



Full wwPDB X-ray Structure Validation Report ⓘ

May 15, 2020 – 04:59 pm BST

PDB ID : 4V5P
Title : The crystal structure of EF-Tu and A9C-tRNA-Trp bound to a near- cognate codon on the 70S ribosome
Authors : Schmeing, T.M.; Voorhees, R.M.; Ramakrishnan, V.
Deposited on : 2010-12-07
Resolution : 3.10 Å(reported)

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

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

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

MolProbity : 4.02b-467
Mogul : 1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix) : 1.13
EDS : 2.11
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac : 5.8.0158
CCP4 : 7.0.044 (Gargrove)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.11

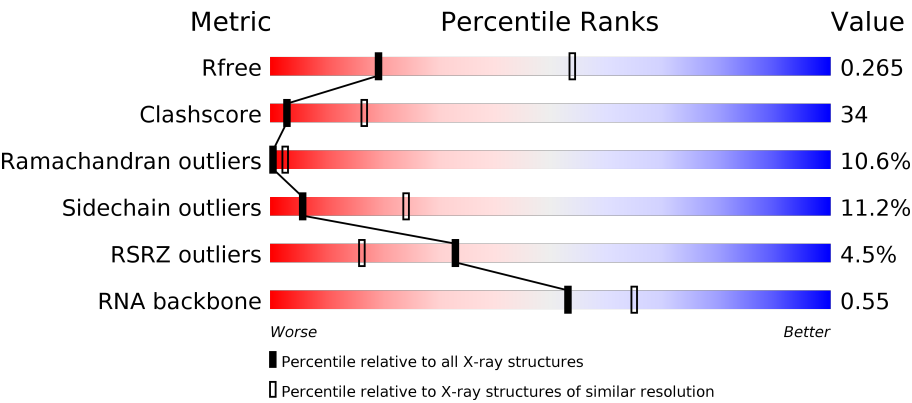
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.10 Å.

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






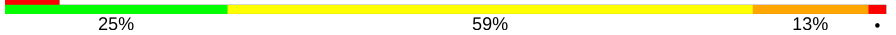
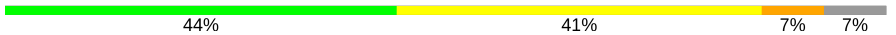
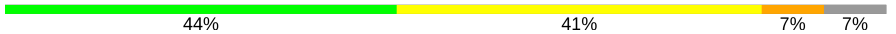
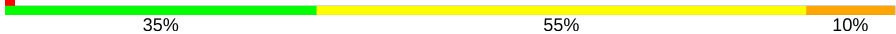
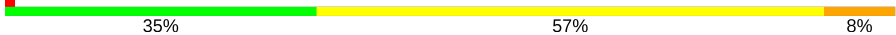
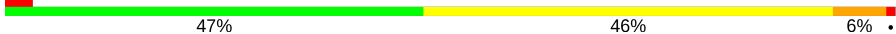



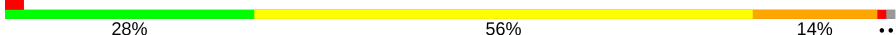

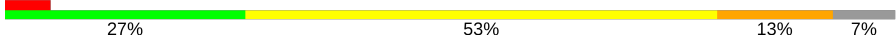
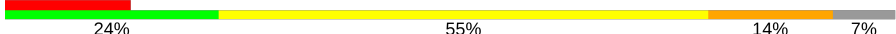



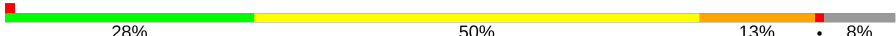





Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1094 (3.10-3.10)
Clashscore	141614	1184 (3.10-3.10)
Ramachandran outliers	138981	1141 (3.10-3.10)
Sidechain outliers	138945	1141 (3.10-3.10)
RSRZ outliers	127900	1067 (3.10-3.10)
RNA backbone	3102	1116 (3.40-2.80)

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

Mol	Chain	Length	Quality of chain
1	AA	1522	<div><div>2%</div><div>36%</div><div>49%</div><div>12%</div><div>••</div></div>
1	CA	1522	<div><div>2%</div><div>35%</div><div>51%</div><div>12%</div><div>••</div></div>
2	AB	256	<div><div>%</div><div>30%</div><div>49%</div><div>12%</div><div>•</div><div>9%</div></div>
2	CB	256	<div><div>2%</div><div>28%</div><div>52%</div><div>11%</div><div>•</div><div>9%</div></div>


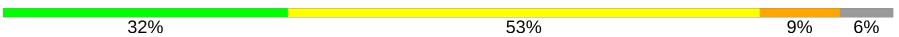
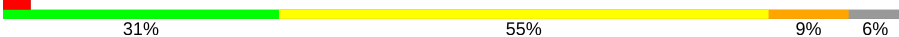


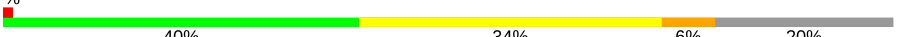
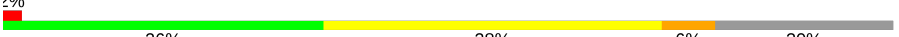
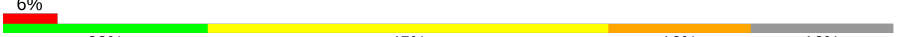
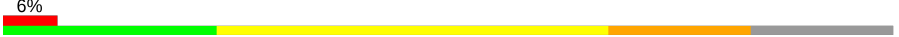

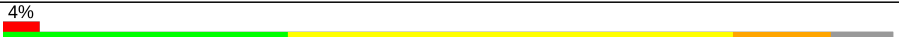


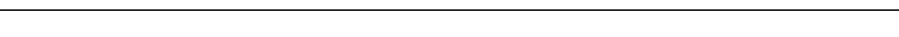






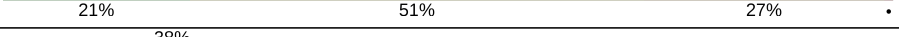

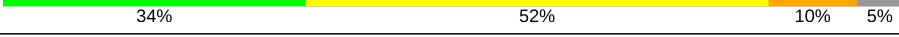


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Mol	Chain	Length	Quality of chain
3	AC	239	
3	CC	239	
4	AD	209	
4	CD	209	
5	AE	162	
5	CE	162	
6	AF	101	
6	CF	101	
7	AG	156	
7	CG	156	
8	AH	138	
8	CH	138	
9	AI	128	
9	CI	128	
10	AJ	105	
10	CJ	105	
11	AK	129	
11	CK	129	
12	AL	135	
12	CL	135	
13	AM	126	
13	CM	126	
14	AN	61	
14	CN	61	
15	AO	89	

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Mol	Chain	Length	Quality of chain
15	CO	89	
16	AP	88	
16	CP	88	
17	AQ	105	
17	CQ	105	
18	AR	88	
18	CR	88	
19	AS	93	
19	CS	93	
20	AT	106	
20	CT	106	
21	AU	27	
21	CU	27	
22	AV	76	
22	AW	76	
22	CV	76	
22	CW	76	
23	AX	27	
23	CX	27	
24	AY	77	
24	CY	77	
25	AZ	405	
25	CZ	405	
26	B0	85	
26	D0	85	

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Mol	Chain	Length	Quality of chain
27	B1	98	
27	D1	98	
28	B2	72	
28	D2	72	
29	B3	60	
29	D3	60	
30	B4	71	
30	D4	71	
31	B5	60	
31	D5	60	
32	B6	54	
32	D6	54	
33	B7	49	
33	D7	49	
34	B8	65	
34	D8	65	
35	B9	37	
35	D9	37	
36	BA	2915	
36	DA	2915	
37	BB	122	
37	DB	122	
38	BC	229	
38	DC	229	
39	BD	276	

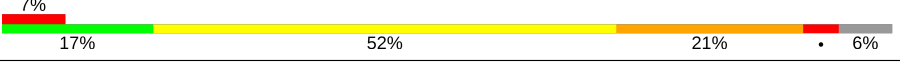
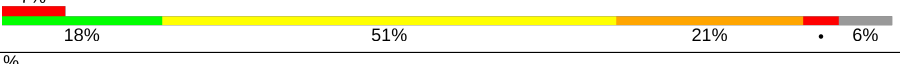
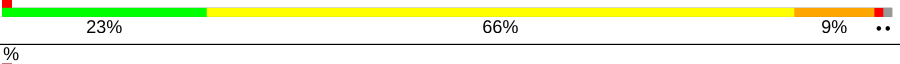
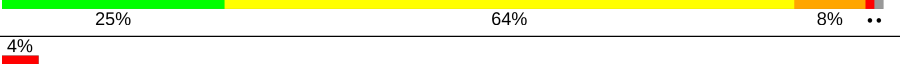
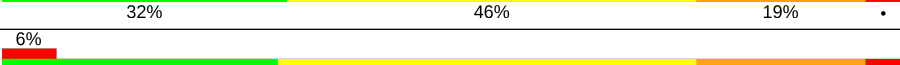
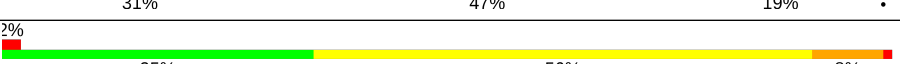
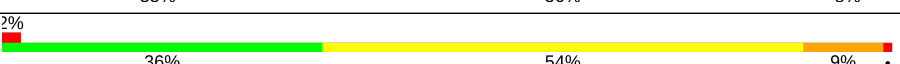
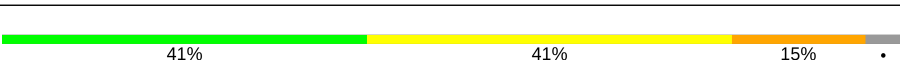

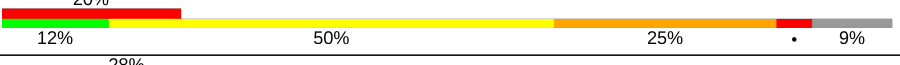
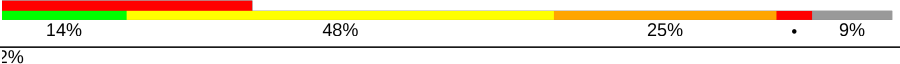
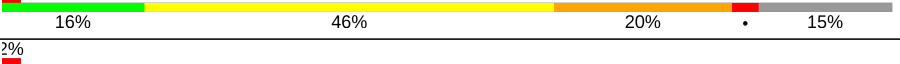
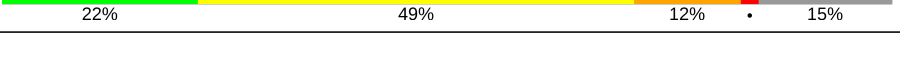
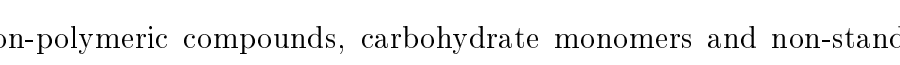
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Mol	Chain	Length	Quality of chain
39	DD	276	
40	BE	206	
40	DE	206	
41	BF	210	
41	DF	210	
42	BG	182	
42	DG	182	
43	BH	180	
43	DH	180	
44	BJ	173	
44	DJ	173	
45	BK	147	
45	DK	147	
46	BN	140	
46	DN	140	
47	BO	122	
47	DO	122	
48	BP	150	
48	DP	150	
49	BQ	141	
49	DQ	141	
50	BR	118	
50	DR	118	
51	BS	112	
51	DS	112	

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Mol	Chain	Length	Quality of chain
52	BT	146	
52	DT	146	
53	BU	118	
53	DU	118	
54	BV	101	
54	DV	101	
55	BW	113	
55	DW	113	
56	BX	96	
56	DX	96	
57	BY	110	
57	DY	110	
58	BZ	206	
58	DZ	206	

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
24	H2U	AY	16	-	-	-	X
24	H2U	AY	17	-	-	-	X
24	H2U	AY	20	-	-	-	X
24	PSU	AY	55	X	-	-	-
24	H2U	CY	16	-	-	-	X
24	H2U	CY	17	-	-	-	X
24	H2U	CY	20	-	-	-	X
24	7MG	CY	46	-	-	-	X
24	PSU	CY	55	X	-	-	X

2 Entry composition

There are 61 unique types of molecules in this entry. The entry contains 307322 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	AA	1510	Total	C	N	O	P	0	0	0
			32451	14445	6010	10487	1509			
1	CA	1510	Total	C	N	O	P	0	0	0
			32451	14445	6010	10487	1509			

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

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

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	AH	138	Total	C	N	O	S	0	0	0
			1116	705	215	193	3			
8	CH	138	Total	C	N	O	S	0	0	0
			1116	705	215	193	3			

- Molecule 9 is a protein called 30S RIBOSOMAL PROTEIN S9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	AI	127	Total	C	N	O		0	0	0
			1010	639	197	174				
9	CI	127	Total	C	N	O		0	0	0
			1010	639	197	174				

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	AJ	98	Total	C	N	O	S	0	0	0
			794	499	156	138	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	CJ	98	Total	C	N	O	S	0	0	0
			794	499	156	138	1			

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

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

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

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

There are 8 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AL	1	MET	-	expression tag	UNP Q5SHN3
AL	2	VAL	-	expression tag	UNP Q5SHN3
AL	3	ALA	-	expression tag	UNP Q5SHN3
AL	4	LEU	-	expression tag	UNP Q5SHN3
CL	1	MET	-	expression tag	UNP Q5SHN3
CL	2	VAL	-	expression tag	UNP Q5SHN3
CL	3	ALA	-	expression tag	UNP Q5SHN3
CL	4	LEU	-	expression tag	UNP Q5SHN3

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	AM	124	Total	C	N	O	S	0	0	0
			987	611	205	169	2			
13	CM	124	Total	C	N	O	S	0	0	0
			987	611	205	169	2			

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	AQ	99	Total	C	N	O	S	0	0	0
			823	528	151	142	2			
17	CQ	99	Total	C	N	O	S	0	0	0
			823	528	151	142	2			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
18	AR	70	Total	C	N	O	0	0	0
			574	367	112	95			
18	CR	70	Total	C	N	O	0	0	0
			574	367	112	95			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AS	78	Total	C	N	O	S	0	0	0
			629	403	114	110	2			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	CS	78	Total	C	N	O	S	0	0	0
			629	403	114	110	2			

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

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

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

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

- Molecule 22 is a RNA chain called E-SITE TRNA PHE OR P-SITE TRNA PHE.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	AV	76	Total	C	N	O	P	0	0	0
			1619	723	290	531	75			
22	AW	76	Total	C	N	O	P	0	0	0
			1619	723	290	531	75			
22	CV	76	Total	C	N	O	P	0	0	0
			1619	723	290	531	75			
22	CW	76	Total	C	N	O	P	0	0	0
			1619	723	290	531	75			

- Molecule 23 is a RNA chain called MRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	AX	17	Total	C	N	O	P	0	0	0
			361	164	68	113	16			
23	CX	17	Total	C	N	O	P	0	0	0
			361	164	68	113	16			

- Molecule 24 is a RNA chain called A-SITE TRNA A9C TRP-TRNA TRP.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
24	AY	77	Total	C	N	O	P	S	0	0	0
			1643	741	287	537	76	2			
24	CY	77	Total	C	N	O	P	S	0	0	0
			1643	741	287	537	76	2			

- Molecule 25 is a protein called ELONGATION FACTOR TU.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
25	AZ	385	Total	C	N	O	S		0	0	0
			2983	1886	522	563	12				
25	CZ	385	Total	C	N	O	S		0	0	0
			2983	1886	522	563	12				

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AZ	6	ILE	VAL	conflict	UNP Q5SHN6
AZ	264	LYS	ARG	conflict	UNP Q5SHN6
CZ	6	ILE	VAL	conflict	UNP Q5SHN6
CZ	264	LYS	ARG	conflict	UNP Q5SHN6

- Molecule 26 is a protein called 50S RIBOSOMAL PROTEIN L27.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
26	B0	84	Total	C	N	O	S		0	0	0
			662	410	140	111	1				
26	D0	84	Total	C	N	O	S		0	0	0
			662	410	140	111	1				

- Molecule 27 is a protein called 50S RIBOSOMAL PROTEIN L28.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
27	B1	93	Total	C	N	O	S		0	0	0
			731	460	145	125	1				
27	D1	93	Total	C	N	O	S		0	0	0
			731	460	145	125	1				

- Molecule 28 is a protein called 50S RIBOSOMAL PROTEIN L29.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
28	B2	71	Total	C	N	O	S		0	0	0
			598	370	121	106	1				

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	D2	71	Total	C	N	O	S	0	0	0
			598	370	121	106	1			

- Molecule 29 is a protein called 50S RIBOSOMAL PROTEIN L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	B3	59	Total	C	N	O	S	0	0	0
			467	298	90	78	1			
29	D3	59	Total	C	N	O	S	0	0	0
			467	298	90	78	1			

- Molecule 30 is a protein called 50S RIBOSOMAL PROTEIN L31.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	B4	44	Total	C	N	O	S	0	0	0
			340	218	57	61	4			
30	D4	44	Total	C	N	O	S	0	0	0
			340	218	57	61	4			

- Molecule 31 is a protein called 50S RIBOSOMAL PROTEIN L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	B5	59	Total	C	N	O	S	0	0	0
			459	288	90	76	5			
31	D5	59	Total	C	N	O	S	0	0	0
			459	288	90	76	5			

- Molecule 32 is a protein called 50S RIBOSOMAL PROTEIN L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	B6	50	Total	C	N	O	S	0	0	0
			433	270	88	71	4			
32	D6	50	Total	C	N	O	S	0	0	0
			433	270	88	71	4			

- Molecule 33 is a protein called 50S RIBOSOMAL PROTEIN L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	B7	48	Total	C	N	O	S	0	0	0
			418	257	104	55	2			
33	D7	48	Total	C	N	O	S	0	0	0
			418	257	104	55	2			

- Molecule 34 is a protein called 50S RIBOSOMAL PROTEIN L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	B8	63	Total	C	N	O	S	0	0	0
			507	326	101	78	2			
34	D8	63	Total	C	N	O	S	0	0	0
			507	326	101	78	2			

- Molecule 35 is a protein called 50S RIBOSOMAL PROTEIN L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	B9	37	Total	C	N	O	S	0	0	0
			307	188	68	47	4			
35	D9	37	Total	C	N	O	S	0	0	0
			307	188	68	47	4			

- Molecule 36 is a RNA chain called 23S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	BA	2901	Total	C	N	O	P	0	0	0
			62477	27807	11683	20087	2900			
36	DA	2901	Total	C	N	O	P	0	0	0
			62477	27807	11683	20087	2900			

- Molecule 37 is a RNA chain called 5S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	BB	119	Total	C	N	O	P	0	0	0
			2551	1136	471	826	118			
37	DB	119	Total	C	N	O	P	0	0	0
			2551	1136	471	826	118			

- Molecule 38 is a protein called 50S RIBOSOMAL PROTEIN L1.

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

- Molecule 39 is a protein called 50S RIBOSOMAL PROTEIN L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	BD	275	Total	C	N	O	S	0	0	0
			2145	1353	428	361	3			
39	DD	275	Total	C	N	O	S	0	0	0
			2145	1353	428	361	3			

- Molecule 40 is a protein called 50S RIBOSOMAL PROTEIN L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	BE	204	Total	C	N	O	S	0	0	0
			1563	988	299	270	6			
40	DE	204	Total	C	N	O	S	0	0	0
			1563	988	299	270	6			

- Molecule 41 is a protein called 50S RIBOSOMAL PROTEIN L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	BF	207	Total	C	N	O	S	0	0	0
			1623	1035	303	282	3			
41	DF	207	Total	C	N	O	S	0	0	0
			1623	1035	303	282	3			

- Molecule 42 is a protein called 50S RIBOSOMAL PROTEIN L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	BG	181	Total	C	N	O	S	0	0	0
			1474	942	268	260	4			
42	DG	181	Total	C	N	O	S	0	0	0
			1474	942	268	260	4			

- Molecule 43 is a protein called 50S RIBOSOMAL PROTEIN L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	BH	159	Total	C	N	O	S	0	0	0
			1222	773	228	220	1			
43	DH	159	Total	C	N	O	S	0	0	0
			1222	773	228	220	1			

- Molecule 44 is a protein called 50S RIBOSOMAL PROTEIN L10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	BJ	130	Total	C	N	O		0	0	0
			651	391	130	130				

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
44	DJ	130	Total	C	N	O	0	0	0
			651	391	130	130			

- Molecule 45 is a protein called 50S RIBOSOMAL PROTEIN L11.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
45	BK	140	Total	C	N	O	0	0	0
			700	420	140	140			
45	DK	140	Total	C	N	O	0	0	0
			700	420	140	140			

- Molecule 46 is a protein called 50S RIBOSOMAL PROTEIN L13.

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

- Molecule 47 is a protein called 50S RIBOSOMAL PROTEIN L14.

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

- Molecule 48 is a protein called 50S RIBOSOMAL PROTEIN L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	BP	146	Total	C	N	O	S	0	0	0
			1114	692	227	193	2			
48	DP	146	Total	C	N	O	S	0	0	0
			1114	692	227	193	2			

- Molecule 49 is a protein called 50S RIBOSOMAL PROTEIN L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
49	BQ	141	Total	C	N	O	S	0	0	0
			1122	715	212	188	7			
49	DQ	141	Total	C	N	O	S	0	0	0
			1122	715	212	188	7			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
50	BR	117	Total	C	N	O	0	0	0
			960	599	202	159			
50	DR	117	Total	C	N	O	0	0	0
			960	599	202	159			

- Molecule 51 is a protein called 50S RIBOSOMAL PROTEIN L18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
51	BS	98	Total	C	N	O	0	0	0
			770	486	154	130			
51	DS	98	Total	C	N	O	0	0	0
			770	486	154	130			

- Molecule 52 is a protein called 50S RIBOSOMAL PROTEIN L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	BT	137	Total	C	N	O	S	0	0	0
			1141	710	234	196	1			
52	DT	137	Total	C	N	O	S	0	0	0
			1141	710	234	196	1			

- Molecule 53 is a protein called 50S RIBOSOMAL PROTEIN L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	BU	117	Total	C	N	O	S	0	0	0
			958	604	202	151	1			
53	DU	117	Total	C	N	O	S	0	0	0
			958	604	202	151	1			

- Molecule 54 is a protein called 50S RIBOSOMAL PROTEIN L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
54	BV	101	Total	C	N	O	S	0	0	0
			779	501	142	135	1			
54	DV	101	Total	C	N	O	S	0	0	0
			779	501	142	135	1			

- Molecule 55 is a protein called 50S RIBOSOMAL PROTEIN L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
55	BW	113	Total	C	N	O	S	0	0	0
			896	563	176	155	2			
55	DW	113	Total	C	N	O	S	0	0	0
			896	563	176	155	2			

- Molecule 56 is a protein called 50S RIBOSOMAL PROTEIN L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
56	BX	92	Total	C	N	O	S	0	0	0
			725	471	131	123				
56	DX	92	Total	C	N	O	S	0	0	0
			725	471	131	123				

- Molecule 57 is a protein called 50S RIBOSOMAL PROTEIN L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
57	BY	100	Total	C	N	O	S	0	0	0
			775	500	148	123	4			
57	DY	100	Total	C	N	O	S	0	0	0
			775	500	148	123	4			

- Molecule 58 is a protein called 50S RIBOSOMAL PROTEIN L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
58	BZ	176	Total	C	N	O	S	0	0	0
			1403	897	252	252	2			
58	DZ	176	Total	C	N	O	S	0	0	0
			1403	897	252	252	2			

- Molecule 59 is ZINC ION (three-letter code: ZN) (formula: Zn).

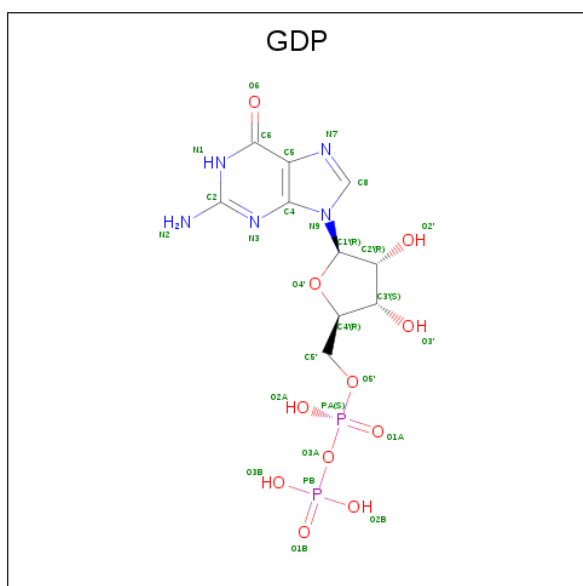
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
59	B4	1	Total	Zn	0	0
			1	1		
59	CN	1	Total	Zn	0	0
			1	1		
59	AN	1	Total	Zn	0	0
			1	1		
59	B9	1	Total	Zn	0	0
			1	1		
59	D9	1	Total	Zn	0	0
			1	1		

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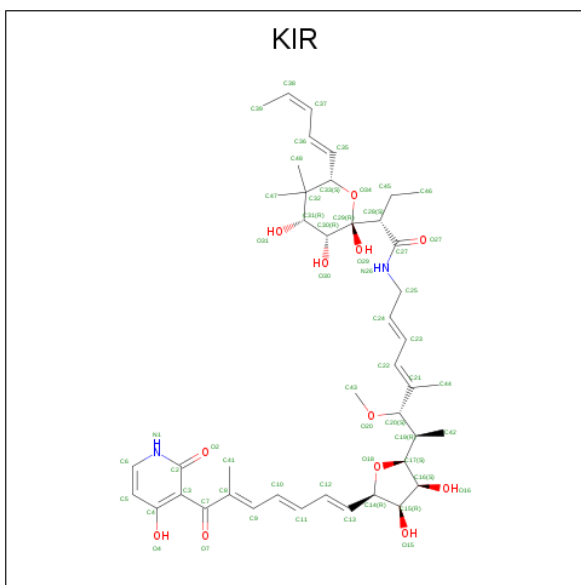
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
59	D4	1	Total	Zn	0	0
			1	1		
59	CD	1	Total	Zn	0	0
			1	1		
59	AD	1	Total	Zn	0	0
			1	1		

- Molecule 60 is GUANOSINE-5'-DIPHOSPHATE (three-letter code: GDP) (formula: $C_{10}H_{15}N_5O_{11}P_2$).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
60	AZ	1	Total	C	N	O	P	0	0
			28	10	5	11	2		
60	CZ	1	Total	C	N	O	P	0	0
			28	10	5	11	2		

- Molecule 61 is KIRROMYCIN (three-letter code: KIR) (formula: $C_{43}H_{60}N_2O_{12}$).

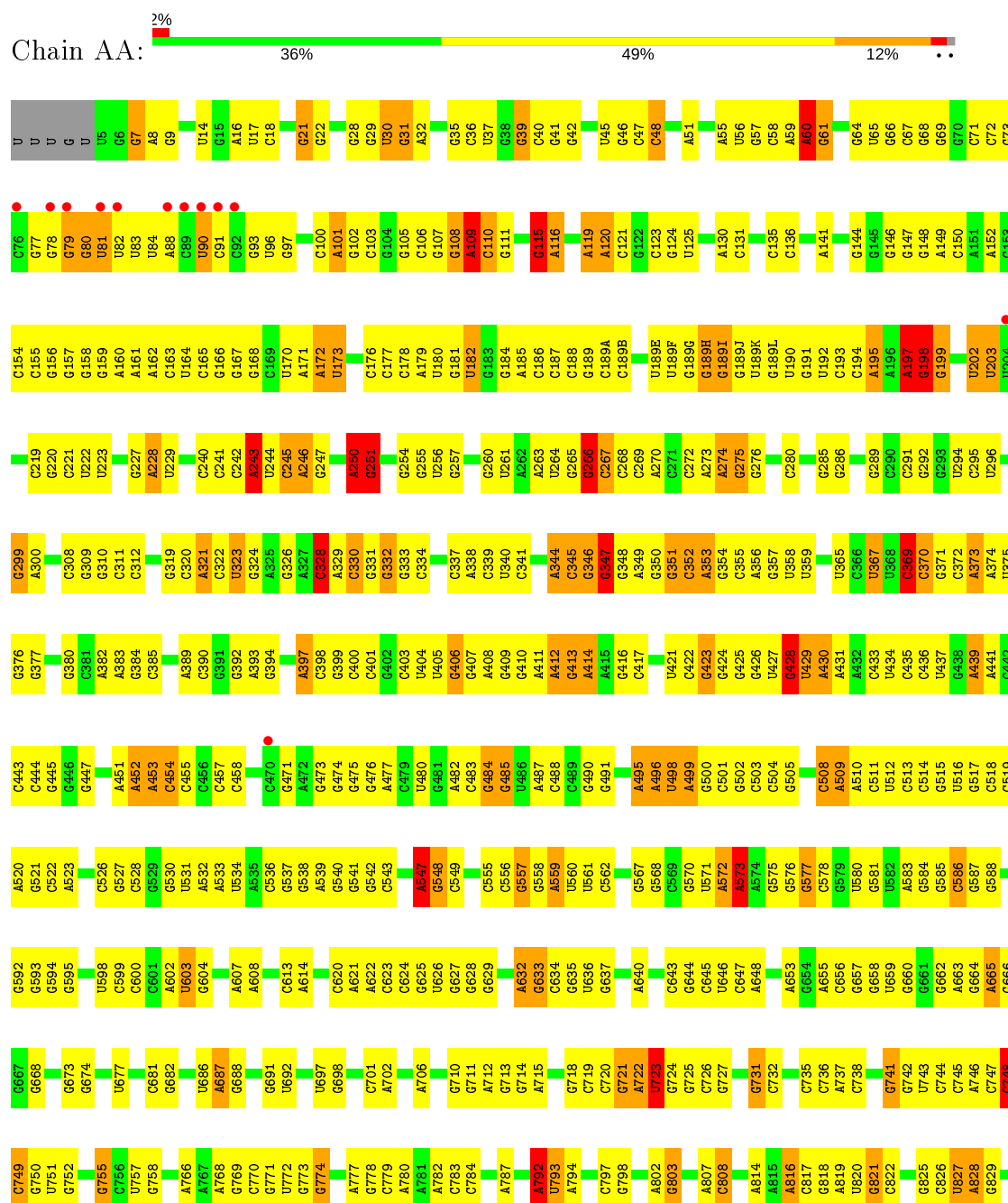


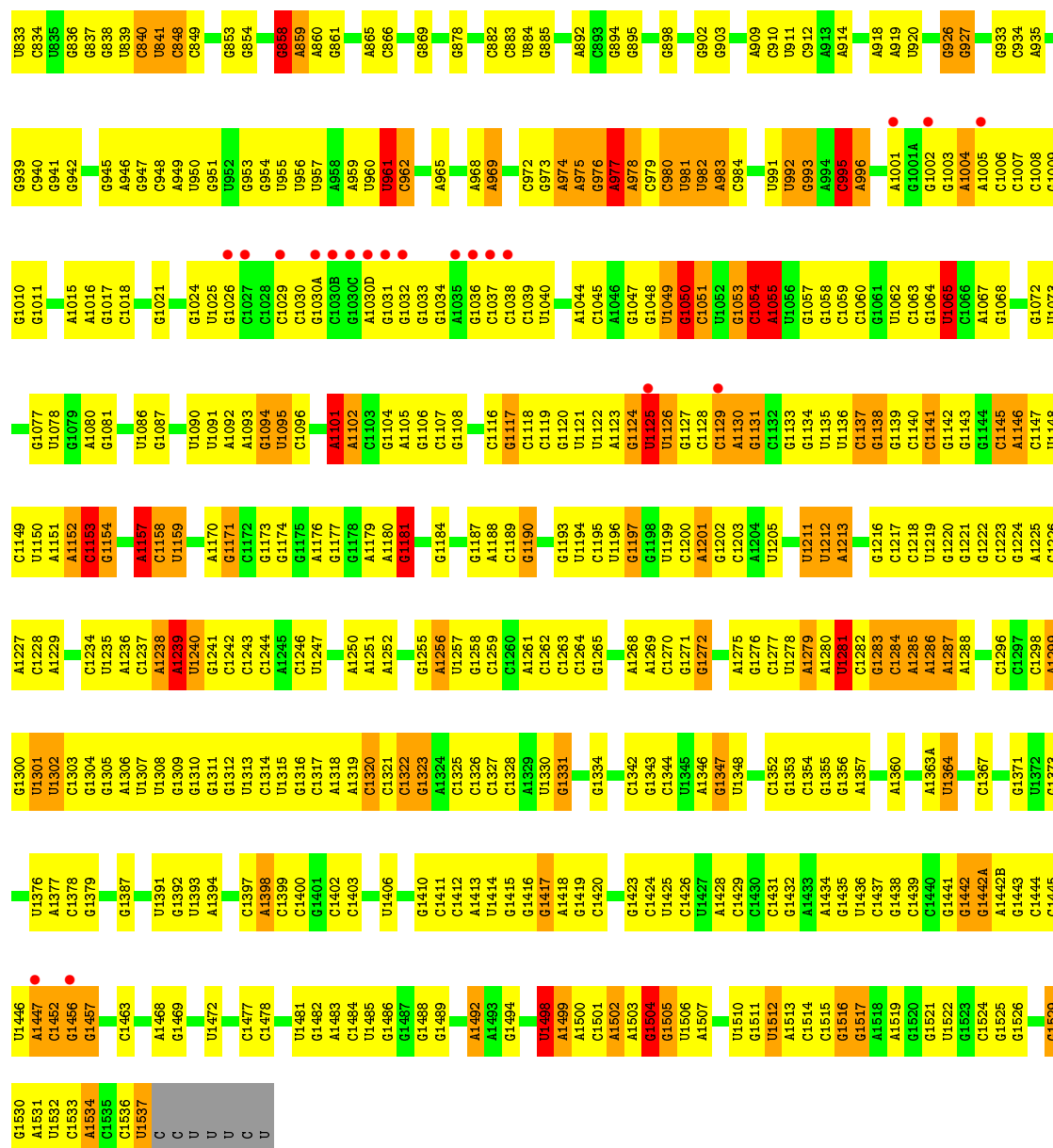
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
61	AZ	1	Total 57	C 43	N 2	O 12	0	0
61	CZ	1	Total 57	C 43	N 2	O 12	0	0

3 Residue-property plots

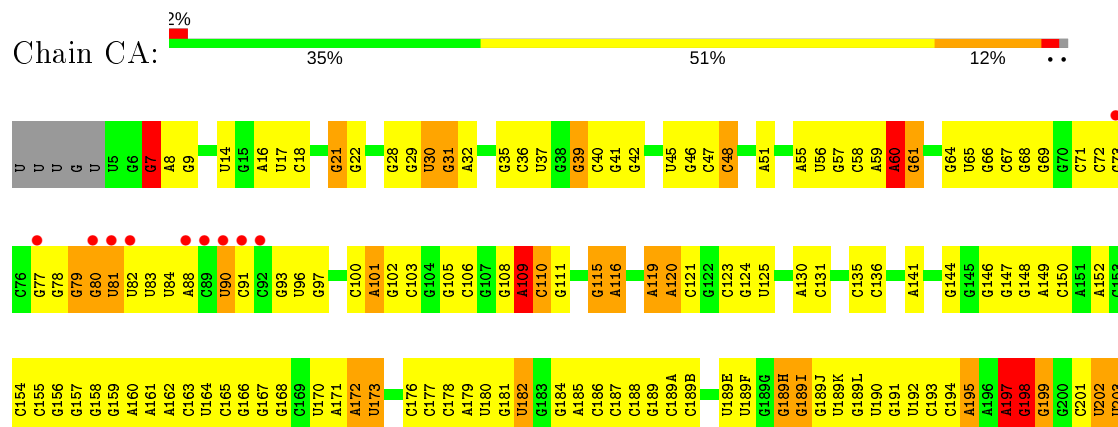
These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are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

• Molecule 1: 16S rRNA

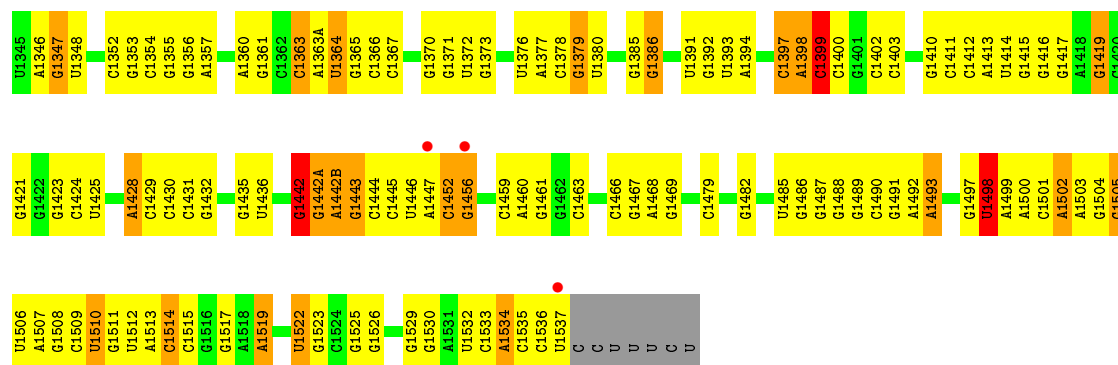




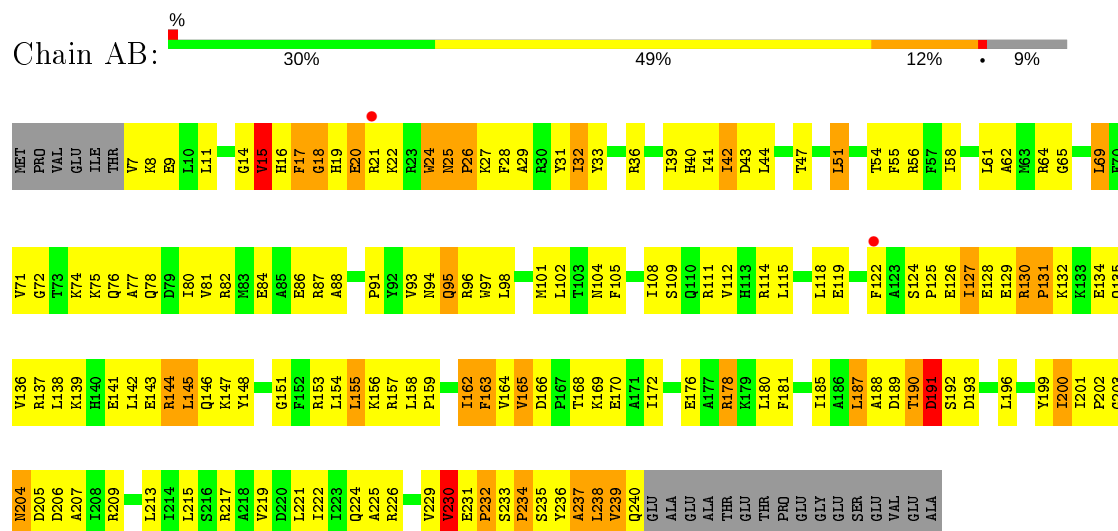
- Molecule 1: 16S rRNA



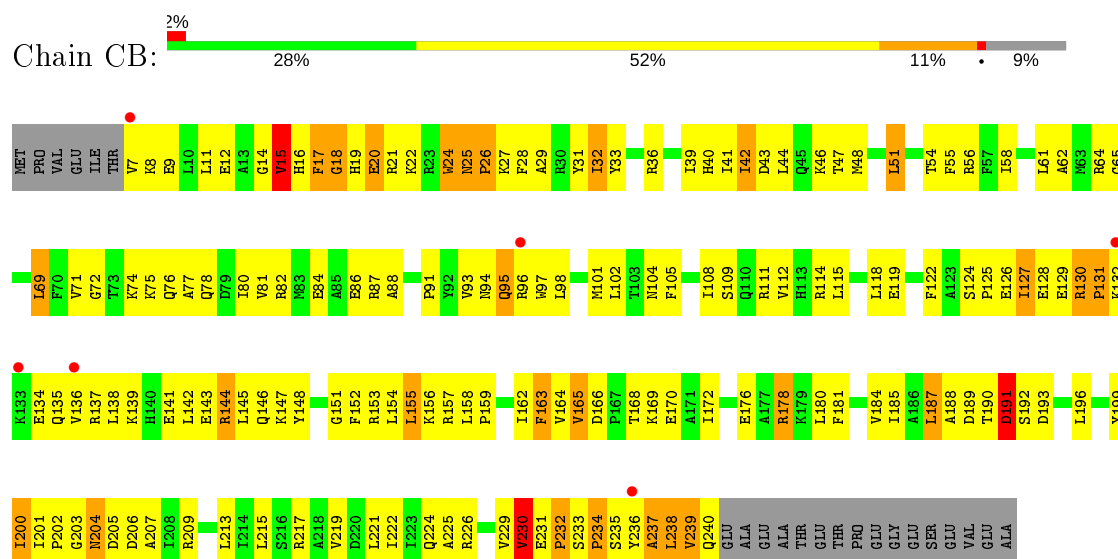
A1275	A1204	G1131	A1055	A983	A913	A819	C738	G661	G584	G515	C436	G370	G297	U204
G1276	U1205	G1132	U1056	C984	A914	U820	G741	G662	G585	U516	U437	G371	A298	C219
C1277	G1057	G1133	G1058	U991	A918	C922	G742	A663	C586	G517	A438	C372	G299	A300
U1211	U1135	U1134	C1059	U992	A919	C921	U743	G664	G587	C518	A439	A373	A300	G220
U1278	U1136	U1135	C1060	G993	U920	G825	U744	A665	G588	C519	A441	A374	G301	C221
A1280	G1061	C1137	G1061	A994	U920	C926	C745	G667	G582	A520	C442	U375	G302	U222
U1281	U1062	C1138	U1062	C995	A923	U827	C746	G668	G593	C521	C443	G376	U223	U223
C1282	C1139	G1139	C1063	A996	C924	U828	C747	G669	G594	C522	C444	G377	C308	G227
G1283	C1140	C1140	U1065	U996	G925	U829	C748	G670	G595	A523	U446	G380	G309	A228
C1284	C1141	C1141	U1065	U996	G925	U829	C749	G671	G596	A523	U446	G380	G310	A228
A1285	G1142	G1142	C1066	A1001	G926	U833	C750	G672	U598	C526	U447	C381	C311	U229
A1286	G1143	G1143	U1067	U997	G927	C934	U751	G673	C599	C528	A451	A382	C312	U229
A1287	G1144	G1144	G1068	U998	G927	C934	U751	G674	C600	G529	A452	A383	C240	C240
A1288	G1145	G1145	G1068	U998	G927	C934	U751	G675	C601	G530	A453	A384	C241	C241
A1289	G1146	G1146	U1072	A1005	A935	G836	C756	G681	C602	G531	A454	A385	C242	C242
A1290	C1147	C1147	U1073	U999	A936	G837	C757	G682	U531	A532	C455	A321	A243	A243
C1291	U1148	U1148	U1074	C1007	G937	U839	C758	U686	G603	A533	C456	C390	U244	U244
A1292	C1149	C1149	G1077	C1008	A938	C840	C759	U687	G604	U534	C457	C391	C245	C245
A1293	U1150	U1150	U1078	U1009	G939	U841	C760	G688	A607	A535	C458	C392	A246	A246
A1294	A1151	A1151	U1079	C940	C940	U842	C761	G689	A608	C536	U471	A393	G247	G247
A1295	C1152	C1152	A1080	G941	G941	C949	C762	G690	C613	C537	U472	C328	A250	A250
A1296	C1153	C1153	G1081	G942	G942	C949	C763	G691	C614	C538	U473	C329	G251	G251
A1297	G1154	G1154	U1082	G943	G943	G853	C764	G692	A621	A539	U474	A330	G252	G252
A1298	A1155	A1155	U1083	G944	G944	G854	C765	G693	A622	A540	U475	C331	G253	G253
A1299	C1156	C1156	U1084	G945	G945	G855	C766	G694	A623	A541	U476	C332	U256	U256
A1300	G1157	G1157	U1085	A946	A946	G856	C767	G695	A624	A542	U477	C333	G257	G257
A1301	C1158	C1158	U1086	A947	A947	G857	C768	G696	A625	A543	U478	C334	G258	G258
A1302	U1159	U1159	U1087	C948	C948	G858	C769	G697	A626	A544	U479	C335	A261	A261
C1303	C1160	C1160	U1088	G949	G949	G859	C770	G698	A627	A545	U480	C336	A262	A262
C1304	G1161	G1161	U1089	A950	A950	G860	C771	G699	A628	A546	U481	C337	A263	A263
C1305	C1162	C1162	U1090	G951	G951	G861	C772	G700	A629	A547	U482	C338	U264	U264
C1306	G1163	G1163	U1091	G952	G952	G862	C773	G701	A630	A548	U483	C339	G265	G265
A1307	C1164	C1164	U1092	G953	G953	C863	C774	G702	A631	A549	U484	C340	G266	G266
A1308	U1165	U1165	U1093	G954	G954	G864	C775	G703	A632	A550	U485	C341	C267	C267
A1309	C1166	C1166	U1094	G955	G955	G865	C776	G704	A633	A551	U486	C342	C268	C268
A1310	G1167	G1167	U1095	G956	G956	G866	C777	G705	A634	A552	U487	C343	C269	C269
A1311	C1168	C1168	U1096	G957	G957	G867	C778	G706	A635	A553	U488	C344	C270	C270
A1312	G1169	G1169	U1097	G958	G958	G868	C779	G707	A636	A554	U489	C345	C271	C271
A1313	C1170	C1170	U1098	G959	G959	G869	C780	G708	A637	A555	U490	C346	C272	C272
A1314	G1171	G1171	U1099	G960	G960	G870	C781	G709	A638	A556	U491	C347	A273	A273
A1315	C1172	C1172	U1100	G961	G961	G871	C782	G710	A639	A557	U492	C348	A274	A274
A1316	G1173	G1173	U1101	G962	G962	G872	C783	G711	A640	A558	U493	C349	A275	A275
A1317	C1174	C1174	U1102	G963	G963	G873	C784	G712	A641	A559	U494	C350	C280	C280
A1318	U1175	U1175	U1103	G964	G964	G874	C785	G713	A642	A560	U495	C351	G285	G285
A1319	C1176	C1176	U1104	G965	G965	G875	C786	G714	A643	A561	U496	C352	G286	G286
A1320	G1177	G1177	U1105	G966	G966	G876	C787	G715	A644	A562	U497	C353	G289	G289
A1321	C1178	C1178	U1106	G967	G967	G877	C788	G716	A645	A563	U498	C354	C291	C291
A1322	U1179	U1179	U1107	G968	G968	G878	C789	G717	A646	A564	U499	C355	G292	G292
A1323	C1180	C1180	U1108	G969	G969	G879	C790	G718	A647	A565	U500	C356	G293	G293
A1324	G1181	G1181	U1109	G970	G970	G880	C791	G719	A648	A566	U501	C357	U294	U294
A1325	C1182	C1182	U1110	G971	G971	G881	C792	G720	A649	A567	U502	C358	U295	U295
A1326	U1183	U1183	U1111	G972	G972	G882	C793	G721	A650	A568	U503	C359	U296	U296
A1327	C1184	C1184	U1112	G973	G973	G883	C794	G722	A651	A569	U504	C360	U297	U297
A1328	U1185	U1185	U1113	G974	G974	G884	C795	G723	A652	A570	U505	C361	U298	U298
A1329	C1186	C1186	U1114	G975	G975	G885	C796	G724	A653	A571	U506	C362	U299	U299
A1330	G1187	G1187	U1115	G976	G976	G886	C797	G725	A654	A572	U507	C363	U300	U300
A1331	C1188	C1188	U1116	G977	G977	G887	C798	G726	A655	A573	U508	C364	U301	U301
A1332	U1189	U1189	U1117	G978	G978	G888	C799	G727	A656	A574	U509	C365	U302	U302
A1333	C1190	C1190	U1118	G979	G979	G889	C800	G728	A657	A575	U510	C366	U303	U303
A1334	G1191	G1191	U1119	G980	G980	G890	C801	G729	A658	A576	U511	C367	U304	U304
A1335	C1192	C1192	U1120	G981	G981	G891	C802	G730	A659	A577	U512	C368	U305	U305
A1336	U1193	U1193	U1121	G982	G982	G892	C803	G731	A660	A578	U513	C369	U306	U306
A1337	C1194	C1194	U1122	G983	G983	G893	C804	G732	A661	A579	U514	C370	U307	U307
A1338	U1195	U1195	U1123	G984	G984	G894	C805	G733	A662	A580	U515	C371	U308	U308
A1339	C1196	C1196	U1124	G985	G985	G895	C806	G734	A663	A581	U516	C372	U309	U309
A1340	G1197	G1197	U1125	G986	G986	G896	C807	G735	A664	A582	U517	C373	U310	U310
A1341	C1198	C1198	U1126	G987	G987	G897	C808	G736	A665	A583	U518	C374	U311	U311
A1342	U1199	U1199	U1127	G988	G988	G898	C809	G737	A666	A584	U519	C375	U312	U312
A1343	C1200	C1200	U1128	G989	G989	G899	C810	G738	A667	A585	U520	C376	U313	U313
A1344	U1201	U1201	U1129	G990	G990	G900	C811	G739	A668	A586	U521	C377	U314	U314
A1345	C1202	C1202	U1130	G991	G991	G901	C812	G740	A669	A587	U522	C378	U315	U315
A1346	U1203	U1203	U1131	G992	G992	G902	C813	G741	A670	A588	U523	C379	U316	U316
A1347	C1204	C1204	U1132	G993	G993	G903	C814	G742	A671	A589	U524	C380	U317	U317
A1348	U1205	U1205	U1133	G994	G994	G904	C815	G743	A672	A590	U525	C381	U318	U318
A1349	C1206	C1206	U1134	G995	G995	G905	C816	G744	A673	A591	U526	C382	U319	U319
A1350	U1207	U1207	U1135	G996	G996	G906	C817	G745	A674	A592	U527	C383	U320	U320
A1351	C1208	C1208	U1136	G997	G997	G907	C818	G746	A675	A593	U528	C384	U321	U321
A1352	U1209	U1209	U1137	G998	G998	G908	C819	G747	A676	A594	U529	C385	U322	U322
A1353	C1210	C1210	U1138	G999	G999	G909	C820	G748	A677	A595	U530	C386	U323	U323
A1354	U1211	U1211	U1139	G1000	G1000	G910	C821	G749	A678	A596	U531	C387	U324	U324
A1355	C1212	C1212	U1140	G1001	G1001	G911	C822	G750	A679	A597	U532	C388	U325	U325
A1356	U1213	U1213	U1141	G1002	G1002	G912	C823	G751	A680	A598	U533	C389	U326	U326
A1357	C1214	C1214	U1142	G1003	G1003	G913	C824	G752	A681	A599	U534	C390	U327	U327
A1358	U1215	U1215	U1143	G1004	G1004	G914	C825	G753	A682	A600	U535	C391	U328	U328
A1359	C1216	C1216	U1144	G1005	G1005	G915	C826	G754	A683	A601	U536	C392	U329	U329
A1360	U1217	U1217	U1145	G1006	G1006	G916	C827	G755	A684	A602	U537	C393	U330	U330
A1361	C1218	C1218	U1146	G1007	G1007	G917	C828	G756	A685	A603	U538	C394	U331	U331
A1362	U1219	U1219	U1147	G1008	G1008	G918	C829	G757	A686	A604	U539	C395	U332	U332
A1363	C1220	C1220	U1148	G1009	G1009	G919	C830	G758	A687	A605	U540	C396	U333	U333
A1364	U1221	U1221	U1149	G1010	G1010	G920	C831	G759	A688	A606	U541	C397	U334	U334
A1365	C1222	C1222	U1150	G1011	G1011	G921	C832	G760	A689	A607	U542	C398	U335	U335
A1366	U1223	U1223	U1151	G1012	G									



• Molecule 2: 30S RIBOSOMAL PROTEIN S2

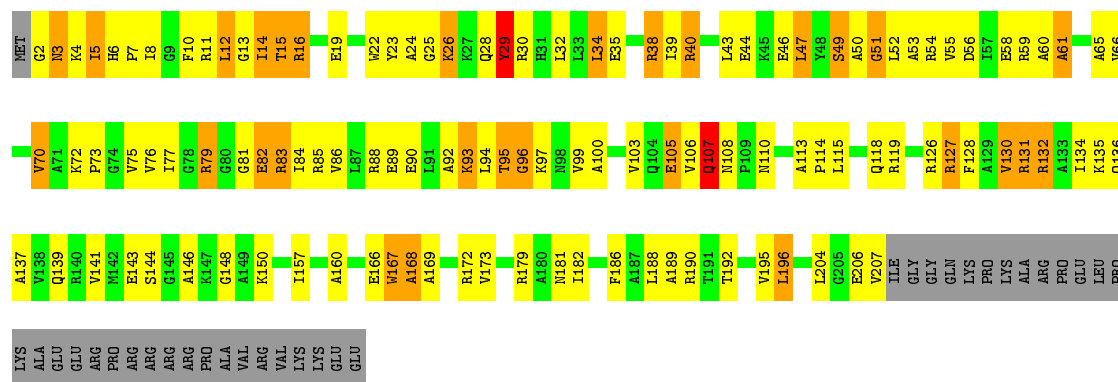


• Molecule 2: 30S RIBOSOMAL PROTEIN S2

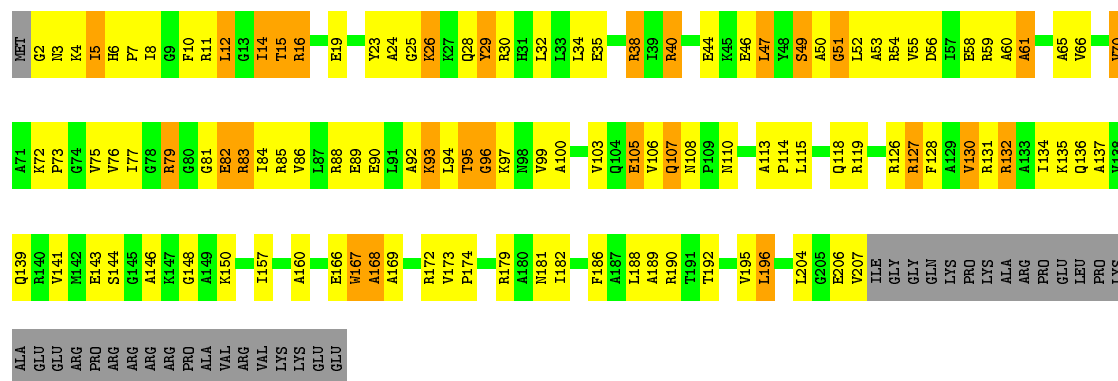


• Molecule 3: 30S RIBOSOMAL PROTEIN S3

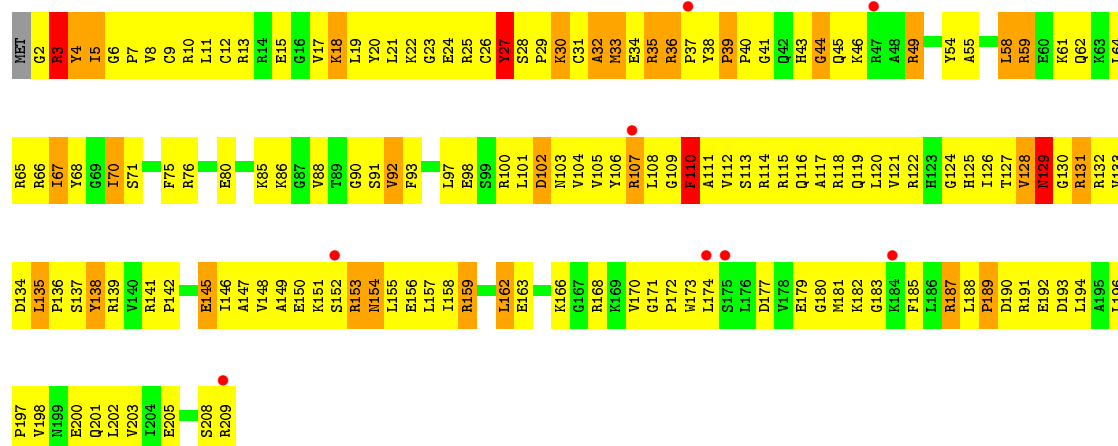
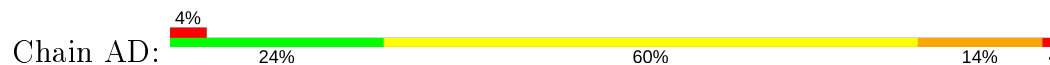




- Molecule 3: 30S RIBOSOMAL PROTEIN S3

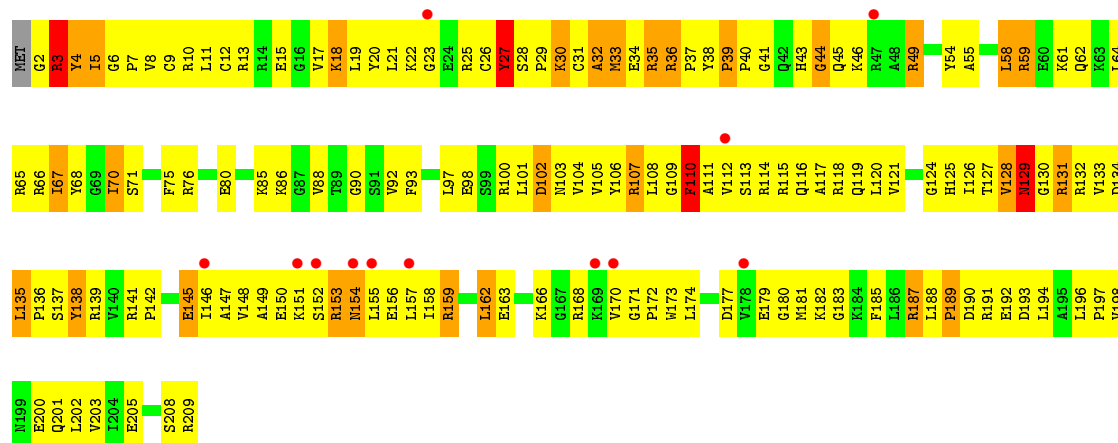


- Molecule 4: 30S RIBOSOMAL PROTEIN S4



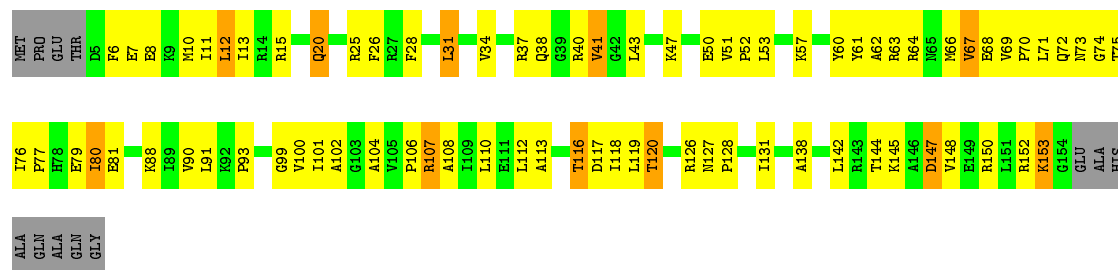
- Molecule 4: 30S RIBOSOMAL PROTEIN S4





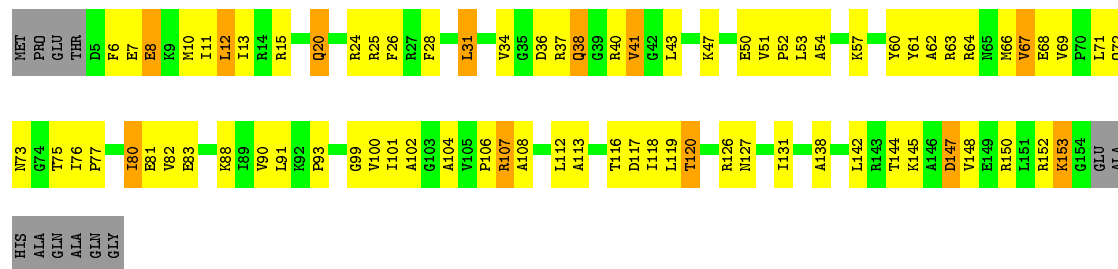
• Molecule 5: 30S RIBOSOMAL PROTEIN S5

Chain AE: 44% 41% 7% 7%



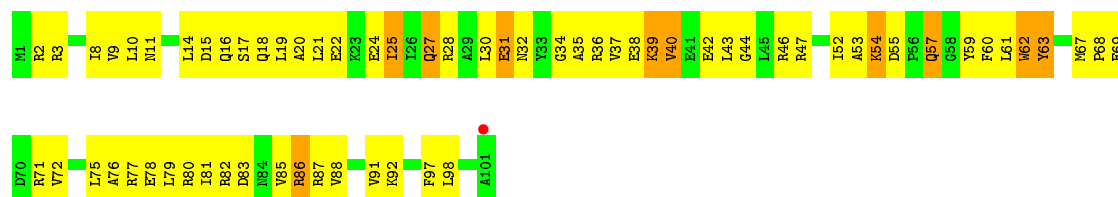
• Molecule 5: 30S RIBOSOMAL PROTEIN S5

Chain CE: 44% 41% 7% 7%

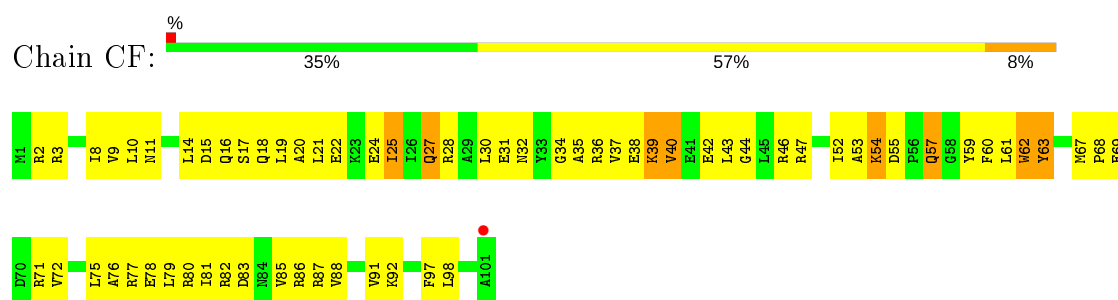


• Molecule 6: 30S RIBOSOMAL PROTEIN S6

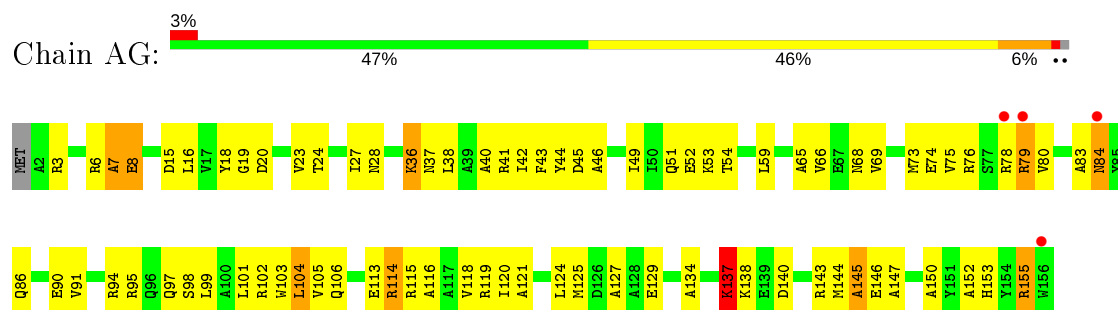
Chain AF: 35% 55% 10%



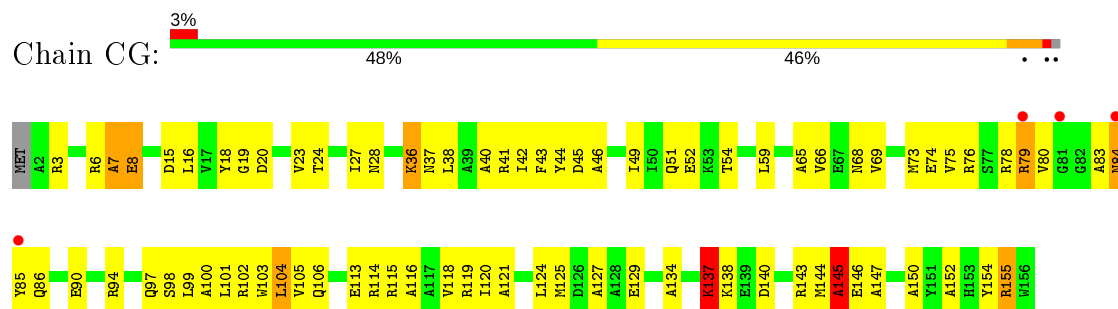
• Molecule 6: 30S RIBOSOMAL PROTEIN S6



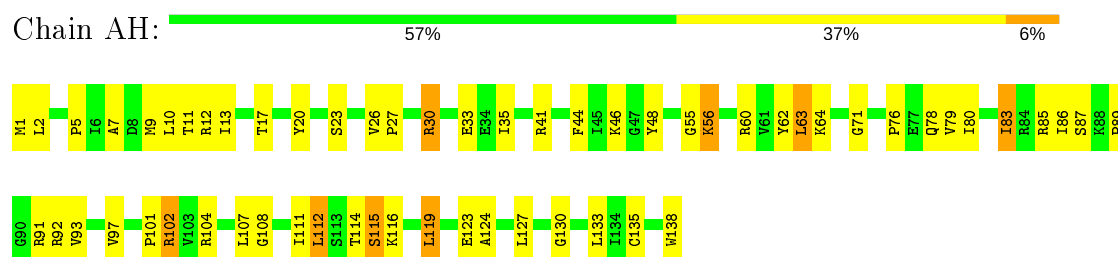
• Molecule 7: 30S RIBOSOMAL PROTEIN S7



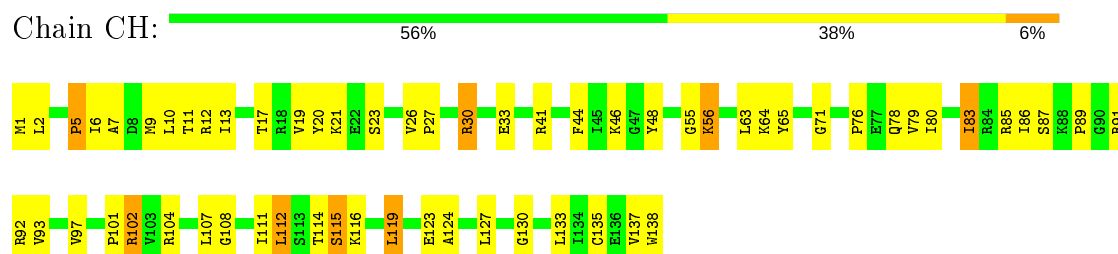
• Molecule 7: 30S RIBOSOMAL PROTEIN S7



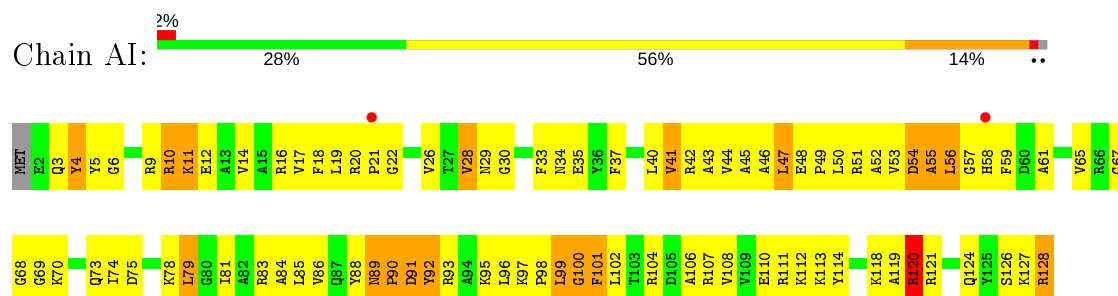
- Molecule 8: 30S RIBOSOMAL PROTEIN S8



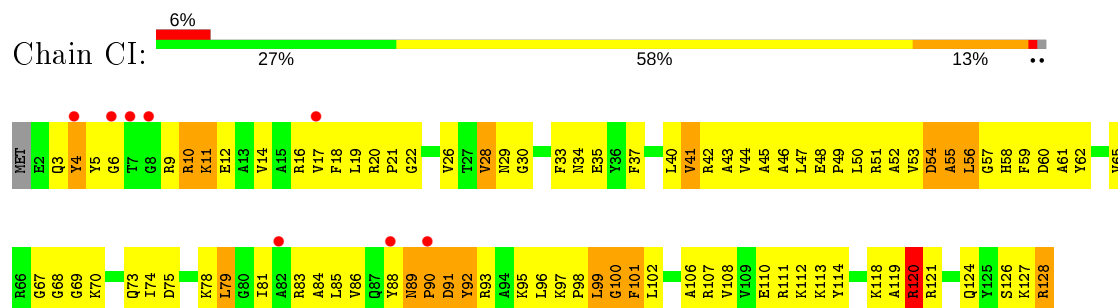
- Molecule 8: 30S RIBOSOMAL PROTEIN S8



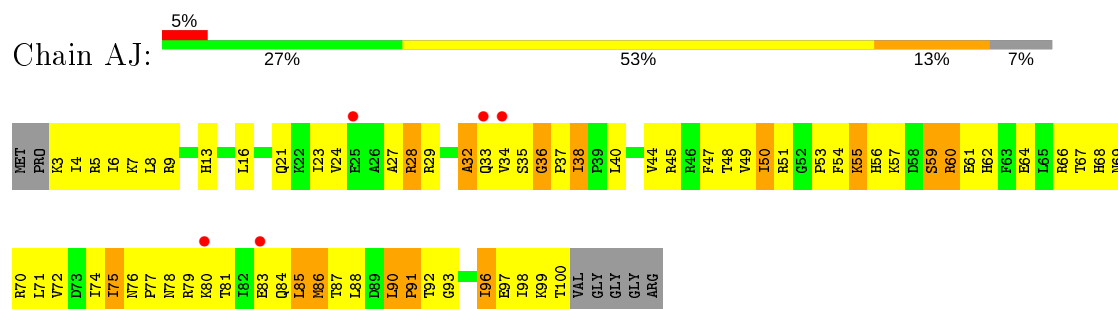
- Molecule 9: 30S RIBOSOMAL PROTEIN S9



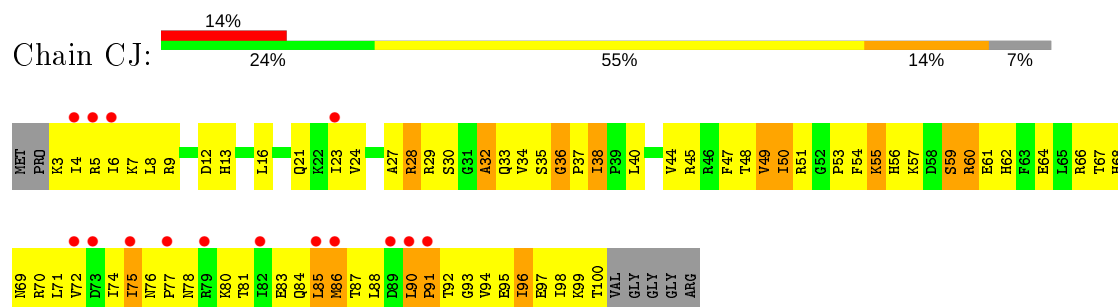
- Molecule 9: 30S RIBOSOMAL PROTEIN S9



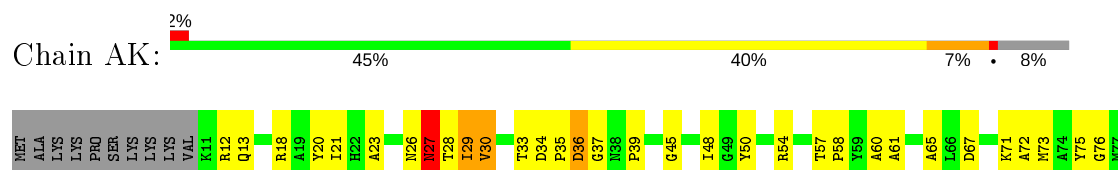
- Molecule 10: 30S RIBOSOMAL PROTEIN S10



- Molecule 10: 30S RIBOSOMAL PROTEIN S10

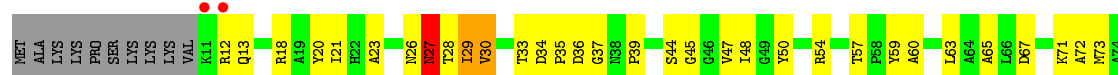
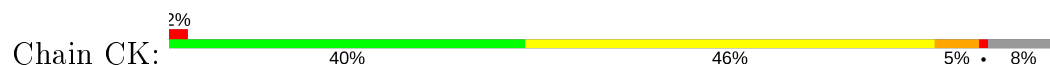


- Molecule 11: 30S RIBOSOMAL PROTEIN S11

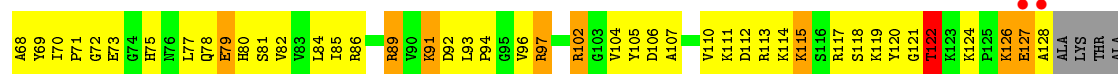




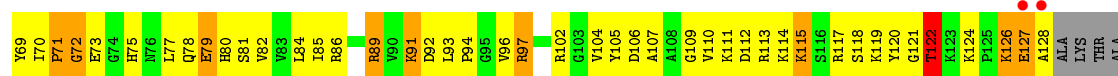
• Molecule 11: 30S RIBOSOMAL PROTEIN S11



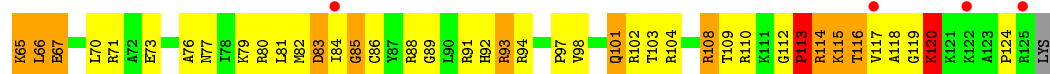
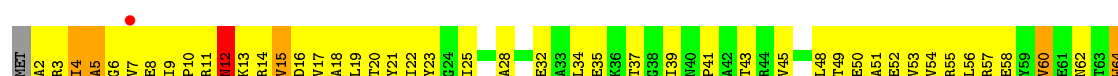
• Molecule 12: 30S RIBOSOMAL PROTEIN S12



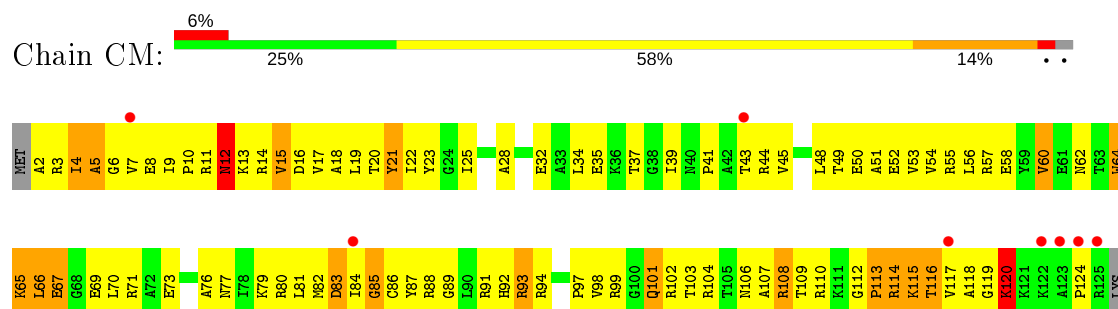
• Molecule 12: 30S RIBOSOMAL PROTEIN S12



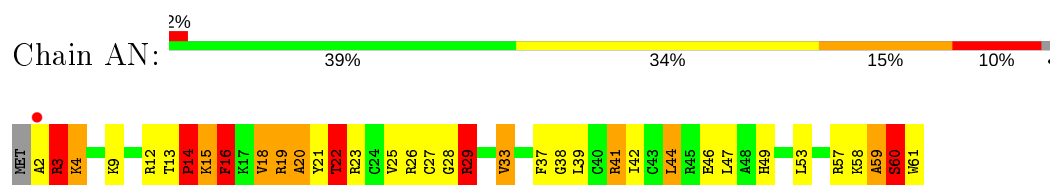
• Molecule 13: 30S RIBOSOMAL PROTEIN S13



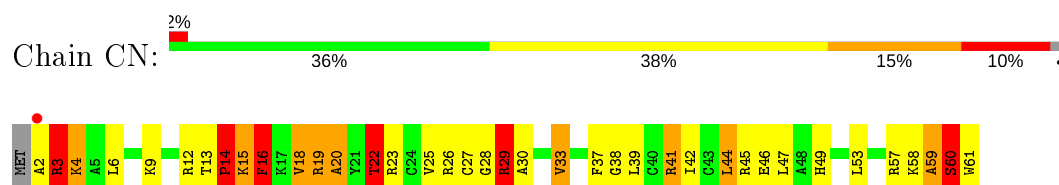
- Molecule 13: 30S RIBOSOMAL PROTEIN S13



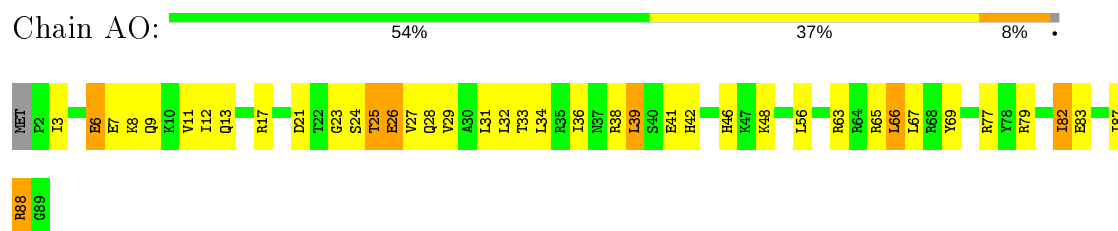
- Molecule 14: 30S RIBOSOMAL PROTEIN S14



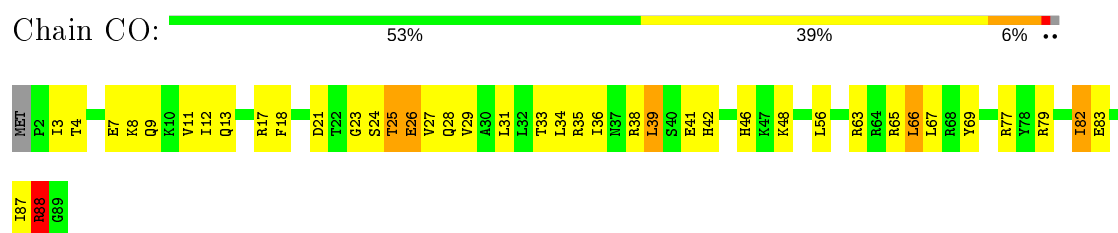
- Molecule 14: 30S RIBOSOMAL PROTEIN S14



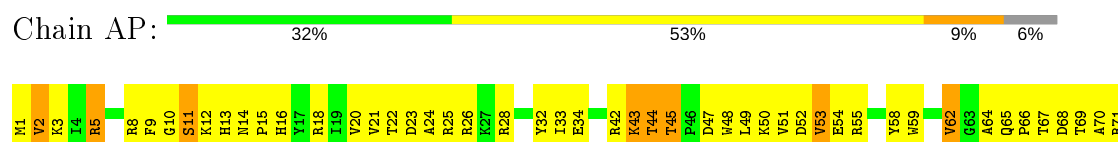
- Molecule 15: 30S RIBOSOMAL PROTEIN S15



- Molecule 15: 30S RIBOSOMAL PROTEIN S15

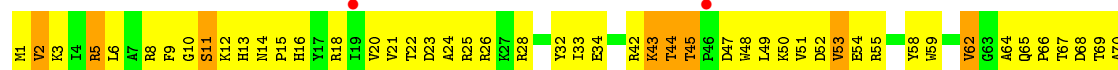


- Molecule 16: 30S RIBOSOMAL PROTEIN S16

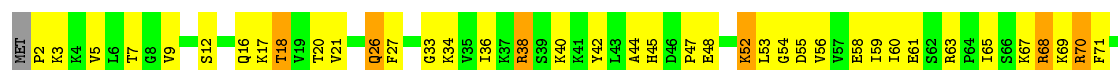




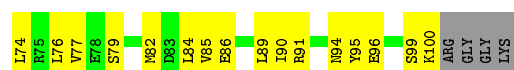
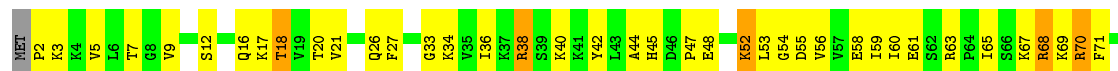
• Molecule 16: 30S RIBOSOMAL PROTEIN S16



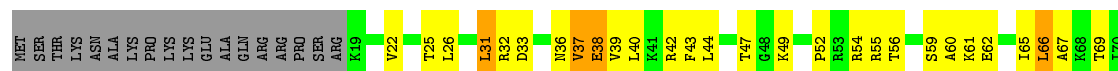
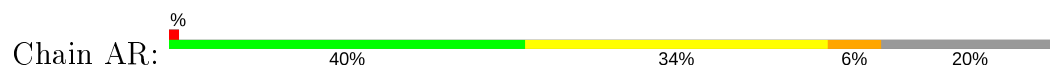
• Molecule 17: 30S RIBOSOMAL PROTEIN S17



• Molecule 17: 30S RIBOSOMAL PROTEIN S17

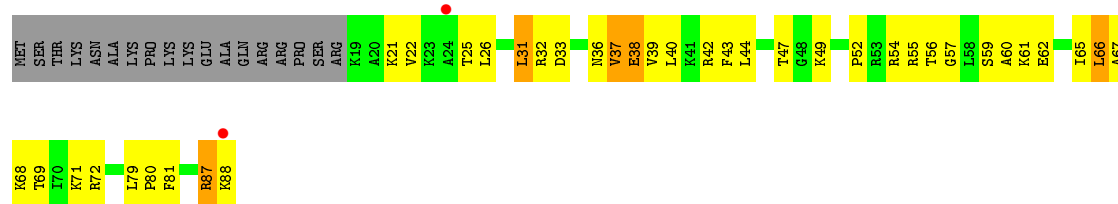


• Molecule 18: 30S RIBOSOMAL PROTEIN S18

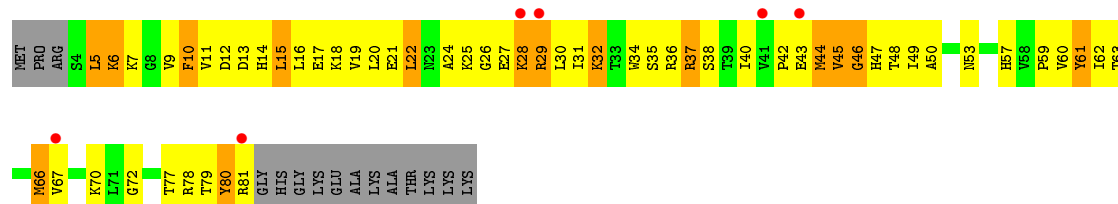
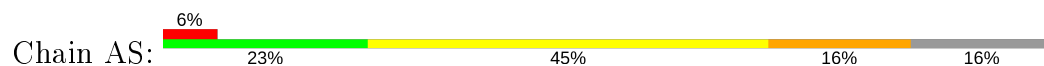


• Molecule 18: 30S RIBOSOMAL PROTEIN S18

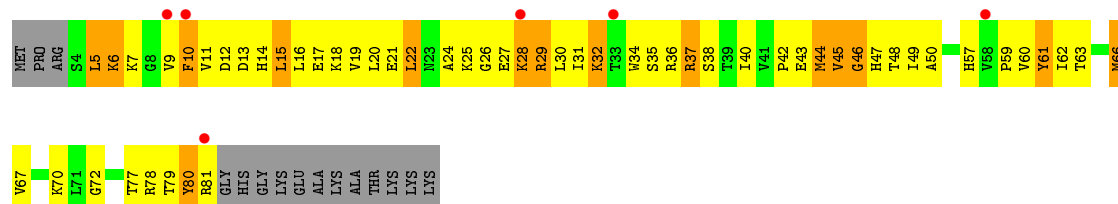




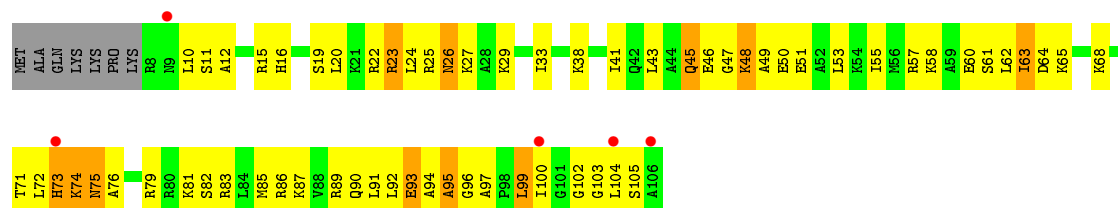
● Molecule 19: 30S RIBOSOMAL PROTEIN S19



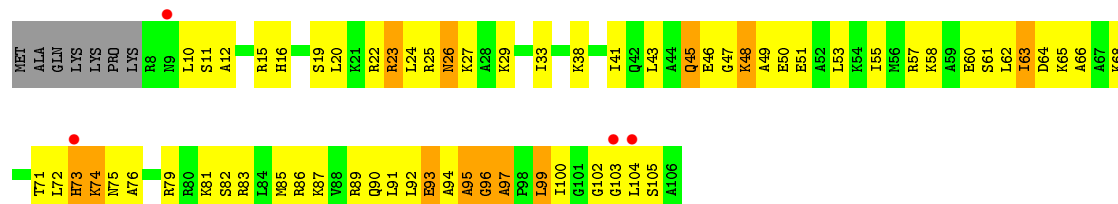
● Molecule 19: 30S RIBOSOMAL PROTEIN S19



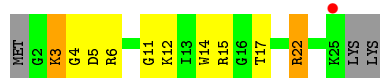
● Molecule 20: 30S RIBOSOMAL PROTEIN S20



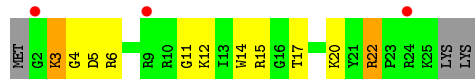
- Molecule 20: 30S RIBOSOMAL PROTEIN S20



- Molecule 21: 30S RIBOSOMAL PROTEIN THX



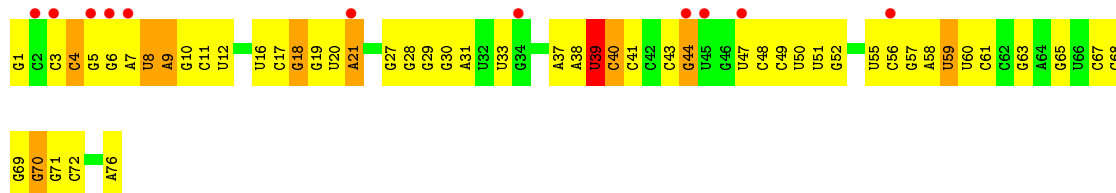
- Molecule 21: 30S RIBOSOMAL PROTEIN THX



- Molecule 22: E-SITE TRNA PHE OR P-SITE TRNA PHE



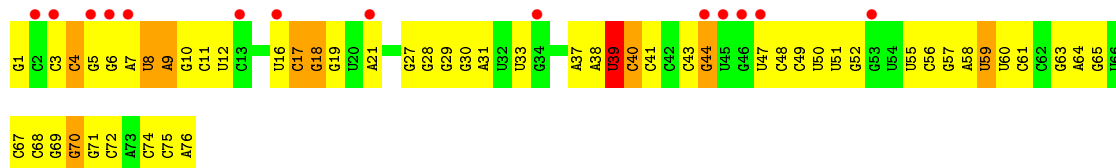
- Molecule 22: E-SITE TRNA PHE OR P-SITE TRNA PHE



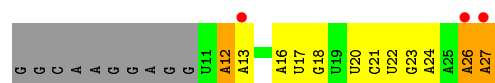
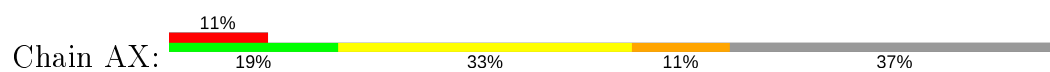
- Molecule 22: E-SITE TRNA PHE OR P-SITE TRNA PHE



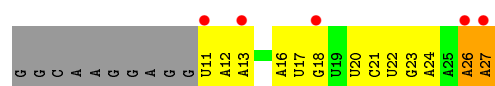
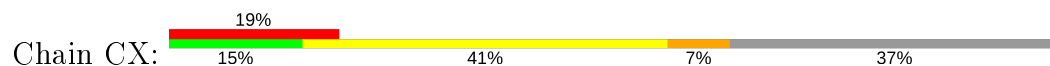
- Molecule 22: E-SITE TRNA PHE OR P-SITE TRNA PHE



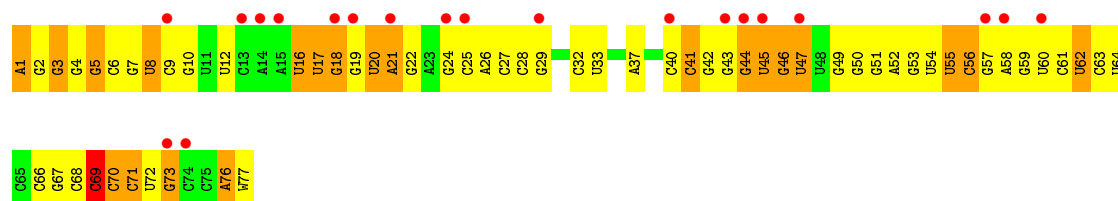
- Molecule 23: MRNA



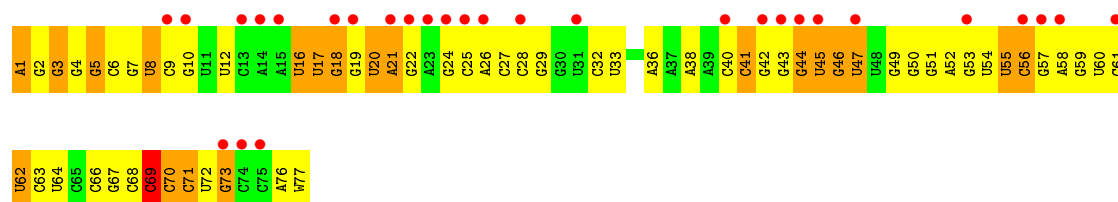
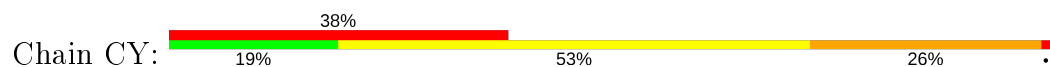
• Molecule 23: MRNA



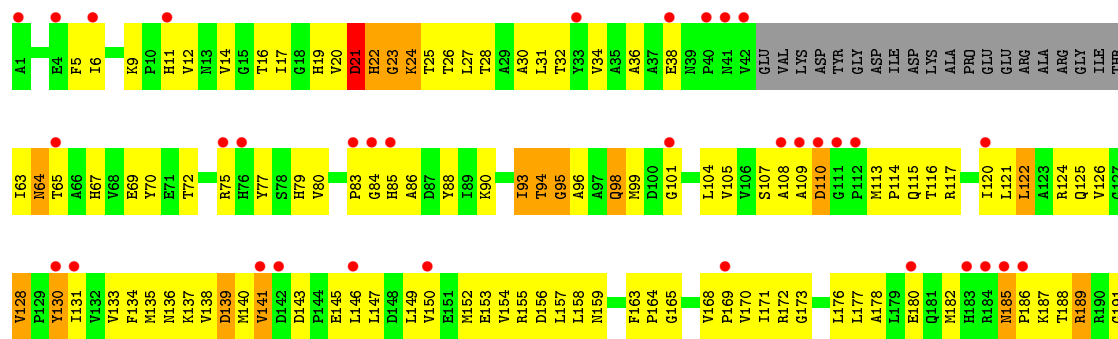
• Molecule 24: A-SITE TRNA A9C TRP-TRNA TRP

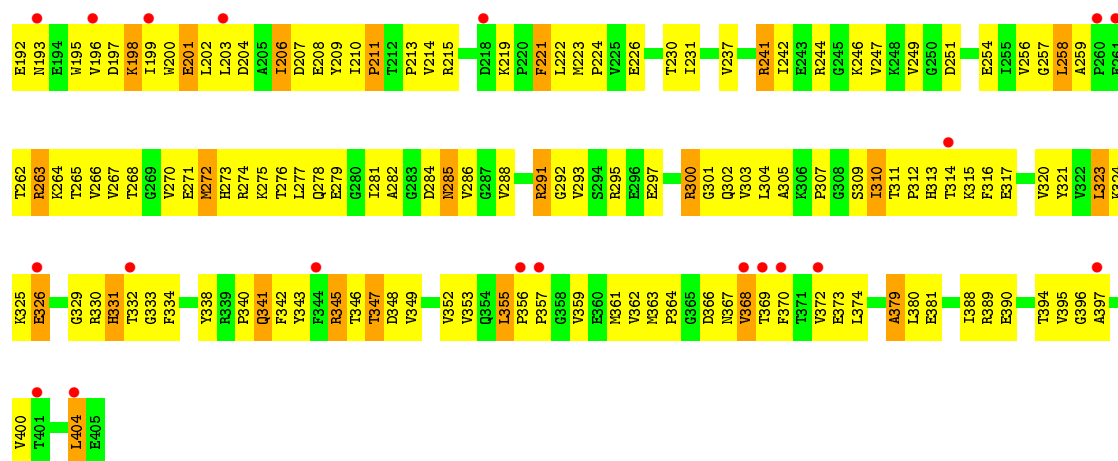


• Molecule 24: A-SITE TRNA A9C TRP-TRNA TRP

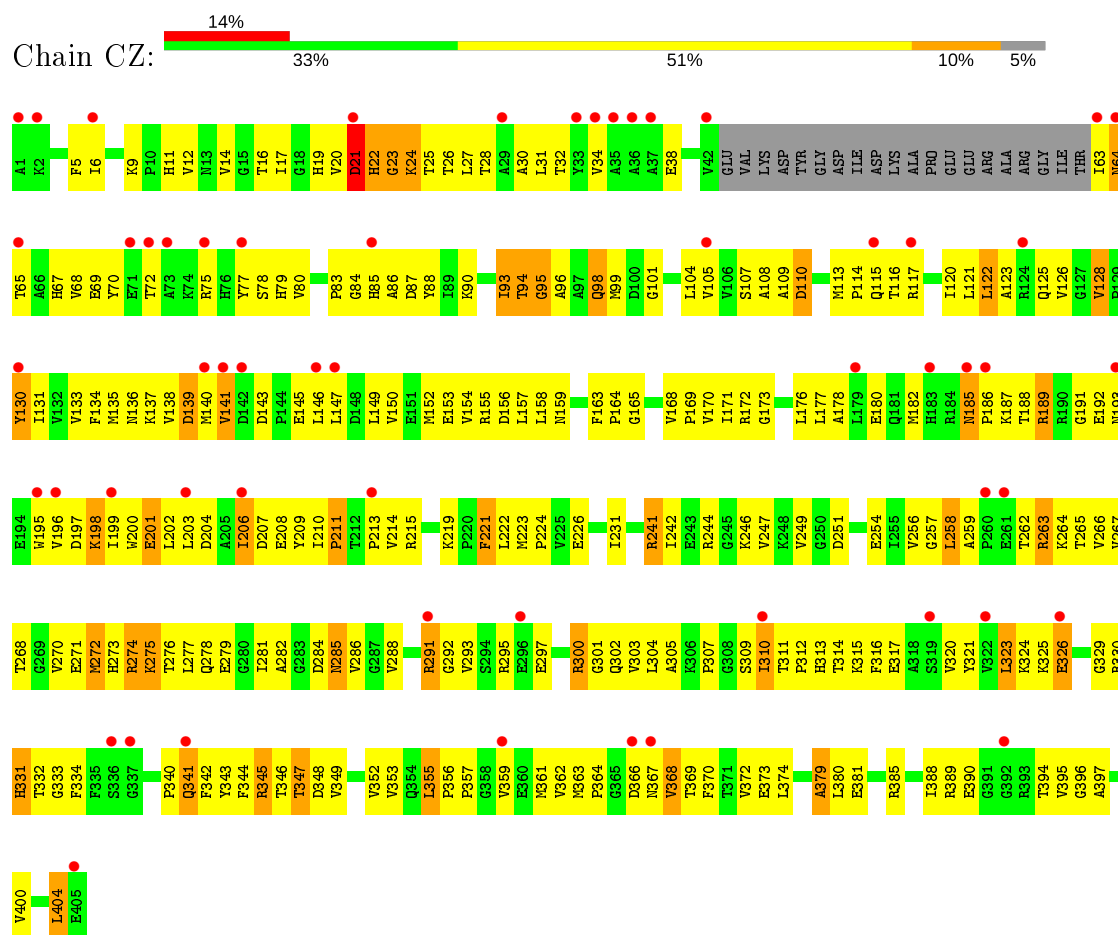


• Molecule 25: ELONGATION FACTOR TU

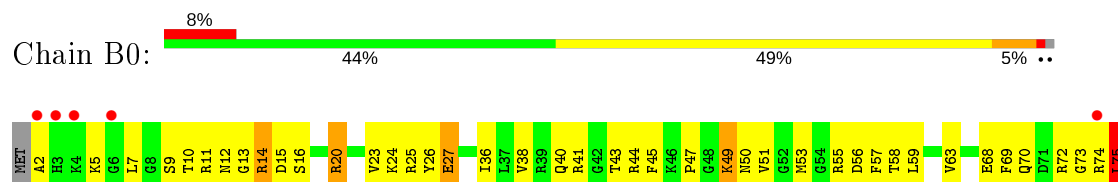




• Molecule 25: ELONGATION FACTOR TU



• Molecule 26: 50S RIBOSOMAL PROTEIN L27

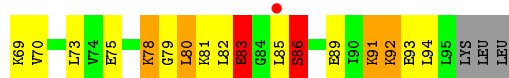
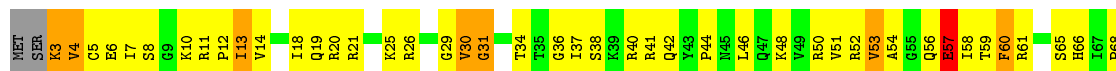




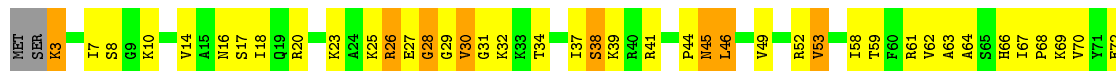
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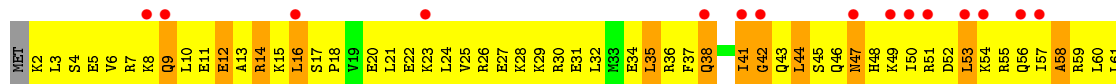
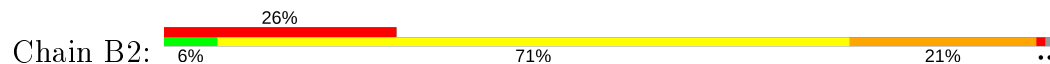
• Molecule 27: 50S RIBOSOMAL PROTEIN L28



• Molecule 27: 50S RIBOSOMAL PROTEIN L28



• Molecule 28: 50S RIBOSOMAL PROTEIN L29

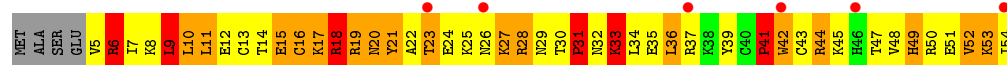


• Molecule 28: 50S RIBOSOMAL PROTEIN L29





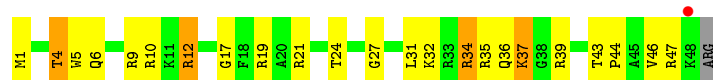
• Molecule 32: 50S RIBOSOMAL PROTEIN L33



• Molecule 32: 50S RIBOSOMAL PROTEIN L33



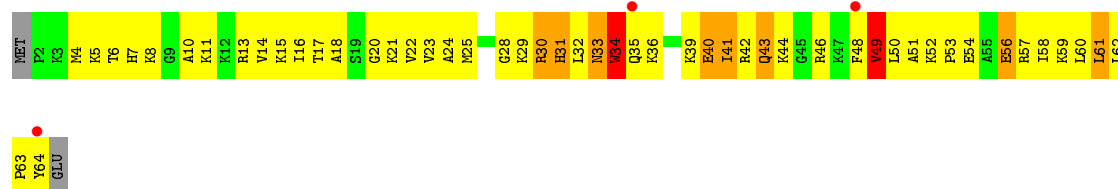
• Molecule 33: 50S RIBOSOMAL PROTEIN L34



• Molecule 33: 50S RIBOSOMAL PROTEIN L34

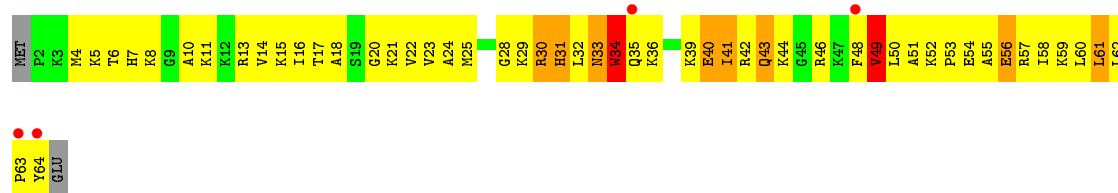


• Molecule 34: 50S RIBOSOMAL PROTEIN L35



• Molecule 34: 50S RIBOSOMAL PROTEIN L35





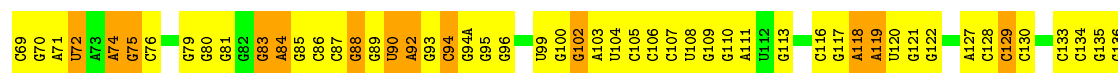
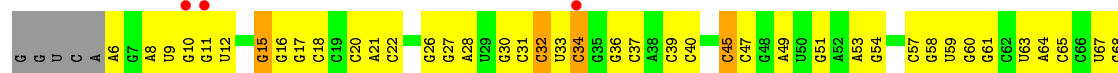
- Molecule 35: 50S RIBOSOMAL PROTEIN L36



- Molecule 35: 50S RIBOSOMAL PROTEIN L36

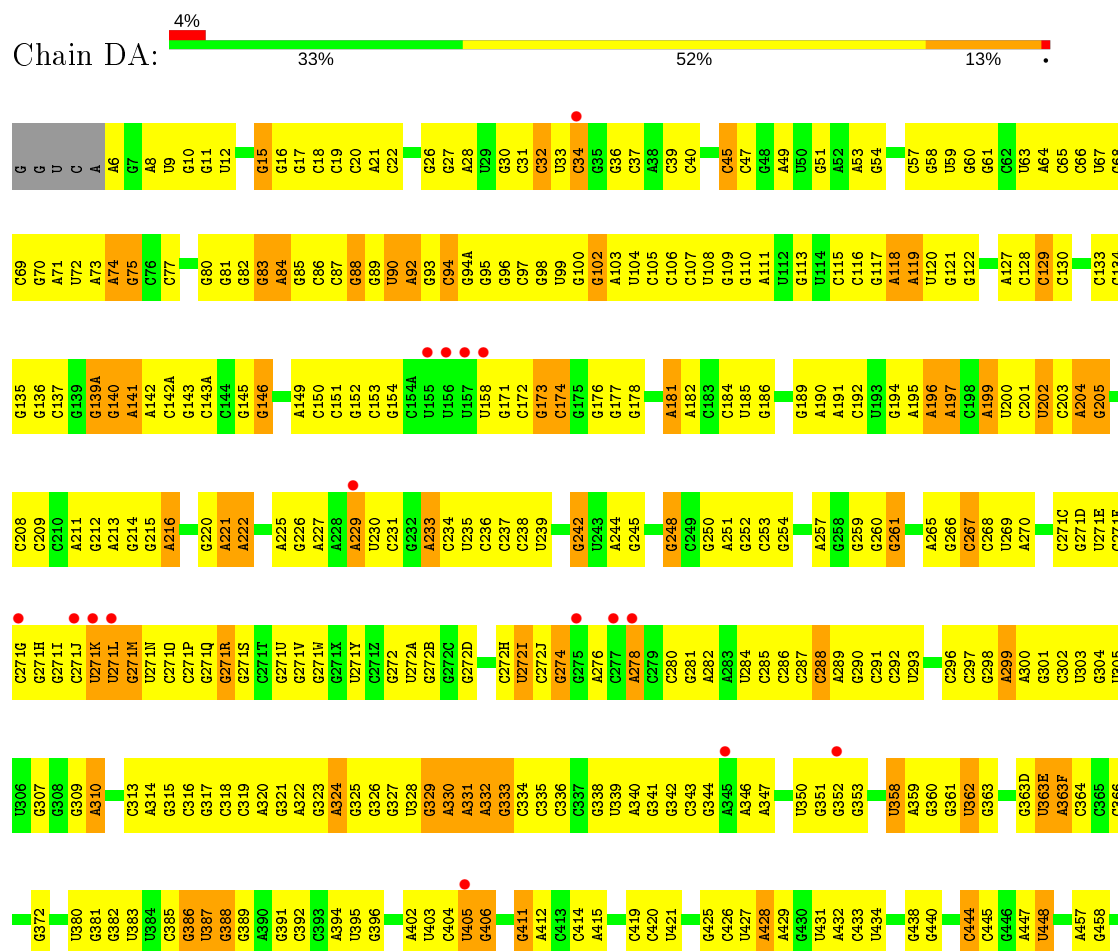
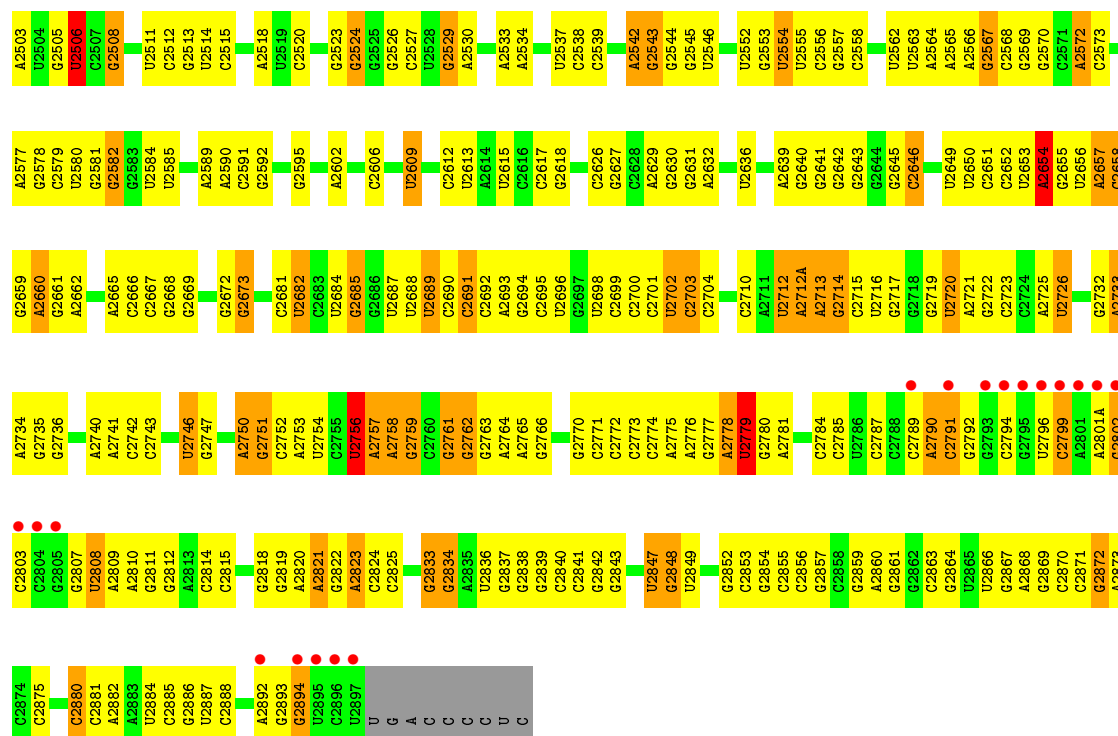


- Molecule 36: 23S RIBOSOMAL RNA



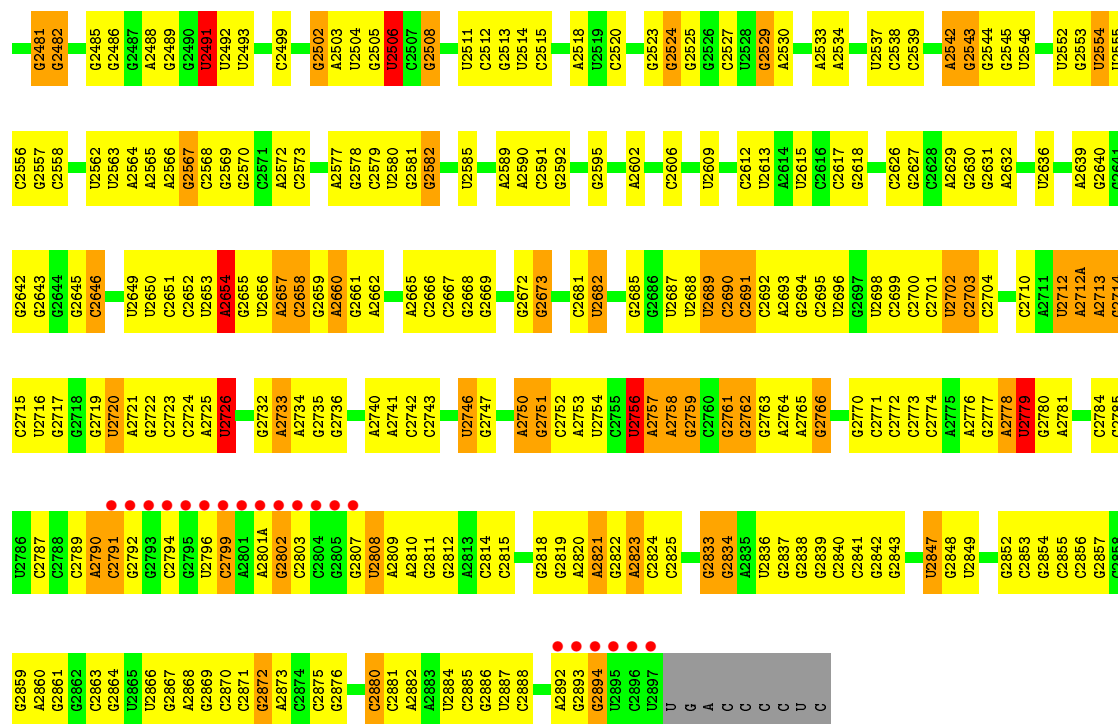
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G1356	G1282	A1142A	A1143	G1075	U1012	A866	A865	G791	C719	C654P	C611	A536	G468
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G1359	G1285	G1215	G1146	U1078	G1018	G869	A870	G796	G723	C654S	U614	C543	A471
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G1363	C1289	G1151	G1151	U1082	G1022	U877	U876	A802	C730	G656	G816	G548	A477
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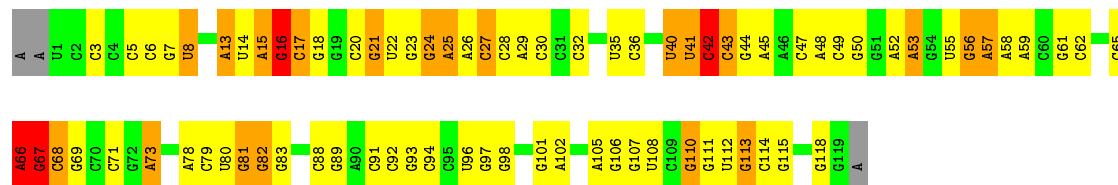
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U1141	U1142	A1143	C1146	A1147	A1148	G1149	C1150	G1151	C1152	C1153	G1154	A1155	A1156	U1159	G1160	C1161	G1162	G1163	G1164	U1165	C1166	U1167	G1168	G1169	G1170	G1171	G1172	A1173	A1174	U1175	A1176	C1177	C1178	C1179	C1180	C1181	A1182	G1183	G1184	C1185	G1186	U1187	U1188	A1189	G1190	G1191	G1192	G1193	U1198	U1199	G1203	A1204	U1205	A1206	C1207		
A1070	G1071	C1072	G1073	G1074	G1075	C1076	U1077	U1078	C1080	U1081	U1082	U1083	A1084	A1085	G1087	A1088	G1089	U1090	G1091	C1092	G1093	U1094	A1095	G1096	U1097	A1098	G1099	C1100	U1101	C1102	A1103	U1105	G1106	U1107	U1108	C1109	G1110	A1111	G1112	U1113	G1114	C1115	C1116	U1120	C1121	G1131	A1132	U1133	C1135	G1136	G1137	G1138	G1139	C1140			
C1006	A1009	A1010	G1011	U1012	C1013	U1014	U1019	A1020	A1021	G1022	U1023	G1024	G1025	U1026	A1027	A1028	A1029	G1030	G1031	A1032	U1033	G1034	U1035	G1036	C1037	C1038	G1039	C1040	G1041	G1042	C1043	G1044	A1045	A1046	A1048	C1049	A1050	G1051	C1052	C1053	A1054	G1055	A1056	A1057	G1058	G1059	U1060	U1061	G1062	G1063	C1064	U1065	U1066	A1067	A1068	A1069	
A933	G934	C935	C936	G940	A941	G942	U943	G944	A945	G946	G947	G948	A953	G954	C955	G956	A957	U958	A959	G960	C961	G962	U963	C964	U969	C970	C971	G972	A973	G974	C975	G977	G978	G979	A980	A983	A984	C985	C986	G987	A988	G989	A990	C991	C992	G993	C994	C995	A996	G997	C998	U999	C1005				
A861	G862	A863	G864	C865	A866	G869	A870	C876	A877	A878	G879	G880	G882	G883	C884	C885	A887	A888	C889	A890	C894	U895	C896	C897	C898	A899	U899	A900	A901	C902	C903	C904	U905	G906	U907	A910	A911	C914	C915	G916	A917	A918	U922	C923	C924	C925	A926	G927	G928	U930	G931	G932					
U787	A788	C789	C790	G791	G792	A793	C796	G797	G798	G801	G805	C806	G809	U810	U811	C812	U813	C814	C815	C816	A819	A824	A896	C825	C826	U827	U828	A831	C832	C833	C834	A837	G838	U839	C840	A843	U839	C844	G845	G846	G847	C848	C849	G850	G851	C852	A853	A854	C855A	C856	U857	G858	G859	C854E	C854F	C854G	
G654H	C654I	A654J	C654K	G654L	C654M	G654N	G654O	C654P	C654Q	C654R	G654S	A654T	A654U	A654V	A655	G656	U657	C658	C659	C660	C661	G662	C663	C664	C665	G666	U667	G668	G669	C670	A671	C671	C672	C673	C674	A675	A676	G684	A685	C686	U687	A688	A689	G690	C691	C692	C693	U694	G695	G696	C697	G700	U703	G704	A708	C709	U709
G710	G711	U714	G715	A716	G717	A722	G723	U724	G729	C730	G732	G733	C736	C737	G738	G739	U740	C741	G742	G743	G744	G745	A746	U747	G748	A751	A752	C753	C754	C755	C756	G760	A761	A764	G769	G770	G771	C772	U773	U774	G775	G776	G780	A781	A782	A783	A784	G785	C786								
A532	G533	C534	A535	G536	C537	C540	C543	A547	A548	G549	G551	U555	U556	C557	U557	G558	G559	U562	G563	C564	C565	U566	U569	G570	A571	A572	G573	C574	A575	U576	G577	C580	C581	G582	C583	C584	C585	A586	C587	U588	C589	U590	G591	G592	G593	U594	C595	C596	U597	G598	G599	G600					
G463	U464	G465	A466	G467	A468	G469	A470	A471	A472	G473	G476	A477	A478	A479	A480	G481	U482	A483	C484	C485	G489	G491	A492	G493	G494	G495	G496	U499	G500	A501	A502	A505	G506	A507	G508	C509	G512	A513	A514	A515	C516	C517	C518	A519	G520	C523	U524	C527	A528	A529	G530	C531					





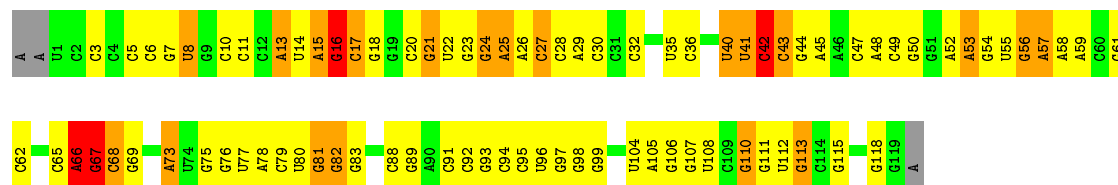
• Molecule 37: 5S RIBOSOMAL RNA

Chain BB: 33% 45% 16%



• Molecule 37: 5S RIBOSOMAL RNA

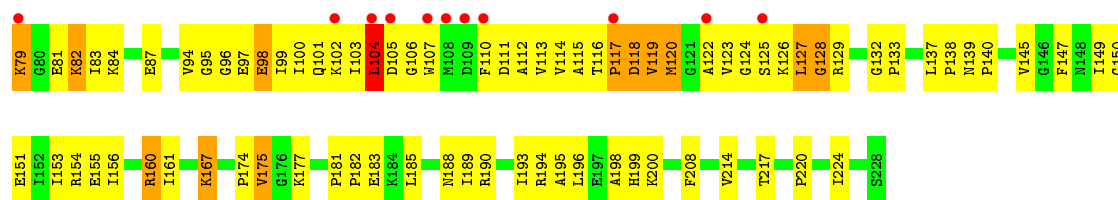
Chain DB: 29% 49% 16%



• Molecule 38: 50S RIBOSOMAL PROTEIN L1

Chain BC: 6% 48% 45% 7%

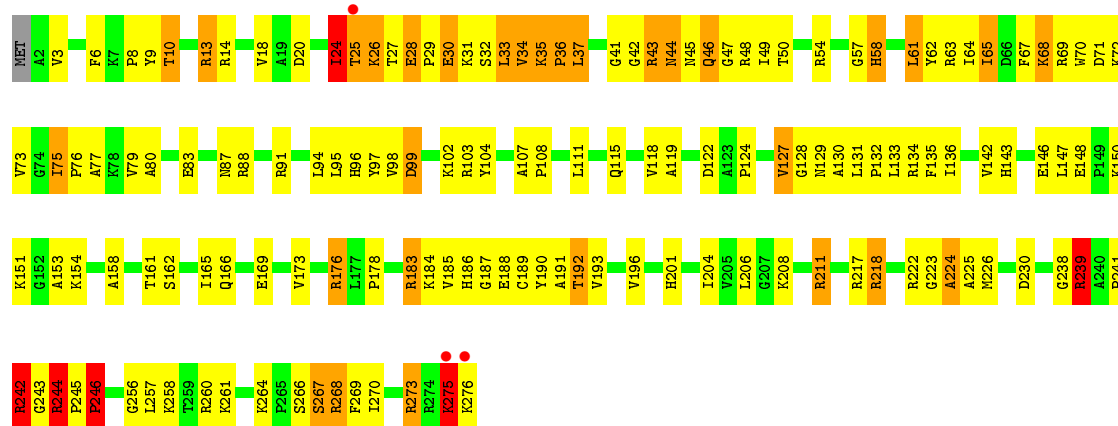




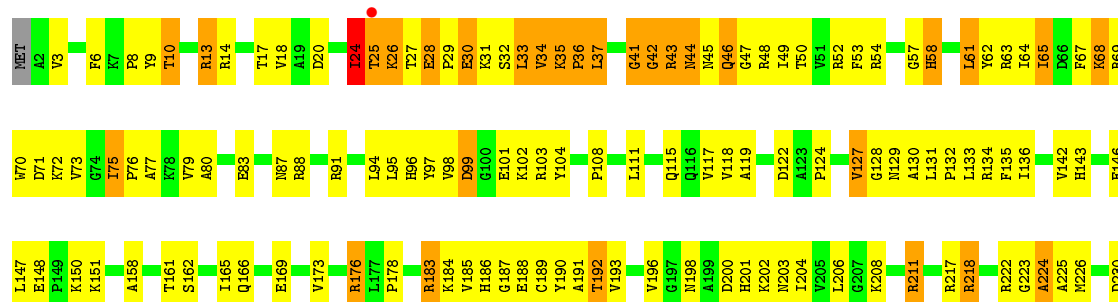
● Molecule 38: 50S RIBOSOMAL PROTEIN L1



● Molecule 39: 50S RIBOSOMAL PROTEIN L2

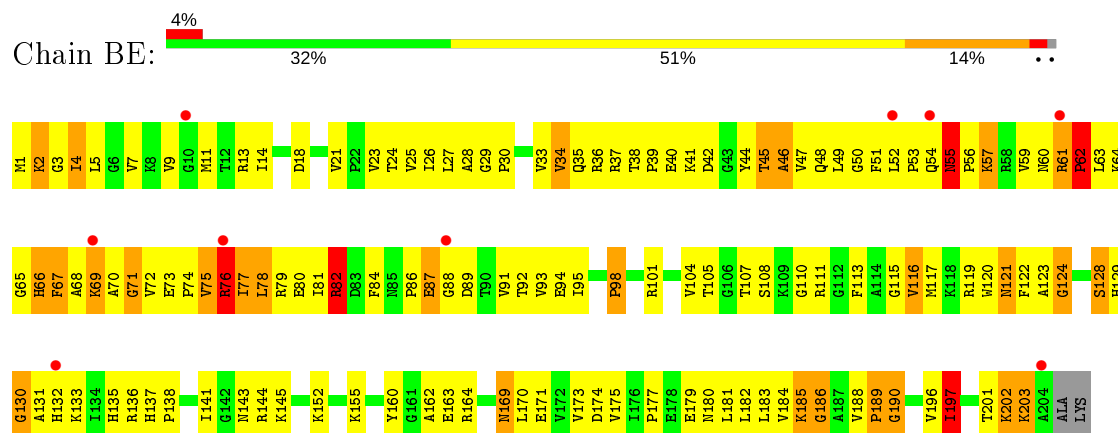


● Molecule 39: 50S RIBOSOMAL PROTEIN L2

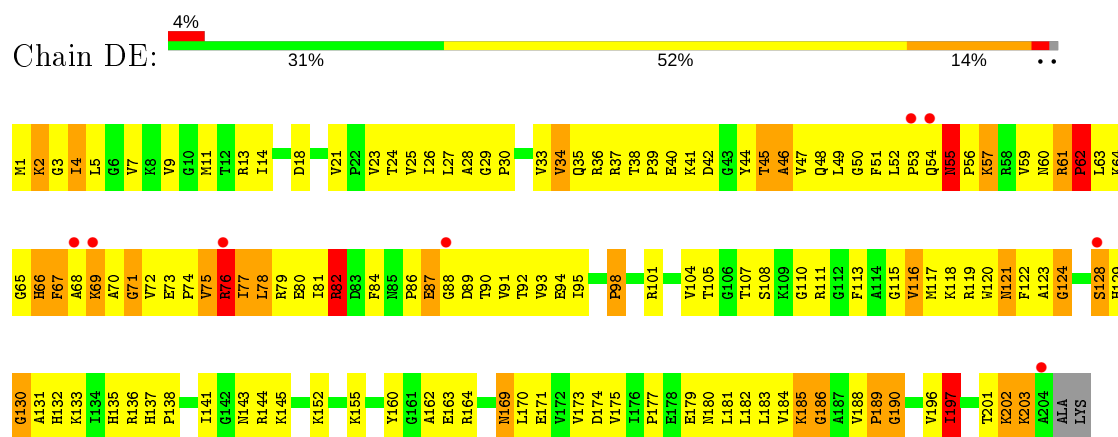




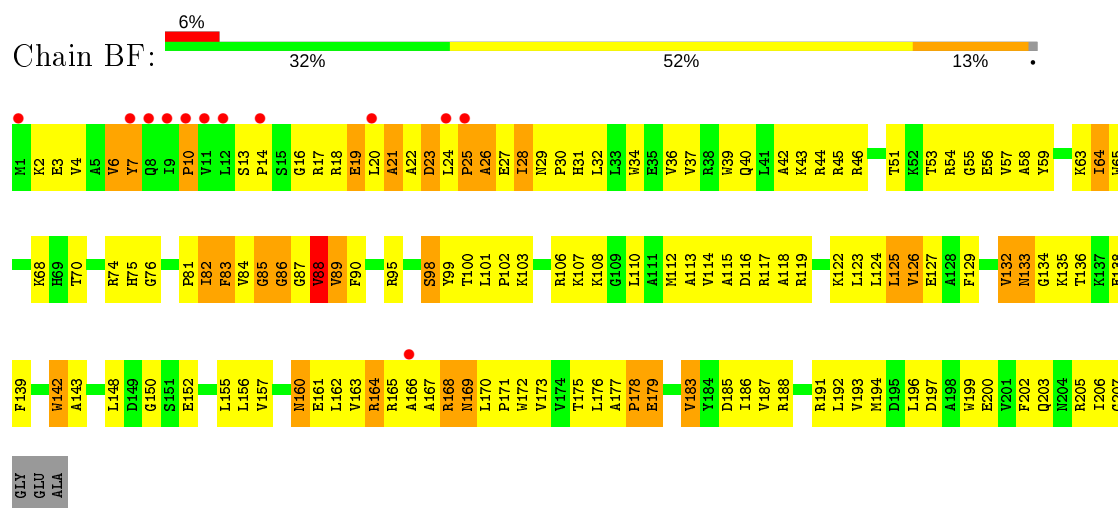
• Molecule 40: 50S RIBOSOMAL PROTEIN L3



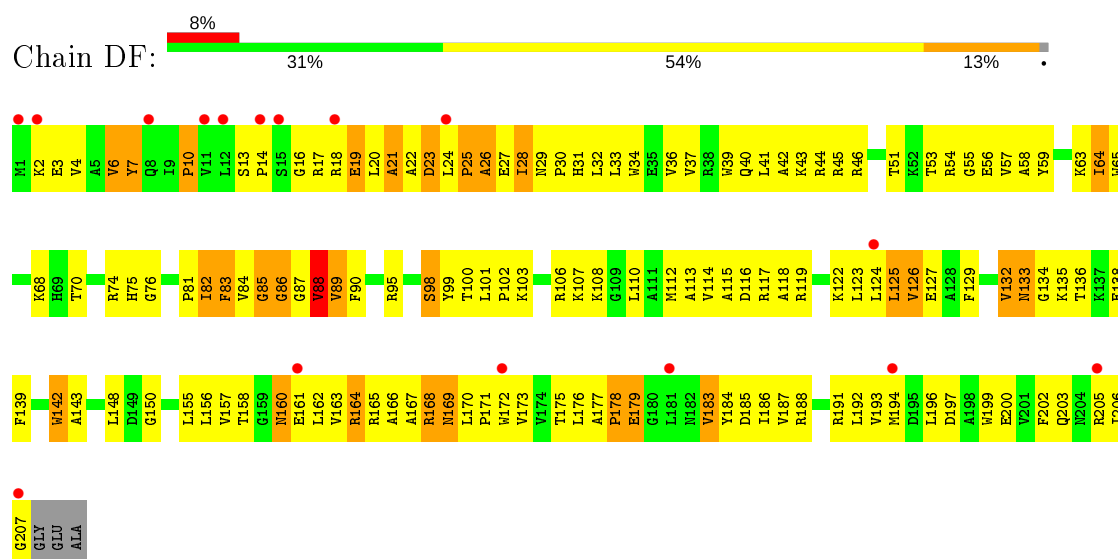
• Molecule 40: 50S RIBOSOMAL PROTEIN L3



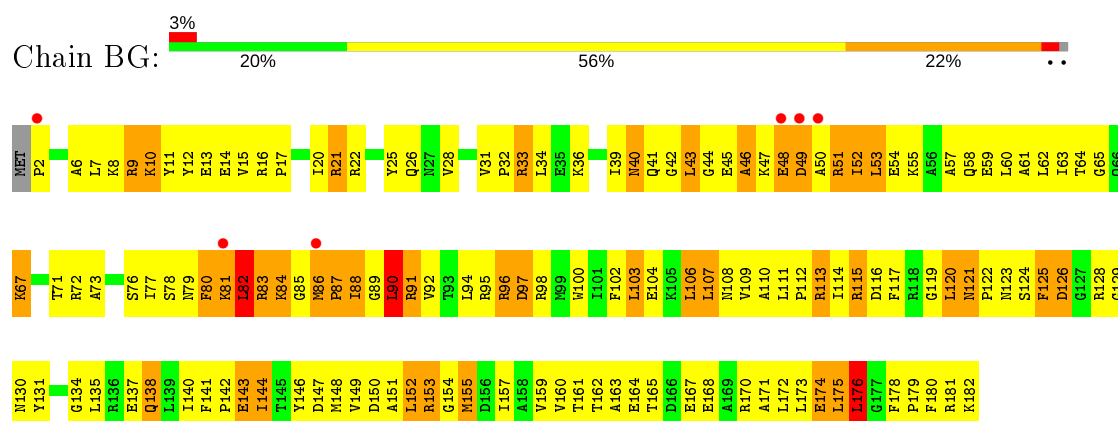
• Molecule 41: 50S RIBOSOMAL PROTEIN L4



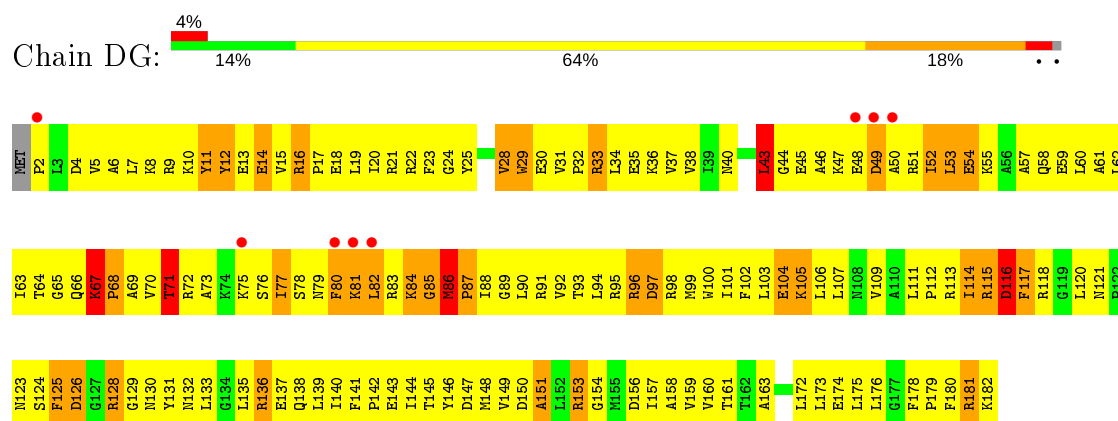
• Molecule 41: 50S RIBOSOMAL PROTEIN L4



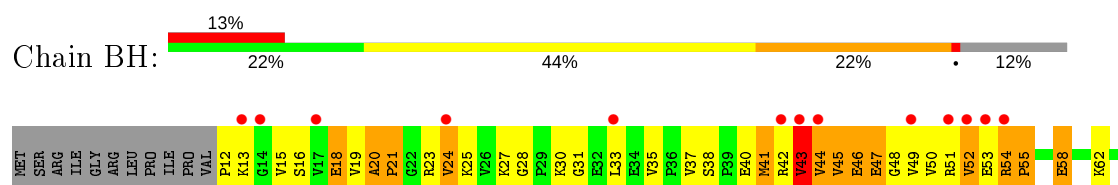
• Molecule 42: 50S RIBOSOMAL PROTEIN L5

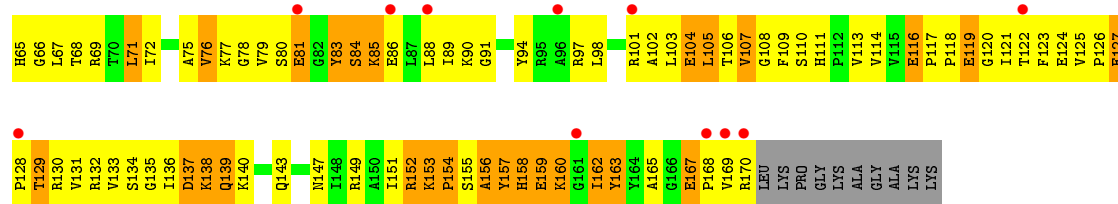


• Molecule 42: 50S RIBOSOMAL PROTEIN L5

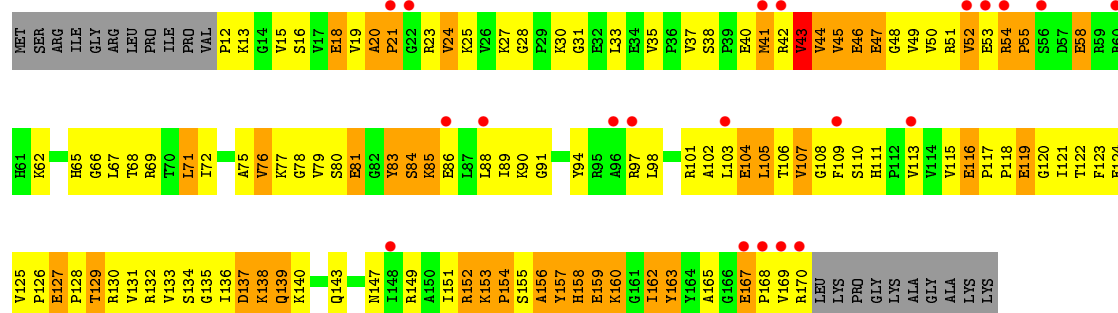
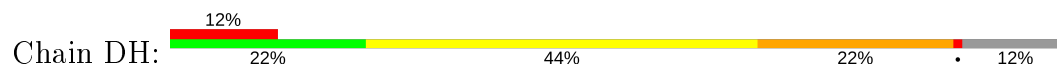


• Molecule 43: 50S RIBOSOMAL PROTEIN L6

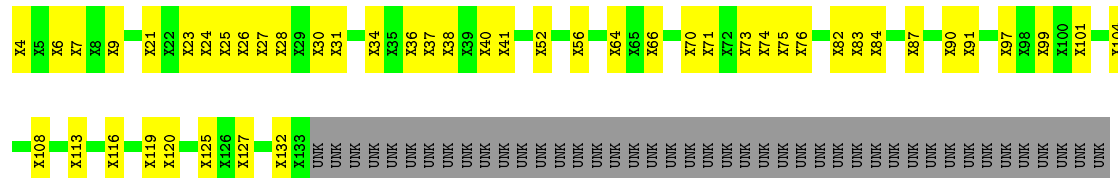





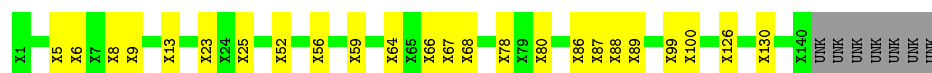
• Molecule 43: 50S RIBOSOMAL PROTEIN L6



• Molecule 44: 50S RIBOSOMAL PROTEIN L10

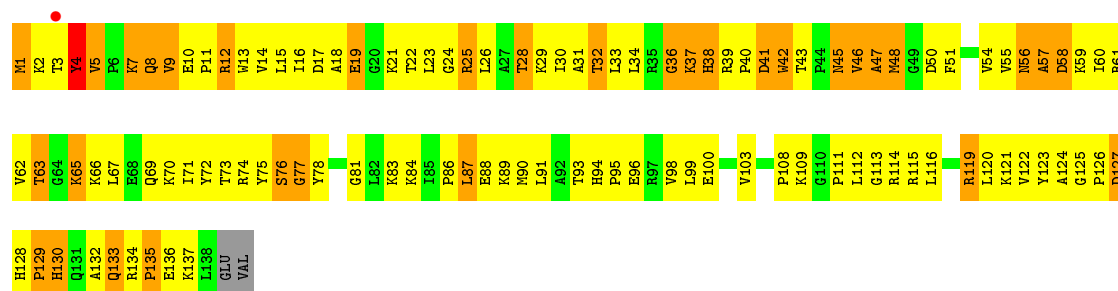


Chain DK: 



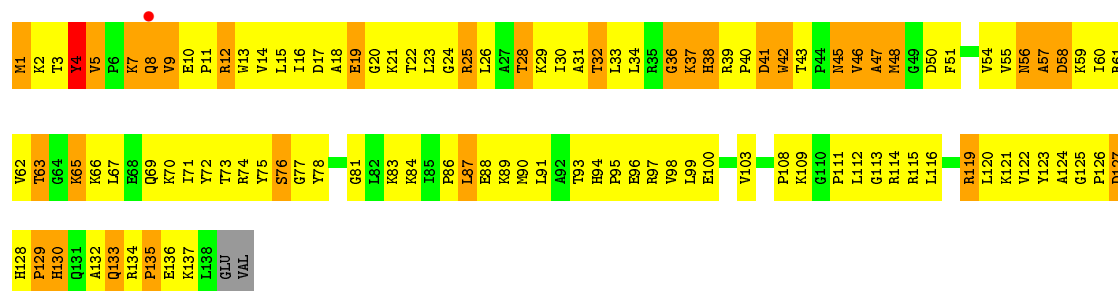
• Molecule 46: 50S RIBOSOMAL PROTEIN L13

Chain BN: 



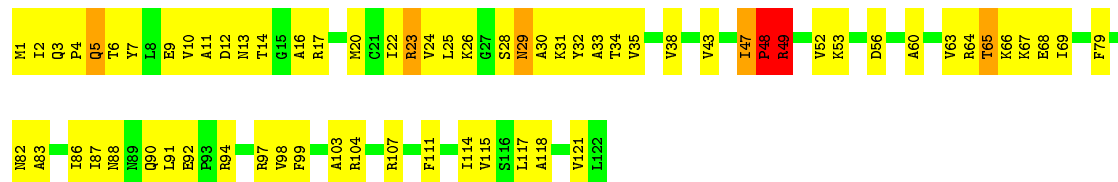
• Molecule 46: 50S RIBOSOMAL PROTEIN L13

Chain DN: 



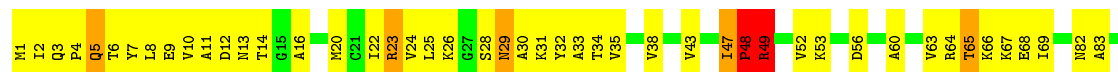
• Molecule 47: 50S RIBOSOMAL PROTEIN L14

Chain BO: 



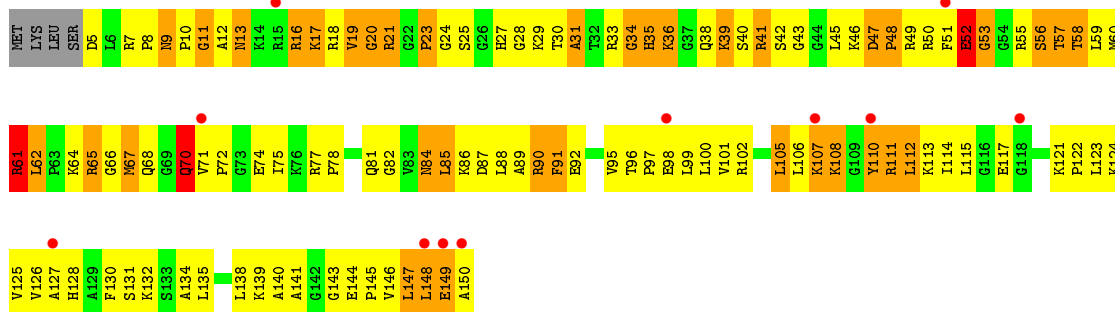
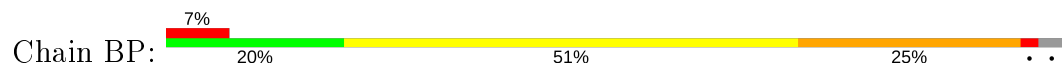
• Molecule 47: 50S RIBOSOMAL PROTEIN L14

Chain DO: 

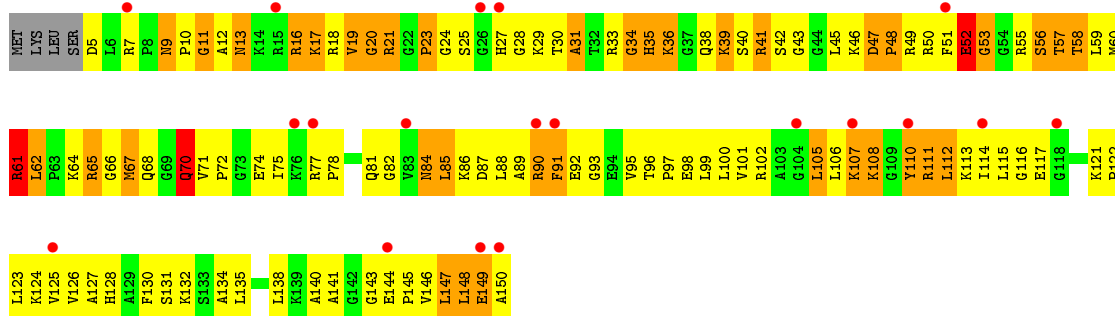
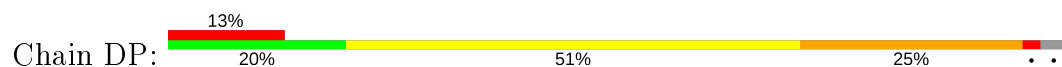




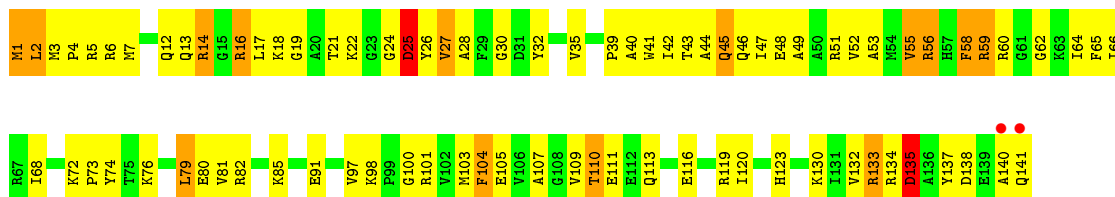
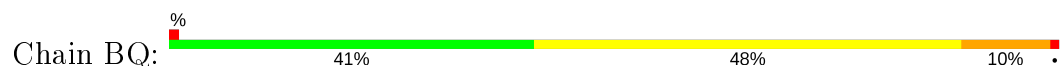
• Molecule 48: 50S RIBOSOMAL PROTEIN L15



