	1504	G	N9-C1'-C2'	5.23	120.80	114.00
59	33	67	SER	O-C-N	-5.22	114.34	122.70
26	Z	41	HIS	N-CA-C	-5.20	96.96	111.00
33	7	105	VAL	N-CA-C	-5.20	96.97	111.00
53	27	2655	G	C1'-O4'-C4'	-5.19	105.75	109.90
59	33	161	ARG	NE-CZ-NH1	5.17	122.89	120.30
7	G	118	ILE	N-CA-C	-5.15	97.09	111.00
15	O	34	GLY	N-CA-C	-5.15	100.22	113.10
52	26	572	A	N9-C1'-C2'	5.12	120.66	114.00
53	27	2134	A	O4'-C1'-N9	5.12	112.29	108.20
59	33	471	PRO	N-CA-CB	5.11	109.44	103.30
59	33	197	GLU	CG-CD-OE2	5.06	128.43	118.30
53	27	1395	A	N9-C1'-C2'	5.05	120.57	114.00
11	K	93	ASN	N-CA-C	-5.05	97.36	111.00
59	33	555	GLN	N-CA-C	-5.05	97.37	111.00
42	16	115	LYS	N-CA-C	-5.03	97.42	111.00
53	27	2529	G	N9-C1'-C2'	5.03	120.53	114.00
7	G	107	GLU	N-CA-C	-5.01	97.48	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	28	87	U	N1-C1'-C2'	5.00	120.51	114.00

There are no chirality outliers.

All (58) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
52	26	1026	G	Sidechain
52	26	1055	A	Sidechain
52	26	1151	A	Sidechain
52	26	1167	A	Sidechain
52	26	117	G	Sidechain
52	26	1194	U	Sidechain
52	26	1299	A	Sidechain
52	26	1345	U	Sidechain
52	26	1504	G	Sidechain
52	26	159	G	Sidechain
52	26	239	U	Sidechain
52	26	266	G	Sidechain
52	26	438	U	Sidechain
52	26	529	G	Sidechain
52	26	820	U	Sidechain
52	26	898	G	Sidechain
53	27	1126	A	Sidechain
53	27	1186	G	Sidechain
53	27	1241	A	Sidechain
53	27	1251	C	Sidechain
53	27	1663	G	Sidechain
53	27	1769	U	Sidechain
53	27	1784	A	Sidechain
53	27	1802	A	Sidechain
53	27	1937	A	Sidechain
53	27	196	A	Sidechain
53	27	1961	C	Sidechain
53	27	1981	A	Sidechain
53	27	1982	U	Sidechain
53	27	1993	U	Sidechain
53	27	2139	U	Sidechain
53	27	214	G	Sidechain
53	27	2155	U	Sidechain
53	27	2187	U	Sidechain
53	27	2273	A	Sidechain
53	27	2489	U	Sidechain

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Mol	Chain	Res	Type	Group
53	27	2516	A	Sidechain
53	27	2518	A	Sidechain
53	27	2529	G	Sidechain
53	27	2532	G	Sidechain
53	27	26	G	Sidechain
53	27	2688	G	Sidechain
53	27	2692	G	Sidechain
53	27	27	G	Sidechain
53	27	446	G	Sidechain
53	27	463	G	Sidechain
53	27	488	G	Sidechain
53	27	512	G	Sidechain
53	27	562	U	Sidechain
53	27	683	U	Sidechain
53	27	734	A	Sidechain
53	27	800	A	Sidechain
53	27	975	A	Sidechain
56	30	15	G	Sidechain
56	30	48	C	Sidechain
58	32	46	A	Sidechain
59	33	156	ARG	Sidechain
59	33	41	TYR	Sidechain

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	2082	0	2157	166	0
2	B	1565	0	1616	126	0
3	C	1552	0	1619	123	0
4	D	1410	0	1447	111	0
5	E	1323	0	1374	81	0
6	F	1111	0	1148	85	0
7	G	988	0	1025	114	0
8	H	1032	0	1088	101	0
9	I	1129	0	1162	73	0
10	J	938	0	1012	59	0
11	K	1045	0	1117	85	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
12	L	1074	0	1157	67	0
13	M	960	0	1000	65	0
14	N	892	0	923	68	0
15	O	917	0	965	75	0
16	P	947	0	1022	82	0
17	Q	816	0	839	86	0
18	R	857	0	922	47	0
19	S	738	0	807	48	0
20	T	779	0	834	50	0
21	U	753	0	780	49	0
22	V	575	0	592	35	0
23	W	625	0	655	39	0
24	X	509	0	543	33	0
25	Y	449	0	491	18	0
26	Z	522	0	521	46	0
27	1	444	0	461	39	0
28	2	409	0	440	25	0
29	3	377	0	418	35	0
30	4	504	0	574	41	0
31	5	302	0	343	33	0
32	6	1704	0	1732	105	0
33	7	1624	0	1699	111	0
34	8	1643	0	1710	145	0
35	9	1156	0	1199	122	0
36	10	817	0	808	74	0
37	11	1181	0	1240	74	0
38	12	979	0	1034	70	0
39	13	1022	0	1070	109	0
40	14	786	0	828	82	0
41	15	869	0	878	90	0
42	16	955	0	1019	97	0
43	17	883	0	944	77	0
44	18	805	0	847	104	0
45	19	714	0	737	31	0
46	20	649	0	666	70	0
47	21	648	0	691	64	0
48	22	535	0	552	51	0
49	23	637	0	665	55	0
50	24	665	0	714	60	0
51	25	544	0	579	72	0
52	26	33016	0	16617	1357	0
53	27	62322	0	31345	2394	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
54	28	2572	0	1302	112	0
55	29	432	0	218	15	0
56	30	1623	0	821	58	0
57	31	1644	0	836	33	0
58	32	1643	0	836	78	0
59	33	4911	0	4550	627	0
All	All	154603	0	105189	7602	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 29.

All (7602) 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)
59:33:188:ARG:NH1	59:33:377:LEU:HA	1.23	1.40
59:33:24:LEU:HD21	59:33:70:SER:HA	1.19	1.16
59:33:17:PRO:HB3	59:33:39:TRP:NE1	1.58	1.15
34:8:84:ASN:HD22	34:8:87:GLU:HG3	0.98	1.15
59:33:188:ARG:NH1	59:33:377:LEU:CA	2.09	1.14
36:10:6:ILE:HD11	36:10:71:ILE:HD11	1.28	1.12
59:33:65:ILE:HG21	59:33:157:ILE:HD11	1.31	1.11
56:30:41:C:H2'	56:30:42:C:H5"	1.29	1.10
40:14:7:ARG:HH12	52:26:1125:U:H4'	1.17	1.09
53:27:45:G:H5"	53:27:46:G:H5'	1.14	1.08
26:Z:61:ASN:HA	26:Z:64:PHE:HB2	1.24	1.08
59:33:63:VAL:HG11	59:33:80:LEU:HG	1.34	1.08
7:G:62:ARG:HH12	53:27:1106:G:H5"	0.94	1.07
53:27:2092:U:H4'	53:27:2093:G:H5"	1.35	1.07
29:3:7:PRO:HB2	53:27:1309:G:H4'	1.37	1.06
59:33:31:SER:HB3	59:33:73:ILE:HG21	1.38	1.06
9:I:81:ILE:HG23	9:I:82:GLY:H	1.14	1.05
54:28:3:C:H2'	54:28:4:C:H5"	1.31	1.04
56:30:7:A:H3'	56:30:8:U:H5"	1.38	1.03
51:25:9:GLU:HG2	51:25:10:PRO:HD3	1.40	1.03
59:33:59:GLY:HA2	59:33:82:PHE:CE1	1.92	1.03
11:K:95:LEU:HD22	11:K:100:ILE:HD11	1.35	1.02
59:33:188:ARG:HH12	59:33:377:LEU:CA	1.71	1.02
11:K:18:ARG:HH22	53:27:1249:U:H2'	1.24	1.01
34:8:190:LEU:HD12	34:8:192:ALA:H	1.24	1.01
53:27:275:C:H2'	53:27:276:U:H4'	1.38	1.01
57:31:75:C:H3'	57:31:76:A:H5"	1.42	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:97:ASN:HB2	3:C:100:MET:HG2	1.43	1.01
59:33:232:PHE:CE1	59:33:329:PRO:HD2	1.97	1.00
53:27:1868:C:H3'	53:27:1869:G:H5"	1.40	1.00
23:W:17:ARG:HE	23:W:23:ALA:HB2	1.24	0.99
29:3:34:ARG:HE	29:3:39:ARG:HD2	1.22	0.99
59:33:77:ARG:HH12	59:33:103:VAL:HG21	1.24	0.99
17:Q:65:ALA:HB3	17:Q:95:ASP:HB2	1.43	0.99
3:C:127:GLU:HB2	3:C:133:LEU:HD13	1.43	0.99
48:22:11:ARG:HD3	52:26:845:A:H1'	1.44	0.99
59:33:66:LEU:HD12	59:33:79:ALA:HB2	1.44	0.98
59:33:44:GLN:HB3	59:33:45:GLN:HB2	1.46	0.98
33:7:171:ARG:HG2	33:7:173:PRO:HD3	1.47	0.97
59:33:696:GLY:HA3	59:33:713:THR:H	1.29	0.97
7:G:62:ARG:NH1	53:27:1106:G:H5"	1.78	0.97
34:8:30:LYS:HD3	52:26:429:U:H6	1.29	0.97
13:M:2:ARG:HA	13:M:5:LYS:HD3	1.47	0.96
37:11:111:GLY:HA2	37:11:118:ARG:HD3	1.47	0.96
43:17:38:ILE:HD11	43:17:51:GLN:HB3	1.47	0.96
34:8:84:ASN:ND2	34:8:87:GLU:HG3	1.80	0.96
8:H:21:PRO:HB2	8:H:22:PRO:HD3	1.47	0.95
53:27:2629:U:O2'	53:27:2630:G:H5"	1.65	0.95
58:32:69:C:H2'	58:32:70:G:H5"	1.48	0.95
53:27:1801:A:H5"	53:27:2203:U:H2'	1.49	0.95
59:33:574:ALA:HB2	59:33:680:LEU:HD21	1.46	0.95
59:33:62:MET:CE	59:33:79:ALA:HA	1.97	0.95
42:16:73:LEU:HD21	42:16:79:ILE:HG21	1.47	0.94
53:27:1304:A:H2'	53:27:1305:C:H5"	1.48	0.94
59:33:49:HIS:HB3	59:33:50:PRO:HD2	1.47	0.94
59:33:95:LEU:O	59:33:99:VAL:HG12	1.66	0.94
16:P:3:VAL:HG22	53:27:1199:U:H1'	1.49	0.94
52:26:1130:A:H61	52:26:1144:G:H1'	1.29	0.94
37:11:69:ARG:HG2	37:11:95:ARG:HG2	1.46	0.94
53:27:1936:A:H2	53:27:1943:U:H3	1.06	0.94
16:P:54:ARG:HE	53:27:1155:A:H5"	1.33	0.93
52:26:1206:G:H2'	52:26:1207:G:H5"	1.50	0.93
59:33:169:ASP:O	59:33:170:GLU:HG3	1.67	0.93
38:12:28:SER:HB3	38:12:56:PRO:HB2	1.50	0.93
6:F:76:GLU:HA	6:F:142:VAL:HG13	1.51	0.93
32:6:33:ALA:HB2	32:6:39:ILE:HG13	1.49	0.93
50:24:23:ARG:HH21	52:26:176:C:H5"	1.32	0.93
59:33:327:LEU:HA	59:33:332:LYS:HA	1.49	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:U:86:LEU:HD23	21:U:89:ILE:HD11	1.50	0.93
48:22:33:THR:HG23	48:22:35:SER:H	1.34	0.93
56:30:51:U:H2'	56:30:52:G:C8	2.04	0.92
56:30:54:U:H3'	56:30:55:U:H5"	1.51	0.92
2:B:5:VAL:H	2:B:32:ASN:HD21	1.03	0.92
34:8:146:GLU:HA	34:8:149:LYS:HB2	1.52	0.92
53:27:2443:C:H2'	53:27:2444:G:H8	1.33	0.92
9:I:80:HIS:HD1	9:I:81:ILE:HG22	1.33	0.92
54:28:65:U:H3'	54:28:108:A:H61	1.32	0.92
1:A:180:MET:HB2	1:A:268:ARG:HB3	1.52	0.91
18:R:73:LYS:HB2	18:R:106:VAL:HB	1.51	0.91
52:26:411:A:H61	52:26:430:A:H62	1.17	0.91
7:G:62:ARG:HH12	53:27:1106:G:C5'	1.83	0.90
53:27:1454:C:HO2'	53:27:1455:G:H8	1.12	0.90
59:33:38:THR:HG21	59:33:77:ARG:HB3	1.53	0.90
52:26:1412:C:H2'	52:26:1413:A:H8	1.35	0.90
53:27:807:U:H2'	53:27:808:G:H8	1.36	0.90
26:Z:42:PRO:HB2	26:Z:46:GLY:HA3	1.51	0.90
59:33:214:ILE:HD11	59:33:260:TRP:HE3	1.35	0.90
59:33:670:ARG:HB2	59:33:741:LEU:HD12	1.50	0.90
48:22:11:ARG:HG3	48:22:12:PHE:H	1.37	0.90
35:9:137:ARG:HH12	52:26:1078:U:H4'	1.34	0.90
6:F:97:ARG:HH11	6:F:112:LYS:HD2	1.37	0.90
53:27:581:C:H2'	53:27:582:A:C8	2.07	0.90
53:27:821:A:H5"	53:27:822:G:H5"	1.52	0.90
53:27:612:G:H1'	53:27:616:A:H61	1.35	0.89
53:27:2111:U:H3	53:27:2147:A:H1'	1.38	0.89
53:27:1664:A:H61	53:27:1996:C:H42	1.18	0.89
10:J:65:THR:HG22	10:J:67:LYS:H	1.36	0.89
27:1:37:HIS:HB3	27:1:43:THR:HG22	1.54	0.89
53:27:2208:C:H2'	53:27:2209:G:C8	2.08	0.89
31:5:19:ARG:HH12	31:5:26:ILE:HD11	1.38	0.89
58:32:36:U:H2'	58:32:37:A:H5'	1.54	0.89
53:27:581:C:H2'	53:27:582:A:H8	1.38	0.88
10:J:121:GLU:HG2	10:J:122:VAL:HG23	1.55	0.88
42:16:98:ARG:HH21	42:16:106:VAL:HA	1.35	0.88
52:26:1512:U:H2'	52:26:1513:A:C8	2.08	0.88
13:M:63:ARG:HA	13:M:80:PHE:HE2	1.35	0.88
7:G:118:ILE:HB	7:G:119:PRO:HD3	1.55	0.88
46:20:14:ARG:HH12	52:26:618:C:H1'	1.38	0.88
39:13:23:GLY:H	39:13:60:LEU:HA	1.39	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:28:3:C:C2'	54:28:4:C:H5"	2.03	0.88
59:33:81:LEU:HA	59:33:84:LEU:HD13	1.54	0.88
59:33:82:PHE:CG	59:33:83:PRO:HD3	2.08	0.88
3:C:143:LEU:HB3	3:C:146:VAL:HG11	1.53	0.88
14:N:49:VAL:HG21	14:N:82:ALA:HA	1.56	0.88
53:27:582:A:H2'	53:27:583:G:C8	2.09	0.88
42:16:109:ARG:NH1	52:26:537:G:H5"	1.89	0.88
59:33:676:ARG:HG3	59:33:677:SER:H	1.35	0.88
59:33:284:GLU:OE2	59:33:341:LYS:HE2	1.74	0.87
53:27:690:G:H2'	53:27:691:C:H6	1.38	0.87
59:33:24:LEU:CD2	59:33:70:SER:HA	2.02	0.87
59:33:62:MET:HE3	59:33:79:ALA:HA	1.56	0.87
35:9:83:PRO:HB3	35:9:96:GLN:HG3	1.55	0.87
53:27:2604:U:H2'	53:27:2605:U:H6	1.40	0.87
56:30:41:C:C2'	56:30:42:C:H5"	2.04	0.87
59:33:96:ARG:HG2	59:33:104:VAL:HG11	1.54	0.87
59:33:143:VAL:HG22	59:33:145:ASP:H	1.37	0.87
12:L:53:MET:HE3	12:L:63:ILE:HD13	1.55	0.87
18:R:29:VAL:HG11	18:R:55:ILE:HD11	1.55	0.87
52:26:767:A:H2'	52:26:768:A:H8	1.39	0.87
59:33:63:VAL:HG11	59:33:80:LEU:CG	2.05	0.87
53:27:2537:U:H2'	53:27:2538:C:C6	2.10	0.87
54:28:44:G:H1'	54:28:47:C:H42	1.39	0.87
59:33:20:TRP:CE2	59:33:63:VAL:HB	2.10	0.87
10:J:103:VAL:HG12	10:J:104:THR:H	1.39	0.86
29:3:34:ARG:NE	29:3:39:ARG:HD2	1.88	0.86
53:27:878:A:H3'	53:27:879:G:H8	1.40	0.86
59:33:175:ALA:HA	59:33:178:CYS:SG	2.14	0.86
52:26:695:A:H2'	52:26:696:A:C8	2.10	0.86
8:H:108:ILE:O	8:H:112:LYS:HB3	1.75	0.86
38:12:11:THR:HG21	52:26:876:C:H1'	1.56	0.86
53:27:1326:U:H2'	53:27:1327:A:H8	1.39	0.86
58:32:46:A:H2'	58:32:47:U:H5"	1.58	0.86
53:27:1779:U:H5"	53:27:1780:A:H5"	1.58	0.86
45:19:71:ARG:NH2	52:26:754:C:H5'	1.91	0.86
54:28:88:C:H5"	54:28:89:U:OP1	1.76	0.86
53:27:1434:A:H2'	53:27:1435:G:C8	2.08	0.86
59:33:91:SER:O	59:33:94:VAL:HG12	1.76	0.86
53:27:1857:G:H1'	53:27:1885:A:H61	1.39	0.86
59:33:300:TYR:CE1	59:33:329:PRO:HD3	2.10	0.86
43:17:25:GLY:H	52:26:1329:A:H5"	1.37	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:61:LEU:HA	30:4:26:ALA:HB2	1.58	0.85
47:21:5:ARG:NH2	52:26:128:G:H5'	1.90	0.85
8:H:73:PRO:HB2	8:H:78:LEU:HD11	1.58	0.85
13:M:55:ALA:HA	13:M:80:PHE:CE1	2.12	0.85
39:13:51:LEU:HD11	39:13:62:LEU:HD11	1.58	0.85
53:27:2508:G:H2'	53:27:2509:G:H8	1.40	0.85
59:33:74:ASP:HA	59:33:77:ARG:NH2	1.91	0.85
59:33:225:ARG:HD2	59:33:276:VAL:HG13	1.56	0.85
6:F:78:VAL:HG21	6:F:103:VAL:HG22	1.58	0.85
41:15:88:PRO:HD3	51:25:28:LEU:HD13	1.57	0.85
59:33:20:TRP:CH2	59:33:76:LEU:HB3	2.11	0.85
4:D:114:ARG:HE	43:17:70:ARG:HH21	1.25	0.85
4:D:130:GLY:HA3	53:27:2305:U:H5"	1.58	0.85
36:10:88:MET:HG2	48:22:64:LEU:HD21	1.58	0.85
59:33:17:PRO:HG3	59:33:39:TRP:CZ2	2.12	0.85
59:33:197:GLU:HG2	59:33:201:TYR:CE2	2.12	0.85
59:33:61:GLU:O	59:33:64:GLU:HG2	1.76	0.85
27:1:54:ILE:HG23	27:1:56:LYS:H	1.41	0.85
26:Z:66:ILE:HD11	44:18:38:GLU:HA	1.58	0.85
53:27:582:A:H2'	53:27:583:G:H8	1.40	0.85
59:33:293:LEU:HD12	59:33:322:ILE:HG21	1.59	0.84
52:26:1130:A:N6	52:26:1144:G:H1'	1.93	0.84
4:D:3:LEU:HA	4:D:6:TYR:HB3	1.58	0.84
52:26:1259:C:H3'	52:26:1260:G:H5"	1.58	0.84
53:27:2136:G:O6	53:27:2156:G:H1'	1.78	0.84
53:27:528:A:C2	53:27:2042:A:H2'	2.13	0.84
53:27:955:U:H5	53:27:962:G:H1	1.24	0.84
41:15:121:ARG:HH21	51:25:35:GLU:HG2	1.43	0.84
52:26:1062:U:H2'	52:26:1063:C:C6	2.12	0.84
44:18:60:ARG:HG2	52:26:981:U:H4'	1.58	0.84
52:26:628:G:H2'	52:26:629:A:H8	1.43	0.84
34:8:8:LEU:HD21	34:8:31:CYS:HB3	1.60	0.83
52:26:405:U:H3'	52:26:406:G:H5'	1.58	0.83
52:26:1144:G:H21	52:26:1146:A:H62	1.22	0.83
40:14:57:VAL:HG22	40:14:58:ASN:H	1.42	0.83
52:26:714:G:H2'	52:26:715:A:C8	2.13	0.83
52:26:628:G:H2'	52:26:629:A:C8	2.14	0.83
5:E:176:LYS:HD3	53:27:2660:A:N6	1.92	0.83
41:15:34:THR:HG22	41:15:40:ALA:HA	1.60	0.83
43:17:100:ARG:HH22	52:26:950:U:H3'	1.44	0.83
11:K:62:PRO:HD3	30:4:26:ALA:HB2	1.61	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:463:ILE:H	59:33:463:ILE:HD12	1.44	0.83
23:W:17:ARG:NE	23:W:23:ALA:HB2	1.94	0.83
44:18:12:ARG:HD3	44:18:58:ARG:O	1.77	0.83
53:27:1101:U:H2'	53:27:1102:C:H5'	1.59	0.82
59:33:30:LYS:O	59:33:33:GLU:HG2	1.79	0.82
8:H:109:ALA:O	8:H:113:ALA:HB3	1.78	0.82
17:Q:49:ILE:HB	17:Q:51:VAL:O	1.79	0.82
9:I:81:ILE:HG23	9:I:82:GLY:N	1.92	0.82
34:8:97:LEU:HB2	34:8:134:TYR:HB3	1.61	0.82
59:33:147:ARG:HA	59:33:150:VAL:HG12	1.60	0.82
40:14:5:ARG:HG2	40:14:79:PRO:HB3	1.61	0.82
48:22:41:SER:HB3	48:22:51:GLN:HE21	1.42	0.82
52:26:960:U:H4'	52:26:961:U:O5'	1.80	0.82
59:33:188:ARG:HH11	59:33:377:LEU:HA	1.41	0.82
53:27:1111:A:O2'	53:27:1112:G:H4'	1.79	0.82
22:V:62:LYS:HB3	22:V:79:GLU:HB3	1.62	0.82
49:23:31:ARG:HD3	59:33:602:VAL:HG21	1.61	0.82
2:B:49:GLN:NE2	2:B:79:LEU:HD13	1.95	0.82
8:H:85:ILE:HD13	8:H:137:LEU:HD21	1.62	0.82
52:26:1219:A:H2'	52:26:1220:G:H8	1.45	0.82
22:V:33:ILE:HG22	22:V:34:VAL:HG23	1.62	0.81
38:12:80:PRO:HG2	52:26:878:A:H5"	1.62	0.81
53:27:184:C:H2'	53:27:185:G:H8	1.44	0.81
53:27:2604:U:H2'	53:27:2605:U:C6	2.14	0.81
59:33:65:ILE:HG21	59:33:157:ILE:CD1	2.09	0.81
53:27:1821:A:H2'	53:27:1822:C:C6	2.15	0.81
21:U:75:GLN:HB2	21:U:92:VAL:HG23	1.61	0.81
35:9:107:GLY:HA3	52:26:9:G:H5'	1.63	0.81
52:26:392:C:H2'	52:26:393:A:H8	1.45	0.81
52:26:1171:A:H2'	52:26:1172:C:C6	2.15	0.81
52:26:1219:A:H2'	52:26:1220:G:C8	2.15	0.81
53:27:2443:C:H2'	53:27:2444:G:C8	2.13	0.81
19:S:2:ILE:HD11	53:27:144:A:H5"	1.62	0.81
40:14:62:ARG:HH12	52:26:1367:C:H5'	1.45	0.81
52:26:352:C:H4'	52:26:354:G:OP1	1.79	0.81
53:27:1300:G:H4'	53:27:1301:A:H5'	1.62	0.81
1:A:149:LYS:HD3	53:27:2204:G:H4'	1.60	0.81
59:33:43:LEU:HG	59:33:44:GLN:OE1	1.81	0.81
59:33:599:VAL:HA	59:33:655:ALA:HB2	1.61	0.81
53:27:2174:C:H2'	53:27:2175:C:H5'	1.61	0.81
59:33:58:ARG:O	59:33:61:GLU:HG2	1.81	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1352:C:H2'	52:26:1353:G:C8	2.15	0.81
8:H:88:GLY:HA3	53:27:1063:G:O2'	1.81	0.80
40:14:8:ILE:HB	40:14:74:VAL:HB	1.60	0.80
53:27:807:U:H2'	53:27:808:G:C8	2.15	0.80
59:33:696:GLY:HA3	59:33:713:THR:N	1.95	0.80
8:H:55:PRO:HD3	8:H:74:PRO:HD3	1.62	0.80
53:27:2817:U:H3'	53:27:2818:U:H5"	1.61	0.80
4:D:43:ILE:HG21	4:D:78:ILE:HG22	1.64	0.80
6:F:32:PRO:HB3	23:W:38:TRP:HB2	1.61	0.80
13:M:55:ALA:HA	13:M:80:PHE:HE1	1.44	0.80
52:26:85:U:H5"	52:26:86:G:H5'	1.63	0.80
52:26:1412:C:H2'	52:26:1413:A:C8	2.16	0.80
53:27:884:U:H4'	59:33:612:CYS:SG	2.22	0.80
54:28:93:C:H2'	54:28:94:A:H8	1.46	0.80
42:16:73:LEU:HD11	42:16:103:CYS:HA	1.63	0.80
59:33:24:LEU:HD21	59:33:70:SER:CA	2.07	0.80
15:O:29:VAL:HG13	15:O:79:VAL:HG22	1.61	0.80
36:10:51:ILE:HD13	36:10:86:ARG:HH12	1.47	0.80
37:11:113:LYS:NZ	52:26:1297:G:H1'	1.96	0.80
57:31:75:C:H3'	57:31:76:A:C5'	2.11	0.80
59:33:188:ARG:HH11	59:33:377:LEU:CA	1.94	0.80
9:I:35:ARG:HA	9:I:40:HIS:HD2	1.46	0.80
53:27:2788:C:H2'	53:27:2789:C:C6	2.16	0.80
3:C:146:VAL:HG12	3:C:185:LYS:HB2	1.64	0.80
6:F:27:ARG:HE	23:W:55:MET:HE2	1.46	0.80
31:5:36:ARG:HG2	31:5:37:GLN:N	1.98	0.79
52:26:35:G:H2'	52:26:36:C:C6	2.17	0.79
52:26:56:U:H2'	52:26:57:G:H8	1.46	0.79
37:11:50:ALA:HB2	37:11:57:GLU:HG2	1.64	0.79
53:27:878:A:H3'	53:27:879:G:C8	2.16	0.79
59:33:621:ILE:HG22	59:33:635:ARG:HA	1.65	0.79
59:33:721:VAL:HG13	59:33:724:ARG:HE	1.47	0.79
41:15:87:GLY:N	41:15:113:THR:HG22	1.98	0.79
52:26:1206:G:C2'	52:26:1207:G:H5"	2.11	0.79
53:27:1503:A:H3'	53:27:1504:A:H5"	1.63	0.79
11:K:57:LEU:HB2	11:K:60:ARG:HH11	1.45	0.79
17:Q:6:GLN:HE21	17:Q:9:GLY:HA2	1.47	0.79
53:27:851:C:H2'	53:27:852:U:C6	2.17	0.79
59:33:45:GLN:HG2	59:33:46:THR:HG23	1.63	0.79
51:25:36:PHE:HB2	51:25:39:LYS:HB3	1.64	0.79
53:27:1293:C:H2'	53:27:1294:U:H5"	1.64	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2060:A:H3'	53:27:2060:A:N3	1.97	0.79
53:27:2188:U:H2'	53:27:2189:U:O4'	1.82	0.79
50:24:55:PRO:HG2	50:24:56:ILE:HD12	1.65	0.79
52:26:835:U:H2'	52:26:836:G:H5"	1.62	0.79
53:27:1061:U:H5'	53:27:1070:A:H1'	1.62	0.79
53:27:848:C:H2'	53:27:849:A:H8	1.48	0.78
59:33:17:PRO:HG3	59:33:39:TRP:HZ2	1.46	0.78
40:14:36:VAL:HG22	40:14:38:GLY:H	1.48	0.78
52:26:673:A:H2'	52:26:674:G:C8	2.18	0.78
52:26:1170:A:H2'	52:26:1171:A:O4'	1.83	0.78
59:33:159:HIS:O	59:33:163:VAL:HB	1.83	0.78
13:M:30:ARG:HH11	13:M:75:ILE:HD11	1.47	0.78
53:27:2292:U:H2'	53:27:2293:G:H8	1.48	0.78
16:P:27:ARG:HH12	53:27:532:A:H5"	1.46	0.78
46:20:67:ILE:HD12	46:20:67:ILE:H	1.48	0.78
53:27:2296:U:H5"	53:27:2297:A:OP1	1.83	0.78
54:28:95:U:H2'	54:28:96:G:C8	2.18	0.78
48:22:17:VAL:HG12	48:22:18:GLN:HG3	1.64	0.78
1:A:77:VAL:HG21	1:A:109:LEU:HD11	1.65	0.78
1:A:209:ALA:HA	1:A:212:TRP:CE2	2.19	0.78
12:L:45:GLN:NE2	53:27:2485:G:H5"	1.98	0.78
46:20:6:LEU:HD22	46:20:17:TYR:HB3	1.64	0.78
47:21:5:ARG:HH22	52:26:128:G:H5'	1.48	0.78
12:L:33:LEU:HD11	12:L:121:ALA:HB2	1.66	0.78
13:M:96:ARG:HH22	13:M:116:VAL:HG13	1.49	0.78
19:S:8:LEU:HD22	24:X:22:LEU:HA	1.65	0.78
41:15:33:ILE:HG22	41:15:41:LEU:HD12	1.65	0.78
41:15:126:ARG:NH2	52:26:692:U:H5"	1.98	0.78
59:33:293:LEU:HD11	59:33:307:PHE:HE2	1.49	0.78
20:T:27:VAL:HA	20:T:33:VAL:HG12	1.64	0.78
28:2:46:VAL:HG12	28:2:47:ILE:H	1.48	0.78
50:24:28:ARG:O	50:24:32:LYS:HG2	1.83	0.78
53:27:546:U:H2'	53:27:547:A:C8	2.19	0.78
59:33:59:GLY:HA2	59:33:82:PHE:CZ	2.18	0.78
7:G:3:LEU:HD12	7:G:5:LEU:H	1.49	0.78
9:I:81:ILE:CG2	9:I:82:GLY:H	1.96	0.78
35:9:63:MET:HB3	35:9:67:ARG:HH12	1.48	0.78
38:12:28:SER:HB2	38:12:58:LEU:HB2	1.66	0.78
39:13:91:GLU:HA	39:13:94:ARG:HB2	1.64	0.78
53:27:193:U:H2'	53:27:194:G:H8	1.47	0.78
20:T:45:GLN:O	53:27:483:A:H4'	1.83	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:15:84:MET:HG2	41:15:110:THR:HB	1.65	0.78
44:18:66:THR:HB	52:26:1202:U:O2'	1.84	0.78
52:26:112:G:H21	52:26:354:G:H5'	1.49	0.78
52:26:1088:G:H21	52:26:1167:A:H61	1.30	0.78
59:33:43:LEU:HA	59:33:56:LEU:HD12	1.65	0.78
59:33:293:LEU:HD11	59:33:307:PHE:CE2	2.19	0.78
9:I:65:THR:HG22	9:I:66:GLY:H	1.48	0.77
31:5:33:HIS:O	31:5:35:GLN:HG3	1.84	0.77
52:26:549:C:H2'	52:26:550:G:H5"	1.65	0.77
53:27:1434:A:H2'	53:27:1435:G:H8	1.49	0.77
56:30:7:A:H3'	56:30:8:U:C5'	2.12	0.77
59:33:59:GLY:HA2	59:33:82:PHE:HE1	1.45	0.77
46:20:10:GLY:HA2	52:26:624:C:H4'	1.66	0.77
43:17:100:ARG:NH2	52:26:950:U:H3'	1.99	0.77
53:27:1341:G:H2'	53:27:1397:U:O2	1.84	0.77
58:32:38:A:H2'	58:32:39:C:O4'	1.84	0.77
52:26:151:A:H2'	52:26:152:A:O4'	1.85	0.77
53:27:215:G:H4'	53:27:216:A:H4'	1.66	0.77
53:27:1096:A:H3'	53:27:1097:U:H5"	1.63	0.77
53:27:1584:U:H2'	53:27:1585:C:H5'	1.66	0.77
3:C:105:LEU:HD23	3:C:108:ILE:HD12	1.67	0.77
35:9:22:LYS:HB3	35:9:29:ILE:HG22	1.65	0.77
52:26:830:G:H2'	52:26:831:A:H8	1.49	0.77
53:27:580:U:H2'	53:27:581:C:C6	2.20	0.77
58:32:69:C:C2'	58:32:70:G:H5"	2.13	0.77
6:F:9:VAL:HB	6:F:13:GLY:HA2	1.67	0.77
52:26:1397:C:N4	55:29:22:A:H2'	1.99	0.77
53:27:2114:A:H3'	53:27:2115:G:H5"	1.66	0.77
59:33:77:ARG:NH1	59:33:103:VAL:HG21	1.98	0.77
2:B:5:VAL:H	2:B:32:ASN:ND2	1.81	0.77
6:F:26:ALA:HA	6:F:30:LEU:HB2	1.67	0.77
9:I:140:LEU:HD23	9:I:141:ASP:N	2.00	0.77
18:R:83:LYS:HD3	18:R:95:ARG:HH12	1.49	0.77
32:6:156:LEU:HD11	32:6:178:LEU:HD13	1.66	0.77
50:24:73:ARG:HH22	52:26:263:A:P	2.08	0.77
54:28:44:G:H1'	54:28:47:C:N4	1.99	0.77
58:32:65:C:H2'	58:32:66:C:C6	2.19	0.77
59:33:63:VAL:HG12	59:33:79:ALA:HB3	1.67	0.77
2:B:148:GLN:HB2	2:B:152:PRO:HG2	1.64	0.77
41:15:23:HIS:HB3	41:15:30:ILE:HB	1.65	0.77
52:26:1305:G:HO2'	52:26:1306:A:H8	1.31	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1304:A:C2'	53:27:1305:C:H5"	2.14	0.77
59:33:17:PRO:HB3	59:33:39:TRP:CE2	2.20	0.77
7:G:11:ILE:HD12	7:G:66:GLY:HA3	1.65	0.77
34:8:205:LYS:HA	52:26:8:A:N7	2.00	0.77
39:13:33:SER:HB3	39:13:36:GLN:HG2	1.66	0.77
53:27:779:U:H2'	53:27:780:G:C8	2.20	0.77
39:13:123:ARG:HD3	39:13:124:PRO:HD2	1.67	0.76
52:26:70:U:H5"	52:26:71:A:OP1	1.83	0.76
52:26:212:G:H2'	52:26:213:G:H8	1.50	0.76
59:33:327:LEU:HD23	59:33:332:LYS:CB	2.15	0.76
39:13:123:ARG:HB3	52:26:1343:G:H4'	1.67	0.76
41:15:126:ARG:HH21	52:26:692:U:H5"	1.48	0.76
44:18:100:TRP:HZ2	52:26:1368:A:H5"	1.50	0.76
45:19:69:LEU:HD11	45:19:76:ARG:HD2	1.67	0.76
50:24:9:ARG:HG2	52:26:108:G:N1	2.00	0.76
53:27:2065:C:H2'	53:27:2066:C:C6	2.20	0.76
59:33:101:LYS:HE3	59:33:105:ASN:HD21	1.51	0.76
8:H:60:VAL:HA	8:H:66:PHE:HB3	1.66	0.76
34:8:131:ILE:HD12	34:8:134:TYR:HB2	1.64	0.76
35:9:137:ARG:NH1	52:26:1078:U:H4'	2.00	0.76
44:18:92:ILE:H	44:18:92:ILE:HD12	1.50	0.76
53:27:184:C:H2'	53:27:185:G:C8	2.19	0.76
53:27:283:G:H3'	53:27:284:U:H5"	1.68	0.76
59:33:57:TRP:O	59:33:60:VAL:HG22	1.84	0.76
59:33:315:LYS:HB3	59:33:316:PRO:HD2	1.67	0.76
7:G:114:GLU:HG3	7:G:115:GLY:H	1.50	0.76
41:15:17:ASP:HB2	41:15:36:ARG:HH22	1.51	0.76
52:26:884:U:H4'	52:26:885:G:H5"	1.68	0.76
59:33:292:ALA:O	59:33:296:VAL:HG13	1.84	0.76
8:H:72:THR:HG21	8:H:112:LYS:HA	1.68	0.76
12:L:42:THR:HA	12:L:93:VAL:HG12	1.66	0.76
37:11:142:ARG:HD2	58:32:41:C:O2'	1.85	0.76
52:26:516:U:H5	52:26:533:A:H62	1.34	0.76
52:26:1305:G:H22	52:26:1331:G:H2'	1.50	0.76
11:K:93:ASN:O	11:K:95:LEU:N	2.18	0.76
36:10:42:TRP:HB2	36:10:59:TYR:HB2	1.67	0.76
40:14:7:ARG:NH1	52:26:1125:U:H4'	1.96	0.76
53:27:612:G:H1'	53:27:616:A:N6	2.00	0.76
1:A:16:VAL:HB	1:A:203:VAL:HG22	1.66	0.76
2:B:118:PHE:HB2	53:27:2823:A:OP1	1.86	0.76
12:L:33:LEU:HD12	12:L:117:PHE:HB3	1.68	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:65:ILE:HG12	59:33:161:ARG:NH2	2.00	0.76
53:27:598:U:H2'	53:27:599:A:C8	2.20	0.76
53:27:1141:U:H4'	53:27:1142:A:O4'	1.86	0.76
53:27:1857:G:H1'	53:27:1885:A:N6	2.01	0.76
12:L:12:MET:HA	53:27:910:A:H62	1.50	0.76
34:8:30:LYS:HD3	52:26:429:U:C6	2.19	0.76
52:26:473:U:H2'	52:26:474:G:C8	2.21	0.76
52:26:767:A:H2'	52:26:768:A:C8	2.20	0.76
39:13:4:GLN:HE22	52:26:1131:G:H5'	1.50	0.76
59:33:99:VAL:HG13	59:33:103:VAL:HB	1.67	0.76
52:26:664:G:H22	52:26:741:G:H1	1.33	0.75
38:12:85:TYR:CE1	38:12:123:GLU:HB2	2.21	0.75
53:27:2329:U:H2'	53:27:2330:G:C8	2.20	0.75
59:33:279:VAL:CG1	59:33:336:ILE:HG12	2.17	0.75
59:33:368:SER:HA	59:33:409:PHE:CE2	2.21	0.75
6:F:44:ILE:O	6:F:48:GLU:HG3	1.86	0.75
17:Q:40:MET:HG3	17:Q:48:LYS:HA	1.67	0.75
21:U:30:ILE:HG13	21:U:40:ILE:HG13	1.69	0.75
44:18:5:MET:HB3	44:18:62:ARG:NH2	2.01	0.75
52:26:20:U:H2'	52:26:21:G:O4'	1.85	0.75
52:26:32:A:H2'	52:26:33:A:C8	2.21	0.75
52:26:114:U:H2'	52:26:115:G:C8	2.21	0.75
58:32:59:A:H5"	58:32:60:U:C5	2.22	0.75
7:G:67:THR:HG21	7:G:74:ASP:HB2	1.68	0.75
11:K:62:PRO:HB2	30:4:29:ARG:HH11	1.50	0.75
53:27:1181:U:H2'	53:27:1182:G:C8	2.22	0.75
59:33:226:GLU:O	59:33:229:ILE:HG12	1.87	0.75
35:9:149:PRO:O	35:9:152:VAL:HG22	1.87	0.75
48:22:70:THR:HG23	48:22:71:ASP:H	1.52	0.75
53:27:1550:C:H2'	53:27:1551:A:C8	2.21	0.75
53:27:2816:G:H2'	53:27:2817:U:C6	2.22	0.75
59:33:20:TRP:CD1	59:33:64:GLU:HA	2.20	0.75
59:33:183:ALA:HB3	59:33:184:PRO:HD3	1.68	0.75
33:7:64:ARG:HG2	33:7:99:GLN:HB2	1.68	0.75
35:9:105:ILE:HD11	35:9:123:LEU:HA	1.66	0.75
46:20:46:LYS:HG3	46:20:48:GLU:H	1.52	0.75
52:26:1432:G:H1'	52:26:1468:A:N6	2.02	0.75
53:27:310:A:C2'	53:27:311:A:H5"	2.17	0.75
53:27:2486:C:H2'	53:27:2487:G:H5"	1.69	0.75
59:33:634:HIS:HB3	59:33:641:LEU:HD22	1.69	0.75
9:I:35:ARG:HA	9:I:40:HIS:CD2	2.22	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:V:39:THR:H	53:27:2331:G:H4'	1.51	0.75
2:B:48:ILE:HG12	2:B:84:LEU:HD11	1.68	0.75
9:I:80:HIS:ND1	9:I:81:ILE:HG22	2.02	0.75
52:26:1513:A:H2'	52:26:1514:G:H8	1.51	0.75
34:8:120:LYS:HE3	52:26:439:U:H4'	1.69	0.74
38:12:77:VAL:HG12	38:12:84:ILE:HD12	1.68	0.74
53:27:2230:G:H2'	53:27:2231:U:C6	2.22	0.74
53:27:2498:C:O2'	53:27:2499:C:H5'	1.87	0.74
59:33:232:PHE:HE1	59:33:329:PRO:HD2	1.46	0.74
33:7:84:GLU:HA	33:7:87:ARG:HG2	1.68	0.74
53:27:690:G:H2'	53:27:691:C:C6	2.22	0.74
53:27:2591:C:H2'	53:27:2592:G:H8	1.52	0.74
29:3:24:THR:HG23	29:3:27:GLY:H	1.52	0.74
38:12:9:MET:HB2	38:12:26:MET:SD	2.27	0.74
40:14:89:ARG:HH12	40:14:90:LEU:HD12	1.52	0.74
52:26:50:A:H4'	52:26:51:A:H5'	1.67	0.74
52:26:337:G:H2'	52:26:338:A:C8	2.23	0.74
53:27:2287:A:O2'	53:27:2288:A:H2'	1.86	0.74
53:27:2328:A:H2'	53:27:2329:U:C6	2.21	0.74
59:33:20:TRP:CZ2	59:33:63:VAL:HB	2.22	0.74
59:33:188:ARG:HH12	59:33:377:LEU:HA	0.81	0.74
10:J:21:CYS:HA	10:J:41:ILE:HG22	1.69	0.74
41:15:87:GLY:H	41:15:113:THR:HG22	1.48	0.74
52:26:473:U:H2'	52:26:474:G:H8	1.51	0.74
53:27:2340:A:H5'	54:28:41:G:H21	1.53	0.74
53:27:2646:C:H2'	53:27:2647:U:O4'	1.88	0.74
59:33:20:TRP:HD1	59:33:64:GLU:HA	1.52	0.74
59:33:96:ARG:HE	59:33:104:VAL:HG21	1.52	0.74
16:P:35:PHE:CZ	16:P:39:ILE:HD11	2.23	0.74
46:20:61:VAL:HG22	46:20:67:ILE:HD11	1.67	0.74
54:28:104:A:H2'	54:28:105:G:O4'	1.88	0.74
59:33:62:MET:HE2	59:33:82:PHE:CD1	2.22	0.74
33:7:122:GLN:HB3	33:7:127:VAL:HG11	1.70	0.74
34:8:36:ALA:HA	34:8:41:GLY:HA3	1.67	0.74
37:11:113:LYS:HZ1	52:26:1297:G:H1'	1.50	0.74
39:13:14:SER:HB2	39:13:69:GLY:HA3	1.68	0.74
39:13:113:LYS:HG3	39:13:119:LYS:HA	1.70	0.74
40:14:28:THR:HG22	40:14:86:ALA:HB1	1.69	0.74
53:27:1331:G:O2'	53:27:1332:G:H5"	1.88	0.74
59:33:43:LEU:HG	59:33:44:GLN:CD	2.07	0.74
4:D:92:GLY:O	4:D:95:MET:HG2	1.87	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:40:THR:HB	6:F:43:ASN:HD22	1.52	0.74
56:30:58:A:H1'	56:30:60:U:OP2	1.86	0.74
5:E:9:VAL:HA	5:E:48:THR:HA	1.68	0.74
40:14:30:LYS:HG3	40:14:34:ALA:HA	1.70	0.74
44:18:2:LYS:HG2	52:26:1048:G:H5"	1.70	0.74
52:26:1010:U:H2'	52:26:1011:C:H6	1.51	0.74
27:1:3:GLN:HE22	27:1:6:LYS:HA	1.52	0.74
42:16:20:VAL:HG21	52:26:553:A:H5"	1.69	0.74
52:26:1513:A:H2'	52:26:1514:G:C8	2.23	0.74
53:27:12:U:H2'	53:27:13:A:H5'	1.69	0.74
53:27:2591:C:H2'	53:27:2592:G:C8	2.22	0.74
59:33:66:LEU:CD1	59:33:79:ALA:HB2	2.17	0.74
29:3:13:ASN:O	29:3:17:GLY:N	2.20	0.73
53:27:45:G:C5'	53:27:46:G:H5'	2.08	0.73
53:27:1363:C:H2'	53:27:1364:G:H8	1.51	0.73
7:G:126:LEU:HD13	7:G:129:LEU:HD21	1.70	0.73
44:18:20:PHE:HE1	44:18:47:LEU:HD11	1.52	0.73
53:27:1102:C:H2'	53:27:1103:A:C8	2.23	0.73
53:27:1441:G:H2'	53:27:1442:U:C6	2.23	0.73
53:27:1957:C:H2'	53:27:1958:C:C6	2.23	0.73
53:27:2043:C:H1'	53:27:2779:U:O4	1.88	0.73
59:33:17:PRO:HB3	59:33:39:TRP:CD1	2.22	0.73
59:33:27:THR:HG23	59:33:28:SER:H	1.52	0.73
1:A:144:GLU:HA	1:A:151:GLY:HA2	1.70	0.73
16:P:20:ALA:HA	16:P:23:TYR:CE2	2.24	0.73
40:14:66:GLU:HB3	44:18:98:ALA:HB2	1.70	0.73
51:25:13:VAL:HG13	51:25:15:LEU:HG	1.71	0.73
53:27:1565:C:O2'	53:27:1566:A:H2'	1.87	0.73
34:8:28:ASP:HB2	34:8:31:CYS:SG	2.28	0.73
59:33:31:SER:HB3	59:33:73:ILE:CG2	2.17	0.73
59:33:153:LEU:O	59:33:157:ILE:HG23	1.88	0.73
6:F:57:LYS:N	6:F:57:LYS:HD2	2.04	0.73
41:15:100:ASN:HB2	41:15:106:ILE:HD11	1.70	0.73
52:26:909:A:H2'	52:26:910:C:O4'	1.87	0.73
53:27:742:A:H2'	53:27:743:A:C8	2.23	0.73
12:L:45:GLN:HE21	53:27:2485:G:H5"	1.54	0.73
34:8:94:GLU:HA	34:8:99:ASN:ND2	2.04	0.73
45:19:87:ARG:HG3	45:19:88:ARG:H	1.54	0.73
52:26:477:C:H2'	52:26:478:A:C8	2.24	0.73
52:26:1409:C:H2'	52:26:1410:A:H8	1.54	0.73
59:33:225:ARG:CD	59:33:276:VAL:HG13	2.19	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:25:17:ARG:C	51:25:19:LYS:H	1.92	0.73
53:27:488:G:N2	53:27:491:G:H5"	2.02	0.73
53:27:1252:G:O2'	53:27:1253:A:H5"	1.87	0.73
53:27:1320:C:O2'	53:27:1321:A:H5"	1.88	0.73
53:27:2807:U:H3'	53:27:2808:G:H5"	1.69	0.73
6:F:112:LYS:HE2	53:27:2220:U:H5"	1.71	0.73
52:26:219:U:H2'	52:26:220:G:H8	1.54	0.73
53:27:208:C:H2'	53:27:209:C:H6	1.52	0.73
53:27:1370:C:H2'	53:27:1371:G:O4'	1.89	0.73
53:27:2073:C:H2'	53:27:2074:U:H6	1.51	0.73
53:27:2620:C:H2'	53:27:2621:G:H5"	1.71	0.73
56:30:19:G:N3	56:30:57:G:H1'	2.04	0.73
5:E:96:ALA:HB3	5:E:103:ASN:HB3	1.70	0.73
36:10:51:ILE:HD13	36:10:86:ARG:NH1	2.03	0.73
53:27:799:G:H5"	53:27:800:A:H2'	1.70	0.73
56:30:54:U:H3'	56:30:55:U:C5'	2.17	0.73
59:33:96:ARG:HG2	59:33:104:VAL:CG1	2.18	0.73
59:33:160:LEU:HD12	59:33:198:LEU:CD2	2.18	0.73
20:T:92:VAL:HG11	20:T:101:THR:HG23	1.68	0.73
52:26:216:U:H2'	52:26:217:C:C6	2.23	0.73
53:27:198:C:O2'	53:27:199:A:H5'	1.89	0.73
53:27:634:C:H2'	53:27:635:C:C6	2.24	0.73
53:27:833:A:H2'	53:27:834:G:C8	2.24	0.73
14:N:33:ARG:O	14:N:34:HIS:HB2	1.89	0.72
53:27:882:G:H3'	53:27:883:G:H5"	1.71	0.72
10:J:58:LEU:HD11	10:J:86:LEU:HD22	1.71	0.72
20:T:65:GLN:HE21	53:27:328:U:H4'	1.52	0.72
36:10:90:MET:HG2	36:10:91:ARG:H	1.52	0.72
52:26:359:G:H5"	59:33:451:PHE:CD2	2.24	0.72
52:26:440:C:H2'	52:26:441:A:H5"	1.69	0.72
53:27:796:C:H2'	53:27:797:G:C8	2.25	0.72
59:33:160:LEU:HD12	59:33:198:LEU:HD22	1.69	0.72
59:33:279:VAL:HG11	59:33:336:ILE:HG12	1.70	0.72
1:A:74:PRO:HG3	1:A:116:GLN:HE22	1.54	0.72
10:J:98:ARG:C	10:J:99:ILE:HD12	2.09	0.72
37:11:11:ILE:HD11	37:11:20:GLU:HB2	1.70	0.72
42:16:78:VAL:HG12	42:16:101:LEU:HD23	1.70	0.72
52:26:714:G:H2'	52:26:715:A:H8	1.54	0.72
53:27:1721:G:H2'	53:27:1738:G:H22	1.53	0.72
15:O:47:ILE:HA	15:O:96:LEU:HD12	1.70	0.72
52:26:56:U:H2'	52:26:57:G:C8	2.23	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1010:U:H2'	52:26:1011:C:C6	2.24	0.72
11:K:57:LEU:HB2	11:K:60:ARG:NH1	2.04	0.72
32:6:185:ILE:HG22	32:6:199:ILE:HB	1.71	0.72
48:22:11:ARG:HD3	52:26:845:A:C1'	2.19	0.72
52:26:413:G:H1'	52:26:428:G:N2	2.03	0.72
53:27:1258:U:H2'	53:27:1259:G:C8	2.24	0.72
53:27:1636:U:H2'	53:27:1637:A:H8	1.55	0.72
7:G:94:ARG:HH21	7:G:131:THR:HG22	1.55	0.72
27:1:3:GLN:HA	53:27:2615:U:C2	2.25	0.72
34:8:94:GLU:HG2	34:8:185:PRO:HG2	1.71	0.72
42:16:113:ARG:HE	42:16:120:ARG:HA	1.52	0.72
52:26:106:C:H2'	52:26:107:G:H8	1.54	0.72
53:27:1807:G:H2'	53:27:1808:A:H5'	1.70	0.72
59:33:66:LEU:HD12	59:33:79:ALA:CB	2.19	0.72
4:D:122:ASP:OD2	4:D:126:ASN:HB2	1.89	0.72
17:Q:14:VAL:HG23	17:Q:98:ILE:HG13	1.71	0.72
49:23:5:LYS:HG3	49:23:6:LYS:HG2	1.71	0.72
52:26:632:U:H3'	52:26:633:G:H5'	1.71	0.72
53:27:1403:A:H2'	53:27:1404:C:C6	2.24	0.72
2:B:4:LEU:HD23	2:B:29:VAL:HG11	1.69	0.72
13:M:63:ARG:HA	13:M:80:PHE:CE2	2.23	0.72
24:X:39:GLN:HE21	24:X:42:LEU:HD11	1.55	0.72
50:24:23:ARG:HH21	52:26:176:C:C5'	2.03	0.72
56:30:66:U:H2'	56:30:67:C:C6	2.24	0.72
52:26:751:U:H2'	52:26:752:G:O4'	1.90	0.72
53:27:1021:A:C8	53:27:1023:U:H1'	2.24	0.72
59:33:31:SER:CB	59:33:73:ILE:HG21	2.16	0.72
59:33:686:ILE:O	59:33:690:GLU:HB2	1.90	0.72
1:A:149:LYS:CD	53:27:2204:G:H4'	2.19	0.72
6:F:133:GLN:HE21	6:F:136:SER:HA	1.55	0.72
59:33:241:LYS:HD3	59:33:246:LYS:NZ	2.04	0.72
8:H:102:ARG:O	8:H:106:GLN:HG3	1.90	0.71
11:K:62:PRO:HD3	30:4:26:ALA:CB	2.19	0.71
33:7:13:ILE:HG22	33:7:14:VAL:HG23	1.70	0.71
51:25:65:ARG:O	51:25:66:ARG:HB2	1.90	0.71
59:33:54:LEU:HB2	59:33:57:TRP:CD1	2.25	0.71
59:33:293:LEU:O	59:33:296:VAL:HG22	1.90	0.71
12:L:30:SER:H	12:L:106:ASP:HB3	1.55	0.71
48:22:59:LYS:HD3	52:26:735:C:H5'	1.72	0.71
7:G:32:GLY:O	53:27:1055:G:H5'	1.89	0.71
27:1:3:GLN:NE2	27:1:6:LYS:HA	2.04	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:141:VAL:HA	34:8:180:THR:HA	1.71	0.71
36:10:10:VAL:HB	36:10:58:HIS:HB3	1.72	0.71
51:25:64:ALA:O	51:25:66:ARG:N	2.23	0.71
52:26:576:C:OP2	52:26:577:G:H5"	1.90	0.71
38:12:106:SER:HA	52:26:642:A:N7	2.06	0.71
52:26:75:G:H2'	52:26:76:G:C8	2.26	0.71
53:27:1066:U:H1'	53:27:1073:A:H61	1.55	0.71
53:27:1406:U:H2'	53:27:1407:G:H5"	1.72	0.71
53:27:2467:C:H2'	53:27:2468:A:O4'	1.91	0.71
54:28:115:A:H2'	54:28:116:G:C8	2.25	0.71
6:F:64:ALA:O	6:F:68:ARG:HG3	1.90	0.71
7:G:41:LEU:HB2	53:27:1082:U:O2'	1.90	0.71
13:M:90:ARG:NH2	53:27:2881:U:H5'	2.06	0.71
31:5:19:ARG:NH1	31:5:26:ILE:HD11	2.06	0.71
42:16:71:HIS:HA	42:16:98:ARG:HH12	1.55	0.71
52:26:484:G:H4'	52:26:485:U:C5'	2.19	0.71
53:27:1537:G:C6	53:27:1538:G:H1'	2.26	0.71
32:6:160:LEU:HB3	32:6:182:VAL:HG12	1.71	0.71
45:19:44:GLU:HG3	45:19:45:HIS:ND1	2.05	0.71
50:24:41:GLY:HA2	50:24:85:LEU:HD11	1.72	0.71
52:26:360:G:OP1	59:33:472:SER:HA	1.91	0.71
52:26:762:U:H2'	52:26:763:G:H8	1.54	0.71
52:26:1162:C:H2'	52:26:1163:A:H8	1.56	0.71
52:26:1402:C:H2'	52:26:1403:C:O4'	1.90	0.71
53:27:45:G:H5"	53:27:46:G:C5'	2.09	0.71
53:27:971:G:H2'	53:27:972:A:O4'	1.91	0.71
53:27:2019:A:H2	53:27:2035:G:H22	1.36	0.71
53:27:2144:G:H4'	53:27:2145:C:C5	2.25	0.71
53:27:2208:C:H2'	53:27:2209:G:H8	1.55	0.71
3:C:155:GLU:O	3:C:159:LEU:HG	1.90	0.71
30:4:61:LEU:HD13	30:4:64:ALA:HB3	1.73	0.71
52:26:1318:A:H2'	52:26:1319:A:H5'	1.71	0.71
53:27:1664:A:H61	53:27:1996:C:N4	1.89	0.71
53:27:2065:C:H2'	53:27:2066:C:H6	1.54	0.71
53:27:2710:C:H2'	53:27:2711:A:H8	1.56	0.71
59:33:20:TRP:HH2	59:33:76:LEU:HB3	1.50	0.71
59:33:88:ASN:HD22	59:33:90:VAL:HG13	1.54	0.71
59:33:327:LEU:HD23	59:33:332:LYS:CA	2.20	0.71
52:26:46:G:OP1	52:26:307:C:H4'	1.90	0.71
53:27:1447:C:H2'	53:27:1448:G:H8	1.54	0.71
53:27:1758:U:C5	53:27:2696:U:H5'	2.26	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:92:PRO:HD2	53:27:1076:C:H1'	1.73	0.71
32:6:69:VAL:HG23	32:6:160:LEU:HD11	1.72	0.71
52:26:842:U:H2'	52:26:844:G:H5'	1.73	0.71
52:26:1509:C:H2'	52:26:1510:C:H6	1.56	0.71
59:33:82:PHE:CD2	59:33:83:PRO:HD3	2.25	0.71
59:33:466:GLN:HG3	59:33:467:LYS:H	1.56	0.71
24:X:16:THR:HA	24:X:19:LEU:HD12	1.73	0.71
39:13:36:GLN:HA	39:13:40:ARG:HG3	1.72	0.71
43:17:54:THR:O	43:17:58:GLU:HG2	1.90	0.71
52:26:1109:C:H2'	52:26:1110:A:O4'	1.91	0.71
52:26:1346:A:O2'	52:26:1347:G:H4'	1.89	0.71
53:27:821:A:C5'	53:27:822:G:H5"	2.19	0.71
54:28:4:C:H6	54:28:4:C:H5'	1.56	0.71
59:33:731:GLN:HG3	59:33:732:VAL:N	2.04	0.71
3:C:90:GLN:OE1	3:C:90:GLN:N	2.23	0.70
5:E:9:VAL:HB	5:E:48:THR:HG22	1.73	0.70
11:K:135:ILE:HD12	11:K:142:ILE:HD11	1.71	0.70
34:8:171:GLU:HG2	34:8:182:LYS:HD2	1.71	0.70
51:25:3:ILE:N	51:25:19:LYS:HG2	2.05	0.70
52:26:1218:C:H2'	52:26:1219:A:C8	2.26	0.70
53:27:18:U:H2'	53:27:19:A:C8	2.26	0.70
53:27:680:C:H2'	53:27:681:G:C8	2.26	0.70
59:33:132:VAL:HG11	59:33:136:ARG:HB2	1.73	0.70
11:K:18:ARG:HH22	53:27:1249:U:C2'	2.03	0.70
14:N:24:THR:HG22	14:N:42:PRO:HD3	1.72	0.70
16:P:54:ARG:NE	53:27:1155:A:H5"	2.06	0.70
53:27:1533:C:H2'	53:27:1534:U:H5"	1.74	0.70
53:27:2545:G:H2'	53:27:2546:U:O4'	1.91	0.70
53:27:2710:C:H2'	53:27:2711:A:C8	2.26	0.70
59:33:286:LEU:HD21	59:33:343:MET:CE	2.21	0.70
12:L:26:VAL:HG12	12:L:104:GLU:HG2	1.73	0.70
34:8:84:ASN:HD22	34:8:87:GLU:CG	1.91	0.70
53:27:248:G:H5'	53:27:249:C:H5'	1.71	0.70
53:27:1297:C:OP1	53:27:2710:C:H4'	1.90	0.70
54:28:6:G:H2'	54:28:7:G:H8	1.56	0.70
59:33:327:LEU:HD23	59:33:332:LYS:HA	1.71	0.70
1:A:224:MET:O	1:A:232:GLY:HA3	1.90	0.70
14:N:38:GLN:HB3	14:N:47:VAL:HG11	1.73	0.70
35:9:76:ASN:O	35:9:78:GLY:N	2.24	0.70
41:15:116:PRO:HB2	41:15:119:GLY:H	1.57	0.70
52:26:335:C:H2'	52:26:336:A:C8	2.26	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1511:G:H2'	52:26:1512:U:O4'	1.91	0.70
53:27:248:G:C5'	53:27:249:C:H5'	2.22	0.70
59:33:64:GLU:O	59:33:68:THR:HG23	1.90	0.70
13:M:42:LYS:HZ1	53:27:2817:U:H5"	1.54	0.70
36:10:29:ILE:HG22	36:10:34:GLY:HA3	1.72	0.70
53:27:1005:C:H2'	53:27:1006:C:H6	1.55	0.70
59:33:82:PHE:CD1	59:33:83:PRO:HD3	2.25	0.70
1:A:28:PRO:HG3	1:A:62:ARG:HH21	1.55	0.70
15:O:59:THR:HG22	15:O:72:VAL:HG12	1.73	0.70
35:9:79:THR:HB	35:9:121:ASN:HD21	1.56	0.70
44:18:92:ILE:HG21	44:18:95:LEU:HD22	1.73	0.70
52:26:203:G:H1'	52:26:466:A:H2	1.57	0.70
53:27:522:A:H2'	53:27:523:C:C6	2.26	0.70
53:27:1790:C:H3'	53:27:1828:G:N2	2.07	0.70
53:27:1794:A:H2'	53:27:1795:C:H6	1.55	0.70
56:30:62:C:H2'	56:30:63:G:C8	2.27	0.70
58:32:13:C:H2'	58:32:22:G:H22	1.55	0.70
1:A:155:ARG:HD3	53:27:1818:U:H6	1.57	0.70
7:G:31:ARG:H	7:G:108:VAL:HG21	1.55	0.70
40:14:41:PRO:O	40:14:42:LEU:HB2	1.90	0.70
52:26:830:G:H2'	52:26:831:A:C8	2.25	0.70
53:27:145:C:H2'	53:27:146:A:C8	2.27	0.70
53:27:1551:A:H2'	53:27:1552:A:O4'	1.91	0.70
53:27:1709:U:H2'	53:27:1710:G:H8	1.56	0.70
59:33:74:ASP:HA	59:33:77:ARG:CZ	2.22	0.70
59:33:718:ASN:HB2	59:33:721:VAL:HG23	1.73	0.70
19:S:28:ASN:HB3	19:S:91:GLN:HE22	1.56	0.70
40:14:6:ILE:HG12	40:14:102:LEU:HD12	1.72	0.70
52:26:131:A:H2'	52:26:132:C:C6	2.27	0.70
53:27:2800:A:H3'	53:27:2801:G:C5'	2.22	0.70
53:27:2846:G:H2'	53:27:2847:U:O4'	1.92	0.70
13:M:42:LYS:NZ	53:27:2817:U:H5"	2.06	0.70
39:13:83:THR:HG21	39:13:102:PHE:HB3	1.74	0.70
53:27:1087:G:H2'	53:27:1088:A:H4'	1.74	0.70
53:27:2588:G:H2'	53:27:2589:A:O4'	1.90	0.70
1:A:106:PRO:HD2	1:A:109:LEU:HD22	1.73	0.69
30:4:61:LEU:O	30:4:61:LEU:HD12	1.92	0.69
46:20:6:LEU:HD12	52:26:375:U:H4'	1.73	0.69
48:22:9:PHE:O	48:22:11:ARG:HG2	1.92	0.69
53:27:2128:G:O6	53:27:2160:C:H2'	1.90	0.69
7:G:45:GLY:HA2	7:G:50:VAL:H	1.54	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1:53:VAL:HG23	27:1:54:ILE:H	1.57	0.69
39:13:44:ARG:O	39:13:47:VAL:HG22	1.91	0.69
52:26:1031:C:O3'	52:26:1033:G:H1'	1.91	0.69
53:27:639:U:H2'	53:27:640:C:C6	2.26	0.69
53:27:784:G:H5'	53:27:785:G:OP1	1.92	0.69
53:27:2327:A:H2'	53:27:2328:A:C8	2.27	0.69
57:31:75:C:H2'	57:31:76:A:C2	2.27	0.69
2:B:73:VAL:CG1	2:B:93:GLY:HA2	2.21	0.69
10:J:102:PRO:HG3	15:O:69:VAL:HG21	1.73	0.69
53:27:1727:C:H2'	53:27:1728:C:O4'	1.91	0.69
53:27:2789:C:H3'	53:27:2893:A:H62	1.57	0.69
54:28:66:A:N1	54:28:107:G:H2'	2.07	0.69
18:R:29:VAL:CG1	18:R:55:ILE:HD11	2.22	0.69
21:U:9:ARG:HG2	21:U:41:GLU:HB2	1.74	0.69
42:16:86:VAL:HG21	42:16:89:LEU:HB2	1.73	0.69
53:27:481:G:H1'	53:27:506:G:N2	2.08	0.69
53:27:729:G:H2'	53:27:1775:U:H1'	1.74	0.69
53:27:871:U:H2'	53:27:872:U:C6	2.26	0.69
59:33:39:TRP:CH2	59:33:43:LEU:HD22	2.27	0.69
59:33:77:ARG:HH12	59:33:99:VAL:CG2	2.04	0.69
59:33:225:ARG:O	59:33:229:ILE:HG23	1.92	0.69
11:K:18:ARG:NH2	53:27:1249:U:H2'	2.02	0.69
32:6:33:ALA:HB3	32:6:37:VAL:O	1.92	0.69
58:32:29:G:H2'	58:32:30:G:C8	2.27	0.69
58:32:37:A:H2'	58:32:38:A:O4'	1.92	0.69
59:33:274:PHE:CD1	59:33:277:ARG:NH1	2.60	0.69
1:A:206:LYS:NZ	53:27:729:G:OP2	2.25	0.69
7:G:4:ASN:HD21	7:G:8:LYS:HE3	1.58	0.69
39:13:125:GLN:NE2	52:26:942:G:H21	1.90	0.69
45:19:13:GLU:HG2	45:19:83:ARG:HH21	1.56	0.69
49:23:54:ARG:HD3	52:26:958:A:C4	2.27	0.69
52:26:484:G:C5	52:26:486:U:H1'	2.28	0.69
53:27:955:U:H5	53:27:962:G:N1	1.89	0.69
4:D:7:TYR:OH	4:D:29:ARG:HB3	1.92	0.69
6:F:127:GLU:HB2	6:F:145:ASN:HA	1.75	0.69
23:W:65:THR:O	23:W:69:GLU:HG3	1.93	0.69
52:26:631:C:OP1	52:26:632:U:H4'	1.92	0.69
53:27:141:G:H3'	53:27:142:A:O4'	1.93	0.69
53:27:145:C:H2'	53:27:146:A:H8	1.58	0.69
53:27:464:U:H2'	53:27:465:G:O4'	1.93	0.69
53:27:1796:U:H2'	53:27:1797:G:H8	1.57	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2352:A:H2'	53:27:2353:G:H5'	1.74	0.69
1:A:48:ILE:HD11	1:A:51:ARG:HA	1.75	0.69
1:A:119:VAL:HG21	6:F:91:PHE:O	1.93	0.69
20:T:31:GLY:O	20:T:66:VAL:HG23	1.93	0.69
21:U:21:ARG:HH21	21:U:87:GLN:HB3	1.57	0.69
27:1:54:ILE:HG13	27:1:56:LYS:HB3	1.75	0.69
33:7:10:ARG:HA	33:7:13:ILE:HD13	1.75	0.69
34:8:18:LEU:HB2	34:8:20:LEU:HG	1.73	0.69
52:26:668:G:H2'	52:26:669:G:H8	1.57	0.69
53:27:570:G:H2'	53:27:2030:A:N7	2.07	0.69
53:27:594:U:H2'	53:27:595:C:C6	2.27	0.69
53:27:1096:A:C3'	53:27:1097:U:H5"	2.22	0.69
53:27:2553:G:H3'	53:27:2554:U:H5"	1.74	0.69
59:33:38:THR:HG21	59:33:77:ARG:CB	2.23	0.69
59:33:39:TRP:CA	59:33:80:LEU:HD13	2.23	0.69
59:33:65:ILE:CD1	59:33:161:ARG:HH21	2.05	0.69
8:H:46:ASP:HA	8:H:50:LYS:HD3	1.75	0.69
10:J:25:LEU:HD11	10:J:40:LYS:HG2	1.75	0.69
32:6:165:ALA:HB3	32:6:190:SER:HB3	1.74	0.69
36:10:45:ARG:HD2	36:10:59:TYR:HE2	1.57	0.69
52:26:484:G:H4'	52:26:485:U:H5"	1.75	0.69
53:27:2147:A:C5	53:27:2148:G:H1'	2.28	0.69
52:26:676:A:H2'	52:26:677:U:C6	2.28	0.69
52:26:1052:U:H2'	52:26:1200:C:H41	1.56	0.69
52:26:1306:A:N6	52:26:1331:G:H1'	2.08	0.69
52:26:1406:U:H2'	52:26:1407:C:O4'	1.93	0.69
59:33:27:THR:HG23	59:33:31:SER:HB2	1.75	0.69
34:8:94:GLU:HA	34:8:99:ASN:HD22	1.57	0.68
34:8:113:ALA:O	34:8:117:VAL:HG23	1.93	0.68
42:16:109:ARG:HH12	52:26:537:G:H5"	1.56	0.68
51:25:66:ARG:HG3	52:26:1099:G:H5'	1.75	0.68
52:26:309:A:H2'	52:26:310:G:H8	1.58	0.68
53:27:1363:C:H2'	53:27:1364:G:C8	2.28	0.68
53:27:1844:C:H2'	53:27:1845:G:H8	1.57	0.68
12:L:78:LEU:HD23	12:L:79:ALA:N	2.08	0.68
47:21:18:LYS:HA	47:21:50:ASN:HB3	1.73	0.68
14:N:45:SER:O	54:28:112:G:N2	2.24	0.68
52:26:817:C:H4'	52:26:818:G:OP1	1.92	0.68
53:27:1636:U:H2'	53:27:1637:A:C8	2.28	0.68
58:32:36:U:C2'	58:32:37:A:H5'	2.22	0.68
42:16:27:PRO:HB2	42:16:28:GLN:NE2	2.09	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:762:U:H2'	52:26:763:G:C8	2.28	0.68
52:26:1038:C:H2'	52:26:1039:G:C8	2.29	0.68
53:27:191:A:O2'	53:27:192:C:H5'	1.93	0.68
53:27:310:A:H2'	53:27:311:A:H5"	1.75	0.68
53:27:1744:A:H3'	53:27:1745:A:H8	1.57	0.68
59:33:157:ILE:O	59:33:161:ARG:HG2	1.93	0.68
3:C:40:ARG:HD2	3:C:92:HIS:CG	2.28	0.68
7:G:88:HIS:H	7:G:89:PRO:CD	2.07	0.68
34:8:31:CYS:SG	34:8:33:ILE:HB	2.34	0.68
37:11:36:SER:HA	39:13:42:THR:HG21	1.75	0.68
43:17:38:ILE:HG13	43:17:55:LEU:HD11	1.75	0.68
52:26:34:C:H2'	52:26:35:G:C8	2.28	0.68
52:26:123:U:OP1	52:26:312:C:H5'	1.93	0.68
53:27:140:C:H2'	53:27:141:G:H4'	1.76	0.68
53:27:680:C:H2'	53:27:681:G:H8	1.59	0.68
53:27:1607:C:H4'	53:27:1608:A:O5'	1.93	0.68
53:27:1790:C:H2'	53:27:1791:A:C5	2.29	0.68
53:27:2788:C:H2'	53:27:2789:C:H6	1.59	0.68
59:33:432:HIS:HB3	59:33:435:VAL:HG23	1.75	0.68
33:7:148:ILE:HD12	33:7:200:TRP:O	1.94	0.68
44:18:12:ARG:HB3	44:18:59:GLN:OE1	1.92	0.68
52:26:296:U:H2'	52:26:297:G:C8	2.28	0.68
53:27:1386:C:H2'	53:27:1387:A:C8	2.29	0.68
59:33:622:VAL:HG23	59:33:636:ALA:HA	1.75	0.68
8:H:100:ILE:HG13	8:H:100:ILE:O	1.92	0.68
32:6:53:LEU:HB3	32:6:219:THR:HG21	1.76	0.68
35:9:35:LEU:HD22	35:9:133:ILE:HG13	1.75	0.68
46:20:43:ALA:HB1	46:20:46:LYS:CD	2.23	0.68
48:22:25:ILE:O	48:22:29:LYS:HG2	1.94	0.68
53:27:39:G:H2'	53:27:40:U:C6	2.29	0.68
53:27:732:C:H2'	53:27:733:G:O4'	1.94	0.68
53:27:1464:G:H2'	53:27:1465:G:H8	1.59	0.68
53:27:2494:G:H2'	53:27:2495:G:H8	1.58	0.68
54:28:65:U:H3'	54:28:108:A:N6	2.07	0.68
59:33:241:LYS:HG3	59:33:246:LYS:HD3	1.75	0.68
26:Z:42:PRO:HB2	26:Z:46:GLY:CA	2.22	0.68
50:24:66:ILE:HG23	50:24:70:LYS:HD3	1.75	0.68
52:26:501:C:H2'	52:26:502:A:C8	2.29	0.68
53:27:809:G:O2'	53:27:810:U:H5'	1.93	0.68
53:27:2590:A:H2'	53:27:2591:C:H6	1.58	0.68
8:H:125:THR:O	8:H:129:GLU:HG3	1.94	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:61:LEU:HA	30:4:26:ALA:CB	2.24	0.68
30:4:39:ARG:HD2	53:27:2363:G:OP2	1.94	0.68
32:6:117:GLU:HG3	32:6:140:LEU:HD11	1.76	0.68
48:22:13:THR:HG21	48:22:20:ILE:HD11	1.76	0.68
51:25:11:PHE:O	51:25:13:VAL:N	2.27	0.68
52:26:235:C:H2'	52:26:236:A:C8	2.29	0.68
53:27:1336:A:H2'	53:27:1337:G:C8	2.29	0.68
53:27:1853:A:H2'	53:27:1854:A:C8	2.29	0.68
53:27:2316:G:H2'	53:27:2317:A:C8	2.28	0.68
59:33:418:LEU:HD21	59:33:430:HIS:CD2	2.29	0.68
2:B:13:ARG:HH11	15:O:55:HIS:HA	1.58	0.68
9:I:17:VAL:HG23	9:I:137:PRO:HB2	1.74	0.68
42:16:113:ARG:NE	42:16:120:ARG:HA	2.08	0.68
53:27:2118:U:C5	53:27:2149:U:H1'	2.29	0.68
53:27:2578:G:O2'	53:27:2579:C:H5'	1.94	0.68
59:33:679:LEU:O	59:33:683:ILE:HD12	1.94	0.68
7:G:61:ARG:HG3	53:27:1047:G:C8	2.29	0.67
29:3:12:ARG:HH22	53:27:464:U:H4'	1.59	0.67
52:26:556:C:H2'	52:26:557:G:H8	1.59	0.67
53:27:1908:C:H2'	53:27:1909:C:H6	1.58	0.67
53:27:2007:U:H2'	53:27:2008:C:H6	1.59	0.67
53:27:2233:U:H2'	53:27:2234:G:C8	2.29	0.67
53:27:2508:G:H1	53:27:2580:U:H3	1.42	0.67
59:33:17:PRO:HB3	59:33:39:TRP:HE1	1.59	0.67
59:33:210:GLU:HG3	59:33:260:TRP:CH2	2.29	0.67
12:L:34:LYS:HE3	12:L:131:VAL:HG11	1.76	0.67
35:9:104:ILE:HD11	35:9:114:LEU:HB3	1.74	0.67
47:21:26:ARG:NH2	47:21:39:ARG:HG2	2.08	0.67
53:27:1191:G:H2'	53:27:1192:G:H8	1.60	0.67
53:27:1550:C:H2'	53:27:1551:A:H8	1.59	0.67
53:27:2427:C:H5"	53:27:2428:G:H5"	1.76	0.67
19:S:65:GLY:HA3	19:S:77:ARG:O	1.93	0.67
22:V:36:GLN:NE2	22:V:39:THR:HA	2.08	0.67
23:W:2:ARG:O	23:W:11:PRO:HD3	1.94	0.67
36:10:18:VAL:H	36:10:19:PRO:HD3	1.60	0.67
37:11:52:ARG:HD2	37:11:124:SER:OG	1.94	0.67
51:25:33:ARG:HG3	51:25:34:ARG:HG2	1.76	0.67
52:26:513:C:H2'	52:26:514:C:C6	2.29	0.67
52:26:524:G:H2'	52:26:525:C:C6	2.29	0.67
52:26:1206:G:C3'	52:26:1207:G:H5"	2.24	0.67
53:27:1662:U:H2'	53:27:1663:G:H8	1.59	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2786:U:H2'	53:27:2787:C:H6	1.60	0.67
54:28:66:A:H5"	54:28:67:G:OP1	1.92	0.67
59:33:188:ARG:HH22	59:33:380:LEU:CB	2.07	0.67
5:E:44:HIS:HA	5:E:49:LEU:HD23	1.76	0.67
16:P:107:ALA:CB	17:Q:46:GLU:HG3	2.24	0.67
36:10:9:MET:HE3	36:10:86:ARG:HB3	1.76	0.67
52:26:1432:G:H1'	52:26:1468:A:H62	1.59	0.67
53:27:796:C:H2'	53:27:797:G:H8	1.58	0.67
58:32:59:A:H5"	58:32:60:U:H5	1.58	0.67
1:A:128:THR:HG22	1:A:188:ARG:HD3	1.76	0.67
15:O:90:ALA:HB2	15:O:112:ARG:HA	1.75	0.67
53:27:1066:U:H2'	53:27:1068:G:OP2	1.93	0.67
53:27:1258:U:H2'	53:27:1259:G:H8	1.59	0.67
53:27:1440:U:H2'	53:27:1441:G:C8	2.29	0.67
59:33:634:HIS:ND1	59:33:634:HIS:O	2.26	0.67
34:8:49:ASP:O	34:8:52:VAL:HG22	1.94	0.67
44:18:27:LYS:O	44:18:31:SER:HB2	1.95	0.67
47:21:20:ILE:HG23	47:21:45:VAL:HB	1.76	0.67
52:26:1061:G:H2'	52:26:1062:U:O4'	1.94	0.67
53:27:839:U:H2'	53:27:840:C:C6	2.28	0.67
53:27:1199:U:H2'	53:27:1200:C:C6	2.28	0.67
53:27:1394:U:H4'	53:27:1603:A:H4'	1.76	0.67
53:27:1597:A:H5"	53:27:1598:A:H5'	1.77	0.67
53:27:2161:C:H5'	53:27:2171:A:H62	1.59	0.67
35:9:121:ASN:O	35:9:122:VAL:HG22	1.95	0.67
53:27:70:G:H4'	53:27:71:A:OP1	1.94	0.67
53:27:805:G:H22	53:27:828:U:H5"	1.60	0.67
53:27:1059:G:H2'	53:27:1060:U:C5	2.28	0.67
22:V:74:LYS:HE3	53:27:858:G:OP1	1.95	0.67
35:9:64:GLU:HB3	35:9:68:ARG:HH22	1.59	0.67
41:15:121:ARG:HE	51:25:35:GLU:CD	1.97	0.67
47:21:4:ILE:HD12	47:21:61:ARG:HD3	1.77	0.67
53:27:657:U:H2'	53:27:658:U:C6	2.30	0.67
53:27:1213:A:N6	53:27:1236:G:H1'	2.09	0.67
58:32:34:C:H3'	58:32:35:A:H5"	1.75	0.67
2:B:179:ARG:HB3	2:B:188:LEU:HD12	1.77	0.67
9:I:105:VAL:HG11	9:I:122:LEU:HD22	1.75	0.67
12:L:63:ILE:HG22	12:L:64:TRP:N	2.09	0.67
28:2:7:LYS:HA	28:2:23:THR:HA	1.75	0.67
47:21:31:PRO:HB2	47:21:32:ILE:HD12	1.76	0.67
52:26:1515:G:H2'	52:26:1516:G:C8	2.29	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1069:A:H4'	53:27:1070:A:H5"	1.75	0.67
59:33:188:ARG:HH11	59:33:377:LEU:CB	2.08	0.67
4:D:98:PHE:HA	4:D:101:ARG:NH2	2.10	0.67
11:K:4:ASN:O	53:27:1243:C:H1'	1.95	0.67
11:K:80:SER:HB3	11:K:114:GLY:HA3	1.77	0.67
14:N:18:LEU:HD23	14:N:25:ARG:HB3	1.76	0.67
27:1:52:LYS:NZ	27:1:55:ALA:HA	2.10	0.67
33:7:109:GLU:HB2	33:7:143:LEU:HD12	1.77	0.67
40:14:30:LYS:HA	40:14:34:ALA:H	1.59	0.67
31:5:1:MET:CE	31:5:36:ARG:HB2	2.24	0.66
36:10:29:ILE:HD13	36:10:64:VAL:HG21	1.75	0.66
52:26:52:C:H2'	52:26:53:A:C8	2.30	0.66
52:26:1384:C:H2'	52:26:1385:G:H8	1.60	0.66
53:27:154:U:H2'	53:27:155:A:C8	2.30	0.66
53:27:1061:U:C5'	53:27:1070:A:H1'	2.24	0.66
58:32:19:G:H5"	58:32:20:U:C5	2.30	0.66
5:E:1:SER:HB3	53:27:2749:A:H5"	1.77	0.66
31:5:1:MET:HE1	31:5:36:ARG:HB2	1.77	0.66
33:7:76:ILE:HA	33:7:83:VAL:HG23	1.77	0.66
35:9:98:ALA:HB1	35:9:101:GLY:HA3	1.77	0.66
42:16:73:LEU:CD2	42:16:79:ILE:HG21	2.24	0.66
52:26:392:C:H2'	52:26:393:A:C8	2.29	0.66
52:26:405:U:H1'	52:26:498:A:H2'	1.76	0.66
52:26:440:C:C3'	52:26:441:A:H5"	2.26	0.66
15:O:97:TYR:O	15:O:100:ARG:HB3	1.96	0.66
33:7:121:SER:O	33:7:125:ARG:HG2	1.95	0.66
43:17:3:ILE:HD11	43:17:21:ILE:HD11	1.77	0.66
53:27:123:G:H5"	53:27:1375:U:O2'	1.95	0.66
53:27:1213:A:H61	53:27:1236:G:H1'	1.60	0.66
53:27:1825:U:H2'	53:27:1826:G:C8	2.30	0.66
53:27:2195:U:H2'	53:27:2196:C:H6	1.60	0.66
56:30:1:G:H2'	56:30:2:C:C6	2.30	0.66
56:30:74:C:C5	59:33:432:HIS:HA	2.29	0.66
56:30:76:A:N3	59:33:412:LYS:HG3	2.10	0.66
58:32:17:C:H3'	58:32:17(A):U:H6	1.60	0.66
59:33:63:VAL:HG12	59:33:79:ALA:CB	2.24	0.66
59:33:281:ILE:HD11	59:33:338:ILE:CG1	2.25	0.66
8:H:55:PRO:HG2	8:H:71:LYS:HB2	1.77	0.66
8:H:124:MET:O	8:H:128:ILE:HG12	1.96	0.66
15:O:23:ASP:O	15:O:25:VAL:HG23	1.94	0.66
42:16:113:ARG:NH2	42:16:120:ARG:HG3	2.11	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:634:C:H2'	53:27:635:C:H6	1.57	0.66
53:27:1709:U:H2'	53:27:1710:G:C8	2.30	0.66
53:27:2834:G:H2'	53:27:2879:A:H61	1.61	0.66
2:B:151:THR:OG1	2:B:152:PRO:HD3	1.95	0.66
8:H:101:SER:O	8:H:104:GLN:HG2	1.95	0.66
10:J:113:MET:HA	10:J:116:ILE:HD12	1.78	0.66
33:7:183:TYR:OH	33:7:198:LYS:HE3	1.96	0.66
38:12:46:GLU:O	38:12:61:THR:HB	1.95	0.66
40:14:36:VAL:HG23	40:14:76:ILE:HG12	1.78	0.66
46:20:54:LEU:HA	46:20:57:ILE:HD12	1.77	0.66
47:21:26:ARG:NH2	52:26:237:G:H5"	2.11	0.66
34:8:201:GLU:HA	34:8:204:SER:HB2	1.77	0.66
41:15:17:ASP:HB2	41:15:36:ARG:NH2	2.11	0.66
42:16:89:LEU:O	42:16:91:GLY:N	2.29	0.66
43:17:27:THR:HG21	52:26:1328:C:H5"	1.78	0.66
46:20:70:ARG:HG3	52:26:375:U:H5"	1.78	0.66
52:26:422:C:H4'	52:26:423:G:C4	2.31	0.66
53:27:569:U:H1'	53:27:947:A:O4'	1.96	0.66
53:27:1868:C:C3'	53:27:1869:G:H5"	2.22	0.66
53:27:2393:U:H2'	53:27:2394:C:H6	1.60	0.66
59:33:44:GLN:CB	59:33:45:GLN:HB2	2.21	0.66
4:D:118:ALA:HB1	4:D:166:ARG:HE	1.61	0.66
7:G:54:VAL:HA	7:G:84:TYR:O	1.95	0.66
16:P:2:ARG:HB2	53:27:1248:G:C5	2.30	0.66
49:23:77:ARG:HD2	52:26:1225:A:O2'	1.96	0.66
52:26:333:U:H2'	52:26:334:C:C6	2.31	0.66
52:26:458:U:H2'	52:26:459:A:C8	2.31	0.66
52:26:695:A:H2'	52:26:696:A:H8	1.55	0.66
52:26:1128:C:H2'	52:26:1129:C:O4'	1.96	0.66
53:27:2554:U:H2'	53:27:2555:U:C6	2.30	0.66
5:E:2:ARG:HD3	53:27:2751:G:C4	2.31	0.66
47:21:69:THR:HB	52:26:254:G:OP1	1.96	0.66
53:27:528:A:H2	53:27:2042:A:H2'	1.57	0.66
53:27:882:G:C3'	53:27:883:G:H5"	2.26	0.66
53:27:2149:U:H2'	53:27:2150:C:C6	2.30	0.66
53:27:2511:U:H2'	53:27:2512:C:C6	2.31	0.66
53:27:2697:G:H2'	53:27:2698:U:O4'	1.95	0.66
56:30:5:G:H2'	56:30:6:G:H8	1.61	0.66
34:8:120:LYS:HG2	34:8:130:ASN:OD1	1.95	0.66
48:22:11:ARG:HG3	48:22:12:PHE:N	2.11	0.66
52:26:835:U:C2'	52:26:836:G:H5"	2.26	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1439:G:H2'	52:26:1440:U:O4'	1.96	0.66
52:26:1464:U:H2'	52:26:1465:A:C8	2.30	0.66
53:27:5:A:H2'	53:27:6:A:H8	1.60	0.66
53:27:758:C:O2	53:27:758:C:H2'	1.96	0.66
53:27:1326:U:H2'	53:27:1327:A:C8	2.28	0.66
53:27:2895:G:H2'	53:27:2896:C:C6	2.31	0.66
54:28:91:C:H2'	54:28:92:C:H6	1.61	0.66
59:33:35:LEU:HD11	59:33:73:ILE:HA	1.78	0.66
59:33:95:LEU:HD13	59:33:107:ILE:HD12	1.77	0.66
2:B:91:THR:HG23	2:B:94:GLN:HB2	1.77	0.66
26:Z:13:THR:HG22	26:Z:23:LYS:HG2	1.77	0.66
35:9:114:LEU:HD23	35:9:122:VAL:HG21	1.78	0.66
52:26:129:A:H1'	52:26:130:A:C8	2.31	0.66
52:26:709:U:H2'	52:26:710:G:H8	1.61	0.66
52:26:1512:U:H2'	52:26:1513:A:H8	1.58	0.66
53:27:656:G:H2'	53:27:657:U:O4'	1.95	0.66
53:27:2834:G:H2'	53:27:2879:A:N6	2.10	0.66
53:27:2861:U:H2'	53:27:2862:G:H8	1.61	0.66
2:B:49:GLN:HE21	2:B:79:LEU:HD13	1.59	0.65
5:E:51:PHE:CE1	5:E:71:LEU:HD12	2.32	0.65
19:S:58:VAL:HG12	19:S:85:VAL:HG22	1.78	0.65
39:13:5:TYR:CE1	39:13:88:GLU:HA	2.32	0.65
52:26:1493:A:H2'	53:27:1913:A:N1	2.11	0.65
53:27:947:A:H2'	53:27:948:C:H6	1.61	0.65
59:33:16:ASP:OD1	59:33:17:PRO:HD2	1.96	0.65
59:33:218:LEU:HD21	59:33:259:ILE:HD13	1.78	0.65
6:F:43:ASN:HA	6:F:46:PHE:HD2	1.60	0.65
18:R:25:ARG:HH22	53:27:519:U:H5"	1.60	0.65
34:8:58:GLN:HG3	52:26:544:G:OP1	1.96	0.65
51:25:19:LYS:O	51:25:22:CYS:HB2	1.96	0.65
52:26:425:G:H2'	52:26:426:U:O4'	1.95	0.65
54:28:30:C:H2'	54:28:31:C:H5'	1.78	0.65
2:B:109:VAL:HG11	2:B:193:VAL:HB	1.78	0.65
11:K:127:VAL:HG21	11:K:142:ILE:HD13	1.79	0.65
33:7:89:VAL:O	33:7:93:ILE:HG13	1.96	0.65
36:10:88:MET:HB3	48:22:63:TYR:CE2	2.31	0.65
41:15:34:THR:HA	41:15:41:LEU:HG	1.78	0.65
43:17:9:PRO:HG2	43:17:17:ALA:HB1	1.78	0.65
50:24:28:ARG:HD3	52:26:1438:G:OP1	1.96	0.65
52:26:431:A:H2'	52:26:432:A:O4'	1.96	0.65
53:27:1912:A:H62	53:27:1917:U:H5	1.42	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:28:3:C:H2'	54:28:4:C:C5'	2.17	0.65
6:F:57:LYS:HD2	6:F:57:LYS:H	1.62	0.65
7:G:114:GLU:HG3	7:G:115:GLY:N	2.11	0.65
10:J:10:VAL:HG23	10:J:17:ARG:O	1.97	0.65
14:N:33:ARG:HG2	14:N:34:HIS:CD2	2.31	0.65
16:P:86:SER:OG	17:Q:52:PRO:HD3	1.97	0.65
24:X:48:ARG:O	24:X:51:ALA:HB3	1.96	0.65
52:26:626:G:H2'	52:26:627:G:C8	2.31	0.65
52:26:1171:A:H2'	52:26:1172:C:H6	1.60	0.65
53:27:1139:G:O2'	53:27:1140:C:H5'	1.96	0.65
53:27:1174:U:H2'	53:27:1175:A:H4'	1.78	0.65
53:27:1475:G:HO2'	53:27:1476:U:H6	1.44	0.65
53:27:2026:U:H2'	53:27:2027:G:H8	1.61	0.65
53:27:2258:C:O2'	53:27:2426:A:H4'	1.97	0.65
2:B:133:THR:HG22	53:27:1993:U:H4'	1.79	0.65
5:E:26:LYS:HD3	5:E:31:GLU:HB2	1.78	0.65
14:N:46:GLU:HB2	54:28:113:C:O2'	1.96	0.65
32:6:163:ILE:HD11	32:6:209:VAL:HG12	1.78	0.65
43:17:82:LEU:HD23	43:17:84:CYS:HB3	1.77	0.65
44:18:30:ILE:CG2	44:18:43:ALA:HB2	2.26	0.65
48:22:11:ARG:HB3	48:22:47:ARG:HH12	1.61	0.65
48:22:33:THR:HG22	48:22:36:GLY:O	1.96	0.65
52:26:374:A:H2'	52:26:375:U:C6	2.32	0.65
52:26:1096:C:H2'	52:26:1097:C:C6	2.32	0.65
53:27:70:G:O2'	53:27:113:U:H4'	1.96	0.65
53:27:247:G:H4'	53:27:386:G:C2	2.32	0.65
53:27:49:A:H4'	53:27:50:U:H5"	1.78	0.65
53:27:584:C:H2'	53:27:585:G:C8	2.31	0.65
53:27:1266:G:H22	53:27:2012:G:H2'	1.60	0.65
53:27:2133:G:H2'	53:27:2158:A:C2	2.32	0.65
53:27:2817:U:C3'	53:27:2818:U:H5"	2.26	0.65
59:33:39:TRP:CZ3	59:33:43:LEU:HD22	2.32	0.65
59:33:617:PRO:HA	59:33:657:TRP:CD2	2.32	0.65
10:J:24:VAL:HA	10:J:39:ILE:HG22	1.79	0.65
17:Q:64:VAL:HG21	17:Q:97:LYS:HE3	1.79	0.65
27:1:33:SER:OG	27:1:35:GLU:HG3	1.96	0.65
52:26:629:A:H2'	52:26:630:A:O4'	1.95	0.65
53:27:2248:C:C2'	53:27:2249:U:H5'	2.27	0.65
58:32:12:G:H22	58:32:23:C:H2'	1.62	0.65
59:33:20:TRP:NE1	59:33:63:VAL:C	2.50	0.65
59:33:73:ILE:O	59:33:77:ARG:HG3	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:179:THR:HG21	59:33:206:LEU:HD12	1.76	0.65
59:33:622:VAL:HB	59:33:641:LEU:HD21	1.78	0.65
2:B:173:GLN:HE22	2:B:208:LYS:HE2	1.61	0.65
13:M:96:ARG:NH2	13:M:116:VAL:HG13	2.11	0.65
21:U:42:LEU:HD13	21:U:47:VAL:HG21	1.77	0.65
29:3:31:LEU:HG	29:3:42:LEU:HD21	1.77	0.65
52:26:52:C:H2'	52:26:53:A:H8	1.61	0.65
52:26:216:U:H2'	52:26:217:C:H6	1.61	0.65
52:26:396:C:H2'	52:26:397:A:H5"	1.78	0.65
52:26:918:A:H2'	52:26:919:A:C8	2.32	0.65
53:27:1937:A:O2'	53:27:1938:A:H3'	1.97	0.65
54:28:93:C:H2'	54:28:94:A:C8	2.31	0.65
2:B:73:VAL:HG11	2:B:93:GLY:HA2	1.79	0.65
4:D:91:ARG:HA	4:D:95:MET:HB3	1.79	0.65
24:X:2:LYS:HE2	53:27:102:U:H1'	1.78	0.65
28:2:12:SER:HB2	28:2:48:TYR:CE1	2.32	0.65
34:8:60:VAL:HA	34:8:63:ILE:HD12	1.79	0.65
40:14:49:PHE:HB2	40:14:65:TYR:HB2	1.79	0.65
51:25:35:GLU:O	51:25:37:TYR:N	2.30	0.65
52:26:778:G:H2'	52:26:779:C:O4'	1.97	0.65
52:26:1273:C:H2'	52:26:1274:A:O4'	1.97	0.65
53:27:1946:U:H2'	53:27:1947:C:C6	2.32	0.65
56:30:21:A:N6	56:30:46:G:H2'	2.11	0.65
58:32:8:U:O4	58:32:13:C:H3'	1.96	0.65
59:33:58:ARG:HD3	59:33:159:HIS:CE1	2.31	0.65
6:F:97:ARG:NH1	6:F:112:LYS:HD2	2.12	0.65
8:H:76:ALA:CB	53:27:1063:G:H5'	2.27	0.65
8:H:124:MET:HE2	53:27:1081:U:H4'	1.79	0.65
16:P:104:ALA:HA	17:Q:46:GLU:CD	2.16	0.65
42:16:120:ARG:CZ	52:26:500:G:H5'	2.26	0.65
43:17:8:ILE:N	43:17:9:PRO:HD3	2.12	0.65
52:26:255:G:H2'	52:26:256:U:C6	2.32	0.65
53:27:1266:G:N2	53:27:2012:G:H2'	2.12	0.65
53:27:1427:A:H4'	53:27:1428:C:O4'	1.96	0.65
53:27:2231:U:H2'	53:27:2232:C:H6	1.61	0.65
53:27:2508:G:H2'	53:27:2509:G:C8	2.29	0.65
2:B:38:LYS:HB2	2:B:47:ALA:HB3	1.76	0.64
4:D:28:PRO:HB2	4:D:168:LEU:HD12	1.79	0.64
44:18:45:LEU:HD21	49:23:12:LEU:HD13	1.78	0.64
45:19:7:THR:HA	45:19:10:ILE:HD12	1.79	0.64
45:19:71:ARG:HH21	52:26:754:C:H5'	1.60	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:193:C:H2'	52:26:194:C:C6	2.32	0.64
52:26:512:U:H2'	52:26:513:C:C6	2.33	0.64
53:27:1721:G:H2'	53:27:1738:G:N2	2.12	0.64
53:27:2352:A:C2'	53:27:2353:G:H5'	2.27	0.64
56:30:76:A:H2'	59:33:431:ILE:HD13	1.79	0.64
59:33:325:VAL:HG22	59:33:335:GLU:HG2	1.78	0.64
3:C:189:THR:HG22	3:C:191:ASP:H	1.61	0.64
29:3:21:ARG:O	29:3:27:GLY:HA3	1.97	0.64
47:21:30:HIS:HD2	47:21:33:TYR:H	1.45	0.64
51:25:67:THR:HA	52:26:1167:A:C5	2.31	0.64
52:26:1343:G:H2'	52:26:1344:C:C6	2.32	0.64
53:27:7:G:H2'	53:27:8:C:C6	2.33	0.64
53:27:2155:U:H2'	53:27:2156:G:H5'	1.79	0.64
59:33:20:TRP:CD1	59:33:63:VAL:HG23	2.30	0.64
16:P:93:ILE:HG21	17:Q:4:VAL:HG11	1.78	0.64
33:7:111:ASP:OD2	33:7:114:LEU:HG	1.96	0.64
42:16:117:GLY:HA2	52:26:35:G:O2'	1.98	0.64
49:23:58:PRO:HG2	59:33:631:ILE:HG13	1.79	0.64
52:26:542:G:H2'	52:26:543:U:C6	2.32	0.64
52:26:1347:G:N2	52:26:1373:G:H2'	2.12	0.64
53:27:1830:C:H2'	53:27:1831:G:H8	1.63	0.64
59:33:240:MET:O	59:33:243:GLU:HG2	1.98	0.64
4:D:4:HIS:O	4:D:7:TYR:HB3	1.97	0.64
29:3:7:PRO:CB	53:27:1309:G:H4'	2.22	0.64
34:8:149:LYS:O	34:8:150:LYS:HG2	1.98	0.64
37:11:50:ALA:HB2	37:11:57:GLU:CG	2.28	0.64
39:13:70:GLY:HA3	52:26:1371:G:O3'	1.97	0.64
52:26:1326:U:H2'	52:26:1327:C:C6	2.33	0.64
52:26:1356:G:H2'	52:26:1357:A:C8	2.31	0.64
53:27:397:U:H2'	53:27:398:C:C6	2.31	0.64
53:27:815:C:H2'	53:27:816:C:H6	1.61	0.64
53:27:1594:U:H2'	53:27:1595:C:C6	2.32	0.64
53:27:2557:G:H2'	53:27:2558:C:C6	2.32	0.64
53:27:2685:G:H2'	53:27:2686:G:H8	1.63	0.64
3:C:23:PHE:HB2	3:C:114:ARG:NH2	2.13	0.64
11:K:62:PRO:HB3	53:27:2393:U:H5"	1.79	0.64
14:N:94:ARG:HB3	14:N:97:PHE:O	1.97	0.64
22:V:38:GLY:HA2	53:27:2330:G:H21	1.62	0.64
34:8:169:TRP:CZ3	34:8:189:ASP:HB3	2.33	0.64
35:9:110:MET:HG3	35:9:139:THR:HG21	1.80	0.64
40:14:15:HIS:HB3	40:14:70:HIS:CE1	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:355:C:H2'	52:26:356:A:O4'	1.97	0.64
52:26:1413:A:H2	52:26:1487:G:H22	1.44	0.64
53:27:11:C:H2'	53:27:12:U:H5"	1.79	0.64
53:27:302:C:H2'	53:27:303:G:H8	1.61	0.64
53:27:947:A:H2'	53:27:948:C:C6	2.33	0.64
53:27:1026:G:H2'	53:27:1027:A:H8	1.62	0.64
53:27:1447:C:H2'	53:27:1448:G:C8	2.33	0.64
53:27:2114:A:H3'	53:27:2115:G:C5'	2.25	0.64
29:3:10:LEU:HD23	53:27:770:G:H5"	1.79	0.64
52:26:399:G:H2'	52:26:400:C:C6	2.32	0.64
52:26:513:C:H2'	52:26:514:C:H6	1.60	0.64
53:27:207:A:H2'	53:27:208:C:O4'	1.98	0.64
53:27:395:U:H2'	53:27:396:G:C8	2.33	0.64
53:27:622:G:H2'	53:27:623:C:H6	1.62	0.64
53:27:1637:A:H2'	53:27:1638:C:C6	2.33	0.64
53:27:1708:C:H2'	53:27:1709:U:C6	2.32	0.64
53:27:2698:U:H2'	53:27:2699:C:C6	2.33	0.64
59:33:612:CYS:HG	59:33:634:HIS:CD2	2.15	0.64
7:G:59:LEU:HA	53:27:1107:G:OP1	1.97	0.64
7:G:118:ILE:HB	7:G:119:PRO:CD	2.26	0.64
20:T:25:LYS:CG	20:T:36:GLU:HB2	2.28	0.64
39:13:16:ALA:HB2	39:13:66:VAL:HG23	1.79	0.64
40:14:33:GLY:O	40:14:34:ALA:HB3	1.98	0.64
41:15:92:ARG:HH21	51:25:24:LYS:HD3	1.63	0.64
46:20:31:ARG:HB2	52:26:310:G:H5"	1.79	0.64
47:21:11:VAL:CG1	47:21:20:ILE:HD11	2.28	0.64
52:26:265:G:O2'	52:26:266:G:H5'	1.98	0.64
52:26:1161:C:H2'	52:26:1162:C:C6	2.33	0.64
53:27:189:G:H2'	53:27:205:G:H22	1.62	0.64
53:27:1310:G:H3'	53:27:1311:G:C8	2.33	0.64
53:27:2124:G:H3'	53:27:2125:G:C5'	2.27	0.64
53:27:2297:A:N1	53:27:2321:U:C5	2.66	0.64
53:27:2660:A:H2'	53:27:2661:G:O4'	1.97	0.64
54:28:113:C:H2'	54:28:114:C:C6	2.33	0.64
2:B:8:LYS:HB2	2:B:201:LEU:HD11	1.80	0.64
4:D:48:LEU:HA	4:D:51:ASN:HD22	1.63	0.64
7:G:61:ARG:HG3	53:27:1047:G:N7	2.12	0.64
29:3:12:ARG:HE	29:3:44:VAL:HG21	1.63	0.64
38:12:14:ARG:HG3	38:12:74:ILE:HG22	1.79	0.64
39:13:17:ARG:HB2	39:13:65:THR:HB	1.79	0.64
44:18:17:ASP:HA	44:18:21:ALA:HB2	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:285:C:H2'	52:26:286:C:C6	2.32	0.64
52:26:864:A:H2'	52:26:865:A:C8	2.32	0.64
53:27:420:C:H2'	53:27:421:C:H6	1.61	0.64
53:27:1536:C:H4'	53:27:1537:G:N2	2.13	0.64
53:27:1539:U:H2'	53:27:1540:G:H8	1.63	0.64
53:27:2799:A:C2'	53:27:2800:A:H5'	2.28	0.64
59:33:77:ARG:NH1	59:33:99:VAL:CG2	2.61	0.64
5:E:70:LEU:O	5:E:74:MET:HG3	1.97	0.64
52:26:312:C:H2'	52:26:313:A:C8	2.32	0.64
52:26:1202:U:H2'	52:26:1203:C:H5'	1.78	0.64
53:27:1098:A:H2'	53:27:1099:G:O4'	1.98	0.64
53:27:1301:A:O2'	53:27:1302:A:H5"	1.98	0.64
53:27:2884:U:O2	53:27:2884:U:H3'	1.98	0.64
54:28:40:U:H1'	54:28:43:C:H5	1.63	0.64
56:30:40:C:H2'	56:30:41:C:C6	2.33	0.64
59:33:17:PRO:CB	59:33:39:TRP:CE2	2.81	0.64
17:Q:68:ARG:HH11	17:Q:90:ARG:HB2	1.63	0.64
21:U:20:LEU:HB3	21:U:25:LYS:O	1.98	0.64
21:U:23:ALA:O	21:U:25:LYS:HG2	1.98	0.64
26:Z:14:ALA:HB3	26:Z:22:MET:O	1.98	0.64
41:15:121:ARG:NH2	51:25:35:GLU:HG2	2.13	0.64
52:26:59:A:H3'	52:26:331:G:H22	1.63	0.64
52:26:656:G:O2'	52:26:657:U:H5'	1.97	0.64
52:26:868:C:H2'	52:26:869:G:O4'	1.98	0.64
52:26:1384:C:H2'	52:26:1385:G:C8	2.32	0.64
53:27:593:U:H2'	53:27:594:U:C6	2.33	0.64
53:27:767:U:O2'	53:27:768:G:H5'	1.97	0.64
59:33:18:GLU:O	59:33:21:ILE:HG12	1.98	0.64
59:33:274:PHE:HB3	59:33:333:THR:HB	1.80	0.64
59:33:281:ILE:HD11	59:33:338:ILE:HG13	1.78	0.64
59:33:285:ARG:HG3	59:33:288:ASP:H	1.61	0.64
1:A:259:ASN:C	1:A:261:ARG:H	2.01	0.63
8:H:18:ASN:H	8:H:19:PRO:HD2	1.63	0.63
16:P:20:ALA:HA	16:P:23:TYR:HE2	1.61	0.63
36:10:53:LYS:O	36:10:54:LEU:HG	1.97	0.63
39:13:56:MET:O	39:13:58:GLU:N	2.31	0.63
46:20:51:ARG:C	46:20:52:LEU:HD12	2.18	0.63
52:26:1349:A:H2'	52:26:1350:A:O4'	1.98	0.63
53:27:1506:U:H2'	53:27:1507:C:C6	2.33	0.63
53:27:2079:U:H2'	53:27:2080:A:H5"	1.79	0.63
53:27:2292:U:H2'	53:27:2293:G:C8	2.32	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2590:A:H2'	53:27:2591:C:C6	2.33	0.63
58:32:50:U:H2'	58:32:51:C:C6	2.33	0.63
59:33:63:VAL:HG11	59:33:80:LEU:CD2	2.28	0.63
59:33:300:TYR:CZ	59:33:329:PRO:HD3	2.33	0.63
59:33:425:LEU:H	59:33:425:LEU:HD12	1.62	0.63
7:G:7:ASP:O	7:G:11:ILE:HG12	1.98	0.63
11:K:103:ILE:HD12	53:27:259:G:H4'	1.79	0.63
16:P:22:GLY:HA2	53:27:18:U:O3'	1.98	0.63
36:10:9:MET:HG2	36:10:59:TYR:CD1	2.34	0.63
37:11:115:MET:HA	37:11:118:ARG:NE	2.13	0.63
42:16:98:ARG:NH2	42:16:106:VAL:HA	2.12	0.63
51:25:67:THR:HA	52:26:1167:A:N7	2.12	0.63
53:27:1278:C:H2'	53:27:1279:G:C8	2.33	0.63
59:33:147:ARG:HA	59:33:150:VAL:CG1	2.28	0.63
4:D:69:ALA:H	4:D:82:TYR:H	1.47	0.63
16:P:64:ILE:HD11	16:P:91:ARG:O	1.97	0.63
17:Q:34:GLU:HG2	17:Q:60:LYS:HA	1.79	0.63
52:26:1409:C:H2'	52:26:1410:A:C8	2.32	0.63
52:26:1509:C:H2'	52:26:1510:C:C6	2.32	0.63
52:26:1517:G:H2'	52:26:1518:A:O4'	1.96	0.63
53:27:1041:G:H2'	53:27:1042:G:H8	1.62	0.63
58:32:41:C:H2'	58:32:42:G:C8	2.33	0.63
46:20:43:ALA:HB1	46:20:46:LYS:HD3	1.80	0.63
49:23:30:LEU:HD13	49:23:48:ILE:HG22	1.81	0.63
52:26:560:A:H5'	52:26:566:G:N2	2.13	0.63
52:26:988:G:H1'	52:26:1014:A:H61	1.63	0.63
52:26:1142:G:H3'	52:26:1143:G:H8	1.63	0.63
53:27:84:A:N1	53:27:99:U:H5'	2.14	0.63
53:27:150:U:H2'	53:27:151:C:C6	2.33	0.63
53:27:443:A:N3	53:27:1201:U:H1'	2.14	0.63
53:27:2092:U:C4'	53:27:2093:G:H5"	2.21	0.63
53:27:2816:G:H2'	53:27:2817:U:H6	1.63	0.63
8:H:106:GLN:O	8:H:110:GLN:HG3	1.98	0.63
48:22:38:ILE:H	48:22:38:ILE:HD12	1.64	0.63
52:26:102:G:H2'	52:26:103:U:C6	2.33	0.63
58:32:8:U:H4'	58:32:48:C:H4'	1.79	0.63
59:33:147:ARG:CA	59:33:150:VAL:HG12	2.29	0.63
59:33:232:PHE:HE1	59:33:329:PRO:CD	2.11	0.63
5:E:163:TYR:HB2	5:E:166:GLU:HB2	1.80	0.63
10:J:19:VAL:HB	10:J:41:ILE:HD12	1.80	0.63
35:9:80:LEU:HD21	35:9:95:MET:HE2	1.79	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2104:C:H2'	53:27:2105:U:C6	2.33	0.63
58:32:42:G:H2'	58:32:43:A:H8	1.63	0.63
59:33:88:ASN:ND2	59:33:90:VAL:HG13	2.13	0.63
19:S:73:ARG:HG3	19:S:73:ARG:HH21	1.63	0.63
44:18:99:SER:OG	52:26:1114:C:H1'	1.99	0.63
47:21:6:THR:HA	47:21:60:ILE:O	1.99	0.63
52:26:440:C:C2'	52:26:441:A:H5"	2.27	0.63
52:26:501:C:H2'	52:26:502:A:H8	1.64	0.63
52:26:1254:A:H2'	52:26:1255:G:C8	2.34	0.63
52:26:1434:A:H2'	52:26:1435:G:O4'	1.98	0.63
52:26:1464:U:H2'	52:26:1465:A:H8	1.63	0.63
53:27:884:U:H5'	59:33:612:CYS:HB3	1.79	0.63
53:27:2286:G:H5"	53:27:2287:A:OP1	1.99	0.63
1:A:159:THR:HG22	1:A:160:TYR:H	1.63	0.63
1:A:207:ALA:HB2	53:27:1790:C:O2'	1.99	0.63
32:6:137:THR:O	32:6:141:GLU:HG3	1.99	0.63
39:13:4:GLN:NE2	52:26:1131:G:H5'	2.14	0.63
41:15:122:PRO:HG2	51:25:34:ARG:O	1.99	0.63
46:20:33:ILE:HD12	46:20:33:ILE:N	2.14	0.63
53:27:692:C:H2'	53:27:693:A:C8	2.34	0.63
53:27:801:G:H3'	53:27:802:A:H5"	1.79	0.63
53:27:2632:A:H2'	53:27:2633:G:C8	2.34	0.63
53:27:2693:G:O2'	53:27:2694:G:H5'	1.99	0.63
58:32:42:G:H2'	58:32:43:A:C8	2.34	0.63
1:A:28:PRO:HG3	1:A:62:ARG:NH2	2.14	0.63
3:C:84:THR:HG21	53:27:586:A:H5'	1.80	0.63
11:K:47:ARG:HH21	53:27:251:A:H4'	1.63	0.63
22:V:22:PHE:CD2	53:27:922:C:H1'	2.33	0.63
31:5:24:ARG:NH2	31:5:36:ARG:HG3	2.13	0.63
43:17:7:ASN:C	43:17:9:PRO:HD3	2.19	0.63
43:17:16:ILE:H	43:17:16:ILE:HD12	1.64	0.63
52:26:539:A:H2'	52:26:540:G:H8	1.64	0.63
52:26:634:C:H2'	52:26:635:A:C8	2.34	0.63
52:26:1162:C:H2'	52:26:1163:A:C8	2.34	0.63
53:27:123:G:H2'	53:27:124:G:H8	1.64	0.63
53:27:154:U:H2'	53:27:155:A:H8	1.62	0.63
53:27:1060:U:C2	53:27:1062:G:H5'	2.34	0.63
53:27:2220:U:H2'	53:27:2221:G:H8	1.64	0.63
53:27:2297:A:N1	53:27:2321:U:H5	1.95	0.63
53:27:2837:A:H2'	53:27:2838:G:H8	1.64	0.63
59:33:54:LEU:HB2	59:33:57:TRP:NE1	2.13	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:46:ARG:NH2	2:B:88:GLU:O	2.31	0.62
15:O:52:ARG:H	15:O:56:SER:HB2	1.64	0.62
19:S:4:GLU:HA	19:S:7:LEU:HD12	1.81	0.62
26:Z:44:PHE:HD1	26:Z:45:THR:HG23	1.64	0.62
36:10:86:ARG:HE	52:26:673:A:H4'	1.64	0.62
51:25:20:ARG:CZ	55:29:7:G:H21	2.11	0.62
52:26:147:G:H2'	52:26:148:G:C8	2.34	0.62
52:26:216:U:H4'	52:26:464:U:H4'	1.80	0.62
52:26:1379:G:O2'	52:26:1380:U:H5'	1.99	0.62
53:27:1485:U:H2'	53:27:1486:U:C6	2.34	0.62
53:27:2839:G:H2'	53:27:2840:C:C6	2.34	0.62
54:28:95:U:H2'	54:28:96:G:H8	1.63	0.62
20:T:10:VAL:O	20:T:21:ARG:HB2	1.99	0.62
21:U:86:LEU:N	21:U:86:LEU:HD12	2.14	0.62
33:7:122:GLN:O	33:7:127:VAL:HG12	1.99	0.62
35:9:154:ALA:HB1	38:12:65:PHE:CZ	2.34	0.62
52:26:328:C:H4'	52:26:329:A:H5'	1.81	0.62
52:26:708:C:H2'	52:26:709:U:C6	2.34	0.62
53:27:1872:A:H2'	53:27:1873:G:O4'	1.99	0.62
59:33:62:MET:CE	59:33:82:PHE:CD1	2.82	0.62
59:33:232:PHE:CZ	59:33:329:PRO:HD2	2.33	0.62
59:33:282:VAL:HG12	59:33:341:LYS:HG2	1.80	0.62
1:A:155:ARG:HD3	53:27:1818:U:C6	2.33	0.62
3:C:117:ARG:NH2	3:C:181:ILE:O	2.31	0.62
5:E:16:VAL:HG12	5:E:17:LYS:N	2.15	0.62
7:G:4:ASN:ND2	7:G:8:LYS:HE3	2.13	0.62
19:S:28:ASN:HB3	19:S:91:GLN:NE2	2.14	0.62
35:9:39:GLY:HA2	35:9:44:ARG:O	1.99	0.62
39:13:51:LEU:HB3	39:13:56:MET:HB3	1.80	0.62
41:15:37:GLN:HB2	41:15:39:ASN:ND2	2.15	0.62
48:22:11:ARG:CB	48:22:47:ARG:HH12	2.12	0.62
52:26:950:U:H2'	52:26:951:G:H8	1.64	0.62
53:27:397:U:H2'	53:27:398:C:H6	1.64	0.62
53:27:1358:G:H2'	53:27:1372:U:O4	1.99	0.62
53:27:1509:A:H2'	53:27:1510:G:C8	2.34	0.62
53:27:1773:A:H2'	53:27:1774:C:O4'	1.99	0.62
53:27:2093:G:H1'	53:27:2198:A:C2	2.33	0.62
59:33:17:PRO:CB	59:33:39:TRP:NE1	2.50	0.62
2:B:51:THR:HB	2:B:79:LEU:HD23	1.81	0.62
6:F:94:ILE:HB	6:F:122:LEU:HB2	1.81	0.62
13:M:1:MET:HG3	13:M:3:HIS:ND1	2.15	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:4:12:ARG:HH12	53:27:250:G:P	2.22	0.62
34:8:58:GLN:O	34:8:62:ARG:HG2	1.99	0.62
37:11:2:ARG:HA	52:26:1380:U:O4	1.99	0.62
52:26:471:U:H2'	52:26:472:U:C6	2.35	0.62
52:26:660:C:H2'	52:26:661:G:O4'	1.98	0.62
53:27:811:U:H1'	53:27:1251:C:H5'	1.82	0.62
53:27:1657:U:H2'	53:27:1658:C:C6	2.35	0.62
22:V:44:GLY:H	22:V:47:VAL:HB	1.63	0.62
27:1:49:ARG:HG2	53:27:2884:U:C6	2.34	0.62
38:12:64:TYR:HD1	38:12:69:ALA:HA	1.64	0.62
39:13:26:LYS:HG3	39:13:61:ASP:OD1	2.00	0.62
39:13:120:ALA:HB1	52:26:1348:U:H5"	1.81	0.62
52:26:233:C:H2'	52:26:234:C:C6	2.35	0.62
53:27:123:G:H2'	53:27:124:G:C8	2.34	0.62
53:27:598:U:H2'	53:27:599:A:H8	1.61	0.62
53:27:1435:G:O2'	53:27:1436:G:H5'	1.98	0.62
53:27:1669:A:H2'	53:27:1670:C:H5'	1.80	0.62
53:27:2644:G:H3'	53:27:2645:G:N2	2.14	0.62
53:27:2786:U:H2'	53:27:2787:C:C6	2.35	0.62
57:31:57:A:H2'	57:31:58:A:H5'	1.82	0.62
59:33:29:GLN:HA	59:33:32:CYS:SG	2.39	0.62
16:P:51:GLN:HG2	16:P:54:ARG:NH1	2.14	0.62
33:7:71:ARG:HE	33:7:74:ILE:HD12	1.63	0.62
33:7:125:ARG:O	33:7:126:ARG:HB2	1.98	0.62
39:13:108:ARG:HG2	52:26:1347:G:O5'	2.00	0.62
52:26:946:A:H2'	52:26:947:G:C8	2.34	0.62
53:27:532:A:N1	53:27:2020:A:H1'	2.15	0.62
54:28:30:C:C2'	54:28:31:C:H5'	2.30	0.62
1:A:184:GLU:OE2	53:27:2222:C:H4'	2.00	0.62
21:U:14:LYS:HB2	54:28:98:G:H1	1.64	0.62
44:18:35:ALA:O	44:18:40:ARG:HB2	1.99	0.62
52:26:285:C:H2'	52:26:286:C:H6	1.64	0.62
52:26:490:C:H2'	52:26:491:G:H8	1.63	0.62
53:27:613:A:H3'	53:27:613:A:N3	2.14	0.62
53:27:721:A:H2'	53:27:722:A:C8	2.34	0.62
53:27:1779:U:H5	53:27:1784:A:N7	1.98	0.62
59:33:147:ARG:O	59:33:150:VAL:HG12	1.99	0.62
1:A:123:ILE:HG23	1:A:191:LEU:HD13	1.82	0.62
7:G:35:VAL:HG23	53:27:1056:G:OP1	1.98	0.62
11:K:21:ARG:NE	53:27:811:U:C5	2.68	0.62
23:W:26:ARG:NH1	23:W:28:PHE:CE1	2.68	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:14:52:LEU:HB2	44:18:80:ARG:HD2	1.81	0.62
49:23:66:VAL:HG23	49:23:67:GLY:H	1.63	0.62
50:24:67:HIS:ND1	52:26:262:A:H4'	2.15	0.62
51:25:19:LYS:HG3	51:25:22:CYS:SG	2.39	0.62
52:26:16:A:O2'	52:26:17:U:H5'	2.00	0.62
53:27:105:C:H2'	53:27:106:C:H6	1.64	0.62
53:27:666:A:H2'	53:27:667:U:C6	2.35	0.62
53:27:1463:C:H2'	53:27:1464:G:C8	2.35	0.62
53:27:2455:G:H2'	53:27:2456:C:C6	2.35	0.62
59:33:676:ARG:HG3	59:33:677:SER:N	2.12	0.62
2:B:129:THR:HG23	2:B:140:HIS:O	2.00	0.62
5:E:10:VAL:HG12	5:E:47:ASN:O	2.00	0.62
28:2:46:VAL:HG12	28:2:47:ILE:N	2.12	0.62
36:10:45:ARG:HD2	36:10:59:TYR:CE2	2.34	0.62
38:12:77:VAL:HG12	38:12:84:ILE:CD1	2.30	0.62
52:26:181:A:H61	52:26:194:C:H2'	1.65	0.62
52:26:234:C:H2'	52:26:235:C:C6	2.35	0.62
52:26:1229:A:H2'	52:26:1230:C:H6	1.65	0.62
52:26:1469:C:H2'	52:26:1470:U:O4'	2.00	0.62
56:30:2:C:H2'	56:30:3:C:C6	2.34	0.62
59:33:210:GLU:CG	59:33:260:TRP:CH2	2.83	0.62
2:B:118:PHE:CE1	2:B:163:GLY:HA2	2.35	0.62
6:F:87:GLU:OE1	36:10:17:GLN:HB2	2.00	0.62
10:J:7:MET:C	10:J:8:LEU:HD12	2.20	0.62
11:K:14:LYS:O	11:K:15:ALA:HB3	1.99	0.62
32:6:56:LEU:HD13	32:6:216:VAL:HG13	1.82	0.62
36:10:38:ARG:HB3	36:10:63:ASN:HB2	1.82	0.62
36:10:67:PRO:HG2	36:10:70:VAL:CG2	2.29	0.62
39:13:66:VAL:HB	39:13:78:ILE:HD11	1.82	0.62
42:16:65:TYR:HE2	42:16:67:GLY:HA2	1.65	0.62
53:27:226:A:H3'	53:27:227:A:H8	1.63	0.62
53:27:1176:U:H2'	53:27:1177:G:C8	2.34	0.62
53:27:2231:U:H2'	53:27:2232:C:C6	2.35	0.62
53:27:2617:U:H2'	53:27:2618:G:O4'	2.00	0.62
56:30:40:C:H2'	56:30:41:C:H6	1.63	0.62
58:32:40:C:H2'	58:32:41:C:C6	2.35	0.62
59:33:154:ALA:O	59:33:157:ILE:HG12	1.98	0.62
2:B:56:LYS:NZ	53:27:2831:G:OP1	2.33	0.61
18:R:51:LEU:HD12	18:R:54:ALA:HB3	1.81	0.61
20:T:96:LYS:O	20:T:97:SER:HB3	2.00	0.61
22:V:35:ARG:HD2	22:V:54:THR:HG23	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:61:ARG:HH21	34:8:68:GLU:N	1.97	0.61
35:9:108:GLY:O	35:9:110:MET:N	2.33	0.61
41:15:111:ASP:HB2	51:25:16:ARG:HH22	1.64	0.61
43:17:6:ILE:HD12	43:17:7:ASN:H	1.63	0.61
52:26:715:A:H2'	52:26:716:A:C8	2.35	0.61
52:26:715:A:H2'	52:26:716:A:H8	1.65	0.61
53:27:644:A:H2'	53:27:645:C:H5"	1.81	0.61
58:32:61:C:O2'	58:32:62:C:H5'	2.00	0.61
10:J:64:ARG:HD2	10:J:79:PHE:CD1	2.34	0.61
28:2:37:LYS:HB2	28:2:48:TYR:CD2	2.35	0.61
41:15:22:ILE:HD13	41:15:95:THR:HG23	1.82	0.61
41:15:30:ILE:HD12	52:26:705:G:H21	1.63	0.61
52:26:41:G:H2'	52:26:42:G:H8	1.65	0.61
52:26:280:C:H4'	52:26:281:G:OP2	2.00	0.61
52:26:664:G:N2	52:26:741:G:H1	1.98	0.61
52:26:1261:A:H3'	52:26:1262:C:H6	1.65	0.61
52:26:1436:U:H2'	52:26:1437:A:C8	2.34	0.61
53:27:1021:A:H2'	53:27:1022:G:H4'	1.82	0.61
53:27:2147:A:C4	53:27:2148:G:H1'	2.35	0.61
59:33:42:CYS:HA	59:33:84:LEU:HD21	1.81	0.61
59:33:286:LEU:O	59:33:289:CYS:SG	2.54	0.61
59:33:721:VAL:HG13	59:33:724:ARG:NE	2.14	0.61
4:D:68:LYS:HE3	54:28:41:G:O6	1.99	0.61
18:R:25:ARG:NH2	53:27:519:U:H5"	2.15	0.61
18:R:57:ASN:HD21	53:27:495:G:C1'	2.13	0.61
20:T:25:LYS:HG2	20:T:36:GLU:HB2	1.82	0.61
23:W:39:VAL:HG21	23:W:46:VAL:HG23	1.81	0.61
26:Z:61:ASN:CA	26:Z:64:PHE:HB2	2.15	0.61
31:5:17:VAL:HG11	31:5:19:ARG:NH1	2.15	0.61
35:9:41:GLY:O	35:9:118:GLY:HA3	2.00	0.61
52:26:117:G:O6	52:26:289:G:H1'	1.99	0.61
52:26:247:G:H2'	52:26:248:C:C6	2.35	0.61
52:26:555:U:H2'	52:26:556:C:C6	2.36	0.61
52:26:1106:G:O2'	52:26:1107:C:H5'	2.00	0.61
53:27:162:U:O2'	53:27:163:C:H5'	1.99	0.61
53:27:980:A:N7	53:27:981:A:C6	2.68	0.61
53:27:1036:G:H2'	53:27:1037:G:H8	1.63	0.61
53:27:2087:G:H2'	53:27:2088:A:C8	2.35	0.61
54:28:4:C:H6	54:28:4:C:C5'	2.13	0.61
59:33:61:GLU:OE2	59:33:158:ALA:HB1	2.00	0.61
59:33:62:MET:SD	59:33:155:GLU:OE1	2.58	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:96:ARG:HG2	59:33:104:VAL:CB	2.30	0.61
15:O:2:ASN:HD21	53:27:2876:G:H5"	1.65	0.61
31:5:33:HIS:O	31:5:35:GLN:N	2.34	0.61
32:6:24:PRO:HB3	52:26:828:U:H2'	1.82	0.61
44:18:80:ARG:HA	44:18:83:VAL:HG12	1.82	0.61
52:26:539:A:H2'	52:26:540:G:C8	2.33	0.61
52:26:631:C:C5'	52:26:632:U:H5'	2.31	0.61
52:26:690:G:H2'	52:26:691:G:O4'	2.00	0.61
52:26:1030:U:H5"	52:26:1031:C:C5	2.34	0.61
52:26:1376:U:H2'	52:26:1377:A:C8	2.36	0.61
53:27:1386:C:H2'	53:27:1387:A:H8	1.65	0.61
53:27:2038:G:H2'	53:27:2039:U:O4'	2.01	0.61
53:27:2623:G:H2'	53:27:2624:G:H8	1.64	0.61
56:30:48:C:H2'	56:30:59:U:H5'	1.81	0.61
59:33:96:ARG:NE	59:33:104:VAL:HG21	2.15	0.61
1:A:230:PRO:HB2	1:A:244:VAL:HG21	1.82	0.61
7:G:20:LYS:HB2	7:G:88:HIS:CE1	2.35	0.61
11:K:116:VAL:HG22	11:K:117:THR:N	2.15	0.61
20:T:6:ARG:O	20:T:24:VAL:HB	2.00	0.61
43:17:101:THR:HG22	52:26:1226:C:H2'	1.82	0.61
44:18:20:PHE:CE1	44:18:47:LEU:HD11	2.34	0.61
52:26:270:A:H2'	52:26:271:C:C6	2.35	0.61
52:26:601:G:H2'	52:26:602:A:H8	1.65	0.61
52:26:1502:A:C8	52:26:1505:G:N2	2.69	0.61
53:27:1906:G:C3'	53:27:1907:G:H5"	2.30	0.61
53:27:2410:G:H2'	53:27:2411:A:O4'	2.00	0.61
53:27:2428:G:H5"	53:27:2429:G:OP1	2.01	0.61
57:31:19:G:H5"	57:31:20:U:C4	2.35	0.61
59:33:204:ARG:HG3	59:33:211:TYR:CD2	2.36	0.61
1:A:159:THR:HG22	1:A:160:TYR:N	2.15	0.61
1:A:206:LYS:HG3	1:A:209:ALA:H	1.65	0.61
8:H:93:ASN:OD1	53:27:1077:A:H4'	2.00	0.61
9:I:65:THR:HG22	9:I:66:GLY:N	2.15	0.61
14:N:6:ALA:O	14:N:9:ARG:HG2	2.01	0.61
23:W:16:ASN:ND2	23:W:26:ARG:HB3	2.15	0.61
32:6:53:LEU:HD23	32:6:56:LEU:HD12	1.83	0.61
32:6:158:ASP:O	32:6:180:ILE:HG23	2.01	0.61
35:9:98:ALA:HB2	35:9:123:LEU:HG	1.83	0.61
49:23:35:ARG:HG2	49:23:50:VAL:CG1	2.31	0.61
51:25:20:ARG:NH2	55:29:7:G:H21	1.98	0.61
52:26:543:U:H2'	52:26:544:G:H8	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1229:A:H2'	52:26:1230:C:C6	2.35	0.61
53:27:121:G:H4'	53:27:149:A:H5'	1.83	0.61
53:27:507:A:H5"	53:27:508:A:H2'	1.82	0.61
53:27:655:A:H4'	53:27:656:G:H5'	1.82	0.61
53:27:737:C:H2'	53:27:738:G:O4'	2.00	0.61
53:27:783:A:H2'	53:27:784:G:H5'	1.81	0.61
53:27:2447:G:C4	53:27:2500:U:C5	2.89	0.61
53:27:2469:A:H2'	53:27:2470:G:H5'	1.82	0.61
53:27:2786:U:O2'	53:27:2787:C:H5'	2.01	0.61
58:32:71:C:H2'	58:32:72:A:O4'	1.99	0.61
59:33:49:HIS:HB3	59:33:50:PRO:CD	2.28	0.61
59:33:425:LEU:HD11	59:33:451:PHE:HB3	1.82	0.61
3:C:84:THR:HG21	53:27:586:A:C5'	2.30	0.61
4:D:76:PHE:HB3	53:27:2311:A:C2	2.36	0.61
15:O:39:LEU:HD13	15:O:81:ASP:OD2	2.00	0.61
15:O:74:GLN:HB2	15:O:77:SER:HB2	1.83	0.61
31:5:27:CYS:SG	31:5:33:HIS:ND1	2.68	0.61
38:12:80:PRO:HG2	52:26:878:A:C5'	2.31	0.61
52:26:574:A:N3	52:26:883:C:H1'	2.16	0.61
53:27:115:C:O2'	53:27:116:C:H5'	2.01	0.61
53:27:766:U:H2'	53:27:767:U:C6	2.36	0.61
53:27:1255:U:H5"	53:27:1256:G:H5"	1.81	0.61
59:33:157:ILE:HG22	59:33:198:LEU:HD21	1.83	0.61
10:J:66:LYS:HA	10:J:79:PHE:O	2.01	0.61
11:K:88:GLY:O	11:K:121:THR:N	2.32	0.61
16:P:75:TYR:O	16:P:78:PHE:HB3	2.01	0.61
33:7:13:ILE:HD12	33:7:13:ILE:N	2.16	0.61
33:7:113:LYS:HB2	33:7:184:ASN:ND2	2.16	0.61
52:26:67:C:H2'	52:26:68:G:C8	2.35	0.61
52:26:584:G:H2'	52:26:585:G:H8	1.65	0.61
52:26:971:G:C8	52:26:1365:G:H4'	2.36	0.61
52:26:1301:U:H2'	52:26:1301:U:O2	1.99	0.61
53:27:63:A:O2'	53:27:64:A:H5'	2.01	0.61
53:27:587:C:C5	53:27:671:C:H1'	2.36	0.61
53:27:1269:A:H2'	53:27:1270:C:C6	2.36	0.61
53:27:1405:U:H2'	53:27:1406:U:C6	2.36	0.61
53:27:1916:A:H2'	53:27:1917:U:O2	2.00	0.61
53:27:2105:U:H2'	53:27:2106:U:O4'	2.01	0.61
55:29:13:A:H61	58:32:35:A:N6	1.98	0.61
59:33:444:ILE:HD11	59:33:449:VAL:HG11	1.82	0.61
2:B:48:ILE:HG23	2:B:84:LEU:HD11	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:133:THR:CG2	53:27:1993:U:H4'	2.31	0.61
7:G:34:THR:HA	7:G:37:LYS:HB3	1.82	0.61
7:G:43:LYS:O	7:G:47:GLU:HG3	2.01	0.61
11:K:90:VAL:HG13	11:K:95:LEU:HD21	1.83	0.61
14:N:71:ALA:HB1	14:N:106:LEU:HB2	1.82	0.61
21:U:86:LEU:HD12	21:U:86:LEU:H	1.66	0.61
34:8:10:LEU:HD13	34:8:62:ARG:HD2	1.82	0.61
38:12:14:ARG:HD3	38:12:74:ILE:O	2.01	0.61
40:14:81:GLU:O	40:14:84:VAL:HG12	2.00	0.61
44:18:25:GLU:HG3	44:18:26:LEU:N	2.15	0.61
46:20:70:ARG:O	46:20:74:LEU:HG	2.01	0.61
53:27:5:A:H2'	53:27:6:A:C8	2.34	0.61
53:27:892:A:H2'	53:27:893:C:C6	2.36	0.61
53:27:1030:C:H2'	53:27:1031:G:C8	2.36	0.61
59:33:61:GLU:HA	59:33:64:GLU:OE1	2.01	0.61
1:A:18:VAL:HG21	1:A:202:ARG:HH21	1.66	0.61
18:R:53:SER:O	18:R:57:ASN:HB2	2.01	0.61
42:16:99:GLY:HA3	42:16:117:GLY:HA3	1.82	0.61
52:26:21:G:H2'	52:26:22:G:C8	2.36	0.61
52:26:601:G:H2'	52:26:602:A:C8	2.36	0.61
52:26:1397:C:H42	55:29:22:A:H2'	1.65	0.61
53:27:176:A:O2'	53:27:177:G:H5'	2.00	0.61
53:27:547:A:H3'	53:27:547:A:N3	2.16	0.61
53:27:1094:U:H1'	53:27:1097:U:H5	1.66	0.61
53:27:1306:C:H2'	53:27:1307:A:H8	1.64	0.61
53:27:1426:G:H8	53:27:1426:G:O5'	1.84	0.61
53:27:2644:G:H3'	53:27:2645:G:H21	1.66	0.61
59:33:293:LEU:CD1	59:33:322:ILE:HG21	2.29	0.61
59:33:434:ASP:O	59:33:438:ARG:HG3	2.01	0.61
12:L:65:ILE:HG22	12:L:67:VAL:H	1.64	0.60
16:P:91:ARG:HH22	53:27:998:C:P	2.24	0.60
38:12:95:MET:O	38:12:98:LEU:HG	2.01	0.60
40:14:36:VAL:HG22	40:14:38:GLY:N	2.13	0.60
42:16:33:CYS:HA	42:16:54:VAL:HA	1.83	0.60
42:16:111:GLN:HB3	52:26:538:G:OP2	2.01	0.60
53:27:890:C:H2'	53:27:891:G:O4'	2.00	0.60
53:27:1794:A:H2'	53:27:1795:C:C6	2.35	0.60
59:33:79:ALA:O	59:33:82:PHE:CD1	2.53	0.60
59:33:286:LEU:HD21	59:33:343:MET:HE1	1.81	0.60
1:A:270:ARG:HG2	1:A:271:SER:N	2.17	0.60
2:B:151:THR:HG23	53:27:2032:G:H21	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:54:LEU:N	6:F:57:LYS:HD3	2.15	0.60
22:V:14:ALA:HB1	53:27:2271:G:OP1	2.00	0.60
23:W:13:THR:HG22	23:W:27:ARG:HA	1.81	0.60
40:14:59:LYS:HG3	40:14:62:ARG:HH21	1.65	0.60
45:19:30:LEU:HD21	52:26:658:C:H5'	1.83	0.60
53:27:107:G:H2'	53:27:108:G:H8	1.65	0.60
54:28:113:C:H2'	54:28:114:C:H6	1.65	0.60
2:B:105:LYS:O	2:B:177:VAL:HG12	2.01	0.60
12:L:57:VAL:O	12:L:59:ARG:N	2.34	0.60
32:6:33:ALA:CB	32:6:39:ILE:HG13	2.25	0.60
39:13:24:ASN:HA	39:13:58:GLU:O	2.00	0.60
47:21:29:LYS:HB2	47:21:36:PHE:CE1	2.36	0.60
52:26:478:A:H2'	52:26:479:U:H5"	1.82	0.60
52:26:841:C:O2'	52:26:843:U:H4'	2.00	0.60
52:26:1405:G:O2'	52:26:1406:U:H5'	2.01	0.60
53:27:601:C:H2'	53:27:602:A:O4'	2.01	0.60
53:27:1810:A:C2'	53:27:1811:G:H5'	2.31	0.60
53:27:2174:C:C2'	53:27:2175:C:H5'	2.30	0.60
59:33:581:GLN:HA	59:33:695:LEU:HD22	1.83	0.60
5:E:2:ARG:HA	5:E:5:LYS:HE2	1.83	0.60
5:E:25:ILE:HG22	5:E:78:VAL:HG21	1.84	0.60
8:H:122:GLU:O	8:H:126:ARG:HG2	2.01	0.60
17:Q:14:VAL:CG2	17:Q:98:ILE:HG13	2.31	0.60
21:U:30:ILE:HG22	21:U:93:ARG:HD3	1.84	0.60
37:11:118:ARG:HA	37:11:121:ASN:HD22	1.66	0.60
50:24:8:LYS:O	50:24:11:ILE:HG13	2.01	0.60
51:25:32:ARG:HG3	51:25:33:ARG:H	1.65	0.60
52:26:70:U:H2'	52:26:94:G:N7	2.17	0.60
52:26:215:C:H2'	52:26:216:U:C6	2.36	0.60
52:26:621:A:H2'	52:26:622:A:O4'	2.01	0.60
53:27:2172:U:OP2	53:27:2173:A:H5'	2.02	0.60
59:33:161:ARG:O	59:33:162:GLU:HG2	2.01	0.60
59:33:438:ARG:HG2	59:33:467:LYS:O	2.01	0.60
10:J:110:GLU:HA	10:J:113:MET:HG2	1.82	0.60
32:6:209:VAL:O	32:6:213:LEU:HB3	2.01	0.60
34:8:12:ARG:HG2	34:8:34:GLU:H	1.66	0.60
37:11:13:PRO:HA	37:11:20:GLU:HA	1.84	0.60
42:16:41:PRO:HB3	42:16:88:ASP:OD2	2.02	0.60
53:27:226:A:H3'	53:27:227:A:C8	2.36	0.60
53:27:818:G:N1	53:27:1187:G:H2'	2.17	0.60
53:27:1506:U:H2'	53:27:1507:C:H6	1.67	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1682:G:C4	53:27:1757:A:H1'	2.36	0.60
53:27:1825:U:H2'	53:27:1826:G:H8	1.66	0.60
53:27:2432:A:H2'	53:27:2433:A:C8	2.37	0.60
59:33:175:ALA:O	59:33:178:CYS:SG	2.59	0.60
59:33:281:ILE:HG13	59:33:338:ILE:HG23	1.83	0.60
18:R:2:GLU:HA	18:R:108:SER:HB2	1.82	0.60
27:1:38:LEU:HD23	27:1:39:ARG:N	2.16	0.60
27:1:39:ARG:CZ	53:27:2884:U:H3	2.14	0.60
40:14:6:ILE:CG1	40:14:102:LEU:HD12	2.32	0.60
52:26:81:A:H2'	52:26:82:G:C8	2.35	0.60
52:26:549:C:C2'	52:26:550:G:H5"	2.30	0.60
53:27:904:G:H2'	53:27:905:A:C8	2.37	0.60
53:27:2685:G:H2'	53:27:2686:G:C8	2.36	0.60
59:33:74:ASP:OD1	59:33:103:VAL:HG22	2.02	0.60
59:33:621:ILE:HD11	59:33:655:ALA:HB3	1.82	0.60
59:33:668:VAL:HA	59:33:713:THR:HA	1.82	0.60
7:G:39:THR:HA	7:G:42:ARG:HB3	1.83	0.60
19:S:3:ARG:O	19:S:7:LEU:HG	2.01	0.60
30:4:30:HIS:ND1	30:4:31:ILE:HG13	2.17	0.60
32:6:95:TRP:CZ3	32:6:171:ALA:HA	2.36	0.60
53:27:319:G:H2'	53:27:320:A:O4'	2.02	0.60
53:27:1228:G:H2'	53:27:1229:C:C6	2.37	0.60
53:27:1315:C:H2'	53:27:1316:U:C6	2.37	0.60
53:27:2026:U:H2'	53:27:2027:G:C8	2.37	0.60
53:27:2130:U:H2'	53:27:2131:U:H5"	1.84	0.60
53:27:2242:G:H8	53:27:2242:G:O5'	1.82	0.60
57:31:59:A:H2'	57:31:60:U:H5'	1.83	0.60
9:I:31:GLU:HG2	9:I:142:ILE:HG12	1.83	0.60
10:J:5:GLN:HA	10:J:20:MET:SD	2.42	0.60
14:N:101:GLY:HA3	54:28:49:C:OP1	2.01	0.60
17:Q:28:ALA:HB3	17:Q:31:GLU:HG2	1.84	0.60
28:2:32:LYS:HA	28:2:50:GLU:OE1	2.01	0.60
33:7:168:ARG:NH2	52:26:1106:G:H1'	2.17	0.60
36:10:18:VAL:HG11	36:10:58:HIS:NE2	2.16	0.60
38:12:14:ARG:CG	38:12:74:ILE:HG22	2.32	0.60
39:13:108:ARG:HD2	52:26:1347:G:C8	2.37	0.60
41:15:80:ASN:HB3	41:15:105:ARG:HB3	1.83	0.60
52:26:13:U:O2'	52:26:14:U:H5'	2.01	0.60
52:26:147:G:H2'	52:26:148:G:H8	1.67	0.60
52:26:845:A:N3	52:26:845:A:H2'	2.15	0.60
52:26:923:A:H2'	52:26:924:C:C6	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1057:G:H2'	52:26:1058:G:C8	2.36	0.60
53:27:639:U:H2'	53:27:640:C:H6	1.67	0.60
53:27:938:G:H2'	53:27:939:G:H8	1.67	0.60
53:27:1584:U:C2'	53:27:1585:C:H5'	2.31	0.60
53:27:2241:A:H2'	53:27:2242:G:C8	2.37	0.60
53:27:2281:A:O2'	53:27:2282:G:H5'	2.01	0.60
9:I:18:VAL:HG22	9:I:140:LEU:HB3	1.83	0.60
32:6:182:VAL:HG23	32:6:195:VAL:HG13	1.84	0.60
37:11:14:ASP:CG	37:11:22:LEU:HD23	2.22	0.60
52:26:556:C:H2'	52:26:557:G:C8	2.36	0.60
52:26:769:G:H4'	52:26:1513:A:H4'	1.84	0.60
52:26:1029:U:H2'	52:26:1031:C:C2	2.36	0.60
53:27:19:A:H2'	53:27:20:C:C6	2.37	0.60
53:27:23:G:H2'	53:27:24:G:H8	1.67	0.60
53:27:157:C:H2'	53:27:158:U:O4'	2.00	0.60
53:27:243:U:H2'	53:27:244:A:H5'	1.84	0.60
53:27:357:C:H2'	53:27:358:U:C6	2.37	0.60
53:27:567:U:H2'	53:27:568:U:O4'	2.02	0.60
53:27:1010:A:N3	53:27:1153:C:H1'	2.17	0.60
53:27:1287:A:O2'	53:27:1288:G:H5'	2.00	0.60
53:27:1720:U:H2'	53:27:1721:G:O4'	2.02	0.60
53:27:1801:A:H5"	53:27:2203:U:C2'	2.29	0.60
53:27:2511:U:H2'	53:27:2512:C:H6	1.67	0.60
53:27:2682:A:O2'	53:27:2683:C:H5'	2.01	0.60
53:27:2754:U:H2'	53:27:2755:C:H5"	1.82	0.60
2:B:115:GLY:O	13:M:3:HIS:NE2	2.35	0.60
11:K:85:VAL:CG1	11:K:94:THR:HG22	2.32	0.60
32:6:91:VAL:HG21	32:6:95:TRP:HD1	1.67	0.60
35:9:11:GLN:HB2	35:9:39:GLY:O	2.01	0.60
36:10:29:ILE:CG2	36:10:34:GLY:HA3	2.32	0.60
45:19:6:ALA:O	45:19:10:ILE:HG13	2.02	0.60
52:26:335:C:H2'	52:26:336:A:H8	1.66	0.60
53:27:2503:A:H1'	53:27:2505:G:OP2	2.01	0.60
53:27:2582:G:O2'	53:27:2583:G:H5'	2.02	0.60
59:33:65:ILE:HG12	59:33:161:ARG:HH21	1.65	0.60
59:33:439:CYS:HA	59:33:465:THR:HG22	1.83	0.60
4:D:72:SER:HB2	4:D:80:GLN:H	1.67	0.59
5:E:29:ASN:HD22	5:E:78:VAL:C	2.05	0.59
13:M:79:LEU:O	13:M:81:ASN:N	2.35	0.59
34:8:116:LEU:HD11	34:8:153:ARG:HD2	1.83	0.59
49:23:79:TYR:CZ	52:26:1226:C:H4'	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:470:C:H2'	52:26:471:U:C6	2.37	0.59
53:27:2721:A:H2'	53:27:2722:G:O4'	2.02	0.59
58:32:32:C:H2'	58:32:33:U:O4'	2.02	0.59
1:A:269:ARG:NH2	53:27:1798:U:OP1	2.35	0.59
5:E:36:LEU:HD11	5:E:67:ALA:HB1	1.84	0.59
7:G:24:SER:H	7:G:118:ILE:HG13	1.66	0.59
14:N:51:ALA:HB3	14:N:78:VAL:HG22	1.83	0.59
33:7:115:VAL:O	33:7:118:SER:HB3	2.02	0.59
34:8:142:VAL:HG12	34:8:179:GLY:O	2.01	0.59
39:13:98:ARG:NH2	52:26:1178:G:C5	2.70	0.59
42:16:52:CYS:SG	42:16:66:ILE:HD11	2.42	0.59
52:26:543:U:H2'	52:26:544:G:C8	2.36	0.59
52:26:1401:G:H2'	52:26:1402:C:O4'	2.01	0.59
53:27:20:C:H2'	53:27:21:A:H8	1.67	0.59
53:27:61:C:C2'	53:27:62:U:H5'	2.31	0.59
53:27:547:A:H4'	53:27:548:G:C4	2.37	0.59
53:27:1444:G:H2'	53:27:1445:G:C8	2.36	0.59
53:27:2248:C:H2'	53:27:2249:U:H5'	1.83	0.59
53:27:2271:G:H2'	53:27:2272:U:C6	2.36	0.59
53:27:2607:G:H2'	53:27:2608:G:O4'	2.02	0.59
53:27:2620:C:C2'	53:27:2621:G:H5"	2.31	0.59
1:A:246:PRO:HD2	1:A:247:TRP:CZ3	2.37	0.59
2:B:66:GLY:HA3	53:27:2787:C:H5'	1.83	0.59
23:W:36:ARG:HD3	53:27:2200:C:OP2	2.02	0.59
34:8:104:MET:CE	34:8:172:VAL:HB	2.32	0.59
52:26:88:U:H2'	52:26:89:U:C4'	2.32	0.59
52:26:950:U:H2'	52:26:951:G:C8	2.37	0.59
52:26:1506:U:O2'	52:26:1507:A:H5'	2.02	0.59
53:27:464:U:C6	53:27:788:A:C2	2.91	0.59
53:27:1005:C:O5'	53:27:1005:C:H6	1.85	0.59
53:27:1199:U:H2'	53:27:1200:C:H6	1.67	0.59
53:27:1664:A:N6	53:27:1996:C:H42	1.95	0.59
53:27:1843:C:H2'	53:27:1844:C:C6	2.38	0.59
53:27:2016:U:H2'	53:27:2017:U:O4'	2.02	0.59
53:27:2393:U:H2'	53:27:2394:C:C6	2.37	0.59
53:27:2512:C:H2'	53:27:2513:A:O4'	2.02	0.59
59:33:224:ASP:O	59:33:228:TYR:CD1	2.55	0.59
2:B:158:GLY:HA3	9:I:80:HIS:NE2	2.17	0.59
3:C:132:LYS:O	3:C:136:GLN:HB2	2.01	0.59
16:P:47:ARG:NH2	16:P:51:GLN:OE1	2.35	0.59
19:S:29:THR:HG23	19:S:85:VAL:C	2.22	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:U:30:ILE:CG2	21:U:93:ARG:HD3	2.32	0.59
36:10:3:HIS:O	36:10:92:THR:HA	2.00	0.59
38:12:94:VAL:HB	38:12:99:GLY:O	2.02	0.59
42:16:63:THR:HG23	42:16:92:VAL:HA	1.82	0.59
46:20:5:ARG:HH12	52:26:377:G:H5'	1.66	0.59
50:24:2:ASN:CG	50:24:3:ILE:H	2.05	0.59
52:26:1201:A:H1'	52:26:1202:U:OP2	2.03	0.59
52:26:1414:U:H2'	52:26:1415:G:H8	1.66	0.59
53:27:1197:G:H2'	53:27:1198:U:C6	2.38	0.59
53:27:1868:C:H3'	53:27:1869:G:C5'	2.25	0.59
58:32:60:U:H2'	58:32:61:C:C5	2.37	0.59
8:H:37:PHE:O	8:H:41:PHE:HB2	2.02	0.59
11:K:19:LEU:HG	11:K:31:GLY:HA3	1.83	0.59
29:3:42:LEU:HD23	29:3:43:THR:HG23	1.85	0.59
43:17:2:ARG:HA	43:17:6:ILE:O	2.01	0.59
52:26:218:U:H2'	52:26:219:U:O4'	2.02	0.59
53:27:858:G:H4'	53:27:859:G:OP2	2.01	0.59
53:27:1304:A:C3'	53:27:1305:C:H5"	2.33	0.59
53:27:1306:C:H2'	53:27:1307:A:C8	2.38	0.59
53:27:1401:G:H2'	53:27:1402:U:O4'	2.02	0.59
53:27:1906:G:H2'	53:27:1907:G:H5"	1.83	0.59
53:27:2024:G:H2'	53:27:2025:C:O4'	2.02	0.59
53:27:2507:C:H2'	53:27:2508:G:H8	1.68	0.59
53:27:2619:C:H2'	53:27:2620:C:C6	2.37	0.59
54:28:1:U:H2'	54:28:2:G:C8	2.38	0.59
59:33:65:ILE:HD13	59:33:157:ILE:CD1	2.33	0.59
59:33:240:MET:HB3	59:33:295:ILE:HD12	1.84	0.59
3:C:148:ILE:HG13	3:C:187:VAL:HG11	1.84	0.59
4:D:24:VAL:O	4:D:27:VAL:HG12	2.02	0.59
39:13:112:ARG:HH12	39:13:114:LYS:HA	1.68	0.59
41:15:71:ASP:O	41:15:72:ALA:HB3	2.01	0.59
52:26:17:U:H2'	52:26:18:C:C6	2.37	0.59
52:26:741:G:H2'	52:26:742:G:H8	1.68	0.59
52:26:891:U:H2'	52:26:892:A:H8	1.66	0.59
52:26:1202:U:C2'	52:26:1203:C:H5'	2.33	0.59
53:27:1061:U:H5'	53:27:1070:A:N3	2.17	0.59
53:27:1725:U:H2'	53:27:1726:C:C6	2.37	0.59
53:27:1881:C:H2'	53:27:1882:U:O4'	2.01	0.59
53:27:2086:U:H2'	53:27:2087:G:C8	2.37	0.59
53:27:2514:U:H2'	53:27:2515:C:H6	1.67	0.59
56:30:13:C:H2'	56:30:14:A:H5"	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:32:31:G:H3'	58:32:32:C:C6	2.38	0.59
13:M:30:ARG:NH1	13:M:75:ILE:HD11	2.18	0.59
24:X:14:LEU:O	24:X:17:GLU:HB3	2.03	0.59
24:X:18:LEU:O	24:X:22:LEU:HB3	2.03	0.59
39:13:11:ARG:HB3	39:13:77:ALA:N	2.17	0.59
40:14:5:ARG:N	40:14:77:VAL:HA	2.16	0.59
51:25:9:GLU:CG	51:25:10:PRO:HD3	2.23	0.59
52:26:349:A:H2'	52:26:350:G:C8	2.37	0.59
53:27:538:A:H2'	53:27:539:G:C8	2.38	0.59
53:27:2110:G:H5'	53:27:2111:U:H5"	1.83	0.59
8:H:59:THR:HB	8:H:67:THR:O	2.03	0.59
10:J:15:GLY:O	10:J:47:ILE:HG12	2.02	0.59
17:Q:1:MET:N	17:Q:43:ASN:HA	2.17	0.59
28:2:12:SER:HB2	28:2:48:TYR:CZ	2.38	0.59
32:6:96:LEU:O	32:6:99:MET:HG2	2.02	0.59
49:23:49:ALA:HA	49:23:58:PRO:HA	1.84	0.59
50:24:2:ASN:OD1	50:24:3:ILE:N	2.35	0.59
52:26:744:C:H2'	52:26:745:G:H8	1.68	0.59
53:27:975:A:H1'	53:27:990:A:N1	2.17	0.59
53:27:1153:C:H2'	53:27:1154:G:O4'	2.03	0.59
53:27:1285:A:H2'	53:27:1286:A:H5'	1.85	0.59
53:27:1931:U:H2'	53:27:1932:A:H8	1.67	0.59
54:28:38:C:O2	54:28:48:U:H1'	2.03	0.59
3:C:149:ILE:HG23	3:C:188:MET:HG3	1.85	0.59
8:H:76:ALA:HB3	53:27:1063:G:H5'	1.83	0.59
12:L:31:PHE:O	12:L:105:MET:N	2.31	0.59
21:U:86:LEU:CD2	21:U:89:ILE:HD11	2.29	0.59
40:14:5:ARG:NH1	40:14:79:PRO:HG3	2.17	0.59
41:15:17:ASP:CB	41:15:36:ARG:HH22	2.15	0.59
41:15:109:ILE:H	41:15:109:ILE:HD12	1.66	0.59
43:17:15:VAL:HG23	43:17:40:GLU:O	2.02	0.59
52:26:418:C:H2'	52:26:419:C:C6	2.37	0.59
52:26:579:A:H2'	52:26:580:C:C6	2.38	0.59
53:27:286:U:H2'	53:27:287:G:C8	2.37	0.59
53:27:1331:G:C2'	53:27:1332:G:H5"	2.33	0.59
53:27:2505:G:N3	53:27:2505:G:H2'	2.18	0.59
8:H:42:ASN:O	8:H:46:ASP:HB3	2.01	0.59
11:K:63:LYS:HA	30:4:12:ARG:HG2	1.85	0.59
35:9:79:THR:HB	35:9:121:ASN:ND2	2.18	0.59
35:9:137:ARG:HH12	52:26:1078:U:C4'	2.12	0.59
35:9:137:ARG:HH22	52:26:1078:U:H4'	1.68	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:15:22:ILE:HG21	41:15:95:THR:HG21	1.84	0.59
52:26:40:C:O2'	52:26:41:G:H5'	2.03	0.59
52:26:420:U:H4'	52:26:421:U:H5	1.68	0.59
52:26:768:A:H4'	52:26:1523:G:N2	2.16	0.59
52:26:988:G:H21	52:26:1015:G:N2	2.01	0.59
53:27:2845:U:H2'	53:27:2846:G:C8	2.38	0.59
59:33:428:ALA:HB1	59:33:435:VAL:HG12	1.85	0.59
6:F:27:ARG:NE	23:W:55:MET:HE2	2.16	0.58
27:1:51:ARG:HG3	27:1:53:VAL:HG13	1.85	0.58
33:7:174:LEU:HD23	33:7:181:ILE:HD13	1.85	0.58
37:11:62:GLU:HA	37:11:65:LEU:HB3	1.83	0.58
39:13:16:ALA:HB1	39:13:65:THR:O	2.03	0.58
43:17:88:LEU:HA	43:17:91:ARG:HE	1.67	0.58
52:26:197:A:N3	52:26:198:G:H1'	2.18	0.58
52:26:202:G:H2'	52:26:203:G:C8	2.38	0.58
52:26:572:A:H4'	52:26:917:G:H5'	1.84	0.58
52:26:692:U:H1'	52:26:695:A:N7	2.18	0.58
52:26:1292:G:H2'	52:26:1293:C:C6	2.38	0.58
53:27:296:U:H2'	53:27:297:G:C8	2.38	0.58
53:27:787:C:H3'	53:27:791:C:H41	1.68	0.58
53:27:2037:A:H2'	53:27:2038:G:C8	2.38	0.58