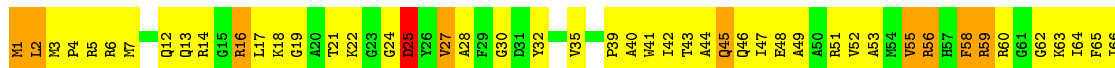
• Molecule 48: 50S RIBOSOMAL PROTEIN L15



• Molecule 49: 50S RIBOSOMAL PROTEIN L16

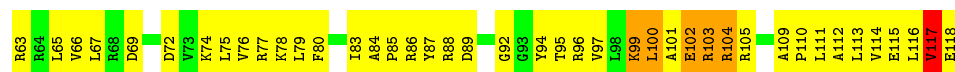


• Molecule 49: 50S RIBOSOMAL PROTEIN L16





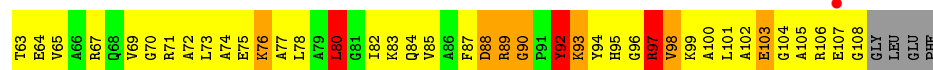
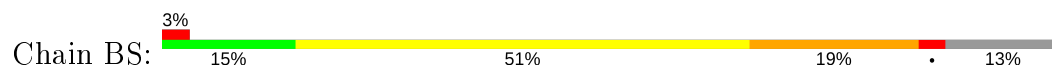
• Molecule 50: 50S RIBOSOMAL PROTEIN L17



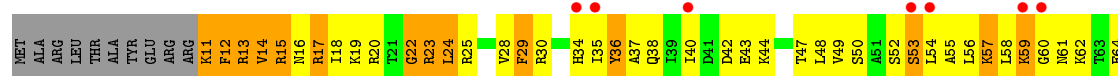
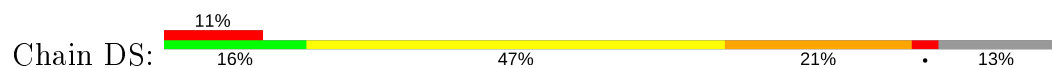
• Molecule 50: 50S RIBOSOMAL PROTEIN L17



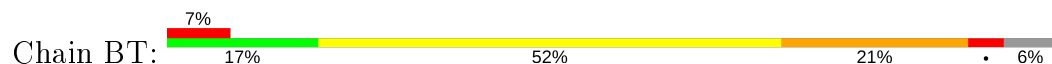
• Molecule 51: 50S RIBOSOMAL PROTEIN L18

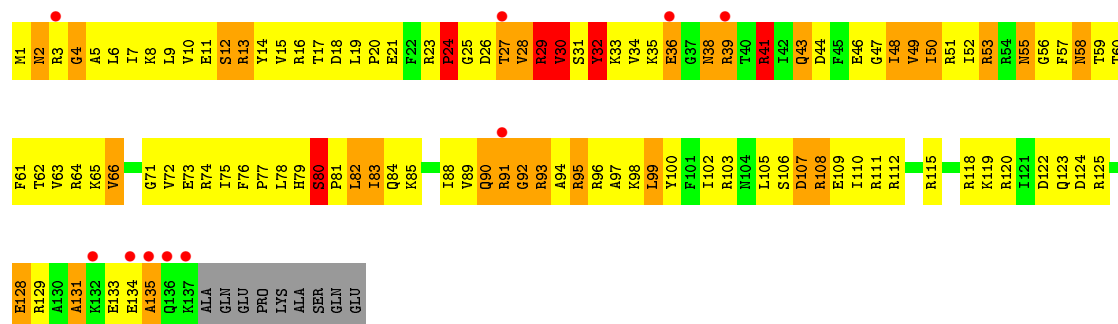


• Molecule 51: 50S RIBOSOMAL PROTEIN L18

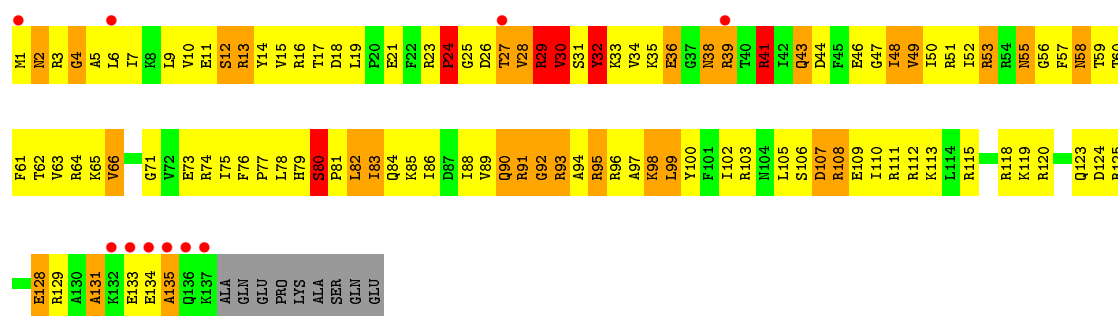
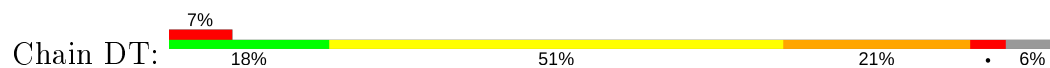


• Molecule 52: 50S RIBOSOMAL PROTEIN L19

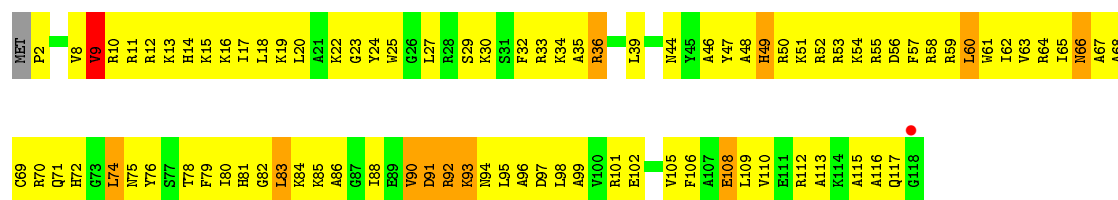




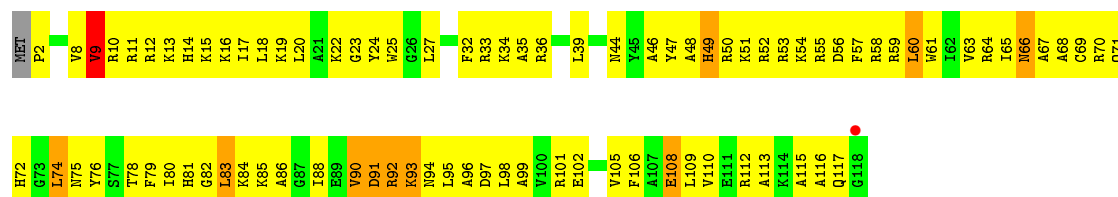
• Molecule 52: 50S RIBOSOMAL PROTEIN L19



• Molecule 53: 50S RIBOSOMAL PROTEIN L20

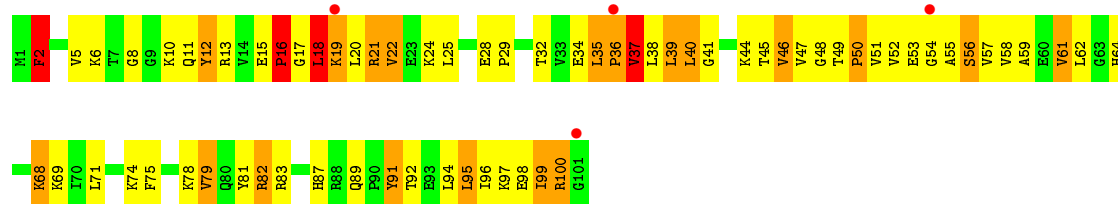


• Molecule 53: 50S RIBOSOMAL PROTEIN L20

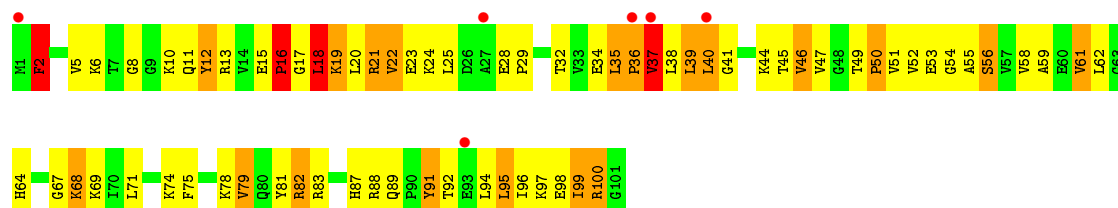


• Molecule 54: 50S RIBOSOMAL PROTEIN L21

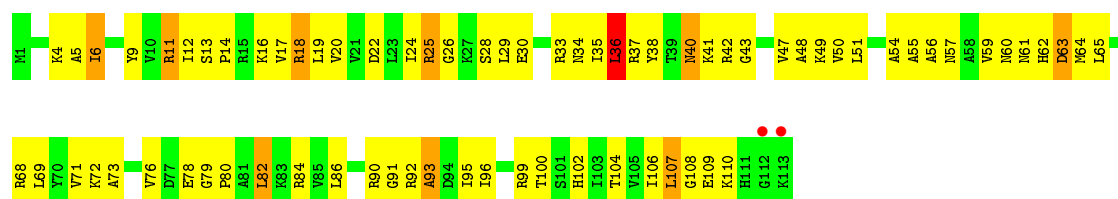




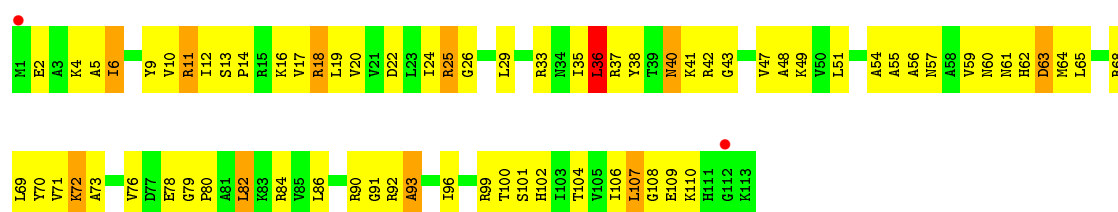
• Molecule 54: 50S RIBOSOMAL PROTEIN L21



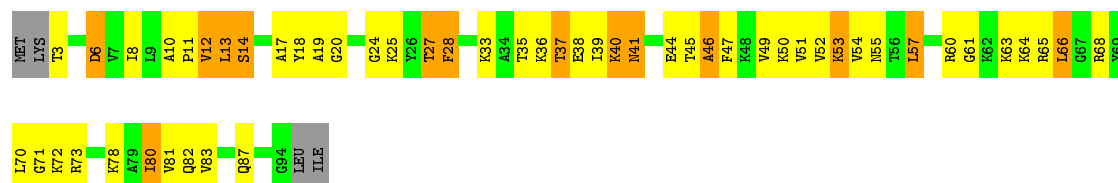
• Molecule 55: 50S RIBOSOMAL PROTEIN L22



• Molecule 55: 50S RIBOSOMAL PROTEIN L22

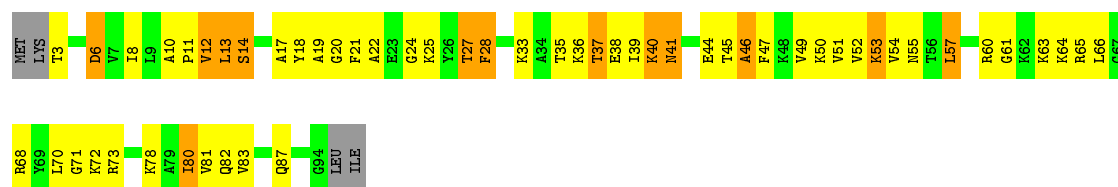


• Molecule 56: 50S RIBOSOMAL PROTEIN L23




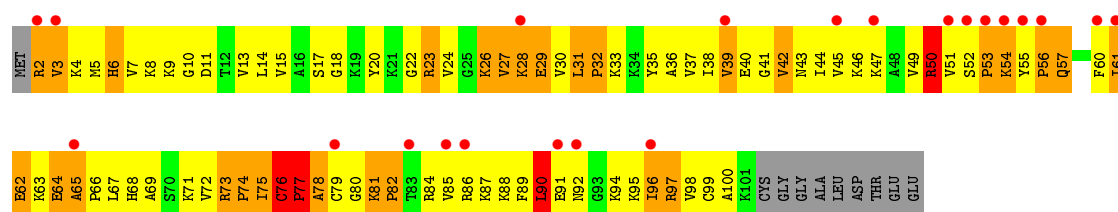
• Molecule 56: 50S RIBOSOMAL PROTEIN L23

Chain DX: 




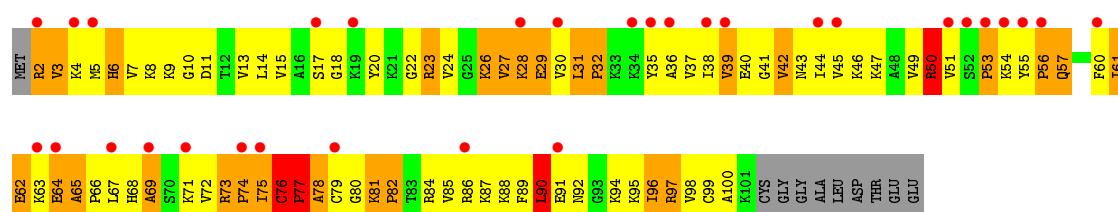
• Molecule 57: 50S RIBOSOMAL PROTEIN L24

Chain BY: 




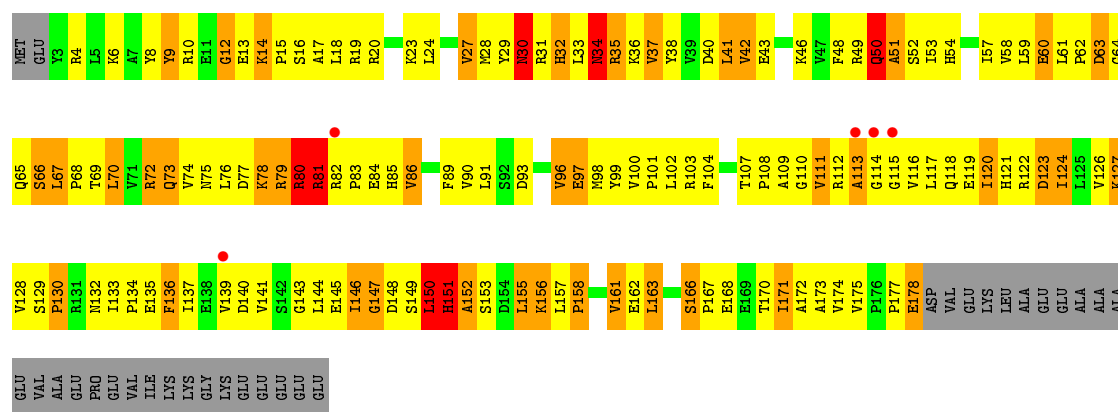
• Molecule 57: 50S RIBOSOMAL PROTEIN L24

Chain DY: 

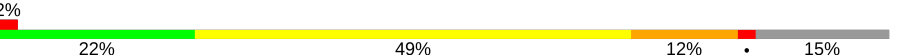


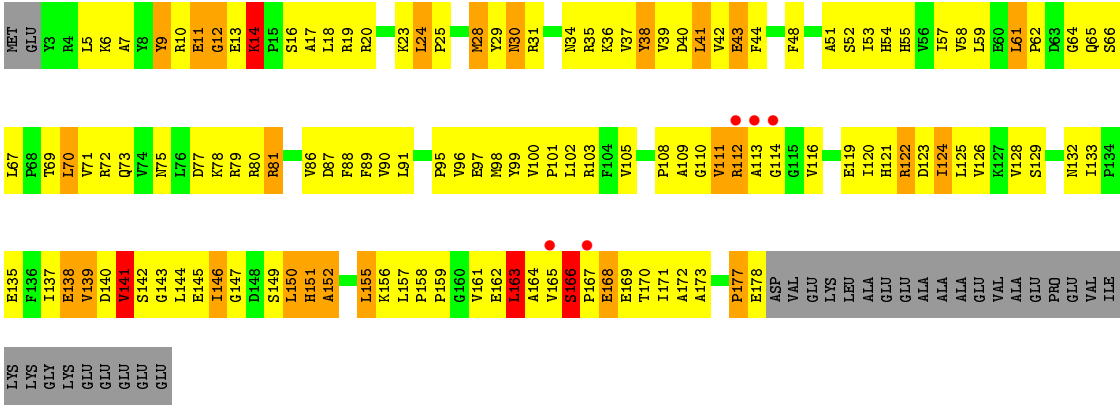
• Molecule 58: 50S RIBOSOMAL PROTEIN L25

Chain BZ: 



• Molecule 58: 50S RIBOSOMAL PROTEIN L25

Chain DZ: 



4 Data and refinement statistics

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α , β , γ	289.90Å 268.50Å 403.60Å 90.00° 91.62° 90.00°	Depositor
Resolution (Å)	50.00 – 3.10 49.92 – 2.93	Depositor EDS
% Data completeness (in resolution range)	98.0 (50.00-3.10) 90.5 (49.92-2.93)	Depositor EDS
R_{merge}	0.02	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.38 (at 2.91Å)	Xtriage
Refinement program	CNS 1.2	Depositor
R, R_{free}	0.243 , 0.267 0.241 , 0.265	Depositor DCC
R_{free} test set	59600 reflections (4.98%)	wwPDB-VP
Wilson B-factor (Å ²)	59.1	Xtriage
Anisotropy	0.077	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.29 , 71.2	EDS
L-test for twinning ²	$\langle L \rangle = 0.47$, $\langle L^2 \rangle = 0.29$	Xtriage
Estimated twinning fraction	0.018 for h,-k,-l	Xtriage
F_o, F_c correlation	0.90	EDS
Total number of atoms	307322	wwPDB-VP
Average B, all atoms (Å ²)	77.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 8.42% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

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

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: OMC, GDP, ZN, H2U, KIR, MIA, 4SU, 7MG, 5MU, PSU

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	AA	0.57	4/36325 (0.0%)	0.75	46/56695 (0.1%)
1	CA	0.52	2/36325 (0.0%)	0.74	36/56695 (0.1%)
2	AB	0.44	0/1935	0.68	0/2609
2	CB	0.43	0/1935	0.69	0/2609
3	AC	0.49	0/1636	0.73	1/2205 (0.0%)
3	CC	0.45	0/1636	0.72	1/2205 (0.0%)
4	AD	0.39	0/1733	0.63	0/2318
4	CD	0.39	0/1733	0.63	0/2318
5	AE	0.54	0/1162	0.77	0/1564
5	CE	0.52	0/1162	0.76	0/1564
6	AF	0.39	0/856	0.65	0/1154
6	CF	0.39	0/856	0.66	0/1154
7	AG	0.45	0/1276	0.63	0/1709
7	CG	0.42	0/1276	0.63	1/1709 (0.1%)
8	AH	0.49	0/1136	0.73	0/1527
8	CH	0.45	0/1136	0.73	0/1527
9	AI	0.44	0/1029	0.68	0/1379
9	CI	0.42	0/1029	0.68	0/1379
10	AJ	0.41	0/807	0.68	0/1085
10	CJ	0.39	0/807	0.67	0/1085
11	AK	0.50	0/900	0.70	0/1213
11	CK	0.47	0/900	0.70	0/1213
12	AL	0.42	0/986	0.72	0/1320
12	CL	0.41	0/986	0.71	0/1320
13	AM	0.41	0/998	0.71	1/1336 (0.1%)
13	CM	0.38	0/998	0.71	1/1336 (0.1%)
14	AN	0.46	0/501	0.78	0/664
14	CN	0.45	0/501	0.79	0/664
15	AO	0.42	0/745	0.64	0/992
15	CO	0.43	0/745	0.64	0/992
16	AP	0.36	0/716	0.64	0/963
16	CP	0.35	0/716	0.64	0/963

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	AQ	0.45	0/836	0.67	0/1117
17	CQ	0.44	0/836	0.67	0/1117
18	AR	0.45	0/579	0.66	0/768
18	CR	0.46	0/579	0.67	0/768
19	AS	0.44	0/642	0.69	0/865
19	CS	0.41	0/642	0.69	0/865
20	AT	0.35	0/765	0.65	0/1007
20	CT	0.34	0/765	0.65	0/1007
21	AU	0.45	0/212	0.67	0/277
21	CU	0.50	0/212	0.66	0/277
22	AV	0.55	0/1809	0.73	1/2819 (0.0%)
22	AW	0.36	0/1809	0.73	2/2819 (0.1%)
22	CV	0.53	0/1809	0.73	1/2819 (0.0%)
22	CW	0.36	0/1809	0.73	2/2819 (0.1%)
23	AX	0.50	0/405	0.71	0/629
23	CX	0.49	0/405	0.70	0/629
24	AY	0.43	1/1616 (0.1%)	0.70	1/2511 (0.0%)
24	CY	0.45	1/1616 (0.1%)	0.70	1/2511 (0.0%)
25	AZ	0.31	0/3041	0.56	0/4127
25	CZ	0.32	0/3041	0.57	0/4127
26	B0	0.39	0/671	0.69	0/892
26	D0	0.41	0/671	0.70	0/892
27	B1	0.47	0/738	0.73	0/981
27	D1	0.40	0/738	0.68	0/981
28	B2	0.35	0/600	0.66	0/793
28	D2	0.33	0/600	0.64	1/793 (0.1%)
29	B3	0.37	0/472	0.61	0/634
29	D3	0.35	0/472	0.61	0/634
30	B4	0.38	0/349	0.65	0/474
30	D4	0.37	0/349	0.65	0/474
31	B5	0.38	0/473	0.72	0/639
31	D5	0.38	0/473	0.71	0/639
32	B6	0.60	0/440	0.82	0/586
32	D6	0.54	0/440	0.80	0/586
33	B7	0.42	0/426	0.68	0/561
33	D7	0.42	0/426	0.69	0/561
34	B8	0.56	0/515	0.87	1/679 (0.1%)
34	D8	0.53	0/515	0.87	1/679 (0.1%)
35	B9	0.42	0/310	0.65	0/407
35	D9	0.41	0/310	0.65	0/407
36	BA	0.51	3/69976 (0.0%)	0.72	33/109244 (0.0%)
36	DA	0.49	2/69976 (0.0%)	0.72	32/109244 (0.0%)
37	BB	0.43	0/2853	0.75	2/4451 (0.0%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
37	DB	0.46	0/2853	0.75	2/4451 (0.0%)
38	BC	0.39	1/1774 (0.1%)	0.60	0/2391
38	DC	0.40	2/1774 (0.1%)	0.60	0/2391
39	BD	0.51	0/2195	0.81	1/2955 (0.0%)
39	DD	0.50	0/2195	0.80	1/2955 (0.0%)
40	BE	0.43	0/1596	0.75	0/2153
40	DE	0.43	0/1596	0.74	0/2153
41	BF	0.36	0/1658	0.65	0/2244
41	DF	0.37	0/1658	0.65	0/2244
42	BG	0.40	0/1499	0.74	1/2016 (0.0%)
42	DG	0.38	0/1499	0.68	0/2016
43	BH	0.32	0/1245	0.66	0/1682
43	DH	0.32	0/1245	0.66	0/1682
46	BN	0.37	0/1131	0.70	0/1525
46	DN	0.37	0/1131	0.69	0/1525
47	BO	0.47	0/943	0.68	0/1269
47	DO	0.46	0/943	0.67	0/1269
48	BP	0.43	0/1131	0.91	2/1504 (0.1%)
48	DP	0.42	0/1131	0.91	2/1504 (0.1%)
49	BQ	0.50	0/1143	0.71	0/1527
49	DQ	0.49	0/1143	0.72	0/1527
50	BR	0.38	0/974	0.71	1/1302 (0.1%)
50	DR	0.38	0/974	0.70	1/1302 (0.1%)
51	BS	0.36	0/778	0.76	0/1036
51	DS	0.37	0/778	0.75	0/1036
52	BT	0.43	0/1155	0.76	2/1542 (0.1%)
52	DT	0.41	0/1155	0.76	2/1542 (0.1%)
53	BU	0.41	0/975	0.68	0/1297
53	DU	0.43	0/975	0.68	0/1297
54	BV	0.37	0/790	0.68	0/1057
54	DV	0.39	0/790	0.68	0/1057
55	BW	0.35	0/907	0.67	0/1216
55	DW	0.36	0/907	0.67	0/1216
56	BX	0.40	0/739	0.65	0/993
56	DX	0.40	0/739	0.65	0/993
57	BY	0.36	0/788	0.73	1/1051 (0.1%)
57	DY	0.36	0/788	0.73	1/1051 (0.1%)
58	BZ	0.46	0/1435	0.81	1/1949 (0.1%)
58	DZ	0.44	0/1435	0.74	0/1949
All	All	0.49	16/330268 (0.0%)	0.72	183/493444 (0.0%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected

by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	AA	5	49
1	CA	4	49
22	AW	1	1
22	CW	1	1
24	AY	2	0
24	CY	2	0
36	BA	2	66
36	DA	2	67
37	BB	0	6
37	DB	0	6
All	All	19	245

All (16) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
36	BA	761	A	C5-C6	-10.36	1.31	1.41
36	DA	761	A	C5-C6	-10.14	1.31	1.41
36	BA	2506	U	N1-C2	8.65	1.46	1.38
36	DA	2506	U	N1-C2	8.34	1.46	1.38
1	AA	858	G	C5-C6	-7.88	1.34	1.42
24	AY	1	A	OP3-P	-7.15	1.52	1.61
24	CY	1	A	OP3-P	-6.99	1.52	1.61
1	CA	858	G	C5-C6	-6.87	1.35	1.42
38	DC	218	MET	CG-SD	6.24	1.97	1.81
1	AA	299	G	C6-O6	5.62	1.29	1.24
38	DC	120	MET	CG-SD	5.48	1.95	1.81
38	BC	120	MET	CG-SD	5.46	1.95	1.81
36	BA	1899	G	N9-C4	-5.36	1.33	1.38
1	AA	1281	U	N1-C2	5.25	1.43	1.38
1	AA	1125	U	C3'-O3'	5.17	1.49	1.42
1	CA	858	G	N1-C2	5.11	1.41	1.37

All (183) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
39	BD	244	ARG	C-N-CD	-11.04	96.32	120.60
39	DD	244	ARG	C-N-CD	-10.91	96.59	120.60
1	CA	1498	U	C2'-C3'-O3'	10.87	133.42	109.50
1	AA	1498	U	C2'-C3'-O3'	10.68	132.99	109.50
1	AA	508	C	C2'-C3'-O3'	9.74	130.93	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	DA	1820	U	C2'-C3'-O3'	9.56	130.53	109.50
1	CA	508	C	C2'-C3'-O3'	9.55	130.51	109.50
36	BA	1820	U	C2'-C3'-O3'	9.38	130.13	109.50
1	AA	1239	A	C2'-C3'-O3'	8.82	128.90	109.50
1	CA	1239	A	C2'-C3'-O3'	8.81	128.89	109.50
1	CA	243	A	C2'-C3'-O3'	8.74	128.72	109.50
36	BA	1786	A	N9-C1'-C2'	8.69	125.30	114.00
1	CA	1399	C	C2'-C3'-O3'	8.69	128.62	109.50
36	DA	1786	A	N9-C1'-C2'	8.61	125.20	114.00
22	AW	76	A	C4'-C3'-O3'	8.58	130.16	113.00
36	BA	1992	G	C2'-C3'-O3'	8.54	128.29	109.50
36	DA	1819	A	C2'-C3'-O3'	8.49	128.18	109.50
1	AA	687	A	C2'-C3'-O3'	8.49	128.17	109.50
1	AA	792	A	C2'-C3'-O3'	8.44	128.07	109.50
1	AA	1049	U	C2'-C3'-O3'	8.39	127.95	109.50
22	CW	76	A	C4'-C3'-O3'	8.38	129.77	113.00
1	AA	243	A	C2'-C3'-O3'	8.35	127.88	109.50
36	BA	1819	A	C2'-C3'-O3'	8.34	127.86	109.50
36	DA	1992	G	C2'-C3'-O3'	8.28	127.73	109.50
1	CA	687	A	C2'-C3'-O3'	8.19	127.51	109.50
48	DP	53	GLY	N-CA-C	-8.11	92.84	113.10
48	BP	53	GLY	N-CA-C	-8.08	92.89	113.10
1	CA	1049	U	C2'-C3'-O3'	8.08	127.27	109.50
1	AA	109	A	C2'-C3'-O3'	8.06	127.24	109.50
36	DA	945	A	N9-C1'-C2'	8.02	124.42	114.00
1	CA	109	A	C2'-C3'-O3'	8.00	127.10	109.50
24	AY	69	C	C2'-C3'-O3'	7.99	127.07	109.50
24	CY	69	C	C2'-C3'-O3'	7.95	126.99	109.50
1	CA	792	A	C2'-C3'-O3'	7.93	126.94	109.50
1	AA	1504	G	C2'-C3'-O3'	7.88	126.83	109.50
1	CA	1050	G	N9-C1'-C2'	-7.80	103.42	112.00
36	BA	945	A	N9-C1'-C2'	7.74	124.06	114.00
1	AA	1101	A	C2'-C3'-O3'	7.64	126.32	109.50
1	CA	1101	A	C2'-C3'-O3'	7.63	126.29	109.50
1	CA	961	U	N1-C1'-C2'	-7.57	103.67	112.00
1	CA	347	G	N9-C1'-C2'	-7.50	103.75	112.00
36	BA	1799	G	C2'-C3'-O3'	7.50	125.99	109.50
1	AA	961	U	N1-C1'-C2'	-7.42	103.84	112.00
36	DA	1799	G	C2'-C3'-O3'	7.29	125.53	109.50
1	AA	347	G	N9-C1'-C2'	-7.26	104.01	112.00
48	BP	52	GLU	N-CA-C	7.24	130.55	111.00
48	DP	52	GLU	N-CA-C	7.12	130.21	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	CW	76	A	C2'-C3'-O3'	7.09	125.10	109.50
22	AW	76	A	C2'-C3'-O3'	7.08	125.07	109.50
1	AA	1050	G	N9-C1'-C2'	-7.02	104.27	112.00
36	BA	1653	G	C2'-C3'-O3'	7.01	124.91	109.50
37	DB	67	G	N9-C1'-C2'	-6.94	104.36	112.00
1	CA	1054	C	N1-C1'-C2'	6.87	122.92	114.00
36	BA	1970	A	C5'-C4'-O4'	6.85	117.33	109.10
37	BB	67	G	N9-C1'-C2'	-6.78	104.54	112.00
36	DA	527	C	O4'-C1'-N1	6.77	113.62	108.20
36	BA	2360	A	N9-C1'-C2'	-6.74	104.58	112.00
1	AA	369	C	N1-C1'-C2'	-6.72	104.61	112.00
52	BT	29	ARG	N-CA-C	6.69	129.05	111.00
52	DT	29	ARG	N-CA-C	6.65	128.94	111.00
36	DA	1970	A	C5'-C4'-O4'	6.61	117.03	109.10
1	CA	60	A	C2'-C3'-O3'	6.60	124.26	113.70
1	AA	1054	C	N1-C1'-C2'	6.56	122.53	114.00
1	AA	772	U	C5'-C4'-C3'	-6.55	105.51	116.00
1	AA	1504	G	C4'-C3'-O3'	6.55	126.10	113.00
1	CA	772	U	C5'-C4'-C3'	-6.54	105.54	116.00
1	CA	369	C	N1-C1'-C2'	-6.53	104.82	112.00
36	DA	2360	A	N9-C1'-C2'	-6.51	104.83	112.00
36	BA	2756	U	C2'-C3'-O3'	6.51	124.12	113.70
1	AA	60	A	C2'-C3'-O3'	6.42	123.97	113.70
37	DB	16	G	N9-C1'-C2'	-6.36	105.00	112.00
36	BA	527	C	O4'-C1'-N1	6.33	113.26	108.20
36	BA	856	C	C2'-C3'-O3'	6.32	123.81	113.70
50	BR	12	ARG	N-CA-C	-6.31	93.97	111.00
36	DA	2756	U	C2'-C3'-O3'	6.30	123.78	113.70
36	DA	1653	G	C2'-C3'-O3'	6.30	123.78	113.70
1	AA	1181	G	N9-C1'-C2'	6.26	122.14	114.00
36	BA	1948	G	C5'-C4'-O4'	-6.23	101.63	109.10
37	BB	16	G	N9-C1'-C2'	-6.20	105.18	112.00
36	DA	1987	G	C5'-C4'-C3'	-6.11	106.22	116.00
50	DR	12	ARG	N-CA-C	-6.11	94.51	111.00
1	AA	995	C	N1-C1'-C2'	-6.07	105.32	112.00
1	CA	723	U	N1-C1'-C2'	6.07	121.89	114.00
1	AA	1502	A	N9-C1'-C2'	6.07	121.89	114.00
36	DA	856	C	C2'-C3'-O3'	6.05	123.38	113.70
36	DA	1970	A	C1'-O4'-C4'	-6.04	105.07	109.90
1	CA	1181	G	N9-C1'-C2'	6.04	121.85	114.00
1	AA	982	U	C2'-C3'-O3'	6.03	123.35	113.70
1	CA	428	G	N9-C1'-C2'	6.03	121.84	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	DA	1948	G	C5'-C4'-O4'	-5.99	101.91	109.10
36	DA	2654	A	N9-C1'-C2'	5.99	121.78	114.00
1	AA	1054	C	C2'-C3'-O3'	5.99	123.28	113.70
1	CA	1054	C	C2'-C3'-O3'	5.99	123.28	113.70
1	AA	428	G	N9-C1'-C2'	5.96	121.75	114.00
1	AA	723	U	N1-C1'-C2'	5.95	121.74	114.00
36	BA	1698	A	O4'-C1'-N9	5.95	112.96	108.20
36	BA	2464	C	N1-C1'-C2'	-5.87	105.55	112.00
34	D8	49	VAL	N-CA-C	-5.86	95.17	111.00
36	BA	2654	A	N9-C1'-C2'	5.85	121.61	114.00
36	BA	1987	G	C5'-C4'-C3'	-5.85	106.64	116.00
1	AA	1498	U	N1-C1'-C2'	5.84	121.59	114.00
36	BA	387	U	C2'-C3'-O3'	5.75	122.90	113.70
36	BA	1819	A	C4'-C3'-O3'	5.74	124.47	113.00
1	CA	1399	C	C4'-C3'-O3'	5.73	124.46	113.00
36	BA	1970	A	C1'-O4'-C4'	-5.64	105.39	109.90
36	BA	958	U	N1-C1'-C2'	5.64	121.33	114.00
52	DT	80	SER	N-CA-C	5.60	126.12	111.00
1	AA	197	A	N9-C1'-C2'	5.59	121.26	114.00
36	DA	387	U	C2'-C3'-O3'	5.58	122.62	113.70
1	CA	748	C	N1-C1'-C2'	5.58	121.25	114.00
36	DA	2278	A	C5'-C4'-C3'	5.57	124.91	116.00
1	CA	197	A	N9-C1'-C2'	5.56	121.22	114.00
1	CA	982	U	C2'-C3'-O3'	5.56	122.59	113.70
34	B8	49	VAL	N-CA-C	-5.55	96.02	111.00
52	BT	80	SER	N-CA-C	5.54	125.96	111.00
1	AA	1504	G	OP2-P-O3'	5.54	117.38	105.20
42	BG	88	ILE	N-CA-C	5.51	125.87	111.00
1	CA	995	C	N1-C1'-C2'	-5.50	105.95	112.00
36	BA	242	G	N9-C1'-C2'	5.47	121.11	114.00
36	BA	2278	A	C5'-C4'-C3'	5.46	124.74	116.00
36	BA	2111	C	N1-C1'-C2'	5.46	121.10	114.00
36	DA	1819	A	C4'-C3'-O3'	5.45	123.90	113.00
1	AA	328	C	N1-C1'-C2'	5.45	121.09	114.00
36	DA	1493	C	N1-C1'-C2'	5.45	121.08	114.00
3	AC	196	LEU	CA-CB-CG	5.44	127.82	115.30
1	CA	1514	C	C5'-C4'-C3'	-5.44	107.30	116.00
36	DA	242	G	N9-C1'-C2'	5.43	121.06	114.00
1	AA	977	A	C5'-C4'-C3'	-5.43	107.32	116.00
36	DA	1698	A	O4'-C1'-N9	5.41	112.53	108.20
3	CC	196	LEU	CA-CB-CG	5.41	127.73	115.30
1	CA	1502	A	N9-C1'-C2'	5.38	121.00	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	BA	1427	A	N9-C1'-C2'	5.38	121.00	114.00
1	AA	1299	A	N9-C1'-C2'	5.38	120.99	114.00
36	DA	2221	G	C5'-C4'-C3'	-5.37	107.42	116.00
36	BA	2286	A	N9-C1'-C2'	5.35	120.96	114.00
36	BA	1781	C	N1-C1'-C2'	5.35	120.95	114.00
36	BA	1493	C	N1-C1'-C2'	5.34	120.95	114.00
36	DA	2111	C	N1-C1'-C2'	5.34	120.95	114.00
1	CA	266	G	C2'-C3'-O3'	5.33	122.23	113.70
36	BA	2221	G	C5'-C4'-C3'	-5.32	107.48	116.00
1	AA	1153	C	N1-C1'-C2'	-5.32	106.15	112.00
36	DA	1781	C	N1-C1'-C2'	5.31	120.91	114.00
36	DA	906	G	C5'-C4'-C3'	-5.30	107.52	116.00
1	AA	748	C	N1-C1'-C2'	5.29	120.88	114.00
57	BY	54	LYS	N-CA-C	-5.29	96.72	111.00
36	DA	2464	C	N1-C1'-C2'	-5.29	106.19	112.00
1	CA	547	A	N9-C1'-C2'	5.28	120.86	114.00
36	DA	2286	A	N9-C1'-C2'	5.27	120.85	114.00
1	AA	1190	G	N9-C1'-C2'	5.27	120.85	114.00
28	D2	28	LYS	N-CA-C	-5.27	96.78	111.00
1	AA	1387	G	C5'-C4'-C3'	-5.25	107.59	116.00
36	BA	2572	A	OP1-P-O3'	5.25	116.76	105.20
57	DY	54	LYS	N-CA-C	-5.24	96.84	111.00
1	CA	1153	C	N1-C1'-C2'	-5.22	106.25	112.00
58	BZ	50	GLN	N-CA-C	-5.22	96.91	111.00
1	CA	328	C	N1-C1'-C2'	5.22	120.78	114.00
22	CV	36	A	C5'-C4'-C3'	-5.19	107.70	116.00
1	AA	547	A	N9-C1'-C2'	5.18	120.74	114.00
1	CA	1299	A	N9-C1'-C2'	5.17	120.72	114.00
13	AM	12	ASN	N-CA-C	5.17	124.96	111.00
1	AA	1279	A	N9-C1'-C2'	5.15	120.69	114.00
13	CM	12	ASN	N-CA-C	5.13	124.84	111.00
1	AA	1065	U	O4'-C1'-N1	5.12	112.30	108.20
1	CA	977	A	C5'-C4'-C3'	-5.12	107.81	116.00
36	BA	1970	A	C5'-C4'-C3'	5.11	124.18	116.00
1	AA	266	G	C2'-C3'-O3'	5.11	121.88	113.70
1	AA	1239	A	C4'-C3'-O3'	5.09	123.19	113.00
36	DA	1159	U	C5'-C4'-C3'	-5.09	107.86	116.00
1	AA	1529	G	C5'-C4'-O4'	5.05	115.16	109.10
1	CA	686	U	N1-C1'-C2'	5.05	120.57	114.00
1	AA	1502	A	O5'-P-OP1	-5.04	101.16	105.70
7	CG	145	ALA	N-CA-C	-5.04	97.39	111.00
1	AA	1420	C	C5'-C4'-C3'	-5.03	107.95	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	772	U	C2'-C3'-O3'	5.03	121.74	113.70
1	AA	686	U	N1-C1'-C2'	5.03	120.53	114.00
22	AV	36	A	C5'-C4'-C3'	-5.02	107.96	116.00
1	AA	772	U	C2'-C3'-O3'	5.02	121.73	113.70
36	DA	1970	A	C5'-C4'-C3'	5.02	124.03	116.00
1	AA	115	G	N9-C1'-C2'	5.02	120.52	114.00
36	DA	2405	G	N9-C1'-C2'	5.02	120.52	114.00
36	BA	906	G	C5'-C4'-C3'	-5.01	107.98	116.00
36	BA	1159	U	C5'-C4'-C3'	-5.01	107.99	116.00
36	DA	857	C	C5'-C4'-C3'	-5.00	108.00	116.00

All (19) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
1	AA	508	C	C3'
1	AA	1239	A	C3'
1	AA	1498	U	C3'
1	AA	1504	G	C3'
1	AA	1531	A	C3'
22	AW	76	A	C3'
24	AY	55	PSU	C3'
24	AY	69	C	C3'
36	BA	1819	A	C3'
36	BA	1820	U	C3'
1	CA	508	C	C3'
1	CA	1239	A	C3'
1	CA	1399	C	C3'
1	CA	1498	U	C3'
22	CW	76	A	C3'
24	CY	55	PSU	C3'
24	CY	69	C	C3'
36	DA	1819	A	C3'
36	DA	1820	U	C3'

All (245) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	AA	1050	G	Sidechain
1	AA	1055	A	Sidechain
1	AA	1077	G	Sidechain
1	AA	108	G	Sidechain
1	AA	1153	C	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	1157	A	Sidechain
1	AA	1181	G	Sidechain
1	AA	1278	U	Sidechain
1	AA	1281	U	Sidechain
1	AA	1283	G	Sidechain
1	AA	1299	A	Sidechain
1	AA	1348	U	Sidechain
1	AA	1397	C	Sidechain
1	AA	1398	A	Sidechain
1	AA	14	U	Sidechain
1	AA	1406	U	Sidechain
1	AA	1414	U	Sidechain
1	AA	1472	U	Sidechain
1	AA	1494	G	Sidechain
1	AA	1512	U	Sidechain
1	AA	1516	G	Sidechain
1	AA	189(G)	G	Sidechain
1	AA	189(H)	G	Sidechain
1	AA	197	A	Sidechain
1	AA	198	G	Sidechain
1	AA	21	G	Sidechain
1	AA	245	C	Sidechain
1	AA	250	A	Sidechain
1	AA	251	G	Sidechain
1	AA	323	U	Sidechain
1	AA	347	G	Sidechain
1	AA	369	C	Sidechain
1	AA	428	G	Sidechain
1	AA	498	U	Sidechain
1	AA	557	G	Sidechain
1	AA	570	G	Sidechain
1	AA	571	U	Sidechain
1	AA	573	A	Sidechain
1	AA	586	C	Sidechain
1	AA	603	U	Sidechain
1	AA	727	G	Sidechain
1	AA	741	G	Sidechain
1	AA	774	G	Sidechain
1	AA	803	G	Sidechain
1	AA	808	C	Sidechain
1	AA	898	G	Sidechain
1	AA	961	U	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	977	A	Sidechain
1	AA	995	C	Sidechain
22	AW	39	U	Sidechain
36	BA	1133	U	Sidechain
36	BA	1162	G	Sidechain
36	BA	1215	G	Sidechain
36	BA	1238	G	Sidechain
36	BA	1379	A	Sidechain
36	BA	140	G	Sidechain
36	BA	1416	G	Sidechain
36	BA	1427	A	Sidechain
36	BA	15	G	Sidechain
36	BA	1647	G	Sidechain
36	BA	1649	G	Sidechain
36	BA	1766	U	Sidechain
36	BA	1772	G	Sidechain
36	BA	1773	A	Sidechain
36	BA	1801	G	Sidechain
36	BA	1807	G	Sidechain
36	BA	1831	G	Sidechain
36	BA	1841	U	Sidechain
36	BA	1900	A	Sidechain
36	BA	1928	A	Sidechain
36	BA	1938	A	Sidechain
36	BA	1973	G	Sidechain
36	BA	1985	G	Sidechain
36	BA	2031	A	Sidechain
36	BA	2061	G	Sidechain
36	BA	2073	C	Sidechain
36	BA	2074	U	Sidechain
36	BA	2173	A	Sidechain
36	BA	2266	A	Sidechain
36	BA	2320	A	Sidechain
36	BA	2335	A	Sidechain
36	BA	2344	U	Sidechain
36	BA	2360	A	Sidechain
36	BA	2413	G	Sidechain
36	BA	2438	U	Sidechain
36	BA	2464	C	Sidechain
36	BA	250	G	Sidechain
36	BA	2506	U	Sidechain
36	BA	2508	G	Sidechain

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Mol	Chain	Res	Type	Group
36	BA	2542	A	Sidechain
36	BA	2564	A	Sidechain
36	BA	2569	G	Sidechain
36	BA	2581	G	Sidechain
36	BA	2582	G	Sidechain
36	BA	2595	G	Sidechain
36	BA	2609	U	Sidechain
36	BA	2685	G	Sidechain
36	BA	2746	U	Sidechain
36	BA	2758	A	Sidechain
36	BA	2779	U	Sidechain
36	BA	2848	G	Sidechain
36	BA	383	U	Sidechain
36	BA	463	G	Sidechain
36	BA	532	A	Sidechain
36	BA	630	G	Sidechain
36	BA	670	A	Sidechain
36	BA	675	A	Sidechain
36	BA	684	G	Sidechain
36	BA	700	G	Sidechain
36	BA	760	G	Sidechain
36	BA	763	G	Sidechain
36	BA	792	G	Sidechain
36	BA	945	A	Sidechain
36	BA	946	G	Sidechain
36	BA	958	U	Sidechain
36	BA	995	C	Sidechain
37	BB	16	G	Sidechain
37	BB	24	G	Sidechain
37	BB	40	U	Sidechain
37	BB	42	C	Sidechain
37	BB	66	A	Sidechain
37	BB	67	G	Sidechain
1	CA	1050	G	Sidechain
1	CA	1077	G	Sidechain
1	CA	1079	G	Sidechain
1	CA	1153	C	Sidechain
1	CA	1157	A	Sidechain
1	CA	1181	G	Sidechain
1	CA	1278	U	Sidechain
1	CA	1281	U	Sidechain
1	CA	1283	G	Sidechain

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Mol	Chain	Res	Type	Group
1	CA	1299	A	Sidechain
1	CA	1338	G	Sidechain
1	CA	1348	U	Sidechain
1	CA	1370	G	Sidechain
1	CA	1380	U	Sidechain
1	CA	1386	G	Sidechain
1	CA	14	U	Sidechain
1	CA	1414	U	Sidechain
1	CA	1428	A	Sidechain
1	CA	1442	G	Sidechain
1	CA	1498	U	Sidechain
1	CA	1505	G	Sidechain
1	CA	1510	U	Sidechain
1	CA	1522	U	Sidechain
1	CA	189(H)	G	Sidechain
1	CA	197	A	Sidechain
1	CA	198	G	Sidechain
1	CA	21	G	Sidechain
1	CA	245	C	Sidechain
1	CA	250	A	Sidechain
1	CA	251	G	Sidechain
1	CA	323	U	Sidechain
1	CA	347	G	Sidechain
1	CA	369	C	Sidechain
1	CA	428	G	Sidechain
1	CA	498	U	Sidechain
1	CA	557	G	Sidechain
1	CA	573	A	Sidechain
1	CA	586	C	Sidechain
1	CA	7	G	Sidechain
1	CA	727	G	Sidechain
1	CA	741	G	Sidechain
1	CA	773	G	Sidechain
1	CA	808	C	Sidechain
1	CA	898	G	Sidechain
1	CA	940	C	Sidechain
1	CA	952	U	Sidechain
1	CA	961	U	Sidechain
1	CA	977	A	Sidechain
1	CA	995	C	Sidechain
22	CW	39	U	Sidechain
36	DA	1133	U	Sidechain

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Mol	Chain	Res	Type	Group
36	DA	1156	A	Sidechain
36	DA	1162	G	Sidechain
36	DA	1215	G	Sidechain
36	DA	1238	G	Sidechain
36	DA	1379	A	Sidechain
36	DA	140	G	Sidechain
36	DA	1416	G	Sidechain
36	DA	1427	A	Sidechain
36	DA	15	G	Sidechain
36	DA	1647	G	Sidechain
36	DA	1766	U	Sidechain
36	DA	1772	G	Sidechain
36	DA	1773	A	Sidechain
36	DA	1801	G	Sidechain
36	DA	1807	G	Sidechain
36	DA	1831	G	Sidechain
36	DA	1841	U	Sidechain
36	DA	1907	G	Sidechain
36	DA	1940	U	Sidechain
36	DA	1952	A	Sidechain
36	DA	1985	G	Sidechain
36	DA	2010	G	Sidechain
36	DA	2011	U	Sidechain
36	DA	202	U	Sidechain
36	DA	2031	A	Sidechain
36	DA	2073	C	Sidechain
36	DA	2074	U	Sidechain
36	DA	2176	A	Sidechain
36	DA	2266	A	Sidechain
36	DA	2320	A	Sidechain
36	DA	2344	U	Sidechain
36	DA	2360	A	Sidechain
36	DA	2413	G	Sidechain
36	DA	2422	A	Sidechain
36	DA	2438	U	Sidechain
36	DA	2464	C	Sidechain
36	DA	2491	U	Sidechain
36	DA	2504	U	Sidechain
36	DA	2506	U	Sidechain
36	DA	2508	G	Sidechain
36	DA	2542	A	Sidechain
36	DA	2564	A	Sidechain

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Mol	Chain	Res	Type	Group
36	DA	2569	G	Sidechain
36	DA	2581	G	Sidechain
36	DA	2582	G	Sidechain
36	DA	2595	G	Sidechain
36	DA	2726	U	Sidechain
36	DA	2746	U	Sidechain
36	DA	2758	A	Sidechain
36	DA	2779	U	Sidechain
36	DA	463	G	Sidechain
36	DA	532	A	Sidechain
36	DA	555	U	Sidechain
36	DA	630	G	Sidechain
36	DA	670	A	Sidechain
36	DA	675	A	Sidechain
36	DA	684	G	Sidechain
36	DA	686	G	Sidechain
36	DA	700	G	Sidechain
36	DA	742	G	Sidechain
36	DA	760	G	Sidechain
36	DA	792	G	Sidechain
36	DA	945	A	Sidechain
36	DA	946	G	Sidechain
36	DA	958	U	Sidechain
36	DA	995	C	Sidechain
37	DB	16	G	Sidechain
37	DB	24	G	Sidechain
37	DB	40	U	Sidechain
37	DB	42	C	Sidechain
37	DB	66	A	Sidechain
37	DB	67	G	Sidechain

5.2 Too-close contacts ⓘ

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	32451	0	16382	1017	0
1	CA	32451	0	16382	1043	0
2	AB	1900	0	1951	209	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	CB	1900	0	1951	211	0
3	AC	1612	0	1677	148	0
3	CC	1612	0	1677	155	0
4	AD	1703	0	1764	221	0
4	CD	1703	0	1763	226	0
5	AE	1146	0	1207	78	0
5	CE	1146	0	1207	89	0
6	AF	843	0	857	78	0
6	CF	843	0	857	77	0
7	AG	1257	0	1296	94	0
7	CG	1257	0	1296	89	0
8	AH	1116	0	1177	50	0
8	CH	1116	0	1177	52	0
9	AI	1010	0	1037	143	0
9	CI	1010	0	1037	142	0
10	AJ	794	0	840	113	0
10	CJ	794	0	840	118	0
11	AK	885	0	904	59	0
11	CK	885	0	904	61	0
12	AL	970	0	1057	112	0
12	CL	970	0	1057	111	0
13	AM	987	0	1059	136	0
13	CM	987	0	1059	139	0
14	AN	492	0	529	58	0
14	CN	492	0	529	61	0
15	AO	734	0	771	42	0
15	CO	734	0	771	43	0
16	AP	700	0	720	72	0
16	CP	700	0	720	73	0
17	AQ	823	0	891	56	0
17	CQ	823	0	891	58	0
18	AR	574	0	644	35	0
18	CR	574	0	644	39	0
19	AS	629	0	652	77	0
19	CS	629	0	652	79	0
20	AT	763	0	861	78	0
20	CT	763	0	861	79	0
21	AU	208	0	221	12	0
21	CU	208	0	221	13	0
22	AV	1619	0	822	60	0
22	AW	1619	0	822	65	0
22	CV	1619	0	822	63	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
22	CW	1619	0	822	69	0
23	AX	361	0	184	7	0
23	CX	361	0	184	11	0
24	AY	1643	0	853	76	0
24	CY	1643	0	853	75	0
25	AZ	2983	0	2999	284	0
25	CZ	2983	0	2999	287	0
26	B0	662	0	688	63	0
26	D0	662	0	688	65	0
27	B1	731	0	808	69	0
27	D1	731	0	808	69	0
28	B2	598	0	653	158	0
28	D2	598	0	653	67	0
29	B3	467	0	523	49	0
29	D3	467	0	523	47	0
30	B4	340	0	336	51	0
30	D4	340	0	336	53	0
31	B5	459	0	480	62	0
31	D5	459	0	480	65	0
32	B6	433	0	461	135	0
32	D6	433	0	461	133	0
33	B7	418	0	467	29	0
33	D7	418	0	467	28	0
34	B8	507	0	576	124	0
34	D8	507	0	576	123	0
35	B9	307	0	336	39	0
35	D9	307	0	335	42	0
36	BA	62477	0	31497	2140	0
36	DA	62477	0	31497	2211	0
37	BB	2551	0	1295	85	0
37	DB	2551	0	1295	97	0
38	BC	1742	0	1800	141	0
38	DC	1742	0	1800	132	0
39	BD	2145	0	2234	221	0
39	DD	2145	0	2234	234	0
40	BE	1563	0	1629	225	0
40	DE	1563	0	1629	222	0
41	BF	1623	0	1677	193	0
41	DF	1623	0	1677	197	0
42	BG	1474	0	1535	247	0
42	DG	1474	0	1535	232	0
43	BH	1222	0	1282	178	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
43	DH	1222	0	1282	184	0
44	BJ	651	0	164	27	0
44	DJ	651	0	164	31	0
45	BK	700	0	173	18	0
45	DK	700	0	173	15	0
46	BN	1104	0	1180	176	0
46	DN	1104	0	1180	171	0
47	BO	933	0	996	77	0
47	DO	933	0	996	78	0
48	BP	1114	0	1187	263	0
48	DP	1114	0	1187	265	0
49	BQ	1122	0	1179	112	0
49	DQ	1122	0	1179	106	0
50	BR	960	0	1021	133	0
50	DR	960	0	1021	128	0
51	BS	770	0	832	152	0
51	DS	770	0	832	150	0
52	BT	1141	0	1202	229	0
52	DT	1141	0	1202	223	0
53	BU	958	0	1015	132	0
53	DU	958	0	1015	130	0
54	BV	779	0	852	117	0
54	DV	779	0	852	120	0
55	BW	896	0	953	87	0
55	DW	896	0	953	86	0
56	BX	725	0	778	82	0
56	DX	725	0	778	84	0
57	BY	775	0	870	162	0
57	DY	775	0	870	156	0
58	BZ	1403	0	1432	216	0
58	DZ	1403	0	1432	200	0
59	AD	1	0	0	0	0
59	AN	1	0	0	0	0
59	B4	1	0	0	0	0
59	B9	1	0	0	0	0
59	CD	1	0	0	0	0
59	CN	1	0	0	0	0
59	D4	1	0	0	0	0
59	D9	1	0	0	0	0
60	AZ	28	0	12	2	0
60	CZ	28	0	12	6	0
61	AZ	57	0	58	3	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
61	CZ	57	0	59	2	0
All	All	307322	0	208715	17679	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 34.

All (17679) 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)
38:DC:123:VAL:CG2	38:DC:127:LEU:HD23	1.33	1.53
38:BC:123:VAL:CG2	38:BC:127:LEU:HD23	1.33	1.51
38:DC:123:VAL:HG23	38:DC:127:LEU:CD2	1.50	1.42
38:BC:123:VAL:HG23	38:BC:127:LEU:CD2	1.50	1.41
36:DA:1899:G:N2	36:DA:1902:C:H41	1.34	1.24
36:BA:1899:G:N2	36:BA:1902:C:H41	1.36	1.24
22:CV:41:C:H2'	22:CV:42:C:H5''	1.22	1.19
36:DA:2645:G:H3'	36:DA:2646:C:H5'	1.21	1.18
13:AM:10:PRO:HB2	13:AM:18:ALA:HB1	1.21	1.18
56:BX:40:LYS:HG2	56:BX:51:VAL:HB	1.21	1.17
1:CA:1149:C:H2'	1:CA:1150:U:O2	1.41	1.17
1:AA:1149:C:H2'	1:AA:1150:U:O2	1.42	1.17
1:AA:227:G:H2'	1:AA:228:A:H5''	1.22	1.17
36:BA:2645:G:H3'	36:BA:2646:C:H5'	1.22	1.17
1:AA:1053:G:H4'	1:AA:1054:C:H5'	1.25	1.17
1:CA:227:G:H2'	1:CA:228:A:H5''	1.21	1.16
13:CM:10:PRO:HB2	13:CM:18:ALA:HB1	1.22	1.16
42:BG:7:LEU:HD21	42:BG:176:LEU:HD21	1.24	1.16
52:DT:33:LYS:HE3	52:DT:43:GLN:HE21	1.06	1.16
28:B2:47:ASN:HA	28:B2:50:ILE:HB	1.29	1.15
41:DF:24:LEU:HB3	41:DF:25:PRO:HD2	1.28	1.14
22:AV:41:C:H2'	22:AV:42:C:H5''	1.21	1.14
43:BH:85:LYS:HE2	43:BH:133:VAL:N	1.61	1.13
43:DH:85:LYS:HE2	43:DH:133:VAL:N	1.61	1.13
41:BF:24:LEU:HB3	41:BF:25:PRO:HD2	1.29	1.13
7:AG:79:ARG:HG2	7:AG:84:ASN:HA	1.23	1.13
1:CA:1053:G:H4'	1:CA:1054:C:H5'	1.28	1.13
7:CG:79:ARG:HG2	7:CG:84:ASN:HA	1.22	1.13
41:DF:167:ALA:HB1	41:DF:173:VAL:HG11	1.30	1.13
49:BQ:141:GLN:HE21	58:BZ:72:ARG:HA	0.99	1.13
39:DD:30:GLU:HB2	39:DD:35:LYS:HD2	1.28	1.12
52:DT:53:ARG:HH11	52:DT:53:ARG:HB3	1.12	1.12