53:27:2373:G:H2'	53:27:2374:C:C6	2.38	0.58
53:27:2739:U:H5"	53:27:2763:G:O6	2.03	0.58
1:A:59:GLN:NE2	1:A:84:PRO:HB2	2.18	0.58
1:A:227:VAL:HG11	53:27:784:G:C2	2.37	0.58
8:H:2:LYS:NZ	8:H:62:ALA:HB2	2.18	0.58
14:N:40:ILE:HD11	54:28:8:C:H4'	1.85	0.58
16:P:61:ILE:HG12	16:P:91:ARG:HD3	1.85	0.58
26:Z:61:ASN:HA	26:Z:64:PHE:CB	2.15	0.58
34:8:146:GLU:HA	34:8:149:LYS:CB	2.29	0.58
39:13:89:TYR:O	39:13:90:ASP:HB3	2.02	0.58
44:18:37:ASP:OD1	44:18:39:ASP:HB3	2.03	0.58
52:26:1176:A:H2'	52:26:1177:G:O4'	2.03	0.58
53:27:2070:A:H2'	53:27:2071:A:C8	2.38	0.58
2:B:6:GLY:HA3	2:B:29:VAL:HG22	1.86	0.58
2:B:121:THR:HB	2:B:127:PHE:CD2	2.38	0.58
6:F:14:SER:HB2	6:F:17:ASP:OD2	2.03	0.58
9:I:37:ARG:HH21	9:I:37:ARG:HG3	1.68	0.58
35:9:28:ARG:HH12	52:26:15:G:H4'	1.69	0.58
44:18:71:GLY:HA2	52:26:975:A:O2'	2.03	0.58
47:21:58:VAL:HG22	47:21:59:GLU:O	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:23:48:ILE:O	49:23:59:VAL:HG22	2.04	0.58
52:26:333:U:H2'	52:26:334:C:H6	1.68	0.58
52:26:406:G:H2'	52:26:407:U:H6	1.68	0.58
52:26:1225:A:H5'	52:26:1226:C:OP2	2.03	0.58
52:26:1522:U:H2'	52:26:1523:G:H8	1.68	0.58
53:27:288:U:H2'	53:27:289:G:C8	2.39	0.58
53:27:1637:A:H5'	53:27:1760:C:O2'	2.02	0.58
59:33:74:ASP:CA	59:33:77:ARG:NH2	2.66	0.58
8:H:13:ALA:HA	8:H:53:PRO:HA	1.86	0.58
10:J:76:VAL:H	15:O:72:VAL:HG22	1.68	0.58
21:U:60:VAL:HG11	21:U:71:LYS:HB3	1.86	0.58
32:6:210:THR:O	32:6:214:GLY:HA3	2.04	0.58
42:16:113:ARG:HH21	42:16:120:ARG:HG3	1.66	0.58
48:22:17:VAL:CG1	48:22:18:GLN:HG3	2.31	0.58
52:26:102:G:H2'	52:26:103:U:H6	1.67	0.58
52:26:505:G:H5'	52:26:534:U:H2'	1.85	0.58
52:26:580:C:H2'	52:26:581:G:C8	2.38	0.58
53:27:414:C:H2'	53:27:415:A:C8	2.38	0.58
53:27:1297:C:H2'	53:27:1298:C:H6	1.68	0.58
53:27:2256:G:H2'	53:27:2257:U:H6	1.67	0.58
53:27:2475:C:H2'	53:27:2476:A:H5'	1.84	0.58
53:27:2849:U:H1'	53:27:2866:U:O2	2.03	0.58
59:33:155:GLU:O	59:33:159:HIS:CD2	2.56	0.58
1:A:1:ALA:N	1:A:19:VAL:O	2.30	0.58
3:C:163:ASN:HB2	53:27:322:A:OP2	2.03	0.58
4:D:139:GLU:HA	26:Z:28:VAL:HG12	1.85	0.58
9:I:59:ALA:HB1	9:I:101:ILE:HG13	1.83	0.58
23:W:71:ARG:HH11	23:W:77:TYR:HE2	1.48	0.58
37:11:110:ARG:HD3	37:11:122:GLU:OE2	2.02	0.58
50:24:9:ARG:HG2	52:26:108:G:C6	2.38	0.58
52:26:81:A:H2'	52:26:82:G:H8	1.67	0.58
52:26:128:G:O2'	52:26:129:A:H5'	2.03	0.58
53:27:110:G:H2'	53:27:111:A:C8	2.38	0.58
53:27:435:C:H2'	53:27:436:C:H5'	1.84	0.58
53:27:1293:C:C2'	53:27:1294:U:H5"	2.32	0.58
53:27:1662:U:H2'	53:27:1663:G:C8	2.38	0.58
53:27:2011:U:H2'	53:27:2012:G:O4'	2.04	0.58
53:27:2039:U:H2'	53:27:2040:G:C8	2.39	0.58
53:27:2329:U:H2'	53:27:2330:G:H8	1.64	0.58
53:27:2620:C:C3'	53:27:2621:G:H5"	2.33	0.58
59:33:61:GLU:C	59:33:64:GLU:HG2	2.24	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:279:VAL:HG13	59:33:336:ILE:HG23	1.85	0.58
59:33:634:HIS:NE2	59:33:640:GLN:HB2	2.18	0.58
2:B:4:LEU:HD11	2:B:100:LEU:HD22	1.85	0.58
15:O:99:LEU:O	15:O:99:LEU:HD23	2.02	0.58
21:U:16:ALA:O	21:U:20:LEU:HD13	2.03	0.58
26:Z:11:GLU:HA	26:Z:25:ARG:HG2	1.85	0.58
34:8:149:LYS:O	34:8:151:GLN:N	2.37	0.58
43:17:38:ILE:HD12	43:17:47:LEU:HD11	1.86	0.58
43:17:54:THR:HA	43:17:57:ASP:OD2	2.03	0.58
50:24:4:LYS:HE3	52:26:60:A:H3'	1.85	0.58
52:26:1129:C:H2'	52:26:1139:G:O6	2.04	0.58
53:27:1053:C:H5'	53:27:1053:C:H6	1.66	0.58
53:27:1622:G:H2'	53:27:1623:G:H8	1.68	0.58
53:27:1726:C:H2'	53:27:1727:C:C6	2.37	0.58
53:27:2071:A:H2'	53:27:2072:C:C6	2.38	0.58
53:27:2799:A:H2'	53:27:2800:A:H5'	1.84	0.58
53:27:2800:A:H3'	53:27:2801:G:H5'	1.85	0.58
53:27:2800:A:C2	53:27:2895:G:H1'	2.38	0.58
59:33:294:GLY:O	59:33:298:THR:HG23	2.03	0.58
16:P:36:GLN:HE21	53:27:563:A:C2'	2.16	0.58
17:Q:1:MET:N	17:Q:43:ASN:HD22	2.02	0.58
17:Q:4:VAL:HG22	17:Q:13:ARG:HA	1.86	0.58
21:U:46:LYS:O	21:U:50:MET:HG2	2.04	0.58
22:V:16:ARG:HD3	53:27:2271:G:H5'	1.86	0.58
24:X:39:GLN:HE21	24:X:42:LEU:CD1	2.16	0.58
40:14:22:THR:HA	40:14:25:ILE:HG22	1.84	0.58
41:15:121:ARG:HE	51:25:35:GLU:CG	2.16	0.58
44:18:8:ARG:HG2	44:18:12:ARG:NH1	2.19	0.58
45:19:23:SER:HA	52:26:751:U:H4'	1.84	0.58
52:26:478:A:C3'	52:26:479:U:H5"	2.34	0.58
52:26:1028:C:H2'	52:26:1029:U:H4'	1.85	0.58
52:26:1323:G:H2'	52:26:1324:A:C8	2.38	0.58
53:27:279:A:N6	53:27:361:G:HO2'	2.00	0.58
53:27:523:C:O2'	53:27:524:G:H5'	2.03	0.58
53:27:1263:U:H2'	53:27:1264:A:C4	2.38	0.58
53:27:1869:G:N2	53:27:1871:A:H5"	2.18	0.58
53:27:2756:U:H1'	53:27:2757:A:H5"	1.84	0.58
56:30:50:U:H2'	56:30:51:U:O4'	2.03	0.58
59:33:30:LYS:HD2	59:33:33:GLU:OE2	2.03	0.58
59:33:63:VAL:CG1	59:33:80:LEU:HG	2.20	0.58
59:33:267:ASN:H	59:33:267:ASN:HD22	1.49	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:699:SER:OG	59:33:710:ILE:HG23	2.04	0.58
1:A:207:ALA:HB1	53:27:1790:C:H4'	1.86	0.58
8:H:99:LYS:HG3	8:H:140:GLU:HG2	1.85	0.58
10:J:10:VAL:HG12	10:J:12:ASP:H	1.67	0.58
14:N:67:ASN:O	14:N:70:ALA:N	2.32	0.58
16:P:67:ALA:O	16:P:70:GLN:HB3	2.03	0.58
20:T:87:GLU:O	20:T:88:ASP:HB3	2.03	0.58
33:7:112:ALA:HB1	33:7:199:VAL:HG13	1.85	0.58
34:8:100:VAL:O	34:8:104:MET:HG2	2.04	0.58
36:10:39:LEU:O	36:10:41:ASP:N	2.36	0.58
42:16:87:LYS:O	42:16:88:ASP:HB2	2.04	0.58
47:21:7:LEU:HD23	47:21:24:ILE:HD13	1.84	0.58
50:24:32:LYS:HE2	52:26:1439:G:OP1	2.03	0.58
51:25:61:ARG:O	51:25:63:ASN:N	2.35	0.58
52:26:212:G:H2'	52:26:213:G:C8	2.35	0.58
53:27:904:G:H2'	53:27:905:A:H8	1.68	0.58
53:27:1659:G:H2'	53:27:1660:G:H5"	1.84	0.58
53:27:1901:A:H2'	53:27:1902:C:C6	2.39	0.58
53:27:2543:G:H2'	53:27:2544:G:C8	2.38	0.58
53:27:2840:C:H2'	53:27:2841:C:C6	2.38	0.58
59:33:61:GLU:HA	59:33:64:GLU:CD	2.24	0.58
1:A:140:VAL:HG12	1:A:191:LEU:HA	1.84	0.58
8:H:21:PRO:CB	8:H:22:PRO:HD3	2.28	0.58
8:H:32:VAL:HG22	8:H:60:VAL:HG21	1.86	0.58
8:H:60:VAL:HA	8:H:66:PHE:CB	2.33	0.58
20:T:73:ASN:OD1	20:T:75:ALA:HB3	2.04	0.58
32:6:93:HIS:CE1	32:6:145:ASN:HB2	2.39	0.58
35:9:133:ILE:H	35:9:133:ILE:HD12	1.68	0.58
38:12:14:ARG:HH12	52:26:876:C:P	2.27	0.58
47:21:22:VAL:HG21	47:21:60:ILE:HD11	1.86	0.58
49:23:39:ILE:HB	49:23:66:VAL:HA	1.86	0.58
52:26:912:C:H2'	52:26:913:A:C8	2.39	0.58
52:26:949:A:H1'	52:26:1364:U:O2	2.04	0.58
52:26:1415:G:H2'	52:26:1416:G:H8	1.68	0.58
53:27:1169:A:H61	53:27:1180:U:H3	1.52	0.58
53:27:1746:A:H2'	53:27:1747:U:C6	2.39	0.58
53:27:2515:C:O2'	53:27:2516:A:H5'	2.03	0.58
53:27:2547:A:H2'	53:27:2548:U:C6	2.38	0.58
54:28:3:C:C3'	54:28:4:C:H5"	2.34	0.58
59:33:47:GLN:OE1	59:33:55:LEU:HD13	2.04	0.58
59:33:65:ILE:CG1	59:33:161:ARG:HH21	2.17	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:22:ILE:HB	53:27:1952:A:C2	2.39	0.58
12:L:46:ILE:HD12	12:L:69:PRO:HG3	1.86	0.58
38:12:40:LYS:HD3	38:12:47:ASP:H	1.68	0.58
52:26:1037:C:H2'	52:26:1038:C:H6	1.68	0.58
52:26:1096:C:H2'	52:26:1097:C:H6	1.68	0.58
53:27:29:U:H2'	53:27:30:G:C8	2.39	0.58
53:27:538:A:H2'	53:27:539:G:O4'	2.03	0.58
53:27:2340:A:H2'	53:27:2341:G:H8	1.69	0.58
9:I:113:PRO:HG3	53:27:529:A:OP2	2.04	0.57
13:M:101:GLY:H	27:1:41:HIS:HD2	1.51	0.57
30:4:63:TYR:HE1	53:27:593:U:H5'	1.69	0.57
33:7:60:ALA:C	33:7:62:SER:H	2.07	0.57
34:8:8:LEU:HB3	52:26:430:A:OP1	2.04	0.57
39:13:38:PHE:HA	39:13:41:GLU:OE1	2.02	0.57
40:14:88:MET:O	40:14:89:ARG:HB3	2.04	0.57
45:19:55:LEU:O	45:19:59:VAL:HG23	2.04	0.57
47:21:46:HIS:HA	47:21:70:LYS:HD2	1.85	0.57
49:23:30:LEU:HD22	49:23:48:ILE:HG22	1.86	0.57
49:23:68:HIS:HB3	49:23:72:GLU:OE1	2.04	0.57
52:26:88:U:H2'	52:26:89:U:H4'	1.86	0.57
52:26:1347:G:H22	52:26:1373:G:H2'	1.69	0.57
53:27:479:A:H4'	53:27:480:A:OP1	2.04	0.57
53:27:1182:G:H2'	53:27:1183:U:O4'	2.04	0.57
53:27:1810:A:H2'	53:27:1811:G:H5'	1.85	0.57
53:27:1866:A:H2'	53:27:1867:G:O4'	2.04	0.57
53:27:2081:U:H2'	53:27:2082:A:H8	1.67	0.57
58:32:57:A:C2'	58:32:58:A:H5'	2.34	0.57
59:33:79:ALA:O	59:33:82:PHE:CE1	2.57	0.57
59:33:236:LEU:O	59:33:240:MET:HG2	2.04	0.57
3:C:48:THR:HG22	3:C:86:ALA:HB3	1.86	0.57
11:K:55:MET:HG2	53:27:2392:A:C2	2.38	0.57
16:P:80:ASN:HB2	53:27:1151:A:O2'	2.04	0.57
19:S:70:HIS:O	19:S:72:GLN:N	2.37	0.57
30:4:25:HIS:HB3	30:4:43:LEU:HD22	1.85	0.57
37:11:102:TRP:CH2	37:11:140:VAL:HG21	2.39	0.57
41:15:63:GLN:HG3	41:15:98:ALA:CB	2.34	0.57
42:16:29:LYS:HE2	42:16:58:ASN:ND2	2.19	0.57
42:16:87:LYS:HE3	52:26:526:C:OP2	2.04	0.57
46:20:40:ASN:CG	46:20:43:ALA:HB2	2.25	0.57
53:27:1188:U:O2'	53:27:1189:A:H5'	2.04	0.57
53:27:1537:G:N1	53:27:1538:G:H1'	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2195:U:H2'	53:27:2196:C:C6	2.39	0.57
53:27:2446:G:H2'	53:27:2447:G:H5"	1.85	0.57
56:30:12:U:H2'	56:30:13:C:O4'	2.04	0.57
59:33:179:THR:HG21	59:33:206:LEU:CD1	2.34	0.57
59:33:197:GLU:HG2	59:33:201:TYR:CZ	2.39	0.57
59:33:267:ASN:HD22	59:33:267:ASN:N	2.02	0.57
6:F:3:VAL:HA	6:F:39:ALA:N	2.19	0.57
19:S:5:GLU:HA	19:S:8:LEU:HD12	1.86	0.57
33:7:86:LEU:O	33:7:90:VAL:HG23	2.04	0.57
35:9:46:GLY:HA3	35:9:69:ASN:O	2.03	0.57
39:13:56:MET:O	39:13:59:LYS:HG2	2.04	0.57
41:15:12:ARG:O	41:15:14:GLN:N	2.37	0.57
43:17:109:LYS:HE3	52:26:1227:A:OP2	2.03	0.57
52:26:265:G:H2'	52:26:267:C:H5	1.69	0.57
52:26:579:A:H2'	52:26:580:C:H6	1.69	0.57
53:27:1144:A:H2'	53:27:1145:C:C6	2.39	0.57
53:27:1821:A:H2'	53:27:1822:C:H6	1.67	0.57
54:28:53:A:H2'	54:28:54:G:H5'	1.86	0.57
59:33:228:TYR:HB2	59:33:277:ARG:HH21	1.68	0.57
1:A:64:VAL:HB	1:A:66:PHE:HE1	1.69	0.57
1:A:94:LEU:HD21	53:27:1501:G:H4'	1.85	0.57
1:A:107:LYS:O	1:A:109:LEU:N	2.38	0.57
2:B:62:LYS:HB2	2:B:63:PRO:HD3	1.85	0.57
14:N:52:SER:OG	14:N:54:VAL:HG12	2.04	0.57
14:N:98:GLN:O	14:N:100:HIS:N	2.37	0.57
17:Q:52:PRO:O	17:Q:53:PHE:HB2	2.05	0.57
35:9:154:ALA:HB1	38:12:65:PHE:CE2	2.39	0.57
36:10:18:VAL:H	36:10:19:PRO:CD	2.17	0.57
37:11:78:ARG:HD3	52:26:1382:C:H1'	1.85	0.57
39:13:12:LYS:O	39:13:14:SER:N	2.35	0.57
40:14:59:LYS:HE2	40:14:62:ARG:NH2	2.19	0.57
42:16:41:PRO:HG3	42:16:49:ARG:HG2	1.84	0.57
52:26:460:A:H2'	52:26:461:A:C8	2.39	0.57
52:26:741:G:H2'	52:26:742:G:C8	2.39	0.57
52:26:865:A:H2	52:26:918:A:H4'	1.70	0.57
53:27:371:A:H5"	53:27:423:A:C2	2.40	0.57
53:27:721:A:H2'	53:27:722:A:H8	1.70	0.57
53:27:975:A:H1'	53:27:990:A:C6	2.39	0.57
53:27:1316:U:H2'	53:27:1317:G:H8	1.70	0.57
53:27:1564:C:H2'	53:27:1565:C:O4'	2.05	0.57
53:27:2405:G:H2'	53:27:2411:A:H62	1.68	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2760:C:O2'	53:27:2761:A:H5'	2.03	0.57
59:33:20:TRP:HE1	59:33:63:VAL:C	2.07	0.57
59:33:657:TRP:O	59:33:659:GLU:N	2.37	0.57
3:C:23:PHE:HD1	3:C:111:GLU:HB2	1.70	0.57
20:T:98:ASN:O	20:T:100:GLU:HG2	2.05	0.57
39:13:112:ARG:NH1	39:13:114:LYS:HA	2.19	0.57
52:26:1359:C:H4'	52:26:1362:A:N6	2.19	0.57
53:27:1028:A:H2'	53:27:1029:A:C8	2.39	0.57
53:27:1403:A:H2'	53:27:1404:C:H6	1.66	0.57
53:27:2134:A:C5	53:27:2157:G:H4'	2.39	0.57
58:32:9:G:H2'	58:32:11:A:N7	2.20	0.57
58:32:34:C:H2'	58:32:35:A:C8	2.40	0.57
59:33:154:ALA:HA	59:33:157:ILE:CD1	2.34	0.57
59:33:504:ASN:CB	59:33:547:GLY:HA3	2.34	0.57
4:D:87:LYS:HD3	53:27:2313:C:H5"	1.85	0.57
11:K:28:GLY:O	11:K:29:LYS:HB3	2.05	0.57
20:T:67:SER:HB2	53:27:335:C:O2	2.04	0.57
23:W:70:LEU:HB3	23:W:75:GLU:HB2	1.85	0.57
26:Z:64:PHE:C	26:Z:66:ILE:H	2.07	0.57
46:20:3:THR:HG22	46:20:22:ALA:O	2.04	0.57
46:20:6:LEU:HB3	46:20:17:TYR:HD1	1.69	0.57
49:23:9:PHE:CD2	52:26:1318:A:H4'	2.40	0.57
52:26:357:G:O2'	52:26:358:U:H5'	2.04	0.57
52:26:406:G:H2'	52:26:407:U:C6	2.40	0.57
52:26:1028:C:C3'	52:26:1029:U:H4'	2.35	0.57
53:27:140:C:H3'	53:27:140:C:OP2	2.04	0.57
53:27:366:C:H2'	53:27:367:G:O4'	2.02	0.57
53:27:723:C:H2'	53:27:724:U:O4'	2.03	0.57
53:27:2093:G:O2'	53:27:2094:A:H5'	2.04	0.57
54:28:111:U:H2'	54:28:112:G:C8	2.38	0.57
2:B:5:VAL:N	2:B:32:ASN:HD21	1.88	0.57
3:C:149:ILE:HD12	3:C:170:ARG:O	2.05	0.57
4:D:90:LEU:HD12	4:D:90:LEU:O	2.04	0.57
9:I:42:ALA:O	16:P:63:ARG:HG3	2.05	0.57
11:K:115:GLU:HG3	11:K:116:VAL:H	1.69	0.57
12:L:28:PHE:N	12:L:104:GLU:OE1	2.36	0.57
18:R:59:GLU:HA	18:R:64:ALA:HA	1.86	0.57
19:S:15:HIS:HE1	53:27:1339:G:OP2	1.87	0.57
32:6:51:GLU:O	32:6:55:GLU:HG2	2.05	0.57
50:24:9:ARG:HG2	52:26:108:G:H1	1.68	0.57
52:26:88:U:C2	52:26:89:U:H1'	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:106:C:C2	52:26:107:G:C8	2.92	0.57
52:26:569:C:H5'	52:26:574:A:N6	2.19	0.57
53:27:138:U:H2'	53:27:139:U:H5"	1.84	0.57
53:27:445:C:O2'	53:27:446:G:H5'	2.04	0.57
53:27:1024:G:H21	53:27:1144:A:H5'	1.70	0.57
53:27:1149:G:H2'	53:27:1150:C:C6	2.40	0.57
53:27:1336:A:H2'	53:27:1337:G:H8	1.68	0.57
53:27:1432:G:H2'	53:27:1433:A:C8	2.39	0.57
58:32:17:C:H3'	58:32:17(A):U:C6	2.40	0.57
58:32:34:C:H2'	58:32:35:A:N7	2.19	0.57
59:33:86:ASP:OD1	59:33:111:ARG:HD2	2.04	0.57
59:33:214:ILE:HD11	59:33:260:TRP:CE3	2.28	0.57
59:33:286:LEU:HD21	59:33:343:MET:HE3	1.85	0.57
1:A:180:MET:CB	1:A:268:ARG:HB3	2.32	0.57
10:J:23:LYS:HG2	10:J:24:VAL:O	2.04	0.57
10:J:88:ASN:O	10:J:90:ASN:N	2.37	0.57
14:N:11:ALA:O	14:N:15:ARG:HG2	2.05	0.57
15:O:4:ILE:O	15:O:8:GLU:HG3	2.05	0.57
33:7:76:ILE:HA	33:7:83:VAL:CG2	2.34	0.57
43:17:28:ARG:HH21	43:17:62:PHE:HB2	1.69	0.57
52:26:336:A:H2'	52:26:337:G:H8	1.70	0.57
52:26:1207:G:H2'	52:26:1208:C:O4'	2.05	0.57
52:26:1418:A:H3'	52:26:1419:G:H5"	1.87	0.57
53:27:65:U:H2'	53:27:66:C:C6	2.40	0.57
53:27:297:G:H2'	53:27:298:G:O4'	2.05	0.57
53:27:754:U:H2'	53:27:755:U:C6	2.39	0.57
53:27:1354:A:H2'	53:27:1355:G:O4'	2.05	0.57
53:27:1529:G:H2'	53:27:1530:G:O4'	2.05	0.57
53:27:2074:U:H2'	53:27:2075:U:C6	2.39	0.57
53:27:2149:U:H2'	53:27:2150:C:H6	1.69	0.57
56:30:71:G:H2'	56:30:72:C:C6	2.40	0.57
59:33:16:ASP:OD2	59:33:17:PRO:HG2	2.04	0.57
3:C:63:LYS:C	3:C:65:THR:N	2.57	0.57
4:D:40:GLY:HA2	4:D:84:ILE:HD11	1.86	0.57
41:15:22:ILE:HD13	41:15:95:THR:CG2	2.35	0.57
42:16:106:VAL:O	42:16:118:VAL:HG21	2.05	0.57
46:20:17:TYR:HB2	46:20:39:PHE:HB3	1.84	0.57
52:26:142:G:H2'	52:26:143:A:O4'	2.04	0.57
52:26:338:A:H2'	52:26:339:C:O4'	2.05	0.57
52:26:1097:C:H2'	52:26:1098:C:C6	2.40	0.57
52:26:1218:C:H2'	52:26:1219:A:H8	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1401:G:C2	52:26:1402:C:H1'	2.40	0.57
53:27:175:G:H2'	53:27:176:A:O4'	2.04	0.57
53:27:383:C:H2'	53:27:383:C:O2	2.04	0.57
53:27:1115:G:H2'	53:27:1116:G:H8	1.70	0.57
53:27:1960:A:O2'	53:27:1961:C:H5'	2.04	0.57
53:27:2061:G:OP1	53:27:2061:G:H4'	2.04	0.57
53:27:2131:U:H5'	53:27:2132:U:C5'	2.34	0.57
53:27:2704:C:H2'	53:27:2705:A:O4'	2.04	0.57
53:27:2730:C:O2'	53:27:2731:G:H5'	2.04	0.57
3:C:60:TRP:HZ2	3:C:63:LYS:HA	1.70	0.57
10:J:103:VAL:HG12	10:J:104:THR:N	2.15	0.57
22:V:48:GLY:H	22:V:58:LYS:HG3	1.70	0.57
23:W:26:ARG:NH1	53:27:2232:C:OP1	2.38	0.57
37:11:117:LEU:HD23	37:11:121:ASN:HD21	1.69	0.57
42:16:26:CYS:SG	42:16:29:LYS:HD3	2.45	0.57
49:23:9:PHE:CE2	52:26:1318:A:H4'	2.40	0.57
52:26:540:G:H2'	52:26:541:G:C8	2.40	0.57
52:26:677:U:H2'	52:26:678:U:C6	2.40	0.57
52:26:708:C:H2'	52:26:709:U:H6	1.68	0.57
52:26:1342:C:H2'	52:26:1343:G:C8	2.39	0.57
53:27:390:U:H4'	53:27:391:A:H5'	1.85	0.57
53:27:657:U:H2'	53:27:658:U:H6	1.68	0.57
53:27:2087:G:H2'	53:27:2088:A:H8	1.69	0.57
53:27:2097:A:H2'	53:27:2098:U:O4'	2.05	0.57
53:27:2586:U:H2'	53:27:2587:A:H8	1.70	0.57
54:28:40:U:H1'	54:28:43:C:C5	2.40	0.57
59:33:621:ILE:HA	59:33:636:ALA:N	2.19	0.57
11:K:33:ARG:HG2	11:K:40:SER:HA	1.86	0.56
23:W:37:PHE:CE2	23:W:58:ILE:HD13	2.40	0.56
31:5:4:ARG:HB3	53:27:2466:C:OP1	2.05	0.56
32:6:91:VAL:HG21	32:6:95:TRP:CD1	2.40	0.56
50:24:2:ASN:HB3	52:26:332:G:OP2	2.05	0.56
50:24:3:ILE:O	50:24:4:LYS:HG2	2.04	0.56
52:26:632:U:H3'	52:26:633:G:C5'	2.34	0.56
52:26:908:A:H2'	52:26:909:A:H8	1.70	0.56
52:26:1305:G:N2	52:26:1331:G:H2'	2.19	0.56
53:27:572:A:C2	53:27:2033:A:C2	2.93	0.56
53:27:815:C:H2'	53:27:816:C:C6	2.39	0.56
53:27:1785:A:OP2	53:27:1982:U:H5'	2.05	0.56
53:27:1924:C:H2'	53:27:1925:C:C6	2.40	0.56
53:27:1936:A:H2	53:27:1943:U:N3	1.91	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2124:G:H3'	53:27:2125:G:H5"	1.87	0.56
59:33:229:ILE:HG22	59:33:277:ARG:HG3	1.87	0.56
59:33:281:ILE:CD1	59:33:338:ILE:HG13	2.34	0.56
7:G:44:ALA:HB2	7:G:52:MET:HB2	1.86	0.56
8:H:14:ALA:HB2	8:H:52:LEU:N	2.19	0.56
20:T:50:ALA:O	20:T:51:LEU:HB2	2.06	0.56
24:X:41:HIS:NE2	53:27:96:C:H4'	2.20	0.56
32:6:107:ARG:HG3	32:6:108:GLN:N	2.20	0.56
33:7:18:ASN:HD22	33:7:53:ARG:NH2	2.03	0.56
33:7:161:ILE:HG21	55:29:23:A:C2	2.40	0.56
37:11:97:ALA:HA	37:11:100:MET:HE2	1.86	0.56
52:26:1161:C:H2'	52:26:1162:C:H6	1.71	0.56
53:27:52:A:O2'	53:27:53:A:H5'	2.05	0.56
53:27:118:A:OP2	53:27:119:A:H5"	2.05	0.56
53:27:312:G:H2'	53:27:313:G:H8	1.70	0.56
53:27:545:U:C2	53:27:546:U:H1'	2.40	0.56
53:27:1842:G:H2'	53:27:1843:C:C6	2.40	0.56
53:27:1908:C:H2'	53:27:1909:C:C6	2.40	0.56
59:33:34:CYS:SG	59:33:77:ARG:HD3	2.45	0.56
59:33:406:VAL:O	59:33:418:LEU:N	2.38	0.56
1:A:170:TYR:HE1	1:A:184:GLU:HG2	1.71	0.56
3:C:58:LYS:HD3	3:C:70:SER:HB3	1.86	0.56
4:D:43:ILE:HG21	4:D:78:ILE:CG2	2.34	0.56
4:D:114:ARG:HE	43:17:70:ARG:NH2	2.00	0.56
6:F:56:ALA:O	6:F:60:GLU:HG2	2.05	0.56
8:H:20:SER:O	8:H:25:PRO:HD2	2.04	0.56
11:K:85:VAL:HG12	11:K:94:THR:HG22	1.87	0.56
13:M:90:ARG:HH21	53:27:2881:U:H5'	1.69	0.56
15:O:27:VAL:HG12	15:O:29:VAL:HG23	1.86	0.56
15:O:90:ALA:HB2	15:O:112:ARG:CA	2.34	0.56
17:Q:1:MET:H2	17:Q:43:ASN:ND2	2.02	0.56
23:W:20:ALA:O	23:W:21:LEU:HB2	2.04	0.56
23:W:22:ASN:ND2	53:27:2079:U:O2'	2.38	0.56
23:W:37:PHE:HE2	23:W:58:ILE:HD13	1.70	0.56
27:1:12:ARG:NH2	53:27:517:C:OP1	2.38	0.56
29:3:24:THR:CG2	29:3:27:GLY:H	2.17	0.56
32:6:20:ARG:HA	32:6:38:HIS:HE1	1.71	0.56
33:7:130:ARG:HD3	35:9:54:GLU:OE1	2.06	0.56
39:13:18:VAL:HG21	39:13:81:GLY:C	2.25	0.56
39:13:89:TYR:HB3	39:13:93:LEU:HD21	1.86	0.56
43:17:6:ILE:HD12	43:17:7:ASN:N	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:17:113:LYS:HB2	43:17:114:PRO:CD	2.35	0.56
46:20:43:ALA:HB1	46:20:46:LYS:HD2	1.87	0.56
52:26:193:C:H2'	52:26:194:C:H6	1.70	0.56
52:26:359:G:H4'	59:33:451:PHE:CE2	2.41	0.56
52:26:606:G:H5"	52:26:607:A:H5'	1.85	0.56
52:26:709:U:H2'	52:26:710:G:C8	2.39	0.56
52:26:731:G:H5'	52:26:766:A:H4'	1.87	0.56
52:26:923:A:H2'	52:26:924:C:H6	1.69	0.56
52:26:1399:C:H1'	52:26:1400:C:OP2	2.06	0.56
53:27:1785:A:O2'	53:27:1786:A:H2'	2.05	0.56
53:27:1878:G:H2'	53:27:1879:C:O4'	2.05	0.56
53:27:2768:U:H2'	53:27:2769:U:O4'	2.05	0.56
59:33:17:PRO:CG	59:33:39:TRP:CZ2	2.88	0.56
59:33:95:LEU:HD13	59:33:107:ILE:CD1	2.35	0.56
59:33:96:ARG:HE	59:33:104:VAL:CG2	2.18	0.56
59:33:553:LEU:C	59:33:555:GLN:H	2.08	0.56
18:R:57:ASN:OD1	53:27:495:G:H1'	2.05	0.56
19:S:12:ARG:HB2	19:S:33:LYS:O	2.05	0.56
34:8:53:GLN:HE22	34:8:201:GLU:HB2	1.70	0.56
36:10:73:GLU:O	36:10:77:THR:HG23	2.04	0.56
44:18:45:LEU:HD21	49:23:12:LEU:HD22	1.88	0.56
48:22:28:LEU:HD23	48:22:58:ILE:HD13	1.86	0.56
52:26:295:C:H2'	52:26:296:U:C6	2.41	0.56
52:26:358:U:H2'	52:26:359:G:O4'	2.05	0.56
53:27:195:A:H2'	53:27:198:C:N4	2.20	0.56
53:27:600:G:H2'	53:27:601:C:C6	2.41	0.56
53:27:1912:A:N7	53:27:1917:U:O4	2.38	0.56
53:27:2897:U:H2'	53:27:2898:U:C6	2.41	0.56
54:28:5:U:H2'	54:28:6:G:H8	1.69	0.56
54:28:111:U:H2'	54:28:112:G:H8	1.71	0.56
59:33:24:LEU:HD22	59:33:67:SER:HA	1.87	0.56
59:33:39:TRP:HA	59:33:80:LEU:HD13	1.85	0.56
59:33:731:GLN:HG3	59:33:732:VAL:H	1.69	0.56
1:A:205:GLY:O	53:27:1791:A:H1'	2.06	0.56
8:H:12:VAL:HG23	8:H:56:VAL:HG11	1.86	0.56
13:M:53:THR:OG1	53:27:2840:C:H5"	2.05	0.56
13:M:63:ARG:HG2	53:27:1454:C:O4'	2.05	0.56
33:7:5:HIS:CE1	33:7:7:ASN:HB3	2.40	0.56
34:8:150:LYS:HA	34:8:154:VAL:HG11	1.87	0.56
40:14:53:ILE:HG13	44:18:84:ARG:NE	2.20	0.56
41:15:41:LEU:HD13	41:15:78:ILE:HD11	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:18:1:ALA:HB1	52:26:1049:U:C5	2.41	0.56
48:22:37:LYS:NZ	51:25:22:CYS:O	2.38	0.56
52:26:202:G:H2'	52:26:203:G:H8	1.70	0.56
52:26:458:U:H2'	52:26:459:A:H8	1.70	0.56
52:26:977:A:H1'	52:26:1223:C:N3	2.20	0.56
53:27:539:G:O2'	53:27:540:C:H5'	2.05	0.56
53:27:755:U:H2'	53:27:756:A:C8	2.41	0.56
53:27:1198:U:H2'	53:27:1199:U:C6	2.40	0.56
53:27:1509:A:H2'	53:27:1510:G:H8	1.69	0.56
53:27:2036:C:H2'	53:27:2037:A:C8	2.41	0.56
53:27:2507:C:H2'	53:27:2508:G:C8	2.41	0.56
53:27:2784:U:H2'	53:27:2785:C:H6	1.70	0.56
59:33:210:GLU:CD	59:33:260:TRP:CH2	2.78	0.56
2:B:152:PRO:O	2:B:154:LYS:N	2.39	0.56
3:C:143:LEU:HB3	3:C:146:VAL:CG1	2.32	0.56
4:D:68:LYS:HA	4:D:82:TYR:O	2.06	0.56
5:E:51:PHE:CZ	5:E:68:ARG:HA	2.41	0.56
17:Q:83:TYR:OH	17:Q:85:LYS:HE2	2.05	0.56
30:4:33:THR:HG23	30:4:34:LYS:N	2.21	0.56
33:7:87:ARG:HB3	33:7:100:ILE:HG21	1.88	0.56
39:13:109:GLN:NE2	52:26:1117:A:H5'	2.21	0.56
45:19:23:SER:HB3	45:19:26:VAL:HG23	1.88	0.56
50:24:27:MET:SD	50:24:66:ILE:HG13	2.46	0.56
52:26:224:U:H2'	52:26:225:C:C6	2.41	0.56
53:27:151:C:H2'	53:27:152:A:C8	2.40	0.56
53:27:1464:G:H2'	53:27:1465:G:C8	2.39	0.56
53:27:2108:A:H3'	53:27:2109:U:H6	1.70	0.56
53:27:2580:U:H2'	53:27:2581:G:H5'	1.86	0.56
53:27:2678:C:H2'	53:27:2679:A:O4'	2.05	0.56
59:33:239:GLU:CB	59:33:299:HIS:CE1	2.88	0.56
59:33:432:HIS:HD2	59:33:434:ASP:HB3	1.71	0.56
59:33:690:GLU:O	59:33:691:LYS:HB2	2.05	0.56
17:Q:32:THR:HG23	17:Q:32:THR:O	2.06	0.56
19:S:44:LYS:HG3	19:S:55:VAL:HG11	1.87	0.56
24:X:56:LEU:O	24:X:60:LYS:HG2	2.06	0.56
32:6:26:MET:HG3	32:6:192:PRO:HD3	1.87	0.56
33:7:93:ILE:HG22	33:7:93:ILE:O	2.04	0.56
38:12:120:LEU:HD12	38:12:120:LEU:O	2.06	0.56
40:14:50:THR:HG21	52:26:1367:C:H4'	1.87	0.56
41:15:111:ASP:OD1	41:15:113:THR:HG23	2.05	0.56
52:26:45:G:H2'	52:26:46:G:C8	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:297:G:H4'	52:26:557:G:H4'	1.88	0.56
52:26:449:G:H2'	52:26:450:G:C8	2.41	0.56
52:26:1488:G:H2'	52:26:1489:G:H8	1.71	0.56
53:27:329:G:O4'	53:27:477:A:H1'	2.05	0.56
53:27:692:C:H2'	53:27:693:A:H8	1.70	0.56
53:27:1071:G:H1'	53:27:1089:A:C5	2.40	0.56
53:27:1889:A:H1'	53:27:2086:U:O2'	2.06	0.56
59:33:34:CYS:SG	59:33:77:ARG:CD	2.94	0.56
1:A:207:ALA:CB	53:27:1790:C:H4'	2.36	0.56
2:B:101:PHE:HD1	2:B:104:VAL:HG21	1.71	0.56
3:C:63:LYS:C	3:C:65:THR:H	2.08	0.56
14:N:40:ILE:HG22	14:N:41:ALA:O	2.06	0.56
21:U:9:ARG:NH2	21:U:12:GLN:HA	2.21	0.56
22:V:34:VAL:HG12	22:V:36:GLN:H	1.69	0.56
30:4:31:ILE:O	30:4:31:ILE:HG22	2.05	0.56
33:7:30:ASP:HA	44:18:64:ARG:HH12	1.70	0.56
36:10:23:GLU:O	36:10:27:ALA:HB2	2.06	0.56
41:15:120:CYS:HB2	52:26:778:G:H1'	1.87	0.56
43:17:104:ASN:HB3	52:26:948:C:OP2	2.06	0.56
45:19:5:GLU:O	45:19:8:ALA:HB3	2.05	0.56
52:26:231:U:H2'	52:26:232:G:H8	1.71	0.56
52:26:339:C:H2'	52:26:340:U:C6	2.41	0.56
52:26:634:C:H2'	52:26:635:A:H8	1.70	0.56
52:26:744:C:H2'	52:26:745:G:C8	2.40	0.56
52:26:1324:A:H2'	52:26:1325:C:C6	2.40	0.56
53:27:404:A:H1'	53:27:406:G:C4	2.41	0.56
53:27:1138:G:H2'	53:27:1139:G:O4'	2.06	0.56
53:27:2162:G:H4'	53:27:2171:A:H5'	1.88	0.56
53:27:2839:G:H2'	53:27:2840:C:H6	1.69	0.56
58:32:10:G:H2'	58:32:11:A:O4'	2.06	0.56
59:33:409:PHE:HA	59:33:415:VAL:HG22	1.88	0.56
5:E:85:LYS:C	5:E:86:LEU:HD12	2.26	0.56
12:L:40:ARG:HG2	12:L:95:LEU:HD23	1.88	0.56
24:X:49:ASP:O	24:X:53:VAL:HG23	2.06	0.56
35:9:28:ARG:NH1	52:26:15:G:H4'	2.21	0.56
40:14:91:ASP:O	40:14:92:LEU:HB2	2.06	0.56
41:15:126:ARG:NH2	52:26:692:U:O3'	2.38	0.56
52:26:71:A:H61	52:26:99:C:H1'	1.71	0.56
53:27:443:A:H5"	53:27:444:C:C5'	2.35	0.56
53:27:942:G:H2'	53:27:943:A:O4'	2.06	0.56
53:27:2170:A:H2'	53:27:2171:A:H4'	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:30:20:U:H5”	59:33:724:ARG:NH1	2.21	0.56
59:33:62:MET:HE2	59:33:79:ALA:HA	1.85	0.56
1:A:12:ARG:HA	1:A:15:VAL:HG23	1.87	0.56
4:D:114:ARG:HA	26:Z:47:LYS:HD3	1.88	0.56
8:H:100:ILE:HG12	8:H:138:VAL:O	2.05	0.56
24:X:41:HIS:CD2	53:27:96:C:H4’	2.41	0.56
27:1:13:GLY:HA3	53:27:16:C:H5’	1.88	0.56
39:13:74:GLN:O	39:13:78:ILE:HG12	2.06	0.56
40:14:62:ARG:NH1	52:26:1367:C:H5’	2.17	0.56
48:22:72:ARG:HH22	51:25:4:LYS:HZ3	1.54	0.56
50:24:66:ILE:HD12	50:24:70:LYS:HD3	1.87	0.56
52:26:130:A:O2’	52:26:264:C:H5’	2.04	0.56
52:26:401:C:O2’	52:26:402:G:H5’	2.06	0.56
52:26:409:U:H2’	52:26:410:G:O4’	2.05	0.56
52:26:725:G:O2’	52:26:726:C:H5’	2.06	0.56
52:26:1009:U:H2’	52:26:1010:U:C6	2.41	0.56
52:26:1123:U:O2’	52:26:1124:G:H5’	2.06	0.56
53:27:27:G:N2	53:27:512:G:H1’	2.20	0.56
53:27:197:A:H4’	53:27:2069:G:OP2	2.06	0.56
53:27:364:C:H2’	53:27:365:U:C6	2.41	0.56
53:27:689:A:H2’	53:27:690:G:C8	2.41	0.56
53:27:2616:C:H2’	53:27:2617:U:H6	1.70	0.56
59:33:243:GLU:CD	59:33:295:ILE:HG21	2.25	0.56
3:C:176:ASP:OD1	3:C:179:SER:HB2	2.05	0.55
29:3:34:ARG:CZ	29:3:39:ARG:HD2	2.35	0.55
35:9:104:ILE:HG23	35:9:104:ILE:O	2.06	0.55
52:26:109:A:H2’	52:26:326:G:N2	2.21	0.55
52:26:750:C:O2’	52:26:751:U:H5’	2.06	0.55
52:26:1033:G:H2’	52:26:1034:G:H5”	1.88	0.55
52:26:1534:A:H8	52:26:1534:A:O5’	1.88	0.55
53:27:1170:C:H2’	53:27:1171:G:C8	2.41	0.55
53:27:1515:A:H2’	53:27:1516:G:O4’	2.06	0.55
53:27:1656:C:H2’	53:27:1657:U:H6	1.70	0.55
53:27:2394:C:H2’	53:27:2395:C:H6	1.71	0.55
54:28:6:G:H2’	54:28:7:G:C8	2.39	0.55
58:32:7:G:H3’	58:32:8:U:H5’	1.87	0.55
58:32:27:U:O2’	58:32:28:C:H5’	2.06	0.55
59:33:101:LYS:HA	59:33:104:VAL:HG12	1.87	0.55
4:D:28:PRO:HG2	4:D:164:GLU:HG2	1.88	0.55
6:F:104:THR:HA	6:F:108:VAL:O	2.05	0.55
7:G:35:VAL:CG2	53:27:1057:A:H4’	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:108:VAL:HG12	7:G:109:LYS:HG2	1.88	0.55
11:K:52:GLY:O	53:27:826:U:H1'	2.07	0.55
11:K:68:SER:HB2	53:27:632:A:O3'	2.05	0.55
12:L:69:PRO:HA	12:L:94:ALA:HB2	1.87	0.55
13:M:116:VAL:HG21	53:27:2881:U:H4'	1.87	0.55
18:R:88:ARG:HB2	18:R:92:ARG:O	2.05	0.55
32:6:76:SER:OG	32:6:92:ASN:HB2	2.06	0.55
33:7:59:PRO:HB3	40:14:94:ALA:HB1	1.88	0.55
36:10:2:ARG:HD2	36:10:68:GLN:NE2	2.21	0.55
37:11:67:ASN:ND2	37:11:126:ALA:O	2.40	0.55
42:16:51:VAL:HG22	42:16:52:CYS:H	1.70	0.55
44:18:45:LEU:HD11	49:23:12:LEU:HD13	1.88	0.55
52:26:561:U:O2	52:26:561:U:H2'	2.05	0.55
52:26:773:G:H3'	52:26:774:G:H5"	1.88	0.55
52:26:880:C:O2'	52:26:881:G:H5'	2.06	0.55
52:26:922:G:H2'	52:26:923:A:C8	2.41	0.55
52:26:974:A:H4'	52:26:975:A:O5'	2.06	0.55
52:26:1079:G:H2'	52:26:1080:A:C8	2.40	0.55
52:26:1327:C:H2'	52:26:1328:C:H6	1.70	0.55
53:27:161:A:H3'	53:27:162:U:H5"	1.87	0.55
53:27:848:C:H2'	53:27:849:A:C8	2.37	0.55
53:27:968:C:H2'	53:27:969:G:C8	2.41	0.55
53:27:1220:G:H2'	53:27:1221:C:C6	2.42	0.55
53:27:1525:A:H2'	53:27:1526:C:O4'	2.06	0.55
53:27:1607:C:H5"	53:27:1608:A:H5'	1.88	0.55
59:33:241:LYS:HD3	59:33:246:LYS:HZ3	1.68	0.55
2:B:11:MET:HG2	2:B:25:THR:HA	1.87	0.55
14:N:33:ARG:HB2	54:28:52:A:N6	2.22	0.55
14:N:38:GLN:HB3	14:N:47:VAL:CG1	2.35	0.55
14:N:56:LYS:O	14:N:60:GLU:HG3	2.06	0.55
19:S:33:LYS:HG2	19:S:80:TRP:CZ3	2.40	0.55
21:U:27:PRO:HA	21:U:41:GLU:HA	1.88	0.55
26:Z:44:PHE:CD1	26:Z:45:THR:HG23	2.42	0.55
33:7:122:GLN:HB3	33:7:127:VAL:CG1	2.34	0.55
34:8:80:ARG:HE	52:26:613:C:P	2.30	0.55
42:16:49:ARG:NH1	52:26:523:A:H61	2.04	0.55
47:21:16:MET:HE2	47:21:19:SER:HB3	1.88	0.55
52:26:3:A:N3	52:26:613:C:H1'	2.22	0.55
52:26:901:A:C5	52:26:902:G:H1'	2.41	0.55
52:26:1074:G:H2'	52:26:1075:U:C6	2.41	0.55
52:26:1305:G:O2'	52:26:1306:A:H8	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1516:G:H2'	52:26:1518:A:OP2	2.05	0.55
53:27:296:U:H2'	53:27:297:G:H8	1.70	0.55
53:27:1056:G:H5"	53:27:1057:A:O4'	2.06	0.55
53:27:1061:U:C4'	53:27:1070:A:H1'	2.35	0.55
53:27:1321:A:H2'	53:27:1321:A:N3	2.20	0.55
53:27:1979:U:O2'	53:27:1980:G:H5'	2.06	0.55
53:27:2475:C:H42	53:27:2529:G:H22	1.53	0.55
56:30:2:C:H2'	56:30:3:C:H6	1.69	0.55
56:30:59:U:H2'	56:30:60:U:C2	2.41	0.55
57:31:69:C:H2'	57:31:70:G:H8	1.71	0.55
12:L:9:PHE:CZ	53:27:911:A:H2'	2.42	0.55
19:S:15:HIS:CD2	19:S:16:VAL:H	2.25	0.55
31:5:36:ARG:HG2	31:5:37:GLN:H	1.69	0.55
33:7:156:LEU:HD12	33:7:156:LEU:O	2.07	0.55
33:7:205:GLU:HG3	33:7:206:ILE:N	2.21	0.55
37:11:69:ARG:CG	37:11:95:ARG:HG2	2.29	0.55
41:15:51:PHE:CE2	41:15:64:VAL:HG11	2.42	0.55
45:19:13:GLU:HG2	45:19:83:ARG:NH2	2.21	0.55
45:19:38:LEU:HD23	45:19:55:LEU:HD13	1.88	0.55
47:21:44:HIS:O	47:21:70:LYS:HG3	2.06	0.55
51:25:18:PHE:C	51:25:19:LYS:HD2	2.27	0.55
52:26:631:C:H5"	52:26:632:U:H5'	1.88	0.55
52:26:781:A:OP1	52:26:1523:G:H5'	2.07	0.55
52:26:1121:U:H2'	52:26:1122:U:C6	2.41	0.55
52:26:1318:A:C2'	52:26:1319:A:H5'	2.37	0.55
53:27:16:C:O2'	53:27:17:G:H5'	2.07	0.55
53:27:127:A:H5"	53:27:128:C:O4'	2.07	0.55
53:27:163:C:H2'	53:27:164:C:O4'	2.06	0.55
53:27:742:A:H2'	53:27:743:A:H8	1.68	0.55
53:27:1242:U:H2'	53:27:1243:C:C6	2.41	0.55
53:27:1475:G:O2'	53:27:1476:U:H6	1.88	0.55
53:27:1570:A:H2'	53:27:1571:A:C8	2.41	0.55
53:27:1591:A:H2'	53:27:1592:C:C6	2.41	0.55
53:27:2328:A:H2'	53:27:2329:U:H6	1.72	0.55
53:27:2689:U:O2	53:27:2713:U:H5"	2.06	0.55
54:28:106:G:H2'	54:28:107:G:O4'	2.06	0.55
59:33:714:ILE:HD12	59:33:716:ILE:HB	1.87	0.55
3:C:7:ASP:O	3:C:9:GLN:HG3	2.06	0.55
4:D:62:GLN:HE21	4:D:88:VAL:HG13	1.71	0.55
4:D:91:ARG:HA	4:D:95:MET:SD	2.47	0.55
5:E:29:ASN:HB2	5:E:78:VAL:HA	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:50:VAL:CG1	53:27:1082:U:H5”	2.37	0.55
7:G:94:ARG:O	7:G:98:GLU:HG2	2.07	0.55
8:H:123:ALA:HB1	53:27:1081:U:H5”	1.88	0.55
16:P:51:GLN:O	16:P:55:GLN:HG3	2.07	0.55
28:2:24:LYS:HZ2	28:2:26:LYS:HA	1.72	0.55
31:5:11:CYS:HB3	31:5:33:HIS:CE1	2.41	0.55
33:7:55:VAL:HB	33:7:66:THR:HB	1.88	0.55
35:9:98:ALA:O	35:9:100:GLU:N	2.39	0.55
37:11:119:LEU:HA	37:11:122:GLU:HG2	1.89	0.55
40:14:57:VAL:HG22	40:14:58:ASN:N	2.18	0.55
41:15:28:ASN:HD21	41:15:56:LYS:HE3	1.71	0.55
49:23:41:PRO:O	49:23:44:ILE:HG13	2.07	0.55
52:26:844:G:N3	52:26:844:G:H2’	2.21	0.55
52:26:947:G:H2’	52:26:948:C:H6	1.71	0.55
53:27:1967:C:H2’	53:27:1968:G:H5’	1.87	0.55
53:27:2121:G:N2	53:27:2177:C:O2	2.39	0.55
53:27:2789:C:H3’	53:27:2893:A:N6	2.21	0.55
54:28:28:C:H2’	54:28:29:A:C8	2.42	0.55
59:33:587:PRO:O	59:33:591:SER:N	2.37	0.55
59:33:679:LEU:HD12	59:33:682:ASP:HB2	1.88	0.55
12:L:61:GLY:HA3	12:L:108:VAL:HG13	1.88	0.55
16:P:2:ARG:HB2	53:27:1248:G:N7	2.22	0.55
36:10:9:MET:HG2	36:10:59:TYR:HD1	1.70	0.55
52:26:250:A:H4’	52:26:251:G:O5’	2.07	0.55
52:26:587:G:O2’	52:26:588:G:H5’	2.06	0.55
52:26:838:G:H2’	52:26:839:C:C6	2.41	0.55
52:26:855:U:H2’	52:26:856:C:C6	2.42	0.55
53:27:962:G:H2’	53:27:963:U:O4’	2.06	0.55
53:27:1124:G:H2’	53:27:1125:G:O4’	2.05	0.55
53:27:1287:A:C2’	53:27:1288:G:H5’	2.37	0.55
53:27:1967:C:C2’	53:27:1968:G:H5’	2.36	0.55
53:27:2108:A:H3’	53:27:2109:U:C6	2.42	0.55
53:27:2121:G:H2’	53:27:2122:U:O4’	2.07	0.55
53:27:2662:A:H2’	53:27:2663:G:O4’	2.07	0.55
59:33:38:THR:OG1	59:33:80:LEU:HD12	2.07	0.55
1:A:30:ALA:HB3	1:A:31:PRO:HD3	1.89	0.55
2:B:27:ILE:HD11	2:B:193:VAL:HG11	1.89	0.55
4:D:7:TYR:HB2	4:D:172:PHE:CZ	2.42	0.55
5:E:51:PHE:HE1	5:E:71:LEU:HD12	1.71	0.55
7:G:58:THR:HG23	7:G:82:ILE:HG12	1.89	0.55
17:Q:68:ARG:NH1	17:Q:90:ARG:HB2	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:U:82:TYR:O	21:U:84:PRO:HD3	2.06	0.55
22:V:17:LEU:HD21	22:V:37:ARG:HH21	1.72	0.55
34:8:117:VAL:HG12	34:8:130:ASN:O	2.06	0.55
34:8:143:SER:HA	34:8:177:MET:O	2.07	0.55
47:21:60:ILE:CG2	47:21:72:TRP:HB3	2.36	0.55
50:24:73:ARG:NH2	52:26:263:A:OP1	2.40	0.55
51:25:41:THR:O	51:25:45:LYS:HG2	2.07	0.55
52:26:428:G:H4'	52:26:429:U:O5'	2.07	0.55
52:26:503:C:H2'	52:26:504:C:H6	1.72	0.55
52:26:824:G:H2'	52:26:825:A:H8	1.71	0.55
52:26:877:G:H2'	52:26:878:A:H8	1.72	0.55
52:26:1258:G:H2'	52:26:1259:C:C6	2.42	0.55
53:27:2453:A:H2'	53:27:2454:G:O4'	2.07	0.55
53:27:2481:G:HO2'	53:27:2482:A:H8	1.54	0.55
53:27:2709:G:H2'	53:27:2710:C:C6	2.41	0.55
54:28:48:U:H2'	54:28:49:C:C6	2.42	0.55
59:33:679:LEU:HD13	59:33:734:ASP:HB2	1.88	0.55
2:B:186:LEU:HD13	15:O:7:LEU:HD11	1.88	0.55
5:E:104:LEU:HB2	5:E:112:VAL:HB	1.89	0.55
6:F:133:GLN:NE2	6:F:136:SER:HA	2.20	0.55
12:L:24:THR:HG23	12:L:99:GLY:O	2.07	0.55
17:Q:1:MET:H2	17:Q:43:ASN:HD22	1.55	0.55
17:Q:16:GLU:OE2	17:Q:100:GLY:HA2	2.07	0.55
18:R:3:THR:HG21	18:R:58:ALA:HA	1.89	0.55
32:6:205:ALA:HB3	32:6:208:ALA:HB2	1.88	0.55
39:13:35:GLU:HA	39:13:39:GLY:HA3	1.88	0.55
40:14:48:ARG:HH21	44:18:100:TRP:HB3	1.71	0.55
41:15:126:ARG:HB2	51:25:33:ARG:HD2	1.88	0.55
42:16:106:VAL:HG23	42:16:116:TYR:HB3	1.88	0.55
46:20:16:PHE:CE1	52:26:625:U:H4'	2.41	0.55
52:26:288:A:H2'	52:26:289:G:H4'	1.88	0.55
52:26:313:A:H2'	52:26:314:C:C6	2.42	0.55
52:26:1142:G:C2	52:26:1143:G:H1'	2.41	0.55
53:27:501:A:H2'	53:27:502:A:C8	2.41	0.55
53:27:960:A:C8	53:27:962:G:C8	2.95	0.55
53:27:1058:U:O2'	53:27:1059:G:H5'	2.07	0.55
53:27:1173:U:H2'	53:27:1174:U:H4'	1.88	0.55
53:27:1528:A:H2'	53:27:1529:G:H5'	1.87	0.55
53:27:1545:A:H2'	53:27:1546:G:O4'	2.07	0.55
53:27:1777:U:H2'	53:27:1778:U:H6	1.70	0.55
53:27:2642:G:O2'	53:27:2643:G:H5'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2682:A:H61	53:27:2728:U:H1'	1.72	0.55
54:28:114:C:H2'	54:28:115:A:C8	2.41	0.55
58:32:30:G:H2'	58:32:31:G:O4'	2.07	0.55
1:A:253:GLY:O	53:27:1843:C:O2'	2.25	0.55
19:S:29:THR:HG23	19:S:85:VAL:O	2.06	0.55
34:8:169:TRP:HZ3	34:8:189:ASP:HB3	1.71	0.55
50:24:2:ASN:OD1	50:24:3:ILE:HG13	2.07	0.55
52:26:65:A:H5'	52:26:200:G:C5'	2.36	0.55
52:26:397:A:O2'	52:26:398:U:H3'	2.07	0.55
52:26:872:A:H3'	52:26:872:A:OP1	2.06	0.55
52:26:1328:C:H2'	52:26:1329:A:O4'	2.07	0.55
52:26:1522:U:H2'	52:26:1523:G:C8	2.41	0.55
53:27:183:C:C2'	53:27:184:C:H5'	2.36	0.55
53:27:528:A:C8	53:27:528:A:H3'	2.42	0.55
53:27:768:G:H2'	53:27:769:U:O4'	2.07	0.55
53:27:1180:U:H2'	53:27:1181:U:O4'	2.07	0.55
53:27:1871:A:H3'	53:27:1872:A:C8	2.42	0.55
53:27:2075:U:H2'	53:27:2238:G:H22	1.72	0.55
53:27:2257:U:O2'	53:27:2258:C:H5'	2.05	0.55
53:27:2631:G:O2'	53:27:2632:A:H5'	2.07	0.55
59:33:43:LEU:HD13	59:33:56:LEU:HD13	1.89	0.55
59:33:368:SER:HA	59:33:409:PHE:CZ	2.42	0.55
2:B:112:THR:HG23	2:B:167:ASN:O	2.07	0.55
4:D:56:LEU:HD12	4:D:86:CYS:SG	2.47	0.55
6:F:83:LYS:HA	6:F:149:GLU:OE1	2.07	0.55
10:J:109:SER:O	10:J:111:LYS:N	2.39	0.55
13:M:49:GLU:OE1	53:27:2839:G:H4'	2.07	0.55
34:8:77:GLU:O	34:8:81:LEU:HB2	2.07	0.55
35:9:75:LEU:HD12	35:9:75:LEU:O	2.06	0.55
42:16:98:ARG:HD2	42:16:103:CYS:SG	2.47	0.55
44:18:8:ARG:HH21	52:26:1217:C:P	2.30	0.55
47:21:11:VAL:HG11	47:21:20:ILE:HD11	1.88	0.55
52:26:320:A:H2'	52:26:321:A:C8	2.42	0.55
52:26:459:A:H2'	52:26:460:A:C8	2.41	0.55
52:26:842:U:H5"	52:26:846:G:C6	2.42	0.55
53:27:12:U:C2'	53:27:13:A:H5'	2.36	0.55
53:27:609:A:H2'	53:27:610:C:O4'	2.07	0.55
53:27:840:C:H2'	53:27:841:G:H8	1.71	0.55
53:27:962:G:O2'	53:27:963:U:H5'	2.07	0.55
53:27:983:A:C6	53:27:984:A:C2	2.94	0.55
53:27:1130:U:O2'	53:27:1131:G:OP1	2.24	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1993:U:H2'	53:27:1994:C:H6	1.72	0.55
53:27:1999:C:H5"	53:27:2723:C:O2'	2.07	0.55
53:27:2256:G:H2'	53:27:2257:U:C6	2.42	0.55
53:27:2318:G:H2'	53:27:2319:G:O4'	2.06	0.55
53:27:2480:C:H2'	53:27:2481:G:O4'	2.07	0.55
53:27:2494:G:H2'	53:27:2495:G:C8	2.41	0.55
53:27:2863:C:H2'	53:27:2864:G:H8	1.72	0.55
59:33:422:SER:O	59:33:454:GLN:HA	2.07	0.55
3:C:60:TRP:O	3:C:61:ARG:HB2	2.07	0.54
3:C:105:LEU:O	3:C:109:LEU:HD13	2.07	0.54
4:D:90:LEU:HD13	4:D:95:MET:HA	1.89	0.54
4:D:142:TYR:CE2	43:17:8:ILE:HG21	2.41	0.54
13:M:63:ARG:NE	13:M:80:PHE:HD2	2.05	0.54
24:X:15:ASN:O	24:X:19:LEU:HG	2.06	0.54
26:Z:66:ILE:CD1	44:18:41:TRP:HB2	2.36	0.54
27:1:49:ARG:HG2	53:27:2884:U:C5	2.42	0.54
32:6:56:LEU:HG	32:6:183:PHE:CE2	2.41	0.54
35:9:22:LYS:CB	35:9:29:ILE:HG22	2.36	0.54
50:24:22:SER:OG	50:24:23:ARG:NH1	2.39	0.54
50:24:47:GLN:O	50:24:50:PHE:HB3	2.06	0.54
52:26:613:C:H2'	52:26:614:C:C6	2.41	0.54
52:26:1026:G:H21	52:26:1027:C:N4	2.04	0.54
53:27:1109:C:H2'	53:27:1110:G:O4'	2.06	0.54
53:27:1266:G:N2	53:27:2012:G:C4	2.75	0.54
53:27:1744:A:H3'	53:27:1745:A:C8	2.42	0.54
53:27:1900:A:H1'	53:27:1970:A:H2'	1.89	0.54
53:27:2580:U:C2'	53:27:2581:G:H5'	2.37	0.54
54:28:5:U:H2'	54:28:6:G:C8	2.42	0.54
59:33:92:GLU:O	59:33:96:ARG:HG3	2.07	0.54
2:B:66:GLY:HA3	53:27:2786:U:O2'	2.07	0.54
3:C:23:PHE:HB2	3:C:114:ARG:HH21	1.71	0.54
3:C:40:ARG:HD2	3:C:92:HIS:CD2	2.43	0.54
10:J:77:ILE:HG12	15:O:71:ARG:HG3	1.88	0.54
15:O:2:ASN:ND2	53:27:2876:G:H5"	2.22	0.54
20:T:24:VAL:HG22	20:T:35:VAL:HG22	1.88	0.54
34:8:81:LEU:O	34:8:82:LYS:HB2	2.06	0.54
36:10:18:VAL:HG11	36:10:58:HIS:CD2	2.42	0.54
39:13:6:TYR:O	39:13:85:ALA:HA	2.07	0.54
40:14:73:LEU:HD21	40:14:75:ASP:HB2	1.89	0.54
47:21:51:GLU:OE1	47:21:51:GLU:N	2.40	0.54
52:26:106:C:O2	52:26:379:C:H4'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:547:A:H4'	53:27:548:G:C5	2.43	0.54
53:27:1520:U:H2'	53:27:1521:G:O4'	2.06	0.54
53:27:2075:U:H2'	53:27:2238:G:N2	2.22	0.54
53:27:2345:G:H21	53:27:2381:A:H3'	1.72	0.54
53:27:2588:G:C2'	53:27:2589:A:H5'	2.37	0.54
5:E:36:LEU:HD11	5:E:67:ALA:CB	2.36	0.54
8:H:93:ASN:HA	8:H:96:LYS:NZ	2.23	0.54
12:L:74:THR:HG21	12:L:86:LYS:HE3	1.89	0.54
17:Q:39:LEU:O	17:Q:40:MET:HB2	2.07	0.54
27:1:52:LYS:HZ2	27:1:55:ALA:HA	1.70	0.54
34:8:30:LYS:HA	52:26:413:G:O6	2.08	0.54
43:17:113:LYS:HB2	43:17:114:PRO:HD3	1.89	0.54
52:26:190:A:H2'	52:26:191:G:O4'	2.06	0.54
52:26:781:A:N6	52:26:802:A:H1'	2.22	0.54
53:27:110:G:H2'	53:27:111:A:H8	1.72	0.54
53:27:803:U:H2'	53:27:804:A:O4'	2.07	0.54
53:27:938:G:H2'	53:27:939:G:C8	2.42	0.54
53:27:1036:G:H2'	53:27:1037:G:C8	2.42	0.54
53:27:1406:U:C2'	53:27:1407:G:H5"	2.38	0.54
53:27:1444:G:H2'	53:27:1445:G:H8	1.71	0.54
53:27:1880:U:H2'	53:27:1881:C:C6	2.42	0.54
59:33:407:TYR:O	59:33:458:GLY:HA2	2.07	0.54
1:A:115:ILE:HD12	1:A:116:GLN:N	2.22	0.54
3:C:58:LYS:HD3	3:C:70:SER:CB	2.36	0.54
3:C:144:GLU:H	3:C:146:VAL:HG13	1.73	0.54
5:E:3:VAL:HG23	53:27:2751:G:H4'	1.89	0.54
22:V:22:PHE:H	22:V:25:GLU:CD	2.10	0.54
30:4:63:TYR:CE2	53:27:242:G:H5"	2.41	0.54
33:7:174:LEU:HD23	33:7:181:ILE:CD1	2.36	0.54
35:9:12:GLU:HB3	35:9:38:VAL:HG12	1.88	0.54
42:16:98:ARG:HB2	42:16:116:TYR:HA	1.89	0.54
51:25:29:ALA:HA	51:25:32:ARG:HD3	1.90	0.54
51:25:65:ARG:O	51:25:66:ARG:CB	2.56	0.54
52:26:211:G:C2'	52:26:212:G:H5'	2.37	0.54
52:26:374:A:H2'	52:26:375:U:H6	1.73	0.54
52:26:684:U:H2'	52:26:685:G:O4'	2.08	0.54
53:27:215:G:C4'	53:27:216:A:H4'	2.36	0.54
53:27:1443:U:H2'	53:27:1444:G:C8	2.42	0.54
53:27:2078:C:H2'	53:27:2079:U:O4'	2.07	0.54
53:27:2487:G:H2'	53:27:2488:G:H8	1.71	0.54
59:33:281:ILE:HG13	59:33:338:ILE:HA	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:666:SER:H	59:33:715:GLU:HA	1.71	0.54
1:A:43:ASN:HD21	53:27:1806:C:H1'	1.72	0.54
4:D:104:THR:HA	26:Z:38:SER:HB3	1.90	0.54
6:F:58:LEU:HA	6:F:61:VAL:HG22	1.90	0.54
8:H:14:ALA:HB2	8:H:52:LEU:H	1.71	0.54
8:H:33:ASN:ND2	8:H:64:ARG:HB3	2.23	0.54
46:20:20:VAL:HG22	46:20:21:VAL:O	2.07	0.54
46:20:21:VAL:HG12	46:20:33:ILE:HD13	1.89	0.54
48:22:11:ARG:HG2	48:22:11:ARG:HH11	1.72	0.54
50:24:4:LYS:C	50:24:6:ALA:H	2.10	0.54
52:26:259:G:H2'	52:26:260:G:H8	1.73	0.54
52:26:337:G:H2'	52:26:338:A:H8	1.72	0.54
52:26:674:G:H2'	52:26:675:A:H8	1.72	0.54
52:26:1210:C:H2'	52:26:1211:U:O4'	2.07	0.54
52:26:1305:G:H1'	52:26:1332:A:N6	2.22	0.54
53:27:451:U:O4	53:27:453:A:H2'	2.08	0.54
53:27:552:U:H2'	53:27:553:G:C8	2.42	0.54
53:27:741:U:H2'	53:27:742:A:C8	2.42	0.54
53:27:1789:A:H2'	53:27:1790:C:O4'	2.07	0.54
53:27:1849:G:H2'	53:27:1850:G:C8	2.43	0.54
53:27:1849:G:H2'	53:27:1850:G:H8	1.73	0.54
53:27:2271:G:H2'	53:27:2272:U:H6	1.73	0.54
53:27:2848:G:N2	53:27:2867:G:H2'	2.21	0.54
59:33:243:GLU:OE2	59:33:295:ILE:HG21	2.05	0.54
59:33:308:ASP:OD2	59:33:310:TYR:CZ	2.61	0.54
2:B:166:GLY:C	2:B:168:GLU:H	2.11	0.54
4:D:19:PHE:HB2	4:D:21:TYR:CE2	2.43	0.54
6:F:9:VAL:HG12	6:F:10:ALA:N	2.22	0.54
6:F:32:PRO:HB3	23:W:38:TRP:CB	2.34	0.54
7:G:44:ALA:HB1	7:G:51:TYR:H	1.73	0.54
18:R:29:VAL:HG11	18:R:55:ILE:CD1	2.31	0.54
26:Z:20:ASN:CG	26:Z:39:LYS:HD3	2.28	0.54
32:6:82:ALA:HB3	32:6:213:LEU:HG	1.89	0.54
33:7:152:VAL:HA	33:7:196:GLY:O	2.07	0.54
34:8:167:PRO:HB3	34:8:169:TRP:CZ2	2.43	0.54
36:10:15:SER:HB2	36:10:58:HIS:HB2	1.89	0.54
38:12:4:ASP:HB2	38:12:80:PRO:HG3	1.88	0.54
52:26:575:G:H4'	52:26:576:C:O5'	2.07	0.54
52:26:677:U:H2'	52:26:678:U:H6	1.72	0.54
52:26:1486:G:H2'	52:26:1487:G:O4'	2.08	0.54
53:27:795:C:H2'	53:27:796:C:C6	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:833:A:H2'	53:27:834:G:H8	1.70	0.54
53:27:2127:G:H1'	53:27:2173:A:N3	2.22	0.54
53:27:2391:G:H2'	53:27:2424:C:N4	2.23	0.54
53:27:2619:C:H2'	53:27:2620:C:H6	1.72	0.54
59:33:43:LEU:O	59:33:44:GLN:HB2	2.08	0.54
59:33:160:LEU:CD1	59:33:198:LEU:HD22	2.38	0.54
59:33:425:LEU:H	59:33:425:LEU:CD1	2.20	0.54
1:A:44:ASN:ND2	53:27:1812:U:H1'	2.22	0.54
3:C:31:VAL:HG11	3:C:177:PRO:HG2	1.90	0.54
3:C:105:LEU:HB3	3:C:200:LEU:HD21	1.89	0.54
4:D:7:TYR:HB2	4:D:172:PHE:HZ	1.73	0.54
5:E:119:GLY:O	5:E:120:ILE:HD13	2.08	0.54
5:E:176:LYS:HD3	53:27:2660:A:H62	1.70	0.54
7:G:42:ARG:C	7:G:45:GLY:H	2.10	0.54
8:H:40:ALA:HA	8:H:43:ALA:HB3	1.89	0.54
18:R:73:LYS:HB2	18:R:106:VAL:CB	2.32	0.54
31:5:37:GLN:OE1	53:27:1124:G:O2'	2.19	0.54
31:5:38:GLY:O	53:27:1031:G:N2	2.41	0.54
34:8:80:ARG:HH21	52:26:613:C:P	2.31	0.54
34:8:205:LYS:HA	52:26:8:A:C5	2.42	0.54
36:10:20:GLY:O	36:10:24:ARG:HG3	2.08	0.54
44:18:25:GLU:HA	44:18:28:ALA:HB3	1.90	0.54
47:21:14:ASP:C	47:21:16:MET:H	2.10	0.54
47:21:39:ARG:HH11	52:26:280:C:H1'	1.73	0.54
48:22:56:ARG:HB3	48:22:60:ARG:NH1	2.23	0.54
51:25:5:VAL:HG11	51:25:16:ARG:HB3	1.89	0.54
52:26:885:G:H2'	52:26:886:G:H8	1.72	0.54
53:27:671:C:H2'	53:27:672:C:C6	2.43	0.54
53:27:1097:U:H2'	53:27:1098:A:H5'	1.90	0.54
53:27:1191:G:H2'	53:27:1192:G:C8	2.42	0.54
53:27:1804:C:H2'	53:27:1805:A:H8	1.72	0.54
53:27:1924:C:H2'	53:27:1925:C:H6	1.72	0.54
53:27:2024:G:OP2	53:27:2034:U:H4'	2.08	0.54
53:27:2036:C:H2'	53:27:2037:A:H8	1.73	0.54
53:27:2220:U:H2'	53:27:2221:G:C8	2.43	0.54
53:27:2393:U:O2'	53:27:2394:C:H5'	2.08	0.54
53:27:2502:G:H5'	53:27:2503:A:H5'	1.89	0.54
57:31:31:G:H2'	57:31:32:C:C6	2.42	0.54
59:33:30:LYS:HD2	59:33:33:GLU:CD	2.28	0.54
59:33:63:VAL:HG21	59:33:80:LEU:HD21	1.90	0.54
6:F:89:LYS:O	6:F:125:THR:HG23	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:12:ARG:HD3	13:M:16:HIS:CE1	2.42	0.54
16:P:57:ARG:NH1	53:27:1154:G:OP2	2.40	0.54
20:T:81:ARG:HH12	53:27:300:A:P	2.30	0.54
28:2:8:ILE:HD12	28:2:50:GLU:HG3	1.90	0.54
33:7:21:TRP:HB2	33:7:58:ARG:HB3	1.90	0.54
39:13:39:GLY:O	39:13:44:ARG:NE	2.41	0.54
48:22:32:ILE:HD12	48:22:32:ILE:O	2.08	0.54
49:23:7:GLY:O	49:23:9:PHE:N	2.41	0.54
52:26:573:A:H2'	52:26:574:A:O4'	2.08	0.54
52:26:1014:A:H2'	52:26:1015:G:O4'	2.08	0.54
53:27:152:A:H2'	53:27:153:U:C6	2.43	0.54
53:27:286:U:H2'	53:27:287:G:H8	1.72	0.54
53:27:1812:U:H2'	53:27:1813:G:C8	2.42	0.54
53:27:1906:G:C2'	53:27:1907:G:H5"	2.38	0.54
53:27:2136:G:C5	53:27:2137:U:H1'	2.42	0.54
53:27:2286:G:H5'	53:27:2287:A:C1'	2.38	0.54
53:27:2583:G:H2'	53:27:2584:U:O4'	2.08	0.54
59:33:158:ALA:O	59:33:161:ARG:O	2.26	0.54
59:33:240:MET:HB3	59:33:295:ILE:CD1	2.38	0.54
4:D:49:LEU:HD22	4:D:83:PRO:O	2.08	0.54
5:E:21:GLN:HE21	5:E:36:LEU:HB3	1.73	0.54
6:F:112:LYS:CE	53:27:2220:U:H5"	2.38	0.54
7:G:23:LEU:HD11	7:G:116:GLU:O	2.07	0.54
13:M:103:ARG:HB2	13:M:110:MET:HG2	1.90	0.54
17:Q:49:ILE:HG22	17:Q:54:VAL:N	2.23	0.54
18:R:69:LEU:HD11	18:R:107:VAL:HG22	1.90	0.54
26:Z:66:ILE:CD1	44:18:38:GLU:HA	2.34	0.54
33:7:161:ILE:HG21	55:29:23:A:H2	1.71	0.54
33:7:174:LEU:HD21	33:7:200:TRP:CD1	2.43	0.54
37:11:91:ARG:O	37:11:95:ARG:N	2.41	0.54
39:13:89:TYR:CB	39:13:93:LEU:HD21	2.37	0.54
41:15:96:ILE:HG13	41:15:97:ARG:N	2.23	0.54
52:26:510:A:N3	52:26:543:U:H1'	2.22	0.54
53:27:1361:G:H2'	53:27:1362:C:C6	2.43	0.54
53:27:1501:G:O2'	53:27:1502:A:H5'	2.08	0.54
59:33:232:PHE:CE1	59:33:329:PRO:CD	2.81	0.54
59:33:620:GLU:O	59:33:621:ILE:HG23	2.07	0.54
1:A:86:ARG:NH2	53:27:1817:G:OP1	2.41	0.54
2:B:164:GLN:HE22	53:27:2822:G:H5"	1.73	0.54
29:3:3:ARG:NH1	53:27:752:A:OP1	2.41	0.54
34:8:8:LEU:O	34:8:11:SER:HB3	2.09	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:11:68:VAL:HG23	37:11:99:ALA:HB1	1.90	0.54
37:11:102:TRP:O	37:11:105:GLU:HB3	2.07	0.54
39:13:34:LEU:HD11	39:13:47:VAL:HG21	1.88	0.54
40:14:80:THR:HB	40:14:83:THR:OG1	2.08	0.54
44:18:53:ASP:O	44:18:55:SER:N	2.39	0.54
46:20:28:ARG:HE	46:20:29:ASN:ND2	2.06	0.54
48:22:18:GLN:HB3	48:22:19:GLU:OE1	2.08	0.54
48:22:71:ASP:OD1	48:22:72:ARG:N	2.41	0.54
52:26:91:U:H2'	52:26:92:U:C6	2.43	0.54
52:26:755:G:H2'	52:26:756:C:H6	1.73	0.54
52:26:1514:G:H2'	52:26:1515:G:H8	1.73	0.54
53:27:801:G:H3'	53:27:802:A:C5'	2.38	0.54
53:27:972:A:H3'	53:27:973:A:H2'	1.90	0.54
53:27:2673:G:H2'	53:27:2674:G:H8	1.73	0.54
54:28:71:C:H2'	54:28:72:G:C8	2.43	0.54
59:33:645:ARG:HA	59:33:649:PRO:HB3	1.89	0.54
1:A:66:PHE:HZ	1:A:86:ARG:HH21	1.56	0.53
1:A:141:HIS:O	1:A:143:VAL:N	2.38	0.53
2:B:101:PHE:O	2:B:103:ASP:N	2.33	0.53
3:C:47:LYS:NZ	53:27:451:U:H4'	2.23	0.53
12:L:35:ALA:HB1	12:L:126:ILE:HD12	1.90	0.53
37:11:59:GLU:HA	37:11:62:GLU:OE1	2.09	0.53
42:16:28:GLN:HG3	42:16:80:LEU:HD21	1.90	0.53
52:26:106:C:H2'	52:26:107:G:C8	2.40	0.53
52:26:123:U:H5"	52:26:311:C:O2'	2.08	0.53
52:26:376:G:H2'	52:26:377:G:H8	1.73	0.53
53:27:222:A:N6	53:27:232:G:H1'	2.24	0.53
53:27:1548:A:H2'	53:27:1549:A:H8	1.74	0.53
53:27:1709:U:O2'	53:27:2859:G:H1'	2.07	0.53
53:27:2127:G:H1'	53:27:2173:A:H1'	1.89	0.53
53:27:2639:A:H2'	53:27:2640:G:O4'	2.08	0.53
53:27:2680:U:H2'	53:27:2681:C:C6	2.43	0.53
59:33:27:THR:HG23	59:33:28:SER:N	2.21	0.53
59:33:71:MET:O	59:33:76:LEU:HD13	2.07	0.53
1:A:43:ASN:ND2	53:27:1806:C:H1'	2.23	0.53
2:B:38:LYS:HA	2:B:43:ASP:OD2	2.08	0.53
8:H:72:THR:HG21	8:H:112:LYS:CA	2.38	0.53
8:H:98:GLY:HA3	8:H:137:LEU:HD23	1.90	0.53
14:N:35:ILE:HG22	14:N:53:THR:HG23	1.89	0.53
16:P:3:VAL:HG22	53:27:1199:U:C1'	2.33	0.53
17:Q:83:TYR:CZ	53:27:1187:G:H5"	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:3:34:ARG:HH21	29:3:39:ARG:CD	2.21	0.53
33:7:69:THR:O	33:7:105:VAL:HG12	2.09	0.53
40:14:38:GLY:O	40:14:74:VAL:HA	2.08	0.53
41:15:80:ASN:CB	41:15:105:ARG:HB3	2.37	0.53
42:16:23:LEU:HG	42:16:24:GLU:H	1.73	0.53
45:19:21:THR:O	52:26:750:C:H1'	2.08	0.53
46:20:57:ILE:O	46:20:61:VAL:HG23	2.08	0.53
47:21:14:ASP:O	47:21:16:MET:N	2.40	0.53
51:25:11:PHE:CE2	51:25:13:VAL:HA	2.42	0.53
52:26:745:G:H2'	52:26:746:A:C8	2.43	0.53
52:26:755:G:H2'	52:26:756:C:C6	2.44	0.53
52:26:900:A:C2	52:26:901:A:C4	2.97	0.53
52:26:1496:C:H1'	52:26:1517:G:H22	1.74	0.53
53:27:191:A:H2'	53:27:192:C:C6	2.43	0.53
53:27:376:G:H2'	53:27:377:G:H8	1.73	0.53
53:27:595:C:H2'	53:27:596:U:C6	2.43	0.53
53:27:969:G:H2'	53:27:970:U:H6	1.73	0.53
53:27:2073:C:O2'	53:27:2074:U:H5'	2.08	0.53
53:27:2261:C:O2'	53:27:2262:U:H5'	2.07	0.53
59:33:60:VAL:O	59:33:63:VAL:HG22	2.08	0.53
59:33:81:LEU:CD2	59:33:84:LEU:HD22	2.38	0.53
59:33:175:ALA:CA	59:33:178:CYS:SG	2.94	0.53
59:33:444:ILE:HG22	59:33:461:ILE:HA	1.91	0.53
1:A:171:VAL:HG13	1:A:185:ALA:HB2	1.90	0.53
2:B:8:LYS:HB2	2:B:201:LEU:CD1	2.38	0.53
3:C:148:ILE:HA	3:C:187:VAL:HG13	1.90	0.53
4:D:78:ILE:HG13	4:D:78:ILE:O	2.07	0.53
6:F:18:GLN:HE22	6:F:39:ALA:CB	2.21	0.53
7:G:59:LEU:CA	53:27:1107:G:OP1	2.56	0.53
7:G:114:GLU:HB2	7:G:123:ILE:HA	1.90	0.53
13:M:41:ALA:HB1	13:M:97:ILE:HD12	1.90	0.53
15:O:13:LYS:HE3	15:O:76:HIS:C	2.28	0.53
35:9:45:VAL:HG21	35:9:117:ALA:HA	1.90	0.53
52:26:13:U:O2	52:26:914:A:H3'	2.08	0.53
52:26:451:A:H4'	52:26:452:A:O4'	2.08	0.53
52:26:900:A:H2'	52:26:901:A:C8	2.44	0.53
52:26:1268:G:H2'	52:26:1269:A:C8	2.43	0.53
52:26:1292:G:H2'	52:26:1293:C:H6	1.72	0.53
53:27:527:C:H2'	53:27:2779:U:O2	2.09	0.53
53:27:1680:U:H2'	53:27:1681:G:O4'	2.08	0.53
53:27:1726:C:H2'	53:27:1727:C:H6	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1734:G:H2'	53:27:1735:A:C8	2.43	0.53
53:27:2743:U:H2'	53:27:2744:G:O4'	2.08	0.53
55:29:13:A:H61	58:32:35:A:H62	1.54	0.53
6:F:117:LEU:HD13	6:F:121:VAL:HA	1.91	0.53
8:H:21:PRO:HB2	8:H:22:PRO:CD	2.29	0.53
9:I:21:THR:HG23	9:I:61:LYS:HB3	1.91	0.53
16:P:49:ARG:HH21	17:Q:72:VAL:HB	1.72	0.53
20:T:28:LEU:HD12	20:T:32:LYS:HB2	1.89	0.53
23:W:6:VAL:HG21	23:W:58:ILE:HD11	1.89	0.53
24:X:23:ARG:O	24:X:25:GLN:N	2.42	0.53
30:4:56:LEU:O	30:4:60:CYS:HB2	2.09	0.53
38:12:65:PHE:CD2	38:12:66:GLN:HG2	2.43	0.53
39:13:115:VAL:HG23	52:26:1367:C:H5"	1.90	0.53
44:18:68:ARG:HD2	52:26:1202:U:O4'	2.08	0.53
52:26:211:G:H2'	52:26:212:G:H5'	1.90	0.53
52:26:247:G:H2'	52:26:248:C:H6	1.73	0.53
52:26:1349:A:H3'	52:26:1350:A:H8	1.74	0.53
53:27:364:C:H2'	53:27:365:U:H6	1.72	0.53
53:27:471:A:H2'	53:27:472:A:O4'	2.08	0.53
53:27:968:C:H2'	53:27:969:G:H8	1.73	0.53
53:27:1967:C:H2'	53:27:1968:G:C5'	2.37	0.53
53:27:2637:U:H2'	53:27:2638:G:O4'	2.09	0.53
53:27:2818:U:H2'	53:27:2819:G:C8	2.43	0.53
56:30:34:G:H2'	56:30:35:A:C8	2.44	0.53
59:33:617:PRO:HG2	59:33:664:GLY:HA2	1.90	0.53
4:D:98:PHE:HA	4:D:101:ARG:CZ	2.38	0.53
5:E:153:PRO:HG2	5:E:166:GLU:OE2	2.08	0.53
5:E:171:LYS:NZ	53:27:2530:A:N7	2.51	0.53
7:G:50:VAL:HG11	53:27:1082:U:OP1	2.09	0.53
9:I:113:PRO:HA	9:I:116:ARG:NH2	2.23	0.53
17:Q:77:PHE:HD1	17:Q:84:ARG:HB3	1.74	0.53
35:9:40:ASP:OD1	35:9:44:ARG:HB2	2.08	0.53
52:26:201:G:H2'	52:26:202:G:O4'	2.08	0.53
52:26:317:U:H2'	52:26:318:G:H8	1.72	0.53
52:26:377:G:H2'	52:26:378:G:H8	1.74	0.53
52:26:1074:G:H2'	52:26:1075:U:H6	1.74	0.53
53:27:597:G:H2'	53:27:598:U:O4'	2.08	0.53
53:27:1352:U:O2'	53:27:1353:A:H5'	2.08	0.53
53:27:2641:G:H2'	53:27:2642:G:H8	1.74	0.53
58:32:59:A:H3'	58:32:60:U:H6	1.72	0.53
59:33:35:LEU:HD11	59:33:73:ILE:CA	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:134:ASN:O	59:33:135:VAL:HB	2.08	0.53
59:33:210:GLU:HB3	59:33:260:TRP:CZ3	2.43	0.53
3:C:58:LYS:HZ2	3:C:70:SER:HB2	1.73	0.53
4:D:37:MET:HE3	4:D:151:LEU:HB3	1.91	0.53
4:D:101:ARG:HD2	4:D:139:GLU:OE2	2.09	0.53
5:E:156:TYR:CE2	53:27:2531:A:H4'	2.43	0.53
9:I:58:ASN:HA	9:I:126:ALA:O	2.09	0.53
14:N:28:VAL:HG22	14:N:29:HIS:H	1.73	0.53
20:T:17:ASP:HB3	20:T:20:LYS:HB3	1.89	0.53
20:T:39:ASN:O	20:T:61:GLU:HA	2.08	0.53
22:V:79:GLU:HG3	22:V:81:GLU:HG2	1.89	0.53
33:7:132:ALA:O	33:7:135:ARG:HB3	2.08	0.53
40:14:14:ASP:OD1	40:14:16:ARG:HG2	2.09	0.53
41:15:35:ASP:OD1	41:15:36:ARG:N	2.42	0.53
43:17:1:ALA:O	43:17:8:ILE:HG13	2.09	0.53
46:20:5:ARG:NH1	52:26:377:G:H5'	2.23	0.53
47:21:68:LYS:O	52:26:254:G:OP1	2.26	0.53
51:25:36:PHE:O	51:25:38:GLU:N	2.35	0.53
52:26:1254:A:H2'	52:26:1255:G:H8	1.72	0.53
53:27:208:C:H2'	53:27:209:C:C6	2.40	0.53
53:27:399:U:OP1	53:27:2090:A:H5"	2.09	0.53
53:27:463:G:C2	53:27:467:G:C6	2.97	0.53
53:27:584:C:H2'	53:27:585:G:H8	1.73	0.53
53:27:1666:G:C2'	53:27:1667:G:H5'	2.39	0.53
53:27:1771:C:H2'	53:27:1772:A:C8	2.43	0.53
53:27:1998:A:H2'	53:27:1999:C:H6	1.72	0.53
53:27:2544:G:O2'	53:27:2545:G:H5'	2.08	0.53
54:28:30:C:H2'	54:28:31:C:C5'	2.38	0.53
59:33:20:TRP:CD1	59:33:64:GLU:CA	2.90	0.53
59:33:73:ILE:HG13	59:33:74:ASP:N	2.24	0.53
2:B:108:ASP:CG	2:B:206:ALA:HA	2.29	0.53
8:H:23:VAL:HG13	8:H:24:GLY:H	1.72	0.53
8:H:35:MET:HB2	8:H:39:LYS:NZ	2.23	0.53
32:6:49:PHE:O	32:6:52:ALA:HB3	2.08	0.53
33:7:87:ARG:HB3	33:7:100:ILE:CG2	2.39	0.53
34:8:171:GLU:HB2	34:8:180:THR:HB	1.91	0.53
36:10:18:VAL:N	36:10:19:PRO:CD	2.72	0.53
39:13:118:ARG:O	39:13:119:LYS:HB3	2.08	0.53
44:18:17:ASP:O	44:18:21:ALA:HB3	2.09	0.53
52:26:34:C:H2'	52:26:35:G:H8	1.72	0.53
52:26:882:C:O2'	52:26:883:C:H5'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1390:U:H2'	52:26:1391:U:C6	2.43	0.53
53:27:19:A:H2'	53:27:20:C:H6	1.73	0.53
53:27:552:U:H2'	53:27:553:G:H8	1.73	0.53
53:27:689:A:H2	53:27:779:U:H4'	1.74	0.53
53:27:2185:U:H2'	53:27:2186:G:C8	2.43	0.53
53:27:2263:C:H2'	53:27:2264:C:H6	1.72	0.53
53:27:2648:G:H2'	53:27:2649:C:O4'	2.09	0.53
54:28:91:C:H2'	54:28:92:C:C6	2.41	0.53
59:33:43:LEU:HA	59:33:56:LEU:CD1	2.38	0.53
59:33:423:THR:HB	59:33:425:LEU:HD13	1.90	0.53
1:A:99:GLU:HB2	53:27:1491:G:H1'	1.90	0.53
2:B:109:VAL:HG21	2:B:193:VAL:HG12	1.90	0.53
4:D:172:PHE:O	4:D:174:PHE:N	2.41	0.53
6:F:18:GLN:HE22	6:F:39:ALA:HB1	1.73	0.53
6:F:50:ARG:HD2	6:F:51:ARG:HH12	1.74	0.53
11:K:38:GLN:HB3	53:27:832:U:OP1	2.09	0.53
16:P:54:ARG:HG3	53:27:1155:A:OP1	2.08	0.53
25:Y:8:GLN:HB2	25:Y:28:LEU:HD13	1.90	0.53
34:8:50:TYR:O	34:8:53:GLN:HB2	2.08	0.53
34:8:149:LYS:HE2	34:8:177:MET:HG2	1.91	0.53
34:8:169:TRP:CG	34:8:185:PRO:HG3	2.44	0.53
35:9:84:VAL:HG22	35:9:85:LYS:O	2.08	0.53
35:9:104:ILE:HG23	35:9:111:ARG:HH11	1.74	0.53
35:9:104:ILE:HA	35:9:121:ASN:O	2.09	0.53
36:10:88:MET:HB3	48:22:63:TYR:HE2	1.72	0.53
46:20:33:ILE:HD12	46:20:33:ILE:H	1.73	0.53
46:20:67:ILE:HD12	46:20:67:ILE:N	2.22	0.53
52:26:370:C:O2'	52:26:371:A:H5'	2.09	0.53
52:26:1168:U:H5"	52:26:1169:A:OP2	2.09	0.53
52:26:1329:A:O2'	52:26:1330:U:H5'	2.09	0.53
52:26:1451:U:H5"	52:26:1452:C:C5	2.43	0.53
53:27:570:G:H22	53:27:2499:C:H5'	1.74	0.53
53:27:679:C:H2'	53:27:680:C:C6	2.44	0.53
53:27:681:G:H2'	53:27:682:G:O4'	2.08	0.53
53:27:1278:C:H2'	53:27:1279:G:H8	1.72	0.53
53:27:2486:C:H2'	53:27:2487:G:C5'	2.36	0.53
53:27:2486:C:C2'	53:27:2487:G:H5"	2.38	0.53
53:27:2514:U:H2'	53:27:2515:C:C6	2.43	0.53
53:27:2643:G:H2'	53:27:2644:G:O4'	2.09	0.53
53:27:2881:U:H2'	53:27:2882:A:C8	2.43	0.53
54:28:94:A:H2'	54:28:95:U:O4'	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:30:55:U:C6	56:30:58:A:H2'	2.44	0.53
59:33:99:VAL:CG2	59:33:103:VAL:HG21	2.39	0.53
59:33:135:VAL:HG22	59:33:136:ARG:HG2	1.90	0.53
59:33:155:GLU:O	59:33:159:HIS:HD2	1.89	0.53
59:33:210:GLU:OE1	59:33:260:TRP:CZ3	2.62	0.53
1:A:170:TYR:CE1	1:A:184:GLU:HG2	2.44	0.53
13:M:96:ARG:HG3	13:M:116:VAL:HG22	1.91	0.53
14:N:51:ALA:HB3	14:N:78:VAL:CG2	2.38	0.53
16:P:53:LYS:NZ	53:27:994:C:OP2	2.42	0.53
21:U:9:ARG:NH1	54:28:76:G:OP1	2.42	0.53
23:W:73:ARG:HB3	23:W:75:GLU:HG2	1.91	0.53
33:7:20:THR:O	33:7:57:GLU:HA	2.09	0.53
34:8:131:ILE:CD1	34:8:134:TYR:HB2	2.37	0.53
34:8:142:VAL:O	34:8:179:GLY:N	2.42	0.53
40:14:37:ARG:HB2	40:14:75:ASP:HB3	1.89	0.53
52:26:237:G:H2'	52:26:238:A:H8	1.74	0.53
52:26:1261:A:H3'	52:26:1262:C:C6	2.44	0.53
53:27:140:C:H3'	53:27:140:C:P	2.48	0.53
53:27:622:G:H2'	53:27:623:C:C6	2.43	0.53
53:27:999:U:H5"	53:27:1154:G:O6	2.09	0.53
53:27:1055:G:H2'	53:27:1056:G:O4'	2.09	0.53
53:27:1463:C:H2'	53:27:1464:G:H8	1.73	0.53
53:27:1956:U:H2'	53:27:1957:C:H5'	1.91	0.53
53:27:2396:G:H2'	53:27:2397:G:H8	1.74	0.53
53:27:2570:G:H2'	53:27:2571:U:O4'	2.08	0.53
56:30:9:A:H5'	56:30:10:G:OP2	2.07	0.53
58:32:11:A:H2	58:32:24:U:H3	1.50	0.53
59:33:210:GLU:CD	59:33:260:TRP:CZ3	2.83	0.53
1:A:64:VAL:HB	1:A:66:PHE:CE1	2.43	0.53
2:B:112:THR:O	2:B:195:GLY:HA2	2.09	0.53
7:G:17:GLU:OE2	7:G:53:ARG:HB3	2.08	0.53
13:M:3:HIS:HD2	53:27:2820:A:O3'	1.92	0.53
14:N:25:ARG:NH1	54:28:8:C:O3'	2.41	0.53
19:S:25:GLU:HG3	19:S:26:LYS:N	2.23	0.53
24:X:39:GLN:HA	53:27:95:A:H4'	1.91	0.53
32:6:45:THR:OG1	32:6:200:PRO:HB2	2.09	0.53
35:9:14:LEU:HD12	35:9:14:LEU:C	2.29	0.53
35:9:114:LEU:O	35:9:119:VAL:HG22	2.08	0.53
37:11:72:VAL:HG12	37:11:89:GLU:HA	1.91	0.53
47:21:5:ARG:HD3	52:26:636:U:C5'	2.38	0.53
48:22:10:CYS:O	48:22:11:ARG:HG3	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:33:A:O2'	52:26:34:C:H5'	2.09	0.53
52:26:70:U:H1'	52:26:71:A:N7	2.24	0.53
53:27:216:A:H2'	53:27:217:A:O4'	2.09	0.53
53:27:551:G:O2'	53:27:552:U:H5'	2.09	0.53
53:27:672:C:O2'	53:27:673:C:H5'	2.09	0.53
53:27:1801:A:C5'	53:27:2203:U:H2'	2.30	0.53
59:33:42:CYS:HB2	59:33:84:LEU:HD11	1.91	0.53
59:33:367:ARG:O	59:33:409:PHE:HZ	1.92	0.53
2:B:5:VAL:HG11	2:B:80:TRP:CZ3	2.44	0.52
3:C:65:THR:HG23	53:27:2059:A:OP1	2.09	0.52
6:F:29:PHE:O	6:F:32:PRO:HG2	2.09	0.52
13:M:31:HIS:CD2	53:27:1279:G:H4'	2.44	0.52
15:O:105:LYS:O	15:O:108:ARG:NH2	2.43	0.52
18:R:7:HIS:HB2	18:R:50:VAL:HG22	1.91	0.52
18:R:90:LYS:HA	53:27:751:A:H5'	1.90	0.52
19:S:70:HIS:C	19:S:72:GLN:H	2.12	0.52
20:T:39:ASN:O	20:T:41:VAL:N	2.43	0.52
34:8:70:GLN:HG2	34:8:74:TYR:CE2	2.44	0.52
36:10:11:HIS:CE1	36:10:54:LEU:HD22	2.44	0.52
37:11:71:THR:O	37:11:90:VAL:HG12	2.09	0.52
52:26:963:G:H2'	52:26:964:A:H8	1.73	0.52
52:26:1127:G:H5'	52:26:1280:A:O2'	2.10	0.52
52:26:1244:G:H2'	52:26:1245:C:C6	2.45	0.52
53:27:340:A:H2'	53:27:341:C:O4'	2.08	0.52
53:27:563:A:C6	53:27:2018:G:C5	2.97	0.52
53:27:599:A:H2'	53:27:600:G:H8	1.74	0.52
53:27:669:G:N3	53:27:669:G:H2'	2.24	0.52
53:27:1486:U:H2'	53:27:1487:U:H6	1.73	0.52
53:27:2398:U:H2'	53:27:2399:G:C8	2.45	0.52
53:27:2603:G:O2'	53:27:2604:U:H5'	2.09	0.52
53:27:2751:G:O2'	53:27:2752:C:H5'	2.09	0.52
59:33:20:TRP:HD1	59:33:64:GLU:CA	2.21	0.52
59:33:43:LEU:CD2	59:33:44:GLN:HE22	2.22	0.52
59:33:81:LEU:CA	59:33:84:LEU:HD13	2.33	0.52
59:33:96:ARG:CG	59:33:104:VAL:HG21	2.38	0.52
5:E:71:LEU:HD23	5:E:74:MET:SD	2.50	0.52
5:E:85:LYS:HB2	5:E:164:ALA:HB2	1.91	0.52
11:K:58:TYR:O	30:4:12:ARG:NH2	2.43	0.52
19:S:54:GLU:H	19:S:54:GLU:CD	2.12	0.52
21:U:29:ILE:HD12	54:28:75:G:O4'	2.09	0.52
42:16:20:VAL:O	42:16:22:ALA:N	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:16:98:ARG:HA	42:16:103:CYS:SG	2.49	0.52
52:26:49:U:O2'	52:26:50:A:H2'	2.09	0.52
52:26:336:A:H2'	52:26:337:G:C8	2.45	0.52
52:26:1147:C:H2'	52:26:1148:U:C6	2.45	0.52
52:26:1436:U:H2'	52:26:1437:A:H8	1.74	0.52
53:27:202:U:H2'	53:27:203:A:O4'	2.08	0.52
53:27:235:U:H2'	53:27:236:C:H6	1.74	0.52
53:27:566:U:H4'	53:27:809:G:OP2	2.09	0.52
53:27:717:C:H2'	53:27:718:A:H5'	1.89	0.52
53:27:2136:G:C6	53:27:2137:U:H1'	2.45	0.52
53:27:2370:G:H2'	53:27:2371:G:C8	2.44	0.52
53:27:2863:C:H2'	53:27:2864:G:C8	2.44	0.52
59:33:47:GLN:CD	59:33:55:LEU:HD13	2.29	0.52
59:33:59:GLY:O	59:33:63:VAL:HG13	2.09	0.52
59:33:410:THR:HG23	59:33:414:ASP:O	2.10	0.52
8:H:98:GLY:HA3	8:H:137:LEU:CD2	2.39	0.52
9:I:84:ILE:HG13	9:I:84:ILE:O	2.09	0.52
11:K:23:ILE:H	11:K:23:ILE:HD12	1.73	0.52
16:P:2:ARG:HB2	53:27:1248:G:C8	2.44	0.52
16:P:65:ASN:HB2	16:P:75:TYR:HB2	1.91	0.52
20:T:5:ARG:HD2	20:T:93:ARG:HH11	1.75	0.52
33:7:18:ASN:O	33:7:55:VAL:HA	2.09	0.52
41:15:92:ARG:O	41:15:94:SER:N	2.42	0.52
41:15:123:PRO:O	51:25:34:ARG:N	2.42	0.52
43:17:78:ARG:HH12	49:23:68:HIS:HE1	1.56	0.52
50:24:48:LYS:HA	50:24:51:ASN:HD22	1.75	0.52
52:26:947:G:H2'	52:26:948:C:C6	2.44	0.52
52:26:1404:C:H2'	52:26:1405:G:C8	2.44	0.52
53:27:173:A:H2'	53:27:174:U:C6	2.45	0.52
53:27:373:U:H3	53:27:401:A:H62	1.56	0.52
53:27:559:G:O5'	53:27:559:G:H8	1.93	0.52
53:27:859:G:O2'	53:27:860:U:P	2.66	0.52
53:27:967:U:H2'	53:27:968:C:C6	2.44	0.52
53:27:1041:G:H2'	53:27:1042:G:C8	2.44	0.52
53:27:1685:C:H2'	53:27:1686:C:C6	2.44	0.52
53:27:2131:U:H5'	53:27:2132:U:H5"	1.91	0.52
53:27:2373:G:H2'	53:27:2374:C:H6	1.73	0.52
54:28:114:C:H2'	54:28:115:A:H8	1.74	0.52
58:32:57:A:O2'	58:32:58:A:H5'	2.09	0.52
58:32:58:A:H1'	58:32:60:U:C5	2.44	0.52
59:33:620:GLU:HG2	59:33:621:ILE:N	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:157:ALA:HB1	1:A:196:ASN:O	2.09	0.52
1:A:230:PRO:CB	1:A:244:VAL:HG21	2.39	0.52
7:G:35:VAL:HG22	53:27:1057:A:O2'	2.10	0.52
18:R:5:ALA:CB	18:R:54:ALA:HA	2.40	0.52
34:8:149:LYS:C	34:8:150:LYS:HG2	2.29	0.52
35:9:131:ASN:O	35:9:133:ILE:N	2.43	0.52
42:16:50:LYS:HD2	42:16:50:LYS:N	2.24	0.52
50:24:53:MET:HG3	50:24:54:GLN:N	2.23	0.52
52:26:112:G:H22	52:26:315:A:H2	1.56	0.52
52:26:1205:U:H2'	52:26:1206:G:C8	2.45	0.52
52:26:1487:G:O2'	52:26:1488:G:H5'	2.10	0.52
53:27:276:U:C2	53:27:277:G:H1'	2.45	0.52
53:27:356:G:H2'	53:27:357:C:O4'	2.10	0.52
53:27:689:A:H2'	53:27:690:G:H8	1.74	0.52
53:27:863:A:H2'	53:27:864:G:C8	2.44	0.52
53:27:945:A:C5	53:27:2448:A:C2	2.98	0.52
53:27:1083:U:H2'	53:27:1085:A:OP2	2.09	0.52
53:27:1782:U:H2'	53:27:1783:A:H5'	1.90	0.52
53:27:1876:A:H2'	53:27:1877:A:O4'	2.08	0.52
53:27:2000:C:O2'	53:27:2001:C:H5'	2.10	0.52
53:27:2106:U:H2'	53:27:2107:G:H8	1.75	0.52
53:27:2162:G:O3'	53:27:2171:A:H5"	2.09	0.52
53:27:2795:C:C2'	53:27:2796:U:H5'	2.39	0.52
59:33:607:HIS:HA	59:33:631:ILE:O	2.09	0.52
59:33:621:ILE:HA	59:33:636:ALA:H	1.74	0.52
3:C:128:ALA:HB1	3:C:129:PRO:CD	2.39	0.52
4:D:105:ILE:HD13	26:Z:24:ILE:HD11	1.92	0.52
5:E:8:VAL:HG21	5:E:68:ARG:HG3	1.91	0.52
5:E:140:ILE:HD12	5:E:141:GLY:N	2.24	0.52
12:L:35:ALA:HA	12:L:128:THR:HG22	1.90	0.52
12:L:63:ILE:CG2	12:L:64:TRP:N	2.71	0.52
13:M:38:LEU:HB3	13:M:39:PRO:HD3	1.91	0.52
13:M:51:LEU:O	13:M:54:LEU:HB3	2.10	0.52
13:M:73:ASN:HA	13:M:76:VAL:HG12	1.92	0.52
29:3:10:LEU:HD11	29:3:14:ARG:HD2	1.92	0.52
32:6:113:LEU:HD13	32:6:143:LEU:CB	2.40	0.52
34:8:2:ARG:O	34:8:4:LEU:HG	2.09	0.52
34:8:187:ARG:HD2	34:8:190:LEU:HD21	1.90	0.52
34:8:187:ARG:O	34:8:190:LEU:HG	2.08	0.52
35:9:45:VAL:CG2	35:9:117:ALA:HA	2.39	0.52
36:10:68:GLN:O	36:10:71:ILE:HG22	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:12:85:TYR:HE1	38:12:123:GLU:HB2	1.74	0.52
38:12:102:VAL:HG12	38:12:125:ILE:HD12	1.90	0.52
39:13:59:LYS:HG3	39:13:60:LEU:HG	1.92	0.52
41:15:121:ARG:HE	51:25:35:GLU:HG2	1.73	0.52
49:23:47:THR:HG22	49:23:60:PHE:HD1	1.74	0.52
52:26:502:A:H2'	52:26:503:C:C6	2.45	0.52
52:26:1088:G:N2	52:26:1167:A:H61	2.05	0.52
53:27:323:C:H2'	53:27:1205:A:N1	2.24	0.52
53:27:753:A:H2'	53:27:754:U:C6	2.45	0.52
53:27:819:A:C4	53:27:1189:A:C2	2.98	0.52
53:27:985:C:H2'	53:27:986:C:C6	2.44	0.52
53:27:1406:U:H2'	53:27:1407:G:O4'	2.08	0.52
53:27:2346:A:H3'	53:27:2347:C:C5'	2.39	0.52
53:27:2450:A:O2'	53:27:2451:A:H5'	2.10	0.52
57:31:21:A:H61	57:31:46:G:H2'	1.75	0.52
59:33:27:THR:CG2	59:33:28:SER:H	2.20	0.52
59:33:35:LEU:HD11	59:33:73:ILE:CB	2.40	0.52
59:33:72:ASP:OD1	59:33:74:ASP:N	2.43	0.52
59:33:156:ARG:O	59:33:160:LEU:HG	2.10	0.52
59:33:169:ASP:O	59:33:169:ASP:OD1	2.27	0.52
8:H:96:LYS:HD2	8:H:138:VAL:HG13	1.92	0.52
12:L:35:ALA:O	12:L:99:GLY:N	2.43	0.52
15:O:80:VAL:HG23	15:O:80:VAL:O	2.09	0.52
16:P:18:LYS:O	16:P:21:LYS:HG2	2.09	0.52
35:9:137:ARG:NH2	52:26:1078:U:H4'	2.25	0.52
39:13:7:GLY:HA3	39:13:85:ALA:HB2	1.91	0.52
42:16:51:VAL:HG22	42:16:52:CYS:N	2.25	0.52
46:20:13:LYS:N	52:26:392:C:OP1	2.35	0.52
46:20:71:VAL:O	46:20:75:ILE:HG13	2.10	0.52
52:26:1327:C:H2'	52:26:1328:C:C6	2.44	0.52
53:27:595:C:H2'	53:27:596:U:H6	1.74	0.52
53:27:811:U:O2	53:27:1251:C:C6	2.62	0.52
53:27:1948:G:H2'	53:27:1949:G:H8	1.75	0.52
53:27:2838:G:H2'	53:27:2839:G:O4'	2.10	0.52
57:31:59:A:C2'	57:31:60:U:H5'	2.39	0.52
59:33:31:SER:O	59:33:35:LEU:HD13	2.08	0.52
59:33:63:VAL:HA	59:33:79:ALA:CB	2.39	0.52
59:33:227:HIS:O	59:33:231:GLU:HG3	2.10	0.52
59:33:427:PHE:HE2	59:33:463:ILE:HD11	1.75	0.52
1:A:140:VAL:O	1:A:161:VAL:N	2.42	0.52
1:A:202:ARG:HH11	1:A:213:ARG:HH22	1.57	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:259:ASN:O	1:A:260:LYS:HB2	2.09	0.52
6:F:69:ALA:HA	6:F:72:ILE:HD12	1.90	0.52
7:G:31:ARG:HB3	53:27:1054:A:H4'	1.92	0.52
10:J:70:ARG:NH1	53:27:2684:U:O4'	2.42	0.52
13:M:94:TYR:O	13:M:116:VAL:N	2.39	0.52
18:R:14:ALA:HB2	18:R:78:GLU:HB3	1.90	0.52
18:R:23:LEU:HD11	27:1:23:ALA:CA	2.39	0.52
20:T:24:VAL:HA	20:T:35:VAL:HA	1.91	0.52
24:X:9:LYS:HG2	24:X:11:VAL:H	1.73	0.52
29:3:10:LEU:O	29:3:14:ARG:HG3	2.10	0.52
32:6:181:PRO:HA	32:6:196:ASP:OD2	2.10	0.52
34:8:169:TRP:CD2	34:8:185:PRO:HG3	2.45	0.52
35:9:46:GLY:HA3	35:9:70:MET:HA	1.91	0.52
35:9:86:GLY:O	35:9:138:ALA:HB1	2.08	0.52
35:9:96:GLN:CG	35:9:97:PRO:HD2	2.40	0.52
36:10:67:PRO:HG2	36:10:70:VAL:HG21	1.91	0.52
42:16:21:PRO:C	42:16:23:LEU:N	2.56	0.52
49:23:50:VAL:HG21	49:23:70:LEU:HB3	1.92	0.52
52:26:262:A:H2'	52:26:263:A:C8	2.44	0.52
52:26:398:U:H2'	52:26:399:G:C8	2.44	0.52
53:27:95:A:H2'	53:27:96:C:O4'	2.09	0.52
53:27:421:C:O2	53:27:421:C:H2'	2.07	0.52
53:27:454:A:H4'	53:27:455:C:OP2	2.10	0.52
53:27:1192:G:O2'	53:27:1193:G:H5'	2.10	0.52
53:27:1779:U:H2'	53:27:1783:A:N7	2.24	0.52
53:27:2719:G:O2'	53:27:2720:U:H5'	2.09	0.52
54:28:55:U:H2'	54:28:56:G:C8	2.44	0.52
56:30:7:A:C3'	56:30:8:U:H5"	2.26	0.52
58:32:3:C:H2'	58:32:4:G:C8	2.45	0.52
59:33:179:THR:HG23	59:33:202:CYS:HB3	1.92	0.52
6:F:112:LYS:CD	53:27:2220:U:H5"	2.40	0.52
9:I:117:ALA:HA	9:I:120:ARG:NH2	2.25	0.52
14:N:40:ILE:HD13	54:28:8:C:O2'	2.10	0.52
15:O:113:LEU:HD21	52:26:1441:A:N1	2.24	0.52
35:9:12:GLU:HA	35:9:37:VAL:O	2.10	0.52
35:9:104:ILE:HG23	35:9:111:ARG:NH1	2.24	0.52
36:10:12:PRO:O	36:10:15:SER:HB3	2.10	0.52
44:18:30:ILE:HG21	44:18:43:ALA:HB2	1.91	0.52
45:19:74:VAL:O	45:19:77:TYR:HB3	2.09	0.52
48:22:31:TYR:CG	48:22:54:LEU:HD11	2.44	0.52
52:26:484:G:N7	52:26:486:U:H1'	2.23	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:843:U:OP1	52:26:846:G:H1'	2.10	0.52
52:26:1018:G:O2'	52:26:1019:A:H5'	2.09	0.52
53:27:309:A:H1'	53:27:329:G:N3	2.25	0.52
53:27:616:A:H2'	53:27:617:G:O4'	2.10	0.52
53:27:1111:A:C2	53:27:1112:G:H1'	2.45	0.52
53:27:1417:C:H2'	53:27:1418:G:O4'	2.10	0.52
53:27:1448:G:H2'	53:27:1449:G:C8	2.45	0.52
53:27:1448:G:H2'	53:27:1449:G:H8	1.74	0.52
53:27:1604:C:H2'	53:27:1605:C:H6	1.74	0.52
53:27:2588:G:O2'	53:27:2589:A:H5'	2.10	0.52
53:27:2779:U:OP1	53:27:2780:G:H2'	2.09	0.52
53:27:2899:A:H2'	53:27:2900:A:C8	2.45	0.52
56:30:14:A:H2'	56:30:15:G:C4'	2.40	0.52
59:33:221:ARG:NH2	59:33:273:LEU:HD11	2.25	0.52
59:33:231:GLU:O	59:33:235:HIS:CD2	2.63	0.52
1:A:36:ASN:HB2	1:A:61:TYR:HB2	1.91	0.52
2:B:68:PHE:O	2:B:72:GLY:N	2.42	0.52
5:E:116:LEU:HB3	5:E:117:PRO:HD2	1.91	0.52
9:I:98:GLU:CD	9:I:98:GLU:H	2.13	0.52
13:M:2:ARG:CA	13:M:5:LYS:HD3	2.31	0.52
17:Q:69:GLY:N	17:Q:91:GLN:O	2.34	0.52
26:Z:1:MET:HB2	54:28:43:C:OP1	2.09	0.52
41:15:15:VAL:HG22	41:15:16:SER:N	2.25	0.52
43:17:3:ILE:HD11	43:17:21:ILE:CD1	2.39	0.52
46:20:18:GLN:OE1	46:20:38:PHE:HB3	2.10	0.52
51:25:36:PHE:HD1	51:25:40:PRO:HD3	1.73	0.52
52:26:257:G:H2'	52:26:258:G:H8	1.75	0.52
52:26:323:U:H2'	52:26:324:G:O4'	2.10	0.52
52:26:478:A:C2'	52:26:479:U:H5"	2.40	0.52
52:26:599:C:H2'	52:26:600:A:H8	1.74	0.52
52:26:825:A:H2'	52:26:826:C:H6	1.75	0.52
52:26:1141:C:H2'	52:26:1142:G:H8	1.75	0.52
53:27:291:G:H2'	53:27:292:U:C6	2.44	0.52
53:27:697:G:H2'	53:27:698:C:C6	2.45	0.52
53:27:784:G:N7	53:27:792:A:C5	2.78	0.52
53:27:1400:U:O2'	53:27:1401:G:H5'	2.10	0.52
53:27:1404:C:O2'	53:27:1405:U:H5'	2.10	0.52
53:27:1713:A:H61	53:27:1745:A:H61	1.57	0.52
53:27:1788:C:H2'	53:27:1789:A:C8	2.45	0.52
53:27:2026:U:C2	53:27:2027:G:C8	2.98	0.52
53:27:2070:A:H2'	53:27:2071:A:O4'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:28:79:G:H2'	54:28:80:U:O4'	2.10	0.52
59:33:20:TRP:CZ2	59:33:76:LEU:CG	2.92	0.52
59:33:35:LEU:HA	59:33:77:ARG:HG2	1.92	0.52
59:33:65:ILE:HD11	59:33:161:ARG:HH21	1.73	0.52
59:33:281:ILE:CG1	59:33:338:ILE:HG13	2.40	0.52
3:C:23:PHE:CD1	3:C:111:GLU:HB2	2.44	0.52
7:G:37:LYS:HG3	7:G:40:GLU:OE1	2.09	0.52
15:O:30:TRP:CD2	15:O:37:LYS:HE3	2.45	0.52
17:Q:24:LYS:HA	17:Q:94:THR:OG1	2.10	0.52
17:Q:57:GLY:HA2	17:Q:103:ALA:C	2.29	0.52
19:S:89:GLU:H	19:S:89:GLU:CD	2.14	0.52
20:T:91:LYS:HE3	53:27:83:A:OP1	2.10	0.52
32:6:165:ALA:HB3	32:6:190:SER:CB	2.40	0.52
34:8:71:PHE:HE1	34:8:93:LEU:HD11	1.75	0.52
38:12:38:VAL:HG21	38:12:109:VAL:HG12	1.92	0.52
39:13:105:ARG:NE	52:26:1118:U:OP1	2.41	0.52
40:14:15:HIS:HA	40:14:18:ILE:HG22	1.92	0.52
46:20:7:ALA:O	46:20:8:ARG:HB3	2.10	0.52
47:21:58:VAL:HG21	47:21:74:LEU:HG	1.91	0.52
50:24:55:PRO:HB2	50:24:59:ARG:HH22	1.74	0.52
52:26:236:A:H2'	52:26:237:G:C8	2.44	0.52
52:26:1026:G:H21	52:26:1027:C:H41	1.57	0.52
52:26:1179:A:H2'	52:26:1180:A:O4'	2.10	0.52
52:26:1333:A:H2'	52:26:1334:G:O4'	2.10	0.52
52:26:1353:G:H2'	52:26:1354:U:C6	2.45	0.52
53:27:418:C:H2'	53:27:419:U:C6	2.45	0.52
53:27:1108:U:O5'	53:27:1108:U:H6	1.93	0.52
53:27:2298:A:H2'	53:27:2299:U:O4'	2.10	0.52
53:27:2417:C:O2'	53:27:2418:A:H5'	2.10	0.52
53:27:2805:C:H2'	53:27:2806:C:C6	2.45	0.52
59:33:611:ARG:HA	59:33:614:GLN:NE2	2.24	0.52
1:A:119:VAL:HG12	1:A:130:PRO:HG2	1.92	0.51
4:D:175:PRO:O	4:D:176:PHE:HB2	2.10	0.51
6:F:3:VAL:HG22	6:F:38:PRO:HA	1.92	0.51
14:N:18:LEU:HD23	14:N:25:ARG:CB	2.40	0.51
15:O:29:VAL:CG1	15:O:79:VAL:HG22	2.38	0.51
16:P:57:ARG:HD2	53:27:997:G:OP2	2.10	0.51
20:T:84:PHE:HB2	53:27:298:G:P	2.50	0.51
22:V:33:ILE:HG21	22:V:76:ILE:HG21	1.92	0.51
36:10:76:THR:O	36:10:79:ARG:HB3	2.10	0.51
39:13:113:LYS:HZ1	52:26:1367:C:P	2.34	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:15:35:ASP:HB3	41:15:39:ASN:OD1	2.10	0.51
42:16:29:LYS:HA	52:26:363:A:H5'	1.92	0.51
43:17:6:ILE:HD11	43:17:21:ILE:HG23	1.92	0.51
50:24:4:LYS:C	50:24:6:ALA:N	2.62	0.51
52:26:134:G:H2'	52:26:135:C:O4'	2.10	0.51
52:26:452:A:H61	52:26:480:U:H3	1.58	0.51
52:26:1202:U:H2'	52:26:1203:C:C5'	2.40	0.51
52:26:1306:A:H62	52:26:1331:G:H1'	1.75	0.51
52:26:1332:A:H2'	52:26:1333:A:H8	1.74	0.51
53:27:783:A:H2'	53:27:784:G:C5'	2.40	0.51
53:27:1268:A:H2'	53:27:1269:A:O4'	2.09	0.51
53:27:2037:A:H2'	53:27:2038:G:H8	1.74	0.51
53:27:2343:U:H2'	53:27:2344:U:C6	2.45	0.51
59:33:39:TRP:N	59:33:80:LEU:HD13	2.25	0.51
59:33:58:ARG:NH1	59:33:159:HIS:ND1	2.58	0.51
59:33:613:CYS:HB2	59:33:635:ARG:HB3	1.91	0.51
1:A:80:LEU:HD21	1:A:109:LEU:HD23	1.92	0.51
3:C:131:THR:HG21	53:27:320:A:H2'	1.92	0.51
3:C:148:ILE:HG13	3:C:187:VAL:CG1	2.40	0.51
4:D:116:LEU:HD13	4:D:175:PRO:HB2	1.92	0.51
6:F:46:PHE:O	6:F:50:ARG:HB2	2.10	0.51
7:G:117:LEU:HD12	7:G:117:LEU:O	2.11	0.51
10:J:61:VAL:HB	10:J:87:LEU:HD11	1.92	0.51
11:K:65:GLY:HA2	53:27:2415:G:H4'	1.92	0.51
11:K:135:ILE:CD1	11:K:142:ILE:HD11	2.38	0.51
12:L:68:PHE:CZ	53:27:871:U:H5"	2.45	0.51
16:P:53:LYS:HE3	53:27:994:C:H3'	1.92	0.51
18:R:23:LEU:HD11	27:1:23:ALA:HA	1.92	0.51
33:7:151:GLU:HA	33:7:165:GLU:O	2.09	0.51
34:8:103:ARG:HD2	34:8:167:PRO:HG2	1.92	0.51
37:11:63:VAL:O	37:11:67:ASN:ND2	2.43	0.51
40:14:7:ARG:HA	40:14:75:ASP:HA	1.92	0.51
45:19:81:ILE:HD12	45:19:82:GLU:N	2.26	0.51
47:21:6:THR:C	47:21:7:LEU:HD12	2.31	0.51
48:22:56:ARG:O	48:22:60:ARG:HG3	2.09	0.51
50:24:34:VAL:O	50:24:38:ILE:HG13	2.10	0.51
50:24:57:VAL:HG13	50:24:58:ASP:N	2.25	0.51
52:26:260:G:H2'	52:26:261:U:C6	2.46	0.51
53:27:2523:G:O2'	53:27:2524:G:H5'	2.09	0.51
53:27:2564:A:C2	53:27:2647:U:H4'	2.45	0.51
53:27:2688:G:H1'	53:27:2721:A:H61	1.74	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:28:87:U:H5”	54:28:88:C:OP2	2.10	0.51
59:33:20:TRP:CG	59:33:63:VAL:HG23	2.45	0.51
59:33:95:LEU:CD1	59:33:107:ILE:HD12	2.41	0.51
59:33:99:VAL:HG21	59:33:103:VAL:HG11	1.93	0.51
2:B:194:PRO:HA	53:27:2680:U:H5’	1.92	0.51
4:D:91:ARG:CA	4:D:95:MET:HB3	2.41	0.51
6:F:89:LYS:O	6:F:90:LEU:HG	2.10	0.51
7:G:105:LYS:O	7:G:106:PHE:HB3	2.10	0.51
16:P:36:GLN:NE2	53:27:563:A:H2’	2.26	0.51
21:U:86:LEU:H	21:U:86:LEU:CD1	2.24	0.51
26:Z:5:ILE:HG13	26:Z:6:HIS:N	2.24	0.51
27:1:12:ARG:HD2	27:1:16:ARG:CZ	2.41	0.51
34:8:82:LYS:O	34:8:88:ASN:ND2	2.42	0.51
37:11:4:ARG:O	37:11:6:ILE:N	2.43	0.51
37:11:47:GLU:HA	37:11:57:GLU:OE2	2.10	0.51
41:15:39:ASN:HA	52:26:683:G:N2	2.25	0.51
44:18:1:ALA:O	44:18:2:LYS:HB2	2.10	0.51
46:20:14:ARG:HH12	52:26:618:C:C1’	2.17	0.51
48:22:54:LEU:O	48:22:57:ALA:HB3	2.09	0.51
49:23:50:VAL:HG12	49:23:51:HIS:O	2.10	0.51
52:26:584:G:H2’	52:26:585:G:C8	2.43	0.51
52:26:911:U:H2’	52:26:912:C:C6	2.46	0.51
52:26:1309:G:O2’	52:26:1310:G:H5’	2.10	0.51
53:27:84:A:H4’	53:27:85:G:O5’	2.10	0.51
53:27:473:G:H2’	53:27:474:G:H8	1.74	0.51
53:27:557:C:H2’	53:27:558:U:H6	1.75	0.51
53:27:1889:A:H2’	53:27:1890:A:C8	2.46	0.51
53:27:2249:U:H3’	53:27:2250:G:C5’	2.40	0.51
53:27:2544:G:H2’	53:27:2545:G:H8	1.75	0.51
53:27:2832:U:H1’	53:27:2834:G:C4	2.45	0.51
58:32:8:U:H5’	58:32:49:G:H5’	1.92	0.51
59:33:228:TYR:HB2	59:33:277:ARG:NH2	2.26	0.51
1:A:79:ARG:HG3	1:A:81:GLU:OE2	2.11	0.51
4:D:100:GLU:O	4:D:104:THR:HB	2.11	0.51
6:F:93:SER:OG	6:F:123:ARG:HG2	2.10	0.51
6:F:135:HIS:CD2	6:F:136:SER:H	2.29	0.51
12:L:73:ILE:HG12	12:L:93:VAL:HG22	1.93	0.51
16:P:86:SER:O	17:Q:52:PRO:HD3	2.10	0.51
22:V:7:ARG:O	22:V:7:ARG:HG2	2.10	0.51
26:Z:11:GLU:OE2	26:Z:23:LYS:HB3	2.09	0.51
33:7:129:PHE:CG	33:7:130:ARG:N	2.78	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:9:20:VAL:CG2	35:9:31:SER:HB3	2.40	0.51
39:13:6:TYR:CG	39:13:7:GLY:N	2.78	0.51
41:15:109:ILE:HD12	41:15:109:ILE:N	2.25	0.51
47:21:26:ARG:CZ	52:26:237:G:H5"	2.40	0.51
48:22:31:TYR:CD2	48:22:54:LEU:HD11	2.45	0.51
49:23:48:ILE:HD11	49:23:70:LEU:HD21	1.92	0.51
52:26:403:C:O2'	52:26:404:G:H5'	2.09	0.51
52:26:735:C:H2'	52:26:736:C:H6	1.76	0.51
52:26:775:G:H2'	52:26:776:G:O4'	2.10	0.51
52:26:1496:C:H2'	52:26:1497:G:O4'	2.11	0.51
53:27:394:C:H2'	53:27:395:U:O4'	2.11	0.51
53:27:533:G:H2'	53:27:534:U:O4'	2.10	0.51
53:27:738:G:N2	53:27:759:G:C4	2.79	0.51
53:27:853:C:H2'	53:27:854:C:C6	2.45	0.51
53:27:1260:A:O2'	53:27:1261:C:H5'	2.11	0.51
53:27:1721:G:N2	53:27:1738:G:H2'	2.25	0.51
53:27:1930:G:H2'	53:27:1968:G:C6	2.45	0.51
53:27:2161:C:C5'	53:27:2171:A:H62	2.23	0.51
53:27:2793:C:H2'	53:27:2794:C:C6	2.45	0.51
59:33:147:ARG:C	59:33:150:VAL:HG12	2.30	0.51
59:33:600:GLU:N	59:33:654:ASP:O	2.39	0.51
1:A:68:ARG:HB2	1:A:128:THR:HG21	1.91	0.51
1:A:202:ARG:HH11	1:A:213:ARG:NH2	2.08	0.51
3:C:1:MET:O	3:C:13:THR:HA	2.11	0.51
4:D:32:LYS:HD3	4:D:91:ARG:CZ	2.40	0.51
6:F:53:GLU:O	6:F:54:LEU:HB2	2.10	0.51
9:I:43:GLU:OE1	9:I:43:GLU:N	2.31	0.51
10:J:8:LEU:O	10:J:19:VAL:HG22	2.11	0.51
10:J:24:VAL:HG12	10:J:33:ALA:HB2	1.92	0.51
11:K:21:ARG:HE	53:27:811:U:H5	1.56	0.51
11:K:62:PRO:HD3	30:4:26:ALA:CA	2.40	0.51
11:K:76:GLU:HB2	11:K:111:ILE:HD13	1.91	0.51
13:M:28:LEU:HD23	13:M:48:VAL:HG21	1.91	0.51
14:N:33:ARG:O	14:N:34:HIS:CB	2.57	0.51
15:O:28:LYS:HB3	15:O:39:LEU:HD21	1.91	0.51
16:P:36:GLN:HE21	53:27:563:A:H2'	1.76	0.51
30:4:37:THR:HA	30:4:40:LYS:HD3	1.93	0.51
30:4:63:TYR:CD2	53:27:242:G:H5"	2.45	0.51
34:8:157:ALA:O	34:8:160:LEU:HB3	2.10	0.51
35:9:40:ASP:OD2	35:9:42:ASN:HB2	2.10	0.51
35:9:105:ILE:CD1	35:9:123:LEU:HA	2.36	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:13:72:SER:HB3	52:26:1373:G:OP2	2.10	0.51
42:16:65:TYR:CE2	42:16:67:GLY:HA2	2.46	0.51
48:22:38:ILE:HD12	48:22:62:ARG:NH2	2.25	0.51
52:26:478:A:H3'	52:26:479:U:H5"	1.92	0.51
52:26:768:A:H1'	52:26:1512:U:O2'	2.11	0.51
52:26:1064:G:H1'	52:26:1190:G:H21	1.75	0.51
52:26:1250:A:H2'	52:26:1251:A:C8	2.46	0.51
52:26:1456:A:H2'	52:26:1457:G:O4'	2.11	0.51
53:27:564:C:H2'	53:27:565:C:C6	2.46	0.51
53:27:919:U:O2'	54:28:81:G:H4'	2.09	0.51
53:27:1234:U:H2'	53:27:1235:G:O4'	2.09	0.51
53:27:1534:U:H2'	53:27:1536:C:O4'	2.11	0.51
53:27:2118:U:H5	53:27:2149:U:H1'	1.73	0.51
53:27:2215:C:H2'	53:27:2216:G:H8	1.76	0.51
53:27:2655:G:H22	53:27:2664:G:H2'	1.75	0.51
53:27:2849:U:H4'	53:27:2868:A:C2	2.46	0.51
2:B:32:ASN:N	2:B:96:ILE:O	2.44	0.51
3:C:71:GLY:HA3	53:27:674:G:H5"	1.91	0.51
8:H:11:GLN:HE21	8:H:53:PRO:HB3	1.75	0.51
9:I:99:ARG:O	9:I:103:ILE:HG13	2.11	0.51
11:K:60:ARG:HH21	53:27:2360:G:H1'	1.76	0.51
11:K:79:LEU:HD11	11:K:112:LEU:HA	1.93	0.51
15:O:30:TRP:CE3	15:O:37:LYS:HG2	2.46	0.51
30:4:35:LYS:HG2	30:4:39:ARG:HH22	1.76	0.51
32:6:205:ALA:O	32:6:208:ALA:HB3	2.11	0.51
35:9:79:THR:OG1	35:9:80:LEU:N	2.42	0.51
41:15:67:GLU:O	41:15:70:ALA:HB3	2.10	0.51
43:17:52:ILE:HG22	43:17:56:ARG:NH1	2.26	0.51
46:20:8:ARG:NH2	52:26:392:C:OP1	2.44	0.51
46:20:28:ARG:HE	46:20:29:ASN:HD21	1.59	0.51
48:22:56:ARG:HB3	48:22:60:ARG:HH12	1.75	0.51
51:25:65:ARG:HG3	51:25:66:ARG:N	2.26	0.51
51:25:67:THR:HG23	52:26:1167:A:H62	1.76	0.51
52:26:430:A:C2'	52:26:431:A:H5'	2.40	0.51
52:26:575:G:HO2'	52:26:821:G:H5'	1.75	0.51
52:26:643:C:H2'	52:26:644:U:C6	2.45	0.51
53:27:662:G:H2'	53:27:663:G:H8	1.75	0.51
53:27:1219:U:H2'	53:27:1220:G:H8	1.76	0.51
53:27:2422:C:H6	53:27:2422:C:H5"	1.76	0.51
53:27:2724:U:H2'	53:27:2725:A:C8	2.45	0.51
53:27:2875:C:O2'	53:27:2876:G:H5'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:31:31:G:H2'	57:31:32:C:H6	1.76	0.51
59:33:599:VAL:HB	59:33:605:LEU:HD12	1.92	0.51
2:B:15:PHE:CD2	15:O:78:PRO:HD3	2.46	0.51
3:C:108:ILE:O	3:C:111:GLU:HB3	2.10	0.51
5:E:54:ARG:HD2	5:E:57:TYR:CE2	2.46	0.51
13:M:92:GLY:HA2	13:M:94:TYR:CE2	2.46	0.51
14:N:25:ARG:HH12	54:28:9:G:P	2.33	0.51
20:T:26:ASN:HB3	20:T:34:ILE:HB	1.93	0.51
32:6:65:LYS:O	32:6:66:ILE:HD13	2.11	0.51
34:8:165:GLU:N	34:8:165:GLU:OE1	2.40	0.51
37:11:129:ASN:C	37:11:134:VAL:HG21	2.31	0.51
48:22:44:THR:O	48:22:46:THR:HG22	2.11	0.51
52:26:943:U:H2'	52:26:944:G:H8	1.75	0.51
52:26:1051:C:H2'	52:26:1052:U:O4'	2.11	0.51
52:26:1157:A:H4'	52:26:1158:C:O5'	2.11	0.51
52:26:1385:G:O2'	52:26:1386:G:H5'	2.10	0.51
52:26:1448:C:H2'	52:26:1449:C:C6	2.45	0.51
53:27:167:A:H2'	53:27:168:G:O4'	2.11	0.51
53:27:1730:C:H1'	53:27:1731:G:C6	2.46	0.51
53:27:2638:G:H1'	53:27:2778:A:H61	1.75	0.51
53:27:2717:C:H2'	53:27:2718:G:O4'	2.09	0.51
53:27:2813:A:H2'	53:27:2814:A:C8	2.46	0.51
58:32:59:A:H3'	58:32:60:U:C6	2.45	0.51
59:33:20:TRP:CZ2	59:33:76:LEU:CB	2.94	0.51
8:H:20:SER:HB3	8:H:21:PRO:HD3	1.92	0.51
9:I:35:ARG:NE	9:I:140:LEU:HD11	2.26	0.51
11:K:21:ARG:HD3	53:27:811:U:C6	2.46	0.51
34:8:163:GLN:OE1	34:8:163:GLN:N	2.40	0.51
36:10:43:GLY:HA2	36:10:58:HIS:CE1	2.45	0.51
38:12:9:MET:CB	38:12:26:MET:SD	2.98	0.51
52:26:197:A:N6	52:26:221:C:H4'	2.24	0.51
52:26:476:U:H2'	52:26:477:C:C6	2.46	0.51
52:26:540:G:H2'	52:26:541:G:O4'	2.10	0.51
52:26:779:C:O2'	52:26:780:A:H5'	2.10	0.51
53:27:276:U:H2'	53:27:277:G:O4'	2.11	0.51
53:27:984:A:H5"	53:27:985:C:OP2	2.10	0.51
53:27:1443:U:H2'	53:27:1444:G:H8	1.74	0.51
53:27:1503:A:C3'	53:27:1504:A:H5"	2.35	0.51
53:27:2297:A:H2'	53:27:2298:A:H5'	1.93	0.51
53:27:2593:U:H2'	53:27:2594:C:C6	2.46	0.51
53:27:2861:U:H2'	53:27:2862:G:C8	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:30:28:G:O2'	56:30:29:G:H5'	2.11	0.51
58:32:46:A:C2'	58:32:47:U:H5"	2.37	0.51
59:33:29:GLN:O	59:33:32:CYS:SG	2.62	0.51
59:33:43:LEU:CD1	59:33:56:LEU:HD13	2.40	0.51
3:C:179:SER:O	3:C:183:PHE:HD2	1.94	0.51
4:D:52:ALA:HB2	4:D:149:ARG:HD2	1.93	0.51
11:K:62:PRO:CD	30:4:26:ALA:HB2	2.38	0.51
12:L:75:GLU:OE1	12:L:90:GLU:HG3	2.11	0.51
13:M:99:LYS:HE2	53:27:2816:G:H5"	1.93	0.51
16:P:10:ARG:HH12	53:27:28:A:H2	1.57	0.51
29:3:4:THR:CG2	53:27:788:A:H1'	2.40	0.51
29:3:34:ARG:NH1	53:27:466:A:OP1	2.24	0.51
33:7:69:THR:C	33:7:105:VAL:HG12	2.31	0.51
40:14:57:VAL:HG23	52:26:972:C:O2'	2.11	0.51
43:17:38:ILE:HD11	43:17:51:GLN:CB	2.32	0.51
44:18:39:ASP:HA	44:18:42:ASN:ND2	2.26	0.51
44:18:99:SER:HG	52:26:1114:C:H1'	1.76	0.51
51:25:32:ARG:HG3	51:25:33:ARG:N	2.26	0.51
52:26:155:A:H2'	52:26:156:C:C6	2.46	0.51
52:26:1520:C:H2'	52:26:1521:C:H6	1.76	0.51
53:27:420:C:H2'	53:27:421:C:C6	2.45	0.51
53:27:1077:A:C2	53:27:1088:A:H3'	2.45	0.51
53:27:1084:A:H2	53:27:1106:G:H1'	1.76	0.51
53:27:1804:C:H2'	53:27:1805:A:C8	2.46	0.51
53:27:2007:U:O2'	53:27:2008:C:H5'	2.11	0.51
53:27:2446:G:C2'	53:27:2447:G:H5"	2.41	0.51
59:33:732:VAL:HB	59:33:735:VAL:CG2	2.40	0.51
1:A:48:ILE:HG23	1:A:48:ILE:O	2.11	0.51
4:D:104:THR:HG21	26:Z:22:MET:SD	2.51	0.51
7:G:34:THR:HA	7:G:37:LYS:CB	2.40	0.51
7:G:50:VAL:CG2	53:27:1082:U:H5"	2.40	0.51
11:K:79:LEU:HD12	11:K:113:ALA:H	1.76	0.51
15:O:51:ASN:O	53:27:2845:U:H5"	2.11	0.51
18:R:79:GLY:H	18:R:101:SER:HA	1.76	0.51
25:Y:13:ILE:HG22	25:Y:14:GLY:N	2.25	0.51
25:Y:25:GLY:HA2	53:27:929:U:O2	2.11	0.51
33:7:102:ILE:O	33:7:102:ILE:HG13	2.11	0.51
36:10:71:ILE:HD12	36:10:74:LEU:HD13	1.91	0.51
37:11:2:ARG:HA	52:26:1380:U:C4	2.46	0.51
37:11:62:GLU:OE1	37:11:62:GLU:N	2.42	0.51
37:11:142:ARG:HD3	58:32:41:C:H4'	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:12:28:SER:OG	38:12:29:SER:N	2.44	0.51
45:19:49:HIS:O	45:19:52:ARG:HB3	2.11	0.51
48:22:33:THR:HG23	48:22:35:SER:N	2.15	0.51
51:25:65:ARG:HG3	51:25:66:ARG:H	1.75	0.51
52:26:257:G:H2'	52:26:258:G:C8	2.46	0.51
53:27:72:U:O2'	53:27:73:A:H5'	2.10	0.51
53:27:751:A:C6	53:27:789:A:N7	2.79	0.51
53:27:821:A:C4'	53:27:822:G:H5"	2.41	0.51
53:27:822:G:OP2	53:27:946:C:H5"	2.11	0.51
53:27:1005:C:H2'	53:27:1006:C:C6	2.42	0.51
53:27:1271:G:C2	53:27:1617:C:H4'	2.46	0.51
53:27:2812:G:H2'	53:27:2813:A:C8	2.45	0.51
59:33:38:THR:HG21	59:33:77:ARG:HD2	1.93	0.51
59:33:556:MET:O	59:33:560:LEU:N	2.43	0.51
1:A:129:LEU:HD11	1:A:134:ILE:HG12	1.92	0.50
1:A:235:GLU:HG3	53:27:2600:A:N7	2.27	0.50
2:B:108:ASP:OD2	2:B:206:ALA:HA	2.11	0.50
7:G:45:GLY:HA2	7:G:50:VAL:N	2.23	0.50
16:P:92:LYS:O	16:P:95:ALA:HB3	2.12	0.50
18:R:88:ARG:HG3	18:R:94:ASP:OD2	2.11	0.50
34:8:13:ARG:NH2	34:8:37:PRO:HB2	2.26	0.50
36:10:88:MET:O	36:10:88:MET:HG3	2.10	0.50
38:12:76:ARG:NH1	38:12:125:ILE:HG23	2.26	0.50
40:14:10:LEU:HD11	40:14:72:ARG:HB2	1.93	0.50
41:15:28:ASN:ND2	41:15:56:LYS:HE3	2.25	0.50
49:23:18:VAL:O	49:23:22:VAL:HG23	2.10	0.50
52:26:399:G:H2'	52:26:400:C:H6	1.74	0.50
52:26:797:C:H2'	52:26:798:U:C6	2.46	0.50
52:26:950:U:H4'	52:26:971:G:C2	2.46	0.50
52:26:984:C:O5'	52:26:984:C:H6	1.92	0.50
52:26:1251:A:H2'	52:26:1252:A:O4'	2.12	0.50
52:26:1391:U:H2'	52:26:1392:G:C8	2.47	0.50
52:26:1399:C:H4'	52:26:1400:C:H2'	1.93	0.50
53:27:487:C:H2'	53:27:488:G:O4'	2.11	0.50
53:27:622:G:O2'	53:27:623:C:H5'	2.11	0.50
53:27:1437:C:H2'	53:27:1438:U:C6	2.46	0.50
53:27:2798:U:H6	53:27:2798:U:P	2.33	0.50
54:28:63:C:H2'	54:28:64:G:H8	1.75	0.50
2:B:84:LEU:HD21	2:B:90:PHE:HD2	1.74	0.50
3:C:147:LEU:HB2	3:C:183:PHE:CG	2.46	0.50
8:H:23:VAL:HG13	8:H:24:GLY:N	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:31:CYS:O	34:8:32:LYS:HB2	2.11	0.50
34:8:53:GLN:HB3	34:8:202:LEU:HD12	1.91	0.50
35:9:87:VAL:HG22	35:9:88:HIS:N	2.25	0.50
44:18:47:LEU:HD21	52:26:1317:C:H4'	1.92	0.50
52:26:24:U:O2'	52:26:25:C:H5'	2.11	0.50
52:26:68:G:H22	52:26:101:A:H2	1.59	0.50
52:26:502:A:H2'	52:26:503:C:O4'	2.11	0.50
52:26:599:C:H2'	52:26:600:A:C8	2.45	0.50
52:26:1130:A:H61	52:26:1144:G:C1'	2.13	0.50
53:27:832:U:H2'	53:27:833:A:C8	2.46	0.50
53:27:1794:A:O2'	53:27:1795:C:H5'	2.11	0.50
53:27:2066:C:H2'	53:27:2067:G:C8	2.46	0.50
53:27:2372:U:H2'	53:27:2373:G:C8	2.46	0.50
53:27:2486:C:H2'	53:27:2487:G:O4'	2.11	0.50
53:27:2779:U:P	53:27:2779:U:H3'	2.52	0.50
54:28:28:C:H2'	54:28:29:A:O4'	2.11	0.50
54:28:80:U:H2'	54:28:81:G:C8	2.46	0.50
58:32:19:G:C5'	58:32:20:U:C5	2.93	0.50
59:33:221:ARG:CZ	59:33:273:LEU:HD11	2.40	0.50
59:33:545:ALA:O	59:33:549:GLY:N	2.40	0.50
8:H:33:ASN:HD22	8:H:64:ARG:HB3	1.76	0.50
14:N:3:LYS:NZ	54:28:47:C:OP2	2.44	0.50
23:W:68:ALA:HA	23:W:71:ARG:NH2	2.26	0.50
26:Z:26:SER:OG	26:Z:27:THR:N	2.44	0.50
27:1:9:ARG:O	27:1:12:ARG:HB3	2.12	0.50
27:1:39:ARG:C	27:1:41:HIS:H	2.14	0.50
34:8:61:ARG:HD2	34:8:71:PHE:CD2	2.46	0.50
35:9:71:ILE:HG21	35:9:144:GLU:HB3	1.92	0.50
36:10:53:LYS:HE3	52:26:710:G:OP1	2.11	0.50
39:13:79:ARG:HD2	39:13:102:PHE:HE1	1.76	0.50
42:16:21:PRO:C	42:16:23:LEU:H	2.07	0.50
42:16:53:ARG:HH11	42:16:63:THR:HB	1.77	0.50
43:17:21:ILE:HB	43:17:24:VAL:CG1	2.41	0.50
52:26:410:G:C6	52:26:429:U:H1'	2.47	0.50
52:26:440:C:H3'	52:26:441:A:H5"	1.92	0.50
52:26:765:G:C6	52:26:812:G:C4	2.99	0.50
52:26:848:C:H2'	52:26:849:G:C4'	2.42	0.50
53:27:712:G:H2'	53:27:713:G:H5'	1.94	0.50
53:27:914:G:H5'	53:27:915:C:OP2	2.12	0.50
53:27:2070:A:H2'	53:27:2071:A:H8	1.76	0.50
53:27:2116:G:H1	53:27:2165:C:H1'	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2713:U:H3'	53:27:2714:G:H5"	1.92	0.50
53:27:2853:C:H2'	53:27:2854:G:C8	2.46	0.50
58:32:29:G:H2'	58:32:30:G:H8	1.73	0.50
59:33:20:TRP:CZ2	59:33:76:LEU:HG	2.46	0.50
1:A:75:ALA:HB2	1:A:95:TYR:HA	1.92	0.50
1:A:216:ARG:NH2	53:27:781:A:OP1	2.45	0.50
3:C:113:VAL:HG12	3:C:118:LEU:HD23	1.92	0.50
3:C:134:LEU:CD2	3:C:161:ALA:HA	2.42	0.50
6:F:41:LYS:O	6:F:45:GLU:HG3	2.11	0.50
7:G:52:MET:CE	7:G:54:VAL:HB	2.41	0.50
9:I:7:LYS:HE3	53:27:538:A:H5"	1.94	0.50
9:I:14:ASP:O	9:I:52:ASP:HB3	2.11	0.50
19:S:57:VAL:HG22	19:S:58:VAL:N	2.27	0.50
20:T:32:LYS:HB3	20:T:63:ALA:CB	2.41	0.50
23:W:17:ARG:NH2	53:27:201:C:OP1	2.44	0.50
29:3:34:ARG:NH2	29:3:39:ARG:HD2	2.27	0.50
31:5:11:CYS:HB3	31:5:33:HIS:HE1	1.75	0.50
32:6:217:ALA:O	32:6:221:ARG:HB2	2.12	0.50
33:7:122:GLN:OE1	33:7:132:ALA:HB1	2.11	0.50
40:14:53:ILE:HG23	52:26:1060:U:H4'	1.93	0.50
42:16:20:VAL:C	42:16:22:ALA:H	2.14	0.50
43:17:62:PHE:O	43:17:64:VAL:HG13	2.12	0.50
46:20:67:ILE:HG22	46:20:68:SER:O	2.11	0.50
52:26:57:G:H2'	52:26:58:C:C6	2.46	0.50
52:26:382:A:H2'	52:26:383:A:C8	2.47	0.50
52:26:431:A:H2'	52:26:432:A:C8	2.46	0.50
52:26:736:C:H2'	52:26:737:C:C6	2.46	0.50
52:26:965:U:H4'	52:26:969:A:C8	2.47	0.50
52:26:1004:A:H3'	52:26:1024:G:N2	2.26	0.50
52:26:1175:G:O2'	52:26:1176:A:H5'	2.12	0.50
52:26:1258:G:H2'	52:26:1259:C:H6	1.76	0.50
52:26:1306:A:H2'	52:26:1307:U:O4'	2.11	0.50
52:26:1498:U:H1'	52:26:1499:A:N7	2.26	0.50
53:27:149:A:H2'	53:27:150:U:C6	2.46	0.50
53:27:149:A:H2'	53:27:150:U:H6	1.76	0.50
53:27:720:U:H2'	53:27:721:A:C8	2.46	0.50
53:27:851:C:H2'	53:27:852:U:H6	1.75	0.50
53:27:853:C:H2'	53:27:854:C:H6	1.76	0.50
53:27:1682:G:C2	53:27:1757:A:H1'	2.46	0.50
53:27:1914:C:O2	53:27:1914:C:O4'	2.29	0.50
53:27:2028:U:O5'	53:27:2028:U:H6	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2167:U:H1'	53:27:2169:A:C8	2.46	0.50
53:27:2196:C:O2'	53:27:2197:U:H5'	2.11	0.50
53:27:2442:C:O2'	53:27:2443:C:H5'	2.12	0.50
59:33:55:LEU:HD23	59:33:55:LEU:C	2.32	0.50
59:33:99:VAL:HG22	59:33:103:VAL:HG21	1.93	0.50
59:33:195:LYS:O	59:33:199:GLU:HG3	2.12	0.50
59:33:409:PHE:HB2	59:33:460:GLN:HA	1.93	0.50
59:33:671:VAL:HA	59:33:737:ASP:O	2.11	0.50
2:B:9:VAL:HG12	15:O:4:ILE:HD11	1.93	0.50
4:D:102:LEU:O	4:D:107:VAL:HG23	2.12	0.50
5:E:1:SER:CB	53:27:2749:A:H5"	2.40	0.50
14:N:7:ARG:HD2	14:N:97:PHE:CZ	2.47	0.50
16:P:65:ASN:CB	16:P:75:TYR:HB2	2.41	0.50
27:1:24:VAL:O	27:1:26:SER:N	2.44	0.50
40:14:33:GLY:O	40:14:34:ALA:CB	2.58	0.50
43:17:53:ASP:OD1	43:17:54:THR:N	2.44	0.50
43:17:100:ARG:HD3	43:17:103:THR:HB	1.93	0.50
47:21:6:THR:OG1	47:21:59:GLU:HB3	2.12	0.50
52:26:89:U:O2	52:26:89:U:H2'	2.10	0.50
52:26:545:C:H2'	52:26:546:A:C8	2.46	0.50
52:26:626:G:H2'	52:26:627:G:H8	1.74	0.50
52:26:1033:G:H3'	52:26:1034:G:H5'	1.93	0.50
52:26:1169:A:H2'	52:26:1170:A:C8	2.47	0.50
52:26:1511:G:O2'	52:26:1512:U:H5'	2.11	0.50
53:27:182:A:H2'	53:27:183:C:C6	2.46	0.50
53:27:235:U:H2'	53:27:236:C:C6	2.46	0.50
53:27:243:U:C2'	53:27:244:A:H5'	2.42	0.50
53:27:279:A:N6	53:27:361:G:H1'	2.26	0.50
53:27:548:G:H2'	53:27:549:G:O4'	2.12	0.50
53:27:971:G:H4'	53:27:983:A:O2'	2.11	0.50
53:27:1045:C:H4'	53:27:1047:G:C8	2.46	0.50
53:27:1666:G:O2'	53:27:1667:G:H5'	2.12	0.50
53:27:1672:A:H4'	53:27:2553:G:H4'	1.93	0.50
53:27:2345:G:H5'	53:27:2347:C:O4'	2.10	0.50
53:27:2773:C:H2'	53:27:2774:C:H6	1.77	0.50
59:33:226:GLU:HA	59:33:229:ILE:CD1	2.42	0.50
59:33:305:ASP:O	59:33:305:ASP:OD1	2.29	0.50
1:A:109:LEU:HG	1:A:110:LYS:N	2.26	0.50
2:B:12:THR:HG21	15:O:8:GLU:HG2	1.93	0.50
2:B:85:ALA:N	2:B:88:GLU:OE2	2.43	0.50
3:C:192:ALA:O	3:C:195:GLN:HB2	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:136:GLN:HE21	53:27:2899:A:C5'	2.25	0.50
16:P:5:ARG:CD	53:27:1250:G:H5"	2.42	0.50
16:P:56:PHE:CZ	53:27:536:G:H4'	2.47	0.50