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1003:G:H2'	1:CA:1004:A:H4'	1.32	1.12
52:DT:55:ASN:H	52:DT:59:THR:HG22	1.12	1.12
28:B2:53:LEU:HA	28:B2:56:GLN:HG2	1.31	1.12
40:DE:47:VAL:HG21	40:DE:86:PRO:HD2	1.32	1.12
36:DA:1301:A:O2'	36:DA:1302:A:H2'	1.50	1.11
36:BA:2092:U:H4'	36:BA:2093:G:H5''	1.32	1.11
36:DA:31:C:H2'	36:DA:32:C:H5''	1.33	1.11
52:BT:53:ARG:HH11	52:BT:53:ARG:HB3	1.11	1.11
56:BX:12:VAL:HB	56:BX:17:ALA:HB1	1.15	1.11
56:DX:12:VAL:HB	56:DX:17:ALA:HB1	1.16	1.11
36:BA:1301:A:O2'	36:BA:1302:A:H2'	1.50	1.11
36:BA:1543:C:H3'	36:BA:1544:A:H5''	1.33	1.10
42:BG:82:LEU:HD13	42:BG:87:PRO:HB3	1.30	1.10
56:DX:12:VAL:HG23	56:DX:13:LEU:H	1.16	1.10
56:DX:40:LYS:HG2	56:DX:51:VAL:HB	1.18	1.10
1:AA:1003:G:H2'	1:AA:1004:A:H4'	1.33	1.10
36:DA:1543:C:H3'	36:DA:1544:A:H5''	1.32	1.10
32:B6:33:LYS:HE2	32:B6:33:LYS:HA	1.31	1.10
41:BF:25:PRO:HB3	41:BF:119:ARG:HB2	1.32	1.10
36:BA:628:G:H2'	36:BA:629:G:H5''	1.32	1.09
40:BE:47:VAL:HG21	40:BE:86:PRO:HD2	1.33	1.09
42:BG:67:LYS:H	42:BG:67:LYS:HD3	0.96	1.09
46:DN:9:VAL:HG12	46:DN:10:GLU:H	1.16	1.09
9:AI:53:VAL:HG22	9:AI:95:LYS:HZ3	1.04	1.09
32:B6:35:GLU:HB3	32:B6:51:GLU:HB2	1.35	1.09
36:DA:1887:C:H2'	36:DA:1888:G:H5''	1.34	1.09
1:AA:1305:G:H22	1:AA:1331:G:H2'	1.07	1.09
34:B8:62:LEU:HD13	36:BA:242:G:H5''	1.33	1.09
49:BQ:141:GLN:NE2	58:BZ:72:ARG:HA	1.66	1.09
41:DF:37:VAL:HG11	48:DP:7:ARG:HH12	1.16	1.09
36:BA:1484:G:H2'	36:BA:1485:G:H5''	1.09	1.08
41:DF:25:PRO:HB3	41:DF:119:ARG:HB2	1.32	1.08
39:BD:30:GLU:HB2	39:BD:35:LYS:HD2	1.24	1.08
22:CV:46:G:H3'	22:CV:47:U:C5'	1.83	1.08
1:AA:954:G:H4'	13:AM:120:LYS:HD2	1.35	1.08
34:D8:62:LEU:HD13	36:DA:242:G:H5''	1.33	1.08
46:BN:9:VAL:HG12	46:BN:10:GLU:H	1.18	1.08
1:CA:1305:G:H22	1:CA:1331:G:H2'	1.06	1.08
1:CA:1305:G:N2	1:CA:1331:G:H2'	1.69	1.08
32:D6:35:GLU:HB3	32:D6:51:GLU:HB2	1.35	1.08
39:BD:71:ASP:HB2	39:BD:103:ARG:HH22	1.19	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1417:G:H5'	1:AA:1417:G:H8	0.97	1.08
41:BF:168:ARG:HG3	41:BF:175:THR:HG21	1.35	1.08
36:DA:628:G:H2'	36:DA:629:G:H5''	1.31	1.08
36:DA:1484:G:H2'	36:DA:1485:G:H5''	1.09	1.07
36:DA:925:C:H2'	36:DA:926:A:H5''	1.36	1.07
31:B5:4:HIS:HB3	31:B5:5:PRO:HD3	1.35	1.07
9:AI:53:VAL:HG22	9:AI:95:LYS:NZ	1.67	1.07
58:BZ:151:HIS:HA	58:BZ:171:ILE:HD12	1.30	1.07
26:B0:10:THR:HG22	26:B0:12:ASN:H	1.18	1.07
41:BF:143:ALA:HB1	41:BF:148:LEU:HB2	1.32	1.07
36:BA:2187:G:H2'	36:BA:2188:C:H5'	1.32	1.07
9:CI:53:VAL:HG22	9:CI:95:LYS:NZ	1.69	1.07
43:BH:85:LYS:CE	43:BH:133:VAL:H	1.68	1.07
58:DZ:51:ALA:HB1	58:DZ:57:ILE:HD11	1.35	1.07
1:AA:1417:G:C8	1:AA:1417:G:H5'	1.89	1.06
52:BT:33:LYS:HE3	52:BT:43:GLN:HE21	1.06	1.06
1:CA:954:G:H4'	13:CM:120:LYS:HD2	1.33	1.06
40:DE:57:LYS:HA	40:DE:57:LYS:HE3	1.32	1.06
43:DH:85:LYS:CE	43:DH:133:VAL:H	1.68	1.06
28:B2:57:ILE:HG22	28:B2:61:LEU:HG	1.36	1.06
36:BA:925:C:H2'	36:BA:926:A:H5''	1.36	1.06
22:AV:46:G:H3'	22:AV:47:U:C5'	1.83	1.06
28:B2:2:LYS:HD3	28:B2:59:ARG:HH12	0.94	1.06
32:D6:33:LYS:HA	32:D6:33:LYS:HE2	1.31	1.06
36:BA:31:C:H2'	36:BA:32:C:H5''	1.34	1.06
41:BF:37:VAL:HG11	48:BP:7:ARG:HH12	1.17	1.06
1:AA:1305:G:N2	1:AA:1331:G:H2'	1.69	1.05
42:BG:72:ARG:HH21	42:BG:86:MET:HG3	1.17	1.05
43:BH:85:LYS:HZ3	43:BH:132:ARG:HA	1.21	1.05
39:DD:71:ASP:HB2	39:DD:103:ARG:HH22	1.16	1.05
22:AW:71:G:H2'	22:AW:72:C:H5'	1.38	1.05
36:BA:271(L):U:H5''	36:BA:271(M):G:H5'	1.38	1.05
41:DF:143:ALA:HB1	41:DF:148:LEU:HB2	1.32	1.05
7:CG:79:ARG:HE	7:CG:84:ASN:HB2	1.22	1.05
42:DG:63:ILE:HA	42:DG:143:GLU:HG3	1.39	1.05
36:DA:2187:G:H2'	36:DA:2188:C:H5'	1.36	1.05
51:DS:59:LYS:HG2	51:DS:60:GLY:H	1.20	1.05
40:BE:57:LYS:HA	40:BE:57:LYS:HE3	1.33	1.05
36:DA:1024:G:H3'	36:DA:1025:G:H5''	1.38	1.04
36:DA:271(L):U:H5''	36:DA:271(M):G:H5'	1.37	1.04
41:DF:168:ARG:HG3	41:DF:175:THR:HG21	1.35	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:227:G:C2'	1:CA:228:A:H5''	1.88	1.04
31:D5:4:HIS:HB3	31:D5:5:PRO:HD3	1.35	1.04
10:AJ:55:LYS:HZ2	10:AJ:55:LYS:HB2	1.16	1.04
38:BC:27:ARG:HD3	38:BC:182:PRO:CG	1.87	1.04
51:BS:59:LYS:HG2	51:BS:60:GLY:H	1.18	1.04
52:BT:55:ASN:H	52:BT:59:THR:HG22	1.13	1.04
29:B3:35:ARG:HB2	29:B3:35:ARG:HH11	1.21	1.04
36:BA:1887:C:H2'	36:BA:1888:G:H5''	1.38	1.04
36:BA:2101:G:H2'	36:BA:2102:U:H5''	1.38	1.04
24:AY:45:U:H3'	24:AY:46:7MG:C5'	1.86	1.04
1:CA:1271:G:H2'	1:CA:1272:G:H5''	1.39	1.03
12:AL:18:VAL:HG23	12:AL:19:ARG:H	1.19	1.03
21:AU:6:ARG:HD3	21:AU:15:ARG:CZ	1.88	1.03
43:DH:85:LYS:HZ3	43:DH:132:ARG:HA	1.23	1.03
36:BA:654(E):G:H22	36:BA:654(Q):C:H1'	1.21	1.03
43:DH:153:LYS:HD3	43:DH:153:LYS:H	1.21	1.03
10:CJ:55:LYS:HZ2	10:CJ:55:LYS:HB2	1.23	1.03
43:DH:16:SER:HB2	43:DH:27:LYS:HB2	1.41	1.03
36:BA:1024:G:H3'	36:BA:1025:G:H5''	1.40	1.03
43:DH:85:LYS:HE2	43:DH:133:VAL:H	0.88	1.03
43:BH:16:SER:HB2	43:BH:27:LYS:HB2	1.40	1.03
56:BX:12:VAL:HG23	56:BX:13:LEU:H	1.18	1.03
24:CY:45:U:H3'	24:CY:46:7MG:C5'	1.87	1.03
43:BH:153:LYS:H	43:BH:153:LYS:HD3	1.23	1.03
1:CA:1533:C:H3'	1:CA:1534:A:H5''	1.37	1.03
5:CE:12:LEU:CD1	5:CE:31:LEU:HB2	1.89	1.03
22:CV:41:C:C2'	22:CV:42:C:H5''	1.89	1.03
36:DA:1484:G:C2'	36:DA:1485:G:H5''	1.89	1.03
22:AV:41:C:C2'	22:AV:42:C:H5''	1.88	1.03
50:BR:99:LYS:H	50:BR:99:LYS:HD2	1.20	1.02
36:BA:774:A:H2	36:BA:787:U:HO2'	1.04	1.02
42:BG:51:ARG:HA	42:BG:51:ARG:HE	1.20	1.02
25:CZ:355:LEU:HB3	25:CZ:370:PHE:HB3	1.41	1.02
29:D3:35:ARG:HB2	29:D3:35:ARG:HH11	1.19	1.02
24:CY:4:G:H2'	24:CY:5:G:H5''	1.38	1.02
36:BA:2833:G:H3'	36:BA:2834:G:C5'	1.89	1.02
41:BF:167:ALA:HB1	41:BF:173:VAL:HG11	1.33	1.02
36:DA:2101:G:H2'	36:DA:2102:U:H5''	1.37	1.02
36:DA:2833:G:H3'	36:DA:2834:G:C5'	1.88	1.02
58:BZ:96:VAL:HG22	58:BZ:97:GLU:H	1.25	1.02
26:D0:10:THR:HG22	26:D0:12:ASN:H	1.18	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2092:U:H4'	36:DA:2093:G:H5''	1.36	1.02
36:BA:628:G:C2'	36:BA:629:G:H5''	1.90	1.02
40:BE:38:THR:HG22	40:BE:40:GLU:H	1.24	1.02
10:CJ:61:GLU:HG3	14:CN:58:LYS:HE2	1.41	1.02
22:CW:71:G:H2'	22:CW:72:C:H5'	1.38	1.02
52:BT:2:ASN:HD22	52:BT:7:ILE:HD11	1.23	1.02
36:BA:272(H):C:H2'	36:BA:272(I):U:H5''	1.41	1.02
1:AA:227:G:C2'	1:AA:228:A:H5''	1.89	1.01
24:AY:4:G:H2'	24:AY:5:G:H5''	1.37	1.01
27:B1:3:LYS:N	27:B1:3:LYS:HZ3	1.57	1.01
25:AZ:355:LEU:HB3	25:AZ:370:PHE:HB3	1.42	1.01
42:DG:144:ILE:HD11	42:DG:149:VAL:HG11	1.42	1.01
43:BH:85:LYS:HE2	43:BH:133:VAL:H	0.88	1.01
32:D6:18:ARG:HG2	32:D6:18:ARG:HH11	1.25	1.01
36:DA:628:G:C2'	36:DA:629:G:H5''	1.89	1.01
42:DG:73:ALA:HB3	42:DG:87:PRO:HG3	1.42	1.01
52:DT:2:ASN:HD22	52:DT:7:ILE:HD11	1.21	1.01
12:CL:18:VAL:HG23	12:CL:19:ARG:H	1.22	1.01
12:AL:20:LYS:H	12:AL:20:LYS:HD3	1.23	1.01
36:BA:612:C:H2'	36:BA:613:G:H5''	1.42	1.01
40:DE:38:THR:HG22	40:DE:40:GLU:H	1.25	1.01
57:DY:76:CYS:SG	57:DY:77:PRO:HD2	2.01	1.01
36:DA:272(H):C:H2'	36:DA:272(I):U:H5''	1.42	1.01
10:AJ:61:GLU:HG3	14:AN:58:LYS:HE2	1.43	1.01
54:BV:15:GLU:HB3	54:BV:16:PRO:HD2	1.40	1.01
1:AA:1271:G:H2'	1:AA:1272:G:H5''	1.38	1.01
36:BA:1884:A:H2'	36:BA:1885:A:H5''	1.43	1.01
57:BY:9:LYS:HG2	57:BY:10:GLY:H	1.25	1.01
4:AD:189:PRO:HB2	4:AD:194:LEU:HD21	1.40	1.00
50:DR:99:LYS:H	50:DR:99:LYS:HD2	1.21	1.00
36:BA:1484:G:C2'	36:BA:1485:G:H5''	1.89	1.00
36:DA:654(E):G:H22	36:DA:654(Q):C:H1'	1.21	1.00
5:CE:76:ILE:HD11	5:CE:142:LEU:HD21	1.43	1.00
54:DV:15:GLU:HB3	54:DV:16:PRO:HD2	1.41	1.00
36:DA:31:C:C2'	36:DA:32:C:H5''	1.91	1.00
34:B8:32:LEU:HG	34:B8:36:LYS:HZ3	1.22	1.00
4:CD:189:PRO:HB2	4:CD:194:LEU:HD21	1.41	1.00
5:AE:76:ILE:HD11	5:AE:142:LEU:HD21	1.43	1.00
34:B8:23:VAL:HG12	34:B8:46:ARG:HH11	1.27	1.00
36:BA:2310:A:O2'	36:BA:2311:A:H5'	1.62	1.00
10:AJ:50:ILE:H	10:AJ:50:ILE:HD13	1.27	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2310:A:O2'	36:DA:2311:A:H5'	1.61	0.99
48:BP:146:VAL:HG22	48:BP:147:LEU:H	1.21	0.99
1:AA:1053:G:H4'	1:AA:1054:C:C5'	1.91	0.99
42:BG:67:LYS:H	42:BG:67:LYS:CD	1.75	0.99
11:CK:108:ILE:HG21	18:CR:88:LYS:HB2	1.44	0.99
34:D8:61:LEU:HD22	34:D8:62:LEU:HG	1.45	0.99
27:D1:34:THR:HG21	27:D1:37:ILE:HD11	1.45	0.99
36:BA:1499:C:H6	36:BA:1499:C:H5'	1.27	0.99
4:AD:28:SER:HB3	4:AD:29:PRO:HD2	1.43	0.99
21:CU:6:ARG:HD3	21:CU:15:ARG:CZ	1.92	0.99
1:CA:1053:G:H4'	1:CA:1054:C:C5'	1.92	0.99
34:D8:23:VAL:HG12	34:D8:46:ARG:HH11	1.28	0.99
36:DA:612:C:H2'	36:DA:613:G:H5''	1.41	0.99
38:DC:72:VAL:HG23	38:DC:111:ASP:HB3	1.45	0.99
25:AZ:241:ARG:HH11	25:AZ:241:ARG:HB3	1.27	0.98
11:AK:108:ILE:HG21	18:AR:88:LYS:HB2	1.44	0.98
36:BA:1279:G:H4'	50:BR:31:HIS:CD2	1.98	0.98
48:DP:146:VAL:HG22	48:DP:147:LEU:H	1.23	0.98
58:BZ:69:THR:HG22	58:BZ:90:VAL:HA	1.43	0.98
42:BG:67:LYS:HD3	42:BG:67:LYS:N	1.77	0.98
12:CL:20:LYS:H	12:CL:20:LYS:HD3	1.25	0.98
17:AQ:52:LYS:HD3	17:AQ:52:LYS:H	1.28	0.98
28:B2:62:THR:HG21	36:BA:76:C:O2'	1.62	0.98
1:CA:1271:G:C2'	1:CA:1272:G:H5''	1.94	0.98
22:CV:23:A:H8	22:CV:23:A:H5'	1.28	0.98
36:DA:1279:G:H4'	50:DR:31:HIS:CD2	1.98	0.98
38:DC:123:VAL:CG2	38:DC:127:LEU:CD2	2.23	0.98
10:CJ:50:ILE:HD13	10:CJ:50:ILE:H	1.29	0.98
17:CQ:52:LYS:H	17:CQ:52:LYS:HD3	1.26	0.98
1:AA:1271:G:C2'	1:AA:1272:G:H5''	1.94	0.97
22:AV:23:A:H8	22:AV:23:A:H5'	1.29	0.97
22:AV:46:G:H3'	22:AV:47:U:H5''	0.98	0.97
57:BY:76:CYS:SG	57:BY:77:PRO:HD2	2.03	0.97
14:CN:59:ALA:O	14:CN:60:SER:HB2	1.61	0.97
53:DU:85:LYS:HD3	53:DU:117:GLN:HE22	1.29	0.97
2:AB:131:PRO:HG2	2:AB:134:GLU:HG2	1.44	0.97
34:B8:13:ARG:HD2	48:BP:61:ARG:HD2	1.46	0.97
5:AE:12:LEU:CD1	5:AE:31:LEU:HB2	1.93	0.97
3:CC:79:ARG:HB2	3:CC:79:ARG:HH11	1.30	0.97
22:CV:46:G:H3'	22:CV:47:U:H5''	0.98	0.97
36:DA:1899:G:H22	36:DA:1902:C:N4	1.61	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:B6:18:ARG:HG2	32:B6:18:ARG:HH11	1.28	0.97
34:B8:61:LEU:HD22	34:B8:62:LEU:HG	1.44	0.97
36:BA:259:G:H21	36:BA:621:A:H8	1.06	0.97
38:BC:123:VAL:CG2	38:BC:127:LEU:CD2	2.24	0.97
22:CV:46:G:C3'	22:CV:47:U:H5''	1.94	0.97
36:DA:1884:A:H2'	36:DA:1885:A:H5''	1.43	0.97
7:AG:79:ARG:HE	7:AG:84:ASN:HB2	1.24	0.97
36:BA:31:C:C2'	36:BA:32:C:H5''	1.93	0.97
51:DS:98:VAL:HG12	51:DS:100:ALA:H	1.30	0.97
2:AB:165:VAL:HG23	2:AB:166:ASP:H	1.29	0.97
14:AN:59:ALA:O	14:AN:60:SER:HB2	1.64	0.97
32:B6:15:GLU:CD	32:B6:18:ARG:CZ	2.32	0.97
48:BP:126:VAL:HA	48:BP:145:PRO:HB2	1.47	0.97
36:DA:655:A:H4'	36:DA:656:G:H5'	1.45	0.97
48:DP:126:VAL:HA	48:DP:145:PRO:HB2	1.47	0.97
57:DY:9:LYS:HG2	57:DY:10:GLY:H	1.26	0.97
54:BV:99:ILE:H	54:BV:99:ILE:HD13	1.28	0.96
20:CT:57:ARG:HH11	20:CT:102:GLY:HA2	1.30	0.96
25:CZ:241:ARG:HB3	25:CZ:241:ARG:HH11	1.29	0.96
1:AA:1502:A:H2	1:AA:1505:G:H1	1.08	0.96
36:BA:1899:G:H22	36:BA:1902:C:N4	1.64	0.96
48:BP:41:ARG:HD3	48:BP:45:LEU:HD23	1.47	0.96
53:BU:85:LYS:HD3	53:BU:117:GLN:HE22	1.30	0.96
36:DA:1141:U:H2'	46:DN:63:THR:HG21	1.43	0.96
22:AV:46:G:C3'	22:AV:47:U:H5''	1.94	0.96
4:CD:28:SER:HB3	4:CD:29:PRO:HD2	1.45	0.96
28:B2:2:LYS:HD3	28:B2:59:ARG:NH1	1.79	0.96
51:BS:98:VAL:HG12	51:BS:100:ALA:H	1.30	0.96
2:CB:131:PRO:HG2	2:CB:134:GLU:HG2	1.46	0.96
36:DA:2833:G:H3'	36:DA:2834:G:H5''	1.47	0.96
36:BA:2801(A):A:H4'	36:BA:2802:G:H5'	1.47	0.96
36:BA:27:G:H22	36:BA:512:G:H2'	1.29	0.96
36:DA:1499:C:H6	36:DA:1499:C:H5'	1.28	0.96
52:DT:53:ARG:HB3	52:DT:53:ARG:NH1	1.80	0.96
34:B8:32:LEU:HG	34:B8:36:LYS:NZ	1.80	0.96
42:BG:77:ILE:HD12	42:BG:82:LEU:O	1.66	0.96
36:DA:2801(A):A:H4'	36:DA:2802:G:H5'	1.47	0.95
20:AT:62:LEU:H	20:AT:62:LEU:HD12	1.30	0.95
36:BA:1948:G:H8	36:BA:1948:G:H5'	1.31	0.95
1:CA:975:A:H4'	1:CA:976:G:H5''	1.46	0.95
36:BA:266:G:H2'	36:BA:267:C:H5''	1.48	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BC:72:VAL:HG23	38:BC:111:ASP:HB3	1.47	0.95
36:BA:1141:U:H2'	46:BN:63:THR:HG21	1.45	0.95
36:BA:2189:U:H2'	36:BA:2190:G:H4'	1.47	0.95
37:BB:20:C:H2'	37:BB:21:G:H5''	1.48	0.95
39:BD:44:ASN:HB3	39:BD:49:ILE:HA	1.46	0.95
52:BT:53:ARG:NH1	52:BT:53:ARG:HB3	1.80	0.95
2:CB:155:LEU:HD21	2:CB:159:PRO:HG3	1.46	0.95
54:DV:99:ILE:H	54:DV:99:ILE:HD13	1.27	0.95
36:BA:655:A:H4'	36:BA:656:G:H5'	1.45	0.95
37:DB:20:C:H2'	37:DB:21:G:H5''	1.48	0.95
55:DW:5:ALA:HB2	55:DW:54:ALA:HB2	1.46	0.95
13:AM:120:LYS:HE3	13:AM:120:LYS:HA	1.49	0.95
26:D0:49:LYS:H	26:D0:80:HIS:HD1	1.04	0.95
51:DS:30:ARG:HH22	51:DS:62:LYS:HD3	1.30	0.95
43:BH:50:VAL:HG12	43:BH:51:ARG:H	1.31	0.95
13:AM:10:PRO:CB	13:AM:18:ALA:HB1	1.97	0.95
2:CB:71:VAL:HB	2:CB:164:VAL:HG12	1.47	0.95
46:DN:47:ALA:HB2	46:DN:112:LEU:HD11	1.49	0.95
34:D8:13:ARG:HD2	48:DP:61:ARG:HD2	1.46	0.95
29:B3:9:VAL:HG11	29:B3:55:ARG:HD3	1.47	0.95
48:BP:23:PRO:HB2	48:BP:33:ARG:HG3	1.46	0.95
41:DF:132:VAL:HG22	41:DF:133:ASN:H	1.30	0.95
51:BS:83:LYS:HG2	51:BS:105:ALA:HB3	1.49	0.95
42:DG:67:LYS:N	42:DG:67:LYS:HD3	1.82	0.95
1:AA:1003:G:C2'	1:AA:1004:A:H4'	1.97	0.94
39:DD:44:ASN:HB3	39:DD:49:ILE:HA	1.49	0.94
3:AC:79:ARG:HB2	3:AC:79:ARG:HH11	1.31	0.94
41:BF:6:VAL:HG12	41:BF:7:TYR:H	1.30	0.94
36:DA:27:G:H22	36:DA:512:G:H2'	1.32	0.94
36:BA:2185:C:H2'	36:BA:2186:G:H5'	1.48	0.94
41:DF:6:VAL:HG12	41:DF:7:TYR:H	1.30	0.94
36:DA:1022:G:H22	36:DA:1142(A):A:H2	1.12	0.94
51:DS:83:LYS:HG2	51:DS:105:ALA:HB3	1.50	0.94
40:BE:34:VAL:HG11	40:BE:78:LEU:HD22	1.50	0.94
13:CM:120:LYS:HE3	13:CM:120:LYS:HA	1.47	0.94
1:AA:1452:C:H4'	1:AA:1456:G:N2	1.82	0.94
51:BS:78:LEU:HD11	51:BS:103:GLU:HG3	1.49	0.94
3:CC:132:ARG:HH11	3:CC:136:GLN:HE22	1.16	0.94
36:DA:676:A:H8	36:DA:2069:G:H21	1.16	0.94
1:CA:1003:G:C2'	1:CA:1004:A:H4'	1.97	0.94
2:CB:165:VAL:HG23	2:CB:166:ASP:H	1.31	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1494:A:H2'	36:DA:1495:A:H5''	1.49	0.94
52:BT:28:VAL:HG22	52:BT:47:GLY:N	1.83	0.94
43:DH:50:VAL:HG12	43:DH:51:ARG:H	1.31	0.94
4:AD:194:LEU:HB3	4:AD:196:LEU:HD13	1.50	0.94
36:DA:880:G:H1	36:DA:897:C:H42	1.14	0.94
48:DP:59:LEU:HA	48:DP:61:ARG:NE	1.82	0.94
1:CA:980:C:H5'	1:CA:980:C:H6	1.31	0.93
20:CT:62:LEU:HD12	20:CT:62:LEU:H	1.33	0.93
36:DA:1948:G:H5'	36:DA:1948:G:H8	1.31	0.93
48:DP:23:PRO:HB2	48:DP:33:ARG:HG3	1.46	0.93
36:BA:2317:C:H2'	36:BA:2318:G:H5'	1.49	0.93
36:BA:676:A:H8	36:BA:2069:G:H21	1.14	0.93
4:CD:128:VAL:HG12	4:CD:129:ASN:H	1.34	0.93
42:DG:67:LYS:H	42:DG:67:LYS:HD3	1.33	0.93
1:AA:1314:C:H5	1:AA:1323:G:H1	1.15	0.93
1:AA:980:C:H5'	1:AA:980:C:H6	1.33	0.93
36:BA:673:C:H6	36:BA:673:C:H5'	1.34	0.93
48:DP:41:ARG:HD3	48:DP:45:LEU:HD23	1.50	0.93
26:B0:49:LYS:H	26:B0:80:HIS:HD1	1.04	0.93
58:BZ:108:PRO:HB3	58:BZ:141:VAL:HG12	1.49	0.93
4:AD:128:VAL:HG12	4:AD:129:ASN:H	1.33	0.93
28:B2:25:VAL:HB	28:B2:64:LEU:HD12	1.48	0.93
36:BA:1494:A:H2'	36:BA:1495:A:H5''	1.49	0.93
55:BW:5:ALA:HB2	55:BW:54:ALA:HB2	1.50	0.93
4:CD:18:LYS:HB2	4:CD:33:MET:HG2	1.46	0.93
36:DA:259:G:H21	36:DA:621:A:H8	1.08	0.93
2:AB:71:VAL:HB	2:AB:164:VAL:HG12	1.50	0.93
36:BA:1689:A:H62	36:BA:1698:A:H2	1.17	0.93
29:D3:9:VAL:HG11	29:D3:55:ARG:HD3	1.49	0.93
32:D6:15:GLU:CD	32:D6:18:ARG:CZ	2.38	0.93
36:DA:2178:C:H2'	36:DA:2179:C:H5'	1.50	0.93
36:DA:2756:U:H1'	36:DA:2757:A:H5''	1.47	0.93
56:DX:52:VAL:HG12	56:DX:53:LYS:H	1.33	0.93
27:B1:80:LEU:HB3	27:B1:82:LEU:HD13	1.50	0.93
36:BA:2756:U:H1'	36:BA:2757:A:H5''	1.48	0.93
48:BP:47:ASP:HB3	48:BP:48:PRO:HA	1.50	0.93
36:DA:2189:U:H2'	36:DA:2190:G:H4'	1.47	0.93
49:BQ:135:ASP:H	49:BQ:137:TYR:HD1	1.14	0.93
13:CM:10:PRO:CB	13:CM:18:ALA:HB1	1.98	0.93
34:D8:61:LEU:HD12	34:D8:61:LEU:H	1.32	0.93
36:DA:2317:C:H2'	36:DA:2318:G:H5'	1.51	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DT:28:VAL:HG22	52:DT:47:GLY:N	1.84	0.93
1:AA:1277:C:HO2'	1:AA:1279:A:H8	0.97	0.92
34:B8:61:LEU:HD12	34:B8:61:LEU:H	1.32	0.92
36:BA:1019:U:H3	36:BA:1142(A):A:H62	1.17	0.92
41:BF:29:ASN:HD22	41:BF:32:LEU:HB2	1.31	0.92
32:D6:6:ARG:HH11	32:D6:6:ARG:HB3	1.33	0.92
36:DA:1779:U:H5	36:DA:1784:A:N7	1.67	0.92
1:AA:858:G:C6	1:AA:869:G:N7	2.37	0.92
36:BA:2833:G:H3'	36:BA:2834:G:H5''	1.49	0.92
36:DA:2893:G:H5'	36:DA:2894:G:H5'	1.51	0.92
1:AA:975:A:H4'	1:AA:976:G:H5''	1.48	0.92
4:AD:18:LYS:HB2	4:AD:33:MET:HG2	1.48	0.92
48:BP:81:GLN:OE1	48:BP:106:LEU:HA	1.69	0.92
52:BT:13:ARG:HA	52:BT:13:ARG:NH1	1.83	0.92
58:BZ:123:ASP:O	58:BZ:124:ILE:HG12	1.68	0.92
36:DA:1747(A):G:C2'	36:DA:1748:G:H5''	1.99	0.92
4:CD:194:LEU:HB3	4:CD:196:LEU:HD13	1.52	0.92
46:DN:67:LEU:O	46:DN:88:GLU:HG3	1.70	0.92
2:AB:155:LEU:HD21	2:AB:159:PRO:HG3	1.49	0.92
36:BA:1865:G:H5'	36:BA:1866:C:OP2	1.69	0.92
48:BP:23:PRO:HD2	48:BP:33:ARG:HE	1.35	0.92
34:D8:32:LEU:HG	34:D8:36:LYS:NZ	1.84	0.92
36:DA:1540:U:H3'	36:DA:1541:G:H3'	1.51	0.92
41:DF:29:ASN:HD22	41:DF:32:LEU:HB2	1.32	0.92
41:BF:132:VAL:HG22	41:BF:133:ASN:H	1.31	0.92
1:AA:1416:G:H2'	1:AA:1417:G:H5''	1.52	0.92
30:D4:14:ILE:HG13	30:D4:31:ILE:HB	1.51	0.92
36:DA:1747(A):G:H2'	36:DA:1748:G:H5''	1.51	0.92
36:DA:2185:C:H2'	36:DA:2186:G:H5'	1.48	0.92
36:DA:266:G:H2'	36:DA:267:C:H5''	1.50	0.92
36:DA:27:G:N2	36:DA:512:G:H2'	1.85	0.92
20:AT:57:ARG:HH11	20:AT:102:GLY:HA2	1.32	0.92
36:BA:2178:C:H2'	36:BA:2179:C:H5'	1.50	0.92
46:BN:47:ALA:HB2	46:BN:112:LEU:HD11	1.49	0.92
52:BT:50:ILE:HD11	52:BT:102:ILE:HD11	1.52	0.92
48:DP:47:ASP:HB3	48:DP:48:PRO:HA	1.51	0.92
51:DS:15:ARG:HH11	51:DS:15:ARG:HB2	1.35	0.92
52:DT:55:ASN:N	52:DT:59:THR:HG22	1.83	0.92
36:BA:2036:C:H6	36:BA:2036:C:H5'	1.34	0.92
36:BA:27:G:N2	36:BA:512:G:H2'	1.84	0.92
27:B1:75:GLU:O	27:B1:78:LYS:HG2	1.69	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:B2:54:LYS:O	28:B2:58:ALA:HB2	1.70	0.91
42:BG:72:ARG:NE	42:BG:86:MET:HA	1.84	0.91
52:BT:33:LYS:HE3	52:BT:43:GLN:NE2	1.85	0.91
5:CE:50:GLU:HB2	5:CE:53:LEU:HD13	1.51	0.91
36:DA:1865:G:H5'	36:DA:1866:C:OP2	1.68	0.91
46:DN:13:TRP:O	46:DN:135:PRO:HD2	1.68	0.91
13:AM:11:ARG:HG2	13:AM:12:ASN:H	1.35	0.91
36:BA:650:C:H3'	36:BA:651:G:H5''	1.53	0.91
46:BN:13:TRP:O	46:BN:135:PRO:HD2	1.70	0.91
51:BS:30:ARG:HH22	51:BS:62:LYS:HD3	1.31	0.91
56:BX:52:VAL:HG12	56:BX:53:LYS:H	1.35	0.91
4:CD:120:LEU:HB3	4:CD:126:ILE:HD11	1.52	0.91
52:BT:55:ASN:N	52:BT:59:THR:HG22	1.85	0.91
42:DG:139:LEU:HA	42:DG:144:ILE:HD13	1.51	0.91
1:CA:1502:A:H2	1:CA:1505:G:H1	1.08	0.91
42:DG:52:ILE:HD13	42:DG:52:ILE:H	1.33	0.91
36:DA:2415:G:O3'	48:DP:66:GLY:HA3	1.71	0.91
4:AD:120:LEU:HB3	4:AD:126:ILE:HD11	1.51	0.91
36:BA:2893:G:H5'	36:BA:2894:G:H5'	1.53	0.91
41:BF:28:ILE:HD13	41:BF:28:ILE:H	1.35	0.91
10:AJ:33:GLN:HB2	10:AJ:75:ILE:HD11	1.53	0.91
1:AA:1367:C:H5'	10:AJ:60:ARG:HH11	1.35	0.91
51:BS:15:ARG:HH11	51:BS:15:ARG:HB2	1.33	0.91
24:CY:45:U:H3'	24:CY:46:7MG:H5''	1.52	0.91
36:BA:2287:A:H62	36:BA:2344:U:H3	1.17	0.91
48:BP:16:ARG:HB2	48:BP:16:ARG:NH1	1.86	0.91
9:CI:53:VAL:HG13	9:CI:95:LYS:HD3	1.53	0.91
39:DD:147:LEU:HD11	39:DD:183:ARG:HH12	1.34	0.91
36:BA:1540:U:H3'	36:BA:1541:G:H3'	1.52	0.91
36:BA:1747(A):G:C2'	36:BA:1748:G:H5''	2.00	0.91
42:BG:44:GLY:H	42:BG:88:ILE:CG2	1.82	0.91
36:BA:2187:G:C2'	36:BA:2188:C:H5'	2.00	0.91
36:BA:612:C:H2'	36:BA:613:G:C5'	2.01	0.91
9:CI:53:VAL:HG22	9:CI:95:LYS:HZ1	1.31	0.91
24:CY:72:U:H2'	24:CY:73:G:H5''	1.53	0.91
36:DA:1517:G:H8	36:DA:1517:G:H5'	1.36	0.91
36:BA:1022:G:H22	36:BA:1142(A):A:H2	1.16	0.90
46:BN:67:LEU:O	46:BN:88:GLU:HG3	1.68	0.90
36:DA:2138:C:H2'	36:DA:2139:C:H6	1.36	0.90
51:DS:78:LEU:HD11	51:DS:103:GLU:HG3	1.49	0.90
26:B0:27:GLU:HB2	26:B0:68:GLU:HA	1.53	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:93:ILE:HG12	25:CZ:122:LEU:HD11	1.53	0.90
24:AY:45:U:H3'	24:AY:46:7MG:H5''	1.51	0.90
36:BA:1779:U:H5	36:BA:1784:A:N7	1.70	0.90
36:BA:2183:C:H2'	36:BA:2184:G:C8	2.07	0.90
48:BP:59:LEU:HA	48:BP:61:ARG:NE	1.86	0.90
52:BT:85:LYS:HB3	52:BT:85:LYS:NZ	1.87	0.90
36:DA:612:C:H2'	36:DA:613:G:C5'	2.01	0.90
9:AI:53:VAL:HG13	9:AI:95:LYS:HD3	1.53	0.90
14:AN:13:THR:N	14:AN:14:PRO:HD2	1.84	0.90
51:BS:106:ARG:HH12	51:BS:108:GLY:CA	1.84	0.90
36:DA:31:C:H2'	36:DA:32:C:C5'	2.01	0.90
9:AI:28:VAL:HG12	9:AI:29:ASN:H	1.36	0.90
39:BD:43:ARG:NH1	39:BD:44:ASN:HD21	1.68	0.90
58:BZ:29:TYR:HB3	58:BZ:34:ASN:HB2	1.53	0.90
52:DT:13:ARG:NH1	52:DT:13:ARG:HA	1.86	0.90
36:BA:2139:C:H2'	36:BA:2140:C:H6	1.36	0.90
36:BA:2312:U:O3'	42:BG:71:THR:HG21	1.71	0.90
1:CA:1314:C:H5	1:CA:1323:G:H1	1.15	0.90
9:CI:17:VAL:HG11	9:CI:81:ILE:HD13	1.52	0.90
36:DA:1689:A:H62	36:DA:1698:A:H2	1.19	0.90
43:DH:19:VAL:HG12	43:DH:20:ALA:H	1.33	0.90
58:DZ:73:GLN:HE21	58:DZ:75:ASN:HD21	1.16	0.90
3:CC:46:GLU:O	3:CC:47:LEU:HB2	1.72	0.90
38:DC:175:VAL:HG12	38:DC:188:ASN:HB3	1.54	0.90
39:DD:70:TRP:CH2	39:DD:150:LYS:HA	2.07	0.90
12:AL:7:ILE:HD12	12:AL:8:ASN:H	1.37	0.90
25:AZ:263:ARG:HH21	25:AZ:297:GLU:HG2	1.37	0.90
51:BS:89:ARG:O	51:BS:92:TYR:HB3	1.72	0.90
52:DT:85:LYS:NZ	52:DT:85:LYS:HB3	1.86	0.90
57:DY:10:GLY:HA2	57:DY:27:VAL:HG13	1.54	0.90
1:AA:1238:A:H8	1:AA:1241:G:HO2'	0.91	0.90
48:BP:47:ASP:HB3	48:BP:48:PRO:CA	2.02	0.90
36:DA:2036:C:H6	36:DA:2036:C:H5'	1.33	0.90
36:DA:2287:A:H62	36:DA:2344:U:H3	1.18	0.90
39:DD:26:LYS:O	39:DD:27:THR:HG22	1.72	0.90
30:B4:14:ILE:HG13	30:B4:31:ILE:HB	1.52	0.90
52:BT:129:ARG:CZ	52:BT:131:ALA:HB3	2.01	0.90
39:DD:43:ARG:NH1	39:DD:44:ASN:HD21	1.70	0.90
40:DE:34:VAL:HG11	40:DE:78:LEU:HD22	1.51	0.90
47:DO:65:THR:HG23	47:DO:67:LYS:H	1.35	0.90
48:DP:81:GLN:OE1	48:DP:106:LEU:HA	1.69	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2138:C:H2'	36:BA:2139:C:H6	1.37	0.89
6:AF:30:LEU:O	6:AF:35:ALA:HB3	1.72	0.89
43:BH:19:VAL:HG12	43:BH:20:ALA:H	1.33	0.89
36:DA:2177:C:H4'	38:DC:46:LYS:HD3	1.52	0.89
12:AL:110:VAL:H	12:AL:122:THR:HG22	1.36	0.89
36:BA:1517:G:H8	36:BA:1517:G:H5'	1.36	0.89
36:DA:2183:C:H2'	36:DA:2184:G:C8	2.08	0.89
3:AC:46:GLU:O	3:AC:47:LEU:HB2	1.71	0.89
12:AL:6:THR:OG1	12:AL:9:GLN:HG3	1.73	0.89
36:BA:1602:U:H3'	36:BA:1603:A:C5'	2.02	0.89
36:BA:2177:C:H4'	38:BC:46:LYS:HD3	1.54	0.89
42:BG:46:ALA:H	42:BG:47:LYS:HD2	1.37	0.89
51:BS:49:VAL:HG12	51:BS:50:SER:H	1.38	0.89
26:D0:27:GLU:HB2	26:D0:68:GLU:HA	1.54	0.89
36:DA:2134:A:N6	36:DA:2157:G:H1'	1.87	0.89
48:DP:47:ASP:HB3	48:DP:48:PRO:CA	2.00	0.89
52:DT:33:LYS:HE3	52:DT:43:GLN:NE2	1.85	0.89
36:BA:1019:U:HO2'	36:BA:1021:A:H2	0.89	0.89
36:BA:2317:C:C2'	36:BA:2318:G:H5'	2.02	0.89
36:BA:880:G:H1	36:BA:897:C:H42	1.16	0.89
51:DS:106:ARG:HH12	51:DS:108:GLY:CA	1.85	0.89
2:AB:87:ARG:HH22	2:AB:232:PRO:C	1.76	0.89
42:BG:85:GLY:C	42:BG:87:PRO:HD3	1.91	0.89
57:BY:10:GLY:HA2	57:BY:27:VAL:HG13	1.54	0.89
1:CA:1277:C:HO2'	1:CA:1279:A:H8	0.96	0.89
36:DA:1019:U:H3	36:DA:1142(A):A:H62	1.18	0.89
36:DA:860:U:H5	36:DA:917:A:N7	1.70	0.89
5:AE:50:GLU:HB2	5:AE:53:LEU:HD13	1.54	0.89
38:BC:27:ARG:CD	38:BC:182:PRO:HG2	2.03	0.89
52:BT:27:THR:O	52:BT:28:VAL:HB	1.72	0.89
50:DR:45:ARG:HG3	50:DR:46:GLY:H	1.38	0.89
51:DS:106:ARG:HH12	51:DS:108:GLY:HA3	1.35	0.89
36:BA:2657:A:H2'	36:BA:2658:C:H5'	1.55	0.89
39:BD:70:TRP:CH2	39:BD:150:LYS:HA	2.08	0.89
12:CL:110:VAL:H	12:CL:122:THR:HG22	1.38	0.89
32:B6:16:CYS:SG	32:B6:48:VAL:HG22	2.13	0.89
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.06	0.89
9:CI:28:VAL:HG12	9:CI:29:ASN:H	1.38	0.89
36:DA:2068:U:H3	36:DA:2430:A:H2	1.17	0.89
39:DD:132:PRO:HG3	39:DD:190:TYR:CE1	2.08	0.89
52:DT:3:ARG:HD2	52:DT:6:LEU:HD12	1.55	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:925:C:C2'	36:BA:926:A:H5''	2.03	0.88
57:BY:73:ARG:HH22	57:BY:82:PRO:HA	1.38	0.88
1:CA:1320:C:H6	1:CA:1320:C:H5'	1.38	0.88
41:DF:28:ILE:HD13	41:DF:28:ILE:H	1.35	0.88
24:AY:72:U:H2'	24:AY:73:G:H5''	1.53	0.88
10:CJ:5:ARG:HB3	10:CJ:99:LYS:HB2	1.53	0.88
48:DP:23:PRO:HD2	48:DP:33:ARG:HE	1.38	0.88
51:DS:89:ARG:O	51:DS:92:TYR:HB3	1.72	0.88
1:AA:452:A:HO2'	1:AA:453:A:H8	0.92	0.88
27:B1:50:ARG:HG3	27:B1:59:THR:HG22	1.53	0.88
28:B2:53:LEU:HA	28:B2:56:GLN:CG	2.04	0.88
36:BA:1747(A):G:H2'	36:BA:1748:G:H5''	1.54	0.88
1:CA:1238:A:H8	1:CA:1241:G:HO2'	0.93	0.88
1:CA:1367:C:H5'	10:CJ:60:ARG:HH11	1.36	0.88
1:CA:858:G:C6	1:CA:869:G:N7	2.41	0.88
16:CP:20:VAL:HG21	16:CP:32:TYR:HB2	1.55	0.88
36:DA:650:C:H3'	36:DA:651:G:H5''	1.53	0.88
36:DA:925:C:C2'	36:DA:926:A:H5''	2.02	0.88
42:DG:139:LEU:HA	42:DG:144:ILE:HG21	1.53	0.88
49:DQ:135:ASP:H	49:DQ:137:TYR:HD1	1.12	0.88
36:BA:860:U:H5	36:BA:917:A:N7	1.72	0.88
42:BG:165:THR:OG1	42:BG:168:GLU:HG3	1.74	0.88
32:D6:15:GLU:HB2	32:D6:20:ASN:HB3	1.55	0.88
9:AI:4:TYR:CD2	9:AI:88:TYR:HB2	2.08	0.88
10:AJ:96:ILE:HD13	10:AJ:96:ILE:H	1.38	0.88
32:B6:15:GLU:HG2	32:B6:18:ARG:NH1	1.88	0.88
38:BC:78:ALA:HA	38:BC:116:THR:H	1.39	0.88
6:CF:30:LEU:O	6:CF:35:ALA:HB3	1.73	0.88
36:DA:1602:U:H3'	36:DA:1603:A:C5'	2.03	0.88
36:DA:673:C:H5'	36:DA:673:C:H6	1.33	0.88
4:AD:114:ARG:HG3	4:AD:114:ARG:HH11	1.38	0.88
36:BA:1516:C:C2'	36:BA:1517:G:H5''	2.04	0.88
36:BA:2415:G:O3'	48:BP:66:GLY:HA3	1.73	0.88
2:CB:204:ASN:ND2	2:CB:206:ASP:H	1.71	0.88
12:AL:36:VAL:HG22	12:AL:82:VAL:HG22	1.54	0.88
10:CJ:33:GLN:HB2	10:CJ:75:ILE:HD11	1.54	0.88
33:D7:34:ARG:HG3	33:D7:34:ARG:HH11	1.39	0.88
36:DA:1049:C:H2'	36:DA:1050:A:H8	1.39	0.88
36:BA:2189:U:C2'	36:BA:2190:G:H4'	2.04	0.88
39:BD:132:PRO:HG3	39:BD:190:TYR:CE1	2.09	0.88
51:BS:106:ARG:HH12	51:BS:108:GLY:HA3	1.37	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2317:C:C2'	36:DA:2318:G:H5'	2.03	0.88
56:DX:11:PRO:HA	56:DX:28:PHE:HB3	1.56	0.88
25:AZ:93:ILE:HG12	25:AZ:122:LEU:HD11	1.53	0.88
38:BC:175:VAL:HG12	38:BC:188:ASN:HB3	1.55	0.88
2:CB:44:LEU:H	2:CB:44:LEU:HD12	1.39	0.88
25:AZ:193:ASN:HB2	25:AZ:196:VAL:HG12	1.56	0.87
36:BA:2134:A:N6	36:BA:2157:G:H1'	1.89	0.87
36:BA:2068:U:H3	36:BA:2430:A:H2	1.18	0.87
36:BA:31:C:H2'	36:BA:32:C:C5'	2.03	0.87
36:BA:654(E):G:N2	36:BA:654(Q):C:H1'	1.89	0.87
52:DT:129:ARG:CZ	52:DT:131:ALA:HB3	2.03	0.87
57:DY:73:ARG:HH22	57:DY:82:PRO:HA	1.38	0.87
36:BA:1899:G:N2	36:BA:1902:C:N4	2.21	0.87
1:CA:265:G:H2'	1:CA:266:G:H5''	1.56	0.87
36:DA:1403:C:H5''	36:DA:1471:A:H1'	1.56	0.87
36:DA:2139:C:H2'	36:DA:2140:C:H6	1.36	0.87
42:DG:114:ILE:HG23	42:DG:116:ASP:O	1.74	0.87
42:DG:47:LYS:HE3	42:DG:81:LYS:HB2	1.55	0.87
36:BA:2572:A:C8	40:BE:144:ARG:HG2	2.10	0.87
1:CA:228:A:H5'	1:CA:228:A:H8	1.38	0.87
3:CC:8:ILE:HG23	3:CC:16:ARG:HG2	1.56	0.87
14:CN:13:THR:N	14:CN:14:PRO:HD2	1.86	0.87
39:BD:10:THR:HG23	39:BD:13:ARG:HB2	1.56	0.87
42:BG:44:GLY:H	42:BG:88:ILE:HG21	1.38	0.87
25:CZ:263:ARG:HH21	25:CZ:297:GLU:HG2	1.38	0.87
48:DP:16:ARG:NH1	48:DP:16:ARG:HB2	1.88	0.87
5:AE:10:MET:SD	5:AE:13:ILE:HD11	2.15	0.87
36:BA:1050:A:H2'	36:BA:1051:G:H5'	1.56	0.87
36:BA:1678:G:N2	36:BA:1989:G:H22	1.73	0.87
52:BT:56:GLY:O	52:BT:59:THR:HG23	1.75	0.87
12:CL:7:ILE:HD12	12:CL:8:ASN:H	1.35	0.87
49:DQ:133:ARG:HH11	49:DQ:133:ARG:HB2	1.38	0.87
25:AZ:198:LYS:HE3	25:AZ:198:LYS:HA	1.56	0.87
41:BF:3:GLU:HA	41:BF:24:LEU:HG	1.55	0.87
47:BO:65:THR:HG23	47:BO:67:LYS:H	1.36	0.87
9:CI:4:TYR:CD2	9:CI:88:TYR:HB2	2.09	0.87
35:D9:7:VAL:HG13	35:D9:34:GLN:HG2	1.57	0.87
36:DA:2187:G:C2'	36:DA:2188:C:H5'	2.05	0.87
36:DA:2657:A:H2'	36:DA:2658:C:H5'	1.56	0.87
36:DA:2864:G:OP1	52:DT:119:LYS:HD2	1.74	0.87
36:DA:657:U:H2'	36:DA:658:C:C6	2.10	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:B2:2:LYS:CD	28:B2:59:ARG:HH12	1.86	0.87
31:B5:24:ALA:O	31:B5:25:LEU:HB2	1.74	0.87
33:B7:34:ARG:HG3	33:B7:34:ARG:HH11	1.39	0.87
38:BC:123:VAL:HG23	38:BC:127:LEU:HD23	0.87	0.87
39:BD:147:LEU:HD11	39:BD:183:ARG:HH12	1.38	0.87
50:BR:3:HIS:O	50:BR:5:LYS:N	2.07	0.87
56:BX:11:PRO:HA	56:BX:28:PHE:HB3	1.56	0.87
57:BY:28:LYS:HG2	57:BY:39:VAL:HG22	1.54	0.87
13:CM:11:ARG:HG2	13:CM:12:ASN:H	1.36	0.87
36:DA:1516:C:C2'	36:DA:1517:G:H5''	2.05	0.87
38:DC:78:ALA:HA	38:DC:116:THR:H	1.40	0.87
39:DD:35:LYS:HG3	39:DD:63:ARG:HG2	1.57	0.87
41:DF:3:GLU:HA	41:DF:24:LEU:HG	1.54	0.87
50:DR:3:HIS:O	50:DR:5:LYS:N	2.07	0.87
1:AA:265:G:H2'	1:AA:266:G:H5''	1.56	0.87
3:AC:132:ARG:HH11	3:AC:136:GLN:HE22	1.22	0.87
43:BH:105:LEU:HD23	43:BH:105:LEU:H	1.40	0.87
2:AB:204:ASN:ND2	2:AB:206:ASP:H	1.73	0.87
32:B6:6:ARG:HH11	32:B6:6:ARG:HB3	1.37	0.87
42:BG:76:SER:HA	42:BG:83:ARG:HB3	1.57	0.87
4:CD:114:ARG:HG3	4:CD:114:ARG:HH11	1.37	0.87
10:CJ:96:ILE:H	10:CJ:96:ILE:HD13	1.39	0.87
39:DD:30:GLU:HB2	39:DD:35:LYS:CD	2.05	0.87
51:DS:49:VAL:HG12	51:DS:50:SER:H	1.38	0.87
2:AB:44:LEU:HD12	2:AB:44:LEU:H	1.39	0.86
4:AD:59:ARG:HA	4:AD:59:ARG:HE	1.40	0.86
36:BA:1494:A:C2'	36:BA:1495:A:H5''	2.05	0.86
40:BE:116:VAL:HG21	40:BE:122:PHE:CD2	2.10	0.86
25:AZ:246:LYS:HB3	25:AZ:281:ILE:HG22	1.56	0.86
12:CL:6:THR:OG1	12:CL:9:GLN:HG3	1.75	0.86
36:DA:1899:G:N2	36:DA:1902:C:N4	2.19	0.86
36:DA:2189:U:C2'	36:DA:2190:G:H4'	2.05	0.86
36:DA:2464:C:HO2'	36:DA:2465:C:H6	1.22	0.86
36:DA:654(E):G:N2	36:DA:654(Q):C:H1'	1.89	0.86
52:DT:27:THR:O	52:DT:28:VAL:HB	1.72	0.86
36:BA:1516:C:H2'	36:BA:1517:G:H5''	1.57	0.86
48:BP:30:THR:HG22	48:BP:31:ALA:N	1.89	0.86
12:CL:36:VAL:HG22	12:CL:82:VAL:HG22	1.56	0.86
57:DY:28:LYS:HG2	57:DY:39:VAL:HG22	1.55	0.86
1:AA:979:C:C3'	1:AA:980:C:H5''	2.05	0.86
16:AP:20:VAL:HG21	16:AP:32:TYR:HB2	1.55	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:30:GLU:HB2	39:BD:35:LYS:CD	2.03	0.86
58:BZ:130:PRO:HA	58:BZ:133:ILE:HD11	1.56	0.86
58:BZ:151:HIS:CB	58:BZ:170:THR:HA	2.05	0.86
31:D5:24:ALA:O	31:D5:25:LEU:HB2	1.75	0.86
38:DC:123:VAL:HG23	38:DC:127:LEU:HD23	0.88	0.86
39:DD:76:PRO:HG2	39:DD:98:VAL:HG21	1.57	0.86
57:DY:53:PRO:HB3	57:DY:56:PRO:HG3	1.57	0.86
57:DY:96:ILE:HG12	57:DY:99:CYS:HB2	1.55	0.86
42:BG:47:LYS:HG2	42:BG:81:LYS:HD2	1.55	0.86
51:BS:54:LEU:HD13	51:BS:58:LEU:H	1.39	0.86
54:BV:24:LYS:HA	54:BV:92:THR:HG23	1.56	0.86
56:BX:27:THR:HG23	56:BX:80:ILE:HB	1.57	0.86
58:BZ:15:PRO:HA	58:BZ:18:LEU:HD23	1.57	0.86
1:CA:1086:U:H2'	1:CA:1087:G:H5'	1.58	0.86
36:DA:1494:A:C2'	36:DA:1495:A:H5''	2.05	0.86
54:DV:18:LEU:HD23	54:DV:19:LYS:H	1.38	0.86
36:BA:330:A:H2	36:BA:1210:A:H2'	1.39	0.86
50:BR:45:ARG:HG3	50:BR:46:GLY:H	1.38	0.86
52:BT:3:ARG:HD2	52:BT:6:LEU:HD12	1.57	0.86
32:D6:16:CYS:SG	32:D6:48:VAL:HG22	2.16	0.86
36:DA:271(C):C:H2'	36:DA:271(D):G:H8	1.40	0.86
1:AA:228:A:H8	1:AA:228:A:H5'	1.39	0.86
4:AD:138:TYR:HD1	4:AD:139:ARG:N	1.73	0.86
9:AI:17:VAL:HG11	9:AI:81:ILE:HD13	1.57	0.86
41:DF:110:LEU:HD12	41:DF:206:ILE:HD11	1.57	0.86
49:BQ:133:ARG:HB2	49:BQ:133:ARG:HH11	1.38	0.86
54:BV:18:LEU:HD23	54:BV:19:LYS:H	1.40	0.86
42:DG:47:LYS:HD3	42:DG:81:LYS:HG3	1.57	0.86
52:DT:80:SER:HB3	52:DT:81:PRO:HD3	1.56	0.86
54:DV:24:LYS:HA	54:DV:92:THR:HG23	1.57	0.86
10:AJ:5:ARG:HB3	10:AJ:99:LYS:HB2	1.56	0.86
31:D5:33:CYS:HB3	31:D5:36:CYS:O	1.76	0.86
36:DA:1887:C:C2'	36:DA:1888:G:H5''	2.05	0.86
46:BN:51:PHE:CZ	46:BN:119:ARG:HD2	2.11	0.86
1:CA:452:A:HO2'	1:CA:453:A:H8	0.91	0.86
31:D5:41:PRO:HG2	31:D5:44:THR:OG1	1.75	0.86
36:DA:1050:A:H2'	36:DA:1051:G:H5'	1.56	0.86
39:DD:10:THR:HG23	39:DD:13:ARG:HB2	1.57	0.86
47:DO:111:PHE:HB3	47:DO:114:ILE:HD13	1.58	0.86
35:B9:7:VAL:HG13	35:B9:34:GLN:HG2	1.58	0.85
58:BZ:126:VAL:HA	58:BZ:163:LEU:HA	1.57	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1536:C:H2'	1:CA:1537:U:O4'	1.75	0.85
25:CZ:277:LEU:HD13	25:CZ:278:GLN:N	1.91	0.85
36:DA:244:A:H4'	48:DP:74:GLU:HG3	1.58	0.85
43:DH:105:LEU:H	43:DH:105:LEU:HD23	1.40	0.85
36:DA:1190:G:H5'	48:DP:35:HIS:H	1.41	0.85
53:DU:92:ARG:O	53:DU:94:ASN:N	2.09	0.85
53:DU:92:ARG:NH1	53:DU:94:ASN:HD22	1.72	0.85
56:DX:27:THR:HG23	56:DX:80:ILE:HB	1.58	0.85
38:BC:77:ILE:HD13	38:BC:95:GLY:HA3	1.58	0.85
7:CG:79:ARG:CZ	22:CW:33:U:H4'	2.06	0.85
25:CZ:246:LYS:HB3	25:CZ:281:ILE:HG22	1.55	0.85
38:DC:77:ILE:HD13	38:DC:95:GLY:HA3	1.58	0.85
40:DE:61:ARG:HB3	40:DE:62:PRO:HD3	1.58	0.85
36:BA:2864:G:OP1	52:BT:119:LYS:HD2	1.75	0.85
4:CD:59:ARG:HA	4:CD:59:ARG:HE	1.39	0.85
27:D1:67:ILE:O	27:D1:70:VAL:HG12	1.76	0.85
36:DA:2159:G:H2'	36:DA:2160:G:H5''	1.58	0.85
51:DS:54:LEU:HD13	51:DS:58:LEU:H	1.40	0.85
36:BA:1543:C:H3'	36:BA:1544:A:C5'	2.05	0.85
36:BA:271(C):C:H2'	36:BA:271(D):G:H8	1.41	0.85
57:BY:53:PRO:HB3	57:BY:56:PRO:HG3	1.58	0.85
2:CB:87:ARG:HH22	2:CB:232:PRO:C	1.78	0.85
25:CZ:19:HIS:CD2	25:CZ:113:MET:HB3	2.12	0.85
40:DE:50:GLY:HA2	40:DE:78:LEU:HB3	1.58	0.85
56:DX:12:VAL:HG23	56:DX:13:LEU:N	1.91	0.85
58:DZ:40:ASP:HB3	58:DZ:43:GLU:HG3	1.58	0.85
13:AM:65:LYS:HD3	13:AM:65:LYS:H	1.42	0.85
36:DA:1543:C:H3'	36:DA:1544:A:C5'	2.05	0.85
57:DY:13:VAL:HG21	57:DY:72:VAL:HB	1.56	0.85
41:BF:25:PRO:CB	41:BF:119:ARG:HB2	2.06	0.85
42:BG:72:ARG:NH2	42:BG:86:MET:HG3	1.92	0.85
52:BT:80:SER:HB3	52:BT:81:PRO:HD3	1.57	0.85
53:BU:92:ARG:NH1	53:BU:94:ASN:HD22	1.75	0.85
1:CA:979:C:C3'	1:CA:980:C:H5''	2.05	0.85
20:CT:45:GLN:NE2	20:CT:46:GLU:HG3	1.92	0.85
32:D6:36:LEU:HD12	32:D6:50:ARG:CZ	2.07	0.85
36:DA:2101:G:C2'	36:DA:2102:U:H5''	2.06	0.85
36:DA:64:A:H5'	56:DX:64:LYS:HD3	1.57	0.85
48:DP:30:THR:HG22	48:DP:31:ALA:N	1.89	0.85
15:AO:87:ILE:HG22	15:AO:88:ARG:H	1.41	0.85
32:B6:28:ARG:HA	32:B6:32:ASN:ND2	1.91	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:657:U:H2'	36:BA:658:C:C6	2.12	0.85
2:CB:185:ILE:HG22	2:CB:199:TYR:HB2	1.59	0.85
1:CA:1367:C:H5'	10:CJ:60:ARG:NH1	1.91	0.85
36:DA:654(H):G:H2'	36:DA:654(I):C:H5'	1.59	0.85
25:AZ:145:GLU:HG2	25:AZ:149:LEU:HB2	1.57	0.85
25:CZ:193:ASN:HB2	25:CZ:196:VAL:HG12	1.56	0.85
29:D3:29:ARG:HH11	29:D3:29:ARG:HB2	1.42	0.85
36:DA:330:A:H2	36:DA:1210:A:H2'	1.40	0.85
36:DA:997:G:OP1	53:DU:93:LYS:HD3	1.77	0.85
38:BC:79:LYS:HD3	38:BC:119:VAL:HB	1.59	0.85
36:BA:244:A:H4'	48:BP:74:GLU:HG3	1.57	0.85
25:CZ:198:LYS:HE3	25:CZ:198:LYS:HA	1.57	0.85
41:DF:25:PRO:CB	41:DF:119:ARG:HB2	2.07	0.85
1:AA:1152:A:H5''	10:AJ:13:HIS:CD2	2.12	0.85
28:B2:28:LYS:NZ	28:B2:31:GLU:HG3	1.90	0.85
32:B6:15:GLU:HB2	32:B6:20:ASN:HB3	1.57	0.85
36:BA:1190:G:H5'	48:BP:35:HIS:H	1.41	0.85
57:BY:13:VAL:HG21	57:BY:72:VAL:HB	1.58	0.85
4:CD:138:TYR:HD1	4:CD:139:ARG:N	1.73	0.85
25:CZ:323:LEU:HD13	25:CZ:396:GLY:HA2	1.57	0.85
36:DA:1047:G:H2'	36:DA:1110:G:H21	1.42	0.85
43:DH:103:LEU:HB2	43:DH:123:PHE:HD2	1.40	0.85
20:AT:45:GLN:NE2	20:AT:46:GLU:HG3	1.92	0.84
39:BD:35:LYS:HG3	39:BD:63:ARG:HG2	1.59	0.84
51:DS:13:ARG:HG3	51:DS:14:VAL:H	1.42	0.84
52:DT:28:VAL:HG13	52:DT:46:GLU:HA	1.57	0.84
31:B5:33:CYS:HB3	31:B5:36:CYS:O	1.77	0.84
36:BA:1067:A:H3'	36:BA:1068:G:H5''	1.58	0.84
40:BE:61:ARG:HB3	40:BE:62:PRO:HD3	1.59	0.84
31:D5:49:CYS:O	31:D5:56:LYS:HG3	1.77	0.84
38:DC:79:LYS:HD3	38:DC:119:VAL:HB	1.60	0.84
25:AZ:323:LEU:HD13	25:AZ:396:GLY:HA2	1.57	0.84
36:BA:1049:C:H2'	36:BA:1050:A:H8	1.40	0.84
40:BE:111:ARG:HG3	40:BE:160:TYR:CD2	2.12	0.84
2:CB:80:ILE:H	2:CB:80:ILE:HD12	1.41	0.84
10:CJ:55:LYS:HZ2	10:CJ:55:LYS:CB	1.90	0.84
25:AZ:277:LEU:HD13	25:AZ:278:GLN:N	1.91	0.84
36:BA:2092:U:C4'	36:BA:2093:G:H5''	2.07	0.84
36:BA:2131:G:H1'	36:BA:2133:G:N2	1.92	0.84
42:BG:47:LYS:NZ	42:BG:88:ILE:HD11	1.92	0.84
43:BH:98:LEU:HB2	43:BH:125:VAL:HG21	1.60	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:D5:4:HIS:CB	31:D5:5:PRO:HD3	2.08	0.84
32:D6:28:ARG:HA	32:D6:32:ASN:ND2	1.93	0.84
56:DX:27:THR:CG2	56:DX:80:ILE:HB	2.07	0.84
1:AA:1086:U:H2'	1:AA:1087:G:H5'	1.57	0.84
36:BA:1539:G:C2	36:BA:1540:U:H1'	2.13	0.84
37:BB:48:A:H4'	51:BS:95:HIS:CD2	2.12	0.84
39:BD:26:LYS:O	39:BD:27:THR:HG22	1.76	0.84
1:CA:1363(A):A:H4'	1:CA:1364:U:H5''	1.59	0.84
46:DN:51:PHE:CZ	46:DN:119:ARG:HD2	2.13	0.84
58:DZ:73:GLN:NE2	58:DZ:75:ASN:HD21	1.75	0.84
1:AA:1417:G:C5'	1:AA:1417:G:H8	1.88	0.84
26:B0:49:LYS:HG3	26:B0:80:HIS:ND1	1.93	0.84
40:BE:38:THR:HB	40:BE:41:LYS:HG2	1.57	0.84
43:BH:103:LEU:HB2	43:BH:123:PHE:HD2	1.40	0.84
36:DA:1067:A:H3'	36:DA:1068:G:H5''	1.58	0.84
42:DG:16:ARG:HH22	42:DG:28:VAL:HG13	1.43	0.84
36:BA:1887:C:C2'	36:BA:1888:G:H5''	2.07	0.84
42:BG:119:GLY:HA3	42:BG:181:ARG:HB3	1.57	0.84
1:CA:1442(B):A:H5'	52:DT:118:ARG:NH1	1.92	0.84
2:CB:172:ILE:H	2:CB:172:ILE:HD12	1.41	0.84
13:CM:65:LYS:HD3	13:CM:65:LYS:H	1.42	0.84
28:D2:17:SER:OG	28:D2:20:GLU:HG2	1.78	0.84
36:DA:2131:G:H1'	36:DA:2133:G:N2	1.93	0.84
36:DA:2245:U:H5'	36:DA:2246:G:H5'	1.60	0.84
36:DA:2572:A:C8	40:DE:144:ARG:HG2	2.11	0.84
36:DA:2656:U:H3	36:DA:2665:A:H2	1.24	0.84
40:DE:111:ARG:HG3	40:DE:160:TYR:CD2	2.13	0.84
42:DG:73:ALA:H	42:DG:87:PRO:HG2	1.43	0.84
52:DT:56:GLY:O	52:DT:59:THR:HG23	1.78	0.84
52:DT:90:GLN:O	52:DT:92:GLY:N	2.10	0.84
29:B3:29:ARG:HB2	29:B3:29:ARG:HH11	1.43	0.84
31:B5:41:PRO:HG2	31:B5:44:THR:OG1	1.77	0.84
36:BA:2159:G:H2'	36:BA:2160:G:H5''	1.58	0.84
40:BE:36:ARG:NH2	40:BE:88:GLY:HA2	1.92	0.84
58:BZ:33:LEU:O	58:BZ:34:ASN:HB3	1.78	0.84
38:DC:123:VAL:HG22	38:DC:127:LEU:HD23	1.59	0.84
41:DF:24:LEU:HB3	41:DF:25:PRO:CD	2.08	0.84
52:DT:50:ILE:HD11	52:DT:102:ILE:HD11	1.58	0.84
1:AA:1416:G:C2'	1:AA:1417:G:H5''	2.08	0.84
36:BA:1403:C:H5''	36:BA:1471:A:H1'	1.56	0.84
36:BA:1434:A:H61	36:BA:1558:A:H62	1.26	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BR:38:VAL:HB	50:BR:39:PRO:HD3	1.59	0.84
52:BT:39:ARG:HD2	52:BT:39:ARG:H	1.43	0.84
26:D0:49:LYS:HG3	26:D0:80:HIS:ND1	1.93	0.84
1:AA:573:A:H8	1:AA:573:A:H5'	1.43	0.83
28:B2:41:ILE:HG13	28:B2:42:GLY:H	1.42	0.83
36:BA:1378:A:O2'	36:BA:1379:A:H5'	1.77	0.83
36:BA:1899:G:H22	36:BA:1902:C:H41	0.84	0.83
48:BP:24:GLY:HA3	48:BP:33:ARG:NH1	1.92	0.83
48:BP:23:PRO:O	48:BP:33:ARG:HD2	1.78	0.83
52:BT:28:VAL:HG13	52:BT:46:GLU:HA	1.59	0.83
1:CA:573:A:H8	1:CA:573:A:H5'	1.43	0.83
1:CA:979:C:H3'	1:CA:980:C:H5''	1.58	0.83
32:D6:10:LEU:H	32:D6:10:LEU:CD2	1.91	0.83
36:DA:1539:G:C2	36:DA:1540:U:H1'	2.12	0.83
36:DA:1826:G:H4'	39:DD:242:ARG:HH21	1.42	0.83
40:DE:38:THR:HB	40:DE:41:LYS:HG2	1.58	0.83
10:AJ:55:LYS:HZ2	10:AJ:55:LYS:CB	1.90	0.83
36:BA:2131:G:N3	36:BA:2133:G:N2	2.25	0.83
5:CE:31:LEU:HD22	5:CE:43:LEU:HD11	1.60	0.83
16:CP:74:LEU:O	16:CP:79:VAL:HG23	1.78	0.83
40:DE:116:VAL:HG21	40:DE:122:PHE:CD2	2.13	0.83
3:AC:8:ILE:HG23	3:AC:16:ARG:HG2	1.59	0.83
31:B5:4:HIS:CB	31:B5:5:PRO:HD3	2.09	0.83
36:BA:2645:G:H3'	36:BA:2646:C:C5'	2.07	0.83
38:BC:27:ARG:HD3	38:BC:182:PRO:HG2	1.56	0.83
41:BF:110:LEU:HD12	41:BF:206:ILE:HD11	1.60	0.83
43:BH:44:VAL:HG12	43:BH:45:VAL:H	1.43	0.83
57:BY:96:ILE:HG12	57:BY:99:CYS:HB2	1.60	0.83
58:DZ:123:ASP:O	58:DZ:124:ILE:HG23	1.79	0.83
1:AA:1152:A:O2'	1:AA:1153:C:H5'	1.78	0.83
32:B6:10:LEU:CD2	32:B6:10:LEU:H	1.91	0.83
36:BA:2656:U:H3	36:BA:2665:A:H2	1.26	0.83
42:BG:47:LYS:HZ2	42:BG:82:LEU:HD12	1.40	0.83
56:BX:35:THR:HG22	56:BX:37:THR:H	1.43	0.83
1:CA:1533:C:C3'	1:CA:1534:A:H5''	2.08	0.83
10:CJ:38:ILE:HG13	10:CJ:71:LEU:HB3	1.58	0.83
38:DC:100:ILE:HG23	38:DC:127:LEU:HD13	1.60	0.83
56:DX:35:THR:HG22	56:DX:37:THR:H	1.42	0.83
27:B1:61:ARG:HG2	27:B1:61:ARG:HH11	1.44	0.83
41:BF:24:LEU:HB3	41:BF:25:PRO:CD	2.09	0.83
53:BU:92:ARG:O	53:BU:94:ASN:N	2.11	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:95:LYS:HG3	57:BY:100:ALA:HA	1.59	0.83
40:DE:36:ARG:NH2	40:DE:88:GLY:HA2	1.92	0.83
42:DG:38:VAL:HG23	42:DG:158:ALA:HB3	1.60	0.83
58:DZ:10:ARG:HE	58:DZ:36:LYS:HD3	1.43	0.83
1:AA:1320:C:H5'	1:AA:1320:C:H6	1.39	0.83
36:BA:1053:C:H2'	36:BA:1054:A:H8	1.44	0.83
40:BE:50:GLY:HA2	40:BE:78:LEU:HB3	1.58	0.83
4:CD:3:ARG:NH1	4:CD:118:ARG:HD3	1.93	0.83
6:CF:11:ASN:HB3	6:CF:14:LEU:HG	1.60	0.83
6:AF:11:ASN:HB3	6:AF:14:LEU:HG	1.58	0.83
36:BA:1884:A:C2'	36:BA:1885:A:H5''	2.09	0.83
1:CA:942:G:H21	9:CI:124:GLN:NE2	1.76	0.83
28:D2:51:ARG:HD3	28:D2:55:ARG:HH12	1.42	0.83
36:DA:2762:G:H8	36:DA:2762:G:H5'	1.43	0.83
46:DN:23:LEU:HB3	46:DN:60:ILE:HG21	1.60	0.83
58:DZ:152:ALA:HB2	58:DZ:168:GLU:HA	1.58	0.83
10:AJ:38:ILE:HG13	10:AJ:71:LEU:HB3	1.59	0.83
30:B4:12:ALA:CB	30:B4:29:PRO:HA	2.09	0.83
31:B5:49:CYS:O	31:B5:56:LYS:HG3	1.78	0.83
1:CA:1152:A:O2'	1:CA:1153:C:H5'	1.77	0.83
25:CZ:145:GLU:HG2	25:CZ:149:LEU:HB2	1.59	0.83
36:DA:1019:U:HO2'	36:DA:1021:A:H2	0.84	0.83
36:DA:761:A:H8	36:DA:761:A:O5'	1.61	0.83
57:DY:97:ARG:HH21	57:DY:98:VAL:HB	1.43	0.83
7:AG:45:ASP:O	7:AG:49:ILE:HG12	1.78	0.83
19:AS:78:ARG:HB2	19:AS:81:ARG:HH11	1.44	0.83
28:B2:47:ASN:HA	28:B2:50:ILE:CB	2.08	0.83
36:BA:2875:C:H4'	52:BT:5:ALA:HB2	1.60	0.83
5:CE:10:MET:SD	5:CE:13:ILE:HD11	2.18	0.83
29:D3:35:ARG:NH1	29:D3:35:ARG:HB2	1.94	0.83
36:DA:2645:G:H3'	36:DA:2646:C:C5'	2.07	0.83
28:B2:18:PRO:CB	28:B2:72:ALA:HA	2.07	0.83
49:BQ:56:ARG:HG3	49:BQ:56:ARG:HH11	1.44	0.83
52:BT:90:GLN:O	52:BT:92:GLY:N	2.11	0.83
36:DA:1087:G:H8	36:DA:1088:A:H4'	1.44	0.83
36:DA:89:G:OP2	36:DA:90:U:H2'	1.79	0.83
2:AB:229:VAL:HG12	2:AB:230:VAL:H	1.44	0.82
14:AN:12:ARG:NH1	14:AN:14:PRO:HG2	1.94	0.82
32:B6:44:ARG:O	32:B6:45:LYS:HE3	1.78	0.82
36:BA:321:G:N2	41:BF:165:ARG:HE	1.76	0.82
39:DD:32:SER:O	39:DD:36:PRO:HG3	1.79	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DH:98:LEU:HB2	43:DH:125:VAL:HG21	1.60	0.82
46:DN:30:ILE:O	46:DN:34:LEU:HB2	1.79	0.82
49:DQ:141:GLN:HE21	58:DZ:72:ARG:HA	1.44	0.82
1:AA:1128:C:O2'	1:AA:1129:C:H5''	1.78	0.82
4:AD:18:LYS:H	4:AD:33:MET:HE2	1.42	0.82
4:AD:34:GLU:O	4:AD:35:ARG:HB2	1.78	0.82
46:BN:133:GLN:HG2	46:BN:135:PRO:HD3	1.61	0.82
57:BY:50:ARG:HD2	57:BY:53:PRO:HA	1.60	0.82
36:BA:2101:G:C2'	36:BA:2102:U:H5''	2.08	0.82
36:BA:89:G:OP2	36:BA:90:U:H2'	1.79	0.82
58:BZ:72:ARG:HG3	58:BZ:89:PHE:HB2	1.61	0.82
7:CG:45:ASP:O	7:CG:49:ILE:HG12	1.79	0.82
34:D8:8:LYS:HA	34:D8:11:LYS:HD3	1.59	0.82
43:DH:137:ASP:O	43:DH:138:LYS:HB2	1.78	0.82
58:DZ:73:GLN:HE21	58:DZ:75:ASN:ND2	1.76	0.82
5:AE:31:LEU:HD22	5:AE:43:LEU:HD11	1.59	0.82
12:AL:33:ARG:HD3	12:AL:62:SER:OG	1.78	0.82
20:AT:50:GLU:HG3	20:AT:100:ILE:HD13	1.60	0.82
25:AZ:271:GLU:HG2	25:AZ:276:THR:HA	1.62	0.82
47:BO:111:PHE:HB3	47:BO:114:ILE:HD13	1.60	0.82
1:CA:1128:C:O2'	1:CA:1129:C:H5''	1.80	0.82
36:DA:1207:C:H2'	36:DA:1208:C:H6	1.44	0.82
36:DA:2305:A:H3'	36:DA:2306:C:H5''	1.61	0.82
51:DS:99:LYS:HB3	51:DS:99:LYS:NZ	1.94	0.82
57:DY:28:LYS:O	57:DY:38:ILE:HG22	1.79	0.82
1:AA:1363(A):A:H4'	1:AA:1364:U:H5''	1.61	0.82
1:AA:1442(B):A:H3'	1:AA:1442(B):A:OP1	1.78	0.82
20:AT:16:HIS:O	20:AT:19:SER:HB3	1.79	0.82
25:AZ:241:ARG:NH1	25:AZ:241:ARG:HB3	1.93	0.82
46:BN:23:LEU:HB3	46:BN:60:ILE:HG21	1.62	0.82
57:BY:97:ARG:HH21	57:BY:98:VAL:HB	1.43	0.82
36:DA:1516:C:H2'	36:DA:1517:G:H5''	1.58	0.82
36:DA:2131:G:N3	36:DA:2133:G:N2	2.27	0.82
2:AB:178:ARG:NH1	8:AH:71:GLY:O	2.12	0.82
38:BC:123:VAL:HG22	38:BC:127:LEU:HD23	1.59	0.82
1:CA:1152:A:H5''	10:CJ:13:HIS:CD2	2.14	0.82
32:D6:44:ARG:O	32:D6:45:LYS:HE3	1.78	0.82
36:DA:1058:G:H2'	36:DA:1059:G:H5''	1.61	0.82
36:DA:621:A:H2'	36:DA:622:G:H5'	1.62	0.82
50:DR:38:VAL:HB	50:DR:39:PRO:HD3	1.60	0.82
2:AB:200:ILE:HD12	2:AB:200:ILE:H	1.44	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:80:ILE:HD12	2:AB:80:ILE:H	1.42	0.82
36:BA:612:C:C2'	36:BA:613:G:H5''	2.09	0.82
36:BA:997:G:OP1	53:BU:93:LYS:HD3	1.79	0.82
51:BS:13:ARG:HG3	51:BS:14:VAL:H	1.44	0.82
41:DF:192:LEU:HD21	41:DF:194:MET:HG3	1.60	0.82
55:DW:26:GLY:H	55:DW:71:VAL:HG23	1.44	0.82
1:AA:547:A:H4'	1:AA:548:G:O5'	1.80	0.82
2:AB:172:ILE:HD12	2:AB:172:ILE:H	1.44	0.82
36:BA:2464:C:HO2'	36:BA:2465:C:H6	1.27	0.82
36:BA:2511:U:H4'	40:BE:124:GLY:HA2	1.62	0.82
58:BZ:96:VAL:HG22	58:BZ:97:GLU:N	1.94	0.82
20:CT:50:GLU:HG3	20:CT:100:ILE:HD13	1.59	0.82
25:CZ:271:GLU:HG2	25:CZ:276:THR:HA	1.62	0.82
48:DP:125:VAL:O	48:DP:145:PRO:HD2	1.79	0.82
58:DZ:149:SER:HB3	58:DZ:173:ALA:HA	1.61	0.82
1:AA:1367:C:H5'	10:AJ:60:ARG:NH1	1.93	0.82
1:AA:538:G:H2'	1:AA:539:A:H8	1.44	0.82
15:AO:17:ARG:HH11	15:AO:17:ARG:HG3	1.43	0.82
36:BA:1207:C:H2'	36:BA:1208:C:H6	1.44	0.82
56:BX:27:THR:CG2	56:BX:80:ILE:HB	2.09	0.82
36:DA:1378:A:O2'	36:DA:1379:A:H5'	1.80	0.82
36:DA:612:C:C2'	36:DA:613:G:H5''	2.08	0.82
46:DN:133:GLN:HG2	46:DN:135:PRO:HD3	1.62	0.82
48:DP:64:LYS:O	48:DP:66:GLY:N	2.13	0.82
1:AA:80:G:N2	1:AA:90:U:H5'	1.93	0.82
18:AR:31:LEU:H	18:AR:31:LEU:HD23	1.45	0.82
34:B8:61:LEU:CD2	34:B8:62:LEU:HG	2.10	0.82
36:BA:1697:G:H3'	36:BA:1698:A:H5''	1.60	0.82
36:BA:621:A:H2'	36:BA:622:G:H5'	1.62	0.82
43:BH:66:GLY:HA2	43:BH:69:ARG:HB3	1.61	0.82
4:CD:150:GLU:CD	4:CD:151:LYS:H	1.82	0.82
36:DA:1899:G:H22	36:DA:1902:C:H41	0.83	0.82
43:DH:44:VAL:HG12	43:DH:45:VAL:H	1.44	0.82
57:DY:8:LYS:HD2	57:DY:8:LYS:N	1.95	0.82
58:DZ:103:ARG:HD3	58:DZ:138:GLU:HG3	1.62	0.82
28:B2:4:SER:HA	28:B2:7:ARG:HD3	1.61	0.81
38:BC:100:ILE:HG23	38:BC:127:LEU:HD13	1.60	0.81
54:BV:62:LEU:HD21	54:BV:95:LEU:HB2	1.62	0.81
5:CE:76:ILE:HD11	5:CE:142:LEU:CD2	2.09	0.81
32:D6:15:GLU:HG2	32:D6:18:ARG:NH1	1.94	0.81
36:DA:2392:A:H2	36:DA:2424:C:H42	1.24	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:272(H):C:C2'	36:DA:272(I):U:H5''	2.10	0.81
36:DA:614(A):U:H4'	36:DA:614(B):G:H5''	1.62	0.81
36:DA:2511:U:H4'	40:DE:124:GLY:HA2	1.62	0.81
57:DY:17:SER:HB2	57:DY:71:LYS:HE2	1.61	0.81
4:AD:150:GLU:CD	4:AD:151:LYS:H	1.82	0.81
50:BR:24:GLN:NE2	50:BR:36:THR:HG21	1.95	0.81
1:CA:939:G:H5''	7:CG:102:ARG:HH12	1.45	0.81
25:CZ:20:VAL:O	25:CZ:21:ASP:HB2	1.80	0.81
36:DA:2138:C:H2'	36:DA:2139:C:C6	2.15	0.81
36:DA:2645:G:C3'	36:DA:2646:C:H5'	2.09	0.81
43:DH:156:ALA:HB3	43:DH:159:GLU:HB3	1.62	0.81
1:AA:538:G:H2'	1:AA:539:A:C8	2.15	0.81
2:AB:25:ASN:C	2:AB:25:ASN:HD22	1.83	0.81
13:AM:11:ARG:HG2	13:AM:12:ASN:ND2	1.95	0.81
28:B2:28:LYS:HZ3	28:B2:31:GLU:HG3	1.44	0.81
34:B8:8:LYS:HA	34:B8:11:LYS:HD3	1.61	0.81
36:BA:1058:G:H2'	36:BA:1059:G:H5''	1.62	0.81
36:BA:272(H):C:C2'	36:BA:272(I):U:H5''	2.10	0.81
36:BA:654(H):G:H2'	36:BA:654(I):C:H5'	1.60	0.81
41:BF:192:LEU:HD21	41:BF:194:MET:HG3	1.62	0.81
43:BH:158:HIS:ND1	43:BH:168:PRO:HB2	1.95	0.81
43:BH:156:ALA:HB3	43:BH:159:GLU:HB3	1.62	0.81
9:CI:52:ALA:HB3	9:CI:95:LYS:HZ2	1.44	0.81
15:CO:87:ILE:HG22	15:CO:88:ARG:H	1.44	0.81
22:CW:71:G:C2'	22:CW:72:C:H5'	2.11	0.81
36:DA:1053:C:H2'	36:DA:1054:A:H8	1.44	0.81
36:DA:2784:C:H1'	40:DE:37:ARG:HH12	1.43	0.81
38:DC:123:VAL:HG21	38:DC:127:LEU:HD23	1.61	0.81
28:B2:47:ASN:HB2	36:BA:94(A):G:O2'	1.80	0.81
1:CA:1203:C:OP1	14:CN:3:ARG:HD3	1.80	0.81
3:CC:113:ALA:HB3	3:CC:114:PRO:HD3	1.63	0.81
4:CD:163:GLU:O	4:CD:166:LYS:HG2	1.81	0.81
4:CD:34:GLU:O	4:CD:35:ARG:HB2	1.79	0.81
36:BA:2138:C:H2'	36:BA:2139:C:C6	2.15	0.81
40:BE:36:ARG:HH21	40:BE:88:GLY:HA2	1.45	0.81
48:BP:125:VAL:O	48:BP:145:PRO:HD2	1.80	0.81
57:BY:8:LYS:HD2	57:BY:8:LYS:N	1.95	0.81
57:DY:50:ARG:HD2	57:DY:53:PRO:HA	1.61	0.81
5:AE:76:ILE:HD11	5:AE:142:LEU:CD2	2.10	0.81
14:AN:26:ARG:HH11	14:AN:47:LEU:HD21	1.45	0.81
36:BA:1948:G:C8	36:BA:1948:G:H5'	2.16	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2287:A:H2	36:BA:2346:A:N1	1.79	0.81
1:CA:538:G:H2'	1:CA:539:A:H8	1.46	0.81
9:CI:52:ALA:HB1	9:CI:95:LYS:HD2	1.62	0.81
12:CL:33:ARG:HD3	12:CL:62:SER:OG	1.81	0.81
1:AA:1533:C:H3'	1:AA:1534:A:H5''	1.61	0.81
1:AA:353:A:H5'	1:AA:353:A:H8	1.44	0.81
1:AA:979:C:H3'	1:AA:980:C:H5''	1.63	0.81
34:B8:11:LYS:HZ1	34:B8:63:PRO:HG3	1.45	0.81
36:BA:1019:U:O2'	36:BA:1021:A:H2	1.63	0.81
36:BA:1047:G:H2'	36:BA:1110:G:H21	1.43	0.81
46:BN:30:ILE:O	46:BN:34:LEU:HB2	1.78	0.81
55:BW:107:LEU:H	55:BW:107:LEU:HD12	1.45	0.81
55:BW:26:GLY:H	55:BW:71:VAL:HG23	1.46	0.81
2:CB:33:TYR:HB2	2:CB:43:ASP:HB2	1.62	0.81
32:D6:18:ARG:NH1	32:D6:18:ARG:HG2	1.93	0.81
36:DA:1019:U:O2'	36:DA:1021:A:H2	1.63	0.81
36:DA:321:G:N2	41:DF:165:ARG:HE	1.78	0.81
49:DQ:56:ARG:HH11	49:DQ:56:ARG:HG3	1.45	0.81
50:DR:24:GLN:NE2	50:DR:36:THR:HG21	1.95	0.81
36:DA:2875:C:H4'	52:DT:5:ALA:HB2	1.61	0.81
55:DW:107:LEU:H	55:DW:107:LEU:HD12	1.46	0.81
1:AA:541:G:H2'	1:AA:542:G:H8	1.44	0.81
22:AW:71:G:C2'	22:AW:72:C:H5'	2.09	0.81
36:BA:2305:A:H3'	36:BA:2306:C:H5''	1.61	0.81
36:BA:761:A:H8	36:BA:761:A:O5'	1.62	0.81
47:BO:35:VAL:HG21	47:BO:103:ALA:HB3	1.62	0.81
56:BX:55:ASN:HB2	56:BX:80:ILE:HG23	1.63	0.81
36:DA:1434:A:H61	36:DA:1558:A:H62	1.27	0.81
36:DA:1543:C:C3'	36:DA:1544:A:H5''	2.10	0.81
36:DA:2524:G:H8	36:DA:2524:G:H5'	1.45	0.81
57:DY:49:VAL:O	57:DY:50:ARG:HB2	1.80	0.81
58:DZ:98:MET:HG2	58:DZ:99:TYR:N	1.94	0.81
27:B1:79:GLY:O	27:B1:80:LEU:HG	1.80	0.81
36:BA:2762:G:H8	36:BA:2762:G:H5'	1.44	0.81
36:BA:64:A:H5'	56:BX:64:LYS:HD3	1.61	0.81
36:BA:896:A:C8	58:BZ:146:ILE:HD12	2.16	0.81
1:CA:80:G:N2	1:CA:90:U:H5'	1.94	0.81
15:CO:17:ARG:HG3	15:CO:17:ARG:HH11	1.45	0.81
36:DA:271(C):C:H2'	36:DA:271(D):G:C8	2.16	0.81
36:DA:34:C:H41	36:DA:447:A:H61	1.29	0.81
48:DP:24:GLY:HA3	48:DP:33:ARG:NH1	1.95	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:DV:36:PRO:O	54:DV:37:VAL:HG13	1.80	0.81
4:AD:3:ARG:NH1	4:AD:118:ARG:HD3	1.95	0.81
9:AI:52:ALA:HB1	9:AI:95:LYS:HD2	1.62	0.81
25:AZ:23:GLY:O	25:AZ:26:THR:HG22	1.81	0.81
26:B0:50:ASN:HD22	26:B0:63:VAL:HG21	1.46	0.81
32:B6:36:LEU:HD12	32:B6:50:ARG:CZ	2.10	0.81
51:BS:99:LYS:HB3	51:BS:99:LYS:NZ	1.93	0.81
55:BW:11:ARG:HG2	55:BW:11:ARG:HH11	1.46	0.81
58:BZ:40:ASP:HB3	58:BZ:43:GLU:HB3	1.61	0.81
1:CA:1003:G:H2'	1:CA:1004:A:C4'	2.10	0.81
36:DA:2185:C:C2'	36:DA:2186:G:H5'	2.10	0.81
43:DH:66:GLY:HA2	43:DH:69:ARG:HB3	1.61	0.81
52:DT:23:ARG:O	52:DT:25:GLY:N	2.14	0.81
1:AA:1003:G:H2'	1:AA:1004:A:C4'	2.10	0.81
20:AT:26:ASN:HB2	20:AT:71:THR:HG23	1.63	0.81
25:AZ:20:VAL:O	25:AZ:21:ASP:HB2	1.79	0.81
31:B5:4:HIS:HB3	31:B5:5:PRO:CD	2.11	0.81
36:BA:1087:G:H8	36:BA:1088:A:H4'	1.44	0.81
41:BF:10:PRO:HD2	41:BF:13:SER:O	1.81	0.81
55:BW:82:LEU:H	55:BW:82:LEU:HD12	1.46	0.81
57:BY:17:SER:HB2	57:BY:71:LYS:HE2	1.62	0.81
2:CB:200:ILE:H	2:CB:200:ILE:HD12	1.46	0.81
39:DD:43:ARG:HB2	39:DD:54:ARG:HB2	1.61	0.81
58:DZ:89:PHE:HE2	58:DZ:96:VAL:HG21	1.46	0.81
3:AC:5:ILE:CD1	3:AC:5:ILE:H	1.94	0.80
16:AP:74:LEU:O	16:AP:79:VAL:HG23	1.80	0.80
22:AW:57:G:C2'	22:AW:58:A:H5'	2.11	0.80
36:BA:2185:C:C2'	36:BA:2186:G:H5'	2.10	0.80
39:BD:183:ARG:HG2	39:BD:183:ARG:HH11	1.45	0.80
36:BA:1826:G:H4'	39:BD:242:ARG:HH21	1.46	0.80
39:BD:32:SER:O	39:BD:36:PRO:HG3	1.81	0.80
20:CT:16:HIS:O	20:CT:19:SER:HB3	1.82	0.80
26:D0:50:ASN:HD22	26:D0:63:VAL:HG21	1.46	0.80
48:DP:64:LYS:C	48:DP:66:GLY:H	1.84	0.80
48:DP:7:ARG:O	48:DP:10:PRO:HD3	1.81	0.80
10:AJ:90:LEU:H	10:AJ:91:PRO:HD3	1.46	0.80
20:AT:23:ARG:O	20:AT:27:LYS:HB2	1.81	0.80
21:AU:6:ARG:HD3	21:AU:15:ARG:NH1	1.95	0.80
34:B8:61:LEU:CD1	34:B8:61:LEU:H	1.94	0.80
36:BA:2668:G:O2'	36:BA:2669:G:H5'	1.79	0.80
48:BP:7:ARG:O	48:BP:10:PRO:HD3	1.81	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:64:LYS:O	48:BP:66:GLY:N	2.13	0.80
2:CB:229:VAL:HG12	2:CB:230:VAL:H	1.46	0.80
16:CP:53:VAL:HG23	16:CP:54:GLU:H	1.46	0.80
25:CZ:241:ARG:NH1	25:CZ:241:ARG:HB3	1.95	0.80
36:DA:1678:G:N2	36:DA:1989:G:H22	1.80	0.80
36:DA:1697:G:H3'	36:DA:1698:A:H5''	1.60	0.80
43:DH:118:PRO:HG2	43:DH:121:ILE:HD12	1.63	0.80
52:DT:39:ARG:H	52:DT:39:ARG:HD2	1.44	0.80
39:BD:43:ARG:HB2	39:BD:54:ARG:HB2	1.63	0.80
1:CA:1157:A:H4'	1:CA:1158:C:O5'	1.80	0.80
46:DN:70:LYS:HG2	46:DN:87:LEU:HD23	1.64	0.80
36:BA:1543:C:C3'	36:BA:1544:A:H5''	2.10	0.80
36:BA:2392:A:H2	36:BA:2424:C:H42	1.27	0.80
36:BA:614(A):U:H4'	36:BA:614(B):G:H5''	1.61	0.80
48:BP:64:LYS:C	48:BP:66:GLY:H	1.83	0.80
4:CD:18:LYS:H	4:CD:33:MET:HE2	1.44	0.80
13:CM:11:ARG:HG2	13:CM:12:ASN:ND2	1.95	0.80
36:DA:1884:A:C2'	36:DA:1885:A:H5''	2.10	0.80
36:DA:2668:G:O2'	36:DA:2669:G:H5'	1.82	0.80
39:DD:30:GLU:HG3	39:DD:63:ARG:NE	1.97	0.80
42:DG:86:MET:HG2	42:DG:86:MET:O	1.79	0.80
49:DQ:60:ARG:HB3	49:DQ:60:ARG:NH1	1.96	0.80
36:BA:89:G:H3'	36:BA:90:U:H5'	1.61	0.80
37:BB:8:U:H5'	37:BB:8:U:H6	1.47	0.80
49:BQ:60:ARG:HB3	49:BQ:60:ARG:NH1	1.97	0.80
1:CA:547:A:H4'	1:CA:548:G:O5'	1.80	0.80
36:DA:2801(A):A:C4'	36:DA:2802:G:H5'	2.12	0.80
43:DH:158:HIS:ND1	43:DH:168:PRO:HB2	1.96	0.80
44:DJ:42:UNK:C	44:DJ:44:UNK:H	1.92	0.80
56:DX:35:THR:HG22	56:DX:38:GLU:H	1.45	0.80
56:DX:40:LYS:HB2	56:DX:54:VAL:HG21	1.61	0.80
42:BG:44:GLY:N	42:BG:88:ILE:HG21	1.96	0.80
36:BA:1227:G:OP1	53:BU:13:LYS:HD2	1.82	0.80
57:BY:49:VAL:O	57:BY:50:ARG:HB2	1.80	0.80
27:D1:69:LYS:HZ1	27:D1:76:ARG:HH22	1.27	0.80
47:DO:35:VAL:HG21	47:DO:103:ALA:HB3	1.61	0.80
36:DA:958:U:H5''	49:DQ:14:ARG:HD2	1.63	0.80
4:AD:163:GLU:O	4:AD:166:LYS:HG2	1.82	0.80
36:BA:2298:A:H62	36:BA:2318:G:H8	1.30	0.80
56:BX:12:VAL:HG23	56:BX:13:LEU:N	1.94	0.80
1:CA:1318:A:H4'	19:CS:10:PHE:CE2	2.16	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:CY:4:G:C2'	24:CY:5:G:H5''	2.12	0.80
25:CZ:34:VAL:HG21	25:CZ:199:ILE:HG21	1.64	0.80
27:D1:86:SER:O	27:D1:90:ILE:HG12	1.80	0.80
30:D4:12:ALA:CB	30:D4:29:PRO:HA	2.10	0.80
34:D8:61:LEU:CD2	34:D8:62:LEU:HG	2.10	0.80
34:D8:11:LYS:HZ1	34:D8:63:PRO:HG3	1.45	0.80
46:DN:9:VAL:HG12	46:DN:10:GLU:N	1.96	0.80
50:DR:24:GLN:HE22	50:DR:36:THR:HG21	1.47	0.80
52:DT:55:ASN:H	52:DT:59:THR:CG2	1.94	0.80
24:AY:4:G:C2'	24:AY:5:G:H5''	2.12	0.80
26:B0:49:LYS:HG3	26:B0:80:HIS:HD1	1.47	0.80
31:B5:2:ALA:HA	36:BA:2015:A:H1'	1.64	0.80
36:DA:2092:U:C4'	36:DA:2093:G:H5''	2.10	0.80
42:DG:51:ARG:HD3	42:DG:53:LEU:HD21	1.64	0.80
47:DO:104:ARG:HE	52:DT:33:LYS:NZ	1.80	0.80
2:CB:25:ASN:HD22	2:CB:25:ASN:C	1.83	0.80
5:CE:12:LEU:HD13	5:CE:31:LEU:HB2	1.63	0.80
36:DA:2099:U:H2'	36:DA:2100:G:C8	2.17	0.80
36:DA:89:G:H3'	36:DA:90:U:H5'	1.62	0.80
49:DQ:141:GLN:NE2	58:DZ:72:ARG:HA	1.97	0.80
1:AA:939:G:H5''	7:AG:102:ARG:HH12	1.46	0.80
7:AG:145:ALA:O	7:AG:147:ALA:N	2.15	0.80
36:BA:2784:C:H1'	40:BE:37:ARG:HH12	1.45	0.80
42:BG:115:ARG:HG2	42:BG:115:ARG:HH11	1.47	0.80
53:DU:59:ARG:HH11	53:DU:59:ARG:HG2	1.47	0.80
55:DW:82:LEU:HD12	55:DW:82:LEU:H	1.47	0.80
38:BC:123:VAL:HG23	38:BC:127:LEU:HD22	1.61	0.79
40:BE:34:VAL:HG11	40:BE:78:LEU:CD2	2.12	0.79
51:BS:52:SER:HB3	51:BS:55:ALA:HB3	1.63	0.79
47:BO:104:ARG:HE	52:BT:33:LYS:NZ	1.78	0.79
53:BU:59:ARG:HH11	53:BU:59:ARG:HG2	1.47	0.79
57:BY:28:LYS:O	57:BY:38:ILE:HG22	1.80	0.79
13:CM:4:ILE:HG22	13:CM:5:ALA:H	1.46	0.79
18:CR:31:LEU:HD23	18:CR:31:LEU:H	1.45	0.79
37:DB:80:U:H2'	37:DB:81:G:H21	1.47	0.79
36:DA:910:A:H62	49:DQ:12:GLN:HA	1.47	0.79
57:DY:26:LYS:HG2	57:DY:27:VAL:H	1.45	0.79
9:AI:52:ALA:HB3	9:AI:95:LYS:NZ	1.97	0.79
29:B3:17:LYS:HG2	36:BA:969:U:OP1	1.82	0.79
43:BH:94:TYR:HD1	43:BH:107:VAL:HA	1.46	0.79
56:BX:35:THR:HG22	56:BX:38:GLU:H	1.46	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:26:LYS:HG2	57:BY:27:VAL:H	1.44	0.79
1:CA:1321:C:H3'	1:CA:1322:C:H5''	1.63	0.79
1:CA:353:A:H5'	1:CA:353:A:H8	1.45	0.79
1:CA:538:G:H2'	1:CA:539:A:C8	2.17	0.79
4:CD:189:PRO:HB2	4:CD:194:LEU:CD2	2.12	0.79
9:CI:20:ARG:NH1	9:CI:20:ARG:HB2	1.96	0.79
10:CJ:24:VAL:HG12	10:CJ:28:ARG:HD2	1.64	0.79
10:CJ:50:ILE:N	10:CJ:50:ILE:HD13	1.97	0.79
13:CM:4:ILE:HG22	13:CM:5:ALA:N	1.98	0.79
36:DA:1948:G:H5'	36:DA:1948:G:C8	2.17	0.79
36:DA:2287:A:H2	36:DA:2346:A:N1	1.80	0.79
49:DQ:141:GLN:HB3	58:DZ:99:TYR:CE1	2.18	0.79
36:BA:2524:G:H8	36:BA:2524:G:H5'	1.47	0.79
1:CA:706:A:O4'	11:CK:29:ILE:HD11	1.82	0.79
39:DD:147:LEU:HD11	39:DD:183:ARG:NH1	1.97	0.79
46:DN:22:THR:HG22	46:DN:61:ARG:HB2	1.63	0.79
49:DQ:134:ARG:HD2	58:DZ:122:ARG:NH2	1.97	0.79
29:B3:35:ARG:NH1	29:B3:35:ARG:HB2	1.96	0.79
32:B6:15:GLU:CG	32:B6:47:THR:HG21	2.13	0.79
36:BA:2801(A):A:C4'	36:BA:2802:G:H5'	2.12	0.79
48:BP:39:LYS:HD2	48:BP:40:SER:H	1.48	0.79
9:CI:52:ALA:HB3	9:CI:95:LYS:NZ	1.98	0.79
24:CY:16:H2U:H5'	24:CY:17:H2U:H5'	1.64	0.79
36:DA:302:C:H2'	36:DA:303:U:C6	2.18	0.79
42:DG:131:TYR:HB3	42:DG:159:VAL:CG1	2.12	0.79
1:AA:1285:A:H4'	1:AA:1286:A:O5'	1.81	0.79
1:AA:1321:C:H3'	1:AA:1322:C:H5''	1.64	0.79
19:AS:43:GLU:O	19:AS:45:VAL:N	2.16	0.79
22:AW:18:G:H1	22:AW:55:U:H1'	1.48	0.79
28:B2:62:THR:HG22	28:B2:66:GLU:HB3	1.63	0.79
36:BA:271(C):C:H2'	36:BA:271(D):G:C8	2.17	0.79
48:BP:30:THR:CG2	48:BP:31:ALA:H	1.95	0.79
22:CW:57:G:C2'	22:CW:58:A:H5'	2.11	0.79
32:D6:14:THR:O	32:D6:49:HIS:HA	1.82	0.79
34:D8:61:LEU:CD1	34:D8:61:LEU:H	1.94	0.79
37:DB:8:U:H5'	37:DB:8:U:H6	1.46	0.79
48:DP:105:LEU:H	48:DP:105:LEU:HD12	1.47	0.79
57:DY:95:LYS:HG3	57:DY:100:ALA:HA	1.62	0.79
1:AA:1157:A:H4'	1:AA:1158:C:O5'	1.82	0.79
32:B6:14:THR:O	32:B6:49:HIS:HA	1.83	0.79
36:BA:654(A):G:H2'	36:BA:654(B):C:H5'	1.64	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:30:GLU:HG3	39:BD:63:ARG:NE	1.97	0.79
43:BH:137:ASP:O	43:BH:138:LYS:HB2	1.80	0.79
54:BV:51:VAL:HG12	54:BV:52:VAL:H	1.47	0.79
56:BX:12:VAL:CG2	56:BX:13:LEU:H	1.92	0.79
13:AM:119:GLY:O	13:AM:120:LYS:HB2	1.83	0.79
36:BA:733:G:N7	36:BA:761:A:C6	2.50	0.79
42:BG:28:VAL:O	42:BG:31:VAL:HG12	1.81	0.79
42:BG:51:ARG:NE	42:BG:51:ARG:HA	1.98	0.79
14:CN:26:ARG:HH11	14:CN:47:LEU:HD21	1.47	0.79
40:DE:36:ARG:HH21	40:DE:88:GLY:HA2	1.45	0.79
12:AL:18:VAL:HG23	12:AL:19:ARG:N	1.95	0.79
39:BD:76:PRO:HG2	39:BD:98:VAL:HG21	1.64	0.79
43:BH:42:ARG:O	43:BH:43:VAL:HG13	1.83	0.79
52:BT:23:ARG:O	52:BT:25:GLY:N	2.16	0.79
14:CN:12:ARG:NH1	14:CN:14:PRO:HG2	1.98	0.79
20:CT:50:GLU:HB2	20:CT:99:LEU:HD12	1.63	0.79
20:CT:26:ASN:HB2	20:CT:71:THR:HG23	1.63	0.79
41:DF:160:ASN:ND2	41:DF:162:LEU:H	1.81	0.79
48:DP:30:THR:CG2	48:DP:31:ALA:H	1.95	0.79
1:AA:424:G:H2'	1:AA:425:G:H8	1.48	0.79
9:AI:20:ARG:NH1	9:AI:20:ARG:HB2	1.97	0.79
28:B2:38:GLN:OE1	28:B2:44:LEU:HD22	1.82	0.79
36:BA:2245:U:H5'	36:BA:2246:G:H5'	1.64	0.79
39:BD:206:LEU:HD22	39:BD:211:ARG:HG2	1.64	0.79
39:BD:24:ILE:O	39:BD:26:LYS:N	2.13	0.79
42:BG:102:PHE:O	42:BG:103:LEU:HB2	1.83	0.79
43:BH:85:LYS:HZ1	43:BH:86:GLU:HA	1.48	0.79
48:BP:101:VAL:HA	48:BP:105:LEU:O	1.83	0.79
48:BP:30:THR:HG22	48:BP:31:ALA:H	1.47	0.79
51:BS:15:ARG:NH1	51:BS:15:ARG:HB2	1.97	0.79
53:BU:92:ARG:NH2	54:BV:10:LYS:HB3	1.97	0.79
1:CA:176:C:H2'	1:CA:177:C:H6	1.48	0.79
36:DA:2502:G:H5''	36:DA:2503:A:H5''	1.65	0.79
58:DZ:7:ALA:HB3	58:DZ:61:LEU:HD23	1.64	0.79
34:B8:11:LYS:NZ	34:B8:63:PRO:HG3	1.98	0.79
40:BE:107:THR:O	40:BE:190:GLY:HA2	1.83	0.79
40:BE:14:ILE:HD11	40:BE:173:VAL:HG11	1.65	0.79
41:BF:160:ASN:ND2	41:BF:162:LEU:H	1.80	0.79
54:BV:36:PRO:O	54:BV:37:VAL:HG13	1.81	0.79
1:CA:376:G:H4'	16:CP:5:ARG:NH1	1.97	0.79
1:CA:541:G:H2'	1:CA:542:G:H8	1.48	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:605:C:H5	36:DA:623:G:H1	1.31	0.79
41:DF:10:PRO:HD2	41:DF:13:SER:O	1.82	0.79
43:DH:156:ALA:C	43:DH:158:HIS:H	1.86	0.79
3:AC:79:ARG:NH1	3:AC:79:ARG:HB2	1.98	0.78
20:AT:50:GLU:HB2	20:AT:99:LEU:HD12	1.64	0.78
28:B2:18:PRO:HB3	28:B2:71:ASN:O	1.83	0.78
36:BA:2099:U:H2'	36:BA:2100:G:C8	2.18	0.78
36:BA:991:C:H6	36:BA:991:C:H5'	1.48	0.78
42:BG:146:TYR:O	42:BG:149:VAL:HG22	1.83	0.78
56:BX:40:LYS:HB2	56:BX:54:VAL:HG21	1.63	0.78
3:CC:5:ILE:CD1	3:CC:5:ILE:H	1.95	0.78
4:AD:100:ARG:HH21	4:AD:118:ARG:HH12	1.30	0.78
24:AY:16:H2U:H5'	24:AY:17:H2U:H5'	1.64	0.78
25:AZ:34:VAL:HG21	25:AZ:199:ILE:HG21	1.65	0.78
28:B2:46:GLN:HB3	28:B2:48:HIS:HD1	1.47	0.78
36:BA:1567:A:H5'	39:BD:58:HIS:CD2	2.18	0.78
43:BH:118:PRO:HG2	43:BH:121:ILE:HD12	1.65	0.78
51:BS:101:LEU:O	51:BS:101:LEU:HD12	1.84	0.78
1:CA:1285:A:H4'	1:CA:1286:A:O5'	1.82	0.78
10:CJ:90:LEU:H	10:CJ:91:PRO:HD3	1.47	0.78
12:CL:18:VAL:HG23	12:CL:19:ARG:N	1.98	0.78
22:CV:23:A:H5'	22:CV:23:A:C8	2.17	0.78
26:D0:50:ASN:HD22	26:D0:63:VAL:CG2	1.96	0.78
29:D3:43:ILE:O	29:D3:47:VAL:HG23	1.84	0.78
36:DA:2298:A:H62	36:DA:2318:G:H8	1.31	0.78
46:DN:62:VAL:CG2	46:DN:66:LYS:HD2	2.12	0.78
48:DP:101:VAL:HA	48:DP:105:LEU:O	1.83	0.78
51:DS:52:SER:HB3	51:DS:55:ALA:HB3	1.65	0.78
55:DW:22:ASP:HA	55:DW:25:ARG:HH12	1.48	0.78
46:BN:22:THR:HG22	46:BN:61:ARG:HB2	1.65	0.78
46:BN:70:LYS:HG2	46:BN:87:LEU:HD23	1.65	0.78
1:CA:1367:C:C5'	10:CJ:60:ARG:HH11	1.95	0.78
9:CI:95:LYS:HG3	9:CI:96:LEU:HD13	1.64	0.78
36:DA:654(A):G:H2'	36:DA:654(B):C:H5'	1.64	0.78
36:DA:1227:G:OP1	53:DU:13:LYS:HD2	1.83	0.78
56:DX:35:THR:O	56:DX:39:ILE:HG12	1.84	0.78
58:DZ:24:LEU:HD12	58:DZ:41:LEU:HG	1.65	0.78
1:AA:1203:C:OP1	14:AN:3:ARG:HD3	1.83	0.78
19:AS:10:PHE:O	19:AS:10:PHE:CG	2.35	0.78
27:B1:3:LYS:HB2	36:BA:1365:A:OP2	1.82	0.78
36:BA:958:U:H5''	49:BQ:14:ARG:HD2	1.66	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BN:62:VAL:CG2	46:BN:66:LYS:HD2	2.13	0.78
46:BN:9:VAL:HG12	46:BN:10:GLU:N	1.98	0.78
22:CW:18:G:H1	22:CW:55:U:H1'	1.48	0.78
31:D5:2:ALA:HA	36:DA:2015:A:H1'	1.63	0.78
39:DD:76:PRO:HG2	39:DD:98:VAL:CG2	2.13	0.78
1:AA:376:G:H5''	16:AP:5:ARG:HB2	1.65	0.78
15:AO:39:LEU:HD13	15:AO:56:LEU:HB2	1.65	0.78
36:BA:2098:U:H3	36:BA:2191:G:H1	1.31	0.78
37:BB:80:U:H2'	37:BB:81:G:H21	1.48	0.78
7:CG:79:ARG:NE	7:CG:84:ASN:HB2	1.97	0.78
20:CT:23:ARG:O	20:CT:27:LYS:HB2	1.83	0.78
25:CZ:23:GLY:O	25:CZ:26:THR:HG22	1.83	0.78
36:DA:2787:C:H1'	40:DE:61:ARG:HD3	1.65	0.78
48:DP:47:ASP:HB2	48:DP:51:PHE:HB2	1.65	0.78
54:DV:19:LYS:NZ	54:DV:20:LEU:H	1.80	0.78
58:DZ:166:SER:HB2	58:DZ:168:GLU:HG3	1.64	0.78
10:AJ:50:ILE:N	10:AJ:50:ILE:HD13	1.97	0.78
11:AK:27:ASN:HD22	11:AK:28:THR:N	1.82	0.78
13:AM:4:ILE:HG22	13:AM:5:ALA:H	1.48	0.78
26:B0:10:THR:HG22	26:B0:12:ASN:N	1.98	0.78
26:B0:50:ASN:HD22	26:B0:63:VAL:CG2	1.97	0.78
36:BA:2312:U:H4'	42:BG:71:THR:HG21	1.65	0.78
50:BR:24:GLN:HE22	50:BR:36:THR:HG21	1.47	0.78
58:BZ:141:VAL:HA	58:BZ:144:LEU:HD23	1.66	0.78
10:CJ:32:ALA:HB2	10:CJ:76:ASN:HB2	1.65	0.78
13:CM:49:THR:HG22	13:CM:51:ALA:H	1.49	0.78
54:DV:62:LEU:HD21	54:DV:95:LEU:HB2	1.63	0.78
4:AD:19:LEU:O	4:AD:26:CYS:SG	2.42	0.78
25:AZ:222:LEU:HD13	25:AZ:305:ALA:HB2	1.66	0.78
34:B8:32:LEU:CG	34:B8:36:LYS:HZ3	1.94	0.78
34:B8:50:LEU:HD12	34:B8:51:ALA:N	1.99	0.78
34:B8:61:LEU:HD13	34:B8:62:LEU:H	1.49	0.78
48:BP:47:ASP:HB2	48:BP:51:PHE:HB2	1.66	0.78
3:CC:40:ARG:HH11	3:CC:40:ARG:HG3	1.49	0.78
12:CL:7:ILE:HD12	12:CL:8:ASN:N	1.98	0.78
13:CM:53:VAL:HG12	13:CM:57:ARG:HH21	1.48	0.78
19:CS:43:GLU:O	19:CS:45:VAL:N	2.15	0.78
19:CS:78:ARG:HB2	19:CS:81:ARG:HH11	1.48	0.78
26:D0:27:GLU:HB3	26:D0:69:PHE:HD1	1.49	0.78
32:D6:10:LEU:H	32:D6:10:LEU:HD23	1.49	0.78
38:DC:123:VAL:HG23	38:DC:127:LEU:HD22	1.60	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DH:42:ARG:O	43:DH:43:VAL:HG13	1.82	0.78
53:DU:92:ARG:NH2	54:DV:10:LYS:HB3	1.98	0.78
56:DX:55:ASN:HB2	56:DX:80:ILE:HG23	1.64	0.78
58:DZ:18:LEU:HD12	58:DZ:18:LEU:H	1.49	0.78
7:AG:79:ARG:NE	7:AG:84:ASN:HB2	1.99	0.78
36:BA:302:C:H2'	36:BA:303:U:C6	2.19	0.78
36:BA:654(H):G:C2'	36:BA:654(I):C:H5'	2.14	0.78
47:BO:104:ARG:HE	52:BT:33:LYS:HZ2	1.30	0.78
3:CC:79:ARG:HB2	3:CC:79:ARG:NH1	1.98	0.78
34:D8:32:LEU:HG	34:D8:36:LYS:HZ1	1.49	0.78
36:DA:1210:A:H5''	36:DA:1212:G:O4'	1.83	0.78
36:DA:145:G:H2'	36:DA:146:G:H5''	1.64	0.78
27:D1:45:ASN:HD21	36:DA:2090:G:H21	1.32	0.78
36:DA:631:A:H5''	48:DP:65:ARG:HH11	1.49	0.78
36:DA:654(H):G:C2'	36:DA:654(I):C:H5'	2.14	0.78
9:AI:95:LYS:HG3	9:AI:96:LEU:HD13	1.64	0.78
36:BA:2147:G:H2'	36:BA:2148:G:O4'	1.84	0.78
36:BA:2334:G:H21	51:BS:18:ILE:HG23	1.49	0.78
36:BA:2726:U:O2	36:BA:2726:U:H5'	1.84	0.78
36:BA:2787:C:H1'	40:BE:61:ARG:HD3	1.66	0.78
58:BZ:30:ASN:HD22	58:BZ:30:ASN:C	1.86	0.78
9:CI:40:LEU:HD11	9:CI:70:LYS:HG2	1.65	0.78
36:DA:733:G:N7	36:DA:761:A:C6	2.52	0.78
38:DC:43:VAL:HG23	38:DC:175:VAL:HG21	1.63	0.78
43:DH:30:LYS:HB2	43:DH:79:VAL:HA	1.66	0.78
36:DA:1076:C:H5''	58:DZ:111:VAL:HG12	1.64	0.78
58:DZ:152:ALA:CB	58:DZ:168:GLU:HA	2.13	0.78
13:AM:4:ILE:HG22	13:AM:5:ALA:N	1.99	0.78
1:AA:1318:A:H4'	19:AS:10:PHE:CE2	2.19	0.78
22:AW:38:A:H2'	22:AW:39:U:H5''	1.66	0.78
27:B1:80:LEU:HB3	27:B1:82:LEU:CD1	2.14	0.78
36:BA:811:U:OP2	48:BP:30:THR:HG23	1.84	0.78
1:CA:939:G:H5''	7:CG:102:ARG:HH22	1.48	0.78
36:DA:657:U:H2'	36:DA:658:C:H6	1.49	0.78
39:DD:183:ARG:HG2	39:DD:183:ARG:HH11	1.46	0.78
43:DH:94:TYR:HD1	43:DH:107:VAL:HA	1.48	0.78
54:DV:51:VAL:HG12	54:DV:52:VAL:H	1.48	0.78
2:AB:229:VAL:HG12	2:AB:230:VAL:N	1.99	0.77
28:B2:25:VAL:CB	28:B2:64:LEU:HD12	2.12	0.77
28:B2:62:THR:O	28:B2:66:GLU:HG3	1.84	0.77
36:BA:1314:C:H5'	36:BA:1314:C:H6	1.46	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:259:G:N2	36:BA:621:A:H8	1.81	0.77
46:BN:55:VAL:HG22	46:BN:126:PRO:HA	1.65	0.77
54:BV:19:LYS:NZ	54:BV:20:LEU:H	1.81	0.77
58:BZ:149:SER:CB	58:BZ:173:ALA:HA	2.14	0.77
19:CS:48:THR:HG22	19:CS:61:TYR:HA	1.66	0.77
43:DH:54:ARG:HG2	43:DH:54:ARG:HH11	1.49	0.77
51:DS:15:ARG:HB2	51:DS:15:ARG:NH1	1.99	0.77
55:DW:11:ARG:HG2	55:DW:11:ARG:HH11	1.48	0.77
4:AD:67:ILE:HG22	4:AD:68:TYR:CD1	2.19	0.77
26:B0:27:GLU:HB3	26:B0:69:PHE:HD1	1.48	0.77
31:B5:29:THR:HG21	36:BA:2814:C:O2'	1.85	0.77
36:BA:34:C:H41	36:BA:447:A:H61	1.32	0.77
43:BH:18:GLU:HB2	43:BH:25:LYS:HB2	1.66	0.77
1:CA:269:C:H2'	1:CA:270:A:H8	1.49	0.77
4:CD:101:LEU:HD23	4:CD:121:VAL:HG11	1.66	0.77
4:CD:11:LEU:HD13	4:CD:66:ARG:HD3	1.66	0.77
13:CM:119:GLY:O	13:CM:120:LYS:HB2	1.83	0.77
34:D8:11:LYS:NZ	34:D8:63:PRO:HG3	1.99	0.77
49:DQ:74:TYR:HD2	49:DQ:91:GLU:HB2	1.48	0.77
10:AJ:80:LYS:O	10:AJ:83:GLU:HB3	1.85	0.77
28:B2:67:LYS:O	28:B2:70:GLN:HG2	1.84	0.77
36:BA:910:A:H62	49:BQ:12:GLN:HA	1.49	0.77
41:BF:28:ILE:HG21	41:BF:116:ASP:HB2	1.66	0.77
48:BP:105:LEU:H	48:BP:105:LEU:HD12	1.48	0.77
49:BQ:74:TYR:HD2	49:BQ:91:GLU:HB2	1.48	0.77
26:D0:49:LYS:HG3	26:D0:80:HIS:HD1	1.48	0.77
39:DD:24:ILE:O	39:DD:26:LYS:N	2.14	0.77
40:DE:14:ILE:HD11	40:DE:173:VAL:HG11	1.66	0.77
48:DP:30:THR:HG22	48:DP:31:ALA:H	1.47	0.77
48:DP:23:PRO:O	48:DP:33:ARG:HD2	1.83	0.77
48:DP:39:LYS:HD2	48:DP:40:SER:H	1.48	0.77
34:B8:32:LEU:HD23	34:B8:36:LYS:HE2	1.65	0.77
36:BA:1087:G:H2'	36:BA:1088:A:H4'	1.66	0.77
56:BX:35:THR:O	56:BX:39:ILE:HG12	1.84	0.77
1:CA:424:G:H2'	1:CA:425:G:H8	1.49	0.77
9:CI:19:LEU:HD21	9:CI:59:PHE:CD2	2.19	0.77
17:CQ:69:LYS:C	17:CQ:70:ARG:HD2	2.05	0.77
34:D8:52:LYS:N	34:D8:53:PRO:HD2	2.00	0.77
54:DV:19:LYS:HG2	54:DV:94:LEU:HB2	1.67	0.77
1:AA:1533:C:C3'	1:AA:1534:A:H5''	2.14	0.77
2:AB:185:ILE:HG22	2:AB:199:TYR:HB2	1.66	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:53:VAL:HG23	16:AP:54:GLU:H	1.48	0.77
22:AV:23:A:H5'	22:AV:23:A:C8	2.18	0.77
36:BA:2645:G:C3'	36:BA:2646:C:H5'	2.09	0.77
1:CA:1238:A:H2	1:CA:1301:U:H3	1.31	0.77
2:CB:75:LYS:HA	2:CB:78:GLN:HE21	1.49	0.77
7:CG:145:ALA:O	7:CG:147:ALA:N	2.17	0.77
36:DA:1348:G:H2'	36:DA:1349:A:H5''	1.66	0.77
42:DG:73:ALA:H	42:DG:87:PRO:CG	1.97	0.77
58:DZ:108:PRO:HD3	58:DZ:141:VAL:HB	1.67	0.77
1:AA:1003:G:N2	1:AA:1039:C:H42	1.82	0.77
2:AB:22:LYS:HE2	2:AB:22:LYS:HA	1.67	0.77
35:B9:34:GLN:O	35:B9:35:ARG:HB2	1.84	0.77
36:BA:1210:A:H5''	36:BA:1212:G:O4'	1.84	0.77
36:BA:1681:G:O2'	36:BA:1762:A:H2'	1.84	0.77
25:CZ:331:HIS:HA	25:CZ:364:PRO:HG2	1.67	0.77
32:D6:15:GLU:CG	32:D6:47:THR:HG21	2.15	0.77
36:DA:1567:A:H5'	39:DD:58:HIS:CD2	2.20	0.77
1:AA:706:A:O4'	11:AK:29:ILE:HD11	1.84	0.77
36:BA:181:A:H5'	36:BA:181:A:H8	1.49	0.77
52:BT:16:ARG:HD2	52:BT:18:ASP:OD1	1.85	0.77
52:BT:60:THR:HG22	52:BT:77:PRO:HA	1.66	0.77
36:DA:280:C:H3'	36:DA:281:G:H8	1.49	0.77
40:DE:34:VAL:HG11	40:DE:78:LEU:CD2	2.14	0.77
49:DQ:56:ARG:HH11	49:DQ:56:ARG:CG	1.97	0.77
52:DT:60:THR:HG22	52:DT:77:PRO:HA	1.67	0.77
1:AA:542:G:OP1	4:AD:10:ARG:NH2	2.18	0.77
34:B8:54:GLU:O	34:B8:58:ILE:HG12	1.85	0.77
36:BA:658:C:H2'	36:BA:659:C:C6	2.19	0.77
41:BF:3:GLU:CA	41:BF:24:LEU:HG	2.15	0.77
43:BH:54:ARG:HH11	43:BH:54:ARG:HG2	1.50	0.77
44:BJ:56:UNK:HA	44:BJ:83:UNK:HA	1.66	0.77
49:BQ:141:GLN:HE21	58:BZ:72:ARG:CA	1.91	0.77
15:CO:39:LEU:HD13	15:CO:56:LEU:HB2	1.66	0.77
36:DA:658:C:H2'	36:DA:659:C:C6	2.19	0.77
41:DF:28:ILE:HG21	41:DF:116:ASP:HB2	1.65	0.77
13:AM:49:THR:HG22	13:AM:51:ALA:H	1.49	0.77
28:B2:20:GLU:OE1	28:B2:23:LYS:HB2	1.84	0.77
32:B6:36:LEU:HD12	32:B6:50:ARG:NH1	2.00	0.77
34:B8:52:LYS:N	34:B8:53:PRO:HD2	2.00	0.77
36:BA:1301:A:H4'	36:BA:1302:A:OP1	1.83	0.77
36:BA:307:G:H21	36:BA:330:A:H62	1.33	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BZ:128:VAL:HG22	58:BZ:129:SER:H	1.50	0.77
1:CA:542:G:OP1	4:CD:10:ARG:NH2	2.17	0.77
1:CA:979:C:H3'	1:CA:980:C:C5'	2.15	0.77
25:CZ:355:LEU:HB3	25:CZ:370:PHE:CB	2.15	0.77
27:D1:76:ARG:HB3	36:DA:271(R):G:H5''	1.66	0.77
58:DZ:151:HIS:HB2	58:DZ:170:THR:HA	1.67	0.77
25:AZ:20:VAL:HG12	25:AZ:115:GLN:HG3	1.67	0.77
36:BA:1038:C:H2'	36:BA:1039:G:H5''	1.67	0.77
36:BA:886:C:H2'	36:BA:887:A:H4'	1.65	0.77
37:BB:17:C:H2'	37:BB:18:G:O4'	1.85	0.77
42:BG:153:ARG:HB3	42:BG:153:ARG:HH11	1.50	0.77
54:BV:15:GLU:HB3	54:BV:16:PRO:CD	2.15	0.77
1:CA:376:G:H5''	16:CP:5:ARG:HB2	1.65	0.77
36:DA:2147:G:H2'	36:DA:2148:G:O4'	1.85	0.77
39:DD:134:ARG:HG3	39:DD:187:GLY:HA3	1.67	0.77
40:DE:107:THR:O	40:DE:190:GLY:HA2	1.84	0.77
41:DF:164:ARG:HG2	41:DF:164:ARG:HH11	1.50	0.77
41:DF:185:ASP:HA	41:DF:188:ARG:HG2	1.67	0.77
31:B5:36:CYS:O	31:B5:38:ALA:N	2.19	0.76
39:BD:147:LEU:HD11	39:BD:183:ARG:NH1	1.99	0.76
43:BH:30:LYS:HB2	43:BH:79:VAL:HA	1.67	0.76
50:BR:99:LYS:N	50:BR:99:LYS:HD2	1.99	0.76
2:CB:22:LYS:HE2	2:CB:22:LYS:HA	1.67	0.76
36:DA:1209:G:H21	36:DA:1210:A:H62	1.30	0.76
36:DA:1314:C:H6	36:DA:1314:C:H5'	1.49	0.76
36:DA:1880:C:C3'	36:DA:1881:C:H5''	2.16	0.76
36:DA:2098:U:H3	36:DA:2191:G:H1	1.31	0.76
53:DU:90:VAL:O	53:DU:92:ARG:N	2.19	0.76
22:AW:8:U:O2'	22:AW:9:A:H5''	1.85	0.76
28:B2:48:HIS:HA	36:BA:95:G:O3'	1.85	0.76
36:BA:605:C:H5	36:BA:623:G:H1	1.30	0.76
2:CB:130:ARG:HH21	2:CB:134:GLU:HG3	1.50	0.76
4:CD:187:ARG:HH11	4:CD:187:ARG:HB3	1.49	0.76
6:CF:8:ILE:HD11	6:CF:79:LEU:HD23	1.67	0.76
19:CS:10:PHE:O	19:CS:10:PHE:CG	2.36	0.76
25:CZ:222:LEU:HD13	25:CZ:305:ALA:HB2	1.67	0.76
32:D6:11:LEU:HD12	32:D6:26:ASN:HB2	1.67	0.76
36:DA:214:G:H1'	36:DA:216:A:O2'	1.85	0.76
36:DA:654:A:H3'	36:DA:654:A:OP1	1.85	0.76
36:DA:991:C:H5'	36:DA:991:C:H6	1.50	0.76
48:DP:106:LEU:HD21	48:DP:112:LEU:HB2	1.65	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DZ:14:LYS:HE2	58:DZ:17:ALA:HB2	1.65	0.76
2:AB:75:LYS:HA	2:AB:78:GLN:HE21	1.47	0.76
10:AJ:34:VAL:HG22	10:AJ:74:ILE:HG22	1.67	0.76
28:B2:46:GLN:HB3	28:B2:48:HIS:ND1	1.99	0.76
36:BA:1880:C:C3'	36:BA:1881:C:H5''	2.15	0.76
39:BD:270:ILE:HD12	39:BD:270:ILE:O	1.86	0.76
49:BQ:141:GLN:HB3	58:BZ:99:TYR:HE1	1.48	0.76
1:CA:624:C:H2'	1:CA:625:G:H8	1.50	0.76
31:D5:54:GLY:H	31:D5:56:LYS:NZ	1.83	0.76
36:DA:1087:G:H2'	36:DA:1088:A:H4'	1.66	0.76
39:DD:270:ILE:O	39:DD:270:ILE:HD12	1.85	0.76
43:DH:46:GLU:OE1	43:DH:50:VAL:HG13	1.85	0.76
1:AA:176:C:H2'	1:AA:177:C:H6	1.48	0.76
1:AA:269:C:H2'	1:AA:270:A:H8	1.50	0.76
1:AA:274:A:O2'	1:AA:275:G:H8	1.69	0.76
13:AM:8:GLU:OE1	13:AM:22:ILE:HA	1.86	0.76
13:AM:82:MET:HG3	13:AM:83:ASP:N	1.99	0.76
19:AS:78:ARG:HB2	19:AS:81:ARG:NH1	2.00	0.76
25:AZ:355:LEU:HB3	25:AZ:370:PHE:CB	2.15	0.76
36:BA:1209:G:H21	36:BA:1210:A:H62	1.33	0.76
36:BA:145:G:H2'	36:BA:146:G:H5''	1.64	0.76
36:BA:2189:U:C3'	36:BA:2190:G:H4'	2.14	0.76
34:B8:62:LEU:CD1	36:BA:242:G:H5''	2.13	0.76
43:BH:50:VAL:HG12	43:BH:51:ARG:N	2.00	0.76
50:BR:2:ARG:HG3	50:BR:2:ARG:HH11	1.49	0.76
2:CB:134:GLU:C	2:CB:136:VAL:H	1.88	0.76
2:CB:25:ASN:HD22	2:CB:27:LYS:H	1.34	0.76
11:CK:79:SER:OG	11:CK:106:LYS:HD2	1.85	0.76
36:DA:2726:U:H5'	36:DA:2726:U:O2	1.85	0.76
36:DA:811:U:OP2	48:DP:30:THR:HG23	1.85	0.76
1:AA:627:G:O2'	1:AA:628:G:H5'	1.86	0.76
2:AB:33:TYR:HB2	2:AB:43:ASP:HB2	1.65	0.76
12:AL:7:ILE:HD12	12:AL:8:ASN:N	1.99	0.76
55:BW:20:VAL:HG23	55:BW:47:VAL:HG21	1.67	0.76
36:DA:259:G:N2	36:DA:621:A:H8	1.83	0.76
46:DN:55:VAL:HG22	46:DN:126:PRO:HA	1.68	0.76
57:DY:10:GLY:CA	57:DY:27:VAL:HG13	2.15	0.76
1:AA:979:C:H3'	1:AA:980:C:C5'	2.16	0.76
2:AB:87:ARG:HH22	2:AB:233:SER:N	1.84	0.76
9:AI:40:LEU:HD11	9:AI:70:LYS:HG2	1.67	0.76
10:AJ:24:VAL:HG12	10:AJ:28:ARG:HD2	1.67	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1880:C:H3'	36:BA:1881:C:H5''	1.67	0.76
36:BA:581:C:H2'	36:BA:582:G:H8	1.51	0.76
51:BS:36:TYR:HD1	51:BS:36:TYR:N	1.84	0.76
36:BA:482:A:H4'	57:BY:47:LYS:HG2	1.68	0.76
57:BY:95:LYS:HE3	57:BY:99:CYS:O	1.85	0.76
1:CA:1003:G:N2	1:CA:1039:C:H42	1.83	0.76
4:CD:17:VAL:HG11	4:CD:197:PRO:HB2	1.68	0.76
19:CS:17:GLU:O	19:CS:21:GLU:HG2	1.86	0.76
40:DE:4:ILE:HD13	40:DE:28:ALA:HB1	1.68	0.76
41:DF:160:ASN:HD21	41:DF:162:LEU:HD13	1.50	0.76
43:DH:50:VAL:HG12	43:DH:51:ARG:N	2.00	0.76
51:DS:96:GLY:O	51:DS:98:VAL:N	2.19	0.76
1:AA:1271:G:H2'	1:AA:1272:G:C5'	2.16	0.76
2:AB:134:GLU:C	2:AB:136:VAL:H	1.89	0.76
25:AZ:19:HIS:ND1	25:AZ:113:MET:HB3	2.00	0.76
52:BT:55:ASN:H	52:BT:59:THR:CG2	1.95	0.76
58:BZ:37:VAL:HG23	58:BZ:38:TYR:N	1.98	0.76
10:CJ:34:VAL:HG22	10:CJ:74:ILE:HG22	1.67	0.76
33:D7:34:ARG:HH11	33:D7:34:ARG:CG	1.99	0.76
36:DA:2137:C:H2'	36:DA:2138:C:C6	2.20	0.76
4:AD:189:PRO:HB2	4:AD:194:LEU:CD2	2.13	0.76
13:AM:53:VAL:HG12	13:AM:57:ARG:HH21	1.49	0.76
1:AA:376:G:H4'	16:AP:5:ARG:NH1	1.99	0.76
36:BA:325:G:H2'	36:BA:326:G:H8	1.51	0.76
36:BA:607:U:OP1	41:BF:102:PRO:HA	1.86	0.76
38:BC:100:ILE:HG22	38:BC:104:LEU:HD23	1.68	0.76
44:BJ:36:UNK:HA	44:BJ:40:UNK:CB	2.15	0.76
1:CA:627:G:O2'	1:CA:628:G:H5'	1.85	0.76
13:CM:23:TYR:HB3	13:CM:67:GLU:HB3	1.65	0.76
19:CS:62:ILE:HA	19:CS:66:MET:HE2	1.68	0.76
34:D8:50:LEU:HD12	34:D8:51:ALA:N	2.01	0.76
36:DA:2712:U:H1'	36:DA:2712(A):A:C8	2.21	0.76
36:DA:845:G:OP2	36:DA:845:G:H8	1.69	0.76
39:DD:206:LEU:HD22	39:DD:211:ARG:HG2	1.66	0.76
42:DG:139:LEU:CA	42:DG:144:ILE:HD13	2.16	0.76
52:DT:85:LYS:HZ2	52:DT:85:LYS:HB3	1.48	0.76
58:DZ:70:LEU:HG	58:DZ:91:LEU:HD11	1.68	0.76
4:AD:17:VAL:HG11	4:AD:197:PRO:HB2	1.68	0.76
5:AE:76:ILE:HG13	5:AE:142:LEU:HD13	1.67	0.76
9:AI:19:LEU:HD21	9:AI:59:PHE:CD2	2.20	0.76
13:AM:23:TYR:HB3	13:AM:67:GLU:HB3	1.68	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:B6:11:LEU:HD12	32:B6:26:ASN:HB2	1.68	0.76
36:BA:2712:U:H1'	36:BA:2712(A):A:C8	2.21	0.76
38:DC:100:ILE:HG22	38:DC:104:LEU:HD23	1.68	0.76
58:DZ:37:VAL:HG23	58:DZ:38:TYR:N	2.01	0.76
32:B6:18:ARG:HG2	32:B6:18:ARG:NH1	1.96	0.76
36:BA:1602:U:H3'	36:BA:1603:A:H5'	1.68	0.76
43:BH:33:LEU:HD21	43:BH:136:ILE:HG22	1.67	0.76
48:BP:146:VAL:HG22	48:BP:147:LEU:N	2.00	0.76
58:BZ:59:LEU:O	58:BZ:66:SER:HA	1.86	0.76
1:CA:1435:G:H2'	1:CA:1436:U:C6	2.21	0.76
27:D1:30:VAL:HG23	27:D1:31:GLY:H	1.49	0.76
36:DA:2159:G:C2'	36:DA:2160:G:H5''	2.15	0.76
36:DA:363(F):A:HO2'	36:DA:364:C:H5	1.34	0.76
36:DA:888:C:H2'	36:DA:889:C:H4'	1.68	0.76
50:DR:58:GLY:HA2	50:DR:80:PHE:HE2	1.50	0.76
10:AJ:32:ALA:HB2	10:AJ:76:ASN:HB2	1.67	0.75
1:AA:1367:C:C5'	10:AJ:60:ARG:HH11	1.99	0.75
31:B5:54:GLY:H	31:B5:56:LYS:NZ	1.83	0.75
36:BA:280:C:H3'	36:BA:281:G:H8	1.50	0.75
39:BD:30:GLU:H	39:BD:35:LYS:HZ1	1.32	0.75
41:BF:164:ARG:HH11	41:BF:164:ARG:HG2	1.52	0.75
54:BV:19:LYS:HG2	54:BV:94:LEU:HB2	1.68	0.75
5:CE:76:ILE:HG13	5:CE:142:LEU:HD13	1.68	0.75
22:CW:8:U:O2'	22:CW:9:A:H5''	1.86	0.75
32:D6:17:LYS:HB3	32:D6:18:ARG:HH12	1.50	0.75
35:D9:34:GLN:O	35:D9:35:ARG:HB2	1.84	0.75
34:D8:62:LEU:CD1	36:DA:242:G:H5''	2.12	0.75
40:DE:38:THR:HG22	40:DE:40:GLU:N	2.00	0.75
47:BO:4:PRO:O	47:BO:5:GLN:HB2	1.84	0.75
50:BR:58:GLY:HA2	50:BR:80:PHE:HE2	1.50	0.75
1:CA:367:U:H4'	25:CZ:291:ARG:HE	1.51	0.75
4:CD:67:ILE:HG22	4:CD:68:TYR:CD1	2.22	0.75
13:CM:64:TRP:O	13:CM:66:LEU:HD13	1.86	0.75
22:CV:52:G:H1	22:CV:62:C:H42	1.35	0.75
36:DA:1057:A:O2'	36:DA:1058:G:H5'	1.87	0.75
43:DH:167:GLU:HB3	43:DH:168:PRO:HD2	1.68	0.75
47:DO:114:ILE:HD12	47:DO:114:ILE:H	1.50	0.75
36:DA:2334:G:H21	51:DS:18:ILE:HG23	1.51	0.75
58:DZ:139:VAL:HG12	58:DZ:140:ASP:H	1.51	0.75
6:AF:35:ALA:HA	6:AF:67:MET:HB3	1.67	0.75
36:BA:1348:G:H2'	36:BA:1349:A:H5''	1.67	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:284:U:H2'	36:BA:285:C:C6	2.22	0.75
8:CH:64:LYS:HG2	8:CH:79:VAL:HG21	1.66	0.75
13:CM:82:MET:HG3	13:CM:83:ASP:N	2.00	0.75
22:CW:38:A:H2'	22:CW:39:U:H5''	1.68	0.75
36:DA:1681:G:O2'	36:DA:1762:A:H2'	1.87	0.75
36:DA:581:C:H2'	36:DA:582:G:C8	2.21	0.75
41:DF:3:GLU:CA	41:DF:24:LEU:HG	2.15	0.75
51:DS:36:TYR:HD1	51:DS:36:TYR:N	1.84	0.75
1:CA:1442(B):A:H5'	52:DT:118:ARG:HH11	1.50	0.75
4:AD:101:LEU:HD23	4:AD:121:VAL:HG11	1.67	0.75
9:AI:4:TYR:CE2	9:AI:88:TYR:HB2	2.20	0.75
19:AS:48:THR:HG22	19:AS:61:TYR:HA	1.68	0.75
25:AZ:331:HIS:HA	25:AZ:364:PRO:HG2	1.67	0.75
32:B6:15:GLU:HG2	32:B6:47:THR:HG21	1.69	0.75
36:BA:2131:G:H1'	36:BA:2133:G:H21	1.51	0.75
36:BA:2159:G:C2'	36:BA:2160:G:H5''	2.16	0.75
36:BA:631:A:H5''	48:BP:65:ARG:HH11	1.50	0.75
36:BA:654:A:H3'	36:BA:654:A:OP1	1.86	0.75
39:BD:134:ARG:HG3	39:BD:187:GLY:HA3	1.67	0.75
51:BS:42:ASP:O	51:BS:43:GLU:HB3	1.85	0.75
57:BY:10:GLY:CA	57:BY:27:VAL:HG13	2.16	0.75
4:CD:100:ARG:HH21	4:CD:118:ARG:HH12	1.32	0.75
6:CF:35:ALA:HA	6:CF:67:MET:HB3	1.67	0.75
36:DA:1720:U:H3'	36:DA:1721:G:H5''	1.69	0.75
37:DB:17:C:H2'	37:DB:18:G:O4'	1.85	0.75
50:DR:116:LEU:O	50:DR:117:VAL:HG12	1.85	0.75
1:AA:939:G:H5''	7:AG:102:ARG:HH22	1.52	0.75
2:AB:8:LYS:HB2	2:AB:9:GLU:OE1	1.87	0.75
5:AE:12:LEU:HD13	5:AE:31:LEU:HB2	1.67	0.75
9:AI:28:VAL:HG12	9:AI:29:ASN:N	1.99	0.75
29:B3:43:ILE:O	29:B3:47:VAL:HG23	1.86	0.75
36:BA:1498:C:C2'	36:BA:1499:C:H5''	2.17	0.75
38:BC:43:VAL:HG23	38:BC:175:VAL:HG21	1.67	0.75
43:BH:46:GLU:OE1	43:BH:50:VAL:HG13	1.86	0.75
2:CB:229:VAL:HG12	2:CB:230:VAL:N	2.02	0.75
36:DA:1022:G:N2	36:DA:1142(A):A:C2	2.53	0.75
36:DA:1880:C:H3'	36:DA:1881:C:H5''	1.69	0.75
36:DA:581:C:H2'	36:DA:582:G:H8	1.50	0.75
51:DS:101:LEU:O	51:DS:101:LEU:HD12	1.86	0.75
51:DS:42:ASP:O	51:DS:43:GLU:HB3	1.85	0.75
1:AA:1053:G:C4'	1:AA:1054:C:H5'	2.12	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:18:LYS:N	4:AD:33:MET:HE2	2.00	0.75
8:AH:64:LYS:HG2	8:AH:79:VAL:HG21	1.69	0.75
15:AO:25:THR:O	15:AO:29:VAL:HG23	1.86	0.75
27:B1:58:ILE:HD12	27:B1:59:THR:H	1.52	0.75
36:BA:1498:C:H2'	36:BA:1499:C:H5''	1.68	0.75
39:BD:27:THR:CG2	39:BD:83:GLU:HG2	2.17	0.75
1:CA:274:A:O2'	1:CA:275:G:H8	1.70	0.75
1:CA:358:U:H2'	1:CA:359:U:C6	2.22	0.75
3:CC:15:THR:HG21	3:CC:181:ASN:HA	1.68	0.75
27:D1:67:ILE:HB	27:D1:68:PRO:HD3	1.69	0.75
36:DA:1039:G:H1	36:DA:1116:C:H42	1.35	0.75
36:DA:2208:A:H1'	36:DA:2219:G:C5	2.22	0.75
43:DH:18:GLU:HB2	43:DH:25:LYS:HB2	1.67	0.75
52:DT:16:ARG:HD2	52:DT:18:ASP:OD1	1.87	0.75
1:AA:1392:G:N2	1:AA:1502:A:H8	1.85	0.75
3:AC:113:ALA:HB3	3:AC:114:PRO:HD3	1.67	0.75
4:AD:187:ARG:HH11	4:AD:187:ARG:HB3	1.50	0.75
8:AH:114:THR:HG22	8:AH:130:GLY:O	1.87	0.75
17:AQ:69:LYS:C	17:AQ:70:ARG:HD2	2.07	0.75
36:BA:886:C:C2'	36:BA:887:A:H4'	2.16	0.75
48:BP:112:LEU:H	48:BP:128:HIS:HD2	1.34	0.75
53:BU:90:VAL:O	53:BU:92:ARG:N	2.19	0.75
2:CB:25:ASN:ND2	2:CB:27:LYS:H	1.85	0.75
4:CD:19:LEU:O	4:CD:26:CYS:SG	2.44	0.75
7:CG:79:ARG:HG2	7:CG:84:ASN:CA	2.11	0.75
14:CN:22:THR:HB	14:CN:33:VAL:HG21	1.68	0.75
36:DA:1331:A:O2'	36:DA:1332:G:H8	1.69	0.75
36:DA:2189:U:C3'	36:DA:2190:G:H4'	2.15	0.75
39:DD:31:LYS:O	39:DD:35:LYS:HB3	1.86	0.75
42:DG:43:LEU:HB3	42:DG:45:GLU:HG2	1.67	0.75
52:DT:28:VAL:HG11	52:DT:46:GLU:HG3	1.69	0.75
53:DU:16:LYS:O	53:DU:20:LEU:HD23	1.86	0.75
54:DV:15:GLU:HB3	54:DV:16:PRO:CD	2.16	0.75
1:AA:1238:A:H2	1:AA:1301:U:H3	1.32	0.75
1:AA:723:U:O4	1:AA:1537:U:H2'	1.85	0.75
1:AA:624:C:H2'	1:AA:625:G:H8	1.50	0.75
3:AC:40:ARG:HH11	3:AC:40:ARG:HG3	1.50	0.75
3:AC:52:LEU:HD23	3:AC:52:LEU:H	1.51	0.75
39:BD:31:LYS:O	39:BD:35:LYS:HB3	1.87	0.75
40:BE:38:THR:HG22	40:BE:40:GLU:N	2.00	0.75
41:BF:185:ASP:HA	41:BF:188:ARG:HG2	1.67	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BG:144:ILE:O	42:BG:144:ILE:HG23	1.87	0.75
42:BG:7:LEU:CD2	42:BG:176:LEU:HD21	2.12	0.75
50:BR:55:ALA:HB2	50:BR:79:LEU:HD11	1.69	0.75
58:BZ:151:HIS:HB3	58:BZ:170:THR:HA	1.69	0.75
36:DA:300:A:H2'	36:DA:334:C:O2'	1.87	0.75
36:DA:543:C:H42	36:DA:549:G:H1	1.34	0.75
48:DP:146:VAL:HG22	48:DP:147:LEU:N	2.02	0.75
1:AA:1104:G:O5'	2:AB:111:ARG:HD2	1.86	0.75
32:B6:15:GLU:OE1	32:B6:18:ARG:NE	2.20	0.75
36:BA:585:G:H2'	36:BA:1251:C:H42	1.52	0.75
36:BA:657:U:H2'	36:BA:658:C:H6	1.52	0.75
49:BQ:56:ARG:CG	49:BQ:56:ARG:HH11	2.00	0.75
49:BQ:66:ILE:HA	49:BQ:104:PHE:HB3	1.68	0.75
1:CA:176:C:H2'	1:CA:177:C:C6	2.22	0.75
16:CP:21:VAL:O	16:CP:33:ILE:HB	1.87	0.75
34:D8:52:LYS:H	34:D8:53:PRO:HD2	1.52	0.75
48:DP:112:LEU:H	48:DP:128:HIS:HD2	1.35	0.75
33:B7:34:ARG:CG	33:B7:34:ARG:HH11	2.00	0.74
36:BA:1331:A:O2'	36:BA:1332:G:H8	1.69	0.74
48:BP:106:LEU:HD21	48:BP:112:LEU:HB2	1.66	0.74
32:D6:36:LEU:HD12	32:D6:50:ARG:NH1	2.01	0.74
36:DA:2189:U:H2'	36:DA:2190:G:C4'	2.17	0.74
36:DA:325:G:H2'	36:DA:326:G:H8	1.52	0.74
36:DA:886:C:C2'	36:DA:887:A:H4'	2.17	0.74
3:AC:188:LEU:HD12	3:AC:195:VAL:CG1	2.15	0.74
25:AZ:110:ASP:HB3	25:AZ:113:MET:CE	2.18	0.74
28:B2:30:ARG:O	28:B2:34:GLU:HB2	1.87	0.74
34:B8:49:VAL:HB	34:B8:53:PRO:HD3	1.68	0.74
36:BA:1057:A:O2'	36:BA:1058:G:H5'	1.87	0.74
39:BD:30:GLU:CB	39:BD:35:LYS:HD2	2.13	0.74
42:BG:79:ASN:O	42:BG:80:PHE:HB2	1.85	0.74
58:BZ:108:PRO:O	58:BZ:111:VAL:HG23	1.88	0.74
11:CK:110:ASP:HB2	18:CR:88:LYS:HE2	1.69	0.74
12:CL:55:VAL:HG23	12:CL:68:ALA:O	1.87	0.74
32:D6:15:GLU:HG2	32:D6:47:THR:HG21	1.68	0.74
34:D8:62:LEU:HD13	36:DA:242:G:C5'	2.15	0.74
34:D8:61:LEU:HD13	34:D8:62:LEU:H	1.52	0.74
36:DA:1301:A:H4'	36:DA:1302:A:OP1	1.86	0.74
36:DA:1602:U:H3'	36:DA:1603:A:H5'	1.67	0.74
36:DA:886:C:H2'	36:DA:887:A:H4'	1.66	0.74
29:D3:17:LYS:HG2	36:DA:969:U:OP1	1.86	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:73:MET:HG2	7:AG:90:GLU:HA	1.69	0.74
12:AL:55:VAL:HG23	12:AL:68:ALA:O	1.87	0.74
36:BA:2853:C:H2'	36:BA:2854:G:C8	2.22	0.74
36:BA:845:G:H8	36:BA:845:G:OP2	1.70	0.74
1:AA:1432:G:OP1	52:BT:107:ASP:HB2	1.87	0.74
58:BZ:63:ASP:HB3	58:BZ:65:GLN:HG3	1.70	0.74
1:CA:192:U:H2'	1:CA:193:C:H6	1.52	0.74
36:DA:1115:G:H2'	36:DA:1116:C:O4'	1.85	0.74
36:DA:28:A:N6	36:DA:512:G:H1'	2.00	0.74
1:AA:1286:A:O2'	1:AA:1287:A:H5''	1.87	0.74
36:BA:1039:G:H1	36:BA:1116:C:H42	1.35	0.74
43:BH:40:GLU:OE1	43:BH:55:PRO:HG3	1.87	0.74
51:BS:59:LYS:HG2	51:BS:60:GLY:N	1.99	0.74
2:CB:87:ARG:HH22	2:CB:233:SER:N	1.83	0.74
34:D8:32:LEU:HD23	34:D8:36:LYS:HE2	1.68	0.74
36:DA:181:A:H5'	36:DA:181:A:H8	1.52	0.74
36:DA:83:G:N2	36:DA:102:G:H2'	2.03	0.74
52:DT:58:ASN:ND2	52:DT:58:ASN:H	1.84	0.74
54:DV:99:ILE:CD1	54:DV:99:ILE:H	2.01	0.74
58:DZ:150:LEU:HD21	58:DZ:172:ALA:HB3	1.68	0.74
34:B8:4:MET:O	34:B8:62:LEU:HD12	1.87	0.74
36:BA:1970:A:H5''	36:BA:1971:A:OP1	1.87	0.74
36:BA:214:G:H1'	36:BA:216:A:O2'	1.87	0.74
36:BA:2463:C:O2'	36:BA:2464:C:H5'	1.87	0.74
41:BF:84:VAL:C	41:BF:86:GLY:H	1.91	0.74
50:BR:116:LEU:O	50:BR:117:VAL:HG12	1.86	0.74
53:BU:91:ASP:O	53:BU:95:LEU:HB2	1.88	0.74
54:BV:29:PRO:HA	54:BV:61:VAL:HG22	1.69	0.74
58:BZ:108:PRO:HB3	58:BZ:141:VAL:CG1	2.17	0.74
58:BZ:81:ARG:HB2	58:BZ:81:ARG:CZ	2.16	0.74
9:CI:85:LEU:HD11	9:CI:96:LEU:HD21	1.68	0.74
33:D7:34:ARG:HG3	33:D7:34:ARG:NH1	1.98	0.74
36:DA:2415:G:H4'	48:DP:66:GLY:C	2.06	0.74
36:DA:307:G:H21	36:DA:330:A:H62	1.32	0.74
36:DA:482:A:H4'	57:DY:47:LYS:HG2	1.69	0.74
39:DD:30:GLU:CD	39:DD:63:ARG:HE	1.91	0.74
41:DF:157:VAL:HG12	41:DF:176:LEU:HB3	1.68	0.74
52:DT:28:VAL:HG22	52:DT:47:GLY:H	1.51	0.74
11:AK:110:ASP:HB2	18:AR:88:LYS:HE2	1.68	0.74
16:AP:21:VAL:O	16:AP:33:ILE:HB	1.88	0.74
36:BA:203:C:H3'	36:BA:204:A:H5''	1.69	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:18:LYS:N	4:CD:33:MET:HE2	2.01	0.74
34:D8:54:GLU:O	34:D8:58:ILE:HG12	1.86	0.74
31:D5:29:THR:HG21	36:DA:2814:C:O2'	1.87	0.74
36:DA:996:A:H4'	53:DU:92:ARG:NE	2.02	0.74
39:DD:71:ASP:CB	39:DD:103:ARG:HH22	2.00	0.74
43:DH:33:LEU:HD21	43:DH:136:ILE:HG22	1.67	0.74
48:DP:61:ARG:O	48:DP:62:LEU:HB3	1.88	0.74
51:DS:74:ALA:HB1	51:DS:103:GLU:HG2	1.69	0.74
36:BA:1051:G:H2'	36:BA:1052:C:C5	2.23	0.74
43:BH:156:ALA:C	43:BH:158:HIS:H	1.87	0.74
26:D0:10:THR:HG22	26:D0:12:ASN:N	2.00	0.74
34:D8:49:VAL:HB	34:D8:53:PRO:HD3	1.68	0.74
40:DE:51:PHE:O	40:DE:74:PRO:HB2	1.87	0.74
36:DA:1279:G:H4'	50:DR:31:HIS:HD2	1.50	0.74
1:AA:176:C:H2'	1:AA:177:C:C6	2.22	0.74
20:AT:26:ASN:ND2	20:AT:26:ASN:H	1.85	0.74
34:B8:43:GLN:O	34:B8:44:LYS:HD2	1.87	0.74
36:BA:1450(A):C:H2'	36:BA:1451:C:C6	2.23	0.74
36:BA:2126:A:H4'	36:BA:2127:G:O5'	1.88	0.74
36:BA:654(C):G:H2'	36:BA:654(D):G:H5'	1.70	0.74
38:BC:79:LYS:HA	38:BC:97:GLU:OE1	1.88	0.74
53:BU:56:ASP:O	53:BU:60:LEU:HG	1.87	0.74
58:BZ:9:TYR:HE1	58:BZ:35:ARG:HG3	1.52	0.74
24:CY:6:C:H42	24:CY:67:G:H1	1.35	0.74
27:D1:34:THR:HG21	27:D1:37:ILE:CD1	2.16	0.74
36:DA:99:U:H4'	36:DA:102:G:H1'	1.70	0.74
36:DA:1528(A):A:H62	36:DA:1541:G:N2	1.85	0.74
36:DA:607:U:OP1	41:DF:102:PRO:HA	1.88	0.74
47:DO:4:PRO:O	47:DO:5:GLN:HB2	1.88	0.74
55:DW:20:VAL:HG23	55:DW:47:VAL:HG21	1.69	0.74
58:DZ:29:TYR:HB3	58:DZ:34:ASN:HB2	1.68	0.74
13:AM:120:LYS:HA	13:AM:120:LYS:CE	2.18	0.74
24:AY:6:C:H42	24:AY:67:G:H1	1.36	0.74
36:BA:300:A:H2'	36:BA:334:C:O2'	1.87	0.74
36:BA:481:G:OP2	57:BY:47:LYS:HD3	1.88	0.74
36:BA:888:C:H2'	36:BA:889:C:H4'	1.68	0.74
40:BE:51:PHE:O	40:BE:74:PRO:HB2	1.87	0.74
51:BS:36:TYR:N	51:BS:36:TYR:CD1	2.56	0.74
53:BU:16:LYS:O	53:BU:20:LEU:HD23	1.88	0.74
7:CG:113:GLU:HG2	7:CG:119:ARG:HG2	1.69	0.74
22:CV:61:C:H5'	22:CV:62:C:OP2	1.87	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:20:VAL:HG12	25:CZ:115:GLN:HG3	1.69	0.74
31:D5:36:CYS:O	31:D5:38:ALA:N	2.21	0.74
36:DA:2131:G:H1'	36:DA:2133:G:H21	1.52	0.74
41:DF:84:VAL:C	41:DF:86:GLY:H	1.91	0.74
43:DH:40:GLU:OE1	43:DH:55:PRO:HG3	1.87	0.74
43:DH:85:LYS:HZ1	43:DH:86:GLU:HA	1.52	0.74
4:AD:23:GLY:HA3	4:AD:112:VAL:HG22	1.68	0.74
13:AM:112:GLY:O	13:AM:114:ARG:N	2.21	0.74
16:AP:20:VAL:HG21	16:AP:32:TYR:CG	2.23	0.74
28:B2:46:GLN:O	28:B2:50:ILE:HD13	1.87	0.74
32:B6:10:LEU:H	32:B6:10:LEU:HD23	1.51	0.74
36:BA:1434:A:H61	36:BA:1558:A:N6	1.85	0.74
2:CB:61:LEU:O	2:CB:64:ARG:HG2	1.87	0.74
21:CU:6:ARG:HD3	21:CU:15:ARG:NH1	2.01	0.74
36:DA:203:C:H3'	36:DA:204:A:H5''	1.69	0.74
43:DH:83:TYR:HB2	43:DH:134:SER:HA	1.70	0.74
51:DS:19:LYS:HB3	51:DS:20:ARG:HH22	1.53	0.74
11:AK:79:SER:OG	11:AK:106:LYS:HD2	1.87	0.73
13:AM:82:MET:CG	13:AM:83:ASP:N	2.50	0.73
28:B2:7:ARG:HA	28:B2:10:LEU:CD1	2.18	0.73
42:BG:95:ARG:O	42:BG:96:ARG:O	2.05	0.73
54:BV:99:ILE:H	54:BV:99:ILE:CD1	2.01	0.73
7:CG:73:MET:HG2	7:CG:90:GLU:HA	1.68	0.73
9:CI:4:TYR:CE2	9:CI:88:TYR:HB2	2.22	0.73
10:CJ:75:ILE:HG13	10:CJ:76:ASN:H	1.53	0.73
25:CZ:110:ASP:HB3	25:CZ:113:MET:CE	2.18	0.73
34:D8:4:MET:O	34:D8:62:LEU:HD12	1.88	0.73
36:DA:1516:C:H2'	36:DA:1517:G:C5'	2.17	0.73
36:DA:2134:A:H62	36:DA:2157:G:H1'	1.53	0.73
36:DA:284:U:H2'	36:DA:285:C:C6	2.23	0.73
56:DX:35:THR:HG22	56:DX:37:THR:N	2.02	0.73
13:AM:12:ASN:HD22	13:AM:12:ASN:H	1.36	0.73
13:AM:88:ARG:HH11	13:AM:88:ARG:HG2	1.53	0.73
24:AY:26:A:H2'	24:AY:27:C:O4'	1.88	0.73
36:BA:2189:U:H2'	36:BA:2190:G:C4'	2.17	0.73
36:BA:760:G:C2'	36:BA:761:A:H5'	2.18	0.73
41:BF:4:VAL:HA	41:BF:19:GLU:HB3	1.69	0.73
41:BF:25:PRO:HB3	41:BF:119:ARG:CB	2.16	0.73
43:BH:167:GLU:HB3	43:BH:168:PRO:HD2	1.68	0.73
9:CI:53:VAL:HG22	9:CI:95:LYS:HZ3	1.52	0.73
36:DA:330:A:O2'	36:DA:331:A:H8	1.71	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2303:G:O2'	42:DG:132:ASN:HB2	1.88	0.73
49:DQ:66:ILE:HA	49:DQ:104:PHE:HB3	1.69	0.73
54:DV:29:PRO:HA	54:DV:61:VAL:HG22	1.69	0.73
32:B6:17:LYS:HB3	32:B6:18:ARG:HH12	1.53	0.73
36:BA:330:A:O2'	36:BA:331:A:H8	1.72	0.73
38:BC:79:LYS:HG2	38:BC:118:ASP:OD2	1.88	0.73
39:BD:134:ARG:HH12	39:BD:135:PHE:HE1	1.36	0.73
1:CA:572:A:H5'	1:CA:573:A:OP2	1.89	0.73
3:CC:5:ILE:HD13	3:CC:5:ILE:N	2.03	0.73
15:CO:25:THR:O	15:CO:29:VAL:HG23	1.88	0.73
48:DP:23:PRO:HB2	48:DP:33:ARG:CG	2.18	0.73
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.23	0.73
22:AW:38:A:H3'	22:AW:39:U:H5''	1.71	0.73
26:B0:40:GLN:HE22	26:B0:45:PHE:H	1.33	0.73
36:BA:1720:U:H3'	36:BA:1721:G:H5''	1.70	0.73
36:BA:760:G:H2'	36:BA:761:A:H5'	1.69	0.73
38:BC:120:MET:HA	38:BC:123:VAL:HG12	1.70	0.73
42:BG:46:ALA:HB3	42:BG:88:ILE:CD1	2.18	0.73
51:BS:49:VAL:HG12	51:BS:50:SER:N	2.04	0.73
2:CB:8:LYS:HB2	2:CB:9:GLU:OE1	1.88	0.73
6:CF:87:ARG:HG2	6:CF:87:ARG:HH11	1.53	0.73
34:D8:43:GLN:O	34:D8:44:LYS:HD2	1.88	0.73
16:AP:20:VAL:HG21	16:AP:32:TYR:CB	2.18	0.73
36:BA:363(F):A:HO2'	36:BA:364:C:H5	1.34	0.73
36:BA:89:G:H3'	36:BA:90:U:C5'	2.18	0.73
36:BA:969:U:H2'	36:BA:970:C:C6	2.23	0.73
38:BC:27:ARG:CD	38:BC:182:PRO:CG	2.61	0.73
40:BE:4:ILE:HD13	40:BE:28:ALA:HB1	1.70	0.73
42:BG:47:LYS:CG	42:BG:81:LYS:HD2	2.18	0.73
48:BP:58:THR:O	48:BP:61:ARG:NE	2.21	0.73
51:BS:92:TYR:CG	51:BS:93:LYS:N	2.57	0.73
51:BS:96:GLY:O	51:BS:98:VAL:N	2.20	0.73
57:BY:42:VAL:HG12	57:BY:65:ALA:HB3	1.70	0.73
32:D6:11:LEU:CD1	32:D6:26:ASN:HB2	2.18	0.73
34:D8:14:VAL:HG23	34:D8:24:ALA:HB2	1.71	0.73
36:DA:2287:A:C2	36:DA:2346:A:N1	2.57	0.73
36:DA:2491:U:H5'	36:DA:2570:G:H5''	1.69	0.73
40:DE:128:SER:OG	40:DE:129:HIS:N	2.22	0.73
41:DF:185:ASP:HA	41:DF:188:ARG:CG	2.19	0.73
57:DY:95:LYS:HE3	57:DY:99:CYS:O	1.87	0.73
9:AI:85:LEU:HD11	9:AI:96:LEU:HD21	1.71	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:64:TRP:O	13:AM:66:LEU:HD13	1.88	0.73
36:BA:2137:C:H2'	36:BA:2138:C:C6	2.24	0.73
36:BA:2415:G:H4'	48:BP:66:GLY:C	2.09	0.73
42:BG:82:LEU:HD13	42:BG:87:PRO:CB	2.12	0.73
48:BP:23:PRO:HB2	48:BP:33:ARG:CG	2.17	0.73
36:DA:1434:A:H61	36:DA:1558:A:N6	1.85	0.73
36:DA:1747(A):G:H2'	36:DA:1748:G:C5'	2.19	0.73
39:DD:30:GLU:CG	39:DD:63:ARG:HE	2.01	0.73
43:DH:91:GLY:HA3	43:DH:94:TYR:CD2	2.23	0.73
48:DP:105:LEU:HD12	48:DP:105:LEU:N	2.03	0.73
51:DS:59:LYS:HG2	51:DS:60:GLY:N	2.01	0.73
58:DZ:151:HIS:CB	58:DZ:170:THR:HA	2.18	0.73
1:AA:1015:A:H2'	1:AA:1016:A:C8	2.23	0.73
2:AB:130:ARG:HH21	2:AB:134:GLU:HG3	1.52	0.73
3:AC:5:ILE:HD13	3:AC:5:ILE:N	2.03	0.73
28:B2:57:ILE:O	28:B2:61:LEU:HG	1.89	0.73
34:B8:62:LEU:HD13	36:BA:242:G:C5'	2.15	0.73
36:BA:320:A:C5	41:BF:136:THR:HG21	2.24	0.73
36:BA:83:G:N2	36:BA:102:G:H2'	2.03	0.73
29:D3:6:VAL:HG12	29:D3:56:VAL:HG22	1.71	0.73
36:DA:1038:C:H2'	36:DA:1039:G:H5''	1.68	0.73
36:DA:585:G:H2'	36:DA:1251:C:H42	1.53	0.73
36:DA:1779:U:C5	36:DA:1784:A:N7	2.56	0.73
42:DG:79:ASN:O	42:DG:80:PHE:HB2	1.89	0.73
56:DX:44:GLU:HG3	56:DX:50:LYS:HA	1.71	0.73
28:B2:6:VAL:O	28:B2:10:LEU:HG	1.89	0.73
36:BA:2287:A:C2	36:BA:2346:A:N1	2.56	0.73
36:BA:2502:G:H5''	36:BA:2503:A:H5''	1.69	0.73
36:BA:761:A:O5'	36:BA:761:A:C8	2.41	0.73
47:BO:87:ILE:CG2	47:BO:91:LEU:HA	2.18	0.73
52:BT:28:VAL:HG11	52:BT:46:GLU:HG3	1.70	0.73
1:CA:1104:G:O5'	2:CB:111:ARG:HD2	1.87	0.73
36:DA:1051:G:H2'	36:DA:1052:C:C5	2.23	0.73
6:AF:43:LEU:HD22	6:AF:43:LEU:H	1.54	0.73
7:AG:79:ARG:HG2	7:AG:84:ASN:CA	2.12	0.73
34:B8:52:LYS:H	34:B8:53:PRO:HD2	1.51	0.73
42:BG:153:ARG:HB3	42:BG:153:ARG:NH1	2.04	0.73
43:BH:85:LYS:NZ	43:BH:86:GLU:HA	2.04	0.73
52:BT:28:VAL:HG22	52:BT:47:GLY:H	1.50	0.73
55:BW:22:ASP:HA	55:BW:25:ARG:HH12	1.54	0.73
3:CC:83:ARG:O	3:CC:86:VAL:HG22	1.88	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:80:LYS:O	10:CJ:83:GLU:HB3	1.87	0.73
13:CM:120:LYS:CE	13:CM:120:LYS:HA	2.18	0.73
36:DA:1450(A):C:H2'	36:DA:1451:C:C6	2.22	0.73
36:DA:2853:C:H2'	36:DA:2854:G:C8	2.22	0.73
42:DG:84:LYS:HD2	42:DG:84:LYS:H	1.53	0.73
53:DU:56:ASP:O	53:DU:60:LEU:HG	1.88	0.73
1:AA:977:A:H2'	1:AA:977:A:N3	2.04	0.73
36:BA:1022:G:N2	36:BA:1142(A):A:H2	1.87	0.73
39:BD:30:GLU:HG3	39:BD:63:ARG:HE	1.52	0.73
48:BP:112:LEU:H	48:BP:128:HIS:CD2	2.07	0.73
1:CA:977:A:N3	1:CA:977:A:H2'	2.03	0.73
2:CB:14:GLY:O	2:CB:15:VAL:HG13	1.88	0.73
11:CK:33:THR:HG22	11:CK:39:PRO:HA	1.69	0.73
36:DA:654(C):G:H2'	36:DA:654(D):G:H5'	1.70	0.73
36:DA:761:A:C8	36:DA:761:A:O5'	2.41	0.73
41:DF:185:ASP:OD1	41:DF:188:ARG:HD3	1.89	0.73
50:DR:2:ARG:HG3	50:DR:2:ARG:HH11	1.53	0.73
53:DU:91:ASP:O	53:DU:95:LEU:HB2	1.89	0.73
36:DA:328:U:H4'	57:DY:68:HIS:ND1	2.04	0.73
9:AI:118:LYS:O	9:AI:119:ALA:HB3	1.89	0.72
24:AY:8:4SU:H5''	24:AY:8:4SU:H6	1.70	0.72
32:B6:30:THR:O	32:B6:31:PRO:C	2.26	0.72
34:B8:14:VAL:HG23	34:B8:24:ALA:HB2	1.69	0.72
36:BA:581:C:H2'	36:BA:582:G:C8	2.22	0.72
40:BE:105:THR:HB	40:BE:197:ILE:HG23	1.71	0.72
42:BG:106:LEU:O	42:BG:110:ALA:HB3	1.88	0.72
58:BZ:102:LEU:HD23	58:BZ:137:ILE:HB	1.69	0.72
1:CA:1502:A:H2	1:CA:1505:G:N1	1.84	0.72
3:CC:58:GLU:H	3:CC:65:ALA:HB3	1.54	0.72
8:CH:114:THR:HG22	8:CH:130:GLY:O	1.89	0.72
24:CY:26:A:H2'	24:CY:27:C:O4'	1.89	0.72
24:CY:8:4SU:H6	24:CY:8:4SU:H5''	1.71	0.72
36:DA:1368:G:O2'	36:DA:1369:G:H5'	1.89	0.72
36:DA:760:G:C2'	36:DA:761:A:H5'	2.19	0.72
42:DG:9:ARG:HG3	42:DG:13:GLU:OE2	1.89	0.72
48:DP:112:LEU:H	48:DP:128:HIS:CD2	2.07	0.72
48:DP:30:THR:CG2	48:DP:31:ALA:N	2.51	0.72
50:DR:99:LYS:N	50:DR:99:LYS:HD2	2.01	0.72
57:DY:28:LYS:HB3	57:DY:37:VAL:HB	1.71	0.72
1:AA:624:C:H4'	16:AP:11:SER:H	1.54	0.72
22:AV:42:C:H6	22:AV:42:C:H5'	1.54	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AV:61:C:H5'	22:AV:62:C:OP2	1.89	0.72
36:BA:28:A:N6	36:BA:512:G:H1'	2.03	0.72
38:BC:123:VAL:HG21	38:BC:127:LEU:HD23	1.61	0.72
41:BF:160:ASN:HD21	41:BF:162:LEU:HD13	1.53	0.72
58:BZ:67:LEU:HD23	58:BZ:90:VAL:HG11	1.71	0.72
1:CA:1271:G:H2'	1:CA:1272:G:C5'	2.17	0.72
1:CA:520:A:N1	1:CA:536:C:H1'	2.04	0.72
4:CD:121:VAL:O	4:CD:134:ASP:HA	1.89	0.72
8:CH:112:LEU:HD23	8:CH:112:LEU:N	2.04	0.72
9:CI:28:VAL:HG12	9:CI:29:ASN:N	2.02	0.72
19:CS:78:ARG:HB2	19:CS:81:ARG:NH1	2.04	0.72
28:D2:8:LYS:HG2	28:D2:11:GLU:OE2	1.89	0.72
36:DA:1639:U:C2'	36:DA:1640:C:H5''	2.19	0.72
36:DA:89:G:H3'	36:DA:90:U:C5'	2.18	0.72
46:DN:86:PRO:HG2	46:DN:89:LYS:HG2	1.70	0.72
53:DU:66:ASN:ND2	53:DU:76:TYR:H	1.87	0.72
2:AB:165:VAL:HG23	2:AB:166:ASP:N	2.04	0.72
13:AM:91:ARG:HD3	13:AM:97:PRO:O	1.89	0.72
16:AP:14:ASN:N	16:AP:15:PRO:HD3	2.04	0.72
19:AS:17:GLU:O	19:AS:21:GLU:HG2	1.90	0.72
28:B2:25:VAL:CG2	28:B2:64:LEU:HD12	2.18	0.72
28:B2:18:PRO:HB2	28:B2:72:ALA:HA	1.68	0.72
36:BA:543:C:H42	36:BA:549:G:H1	1.36	0.72
56:BX:35:THR:HG22	56:BX:37:THR:N	2.03	0.72
58:BZ:69:THR:CG2	58:BZ:90:VAL:HA	2.19	0.72
49:BQ:141:GLN:HB3	58:BZ:99:TYR:CE1	2.24	0.72
1:CA:538:G:OP2	12:CL:115:LYS:HG3	1.90	0.72
13:CM:101:GLN:HE21	13:CM:101:GLN:N	1.87	0.72
36:DA:1022:G:N2	36:DA:1142(A):A:H2	1.84	0.72
36:DA:1087:G:O2'	36:DA:1089:G:H5'	1.89	0.72
36:DA:84:A:H2'	57:DY:9:LYS:HZ3	1.54	0.72
39:DD:71:ASP:HB2	39:DD:103:ARG:NH2	2.00	0.72
54:DV:19:LYS:HB2	54:DV:96:ILE:HD11	1.72	0.72
4:AD:11:LEU:HD13	4:AD:66:ARG:HD3	1.70	0.72
32:B6:28:ARG:HA	32:B6:32:ASN:HD22	1.54	0.72
56:BX:10:ALA:O	56:BX:28:PHE:HB2	1.89	0.72
57:BY:73:ARG:NH2	57:BY:82:PRO:HA	2.04	0.72
9:CI:19:LEU:HD23	9:CI:20:ARG:N	2.04	0.72
9:CI:58:HIS:CD2	9:CI:58:HIS:O	2.42	0.72
22:CW:38:A:H3'	22:CW:39:U:H5''	1.71	0.72
1:AA:407:G:O2'	4:AD:116:GLN:HG3	1.89	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1104:C:H2'	36:BA:1105:U:H6	1.53	0.72
36:BA:1517:G:H5'	36:BA:1517:G:C8	2.24	0.72
47:BO:1:MET:HG3	47:BO:67:LYS:HG2	1.72	0.72
51:BS:89:ARG:CG	51:BS:92:TYR:HA	2.19	0.72
36:BA:328:U:H4'	57:BY:68:HIS:ND1	2.04	0.72
3:CC:188:LEU:HD12	3:CC:195:VAL:CG1	2.18	0.72
13:CM:88:ARG:HG2	13:CM:88:ARG:HH11	1.55	0.72
22:CV:41:C:H2'	22:CV:42:C:C5'	2.13	0.72
32:D6:15:GLU:HB2	32:D6:20:ASN:CB	2.19	0.72
36:DA:2126:A:H4'	36:DA:2127:G:O5'	1.89	0.72
39:DD:27:THR:CG2	39:DD:83:GLU:HG2	2.19	0.72
41:DF:132:VAL:HG13	41:DF:133:ASN:ND2	2.05	0.72
47:DO:87:ILE:CG2	47:DO:91:LEU:HA	2.19	0.72
53:DU:108:GLU:HG3	54:DV:44:LYS:HD3	1.70	0.72
56:DX:57:LEU:HD22	56:DX:57:LEU:O	1.89	0.72
36:DA:481:G:OP2	57:DY:47:LYS:HD3	1.90	0.72
20:AT:57:ARG:HH11	20:AT:102:GLY:CA	2.02	0.72
29:B3:6:VAL:HG12	29:B3:56:VAL:HG22	1.70	0.72
36:BA:1210:A:H8	36:BA:1210:A:H5'	1.54	0.72
54:BV:47:VAL:HG12	54:BV:52:VAL:HB	1.71	0.72
6:CF:61:LEU:HB3	6:CF:63:TYR:HE1	1.54	0.72
28:D2:21:LEU:HB3	28:D2:64:LEU:HD12	1.69	0.72
36:DA:2579:C:O2'	40:DE:131:ALA:HB2	1.88	0.72
5:AE:101:ILE:O	5:AE:120:THR:HB	1.89	0.72
32:B6:15:GLU:HB2	32:B6:20:ASN:CB	2.20	0.72
53:BU:108:GLU:HG3	54:BV:44:LYS:HD3	1.70	0.72
57:BY:28:LYS:HB3	57:BY:37:VAL:HB	1.72	0.72
36:BA:328:U:H4'	57:BY:68:HIS:CE1	2.23	0.72
7:CG:16:LEU:CD1	9:CI:42:ARG:HA	2.19	0.72
36:DA:1498:C:H2'	36:DA:1499:C:H5''	1.71	0.72
36:DA:500:G:N2	36:DA:502:A:H3'	2.05	0.72
36:DA:774:A:H2	36:DA:787:U:HO2'	1.37	0.72
40:DE:54:GLN:O	40:DE:75:VAL:HG23	1.88	0.72
50:DR:117:VAL:O	50:DR:118:GLU:HB2	1.89	0.72
50:DR:52:ILE:HB	50:DR:94:TYR:HD2	1.54	0.72
1:AA:537:G:H2'	1:AA:538:G:C8	2.25	0.72
9:AI:19:LEU:HD23	9:AI:20:ARG:N	2.03	0.72
22:AV:52:G:H1	22:AV:62:C:H42	1.37	0.72
48:BP:56:SER:O	48:BP:58:THR:N	2.22	0.72
50:BR:117:VAL:O	50:BR:118:GLU:HB2	1.89	0.72
9:CI:114:TYR:HE1	10:CJ:59:SER:HA	1.55	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:81:LEU:HD12	13:CM:86:CYS:SG	2.29	0.72
36:DA:1498:C:C2'	36:DA:1499:C:H5''	2.18	0.72
36:DA:760:G:H2'	36:DA:761:A:H5'	1.70	0.72
38:DC:79:LYS:HA	38:DC:97:GLU:OE1	1.90	0.72
6:AF:46:ARG:HH22	18:AR:37:VAL:CG1	2.03	0.72
10:AJ:6:ILE:HG22	10:AJ:98:ILE:HD12	1.72	0.72
13:AM:97:PRO:HA	13:AM:110:ARG:HD3	1.72	0.72
1:AA:280:C:O2	17:AQ:38:ARG:HG3	1.88	0.72
26:B0:27:GLU:HB3	26:B0:69:PHE:CD1	2.25	0.72
36:BA:1516:C:H2'	36:BA:1517:G:C5'	2.18	0.72
36:BA:1747(A):G:H2'	36:BA:1748:G:C5'	2.20	0.72
40:BE:24:THR:HG22	40:BE:186:GLY:HA2	1.72	0.72
43:BH:85:LYS:HD3	43:BH:133:VAL:HB	1.71	0.72
43:BH:89:ILE:O	43:BH:89:ILE:HG13	1.88	0.72
51:BS:19:LYS:HB3	51:BS:20:ARG:HH22	1.55	0.72
26:D0:27:GLU:HB3	26:D0:69:PHE:CD1	2.25	0.72
34:D8:61:LEU:HD22	34:D8:62:LEU:H	1.55	0.72
48:DP:97:PRO:O	48:DP:98:GLU:HB3	1.89	0.72
36:DA:958:U:H5''	49:DQ:14:ARG:CD	2.18	0.72
51:DS:17:ARG:HA	51:DS:20:ARG:NH1	2.05	0.72
49:DQ:134:ARG:HD2	58:DZ:122:ARG:HH22	1.52	0.72
11:AK:33:THR:HG22	11:AK:39:PRO:HA	1.71	0.72
11:AK:57:THR:HG23	11:AK:60:ALA:H	1.55	0.72
12:AL:38:THR:HG21	12:AL:59:ARG:HG3	1.70	0.72
34:B8:6:THR:HB	34:B8:11:LYS:NZ	2.05	0.72
36:BA:2208:A:H1'	36:BA:2219:G:C5	2.24	0.72
40:BE:101:ARG:NE	40:BE:171:GLU:HB2	2.05	0.72
48:BP:30:THR:CG2	48:BP:31:ALA:N	2.52	0.72
48:BP:84:ASN:HD22	48:BP:84:ASN:N	1.88	0.72
58:BZ:29:TYR:HB3	58:BZ:34:ASN:CB	2.18	0.72
1:CA:1504:G:OP1	1:CA:1507:A:H4'	1.90	0.72
16:CP:20:VAL:HG21	16:CP:32:TYR:CB	2.19	0.72
32:D6:33:LYS:HA	32:D6:33:LYS:CE	2.14	0.72
36:DA:1104:C:H2'	36:DA:1105:U:H6	1.52	0.72
36:DA:611:C:H2'	36:DA:612:C:H6	1.55	0.72
36:DA:969:U:H2'	36:DA:970:C:C6	2.25	0.72
1:AA:192:U:C1'	20:AT:103:GLY:HA2	2.19	0.71
1:AA:942:G:H21	9:AI:124:GLN:NE2	1.86	0.71
8:AH:7:ALA:HB2	8:AH:85:ARG:HD3	1.71	0.71
22:AW:69:G:H2'	22:AW:70:G:H5''	1.71	0.71
36:BA:1528(A):A:H62	36:BA:1541:G:N2	1.88	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:35:LYS:HG2	39:BD:36:PRO:N	2.04	0.71
41:BF:185:ASP:HA	41:BF:188:ARG:CG	2.20	0.71
48:BP:24:GLY:CA	48:BP:33:ARG:NH1	2.53	0.71
51:BS:17:ARG:HA	51:BS:20:ARG:NH1	2.05	0.71
58:BZ:101:PRO:O	58:BZ:136:PHE:HA	1.89	0.71
1:CA:1053:G:C4'	1:CA:1054:C:H5'	2.15	0.71
8:CH:7:ALA:HB2	8:CH:85:ARG:HD3	1.70	0.71
1:CA:192:U:C1'	20:CT:103:GLY:HA2	2.20	0.71
31:D5:2:ALA:N	36:DA:747:U:C4	2.58	0.71
36:DA:1378:A:H4'	36:DA:1379:A:OP1	1.88	0.71
40:DE:105:THR:HB	40:DE:197:ILE:HG23	1.72	0.71
46:DN:58:ASP:O	46:DN:60:ILE:N	2.21	0.71
26:D0:7:LEU:HD13	49:DQ:85:LYS:HG3	1.71	0.71
1:AA:358:U:H2'	1:AA:359:U:C6	2.25	0.71
4:AD:59:ARG:HH21	4:AD:62:GLN:HG3	1.54	0.71
8:AH:112:LEU:N	8:AH:112:LEU:HD23	2.04	0.71
9:AI:91:ASP:C	9:AI:93:ARG:H	1.94	0.71
25:AZ:295:ARG:HH11	25:AZ:295:ARG:HG2	1.54	0.71
42:BG:76:SER:CA	42:BG:83:ARG:HB3	2.19	0.71
3:CC:134:ILE:HG22	3:CC:168:ALA:HB3	1.71	0.71
5:CE:12:LEU:HD12	5:CE:31:LEU:HB2	1.70	0.71
9:CI:19:LEU:HD21	9:CI:59:PHE:HD2	1.53	0.71
52:DT:3:ARG:O	52:DT:5:ALA:N	2.23	0.71
56:DX:10:ALA:O	56:DX:28:PHE:HB2	1.89	0.71
31:B5:2:ALA:N	36:BA:747:U:C4	2.58	0.71
40:BE:54:GLN:O	40:BE:75:VAL:HG23	1.89	0.71
43:BH:91:GLY:HA3	43:BH:94:TYR:CD2	2.25	0.71
52:BT:3:ARG:O	52:BT:5:ALA:N	2.22	0.71
56:BX:57:LEU:HD22	56:BX:57:LEU:O	1.90	0.71
1:CA:228:A:H5'	1:CA:228:A:C8	2.24	0.71
1:CA:405:U:H3'	1:CA:406:G:H5'	1.72	0.71
2:CB:204:ASN:HD22	2:CB:205:ASP:N	1.87	0.71
25:CZ:188:THR:HG21	25:CZ:193:ASN:HD22	1.55	0.71
22:CW:56:C:O4'	38:DC:132:GLY:HA3	1.91	0.71
39:DD:30:GLU:HG3	39:DD:63:ARG:HE	1.53	0.71
41:DF:4:VAL:HA	41:DF:19:GLU:HB3	1.70	0.71
42:DG:77:ILE:HG12	42:DG:82:LEU:O	1.89	0.71
48:DP:105:LEU:O	48:DP:106:LEU:HB2	1.90	0.71
36:DA:143:G:O4'	56:DX:37:THR:HG21	1.89	0.71
1:AA:192:U:H2'	1:AA:193:C:H6	1.52	0.71
7:AG:16:LEU:CD1	9:AI:42:ARG:HA	2.20	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:75:ILE:HG13	10:AJ:76:ASN:H	1.54	0.71
13:AM:101:GLN:HE21	13:AM:101:GLN:N	1.87	0.71
39:BD:30:GLU:CG	39:BD:63:ARG:HE	2.03	0.71
41:BF:36:VAL:O	41:BF:40:GLN:HG3	1.91	0.71
13:CM:8:GLU:OE1	13:CM:22:ILE:HA	1.90	0.71
13:CM:91:ARG:HD3	13:CM:97:PRO:O	1.90	0.71
16:CP:20:VAL:HG21	16:CP:32:TYR:CG	2.25	0.71
36:DA:1970:A:H5''	36:DA:1971:A:OP1	1.90	0.71
52:DT:58:ASN:H	52:DT:58:ASN:HD22	1.37	0.71
52:DT:2:ASN:ND2	52:DT:7:ILE:HD11	2.03	0.71
54:DV:21:ARG:O	54:DV:22:VAL:HG13	1.89	0.71
57:DY:13:VAL:HG23	57:DY:73:ARG:O	1.91	0.71
57:DY:42:VAL:HG12	57:DY:65:ALA:HB3	1.73	0.71
5:AE:12:LEU:HD12	5:AE:31:LEU:HB2	1.70	0.71
11:AK:27:ASN:HD22	11:AK:28:THR:H	1.35	0.71
13:AM:89:GLY:O	13:AM:93:ARG:HD2	1.89	0.71
28:B2:35:LEU:CD2	28:B2:50:ILE:HG13	2.20	0.71
41:BF:157:VAL:HG12	41:BF:176:LEU:HB3	1.69	0.71
48:BP:105:LEU:O	48:BP:106:LEU:HB2	1.90	0.71
48:BP:97:PRO:O	48:BP:98:GLU:HB3	1.91	0.71
4:CD:23:GLY:HA3	4:CD:112:VAL:HG22	1.73	0.71
11:CK:27:ASN:HD22	11:CK:28:THR:N	1.88	0.71
20:CT:45:GLN:HE22	20:CT:46:GLU:HG3	1.55	0.71
20:CT:57:ARG:HH11	20:CT:102:GLY:CA	2.02	0.71
36:DA:1409:C:H2'	36:DA:1410:G:C8	2.26	0.71
38:DC:79:LYS:HG2	38:DC:118:ASP:OD2	1.90	0.71
41:DF:84:VAL:O	41:DF:86:GLY:N	2.23	0.71
43:DH:85:LYS:NZ	43:DH:86:GLU:HA	2.05	0.71
50:DR:55:ALA:HB2	50:DR:79:LEU:HD11	1.71	0.71
51:DS:49:VAL:HG12	51:DS:50:SER:N	2.05	0.71
36:DA:328:U:H4'	57:DY:68:HIS:CE1	2.25	0.71
1:AA:1392:G:N2	1:AA:1502:A:C8	2.59	0.71
2:AB:204:ASN:HD22	2:AB:205:ASP:N	1.89	0.71
3:AC:58:GLU:H	3:AC:65:ALA:HB3	1.54	0.71
38:BC:27:ARG:HE	38:BC:182:PRO:CB	2.03	0.71
42:BG:44:GLY:CA	42:BG:88:ILE:HG21	2.20	0.71
43:BH:121:ILE:HG23	43:BH:133:VAL:HG13	1.72	0.71
47:BO:114:ILE:HD12	47:BO:114:ILE:H	1.54	0.71
48:BP:105:LEU:HD12	48:BP:105:LEU:N	2.04	0.71
50:BR:14:SER:HA	50:BR:17:ARG:HH12	1.55	0.71
4:CD:30:LYS:C	4:CD:32:ALA:H	1.93	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:97:PRO:HA	13:CM:110:ARG:HD3	1.72	0.71
27:D1:89:GLU:HA	27:D1:92:LYS:HE2	1.70	0.71
36:DA:1210:A:H5'	36:DA:1210:A:H8	1.55	0.71
43:DH:85:LYS:HD3	43:DH:133:VAL:HB	1.71	0.71
58:DZ:152:ALA:O	58:DZ:155:LEU:HD22	1.90	0.71
2:AB:87:ARG:NH2	2:AB:232:PRO:HA	2.06	0.71
3:AC:15:THR:HG21	3:AC:181:ASN:HA	1.72	0.71
3:AC:83:ARG:O	3:AC:86:VAL:HG22	1.91	0.71
30:B4:12:ALA:HB2	30:B4:29:PRO:HA	1.73	0.71
36:BA:1087:G:O2'	36:BA:1089:G:H5'	1.89	0.71
36:BA:143:G:O4'	56:BX:37:THR:HG21	1.90	0.71
36:BA:914:C:H2'	36:BA:915:C:H5'	1.72	0.71
36:BA:99:U:H4'	36:BA:102:G:H1'	1.73	0.71
51:BS:40:ILE:HG22	51:BS:47:THR:HA	1.72	0.71
51:BS:74:ALA:HB1	51:BS:103:GLU:HG2	1.71	0.71
56:BX:44:GLU:HG3	56:BX:50:LYS:HA	1.73	0.71
1:CA:407:G:O2'	4:CD:116:GLN:HG3	1.91	0.71
3:CC:134:ILE:HG21	3:CC:167:TRP:O	1.89	0.71
32:D6:6:ARG:HB3	32:D6:6:ARG:NH1	2.05	0.71
36:DA:2139:C:H2'	36:DA:2140:C:C6	2.24	0.71
36:DA:523:C:C2'	36:DA:524:U:H5'	2.21	0.71
39:DD:35:LYS:HG2	39:DD:36:PRO:N	2.06	0.71
40:DE:7:VAL:HG12	40:DE:27:LEU:HB3	1.71	0.71
40:DE:4:ILE:CD1	40:DE:28:ALA:HB1	2.20	0.71
42:DG:69:ALA:O	42:DG:71:THR:HG22	1.91	0.71
46:DN:58:ASP:C	46:DN:60:ILE:H	1.93	0.71
50:DR:14:SER:HA	50:DR:17:ARG:HH12	1.54	0.71
7:AG:113:GLU:HG2	7:AG:119:ARG:HG2	1.72	0.71
52:BT:85:LYS:HB3	52:BT:85:LYS:HZ2	1.55	0.71
54:BV:21:ARG:O	54:BV:22:VAL:HG13	1.90	0.71
1:CA:194:C:H2'	1:CA:195:A:H5''	1.73	0.71
4:CD:5:ILE:HA	4:CD:115:ARG:HH12	1.54	0.71
1:CA:280:C:O2	17:CQ:38:ARG:HG3	1.90	0.71
22:CW:69:G:H2'	22:CW:70:G:H5''	1.71	0.71
36:DA:1221(A):C:H2'	36:DA:1222:C:H6	1.55	0.71
36:DA:2577:A:H5''	36:DA:2578:G:H5'	1.73	0.71
38:DC:120:MET:HA	38:DC:123:VAL:HG12	1.71	0.71
39:DD:30:GLU:H	39:DD:35:LYS:HZ1	1.37	0.71
36:DA:833:U:H5''	48:DP:48:PRO:HB3	1.73	0.71
25:AZ:263:ARG:HB2	25:AZ:263:ARG:NH1	2.06	0.71
36:BA:266:G:C2'	36:BA:267:C:H5''	2.19	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BB:91:C:H5'	49:BQ:17:LEU:O	1.90	0.71
40:BE:105:THR:HG21	40:BE:164:ARG:NH1	2.05	0.71
48:BP:126:VAL:HA	48:BP:145:PRO:CB	2.21	0.71
1:CA:1218:C:H2'	1:CA:1219:U:C6	2.25	0.71
13:CM:82:MET:CG	13:CM:83:ASP:N	2.53	0.71
20:CT:26:ASN:ND2	20:CT:26:ASN:H	1.88	0.71
31:D5:4:HIS:HB3	31:D5:5:PRO:CD	2.12	0.71
43:DH:89:ILE:O	43:DH:89:ILE:HG13	1.89	0.71
48:DP:147:LEU:HG	48:DP:148:LEU:H	1.55	0.71
48:DP:58:THR:O	48:DP:58:THR:HG22	1.91	0.71
28:B2:47:ASN:CA	28:B2:50:ILE:HB	2.14	0.71
40:BE:7:VAL:HG12	40:BE:27:LEU:HB3	1.73	0.71
41:BF:29:ASN:ND2	41:BF:32:LEU:HB2	2.06	0.71
46:BN:86:PRO:HG2	46:BN:89:LYS:HG2	1.71	0.71
54:BV:25:LEU:H	54:BV:92:THR:HG21	1.55	0.71
58:BZ:152:ALA:HB1	58:BZ:167:PRO:HB2	1.72	0.71
2:CB:165:VAL:HG23	2:CB:166:ASP:N	2.06	0.71
9:CI:91:ASP:C	9:CI:93:ARG:H	1.94	0.71
13:CM:23:TYR:CE2	13:CM:70:LEU:HD22	2.26	0.71
36:DA:2145:C:H5''	36:DA:2146:C:OP2	1.91	0.71
50:DR:7:GLY:O	50:DR:8:ARG:NE	2.24	0.71
51:DS:89:ARG:CG	51:DS:92:TYR:HA	2.21	0.71
8:AH:55:GLY:C	8:AH:56:LYS:HD2	2.12	0.70
28:B2:43:GLN:C	28:B2:45:SER:H	1.94	0.70
30:B4:30:GLU:C	30:B4:31:ILE:HD12	2.10	0.70
33:B7:34:ARG:NH1	33:B7:34:ARG:HG3	1.99	0.70
36:BA:611:C:H2'	36:BA:612:C:H6	1.55	0.70
37:BB:20:C:C2'	37:BB:21:G:H5''	2.21	0.70
39:BD:71:ASP:CB	39:BD:103:ARG:HH22	2.02	0.70
41:BF:84:VAL:O	41:BF:86:GLY:N	2.24	0.70
43:BH:83:TYR:HB2	43:BH:134:SER:HA	1.72	0.70
48:BP:147:LEU:HG	48:BP:148:LEU:H	1.56	0.70
48:BP:96:THR:HG22	48:BP:126:VAL:HB	1.71	0.70
6:CF:91:VAL:HG11	18:CR:72:ARG:NH1	2.05	0.70
16:CP:14:ASN:N	16:CP:15:PRO:HD3	2.05	0.70
22:CV:42:C:H6	22:CV:42:C:H5'	1.54	0.70
34:D8:6:THR:HB	34:D8:11:LYS:NZ	2.06	0.70
36:DA:2136:C:H2'	36:DA:2137:C:C6	2.25	0.70
36:DA:2779:U:H1'	36:DA:2781:A:C5	2.26	0.70
36:DA:292:C:H2'	36:DA:293:U:C6	2.26	0.70
36:DA:637:A:OP2	48:DP:115:LEU:HB2	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DS:12:PHE:C	51:DS:12:PHE:HD1	1.94	0.70
54:DV:19:LYS:HG3	54:DV:20:LEU:N	2.05	0.70
1:AA:59:A:H3'	1:AA:331:G:H22	1.55	0.70
36:BA:1223:G:H5'	36:BA:1223:G:H8	1.56	0.70
36:BA:1301:A:HO2'	36:BA:1302:A:H2'	1.52	0.70
36:BA:2455:G:H2'	36:BA:2456:C:C6	2.25	0.70
40:BE:81:ILE:O	40:BE:81:ILE:HG22	1.90	0.70
41:BF:185:ASP:OD1	41:BF:188:ARG:HD3	1.91	0.70
43:BH:94:TYR:CD1	43:BH:107:VAL:HA	2.27	0.70
46:BN:62:VAL:HG22	46:BN:66:LYS:HD2	1.72	0.70
48:BP:16:ARG:HD3	48:BP:16:ARG:O	1.91	0.70
58:BZ:157:LEU:HD21	58:BZ:163:LEU:HD22	1.73	0.70
1:CA:498:U:HO2'	1:CA:499:A:H8	1.39	0.70
6:CF:46:ARG:HH22	18:CR:37:VAL:CG1	2.03	0.70
19:CS:11:VAL:CG1	19:CS:16:LEU:HD11	2.22	0.70
36:DA:1103:A:H5'	36:DA:1104:C:OP2	1.91	0.70
30:D4:25:TYR:CE2	42:DG:2:PRO:HB3	2.26	0.70
48:DP:84:ASN:HD22	48:DP:84:ASN:N	1.88	0.70
57:DY:45:VAL:HG12	57:DY:60:PHE:CD1	2.26	0.70
1:AA:572:A:H5'	1:AA:573:A:OP2	1.90	0.70
3:AC:40:ARG:O	3:AC:44:GLU:HG3	1.91	0.70
22:AV:41:C:H2'	22:AV:42:C:C5'	2.12	0.70
30:B4:12:ALA:HB1	30:B4:29:PRO:HA	1.72	0.70
36:BA:363(F):A:O2'	36:BA:364:C:H5	1.75	0.70
36:BA:523:C:C2'	36:BA:524:U:H5'	2.20	0.70
41:BF:132:VAL:HG13	41:BF:133:ASN:ND2	2.05	0.70
58:BZ:70:LEU:HD23	58:BZ:70:LEU:H	1.56	0.70
1:CA:1286:A:O2'	1:CA:1287:A:H5''	1.91	0.70
1:CA:59:A:H3'	1:CA:331:G:H22	1.55	0.70
22:CW:57:G:H2'	22:CW:58:A:H5'	1.71	0.70
30:D4:30:GLU:C	30:D4:31:ILE:HD12	2.11	0.70
36:DA:1517:G:C8	36:DA:1517:G:H5'	2.23	0.70
51:DS:106:ARG:NH1	51:DS:108:GLY:HA3	2.06	0.70
51:DS:92:TYR:CG	51:DS:93:LYS:N	2.58	0.70
53:DU:34:LYS:HE2	53:DU:34:LYS:HA	1.72	0.70
1:AA:520:A:N1	1:AA:536:C:H1'	2.07	0.70
6:AF:55:ASP:HB3	6:AF:57:GLN:NE2	2.05	0.70
15:AO:87:ILE:HG22	15:AO:88:ARG:N	2.05	0.70
28:B2:57:ILE:HG22	28:B2:61:LEU:CG	2.19	0.70
31:B5:40:LYS:HE2	31:B5:44:THR:O	1.92	0.70
36:BA:1378:A:H4'	36:BA:1379:A:OP1	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BF:178:PRO:HG2	41:BF:179:GLU:OE1	1.91	0.70
36:BA:1141:U:C2'	46:BN:63:THR:HG21	2.20	0.70
36:BA:833:U:H5''	48:BP:48:PRO:HB3	1.72	0.70
26:B0:7:LEU:HD13	49:BQ:85:LYS:HG3	1.72	0.70
3:CC:52:LEU:HD23	3:CC:52:LEU:H	1.54	0.70
11:CK:57:THR:HG23	11:CK:60:ALA:H	1.56	0.70
12:CL:38:THR:HG21	12:CL:59:ARG:HG3	1.71	0.70
30:D4:12:ALA:HB1	30:D4:29:PRO:HA	1.73	0.70
36:DA:548:A:H2'	36:DA:549:G:H5'	1.73	0.70
46:DN:3:THR:HG22	46:DN:4:TYR:H	1.55	0.70
46:DN:62:VAL:HG22	46:DN:66:LYS:HD2	1.72	0.70
52:DT:53:ARG:HH11	52:DT:53:ARG:CB	1.99	0.70
1:AA:299:G:H2'	1:AA:300:A:C8	2.27	0.70
13:AM:10:PRO:HB2	13:AM:18:ALA:CB	2.13	0.70
25:AZ:188:THR:HG21	25:AZ:193:ASN:HD22	1.55	0.70
36:BA:1103:A:H5'	36:BA:1104:C:OP2	1.92	0.70
36:BA:271(L):U:H5''	36:BA:271(M):G:C5'	2.19	0.70
37:BB:48:A:H4'	51:BS:95:HIS:HD2	1.54	0.70
51:BS:89:ARG:HH11	51:BS:89:ARG:HG2	1.55	0.70
2:CB:25:ASN:HD21	2:CB:27:LYS:HG3	1.54	0.70
25:CZ:150:VAL:O	25:CZ:154:VAL:HG23	1.92	0.70
41:DF:25:PRO:HB3	41:DF:119:ARG:CB	2.17	0.70
48:DP:147:LEU:HG	48:DP:148:LEU:N	2.06	0.70
1:AA:1129:C:O5'	1:AA:1130:A:H5'	1.92	0.70
1:AA:80:G:O2'	1:AA:81:U:H5'	1.90	0.70
36:BA:1301:A:O2'	36:BA:1302:A:C2'	2.34	0.70
36:BA:500:G:N2	36:BA:502:A:H3'	2.07	0.70
36:BA:935:C:H2'	36:BA:936:C:C6	2.27	0.70
42:BG:55:LYS:O	42:BG:59:GLU:HG3	1.92	0.70
53:BU:69:CYS:O	53:BU:74:LEU:HD12	1.90	0.70
54:BV:19:LYS:HG3	54:BV:20:LEU:N	2.06	0.70
55:BW:6:ILE:HG12	55:BW:104:THR:CG2	2.21	0.70
58:BZ:155:LEU:HD23	58:BZ:155:LEU:H	1.56	0.70
1:CA:1015:A:H2'	1:CA:1016:A:C8	2.26	0.70
1:CA:358:U:H2'	1:CA:359:U:H6	1.54	0.70
36:DA:708:C:H42	36:DA:723:G:H1	1.39	0.70
39:DD:24:ILE:HD13	39:DD:25:THR:H	1.57	0.70
42:DG:28:VAL:O	42:DG:31:VAL:HG12	1.91	0.70
51:DS:36:TYR:N	51:DS:36:TYR:CD1	2.56	0.70
1:AA:498:U:HO2'	1:AA:499:A:H8	1.40	0.70
2:AB:14:GLY:O	2:AB:15:VAL:HG13	1.90	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:109:GLY:O	4:AD:111:ALA:N	2.24	0.70
20:AT:63:ILE:HG21	20:AT:81:LYS:HG3	1.74	0.70
28:B2:47:ASN:O	28:B2:51:ARG:HB3	1.92	0.70
31:B5:48:GLU:O	31:B5:49:CYS:SG	2.49	0.70
36:BA:1169:G:H1	36:BA:1180:C:H42	1.40	0.70
36:BA:2145:C:H5''	36:BA:2146:C:OP2	1.92	0.70
36:BA:292:C:H2'	36:BA:293:U:C6	2.26	0.70
37:BB:13:A:O2'	37:BB:14:U:H3'	1.92	0.70
46:BN:61:ARG:HG3	46:BN:61:ARG:HH11	1.56	0.70
47:BO:86:ILE:HG22	47:BO:94:ARG:HB2	1.73	0.70
52:BT:27:THR:O	52:BT:28:VAL:CB	2.39	0.70
52:BT:58:ASN:ND2	52:BT:58:ASN:H	1.88	0.70
1:CA:434:U:H2'	1:CA:435:C:C6	2.27	0.70
10:CJ:50:ILE:CD1	10:CJ:50:ILE:H	1.96	0.70
13:CM:12:ASN:H	13:CM:12:ASN:HD22	1.39	0.70
31:D5:48:GLU:O	31:D5:49:CYS:SG	2.50	0.70
31:D5:54:GLY:H	31:D5:56:LYS:HZ1	1.37	0.70
32:D6:28:ARG:HA	32:D6:32:ASN:HD22	1.56	0.70
36:DA:363(F):A:O2'	36:DA:364:C:H5	1.72	0.70
36:DA:1141:U:C2'	46:DN:63:THR:HG21	2.20	0.70
48:DP:16:ARG:O	48:DP:16:ARG:HD3	1.92	0.70
7:AG:78:ARG:O	7:AG:78:ARG:HG3	1.92	0.70
35:B9:10:ILE:O	35:B9:10:ILE:HG22	1.92	0.70
36:BA:2139:C:H2'	36:BA:2140:C:C6	2.25	0.70
36:BA:628:G:H2'	36:BA:629:G:C5'	2.18	0.70
36:BA:935:C:H2'	36:BA:936:C:H6	1.57	0.70
39:BD:108:PRO:HG2	39:BD:111:LEU:HB2	1.72	0.70
39:BD:30:GLU:CD	39:BD:63:ARG:HE	1.94	0.70
40:BE:128:SER:OG	40:BE:129:HIS:N	2.23	0.70
41:BF:37:VAL:HG11	48:BP:7:ARG:NH1	2.01	0.70
42:BG:47:LYS:HZ3	42:BG:88:ILE:HD11	1.53	0.70
1:CA:537:G:H2'	1:CA:538:G:C8	2.25	0.70
3:CC:40:ARG:O	3:CC:44:GLU:HG3	1.92	0.70
4:CD:12:CYS:HA	4:CD:19:LEU:HD13	1.73	0.70
13:CM:112:GLY:O	13:CM:114:ARG:N	2.24	0.70
13:CM:89:GLY:O	13:CM:93:ARG:HD2	1.92	0.70
16:CP:67:THR:HB	16:CP:70:ALA:HB2	1.72	0.70
36:DA:1223:G:H5'	36:DA:1223:G:H8	1.56	0.70
39:DD:176:ARG:HH11	39:DD:176:ARG:HG2	1.56	0.70
30:D4:26:SER:HB3	42:DG:105:LYS:HZ1	1.57	0.70
43:DH:121:ILE:HG23	43:DH:133:VAL:HG13	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DT:27:THR:O	52:DT:28:VAL:CB	2.39	0.70
2:AB:118:LEU:HB3	2:AB:142:LEU:HD12	1.74	0.70
6:AF:61:LEU:HB3	6:AF:63:TYR:HE1	1.56	0.70
7:AG:79:ARG:CZ	22:AW:33:U:H4'	2.22	0.70
31:B5:55:ARG:O	31:B5:56:LYS:HD3	1.92	0.70
57:BY:45:VAL:HG12	57:BY:60:PHE:CD1	2.27	0.70
49:BQ:22:LYS:H	58:BZ:78:LYS:HZ1	1.37	0.70
1:CA:1305:G:H5'	21:CU:4:GLY:HA3	1.73	0.70
1:CA:80:G:O2'	1:CA:81:U:H5'	1.91	0.70
2:CB:118:LEU:HB3	2:CB:142:LEU:HD12	1.72	0.70
3:CC:7:PRO:O	3:CC:11:ARG:HG2	1.92	0.70
3:CC:95:THR:HG23	3:CC:97:LYS:HD2	1.73	0.70
6:CF:43:LEU:H	6:CF:43:LEU:HD22	1.55	0.70
25:CZ:263:ARG:HB2	25:CZ:263:ARG:NH1	2.07	0.70
36:DA:1058:G:C2'	36:DA:1059:G:H5''	2.22	0.70
36:DA:18:C:O3'	53:DU:23:GLY:HA2	1.92	0.70
1:AA:1036:G:H5''	1:AA:1037:C:C5	2.26	0.70
4:AD:59:ARG:NH2	4:AD:62:GLN:HG3	2.06	0.70
1:AA:538:G:OP2	12:AL:115:LYS:HG3	1.92	0.70
22:AW:38:A:C3'	22:AW:39:U:H5''	2.22	0.70
36:BA:1279:G:H4'	50:BR:31:HIS:HD2	1.51	0.70
39:BD:129:ASN:O	39:BD:193:VAL:HG12	1.92	0.70
58:BZ:151:HIS:HB2	58:BZ:170:THR:HA	1.74	0.70
58:BZ:17:ALA:O	58:BZ:20:ARG:HG2	1.91	0.70
58:BZ:96:VAL:CG2	58:BZ:97:GLU:H	1.98	0.70
9:CI:118:LYS:O	9:CI:119:ALA:HB3	1.92	0.70
13:CM:15:VAL:O	13:CM:19:LEU:HD23	1.92	0.70
24:CY:2:G:C2'	24:CY:3:G:H5''	2.22	0.70
36:DA:1639:U:H2'	36:DA:1640:C:H5''	1.73	0.70
36:DA:272(J):C:H2'	36:DA:274:G:H5'	1.74	0.70
40:DE:101:ARG:NE	40:DE:171:GLU:HB2	2.07	0.70
36:DA:631:A:H5''	48:DP:65:ARG:NH1	2.07	0.70
54:DV:47:VAL:HG12	54:DV:52:VAL:HB	1.71	0.70
4:AD:121:VAL:O	4:AD:134:ASP:HA	1.92	0.69
19:AS:11:VAL:CG1	19:AS:16:LEU:HD11	2.22	0.69
24:AY:2:G:C2'	24:AY:3:G:H5''	2.22	0.69
39:BD:176:ARG:HG2	39:BD:176:ARG:HH11	1.57	0.69
39:BD:76:PRO:HG2	39:BD:98:VAL:CG2	2.21	0.69
41:BF:89:VAL:HG12	41:BF:90:PHE:N	2.07	0.69
48:BP:147:LEU:HG	48:BP:148:LEU:N	2.06	0.69
36:BA:244:A:H4'	48:BP:74:GLU:CG	2.22	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BU:34:LYS:HA	53:BU:34:LYS:HE2	1.73	0.69
57:BY:9:LYS:CG	57:BY:10:GLY:H	2.04	0.69
1:CA:1036:G:H5''	1:CA:1037:C:C5	2.27	0.69
1:CA:227:G:H2'	1:CA:228:A:C5'	2.13	0.69
1:CA:841:U:H3'	1:CA:848:C:O4'	1.91	0.69
1:CA:940:C:P	7:CG:102:ARG:HH21	2.15	0.69
5:CE:101:ILE:O	5:CE:120:THR:HB	1.92	0.69
26:D0:40:GLN:HE22	26:D0:45:PHE:H	1.39	0.69
36:DA:1169:G:H1	36:DA:1180:C:H42	1.39	0.69
37:DB:13:A:O2'	37:DB:14:U:H3'	1.91	0.69
48:DP:126:VAL:HA	48:DP:145:PRO:CB	2.20	0.69
51:DS:85:VAL:HG23	51:DS:106:ARG:HD3	1.72	0.69
52:DT:28:VAL:HG21	52:DT:46:GLU:HG3	1.74	0.69
57:DY:73:ARG:NH2	57:DY:82:PRO:HA	2.06	0.69
1:AA:405:U:H3'	1:AA:406:G:H5'	1.73	0.69
1:AA:434:U:H2'	1:AA:435:C:C6	2.27	0.69
2:AB:82:ARG:O	2:AB:86:GLU:HG3	1.92	0.69
9:AI:19:LEU:HD21	9:AI:59:PHE:HD2	1.56	0.69
14:AN:44:LEU:HD12	14:AN:44:LEU:O	1.91	0.69
28:B2:12:GLU:HA	28:B2:15:LYS:HE3	1.73	0.69
34:B8:4:MET:HE3	34:B8:61:LEU:HG	1.73	0.69
36:BA:1396:U:H2'	36:BA:1396:U:O2	1.93	0.69
36:BA:2377:A:H4'	51:BS:107:GLU:O	1.91	0.69
36:BA:272(J):C:H2'	36:BA:274:G:H5'	1.74	0.69
48:BP:61:ARG:O	48:BP:62:LEU:HB3	1.92	0.69
50:BR:7:GLY:O	50:BR:8:ARG:NE	2.25	0.69
51:BS:106:ARG:NH1	51:BS:108:GLY:HA3	2.06	0.69
4:CD:133:VAL:HG12	4:CD:135:LEU:H	1.55	0.69
5:CE:100:VAL:HG12	5:CE:118:ILE:HG22	1.75	0.69
10:CJ:86:MET:HG2	10:CJ:86:MET:O	1.92	0.69
13:CM:53:VAL:CG1	13:CM:57:ARG:HH21	2.03	0.69
36:DA:1107:G:H4'	44:DJ:81:UNK:CB	2.22	0.69
36:DA:1403:C:H5''	36:DA:1471:A:C1'	2.22	0.69
36:DA:1796:U:H2'	36:DA:1797:C:C6	2.27	0.69
36:DA:310:A:P	57:DY:18:GLY:HA2	2.32	0.69
1:AA:1238:A:H8	1:AA:1241:G:O2'	1.70	0.69
1:AA:841:U:H3'	1:AA:848:C:O4'	1.91	0.69
4:AD:64:LEU:HB2	4:AD:198:VAL:HG11	1.74	0.69
5:AE:80:ILE:HD12	5:AE:138:ALA:HB1	1.75	0.69
6:AF:8:ILE:HD11	6:AF:79:LEU:HD23	1.74	0.69
1:AA:191:G:N3	20:AT:105:SER:HB3	2.08	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:57:G:H2'	24:AY:58:A:H5'	1.73	0.69
36:BA:1022:G:N2	36:BA:1142(A):A:C2	2.55	0.69
36:BA:2134:A:H62	36:BA:2157:G:H1'	1.55	0.69
39:BD:267:SER:C	39:BD:269:PHE:H	1.95	0.69
40:BE:4:ILE:CD1	40:BE:28:ALA:HB1	2.22	0.69
51:BS:85:VAL:HG23	51:BS:106:ARG:HD3	1.72	0.69
1:CA:1129:C:O5'	1:CA:1130:A:H5'	1.92	0.69
5:CE:51:VAL:HB	5:CE:52:PRO:HD3	1.75	0.69
31:D5:36:CYS:C	31:D5:38:ALA:H	1.95	0.69
36:DA:266:G:C2'	36:DA:267:C:H5''	2.20	0.69
37:DB:20:C:C2'	37:DB:21:G:H5''	2.21	0.69
41:DF:39:TRP:CH2	41:DF:106:ARG:HD3	2.28	0.69
41:DF:178:PRO:HG2	41:DF:179:GLU:OE1	1.92	0.69
56:DX:49:VAL:HG12	56:DX:87:GLN:HE21	1.57	0.69
14:AN:57:ARG:HH11	14:AN:57:ARG:HB2	1.57	0.69
34:B8:61:LEU:HD22	34:B8:62:LEU:H	1.57	0.69
36:BA:1331:A:HO2'	36:BA:1332:G:H8	1.40	0.69
36:BA:1403:C:H5''	36:BA:1471:A:C1'	2.23	0.69
36:BA:1639:U:C2'	36:BA:1640:C:H5''	2.21	0.69
36:BA:1639:U:H2'	36:BA:1640:C:H5''	1.73	0.69
36:BA:2136:C:H2'	36:BA:2137:C:C6	2.27	0.69
36:BA:2160:G:H8	36:BA:2160:G:H5'	1.56	0.69
39:BD:69:ARG:NH2	39:BD:128:GLY:O	2.24	0.69
47:BO:24:VAL:HG12	47:BO:33:ALA:HB2	1.75	0.69
2:CB:82:ARG:O	2:CB:86:GLU:HG3	1.92	0.69
17:CQ:70:ARG:HD2	17:CQ:70:ARG:N	2.07	0.69
36:DA:2377:A:O2'	36:DA:2378:A:H5'	1.93	0.69
36:DA:935:C:H2'	36:DA:936:C:C6	2.28	0.69
40:DE:116:VAL:HG22	40:DE:117:MET:N	2.06	0.69
47:DO:65:THR:HG23	47:DO:67:LYS:N	2.07	0.69
1:AA:1218:C:H2'	1:AA:1219:U:C6	2.27	0.69
36:BA:1771:C:H1'	36:BA:1786:A:C8	2.28	0.69
36:BA:1932:A:H2'	36:BA:1933:G:O4'	1.92	0.69
36:BA:548:A:H2'	36:BA:549:G:H5'	1.73	0.69
2:CB:44:LEU:HA	2:CB:47:THR:HB	1.75	0.69
25:CZ:251:ASP:O	25:CZ:267:VAL:HG12	1.92	0.69
42:DG:82:LEU:HD13	42:DG:87:PRO:HB2	1.75	0.69
46:DN:66:LYS:O	46:DN:70:LYS:HB3	1.91	0.69
47:DO:114:ILE:HD12	47:DO:114:ILE:N	2.07	0.69
51:DS:40:ILE:HG22	51:DS:47:THR:HA	1.74	0.69
3:AC:95:THR:HG23	3:AC:97:LYS:HD2	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:23:TYR:CE2	13:AM:70:LEU:HD22	2.27	0.69
13:AM:53:VAL:CG1	13:AM:57:ARG:HH21	2.05	0.69
22:AW:57:G:H2'	22:AW:58:A:H5'	1.71	0.69
36:BA:1060:U:C1'	36:BA:1061:U:H5''	2.22	0.69
36:BA:672:C:O2'	36:BA:673:C:H5''	1.93	0.69
38:BC:81:GLU:O	38:BC:84:LYS:HD3	1.92	0.69
40:BE:117:MET:O	40:BE:121:ASN:HA	1.93	0.69
42:BG:173:LEU:HB3	42:BG:178:PHE:CD2	2.27	0.69
46:BN:126:PRO:O	46:BN:127:ASP:HB2	1.93	0.69
4:CD:149:ALA:HB3	4:CD:152:SER:OG	1.92	0.69
17:CQ:67:LYS:O	17:CQ:68:ARG:HB2	1.91	0.69
34:D8:42:ARG:O	34:D8:44:LYS:N	2.25	0.69
36:DA:1480:G:H2'	36:DA:1481:U:H5'	1.73	0.69
36:DA:1932:A:H2'	36:DA:1933:G:O4'	1.92	0.69
36:DA:559:G:H22	53:DU:49:HIS:CD2	2.10	0.69
38:DC:73:ARG:HE	38:DC:110:PHE:HD1	1.40	0.69
39:DD:108:PRO:HG2	39:DD:111:LEU:HB2	1.72	0.69
47:DO:86:ILE:HG22	47:DO:94:ARG:HB2	1.75	0.69
51:DS:15:ARG:O	51:DS:18:ILE:HG13	1.93	0.69
57:DY:9:LYS:HG2	57:DY:10:GLY:N	2.04	0.69
1:AA:664:G:H22	1:AA:741:G:H1	1.40	0.69
6:AF:87:ARG:HH11	6:AF:87:ARG:HG2	1.56	0.69
31:B5:36:CYS:C	31:B5:38:ALA:H	1.94	0.69
32:B6:11:LEU:CD1	32:B6:26:ASN:HB2	2.21	0.69
36:BA:2312:U:H4'	42:BG:71:THR:CG2	2.21	0.69
39:BD:30:GLU:N	39:BD:35:LYS:NZ	2.40	0.69
39:BD:45:ASN:CG	39:BD:46:GLN:H	1.95	0.69
44:BJ:97:UNK:HA	44:BJ:132:UNK:HA	1.73	0.69
2:CB:87:ARG:NH2	2:CB:232:PRO:HA	2.08	0.69
3:CC:14:ILE:CG1	3:CC:15:THR:N	2.56	0.69
15:CO:87:ILE:HG22	15:CO:88:ARG:N	2.07	0.69
32:D6:30:THR:O	32:D6:31:PRO:C	2.28	0.69
36:DA:604:G:H2'	36:DA:605:C:O2	1.92	0.69
38:DC:5:LYS:HA	38:DC:8:ARG:HE	1.57	0.69
48:DP:56:SER:O	48:DP:58:THR:N	2.25	0.69
1:AA:1306:A:H61	1:AA:1331:G:H1'	1.58	0.69
6:AF:77:ARG:HG2	6:AF:77:ARG:HH11	1.57	0.69
12:AL:18:VAL:CG2	12:AL:19:ARG:H	2.02	0.69
10:AJ:61:GLU:CG	14:AN:58:LYS:HE2	2.22	0.69
20:AT:45:GLN:HE22	20:AT:46:GLU:HG3	1.55	0.69
25:AZ:251:ASP:O	25:AZ:267:VAL:HG12	1.93	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:B9:25:VAL:HB	35:B9:34:GLN:HB2	1.75	0.69
37:BB:7:G:H2'	37:BB:8:U:H5''	1.75	0.69
6:CF:91:VAL:HG11	18:CR:72:ARG:HH12	1.57	0.69
30:D4:12:ALA:HB2	30:D4:29:PRO:HA	1.74	0.69
32:D6:42:TRP:HA	32:D6:42:TRP:CE3	2.26	0.69
33:D7:34:ARG:HD2	33:D7:39:ARG:HG3	1.74	0.69
36:DA:2304:G:H22	36:DA:2312:U:H3	1.39	0.69
36:DA:359:A:H2'	36:DA:360:G:O4'	1.93	0.69
36:DA:914:C:H2'	36:DA:915:C:H5'	1.74	0.69
39:DD:129:ASN:O	39:DD:193:VAL:HG12	1.93	0.69
39:DD:45:ASN:CG	39:DD:46:GLN:H	1.95	0.69
40:DE:105:THR:HG21	40:DE:164:ARG:NH1	2.07	0.69
41:DF:53:THR:HG23	41:DF:55:GLY:H	1.57	0.69
43:DH:94:TYR:CD1	43:DH:107:VAL:HA	2.28	0.69
52:DT:38:ASN:ND2	52:DT:38:ASN:O	2.26	0.69
1:AA:194:C:H2'	1:AA:195:A:H5''	1.74	0.69
3:AC:32:LEU:HD22	3:AC:59:ARG:NH1	2.08	0.69
24:AY:41:C:H6	24:AY:41:C:H5'	1.58	0.69
36:BA:197:A:C8	36:BA:197:A:H5'	2.27	0.69
39:BD:27:THR:HG23	39:BD:83:GLU:HG2	1.74	0.69
40:BE:111:ARG:HB3	50:BR:2:ARG:HH12	1.58	0.69
41:BF:132:VAL:HG22	41:BF:133:ASN:N	2.07	0.69
46:BN:46:VAL:HG13	46:BN:48:MET:HG3	1.75	0.69
50:BR:3:HIS:C	50:BR:5:LYS:H	1.97	0.69
52:BT:28:VAL:HG12	52:BT:29:ARG:HD3	1.75	0.69
1:CA:197:A:H4'	1:CA:198:G:O5'	1.93	0.69
1:CA:664:G:H22	1:CA:741:G:H1	1.40	0.69
1:CA:858:G:C5'	1:CA:858:G:H8	2.06	0.69
32:D6:15:GLU:OE1	32:D6:18:ARG:NE	2.25	0.69
36:DA:590:A:H2'	36:DA:591:C:C6	2.27	0.69
38:DC:81:GLU:O	38:DC:84:LYS:HD3	1.91	0.69
40:DE:111:ARG:HB3	50:DR:2:ARG:NH1	2.08	0.69
41:DF:37:VAL:HG11	48:DP:7:ARG:NH1	2.00	0.69
42:DG:51:ARG:NE	42:DG:51:ARG:HA	2.07	0.69
48:DP:58:THR:O	48:DP:61:ARG:NE	2.22	0.69
54:DV:25:LEU:H	54:DV:92:THR:HG21	1.56	0.69
57:DY:8:LYS:HE2	57:DY:72:VAL:HG23	1.74	0.69
2:AB:61:LEU:O	2:AB:64:ARG:HG2	1.91	0.69
4:AD:5:ILE:HA	4:AD:115:ARG:HH12	1.57	0.69
16:AP:20:VAL:CG2	16:AP:32:TYR:HB2	2.23	0.69
32:B6:42:TRP:CE3	32:B6:42:TRP:HA	2.26	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1071:G:H1'	36:BA:1089:G:H2'	1.75	0.69
36:BA:271(J):C:H2'	36:BA:271(J):C:O2	1.92	0.69
36:BA:419:C:H2'	36:BA:420:C:H6	1.58	0.69
36:BA:708:C:H42	36:BA:723:G:H1	1.41	0.69
49:BQ:32:TYR:O	49:BQ:105:GLU:HB2	1.92	0.69
1:CA:452:A:O2'	1:CA:453:A:H8	1.71	0.69
22:CW:38:A:C3'	22:CW:39:U:H5''	2.23	0.69
25:CZ:295:ARG:HG2	25:CZ:295:ARG:HH11	1.57	0.69
36:DA:999:U:H5''	36:DA:1154:G:O6	1.93	0.69
40:DE:117:MET:O	40:DE:121:ASN:HA	1.93	0.69
41:DF:32:LEU:O	41:DF:36:VAL:HG23	1.93	0.69
40:DE:111:ARG:HB3	50:DR:2:ARG:HH12	1.58	0.69
4:AD:12:CYS:HA	4:AD:19:LEU:HD13	1.73	0.69
34:B8:42:ARG:O	34:B8:44:LYS:N	2.25	0.69
36:BA:1314:C:C6	36:BA:1314:C:H5'	2.28	0.69
36:BA:1409:C:H2'	36:BA:1410:G:C8	2.27	0.69
36:BA:2304:G:H22	36:BA:2312:U:H3	1.39	0.69
38:BC:27:ARG:HD3	38:BC:182:PRO:HG3	1.73	0.69
40:BE:111:ARG:HB3	50:BR:2:ARG:NH1	2.08	0.69
43:BH:42:ARG:HG2	43:BH:43:VAL:H	1.57	0.69
36:BA:1141:U:H2'	46:BN:63:THR:CG2	2.23	0.69
51:BS:12:PHE:HD1	51:BS:12:PHE:C	1.97	0.69
52:BT:62:THR:HG22	52:BT:75:ILE:HG13	1.73	0.69
54:BV:19:LYS:HB2	54:BV:96:ILE:HD11	1.74	0.69
1:CA:1234:C:H1'	1:CA:1364:U:O2	1.93	0.69
6:CF:34:GLY:N	6:CF:71:ARG:HH21	1.91	0.69
16:CP:20:VAL:CG2	16:CP:32:TYR:HB2	2.23	0.69
24:CY:2:G:H2'	24:CY:3:G:H5''	1.73	0.69
28:D2:10:LEU:HD11	28:D2:14:ARG:NH2	2.08	0.69
31:D5:55:ARG:O	31:D5:56:LYS:HD3	1.92	0.69
35:D9:25:VAL:HB	35:D9:34:GLN:HB2	1.75	0.69
36:DA:2291:U:H2'	36:DA:2292:C:C6	2.27	0.69
36:DA:2852:G:H2'	36:DA:2853:C:C6	2.28	0.69
48:DP:24:GLY:CA	48:DP:33:ARG:NH1	2.56	0.69
48:DP:96:THR:HG22	48:DP:126:VAL:HB	1.74	0.69
50:DR:75:LEU:HD13	50:DR:75:LEU:O	1.92	0.69
1:AA:1190:G:OP1	3:AC:5:ILE:HD12	1.93	0.68
3:AC:73:PRO:HG3	3:AC:105:GLU:HB2	1.75	0.68
4:AD:133:VAL:HG12	4:AD:135:LEU:H	1.57	0.68
1:AA:1305:G:H5'	21:AU:4:GLY:HA3	1.75	0.68
25:AZ:150:VAL:O	25:AZ:154:VAL:HG23	1.92	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:271:GLU:O	25:AZ:286:VAL:HG23	1.93	0.68
36:BA:106:C:H2'	36:BA:107:C:C6	2.28	0.68
36:BA:1221(A):C:H2'	36:BA:1222:C:H6	1.58	0.68
36:BA:18:C:O3'	53:BU:23:GLY:HA2	1.93	0.68
36:BA:310:A:P	57:BY:18:GLY:HA2	2.33	0.68
43:BH:89:ILE:HG12	43:BH:129:THR:O	1.93	0.68
46:BN:58:ASP:O	46:BN:60:ILE:N	2.24	0.68
47:BO:88:ASN:HD21	47:BO:92:GLU:HB2	1.58	0.68
2:CB:87:ARG:HH22	2:CB:232:PRO:HA	1.58	0.68
4:CD:3:ARG:HG2	4:CD:118:ARG:HE	1.58	0.68
24:CY:41:C:H6	24:CY:41:C:H5'	1.58	0.68
25:CZ:271:GLU:O	25:CZ:286:VAL:HG23	1.92	0.68
27:D1:69:LYS:NZ	27:D1:76:ARG:HH22	1.91	0.68
34:D8:50:LEU:C	34:D8:52:LYS:H	1.95	0.68
36:DA:2160:G:H8	36:DA:2160:G:H5'	1.57	0.68
36:DA:271(J):C:H2'	36:DA:271(J):C:O2	1.92	0.68
39:DD:69:ARG:NH2	39:DD:128:GLY:O	2.27	0.68
46:DN:46:VAL:HG13	46:DN:48:MET:HG3	1.75	0.68
2:AB:87:ARG:HH22	2:AB:232:PRO:HA	1.57	0.68
6:AF:91:VAL:HG11	18:AR:72:ARG:NH1	2.08	0.68
31:B5:40:LYS:HE3	31:B5:46:CYS:HB3	1.75	0.68
36:BA:1170:G:H1	36:BA:1179:C:H42	1.40	0.68
36:BA:296:C:O2'	36:BA:297:C:H5'	1.92	0.68
42:BG:11:TYR:OH	42:BG:33:ARG:HG3	1.91	0.68
50:BR:52:ILE:HB	50:BR:94:TYR:HD2	1.58	0.68
50:BR:62:ALA:O	50:BR:66:VAL:HG23	1.93	0.68
57:BY:75:ILE:HG23	57:BY:76:CYS:N	2.07	0.68
1:CA:1347:G:N2	1:CA:1373:G:H2'	2.08	0.68
5:CE:107:ARG:HG3	5:CE:108:ALA:N	2.07	0.68
27:D1:84:GLY:O	27:D1:86:SER:N	2.22	0.68
36:DA:1762:A:H8	36:DA:1762:A:O5'	1.74	0.68
40:DE:81:ILE:O	40:DE:81:ILE:HG22	1.93	0.68
41:DF:36:VAL:O	41:DF:40:GLN:HG3	1.93	0.68
50:DR:100:LEU:HD11	50:DR:113:LEU:HB2	1.75	0.68
50:DR:4:LEU:C	50:DR:6:SER:H	1.96	0.68
36:DA:2377:A:H4'	51:DS:107:GLU:O	1.93	0.68
9:AI:114:TYR:HE1	10:AJ:59:SER:HA	1.57	0.68
10:AJ:86:MET:O	10:AJ:86:MET:HG2	1.91	0.68
14:AN:22:THR:HB	14:AN:33:VAL:HG21	1.73	0.68
24:AY:2:G:H2'	24:AY:3:G:H5''	1.73	0.68
34:B8:50:LEU:C	34:B8:52:LYS:H	1.95	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1058:G:C2'	36:BA:1059:G:H5''	2.22	0.68
36:BA:2852:G:H2'	36:BA:2853:C:C6	2.28	0.68
36:BA:359:A:H2'	36:BA:360:G:O4'	1.94	0.68
39:BD:24:ILE:HD13	39:BD:25:THR:H	1.58	0.68
39:BD:34:VAL:HG23	39:BD:35:LYS:H	1.58	0.68
22:AV:56:C:O2'	42:BG:78:SER:HB2	1.93	0.68
50:BR:4:LEU:C	50:BR:6:SER:H	1.96	0.68
52:BT:13:ARG:HA	52:BT:13:ARG:CZ	2.24	0.68
54:BV:39:LEU:HD12	54:BV:47:VAL:HG11	1.75	0.68
1:CA:953:G:H5'	1:CA:965:A:H61	1.57	0.68
3:CC:73:PRO:HG3	3:CC:105:GLU:HB2	1.75	0.68
5:CE:80:ILE:HD12	5:CE:138:ALA:HB1	1.74	0.68
6:CF:55:ASP:HB3	6:CF:57:GLN:NE2	2.09	0.68
7:CG:7:ALA:O	7:CG:8:GLU:HB2	1.92	0.68
36:DA:1301:A:O2'	36:DA:1302:A:C2'	2.35	0.68
36:DA:1396:U:H2'	36:DA:1396:U:O2	1.92	0.68
36:DA:2463:C:O2'	36:DA:2464:C:H5'	1.92	0.68
36:DA:419:C:H2'	36:DA:420:C:H6	1.59	0.68
40:DE:33:VAL:HG12	40:DE:89:ASP:O	1.94	0.68
43:DH:42:ARG:HG2	43:DH:43:VAL:H	1.58	0.68
43:DH:89:ILE:HG12	43:DH:129:THR:O	1.92	0.68
51:DS:13:ARG:CG	51:DS:14:VAL:H	2.06	0.68
55:DW:6:ILE:HG12	55:DW:104:THR:CG2	2.23	0.68
4:AD:126:ILE:HD12	4:AD:126:ILE:N	2.08	0.68
5:AE:107:ARG:HG3	5:AE:108:ALA:N	2.07	0.68
17:AQ:67:LYS:O	17:AQ:68:ARG:HB2	1.93	0.68
24:AY:16:H2U:H5'	24:AY:17:H2U:C5'	2.23	0.68
36:BA:1541:G:H1'	36:BA:1542:A:C4	2.28	0.68
41:BF:160:ASN:OD1	41:BF:163:VAL:HG23	1.93	0.68
46:BN:58:ASP:C	46:BN:60:ILE:H	1.95	0.68
53:BU:66:ASN:O	53:BU:70:ARG:HB2	1.92	0.68
58:BZ:115:GLY:HA3	58:BZ:174:VAL:HG12	1.76	0.68
4:CD:64:LEU:HB2	4:CD:198:VAL:HG11	1.74	0.68
25:CZ:143:ASP:HB3	25:CZ:146:LEU:HB3	1.74	0.68
25:CZ:277:LEU:HD13	25:CZ:278:GLN:H	1.56	0.68
34:D8:33:ASN:CG	34:D8:34:TRP:H	1.97	0.68
36:DA:2305:A:C3'	36:DA:2306:C:H5''	2.23	0.68
36:DA:259:G:H1'	36:DA:621:A:O2'	1.93	0.68
37:DB:25:A:H2'	37:DB:25:A:N3	2.07	0.68
39:DD:134:ARG:HH12	39:DD:135:PHE:HE1	1.41	0.68
1:AA:540:G:H2'	1:AA:541:G:H8	1.58	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:625:G:H2'	1:AA:626:U:C6	2.28	0.68
2:AB:25:ASN:HD21	2:AB:27:LYS:HG3	1.58	0.68
4:AD:30:LYS:C	4:AD:32:ALA:H	1.95	0.68
36:BA:2779:U:H1'	36:BA:2781:A:C5	2.27	0.68
36:BA:2853:C:H2'	36:BA:2854:G:H8	1.58	0.68
36:BA:672:C:H2'	36:BA:673:C:H5'	1.75	0.68
41:BF:32:LEU:O	41:BF:36:VAL:HG23	1.94	0.68
46:BN:3:THR:HG22	46:BN:4:TYR:H	1.58	0.68
56:BX:49:VAL:HG12	56:BX:87:GLN:HE21	1.57	0.68
57:BY:13:VAL:CG2	57:BY:72:VAL:HB	2.23	0.68
58:BZ:54:HIS:HB3	58:BZ:101:PRO:HD3	1.73	0.68
1:CA:351:G:H4'	1:CA:352:C:OP1	1.93	0.68
3:CC:5:ILE:CD1	3:CC:5:ILE:N	2.56	0.68
15:CO:82:ILE:HD11	15:CO:88:ARG:HB2	1.74	0.68
34:D8:14:VAL:HG21	34:D8:22:VAL:CG1	2.23	0.68
36:DA:2178:C:H2'	36:DA:2179:C:C5'	2.23	0.68
36:DA:2455:G:H2'	36:DA:2456:C:C6	2.28	0.68
36:DA:271(L):U:H5''	36:DA:271(M):G:C5'	2.19	0.68
36:DA:296:C:O2'	36:DA:297:C:H5'	1.93	0.68
39:DD:30:GLU:HB3	39:DD:83:GLU:OE1	1.93	0.68
39:DD:30:GLU:N	39:DD:35:LYS:NZ	2.41	0.68
49:DQ:51:ARG:O	49:DQ:55:VAL:HG12	1.94	0.68
3:AC:134:ILE:HG21	3:AC:167:TRP:O	1.94	0.68
9:AI:83:ARG:O	9:AI:86:VAL:HG12	1.93	0.68
13:AM:5:ALA:HB2	13:AM:66:LEU:HD23	1.76	0.68
36:BA:2377:A:O2'	36:BA:2378:A:H5'	1.93	0.68
36:BA:654(P):C:H2'	36:BA:654(Q):C:O4'	1.94	0.68
36:BA:74:A:H5''	36:BA:75:G:O4'	1.93	0.68
42:BG:34:LEU:HD12	42:BG:34:LEU:O	1.93	0.68
43:BH:103:LEU:HB2	43:BH:123:PHE:CD2	2.27	0.68
36:BA:958:U:H5''	49:BQ:14:ARG:CD	2.23	0.68
50:BR:58:GLY:HA2	50:BR:80:PHE:CE2	2.29	0.68
11:CK:27:ASN:HD22	11:CK:28:THR:H	1.41	0.68
22:CV:63:G:H2'	22:CV:64:A:O4'	1.94	0.68
25:CZ:265:THR:HG21	25:CZ:293:VAL:CG2	2.23	0.68
36:DA:320:A:C5	41:DF:136:THR:HG21	2.28	0.68
38:DC:75:LEU:HD11	38:DC:113:VAL:HG13	1.76	0.68
39:DD:158:ALA:HB3	39:DD:161:THR:HG21	1.75	0.68
39:DD:34:VAL:HG23	39:DD:35:LYS:H	1.58	0.68
50:DR:3:HIS:C	50:DR:5:LYS:H	1.97	0.68
50:DR:62:ALA:O	50:DR:66:VAL:HG23	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DT:62:THR:HG22	52:DT:75:ILE:HG13	1.74	0.68
57:DY:13:VAL:CG2	57:DY:72:VAL:HB	2.23	0.68
57:DY:46:LYS:HB3	57:DY:62:GLU:HG2	1.76	0.68
4:AD:3:ARG:HG2	4:AD:118:ARG:HE	1.58	0.68
10:AJ:32:ALA:H	10:AJ:78:ASN:ND2	1.92	0.68
13:AM:5:ALA:CB	13:AM:66:LEU:HD23	2.24	0.68
28:B2:25:VAL:O	28:B2:29:LYS:HG2	1.94	0.68
34:B8:50:LEU:O	34:B8:51:ALA:HB3	1.93	0.68
36:BA:1589:C:H2'	36:BA:1590:U:C6	2.28	0.68
36:BA:321:G:H21	41:BF:165:ARG:HE	1.37	0.68
43:BH:117:PRO:HB3	43:BH:123:PHE:CE1	2.28	0.68
53:BU:66:ASN:ND2	53:BU:76:TYR:H	1.90	0.68
9:CI:79:LEU:HD23	9:CI:101:PHE:O	1.94	0.68
19:CS:32:LYS:N	19:CS:32:LYS:HZ3	1.91	0.68
22:CW:65:G:H4'	32:D6:28:ARG:NH2	2.09	0.68
22:CW:7:A:C5	22:CW:49:C:H5	2.12	0.68
24:CY:57:G:H2'	24:CY:58:A:H5'	1.75	0.68
35:D9:10:ILE:O	35:D9:10:ILE:HG22	1.93	0.68
36:DA:1188:U:O2'	36:DA:1189:A:H5'	1.93	0.68
36:DA:2188:C:H2'	36:DA:2189:U:C5	2.29	0.68
36:DA:2396:G:O2'	36:DA:2397:G:H5'	1.93	0.68
47:DO:88:ASN:HD21	47:DO:92:GLU:HB2	1.59	0.68
2:AB:25:ASN:HD22	2:AB:27:LYS:H	1.40	0.68
9:AI:53:VAL:N	9:AI:95:LYS:HZ2	1.92	0.68
16:AP:43:LYS:HA	16:AP:48:TRP:CB	2.24	0.68
22:AW:38:A:C2'	22:AW:39:U:H5''	2.24	0.68
22:AW:7:A:C5	22:AW:49:C:H5	2.11	0.68
25:AZ:277:LEU:HD13	25:AZ:278:GLN:H	1.56	0.68
30:B4:39:CYS:O	30:B4:40:HIS:HB2	1.92	0.68
34:B8:50:LEU:HD12	34:B8:51:ALA:H	1.59	0.68
36:BA:2305:A:C3'	36:BA:2306:C:H5''	2.22	0.68
36:BA:631:A:H5''	48:BP:65:ARG:NH1	2.08	0.68
37:BB:16:G:HO2'	37:BB:17:C:H6	1.39	0.68
41:BF:39:TRP:CH2	41:BF:106:ARG:HD3	2.28	0.68
50:BR:75:LEU:O	50:BR:75:LEU:HD13	1.94	0.68
1:CA:1490:C:O2'	1:CA:1491:G:H5'	1.92	0.68
1:CA:625:G:H2'	1:CA:626:U:C6	2.28	0.68
10:CJ:32:ALA:CB	10:CJ:76:ASN:HB2	2.23	0.68
12:CL:80:HIS:HB2	24:CY:68:C:H4'	1.75	0.68
27:D1:18:ILE:HD12	36:DA:380:U:H5'	1.75	0.68
36:DA:1170:G:H1	36:DA:1179:C:H42	1.40	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:191:A:O2'	36:DA:192:C:H5'	1.94	0.68
36:DA:2777:G:H5''	36:DA:2778:A:H5'	1.76	0.68
57:DY:75:ILE:HG23	57:DY:76:CYS:N	2.07	0.68
2:AB:96:ARG:HD3	2:AB:148:TYR:CE1	2.29	0.68
10:AJ:32:ALA:CB	10:AJ:76:ASN:HB2	2.24	0.68
16:AP:67:THR:HB	16:AP:70:ALA:HB2	1.74	0.68
24:AY:1:A:H5'	25:AZ:300:ARG:NH1	2.09	0.68
36:BA:1748:G:H8	36:BA:1748:G:H5'	1.59	0.68
36:BA:996:A:H4'	53:BU:92:ARG:NE	2.08	0.68
1:CA:784:C:H4'	36:DA:1837:C:OP1	1.93	0.68
10:CJ:6:ILE:HG22	10:CJ:98:ILE:HD12	1.74	0.68
13:CM:83:ASP:CG	13:CM:84:ILE:H	1.97	0.68
14:CN:44:LEU:O	14:CN:44:LEU:HD12	1.94	0.68
34:D8:61:LEU:N	34:D8:61:LEU:CD1	2.56	0.68
37:DB:16:G:HO2'	37:DB:17:C:H6	1.42	0.68
46:DN:61:ARG:HG3	46:DN:61:ARG:HH11	1.58	0.68
49:DQ:32:TYR:O	49:DQ:105:GLU:HB2	1.94	0.68
52:DT:35:LYS:HZ3	52:DT:41:ARG:HD2	1.59	0.68
1:AA:187:C:H2'	1:AA:188:C:C6	2.29	0.68
1:AA:953:G:H5'	1:AA:965:A:H61	1.59	0.68
2:AB:25:ASN:ND2	2:AB:27:LYS:H	1.91	0.68
25:AZ:64:ASN:H	25:AZ:64:ASN:HD22	1.41	0.68
36:BA:1005:C:H2'	36:BA:1006:C:C6	2.29	0.68
36:BA:1005:C:H2'	36:BA:1006:C:H6	1.59	0.68
36:BA:604:G:H2'	36:BA:605:C:O2	1.94	0.68
43:BH:118:PRO:CG	43:BH:121:ILE:HD12	2.24	0.68
43:BH:158:HIS:HD1	43:BH:168:PRO:HB2	1.59	0.68
43:BH:16:SER:CB	43:BH:27:LYS:HB2	2.22	0.68
36:BA:139(A):G:N2	56:BX:44:GLU:OE1	2.27	0.68
3:CC:5:ILE:HG12	3:CC:10:PHE:HB2	1.76	0.68
7:CG:78:ARG:NH1	7:CG:80:VAL:HG21	2.07	0.68
14:CN:57:ARG:HB2	14:CN:57:ARG:HH11	1.59	0.68
19:CS:32:LYS:H	19:CS:32:LYS:HZ3	1.42	0.68
27:D1:16:ASN:HD22	27:D1:37:ILE:CG2	2.07	0.68
31:D5:16:ARG:HD2	31:D5:20:ARG:HH12	1.58	0.68
36:DA:1589:C:H2'	36:DA:1590:U:C6	2.28	0.68
36:DA:2111:C:H1'	36:DA:2118:U:C4'	2.24	0.68
36:DA:813:U:H2'	36:DA:814:C:C6	2.29	0.68
36:DA:2485:G:H5''	49:DQ:46:GLN:HE21	1.59	0.68
50:DR:58:GLY:HA2	50:DR:80:PHE:CE2	2.29	0.68
55:DW:4:LYS:HG2	55:DW:5:ALA:N	2.09	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DZ:151:HIS:HA	58:DZ:171:ILE:HG12	1.76	0.68
13:AM:83:ASP:CG	13:AM:84:ILE:H	1.97	0.67
32:B6:33:LYS:CE	32:B6:33:LYS:HA	2.14	0.67
36:BA:2491:U:H5'	36:BA:2570:G:H5''	1.74	0.67
51:BS:34:HIS:HB3	51:BS:53:SER:HB3	1.76	0.67
51:BS:99:LYS:HZ2	51:BS:99:LYS:HB3	1.57	0.67
1:CA:1316:G:N2	1:CA:1318:A:H3'	2.09	0.67
1:CA:585:G:H4'	12:CL:8:ASN:HD21	1.58	0.67
1:CA:628:G:O2'	1:CA:629:G:H5'	1.94	0.67
1:CA:939:G:H5''	7:CG:102:ARG:NH1	2.09	0.67
2:CB:80:ILE:HD12	2:CB:80:ILE:N	2.09	0.67
9:CI:83:ARG:O	9:CI:86:VAL:HG12	1.94	0.67
20:CT:63:ILE:HG21	20:CT:81:LYS:HG3	1.75	0.67
25:CZ:64:ASN:HD22	25:CZ:64:ASN:H	1.41	0.67
36:DA:1071:G:H1'	36:DA:1089:G:H2'	1.75	0.67
36:DA:1242:A:H5'	36:DA:1243:G:OP2	1.93	0.67
36:DA:614(A):U:H4'	36:DA:614(B):G:C5'	2.25	0.67
36:DA:654(P):C:H2'	36:DA:654(Q):C:O4'	1.94	0.67
36:DA:672:C:O2'	36:DA:673:C:H5''	1.93	0.67
39:DD:267:SER:C	39:DD:269:PHE:H	1.94	0.67
53:DU:66:ASN:O	53:DU:70:ARG:HB2	1.93	0.67
1:AA:1468:A:H2'	1:AA:1469:G:O4'	1.94	0.67
1:AA:624:C:H2'	1:AA:625:G:C8	2.29	0.67
3:AC:50:ALA:HA	3:AC:72:LYS:HB2	1.75	0.67
3:AC:95:THR:HG22	3:AC:95:THR:O	1.94	0.67
4:AD:149:ALA:HB3	4:AD:152:SER:OG	1.94	0.67
28:B2:3:LEU:HD23	28:B2:3:LEU:O	1.94	0.67
36:BA:1242:A:H5'	36:BA:1243:G:OP2	1.94	0.67
36:BA:172:C:H2'	36:BA:173:G:O4'	1.95	0.67
36:BA:2133:G:H2'	36:BA:2157:G:N2	2.09	0.67
39:BD:71:ASP:HB2	39:BD:103:ARG:NH2	2.02	0.67
40:BE:101:ARG:HH11	40:BE:169:ASN:ND2	1.93	0.67
40:BE:33:VAL:HG12	40:BE:89:ASP:O	1.93	0.67
41:BF:53:THR:HG23	41:BF:55:GLY:H	1.59	0.67
51:BS:52:SER:CB	51:BS:55:ALA:HB3	2.24	0.67
57:BY:13:VAL:HG23	57:BY:73:ARG:O	1.94	0.67
16:CP:49:LEU:HD12	16:CP:50:LYS:N	2.09	0.67
34:D8:15:LYS:HB2	48:DP:65:ARG:HH21	1.59	0.67
36:DA:1314:C:C6	36:DA:1314:C:H5'	2.30	0.67
36:DA:2118:U:H5'	36:DA:2147:G:H21	1.60	0.67
46:DN:134:ARG:O	46:DN:136:GLU:N	2.28	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DS:89:ARG:HH11	51:DS:89:ARG:HG2	1.57	0.67
4:AD:18:LYS:H	4:AD:33:MET:CE	2.07	0.67
7:AG:7:ALA:O	7:AG:8:GLU:HB2	1.94	0.67
22:AV:44:G:C3'	22:AV:45:U:H5'	2.25	0.67
24:AY:72:U:C2'	24:AY:73:G:H5''	2.23	0.67
36:BA:1899:G:O2'	36:BA:1900:A:H5''	1.94	0.67
36:BA:2200:C:H42	36:BA:2223:G:H1	1.42	0.67
36:BA:2485:G:H5''	49:BQ:46:GLN:HE21	1.59	0.67
43:BH:153:LYS:N	43:BH:153:LYS:HD3	2.04	0.67
47:BO:65:THR:HG23	47:BO:67:LYS:N	2.09	0.67
7:CG:78:ARG:HG3	7:CG:78:ARG:O	1.94	0.67
13:CM:65:LYS:H	13:CM:65:LYS:CD	2.07	0.67
25:CZ:24:LYS:HG3	25:CZ:25:THR:H	1.59	0.67
26:D0:16:SER:HB2	36:DA:2262:U:H5	1.59	0.67
36:DA:491:G:H2'	36:DA:492:A:H8	1.57	0.67
36:DA:476:G:H4'	36:DA:502:A:N1	2.09	0.67
37:DB:66:A:H61	37:DB:108:U:H2'	1.59	0.67
25:AZ:265:THR:HG21	25:AZ:293:VAL:CG2	2.23	0.67
31:B5:16:ARG:NH1	31:B5:17:ASP:OD1	2.28	0.67
36:BA:1762:A:H8	36:BA:1762:A:O5'	1.77	0.67
39:BD:62:TYR:HE1	39:BD:64:ILE:HA	1.60	0.67
40:BE:77:ILE:HG22	40:BE:78:LEU:H	1.60	0.67
46:BN:66:LYS:O	46:BN:70:LYS:HB3	1.93	0.67
49:BQ:51:ARG:O	49:BQ:55:VAL:HG12	1.95	0.67
57:BY:81:LYS:HD2	57:BY:96:ILE:CG1	2.24	0.67
1:CA:1211:U:H5'	1:CA:1212:U:OP1	1.95	0.67
11:CK:127:LYS:O	11:CK:129:SER:N	2.27	0.67
15:CO:79:ARG:O	15:CO:82:ILE:HG22	1.95	0.67
24:CY:16:H2U:H5'	24:CY:17:H2U:C5'	2.23	0.67
36:DA:321:G:H21	41:DF:165:ARG:HE	1.40	0.67
38:DC:10:LEU:HD12	38:DC:32:LEU:HA	1.77	0.67
42:DG:16:ARG:HH22	42:DG:28:VAL:CG1	2.07	0.67
47:DO:1:MET:HG3	47:DO:67:LYS:HG2	1.77	0.67
52:DT:28:VAL:HG12	52:DT:29:ARG:HD3	1.75	0.67
1:AA:197:A:H4'	1:AA:198:G:O5'	1.94	0.67
1:AA:858:G:C5'	1:AA:858:G:H8	2.07	0.67
16:AP:49:LEU:HD12	16:AP:50:LYS:N	2.09	0.67
24:AY:6:C:O2'	24:AY:7:G:H5'	1.94	0.67
27:B1:81:LYS:O	27:B1:81:LYS:HG2	1.94	0.67
36:BA:271(K):U:H3'	36:BA:271(L):U:H5'	1.77	0.67
36:BA:287:C:H2'	36:BA:288:C:C6	2.30	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BB:42:C:H4'	42:BG:67:LYS:HG2	1.76	0.67
38:BC:75:LEU:HD11	38:BC:113:VAL:HG13	1.77	0.67
40:BE:63:LEU:O	40:BE:63:LEU:HD23	1.94	0.67
48:BP:23:PRO:CD	48:BP:33:ARG:HE	2.08	0.67
51:BS:13:ARG:CG	51:BS:14:VAL:H	2.07	0.67
58:BZ:178:GLU:N	58:BZ:178:GLU:OE1	2.28	0.67
1:CA:1486:G:H2'	1:CA:1487:G:O4'	1.95	0.67
1:CA:1513:A:H2'	1:CA:1514:C:C6	2.30	0.67
2:CB:96:ARG:HD3	2:CB:148:TYR:CE1	2.28	0.67
2:CB:204:ASN:HD22	2:CB:206:ASP:H	1.42	0.67
12:CL:89:ARG:NH1	12:CL:91:LYS:HG2	2.10	0.67
24:CY:40:C:H2'	24:CY:41:C:H5''	1.76	0.67
34:D8:61:LEU:HD22	34:D8:62:LEU:N	2.09	0.67
36:DA:1005:C:H2'	36:DA:1006:C:C6	2.30	0.67
36:DA:2133:G:H2'	36:DA:2157:G:N2	2.09	0.67
46:DN:74:ARG:HH21	46:DN:83:LYS:HD2	1.59	0.67
58:DZ:126:VAL:HA	58:DZ:163:LEU:HA	1.76	0.67
1:AA:1416:G:H2'	1:AA:1417:G:C5'	2.23	0.67
2:AB:96:ARG:HD3	2:AB:148:TYR:HE1	1.59	0.67
9:AI:53:VAL:H	9:AI:95:LYS:HZ2	1.43	0.67
22:AV:63:G:H2'	22:AV:64:A:O4'	1.95	0.67
38:BC:5:LYS:HA	38:BC:8:ARG:HE	1.59	0.67
42:BG:34:LEU:HB3	42:BG:161:THR:HG22	1.76	0.67
46:BN:3:THR:CG2	46:BN:5:VAL:HG23	2.24	0.67
52:BT:28:VAL:HG21	52:BT:46:GLU:HG3	1.74	0.67
52:BT:78:LEU:O	52:BT:79:HIS:HD2	1.77	0.67
36:BA:559:G:H22	53:BU:49:HIS:CD2	2.13	0.67
1:CA:624:C:H4'	16:CP:11:SER:H	1.60	0.67
9:CI:53:VAL:H	9:CI:95:LYS:HZ3	1.43	0.67
16:CP:43:LYS:HA	16:CP:48:TRP:CB	2.25	0.67
27:D1:75:GLU:O	27:D1:78:LYS:HG2	1.93	0.67
36:DA:1060:U:C1'	36:DA:1061:U:H5''	2.23	0.67
36:DA:2853:C:H2'	36:DA:2854:G:H8	1.59	0.67
36:DA:935:C:H2'	36:DA:936:C:H6	1.58	0.67
30:D4:26:SER:HB3	42:DG:105:LYS:NZ	2.09	0.67
36:DA:2563:U:H4'	47:DO:28:SER:HA	1.77	0.67
48:DP:64:LYS:C	48:DP:66:GLY:N	2.48	0.67
53:DU:76:TYR:CE1	53:DU:80:ILE:HG13	2.30	0.67
1:AA:344:A:H4'	1:AA:345:C:OP2	1.93	0.67
12:AL:47:LYS:O	12:AL:49:ASN:N	2.27	0.67
36:BA:1480:G:H2'	36:BA:1481:U:H5'	1.74	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:491:G:H2'	36:BA:492:A:H8	1.60	0.67
41:BF:28:ILE:CD1	41:BF:28:ILE:H	2.06	0.67
51:BS:12:PHE:CD1	51:BS:12:PHE:C	2.67	0.67
57:BY:8:LYS:HE2	57:BY:72:VAL:HG23	1.75	0.67
57:BY:9:LYS:HG2	57:BY:10:GLY:N	2.03	0.67
1:CA:1272:G:H5'	1:CA:1272:G:H8	1.60	0.67
1:CA:80:G:C2	1:CA:90:U:H5'	2.30	0.67
4:CD:28:SER:HB3	4:CD:29:PRO:CD	2.23	0.67
8:CH:55:GLY:C	8:CH:56:LYS:HD2	2.15	0.67
13:CM:5:ALA:CB	13:CM:66:LEU:HD23	2.25	0.67
20:CT:47:GLY:O	20:CT:49:ALA:N	2.24	0.67
36:DA:1484:G:H2'	36:DA:1485:G:C5'	2.05	0.67
36:DA:2110:G:N1	36:DA:2178:C:H5	1.93	0.67
36:DA:860:U:C5	36:DA:917:A:N7	2.60	0.67
51:DS:52:SER:CB	51:DS:55:ALA:HB3	2.24	0.67
53:DU:69:CYS:O	53:DU:74:LEU:HD12	1.94	0.67
57:DY:81:LYS:HD2	57:DY:96:ILE:HG13	1.75	0.67
2:AB:44:LEU:HA	2:AB:47:THR:HB	1.76	0.67
13:AM:81:LEU:HD12	13:AM:86:CYS:SG	2.35	0.67
15:AO:82:ILE:HD11	15:AO:88:ARG:HB2	1.75	0.67
32:B6:6:ARG:NH1	32:B6:6:ARG:HB3	2.10	0.67
41:BF:65:TRP:CZ3	41:BF:75:HIS:HD2	2.13	0.67
43:BH:98:LEU:HB2	43:BH:125:VAL:CG2	2.25	0.67
49:BQ:27:VAL:H	49:BQ:137:TYR:HD2	1.41	0.67
52:BT:82:LEU:N	52:BT:82:LEU:HD12	2.09	0.67
58:BZ:128:VAL:HG22	58:BZ:129:SER:N	2.08	0.67
1:CA:1352:C:H2'	1:CA:1353:G:C8	2.30	0.67
1:CA:191:G:N3	20:CT:105:SER:HB3	2.10	0.67
1:CA:975:A:H4'	1:CA:976:G:C5'	2.21	0.67
3:CC:32:LEU:HD22	3:CC:59:ARG:NH1	2.10	0.67
4:CD:18:LYS:H	4:CD:33:MET:CE	2.07	0.67
1:CA:376:G:H4'	16:CP:5:ARG:HH11	1.59	0.67
22:CW:37:A:H3'	22:CW:38:A:C8	2.30	0.67
34:D8:4:MET:HE3	34:D8:61:LEU:HG	1.75	0.67
36:DA:796:C:H2'	36:DA:797:C:C6	2.29	0.67
52:DT:13:ARG:CZ	52:DT:13:ARG:HA	2.25	0.67
52:DT:89:VAL:CG1	52:DT:91:ARG:HG3	2.25	0.67
52:DT:6:LEU:HD23	52:DT:9:LEU:HD12	1.76	0.67
31:D5:25:LEU:HD12	55:DW:19:LEU:HG	1.76	0.67
58:DZ:23:LYS:O	58:DZ:24:LEU:HB3	1.95	0.67
1:AA:1502:A:H2	1:AA:1505:G:N1	1.87	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:190:U:H2'	1:AA:191:G:H8	1.60	0.67
1:AA:403:C:O2'	1:AA:404:U:H5'	1.94	0.67
1:AA:979:C:C2'	1:AA:980:C:H5''	2.25	0.67
13:AM:15:VAL:O	13:AM:19:LEU:HD23	1.94	0.67
25:AZ:153:GLU:O	25:AZ:157:LEU:HD13	1.95	0.67
34:B8:33:ASN:CG	34:B8:34:TRP:N	2.49	0.67
34:B8:61:LEU:HD22	34:B8:62:LEU:N	2.10	0.67
42:BG:106:LEU:HD12	42:BG:141:PHE:HE1	1.59	0.67
36:BA:637:A:OP2	48:BP:115:LEU:HB2	1.95	0.67
1:CA:1442(A):G:H3'	1:CA:1442(B):A:C5'	2.24	0.67
1:CA:423:G:H2'	1:CA:424:G:H5'	1.77	0.67
2:CB:47:THR:HA	2:CB:202:PRO:HG2	1.76	0.67
31:D5:40:LYS:HE2	31:D5:44:THR:O	1.94	0.67
36:DA:1541:G:H1'	36:DA:1542:A:C4	2.29	0.67
36:DA:197:A:H5'	36:DA:197:A:C8	2.30	0.67
38:DC:214:VAL:CG2	38:DC:224:ILE:HD13	2.25	0.67
41:DF:29:ASN:ND2	41:DF:32:LEU:HB2	2.07	0.67
41:DF:65:TRP:CZ3	41:DF:75:HIS:HD2	2.13	0.67
42:DG:12:TYR:HA	42:DG:16:ARG:HG2	1.77	0.67
43:DH:118:PRO:CG	43:DH:121:ILE:HD12	2.23	0.67
46:DN:126:PRO:O	46:DN:127:ASP:HB2	1.93	0.67
46:DN:3:THR:HG22	46:DN:4:TYR:N	2.09	0.67
58:DZ:29:TYR:HB3	58:DZ:34:ASN:CB	2.25	0.67
1:AA:1272:G:H5'	1:AA:1272:G:H8	1.60	0.67
1:AA:1306:A:N6	1:AA:1331:G:H1'	2.09	0.67
1:AA:628:G:O2'	1:AA:629:G:H5'	1.95	0.67
1:AA:80:G:C2	1:AA:90:U:H5'	2.29	0.67
3:AC:134:ILE:HG22	3:AC:168:ALA:HB3	1.76	0.67
17:AQ:70:ARG:N	17:AQ:70:ARG:HD2	2.09	0.67
25:AZ:143:ASP:HB3	25:AZ:146:LEU:HB3	1.75	0.67
25:AZ:145:GLU:OE2	25:AZ:149:LEU:HD22	1.95	0.67
36:BA:1796:U:H2'	36:BA:1797:C:C6	2.30	0.67
36:BA:2178:C:H2'	36:BA:2179:C:C5'	2.24	0.67
36:BA:272(D):G:H1	36:BA:364:C:H42	1.41	0.67
40:BE:116:VAL:HG22	40:BE:117:MET:N	2.09	0.67
46:BN:74:ARG:HH21	46:BN:83:LYS:HD2	1.60	0.67
47:BO:88:ASN:ND2	47:BO:92:GLU:HB2	2.10	0.67
52:BT:6:LEU:HD23	52:BT:9:LEU:HD12	1.76	0.67
53:BU:90:VAL:HG12	53:BU:91:ASP:N	2.10	0.67
54:BV:39:LEU:HA	54:BV:47:VAL:CG1	2.25	0.67
55:BW:4:LYS:HG2	55:BW:5:ALA:N	2.09	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1306:A:N6	1:CA:1331:G:H1'	2.10	0.67
1:CA:190:U:H2'	1:CA:191:G:H8	1.60	0.67
3:CC:50:ALA:HA	3:CC:72:LYS:HB2	1.77	0.67
17:CQ:58:GLU:HB2	17:CQ:74:LEU:HB3	1.77	0.67
25:CZ:145:GLU:OE2	25:CZ:149:LEU:HD22	1.95	0.67
27:D1:26:ARG:HG2	27:D1:27:GLU:HG3	1.75	0.67
34:D8:50:LEU:HD12	34:D8:51:ALA:H	1.60	0.67
36:DA:1331:A:HO2'	36:DA:1332:G:H8	1.41	0.67
37:DB:7:G:H2'	37:DB:8:U:H5''	1.77	0.67
39:DD:27:THR:HG23	39:DD:83:GLU:HG2	1.76	0.67
41:DF:133:ASN:O	41:DF:135:LYS:N	2.28	0.67
36:DA:1190:G:H5'	48:DP:35:HIS:N	2.09	0.67
48:DP:59:LEU:HA	48:DP:61:ARG:HE	1.60	0.67
53:DU:92:ARG:NH2	54:DV:11:GLN:H	1.93	0.67
58:DZ:99:TYR:HD2	58:DZ:123:ASP:HB3	1.59	0.67
1:AA:1039:C:H2'	1:AA:1040:U:C5	2.30	0.66
1:AA:1316:G:N2	1:AA:1318:A:H3'	2.10	0.66
3:AC:7:PRO:O	3:AC:11:ARG:HG2	1.95	0.66
5:AE:100:VAL:HG12	5:AE:118:ILE:HG22	1.77	0.66
14:AN:12:ARG:HH11	14:AN:14:PRO:HG2	1.57	0.66
20:AT:49:ALA:O	20:AT:53:LEU:HD13	1.95	0.66
36:BA:1161:C:H1'	54:BV:8:GLY:O	1.95	0.66
36:BA:2308:G:O6	36:BA:2310:A:H2'	1.95	0.66
39:BD:118:VAL:HG22	39:BD:119:ALA:N	2.10	0.66
39:BD:30:GLU:HB3	39:BD:83:GLU:OE1	1.95	0.66
41:BF:133:ASN:O	41:BF:135:LYS:N	2.29	0.66
46:BN:46:VAL:O	46:BN:47:ALA:HB3	1.95	0.66
51:BS:89:ARG:HG2	51:BS:92:TYR:HA	1.76	0.66
52:BT:2:ASN:ND2	52:BT:7:ILE:HD11	2.05	0.66
57:BY:2:ARG:CD	57:BY:3:VAL:HG23	2.24	0.66
58:BZ:115:GLY:HA2	58:BZ:175:VAL:O	1.95	0.66
1:CA:250:A:H4'	1:CA:251:G:O5'	1.95	0.66
1:CA:975:A:H5'	1:CA:975:A:H8	1.60	0.66
10:CJ:24:VAL:HG21	10:CJ:37:PRO:HG3	1.76	0.66
20:CT:10:LEU:HD12	20:CT:11:SER:H	1.59	0.66
34:D8:33:ASN:CG	34:D8:34:TRP:N	2.48	0.66
36:DA:628:G:H2'	36:DA:629:G:C5'	2.18	0.66
36:DA:862:G:H2'	36:DA:863:A:O4'	1.95	0.66
37:DB:40:U:H3'	37:DB:41:U:H5''	1.78	0.66
40:DE:137:HIS:HB3	40:DE:138:PRO:HD2	1.77	0.66
40:DE:63:LEU:O	40:DE:63:LEU:HD23	1.94	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DG:51:ARG:HH11	42:DG:53:LEU:CD2	2.08	0.66
46:DN:3:THR:CG2	46:DN:5:VAL:HG23	2.25	0.66
47:DO:24:VAL:HG12	47:DO:33:ALA:HB2	1.77	0.66
51:DS:12:PHE:CD1	51:DS:12:PHE:C	2.66	0.66
54:DV:18:LEU:CD2	54:DV:19:LYS:H	2.07	0.66
54:DV:39:LEU:HD12	54:DV:47:VAL:HG11	1.78	0.66
57:DY:81:LYS:HD2	57:DY:96:ILE:CG1	2.24	0.66
3:AC:14:ILE:CG1	3:AC:15:THR:N	2.58	0.66
13:AM:11:ARG:HG2	13:AM:12:ASN:HD22	1.58	0.66
19:AS:16:LEU:O	19:AS:19:VAL:N	2.28	0.66
26:B0:49:LYS:N	26:B0:80:HIS:HD1	1.87	0.66
28:B2:35:LEU:CG	28:B2:53:LEU:HD13	2.25	0.66
36:BA:2174:C:H1'	38:BC:217:THR:O	1.95	0.66
36:BA:2577:A:H5''	36:BA:2578:G:H5'	1.77	0.66
38:BC:82:LYS:HE2	38:BC:82:LYS:HA	1.77	0.66
36:BA:2758:A:N6	43:BH:67:LEU:HD11	2.10	0.66
53:BU:88:ILE:C	53:BU:90:VAL:H	1.99	0.66
57:BY:81:LYS:HD2	57:BY:96:ILE:HG13	1.76	0.66
58:BZ:119:GLU:HG2	58:BZ:122:ARG:NH1	2.10	0.66
1:CA:1432:G:OP1	52:DT:107:ASP:HB2	1.95	0.66
14:CN:12:ARG:HH11	14:CN:14:PRO:HG2	1.59	0.66
10:CJ:61:GLU:CG	14:CN:58:LYS:HE2	2.22	0.66
25:CZ:317:GLU:HG3	25:CZ:404:LEU:HD21	1.78	0.66
27:D1:25:LYS:HG3	36:DA:388:G:OP1	1.94	0.66
56:DX:13:LEU:HA	56:DX:18:TYR:CE1	2.30	0.66
1:AA:227:G:H2'	1:AA:228:A:C5'	2.14	0.66
1:AA:977:A:O2'	1:AA:978:A:C5'	2.42	0.66
1:AA:979:C:H2'	1:AA:980:C:H5''	1.77	0.66
5:AE:51:VAL:HB	5:AE:52:PRO:HD3	1.76	0.66
27:B1:73:LEU:HD22	27:B1:94:LEU:HB3	1.77	0.66
31:B5:36:CYS:SG	31:B5:48:GLU:O	2.53	0.66
36:BA:877:U:O2'	36:BA:878:A:H5''	1.95	0.66
39:BD:118:VAL:HG22	39:BD:119:ALA:H	1.60	0.66
54:BV:18:LEU:CD2	54:BV:19:LYS:H	2.09	0.66
1:CA:722:A:N3	1:CA:722:A:H2'	2.10	0.66
1:CA:946:A:H2'	1:CA:947:G:C8	2.29	0.66
1:CA:977:A:O2'	1:CA:978:A:C5'	2.43	0.66
3:CC:189:ALA:HB3	3:CC:196:LEU:HB2	1.77	0.66
17:CQ:59:ILE:HG23	17:CQ:71:PHE:HB3	1.76	0.66
22:CW:31:A:N1	22:CW:39:U:O4	2.28	0.66
25:CZ:16:THR:HG23	25:CZ:79:HIS:NE2	2.10	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2174:C:H1'	38:DC:217:THR:O	1.94	0.66
36:DA:271(K):U:H3'	36:DA:271(L):U:H5'	1.77	0.66
36:DA:272(D):G:H1	36:DA:364:C:H42	1.42	0.66
36:DA:523:C:H2'	36:DA:524:U:H5'	1.78	0.66
36:DA:672:C:C2'	36:DA:673:C:H5''	2.25	0.66
43:DH:19:VAL:HG12	43:DH:20:ALA:N	2.09	0.66
57:DY:2:ARG:CD	57:DY:3:VAL:HG23	2.24	0.66
1:AA:1211:U:H5'	1:AA:1212:U:OP1	1.95	0.66
1:AA:351:G:H4'	1:AA:352:C:OP1	1.95	0.66
1:AA:848:C:O2'	1:AA:849:C:H5'	1.94	0.66
2:AB:151:GLY:O	2:AB:153:ARG:N	2.27	0.66
28:B2:9:GLN:OE1	28:B2:60:LEU:HD21	1.95	0.66
36:BA:729:G:OP2	39:BD:13:ARG:NH1	2.28	0.66
39:BD:28:GLU:HB2	39:BD:29:PRO:CD	2.26	0.66
42:BG:103:LEU:O	42:BG:107:LEU:HD22	1.94	0.66
42:BG:154:GLY:O	42:BG:155:MET:HB3	1.95	0.66
1:CA:1086:U:H2'	1:CA:1087:G:C5'	2.25	0.66
4:CD:126:ILE:HD12	4:CD:126:ILE:N	2.11	0.66
6:CF:67:MET:HB2	6:CF:68:PRO:HD2	1.77	0.66
24:CY:51:G:H1	24:CY:63:C:H42	1.43	0.66
36:DA:1076:C:H5''	58:DZ:111:VAL:CG1	2.26	0.66
41:DF:89:VAL:HG12	41:DF:90:PHE:N	2.10	0.66
48:DP:146:VAL:O	48:DP:148:LEU:HG	1.96	0.66
2:AB:215:LEU:O	2:AB:219:VAL:HG23	1.96	0.66
4:AD:129:ASN:N	4:AD:129:ASN:HD22	1.94	0.66
22:AW:69:G:C2'	22:AW:70:G:H5''	2.26	0.66
25:AZ:24:LYS:HG3	25:AZ:25:THR:H	1.60	0.66
13:AM:57:ARG:NH1	30:B4:34:GLU:HG3	2.11	0.66
32:B6:25:LYS:HE2	34:B8:34:TRP:HE1	1.61	0.66
36:BA:614(A):U:H4'	36:BA:614(B):G:C5'	2.24	0.66
36:BA:709:U:H2'	36:BA:710:G:C8	2.29	0.66
37:BB:25:A:H2'	37:BB:25:A:N3	2.09	0.66
42:BG:20:ILE:C	42:BG:22:ARG:H	1.98	0.66
36:BA:2563:U:H4'	47:BO:28:SER:HA	1.77	0.66
50:BR:100:LEU:HD11	50:BR:113:LEU:HB2	1.77	0.66
51:BS:15:ARG:O	51:BS:18:ILE:HG13	1.95	0.66
53:BU:92:ARG:NH2	54:BV:11:GLN:H	1.92	0.66
9:CI:9:ARG:CG	9:CI:14:VAL:HG13	2.26	0.66
22:CV:51:U:H2'	22:CV:52:G:C8	2.30	0.66
28:D2:38:GLN:OE1	28:D2:44:LEU:HD13	1.95	0.66
31:D5:16:ARG:HD2	31:D5:20:ARG:NH1	2.10	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:172:C:H2'	36:DA:173:G:O4'	1.95	0.66
36:DA:2485:G:H5''	49:DQ:46:GLN:NE2	2.11	0.66
36:DA:287:C:H2'	36:DA:288:C:C6	2.30	0.66
36:DA:709:U:H2'	36:DA:710:G:C8	2.31	0.66
42:DG:51:ARG:CZ	42:DG:51:ARG:HA	2.26	0.66
51:DS:54:LEU:CD1	51:DS:58:LEU:H	2.09	0.66
51:DS:88:ASP:OD1	51:DS:89:ARG:N	2.28	0.66
1:AA:149:A:H2'	1:AA:150:C:C6	2.30	0.66
1:AA:452:A:O2'	1:AA:453:A:H8	1.72	0.66
11:AK:127:LYS:O	11:AK:129:SER:N	2.28	0.66
13:AM:65:LYS:H	13:AM:65:LYS:CD	2.07	0.66
17:AQ:58:GLU:HB2	17:AQ:74:LEU:HB3	1.78	0.66
31:B5:40:LYS:HG2	31:B5:46:CYS:HB2	1.78	0.66
32:B6:35:GLU:CB	32:B6:51:GLU:HB2	2.21	0.66
36:BA:1600:C:O2'	36:BA:1601:G:H5'	1.95	0.66
36:BA:2108:C:O2	36:BA:2108:C:H2'	1.94	0.66
36:BA:2291:U:H2'	36:BA:2292:C:C6	2.30	0.66
38:BC:73:ARG:HE	38:BC:110:PHE:HD1	1.41	0.66
1:CA:8:A:H62	4:CD:208:SER:HB2	1.60	0.66
6:CF:82:ARG:HB2	6:CF:85:VAL:HG23	1.76	0.66
9:CI:53:VAL:N	9:CI:95:LYS:HZ3	1.92	0.66
22:CV:44:G:C3'	22:CV:45:U:H5'	2.26	0.66
36:DA:212:G:O2'	36:DA:213:A:H5'	1.96	0.66
36:DA:2308:G:O6	36:DA:2310:A:H2'	1.96	0.66
36:DA:2472:G:H5'	36:DA:2473:U:H5''	1.77	0.66
39:DD:62:TYR:HE1	39:DD:64:ILE:HA	1.60	0.66
41:DF:132:VAL:HG22	41:DF:133:ASN:N	2.07	0.66
41:DF:160:ASN:ND2	41:DF:162:LEU:HD13	2.09	0.66
42:DG:82:LEU:HD13	42:DG:87:PRO:CB	2.25	0.66
43:DH:117:PRO:HB3	43:DH:123:PHE:CE1	2.31	0.66
48:DP:66:GLY:O	48:DP:67:MET:HB2	1.96	0.66
58:DZ:40:ASP:HB3	58:DZ:43:GLU:CG	2.24	0.66
1:AA:228:A:H5'	1:AA:228:A:C8	2.25	0.66
3:AC:5:ILE:HG12	3:AC:10:PHE:HB2	1.76	0.66
3:AC:76:VAL:HG21	3:AC:103:VAL:HG21	1.78	0.66
1:AA:426:G:P	4:AD:36:ARG:HH21	2.18	0.66
7:AG:78:ARG:NH1	7:AG:80:VAL:HG21	2.11	0.66
12:AL:82:VAL:H	12:AL:106:ASP:CG	1.99	0.66
6:AF:46:ARG:HH22	18:AR:37:VAL:HG11	1.61	0.66
35:B9:10:ILE:O	35:B9:11:CYS:HB3	1.95	0.66
36:BA:2206:G:N2	36:BA:2207:G:H5'	2.10	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BH:98:LEU:HD12	43:BH:102:ALA:O	1.96	0.66
36:BA:1059:G:H1'	45:BK:126:UNK:O	1.96	0.66
48:BP:114:ILE:HD13	48:BP:127:ALA:HB2	1.78	0.66
48:BP:124:LYS:HD3	48:BP:143:GLY:HA3	1.77	0.66
54:BV:17:GLY:C	54:BV:18:LEU:HD13	2.16	0.66
55:BW:6:ILE:HG12	55:BW:104:THR:HG22	1.75	0.66
57:BY:95:LYS:HE3	57:BY:100:ALA:HB2	1.76	0.66
1:CA:426:G:P	4:CD:36:ARG:HH21	2.19	0.66
20:CT:49:ALA:O	20:CT:53:LEU:HD13	1.96	0.66
25:CZ:153:GLU:O	25:CZ:157:LEU:HD13	1.96	0.66
25:CZ:163:PHE:HD1	25:CZ:164:PRO:HD2	1.61	0.66
31:D5:36:CYS:SG	31:D5:48:GLU:O	2.54	0.66
32:D6:19:ARG:HD3	32:D6:20:ASN:H	1.59	0.66
36:DA:1005:C:H2'	36:DA:1006:C:H6	1.61	0.66
36:DA:106:C:H2'	36:DA:107:C:C6	2.30	0.66
38:DC:82:LYS:HA	38:DC:82:LYS:HE2	1.78	0.66
41:DF:160:ASN:OD1	41:DF:163:VAL:HG23	1.94	0.66
3:AC:58:GLU:HB2	3:AC:65:ALA:HB2	1.78	0.66
3:AC:94:LEU:O	3:AC:95:THR:HB	1.95	0.66
10:AJ:50:ILE:CD1	10:AJ:50:ILE:H	1.95	0.66
17:AQ:5:VAL:HG22	17:AQ:60:ILE:HD12	1.77	0.66
19:AS:43:GLU:O	19:AS:45:VAL:HG13	1.95	0.66
29:B3:35:ARG:CB	29:B3:35:ARG:HH11	2.05	0.66
36:BA:271(L):U:C5'	36:BA:271(M):G:H5'	2.21	0.66
36:BA:2777:G:H5''	36:BA:2778:A:H5'	1.78	0.66
39:BD:267:SER:O	39:BD:269:PHE:N	2.29	0.66
42:BG:42:GLY:O	42:BG:44:GLY:N	2.28	0.66
47:BO:114:ILE:HD12	47:BO:114:ILE:N	2.09	0.66
48:BP:146:VAL:O	48:BP:148:LEU:HG	1.96	0.66
36:BA:1190:G:H5'	48:BP:35:HIS:N	2.10	0.66
49:BQ:12:GLN:HG2	49:BQ:73:PRO:HD2	1.78	0.66
51:BS:106:ARG:HH12	51:BS:108:GLY:N	1.94	0.66
52:BT:89:VAL:CG1	52:BT:91:ARG:HG3	2.26	0.66
58:BZ:114:GLY:O	58:BZ:146:ILE:HG22	1.96	0.66
1:CA:624:C:H2'	1:CA:625:G:C8	2.30	0.66
13:CM:10:PRO:HB2	13:CM:18:ALA:CB	2.14	0.66
13:CM:5:ALA:HB2	13:CM:66:LEU:HD23	1.77	0.66
15:CO:3:ILE:O	15:CO:3:ILE:HG13	1.95	0.66
36:DA:74:A:H5''	36:DA:75:G:O4'	1.96	0.66
39:DD:28:GLU:HB2	39:DD:29:PRO:CD	2.26	0.66
57:DY:17:SER:HB2	57:DY:71:LYS:CE	2.25	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:28:SER:HB3	4:AD:29:PRO:CD	2.22	0.66
14:AN:29:ARG:HG3	14:AN:29:ARG:HH11	1.61	0.66
28:B2:55:ARG:HG3	28:B2:55:ARG:HH11	1.61	0.66
36:BA:1598:C:H5'	56:BX:36:LYS:HG2	1.78	0.66
36:BA:1332:G:H21	36:BA:1610:A:H8	1.40	0.66
36:BA:2579:C:O2'	40:BE:131:ALA:HB2	1.96	0.66
42:BG:138:GLN:NE2	42:BG:152:LEU:HA	2.10	0.66
42:BG:46:ALA:HB3	42:BG:88:ILE:HD13	1.78	0.66
52:BT:109:GLU:HG2	52:BT:112:ARG:NH2	2.10	0.66
53:BU:15:LYS:O	53:BU:19:LYS:HG2	1.96	0.66
56:BX:24:GLY:O	56:BX:82:GLN:HA	1.96	0.66
1:CA:848:C:O2'	1:CA:849:C:H5'	1.96	0.66
21:CU:12:LYS:HG2	21:CU:22:ARG:HB3	1.77	0.66
22:CW:38:A:C2'	22:CW:39:U:H5''	2.26	0.66
36:DA:1534:U:H2'	36:DA:1535:A:O4'	1.96	0.66
36:DA:2108:C:O2	36:DA:2108:C:H2'	1.94	0.66
42:DG:70:VAL:HG11	42:DG:72:ARG:HH21	1.61	0.66
42:DG:5:VAL:HB	42:DG:8:LYS:HB2	1.76	0.66
51:DS:99:LYS:HB3	51:DS:99:LYS:HZ2	1.58	0.66
1:AA:1256:A:H2	1:AA:1277:C:C6	2.14	0.66
1:AA:1330:U:H5'	1:AA:1331:G:OP2	1.96	0.66
1:AA:1533:C:H2'	1:AA:1534:A:H5''	1.78	0.66
1:AA:187:C:H2'	1:AA:188:C:H6	1.61	0.66
1:AA:975:A:H5'	1:AA:975:A:H8	1.59	0.66
22:AV:17:C:H2'	22:AV:18:G:H5''	1.78	0.66
32:B6:19:ARG:HD3	32:B6:20:ASN:H	1.60	0.66
36:BA:1192:G:N7	48:BP:29:LYS:NZ	2.39	0.66
36:BA:1278:A:OP1	50:BR:36:THR:HG22	1.95	0.66
36:BA:862:G:H2'	36:BA:863:A:O4'	1.95	0.66
41:BF:156:LEU:HD21	41:BF:163:VAL:HG12	1.78	0.66
58:BZ:96:VAL:HG13	58:BZ:97:GLU:N	2.10	0.66
13:CM:54:VAL:O	13:CM:58:GLU:HG2	1.95	0.66
22:CV:17:C:H2'	22:CV:18:G:H5''	1.78	0.66
29:D3:19:GLN:HE22	29:D3:52:HIS:HE1	1.44	0.66
30:D4:39:CYS:O	30:D4:40:HIS:HB2	1.94	0.66
36:DA:1902:C:H4'	39:DD:244:ARG:HA	1.78	0.66
36:DA:2206:G:N2	36:DA:2207:G:H5'	2.11	0.66
36:DA:2219:G:O2'	36:DA:2220:G:H5'	1.96	0.66
36:DA:280:C:H3'	36:DA:281:G:C8	2.30	0.66
36:DA:402:A:O2'	36:DA:403:U:H5'	1.96	0.66
40:DE:57:LYS:HA	40:DE:57:LYS:CE	2.18	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DG:106:LEU:O	42:DG:111:LEU:HG	1.96	0.66
43:DH:103:LEU:HB2	43:DH:123:PHE:CD2	2.28	0.66
43:DH:85:LYS:NZ	43:DH:132:ARG:HA	2.07	0.66
43:DH:12:PRO:O	43:DH:15:VAL:HG22	1.96	0.66
51:DS:106:ARG:HG2	51:DS:106:ARG:HH11	1.61	0.66
52:DT:23:ARG:HH21	52:DT:120:ARG:HD3	1.61	0.66
52:DT:80:SER:CB	52:DT:81:PRO:HD3	2.26	0.66
1:AA:444:C:H2'	1:AA:445:G:H8	1.61	0.65
10:AJ:24:VAL:HG21	10:AJ:37:PRO:HG3	1.77	0.65
24:AY:27:C:O2'	24:AY:28:C:H5'	1.97	0.65
24:AY:40:C:C2'	24:AY:41:C:H5''	2.26	0.65
36:BA:476:G:H4'	36:BA:502:A:N1	2.11	0.65
36:BA:672:C:C2'	36:BA:673:C:H5''	2.26	0.65
36:BA:813:U:H2'	36:BA:814:C:C6	2.31	0.65
36:BA:944:G:H5'	36:BA:945:A:O5'	1.95	0.65
38:BC:27:ARG:NE	38:BC:182:PRO:HG2	2.10	0.65
42:BG:137:GLU:HG3	42:BG:138:GLN:H	1.61	0.65
42:BG:120:LEU:HB2	42:BG:179:PRO:O	1.95	0.65
51:BS:88:ASP:OD1	51:BS:89:ARG:N	2.28	0.65
53:BU:52:ARG:HB3	53:BU:52:ARG:NH1	2.11	0.65
54:BV:35:LEU:O	54:BV:37:VAL:N	2.28	0.65
57:BY:14:LEU:HD12	57:BY:15:VAL:H	1.59	0.65
58:BZ:28:MET:CE	58:BZ:37:VAL:HG11	2.26	0.65
1:CA:444:C:H2'	1:CA:445:G:H8	1.60	0.65
3:CC:49:SER:C	3:CC:51:GLY:H	1.99	0.65
4:CD:109:GLY:O	4:CD:111:ALA:N	2.28	0.65
36:DA:2111:C:H1'	36:DA:2118:U:H4'	1.77	0.65
36:DA:2672:G:H2'	36:DA:2673:G:H5''	1.78	0.65
36:DA:886:C:O2'	36:DA:887:A:H4'	1.97	0.65
41:DF:43:LYS:HA	41:DF:98:SER:HB3	1.78	0.65
49:DQ:12:GLN:HG2	49:DQ:73:PRO:HD2	1.77	0.65
56:DX:24:GLY:O	56:DX:82:GLN:HA	1.96	0.65
58:DZ:18:LEU:CD1	58:DZ:18:LEU:H	2.08	0.65
1:AA:1234:C:H1'	1:AA:1364:U:O2	1.96	0.65
1:AA:1512:U:H2'	1:AA:1513:A:C8	2.30	0.65
9:AI:9:ARG:CG	9:AI:14:VAL:HG13	2.26	0.65
36:BA:796:C:H2'	36:BA:797:C:C6	2.31	0.65
39:BD:158:ALA:HB3	39:BD:161:THR:HG21	1.77	0.65
48:BP:65:ARG:HB3	48:BP:68:GLN:HE22	1.61	0.65
52:BT:53:ARG:HH11	52:BT:53:ARG:CB	1.97	0.65
57:BY:46:LYS:HB3	57:BY:62:GLU:HG2	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1412:C:H2'	1:CA:1413:A:H8	1.58	0.65
1:CA:149:A:H2'	1:CA:150:C:C6	2.31	0.65
1:CA:1535:C:H2'	1:CA:1536:C:C5	2.31	0.65
1:CA:299:G:H2'	1:CA:300:A:C8	2.31	0.65
1:CA:961:U:HO2'	1:CA:962:C:H6	1.45	0.65
4:CD:3:ARG:HG2	4:CD:118:ARG:NE	2.12	0.65
9:CI:20:ARG:O	9:CI:22:GLY:N	2.29	0.65
17:CQ:27:PHE:CZ	17:CQ:36:ILE:HD11	2.31	0.65
22:CW:69:G:C2'	22:CW:70:G:H5''	2.25	0.65
36:DA:195:A:H5''	36:DA:196:A:OP2	1.95	0.65
36:DA:391:G:O2'	36:DA:392:C:H5'	1.97	0.65
36:DA:654(A):G:C2'	36:DA:654(B):C:H5'	2.25	0.65
41:DF:125:LEU:HD23	41:DF:125:LEU:N	2.12	0.65
43:DH:158:HIS:HD1	43:DH:168:PRO:HB2	1.61	0.65
52:DT:82:LEU:HD12	52:DT:82:LEU:N	2.12	0.65
58:DZ:166:SER:CB	58:DZ:168:GLU:HG3	2.26	0.65
2:AB:95:GLN:HE21	2:AB:147:LYS:HE2	1.60	0.65
4:AD:128:VAL:HG12	4:AD:129:ASN:N	2.08	0.65
19:AS:32:LYS:N	19:AS:32:LYS:HZ3	1.94	0.65
25:AZ:152:MET:CE	25:AZ:156:ASP:HB2	2.26	0.65
25:AZ:163:PHE:HD1	25:AZ:164:PRO:HD2	1.62	0.65
25:AZ:16:THR:HG23	25:AZ:79:HIS:NE2	2.10	0.65
28:B2:51:ARG:HD2	36:BA:94(A):G:H21	1.60	0.65
34:B8:15:LYS:HB2	48:BP:65:ARG:HH21	1.60	0.65
36:BA:234:C:H2'	36:BA:235:U:C6	2.31	0.65
36:BA:2523:G:H2'	36:BA:2524:G:H5'	1.78	0.65
36:BA:654(A):G:C2'	36:BA:654(B):C:H5'	2.25	0.65
46:BN:3:THR:HG22	46:BN:4:TYR:N	2.11	0.65
48:BP:58:THR:O	48:BP:58:THR:HG22	1.95	0.65
52:BT:80:SER:CB	52:BT:81:PRO:HD3	2.26	0.65
36:BA:328:U:H4'	57:BY:68:HIS:HD1	1.59	0.65
2:CB:96:ARG:HD3	2:CB:148:TYR:HE1	1.59	0.65
25:CZ:143:ASP:HB3	25:CZ:146:LEU:CB	2.26	0.65
36:DA:2201:C:O2'	36:DA:2202:C:H5'	1.96	0.65
36:DA:2313:C:H5'	36:DA:2313:C:H6	1.60	0.65
39:DD:267:SER:O	39:DD:269:PHE:N	2.30	0.65
39:DD:24:ILE:C	39:DD:26:LYS:H	1.99	0.65
48:DP:115:LEU:HA	48:DP:134:ALA:HB3	1.76	0.65
53:DU:90:VAL:HG12	53:DU:91:ASP:N	2.11	0.65
57:DY:14:LEU:HD12	57:DY:15:VAL:H	1.60	0.65
58:DZ:40:ASP:OD1	58:DZ:42:VAL:HG12	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DQ:19:GLY:HA3	58:DZ:79:ARG:HH12	1.60	0.65
1:AA:1443:G:H5'	1:AA:1444:C:OP2	1.96	0.65
3:AC:166:GLU:HA	3:AC:166:GLU:OE1	1.96	0.65
6:AF:91:VAL:HG11	18:AR:72:ARG:HH12	1.61	0.65
7:AG:79:ARG:NH2	22:AW:33:U:H4'	2.11	0.65
32:B6:43:CYS:O	32:B6:44:ARG:HB2	1.96	0.65
36:BA:1786:A:C2	36:BA:2606:C:H1'	2.32	0.65
36:BA:2110:G:N1	36:BA:2178:C:H5	1.94	0.65
36:BA:272(I):U:H6	36:BA:272(I):U:H5'	1.61	0.65
36:BA:402:A:O2'	36:BA:403:U:H5'	1.96	0.65
40:BE:77:ILE:HG22	40:BE:78:LEU:HD12	1.79	0.65
42:BG:52:ILE:HG12	42:BG:54:GLU:HB2	1.79	0.65
49:BQ:21:THR:O	49:BQ:22:LYS:HB3	1.95	0.65
52:BT:38:ASN:O	52:BT:38:ASN:ND2	2.28	0.65
52:BT:62:THR:CG2	52:BT:75:ILE:HG13	2.27	0.65
57:BY:27:VAL:HG12	57:BY:29:GLU:OE1	1.95	0.65
1:CA:1039:C:H2'	1:CA:1040:U:C5	2.30	0.65
6:CF:46:ARG:HH22	18:CR:37:VAL:HG11	1.59	0.65
25:CZ:215:ARG:HH11	25:CZ:215:ARG:HG3	1.60	0.65
31:D5:16:ARG:NH1	31:D5:17:ASP:OD1	2.30	0.65
36:DA:1141:U:H2'	46:DN:63:THR:CG2	2.21	0.65
36:DA:1592:C:H2'	36:DA:1593:G:H8	1.61	0.65
36:DA:2195:C:O2'	36:DA:2196:C:H5'	1.96	0.65
36:DA:244:A:H4'	48:DP:74:GLU:CG	2.24	0.65
36:DA:328:U:H4'	57:DY:68:HIS:HD1	1.61	0.65
36:DA:45:C:H2'	36:DA:47:C:C6	2.31	0.65
36:DA:614(B):G:H1'	41:DF:44:ARG:HG3	1.79	0.65
40:DE:24:THR:HG22	40:DE:186:GLY:HA2	1.79	0.65
52:DT:19:LEU:HD22	52:DT:85:LYS:HD3	1.78	0.65
54:DV:35:LEU:O	54:DV:37:VAL:N	2.30	0.65
54:DV:34:GLU:O	54:DV:36:PRO:HD3	1.96	0.65
54:DV:39:LEU:HA	54:DV:47:VAL:CG1	2.26	0.65
4:AD:3:ARG:HG2	4:AD:118:ARG:NE	2.11	0.65
12:AL:119:LYS:O	12:AL:120:TYR:HB2	1.97	0.65
25:AZ:143:ASP:HB3	25:AZ:146:LEU:CB	2.26	0.65
34:B8:16:ILE:HD12	34:B8:57:ARG:HG2	1.79	0.65
36:BA:2111:C:H1'	36:BA:2118:U:C4'	2.27	0.65
39:BD:242:ARG:CG	39:BD:242:ARG:HH11	2.09	0.65
40:BE:11:MET:HB2	40:BE:23:VAL:O	1.96	0.65
53:BU:76:TYR:CE1	53:BU:80:ILE:HG13	2.31	0.65
58:BZ:156:LYS:O	58:BZ:158:PRO:HD3	1.95	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1277:C:O2'	1:CA:1279:A:H8	1.75	0.65
1:CA:1313:U:H2'	1:CA:1314:C:O2	1.96	0.65
1:CA:344:A:H4'	1:CA:345:C:OP2	1.96	0.65
4:CD:59:ARG:NH2	4:CD:62:GLN:HG3	2.10	0.65
11:CK:30:VAL:HG21	11:CK:65:ALA:HA	1.77	0.65
18:CR:36:ASN:OD1	18:CR:38:GLU:HG2	1.96	0.65
19:CS:32:LYS:NZ	19:CS:32:LYS:H	1.94	0.65
28:D2:47:ASN:O	28:D2:49:LYS:N	2.30	0.65
36:DA:1352:U:O2'	36:DA:1353:A:H5'	1.96	0.65
36:DA:2580:U:O3'	40:DE:130:GLY:HA3	1.97	0.65
40:DE:11:MET:HB2	40:DE:23:VAL:O	1.97	0.65
48:DP:124:LYS:HD3	48:DP:143:GLY:HA3	1.77	0.65
51:DS:89:ARG:HG2	51:DS:92:TYR:HA	1.78	0.65
37:DB:106:G:H5''	58:DZ:31:ARG:HG2	1.77	0.65
1:AA:353:A:H5'	1:AA:353:A:C8	2.31	0.65
1:AA:657:G:O2'	1:AA:658:G:H5'	1.97	0.65
17:AQ:40:LYS:HD3	17:AQ:42:TYR:CZ	2.32	0.65
21:AU:12:LYS:HG2	21:AU:22:ARG:HB3	1.77	0.65
25:AZ:295:ARG:NH1	25:AZ:295:ARG:HG2	2.11	0.65
28:B2:2:LYS:HE3	28:B2:59:ARG:HH22	1.61	0.65
36:BA:1053:C:H2'	36:BA:1054:A:C8	2.31	0.65
36:BA:1352:U:O2'	36:BA:1353:A:H5'	1.97	0.65
36:BA:970:C:H2'	36:BA:971:C:H6	1.62	0.65
39:BD:24:ILE:HD13	39:BD:25:THR:N	2.11	0.65
39:BD:43:ARG:NH1	39:BD:44:ASN:ND2	2.44	0.65
40:BE:4:ILE:HD12	40:BE:92:THR:O	1.96	0.65
48:BP:16:ARG:HH11	48:BP:16:ARG:HB2	1.62	0.65
36:BA:833:U:H5''	48:BP:48:PRO:CB	2.26	0.65
52:BT:75:ILE:N	52:BT:75:ILE:HD12	2.12	0.65
1:CA:1124:G:H5'	10:CJ:35:SER:HB2	1.77	0.65
2:CB:22:LYS:CA	2:CB:22:LYS:HE2	2.27	0.65
3:CC:58:GLU:HB2	3:CC:65:ALA:HB2	1.79	0.65
9:CI:26:VAL:HG22	9:CI:61:ALA:HB3	1.78	0.65
17:CQ:40:LYS:HD3	17:CQ:42:TYR:CZ	2.31	0.65
36:DA:1051:G:H2'	36:DA:1052:C:C6	2.32	0.65
36:DA:1278:A:OP1	50:DR:36:THR:HG22	1.96	0.65
36:DA:1971:A:C4	39:DD:241:PRO:HD3	2.32	0.65
38:DC:114:VAL:HG23	38:DC:149:ILE:HD11	1.79	0.65
38:DC:96:GLY:H	38:DC:99:ILE:CG1	2.09	0.65
40:DE:77:ILE:HG22	40:DE:78:LEU:H	1.62	0.65
46:DN:132:ALA:O	46:DN:133:GLN:HB3	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DR:14:SER:HA	50:DR:17:ARG:NH1	2.11	0.65
51:DS:24:LEU:HB3	51:DS:85:VAL:HG12	1.77	0.65
1:AA:940:C:P	7:AG:102:ARG:HH21	2.20	0.65
2:AB:22:LYS:HE2	2:AB:22:LYS:CA	2.26	0.65
4:AD:145:GLU:H	4:AD:145:GLU:CD	2.00	0.65
1:AA:437:U:OP1	4:AD:155:LEU:HD22	1.96	0.65
28:B2:21:LEU:HB3	28:B2:64:LEU:HG	1.78	0.65
32:B6:5:VAL:N	32:B6:8:LYS:HB3	2.12	0.65
36:BA:259:G:H1'	36:BA:621:A:O2'	1.96	0.65
41:BF:160:ASN:ND2	41:BF:162:LEU:HD13	2.11	0.65
36:BA:1952:A:C6	47:BO:22:ILE:HD12	2.31	0.65
51:BS:98:VAL:CG1	51:BS:100:ALA:H	2.08	0.65
58:BZ:119:GLU:O	58:BZ:121:HIS:N	2.30	0.65
2:CB:97:TRP:HZ3	2:CB:176:GLU:OE2	1.80	0.65
31:D5:40:LYS:HE3	31:D5:46:CYS:HB3	1.78	0.65
36:DA:1771:C:H1'	36:DA:1786:A:C8	2.30	0.65
36:DA:234:C:H2'	36:DA:235:U:C6	2.31	0.65
36:DA:644:A:C2	36:DA:2369:A:H1'	2.32	0.65
36:DA:672:C:H2'	36:DA:673:C:H5'	1.77	0.65
39:DD:118:VAL:HG22	39:DD:119:ALA:H	1.62	0.65
39:DD:24:ILE:HD13	39:DD:25:THR:N	2.12	0.65
54:DV:49:THR:HB	54:DV:50:PRO:CD	2.27	0.65
36:DA:106:C:H1'	57:DY:2:ARG:NH2	2.11	0.65
1:AA:309:G:H1'	1:AA:608:A:C2	2.31	0.65
2:AB:84:GLU:HB3	2:AB:219:VAL:HG21	1.79	0.65
3:AC:49:SER:O	3:AC:50:ALA:HB3	1.97	0.65
30:B4:13:ARG:C	30:B4:14:ILE:HD12	2.17	0.65
31:B5:4:HIS:CB	31:B5:5:PRO:CD	2.72	0.65
36:BA:1042:G:H1'	36:BA:1114:G:H22	1.61	0.65
36:BA:1810:A:H2'	36:BA:1811:G:O4'	1.97	0.65
36:BA:280:C:H3'	36:BA:281:G:C8	2.30	0.65
37:BB:40:U:H3'	37:BB:41:U:H5''	1.79	0.65
42:BG:131:TYR:HB3	42:BG:159:VAL:CG1	2.26	0.65
1:CA:1255:G:H3'	1:CA:1279:A:N6	2.12	0.65
1:CA:939:G:H5''	7:CG:102:ARG:NH2	2.12	0.65
3:CC:76:VAL:HG21	3:CC:103:VAL:HG21	1.79	0.65
5:CE:31:LEU:CD2	5:CE:43:LEU:HD11	2.27	0.65
12:CL:47:LYS:O	12:CL:49:ASN:N	2.30	0.65
35:D9:10:ILE:O	35:D9:11:CYS:HB3	1.94	0.65
36:DA:1301:A:HO2'	36:DA:1302:A:H2'	1.59	0.65
36:DA:2758:A:C2	36:DA:2759:G:H1'	2.32	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:479:A:O2'	36:DA:481:G:H5'	1.96	0.65
48:DP:114:ILE:HD13	48:DP:127:ALA:HB2	1.78	0.65
53:DU:15:LYS:O	53:DU:19:LYS:HG2	1.97	0.65
56:DX:35:THR:CG2	56:DX:37:THR:H	2.09	0.65
58:DZ:166:SER:H	58:DZ:167:PRO:HA	1.61	0.65
58:DZ:69:THR:HG22	58:DZ:90:VAL:HA	1.78	0.65
1:AA:250:A:H4'	1:AA:251:G:O5'	1.95	0.65
1:AA:946:A:H2'	1:AA:947:G:C8	2.32	0.65
12:AL:38:THR:CG2	12:AL:59:ARG:HG3	2.26	0.65
19:AS:32:LYS:H	19:AS:32:LYS:NZ	1.94	0.65
28:B2:28:LYS:C	28:B2:57:ILE:HD11	2.16	0.65
36:BA:1779:U:C5	36:BA:1784:A:N7	2.59	0.65
36:BA:2649:U:H2'	36:BA:2650:U:C6	2.31	0.65
36:BA:479:A:O2'	36:BA:481:G:H5'	1.97	0.65
40:BE:137:HIS:HB3	40:BE:138:PRO:HD2	1.79	0.65
40:BE:202:LYS:HD2	40:BE:202:LYS:N	2.12	0.65
43:BH:19:VAL:HG12	43:BH:20:ALA:N	2.09	0.65
2:CB:95:GLN:HE21	2:CB:147:LYS:HE2	1.62	0.65
2:CB:151:GLY:O	2:CB:153:ARG:N	2.27	0.65
4:CD:180:GLY:O	4:CD:182:LYS:HG3	1.96	0.65
4:CD:59:ARG:HH21	4:CD:62:GLN:HG3	1.59	0.65
5:CE:63:ARG:HA	5:CE:66:MET:HE3	1.79	0.65
22:CW:59:U:H2'	22:CW:60:U:H5'	1.79	0.65
36:DA:1332:G:H21	36:DA:1610:A:H8	1.42	0.65
36:DA:1348:G:C2'	36:DA:1349:A:H5''	2.25	0.65
36:DA:1786:A:C2	36:DA:2606:C:H1'	2.32	0.65
37:DB:3:C:H42	37:DB:118:G:H1	1.45	0.65
39:DD:35:LYS:HA	39:DD:63:ARG:HA	1.79	0.65
48:DP:65:ARG:HB3	48:DP:68:GLN:HE22	1.61	0.65
58:DZ:72:ARG:CG	58:DZ:89:PHE:HB2	2.26	0.65
1:AA:1117:G:H5'	1:AA:1117:G:H8	1.62	0.65
1:AA:423:G:H2'	1:AA:424:G:H5'	1.77	0.65
1:AA:540:G:H2'	1:AA:541:G:C8	2.32	0.65
1:AA:585:G:H4'	12:AL:8:ASN:HD21	1.61	0.65
1:AA:8:A:H62	4:AD:208:SER:HB2	1.62	0.65
22:AV:51:U:H2'	22:AV:52:G:C8	2.32	0.65
24:AY:40:C:H2'	24:AY:41:C:H5''	1.77	0.65
25:AZ:27:LEU:O	25:AZ:31:LEU:HG	1.97	0.65
36:BA:1534:U:H2'	36:BA:1535:A:O4'	1.96	0.65
36:BA:1642:G:O2'	36:BA:1643:G:H5'	1.97	0.65
36:BA:191:A:O2'	36:BA:192:C:H5'	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2111:C:H1'	36:BA:2118:U:H4'	1.78	0.65
36:BA:267:C:H2'	36:BA:268:C:H6	1.62	0.65
36:BA:2801(A):A:H5'	36:BA:2802:G:H8	1.62	0.65
39:BD:35:LYS:HA	39:BD:63:ARG:HA	1.78	0.65
42:BG:7:LEU:HD22	42:BG:100:TRP:CE3	2.32	0.65
42:BG:171:ALA:O	42:BG:175:LEU:HG	1.95	0.65
42:BG:170:ARG:O	42:BG:174:GLU:HB2	1.97	0.65
42:BG:34:LEU:CB	42:BG:161:THR:HG22	2.26	0.65
43:BH:120:GLY:O	43:BH:135:GLY:HA2	1.97	0.65
49:BQ:137:TYR:CE2	58:BZ:81:ARG:NH2	2.65	0.65
50:BR:14:SER:HA	50:BR:17:ARG:NH1	2.12	0.65
54:BV:5:VAL:HG21	54:BV:35:LEU:HD23	1.79	0.65
1:CA:1216:G:O2'	1:CA:1217:C:H5'	1.97	0.65
1:CA:187:C:H2'	1:CA:188:C:C6	2.31	0.65
14:CN:13:THR:N	14:CN:14:PRO:CD	2.60	0.65
17:CQ:59:ILE:HG22	17:CQ:71:PHE:CD2	2.31	0.65
25:CZ:152:MET:CE	25:CZ:156:ASP:HB2	2.27	0.65
32:D6:5:VAL:N	32:D6:8:LYS:HB3	2.12	0.65
36:DA:1087:G:H2'	36:DA:1088:A:C4'	2.26	0.65
36:DA:1042:G:H1'	36:DA:1114:G:H22	1.61	0.65
36:DA:1161:C:H1'	54:DV:8:GLY:O	1.97	0.65
36:DA:1748:G:H8	36:DA:1748:G:H5'	1.60	0.65
36:DA:1877:A:H5'	36:DA:1878:G:OP2	1.97	0.65
36:DA:225:A:O2'	36:DA:257:A:H4'	1.96	0.65
36:DA:886:C:H2'	36:DA:887:A:C4'	2.27	0.65
39:DD:30:GLU:HG3	39:DD:63:ARG:CZ	2.27	0.65
40:DE:59:VAL:HG13	40:DE:60:ASN:H	1.62	0.65
53:DU:85:LYS:HD3	53:DU:117:GLN:NE2	2.06	0.65
1:AA:1442(B):A:H3'	1:AA:1442(B):A:P	2.37	0.64
2:AB:80:ILE:HD12	2:AB:80:ILE:N	2.11	0.64
1:AA:1124:G:H5'	10:AJ:35:SER:HB2	1.79	0.64
12:AL:33:ARG:HG2	12:AL:60:LEU:HD12	1.78	0.64
1:AA:522:C:H41	12:AL:53:ARG:HH22	1.46	0.64
15:AO:79:ARG:O	15:AO:82:ILE:HG22	1.97	0.64
22:AW:37:A:H3'	22:AW:38:A:C8	2.31	0.64
36:BA:2287:A:N6	36:BA:2344:U:H3	1.92	0.64
36:BA:271(Q):G:H1'	36:BA:271(R):G:C8	2.32	0.64
36:BA:2886:G:H2'	36:BA:2887:U:H6	1.62	0.64
39:BD:131:LEU:HB2	39:BD:136:ILE:HD11	1.79	0.64
49:BQ:111:GLU:OE1	49:BQ:133:ARG:NH2	2.29	0.64
1:CA:1306:A:H61	1:CA:1331:G:H1'	1.60	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:155:LEU:O	4:CD:159:ARG:HG2	1.97	0.64
10:CJ:32:ALA:H	10:CJ:78:ASN:ND2	1.94	0.64
12:CL:33:ARG:HG2	12:CL:60:LEU:HD12	1.78	0.64
19:CS:11:VAL:HG11	19:CS:16:LEU:HD11	1.79	0.64
24:CY:40:C:H2'	24:CY:41:C:C5'	2.27	0.64
25:CZ:385:ARG:HD3	61:CZ:502:KIR:H301	1.79	0.64
26:D0:49:LYS:N	26:D0:80:HIS:HD1	1.87	0.64
36:DA:1221(A):C:H2'	36:DA:1222:C:C6	2.31	0.64
43:DH:16:SER:CB	43:DH:27:LYS:HB2	2.23	0.64
36:DA:496:G:H1'	55:DW:61:ASN:ND2	2.12	0.64
58:DZ:157:LEU:HD11	58:DZ:163:LEU:HD22	1.78	0.64
58:DZ:81:ARG:NH1	58:DZ:81:ARG:HB3	2.11	0.64
1:AA:645:C:H2'	1:AA:646:U:H6	1.63	0.64
1:AA:666:G:H5'	1:AA:726:C:H1'	1.80	0.64
1:AA:939:G:H5''	7:AG:102:ARG:NH1	2.12	0.64
12:AL:47:LYS:C	12:AL:49:ASN:H	2.00	0.64
19:AS:40:ILE:HG23	19:AS:62:ILE:HD11	1.78	0.64
25:AZ:198:LYS:HA	25:AZ:198:LYS:CE	2.26	0.64
36:BA:1087:G:H2'	36:BA:1088:A:C4'	2.26	0.64
36:BA:1579:A:H8	36:BA:1579:A:H5'	1.61	0.64
36:BA:1902:C:H1'	39:BD:244:ARG:HG3	1.80	0.64
36:BA:1980:G:O2'	36:BA:1982:C:OP2	2.14	0.64
36:BA:225:A:O2'	36:BA:257:A:H4'	1.96	0.64
36:BA:2852:G:H2'	36:BA:2853:C:H6	1.63	0.64
36:BA:654(V):A:OP2	36:BA:655:A:H3'	1.97	0.64
46:BN:134:ARG:O	46:BN:136:GLU:N	2.29	0.64
51:BS:106:ARG:HH11	51:BS:106:ARG:HG2	1.62	0.64
58:BZ:70:LEU:HD22	58:BZ:91:LEU:HD11	1.78	0.64
1:CA:1190:G:OP1	3:CC:5:ILE:HD12	1.98	0.64
3:CC:135:LYS:HZ3	5:CE:53:LEU:HD11	1.62	0.64
4:CD:129:ASN:N	4:CD:129:ASN:HD22	1.95	0.64
5:CE:7:GLU:HG2	5:CE:112:LEU:HD21	1.78	0.64
12:CL:7:ILE:CD1	12:CL:8:ASN:N	2.60	0.64
26:D0:40:GLN:HE22	26:D0:44:ARG:N	1.95	0.64
30:D4:13:ARG:C	30:D4:14:ILE:HD12	2.17	0.64
30:D4:7:PRO:CG	42:DG:61:ALA:HB1	2.27	0.64
36:DA:1059:G:H1'	45:DK:126:UNK:O	1.97	0.64
36:DA:267:C:H2'	36:DA:268:C:H6	1.62	0.64
42:DG:114:ILE:O	42:DG:116:ASP:N	2.30	0.64
42:DG:46:ALA:HB2	42:DG:88:ILE:HG13	1.79	0.64