32:6:79:VAL:HA	32:6:213:LEU:HD21	1.94	0.50
32:6:110:ILE:HG22	32:6:114:LYS:HE2	1.92	0.50
34:8:94:GLU:CG	34:8:185:PRO:HG2	2.39	0.50
35:9:46:GLY:HA2	35:9:140:ILE:HD11	1.93	0.50
36:10:42:TRP:CH2	36:10:100:SER:HA	2.46	0.50
42:16:86:VAL:HG23	42:16:87:LYS:N	2.26	0.50
44:18:61:ASN:ND2	44:18:72:PHE:CE2	2.78	0.50
47:21:4:ILE:CD1	47:21:61:ARG:HD3	2.42	0.50
49:23:60:PHE:CE1	59:33:651:ARG:HG2	2.46	0.50
52:26:259:G:H2'	52:26:260:G:C8	2.46	0.50
52:26:331:G:O5'	52:26:331:G:H8	1.94	0.50
52:26:476:U:H2'	52:26:477:C:H6	1.77	0.50
52:26:865:A:C2	52:26:918:A:H4'	2.47	0.50
52:26:1242:G:O2'	52:26:1243:C:H5'	2.12	0.50
52:26:1346:A:N3	52:26:1346:A:H2'	2.27	0.50
53:27:176:A:C2'	53:27:177:G:H5'	2.42	0.50
53:27:268:C:H2'	53:27:269:C:H6	1.77	0.50
53:27:665:U:H2'	53:27:666:A:H8	1.76	0.50
53:27:871:U:H2'	53:27:872:U:H6	1.73	0.50
53:27:1062:G:H2'	53:27:1063:G:C8	2.47	0.50
53:27:1640:A:O2'	53:27:1641:A:H5'	2.11	0.50
53:27:1995:U:H2'	53:27:1996:C:C5	2.46	0.50
53:27:2186:G:O2'	53:27:2187:U:H5'	2.11	0.50
53:27:2533:U:H2'	53:27:2534:A:O4'	2.12	0.50
53:27:2597:G:H2'	53:27:2598:A:C8	2.47	0.50
57:31:38:A:H2'	57:31:39:C:O4'	2.11	0.50
59:33:60:VAL:HA	59:33:63:VAL:HG22	1.93	0.50
59:33:634:HIS:HE1	59:33:638:CYS:SG	2.34	0.50
1:A:106:PRO:O	1:A:108:GLY:N	2.44	0.50
3:C:137:LYS:O	3:C:140:ASP:HB2	2.11	0.50
4:D:139:GLU:HA	26:Z:28:VAL:CG1	2.42	0.50
7:G:28:ALA:H	7:G:111:ALA:H	1.59	0.50
19:S:50:LEU:HD13	24:X:26:PHE:CE2	2.47	0.50
27:1:54:ILE:HG23	27:1:56:LYS:N	2.19	0.50
34:8:70:GLN:HE22	34:8:133:SER:HB2	1.75	0.50
37:11:69:ARG:HA	37:11:99:ALA:HB2	1.92	0.50
41:15:100:ASN:CB	41:15:106:ILE:HD11	2.40	0.50
42:16:69:GLU:HB3	52:26:521:G:O5'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:411:A:H4'	52:26:412:A:O5'	2.11	0.50
52:26:413:G:H1'	52:26:428:G:H22	1.77	0.50
52:26:1144:G:N2	52:26:1146:A:H62	2.01	0.50
53:27:418:C:H2'	53:27:419:U:O4'	2.12	0.50
53:27:554:U:H2'	53:27:555:G:O4'	2.12	0.50
53:27:1310:G:H3'	53:27:1311:G:H8	1.76	0.50
53:27:1432:G:H2'	53:27:1433:A:H8	1.75	0.50
53:27:1682:G:H2'	53:27:1683:U:C6	2.47	0.50
53:27:1790:C:H3'	53:27:1828:G:H21	1.77	0.50
53:27:2299:U:H2'	53:27:2300:C:C6	2.47	0.50
54:28:13:G:H1	54:28:69:G:HO2'	1.59	0.50
59:33:333:THR:O	59:33:335:GLU:N	2.45	0.50
59:33:599:VAL:HA	59:33:655:ALA:CB	2.37	0.50
2:B:48:ILE:HG23	2:B:84:LEU:CD1	2.42	0.50
2:B:145:SER:HB2	53:27:2578:G:N7	2.27	0.50
3:C:48:THR:CG2	3:C:86:ALA:HB3	2.42	0.50
5:E:72:ASN:O	5:E:76:ILE:HG12	2.12	0.50
9:I:52:ASP:O	9:I:54:ILE:HG13	2.11	0.50
16:P:90:ASP:OD2	17:Q:11:GLN:HB2	2.12	0.50
17:Q:34:GLU:HA	17:Q:59:ILE:O	2.12	0.50
33:7:185:THR:HG22	33:7:186:SER:N	2.26	0.50
34:8:12:ARG:C	34:8:15:GLY:H	2.15	0.50
34:8:70:GLN:HE22	34:8:133:SER:CB	2.24	0.50
35:9:12:GLU:HG3	35:9:63:MET:CE	2.42	0.50
38:12:8:ASP:OD1	52:26:825:A:H1'	2.10	0.50
40:14:59:LYS:O	40:14:62:ARG:NE	2.44	0.50
44:18:7:ALA:HB1	52:26:995:C:H5'	1.94	0.50
49:23:32:THR:C	49:23:33:TRP:HD1	2.14	0.50
52:26:512:U:H2'	52:26:513:C:H6	1.76	0.50
52:26:644:U:H2'	52:26:645:G:H8	1.76	0.50
52:26:773:G:C3'	52:26:774:G:H5"	2.42	0.50
52:26:797:C:H2'	52:26:798:U:H6	1.77	0.50
52:26:1057:G:H2'	52:26:1058:G:H8	1.76	0.50
52:26:1143:G:H2'	52:26:1144:G:H8	1.75	0.50
53:27:780:G:H21	53:27:783:A:H62	1.59	0.50
53:27:804:A:H2'	53:27:806:C:C4	2.47	0.50
53:27:911:A:H8	53:27:911:A:O5'	1.93	0.50
53:27:1992:G:H5'	53:27:1994:C:H41	1.77	0.50
53:27:2093:G:H1'	53:27:2198:A:H2	1.74	0.50
53:27:2372:U:H2'	53:27:2373:G:H8	1.77	0.50
53:27:2592:G:C2'	53:27:2593:U:H5'	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:32:11:A:C2	58:32:24:U:N3	2.71	0.50
59:33:20:TRP:HZ2	59:33:76:LEU:HG	1.77	0.50
59:33:107:ILE:HG13	59:33:108:HIS:N	2.27	0.50
59:33:154:ALA:HA	59:33:157:ILE:HG12	1.94	0.50
59:33:732:VAL:HB	59:33:735:VAL:HB	1.94	0.50
4:D:131:VAL:CG2	4:D:151:LEU:HG	2.41	0.50
6:F:37:VAL:HG13	6:F:38:PRO:HD2	1.94	0.50
6:F:130:VAL:HB	6:F:142:VAL:O	2.11	0.50
16:P:17:LEU:HA	16:P:20:ALA:HB3	1.94	0.50
16:P:90:ASP:O	16:P:94:LEU:HG	2.11	0.50
32:6:82:ALA:CB	32:6:213:LEU:HG	2.42	0.50
34:8:103:ARG:HG3	34:8:170:LEU:HD21	1.93	0.50
34:8:116:LEU:HD23	34:8:122:ILE:HD11	1.94	0.50
36:10:24:ARG:O	36:10:27:ALA:HB3	2.12	0.50
37:11:147:ASN:C	37:11:149:ALA:H	2.16	0.50
39:13:79:ARG:HD2	39:13:102:PHE:CE1	2.47	0.50
44:18:1:ALA:N	44:18:6:LYS:HE3	2.27	0.50
47:21:11:VAL:HB	47:21:56:ASP:OD1	2.11	0.50
52:26:519:C:N4	52:26:520:A:C6	2.79	0.50
52:26:635:A:H2'	52:26:636:U:C6	2.46	0.50
52:26:842:U:H5"	52:26:846:G:N1	2.27	0.50
52:26:943:U:H2'	52:26:944:G:O4'	2.12	0.50
52:26:1388:C:H2'	52:26:1389:C:H6	1.76	0.50
53:27:83:A:H2'	53:27:84:A:C8	2.47	0.50
53:27:212:G:O2'	53:27:213:A:H5'	2.12	0.50
53:27:527:C:P	53:27:2779:U:H3	2.35	0.50
53:27:587:C:H5"	53:27:588:U:H5'	1.94	0.50
53:27:974:G:C6	53:27:1186:G:C5	3.00	0.50
53:27:1654:A:O2'	53:27:1655:A:H5'	2.12	0.50
53:27:1672:A:C2	53:27:2582:G:H5'	2.47	0.50
53:27:2364:C:C2'	53:27:2365:G:H5'	2.42	0.50
53:27:2391:G:H2'	53:27:2424:C:H41	1.77	0.50
53:27:2716:C:H2'	53:27:2717:C:C6	2.47	0.50
54:28:4:C:H5'	54:28:4:C:C6	2.42	0.50
56:30:54:U:C3'	56:30:55:U:H5"	2.35	0.50
1:A:171:VAL:HG13	1:A:185:ALA:CB	2.41	0.49
5:E:8:VAL:CG2	5:E:68:ARG:HG3	2.41	0.49
8:H:17:ALA:HB1	8:H:38:CYS:HA	1.93	0.49
17:Q:37:GLU:HB2	17:Q:53:PHE:CE1	2.47	0.49
18:R:83:LYS:NZ	53:27:1260:A:OP1	2.45	0.49
23:W:3:VAL:HG22	23:W:10:ARG:HB3	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:6:116:LEU:HA	32:6:119:GLN:HG2	1.94	0.49
35:9:104:ILE:HD13	35:9:119:VAL:HG23	1.94	0.49
36:10:74:LEU:HG	36:10:78:PHE:HE2	1.76	0.49
37:11:46:LEU:HB3	37:11:57:GLU:OE1	2.12	0.49
40:14:8:ILE:HB	40:14:74:VAL:CB	2.37	0.49
44:18:7:ALA:O	44:18:10:VAL:HG12	2.12	0.49
44:18:21:ALA:HA	52:26:1257:A:N1	2.27	0.49
52:26:925:G:C2	52:26:927:G:C8	3.00	0.49
53:27:350:G:H2'	53:27:351:C:O4'	2.12	0.49
53:27:498:G:O2'	53:27:499:U:H5'	2.11	0.49
53:27:2201:G:H2'	53:27:2202:U:O4'	2.12	0.49
53:27:2290:G:H2'	53:27:2291:U:O4'	2.11	0.49
59:33:435:VAL:HA	59:33:438:ARG:HD3	1.93	0.49
1:A:206:LYS:HB2	53:27:729:G:C5	2.47	0.49
2:B:186:LEU:HD21	15:O:3:ILE:HG21	1.94	0.49
5:E:71:LEU:O	5:E:75:VAL:HG23	2.12	0.49
6:F:14:SER:O	6:F:15:LEU:HB3	2.12	0.49
13:M:77:ALA:O	13:M:81:ASN:HB2	2.12	0.49
14:N:34:HIS:HA	14:N:53:THR:OG1	2.12	0.49
19:S:61:LEU:HB3	53:27:1341:G:H5'	1.94	0.49
26:Z:14:ALA:HA	26:Z:31:ASP:OD1	2.12	0.49
29:3:34:ARG:HH21	29:3:39:ARG:HD2	1.77	0.49
36:10:52:ASN:O	36:10:53:LYS:HB2	2.11	0.49
39:13:87:MET:HA	39:13:90:ASP:HA	1.93	0.49
40:14:72:ARG:HH22	52:26:1152:A:P	2.34	0.49
52:26:434:U:H2'	52:26:435:A:C8	2.47	0.49
52:26:1326:U:O2'	52:26:1327:C:H5'	2.13	0.49
53:27:419:U:H2'	53:27:420:C:C6	2.47	0.49
53:27:635:C:H2'	53:27:636:G:O4'	2.11	0.49
53:27:729:G:H4'	53:27:763:G:H5'	1.94	0.49
53:27:863:A:H2'	53:27:864:G:H8	1.76	0.49
53:27:1280:G:O2'	53:27:1281:G:H5'	2.12	0.49
53:27:1669:A:C2'	53:27:1670:C:H5'	2.42	0.49
53:27:1772:A:H2'	53:27:1773:A:H4'	1.94	0.49
53:27:1985:C:O2'	53:27:1986:C:H5'	2.12	0.49
53:27:2081:U:H2'	53:27:2082:A:C8	2.48	0.49
53:27:2144:G:H4'	53:27:2145:C:C4	2.47	0.49
53:27:2316:G:H2'	53:27:2317:A:H8	1.76	0.49
53:27:2351:G:H2'	53:27:2365:G:H22	1.77	0.49
59:33:239:GLU:HG3	59:33:299:HIS:CE1	2.47	0.49
59:33:304:PRO:O	59:33:305:ASP:HB3	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:741:LEU:HD23	59:33:742:HIS:N	2.27	0.49
2:B:85:ALA:O	2:B:87:GLY:N	2.43	0.49
2:B:135:GLY:HA2	53:27:743:A:OP1	2.12	0.49
3:C:60:TRP:CH2	3:C:67:ARG:HB3	2.47	0.49
13:M:115:LEU:O	13:M:115:LEU:HD12	2.12	0.49
16:P:51:GLN:HA	16:P:54:ARG:NH1	2.27	0.49
23:W:4:CYS:HB2	23:W:51:SER:HB3	1.94	0.49
32:6:46:VAL:HB	32:6:47:PRO:HD3	1.94	0.49
32:6:132:GLU:O	32:6:136:ARG:HG2	2.12	0.49
36:10:2:ARG:HD2	36:10:68:GLN:HE21	1.77	0.49
37:11:113:LYS:HZ3	52:26:1297:G:H1’	1.75	0.49
42:16:99:GLY:O	52:26:35:G:H5”	2.13	0.49
44:18:66:THR:HG22	52:26:1203:C:H4’	1.93	0.49
45:19:45:HIS:O	45:19:47:LYS:N	2.39	0.49
52:26:54:C:C2	52:26:352:C:H5	2.30	0.49
52:26:237:G:H2’	52:26:238:A:C8	2.47	0.49
52:26:300:A:H2’	52:26:301:G:O4’	2.13	0.49
52:26:363:A:H2’	52:26:364:A:O4’	2.13	0.49
52:26:524:G:H2’	52:26:525:C:H6	1.74	0.49
52:26:737:C:H2’	52:26:738:C:C6	2.47	0.49
52:26:827:U:H2’	52:26:870:U:O4	2.12	0.49
52:26:848:C:H2’	52:26:849:G:H5”	1.93	0.49
52:26:920:U:H2’	52:26:921:U:C6	2.48	0.49
52:26:948:C:O2’	52:26:949:A:H5’	2.12	0.49
52:26:953:G:H2’	52:26:954:G:O4’	2.13	0.49
52:26:1288:A:H2’	52:26:1289:A:O4’	2.12	0.49
53:27:818:G:H1	53:27:1187:G:H2’	1.77	0.49
53:27:1114:C:H2’	53:27:1115:G:C8	2.47	0.49
53:27:1222:U:H2’	53:27:1223:G:C8	2.47	0.49
53:27:1273:U:H4’	53:27:1275:A:OP1	2.11	0.49
53:27:1548:A:H2’	53:27:1549:A:C8	2.47	0.49
53:27:1585:C:H2’	53:27:1586:A:H5’	1.94	0.49
56:30:55:U:H6	56:30:58:A:H2’	1.77	0.49
59:33:204:ARG:HG3	59:33:211:TYR:CE2	2.46	0.49
1:A:94:LEU:HD13	1:A:100:ARG:HG2	1.93	0.49
1:A:257:ARG:HD2	53:27:1799:G:OP1	2.13	0.49
4:D:40:GLY:HA2	4:D:84:ILE:CD1	2.42	0.49
4:D:101:ARG:HG3	4:D:105:ILE:HD11	1.95	0.49
8:H:76:ALA:HB1	53:27:1063:G:H5’	1.95	0.49
15:O:30:TRP:CE2	15:O:37:LYS:HE3	2.47	0.49
20:T:56:GLY:O	20:T:58:VAL:N	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:V:34:VAL:HG12	22:V:36:GLN:N	2.26	0.49
33:7:155:ARG:HG3	33:7:192:TYR:HB3	1.94	0.49
34:8:190:LEU:HD12	34:8:192:ALA:N	2.08	0.49
40:14:19:ASP:O	40:14:22:THR:HB	2.13	0.49
44:18:6:LYS:HE2	44:18:67:GLY:HA3	1.95	0.49
47:21:28:VAL:HG22	47:21:29:LYS:N	2.28	0.49
52:26:65:A:H5'	52:26:200:G:H5"	1.95	0.49
52:26:746:A:H2'	52:26:747:A:C8	2.47	0.49
52:26:848:C:C3'	52:26:849:G:H5"	2.43	0.49
52:26:1474:U:H2'	52:26:1475:G:O4'	2.12	0.49
53:27:171:U:H2'	53:27:172:A:H8	1.77	0.49
53:27:250:G:C6	53:27:251:A:C6	3.00	0.49
53:27:322:A:H5'	53:27:340:A:H1'	1.94	0.49
53:27:566:U:O2'	53:27:567:U:H5'	2.11	0.49
53:27:594:U:H2'	53:27:595:C:H6	1.75	0.49
53:27:974:G:H1'	53:27:975:A:C8	2.47	0.49
53:27:1528:A:C2'	53:27:1529:G:H5'	2.42	0.49
53:27:2452:C:C2	53:27:2504:U:O4	2.65	0.49
59:33:188:ARG:NH1	59:33:377:LEU:CB	2.70	0.49
59:33:296:VAL:HG23	59:33:297:HIS:CD2	2.47	0.49
59:33:696:GLY:CA	59:33:713:THR:H	2.13	0.49
1:A:74:PRO:O	1:A:96:LYS:HG2	2.13	0.49
2:B:106:LYS:HE2	2:B:176:ASP:OD1	2.12	0.49
3:C:29:HIS:O	3:C:33:VAL:HG23	2.13	0.49
6:F:54:LEU:H	6:F:57:LYS:HD3	1.77	0.49
8:H:100:ILE:HA	8:H:104:GLN:NE2	2.28	0.49
12:L:26:VAL:HG11	12:L:32:GLY:HA3	1.94	0.49
14:N:40:ILE:CD1	54:28:8:C:H4'	2.42	0.49
14:N:106:LEU:HD23	14:N:106:LEU:C	2.32	0.49
20:T:6:ARG:HB2	53:27:85:G:OP2	2.11	0.49
29:3:5:PHE:HD1	53:27:464:U:H5'	1.78	0.49
29:3:21:ARG:HG2	29:3:31:LEU:HD11	1.94	0.49
31:5:24:ARG:HG2	31:5:24:ARG:HH21	1.76	0.49
43:17:3:ILE:HG12	43:17:7:ASN:HD22	1.77	0.49
52:26:197:A:C6	52:26:221:C:H4'	2.46	0.49
52:26:376:G:H2'	52:26:377:G:C8	2.48	0.49
52:26:591:U:H2'	52:26:592:G:H8	1.77	0.49
52:26:721:G:H4'	52:26:722:G:O4'	2.13	0.49
52:26:1237:C:H4'	52:26:1300:G:N2	2.28	0.49
53:27:1485:U:H2'	53:27:1486:U:H6	1.77	0.49
53:27:1660:G:H2'	53:27:1661:G:H8	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1708:C:H2'	53:27:1709:U:H6	1.74	0.49
54:28:35:C:H2'	54:28:36:C:H5'	1.93	0.49
57:31:24:U:H2'	57:31:25:C:C6	2.48	0.49
59:33:154:ALA:C	59:33:157:ILE:HG12	2.33	0.49
59:33:177:GLU:HG3	59:33:181:ILE:HD12	1.95	0.49
59:33:228:TYR:CD2	59:33:277:ARG:NH2	2.81	0.49
2:B:149:ASN:HB3	53:27:2572:A:OP2	2.13	0.49
3:C:35:TYR:CE1	53:27:615:U:H2'	2.47	0.49
7:G:34:THR:CB	53:27:1085:A:H61	2.25	0.49
7:G:87:GLU:HG2	7:G:92:ALA:N	2.28	0.49
11:K:62:PRO:HB2	30:4:29:ARG:NH1	2.24	0.49
21:U:39:ALA:O	21:U:40:ILE:HD13	2.12	0.49
27:1:25:THR:OG1	27:1:26:SER:N	2.46	0.49
33:7:46:LEU:HD11	33:7:75:VAL:HG22	1.94	0.49
33:7:178:ARG:O	33:7:205:GLU:HA	2.13	0.49
34:8:103:ARG:NH2	34:8:110:ARG:HH21	2.10	0.49
37:11:102:TRP:HH2	37:11:140:VAL:HG21	1.78	0.49
40:14:14:ASP:O	40:14:18:ILE:HG22	2.12	0.49
49:23:54:ARG:HB3	52:26:958:A:C2	2.47	0.49
52:26:1471:U:O2'	52:26:1472:U:H5'	2.11	0.49
53:27:26:G:O2'	53:27:27:G:H5'	2.12	0.49
53:27:171:U:H2'	53:27:172:A:C8	2.48	0.49
53:27:389:G:O2'	53:27:412:A:H1'	2.13	0.49
53:27:462:C:H2'	53:27:463:G:O4'	2.13	0.49
53:27:499:U:H2'	53:27:500:G:O4'	2.13	0.49
53:27:783:A:C2'	53:27:784:G:H5'	2.43	0.49
53:27:1836:C:O2'	53:27:1837:C:H5'	2.13	0.49
53:27:2064:C:H2'	53:27:2065:C:C6	2.47	0.49
53:27:2128:G:H1	53:27:2161:C:H4'	1.77	0.49
53:27:2267:A:H3'	53:27:2267:A:N3	2.28	0.49
53:27:2471:A:H2'	53:27:2472:G:H5'	1.95	0.49
53:27:2650:U:H2'	53:27:2651:C:H6	1.78	0.49
2:B:13:ARG:HA	2:B:23:PRO:HA	1.94	0.49
6:F:3:VAL:HG13	6:F:37:VAL:O	2.13	0.49
7:G:23:LEU:HD12	7:G:118:ILE:CG1	2.43	0.49
12:L:97:GLN:OE1	12:L:97:GLN:N	2.46	0.49
18:R:20:VAL:HG11	18:R:44:ALA:HA	1.95	0.49
19:S:56:GLU:HB3	19:S:86:THR:O	2.13	0.49
32:6:70:GLY:HA2	32:6:163:ILE:HG22	1.94	0.49
32:6:115:ASP:O	32:6:119:GLN:HG2	2.13	0.49
39:13:100:ALA:HB1	39:13:102:PHE:HE2	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:14:89:ARG:NH1	40:14:90:LEU:HB2	2.28	0.49
51:25:38:GLU:OE1	52:26:1526:G:H3'	2.13	0.49
52:26:291:U:O2'	52:26:292:G:H5'	2.12	0.49
52:26:955:U:H1'	52:26:1227:A:H61	1.77	0.49
52:26:1147:C:H2'	52:26:1148:U:H6	1.77	0.49
53:27:100:U:H4'	53:27:101:A:O4'	2.13	0.49
53:27:105:C:H2'	53:27:106:C:C6	2.44	0.49
53:27:452:G:N2	53:27:458:G:C4	2.81	0.49
53:27:649:G:H2'	53:27:650:C:O4'	2.12	0.49
53:27:677:A:H2'	53:27:678:C:H6	1.78	0.49
53:27:797:G:H2'	53:27:798:G:H8	1.77	0.49
53:27:1023:U:O2'	53:27:1122:G:H5'	2.13	0.49
53:27:1300:G:H4'	53:27:1301:A:C5'	2.38	0.49
53:27:1930:G:H2'	53:27:1968:G:O6	2.13	0.49
53:27:1957:C:H2'	53:27:1958:C:H6	1.75	0.49
53:27:2221:G:O2'	53:27:2222:C:H5'	2.13	0.49
58:32:51:C:H2'	58:32:52:G:H8	1.78	0.49
59:33:20:TRP:CZ2	59:33:76:LEU:HB3	2.45	0.49
59:33:65:ILE:HD13	59:33:157:ILE:HG13	1.93	0.49
59:33:134:ASN:C	59:33:135:VAL:HG12	2.33	0.49
59:33:198:LEU:O	59:33:202:CYS:SG	2.70	0.49
59:33:226:GLU:C	59:33:229:ILE:HG12	2.33	0.49
59:33:425:LEU:HD12	59:33:425:LEU:N	2.28	0.49
59:33:721:VAL:O	59:33:725:VAL:HG23	2.12	0.49
1:A:245:THR:CG2	1:A:249:VAL:HB	2.43	0.49
4:D:121:PHE:CE1	4:D:127:TYR:HB2	2.47	0.49
6:F:79:THR:HG23	6:F:145:ASN:O	2.13	0.49
8:H:67:THR:HG23	8:H:69:VAL:HG23	1.95	0.49
12:L:26:VAL:HG23	12:L:133:LYS:HB2	1.95	0.49
14:N:49:VAL:HG13	14:N:81:ARG:HB2	1.95	0.49
26:Z:31:ASP:OD1	26:Z:32:LEU:N	2.45	0.49
31:5:13:ASN:O	31:5:15:LYS:HG2	2.13	0.49
32:6:8:MET:O	32:6:10:LYS:HG3	2.12	0.49
32:6:57:ASN:HA	32:6:60:ALA:HB3	1.95	0.49
32:6:93:HIS:ND1	32:6:145:ASN:O	2.45	0.49
32:6:108:GLN:NE2	32:6:111:LYS:HD3	2.28	0.49
35:9:156:ARG:HD2	38:12:44:PHE:CZ	2.48	0.49
36:10:18:VAL:CG1	36:10:19:PRO:HD3	2.43	0.49
41:15:108:ASN:HD22	51:25:4:LYS:HE3	1.78	0.49
41:15:126:ARG:HA	41:15:126:ARG:HD3	1.59	0.49
42:16:56:LEU:HD12	42:16:60:PHE:HB2	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:20:7:ALA:O	46:20:29:ASN:ND2	2.45	0.49
46:20:67:ILE:H	46:20:67:ILE:CD1	2.20	0.49
51:25:19:LYS:C	51:25:22:CYS:H	2.15	0.49
52:26:203:G:H1'	52:26:466:A:C2	2.41	0.49
52:26:825:A:H2'	52:26:826:C:C6	2.48	0.49
52:26:831:A:H2'	52:26:832:G:O4'	2.12	0.49
52:26:1032:G:N3	52:26:1032:G:H2'	2.27	0.49
52:26:1225:A:H2'	52:26:1225:A:N3	2.27	0.49
53:27:1183:U:H2'	53:27:1184:U:C6	2.47	0.49
53:27:1484:U:H2'	53:27:1485:U:C6	2.48	0.49
53:27:1826:G:C6	53:27:1827:U:C4	3.01	0.49
53:27:1908:C:O5'	53:27:1908:C:H6	1.96	0.49
53:27:2415:G:C5	53:27:2416:C:C4	3.01	0.49
53:27:2702:G:H2'	53:27:2702:G:N3	2.27	0.49
59:33:63:VAL:HA	59:33:79:ALA:HB3	1.94	0.49
59:33:86:ASP:OD1	59:33:111:ARG:CD	2.61	0.49
59:33:728:LYS:C	59:33:729:LEU:HD12	2.33	0.49
1:A:104:LEU:O	1:A:106:PRO:HD3	2.13	0.49
1:A:270:ARG:NH2	53:27:1798:U:OP2	2.45	0.49
3:C:75:SER:O	3:C:78:TRP:HB2	2.12	0.49
6:F:4:ILE:N	6:F:37:VAL:O	2.46	0.49
7:G:114:GLU:CG	7:G:115:GLY:H	2.22	0.49
8:H:89:SER:HB2	8:H:97:VAL:HG22	1.94	0.49
17:Q:31:GLU:O	17:Q:62:GLU:HG3	2.12	0.49
17:Q:39:LEU:HD12	17:Q:49:ILE:HG21	1.95	0.49
17:Q:39:LEU:CD1	17:Q:53:PHE:H	2.26	0.49
22:V:73:ARG:NH2	53:27:2333:A:OP2	2.44	0.49
25:Y:50:VAL:O	25:Y:52:PHE:N	2.46	0.49
28:2:20:TYR:HE2	28:2:37:LYS:HB3	1.77	0.49
30:4:23:HIS:ND1	30:4:24:LYS:O	2.44	0.49
31:5:1:MET:HE2	31:5:36:ARG:HB2	1.95	0.49
32:6:15:PHE:O	32:6:40:ILE:N	2.45	0.49
42:16:29:LYS:HE2	42:16:58:ASN:HD22	1.77	0.49
52:26:299:G:C6	52:26:300:A:C6	3.01	0.49
52:26:484:G:H4'	52:26:485:U:H5'	1.92	0.49
52:26:963:G:C4	52:26:964:A:C8	3.01	0.49
52:26:1457:G:O2'	52:26:1458:G:H5'	2.13	0.49
53:27:141:G:OP1	53:27:142:A:C6	2.66	0.49
53:27:155:A:H2'	53:27:156:A:C8	2.48	0.49
53:27:155:A:H2'	53:27:156:A:H8	1.78	0.49
53:27:760:G:H2'	53:27:761:A:O4'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:813:U:H2'	53:27:814:C:C6	2.47	0.49
53:27:1094:U:H2'	53:27:1096:A:OP2	2.13	0.49
53:27:1117:C:H2'	53:27:1118:C:C6	2.47	0.49
53:27:1998:A:H2'	53:27:1999:C:C6	2.47	0.49
53:27:2487:G:H2'	53:27:2488:G:C8	2.47	0.49
53:27:2655:G:N2	53:27:2664:G:H2'	2.28	0.49
54:28:35:C:C2'	54:28:36:C:H5'	2.42	0.49
59:33:101:LYS:O	59:33:104:VAL:HG12	2.12	0.49
59:33:210:GLU:OE1	59:33:260:TRP:HZ3	1.96	0.49
59:33:340:THR:OG1	59:33:343:MET:HG3	2.12	0.49
59:33:681:ARG:O	59:33:685:THR:N	2.27	0.49
1:A:139:THR:HG21	1:A:193:GLU:OE2	2.13	0.49
7:G:23:LEU:HB3	7:G:87:GLU:OE1	2.13	0.49
11:K:47:ARG:NH2	53:27:195:A:H4'	2.28	0.49
13:M:103:ARG:HB3	13:M:108:ALA:HB3	1.95	0.49
24:X:23:ARG:HA	24:X:27:ASN:OD1	2.13	0.49
29:3:4:THR:HG23	53:27:788:A:H1'	1.95	0.49
34:8:88:ASN:O	34:8:92:LEU:HG	2.12	0.49
52:26:600:A:O2'	52:26:601:G:H5'	2.13	0.49
52:26:915:A:H2'	52:26:916:U:O4'	2.13	0.49
52:26:950:U:H4'	52:26:971:G:N2	2.28	0.49
52:26:1296:C:H4'	52:26:1302:C:N4	2.28	0.49
53:27:250:G:C5	53:27:251:A:C5	3.01	0.49
53:27:255:A:H2'	53:27:256:A:O4'	2.13	0.49
53:27:514:A:H2'	53:27:515:A:O4'	2.12	0.49
53:27:754:U:H2'	53:27:755:U:H6	1.76	0.49
53:27:883:G:H2'	53:27:884:U:C6	2.47	0.49
53:27:1934:C:O2'	53:27:1935:G:H5'	2.13	0.49
53:27:2124:G:O6	53:27:2175:C:H1'	2.13	0.49
53:27:2251:G:C2	53:27:2252:G:C4	3.01	0.49
53:27:2358:A:H2'	53:27:2359:C:O4'	2.13	0.49
59:33:41:TYR:OH	59:33:94:VAL:HG22	2.13	0.49
6:F:44:ILE:O	6:F:48:GLU:N	2.46	0.48
7:G:88:HIS:HB2	7:G:89:PRO:HD3	1.95	0.48
8:H:75:ALA:HB3	53:27:1060:U:H5	1.78	0.48
11:K:75:ALA:HB2	11:K:105:ILE:HD12	1.95	0.48
18:R:62:ASP:N	18:R:62:ASP:OD1	2.45	0.48
19:S:79:ASP:N	19:S:79:ASP:OD1	2.44	0.48
26:Z:41:HIS:CE1	26:Z:43:PHE:HB3	2.48	0.48
29:3:39:ARG:NH2	53:27:468:G:N7	2.61	0.48
34:8:171:GLU:CG	34:8:182:LYS:HD2	2.41	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:9:51:LYS:NZ	52:26:1081:A:OP2	2.45	0.48
35:9:88:HIS:CE1	35:9:137:ARG:HG2	2.48	0.48
35:9:160:VAL:O	35:9:163:ILE:HG13	2.13	0.48
37:11:91:ARG:HG3	37:11:92:PRO:HD2	1.95	0.48
41:15:52:ARG:H	41:15:55:ARG:HB2	1.78	0.48
42:16:88:ASP:HB2	52:26:523:A:N1	2.27	0.48
44:18:2:LYS:HA	52:26:1048:G:OP1	2.13	0.48
44:18:48:GLN:NE2	49:23:9:PHE:HE1	2.10	0.48
52:26:192:A:H2'	52:26:193:C:C6	2.48	0.48
52:26:452:A:H2'	52:26:453:G:O4'	2.13	0.48
52:26:1222:G:O2'	52:26:1223:C:H5'	2.12	0.48
53:27:1030:C:H2'	53:27:1031:G:H8	1.76	0.48
53:27:1259:G:H2'	53:27:1260:A:C8	2.47	0.48
53:27:1479:G:O2'	53:27:1480:C:H5'	2.13	0.48
53:27:1504:A:H2'	53:27:1505:A:O4'	2.13	0.48
53:27:1632:A:H2'	53:27:1633:G:O4'	2.12	0.48
53:27:1770:G:C6	53:27:1983:G:C5	3.01	0.48
53:27:1844:C:H2'	53:27:1845:G:C8	2.42	0.48
53:27:2623:G:H5'	53:27:2826:A:O2'	2.13	0.48
58:32:34:C:H3'	58:32:35:A:C5'	2.42	0.48
59:33:65:ILE:HD13	59:33:157:ILE:HD11	1.93	0.48
5:E:41:GLU:HG3	5:E:54:ARG:HA	1.96	0.48
7:G:34:THR:HG21	53:27:1085:A:H61	1.78	0.48
7:G:34:THR:O	7:G:38:MET:HG3	2.13	0.48
7:G:40:GLU:O	7:G:43:LYS:HB3	2.13	0.48
12:L:53:MET:HB2	12:L:120:ALA:HB2	1.94	0.48
14:N:49:VAL:HG21	14:N:82:ALA:CA	2.34	0.48
22:V:16:ARG:HG3	53:27:2356:U:H4'	1.95	0.48
33:7:94:ALA:O	33:7:96:VAL:HG22	2.13	0.48
34:8:68:GLU:HB3	52:26:546:A:P	2.53	0.48
41:15:78:ILE:HG22	41:15:79:LYS:O	2.13	0.48
44:18:2:LYS:HE3	44:18:5:MET:HG2	1.95	0.48
44:18:48:GLN:OE1	44:18:48:GLN:N	2.37	0.48
44:18:92:ILE:HD12	44:18:92:ILE:N	2.24	0.48
52:26:37:U:H2'	52:26:38:G:C8	2.48	0.48
52:26:41:G:H2'	52:26:42:G:C8	2.48	0.48
52:26:78:A:H2'	52:26:79:G:N7	2.28	0.48
52:26:320:A:H2'	52:26:321:A:H8	1.75	0.48
52:26:676:A:H2'	52:26:677:U:H6	1.75	0.48
52:26:810:C:H2'	52:26:811:C:O4'	2.13	0.48
52:26:945:G:C2	52:26:946:A:C8	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:528:A:N1	53:27:2042:A:H2'	2.28	0.48
53:27:583:G:H2'	53:27:584:C:C6	2.48	0.48
53:27:801:G:H4'	53:27:802:A:OP2	2.12	0.48
53:27:1533:C:C2'	53:27:1534:U:H5"	2.41	0.48
53:27:1732:C:O2'	53:27:1733:G:H5'	2.13	0.48
53:27:1793:C:H2'	53:27:1794:A:H8	1.78	0.48
53:27:2262:U:H2'	53:27:2263:C:C6	2.49	0.48
53:27:2537:U:H2'	53:27:2538:C:H6	1.73	0.48
58:32:48:C:O2	58:32:59:A:H1'	2.13	0.48
59:33:49:HIS:CB	59:33:50:PRO:HD2	2.33	0.48
59:33:101:LYS:HA	59:33:104:VAL:CG1	2.43	0.48
59:33:443:LYS:HB2	59:33:462:GLU:HB2	1.95	0.48
1:A:165:ALA:HB3	1:A:172:THR:HB	1.95	0.48
3:C:98:LYS:O	3:C:102:ARG:HG2	2.13	0.48
4:D:54:ALA:O	4:D:57:ALA:HB3	2.13	0.48
6:F:69:ALA:O	6:F:72:ILE:HB	2.14	0.48
8:H:11:GLN:NE2	8:H:74:PRO:HG2	2.28	0.48
8:H:60:VAL:HG12	8:H:61:TYR:N	2.29	0.48
10:J:66:LYS:HD3	53:27:1666:G:P	2.54	0.48
12:L:34:LYS:HD3	21:U:81:PRO:O	2.14	0.48
13:M:37:THR:HG22	13:M:110:MET:HE1	1.94	0.48
13:M:96:ARG:HD3	53:27:2882:A:OP1	2.14	0.48
18:R:23:LEU:HD11	27:1:23:ALA:N	2.28	0.48
33:7:39:ARG:NH2	33:7:56:ILE:HG12	2.28	0.48
33:7:95:GLY:O	33:7:96:VAL:HG13	2.13	0.48
37:11:48:THR:O	37:11:51:GLN:HB3	2.14	0.48
39:13:70:GLY:O	39:13:74:GLN:HG3	2.13	0.48
40:14:18:ILE:HG23	40:14:19:ASP:N	2.27	0.48
43:17:13:HIS:HB2	43:17:16:ILE:HD13	1.95	0.48
46:20:7:ALA:HB1	46:20:9:HIS:CE1	2.47	0.48
49:23:14:LEU:HD12	49:23:32:THR:OG1	2.12	0.48
52:26:1282:C:H2'	52:26:1283:U:C6	2.47	0.48
52:26:1370:G:C2	52:26:1371:G:C8	3.01	0.48
53:27:870:U:C2'	53:27:871:U:H5'	2.43	0.48
53:27:926:G:H2'	53:27:927:A:H8	1.77	0.48
53:27:1390:U:O2'	53:27:1391:U:H5'	2.13	0.48
53:27:1900:A:C2	53:27:1970:A:C5	3.01	0.48
53:27:2247:A:H2'	53:27:2248:C:C6	2.48	0.48
53:27:2369:A:H2'	53:27:2370:G:H8	1.77	0.48
53:27:2603:G:C2'	53:27:2604:U:H5'	2.44	0.48
56:30:14:A:H2'	56:30:15:G:H4'	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:30:61:C:O2'	56:30:62:C:H5'	2.13	0.48
59:33:20:TRP:CZ2	59:33:76:LEU:HD23	2.48	0.48
2:B:112:THR:HG22	2:B:113:SER:O	2.14	0.48
2:B:145:SER:O	53:27:2512:C:H1'	2.14	0.48
4:D:55:ASP:O	4:D:58:ALA:HB3	2.13	0.48
5:E:173:ALA:O	5:E:175:LYS:N	2.46	0.48
16:P:27:ARG:HH11	53:27:532:A:H2'	1.79	0.48
18:R:31:GLN:O	18:R:35:ILE:HG13	2.12	0.48
29:3:5:PHE:CD1	53:27:464:U:H5'	2.49	0.48
32:6:112:ARG:O	32:6:116:LEU:HB2	2.14	0.48
38:12:17:GLN:NE2	38:12:69:ALA:HB1	2.28	0.48
38:12:106:SER:HA	52:26:642:A:C8	2.48	0.48
39:13:51:LEU:HD11	39:13:62:LEU:CD1	2.38	0.48
42:16:106:VAL:HB	42:16:109:ARG:HG3	1.95	0.48
51:25:7:GLU:OE2	51:25:14:ALA:HA	2.13	0.48
52:26:738:C:H2'	52:26:739:C:C6	2.48	0.48
52:26:834:U:H2'	52:26:835:U:C6	2.48	0.48
52:26:917:G:H2'	52:26:918:A:C8	2.48	0.48
52:26:1248:A:H2'	52:26:1249:C:C6	2.49	0.48
52:26:1332:A:H2'	52:26:1333:A:C8	2.48	0.48
52:26:1476:A:H2'	52:26:1477:U:O4'	2.14	0.48
53:27:61:C:H2'	53:27:62:U:H5'	1.95	0.48
53:27:524:G:H2'	53:27:525:U:C6	2.48	0.48
53:27:690:G:O2'	53:27:691:C:H5'	2.13	0.48
53:27:1270:C:H5"	53:27:1271:G:O5'	2.14	0.48
53:27:1468:U:H2'	53:27:1522:A:N6	2.28	0.48
53:27:2026:U:H2'	53:27:2027:G:O4'	2.13	0.48
53:27:2419:U:H2'	53:27:2420:C:C6	2.49	0.48
55:29:6:G:H2'	55:29:7:G:O4'	2.13	0.48
59:33:16:ASP:CG	59:33:17:PRO:HD2	2.34	0.48
59:33:73:ILE:HG13	59:33:74:ASP:H	1.78	0.48
59:33:79:ALA:O	59:33:82:PHE:HD1	1.96	0.48
59:33:243:GLU:OE1	59:33:295:ILE:HG21	2.13	0.48
3:C:163:ASN:HB2	53:27:322:A:P	2.53	0.48
7:G:59:LEU:HD23	7:G:61:ARG:H	1.79	0.48
9:I:32:LEU:CD2	9:I:54:ILE:HG21	2.44	0.48
13:M:55:ALA:HA	13:M:80:PHE:CD1	2.49	0.48
16:P:107:ALA:HB3	17:Q:46:GLU:HG3	1.94	0.48
17:Q:22:LEU:HD13	17:Q:96:VAL:HG22	1.96	0.48
20:T:27:VAL:HG11	53:27:85:G:C5'	2.43	0.48
21:U:45:ASP:O	21:U:48:MET:HB3	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:V:21:ARG:HA	22:V:25:GLU:OE1	2.14	0.48
27:1:48:TYR:CE2	27:1:49:ARG:HG3	2.49	0.48
33:7:56:ILE:CD1	33:7:65:VAL:HG13	2.44	0.48
34:8:43:ARG:HH21	52:26:512:U:P	2.36	0.48
34:8:61:ARG:HH21	34:8:68:GLU:H	1.62	0.48
36:10:66:ALA:HB1	36:10:67:PRO:HD2	1.95	0.48
38:12:88:LYS:O	38:12:91:LEU:HG	2.13	0.48
43:17:78:ARG:O	43:17:82:LEU:HB2	2.14	0.48
52:26:137:U:H2'	52:26:138:G:H8	1.78	0.48
52:26:608:A:H2'	52:26:609:A:C8	2.48	0.48
52:26:1070:U:H2'	52:26:1071:C:C6	2.48	0.48
52:26:1406:U:C2'	52:26:1407:C:H5'	2.44	0.48
53:27:1054:A:H2'	53:27:1055:G:H8	1.79	0.48
53:27:1076:C:O2'	53:27:1077:A:H5'	2.14	0.48
53:27:1683:U:H2'	53:27:1684:G:H8	1.79	0.48
53:27:1783:A:N1	53:27:2587:A:H2'	2.28	0.48
53:27:1914:C:H2'	53:27:1915:U:O4'	2.13	0.48
53:27:2073:C:H2'	53:27:2074:U:C6	2.40	0.48
53:27:2586:U:H2'	53:27:2587:A:C8	2.48	0.48
59:33:62:MET:SD	59:33:155:GLU:HB2	2.53	0.48
59:33:101:LYS:C	59:33:104:VAL:HG12	2.34	0.48
59:33:333:THR:O	59:33:333:THR:CG2	2.62	0.48
59:33:333:THR:O	59:33:333:THR:HG22	2.13	0.48
59:33:671:VAL:HG13	59:33:710:ILE:HB	1.96	0.48
1:A:251:THR:OG1	1:A:252:LYS:N	2.45	0.48
2:B:5:VAL:HG11	2:B:80:TRP:CE3	2.48	0.48
4:D:84:ILE:HG21	53:27:2312:U:H5'	1.95	0.48
4:D:115:GLY:O	4:D:116:LEU:HD12	2.13	0.48
8:H:77:VAL:HG23	53:27:1063:G:OP1	2.14	0.48
11:K:65:GLY:C	53:27:2415:G:H4'	2.34	0.48
14:N:26:LEU:HD23	14:N:92:PHE:HD1	1.79	0.48
14:N:80:GLU:O	14:N:84:GLU:HG3	2.14	0.48
15:O:4:ILE:HG22	15:O:8:GLU:CD	2.34	0.48
20:T:48:VAL:H	20:T:53:GLN:HA	1.77	0.48
30:4:54:LEU:O	30:4:58:ILE:HG13	2.14	0.48
32:6:107:ARG:HG3	32:6:108:GLN:H	1.79	0.48
35:9:77:ASN:OD1	35:9:78:GLY:N	2.43	0.48
44:18:92:ILE:H	44:18:92:ILE:CD1	2.23	0.48
46:20:21:VAL:HG21	46:20:60:TRP:CD1	2.49	0.48
52:26:1004:A:H3'	52:26:1024:G:H22	1.78	0.48
53:27:47:C:H2'	53:27:48:G:H8	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:310:A:O2'	53:27:311:A:H5"	2.13	0.48
53:27:1529:G:H2'	53:27:1530:G:C1'	2.43	0.48
53:27:1542:U:H2'	53:27:1543:G:O4'	2.14	0.48
53:27:1549:A:H2'	53:27:1550:C:H6	1.78	0.48
53:27:1575:C:H2'	53:27:1576:U:C6	2.49	0.48
53:27:1770:G:C5	53:27:1983:G:C6	3.02	0.48
53:27:2626:C:H2'	53:27:2627:G:C8	2.49	0.48
59:33:20:TRP:HZ3	59:33:35:LEU:HB3	1.78	0.48
59:33:327:LEU:HD23	59:33:332:LYS:HB2	1.93	0.48
4:D:146:ASP:CG	4:D:147:ARG:H	2.16	0.48
4:D:151:LEU:HD12	4:D:152:ASP:N	2.29	0.48
5:E:117:PRO:HG2	5:E:118:ALA:H	1.77	0.48
8:H:72:THR:CG2	8:H:112:LYS:HA	2.42	0.48
14:N:34:HIS:ND1	14:N:53:THR:OG1	2.42	0.48
15:O:20:ARG:HD3	15:O:112:ARG:NE	2.29	0.48
16:P:88:GLU:HG2	17:Q:52:PRO:HB3	1.96	0.48
18:R:65:ASP:OD2	18:R:68:ASP:N	2.46	0.48
20:T:3:LYS:HB3	20:T:82:VAL:HG21	1.95	0.48
21:U:44:HIS:CE1	21:U:48:MET:HB2	2.49	0.48
27:1:38:LEU:HD22	27:1:41:HIS:ND1	2.29	0.48
28:2:40:PRO:HG2	28:2:41:VAL:H	1.79	0.48
32:6:162:VAL:O	32:6:184:ALA:HA	2.13	0.48
32:6:182:VAL:C	32:6:183:PHE:HD1	2.17	0.48
36:10:8:PHE:CG	36:10:78:PHE:HE1	2.31	0.48
38:12:46:GLU:HB3	38:12:61:THR:HG22	1.95	0.48
39:13:29:ILE:HA	39:13:64:ILE:O	2.13	0.48
43:17:96:VAL:C	43:17:98:GLY:H	2.17	0.48
44:18:9:GLU:O	44:18:12:ARG:HB2	2.13	0.48
47:21:67:SER:OG	47:21:68:LYS:N	2.47	0.48
52:26:25:C:H2'	52:26:26:A:C8	2.49	0.48
52:26:908:A:H2'	52:26:909:A:C8	2.47	0.48
52:26:1387:G:H2'	52:26:1388:C:C6	2.49	0.48
53:27:121:G:H2'	53:27:122:G:C8	2.49	0.48
53:27:887:U:O2'	53:27:888:C:H5"	2.14	0.48
53:27:1177:G:H2'	53:27:1178:C:O4'	2.14	0.48
53:27:1186:G:N2	53:27:1187:G:H1'	2.29	0.48
53:27:1259:G:H2'	53:27:1260:A:H8	1.77	0.48
53:27:2190:G:H2'	53:27:2191:A:C8	2.49	0.48
53:27:2555:U:H2'	53:27:2556:C:H5'	1.96	0.48
53:27:2821:A:H2'	53:27:2822:G:C8	2.49	0.48
59:33:410:THR:N	59:33:414:ASP:O	2.45	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:109:LEU:HG	1:A:110:LYS:H	1.78	0.48
1:A:124:LYS:HB3	1:A:127:ASN:ND2	2.29	0.48
1:A:170:TYR:HB3	1:A:182:LYS:HG2	1.95	0.48
3:C:34:ALA:HB2	3:C:94:GLN:HE21	1.78	0.48
3:C:45:ALA:HA	3:C:87:ALA:O	2.14	0.48
3:C:52:VAL:HG13	53:27:452:G:OP1	2.13	0.48
4:D:97:GLU:OE1	26:Z:25:ARG:HD2	2.14	0.48
6:F:1:MET:HG3	6:F:3:VAL:HG23	1.95	0.48
8:H:106:GLN:O	8:H:109:ALA:HB3	2.13	0.48
10:J:63:VAL:HG23	10:J:64:ARG:HG3	1.95	0.48
32:6:15:PHE:O	32:6:40:ILE:HB	2.13	0.48
33:7:177:LEU:HG	52:26:1112:C:N3	2.29	0.48
34:8:59:LYS:O	34:8:63:ILE:HG13	2.13	0.48
34:8:131:ILE:HG22	52:26:403:C:H5'	1.96	0.48
40:14:53:ILE:HD13	52:26:1060:U:H5"	1.95	0.48
44:18:63:CYS:HB3	44:18:67:GLY:H	1.79	0.48
48:22:48:ALA:O	48:22:51:GLN:HB3	2.13	0.48
50:24:70:LYS:O	50:24:73:ARG:HB3	2.14	0.48
52:26:177:G:H2'	52:26:178:C:H5'	1.96	0.48
52:26:971:G:H3'	52:26:971:G:OP1	2.14	0.48
52:26:1301:U:O2	52:26:1301:U:C2'	2.61	0.48
52:26:1477:U:H2'	52:26:1478:U:C6	2.49	0.48
53:27:300:A:N3	53:27:319:G:H1'	2.29	0.48
53:27:528:A:H2	53:27:2043:C:H5'	1.79	0.48
53:27:770:G:H2'	53:27:771:G:H8	1.79	0.48
53:27:1797:G:C5	53:27:1798:U:C4	3.01	0.48
53:27:2502:G:H5'	53:27:2503:A:C5'	2.44	0.48
53:27:2556:C:H2'	53:27:2557:G:O4'	2.13	0.48
53:27:2568:U:C4	53:27:2569:G:N7	2.82	0.48
59:33:81:LEU:HD22	59:33:84:LEU:HD22	1.96	0.48
1:A:206:LYS:CG	1:A:209:ALA:H	2.26	0.48
4:D:111:ARG:O	4:D:112:ASP:HB3	2.14	0.48
7:G:43:LYS:HD2	7:G:98:GLU:HB3	1.96	0.48
11:K:47:ARG:NH1	53:27:196:A:OP2	2.47	0.48
14:N:85:LYS:HB2	14:N:87:ILE:HG12	1.96	0.48
19:S:60:THR:O	53:27:1341:G:H4'	2.13	0.48
33:7:174:LEU:HD21	33:7:200:TRP:HD1	1.78	0.48
34:8:2:ARG:HD2	34:8:114:ARG:HE	1.79	0.48
36:10:38:ARG:NH2	36:10:40:GLU:OE1	2.47	0.48
41:15:40:ALA:O	52:26:684:U:O2'	2.26	0.48
44:18:58:ARG:HH12	52:26:979:C:C2'	2.27	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:22:39:VAL:HG13	48:22:40:PRO:HD2	1.96	0.48
51:25:17:ARG:C	51:25:19:LYS:N	2.60	0.48
52:26:255:G:H2'	52:26:256:U:H6	1.78	0.48
52:26:540:G:H2'	52:26:541:G:H8	1.77	0.48
52:26:1029:U:H2'	52:26:1031:C:O2	2.13	0.48
52:26:1205:U:H2'	52:26:1206:G:H8	1.79	0.48
53:27:279:A:H2'	53:27:280:U:O4'	2.14	0.48
53:27:354:A:H2'	53:27:355:U:O4'	2.14	0.48
53:27:581:C:O5'	53:27:581:C:H6	1.96	0.48
53:27:819:A:C2	53:27:820:A:C4	3.02	0.48
53:27:927:A:H2'	53:27:928:A:C8	2.49	0.48
53:27:1076:C:C2'	53:27:1077:A:H5'	2.44	0.48
53:27:1539:U:H2'	53:27:1540:G:C8	2.47	0.48
53:27:2470:G:O2'	53:27:2471:A:H5'	2.14	0.48
59:33:56:LEU:O	59:33:60:VAL:HG13	2.13	0.48
59:33:327:LEU:CD2	59:33:332:LYS:CB	2.87	0.48
2:B:26:VAL:HG22	2:B:188:LEU:CD2	2.44	0.48
3:C:43:THR:O	53:27:38:A:H1'	2.13	0.48
3:C:175:ILE:HB	3:C:180:LEU:HD11	1.96	0.48
4:D:131:VAL:HG21	4:D:151:LEU:HG	1.95	0.48
5:E:155:PRO:O	5:E:170:THR:HA	2.13	0.48
6:F:58:LEU:O	6:F:61:VAL:HG22	2.14	0.48
28:2:24:LYS:NZ	28:2:26:LYS:HA	2.29	0.48
43:17:28:ARG:O	43:17:31:ALA:HB3	2.14	0.48
44:18:80:ARG:O	44:18:83:VAL:HG12	2.14	0.48
52:26:575:G:O2'	52:26:821:G:H5'	2.13	0.48
52:26:768:A:O2'	52:26:769:G:H5'	2.13	0.48
52:26:772:U:H2'	52:26:773:G:C8	2.49	0.48
53:27:191:A:C2	53:27:192:C:C2	3.02	0.48
53:27:306:U:H2'	53:27:307:G:O4'	2.14	0.48
53:27:531:C:C5	53:27:2035:G:C2	3.02	0.48
53:27:647:G:H8	53:27:647:G:OP2	1.96	0.48
53:27:910:A:H2'	53:27:911:A:C8	2.48	0.48
53:27:974:G:C8	53:27:990:A:N6	2.79	0.48
53:27:1293:C:H2'	53:27:1294:U:O4'	2.14	0.48
53:27:2116:G:N1	53:27:2165:C:H1'	2.29	0.48
53:27:2661:G:C6	53:27:2662:A:C2	3.02	0.48
53:27:2812:G:H2'	53:27:2813:A:O4'	2.13	0.48
54:28:29:A:H2'	54:28:30:C:C6	2.48	0.48
54:28:53:A:C2'	54:28:54:G:H5'	2.44	0.48
59:33:35:LEU:HD21	59:33:76:LEU:HD22	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:51:ASP:HB2	59:33:164:LYS:HD2	1.96	0.48
1:A:68:ARG:HH21	1:A:115:ILE:HD13	1.79	0.47
1:A:131:MET:HG2	1:A:134:ILE:HD12	1.96	0.47
2:B:13:ARG:O	2:B:14:ILE:HD13	2.14	0.47
2:B:43:ASP:OD1	53:27:2784:U:H4'	2.13	0.47
7:G:14:GLU:O	7:G:18:VAL:HG23	2.14	0.47
7:G:25:ALA:HB3	7:G:85:SER:C	2.35	0.47
7:G:50:VAL:HG13	53:27:1082:U:H5"	1.96	0.47
10:J:60:ALA:HA	10:J:87:LEU:HG	1.95	0.47
15:O:30:TRP:NE1	15:O:81:ASP:OD1	2.47	0.47
18:R:62:ASP:CG	18:R:63:GLY:H	2.18	0.47
28:2:14:ALA:HB2	28:2:46:VAL:HG21	1.96	0.47
33:7:174:LEU:HB2	52:26:1108:G:OP1	2.13	0.47
33:7:184:ASN:OD1	33:7:185:THR:N	2.47	0.47
34:8:84:ASN:HB3	34:8:87:GLU:OE1	2.14	0.47
35:9:12:GLU:OE1	35:9:12:GLU:N	2.48	0.47
35:9:76:ASN:HB2	35:9:81:GLN:OE1	2.14	0.47
35:9:148:SER:HB2	35:9:149:PRO:HD2	1.95	0.47
35:9:155:LYS:HG3	35:9:156:ARG:H	1.78	0.47
36:10:40:GLU:HB3	36:10:61:LEU:HD23	1.96	0.47
37:11:26:VAL:HG22	37:11:42:VAL:HG21	1.95	0.47
38:12:7:ALA:O	38:12:11:THR:HG23	2.14	0.47
38:12:64:TYR:CD1	38:12:69:ALA:HA	2.45	0.47
49:23:10:ILE:HG22	49:23:38:THR:N	2.29	0.47
52:26:197:A:H1'	52:26:198:G:O4'	2.14	0.47
52:26:265:G:H2'	52:26:267:C:C5	2.49	0.47
52:26:562:U:H5	52:26:884:U:HO2'	1.61	0.47
52:26:696:A:H1'	52:26:786:G:O2'	2.14	0.47
52:26:1053:G:N7	52:26:1199:U:H3'	2.29	0.47
52:26:1376:U:H2'	52:26:1377:A:H8	1.79	0.47
53:27:197:A:C6	53:27:198:C:C2	3.02	0.47
53:27:648:G:O4'	53:27:2351:G:H5"	2.13	0.47
53:27:666:A:H2'	53:27:667:U:H6	1.78	0.47
53:27:671:C:H2'	53:27:672:C:H6	1.78	0.47
53:27:752:A:H62	53:27:2609:U:H3	1.62	0.47
53:27:799:G:H3'	53:27:800:A:H8	1.79	0.47
53:27:1656:C:H2'	53:27:1657:U:C6	2.47	0.47
53:27:1895:C:C3'	53:27:1896:G:H5"	2.44	0.47
53:27:2407:A:H2'	53:27:2408:U:C6	2.48	0.47
59:33:96:ARG:HG2	59:33:104:VAL:HB	1.96	0.47
59:33:551:ILE:O	59:33:552:ARG:CB	2.61	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:671:VAL:HG22	59:33:671:VAL:O	2.14	0.47
1:A:140:VAL:HG12	1:A:191:LEU:HD23	1.95	0.47
1:A:259:ASN:C	1:A:261:ARG:N	2.67	0.47
2:B:2:ILE:HD13	2:B:90:PHE:CZ	2.48	0.47
4:D:52:ALA:CB	4:D:149:ARG:HD2	2.44	0.47
8:H:18:ASN:N	8:H:19:PRO:HD2	2.27	0.47
9:I:45:THR:HB	9:I:48:VAL:HB	1.96	0.47
13:M:116:VAL:O	13:M:117:ASP:HB2	2.14	0.47
22:V:12:SER:HB2	53:27:2262:U:OP2	2.14	0.47
32:6:31:PHE:HB2	32:6:39:ILE:HB	1.96	0.47
52:26:430:A:H2'	52:26:431:A:H5'	1.96	0.47
52:26:737:C:H2'	52:26:738:C:H6	1.80	0.47
52:26:1028:C:C2'	52:26:1029:U:H4'	2.43	0.47
53:27:287:G:O2'	53:27:288:U:H5'	2.13	0.47
53:27:615:U:H5"	53:27:616:A:OP2	2.14	0.47
53:27:629:G:H5"	53:27:650:C:O2'	2.14	0.47
53:27:965:C:O2'	53:27:966:G:H5'	2.14	0.47
53:27:1174:U:H5'	53:27:1175:A:OP2	2.14	0.47
53:27:1209:U:C2'	53:27:1210:G:H5"	2.44	0.47
53:27:1396:U:H5"	53:27:1397:U:OP2	2.14	0.47
53:27:1421:G:C2	53:27:1422:G:C8	3.02	0.47
53:27:1474:U:H2'	53:27:1475:G:O4'	2.14	0.47
53:27:2385:C:O2'	53:27:2386:A:H5'	2.14	0.47
53:27:2489:U:H2'	53:27:2490:G:O4'	2.14	0.47
59:33:108:HIS:CE1	59:33:111:ARG:HH21	2.32	0.47
59:33:686:ILE:HG22	59:33:690:GLU:OE1	2.14	0.47
1:A:158:GLY:HA3	53:27:1820:U:N3	2.29	0.47
1:A:204:LEU:HD21	1:A:213:ARG:NE	2.29	0.47
2:B:114:LYS:HD3	53:27:2723:C:OP1	2.14	0.47
2:B:123:LYS:HE2	13:M:1:MET:CE	2.44	0.47
5:E:51:PHE:CZ	5:E:71:LEU:HD12	2.49	0.47
7:G:6:GLN:O	7:G:9:GLN:HB3	2.14	0.47
7:G:35:VAL:HG22	53:27:1057:A:H4'	1.94	0.47
8:H:79:LEU:HD21	8:H:128:ILE:HG22	1.96	0.47
9:I:2:LYS:HA	53:27:995:C:C4	2.49	0.47
9:I:120:ARG:NE	53:27:2780:G:OP2	2.46	0.47
14:N:72:ALA:HA	14:N:109:ALA:HB2	1.94	0.47
17:Q:70:GLU:O	17:Q:90:ARG:HA	2.14	0.47
27:1:13:GLY:HA3	53:27:16:C:C5'	2.43	0.47
32:6:113:LEU:HD13	32:6:143:LEU:HB2	1.96	0.47
34:8:96:ARG:O	34:8:100:VAL:HG23	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:120:LYS:HG2	34:8:130:ASN:CG	2.35	0.47
35:9:137:ARG:CZ	52:26:1078:U:H4'	2.44	0.47
37:11:6:ILE:HD12	37:11:6:ILE:O	2.14	0.47
42:16:113:ARG:HE	42:16:120:ARG:CA	2.25	0.47
52:26:192:A:H2'	52:26:193:C:H6	1.79	0.47
52:26:1004:A:H2'	52:26:1005:A:C8	2.49	0.47
52:26:1137:C:H4'	52:26:1138:G:H5'	1.95	0.47
53:27:346:A:H5'	53:27:346:A:C8	2.50	0.47
53:27:401:A:C2	53:27:402:A:C4	3.02	0.47
53:27:727:A:H2'	53:27:728:G:O4'	2.14	0.47
53:27:837:C:H2'	53:27:838:C:H5'	1.97	0.47
53:27:1026:G:H2'	53:27:1027:A:C8	2.47	0.47
53:27:1416:G:H2'	53:27:1417:C:C6	2.49	0.47
53:27:1663:G:N1	53:27:1998:A:C6	2.82	0.47
53:27:1805:A:H2'	53:27:1806:C:H6	1.79	0.47
53:27:1949:G:H2'	53:27:1950:G:C8	2.49	0.47
53:27:2021:C:H3'	53:27:2022:U:H5"	1.96	0.47
53:27:2508:G:C4	53:27:2509:G:C8	3.02	0.47
53:27:2625:G:H2'	53:27:2626:C:C6	2.48	0.47
59:33:161:ARG:O	59:33:162:GLU:CG	2.63	0.47
59:33:679:LEU:HD22	59:33:734:ASP:HB3	1.96	0.47
1:A:1:ALA:N	1:A:198:GLU:OE1	2.47	0.47
1:A:51:ARG:O	1:A:52:HIS:HB2	2.15	0.47
6:F:90:LEU:HG	6:F:123:ARG:O	2.14	0.47
6:F:122:LEU:CD2	6:F:128:HIS:HB2	2.43	0.47
7:G:27:VAL:HG12	7:G:110:ALA:HB1	1.96	0.47
9:I:18:VAL:CG2	9:I:140:LEU:HB3	2.44	0.47
9:I:36:LEU:HD22	9:I:121:LYS:HB2	1.96	0.47
11:K:95:LEU:HB2	11:K:101:ILE:CD1	2.45	0.47
14:N:74:VAL:O	14:N:78:VAL:HG23	2.14	0.47
15:O:59:THR:CG2	15:O:72:VAL:HG12	2.44	0.47
16:P:47:ARG:NH2	53:27:560:C:O2'	2.47	0.47
16:P:61:ILE:HG23	16:P:75:TYR:CZ	2.49	0.47
16:P:80:ASN:OD1	53:27:1151:A:H4'	2.14	0.47
17:Q:49:ILE:HD12	17:Q:49:ILE:O	2.14	0.47
24:X:26:PHE:HD1	24:X:29:ARG:HH11	1.62	0.47
34:8:68:GLU:HG2	52:26:545:C:H5"	1.96	0.47
34:8:196:GLU:OE1	34:8:196:GLU:N	2.48	0.47
37:11:103:ILE:HG21	37:11:123:LEU:HD21	1.96	0.47
39:13:64:ILE:HG21	39:13:78:ILE:HD12	1.96	0.47
39:13:105:ARG:HG2	52:26:1118:U:H5'	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:14:44:THR:HG23	40:14:69:THR:C	2.35	0.47
42:16:23:LEU:O	42:16:25:ALA:N	2.48	0.47
47:21:52:CYS:SG	47:21:74:LEU:HD11	2.54	0.47
48:22:45:GLY:O	48:22:46:THR:O	2.32	0.47
49:23:31:ARG:HA	49:23:56:HIS:NE2	2.29	0.47
52:26:66:A:H4'	52:26:173:U:H5	1.77	0.47
52:26:124:C:O2'	52:26:125:U:H5'	2.14	0.47
52:26:160:A:C2	52:26:343:U:H4'	2.49	0.47
52:26:668:G:H2'	52:26:669:G:C8	2.44	0.47
52:26:714:G:N2	52:26:777:A:H1'	2.29	0.47
52:26:766:A:H2'	52:26:767:A:O4'	2.14	0.47
52:26:936:C:H2'	52:26:937:A:O4'	2.15	0.47
52:26:994:A:C8	52:26:1216:A:H4'	2.50	0.47
52:26:1058:G:H2'	52:26:1059:C:O4'	2.14	0.47
53:27:160:A:N3	53:27:2208:C:O2'	2.47	0.47
53:27:291:G:H2'	53:27:292:U:H6	1.77	0.47
53:27:547:A:H4'	53:27:548:G:C8	2.50	0.47
53:27:1219:U:H2'	53:27:1220:G:C8	2.49	0.47
53:27:1604:C:H2'	53:27:1605:C:C6	2.50	0.47
53:27:1758:U:H5	53:27:2696:U:H5'	1.76	0.47
53:27:2573:C:OP1	53:27:2574:G:H5"	2.14	0.47
56:30:63:G:H2'	56:30:64:A:H8	1.79	0.47
58:32:57:A:H2'	58:32:58:A:H5'	1.95	0.47
59:33:228:TYR:CB	59:33:277:ARG:NH2	2.78	0.47
59:33:239:GLU:HB2	59:33:299:HIS:CE1	2.48	0.47
59:33:326:VAL:HG22	59:33:334:VAL:HG13	1.96	0.47
2:B:18:ASP:OD1	2:B:19:GLY:N	2.46	0.47
3:C:77:ILE:HG13	3:C:78:TRP:HD1	1.80	0.47
3:C:118:LEU:HG	3:C:120:VAL:HG23	1.96	0.47
6:F:5:LEU:HD22	6:F:14:SER:OG	2.14	0.47
7:G:34:THR:CG2	53:27:1084:A:H62	2.28	0.47
8:H:2:LYS:HB3	8:H:7:TYR:CD2	2.48	0.47
12:L:75:GLU:O	12:L:87:GLY:HA3	2.13	0.47
14:N:67:ASN:O	14:N:68:LYS:C	2.52	0.47
16:P:107:ALA:HB2	17:Q:46:GLU:HG3	1.97	0.47
17:Q:20:VAL:O	17:Q:96:VAL:HG22	2.14	0.47
21:U:83:LYS:O	21:U:85:LYS:N	2.48	0.47
35:9:64:GLU:HB3	35:9:68:ARG:NH2	2.28	0.47
35:9:125:LYS:HG2	35:9:127:TYR:CZ	2.49	0.47
35:9:155:LYS:CB	38:12:70:VAL:HG13	2.45	0.47
36:10:70:VAL:HA	36:10:73:GLU:OE1	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:12:77:VAL:HG23	38:12:126:CYS:HA	1.96	0.47
39:13:33:SER:CB	39:13:36:GLN:HG2	2.41	0.47
42:16:78:VAL:O	42:16:102:ASP:HB3	2.14	0.47
42:16:113:ARG:HG2	42:16:113:ARG:HH11	1.78	0.47
44:18:23:ARG:O	44:18:23:ARG:HG2	2.15	0.47
46:20:63:GLN:NE2	52:26:227:G:O2'	2.46	0.47
48:22:10:CYS:O	48:22:12:PHE:N	2.48	0.47
50:24:48:LYS:O	50:24:52:GLU:HG3	2.14	0.47
52:26:720:C:H2'	52:26:721:G:C8	2.48	0.47
52:26:767:A:C4	52:26:768:A:C8	3.02	0.47
52:26:1359:C:H2'	52:26:1361:G:OP2	2.14	0.47
53:27:29:U:H2'	53:27:30:G:H8	1.76	0.47
53:27:360:U:H2'	53:27:361:G:N9	2.29	0.47
53:27:602:A:H1'	53:27:656:G:N2	2.30	0.47
53:27:687:C:H6	53:27:687:C:H5"	1.78	0.47
53:27:1498:C:H2'	53:27:1499:C:C6	2.49	0.47
53:27:1647:U:P	53:27:1647:U:H3'	2.55	0.47
53:27:2345:G:N3	53:27:2381:A:H2'	2.29	0.47
53:27:2629:U:HO2'	53:27:2630:G:H5"	1.75	0.47
59:33:327:LEU:CD2	59:33:332:LYS:HB3	2.45	0.47
1:A:6:LYS:HG3	1:A:7:PRO:HD2	1.96	0.47
2:B:84:LEU:HD23	2:B:88:GLU:HG3	1.95	0.47
5:E:17:LYS:HB2	5:E:24:THR:HB	1.96	0.47
5:E:126:THR:HB	5:E:129:GLU:OE1	2.14	0.47
7:G:25:ALA:HA	7:G:96:PHE:CE1	2.50	0.47
7:G:43:LYS:O	7:G:46:ARG:HG2	2.15	0.47
8:H:11:GLN:HB3	53:27:1061:U:C5	2.50	0.47
8:H:112:LYS:HE2	8:H:116:MET:HG2	1.97	0.47
8:H:123:ALA:HB1	53:27:1081:U:C5'	2.44	0.47
16:P:62:ALA:HB2	53:27:1009:A:H5"	1.97	0.47
21:U:21:ARG:NH2	21:U:87:GLN:HB3	2.25	0.47
28:2:43:ARG:HH11	53:27:2370:G:H1'	1.80	0.47
33:7:129:PHE:CD1	33:7:130:ARG:N	2.83	0.47
34:8:33:ILE:HG12	34:8:34:GLU:N	2.30	0.47
41:15:20:ALA:HB2	41:15:33:ILE:HG12	1.96	0.47
41:15:80:ASN:HB2	41:15:105:ARG:O	2.14	0.47
43:17:78:ARG:HH12	49:23:68:HIS:CE1	2.31	0.47
43:17:102:LYS:HG3	52:26:1226:C:C4	2.50	0.47
52:26:1010:U:O2'	52:26:1011:C:H5'	2.15	0.47
52:26:1064:G:H1'	52:26:1190:G:N2	2.29	0.47
52:26:1282:C:H2'	52:26:1283:U:H6	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:20:C:H2'	53:27:21:A:C8	2.47	0.47
53:27:49:A:H5'	53:27:51:G:O4'	2.14	0.47
53:27:689:A:C2	53:27:779:U:H4'	2.50	0.47
53:27:1059:G:H2'	53:27:1060:U:C6	2.50	0.47
53:27:1549:A:H2'	53:27:1550:C:C6	2.49	0.47
53:27:2131:U:O4'	53:27:2133:G:H4'	2.14	0.47
53:27:2592:G:H2'	53:27:2593:U:O4'	2.15	0.47
59:33:267:ASN:N	59:33:267:ASN:ND2	2.62	0.47
1:A:51:ARG:O	1:A:52:HIS:CB	2.63	0.47
1:A:134:ILE:HG22	1:A:135:PRO:O	2.14	0.47
1:A:203:VAL:O	1:A:205:GLY:N	2.48	0.47
2:B:13:ARG:HD2	2:B:21:SER:OG	2.14	0.47
2:B:24:VAL:HG12	2:B:190:LYS:HA	1.96	0.47
2:B:123:LYS:HE2	13:M:1:MET:HE1	1.95	0.47
2:B:171:THR:HG22	2:B:172:VAL:N	2.30	0.47
3:C:147:LEU:CD1	3:C:168:ASP:HB3	2.44	0.47
3:C:164:LEU:HD22	3:C:167:VAL:HG23	1.96	0.47
5:E:64:ALA:O	5:E:67:ALA:HB3	2.14	0.47
10:J:2:ILE:HB	10:J:33:ALA:HB3	1.96	0.47
10:J:22:ILE:HD11	10:J:40:LYS:HB2	1.97	0.47
12:L:4:PRO:CG	12:L:70:ASP:HA	2.43	0.47
12:L:53:MET:HE1	12:L:63:ILE:HG21	1.96	0.47
16:P:36:GLN:NE2	53:27:563:A:N3	2.54	0.47
18:R:3:THR:HG21	18:R:58:ALA:CA	2.44	0.47
19:S:25:GLU:HG3	19:S:26:LYS:H	1.78	0.47
32:6:130:LYS:HD2	32:6:133:ALA:HB3	1.95	0.47
33:7:111:ASP:OD1	33:7:112:ALA:N	2.47	0.47
34:8:201:GLU:O	34:8:204:SER:N	2.48	0.47
35:9:75:LEU:HD12	35:9:75:LEU:C	2.34	0.47
35:9:135:VAL:HG23	35:9:136:VAL:N	2.30	0.47
39:13:5:TYR:CD2	39:13:88:GLU:HG2	2.49	0.47
39:13:9:GLY:HA3	39:13:81:GLY:N	2.29	0.47
40:14:48:ARG:HA	40:14:65:TYR:O	2.14	0.47
41:15:19:VAL:HG22	41:15:82:GLU:HB2	1.96	0.47
43:17:16:ILE:HD12	43:17:16:ILE:N	2.29	0.47
45:19:27:GLN:O	45:19:31:LEU:HG	2.14	0.47
48:22:72:ARG:NH2	51:25:4:LYS:HD3	2.30	0.47
50:24:73:ARG:NH2	52:26:261:U:C4	2.83	0.47
52:26:109:A:C6	52:26:326:G:C6	3.03	0.47
52:26:219:U:H2'	52:26:220:G:C8	2.42	0.47
52:26:418:C:H2'	52:26:419:C:H6	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:609:A:H8	52:26:609:A:O5'	1.97	0.47
52:26:658:C:H2'	52:26:659:U:C6	2.50	0.47
52:26:848:C:H2'	52:26:849:G:O4'	2.15	0.47
52:26:884:U:H4'	52:26:885:G:C5'	2.41	0.47
52:26:1028:C:H3'	52:26:1029:U:H4'	1.94	0.47
52:26:1365:G:H2'	52:26:1366:C:H6	1.80	0.47
53:27:18:U:H2'	53:27:19:A:H8	1.75	0.47
53:27:239:C:H2'	53:27:240:C:O4'	2.15	0.47
53:27:324:A:H2'	53:27:325:G:O4'	2.15	0.47
53:27:406:G:H2'	53:27:407:G:H8	1.78	0.47
53:27:516:C:H2'	53:27:517:C:C6	2.50	0.47
53:27:520:G:H2'	53:27:521:U:C6	2.49	0.47
53:27:532:A:H2'	53:27:532:A:N3	2.30	0.47
53:27:668:A:H2'	53:27:670:A:H62	1.78	0.47
53:27:729:G:H4'	53:27:763:G:C5'	2.44	0.47
53:27:743:A:O2'	53:27:744:U:H5'	2.14	0.47
53:27:744:U:H2'	53:27:745:G:O4'	2.15	0.47
53:27:926:G:H2'	53:27:927:A:C8	2.50	0.47
53:27:1127:A:H2'	53:27:1128:G:H5"	1.97	0.47
53:27:1431:A:O2'	53:27:1432:G:H5'	2.15	0.47
53:27:1736:U:H2'	53:27:1737:G:C8	2.49	0.47
53:27:1788:C:H2'	53:27:1789:A:H8	1.78	0.47
53:27:1882:U:O2'	53:27:1883:U:H5'	2.14	0.47
53:27:2249:U:H3'	53:27:2250:G:H5'	1.96	0.47
53:27:2286:G:C5'	53:27:2287:A:O4'	2.63	0.47
54:28:110:C:C2'	54:28:111:U:H5'	2.45	0.47
59:33:58:ARG:NH1	59:33:159:HIS:CE1	2.83	0.47
59:33:210:GLU:HB3	59:33:260:TRP:CE3	2.50	0.47
59:33:241:LYS:HD3	59:33:246:LYS:HZ2	1.76	0.47
59:33:432:HIS:CD2	59:33:434:ASP:H	2.33	0.47
59:33:504:ASN:O	59:33:508:GLY:N	2.47	0.47
59:33:534:TYR:O	59:33:535:ASN:C	2.53	0.47
59:33:639:GLU:O	59:33:643:GLU:HG3	2.15	0.47
59:33:696:GLY:O	59:33:712:MET:HA	2.14	0.47
4:D:147:ARG:HB3	4:D:149:ARG:NH1	2.29	0.47
10:J:15:GLY:HA2	10:J:47:ILE:HD11	1.97	0.47
16:P:55:GLN:HA	16:P:58:GLN:HG2	1.97	0.47
23:W:56:ARG:O	23:W:59:ASP:HB3	2.15	0.47
35:9:80:LEU:HB2	35:9:97:PRO:HA	1.97	0.47
39:13:17:ARG:NH2	52:26:1147:C:H1'	2.29	0.47
39:13:94:ARG:HA	39:13:97:LEU:CB	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:14:59:LYS:HD3	52:26:973:G:OP1	2.15	0.47
41:15:50:GLY:O	41:15:51:PHE:HB2	2.15	0.47
42:16:43:LYS:HE3	55:29:21:C:OP1	2.15	0.47
44:18:72:PHE:CE2	44:18:74:ARG:HA	2.50	0.47
47:21:5:ARG:HD3	52:26:636:U:H5'	1.97	0.47
50:24:25:SER:HA	50:24:28:ARG:HD2	1.96	0.47
52:26:68:G:C2	52:26:69:G:H1'	2.49	0.47
52:26:518:C:H2'	52:26:530:G:C4	2.50	0.47
52:26:554:A:H2'	52:26:555:U:C6	2.50	0.47
52:26:1226:C:H4'	52:26:1227:A:OP1	2.14	0.47
52:26:1488:G:C4	52:26:1489:G:C8	3.02	0.47
53:27:173:A:H2'	53:27:174:U:H6	1.78	0.47
53:27:201:C:O2'	53:27:202:U:H5'	2.15	0.47
53:27:1097:U:C2'	53:27:1098:A:H5'	2.45	0.47
53:27:1313:U:H2'	53:27:1610:A:C2	2.50	0.47
53:27:1824:G:O2'	53:27:1825:U:H5'	2.14	0.47
53:27:1924:C:O2'	53:27:1925:C:H5'	2.14	0.47
53:27:2081:U:C4	53:27:2237:G:C2	3.02	0.47
53:27:2115:G:OP1	53:27:2166:U:H1'	2.15	0.47
53:27:2347:C:H2'	53:27:2348:U:C6	2.50	0.47
53:27:2553:G:H2'	53:27:2554:U:C4'	2.45	0.47
59:33:673:ALA:HB1	59:33:734:ASP:O	2.15	0.47
1:A:206:LYS:HB2	53:27:729:G:N7	2.30	0.47
4:D:140:ILE:HD12	4:D:140:ILE:N	2.30	0.47
11:K:126:ARG:NH1	53:27:635:C:OP2	2.48	0.47
15:O:52:ARG:H	15:O:56:SER:CB	2.28	0.47
25:Y:23:LEU:HD11	25:Y:53:MET:SD	2.55	0.47
43:17:101:THR:HG21	52:26:1226:C:OP2	2.15	0.47
47:21:50:ASN:OD1	47:21:50:ASN:N	2.47	0.47
52:26:279:A:H5"	52:26:280:C:H3'	1.97	0.47
52:26:300:A:H1'	52:26:565:U:O2	2.15	0.47
52:26:309:A:H2'	52:26:310:G:C8	2.44	0.47
53:27:595:C:O2'	53:27:596:U:H5'	2.15	0.47
53:27:694:U:H2'	53:27:695:G:C8	2.49	0.47
53:27:819:A:H3'	53:27:973:A:N6	2.30	0.47
53:27:922:C:C2	53:27:923:G:C8	3.03	0.47
53:27:1571:A:H2'	53:27:1572:A:C8	2.50	0.47
53:27:1613:G:H3'	53:27:1614:A:C5'	2.45	0.47
53:27:2079:U:C2'	53:27:2080:A:H5"	2.45	0.47
53:27:2272:U:H5"	53:27:2273:A:OP1	2.15	0.47
53:27:2821:A:O2'	53:27:2822:G:H5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:24:LEU:HD12	59:33:24:LEU:N	2.30	0.47
59:33:315:LYS:HB2	59:33:319:TYR:HB3	1.97	0.47
59:33:710:ILE:N	59:33:710:ILE:HD12	2.30	0.47
1:A:77:VAL:HG13	1:A:91:ALA:HB1	1.97	0.47
2:B:83:ARG:NH2	53:27:2637:U:H5"	2.30	0.47
11:K:41:ARG:HH21	11:K:41:ARG:HG3	1.80	0.47
24:X:20:ASN:HA	24:X:24:GLU:OE1	2.15	0.47
24:X:58:ASN:O	24:X:63:ALA:HB2	2.15	0.47
25:Y:13:ILE:O	25:Y:15:ARG:N	2.46	0.47
25:Y:56:VAL:HG22	25:Y:57:GLU:N	2.30	0.47
32:6:91:VAL:HG11	32:6:95:TRP:CD1	2.50	0.47
36:10:75:GLU:O	36:10:78:PHE:HB2	2.14	0.47
43:17:6:ILE:CD1	43:17:7:ASN:H	2.27	0.47
43:17:25:GLY:N	52:26:1329:A:H5"	2.18	0.47
45:19:87:ARG:HG3	45:19:88:ARG:N	2.25	0.47
49:23:5:LYS:HG3	49:23:6:LYS:N	2.29	0.47
50:24:59:ARG:O	50:24:63:LYS:HB2	2.14	0.47
52:26:252:U:O2	52:26:252:U:H2'	2.15	0.47
52:26:591:U:H2'	52:26:592:G:C8	2.50	0.47
52:26:692:U:H2'	52:26:694:A:OP2	2.15	0.47
52:26:826:C:O2'	52:26:827:U:H5'	2.15	0.47
53:27:652:U:H2'	53:27:653:U:H5'	1.97	0.47
53:27:959:A:O2'	53:27:960:A:H5'	2.15	0.47
53:27:1096:A:C2'	53:27:1097:U:H5"	2.45	0.47
53:27:1173:U:C3'	53:27:1174:U:H4'	2.45	0.47
53:27:1186:G:H2'	53:27:1187:G:C8	2.50	0.47
53:27:1677:A:H2'	53:27:1678:A:C8	2.50	0.47
53:27:1695:G:H2'	53:27:1696:G:O4'	2.15	0.47
53:27:2351:G:H1'	53:27:2366:A:H61	1.79	0.47
53:27:2657:A:H2'	53:27:2658:C:O4'	2.15	0.47
53:27:2686:G:H2'	53:27:2687:U:O4'	2.15	0.47
53:27:2812:G:H2'	53:27:2813:A:H8	1.80	0.47
57:31:22:G:O2'	57:31:23:C:H5'	2.15	0.47
59:33:99:VAL:CG1	59:33:103:VAL:HB	2.39	0.47
1:A:154:ALA:CB	1:A:161:VAL:HG23	2.45	0.46
1:A:204:LEU:CD2	1:A:213:ARG:HE	2.28	0.46
5:E:21:GLN:OE1	5:E:54:ARG:NH2	2.48	0.46
6:F:54:LEU:O	6:F:58:LEU:N	2.30	0.46
11:K:111:ILE:HD11	53:27:636:G:C6	2.51	0.46
15:O:8:GLU:O	15:O:11:GLN:HB3	2.15	0.46
15:O:50:ARG:CZ	15:O:52:ARG:HG3	2.44	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:V:43:ALA:HB1	22:V:47:VAL:O	2.15	0.46
26:Z:16:CYS:SG	26:Z:34:LEU:HB2	2.55	0.46
27:1:32:THR:OG1	27:1:50:GLY:HA2	2.15	0.46
32:6:20:ARG:HD2	52:26:831:A:OP1	2.15	0.46
32:6:70:GLY:HA2	32:6:163:ILE:CG2	2.45	0.46
34:8:149:LYS:O	34:8:151:GLN:HG2	2.14	0.46
39:13:24:ASN:O	39:13:60:LEU:N	2.44	0.46
41:15:121:ARG:NH1	52:26:779:C:O2'	2.48	0.46
43:17:7:ASN:OD1	43:17:9:PRO:HD3	2.15	0.46
48:22:41:SER:CB	48:22:51:GLN:HE21	2.22	0.46
52:26:176:C:H2'	52:26:177:G:N3	2.31	0.46
52:26:321:A:O2'	52:26:322:C:H5'	2.14	0.46
52:26:951:G:O2'	52:26:952:U:H5'	2.15	0.46
52:26:955:U:H2'	52:26:956:U:H6	1.79	0.46
52:26:981:U:H5	52:26:982:U:HO2'	1.62	0.46
52:26:1300:G:O2'	52:26:1301:U:O5'	2.34	0.46
52:26:1365:G:H2'	52:26:1366:C:C6	2.50	0.46
52:26:1527:U:O2'	52:26:1528:U:H5'	2.16	0.46
53:27:35:G:C4	53:27:454:A:C2	3.03	0.46
53:27:435:C:C2'	53:27:436:C:H5'	2.46	0.46
53:27:449:A:H2'	53:27:450:G:O4'	2.15	0.46
53:27:1314:C:H2'	53:27:1315:C:H6	1.80	0.46
53:27:1685:C:H2'	53:27:1686:C:H6	1.80	0.46
53:27:1773:A:H2	53:27:1977:A:N1	2.13	0.46
53:27:2216:G:H2'	53:27:2217:G:H8	1.80	0.46
53:27:2888:C:H2'	53:27:2889:C:C6	2.50	0.46
1:A:95:TYR:HB2	1:A:99:GLU:O	2.15	0.46
1:A:269:ARG:HG2	1:A:270:ARG:N	2.31	0.46
2:B:120:GLY:HA2	53:27:1655:A:O2'	2.16	0.46
8:H:55:PRO:HD3	8:H:74:PRO:CD	2.40	0.46
9:I:77:HIS:HA	9:I:83:GLY:O	2.15	0.46
13:M:31:HIS:O	13:M:32:GLU:HB2	2.16	0.46
17:Q:57:GLY:HA2	17:Q:103:ALA:OXT	2.15	0.46
17:Q:74:ILE:HB	17:Q:87:GLN:HB3	1.98	0.46
38:12:14:ARG:CD	38:12:74:ILE:HG22	2.45	0.46
38:12:86:LYS:HD2	38:12:90:GLU:HG2	1.97	0.46
42:16:49:ARG:NH1	42:16:88:ASP:OD2	2.48	0.46
43:17:28:ARG:NH2	43:17:62:PHE:HB2	2.30	0.46
48:22:10:CYS:HB2	48:22:45:GLY:HA3	1.98	0.46
52:26:532:A:H4'	52:26:533:A:OP2	2.15	0.46
52:26:689:C:C2'	52:26:690:G:H5'	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1127:G:H22	52:26:1145:A:H2	1.62	0.46
53:27:20:C:O2'	53:27:21:A:H5'	2.16	0.46
53:27:979:A:H2'	53:27:982:C:H42	1.80	0.46
53:27:1019:U:H3	53:27:1142:A:H62	1.63	0.46
53:27:1162:G:H2'	53:27:1163:G:H8	1.79	0.46
53:27:1229:C:H2'	53:27:1230:A:H8	1.81	0.46
53:27:1810:A:H2'	53:27:1811:G:C5'	2.46	0.46
53:27:2124:G:O5'	53:27:2124:G:H8	1.97	0.46
53:27:2285:C:O2'	53:27:2287:A:H1'	2.15	0.46
53:27:2405:G:O2'	53:27:2411:A:N6	2.48	0.46
54:28:32:U:H2'	54:28:33:G:C8	2.49	0.46
58:32:49:G:H2'	58:32:49:G:N3	2.31	0.46
59:33:229:ILE:HG13	59:33:230:GLU:N	2.31	0.46
59:33:281:ILE:HG13	59:33:281:ILE:O	2.14	0.46
4:D:120:SER:HB2	4:D:127:TYR:CE1	2.50	0.46
5:E:97:VAL:HG23	5:E:124:CYS:SG	2.56	0.46
6:F:2:GLN:HB3	6:F:39:ALA:HB3	1.97	0.46
7:G:8:LYS:O	7:G:12:VAL:HG23	2.15	0.46
7:G:34:THR:CG2	53:27:1085:A:H61	2.28	0.46
7:G:55:VAL:HG23	7:G:55:VAL:O	2.15	0.46
9:I:68:LYS:HD3	53:27:1022:G:N7	2.30	0.46
11:K:109:LYS:HE3	11:K:128:THR:HG22	1.97	0.46
16:P:93:ILE:HG13	17:Q:11:GLN:HB3	1.96	0.46
25:Y:47:ILE:O	25:Y:51:SER:N	2.47	0.46
35:9:142:GLY:O	35:9:145:ASN:HB3	2.15	0.46
36:10:65:GLU:O	36:10:66:ALA:HB2	2.15	0.46
38:12:9:MET:HG3	38:12:10:LEU:N	2.29	0.46
50:24:23:ARG:NH2	52:26:176:C:C5'	2.77	0.46
52:26:389:A:H3'	52:26:390:U:C6	2.51	0.46
52:26:624:C:H2'	52:26:625:U:H6	1.81	0.46
52:26:798:U:H2'	52:26:799:G:O4'	2.15	0.46
52:26:1317:C:H5'	52:26:1318:A:OP2	2.15	0.46
52:26:1375:A:H2'	52:26:1376:U:O4'	2.15	0.46
53:27:279:A:H61	53:27:361:G:H1'	1.80	0.46
53:27:308:G:C8	53:27:501:A:O4'	2.68	0.46
53:27:589:U:O2'	53:27:590:A:H5'	2.15	0.46
53:27:778:G:C6	53:27:779:U:N3	2.83	0.46
53:27:975:A:H5'	53:27:976:G:OP2	2.16	0.46
53:27:1895:C:H2'	53:27:1896:G:O4'	2.15	0.46
53:27:1980:G:O2'	53:27:1981:A:H5"	2.15	0.46
53:27:2053:G:O6	53:27:2614:A:H2	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:28:85:G:H2'	54:28:86:G:H8	1.81	0.46
56:30:63:G:H2'	56:30:64:A:C8	2.50	0.46
59:33:241:LYS:CD	59:33:246:LYS:HZ3	2.29	0.46
3:C:153:LEU:HD11	3:C:158:PHE:HB2	1.97	0.46
5:E:152:ARG:HH21	5:E:152:ARG:HG3	1.80	0.46
7:G:25:ALA:HB3	7:G:85:SER:O	2.15	0.46
8:H:67:THR:CG2	8:H:69:VAL:HG23	2.46	0.46
8:H:76:ALA:HA	8:H:79:LEU:HD12	1.98	0.46
12:L:4:PRO:HG2	12:L:70:ASP:HA	1.98	0.46
12:L:88:ASN:O	12:L:90:GLU:N	2.49	0.46
14:N:28:VAL:HG12	14:N:93:ASP:O	2.16	0.46
15:O:50:ARG:O	15:O:56:SER:HA	2.16	0.46
16:P:107:ALA:O	16:P:110:GLU:HB2	2.15	0.46
17:Q:21:ARG:C	17:Q:22:LEU:HD12	2.35	0.46
18:R:7:HIS:CD2	53:27:492:A:H2	2.33	0.46
20:T:59:GLU:OE1	20:T:59:GLU:N	2.48	0.46
24:X:24:GLU:O	24:X:28:LEU:HG	2.16	0.46
25:Y:4:ILE:HG23	25:Y:4:ILE:O	2.14	0.46
26:Z:66:ILE:HD11	44:18:41:TRP:HB2	1.98	0.46
35:9:135:VAL:O	35:9:139:THR:HG23	2.15	0.46
37:11:14:ASP:OD2	37:11:17:PHE:N	2.49	0.46
37:11:29:LEU:HD23	37:11:29:LEU:O	2.15	0.46
42:16:62:VAL:HG11	42:16:94:TYR:CE2	2.50	0.46
44:18:16:ALA:HA	44:18:54:SER:O	2.16	0.46
46:20:19:VAL:H	46:20:38:PHE:HA	1.80	0.46
49:23:76:THR:OG1	49:23:77:ARG:N	2.48	0.46
50:24:28:ARG:C	50:24:32:LYS:HG2	2.36	0.46
50:24:55:PRO:HA	52:26:193:C:O2'	2.16	0.46
52:26:764:C:H2'	52:26:765:G:O4'	2.16	0.46
52:26:877:G:H2'	52:26:878:A:C8	2.48	0.46
52:26:1109:C:H2'	52:26:1110:A:C8	2.50	0.46
52:26:1198:G:H2'	52:26:1199:U:C6	2.51	0.46
52:26:1410:A:H2'	52:26:1411:C:C6	2.51	0.46
52:26:1473:G:O2'	52:26:1474:U:H5'	2.15	0.46
53:27:214:G:H21	53:27:216:A:H1'	1.81	0.46
53:27:488:G:H1'	53:27:492:A:N6	2.30	0.46
53:27:563:A:C6	53:27:2018:G:C4	3.04	0.46
53:27:768:G:N2	53:27:1379:U:O2'	2.48	0.46
53:27:819:A:OP2	53:27:1187:G:N2	2.45	0.46
53:27:1196:C:H2'	53:27:1197:G:C8	2.50	0.46
53:27:1216:G:N2	53:27:1234:U:H1'	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1357:C:H2'	53:27:1358:G:O4'	2.15	0.46
53:27:1609:A:H1'	53:27:1616:A:C1'	2.45	0.46
53:27:1843:C:H2'	53:27:1844:C:H6	1.77	0.46
53:27:2589:A:H2'	53:27:2590:A:H8	1.80	0.46
57:31:48:C:H2'	57:31:59:A:H4'	1.98	0.46
57:31:50:U:H2'	57:31:51:C:C6	2.51	0.46
59:33:27:THR:CG2	59:33:31:SER:HB2	2.45	0.46
59:33:49:HIS:NE2	59:33:55:LEU:HG	2.30	0.46
59:33:573:ASP:O	59:33:576:ALA:HB3	2.16	0.46
5:E:110:HIS:HE1	53:27:2667:C:O2'	1.98	0.46
9:I:41:LYS:HE2	9:I:43:GLU:OE2	2.15	0.46
16:P:87:VAL:HA	17:Q:49:ILE:HD11	1.97	0.46
20:T:26:ASN:OD1	20:T:27:VAL:N	2.48	0.46
21:U:92:VAL:O	21:U:94:ALA:N	2.48	0.46
31:5:24:ARG:NH2	31:5:24:ARG:HG2	2.31	0.46
33:7:21:TRP:CB	33:7:58:ARG:HB3	2.45	0.46
34:8:133:SER:HB3	52:26:403:C:OP1	2.15	0.46
34:8:187:ARG:NH1	34:8:190:LEU:HD11	2.30	0.46
35:9:107:GLY:HA2	52:26:8:A:H1'	1.98	0.46
37:11:3:ARG:O	37:11:5:VAL:N	2.49	0.46
42:16:106:VAL:CG2	42:16:116:TYR:HB3	2.45	0.46
44:18:85:GLU:O	44:18:89:ARG:NH1	2.48	0.46
48:22:40:PRO:HB3	52:26:720:C:OP1	2.15	0.46
50:24:24:ARG:HH22	52:26:323:U:P	2.39	0.46
52:26:138:G:C2'	52:26:139:A:H5'	2.46	0.46
52:26:490:C:H2'	52:26:491:G:C8	2.46	0.46
52:26:538:G:H2'	52:26:539:A:C8	2.51	0.46
52:26:580:C:H2'	52:26:581:G:H8	1.76	0.46
52:26:763:G:H2'	52:26:764:C:H6	1.81	0.46
52:26:924:C:H2'	52:26:925:G:C8	2.50	0.46
52:26:981:U:H2'	52:26:982:U:C5	2.51	0.46
52:26:1033:G:H2'	52:26:1033:G:N3	2.31	0.46
52:26:1298:U:H4'	52:26:1299:A:C4	2.50	0.46
53:27:118:A:H2'	53:27:120:U:O4	2.15	0.46
53:27:586:A:H2	53:27:809:G:N3	2.14	0.46
53:27:1268:A:H1'	53:27:2013:A:N6	2.31	0.46
53:27:1394:U:H5"	53:27:1603:A:O3'	2.14	0.46
53:27:1967:C:H2'	53:27:1968:G:O4'	2.16	0.46
53:27:2128:G:N3	53:27:2173:A:H4'	2.31	0.46
53:27:2226:C:H3'	53:27:2227:A:H8	1.80	0.46
53:27:2286:G:H4'	53:27:2287:A:O4'	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2287:A:HO2'	53:27:2288:A:H2'	1.79	0.46
53:27:2516:A:O2'	53:27:2517:C:H5'	2.16	0.46
53:27:2795:C:H2'	53:27:2796:U:H5'	1.98	0.46
59:33:96:ARG:HG3	59:33:104:VAL:HG21	1.97	0.46
59:33:157:ILE:HG13	59:33:158:ALA:N	2.31	0.46
1:A:42:ARG:HD3	1:A:46:GLY:O	2.15	0.46
2:B:115:GLY:HA3	53:27:2821:A:OP2	2.15	0.46
3:C:31:VAL:CG1	3:C:177:PRO:HG2	2.46	0.46
3:C:178:VAL:HG13	3:C:179:SER:N	2.30	0.46
6:F:99:ILE:HD13	6:F:130:VAL:HG11	1.97	0.46
11:K:65:GLY:CA	53:27:2415:G:H4'	2.45	0.46
12:L:24:THR:O	12:L:24:THR:HG22	2.14	0.46
23:W:22:ASN:OD1	23:W:22:ASN:O	2.34	0.46
33:7:46:LEU:HD11	33:7:75:VAL:HG13	1.97	0.46
34:8:144:ILE:CG2	34:8:149:LYS:HA	2.45	0.46
39:13:94:ARG:HA	39:13:97:LEU:HB3	1.96	0.46
39:13:128:LYS:NZ	57:31:34:C:OP2	2.43	0.46
40:14:17:LEU:O	40:14:20:GLN:HG2	2.16	0.46
41:15:70:ALA:O	41:15:73:VAL:HG22	2.16	0.46
42:16:115:LYS:O	42:16:116:TYR:CB	2.63	0.46
52:26:12:U:C3'	52:26:13:U:H5"	2.46	0.46
52:26:49:U:H3	52:26:362:G:H1'	1.81	0.46
52:26:58:C:O2'	52:26:59:A:H5'	2.15	0.46
52:26:345:C:H4'	52:26:346:G:C2	2.51	0.46
52:26:393:A:C2	52:26:394:G:C8	3.04	0.46
52:26:1417:G:H2'	52:26:1482:G:N2	2.31	0.46
53:27:360:U:H2'	53:27:361:G:C8	2.51	0.46
53:27:780:G:H5"	53:27:781:A:OP1	2.16	0.46
53:27:2297:A:N6	53:27:2319:G:H1'	2.31	0.46
53:27:2339:C:H2'	53:27:2340:A:C8	2.50	0.46
53:27:2881:U:H2'	53:27:2882:A:H8	1.79	0.46
56:30:68:C:H2'	56:30:69:G:C8	2.51	0.46
1:A:67:LYS:HG2	1:A:150:GLY:HA2	1.97	0.46
2:B:2:ILE:HD11	2:B:100:LEU:HD21	1.98	0.46
3:C:191:ASP:O	3:C:195:GLN:HG2	2.16	0.46
14:N:28:VAL:HG22	14:N:29:HIS:N	2.30	0.46
17:Q:73:LYS:O	17:Q:75:VAL:HG23	2.16	0.46
18:R:93:ALA:HB2	53:27:1614:A:C2	2.51	0.46
19:S:57:VAL:HG12	19:S:86:THR:OG1	2.16	0.46
22:V:17:LEU:HD21	22:V:37:ARG:NH2	2.30	0.46
25:Y:30:ARG:O	25:Y:33:HIS:HB2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Z:57:VAL:HG23	49:23:63:ASP:OD1	2.15	0.46
30:4:41:ARG:HA	30:4:44:ARG:NH1	2.31	0.46
31:5:19:ARG:HG2	53:27:2756:U:OP2	2.16	0.46
31:5:36:ARG:O	31:5:37:GLN:HB3	2.16	0.46
33:7:60:ALA:O	33:7:62:SER:N	2.49	0.46
37:11:118:ARG:O	37:11:122:GLU:HG2	2.15	0.46
39:13:24:ASN:HB3	39:13:58:GLU:HG2	1.97	0.46
39:13:123:ARG:HB3	52:26:1343:G:C4'	2.42	0.46
40:14:6:ILE:HA	40:14:101:SER:O	2.15	0.46
40:14:40:ILE:O	40:14:73:LEU:N	2.45	0.46
41:15:84:MET:HA	41:15:110:THR:O	2.15	0.46
43:17:33:LEU:CD2	43:17:40:GLU:HA	2.46	0.46
52:26:128:G:H2'	52:26:129:A:C8	2.51	0.46
52:26:207:C:H2'	52:26:208:U:O4'	2.15	0.46
52:26:226:G:O2'	52:26:227:G:H5'	2.15	0.46
52:26:1177:G:H2'	52:26:1178:G:O4'	2.15	0.46
52:26:1220:G:H2'	52:26:1221:G:O4'	2.15	0.46
52:26:1353:G:H2'	52:26:1354:U:H6	1.79	0.46
53:27:83:A:H2'	53:27:84:A:N7	2.30	0.46
53:27:195:A:H2'	53:27:198:C:H42	1.79	0.46
53:27:218:A:H3'	53:27:219:A:H8	1.81	0.46
53:27:426:C:H2'	53:27:427:U:H6	1.80	0.46
53:27:588:U:O4	53:27:670:A:H1'	2.16	0.46
53:27:784:G:C8	53:27:792:A:N7	2.84	0.46
53:27:785:G:C6	53:27:786:C:C4	3.04	0.46
53:27:1313:U:C2	53:27:1610:A:H2	2.32	0.46
53:27:1555:G:H5'	53:27:1555:G:C8	2.51	0.46
53:27:2472:G:H2'	53:27:2529:G:N2	2.31	0.46
53:27:2520:C:C6	53:27:2567:G:H1'	2.51	0.46
53:27:2526:G:H2'	53:27:2527:C:C6	2.51	0.46
53:27:2682:A:C2	53:27:2683:C:C2	3.03	0.46
53:27:2688:G:H1'	53:27:2721:A:N6	2.30	0.46
53:27:2708:G:H2'	53:27:2709:G:H8	1.80	0.46
56:30:74:C:N4	59:33:429:TYR:O	2.47	0.46
59:33:35:LEU:HD11	59:33:73:ILE:HG22	1.98	0.46
59:33:327:LEU:HD23	59:33:332:LYS:HB3	1.93	0.46
1:A:131:MET:HA	1:A:134:ILE:HD12	1.97	0.46
3:C:130:LYS:HB2	3:C:133:LEU:CD1	2.46	0.46
10:J:28:SER:HB3	53:27:2563:U:O2'	2.16	0.46
11:K:57:LEU:CB	11:K:60:ARG:HH11	2.21	0.46
13:M:114:GLU:OE1	13:M:118:ARG:NH2	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:48:LYS:HG3	17:Q:49:ILE:N	2.31	0.46
17:Q:72:VAL:HG22	17:Q:89:HIS:O	2.15	0.46
20:T:96:LYS:HZ1	53:27:299:A:P	2.38	0.46
30:4:11:LYS:NZ	53:27:249:C:O2	2.41	0.46
31:5:19:ARG:HH22	31:5:26:ILE:HD11	1.80	0.46
32:6:27:LYS:HB3	32:6:28:PRO:HD3	1.98	0.46
32:6:103:TRP:O	32:6:107:ARG:HG2	2.15	0.46
33:7:46:LEU:HD12	33:7:49:ALA:HB3	1.98	0.46
33:7:72:PRO:O	33:7:76:ILE:HG12	2.16	0.46
33:7:131:ARG:HA	33:7:131:ARG:HD2	1.76	0.46
33:7:154:GLY:O	33:7:156:LEU:HG	2.15	0.46
34:8:144:ILE:CD1	34:8:177:MET:HB3	2.45	0.46
42:16:23:LEU:C	42:16:25:ALA:H	2.19	0.46
42:16:38:THR:HA	42:16:49:ARG:O	2.16	0.46
47:21:32:ILE:HD12	47:21:32:ILE:N	2.29	0.46
50:24:34:VAL:HG11	50:24:78:LEU:HD23	1.98	0.46
51:25:17:ARG:O	51:25:19:LYS:N	2.48	0.46
52:26:66:A:H4’	52:26:173:U:C5	2.50	0.46
52:26:158:G:H2’	52:26:159:G:O4’	2.15	0.46
52:26:603:U:H2’	52:26:604:G:C8	2.50	0.46
52:26:604:G:H2’	52:26:605:U:O4’	2.15	0.46
52:26:771:G:H2’	52:26:772:U:C6	2.51	0.46
52:26:831:A:H3’	52:26:832:G:H5”	1.98	0.46
52:26:848:C:H3’	52:26:849:G:H5”	1.98	0.46
52:26:1072:G:C5	52:26:1073:U:C4	3.03	0.46
53:27:17:G:H2’	53:27:18:U:C6	2.51	0.46
53:27:21:A:H2’	53:27:22:C:O4’	2.15	0.46
53:27:709:U:H2’	53:27:710:U:H6	1.81	0.46
53:27:817:C:H2’	53:27:818:G:O4’	2.16	0.46
53:27:1705:A:C5	53:27:1706:C:C4	3.04	0.46
53:27:1746:A:H2’	53:27:1747:U:H6	1.76	0.46
53:27:2462:C:H1’	53:27:2491:U:O4	2.15	0.46
53:27:2504:U:H2’	53:27:2505:G:H5’	1.96	0.46
54:28:79:G:O2’	54:28:80:U:H5’	2.16	0.46
55:29:20:U:H2’	55:29:21:C:C6	2.51	0.46
58:32:24:U:O5’	58:32:24:U:H6	1.97	0.46
59:33:43:LEU:HG	59:33:44:GLN:NE2	2.30	0.46
59:33:303:LEU:HD12	59:33:304:PRO:HD2	1.97	0.46
59:33:408:VAL:HA	59:33:458:GLY:HA2	1.97	0.46
1:A:207:ALA:HA	53:27:1791:A:H5’	1.98	0.46
3:C:21:ARG:HG2	3:C:110:SER:OG	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:164:LEU:HD22	3:C:167:VAL:CG2	2.46	0.46
7:G:34:THR:HB	53:27:1085:A:H61	1.81	0.46
8:H:37:PHE:HB2	8:H:66:PHE:CZ	2.51	0.46
11:K:14:LYS:O	11:K:15:ALA:CB	2.63	0.46
12:L:53:MET:SD	12:L:117:PHE:HE1	2.39	0.46
16:P:55:GLN:NE2	53:27:559:G:H1'	2.30	0.46
19:S:61:LEU:HD21	19:S:82:LYS:HD2	1.98	0.46
28:2:20:TYR:CE2	28:2:37:LYS:HB3	2.50	0.46
34:8:104:MET:HE2	34:8:179:GLY:HA2	1.98	0.46
37:11:2:ARG:HB3	52:26:933:G:OP2	2.16	0.46
42:16:25:ALA:O	52:26:553:A:O2'	2.34	0.46
44:18:63:CYS:HB2	44:18:79:SER:HB2	1.96	0.46
44:18:89:ARG:HB2	44:18:89:ARG:CZ	2.45	0.46
51:25:17:ARG:CZ	52:26:1538:C:O2'	2.64	0.46
52:26:41:G:O2'	52:26:42:G:H5'	2.16	0.46
52:26:178:C:H2'	52:26:179:A:H8	1.80	0.46
52:26:735:C:H2'	52:26:736:C:C6	2.51	0.46
53:27:5:A:O2'	53:27:6:A:H5'	2.16	0.46
53:27:183:C:O2'	53:27:184:C:H5'	2.16	0.46
53:27:528:A:H8	53:27:528:A:O5'	1.99	0.46
53:27:587:C:C6	53:27:671:C:H1'	2.51	0.46
53:27:825:A:H2'	53:27:826:U:C6	2.51	0.46
53:27:1190:G:H2'	53:27:1191:G:H8	1.81	0.46
53:27:1451:C:H4'	53:27:1452:G:N9	2.30	0.46
53:27:1640:A:H2'	53:27:1641:A:O4'	2.16	0.46
53:27:2028:U:O2'	53:27:2029:G:H5'	2.16	0.46
53:27:2592:G:H2'	53:27:2593:U:H5'	1.98	0.46
53:27:2620:C:H2'	53:27:2621:G:C5'	2.44	0.46
56:30:14:A:H2'	56:30:15:G:C1'	2.46	0.46
56:30:38:A:H2'	56:30:39:U:O4'	2.16	0.46
59:33:82:PHE:CD2	59:33:83:PRO:CD	2.98	0.46
59:33:160:LEU:HD12	59:33:198:LEU:HD23	1.97	0.46
3:C:132:LYS:HE2	53:27:320:A:OP2	2.16	0.46
3:C:178:VAL:HG13	3:C:179:SER:H	1.81	0.46
5:E:154:GLU:HG3	5:E:157:LYS:H	1.80	0.46
7:G:48:ALA:HB3	7:G:51:TYR:CD2	2.51	0.46
10:J:28:SER:HB2	53:27:2566:A:N1	2.30	0.46
13:M:34:ILE:HG22	53:27:1279:G:H5'	1.98	0.46
14:N:81:ARG:O	14:N:85:LYS:HG2	2.16	0.46
17:Q:15:SER:O	17:Q:18:GLN:HG2	2.15	0.46
19:S:4:GLU:O	19:S:8:LEU:HG	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Z:32:LEU:O	26:Z:34:LEU:N	2.48	0.46
37:11:75:LYS:NZ	37:11:77:ARG:HD3	2.30	0.46
42:16:23:LEU:HG	42:16:24:GLU:N	2.31	0.46
43:17:49:GLU:C	43:17:51:GLN:H	2.20	0.46
44:18:12:ARG:NH2	52:26:980:C:O3'	2.49	0.46
47:21:68:LYS:HB2	52:26:267:C:OP1	2.16	0.46
52:26:106:C:H2'	52:26:107:G:O4'	2.15	0.46
52:26:376:G:O2'	52:26:377:G:H5'	2.16	0.46
52:26:405:U:C3'	52:26:406:G:H5'	2.39	0.46
52:26:447:G:H8	52:26:447:G:O5'	1.98	0.46
52:26:549:C:C3'	52:26:550:G:H5"	2.45	0.46
53:27:325:G:H2'	53:27:326:G:H8	1.81	0.46
53:27:996:A:O2'	53:27:997:G:H5'	2.15	0.46
53:27:1748:C:H2'	53:27:1749:A:C8	2.51	0.46
53:27:1935:G:H3'	53:27:1962:C:H42	1.80	0.46
53:27:1948:G:H2'	53:27:1949:G:C8	2.51	0.46
53:27:2194:U:H2'	53:27:2195:U:C6	2.51	0.46
53:27:2737:G:H2'	53:27:2738:A:O4'	2.16	0.46
53:27:2873:A:O2'	53:27:2874:C:H5'	2.16	0.46
54:28:37:C:H2'	54:28:38:C:O4'	2.16	0.46
59:33:226:GLU:HA	59:33:229:ILE:HG12	1.97	0.46
59:33:285:ARG:HE	59:33:287:GLN:HB3	1.81	0.46
2:B:56:LYS:NZ	53:27:2831:G:P	2.89	0.45
2:B:110:THR:HG21	2:B:169:ARG:NH1	2.31	0.45
2:B:130:GLN:NE2	53:27:2578:G:N2	2.64	0.45
3:C:44:ARG:NE	53:27:444:C:OP2	2.48	0.45
4:D:49:LEU:CD2	4:D:83:PRO:HB2	2.46	0.45
6:F:25:TYR:CD1	53:27:2094:A:H5'	2.52	0.45
6:F:93:SER:HB3	6:F:121:VAL:HG23	1.99	0.45
11:K:55:MET:HG2	53:27:2392:A:H2	1.80	0.45
15:O:89:GLY:C	15:O:112:ARG:HG3	2.36	0.45
18:R:69:LEU:HA	18:R:109:ASP:HA	1.98	0.45
21:U:70:ILE:HG22	21:U:72:VAL:HG13	1.98	0.45
23:W:73:ARG:HD2	23:W:75:GLU:HG2	1.99	0.45
31:5:36:ARG:CG	31:5:37:GLN:N	2.74	0.45
38:12:49:LYS:HB3	38:12:51:GLU:HG3	1.98	0.45
40:14:63:ASP:OD2	44:18:84:ARG:NE	2.42	0.45
43:17:99:GLN:NE2	52:26:1307:U:OP1	2.44	0.45
52:26:160:A:N6	52:26:161:A:C2	2.84	0.45
52:26:1404:C:H2'	52:26:1405:G:H8	1.80	0.45
53:27:93:G:H2'	53:27:94:A:O4'	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:492:A:H2'	53:27:493:G:O4'	2.15	0.45
53:27:858:G:H8	53:27:858:G:OP2	1.99	0.45
53:27:1078:U:H5"	53:27:1079:C:O5'	2.15	0.45
53:27:1091:G:O2'	53:27:1092:C:H5'	2.16	0.45
53:27:2861:U:O2'	53:27:2862:G:H5'	2.16	0.45
58:32:39:C:H2'	58:32:40:C:C6	2.51	0.45
59:33:38:THR:HG21	59:33:77:ARG:CG	2.46	0.45
59:33:240:MET:HA	59:33:243:GLU:HG2	1.98	0.45
2:B:37:VAL:HG23	2:B:92:VAL:HG22	1.97	0.45
2:B:135:GLY:O	53:27:2580:U:H5"	2.16	0.45
3:C:84:THR:CB	53:27:586:A:H5'	2.46	0.45
5:E:85:LYS:O	5:E:164:ALA:N	2.46	0.45
7:G:81:LEU:O	7:G:82:ILE:HD13	2.16	0.45
8:H:112:LYS:HE2	8:H:116:MET:CG	2.46	0.45
10:J:121:GLU:OE2	15:O:62:LYS:NZ	2.49	0.45
12:L:42:THR:OG1	12:L:45:GLN:HG3	2.17	0.45
17:Q:34:GLU:OE2	17:Q:60:LYS:HG2	2.17	0.45
17:Q:71:LYS:N	17:Q:90:ARG:HG2	2.32	0.45
17:Q:77:PHE:CD1	17:Q:84:ARG:HB3	2.52	0.45
18:R:4:ILE:HG22	18:R:106:VAL:HG22	1.98	0.45
20:T:32:LYS:HB3	20:T:63:ALA:HB1	1.98	0.45
23:W:22:ASN:HA	53:27:200:U:H5"	1.97	0.45
25:Y:52:PHE:CD1	54:28:83:G:H4'	2.51	0.45
28:2:40:PRO:O	28:2:43:ARG:HG2	2.16	0.45
31:5:11:CYS:N	31:5:14:CYS:SG	2.88	0.45
32:6:49:PHE:CD1	32:6:199:ILE:HD13	2.52	0.45
34:8:117:VAL:O	34:8:130:ASN:HA	2.17	0.45
35:9:155:LYS:HB2	38:12:70:VAL:HG13	1.97	0.45
41:15:44:ALA:HB3	41:15:69:CYS:HB2	1.98	0.45
42:16:25:ALA:HB1	52:26:554:A:H5'	1.98	0.45
46:20:5:ARG:HD2	52:26:376:G:H5"	1.97	0.45
47:21:57:VAL:HG12	47:21:78:VAL:HG23	1.98	0.45
52:26:317:U:H2'	52:26:318:G:C8	2.49	0.45
52:26:1088:G:H21	52:26:1167:A:N6	2.06	0.45
52:26:1112:C:O5'	52:26:1112:C:H6	2.00	0.45
52:26:1129:C:H2'	52:26:1139:G:C6	2.51	0.45
53:27:443:A:H5"	53:27:444:C:H5"	1.97	0.45
53:27:513:A:H4'	53:27:1217:U:H5'	1.98	0.45
53:27:685:A:H1'	53:27:688:U:O4	2.16	0.45
53:27:969:G:H2'	53:27:970:U:C6	2.51	0.45
53:27:1029:A:O5'	53:27:1029:A:H8	2.00	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1268:A:H2'	53:27:1269:A:C8	2.51	0.45
53:27:1372:U:H2'	53:27:1373:A:H8	1.81	0.45
53:27:1381:G:O2'	53:27:1382:G:H5'	2.16	0.45
53:27:2114:A:N3	53:27:2114:A:H2'	2.31	0.45
53:27:2356:U:H2'	53:27:2357:G:O4'	2.16	0.45
53:27:2772:C:H2'	53:27:2773:C:C6	2.52	0.45
56:30:7:A:O2'	56:30:49:C:H5'	2.16	0.45
57:31:28:C:H2'	57:31:29:G:H8	1.81	0.45
58:32:68:C:O2'	58:32:69:C:H5'	2.15	0.45
59:33:699:SER:HA	59:33:710:ILE:HA	1.96	0.45
1:A:210:ALA:O	1:A:213:ARG:HB2	2.16	0.45
2:B:13:ARG:NH1	15:O:55:HIS:HA	2.28	0.45
4:D:91:ARG:HG2	54:28:43:C:O2'	2.15	0.45
5:E:66:THR:OG1	53:27:2748:A:H1'	2.16	0.45
7:G:11:ILE:O	7:G:15:VAL:HG23	2.17	0.45
7:G:33:VAL:HA	53:27:1055:G:H4'	1.98	0.45
32:6:35:ASN:O	32:6:37:VAL:N	2.46	0.45
33:7:32:LEU:O	33:7:35:ASP:HB3	2.16	0.45
34:8:103:ARG:NH2	34:8:110:ARG:NH2	2.64	0.45
35:9:113:VAL:HG13	35:9:114:LEU:CD1	2.46	0.45
36:10:25:TYR:O	36:10:29:ILE:HG13	2.16	0.45
38:12:9:MET:HB2	38:12:26:MET:CE	2.47	0.45
42:16:27:PRO:HD2	52:26:363:A:C4	2.51	0.45
44:18:66:THR:HG21	52:26:1202:U:O2	2.17	0.45
46:20:6:LEU:HD12	52:26:375:U:O3'	2.16	0.45
47:21:30:HIS:CD2	47:21:32:ILE:H	2.34	0.45
52:26:305:G:H5"	52:26:306:A:OP1	2.16	0.45
52:26:607:A:H2'	52:26:608:A:C8	2.52	0.45
52:26:895:G:H2'	52:26:896:C:C6	2.52	0.45
52:26:928:G:O2'	52:26:929:G:H5'	2.17	0.45
52:26:1417:G:N2	52:26:1482:G:H2'	2.31	0.45
53:27:14:A:N6	53:27:15:G:C2	2.84	0.45
53:27:64:A:H2'	53:27:65:U:C6	2.52	0.45
53:27:709:U:H2'	53:27:710:U:C6	2.52	0.45
53:27:828:U:H2'	53:27:829:A:C8	2.51	0.45
53:27:1111:A:N3	53:27:1112:G:H1'	2.31	0.45
53:27:1385:A:C4	53:27:1386:C:C5	3.03	0.45
53:27:1793:C:H2'	53:27:1794:A:C8	2.51	0.45
53:27:2122:U:H2'	53:27:2123:G:O4'	2.16	0.45
53:27:2233:U:H2'	53:27:2234:G:H8	1.78	0.45
53:27:2418:A:H2'	53:27:2419:U:O4'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2712:C:O2'	53:27:2713:U:OP1	2.28	0.45
53:27:2774:C:H2'	53:27:2775:G:O4'	2.16	0.45
53:27:2828:G:C2	53:27:2829:A:C8	3.05	0.45
56:30:60:U:H5"	56:30:61:C:OP2	2.16	0.45
59:33:221:ARG:NE	59:33:224:ASP:OD2	2.49	0.45
59:33:418:LEU:HD21	59:33:430:HIS:HD2	1.79	0.45
1:A:259:ASN:O	1:A:261:ARG:N	2.43	0.45
2:B:3:GLY:C	2:B:4:LEU:HD12	2.36	0.45
3:C:171:ASP:O	3:C:172:ALA:C	2.54	0.45
4:D:48:LEU:HD21	4:D:147:ARG:HE	1.81	0.45
4:D:94:ARG:HH21	26:Z:1:MET:HE3	1.81	0.45
6:F:132:PHE:CE2	6:F:142:VAL:HB	2.51	0.45
11:K:116:VAL:CG2	11:K:117:THR:N	2.79	0.45
12:L:125:PRO:HG2	12:L:126:ILE:H	1.81	0.45
16:P:14:LYS:O	16:P:18:LYS:HG3	2.15	0.45
20:T:23:LYS:C	20:T:35:VAL:HG13	2.37	0.45
34:8:58:GLN:OE1	34:8:61:ARG:NH1	2.49	0.45
34:8:160:LEU:HD23	34:8:160:LEU:C	2.37	0.45
44:18:72:PHE:CE1	44:18:77:GLY:HA2	2.52	0.45
46:20:72:ALA:O	46:20:75:ILE:HB	2.16	0.45
50:24:11:ILE:C	50:24:11:ILE:HD12	2.37	0.45
50:24:24:ARG:O	50:24:28:ARG:HG3	2.16	0.45
52:26:122:G:C6	52:26:123:U:C4	3.05	0.45
52:26:130:A:H1'	52:26:264:C:O4'	2.16	0.45
52:26:234:C:H2'	52:26:235:C:H6	1.77	0.45
52:26:314:C:O2'	52:26:315:A:H5'	2.17	0.45
52:26:545:C:O2'	52:26:546:A:H5'	2.16	0.45
52:26:563:A:C2	52:26:567:G:C5	3.04	0.45
52:26:796:C:O2'	52:26:797:C:H5'	2.16	0.45
52:26:997:U:O2'	52:26:998:C:H5'	2.17	0.45
52:26:1090:U:O2'	52:26:1091:U:H5'	2.17	0.45
53:27:183:C:H2'	53:27:184:C:H5'	1.99	0.45
53:27:242:G:N2	53:27:254:G:H2'	2.31	0.45
53:27:600:G:H2'	53:27:601:C:H6	1.82	0.45
53:27:644:A:H2'	53:27:645:C:C5'	2.44	0.45
53:27:704:G:H2'	53:27:726:G:N1	2.31	0.45
53:27:1096:A:H3'	53:27:1097:U:C5'	2.42	0.45
53:27:1754:A:H2'	53:27:1755:A:C8	2.51	0.45
53:27:2515:C:H2'	53:27:2516:A:C8	2.52	0.45
53:27:2648:G:H2'	53:27:2649:C:H6	1.81	0.45
57:31:69:C:H2'	57:31:70:G:C8	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:32:7:G:H3'	58:32:8:U:C5'	2.46	0.45
59:33:43:LEU:CG	59:33:44:GLN:OE1	2.59	0.45
59:33:271:ASP:O	59:33:275:ASP:HB2	2.16	0.45
59:33:300:TYR:CE1	59:33:329:PRO:CD	2.92	0.45
59:33:315:LYS:CB	59:33:316:PRO:HD2	2.42	0.45
59:33:639:GLU:O	59:33:643:GLU:N	2.49	0.45
6:F:61:VAL:HG23	6:F:62:LEU:N	2.31	0.45
9:I:18:VAL:CG2	9:I:140:LEU:HD22	2.47	0.45
9:I:88:THR:OG1	9:I:91:GLU:HG3	2.15	0.45
10:J:48:PRO:HG3	52:26:1422:G:H5'	1.98	0.45
16:P:65:ASN:HD21	16:P:69:ARG:HH11	1.65	0.45
17:Q:49:ILE:HG22	17:Q:54:VAL:CA	2.47	0.45
20:T:48:VAL:C	20:T:53:GLN:HB3	2.37	0.45
27:1:43:THR:HG1	27:1:47:TYR:N	2.14	0.45
38:12:5:PRO:O	38:12:8:ASP:HB3	2.17	0.45
40:14:25:ILE:HG23	40:14:26:VAL:N	2.32	0.45
40:14:66:GLU:HB3	44:18:98:ALA:CB	2.44	0.45
42:16:28:GLN:NE2	52:26:33:A:O2'	2.50	0.45
46:20:7:ALA:CB	46:20:18:GLN:HB3	2.46	0.45
50:24:4:LYS:HB3	50:24:6:ALA:HB3	1.99	0.45
52:26:45:G:H2'	52:26:46:G:H8	1.81	0.45
52:26:298:A:H2'	52:26:299:G:O4'	2.17	0.45
52:26:892:A:C6	52:26:893:C:C4	3.04	0.45
52:26:976:G:H1'	52:26:1363:A:N6	2.31	0.45
52:26:978:A:H2	52:26:1319:A:O4'	1.99	0.45
52:26:1095:U:O2'	52:26:1096:C:H5'	2.17	0.45
52:26:1179:A:C2'	52:26:1180:A:H5'	2.47	0.45
52:26:1305:G:N2	52:26:1331:G:C2'	2.80	0.45
52:26:1403:C:O5'	52:26:1403:C:H6	1.99	0.45
52:26:1461:G:H2'	52:26:1462:C:C6	2.51	0.45
52:26:1468:A:O2'	52:26:1469:C:H5'	2.16	0.45
52:26:1488:G:H2'	52:26:1489:G:C8	2.51	0.45
53:27:30:G:H2'	53:27:31:C:C6	2.51	0.45
53:27:319:G:H2'	53:27:320:A:C8	2.51	0.45
53:27:776:G:C5	53:27:793:A:C8	3.05	0.45
53:27:1111:A:O2'	53:27:1112:G:OP1	2.32	0.45
53:27:1206:G:H2'	53:27:1207:C:C6	2.51	0.45
53:27:1304:A:H2'	53:27:1305:C:C5'	2.34	0.45
53:27:1316:U:H2'	53:27:1317:G:C8	2.51	0.45
53:27:1408:G:H2'	53:27:1409:U:O4'	2.17	0.45
53:27:1670:C:C5	53:27:1671:U:C4	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1748:C:H2'	53:27:1749:A:H8	1.81	0.45
53:27:1796:U:H2'	53:27:1797:G:C8	2.44	0.45
53:27:2648:G:H2'	53:27:2649:C:C6	2.52	0.45
53:27:2784:U:O2'	53:27:2785:C:H5'	2.17	0.45
53:27:2809:A:H5'	53:27:2810:A:OP2	2.17	0.45
54:28:119:A:C2	54:28:120:A:H1'	2.52	0.45
59:33:56:LEU:HD23	59:33:56:LEU:C	2.37	0.45
59:33:161:ARG:C	59:33:162:GLU:HG2	2.37	0.45
59:33:675:ASP:HB2	59:33:706:GLN:CG	2.47	0.45
59:33:690:GLU:OE2	59:33:725:VAL:HG22	2.16	0.45
1:A:177:SER:HB3	53:27:1799:G:O6	2.16	0.45
2:B:12:THR:HG23	15:O:55:HIS:CE1	2.52	0.45
6:F:140:ALA:C	6:F:141:LYS:HD2	2.37	0.45
7:G:11:ILE:O	7:G:14:GLU:HB3	2.17	0.45
8:H:2:LYS:HZ3	8:H:62:ALA:HB2	1.79	0.45
8:H:75:ALA:CB	8:H:131:THR:HG21	2.47	0.45
9:I:37:ARG:HG3	9:I:37:ARG:NH2	2.30	0.45
11:K:134:ALA:O	11:K:137:ALA:HB3	2.16	0.45
15:O:50:ARG:NH2	53:27:2683:C:OP1	2.47	0.45
22:V:13:GLU:O	22:V:14:ALA:C	2.53	0.45
23:W:39:VAL:HG12	23:W:41:SER:HB3	1.97	0.45
34:8:100:VAL:HG21	34:8:136:VAL:HG21	1.99	0.45
34:8:119:HIS:ND1	52:26:437:U:O2'	2.39	0.45
34:8:149:LYS:C	34:8:151:GLN:H	2.19	0.45
37:11:141:HIS:O	37:11:145:GLU:HG2	2.16	0.45
39:13:10:ARG:HH21	52:26:1149:C:P	2.39	0.45
39:13:60:LEU:HD12	39:13:60:LEU:O	2.17	0.45
41:15:108:ASN:HA	51:25:6:ARG:HA	1.97	0.45
42:16:49:ARG:NH1	52:26:523:A:N6	2.63	0.45
42:16:49:ARG:HH12	52:26:523:A:H61	1.63	0.45
43:17:33:LEU:HD23	43:17:40:GLU:HA	1.99	0.45
46:20:6:LEU:CD1	52:26:375:U:H4'	2.42	0.45
49:23:57:VAL:HA	49:23:58:PRO:HD3	1.67	0.45
52:26:78:A:H2'	52:26:79:G:C8	2.51	0.45
52:26:286:C:H2'	52:26:287:U:H6	1.82	0.45
52:26:606:G:N2	52:26:631:C:H3'	2.32	0.45
52:26:918:A:H2'	52:26:919:A:O4'	2.17	0.45
52:26:926:G:C6	52:26:1505:G:N7	2.85	0.45
52:26:982:U:H4'	52:26:983:A:O5'	2.17	0.45
52:26:1084:G:H1'	52:26:1103:C:H41	1.82	0.45
52:26:1236:A:H2'	52:26:1237:C:C6	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:494:G:O2'	53:27:495:G:H5'	2.16	0.45
53:27:809:G:H2'	53:27:810:U:H6	1.82	0.45
53:27:1565:C:HO2'	53:27:1566:A:H2'	1.81	0.45
53:27:1721:G:H22	53:27:1738:G:H2'	1.81	0.45
53:27:1809:A:N7	53:27:1810:A:C6	2.85	0.45
53:27:1904:G:N2	53:27:1905:C:H1'	2.31	0.45
53:27:1935:G:H1'	53:27:1964:G:N2	2.32	0.45
53:27:1979:U:C2'	53:27:1980:G:H5'	2.47	0.45
53:27:2521:C:H2'	53:27:2522:U:O4'	2.16	0.45
57:31:17:C:H2'	57:31:17(A):U:H5	1.81	0.45
59:33:101:LYS:HE3	59:33:105:ASN:ND2	2.25	0.45
59:33:259:ILE:O	59:33:263:MET:HG3	2.17	0.45
59:33:279:VAL:HG13	59:33:336:ILE:HA	1.99	0.45
2:B:166:GLY:O	2:B:168:GLU:N	2.46	0.45
7:G:22:ALA:HB1	7:G:91:ALA:HB1	1.97	0.45
7:G:51:TYR:HE1	7:G:89:PRO:HG2	1.81	0.45
7:G:60:LEU:HA	7:G:64:VAL:CG2	2.47	0.45
9:I:27:ARG:NH2	53:27:1142:A:H4'	2.32	0.45
10:J:22:ILE:HD11	10:J:40:LYS:CB	2.46	0.45
18:R:65:ASP:OD2	18:R:68:ASP:HB3	2.16	0.45
20:T:45:GLN:O	20:T:55:GLY:HA2	2.16	0.45
29:3:18:PHE:O	29:3:21:ARG:HB3	2.17	0.45
33:7:196:GLY:N	52:26:1057:G:H4'	2.32	0.45
35:9:82:HIS:HE1	35:9:146:MET:HA	1.81	0.45
35:9:110:MET:O	35:9:113:VAL:HG12	2.17	0.45
36:10:36:ILE:HD11	36:10:39:LEU:HG	1.97	0.45
37:11:129:ASN:O	37:11:134:VAL:HG21	2.16	0.45
39:13:17:ARG:CB	39:13:65:THR:HB	2.46	0.45
40:14:10:LEU:CD1	40:14:72:ARG:HB2	2.46	0.45
43:17:3:ILE:HD12	43:17:59:VAL:HG11	1.98	0.45
44:18:29:ILE:O	44:18:32:ASP:HB3	2.17	0.45
44:18:81:ILE:HG21	52:26:1202:U:C2	2.52	0.45
51:25:19:LYS:HB3	51:25:24:LYS:HE3	1.99	0.45
52:26:90:C:H6	52:26:90:C:H5"	1.81	0.45
52:26:461:A:H2'	52:26:462:G:C8	2.51	0.45
52:26:538:G:H2'	52:26:539:A:H8	1.82	0.45
52:26:596:A:H2'	52:26:597:G:H8	1.82	0.45
52:26:810:C:O2'	52:26:811:C:H5'	2.17	0.45
52:26:811:C:H4'	52:26:900:A:N6	2.31	0.45
52:26:1415:G:C4	52:26:1416:G:C8	3.05	0.45
53:27:24:G:C2	53:27:25:U:C2	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:237:C:H2'	53:27:238:C:H6	1.81	0.45
53:27:528:A:C8	53:27:528:A:C3'	3.00	0.45
53:27:826:U:H5"	53:27:2428:G:O3'	2.17	0.45
53:27:1353:A:H2'	53:27:1354:A:C8	2.51	0.45
53:27:1505:A:H2'	53:27:1506:U:C6	2.52	0.45
53:27:1660:G:C2	53:27:1661:G:C5	3.04	0.45
53:27:1858:A:H1'	53:27:1885:A:C2	2.52	0.45
53:27:2051:A:H2'	53:27:2614:A:N6	2.32	0.45
53:27:2262:U:H2'	53:27:2263:C:H6	1.81	0.45
53:27:2297:A:C2	53:27:2321:U:H5	2.34	0.45
53:27:2415:G:H2'	53:27:2416:C:C6	2.51	0.45
53:27:2556:C:C5	53:27:2557:G:N7	2.85	0.45
59:33:20:TRP:CD1	59:33:64:GLU:N	2.85	0.45
59:33:60:VAL:O	59:33:63:VAL:CG2	2.64	0.45
59:33:63:VAL:CG1	59:33:80:LEU:N	2.80	0.45
59:33:276:VAL:O	59:33:276:VAL:HG22	2.16	0.45
59:33:634:HIS:O	59:33:635:ARG:HB3	2.16	0.45
3:C:109:LEU:HA	3:C:112:LEU:HD12	1.99	0.45
9:I:15:TRP:CZ2	9:I:135:GLN:HG3	2.52	0.45
9:I:36:LEU:O	9:I:51:GLY:HA3	2.17	0.45
16:P:14:LYS:HE3	53:27:1218:G:OP2	2.17	0.45
21:U:21:ARG:NH2	21:U:87:GLN:O	2.50	0.45
31:5:11:CYS:SG	31:5:33:HIS:CE1	3.09	0.45
32:6:19:THR:OG1	32:6:20:ARG:N	2.49	0.45
32:6:27:LYS:O	32:6:29:PHE:N	2.45	0.45
32:6:204:ASP:OD1	32:6:205:ALA:N	2.46	0.45
33:7:10:ARG:HH11	33:7:10:ARG:HG3	1.81	0.45
33:7:21:TRP:CE2	44:18:93:PRO:HG2	2.51	0.45
39:13:80:HIS:CD2	39:13:84:ARG:HG2	2.52	0.45
40:14:102:LEU:HD23	40:14:102:LEU:C	2.37	0.45
41:15:62:ALA:O	41:15:65:ALA:HB3	2.16	0.45
47:21:42:LYS:HZ3	52:26:277:C:P	2.39	0.45
49:23:31:ARG:HD3	59:33:602:VAL:CG2	2.40	0.45
50:24:56:ILE:HD12	50:24:56:ILE:H	1.82	0.45
50:24:57:VAL:HG13	50:24:58:ASP:H	1.81	0.45
52:26:390:U:H2'	52:26:391:G:H8	1.81	0.45
52:26:422:C:O2'	52:26:423:G:H5"	2.17	0.45
52:26:895:G:H2'	52:26:896:C:H6	1.81	0.45
52:26:1031:C:H4'	52:26:1033:G:N3	2.32	0.45
52:26:1064:G:O2'	52:26:1190:G:N2	2.49	0.45
52:26:1516:G:N2	52:26:1520:C:C2	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:210:C:H2'	53:27:211:C:H6	1.82	0.45
53:27:302:C:O2'	53:27:303:G:H5'	2.17	0.45
53:27:341:C:H2'	53:27:342:A:C8	2.51	0.45
53:27:496:G:H2'	53:27:497:A:O4'	2.17	0.45
53:27:599:A:H2'	53:27:600:G:C8	2.50	0.45
53:27:638:G:H2'	53:27:639:U:O4'	2.17	0.45
53:27:807:U:O2'	53:27:808:G:H5'	2.17	0.45
53:27:1166:G:O2'	53:27:1167:C:H5'	2.17	0.45
53:27:1345:C:H5'	53:27:1345:C:H6	1.81	0.45
53:27:2248:C:H2'	53:27:2249:U:C5'	2.46	0.45
54:28:59:A:H2'	54:28:60:C:O4'	2.17	0.45
59:33:232:PHE:O	59:33:236:LEU:HG	2.16	0.45
59:33:293:LEU:HD11	59:33:307:PHE:CZ	2.51	0.45
59:33:406:VAL:HG23	59:33:418:LEU:HB2	1.99	0.45
59:33:678:GLY:O	59:33:681:ARG:HB2	2.17	0.45
1:A:230:PRO:HB2	1:A:244:VAL:CG2	2.45	0.45
1:A:234:GLY:CA	1:A:238:ASN:HD22	2.30	0.45
3:C:189:THR:O	3:C:193:VAL:HG23	2.17	0.45
6:F:9:VAL:HB	6:F:13:GLY:CA	2.43	0.45
8:H:88:GLY:H	53:27:1064:C:H5'	1.82	0.45
13:M:52:ILE:O	13:M:55:ALA:N	2.48	0.45
15:O:29:VAL:HG21	15:O:73:PHE:HE1	1.82	0.45
15:O:108:ARG:NH1	52:26:1464:U:P	2.90	0.45
17:Q:93:PHE:C	17:Q:93:PHE:CD1	2.90	0.45
29:3:24:THR:OG1	29:3:25:LYS:N	2.50	0.45
29:3:34:ARG:HH12	53:27:466:A:P	2.37	0.45
32:6:56:LEU:HG	32:6:183:PHE:HE2	1.82	0.45
34:8:111:ALA:O	34:8:114:ARG:HB3	2.17	0.45
34:8:168:THR:HB	34:8:183:ARG:HH22	1.82	0.45
35:9:23:THR:HA	35:9:28:ARG:HA	1.99	0.45
39:13:36:GLN:HB2	39:13:40:ARG:HH11	1.81	0.45
49:23:30:LEU:HD22	49:23:48:ILE:CG2	2.47	0.45
52:26:384:G:H2'	52:26:385:C:C6	2.52	0.45
52:26:413:G:H1'	52:26:428:G:H21	1.78	0.45
52:26:466:A:H5"	52:26:467:U:OP1	2.17	0.45
52:26:686:U:O4	52:26:703:G:H2'	2.16	0.45
52:26:880:C:H2'	52:26:881:G:H8	1.81	0.45
52:26:1002:G:H2'	52:26:1003:G:O4'	2.17	0.45
52:26:1006:G:O2'	52:26:1007:U:H5'	2.16	0.45
53:27:441:U:H2'	53:27:442:G:C8	2.52	0.45
53:27:466:A:N3	53:27:683:U:H1'	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:910:A:C6	53:27:911:A:C6	3.05	0.45
53:27:1080:A:O2'	53:27:1081:U:H5'	2.17	0.45
53:27:1293:C:H2'	53:27:1294:U:C5'	2.42	0.45
53:27:1909:C:H2'	53:27:1910:G:H8	1.82	0.45
53:27:2190:G:H2'	53:27:2191:A:H8	1.82	0.45
53:27:2398:U:H2'	53:27:2399:G:H8	1.80	0.45
53:27:2407:A:H2'	53:27:2408:U:H6	1.80	0.45
53:27:2632:A:H2'	53:27:2633:G:H8	1.81	0.45
53:27:2681:C:C4	53:27:2724:U:C5	3.05	0.45
53:27:2805:C:H2'	53:27:2806:C:H6	1.80	0.45
53:27:2821:A:C2	53:27:2822:G:C4	3.05	0.45
59:33:47:GLN:HE22	59:33:87:ALA:HB1	1.82	0.45
59:33:274:PHE:HB3	59:33:333:THR:CB	2.47	0.45
2:B:148:GLN:OE1	2:B:148:GLN:N	2.50	0.45
3:C:119:ILE:HB	3:C:187:VAL:HA	1.99	0.45
5:E:16:VAL:CG1	5:E:17:LYS:N	2.80	0.45
6:F:75:LEU:O	6:F:77:THR:HG22	2.17	0.45
7:G:25:ALA:HA	7:G:96:PHE:HE1	1.82	0.45
8:H:93:ASN:O	8:H:94:LYS:HG3	2.17	0.45
9:I:17:VAL:CG2	9:I:137:PRO:HB2	2.44	0.45
11:K:19:LEU:HD23	11:K:20:GLY:N	2.32	0.45
11:K:54:GLN:NE2	53:27:2358:A:H61	2.14	0.45
15:O:105:LYS:HG2	52:26:1432:G:O5'	2.17	0.45
26:Z:66:ILE:HG21	44:18:40:ARG:NH2	2.32	0.45
33:7:131:ARG:HE	33:7:135:ARG:HH21	1.65	0.45
33:7:149:LYS:HA	33:7:167:TYR:O	2.17	0.45
34:8:78:ALA:HB1	34:8:85:THR:O	2.17	0.45
44:18:25:GLU:O	44:18:28:ALA:HB3	2.17	0.45
52:26:68:G:H2'	52:26:69:G:O4'	2.16	0.45
52:26:181:A:N6	52:26:194:C:H2'	2.29	0.45
52:26:363:A:O2'	52:26:364:A:H5'	2.17	0.45
52:26:406:G:O6	52:26:495:A:H2'	2.17	0.45
52:26:408:A:H2'	52:26:409:U:C6	2.52	0.45
52:26:1329:A:H2'	52:26:1330:U:O4'	2.16	0.45
53:27:164:C:H2'	53:27:165:A:H5'	1.98	0.45
53:27:214:G:O2'	53:27:215:G:H5'	2.17	0.45
53:27:538:A:H2'	53:27:539:G:H8	1.78	0.45
53:27:840:C:O5'	53:27:840:C:H6	1.99	0.45
53:27:1115:G:H2'	53:27:1116:G:C8	2.51	0.45
53:27:1351:C:O2'	53:27:1571:A:H1'	2.17	0.45
53:27:1790:C:H5"	53:27:1791:A:OP1	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1901:A:H2'	53:27:1902:C:H6	1.78	0.45
53:27:1977:A:H2'	53:27:1978:A:O4'	2.17	0.45
53:27:2107:G:H2'	53:27:2108:A:C1'	2.47	0.45
53:27:2135:A:C6	53:27:2136:G:H1'	2.51	0.45
53:27:2294:G:H2'	53:27:2295:C:H6	1.82	0.45
53:27:2589:A:H2'	53:27:2590:A:C8	2.52	0.45
53:27:2591:C:C2	53:27:2592:G:N7	2.85	0.45
53:27:2665:A:O2'	53:27:2666:C:H5'	2.17	0.45
53:27:2876:G:H2'	53:27:2877:G:O4'	2.17	0.45
58:32:7:G:H2'	58:32:49:G:O4'	2.16	0.45
58:32:60:U:H2'	58:32:61:C:H5	1.77	0.45
59:33:675:ASP:HB2	59:33:706:GLN:HG2	1.99	0.45
59:33:676:ARG:O	59:33:679:LEU:HB2	2.17	0.45
1:A:227:VAL:HG11	53:27:784:G:N1	2.32	0.44
2:B:133:THR:HG23	2:B:134:HIS:N	2.32	0.44
5:E:93:TYR:HA	5:E:105:SER:O	2.16	0.44
9:I:117:ALA:HA	9:I:120:ARG:HH22	1.81	0.44
15:O:31:VAL:HG12	15:O:38:ARG:O	2.17	0.44
16:P:105:PHE:O	16:P:109:VAL:HG23	2.17	0.44
17:Q:21:ARG:O	17:Q:22:LEU:HD12	2.16	0.44
17:Q:78:ARG:NH2	17:Q:78:ARG:CB	2.80	0.44
21:U:51:GLN:HA	21:U:56:PHE:CD2	2.51	0.44
30:4:51:LYS:HD2	53:27:937:C:OP1	2.17	0.44
32:6:67:LEU:HD23	32:6:68:PHE:N	2.32	0.44
32:6:156:LEU:HA	32:6:157:PRO:HD3	1.84	0.44
33:7:24:ASN:O	33:7:28:PHE:N	2.50	0.44
35:9:59:ILE:HG13	35:9:60:GLN:N	2.32	0.44
35:9:96:GLN:HG3	35:9:97:PRO:HD2	1.98	0.44
37:11:3:ARG:HD3	37:11:4:ARG:NH1	2.32	0.44
37:11:15:PRO:HA	39:13:45:MET:SD	2.56	0.44
42:16:120:ARG:HH22	52:26:500:G:P	2.40	0.44
43:17:15:VAL:HG22	43:17:33:LEU:HD22	1.99	0.44
44:18:20:PHE:HA	44:18:23:ARG:C	2.38	0.44
46:20:19:VAL:HB	46:20:37:GLY:C	2.37	0.44
46:20:42:ILE:HD12	46:20:42:ILE:O	2.17	0.44
52:26:21:G:H1'	52:26:915:A:H61	1.82	0.44
52:26:122:G:H8	52:26:122:G:O5'	1.99	0.44
52:26:680:C:H2'	52:26:681:A:H8	1.81	0.44
52:26:1040:U:O2'	52:26:1041:G:H5'	2.17	0.44
52:26:1369:C:H2'	52:26:1370:G:C8	2.52	0.44
53:27:282:A:H2'	53:27:283:G:C8	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1687:G:H2'	53:27:1688:U:C6	2.52	0.44
53:27:1691:C:O2'	53:27:1692:U:H5'	2.17	0.44
53:27:1842:G:H2'	53:27:1843:C:H6	1.81	0.44
53:27:2016:U:O5'	53:27:2016:U:H6	1.99	0.44
53:27:2039:U:H2'	53:27:2040:G:H8	1.81	0.44
53:27:2049:G:C4	53:27:2050:C:C5	3.06	0.44
53:27:2135:A:C5	53:27:2136:G:H1'	2.51	0.44
53:27:2675:A:O2'	53:27:2676:C:H5'	2.16	0.44
57:31:25:C:C2	57:31:26:G:C8	3.05	0.44
59:33:42:CYS:CB	59:33:84:LEU:HD11	2.47	0.44
59:33:78:ALA:CB	59:33:151:ILE:HD13	2.47	0.44
59:33:101:LYS:CA	59:33:104:VAL:HG12	2.47	0.44
59:33:274:PHE:CE1	59:33:277:ARG:NH1	2.85	0.44
1:A:245:THR:HG23	1:A:249:VAL:O	2.17	0.44
2:B:121:THR:HB	2:B:127:PHE:CE2	2.51	0.44
7:G:47:GLU:HB2	7:G:51:TYR:HE2	1.82	0.44
9:I:15:TRP:CE2	9:I:135:GLN:HG3	2.51	0.44
9:I:98:GLU:HB3	9:I:124:VAL:CG2	2.46	0.44
14:N:24:THR:OG1	14:N:90:VAL:HG22	2.16	0.44
15:O:16:VAL:HG13	15:O:83:ILE:HD12	1.99	0.44
16:P:5:ARG:HD2	53:27:1250:G:H5"	1.99	0.44
19:S:2:ILE:HG22	19:S:5:GLU:OE1	2.16	0.44
24:X:23:ARG:O	24:X:24:GLU:C	2.55	0.44
25:Y:53:MET:HG3	25:Y:54:VAL:HG13	1.99	0.44
28:2:29:LYS:HD2	53:27:2286:G:OP1	2.17	0.44
40:14:53:ILE:HG22	40:14:61:ALA:O	2.17	0.44
41:15:29:THR:HG21	41:15:62:ALA:HB2	1.98	0.44
51:25:49:ALA:O	51:25:53:LYS:HG3	2.17	0.44
52:26:24:U:H2'	52:26:25:C:C6	2.52	0.44
52:26:86:G:H21	52:26:87:C:N4	2.16	0.44
52:26:341:C:O2'	52:26:342:C:H5'	2.16	0.44
52:26:1074:G:C6	52:26:1102:A:N6	2.85	0.44
52:26:1509:C:C6	52:26:1510:C:H5	2.35	0.44
53:27:383:C:O2	53:27:383:C:C2'	2.65	0.44
53:27:677:A:H2'	53:27:678:C:C6	2.51	0.44
53:27:973:A:H5'	53:27:1188:U:H1'	1.99	0.44
53:27:1209:U:O2'	53:27:1210:G:H5"	2.17	0.44
53:27:1869:G:C2	53:27:1871:A:H5"	2.52	0.44
53:27:2060:A:N3	53:27:2060:A:C3'	2.74	0.44
53:27:2162:G:H4'	53:27:2171:A:C5'	2.46	0.44
53:27:2178:C:H2'	53:27:2179:C:C6	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2335:A:N7	53:27:2337:G:C5	2.85	0.44
54:28:35:C:H2'	54:28:36:C:C5'	2.47	0.44
57:31:2:G:H2'	57:31:3:C:C6	2.52	0.44
59:33:473:ARG:HA	59:33:477:ASN:H	1.82	0.44
59:33:676:ARG:CG	59:33:677:SER:H	2.17	0.44
12:L:95:LEU:O	12:L:96:ILE:HD13	2.18	0.44
17:Q:32:THR:HA	17:Q:62:GLU:HA	2.00	0.44
20:T:10:VAL:HG12	20:T:71:ILE:HA	1.99	0.44
22:V:36:GLN:OE1	22:V:41:PHE:N	2.50	0.44
31:5:7:VAL:HG12	31:5:35:GLN:HB3	2.00	0.44
32:6:18:GLN:O	32:6:19:THR:HB	2.17	0.44
35:9:148:SER:OG	35:9:151:MET:HG2	2.17	0.44
37:11:131:GLY:O	37:11:134:VAL:HG22	2.18	0.44
38:12:2:MET:HG3	38:12:2:MET:O	2.17	0.44
41:15:111:ASP:OD2	51:25:24:LYS:HG2	2.17	0.44
43:17:28:ARG:HG2	43:17:62:PHE:CE2	2.53	0.44
44:18:44:VAL:O	44:18:48:GLN:NE2	2.47	0.44
52:26:734:G:H2'	52:26:735:C:C6	2.52	0.44
53:27:23:G:H2'	53:27:24:G:C8	2.51	0.44
53:27:308:G:H2'	53:27:309:A:C8	2.52	0.44
53:27:764:A:O2'	53:27:765:C:H5'	2.17	0.44
53:27:780:G:H2'	53:27:782:A:N7	2.31	0.44
53:27:869:G:H2'	53:27:870:U:O4'	2.17	0.44
53:27:1309:G:H2'	53:27:1310:G:O4'	2.16	0.44
53:27:1651:G:C2	53:27:1652:A:C4	3.05	0.44
53:27:1810:A:H2'	53:27:1811:G:O4'	2.17	0.44
53:27:2391:G:H1'	53:27:2429:G:N2	2.33	0.44
53:27:2471:A:C2'	53:27:2472:G:H5'	2.47	0.44
53:27:2565:A:H5"	53:27:2566:A:OP2	2.16	0.44
59:33:293:LEU:HD23	59:33:293:LEU:C	2.37	0.44
59:33:461:ILE:HG22	59:33:462:GLU:N	2.32	0.44
59:33:599:VAL:HG21	59:33:631:ILE:CD1	2.47	0.44
1:A:160:TYR:HB3	1:A:193:GLU:HB3	1.98	0.44
1:A:164:VAL:HG23	1:A:174:ARG:HB2	2.00	0.44