43:DH:98:LEU:HB2	43:DH:125:VAL:CG2	2.26	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DN:46:VAL:O	46:DN:47:ALA:HB3	1.97	0.64
47:DO:88:ASN:ND2	47:DO:92:GLU:HB2	2.12	0.64
57:DY:95:LYS:HE3	57:DY:100:ALA:HB2	1.78	0.64
1:AA:1086:U:H2'	1:AA:1087:G:C5'	2.25	0.64
14:AN:13:THR:N	14:AN:14:PRO:CD	2.58	0.64
20:AT:10:LEU:HD12	20:AT:11:SER:H	1.61	0.64
26:B0:50:ASN:ND2	26:B0:63:VAL:HG21	2.12	0.64
35:B9:19:ARG:O	35:B9:20:HIS:HB2	1.97	0.64
36:BA:496:G:H1'	55:BW:61:ASN:ND2	2.12	0.64
41:BF:148:LEU:HD23	41:BF:191:ARG:NH1	2.12	0.64
42:BG:55:LYS:HA	42:BG:58:GLN:HG2	1.79	0.64
49:BQ:60:ARG:HH11	49:BQ:60:ARG:HB3	1.63	0.64
51:BS:54:LEU:CD1	51:BS:58:LEU:H	2.09	0.64
58:BZ:119:GLU:HG3	58:BZ:122:ARG:HD3	1.78	0.64
1:CA:1442:G:H1	1:CA:1461:G:H21	1.45	0.64
1:CA:723:U:C4	1:CA:1537:U:H2'	2.32	0.64
3:CC:34:LEU:HD22	3:CC:38:ARG:NE	2.12	0.64
5:CE:20:GLN:NE2	5:CE:25:ARG:NH2	2.44	0.64
14:CN:29:ARG:HG3	14:CN:29:ARG:HH11	1.60	0.64
24:CY:27:C:O2'	24:CY:28:C:H5'	1.97	0.64
36:DA:2113:U:H2'	36:DA:2114:A:H8	1.63	0.64
36:DA:2758:A:N6	43:DH:67:LEU:HD11	2.12	0.64
43:DH:120:GLY:O	43:DH:135:GLY:HA2	1.97	0.64
47:DO:98:VAL:HG12	47:DO:117:LEU:HB3	1.79	0.64
51:DS:98:VAL:CG1	51:DS:100:ALA:H	2.08	0.64
55:DW:6:ILE:HG12	55:DW:104:THR:HG22	1.79	0.64
56:DX:12:VAL:HB	56:DX:17:ALA:CB	2.10	0.64
1:AA:975:A:H4'	1:AA:976:G:C5'	2.25	0.64
5:AE:41:VAL:HG13	5:AE:113:ALA:HA	1.79	0.64
6:AF:67:MET:HB2	6:AF:68:PRO:HD2	1.79	0.64
9:AI:79:LEU:HD23	9:AI:101:PHE:O	1.97	0.64
24:AY:40:C:H2'	24:AY:41:C:C5'	2.28	0.64
24:AY:51:G:H1	24:AY:63:C:H42	1.43	0.64
31:B5:16:ARG:HD2	31:B5:20:ARG:HH12	1.61	0.64
32:B6:15:GLU:OE2	32:B6:18:ARG:NH2	2.30	0.64
36:BA:2228:G:OP1	39:BD:261:LYS:HE3	1.97	0.64
36:BA:2312:U:C4'	42:BG:71:THR:HG21	2.27	0.64
36:BA:886:C:O2'	36:BA:887:A:H4'	1.97	0.64
38:BC:96:GLY:H	38:BC:99:ILE:CG1	2.10	0.64
46:BN:10:GLU:OE2	46:BN:11:PRO:HD2	1.96	0.64
48:BP:115:LEU:HA	48:BP:134:ALA:HB3	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:97:ARG:HH21	57:BY:98:VAL:CB	2.10	0.64
58:BZ:9:TYR:CE1	58:BZ:35:ARG:HG3	2.33	0.64
1:CA:269:C:H2'	1:CA:270:A:C8	2.32	0.64
12:CL:59:ARG:HG2	12:CL:65:GLU:HG3	1.79	0.64
24:CY:40:C:C2'	24:CY:41:C:H5''	2.26	0.64
24:CY:72:U:C2'	24:CY:73:G:H5''	2.23	0.64
36:DA:271(Q):G:H1'	36:DA:271(R):G:C8	2.32	0.64
36:DA:654(V):A:OP 2	36:DA:655:A:H3'	1.97	0.64
36:DA:877:U:O2'	36:DA:878:A:H5''	1.97	0.64
36:DA:944:G:H5'	36:DA:945:A:O5'	1.97	0.64
40:DE:101:ARG:HD2	40:DE:169:ASN:O	1.97	0.64
43:DH:94:TYR:HE1	43:DH:108:GLY:N	1.96	0.64
51:DS:34:HIS:HB3	51:DS:53:SER:HB3	1.78	0.64
58:DZ:124:ILE:O	58:DZ:124:ILE:HG13	1.98	0.64
1:AA:1127:G:O2'	1:AA:1128:C:H5'	1.98	0.64
3:AC:135:LYS:NZ	5:AE:50:GLU:HG2	2.12	0.64
17:AQ:59:ILE:HG23	17:AQ:71:PHE:HB3	1.79	0.64
22:AW:59:U:H2'	22:AW:60:U:H5'	1.79	0.64
25:AZ:98:GLN:HE22	25:AZ:346:THR:HG22	1.62	0.64
30:B4:10:VAL:HG23	30:B4:11:PRO:HD2	1.78	0.64
36:BA:1499:C:H5'	36:BA:1499:C:C6	2.20	0.64
36:BA:614(B):G:H1'	41:BF:44:ARG:HG3	1.80	0.64
36:BA:672:C:H2'	36:BA:673:C:C5'	2.28	0.64
43:BH:94:TYR:HE1	43:BH:108:GLY:N	1.96	0.64
47:BO:47:ILE:O	47:BO:48:PRO:O	2.15	0.64
1:CA:540:G:H2'	1:CA:541:G:H8	1.61	0.64
3:CC:5:ILE:H	3:CC:5:ILE:HD13	1.60	0.64
5:CE:20:GLN:HE21	5:CE:25:ARG:NH2	1.95	0.64
36:DA:1192:G:N7	48:DP:29:LYS:NZ	2.41	0.64
42:DG:181:ARG:HG2	42:DG:181:ARG:O	1.97	0.64
51:DS:38:GLN:O	51:DS:40:ILE:HG23	1.97	0.64
1:AA:358:U:H2'	1:AA:359:U:H6	1.59	0.64
2:AB:204:ASN:HD22	2:AB:206:ASP:H	1.44	0.64
22:AW:51:U:H2'	22:AW:52:G:H8	1.62	0.64
25:AZ:317:GLU:HG3	25:AZ:404:LEU:HD21	1.78	0.64
34:B8:33:ASN:CG	34:B8:34:TRP:H	1.98	0.64
36:BA:999:U:H5''	36:BA:1154:G:O6	1.97	0.64
36:BA:2758:A:C2	36:BA:2759:G:H1'	2.32	0.64
40:BE:59:VAL:HG13	40:BE:60:ASN:H	1.62	0.64
41:BF:125:LEU:HD23	41:BF:125:LEU:N	2.13	0.64
42:BG:34:LEU:HA	42:BG:161:THR:HG22	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BH:85:LYS:HZ3	43:BH:132:ARG:CA	2.06	0.64
54:BV:34:GLU:O	54:BV:36:PRO:HD3	1.97	0.64
57:BY:17:SER:HB2	57:BY:71:LYS:CE	2.26	0.64
1:CA:1228:C:OP1	13:CM:115:LYS:HE3	1.98	0.64
1:CA:192:U:H2'	1:CA:193:C:C6	2.32	0.64
1:CA:45:U:H2'	1:CA:46:G:C8	2.32	0.64
4:CD:5:ILE:HA	4:CD:115:ARG:NH1	2.12	0.64
6:CF:19:LEU:HD23	6:CF:19:LEU:O	1.97	0.64
13:CM:12:ASN:ND2	13:CM:12:ASN:H	1.95	0.64
1:CA:1221:G:H4'	19:CS:77:THR:HG21	1.79	0.64
25:CZ:198:LYS:CE	25:CZ:198:LYS:HA	2.27	0.64
30:D4:10:VAL:HG23	30:D4:11:PRO:HD2	1.80	0.64
32:D6:17:LYS:HE2	32:D6:17:LYS:HA	1.79	0.64
36:DA:99:U:C4'	36:DA:102:G:H1'	2.27	0.64
36:DA:1286:A:H2'	36:DA:1288:U:OP2	1.97	0.64
36:DA:2523:G:H2'	36:DA:2524:G:H5'	1.80	0.64
36:DA:833:U:H5''	48:DP:48:PRO:CB	2.27	0.64
39:DD:118:VAL:HG22	39:DD:119:ALA:N	2.12	0.64
40:DE:202:LYS:HD2	40:DE:202:LYS:N	2.12	0.64
41:DF:24:LEU:O	41:DF:26:ALA:N	2.31	0.64
53:DU:64:ARG:HG2	53:DU:64:ARG:HH11	1.63	0.64
54:DV:5:VAL:HG23	54:DV:37:VAL:O	1.98	0.64
54:DV:19:LYS:HB3	54:DV:94:LEU:O	1.96	0.64
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.32	0.64
1:AA:72:C:H2'	1:AA:73:G:C8	2.33	0.64
3:AC:5:ILE:HD13	3:AC:5:ILE:H	1.58	0.64
5:AE:31:LEU:CD2	5:AE:43:LEU:HD11	2.28	0.64
9:AI:20:ARG:O	9:AI:22:GLY:N	2.30	0.64
13:AM:54:VAL:O	13:AM:58:GLU:HG2	1.97	0.64
15:AO:3:ILE:O	15:AO:3:ILE:HG13	1.96	0.64
1:AA:376:G:H4'	16:AP:5:ARG:HH11	1.62	0.64
20:AT:47:GLY:O	20:AT:49:ALA:N	2.24	0.64
25:AZ:171:ILE:HG22	25:AZ:172:ARG:H	1.63	0.64
29:B3:19:GLN:HE22	29:B3:52:HIS:HE1	1.44	0.64
36:BA:523:C:H2'	36:BA:524:U:H5'	1.78	0.64
36:BA:886:C:H2'	36:BA:887:A:C4'	2.27	0.64
5:CE:41:VAL:HG13	5:CE:113:ALA:HA	1.80	0.64
19:CS:43:GLU:O	19:CS:45:VAL:HG13	1.96	0.64
7:CG:79:ARG:NH2	22:CW:33:U:H4'	2.12	0.64
27:D1:69:LYS:NZ	27:D1:76:ARG:NH2	2.46	0.64
36:DA:1058:G:H3'	36:DA:1059:G:C5'	2.28	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:613:G:H8	36:DA:613:G:H5'	1.62	0.64
42:DG:25:TYR:CE2	42:DG:32:PRO:HD2	2.32	0.64
52:DT:94:ALA:O	52:DT:96:ARG:N	2.30	0.64
36:DA:1598:C:H5'	56:DX:36:LYS:HG2	1.78	0.64
1:AA:192:U:H2'	1:AA:193:C:C6	2.33	0.64
1:AA:266:G:C5'	1:AA:267:C:C5	2.81	0.64
2:AB:17:PHE:CD2	2:AB:44:LEU:HD11	2.32	0.64
4:AD:180:GLY:O	4:AD:182:LYS:HG3	1.98	0.64
28:B2:7:ARG:HA	28:B2:10:LEU:HD12	1.78	0.64
36:BA:2036:C:H5'	36:BA:2036:C:C6	2.25	0.64
36:BA:2762:G:H5'	36:BA:2762:G:C8	2.30	0.64
43:BH:12:PRO:O	43:BH:15:VAL:HG22	1.97	0.64
1:CA:254:G:OP1	17:CQ:67:LYS:O	2.15	0.64
25:CZ:98:GLN:HE22	25:CZ:346:THR:HG22	1.61	0.64
34:D8:50:LEU:O	34:D8:51:ALA:HB3	1.98	0.64
36:DA:1264:G:H3'	36:DA:1265:A:H5''	1.80	0.64
36:DA:1899:G:O2'	36:DA:1900:A:H5''	1.97	0.64
36:DA:2308:G:N7	36:DA:2310:A:H5'	2.13	0.64
36:DA:2886:G:H2'	36:DA:2887:U:H6	1.62	0.64
36:DA:298:G:H5'	36:DA:299:A:OP1	1.98	0.64
39:DD:242:ARG:HH11	39:DD:242:ARG:CG	2.11	0.64
41:DF:28:ILE:CD1	41:DF:28:ILE:H	2.06	0.64
42:DG:85:GLY:C	42:DG:87:PRO:HD3	2.18	0.64
55:DW:29:LEU:HG	55:DW:33:ARG:HD2	1.80	0.64
1:AA:1513:A:H2'	1:AA:1514:C:C6	2.33	0.64
1:AA:797:C:OP1	11:AK:124:LYS:HE2	1.97	0.64
2:AB:47:THR:HA	2:AB:202:PRO:HG2	1.79	0.64
3:AC:135:LYS:HZ2	5:AE:50:GLU:HG2	1.61	0.64
4:AD:145:GLU:HA	4:AD:183:GLY:O	1.97	0.64
22:AW:43:C:H2'	22:AW:44:G:H1'	1.80	0.64
33:B7:34:ARG:HD2	33:B7:39:ARG:HG3	1.79	0.64
36:BA:1348:G:C2'	36:BA:1349:A:H5''	2.27	0.64
36:BA:1368:G:O2'	36:BA:1369:G:H5'	1.96	0.64
36:BA:1991:U:H2'	36:BA:1992:G:H5''	1.80	0.64
36:BA:2110:G:H1	36:BA:2178:C:H5	1.46	0.64
36:BA:2184:G:H2'	36:BA:2185:C:C1'	2.28	0.64
36:BA:644:A:C2	36:BA:2369:A:H1'	2.33	0.64
36:BA:2472:G:H5'	36:BA:2473:U:H5''	1.79	0.64
36:BA:45:C:H2'	36:BA:47:C:C6	2.32	0.64
40:BE:33:VAL:HG23	40:BE:47:VAL:HG13	1.80	0.64
46:BN:132:ALA:O	46:BN:133:GLN:HB3	1.96	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BQ:68:ILE:HG23	49:BQ:103:MET:HA	1.80	0.64
56:BX:13:LEU:HA	56:BX:18:TYR:CE1	2.32	0.64
56:BX:35:THR:CG2	56:BX:37:THR:H	2.10	0.64
1:CA:1047:G:H5''	14:CN:4:LYS:HE2	1.80	0.64
1:CA:72:C:H2'	1:CA:73:G:C8	2.33	0.64
2:CB:215:LEU:O	2:CB:219:VAL:HG23	1.97	0.64
4:CD:148:VAL:HG12	4:CD:149:ALA:H	1.63	0.64
9:CI:42:ARG:HH22	9:CI:75:ASP:CG	2.02	0.64
13:CM:11:ARG:HG2	13:CM:12:ASN:HD22	1.60	0.64
17:CQ:52:LYS:N	17:CQ:52:LYS:HD3	2.07	0.64
22:CW:43:C:H2'	22:CW:44:G:H1'	1.80	0.64
36:DA:1053:C:H2'	36:DA:1054:A:C8	2.31	0.64
36:DA:2443:C:O2'	36:DA:2444:G:H5'	1.97	0.64
36:DA:547:A:H2'	36:DA:548:A:C8	2.32	0.64
37:DB:106:G:C5'	58:DZ:31:ARG:HG2	2.28	0.64
39:DD:30:GLU:CB	39:DD:35:LYS:HD2	2.16	0.64
40:DE:101:ARG:CZ	40:DE:171:GLU:HB2	2.28	0.64
49:DQ:109:VAL:HG12	49:DQ:113:GLN:HB2	1.78	0.64
52:DT:62:THR:CG2	52:DT:75:ILE:HG13	2.28	0.64
58:DZ:139:VAL:HG12	58:DZ:140:ASP:N	2.13	0.64
1:AA:1533:C:C2'	1:AA:1534:A:H5''	2.27	0.64
4:AD:155:LEU:O	4:AD:159:ARG:HG2	1.98	0.64
5:AE:20:GLN:NE2	5:AE:25:ARG:NH2	2.46	0.64
19:AS:45:VAL:HG23	19:AS:46:GLY:N	2.13	0.64
36:BA:278:A:H61	36:BA:362:U:H3	1.45	0.64
38:BC:27:ARG:HE	38:BC:182:PRO:HB2	1.63	0.64
38:BC:214:VAL:CG2	38:BC:224:ILE:HD13	2.28	0.64
36:BA:1902:C:H4'	39:BD:244:ARG:HA	1.79	0.64
43:BH:85:LYS:NZ	43:BH:132:ARG:HA	2.06	0.64
54:BV:19:LYS:HZ3	54:BV:20:LEU:H	1.44	0.64
54:BV:19:LYS:HB3	54:BV:94:LEU:O	1.98	0.64
1:CA:1442(B):A:C8	52:DT:118:ARG:HD3	2.33	0.64
3:CC:49:SER:O	3:CC:50:ALA:HB3	1.98	0.64
12:CL:112:ASP:O	12:CL:114:LYS:HG2	1.98	0.64
17:CQ:5:VAL:HG22	17:CQ:60:ILE:HD12	1.79	0.64
29:D3:35:ARG:HD3	29:D3:37:LEU:HD11	1.80	0.64
36:DA:2200:C:H42	36:DA:2223:G:H1	1.44	0.64
37:DB:67:G:HO2'	37:DB:68:C:H6	1.45	0.64
46:DN:129:PRO:O	46:DN:130:HIS:HB3	1.98	0.64
36:DA:2713:A:OP1	50:DR:14:SER:HB3	1.98	0.64
52:DT:109:GLU:HG2	52:DT:112:ARG:NH2	2.13	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:447:G:H2'	1:AA:485:G:N2	2.14	0.63
1:AA:961:U:HO2'	1:AA:962:C:H6	1.44	0.63
22:AW:31:A:N1	22:AW:39:U:O4	2.30	0.63
26:B0:20:ARG:HG2	26:B0:20:ARG:HH11	1.63	0.63
36:BA:1187:G:H5''	54:BV:81:TYR:CE1	2.33	0.63
36:BA:1264:G:H3'	36:BA:1265:A:H5''	1.80	0.63
36:BA:533:G:H5'	53:BU:24:TYR:CE1	2.33	0.63
42:BG:82:LEU:HD23	42:BG:83:ARG:H	1.63	0.63
57:BY:46:LYS:HD3	57:BY:47:LYS:N	2.12	0.63
58:BZ:70:LEU:HD11	58:BZ:98:MET:HG2	1.79	0.63
1:CA:1054:C:O2'	1:CA:1055:A:C5'	2.45	0.63
1:CA:865:A:H5'	1:CA:1078:U:O4	1.98	0.63
4:CD:145:GLU:H	4:CD:145:GLU:CD	2.00	0.63
8:CH:89:PRO:HA	8:CH:92:ARG:NH1	2.13	0.63
9:CI:4:TYR:HB2	9:CI:19:LEU:HB3	1.80	0.63
9:CI:51:ARG:HG2	9:CI:56:LEU:HD22	1.78	0.63
22:CW:1:G:N3	22:CW:1:G:H2'	2.13	0.63
22:CW:65:G:H4'	32:D6:28:ARG:HH21	1.61	0.63
25:CZ:93:ILE:CG1	25:CZ:122:LEU:HD11	2.27	0.63
36:DA:1188:U:H4'	54:DV:79:VAL:CG2	2.28	0.63
36:DA:2110:G:H1	36:DA:2178:C:H5	1.44	0.63
39:DD:161:THR:O	39:DD:196:VAL:HG23	1.99	0.63
40:DE:101:ARG:HB3	40:DE:201:THR:HG21	1.79	0.63
51:DS:106:ARG:O	51:DS:106:ARG:HG2	1.98	0.63
58:DZ:123:ASP:O	58:DZ:124:ILE:HG12	1.99	0.63
2:AB:75:LYS:HA	2:AB:78:GLN:NE2	2.13	0.63
3:AC:16:ARG:NH1	3:AC:16:ARG:HB2	2.13	0.63
12:AL:112:ASP:O	12:AL:114:LYS:HG2	1.98	0.63
22:AW:1:G:H2'	22:AW:1:G:N3	2.13	0.63
24:AY:18:G:OP1	24:AY:18:G:H3'	1.98	0.63
27:B1:41:ARG:NH2	36:BA:1365:A:OP1	2.30	0.63
30:B4:5:ILE:O	30:B4:5:ILE:HG12	1.98	0.63
36:BA:1058:G:H3'	36:BA:1059:G:C5'	2.28	0.63
36:BA:2396:G:O2'	36:BA:2397:G:H5'	1.99	0.63
36:BA:970:C:H2'	36:BA:971:C:C6	2.34	0.63
38:BC:10:LEU:HD12	38:BC:32:LEU:HA	1.80	0.63
50:BR:2:ARG:HG3	50:BR:2:ARG:NH1	2.14	0.63
52:BT:82:LEU:HD12	52:BT:82:LEU:H	1.63	0.63
1:CA:403:C:O2'	1:CA:404:U:H5'	1.97	0.63
4:CD:128:VAL:HG12	4:CD:129:ASN:N	2.09	0.63
6:CF:77:ARG:HG2	6:CF:77:ARG:HH11	1.61	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DF:6:VAL:HG12	41:DF:7:TYR:N	2.09	0.63
42:DG:116:ASP:O	42:DG:117:PHE:HB2	1.97	0.63
46:DN:26:LEU:HD12	46:DN:26:LEU:O	1.96	0.63
47:DO:104:ARG:HE	52:DT:33:LYS:HZ2	1.45	0.63
48:DP:77:ARG:HD3	48:DP:78:PRO:HD2	1.80	0.63
50:DR:10:LEU:O	50:DR:11:ASN:HB2	1.99	0.63
52:DT:75:ILE:HD12	52:DT:75:ILE:N	2.12	0.63
1:AA:521:G:H4'	12:AL:73:GLU:HG2	1.80	0.63
2:AB:44:LEU:HA	2:AB:47:THR:CB	2.28	0.63
4:AD:5:ILE:HA	4:AD:115:ARG:NH1	2.14	0.63
6:AF:82:ARG:HB2	6:AF:85:VAL:HG23	1.80	0.63
13:AM:17:VAL:O	13:AM:20:THR:HB	1.99	0.63
31:B5:16:ARG:HD2	31:B5:20:ARG:NH1	2.12	0.63
36:BA:1051:G:H2'	36:BA:1052:C:C6	2.32	0.63
36:BA:195:A:H5''	36:BA:196:A:OP2	1.99	0.63
36:BA:302:C:H2'	36:BA:303:U:H6	1.63	0.63
39:BD:30:GLU:HG3	39:BD:63:ARG:CZ	2.27	0.63
40:BE:101:ARG:HD2	40:BE:169:ASN:O	1.97	0.63
48:BP:102:ARG:HH11	48:BP:102:ARG:HB2	1.64	0.63
48:BP:64:LYS:C	48:BP:66:GLY:N	2.47	0.63
51:BS:106:ARG:O	51:BS:106:ARG:HG2	1.98	0.63
50:BR:103:ARG:HG3	55:BW:40:ASN:OD1	1.97	0.63
1:CA:447:G:H2'	1:CA:485:G:N2	2.13	0.63
13:CM:101:GLN:HE21	13:CM:101:GLN:H	1.46	0.63
19:CS:62:ILE:HA	19:CS:66:MET:CE	2.28	0.63
32:D6:17:LYS:HB3	32:D6:18:ARG:NH1	2.13	0.63
32:D6:25:LYS:HD2	36:DA:2285:C:H41	1.64	0.63
32:D6:43:CYS:O	32:D6:44:ARG:HB2	1.98	0.63
36:DA:1024:G:C3'	36:DA:1025:G:H5''	2.21	0.63
36:DA:1499:C:C6	36:DA:1499:C:H5'	2.21	0.63
36:DA:1718:G:H2'	36:DA:1719:G:H8	1.63	0.63
36:DA:1952:A:C6	47:DO:22:ILE:HD12	2.33	0.63
36:DA:672:C:H2'	36:DA:673:C:C5'	2.28	0.63
39:DD:148:GLU:HB2	39:DD:151:LYS:HD2	1.80	0.63
40:DE:77:ILE:HG22	40:DE:78:LEU:HD12	1.80	0.63
9:AI:26:VAL:HG22	9:AI:61:ALA:HB3	1.79	0.63
11:AK:30:VAL:HG21	11:AK:65:ALA:HA	1.80	0.63
12:AL:59:ARG:HG2	12:AL:65:GLU:HG3	1.80	0.63
19:AS:11:VAL:HG11	19:AS:16:LEU:HD11	1.80	0.63
25:AZ:215:ARG:HG3	25:AZ:215:ARG:HH11	1.63	0.63
36:BA:1718:G:H2'	36:BA:1719:G:H8	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2790:A:H2'	36:BA:2791:C:H5''	1.81	0.63
36:BA:590:A:H2'	36:BA:591:C:C6	2.33	0.63
38:BC:161:ILE:HG21	38:BC:174:PRO:HG2	1.80	0.63
39:BD:99:ASP:OD1	39:BD:99:ASP:C	2.37	0.63
53:BU:88:ILE:HD12	53:BU:109:LEU:HD22	1.80	0.63
57:BY:74:PRO:O	57:BY:75:ILE:HB	1.99	0.63
1:CA:35:G:H2'	1:CA:36:C:C6	2.34	0.63
10:CJ:4:ILE:HB	10:CJ:74:ILE:CG1	2.28	0.63
16:CP:43:LYS:HG3	16:CP:48:TRP:CE3	2.33	0.63
19:CS:40:ILE:HG23	19:CS:62:ILE:HD11	1.80	0.63
22:CW:51:U:H2'	22:CW:52:G:H8	1.62	0.63
24:CY:18:G:H3'	24:CY:18:G:OP1	1.98	0.63
24:CY:6:C:O2'	24:CY:7:G:H5'	1.96	0.63
26:D0:20:ARG:HG2	26:D0:20:ARG:HH11	1.63	0.63
29:D3:35:ARG:HH11	29:D3:35:ARG:CB	2.03	0.63
30:D4:27:THR:O	30:D4:28:LYS:HB3	1.98	0.63
32:D6:25:LYS:HE2	34:D8:34:TRP:HE1	1.63	0.63
36:DA:221:A:H4'	36:DA:222:A:O5'	1.97	0.63
36:DA:2389:G:H5''	36:DA:2390:U:H5'	1.80	0.63
39:DD:275:LYS:O	39:DD:276:LYS:HB2	1.97	0.63
43:DH:91:GLY:HA3	43:DH:94:TYR:HD2	1.64	0.63
48:DP:102:ARG:HH11	48:DP:102:ARG:HB2	1.64	0.63
51:DS:20:ARG:HH11	51:DS:20:ARG:HG2	1.63	0.63
52:DT:94:ALA:C	52:DT:96:ARG:H	2.01	0.63
57:DY:27:VAL:HG12	57:DY:29:GLU:OE1	1.98	0.63
1:AA:269:C:H2'	1:AA:270:A:C8	2.33	0.63
9:AI:4:TYR:HB2	9:AI:19:LEU:HB3	1.80	0.63
9:AI:51:ARG:HG2	9:AI:56:LEU:HD22	1.79	0.63
22:AV:47:U:H3'	22:AV:48:C:H5'	1.81	0.63
22:AW:65:G:H4'	32:B6:28:ARG:HH21	1.64	0.63
34:B8:14:VAL:HG21	34:B8:22:VAL:CG1	2.27	0.63
36:BA:32:C:O2'	36:BA:33:U:H5'	1.98	0.63
36:BA:84:A:H2'	57:BY:9:LYS:HZ3	1.64	0.63
38:BC:114:VAL:HG23	38:BC:149:ILE:HD11	1.81	0.63
43:BH:41:MET:HG3	43:BH:42:ARG:O	1.99	0.63
55:BW:82:LEU:HD12	55:BW:82:LEU:N	2.12	0.63
1:CA:645:C:H2'	1:CA:646:U:H6	1.64	0.63
1:CA:677:U:H3	1:CA:713:G:H22	1.46	0.63
1:CA:797:C:OP1	11:CK:124:LYS:HE2	1.99	0.63
1:CA:977:A:N3	1:CA:977:A:C2'	2.62	0.63
4:CD:158:ILE:O	4:CD:162:LEU:HB2	1.99	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:145:GLU:HA	4:CD:183:GLY:O	1.96	0.63
2:CB:178:ARG:NH1	8:CH:71:GLY:O	2.32	0.63
36:DA:2502:G:H5''	36:DA:2503:A:C5'	2.28	0.63
36:DA:278:A:H61	36:DA:362:U:H3	1.47	0.63
36:DA:414:C:H1'	36:DA:1864:U:O2'	1.99	0.63
36:DA:814:C:H2'	36:DA:815:C:H6	1.64	0.63
37:DB:82:G:O2'	37:DB:83:G:H5'	1.97	0.63
36:DA:2228:G:OP1	39:DD:261:LYS:HE3	1.99	0.63
42:DG:6:ALA:HB3	42:DG:104:GLU:OE2	1.99	0.63
49:DQ:35:VAL:HG12	49:DQ:130:LYS:O	1.99	0.63
54:DV:5:VAL:HG21	54:DV:35:LEU:HD23	1.81	0.63
1:AA:17:U:H2'	1:AA:18:C:C6	2.33	0.63
13:AM:12:ASN:ND2	13:AM:12:ASN:H	1.95	0.63
25:AZ:263:ARG:HH21	25:AZ:297:GLU:CG	2.10	0.63
28:B2:60:LEU:O	28:B2:63:VAL:HB	1.97	0.63
28:B2:60:LEU:HA	28:B2:63:VAL:HG21	1.81	0.63
36:BA:654(E):G:H22	36:BA:654(Q):C:C1'	2.06	0.63
39:BD:24:ILE:C	39:BD:26:LYS:H	2.00	0.63
36:BA:2580:U:O3'	40:BE:130:GLY:HA3	1.98	0.63
42:BG:134:GLY:O	42:BG:135:LEU:HD12	1.97	0.63
46:BN:26:LEU:HD12	46:BN:26:LEU:O	1.98	0.63
47:BO:98:VAL:HG12	47:BO:117:LEU:HB3	1.79	0.63
47:BO:60:ALA:HA	47:BO:87:ILE:HG12	1.81	0.63
48:BP:66:GLY:O	48:BP:67:MET:HB2	1.96	0.63
49:BQ:42:ILE:HD13	49:BQ:97:VAL:CG2	2.29	0.63
51:BS:24:LEU:HB3	51:BS:85:VAL:HG12	1.79	0.63
58:BZ:151:HIS:HA	58:BZ:171:ILE:CD1	2.17	0.63
1:CA:1048:G:H5''	14:CN:2:ALA:HB1	1.79	0.63
1:CA:1256:A:H2	1:CA:1277:C:C6	2.16	0.63
1:CA:657:G:O2'	1:CA:658:G:H5'	1.98	0.63
6:CF:43:LEU:HD22	6:CF:43:LEU:N	2.14	0.63
11:CK:67:ASP:OD2	11:CK:71:LYS:HE3	1.99	0.63
12:CL:38:THR:CG2	12:CL:59:ARG:HG3	2.27	0.63
22:CW:71:G:H2'	22:CW:72:C:C5'	2.23	0.63
36:DA:2649:U:H2'	36:DA:2650:U:C6	2.33	0.63
36:DA:272(I):U:H5'	36:DA:272(I):U:H6	1.64	0.63
41:DF:156:LEU:HD21	41:DF:163:VAL:HG12	1.79	0.63
41:DF:32:LEU:HD23	41:DF:32:LEU:O	1.99	0.63
43:DH:153:LYS:HD3	43:DH:153:LYS:N	2.02	0.63
48:DP:23:PRO:CD	48:DP:33:ARG:HE	2.10	0.63
47:DO:104:ARG:NH2	52:DT:33:LYS:HD3	2.14	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:DV:17:GLY:C	54:DV:18:LEU:HD13	2.18	0.63
55:DW:4:LYS:HA	55:DW:106:ILE:HG22	1.80	0.63
1:AA:1116:C:H2'	1:AA:1117:G:C5'	2.29	0.63
1:AA:1116:C:H2'	1:AA:1117:G:H5''	1.81	0.63
3:AC:114:PRO:O	3:AC:118:GLN:HG3	1.99	0.63
34:B8:61:LEU:HD13	34:B8:62:LEU:N	2.12	0.63
36:BA:547:A:H2'	36:BA:548:A:C8	2.33	0.63
42:BG:11:TYR:O	42:BG:15:VAL:HB	1.98	0.63
48:BP:24:GLY:N	48:BP:33:ARG:CZ	2.61	0.63
49:BQ:109:VAL:HG12	49:BQ:113:GLN:HB2	1.79	0.63
52:BT:94:ALA:O	52:BT:96:ARG:N	2.31	0.63
54:BV:5:VAL:HG23	54:BV:37:VAL:O	1.97	0.63
56:BX:40:LYS:O	56:BX:40:LYS:HD2	1.98	0.63
1:CA:1127:G:O2'	1:CA:1128:C:H5'	1.99	0.63
1:CA:274:A:O2'	1:CA:275:G:C8	2.51	0.63
20:CT:25:ARG:HG3	20:CT:25:ARG:HH11	1.64	0.63
35:D9:29:ASN:H	35:D9:29:ASN:HD22	1.46	0.63
36:DA:1103:A:H5''	36:DA:1104:C:H5	1.63	0.63
36:DA:1398:C:O2'	36:DA:1399:C:H5'	1.98	0.63
36:DA:2100:G:H2'	36:DA:2101:G:C8	2.33	0.63
36:DA:654(E):G:H2'	36:DA:654(F):C:H5'	1.81	0.63
43:DH:76:VAL:C	43:DH:78:GLY:H	2.02	0.63
46:DN:10:GLU:OE2	46:DN:11:PRO:HD2	1.98	0.63
48:DP:148:LEU:O	48:DP:149:GLU:HB2	1.98	0.63
36:DA:661:C:O3'	48:DP:18:ARG:HD2	1.98	0.63
54:DV:74:LYS:HB2	54:DV:83:ARG:HB2	1.79	0.63
1:AA:722:A:H2'	1:AA:722:A:N3	2.13	0.63
1:AA:722:A:HO2'	1:AA:724:G:H8	1.46	0.63
6:AF:46:ARG:NH2	18:AR:37:VAL:HG11	2.14	0.63
28:B2:35:LEU:HD21	28:B2:50:ILE:HG13	1.79	0.63
36:BA:1592:C:H2'	36:BA:1593:G:H8	1.63	0.63
36:BA:221:A:H4'	36:BA:222:A:O5'	1.98	0.63
36:BA:2061:G:H5''	36:BA:2503:A:C2	2.34	0.63
36:BA:2502:G:H5''	36:BA:2503:A:C5'	2.29	0.63
36:BA:2023:G:H5'	36:BA:2617:C:H4'	1.81	0.63
36:BA:8:A:H2'	36:BA:9:U:C5	2.34	0.63
37:BB:3:C:H42	37:BB:118:G:H1	1.45	0.63
44:BJ:25:UNK:HA	44:BJ:116:UNK:HA	1.79	0.63
48:BP:101:VAL:HG12	48:BP:106:LEU:CB	2.29	0.63
52:BT:85:LYS:HB3	52:BT:85:LYS:HZ3	1.61	0.63
54:BV:74:LYS:HB2	54:BV:83:ARG:HB2	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:46:LYS:HD3	57:BY:47:LYS:H	1.63	0.63
58:BZ:28:MET:HE2	58:BZ:37:VAL:HG11	1.80	0.63
1:CA:1065:U:C5	1:CA:1190:G:HI'	2.33	0.63
1:CA:77:G:H5'	1:CA:78:G:OP2	1.98	0.63
10:CJ:96:ILE:H	10:CJ:96:ILE:CD1	2.10	0.63
25:CZ:27:LEU:O	25:CZ:31:LEU:HG	1.97	0.63
26:D0:50:ASN:ND2	26:D0:63:VAL:HG21	2.12	0.63
35:D9:19:ARG:O	35:D9:20:HIS:HB2	1.97	0.63
36:DA:2762:G:H5'	36:DA:2762:G:C8	2.29	0.63
40:DE:4:ILE:HD12	40:DE:92:THR:O	1.99	0.63
42:DG:116:ASP:O	42:DG:117:PHE:CB	2.46	0.63
49:DQ:111:GLU:OE1	49:DQ:133:ARG:NH2	2.32	0.63
49:DQ:21:THR:O	49:DQ:22:LYS:HB3	1.99	0.63
50:DR:45:ARG:HG3	50:DR:46:GLY:N	2.12	0.63
57:DY:46:LYS:HD3	57:DY:47:LYS:H	1.64	0.63
1:AA:1016:A:H2'	1:AA:1017:G:O4'	1.99	0.63
1:AA:266:G:H5'	1:AA:267:C:C5	2.34	0.63
2:AB:29:ALA:HA	2:AB:32:ILE:CG2	2.29	0.63
2:AB:80:ILE:CD1	2:AB:80:ILE:H	2.11	0.63
6:AF:43:LEU:HD22	6:AF:43:LEU:N	2.13	0.63
16:AP:49:LEU:HD12	16:AP:50:LYS:H	1.64	0.63
18:AR:32:ARG:HA	18:AR:69:THR:HG21	1.81	0.63
25:AZ:93:ILE:CG1	25:AZ:122:LEU:HD11	2.28	0.63
36:BA:2672:G:H2'	36:BA:2673:G:H5''	1.81	0.63
36:BA:674:G:HI'	41:BF:74:ARG:HD2	1.80	0.63
37:BB:66:A:H61	37:BB:108:U:H2'	1.62	0.63
40:BE:101:ARG:HB3	40:BE:201:THR:HG21	1.80	0.63
41:BF:24:LEU:O	41:BF:26:ALA:N	2.31	0.63
46:BN:96:GLU:H	46:BN:96:GLU:CD	2.02	0.63
47:BO:104:ARG:NH2	52:BT:33:LYS:HD3	2.13	0.63
52:BT:57:PHE:HE1	52:BT:79:HIS:HD1	1.47	0.63
53:BU:83:LEU:HG	53:BU:88:ILE:CD1	2.28	0.63
55:BW:29:LEU:HG	55:BW:33:ARG:HD2	1.81	0.63
55:BW:4:LYS:HA	55:BW:106:ILE:HG22	1.81	0.63
1:CA:108:G:H5'	1:CA:109:A:C5'	2.28	0.63
2:CB:44:LEU:HA	2:CB:47:THR:CB	2.28	0.63
1:CA:1250:A:H4'	9:CI:68:GLY:N	2.14	0.63
11:CK:97:ALA:O	11:CK:101:SER:HB3	1.98	0.63
25:CZ:171:ILE:HG22	25:CZ:172:ARG:H	1.64	0.63
36:DA:106:C:H2'	36:DA:107:C:H6	1.64	0.63
36:DA:2307:G:H21	36:DA:2308:G:H5''	1.64	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DH:98:LEU:HD12	43:DH:102:ALA:O	1.98	0.63
46:DN:43:THR:HB	46:DN:46:VAL:CG1	2.29	0.63
48:DP:101:VAL:HG12	48:DP:106:LEU:CB	2.29	0.63
50:DR:103:ARG:HG3	55:DW:40:ASN:OD1	1.99	0.63
3:AC:34:LEU:O	3:AC:38:ARG:HG2	1.99	0.62
10:AJ:96:ILE:H	10:AJ:96:ILE:CD1	2.09	0.62
22:AW:59:U:H5'	22:AW:60:U:C5	2.34	0.62
27:B1:78:LYS:HE2	27:B1:78:LYS:HA	1.81	0.62
28:B2:57:ILE:CG2	28:B2:61:LEU:HG	2.22	0.62
36:BA:1877:A:H5'	36:BA:1878:G:OP2	1.98	0.62
36:BA:650:C:C3'	36:BA:651:G:H5''	2.28	0.62
43:BH:76:VAL:C	43:BH:78:GLY:H	2.02	0.62
1:CA:979:C:C2'	1:CA:980:C:H5''	2.28	0.62
3:CC:94:LEU:O	3:CC:95:THR:HB	1.99	0.62
1:CA:437:U:OP1	4:CD:155:LEU:HD22	1.99	0.62
8:CH:17:THR:HB	8:CH:78:GLN:OE1	2.00	0.62
6:CF:46:ARG:NH2	18:CR:37:VAL:HG11	2.13	0.62
36:DA:1409:C:H2'	36:DA:1410:G:H8	1.63	0.62
36:DA:2036:C:C6	36:DA:2036:C:H5'	2.24	0.62
36:DA:1786:A:H2	36:DA:2606:C:H1'	1.64	0.62
37:DB:65:C:O2'	37:DB:66:A:H5'	1.99	0.62
38:DC:18:LYS:HD3	38:DC:20:TYR:CE2	2.34	0.62
46:DN:72:TYR:CD2	46:DN:90:MET:HG3	2.34	0.62
49:DQ:43:THR:OG1	49:DQ:45:GLN:HG2	1.99	0.62
49:DQ:79:LEU:HD23	49:DQ:80:GLU:H	1.64	0.62
53:DU:17:ILE:HG23	53:DU:39:LEU:HD12	1.80	0.62
1:AA:108:G:H5'	1:AA:109:A:C5'	2.29	0.62
20:AT:92:LEU:C	20:AT:94:ALA:H	2.02	0.62
22:AW:71:G:H2'	22:AW:72:C:C5'	2.23	0.62
25:AZ:145:GLU:O	25:AZ:149:LEU:N	2.32	0.62
29:B3:35:ARG:HD3	29:B3:37:LEU:HD11	1.81	0.62
32:B6:15:GLU:HG3	32:B6:47:THR:HG21	1.81	0.62
31:B5:11:THR:OG1	36:BA:1264:G:H5'	1.99	0.62
36:BA:1335:U:H2'	36:BA:1336:A:H8	1.64	0.62
36:BA:2313:C:H5'	36:BA:2313:C:H6	1.63	0.62
37:BB:65:C:O2'	37:BB:66:A:H5'	1.99	0.62
40:BE:117:MET:CE	40:BE:136:ARG:HA	2.29	0.62
42:BG:159:VAL:HG13	42:BG:159:VAL:O	2.00	0.62
49:BQ:109:VAL:HG12	49:BQ:110:THR:N	2.12	0.62
51:BS:30:ARG:NH2	51:BS:62:LYS:HD3	2.11	0.62
2:CB:29:ALA:HA	2:CB:32:ILE:CG2	2.30	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:138:TYR:CD1	4:CD:139:ARG:N	2.64	0.62
12:CL:47:LYS:C	12:CL:49:ASN:H	2.01	0.62
26:D0:12:ASN:O	26:D0:14:ARG:N	2.31	0.62
36:DA:1540:U:H3'	36:DA:1541:G:C3'	2.29	0.62
36:DA:2790:A:H2'	36:DA:2791:C:H5''	1.81	0.62
38:DC:132:GLY:N	38:DC:133:PRO:HD2	2.14	0.62
36:DA:1187:G:H5''	54:DV:81:TYR:CE1	2.33	0.62
1:AA:1255:G:H3'	1:AA:1279:A:N6	2.14	0.62
2:AB:111:ARG:HG2	2:AB:111:ARG:HH11	1.65	0.62
3:AC:3:ASN:CG	3:AC:4:LYS:H	2.02	0.62
17:AQ:59:ILE:HG22	17:AQ:71:PHE:CD2	2.35	0.62
19:AS:45:VAL:O	19:AS:47:HIS:N	2.26	0.62
32:B6:17:LYS:HB3	32:B6:18:ARG:NH1	2.13	0.62
36:BA:1038:C:C2'	36:BA:1039:G:H5''	2.29	0.62
36:BA:2187:G:H2'	36:BA:2188:C:C5'	2.19	0.62
36:BA:2422:A:H4'	36:BA:2423:U:OP1	1.99	0.62
37:BB:82:G:O2'	37:BB:83:G:H5'	1.98	0.62
40:BE:52:LEU:HD23	40:BE:75:VAL:HB	1.81	0.62
41:BF:206:ILE:HG22	41:BF:207:GLY:H	1.63	0.62
42:BG:76:SER:CB	42:BG:83:ARG:HB3	2.29	0.62
53:BU:14:HIS:CD2	53:BU:36:ARG:HH22	2.17	0.62
1:CA:1005:A:H4'	1:CA:1037:C:O2'	1.99	0.62
1:CA:187:C:H2'	1:CA:188:C:H6	1.63	0.62
1:CA:266:G:C5'	1:CA:267:C:C5	2.82	0.62
1:CA:537:G:H2'	1:CA:538:G:H8	1.64	0.62
2:CB:77:ALA:O	2:CB:81:VAL:HG23	1.99	0.62
34:D8:10:ALA:HB3	34:D8:60:LEU:HD21	1.81	0.62
36:DA:1579:A:H5'	36:DA:1579:A:H8	1.64	0.62
36:DA:1810:A:H2'	36:DA:1811:G:O4'	1.99	0.62
36:DA:2523:G:H2'	36:DA:2524:G:C5'	2.29	0.62
36:DA:2852:G:H2'	36:DA:2853:C:H6	1.64	0.62
36:DA:970:C:H2'	36:DA:971:C:H6	1.64	0.62
49:DQ:27:VAL:H	49:DQ:137:TYR:HD2	1.46	0.62
52:DT:78:LEU:O	52:DT:79:HIS:HD2	1.81	0.62
57:DY:28:LYS:CB	57:DY:37:VAL:HB	2.29	0.62
58:DZ:72:ARG:HG3	58:DZ:89:PHE:HB2	1.80	0.62
1:AA:1003:G:H21	1:AA:1039:C:H42	1.47	0.62
1:AA:192:U:H1'	20:AT:103:GLY:HA2	1.81	0.62
14:AN:25:VAL:HG23	14:AN:38:GLY:O	1.99	0.62
25:AZ:291:ARG:HH11	25:AZ:291:ARG:HB2	1.64	0.62
36:BA:943:U:OP2	48:BP:38:GLN:CD	2.38	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:275:LYS:O	39:BD:276:LYS:HB2	1.98	0.62
43:BH:44:VAL:HG12	43:BH:45:VAL:N	2.13	0.62
54:BV:2:PHE:C	54:BV:2:PHE:CD1	2.73	0.62
1:CA:17:U:H2'	1:CA:18:C:C6	2.33	0.62
1:CA:376:G:OP2	16:CP:67:THR:HG21	1.98	0.62
1:CA:539:A:H2'	1:CA:540:G:C8	2.35	0.62
2:CB:80:ILE:H	2:CB:80:ILE:CD1	2.09	0.62
2:CB:97:TRP:CZ3	2:CB:176:GLU:OE2	2.52	0.62
3:CC:34:LEU:O	3:CC:38:ARG:HG2	1.98	0.62
8:CH:2:LEU:HD21	8:CH:5:PRO:HA	1.80	0.62
19:CS:16:LEU:O	19:CS:19:VAL:N	2.32	0.62
27:D1:82:LEU:HD21	27:D1:90:ILE:HG23	1.80	0.62
34:D8:61:LEU:HD13	34:D8:62:LEU:N	2.14	0.62
36:DA:1092:C:H42	36:DA:1100:C:H42	1.47	0.62
36:DA:2068:U:N3	36:DA:2430:A:H2	1.93	0.62
36:DA:8:A:H2'	36:DA:9:U:C5	2.34	0.62
40:DE:201:THR:C	40:DE:202:LYS:HD2	2.19	0.62
48:DP:66:GLY:O	48:DP:67:MET:CB	2.47	0.62
53:DU:101:ARG:HH11	53:DU:101:ARG:HG3	1.64	0.62
57:DY:9:LYS:CG	57:DY:10:GLY:H	2.04	0.62
57:DY:17:SER:CB	57:DY:71:LYS:HE2	2.29	0.62
57:DY:46:LYS:HD3	57:DY:47:LYS:N	2.14	0.62
1:AA:1221:G:H4'	19:AS:77:THR:HG21	1.81	0.62
1:AA:537:G:H2'	1:AA:538:G:H8	1.63	0.62
5:AE:63:ARG:HA	5:AE:66:MET:HE3	1.79	0.62
6:AF:28:ARG:HH11	6:AF:28:ARG:HG3	1.64	0.62
12:AL:7:ILE:CD1	12:AL:8:ASN:N	2.62	0.62
13:AM:3:ARG:HD3	42:BG:113:ARG:NH1	2.14	0.62
36:BA:106:C:H1'	57:BY:2:ARG:NH2	2.14	0.62
36:BA:1221(A):C:H2'	36:BA:1222:C:C6	2.34	0.62
36:BA:2199:A:H3'	36:BA:2200:C:H6	1.64	0.62
36:BA:2485:G:H5''	49:BQ:46:GLN:NE2	2.13	0.62
36:BA:2712:U:O2'	36:BA:2713:A:H5'	1.98	0.62
38:BC:132:GLY:N	38:BC:133:PRO:HD2	2.15	0.62
46:BN:32:THR:C	46:BN:34:LEU:H	2.03	0.62
51:BS:38:GLN:O	51:BS:40:ILE:HG23	1.98	0.62
52:BT:94:ALA:C	52:BT:96:ARG:H	2.03	0.62
53:BU:64:ARG:HG2	53:BU:64:ARG:HH11	1.63	0.62
58:BZ:108:PRO:CB	58:BZ:141:VAL:HG12	2.27	0.62
4:CD:189:PRO:CB	4:CD:194:LEU:HD21	2.22	0.62
6:CF:62:TRP:C	6:CF:63:TYR:HD1	2.03	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:69:GLU:HG2	25:CZ:70:TYR:N	2.14	0.62
36:DA:2184:G:H2'	36:DA:2185:C:C1'	2.28	0.62
36:DA:302:C:H2'	36:DA:303:U:H6	1.63	0.62
36:DA:603:A:H1'	36:DA:604:G:OP2	1.99	0.62
38:DC:139:ASN:OD1	38:DC:140:PRO:HD2	1.99	0.62
43:DH:44:VAL:HG12	43:DH:45:VAL:N	2.14	0.62
47:DO:47:ILE:O	47:DO:48:PRO:O	2.18	0.62
48:DP:24:GLY:N	48:DP:33:ARG:CZ	2.63	0.62
52:DT:23:ARG:HG2	52:DT:120:ARG:NH1	2.14	0.62
53:DU:83:LEU:HG	53:DU:88:ILE:CD1	2.28	0.62
57:DY:2:ARG:HD3	57:DY:3:VAL:HG23	1.81	0.62
9:AI:53:VAL:O	9:AI:55:ALA:N	2.33	0.62
16:AP:43:LYS:HG3	16:AP:48:TRP:CE3	2.35	0.62
34:B8:61:LEU:CD1	34:B8:61:LEU:N	2.57	0.62
36:BA:2009:G:O2'	36:BA:2010:G:H5'	2.00	0.62
36:BA:2019:A:H2'	36:BA:2020:A:O5'	2.00	0.62
36:BA:2162:G:O2'	36:BA:2163:C:H5'	2.00	0.62
36:BA:298:G:H5'	36:BA:299:A:OP1	1.99	0.62
39:BD:148:GLU:HB2	39:BD:151:LYS:HD2	1.81	0.62
39:BD:223:GLY:C	39:BD:224:ALA:O	2.36	0.62
46:BN:45:ASN:HD22	46:BN:45:ASN:H	1.47	0.62
48:BP:95:VAL:HG23	48:BP:125:VAL:HA	1.81	0.62
50:BR:45:ARG:HG3	50:BR:46:GLY:N	2.12	0.62
53:BU:92:ARG:HH21	54:BV:10:LYS:HB3	1.63	0.62
1:CA:1296:C:H4'	1:CA:1302:U:C5	2.35	0.62
1:CA:1532:U:H2'	1:CA:1533:C:O4'	1.99	0.62
1:CA:950:U:H2'	1:CA:951:G:H8	1.64	0.62
2:CB:84:GLU:HB3	2:CB:219:VAL:HG21	1.80	0.62
12:CL:8:ASN:O	12:CL:12:ARG:HG3	1.99	0.62
13:CM:17:VAL:O	13:CM:20:THR:HB	1.99	0.62
22:CW:59:U:H5'	22:CW:60:U:C5	2.33	0.62
26:D0:73:GLY:O	26:D0:75:LEU:N	2.32	0.62
32:D6:42:TRP:HA	32:D6:42:TRP:HE3	1.64	0.62
36:DA:16:G:O2'	36:DA:17:G:H5'	2.00	0.62
36:DA:2152:G:O2'	36:DA:2153:G:H5'	1.99	0.62
43:DH:41:MET:HG3	43:DH:42:ARG:O	2.00	0.62
50:DR:30:THR:HG22	50:DR:31:HIS:ND1	2.14	0.62
52:DT:28:VAL:O	52:DT:29:ARG:CB	2.47	0.62
57:DY:97:ARG:HH21	57:DY:98:VAL:CB	2.12	0.62
1:AA:45:U:H2'	1:AA:46:G:C8	2.34	0.62
3:AC:16:ARG:HH11	3:AC:16:ARG:HB2	1.65	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:49:SER:C	3:AC:51:GLY:H	2.01	0.62
4:AD:19:LEU:HD12	4:AD:19:LEU:N	2.14	0.62
5:AE:20:GLN:HE21	5:AE:25:ARG:NH2	1.96	0.62
30:B4:27:THR:O	30:B4:28:LYS:HB3	1.99	0.62
35:B9:1:MET:HE2	35:B9:31:LYS:HB3	1.81	0.62
36:BA:1332:G:N2	36:BA:1610:A:C8	2.67	0.62
36:BA:2099:U:H2'	36:BA:2100:G:H8	1.64	0.62
36:BA:2118:U:H5'	36:BA:2147:G:H21	1.64	0.62
36:BA:2201:C:O2'	36:BA:2202:C:H5'	2.00	0.62
36:BA:2443:C:O2'	36:BA:2444:G:H5'	2.00	0.62
36:BA:99:U:C4'	36:BA:102:G:H1'	2.30	0.62
42:BG:52:ILE:HD13	42:BG:53:LEU:N	2.14	0.62
48:BP:66:GLY:O	48:BP:67:MET:CB	2.47	0.62
49:BQ:109:VAL:HG13	49:BQ:113:GLN:OE1	2.00	0.62
51:BS:35:ILE:H	51:BS:53:SER:HB2	1.62	0.62
55:BW:5:ALA:O	55:BW:6:ILE:HB	2.00	0.62
1:CA:1142:G:H2'	1:CA:1143:G:O4'	2.00	0.62
1:CA:180:U:H2'	1:CA:181:G:H5'	1.82	0.62
10:CJ:28:ARG:HB3	10:CJ:28:ARG:HH11	1.64	0.62
16:CP:67:THR:HB	16:CP:70:ALA:CB	2.30	0.62
36:DA:1064:C:H2'	36:DA:1065:U:H5''	1.81	0.62
36:DA:2199:A:H3'	36:DA:2200:C:H6	1.65	0.62
36:DA:2801(A):A:H5'	36:DA:2802:G:H8	1.64	0.62
36:DA:848:G:N3	36:DA:933:A:H1'	2.14	0.62
40:DE:33:VAL:HG23	40:DE:47:VAL:HG13	1.82	0.62
42:DG:45:GLU:O	42:DG:51:ARG:HG3	2.00	0.62
43:DH:50:VAL:CG1	43:DH:51:ARG:H	2.10	0.62
36:DA:661:C:H4'	48:DP:16:ARG:NH1	2.14	0.62
49:DQ:109:VAL:HG12	49:DQ:110:THR:N	2.15	0.62
53:DU:88:ILE:C	53:DU:90:VAL:H	2.02	0.62
1:AA:1005:A:H4'	1:AA:1037:C:O2'	1.99	0.62
1:AA:1116:C:C2'	1:AA:1117:G:H5''	2.30	0.62
12:AL:6:THR:H	12:AL:9:GLN:HE21	1.48	0.62
19:AS:62:ILE:HA	19:AS:66:MET:HE2	1.80	0.62
22:AW:38:A:H2'	22:AW:39:U:C5'	2.29	0.62
36:BA:2308:G:N7	36:BA:2310:A:H5'	2.14	0.62
35:B9:30:PRO:HB2	36:BA:2527:C:H5'	1.81	0.62
36:BA:654(E):G:H2'	36:BA:654(F):C:H5'	1.82	0.62
39:BD:70:TRP:O	39:BD:73:VAL:HG23	1.99	0.62
49:BQ:109:VAL:CG1	49:BQ:113:GLN:HB2	2.30	0.62
52:BT:93:ARG:NH2	52:BT:95:ARG:HD3	2.14	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:BW:11:ARG:HG2	55:BW:11:ARG:NH1	2.13	0.62
57:BY:81:LYS:HD3	57:BY:97:ARG:O	1.99	0.62
1:CA:393:A:O2'	1:CA:394:G:H5'	1.99	0.62
14:CN:25:VAL:HG23	14:CN:38:GLY:O	1.99	0.62
17:CQ:67:LYS:O	17:CQ:68:ARG:CB	2.47	0.62
27:D1:7:ILE:HG22	27:D1:8:SER:N	2.14	0.62
28:D2:68:ARG:HG3	28:D2:72:ALA:HB2	1.81	0.62
36:DA:1991:U:H2'	36:DA:1992:G:H5''	1.82	0.62
36:DA:582:G:H2'	36:DA:583:G:C8	2.35	0.62
36:DA:943:U:OP2	48:DP:38:GLN:CD	2.38	0.62
39:DD:70:TRP:O	39:DD:73:VAL:HG23	1.99	0.62
40:DE:57:LYS:HE3	40:DE:57:LYS:CA	2.19	0.62
49:DQ:68:ILE:HG23	49:DQ:103:MET:HA	1.81	0.62
2:AB:7:VAL:O	2:AB:11:LEU:HB2	2.00	0.62
4:AD:189:PRO:CB	4:AD:194:LEU:HD21	2.23	0.62
10:AJ:90:LEU:N	10:AJ:91:PRO:HD3	2.15	0.62
25:AZ:104:LEU:HD23	25:AZ:133:VAL:HG22	1.82	0.62
26:B0:73:GLY:O	26:B0:75:LEU:N	2.32	0.62
28:B2:3:LEU:O	28:B2:7:ARG:HG3	1.99	0.62
36:BA:1024:G:C3'	36:BA:1025:G:H5''	2.22	0.62
36:BA:2309:A:H2'	36:BA:2310:A:C5'	2.30	0.62
40:BE:201:THR:C	40:BE:202:LYS:HD2	2.20	0.62
42:BG:10:LYS:O	42:BG:15:VAL:HG23	1.99	0.62
46:BN:99:LEU:O	46:BN:103:VAL:HG23	2.00	0.62
36:BA:956:G:OP2	49:BQ:14:ARG:NH2	2.32	0.62
50:BR:2:ARG:HD2	50:BR:2:ARG:O	2.00	0.62
50:BR:21:TYR:HB3	50:BR:47:PHE:CD2	2.35	0.62
54:BV:49:THR:HB	54:BV:50:PRO:CD	2.28	0.62
57:BY:73:ARG:HH22	57:BY:82:PRO:CA	2.12	0.62
58:BZ:33:LEU:HD12	58:BZ:34:ASN:H	1.64	0.62
1:CA:423:G:C2'	1:CA:424:G:H5'	2.29	0.62
3:CC:40:ARG:NH1	3:CC:40:ARG:HG3	2.14	0.62
20:CT:92:LEU:C	20:CT:94:ALA:H	2.02	0.62
25:CZ:295:ARG:HG2	25:CZ:295:ARG:NH1	2.12	0.62
36:DA:1058:G:C3'	36:DA:1059:G:C5'	2.78	0.62
36:DA:1335:U:H2'	36:DA:1336:A:H8	1.65	0.62
36:DA:1419:A:O2'	36:DA:1420:U:H5''	1.99	0.62
36:DA:2811:G:OP1	40:DE:60:ASN:HB2	1.99	0.62
36:DA:693:C:O2'	36:DA:694:U:H5'	2.00	0.62
48:DP:16:ARG:HB2	48:DP:16:ARG:HH11	1.65	0.62
52:DT:28:VAL:O	52:DT:29:ARG:CG	2.48	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:DV:19:LYS:HZ3	54:DV:20:LEU:H	1.46	0.62
56:DX:12:VAL:CG2	56:DX:13:LEU:H	1.90	0.62
57:DY:81:LYS:HD3	57:DY:97:ARG:O	2.00	0.62
1:AA:77:G:H5'	1:AA:78:G:OP2	1.99	0.62
2:AB:47:THR:O	2:AB:51:LEU:HB2	2.00	0.62
13:AM:116:THR:O	13:AM:118:ALA:N	2.33	0.62
28:B2:35:LEU:HG	28:B2:53:LEU:HD13	1.82	0.62
32:B6:15:GLU:OE1	32:B6:18:ARG:CG	2.48	0.62
36:BA:1064:C:H2'	36:BA:1065:U:H5''	1.82	0.62
36:BA:1771:C:C1'	36:BA:1786:A:H8	2.11	0.62
36:BA:212:G:O2'	36:BA:213:A:H5'	1.99	0.62
36:BA:2195:C:O2'	36:BA:2196:C:H5'	1.99	0.62
36:BA:495:G:H21	55:BW:61:ASN:HD21	1.46	0.62
36:BA:528:A:H2	36:BA:2043:C:C5'	2.13	0.62
40:BE:101:ARG:CZ	40:BE:171:GLU:HB2	2.29	0.62
41:BF:139:PHE:HB2	41:BF:166:ALA:HB1	1.82	0.62
46:BN:129:PRO:O	46:BN:130:HIS:HB3	1.99	0.62
57:BY:2:ARG:HD3	57:BY:3:VAL:HG23	1.81	0.62
58:BZ:19:ARG:NH1	58:BZ:84:GLU:O	2.33	0.62
1:CA:1006:C:N4	1:CA:1024:G:H21	1.98	0.62
1:CA:731:G:OP1	1:CA:766:A:H1'	2.00	0.62
3:CC:70:VAL:HG13	3:CC:72:LYS:H	1.65	0.62
10:CJ:61:GLU:OE2	14:CN:49:HIS:HE1	1.82	0.62
34:D8:16:ILE:HD12	34:D8:57:ARG:HG2	1.80	0.62
36:DA:1771:C:C1'	36:DA:1786:A:H8	2.13	0.62
36:DA:90:U:O4'	36:DA:92:A:H8	1.83	0.62
40:DE:37:ARG:HA	40:DE:42:ASP:OD2	1.99	0.62
41:DF:139:PHE:HB2	41:DF:166:ALA:HB1	1.82	0.62
47:DO:35:VAL:HG21	47:DO:103:ALA:CB	2.28	0.62
49:DQ:109:VAL:HG13	49:DQ:113:GLN:OE1	2.00	0.62
56:DX:40:LYS:HG2	56:DX:51:VAL:CB	2.12	0.62
56:DX:40:LYS:HD2	56:DX:40:LYS:O	2.00	0.62
1:AA:1347:G:N2	1:AA:1373:G:H2'	2.15	0.61
1:AA:541:G:H2'	1:AA:542:G:C8	2.32	0.61
1:AA:627:G:H2'	1:AA:628:G:H8	1.65	0.61
2:AB:204:ASN:C	2:AB:204:ASN:HD22	2.02	0.61
4:AD:148:VAL:HG12	4:AD:149:ALA:H	1.63	0.61
22:AW:43:C:H2'	22:AW:44:G:C1'	2.29	0.61
26:B0:16:SER:HB2	36:BA:2262:U:H5	1.65	0.61
34:B8:6:THR:CG2	34:B8:63:PRO:HD3	2.29	0.61
36:BA:1188:U:O2'	36:BA:1189:A:H5'	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1286:A:H2'	36:BA:1288:U:OP2	2.00	0.61
36:BA:1409:C:H2'	36:BA:1410:G:H8	1.64	0.61
36:BA:1598:C:H5'	56:BX:36:LYS:CG	2.30	0.61
36:BA:2219:G:O2'	36:BA:2220:G:H5'	2.00	0.61
36:BA:1782:C:H1'	36:BA:2609:U:H5''	1.81	0.61
58:BZ:162:GLU:O	58:BZ:163:LEU:O	2.17	0.61
1:CA:633:G:H5'	1:CA:634:C:OP2	2.00	0.61
2:CB:204:ASN:C	2:CB:204:ASN:HD22	2.02	0.61
2:CB:7:VAL:O	2:CB:11:LEU:HB2	2.00	0.61
10:CJ:4:ILE:HB	10:CJ:74:ILE:HD11	1.82	0.61
22:CV:47:U:H3'	22:CV:48:C:H5'	1.81	0.61
28:D2:69:ARG:HB2	28:D2:70:GLN:HE22	1.64	0.61
31:D5:40:LYS:HG2	31:D5:46:CYS:HB2	1.81	0.61
35:D9:30:PRO:HB2	36:DA:2527:C:H5'	1.81	0.61
40:DE:120:TRP:CE3	40:DE:155:LYS:HE3	2.34	0.61
40:DE:101:ARG:HH11	40:DE:169:ASN:ND2	1.98	0.61
40:DE:44:TYR:O	40:DE:45:THR:HB	1.99	0.61
41:DF:206:ILE:HG22	41:DF:207:GLY:H	1.64	0.61
50:DR:21:TYR:HB3	50:DR:47:PHE:CD2	2.35	0.61
53:DU:14:HIS:CD2	53:DU:36:ARG:HH22	2.18	0.61
1:AA:1250:A:H4'	9:AI:68:GLY:N	2.15	0.61
9:AI:65:VAL:HG21	9:AI:73:GLN:HB3	1.82	0.61
12:AL:89:ARG:NH1	12:AL:91:LYS:HG2	2.14	0.61
25:AZ:309:SER:O	25:AZ:310:ILE:HG22	2.00	0.61
32:B6:17:LYS:HA	32:B6:17:LYS:HE2	1.82	0.61
36:BA:197:A:H5'	36:BA:197:A:H8	1.65	0.61
36:BA:2523:G:H2'	36:BA:2524:G:C5'	2.30	0.61
39:BD:24:ILE:HG23	39:BD:25:THR:H	1.65	0.61
41:BF:43:LYS:HA	41:BF:98:SER:HB3	1.83	0.61
1:AA:1463:C:H5'	52:BT:115:ARG:HH12	1.65	0.61
52:BT:58:ASN:HD22	52:BT:58:ASN:H	1.45	0.61
53:BU:47:TYR:HA	53:BU:50:ARG:NH1	2.14	0.61
57:BY:28:LYS:CB	57:BY:37:VAL:HB	2.29	0.61
1:CA:666:G:H5'	1:CA:726:C:H1'	1.82	0.61
5:CE:81:GLU:OE1	5:CE:88:LYS:HE3	2.01	0.61
10:CJ:55:LYS:NZ	10:CJ:55:LYS:CB	2.63	0.61
13:CM:15:VAL:HG22	13:CM:43:THR:O	2.00	0.61
22:CW:43:C:H2'	22:CW:44:G:C1'	2.30	0.61
36:DA:1614:A:N1	55:DW:91:GLY:HA2	2.15	0.61
36:DA:1747(A):G:O2'	36:DA:1748:G:H5''	2.00	0.61
36:DA:1782:C:H1'	36:DA:2609:U:H5''	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2009:G:O2'	36:DA:2010:G:H5'	2.00	0.61
36:DA:2309:A:H2'	36:DA:2310:A:C5'	2.29	0.61
36:DA:2422:A:H4'	36:DA:2423:U:OP1	1.99	0.61
53:DU:47:TYR:HA	53:DU:50:ARG:NH1	2.15	0.61
53:DU:55:ARG:HA	53:DU:58:ARG:HD2	1.82	0.61
55:DW:5:ALA:O	55:DW:6:ILE:HB	2.00	0.61
1:AA:423:G:C2'	1:AA:424:G:H5'	2.29	0.61
5:AE:7:GLU:HG2	5:AE:112:LEU:HD21	1.81	0.61
6:AF:25:ILE:O	6:AF:25:ILE:HD13	1.99	0.61
12:AL:45:PRO:HG3	12:AL:53:ARG:HD3	1.83	0.61
13:AM:101:GLN:H	13:AM:101:GLN:HE21	1.46	0.61
22:AV:4:C:H2'	22:AV:5:G:H5''	1.82	0.61
36:BA:1103:A:H5''	36:BA:1104:C:H5	1.63	0.61
43:BH:50:VAL:CG1	43:BH:51:ARG:H	2.10	0.61
1:AA:1423:G:H5'	47:BO:49:ARG:HH22	1.65	0.61
53:BU:55:ARG:HA	53:BU:58:ARG:HD2	1.81	0.61
1:CA:1016:A:H2'	1:CA:1017:G:O4'	2.00	0.61
1:CA:256:U:H2'	1:CA:257:G:C8	2.35	0.61
1:CA:573:A:H5'	1:CA:573:A:C8	2.31	0.61
2:CB:9:GLU:OE1	2:CB:9:GLU:N	2.32	0.61
3:CC:95:THR:HG22	3:CC:95:THR:O	1.99	0.61
9:CI:28:VAL:CG2	9:CI:33:PHE:HA	2.30	0.61
7:CG:150:ALA:HB2	11:CK:50:TYR:OH	2.00	0.61
12:CL:119:LYS:O	12:CL:120:TYR:HB2	2.01	0.61
19:CS:16:LEU:HD12	19:CS:16:LEU:H	1.64	0.61
25:CZ:145:GLU:O	25:CZ:149:LEU:N	2.33	0.61
26:D0:40:GLN:NE2	26:D0:44:ARG:H	1.98	0.61
36:DA:1600:C:O2'	36:DA:1601:G:H5'	1.99	0.61
36:DA:2153:G:O2'	36:DA:2154:G:H5'	2.01	0.61
35:D9:10:ILE:HG23	36:DA:2477:C:N4	2.14	0.61
38:DC:40:THR:HG22	38:DC:177:LYS:HD2	1.81	0.61
39:DD:30:GLU:H	39:DD:35:LYS:NZ	1.98	0.61
41:DF:148:LEU:HD23	41:DF:191:ARG:NH1	2.15	0.61
47:DO:60:ALA:HA	47:DO:87:ILE:HG12	1.80	0.61
49:DQ:56:ARG:CG	49:DQ:56:ARG:NH1	2.62	0.61
1:AA:1142:G:H2'	1:AA:1143:G:O4'	2.00	0.61
1:AA:1313:U:H2'	1:AA:1314:C:O2	2.00	0.61
1:AA:382:A:H2'	1:AA:383:A:H8	1.65	0.61
1:AA:444:C:H2'	1:AA:445:G:C8	2.35	0.61
1:AA:673:G:H2'	1:AA:674:G:C8	2.36	0.61
1:AA:96:U:H2'	1:AA:97:G:N7	2.16	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:114:ARG:HG3	4:AD:114:ARG:NH1	2.14	0.61
17:AQ:27:PHE:CZ	17:AQ:36:ILE:HD11	2.35	0.61
22:AW:65:G:H4'	32:B6:28:ARG:NH2	2.15	0.61
32:B6:53:LYS:CD	32:B6:54:ILE:H	2.13	0.61
36:BA:1335:U:H2'	36:BA:1336:A:C8	2.35	0.61
36:BA:2307:G:H21	36:BA:2308:G:H5''	1.66	0.61
36:BA:2464:C:O2'	36:BA:2465:C:H6	1.82	0.61
36:BA:2537:U:H2'	36:BA:2538:C:C6	2.35	0.61
36:BA:860:U:C5	36:BA:917:A:N7	2.62	0.61
36:BA:855:G:H1	36:BA:922:U:H3	1.46	0.61
37:BB:61:G:O2'	37:BB:62:C:H5'	2.00	0.61
36:BA:1813:G:H1'	39:BD:50:THR:OG1	1.99	0.61
54:BV:99:ILE:O	54:BV:99:ILE:HG12	2.01	0.61
1:CA:1331:G:OP2	13:CM:23:TYR:HD1	1.83	0.61
1:CA:673:G:H2'	1:CA:674:G:C8	2.35	0.61
2:CB:44:LEU:HD12	2:CB:44:LEU:N	2.13	0.61
2:CB:75:LYS:HA	2:CB:78:GLN:NE2	2.14	0.61
9:CI:106:ALA:O	9:CI:108:VAL:HG23	2.01	0.61
1:CA:521:G:H4'	12:CL:73:GLU:HG2	1.81	0.61
12:CL:82:VAL:H	12:CL:106:ASP:CG	2.04	0.61
18:CR:36:ASN:HD21	18:CR:39:VAL:HG21	1.66	0.61
22:CW:38:A:H2'	22:CW:39:U:C5'	2.30	0.61
36:DA:1061:U:H4'	36:DA:1070:A:O4'	2.00	0.61
36:DA:1718:G:H2'	36:DA:1719:G:C8	2.35	0.61
36:DA:996:A:O3'	53:DU:92:ARG:HG2	2.00	0.61
41:DF:177:ALA:HB1	41:DF:178:PRO:HD2	1.82	0.61
57:DY:74:PRO:O	57:DY:75:ILE:HB	1.99	0.61
4:AD:11:LEU:HD22	4:AD:66:ARG:NH1	2.15	0.61
4:AD:131:ARG:HD3	4:AD:131:ARG:H	1.66	0.61
6:AF:34:GLY:N	6:AF:71:ARG:HH21	1.97	0.61
11:AK:97:ALA:O	11:AK:101:SER:HB3	2.00	0.61
36:BA:1019:U:H3	36:BA:1142(A):A:N6	1.93	0.61
36:BA:106:C:H2'	36:BA:107:C:H6	1.63	0.61
36:BA:1092:C:H42	36:BA:1100:C:H42	1.49	0.61
36:BA:1419:A:O2'	36:BA:1420:U:H5''	2.00	0.61
36:BA:145:G:C2'	36:BA:146:G:H5''	2.30	0.61
36:BA:1747(A):G:O2'	36:BA:1748:G:H5''	1.99	0.61
38:BC:139:ASN:OD1	38:BC:140:PRO:HD2	2.00	0.61
46:BN:72:TYR:CD2	46:BN:90:MET:HG3	2.36	0.61
48:BP:148:LEU:O	48:BP:149:GLU:HB2	1.98	0.61
49:BQ:43:THR:OG1	49:BQ:45:GLN:HG2	1.99	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BR:4:LEU:HG	50:BR:4:LEU:O	2.01	0.61
54:BV:39:LEU:HA	54:BV:47:VAL:HG13	1.82	0.61
3:CC:166:GLU:OE1	3:CC:166:GLU:HA	2.00	0.61
1:CA:191:G:C4	20:CT:105:SER:HB3	2.36	0.61
25:CZ:193:ASN:HB2	25:CZ:196:VAL:CG1	2.30	0.61
25:CZ:263:ARG:HH21	25:CZ:297:GLU:CG	2.11	0.61
36:DA:1332:G:N2	36:DA:1609:A:O2'	2.33	0.61
36:DA:1720:U:C3'	36:DA:1721:G:H5''	2.30	0.61
36:DA:2512:C:H2'	36:DA:2513:G:O4'	2.00	0.61
36:DA:729:G:OP2	39:DD:13:ARG:NH1	2.33	0.61
37:DB:68:C:H2'	37:DB:69:G:O4'	2.01	0.61
39:DD:94:LEU:HB2	39:DD:104:TYR:HE1	1.65	0.61
39:DD:99:ASP:OD1	39:DD:99:ASP:C	2.37	0.61
51:DS:106:ARG:HH12	51:DS:108:GLY:N	1.98	0.61
52:DT:93:ARG:NH2	52:DT:95:ARG:HD3	2.15	0.61
36:DA:896:A:N1	58:DZ:113:ALA:O	2.34	0.61
3:AC:81:GLY:HA3	3:AC:85:ARG:CZ	2.31	0.61
6:AF:19:LEU:HD23	6:AF:19:LEU:O	1.99	0.61
9:AI:99:LEU:HD22	9:AI:99:LEU:N	2.16	0.61
19:AS:16:LEU:H	19:AS:16:LEU:HD12	1.65	0.61
36:BA:1013:C:O2'	36:BA:1014:U:H5'	2.00	0.61
36:BA:2886:G:H2'	36:BA:2887:U:C6	2.36	0.61
36:BA:325:G:H2'	36:BA:326:G:C8	2.35	0.61
41:BF:6:VAL:HG12	41:BF:7:TYR:N	2.09	0.61
30:B4:24:THR:HB	42:BG:104:GLU:OE2	2.01	0.61
46:BN:32:THR:HG22	46:BN:37:LYS:HD3	1.83	0.61
36:BA:2713:A:OP1	50:BR:14:SER:HB3	2.00	0.61
2:CB:42:ILE:HD11	2:CB:202:PRO:HB2	1.83	0.61
3:CC:114:PRO:O	3:CC:118:GLN:HG3	2.01	0.61
3:CC:15:THR:CG2	3:CC:181:ASN:HA	2.28	0.61
12:CL:20:LYS:H	12:CL:20:LYS:CD	2.04	0.61
19:CS:45:VAL:HG23	19:CS:46:GLY:N	2.15	0.61
36:DA:1592:C:H2'	36:DA:1593:G:C8	2.35	0.61
36:DA:2533:A:H2'	36:DA:2534:A:O4'	2.00	0.61
36:DA:2537:U:H2'	36:DA:2538:C:C6	2.36	0.61
36:DA:855:G:H1	36:DA:922:U:H3	1.48	0.61
38:DC:29:VAL:HG11	38:DC:214:VAL:HG12	1.81	0.61
41:DF:22:ALA:HB1	41:DF:26:ALA:HB2	1.81	0.61
48:DP:40:SER:O	48:DP:41:ARG:HD3	2.00	0.61
51:DS:54:LEU:HD13	51:DS:57:LYS:HA	1.83	0.61
52:DT:57:PHE:HE1	52:DT:79:HIS:HD1	1.47	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1598:C:H5'	56:DX:36:LYS:CG	2.30	0.61
1:AA:1442(B):A:N3	1:AA:1442(B):A:H2'	2.15	0.61
1:AA:382:A:H2'	1:AA:383:A:C8	2.36	0.61
1:AA:539:A:H2'	1:AA:540:G:C8	2.35	0.61
1:AA:950:U:H2'	1:AA:951:G:H8	1.66	0.61
1:AA:992:U:H4'	1:AA:993:G:O5'	1.99	0.61
3:AC:189:ALA:HB3	3:AC:196:LEU:HB2	1.82	0.61
8:AH:102:ARG:N	8:AH:102:ARG:HD3	2.15	0.61
19:AS:32:LYS:H	19:AS:32:LYS:HZ3	1.46	0.61
36:BA:1503:U:H2'	36:BA:1504:C:C6	2.36	0.61
36:BA:2148:G:O2'	36:BA:2149:G:H5'	2.01	0.61
36:BA:2068:U:N3	36:BA:2430:A:H2	1.94	0.61
36:BA:2555:U:H2'	36:BA:2556:C:H5'	1.82	0.61
36:BA:361:G:N2	36:BA:362:U:H1'	2.15	0.61
36:BA:582:G:H2'	36:BA:583:G:C8	2.36	0.61
37:BB:112:U:H2'	37:BB:113:G:H8	1.64	0.61
38:BC:18:LYS:HD3	38:BC:20:TYR:CE2	2.36	0.61
39:BD:43:ARG:HB2	39:BD:54:ARG:CB	2.30	0.61
46:BN:18:ALA:HB3	46:BN:56:ASN:O	2.01	0.61
48:BP:23:PRO:CB	48:BP:33:ARG:HG3	2.25	0.61
48:BP:24:GLY:HA3	48:BP:33:ARG:HH12	1.65	0.61
48:BP:34:GLY:O	48:BP:35:HIS:HB2	2.01	0.61
57:BY:84:ARG:CZ	57:BY:97:ARG:HB3	2.31	0.61
58:BZ:108:PRO:HA	58:BZ:141:VAL:O	2.00	0.61
1:CA:266:G:H5'	1:CA:267:C:C5	2.35	0.61
1:CA:353:A:H5'	1:CA:353:A:C8	2.31	0.61
3:CC:11:ARG:NH2	3:CC:182:ILE:HD12	2.16	0.61
3:CC:23:TYR:CD1	3:CC:24:ALA:N	2.69	0.61
4:CD:88:VAL:O	4:CD:92:VAL:HG23	2.01	0.61
7:CG:27:ILE:HD13	7:CG:40:ALA:HA	1.82	0.61
36:DA:136:G:H2'	36:DA:137:C:H6	1.65	0.61
36:DA:141:A:H1'	36:DA:1408:C:O2'	2.00	0.61
36:DA:59:U:H3	36:DA:68:G:H1	1.48	0.61
41:DF:167:ALA:HB1	41:DF:173:VAL:CG1	2.20	0.61
36:DA:674:G:H1'	41:DF:74:ARG:HD2	1.81	0.61
56:DX:12:VAL:HG12	56:DX:27:THR:O	2.01	0.61
56:DX:63:LYS:HG3	56:DX:72:LYS:HG2	1.82	0.61
8:AH:89:PRO:HA	8:AH:92:ARG:NH1	2.15	0.61
13:AM:11:ARG:O	13:AM:13:LYS:N	2.33	0.61
25:AZ:69:GLU:HG2	25:AZ:70:TYR:N	2.15	0.61
35:B9:1:MET:CE	35:B9:31:LYS:HB3	2.30	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1058:G:C3'	36:BA:1059:G:C5'	2.78	0.61
36:BA:1718:G:H2'	36:BA:1719:G:C8	2.36	0.61
36:BA:271(K):U:H3'	36:BA:271(L):U:C5'	2.30	0.61
36:BA:671:C:H2'	36:BA:672:C:C6	2.35	0.61
40:BE:94:GLU:OE2	40:BE:177:PRO:HB3	2.01	0.61
40:BE:37:ARG:HA	40:BE:42:ASP:OD2	2.00	0.61
41:BF:22:ALA:HB1	41:BF:26:ALA:HB2	1.82	0.61
42:BG:121:ASN:HB3	42:BG:124:SER:HB2	1.81	0.61
53:BU:95:LEU:O	53:BU:98:LEU:HG	2.01	0.61
57:BY:13:VAL:HG11	57:BY:28:LYS:HD3	1.83	0.61
3:CC:79:ARG:CB	3:CC:79:ARG:HH11	2.09	0.61
10:CJ:90:LEU:N	10:CJ:91:PRO:HD3	2.16	0.61
13:CM:116:THR:O	13:CM:118:ALA:N	2.34	0.61
18:CR:31:LEU:H	18:CR:31:LEU:CD2	2.12	0.61
25:CZ:200:TRP:O	25:CZ:204:ASP:HB2	2.00	0.61
30:D4:5:ILE:HG12	30:D4:5:ILE:O	1.99	0.61
36:DA:1385:G:H4'	36:DA:1386:C:OP1	2.00	0.61
36:DA:2591:C:H2'	36:DA:2592:G:C8	2.35	0.61
36:DA:491:G:H2'	36:DA:492:A:C8	2.36	0.61
39:DD:102:LYS:O	39:DD:103:ARG:HG2	2.01	0.61
46:DN:32:THR:HG22	46:DN:37:LYS:HD3	1.82	0.61
46:DN:9:VAL:HG21	46:DN:48:MET:HB2	1.80	0.61
50:DR:4:LEU:HG	50:DR:4:LEU:O	2.00	0.61
3:AC:15:THR:CG2	3:AC:181:ASN:HA	2.30	0.61
1:AA:939:G:H5''	7:AG:102:ARG:NH2	2.16	0.61
17:AQ:85:VAL:O	17:AQ:89:LEU:HG	2.01	0.61
25:AZ:193:ASN:HB2	25:AZ:196:VAL:CG1	2.29	0.61
36:BA:1786:A:H2	36:BA:2606:C:H1'	1.64	0.61
40:BE:44:TYR:O	40:BE:45:THR:HB	2.00	0.61
36:BA:470:A:OP1	41:BF:59:TYR:HE1	1.83	0.61
51:BS:20:ARG:HG2	51:BS:20:ARG:HH11	1.66	0.61
53:BU:85:LYS:HD3	53:BU:117:GLN:NE2	2.08	0.61
58:BZ:10:ARG:NH2	58:BZ:36:LYS:HB2	2.16	0.61
58:BZ:23:LYS:HD3	58:BZ:38:TYR:CE1	2.34	0.61
1:CA:1116:C:H2'	1:CA:1117:G:C5'	2.31	0.61
1:CA:72:C:H2'	1:CA:73:G:H8	1.66	0.61
4:CD:22:LYS:HB2	4:CD:26:CYS:CB	2.30	0.61
4:CD:70:ILE:HG22	4:CD:71:SER:O	2.00	0.61
25:CZ:291:ARG:HH11	25:CZ:291:ARG:HB2	1.65	0.61
36:DA:2019:A:H2'	36:DA:2020:A:O5'	2.00	0.61
36:DA:2023:G:H5'	36:DA:2617:C:H4'	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DD:62:TYR:CE1	39:DD:64:ILE:HA	2.36	0.61
41:DF:187:VAL:HG12	48:DP:7:ARG:HA	1.83	0.61
49:DQ:109:VAL:CG1	49:DQ:113:GLN:HB2	2.30	0.61
51:DS:93:LYS:O	51:DS:95:HIS:N	2.34	0.61
52:DT:30:VAL:CG2	52:DT:83:ILE:HG12	2.31	0.61
52:DT:35:LYS:NZ	52:DT:41:ARG:HD2	2.16	0.61
52:DT:82:LEU:H	52:DT:82:LEU:HD12	1.66	0.61
1:AA:1048:G:H5''	14:AN:2:ALA:HB1	1.83	0.61
1:AA:376:G:OP2	16:AP:67:THR:HG21	2.01	0.61
2:AB:87:ARG:HH22	2:AB:232:PRO:CA	2.14	0.61
17:AQ:67:LYS:O	17:AQ:68:ARG:CB	2.48	0.61
32:B6:15:GLU:CD	32:B6:18:ARG:NE	2.55	0.61
36:BA:1592:C:H2'	36:BA:1593:G:C8	2.36	0.61
36:BA:611:C:H2'	36:BA:612:C:C6	2.36	0.61
36:BA:613:G:H5'	36:BA:613:G:H8	1.65	0.61
37:BB:7:G:C2'	37:BB:8:U:H5''	2.31	0.61
43:BH:83:TYR:CB	43:BH:135:GLY:H	2.14	0.61
1:CA:155:C:H2'	1:CA:156:G:H8	1.66	0.61
1:CA:382:A:H2'	1:CA:383:A:H8	1.66	0.61
1:CA:433:C:H2'	1:CA:434:U:C6	2.36	0.61
1:CA:939:G:O3'	7:CG:102:ARG:NH2	2.34	0.61
3:CC:52:LEU:HD12	3:CC:55:VAL:CG2	2.31	0.61
3:CC:60:ALA:O	3:CC:61:ALA:HB2	2.01	0.61
19:CS:49:ILE:O	19:CS:60:VAL:HG12	2.01	0.61
1:CA:1536:C:H42	23:CX:11:U:H3	1.47	0.61
29:D3:39:ASP:OD1	29:D3:44:ARG:HD2	2.01	0.61
34:D8:6:THR:CG2	34:D8:63:PRO:HD3	2.31	0.61
36:DA:1013:C:O2'	36:DA:1014:U:H5'	2.00	0.61
36:DA:528:A:H2	36:DA:2043:C:C5'	2.13	0.61
36:DA:611:C:H2'	36:DA:612:C:C6	2.36	0.61
36:DA:654(C):G:C2'	36:DA:654(D):G:H5'	2.31	0.61
38:DC:50:ASP:OD2	38:DC:53:ARG:HG3	2.01	0.61
46:DN:43:THR:HB	46:DN:46:VAL:HG11	1.82	0.61
48:DP:126:VAL:HG22	48:DP:145:PRO:HG2	1.82	0.61
55:DW:59:VAL:HG12	55:DW:59:VAL:O	2.01	0.61
36:DA:496:G:H1'	55:DW:61:ASN:HD22	1.66	0.61
58:DZ:163:LEU:HD12	58:DZ:165:VAL:HG21	1.83	0.61
58:DZ:10:ARG:HB3	58:DZ:36:LYS:HG3	1.82	0.61
1:AA:56:U:H2'	1:AA:57:G:C8	2.36	0.60
1:AA:882:C:O2'	1:AA:883:C:H5'	2.00	0.60
3:AC:40:ARG:NH1	3:AC:40:ARG:HG3	2.16	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:390:C:O3'	16:AP:28:ARG:NH2	2.34	0.60
19:AS:49:ILE:O	19:AS:60:VAL:HG12	2.01	0.60
25:AZ:258:LEU:O	25:AZ:259:ALA:HB3	2.01	0.60
30:B4:9:LEU:HD13	30:B4:10:VAL:H	1.65	0.60
36:BA:141:A:H1'	36:BA:1408:C:O2'	2.01	0.60
36:BA:661:C:O3'	48:BP:18:ARG:HD2	2.01	0.60
1:CA:1117:G:H5'	1:CA:1117:G:H8	1.64	0.60
1:CA:1258:G:O2'	1:CA:1259:C:H5'	2.00	0.60
1:CA:992:U:H4'	1:CA:993:G:O5'	2.00	0.60
4:CD:124:GLY:O	4:CD:126:ILE:N	2.33	0.60
13:CM:11:ARG:O	13:CM:13:LYS:N	2.33	0.60
31:D5:4:HIS:CB	31:D5:5:PRO:CD	2.72	0.60
36:DA:1109:C:H2'	36:DA:1110:G:O4'	2.01	0.60
36:DA:1503:U:H2'	36:DA:1504:C:C6	2.35	0.60
36:DA:2784:C:H1'	40:DE:37:ARG:NH1	2.16	0.60
36:DA:361:G:N2	36:DA:362:U:H1'	2.16	0.60
36:DA:658:C:H2'	36:DA:659:C:H6	1.64	0.60
36:DA:671:C:H2'	36:DA:672:C:C6	2.36	0.60
37:DB:112:U:H2'	37:DB:113:G:H8	1.66	0.60
40:DE:61:ARG:CB	40:DE:62:PRO:HD3	2.30	0.60
44:DJ:118:UNK:O	44:DJ:119:UNK:C	2.48	0.60
48:DP:23:PRO:CB	48:DP:33:ARG:HG3	2.25	0.60
49:DQ:42:ILE:HD13	49:DQ:97:VAL:CG2	2.31	0.60
53:DU:88:ILE:HD12	53:DU:109:LEU:HD22	1.83	0.60
54:DV:2:PHE:CD1	54:DV:2:PHE:C	2.74	0.60
54:DV:39:LEU:HA	54:DV:47:VAL:HG13	1.82	0.60
36:DA:495:G:H21	55:DW:61:ASN:HD21	1.47	0.60
36:DA:26:G:OP1	55:DW:80:PRO:HB3	2.01	0.60
36:DA:1077:A:OP2	58:DZ:111:VAL:HG11	2.01	0.60
1:AA:1125:U:O4	10:AJ:5:ARG:HG3	2.00	0.60
1:AA:1221:G:O2'	1:AA:1222:G:H5'	2.01	0.60
1:AA:346:G:N3	1:AA:346:G:H2'	2.16	0.60
4:AD:138:TYR:C	4:AD:138:TYR:HD1	2.04	0.60
4:AD:138:TYR:CD1	4:AD:139:ARG:N	2.64	0.60
18:AR:36:ASN:OD1	18:AR:38:GLU:HG2	2.01	0.60
22:AW:44:G:H2'	22:AW:44:G:N3	2.16	0.60
22:AW:7:A:C4	22:AW:49:C:H5	2.19	0.60
27:B1:51:VAL:O	27:B1:57:GLU:HA	2.01	0.60
32:B6:42:TRP:HA	32:B6:42:TRP:HE3	1.64	0.60
35:B9:29:ASN:HD22	35:B9:29:ASN:H	1.47	0.60
36:BA:1061:U:H4'	36:BA:1070:A:O4'	2.00	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1517:G:H2'	36:BA:1518:U:O4'	2.02	0.60
36:BA:1540:U:H3'	36:BA:1541:G:C3'	2.29	0.60
36:BA:469:G:C2'	36:BA:470:A:H5''	2.31	0.60
36:BA:852:G:O2'	36:BA:853:G:H5'	2.02	0.60
41:BF:32:LEU:O	41:BF:32:LEU:HD23	2.00	0.60
42:BG:7:LEU:HD22	42:BG:100:TRP:CZ3	2.36	0.60
42:BG:40:ASN:HB2	42:BG:91:ARG:HB2	1.81	0.60
46:BN:9:VAL:HG21	46:BN:48:MET:HB2	1.83	0.60
48:BP:59:LEU:HA	48:BP:61:ARG:HE	1.64	0.60
1:CA:1004:A:H5'	1:CA:1005:A:OP2	2.02	0.60
1:CA:1238:A:H8	1:CA:1241:G:O2'	1.74	0.60
3:CC:14:ILE:HD11	3:CC:179:ARG:HA	1.83	0.60
8:CH:102:ARG:N	8:CH:102:ARG:HD3	2.15	0.60
12:CL:18:VAL:CG2	12:CL:19:ARG:H	2.04	0.60
18:CR:59:SER:OG	18:CR:62:GLU:HG3	2.01	0.60
31:D5:48:GLU:O	31:D5:49:CYS:CB	2.48	0.60
36:DA:1335:U:H2'	36:DA:1336:A:C8	2.36	0.60
36:DA:197:A:H8	36:DA:197:A:H5'	1.66	0.60
36:DA:271(K):U:H3'	36:DA:271(L):U:C5'	2.30	0.60
36:DA:2733:A:O2'	36:DA:2734:A:H5'	2.01	0.60
36:DA:2854:G:H2'	36:DA:2855:C:C6	2.36	0.60
39:DD:130:ALA:C	39:DD:131:LEU:HD12	2.21	0.60
41:DF:164:ARG:HG2	41:DF:164:ARG:NH1	2.15	0.60
46:DN:32:THR:C	46:DN:34:LEU:H	2.05	0.60
48:DP:57:THR:OG1	48:DP:59:LEU:HB3	2.02	0.60
51:DS:54:LEU:HD13	51:DS:58:LEU:N	2.15	0.60
58:DZ:162:GLU:O	58:DZ:162:GLU:HG3	1.99	0.60
1:AA:1417:G:C5'	1:AA:1417:G:C8	2.74	0.60
1:AA:274:A:O2'	1:AA:275:G:C8	2.50	0.60
1:AA:433:C:H2'	1:AA:434:U:C6	2.36	0.60
4:AD:158:ILE:O	4:AD:162:LEU:HB2	2.01	0.60
31:B5:56:LYS:O	31:B5:57:VAL:C	2.40	0.60
35:B9:35:ARG:O	35:B9:36:GLN:O	2.19	0.60
36:BA:1363:C:H2'	36:BA:1364:G:H8	1.67	0.60
36:BA:2206:G:H21	36:BA:2207:G:H4'	1.66	0.60
42:BG:102:PHE:CD1	42:BG:102:PHE:O	2.54	0.60
43:BH:58:GLU:O	43:BH:62:LYS:HB2	2.02	0.60
43:BH:91:GLY:HA3	43:BH:94:TYR:HD2	1.65	0.60
1:CA:1221:G:O2'	1:CA:1222:G:H5'	2.01	0.60
1:CA:1356:G:H2'	1:CA:1357:A:C8	2.36	0.60
1:CA:542:G:H2'	1:CA:543:C:H6	1.67	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:47:THR:O	2:CB:51:LEU:HB2	2.02	0.60
35:D9:1:MET:CE	35:D9:31:LYS:HB3	2.31	0.60
36:DA:1332:G:N2	36:DA:1610:A:C8	2.69	0.60
36:DA:2101:G:H2'	36:DA:2102:U:C5'	2.24	0.60
36:DA:2208:A:H1'	36:DA:2219:G:C4	2.36	0.60
36:DA:650:C:C3'	36:DA:651:G:H5''	2.29	0.60
43:DH:83:TYR:CB	43:DH:135:GLY:H	2.13	0.60
46:DN:9:VAL:CG1	46:DN:10:GLU:H	2.01	0.60
46:DN:133:GLN:CG	46:DN:135:PRO:HD3	2.30	0.60
48:DP:34:GLY:O	48:DP:35:HIS:HB2	2.00	0.60
3:AC:79:ARG:CB	3:AC:79:ARG:HH11	2.10	0.60
24:AY:61:C:O2'	24:AY:62:U:H5''	2.01	0.60
25:AZ:263:ARG:HB2	25:AZ:263:ARG:CZ	2.31	0.60
41:BF:187:VAL:HG12	48:BP:7:ARG:HA	1.83	0.60
53:BU:17:ILE:HG23	53:BU:39:LEU:HD12	1.84	0.60
57:BY:27:VAL:HG12	57:BY:29:GLU:H	1.66	0.60
57:BY:79:CYS:SG	57:BY:80:GLY:N	2.74	0.60
1:CA:1003:G:H21	1:CA:1039:C:H42	1.47	0.60
1:CA:346:G:H2'	1:CA:346:G:N3	2.17	0.60
1:CA:882:C:O2'	1:CA:883:C:H5'	2.01	0.60
5:CE:40:ARG:NH2	5:CE:66:MET:HG2	2.16	0.60
16:CP:53:VAL:HG23	16:CP:54:GLU:HG2	1.82	0.60
22:CV:56:C:C1'	42:DG:76:SER:HB2	2.31	0.60
12:CL:80:HIS:CB	24:CY:68:C:H4'	2.32	0.60
25:CZ:263:ARG:HB2	25:CZ:263:ARG:CZ	2.32	0.60
26:D0:16:SER:HB2	36:DA:2262:U:C5	2.36	0.60
32:D6:53:LYS:CD	32:D6:54:ILE:H	2.14	0.60
36:DA:1363:C:H2'	36:DA:1364:G:H8	1.66	0.60
36:DA:1448:G:N3	36:DA:1528(A):A:H2	1.99	0.60
36:DA:654(U):A:H2'	36:DA:654(V):A:C8	2.36	0.60
39:DD:224:ALA:O	39:DD:226:MET:N	2.34	0.60
40:DE:52:LEU:HD23	40:DE:75:VAL:HB	1.83	0.60
46:DN:72:TYR:HD2	46:DN:90:MET:HG3	1.65	0.60
48:DP:58:THR:C	48:DP:61:ARG:HE	2.05	0.60
48:DP:85:LEU:HA	48:DP:88:LEU:CB	2.31	0.60
53:DU:66:ASN:HD21	53:DU:76:TYR:H	1.48	0.60
54:DV:40:LEU:HD22	54:DV:46:VAL:HA	1.84	0.60
54:DV:49:THR:HB	54:DV:50:PRO:HD2	1.83	0.60
57:DY:44:ILE:HD12	57:DY:44:ILE:N	2.16	0.60
58:DZ:18:LEU:HD12	58:DZ:18:LEU:N	2.14	0.60
1:AA:961:U:O2'	1:AA:962:C:O5'	2.19	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:37:ASN:O	7:AG:41:ARG:HG3	2.01	0.60
10:AJ:28:ARG:HH11	10:AJ:28:ARG:HB3	1.66	0.60
28:B2:65:ASN:O	28:B2:67:LYS:N	2.34	0.60
28:B2:18:PRO:CG	28:B2:72:ALA:HA	2.31	0.60
36:BA:136:G:H2'	36:BA:137:C:H6	1.65	0.60
36:BA:2092:U:H4'	36:BA:2093:G:C5'	2.20	0.60
36:BA:636:G:OP1	48:BP:132:LYS:HE2	2.01	0.60
38:BC:96:GLY:HA3	38:BC:99:ILE:HD11	1.84	0.60
48:BP:40:SER:O	48:BP:41:ARG:HD3	2.00	0.60
51:BS:85:VAL:O	51:BS:106:ARG:HG3	1.99	0.60
36:BA:496:G:H1'	55:BW:61:ASN:HD22	1.67	0.60
57:BY:17:SER:CB	57:BY:71:LYS:HE2	2.30	0.60
1:CA:444:C:H2'	1:CA:445:G:C8	2.35	0.60
1:CA:540:G:H2'	1:CA:541:G:C8	2.35	0.60
2:CB:42:ILE:CD1	2:CB:202:PRO:HB2	2.31	0.60
5:CE:147:ASP:HB3	5:CE:150:ARG:HH12	1.66	0.60
1:CA:1125:U:O4	10:CJ:5:ARG:HG3	2.02	0.60
1:CA:522:C:H41	12:CL:53:ARG:HH22	1.48	0.60
12:CL:69:TYR:HB2	12:CL:96:VAL:HG11	1.84	0.60
14:CN:19:ARG:O	14:CN:20:ALA:C	2.40	0.60
24:CY:61:C:O2'	24:CY:62:U:H5''	2.02	0.60
24:CY:70:C:O2'	24:CY:71:C:H5'	2.02	0.60
25:CZ:104:LEU:HD23	25:CZ:133:VAL:HG22	1.83	0.60
34:D8:39:LYS:HG3	34:D8:43:GLN:NE2	2.17	0.60
36:DA:2061:G:H5''	36:DA:2503:A:C2	2.37	0.60
32:D6:5:VAL:HB	36:DA:2284:C:OP2	2.01	0.60
36:DA:271(R):G:O2'	36:DA:271(S):G:H5'	2.01	0.60
36:DA:898:C:H2'	36:DA:899:A:O4'	2.02	0.60
36:DA:970:C:H2'	36:DA:971:C:C6	2.36	0.60
39:DD:142:VAL:HG21	39:DD:191:ALA:HB1	1.84	0.60
41:DF:185:ASP:HA	41:DF:188:ARG:HD3	1.83	0.60
52:DT:32:TYR:CD1	52:DT:32:TYR:N	2.69	0.60
54:DV:55:ALA:O	54:DV:56:SER:HB3	2.01	0.60
57:DY:84:ARG:CZ	57:DY:97:ARG:HB3	2.32	0.60
58:DZ:34:ASN:O	58:DZ:35:ARG:HD2	2.01	0.60
2:AB:142:LEU:HD21	2:AB:146:GLN:NE2	2.16	0.60
4:AD:100:ARG:O	4:AD:104:VAL:HG23	2.01	0.60
5:AE:64:ARG:CZ	5:AE:64:ARG:HB2	2.30	0.60
7:AG:38:LEU:O	7:AG:38:LEU:HD12	2.01	0.60
16:AP:75:ARG:O	16:AP:78:GLY:N	2.26	0.60
19:AS:16:LEU:N	19:AS:16:LEU:HD12	2.17	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1499:C:H6	36:BA:1499:C:C5'	2.10	0.60
36:BA:654(C):G:C2'	36:BA:654(D):G:H5'	2.32	0.60
40:BE:120:TRP:CE3	40:BE:155:LYS:HE3	2.36	0.60
46:BN:133:GLN:CG	46:BN:135:PRO:HD3	2.30	0.60
48:BP:97:PRO:HD3	48:BP:126:VAL:O	2.02	0.60
49:BQ:5:ARG:HB2	49:BQ:5:ARG:CZ	2.30	0.60
50:BR:30:THR:HG22	50:BR:31:HIS:ND1	2.16	0.60
52:BT:35:LYS:HZ3	52:BT:41:ARG:HD2	1.67	0.60
58:BZ:28:MET:O	58:BZ:34:ASN:HA	2.01	0.60
1:CA:194:C:C2'	1:CA:195:A:H5''	2.31	0.60
1:CA:56:U:H2'	1:CA:57:G:C8	2.36	0.60
1:CA:627:G:H2'	1:CA:628:G:H8	1.66	0.60
1:CA:736:C:H2'	1:CA:737:A:C8	2.36	0.60
1:CA:927:G:OP2	1:CA:927:G:H4'	2.01	0.60
1:CA:96:U:H2'	1:CA:97:G:N7	2.17	0.60
6:CF:25:ILE:HD13	6:CF:25:ILE:O	2.01	0.60
36:DA:1499:C:H6	36:DA:1499:C:C5'	2.11	0.60
36:DA:1921:G:O2'	36:DA:1922:G:H5'	2.02	0.60
36:DA:2248:C:H2'	36:DA:2249:U:H5'	1.83	0.60
36:DA:2523:G:C2'	36:DA:2524:G:H5''	2.32	0.60
38:DC:96:GLY:HA3	38:DC:99:ILE:HD11	1.83	0.60
39:DD:223:GLY:C	39:DD:224:ALA:O	2.39	0.60
42:DG:87:PRO:O	42:DG:88:ILE:HG12	2.01	0.60
42:DG:57:ALA:HA	42:DG:90:LEU:HD21	1.83	0.60
43:DH:105:LEU:N	43:DH:105:LEU:HD23	2.14	0.60
44:DJ:97:UNK:HA	44:DJ:131:UNK:O	2.02	0.60
46:DN:96:GLU:H	46:DN:96:GLU:CD	2.05	0.60
49:DQ:19:GLY:O	49:DQ:98:LYS:HD3	2.02	0.60
51:DS:35:ILE:H	51:DS:53:SER:HB2	1.67	0.60
1:AA:1096:C:H5''	2:AB:137:ARG:HH21	1.66	0.60
5:AE:80:ILE:HG13	5:AE:91:LEU:HB2	1.83	0.60
6:AF:10:LEU:HD11	6:AF:61:LEU:HD11	1.84	0.60
9:AI:90:PRO:HG2	9:AI:91:ASP:H	1.67	0.60
13:AM:3:ARG:NH2	13:AM:7:VAL:HG13	2.16	0.60
28:B2:35:LEU:HD13	28:B2:36:ARG:N	2.16	0.60
29:B3:29:ARG:HH22	36:BA:1183:G:H4'	1.66	0.60
29:B3:39:ASP:OD1	29:B3:44:ARG:HD2	2.02	0.60
36:BA:1398:C:O2'	36:BA:1399:C:H5'	2.02	0.60
36:BA:1678:G:H22	36:BA:1989:G:H22	1.45	0.60
36:BA:2074:U:H2'	36:BA:2075:U:C6	2.37	0.60
36:BA:603:A:H1'	36:BA:604:G:OP2	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BT:28:VAL:O	52:BT:29:ARG:CB	2.48	0.60
53:BU:101:ARG:HH11	53:BU:101:ARG:HG3	1.67	0.60
9:CI:53:VAL:O	9:CI:55:ALA:N	2.34	0.60
1:CA:390:C:O3'	16:CP:28:ARG:NH2	2.35	0.60
22:CW:44:G:H2'	22:CW:44:G:N3	2.17	0.60
34:D8:15:LYS:HB2	48:DP:65:ARG:NH2	2.17	0.60
36:DA:1038:C:C2'	36:DA:1039:G:H5''	2.31	0.60
36:DA:2681:C:H5	36:DA:2725:A:H62	1.49	0.60
52:DT:23:ARG:HG2	52:DT:120:ARG:HH12	1.65	0.60
56:DX:8:ILE:H	56:DX:8:ILE:HD12	1.66	0.60
58:DZ:58:VAL:HA	58:DZ:67:LEU:O	2.02	0.60
1:AA:1065:U:C5	1:AA:1190:G:H1'	2.37	0.60
1:AA:1234:C:O2'	1:AA:1235:U:H5'	2.02	0.60
1:AA:1258:G:O2'	1:AA:1259:C:H5'	2.02	0.60
10:AJ:4:ILE:HB	10:AJ:74:ILE:CG1	2.31	0.60
12:AL:26:ALA:HA	12:AL:64:TYR:CD2	2.37	0.60
20:AT:74:LYS:HD3	20:AT:74:LYS:N	2.16	0.60
32:B6:53:LYS:O	32:B6:54:ILE:OXT	2.20	0.60
36:BA:1188:U:H4'	54:BV:79:VAL:CG2	2.31	0.60
36:BA:140:G:H1'	36:BA:141:A:H2	1.67	0.60
36:BA:1448:G:N3	36:BA:1528(A):A:H2	2.00	0.60
36:BA:2113:U:H2'	36:BA:2114:A:H8	1.66	0.60
36:BA:2115:G:N3	36:BA:2117:A:N7	2.50	0.60
36:BA:271(R):G:O2'	36:BA:271(S):G:H5'	2.01	0.60
36:BA:2866:U:C6	36:BA:2868:A:H1'	2.36	0.60
36:BA:28:A:H61	36:BA:512:G:H1'	1.67	0.60
36:BA:676:A:H8	36:BA:2069:G:N2	1.94	0.60
36:BA:814:C:H2'	36:BA:815:C:H6	1.66	0.60
36:BA:996:A:O3'	53:BU:92:ARG:HG2	2.02	0.60
38:BC:128:GLY:HA2	38:BC:137:LEU:HD23	1.83	0.60
39:BD:62:TYR:CE1	39:BD:64:ILE:HA	2.36	0.60
41:BF:157:VAL:CG2	41:BF:194:MET:HG2	2.32	0.60
49:BQ:35:VAL:HG12	49:BQ:130:LYS:O	2.02	0.60
52:BT:28:VAL:HG22	52:BT:46:GLU:HA	1.84	0.60
52:BT:33:LYS:CE	52:BT:43:GLN:HE21	1.98	0.60
52:BT:19:LEU:HD22	52:BT:85:LYS:HD3	1.82	0.60
54:BV:55:ALA:O	54:BV:56:SER:HB3	2.00	0.60
56:BX:12:VAL:HG12	56:BX:27:THR:O	2.01	0.60
58:BZ:6:LYS:HD3	58:BZ:60:GLU:HB2	1.84	0.60
1:CA:1072:G:H2'	1:CA:1073:U:C6	2.36	0.60
1:CA:59:A:H5'	1:CA:60:A:H5''	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:78:ARG:O	7:CG:80:VAL:N	2.35	0.60
18:CR:32:ARG:HA	18:CR:69:THR:HG21	1.83	0.60
25:CZ:258:LEU:O	25:CZ:259:ALA:HB3	2.00	0.60
26:D0:70:GLN:NE2	26:D0:80:HIS:NE2	2.50	0.60
36:DA:2312:U:H2'	36:DA:2313:C:H5''	1.84	0.60
36:DA:848:G:N9	36:DA:933:A:H8	2.00	0.60
38:DC:116:THR:HG22	38:DC:147:PHE:HA	1.84	0.60
40:DE:33:VAL:HG13	40:DE:33:VAL:O	2.02	0.60
52:DT:65:LYS:HG3	52:DT:66:VAL:N	2.17	0.60
53:DU:48:ALA:O	53:DU:52:ARG:HG3	2.02	0.60
1:AA:1456:G:C2	1:AA:1457:G:H1'	2.37	0.60
1:AA:748:C:H4'	1:AA:749:C:O5'	2.02	0.60
2:AB:42:ILE:HD11	2:AB:202:PRO:HB2	1.83	0.60
2:AB:17:PHE:HD2	2:AB:44:LEU:HD11	1.66	0.60
12:AL:77:LEU:HD11	12:AL:107:ALA:HA	1.82	0.60
16:AP:43:LYS:O	16:AP:45:THR:N	2.35	0.60
16:AP:67:THR:HB	16:AP:70:ALA:CB	2.32	0.60
1:AA:254:G:OP1	17:AQ:67:LYS:O	2.20	0.60
18:AR:26:LEU:CD2	18:AR:39:VAL:HG13	2.31	0.60
20:AT:25:ARG:HG3	20:AT:25:ARG:HH11	1.65	0.60
25:AZ:263:ARG:HG3	25:AZ:264:LYS:N	2.17	0.60
36:BA:1332:G:N2	36:BA:1609:A:O2'	2.34	0.60
36:BA:1750:G:O2'	36:BA:1751:C:H5'	2.01	0.60
36:BA:16:G:O2'	36:BA:17:G:H5'	2.01	0.60
32:B6:25:LYS:HD2	36:BA:2285:C:H41	1.67	0.60
36:BA:391:G:O2'	36:BA:392:C:H5'	2.02	0.60
38:BC:40:THR:HG22	38:BC:177:LYS:HD2	1.84	0.60
38:BC:29:VAL:HG11	38:BC:214:VAL:HG12	1.84	0.60
40:BE:44:TYR:O	40:BE:45:THR:CB	2.49	0.60
42:BG:111:LEU:O	42:BG:114:ILE:HG22	2.01	0.60
47:BO:35:VAL:HG21	47:BO:103:ALA:CB	2.31	0.60
48:BP:77:ARG:HD3	48:BP:78:PRO:HD2	1.81	0.60
48:BP:85:LEU:HA	48:BP:88:LEU:HB2	1.84	0.60
53:BU:44:ASN:ND2	54:BV:75:PHE:HB3	2.17	0.60
54:BV:40:LEU:HD22	54:BV:46:VAL:HA	1.83	0.60
1:CA:57:G:H2'	1:CA:58:C:C6	2.37	0.60
5:CE:80:ILE:HG13	5:CE:91:LEU:HB2	1.82	0.60
10:CJ:34:VAL:CG2	10:CJ:74:ILE:HG22	2.32	0.60
22:CW:30:G:H2'	22:CW:31:A:H8	1.67	0.60
25:CZ:226:GLU:O	25:CZ:300:ARG:HD2	2.02	0.60
27:D1:8:SER:OG	27:D1:10:LYS:HG3	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:D6:15:GLU:OE2	32:D6:18:ARG:NH2	2.35	0.60
36:DA:2779:U:H1'	36:DA:2781:A:C6	2.37	0.60
36:DA:2886:G:H2'	36:DA:2887:U:C6	2.37	0.60
42:DG:54:GLU:OE1	42:DG:55:LYS:N	2.35	0.60
42:DG:77:ILE:HB	42:DG:80:PHE:O	2.02	0.60
46:DN:2:LYS:HZ1	54:DV:13:ARG:H	1.50	0.60
52:DT:29:ARG:CB	52:DT:85:LYS:HA	2.32	0.60
1:AA:339:C:OP2	47:BO:97:ARG:NH1	2.35	0.60
4:AD:70:ILE:HG22	4:AD:71:SER:O	2.01	0.60
7:AG:27:ILE:HD13	7:AG:40:ALA:HA	1.83	0.60
19:AS:44:MET:SD	19:AS:44:MET:N	2.75	0.60
27:B1:60:PHE:CE1	27:B1:91:LYS:HG3	2.37	0.60
28:B2:52:ASP:O	28:B2:56:GLN:HG2	2.02	0.60
13:AM:57:ARG:HH12	30:B4:34:GLU:HG3	1.66	0.60
36:BA:654(U):A:H2'	36:BA:654(V):A:C8	2.37	0.60
50:BR:103:ARG:O	50:BR:104:ARG:HB2	2.02	0.60
51:BS:58:LEU:HG	51:BS:59:LYS:H	1.66	0.60
51:BS:89:ARG:HG3	51:BS:92:TYR:CA	2.31	0.60
58:BZ:150:LEU:HD23	58:BZ:171:ILE:HD11	1.82	0.60
1:CA:1039:C:H2'	1:CA:1040:U:C6	2.37	0.60
1:CA:382:A:H2'	1:CA:383:A:C8	2.37	0.60
1:CA:559:A:P	5:CE:126:ARG:HH22	2.24	0.60
2:CB:111:ARG:HG2	2:CB:111:ARG:HH11	1.67	0.60
9:CI:90:PRO:HG2	9:CI:91:ASP:H	1.67	0.60
12:CL:51:ALA:C	12:CL:52:LEU:HD22	2.22	0.60
13:CM:65:LYS:O	13:CM:70:LEU:HD12	2.02	0.60
17:CQ:45:HIS:CD2	17:CQ:47:PRO:HD3	2.37	0.60
1:CA:192:U:H1'	20:CT:103:GLY:HA2	1.82	0.60
22:CV:4:C:H2'	22:CV:5:G:H5''	1.84	0.60
22:CW:30:G:H2'	22:CW:31:A:C8	2.37	0.60
25:CZ:121:LEU:O	25:CZ:125:GLN:HG2	2.02	0.60
29:D3:29:ARG:HH22	36:DA:1183:G:H4'	1.67	0.60
36:DA:2099:U:H2'	36:DA:2100:G:H8	1.62	0.60
36:DA:2162:G:O2'	36:DA:2163:C:H5'	2.01	0.60
36:DA:2572:A:N7	40:DE:145:LYS:HB2	2.16	0.60
41:DF:100:THR:O	41:DF:100:THR:HG22	2.00	0.60
41:DF:101:LEU:HD12	41:DF:102:PRO:HD2	1.83	0.60
42:DG:114:ILE:C	42:DG:116:ASP:H	2.04	0.60
57:DY:27:VAL:HG12	57:DY:29:GLU:H	1.67	0.60
1:AA:191:G:C4	20:AT:105:SER:HB3	2.35	0.59
1:AA:559:A:P	5:AE:126:ARG:HH22	2.24	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:12:ARG:NH1	8:AH:27:PRO:HD3	2.17	0.59
13:AM:15:VAL:HG22	13:AM:43:THR:O	2.02	0.59
24:AY:70:C:O2'	24:AY:71:C:H5'	2.02	0.59
25:AZ:200:TRP:O	25:AZ:204:ASP:HB2	2.02	0.59
36:BA:2312:U:H2'	36:BA:2313:C:C5'	2.32	0.59
38:BC:10:LEU:HD11	38:BC:34:THR:OG1	2.02	0.59
42:BG:47:LYS:HE3	42:BG:81:LYS:HB3	1.84	0.59
46:BN:12:ARG:HB3	46:BN:50:ASP:OD1	2.02	0.59
49:BQ:22:LYS:H	58:BZ:78:LYS:NZ	1.99	0.59
57:BY:98:VAL:O	57:BY:99:CYS:SG	2.59	0.59
58:BZ:62:PRO:C	58:BZ:64:GLY:H	2.04	0.59
58:BZ:76:LEU:HD23	58:BZ:83:PRO:HA	1.84	0.59
1:CA:1429:C:H2'	1:CA:1430:C:C6	2.37	0.59
1:CA:227:G:C3'	1:CA:228:A:H5''	2.31	0.59
1:CA:228:A:C5'	1:CA:228:A:H8	2.14	0.59
4:CD:138:TYR:HD1	4:CD:138:TYR:C	2.04	0.59
5:CE:64:ARG:HB2	5:CE:64:ARG:CZ	2.32	0.59
6:CF:10:LEU:HD11	6:CF:61:LEU:HD11	1.84	0.59
13:CM:49:THR:HB	13:CM:52:GLU:HG3	1.84	0.59
14:CN:59:ALA:O	14:CN:60:SER:CB	2.45	0.59
16:CP:49:LEU:HD12	16:CP:50:LYS:H	1.66	0.59
22:CW:74:C:H4'	27:D1:23:LYS:HE2	1.84	0.59
22:CW:7:A:C4	22:CW:49:C:H5	2.20	0.59
25:CZ:355:LEU:HD23	25:CZ:368:VAL:HG11	1.84	0.59
36:DA:118:A:N3	36:DA:178:G:H1'	2.17	0.59
36:DA:1642:G:O2'	36:DA:1643:G:H5'	2.02	0.59
36:DA:325:G:H2'	36:DA:326:G:C8	2.35	0.59
36:DA:774:A:H2	36:DA:787:U:O2'	1.84	0.59
39:DD:43:ARG:HB2	39:DD:54:ARG:CB	2.32	0.59
42:DG:77:ILE:HG22	42:DG:79:ASN:O	2.02	0.59
46:DN:12:ARG:HB3	46:DN:50:ASP:OD1	2.02	0.59
49:DQ:60:ARG:HB3	49:DQ:60:ARG:HH11	1.63	0.59
50:DR:2:ARG:HG3	50:DR:2:ARG:NH1	2.17	0.59
52:DT:28:VAL:HG22	52:DT:46:GLU:HA	1.84	0.59
52:DT:50:ILE:HD13	52:DT:64:ARG:HB3	1.84	0.59
54:DV:99:ILE:O	54:DV:99:ILE:HG12	2.01	0.59
1:AA:1004:A:H5'	1:AA:1005:A:OP2	2.01	0.59
1:AA:1006:C:N4	1:AA:1024:G:H21	1.99	0.59
1:AA:1499:A:O2'	1:AA:1500:A:H5'	2.02	0.59
1:AA:977:A:C2'	1:AA:977:A:N3	2.64	0.59
6:AF:62:TRP:C	6:AF:63:TYR:HD1	2.04	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:2:LEU:HD21	8:AH:5:PRO:HA	1.84	0.59
20:AT:57:ARG:HD3	20:AT:102:GLY:HA2	1.83	0.59
28:B2:27:GLU:O	28:B2:30:ARG:HB3	2.01	0.59
32:B6:9:LEU:HD22	32:B6:10:LEU:N	2.17	0.59
34:B8:6:THR:HG21	34:B8:63:PRO:HD3	1.84	0.59
36:BA:1720:U:C3'	36:BA:1721:G:H5''	2.31	0.59
36:BA:848:G:N3	36:BA:933:A:H1'	2.17	0.59
39:BD:183:ARG:HG2	39:BD:183:ARG:NH1	2.16	0.59
50:BR:99:LYS:CD	50:BR:99:LYS:H	2.01	0.59
51:BS:89:ARG:HG3	51:BS:92:TYR:HA	1.83	0.59
1:CA:1005:A:H5'	1:CA:1037:C:O2	2.02	0.59
1:CA:1330:U:H5'	1:CA:1331:G:OP2	2.02	0.59
1:CA:979:C:H2'	1:CA:980:C:H5''	1.83	0.59
2:CB:17:PHE:CD2	2:CB:44:LEU:HD11	2.36	0.59
3:CC:3:ASN:CG	3:CC:4:LYS:H	2.04	0.59
9:CI:99:LEU:HD22	9:CI:99:LEU:N	2.16	0.59
27:D1:62:VAL:HG22	27:D1:63:ALA:O	2.02	0.59
31:D5:56:LYS:O	31:D5:57:VAL:C	2.39	0.59
36:DA:1188:U:H4'	54:DV:79:VAL:HG22	1.84	0.59
31:D5:11:THR:OG1	36:DA:1264:G:H5'	2.01	0.59
36:DA:145:G:C2'	36:DA:146:G:H5''	2.30	0.59
36:DA:2312:U:H2'	36:DA:2313:C:C5'	2.32	0.59
38:DC:128:GLY:HA2	38:DC:137:LEU:HD23	1.84	0.59
41:DF:185:ASP:HA	41:DF:188:ARG:CD	2.31	0.59
50:DR:2:ARG:HD2	50:DR:2:ARG:O	2.00	0.59
57:DY:81:LYS:O	57:DY:82:PRO:O	2.20	0.59
1:AA:1039:C:H2'	1:AA:1040:U:C6	2.37	0.59
1:AA:1319:A:H5'	1:AA:1320:C:OP1	2.02	0.59
1:AA:858:G:C5	1:AA:869:G:N7	2.70	0.59
3:AC:14:ILE:HG12	3:AC:15:THR:N	2.17	0.59
4:AD:138:TYR:CD1	4:AD:138:TYR:C	2.76	0.59
12:AL:81:SER:HA	12:AL:106:ASP:OD2	2.02	0.59
20:AT:26:ASN:HD22	20:AT:26:ASN:N	2.00	0.59
22:AV:1:G:H1'	26:B0:5:LYS:NZ	2.16	0.59
24:AY:57:G:C2'	24:AY:58:A:H5'	2.33	0.59
28:B2:6:VAL:HG12	28:B2:10:LEU:HD21	1.83	0.59
36:BA:2032:G:OP2	36:BA:2454:G:O2'	2.20	0.59
36:BA:898:C:H2'	36:BA:899:A:O4'	2.02	0.59
38:BC:116:THR:HG22	38:BC:147:PHE:HA	1.84	0.59
41:BF:114:VAL:HG21	41:BF:202:PHE:CE1	2.37	0.59
31:B5:25:LEU:HD12	55:BW:19:LEU:HG	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1354:C:H2'	1:CA:1355:G:H8	1.66	0.59
1:CA:1376:U:H2'	1:CA:1377:A:C8	2.37	0.59
1:CA:198:G:O2'	1:CA:199:G:H8	1.85	0.59
1:CA:1096:C:H5''	2:CB:137:ARG:HH21	1.67	0.59
3:CC:81:GLY:HA3	3:CC:85:ARG:CZ	2.31	0.59
21:CU:3:LYS:HB3	21:CU:14:TRP:CD1	2.37	0.59
32:D6:15:GLU:OE1	32:D6:18:ARG:CG	2.50	0.59
36:DA:1019:U:H3	36:DA:1142(A):A:N6	1.94	0.59
36:DA:2555:U:H2'	36:DA:2556:C:H5'	1.83	0.59
36:DA:2712:U:O2'	36:DA:2713:A:H5'	2.01	0.59
36:DA:32:C:O2'	36:DA:33:U:H5'	2.02	0.59
36:DA:512:G:HO2'	36:DA:513:A:H8	1.49	0.59
36:DA:848:G:H5'	36:DA:848:G:H8	1.67	0.59
43:DH:54:ARG:HG2	43:DH:54:ARG:NH1	2.17	0.59
48:DP:95:VAL:HG23	48:DP:125:VAL:HA	1.83	0.59
51:DS:30:ARG:NH2	51:DS:62:LYS:HD3	2.11	0.59
57:DY:77:PRO:O	57:DY:99:CYS:SG	2.61	0.59
57:DY:81:LYS:HD3	57:DY:97:ARG:HG3	1.85	0.59
1:AA:1054:C:O2'	1:AA:1055:A:C5'	2.50	0.59
1:AA:542:G:H2'	1:AA:543:C:H6	1.68	0.59
4:AD:4:TYR:O	4:AD:5:ILE:HB	2.01	0.59
16:AP:53:VAL:HG23	16:AP:54:GLU:HG2	1.85	0.59
16:AP:8:ARG:NH2	16:AP:15:PRO:HG3	2.17	0.59
25:AZ:131:ILE:O	25:AZ:168:VAL:HG13	2.02	0.59
25:AZ:226:GLU:O	25:AZ:300:ARG:HD2	2.02	0.59
34:B8:41:ILE:HD12	36:BA:2419:U:OP1	2.02	0.59
36:BA:140:G:H1'	36:BA:141:A:C2	2.37	0.59
36:BA:1480:G:H2'	36:BA:1481:U:C5'	2.31	0.59
36:BA:661:C:H4'	48:BP:16:ARG:NH1	2.18	0.59
57:BY:77:PRO:O	57:BY:99:CYS:SG	2.61	0.59
49:BQ:19:GLY:HA3	58:BZ:79:ARG:HH22	1.68	0.59
1:CA:1030(D):A:H2'	1:CA:1031:G:H5'	1.84	0.59
1:CA:1319:A:H5'	1:CA:1320:C:OP1	2.02	0.59
1:CA:265:G:C2'	1:CA:266:G:H5''	2.31	0.59
1:CA:665:A:H2'	1:CA:732:C:O2	2.02	0.59
4:CD:19:LEU:HD12	4:CD:19:LEU:N	2.16	0.59
6:CF:28:ARG:HG3	6:CF:28:ARG:HH11	1.67	0.59
22:CV:51:U:H2'	22:CV:52:G:H8	1.66	0.59
25:CZ:26:THR:HG21	60:CZ:501:GDP:C8	2.37	0.59
32:D6:13:CYS:O	32:D6:21:TYR:HA	2.02	0.59
34:D8:32:LEU:HG	34:D8:36:LYS:HZ3	1.65	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1192:G:O2'	36:DA:1193:G:H5'	2.02	0.59
36:DA:1480:G:H2'	36:DA:1481:U:C5'	2.30	0.59
36:DA:2101:G:C3'	36:DA:2102:U:H5''	2.32	0.59
36:DA:2115:G:N3	36:DA:2117:A:N7	2.50	0.59
36:DA:271(L):U:C5'	36:DA:271(M):G:H5'	2.21	0.59
38:DC:161:ILE:HG21	38:DC:174:PRO:HG2	1.83	0.59
39:DD:183:ARG:HG2	39:DD:183:ARG:NH1	2.17	0.59
39:DD:24:ILE:HG23	39:DD:25:THR:H	1.67	0.59
46:DN:45:ASN:HD22	46:DN:45:ASN:H	1.50	0.59
1:AA:1158:C:C2'	1:AA:1158:C:O2	2.49	0.59
3:AC:60:ALA:O	3:AC:61:ALA:HB2	2.01	0.59
10:AJ:61:GLU:OE2	14:AN:49:HIS:HE1	1.86	0.59
25:AZ:126:VAL:HG13	61:AZ:502:KIR:C47	2.33	0.59
28:B2:22:GLU:O	28:B2:26:ARG:HB2	2.03	0.59
31:B5:48:GLU:O	31:B5:49:CYS:CB	2.50	0.59
32:B6:52:VAL:HG12	32:B6:53:LYS:H	1.68	0.59
36:BA:1058:G:C3'	36:BA:1059:G:H5''	2.32	0.59
36:BA:1082:U:O2'	44:BJ:38:UNK:HA	2.03	0.59
36:BA:1210:A:C8	36:BA:1210:A:H5'	2.37	0.59
36:BA:1270:C:H5''	36:BA:1271:G:O5'	2.03	0.59
36:BA:1678:G:N2	36:BA:1989:G:N2	2.47	0.59
36:BA:2186:G:H2'	36:BA:2187:G:C8	2.38	0.59
36:BA:2591:C:H2'	36:BA:2592:G:C8	2.37	0.59
36:BA:2884:U:H2'	36:BA:2885:C:H5'	1.84	0.59
36:BA:30:G:H2'	36:BA:31:C:C6	2.38	0.59
36:BA:693:C:O2'	36:BA:694:U:H5'	2.03	0.59
48:BP:16:ARG:CB	48:BP:16:ARG:HH11	2.16	0.59
53:BU:92:ARG:HH21	54:BV:10:LYS:CB	2.16	0.59
1:CA:178:C:O2'	1:CA:179:A:H5'	2.03	0.59
13:CM:3:ARG:NH2	13:CM:7:VAL:HG13	2.17	0.59
17:CQ:9:VAL:HG11	17:CQ:84:LEU:HD12	1.85	0.59
36:DA:1207:C:H2'	36:DA:1208:C:C6	2.33	0.59
36:DA:1450(A):C:H2'	36:DA:1451:C:C5	2.38	0.59
36:DA:2148:G:O2'	36:DA:2149:G:H5'	2.02	0.59
36:DA:330:A:HO2'	36:DA:331:A:H8	1.49	0.59
36:DA:34:C:H41	36:DA:447:A:N6	2.00	0.59
40:DE:44:TYR:O	40:DE:45:THR:CB	2.51	0.59
42:DG:37:VAL:HG21	42:DG:103:LEU:HD11	1.84	0.59
43:DH:84:SER:O	43:DH:85:LYS:HB3	2.02	0.59
46:DN:18:ALA:HB3	46:DN:56:ASN:O	2.02	0.59
50:DR:72:ASP:HB3	50:DR:75:LEU:HB3	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:DU:92:ARG:HH21	54:DV:10:LYS:HB3	1.65	0.59
55:DW:82:LEU:N	55:DW:82:LEU:HD12	2.14	0.59
1:AA:180:U:H2'	1:AA:181:G:H5'	1.82	0.59
1:AA:393:A:O2'	1:AA:394:G:H5'	2.03	0.59
3:AC:23:TYR:CD1	3:AC:24:ALA:N	2.71	0.59
19:AS:78:ARG:O	19:AS:81:ARG:HD3	2.02	0.59
28:B2:60:LEU:HA	28:B2:63:VAL:CG2	2.33	0.59
36:BA:1095:A:H2'	36:BA:1096:A:H8	1.67	0.59
33:B7:9:ARG:NE	36:BA:1310:G:OP2	2.31	0.59
36:BA:176:G:O2'	36:BA:177:G:H5'	2.03	0.59
36:BA:2389:G:H5''	36:BA:2390:U:H5'	1.84	0.59
36:BA:2681:C:H5	36:BA:2725:A:H62	1.51	0.59
36:BA:297:C:H2'	36:BA:298:G:O4'	2.02	0.59
41:BF:168:ARG:CG	41:BF:175:THR:HG21	2.23	0.59
41:BF:206:ILE:HG22	41:BF:207:GLY:N	2.17	0.59
52:BT:32:TYR:N	52:BT:32:TYR:CD1	2.70	0.59
4:CD:55:ALA:O	4:CD:59:ARG:HG2	2.03	0.59
5:CE:64:ARG:HH11	5:CE:64:ARG:HG3	1.68	0.59
7:CG:113:GLU:O	7:CG:119:ARG:HD3	2.03	0.59
16:CP:8:ARG:NH2	16:CP:15:PRO:HG3	2.18	0.59
20:CT:74:LYS:HD3	20:CT:74:LYS:N	2.17	0.59
22:CV:44:G:H2'	22:CV:45:U:H5'	1.85	0.59
36:DA:1058:G:C3'	36:DA:1059:G:H5''	2.32	0.59
36:DA:2358:G:H22	48:DP:55:ARG:HH21	1.49	0.59
36:DA:2631:G:N2	40:DE:61:ARG:NH1	2.50	0.59
36:DA:2833:G:H3'	36:DA:2834:G:H5'	1.82	0.59
36:DA:852:G:O2'	36:DA:853:G:H5'	2.02	0.59
40:DE:117:MET:CE	40:DE:136:ARG:HA	2.32	0.59
36:DA:2632:A:O2'	40:DE:61:ARG:NH2	2.35	0.59
55:DW:11:ARG:HG2	55:DW:11:ARG:NH1	2.15	0.59
36:DA:139(A):G:N2	56:DX:44:GLU:OE1	2.30	0.59
1:AA:1151:A:HO2'	1:AA:1152:A:H8	1.49	0.59
1:AA:437:U:C5'	4:AD:155:LEU:HD13	2.32	0.59
1:AA:633:G:H5'	1:AA:634:C:OP2	2.03	0.59
5:AE:40:ARG:NH2	5:AE:66:MET:HG2	2.17	0.59
6:AF:11:ASN:HB3	6:AF:14:LEU:CG	2.31	0.59
20:AT:26:ASN:HD22	20:AT:26:ASN:H	1.50	0.59
22:AW:30:G:H2'	22:AW:31:A:C8	2.38	0.59
27:B1:61:ARG:NH1	27:B1:61:ARG:HG2	2.15	0.59
28:B2:69:ARG:H	28:B2:69:ARG:HD2	1.68	0.59
36:BA:2153:G:O2'	36:BA:2154:G:H5'	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2312:U:C3'	42:BG:71:THR:HG21	2.32	0.59
52:BT:30:VAL:CG2	52:BT:83:ILE:HG12	2.32	0.59
57:BY:81:LYS:O	57:BY:82:PRO:O	2.20	0.59
58:BZ:149:SER:HB3	58:BZ:173:ALA:HA	1.84	0.59
1:CA:37:U:OP1	12:CL:124:LYS:HB3	2.02	0.59
1:CA:748:C:H4'	1:CA:749:C:O5'	2.02	0.59
9:CI:53:VAL:HG13	9:CI:95:LYS:CD	2.30	0.59
13:CM:108:ARG:HG3	13:CM:108:ARG:HH11	1.68	0.59
13:CM:15:VAL:HG11	13:CM:48:LEU:HD11	1.84	0.59
17:CQ:3:LYS:HB3	17:CQ:61:GLU:HB3	1.84	0.59
17:CQ:85:VAL:O	17:CQ:89:LEU:HG	2.03	0.59
25:CZ:126:VAL:O	25:CZ:128:VAL:HG23	2.02	0.59
28:D2:31:GLU:HB3	28:D2:53:LEU:HD11	1.84	0.59
34:D8:33:ASN:HD22	36:DA:2419:U:H5''	1.66	0.59
36:DA:2840:C:H2'	36:DA:2841:C:C6	2.37	0.59
36:DA:925:C:H2'	36:DA:926:A:C5'	2.24	0.59
38:DC:10:LEU:HD11	38:DC:34:THR:OG1	2.02	0.59
40:DE:59:VAL:CG2	40:DE:63:LEU:HA	2.33	0.59
42:DG:32:PRO:HB2	42:DG:172:LEU:HD12	1.84	0.59
44:DJ:120:UNK:O	44:DJ:121:UNK:CB	2.50	0.59
48:DP:65:ARG:CB	48:DP:68:GLN:HE22	2.16	0.59
48:DP:85:LEU:HA	48:DP:88:LEU:HB2	1.84	0.59
48:DP:97:PRO:HD3	48:DP:126:VAL:O	2.02	0.59
52:DT:58:ASN:N	52:DT:58:ASN:HD22	1.96	0.59
58:DZ:163:LEU:HD12	58:DZ:165:VAL:CG2	2.32	0.59
1:AA:731:G:OP1	1:AA:766:A:H1'	2.03	0.59
2:AB:7:VAL:O	2:AB:11:LEU:HD12	2.03	0.59
4:AD:124:GLY:O	4:AD:126:ILE:N	2.35	0.59
4:AD:55:ALA:O	4:AD:59:ARG:HG2	2.03	0.59
12:AL:51:ALA:C	12:AL:52:LEU:HD22	2.23	0.59
17:AQ:45:HIS:CD2	17:AQ:47:PRO:HD3	2.38	0.59
17:AQ:9:VAL:HG11	17:AQ:84:LEU:HD12	1.85	0.59
19:AS:62:ILE:HA	19:AS:66:MET:CE	2.32	0.59
27:B1:80:LEU:CB	27:B1:82:LEU:HD13	2.29	0.59
30:B4:42:PHE:O	30:B4:43:TYR:O	2.21	0.59
34:B8:10:ALA:HB3	34:B8:60:LEU:HD21	1.83	0.59
36:BA:1109:C:H2'	36:BA:1110:G:O4'	2.02	0.59
36:BA:414:C:H1'	36:BA:1864:U:O2'	2.01	0.59
36:BA:2152:G:O2'	36:BA:2153:G:H5'	2.01	0.59
36:BA:331:A:H1'	36:BA:332:A:OP1	2.03	0.59
37:BB:68:C:H2'	37:BB:69:G:O4'	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BG:86:MET:N	42:BG:87:PRO:HD3	2.18	0.59
48:BP:85:LEU:HA	48:BP:88:LEU:CB	2.32	0.59
50:BR:72:ASP:HB3	50:BR:75:LEU:HB3	1.84	0.59
52:BT:23:ARG:HG2	52:BT:120:ARG:NH1	2.17	0.59
36:BA:1009:A:H1'	53:BU:59:ARG:NH1	2.18	0.59
1:CA:1158:C:O2	1:CA:1158:C:C2'	2.50	0.59
1:CA:613:C:H2'	1:CA:614:A:H8	1.68	0.59
1:CA:722:A:HO2'	1:CA:724:G:H8	1.50	0.59
4:CD:11:LEU:HD22	4:CD:66:ARG:NH1	2.18	0.59
6:CF:57:GLN:HE21	6:CF:57:GLN:H	1.51	0.59
9:CI:111:ARG:O	9:CI:119:ALA:HB2	2.03	0.59
12:CL:6:THR:H	12:CL:9:GLN:HE21	1.49	0.59
13:CM:12:ASN:N	13:CM:12:ASN:HD22	1.96	0.59
19:CS:16:LEU:N	19:CS:16:LEU:HD12	2.17	0.59
20:CT:57:ARG:HD3	20:CT:102:GLY:HA2	1.84	0.59
27:D1:82:LEU:HD11	27:D1:90:ILE:CD1	2.33	0.59
32:D6:15:GLU:OE2	32:D6:41:PRO:HB2	2.03	0.59
36:DA:1060:U:H1'	36:DA:1061:U:OP2	2.02	0.59
36:DA:1809:A:H2'	36:DA:1810:A:C8	2.38	0.59
36:DA:1887:C:C3'	36:DA:1888:G:H5''	2.33	0.59
36:DA:1902:C:H1'	39:DD:244:ARG:HG3	1.84	0.59
36:DA:2464:C:O2'	36:DA:2465:C:H6	1.84	0.59
36:DA:272(I):U:H2'	36:DA:272(J):C:H6	1.66	0.59
37:DB:56:G:H4'	37:DB:57:A:O5'	2.03	0.59
39:DD:65:ILE:H	39:DD:65:ILE:HD13	1.67	0.59
48:DP:24:GLY:HA3	48:DP:33:ARG:HH12	1.68	0.59
36:DA:832:G:OP1	48:DP:40:SER:HB3	2.01	0.59
52:DT:3:ARG:HB2	52:DT:6:LEU:HB2	1.85	0.59
57:DY:13:VAL:HG11	57:DY:28:LYS:HD3	1.85	0.59
4:AD:88:VAL:O	4:AD:92:VAL:HG23	2.02	0.59
1:AA:37:U:OP1	12:AL:124:LYS:HB3	2.02	0.59
15:AO:82:ILE:CD1	15:AO:87:ILE:HB	2.32	0.59
26:B0:70:GLN:NE2	26:B0:80:HIS:NE2	2.50	0.59
28:B2:27:GLU:O	28:B2:30:ARG:CB	2.51	0.59
29:B3:31:LEU:HD23	29:B3:32:GLN:H	1.67	0.59
36:BA:2248:C:H2'	36:BA:2249:U:H5'	1.85	0.59
40:BE:52:LEU:HD21	52:BT:1:MET:HE3	1.83	0.59
41:BF:127:GLU:OE1	41:BF:196:LEU:HD12	2.02	0.59
42:BG:121:ASN:C	42:BG:121:ASN:HD22	2.05	0.59
42:BG:52:ILE:HG12	42:BG:54:GLU:H	1.68	0.59
44:BJ:28:UNK:HA	44:BJ:82:UNK:HA	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BT:13:ARG:HH11	52:BT:13:ARG:HA	1.62	0.59
56:BX:8:ILE:H	56:BX:8:ILE:HD12	1.68	0.59
57:BY:29:GLU:N	57:BY:29:GLU:OE1	2.36	0.59
58:BZ:72:ARG:CG	58:BZ:89:PHE:HB2	2.31	0.59
1:CA:1116:C:C2'	1:CA:1117:G:H5''	2.32	0.59
1:CA:1151:A:HO2'	1:CA:1152:A:H8	1.50	0.59
36:DA:1510:G:O2'	36:DA:1511:C:H5'	2.03	0.59
50:DR:84:ALA:HB3	50:DR:85:PRO:HD3	1.85	0.59
51:DS:89:ARG:HG3	51:DS:92:TYR:CA	2.33	0.59
53:DU:70:ARG:HA	53:DU:74:LEU:O	2.03	0.59
58:DZ:98:MET:O	58:DZ:125:LEU:HA	2.03	0.59
1:AA:1228:C:OP1	13:AM:115:LYS:HE3	2.02	0.59
1:AA:155:C:H2'	1:AA:156:G:H8	1.67	0.59
1:AA:35:G:H2'	1:AA:36:C:C6	2.37	0.59
1:AA:858:G:C6	1:AA:869:G:C8	2.89	0.59
2:AB:114:ARG:HH12	2:AB:118:LEU:HD21	1.66	0.59
2:AB:229:VAL:CG1	2:AB:230:VAL:H	2.15	0.59
6:AF:75:LEU:O	6:AF:78:GLU:HB3	2.03	0.59
25:AZ:355:LEU:HD23	25:AZ:368:VAL:HG11	1.84	0.59
27:B1:3:LYS:N	27:B1:3:LYS:NZ	2.43	0.59
28:B2:62:THR:HG21	36:BA:76:C:HO2'	1.68	0.59
34:B8:33:ASN:HD22	36:BA:2419:U:H5''	1.67	0.59
36:BA:1060:U:H1'	36:BA:1061:U:OP2	2.02	0.59
36:BA:2533:A:H2'	36:BA:2534:A:O4'	2.02	0.59
36:BA:2811:G:OP1	40:BE:60:ASN:HB2	2.03	0.59
36:BA:848:G:H8	36:BA:848:G:H5'	1.68	0.59
38:BC:118:ASP:C	38:BC:120:MET:H	2.04	0.59
39:BD:142:VAL:HG21	39:BD:191:ALA:HB1	1.85	0.59
39:BD:65:ILE:HD13	39:BD:65:ILE:H	1.66	0.59
40:BE:5:LEU:HD12	40:BE:51:PHE:HB2	1.84	0.59
41:BF:28:ILE:HD13	41:BF:28:ILE:N	2.12	0.59
42:BG:42:GLY:HA2	42:BG:89:GLY:HA2	1.85	0.59
42:BG:45:GLU:OE1	42:BG:45:GLU:N	2.36	0.59
47:BO:10:VAL:HG21	47:BO:16:ALA:O	2.03	0.59
52:BT:35:LYS:NZ	52:BT:41:ARG:HD2	2.18	0.59
52:BT:58:ASN:N	52:BT:58:ASN:HD22	2.01	0.59
4:CD:4:TYR:O	4:CD:5:ILE:HB	2.02	0.59
10:CJ:4:ILE:N	10:CJ:4:ILE:HD12	2.18	0.59
11:CK:18:ARG:HH21	11:CK:37:GLY:N	2.01	0.59
25:CZ:131:ILE:O	25:CZ:168:VAL:HG13	2.03	0.59
26:D0:36:ILE:HD11	36:DA:2355:C:H4'	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1095:A:H2'	36:DA:1096:A:H8	1.67	0.59
36:DA:1208:C:O2	36:DA:1208:C:H2'	2.03	0.59
36:DA:528:A:C2	36:DA:2042:A:H2'	2.38	0.59
36:DA:469:G:C2'	36:DA:470:A:H5''	2.32	0.59
36:DA:848:G:O6	36:DA:928:G:H2'	2.02	0.59
40:DE:9:VAL:HG12	40:DE:25:VAL:O	2.02	0.59
41:DF:114:VAL:HG21	41:DF:202:PHE:CE1	2.38	0.59
41:DF:21:ALA:HB3	41:DF:23:ASP:OD1	2.02	0.59
42:DG:93:THR:O	42:DG:94:LEU:HD23	2.02	0.59
48:DP:92:GLU:HG2	48:DP:121:LYS:NZ	2.18	0.59
52:DT:96:ARG:CZ	52:DT:96:ARG:HB2	2.33	0.59
54:DV:12:TYR:N	54:DV:12:TYR:CD1	2.70	0.59
2:AB:109:SER:C	2:AB:111:ARG:H	2.06	0.58
4:AD:22:LYS:HB2	4:AD:26:CYS:CB	2.31	0.58
6:AF:61:LEU:O	6:AF:62:TRP:HB3	2.03	0.58
9:AI:42:ARG:HH22	9:AI:75:ASP:CG	2.05	0.58
10:AJ:55:LYS:NZ	10:AJ:55:LYS:CB	2.58	0.58
25:AZ:121:LEU:O	25:AZ:125:GLN:HG2	2.03	0.58
36:BA:1023:U:H5'	36:BA:1023:U:H6	1.67	0.58
36:BA:2312:U:H2'	36:BA:2313:C:H5''	1.85	0.58
36:BA:2632:A:O2'	40:BE:61:ARG:NH2	2.36	0.58
36:BA:90:U:O4'	36:BA:92:A:H8	1.86	0.58
40:BE:59:VAL:CG2	40:BE:63:LEU:HA	2.33	0.58
40:BE:75:VAL:O	40:BE:77:ILE:N	2.36	0.58
41:BF:185:ASP:HA	41:BF:188:ARG:HD3	1.84	0.58
43:BH:105:LEU:HD23	43:BH:105:LEU:N	2.13	0.58
48:BP:58:THR:C	48:BP:61:ARG:HE	2.05	0.58
50:BR:10:LEU:O	50:BR:11:ASN:HB2	2.02	0.58
51:BS:20:ARG:HA	51:BS:20:ARG:NE	2.18	0.58
52:BT:32:TYR:CD2	52:BT:81:PRO:HB2	2.38	0.58
53:BU:108:GLU:CG	54:BV:44:LYS:HD3	2.33	0.58
55:BW:84:ARG:HB2	55:BW:96:ILE:HG22	1.85	0.58
56:BX:52:VAL:HG12	56:BX:53:LYS:N	2.13	0.58
1:CA:592:G:H2'	1:CA:593:G:H8	1.67	0.58
12:CL:91:LYS:HB3	12:CL:91:LYS:NZ	2.18	0.58
1:CA:1309:G:OP1	13:CM:92:HIS:HE1	1.86	0.58
16:CP:43:LYS:O	16:CP:45:THR:N	2.36	0.58
25:CZ:113:MET:HG3	25:CZ:114:PRO:HD2	1.84	0.58
28:D2:51:ARG:HB2	28:D2:55:ARG:NH1	2.17	0.58
36:DA:1071:G:H2'	36:DA:1072:C:O4'	2.03	0.58
36:DA:2753:A:O2'	36:DA:2754:U:H5'	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:419:C:H2'	36:DA:420:C:C6	2.38	0.58
36:DA:953:A:O2'	36:DA:954:G:H5'	2.02	0.58
37:DB:7:G:C2'	37:DB:8:U:H5''	2.33	0.58
50:DR:94:TYR:CD1	50:DR:94:TYR:N	2.69	0.58
52:DT:28:VAL:HG13	52:DT:46:GLU:CA	2.32	0.58
53:DU:65:ILE:HG12	53:DU:96:ALA:HB1	1.85	0.58
53:DU:92:ARG:HH21	54:DV:10:LYS:CB	2.16	0.58
53:DU:44:ASN:ND2	54:DV:75:PHE:HB3	2.18	0.58
1:AA:1309:G:OP1	13:AM:92:HIS:HE1	1.86	0.58
5:AE:81:GLU:OE1	5:AE:88:LYS:HE3	2.03	0.58
32:B6:13:CYS:O	32:B6:21:TYR:HA	2.03	0.58
36:BA:1040:C:H2'	36:BA:1041:G:C8	2.38	0.58
36:BA:1809:A:H2'	36:BA:1810:A:C8	2.37	0.58
36:BA:2101:G:H2'	36:BA:2102:U:C5'	2.25	0.58
34:B8:41:ILE:HD12	36:BA:2419:U:P	2.43	0.58
36:BA:2512:C:H2'	36:BA:2513:G:O4'	2.03	0.58
36:BA:2688:U:H1'	36:BA:2721:A:N6	2.19	0.58
36:BA:272(I):U:H2'	36:BA:272(J):C:H6	1.66	0.58
36:BA:2753:A:O2'	36:BA:2754:U:H5'	2.03	0.58
40:BE:179:GLU:O	40:BE:180:ASN:HB2	2.03	0.58
41:BF:21:ALA:HB3	41:BF:23:ASP:OD1	2.03	0.58
46:BN:43:THR:HB	46:BN:46:VAL:CG1	2.33	0.58
48:BP:65:ARG:CB	48:BP:68:GLN:HE22	2.15	0.58
52:BT:96:ARG:CZ	52:BT:96:ARG:HB2	2.33	0.58
57:BY:44:ILE:N	57:BY:44:ILE:HD12	2.17	0.58
2:CB:189:ASP:HB3	2:CB:203:GLY:O	2.03	0.58
7:CG:37:ASN:O	7:CG:41:ARG:HG3	2.03	0.58
5:CE:148:VAL:HG21	8:CH:107:LEU:HD13	1.85	0.58
9:CI:48:GLU:N	9:CI:49:PRO:CD	2.66	0.58
19:CS:31:ILE:HG23	19:CS:49:ILE:HG23	1.83	0.58
27:D1:86:SER:OG	27:D1:89:GLU:HB2	2.02	0.58
36:DA:1517:G:H2'	36:DA:1518:U:O4'	2.02	0.58
36:DA:1311:G:N2	36:DA:1603:A:H62	2.01	0.58
36:DA:189:G:H2'	36:DA:205:G:N2	2.17	0.58
36:DA:2206:G:H21	36:DA:2207:G:H4'	1.67	0.58
36:DA:2524:G:C8	36:DA:2524:G:H5'	2.32	0.58
36:DA:297:C:H2'	36:DA:298:G:O4'	2.03	0.58
36:DA:322:A:OP2	41:DF:169:ASN:HB2	2.03	0.58
46:DN:58:ASP:O	46:DN:60:ILE:HG13	2.03	0.58
36:DA:636:G:OP1	48:DP:132:LYS:HE2	2.03	0.58
49:DQ:5:ARG:CZ	49:DQ:5:ARG:HB2	2.32	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DZ:113:ALA:HB1	58:DZ:146:ILE:HD13	1.84	0.58
1:AA:266:G:H5''	1:AA:267:C:H5	1.67	0.58
3:AC:52:LEU:HD12	3:AC:55:VAL:CG2	2.33	0.58
3:AC:5:ILE:CD1	3:AC:5:ILE:N	2.56	0.58
3:AC:95:THR:O	3:AC:97:LYS:N	2.36	0.58
8:AH:17:THR:HB	8:AH:78:GLN:OE1	2.03	0.58
36:BA:1331:A:O2'	36:BA:1332:G:H5''	2.03	0.58
36:BA:1385:G:H4'	36:BA:1386:C:OP1	2.02	0.58
36:BA:1614:A:N1	55:BW:91:GLY:HA2	2.18	0.58
36:BA:2720:U:H2'	36:BA:2720:U:O2	2.03	0.58
36:BA:621:A:H2'	36:BA:622:G:C5'	2.32	0.58
36:BA:657:U:C2	36:BA:658:C:C5	2.91	0.58
39:BD:43:ARG:HH11	39:BD:44:ASN:HD21	1.49	0.58
43:BH:84:SER:O	43:BH:85:LYS:HB3	2.02	0.58
52:BT:23:ARG:HH21	52:BT:120:ARG:HD3	1.67	0.58
52:BT:50:ILE:HD13	52:BT:64:ARG:HB3	1.85	0.58
54:BV:12:TYR:N	54:BV:12:TYR:CD1	2.71	0.58
57:BY:95:LYS:CE	57:BY:100:ALA:HB2	2.33	0.58
1:CA:662:G:H2'	1:CA:663:A:C8	2.38	0.58
1:CA:980:C:H5'	1:CA:980:C:C6	2.23	0.58
6:CF:61:LEU:O	6:CF:62:TRP:HB3	2.03	0.58
30:D4:9:LEU:HD13	30:D4:10:VAL:H	1.67	0.58
31:D5:49:CYS:O	31:D5:56:LYS:HE2	2.02	0.58
32:D6:53:LYS:HD3	32:D6:53:LYS:H	1.69	0.58
34:D8:6:THR:HB	34:D8:11:LYS:HZ1	1.67	0.58
36:DA:1720:U:H2'	36:DA:1721:G:C4'	2.32	0.58
22:CW:71:G:O2'	36:DA:1851:U:H1'	2.03	0.58
36:DA:2092:U:H4'	36:DA:2093:G:C5'	2.23	0.58
36:DA:2187:G:H2'	36:DA:2188:C:C5'	2.23	0.58
36:DA:28:A:H61	36:DA:512:G:H1'	1.65	0.58
36:DA:548:A:C2'	36:DA:549:G:H5'	2.34	0.58
36:DA:654(E):G:H22	36:DA:654(Q):C:C1'	2.07	0.58
38:DC:118:ASP:C	38:DC:120:MET:H	2.04	0.58
41:DF:157:VAL:CG2	41:DF:194:MET:HG2	2.33	0.58
42:DG:111:LEU:N	42:DG:112:PRO:HD2	2.17	0.58
48:DP:101:VAL:HG12	48:DP:106:LEU:HB3	1.85	0.58
36:DA:956:G:OP2	49:DQ:14:ARG:NH2	2.36	0.58
52:DT:78:LEU:C	52:DT:79:HIS:HD2	2.07	0.58
53:DU:108:GLU:CG	54:DV:44:LYS:HD3	2.33	0.58
54:DV:68:LYS:HA	54:DV:68:LYS:HE2	1.85	0.58
56:DX:33:LYS:HE2	56:DX:33:LYS:HA	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DZ:166:SER:N	58:DZ:167:PRO:HA	2.17	0.58
1:AA:1512:U:H2'	1:AA:1513:A:H8	1.65	0.58
13:AM:49:THR:HB	13:AM:52:GLU:HG3	1.83	0.58
18:AR:36:ASN:HD21	18:AR:39:VAL:HG21	1.67	0.58
19:AS:12:ASP:HB2	19:AS:38:SER:OG	2.04	0.58
28:B2:62:THR:HG22	28:B2:66:GLU:CB	2.32	0.58
34:B8:6:THR:HB	34:B8:11:LYS:HZ1	1.68	0.58
36:BA:153:C:H2'	36:BA:154:G:C8	2.39	0.58
36:BA:2733:A:O2'	36:BA:2734:A:H5'	2.03	0.58
36:BA:811:U:O2'	36:BA:812:C:H5''	2.03	0.58
41:BF:101:LEU:HD12	41:BF:102:PRO:HD2	1.84	0.58
41:BF:185:ASP:HA	41:BF:188:ARG:CD	2.33	0.58
43:BH:149:ARG:HA	43:BH:162:ILE:CD1	2.32	0.58
48:BP:57:THR:OG1	48:BP:59:LEU:HB3	2.03	0.58
51:BS:54:LEU:HD13	51:BS:57:LYS:HA	1.85	0.58
52:BT:106:SER:O	52:BT:107:ASP:CB	2.51	0.58
52:BT:31:SER:HG	52:BT:32:TYR:HE1	1.49	0.58
53:BU:91:ASP:OD1	53:BU:96:ALA:HB2	2.04	0.58
57:BY:17:SER:OG	57:BY:18:GLY:N	2.37	0.58
1:CA:1201:A:H5'	1:CA:1203:C:OP2	2.03	0.58
1:CA:443:C:H2'	1:CA:444:C:H6	1.69	0.58
1:CA:309:G:H1'	1:CA:608:A:C2	2.38	0.58
2:CB:114:ARG:HH12	2:CB:118:LEU:HD21	1.68	0.58
2:CB:142:LEU:HD21	2:CB:146:GLN:NE2	2.17	0.58
4:CD:22:LYS:HB2	4:CD:26:CYS:HB3	1.85	0.58
25:CZ:309:SER:O	25:CZ:310:ILE:HG22	2.03	0.58
25:CZ:366:ASP:HB3	25:CZ:368:VAL:HG23	1.84	0.58
25:CZ:137:LYS:HG2	60:CZ:501:GDP:C2	2.38	0.58
29:D3:31:LEU:HD23	29:D3:32:GLN:H	1.68	0.58
31:D5:54:GLY:N	31:D5:56:LYS:NZ	2.51	0.58
36:DA:2115:G:C2	36:DA:2117:A:N7	2.72	0.58
36:DA:2179:C:H1'	36:DA:2180:U:C5	2.39	0.58
36:DA:2186:G:H2'	36:DA:2187:G:C8	2.38	0.58
36:DA:335:C:H2'	36:DA:336:C:C6	2.38	0.58
39:DD:61:LEU:O	39:DD:63:ARG:NH1	2.36	0.58
36:DA:2636:U:H4'	40:DE:80:GLU:OE1	2.04	0.58
42:DG:16:ARG:O	42:DG:20:ILE:HG13	2.04	0.58
43:DH:67:LEU:O	43:DH:71:LEU:HB2	2.03	0.58
51:DS:20:ARG:HA	51:DS:20:ARG:NE	2.17	0.58
52:DT:28:VAL:CG1	52:DT:46:GLU:HG3	2.33	0.58
52:DT:33:LYS:CE	52:DT:43:GLN:HE21	1.98	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DT:32:TYR:CD2	52:DT:81:PRO:HB2	2.38	0.58
53:DU:95:LEU:O	53:DU:98:LEU:HG	2.02	0.58
58:DZ:109:ALA:CB	58:DZ:145:GLU:OE1	2.51	0.58
1:AA:1452:C:C4'	1:AA:1456:G:N2	2.61	0.58
7:AG:113:GLU:O	7:AG:119:ARG:HD3	2.03	0.58
9:AI:52:ALA:HB3	9:AI:95:LYS:HZ2	1.66	0.58
13:AM:15:VAL:HG11	13:AM:48:LEU:HD11	1.86	0.58
1:AA:1047:G:H5''	14:AN:4:LYS:HE2	1.84	0.58
15:AO:27:VAL:O	15:AO:31:LEU:HD13	2.03	0.58
15:AO:26:GLU:OE2	15:AO:77:ARG:NH1	2.36	0.58
18:AR:31:LEU:H	18:AR:31:LEU:CD2	2.14	0.58
24:AY:70:C:H2'	24:AY:71:C:C6	2.38	0.58
30:B4:20:ASN:HD22	30:B4:21:VAL:N	2.02	0.58
32:B6:15:GLU:CG	32:B6:18:ARG:CZ	2.81	0.58
35:B9:10:ILE:N	35:B9:10:ILE:HD12	2.18	0.58
36:BA:1071:G:H2'	36:BA:1072:C:O4'	2.03	0.58
36:BA:1887:C:C3'	36:BA:1888:G:H5''	2.33	0.58
37:BB:56:G:H4'	37:BB:57:A:O5'	2.04	0.58
39:BD:102:LYS:O	39:BD:103:ARG:HG2	2.04	0.58
40:BE:9:VAL:HG12	40:BE:25:VAL:O	2.04	0.58
42:BG:7:LEU:HD13	42:BG:100:TRP:HE3	1.69	0.58
42:BG:172:LEU:CD2	42:BG:176:LEU:HD12	2.33	0.58
46:BN:1:MET:C	46:BN:2:LYS:HD2	2.23	0.58
47:BO:2:ILE:HD12	47:BO:6:THR:HG21	1.85	0.58
57:BY:81:LYS:HD3	57:BY:97:ARG:HG3	1.85	0.58
58:BZ:81:ARG:HB2	58:BZ:81:ARG:NH1	2.19	0.58
2:CB:87:ARG:HH22	2:CB:232:PRO:CA	2.16	0.58
3:CC:14:ILE:HG12	3:CC:15:THR:N	2.19	0.58
4:CD:121:VAL:HA	4:CD:126:ILE:HD13	1.86	0.58
4:CD:128:VAL:O	4:CD:130:GLY:N	2.37	0.58
19:CS:12:ASP:HB2	19:CS:38:SER:OG	2.02	0.58
19:CS:29:ARG:HD2	19:CS:29:ARG:N	2.19	0.58
28:D2:29:LYS:HE2	28:D2:57:ILE:HG21	1.84	0.58
32:D6:53:LYS:N	32:D6:53:LYS:HD3	2.18	0.58
36:DA:1141:U:H6	46:DN:63:THR:HB	1.69	0.58
36:DA:2314:C:H5'	42:DG:38:VAL:HG21	1.85	0.58
36:DA:2777:G:H5''	36:DA:2778:A:C5'	2.32	0.58
36:DA:2866:U:C6	36:DA:2868:A:H1'	2.38	0.58
36:DA:30:G:H2'	36:DA:31:C:C6	2.38	0.58
36:DA:84:A:H5''	57:DY:9:LYS:HD2	1.85	0.58
39:DD:136:ILE:HB	39:DD:165:ILE:CD1	2.34	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DF:160:ASN:HD21	41:DF:162:LEU:CD1	2.15	0.58
42:DG:172:LEU:O	42:DG:172:LEU:HD23	2.03	0.58
47:DO:10:VAL:HG21	47:DO:16:ALA:O	2.04	0.58
51:DS:17:ARG:O	51:DS:20:ARG:HG2	2.03	0.58
51:DS:58:LEU:HG	51:DS:59:LYS:H	1.67	0.58
52:DT:106:SER:O	52:DT:107:ASP:CB	2.51	0.58
36:DA:2867:G:C5	52:DT:23:ARG:NH1	2.72	0.58
52:DT:4:GLY:O	52:DT:7:ILE:HB	2.04	0.58
1:AA:1030(D):A:H2'	1:AA:1031:G:H5'	1.85	0.58
1:AA:1216:G:O2'	1:AA:1217:C:H5'	2.03	0.58
2:AB:97:TRP:HZ3	2:AB:176:GLU:OE2	1.86	0.58
4:AD:190:ASP:HB3	4:AD:193:ASP:OD2	2.04	0.58
6:AF:57:GLN:HE21	6:AF:57:GLN:H	1.51	0.58
20:AT:12:ALA:O	20:AT:15:ARG:HB2	2.03	0.58
22:AW:38:A:H2'	22:AW:39:U:C4'	2.34	0.58
34:B8:39:LYS:HG3	34:B8:43:GLN:NE2	2.19	0.58
36:BA:2298:A:H2'	36:BA:2299:G:O4'	2.03	0.58
36:BA:2854:G:H2'	36:BA:2855:C:C6	2.38	0.58
36:BA:1902:C:O2'	39:BD:244:ARG:HB2	2.03	0.58
36:BA:323:G:H2'	41:BF:169:ASN:ND2	2.19	0.58
42:BG:115:ARG:NH2	42:BG:137:GLU:OE1	2.37	0.58
48:BP:126:VAL:HG22	48:BP:145:PRO:HG2	1.84	0.58
53:BU:48:ALA:O	53:BU:52:ARG:HG3	2.02	0.58
1:CA:1038:C:H6	1:CA:1038:C:O5'	1.87	0.58
1:CA:1236:A:H2'	1:CA:1237:C:C6	2.38	0.58
1:CA:542:G:P	4:CD:10:ARG:HH21	2.27	0.58
1:CA:681:C:O2'	1:CA:682:G:H5'	2.03	0.58
3:CC:181:ASN:ND2	3:CC:204:LEU:HB2	2.19	0.58
3:CC:32:LEU:HD22	3:CC:59:ARG:HH11	1.68	0.58
4:CD:131:ARG:HD3	4:CD:131:ARG:H	1.69	0.58
5:CE:41:VAL:HG23	5:CE:67:VAL:HG13	1.86	0.58
7:CG:113:GLU:CG	7:CG:119:ARG:HG2	2.34	0.58
16:CP:20:VAL:HG22	16:CP:21:VAL:N	2.18	0.58
20:CT:45:GLN:HB3	20:CT:91:LEU:HD22	1.84	0.58
22:CV:52:G:H1	22:CV:62:C:N4	2.00	0.58
25:CZ:222:LEU:HD11	25:CZ:303:VAL:HB	1.84	0.58
28:D2:53:LEU:O	28:D2:57:ILE:HG12	2.03	0.58
36:DA:1683:C:H2'	36:DA:1684:C:H6	1.68	0.58
36:DA:252:G:OP2	48:DP:50:ARG:NH2	2.34	0.58
36:DA:2688:U:H1'	36:DA:2721:A:N6	2.19	0.58
36:DA:2712:U:OP1	36:DA:2714:G:H4'	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:590:A:H2'	36:DA:591:C:H6	1.69	0.58
36:DA:811:U:O2'	36:DA:812:C:H5''	2.03	0.58
40:DE:203:LYS:HD2	40:DE:203:LYS:O	2.03	0.58
36:DA:323:G:H2'	41:DF:169:ASN:ND2	2.19	0.58
30:D4:7:PRO:HG2	42:DG:61:ALA:HB1	1.85	0.58
43:DH:149:ARG:HA	43:DH:162:ILE:CD1	2.33	0.58
51:DS:15:ARG:HH12	51:DS:18:ILE:HD11	1.67	0.58
52:DT:39:ARG:CD	52:DT:39:ARG:H	2.13	0.58
36:DA:1009:A:H1'	53:DU:59:ARG:NH1	2.18	0.58
53:DU:91:ASP:OD1	53:DU:96:ALA:HB2	2.03	0.58
58:DZ:102:LEU:HD21	58:DZ:124:ILE:HD13	1.85	0.58
1:AA:681:C:O2'	1:AA:682:G:H5'	2.04	0.58
1:AA:711:G:O2'	1:AA:712:A:H5'	2.03	0.58
25:AZ:202:LEU:O	25:AZ:206:ILE:HB	2.04	0.58
25:AZ:222:LEU:HD11	25:AZ:303:VAL:HB	1.85	0.58
34:B8:15:LYS:HB2	48:BP:65:ARG:NH2	2.17	0.58
36:BA:1056:G:N2	36:BA:1104:C:H42	2.02	0.58
36:BA:1060:U:O4'	36:BA:1061:U:H5''	2.04	0.58
36:BA:2248:C:C2'	36:BA:2249:U:H5'	2.34	0.58
37:BB:67:G:HO2'	37:BB:68:C:H6	1.52	0.58
39:BD:30:GLU:HG3	39:BD:63:ARG:NH2	2.19	0.58
40:BE:61:ARG:HB3	40:BE:62:PRO:CD	2.33	0.58
36:BA:2631:G:N2	40:BE:61:ARG:NH1	2.51	0.58
52:BT:28:VAL:O	52:BT:29:ARG:CG	2.51	0.58
53:BU:70:ARG:HA	53:BU:74:LEU:O	2.03	0.58
53:BU:66:ASN:HD21	53:BU:76:TYR:H	1.51	0.58
58:BZ:10:ARG:HH21	58:BZ:36:LYS:HB2	1.69	0.58
58:BZ:80:ARG:O	58:BZ:82:ARG:N	2.37	0.58
1:CA:1226:C:H4'	1:CA:1227:A:OP1	2.04	0.58
1:CA:180:U:C2'	1:CA:181:G:H5'	2.34	0.58
2:CB:109:SER:C	2:CB:111:ARG:H	2.07	0.58
1:CA:1255:G:H5''	3:CC:26:LYS:HE2	1.85	0.58
3:CC:95:THR:O	3:CC:97:LYS:N	2.37	0.58
4:CD:100:ARG:O	4:CD:104:VAL:HG23	2.03	0.58
4:CD:138:TYR:C	4:CD:138:TYR:CD1	2.77	0.58
36:DA:1087:G:H2'	36:DA:1088:A:C5'	2.33	0.58
36:DA:1210:A:C8	36:DA:1210:A:H5'	2.37	0.58
36:DA:565:C:H4'	36:DA:1253:A:C6	2.39	0.58
36:DA:140:G:H1'	36:DA:141:A:C2	2.39	0.58
36:DA:1817:G:H2'	36:DA:1818:U:H5'	1.85	0.58
36:DA:331:A:H1'	36:DA:332:A:OP1	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DB:61:G:O2'	37:DB:62:C:H5'	2.03	0.58
39:DD:8:PRO:HB3	39:DD:14:ARG:HB3	1.85	0.58
41:DF:126:VAL:HG11	41:DF:142:TRP:HH2	1.69	0.58
41:DF:127:GLU:OE1	41:DF:196:LEU:HD12	2.04	0.58
46:DN:1:MET:C	46:DN:2:LYS:HD2	2.24	0.58
46:DN:3:THR:C	46:DN:4:TYR:CG	2.77	0.58
50:DR:55:ALA:HB2	50:DR:79:LEU:CD1	2.34	0.58
1:AA:1005:A:H5'	1:AA:1037:C:O2	2.04	0.58
1:AA:1536:C:H2'	1:AA:1537:U:O4'	2.03	0.58
2:AB:130:ARG:NH1	2:AB:138:LEU:HD11	2.18	0.58
2:AB:42:ILE:CD1	2:AB:202:PRO:HB2	2.33	0.58
2:AB:9:GLU:N	2:AB:9:GLU:OE1	2.32	0.58
1:AA:559:A:OP1	5:AE:126:ARG:NH2	2.36	0.58
7:AG:78:ARG:O	7:AG:80:VAL:N	2.36	0.58
11:AK:27:ASN:ND2	11:AK:28:THR:N	2.48	0.58
14:AN:12:ARG:HB3	14:AN:12:ARG:HH11	1.68	0.58
19:AS:16:LEU:HA	19:AS:19:VAL:HB	1.85	0.58
25:AZ:366:ASP:HB3	25:AZ:368:VAL:HG23	1.85	0.58
28:B2:55:ARG:HA	28:B2:58:ALA:HB3	1.86	0.58
29:B3:1:MET:O	29:B3:3:ARG:N	2.37	0.58
33:B7:19:ARG:HG2	33:B7:19:ARG:HH11	1.69	0.58
36:BA:110:G:O2'	36:BA:111:A:H5'	2.03	0.58
36:BA:2188:C:H2'	36:BA:2189:U:C6	2.39	0.58
35:B9:10:ILE:HG23	36:BA:2477:C:N4	2.19	0.58
44:BJ:27:UNK:HA	44:BJ:113:UNK:CB	2.34	0.58
51:BS:54:LEU:HD13	51:BS:58:LEU:N	2.15	0.58
52:BT:28:VAL:CG1	52:BT:46:GLU:HG3	2.34	0.58
55:BW:59:VAL:HG12	55:BW:59:VAL:O	2.04	0.58
58:BZ:152:ALA:CA	58:BZ:167:PRO:HB2	2.34	0.58
1:CA:202:U:H4'	1:CA:203:U:OP2	2.03	0.58
1:CA:697:U:H2'	1:CA:698:G:H5'	1.86	0.58
15:CO:26:GLU:OE2	15:CO:77:ARG:NH1	2.37	0.58
19:CS:16:LEU:HA	19:CS:19:VAL:HB	1.85	0.58
29:D3:35:ARG:HD3	29:D3:37:LEU:HD21	1.86	0.58
36:DA:110:G:O2'	36:DA:111:A:H5'	2.03	0.58
36:DA:140:G:H1'	36:DA:141:A:H2	1.69	0.58
36:DA:1813:G:H1'	39:DD:50:THR:OG1	2.04	0.58
36:DA:2162:G:O2'	36:DA:2173:A:N6	2.37	0.58
36:DA:2248:C:C2'	36:DA:2249:U:H5'	2.33	0.58
36:DA:2303:G:H4'	42:DG:124:SER:O	2.04	0.58
36:DA:2579:C:O2'	40:DE:131:ALA:CB	2.52	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DF:101:LEU:HD12	41:DF:102:PRO:CD	2.34	0.58
36:DA:470:A:OP1	41:DF:59:TYR:HE1	1.87	0.58
42:DG:145:THR:HB	42:DG:148:MET:HB2	1.84	0.58
44:DJ:12:UNK:C	44:DJ:14:UNK:N	2.67	0.58
52:DT:106:SER:O	52:DT:107:ASP:CG	2.42	0.58
53:DU:52:ARG:HB3	53:DU:52:ARG:NH1	2.19	0.58
53:DU:95:LEU:CD1	54:DV:11:GLN:HG3	2.33	0.58
55:DW:64:MET:O	55:DW:65:LEU:HB3	2.04	0.58
57:DY:29:GLU:N	57:DY:29:GLU:OE1	2.37	0.58
57:DY:8:LYS:CD	57:DY:8:LYS:N	2.66	0.58
58:DZ:163:LEU:CD2	58:DZ:163:LEU:H	2.17	0.58
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.38	0.58
2:AB:25:ASN:C	2:AB:25:ASN:ND2	2.57	0.58
3:AC:34:LEU:HD22	3:AC:38:ARG:NE	2.19	0.58
4:AD:34:GLU:O	4:AD:35:ARG:CB	2.50	0.58
17:AQ:52:LYS:N	17:AQ:52:LYS:HD3	2.09	0.58
25:AZ:113:MET:HG3	25:AZ:114:PRO:HD2	1.84	0.58
25:AZ:126:VAL:O	25:AZ:128:VAL:HG23	2.02	0.58
31:B5:54:GLY:H	31:B5:56:LYS:HZ1	1.49	0.58
36:BA:1023:U:H2'	36:BA:1024:G:H5'	1.86	0.58
36:BA:1060:U:H1'	36:BA:1061:U:H5''	1.84	0.58
36:BA:1721:G:C6	36:BA:1739:U:H5'	2.39	0.58
36:BA:189:G:H2'	36:BA:205:G:N2	2.19	0.58
36:BA:2162:G:O2'	36:BA:2173:A:N6	2.37	0.58
27:B1:29:GLY:HA3	36:BA:2396:G:O2'	2.02	0.58
36:BA:2756:U:H1'	36:BA:2757:A:C5'	2.30	0.58
40:BE:185:LYS:O	40:BE:186:GLY:O	2.22	0.58
46:BN:3:THR:C	46:BN:4:TYR:CG	2.77	0.58
50:BR:87:TYR:O	50:BR:89:ASP:N	2.37	0.58
52:BT:106:SER:O	52:BT:107:ASP:CG	2.42	0.58
52:BT:65:LYS:HG3	52:BT:66:VAL:N	2.18	0.58
58:BZ:74:VAL:HG22	58:BZ:86:VAL:HG12	1.86	0.58
1:CA:1269:A:C2	1:CA:1313:U:O4'	2.57	0.58
1:CA:433:C:H2'	1:CA:434:U:H6	1.69	0.58
1:CA:961:U:O2'	1:CA:962:C:O5'	2.21	0.58
1:CA:975:A:C4'	1:CA:976:G:H5''	2.28	0.58
2:CB:130:ARG:NH1	2:CB:138:LEU:HD11	2.18	0.58
7:CG:65:ALA:HB1	7:CG:127:ALA:HB3	1.85	0.58
12:CL:77:LEU:HD11	12:CL:107:ALA:HA	1.86	0.58
19:CS:78:ARG:O	19:CS:81:ARG:HD3	2.04	0.58
32:D6:53:LYS:O	32:D6:54:ILE:OXT	2.22	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1040:C:H2'	36:DA:1041:G:C8	2.38	0.58
36:DA:1056:G:N2	36:DA:1104:C:H42	2.02	0.58
36:DA:1209:G:H21	36:DA:1210:A:N6	2.01	0.58
36:DA:1268:A:H2'	36:DA:1269:A:O4'	2.03	0.58
36:DA:2020:A:O2'	36:DA:2021:C:H5'	2.03	0.58
36:DA:2492:U:O2'	36:DA:2493:U:H5'	2.03	0.58
36:DA:2884:U:H2'	36:DA:2885:C:H5'	1.85	0.58
36:DA:657:U:C2	36:DA:658:C:C5	2.92	0.58
43:DH:85:LYS:HE3	43:DH:85:LYS:O	2.04	0.58
51:DS:89:ARG:HG3	51:DS:92:TYR:HA	1.85	0.58
52:DT:28:VAL:CG1	52:DT:46:GLU:HA	2.31	0.58
53:DU:59:ARG:HG2	53:DU:59:ARG:NH1	2.17	0.58
54:DV:82:ARG:HD2	54:DV:82:ARG:N	2.19	0.58
55:DW:37:ARG:HG3	55:DW:37:ARG:HH11	1.69	0.58
55:DW:69:LEU:HA	55:DW:108:GLY:O	2.04	0.58
1:AA:1314:C:OP2	19:AS:6:LYS:HG3	2.04	0.58
4:AD:22:LYS:HB2	4:AD:26:CYS:HB3	1.85	0.58
6:AF:55:ASP:HB3	6:AF:57:GLN:HE22	1.68	0.58
11:AK:18:ARG:HH21	11:AK:37:GLY:N	2.02	0.58
16:AP:43:LYS:HA	16:AP:48:TRP:HB2	1.85	0.58
16:AP:43:LYS:HA	16:AP:48:TRP:HB3	1.85	0.58
32:B6:28:ARG:CA	32:B6:32:ASN:HD22	2.16	0.58
32:B6:13:CYS:HA	32:B6:50:ARG:O	2.04	0.58
36:BA:1198:U:H2'	36:BA:1199:U:C6	2.39	0.58
36:BA:1336:A:H2'	36:BA:1337:G:C8	2.39	0.58
36:BA:1510:G:O2'	36:BA:1511:C:H5'	2.04	0.58
36:BA:1720:U:H2'	36:BA:1721:G:C4'	2.33	0.58
36:BA:2115:G:C2	36:BA:2117:A:N7	2.72	0.58
36:BA:2179:C:H1'	36:BA:2180:U:C5	2.39	0.58
36:BA:2807:G:H3'	36:BA:2808:U:H5''	1.85	0.58
36:BA:565:C:H4'	36:BA:1253:A:C6	2.38	0.58
36:BA:2572:A:N7	40:BE:145:LYS:HB2	2.18	0.58
55:BW:14:PRO:HG2	55:BW:78:GLU:HG3	1.86	0.58
36:BA:26:G:OP1	55:BW:80:PRO:HB3	2.04	0.58
58:BZ:48:PHE:CZ	58:BZ:74:VAL:HG21	2.39	0.58
1:CA:108:G:H5'	1:CA:109:A:H5''	1.86	0.58
1:CA:1120:G:H2'	1:CA:1121:U:C6	2.39	0.58
1:CA:437:U:C5'	4:CD:155:LEU:HD13	2.34	0.58
1:CA:865:A:C2	1:CA:918:A:H4'	2.38	0.58
1:CA:950:U:H2'	1:CA:951:G:C8	2.39	0.58
2:CB:97:TRP:CZ2	2:CB:102:LEU:HD13	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:16:ARG:NH1	3:CC:16:ARG:HB2	2.18	0.58
4:CD:114:ARG:HG3	4:CD:114:ARG:NH1	2.13	0.58
18:CR:36:ASN:HD21	18:CR:39:VAL:CG2	2.17	0.58
36:DA:1051:G:H2'	36:DA:1052:C:C4	2.39	0.58
36:DA:1060:U:H1'	36:DA:1061:U:H5''	1.85	0.58
36:DA:1257:C:H2'	36:DA:1258:C:H6	1.69	0.58
36:DA:1331:A:O2'	36:DA:1332:G:H5''	2.04	0.58
36:DA:2287:A:N6	36:DA:2344:U:H3	1.94	0.58
36:DA:266:G:H2'	36:DA:267:C:C5'	2.29	0.58
36:DA:2712:U:O2	36:DA:2712:U:H5'	2.04	0.58
36:DA:271(E):U:H2'	36:DA:271(F):C:C6	2.39	0.58
36:DA:2840:C:H2'	36:DA:2841:C:H6	1.67	0.58
36:DA:533:G:H5'	53:DU:24:TYR:CE1	2.39	0.58
39:DD:30:GLU:N	39:DD:35:LYS:HZ2	2.02	0.58
43:DH:19:VAL:O	43:DH:20:ALA:HB2	2.04	0.58
43:DH:58:GLU:O	43:DH:62:LYS:HB2	2.02	0.58
46:DN:121:LYS:HB3	46:DN:123:TYR:HE1	1.69	0.58
58:DZ:98:MET:O	58:DZ:125:LEU:HD12	2.03	0.58
1:AA:227:G:C3'	1:AA:228:A:H5''	2.33	0.57
9:AI:28:VAL:CG2	9:AI:33:PHE:HA	2.33	0.57
16:AP:67:THR:HG22	16:AP:68:ASP:N	2.19	0.57
17:AQ:3:LYS:HB3	17:AQ:61:GLU:HB3	1.84	0.57
20:AT:29:LYS:O	20:AT:33:ILE:HG13	2.04	0.57
20:AT:53:LEU:O	20:AT:57:ARG:HB2	2.04	0.57
32:B6:15:GLU:OE1	32:B6:18:ARG:CD	2.52	0.57
32:B6:20:ASN:O	32:B6:21:TYR:CD2	2.57	0.57
36:BA:1450(A):C:H2'	36:BA:1451:C:C5	2.38	0.57
36:BA:491:G:H2'	36:BA:492:A:C8	2.38	0.57
36:BA:814:C:H2'	36:BA:815:C:C6	2.39	0.57
39:BD:30:GLU:HG2	39:BD:35:LYS:HZ1	1.68	0.57
40:BE:33:VAL:HG13	40:BE:33:VAL:O	2.04	0.57
43:BH:19:VAL:O	43:BH:20:ALA:HB2	2.04	0.57
50:BR:84:ALA:HB3	50:BR:85:PRO:HD3	1.85	0.57
51:BS:17:ARG:O	51:BS:20:ARG:HG2	2.03	0.57
52:BT:3:ARG:HB2	52:BT:6:LEU:HB2	1.85	0.57
55:BW:64:MET:O	55:BW:65:LEU:HB3	2.04	0.57
56:BX:63:LYS:HG3	56:BX:72:LYS:HG2	1.85	0.57
58:BZ:67:LEU:HD12	58:BZ:67:LEU:N	2.19	0.57
19:CS:45:VAL:O	19:CS:47:HIS:N	2.28	0.57
25:CZ:84:GLY:O	25:CZ:85:HIS:HB3	2.04	0.57
27:D1:41:ARG:HH22	36:DA:1365:A:H5''	1.68	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:D4:22:ILE:HD12	30:D4:22:ILE:N	2.20	0.57
36:DA:2111:C:N3	36:DA:2145:C:H2'	2.19	0.57
36:DA:2327:A:H2'	36:DA:2328:A:C8	2.39	0.57
36:DA:621:A:H2'	36:DA:622:G:C5'	2.32	0.57
39:DD:224:ALA:C	39:DD:226:MET:H	2.07	0.57
43:DH:85:LYS:HZ3	43:DH:132:ARG:CA	2.08	0.57
47:DO:43:VAL:HG21	47:DO:52:VAL:CG1	2.34	0.57
48:DP:71:VAL:HG12	48:DP:72:PRO:HD3	1.86	0.57
51:DS:85:VAL:O	51:DS:106:ARG:HG3	2.03	0.57
58:DZ:165:VAL:HG12	58:DZ:166:SER:N	2.18	0.57
1:AA:1331:G:OP2	13:AM:23:TYR:HD1	1.87	0.57
1:AA:1442(B):A:O2'	1:AA:1443:G:C8	2.58	0.57
1:AA:228:A:H8	1:AA:228:A:C5'	2.14	0.57
1:AA:613:C:H2'	1:AA:614:A:H8	1.70	0.57
1:AA:632:A:C8	1:AA:633:G:C8	2.93	0.57
11:AK:67:ASP:OD2	11:AK:71:LYS:HE3	2.05	0.57
12:AL:20:LYS:CD	12:AL:20:LYS:H	2.02	0.57
13:AM:83:ASP:CG	13:AM:84:ILE:N	2.58	0.57
28:B2:53:LEU:HG	28:B2:56:GLN:HG3	1.85	0.57
36:BA:2712:U:O2	36:BA:2712:U:H5'	2.04	0.57
36:BA:672:C:C2'	36:BA:673:C:C5'	2.82	0.57
38:BC:50:ASP:OD2	38:BC:53:ARG:HG3	2.03	0.57
40:BE:61:ARG:CB	40:BE:62:PRO:HD3	2.31	0.57
41:BF:25:PRO:CG	41:BF:119:ARG:HB2	2.34	0.57
48:BP:101:VAL:HG12	48:BP:106:LEU:HB3	1.85	0.57
50:BR:79:LEU:HA	50:BR:83:ILE:HG13	1.86	0.57
52:BT:85:LYS:NZ	52:BT:85:LYS:CB	2.66	0.57
56:BX:3:THR:HA	56:BX:6:ASP:OD1	2.05	0.57
58:BZ:101:PRO:HG2	58:BZ:136:PHE:H	1.68	0.57
1:CA:1116:C:H2'	1:CA:1117:G:H5''	1.84	0.57
1:CA:135:C:H2'	1:CA:136:C:H5'	1.86	0.57
2:CB:134:GLU:C	2:CB:136:VAL:N	2.57	0.57
2:CB:229:VAL:CG1	2:CB:230:VAL:H	2.16	0.57
8:CH:12:ARG:NH1	8:CH:27:PRO:HD3	2.19	0.57
11:CK:124:LYS:HD2	11:CK:125:PHE:CZ	2.39	0.57
31:D5:36:CYS:SG	31:D5:46:CYS:SG	3.01	0.57
32:D6:35:GLU:CB	32:D6:51:GLU:HB2	2.20	0.57
36:DA:2074:U:H2'	36:DA:2075:U:C6	2.39	0.57
36:DA:752:A:O2'	36:DA:753:C:OP2	2.19	0.57
39:DD:43:ARG:NH1	39:DD:44:ASN:ND2	2.47	0.57
41:DF:64:ILE:HG22	41:DF:76:GLY:O	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DN:14:VAL:HG13	46:DN:137:LYS:HG3	1.86	0.57
52:DT:134:GLU:O	52:DT:135:ALA:HB3	2.04	0.57
57:DY:2:ARG:N	57:DY:4:LYS:HE3	2.18	0.57
57:DY:87:LYS:O	57:DY:88:LYS:HB2	2.03	0.57
2:AB:77:ALA:O	2:AB:81:VAL:HG23	2.03	0.57
4:AD:128:VAL:O	4:AD:130:GLY:N	2.37	0.57
5:AE:64:ARG:HG3	5:AE:64:ARG:HH11	1.68	0.57
9:AI:126:SER:O	9:AI:127:LYS:HB3	2.04	0.57
9:AI:79:LEU:HD22	9:AI:79:LEU:O	2.04	0.57
10:AJ:6:ILE:HG13	10:AJ:72:VAL:HB	1.86	0.57
11:AK:26:ASN:O	11:AK:27:ASN:HB2	2.04	0.57
12:AL:91:LYS:NZ	12:AL:91:LYS:HB3	2.19	0.57
23:AX:20:U:O2'	23:AX:21:C:H5'	2.03	0.57
25:AZ:171:ILE:HG22	25:AZ:172:ARG:N	2.19	0.57
28:B2:49:LYS:HB2	28:B2:49:LYS:NZ	2.20	0.57
32:B6:36:LEU:HD23	32:B6:36:LEU:C	2.24	0.57
36:BA:1051:G:H2'	36:BA:1052:C:C4	2.38	0.57
36:BA:1192:G:O2'	36:BA:1193:G:H5'	2.04	0.57
36:BA:1268:A:H2'	36:BA:1269:A:O4'	2.04	0.57
36:BA:2111:C:N3	36:BA:2145:C:H2'	2.20	0.57
36:BA:2208:A:H1'	36:BA:2219:G:C4	2.38	0.57
36:BA:2310:A:HO2'	36:BA:2311:A:H5'	1.68	0.57
36:BA:2523:G:C2'	36:BA:2524:G:H5''	2.34	0.57
36:BA:548:A:C2'	36:BA:549:G:H5'	2.34	0.57
36:BA:59:U:H3	36:BA:68:G:H1	1.49	0.57
36:BA:848:G:N9	36:BA:933:A:H8	2.03	0.57
39:BD:224:ALA:O	39:BD:226:MET:N	2.38	0.57
43:BH:54:ARG:NH1	43:BH:54:ARG:HG2	2.18	0.57
52:BT:23:ARG:HG2	52:BT:120:ARG:HH12	1.68	0.57
1:CA:189(A):C:H2'	1:CA:189(B):C:C6	2.39	0.57
1:CA:266:G:H5''	1:CA:267:C:H5	1.69	0.57
1:CA:476:G:H2'	1:CA:477:A:H8	1.70	0.57
1:CA:939:G:H2'	1:CA:940:C:C6	2.39	0.57
2:CB:7:VAL:O	2:CB:11:LEU:HD12	2.04	0.57
4:CD:34:GLU:O	4:CD:35:ARG:CB	2.52	0.57
19:CS:47:HIS:O	19:CS:62:ILE:HG22	2.04	0.57
22:CW:38:A:H2'	22:CW:39:U:C4'	2.33	0.57
25:CZ:19:HIS:HD2	25:CZ:113:MET:HB3	1.65	0.57
34:D8:33:ASN:ND2	36:DA:2419:U:H5''	2.19	0.57
46:DN:111:PRO:HA	46:DN:114:ARG:NH1	2.19	0.57
47:DO:23:ARG:HG3	47:DO:24:VAL:N	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DP:127:ALA:HB3	48:DP:130:PHE:CZ	2.39	0.57
52:DT:23:ARG:NH2	52:DT:120:ARG:HD3	2.19	0.57
1:AA:1038:C:O5'	1:AA:1038:C:H6	1.87	0.57
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.38	0.57
1:AA:178:C:O2'	1:AA:179:A:H5'	2.03	0.57
1:AA:542:G:P	4:AD:10:ARG:NH2	2.77	0.57
1:AA:72:C:H2'	1:AA:73:G:H8	1.66	0.57
12:AL:69:TYR:HB2	12:AL:96:VAL:HG11	1.85	0.57
14:AN:57:ARG:HH11	14:AN:57:ARG:CB	2.16	0.57
27:B1:58:ILE:HD12	27:B1:59:THR:N	2.18	0.57
36:BA:1257:C:H2'	36:BA:1258:C:H6	1.69	0.57
36:BA:1498:C:H2'	36:BA:1499:C:C5'	2.34	0.57
36:BA:2133:G:H2'	36:BA:2157:G:H22	1.68	0.57
26:B0:56:ASP:OD2	36:BA:2364:C:H5'	2.04	0.57
37:BB:35:U:O2'	37:BB:36:C:H5'	2.05	0.57
39:BD:218:ARG:HG3	39:BD:218:ARG:HH11	1.69	0.57
41:BF:37:VAL:CG1	48:BP:7:ARG:HH12	2.04	0.57
52:BT:11:GLU:H	52:BT:11:GLU:CD	2.07	0.57
53:BU:59:ARG:NH1	53:BU:59:ARG:HG2	2.19	0.57
54:BV:82:ARG:HD2	54:BV:82:ARG:N	2.19	0.57
55:BW:69:LEU:HA	55:BW:108:GLY:O	2.04	0.57
57:BY:14:LEU:HD13	57:BY:24:VAL:HG22	1.85	0.57
57:BY:88:LYS:O	57:BY:90:LEU:HD23	2.04	0.57
1:CA:1003:G:C3'	1:CA:1004:A:H4'	2.34	0.57
1:CA:1487:G:O2'	1:CA:1488:G:H5'	2.04	0.57
1:CA:1508:G:O2'	1:CA:1509:C:H5'	2.05	0.57
1:CA:161:A:H2'	1:CA:162:A:C8	2.38	0.57
1:CA:457:C:H2'	1:CA:458:C:C6	2.40	0.57
3:CC:95:THR:CG2	3:CC:97:LYS:HD2	2.34	0.57
15:CO:27:VAL:O	15:CO:31:LEU:HD13	2.04	0.57
19:CS:24:ALA:O	19:CS:25:LYS:HB2	2.05	0.57
1:CA:1221:G:H4'	19:CS:77:THR:CG2	2.34	0.57
20:CT:62:LEU:CD1	20:CT:62:LEU:H	2.14	0.57
24:CY:43:G:H5'	24:CY:44:G:OP2	2.04	0.57
24:CY:57:G:C2'	24:CY:58:A:H5'	2.34	0.57
27:D1:44:PRO:HG2	27:D1:46:LEU:HD23	1.86	0.57
32:D6:36:LEU:HD23	32:D6:36:LEU:C	2.24	0.57
36:DA:1709:U:H2'	36:DA:1710:C:C6	2.39	0.57
36:DA:1762:A:C8	36:DA:1762:A:O5'	2.57	0.57
36:DA:2720:U:O2	36:DA:2720:U:H2'	2.04	0.57
36:DA:612:C:C2'	36:DA:613:G:C5'	2.77	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DG:52:ILE:CD1	42:DG:52:ILE:H	2.12	0.57
43:DH:83:TYR:HB2	43:DH:134:SER:CA	2.33	0.57
54:DV:52:VAL:HG13	54:DV:55:ALA:HB3	1.85	0.57
56:DX:8:ILE:N	56:DX:8:ILE:HD12	2.18	0.57
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.39	0.57
1:AA:1158:C:H2'	1:AA:1158:C:O2	2.03	0.57
1:AA:1296:C:H4'	1:AA:1302:U:C5	2.39	0.57
1:AA:1376:U:H2'	1:AA:1377:A:C8	2.39	0.57
1:AA:194:C:C2'	1:AA:195:A:H5''	2.33	0.57
1:AA:677:U:H3	1:AA:713:G:H22	1.52	0.57
3:AC:32:LEU:HD22	3:AC:59:ARG:HH11	1.66	0.57
9:AI:33:PHE:C	9:AI:35:GLU:H	2.07	0.57
9:AI:52:ALA:HB3	9:AI:95:LYS:HZ1	1.68	0.57
14:AN:19:ARG:O	14:AN:20:ALA:C	2.40	0.57
16:AP:20:VAL:HG22	16:AP:21:VAL:N	2.19	0.57
22:AV:44:G:H2'	22:AV:45:U:H5'	1.85	0.57
22:AV:52:G:H1	22:AV:62:C:N4	2.02	0.57
36:BA:1748:G:C8	36:BA:1748:G:H5'	2.40	0.57
36:BA:118:A:N3	36:BA:178:G:H1'	2.19	0.57
36:BA:2777:G:H5''	36:BA:2778:A:C5'	2.33	0.57
36:BA:2779:U:H1'	36:BA:2781:A:C6	2.37	0.57
40:BE:2:LYS:HD3	40:BE:95:ILE:HG22	1.86	0.57
36:BA:322:A:OP2	41:BF:169:ASN:HB2	2.04	0.57
47:BO:64:ARG:NH1	47:BO:83:ALA:HB2	2.19	0.57
36:BA:832:G:OP1	48:BP:40:SER:HB3	2.04	0.57
36:BA:2867:G:C5	52:BT:23:ARG:NH1	2.72	0.57
52:BT:78:LEU:C	52:BT:79:HIS:HD2	2.07	0.57
58:BZ:14:LYS:HB2	58:BZ:17:ALA:CB	2.34	0.57
58:BZ:155:LEU:HD23	58:BZ:155:LEU:N	2.19	0.57
1:CA:1086:U:C2'	1:CA:1087:G:H5'	2.33	0.57
1:CA:1127:G:H1'	1:CA:1147:C:H42	1.70	0.57
1:CA:1533:C:H3'	1:CA:1534:A:C5'	2.24	0.57
3:CC:173:VAL:O	3:CC:173:VAL:HG12	2.04	0.57
4:CD:150:GLU:CG	4:CD:151:LYS:N	2.68	0.57
9:CI:53:VAL:C	9:CI:55:ALA:H	2.08	0.57
12:CL:47:LYS:C	12:CL:49:ASN:N	2.58	0.57
1:CA:390:C:H4'	16:CP:28:ARG:HH21	1.69	0.57
20:CT:57:ARG:NH1	20:CT:102:GLY:HA2	2.12	0.57
22:CV:44:G:H2'	22:CV:44:G:N3	2.19	0.57
25:CZ:202:LEU:O	25:CZ:206:ILE:HB	2.04	0.57
29:D3:1:MET:O	29:D3:3:ARG:N	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1104:C:H2'	36:DA:1105:U:C6	2.36	0.57
36:DA:1750:G:O2'	36:DA:1751:C:H5'	2.04	0.57
36:DA:2691:C:H6	36:DA:2691:C:H5'	1.67	0.57
36:DA:528:A:H2	36:DA:2043:C:O5'	1.87	0.57
36:DA:814:C:H2'	36:DA:815:C:C6	2.39	0.57
40:DE:94:GLU:OE2	40:DE:177:PRO:HB3	2.03	0.57
42:DG:20:ILE:O	42:DG:24:GLY:HA2	2.05	0.57
43:DH:85:LYS:CD	43:DH:133:VAL:HB	2.34	0.57
34:D8:25:MET:HG3	48:DP:64:LYS:HB2	1.86	0.57
50:DR:55:ALA:HB1	50:DR:84:ALA:HB2	1.86	0.57
58:DZ:105:VAL:O	58:DZ:140:ASP:HA	2.04	0.57
1:AA:1120:G:H2'	1:AA:1121:U:C6	2.39	0.57
1:AA:980:C:H5'	1:AA:980:C:C6	2.25	0.57
2:AB:17:PHE:O	2:AB:18:GLY:O	2.22	0.57
4:AD:9:CYS:O	4:AD:12:CYS:HB2	2.05	0.57
9:AI:48:GLU:N	9:AI:49:PRO:CD	2.68	0.57
12:AL:113:ARG:HB3	12:AL:122:THR:HG21	1.87	0.57
19:AS:24:ALA:O	19:AS:25:LYS:HB2	2.05	0.57
28:B2:25:VAL:HB	28:B2:64:LEU:CD1	2.29	0.57
36:BA:1087:G:H2'	36:BA:1088:A:C5'	2.33	0.57
36:BA:1106:G:H2'	36:BA:1107:G:O4'	2.05	0.57
36:BA:1188:U:H4'	54:BV:79:VAL:HG22	1.86	0.57
36:BA:612:C:C2'	36:BA:613:G:C5'	2.77	0.57
38:BC:120:MET:O	38:BC:124:GLY:N	2.35	0.57
42:BG:9:ARG:O	42:BG:12:TYR:N	2.38	0.57
42:BG:47:LYS:NZ	42:BG:82:LEU:HD12	2.15	0.57
54:BV:49:THR:HB	54:BV:50:PRO:HD2	1.84	0.57
56:BX:8:ILE:HD12	56:BX:8:ILE:N	2.19	0.57
19:CS:32:LYS:O	19:CS:32:LYS:HG2	2.04	0.57
20:CT:12:ALA:O	20:CT:15:ARG:HB2	2.04	0.57
32:D6:52:VAL:HG12	32:D6:53:LYS:H	1.69	0.57
35:D9:10:ILE:N	35:D9:10:ILE:HD12	2.19	0.57
36:DA:1523:U:H2'	36:DA:1524:G:C8	2.39	0.57
39:DD:30:GLU:HG3	39:DD:63:ARG:NH2	2.19	0.57
40:DE:26:ILE:HG23	40:DE:196:VAL:HG21	1.87	0.57
43:DH:66:GLY:CA	43:DH:69:ARG:HB3	2.34	0.57
50:DR:101:ALA:O	50:DR:102:GLU:HB2	2.05	0.57
58:DZ:166:SER:HB2	58:DZ:168:GLU:N	2.20	0.57
58:DZ:10:ARG:NE	58:DZ:36:LYS:HB2	2.19	0.57
1:AA:198:G:O2'	1:AA:199:G:H8	1.87	0.57
1:AA:57:G:H2'	1:AA:58:C:C6	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:97:TRP:CZ2	2:AB:102:LEU:HD13	2.40	0.57
2:AB:109:SER:C	2:AB:111:ARG:N	2.58	0.57
4:AD:150:GLU:CG	4:AD:151:LYS:N	2.68	0.57
10:AJ:32:ALA:H	10:AJ:78:ASN:HD21	1.52	0.57
15:AO:21:ASP:OD2	15:AO:24:SER:HB3	2.05	0.57
25:AZ:19:HIS:CE1	25:AZ:113:MET:HB3	2.39	0.57
36:BA:1523:U:H2'	36:BA:1524:G:C8	2.39	0.57
36:BA:2358:G:H22	48:BP:55:ARG:HH21	1.52	0.57
36:BA:266:G:H2'	36:BA:267:C:C5'	2.28	0.57
36:BA:271(E):U:H2'	36:BA:271(F):C:C6	2.39	0.57
36:BA:848:G:O6	36:BA:928:G:H2'	2.04	0.57
39:BD:8:PRO:HB3	39:BD:14:ARG:HB3	1.86	0.57
40:BE:203:LYS:O	40:BE:203:LYS:HD2	2.05	0.57
43:BH:67:LEU:O	43:BH:71:LEU:HB2	2.03	0.57
46:BN:72:TYR:HD2	46:BN:90:MET:HG3	1.68	0.57
48:BP:92:GLU:HG2	48:BP:121:LYS:NZ	2.20	0.57
58:BZ:10:ARG:HG2	58:BZ:12:GLY:H	1.69	0.57
1:CA:1270:C:H2'	1:CA:1271:G:H8	1.70	0.57
2:CB:31:TYR:O	2:CB:42:ILE:HG13	2.05	0.57
3:CC:134:ILE:CG2	3:CC:168:ALA:HB3	2.34	0.57
4:CD:9:CYS:O	4:CD:12:CYS:HB2	2.05	0.57
1:CA:1347:G:C6	9:CI:107:ARG:NH2	2.73	0.57
9:CI:97:LYS:HB3	9:CI:98:PRO:HD3	1.85	0.57
16:CP:43:LYS:HA	16:CP:48:TRP:HB2	1.86	0.57
16:CP:43:LYS:HA	16:CP:48:TRP:HB3	1.85	0.57
33:D7:19:ARG:HG2	33:D7:19:ARG:HH11	1.69	0.57
34:D8:6:THR:OG1	34:D8:11:LYS:HE3	2.05	0.57
34:D8:23:VAL:CG1	34:D8:46:ARG:HB3	2.35	0.57
36:DA:1023:U:H6	36:DA:1023:U:H5'	1.68	0.57
36:DA:330:A:C2	36:DA:1210:A:H2'	2.32	0.57
36:DA:1677:A:H2'	36:DA:1678:G:C8	2.40	0.57
36:DA:2188:C:H2'	36:DA:2189:U:C6	2.39	0.57
38:DC:214:VAL:HG23	38:DC:224:ILE:HD13	1.86	0.57
41:DF:168:ARG:CG	41:DF:175:THR:HG21	2.23	0.57
30:D4:7:PRO:HG2	42:DG:65:GLY:HA2	1.87	0.57
47:DO:87:ILE:HG21	47:DO:91:LEU:HA	1.85	0.57
56:DX:52:VAL:HG12	56:DX:53:LYS:N	2.11	0.57
57:DY:53:PRO:CB	57:DY:56:PRO:HG3	2.31	0.57
1:AA:1286:A:O2'	1:AA:1287:A:C5'	2.53	0.57
1:AA:135:C:H2'	1:AA:136:C:H5'	1.86	0.57
1:AA:256:U:H2'	1:AA:257:G:C8	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:433:C:H2'	1:AA:434:U:H6	1.70	0.57
13:AM:91:ARG:CB	13:AM:98:VAL:HG12	2.35	0.57
19:AS:32:LYS:O	19:AS:32:LYS:HG2	2.04	0.57
22:AW:27:G:O2'	22:AW:28:G:H5'	2.05	0.57
30:B4:14:ILE:HG13	30:B4:31:ILE:CB	2.32	0.57
31:B5:31:VAL:HG13	31:B5:42:PRO:HG3	1.86	0.57
31:B5:49:CYS:O	31:B5:56:LYS:HE2	2.05	0.57
36:BA:1184:G:O2'	36:BA:1185:C:H5'	2.04	0.57
36:BA:1207:C:H2'	36:BA:1208:C:C6	2.34	0.57
36:BA:1417:C:H2'	36:BA:1418:G:O4'	2.04	0.57
36:BA:2020:A:O2'	36:BA:2021:C:H5'	2.05	0.57
36:BA:326:G:H2'	36:BA:327:G:H8	1.69	0.57
39:BD:72:LYS:HG3	39:BD:103:ARG:NH2	2.20	0.57
39:BD:35:LYS:HG3	39:BD:63:ARG:CG	2.34	0.57
41:BF:177:ALA:HB1	41:BF:178:PRO:HD2	1.85	0.57
42:BG:32:PRO:HA	42:BG:162:THR:OG1	2.05	0.57
46:BN:14:VAL:HG13	46:BN:137:LYS:HG3	1.87	0.57
1:CA:542:G:P	4:CD:10:ARG:NH2	2.77	0.57
11:CK:84:VAL:HG11	11:CK:95:ILE:HD11	1.87	0.57
34:D8:13:ARG:HD2	48:DP:61:ARG:CD	2.28	0.57
36:DA:1721:G:C6	36:DA:1739:U:H5'	2.40	0.57
36:DA:1861:G:O2'	36:DA:1862:G:H5'	2.05	0.57
36:DA:2833:G:C3'	36:DA:2834:G:H5''	2.31	0.57
38:DC:106:GLY:O	38:DC:107:TRP:HB3	2.05	0.57
40:DE:117:MET:HE1	40:DE:136:ARG:HA	1.86	0.57
40:DE:179:GLU:O	40:DE:180:ASN:HB2	2.03	0.57
44:DJ:106:UNK:O	44:DJ:107:UNK:CB	2.53	0.57
37:DB:91:C:OP1	49:DQ:16:ARG:HD2	2.05	0.57
52:DT:13:ARG:HH11	52:DT:13:ARG:HA	1.65	0.57
57:DY:14:LEU:HD13	57:DY:24:VAL:HG22	1.85	0.57
57:DY:47:LYS:HE3	57:DY:60:PHE:HZ	1.70	0.57
1:AA:1201:A:H5'	1:AA:1203:C:OP2	2.04	0.57
1:AA:490:G:H2'	1:AA:491:G:C8	2.40	0.57
1:AA:573:A:H5'	1:AA:573:A:C8	2.32	0.57
10:AJ:4:ILE:HB	10:AJ:74:ILE:HD11	1.87	0.57
36:BA:1166:C:H2'	36:BA:1167:U:C6	2.40	0.57
36:BA:1208:C:O2	36:BA:1208:C:H2'	2.03	0.57
36:BA:1677:A:H2'	36:BA:1678:G:C8	2.40	0.57
36:BA:1858:G:H1'	36:BA:1884:A:N6	2.20	0.57
36:BA:2712:U:OP1	36:BA:2714:G:H4'	2.05	0.57
36:BA:882:G:H2'	36:BA:883:G:H8	1.70	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BG:115:ARG:HG2	42:BG:115:ARG:NH1	2.11	0.57
42:BG:46:ALA:C	42:BG:47:LYS:HD2	2.24	0.57
43:BH:85:LYS:CD	43:BH:133:VAL:HB	2.34	0.57
47:BO:87:ILE:HG21	47:BO:91:LEU:HA	1.86	0.57
52:BT:28:VAL:CG1	52:BT:46:GLU:HA	2.32	0.57
52:BT:50:ILE:HA	52:BT:99:LEU:CD1	2.35	0.57
54:BV:38:LEU:O	54:BV:39:LEU:HD13	2.05	0.57
56:BX:12:VAL:HB	56:BX:17:ALA:CB	2.10	0.57
1:CA:1428:A:H2'	1:CA:1429:C:C6	2.40	0.57
1:CA:858:G:H5''	1:CA:858:G:H8	1.70	0.57
5:CE:6:PHE:CB	5:CE:34:VAL:HG22	2.35	0.57
9:CI:4:TYR:CG	9:CI:88:TYR:HB2	2.40	0.57
9:CI:99:LEU:HD22	9:CI:99:LEU:H	1.70	0.57
15:CO:17:ARG:HD3	15:CO:26:GLU:CD	2.25	0.57
20:CT:53:LEU:O	20:CT:57:ARG:HB2	2.05	0.57
24:CY:55:PSU:H2'	24:CY:56:C:OP2	2.05	0.57
24:CY:70:C:H2'	24:CY:71:C:C6	2.39	0.57
30:D4:42:PHE:O	30:D4:43:TYR:O	2.22	0.57
36:DA:176:G:O2'	36:DA:177:G:H5'	2.05	0.57
36:DA:1858:G:H1'	36:DA:1884:A:N6	2.19	0.57
36:DA:2298:A:H2'	36:DA:2299:G:O4'	2.05	0.57
36:DA:326:G:H2'	36:DA:327:G:H8	1.69	0.57
36:DA:93:G:H2'	36:DA:94:C:C6	2.40	0.57
39:DD:35:LYS:HG3	39:DD:63:ARG:CG	2.33	0.57
52:DT:10:VAL:O	52:DT:13:ARG:NE	2.35	0.57
53:DU:32:PHE:CB	53:DU:36:ARG:NH2	2.68	0.57
58:DZ:23:LYS:O	58:DZ:24:LEU:CB	2.51	0.57
58:DZ:77:ASP:HB3	58:DZ:80:ARG:O	2.05	0.57
1:AA:161:A:H2'	1:AA:162:A:C8	2.40	0.57
1:AA:413:G:H1'	1:AA:428:G:H21	1.70	0.57
1:AA:697:U:H2'	1:AA:698:G:H5'	1.86	0.57
2:AB:139:LYS:O	2:AB:143:GLU:HG3	2.04	0.57
18:AR:59:SER:OG	18:AR:62:GLU:HG3	2.05	0.57
28:B2:67:LYS:HA	28:B2:70:GLN:HG2	1.87	0.57
32:B6:9:LEU:O	32:B6:9:LEU:HD13	2.04	0.57
34:B8:23:VAL:CG1	34:B8:46:ARG:HB3	2.34	0.57
36:BA:1464:C:HO2'	36:BA:1528:A:H8	1.52	0.57
28:B2:51:ARG:CD	36:BA:94(A):G:H21	2.17	0.57
39:BD:111:LEU:HD22	39:BD:115:GLN:OE1	2.05	0.57
39:BD:94:LEU:HB2	39:BD:104:TYR:HE1	1.69	0.57
40:BE:26:ILE:HG23	40:BE:196:VAL:HG21	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BG:36:LYS:HD3	42:BG:95:ARG:HH12	1.70	0.57
50:BR:45:ARG:CG	50:BR:46:GLY:H	2.13	0.57
52:BT:28:VAL:HG13	52:BT:46:GLU:CA	2.32	0.57
54:BV:47:VAL:O	54:BV:47:VAL:HG23	2.05	0.57
56:BX:33:LYS:HA	56:BX:33:LYS:HE2	1.86	0.57
57:BY:28:LYS:HB3	57:BY:39:VAL:H	1.69	0.57
57:BY:86:ARG:NH2	57:BY:95:LYS:HE2	2.19	0.57
3:CC:70:VAL:O	3:CC:105:GLU:HA	2.04	0.57
5:CE:60:TYR:CE1	5:CE:64:ARG:NH2	2.73	0.57
10:CJ:3:LYS:HD2	10:CJ:77:PRO:HG3	1.87	0.57
11:CK:80:VAL:HG13	11:CK:103:LEU:HD11	1.86	0.57
20:CT:62:LEU:HA	20:CT:65:LYS:HB2	1.86	0.57
20:CT:50:GLU:HB2	20:CT:99:LEU:CD1	2.33	0.57
25:CZ:315:LYS:HA	25:CZ:372:VAL:O	2.04	0.57
27:D1:53:VAL:HG22	27:D1:74:VAL:HG13	1.85	0.57
34:D8:6:THR:HG21	34:D8:63:PRO:HD3	1.86	0.57
36:DA:1722:A:O2'	36:DA:1739:U:C5'	2.53	0.57
40:DE:5:LEU:HD12	40:DE:51:PHE:HB2	1.86	0.57
42:DG:131:TYR:HB3	42:DG:159:VAL:HG13	1.84	0.57
42:DG:68:PRO:HG3	42:DG:92:VAL:HB	1.85	0.57
46:DN:99:LEU:O	46:DN:103:VAL:HG23	2.04	0.57
49:DQ:134:ARG:CD	58:DZ:122:ARG:NH2	2.68	0.57
51:DS:11:LYS:HG2	51:DS:11:LYS:O	2.05	0.57
55:DW:84:ARG:HB2	55:DW:96:ILE:HG22	1.85	0.57
57:DY:31:LEU:HB2	57:DY:32:PRO:HA	1.87	0.57
58:DZ:142:SER:C	58:DZ:144:LEU:H	2.06	0.57
1:AA:1378:C:H4'	7:AG:94:ARG:HH22	1.70	0.56
1:AA:189(A):C:H2'	1:AA:189(B):C:C6	2.40	0.56
1:AA:390:C:H4'	16:AP:28:ARG:HH21	1.70	0.56
1:AA:443:C:H2'	1:AA:444:C:H6	1.70	0.56
1:AA:457:C:H2'	1:AA:458:C:C6	2.40	0.56
1:AA:961:U:O2'	1:AA:962:C:P	2.63	0.56
9:AI:53:VAL:CG2	9:AI:95:LYS:HZ3	1.97	0.56
9:AI:9:ARG:HG3	9:AI:14:VAL:HG13	1.87	0.56
25:AZ:26:THR:HB	60:AZ:501:GDP:O2A	2.05	0.56
31:B5:54:GLY:N	31:B5:56:LYS:NZ	2.51	0.56
36:BA:2524:G:C8	36:BA:2524:G:H5'	2.35	0.56
36:BA:2691:C:H6	36:BA:2691:C:H5'	1.69	0.56
36:BA:2761:G:C2'	36:BA:2762:G:H5''	2.35	0.56
36:BA:672:C:O3'	41:BF:81:PRO:HG3	2.05	0.56
40:BE:182:LEU:C	40:BE:183:LEU:HD12	2.24	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BG:152:LEU:HD23	42:BG:152:LEU:H	1.70	0.56
42:BG:51:ARG:CA	42:BG:51:ARG:HE	2.08	0.56
42:BG:86:MET:O	42:BG:86:MET:HG2	2.05	0.56
50:BR:55:ALA:HB1	50:BR:84:ALA:HB2	1.85	0.56
51:BS:106:ARG:CZ	51:BS:106:ARG:HB3	2.35	0.56
36:BA:533:G:H5'	53:BU:24:TYR:CD1	2.40	0.56
2:CB:139:LYS:O	2:CB:143:GLU:HG3	2.04	0.56
2:CB:72:GLY:O	2:CB:94:ASN:HA	2.04	0.56
3:CC:135:LYS:NZ	5:CE:50:GLU:HG2	2.20	0.56
10:CJ:33:GLN:O	10:CJ:75:ILE:HG12	2.05	0.56
18:CR:26:LEU:CD2	18:CR:39:VAL:HG13	2.35	0.56
23:CX:20:U:O2'	23:CX:21:C:H5'	2.05	0.56
25:CZ:108:ALA:HB3	25:CZ:137:LYS:O	2.05	0.56
26:D0:56:ASP:OD1	26:D0:58:THR:OG1	2.20	0.56
32:D6:15:GLU:O	32:D6:17:LYS:N	2.38	0.56
34:D8:30:ARG:HA	34:D8:30:ARG:HE	1.70	0.56
36:DA:1106:G:H2'	36:DA:1107:G:O4'	2.04	0.56
36:DA:2807:G:H3'	36:DA:2808:U:H5''	1.86	0.56
36:DA:530:G:C5	36:DA:2022:U:H5''	2.40	0.56
36:DA:769:G:H4'	36:DA:1379:A:N1	2.20	0.56
39:DD:131:LEU:HB2	39:DD:136:ILE:HD11	1.86	0.56
40:DE:61:ARG:HB3	40:DE:62:PRO:CD	2.33	0.56
57:DY:86:ARG:NH2	57:DY:95:LYS:HE2	2.18	0.56
1:AA:1003:G:C3'	1:AA:1004:A:H4'	2.34	0.56
1:AA:1354:C:H2'	1:AA:1355:G:H8	1.69	0.56
1:AA:345:C:H4'	52:BT:41:ARG:HH21	1.70	0.56
1:AA:975:A:H5'	1:AA:975:A:C8	2.40	0.56
7:AG:113:GLU:CG	7:AG:119:ARG:HG2	2.35	0.56
9:AI:4:TYR:CG	9:AI:88:TYR:HB2	2.39	0.56
9:AI:53:VAL:C	9:AI:55:ALA:H	2.07	0.56
10:AJ:33:GLN:O	10:AJ:75:ILE:HG12	2.05	0.56
18:AR:36:ASN:HD21	18:AR:39:VAL:CG2	2.18	0.56
26:B0:16:SER:HB2	36:BA:2262:U:C5	2.39	0.56
27:B1:7:ILE:HG22	27:B1:8:SER:N	2.20	0.56
28:B2:28:LYS:O	28:B2:57:ILE:HD11	2.05	0.56
28:B2:69:ARG:HD2	28:B2:69:ARG:N	2.19	0.56
36:BA:1683:C:H2'	36:BA:1684:C:C6	2.40	0.56
36:BA:1683:C:H2'	36:BA:1684:C:H6	1.70	0.56
38:BC:106:GLY:O	38:BC:107:TRP:HB3	2.05	0.56
39:BD:224:ALA:C	39:BD:226:MET:H	2.08	0.56
40:BE:38:THR:HB	40:BE:41:LYS:CG	2.32	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BF:160:ASN:HD21	41:BF:162:LEU:CD1	2.17	0.56
47:BO:23:ARG:HG3	47:BO:24:VAL:N	2.18	0.56
47:BO:35:VAL:HG11	47:BO:69:ILE:HD13	1.87	0.56
50:BR:94:TYR:CD1	50:BR:94:TYR:N	2.70	0.56
52:BT:134:GLU:O	52:BT:135:ALA:HB3	2.04	0.56
52:BT:29:ARG:CB	52:BT:85:LYS:HA	2.36	0.56
54:BV:52:VAL:HG13	54:BV:55:ALA:HB3	1.86	0.56
57:BY:51:VAL:O	57:BY:53:PRO:HD3	2.05	0.56
1:CA:1242:C:O2'	1:CA:1243:C:H5'	2.06	0.56
1:CA:858:G:C5	1:CA:869:G:N7	2.73	0.56
1:CA:953:G:C5'	1:CA:965:A:H61	2.18	0.56
6:CF:11:ASN:HB3	6:CF:14:LEU:CG	2.32	0.56
9:CI:88:TYR:O	9:CI:89:ASN:HB2	2.05	0.56
14:CN:27:CYS:SG	14:CN:29:ARG:HB2	2.46	0.56
22:CW:67:C:H2'	22:CW:68:C:C6	2.40	0.56
33:D7:9:ARG:NE	36:DA:1310:G:OP2	2.30	0.56
36:DA:1523:U:H2'	36:DA:1524:G:H8	1.70	0.56
36:DA:2376:A:H2'	36:DA:2377:A:O4'	2.05	0.56
36:DA:672:C:O3'	41:DF:81:PRO:HG3	2.05	0.56
36:DA:691:C:O2'	36:DA:692:C:H5'	2.05	0.56
38:DC:190:ARG:O	38:DC:194:ARG:HG3	2.05	0.56
40:DE:87:GLU:OE2	40:DE:89:ASP:HB3	2.05	0.56
46:DN:96:GLU:O	46:DN:100:GLU:HG3	2.04	0.56
47:DO:2:ILE:HD12	47:DO:6:THR:HG21	1.87	0.56
48:DP:135:LEU:HD13	48:DP:135:LEU:O	2.05	0.56
56:DX:3:THR:HA	56:DX:6:ASP:OD1	2.04	0.56
57:DY:27:VAL:HA	57:DY:28:LYS:HE2	1.88	0.56
57:DY:90:LEU:HG	57:DY:91:GLU:H	1.70	0.56
1:AA:59:A:H5'	1:AA:60:A:H5''	1.85	0.56
2:AB:95:GLN:NE2	2:AB:147:LYS:HE2	2.20	0.56
4:AD:191:ARG:HD3	4:AD:200:GLU:OE2	2.05	0.56
7:AG:137:LYS:O	7:AG:138:LYS:C	2.44	0.56
22:AV:44:G:H2'	22:AV:44:G:N3	2.20	0.56
25:AZ:84:GLY:O	25:AZ:85:HIS:HB3	2.04	0.56
26:B0:20:ARG:CG	26:B0:20:ARG:HH11	2.18	0.56
34:B8:50:LEU:N	34:B8:53:PRO:HD3	2.20	0.56
36:BA:108:U:H2'	36:BA:109:G:H8	1.70	0.56
36:BA:1709:U:H2'	36:BA:1710:C:C6	2.40	0.56
31:B5:7:PRO:HG2	36:BA:2016:U:O2	2.05	0.56
36:BA:528:A:H2	36:BA:2043:C:O5'	1.88	0.56
36:BA:2101:G:C3'	36:BA:2102:U:H5''	2.34	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2836:U:O5'	36:BA:2836:U:H6	1.88	0.56
39:BD:36:PRO:O	39:BD:37:LEU:HB2	2.04	0.56
41:BF:164:ARG:HG2	41:BF:164:ARG:NH1	2.17	0.56
46:BN:43:THR:HB	46:BN:46:VAL:HG11	1.86	0.56
48:BP:23:PRO:HD2	48:BP:33:ARG:NE	2.14	0.56
50:BR:101:ALA:O	50:BR:102:GLU:HB2	2.04	0.56
52:BT:4:GLY:O	52:BT:7:ILE:HB	2.05	0.56
56:BX:57:LEU:HD13	56:BX:57:LEU:N	2.19	0.56
57:BY:27:VAL:HA	57:BY:28:LYS:HE2	1.87	0.56
57:BY:31:LEU:HB2	57:BY:32:PRO:HA	1.86	0.56
1:CA:1158:C:H2'	1:CA:1158:C:O2	2.04	0.56
1:CA:498:U:O2'	1:CA:499:A:H8	1.88	0.56
1:CA:580:U:H2'	1:CA:581:G:O4'	2.05	0.56
2:CB:18:GLY:H	2:CB:42:ILE:HG23	1.69	0.56
7:CG:113:GLU:HG3	7:CG:118:VAL:HG23	1.86	0.56
9:CI:65:VAL:HG21	9:CI:73:GLN:HB3	1.86	0.56
9:CI:114:TYR:CE1	10:CJ:59:SER:HA	2.39	0.56
16:CP:21:VAL:HG12	16:CP:34:GLU:O	2.05	0.56
25:CZ:11:HIS:O	25:CZ:12:VAL:HG13	2.05	0.56
25:CZ:320:VAL:HG13	25:CZ:397:ALA:O	2.05	0.56
32:D6:9:LEU:HD22	32:D6:10:LEU:N	2.20	0.56
32:D6:15:GLU:CD	32:D6:18:ARG:NE	2.58	0.56
34:D8:14:VAL:HG21	34:D8:22:VAL:HG13	1.87	0.56
35:D9:35:ARG:O	35:D9:36:GLN:O	2.22	0.56
36:DA:1184:G:O2'	36:DA:1185:C:H5'	2.05	0.56
36:DA:1417:C:H2'	36:DA:1418:G:O4'	2.04	0.56
36:DA:1827:C:O2'	36:DA:1828:G:H5'	2.06	0.56
36:DA:2297:C:O2'	36:DA:2298:A:H5'	2.05	0.56
36:DA:549:G:O2'	36:DA:551:G:H5'	2.05	0.56
36:DA:621:A:C2'	36:DA:622:G:H5'	2.35	0.56
36:DA:648:G:H2'	36:DA:649:G:H8	1.71	0.56
38:DC:5:LYS:HB3	38:DC:8:ARG:HH21	1.70	0.56
38:DC:75:LEU:HD12	38:DC:75:LEU:C	2.24	0.56
39:DD:30:GLU:HG2	39:DD:35:LYS:HZ1	1.70	0.56
40:DE:116:VAL:CG2	40:DE:117:MET:N	2.68	0.56
40:DE:116:VAL:O	40:DE:117:MET:CB	2.52	0.56
40:DE:101:ARG:NH2	40:DE:171:GLU:HB2	2.20	0.56
42:DG:51:ARG:NH1	42:DG:53:LEU:HD22	2.21	0.56
46:DN:94:HIS:N	46:DN:95:PRO:CD	2.68	0.56
47:DO:114:ILE:H	47:DO:114:ILE:CD1	2.18	0.56
47:DO:88:ASN:OD1	47:DO:90:GLN:N	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DR:79:LEU:HA	50:DR:83:ILE:HG13	1.86	0.56
52:DT:11:GLU:H	52:DT:11:GLU:CD	2.09	0.56
53:DU:76:TYR:O	53:DU:80:ILE:HG12	2.04	0.56
57:DY:95:LYS:CE	57:DY:100:ALA:HB2	2.35	0.56
1:AA:260:G:H2'	1:AA:261:U:C6	2.40	0.56
2:AB:31:TYR:O	2:AB:42:ILE:HG13	2.06	0.56
2:AB:18:GLY:H	2:AB:42:ILE:HG23	1.70	0.56
3:AC:82:GLU:O	3:AC:86:VAL:HG13	2.05	0.56
6:AF:3:ARG:HH11	6:AF:3:ARG:HG3	1.70	0.56
7:AG:99:LEU:O	7:AG:102:ARG:HG2	2.06	0.56
9:AI:106:ALA:O	9:AI:108:VAL:HG23	2.05	0.56
9:AI:53:VAL:HG13	9:AI:95:LYS:CD	2.31	0.56
19:AS:29:ARG:HD2	19:AS:29:ARG:N	2.19	0.56
22:AW:30:G:H2'	22:AW:31:A:H8	1.69	0.56
36:BA:2761:G:H2'	36:BA:2762:G:H5''	1.87	0.56
36:BA:93:G:H2'	36:BA:94:C:C6	2.41	0.56
37:BB:56:G:O2'	37:BB:57:A:OP2	2.21	0.56
42:BG:150:ASP:O	42:BG:151:ALA:HB3	2.04	0.56
42:BG:41:GLN:CD	42:BG:60:LEU:HD21	2.25	0.56
42:BG:6:ALA:O	42:BG:10:LYS:HD3	2.05	0.56
48:BP:16:ARG:CZ	48:BP:16:ARG:HB2	2.35	0.56
57:BY:81:LYS:HD2	57:BY:96:ILE:HD11	1.86	0.56
1:CA:260:G:H2'	1:CA:261:U:C6	2.40	0.56
1:CA:858:G:C6	1:CA:869:G:C8	2.94	0.56
3:CC:76:VAL:HG21	3:CC:103:VAL:CG2	2.35	0.56
4:CD:36:ARG:C	4:CD:38:TYR:H	2.07	0.56
5:CE:41:VAL:HG23	5:CE:67:VAL:CG1	2.34	0.56
1:CA:751:U:H4'	15:CO:24:SER:HA	1.87	0.56
24:CY:49:G:O2'	24:CY:50:G:H5'	2.06	0.56
25:CZ:171:ILE:HG22	25:CZ:172:ARG:N	2.19	0.56
27:D1:29:GLY:O	27:D1:31:GLY:N	2.38	0.56
34:D8:23:VAL:HG12	34:D8:46:ARG:NH1	2.11	0.56
35:D9:16:VAL:HG11	36:DA:1032:A:O3'	2.05	0.56
36:DA:1013:C:H2'	36:DA:1014:U:C6	2.41	0.56
36:DA:1112:G:O2'	36:DA:1113:U:H5'	2.04	0.56
36:DA:1231:G:H2'	36:DA:1232:G:C8	2.41	0.56
36:DA:1464:C:HO2'	36:DA:1528:A:H8	1.49	0.56
36:DA:2544:G:H8	36:DA:2544:G:O5'	1.88	0.56
36:DA:31:C:O2'	36:DA:32:C:H5''	2.05	0.56
39:DD:31:LYS:HG3	39:DD:33:LEU:HG	1.87	0.56
40:DE:75:VAL:O	40:DE:77:ILE:N	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DN:71:ILE:HG21	46:DN:84:LYS:HB3	1.87	0.56
49:DQ:116:GLU:O	49:DQ:120:ILE:HG12	2.05	0.56
50:DR:103:ARG:NH1	50:DR:110:PRO:HB3	2.20	0.56
54:DV:59:ALA:HA	54:DV:95:LEU:O	2.05	0.56
57:DY:81:LYS:HD2	57:DY:96:ILE:HD11	1.87	0.56
1:AA:580:U:H2'	1:AA:581:G:O4'	2.05	0.56
1:AA:736:C:H2'	1:AA:737:A:C8	2.39	0.56
4:AD:36:ARG:C	4:AD:38:TYR:H	2.07	0.56
8:AH:56:LYS:HD2	8:AH:56:LYS:N	2.20	0.56
8:AH:20:TYR:CE2	8:AH:76:PRO:HG2	2.40	0.56
12:AL:8:ASN:O	12:AL:12:ARG:HG3	2.05	0.56
22:AV:41:C:C3'	22:AV:42:C:H5''	2.36	0.56
25:AZ:315:LYS:HA	25:AZ:372:VAL:O	2.04	0.56
30:B4:7:PRO:CG	42:BG:61:ALA:HB1	2.36	0.56
32:B6:10:LEU:CD2	32:B6:10:LEU:N	2.67	0.56
36:BA:1049:C:H2'	36:BA:1050:A:C8	2.30	0.56
36:BA:137:C:O2	36:BA:137:C:H2'	2.04	0.56
36:BA:1784:A:H4'	36:BA:1785:A:O5'	2.05	0.56
36:BA:1947:C:C2'	36:BA:1948:G:H5''	2.35	0.56
36:BA:2240:C:O2'	36:BA:2241:A:H5'	2.05	0.56
36:BA:335:C:H2'	36:BA:336:C:C6	2.40	0.56
36:BA:419:C:H2'	36:BA:420:C:C6	2.39	0.56
36:BA:84:A:H5''	57:BY:9:LYS:HD2	1.87	0.56
36:BA:926:A:H5'	36:BA:926:A:H8	1.71	0.56
43:BH:76:VAL:O	43:BH:79:VAL:HG22	2.06	0.56
57:BY:8:LYS:N	57:BY:8:LYS:CD	2.65	0.56
58:BZ:114:GLY:H	58:BZ:146:ILE:CG2	2.18	0.56
58:BZ:115:GLY:HA3	58:BZ:174:VAL:CG1	2.35	0.56
58:BZ:6:LYS:HG2	58:BZ:8:TYR:OH	2.06	0.56
1:CA:1378:C:H4'	7:CG:94:ARG:HH22	1.71	0.56
1:CA:443:C:H2'	1:CA:444:C:C6	2.40	0.56
13:CM:83:ASP:CG	13:CM:84:ILE:N	2.58	0.56
28:D2:46:GLN:HB3	28:D2:48:HIS:HE1	1.71	0.56
32:D6:15:GLU:HG3	32:D6:47:THR:HG21	1.86	0.56
36:DA:1166:C:H2'	36:DA:1167:U:C6	2.40	0.56
36:DA:1542:A:C8	36:DA:1544:A:H5'	2.40	0.56
36:DA:153:C:H2'	36:DA:154:G:C8	2.40	0.56
36:DA:2341:G:H2'	36:DA:2342:C:C6	2.39	0.56
36:DA:2703:C:O2'	36:DA:2704:C:H5'	2.05	0.56
36:DA:744:G:OP1	40:DE:132:HIS:HB3	2.06	0.56
42:DG:86:MET:N	42:DG:87:PRO:CD	2.68	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DO:35:VAL:HG11	47:DO:69:ILE:HD13	1.87	0.56
56:DX:18:TYR:O	56:DX:20:GLY:N	2.38	0.56
57:DY:51:VAL:O	57:DY:53:PRO:HD3	2.05	0.56
2:AB:44:LEU:HD12	2:AB:44:LEU:N	2.14	0.56
2:AB:88:ALA:HB2	2:AB:219:VAL:HG13	1.86	0.56
2:AB:97:TRP:CZ3	2:AB:176:GLU:OE2	2.58	0.56
20:AT:50:GLU:HB2	20:AT:99:LEU:CD1	2.34	0.56
28:B2:65:ASN:HB3	36:BA:72:U:C5	2.41	0.56
32:B6:53:LYS:N	32:B6:53:LYS:HD3	2.19	0.56
36:BA:658:C:H2'	36:BA:659:C:H6	1.66	0.56
38:BC:149:ILE:HG23	38:BC:150:GLY:N	2.20	0.56
39:BD:161:THR:O	39:BD:196:VAL:HG23	2.06	0.56
39:BD:31:LYS:HG3	39:BD:33:LEU:HG	1.88	0.56
41:BF:101:LEU:HD12	41:BF:102:PRO:CD	2.35	0.56
41:BF:126:VAL:HG11	41:BF:142:TRP:HH2	1.69	0.56
48:BP:135:LEU:HD13	48:BP:135:LEU:O	2.06	0.56
34:B8:25:MET:HG3	48:BP:64:LYS:HB2	1.88	0.56
49:BQ:59:ARG:HD2	49:BQ:59:ARG:O	2.06	0.56
49:BQ:19:GLY:O	49:BQ:98:LYS:HD3	2.05	0.56
54:BV:28:GLU:HB3	54:BV:29:PRO:HD2	1.87	0.56
1:CA:1148:U:H2'	1:CA:1149:C:O4'	2.05	0.56
1:CA:659:U:O2'	1:CA:660:G:H5'	2.06	0.56
2:CB:109:SER:C	2:CB:111:ARG:N	2.58	0.56
6:CF:21:LEU:HD13	6:CF:21:LEU:C	2.26	0.56
9:CI:33:PHE:C	9:CI:35:GLU:H	2.08	0.56
20:CT:73:HIS:HB3	20:CT:74:LYS:HD3	1.87	0.56
25:CZ:263:ARG:HG3	25:CZ:264:LYS:N	2.20	0.56
26:D0:43:THR:HG22	36:DA:2331:G:O2'	2.05	0.56
28:D2:64:LEU:O	28:D2:68:ARG:HB2	2.06	0.56
36:DA:1572:A:O2'	36:DA:1573:G:H5'	2.05	0.56
36:DA:2836:U:O5'	36:DA:2836:U:H6	1.88	0.56
36:DA:882:G:H2'	36:DA:883:G:H8	1.70	0.56
38:DC:32:LEU:HD13	38:DC:220:PRO:HG2	1.86	0.56
43:DH:159:GLU:C	43:DH:159:GLU:CD	2.63	0.56
36:DA:2657:A:O2'	43:DH:160:LYS:HE2	2.06	0.56
46:DN:25:ARG:HG2	46:DN:25:ARG:HH11	1.71	0.56
52:DT:31:SER:OG	52:DT:32:TYR:CE1	2.59	0.56
53:DU:92:ARG:HD3	53:DU:94:ASN:HB3	1.87	0.56
56:DX:57:LEU:HD13	56:DX:57:LEU:N	2.20	0.56
57:DY:17:SER:OG	57:DY:18:GLY:N	2.37	0.56
1:AA:192:U:O4'	20:AT:103:GLY:HA2	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:202:U:H4'	1:AA:203:U:OP2	2.04	0.56
3:AC:95:THR:CG2	3:AC:97:LYS:HD2	2.35	0.56
4:AD:152:SER:O	4:AD:154:ASN:N	2.39	0.56
10:AJ:34:VAL:CG2	10:AJ:74:ILE:HG22	2.34	0.56
12:AL:47:LYS:C	12:AL:49:ASN:N	2.57	0.56
25:AZ:110:ASP:HB3	25:AZ:113:MET:HE1	1.86	0.56
28:B2:10:LEU:O	28:B2:14:ARG:HG3	2.06	0.56
30:B4:22:ILE:N	30:B4:22:ILE:HD12	2.19	0.56
36:BA:1077:A:P	58:BZ:111:VAL:HG11	2.45	0.56
36:BA:2376:A:H2'	36:BA:2377:A:O4'	2.05	0.56
36:BA:252:G:OP2	48:BP:50:ARG:NH2	2.34	0.56
38:BC:27:ARG:NE	38:BC:182:PRO:CB	2.68	0.56
39:BD:134:ARG:NH1	39:BD:135:PHE:CE1	2.73	0.56
39:BD:223:GLY:O	39:BD:224:ALA:O	2.24	0.56
42:BG:131:TYR:HB3	42:BG:159:VAL:HG12	1.88	0.56
50:BR:55:ALA:HB2	50:BR:79:LEU:CD1	2.33	0.56
52:BT:32:TYR:HB3	52:BT:81:PRO:HB3	1.87	0.56
52:BT:96:ARG:HB2	52:BT:96:ARG:NH1	2.21	0.56
57:BY:7:VAL:HB	57:BY:8:LYS:HZ3	1.71	0.56
1:CA:115:G:H1'	1:CA:116:A:N7	2.21	0.56
1:CA:1264:C:H2'	1:CA:1265:G:C8	2.40	0.56
1:CA:490:G:H2'	1:CA:491:G:C8	2.40	0.56
1:CA:946:A:H2'	1:CA:947:G:H8	1.68	0.56
2:CB:154:LEU:O	2:CB:156:LYS:HG3	2.04	0.56
6:CF:63:TYR:N	6:CF:63:TYR:HD1	2.04	0.56
13:CM:49:THR:O	13:CM:53:VAL:HG23	2.05	0.56
13:CM:3:ARG:HH21	13:CM:7:VAL:HG22	1.71	0.56
14:CN:15:LYS:HB3	14:CN:16:PHE:CE2	2.41	0.56
20:CT:26:ASN:N	20:CT:26:ASN:HD22	2.04	0.56
25:CZ:64:ASN:ND2	25:CZ:64:ASN:H	2.02	0.56
29:D3:26:LEU:HB2	29:D3:28:LEU:CD2	2.36	0.56
31:D5:31:VAL:HG13	31:D5:42:PRO:HG3	1.87	0.56
33:D7:43:THR:HG23	33:D7:44:PRO:HD2	1.87	0.56
36:DA:2133:G:H2'	36:DA:2157:G:H22	1.68	0.56
36:DA:2206:G:N3	36:DA:2206:G:H3'	2.21	0.56
36:DA:519:U:H2'	36:DA:520:G:H8	1.70	0.56
41:DF:206:ILE:HG22	41:DF:207:GLY:N	2.19	0.56
50:DR:87:TYR:O	50:DR:89:ASP:N	2.38	0.56
51:DS:97:ARG:C	51:DS:97:ARG:NE	2.59	0.56
52:DT:30:VAL:HG12	52:DT:44:ASP:CG	2.26	0.56
1:AA:476:G:H2'	1:AA:477:A:C8	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:476:G:H2'	1:AA:477:A:H8	1.69	0.56
1:AA:662:G:H2'	1:AA:663:A:C8	2.41	0.56
1:AA:713:G:H2'	1:AA:714:G:C8	2.40	0.56
1:AA:865:A:C2	1:AA:918:A:H4'	2.41	0.56
1:AA:950:U:H2'	1:AA:951:G:C8	2.40	0.56
2:AB:151:GLY:C	2:AB:153:ARG:H	2.09	0.56
13:AM:108:ARG:HH11	13:AM:108:ARG:HG3	1.71	0.56
24:AY:43:G:H5'	24:AY:44:G:OP2	2.05	0.56
26:B0:56:ASP:OD1	26:B0:58:THR:OG1	2.21	0.56
28:B2:66:GLU:OE2	28:B2:67:LYS:HB2	2.06	0.56
36:BA:1013:C:H2'	36:BA:1014:U:C6	2.41	0.56
36:BA:1328:G:H2'	36:BA:1330:C:C5	2.40	0.56
36:BA:1412:A:O2'	36:BA:1413:G:H5'	2.05	0.56
36:BA:2544:G:O5'	36:BA:2544:G:H8	1.88	0.56
36:BA:2822:G:H2'	36:BA:2823:A:H5''	1.87	0.56
36:BA:363(E):U:H2'	36:BA:363(F):A:H1'	1.87	0.56
38:BC:189:ILE:O	38:BC:193:ILE:HG13	2.05	0.56
46:BN:24:GLY:O	46:BN:28:THR:HB	2.05	0.56
58:BZ:4:ARG:HG2	58:BZ:58:VAL:HB	1.87	0.56
1:CA:961:U:O2'	1:CA:962:C:P	2.64	0.56
5:CE:152:ARG:O	5:CE:153:LYS:C	2.43	0.56
1:CA:940:C:P	7:CG:102:ARG:NH2	2.78	0.56
25:CZ:182:MET:SD	25:CZ:196:VAL:HG21	2.46	0.56
30:D4:14:ILE:HG13	30:D4:31:ILE:CB	2.31	0.56
35:D9:4:ARG:O	35:D9:36:GLN:HA	2.05	0.56
36:DA:1060:U:O4'	36:DA:1061:U:H5''	2.04	0.56
36:DA:1270:C:H5''	36:DA:1271:G:O5'	2.06	0.56
36:DA:1328:G:H2'	36:DA:1330:C:C5	2.41	0.56
36:DA:1494:A:C3'	36:DA:1495:A:H5''	2.36	0.56
36:DA:1498:C:H2'	36:DA:1499:C:C5'	2.35	0.56
36:DA:2310:A:O2'	36:DA:2311:A:C5'	2.47	0.56
36:DA:2466:C:O2'	36:DA:2467:C:H5'	2.06	0.56
36:DA:321:G:N3	41:DF:165:ARG:HD3	2.21	0.56
36:DA:672:C:C2'	36:DA:673:C:C5'	2.83	0.56
40:DE:185:LYS:O	40:DE:186:GLY:O	2.23	0.56
44:DJ:41:UNK:O	44:DJ:53:UNK:HA	2.06	0.56
48:DP:16:ARG:CZ	48:DP:16:ARG:HB2	2.35	0.56
54:DV:58:VAL:O	54:DV:97:LYS:HB2	2.06	0.56
55:DW:14:PRO:HG2	55:DW:78:GLU:HG3	1.87	0.56
58:DZ:163:LEU:HD23	58:DZ:163:LEU:N	2.21	0.56
1:AA:189(H):G:O2'	1:AA:189(I):G:H8	1.89	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:416:G:O2'	1:AA:417:C:H5'	2.06	0.56
1:AA:625:G:H2'	1:AA:626:U:H6	1.71	0.56
1:AA:437:U:H5''	4:AD:155:LEU:HD13	1.87	0.56
12:AL:34:ARG:HG2	12:AL:35:GLY:N	2.21	0.56
17:AQ:53:LEU:HD21	17:AQ:85:VAL:HG11	1.88	0.56
17:AQ:45:HIS:HB2	17:AQ:65:ILE:CD1	2.36	0.56
20:AT:62:LEU:HA	20:AT:65:LYS:HB2	1.87	0.56
22:AV:51:U:H2'	22:AV:52:G:H8	1.69	0.56
24:AY:62:U:H5'	24:AY:62:U:H6	1.71	0.56
25:AZ:64:ASN:H	25:AZ:64:ASN:ND2	2.03	0.56
32:B6:53:LYS:CG	32:B6:54:ILE:H	2.19	0.56
34:B8:23:VAL:HG13	34:B8:46:ARG:HB3	1.86	0.56
36:BA:1523:U:H2'	36:BA:1524:G:H8	1.70	0.56
36:BA:2327:A:H2'	36:BA:2328:A:C8	2.40	0.56
36:BA:330:A:HO2'	36:BA:331:A:H8	1.54	0.56
37:BB:52:A:O2'	37:BB:53:A:C8	2.53	0.56
40:BE:65:GLY:O	40:BE:67:PHE:N	2.39	0.56
53:BU:95:LEU:CD1	54:BV:11:GLN:HG3	2.35	0.56
1:CA:1536:C:O2'	1:CA:1537:U:H5'	2.05	0.56
2:CB:233:SER:O	2:CB:235:SER:N	2.38	0.56
7:CG:38:LEU:HD12	7:CG:38:LEU:O	2.05	0.56
9:CI:40:LEU:O	9:CI:42:ARG:N	2.38	0.56
12:CL:75:HIS:HD2	12:CL:77:LEU:HB2	1.70	0.56
19:CS:48:THR:HG22	19:CS:61:TYR:CA	2.34	0.56
22:CW:37:A:H3'	22:CW:38:A:H8	1.71	0.56
25:CZ:313:HIS:HB2	25:CZ:380:LEU:HB2	1.88	0.56
29:D3:29:ARG:NH1	29:D3:29:ARG:HB2	2.18	0.56
30:D4:20:ASN:HD22	30:D4:21:VAL:N	2.03	0.56
32:D6:15:GLU:OE1	32:D6:18:ARG:CD	2.54	0.56
32:D6:53:LYS:CG	32:D6:54:ILE:H	2.19	0.56
33:D7:12:ARG:HG2	33:D7:46:VAL:HG22	1.88	0.56
35:D9:1:MET:HE2	35:D9:31:LYS:HB3	1.87	0.56
36:DA:137:C:O2	36:DA:137:C:H2'	2.04	0.56
36:DA:1683:C:H2'	36:DA:1684:C:C6	2.41	0.56
36:DA:1858:G:HO2'	36:DA:1859:A:H8	1.54	0.56
52:DT:50:ILE:HA	52:DT:99:LEU:CD1	2.36	0.56
1:AA:443:C:H2'	1:AA:444:C:C6	2.41	0.56
2:AB:188:ALA:O	2:AB:202:PRO:HA	2.06	0.56
3:AC:76:VAL:HG21	3:AC:103:VAL:CG2	2.35	0.56
7:AG:69:VAL:HG23	7:AG:134:ALA:O	2.06	0.56
7:AG:65:ALA:HB1	7:AG:127:ALA:HB3	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:88:TYR:O	9:AI:89:ASN:HB2	2.06	0.56
11:AK:80:VAL:HG13	11:AK:103:LEU:HD11	1.87	0.56
12:AL:126:LYS:HA	12:AL:126:LYS:HE2	1.88	0.56
15:AO:24:SER:O	15:AO:28:GLN:HG3	2.06	0.56
21:AU:3:LYS:HB3	21:AU:14:TRP:CD1	2.41	0.56
22:AV:16:U:H3	22:AV:59:U:H3	1.53	0.56
25:AZ:320:VAL:HG13	25:AZ:397:ALA:O	2.06	0.56
25:AZ:324:LYS:HA	25:AZ:364:PRO:HB3	1.88	0.56
28:B2:62:THR:OG1	36:BA:76:C:H4'	2.06	0.56
32:B6:53:LYS:H	32:B6:53:LYS:HD3	1.71	0.56
36:BA:1060:U:H1'	36:BA:1061:U:C5'	2.36	0.56
36:BA:108:U:H2'	36:BA:109:G:C8	2.41	0.56
36:BA:1163:G:O2'	36:BA:1164:G:H5'	2.06	0.56
36:BA:1817:G:H2'	36:BA:1818:U:H5'	1.86	0.56
36:BA:2833:G:H3'	36:BA:2834:G:H5'	1.82	0.56
46:BN:9:VAL:CG1	46:BN:10:GLU:H	2.03	0.56
46:BN:121:LYS:HB3	46:BN:123:TYR:HE1	1.71	0.56
47:BO:43:VAL:HG21	47:BO:52:VAL:CG1	2.36	0.56
50:BR:103:ARG:NH1	50:BR:110:PRO:HB3	2.21	0.56
52:BT:106:SER:O	52:BT:107:ASP:OD1	2.24	0.56
54:BV:68:LYS:HA	54:BV:68:LYS:HE2	1.88	0.56
57:BY:13:VAL:CG1	57:BY:28:LYS:HD3	2.36	0.56
1:CA:475:G:O2'	1:CA:476:G:H5'	2.06	0.56
1:CA:865:A:H2	1:CA:918:A:H4'	1.71	0.56
2:CB:236:TYR:O	2:CB:238:LEU:N	2.39	0.56
5:CE:102:ALA:HB1	5:CE:106:PRO:HG2	1.88	0.56
11:CK:33:THR:HG22	11:CK:39:PRO:CA	2.36	0.56
12:CL:45:PRO:HG3	12:CL:53:ARG:HD3	1.87	0.56
16:CP:20:VAL:HG23	16:CP:34:GLU:O	2.05	0.56
11:CK:108:ILE:CG2	18:CR:88:LYS:HB2	2.29	0.56
32:D6:15:GLU:OE1	32:D6:18:ARG:HG3	2.06	0.56
35:D9:7:VAL:HG22	35:D9:34:GLN:HG2	1.88	0.56
36:DA:1069:A:H1'	36:DA:1070:A:OP2	2.06	0.56
36:DA:1169:G:H1	36:DA:1180:C:N4	2.04	0.56
36:DA:1485:G:H22	36:DA:1505:C:H5'	1.71	0.56
36:DA:2206:G:H21	36:DA:2207:G:C5'	2.19	0.56
36:DA:2685:G:HO2'	36:DA:2726:U:H5	1.54	0.56
38:DC:149:ILE:HG23	38:DC:150:GLY:N	2.20	0.56
41:DF:25:PRO:CG	41:DF:119:ARG:HB2	2.36	0.56
44:DJ:8:UNK:C	44:DJ:10:UNK:H	2.18	0.56
48:DP:16:ARG:CB	48:DP:16:ARG:HH11	2.18	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:DU:76:TYR:CZ	53:DU:80:ILE:HG13	2.40	0.56
36:DA:1151:G:H5''	53:DU:81:HIS:CE1	2.41	0.56
54:DV:24:LYS:HA	54:DV:92:THR:CG2	2.33	0.56
58:DZ:77:ASP:O	58:DZ:78:LYS:HB2	2.05	0.56
58:DZ:99:TYR:CE1	58:DZ:125:LEU:HD13	2.41	0.56
1:AA:180:U:C2'	1:AA:181:G:H5'	2.35	0.56
1:AA:265:G:C2'	1:AA:266:G:H5''	2.32	0.56
2:AB:233:SER:O	2:AB:235:SER:N	2.38	0.56
5:AE:147:ASP:HB3	5:AE:150:ARG:HH12	1.71	0.56
5:AE:76:ILE:HG23	5:AE:93:PRO:HG3	1.88	0.56
11:AK:21:ILE:HG13	11:AK:30:VAL:HG12	1.88	0.56
22:AV:67:C:H2'	22:AV:68:C:C6	2.41	0.56
25:AZ:270:VAL:HG12	25:AZ:286:VAL:HG21	1.88	0.56
29:B3:26:LEU:HB2	29:B3:28:LEU:CD2	2.36	0.56
32:B6:15:GLU:O	32:B6:17:LYS:N	2.39	0.56
36:BA:1141:U:H6	46:BN:63:THR:HB	1.71	0.56
36:BA:2096:U:H2'	36:BA:2097:C:C6	2.41	0.56
36:BA:2840:C:H2'	36:BA:2841:C:C6	2.41	0.56
36:BA:549:G:O2'	36:BA:551:G:H5'	2.06	0.56
30:B4:34:GLU:HG2	42:BG:113:ARG:NH1	2.21	0.56
43:BH:83:TYR:HB2	43:BH:134:SER:CA	2.35	0.56
43:BH:159:GLU:C	43:BH:159:GLU:CD	2.64	0.56
46:BN:76:SER:HB3	46:BN:81:GLY:HA3	1.88	0.56
54:BV:58:VAL:O	54:BV:97:LYS:HB2	2.06	0.56
1:CA:1001:A:N3	1:CA:1001:A:H2'	2.21	0.56
1:CA:1241:G:H2'	1:CA:1242:C:C6	2.41	0.56
1:CA:490:G:H2'	1:CA:491:G:H8	1.71	0.56
6:CF:3:ARG:HH11	6:CF:3:ARG:HG3	1.71	0.56
7:CG:79:ARG:CG	7:CG:84:ASN:HA	2.15	0.56
10:CJ:24:VAL:HG21	10:CJ:37:PRO:CG	2.35	0.56
14:CN:12:ARG:HB3	14:CN:12:ARG:HH11	1.71	0.56
15:CO:82:ILE:CD1	15:CO:87:ILE:HB	2.35	0.56
22:CW:27:G:O2'	22:CW:28:G:H5'	2.06	0.56
25:CZ:326:GLU:CD	25:CZ:326:GLU:H	2.09	0.56
32:D6:13:CYS:HA	32:D6:50:ARG:O	2.06	0.56
36:DA:1678:G:N2	36:DA:1989:G:N2	2.53	0.56
36:DA:1947:C:C2'	36:DA:1948:G:H5''	2.36	0.56
36:DA:2590:A:H5''	39:DD:239:ARG:HE	1.70	0.56
36:DA:2776:A:H4'	36:DA:2777:G:H5''	1.88	0.56
38:DC:40:THR:HG22	38:DC:177:LYS:CE	2.36	0.56
53:DU:79:PHE:CE1	53:DU:83:LEU:HD11	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DX:13:LEU:HA	56:DX:18:TYR:CZ	2.40	0.56
58:DZ:10:ARG:CZ	58:DZ:36:LYS:HB2	2.36	0.56
4:AD:145:GLU:OE1	4:AD:145:GLU:O	2.25	0.55
9:AI:91:ASP:O	9:AI:93:ARG:N	2.39	0.55
11:AK:21:ILE:HG13	11:AK:30:VAL:CG1	2.36	0.55
13:AM:65:LYS:O	13:AM:70:LEU:HD12	2.06	0.55
16:AP:20:VAL:HG23	16:AP:34:GLU:O	2.06	0.55
24:AY:55:PSU:H2'	24:AY:56:C:OP2	2.05	0.55
25:AZ:108:ALA:HB3	25:AZ:137:LYS:O	2.06	0.55
25:AZ:361:MET:HG3	25:AZ:363:MET:HG3	1.87	0.55
30:B4:5:ILE:O	42:BG:67:LYS:HD2	2.05	0.55
32:B6:5:VAL:HB	36:BA:2284:C:OP2	2.06	0.55
36:BA:1056:G:H22	36:BA:1104:C:H42	1.54	0.55
36:BA:1104:C:H2'	36:BA:1105:U:C6	2.37	0.55
36:BA:1209:G:H21	36:BA:1210:A:N6	2.03	0.55
36:BA:1528:A:N1	36:BA:1542:A:H2	2.03	0.55
39:BD:31:LYS:HZ1	39:BD:33:LEU:HD11	1.69	0.55
39:BD:32:SER:O	39:BD:36:PRO:CG	2.53	0.55
40:BE:87:GLU:OE2	40:BE:89:ASP:HB3	2.05	0.55
41:BF:100:THR:O	41:BF:100:THR:HG22	2.04	0.55
41:BF:7:TYR:OH	41:BF:10:PRO:HB3	2.06	0.55
46:BN:2:LYS:HZ1	54:BV:13:ARG:H	1.54	0.55
48:BP:23:PRO:HB2	48:BP:33:ARG:CD	2.36	0.55
51:BS:11:LYS:HG2	51:BS:11:LYS:O	2.06	0.55
55:BW:43:GLY:O	55:BW:47:VAL:HG23	2.06	0.55
56:BX:50:LYS:H	56:BX:87:GLN:HE22	1.54	0.55
57:BY:90:LEU:HG	57:BY:91:GLU:H	1.72	0.55
58:BZ:119:GLU:C	58:BZ:121:HIS:H	2.08	0.55
58:BZ:152:ALA:CB	58:BZ:167:PRO:HB2	2.36	0.55
1:CA:711:G:O2'	1:CA:712:A:H5'	2.06	0.55
1:CA:713:G:H2'	1:CA:714:G:C8	2.40	0.55
2:CB:119:GLU:O	2:CB:122:PHE:HB3	2.06	0.55
4:CD:190:ASP:HB3	4:CD:193:ASP:OD2	2.06	0.55
7:CG:152:ALA:O	7:CG:155:ARG:HG3	2.06	0.55
11:CK:21:ILE:HG13	11:CK:30:VAL:CG1	2.35	0.55
24:CY:62:U:H6	24:CY:62:U:H5'	1.70	0.55
25:CZ:361:MET:HG3	25:CZ:363:MET:HG3	1.87	0.55
26:D0:20:ARG:CG	26:D0:20:ARG:HH11	2.19	0.55
31:D5:36:CYS:C	31:D5:38:ALA:N	2.60	0.55
36:DA:1311:G:H21	36:DA:1603:A:H62	1.53	0.55
36:DA:184:C:H2'	36:DA:185:U:C6	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1678:G:H22	36:DA:1989:G:H22	1.52	0.55
38:DC:40:THR:HG22	38:DC:177:LYS:CD	2.35	0.55
46:DN:24:GLY:O	46:DN:28:THR:HB	2.06	0.55
48:DP:87:ASP:O	48:DP:90:ARG:HB2	2.05	0.55
52:DT:96:ARG:HB2	52:DT:96:ARG:NH1	2.21	0.55
1:AA:141:A:H1'	1:AA:182:U:O2	2.07	0.55
1:AA:592:G:H2'	1:AA:593:G:H8	1.70	0.55
2:AB:21:ARG:HB3	2:AB:39:ILE:HG12	1.88	0.55
4:AD:121:VAL:HA	4:AD:126:ILE:HD13	1.86	0.55
10:AJ:55:LYS:NZ	10:AJ:55:LYS:HB2	1.99	0.55
25:AZ:324:LYS:HE3	25:AZ:326:GLU:OE2	2.07	0.55
29:B3:35:ARG:HD3	29:B3:37:LEU:HD21	1.89	0.55
32:B6:15:GLU:OE1	32:B6:18:ARG:HG3	2.06	0.55
32:B6:15:GLU:OE2	32:B6:41:PRO:HB2	2.06	0.55
36:BA:181:A:H5'	36:BA:181:A:C8	2.38	0.55
36:BA:2720:U:H5'	36:BA:2721:A:OP2	2.06	0.55
36:BA:654(I):C:H5''	36:BA:654(J):A:OP1	2.06	0.55
40:BE:57:LYS:HE3	40:BE:57:LYS:CA	2.21	0.55
41:BF:183:VAL:O	41:BF:187:VAL:HG23	2.07	0.55
42:BG:11:TYR:HA	42:BG:15:VAL:CG2	2.35	0.55
46:BN:111:PRO:HA	46:BN:114:ARG:NH1	2.22	0.55
48:BP:16:ARG:CZ	48:BP:18:ARG:HG2	2.36	0.55
36:BA:1246:A:OP1	48:BP:16:ARG:NH2	2.39	0.55
51:BS:15:ARG:HH12	51:BS:18:ILE:HD11	1.71	0.55
52:BT:106:SER:C	52:BT:107:ASP:OD1	2.44	0.55
1:AA:1442(B):A:H5'	52:BT:122:ASP:OD1	2.06	0.55
54:BV:59:ALA:HA	54:BV:95:LEU:O	2.05	0.55
57:BY:81:LYS:HD2	57:BY:96:ILE:CD1	2.37	0.55
3:CC:136:GLN:O	3:CC:139:GLN:HB3	2.07	0.55
7:CG:137:LYS:O	7:CG:138:LYS:C	2.45	0.55
9:CI:40:LEU:CD1	9:CI:70:LYS:HG2	2.34	0.55
9:CI:46:ALA:HB2	9:CI:74:ILE:HG23	1.88	0.55
14:CN:57:ARG:CB	14:CN:57:ARG:HH11	2.19	0.55
25:CZ:24:LYS:H	25:CZ:105:VAL:HG11	1.72	0.55
27:D1:29:GLY:HA3	36:DA:2396:G:O2'	2.06	0.55
36:DA:2756:U:H1'	36:DA:2757:A:C5'	2.29	0.55
39:DD:36:PRO:O	39:DD:37:LEU:HB2	2.06	0.55
41:DF:183:VAL:O	41:DF:187:VAL:HG23	2.06	0.55
43:DH:126:PRO:O	43:DH:127:GLU:HB2	2.07	0.55
44:DJ:96:UNK:O	44:DJ:100:UNK:N	2.39	0.55
50:DR:103:ARG:O	50:DR:104:ARG:HB2	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DR:34:ILE:HB	50:DR:114:VAL:CG2	2.37	0.55
36:DA:2822:G:O6	50:DR:4:LEU:HB3	2.05	0.55
37:DB:48:A:H4'	51:DS:95:HIS:CD2	2.41	0.55
53:DU:95:LEU:HD12	54:DV:11:GLN:HG3	1.88	0.55
36:DA:84:A:H2'	57:DY:9:LYS:NZ	2.19	0.55
1:AA:1269:A:C2	1:AA:1313:U:O4'	2.58	0.55
2:AB:118:LEU:HD13	2:AB:142:LEU:HB2	1.88	0.55
9:AI:97:LYS:HB3	9:AI:98:PRO:HD3	1.88	0.55
10:AJ:92:THR:HG23	10:AJ:93:GLY:N	2.22	0.55
22:AW:3:C:H2'	22:AW:4:C:O4'	2.06	0.55
22:AW:67:C:H2'	22:AW:68:C:C6	2.41	0.55
27:B1:78:LYS:CA	27:B1:78:LYS:HE2	2.36	0.55
35:B9:4:ARG:O	35:B9:36:GLN:HA	2.06	0.55
36:BA:1131:G:HO2'	36:BA:1132:A:H8	1.52	0.55
38:BC:5:LYS:HB3	38:BC:8:ARG:HH21	1.72	0.55
39:BD:44:ASN:N	39:BD:44:ASN:OD1	2.38	0.55
40:BE:57:LYS:HA	40:BE:57:LYS:CE	2.21	0.55
41:BF:4:VAL:HG11	41:BF:17:ARG:NE	2.21	0.55
42:BG:130:ASN:OD1	42:BG:160:VAL:HA	2.06	0.55
43:BH:105:LEU:CD2	43:BH:113:VAL:HB	2.35	0.55
43:BH:16:SER:HB2	43:BH:27:LYS:CB	2.27	0.55
43:BH:66:GLY:CA	43:BH:69:ARG:HB3	2.34	0.55
46:BN:96:GLU:O	46:BN:100:GLU:HG3	2.06	0.55
53:BU:76:TYR:CZ	53:BU:80:ILE:HG13	2.41	0.55
57:BY:77:PRO:O	57:BY:78:ALA:HB2	2.06	0.55
57:BY:87:LYS:O	57:BY:88:LYS:HB2	2.04	0.55
1:CA:1157:A:H1'	1:CA:1181:G:N2	2.20	0.55
1:CA:1282:C:O2'	1:CA:1283:G:H5'	2.06	0.55
1:CA:189(I):G:O2'	1:CA:189(J):G:H5'	2.06	0.55
1:CA:266:G:H5'	1:CA:268:C:H41	1.71	0.55
1:CA:424:G:O2'	1:CA:425:G:H5'	2.06	0.55
1:CA:626:U:H2'	1:CA:627:G:H8	1.70	0.55
3:CC:16:ARG:HB2	3:CC:16:ARG:HH11	1.71	0.55
3:CC:50:ALA:HB1	3:CC:70:VAL:CG1	2.37	0.55
9:CI:28:VAL:CG1	9:CI:29:ASN:H	2.10	0.55
11:CK:27:ASN:ND2	11:CK:28:THR:N	2.55	0.55
12:CL:81:SER:HA	12:CL:106:ASP:OD2	2.06	0.55
16:CP:67:THR:HG22	16:CP:68:ASP:N	2.20	0.55
22:CW:39:U:H4'	22:CW:39:U:OP1	2.07	0.55
25:CZ:262:THR:HG21	25:CZ:312:PRO:HD3	1.89	0.55
36:DA:1060:U:H1'	36:DA:1061:U:C5'	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1494:A:H3'	36:DA:1494:A:N3	2.20	0.55
36:DA:1567:A:C5'	39:DD:58:HIS:CD2	2.89	0.55
36:DA:1790:C:H5''	36:DA:1791:A:OP1	2.06	0.55
36:DA:282:A:N6	36:DA:359:A:H1'	2.22	0.55
36:DA:2870:C:H5''	50:DR:65:LEU:HD21	1.89	0.55
37:DB:44:G:H1'	37:DB:47:C:N4	2.22	0.55
38:DC:181:PRO:HB2	38:DC:183:GLU:OE2	2.06	0.55
42:DG:77:ILE:HB	42:DG:81:LYS:O	2.06	0.55
42:DG:88:ILE:HG22	42:DG:89:GLY:N	2.22	0.55
42:DG:36:LYS:HD3	42:DG:95:ARG:HH12	1.69	0.55
41:DF:37:VAL:CG1	48:DP:7:ARG:HH12	2.03	0.55
57:DY:88:LYS:O	57:DY:90:LEU:HD23	2.05	0.55
58:DZ:65:GLN:HB3	58:DZ:67:LEU:CD1	2.36	0.55
1:AA:475:G:O2'	1:AA:476:G:H5'	2.06	0.55
1:AA:769:G:H4'	1:AA:1513:A:H4'	1.88	0.55
1:AA:939:G:H2'	1:AA:940:C:C6	2.41	0.55
2:AB:154:LEU:O	2:AB:156:LYS:HG3	2.07	0.55
15:AO:36:ILE:HG23	15:AO:56:LEU:HD11	1.89	0.55
20:AT:73:HIS:HB3	20:AT:74:LYS:HD3	1.87	0.55
20:AT:45:GLN:HB3	20:AT:91:LEU:HD22	1.87	0.55
32:B6:41:PRO:HG2	32:B6:44:ARG:O	2.06	0.55
36:BA:1069:A:H1'	36:BA:1070:A:OP2	2.05	0.55
36:BA:1169:G:H1	36:BA:1180:C:N4	2.05	0.55
36:BA:2360:A:O2'	36:BA:2361:A:O4'	2.20	0.55
36:BA:227:A:C2	36:BA:2407:G:H1'	2.41	0.55
36:BA:523:C:O2'	36:BA:524:U:H5'	2.06	0.55
43:BH:52:VAL:HB	43:BH:69:ARG:HD3	1.88	0.55
46:BN:94:HIS:N	46:BN:95:PRO:CD	2.69	0.55
49:BQ:42:ILE:HD13	49:BQ:97:VAL:HG21	1.87	0.55
50:BR:111:LEU:N	50:BR:111:LEU:HD12	2.21	0.55
58:BZ:69:THR:HB	58:BZ:89:PHE:O	2.07	0.55
2:CB:95:GLN:NE2	2:CB:147:LYS:HE2	2.22	0.55
4:CD:152:SER:O	4:CD:154:ASN:N	2.39	0.55
11:CK:48:ILE:HD11	11:CK:67:ASP:CB	2.36	0.55
12:CL:34:ARG:HG2	12:CL:35:GLY:N	2.21	0.55
13:CM:2:ALA:HB3	13:CM:9:ILE:HG23	1.88	0.55
22:CV:67:C:H2'	22:CV:68:C:C6	2.42	0.55
25:CZ:368:VAL:HG12	25:CZ:369:THR:N	2.20	0.55
34:D8:11:LYS:H	34:D8:11:LYS:HD2	1.71	0.55
34:D8:18:ALA:HB2	36:DA:628:G:H5''	1.88	0.55
36:DA:134:C:H2'	36:DA:135:G:H8	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1784:A:H4'	36:DA:1785:A:O5'	2.06	0.55
36:DA:2160:G:H5'	36:DA:2160:G:C8	2.40	0.55
34:D8:41:ILE:HD12	36:DA:2419:U:OP1	2.07	0.55
36:DA:363(E):U:H2'	36:DA:363(F):A:H1'	1.87	0.55
38:DC:167:LYS:O	38:DC:167:LYS:HD2	2.06	0.55
39:DD:108:PRO:HB3	39:DD:143:HIS:CE1	2.41	0.55
42:DG:18:GLU:HG2	42:DG:175:LEU:HD13	1.88	0.55
48:DP:147:LEU:O	48:DP:148:LEU:HB2	2.07	0.55
48:DP:86:LYS:HB2	48:DP:117:GLU:O	2.07	0.55
49:DQ:133:ARG:CB	49:DQ:133:ARG:HH11	2.16	0.55
53:DU:27:LEU:O	53:DU:34:LYS:HB2	2.06	0.55
54:DV:61:VAL:O	54:DV:61:VAL:HG22	2.06	0.55
56:DX:27:THR:HG22	56:DX:80:ILE:HB	1.88	0.55
57:DY:47:LYS:HG3	57:DY:60:PHE:CZ	2.41	0.55
57:DY:73:ARG:HH22	57:DY:82:PRO:CA	2.14	0.55
1:AA:166:G:O2'	1:AA:167:G:H5'	2.07	0.55
1:AA:516:U:C4	1:AA:517:G:C6	2.94	0.55
1:AA:16:A:N1	1:AA:919:A:H2	2.03	0.55
1:AA:977:A:O2'	1:AA:978:A:H5''	2.06	0.55
3:AC:167:TRP:O	3:AC:168:ALA:HB3	2.06	0.55
3:AC:14:ILE:HD11	3:AC:179:ARG:HA	1.88	0.55
4:AD:157:LEU:HD12	4:AD:157:LEU:H	1.71	0.55
7:AG:79:ARG:CG	7:AG:84:ASN:HA	2.16	0.55
9:AI:40:LEU:O	9:AI:42:ARG:N	2.40	0.55
13:AM:2:ALA:HB3	13:AM:9:ILE:HG23	1.88	0.55
25:AZ:262:THR:HG21	25:AZ:312:PRO:HD3	1.88	0.55
36:BA:1112:G:O2'	36:BA:1113:U:H5'	2.06	0.55
36:BA:2807:G:C3'	36:BA:2808:U:H5''	2.36	0.55
36:BA:519:U:H2'	36:BA:520:G:H8	1.71	0.55
36:BA:675:A:OP1	41:BF:63:LYS:HE2	2.07	0.55
36:BA:84:A:H2'	57:BY:9:LYS:NZ	2.21	0.55
37:BB:106:G:O2'	37:BB:107:G:H5'	2.06	0.55
42:BG:77:ILE:HG22	42:BG:79:ASN:O	2.06	0.55
48:BP:17:LYS:HG2	48:BP:17:LYS:O	2.07	0.55
48:BP:97:PRO:O	48:BP:98:GLU:CB	2.55	0.55
1:CA:1065:U:C4	1:CA:1190:G:H1'	2.41	0.55
5:CE:41:VAL:O	5:CE:67:VAL:HG12	2.07	0.55
12:CL:70:ILE:HG22	12:CL:102:ARG:HH12	1.72	0.55
12:CL:113:ARG:HB3	12:CL:122:THR:HG21	1.88	0.55
19:CS:44:MET:N	19:CS:44:MET:SD	2.79	0.55
25:CZ:19:HIS:HA	25:CZ:115:GLN:HB2	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2078:C:H2'	36:DA:2079:U:C6	2.41	0.55
36:DA:2386:C:H2'	36:DA:2387:U:C6	2.42	0.55
37:DB:7:G:C3'	37:DB:8:U:H5''	2.37	0.55
38:DC:75:LEU:HG	38:DC:112:ALA:O	2.06	0.55
39:DD:218:ARG:HG3	39:DD:218:ARG:HH11	1.71	0.55
40:DE:65:GLY:O	40:DE:67:PHE:N	2.38	0.55
41:DF:84:VAL:C	41:DF:86:GLY:N	2.59	0.55
49:DQ:59:ARG:O	49:DQ:59:ARG:HD2	2.07	0.55
52:DT:106:SER:C	52:DT:107:ASP:OD1	2.44	0.55
53:DU:101:ARG:NH1	53:DU:101:ARG:HG3	2.21	0.55
54:DV:34:GLU:O	54:DV:36:PRO:CD	2.54	0.55
55:DW:22:ASP:HA	55:DW:25:ARG:NH1	2.19	0.55
1:AA:1150:U:O2	1:AA:1150:U:O4'	2.23	0.55
1:AA:392:G:H2'	1:AA:393:A:H8	1.72	0.55
1:AA:490:G:H2'	1:AA:491:G:H8	1.70	0.55
2:AB:86:GLU:C	2:AB:88:ALA:H	2.09	0.55
9:AI:99:LEU:H	9:AI:99:LEU:HD22	1.70	0.55
13:AM:116:THR:HG22	13:AM:116:THR:O	2.07	0.55
26:B0:40:GLN:HE22	26:B0:45:PHE:N	2.02	0.55
28:B2:48:HIS:NE2	28:B2:49:LYS:HE3	2.22	0.55
36:BA:134:C:H2'	36:BA:135:G:H8	1.72	0.55
36:BA:1503:U:C4	36:BA:1504:C:N4	2.74	0.55
36:BA:1485:G:H22	36:BA:1505:C:H5'	1.72	0.55
1:AA:784:C:H4'	36:BA:1837:C:OP1	2.07	0.55
36:BA:2341:G:H2'	36:BA:2342:C:C6	2.41	0.55
36:BA:324:A:H2'	36:BA:325:G:O4'	2.07	0.55
37:BB:7:G:C3'	37:BB:8:U:H5''	2.36	0.55
39:BD:142:VAL:HG22	39:BD:143:HIS:N	2.20	0.55
39:BD:61:LEU:O	39:BD:63:ARG:NH1	2.40	0.55
43:BH:85:LYS:O	43:BH:85:LYS:HE3	2.06	0.55
48:BP:39:LYS:CD	48:BP:40:SER:H	2.18	0.55
48:BP:45:LEU:CD1	48:BP:46:LYS:H	2.20	0.55
48:BP:56:SER:HB3	48:BP:60:MET:HG2	1.89	0.55
48:BP:62:LEU:HD23	48:BP:62:LEU:N	2.22	0.55
49:BQ:141:GLN:CD	58:BZ:72:ARG:NE	2.60	0.55
36:BA:2822:G:O6	50:BR:4:LEU:HB3	2.06	0.55
56:BX:13:LEU:HA	56:BX:18:TYR:CZ	2.42	0.55
36:BA:310:A:OP1	57:BY:17:SER:O	2.25	0.55
1:CA:1535:C:H2'	1:CA:1536:C:C6	2.42	0.55
1:CA:189(H):G:O2'	1:CA:189(I):G:H8	1.89	0.55
2:CB:124:SER:O	2:CB:127:ILE:HG12	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:9:CYS:SG	4:CD:31:CYS:O	2.64	0.55
6:CF:8:ILE:HG23	6:CF:85:VAL:HG13	1.89	0.55
9:CI:126:SER:O	9:CI:127:LYS:HB3	2.06	0.55
9:CI:53:VAL:CG1	9:CI:95:LYS:HD3	2.32	0.55
25:CZ:178:ALA:HB1	25:CZ:199:ILE:CD1	2.37	0.55
25:CZ:69:GLU:HB2	25:CZ:273:HIS:CE1	2.42	0.55
32:D6:28:ARG:CA	32:D6:32:ASN:HD22	2.19	0.55
34:D8:41:ILE:HD12	36:DA:2419:U:P	2.46	0.55
36:DA:1411:C:H2'	36:DA:1412:A:C8	2.41	0.55
36:DA:1496:A:H8	36:DA:1577:C:HO2'	1.55	0.55
36:DA:2096:U:H2'	36:DA:2097:C:C6	2.41	0.55
36:DA:2373:G:H2'	36:DA:2374:C:C6	2.42	0.55
36:DA:2408:U:H2'	36:DA:2409:G:C8	2.42	0.55
36:DA:654(T):C:O2'	36:DA:654(U):A:O4'	2.17	0.55
37:DB:35:U:O2'	37:DB:36:C:H5'	2.06	0.55
38:DC:96:GLY:H	38:DC:99:ILE:HG13	1.71	0.55
39:DD:44:ASN:OD1	39:DD:44:ASN:N	2.38	0.55
48:DP:56:SER:HB3	48:DP:60:MET:HG2	1.88	0.55
50:DR:28:LEU:CD2	50:DR:29:LEU:HD12	2.37	0.55
54:DV:38:LEU:HD23	54:DV:39:LEU:N	2.21	0.55
54:DV:47:VAL:O	54:DV:47:VAL:HG23	2.07	0.55
56:DX:35:THR:HB	56:DX:38:GLU:HB3	1.87	0.55
56:DX:50:LYS:H	56:DX:87:GLN:HE22	1.55	0.55
57:DY:28:LYS:HB3	57:DY:39:VAL:H	1.70	0.55
58:DZ:141:VAL:HA	58:DZ:144:LEU:HD23	1.89	0.55
3:AC:50:ALA:HB1	3:AC:70:VAL:CG1	2.37	0.55
1:AA:542:G:P	4:AD:10:ARG:HH21	2.28	0.55
7:AG:152:ALA:O	7:AG:155:ARG:HG3	2.06	0.55
13:AM:12:ASN:N	13:AM:12:ASN:HD22	1.95	0.55
19:AS:48:THR:HG22	19:AS:61:TYR:CA	2.36	0.55
25:AZ:24:LYS:H	25:AZ:105:VAL:HG11	1.71	0.55
25:AZ:330:ARG:NH1	25:AZ:334:PHE:HB3	2.22	0.55
25:AZ:349:VAL:HG21	25:AZ:374:LEU:HD13	1.89	0.55
25:AZ:368:VAL:HG12	25:AZ:369:THR:N	2.21	0.55
35:B9:29:ASN:N	35:B9:29:ASN:HD22	2.03	0.55
35:B9:7:VAL:HG22	35:B9:34:GLN:HG2	1.88	0.55
36:BA:1385:G:O2'	36:BA:1396:U:C6	2.60	0.55
36:BA:1493:C:C4	36:BA:2206:G:O2'	2.59	0.55
36:BA:1493:C:O2	36:BA:1493:C:H2'	2.07	0.55
36:BA:1516:C:O2'	36:BA:1517:G:H5''	2.06	0.55
36:BA:1722:A:O2'	36:BA:1739:U:C5'	2.54	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2125:G:OP1	38:BC:40:THR:HG21	2.07	0.55
36:BA:2160:G:C8	36:BA:2160:G:H5'	2.38	0.55
36:BA:643:A:H2'	36:BA:644:A:O4'	2.07	0.55
36:BA:888:C:H2'	36:BA:889:C:C4'	2.36	0.55
36:BA:910:A:H2'	36:BA:911:A:C8	2.42	0.55
37:BB:111:G:O2'	37:BB:112:U:H5'	2.07	0.55
39:BD:130:ALA:C	39:BD:131:LEU:HD12	2.27	0.55
36:BA:1971:A:C4	39:BD:241:PRO:HD3	2.42	0.55
39:BD:267:SER:C	39:BD:269:PHE:N	2.59	0.55
41:BF:103:LYS:HG3	41:BF:106:ARG:HH21	1.71	0.55
36:BA:321:G:N3	41:BF:165:ARG:HD3	2.22	0.55
42:BG:43:LEU:N	42:BG:43:LEU:HD22	2.21	0.55
43:BH:149:ARG:HG3	43:BH:162:ILE:HG12	1.87	0.55
48:BP:87:ASP:O	48:BP:90:ARG:HB2	2.07	0.55
49:BQ:79:LEU:HD23	49:BQ:80:GLU:H	1.70	0.55
51:BS:93:LYS:O	51:BS:95:HIS:N	2.40	0.55
52:BT:30:VAL:HG21	52:BT:83:ILE:HG12	1.88	0.55
53:BU:65:ILE:HG12	53:BU:96:ALA:HB1	1.87	0.55
1:CA:1314:C:OP2	19:CS:6:LYS:HG3	2.06	0.55
1:CA:769:G:H4'	1:CA:1513:A:H4'	1.89	0.55
1:CA:516:U:C4	1:CA:517:G:C6	2.95	0.55
2:CB:86:GLU:C	2:CB:88:ALA:H	2.10	0.55
9:CI:20:ARG:CZ	9:CI:20:ARG:HB2	2.36	0.55
17:CQ:52:LYS:HD3	17:CQ:55:ASP:OD2	2.07	0.55
19:CS:40:ILE:O	19:CS:40:ILE:HG22	2.06	0.55
22:CV:62:C:O2	22:CV:62:C:H2'	2.06	0.55
27:D1:3:LYS:NZ	27:D1:3:LYS:HB2	2.21	0.55
34:D8:50:LEU:N	34:D8:53:PRO:HD3	2.21	0.55
36:DA:1400:G:H2'	36:DA:1401:G:C8	2.42	0.55
36:DA:1412:A:O2'	36:DA:1413:G:H5'	2.07	0.55
36:DA:1708:C:O2'	36:DA:1709:U:H5'	2.06	0.55
36:DA:483:A:H5''	57:DY:49:VAL:HG22	1.89	0.55
36:DA:612:C:H2'	36:DA:613:G:H5'	1.86	0.55
37:DB:67:G:O2'	37:DB:68:C:H6	1.89	0.55
39:DD:6:PHE:HE1	39:DD:18:VAL:HG12	1.71	0.55
40:DE:107:THR:O	40:DE:190:GLY:CA	2.54	0.55
41:DF:39:TRP:CB	41:DF:101:LEU:HD22	2.37	0.55
42:DG:6:ALA:O	42:DG:10:LYS:HD3	2.07	0.55
47:DO:4:PRO:O	47:DO:5:GLN:CB	2.55	0.55
48:DP:144:GLU:N	48:DP:145:PRO:HD3	2.22	0.55
48:DP:16:ARG:CZ	48:DP:18:ARG:HG2	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DY:81:LYS:HD2	57:DY:96:ILE:CD1	2.36	0.55
58:DZ:11:GLU:OE1	58:DZ:12:GLY:N	2.38	0.55
1:AA:1157:A:H1'	1:AA:1181:G:N2	2.22	0.55
1:AA:1221:G:H4'	19:AS:77:THR:CG2	2.37	0.55
2:AB:119:GLU:O	2:AB:122:PHE:HB3	2.07	0.55
2:AB:124:SER:O	2:AB:127:ILE:HG12	2.06	0.55
3:AC:70:VAL:HG13	3:AC:72:LYS:H	1.71	0.55
5:AE:41:VAL:HG23	5:AE:67:VAL:CG1	2.36	0.55
6:AF:61:LEU:O	6:AF:62:TRP:CB	2.55	0.55
7:AG:113:GLU:HG3	7:AG:118:VAL:HG23	1.88	0.55
11:AK:48:ILE:HD11	11:AK:67:ASP:CB	2.37	0.55
16:AP:21:VAL:HG12	16:AP:34:GLU:O	2.07	0.55
25:AZ:25:THR:HB	60:AZ:501:GDP:O2B	2.06	0.55
28:B2:9:GLN:OE1	28:B2:60:LEU:HD11	2.07	0.55
32:B6:15:GLU:CD	32:B6:18:ARG:NH2	2.60	0.55
32:B6:15:GLU:HG2	32:B6:18:ARG:CZ	2.36	0.55
33:B7:12:ARG:HG2	33:B7:46:VAL:HG22	1.89	0.55
34:B8:23:VAL:HG12	34:B8:46:ARG:NH1	2.10	0.55
36:BA:1494:A:C3'	36:BA:1495:A:H5''	2.36	0.55
36:BA:1547:C:O2'	36:BA:1548:C:H5'	2.07	0.55
36:BA:530:G:C5	36:BA:2022:U:H5''	2.41	0.55
36:BA:2206:G:H21	36:BA:2207:G:C5'	2.19	0.55
36:BA:8:A:H2'	36:BA:9:U:C6	2.41	0.55
43:BH:155:SER:O	43:BH:157:TYR:N	2.37	0.55
45:BK:66:UNK:O	45:BK:67:UNK:C	2.55	0.55
48:BP:127:ALA:HB3	48:BP:130:PHE:CZ	2.42	0.55
50:BR:2:ARG:HD2	50:BR:2:ARG:C	2.26	0.55
51:BS:28:VAL:HG12	51:BS:29:PHE:N	2.22	0.55
54:BV:24:LYS:HA	54:BV:92:THR:CG2	2.32	0.55
54:BV:38:LEU:HD23	54:BV:39:LEU:N	2.21	0.55
50:BR:103:ARG:HG3	55:BW:40:ASN:CG	2.27	0.55
57:BY:62:GLU:OE1	57:BY:62:GLU:N	2.40	0.55
1:CA:1030(A):G:H1'	1:CA:1031:G:H1	1.71	0.55
3:CC:167:TRP:O	3:CC:168:ALA:HB3	2.07	0.55
5:CE:76:ILE:HG23	5:CE:93:PRO:HG3	1.89	0.55
12:CL:26:ALA:HA	12:CL:64:TYR:CD2	2.41	0.55
22:CW:3:C:H2'	22:CW:4:C:O4'	2.06	0.55
25:CZ:343:TYR:CE1	25:CZ:389:ARG:HD3	2.42	0.55
36:DA:1198:U:H2'	36:DA:1199:U:C6	2.41	0.55
36:DA:1980:G:O2'	36:DA:1982:C:OP2	2.20	0.55
36:DA:676:A:H8	36:DA:2069:G:N2	1.97	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DD:147:LEU:CD1	39:DD:183:ARG:HH12	2.15	0.55
41:DF:4:VAL:HG11	41:DF:17:ARG:NE	2.22	0.55
43:DH:155:SER:O	43:DH:157:TYR:N	2.38	0.55
43:DH:157:TYR:HD1	43:DH:157:TYR:O	1.90	0.55
47:DO:26:LYS:HB3	47:DO:30:ALA:HB2	1.89	0.55
34:D8:25:MET:CG	48:DP:64:LYS:HB2	2.36	0.55
36:DA:2414:G:H21	48:DP:67:MET:CE	2.20	0.55
50:DR:96:ARG:NH2	50:DR:117:VAL:HG23	2.22	0.55
1:AA:1255:G:H5''	3:AC:26:LYS:HE2	1.89	0.55
1:AA:424:G:O2'	1:AA:425:G:H5'	2.07	0.55
4:AD:70:ILE:HG22	4:AD:71:SER:N	2.22	0.55
5:AE:40:ARG:HH11	5:AE:40:ARG:HG2	1.71	0.55
6:AF:19:LEU:HD11	6:AF:59:TYR:CZ	2.42	0.55
9:AI:114:TYR:CE1	10:AJ:59:SER:HA	2.39	0.55
25:AZ:11:HIS:O	25:AZ:12:VAL:HG13	2.06	0.55
32:B6:15:GLU:CG	32:B6:18:ARG:NH1	2.65	0.55
32:B6:28:ARG:CA	32:B6:32:ASN:ND2	2.68	0.55
34:B8:52:LYS:N	34:B8:53:PRO:CD	2.70	0.55
36:BA:2025:C:H2'	36:BA:2026:C:H6	1.71	0.55
36:BA:2037:G:H2'	36:BA:2038:G:C8	2.41	0.55
36:BA:2317:C:H2'	36:BA:2318:G:C5'	2.30	0.55
36:BA:234:C:H2'	36:BA:235:U:H6	1.69	0.55
36:BA:2892:A:H62	36:BA:2893:G:N2	2.05	0.55
38:BC:96:GLY:H	38:BC:99:ILE:HG13	1.71	0.55
41:BF:160:ASN:HD21	41:BF:162:LEU:HB2	1.72	0.55
42:BG:103:LEU:HA	42:BG:106:LEU:HB3	1.89	0.55
47:BO:88:ASN:OD1	47:BO:90:GLN:N	2.38	0.55
48:BP:23:PRO:C	48:BP:33:ARG:NE	2.60	0.55
55:BW:37:ARG:HG3	55:BW:37:ARG:HH11	1.72	0.55
58:BZ:96:VAL:HG12	58:BZ:128:VAL:O	2.06	0.55
1:CA:255:G:O6	1:CA:266:G:O6	2.25	0.55
9:CI:9:ARG:HG3	9:CI:14:VAL:HG13	1.88	0.55
10:CJ:6:ILE:HG13	10:CJ:72:VAL:HB	1.87	0.55
10:CJ:6:ILE:O	10:CJ:6:ILE:HG13	2.07	0.55
22:CV:1:G:H1'	26:D0:5:LYS:NZ	2.21	0.55
25:CZ:72:THR:HG22	25:CZ:203:LEU:HD21	1.89	0.55
25:CZ:324:LYS:HA	25:CZ:364:PRO:HB3	1.89	0.55
26:D0:40:GLN:NE2	26:D0:44:ARG:HB2	2.22	0.55
32:D6:41:PRO:HG2	32:D6:44:ARG:O	2.06	0.55
36:DA:1503:U:C4	36:DA:1504:C:N4	2.75	0.55
36:DA:1820:U:O2	39:DD:201:HIS:HB3	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2125:G:OP1	38:DC:40:THR:HG21	2.06	0.55
36:DA:2240:C:O2'	36:DA:2241:A:H5'	2.06	0.55
36:DA:2720:U:H5'	36:DA:2721:A:OP2	2.07	0.55
36:DA:272(I):U:O2'	36:DA:272(J):C:H5'	2.07	0.55
36:DA:2761:G:H2'	36:DA:2762:G:H5''	1.88	0.55
36:DA:2893:G:H5'	36:DA:2894:G:C5'	2.33	0.55
38:DC:120:MET:HA	38:DC:123:VAL:CG1	2.37	0.55
40:DE:21:VAL:HG23	40:DE:21:VAL:O	2.06	0.55
50:DR:3:HIS:C	50:DR:3:HIS:HD1	2.10	0.55
36:DA:2010:G:H5''	55:DW:42:ARG:HB2	1.89	0.55
1:AA:266:G:H5'	1:AA:268:C:H41	1.72	0.55
2:AB:18:GLY:H	2:AB:42:ILE:CG2	2.20	0.55
25:AZ:171:ILE:HD12	25:AZ:201:GLU:OE1	2.07	0.55
25:AZ:69:GLU:HB2	25:AZ:273:HIS:CE1	2.42	0.55
30:B4:5:ILE:H	30:B4:5:ILE:HD13	1.72	0.55
32:B6:26:ASN:ND2	32:B6:32:ASN:OD1	2.39	0.55
35:B9:16:VAL:HG11	36:BA:1032:A:O3'	2.07	0.55
36:BA:1059:G:H2'	36:BA:1060:U:H5	1.72	0.55
36:BA:1427:A:O2'	36:BA:1428:C:OP2	2.24	0.55
36:BA:1451:C:N4	36:BA:1461:G:H1	2.05	0.55
36:BA:1496:A:H8	36:BA:1577:C:HO2'	1.53	0.55
36:BA:1542:A:C8	36:BA:1544:A:H5'	2.41	0.55
34:B8:33:ASN:ND2	36:BA:2419:U:H5''	2.22	0.55
36:BA:612:C:H2'	36:BA:613:G:H5'	1.86	0.55
36:BA:2393:A:H4'	48:BP:61:ARG:O	2.07	0.55
36:BA:2870:C:H5''	50:BR:65:LEU:HD21	1.88	0.55
53:BU:92:ARG:HD3	53:BU:94:ASN:HB3	1.89	0.55
54:BV:38:LEU:C	54:BV:39:LEU:HD13	2.27	0.55
1:CA:66:G:H4'	1:CA:173:U:C5	2.42	0.55
28:D2:31:GLU:CB	28:D2:53:LEU:HD11	2.37	0.55
30:D4:12:ALA:HB1	30:D4:29:PRO:O	2.07	0.55
36:DA:1528:A:N1	36:DA:1542:A:H2	2.04	0.55
36:DA:1547:C:O2'	36:DA:1548:C:H5'	2.07	0.55
38:DC:119:VAL:HG22	38:DC:119:VAL:O	2.07	0.55
48:DP:16:ARG:CB	48:DP:16:ARG:NH1	2.67	0.55
50:DR:59:ASP:O	50:DR:60:LEU:HB3	2.07	0.55
53:DU:112:ARG:NH1	54:DV:46:VAL:HG11	2.22	0.55
57:DY:62:GLU:OE1	57:DY:62:GLU:N	2.40	0.55
57:DY:79:CYS:SG	57:DY:80:GLY:N	2.80	0.55
58:DZ:150:LEU:CD2	58:DZ:172:ALA:HB3	2.36	0.55
58:DZ:54:HIS:HB2	58:DZ:55:HIS:CD2	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:115:G:H1'	1:AA:116:A:N7	2.21	0.54
1:AA:626:U:H2'	1:AA:627:G:H8	1.71	0.54
2:AB:236:TYR:O	2:AB:238:LEU:N	2.40	0.54
4:AD:43:HIS:O	4:AD:45:GLN:N	2.40	0.54
9:AI:33:PHE:O	9:AI:35:GLU:N	2.40	0.54
9:AI:50:LEU:HB3	9:AI:56:LEU:HA	1.88	0.54
13:AM:83:ASP:C	13:AM:85:GLY:H	2.10	0.54
20:AT:64:ASP:OD1	20:AT:81:LYS:HD2	2.07	0.54
25:AZ:72:THR:HG22	25:AZ:203:LEU:HD21	1.88	0.54
26:B0:12:ASN:O	26:B0:14:ARG:N	2.36	0.54
26:B0:40:GLN:HE22	26:B0:44:ARG:N	2.05	0.54
26:B0:40:GLN:NE2	26:B0:44:ARG:HB2	2.21	0.54
27:B1:48:LYS:HG2	27:B1:50:ARG:NH2	2.22	0.54
33:B7:34:ARG:HD3	36:BA:467:G:OP2	2.07	0.54
36:BA:1411:C:H2'	36:BA:1412:A:C8	2.42	0.54
36:BA:2358:G:H22	48:BP:55:ARG:NH2	2.05	0.54
36:BA:2776:A:H4'	36:BA:2777:G:H5''	1.89	0.54
36:BA:332:A:O2'	36:BA:333:G:O5'	2.24	0.54
36:BA:414:C:O2'	36:BA:415:A:H5'	2.06	0.54
42:BG:52:ILE:HD13	42:BG:52:ILE:H	1.73	0.54
42:BG:64:THR:CG2	42:BG:94:LEU:HD11	2.37	0.54
36:BA:2657:A:O2'	43:BH:160:LYS:HE2	2.07	0.54
43:BH:94:TYR:HE2	43:BH:160:LYS:HB3	1.72	0.54
46:BN:61:ARG:HG3	46:BN:61:ARG:NH1	2.21	0.54
50:BR:28:LEU:CD2	50:BR:29:LEU:HD12	2.37	0.54
51:BS:58:LEU:CG	51:BS:59:LYS:H	2.20	0.54
57:BY:36:ALA:HB1	57:BY:67:LEU:O	2.07	0.54
1:CA:1125:U:C5'	1:CA:1126:U:H5	2.21	0.54
1:CA:437:U:H5''	4:CD:155:LEU:HD13	1.88	0.54
1:CA:939:G:C5'	7:CG:102:ARG:HH22	2.19	0.54
1:CA:992:U:H1'	1:CA:993:G:C2	2.43	0.54
2:CB:88:ALA:HB2	2:CB:219:VAL:HG13	1.87	0.54
2:CB:25:ASN:C	2:CB:25:ASN:ND2	2.56	0.54
6:CF:63:TYR:N	6:CF:63:TYR:CD1	2.75	0.54
9:CI:50:LEU:HB3	9:CI:56:LEU:HA	1.88	0.54
1:CA:585:G:H4'	12:CL:8:ASN:ND2	2.22	0.54
17:CQ:53:LEU:HD23	17:CQ:54:GLY:N	2.22	0.54
17:CQ:53:LEU:HD21	17:CQ:85:VAL:HG11	1.89	0.54
30:D4:5:ILE:H	30:D4:5:ILE:HD13	1.72	0.54
31:D5:57:VAL:O	31:D5:58:LEU:HD12	2.07	0.54
36:DA:1411:C:H2'	36:DA:1412:A:H8	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2319:G:OP2	36:DA:2319:G:H4'	2.07	0.54
36:DA:234:C:H2'	36:DA:235:U:H6	1.71	0.54
36:DA:270:A:N1	36:DA:366:C:O2'	2.36	0.54
36:DA:2761:G:C2'	36:DA:2762:G:H5''	2.36	0.54
36:DA:583:G:OP2	53:DU:10:ARG:HD2	2.06	0.54
39:DD:223:GLY:O	39:DD:224:ALA:O	2.25	0.54
43:DH:105:LEU:CD2	43:DH:113:VAL:HB	2.37	0.54
43:DH:76:VAL:O	43:DH:79:VAL:HG22	2.08	0.54
50:DR:2:ARG:HD2	50:DR:2:ARG:C	2.28	0.54
51:DS:58:LEU:CG	51:DS:59:LYS:H	2.20	0.54
51:DS:97:ARG:NH2	51:DS:98:VAL:HA	2.22	0.54
58:DZ:14:LYS:O	58:DZ:14:LYS:HD2	2.08	0.54
1:AA:1127:G:H1'	1:AA:1147:C:H42	1.72	0.54
1:AA:1148:U:H2'	1:AA:1149:C:O4'	2.06	0.54
5:AE:28:PHE:O	5:AE:47:LYS:HA	2.07	0.54
6:AF:63:TYR:HD1	6:AF:63:TYR:N	2.05	0.54
11:AK:124:LYS:HD2	11:AK:125:PHE:CZ	2.43	0.54
16:AP:14:ASN:N	16:AP:15:PRO:CD	2.70	0.54
24:AY:45:U:H3'	24:AY:46:7MG:H5'	1.84	0.54
30:B4:12:ALA:HB1	30:B4:29:PRO:O	2.07	0.54
32:B6:20:ASN:C	32:B6:21:TYR:CG	2.80	0.54
36:BA:573:G:O2'	36:BA:574:C:H3'	2.07	0.54
36:BA:925:C:H2'	36:BA:926:A:C5'	2.25	0.54
38:BC:75:LEU:C	38:BC:75:LEU:HD12	2.27	0.54
39:BD:45:ASN:OD1	39:BD:46:GLN:N	2.40	0.54
42:BG:39:ILE:HD11	42:BG:64:THR:HG21	1.88	0.54
42:BG:46:ALA:N	42:BG:47:LYS:HD2	2.16	0.54
42:BG:7:LEU:O	42:BG:8:LYS:C	2.45	0.54
42:BG:72:ARG:HE	42:BG:86:MET:HA	1.68	0.54
43:BH:157:TYR:O	43:BH:157:TYR:HD1	1.90	0.54
46:BN:25:ARG:HG2	46:BN:25:ARG:HH11	1.73	0.54
49:BQ:133:ARG:HB2	49:BQ:133:ARG:NH1	2.17	0.54
50:BR:59:ASP:O	50:BR:60:LEU:HB3	2.08	0.54
58:BZ:61:LEU:HD12	58:BZ:67:LEU:HD13	1.88	0.54
58:BZ:77:ASP:O	58:BZ:79:ARG:N	2.40	0.54
1:CA:416:G:O2'	1:CA:417:C:H5'	2.07	0.54
1:CA:487:A:H2'	1:CA:488:C:O4'	2.07	0.54
2:CB:17:PHE:O	2:CB:18:GLY:O	2.25	0.54
2:CB:188:ALA:O	2:CB:202:PRO:HA	2.07	0.54
2:CB:17:PHE:HD2	2:CB:44:LEU:HD11	1.71	0.54
4:CD:110:PHE:CD1	4:CD:110:PHE:N	2.75	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:191:ARG:HD3	4:CD:200:GLU:OE2	2.06	0.54
9:CI:58:HIS:CG	9:CI:58:HIS:O	2.61	0.54
10:CJ:61:GLU:HG3	14:CN:58:LYS:CE	2.27	0.54
12:CL:126:LYS:HA	12:CL:126:LYS:HE2	1.88	0.54
30:D4:11:PRO:HB3	30:D4:25:TYR:CE2	2.42	0.54
34:D8:32:LEU:HD13	36:DA:2392:A:OP1	2.07	0.54
35:D9:29:ASN:N	35:D9:29:ASN:HD22	2.03	0.54
36:DA:108:U:H2'	36:DA:109:G:C8	2.42	0.54
36:DA:1469:A:H2'	36:DA:1470:G:C8	2.42	0.54
36:DA:2317:C:H2'	36:DA:2318:G:C5'	2.30	0.54
36:DA:2693:A:H2'	36:DA:2694:G:H8	1.72	0.54
36:DA:470:A:H2'	36:DA:471:A:O4'	2.07	0.54
36:DA:984:A:H5''	36:DA:985:C:H5	1.71	0.54
39:DD:6:PHE:CE1	39:DD:18:VAL:HG12	2.42	0.54
41:DF:126:VAL:O	41:DF:196:LEU:HG	2.07	0.54
42:DG:43:LEU:HD21	42:DG:90:LEU:HB2	1.88	0.54
44:DJ:127:UNK:HA	44:DJ:130:UNK:CB	2.38	0.54
46:DN:76:SER:N	46:DN:81:GLY:O	2.35	0.54
51:DS:42:ASP:C	51:DS:44:LYS:H	2.11	0.54
52:DT:24:PRO:HD3	52:DT:52:ILE:HD12	1.90	0.54
54:DV:28:GLU:HB3	54:DV:29:PRO:HD2	1.89	0.54
1:AA:1001:A:H2'	1:AA:1001:A:N3	2.22	0.54
1:AA:1211:U:H1'	1:AA:1213:A:C2	2.42	0.54
1:AA:1225:A:H2'	1:AA:1226:C:C5	2.43	0.54
1:AA:645:C:H2'	1:AA:646:U:C6	2.41	0.54
1:AA:665:A:H2'	1:AA:732:C:O2	2.06	0.54
1:AA:992:U:H1'	1:AA:993:G:C2	2.42	0.54
2:AB:144:ARG:HG3	2:AB:145:LEU:N	2.22	0.54
3:AC:19:GLU:O	3:AC:56:ASP:HA	2.07	0.54
16:AP:5:ARG:HG3	16:AP:5:ARG:HH11	1.71	0.54
24:AY:10:G:N2	24:AY:26:A:H1'	2.22	0.54
25:AZ:172:ARG:O	25:AZ:198:LYS:HD3	2.07	0.54
25:AZ:19:HIS:HA	25:AZ:115:GLN:HB2	1.90	0.54
29:B3:15:TYR:HD2	29:B3:19:GLN:HE22	1.55	0.54
34:B8:62:LEU:N	34:B8:63:PRO:HD2	2.23	0.54
36:BA:1171:G:N7	36:BA:1173:G:H1'	2.22	0.54
36:BA:1354:A:H2'	36:BA:1355:G:O4'	2.07	0.54
36:BA:1494:A:N3	36:BA:1494:A:H3'	2.21	0.54
36:BA:2199:A:H3'	36:BA:2200:C:C6	2.43	0.54
36:BA:2386:C:H2'	36:BA:2387:U:C6	2.42	0.54
36:BA:2408:U:H2'	36:BA:2409:G:C8	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:267:C:H2'	36:BA:268:C:C6	2.43	0.54
36:BA:470:A:H2'	36:BA:471:A:O4'	2.08	0.54
36:BA:984:A:H5''	36:BA:985:C:H5	1.72	0.54
37:BB:105:A:H2'	37:BB:106:G:O4'	2.07	0.54
38:BC:120:MET:HA	38:BC:123:VAL:CG1	2.36	0.54
43:BH:158:HIS:CE1	43:BH:169:VAL:HG12	2.42	0.54
47:BO:4:PRO:O	47:BO:5:GLN:CB	2.52	0.54
51:BS:17:ARG:HA	51:BS:20:ARG:HH11	1.72	0.54
54:BV:5:VAL:HG21	54:BV:35:LEU:CD2	2.37	0.54
56:BX:18:TYR:O	56:BX:20:GLY:N	2.40	0.54
57:BY:47:LYS:HG3	57:BY:60:PHE:CZ	2.43	0.54
1:CA:1017:G:H2'	1:CA:1018:C:C6	2.43	0.54
1:CA:1310:G:O2'	1:CA:1311:G:H5'	2.07	0.54
1:CA:429:U:H1'	1:CA:430:A:H5''	1.90	0.54
1:CA:977:A:O2'	1:CA:978:A:H5''	2.08	0.54
2:CB:144:ARG:HG3	2:CB:145:LEU:N	2.21	0.54
2:CB:172:ILE:HD12	2:CB:172:ILE:N	2.19	0.54
3:CC:19:GLU:O	3:CC:56:ASP:HA	2.08	0.54
4:CD:126:ILE:HG22	4:CD:127:THR:N	2.21	0.54
7:CG:99:LEU:O	7:CG:102:ARG:HG2	2.07	0.54
17:CQ:45:HIS:HB2	17:CQ:65:ILE:CD1	2.37	0.54
22:CV:48:C:OP2	22:CV:48:C:H6	1.91	0.54
25:CZ:189:ARG:HG2	25:CZ:189:ARG:HH11	1.72	0.54
25:CZ:137:LYS:HA	60:CZ:501:GDP:N1	2.22	0.54
29:D3:4:LEU:O	29:D3:36:VAL:HA	2.08	0.54
36:DA:191:A:H2'	36:DA:192:C:C6	2.42	0.54
36:DA:2392:A:H2	36:DA:2424:C:N4	1.99	0.54
36:DA:267:C:H2'	36:DA:268:C:C6	2.42	0.54
36:DA:2001:A:H4'	36:DA:2689:U:H2'	1.90	0.54
36:DA:39:C:H2'	36:DA:40:C:C6	2.42	0.54
36:DA:708:C:N4	36:DA:723:G:H1	2.04	0.54
36:DA:8:A:H2'	36:DA:9:U:C6	2.41	0.54
37:DB:81:G:O6	37:DB:96:U:O2	2.25	0.54
38:DC:116:THR:HB	38:DC:147:PHE:CD1	2.43	0.54
42:DG:125:PHE:O	42:DG:126:ASP:O	2.26	0.54
46:DN:46:VAL:CG1	46:DN:48:MET:HG3	2.38	0.54
48:DP:17:LYS:C	48:DP:19:VAL:H	2.09	0.54
49:DQ:42:ILE:HD13	49:DQ:97:VAL:HG21	1.90	0.54
50:DR:99:LYS:H	50:DR:99:LYS:CD	2.03	0.54
51:DS:106:ARG:CZ	51:DS:106:ARG:HB3	2.37	0.54
51:DS:22:GLY:O	51:DS:23:ARG:O	2.25	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:559:G:N2	53:DU:49:HIS:CD2	2.75	0.54
58:DZ:151:HIS:O	58:DZ:152:ALA:HB3	2.08	0.54
1:AA:1347:G:C6	9:AI:107:ARG:NH2	2.76	0.54
9:AI:20:ARG:CZ	9:AI:20:ARG:HB2	2.37	0.54
10:AJ:33:GLN:HB2	10:AJ:75:ILE:CD1	2.33	0.54
10:AJ:4:ILE:HD12	10:AJ:4:ILE:N	2.21	0.54
11:AK:84:VAL:HG11	11:AK:95:ILE:HD11	1.88	0.54
22:AV:44:G:C2'	22:AV:45:U:H5'	2.36	0.54
24:AY:70:C:H2'	24:AY:71:C:H6	1.72	0.54
36:BA:1572:A:O2'	36:BA:1573:G:H5'	2.07	0.54
36:BA:2019:A:C2'	36:BA:2020:A:O5'	2.54	0.54
36:BA:528:A:C2	36:BA:2042:A:H2'	2.41	0.54
36:BA:2206:G:N3	36:BA:2206:G:H3'	2.22	0.54
26:B0:43:THR:HG22	36:BA:2331:G:O2'	2.08	0.54
26:B0:36:ILE:HD11	36:BA:2355:C:H4'	1.88	0.54
36:BA:39:C:H2'	36:BA:40:C:C6	2.42	0.54
36:BA:1567:A:C5'	39:BD:58:HIS:CD2	2.89	0.54
40:BE:101:ARG:HE	40:BE:171:GLU:HB2	1.71	0.54
40:BE:116:VAL:O	40:BE:117:MET:CB	2.54	0.54
36:BA:2784:C:H1'	40:BE:37:ARG:NH1	2.18	0.54
40:BE:49:LEU:O	40:BE:78:LEU:CB	2.56	0.54
40:BE:77:ILE:HG22	40:BE:78:LEU:N	2.22	0.54
41:BF:167:ALA:HB1	41:BF:173:VAL:CG1	2.23	0.54
43:BH:126:PRO:O	43:BH:127:GLU:CB	2.56	0.54
58:BZ:152:ALA:C	58:BZ:167:PRO:HB2	2.28	0.54
1:CA:625:G:H2'	1:CA:626:U:H6	1.72	0.54
6:CF:75:LEU:O	6:CF:78:GLU:HB3	2.06	0.54
8:CH:89:PRO:HA	8:CH:92:ARG:HH11	1.71	0.54
9:CI:91:ASP:O	9:CI:93:ARG:N	2.40	0.54
11:CK:26:ASN:O	11:CK:27:ASN:HB2	2.07	0.54
12:CL:117:ARG:O	12:CL:119:LYS:O	2.26	0.54
1:CA:187:C:H4'	20:CT:85:MET:O	2.08	0.54
22:CW:55:U:H5	22:CW:58:A:OP2	1.91	0.54
25:CZ:221:PHE:HA	25:CZ:244:ARG:O	2.07	0.54
32:D6:15:GLU:CG	32:D6:18:ARG:CZ	2.85	0.54
35:D9:1:MET:CG	36:DA:2478:A:OP2	2.56	0.54
36:DA:1314:C:C2	36:DA:1339:G:N2	2.76	0.54
36:DA:1748:G:C8	36:DA:1748:G:H5'	2.40	0.54
36:DA:2360:A:C2	36:DA:2361:A:H1'	2.43	0.54
36:DA:227:A:C2	36:DA:2407:G:H1'	2.42	0.54
36:DA:414:C:O2'	36:DA:415:A:H5'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DD:32:SER:O	39:DD:36:PRO:CG	2.53	0.54
39:DD:45:ASN:OD1	39:DD:46:GLN:N	2.41	0.54
40:DE:2:LYS:HD3	40:DE:95:ILE:HG22	1.88	0.54
42:DG:38:VAL:CG2	42:DG:158:ALA:HB3	2.36	0.54
42:DG:173:LEU:O	42:DG:178:PHE:HB2	2.07	0.54
43:DH:52:VAL:HB	43:DH:69:ARG:HD3	1.89	0.54
43:DH:94:TYR:HE2	43:DH:160:LYS:HB3	1.73	0.54
48:DP:112:LEU:O	48:DP:112:LEU:HD13	2.07	0.54
51:DS:19:LYS:HB3	51:DS:20:ARG:NH2	2.21	0.54
51:DS:49:VAL:CG1	51:DS:50:SER:H	2.16	0.54
1:AA:266:G:H5''	1:AA:267:C:C5	2.42	0.54
4:AD:126:ILE:HG22	4:AD:127:THR:N	2.23	0.54
4:AD:12:CYS:HA	4:AD:19:LEU:CD1	2.38	0.54
5:AE:41:VAL:HG23	5:AE:67:VAL:HG13	1.89	0.54
9:AI:40:LEU:CD1	9:AI:70:LYS:HG2	2.37	0.54
1:AA:585:G:H4'	12:AL:8:ASN:ND2	2.21	0.54
16:AP:50:LYS:HD3	16:AP:51:VAL:N	2.22	0.54
17:AQ:82:MET:O	17:AQ:86:GLU:HG2	2.07	0.54
20:AT:104:LEU:C	20:AT:104:LEU:HD23	2.28	0.54
22:AW:39:U:OP1	22:AW:39:U:H4'	2.07	0.54
36:BA:282:A:N6	36:BA:359:A:H1'	2.22	0.54
36:BA:744:G:OP1	40:BE:132:HIS:HB3	2.07	0.54
38:BC:167:LYS:O	38:BC:167:LYS:HD2	2.07	0.54
39:BD:136:ILE:HB	39:BD:165:ILE:CD1	2.36	0.54
40:BE:45:THR:O	40:BE:46:ALA:HB2	2.07	0.54
40:BE:81:ILE:O	40:BE:82:ARG:O	2.26	0.54
48:BP:147:LEU:O	48:BP:148:LEU:HB2	2.08	0.54
51:BS:42:ASP:C	51:BS:44:LYS:H	2.11	0.54
53:BU:101:ARG:HG3	53:BU:101:ARG:NH1	2.23	0.54
58:BZ:51:ALA:CB	58:BZ:57:ILE:HD11	2.37	0.54
1:CA:186:C:H2'	1:CA:187:C:C6	2.43	0.54
1:CA:413:G:H1'	1:CA:428:G:H21	1.71	0.54
1:CA:541:G:H2'	1:CA:542:G:C8	2.35	0.54
1:CA:735:C:H2'	1:CA:736:C:H6	1.72	0.54
18:CR:22:VAL:O	18:CR:25:THR:HB	2.08	0.54