4:D:104:THR:O	26:Z:38:SER:HB3	2.16	0.44
14:N:30:ARG:NH2	54:28:48:U:P	2.90	0.44
15:O:13:LYS:HB3	15:O:13:LYS:HE2	1.77	0.44
17:Q:21:ARG:HG3	17:Q:95:ASP:OD1	2.17	0.44
17:Q:78:ARG:HB3	17:Q:78:ARG:HH21	1.83	0.44
21:U:7:GLU:HA	21:U:65:VAL:HG23	1.99	0.44
21:U:86:LEU:N	21:U:86:LEU:CD1	2.80	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:86:GLY:O	34:8:90:LEU:HG	2.17	0.44
37:11:115:MET:O	37:11:118:ARG:HG2	2.17	0.44
39:13:11:ARG:NH1	39:13:12:LYS:HB2	2.32	0.44
39:13:121:ARG:HH12	52:26:1346:A:P	2.40	0.44
41:15:51:PHE:HE2	41:15:64:VAL:HG11	1.82	0.44
42:16:112:ALA:HA	52:26:502:A:OP1	2.18	0.44
43:17:25:GLY:H	52:26:1329:A:C5'	2.20	0.44
44:18:40:ARG:O	44:18:43:ALA:HB3	2.17	0.44
52:26:1120:C:H2'	52:26:1121:U:H6	1.82	0.44
53:27:197:A:C4	53:27:2430:A:C6	3.06	0.44
53:27:588:U:H2'	53:27:589:U:C6	2.52	0.44
53:27:995:C:H5'	53:27:995:C:C6	2.53	0.44
53:27:1637:A:H2'	53:27:1638:C:H6	1.82	0.44
53:27:2206:C:H2'	53:27:2207:C:H6	1.83	0.44
53:27:2216:G:H2'	53:27:2217:G:C8	2.52	0.44
53:27:2475:C:C2'	53:27:2476:A:H5'	2.47	0.44
53:27:2636:C:O2'	53:27:2637:U:H5'	2.17	0.44
53:27:2824:C:C4	53:27:2825:G:C5	3.04	0.44
59:33:692:VAL:CG1	59:33:716:ILE:HG13	2.47	0.44
2:B:2:ILE:O	2:B:2:ILE:HG13	2.18	0.44
2:B:62:LYS:N	2:B:63:PRO:CD	2.81	0.44
2:B:77:ARG:O	2:B:77:ARG:HG3	2.18	0.44
3:C:94:GLN:OE1	53:27:660:C:H5"	2.17	0.44
3:C:158:PHE:HD1	3:C:169:VAL:HB	1.83	0.44
4:D:45:ASP:HB2	4:D:48:LEU:HB3	1.99	0.44
5:E:120:ILE:HG23	5:E:134:GLY:HA3	1.99	0.44
9:I:80:HIS:O	9:I:82:GLY:N	2.51	0.44
10:J:25:LEU:HD21	10:J:40:LYS:HG2	1.98	0.44
10:J:76:VAL:HG12	15:O:72:VAL:CG2	2.48	0.44
10:J:98:ARG:HA	10:J:98:ARG:HD3	1.74	0.44
11:K:84:LYS:HG2	11:K:84:LYS:O	2.18	0.44
17:Q:26:ASP:O	17:Q:27:ILE:HD13	2.17	0.44
24:X:26:PHE:O	24:X:30:MET:HG2	2.18	0.44
33:7:56:ILE:HD12	33:7:65:VAL:HG22	1.98	0.44
33:7:105:VAL:HG13	33:7:105:VAL:O	2.18	0.44
35:9:137:ARG:O	35:9:140:ILE:HG22	2.18	0.44
35:9:148:SER:O	35:9:151:MET:HB2	2.18	0.44
42:16:113:ARG:HG2	42:16:113:ARG:NH1	2.31	0.44
43:17:39:ALA:O	43:17:42:VAL:HG22	2.17	0.44
47:21:11:VAL:HG13	47:21:20:ILE:HD11	1.99	0.44
51:25:11:PHE:CZ	51:25:13:VAL:HA	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:229:U:H2'	52:26:230:G:C8	2.53	0.44
52:26:552:U:O2'	52:26:553:A:H5'	2.17	0.44
52:26:707:U:H2'	52:26:708:C:C6	2.53	0.44
52:26:731:G:C5'	52:26:766:A:H4'	2.46	0.44
52:26:806:C:O2'	52:26:807:A:H5'	2.18	0.44
52:26:1093:A:O2'	52:26:1094:G:H5'	2.17	0.44
52:26:1339:A:H2'	52:26:1340:A:O4'	2.17	0.44
52:26:1515:G:H2'	52:26:1516:G:H8	1.78	0.44
53:27:68:G:H2'	53:27:69:C:O4'	2.18	0.44
53:27:84:A:C6	53:27:99:U:H5'	2.52	0.44
53:27:103:A:H2'	53:27:104:A:O4'	2.17	0.44
53:27:222:A:H61	53:27:232:G:H1'	1.81	0.44
53:27:603:A:H4'	53:27:604:G:O5'	2.17	0.44
53:27:637:A:C6	53:27:652:U:H4'	2.53	0.44
53:27:745:G:O2'	53:27:748:G:H1'	2.18	0.44
53:27:1683:U:H2'	53:27:1684:G:C8	2.53	0.44
53:27:1999:C:H2'	53:27:2000:C:C6	2.53	0.44
53:27:2248:C:H3'	53:27:2249:U:C6	2.53	0.44
53:27:2448:A:H3'	53:27:2449:U:H2'	1.98	0.44
53:27:2549:G:O2'	53:27:2550:G:H5'	2.17	0.44
53:27:2668:G:H2'	53:27:2669:G:H8	1.83	0.44
59:33:325:VAL:HG12	59:33:332:LYS:O	2.18	0.44
59:33:428:ALA:HB3	59:33:436:GLY:HA2	1.99	0.44
59:33:621:ILE:C	59:33:621:ILE:HD12	2.38	0.44
2:B:112:THR:O	2:B:195:GLY:CA	2.65	0.44
3:C:44:ARG:NH1	53:27:1248:G:OP1	2.51	0.44
3:C:46:GLN:O	3:C:86:ALA:HB1	2.17	0.44
4:D:127:TYR:CE2	4:D:129:MET:HB3	2.52	0.44
5:E:2:ARG:CD	53:27:2751:G:C4	3.00	0.44
6:F:114:GLU:OE2	6:F:134:VAL:HA	2.18	0.44
7:G:21:GLY:HA2	7:G:86:MET:CE	2.48	0.44
8:H:108:ILE:HG23	8:H:112:LYS:HB3	1.99	0.44
12:L:9:PHE:HZ	53:27:911:A:H2'	1.82	0.44
14:N:95:SER:HB2	14:N:97:PHE:HD2	1.82	0.44
18:R:9:HIS:CE1	18:R:80:PRO:HG2	2.51	0.44
20:T:35:VAL:HB	20:T:38:ILE:HG13	1.98	0.44
24:X:59:GLU:HA	24:X:63:ALA:CB	2.47	0.44
32:6:11:ALA:HB2	32:6:211:LEU:HD21	1.98	0.44
32:6:66:ILE:HG22	32:6:67:LEU:N	2.32	0.44
32:6:95:TRP:HH2	32:6:174:GLU:HB3	1.81	0.44
35:9:163:ILE:C	35:9:163:ILE:HD12	2.38	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:10:11:HIS:CD2	36:10:13:ASP:H	2.36	0.44
41:15:127:ARG:HD2	52:26:1506:U:O2	2.17	0.44
45:19:34:GLN:HB3	45:19:58:MET:HE2	2.00	0.44
50:24:53:MET:O	50:24:57:VAL:HG12	2.18	0.44
52:26:193:C:O2'	52:26:194:C:H5'	2.18	0.44
52:26:589:U:H2'	52:26:590:U:C6	2.52	0.44
52:26:893:C:H2'	52:26:894:G:C8	2.52	0.44
52:26:1120:C:H2'	52:26:1121:U:C6	2.53	0.44
52:26:1130:A:H2'	52:26:1131:G:O4'	2.18	0.44
53:27:47:C:H2'	53:27:48:G:C8	2.53	0.44
53:27:80:G:N2	53:27:81:G:H1'	2.33	0.44
53:27:307:G:H2'	53:27:309:A:OP2	2.17	0.44
53:27:556:A:H3'	53:27:557:C:H6	1.83	0.44
53:27:568:U:C6	53:27:570:G:OP2	2.71	0.44
53:27:678:C:H2'	53:27:679:C:H6	1.82	0.44
53:27:795:C:H2'	53:27:796:C:H6	1.83	0.44
53:27:985:C:H2'	53:27:986:C:H6	1.81	0.44
53:27:1387:A:H2'	53:27:1388:G:C8	2.52	0.44
53:27:1678:A:H8	53:27:1678:A:O5'	2.00	0.44
53:27:1765:U:O2'	53:27:1766:G:H5'	2.17	0.44
53:27:2159:G:C2'	53:27:2160:C:H5'	2.48	0.44
53:27:2574:G:H2'	53:27:2575:C:O4'	2.18	0.44
53:27:2791:G:H2'	53:27:2792:A:O4'	2.16	0.44
54:28:48:U:H2'	54:28:49:C:H6	1.80	0.44
56:30:27:G:H2'	56:30:28:G:C8	2.53	0.44
56:30:57:G:H2'	56:30:58:A:H5'	2.00	0.44
59:33:191:ILE:HG22	59:33:194:LEU:HD13	1.99	0.44
59:33:408:VAL:O	59:33:415:VAL:HA	2.17	0.44
59:33:673:ALA:C	59:33:707:LEU:HD12	2.38	0.44
1:A:61:TYR:CE1	53:27:1816:C:H3'	2.52	0.44
3:C:31:VAL:HG21	3:C:104:ALA:CB	2.48	0.44
3:C:66:GLY:H	53:27:2060:A:H5"	1.83	0.44
3:C:84:THR:OG1	53:27:586:A:H5'	2.17	0.44
3:C:177:PRO:O	3:C:181:ILE:HG13	2.18	0.44
6:F:47:PHE:O	6:F:52:ALA:N	2.49	0.44
7:G:52:MET:HE3	7:G:99:PHE:CE1	2.53	0.44
11:K:109:LYS:HE2	53:27:636:G:N7	2.32	0.44
13:M:2:ARG:NH1	53:27:2822:G:O6	2.48	0.44
13:M:28:LEU:CD2	13:M:48:VAL:HG21	2.47	0.44
13:M:47:VAL:C	13:M:50:PRO:HD2	2.38	0.44
14:N:18:LEU:HD21	14:N:91:SER:HB2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:X:38:GLN:HB3	24:X:39:GLN:OE1	2.18	0.44
34:8:31:CYS:HA	52:26:429:U:OP2	2.17	0.44
34:8:71:PHE:O	34:8:74:TYR:HB2	2.17	0.44
35:9:76:ASN:O	35:9:77:ASN:C	2.56	0.44
35:9:156:ARG:HH11	38:12:100:ILE:CG2	2.30	0.44
38:12:3:GLN:O	52:26:587:G:H4'	2.17	0.44
39:13:117:LEU:HG	39:13:123:ARG:HE	1.83	0.44
41:15:76:TYR:O	41:15:78:ILE:N	2.51	0.44
42:16:109:ARG:NH1	52:26:537:G:C5'	2.73	0.44
44:18:56:PRO:HA	44:18:59:GLN:HG2	2.00	0.44
47:21:39:ARG:HA	52:26:280:C:O2	2.17	0.44
52:26:152:A:H2'	52:26:153:C:H5'	1.99	0.44
52:26:166:U:H2'	52:26:167:A:H8	1.81	0.44
52:26:229:U:H2'	52:26:230:G:O4'	2.18	0.44
52:26:409:U:O5'	52:26:409:U:H6	2.00	0.44
52:26:924:C:H2'	52:26:925:G:H8	1.82	0.44
52:26:1114:C:O2'	52:26:1115:U:H5'	2.18	0.44
53:27:130:C:H2'	53:27:131:A:O4'	2.18	0.44
53:27:237:C:H2'	53:27:238:C:C6	2.53	0.44
53:27:406:G:H2'	53:27:407:G:C8	2.52	0.44
53:27:809:G:C5	53:27:810:U:C5	3.06	0.44
53:27:1185:G:H5"	53:27:1186:G:OP1	2.18	0.44
53:27:1195:G:C2	53:27:1196:C:C5	3.05	0.44
53:27:1223:G:C6	53:27:1227:G:C6	3.06	0.44
53:27:1430:G:H2'	53:27:1431:A:C8	2.53	0.44
53:27:1486:U:H2'	53:27:1487:U:C6	2.53	0.44
53:27:1609:A:H1'	53:27:1616:A:O4'	2.18	0.44
53:27:1930:G:H2'	53:27:1931:U:OP2	2.17	0.44
59:33:78:ALA:HB1	59:33:151:ILE:HD13	2.00	0.44
59:33:173:LEU:HD23	59:33:173:LEU:C	2.38	0.44
59:33:210:GLU:OE1	59:33:210:GLU:HA	2.17	0.44
59:33:642:ALA:HA	59:33:645:ARG:HD2	1.98	0.44
1:A:83:ASP:OD1	1:A:84:PRO:HD2	2.17	0.44
1:A:205:GLY:O	53:27:1791:A:C1'	2.65	0.44
2:B:28:GLU:HA	2:B:185:ASN:O	2.18	0.44
3:C:14:VAL:HG21	3:C:19:PHE:CD2	2.53	0.44
4:D:37:MET:SD	4:D:52:ALA:HB1	2.58	0.44
4:D:104:THR:CA	26:Z:38:SER:HB3	2.48	0.44
9:I:27:ARG:HH21	53:27:1141:U:H5"	1.82	0.44
9:I:90:GLU:O	9:I:93:ILE:HB	2.17	0.44
11:K:81:ASP:OD1	11:K:82:LEU:N	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:23:TYR:HD1	53:27:533:G:O5'	1.99	0.44
21:U:14:LYS:HB2	54:28:98:G:N1	2.30	0.44
29:3:33:ARG:O	29:3:36:ALA:HB3	2.17	0.44
29:3:34:ARG:HA	29:3:34:ARG:HD2	1.61	0.44
32:6:108:GLN:HE22	32:6:111:LYS:HD3	1.83	0.44
33:7:182:ASP:OD1	33:7:183:TYR:N	2.51	0.44
34:8:150:LYS:HB3	34:8:177:MET:HE2	2.00	0.44
42:16:87:LYS:HE3	52:26:526:C:P	2.58	0.44
43:17:24:VAL:HA	52:26:1329:A:H5"	2.00	0.44
52:26:62:U:H2'	52:26:63:C:C6	2.53	0.44
52:26:211:G:H2'	52:26:212:G:C4'	2.48	0.44
52:26:811:C:H4'	52:26:900:A:H62	1.83	0.44
52:26:971:G:H1'	52:26:1365:G:O2'	2.18	0.44
52:26:978:A:C2	52:26:1319:A:C4	3.05	0.44
52:26:994:A:C5	52:26:1216:A:H4'	2.53	0.44
52:26:1008:U:H2'	52:26:1009:U:C6	2.52	0.44
52:26:1032:G:H3'	52:26:1033:G:H4'	1.99	0.44
52:26:1453:G:H3'	52:26:1453:G:N3	2.32	0.44
53:27:181:A:O2'	53:27:182:A:H5'	2.16	0.44
53:27:520:G:H2'	53:27:521:U:H6	1.83	0.44
53:27:758:C:O2	53:27:758:C:C2'	2.63	0.44
53:27:891:G:H2'	53:27:892:A:H8	1.82	0.44
53:27:996:A:H2'	53:27:997:G:H8	1.82	0.44
53:27:1130:U:C2	53:27:2025:C:H5"	2.53	0.44
53:27:1406:U:C3'	53:27:1407:G:H5"	2.48	0.44
53:27:1425:G:H2'	53:27:1426:G:C8	2.53	0.44
53:27:1838:C:H4'	53:27:1839:G:H8	1.82	0.44
53:27:2083:G:H2'	53:27:2084:C:C6	2.53	0.44
57:31:66:C:H2'	57:31:67:C:H6	1.82	0.44
59:33:20:TRP:CE2	59:33:63:VAL:CB	2.93	0.44
59:33:65:ILE:HD13	59:33:157:ILE:CG1	2.48	0.44
59:33:191:ILE:CG2	59:33:194:LEU:HD13	2.47	0.44
59:33:240:MET:HB2	59:33:245:VAL:HG13	2.00	0.44
59:33:444:ILE:HG13	59:33:444:ILE:O	2.18	0.44
59:33:675:ASP:HB2	59:33:706:GLN:HE21	1.83	0.44
1:A:174:ARG:HD3	1:A:180:MET:SD	2.58	0.44
3:C:44:ARG:CD	3:C:90:GLN:HE22	2.31	0.44
4:D:16:MET:O	4:D:20:ASN:HA	2.18	0.44
4:D:93:GLU:HA	4:D:96:TRP:HD1	1.83	0.44
11:K:28:GLY:HA2	53:27:811:U:OP2	2.18	0.44
15:O:113:LEU:HD11	52:26:1441:A:C2	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:W:73:ARG:HD2	23:W:75:GLU:CG	2.47	0.44
24:X:45:GLN:HG3	24:X:46:VAL:N	2.31	0.44
30:4:18:LYS:HB3	53:27:651:G:OP1	2.17	0.44
32:6:95:TRP:CH2	32:6:171:ALA:HA	2.53	0.44
33:7:205:GLU:HG3	33:7:206:ILE:H	1.83	0.44
35:9:12:GLU:HG3	35:9:63:MET:HE1	2.00	0.44
35:9:20:VAL:HG23	35:9:31:SER:HB3	2.00	0.44
38:12:14:ARG:HD3	38:12:74:ILE:HG22	1.99	0.44
39:13:89:TYR:O	39:13:90:ASP:CB	2.66	0.44
39:13:115:VAL:HG21	40:14:62:ARG:HG3	2.00	0.44
40:14:72:ARG:NH2	52:26:1152:A:O5'	2.49	0.44
43:17:24:VAL:HG23	43:17:28:ARG:HB3	1.99	0.44
45:19:58:MET:O	45:19:61:GLN:HB3	2.17	0.44
51:25:34:ARG:HB3	51:25:36:PHE:HD2	1.83	0.44
52:26:70:U:H4'	52:26:71:A:O5'	2.18	0.44
52:26:77:A:H61	52:26:92:U:H3	1.66	0.44
52:26:151:A:O2'	52:26:152:A:H5'	2.18	0.44
52:26:220:G:O2'	52:26:221:C:H5'	2.17	0.44
52:26:726:C:H2'	52:26:727:G:O4'	2.18	0.44
52:26:783:C:H2'	52:26:784:A:C8	2.53	0.44
52:26:1428:A:H2'	52:26:1429:A:O4'	2.17	0.44
52:26:1520:C:H2'	52:26:1521:C:C6	2.51	0.44
53:27:188:G:H3'	53:27:189:G:H8	1.83	0.44
53:27:291:G:O2'	53:27:292:U:H5'	2.18	0.44
53:27:395:U:H2'	53:27:396:G:H8	1.80	0.44
53:27:551:G:C2'	53:27:552:U:H5'	2.48	0.44
53:27:1668:A:C5	53:27:1674:G:C5	3.06	0.44
53:27:1811:G:C6	53:27:1812:U:C4	3.05	0.44
53:27:1997:C:H2'	53:27:1998:A:H8	1.83	0.44
53:27:2057:G:H2'	53:27:2058:A:H8	1.83	0.44
53:27:2079:U:H2'	53:27:2080:A:O4'	2.18	0.44
56:30:17:C:H5'	56:30:19:G:OP1	2.18	0.44
58:32:69:C:C3'	58:32:70:G:H5"	2.47	0.44
59:33:62:MET:HE3	59:33:79:ALA:CA	2.37	0.44
59:33:233:VAL:O	59:33:237:ARG:HG3	2.17	0.44
1:A:12:ARG:HA	1:A:15:VAL:CG2	2.47	0.43
2:B:37:VAL:HG12	2:B:39:ASP:OD1	2.18	0.43
2:B:154:LYS:HD3	53:27:2024:G:H4'	2.00	0.43
5:E:87:GLN:OE1	5:E:164:ALA:HA	2.18	0.43
5:E:152:ARG:HG3	5:E:152:ARG:NH2	2.33	0.43
7:G:87:GLU:HB3	7:G:90:GLY:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:103:ALA:O	8:H:107:GLU:HG3	2.17	0.43
10:J:90:ASN:OD1	10:J:91:SER:N	2.51	0.43
17:Q:35:PHE:O	17:Q:58:VAL:HA	2.18	0.43
17:Q:83:TYR:CE1	53:27:1187:G:H5"	2.52	0.43
23:W:12:VAL:O	23:W:28:PHE:HB2	2.18	0.43
32:6:20:ARG:O	32:6:22:TRP:N	2.51	0.43
33:7:173:PRO:HB2	33:7:176:THR:OG1	2.18	0.43
39:13:98:ARG:NH2	52:26:1180:A:OP2	2.39	0.43
39:13:129:ARG:OXT	39:13:129:ARG:HG3	2.18	0.43
41:15:28:ASN:HD21	41:15:56:LYS:CE	2.31	0.43
41:15:61:ALA:O	41:15:64:VAL:HG12	2.17	0.43
44:18:30:ILE:HG22	44:18:43:ALA:HB2	1.99	0.43
46:20:4:ILE:HG12	46:20:21:VAL:HG22	1.99	0.43
52:26:165:G:H2'	52:26:166:U:C6	2.52	0.43
52:26:696:A:O2'	52:26:697:U:H5'	2.19	0.43
52:26:747:A:H2'	52:26:748:G:O4'	2.17	0.43
53:27:263:G:H2'	53:27:264:C:O4'	2.18	0.43
53:27:271:G:O2'	53:27:272:A:H5"	2.17	0.43
53:27:555:G:HO2'	53:27:556:A:H8	1.66	0.43
53:27:1078:U:H4'	53:27:1088:A:OP1	2.17	0.43
53:27:1562:U:H2'	53:27:1563:U:O4'	2.18	0.43
53:27:1672:A:C4'	53:27:2553:G:H4'	2.48	0.43
53:27:1853:A:C6	53:27:1889:A:C5	3.06	0.43
54:28:42:C:C2'	54:28:43:C:H5'	2.48	0.43
54:28:71:C:H2'	54:28:72:G:H8	1.80	0.43
59:33:62:MET:HE2	59:33:82:PHE:CE1	2.53	0.43
59:33:99:VAL:HG11	59:33:103:VAL:CG1	2.48	0.43
59:33:177:GLU:O	59:33:181:ILE:HB	2.18	0.43
59:33:716:ILE:HD11	59:33:721:VAL:HB	2.00	0.43
1:A:140:VAL:CG1	1:A:191:LEU:HD23	2.48	0.43
2:B:84:LEU:HD21	2:B:90:PHE:CD2	2.53	0.43
3:C:110:SER:O	3:C:114:ARG:HG3	2.18	0.43
4:D:9:ASP:CG	4:D:10:GLU:H	2.20	0.43
6:F:108:VAL:HG12	6:F:110:VAL:N	2.33	0.43
8:H:7:TYR:CE1	8:H:60:VAL:HB	2.54	0.43
8:H:75:ALA:HB3	53:27:1060:U:C5	2.53	0.43
11:K:89:VAL:HA	11:K:121:THR:O	2.18	0.43
14:N:7:ARG:HG3	14:N:10:ARG:HH11	1.83	0.43
17:Q:91:GLN:HE22	53:27:1162:G:H21	1.64	0.43
26:Z:51:VAL:O	26:Z:53:THR:N	2.51	0.43
32:6:158:ASP:O	32:6:181:PRO:HD2	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:7:15:LYS:HA	33:7:16:PRO:HD2	1.93	0.43
34:8:12:ARG:HD3	34:8:33:ILE:HA	2.00	0.43
35:9:56:PRO:O	35:9:59:ILE:HG12	2.17	0.43
38:12:121:GLY:C	52:26:599:C:H4'	2.38	0.43
41:15:68:ARG:O	41:15:71:ASP:HB3	2.18	0.43
42:16:113:ARG:HD2	42:16:118:VAL:O	2.16	0.43
52:26:130:A:H1'	52:26:264:C:C4'	2.47	0.43
52:26:299:G:C6	52:26:300:A:N1	2.86	0.43
52:26:589:U:H2'	52:26:590:U:H6	1.82	0.43
52:26:770:C:H2'	52:26:771:G:H8	1.82	0.43
52:26:878:A:H2'	52:26:879:C:C6	2.53	0.43
52:26:1103:C:O5'	52:26:1103:C:H6	2.01	0.43
52:26:1125:U:O2'	52:26:1126:U:H2'	2.17	0.43
53:27:283:G:H3'	53:27:284:U:C5'	2.42	0.43
53:27:544:C:H5'	53:27:545:U:OP1	2.18	0.43
53:27:696:G:O2'	53:27:697:G:H5'	2.18	0.43
53:27:2207:C:H2'	53:27:2208:C:C6	2.53	0.43
53:27:2584:U:H3'	53:27:2585:U:H5"	2.00	0.43
53:27:2745:C:H2'	53:27:2746:U:C6	2.52	0.43
59:33:281:ILE:HG12	59:33:338:ILE:HG13	1.99	0.43
4:D:93:GLU:O	4:D:96:TRP:HB2	2.18	0.43
6:F:15:LEU:HD12	6:F:16:GLY:N	2.33	0.43
9:I:35:ARG:HB2	9:I:54:ILE:HD11	2.00	0.43
13:M:12:ARG:O	13:M:17:ARG:NH2	2.51	0.43
14:N:100:HIS:HD2	54:28:48:U:H4'	1.83	0.43
22:V:10:ARG:NH2	53:27:2279:G:N7	2.66	0.43
26:Z:62:LYS:HD3	26:Z:62:LYS:HA	1.70	0.43
34:8:97:LEU:CB	34:8:134:TYR:HB3	2.41	0.43
36:10:63:ASN:ND2	36:10:96:VAL:HG21	2.33	0.43
38:12:94:VAL:HG12	38:12:95:MET:HG3	2.01	0.43
39:13:51:LEU:O	39:13:55:ASP:N	2.51	0.43
40:14:89:ARG:HG2	40:14:90:LEU:N	2.33	0.43
44:18:26:LEU:O	44:18:30:ILE:HB	2.19	0.43
46:20:23:ASP:OD2	52:26:230:G:H5'	2.18	0.43
47:21:16:MET:HG3	47:21:19:SER:HB3	1.99	0.43
52:26:235:C:H2'	52:26:236:A:H8	1.79	0.43
52:26:371:A:H4'	52:26:482:A:H4'	2.00	0.43
52:26:631:C:O5'	52:26:632:U:H5'	2.18	0.43
52:26:836:G:H2'	52:26:837:U:O4'	2.17	0.43
52:26:1237:C:H4'	52:26:1300:G:H22	1.83	0.43
53:27:191:A:H2'	53:27:192:C:H6	1.79	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:211:C:H2'	53:27:212:G:C8	2.53	0.43
53:27:287:G:C2'	53:27:288:U:H5'	2.48	0.43
53:27:346:A:C2	53:27:347:A:H1'	2.53	0.43
53:27:377:G:C6	53:27:378:C:C4	3.07	0.43
53:27:540:C:H2'	53:27:541:A:O4'	2.18	0.43
53:27:776:G:H4'	53:27:777:G:O5'	2.19	0.43
53:27:852:U:H2'	53:27:853:C:C6	2.53	0.43
53:27:955:U:H5	53:27:962:G:C6	2.36	0.43
53:27:1228:G:H2'	53:27:1229:C:H6	1.81	0.43
53:27:1536:C:H4'	53:27:1537:G:C2	2.53	0.43
53:27:1923:U:H5"	57:31:24:U:O2'	2.18	0.43
53:27:2364:C:H2'	53:27:2365:G:H5'	1.99	0.43
53:27:2595:G:N1	53:27:2599:G:C6	2.87	0.43
54:28:33:G:H2'	54:28:34:A:O4'	2.18	0.43
58:32:16:C:H4'	58:32:59:A:N1	2.32	0.43
59:33:24:LEU:CD1	59:33:67:SER:O	2.66	0.43
59:33:172:VAL:CG2	59:33:176:LYS:HE2	2.48	0.43
59:33:302:HIS:HE1	59:33:325:VAL:H	1.66	0.43
3:C:104:ALA:O	3:C:108:ILE:HG13	2.19	0.43
3:C:105:LEU:CB	3:C:200:LEU:HD21	2.47	0.43
4:D:34:THR:C	4:D:35:LEU:HD12	2.38	0.43
6:F:88:GLY:HA2	6:F:125:THR:OG1	2.18	0.43
6:F:122:LEU:HD23	6:F:128:HIS:HB2	2.00	0.43
7:G:6:GLN:OE1	7:G:6:GLN:N	2.48	0.43
9:I:113:PRO:HD2	53:27:558:U:OP1	2.18	0.43
11:K:30:THR:O	11:K:32:GLY:N	2.51	0.43
13:M:67:PHE:O	13:M:71:ARG:HA	2.18	0.43
17:Q:82:HIS:ND1	17:Q:82:HIS:O	2.51	0.43
19:S:84:TYR:CD2	53:27:1341:G:C4	3.07	0.43
30:4:16:THR:HG21	30:4:48:MET:SD	2.59	0.43
32:6:81:ASP:O	32:6:85:SER:N	2.48	0.43
32:6:95:TRP:O	32:6:170:ILE:HD11	2.18	0.43
33:7:10:ARG:NH2	33:7:174:LEU:O	2.51	0.43
33:7:174:LEU:HA	33:7:181:ILE:HD12	2.00	0.43
33:7:201:ILE:O	33:7:203:LYS:NZ	2.51	0.43
38:12:13:ILE:O	38:12:17:GLN:HG2	2.19	0.43
38:12:14:ARG:NH1	52:26:875:U:O2'	2.51	0.43
39:13:11:ARG:HH12	39:13:12:LYS:HE3	1.83	0.43
39:13:113:LYS:HE2	39:13:118:ARG:C	2.38	0.43
40:14:48:ARG:NE	44:18:100:TRP:CD2	2.85	0.43
45:19:47:LYS:O	45:19:49:HIS:N	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:21:56:ASP:OD1	47:21:56:ASP:N	2.51	0.43
52:26:222:C:H2'	52:26:223:A:C8	2.54	0.43
52:26:1053:G:N7	52:26:1200:C:H5'	2.34	0.43
52:26:1397:C:H41	55:29:22:A:H2'	1.82	0.43
52:26:1427:C:H2'	52:26:1428:A:H8	1.83	0.43
53:27:458:G:N2	53:27:469:G:H2'	2.34	0.43
53:27:1075:C:O2'	53:27:1076:C:H5'	2.18	0.43
53:27:1164:C:O2'	53:27:1165:A:H5'	2.18	0.43
53:27:1599:U:H2'	53:27:1600:C:H6	1.83	0.43
53:27:2142:A:H2'	53:27:2142:A:N3	2.34	0.43
53:27:2809:A:H3'	53:27:2810:A:H8	1.83	0.43
53:27:2878:U:H6	53:27:2878:U:O5'	2.02	0.43
3:C:90:GLN:NE2	3:C:92:HIS:HE1	2.17	0.43
5:E:106:LEU:O	5:E:151:ARG:NH2	2.52	0.43
6:F:25:TYR:O	6:F:29:PHE:HB3	2.17	0.43
6:F:51:ARG:HA	6:F:55:GLU:HG2	2.01	0.43
8:H:2:LYS:HB3	8:H:7:TYR:CE2	2.53	0.43
8:H:112:LYS:O	8:H:116:MET:HG3	2.18	0.43
9:I:98:GLU:HB3	9:I:124:VAL:HG21	1.99	0.43
27:1:8:THR:CG2	27:1:10:SER:HB3	2.49	0.43
28:2:10:LEU:HD23	28:2:50:GLU:HA	2.00	0.43
32:6:22:TRP:CH2	32:6:24:PRO:HA	2.53	0.43
41:15:88:PRO:HG2	41:15:89:GLY:H	1.83	0.43
42:16:80:LEU:HB2	42:16:101:LEU:HD13	2.01	0.43
42:16:109:ARG:HH12	52:26:537:G:C5'	2.26	0.43
49:23:9:PHE:HE2	49:23:36:ARG:HE	1.65	0.43
51:25:27:VAL:O	51:25:31:VAL:N	2.32	0.43
52:26:107:G:N2	52:26:108:G:H1'	2.33	0.43
52:26:465:A:H2'	52:26:466:A:O4'	2.18	0.43
52:26:734:G:H2'	52:26:735:C:H6	1.84	0.43
52:26:766:A:C2'	52:26:767:A:H5'	2.48	0.43
52:26:956:U:O2'	52:26:957:U:H5'	2.17	0.43
52:26:965:U:H5"	52:26:966:G:OP1	2.18	0.43
52:26:1524:C:H2'	52:26:1525:G:C8	2.52	0.43
53:27:182:A:O2'	53:27:183:C:H5'	2.19	0.43
53:27:205:G:O2'	53:27:206:U:P	2.76	0.43
53:27:418:C:H2'	53:27:419:U:H6	1.84	0.43
53:27:585:G:H3'	53:27:1251:C:N4	2.33	0.43
53:27:840:C:H2'	53:27:841:G:C8	2.53	0.43
53:27:1178:C:H2'	53:27:1179:G:C8	2.53	0.43
53:27:1372:U:H2'	53:27:1373:A:C8	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1669:A:O3'	53:27:2549:G:H5'	2.19	0.43
53:27:1912:A:N6	53:27:1917:U:H5	2.13	0.43
53:27:2111:U:N3	53:27:2147:A:H1'	2.18	0.43
53:27:2661:G:H2'	53:27:2662:A:O4'	2.19	0.43
56:30:44:G:H2'	56:30:45:U:H5'	2.00	0.43
59:33:241:LYS:CD	59:33:246:LYS:NZ	2.77	0.43
1:A:43:ASN:HB3	1:A:49:THR:HG21	2.01	0.43
1:A:52:HIS:O	1:A:216:ARG:N	2.44	0.43
1:A:211:ARG:HA	1:A:211:ARG:HD2	1.80	0.43
2:B:13:ARG:HH22	15:O:74:GLN:CD	2.22	0.43
4:D:7:TYR:HA	4:D:11:VAL:CG2	2.49	0.43
4:D:100:GLU:C	4:D:102:LEU:H	2.22	0.43
8:H:79:LEU:HD11	8:H:128:ILE:O	2.18	0.43
9:I:16:TYR:CD1	9:I:140:LEU:HB2	2.54	0.43
12:L:10:ARG:CZ	12:L:10:ARG:HB2	2.48	0.43
14:N:7:ARG:HD2	14:N:97:PHE:CE2	2.53	0.43
15:O:62:LYS:HE2	15:O:64:SER:HB2	2.00	0.43
16:P:42:GLY:O	16:P:45:ALA:HB3	2.19	0.43
17:Q:24:LYS:HE2	53:27:1163:G:H5'	2.00	0.43
17:Q:49:ILE:HG22	17:Q:54:VAL:HA	2.00	0.43
23:W:7:THR:OG1	23:W:9:LYS:HG3	2.19	0.43
28:2:11:VAL:HG12	28:2:12:SER:N	2.34	0.43
32:6:182:VAL:CG2	32:6:195:VAL:HA	2.48	0.43
33:7:41:TYR:O	33:7:44:LYS:HB2	2.19	0.43
34:8:141:VAL:HG12	34:8:180:THR:HG23	2.00	0.43
35:9:100:GLU:C	35:9:102:THR:N	2.72	0.43
40:14:68:ARG:HH22	52:26:1115:U:P	2.40	0.43
42:16:119:LYS:HA	52:26:36:C:H5"	2.00	0.43
46:20:14:ARG:NH1	52:26:618:C:H1'	2.20	0.43
51:25:16:ARG:O	51:25:19:LYS:HB2	2.18	0.43
51:25:18:PHE:O	51:25:19:LYS:HD2	2.18	0.43
52:26:379:C:H2'	52:26:380:G:C8	2.54	0.43
52:26:423:G:H3'	52:26:423:G:N3	2.33	0.43
52:26:667:G:H2'	52:26:668:G:C8	2.52	0.43
52:26:836:G:C5	52:26:851:G:C6	3.07	0.43
52:26:1415:G:C6	52:26:1486:G:C6	3.06	0.43
52:26:1499:A:H2'	52:26:1500:A:H8	1.84	0.43
53:27:481:G:H1'	53:27:506:G:H22	1.78	0.43
53:27:1112:G:H2'	53:27:1113:U:O4'	2.19	0.43
53:27:1173:U:C2'	53:27:1174:U:H4'	2.49	0.43
53:27:1184:U:O2'	53:27:1185:G:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1279:G:C4	53:27:1280:G:C8	3.06	0.43
53:27:2021:C:H3'	53:27:2022:U:C5'	2.49	0.43
53:27:2576:G:H2'	53:27:2576:G:N3	2.34	0.43
53:27:2620:C:H3'	53:27:2621:G:H5"	2.00	0.43
56:30:5:G:H2'	56:30:6:G:C8	2.47	0.43
56:30:5:G:O2'	56:30:6:G:H5'	2.18	0.43
57:31:4:G:H2'	57:31:5:G:H8	1.84	0.43
59:33:338:ILE:HD12	59:33:338:ILE:N	2.34	0.43
59:33:624:PHE:CG	59:33:644:LEU:HD13	2.54	0.43
1:A:71:ASP:OD2	1:A:188:ARG:NH2	2.49	0.43
1:A:253:GLY:N	53:27:1796:U:H4'	2.34	0.43
7:G:23:LEU:HA	7:G:118:ILE:HG13	2.00	0.43
7:G:117:LEU:HD12	7:G:117:LEU:C	2.39	0.43
8:H:11:GLN:CD	8:H:74:PRO:HG2	2.39	0.43
9:I:111:LYS:HE3	9:I:111:LYS:HB2	1.89	0.43
10:J:30:ARG:HD2	53:27:2674:G:H4'	1.99	0.43
10:J:109:SER:O	10:J:111:LYS:HG2	2.19	0.43
12:L:26:VAL:HA	12:L:104:GLU:CD	2.38	0.43
12:L:70:ASP:C	12:L:70:ASP:OD1	2.57	0.43
18:R:1:MET:HG3	18:R:2:GLU:N	2.33	0.43
20:T:41:VAL:HG23	20:T:60:LYS:HB2	2.00	0.43
25:Y:10:ARG:NH2	25:Y:52:PHE:O	2.51	0.43
34:8:2:ARG:HH21	34:8:111:ALA:HB1	1.84	0.43
35:9:110:MET:HA	35:9:113:VAL:HG12	2.00	0.43
39:13:5:TYR:CD1	39:13:88:GLU:HA	2.54	0.43
39:13:9:GLY:HA3	39:13:81:GLY:CA	2.49	0.43
39:13:30:ASN:O	39:13:32:ARG:N	2.51	0.43
41:15:63:GLN:HG3	41:15:98:ALA:HB1	2.00	0.43
41:15:76:TYR:O	41:15:77:GLY:C	2.56	0.43
42:16:100:ALA:HB2	52:26:35:G:H5'	2.01	0.43
44:18:89:ARG:HB3	44:18:91:GLU:HG2	2.00	0.43
45:19:24:THR:HG21	45:19:69:LEU:HB2	2.01	0.43
50:24:78:LEU:O	50:24:81:GLN:HB2	2.19	0.43
52:26:228:A:H2'	52:26:229:U:C6	2.53	0.43
52:26:841:C:H1'	52:26:843:U:H1'	2.01	0.43
52:26:861:G:H21	52:26:874:G:C4'	2.32	0.43
52:26:1166:G:O2'	52:26:1169:A:N6	2.51	0.43
52:26:1203:C:H2'	52:26:1204:A:C8	2.54	0.43
52:26:1256:A:N7	52:26:1278:G:H1'	2.34	0.43
52:26:1325:C:O2'	52:26:1326:U:H5'	2.19	0.43
52:26:1448:C:H2'	52:26:1449:C:H6	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1514:G:H2'	52:26:1515:G:C8	2.52	0.43
53:27:270:A:OP1	53:27:271:G:H8	2.02	0.43
53:27:488:G:H22	53:27:491:G:H5"	1.82	0.43
53:27:496:G:C2	53:27:497:A:H1'	2.53	0.43
53:27:858:G:C4'	53:27:859:G:OP2	2.65	0.43
53:27:1575:C:H2'	53:27:1576:U:H6	1.84	0.43
53:27:1892:C:H2'	53:27:1893:C:C6	2.53	0.43
53:27:2359:C:O2'	53:27:2360:G:H5'	2.19	0.43
53:27:2428:G:O5'	53:27:2428:G:H8	2.02	0.43
53:27:2591:C:C2	53:27:2592:G:C8	3.07	0.43
53:27:2616:C:H2'	53:27:2617:U:C6	2.51	0.43
58:32:12:G:H22	58:32:23:C:C2'	2.31	0.43
59:33:146:PHE:O	59:33:149:VAL:HG22	2.19	0.43
59:33:194:LEU:O	59:33:198:LEU:HG	2.19	0.43
59:33:669:VAL:HG23	59:33:739:ARG:C	2.39	0.43
59:33:686:ILE:HG21	59:33:729:LEU:HD11	1.99	0.43
1:A:48:ILE:HG22	53:27:779:U:P	2.59	0.43
2:B:133:THR:OG1	2:B:134:HIS:N	2.51	0.43
3:C:34:ALA:CB	3:C:94:GLN:HE21	2.32	0.43
3:C:109:LEU:N	3:C:109:LEU:HD12	2.33	0.43
4:D:164:GLU:O	4:D:167:ALA:HB3	2.18	0.43
7:G:50:VAL:HG22	53:27:1082:U:H5"	2.00	0.43
8:H:73:PRO:HA	8:H:74:PRO:HD3	1.77	0.43
10:J:71:ARG:HB3	10:J:72:PRO:HD2	2.00	0.43
17:Q:16:GLU:HG3	17:Q:100:GLY:HA2	2.01	0.43
29:3:12:ARG:NE	29:3:44:VAL:HG21	2.32	0.43
31:5:26:ILE:HG22	31:5:27:CYS:N	2.34	0.43
34:8:8:LEU:CB	52:26:430:A:OP1	2.67	0.43
34:8:28:ASP:O	34:8:29:THR:C	2.57	0.43
35:9:159:SER:HB2	35:9:161:GLU:HG2	2.00	0.43
37:11:147:ASN:C	37:11:149:ALA:N	2.71	0.43
47:21:49:ASN:O	47:21:50:ASN:C	2.57	0.43
52:26:742:G:O2'	52:26:743:A:H5'	2.18	0.43
52:26:878:A:H2'	52:26:879:C:H6	1.83	0.43
52:26:915:A:C2'	52:26:916:U:H5'	2.48	0.43
52:26:992:U:H1'	52:26:993:G:C2	2.54	0.43
52:26:1371:G:H2'	52:26:1372:U:O4'	2.19	0.43
53:27:26:G:H2'	53:27:27:G:O4'	2.18	0.43
53:27:146:A:H2'	53:27:147:C:C6	2.54	0.43
53:27:192:C:H2'	53:27:193:U:O4'	2.19	0.43
53:27:308:G:O4'	53:27:501:A:H5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:404:A:O2'	53:27:405:U:H5'	2.17	0.43
53:27:1293:C:C3'	53:27:1294:U:H5"	2.48	0.43
53:27:1313:U:H2'	53:27:1313:U:O2	2.18	0.43
53:27:1682:G:N3	53:27:1757:A:H1'	2.34	0.43
53:27:1747:U:O2'	53:27:1748:C:H5'	2.18	0.43
53:27:1804:C:H6	53:27:1804:C:O5'	2.01	0.43
53:27:2576:G:H3'	53:27:2576:G:OP1	2.18	0.43
53:27:2618:G:C6	53:27:2619:C:C4	3.07	0.43
59:33:103:VAL:O	59:33:107:ILE:HG23	2.18	0.43
59:33:248:GLU:HG2	59:33:250:TYR:CD2	2.54	0.43
59:33:334:VAL:HG13	59:33:334:VAL:O	2.18	0.43
59:33:442:ALA:O	59:33:448:ILE:HG13	2.19	0.43
1:A:5:CYS:SG	1:A:12:ARG:NE	2.92	0.43
1:A:29:PHE:CE2	1:A:31:PRO:HB2	2.54	0.43
2:B:56:LYS:HZ3	53:27:2831:G:P	2.42	0.43
9:I:130:HIS:ND1	9:I:130:HIS:O	2.51	0.43
10:J:40:LYS:HE2	53:27:2561:U:O3'	2.19	0.43
11:K:62:PRO:HD2	30:4:24:LYS:HB3	2.00	0.43
11:K:85:VAL:HG21	11:K:90:VAL:HG22	1.99	0.43
12:L:21:ALA:HA	12:L:97:GLN:HG2	2.00	0.43
14:N:66:GLY:HA2	14:N:102:ARG:NH2	2.33	0.43
17:Q:39:LEU:O	17:Q:49:ILE:HG23	2.19	0.43
17:Q:91:GLN:HE21	53:27:993:G:H1'	1.83	0.43
18:R:57:ASN:HD21	53:27:495:G:H1'	1.84	0.43
20:T:76:THR:O	20:T:78:LYS:HG2	2.17	0.43
22:V:28:LEU:HA	22:V:60:ASP:OD1	2.19	0.43
26:Z:26:SER:OG	26:Z:28:VAL:HG13	2.19	0.43
29:3:3:ARG:HH12	53:27:752:A:P	2.42	0.43
32:6:113:LEU:HD13	32:6:143:LEU:HB3	2.01	0.43
34:8:154:VAL:O	34:8:158:LEU:HD13	2.19	0.43
35:9:76:ASN:N	35:9:79:THR:O	2.52	0.43
37:11:68:VAL:HG21	37:11:103:ILE:CG1	2.48	0.43
47:21:45:VAL:HG21	47:21:60:ILE:HD13	2.00	0.43
49:23:49:ALA:HB1	49:23:56:HIS:O	2.19	0.43
52:26:89:U:O2	52:26:90:C:C5	2.72	0.43
52:26:149:A:O2'	52:26:150:U:H5'	2.19	0.43
52:26:360:G:C6	52:26:361:G:C6	3.07	0.43
52:26:436:C:H2'	52:26:437:U:C6	2.54	0.43
52:26:505:G:OP2	52:26:535:A:H5'	2.18	0.43
52:26:878:A:H2'	52:26:879:C:O4'	2.18	0.43
52:26:963:G:N2	52:26:972:C:O2	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1119:C:H2'	52:26:1120:C:C6	2.54	0.43
53:27:276:U:H2'	53:27:277:G:C4'	2.49	0.43
53:27:648:G:H1'	53:27:2351:G:OP1	2.18	0.43
53:27:674:G:H2'	53:27:804:A:H61	1.83	0.43
53:27:1096:A:H2'	53:27:1097:U:H5"	2.01	0.43
53:27:1164:C:H2'	53:27:1165:A:C8	2.54	0.43
53:27:1164:C:H2'	53:27:1165:A:H8	1.82	0.43
53:27:1313:U:O2	53:27:1313:U:C2'	2.66	0.43
53:27:1659:G:C2'	53:27:1660:G:H5"	2.48	0.43
53:27:1906:G:H1'	53:27:1929:G:C6	2.54	0.43
53:27:2066:C:H2'	53:27:2067:G:H8	1.83	0.43
53:27:2156:G:C2'	53:27:2157:G:H5'	2.49	0.43
53:27:2333:A:H4'	53:27:2334:U:O5'	2.19	0.43
54:28:85:G:H2'	54:28:86:G:C8	2.53	0.43
58:32:51:C:H2'	58:32:52:G:C8	2.54	0.43
59:33:61:GLU:HA	59:33:64:GLU:HG2	2.00	0.43
1:A:130:PRO:HA	1:A:188:ARG:HA	2.00	0.43
7:G:94:ARG:HH21	7:G:131:THR:CG2	2.25	0.43
8:H:74:PRO:O	8:H:78:LEU:HG	2.19	0.43
11:K:60:ARG:NH2	53:27:2428:G:N2	2.67	0.43
12:L:4:PRO:HG3	12:L:68:PHE:HE2	1.83	0.43
12:L:78:LEU:HD23	12:L:79:ALA:HB2	2.01	0.43
13:M:96:ARG:O	13:M:113:ILE:HA	2.19	0.43
15:O:22:GLY:O	15:O:89:GLY:HA3	2.19	0.43
16:P:42:GLY:HA3	17:Q:75:VAL:HG21	2.00	0.43
17:Q:80:ARG:HH12	53:27:571:U:P	2.42	0.43
19:S:44:LYS:HG3	19:S:55:VAL:CG1	2.48	0.43
34:8:2:ARG:HD2	34:8:114:ARG:NE	2.34	0.43
38:12:3:GLN:NE2	52:26:755:G:H21	2.17	0.43
39:13:11:ARG:HG2	39:13:76:GLY:HA3	2.00	0.43
43:17:15:VAL:HG21	43:17:40:GLU:HB2	2.00	0.43
43:17:69:ARG:HG2	43:17:69:ARG:HH11	1.84	0.43
44:18:5:MET:HB3	44:18:62:ARG:HH21	1.79	0.43
46:20:6:LEU:HD12	52:26:375:U:C4'	2.46	0.43
52:26:395:C:C4	52:26:396:C:N4	2.87	0.43
52:26:422:C:OP2	52:26:422:C:C6	2.72	0.43
52:26:808:C:H2'	52:26:809:G:O4'	2.19	0.43
52:26:1259:C:H3'	52:26:1260:G:C5'	2.39	0.43
52:26:1484:C:H2'	52:26:1485:U:O4'	2.19	0.43
53:27:80:G:H2'	53:27:81:G:O4'	2.18	0.43
53:27:236:C:O2'	53:27:431:U:H4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:563:A:C6	53:27:564:C:C4	3.07	0.43
53:27:586:A:C2	53:27:1254:A:C2	3.06	0.43
53:27:610:C:H2'	53:27:611:C:H6	1.83	0.43
53:27:784:G:OP2	53:27:2589:A:OP1	2.37	0.43
53:27:1065:U:H1'	53:27:1074:G:N2	2.34	0.43
53:27:1361:G:C6	53:27:1371:G:N2	2.87	0.43
53:27:1666:G:H2'	53:27:1667:G:H5'	2.00	0.43
53:27:1951:U:O2	53:27:1953:A:H8	2.02	0.43
53:27:2312:U:C2'	53:27:2313:C:H5'	2.48	0.43
53:27:2388:A:H5'	53:27:2389:G:OP2	2.19	0.43
53:27:2584:U:C3'	53:27:2585:U:H5"	2.49	0.43
53:27:2679:A:O2'	53:27:2680:U:H5'	2.19	0.43
54:28:11:C:C2'	54:28:12:C:H5'	2.49	0.43
54:28:30:C:H2'	54:28:31:C:O4'	2.19	0.43
59:33:24:LEU:CD2	59:33:67:SER:O	2.67	0.43
59:33:197:GLU:CG	59:33:201:TYR:CE2	2.92	0.43
59:33:729:LEU:O	59:33:735:VAL:HG11	2.18	0.43
3:C:68:ALA:O	3:C:70:SER:N	2.51	0.42
5:E:91:VAL:HG22	5:E:92:GLY:N	2.33	0.42
8:H:102:ARG:HA	8:H:105:LEU:HD12	2.00	0.42
15:O:13:LYS:HE3	15:O:76:HIS:O	2.19	0.42
17:Q:37:GLU:OE1	17:Q:37:GLU:N	2.51	0.42
17:Q:64:VAL:HG21	17:Q:97:LYS:HB2	2.01	0.42
19:S:48:GLN:O	19:S:52:GLU:HA	2.19	0.42
21:U:53:LYS:HB3	21:U:55:GLU:OE1	2.19	0.42
21:U:93:ARG:HA	21:U:93:ARG:HD2	1.88	0.42
44:18:30:ILE:O	44:18:40:ARG:HG3	2.19	0.42
44:18:95:LEU:HG	44:18:95:LEU:O	2.18	0.42
46:20:14:ARG:HH21	46:20:42:ILE:HD11	1.83	0.42
52:26:290:C:O5'	52:26:290:C:H6	2.02	0.42
52:26:431:A:H2'	52:26:432:A:H8	1.85	0.42
52:26:529:G:H4'	52:26:533:A:C2	2.54	0.42
52:26:890:G:O2'	52:26:906:A:N6	2.52	0.42
52:26:1069:C:O2'	52:26:1192:C:H1'	2.19	0.42
52:26:1187:G:O2'	52:26:1188:A:H5'	2.19	0.42
53:27:193:U:H2'	53:27:194:G:C8	2.38	0.42
53:27:527:C:C4	53:27:2779:U:H2'	2.54	0.42
53:27:556:A:H3'	53:27:557:C:C6	2.54	0.42
53:27:957:C:O2'	53:27:958:U:H5"	2.19	0.42
53:27:1178:C:C2	53:27:1179:G:N7	2.87	0.42
53:27:1912:A:N7	53:27:1917:U:C5	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1930:G:H2'	53:27:1968:G:N1	2.33	0.42
53:27:1973:G:H2'	53:27:1974:C:O4'	2.18	0.42
53:27:2248:C:H2'	53:27:2249:U:O4'	2.19	0.42
53:27:2312:U:O2'	53:27:2313:C:H5'	2.19	0.42
53:27:2617:U:H3'	53:27:2618:G:H8	1.84	0.42
53:27:2636:C:H2'	53:27:2637:U:C6	2.54	0.42
53:27:2869:G:H2'	53:27:2870:C:C6	2.54	0.42
54:28:82:U:H2'	54:28:83:G:H8	1.84	0.42
56:30:62:C:H2'	56:30:63:G:N9	2.34	0.42
58:32:12:G:H2'	58:32:13:C:O4'	2.19	0.42
59:33:57:TRP:O	59:33:60:VAL:CG2	2.63	0.42
59:33:84:LEU:HB3	59:33:90:VAL:HG21	2.01	0.42
59:33:172:VAL:HG13	59:33:173:LEU:N	2.34	0.42
59:33:281:ILE:HD13	59:33:281:ILE:HG21	1.80	0.42
3:C:76:PRO:HA	3:C:82:GLY:HA3	2.01	0.42
5:E:10:VAL:HG13	5:E:10:VAL:O	2.19	0.42
5:E:95:ALA:HB3	5:E:127:GLN:O	2.19	0.42
6:F:131:SER:OG	6:F:141:LYS:HE3	2.18	0.42
7:G:20:LYS:O	7:G:22:ALA:N	2.45	0.42
8:H:93:ASN:OD1	8:H:133:ARG:O	2.38	0.42
9:I:34:ARG:HH11	9:I:34:ARG:HG3	1.84	0.42
9:I:136:GLN:HE21	53:27:2899:A:H5'	1.83	0.42
11:K:63:LYS:HA	30:4:11:LYS:O	2.19	0.42
13:M:22:ARG:HG3	13:M:70:THR:HA	2.01	0.42
13:M:33:ILE:O	13:M:33:ILE:HG23	2.19	0.42
13:M:51:LEU:HD11	13:M:70:THR:HG23	2.01	0.42
14:N:32:PRO:O	14:N:102:ARG:NH1	2.50	0.42
14:N:49:VAL:HG11	14:N:78:VAL:O	2.19	0.42
17:Q:38:VAL:HG22	17:Q:40:MET:H	1.83	0.42
25:Y:25:GLY:O	53:27:929:U:H1'	2.19	0.42
32:6:116:LEU:HA	32:6:119:GLN:CG	2.48	0.42
33:7:2:GLN:HE21	52:26:1191:A:P	2.42	0.42
33:7:38:VAL:HG23	33:7:39:ARG:N	2.34	0.42
35:9:92:ARG:HB2	35:9:127:TYR:HB2	2.01	0.42
41:15:30:ILE:HD13	41:15:45:THR:HG23	2.01	0.42
47:21:6:THR:O	47:21:7:LEU:HD12	2.18	0.42
48:22:32:ILE:HD12	48:22:33:THR:O	2.19	0.42
48:22:33:THR:HG22	48:22:37:LYS:HB3	2.01	0.42
52:26:73:C:H2'	52:26:74:A:H8	1.83	0.42
52:26:786:G:C4	52:26:787:A:C8	3.07	0.42
52:26:943:U:H2'	52:26:944:G:C8	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:961:U:P	52:26:1223:C:H4'	2.58	0.42
52:26:1073:U:C4	52:26:1074:G:N7	2.87	0.42
52:26:1429:A:H2'	52:26:1430:A:H8	1.83	0.42
53:27:564:C:H2'	53:27:565:C:H6	1.81	0.42
53:27:572:A:C6	53:27:573:U:N3	2.88	0.42
53:27:691:C:O2'	53:27:692:C:H5'	2.19	0.42
53:27:976:G:H4'	53:27:1156:A:N7	2.34	0.42
53:27:1360:G:C8	53:27:1361:G:C8	3.08	0.42
53:27:1736:U:H2'	53:27:1737:G:O4'	2.20	0.42
53:27:1842:G:C6	53:27:1843:C:C4	3.06	0.42
53:27:1842:G:C5	53:27:1843:C:C4	3.06	0.42
53:27:2110:G:H5'	53:27:2111:U:C5'	2.48	0.42
53:27:2363:G:H2'	53:27:2364:C:C6	2.54	0.42
53:27:2568:U:H2'	53:27:2569:G:O4'	2.19	0.42
58:32:40:C:H2'	58:32:41:C:H6	1.82	0.42
1:A:47:ARG:NH1	53:27:1807:G:OP1	2.50	0.42
2:B:157:LYS:HA	53:27:2619:C:H5"	2.00	0.42
3:C:45:ALA:CB	53:27:38:A:H4'	2.49	0.42
4:D:65:LEU:HD23	4:D:87:LYS:HE2	2.00	0.42
5:E:91:VAL:HG12	5:E:159:LYS:HE2	2.00	0.42
5:E:144:ALA:HB1	5:E:163:TYR:HE1	1.84	0.42
6:F:80:ILE:HD13	6:F:98:ASP:OD2	2.19	0.42
7:G:38:MET:HE1	53:27:1058:U:H5'	2.00	0.42
7:G:52:MET:HE3	7:G:99:PHE:CZ	2.54	0.42
8:H:73:PRO:CB	8:H:78:LEU:HD21	2.49	0.42
9:I:15:TRP:O	9:I:138:GLN:HB3	2.20	0.42
11:K:54:GLN:HE22	53:27:2358:A:H61	1.66	0.42
19:S:73:ARG:HG3	19:S:73:ARG:NH2	2.29	0.42
26:Z:66:ILE:HD13	44:18:41:TRP:HB2	2.01	0.42
32:6:202:ASN:HD21	32:6:208:ALA:HB2	1.83	0.42
34:8:131:ILE:HD12	34:8:131:ILE:O	2.19	0.42
35:9:113:VAL:HG13	35:9:114:LEU:HD13	2.01	0.42
35:9:152:VAL:C	35:9:154:ALA:N	2.71	0.42
37:11:117:LEU:HD23	37:11:121:ASN:ND2	2.34	0.42
40:14:50:THR:HB	52:26:975:A:H62	1.84	0.42
40:14:98:VAL:HG22	40:14:99:GLN:N	2.34	0.42
46:20:8:ARG:HG3	46:20:8:ARG:O	2.19	0.42
49:23:21:ALA:O	49:23:25:GLY:N	2.50	0.42
49:23:55:GLN:NE2	59:33:606:MET:HA	2.34	0.42
52:26:199:A:O2'	52:26:200:G:H5'	2.19	0.42
52:26:705:G:H2'	52:26:706:A:H5'	1.99	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:756:C:H2'	52:26:757:U:H6	1.85	0.42
52:26:793:U:H5'	52:26:794:A:O5'	2.18	0.42
52:26:1118:U:H1'	52:26:1179:A:C4	2.55	0.42
52:26:1241:G:H2'	52:26:1242:G:H8	1.84	0.42
53:27:279:A:N6	53:27:361:G:O2'	2.51	0.42
53:27:522:A:H2'	53:27:523:C:H6	1.81	0.42
53:27:532:A:H4'	53:27:533:G:C8	2.53	0.42
53:27:784:G:C5'	53:27:785:G:OP1	2.63	0.42
53:27:823:C:C4	53:27:824:U:C4	3.07	0.42
53:27:870:U:O2'	53:27:871:U:H5'	2.19	0.42
53:27:1001:A:H2'	53:27:1002:G:O4'	2.19	0.42
53:27:1277:G:H2'	53:27:1278:C:C6	2.55	0.42
53:27:1310:G:O2'	53:27:1611:C:H5"	2.18	0.42
53:27:1629:U:H1'	53:27:2698:U:H5"	2.01	0.42
53:27:2061:G:C8	53:27:2503:A:O4'	2.72	0.42
53:27:2691:C:O2'	53:27:2692:G:H5'	2.19	0.42
55:29:17:U:H2'	55:29:18:G:C8	2.54	0.42
59:33:18:GLU:O	59:33:21:ILE:CG1	2.68	0.42
59:33:232:PHE:HE1	59:33:329:PRO:CG	2.32	0.42
1:A:217:PRO:HB2	53:27:1789:A:O3'	2.19	0.42
3:C:84:THR:CG2	53:27:586:A:H5'	2.45	0.42
3:C:132:LYS:HD3	53:27:319:G:OP2	2.20	0.42
5:E:16:VAL:HG12	5:E:17:LYS:H	1.85	0.42
7:G:34:THR:HG21	53:27:1085:A:N6	2.34	0.42
7:G:44:ALA:O	7:G:50:VAL:N	2.52	0.42
9:I:16:TYR:O	9:I:55:ILE:N	2.52	0.42
9:I:26:GLY:HA3	53:27:1140:C:H5'	2.01	0.42
10:J:31:ARG:HH12	53:27:2676:C:P	2.42	0.42
14:N:49:VAL:CG2	14:N:82:ALA:HA	2.37	0.42
17:Q:37:GLU:CD	17:Q:37:GLU:H	2.22	0.42
18:R:11:ARG:HH21	53:27:1322:A:H5'	1.83	0.42
21:U:18:ARG:HH21	54:28:78:A:P	2.42	0.42
29:3:12:ARG:NH2	53:27:686:U:O4	2.52	0.42
32:6:191:ASP:OD1	32:6:192:PRO:HD2	2.19	0.42
33:7:86:LEU:HA	33:7:89:VAL:CG2	2.50	0.42
36:10:54:LEU:HD12	36:10:55:HIS:N	2.35	0.42
37:11:2:ARG:NH2	52:26:935:A:C2	2.87	0.42
39:13:43:ALA:O	39:13:46:VAL:HG22	2.19	0.42
41:15:71:ASP:O	41:15:72:ALA:CB	2.66	0.42
41:15:126:ARG:HB2	51:25:33:ARG:CD	2.48	0.42
44:18:33:VAL:O	44:18:33:VAL:HG23	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:19:71:ARG:HH22	52:26:754:C:H5'	1.78	0.42
47:21:26:ARG:CZ	47:21:39:ARG:HG2	2.50	0.42
49:23:10:ILE:CD1	49:23:15:LEU:HB2	2.48	0.42
52:26:5:U:H4'	52:26:6:G:C4	2.54	0.42
52:26:123:U:H2'	52:26:124:C:C6	2.55	0.42
52:26:157:U:H1'	52:26:165:G:C2	2.54	0.42
52:26:496:A:C2	52:26:497:G:C5	3.07	0.42
52:26:967:C:H2'	52:26:968:A:C8	2.54	0.42
52:26:969:A:O2'	52:26:970:C:H5'	2.20	0.42
52:26:1054:C:OP2	52:26:1197:A:OP2	2.37	0.42
52:26:1234:C:C2'	52:26:1235:U:H5'	2.49	0.42
53:27:483:A:N7	53:27:497:A:H2	2.18	0.42
53:27:635:C:H2'	53:27:636:G:C8	2.55	0.42
53:27:770:G:C4	53:27:771:G:C8	3.07	0.42
53:27:860:U:H1'	53:27:2268:A:H5'	2.01	0.42
53:27:996:A:C6	53:27:1160:G:N1	2.87	0.42
53:27:1356:G:C5	53:27:1357:C:C5	3.08	0.42
53:27:1669:A:OP2	53:27:1670:C:OP2	2.37	0.42
53:27:1786:A:H1'	53:27:1938:A:N6	2.34	0.42
53:27:1869:G:H2'	53:27:1871:A:H2	1.85	0.42
53:27:1909:C:H2'	53:27:1910:G:C8	2.54	0.42
53:27:1923:U:H2'	53:27:1924:C:C6	2.54	0.42
53:27:1999:C:H1'	53:27:2687:U:O2'	2.19	0.42
53:27:2048:G:H2'	53:27:2049:G:O4'	2.20	0.42
53:27:2071:A:C6	53:27:2072:C:N4	2.87	0.42
53:27:2075:U:C4	53:27:2238:G:C6	3.08	0.42
53:27:2460:U:H2'	53:27:2461:A:H8	1.83	0.42
59:33:38:THR:CG2	59:33:77:ARG:HD2	2.49	0.42
59:33:622:VAL:CB	59:33:641:LEU:HD21	2.48	0.42
59:33:664:GLY:N	59:33:717:TYR:O	2.52	0.42
20:T:82:VAL:HG12	20:T:83:GLY:N	2.34	0.42
23:W:32:LEU:O	23:W:33:HIS:CG	2.72	0.42
24:X:7:ARG:HG3	24:X:8:GLU:N	2.34	0.42
30:4:38:LYS:HG3	30:4:41:ARG:NH1	2.35	0.42
32:6:76:SER:HB2	32:6:92:ASN:O	2.19	0.42
32:6:105:THR:N	32:6:107:ARG:HG2	2.35	0.42
35:9:63:MET:HB3	35:9:67:ARG:NH1	2.25	0.42
41:15:96:ILE:O	41:15:99:LEU:HB3	2.18	0.42
42:16:112:ALA:HA	52:26:502:A:P	2.59	0.42
52:26:177:G:O2'	52:26:1448:C:H4'	2.20	0.42
52:26:207:C:H1'	52:26:212:G:H22	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:542:G:H2'	52:26:543:U:H6	1.79	0.42
52:26:711:G:H2'	52:26:712:A:H8	1.84	0.42
52:26:880:C:H2'	52:26:881:G:O4'	2.19	0.42
52:26:900:A:H2'	52:26:901:A:O4'	2.19	0.42
52:26:922:G:C6	52:26:923:A:C6	3.08	0.42
52:26:1414:U:H2'	52:26:1415:G:C8	2.50	0.42
52:26:1434:A:O2'	52:26:1435:G:H5'	2.18	0.42
53:27:303:G:H2'	53:27:304:U:O4'	2.19	0.42
53:27:1049:C:H1'	53:27:1113:U:H4'	2.02	0.42
53:27:1105:U:H2'	53:27:1106:G:H8	1.84	0.42
53:27:1255:U:C5'	53:27:1256:G:H5"	2.49	0.42
53:27:1620:G:O2'	53:27:1621:U:H5'	2.19	0.42
53:27:1891:G:H2'	53:27:1892:C:H6	1.83	0.42
53:27:2090:A:H2'	53:27:2091:C:H6	1.83	0.42
53:27:2662:A:C4	53:27:2663:G:H1'	2.55	0.42
54:28:56:G:H4'	54:28:57:A:H8	1.83	0.42
55:29:13:A:O5'	55:29:13:A:H8	2.02	0.42
59:33:197:GLU:CG	59:33:201:TYR:CZ	3.02	0.42
59:33:599:VAL:N	59:33:602:VAL:O	2.53	0.42
1:A:154:ALA:HB2	1:A:161:VAL:HG23	2.00	0.42
2:B:104:VAL:O	2:B:177:VAL:HG11	2.20	0.42
3:C:103:GLY:O	3:C:106:LYS:HB2	2.19	0.42
4:D:102:LEU:HA	4:D:106:ALA:HB3	2.02	0.42
4:D:114:ARG:NH1	43:17:67:ASP:OD1	2.50	0.42
14:N:100:HIS:H	14:N:103:VAL:HG23	1.85	0.42
16:P:53:LYS:HE2	53:27:994:C:C6	2.54	0.42
20:T:38:ILE:HG22	20:T:39:ASN:N	2.34	0.42
21:U:60:VAL:HG13	21:U:72:VAL:O	2.20	0.42
30:4:3:ILE:N	30:4:63:TYR:OH	2.52	0.42
33:7:46:LEU:CD1	33:7:75:VAL:HG13	2.50	0.42
34:8:67:LEU:HD23	34:8:67:LEU:HA	1.88	0.42
35:9:35:LEU:HD12	35:9:48:GLY:O	2.19	0.42
35:9:101:GLY:O	35:9:102:THR:O	2.36	0.42
37:11:28:ILE:O	37:11:28:ILE:HG22	2.20	0.42
41:15:40:ALA:HB3	52:26:685:G:O4'	2.20	0.42
43:17:28:ARG:HG2	43:17:62:PHE:CD2	2.55	0.42
44:18:26:LEU:HA	44:18:30:ILE:HD12	2.00	0.42
45:19:35:ILE:HG12	45:19:55:LEU:HD11	2.02	0.42
46:20:21:VAL:O	46:20:32:PHE:HB2	2.20	0.42
51:25:27:VAL:O	51:25:31:VAL:HG12	2.19	0.42
52:26:88:U:C2'	52:26:89:U:H4'	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:137:U:O2'	52:26:138:G:H5'	2.19	0.42
52:26:236:A:H2'	52:26:237:G:H8	1.84	0.42
52:26:434:U:H2'	52:26:435:A:H8	1.85	0.42
52:26:731:G:H5'	52:26:766:A:C4'	2.49	0.42
52:26:1026:G:H2'	52:26:1026:G:N3	2.33	0.42
52:26:1037:C:H2'	52:26:1038:C:C6	2.52	0.42
52:26:1114:C:H2'	52:26:1115:U:O4'	2.18	0.42
52:26:1231:G:O2'	52:26:1232:U:H5'	2.19	0.42
52:26:1415:G:N3	52:26:1416:G:C8	2.88	0.42
53:27:426:C:H2'	53:27:427:U:C6	2.54	0.42
53:27:687:C:H5'	53:27:688:U:OP2	2.19	0.42
53:27:1070:A:H2'	53:27:1097:U:OP1	2.20	0.42
53:27:1187:G:H8	53:27:1187:G:O5'	2.03	0.42
53:27:2007:U:H2'	53:27:2008:C:C6	2.46	0.42
53:27:2107:G:H2'	53:27:2108:A:O4'	2.19	0.42
53:27:2341:G:H2'	53:27:2342:C:H6	1.85	0.42
53:27:2654:A:N1	53:27:2665:A:H5"	2.35	0.42
53:27:2800:A:H3'	53:27:2801:G:H5"	2.01	0.42
54:28:34:A:H2'	54:28:44:G:O6	2.18	0.42
58:32:40:C:C2	58:32:41:C:C5	3.06	0.42
59:33:30:LYS:C	59:33:33:GLU:HG2	2.37	0.42
59:33:72:ASP:O	59:33:76:LEU:HD13	2.20	0.42
59:33:175:ALA:O	59:33:179:THR:HG23	2.19	0.42
59:33:260:TRP:NE1	59:33:264:GLN:NE2	2.67	0.42
59:33:432:HIS:HB3	59:33:435:VAL:CG2	2.46	0.42
59:33:702:ASP:OD1	59:33:703:THR:N	2.48	0.42
1:A:12:ARG:HD2	53:27:728:G:H4'	2.02	0.42
4:D:14:LYS:O	4:D:18:GLU:HG3	2.19	0.42
4:D:18:GLU:C	4:D:20:ASN:H	2.23	0.42
4:D:72:SER:OG	4:D:79:ARG:HA	2.20	0.42
6:F:3:VAL:HA	6:F:39:ALA:H	1.84	0.42
7:G:82:ILE:HB	7:G:84:TYR:CE2	2.55	0.42
9:I:62:VAL:HG11	9:I:101:ILE:HD11	2.01	0.42
9:I:95:ARG:HG3	9:I:96:ARG:HG2	2.02	0.42
10:J:22:ILE:HD12	10:J:23:LYS:HB3	2.02	0.42
14:N:15:ARG:HD2	14:N:25:ARG:NH2	2.34	0.42
15:O:1:SER:N	15:O:4:ILE:HD12	2.35	0.42
15:O:85:VAL:HG12	15:O:86:LYS:N	2.35	0.42
15:O:93:LYS:HD3	53:27:2717:C:O2'	2.19	0.42
16:P:27:ARG:HH21	16:P:37:ALA:HA	1.84	0.42
19:S:48:GLN:HB2	19:S:55:VAL:HG21	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:11:ILE:HD11	20:T:19:GLY:HA2	2.02	0.42
25:Y:20:LYS:O	25:Y:23:LEU:HB2	2.19	0.42
32:6:91:VAL:HG11	32:6:95:TRP:HD1	1.83	0.42
32:6:185:ILE:HG22	32:6:199:ILE:CB	2.47	0.42
33:7:68:HIS:HA	33:7:103:ALA:O	2.19	0.42
34:8:84:ASN:O	34:8:88:ASN:ND2	2.53	0.42
34:8:144:ILE:HG22	34:8:149:LYS:HA	2.01	0.42
37:11:110:ARG:HG2	37:11:110:ARG:O	2.20	0.42
42:16:104:SER:HB2	42:16:107:LYS:HZ1	1.84	0.42
44:18:57:SER:OG	52:26:1316:G:H4'	2.20	0.42
46:20:6:LEU:HD13	46:20:17:TYR:CD1	2.54	0.42
48:22:13:THR:CG2	48:22:20:ILE:HD11	2.48	0.42
52:26:357:G:OP1	52:26:367:U:H2'	2.19	0.42
52:26:441:A:H61	52:26:493:A:H2	1.67	0.42
52:26:514:C:H2'	52:26:515:G:C8	2.53	0.42
52:26:602:A:H2'	52:26:603:U:C6	2.54	0.42
52:26:848:C:H2'	52:26:849:G:C5'	2.49	0.42
52:26:1001:C:H2'	52:26:1002:G:C8	2.54	0.42
52:26:1064:G:C2	52:26:1066:C:N4	2.88	0.42
53:27:514:A:O2'	53:27:515:A:H5'	2.20	0.42
53:27:1387:A:O2'	53:27:1388:G:H5'	2.19	0.42
53:27:1528:A:H2'	53:27:1529:G:C5'	2.50	0.42
53:27:1542:U:H2'	53:27:1543:G:C8	2.55	0.42
53:27:1772:A:H2'	53:27:1773:A:O3'	2.20	0.42
53:27:2287:A:C5	53:27:2289:G:C8	3.08	0.42
53:27:2452:C:C2	53:27:2504:U:C4	3.08	0.42
53:27:2828:G:O2'	53:27:2829:A:H5'	2.20	0.42
59:33:407:TYR:O	59:33:408:VAL:HG13	2.19	0.42
1:A:44:ASN:HD21	53:27:1812:U:C1'	2.31	0.42
1:A:163:ILE:HG12	1:A:173:LEU:CD2	2.49	0.42
1:A:204:LEU:HD21	1:A:213:ARG:HE	1.85	0.42
2:B:4:LEU:HD13	2:B:101:PHE:CE2	2.55	0.42
5:E:34:ARG:CG	5:E:74:MET:SD	3.08	0.42
5:E:85:LYS:HB2	5:E:164:ALA:CB	2.50	0.42
8:H:127:SER:CA	53:27:1059:G:H21	2.33	0.42
9:I:118:MET:O	9:I:121:LYS:HG2	2.20	0.42
12:L:67:VAL:HG12	12:L:100:LYS:HE3	2.01	0.42
12:L:69:PRO:CA	12:L:94:ALA:HB2	2.48	0.42
12:L:86:LYS:HZ3	53:27:955:U:P	2.42	0.42
14:N:69:ASP:N	14:N:69:ASP:OD1	2.52	0.42
15:O:52:ARG:NH2	53:27:2720:U:H5"	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:63:ILE:H	15:O:63:ILE:HG13	1.53	0.42
16:P:90:ASP:OD1	16:P:90:ASP:C	2.56	0.42
19:S:88:LYS:O	19:S:91:GLN:HB3	2.18	0.42
28:2:34:GLU:HA	28:2:48:TYR:O	2.19	0.42
31:5:19:ARG:HH12	31:5:26:ILE:CD1	2.20	0.42
33:7:76:ILE:CA	33:7:83:VAL:HG23	2.49	0.42
33:7:121:SER:O	33:7:124:GLU:HB3	2.19	0.42
33:7:196:GLY:H	52:26:1057:G:H4'	1.85	0.42
39:13:86:LEU:HA	39:13:86:LEU:HD23	1.78	0.42
42:16:113:ARG:HH21	42:16:120:ARG:CG	2.32	0.42
46:20:54:LEU:O	46:20:57:ILE:HB	2.20	0.42
49:23:30:LEU:N	49:23:30:LEU:HD12	2.34	0.42
52:26:123:U:H2'	52:26:124:C:H6	1.85	0.42
52:26:222:C:H2'	52:26:223:A:H8	1.84	0.42
52:26:321:A:H2'	52:26:322:C:C6	2.54	0.42
52:26:487:A:H2'	52:26:488:C:O4'	2.19	0.42
52:26:573:A:C6	52:26:574:A:N1	2.88	0.42
52:26:579:A:H5'	52:26:728:A:H1'	2.02	0.42
52:26:785:G:O2'	52:26:786:G:H5'	2.19	0.42
53:27:256:A:O2'	53:27:257:C:H5'	2.20	0.42
53:27:341:C:H2'	53:27:342:A:H8	1.83	0.42
53:27:342:A:H2'	53:27:343:C:O4'	2.20	0.42
53:27:868:U:C4	53:27:869:G:N7	2.88	0.42
53:27:884:U:O5'	53:27:884:U:H6	2.03	0.42
53:27:942:G:H2'	53:27:943:A:H8	1.85	0.42
53:27:1126:A:H8	53:27:1126:A:OP1	2.03	0.42
53:27:1272:A:C2	53:27:1618:A:C2	3.08	0.42
53:27:1795:C:C4	53:27:1796:U:C4	3.08	0.42
53:27:1815:A:H8	53:27:1815:A:OP1	2.02	0.42
53:27:2010:G:O2'	53:27:2011:U:H5'	2.20	0.42
53:27:2173:A:H2'	53:27:2174:C:C5	2.55	0.42
59:33:18:GLU:HA	59:33:21:ILE:CD1	2.50	0.42
59:33:54:LEU:HB2	59:33:57:TRP:HE1	1.84	0.42
59:33:326:VAL:HG22	59:33:334:VAL:CG1	2.50	0.42
59:33:566:LYS:CB	59:33:569:ALA:HB3	2.50	0.42
1:A:75:ALA:CB	1:A:95:TYR:HA	2.49	0.42
2:B:49:GLN:HE21	2:B:79:LEU:HB3	1.85	0.42
2:B:183:GLU:OE1	2:B:183:GLU:N	2.52	0.42
4:D:34:THR:HA	4:D:88:VAL:O	2.20	0.42
10:J:76:VAL:H	15:O:72:VAL:CG2	2.30	0.42
11:K:41:ARG:NH1	53:27:807:U:OP2	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:9:ARG:HG3	14:N:10:ARG:N	2.35	0.42
17:Q:37:GLU:HB2	17:Q:53:PHE:HE1	1.84	0.42
18:R:66:ILE:O	18:R:69:LEU:HB3	2.19	0.42
19:S:81:LYS:NZ	53:27:1600:C:OP1	2.43	0.42
23:W:17:ARG:HD3	23:W:17:ARG:HA	1.95	0.42
26:Z:43:PHE:HB2	26:Z:47:LYS:NZ	2.34	0.42
30:4:8:GLY:O	30:4:12:ARG:NH2	2.53	0.42
31:5:24:ARG:HH22	31:5:36:ARG:HG3	1.84	0.42
35:9:132:PRO:O	35:9:135:VAL:HG22	2.20	0.42
42:16:101:LEU:HB3	42:16:102:ASP:H	1.53	0.42
47:21:60:ILE:HG22	47:21:72:TRP:HE3	1.85	0.42
51:25:38:GLU:OE1	52:26:1527:U:OP2	2.38	0.42
52:26:267:C:O2'	52:26:268:U:H5'	2.19	0.42
52:26:605:U:H2'	52:26:606:G:H8	1.85	0.42
52:26:849:G:H2'	52:26:850:U:O4'	2.20	0.42
52:26:852:G:C5	52:26:853:C:C5	3.08	0.42
52:26:1143:G:H2'	52:26:1144:G:C8	2.55	0.42
53:27:864:G:O2'	53:27:865:C:H5'	2.19	0.42
53:27:962:G:H21	53:27:2250:G:H22	1.68	0.42
53:27:1271:G:O3'	53:27:1272:A:H4'	2.20	0.42
53:27:1528:A:H2'	53:27:1529:G:O4'	2.19	0.42
53:27:2340:A:H2'	53:27:2341:G:C8	2.54	0.42
53:27:2543:G:H2'	53:27:2544:G:H8	1.82	0.42
53:27:2553:G:H2'	53:27:2554:U:O4'	2.20	0.42
53:27:2623:G:H2'	53:27:2624:G:C8	2.51	0.42
54:28:118:C:H2'	54:28:119:A:H8	1.84	0.42
57:31:52:G:H2'	57:31:53:G:O4'	2.20	0.42
57:31:66:C:O2'	57:31:67:C:H5'	2.20	0.42
59:33:61:GLU:HA	59:33:64:GLU:CG	2.49	0.42
59:33:450:PRO:C	59:33:452:THR:H	2.20	0.42
59:33:599:VAL:HG11	59:33:631:ILE:CD1	2.49	0.42
1:A:47:ARG:NH2	53:27:777:G:O2'	2.53	0.42
1:A:62:ARG:NH2	53:27:1568:G:OP2	2.44	0.42
1:A:155:ARG:NH1	53:27:1818:U:H5	2.18	0.42
3:C:109:LEU:HD11	3:C:180:LEU:HD23	2.01	0.42
7:G:59:LEU:HD23	7:G:61:ARG:N	2.35	0.42
19:S:11:LEU:HD21	19:S:47:VAL:HG22	2.02	0.42
19:S:57:VAL:HG22	19:S:58:VAL:H	1.85	0.42
21:U:26:PHE:CZ	21:U:86:LEU:HD22	2.55	0.42
24:X:59:GLU:HA	24:X:63:ALA:HB2	2.02	0.42
38:12:10:LEU:HD22	38:12:74:ILE:HD13	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:12:56:PRO:O	38:12:58:LEU:N	2.52	0.42
39:13:122:ARG:HB2	52:26:1349:A:OP1	2.20	0.42
44:18:93:PRO:O	44:18:94:GLY:C	2.59	0.42
46:20:5:ARG:HB2	52:26:376:G:H5"	2.01	0.42
46:20:20:VAL:HG21	46:20:32:PHE:CG	2.55	0.42
51:25:17:ARG:NH2	52:26:1538:C:O2'	2.53	0.42
52:26:24:U:H4'	52:26:524:G:O2'	2.20	0.42
52:26:236:A:H8	52:26:236:A:O5'	2.03	0.42
52:26:374:A:H2	52:26:390:U:HO2'	1.60	0.42
52:26:429:U:H4'	52:26:430:A:O5'	2.20	0.42
52:26:469:C:H2'	52:26:470:C:H5'	2.01	0.42
52:26:792:A:H1'	52:26:794:A:C8	2.55	0.42
52:26:824:G:O2'	52:26:825:A:H5'	2.19	0.42
52:26:892:A:H2'	52:26:893:C:H6	1.84	0.42
52:26:1155:A:H2'	52:26:1156:G:O4'	2.20	0.42
53:27:185:G:H2'	53:27:186:G:O4'	2.20	0.42
53:27:283:G:H2'	53:27:284:U:H4'	2.02	0.42
53:27:719:C:H2'	53:27:720:U:O4'	2.20	0.42
53:27:1306:C:O2'	53:27:1307:A:H5'	2.20	0.42
53:27:1555:G:H5'	53:27:1555:G:H8	1.84	0.42
53:27:1820:U:H4'	53:27:1821:A:OP2	2.20	0.42
53:27:2027:G:C2	53:27:2028:U:C2	3.07	0.42
53:27:2037:A:C6	53:27:2038:G:C6	3.08	0.42
54:28:35:C:H2'	54:28:36:C:O4'	2.19	0.42
59:33:65:ILE:HG12	59:33:161:ARG:HH22	1.83	0.42
59:33:82:PHE:CG	59:33:83:PRO:CD	2.93	0.42
59:33:134:ASN:O	59:33:135:VAL:CB	2.68	0.42
59:33:154:ALA:CA	59:33:157:ILE:HG12	2.50	0.42
59:33:197:GLU:OE2	59:33:201:TYR:OH	2.35	0.42
59:33:215:ALA:O	59:33:219:HIS:ND1	2.53	0.42
59:33:252:ARG:HD3	59:33:280:ARG:NH2	2.35	0.42
59:33:473:ARG:O	59:33:475:TRP:N	2.53	0.42
1:A:145:MET:HE3	1:A:181:ARG:HE	1.85	0.41
1:A:208:GLY:O	1:A:211:ARG:N	2.53	0.41
3:C:132:LYS:HE3	3:C:132:LYS:HB2	1.87	0.41
7:G:24:SER:N	7:G:118:ILE:HG13	2.32	0.41
8:H:109:ALA:HB1	8:H:121:ILE:HG23	2.02	0.41
10:J:12:ASP:HB2	10:J:98:ARG:O	2.20	0.41
15:O:77:SER:O	15:O:80:VAL:HG22	2.20	0.41
15:O:88:ARG:N	15:O:111:GLU:OE2	2.53	0.41
17:Q:10:LYS:CE	53:27:994:C:H1'	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Y:44:ARG:HH22	25:Y:56:VAL:HG21	1.85	0.41
26:Z:1:MET:HA	54:28:44:G:OP2	2.20	0.41
27:1:51:ARG:CG	27:1:53:VAL:HG13	2.48	0.41
30:4:44:ARG:N	30:4:45:PRO:HD2	2.35	0.41
32:6:17:HIS:CG	32:6:202:ASN:HB3	2.55	0.41
35:9:26:GLY:O	52:26:1194:U:H5'	2.20	0.41
36:10:6:ILE:HD13	36:10:74:LEU:HD21	2.00	0.41
37:11:21:LEU:C	37:11:21:LEU:HD23	2.40	0.41
39:13:9:GLY:HA3	39:13:81:GLY:HA2	2.02	0.41
41:15:30:ILE:HD13	41:15:45:THR:CG2	2.50	0.41
42:16:109:ARG:NH2	42:16:116:TYR:HE2	2.18	0.41
47:21:42:LYS:NZ	52:26:278:G:OP2	2.35	0.41
51:25:28:LEU:O	51:25:30:GLU:N	2.44	0.41
52:26:90:C:H2'	52:26:91:U:H5'	2.01	0.41
52:26:113:G:H1'	52:26:354:G:H5"	2.02	0.41
52:26:122:G:C5	52:26:123:U:C5	3.07	0.41
52:26:296:U:H2'	52:26:297:G:H8	1.80	0.41
52:26:312:C:H2'	52:26:313:A:H8	1.79	0.41
52:26:325:A:H2'	52:26:326:G:O4'	2.20	0.41
52:26:496:A:H2'	52:26:497:G:C8	2.55	0.41
52:26:514:C:H2'	52:26:515:G:H8	1.85	0.41
52:26:545:C:H2'	52:26:546:A:H8	1.85	0.41
52:26:1109:C:H2'	52:26:1110:A:H8	1.85	0.41
52:26:1197:A:O2'	52:26:1198:G:H5'	2.20	0.41
52:26:1353:G:O2'	52:26:1354:U:H5'	2.20	0.41
53:27:128:C:H2'	53:27:129:C:H6	1.85	0.41
53:27:316:C:O5'	53:27:316:C:H6	2.03	0.41
53:27:379:G:H4'	53:27:2232:C:H5"	2.01	0.41
53:27:524:G:C6	53:27:525:U:C4	3.08	0.41
53:27:565:C:H6	53:27:565:C:O5'	2.03	0.41
53:27:950:G:H2'	53:27:951:C:H6	1.85	0.41
53:27:1052:C:H2'	53:27:1053:C:H5'	2.01	0.41
53:27:1110:G:H2'	53:27:1111:A:C8	2.55	0.41
53:27:1172:C:H2'	53:27:1173:U:C2	2.55	0.41
53:27:1577:C:H2'	53:27:1578:U:C6	2.55	0.41
53:27:1874:C:H2'	53:27:1875:G:O4'	2.20	0.41
53:27:2066:C:O2'	53:27:2067:G:H5'	2.19	0.41
53:27:2069:G:C2	53:27:2070:A:C8	3.07	0.41
53:27:2544:G:H2'	53:27:2545:G:C8	2.55	0.41
53:27:2650:U:H2'	53:27:2651:C:C6	2.55	0.41
53:27:2714:G:O2'	53:27:2715:C:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:32:26:G:O6	58:32:44:A:C2	2.73	0.41
59:33:687:LEU:HA	59:33:690:GLU:OE1	2.19	0.41
1:A:164:VAL:CG2	1:A:174:ARG:HB2	2.50	0.41
2:B:184:ARG:O	2:B:186:LEU:HG	2.20	0.41
4:D:72:SER:OG	4:D:79:ARG:HG2	2.20	0.41
8:H:54:ILE:HA	8:H:73:PRO:HA	2.02	0.41
9:I:110:PRO:HB3	53:27:1007:C:O3'	2.20	0.41
10:J:23:LYS:HE3	53:27:2561:U:O2	2.19	0.41
11:K:81:ASP:OD1	11:K:81:ASP:C	2.58	0.41
13:M:66:ALA:O	13:M:69:ARG:O	2.38	0.41
14:N:68:LYS:HG3	54:28:50:A:OP1	2.20	0.41
14:N:100:HIS:H	14:N:103:VAL:CG2	2.33	0.41
15:O:28:LYS:HA	15:O:41:ALA:HA	2.02	0.41
19:S:12:ARG:HD3	19:S:12:ARG:HA	1.82	0.41
20:T:27:VAL:HG11	53:27:85:G:H5"	2.02	0.41
21:U:42:LEU:CD1	21:U:47:VAL:HG21	2.46	0.41
23:W:16:ASN:OD1	23:W:26:ARG:HD2	2.19	0.41
32:6:100:LEU:O	32:6:103:TRP:HB2	2.20	0.41
33:7:28:PHE:HE2	44:18:76:PHE:HD1	1.68	0.41
33:7:120:THR:HG23	33:7:188:ALA:CB	2.50	0.41
34:8:59:LYS:CD	34:8:194:ILE:HG22	2.50	0.41
38:12:84:ILE:HG22	38:12:85:TYR:N	2.35	0.41
42:16:29:LYS:O	42:16:80:LEU:HD12	2.20	0.41
46:20:38:PHE:CE2	46:20:51:ARG:HB3	2.55	0.41
52:26:189:A:H2'	52:26:190:A:C8	2.55	0.41
52:26:398:U:H2'	52:26:399:G:H8	1.84	0.41
52:26:855:U:H2'	52:26:856:C:H6	1.83	0.41
52:26:1097:C:H2'	52:26:1098:C:H6	1.82	0.41
52:26:1264:U:H2'	52:26:1265:C:C6	2.55	0.41
53:27:16:C:O5'	53:27:16:C:H6	2.03	0.41
53:27:458:G:N2	53:27:469:G:C4	2.88	0.41
53:27:528:A:C2	53:27:2043:C:H5'	2.55	0.41
53:27:624:C:H2'	53:27:625:G:O4'	2.20	0.41
53:27:635:C:H2'	53:27:636:G:H8	1.85	0.41
53:27:714:U:H2'	53:27:716:A:N7	2.35	0.41
53:27:727:A:C6	53:27:728:G:C6	3.08	0.41
53:27:755:U:H2'	53:27:756:A:H8	1.81	0.41
53:27:814:C:O2'	53:27:815:C:H5'	2.20	0.41
53:27:820:A:H2'	53:27:821:A:C8	2.55	0.41
53:27:1015:U:H2'	53:27:1016:G:H8	1.84	0.41
53:27:1127:A:C2'	53:27:1128:G:H5"	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1312:U:H4'	53:27:1313:U:O5'	2.21	0.41
53:27:1358:G:C2	53:27:1372:U:C5	3.08	0.41
53:27:1361:G:C6	53:27:1362:C:N4	2.87	0.41
53:27:1656:C:C2	53:27:1657:U:C5	3.08	0.41
53:27:1689:A:N6	53:27:1697:G:H2'	2.35	0.41
53:27:1706:C:O2'	53:27:1757:A:H5'	2.20	0.41
53:27:1878:G:O2'	53:27:1879:C:H5'	2.20	0.41
53:27:1906:G:H3'	53:27:1907:G:H5"	2.02	0.41
53:27:2025:C:H2'	53:27:2026:U:C6	2.54	0.41
53:27:2040:G:H2'	53:27:2041:U:O4'	2.20	0.41
53:27:2291:U:O2'	53:27:2374:C:H1'	2.20	0.41
53:27:2454:G:C4	53:27:2455:G:C8	3.08	0.41
53:27:2773:C:H2'	53:27:2774:C:C6	2.55	0.41
58:32:21:A:H62	58:32:47:U:H4'	1.84	0.41
58:32:36:U:H2'	58:32:37:A:C5'	2.38	0.41
59:33:292:ALA:HA	59:33:295:ILE:HG12	2.02	0.41
59:33:293:LEU:C	59:33:296:VAL:HG22	2.39	0.41
59:33:300:TYR:CD1	59:33:328:GLY:HA2	2.55	0.41
59:33:668:VAL:HG12	59:33:669:VAL:N	2.34	0.41
1:A:202:ARG:NH1	1:A:213:ARG:HH22	2.16	0.41
3:C:65:THR:O	3:C:65:THR:HG22	2.20	0.41
3:C:164:LEU:HD23	3:C:165:HIS:N	2.36	0.41
9:I:45:THR:HG22	9:I:47:HIS:H	1.85	0.41
16:P:1:ALA:O	16:P:3:VAL:N	2.53	0.41
16:P:2:ARG:HA	53:27:1248:G:O2'	2.20	0.41
17:Q:91:GLN:OE1	17:Q:92:TRP:N	2.54	0.41
18:R:74:ILE:HG13	18:R:104:THR:O	2.21	0.41
22:V:55:LEU:HD23	22:V:55:LEU:HA	1.83	0.41
28:2:9:LYS:HG3	28:2:19:PHE:CD1	2.56	0.41
28:2:46:VAL:CG1	28:2:47:ILE:H	2.25	0.41
30:4:2:LYS:HB2	53:27:242:G:C8	2.55	0.41
32:6:22:TRP:H	32:6:22:TRP:HD1	1.69	0.41
32:6:59:ILE:O	32:6:63:LYS:N	2.54	0.41
33:7:8:GLY:HA3	44:18:88:MET:HE3	2.02	0.41
33:7:86:LEU:HA	33:7:89:VAL:HG22	2.02	0.41
33:7:116:ALA:O	33:7:119:ILE:HB	2.20	0.41
35:9:37:VAL:HG12	35:9:116:VAL:HG21	2.02	0.41
35:9:70:MET:O	35:9:71:ILE:HD13	2.20	0.41
35:9:154:ALA:HB1	38:12:65:PHE:CE1	2.54	0.41
38:12:19:ALA:C	38:12:21:LYS:N	2.72	0.41
38:12:19:ALA:HB3	38:12:21:LYS:HB2	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:13:102:PHE:O	39:13:104:THR:N	2.53	0.41
40:14:7:ARG:O	40:14:101:SER:HB2	2.21	0.41
40:14:34:ALA:O	40:14:36:VAL:HG12	2.21	0.41
42:16:24:GLU:C	42:16:26:CYS:N	2.71	0.41
43:17:18:LEU:HD22	43:17:21:ILE:HD11	2.02	0.41
43:17:90:HIS:HE2	52:26:1309:G:P	2.42	0.41
44:18:97:LYS:HE2	52:26:1189:U:OP1	2.21	0.41
52:26:166:U:O2'	52:26:167:A:H5'	2.21	0.41
52:26:232:G:C2'	52:26:233:C:H5'	2.50	0.41
52:26:720:C:C5	52:26:721:G:C4	3.08	0.41
52:26:926:G:O6	55:29:16:A:OP2	2.39	0.41
52:26:955:U:H2'	52:26:956:U:C6	2.56	0.41
53:27:71:A:H3'	53:27:71:A:OP2	2.21	0.41
53:27:186:G:H2'	53:27:187:G:H8	1.85	0.41
53:27:413:C:O2'	53:27:414:C:H5'	2.20	0.41
53:27:489:G:C5	53:27:1284:A:C2	3.08	0.41
53:27:524:G:C5	53:27:525:U:C4	3.08	0.41
53:27:696:G:H2'	53:27:697:G:H8	1.85	0.41
53:27:852:U:H2'	53:27:853:C:H6	1.85	0.41
53:27:2582:G:OP2	53:27:2583:G:OP2	2.37	0.41
54:28:24:G:N2	54:28:28:C:C2	2.88	0.41
54:28:62:C:O2'	54:28:63:C:H5'	2.20	0.41
56:30:44:G:C2'	56:30:45:U:H5'	2.51	0.41
59:33:214:ILE:HG21	59:33:214:ILE:HD13	1.79	0.41
59:33:231:GLU:O	59:33:235:HIS:HD2	2.03	0.41
1:A:23:LEU:HD21	1:A:89:ASN:CG	2.40	0.41
1:A:206:LYS:HD3	53:27:729:G:C8	2.54	0.41
2:B:61:THR:HB	2:B:63:PRO:HD2	2.01	0.41
4:D:142:TYR:O	4:D:145:VAL:HG22	2.21	0.41
6:F:90:LEU:HB3	6:F:92:GLY:H	1.86	0.41
8:H:102:ARG:HD3	8:H:105:LEU:HD12	2.02	0.41
8:H:134:SER:HB2	53:27:1062:G:H21	1.85	0.41
10:J:58:LEU:CD1	10:J:86:LEU:HD22	2.48	0.41
12:L:72:PRO:HB3	12:L:92:TRP:CZ3	2.56	0.41
13:M:65:LEU:HD11	13:M:69:ARG:HH22	1.86	0.41
16:P:2:ARG:HD2	53:27:1248:G:C2	2.55	0.41
21:U:40:ILE:HG22	21:U:41:GLU:N	2.36	0.41
25:Y:36:GLU:O	25:Y:37:ARG:NH1	2.50	0.41
32:6:75:ALA:O	32:6:79:VAL:HG23	2.20	0.41
33:7:83:VAL:O	33:7:86:LEU:HB2	2.20	0.41
35:9:104:ILE:O	35:9:104:ILE:HG13	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:10:9:MET:HE1	36:10:86:ARG:HD2	2.02	0.41
37:11:130:LYS:HB2	37:11:130:LYS:HE3	1.84	0.41
38:12:29:SER:OG	38:12:32:LYS:HG3	2.21	0.41
39:13:33:SER:HB3	39:13:36:GLN:CG	2.44	0.41
42:16:49:ARG:HA	42:16:49:ARG:HD3	1.79	0.41
43:17:14:ALA:HA	43:17:17:ALA:HB3	2.01	0.41
43:17:18:LEU:HD12	43:17:33:LEU:CD1	2.50	0.41
44:18:48:GLN:NE2	49:23:9:PHE:CE1	2.86	0.41
47:21:57:VAL:O	47:21:77:VAL:HG13	2.19	0.41
50:24:9:ARG:NH2	52:26:107:G:N7	2.68	0.41
51:25:38:GLU:HB2	52:26:1526:G:OP2	2.20	0.41
52:26:88:U:O2	52:26:89:U:H1'	2.21	0.41
52:26:89:U:C2	52:26:90:C:C5	3.07	0.41
52:26:188:C:H2'	52:26:189:A:O4'	2.21	0.41
52:26:581:G:H8	52:26:581:G:O5'	2.03	0.41
52:26:1129:C:O2'	52:26:1130:A:N7	2.47	0.41
52:26:1142:G:H3'	52:26:1143:G:C8	2.49	0.41
52:26:1368:A:O2'	52:26:1369:C:H5'	2.21	0.41
52:26:1519:A:C8	52:26:1519:A:H3'	2.56	0.41
53:27:69:C:O2'	53:27:70:G:H5'	2.20	0.41
53:27:210:C:H2'	53:27:211:C:C6	2.56	0.41
53:27:1027:A:C6	53:27:1126:A:C4	3.08	0.41
53:27:1266:G:H22	53:27:2012:G:C2'	2.31	0.41
53:27:1378:A:C4	53:27:1380:G:N7	2.88	0.41
53:27:1750:G:O2'	53:27:1751:U:H5'	2.19	0.41
53:27:1776:G:C6	53:27:1777:U:C4	3.08	0.41
53:27:1911:U:H3'	53:27:1911:U:O2	2.20	0.41
53:27:1930:G:C2'	53:27:1931:U:OP2	2.68	0.41
53:27:1934:C:H2'	53:27:1935:G:O4'	2.20	0.41
53:27:2405:G:H2'	53:27:2411:A:N6	2.35	0.41
53:27:2405:G:H1'	53:27:2412:A:N6	2.36	0.41
53:27:2520:C:H2'	53:27:2521:C:H6	1.85	0.41
53:27:2564:A:OP1	53:27:2648:G:H4'	2.20	0.41
53:27:2578:G:C2'	53:27:2579:C:H5'	2.50	0.41
53:27:2592:G:C2	53:27:2593:U:H1'	2.56	0.41
53:27:2737:G:H2'	53:27:2738:A:C8	2.55	0.41
59:33:135:VAL:HA	59:33:138:MET:HB3	2.02	0.41
59:33:721:VAL:O	59:33:724:ARG:HG2	2.20	0.41
59:33:728:LYS:O	59:33:731:GLN:HG2	2.21	0.41
59:33:732:VAL:O	59:33:735:VAL:HB	2.20	0.41
1:A:113:ASP:OD1	1:A:114:GLN:N	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:4:LEU:HG	2:B:32:ASN:HD22	1.86	0.41
3:C:147:LEU:HD22	3:C:183:PHE:CD2	2.55	0.41
3:C:175:ILE:O	3:C:175:ILE:HG13	2.21	0.41
4:D:48:LEU:O	4:D:51:ASN:HB2	2.21	0.41
4:D:73:VAL:O	4:D:73:VAL:HG23	2.20	0.41
5:E:95:ALA:HB1	5:E:130:ILE:HD11	2.01	0.41
5:E:136:ASP:OD2	5:E:138:GLN:HB3	2.20	0.41
9:I:65:THR:HG21	53:27:1141:U:H2'	2.02	0.41
10:J:112:PHE:O	10:J:116:ILE:HG13	2.20	0.41
16:P:101:ASP:OD2	16:P:104:ALA:HB2	2.19	0.41
17:Q:24:LYS:CE	53:27:1163:G:H5'	2.51	0.41
20:T:5:ARG:HB2	53:27:85:G:OP1	2.21	0.41
27:1:8:THR:HG23	27:1:10:SER:HB3	2.02	0.41
28:2:29:LYS:HA	28:2:30:PRO:HD2	1.91	0.41
30:4:30:HIS:O	30:4:32:LEU:HD23	2.20	0.41
34:8:63:ILE:HG22	34:8:110:ARG:HH12	1.86	0.41
34:8:144:ILE:HG22	34:8:145:ARG:O	2.20	0.41
35:9:28:ARG:HH12	52:26:15:G:C4'	2.30	0.41
36:10:64:VAL:HG22	36:10:65:GLU:N	2.36	0.41
38:12:74:ILE:HG13	38:12:128:VAL:HG22	2.03	0.41
39:13:24:ASN:HB2	39:13:26:LYS:HG2	2.03	0.41
39:13:35:GLU:OE1	39:13:35:GLU:N	2.41	0.41
42:16:20:VAL:C	42:16:22:ALA:N	2.74	0.41
43:17:3:ILE:CD1	43:17:7:ASN:HD22	2.33	0.41
43:17:7:ASN:OD1	43:17:9:PRO:CD	2.68	0.41
44:18:45:LEU:CD2	49:23:12:LEU:HD22	2.48	0.41
45:19:87:ARG:CG	45:19:88:ARG:N	2.83	0.41
46:20:28:ARG:NH2	52:26:390:U:H4'	2.35	0.41
46:20:33:ILE:N	46:20:33:ILE:CD1	2.84	0.41
49:23:4:LEU:HD21	49:23:9:PHE:H	1.84	0.41
49:23:5:LYS:HB2	52:26:1313:U:OP1	2.20	0.41
52:26:155:A:H2'	52:26:156:C:O4'	2.21	0.41
52:26:181:A:H2'	52:26:182:A:C8	2.56	0.41
52:26:616:G:O2'	52:26:617:G:H5'	2.20	0.41
52:26:842:U:C2'	52:26:844:G:H5'	2.48	0.41
52:26:857:C:H2'	52:26:858:G:C8	2.56	0.41
52:26:1005:A:H2'	52:26:1006:G:O4'	2.20	0.41
52:26:1137:C:H5'	52:26:1138:G:H5'	2.02	0.41
52:26:1295:U:H2'	52:26:1296:C:C6	2.55	0.41
52:26:1452:C:H5"	52:26:1453:G:C2	2.55	0.41
53:27:30:G:H2'	53:27:31:C:H6	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:269:C:C2	53:27:270:A:C8	3.09	0.41
53:27:414:C:H5"	53:27:1879:C:O2'	2.21	0.41
53:27:460:A:C2	53:27:470:A:C4	3.08	0.41
53:27:701:G:N2	53:27:702:U:H1'	2.35	0.41
53:27:717:C:C2'	53:27:718:A:H5'	2.51	0.41
53:27:780:G:H5"	53:27:781:A:P	2.60	0.41
53:27:882:G:C2'	53:27:883:G:H5"	2.51	0.41
53:27:1090:A:H61	53:27:1101:U:H3	1.67	0.41
53:27:1216:G:H2'	53:27:1217:U:O4'	2.21	0.41
53:27:1676:A:H8	53:27:1676:A:O5'	2.03	0.41
53:27:1863:G:H2'	53:27:1864:U:O4'	2.20	0.41
53:27:2333:A:H5"	53:27:2334:U:OP1	2.20	0.41
53:27:2463:C:O5'	53:27:2463:C:H6	2.04	0.41
57:31:40:C:H2'	57:31:41:C:H6	1.86	0.41
59:33:67:SER:CB	59:33:76:LEU:HD21	2.50	0.41
59:33:136:ARG:NH1	59:33:136:ARG:HG3	2.36	0.41
59:33:279:VAL:HG12	59:33:335:GLU:O	2.20	0.41
59:33:634:HIS:CE1	59:33:638:CYS:SG	3.13	0.41
1:A:206:LYS:HD3	1:A:208:GLY:HA3	2.01	0.41
2:B:171:THR:HG1	53:27:2773:C:P	2.44	0.41
3:C:195:GLN:O	3:C:198:GLU:HB3	2.20	0.41
7:G:126:LEU:HB3	7:G:129:LEU:HG	2.01	0.41
9:I:18:VAL:HG22	9:I:140:LEU:HD22	2.01	0.41
12:L:32:GLY:HA2	12:L:103:TYR:O	2.20	0.41
16:P:23:TYR:CE1	53:27:533:G:H4'	2.56	0.41
20:T:48:VAL:O	20:T:48:VAL:HG13	2.20	0.41
22:V:37:ARG:HD2	53:27:2387:U:H1'	2.01	0.41
26:Z:1:MET:O	26:Z:3:LYS:N	2.53	0.41
27:1:10:SER:O	27:1:14:MET:HG2	2.20	0.41
31:5:19:ARG:NH2	31:5:26:ILE:HD11	2.36	0.41
32:6:12:GLY:H	32:6:14:HIS:CE1	2.38	0.41
37:11:61:PHE:CE2	37:11:65:LEU:HD22	2.56	0.41
43:17:49:GLU:O	43:17:51:GLN:N	2.53	0.41
48:22:38:ILE:HD12	48:22:62:ARG:HH22	1.85	0.41
48:22:59:LYS:HD3	52:26:734:G:O2'	2.21	0.41
50:24:36:ALA:O	50:24:39:GLU:HB2	2.20	0.41
52:26:51:A:H4'	52:26:52:C:C5'	2.50	0.41
52:26:768:A:H4'	52:26:1523:G:H21	1.83	0.41
52:26:922:G:H2'	52:26:923:A:H8	1.86	0.41
52:26:957:U:H2'	52:26:959:A:OP2	2.21	0.41
52:26:1460:C:H2'	52:26:1461:G:H8	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:149:A:O2'	53:27:150:U:H5'	2.21	0.41
53:27:381:G:O2'	53:27:382:A:H5'	2.21	0.41
53:27:571:U:C4	53:27:2030:A:C6	3.09	0.41
53:27:821:A:H4'	53:27:822:G:H5"	2.03	0.41
53:27:921:C:O2'	53:27:922:C:H5'	2.20	0.41
53:27:1064:C:H2'	53:27:1065:U:O4'	2.20	0.41
53:27:1277:G:H2'	53:27:1278:C:O4'	2.21	0.41
53:27:1319:C:O2'	53:27:1320:C:H5'	2.20	0.41
53:27:1429:G:O2'	53:27:1430:G:H5'	2.21	0.41
53:27:1696:G:C6	53:27:1697:G:C4	3.09	0.41
53:27:1930:G:O2'	53:27:1931:U:C6	2.73	0.41
53:27:2330:G:H2'	53:27:2331:G:O4'	2.21	0.41
53:27:2633:G:H5'	53:27:2811:G:O2'	2.21	0.41
54:28:97:C:C2'	54:28:98:G:H5'	2.51	0.41
56:30:12:U:C2	56:30:13:C:H1'	2.55	0.41
58:32:9:G:H5"	58:32:11:A:C8	2.56	0.41
58:32:26:G:N7	58:32:44:A:C2	2.89	0.41
58:32:35:A:H2'	58:32:36:U:O4'	2.20	0.41
59:33:77:ARG:NH1	59:33:99:VAL:HG23	2.34	0.41
59:33:104:VAL:O	59:33:107:ILE:HG12	2.21	0.41
59:33:624:PHE:CD2	59:33:644:LEU:HD13	2.56	0.41
1:A:15:VAL:HG22	1:A:204:LEU:O	2.21	0.41
1:A:158:GLY:HA3	53:27:1820:U:C4	2.55	0.41
2:B:164:GLN:OE1	2:B:165:MET:N	2.54	0.41
3:C:18:THR:HG22	3:C:19:PHE:CD1	2.56	0.41
3:C:88:ARG:O	3:C:89:PRO:C	2.56	0.41
6:F:31:VAL:HA	6:F:36:ALA:O	2.21	0.41
8:H:72:THR:OG1	8:H:115:ASP:HB2	2.21	0.41
11:K:141:LYS:HE2	11:K:143:GLU:HB3	2.02	0.41
12:L:59:ARG:NE	59:33:736:ILE:HD12	2.36	0.41
12:L:63:ILE:CG2	12:L:64:TRP:H	2.34	0.41
13:M:93:GLY:HA2	53:27:2838:G:N2	2.36	0.41
16:P:36:GLN:NE2	53:27:563:A:C2'	2.82	0.41
31:5:30:GLU:HB2	31:5:33:HIS:CE1	2.56	0.41
32:6:113:LEU:O	32:6:117:GLU:HB2	2.21	0.41
33:7:35:ASP:O	33:7:38:VAL:HG22	2.21	0.41
35:9:113:VAL:HG13	35:9:114:LEU:N	2.36	0.41
36:10:55:HIS:O	36:10:56:LYS:HB2	2.21	0.41
36:10:71:ILE:HD12	36:10:71:ILE:HA	1.87	0.41
37:11:78:ARG:HD3	52:26:1382:C:C1'	2.50	0.41
38:12:88:LYS:HG3	38:12:89:ASP:N	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:14:53:ILE:HD11	44:18:84:ARG:NH2	2.35	0.41
41:15:30:ILE:HD12	52:26:705:G:N2	2.34	0.41
44:18:66:THR:CG2	44:18:82:LYS:HD3	2.50	0.41
47:21:39:ARG:NH1	52:26:280:C:H1'	2.34	0.41
50:24:54:GLN:NE2	52:26:192:A:N3	2.64	0.41
52:26:60:A:P	52:26:60:A:H8	2.44	0.41
52:26:64:G:H4'	52:26:65:A:H3'	2.02	0.41
52:26:201:G:H2'	52:26:202:G:C8	2.56	0.41
52:26:246:A:H4'	52:26:247:G:OP1	2.20	0.41
52:26:903:G:C6	52:26:904:U:C4	3.09	0.41
52:26:1329:A:C2'	52:26:1330:U:H5'	2.51	0.41
53:27:56:A:O2'	53:27:57:C:H5'	2.20	0.41
53:27:246:C:O2'	53:27:385:C:H4'	2.21	0.41
53:27:325:G:H2'	53:27:326:G:C8	2.56	0.41
53:27:411:G:OP2	53:27:2407:A:OP2	2.39	0.41
53:27:876:C:C2'	53:27:877:A:H5'	2.50	0.41
53:27:1082:U:H3'	53:27:1083:U:H5"	2.03	0.41
53:27:1097:U:H2'	53:27:1098:A:C5'	2.50	0.41
53:27:1209:U:H2'	53:27:1210:G:H21	1.85	0.41
53:27:1376:C:H2'	53:27:1377:G:O4'	2.20	0.41
53:27:1967:C:O2'	53:27:1968:G:H5'	2.21	0.41
53:27:2060:A:N6	53:27:2502:G:N3	2.69	0.41
53:27:2211:A:H5'	53:27:2212:A:OP2	2.20	0.41
53:27:2382:G:H5'	53:27:2383:G:OP1	2.20	0.41
53:27:2631:G:C2'	53:27:2632:A:H5'	2.51	0.41
58:32:33:U:H2'	58:32:36:U:OP2	2.20	0.41
59:33:670:ARG:HG3	59:33:711:ASP:OD1	2.21	0.41
59:33:712:MET:HG3	59:33:714:ILE:HG23	2.02	0.41
1:A:45:ASN:O	53:27:773:U:H5"	2.21	0.41
1:A:73:ILE:HA	1:A:74:PRO:HD3	1.93	0.41
2:B:4:LEU:HD22	2:B:101:PHE:HE2	1.85	0.41
3:C:165:HIS:CD2	3:C:165:HIS:C	2.94	0.41
4:D:56:LEU:HD23	4:D:56:LEU:HA	1.93	0.41
4:D:169:LEU:HB2	4:D:176:PHE:CZ	2.56	0.41
5:E:136:ASP:OD2	5:E:139:VAL:HG23	2.21	0.41
8:H:82:ALA:HB1	8:H:104:GLN:CD	2.40	0.41
10:J:35:VAL:HG13	10:J:106:GLU:HG3	2.03	0.41
14:N:88:LYS:HE2	14:N:116:GLN:HG3	2.01	0.41
14:N:102:ARG:N	54:28:49:C:OP1	2.48	0.41
15:O:23:ASP:OD1	15:O:89:GLY:N	2.54	0.41
15:O:94:ALA:HB2	53:27:2848:G:H8	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:5:ARG:HD3	53:27:1250:G:H5”	2.02	0.41
16:P:106:THR:O	16:P:110:GLU:HG2	2.21	0.41
21:U:25:LYS:HB3	21:U:41:GLU:OE2	2.21	0.41
32:6:11:ALA:CB	32:6:211:LEU:HD21	2.51	0.41
35:9:26:GLY:O	52:26:1194:U:C5’	2.68	0.41
36:10:90:MET:CG	36:10:91:ARG:H	2.22	0.41
38:12:3:GLN:HE22	52:26:755:G:H21	1.68	0.41
39:13:6:TYR:CZ	52:26:1147:C:H4’	2.55	0.41
41:15:33:ILE:O	41:15:41:LEU:HB2	2.21	0.41
44:18:53:ASP:O	44:18:54:SER:OG	2.32	0.41
45:19:44:GLU:O	45:19:45:HIS:HB2	2.20	0.41
47:21:45:VAL:HG13	47:21:72:TRP:O	2.20	0.41
47:21:59:GLU:C	47:21:60:ILE:HG13	2.41	0.41
52:26:70:U:H4’	52:26:71:A:H8	1.86	0.41
52:26:443:C:O2’	52:26:444:G:H5’	2.21	0.41
52:26:558:G:C4	52:26:559:A:C2	3.09	0.41
52:26:1196:A:H2’	52:26:1196:A:N3	2.35	0.41
52:26:1489:G:C6	52:26:1490:U:C4	3.09	0.41
52:26:1522:U:O2’	52:26:1523:G:H5’	2.20	0.41
53:27:74:A:H4’	53:27:75:G:O5’	2.20	0.41
53:27:176:A:HO2’	53:27:177:G:H5’	1.85	0.41
53:27:607:U:O4	53:27:619:G:H2’	2.21	0.41
53:27:628:G:O2’	53:27:629:G:H5’	2.21	0.41
53:27:654:A:H3’	53:27:654:A:N3	2.34	0.41
53:27:786:C:H2’	53:27:787:C:H6	1.85	0.41
53:27:1384:A:H2’	53:27:1385:A:C5’	2.51	0.41
53:27:1385:A:C6	53:27:1403:A:C6	3.08	0.41
53:27:1584:U:O5’	53:27:1584:U:H6	2.03	0.41
53:27:1672:A:C6	53:27:1673:G:C6	3.09	0.41
53:27:1788:C:O2’	53:27:1789:A:H5’	2.21	0.41
53:27:1941:C:O2	53:27:1941:C:H2’	2.21	0.41
53:27:2116:G:H1	53:27:2165:C:C1’	2.33	0.41
53:27:2364:C:O2’	53:27:2365:G:H5’	2.21	0.41
53:27:2469:A:C2’	53:27:2470:G:H5’	2.49	0.41
53:27:2510:C:H2’	53:27:2511:U:C6	2.56	0.41
54:28:39:A:C2	54:28:44:G:C2	3.09	0.41
56:30:13:C:H2’	56:30:13:C:O2	2.20	0.41
59:33:63:VAL:HG12	59:33:80:LEU:N	2.36	0.41
59:33:138:MET:C	59:33:140:LEU:N	2.74	0.41
59:33:594:ASN:CG	59:33:595:GLY:H	2.23	0.41
1:A:51:ARG:H	1:A:51:ARG:HG2	1.61	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:65:ASP:OD2	1:A:68:ARG:HD2	2.20	0.41
1:A:216:ARG:HG2	1:A:216:ARG:HH11	1.85	0.41
2:B:148:GLN:O	53:27:2052:A:H4'	2.21	0.41
3:C:1:MET:N	3:C:13:THR:HG23	2.36	0.41
3:C:126:VAL:HG22	3:C:127:GLU:N	2.36	0.41
4:D:37:MET:CE	4:D:151:LEU:HB3	2.50	0.41
4:D:104:THR:HA	26:Z:38:SER:CB	2.50	0.41
5:E:4:ALA:HB2	5:E:65:GLY:N	2.35	0.41
5:E:94:ARG:HB2	5:E:105:SER:HB2	2.02	0.41
5:E:146:ASP:O	5:E:149:ALA:HB3	2.21	0.41
5:E:154:GLU:HG3	5:E:157:LYS:N	2.35	0.41
7:G:88:HIS:N	7:G:89:PRO:CD	2.76	0.41
8:H:73:PRO:O	8:H:112:LYS:HD3	2.21	0.41
8:H:92:PRO:HD3	53:27:1063:G:H21	1.86	0.41
10:J:22:ILE:HG13	10:J:40:LYS:O	2.21	0.41
10:J:47:ILE:HA	10:J:48:PRO:HD3	1.91	0.41
11:K:57:LEU:HA	11:K:60:ARG:HE	1.86	0.41
12:L:25:ASP:O	12:L:27:SER:N	2.54	0.41
12:L:101:VAL:O	12:L:102:LEU:HD23	2.21	0.41
13:M:69:ARG:C	13:M:71:ARG:H	2.23	0.41
13:M:102:PHE:HA	13:M:108:ALA:O	2.20	0.41
15:O:97:TYR:HB2	53:27:2718:G:OP1	2.21	0.41
19:S:14:PRO:HA	19:S:32:LEU:HB3	2.03	0.41
20:T:47:PRO:HB2	20:T:53:GLN:HB2	2.03	0.41
21:U:19:ARG:NH1	54:28:94:A:OP1	2.54	0.41
22:V:21:ARG:HA	22:V:21:ARG:HD3	1.89	0.41
25:Y:16:LEU:HB2	25:Y:19:HIS:CD2	2.56	0.41
27:1:40:HIS:HA	27:1:48:TYR:OH	2.21	0.41
27:1:43:THR:OG1	27:1:47:TYR:N	2.53	0.41
33:7:49:ALA:HB1	33:7:75:VAL:HG22	2.02	0.41
33:7:121:SER:O	33:7:125:ARG:NH1	2.54	0.41
34:8:21:LYS:HE3	52:26:429:U:O2'	2.20	0.41
34:8:55:ARG:NE	34:8:55:ARG:HA	2.35	0.41
34:8:57:LYS:HA	34:8:199:ILE:CD1	2.51	0.41
34:8:122:ILE:HG22	34:8:142:VAL:CG2	2.51	0.41
34:8:124:VAL:HG23	34:8:141:VAL:O	2.20	0.41
34:8:197:HIS:O	34:8:200:VAL:HB	2.21	0.41
35:9:82:HIS:O	35:9:83:PRO:C	2.59	0.41
35:9:131:ASN:HA	35:9:132:PRO:HD2	1.87	0.41
36:10:38:ARG:HA	36:10:38:ARG:HD2	1.85	0.41
36:10:38:ARG:HH21	36:10:40:GLU:HB2	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:10:85:ILE:O	36:10:86:ARG:HB3	2.21	0.41
37:11:13:PRO:HB3	37:11:20:GLU:HB3	2.03	0.41
37:11:21:LEU:CD1	37:11:96:ASN:HD22	2.33	0.41
37:11:74:VAL:O	37:11:74:VAL:HG23	2.21	0.41
38:12:6:ILE:HD13	38:12:6:ILE:N	2.36	0.41
39:13:10:ARG:O	39:13:105:ARG:CZ	2.69	0.41
41:15:29:THR:OG1	41:15:46:ALA:HB2	2.20	0.41
42:16:20:VAL:N	42:16:21:PRO:HD3	2.36	0.41
43:17:3:ILE:HG12	43:17:7:ASN:CB	2.50	0.41
44:18:92:ILE:HA	44:18:93:PRO:HD3	1.94	0.41
46:20:68:SER:HB3	46:20:71:VAL:HG23	2.02	0.41
47:21:39:ARG:HA	47:21:39:ARG:HD3	1.93	0.41
47:21:43:LEU:HD13	47:21:72:TRP:CE2	2.56	0.41
47:21:57:VAL:HG12	47:21:58:VAL:N	2.35	0.41
49:23:60:PHE:CZ	59:33:651:ARG:HG2	2.56	0.41
49:23:61:VAL:HA	49:23:65:MET:SD	2.61	0.41
50:24:11:ILE:HG13	50:24:12:GLN:N	2.36	0.41
50:24:38:ILE:HD13	50:24:81:GLN:HB3	2.03	0.41
50:24:68:LYS:O	50:24:71:ALA:HB3	2.21	0.41
50:24:79:THR:HA	50:24:82:ILE:HG12	2.01	0.41
51:25:32:ARG:CG	51:25:33:ARG:N	2.84	0.41
51:25:46:ARG:HA	51:25:46:ARG:HD3	1.86	0.41
52:26:54:C:C4	52:26:352:C:C5	3.09	0.41
52:26:116:A:H2'	52:26:117:G:O4'	2.21	0.41
52:26:129:A:O2'	52:26:130:A:H5"	2.20	0.41
52:26:248:C:O2'	52:26:249:U:H5'	2.21	0.41
52:26:519:C:C4	52:26:520:A:C5	3.09	0.41
52:26:635:A:H2'	52:26:636:U:H6	1.86	0.41
52:26:792:A:H1'	52:26:794:A:N7	2.36	0.41
52:26:818:G:H2'	52:26:820:U:C5	2.55	0.41
52:26:892:A:H2'	52:26:893:C:C6	2.55	0.41
52:26:930:C:O2	52:26:1387:G:N2	2.52	0.41
52:26:1168:U:H3'	52:26:1168:U:OP2	2.21	0.41
52:26:1203:C:H2'	52:26:1204:A:H8	1.86	0.41
52:26:1234:C:O2'	52:26:1235:U:H5'	2.21	0.41
52:26:1303:C:O2	52:26:1303:C:H2'	2.21	0.41
52:26:1424:U:H2'	52:26:1425:U:O4'	2.20	0.41
53:27:440:C:H2'	53:27:441:U:H6	1.85	0.41
53:27:510:C:H2'	53:27:511:U:C6	2.56	0.41
53:27:531:C:H5"	53:27:532:A:C5	2.55	0.41
53:27:644:A:H2'	53:27:645:C:C4'	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:818:G:O2'	53:27:819:A:H5"	2.20	0.41
53:27:818:G:H2'	53:27:1187:G:N2	2.36	0.41
53:27:1438:U:O2'	53:27:1439:A:H5'	2.21	0.41
53:27:1537:G:N3	53:27:1537:G:H5"	2.36	0.41
53:27:1655:A:C8	53:27:1656:C:C5	3.09	0.41
53:27:1789:A:O2'	53:27:1790:C:H5'	2.20	0.41
53:27:1791:A:C2	53:27:1829:A:O4'	2.73	0.41
53:27:2079:U:C3'	53:27:2080:A:H5"	2.51	0.41
53:27:2089:C:H2'	53:27:2090:A:C8	2.55	0.41
53:27:2186:G:C2'	53:27:2187:U:H5'	2.51	0.41
53:27:2212:A:H4'	53:27:2213:U:O4	2.21	0.41
53:27:2244:U:H2'	53:27:2245:U:O4'	2.20	0.41
53:27:2549:G:C6	53:27:2560:A:C6	3.09	0.41
53:27:2641:G:H2'	53:27:2642:G:C8	2.53	0.41
53:27:2643:G:C6	53:27:2644:G:C5	3.09	0.41
54:28:14:U:OP2	54:28:71:C:H5'	2.20	0.41
54:28:82:U:H2'	54:28:83:G:C8	2.55	0.41
56:30:42:C:H5'	56:30:42:C:H6	1.85	0.41
56:30:73:A:C2	56:30:74:C:C4	3.09	0.41
57:31:42:G:O2'	57:31:43:A:H5'	2.21	0.41
59:33:35:LEU:N	59:33:35:LEU:HD12	2.36	0.41
59:33:81:LEU:HD23	59:33:84:LEU:HD22	2.03	0.41
59:33:405:ARG:HE	59:33:417:ASP:HB3	1.85	0.41
59:33:570:GLU:HA	59:33:681:ARG:HD3	2.02	0.41
59:33:619:ASP:O	59:33:620:GLU:O	2.38	0.41
1:A:75:ALA:HB2	1:A:95:TYR:CD1	2.56	0.41
1:A:245:THR:HG21	1:A:249:VAL:HB	2.02	0.41
3:C:15:SER:HB2	3:C:18:THR:OG1	2.21	0.41
3:C:29:HIS:O	3:C:32:VAL:HG12	2.21	0.41
5:E:171:LYS:HZ2	53:27:2529:G:P	2.44	0.41
7:G:87:GLU:OE2	7:G:96:PHE:HB2	2.21	0.41
12:L:2:LEU:HD12	12:L:2:LEU:HA	1.93	0.41
13:M:40:LYS:HE3	53:27:1651:G:OP1	2.20	0.41
15:O:28:LYS:HB3	15:O:39:LEU:HD11	2.03	0.41
22:V:62:LYS:HG2	22:V:63:VAL:H	1.86	0.41
23:W:29:LEU:HA	23:W:30:PRO:HD2	1.91	0.41
27:1:8:THR:HB	53:27:2020:A:H5'	2.03	0.41
33:7:78:LYS:HG2	33:7:79:LYS:HD3	2.03	0.41
34:8:36:ALA:CA	34:8:41:GLY:HA3	2.44	0.41
34:8:171:GLU:HB2	34:8:180:THR:O	2.21	0.41
35:9:156:ARG:C	35:9:158:LYS:H	2.24	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:10:9:MET:HG2	36:10:59:TYR:CE1	2.56	0.41
36:10:15:SER:HG	36:10:58:HIS:CG	2.39	0.41
36:10:54:LEU:HD12	36:10:54:LEU:C	2.41	0.41
38:12:46:GLU:HB3	38:12:61:THR:CG2	2.51	0.41
38:12:74:ILE:HG13	38:12:128:VAL:HA	2.03	0.41
40:14:40:ILE:HA	40:14:41:PRO:HD2	1.76	0.41
41:15:20:ALA:HA	41:15:33:ILE:HA	2.02	0.41
44:18:87:ALA:CA	44:18:92:ILE:HD13	2.50	0.41
47:21:16:MET:HE2	47:21:19:SER:CB	2.50	0.41
49:23:6:LYS:HA	49:23:6:LYS:HD3	1.80	0.41
50:24:29:THR:O	50:24:33:LYS:HG2	2.21	0.41
51:25:58:LYS:HG3	51:25:59:LEU:HD12	2.03	0.41
52:26:300:A:O5’	52:26:300:A:H8	2.04	0.41
52:26:835:U:C3’	52:26:836:G:H5”	2.50	0.41
52:26:848:C:C2’	52:26:849:G:H5”	2.52	0.41
52:26:1005:A:H4’	52:26:1037:C:O2’	2.21	0.41
53:27:53:A:C8	53:27:54:G:C8	3.09	0.41
53:27:189:G:C4	53:27:205:G:N2	2.89	0.41
53:27:228:C:H4’	53:27:229:C:C6	2.56	0.41
53:27:558:U:H2’	53:27:559:G:C8	2.56	0.41
53:27:882:G:H2’	53:27:883:G:H5”	2.02	0.41
53:27:896:A:H5”	53:27:897:C:OP2	2.22	0.41
53:27:1065:U:H2’	53:27:1066:U:O4’	2.21	0.41
53:27:1130:U:O2’	53:27:1131:G:P	2.79	0.41
53:27:1803:A:N6	53:27:1814:G:H1’	2.36	0.41
53:27:2716:C:H2’	53:27:2717:C:H6	1.86	0.41
53:27:2804:U:H2’	53:27:2805:C:C6	2.56	0.41
53:27:2837:A:H2’	53:27:2838:G:C8	2.48	0.41
54:28:49:C:H2’	54:28:50:A:C8	2.56	0.41
57:31:62:C:H2’	57:31:63:G:C8	2.56	0.41
59:33:239:GLU:HB2	59:33:299:HIS:HE1	1.86	0.41
59:33:281:ILE:CG1	59:33:338:ILE:HG23	2.49	0.41
59:33:292:ALA:O	59:33:295:ILE:HG12	2.21	0.41
1:A:52:HIS:CD2	53:27:1824:G:OP2	2.74	0.40
3:C:189:THR:HG22	3:C:191:ASP:N	2.32	0.40
4:D:19:PHE:HB2	4:D:21:TYR:CZ	2.56	0.40
4:D:74:ALA:C	4:D:77:LYS:H	2.24	0.40
5:E:76:ILE:O	5:E:80:GLU:N	2.55	0.40
5:E:120:ILE:HG22	5:E:121:THR:N	2.36	0.40
5:E:120:ILE:HG21	5:E:140:ILE:HG22	2.03	0.40
7:G:22:ALA:O	7:G:119:PRO:HD3	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:53:ARG:HA	7:G:53:ARG:HD3	1.88	0.40
11:K:78:ARG:HH11	53:27:626:A:H2'	1.86	0.40
11:K:95:LEU:HB2	11:K:101:ILE:HD11	2.03	0.40
16:P:81:GLY:O	16:P:85:ALA:N	2.51	0.40
19:S:2:ILE:O	19:S:3:ARG:C	2.60	0.40
19:S:34:VAL:HG21	19:S:43:ILE:HD11	2.03	0.40
21:U:26:PHE:O	21:U:26:PHE:CG	2.74	0.40
22:V:66:GLU:HB2	22:V:75:PHE:HB2	2.03	0.40
32:6:102:ASN:O	32:6:106:VAL:HG23	2.21	0.40
34:8:76:LYS:O	34:8:79:ALA:HB3	2.22	0.40
35:9:42:ASN:HA	35:9:75:LEU:HD21	2.03	0.40
37:11:78:ARG:HB3	37:11:83:THR:HG23	2.03	0.40
39:13:33:SER:O	39:13:36:GLN:HG2	2.21	0.40
40:14:67:ILE:HG23	44:18:94:GLY:O	2.21	0.40
43:17:26:LYS:O	43:17:29:SER:HB3	2.20	0.40
46:20:56:ARG:HD2	46:20:56:ARG:HA	1.89	0.40
52:26:11:G:H2'	52:26:12:U:O4'	2.21	0.40
52:26:86:G:H21	52:26:87:C:H42	1.70	0.40
52:26:125:U:H2'	52:26:126:G:C8	2.56	0.40
52:26:201:G:O2'	52:26:469:C:O2'	2.39	0.40
53:27:219:A:H5'	53:27:220:G:OP2	2.21	0.40
53:27:265:A:H4'	53:27:266:G:OP1	2.21	0.40
53:27:820:A:H2'	53:27:821:A:O4'	2.21	0.40
53:27:1264:A:N7	53:27:1265:A:C5	2.90	0.40
53:27:1648:U:H5"	53:27:1648:U:H6	1.86	0.40
53:27:2114:A:H62	53:27:2115:G:H21	1.68	0.40
53:27:2197:U:O3'	53:27:2198:A:H2'	2.21	0.40
53:27:2230:G:H2'	53:27:2231:U:H6	1.80	0.40
53:27:2626:C:H2'	53:27:2627:G:H8	1.86	0.40
53:27:2679:A:H2'	53:27:2680:U:H6	1.86	0.40
53:27:2784:U:H2'	53:27:2785:C:C6	2.54	0.40
53:27:2884:U:O2	53:27:2884:U:C3'	2.65	0.40
54:28:118:C:H2'	54:28:119:A:C8	2.56	0.40
59:33:110:VAL:HG13	59:33:152:LYS:HD3	2.04	0.40
59:33:286:LEU:HA	59:33:289:CYS:SG	2.61	0.40
59:33:673:ALA:HB3	59:33:679:LEU:HD21	2.03	0.40
1:A:49:THR:HB	53:27:1805:A:N3	2.36	0.40
3:C:130:LYS:NZ	53:27:320:A:OP1	2.53	0.40
4:D:72:SER:HB2	4:D:80:GLN:N	2.34	0.40
4:D:169:LEU:HB2	4:D:176:PHE:HZ	1.86	0.40
9:I:17:VAL:N	9:I:138:GLN:O	2.48	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:33:ARG:HD3	11:K:40:SER:O	2.21	0.40
12:L:30:SER:N	12:L:106:ASP:HB3	2.29	0.40
12:L:53:MET:CE	12:L:63:ILE:HG21	2.51	0.40
14:N:95:SER:HB2	14:N:97:PHE:CD2	2.56	0.40
15:O:29:VAL:HG22	15:O:80:VAL:HA	2.02	0.40
15:O:105:LYS:HD3	52:26:1433:A:OP1	2.21	0.40
18:R:25:ARG:NH1	53:27:519:U:H5"	2.37	0.40
18:R:25:ARG:HG2	18:R:74:ILE:HG22	2.03	0.40
24:X:47:ARG:HD2	53:27:73:A:OP2	2.22	0.40
30:4:40:LYS:NZ	53:27:2419:U:OP1	2.52	0.40
39:13:11:ARG:H	39:13:77:ALA:HA	1.85	0.40
39:13:93:LEU:O	39:13:96:GLU:HB3	2.21	0.40
42:16:47:ALA:C	42:16:48:LEU:HD12	2.41	0.40
42:16:57:THR:OG1	52:26:362:G:OP1	2.39	0.40
43:17:57:ASP:C	43:17:57:ASP:OD1	2.60	0.40
47:21:38:LYS:HD3	52:26:585:G:OP1	2.21	0.40
48:22:52:ARG:HH21	52:26:664:G:P	2.44	0.40
51:25:17:ARG:HH12	51:25:20:ARG:HE	1.69	0.40
52:26:88:U:H2'	52:26:89:U:O4'	2.22	0.40
52:26:174:A:C2'	52:26:175:C:H5'	2.52	0.40
52:26:284:C:H2'	52:26:285:C:C6	2.56	0.40
52:26:440:C:H2'	52:26:441:A:O4'	2.22	0.40
52:26:891:U:H2'	52:26:892:A:C8	2.51	0.40
53:27:197:A:OP1	53:27:198:C:OP2	2.39	0.40
53:27:275:C:C2'	53:27:276:U:H4'	2.26	0.40
53:27:740:C:O2'	53:27:741:U:H5'	2.22	0.40
53:27:818:G:C2'	53:27:819:A:H5"	2.51	0.40
53:27:941:A:H2'	53:27:942:G:O4'	2.22	0.40
53:27:947:A:H2'	53:27:948:C:O4'	2.20	0.40
53:27:1275:A:H4'	53:27:1276:A:O5'	2.21	0.40
53:27:1331:G:C2'	53:27:1332:G:C5'	2.99	0.40
53:27:1469:A:H2'	53:27:1470:A:C8	2.56	0.40
53:27:1659:G:C3'	53:27:1660:G:H5"	2.51	0.40
53:27:2080:A:C5	53:27:2081:U:C4	3.09	0.40
53:27:2165:C:H6	53:27:2165:C:O5'	2.04	0.40
53:27:2296:U:C5'	53:27:2297:A:OP1	2.64	0.40
53:27:2453:A:O2'	53:27:2454:G:H5'	2.21	0.40
53:27:2520:C:O2'	53:27:2521:C:H5'	2.21	0.40
53:27:2673:G:H2'	53:27:2674:G:C8	2.55	0.40
53:27:2715:C:O5'	53:27:2715:C:H6	2.04	0.40
53:27:2762:C:H5'	53:27:2763:G:OP2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2809:A:H3'	53:27:2810:A:C8	2.56	0.40
54:28:56:G:H4'	54:28:57:A:C8	2.56	0.40
57:31:11:A:O2'	57:31:12:G:H5'	2.21	0.40
57:31:64:G:H2'	57:31:65:C:C6	2.56	0.40
59:33:326:VAL:CG2	59:33:334:VAL:CG1	2.99	0.40
59:33:626:THR:HG23	59:33:632:SER:HB2	2.03	0.40
1:A:124:LYS:HB3	1:A:127:ASN:HD21	1.87	0.40
2:B:130:GLN:HE22	53:27:2578:G:N2	2.19	0.40
3:C:145:ASP:OD2	3:C:183:PHE:HA	2.21	0.40
4:D:32:LYS:HD3	4:D:91:ARG:NH2	2.36	0.40
4:D:140:ILE:HG22	4:D:142:TYR:H	1.86	0.40
7:G:79:PRO:O	7:G:80:THR:OG1	2.33	0.40
7:G:107:GLU:O	7:G:108:VAL:HB	2.22	0.40
12:L:59:ARG:CZ	59:33:736:ILE:HD12	2.52	0.40
14:N:77:ALA:O	14:N:81:ARG:HG3	2.22	0.40
15:O:13:LYS:HE3	15:O:76:HIS:HA	2.04	0.40
18:R:8:ARG:HE	18:R:102:HIS:CE1	2.39	0.40
19:S:10:VAL:HG21	19:S:42:GLU:HG2	2.03	0.40
19:S:13:ALA:HB1	24:X:33:ALA:HB1	2.03	0.40
21:U:76:ASP:H	21:U:90:ASP:HB2	1.86	0.40
24:X:39:GLN:HG3	24:X:41:HIS:HE1	1.86	0.40
24:X:48:ARG:HD3	24:X:48:ARG:HA	1.90	0.40
28:2:9:LYS:O	28:2:51:ALA:HB3	2.21	0.40
31:5:36:ARG:HG2	31:5:36:ARG:HH11	1.85	0.40
33:7:150:VAL:O	33:7:166:TRP:HA	2.22	0.40
33:7:171:ARG:HG3	52:26:1107:C:OP1	2.21	0.40
37:11:91:ARG:CG	37:11:92:PRO:HD2	2.51	0.40
39:13:49:GLN:N	39:13:50:PRO:HD2	2.36	0.40
40:14:6:ILE:N	40:14:76:ILE:O	2.54	0.40
41:15:20:ALA:CB	41:15:33:ILE:HG12	2.50	0.40
46:20:16:PHE:CZ	52:26:625:U:H4'	2.55	0.40
47:21:62:GLU:OE2	52:26:128:G:H1'	2.21	0.40
50:24:22:SER:OG	50:24:23:ARG:N	2.54	0.40
50:24:74:HIS:O	50:24:78:LEU:HB2	2.21	0.40
52:26:75:G:H2'	52:26:76:G:H8	1.83	0.40
52:26:357:G:C2	52:26:358:U:C5	3.09	0.40
52:26:478:A:H2'	52:26:479:U:C5'	2.51	0.40
52:26:872:A:C5	52:26:874:G:C8	3.09	0.40
52:26:1284:C:H3'	52:26:1285:A:C8	2.57	0.40
52:26:1415:G:C2	52:26:1416:G:C8	3.10	0.40
53:27:216:A:C8	53:27:432:A:C6	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:431:U:O2'	53:27:432:A:H5'	2.21	0.40
53:27:1221:C:O2	53:27:1221:C:H2'	2.21	0.40
53:27:1268:A:H2'	53:27:1269:A:H8	1.86	0.40
53:27:1287:A:H2'	53:27:1288:G:H5'	2.04	0.40
53:27:1430:G:H2'	53:27:1431:A:H8	1.87	0.40
53:27:1761:C:C5	53:27:1762:A:C6	3.10	0.40
53:27:1777:U:C2	53:27:1778:U:C5	3.10	0.40
53:27:1805:A:H2'	53:27:1806:C:C6	2.56	0.40
53:27:1868:C:H2'	53:27:1869:G:C4'	2.51	0.40
53:27:1869:G:H2'	53:27:1871:A:C2	2.56	0.40
53:27:2391:G:H4'	53:27:2392:A:OP1	2.21	0.40
53:27:2700:A:H2'	53:27:2701:U:C6	2.56	0.40
53:27:2796:U:H6	53:27:2796:U:H3'	1.86	0.40
53:27:2796:U:O2	53:27:2801:G:N1	2.53	0.40
53:27:2836:U:H6	53:27:2836:U:O5'	2.04	0.40
53:27:2842:G:H2'	53:27:2843:G:H8	1.85	0.40
57:31:17:C:H2'	57:31:17(A):U:C5	2.57	0.40
2:B:142:VAL:HB	2:B:143:PRO:HD2	2.03	0.40
3:C:121:VAL:O	3:C:190:ALA:N	2.55	0.40
4:D:38:GLY:HA2	4:D:85:GLY:HA3	2.04	0.40
7:G:60:LEU:HA	7:G:64:VAL:HG23	2.04	0.40
11:K:116:VAL:HG22	11:K:117:THR:H	1.86	0.40
12:L:38:ARG:HB2	12:L:98:PRO:HD3	2.02	0.40
16:P:111:LYS:NZ	17:Q:50:GLY:O	2.44	0.40
21:U:18:ARG:HG3	21:U:18:ARG:HH11	1.85	0.40
21:U:35:GLU:H	21:U:35:GLU:CD	2.24	0.40
30:4:25:HIS:HB2	30:4:43:LEU:O	2.21	0.40
32:6:49:PHE:HD1	32:6:199:ILE:HG21	1.87	0.40
33:7:173:PRO:HB2	33:7:176:THR:CB	2.52	0.40
35:9:49:TYR:O	35:9:62:ALA:HB2	2.21	0.40
36:10:7:VAL:HA	36:10:60:VAL:O	2.21	0.40
39:13:11:ARG:HH11	39:13:12:LYS:HB2	1.87	0.40
42:16:76:HIS:O	42:16:77:SER:HB2	2.20	0.40
45:19:63:ARG:HA	45:19:63:ARG:HD2	1.84	0.40
46:20:22:ALA:HA	46:20:33:ILE:HD12	2.02	0.40
46:20:60:TRP:O	46:20:64:GLY:N	2.55	0.40
50:24:23:ARG:HB2	50:24:65:LEU:HD22	2.03	0.40
52:26:36:C:H2'	52:26:37:U:O4'	2.22	0.40
52:26:211:G:H2'	52:26:212:G:C5'	2.52	0.40
52:26:256:U:H2'	52:26:257:G:C8	2.56	0.40
52:26:865:A:H2'	52:26:866:C:O4'	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1038:C:H2'	52:26:1039:G:H8	1.83	0.40
52:26:1045:C:H2'	52:26:1046:A:O4'	2.22	0.40
52:26:1097:C:H2'	52:26:1098:C:O4'	2.21	0.40
52:26:1388:C:H2'	52:26:1389:C:C6	2.55	0.40
53:27:30:G:H2'	53:27:31:C:O4'	2.22	0.40
53:27:792:A:C3'	53:27:793:A:H5'	2.51	0.40
53:27:955:U:O2	53:27:955:U:O4'	2.40	0.40
53:27:976:G:H2'	53:27:977:G:H8	1.87	0.40
53:27:1111:A:O2'	53:27:1112:G:P	2.78	0.40
53:27:1664:A:C5	53:27:2726:A:N7	2.89	0.40
53:27:1754:A:C6	53:27:1755:A:C6	3.09	0.40
53:27:1810:A:H2'	53:27:1811:G:C4'	2.51	0.40
53:27:1846:G:C6	53:27:1847:G:N1	2.89	0.40
53:27:1891:G:H2'	53:27:1892:C:C6	2.57	0.40
53:27:2088:A:O2'	53:27:2089:C:H5'	2.22	0.40
53:27:2369:A:H2'	53:27:2370:G:C8	2.57	0.40
53:27:2396:G:C2	53:27:2421:G:C2	3.09	0.40
53:27:2472:G:O6	53:27:2476:A:H4'	2.21	0.40
53:27:2476:A:H2'	53:27:2477:U:O4'	2.22	0.40
53:27:2757:A:N3	53:27:2757:A:H2'	2.35	0.40
59:33:154:ALA:HA	59:33:157:ILE:CG1	2.52	0.40
59:33:285:ARG:CZ	59:33:288:ASP:OD1	2.70	0.40
59:33:407:TYR:HB2	59:33:415:VAL:CG1	2.52	0.40
59:33:429:TYR:CZ	59:33:436:GLY:HA3	2.57	0.40
59:33:473:ARG:O	59:33:474:ASP:C	2.59	0.40
2:B:37:VAL:HG13	2:B:48:ILE:HG22	2.02	0.40
4:D:47:LYS:HE3	4:D:47:LYS:HB2	1.94	0.40
4:D:108:PRO:HA	26:Z:41:HIS:CD2	2.57	0.40
4:D:152:ASP:OD1	4:D:153:ILE:N	2.55	0.40
6:F:2:GLN:H	6:F:2:GLN:CD	2.22	0.40
7:G:27:VAL:O	7:G:82:ILE:HA	2.22	0.40
7:G:56:ARG:H	53:27:1084:A:H5'	1.87	0.40
11:K:103:ILE:CD1	53:27:259:G:H4'	2.49	0.40
12:L:45:GLN:HE21	53:27:2485:G:C5'	2.29	0.40
13:M:33:ILE:HD12	13:M:114:GLU:OE1	2.21	0.40
22:V:51:ARG:C	22:V:53:HIS:H	2.24	0.40
23:W:36:ARG:N	53:27:2200:C:OP1	2.53	0.40
28:2:20:TYR:OH	53:27:2348:U:H5'	2.21	0.40
32:6:183:PHE:N	32:6:183:PHE:CD1	2.89	0.40
34:8:11:SER:O	34:8:16:THR:N	2.50	0.40
34:8:103:ARG:HG3	34:8:167:PRO:HG2	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:174:ALA:C	34:8:177:MET:H	2.24	0.40
35:9:60:GLN:HG3	35:9:61:LYS:N	2.37	0.40
38:12:47:ASP:OD1	38:12:48:PHE:N	2.51	0.40
39:13:20:ILE:HD11	39:13:60:LEU:HB2	2.03	0.40
39:13:48:ARG:O	39:13:51:LEU:HB2	2.22	0.40
40:14:5:ARG:CZ	40:14:79:PRO:HG3	2.51	0.40
40:14:14:ASP:OD1	40:14:15:HIS:N	2.54	0.40
40:14:51:VAL:HG22	40:14:63:ASP:O	2.22	0.40
41:15:33:ILE:HG13	41:15:69:CYS:SG	2.62	0.40
46:20:60:TRP:HB3	46:20:65:ALA:HB2	2.03	0.40
47:21:26:ARG:HG2	47:21:26:ARG:HH11	1.86	0.40
49:23:32:THR:O	49:23:56:HIS:HE1	2.04	0.40
52:26:50:A:H1'	52:26:52:C:C6	2.56	0.40
52:26:232:G:H1'	52:26:262:A:N1	2.36	0.40
52:26:356:A:N3	52:26:368:U:O2'	2.47	0.40
52:26:1077:G:N2	52:26:1080:A:OP2	2.54	0.40
52:26:1420:U:O2'	52:26:1421:G:H5'	2.22	0.40
53:27:332:A:C5	53:27:335:C:C4	3.09	0.40
53:27:426:C:O2'	53:27:427:U:H5'	2.22	0.40
53:27:648:G:H2'	53:27:649:G:H8	1.87	0.40
53:27:743:A:H2'	53:27:744:U:C6	2.56	0.40
53:27:1020:A:H1'	53:27:1021:A:OP2	2.21	0.40
53:27:1186:G:C2	53:27:1187:G:H1'	2.57	0.40
53:27:1277:G:H2'	53:27:1278:C:H6	1.86	0.40
53:27:1394:U:O3'	53:27:1603:A:H5"	2.21	0.40
53:27:2116:G:C6	53:27:2165:C:H1'	2.57	0.40
53:27:2286:G:H5'	53:27:2287:A:H1'	2.03	0.40
53:27:2364:C:H2'	53:27:2365:G:C5'	2.51	0.40
58:32:14:A:C8	58:32:22:G:N2	2.89	0.40
59:33:74:ASP:CA	59:33:77:ARG:HH21	2.35	0.40
59:33:281:ILE:CG1	59:33:338:ILE:HA	2.51	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
1	A	269/273 (98%)	218 (81%)	34 (13%)	17 (6%)	1 19
2	B	207/209 (99%)	175 (84%)	25 (12%)	7 (3%)	3 31
3	C	199/201 (99%)	157 (79%)	23 (12%)	19 (10%)	0 11
4	D	175/179 (98%)	143 (82%)	23 (13%)	9 (5%)	2 23
5	E	174/177 (98%)	148 (85%)	19 (11%)	7 (4%)	3 27
6	F	147/149 (99%)	116 (79%)	20 (14%)	11 (8%)	1 16
7	G	129/165 (78%)	91 (70%)	27 (21%)	11 (8%)	1 13
8	H	139/142 (98%)	107 (77%)	21 (15%)	11 (8%)	1 15
9	I	140/142 (99%)	120 (86%)	16 (11%)	4 (3%)	4 33
10	J	120/123 (98%)	94 (78%)	19 (16%)	7 (6%)	1 21
11	K	141/144 (98%)	108 (77%)	18 (13%)	15 (11%)	0 8
12	L	134/136 (98%)	104 (78%)	17 (13%)	13 (10%)	0 11
13	M	118/127 (93%)	95 (80%)	18 (15%)	5 (4%)	3 26
14	N	114/117 (97%)	92 (81%)	16 (14%)	6 (5%)	2 22
15	O	112/115 (97%)	96 (86%)	13 (12%)	3 (3%)	5 35
16	P	115/118 (98%)	99 (86%)	13 (11%)	3 (3%)	5 35
17	Q	101/103 (98%)	74 (73%)	19 (19%)	8 (8%)	1 15
18	R	108/110 (98%)	84 (78%)	17 (16%)	7 (6%)	1 19
19	S	91/100 (91%)	76 (84%)	13 (14%)	2 (2%)	6 38
20	T	100/104 (96%)	81 (81%)	11 (11%)	8 (8%)	1 15
21	U	92/94 (98%)	75 (82%)	13 (14%)	4 (4%)	2 26
22	V	73/85 (86%)	64 (88%)	5 (7%)	4 (6%)	2 22
23	W	75/78 (96%)	65 (87%)	7 (9%)	3 (4%)	3 27
24	X	61/63 (97%)	53 (87%)	2 (3%)	6 (10%)	0 10
25	Y	56/59 (95%)	48 (86%)	4 (7%)	4 (7%)	1 17
26	Z	64/70 (91%)	49 (77%)	8 (12%)	7 (11%)	0 8
27	1	54/57 (95%)	39 (72%)	9 (17%)	6 (11%)	0 8
28	2	48/55 (87%)	39 (81%)	8 (17%)	1 (2%)	7 39
29	3	44/46 (96%)	38 (86%)	4 (9%)	2 (4%)	2 25
30	4	62/65 (95%)	49 (79%)	11 (18%)	2 (3%)	4 32

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
31	5	36/38 (95%)	28 (78%)	5 (14%)	3 (8%)	1 14
32	6	216/241 (90%)	158 (73%)	40 (18%)	18 (8%)	1 14
33	7	204/233 (88%)	174 (85%)	24 (12%)	6 (3%)	4 33
34	8	203/206 (98%)	166 (82%)	27 (13%)	10 (5%)	2 24
35	9	155/167 (93%)	119 (77%)	20 (13%)	16 (10%)	0 9
36	10	98/135 (73%)	71 (72%)	18 (18%)	9 (9%)	1 12
37	11	149/179 (83%)	125 (84%)	16 (11%)	8 (5%)	2 22
38	12	127/130 (98%)	109 (86%)	14 (11%)	4 (3%)	4 32
39	13	125/130 (96%)	93 (74%)	16 (13%)	16 (13%)	0 5
40	14	96/103 (93%)	74 (77%)	10 (10%)	12 (12%)	0 5
41	15	114/129 (88%)	89 (78%)	15 (13%)	10 (9%)	1 13
42	16	121/124 (98%)	90 (74%)	21 (17%)	10 (8%)	1 14
43	17	112/118 (95%)	89 (80%)	15 (13%)	8 (7%)	1 17
44	18	98/101 (97%)	74 (76%)	16 (16%)	8 (8%)	1 14
45	19	86/89 (97%)	73 (85%)	10 (12%)	3 (4%)	3 30
46	20	80/82 (98%)	59 (74%)	20 (25%)	1 (1%)	12 48
47	21	78/84 (93%)	57 (73%)	14 (18%)	7 (9%)	1 13
48	22	63/75 (84%)	44 (70%)	11 (18%)	8 (13%)	0 5
49	23	77/92 (84%)	62 (80%)	11 (14%)	4 (5%)	2 23
50	24	83/87 (95%)	71 (86%)	9 (11%)	3 (4%)	3 29
51	25	63/71 (89%)	36 (57%)	14 (22%)	13 (21%)	0 2
59	33	663/750 (88%)	559 (84%)	61 (9%)	43 (6%)	1 19
All	All	6509/6970 (93%)	5217 (80%)	860 (13%)	432 (7%)	2 19