22:CW:71:G:N3	36:DA:1851:U:H4'	2.23	0.54
24:CY:10:G:N2	24:CY:26:A:H1'	2.22	0.54
34:D8:61:LEU:C	34:D8:63:PRO:HD2	2.28	0.54
36:DA:1023:U:H2'	36:DA:1024:G:H5'	1.89	0.54
36:DA:1336:A:H2'	36:DA:1337:G:C8	2.41	0.54
31:D5:7:PRO:HG2	36:DA:2016:U:O2	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:332:A:O2'	36:DA:333:G:O5'	2.25	0.54
41:DF:103:LYS:HG3	41:DF:106:ARG:HH21	1.72	0.54
41:DF:19:GLU:O	41:DF:20:LEU:HG	2.08	0.54
42:DG:172:LEU:HD23	42:DG:176:LEU:HD12	1.90	0.54
36:DA:2312:U:OP1	42:DG:73:ALA:HB1	2.08	0.54
48:DP:50:ARG:HG2	48:DP:50:ARG:HH11	1.72	0.54
52:DT:50:ILE:CD1	52:DT:64:ARG:HB3	2.37	0.54
54:DV:38:LEU:O	54:DV:39:LEU:HD13	2.08	0.54
57:DY:13:VAL:CG1	57:DY:28:LYS:HD3	2.37	0.54
57:DY:6:HIS:N	57:DY:6:HIS:CD2	2.75	0.54
1:AA:1007:C:O2'	1:AA:1008:C:H5'	2.08	0.54
1:AA:1030(A):G:H1'	1:AA:1031:G:H1	1.72	0.54
1:AA:1320:C:O2'	1:AA:1321:C:H5'	2.08	0.54
4:AD:76:ARG:O	4:AD:80:GLU:HG2	2.07	0.54
8:AH:10:LEU:HD22	8:AH:83:ILE:HD11	1.90	0.54
14:AN:15:LYS:HB3	14:AN:16:PHE:CE2	2.41	0.54
30:B4:28:LYS:O	30:B4:31:ILE:HD11	2.07	0.54
32:B6:45:LYS:HG3	36:BA:2371:G:H4'	1.89	0.54
35:B9:1:MET:CG	36:BA:2478:A:OP2	2.55	0.54
36:BA:1469:A:H2'	36:BA:1470:G:C8	2.43	0.54
36:BA:2693:A:H2'	36:BA:2694:G:H8	1.71	0.54
28:B2:48:HIS:HA	36:BA:95:G:H4'	1.90	0.54
37:BB:81:G:O6	37:BB:96:U:O2	2.25	0.54
39:BD:48:ARG:HH11	39:BD:48:ARG:HG3	1.73	0.54
41:BF:157:VAL:HG21	41:BF:194:MET:HG2	1.89	0.54
50:BR:3:HIS:HD1	50:BR:3:HIS:C	2.10	0.54
36:BA:1341:U:H4'	56:BX:57:LEU:HB3	1.90	0.54
1:CA:1150:U:O4'	1:CA:1150:U:O2	2.25	0.54
1:CA:818:G:O2'	1:CA:819:A:H5'	2.07	0.54
8:CH:2:LEU:HD23	8:CH:2:LEU:O	2.08	0.54
11:CK:21:ILE:HG13	11:CK:30:VAL:HG12	1.90	0.54
14:CN:39:LEU:HD11	14:CN:47:LEU:HD12	1.90	0.54
15:CO:82:ILE:CD1	15:CO:88:ARG:HB2	2.37	0.54
16:CP:50:LYS:HD3	16:CP:51:VAL:N	2.22	0.54
20:CT:64:ASP:OD1	20:CT:81:LYS:HD2	2.08	0.54
25:CZ:64:ASN:N	25:CZ:64:ASN:ND2	2.55	0.54
34:D8:23:VAL:HG11	34:D8:46:ARG:HD3	1.90	0.54
36:DA:108:U:H2'	36:DA:109:G:H8	1.71	0.54
36:DA:1516:C:O2'	36:DA:1517:G:H5''	2.06	0.54
36:DA:1771:C:C1'	36:DA:1786:A:C8	2.90	0.54
36:DA:2030:A:H4'	36:DA:2031:A:H8	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2892:A:H62	36:DA:2893:G:N2	2.05	0.54
36:DA:654(H):G:C3'	36:DA:654(I):C:H5'	2.37	0.54
39:DD:267:SER:C	39:DD:269:PHE:N	2.60	0.54
40:DE:45:THR:O	40:DE:46:ALA:HB2	2.08	0.54
40:DE:52:LEU:HB3	40:DE:75:VAL:HB	1.90	0.54
54:DV:18:LEU:HD23	54:DV:19:LYS:N	2.18	0.54
55:DW:5:ALA:HB2	55:DW:54:ALA:CB	2.29	0.54
1:AA:1264:C:H2'	1:AA:1265:G:C8	2.42	0.54
2:AB:189:ASP:HB3	2:AB:203:GLY:O	2.08	0.54
6:AF:63:TYR:CD1	6:AF:63:TYR:N	2.76	0.54
9:AI:53:VAL:CG1	9:AI:95:LYS:HD3	2.32	0.54
12:AL:39:VAL:HG12	12:AL:40:VAL:N	2.23	0.54
22:AW:37:A:H3'	22:AW:38:A:H8	1.72	0.54
24:AY:49:G:O2'	24:AY:50:G:H5'	2.07	0.54
25:AZ:133:VAL:HG23	25:AZ:168:VAL:HG11	1.90	0.54
25:AZ:139:ASP:CG	25:AZ:177:LEU:HD11	2.27	0.54
32:B6:5:VAL:O	32:B6:6:ARG:CB	2.56	0.54
36:BA:1068:G:H1'	36:BA:1069:A:H5'	1.90	0.54
36:BA:1210:A:H4'	36:BA:1211:U:O5'	2.08	0.54
36:BA:1361:G:O2'	36:BA:1362:C:H5'	2.08	0.54
36:BA:2179:C:H4'	36:BA:2180:U:N3	2.22	0.54
36:BA:2319:G:H4'	36:BA:2319:G:OP2	2.07	0.54
36:BA:2360:A:O2'	36:BA:2361:A:P	2.66	0.54
36:BA:2466:C:O2'	36:BA:2467:C:H5'	2.08	0.54
36:BA:2523:G:O2'	36:BA:2524:G:H5''	2.07	0.54
36:BA:607:U:H3	36:BA:621:A:H2	1.56	0.54
38:BC:40:THR:HG22	38:BC:177:LYS:CD	2.38	0.54
39:BD:35:LYS:CB	39:BD:36:PRO:CD	2.85	0.54
40:BE:101:ARG:NH2	40:BE:171:GLU:HB2	2.22	0.54
40:BE:48:GLN:HE21	40:BE:78:LEU:HD22	1.72	0.54
41:BF:39:TRP:CB	41:BF:101:LEU:HD22	2.38	0.54
43:BH:126:PRO:O	43:BH:127:GLU:HB2	2.07	0.54
48:BP:17:LYS:C	48:BP:19:VAL:H	2.10	0.54
50:BR:83:ILE:HG22	50:BR:87:TYR:HE2	1.73	0.54
51:BS:49:VAL:CG1	51:BS:50:SER:H	2.15	0.54
52:BT:129:ARG:NE	52:BT:131:ALA:HB3	2.22	0.54
52:BT:27:THR:OG1	52:BT:28:VAL:N	2.40	0.54
53:BU:61:TRP:CH2	53:BU:94:ASN:HB2	2.43	0.54
57:BY:2:ARG:N	57:BY:4:LYS:HE3	2.22	0.54
22:CV:44:G:C2'	22:CV:45:U:H5'	2.37	0.54
25:CZ:139:ASP:CG	25:CZ:177:LEU:HD11	2.28	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D2:8:LYS:HA	28:D2:11:GLU:HG3	1.90	0.54
30:D4:18:CYS:SG	30:D4:19:GLY:N	2.81	0.54
31:D5:54:GLY:C	31:D5:56:LYS:HZ2	2.11	0.54
32:D6:9:LEU:HD13	32:D6:9:LEU:O	2.07	0.54
36:DA:1163:G:O2'	36:DA:1164:G:H5'	2.07	0.54
36:DA:1171:G:N7	36:DA:1173:G:H1'	2.22	0.54
36:DA:15:G:O2'	36:DA:16:G:H5'	2.08	0.54
36:DA:654(I):C:H5''	36:DA:654(J):A:OP1	2.07	0.54
38:DC:41:VAL:HG21	38:DC:185:LEU:HD22	1.88	0.54
36:DA:674:G:N3	41:DF:74:ARG:NH1	2.55	0.54
42:DG:83:ARG:HB2	42:DG:84:LYS:HD2	1.90	0.54
48:DP:131:SER:OG	48:DP:134:ALA:HB3	2.08	0.54
36:DA:2358:G:H22	48:DP:55:ARG:NH2	2.04	0.54
49:DQ:30:GLY:HA2	49:DQ:107:ALA:HB2	1.90	0.54
49:DQ:43:THR:OG1	49:DQ:46:GLN:HG3	2.08	0.54
50:DR:111:LEU:HD12	50:DR:111:LEU:N	2.23	0.54
52:DT:30:VAL:HG21	52:DT:83:ILE:HG12	1.89	0.54
52:DT:32:TYR:HB3	52:DT:81:PRO:HB3	1.88	0.54
58:DZ:98:MET:HG2	58:DZ:99:TYR:H	1.68	0.54
1:AA:1342:C:O2'	9:AI:124:GLN:HG3	2.08	0.54
1:AA:267:C:H2'	1:AA:268:C:H6	1.73	0.54
1:AA:961:U:O2'	1:AA:962:C:H6	1.90	0.54
6:AF:79:LEU:H	6:AF:79:LEU:HD12	1.72	0.54
19:AS:40:ILE:HG23	19:AS:62:ILE:CD1	2.38	0.54
25:AZ:313:HIS:HB2	25:AZ:380:LEU:HB2	1.89	0.54
31:B5:33:CYS:HG	31:B5:36:CYS:HG	1.55	0.54
34:B8:32:LEU:HD13	36:BA:2392:A:OP1	2.07	0.54
36:BA:272(I):U:O2'	36:BA:272(J):C:H5'	2.08	0.54
36:BA:621:A:C2'	36:BA:622:G:H5'	2.36	0.54
36:BA:752:A:O2'	36:BA:753:C:OP2	2.25	0.54
39:BD:72:LYS:HZ2	39:BD:75:ILE:HG13	1.73	0.54
40:BE:21:VAL:O	40:BE:21:VAL:HG23	2.08	0.54
41:BF:19:GLU:O	41:BF:20:LEU:HG	2.06	0.54
46:BN:4:TYR:CD1	46:BN:4:TYR:N	2.75	0.54
53:BU:76:TYR:O	53:BU:80:ILE:HG12	2.08	0.54
53:BU:79:PHE:CE1	53:BU:83:LEU:HD11	2.42	0.54
54:BV:34:GLU:O	54:BV:36:PRO:CD	2.56	0.54
53:BU:112:ARG:NH1	54:BV:46:VAL:HG11	2.22	0.54
36:BA:84:A:H3'	57:BY:9:LYS:HG3	1.90	0.54
58:BZ:14:LYS:O	58:BZ:17:ALA:HB3	2.07	0.54
58:BZ:29:TYR:O	58:BZ:30:ASN:HB3	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:476:G:H2'	1:CA:477:A:C8	2.41	0.54
4:CD:157:LEU:HD12	4:CD:157:LEU:H	1.71	0.54
8:CH:85:ARG:HH11	8:CH:85:ARG:HG3	1.73	0.54
25:CZ:324:LYS:HE3	25:CZ:326:GLU:OE2	2.08	0.54
26:D0:56:ASP:OD2	36:DA:2364:C:H5'	2.08	0.54
34:D8:62:LEU:N	34:D8:63:PRO:HD2	2.23	0.54
36:DA:2025:C:H2'	36:DA:2026:C:H6	1.72	0.54
36:DA:2179:C:H1'	36:DA:2180:U:C4	2.42	0.54
39:DD:27:THR:HG23	39:DD:27:THR:O	2.08	0.54
41:DF:7:TYR:OH	41:DF:10:PRO:HB3	2.08	0.54
48:DP:23:PRO:HB2	48:DP:33:ARG:CD	2.37	0.54
54:DV:19:LYS:HE2	54:DV:19:LYS:HA	1.90	0.54
19:AS:47:HIS:O	19:AS:62:ILE:HG22	2.07	0.54
22:AV:62:C:H2'	22:AV:62:C:O2	2.06	0.54
30:B4:5:ILE:N	30:B4:5:ILE:HD13	2.23	0.54
31:B5:54:GLY:N	31:B5:56:LYS:HZ2	2.06	0.54
34:B8:11:LYS:HD2	34:B8:11:LYS:H	1.72	0.54
34:B8:6:THR:OG1	34:B8:11:LYS:HE3	2.07	0.54
36:BA:1827:C:O2'	36:BA:1828:G:H5'	2.08	0.54
36:BA:2636:U:H4'	40:BE:80:GLU:OE1	2.07	0.54
36:BA:918:A:H5''	37:BB:98:G:O2'	2.08	0.54
38:BC:87:GLU:CG	38:BC:94:VAL:HG11	2.38	0.54
40:BE:23:VAL:HA	40:BE:186:GLY:H	1.73	0.54
42:BG:9:ARG:O	42:BG:10:LYS:C	2.47	0.54
47:BO:114:ILE:H	47:BO:114:ILE:CD1	2.21	0.54
58:BZ:119:GLU:HG2	58:BZ:122:ARG:HH11	1.72	0.54
58:BZ:49:ARG:O	58:BZ:50:GLN:HB2	2.07	0.54
1:CA:392:G:H2'	1:CA:393:A:H8	1.72	0.54
1:CA:1397:C:OP2	5:CE:24:ARG:NH2	2.39	0.54
6:CF:19:LEU:HD11	6:CF:59:TYR:CZ	2.43	0.54
7:CG:75:VAL:O	7:CG:75:VAL:HG23	2.08	0.54
7:CG:79:ARG:NE	22:CW:33:U:H4'	2.23	0.54
12:CL:92:ASP:O	12:CL:94:PRO:HD3	2.08	0.54
19:CS:50:ALA:HB1	19:CS:57:HIS:HB3	1.89	0.54
1:CA:192:U:O4'	20:CT:103:GLY:HA2	2.08	0.54
20:CT:29:LYS:O	20:CT:33:ILE:HG13	2.08	0.54
28:D2:35:LEU:O	28:D2:39:ALA:N	2.41	0.54
28:D2:35:LEU:HB3	28:D2:50:ILE:HG13	1.90	0.54
28:D2:69:ARG:HB2	28:D2:70:GLN:NE2	2.23	0.54
29:D3:15:TYR:HD2	29:D3:19:GLN:HE22	1.56	0.54
32:D6:20:ASN:O	32:D6:21:TYR:CD2	2.61	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1826:G:H4'	39:DD:242:ARG:NH2	2.19	0.54
36:DA:1880:C:H2'	36:DA:1881:C:H5''	1.90	0.54
36:DA:2019:A:C2'	36:DA:2020:A:O5'	2.55	0.54
36:DA:2682:U:H6	36:DA:2682:U:H5'	1.73	0.54
36:DA:363(E):U:H2'	36:DA:363(F):A:C1'	2.38	0.54
36:DA:910:A:H2'	36:DA:911:A:C8	2.42	0.54
39:DD:148:GLU:CB	39:DD:151:LYS:HD2	2.38	0.54
40:DE:107:THR:HA	40:DE:163:GLU:O	2.08	0.54
41:DF:85:GLY:O	41:DF:86:GLY:O	2.26	0.54
42:DG:149:VAL:O	42:DG:149:VAL:HG23	2.08	0.54
46:DN:76:SER:HB3	46:DN:81:GLY:HA3	1.90	0.54
48:DP:17:LYS:O	48:DP:17:LYS:HG2	2.07	0.54
49:DQ:74:TYR:CD2	49:DQ:91:GLU:HB2	2.38	0.54
52:DT:85:LYS:HZ3	52:DT:85:LYS:HB3	1.68	0.54
54:DV:91:TYR:H	54:DV:91:TYR:HD1	1.56	0.54
1:AA:108:G:H5'	1:AA:109:A:H5''	1.89	0.54
1:AA:1437:C:H2'	1:AA:1438:G:H8	1.73	0.54
1:AA:186:C:H2'	1:AA:187:C:C6	2.43	0.54
1:AA:31:G:N1	1:AA:48:C:H5''	2.23	0.54
1:AA:78:G:N2	1:AA:91:C:H41	2.06	0.54
3:AC:134:ILE:CG2	3:AC:168:ALA:HB3	2.38	0.54
4:AD:18:LYS:HE3	4:AD:31:CYS:SG	2.48	0.54
5:AE:6:PHE:CB	5:AE:34:VAL:HG22	2.37	0.54
13:AM:83:ASP:OD1	13:AM:84:ILE:N	2.40	0.54
14:AN:27:CYS:SG	14:AN:29:ARG:HB2	2.48	0.54
15:AO:17:ARG:NH1	15:AO:17:ARG:HG3	2.19	0.54
15:AO:82:ILE:CD1	15:AO:88:ARG:HB2	2.38	0.54
25:AZ:189:ARG:HG2	25:AZ:189:ARG:HH11	1.73	0.54
26:B0:40:GLN:NE2	26:B0:44:ARG:H	2.06	0.54
31:B5:49:CYS:SG	31:B5:50:GLY:N	2.81	0.54
36:BA:1142(A):A:H8	36:BA:1142(A):A:H5'	1.73	0.54
36:BA:1314:C:C2	36:BA:1339:G:N2	2.76	0.54
36:BA:1400:G:H2'	36:BA:1401:G:C8	2.43	0.54
36:BA:142(A):C:O2'	36:BA:143:G:H5'	2.08	0.54
36:BA:1573:G:H2'	36:BA:1574:C:H5'	1.90	0.54
36:BA:15:G:O2'	36:BA:16:G:H5'	2.07	0.54
36:BA:2750:A:H4'	36:BA:2751:G:OP1	2.08	0.54
36:BA:629:G:H1'	36:BA:639:U:O2'	2.08	0.54
37:BB:44:G:H1'	37:BB:47:C:N4	2.23	0.54
38:BC:119:VAL:O	38:BC:119:VAL:HG22	2.08	0.54
39:BD:77:ALA:HA	39:BD:97:TYR:HA	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BF:53:THR:O	41:BF:57:VAL:HG23	2.08	0.54
42:BG:44:GLY:HA2	42:BG:88:ILE:HG21	1.90	0.54
1:AA:1423:G:C5'	47:BO:49:ARG:HH22	2.20	0.54
47:BO:97:ARG:HH11	47:BO:97:ARG:HG3	1.73	0.54
48:BP:50:ARG:HH11	48:BP:50:ARG:HG2	1.73	0.54
36:BA:2406:U:N3	48:BP:72:PRO:HB2	2.23	0.54
51:BS:58:LEU:O	51:BS:59:LYS:O	2.26	0.54
55:BW:12:ILE:HD13	55:BW:17:VAL:HG22	1.90	0.54
55:BW:71:VAL:HG23	55:BW:71:VAL:O	2.08	0.54
57:BY:47:LYS:HE3	57:BY:60:PHE:HZ	1.73	0.54
58:BZ:30:ASN:ND2	58:BZ:30:ASN:C	2.57	0.54
1:CA:1402:C:O2	1:CA:1500:A:N1	2.40	0.54
1:CA:266:G:H5''	1:CA:267:C:C5	2.43	0.54
1:CA:78:G:N2	1:CA:91:C:H41	2.06	0.54
4:CD:145:GLU:OE1	4:CD:145:GLU:O	2.26	0.54
7:CG:115:ARG:O	7:CG:118:VAL:HG22	2.08	0.54
9:CI:79:LEU:O	9:CI:79:LEU:HD22	2.08	0.54
9:CI:91:ASP:C	9:CI:93:ARG:N	2.60	0.54
17:CQ:82:MET:O	17:CQ:86:GLU:HG2	2.08	0.54
22:CV:45:U:H2'	22:CV:45:U:OP2	2.08	0.54
24:CY:38:A:H5'	36:DA:1913:A:C6	2.43	0.54
24:CY:70:C:H2'	24:CY:71:C:H6	1.73	0.54
25:CZ:152:MET:HE2	25:CZ:156:ASP:HB2	1.89	0.54
25:CZ:178:ALA:CB	25:CZ:199:ILE:HD11	2.38	0.54
29:D3:25:ALA:C	29:D3:27:GLY:H	2.10	0.54
30:D4:28:LYS:O	30:D4:31:ILE:HD11	2.07	0.54
36:DA:1059:G:H2'	36:DA:1060:U:H5	1.71	0.54
36:DA:1451:C:N4	36:DA:1461:G:H1	2.05	0.54
36:DA:1652:A:C2'	36:DA:1653:G:H5'	2.38	0.54
36:DA:2179:C:H4'	36:DA:2180:U:N3	2.23	0.54
36:DA:310:A:OP1	57:DY:17:SER:O	2.26	0.54
36:DA:832:G:H21	48:DP:53:GLY:CA	2.21	0.54
39:DD:68:LYS:HD3	39:DD:70:TRP:CZ2	2.42	0.54
43:DH:149:ARG:HG3	43:DH:162:ILE:HG12	1.90	0.54
43:DH:30:LYS:HA	43:DH:30:LYS:HE2	1.90	0.54
36:DA:1453:U:H5'	50:DR:63:ARG:NE	2.23	0.54
52:DT:27:THR:HG23	52:DT:28:VAL:H	1.73	0.54
52:DT:28:VAL:CG2	52:DT:46:GLU:HG3	2.38	0.54
53:DU:61:TRP:CH2	53:DU:94:ASN:HB2	2.43	0.54
1:AA:1242:C:O2'	1:AA:1243:C:H5'	2.08	0.53
1:AA:858:G:H5''	1:AA:858:G:H8	1.71	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:102:ARG:O	7:AG:106:GLN:HG3	2.08	0.53
7:AG:15:ASP:OD1	7:AG:44:TYR:OH	2.26	0.53
10:AJ:50:ILE:HG23	10:AJ:60:ARG:HH21	1.73	0.53
11:AK:108:ILE:CG2	18:AR:88:LYS:HB2	2.28	0.53
22:AW:57:G:O2'	22:AW:58:A:H5'	2.08	0.53
25:AZ:168:VAL:O	25:AZ:170:VAL:HG23	2.07	0.53
25:AZ:70:TYR:O	25:AZ:77:TYR:HB2	2.07	0.53
31:B5:24:ALA:O	31:B5:25:LEU:CB	2.53	0.53
36:BA:1013:C:H2'	36:BA:1014:U:H6	1.72	0.53
36:BA:99:U:C6	36:BA:102:G:N2	2.76	0.53
36:BA:1820:U:O2	39:BD:201:HIS:HB3	2.08	0.53
42:BG:34:LEU:CA	42:BG:161:THR:HG22	2.38	0.53
42:BG:72:ARG:HB3	42:BG:86:MET:H	1.73	0.53
48:BP:144:GLU:N	48:BP:145:PRO:HD3	2.23	0.53
50:BR:96:ARG:NH2	50:BR:117:VAL:HG23	2.23	0.53
50:BR:13:HIS:HE1	50:BR:15:SER:OG	1.91	0.53
49:BQ:19:GLY:HA3	58:BZ:79:ARG:NH2	2.22	0.53
1:CA:755:G:OP2	15:CO:65:ARG:HD2	2.07	0.53
4:CD:157:LEU:HD12	4:CD:157:LEU:N	2.23	0.53
1:CA:559:A:OP1	5:CE:126:ARG:NH2	2.38	0.53
7:CG:69:VAL:HG23	7:CG:134:ALA:O	2.08	0.53
7:CG:6:ARG:HH21	7:CG:94:ARG:HH12	1.56	0.53
1:CA:1371:G:O3'	9:CI:69:GLY:HA3	2.08	0.53
10:CJ:40:LEU:HB2	10:CJ:69:ASN:HB2	1.90	0.53
12:CL:40:VAL:HG11	12:CL:77:LEU:O	2.08	0.53
13:CM:91:ARG:CB	13:CM:98:VAL:HG12	2.38	0.53
15:CO:21:ASP:OD2	15:CO:24:SER:HB3	2.07	0.53
25:CZ:171:ILE:HD12	25:CZ:201:GLU:OE1	2.07	0.53
30:D4:28:LYS:HA	30:D4:28:LYS:HE3	1.90	0.53
36:DA:1049:C:H2'	36:DA:1050:A:C8	2.29	0.53
36:DA:1354:A:H2'	36:DA:1355:G:O4'	2.08	0.53
36:DA:142:A:H5''	36:DA:142(A):C:H5	1.72	0.53
36:DA:1880:C:C2'	36:DA:1881:C:H5''	2.38	0.53
36:DA:1860:G:H1	36:DA:1882:C:H42	1.54	0.53
36:DA:324:A:H2'	36:DA:325:G:O4'	2.07	0.53
36:DA:335:C:H2'	36:DA:336:C:H6	1.74	0.53
36:DA:341:G:O2'	36:DA:342:G:H5'	2.08	0.53
36:DA:222:A:H5''	36:DA:421:U:OP1	2.08	0.53
37:DB:106:G:O2'	37:DB:107:G:H5'	2.07	0.53
38:DC:87:GLU:CG	38:DC:94:VAL:HG11	2.38	0.53
39:DD:111:LEU:HD22	39:DD:115:GLN:OE1	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DF:157:VAL:HG21	41:DF:194:MET:HG2	1.90	0.53
41:DF:28:ILE:N	41:DF:28:ILE:HD13	2.13	0.53
41:DF:3:GLU:HA	41:DF:24:LEU:CG	2.35	0.53
42:DG:118:ARG:HG2	42:DG:118:ARG:HH11	1.73	0.53
42:DG:73:ALA:CB	42:DG:87:PRO:HG3	2.28	0.53
48:DP:9:ASN:H	48:DP:10:PRO:CD	2.22	0.53
36:DA:2392:A:H1'	48:DP:60:MET:HB3	1.90	0.53
51:DS:17:ARG:HA	51:DS:20:ARG:HH11	1.73	0.53
52:DT:29:ARG:HB3	52:DT:85:LYS:HA	1.89	0.53
52:DT:92:GLY:O	52:DT:93:ARG:C	2.47	0.53
55:DW:17:VAL:O	55:DW:20:VAL:HG22	2.08	0.53
57:DY:2:ARG:C	57:DY:4:LYS:H	2.12	0.53
1:AA:377:G:OP1	16:AP:3:LYS:HD2	2.08	0.53
4:AD:205:GLU:OE2	5:AE:100:VAL:HG22	2.08	0.53
12:AL:40:VAL:HG11	12:AL:77:LEU:O	2.08	0.53
36:BA:1039:G:H1	36:BA:1116:C:N4	2.05	0.53
36:BA:330:A:C2	36:BA:1210:A:H2'	2.31	0.53
36:BA:1231:G:H2'	36:BA:1232:G:C8	2.42	0.53
36:BA:1292:U:H2'	36:BA:1293:C:C6	2.43	0.53
36:BA:1608:A:H1'	36:BA:1610:A:OP2	2.08	0.53
36:BA:184:C:H2'	36:BA:185:U:C6	2.43	0.53
36:BA:2735:G:H2'	36:BA:2736:G:H8	1.73	0.53
37:BB:42:C:O2'	37:BB:43:C:P	2.66	0.53
39:BD:34:VAL:HG23	39:BD:35:LYS:N	2.24	0.53
42:BG:111:LEU:N	42:BG:112:PRO:HD2	2.23	0.53
42:BG:138:GLN:CG	42:BG:153:ARG:O	2.56	0.53
43:BH:30:LYS:HA	43:BH:30:LYS:HE2	1.91	0.53
47:BO:115:VAL:HG13	47:BO:121:VAL:HG21	1.88	0.53
58:BZ:37:VAL:CG2	58:BZ:38:TYR:N	2.68	0.53
1:CA:377:G:OP1	16:CP:3:LYS:HD2	2.09	0.53
1:CA:725:G:O2'	1:CA:726:C:H5'	2.08	0.53
1:CA:738:C:H5''	6:CF:69:GLU:HB2	1.90	0.53
2:CB:151:GLY:C	2:CB:153:ARG:H	2.10	0.53
2:CB:162:ILE:O	2:CB:185:ILE:HG12	2.07	0.53
2:CB:18:GLY:H	2:CB:42:ILE:CG2	2.20	0.53
4:CD:121:VAL:N	4:CD:126:ILE:HD13	2.23	0.53
5:CE:90:VAL:C	5:CE:91:LEU:HD22	2.29	0.53
10:CJ:16:LEU:HD11	10:CJ:70:ARG:HG2	1.90	0.53
10:CJ:4:ILE:HD11	10:CJ:77:PRO:HB3	1.91	0.53
34:D8:52:LYS:N	34:D8:53:PRO:CD	2.70	0.53
36:DA:1013:C:H2'	36:DA:1014:U:H6	1.72	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1331:A:O2'	36:DA:1332:G:C8	2.58	0.53
36:DA:1493:C:O2	36:DA:1493:C:H2'	2.07	0.53
36:DA:1586:A:H5''	36:DA:1587:A:C8	2.44	0.53
36:DA:1722:A:O2'	36:DA:1739:U:H5''	2.08	0.53
36:DA:1999:C:H4'	36:DA:2723:C:O2	2.08	0.53
37:DB:105:A:H2'	37:DB:106:G:O4'	2.08	0.53
39:DD:91:ARG:HG2	39:DD:91:ARG:HH11	1.73	0.53
40:DE:48:GLN:HE21	40:DE:78:LEU:HD22	1.73	0.53
40:DE:59:VAL:HG23	40:DE:63:LEU:HA	1.90	0.53
43:DH:20:ALA:HB1	43:DH:21:PRO:CD	2.39	0.53
49:DQ:63:LYS:HB2	58:DZ:116:VAL:HG11	1.90	0.53
50:DR:67:LEU:HD13	50:DR:76:VAL:HG21	1.91	0.53
57:DY:98:VAL:O	57:DY:99:CYS:SG	2.66	0.53
1:AA:1320:C:H5''	19:AS:70:LYS:HG3	1.90	0.53
1:AA:825:G:O2'	1:AA:826:C:H5'	2.08	0.53
4:AD:200:GLU:HG2	4:AD:201:GLN:N	2.24	0.53
9:AI:40:LEU:C	9:AI:42:ARG:H	2.12	0.53
13:AM:93:ARG:HG3	36:BA:888:C:OP2	2.09	0.53
14:AN:59:ALA:O	14:AN:60:SER:CB	2.46	0.53
15:AO:17:ARG:HD3	15:AO:26:GLU:CD	2.29	0.53
19:AS:31:ILE:HG23	19:AS:49:ILE:HG23	1.90	0.53
25:AZ:326:GLU:H	25:AZ:326:GLU:CD	2.10	0.53
28:B2:43:GLN:C	28:B2:45:SER:N	2.61	0.53
28:B2:35:LEU:HB2	28:B2:53:LEU:HD13	1.90	0.53
34:B8:23:VAL:HG11	34:B8:46:ARG:HD3	1.90	0.53
36:BA:142:A:H5''	36:BA:142(A):C:H5	1.73	0.53
36:BA:1602:U:H3'	36:BA:1603:A:H5''	1.88	0.53
36:BA:1880:C:H2'	36:BA:1881:C:H5''	1.91	0.53
36:BA:2492:U:O2'	36:BA:2493:U:H5'	2.09	0.53
36:BA:2840:C:H2'	36:BA:2841:C:H6	1.73	0.53
36:BA:480:A:H3'	36:BA:481:G:H5''	1.90	0.53
36:BA:673:C:C6	36:BA:673:C:H5'	2.27	0.53
36:BA:686:G:N2	36:BA:788:A:H61	2.07	0.53
38:BC:87:GLU:HG3	38:BC:94:VAL:HG11	1.91	0.53
38:BC:99:ILE:HG22	38:BC:99:ILE:O	2.08	0.53
41:BF:3:GLU:HB2	41:BF:24:LEU:HD23	1.90	0.53
41:BF:64:ILE:HG22	41:BF:76:GLY:O	2.08	0.53
46:BN:71:ILE:HG21	46:BN:84:LYS:HB3	1.89	0.53
53:BU:102:GLU:HB2	53:BU:105:VAL:HB	1.89	0.53
54:BV:58:VAL:HG12	54:BV:97:LYS:HB2	1.89	0.53
55:BW:5:ALA:HB2	55:BW:54:ALA:CB	2.32	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BZ:116:VAL:O	58:BZ:117:LEU:HB3	2.08	0.53
58:BZ:30:ASN:ND2	58:BZ:33:LEU:H	2.07	0.53
1:CA:401:C:H1'	1:CA:622:A:H1'	1.90	0.53
3:CC:81:GLY:HA3	3:CC:85:ARG:NE	2.23	0.53
9:CI:20:ARG:CB	9:CI:20:ARG:HH11	2.21	0.53
9:CI:46:ALA:O	9:CI:78:LYS:HA	2.08	0.53
10:CJ:32:ALA:H	10:CJ:78:ASN:HD21	1.54	0.53
13:CM:83:ASP:C	13:CM:85:GLY:H	2.11	0.53
25:CZ:168:VAL:O	25:CZ:170:VAL:HG23	2.09	0.53
32:D6:14:THR:HG23	32:D6:16:CYS:H	1.73	0.53
32:D6:20:ASN:C	32:D6:21:TYR:CG	2.82	0.53
34:D8:15:LYS:HD2	34:D8:16:ILE:H	1.73	0.53
34:D8:61:LEU:CD1	34:D8:62:LEU:H	2.21	0.53
36:DA:99:U:C6	36:DA:102:G:N2	2.77	0.53
36:DA:1056:G:H22	36:DA:1104:C:H42	1.54	0.53
36:DA:1506:C:H2'	36:DA:1506:C:O2	2.09	0.53
36:DA:2219:G:C2'	36:DA:2220:G:H5'	2.39	0.53
36:DA:2741:A:H2'	36:DA:2742:C:O4'	2.08	0.53
38:DC:87:GLU:HG3	38:DC:94:VAL:HG11	1.91	0.53
40:DE:182:LEU:C	40:DE:183:LEU:HD12	2.29	0.53
49:DQ:6:ARG:O	49:DQ:7:MET:HG3	2.07	0.53
54:DV:5:VAL:HG21	54:DV:35:LEU:CD2	2.38	0.53
58:DZ:166:SER:HB2	58:DZ:167:PRO:C	2.29	0.53
1:AA:1050:G:O2'	1:AA:1051:C:P	2.65	0.53
1:AA:1525:G:O2'	1:AA:1526:G:H5'	2.09	0.53
1:AA:189(I):G:O2'	1:AA:189(J):G:H5'	2.08	0.53
1:AA:77:G:H2'	1:AA:77:G:N3	2.23	0.53
4:AD:110:PHE:N	4:AD:110:PHE:CD1	2.75	0.53
6:AF:15:ASP:OD1	6:AF:18:GLN:NE2	2.41	0.53
9:AI:58:HIS:CG	9:AI:58:HIS:O	2.61	0.53
10:AJ:3:LYS:HD2	10:AJ:77:PRO:HG3	1.89	0.53
12:AL:75:HIS:HD2	12:AL:77:LEU:HB2	1.73	0.53
15:AO:9:GLN:O	15:AO:13:GLN:HG3	2.08	0.53
29:B3:28:LEU:HD23	29:B3:28:LEU:H	1.73	0.53
34:B8:61:LEU:CD1	34:B8:62:LEU:H	2.18	0.53
36:BA:1861:G:O2'	36:BA:1862:G:H5'	2.08	0.53
36:BA:2179:C:H1'	36:BA:2180:U:C4	2.43	0.53
36:BA:2682:U:H5'	36:BA:2682:U:H6	1.74	0.53
36:BA:2695:C:H2'	36:BA:2696:U:C6	2.43	0.53
39:BD:108:PRO:HB3	39:BD:143:HIS:CE1	2.44	0.53
39:BD:264:LYS:HG2	39:BD:266:SER:HB3	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BG:109:VAL:O	42:BG:112:PRO:HG2	2.08	0.53
42:BG:138:GLN:HE21	42:BG:152:LEU:CB	2.21	0.53
42:BG:16:ARG:O	42:BG:20:ILE:HG13	2.08	0.53
42:BG:85:GLY:C	42:BG:87:PRO:CD	2.73	0.53
49:BQ:133:ARG:HG2	49:BQ:134:ARG:N	2.23	0.53
56:BX:40:LYS:HG2	56:BX:51:VAL:CB	2.15	0.53
1:CA:1211:U:H1'	1:CA:1213:A:C2	2.44	0.53
1:CA:1536:C:C2'	1:CA:1537:U:H5'	2.39	0.53
4:CD:12:CYS:HA	4:CD:19:LEU:CD1	2.38	0.53
6:CF:15:ASP:OD1	6:CF:18:GLN:NE2	2.41	0.53
22:CV:16:U:H3	22:CV:59:U:H3	1.54	0.53
34:D8:23:VAL:HG13	34:D8:46:ARG:HB3	1.89	0.53
34:D8:33:ASN:OD1	34:D8:35:GLN:N	2.41	0.53
36:DA:1404:C:O2'	36:DA:1405:U:H5'	2.08	0.53
36:DA:2320:A:N3	36:DA:2320:A:H2'	2.22	0.53
36:DA:2360:A:O2'	36:DA:2361:A:O4'	2.22	0.53
36:DA:2360:A:O2'	36:DA:2361:A:P	2.67	0.53
36:DA:2523:G:O2'	36:DA:2524:G:H5''	2.09	0.53
36:DA:2545:G:N3	36:DA:2565:A:H2	2.06	0.53
36:DA:480:A:H3'	36:DA:481:G:H5''	1.90	0.53
36:DA:796:C:H2'	36:DA:797:C:H6	1.72	0.53
42:DG:109:VAL:O	42:DG:112:PRO:HG2	2.09	0.53
43:DH:88:LEU:HD13	43:DH:130:ARG:HG2	1.90	0.53
45:DK:66:UNK:O	45:DK:67:UNK:C	2.55	0.53
46:DN:48:MET:HE3	46:DN:48:MET:C	2.29	0.53
47:DO:104:ARG:HE	52:DT:33:LYS:HZ3	1.54	0.53
58:DZ:10:ARG:NH2	58:DZ:36:LYS:HB2	2.23	0.53
1:AA:321:A:O2'	1:AA:322:C:H5'	2.09	0.53
1:AA:939:G:O3'	7:AG:102:ARG:NH2	2.40	0.53
3:AC:136:GLN:O	3:AC:139:GLN:HB3	2.08	0.53
5:AE:41:VAL:O	5:AE:67:VAL:HG12	2.08	0.53
7:AG:43:PHE:O	7:AG:46:ALA:HB3	2.09	0.53
9:AI:118:LYS:O	9:AI:119:ALA:CB	2.56	0.53
12:AL:70:ILE:HG22	12:AL:102:ARG:HH12	1.73	0.53
17:AQ:45:HIS:HB2	17:AQ:65:ILE:HD13	1.90	0.53
17:AQ:53:LEU:HD23	17:AQ:54:GLY:N	2.24	0.53
25:AZ:263:ARG:NH2	25:AZ:297:GLU:HG2	2.14	0.53
35:B9:10:ILE:HD12	35:B9:10:ILE:H	1.72	0.53
36:BA:1925:C:O2'	36:BA:1926:U:H5'	2.08	0.53
36:BA:2116:G:N7	36:BA:2117:A:C2	2.76	0.53
36:BA:2320:A:H2'	36:BA:2320:A:N3	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2590:A:H5''	39:BD:239:ARG:HE	1.74	0.53
36:BA:512:G:HO2'	36:BA:513:A:H8	1.55	0.53
36:BA:953:A:O2'	36:BA:954:G:H5'	2.09	0.53
39:BD:79:VAL:HG21	39:BD:111:LEU:HD11	1.90	0.53
36:BA:2579:C:O2'	40:BE:131:ALA:CB	2.56	0.53
42:BG:39:ILE:HG12	42:BG:92:VAL:CG1	2.38	0.53
36:BA:832:G:O2'	48:BP:52:GLU:HB3	2.09	0.53
51:BS:95:HIS:CG	51:BS:96:GLY:N	2.76	0.53
53:BU:32:PHE:CB	53:BU:36:ARG:NH2	2.72	0.53
54:BV:39:LEU:HD22	54:BV:39:LEU:N	2.24	0.53
54:BV:6:LYS:O	54:BV:37:VAL:HG21	2.09	0.53
54:BV:91:TYR:HD1	54:BV:91:TYR:H	1.57	0.53
55:BW:86:LEU:HD22	55:BW:96:ILE:HD12	1.91	0.53
57:BY:53:PRO:CB	57:BY:56:PRO:HG3	2.32	0.53
57:BY:43:ASN:CB	57:BY:64:GLU:HA	2.38	0.53
58:BZ:104:PHE:CE2	58:BZ:119:GLU:HB3	2.43	0.53
58:BZ:99:TYR:HB3	58:BZ:123:ASP:OD2	2.09	0.53
1:CA:1053:G:H4'	1:CA:1054:C:H5''	1.85	0.53
1:CA:645:C:H2'	1:CA:646:U:C6	2.42	0.53
3:CC:82:GLU:O	3:CC:86:VAL:HG13	2.07	0.53
13:CM:116:THR:O	13:CM:116:THR:HG22	2.09	0.53
17:CQ:21:VAL:HG21	17:CQ:59:ILE:HD11	1.90	0.53
17:CQ:18:THR:HG23	17:CQ:69:LYS:HE3	1.91	0.53
22:CV:68:C:O2'	22:CV:69:G:H5'	2.08	0.53
25:CZ:110:ASP:HB3	25:CZ:113:MET:HE1	1.87	0.53
25:CZ:270:VAL:HG12	25:CZ:286:VAL:HG21	1.89	0.53
34:D8:61:LEU:CD2	34:D8:62:LEU:H	2.21	0.53
36:DA:1058:G:H3'	36:DA:1059:G:H5'	1.91	0.53
36:DA:2179:C:H4'	36:DA:2180:U:C2	2.44	0.53
36:DA:2406:U:N3	48:DP:72:PRO:HB2	2.24	0.53
36:DA:2777:G:C5'	36:DA:2778:A:H5'	2.38	0.53
36:DA:49:A:H5''	36:DA:51:G:O4'	2.07	0.53
36:DA:607:U:H3	36:DA:621:A:H2	1.57	0.53
36:DA:622:G:O2'	36:DA:623:G:H5'	2.09	0.53
36:DA:67:U:H2'	36:DA:68:G:H8	1.73	0.53
46:DN:12:ARG:O	46:DN:14:VAL:HG23	2.09	0.53
46:DN:4:TYR:N	46:DN:4:TYR:CD1	2.76	0.53
48:DP:23:PRO:C	48:DP:33:ARG:NE	2.62	0.53
57:DY:7:VAL:HB	57:DY:8:LYS:HZ3	1.74	0.53
58:DZ:108:PRO:HB3	58:DZ:141:VAL:HG12	1.90	0.53
1:AA:1009:G:H2'	1:AA:1010:G:H8	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1510:U:H2'	1:AA:1511:G:C8	2.44	0.53
1:AA:429:U:H1'	1:AA:430:A:H5''	1.90	0.53
3:AC:79:ARG:O	3:AC:82:GLU:OE1	2.26	0.53
8:AH:89:PRO:HA	8:AH:92:ARG:HH11	1.73	0.53
12:AL:92:ASP:O	12:AL:94:PRO:HD3	2.09	0.53
13:AM:49:THR:O	13:AM:53:VAL:HG23	2.07	0.53
16:AP:71:ARG:HA	16:AP:74:LEU:HD23	1.91	0.53
17:AQ:52:LYS:HD3	17:AQ:55:ASP:OD2	2.09	0.53
30:B4:22:ILE:H	30:B4:22:ILE:HD12	1.73	0.53
31:B5:57:VAL:C	31:B5:58:LEU:HD12	2.29	0.53
35:B9:7:VAL:HG13	35:B9:34:GLN:CG	2.36	0.53
36:BA:1050:A:H2'	36:BA:1051:G:C5'	2.35	0.53
36:BA:1058:G:H3'	36:BA:1059:G:H5'	1.91	0.53
36:BA:1331:A:O2'	36:BA:1332:G:C8	2.58	0.53
36:BA:1389:G:H2'	36:BA:1390:U:C6	2.43	0.53
36:BA:1771:C:C1'	36:BA:1786:A:C8	2.89	0.53
36:BA:1888:G:H5'	36:BA:1888:G:N3	2.23	0.53
36:BA:1947:C:H2'	36:BA:1948:G:H5''	1.90	0.53
34:B8:18:ALA:HB2	36:BA:628:G:H5''	1.90	0.53
36:BA:654(H):G:C3'	36:BA:654(I):C:H5'	2.38	0.53
36:BA:654(N):G:H2'	36:BA:654(O):G:O4'	2.08	0.53
37:BB:3:C:N4	37:BB:118:G:H1	2.07	0.53
40:BE:59:VAL:HG23	40:BE:63:LEU:HA	1.91	0.53
36:BA:1245:G:H5''	41:BF:34:TRP:HZ2	1.74	0.53
41:BF:84:VAL:C	41:BF:86:GLY:N	2.61	0.53
42:BG:47:LYS:HZ2	42:BG:82:LEU:CD1	2.18	0.53
43:BH:85:LYS:NZ	43:BH:86:GLU:CA	2.72	0.53
47:BO:111:PHE:O	47:BO:115:VAL:HG23	2.08	0.53
36:BA:2848:G:C8	52:BT:97:ALA:HB2	2.43	0.53
57:BY:23:ARG:HH11	57:BY:23:ARG:HG2	1.74	0.53
1:CA:1176:A:H2'	1:CA:1177:G:C8	2.44	0.53
1:CA:1234:C:O2'	1:CA:1235:U:H5'	2.07	0.53
1:CA:1327:C:O2'	1:CA:1328:C:H5'	2.09	0.53
1:CA:979:C:C3'	1:CA:980:C:C5'	2.80	0.53
6:CF:37:VAL:HG12	6:CF:38:GLU:O	2.08	0.53
9:CI:111:ARG:O	9:CI:119:ALA:CB	2.57	0.53
25:CZ:133:VAL:HG23	25:CZ:168:VAL:HG11	1.89	0.53
25:CZ:27:LEU:O	25:CZ:30:ALA:HB3	2.09	0.53
25:CZ:349:VAL:HG21	25:CZ:374:LEU:HD13	1.91	0.53
25:CZ:70:TYR:O	25:CZ:77:TYR:HB2	2.08	0.53
27:D1:3:LYS:NZ	27:D1:3:LYS:CB	2.71	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D2:20:GLU:HG3	28:D2:21:LEU:N	2.23	0.53
36:DA:1528(A):A:H62	36:DA:1541:G:H21	1.57	0.53
36:DA:2523:G:C2'	36:DA:2524:G:C5'	2.87	0.53
36:DA:710:G:H2'	36:DA:711:G:C8	2.43	0.53
37:DB:80:U:H2'	37:DB:81:G:N2	2.21	0.53
37:DB:96:U:H2'	37:DB:97:G:C8	2.44	0.53
41:DF:197:ASP:O	41:DF:200:GLU:HB3	2.08	0.53
43:DH:156:ALA:C	43:DH:158:HIS:N	2.61	0.53
47:DO:97:ARG:HG3	47:DO:97:ARG:HH11	1.74	0.53
48:DP:57:THR:OG1	48:DP:59:LEU:CB	2.56	0.53
51:DS:95:HIS:CG	51:DS:96:GLY:N	2.76	0.53
36:DA:84:A:H3'	57:DY:9:LYS:HG3	1.91	0.53
3:AC:70:VAL:O	3:AC:105:GLU:HA	2.09	0.53
6:AF:69:GLU:O	6:AF:72:VAL:HG12	2.09	0.53
25:AZ:206:ILE:C	25:AZ:208:GLU:H	2.12	0.53
31:B5:54:GLY:C	31:B5:56:LYS:HZ2	2.12	0.53
32:B6:14:THR:HG23	32:B6:16:CYS:H	1.74	0.53
32:B6:41:PRO:HD2	32:B6:45:LYS:HA	1.91	0.53
34:B8:33:ASN:OD1	34:B8:35:GLN:N	2.41	0.53
36:BA:118:A:OP2	36:BA:119:A:H5''	2.09	0.53
36:BA:1708:C:O2'	36:BA:1709:U:H5'	2.08	0.53
36:BA:361:G:H2'	36:BA:362:U:H4'	1.90	0.53
36:BA:654(T):C:O2'	36:BA:654(U):A:O4'	2.17	0.53
36:BA:690:G:H2'	36:BA:691:C:C6	2.44	0.53
37:BB:67:G:O2'	37:BB:68:C:H6	1.92	0.53
36:BA:2787:C:H1'	40:BE:61:ARG:CD	2.37	0.53
41:BF:126:VAL:O	41:BF:196:LEU:HG	2.09	0.53
44:BJ:30:UNK:O	44:BJ:31:UNK:CB	2.56	0.53
46:BN:63:THR:O	46:BN:66:LYS:HE3	2.08	0.53
48:BP:71:VAL:HG12	48:BP:72:PRO:HD3	1.91	0.53
49:BQ:110:THR:HG23	49:BQ:113:GLN:OE1	2.09	0.53
49:BQ:81:VAL:HG22	49:BQ:82:ARG:N	2.24	0.53
51:BS:22:GLY:O	51:BS:23:ARG:O	2.26	0.53
54:BV:61:VAL:HG22	54:BV:61:VAL:O	2.08	0.53
54:BV:81:TYR:C	54:BV:82:ARG:HD2	2.28	0.53
57:BY:89:PHE:C	57:BY:90:LEU:HD23	2.29	0.53
1:CA:632:A:C8	1:CA:633:G:C8	2.96	0.53
2:CB:118:LEU:HD13	2:CB:142:LEU:HB2	1.89	0.53
5:CE:50:GLU:HB2	5:CE:53:LEU:CD1	2.33	0.53
6:CF:79:LEU:HD12	6:CF:79:LEU:H	1.74	0.53
8:CH:20:TYR:CE2	8:CH:76:PRO:HG2	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:10:LEU:HD22	8:CH:83:ILE:HD11	1.89	0.53
10:CJ:55:LYS:HG3	10:CJ:56:HIS:H	1.74	0.53
30:D4:5:ILE:N	30:D4:5:ILE:HD13	2.23	0.53
36:DA:1210:A:H4'	36:DA:1211:U:O5'	2.09	0.53
36:DA:1582:C:O2'	36:DA:1586:A:C8	2.62	0.53
36:DA:239:U:H1'	36:DA:259:G:N2	2.24	0.53
36:DA:31:C:C2'	36:DA:32:C:C5'	2.72	0.53
46:DN:61:ARG:NH1	46:DN:61:ARG:HG3	2.22	0.53
49:DQ:81:VAL:HG22	49:DQ:82:ARG:N	2.23	0.53
52:DT:85:LYS:HZ2	52:DT:85:LYS:CB	2.20	0.53
53:DU:102:GLU:HB2	53:DU:105:VAL:HB	1.89	0.53
56:DX:35:THR:HG22	56:DX:38:GLU:N	2.21	0.53
1:AA:1434:A:H2'	1:AA:1435:G:O4'	2.08	0.53
1:AA:512:U:H2'	1:AA:513:C:H6	1.74	0.53
1:AA:995:C:HO2'	1:AA:996:A:H8	1.57	0.53
2:AB:134:GLU:C	2:AB:136:VAL:N	2.58	0.53
3:AC:81:GLY:HA3	3:AC:85:ARG:NE	2.23	0.53
4:AD:121:VAL:N	4:AD:126:ILE:HD13	2.24	0.53
6:AF:27:GLN:CA	6:AF:27:GLN:HE21	2.20	0.53
9:AI:46:ALA:O	9:AI:78:LYS:HA	2.09	0.53
18:AR:22:VAL:O	18:AR:25:THR:HB	2.09	0.53
25:AZ:178:ALA:HB1	25:AZ:199:ILE:CD1	2.38	0.53
25:AZ:221:PHE:HA	25:AZ:244:ARG:O	2.09	0.53
27:B1:13:ILE:HD12	27:B1:14:VAL:N	2.24	0.53
36:BA:1762:A:C8	36:BA:1762:A:O5'	2.59	0.53
36:BA:2373:G:H2'	36:BA:2374:C:C6	2.43	0.53
36:BA:2649:U:O2'	36:BA:2650:U:H5'	2.08	0.53
36:BA:2754:U:H2'	36:BA:2756:U:OP1	2.09	0.53
36:BA:2892:A:H62	36:BA:2893:G:H21	1.57	0.53
38:BC:116:THR:HB	38:BC:147:PHE:CD1	2.44	0.53
39:BD:147:LEU:CD1	39:BD:183:ARG:HH12	2.18	0.53
40:BE:52:LEU:HB3	40:BE:75:VAL:HB	1.90	0.53
36:BA:1054:A:O2'	44:BJ:31:UNK:HA	2.09	0.53
46:BN:58:ASP:O	46:BN:60:ILE:HG13	2.08	0.53
54:BV:39:LEU:CD1	54:BV:47:VAL:HG11	2.37	0.53
56:BX:27:THR:HG22	56:BX:80:ILE:HB	1.91	0.53
57:BY:2:ARG:C	57:BY:4:LYS:H	2.12	0.53
58:BZ:58:VAL:HA	58:BZ:67:LEU:O	2.08	0.53
1:CA:1225:A:H2'	1:CA:1226:C:C5	2.44	0.53
1:CA:267:C:H2'	1:CA:268:C:H6	1.73	0.53
1:CA:367:U:H4'	25:CZ:291:ARG:NE	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:532:A:N6	1:CA:1206:G:O2'	2.41	0.53
4:CD:150:GLU:CD	4:CD:151:LYS:N	2.58	0.53
9:CI:3:GLN:HA	9:CI:19:LEU:O	2.08	0.53
9:CI:40:LEU:C	9:CI:42:ARG:H	2.10	0.53
25:CZ:330:ARG:NH1	25:CZ:334:PHE:HB3	2.23	0.53
25:CZ:98:GLN:HE22	25:CZ:346:THR:CG2	2.22	0.53
26:D0:26:TYR:CE2	36:DA:857:C:H1'	2.44	0.53
36:DA:1050:A:H2'	36:DA:1051:G:C5'	2.35	0.53
36:DA:142(A):C:O2'	36:DA:143:G:H5'	2.08	0.53
36:DA:1573:G:H2'	36:DA:1574:C:H5'	1.90	0.53
36:DA:2097:C:O2'	36:DA:2098:U:H5'	2.09	0.53
36:DA:2750:A:H4'	36:DA:2751:G:OP1	2.08	0.53
36:DA:2807:G:C3'	36:DA:2808:U:H5''	2.38	0.53
36:DA:654(N):G:H2'	36:DA:654(O):G:O4'	2.09	0.53
39:DD:142:VAL:HG22	39:DD:143:HIS:N	2.24	0.53
39:DD:72:LYS:HG3	39:DD:103:ARG:NH2	2.24	0.53
42:DG:31:VAL:O	42:DG:33:ARG:HG3	2.09	0.53
42:DG:77:ILE:O	42:DG:78:SER:C	2.46	0.53
43:DH:126:PRO:O	43:DH:127:GLU:CB	2.56	0.53
49:DQ:140:ALA:HB1	58:DZ:99:TYR:CE2	2.43	0.53
50:DR:28:LEU:HD12	50:DR:114:VAL:CG2	2.39	0.53
52:DT:106:SER:O	52:DT:107:ASP:OD1	2.27	0.53
54:DV:81:TYR:C	54:DV:82:ARG:HD2	2.28	0.53
56:DX:64:LYS:HG2	56:DX:65:ARG:N	2.24	0.53
57:DY:77:PRO:O	57:DY:78:ALA:HB2	2.07	0.53
58:DZ:119:GLU:O	58:DZ:121:HIS:N	2.39	0.53
58:DZ:11:GLU:H	58:DZ:11:GLU:CD	2.12	0.53
58:DZ:123:ASP:O	58:DZ:124:ILE:CG2	2.53	0.53
10:AJ:24:VAL:HG21	10:AJ:37:PRO:CG	2.38	0.53
10:AJ:4:ILE:HD11	10:AJ:77:PRO:HB3	1.91	0.53
12:AL:10:LEU:O	12:AL:14:GLY:N	2.42	0.53
24:AY:2:G:O2'	24:AY:3:G:H5''	2.09	0.53
25:AZ:333:GLY:HA3	25:AZ:363:MET:HA	1.91	0.53
31:B5:36:CYS:C	31:B5:38:ALA:N	2.59	0.53
31:B5:57:VAL:O	31:B5:58:LEU:HD12	2.08	0.53
32:B6:12:GLU:HA	32:B6:23:THR:HA	1.91	0.53
36:BA:1087:G:C8	36:BA:1088:A:H4'	2.35	0.53
36:BA:1411:C:H2'	36:BA:1412:A:H8	1.73	0.53
36:BA:2334:G:H21	51:BS:18:ILE:CG2	2.20	0.53
36:BA:2703:C:O2'	36:BA:2704:C:H5'	2.09	0.53
38:BC:190:ARG:O	38:BC:194:ARG:HG3	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BC:214:VAL:HG23	38:BC:224:ILE:HD13	1.91	0.53
40:BE:117:MET:HE1	40:BE:136:ARG:HA	1.90	0.53
40:BE:107:THR:HA	40:BE:163:GLU:O	2.09	0.53
42:BG:9:ARG:O	42:BG:11:TYR:N	2.41	0.53
43:BH:50:VAL:CG1	43:BH:52:VAL:HG23	2.39	0.53
46:BN:126:PRO:O	46:BN:127:ASP:CB	2.57	0.53
34:B8:25:MET:CG	48:BP:64:LYS:HB2	2.39	0.53
52:BT:10:VAL:O	52:BT:13:ARG:NE	2.37	0.53
58:BZ:114:GLY:H	58:BZ:146:ILE:HG22	1.72	0.53
1:CA:1010:G:O2'	1:CA:1011:G:H5'	2.09	0.53
1:CA:1157:A:H1'	1:CA:1181:G:C2	2.44	0.53
1:CA:28:G:O2'	1:CA:296:U:OP1	2.25	0.53
2:CB:141:GLU:O	2:CB:144:ARG:HG2	2.09	0.53
3:CC:172:ARG:O	3:CC:173:VAL:HG23	2.09	0.53
3:CC:92:ALA:O	3:CC:96:GLY:HA2	2.09	0.53
4:CD:11:LEU:O	4:CD:12:CYS:C	2.47	0.53
4:CD:43:HIS:O	4:CD:45:GLN:N	2.41	0.53
6:CF:69:GLU:O	6:CF:72:VAL:HG12	2.09	0.53
6:CF:87:ARG:CG	6:CF:87:ARG:HH11	2.21	0.53
13:CM:23:TYR:HD2	13:CM:67:GLU:HA	1.72	0.53
13:CM:7:VAL:O	13:CM:9:ILE:HG13	2.09	0.53
36:DA:2199:A:H3'	36:DA:2200:C:C6	2.43	0.53
36:DA:88:G:H5'	36:DA:89:G:OP2	2.09	0.53
38:DC:49:ILE:HB	38:DC:56:GLN:HB3	1.91	0.53
39:DD:79:VAL:HG21	39:DD:111:LEU:HD11	1.89	0.53
41:DF:53:THR:O	41:DF:57:VAL:HG23	2.08	0.53
42:DG:64:THR:HG23	42:DG:65:GLY:N	2.24	0.53
42:DG:61:ALA:O	42:DG:65:GLY:N	2.42	0.53
46:DN:1:MET:C	46:DN:1:MET:SD	2.87	0.53
48:DP:147:LEU:CG	48:DP:148:LEU:N	2.70	0.53
52:DT:27:THR:OG1	52:DT:28:VAL:N	2.41	0.53
50:DR:103:ARG:HG3	55:DW:40:ASN:CG	2.29	0.53
58:DZ:155:LEU:CD2	58:DZ:155:LEU:H	2.22	0.53
58:DZ:65:GLN:HB3	58:DZ:67:LEU:HD11	1.90	0.53
1:AA:1236:A:H2'	1:AA:1237:C:C6	2.44	0.53
1:AA:953:G:C5'	1:AA:965:A:H61	2.22	0.53
2:AB:209:ARG:NH1	2:AB:239:VAL:HG11	2.24	0.53
5:AE:102:ALA:HB1	5:AE:106:PRO:HG2	1.91	0.53
10:AJ:29:ARG:HH11	10:AJ:29:ARG:HG2	1.74	0.53
10:AJ:6:ILE:HG13	10:AJ:6:ILE:O	2.09	0.53
13:AM:108:ARG:NH1	13:AM:108:ARG:HG3	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AN:29:ARG:CG	14:AN:29:ARG:HH11	2.21	0.53
25:AZ:189:ARG:HB2	25:AZ:192:GLU:OE2	2.09	0.53
27:B1:30:VAL:HG23	27:B1:30:VAL:O	2.09	0.53
34:B8:4:MET:HE2	34:B8:61:LEU:HD23	1.91	0.53
36:BA:1682:G:H5'	36:BA:1762:A:O2'	2.08	0.53
36:BA:2179:C:H4'	36:BA:2180:U:C2	2.43	0.53
36:BA:341:G:O2'	36:BA:342:G:H5'	2.09	0.53
36:BA:469:G:H2'	36:BA:470:A:H5''	1.91	0.53
29:B3:43:ILE:HD11	36:BA:927:G:O2'	2.09	0.53
37:BB:80:U:H2'	37:BB:81:G:N2	2.21	0.53
42:BG:83:ARG:HB2	42:BG:84:LYS:HD2	1.91	0.53
47:BO:26:LYS:HB3	47:BO:30:ALA:HB2	1.91	0.53
49:BQ:30:GLY:HA2	49:BQ:107:ALA:HB2	1.90	0.53
50:BR:28:LEU:HD23	50:BR:28:LEU:C	2.30	0.53
51:BS:89:ARG:NH1	51:BS:89:ARG:HG2	2.24	0.53
53:BU:52:ARG:HH11	53:BU:52:ARG:HB3	1.74	0.53
56:BX:35:THR:HB	56:BX:38:GLU:HB3	1.90	0.53
1:CA:1007:C:O2'	1:CA:1008:C:H5'	2.09	0.53
1:CA:1270:C:H2'	1:CA:1271:G:C8	2.43	0.53
1:CA:166:G:O2'	1:CA:167:G:H5'	2.09	0.53
1:CA:825:G:O2'	1:CA:826:C:H5'	2.09	0.53
3:CC:5:ILE:H	3:CC:5:ILE:HD12	1.72	0.53
3:CC:76:VAL:CG2	3:CC:103:VAL:HG21	2.38	0.53
8:CH:56:LYS:HD2	8:CH:56:LYS:N	2.24	0.53
10:CJ:3:LYS:C	10:CJ:4:ILE:HD12	2.29	0.53
10:CJ:50:ILE:HG23	10:CJ:60:ARG:HH21	1.72	0.53
29:D3:19:GLN:NE2	29:D3:52:HIS:HE1	2.07	0.53
31:D5:57:VAL:C	31:D5:58:LEU:HD12	2.29	0.53
32:D6:12:GLU:HA	32:D6:23:THR:HA	1.91	0.53
28:D2:69:ARG:NH2	36:DA:111:A:H4'	2.24	0.53
36:DA:2133:G:C5	36:DA:2157:G:N1	2.77	0.53
36:DA:2649:U:H2'	36:DA:2650:U:H6	1.73	0.53
36:DA:2672:G:C2'	36:DA:2673:G:H5''	2.38	0.53
36:DA:888:C:H2'	36:DA:889:C:C4'	2.36	0.53
36:DA:902:C:H2'	36:DA:903:C:C6	2.44	0.53
37:DB:3:C:N4	37:DB:118:G:H1	2.07	0.53
37:DB:56:G:O2'	37:DB:57:A:OP2	2.25	0.53
39:DD:77:ALA:HA	39:DD:97:TYR:HA	1.91	0.53
40:DE:49:LEU:O	40:DE:78:LEU:CB	2.57	0.53
44:DJ:18:UNK:O	44:DJ:19:UNK:C	2.57	0.53
44:DJ:96:UNK:C	44:DJ:98:UNK:N	2.70	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DO:64:ARG:NH1	47:DO:83:ALA:HB2	2.23	0.53
36:DA:1246:A:OP1	48:DP:16:ARG:NH2	2.41	0.53
48:DP:33:ARG:O	48:DP:34:GLY:C	2.47	0.53
40:DE:52:LEU:HD21	52:DT:1:MET:HE3	1.90	0.53
55:DW:43:GLY:O	55:DW:47:VAL:HG23	2.08	0.53
1:AA:1226:C:H4'	1:AA:1227:A:OP1	2.10	0.52
1:AA:1270:C:H2'	1:AA:1271:G:H8	1.74	0.52
1:AA:78:G:O2'	1:AA:79:G:H4'	2.08	0.52
3:AC:11:ARG:NH2	3:AC:182:ILE:HD12	2.24	0.52
4:AD:12:CYS:CA	4:AD:19:LEU:HD13	2.39	0.52
4:AD:30:LYS:C	4:AD:32:ALA:N	2.62	0.52
8:AH:41:ARG:HH12	8:AH:123:GLU:CD	2.13	0.52
10:AJ:90:LEU:H	10:AJ:91:PRO:CD	2.21	0.52
13:AM:23:TYR:HD2	13:AM:67:GLU:HA	1.74	0.52
18:AR:26:LEU:HD21	18:AR:39:VAL:HG13	1.90	0.52
1:AA:187:C:H4'	20:AT:85:MET:O	2.09	0.52
25:AZ:64:ASN:N	25:AZ:64:ASN:ND2	2.56	0.52
30:B4:11:PRO:HB3	30:B4:25:TYR:CE2	2.44	0.52
34:B8:50:LEU:O	34:B8:51:ALA:CB	2.57	0.52
36:BA:769:G:H4'	36:BA:1379:A:N1	2.24	0.52
36:BA:1910:G:O2'	36:BA:1911:U:H5'	2.09	0.52
36:BA:2472:G:H5'	36:BA:2473:U:C5'	2.40	0.52
36:BA:2508:G:O3'	36:BA:2555:U:H5'	2.09	0.52
36:BA:2854:G:H1	36:BA:2863:C:H42	1.57	0.52
36:BA:648:G:H2'	36:BA:649:G:H8	1.73	0.52
38:BC:6:ARG:HH11	38:BC:34:THR:HB	1.74	0.52
40:BE:116:VAL:CG2	40:BE:117:MET:N	2.72	0.52
40:BE:117:MET:HE3	40:BE:136:ARG:HA	1.90	0.52
50:BR:67:LEU:HD13	50:BR:76:VAL:HG21	1.91	0.52
55:BW:40:ASN:O	55:BW:41:LYS:HG2	2.09	0.52
1:CA:1054:C:O2'	1:CA:1055:A:H5''	2.09	0.52
1:CA:78:G:O2'	1:CA:79:G:H4'	2.08	0.52
1:CA:975:A:H5'	1:CA:975:A:C8	2.42	0.52
2:CB:98:LEU:O	2:CB:101:MET:HG3	2.09	0.52
4:CD:59:ARG:CA	4:CD:59:ARG:HE	2.11	0.52
13:CM:56:LEU:C	13:CM:56:LEU:HD13	2.28	0.52
18:CR:31:LEU:HD23	18:CR:31:LEU:N	2.21	0.52
25:CZ:12:VAL:HG23	25:CZ:77:TYR:CD1	2.44	0.52
24:CY:2:G:H4'	25:CZ:88:TYR:CE1	2.44	0.52
36:DA:1034:G:H2'	36:DA:1035:U:O4'	2.09	0.52
36:DA:1341:U:H4'	56:DX:57:LEU:HB3	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1843:C:H2'	36:DA:1844:C:C6	2.44	0.52
36:DA:2393:A:H4'	48:DP:61:ARG:O	2.09	0.52
36:DA:2416:C:H2'	36:DA:2417:C:C6	2.44	0.52
36:DA:654(M):C:H2'	36:DA:654(N):G:N7	2.24	0.52
36:DA:848:G:C4	36:DA:933:A:H8	2.27	0.52
36:DA:926:A:H8	36:DA:926:A:H5'	1.73	0.52
37:DB:52:A:O2'	37:DB:53:A:C8	2.54	0.52
39:DD:268:ARG:NH1	39:DD:268:ARG:HB3	2.24	0.52
41:DF:129:PHE:O	41:DF:132:VAL:HB	2.09	0.52
41:DF:27:GLU:OE1	41:DF:27:GLU:N	2.42	0.52
42:DG:91:ARG:HD2	42:DG:92:VAL:N	2.24	0.52
43:DH:50:VAL:CG1	43:DH:52:VAL:HG23	2.39	0.52
46:DN:126:PRO:O	46:DN:127:ASP:CB	2.57	0.52
46:DN:55:VAL:HG22	46:DN:56:ASN:N	2.24	0.52
46:DN:63:THR:O	46:DN:66:LYS:HE3	2.09	0.52
46:DN:90:MET:HA	46:DN:90:MET:CE	2.39	0.52
48:DP:9:ASN:H	48:DP:10:PRO:HD3	1.74	0.52
50:DR:4:LEU:CG	50:DR:4:LEU:O	2.57	0.52
52:DT:28:VAL:HG22	52:DT:46:GLU:C	2.30	0.52
53:DU:92:ARG:NH1	53:DU:94:ASN:ND2	2.50	0.52
54:DV:39:LEU:CD1	54:DV:47:VAL:HG11	2.39	0.52
2:AB:114:ARG:NH1	2:AB:118:LEU:HG	2.25	0.52
3:AC:181:ASN:ND2	3:AC:204:LEU:HB2	2.24	0.52
5:AE:60:TYR:CE1	5:AE:64:ARG:NH2	2.74	0.52
8:AH:30:ARG:HB3	8:AH:30:ARG:NH1	2.25	0.52
9:AI:111:ARG:O	9:AI:119:ALA:HB2	2.10	0.52
10:AJ:55:LYS:HG3	10:AJ:56:HIS:H	1.74	0.52
10:AJ:90:LEU:N	10:AJ:91:PRO:CD	2.72	0.52
13:AM:11:ARG:HG2	13:AM:12:ASN:N	2.16	0.52
13:AM:22:ILE:HB	13:AM:25:ILE:HD12	1.91	0.52
22:AV:47:U:H3'	22:AV:48:C:C5'	2.39	0.52
28:B2:8:LYS:C	28:B2:10:LEU:H	2.10	0.52
28:B2:15:LYS:HG3	28:B2:16:LEU:N	2.25	0.52
34:B8:62:LEU:N	34:B8:63:PRO:CD	2.72	0.52
36:BA:2078:C:H2'	36:BA:2079:U:C6	2.45	0.52
27:B1:25:LYS:HE2	36:BA:2396:G:OP1	2.09	0.52
36:BA:49:A:H5''	36:BA:51:G:O4'	2.09	0.52
40:BE:52:LEU:HD23	40:BE:75:VAL:CB	2.38	0.52
41:BF:197:ASP:O	41:BF:200:GLU:HB3	2.09	0.52
42:BG:119:GLY:HA3	42:BG:181:ARG:CB	2.35	0.52
43:BH:122:THR:HB	43:BH:134:SER:HB2	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BH:90:LYS:O	43:BH:94:TYR:HD2	1.92	0.52
46:BN:1:MET:C	46:BN:1:MET:SD	2.88	0.52
48:BP:45:LEU:HD12	48:BP:46:LYS:H	1.74	0.52
51:BS:99:LYS:HZ3	51:BS:99:LYS:HB3	1.73	0.52
52:BT:26:ASP:HB3	52:BT:89:VAL:O	2.10	0.52
52:BT:28:VAL:HG22	52:BT:46:GLU:C	2.29	0.52
54:BV:19:LYS:HE2	54:BV:19:LYS:HA	1.91	0.52
56:BX:38:GLU:HG2	56:BX:38:GLU:O	2.07	0.52
1:CA:45:U:H2'	1:CA:46:G:H8	1.75	0.52
1:CA:77:G:H2'	1:CA:77:G:N3	2.24	0.52
2:CB:236:TYR:O	2:CB:237:ALA:C	2.46	0.52
4:CD:17:VAL:HG12	4:CD:17:VAL:O	2.08	0.52
5:CE:7:GLU:HG2	5:CE:112:LEU:CD2	2.39	0.52
9:CI:28:VAL:HG23	9:CI:33:PHE:HA	1.91	0.52
10:CJ:45:ARG:O	10:CJ:64:GLU:HA	2.09	0.52
14:CN:29:ARG:HH11	14:CN:29:ARG:CG	2.21	0.52
25:CZ:206:ILE:C	25:CZ:208:GLU:H	2.12	0.52
36:DA:814:C:H4'	36:DA:1224:C:O2	2.09	0.52
36:DA:1541:G:O3'	36:DA:1541:G:OP2	2.28	0.52
36:DA:1652:A:O2'	36:DA:1653:G:H5'	2.09	0.52
36:DA:199:A:N6	36:DA:2433:A:H2'	2.24	0.52
36:DA:2037:G:H2'	36:DA:2038:G:C8	2.44	0.52
36:DA:1493:C:C4	36:DA:2206:G:O2'	2.62	0.52
36:DA:221:A:O2'	36:DA:222:A:OP2	2.26	0.52
36:DA:2485:G:O2'	36:DA:2486:G:H5'	2.10	0.52
36:DA:523:C:O2'	36:DA:524:U:H5'	2.08	0.52
36:DA:535:C:O2'	36:DA:536:A:H5'	2.09	0.52
36:DA:654(E):G:C2'	36:DA:654(F):C:H5'	2.38	0.52
36:DA:710:G:H2'	36:DA:711:G:H8	1.74	0.52
36:DA:832:G:O2'	48:DP:52:GLU:HB3	2.10	0.52
37:DB:27:C:H5'	37:DB:28:C:OP2	2.09	0.52
38:DC:120:MET:O	38:DC:124:GLY:N	2.35	0.52
39:DD:45:ASN:CG	39:DD:46:GLN:N	2.63	0.52
36:DA:2060:A:N6	41:DF:74:ARG:HH21	2.07	0.52
42:DG:73:ALA:O	42:DG:85:GLY:HA2	2.09	0.52
50:DR:74:LYS:CD	50:DR:77:ARG:HH11	2.21	0.52
51:DS:12:PHE:HD1	51:DS:13:ARG:N	2.06	0.52
1:AA:1176:A:H2'	1:AA:1177:G:C8	2.44	0.52
1:AA:1533:C:H3'	1:AA:1534:A:C5'	2.35	0.52
1:AA:255:G:O6	1:AA:266:G:O6	2.26	0.52
1:AA:624:C:H4'	16:AP:11:SER:N	2.22	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:58:GLU:HB2	3:AC:65:ALA:CB	2.39	0.52
3:AC:92:ALA:O	3:AC:96:GLY:HA2	2.08	0.52
22:AW:59:U:C2'	22:AW:60:U:H5'	2.40	0.52
27:B1:68:PRO:O	27:B1:70:VAL:N	2.43	0.52
28:B2:47:ASN:HB3	28:B2:51:ARG:HB2	1.91	0.52
28:B2:46:GLN:HB3	28:B2:48:HIS:CE1	2.45	0.52
34:B8:32:LEU:CB	34:B8:36:LYS:HZ3	2.22	0.52
36:BA:1120:G:H2'	36:BA:1121:C:C6	2.44	0.52
36:BA:1453:U:H5'	50:BR:63:ARG:NE	2.24	0.52
36:BA:1484:G:H2'	36:BA:1485:G:C5'	2.06	0.52
36:BA:1722:A:O2'	36:BA:1739:U:H5''	2.09	0.52
36:BA:747:U:O2	36:BA:2014:A:H1'	2.09	0.52
36:BA:2297:C:O2'	36:BA:2298:A:H5'	2.09	0.52
36:BA:710:G:H2'	36:BA:711:G:C8	2.44	0.52
39:BD:268:ARG:HB3	39:BD:268:ARG:NH1	2.25	0.52
39:BD:45:ASN:CG	39:BD:46:GLN:N	2.62	0.52
39:BD:72:LYS:NZ	39:BD:75:ILE:HG13	2.24	0.52
42:BG:107:LEU:H	42:BG:107:LEU:HD22	1.73	0.52
42:BG:107:LEU:HD23	42:BG:108:ASN:N	2.24	0.52
48:BP:114:ILE:HD13	48:BP:127:ALA:CB	2.39	0.52
48:BP:38:GLN:HG3	48:BP:39:LYS:H	1.74	0.52
51:BS:61:ASN:OD1	51:BS:64:GLU:HB2	2.09	0.52
52:BT:23:ARG:HA	52:BT:52:ILE:CD1	2.39	0.52
1:CA:1320:C:H5''	19:CS:70:LYS:HG3	1.91	0.52
1:CA:1452:C:H4'	1:CA:1456:G:N2	2.25	0.52
1:CA:1513:A:H2'	1:CA:1514:C:H6	1.72	0.52
1:CA:256:U:H2'	1:CA:257:G:H8	1.74	0.52
2:CB:24:TRP:CZ3	2:CB:26:PRO:HA	2.44	0.52
4:CD:111:ALA:HB2	4:CD:120:LEU:HD12	1.92	0.52
8:CH:41:ARG:HH12	8:CH:123:GLU:CD	2.12	0.52
13:CM:108:ARG:HG3	13:CM:108:ARG:NH1	2.24	0.52
16:CP:14:ASN:N	16:CP:15:PRO:CD	2.71	0.52
27:D1:61:ARG:HG2	27:D1:61:ARG:HH11	1.74	0.52
31:D5:49:CYS:SG	31:D5:50:GLY:N	2.82	0.52
36:DA:1518:U:H2'	36:DA:1519:G:O4'	2.09	0.52
36:DA:2840:C:H5''	50:DR:53:HIS:CD2	2.44	0.52
36:DA:2892:A:H62	36:DA:2893:G:H21	1.56	0.52
36:DA:629:G:H1'	36:DA:639:U:O2'	2.10	0.52
36:DA:947:G:H2'	36:DA:948:G:C8	2.44	0.52
37:DB:93:G:H2'	37:DB:94:C:H6	1.74	0.52
41:DF:116:ASP:OD2	48:DP:5:ASP:N	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DF:160:ASN:HD21	41:DF:162:LEU:HB2	1.74	0.52
44:DJ:121:UNK:O	44:DJ:123:UNK:N	2.43	0.52
52:DT:129:ARG:NE	52:DT:131:ALA:HB3	2.23	0.52
53:DU:102:GLU:HG3	54:DV:2:PHE:HE2	1.74	0.52
54:DV:39:LEU:HD22	54:DV:39:LEU:N	2.25	0.52
57:DY:57:GLN:HA	57:DY:57:GLN:OE1	2.09	0.52
58:DZ:44:PHE:C	58:DZ:44:PHE:CD1	2.83	0.52
1:AA:1241:G:H2'	1:AA:1242:C:C6	2.44	0.52
1:AA:498:U:O2'	1:AA:499:A:H8	1.91	0.52
1:AA:626:U:H2'	1:AA:627:G:C8	2.45	0.52
2:AB:15:VAL:H	2:AB:16:HIS:CE1	2.27	0.52
3:AC:188:LEU:HD12	3:AC:195:VAL:HG11	1.91	0.52
5:AE:90:VAL:C	5:AE:91:LEU:HD22	2.30	0.52
7:AG:16:LEU:HD12	9:AI:42:ARG:HA	1.92	0.52
10:AJ:44:VAL:HG21	10:AJ:66:ARG:HH21	1.73	0.52
1:AA:751:U:H4'	15:AO:24:SER:HA	1.91	0.52
34:B8:13:ARG:HD2	48:BP:61:ARG:CD	2.31	0.52
36:BA:1068:G:H1'	36:BA:1069:A:C5'	2.40	0.52
36:BA:1506:C:O2	36:BA:1506:C:H2'	2.09	0.52
36:BA:1651:G:H2'	36:BA:1652:A:O4'	2.10	0.52
36:BA:2649:U:H2'	36:BA:2650:U:H6	1.71	0.52
36:BA:31:C:O2'	36:BA:32:C:H5''	2.08	0.52
36:BA:36:G:H2'	36:BA:37:C:H6	1.74	0.52
36:BA:610:G:N2	36:BA:619:G:H1'	2.25	0.52
36:BA:902:C:H2'	36:BA:903:C:C6	2.44	0.52
36:BA:2060:A:N6	41:BF:74:ARG:HH21	2.07	0.52
43:BH:156:ALA:C	43:BH:158:HIS:N	2.62	0.52
46:BN:46:VAL:CG1	46:BN:48:MET:HG3	2.38	0.52
48:BP:102:ARG:CB	48:BP:102:ARG:NH1	2.73	0.52
48:BP:9:ASN:H	48:BP:10:PRO:HD3	1.74	0.52
50:BR:4:LEU:C	50:BR:6:SER:N	2.62	0.52
52:BT:30:VAL:HG12	52:BT:44:ASP:CG	2.29	0.52
56:BX:64:LYS:HG2	56:BX:65:ARG:N	2.24	0.52
1:CA:1261:A:C2'	1:CA:1262:C:H5'	2.40	0.52
1:CA:1402:C:H2'	1:CA:1403:C:O4'	2.10	0.52
1:CA:1510:U:H2'	1:CA:1511:G:C8	2.43	0.52
1:CA:512:U:H2'	1:CA:513:C:H6	1.74	0.52
1:CA:961:U:H5'	1:CA:984:C:H1'	1.91	0.52
1:CA:509:A:H5'	4:CD:54:TYR:HD2	1.74	0.52
6:CF:27:GLN:HE21	6:CF:27:GLN:CA	2.22	0.52
11:CK:20:TYR:O	11:CK:30:VAL:HA	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:14:ARG:NH2	13:CM:16:ASP:OD2	2.41	0.52
13:CM:22:ILE:HB	13:CM:25:ILE:HD12	1.91	0.52
13:CM:35:GLU:C	13:CM:37:THR:H	2.12	0.52
1:CA:1308:U:OP1	13:CM:98:VAL:HG22	2.10	0.52
19:CS:13:ASP:O	19:CS:15:LEU:N	2.42	0.52
25:CZ:388:ILE:HB	25:CZ:395:VAL:HG23	1.91	0.52
32:D6:41:PRO:HD2	32:D6:45:LYS:HA	1.91	0.52
36:DA:2000:G:O2'	36:DA:2001:A:H5'	2.10	0.52
36:DA:484:C:H2'	36:DA:485:C:C6	2.45	0.52
36:DA:643:A:H2'	36:DA:644:A:O4'	2.08	0.52
36:DA:901:A:H5'	36:DA:902:C:OP2	2.09	0.52
39:DD:35:LYS:CB	39:DD:36:PRO:CD	2.87	0.52
39:DD:34:VAL:HG23	39:DD:35:LYS:N	2.23	0.52
39:DD:70:TRP:CZ3	39:DD:150:LYS:HA	2.44	0.52
43:DH:158:HIS:CE1	43:DH:169:VAL:HG12	2.44	0.52
48:DP:107:LYS:HG3	48:DP:107:LYS:O	2.10	0.52
52:DT:23:ARG:HA	52:DT:52:ILE:CD1	2.39	0.52
53:DU:52:ARG:O	53:DU:55:ARG:N	2.43	0.52
54:DV:58:VAL:HB	54:DV:98:GLU:HG2	1.91	0.52
55:DW:71:VAL:HG23	55:DW:71:VAL:O	2.10	0.52
57:DY:36:ALA:HB1	57:DY:67:LEU:O	2.09	0.52
57:DY:43:ASN:CB	57:DY:64:GLU:HA	2.39	0.52
58:DZ:163:LEU:CD2	58:DZ:163:LEU:N	2.73	0.52
1:AA:1030(D):A:N7	1:AA:1031:G:N3	2.57	0.52
1:AA:1498:U:H4'	1:AA:1519:A:C2	2.44	0.52
1:AA:154:C:H2'	1:AA:155:C:C6	2.44	0.52
1:AA:865:A:H2'	1:AA:866:C:C6	2.43	0.52
1:AA:940:C:P	7:AG:102:ARG:NH2	2.82	0.52
1:AA:946:A:H2'	1:AA:947:G:H8	1.73	0.52
2:AB:204:ASN:HD21	2:AB:206:ASP:H	1.56	0.52
5:AE:7:GLU:HG2	5:AE:112:LEU:CD2	2.39	0.52
7:AG:101:LEU:O	7:AG:105:VAL:HG23	2.09	0.52
8:AH:116:LYS:HD3	8:AH:127:LEU:HD12	1.92	0.52
9:AI:91:ASP:C	9:AI:93:ARG:N	2.60	0.52
1:AA:755:G:OP2	15:AO:65:ARG:HD2	2.10	0.52
24:AY:68:C:H2'	24:AY:69:C:C6	2.44	0.52
25:AZ:178:ALA:CB	25:AZ:199:ILE:HD11	2.40	0.52
25:AZ:388:ILE:HB	25:AZ:395:VAL:HG23	1.91	0.52
25:AZ:63:ILE:HG13	25:AZ:64:ASN:N	2.25	0.52
28:B2:25:VAL:CG1	28:B2:29:LYS:HE2	2.40	0.52
36:BA:2097:C:O2'	36:BA:2098:U:H5'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:583:G:OP2	53:BU:10:ARG:HD2	2.10	0.52
36:BA:67:U:H2'	36:BA:68:G:H8	1.75	0.52
38:BC:49:ILE:HB	38:BC:56:GLN:HB3	1.90	0.52
39:BD:148:GLU:CB	39:BD:151:LYS:HD2	2.40	0.52
42:BG:2:PRO:HG2	42:BG:98:ARG:HH12	1.74	0.52
46:BN:90:MET:CE	46:BN:90:MET:HA	2.40	0.52
48:BP:57:THR:OG1	48:BP:59:LEU:CB	2.58	0.52
52:BT:23:ARG:NH2	52:BT:120:ARG:HD3	2.24	0.52
58:BZ:75:ASN:O	58:BZ:84:GLU:HB3	2.09	0.52
1:CA:1120:G:H2'	1:CA:1121:U:H6	1.75	0.52
1:CA:1442(A):G:H3'	1:CA:1442(B):A:H5''	1.90	0.52
1:CA:148:G:H2'	1:CA:149:A:H8	1.75	0.52
1:CA:158:G:O2'	1:CA:159:G:H5'	2.09	0.52
1:CA:626:U:H2'	1:CA:627:G:C8	2.44	0.52
1:CA:807:A:H2'	1:CA:808:C:C6	2.44	0.52
1:CA:80:G:H22	1:CA:90:U:H5'	1.74	0.52
1:CA:977:A:O2'	1:CA:978:A:H5'	2.09	0.52
4:CD:70:ILE:HG22	4:CD:71:SER:N	2.25	0.52
7:CG:102:ARG:O	7:CG:106:GLN:HG3	2.09	0.52
9:CI:33:PHE:O	9:CI:35:GLU:N	2.41	0.52
10:CJ:33:GLN:HB2	10:CJ:75:ILE:CD1	2.33	0.52
11:CK:88:GLY:O	11:CK:89:ALA:C	2.48	0.52
20:CT:104:LEU:HD23	20:CT:104:LEU:C	2.29	0.52
20:CT:91:LEU:O	20:CT:94:ALA:HB3	2.10	0.52
22:CV:41:C:C3'	22:CV:42:C:H5''	2.37	0.52
22:CV:56:C:H1'	42:DG:76:SER:HB2	1.90	0.52
25:CZ:213:PRO:HG2	25:CZ:215:ARG:HE	1.74	0.52
25:CZ:345:ARG:NH1	25:CZ:379:ALA:O	2.43	0.52
28:D2:7:ARG:O	28:D2:10:LEU:HB3	2.10	0.52
28:D2:33:MET:O	28:D2:37:PHE:HB2	2.08	0.52
36:DA:1389:G:H2'	36:DA:1390:U:C6	2.44	0.52
36:DA:2848:G:C8	52:DT:97:ALA:HB2	2.45	0.52
40:DE:77:ILE:HG22	40:DE:78:LEU:N	2.24	0.52
42:DG:150:ASP:O	42:DG:151:ALA:HB2	2.09	0.52
46:DN:87:LEU:CD1	46:DN:91:LEU:HG	2.40	0.52
47:DO:115:VAL:HG13	47:DO:121:VAL:HG21	1.90	0.52
48:DP:23:PRO:HD2	48:DP:33:ARG:NE	2.16	0.52
1:AA:865:A:H2	1:AA:918:A:H4'	1.74	0.52
1:AA:975:A:C4'	1:AA:976:G:H5''	2.31	0.52
3:AC:139:GLN:NE2	3:AC:143:GLU:OE2	2.42	0.52
3:AC:173:VAL:HG12	3:AC:173:VAL:O	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:50:ALA:HA	3:AC:72:LYS:CB	2.39	0.52
4:AD:157:LEU:N	4:AD:157:LEU:HD12	2.23	0.52
4:AD:190:ASP:O	4:AD:194:LEU:HD23	2.10	0.52
9:AI:65:VAL:HG21	9:AI:73:GLN:CG	2.40	0.52
12:AL:59:ARG:NH2	12:AL:63:GLY:HA2	2.24	0.52
19:AS:15:LEU:O	19:AS:19:VAL:HG23	2.09	0.52
22:AW:55:U:H5	22:AW:58:A:OP2	1.92	0.52
25:AZ:27:LEU:O	25:AZ:30:ALA:HB3	2.10	0.52
25:AZ:343:TYR:CE1	25:AZ:389:ARG:HD3	2.44	0.52
26:B0:40:GLN:HE21	26:B0:44:ARG:HB2	1.74	0.52
29:B3:19:GLN:NE2	29:B3:52:HIS:HE1	2.07	0.52
30:B4:28:LYS:HE3	30:B4:28:LYS:HA	1.91	0.52
36:BA:1681:G:O2'	36:BA:1762:A:C2'	2.57	0.52
36:BA:2314:C:O2'	36:BA:2315:G:H5'	2.10	0.52
36:BA:2741:A:H2'	36:BA:2742:C:O4'	2.09	0.52
36:BA:2807:G:H2'	36:BA:2808:U:H5''	1.90	0.52
36:BA:278:A:N6	36:BA:362:U:H3	2.08	0.52
22:AW:56:C:O4'	38:BC:132:GLY:HA3	2.10	0.52
36:BA:801:G:O4'	41:BF:54:ARG:HD3	2.09	0.52
46:BN:57:ALA:HB3	46:BN:124:ALA:HA	1.90	0.52
48:BP:33:ARG:O	48:BP:34:GLY:C	2.47	0.52
50:BR:28:LEU:HD12	50:BR:114:VAL:CG2	2.39	0.52
51:BS:97:ARG:C	51:BS:97:ARG:NE	2.63	0.52
52:BT:2:ASN:HB2	52:BT:7:ILE:HD11	1.92	0.52
52:BT:28:VAL:HG11	52:BT:46:GLU:CG	2.39	0.52
53:BU:102:GLU:HG3	54:BV:2:PHE:HE2	1.74	0.52
53:BU:92:ARG:NH1	53:BU:94:ASN:ND2	2.52	0.52
53:BU:95:LEU:HD12	54:BV:11:GLN:HG3	1.90	0.52
58:BZ:132:ASN:C	58:BZ:134:PRO:HD3	2.30	0.52
1:CA:1320:C:O2'	1:CA:1321:C:H5'	2.10	0.52
1:CA:1321:C:C3'	1:CA:1322:C:H5''	2.38	0.52
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.45	0.52
1:CA:961:U:O2'	1:CA:962:C:H6	1.92	0.52
2:CB:21:ARG:HB3	2:CB:39:ILE:HG12	1.90	0.52
9:CI:65:VAL:HG21	9:CI:73:GLN:CG	2.39	0.52
11:CK:115:PRO:C	11:CK:117:ASN:H	2.13	0.52
1:CA:973:G:O3'	14:CN:41:ARG:NH1	2.42	0.52
19:CS:36:ARG:HB2	19:CS:72:GLY:HA3	1.92	0.52
25:CZ:185:ASN:N	25:CZ:185:ASN:HD22	2.07	0.52
28:D2:38:GLN:HA	28:D2:41:ILE:HG12	1.92	0.52
31:D5:54:GLY:N	31:D5:56:LYS:HZ1	2.04	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:D6:52:VAL:HG12	32:D6:53:LYS:CD	2.39	0.52
34:D8:22:VAL:HB	34:D8:53:PRO:HB3	1.92	0.52
36:DA:1445(A):C:O2'	36:DA:1446:C:H5'	2.10	0.52
36:DA:1771:C:H1'	36:DA:1786:A:H8	1.70	0.52
36:DA:2508:G:O3'	36:DA:2555:U:H5'	2.10	0.52
36:DA:2822:G:H2'	36:DA:2823:A:H5''	1.90	0.52
36:DA:588:U:H2'	36:DA:589:C:C6	2.45	0.52
36:DA:780:G:OP1	39:DD:218:ARG:NH2	2.41	0.52
29:D3:43:ILE:HD11	36:DA:927:G:O2'	2.10	0.52
41:DF:22:ALA:HB1	41:DF:26:ALA:CB	2.39	0.52
43:DH:41:MET:HG3	43:DH:42:ARG:N	2.24	0.52
54:DV:58:VAL:HG12	54:DV:97:LYS:HB2	1.90	0.52
1:AA:158:G:O2'	1:AA:159:G:H5'	2.10	0.52
1:AA:328:C:H4'	1:AA:329:A:H5'	1.92	0.52
1:AA:927:G:H4'	1:AA:927:G:OP2	2.10	0.52
2:AB:69:LEU:HD23	2:AB:91:PRO:HB2	1.92	0.52
3:AC:50:ALA:HB2	3:AC:75:VAL:HB	1.92	0.52
3:AC:76:VAL:CG2	3:AC:103:VAL:HG21	2.39	0.52
6:AF:21:LEU:C	6:AF:21:LEU:HD13	2.29	0.52
11:AK:20:TYR:O	11:AK:30:VAL:HA	2.10	0.52
12:AL:20:LYS:N	12:AL:20:LYS:HD3	2.08	0.52
19:AS:13:ASP:O	19:AS:15:LEU:N	2.43	0.52
25:AZ:208:GLU:O	25:AZ:209:TYR:HB3	2.10	0.52
28:B2:48:HIS:CG	28:B2:49:LYS:H	2.27	0.52
36:BA:1499:C:C2'	36:BA:1500:G:H5'	2.40	0.52
36:BA:1466:G:H2'	36:BA:1547:C:N4	2.25	0.52
36:BA:405:U:H3'	36:BA:406:G:H5'	1.91	0.52
42:BG:31:VAL:O	42:BG:33:ARG:HD3	2.10	0.52
43:BH:85:LYS:HG2	43:BH:86:GLU:N	2.25	0.52
46:BN:10:GLU:CD	46:BN:11:PRO:HD2	2.30	0.52
46:BN:48:MET:C	46:BN:48:MET:HE3	2.30	0.52
50:BR:34:ILE:HB	50:BR:114:VAL:CG2	2.40	0.52
51:BS:89:ARG:CG	51:BS:92:TYR:CA	2.88	0.52
55:BW:68:ARG:O	55:BW:109:GLU:HA	2.10	0.52
1:CA:1392:G:N2	1:CA:1502:A:C8	2.78	0.52
1:CA:436:C:H2'	1:CA:437:U:C6	2.44	0.52
3:CC:50:ALA:HB2	3:CC:75:VAL:HB	1.91	0.52
7:CG:15:ASP:OD1	7:CG:44:TYR:OH	2.26	0.52
7:CG:7:ALA:O	7:CG:8:GLU:CB	2.57	0.52
9:CI:69:GLY:O	9:CI:73:GLN:HG3	2.10	0.52
10:CJ:90:LEU:N	10:CJ:91:PRO:CD	2.73	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:9:GLN:O	15:CO:13:GLN:HG3	2.09	0.52
24:CY:28:C:H2'	24:CY:29:G:C8	2.45	0.52
24:CY:45:U:H3'	24:CY:46:7MG:H5'	1.84	0.52
31:D5:57:VAL:HG12	31:D5:58:LEU:N	2.25	0.52
36:DA:1103:A:H5''	36:DA:1104:C:C5	2.43	0.52
36:DA:1947:C:H2'	36:DA:1948:G:H5''	1.91	0.52
36:DA:2735:G:H2'	36:DA:2736:G:H8	1.75	0.52
36:DA:2807:G:H2'	36:DA:2808:U:H5''	1.92	0.52
39:DD:201:HIS:O	39:DD:204:ILE:HG12	2.10	0.52
39:DD:91:ARG:HG2	39:DD:91:ARG:NH1	2.25	0.52
36:DA:1245:G:H5''	41:DF:34:TRP:HZ2	1.74	0.52
42:DG:19:LEU:O	42:DG:22:ARG:HB2	2.10	0.52
43:DH:90:LYS:O	43:DH:94:TYR:HD2	1.92	0.52
48:DP:98:GLU:HA	48:DP:101:VAL:HG22	1.92	0.52
50:DR:83:ILE:HG22	50:DR:87:TYR:HE2	1.74	0.52
52:DT:84:GLN:O	52:DT:85:LYS:HG3	2.10	0.52
57:DY:89:PHE:C	57:DY:90:LEU:HD23	2.30	0.52
1:AA:1017:G:H2'	1:AA:1018:C:C6	2.44	0.52
1:AA:1327:C:O2'	1:AA:1328:C:H5'	2.10	0.52
2:AB:141:GLU:O	2:AB:144:ARG:HG2	2.09	0.52
2:AB:87:ARG:NH2	2:AB:232:PRO:C	2.56	0.52
3:AC:46:GLU:O	3:AC:47:LEU:CB	2.52	0.52
5:AE:152:ARG:O	5:AE:153:LYS:C	2.48	0.52
25:AZ:209:TYR:O	25:AZ:211:PRO:HD3	2.10	0.52
28:B2:24:LEU:O	28:B2:28:LYS:HB2	2.10	0.52
36:BA:1363:C:H2'	36:BA:1364:G:C8	2.45	0.52
36:BA:1479:G:H5''	36:BA:1560:G:H4'	1.92	0.52
36:BA:2461:C:H2'	36:BA:2462:U:C6	2.45	0.52
36:BA:2523:G:C2'	36:BA:2524:G:C5'	2.87	0.52
36:BA:2001:A:H4'	36:BA:2689:U:H2'	1.92	0.52
36:BA:271(U):G:O2'	36:BA:271(V):G:H5'	2.10	0.52
36:BA:335:C:H2'	36:BA:336:C:H6	1.75	0.52
36:BA:814:C:H4'	36:BA:1224:C:O2	2.10	0.52
39:BD:68:LYS:HD3	39:BD:70:TRP:CZ2	2.45	0.52
40:BE:63:LEU:O	40:BE:64:LYS:C	2.47	0.52
42:BG:9:ARG:HD3	42:BG:13:GLU:OE2	2.09	0.52
48:BP:86:LYS:HB2	48:BP:117:GLU:O	2.10	0.52
36:BA:832:G:H21	48:BP:53:GLY:CA	2.22	0.52
41:BF:116:ASP:OD2	48:BP:5:ASP:N	2.43	0.52
57:BY:6:HIS:N	57:BY:6:HIS:CD2	2.75	0.52
57:BY:7:VAL:HB	57:BY:8:LYS:NZ	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1268:A:H2'	1:CA:1269:A:C8	2.45	0.52
1:CA:291:C:O2'	1:CA:292:G:H5'	2.10	0.52
1:CA:67:C:O2'	1:CA:171:A:H1'	2.10	0.52
2:CB:141:GLU:O	2:CB:145:LEU:HD23	2.10	0.52
2:CB:69:LEU:HD23	2:CB:91:PRO:HB2	1.92	0.52
5:CE:28:PHE:O	5:CE:47:LYS:HA	2.09	0.52
1:CA:1342:C:O2'	9:CI:124:GLN:HG3	2.08	0.52
13:CM:11:ARG:CG	13:CM:12:ASN:H	2.11	0.52
16:CP:20:VAL:HG23	16:CP:34:GLU:C	2.30	0.52
16:CP:59:TRP:HA	16:CP:62:VAL:HG23	1.91	0.52
26:D0:11:ARG:O	26:D0:14:ARG:NH2	2.42	0.52
30:D4:22:ILE:H	30:D4:22:ILE:HD12	1.73	0.52
35:D9:7:VAL:HG13	35:D9:34:GLN:CG	2.34	0.52
36:DA:1204:A:N1	36:DA:1241:A:H2	2.08	0.52
36:DA:1751:C:O2'	36:DA:1752:C:H5'	2.09	0.52
36:DA:1902:C:O2'	39:DD:244:ARG:HB2	2.09	0.52
36:DA:291:C:H2'	36:DA:292:C:C6	2.44	0.52
36:DA:361:G:H2'	36:DA:362:U:H4'	1.91	0.52
36:DA:747:U:O2	36:DA:2014:A:H1'	2.10	0.52
38:DC:6:ARG:HH11	38:DC:34:THR:HB	1.74	0.52
39:DD:275:LYS:HD2	39:DD:276:LYS:N	2.25	0.52
42:DG:64:THR:HG23	42:DG:65:GLY:H	1.74	0.52
47:DO:31:LYS:HB3	47:DO:32:TYR:CE1	2.45	0.52
48:DP:146:VAL:HG13	48:DP:147:LEU:N	2.25	0.52
50:DR:33:ARG:HG3	50:DR:115:GLU:HG3	1.92	0.52
51:DS:61:ASN:OD1	51:DS:64:GLU:HB2	2.09	0.52
52:DT:83:ILE:HG13	52:DT:84:GLN:N	2.24	0.52
57:DY:74:PRO:HG2	57:DY:81:LYS:O	2.10	0.52
1:AA:1086:U:C2'	1:AA:1087:G:H5'	2.33	0.52
1:AA:757:U:O2'	1:AA:758:G:H5'	2.10	0.52
2:AB:72:GLY:O	2:AB:94:ASN:HA	2.10	0.52
4:AD:126:ILE:CD1	4:AD:126:ILE:N	2.72	0.52
13:AM:56:LEU:HD13	13:AM:56:LEU:C	2.30	0.52
24:AY:28:C:H2'	24:AY:29:G:C8	2.45	0.52
25:AZ:231:ILE:HD12	25:AZ:231:ILE:N	2.25	0.52
29:B3:29:ARG:NH1	29:B3:29:ARG:HB2	2.19	0.52
33:B7:43:THR:HG23	33:B7:44:PRO:HD2	1.90	0.52
34:B8:22:VAL:HB	34:B8:53:PRO:HB3	1.91	0.52
36:BA:1450(A):C:H2'	36:BA:1451:C:H6	1.75	0.52
36:BA:2199:A:H5'	36:BA:2200:C:OP2	2.10	0.52
36:BA:654(E):G:C2'	36:BA:654(F):C:H5'	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:10:THR:HG23	39:BD:13:ARG:CB	2.36	0.52
40:BE:54:GLN:O	40:BE:55:ASN:HB2	2.10	0.52
41:BF:22:ALA:HB1	41:BF:26:ALA:CB	2.40	0.52
42:BG:20:ILE:O	42:BG:22:ARG:N	2.43	0.52
43:BH:37:VAL:HG12	43:BH:38:SER:N	2.25	0.52
46:BN:58:ASP:C	46:BN:60:ILE:N	2.62	0.52
46:BN:76:SER:N	46:BN:81:GLY:O	2.35	0.52
48:BP:107:LYS:HG3	48:BP:107:LYS:O	2.10	0.52
48:BP:23:PRO:C	48:BP:33:ARG:CZ	2.77	0.52
48:BP:75:ILE:N	48:BP:75:ILE:HD12	2.25	0.52
49:BQ:116:GLU:O	49:BQ:120:ILE:HG12	2.10	0.52
36:BA:518:G:H4'	55:BW:18:ARG:NH1	2.25	0.52
57:BY:41:GLY:O	57:BY:42:VAL:O	2.28	0.52
1:CA:272:C:O2'	1:CA:273:A:H5'	2.10	0.52
1:CA:995:C:HO2'	1:CA:996:A:H8	1.57	0.52
4:CD:111:ALA:HB2	4:CD:120:LEU:CD1	2.40	0.52
4:CD:114:ARG:CG	4:CD:114:ARG:HH11	2.14	0.52
4:CD:127:THR:HG23	4:CD:130:GLY:O	2.10	0.52
6:CF:43:LEU:H	6:CF:43:LEU:CD2	2.23	0.52
6:CF:61:LEU:O	6:CF:62:TRP:CB	2.57	0.52
10:CJ:90:LEU:H	10:CJ:91:PRO:CD	2.21	0.52
25:CZ:244:ARG:HA	25:CZ:282:ALA:HB2	1.92	0.52
36:DA:1231:G:H2'	36:DA:1232:G:H8	1.75	0.52
36:DA:1385:G:O2'	36:DA:1396:U:C6	2.62	0.52
36:DA:1754:C:OP1	52:DT:96:ARG:NH1	2.42	0.52
36:DA:575:A:OP2	36:DA:2499:C:O2'	2.28	0.52
36:DA:2022:U:O2'	36:DA:2617:C:H5'	2.10	0.52
36:DA:2672:G:C3'	36:DA:2673:G:H5''	2.40	0.52
36:DA:36:G:H2'	36:DA:37:C:H6	1.74	0.52
36:DA:57:C:H2'	36:DA:58:G:O4'	2.10	0.52
39:DD:134:ARG:NH1	39:DD:135:PHE:CE1	2.77	0.52
42:DG:59:GLU:HA	42:DG:62:LEU:HD13	1.92	0.52
36:DA:1139:G:H5''	46:DN:70:LYS:NZ	2.25	0.52
51:DS:58:LEU:O	51:DS:59:LYS:O	2.28	0.52
58:DZ:152:ALA:HB2	58:DZ:168:GLU:CA	2.35	0.52
1:AA:266:G:C5'	1:AA:267:C:H5	2.22	0.52
1:AA:487:A:H2'	1:AA:488:C:O4'	2.09	0.52
3:AC:50:ALA:HB1	3:AC:70:VAL:HG13	1.92	0.52
3:AC:5:ILE:H	3:AC:5:ILE:HD12	1.72	0.52
1:AA:427:U:OP1	4:AD:13:ARG:NH2	2.43	0.52
21:AU:17:THR:O	21:AU:22:ARG:NH1	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:2:G:H2'	24:AY:3:G:C5'	2.40	0.52
25:AZ:19:HIS:CG	25:AZ:115:GLN:HB2	2.45	0.52
29:B3:29:ARG:NH2	36:BA:1183:G:H4'	2.25	0.52
36:BA:1270:C:H5''	36:BA:1271:G:C5'	2.39	0.52
36:BA:1311:G:N2	36:BA:1603:A:H62	2.06	0.52
36:BA:1771:C:H1'	36:BA:1786:A:H8	1.68	0.52
41:BF:185:ASP:CA	41:BF:188:ARG:HG2	2.40	0.52
42:BG:33:ARG:O	42:BG:162:THR:HG23	2.10	0.52
43:BH:136:ILE:HD12	43:BH:136:ILE:N	2.25	0.52
43:BH:20:ALA:HB1	43:BH:21:PRO:CD	2.39	0.52
49:BQ:43:THR:OG1	49:BQ:46:GLN:HG3	2.10	0.52
51:BS:20:ARG:HG2	51:BS:20:ARG:NH1	2.25	0.52
51:BS:53:SER:C	51:BS:55:ALA:H	2.14	0.52
58:BZ:150:LEU:C	58:BZ:150:LEU:HD23	2.30	0.52
2:CB:209:ARG:NH1	2:CB:239:VAL:HG11	2.24	0.52
8:CH:23:SER:HA	8:CH:63:LEU:HD22	1.91	0.52
10:CJ:44:VAL:HG21	10:CJ:66:ARG:HH21	1.75	0.52
13:CM:83:ASP:OD1	13:CM:84:ILE:N	2.43	0.52
15:CO:17:ARG:HG3	15:CO:17:ARG:NH1	2.21	0.52
15:CO:7:GLU:O	15:CO:11:VAL:HG23	2.10	0.52
25:CZ:333:GLY:HA3	25:CZ:363:MET:HA	1.92	0.52
27:D1:66:HIS:O	27:D1:67:ILE:C	2.49	0.52
27:D1:72:GLU:CG	27:D1:76:ARG:HH21	2.23	0.52
28:D2:68:ARG:HG3	28:D2:72:ALA:CB	2.40	0.52
32:D6:26:ASN:ND2	32:D6:32:ASN:OD1	2.42	0.52
36:DA:1049:C:O2	36:DA:1113:U:H4'	2.11	0.52
36:DA:118:A:H1'	36:DA:178:G:O4'	2.10	0.52
36:DA:1203:G:H3'	36:DA:1204:A:H5''	1.91	0.52
36:DA:1450(A):C:H2'	36:DA:1451:C:H6	1.73	0.52
36:DA:1539:G:H2'	36:DA:1540:U:O4'	2.10	0.52
36:DA:1910:G:O2'	36:DA:1911:U:H5'	2.10	0.52
36:DA:2631:G:N2	40:DE:61:ARG:HH12	2.08	0.52
36:DA:2695:C:H2'	36:DA:2696:U:C6	2.45	0.52
36:DA:320:A:H2'	41:DF:136:THR:OG1	2.09	0.52
36:DA:979:G:H3'	36:DA:980:A:C5'	2.40	0.52
38:DC:40:THR:HA	38:DC:177:LYS:HA	1.92	0.52
46:DN:10:GLU:CD	46:DN:11:PRO:HD2	2.31	0.52
48:DP:20:GLY:O	48:DP:21:ARG:HB2	2.10	0.52
58:DZ:100:VAL:O	58:DZ:124:ILE:HG12	2.10	0.52
1:AA:1063:C:H5	1:AA:1064:G:HO2'	1.56	0.51
2:AB:98:LEU:O	2:AB:101:MET:HG3	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:78:ARG:CG	7:AG:78:ARG:O	2.57	0.51
9:AI:20:ARG:HH11	9:AI:20:ARG:CB	2.22	0.51
10:AJ:92:THR:HG23	10:AJ:93:GLY:H	1.74	0.51
16:AP:59:TRP:HA	16:AP:62:VAL:HG23	1.91	0.51
16:AP:5:ARG:NE	16:AP:22:THR:CG2	2.73	0.51
20:AT:60:GLU:O	20:AT:60:GLU:HG2	2.09	0.51
22:AV:45:U:H2'	22:AV:45:U:OP2	2.09	0.51
25:AZ:126:VAL:O	25:AZ:126:VAL:HG12	2.10	0.51
25:AZ:345:ARG:NH1	25:AZ:379:ALA:O	2.44	0.51
25:AZ:98:GLN:HE22	25:AZ:346:THR:CG2	2.23	0.51
34:B8:61:LEU:C	34:B8:63:PRO:HD2	2.31	0.51
36:BA:1259:G:O2'	36:BA:1260:G:H5'	2.11	0.51
36:BA:1518:U:H2'	36:BA:1519:G:O4'	2.09	0.51
36:BA:363(E):U:H2'	36:BA:363(F):A:C1'	2.39	0.51
36:BA:57:C:H2'	36:BA:58:G:O4'	2.10	0.51
36:BA:753:C:O2'	36:BA:754:C:H5'	2.10	0.51
36:BA:838:C:O2'	36:BA:839:U:H5'	2.10	0.51
40:BE:104:VAL:HG11	40:BE:188:VAL:HG21	1.92	0.51
40:BE:59:VAL:O	40:BE:60:ASN:CG	2.49	0.51
42:BG:125:PHE:CZ	42:BG:170:ARG:HA	2.45	0.51
42:BG:172:LEU:HD23	42:BG:176:LEU:HD12	1.91	0.51
36:BA:2414:G:H21	48:BP:67:MET:CE	2.23	0.51
49:BQ:43:THR:HB	49:BQ:45:GLN:HE21	1.75	0.51
36:BA:2840:C:H5''	50:BR:53:HIS:CD2	2.45	0.51
51:BS:90:GLY:C	51:BS:92:TYR:H	2.14	0.51
55:BW:9:TYR:N	55:BW:9:TYR:CD1	2.78	0.51
57:BY:57:GLN:HA	57:BY:57:GLN:OE1	2.09	0.51
58:BZ:14:LYS:O	58:BZ:18:LEU:HD22	2.10	0.51
58:BZ:62:PRO:C	58:BZ:64:GLY:N	2.63	0.51
58:BZ:70:LEU:HD23	58:BZ:70:LEU:N	2.23	0.51
1:CA:1158:C:O2'	1:CA:1159:U:H4'	2.10	0.51
1:CA:1429:C:H2'	1:CA:1430:C:H6	1.74	0.51
10:CJ:85:LEU:O	10:CJ:87:THR:N	2.43	0.51
20:CT:86:ARG:O	20:CT:90:GLN:HG3	2.09	0.51
26:D0:40:GLN:HE21	26:D0:44:ARG:HB2	1.75	0.51
29:D3:28:LEU:HD23	29:D3:28:LEU:H	1.75	0.51
36:DA:1638:C:H4'	36:DA:2710:C:O2	2.10	0.51
27:D1:52:ARG:NH2	36:DA:2218:U:O4'	2.43	0.51
36:DA:2092:U:H5	36:DA:2226:C:OP2	1.94	0.51
36:DA:2369:A:O2'	36:DA:2370:G:H5'	2.10	0.51
36:DA:389:G:H1	48:DP:72:PRO:HD3	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:405:U:H3'	36:DA:406:G:H5'	1.92	0.51
36:DA:92:A:H2'	36:DA:92:A:N3	2.25	0.51
37:DB:111:G:O2'	37:DB:112:U:H5'	2.10	0.51
40:DE:63:LEU:O	40:DE:64:LYS:C	2.49	0.51
41:DF:3:GLU:HB2	41:DF:24:LEU:HD23	1.91	0.51
42:DG:144:ILE:HD11	42:DG:149:VAL:CG1	2.29	0.51
42:DG:172:LEU:O	42:DG:176:LEU:HB2	2.10	0.51
43:DH:124:GLU:HG3	43:DH:132:ARG:HG3	1.92	0.51
48:DP:16:ARG:HD3	48:DP:16:ARG:C	2.30	0.51
54:DV:6:LYS:O	54:DV:37:VAL:HG21	2.10	0.51
55:DW:9:TYR:CD1	55:DW:9:TYR:N	2.77	0.51
57:DY:60:PHE:O	57:DY:61:ILE:HG13	2.10	0.51
58:DZ:165:VAL:HG12	58:DZ:168:GLU:H	1.76	0.51
58:DZ:149:SER:CB	58:DZ:173:ALA:HA	2.37	0.51
1:AA:1010:G:O2'	1:AA:1011:G:H5'	2.10	0.51
1:AA:108:G:H5'	1:AA:109:A:H5'	1.92	0.51
1:AA:979:C:C3'	1:AA:980:C:C5'	2.78	0.51
2:AB:114:ARG:NH1	2:AB:118:LEU:HD21	2.25	0.51
2:AB:172:ILE:HD12	2:AB:172:ILE:N	2.21	0.51
4:AD:150:GLU:CD	4:AD:151:LYS:N	2.58	0.51
4:AD:17:VAL:O	4:AD:17:VAL:HG12	2.10	0.51
9:AI:11:LYS:O	9:AI:12:GLU:HB2	2.10	0.51
11:AK:33:THR:HG22	11:AK:39:PRO:CA	2.38	0.51
1:AA:501:C:OP1	12:AL:117:ARG:NH2	2.43	0.51
13:AM:88:ARG:NH1	13:AM:88:ARG:HG2	2.24	0.51
19:AS:50:ALA:HB1	19:AS:57:HIS:HB3	1.92	0.51
28:B2:32:LEU:O	28:B2:35:LEU:HB3	2.10	0.51
29:B3:4:LEU:O	29:B3:36:VAL:HA	2.10	0.51
36:BA:1880:C:C2'	36:BA:1881:C:H5''	2.39	0.51
36:BA:2000:G:O2'	36:BA:2001:A:H5'	2.09	0.51
36:BA:2219:G:C2'	36:BA:2220:G:H5'	2.40	0.51
36:BA:1638:C:H4'	36:BA:2710:C:O2	2.10	0.51
36:BA:271(F):C:O2'	36:BA:271(G):C:H5'	2.10	0.51
36:BA:291:C:H2'	36:BA:292:C:C6	2.45	0.51
38:BC:40:THR:HG22	38:BC:177:LYS:CE	2.39	0.51
39:BD:30:GLU:N	39:BD:35:LYS:HZ2	2.06	0.51
39:BD:48:ARG:NH1	39:BD:48:ARG:HG3	2.25	0.51
40:BE:183:LEU:HD12	40:BE:183:LEU:N	2.25	0.51
41:BF:29:ASN:HD22	41:BF:32:LEU:CB	2.14	0.51
42:BG:16:ARG:CD	42:BG:31:VAL:HG11	2.40	0.51
48:BP:16:ARG:CB	48:BP:16:ARG:NH1	2.65	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BU:83:LEU:HG	53:BU:88:ILE:HD11	1.92	0.51
58:BZ:151:HIS:ND1	58:BZ:152:ALA:N	2.53	0.51
2:CB:87:ARG:NH2	2:CB:232:PRO:C	2.58	0.51
4:CD:149:ALA:O	4:CD:153:ARG:HG3	2.10	0.51
13:CM:16:ASP:HA	13:CM:34:LEU:HD11	1.92	0.51
22:CV:47:U:H3'	22:CV:48:C:C5'	2.40	0.51
24:CY:68:C:H2'	24:CY:69:C:C6	2.44	0.51
25:CZ:19:HIS:CG	25:CZ:115:GLN:HB2	2.45	0.51
27:D1:27:GLU:O	27:D1:28:GLY:C	2.48	0.51
36:DA:1068:G:H1'	36:DA:1069:A:H5'	1.91	0.51
36:DA:2520:C:C6	36:DA:2567:G:H1'	2.46	0.51
36:DA:576:U:H2'	36:DA:577:G:C8	2.45	0.51
36:DA:979:G:H3'	36:DA:980:A:H5''	1.92	0.51
42:DG:71:THR:HG23	42:DG:89:GLY:C	2.30	0.51
43:DH:88:LEU:CD1	43:DH:130:ARG:HG2	2.40	0.51
46:DN:57:ALA:HB3	46:DN:124:ALA:HA	1.92	0.51
48:DP:114:ILE:HD13	48:DP:127:ALA:CB	2.39	0.51
36:DA:910:A:C5	49:DQ:13:GLN:HG3	2.45	0.51
50:DR:74:LYS:HD2	50:DR:77:ARG:HD2	1.92	0.51
51:DS:28:VAL:HG12	51:DS:29:PHE:N	2.25	0.51
53:DU:90:VAL:HG12	53:DU:91:ASP:H	1.74	0.51
54:DV:38:LEU:C	54:DV:39:LEU:HD13	2.30	0.51
56:DX:49:VAL:CG1	56:DX:87:GLN:HE21	2.23	0.51
57:DY:7:VAL:HB	57:DY:8:LYS:NZ	2.26	0.51
1:AA:1534:A:N7	23:AX:12:A:H2	2.09	0.51
1:AA:66:G:H4'	1:AA:173:U:C5	2.45	0.51
1:AA:632:A:H8	1:AA:633:G:C8	2.28	0.51
2:AB:239:VAL:O	2:AB:240:GLN:HB3	2.11	0.51
1:AA:421:U:C6	3:AC:127:ARG:NH1	2.78	0.51
4:AD:173:TRP:CD1	4:AD:174:LEU:HG	2.45	0.51
4:AD:188:LEU:O	4:AD:189:PRO:O	2.28	0.51
4:AD:75:PHE:CE1	4:AD:93:PHE:HZ	2.28	0.51
6:AF:43:LEU:CD2	6:AF:43:LEU:H	2.22	0.51
1:AA:738:C:H5''	6:AF:69:GLU:HB2	1.93	0.51
9:AI:3:GLN:HA	9:AI:19:LEU:O	2.10	0.51
22:AV:68:C:O2'	22:AV:69:G:H5'	2.10	0.51
28:B2:23:LYS:HA	28:B2:26:ARG:HB3	1.93	0.51
30:B4:8:LYS:O	30:B4:9:LEU:CB	2.59	0.51
31:B5:3:LYS:O	31:B5:4:HIS:C	2.49	0.51
32:B6:52:VAL:HG12	32:B6:53:LYS:CD	2.41	0.51
34:B8:30:ARG:HA	34:B8:30:ARG:HE	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1316:U:O2'	36:BA:1317:A:H5'	2.10	0.51
36:BA:191:A:H2'	36:BA:192:C:C6	2.45	0.51
36:BA:1921:G:O2'	36:BA:1922:G:H5'	2.10	0.51
36:BA:2469:A:O2'	49:BQ:56:ARG:HD2	2.10	0.51
36:BA:39:C:O2'	36:BA:40:C:H5'	2.10	0.51
39:BD:44:ASN:HB2	39:BD:48:ARG:O	2.11	0.51
36:BA:745:G:OP1	40:BE:133:LYS:HE3	2.11	0.51
41:BF:82:ILE:O	41:BF:83:PHE:HB2	2.09	0.51
42:BG:47:LYS:CD	42:BG:81:LYS:HD2	2.39	0.51
42:BG:58:GLN:O	42:BG:62:LEU:HD13	2.10	0.51
43:BH:42:ARG:HG2	43:BH:43:VAL:N	2.25	0.51
51:BS:97:ARG:NH2	51:BS:98:VAL:HA	2.25	0.51
53:BU:69:CYS:HB2	53:BU:74:LEU:HD11	1.92	0.51
53:BU:90:VAL:HG12	53:BU:91:ASP:H	1.72	0.51
54:BV:58:VAL:HB	54:BV:98:GLU:HG2	1.92	0.51
1:CA:1269:A:H2	1:CA:1312:G:N3	2.09	0.51
1:CA:22:G:H4'	1:CA:885:G:C8	2.45	0.51
1:CA:924:C:H5'	1:CA:1399:C:OP2	2.10	0.51
2:CB:229:VAL:O	2:CB:230:VAL:HG13	2.09	0.51
2:CB:33:TYR:HB3	2:CB:41:ILE:HG22	1.91	0.51
3:CC:84:ILE:O	3:CC:88:ARG:HG3	2.09	0.51
6:CF:55:ASP:HB3	6:CF:57:GLN:HE22	1.73	0.51
9:CI:128:ARG:H	9:CI:128:ARG:HD2	1.76	0.51
9:CI:54:ASP:C	9:CI:56:LEU:H	2.14	0.51
20:CT:74:LYS:C	20:CT:76:ALA:H	2.13	0.51
27:D1:75:GLU:OE1	27:D1:75:GLU:HA	2.10	0.51
34:D8:36:LYS:HE3	34:D8:40:GLU:OE2	2.10	0.51
34:D8:48:PHE:O	34:D8:49:VAL:HG22	2.10	0.51
34:D8:50:LEU:C	34:D8:52:LYS:N	2.63	0.51
36:DA:1265:A:OP2	36:DA:2615:U:OP1	2.29	0.51
36:DA:1639:U:O2'	36:DA:1640:C:H5''	2.08	0.51
36:DA:2087:G:O2'	36:DA:2088:G:H5'	2.10	0.51
36:DA:2472:G:H5'	36:DA:2473:U:C5'	2.38	0.51
36:DA:265:A:H1'	36:DA:266:G:O4'	2.10	0.51
36:DA:433:C:O2'	36:DA:434:U:H5'	2.09	0.51
36:DA:465:G:H2'	36:DA:466:A:C8	2.45	0.51
36:DA:610:G:N2	36:DA:619:G:H1'	2.24	0.51
39:DD:65:ILE:HD11	39:DD:67:PHE:CE2	2.45	0.51
40:DE:23:VAL:HA	40:DE:186:GLY:H	1.76	0.51
40:DE:38:THR:HB	40:DE:41:LYS:CG	2.34	0.51
41:DF:125:LEU:HD23	41:DF:125:LEU:H	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DH:163:TYR:N	43:DH:163:TYR:CD1	2.79	0.51
46:DN:121:LYS:HB3	46:DN:123:TYR:CE1	2.46	0.51
49:DQ:110:THR:HG23	49:DQ:113:GLN:HG3	1.92	0.51
50:DR:103:ARG:HH11	50:DR:110:PRO:HB3	1.75	0.51
51:DS:15:ARG:NH1	51:DS:18:ILE:HD11	2.25	0.51
53:DU:110:VAL:O	53:DU:113:ALA:HB3	2.10	0.51
55:DW:9:TYR:HD1	55:DW:9:TYR:N	2.08	0.51
1:AA:228:A:H2'	1:AA:229:U:O4'	2.11	0.51
1:AA:502:G:OP1	12:AL:118:SER:HB3	2.10	0.51
1:AA:80:G:C2'	1:AA:81:U:H5'	2.41	0.51
1:AA:977:A:O2'	1:AA:978:A:H5'	2.09	0.51
2:AB:54:THR:HG21	2:AB:201:ILE:HD11	1.92	0.51
1:AA:421:U:H6	3:AC:127:ARG:NH1	2.08	0.51
4:AD:101:LEU:O	4:AD:103:ASN:N	2.43	0.51
5:AE:102:ALA:CB	5:AE:120:THR:HG21	2.39	0.51
7:AG:75:VAL:HG23	7:AG:75:VAL:O	2.09	0.51
13:AM:3:ARG:HH21	13:AM:7:VAL:HG22	1.74	0.51
13:AM:73:GLU:O	13:AM:76:ALA:HB3	2.10	0.51
16:AP:20:VAL:HG23	16:AP:34:GLU:C	2.31	0.51
16:AP:5:ARG:NE	16:AP:22:THR:HG21	2.25	0.51
20:AT:58:LYS:O	20:AT:61:SER:HB3	2.10	0.51
25:AZ:9:LYS:HB3	25:AZ:75:ARG:HA	1.93	0.51
27:B1:11:ARG:HB2	27:B1:12:PRO:HD2	1.92	0.51
28:B2:20:GLU:O	28:B2:23:LYS:N	2.44	0.51
29:B3:25:ALA:C	29:B3:27:GLY:H	2.12	0.51
32:B6:18:ARG:HH11	32:B6:18:ARG:CG	2.09	0.51
32:B6:30:THR:CG2	32:B6:31:PRO:HD2	2.40	0.51
34:B8:15:LYS:HD2	34:B8:16:ILE:H	1.75	0.51
36:BA:2383:G:O2'	36:BA:2384:G:H5'	2.11	0.51
36:BA:1999:C:H4'	36:BA:2723:C:O2	2.09	0.51
36:BA:652:C:HO2'	36:BA:653:A:P	2.34	0.51
36:BA:92:A:H2'	36:BA:92:A:N3	2.25	0.51
38:BC:41:VAL:HG21	38:BC:185:LEU:HD22	1.92	0.51
38:BC:32:LEU:HD13	38:BC:220:PRO:HG2	1.92	0.51
39:BD:133:LEU:HB3	39:BD:173:VAL:HG11	1.93	0.51
39:BD:222:ARG:O	39:BD:224:ALA:O	2.29	0.51
39:BD:275:LYS:HD2	39:BD:276:LYS:N	2.26	0.51
36:BA:1997:G:OP1	40:BE:123:ALA:HB1	2.09	0.51
40:BE:35:GLN:HG2	40:BE:36:ARG:N	2.26	0.51
43:BH:163:TYR:CD1	43:BH:163:TYR:N	2.78	0.51
46:BN:12:ARG:O	46:BN:50:ASP:HB3	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BR:4:LEU:O	50:BR:4:LEU:CG	2.58	0.51
52:BT:24:PRO:HD3	52:BT:52:ILE:HD12	1.92	0.51
52:BT:27:THR:HG22	52:BT:49:VAL:HB	1.92	0.51
54:BV:69:LYS:HA	54:BV:87:HIS:O	2.10	0.51
55:BW:17:VAL:O	55:BW:20:VAL:HG22	2.10	0.51
55:BW:65:LEU:HD23	55:BW:68:ARG:NE	2.26	0.51
58:BZ:145:GLU:O	58:BZ:147:GLY:N	2.43	0.51
1:CA:1009:G:H2'	1:CA:1010:G:H8	1.75	0.51
1:CA:1030(D):A:N7	1:CA:1031:G:N3	2.58	0.51
2:CB:44:LEU:H	2:CB:44:LEU:CD1	2.18	0.51
3:CC:14:ILE:HG13	3:CC:15:THR:H	1.76	0.51
4:CD:3:ARG:HH11	4:CD:118:ARG:HD3	1.74	0.51
4:CD:12:CYS:CA	4:CD:19:LEU:HD13	2.39	0.51
8:CH:30:ARG:CB	8:CH:30:ARG:HH11	2.24	0.51
10:CJ:48:THR:HG23	10:CJ:62:HIS:CE1	2.45	0.51
13:CM:83:ASP:OD1	13:CM:85:GLY:N	2.43	0.51
15:CO:24:SER:O	15:CO:28:GLN:HG3	2.10	0.51
16:CP:5:ARG:HH11	16:CP:5:ARG:HG3	1.74	0.51
20:CT:60:GLU:HG2	20:CT:60:GLU:O	2.11	0.51
21:CU:17:THR:O	21:CU:22:ARG:NH1	2.44	0.51
25:CZ:163:PHE:CD1	25:CZ:164:PRO:HD2	2.44	0.51
29:D3:31:LEU:HD12	36:DA:989:G:P	2.51	0.51
36:DA:1361:G:O2'	36:DA:1362:C:H5'	2.10	0.51
36:DA:142:A:H1'	36:DA:1408:C:H1'	1.93	0.51
36:DA:2031:A:O2'	36:DA:2455:G:H4'	2.11	0.51
36:DA:266:G:C3'	36:DA:267:C:H5''	2.40	0.51
36:DA:469:G:H2'	36:DA:470:A:H5''	1.92	0.51
36:DA:523:C:H5''	36:DA:540:C:O2'	2.10	0.51
36:DA:675:A:OP1	41:DF:63:LYS:HE2	2.10	0.51
38:DC:99:ILE:O	38:DC:99:ILE:HG22	2.11	0.51
39:DD:30:GLU:HG3	39:DD:35:LYS:HE3	1.93	0.51
40:DE:104:VAL:HG11	40:DE:188:VAL:HG21	1.91	0.51
36:DA:2811:G:H4'	40:DE:61:ARG:HH21	1.75	0.51
48:DP:59:LEU:CA	48:DP:61:ARG:HE	2.23	0.51
50:DR:79:LEU:HA	50:DR:83:ILE:CG1	2.41	0.51
55:DW:73:ALA:HB3	55:DW:106:ILE:HD11	1.92	0.51
57:DY:85:VAL:HG12	57:DY:86:ARG:N	2.25	0.51
58:DZ:114:GLY:HA3	58:DZ:146:ILE:HG21	1.91	0.51
1:AA:735:C:H2'	1:AA:736:C:H6	1.76	0.51
1:AA:737:A:H2'	1:AA:738:C:C6	2.46	0.51
14:AN:15:LYS:O	14:AN:16:PHE:O	2.29	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AN:57:ARG:CB	14:AN:57:ARG:NH1	2.73	0.51
18:AR:52:PRO:O	18:AR:56:THR:HG23	2.11	0.51
1:AA:186:C:O3'	20:AT:82:SER:HB3	2.09	0.51
31:B5:40:LYS:HG2	31:B5:46:CYS:CB	2.40	0.51
36:BA:1203:G:H3'	36:BA:1204:A:H5''	1.91	0.51
36:BA:2010:G:H5''	55:BW:42:ARG:HB2	1.91	0.51
36:BA:2031:A:O2'	36:BA:2455:G:H4'	2.10	0.51
36:BA:2771:C:H2'	36:BA:2772:C:C6	2.46	0.51
36:BA:564:C:O2'	36:BA:565:C:H5'	2.11	0.51
36:BA:654(M):C:H2'	36:BA:654(N):G:N7	2.25	0.51
36:BA:84:A:H61	36:BA:102:G:C2'	2.24	0.51
38:BC:27:ARG:HD3	38:BC:182:PRO:CB	2.40	0.51
38:BC:75:LEU:HG	38:BC:112:ALA:O	2.10	0.51
40:BE:3:GLY:O	40:BE:4:ILE:HB	2.10	0.51
41:BF:126:VAL:HG21	41:BF:129:PHE:CZ	2.46	0.51
43:BH:103:LEU:CB	43:BH:123:PHE:HD2	2.19	0.51
49:BQ:137:TYR:CE2	58:BZ:81:ARG:CZ	2.93	0.51
52:BT:28:VAL:HG11	52:BT:88:ILE:HD11	1.93	0.51
57:BY:60:PHE:O	57:BY:61:ILE:HG13	2.11	0.51
1:CA:154:C:H2'	1:CA:155:C:C6	2.45	0.51
1:CA:542:G:H5'	4:CD:41:GLY:HA2	1.93	0.51
9:CI:100:GLY:O	9:CI:102:LEU:N	2.43	0.51
10:CJ:4:ILE:HB	10:CJ:74:ILE:CD1	2.40	0.51
10:CJ:92:THR:HG23	10:CJ:93:GLY:N	2.25	0.51
11:CK:54:ARG:O	11:CK:57:THR:HG22	2.10	0.51
12:CL:39:VAL:HG12	12:CL:40:VAL:N	2.25	0.51
19:CS:20:LEU:C	19:CS:22:LEU:H	2.14	0.51
22:CV:42:C:H6	22:CV:42:C:C5'	2.23	0.51
30:D4:31:ILE:HD12	30:D4:31:ILE:N	2.26	0.51
31:D5:24:ALA:O	31:D5:25:LEU:CB	2.54	0.51
35:D9:1:MET:HG3	36:DA:2478:A:OP2	2.11	0.51
36:DA:1068:G:H1'	36:DA:1069:A:C5'	2.40	0.51
36:DA:1120:G:H2'	36:DA:1121:C:C6	2.45	0.51
36:DA:1292:U:H2'	36:DA:1293:C:C6	2.45	0.51
36:DA:2052:G:H4'	40:DE:143:ASN:O	2.09	0.51
36:DA:2811:G:C4'	40:DE:61:ARG:HH21	2.24	0.51
41:DF:178:PRO:HG2	41:DF:179:GLU:H	1.75	0.51
41:DF:188:ARG:HA	48:DP:7:ARG:HB2	1.93	0.51
43:DH:51:ARG:HG3	43:DH:52:VAL:H	1.75	0.51
34:D8:13:ARG:CD	48:DP:61:ARG:HD2	2.31	0.51
49:DQ:110:THR:HG23	49:DQ:113:GLN:OE1	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DS:20:ARG:NH1	51:DS:20:ARG:HG2	2.23	0.51
1:AA:1050:G:O2'	1:AA:1051:C:H6	1.94	0.51
1:AA:1282:C:O2'	1:AA:1283:G:H5'	2.11	0.51
1:AA:272:C:O2'	1:AA:273:A:H5'	2.10	0.51
1:AA:858:G:N1	1:AA:869:G:C8	2.78	0.51
4:AD:149:ALA:O	4:AD:153:ARG:HG3	2.11	0.51
11:AK:18:ARG:HH21	11:AK:36:ASP:C	2.14	0.51
11:AK:54:ARG:O	11:AK:57:THR:HG22	2.11	0.51
19:AS:40:ILE:O	19:AS:40:ILE:HG22	2.09	0.51
25:AZ:182:MET:SD	25:AZ:196:VAL:HG21	2.50	0.51
25:AZ:12:VAL:HG23	25:AZ:77:TYR:CD1	2.45	0.51
36:BA:1222:C:H2'	36:BA:1223:G:C5'	2.40	0.51
36:BA:1541:G:O3'	36:BA:1541:G:OP2	2.28	0.51
36:BA:221:A:O2'	36:BA:222:A:OP2	2.27	0.51
36:BA:467:G:O2'	36:BA:468:G:H5'	2.10	0.51
40:BE:107:THR:O	40:BE:190:GLY:CA	2.54	0.51
40:BE:26:ILE:CG2	40:BE:196:VAL:HG21	2.40	0.51
41:BF:139:PHE:O	41:BF:142:TRP:HB3	2.10	0.51
43:BH:88:LEU:HD13	43:BH:130:ARG:HG2	1.92	0.51
47:BO:86:ILE:O	47:BO:87:ILE:HD13	2.10	0.51
48:BP:146:VAL:HG13	48:BP:147:LEU:N	2.24	0.51
49:BQ:1:MET:O	49:BQ:2:LEU:CB	2.58	0.51
55:BW:73:ALA:HB3	55:BW:106:ILE:HD11	1.93	0.51
58:BZ:166:SER:OG	58:BZ:167:PRO:HA	2.09	0.51
1:CA:1316:G:O3'	14:CN:18:VAL:HG22	2.10	0.51
1:CA:323:U:H2'	1:CA:324:G:O4'	2.10	0.51
1:CA:797:C:O2'	1:CA:798:G:H5'	2.11	0.51
9:CI:85:LEU:HD12	9:CI:86:VAL:N	2.26	0.51
19:CS:16:LEU:CD1	19:CS:16:LEU:H	2.23	0.51
25:CZ:189:ARG:HB2	25:CZ:192:GLU:OE2	2.11	0.51
25:CZ:208:GLU:O	25:CZ:209:TYR:HB3	2.10	0.51
26:D0:40:GLN:HE22	26:D0:45:PHE:N	2.08	0.51
32:D6:28:ARG:CA	32:D6:32:ASN:ND2	2.71	0.51
32:D6:16:CYS:SG	32:D6:49:HIS:N	2.84	0.51
34:D8:10:ALA:CB	34:D8:60:LEU:HD21	2.40	0.51
36:DA:1142(A):A:H8	36:DA:1142(A):A:H5'	1.75	0.51
36:DA:1260:G:H2'	36:DA:1261:C:C6	2.45	0.51
36:DA:2116:G:N7	36:DA:2117:A:C2	2.78	0.51
36:DA:2159:G:H2'	36:DA:2160:G:C5'	2.36	0.51
36:DA:230:U:H2'	36:DA:231:C:H6	1.74	0.51
36:DA:2649:U:O2'	36:DA:2650:U:H5'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DG:136:ARG:HH11	42:DG:136:ARG:HB3	1.74	0.51
42:DG:52:ILE:HB	42:DG:54:GLU:HG3	1.92	0.51
42:DG:83:ARG:O	42:DG:85:GLY:N	2.43	0.51
43:DH:85:LYS:NZ	43:DH:86:GLU:CA	2.73	0.51
46:DN:10:GLU:CG	46:DN:11:PRO:HD2	2.41	0.51
48:DP:102:ARG:NH1	48:DP:102:ARG:CB	2.74	0.51
49:DQ:133:ARG:HG2	49:DQ:134:ARG:N	2.26	0.51
50:DR:28:LEU:HD23	50:DR:28:LEU:C	2.30	0.51
51:DS:92:TYR:O	51:DS:93:LYS:CB	2.59	0.51
1:AA:337:C:H2'	1:AA:338:A:H8	1.75	0.51
1:AA:539:A:OP2	12:AL:115:LYS:HE3	2.11	0.51
1:AA:624:C:H4'	16:AP:10:GLY:HA2	1.92	0.51
3:AC:54:ARG:HG2	3:AC:55:VAL:N	2.26	0.51
4:AD:101:LEU:C	4:AD:103:ASN:N	2.63	0.51
1:AA:407:G:HO2'	4:AD:116:GLN:HG3	1.75	0.51
1:AA:939:G:C5'	7:AG:102:ARG:HH22	2.22	0.51
10:AJ:6:ILE:CG1	10:AJ:72:VAL:HB	2.40	0.51
22:AV:42:C:C5'	22:AV:42:C:H6	2.22	0.51
22:AV:1:G:H1'	26:B0:5:LYS:HZ1	1.74	0.51
30:B4:7:PRO:O	30:B4:8:LYS:HB3	2.11	0.51
32:B6:10:LEU:HD12	34:B8:34:TRP:HB2	1.93	0.51
32:B6:16:CYS:SG	32:B6:49:HIS:N	2.84	0.51
35:B9:29:ASN:HD21	35:B9:32:HIS:CG	2.29	0.51
36:BA:11:G:H2'	36:BA:12:U:C6	2.46	0.51
36:BA:1204:A:N1	36:BA:1241:A:H2	2.08	0.51
31:B5:4:HIS:O	36:BA:2056:G:N2	2.44	0.51
36:BA:2060:A:H62	41:BF:74:ARG:HH21	1.59	0.51
36:BA:1265:A:OP2	36:BA:2615:U:OP1	2.28	0.51
36:BA:299:A:N1	36:BA:322:A:O2'	2.37	0.51
36:BA:580:C:H2'	36:BA:581:C:H6	1.75	0.51
36:BA:659:C:H4'	41:BF:100:THR:O	2.10	0.51
38:BC:181:PRO:HB2	38:BC:183:GLU:OE2	2.10	0.51
39:BD:267:SER:O	39:BD:269:PHE:HD1	1.94	0.51
43:BH:52:VAL:HB	43:BH:69:ARG:CD	2.40	0.51
48:BP:9:ASN:H	48:BP:10:PRO:CD	2.22	0.51
34:B8:15:LYS:CG	48:BP:65:ARG:NH2	2.74	0.51
52:BT:62:THR:HA	52:BT:74:ARG:O	2.10	0.51
54:BV:39:LEU:CD1	54:BV:51:VAL:HA	2.40	0.51
56:BX:40:LYS:HB2	56:BX:54:VAL:CG2	2.39	0.51
58:BZ:27:VAL:O	58:BZ:27:VAL:HG13	2.10	0.51
58:BZ:72:ARG:NH2	58:BZ:97:GLU:O	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:328:C:C2'	1:CA:328:C:O2	2.58	0.51
1:CA:865:A:H2'	1:CA:866:C:C6	2.46	0.51
2:CB:97:TRP:HZ2	2:CB:102:LEU:HD13	1.76	0.51
4:CD:18:LYS:HE3	4:CD:31:CYS:SG	2.51	0.51
6:CF:57:GLN:HE21	6:CF:57:GLN:N	2.09	0.51
7:CG:79:ARG:HA	7:CG:83:ALA:O	2.11	0.51
9:CI:43:ALA:HA	9:CI:74:ILE:HD13	1.93	0.51
10:CJ:6:ILE:CG1	10:CJ:72:VAL:HB	2.40	0.51
10:CJ:7:LYS:HB2	10:CJ:97:GLU:HB2	1.92	0.51
19:CS:43:GLU:O	19:CS:45:VAL:HG22	2.10	0.51
22:CW:57:G:O2'	22:CW:58:A:H5'	2.10	0.51
25:CZ:172:ARG:O	25:CZ:198:LYS:HD3	2.09	0.51
31:D5:43:HIS:HD2	36:DA:2815:C:O2'	1.93	0.51
32:D6:10:LEU:HD12	34:D8:34:TRP:HB2	1.93	0.51
36:DA:1682:G:H5'	36:DA:1762:A:O2'	2.10	0.51
36:DA:2200:C:N4	36:DA:2223:G:H1	2.08	0.51
36:DA:838:C:O2'	36:DA:839:U:H5'	2.10	0.51
41:DF:139:PHE:O	41:DF:142:TRP:HB3	2.11	0.51
42:DG:130:ASN:OD1	42:DG:160:VAL:HA	2.10	0.51
48:DP:16:ARG:HD3	48:DP:18:ARG:H	1.75	0.51
52:DT:2:ASN:HB2	52:DT:7:ILE:HD11	1.92	0.51
53:DU:69:CYS:HB2	53:DU:74:LEU:HD11	1.93	0.51
58:DZ:114:GLY:HA3	58:DZ:146:ILE:CG2	2.41	0.51
1:AA:1123:A:H2	1:AA:1150:U:C5	2.29	0.51
1:AA:1269:A:H2	1:AA:1312:G:N3	2.09	0.51
1:AA:797:C:O2'	1:AA:798:G:H5'	2.10	0.51
10:AJ:16:LEU:HD11	10:AJ:70:ARG:HG2	1.93	0.51
10:AJ:85:LEU:O	10:AJ:87:THR:N	2.41	0.51
13:AM:83:ASP:OD1	13:AM:85:GLY:N	2.44	0.51
27:B1:53:VAL:O	27:B1:54:ALA:HB3	2.10	0.51
28:B2:62:THR:HG22	28:B2:66:GLU:CG	2.40	0.51
31:B5:57:VAL:HG12	31:B5:58:LEU:N	2.26	0.51
36:BA:1344:G:H4'	36:BA:1384:A:C5	2.45	0.51
36:BA:1445(A):C:O2'	36:BA:1446:C:H5'	2.10	0.51
36:BA:118:A:H1'	36:BA:178:G:O4'	2.11	0.51
36:BA:2107:C:C1'	36:BA:2182:G:H22	2.23	0.51
36:BA:2286:A:H4'	36:BA:2287:A:O4'	2.10	0.51
36:BA:2837:G:H2'	36:BA:2838:G:H8	1.75	0.51
36:BA:34:C:H41	36:BA:447:A:N6	2.04	0.51
36:BA:88:G:N3	36:BA:88:G:H2'	2.25	0.51
39:BD:27:THR:HG23	39:BD:27:THR:O	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:30:GLU:HG3	39:BD:35:LYS:HE3	1.93	0.51
41:BF:129:PHE:O	41:BF:132:VAL:HB	2.11	0.51
43:BH:51:ARG:HG3	43:BH:52:VAL:H	1.76	0.51
48:BP:16:ARG:HD3	48:BP:16:ARG:C	2.30	0.51
48:BP:16:ARG:HD3	48:BP:18:ARG:H	1.76	0.51
52:BT:28:VAL:O	52:BT:29:ARG:HB2	2.10	0.51
54:BV:38:LEU:O	54:BV:52:VAL:HG12	2.11	0.51
1:CA:1029:C:H2'	1:CA:1030(A):G:N7	2.26	0.51
1:CA:35:G:H2'	1:CA:36:C:H6	1.75	0.51
1:CA:471:G:H21	16:CP:82:GLN:NE2	2.09	0.51
1:CA:523:A:N1	12:CL:92:ASP:OD2	2.44	0.51
1:CA:980:C:C5'	1:CA:980:C:H6	2.14	0.51
2:CB:15:VAL:H	2:CB:16:HIS:CE1	2.29	0.51
2:CB:54:THR:HG21	2:CB:201:ILE:HD11	1.92	0.51
3:CC:188:LEU:HD12	3:CC:195:VAL:HG11	1.93	0.51
8:CH:30:ARG:NH1	8:CH:30:ARG:HB3	2.25	0.51
8:CH:64:LYS:CG	8:CH:79:VAL:HG21	2.39	0.51
17:CQ:27:PHE:CE2	17:CQ:36:ILE:HD11	2.45	0.51
17:CQ:55:ASP:HB3	17:CQ:76:LEU:CD1	2.41	0.51
20:CT:58:LYS:O	20:CT:61:SER:HB3	2.10	0.51
22:CV:75:C:H2'	22:CV:76:A:C1'	2.41	0.51
25:CZ:26:THR:HB	60:CZ:501:GDP:O2A	2.11	0.51
30:D4:15:ILE:HD13	30:D4:21:VAL:HG13	1.93	0.51
31:D5:3:LYS:O	31:D5:4:HIS:C	2.48	0.51
34:D8:62:LEU:N	34:D8:63:PRO:CD	2.73	0.51
36:DA:171:G:O2'	36:DA:172:C:H5'	2.11	0.51
31:D5:4:HIS:O	36:DA:2056:G:N2	2.43	0.51
36:DA:2107:C:C1'	36:DA:2182:G:H22	2.24	0.51
36:DA:2461:C:H2'	36:DA:2462:U:C6	2.46	0.51
36:DA:2469:A:H2	36:DA:2481:G:H21	1.58	0.51
36:DA:2754:U:H2'	36:DA:2756:U:OP1	2.11	0.51
33:D7:5:TRP:CZ3	36:DA:464:U:H4'	2.45	0.51
36:DA:88:G:H2'	36:DA:88:G:N3	2.25	0.51
41:DF:113:ALA:HB1	41:DF:186:ILE:HG21	1.93	0.51
41:DF:185:ASP:CA	41:DF:188:ARG:HG2	2.39	0.51
43:DH:122:THR:HB	43:DH:134:SER:HB2	1.93	0.51
48:DP:62:LEU:N	48:DP:62:LEU:HD23	2.26	0.51
49:DQ:81:VAL:HG22	49:DQ:82:ARG:H	1.76	0.51
50:DR:4:LEU:C	50:DR:6:SER:N	2.63	0.51
52:DT:26:ASP:HB3	52:DT:89:VAL:O	2.11	0.51
36:DA:518:G:H4'	55:DW:18:ARG:NH1	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1320:C:H5'	1:AA:1320:C:C6	2.31	0.51
1:AA:1321:C:C3'	1:AA:1322:C:H5''	2.38	0.51
1:AA:542:G:H2'	1:AA:543:C:C6	2.46	0.51
1:AA:594:G:C2'	1:AA:595:G:H5'	2.41	0.51
1:AA:779:C:H2'	1:AA:780:A:O4'	2.10	0.51
2:AB:236:TYR:O	2:AB:237:ALA:C	2.48	0.51
7:AG:79:ARG:HA	7:AG:83:ALA:O	2.11	0.51
11:AK:88:GLY:O	11:AK:89:ALA:C	2.49	0.51
13:AM:65:LYS:HD3	13:AM:65:LYS:N	2.21	0.51
1:AA:471:G:H21	16:AP:82:GLN:NE2	2.09	0.51
25:AZ:86:ALA:C	25:AZ:88:TYR:H	2.14	0.51
28:B2:48:HIS:CG	28:B2:49:LYS:N	2.79	0.51
28:B2:47:ASN:HB3	28:B2:51:ARG:CB	2.40	0.51
28:B2:67:LYS:O	28:B2:69:ARG:N	2.44	0.51
30:B4:9:LEU:HD13	30:B4:10:VAL:N	2.25	0.51
34:B8:39:LYS:HG3	34:B8:43:GLN:HE21	1.75	0.51
36:BA:1586:A:H5''	36:BA:1587:A:C8	2.46	0.51
36:BA:1688:U:H1'	36:BA:1701:A:C6	2.46	0.51
36:BA:2200:C:N4	36:BA:2223:G:H1	2.07	0.51
36:BA:2360:A:C2	36:BA:2361:A:H1'	2.46	0.51
36:BA:266:G:C3'	36:BA:267:C:H5''	2.41	0.51
36:BA:270:A:N1	36:BA:366:C:O2'	2.38	0.51
36:BA:863:A:O2'	36:BA:864:G:H5'	2.10	0.51
36:BA:901:A:H5'	36:BA:902:C:OP2	2.11	0.51
37:BB:96:U:H2'	37:BB:97:G:C8	2.45	0.51
42:BG:114:ILE:O	42:BG:114:ILE:HG23	2.11	0.51
42:BG:173:LEU:HD13	42:BG:178:PHE:CD2	2.45	0.51
42:BG:20:ILE:C	42:BG:22:ARG:N	2.64	0.51
43:BH:124:GLU:HG3	43:BH:132:ARG:HG3	1.93	0.51
43:BH:121:ILE:HG23	43:BH:133:VAL:CG1	2.40	0.51
36:BA:1059:G:H22	45:BK:130:UNK:CB	2.24	0.51
47:BO:31:LYS:HB3	47:BO:32:TYR:CE1	2.46	0.51
51:BS:19:LYS:HB3	51:BS:20:ARG:NH2	2.22	0.51
51:BS:85:VAL:C	51:BS:106:ARG:HG3	2.31	0.51
57:BY:74:PRO:HG2	57:BY:81:LYS:O	2.11	0.51
1:CA:1286:A:O2'	1:CA:1287:A:C5'	2.57	0.51
1:CA:1343:G:H2'	1:CA:1344:C:C6	2.46	0.51
2:CB:130:ARG:NH2	2:CB:134:GLU:HG3	2.23	0.51
4:CD:200:GLU:HG2	4:CD:201:GLN:N	2.25	0.51
7:CG:15:ASP:HB3	7:CG:20:ASP:H	1.76	0.51
9:CI:112:LYS:HA	9:CI:119:ALA:HB2	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:67:ASP:O	11:CK:71:LYS:HG3	2.10	0.51
12:CL:27:LEU:HD23	12:CL:30:ALA:O	2.10	0.51
25:CZ:64:ASN:N	25:CZ:64:ASN:HD22	2.04	0.51
25:CZ:32:THR:HG22	25:CZ:70:TYR:HB3	1.93	0.51
26:D0:49:LYS:O	26:D0:50:ASN:HB2	2.09	0.51
27:D1:27:GLU:O	27:D1:29:GLY:N	2.44	0.51
27:D1:82:LEU:HD11	27:D1:90:ILE:HD12	1.92	0.51
28:D2:44:LEU:HD23	28:D2:44:LEU:O	2.10	0.51
30:D4:6:HIS:HB3	42:DG:67:LYS:NZ	2.26	0.51
32:D6:18:ARG:CG	32:D6:18:ARG:HH11	2.06	0.51
32:D6:30:THR:CG2	32:D6:31:PRO:HD2	2.41	0.51
36:DA:1059:G:H22	45:DK:130:UNK:CB	2.24	0.51
36:DA:1064:C:H4'	45:DK:87:UNK:CB	2.41	0.51
36:DA:1087:G:C8	36:DA:1088:A:H4'	2.35	0.51
36:DA:1344:G:H4'	36:DA:1384:A:C5	2.46	0.51
36:DA:2880:C:H1'	50:DR:92:GLY:O	2.10	0.51
36:DA:332:A:H4'	36:DA:333:G:OP1	2.11	0.51
36:DA:673:C:H6	36:DA:673:C:C5'	2.16	0.51
36:DA:996:A:H4'	53:DU:92:ARG:CD	2.40	0.51
40:DE:52:LEU:HD23	40:DE:75:VAL:CB	2.41	0.51
43:DH:152:ARG:HH11	43:DH:152:ARG:HG3	1.76	0.51
48:DP:147:LEU:O	48:DP:148:LEU:CB	2.57	0.51
48:DP:47:ASP:OD2	48:DP:50:ARG:HG2	2.10	0.51
50:DR:9:LYS:C	50:DR:10:LEU:HG	2.30	0.51
55:DW:69:LEU:HD23	55:DW:108:GLY:O	2.11	0.51
57:DY:3:VAL:C	57:DY:5:MET:H	2.14	0.51
57:DY:86:ARG:HH22	57:DY:95:LYS:HE2	1.75	0.51
1:AA:1250:A:H4'	9:AI:68:GLY:H	1.76	0.51
1:AA:1394:A:C5	1:AA:1501:C:H4'	2.46	0.51
9:AI:111:ARG:O	9:AI:113:LYS:HD2	2.10	0.51
9:AI:83:ARG:C	9:AI:86:VAL:HG12	2.31	0.51
12:AL:27:LEU:HD23	12:AL:30:ALA:O	2.11	0.51
22:AV:44:G:H3'	22:AV:45:U:H5'	1.92	0.51
24:AY:45:U:C3'	24:AY:46:7MG:H5''	2.33	0.51
24:AY:51:G:N2	24:AY:64:U:O2	2.44	0.51
25:AZ:152:MET:HE2	25:AZ:156:ASP:HB2	1.93	0.51
33:B7:19:ARG:NH1	33:B7:19:ARG:HG2	2.26	0.51
35:B9:1:MET:HG3	36:BA:2478:A:OP2	2.11	0.51
36:BA:1231:G:H2'	36:BA:1232:G:H8	1.76	0.51
36:BA:142:A:H1'	36:BA:1408:C:H1'	1.92	0.51
36:BA:171:G:O2'	36:BA:172:C:H5'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2475:C:H42	36:BA:2529:G:H22	1.60	0.51
36:BA:2672:G:C2'	36:BA:2673:G:H5''	2.41	0.51
36:BA:2811:G:H4'	40:BE:61:ARG:HH21	1.76	0.51
36:BA:405:U:H3'	36:BA:406:G:C5'	2.41	0.51
36:BA:575:A:OP2	36:BA:2499:C:O2'	2.28	0.51
39:BD:130:ALA:HA	39:BD:192:THR:HA	1.92	0.51
39:BD:241:PRO:O	39:BD:243:GLY:N	2.43	0.51
48:BP:131:SER:OG	48:BP:134:ALA:HB3	2.11	0.51
48:BP:147:LEU:O	48:BP:148:LEU:CB	2.58	0.51
51:BS:48:LEU:HD23	51:BS:82:ILE:HD11	1.93	0.51
51:BS:54:LEU:HD21	51:BS:58:LEU:O	2.11	0.51
52:BT:27:THR:HG23	52:BT:28:VAL:H	1.75	0.51
36:BA:1151:G:H5''	53:BU:81:HIS:CE1	2.47	0.51
55:BW:6:ILE:HG12	55:BW:104:THR:HB	1.93	0.51