All (432) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	97	ASP
1	A	107	LYS
1	A	121	ALA
1	A	143	VAL
1	A	154	ALA
3	C	61	ARG
3	C	71	GLY

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Mol	Chain	Res	Type
3	C	199	MET
5	E	45	ALA
5	E	59	ASP
5	E	117	PRO
5	E	174	LYS
6	F	2	GLN
6	F	10	ALA
6	F	54	LEU
7	G	55	VAL
7	G	88	HIS
7	G	93	ALA
8	H	18	ASN
8	H	24	GLY
9	I	81	ILE
10	J	50	GLY
10	J	89	ASN
10	J	107	LEU
10	J	110	GLU
11	K	31	GLY
11	K	38	GLN
11	K	94	THR
12	L	87	GLY
13	M	117	ASP
14	N	68	LYS
16	P	2	ARG
17	Q	54	VAL
17	Q	80	ARG
18	R	62	ASP
20	T	57	ILE
23	W	2	ARG
24	X	24	GLU
24	X	25	GLN
25	Y	13	ILE
26	Z	52	ALA
27	1	23	ALA
30	4	26	ALA
31	5	34	LYS
32	6	14	HIS
32	6	21	TYR
32	6	72	LYS
32	6	87	ASP
32	6	167	HIS

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Mol	Chain	Res	Type
33	7	156	LEU
33	7	205	GLU
34	8	47	LEU
34	8	81	LEU
34	8	150	LYS
35	9	77	ASN
35	9	99	SER
35	9	121	ASN
35	9	122	VAL
35	9	132	PRO
36	10	91	ARG
37	11	4	ARG
39	13	12	LYS
39	13	55	ASP
39	13	58	GLU
39	13	71	ILE
40	14	34	ALA
40	14	41	PRO
41	15	125	LYS
42	16	76	HIS
42	16	88	ASP
43	17	9	PRO
43	17	104	ASN
48	22	11	ARG
48	22	46	THR
50	24	67	HIS
51	25	14	ALA
51	25	32	ARG
51	25	36	PHE
51	25	65	ARG
51	25	66	ARG
59	33	72	ASP
59	33	134	ASN
59	33	135	VAL
59	33	170	GLU
59	33	469	PRO
59	33	471	PRO
59	33	484	THR
59	33	485	THR
59	33	612	CYS
59	33	620	GLU
59	33	688	ALA

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Mol	Chain	Res	Type
1	A	43	ASN
1	A	108	GLY
1	A	120	ASP
1	A	157	ALA
1	A	234	GLY
1	A	252	LYS
2	B	102	ALA
2	B	103	ASP
2	B	153	GLY
3	C	42	GLY
3	C	56	GLY
3	C	70	SER
3	C	144	GLU
3	C	165	HIS
4	D	8	LYS
4	D	20	ASN
4	D	81	GLY
4	D	175	PRO
5	E	135	ALA
6	F	3	VAL
6	F	114	GLU
6	F	118	PRO
7	G	73	LYS
7	G	107	GLU
8	H	5	GLN
8	H	8	VAL
11	K	4	ASN
11	K	36	LYS
11	K	85	VAL
12	L	15	GLY
12	L	21	ALA
12	L	59	ARG
12	L	89	VAL
13	M	59	SER
14	N	99	TYR
14	N	101	GLY
18	R	2	GLU
19	S	71	GLY
20	T	54	PRO
21	U	45	ASP
21	U	84	PRO
22	V	12	SER

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Mol	Chain	Res	Type
22	V	68	LYS
23	W	41	SER
24	X	23	ARG
26	Z	33	ASN
26	Z	50	ASP
27	1	2	VAL
27	1	17	SER
27	1	25	THR
30	4	62	PRO
31	5	11	CYS
31	5	29	ALA
32	6	20	ARG
32	6	34	ARG
32	6	123	GLY
32	6	148	GLY
32	6	157	PRO
32	6	212	TYR
34	8	24	VAL
34	8	26	ALA
34	8	29	THR
34	8	30	LYS
34	8	154	VAL
35	9	11	GLN
35	9	50	GLY
35	9	93	VAL
35	9	102	THR
36	10	40	GLU
36	10	54	LEU
37	11	29	LEU
37	11	55	LYS
37	11	129	ASN
38	12	51	GLU
38	12	66	GLN
39	13	38	PHE
39	13	57	VAL
39	13	103	VAL
40	14	47	GLU
40	14	57	VAL
41	15	13	LYS
41	15	16	SER
41	15	88	PRO
41	15	91	GLY

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Mol	Chain	Res	Type
41	15	93	GLU
41	15	94	SER
42	16	11	ARG
42	16	47	ALA
42	16	90	PRO
43	17	6	ILE
43	17	98	GLY
44	18	28	ALA
44	18	53	ASP
44	18	94	GLY
45	19	20	ASP
47	21	15	LYS
47	21	81	ALA
48	22	17	VAL
48	22	37	LYS
48	22	45	GLY
48	22	71	ASP
49	23	54	ARG
50	24	65	LEU
50	24	68	LYS
51	25	30	GLU
51	25	62	GLU
59	33	521	ILE
59	33	533	ARG
59	33	552	ARG
59	33	613	CYS
59	33	629	ARG
59	33	658	GLY
59	33	666	SER
59	33	676	ARG
59	33	691	LYS
59	33	703	THR
1	A	7	PRO
2	B	194	PRO
3	C	68	ALA
3	C	69	ARG
3	C	101	TYR
3	C	166	LYS
4	D	120	SER
4	D	142	TYR
4	D	149	ARG
5	E	46	ASP

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Mol	Chain	Res	Type
5	E	118	ALA
6	F	9	VAL
7	G	118	ILE
8	H	49	GLU
8	H	75	ALA
8	H	94	LYS
8	H	97	VAL
11	K	14	LYS
11	K	93	ASN
11	K	111	ILE
11	K	113	ALA
11	K	129	LYS
12	L	58	LYS
12	L	69	PRO
13	M	71	ARG
14	N	114	GLY
16	P	23	TYR
17	Q	31	GLU
17	Q	55	ASP
17	Q	69	GLY
17	Q	100	GLY
18	R	3	THR
18	R	89	ALA
20	T	18	LYS
21	U	34	LYS
21	U	44	HIS
22	V	14	ALA
22	V	17	LEU
25	Y	51	SER
25	Y	52	PHE
26	Z	2	LYS
27	1	53	VAL
28	2	40	PRO
32	6	11	ALA
32	6	19	THR
32	6	22	TRP
32	6	36	LYS
32	6	104	LYS
32	6	105	THR
32	6	202	ASN
33	7	44	LYS
34	8	23	GLY

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Mol	Chain	Res	Type
35	9	22	LYS
35	9	81	GLN
35	9	89	THR
35	9	109	ALA
36	10	56	LYS
37	11	16	LYS
38	12	56	PRO
39	13	23	GLY
39	13	102	PHE
39	13	107	ALA
40	14	35	GLN
40	14	43	PRO
40	14	92	LEU
41	15	51	PHE
42	16	33	CYS
42	16	35	ARG
43	17	113	LYS
45	19	2	LEU
46	20	48	GLU
47	21	50	ASN
47	21	56	ASP
49	23	26	ASP
51	25	12	ASP
51	25	23	GLU
51	25	60	ALA
59	33	267	ASN
59	33	334	VAL
59	33	474	ASP
59	33	476	LEU
59	33	510	GLN
59	33	529	HIS
59	33	618	GLY
59	33	619	ASP
59	33	635	ARG
59	33	637	ASP
59	33	697	VAL
59	33	740	ARG
1	A	52	HIS
1	A	112	GLY
1	A	204	LEU
1	A	231	HIS
2	B	138	LEU

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Mol	Chain	Res	Type
3	C	62	GLN
3	C	65	THR
3	C	80	SER
4	D	125	GLY
4	D	173	ASP
6	F	14	SER
6	F	25	TYR
6	F	77	THR
8	H	13	ALA
9	I	40	HIS
10	J	35	VAL
11	K	29	LYS
11	K	37	GLY
12	L	6	ARG
13	M	70	THR
13	M	116	VAL
14	N	88	LYS
17	Q	53	PHE
18	R	59	GLU
19	S	72	GLN
20	T	40	LEU
20	T	88	ASP
23	W	31	ASN
24	X	22	LEU
26	Z	42	PRO
27	1	40	HIS
29	3	4	THR
29	3	8	SER
33	7	21	TRP
33	7	46	LEU
36	10	86	ARG
36	10	93	LYS
36	10	98	GLU
37	11	56	SER
37	11	113	LYS
38	12	65	PHE
39	13	13	SER
39	13	90	ASP
39	13	119	LYS
40	14	75	ASP
40	14	89	ARG
41	15	77	GLY

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Mol	Chain	Res	Type
44	18	34	ASN
44	18	61	ASN
48	22	18	GLN
48	22	19	GLU
49	23	4	LEU
49	23	8	PRO
51	25	18	PHE
59	33	52	ALA
59	33	532	PRO
59	33	537	ASN
59	33	548	GLY
59	33	567	PRO
59	33	656	VAL
2	B	10	GLY
2	B	86	GLU
3	C	27	LEU
3	C	63	LYS
3	C	83	VAL
6	F	15	LEU
7	G	48	ALA
7	G	119	PRO
11	K	15	ALA
11	K	84	LYS
12	L	10	ARG
12	L	26	VAL
14	N	100	HIS
15	O	64	SER
17	Q	40	MET
18	R	63	GLY
20	T	97	SER
25	Y	4	ILE
26	Z	24	ILE
26	Z	64	PHE
34	8	166	LYS
36	10	53	LYS
39	13	9	GLY
39	13	31	GLN
39	13	42	THR
40	14	33	GLY
40	14	39	PRO
40	14	61	ALA
41	15	126	ARG

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Mol	Chain	Res	Type
42	16	24	GLU
42	16	60	PHE
43	17	97	ARG
44	18	2	LYS
44	18	20	PHE
44	18	91	GLU
47	21	51	GLU
47	21	65	PRO
47	21	69	THR
51	25	10	PRO
1	A	85	ASN
7	G	50	VAL
7	G	130	PRO
9	I	64	VAL
12	L	70	ASP
15	O	35	SER
20	T	89	GLY
24	X	20	ASN
24	X	55	THR
33	7	61	LYS
35	9	17	VAL
35	9	23	THR
36	10	18	VAL
43	17	93	GLY
59	33	44	GLN
59	33	621	ILE
59	33	692	VAL
8	H	21	PRO
9	I	100	VAL
15	O	63	ILE
16	P	6	GLY
45	19	10	ILE
7	G	21	GLY
12	L	23	GLY
43	17	50	GLY
59	33	483	VAL
3	C	121	VAL
18	R	74	ILE
35	9	104	ILE
8	H	73	PRO
10	J	27	GLY
12	L	57	VAL

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Mol	Chain	Res	Type
20	T	38	ILE
37	11	5	VAL
42	16	3	VAL
51	25	9	GLU
10	J	93	GLN

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
1	A	216/218 (99%)	215 (100%)	1 (0%)	88 93
2	B	164/164 (100%)	164 (100%)	0	100 100
3	C	165/165 (100%)	163 (99%)	2 (1%)	71 83
4	D	148/150 (99%)	147 (99%)	1 (1%)	84 90
5	E	137/138 (99%)	137 (100%)	0	100 100
6	F	114/114 (100%)	114 (100%)	0	100 100
7	G	100/123 (81%)	99 (99%)	1 (1%)	76 86
8	H	109/110 (99%)	109 (100%)	0	100 100
9	I	116/116 (100%)	116 (100%)	0	100 100
10	J	103/104 (99%)	103 (100%)	0	100 100
11	K	102/103 (99%)	101 (99%)	1 (1%)	76 86
12	L	109/109 (100%)	109 (100%)	0	100 100
13	M	100/103 (97%)	99 (99%)	1 (1%)	76 86
14	N	86/87 (99%)	86 (100%)	0	100 100
15	O	99/100 (99%)	99 (100%)	0	100 100
16	P	89/90 (99%)	89 (100%)	0	100 100
17	Q	84/84 (100%)	84 (100%)	0	100 100
18	R	93/93 (100%)	93 (100%)	0	100 100
19	S	80/84 (95%)	80 (100%)	0	100 100
20	T	83/85 (98%)	83 (100%)	0	100 100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
21	U	78/78 (100%)	78 (100%)	0	100	100
22	V	57/63 (90%)	57 (100%)	0	100	100
23	W	67/68 (98%)	67 (100%)	0	100	100
24	X	55/55 (100%)	55 (100%)	0	100	100
25	Y	48/49 (98%)	48 (100%)	0	100	100
26	Z	59/62 (95%)	57 (97%)	2 (3%)	37	62
27	1	47/48 (98%)	47 (100%)	0	100	100
28	2	45/49 (92%)	45 (100%)	0	100	100
29	3	38/38 (100%)	38 (100%)	0	100	100
30	4	51/52 (98%)	51 (100%)	0	100	100
31	5	34/34 (100%)	34 (100%)	0	100	100
32	6	180/199 (90%)	179 (99%)	1 (1%)	86	91
33	7	170/190 (90%)	169 (99%)	1 (1%)	86	91
34	8	172/173 (99%)	172 (100%)	0	100	100
35	9	119/126 (94%)	117 (98%)	2 (2%)	60	78
36	10	87/116 (75%)	87 (100%)	0	100	100
37	11	124/147 (84%)	124 (100%)	0	100	100
38	12	104/105 (99%)	104 (100%)	0	100	100
39	13	105/107 (98%)	103 (98%)	2 (2%)	57	75
40	14	86/90 (96%)	86 (100%)	0	100	100
41	15	89/99 (90%)	87 (98%)	2 (2%)	52	71
42	16	103/104 (99%)	103 (100%)	0	100	100
43	17	92/96 (96%)	92 (100%)	0	100	100
44	18	83/84 (99%)	83 (100%)	0	100	100
45	19	76/77 (99%)	76 (100%)	0	100	100
46	20	65/65 (100%)	65 (100%)	0	100	100
47	21	74/78 (95%)	73 (99%)	1 (1%)	67	81
48	22	56/65 (86%)	56 (100%)	0	100	100
49	23	70/79 (89%)	70 (100%)	0	100	100
50	24	65/66 (98%)	65 (100%)	0	100	100
51	25	55/61 (90%)	54 (98%)	1 (2%)	59	77

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
59	33	452/635 (71%)	448 (99%)	4 (1%)	78 87
All	All	5303/5698 (93%)	5280 (100%)	23 (0%)	91 94

All (23) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	156	SER
3	C	44	ARG
3	C	149	ILE
4	D	3	LEU
7	G	59	LEU
11	K	62	PRO
13	M	51	LEU
26	Z	37	CYS
26	Z	43	PHE
32	6	67	LEU
33	7	102	ILE
35	9	122	VAL
35	9	132	PRO
39	13	60	LEU
39	13	93	LEU
41	15	39	ASN
41	15	117	HIS
47	21	78	VAL
51	25	18	PHE
59	33	267	ASN
59	33	338	ILE
59	33	425	LEU
59	33	463	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (94) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	89	ASN
1	A	116	GLN
1	A	225	ASN
1	A	238	ASN
1	A	242	HIS
2	B	32	ASN
2	B	49	GLN
2	B	173	GLN

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Mol	Chain	Res	Type
3	C	62	GLN
3	C	92	HIS
3	C	94	GLN
4	D	51	ASN
4	D	62	GLN
4	D	80	GLN
5	E	29	ASN
5	E	47	ASN
5	E	110	HIS
6	F	18	GLN
6	F	43	ASN
6	F	73	ASN
6	F	133	GLN
6	F	135	HIS
7	G	4	ASN
7	G	9	GLN
8	H	11	GLN
8	H	33	ASN
8	H	104	GLN
9	I	58	ASN
9	I	136	GLN
10	J	3	GLN
11	K	54	GLN
12	L	22	GLN
13	M	81	ASN
14	N	100	HIS
17	Q	6	GLN
17	Q	43	ASN
19	S	15	HIS
20	T	39	ASN
20	T	65	GLN
20	T	73	ASN
21	U	44	HIS
22	V	8	ASN
22	V	72	ASN
23	W	16	ASN
23	W	22	ASN
24	X	58	ASN
25	Y	8	GLN
26	Z	20	ASN
26	Z	30	HIS
27	1	4	GLN

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Mol	Chain	Res	Type
32	6	35	ASN
32	6	38	HIS
32	6	57	ASN
32	6	108	GLN
33	7	18	ASN
33	7	24	ASN
34	8	35	GLN
34	8	70	GLN
34	8	84	ASN
34	8	99	ASN
34	8	125	ASN
34	8	151	GLN
35	9	42	ASN
36	10	11	HIS
36	10	63	ASN
37	11	67	ASN
37	11	121	ASN
38	12	20	ASN
39	13	4	GLN
39	13	30	ASN
39	13	36	GLN
39	13	125	GLN
41	15	108	ASN
42	16	4	ASN
42	16	28	GLN
43	17	13	HIS
45	19	45	HIS
45	19	49	HIS
46	20	9	HIS
46	20	26	ASN
46	20	29	ASN
46	20	63	GLN
47	21	30	HIS
48	22	51	GLN
49	23	68	HIS
50	24	51	ASN
59	33	88	ASN
59	33	235	HIS
59	33	264	GLN
59	33	267	ASN
59	33	432	HIS
59	33	437	HIS

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Mol	Chain	Res	Type
59	33	614	GLN
59	33	720	GLN

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
52	26	1538/1539 (99%)	190 (12%)	8 (0%)
53	27	2902/2903 (99%)	410 (14%)	22 (0%)
54	28	119/120 (99%)	9 (7%)	1 (0%)
55	29	19/20 (95%)	4 (21%)	0
56	30	75/76 (98%)	20 (26%)	1 (1%)
57	31	76/77 (98%)	6 (7%)	0
58	32	76/77 (98%)	22 (28%)	1 (1%)
All	All	4805/4812 (99%)	661 (13%)	33 (0%)

All (661) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
52	26	9	G
52	26	13	U
52	26	22	G
52	26	32	A
52	26	39	G
52	26	47	C
52	26	48	C
52	26	50	A
52	26	51	A
52	26	70	U
52	26	71	A
52	26	77	A
52	26	78	A
52	26	79	G
52	26	86	G
52	26	88	U
52	26	95	C
52	26	121	U
52	26	168	G
52	26	183	C
52	26	195	A
52	26	210	C
52	26	212	G

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Mol	Chain	Res	Type
52	26	240	G
52	26	247	G
52	26	251	G
52	26	266	G
52	26	267	C
52	26	281	G
52	26	289	G
52	26	306	A
52	26	328	C
52	26	330	C
52	26	345	C
52	26	346	G
52	26	352	C
52	26	354	G
52	26	363	A
52	26	367	U
52	26	372	C
52	26	398	U
52	26	412	A
52	26	414	A
52	26	421	U
52	26	422	C
52	26	423	G
52	26	429	U
52	26	441	A
52	26	448	A
52	26	462	G
52	26	463	U
52	26	467	U
52	26	479	U
52	26	484	G
52	26	485	U
52	26	486	U
52	26	495	A
52	26	510	A
52	26	518	C
52	26	527	G
52	26	531	U
52	26	534	U
52	26	547	A
52	26	550	G
52	26	559	A

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Mol	Chain	Res	Type
52	26	561	U
52	26	564	C
52	26	566	G
52	26	572	A
52	26	573	A
52	26	574	A
52	26	575	G
52	26	576	C
52	26	577	G
52	26	633	G
52	26	642	A
52	26	661	G
52	26	665	A
52	26	703	G
52	26	713	G
52	26	721	G
52	26	723	U
52	26	724	G
52	26	755	G
52	26	759	A
52	26	774	G
52	26	777	A
52	26	794	A
52	26	815	A
52	26	817	C
52	26	818	G
52	26	819	A
52	26	820	U
52	26	832	G
52	26	836	G
52	26	842	U
52	26	843	U
52	26	845	A
52	26	849	G
52	26	871	U
52	26	872	A
52	26	873	A
52	26	889	A
52	26	902	G
52	26	934	C
52	26	935	A
52	26	960	U

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Mol	Chain	Res	Type
52	26	961	U
52	26	966	G
52	26	969	A
52	26	971	G
52	26	975	A
52	26	976	G
52	26	977	A
52	26	992	U
52	26	993	G
52	26	994	A
52	26	1004	A
52	26	1026	G
52	26	1027	C
52	26	1029	U
52	26	1030	U
52	26	1031	C
52	26	1033	G
52	26	1034	G
52	26	1053	G
52	26	1054	C
52	26	1055	A
52	26	1085	U
52	26	1094	G
52	26	1101	A
52	26	1130	A
52	26	1133	G
52	26	1137	C
52	26	1138	G
52	26	1139	G
52	26	1140	C
52	26	1151	A
52	26	1159	U
52	26	1168	U
52	26	1182	G
52	26	1184	G
52	26	1196	A
52	26	1197	A
52	26	1201	A
52	26	1202	U
52	26	1207	G
52	26	1212	U
52	26	1213	A

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Mol	Chain	Res	Type
52	26	1214	C
52	26	1225	A
52	26	1226	C
52	26	1227	A
52	26	1238	A
52	26	1240	U
52	26	1241	G
52	26	1258	G
52	26	1260	G
52	26	1275	A
52	26	1278	G
52	26	1280	A
52	26	1282	C
52	26	1286	U
52	26	1287	A
52	26	1300	G
52	26	1301	U
52	26	1317	C
52	26	1336	C
52	26	1346	A
52	26	1347	G
52	26	1363	A
52	26	1370	G
52	26	1381	U
52	26	1394	A
52	26	1395	C
52	26	1400	C
52	26	1419	G
52	26	1446	A
52	26	1451	U
52	26	1452	C
52	26	1492	A
52	26	1497	G
52	26	1499	A
52	26	1503	A
52	26	1506	U
52	26	1517	G
52	26	1519	A
52	26	1520	C
52	26	1529	G
52	26	1530	G
53	27	10	A

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Mol	Chain	Res	Type
53	27	12	U
53	27	34	U
53	27	46	G
53	27	49	A
53	27	51	G
53	27	63	A
53	27	71	A
53	27	74	A
53	27	75	G
53	27	98	G
53	27	114	U
53	27	119	A
53	27	120	U
53	27	138	U
53	27	139	U
53	27	140	C
53	27	141	G
53	27	142	A
53	27	162	U
53	27	163	C
53	27	181	A
53	27	196	A
53	27	216	A
53	27	219	A
53	27	221	A
53	27	222	A
53	27	228	C
53	27	229	C
53	27	233	A
53	27	248	G
53	27	249	C
53	27	255	A
53	27	266	G
53	27	272	A
53	27	276	U
53	27	284	U
53	27	294	A
53	27	311	A
53	27	323	C
53	27	324	A
53	27	329	G
53	27	330	A

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Mol	Chain	Res	Type
53	27	334	C
53	27	346	A
53	27	349	U
53	27	361	G
53	27	363	G
53	27	371	A
53	27	372	G
53	27	380	G
53	27	386	G
53	27	387	U
53	27	404	A
53	27	405	U
53	27	406	G
53	27	411	G
53	27	421	C
53	27	424	G
53	27	451	U
53	27	457	A
53	27	458	G
53	27	480	A
53	27	481	G
53	27	491	G
53	27	504	A
53	27	505	A
53	27	508	A
53	27	529	A
53	27	532	A
53	27	533	G
53	27	545	U
53	27	546	U
53	27	563	A
53	27	573	U
53	27	575	A
53	27	586	A
53	27	588	U
53	27	603	A
53	27	614	A
53	27	615	U
53	27	616	A
53	27	627	A
53	27	637	A
53	27	646	U

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Mol	Chain	Res	Type
53	27	654	A
53	27	655	A
53	27	669	G
53	27	686	U
53	27	687	C
53	27	694	U
53	27	695	G
53	27	711	G
53	27	730	A
53	27	734	A
53	27	747	C
53	27	752	A
53	27	757	G
53	27	764	A
53	27	775	G
53	27	776	G
53	27	782	A
53	27	784	G
53	27	805	G
53	27	812	C
53	27	819	A
53	27	822	G
53	27	827	U
53	27	828	U
53	27	830	G
53	27	845	A
53	27	846	U
53	27	847	U
53	27	858	G
53	27	859	G
53	27	860	U
53	27	878	A
53	27	883	G
53	27	888	C
53	27	893	C
53	27	896	A
53	27	902	C
53	27	907	G
53	27	910	A
53	27	915	C
53	27	932	U
53	27	941	A

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Mol	Chain	Res	Type
53	27	945	A
53	27	946	C
53	27	953	G
53	27	961	C
53	27	962	G
53	27	974	G
53	27	975	A
53	27	983	A
53	27	990	A
53	27	995	C
53	27	996	A
53	27	999	U
53	27	1012	U
53	27	1013	C
53	27	1021	A
53	27	1022	G
53	27	1033	U
53	27	1045	C
53	27	1046	A
53	27	1047	G
53	27	1053	C
53	27	1060	U
53	27	1061	U
53	27	1070	A
53	27	1071	G
53	27	1073	A
53	27	1083	U
53	27	1088	A
53	27	1090	A
53	27	1097	U
53	27	1111	A
53	27	1112	G
53	27	1119	U
53	27	1129	A
53	27	1131	G
53	27	1132	U
53	27	1135	C
53	27	1143	A
53	27	1157	G
53	27	1173	U
53	27	1174	U
53	27	1175	A

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Mol	Chain	Res	Type
53	27	1177	G
53	27	1180	U
53	27	1206	G
53	27	1212	G
53	27	1221	C
53	27	1238	G
53	27	1250	G
53	27	1251	C
53	27	1253	A
53	27	1256	G
53	27	1271	G
53	27	1272	A
53	27	1273	U
53	27	1294	U
53	27	1300	G
53	27	1301	A
53	27	1302	A
53	27	1305	C
53	27	1314	C
53	27	1321	A
53	27	1332	G
53	27	1345	C
53	27	1365	A
53	27	1378	A
53	27	1379	U
53	27	1383	A
53	27	1395	A
53	27	1407	G
53	27	1416	G
53	27	1419	A
53	27	1420	A
53	27	1421	G
53	27	1428	C
53	27	1452	G
53	27	1453	A
53	27	1461	C
53	27	1482	G
53	27	1490	A
53	27	1504	A
53	27	1508	A
53	27	1509	A
53	27	1515	A

Continued on next page...

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Mol	Chain	Res	Type
53	27	1524	G
53	27	1530	G
53	27	1534	U
53	27	1535	A
53	27	1536	C
53	27	1555	G
53	27	1560	G
53	27	1569	A
53	27	1578	U
53	27	1587	G
53	27	1608	A
53	27	1616	A
53	27	1647	U
53	27	1648	U
53	27	1660	G
53	27	1674	G
53	27	1694	C
53	27	1699	G
53	27	1715	G
53	27	1729	U
53	27	1730	C
53	27	1731	G
53	27	1735	A
53	27	1738	G
53	27	1757	A
53	27	1758	U
53	27	1763	G
53	27	1764	C
53	27	1773	A
53	27	1782	U
53	27	1791	A
53	27	1800	C
53	27	1801	A
53	27	1808	A
53	27	1816	C
53	27	1848	A
53	27	1869	G
53	27	1871	A
53	27	1896	G
53	27	1900	A
53	27	1901	A
53	27	1906	G

Continued on next page...

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Mol	Chain	Res	Type
53	27	1907	G
53	27	1913	A
53	27	1929	G
53	27	1930	G
53	27	1931	U
53	27	1937	A
53	27	1955	U
53	27	1967	C
53	27	1970	A
53	27	1971	U
53	27	1972	G
53	27	1982	U
53	27	1991	U
53	27	1993	U
53	27	1997	C
53	27	2022	U
53	27	2023	C
53	27	2031	A
53	27	2033	A
53	27	2036	C
53	27	2043	C
53	27	2052	A
53	27	2055	C
53	27	2056	G
53	27	2060	A
53	27	2061	G
53	27	2062	A
53	27	2069	G
53	27	2072	C
53	27	2080	A
53	27	2093	G
53	27	2108	A
53	27	2110	G
53	27	2111	U
53	27	2112	G
53	27	2115	G
53	27	2118	U
53	27	2119	A
53	27	2125	G
53	27	2131	U
53	27	2132	U
53	27	2133	G

Continued on next page...

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Mol	Chain	Res	Type
53	27	2136	G
53	27	2143	C
53	27	2145	C
53	27	2149	U
53	27	2157	G
53	27	2166	U
53	27	2167	U
53	27	2170	A
53	27	2171	A
53	27	2172	U
53	27	2173	A
53	27	2182	U
53	27	2189	U
53	27	2198	A
53	27	2204	G
53	27	2211	A
53	27	2213	U
53	27	2225	A
53	27	2238	G
53	27	2239	G
53	27	2243	U
53	27	2250	G
53	27	2269	G
53	27	2279	G
53	27	2283	C
53	27	2287	A
53	27	2297	A
53	27	2305	U
53	27	2309	A
53	27	2311	A
53	27	2325	G
53	27	2327	A
53	27	2334	U
53	27	2335	A
53	27	2347	C
53	27	2350	C
53	27	2357	G
53	27	2361	G
53	27	2382	G
53	27	2383	G
53	27	2385	C
53	27	2392	A

Continued on next page...

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Mol	Chain	Res	Type
53	27	2402	U
53	27	2406	A
53	27	2423	U
53	27	2427	C
53	27	2428	G
53	27	2429	G
53	27	2430	A
53	27	2435	A
53	27	2436	G
53	27	2441	U
53	27	2445	G
53	27	2448	A
53	27	2476	A
53	27	2484	G
53	27	2487	G
53	27	2498	C
53	27	2502	G
53	27	2503	A
53	27	2504	U
53	27	2505	G
53	27	2506	U
53	27	2518	A
53	27	2520	C
53	27	2529	G
53	27	2547	A
53	27	2554	U
53	27	2566	A
53	27	2567	G
53	27	2572	A
53	27	2582	G
53	27	2585	U
53	27	2586	U
53	27	2602	A
53	27	2609	U
53	27	2613	U
53	27	2621	G
53	27	2629	U
53	27	2630	G
53	27	2646	C
53	27	2655	G
53	27	2689	U
53	27	2690	U

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Mol	Chain	Res	Type
53	27	2713	U
53	27	2714	G
53	27	2744	G
53	27	2748	A
53	27	2757	A
53	27	2762	C
53	27	2764	A
53	27	2765	A
53	27	2778	A
53	27	2779	U
53	27	2791	G
53	27	2794	C
53	27	2797	U
53	27	2798	U
53	27	2799	A
53	27	2800	A
53	27	2801	G
53	27	2808	G
53	27	2809	A
53	27	2818	U
53	27	2820	A
53	27	2821	A
53	27	2833	U
53	27	2848	G
53	27	2849	U
53	27	2867	G
53	27	2868	A
53	27	2873	A
53	27	2879	A
53	27	2880	C
53	27	2883	A
54	28	4	C
54	28	13	G
54	28	35	C
54	28	44	G
54	28	45	A
54	28	67	G
54	28	89	U
54	28	108	A
54	28	109	A
55	29	6	G
55	29	8	A

Continued on next page...

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Mol	Chain	Res	Type
55	29	12	A
55	29	22	A
56	30	8	U
56	30	9	A
56	30	10	G
56	30	14	A
56	30	15	G
56	30	17	C
56	30	18	G
56	30	19	G
56	30	20	U
56	30	21	A
56	30	42	C
56	30	46	G
56	30	48	C
56	30	52	G
56	30	55	U
56	30	56	C
56	30	59	U
56	30	61	C
56	30	63	G
56	30	75	C
57	31	9	G
57	31	19	G
57	31	20	U
57	31	47	U
57	31	48	C
57	31	76	A
58	32	8	U
58	32	9	G
58	32	10	G
58	32	12	G
58	32	13	C
58	32	14	A
58	32	16	C
58	32	17	C
58	32	17(A)	U
58	32	18	G
58	32	19	G
58	32	21	A
58	32	22	G
58	32	34	C

Continued on next page...

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Mol	Chain	Res	Type
58	32	35	A
58	32	45	G
58	32	48	C
58	32	59	A
58	32	64	G
58	32	70	G
58	32	75	C
58	32	76	A

All (33) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
52	26	70	U
52	26	246	A
52	26	280	C
52	26	758	C
52	26	960	U
52	26	1201	A
52	26	1300	G
52	26	1399	C
53	27	227	A
53	27	405	U
53	27	490	C
53	27	774	G
53	27	858	G
53	27	859	G
53	27	1020	A
53	27	1111	A
53	27	1130	U
53	27	1378	A
53	27	1730	C
53	27	1847	G
53	27	1930	G
53	27	2286	G
53	27	2296	U
53	27	2326	C
53	27	2333	A
53	27	2391	G
53	27	2428	G
53	27	2712	C
53	27	2756	U
53	27	2873	A

Continued on next page...

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Mol	Chain	Res	Type
54	28	88	C
56	30	15	G
58	32	16	C

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

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

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

There are no ligands in this entry.

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

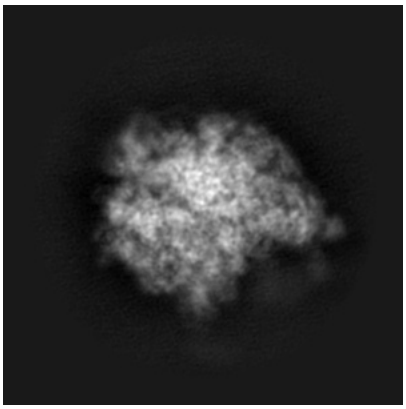
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-8282. These allow visual inspection of the internal detail of the map and identification of artifacts.

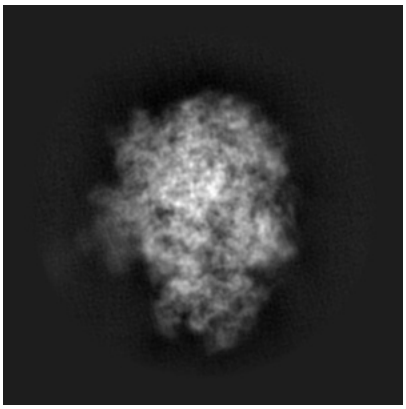
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

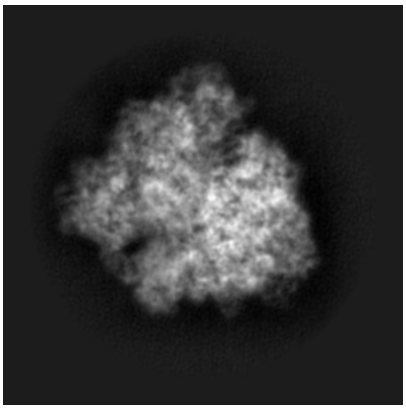
6.1.1 Primary map



X

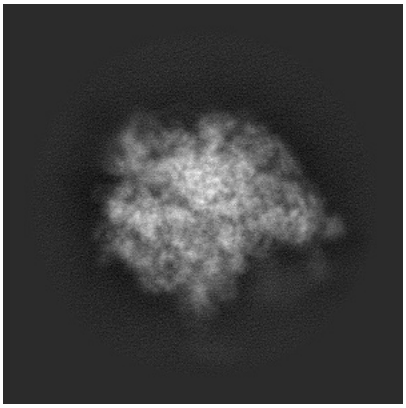


Y

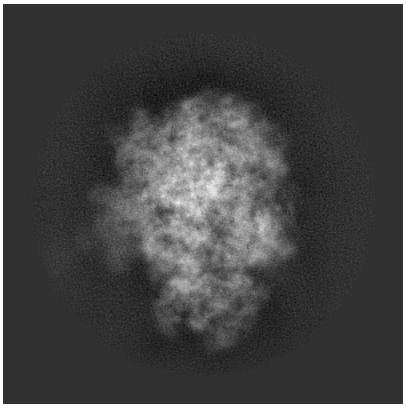


Z

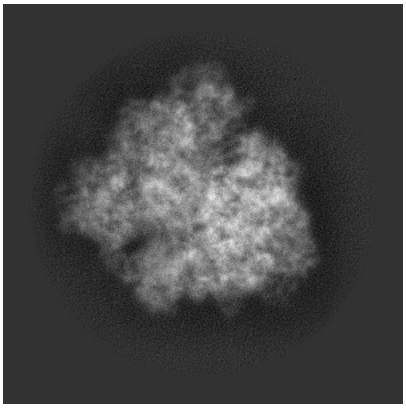
6.1.2 Raw map



X



Y

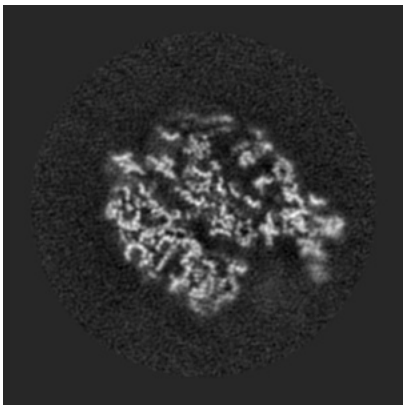


Z

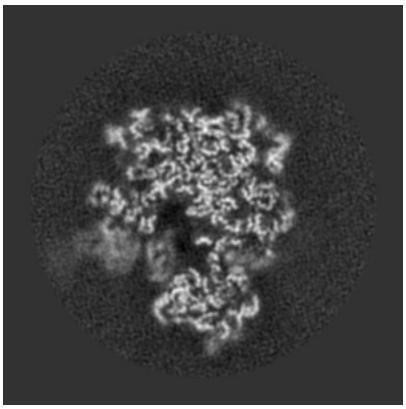
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

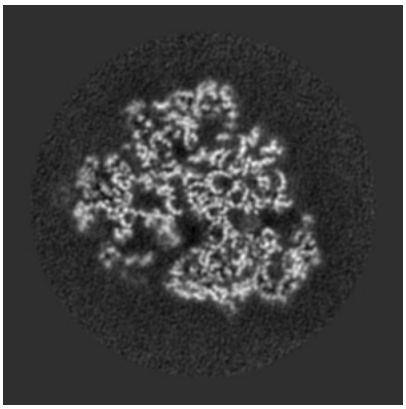
6.2.1 Primary map



X Index: 240

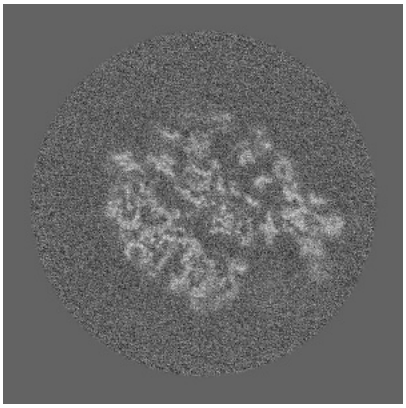


Y Index: 240

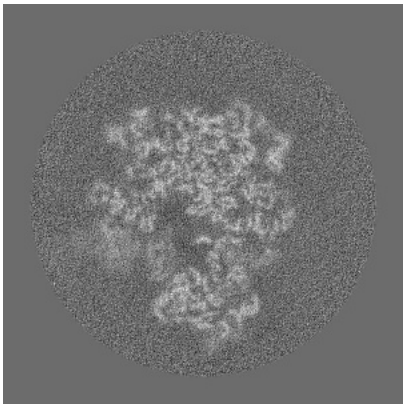


Z Index: 240

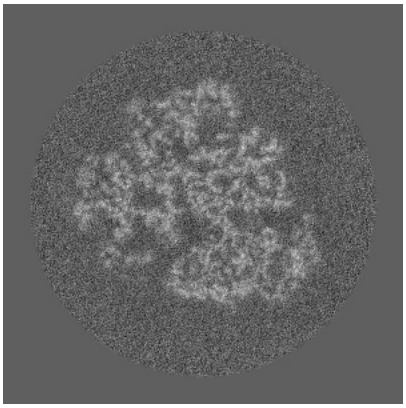
6.2.2 Raw map



X Index: 240



Y Index: 240

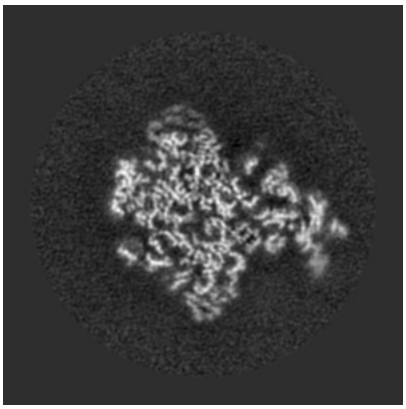


Z Index: 240

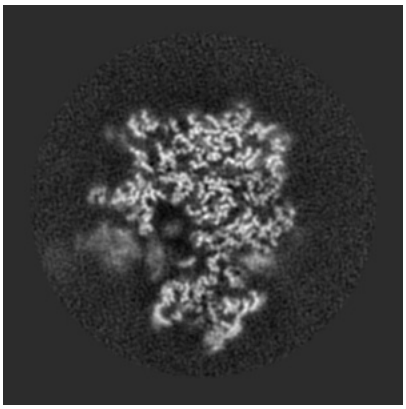
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

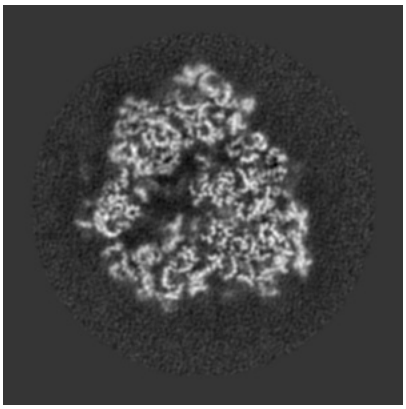
6.3.1 Primary map



X Index: 250

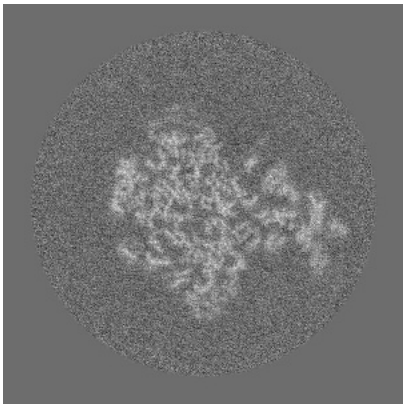


Y Index: 247

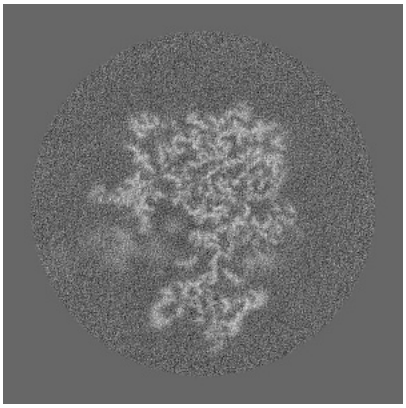


Z Index: 220

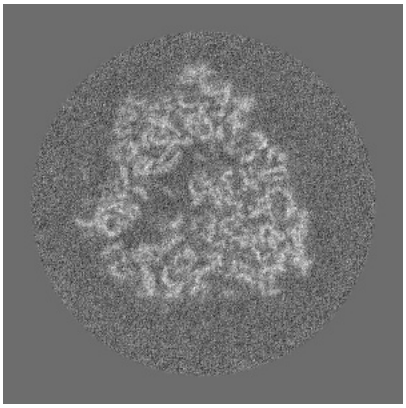
6.3.2 Raw map



X Index: 250



Y Index: 250

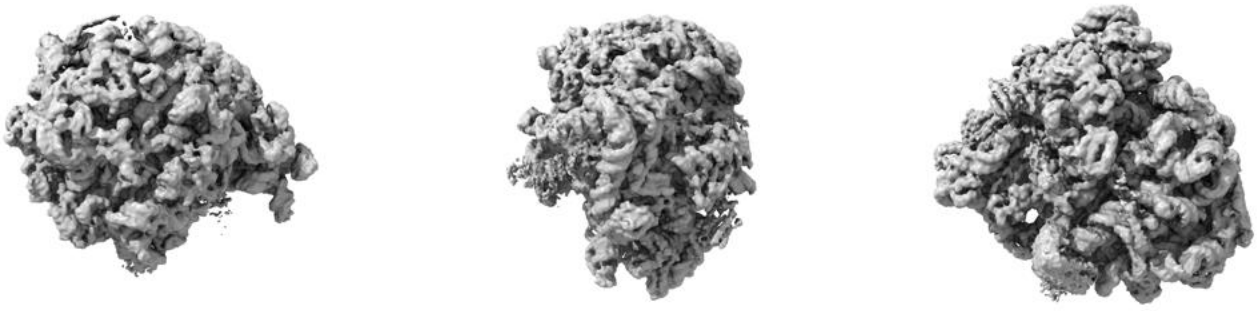


Z Index: 222

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

6.4 Orthogonal surface views (i)

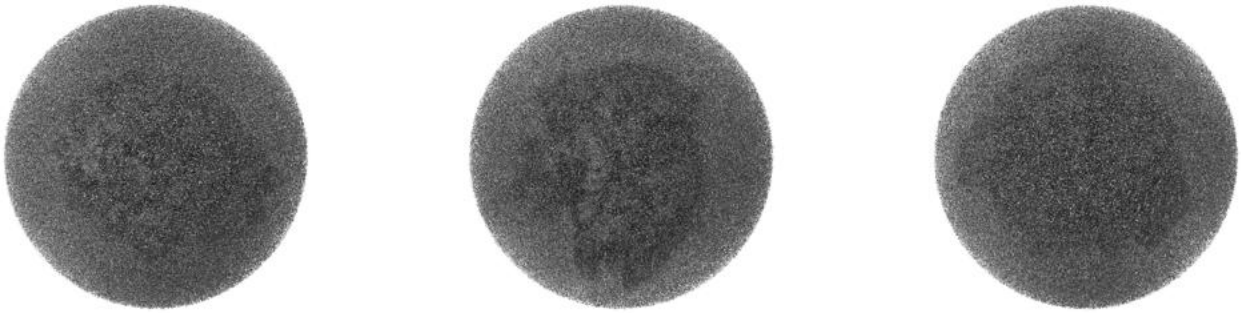
6.4.1 Primary map



X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.1. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.4.2 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.

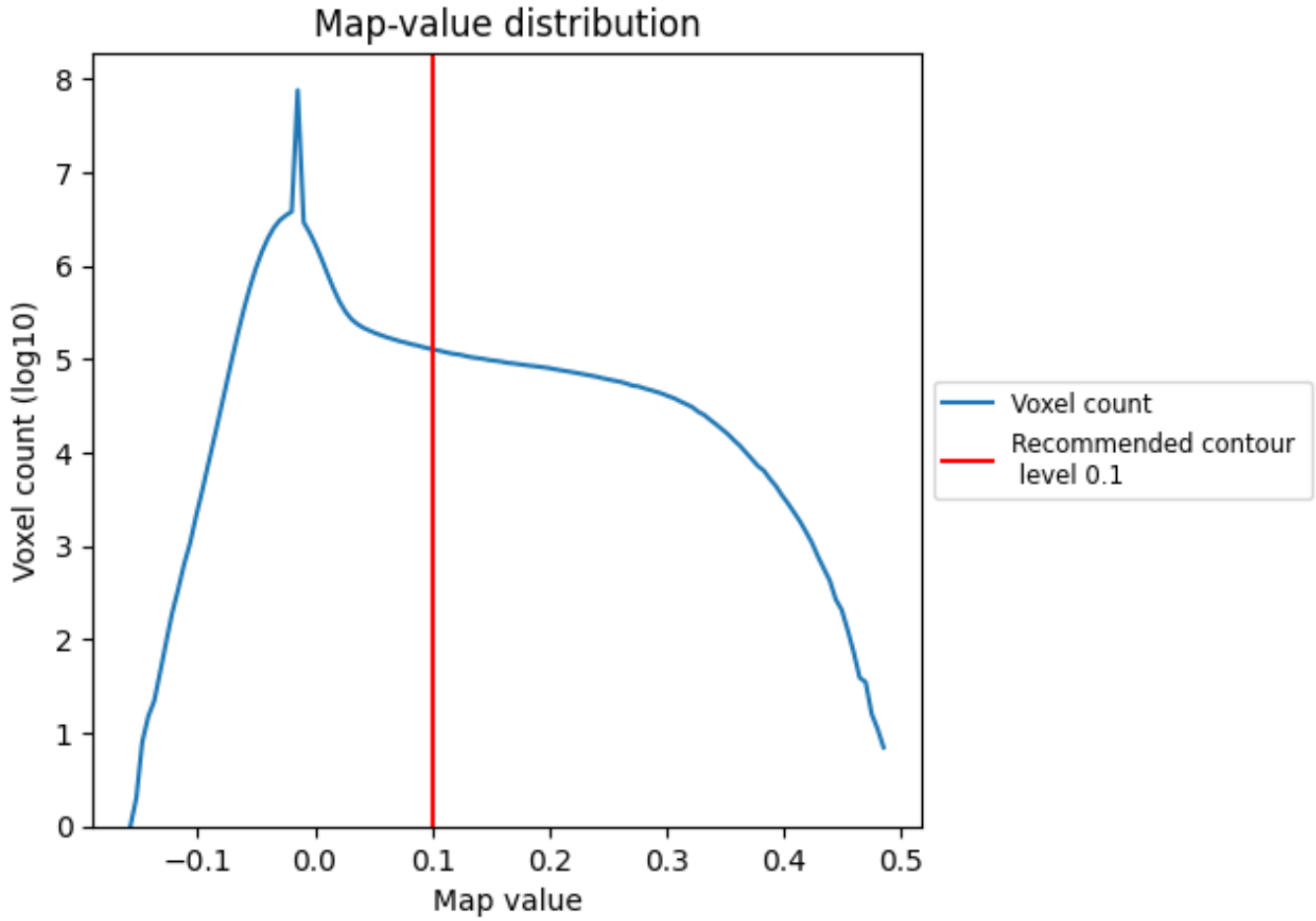
6.5 Mask visualisation (i)

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

7 Map analysis

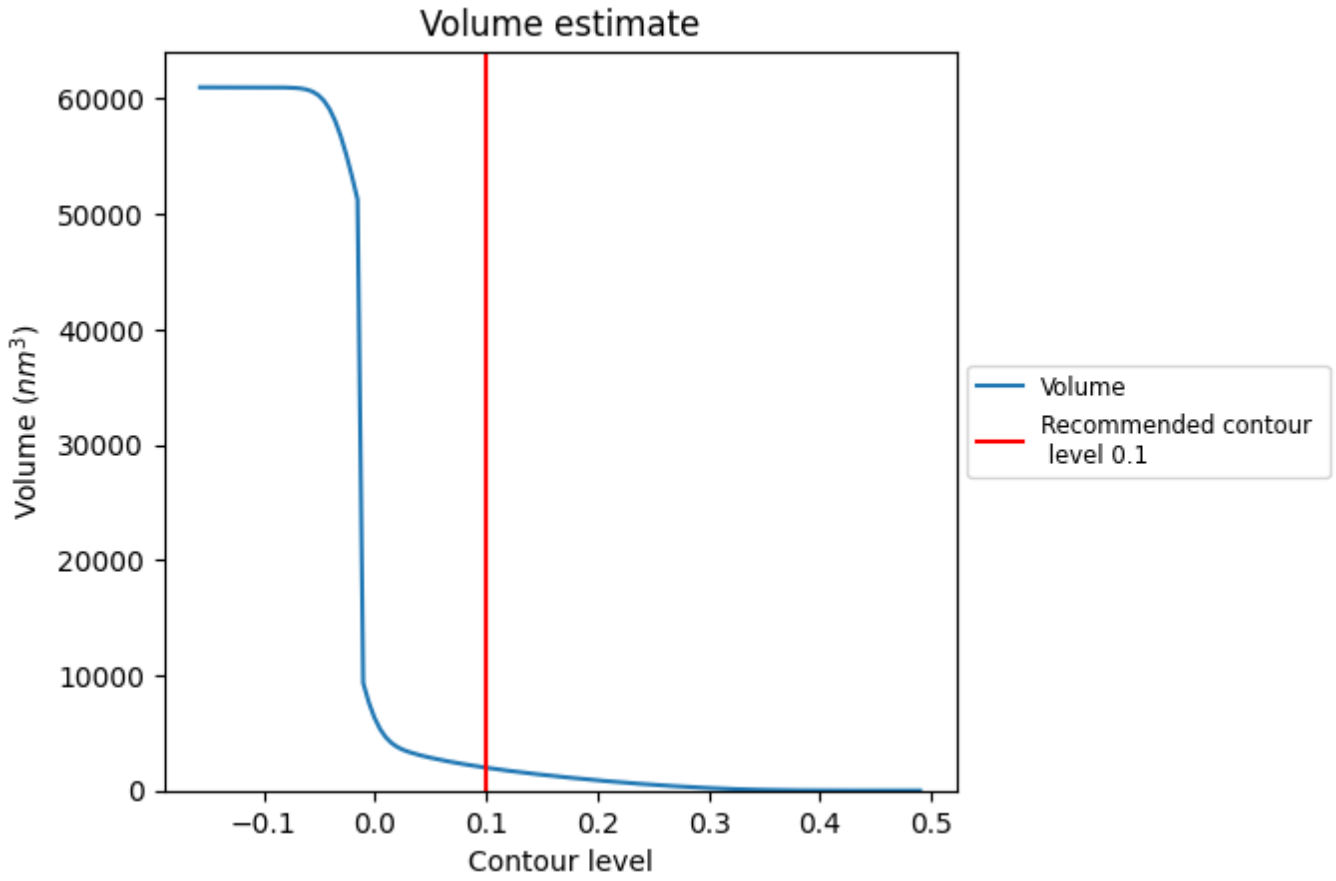
This section contains the results of statistical analysis of the map.

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.

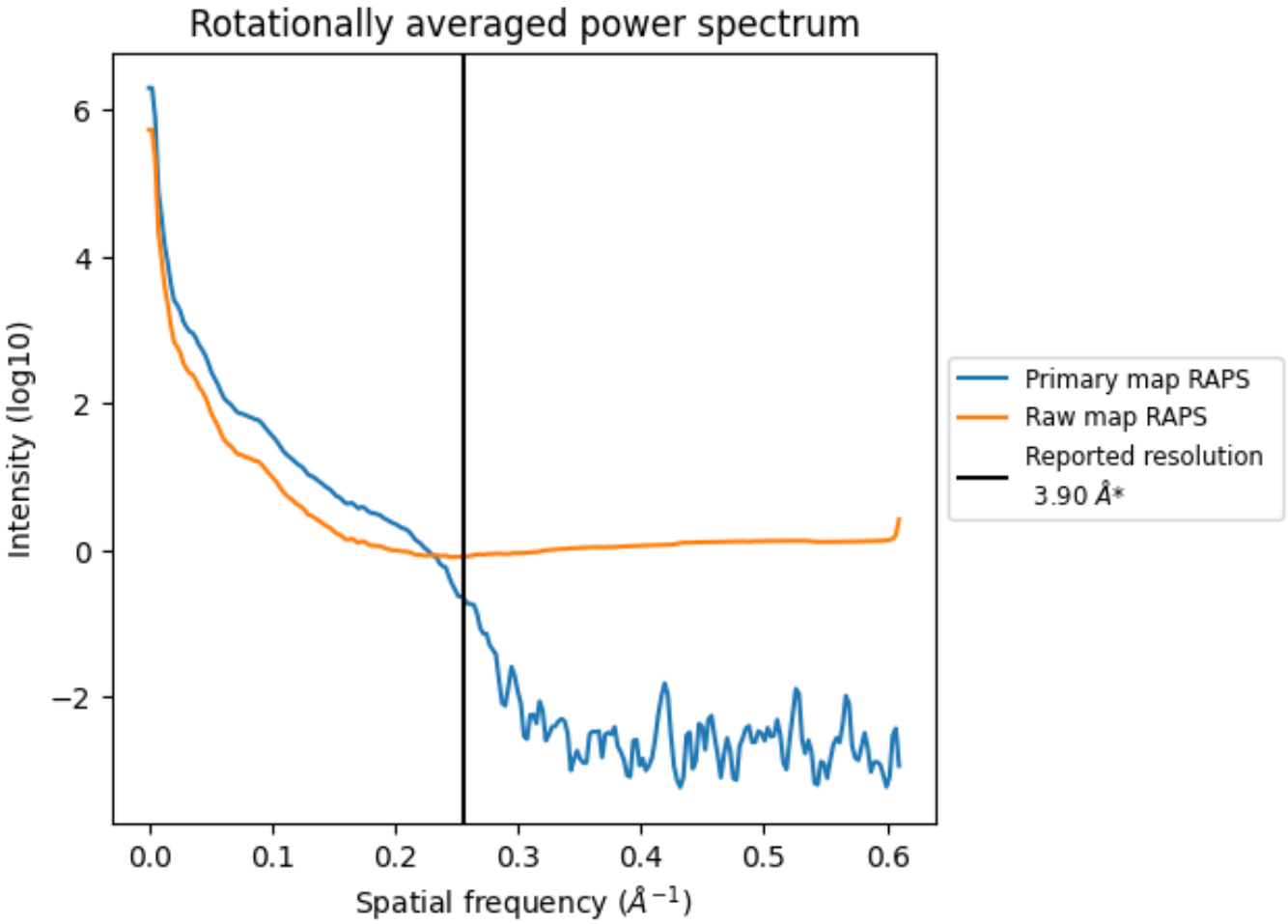
7.2 Volume estimate



The volume at the recommended contour level is 1983 nm^3; this corresponds to an approximate mass of 1791 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)

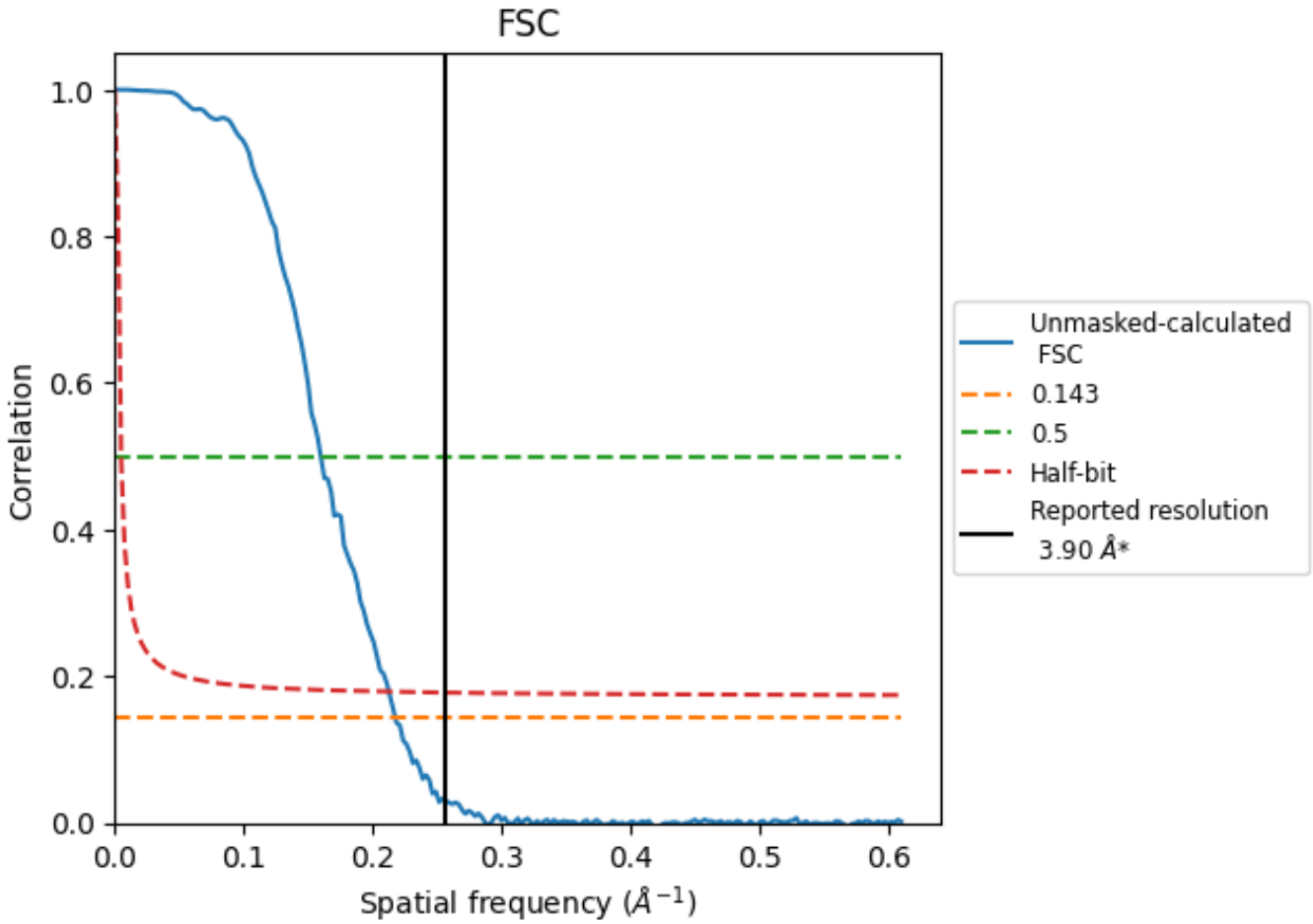


*Reported resolution corresponds to spatial frequency of 0.256 Å^{-1}

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 0.256 Å^{-1}

8.2 Resolution estimates (i)

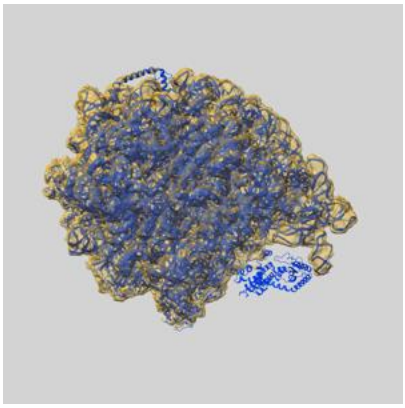
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.90	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	4.60	6.27	4.70

*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 4.60 differs from the reported value 3.9 by more than 10 %

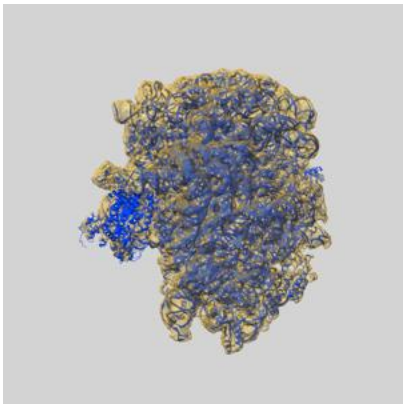
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-8282 and PDB model 5KPX. Per-residue inclusion information can be found in section 3 on page 15.

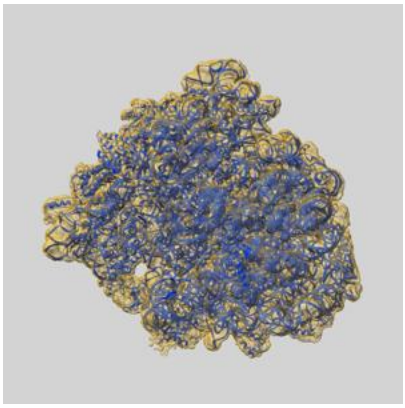
9.1 Map-model overlay



X



Y



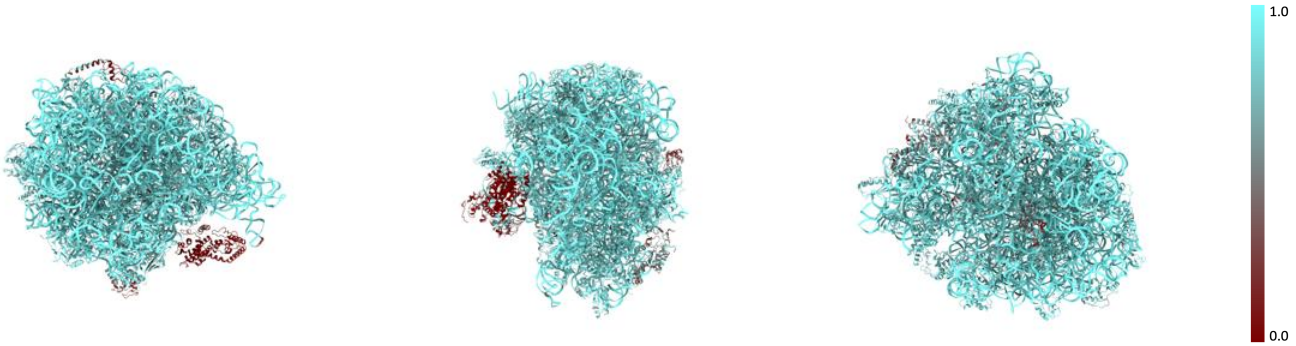
Z

The images above show the 3D surface view of the map at the recommended contour level 0.1 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

This section was not generated.

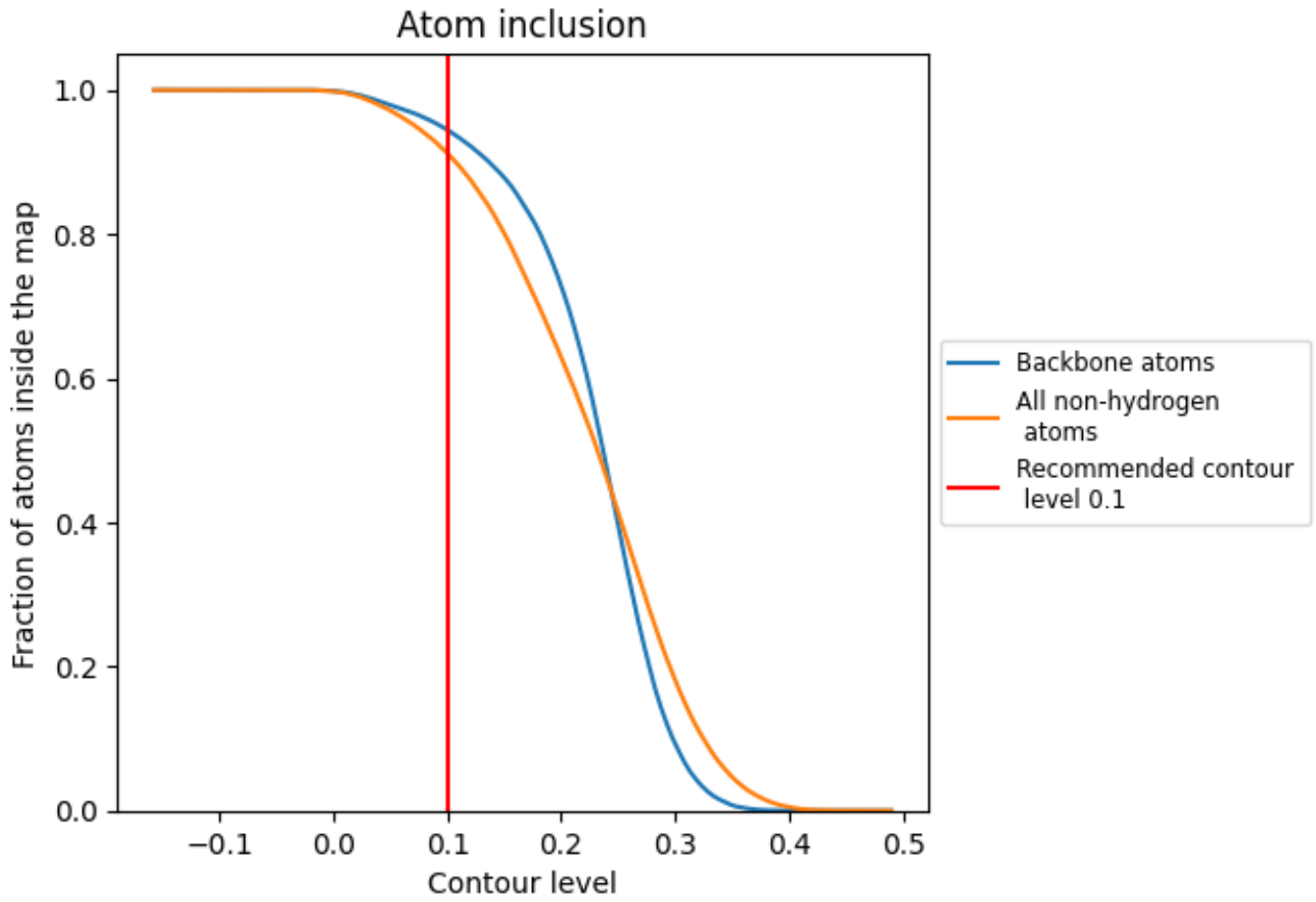
9.3 Atom inclusion mapped to coordinate model



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 (0.1).

9.4 Atom inclusion (i)



At the recommended contour level, 94% of all backbone atoms, 91% 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 (0.1) and Q-score for the entire model and for each chain.

Chain	Atom inclusion
All	0.9121
1	0.8692
10	0.8794
11	0.8610
12	0.8490
13	0.8744
14	0.8200
15	0.8769
16	0.7894
17	0.8578
18	0.8592
19	0.8667
2	0.7855
20	0.8612
21	0.8592
22	0.8872
23	0.8647
24	0.8615
25	0.7698
26	0.9900
27	0.9879
28	0.9942
29	0.9259
3	0.8732
30	0.9532
31	0.9647
32	0.8089
33	0.3573
4	0.8330
5	0.8596
6	0.4949
7	0.8333
8	0.8289
9	0.8536
A	0.8502

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Chain	Atom inclusion
B	0.8622
C	0.7901
D	0.8667
E	0.8759
F	0.4124
G	0.2893
H	0.3826
I	0.8736
J	0.8007
K	0.8681
L	0.8244
M	0.8850
N	0.8922
O	0.8581
P	0.8767
Q	0.8795
R	0.8206
S	0.8643
T	0.8892
U	0.8347
V	0.8640
W	0.8702
X	0.8431
Y	0.8467
Z	0.8650