56:BX:52:VAL:O	56:BX:53:LYS:C	2.49	0.51
36:BA:483:A:H5''	57:BY:49:VAL:HG22	1.91	0.51
1:CA:1005:A:H2'	1:CA:1006:C:H5'	1.92	0.51
1:CA:1466:C:H2'	1:CA:1467:G:O4'	2.11	0.51
1:CA:190:U:H2'	1:CA:191:G:C8	2.43	0.51
1:CA:373:A:O2'	1:CA:374:A:H5'	2.11	0.51
2:CB:239:VAL:O	2:CB:240:GLN:HB3	2.10	0.51
3:CC:150:LYS:HG3	3:CC:169:ALA:HB2	1.92	0.51
4:CD:101:LEU:C	4:CD:103:ASN:N	2.63	0.51
4:CD:117:ALA:O	4:CD:121:VAL:HG23	2.11	0.51
6:CF:15:ASP:OD2	6:CF:17:SER:HB2	2.11	0.51
10:CJ:29:ARG:HH11	10:CJ:29:ARG:HG2	1.75	0.51
22:CV:53:G:O2'	22:CV:54:U:H5'	2.10	0.51
22:CW:5:G:N2	22:CW:69:G:C5	2.79	0.51
25:CZ:231:ILE:N	25:CZ:231:ILE:HD12	2.26	0.51
25:CZ:249:VAL:HG13	25:CZ:268:THR:HA	1.94	0.51
25:CZ:404:LEU:HD22	25:CZ:404:LEU:H	1.76	0.51
31:D5:36:CYS:SG	31:D5:48:GLU:HB2	2.51	0.51
36:DA:118:A:OP2	36:DA:119:A:H5''	2.11	0.51
36:DA:11:G:H2'	36:DA:12:U:C6	2.45	0.51
36:DA:2111:C:H1'	36:DA:2118:U:O4'	2.11	0.51
32:D6:45:LYS:HG3	36:DA:2371:G:H4'	1.91	0.51
36:DA:2790:A:H2'	36:DA:2791:C:C5'	2.41	0.51
36:DA:467:G:O2'	36:DA:468:G:H5'	2.11	0.51
39:DD:124:PRO:HG2	39:DD:129:ASN:ND2	2.26	0.51
39:DD:130:ALA:HA	39:DD:192:THR:HA	1.92	0.51
39:DD:267:SER:O	39:DD:269:PHE:HD1	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DE:35:GLN:HG2	40:DE:36:ARG:N	2.26	0.51
36:DA:2632:A:C2	40:DE:61:ARG:HD2	2.46	0.51
40:DE:81:ILE:O	40:DE:82:ARG:O	2.28	0.51
41:DF:167:ALA:HA	41:DF:170:LEU:HD23	1.92	0.51
42:DG:125:PHE:CB	42:DG:130:ASN:O	2.59	0.51
42:DG:141:PHE:HB3	42:DG:142:PRO:HD2	1.93	0.51
43:DH:121:ILE:HG23	43:DH:133:VAL:CG1	2.40	0.51
46:DN:91:LEU:CD2	46:DN:98:VAL:HG21	2.41	0.51
47:DO:63:VAL:HG23	47:DO:64:ARG:HG3	1.92	0.51
52:DT:28:VAL:O	52:DT:29:ARG:HB2	2.10	0.51
53:DU:85:LYS:CD	53:DU:117:GLN:HE22	2.14	0.51
54:DV:69:LYS:HA	54:DV:87:HIS:O	2.11	0.51
55:DW:86:LEU:HD22	55:DW:96:ILE:HD12	1.93	0.51
4:AD:98:GLU:HG2	4:AD:189:PRO:HG3	1.93	0.50
9:AI:46:ALA:HB2	9:AI:74:ILE:HG23	1.93	0.50
13:AM:118:ALA:HB3	22:AV:29:G:C5'	2.42	0.50
22:AV:53:G:O2'	22:AV:54:U:H5'	2.11	0.50
25:AZ:222:LEU:HA	25:AZ:304:LEU:O	2.11	0.50
25:AZ:300:ARG:HH11	25:AZ:300:ARG:HG2	1.76	0.50
27:B1:81:LYS:O	27:B1:83:GLU:HG3	2.10	0.50
34:B8:14:VAL:HG21	34:B8:22:VAL:HG13	1.93	0.50
36:BA:1103:A:H5''	36:BA:1104:C:C5	2.44	0.50
36:BA:1499:C:O2'	36:BA:1500:G:H5'	2.11	0.50
36:BA:1799:G:H5'	36:BA:1819:A:N6	2.26	0.50
36:BA:1843:C:H2'	36:BA:1844:C:C6	2.46	0.50
36:BA:1860:G:H1	36:BA:1882:C:H42	1.58	0.50
36:BA:1884:A:C3'	36:BA:1885:A:H5''	2.40	0.50
36:BA:2131:G:H1'	36:BA:2133:G:C2	2.46	0.50
36:BA:2360:A:O2'	36:BA:2361:A:C5'	2.59	0.50
36:BA:2369:A:O2'	36:BA:2370:G:H5'	2.10	0.50
36:BA:2402:C:H2'	36:BA:2403:C:H5'	1.93	0.50
36:BA:643:A:O2'	36:BA:644:A:H5'	2.11	0.50
37:BB:48:A:H2'	37:BB:49:C:C6	2.46	0.50
38:BC:127:LEU:O	38:BC:129:ARG:N	2.44	0.50
39:BD:201:HIS:O	39:BD:204:ILE:HG12	2.11	0.50
40:BE:197:ILE:O	40:BE:197:ILE:HG12	2.11	0.50
41:BF:160:ASN:ND2	41:BF:160:ASN:C	2.63	0.50
41:BF:178:PRO:HG2	41:BF:179:GLU:H	1.75	0.50
42:BG:129:GLY:HA3	42:BG:163:ALA:HB3	1.92	0.50
43:BH:41:MET:SD	43:BH:53:GLU:O	2.68	0.50
50:BR:9:LYS:C	50:BR:10:LEU:HG	2.31	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BT:92:GLY:O	52:BT:93:ARG:C	2.48	0.50
36:BA:534:U:O2'	53:BU:49:HIS:CD2	2.64	0.50
54:BV:5:VAL:HG22	54:BV:6:LYS:N	2.27	0.50
4:CD:101:LEU:O	4:CD:103:ASN:N	2.44	0.50
7:CG:101:LEU:O	7:CG:105:VAL:HG23	2.12	0.50
1:CA:1226:C:C5	13:CM:104:ARG:HB2	2.46	0.50
36:DA:1664:A:H1'	36:DA:2726:U:C5	2.46	0.50
36:DA:2307:G:N2	36:DA:2308:G:H5''	2.26	0.50
36:DA:2659:G:H2'	36:DA:2660:A:H5''	1.93	0.50
36:DA:383:U:H2'	36:DA:385:C:H5	1.76	0.50
36:DA:84:A:H61	36:DA:102:G:C2'	2.23	0.50
38:DC:18:LYS:HD3	38:DC:20:TYR:CZ	2.46	0.50
39:DD:43:ARG:HH11	39:DD:44:ASN:HD21	1.55	0.50
39:DD:72:LYS:HZ2	39:DD:75:ILE:HG13	1.76	0.50
36:DA:1997:G:OP1	40:DE:123:ALA:HB1	2.10	0.50
40:DE:26:ILE:CG2	40:DE:196:VAL:HG21	2.41	0.50
42:DG:87:PRO:C	42:DG:88:ILE:HG12	2.32	0.50
36:DA:832:G:H21	48:DP:53:GLY:HA2	1.76	0.50
54:DV:39:LEU:CD1	54:DV:51:VAL:HA	2.41	0.50
55:DW:29:LEU:CG	55:DW:33:ARG:HD2	2.41	0.50
37:DB:75:G:O3'	58:DZ:10:ARG:NH2	2.43	0.50
58:DZ:145:GLU:HA	58:DZ:145:GLU:OE1	2.10	0.50
58:DZ:18:LEU:O	58:DZ:23:LYS:HB2	2.11	0.50
58:DZ:95:PRO:HA	58:DZ:129:SER:HA	1.93	0.50
1:AA:1005:A:H2'	1:AA:1006:C:H5'	1.93	0.50
1:AA:1202:G:C2	14:AN:42:ILE:HG21	2.45	0.50
1:AA:1392:G:H21	1:AA:1502:A:H8	1.41	0.50
2:AB:141:GLU:O	2:AB:145:LEU:HD23	2.11	0.50
9:AI:100:GLY:O	9:AI:102:LEU:N	2.45	0.50
10:AJ:61:GLU:HG3	14:AN:58:LYS:CE	2.28	0.50
13:AM:91:ARG:HB3	13:AM:98:VAL:HG12	1.93	0.50
1:AA:1217:C:OP1	14:AN:9:LYS:HE3	2.11	0.50
22:AW:69:G:H2'	22:AW:70:G:C5'	2.41	0.50
24:AY:17:H2U:O2'	24:AY:18:G:OP1	2.30	0.50
26:B0:49:LYS:O	26:B0:50:ASN:HB2	2.11	0.50
28:B2:41:ILE:HG13	28:B2:42:GLY:N	2.19	0.50
30:B4:10:VAL:CG2	30:B4:11:PRO:HD2	2.41	0.50
32:B6:53:LYS:CG	32:B6:54:ILE:N	2.74	0.50
36:BA:1149:G:H2'	36:BA:1150:C:C6	2.46	0.50
36:BA:2133:G:H4'	36:BA:2133:G:OP1	2.12	0.50
40:BE:48:GLN:NE2	40:BE:78:LEU:HD22	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BG:106:LEU:HG	42:BG:106:LEU:O	2.11	0.50
48:BP:122:PRO:HA	48:BP:141:ALA:O	2.12	0.50
56:BX:35:THR:HG22	56:BX:38:GLU:N	2.21	0.50
58:BZ:136:PHE:O	58:BZ:137:ILE:HD13	2.12	0.50
58:BZ:18:LEU:HB3	58:BZ:23:LYS:HB2	1.92	0.50
1:CA:1050:G:O2'	1:CA:1051:C:H6	1.94	0.50
1:CA:397:A:H3'	1:CA:397:A:N3	2.27	0.50
2:CB:204:ASN:ND2	2:CB:207:ALA:H	2.10	0.50
4:CD:76:ARG:O	4:CD:80:GLU:HG2	2.11	0.50
7:CG:78:ARG:CG	7:CG:78:ARG:O	2.58	0.50
8:CH:116:LYS:HD3	8:CH:127:LEU:HD12	1.92	0.50
13:CM:34:LEU:HD13	13:CM:41:PRO:HA	1.93	0.50
17:CQ:45:HIS:HB2	17:CQ:65:ILE:HD13	1.92	0.50
25:CZ:86:ALA:C	25:CZ:88:TYR:H	2.14	0.50
29:D3:29:ARG:NH2	36:DA:1183:G:H4'	2.26	0.50
35:D9:29:ASN:HD21	35:D9:32:HIS:CG	2.28	0.50
36:DA:1430:C:H2'	36:DA:1431:U:C6	2.46	0.50
36:DA:1479:G:H5''	36:DA:1560:G:H4'	1.94	0.50
36:DA:1799:G:H5'	36:DA:1819:A:N6	2.26	0.50
36:DA:1888:G:N3	36:DA:1888:G:H5'	2.26	0.50
36:DA:2206:G:N2	36:DA:2207:G:H4'	2.27	0.50
32:D6:25:LYS:HD2	36:DA:2285:C:N4	2.25	0.50
36:DA:260:G:H1'	36:DA:621:A:H1'	1.93	0.50
36:DA:45:C:H2'	36:DA:47:C:H6	1.72	0.50
36:DA:782:A:H5'	36:DA:783:A:C2	2.46	0.50
40:DE:47:VAL:HG12	40:DE:49:LEU:HD22	1.92	0.50
40:DE:59:VAL:O	40:DE:60:ASN:CG	2.50	0.50
41:DF:155:LEU:HD23	41:DF:192:LEU:HD12	1.92	0.50
42:DG:30:GLU:HG2	42:DG:30:GLU:O	2.11	0.50
42:DG:49:ASP:CG	42:DG:50:ALA:H	2.13	0.50
48:DP:112:LEU:HD22	48:DP:113:LYS:N	2.26	0.50
34:D8:15:LYS:CG	48:DP:65:ARG:NH2	2.74	0.50
48:DP:75:ILE:HD12	48:DP:75:ILE:N	2.25	0.50
52:DT:109:GLU:O	52:DT:112:ARG:HG2	2.12	0.50
52:DT:27:THR:HG23	52:DT:28:VAL:N	2.26	0.50
54:DV:5:VAL:HG22	54:DV:6:LYS:N	2.26	0.50
54:DV:62:LEU:CD2	54:DV:95:LEU:HB2	2.39	0.50
57:DY:23:ARG:HH11	57:DY:23:ARG:HG2	1.76	0.50
58:DZ:128:VAL:HG22	58:DZ:129:SER:N	2.25	0.50
49:DQ:141:GLN:OXT	58:DZ:53:ILE:HD12	2.11	0.50
1:AA:1065:U:C4	1:AA:1190:G:H1'	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:718:G:H5'	11:AK:117:ASN:OD1	2.11	0.50
2:AB:204:ASN:ND2	2:AB:207:ALA:H	2.10	0.50
4:AD:117:ALA:O	4:AD:121:VAL:HG23	2.12	0.50
4:AD:11:LEU:O	4:AD:12:CYS:C	2.49	0.50
4:AD:17:VAL:O	4:AD:18:LYS:C	2.48	0.50
9:AI:54:ASP:C	9:AI:56:LEU:H	2.14	0.50
10:AJ:40:LEU:HB2	10:AJ:69:ASN:HB2	1.92	0.50
10:AJ:55:LYS:NZ	10:AJ:55:LYS:CA	2.75	0.50
11:AK:48:ILE:HD11	11:AK:67:ASP:HB2	1.94	0.50
13:AM:34:LEU:HD13	13:AM:41:PRO:HA	1.92	0.50
16:AP:64:ALA:O	16:AP:66:PRO:HD3	2.11	0.50
19:AS:20:LEU:C	19:AS:22:LEU:H	2.14	0.50
20:AT:74:LYS:C	20:AT:76:ALA:H	2.15	0.50
25:AZ:130:TYR:CD2	25:AZ:211:PRO:HD2	2.46	0.50
25:AZ:224:PRO:HD2	25:AZ:241:ARG:O	2.11	0.50
26:B0:26:TYR:CE2	36:BA:857:C:H1'	2.46	0.50
30:B4:31:ILE:HD12	30:B4:31:ILE:N	2.25	0.50
32:B6:52:VAL:HG12	32:B6:53:LYS:N	2.26	0.50
34:B8:48:PHE:O	34:B8:49:VAL:HG22	2.11	0.50
36:BA:1038:C:C3'	36:BA:1039:G:H5''	2.42	0.50
36:BA:1279:G:H4'	50:BR:31:HIS:NE2	2.26	0.50
36:BA:2206:G:N2	36:BA:2207:G:H4'	2.26	0.50
34:B8:30:ARG:NH2	36:BA:2419:U:O4	2.44	0.50
36:BA:2469:A:H2	36:BA:2481:G:H21	1.59	0.50
36:BA:1999:C:H5''	36:BA:2723:C:O2'	2.12	0.50
36:BA:2791:C:H4'	36:BA:2792:G:O5'	2.12	0.50
39:BD:142:VAL:HG22	39:BD:143:HIS:H	1.76	0.50
44:BJ:21:UNK:C	44:BJ:23:UNK:H	2.24	0.50
46:BN:55:VAL:HG22	46:BN:56:ASN:N	2.26	0.50
46:BN:57:ALA:O	46:BN:58:ASP:C	2.50	0.50
47:BO:24:VAL:CG1	47:BO:33:ALA:HB2	2.40	0.50
49:BQ:101:ARG:HG3	49:BQ:101:ARG:HH11	1.77	0.50
50:BR:74:LYS:HD2	50:BR:77:ARG:HD2	1.92	0.50
52:BT:28:VAL:CG2	52:BT:46:GLU:HG3	2.38	0.50
1:CA:31:G:N1	1:CA:48:C:H5''	2.25	0.50
1:CA:883:C:O2'	1:CA:884:U:H5'	2.11	0.50
3:CC:14:ILE:HG13	3:CC:15:THR:N	2.26	0.50
3:CC:50:ALA:HA	3:CC:72:LYS:CB	2.40	0.50
1:CA:427:U:OP1	4:CD:13:ARG:NH2	2.45	0.50
4:CD:188:LEU:O	4:CD:189:PRO:O	2.28	0.50
30:D4:8:LYS:O	30:D4:9:LEU:CB	2.59	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:D6:10:LEU:N	32:D6:10:LEU:CD2	2.67	0.50
32:D6:15:GLU:CD	32:D6:18:ARG:NH2	2.64	0.50
32:D6:15:GLU:HG2	32:D6:18:ARG:CZ	2.40	0.50
32:D6:53:LYS:CG	32:D6:54:ILE:N	2.75	0.50
34:D8:33:ASN:HB2	34:D8:36:LYS:HD2	1.93	0.50
36:DA:1243:G:H2'	36:DA:1244:G:O4'	2.11	0.50
36:DA:1270:C:H5''	36:DA:1271:G:C5'	2.41	0.50
36:DA:1378:A:C4'	36:DA:1379:A:OP1	2.57	0.50
36:DA:151:C:H2'	36:DA:152:G:C8	2.46	0.50
36:DA:2402:C:H2'	36:DA:2403:C:H5'	1.94	0.50
36:DA:2475:C:H42	36:DA:2529:G:H22	1.59	0.50
36:DA:2837:G:H2'	36:DA:2838:G:H8	1.76	0.50
36:DA:826:U:H2'	36:DA:828:U:O4'	2.11	0.50
37:DB:48:A:H2'	37:DB:49:C:C6	2.45	0.50
36:DA:729:G:C5	39:DD:208:LYS:HB2	2.46	0.50
39:DD:62:TYR:HA	39:DD:87:ASN:HD21	1.76	0.50
39:DD:69:ARG:HG3	39:DD:130:ALA:CB	2.42	0.50
40:DE:101:ARG:HE	40:DE:171:GLU:HB2	1.74	0.50
40:DE:188:VAL:HG23	40:DE:189:PRO:HD2	1.92	0.50
41:DF:160:ASN:ND2	41:DF:160:ASN:C	2.65	0.50
42:DG:40:ASN:HB3	42:DG:156:ASP:HB2	1.92	0.50
42:DG:47:LYS:HD3	42:DG:81:LYS:CG	2.37	0.50
42:DG:51:ARG:NH1	42:DG:53:LEU:CD2	2.75	0.50
46:DN:29:LYS:C	46:DN:31:ALA:N	2.65	0.50
48:DP:39:LYS:CD	48:DP:40:SER:H	2.21	0.50
52:DT:28:VAL:HG11	52:DT:88:ILE:HD11	1.94	0.50
57:DY:44:ILE:HG22	57:DY:45:VAL:N	2.26	0.50
4:AD:162:LEU:HG	4:AD:181:MET:HE3	1.92	0.50
4:AD:20:TYR:HA	4:AD:26:CYS:SG	2.52	0.50
8:AH:7:ALA:HB2	8:AH:85:ARG:CD	2.41	0.50
15:AO:7:GLU:O	15:AO:11:VAL:HG23	2.11	0.50
16:AP:44:THR:O	16:AP:45:THR:CB	2.59	0.50
19:AS:43:GLU:O	19:AS:45:VAL:HG22	2.12	0.50
24:AY:20:H2U:H4'	24:AY:21:A:O5'	2.12	0.50
25:AZ:185:ASN:HD22	25:AZ:185:ASN:N	2.08	0.50
25:AZ:244:ARG:HA	25:AZ:282:ALA:HB2	1.92	0.50
31:B5:52:TYR:CD1	31:B5:52:TYR:N	2.80	0.50
36:BA:1049:C:O2	36:BA:1113:U:H4'	2.11	0.50
36:BA:2036:C:H6	36:BA:2036:C:C5'	2.17	0.50
36:BA:230:U:H2'	36:BA:231:C:H6	1.76	0.50
36:BA:2811:G:C4'	40:BE:61:ARG:HH21	2.25	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:31:C:C2'	36:BA:32:C:C5'	2.74	0.50
33:B7:5:TRP:CZ3	36:BA:464:U:H4'	2.46	0.50
36:BA:729:G:C5	39:BD:208:LYS:HB2	2.46	0.50
37:BB:48:A:OP1	51:BS:93:LYS:HB3	2.11	0.50
41:BF:27:GLU:N	41:BF:27:GLU:OE1	2.44	0.50
42:BG:120:LEU:H	42:BG:181:ARG:H	1.60	0.50
46:BN:90:MET:HE2	46:BN:90:MET:HA	1.93	0.50
49:BQ:81:VAL:HG22	49:BQ:82:ARG:H	1.77	0.50
50:BR:33:ARG:HG3	50:BR:115:GLU:HG3	1.93	0.50
55:BW:9:TYR:N	55:BW:9:TYR:HD1	2.09	0.50
58:BZ:119:GLU:C	58:BZ:121:HIS:N	2.64	0.50
1:CA:267:C:H2'	1:CA:268:C:C6	2.46	0.50
3:CC:139:GLN:NE2	3:CC:143:GLU:OE2	2.44	0.50
4:CD:205:GLU:OE2	5:CE:100:VAL:HG22	2.11	0.50
5:CE:102:ALA:CB	5:CE:120:THR:HG21	2.42	0.50
1:CA:939:G:C5'	7:CG:102:ARG:HH12	2.21	0.50
12:CL:85:ILE:HG23	12:CL:86:ARG:N	2.27	0.50
16:CP:23:ASP:O	16:CP:24:ALA:C	2.49	0.50
22:CW:59:U:C2'	22:CW:60:U:H5'	2.40	0.50
25:CZ:209:TYR:O	25:CZ:211:PRO:HD3	2.11	0.50
25:CZ:224:PRO:HD2	25:CZ:241:ARG:O	2.11	0.50
34:D8:39:LYS:HG3	34:D8:43:GLN:HE21	1.76	0.50
36:DA:1466:G:H2'	36:DA:1547:C:N4	2.27	0.50
36:DA:564:C:O2'	36:DA:565:C:H5'	2.12	0.50
36:DA:628:G:C3'	36:DA:629:G:H5'	2.41	0.50
36:DA:990:A:OP2	36:DA:991:C:OP2	2.29	0.50
37:DB:68:C:O2'	37:DB:69:G:H5'	2.12	0.50
38:DC:96:GLY:H	38:DC:99:ILE:HG12	1.76	0.50
40:DE:52:LEU:HD11	52:DT:1:MET:HE2	1.94	0.50
43:DH:24:VAL:O	43:DH:24:VAL:HG12	2.12	0.50
46:DN:65:LYS:NZ	46:DN:65:LYS:HB3	2.27	0.50
47:DO:12:ASP:C	47:DO:14:THR:H	2.13	0.50
49:DQ:101:ARG:HH11	49:DQ:101:ARG:HG3	1.77	0.50
51:DS:90:GLY:C	51:DS:92:TYR:H	2.14	0.50
53:DU:83:LEU:HG	53:DU:88:ILE:HD11	1.92	0.50
58:DZ:54:HIS:HB3	58:DZ:101:PRO:HD3	1.93	0.50
37:DB:75:G:H22	58:DZ:73:GLN:NE2	2.09	0.50
58:DZ:89:PHE:CE2	58:DZ:96:VAL:HG21	2.36	0.50
1:AA:1310:G:O2'	1:AA:1311:G:H5'	2.12	0.50
1:AA:659:U:O2'	1:AA:660:G:H5'	2.11	0.50
1:AA:735:C:O2'	1:AA:736:C:H5'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:150:GLU:C	4:AD:152:SER:H	2.14	0.50
4:AD:31:CYS:O	4:AD:32:ALA:HB3	2.11	0.50
8:AH:2:LEU:HD23	8:AH:2:LEU:O	2.11	0.50
13:AM:14:ARG:NH2	13:AM:16:ASP:OD2	2.44	0.50
17:AQ:55:ASP:HB3	17:AQ:76:LEU:CD1	2.42	0.50
20:AT:86:ARG:O	20:AT:90:GLN:HG3	2.12	0.50
22:AV:75:C:H2'	22:AV:76:A:C1'	2.41	0.50
25:AZ:64:ASN:N	25:AZ:64:ASN:HD22	2.04	0.50
36:BA:1029:A:H2'	36:BA:1030:G:O4'	2.12	0.50
36:BA:151:C:H2'	36:BA:152:G:C8	2.46	0.50
36:BA:1311:G:H21	36:BA:1603:A:H62	1.60	0.50
36:BA:1885:A:H8	36:BA:1885:A:H5'	1.76	0.50
36:BA:2087:G:O2'	36:BA:2088:G:H5'	2.11	0.50
36:BA:2175:C:N3	36:BA:2176:A:C2	2.80	0.50
36:BA:2464:C:O2'	36:BA:2465:C:O5'	2.29	0.50
36:BA:979:G:H3'	36:BA:980:A:H5''	1.94	0.50
38:BC:103:ILE:O	38:BC:104:LEU:C	2.50	0.50
42:BG:174:GLU:O	42:BG:176:LEU:N	2.45	0.50
43:BH:41:MET:O	43:BH:42:ARG:HB3	2.11	0.50
47:BO:12:ASP:C	47:BO:14:THR:H	2.13	0.50
48:BP:10:PRO:O	48:BP:11:GLY:O	2.30	0.50
49:BQ:3:MET:HB2	49:BQ:4:PRO:HD2	1.93	0.50
52:BT:100:TYR:O	52:BT:103:ARG:HG3	2.12	0.50
52:BT:30:VAL:O	52:BT:31:SER:HB3	2.11	0.50
56:BX:70:LEU:HD23	56:BX:71:GLY:N	2.27	0.50
57:BY:87:LYS:HG3	57:BY:88:LYS:H	1.77	0.50
1:CA:983:A:O2'	1:CA:1050:G:OP2	2.29	0.50
1:CA:328:C:H4'	1:CA:329:A:H5'	1.92	0.50
1:CA:59:A:H3'	1:CA:331:G:N2	2.25	0.50
1:CA:719:C:O2'	18:CR:49:LYS:HB3	2.11	0.50
1:CA:737:A:H2'	1:CA:738:C:C6	2.46	0.50
2:CB:168:THR:CG2	2:CB:192:SER:HA	2.42	0.50
2:CB:56:ARG:HH11	2:CB:56:ARG:HG3	1.75	0.50
4:CD:17:VAL:O	4:CD:18:LYS:C	2.50	0.50
6:CF:82:ARG:HB2	6:CF:85:VAL:CG2	2.42	0.50
10:CJ:16:LEU:CD1	10:CJ:70:ARG:HG2	2.41	0.50
15:CO:8:LYS:O	15:CO:12:ILE:HG13	2.11	0.50
25:CZ:122:LEU:O	25:CZ:122:LEU:HD13	2.12	0.50
26:D0:43:THR:O	26:D0:43:THR:HG23	2.12	0.50
29:D3:26:LEU:HB2	29:D3:28:LEU:HD22	1.94	0.50
32:D6:15:GLU:OE2	32:D6:41:PRO:CB	2.58	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1051:G:C4	36:DA:1052:C:N4	2.80	0.50
36:DA:1171:G:C8	36:DA:1173:G:H1'	2.47	0.50
36:DA:1274:A:N3	36:DA:1297:C:H1'	2.26	0.50
36:DA:1885:A:H5'	36:DA:1885:A:H8	1.75	0.50
36:DA:2096:U:H2'	36:DA:2097:C:H6	1.77	0.50
36:DA:363(E):U:H3'	36:DA:363(F):A:O4'	2.12	0.50
36:DA:686:G:N2	36:DA:788:A:H61	2.10	0.50
33:D7:10:ARG:NH1	36:DA:771:G:OP1	2.44	0.50
38:DC:103:ILE:O	38:DC:104:LEU:C	2.49	0.50
38:DC:189:ILE:O	38:DC:193:ILE:HG13	2.10	0.50
39:DD:133:LEU:HB3	39:DD:173:VAL:HG11	1.93	0.50
39:DD:43:ARG:O	39:DD:43:ARG:HG2	2.12	0.50
39:DD:35:LYS:O	39:DD:62:TYR:O	2.30	0.50
43:DH:41:MET:O	43:DH:42:ARG:HB3	2.12	0.50
48:DP:45:LEU:CD1	48:DP:46:LYS:H	2.24	0.50
49:DQ:134:ARG:HA	49:DQ:137:TYR:CD1	2.46	0.50
49:DQ:43:THR:HB	49:DQ:45:GLN:HE21	1.76	0.50
52:DT:100:TYR:O	52:DT:103:ARG:HG3	2.11	0.50
1:AA:1029:C:H2'	1:AA:1030(A):G:N7	2.27	0.50
1:AA:1158:C:O2'	1:AA:1159:U:H4'	2.11	0.50
1:AA:190:U:H2'	1:AA:191:G:C8	2.43	0.50
1:AA:397:A:H3'	1:AA:397:A:N3	2.27	0.50
1:AA:436:C:H2'	1:AA:437:U:C6	2.47	0.50
2:AB:25:ASN:O	2:AB:27:LYS:N	2.45	0.50
3:AC:81:GLY:O	3:AC:82:GLU:C	2.50	0.50
7:AG:6:ARG:HH21	7:AG:94:ARG:HH12	1.57	0.50
12:AL:6:THR:HG1	12:AL:9:GLN:HG3	1.74	0.50
1:AA:719:C:O2'	18:AR:49:LYS:HB3	2.12	0.50
20:AT:93:GLU:OE1	20:AT:93:GLU:N	2.45	0.50
28:B2:52:ASP:O	28:B2:56:GLN:NE2	2.45	0.50
36:BA:1021:A:C8	36:BA:1021:A:H3'	2.47	0.50
36:BA:1243:G:H2'	36:BA:1244:G:O4'	2.11	0.50
36:BA:2030:A:H4'	36:BA:2031:A:H8	1.77	0.50
36:BA:2188:C:H2'	36:BA:2189:U:C5	2.47	0.50
36:BA:2310:A:O2'	36:BA:2311:A:C5'	2.48	0.50
36:BA:2416:C:H2'	36:BA:2417:C:C6	2.47	0.50
36:BA:2545:G:N3	36:BA:2565:A:H2	2.08	0.50
31:B5:43:HIS:HD2	36:BA:2815:C:O2'	1.94	0.50
36:BA:481:G:P	57:BY:47:LYS:HD3	2.51	0.50
36:BA:710:G:H2'	36:BA:711:G:H8	1.77	0.50
36:BA:733:G:C8	36:BA:761:A:N1	2.80	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:796:C:H2'	36:BA:797:C:H6	1.75	0.50
39:BD:162:SER:O	39:BD:178:PRO:HG3	2.11	0.50
39:BD:65:ILE:HD11	39:BD:67:PHE:CE2	2.47	0.50
36:BA:2631:G:N2	40:BE:61:ARG:HH12	2.09	0.50
42:BG:61:ALA:O	42:BG:65:GLY:N	2.42	0.50
36:BA:558:G:OP2	46:BN:111:PRO:HD2	2.11	0.50
48:BP:122:PRO:HB3	48:BP:141:ALA:CB	2.42	0.50
48:BP:16:ARG:NE	48:BP:18:ARG:HG2	2.26	0.50
36:BA:832:G:H21	48:BP:53:GLY:HA2	1.76	0.50
48:BP:98:GLU:HA	48:BP:101:VAL:HG22	1.92	0.50
49:BQ:133:ARG:CB	49:BQ:133:ARG:HH11	2.17	0.50
49:BQ:16:ARG:HG3	49:BQ:17:LEU:N	2.26	0.50
50:BR:18:LEU:HD13	50:BR:18:LEU:C	2.32	0.50
51:BS:97:ARG:NH1	51:BS:98:VAL:O	2.45	0.50
53:BU:52:ARG:O	53:BU:55:ARG:N	2.45	0.50
55:BW:69:LEU:HD23	55:BW:108:GLY:O	2.11	0.50
56:BX:41:ASN:O	56:BX:45:THR:HG23	2.12	0.50
57:BY:85:VAL:HG12	57:BY:86:ARG:N	2.25	0.50
1:CA:1442(A):G:H5'	1:CA:1442(B):A:OP2	2.12	0.50
1:CA:310:G:H2'	1:CA:311:C:H6	1.77	0.50
3:CC:126:ARG:O	3:CC:128:PHE:HD1	1.95	0.50
7:CG:16:LEU:HD12	9:CI:42:ARG:HA	1.91	0.50
12:CL:59:ARG:NH2	12:CL:63:GLY:HA2	2.25	0.50
16:CP:1:MET:O	16:CP:24:ALA:HB2	2.11	0.50
19:CS:31:ILE:HG23	19:CS:49:ILE:HA	1.93	0.50
25:CZ:256:VAL:HA	25:CZ:262:THR:HG22	1.94	0.50
25:CZ:265:THR:HG21	25:CZ:293:VAL:HG22	1.93	0.50
25:CZ:63:ILE:HG13	25:CZ:64:ASN:N	2.26	0.50
26:D0:15:ASP:OD1	26:D0:16:SER:N	2.42	0.50
28:D2:14:ARG:O	28:D2:14:ARG:HG2	2.12	0.50
33:D7:19:ARG:HG2	33:D7:19:ARG:NH1	2.26	0.50
36:DA:1012:U:C5	46:DN:28:THR:HG21	2.47	0.50
36:DA:1021:A:C8	36:DA:1021:A:H3'	2.47	0.50
36:DA:1360:A:H5'	36:DA:1361:G:OP2	2.11	0.50
36:DA:1948:G:O2'	36:DA:1949:G:H5'	2.11	0.50
36:DA:2032:G:OP2	36:DA:2454:G:O2'	2.22	0.50
36:DA:2771:C:H2'	36:DA:2772:C:C6	2.47	0.50
36:DA:547:A:H2'	36:DA:548:A:H8	1.75	0.50
36:DA:654(O):G:H2'	36:DA:654(P):C:C5	2.47	0.50
36:DA:696:G:O2'	36:DA:697:C:H5'	2.12	0.50
39:DD:75:ILE:HG21	39:DD:99:ASP:HB3	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DE:144:ARG:CG	40:DE:145:LYS:H	2.25	0.50
36:DA:801:G:O4'	41:DF:54:ARG:HD3	2.11	0.50
46:DN:56:ASN:H	46:DN:125:GLY:HA3	1.77	0.50
46:DN:129:PRO:O	46:DN:130:HIS:CB	2.60	0.50
47:DO:11:ALA:HB1	47:DO:99:PHE:O	2.12	0.50
48:DP:23:PRO:C	48:DP:33:ARG:CZ	2.80	0.50
49:DQ:16:ARG:HG3	49:DQ:17:LEU:N	2.26	0.50
52:DT:129:ARG:HG3	52:DT:129:ARG:O	2.12	0.50
52:DT:31:SER:HG	52:DT:32:TYR:HE1	1.56	0.50
57:DY:13:VAL:HG22	57:DY:14:LEU:N	2.27	0.50
1:AA:1157:A:H1'	1:AA:1181:G:C2	2.46	0.50
1:AA:264:U:H4'	17:AQ:63:ARG:HD3	1.94	0.50
1:AA:323:U:H2'	1:AA:324:G:O4'	2.12	0.50
1:AA:45:U:H2'	1:AA:46:G:H8	1.77	0.50
1:AA:973:G:O3'	14:AN:41:ARG:NH1	2.45	0.50
9:AI:69:GLY:O	9:AI:73:GLN:HG3	2.12	0.50
19:AS:18:LYS:O	19:AS:22:LEU:HB2	2.12	0.50
25:AZ:213:PRO:HG2	25:AZ:215:ARG:HE	1.77	0.50
25:AZ:28:THR:HG23	25:AZ:79:HIS:CE1	2.46	0.50
25:AZ:14:VAL:HG23	25:AZ:79:HIS:HA	1.94	0.50
27:B1:4:VAL:HG23	27:B1:5:CYS:N	2.26	0.50
27:B1:6:GLU:OE1	27:B1:61:ARG:N	2.43	0.50
28:B2:13:ALA:C	28:B2:15:LYS:H	2.15	0.50
28:B2:62:THR:CG2	28:B2:66:GLU:HB3	2.38	0.50
34:B8:33:ASN:HB2	34:B8:36:LYS:HD2	1.93	0.50
36:BA:1171:G:C8	36:BA:1173:G:H1'	2.47	0.50
36:BA:239:U:H1'	36:BA:259:G:N2	2.27	0.50
36:BA:2777:G:C5'	36:BA:2778:A:H5'	2.39	0.50
36:BA:2870:C:H2'	36:BA:2871:C:O4'	2.12	0.50
36:BA:431:U:O2'	36:BA:432:A:H5'	2.12	0.50
36:BA:481:G:H1'	36:BA:506:G:H21	1.76	0.50
36:BA:696:G:O2'	36:BA:697:C:H5'	2.11	0.50
39:BD:226:MET:HB3	39:BD:230:ASP:HB2	1.94	0.50
40:BE:30:PRO:HD3	40:BE:180:ASN:ND2	2.26	0.50
40:BE:47:VAL:HG12	40:BE:49:LEU:HD22	1.94	0.50
42:BG:31:VAL:HG23	42:BG:32:PRO:HD2	1.93	0.50
42:BG:89:GLY:O	42:BG:90:LEU:HB3	2.12	0.50
43:BH:109:PHE:CZ	43:BH:152:ARG:NH1	2.79	0.50
43:BH:24:VAL:O	43:BH:24:VAL:HG12	2.11	0.50
43:BH:41:MET:HG3	43:BH:42:ARG:N	2.26	0.50
43:BH:88:LEU:CD1	43:BH:130:ARG:HG2	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BR:103:ARG:HH11	50:BR:110:PRO:HB3	1.77	0.50
52:BT:129:ARG:O	52:BT:129:ARG:HG3	2.12	0.50
52:BT:50:ILE:CD1	52:BT:64:ARG:HB3	2.41	0.50
58:BZ:123:ASP:O	58:BZ:124:ILE:CG1	2.50	0.50
58:BZ:102:LEU:CD2	58:BZ:137:ILE:HB	2.42	0.50
58:BZ:33:LEU:HD12	58:BZ:34:ASN:N	2.26	0.50
1:CA:264:U:H4'	17:CQ:63:ARG:HD3	1.94	0.50
1:CA:655:A:H2'	1:CA:656:C:H6	1.76	0.50
1:CA:668:G:O2'	15:CO:46:HIS:HD2	1.95	0.50
1:CA:783:C:O2'	1:CA:784:C:H5'	2.11	0.50
1:CA:80:G:C2'	1:CA:81:U:H5'	2.41	0.50
11:CK:18:ARG:HH21	11:CK:36:ASP:C	2.14	0.50
13:CM:4:ILE:O	13:CM:5:ALA:C	2.50	0.50
14:CN:15:LYS:O	14:CN:16:PHE:O	2.29	0.50
24:CY:2:G:H2'	24:CY:3:G:C5'	2.40	0.50
27:D1:69:LYS:O	27:D1:69:LYS:HD3	2.11	0.50
30:D4:9:LEU:HD13	30:D4:10:VAL:N	2.26	0.50
30:D4:7:PRO:O	30:D4:8:LYS:HB3	2.12	0.50
35:D9:10:ILE:H	35:D9:10:ILE:HD12	1.74	0.50
36:DA:1029:A:H2'	36:DA:1030:G:O4'	2.11	0.50
36:DA:1168:G:H2'	36:DA:1169:G:C8	2.46	0.50
36:DA:1363:C:H2'	36:DA:1364:G:C8	2.45	0.50
36:DA:1427:A:O2'	36:DA:1428:C:OP2	2.25	0.50
36:DA:1688:U:H1'	36:DA:1701:A:C6	2.47	0.50
36:DA:1908:C:H2'	36:DA:1909:C:H6	1.77	0.50
36:DA:2052:G:C8	40:DE:141:ILE:HD11	2.47	0.50
36:DA:2081:C:H2'	36:DA:2082:A:H8	1.76	0.50
36:DA:2131:G:H1'	36:DA:2133:G:C2	2.47	0.50
36:DA:2414:G:H21	48:DP:67:MET:HE1	1.76	0.50
36:DA:2854:G:H1	36:DA:2863:C:H42	1.58	0.50
36:DA:2869:G:H2'	36:DA:2870:C:H6	1.76	0.50
36:DA:2881:C:H2'	36:DA:2882:A:H8	1.77	0.50
36:DA:57:C:O2'	36:DA:58:G:H5'	2.11	0.50
37:DB:65:C:C2'	37:DB:66:A:H5'	2.42	0.50
37:DB:91:C:H5'	49:DQ:17:LEU:O	2.10	0.50
40:DE:48:GLN:NE2	40:DE:78:LEU:HD22	2.27	0.50
41:DF:126:VAL:HG21	41:DF:129:PHE:CZ	2.47	0.50
43:DH:52:VAL:HB	43:DH:69:ARG:CD	2.41	0.50
36:DA:2882:A:H5'	50:DR:96:ARG:HG3	1.94	0.50
52:DT:61:PHE:CE1	52:DT:76:PHE:HB2	2.47	0.50
52:DT:3:ARG:CB	52:DT:6:LEU:HB2	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DX:70:LEU:HD23	56:DX:71:GLY:N	2.27	0.50
57:DY:87:LYS:HG3	57:DY:88:LYS:H	1.77	0.50
1:AA:865:A:H5'	1:AA:1078:U:O4	2.12	0.50
1:AA:1270:C:H2'	1:AA:1271:G:C8	2.46	0.50
1:AA:245:C:O2'	1:AA:246:A:P	2.69	0.50
2:AB:142:LEU:C	2:AB:142:LEU:HD23	2.32	0.50
3:AC:11:ARG:O	3:AC:14:ILE:O	2.29	0.50
4:AD:152:SER:C	4:AD:154:ASN:H	2.15	0.50
5:AE:50:GLU:HB2	5:AE:53:LEU:CD1	2.35	0.50
6:AF:37:VAL:HG12	6:AF:38:GLU:O	2.12	0.50
6:AF:53:ALA:O	6:AF:54:LYS:HB2	2.11	0.50
10:AJ:7:LYS:HB2	10:AJ:97:GLU:HB2	1.94	0.50
13:AM:4:ILE:CG2	13:AM:5:ALA:N	2.68	0.50
22:AV:48:C:OP2	22:AV:48:C:H6	1.94	0.50
25:AZ:113:MET:HG3	25:AZ:114:PRO:CD	2.42	0.50
25:AZ:163:PHE:CD1	25:AZ:164:PRO:HD2	2.45	0.50
22:AV:1:G:C1'	26:B0:5:LYS:HZ1	2.24	0.50
27:B1:79:GLY:O	27:B1:80:LEU:CG	2.55	0.50
28:B2:49:LYS:HZ2	28:B2:49:LYS:HB2	1.76	0.50
28:B2:48:HIS:CD2	28:B2:49:LYS:HG3	2.46	0.50
36:BA:17:G:H2'	36:BA:18:C:C6	2.47	0.50
36:BA:2133:G:C5	36:BA:2157:G:N1	2.80	0.50
36:BA:2672:G:C3'	36:BA:2673:G:H5''	2.41	0.50
36:BA:2747:G:C2	36:BA:2756:U:C5	3.00	0.50
36:BA:576:U:H2'	36:BA:577:G:C8	2.46	0.50
36:BA:708:C:N4	36:BA:723:G:H1	2.06	0.50
36:BA:848:G:C4	36:BA:933:A:H8	2.30	0.50
39:BD:124:PRO:HG2	39:BD:129:ASN:ND2	2.27	0.50
41:BF:188:ARG:HA	48:BP:7:ARG:HB2	1.93	0.50
42:BG:43:LEU:H	42:BG:43:LEU:HD22	1.77	0.50
42:BG:72:ARG:CD	42:BG:86:MET:HA	2.42	0.50
46:BN:134:ARG:N	46:BN:135:PRO:HD3	2.27	0.50
46:BN:12:ARG:O	46:BN:14:VAL:HG23	2.12	0.50
48:BP:47:ASP:OD2	48:BP:50:ARG:HG2	2.11	0.50
52:BT:48:ILE:C	52:BT:48:ILE:HD12	2.32	0.50
53:BU:83:LEU:CD1	53:BU:83:LEU:H	2.25	0.50
57:BY:3:VAL:C	57:BY:5:MET:H	2.14	0.50
1:CA:453:A:O2'	1:CA:454:C:O4'	2.30	0.50
1:CA:858:G:C8	1:CA:858:G:C5'	2.93	0.50
3:CC:54:ARG:HG2	3:CC:55:VAL:N	2.26	0.50
3:CC:50:ALA:HB1	3:CC:70:VAL:HG13	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:150:GLU:C	4:CD:152:SER:H	2.13	0.50
4:CD:98:GLU:HG2	4:CD:189:PRO:HG3	1.93	0.50
7:CG:43:PHE:O	7:CG:46:ALA:HB3	2.12	0.50
25:CZ:19:HIS:CD2	25:CZ:115:GLN:HB2	2.47	0.50
25:CZ:215:ARG:NH1	25:CZ:215:ARG:HG3	2.25	0.50
25:CZ:223:MET:CB	25:CZ:242:ILE:HA	2.42	0.50
36:DA:1459:G:N7	36:DA:1461:G:N3	2.60	0.50
36:DA:2314:C:O2'	36:DA:2315:G:H5'	2.11	0.50
36:DA:2562:U:H1'	47:DO:23:ARG:HH11	1.76	0.50
36:DA:2659:G:C3'	36:DA:2660:A:H5''	2.42	0.50
36:DA:271(F):C:O2'	36:DA:271(G):C:H5'	2.10	0.50
36:DA:648:G:H2'	36:DA:649:G:C8	2.46	0.50
37:DB:42:C:O2'	37:DB:43:C:P	2.69	0.50
44:DJ:14:UNK:C	44:DJ:16:UNK:N	2.75	0.50
46:DN:12:ARG:O	46:DN:50:ASP:HB3	2.12	0.50
50:DR:55:ALA:HA	50:DR:80:PHE:CE2	2.46	0.50
55:DW:29:LEU:CD1	55:DW:33:ARG:HD2	2.42	0.50
1:AA:1127:G:H1	1:AA:1145:C:N4	2.10	0.50
1:AA:1283:G:O2'	1:AA:1284:C:P	2.69	0.50
1:AA:189(J):G:O2'	1:AA:189(K):U:H5'	2.11	0.50
1:AA:267:C:H2'	1:AA:268:C:C6	2.46	0.50
1:AA:557:G:H2'	1:AA:558:G:O4'	2.12	0.50
1:AA:636:U:H2'	1:AA:637:G:C8	2.47	0.50
4:AD:106:TYR:HD2	4:AD:113:SER:O	1.95	0.50
12:AL:17:LYS:HD3	12:AL:18:VAL:H	1.77	0.50
20:AT:91:LEU:O	20:AT:94:ALA:HB3	2.11	0.50
28:B2:63:VAL:HG12	28:B2:64:LEU:N	2.26	0.50
29:B3:7:LYS:HE2	29:B3:32:GLN:OE1	2.12	0.50
36:BA:1403:C:C2'	36:BA:1404:C:O5'	2.60	0.50
36:BA:2182:G:O2'	36:BA:2183:C:H5'	2.12	0.50
36:BA:2392:A:H2	36:BA:2424:C:N4	2.03	0.50
36:BA:2022:U:O2'	36:BA:2617:C:H5'	2.12	0.50
36:BA:272(H):C:C3'	36:BA:272(I):U:H5''	2.42	0.50
36:BA:691:C:O2'	36:BA:692:C:H5'	2.11	0.50
36:BA:914:C:C2'	36:BA:915:C:H5'	2.40	0.50
37:BB:112:U:H2'	37:BB:113:G:C8	2.45	0.50
41:BF:31:HIS:ND1	48:BP:13:ASN:HB2	2.27	0.50
42:BG:71:THR:HG22	42:BG:72:ARG:N	2.26	0.50
46:BN:51:PHE:CE1	46:BN:119:ARG:HD2	2.46	0.50
50:BR:74:LYS:CD	50:BR:77:ARG:HH11	2.24	0.50
36:BA:1754:C:OP1	52:BT:96:ARG:NH1	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BV:5:VAL:CG2	54:BV:35:LEU:HD23	2.41	0.50
56:BX:24:GLY:O	56:BX:83:VAL:N	2.45	0.50
58:BZ:150:LEU:CD2	58:BZ:171:ILE:HD11	2.42	0.50
1:CA:1050:G:O2'	1:CA:1051:C:P	2.70	0.50
1:CA:1217:C:OP1	14:CN:9:LYS:HE3	2.12	0.50
1:CA:1452:C:H4'	1:CA:1456:G:C2	2.46	0.50
1:CA:1497:G:C2'	1:CA:1498:U:H5'	2.42	0.50
1:CA:186:C:O3'	20:CT:82:SER:HB3	2.12	0.50
1:CA:189(K):U:H2'	1:CA:189(L):G:C8	2.46	0.50
1:CA:501:C:OP1	12:CL:117:ARG:NH2	2.45	0.50
3:CC:14:ILE:O	3:CC:16:ARG:N	2.45	0.50
13:CM:97:PRO:CA	13:CM:110:ARG:HD3	2.39	0.50
1:CA:1202:G:N2	14:CN:46:GLU:OE2	2.43	0.50
19:CS:40:ILE:HG23	19:CS:62:ILE:CD1	2.40	0.50
25:CZ:344:PHE:O	61:CZ:502:KIR:H482	2.12	0.50
27:D1:72:GLU:HG3	27:D1:76:ARG:HH21	1.76	0.50
32:D6:52:VAL:HG12	32:D6:53:LYS:N	2.27	0.50
36:DA:1608:A:H1'	36:DA:1610:A:OP2	2.12	0.50
36:DA:1853:A:H2'	36:DA:1854:A:C8	2.47	0.50
36:DA:2247:A:O2'	36:DA:2248:C:H5'	2.12	0.50
36:DA:271(U):G:O2'	36:DA:271(V):G:H5'	2.11	0.50
36:DA:2722:G:H2'	36:DA:2723:C:C6	2.46	0.50
36:DA:2887:U:O2'	36:DA:2888:C:H5'	2.12	0.50
36:DA:481:G:H1'	36:DA:506:G:H21	1.77	0.50
38:DC:127:LEU:O	38:DC:129:ARG:N	2.44	0.50
39:DD:142:VAL:CG2	39:DD:191:ALA:HB1	2.42	0.50
42:DG:137:GLU:O	42:DG:140:ILE:HG23	2.11	0.50
42:DG:82:LEU:HD22	42:DG:87:PRO:HA	1.94	0.50
43:DH:83:TYR:CB	43:DH:135:GLY:N	2.75	0.50
43:DH:42:ARG:HG2	43:DH:43:VAL:N	2.26	0.50
36:DA:558:G:OP2	46:DN:111:PRO:HD2	2.12	0.50
46:DN:57:ALA:O	46:DN:58:ASP:C	2.50	0.50
51:DS:65:VAL:O	51:DS:69:VAL:HG12	2.12	0.50
52:DT:62:THR:HG22	52:DT:75:ILE:HG23	1.94	0.50
53:DU:90:VAL:CG1	53:DU:91:ASP:H	2.23	0.50
56:DX:52:VAL:O	56:DX:53:LYS:C	2.50	0.50
1:AA:1004:A:H5''	1:AA:1025:U:C2	2.47	0.49
1:AA:1050:G:O2'	1:AA:1051:C:C6	2.65	0.49
2:AB:44:LEU:HA	2:AB:47:THR:OG1	2.12	0.49
3:AC:99:VAL:HG23	3:AC:99:VAL:O	2.12	0.49
4:AD:111:ALA:HB2	4:AD:120:LEU:HD12	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:77:ARG:CG	6:AF:77:ARG:HH11	2.24	0.49
8:AH:20:TYR:HE2	8:AH:76:PRO:HG2	1.77	0.49
11:AK:115:PRO:C	11:AK:117:ASN:H	2.14	0.49
12:AL:117:ARG:O	12:AL:118:SER:C	2.51	0.49
28:B2:28:LYS:HZ2	28:B2:31:GLU:HG3	1.75	0.49
36:BA:1051:G:C4	36:BA:1052:C:N4	2.80	0.49
36:BA:628:G:C3'	36:BA:629:G:H5''	2.41	0.49
36:BA:652:C:O2'	36:BA:653:A:O5'	2.29	0.49
36:BA:755:C:H2'	36:BA:756:C:C6	2.46	0.49
36:BA:88:G:H5'	36:BA:89:G:OP2	2.11	0.49
39:BD:131:LEU:HB2	39:BD:136:ILE:CD1	2.42	0.49
41:BF:107:LYS:O	41:BF:110:LEU:N	2.44	0.49
48:BP:112:LEU:O	48:BP:112:LEU:HD13	2.12	0.49
48:BP:34:GLY:O	48:BP:35:HIS:CB	2.60	0.49
52:BT:27:THR:HG23	52:BT:28:VAL:N	2.27	0.49
52:BT:83:ILE:HG13	52:BT:84:GLN:N	2.26	0.49
53:BU:86:ALA:HB2	53:BU:116:ALA:HB2	1.94	0.49
1:CA:1150:U:C5	1:CA:1151:A:C5	3.00	0.49
1:CA:152:A:N6	1:CA:170:U:C2	2.80	0.49
1:CA:337:C:H2'	1:CA:338:A:H8	1.78	0.49
3:CC:25:GLY:O	3:CC:26:LYS:C	2.51	0.49
4:CD:190:ASP:O	4:CD:194:LEU:HD23	2.12	0.49
4:CD:30:LYS:C	4:CD:32:ALA:N	2.62	0.49
4:CD:43:HIS:O	4:CD:45:GLN:HG2	2.12	0.49
16:CP:44:THR:O	16:CP:45:THR:CB	2.60	0.49
20:CT:92:LEU:C	20:CT:94:ALA:N	2.66	0.49
36:DA:122:G:H1	36:DA:129:C:H42	1.60	0.49
36:DA:1536:C:H2'	36:DA:1537:G:H4'	1.94	0.49
36:DA:1999:C:H5''	36:DA:2723:C:O2'	2.11	0.49
36:DA:2286:A:H4'	36:DA:2287:A:O4'	2.12	0.49
36:DA:2415:G:H2'	36:DA:2416:C:C6	2.47	0.49
36:DA:2791:C:H4'	36:DA:2792:G:O5'	2.12	0.49
36:DA:405:U:H3'	36:DA:406:G:C5'	2.42	0.49
36:DA:863:A:O2'	36:DA:864:G:H5'	2.11	0.49
42:DG:15:VAL:C	42:DG:17:PRO:HD2	2.33	0.49
43:DH:103:LEU:CB	43:DH:123:PHE:HD2	2.19	0.49
46:DN:46:VAL:O	46:DN:47:ALA:CB	2.60	0.49
36:DA:2690:C:H5	50:DR:14:SER:HG	1.59	0.49
50:DR:18:LEU:HD11	50:DR:22:ARG:CZ	2.42	0.49
52:DT:89:VAL:HG12	52:DT:91:ARG:HG3	1.93	0.49
55:DW:37:ARG:HG3	55:DW:37:ARG:NH1	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DX:41:ASN:O	56:DX:45:THR:HG23	2.12	0.49
58:DZ:5:LEU:O	58:DZ:59:LEU:HA	2.12	0.49
1:AA:1446:U:O2'	1:AA:1447:A:H3'	2.12	0.49
1:AA:1481:U:H2'	1:AA:1482:G:C8	2.47	0.49
1:AA:148:G:H2'	1:AA:149:A:H8	1.75	0.49
1:AA:285:G:O2'	1:AA:286:G:H5'	2.13	0.49
2:AB:162:ILE:O	2:AB:185:ILE:HG12	2.12	0.49
3:AC:16:ARG:HH11	3:AC:16:ARG:CB	2.24	0.49
6:AF:40:VAL:O	6:AF:40:VAL:HG13	2.12	0.49
6:AF:57:GLN:N	6:AF:57:GLN:HE21	2.10	0.49
7:AG:118:VAL:CG2	7:AG:119:ARG:N	2.75	0.49
8:AH:23:SER:HA	8:AH:63:LEU:HD22	1.93	0.49
10:AJ:45:ARG:O	10:AJ:64:GLU:HA	2.12	0.49
13:AM:82:MET:CG	13:AM:83:ASP:H	2.25	0.49
17:AQ:18:THR:HG23	17:AQ:69:LYS:HE3	1.93	0.49
25:AZ:355:LEU:HB2	25:AZ:356:PRO:HD2	1.94	0.49
25:AZ:90:LYS:HB2	25:AZ:90:LYS:NZ	2.27	0.49
36:BA:2175:C:N3	36:BA:2176:A:N1	2.60	0.49
36:BA:2414:G:H21	48:BP:67:MET:HE1	1.75	0.49
36:BA:2790:A:H2'	36:BA:2791:C:C5'	2.41	0.49
36:BA:2887:U:O2'	36:BA:2888:C:H5'	2.12	0.49
36:BA:492:A:H2'	36:BA:493:G:O4'	2.12	0.49
36:BA:57:C:O2'	36:BA:58:G:H5'	2.11	0.49
37:BB:8:U:O3'	51:BS:25:ARG:NH2	2.46	0.49
37:BB:93:G:H2'	37:BB:94:C:H6	1.76	0.49
41:BF:53:THR:HG22	41:BF:56:GLU:HG3	1.93	0.49
46:BN:10:GLU:CG	46:BN:11:PRO:HD2	2.42	0.49
46:BN:22:THR:HG22	46:BN:61:ARG:CB	2.40	0.49
46:BN:96:GLU:OE1	46:BN:96:GLU:N	2.41	0.49
1:AA:1423:G:OP1	47:BO:49:ARG:NH2	2.45	0.49
34:B8:15:LYS:CB	48:BP:65:ARG:HH21	2.25	0.49
50:BR:55:ALA:HA	50:BR:80:PHE:CE2	2.47	0.49
51:BS:34:HIS:HB2	51:BS:36:TYR:HE1	1.76	0.49
51:BS:65:VAL:O	51:BS:69:VAL:HG12	2.12	0.49
51:BS:92:TYR:O	51:BS:93:LYS:CB	2.60	0.49
52:BT:106:SER:HA	52:BT:110:ILE:HG12	1.94	0.49
52:BT:109:GLU:O	52:BT:112:ARG:HG2	2.12	0.49
52:BT:78:LEU:O	52:BT:78:LEU:HD23	2.13	0.49
55:BW:6:ILE:HG12	55:BW:104:THR:CB	2.42	0.49
56:BX:49:VAL:CG1	56:BX:87:GLN:HE21	2.24	0.49
57:BY:86:ARG:HH22	57:BY:95:LYS:HE2	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1076:C:H5''	58:BZ:111:VAL:CG1	2.42	0.49
1:CA:1317:C:H2'	1:CA:1318:A:O4'	2.11	0.49
1:CA:337:C:H2'	1:CA:338:A:C8	2.48	0.49
2:CB:114:ARG:NH1	2:CB:118:LEU:HD21	2.26	0.49
3:CC:58:GLU:HB2	3:CC:65:ALA:CB	2.42	0.49
13:CM:73:GLU:O	13:CM:76:ALA:HB3	2.12	0.49
1:CA:636:U:H5''	17:CQ:2:PRO:HG3	1.93	0.49
19:CS:18:LYS:O	19:CS:22:LEU:HB2	2.11	0.49
20:CT:89:ARG:HD2	20:CT:104:LEU:HD11	1.94	0.49
25:CZ:355:LEU:HB2	25:CZ:356:PRO:HD2	1.94	0.49
25:CZ:341:GLN:HE22	25:CZ:390:GLU:HA	1.77	0.49
25:CZ:9:LYS:HB3	25:CZ:75:ARG:HA	1.94	0.49
35:D9:19:ARG:O	35:D9:20:HIS:CB	2.60	0.49
36:DA:1222:C:H2'	36:DA:1223:G:C5'	2.42	0.49
36:DA:1773:A:C2'	36:DA:1774:C:H5'	2.42	0.49
36:DA:2360:A:O2'	36:DA:2361:A:C5'	2.60	0.49
36:DA:2475:C:H5'	36:DA:2476:A:OP2	2.11	0.49
36:DA:2668:G:HO2'	36:DA:2669:G:H5'	1.77	0.49
36:DA:654(H):G:H2'	36:DA:654(I):C:C5'	2.38	0.49
36:DA:673:C:C6	36:DA:673:C:H5'	2.26	0.49
36:DA:994:C:O2'	36:DA:996:A:OP1	2.30	0.49
37:DB:54:G:H21	42:DG:29:TRP:HE1	1.61	0.49
37:DB:78:A:H2'	37:DB:79:C:O4'	2.12	0.49
38:DC:63:SER:HA	38:DC:160:ARG:HA	1.94	0.49
39:DD:238:GLY:O	39:DD:239:ARG:O	2.30	0.49
39:DD:34:VAL:CG2	39:DD:35:LYS:H	2.21	0.49
41:DF:107:LYS:O	41:DF:110:LEU:N	2.44	0.49
42:DG:46:ALA:O	42:DG:82:LEU:HD11	2.12	0.49
42:DG:79:ASN:O	42:DG:80:PHE:CB	2.59	0.49
43:DH:85:LYS:HG2	43:DH:86:GLU:N	2.26	0.49
48:DP:122:PRO:HB3	48:DP:141:ALA:CB	2.42	0.49
49:DQ:12:GLN:CG	49:DQ:73:PRO:HD2	2.42	0.49
36:DA:533:G:H5'	53:DU:24:TYR:CD1	2.47	0.49
55:DW:65:LEU:HD23	55:DW:68:ARG:NE	2.27	0.49
58:DZ:167:PRO:O	58:DZ:168:GLU:HB3	2.11	0.49
58:DZ:54:HIS:HB2	58:DZ:55:HIS:HD2	1.76	0.49
1:AA:333:G:O2'	1:AA:334:C:H5'	2.11	0.49
1:AA:349:A:O2'	1:AA:350:G:H5'	2.12	0.49
2:AB:33:TYR:HB3	2:AB:41:ILE:HG22	1.93	0.49
5:AE:11:ILE:HB	5:AE:31:LEU:HB3	1.94	0.49
7:AG:137:LYS:O	7:AG:140:ASP:N	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:85:LEU:HD12	9:AI:86:VAL:N	2.28	0.49
13:AM:35:GLU:C	13:AM:37:THR:H	2.15	0.49
13:AM:7:VAL:O	13:AM:9:ILE:HG13	2.11	0.49
14:AN:39:LEU:HD11	14:AN:47:LEU:HD12	1.94	0.49
19:AS:16:LEU:H	19:AS:16:LEU:CD1	2.24	0.49
20:AT:83:ARG:O	20:AT:87:LYS:HB2	2.12	0.49
25:AZ:107:SER:HB2	25:AZ:137:LYS:HD2	1.94	0.49
25:AZ:122:LEU:O	25:AZ:122:LEU:HD13	2.12	0.49
34:B8:50:LEU:C	34:B8:52:LYS:N	2.63	0.49
36:BA:1012:U:C5	46:BN:28:THR:HG21	2.47	0.49
36:BA:1034:G:H2'	36:BA:1035:U:O4'	2.11	0.49
36:BA:1459:G:N7	36:BA:1461:G:N3	2.60	0.49
36:BA:1539:G:H2'	36:BA:1540:U:O4'	2.11	0.49
36:BA:1790:C:H5''	36:BA:1791:A:OP1	2.12	0.49
22:AW:71:G:O2'	36:BA:1851:U:H1'	2.12	0.49
36:BA:2722:G:H2'	36:BA:2723:C:C6	2.48	0.49
36:BA:1664:A:H1'	36:BA:2726:U:C5	2.48	0.49
36:BA:380:U:H2'	36:BA:381:G:H8	1.76	0.49
36:BA:465:G:H2'	36:BA:466:A:C8	2.46	0.49
36:BA:654(O):G:H2'	36:BA:654(P):C:C5	2.47	0.49
36:BA:994:C:O2'	36:BA:996:A:OP1	2.31	0.49
43:BH:35:VAL:HG13	43:BH:71:LEU:HD22	1.93	0.49
43:BH:83:TYR:CB	43:BH:135:GLY:N	2.75	0.49
51:BS:74:ALA:CB	51:BS:103:GLU:HG2	2.42	0.49
51:BS:98:VAL:HG12	51:BS:99:LYS:N	2.25	0.49
55:BW:17:VAL:O	55:BW:19:LEU:N	2.44	0.49
55:BW:12:ILE:HB	55:BW:42:ARG:HH12	1.76	0.49
1:CA:1262:C:H2'	1:CA:1263:C:H6	1.77	0.49
1:CA:1330:U:H3'	1:CA:1331:G:O4'	2.12	0.49
1:CA:636:U:H2'	1:CA:637:G:C8	2.47	0.49
1:CA:779:C:H2'	1:CA:780:A:O4'	2.11	0.49
2:CB:114:ARG:NH1	2:CB:118:LEU:HG	2.26	0.49
2:CB:221:LEU:O	2:CB:221:LEU:HD13	2.12	0.49
4:CD:31:CYS:O	4:CD:32:ALA:HB3	2.12	0.49
8:CH:46:LYS:HG3	8:CH:64:LYS:HB2	1.94	0.49
10:CJ:55:LYS:NZ	10:CJ:55:LYS:CA	2.76	0.49
10:CJ:57:LYS:NZ	10:CJ:60:ARG:HH22	2.10	0.49
1:CA:1229:A:OP2	13:CM:114:ARG:HD3	2.12	0.49
13:CM:23:TYR:HE2	13:CM:70:LEU:HD22	1.75	0.49
22:CV:44:G:H3'	22:CV:45:U:H5'	1.93	0.49
28:D2:9:GLN:HG2	28:D2:56:GLN:NE2	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:D4:9:LEU:HD13	30:D4:26:SER:O	2.13	0.49
31:D5:40:LYS:HG2	31:D5:46:CYS:CB	2.41	0.49
32:D6:48:VAL:O	32:D6:49:HIS:O	2.30	0.49
33:D7:32:LYS:O	33:D7:36:GLN:HB2	2.12	0.49
36:DA:1149:G:H2'	36:DA:1150:C:C6	2.46	0.49
36:DA:1316:U:O2'	36:DA:1317:A:H5'	2.13	0.49
36:DA:1515:G:H2'	36:DA:1516:C:C6	2.47	0.49
36:DA:1651:G:H2'	36:DA:1652:A:O4'	2.12	0.49
36:DA:1713:U:O2'	36:DA:1714:G:H5'	2.13	0.49
36:DA:2033:A:O2'	36:DA:2034:U:P	2.70	0.49
36:DA:2134:A:H61	36:DA:2157:G:H1'	1.74	0.49
36:DA:2199:A:H5'	36:DA:2200:C:OP2	2.13	0.49
36:DA:2787:C:H1'	40:DE:61:ARG:CD	2.38	0.49
36:DA:977:G:C6	36:DA:987:G:C6	3.01	0.49
39:DD:176:ARG:NH1	39:DD:176:ARG:HG2	2.26	0.49
41:DF:7:TYR:HD2	41:DF:16:GLY:HA3	1.76	0.49
42:DG:101:ILE:O	42:DG:104:GLU:HB3	2.12	0.49
42:DG:138:GLN:HE21	42:DG:144:ILE:HD12	1.76	0.49
43:DH:35:VAL:HG13	43:DH:71:LEU:HD22	1.93	0.49
46:DN:34:LEU:C	46:DN:34:LEU:HD13	2.32	0.49
48:DP:122:PRO:HA	48:DP:141:ALA:O	2.12	0.49
48:DP:34:GLY:O	48:DP:35:HIS:CB	2.60	0.49
51:DS:98:VAL:HG12	51:DS:99:LYS:N	2.27	0.49
52:DT:30:VAL:O	52:DT:31:SER:HB3	2.12	0.49
54:DV:52:VAL:O	54:DV:52:VAL:HG22	2.11	0.49
55:DW:68:ARG:O	55:DW:109:GLU:HA	2.12	0.49
57:DY:41:GLY:O	57:DY:42:VAL:O	2.30	0.49
1:AA:1057:G:H2'	1:AA:1058:G:O4'	2.12	0.49
1:AA:1190:G:OP1	3:AC:5:ILE:N	2.44	0.49
1:AA:1483:A:H2'	1:AA:1484:C:O4'	2.12	0.49
1:AA:424:G:H2'	1:AA:425:G:C8	2.37	0.49
1:AA:983:A:O2'	1:AA:1050:G:OP2	2.30	0.49
2:AB:97:TRP:HZ2	2:AB:102:LEU:HD13	1.76	0.49
2:AB:166:ASP:HB3	2:AB:169:LYS:HB2	1.94	0.49
2:AB:189:ASP:O	2:AB:191:ASP:N	2.45	0.49
2:AB:238:LEU:HD23	2:AB:239:VAL:H	1.77	0.49
3:AC:23:TYR:CD1	3:AC:23:TYR:C	2.86	0.49
3:AC:52:LEU:CD2	3:AC:52:LEU:H	2.23	0.49
9:AI:53:VAL:H	9:AI:95:LYS:NZ	2.09	0.49
11:AK:12:ARG:HG2	11:AK:13:GLN:N	2.27	0.49
13:AM:16:ASP:HA	13:AM:34:LEU:HD11	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AO:87:ILE:CG2	15:AO:88:ARG:H	2.17	0.49
16:AP:52:ASP:OD2	16:AP:55:ARG:HG3	2.13	0.49
17:AQ:27:PHE:CE2	17:AQ:36:ILE:HD11	2.47	0.49
22:AW:5:G:N2	22:AW:69:G:C5	2.80	0.49
25:AZ:31:LEU:HD23	25:AZ:199:ILE:HG23	1.95	0.49
25:AZ:330:ARG:HH21	25:AZ:332:THR:HG1	1.60	0.49
28:B2:43:GLN:O	28:B2:45:SER:N	2.45	0.49
30:B4:15:ILE:HD13	30:B4:21:VAL:HG13	1.94	0.49
30:B4:45:GLY:O	30:B4:46:GLN:HB2	2.12	0.49
32:B6:29:ASN:O	32:B6:30:THR:C	2.50	0.49
36:BA:1360:A:H5'	36:BA:1361:G:OP2	2.12	0.49
36:BA:1853:A:H2'	36:BA:1854:A:C8	2.47	0.49
36:BA:21:A:O2'	36:BA:22:C:H5'	2.12	0.49
36:BA:301:G:H1'	36:BA:302:C:C6	2.47	0.49
36:BA:332:A:H4'	36:BA:333:G:OP1	2.12	0.49
36:BA:559:G:N2	53:BU:49:HIS:CD2	2.80	0.49
36:BA:634:C:H2'	36:BA:635:C:C6	2.48	0.49
36:BA:645:C:H5'	36:BA:646:A:OP1	2.13	0.49
38:BC:40:THR:HA	38:BC:177:LYS:HA	1.94	0.49
42:BG:121:ASN:ND2	42:BG:123:ASN:H	2.09	0.49
44:BJ:74:UNK:O	44:BJ:76:UNK:N	2.45	0.49
36:BA:2392:A:H1'	48:BP:60:MET:HB3	1.94	0.49
49:BQ:66:ILE:HD12	49:BQ:66:ILE:C	2.33	0.49
1:CA:1057:G:H2'	1:CA:1058:G:O4'	2.12	0.49
1:CA:1152:A:H2'	1:CA:1153:C:C6	2.47	0.49
1:CA:1320:C:H6	1:CA:1320:C:C5'	2.18	0.49
1:CA:328:C:H2'	1:CA:328:C:O2	2.11	0.49
1:CA:399:G:H2'	1:CA:400:C:C6	2.47	0.49
1:CA:502:G:OP1	12:CL:118:SER:HB3	2.12	0.49
1:CA:603:U:H2'	1:CA:604:G:C8	2.47	0.49
2:CB:178:ARG:HH11	2:CB:178:ARG:CG	2.25	0.49
4:CD:173:TRP:CD1	4:CD:174:LEU:HG	2.46	0.49
5:CE:107:ARG:HH11	5:CE:107:ARG:HG2	1.77	0.49
7:CG:144:MET:C	7:CG:145:ALA:O	2.50	0.49
11:CK:12:ARG:HG2	11:CK:13:GLN:N	2.27	0.49
10:CJ:47:PHE:CE2	14:CN:37:PHE:HE2	2.30	0.49
1:CA:1202:G:C2	14:CN:42:ILE:HG21	2.47	0.49
17:CQ:59:ILE:CG2	17:CQ:71:PHE:HB3	2.40	0.49
18:CR:52:PRO:O	18:CR:56:THR:HG23	2.12	0.49
22:CW:57:G:H2'	22:CW:58:A:C5'	2.41	0.49
24:CY:20:H2U:H4'	24:CY:21:A:O5'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:30:ALA:O	25:CZ:34:VAL:HG23	2.12	0.49
26:D0:47:PRO:HG3	26:D0:53:MET:HB2	1.94	0.49
36:DA:2001:A:H2'	36:DA:2002:G:C8	2.47	0.49
36:DA:2175:C:N3	36:DA:2176:A:N1	2.61	0.49
36:DA:2330:G:O2'	36:DA:2331:G:H5'	2.12	0.49
36:DA:271(V):G:H2'	36:DA:271(W):G:O4'	2.13	0.49
36:DA:473:G:P	36:DA:508:G:H22	2.36	0.49
36:DA:633:A:H2'	36:DA:634:C:H5'	1.94	0.49
36:DA:753:C:H2'	36:DA:754:C:H6	1.78	0.49
36:DA:755:C:H2'	36:DA:756:C:C6	2.48	0.49
39:DD:70:TRP:HZ3	39:DD:146:GLU:OE2	1.95	0.49
39:DD:30:GLU:CA	39:DD:35:LYS:HZ2	2.25	0.49
43:DH:152:ARG:NH1	43:DH:152:ARG:HG3	2.26	0.49
46:DN:1:MET:HE1	46:DN:2:LYS:C	2.32	0.49
48:DP:10:PRO:O	48:DP:11:GLY:O	2.31	0.49
51:DS:34:HIS:HB2	51:DS:36:TYR:HE1	1.76	0.49
55:DW:6:ILE:HG12	55:DW:104:THR:HB	1.93	0.49
56:DX:40:LYS:HB2	56:DX:54:VAL:CG2	2.38	0.49
57:DY:64:GLU:O	57:DY:65:ALA:HB2	2.12	0.49
58:DZ:54:HIS:CG	58:DZ:101:PRO:HD3	2.48	0.49
58:DZ:9:TYR:OH	58:DZ:35:ARG:HG3	2.13	0.49
1:AA:1153:C:O2'	1:AA:1154:G:C5'	2.60	0.49
1:AA:1261:A:C2'	1:AA:1262:C:H5'	2.42	0.49
1:AA:1521:G:H2'	1:AA:1522:U:C6	2.47	0.49
1:AA:337:C:H2'	1:AA:338:A:C8	2.47	0.49
1:AA:426:G:H2'	1:AA:427:U:C6	2.48	0.49
2:AB:61:LEU:HD23	2:AB:61:LEU:C	2.33	0.49
1:AA:542:G:H5'	4:AD:41:GLY:HA2	1.93	0.49
6:AF:8:ILE:HG23	6:AF:85:VAL:HG13	1.95	0.49
13:AM:94:ARG:NH2	36:BA:887:A:H5''	2.27	0.49
25:AZ:219:LYS:HB2	25:AZ:244:ARG:HB2	1.95	0.49
25:AZ:27:LEU:C	25:AZ:27:LEU:HD12	2.33	0.49
25:AZ:330:ARG:HH12	25:AZ:334:PHE:HB3	1.77	0.49
28:B2:29:LYS:HA	28:B2:57:ILE:HD12	1.93	0.49
30:B4:5:ILE:CG1	30:B4:5:ILE:O	2.61	0.49
34:B8:36:LYS:HE3	34:B8:40:GLU:OE2	2.12	0.49
36:BA:1168:G:H2'	36:BA:1169:G:C8	2.46	0.49
36:BA:222:A:H5''	36:BA:421:U:OP1	2.13	0.49
36:BA:2543:G:H2'	36:BA:2544:G:C8	2.48	0.49
36:BA:2659:G:C3'	36:BA:2660:A:H5''	2.42	0.49
36:BA:2822:G:O6	50:BR:4:LEU:HD23	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:751:A:H5'	55:BW:90:ARG:HA	1.95	0.49
36:BA:947:G:H2'	36:BA:948:G:C8	2.47	0.49
37:BB:50:G:OP2	51:BS:62:LYS:HB2	2.12	0.49
40:BE:68:ALA:C	40:BE:70:ALA:H	2.16	0.49
36:BA:1064:C:H4'	45:BK:87:UNK:CB	2.42	0.49
47:BO:98:VAL:HG11	47:BO:118:ALA:N	2.27	0.49
47:BO:11:ALA:HB1	47:BO:99:PHE:O	2.13	0.49
49:BQ:56:ARG:CG	49:BQ:56:ARG:NH1	2.63	0.49
52:BT:29:ARG:HB3	52:BT:85:LYS:HA	1.92	0.49
53:BU:90:VAL:CG1	53:BU:91:ASP:H	2.21	0.49
1:CA:1190:G:OP1	3:CC:5:ILE:N	2.42	0.49
1:CA:1238:A:C2	1:CA:1301:U:N3	2.58	0.49
1:CA:228:A:H2'	1:CA:229:U:O4'	2.13	0.49
1:CA:603:U:H2'	1:CA:604:G:H8	1.78	0.49
1:CA:636:U:H2'	1:CA:637:G:H8	1.77	0.49
1:CA:792:A:H4'	1:CA:793:U:O5'	2.12	0.49
2:CB:101:MET:C	2:CB:102:LEU:HD12	2.33	0.49
3:CC:51:GLY:O	3:CC:115:LEU:HD21	2.13	0.49
4:CD:20:TYR:HA	4:CD:26:CYS:SG	2.52	0.49
5:CE:76:ILE:CG1	5:CE:77:PRO:HD2	2.43	0.49
8:CH:108:GLY:HA3	8:CH:138:TRP:HB3	1.94	0.49
24:CY:2:G:O2'	24:CY:3:G:H5''	2.11	0.49
25:CZ:134:PHE:CG	25:CZ:202:LEU:HD22	2.48	0.49
25:CZ:130:TYR:CD2	25:CZ:211:PRO:HD2	2.47	0.49
25:CZ:311:THR:HB	25:CZ:312:PRO:HD2	1.95	0.49
28:D2:52:ASP:O	28:D2:55:ARG:N	2.45	0.49
32:D6:29:ASN:O	32:D6:30:THR:C	2.50	0.49
32:D6:52:VAL:HG12	32:D6:53:LYS:HD3	1.94	0.49
36:DA:1290:C:H2'	36:DA:1291:C:C6	2.48	0.49
36:DA:2687:U:C4	36:DA:2688:U:C5	3.00	0.49
36:DA:2777:G:C4'	36:DA:2778:A:H5'	2.43	0.49
36:DA:2822:G:O6	50:DR:4:LEU:HD23	2.11	0.49
36:DA:536:A:H2'	36:DA:537:C:C6	2.47	0.49
36:DA:68:G:H2'	36:DA:69:C:C6	2.47	0.49
36:DA:323:G:H2'	41:DF:169:ASN:HD21	1.78	0.49
41:DF:53:THR:HG22	41:DF:56:GLU:HG3	1.95	0.49
43:DH:85:LYS:HE3	43:DH:85:LYS:C	2.32	0.49
46:DN:14:VAL:CG1	46:DN:137:LYS:HG3	2.43	0.49
47:DO:111:PHE:O	47:DO:115:VAL:HG23	2.12	0.49
49:DQ:1:MET:O	49:DQ:2:LEU:CB	2.60	0.49
51:DS:74:ALA:CB	51:DS:103:GLU:HG2	2.40	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DS:53:SER:C	51:DS:55:ALA:H	2.14	0.49
52:DT:27:THR:HG22	52:DT:49:VAL:HB	1.93	0.49
52:DT:62:THR:HA	52:DT:74:ARG:O	2.12	0.49
54:DV:38:LEU:HD23	54:DV:38:LEU:C	2.33	0.49
56:DX:33:LYS:CA	56:DX:33:LYS:HE2	2.42	0.49
58:DZ:17:ALA:O	58:DZ:20:ARG:HG2	2.11	0.49
1:AA:1442(B):A:C2	52:BT:118:ARG:NH2	2.80	0.49
4:AD:127:THR:HG23	4:AD:130:GLY:O	2.11	0.49
7:AG:115:ARG:O	7:AG:118:VAL:HG22	2.13	0.49
12:AL:79:GLU:HG2	12:AL:79:GLU:O	2.11	0.49
22:AW:39:U:O2	22:AW:39:U:H5'	2.12	0.49
24:AY:41:C:H2'	24:AY:42:G:O4'	2.13	0.49
25:AZ:215:ARG:NH1	25:AZ:215:ARG:HG3	2.28	0.49
25:AZ:249:VAL:HG13	25:AZ:268:THR:HA	1.94	0.49
25:AZ:404:LEU:HD22	25:AZ:404:LEU:H	1.77	0.49
25:AZ:5:PHE:C	25:AZ:5:PHE:CD1	2.85	0.49
32:B6:15:GLU:HG2	32:B6:18:ARG:HH12	1.75	0.49
32:B6:25:LYS:HE3	34:B8:35:GLN:OE1	2.13	0.49
36:BA:2241:A:H2'	36:BA:2242:G:C8	2.47	0.49
42:BG:165:THR:HG1	42:BG:168:GLU:HG3	1.72	0.49
42:BG:73:ALA:H	42:BG:87:PRO:HD2	1.77	0.49
50:BR:86:ARG:HB3	50:BR:118:GLU:OE2	2.12	0.49
51:BS:106:ARG:CG	51:BS:106:ARG:HH11	2.24	0.49
36:BA:143:G:H4'	56:BX:35:THR:HG21	1.94	0.49
57:BY:73:ARG:HE	57:BY:73:ARG:HA	1.78	0.49
1:CA:1286:A:O2'	1:CA:1287:A:OP2	2.29	0.49
1:CA:1488:G:H2'	1:CA:1489:G:H8	1.76	0.49
1:CA:349:A:O2'	1:CA:350:G:H5'	2.12	0.49
1:CA:41:G:H2'	1:CA:42:G:C8	2.47	0.49
4:CD:45:GLN:O	4:CD:46:LYS:HG2	2.13	0.49
4:CD:75:PHE:CE1	4:CD:93:PHE:HZ	2.29	0.49
12:CL:79:GLU:O	12:CL:79:GLU:HG2	2.13	0.49
14:CN:57:ARG:NH1	14:CN:57:ARG:CB	2.75	0.49
17:CQ:86:GLU:O	17:CQ:90:ILE:HG12	2.12	0.49
25:CZ:222:LEU:CD1	25:CZ:303:VAL:HB	2.42	0.49
25:CZ:263:ARG:NH2	25:CZ:297:GLU:HG2	2.16	0.49
33:D7:4:THR:CG2	36:DA:788:A:H1'	2.43	0.49
36:DA:1039:G:H1	36:DA:1116:C:N4	2.04	0.49
36:DA:1499:C:C2'	36:DA:1500:G:H5'	2.41	0.49
36:DA:1862:G:O2'	36:DA:1863:G:H5'	2.12	0.49
36:DA:2464:C:O2'	36:DA:2465:C:O5'	2.31	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:272(H):C:C3'	36:DA:272(I):U:H5''	2.43	0.49
36:DA:315:G:H2'	36:DA:316:C:C6	2.48	0.49
36:DA:39:C:O2'	36:DA:40:C:H5'	2.13	0.49
36:DA:733:G:C8	36:DA:761:A:N1	2.80	0.49
36:DA:848:G:H5'	36:DA:848:G:C8	2.46	0.49
40:DE:9:VAL:HG13	40:DE:25:VAL:HB	1.94	0.49
41:DF:82:ILE:O	41:DF:83:PHE:HB2	2.13	0.49
42:DG:125:PHE:HB2	42:DG:130:ASN:O	2.13	0.49
42:DG:52:ILE:HG12	42:DG:53:LEU:N	2.26	0.49
47:DO:9:GLU:O	47:DO:83:ALA:HA	2.12	0.49
49:DQ:133:ARG:HB2	49:DQ:133:ARG:NH1	2.17	0.49
51:DS:74:ALA:HB2	51:DS:101:LEU:HD13	1.95	0.49
52:DT:106:SER:HA	52:DT:110:ILE:HG12	1.93	0.49
54:DV:5:VAL:CG2	54:DV:35:LEU:HD23	2.43	0.49
54:DV:38:LEU:O	54:DV:52:VAL:HG12	2.12	0.49
55:DW:17:VAL:O	55:DW:19:LEU:N	2.45	0.49
56:DX:12:VAL:CG2	56:DX:13:LEU:N	2.61	0.49
58:DZ:11:GLU:OE1	58:DZ:13:GLU:N	2.41	0.49
58:DZ:156:LYS:O	58:DZ:156:LYS:HG2	2.11	0.49
1:AA:189(K):U:H2'	1:AA:189(L):G:C8	2.48	0.49
1:AA:603:U:H2'	1:AA:604:G:C8	2.47	0.49
4:AD:43:HIS:O	4:AD:45:GLN:HG2	2.12	0.49
9:AI:95:LYS:HG3	9:AI:96:LEU:CD1	2.39	0.49
13:AM:4:ILE:O	13:AM:5:ALA:C	2.51	0.49
13:AM:4:ILE:CG2	13:AM:5:ALA:H	2.15	0.49
22:AW:6:G:O2'	22:AW:7:A:H5'	2.13	0.49
28:B2:41:ILE:HD11	28:B2:44:LEU:CD1	2.43	0.49
30:B4:18:CYS:SG	30:B4:19:GLY:N	2.85	0.49
32:B6:30:THR:O	32:B6:32:ASN:N	2.46	0.49
36:BA:1427:A:H4'	36:BA:1428:C:O5'	2.13	0.49
36:BA:1582:C:O2'	36:BA:1586:A:C8	2.64	0.49
36:BA:2206:G:N2	36:BA:2207:G:C5'	2.76	0.49
36:BA:39:C:H2'	36:BA:40:C:H6	1.78	0.49
36:BA:904:C:H2'	36:BA:905:U:C6	2.47	0.49
40:BE:105:THR:HG21	40:BE:164:ARG:HH12	1.76	0.49
40:BE:46:ALA:HB2	40:BE:82:ARG:HA	1.95	0.49
41:BF:167:ALA:HA	41:BF:170:LEU:HD23	1.95	0.49
42:BG:91:ARG:C	42:BG:91:ARG:HD2	2.33	0.49
43:BH:50:VAL:HG12	43:BH:52:VAL:HG23	1.95	0.49
43:BH:35:VAL:HG21	43:BH:75:ALA:HB2	1.94	0.49
46:BN:19:GLU:O	46:BN:59:LYS:HB3	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B8:13:ARG:CD	48:BP:61:ARG:HD2	2.32	0.49
48:BP:61:ARG:O	48:BP:62:LEU:CB	2.60	0.49
50:BR:79:LEU:HA	50:BR:83:ILE:CG1	2.43	0.49
51:BS:12:PHE:HD1	51:BS:13:ARG:N	2.10	0.49
52:BT:62:THR:HG22	52:BT:75:ILE:HG23	1.94	0.49
55:BW:107:LEU:N	55:BW:107:LEU:HD12	2.22	0.49
58:BZ:67:LEU:HD23	58:BZ:90:VAL:CG1	2.40	0.49
1:CA:1286:A:H1'	1:CA:1287:A:H4'	1.95	0.49
1:CA:1497:G:H2'	1:CA:1498:U:H5'	1.95	0.49
1:CA:735:C:O2'	1:CA:736:C:H5'	2.12	0.49
4:CD:102:ASP:OD2	4:CD:136:PRO:HB3	2.12	0.49
4:CD:162:LEU:HG	4:CD:181:MET:HE3	1.94	0.49
8:CH:30:ARG:HH11	8:CH:30:ARG:HB2	1.77	0.49
9:CI:10:ARG:HG3	9:CI:10:ARG:HH11	1.76	0.49
10:CJ:3:LYS:O	10:CJ:100:THR:HA	2.12	0.49
12:CL:50:SER:O	12:CL:51:ALA:HB2	2.13	0.49
1:CA:1228:C:OP1	13:CM:108:ARG:NH2	2.46	0.49
18:CR:26:LEU:HD21	18:CR:39:VAL:HG13	1.95	0.49
25:CZ:300:ARG:HH11	25:CZ:300:ARG:HG2	1.78	0.49
35:D9:7:VAL:CG1	35:D9:34:GLN:HG2	2.37	0.49
35:D9:7:VAL:HG21	35:D9:36:GLN:H	1.78	0.49
36:DA:1290:C:H2'	36:DA:1291:C:H6	1.77	0.49
36:DA:2491:U:H4'	36:DA:2570:G:OP1	2.12	0.49
36:DA:253:C:H2'	36:DA:254:G:O4'	2.12	0.49
36:DA:610:G:H2'	36:DA:611:C:C6	2.48	0.49
28:D2:47:ASN:ND2	36:DA:94(A):G:H21	2.11	0.49
39:DD:264:LYS:HG2	39:DD:266:SER:HB3	1.92	0.49
40:DE:132:HIS:ND1	40:DE:132:HIS:O	2.45	0.49
40:DE:87:GLU:OE1	40:DE:89:ASP:N	2.46	0.49
42:DG:114:ILE:HG12	42:DG:114:ILE:O	2.13	0.49
43:DH:19:VAL:CG1	43:DH:20:ALA:H	2.15	0.49
43:DH:65:HIS:O	43:DH:67:LEU:N	2.42	0.49
46:DN:51:PHE:CE1	46:DN:119:ARG:HD2	2.47	0.49
48:DP:16:ARG:NE	48:DP:18:ARG:HG2	2.28	0.49
34:D8:15:LYS:CB	48:DP:65:ARG:HH21	2.24	0.49
48:DP:84:ASN:ND2	48:DP:84:ASN:N	2.59	0.49
49:DQ:27:VAL:HG21	49:DQ:134:ARG:HG3	1.94	0.49
51:DS:54:LEU:HD21	51:DS:58:LEU:O	2.13	0.49
58:DZ:141:VAL:CG1	58:DZ:144:LEU:HG	2.43	0.49
1:AA:1268:A:H2'	1:AA:1269:A:C8	2.48	0.49
1:AA:373:A:O2'	1:AA:374:A:H5'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:484:G:H4'	1:AA:485:G:O5'	2.13	0.49
1:AA:723:U:C4	1:AA:1537:U:H2'	2.47	0.49
2:AB:168:THR:CG2	2:AB:192:SER:HA	2.43	0.49
4:AD:110:PHE:N	4:AD:110:PHE:HD1	2.10	0.49
4:AD:18:LYS:HE3	4:AD:31:CYS:CB	2.43	0.49
4:AD:19:LEU:HD23	4:AD:67:ILE:HD12	1.93	0.49
9:AI:128:ARG:H	9:AI:128:ARG:HD2	1.77	0.49
13:AM:12:ASN:ND2	13:AM:12:ASN:N	2.59	0.49
17:AQ:21:VAL:HG21	17:AQ:59:ILE:HD11	1.95	0.49
25:AZ:155:ARG:O	25:AZ:159:ASN:ND2	2.46	0.49
25:AZ:314:THR:HG23	25:AZ:374:LEU:O	2.13	0.49
34:B8:10:ALA:CB	34:B8:60:LEU:HD21	2.43	0.49
36:BA:142:A:H8	36:BA:1595:G:H21	1.60	0.49
27:B1:30:VAL:H	36:BA:2396:G:H4'	1.77	0.49
36:BA:753:C:H2'	36:BA:754:C:H6	1.78	0.49
36:BA:979:G:H3'	36:BA:980:A:C5'	2.42	0.49
37:BB:65:C:C2'	37:BB:66:A:H5'	2.43	0.49
38:BC:27:ARG:NE	38:BC:182:PRO:CG	2.74	0.49
39:BD:6:PHE:CE1	39:BD:18:VAL:HG12	2.48	0.49
39:BD:75:ILE:HG21	39:BD:99:ASP:HB3	1.93	0.49
41:BF:160:ASN:HD22	41:BF:160:ASN:C	2.16	0.49
41:BF:155:LEU:HD23	41:BF:192:LEU:HD12	1.93	0.49
42:BG:47:LYS:HZ1	42:BG:88:ILE:HD11	1.75	0.49
48:BP:147:LEU:CG	48:BP:148:LEU:N	2.70	0.49
49:BQ:14:ARG:HG2	49:BQ:41:TRP:HH2	1.78	0.49
49:BQ:25:ASP:HA	49:BQ:100:GLY:O	2.12	0.49
52:BT:28:VAL:HG23	52:BT:47:GLY:O	2.13	0.49
36:BA:17:G:H4'	53:BU:25:TRP:CH2	2.48	0.49
53:BU:99:ALA:HB2	53:BU:106:PHE:CE1	2.47	0.49
55:BW:36:LEU:HD11	55:BW:47:VAL:HG12	1.95	0.49
55:BW:55:ALA:C	55:BW:57:ASN:H	2.15	0.49
36:BA:1076:C:O3'	58:BZ:111:VAL:HG11	2.12	0.49
58:BZ:111:VAL:HG12	58:BZ:112:ARG:N	2.26	0.49
1:CA:1095:U:P	1:CA:1108:G:H1	2.36	0.49
1:CA:141:A:H1'	1:CA:182:U:O2	2.12	0.49
5:CE:6:PHE:HB2	5:CE:34:VAL:HG22	1.94	0.49
6:CF:38:GLU:O	6:CF:39:LYS:O	2.30	0.49
6:CF:77:ARG:CG	6:CF:77:ARG:HH11	2.26	0.49
8:CH:30:ARG:CB	8:CH:30:ARG:NH1	2.76	0.49
1:CA:718:G:H5'	11:CK:117:ASN:OD1	2.13	0.49
20:CT:83:ARG:O	20:CT:87:LYS:HB2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:D3:3:ARG:HG2	29:D3:38:GLU:OE2	2.12	0.49
36:DA:1403:C:C2'	36:DA:1404:C:O5'	2.61	0.49
36:DA:1884:A:C3'	36:DA:1885:A:H5''	2.41	0.49
36:DA:2023:G:H4'	36:DA:2617:C:O3'	2.12	0.49
36:DA:2383:G:O2'	36:DA:2384:G:H5'	2.13	0.49
36:DA:2747:G:C2	36:DA:2756:U:C5	3.00	0.49
36:DA:301:G:H1'	36:DA:302:C:C6	2.48	0.49
36:DA:573:G:O2'	36:DA:574:C:H3'	2.12	0.49
36:DA:572:A:H5''	36:DA:573:G:OP2	2.13	0.49
36:DA:753:C:O2'	36:DA:754:C:H5'	2.13	0.49
36:DA:824:A:H1'	36:DA:2358:G:N7	2.28	0.49
37:DB:49:C:H2'	37:DB:50:G:C8	2.48	0.49
41:DF:199:TRP:HZ3	41:DF:203:GLN:OE1	1.96	0.49
42:DG:53:LEU:N	42:DG:53:LEU:HD22	2.27	0.49
43:DH:37:VAL:HG12	43:DH:38:SER:N	2.26	0.49
45:DK:59:UNK:HA	45:DK:64:UNK:O	2.13	0.49
48:DP:45:LEU:HD12	48:DP:46:LYS:H	1.78	0.49
49:DQ:64:ILE:HG22	49:DQ:65:PHE:N	2.28	0.49
53:DU:83:LEU:H	53:DU:83:LEU:CD1	2.26	0.49
54:DV:82:ARG:HH11	54:DV:82:ARG:HG2	1.78	0.49
58:DZ:139:VAL:O	58:DZ:140:ASP:HB3	2.13	0.49
1:AA:1515:C:O2'	1:AA:1516:G:H5'	2.12	0.49
5:AE:104:ALA:HA	5:AE:107:ARG:HG2	1.95	0.49
7:AG:144:MET:C	7:AG:145:ALA:O	2.50	0.49
10:AJ:48:THR:HG23	10:AJ:62:HIS:CE1	2.47	0.49
11:AK:124:LYS:HD2	11:AK:125:PHE:CE2	2.47	0.49
25:AZ:101:GLY:HA3	25:AZ:210:ILE:HD12	1.95	0.49
28:B2:51:ARG:HG3	28:B2:51:ARG:O	2.13	0.49
33:B7:21:ARG:HB3	33:B7:27:GLY:O	2.13	0.49
34:B8:50:LEU:C	34:B8:53:PRO:HD2	2.33	0.49
36:BA:1404:C:O2'	36:BA:1405:U:H5'	2.12	0.49
36:BA:92:A:H3'	36:BA:93:G:H8	1.78	0.49
37:BB:49:C:H2'	37:BB:50:G:C8	2.48	0.49
38:BC:132:GLY:N	38:BC:133:PRO:CD	2.76	0.49
39:BD:242:ARG:CG	39:BD:242:ARG:NH1	2.72	0.49
41:BF:150:GLY:HA2	41:BF:172:TRP:CE3	2.47	0.49
42:BG:41:GLN:OE1	42:BG:60:LEU:HD21	2.13	0.49
43:BH:85:LYS:C	43:BH:85:LYS:HE3	2.33	0.49
46:BN:29:LYS:C	46:BN:31:ALA:N	2.65	0.49
47:BO:63:VAL:HG23	47:BO:64:ARG:HG3	1.94	0.49
49:BQ:42:ILE:HD13	49:BQ:97:VAL:HG22	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2880:C:H1'	50:BR:92:GLY:O	2.13	0.49
52:BT:28:VAL:O	52:BT:28:VAL:HG12	2.12	0.49
52:BT:3:ARG:CB	52:BT:6:LEU:HB2	2.43	0.49
52:BT:78:LEU:C	52:BT:79:HIS:CD2	2.86	0.49
55:BW:17:VAL:C	55:BW:19:LEU:N	2.66	0.49
55:BW:82:LEU:H	55:BW:82:LEU:CD1	2.22	0.49
58:BZ:14:LYS:HB2	58:BZ:17:ALA:HB2	1.94	0.49
1:CA:1004:A:H5''	1:CA:1025:U:C2	2.47	0.49
1:CA:108:G:H5'	1:CA:109:A:H5'	1.92	0.49
1:CA:1221:G:OP1	1:CA:1321:C:N3	2.46	0.49
1:CA:1459:C:O2'	1:CA:1460:A:H5'	2.13	0.49
1:CA:539:A:OP2	12:CL:115:LYS:HE3	2.13	0.49
2:CB:142:LEU:HD23	2:CB:142:LEU:C	2.33	0.49
2:CB:44:LEU:HA	2:CB:47:THR:OG1	2.13	0.49
3:CC:23:TYR:CD1	3:CC:23:TYR:C	2.85	0.49
4:CD:152:SER:C	4:CD:154:ASN:H	2.16	0.49
12:CL:35:GLY:O	12:CL:82:VAL:HG13	2.13	0.49
13:CM:15:VAL:HG12	13:CM:45:VAL:HG22	1.95	0.49
16:CP:71:ARG:HA	16:CP:74:LEU:HD23	1.94	0.49
20:CT:26:ASN:H	20:CT:26:ASN:HD22	1.55	0.49
20:CT:48:LYS:HB3	20:CT:51:GLU:HG2	1.95	0.49
26:D0:23:VAL:HG11	26:D0:69:PHE:HZ	1.78	0.49
33:D7:21:ARG:HB3	33:D7:27:GLY:O	2.12	0.49
34:D8:32:LEU:CG	34:D8:36:LYS:NZ	2.67	0.49
36:DA:1052:C:H2'	36:DA:1053:C:C6	2.48	0.49
36:DA:1602:U:H3'	36:DA:1603:A:H5''	1.90	0.49
36:DA:1771:C:O2'	36:DA:1786:A:H8	1.95	0.49
36:DA:2182:G:O2'	36:DA:2183:C:H5'	2.13	0.49
36:DA:2533:A:OP1	36:DA:2665:A:H1'	2.12	0.49
43:DH:50:VAL:HG12	43:DH:52:VAL:HG23	1.95	0.49
46:DN:11:PRO:O	46:DN:13:TRP:N	2.45	0.49
48:DP:101:VAL:HG12	48:DP:106:LEU:HB2	1.95	0.49
49:DQ:42:ILE:HD13	49:DQ:97:VAL:HG22	1.94	0.49
50:DR:96:ARG:CZ	50:DR:117:VAL:HG23	2.43	0.49
51:DS:49:VAL:CG1	51:DS:50:SER:N	2.76	0.49
53:DU:86:ALA:HB2	53:DU:116:ALA:HB2	1.93	0.49
55:DW:12:ILE:HB	55:DW:42:ARG:HH12	1.77	0.49
56:DX:61:GLY:HA3	56:DX:73:ARG:O	2.13	0.49
58:DZ:108:PRO:C	58:DZ:110:GLY:H	2.15	0.49
58:DZ:48:PHE:CE1	58:DZ:52:SER:HA	2.48	0.49
49:DQ:141:GLN:NE2	58:DZ:72:ARG:HD3	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:39:G:O2'	1:AA:40:C:H5'	2.12	0.49
1:AA:836:G:H2'	1:AA:837:G:H8	1.78	0.49
2:AB:24:TRP:CZ3	2:AB:26:PRO:HA	2.48	0.49
6:AF:87:ARG:CG	6:AF:87:ARG:HH11	2.25	0.49
9:AI:28:VAL:HG23	9:AI:33:PHE:HA	1.93	0.49
9:AI:41:VAL:O	9:AI:41:VAL:HG12	2.13	0.49
12:AL:8:ASN:HD22	17:AQ:34:LYS:NZ	2.11	0.49
12:AL:97:ARG:CB	12:AL:97:ARG:HH11	2.26	0.49
25:AZ:300:ARG:NH1	25:AZ:300:ARG:HG2	2.28	0.49
29:B3:29:ARG:HH11	29:B3:29:ARG:CB	2.19	0.49
31:B5:54:GLY:H	31:B5:56:LYS:HZ2	1.56	0.49
36:BA:1515:G:H2'	36:BA:1516:C:C6	2.48	0.49
36:BA:2081:C:H2'	36:BA:2082:A:H8	1.77	0.49
36:BA:2159:G:H2'	36:BA:2160:G:C5'	2.37	0.49
36:BA:2307:G:N2	36:BA:2308:G:H5''	2.27	0.49
36:BA:2472:G:C5'	36:BA:2473:U:H5''	2.42	0.49
36:BA:2762:G:C2'	36:BA:2763:G:H5'	2.42	0.49
36:BA:2818:G:H4'	36:BA:2837:G:O4'	2.13	0.49
36:BA:523:C:H2'	36:BA:524:U:C5'	2.43	0.49
36:BA:610:G:H2'	36:BA:611:C:C6	2.48	0.49
36:BA:616:G:H2'	36:BA:618:C:O4'	2.13	0.49
36:BA:260:G:H1'	36:BA:621:A:H1'	1.94	0.49
36:BA:752:A:H4'	36:BA:753:C:O5'	2.13	0.49
41:BF:44:ARG:O	41:BF:44:ARG:HG2	2.12	0.49
43:BH:147:ASN:N	43:BH:147:ASN:HD22	2.09	0.49
44:BJ:73:UNK:C	44:BJ:75:UNK:N	2.75	0.49
48:BP:20:GLY:O	48:BP:21:ARG:HB2	2.12	0.49
49:BQ:12:GLN:CG	49:BQ:73:PRO:HD2	2.43	0.49
49:BQ:74:TYR:CD2	49:BQ:91:GLU:HB2	2.39	0.49
57:BY:28:LYS:N	57:BY:28:LYS:CE	2.76	0.49
1:CA:1283:G:O2'	1:CA:1284:C:P	2.71	0.49
1:CA:285:G:O2'	1:CA:286:G:H5'	2.12	0.49
2:CB:122:PHE:O	2:CB:127:ILE:HD11	2.13	0.49
2:CB:71:VAL:HG13	2:CB:93:VAL:HG13	1.94	0.49
9:CI:11:LYS:O	9:CI:12:GLU:HB2	2.13	0.49
10:CJ:24:VAL:CG2	10:CJ:37:PRO:HG3	2.42	0.49
11:CK:72:ALA:O	11:CK:75:TYR:HB2	2.13	0.49
16:CP:44:THR:O	16:CP:45:THR:HB	2.13	0.49
25:CZ:101:GLY:HA3	25:CZ:210:ILE:HD12	1.95	0.49
28:D2:35:LEU:HB3	28:D2:50:ILE:CD1	2.43	0.49
31:D5:52:TYR:N	31:D5:52:TYR:CD1	2.80	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D1:41:ARG:NH2	36:DA:1365:A:H5''	2.26	0.49
36:DA:1499:C:O2'	36:DA:1500:G:H5'	2.12	0.49
36:DA:158:U:H3'	36:DA:158:U:O2	2.13	0.49
36:DA:1747(A):G:C2'	36:DA:1748:G:C5'	2.81	0.49
36:DA:1827:C:C2'	36:DA:1828:G:H5'	2.43	0.49
36:DA:2230:G:H2'	36:DA:2231:C:H6	1.77	0.49
39:DD:48:ARG:HG3	39:DD:48:ARG:HH11	1.78	0.49
40:DE:54:GLN:O	40:DE:55:ASN:HB2	2.12	0.49
43:DH:16:SER:HB2	43:DH:27:LYS:CB	2.27	0.49
50:DR:38:VAL:HB	50:DR:39:PRO:CD	2.39	0.49
57:DY:31:LEU:HD22	57:DY:31:LEU:N	2.28	0.49
57:DY:62:GLU:CD	57:DY:62:GLU:N	2.67	0.49
58:DZ:128:VAL:HG21	58:DZ:132:ASN:O	2.13	0.49
58:DZ:165:VAL:HG12	58:DZ:167:PRO:HA	1.95	0.49
1:AA:1371:G:O3'	9:AI:69:GLY:HA3	2.12	0.48
1:AA:1412:C:H2'	1:AA:1413:A:H8	1.77	0.48
1:AA:328:C:O2	1:AA:328:C:C2'	2.60	0.48
1:AA:328:C:H2'	1:AA:328:C:O2	2.13	0.48
1:AA:346:G:O2'	1:AA:347:G:P	2.71	0.48
1:AA:542:G:H5'	4:AD:41:GLY:CA	2.43	0.48
2:AB:127:ILE:HG22	2:AB:128:GLU:N	2.28	0.48
2:AB:229:VAL:O	2:AB:230:VAL:HG13	2.13	0.48
3:AC:14:ILE:O	3:AC:16:ARG:N	2.46	0.48
4:AD:111:ALA:HB2	4:AD:120:LEU:CD1	2.43	0.48
4:AD:170:VAL:HG12	4:AD:171:GLY:N	2.27	0.48
9:AI:65:VAL:HG21	9:AI:73:GLN:CB	2.43	0.48
9:AI:43:ALA:HA	9:AI:74:ILE:HD13	1.94	0.48
15:AO:82:ILE:HD13	15:AO:87:ILE:HB	1.94	0.48
25:AZ:270:VAL:CG1	25:AZ:286:VAL:HG21	2.43	0.48
27:B1:3:LYS:HG2	27:B1:4:VAL:HG12	1.94	0.48
34:B8:61:LEU:CD2	34:B8:62:LEU:H	2.23	0.48
35:B9:19:ARG:O	35:B9:20:HIS:CB	2.60	0.48
36:BA:1052:C:H2'	36:BA:1053:C:C6	2.48	0.48
36:BA:1139:G:H5''	46:BN:70:LYS:NZ	2.27	0.48
36:BA:1540:U:C3'	36:BA:1541:G:H3'	2.35	0.48
36:BA:1658:C:H2'	36:BA:1659:U:C6	2.48	0.48
36:BA:2641:G:OP1	46:BN:74:ARG:NE	2.46	0.48
36:BA:714:U:H2'	36:BA:716:A:OP2	2.13	0.48
36:BA:848:G:H5'	36:BA:848:G:C8	2.47	0.48
29:B3:31:LEU:HD12	36:BA:989:G:P	2.52	0.48
40:BE:75:VAL:HG12	40:BE:76:ARG:N	2.27	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BE:50:GLY:CA	40:BE:78:LEU:HB3	2.36	0.48
41:BF:118:ALA:HA	41:BF:123:LEU:HB3	1.95	0.48
43:BH:40:GLU:O	43:BH:41:MET:HB3	2.13	0.48
44:BJ:37:UNK:HA	44:BJ:41:UNK:CB	2.42	0.48
46:BN:34:LEU:HD13	46:BN:34:LEU:C	2.33	0.48
48:BP:84:ASN:HA	48:BP:115:LEU:O	2.12	0.48
54:BV:51:VAL:HG12	54:BV:52:VAL:N	2.23	0.48
56:BX:33:LYS:HE2	56:BX:33:LYS:CA	2.43	0.48
57:BY:2:ARG:HG2	57:BY:2:ARG:HH11	1.78	0.48
58:BZ:120:ILE:O	58:BZ:120:ILE:HG22	2.12	0.48
58:BZ:103:ARG:NH2	58:BZ:136:PHE:CE1	2.81	0.48
2:CB:172:ILE:CD1	2:CB:172:ILE:H	2.21	0.48
3:CC:148:GLY:HA3	3:CC:172:ARG:O	2.13	0.48
3:CC:99:VAL:HG23	3:CC:99:VAL:O	2.13	0.48
4:CD:126:ILE:CD1	4:CD:126:ILE:N	2.75	0.48
16:CP:52:ASP:OD2	16:CP:55:ARG:HG3	2.13	0.48
20:CT:93:GLU:OE1	20:CT:93:GLU:N	2.46	0.48
28:D2:68:ARG:CZ	28:D2:72:ALA:HB1	2.42	0.48
36:DA:1038:C:C3'	36:DA:1039:G:H5''	2.43	0.48
36:DA:142:A:H8	36:DA:1595:G:H21	1.59	0.48
36:DA:1504:C:O2'	36:DA:1505:C:C5'	2.61	0.48
36:DA:1651:G:C2	36:DA:2007:C:N3	2.81	0.48
36:DA:2543:G:H2'	36:DA:2544:G:C8	2.48	0.48
36:DA:2842:G:O2'	36:DA:2843:G:H5'	2.13	0.48
36:DA:438:G:H2'	36:DA:440:G:H8	1.78	0.48
36:DA:860:U:O2	36:DA:860:U:O4'	2.31	0.48
39:DD:70:TRP:O	39:DD:71:ASP:C	2.49	0.48
41:DF:119:ARG:HH11	41:DF:119:ARG:HG2	1.77	0.48
41:DF:150:GLY:HA2	41:DF:172:TRP:CE3	2.48	0.48
43:DH:147:ASN:N	43:DH:147:ASN:HD22	2.11	0.48
43:DH:41:MET:SD	43:DH:53:GLU:O	2.70	0.48
44:DJ:27:UNK:CB	44:DJ:113:UNK:HA	2.42	0.48
45:DK:13:UNK:O	45:DK:52:UNK:HA	2.14	0.48
46:DN:89:LYS:O	46:DN:93:THR:HG22	2.13	0.48
49:DQ:3:MET:HB2	49:DQ:4:PRO:HD2	1.95	0.48
51:DS:16:ASN:O	51:DS:18:ILE:N	2.46	0.48
51:DS:89:ARG:CG	51:DS:92:TYR:CA	2.89	0.48
51:DS:97:ARG:NH1	51:DS:98:VAL:O	2.46	0.48
52:DT:27:THR:H	52:DT:49:VAL:HG12	1.78	0.48
52:DT:78:LEU:O	52:DT:78:LEU:HD23	2.13	0.48
53:DU:47:TYR:O	53:DU:51:LYS:HG2	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:DU:95:LEU:C	53:DU:97:ASP:H	2.17	0.48
55:DW:6:ILE:HG12	55:DW:104:THR:CB	2.43	0.48
1:AA:1504:G:OP1	1:AA:1507:A:H4'	2.12	0.48
1:AA:310:G:H2'	1:AA:311:C:H6	1.77	0.48
1:AA:319:G:O2'	1:AA:320:C:H5'	2.13	0.48
3:AC:126:ARG:O	3:AC:128:PHE:HD1	1.96	0.48
8:AH:85:ARG:HH11	8:AH:85:ARG:HG3	1.78	0.48
10:AJ:3:LYS:C	10:AJ:4:ILE:HD12	2.33	0.48
7:AG:150:ALA:HB2	11:AK:50:TYR:OH	2.12	0.48
11:AK:76:GLY:O	11:AK:78:GLN:HG3	2.12	0.48
12:AL:85:ILE:HG23	12:AL:86:ARG:N	2.27	0.48
16:AP:1:MET:O	16:AP:24:ALA:HB2	2.12	0.48
20:AT:92:LEU:C	20:AT:94:ALA:N	2.66	0.48
25:AZ:223:MET:CB	25:AZ:242:ILE:HA	2.43	0.48
25:AZ:341:GLN:NE2	25:AZ:389:ARG:O	2.46	0.48
28:B2:20:GLU:O	28:B2:21:LEU:C	2.51	0.48
29:B3:3:ARG:HG2	29:B3:38:GLU:OE2	2.13	0.48
36:BA:1061:U:H4'	36:BA:1070:A:C1'	2.44	0.48
36:BA:1378:A:C4'	36:BA:1379:A:OP1	2.59	0.48
36:BA:1899:G:C2'	36:BA:1900:A:OP2	2.62	0.48
36:BA:2096:U:H2'	36:BA:2097:C:H6	1.77	0.48
36:BA:2123:G:O2'	36:BA:2124:G:H5'	2.13	0.48
36:BA:2659:G:H2'	36:BA:2660:A:H5''	1.93	0.48
36:BA:271(V):G:H2'	36:BA:271(W):G:O4'	2.13	0.48
36:BA:590:A:H2'	36:BA:591:C:H6	1.78	0.48
36:BA:2632:A:C2	40:BE:61:ARG:HD2	2.48	0.48
42:BG:6:ALA:HB3	42:BG:104:GLU:OE1	2.13	0.48
46:BN:121:LYS:HB3	46:BN:123:TYR:CE1	2.48	0.48
36:BA:806:C:OP2	48:BP:39:LYS:HD2	2.13	0.48
52:BT:13:ARG:HH12	52:BT:15:VAL:CG1	2.26	0.48
53:BU:79:PHE:O	53:BU:83:LEU:HD13	2.13	0.48
55:BW:5:ALA:O	55:BW:6:ILE:CB	2.61	0.48
56:BX:61:GLY:HA3	56:BX:73:ARG:O	2.12	0.48
58:BZ:15:PRO:C	58:BZ:17:ALA:H	2.15	0.48
1:CA:1002:G:H2'	1:CA:1003:G:O4'	2.13	0.48
1:CA:977:A:N6	1:CA:1224:G:O5'	2.46	0.48
1:CA:1536:C:N4	23:CX:11:U:H3	2.10	0.48
1:CA:745:C:O2'	1:CA:746:A:H5'	2.13	0.48
1:CA:933:G:OP2	7:CG:3:ARG:HB3	2.12	0.48
2:CB:155:LEU:HD13	2:CB:157:ARG:H	1.77	0.48
2:CB:238:LEU:HD23	2:CB:239:VAL:H	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:11:ILE:HB	5:CE:31:LEU:HB3	1.95	0.48
9:CI:20:ARG:HB2	9:CI:20:ARG:HH11	1.72	0.48
9:CI:28:VAL:HG21	9:CI:33:PHE:HA	1.94	0.48
12:CL:10:LEU:O	12:CL:14:GLY:N	2.45	0.48
15:CO:36:ILE:HG23	15:CO:56:LEU:HD11	1.95	0.48
17:CQ:9:VAL:HG11	17:CQ:84:LEU:CD1	2.43	0.48
19:CS:15:LEU:O	19:CS:19:VAL:HG23	2.13	0.48
20:CT:94:ALA:O	20:CT:95:ALA:HB3	2.13	0.48
25:CZ:330:ARG:HH12	25:CZ:334:PHE:HB3	1.78	0.48
30:D4:10:VAL:CG2	30:D4:11:PRO:HD2	2.42	0.48
32:D6:7:ILE:HG21	32:D6:29:ASN:HD22	1.78	0.48
36:DA:1638:C:H5''	36:DA:2710:C:O2'	2.13	0.48
36:DA:152:G:H1	36:DA:174:C:H42	1.60	0.48
36:DA:2206:G:N2	36:DA:2207:G:C5'	2.76	0.48
36:DA:380:U:H2'	36:DA:381:G:H8	1.78	0.48
36:DA:519:U:H2'	36:DA:520:G:C8	2.48	0.48
36:DA:643:A:O2'	36:DA:644:A:H5'	2.13	0.48
36:DA:652:C:O2'	36:DA:653:A:O5'	2.31	0.48
36:DA:690:G:H2'	36:DA:691:C:C6	2.48	0.48
38:DC:132:GLY:N	38:DC:133:PRO:CD	2.75	0.48
38:DC:175:VAL:HG12	38:DC:188:ASN:CB	2.37	0.48
46:DN:128:HIS:O	46:DN:128:HIS:CG	2.66	0.48
46:DN:55:VAL:HG22	46:DN:56:ASN:H	1.78	0.48
48:DP:92:GLU:HG2	48:DP:121:LYS:HZ3	1.78	0.48
51:DS:48:LEU:HD23	51:DS:82:ILE:HD11	1.94	0.48
51:DS:87:PHE:CG	51:DS:88:ASP:N	2.81	0.48
52:DT:78:LEU:C	52:DT:79:HIS:CD2	2.86	0.48
55:DW:5:ALA:O	55:DW:6:ILE:CB	2.61	0.48
57:DY:39:VAL:HG12	57:DY:40:GLU:N	2.29	0.48
1:AA:1053:G:H4'	1:AA:1054:C:H5''	1.85	0.48
1:AA:1437:C:H2'	1:AA:1438:G:C8	2.48	0.48
1:AA:453:A:O2'	1:AA:454:C:O4'	2.30	0.48
1:AA:636:U:H2'	1:AA:637:G:H8	1.77	0.48
3:AC:94:LEU:O	3:AC:95:THR:CB	2.62	0.48
4:AD:17:VAL:HG11	4:AD:197:PRO:CB	2.42	0.48
4:AD:59:ARG:CA	4:AD:59:ARG:HE	2.10	0.48
4:AD:70:ILE:CG2	4:AD:71:SER:N	2.76	0.48
12:AL:46:LYS:H	12:AL:92:ASP:HB3	1.77	0.48
13:AM:97:PRO:CA	13:AM:110:ARG:HD3	2.41	0.48
13:AM:119:GLY:O	13:AM:120:LYS:CB	2.60	0.48
25:AZ:130:TYR:CE2	25:AZ:211:PRO:HD2	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:265:THR:HG21	25:AZ:293:VAL:HG22	1.93	0.48
32:B6:15:GLU:OE2	32:B6:41:PRO:CB	2.61	0.48
33:B7:4:THR:CG2	36:BA:788:A:HI'	2.43	0.48
34:B8:32:LEU:CG	34:B8:36:LYS:NZ	2.63	0.48
36:BA:1120:G:H2'	36:BA:1121:C:H6	1.78	0.48
36:BA:1142(A):A:C8	36:BA:1142(A):A:H5'	2.49	0.48
36:BA:1215:G:O2'	36:BA:1216:G:H5'	2.13	0.48
36:BA:1260:G:H2'	36:BA:1261:C:C6	2.49	0.48
36:BA:1908:C:H2'	36:BA:1909:C:H6	1.78	0.48
36:BA:195:A:C8	36:BA:197:A:OP1	2.66	0.48
36:BA:1651:G:C2	36:BA:2007:C:N3	2.81	0.48
36:BA:2839:G:H2'	36:BA:2840:C:C6	2.48	0.48
36:BA:438:G:O2'	36:BA:440:G:H5'	2.13	0.48
36:BA:648:G:H2'	36:BA:649:G:C8	2.48	0.48
39:BD:6:PHE:HE1	39:BD:18:VAL:HG12	1.77	0.48
40:BE:116:VAL:CG2	40:BE:122:PHE:CG	2.96	0.48
41:BF:3:GLU:HA	41:BF:24:LEU:CG	2.35	0.48
42:BG:11:TYR:HA	42:BG:15:VAL:HG21	1.95	0.48
48:BP:61:ARG:C	48:BP:62:LEU:CD2	2.81	0.48
50:BR:38:VAL:HB	50:BR:39:PRO:CD	2.38	0.48
53:BU:27:LEU:O	53:BU:34:LYS:HB2	2.13	0.48
58:BZ:171:ILE:HD13	58:BZ:171:ILE:H	1.77	0.48
1:CA:1090:U:H2'	1:CA:1091:U:C6	2.49	0.48
1:CA:1424:C:H2'	1:CA:1425:U:O4'	2.13	0.48
1:CA:333:G:O2'	1:CA:334:C:H5'	2.13	0.48
1:CA:826:C:H2'	1:CA:827:U:H6	1.78	0.48
1:CA:926:G:H5''	1:CA:927:G:O5'	2.13	0.48
1:CA:945:G:H2'	1:CA:945:G:N3	2.29	0.48
2:CB:189:ASP:O	2:CB:191:ASP:N	2.47	0.48
2:CB:204:ASN:HD21	2:CB:206:ASP:H	1.54	0.48
3:CC:11:ARG:O	3:CC:14:ILE:O	2.30	0.48
4:CD:106:TYR:HD2	4:CD:113:SER:O	1.97	0.48
4:CD:107:ARG:HH21	4:CD:194:LEU:HD12	1.79	0.48
6:CF:47:ARG:O	6:CF:47:ARG:HG3	2.14	0.48
7:CG:118:VAL:O	7:CG:121:ALA:HB3	2.14	0.48
9:CI:86:VAL:CG2	9:CI:93:ARG:HG2	2.42	0.48
20:CT:89:ARG:HB2	20:CT:104:LEU:HD12	1.96	0.48
24:CY:41:C:H2'	24:CY:42:G:O4'	2.13	0.48
24:CY:51:G:N2	24:CY:64:U:O2	2.46	0.48
25:CZ:139:ASP:O	25:CZ:139:ASP:CG	2.51	0.48
27:D1:3:LYS:HB2	27:D1:3:LYS:HZ2	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D1:72:GLU:HA	27:D1:72:GLU:OE1	2.13	0.48
28:D2:35:LEU:HB3	28:D2:50:ILE:HD11	1.95	0.48
34:D8:4:MET:HE2	34:D8:61:LEU:HD23	1.95	0.48
36:DA:1131:G:HO2'	36:DA:1132:A:H8	1.62	0.48
36:DA:1331:A:C2'	36:DA:1332:G:H5''	2.43	0.48
36:DA:1542:A:H5'	36:DA:1543:C:OP2	2.13	0.48
36:DA:17:G:H2'	36:DA:18:C:C6	2.47	0.48
36:DA:2746:U:O2'	36:DA:2747:G:H5'	2.13	0.48
36:DA:2870:C:H2'	36:DA:2871:C:O4'	2.13	0.48
36:DA:580:C:H2'	36:DA:581:C:H6	1.78	0.48
39:DD:241:PRO:O	39:DD:243:GLY:N	2.46	0.48
40:DE:75:VAL:HG12	40:DE:76:ARG:N	2.29	0.48
41:DF:150:GLY:HA2	41:DF:172:TRP:CD2	2.49	0.48
42:DG:85:GLY:C	42:DG:87:PRO:CD	2.81	0.48
43:DH:35:VAL:HG21	43:DH:75:ALA:HB2	1.94	0.48
43:DH:80:SER:O	43:DH:81:GLU:HB2	2.13	0.48
47:DO:35:VAL:CG1	47:DO:69:ILE:HD13	2.44	0.48
47:DO:53:LYS:O	47:DO:56:ASP:HB2	2.13	0.48
50:DR:13:HIS:HE1	50:DR:15:SER:OG	1.96	0.48
51:DS:12:PHE:CD1	51:DS:13:ARG:N	2.81	0.48
52:DT:13:ARG:HH12	52:DT:15:VAL:CG1	2.26	0.48
52:DT:28:VAL:HB	52:DT:88:ILE:HG12	1.94	0.48
58:DZ:24:LEU:HD23	58:DZ:24:LEU:C	2.33	0.48
1:AA:1150:U:C5	1:AA:1151:A:C5	3.02	0.48
1:AA:22:G:H4'	1:AA:885:G:C8	2.48	0.48
1:AA:434:U:H2'	1:AA:435:C:H6	1.78	0.48
1:AA:509:A:H5'	4:AD:54:TYR:HD2	1.79	0.48
1:AA:437:U:H5''	4:AD:155:LEU:CD1	2.42	0.48
7:AG:7:ALA:O	7:AG:8:GLU:CB	2.59	0.48
9:AI:4:TYR:CE2	9:AI:88:TYR:CB	2.95	0.48
1:AA:1124:G:C5'	10:AJ:35:SER:HB2	2.43	0.48
10:AJ:57:LYS:NZ	10:AJ:60:ARG:HH22	2.11	0.48
13:AM:22:ILE:CB	13:AM:25:ILE:HD12	2.43	0.48
20:AT:62:LEU:N	20:AT:62:LEU:HD12	2.12	0.48
22:AW:57:G:H2'	22:AW:58:A:C5'	2.41	0.48
26:B0:47:PRO:HG3	26:B0:53:MET:HB2	1.95	0.48
36:BA:1652:A:C2'	36:BA:1653:G:H5'	2.42	0.48
36:BA:1713:U:O2'	36:BA:1714:G:H5'	2.14	0.48
36:BA:2102:U:C5	36:BA:2103:C:N3	2.81	0.48
36:BA:2419:U:O2'	36:BA:2420:C:H5'	2.13	0.48
36:BA:2475:C:H5'	36:BA:2476:A:OP2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:484:C:H2'	36:BA:485:C:C6	2.48	0.48
36:BA:588:U:H2'	36:BA:589:C:C6	2.49	0.48
36:BA:633:A:H2'	36:BA:634:C:H5'	1.95	0.48
36:BA:68:G:H2'	36:BA:69:C:C6	2.48	0.48
37:BB:27:C:H5'	37:BB:28:C:OP2	2.12	0.48
40:BE:132:HIS:O	40:BE:132:HIS:ND1	2.46	0.48
40:BE:65:GLY:HA2	40:BE:70:ALA:CB	2.44	0.48
52:BT:61:PHE:CE1	52:BT:76:PHE:HB2	2.48	0.48
53:BU:47:TYR:O	53:BU:51:LYS:HG2	2.13	0.48
54:BV:62:LEU:CD2	54:BV:95:LEU:HB2	2.39	0.48
57:BY:44:ILE:HG22	57:BY:45:VAL:N	2.27	0.48
1:CA:1320:C:C6	1:CA:1320:C:H5'	2.31	0.48
1:CA:484:G:H4'	1:CA:485:G:O5'	2.12	0.48
3:CC:181:ASN:HD22	3:CC:204:LEU:HB2	1.77	0.48
7:CG:137:LYS:O	7:CG:140:ASP:N	2.46	0.48
8:CH:101:PRO:HG2	8:CH:133:LEU:HD21	1.95	0.48
8:CH:87:SER:HB2	8:CH:93:VAL:HB	1.95	0.48
10:CJ:92:THR:HG23	10:CJ:93:GLY:H	1.77	0.48
25:CZ:130:TYR:CE2	25:CZ:211:PRO:HD2	2.49	0.48
25:CZ:222:LEU:HA	25:CZ:304:LEU:O	2.13	0.48
26:D0:72:ARG:HD3	26:D0:75:LEU:HD13	1.95	0.48
30:D4:25:TYR:O	30:D4:26:SER:HB3	2.12	0.48
33:D7:12:ARG:NH2	36:DA:465:G:OP1	2.45	0.48
34:D8:30:ARG:NH2	36:DA:2419:U:O4	2.46	0.48
35:D9:35:ARG:O	35:D9:35:ARG:HG2	2.13	0.48
36:DA:1675:C:H2'	36:DA:1676:A:O4'	2.13	0.48
36:DA:2123:G:O2'	36:DA:2124:G:H5'	2.12	0.48
36:DA:2416:C:H2'	36:DA:2417:C:H6	1.78	0.48
36:DA:616:G:H2'	36:DA:618:C:O4'	2.12	0.48
36:DA:86:C:H2'	36:DA:87:C:C6	2.48	0.48
40:DE:116:VAL:CG2	40:DE:122:PHE:CG	2.97	0.48
42:DG:48:GLU:O	42:DG:49:ASP:HB3	2.13	0.48
48:DP:38:GLN:HG3	48:DP:39:LYS:H	1.78	0.48
48:DP:84:ASN:C	48:DP:86:LYS:N	2.67	0.48
51:DS:106:ARG:CG	51:DS:106:ARG:HH11	2.23	0.48
53:DU:92:ARG:HB2	54:DV:11:GLN:NE2	2.28	0.48
1:AA:1120:G:H2'	1:AA:1121:U:H6	1.76	0.48
1:AA:1286:A:O2'	1:AA:1287:A:OP2	2.27	0.48
1:AA:67:C:O2'	1:AA:171:A:H1'	2.13	0.48
4:AD:102:ASP:OD2	4:AD:136:PRO:HB3	2.14	0.48
12:AL:50:SER:O	12:AL:51:ALA:HB2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:75:HIS:CD2	12:AL:77:LEU:H	2.31	0.48
15:AO:33:THR:HG23	15:AO:63:ARG:NH1	2.27	0.48
1:AA:624:C:O3'	16:AP:10:GLY:HA2	2.13	0.48
17:AQ:9:VAL:HG11	17:AQ:84:LEU:CD1	2.43	0.48
18:AR:31:LEU:N	18:AR:31:LEU:HD23	2.22	0.48
24:AY:72:U:C3'	24:AY:73:G:H5''	2.44	0.48
25:AZ:223:MET:O	25:AZ:223:MET:HG3	2.14	0.48
25:AZ:267:VAL:HG23	25:AZ:288:VAL:HG13	1.94	0.48
25:AZ:30:ALA:O	25:AZ:34:VAL:HG23	2.14	0.48
27:B1:19:GLN:OE1	27:B1:19:GLN:HA	2.14	0.48
34:B8:7:HIS:N	34:B8:11:LYS:HE2	2.28	0.48
35:B9:35:ARG:HG2	35:B9:35:ARG:O	2.13	0.48
36:BA:1342:A:H2	36:BA:1396:U:HO2'	1.61	0.48
36:BA:1948:G:O2'	36:BA:1949:G:H5'	2.14	0.48
36:BA:2052:G:H4'	40:BE:143:ASN:O	2.12	0.48
36:BA:755:C:H2'	36:BA:756:C:H6	1.78	0.48
37:BB:78:A:H2'	37:BB:79:C:O4'	2.14	0.48
41:BF:160:ASN:HD21	41:BF:162:LEU:H	1.58	0.48
42:BG:107:LEU:HD12	42:BG:178:PHE:CD1	2.47	0.48
42:BG:114:ILE:CG2	42:BG:117:PHE:HB2	2.44	0.48
42:BG:167:GLU:H	42:BG:167:GLU:CD	2.17	0.48
30:B4:6:HIS:HB3	42:BG:67:LYS:NZ	2.28	0.48
42:BG:39:ILE:HG12	42:BG:92:VAL:HG12	1.96	0.48
36:BA:389:G:H1	48:BP:72:PRO:HD3	1.78	0.48
48:BP:92:GLU:HG2	48:BP:121:LYS:HZ1	1.78	0.48
57:BY:31:LEU:HD22	57:BY:31:LEU:N	2.28	0.48
57:BY:64:GLU:O	57:BY:65:ALA:HB2	2.13	0.48
1:CA:189(J):G:O2'	1:CA:189(K):U:H5'	2.13	0.48
1:CA:853:G:O2'	1:CA:854:G:H5'	2.13	0.48
1:CA:911:U:O2'	1:CA:912:C:H5'	2.13	0.48
3:CC:186:PHE:CE2	3:CC:188:LEU:HD22	2.48	0.48
4:CD:22:LYS:HB2	4:CD:26:CYS:HB2	1.95	0.48
7:CG:28:ASN:OD1	7:CG:36:LYS:HE2	2.14	0.48
7:CG:66:VAL:O	7:CG:69:VAL:HG12	2.13	0.48
9:CI:114:TYR:CD1	10:CJ:60:ARG:HG2	2.49	0.48
9:CI:41:VAL:HG12	9:CI:41:VAL:O	2.14	0.48
12:CL:97:ARG:CB	12:CL:97:ARG:HH11	2.26	0.48
20:CT:72:LEU:O	20:CT:74:LYS:N	2.46	0.48
25:CZ:155:ARG:O	25:CZ:159:ASN:ND2	2.45	0.48
25:CZ:31:LEU:HD23	25:CZ:199:ILE:HG23	1.95	0.48
25:CZ:352:VAL:HG12	25:CZ:353:VAL:N	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:D4:19:GLY:O	30:D4:21:VAL:HG23	2.14	0.48
36:DA:1773:A:H2'	36:DA:1774:C:H5'	1.95	0.48
36:DA:17:G:H4'	53:DU:25:TRP:CH2	2.48	0.48
36:DA:2201:C:H2'	36:DA:2202:C:C6	2.49	0.48
36:DA:2472:G:C5'	36:DA:2473:U:H5''	2.42	0.48
33:D7:34:ARG:HD3	36:DA:467:G:OP2	2.12	0.48
36:DA:605:C:H1'	36:DA:657:U:O2'	2.14	0.48
36:DA:811:U:O2'	36:DA:812:C:C5'	2.61	0.48
37:DB:93:G:H2'	37:DB:94:C:C6	2.48	0.48
39:DD:44:ASN:HB2	39:DD:48:ARG:O	2.13	0.48
41:DF:44:ARG:O	41:DF:44:ARG:HG2	2.13	0.48
48:DP:97:PRO:O	48:DP:98:GLU:CB	2.54	0.48
54:DV:19:LYS:HB2	54:DV:96:ILE:CD1	2.42	0.48
56:DX:38:GLU:O	56:DX:38:GLU:HG2	2.12	0.48
58:DZ:151:HIS:HB2	58:DZ:170:THR:CA	2.42	0.48
1:AA:1316:G:O3'	14:AN:18:VAL:HG22	2.12	0.48
1:AA:1410:G:H2'	1:AA:1411:C:C6	2.49	0.48
2:AB:132:LYS:HA	2:AB:135:GLN:OE1	2.14	0.48
1:AA:8:A:C5	4:AD:209:ARG:HB2	2.48	0.48
16:AP:23:ASP:O	16:AP:24:ALA:C	2.50	0.48
16:AP:3:LYS:HG2	16:AP:65:GLN:O	2.13	0.48
17:AQ:86:GLU:O	17:AQ:90:ILE:HG12	2.14	0.48
20:AT:89:ARG:HD2	20:AT:104:LEU:HD11	1.94	0.48
20:AT:50:GLU:CB	20:AT:99:LEU:HD12	2.41	0.48
22:AW:71:G:N3	36:BA:1851:U:H4'	2.29	0.48
25:AZ:134:PHE:HD1	25:AZ:171:ILE:HB	1.77	0.48
25:AZ:138:VAL:C	25:AZ:140:MET:H	2.17	0.48
25:AZ:256:VAL:HA	25:AZ:262:THR:HG22	1.95	0.48
27:B1:68:PRO:C	27:B1:70:VAL:N	2.66	0.48
30:B4:9:LEU:HD13	30:B4:26:SER:O	2.13	0.48
36:BA:1274:A:N3	36:BA:1297:C:H1'	2.28	0.48
36:BA:1336:A:H2'	36:BA:1337:G:H8	1.78	0.48
36:BA:1782:C:H1'	36:BA:2609:U:C5'	2.44	0.48
36:BA:2023:G:H4'	36:BA:2617:C:O3'	2.13	0.48
36:BA:2762:G:H2'	36:BA:2763:G:H5'	1.94	0.48
36:BA:2842:G:O2'	36:BA:2843:G:H5'	2.14	0.48
36:BA:425:G:O2'	36:BA:426:C:H5'	2.14	0.48
36:BA:438:G:H2'	36:BA:440:G:H8	1.78	0.48
36:BA:566:U:O4	54:BV:78:LYS:HE2	2.14	0.48
36:BA:761:A:C8	36:BA:761:A:H3'	2.49	0.48
36:BA:780:G:OP1	39:BD:218:ARG:NH2	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:978:G:C2	36:BA:986:C:N3	2.81	0.48
36:BA:990:A:OP2	36:BA:991:C:OP2	2.31	0.48
39:BD:70:TRP:O	39:BD:71:ASP:C	2.51	0.48
41:BF:125:LEU:H	41:BF:125:LEU:HD23	1.76	0.48
36:BA:674:G:N3	41:BF:74:ARG:NH1	2.62	0.48
41:BF:89:VAL:HG12	41:BF:90:PHE:H	1.76	0.48
43:BH:130:ARG:O	43:BH:131:VAL:HG23	2.13	0.48
48:BP:17:LYS:C	48:BP:19:VAL:N	2.67	0.48
52:BT:31:SER:OG	52:BT:32:TYR:CE1	2.60	0.48
54:BV:52:VAL:HG22	54:BV:52:VAL:O	2.14	0.48
55:BW:22:ASP:HA	55:BW:25:ARG:NH1	2.23	0.48
55:BW:37:ARG:HG2	55:BW:38:TYR:CD2	2.49	0.48
57:BY:62:GLU:CD	57:BY:62:GLU:N	2.66	0.48
58:BZ:126:VAL:O	58:BZ:126:VAL:HG23	2.12	0.48
1:CA:814:A:H2'	1:CA:816:A:C5'	2.44	0.48
7:CG:118:VAL:CG2	7:CG:119:ARG:N	2.77	0.48
7:CG:37:ASN:HD21	9:CI:40:LEU:HA	1.77	0.48
1:CA:1250:A:H4'	9:CI:68:GLY:H	1.78	0.48
17:CQ:52:LYS:H	17:CQ:52:LYS:CD	2.10	0.48
1:CA:1305:G:C5'	21:CU:4:GLY:HA3	2.42	0.48
25:CZ:28:THR:HG23	25:CZ:79:HIS:CE1	2.48	0.48
32:D6:25:LYS:HE3	34:D8:35:GLN:OE1	2.14	0.48
32:D6:22:ALA:HB2	32:D6:39:TYR:CZ	2.49	0.48
34:D8:50:LEU:C	34:D8:53:PRO:HD2	2.34	0.48
36:DA:2257:U:O2'	36:DA:2258:C:H5'	2.14	0.48
36:DA:2692:C:H1'	36:DA:2847:U:O2'	2.13	0.48
36:DA:492:A:H2'	36:DA:493:G:O4'	2.14	0.48
36:DA:623:G:H2'	36:DA:624:C:C6	2.49	0.48
36:DA:664:C:O4'	36:DA:940:G:H5''	2.14	0.48
36:DA:92:A:H3'	36:DA:93:G:H8	1.79	0.48
40:DE:144:ARG:HG3	40:DE:145:LYS:N	2.29	0.48
40:DE:3:GLY:O	40:DE:4:ILE:HB	2.13	0.48
40:DE:81:ILE:CG2	40:DE:81:ILE:O	2.61	0.48
42:DG:38:VAL:HG12	42:DG:93:THR:HA	1.96	0.48
47:DO:24:VAL:CG1	47:DO:33:ALA:HB2	2.43	0.48
48:DP:102:ARG:NH1	48:DP:102:ARG:HB2	2.28	0.48
48:DP:105:LEU:H	48:DP:105:LEU:CD1	2.24	0.48
49:DQ:60:ARG:HB3	49:DQ:60:ARG:CZ	2.43	0.48
36:DA:481:G:P	57:DY:47:LYS:HD3	2.52	0.48
1:AA:1002:G:H2'	1:AA:1003:G:O4'	2.13	0.48
1:AA:1485:U:O2'	1:AA:1486:G:H5'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:369:C:O2'	1:AA:370:C:O5'	2.32	0.48
1:AA:807:A:H2'	1:AA:808:C:C6	2.49	0.48
1:AA:945:G:N3	1:AA:945:G:H2'	2.27	0.48
2:AB:130:ARG:NH2	2:AB:134:GLU:HG3	2.24	0.48
2:AB:221:LEU:O	2:AB:221:LEU:HD13	2.13	0.48
2:AB:47:THR:HG23	2:AB:202:PRO:O	2.12	0.48
2:AB:56:ARG:HH11	2:AB:56:ARG:HG3	1.78	0.48
3:AC:84:ILE:O	3:AC:88:ARG:HG3	2.12	0.48
8:AH:30:ARG:CB	8:AH:30:ARG:HH11	2.25	0.48
9:AI:20:ARG:HH11	9:AI:20:ARG:HB2	1.72	0.48
10:AJ:86:MET:O	10:AJ:87:THR:HG23	2.13	0.48
13:AM:28:ALA:O	13:AM:32:GLU:HB2	2.14	0.48
1:AA:276:G:O2'	17:AQ:68:ARG:NH1	2.47	0.48
20:AT:62:LEU:H	20:AT:62:LEU:CD1	2.12	0.48
20:AT:74:LYS:HB2	20:AT:75:ASN:H	1.44	0.48
25:AZ:187:LYS:HD2	25:AZ:187:LYS:N	2.29	0.48
28:B2:62:THR:O	28:B2:66:GLU:N	2.47	0.48
34:B8:15:LYS:HD3	48:BP:65:ARG:HH21	1.78	0.48
36:BA:1315:C:O2'	36:BA:1316:U:H5'	2.13	0.48
36:BA:1403:C:H2'	36:BA:1404:C:O5'	2.14	0.48
36:BA:1504:C:O2'	36:BA:1505:C:C5'	2.61	0.48
36:BA:152:G:H1	36:BA:174:C:H42	1.60	0.48
36:BA:2881:C:H2'	36:BA:2882:A:H8	1.79	0.48
36:BA:2887:U:H2'	36:BA:2888:C:C6	2.49	0.48
36:BA:363(E):U:H3'	36:BA:363(F):A:O4'	2.14	0.48
36:BA:86:C:H2'	36:BA:87:C:C6	2.48	0.48
40:BE:81:ILE:O	40:BE:81:ILE:CG2	2.59	0.48
41:BF:150:GLY:HA2	41:BF:172:TRP:CD2	2.48	0.48
41:BF:85:GLY:O	41:BF:86:GLY:O	2.31	0.48
44:BJ:99:UNK:C	44:BJ:101:UNK:N	2.71	0.48
46:BN:87:LEU:CD1	46:BN:91:LEU:HG	2.43	0.48
50:BR:28:LEU:HD12	50:BR:114:VAL:HG21	1.95	0.48
52:BT:94:ALA:HB1	52:BT:99:LEU:HD23	1.96	0.48
1:CA:1005:A:C3'	1:CA:1006:C:H5'	2.44	0.48
1:CA:345:C:H1'	1:CA:346:G:N2	2.29	0.48
1:CA:46:G:O2'	1:CA:365:U:H1'	2.13	0.48
1:CA:405:U:O2	1:CA:498:U:H2'	2.14	0.48
1:CA:632:A:H8	1:CA:633:G:C8	2.32	0.48
1:CA:939:G:H5''	7:CG:102:ARG:CZ	2.42	0.48
2:CB:142:LEU:CD2	2:CB:146:GLN:NE2	2.77	0.48
3:CC:79:ARG:O	3:CC:82:GLU:OE1	2.31	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:110:PHE:HD1	4:CD:110:PHE:N	2.11	0.48
9:CI:83:ARG:C	9:CI:86:VAL:HG12	2.32	0.48
13:CM:9:ILE:HD13	42:DG:146:TYR:CE2	2.49	0.48
22:CW:39:U:H5'	22:CW:39:U:O2	2.12	0.48
22:CW:6:G:O2'	22:CW:7:A:H5'	2.13	0.48
36:DA:1342:A:H2	36:DA:1396:U:HO2'	1.61	0.48
36:DA:1750:G:H2'	36:DA:1751:C:C6	2.48	0.48
36:DA:189:G:H2'	36:DA:205:G:H22	1.77	0.48
36:DA:2312:U:C2'	36:DA:2313:C:H5''	2.42	0.48
37:DB:73:A:C4	37:DB:105:A:C2	3.01	0.48
38:DC:74:VAL:HG11	38:DC:153:ILE:HG23	1.94	0.48
39:DD:222:ARG:O	39:DD:224:ALA:O	2.32	0.48
42:DG:145:THR:HB	42:DG:148:MET:CB	2.44	0.48
46:DN:134:ARG:N	46:DN:135:PRO:HD3	2.28	0.48
46:DN:15:LEU:O	46:DN:136:GLU:HA	2.14	0.48
47:DO:25:LEU:HB2	47:DO:38:VAL:HG23	1.96	0.48
48:DP:114:ILE:HB	48:DP:130:PHE:CD2	2.48	0.48
50:DR:86:ARG:HB3	50:DR:118:GLU:OE2	2.14	0.48
57:DY:28:LYS:N	57:DY:28:LYS:CE	2.76	0.48
1:AA:1003:G:H21	1:AA:1039:C:N4	2.10	0.48
1:AA:1229:A:OP2	13:AM:114:ARG:HD3	2.13	0.48
1:AA:1277:C:O2'	1:AA:1279:A:H8	1.78	0.48
1:AA:1410:G:H2'	1:AA:1411:C:H6	1.78	0.48
1:AA:1511:G:C2'	1:AA:1512:U:H5'	2.44	0.48
1:AA:1536:C:C2'	1:AA:1537:U:O4'	2.60	0.48
1:AA:499:A:H4'	1:AA:500:G:H5'	1.96	0.48
1:AA:770:C:O2'	1:AA:771:G:H5'	2.14	0.48
7:AG:84:ASN:ND2	7:AG:84:ASN:C	2.67	0.48
10:AJ:16:LEU:CD1	10:AJ:70:ARG:HG2	2.44	0.48
12:AL:119:LYS:O	12:AL:120:TYR:CB	2.62	0.48
13:AM:11:ARG:CG	13:AM:12:ASN:H	2.10	0.48
15:AO:29:VAL:HG11	15:AO:67:LEU:HD21	1.96	0.48
19:AS:31:ILE:HG23	19:AS:49:ILE:HA	1.96	0.48
26:B0:15:ASP:OD1	26:B0:16:SER:N	2.42	0.48
36:BA:1537:G:H2'	36:BA:1538:G:H8	1.79	0.48
36:BA:1751:C:O2'	36:BA:1752:C:H5'	2.13	0.48
36:BA:2312:U:C2'	36:BA:2313:C:H5''	2.43	0.48
36:BA:2869:G:H2'	36:BA:2870:C:H6	1.78	0.48
36:BA:332:A:O2'	36:BA:333:G:P	2.72	0.48
41:BF:7:TYR:HD2	41:BF:16:GLY:HA3	1.78	0.48
53:BU:19:LYS:O	53:BU:22:LYS:HG2	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:BW:4:LYS:HG2	55:BW:5:ALA:H	1.76	0.48
57:BY:13:VAL:HG22	57:BY:14:LEU:N	2.29	0.48
58:BZ:48:PHE:O	58:BZ:52:SER:N	2.47	0.48
1:CA:1003:G:H21	1:CA:1039:C:N4	2.11	0.48
1:CA:499:A:H4'	1:CA:500:G:H5'	1.95	0.48
1:CA:995:C:O2'	1:CA:996:A:H8	1.97	0.48
3:CC:49:SER:C	3:CC:51:GLY:N	2.66	0.48
4:CD:114:ARG:NH1	4:CD:114:ARG:CG	2.75	0.48
6:CF:22:GLU:O	6:CF:25:ILE:HG22	2.13	0.48
13:CM:88:ARG:HG2	13:CM:88:ARG:NH1	2.25	0.48
20:CT:50:GLU:CB	20:CT:99:LEU:HD12	2.40	0.48
22:CV:63:G:H8	22:CV:63:G:H5'	1.79	0.48
25:CZ:219:LYS:HB2	25:CZ:244:ARG:HB2	1.96	0.48
27:D1:90:ILE:O	27:D1:94:LEU:HD13	2.14	0.48
29:D3:11:SER:HB3	36:DA:988:A:P	2.53	0.48
29:D3:29:ARG:HH11	29:D3:29:ARG:CB	2.19	0.48
13:CM:57:ARG:HH12	30:D4:34:GLU:HG3	1.78	0.48
35:D9:29:ASN:O	35:D9:29:ASN:ND2	2.46	0.48
36:DA:1259:G:O2'	36:DA:1260:G:H5'	2.14	0.48
36:DA:1652:A:H2'	36:DA:1653:G:H5'	1.95	0.48
36:DA:20:C:O2'	36:DA:21:A:H5'	2.14	0.48
36:DA:2105:C:N3	36:DA:2184:G:N2	2.61	0.48
36:DA:326:G:H2'	36:DA:327:G:C8	2.47	0.48
36:DA:500:G:H22	36:DA:502:A:H3'	1.79	0.48
36:DA:566:U:O4	54:DV:78:LYS:HE2	2.13	0.48
36:DA:630:G:H4'	36:DA:640:C:H4'	1.94	0.48
36:DA:645:C:H5'	36:DA:646:A:OP1	2.14	0.48
36:DA:64:A:O2'	36:DA:65:C:H5'	2.14	0.48
36:DA:723:G:H2'	36:DA:724:U:C6	2.49	0.48
36:DA:845:G:C8	36:DA:845:G:OP2	2.59	0.48
39:DD:226:MET:HB3	39:DD:230:ASP:HB2	1.94	0.48
42:DG:34:LEU:HA	42:DG:161:THR:HA	1.95	0.48
46:DN:34:LEU:O	46:DN:34:LEU:HD13	2.13	0.48
48:DP:16:ARG:O	48:DP:18:ARG:N	2.47	0.48
51:DS:74:ALA:O	51:DS:76:LYS:N	2.46	0.48
52:DT:13:ARG:HH12	52:DT:15:VAL:HG12	1.79	0.48
52:DT:28:VAL:HG22	52:DT:46:GLU:CA	2.43	0.48
52:DT:77:PRO:C	52:DT:79:HIS:H	2.17	0.48
55:DW:36:LEU:HD11	55:DW:47:VAL:HG12	1.96	0.48
55:DW:4:LYS:HG2	55:DW:5:ALA:H	1.78	0.48
1:AA:1137:C:O2'	1:AA:1138:G:N2	2.45	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1330:U:H3'	1:AA:1331:G:O4'	2.14	0.48
1:AA:640:A:O2'	8:AH:115:SER:HB2	2.14	0.48
2:AB:231:GLU:HA	2:AB:232:PRO:HD3	1.68	0.48
3:AC:49:SER:C	3:AC:51:GLY:N	2.67	0.48
6:AF:15:ASP:OD2	6:AF:17:SER:HB2	2.14	0.48
9:AI:111:ARG:HG2	9:AI:112:LYS:N	2.29	0.48
13:AM:57:ARG:HH12	30:B4:34:GLU:CG	2.27	0.48
15:AO:66:LEU:O	15:AO:69:TYR:HB3	2.13	0.48
16:AP:44:THR:O	16:AP:45:THR:HB	2.13	0.48
19:AS:21:GLU:O	19:AS:21:GLU:HG3	2.14	0.48
19:AS:36:ARG:HB2	19:AS:72:GLY:HA3	1.94	0.48
20:AT:72:LEU:O	20:AT:74:LYS:N	2.47	0.48
22:AV:1:G:C1'	26:B0:5:LYS:NZ	2.76	0.48
24:AY:21:A:H5'	24:AY:22:G:OP1	2.13	0.48
25:AZ:134:PHE:CG	25:AZ:202:LEU:HD22	2.49	0.48
24:AY:76:A:H5''	25:AZ:231:ILE:HD11	1.94	0.48
25:AZ:349:VAL:HG23	25:AZ:374:LEU:HD22	1.96	0.48
32:B6:48:VAL:O	32:B6:49:HIS:O	2.32	0.48
36:BA:1257:C:H2'	36:BA:1258:C:C6	2.47	0.48
36:BA:1290:C:H2'	36:BA:1291:C:C6	2.49	0.48
36:BA:1677:A:H2'	36:BA:1678:G:H8	1.79	0.48
36:BA:1826:G:H4'	39:BD:242:ARG:NH2	2.24	0.48
36:BA:2415:G:H2'	36:BA:2416:C:C6	2.49	0.48
36:BA:199:A:N6	36:BA:2433:A:H2'	2.28	0.48
36:BA:2692:C:H1'	36:BA:2847:U:O2'	2.14	0.48
36:BA:359:A:C2	36:BA:360:G:H1'	2.48	0.48
36:BA:383:U:H2'	36:BA:385:C:H5	1.78	0.48
36:BA:433:C:O2'	36:BA:434:U:H5'	2.14	0.48
36:BA:523:C:H5''	36:BA:540:C:O2'	2.14	0.48
36:BA:654(N):G:N7	36:BA:654(O):G:C4	2.81	0.48
37:BB:68:C:O2'	37:BB:69:G:H5'	2.14	0.48
39:BD:35:LYS:O	39:BD:62:TYR:O	2.32	0.48
39:BD:35:LYS:HB3	39:BD:36:PRO:CD	2.42	0.48
42:BG:107:LEU:HD12	42:BG:178:PHE:CE1	2.49	0.48
43:BH:126:PRO:O	43:BH:127:GLU:HG3	2.13	0.48
45:BK:59:UNK:HA	45:BK:64:UNK:O	2.14	0.48
46:BN:46:VAL:O	46:BN:47:ALA:CB	2.60	0.48
46:BN:56:ASN:H	46:BN:125:GLY:HA3	1.79	0.48
46:BN:55:VAL:HG22	46:BN:56:ASN:H	1.78	0.48
48:BP:59:LEU:CA	48:BP:61:ARG:HE	2.27	0.48
49:BQ:134:ARG:HA	49:BQ:137:TYR:CD1	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BB:91:C:OP1	49:BQ:16:ARG:HD2	2.14	0.48
51:BS:99:LYS:NZ	51:BS:99:LYS:CB	2.70	0.48
52:BT:27:THR:H	52:BT:49:VAL:HG12	1.78	0.48
52:BT:84:GLN:O	52:BT:85:LYS:HG3	2.13	0.48
53:BU:88:ILE:C	53:BU:90:VAL:N	2.64	0.48
1:CA:1255:G:C5'	3:CC:26:LYS:HE2	2.43	0.48
1:CA:173:U:H5''	1:CA:197:A:O4'	2.14	0.48
1:CA:319:G:O2'	1:CA:320:C:H5'	2.13	0.48
2:CB:166:ASP:HB3	2:CB:169:LYS:HB2	1.95	0.48
2:CB:61:LEU:C	2:CB:61:LEU:HD23	2.35	0.48
8:CH:7:ALA:HB2	8:CH:85:ARG:CD	2.39	0.48
9:CI:99:LEU:O	9:CI:101:PHE:N	2.47	0.48
10:CJ:7:LYS:O	10:CJ:8:LEU:HD12	2.13	0.48
11:CK:108:ILE:O	18:CR:87:ARG:N	2.47	0.48
12:CL:111:LYS:O	12:CL:112:ASP:HB2	2.14	0.48
13:CM:2:ALA:N	13:CM:9:ILE:HG23	2.29	0.48
13:CM:52:GLU:HG2	13:CM:55:ARG:NH1	2.29	0.48
25:CZ:314:THR:HG23	25:CZ:374:LEU:O	2.13	0.48
27:D1:58:ILE:HD12	27:D1:59:THR:H	1.79	0.48
32:D6:5:VAL:O	32:D6:6:ARG:CB	2.61	0.48
34:D8:50:LEU:O	34:D8:51:ALA:CB	2.62	0.48
36:DA:102:G:H4'	36:DA:102:G:OP1	2.14	0.48
36:DA:1315:C:O2'	36:DA:1316:U:H5'	2.13	0.48
36:DA:1607:C:H4'	36:DA:1608:A:O5'	2.14	0.48
36:DA:1899:G:C2'	36:DA:1900:A:OP2	2.61	0.48
36:DA:2175:C:N3	36:DA:2176:A:C2	2.82	0.48
36:DA:2248:C:H2'	36:DA:2249:U:C5'	2.44	0.48
36:DA:2555:U:C2'	36:DA:2556:C:H5'	2.44	0.48
36:DA:278:A:N6	36:DA:362:U:H3	2.09	0.48
36:DA:438:G:O2'	36:DA:440:G:H5'	2.13	0.48
36:DA:90:U:O4'	36:DA:92:A:C8	2.67	0.48
40:DE:30:PRO:HD3	40:DE:180:ASN:ND2	2.29	0.48
40:DE:33:VAL:HG12	40:DE:69:LYS:HD2	1.95	0.48
42:DG:128:ARG:O	42:DG:130:ASN:N	2.47	0.48
42:DG:181:ARG:O	42:DG:182:LYS:OXT	2.32	0.48
42:DG:51:ARG:HH11	42:DG:53:LEU:HD21	1.79	0.48
42:DG:46:ALA:HB2	42:DG:88:ILE:CG1	2.42	0.48
43:DH:109:PHE:CZ	43:DH:152:ARG:NH1	2.82	0.48
36:DA:558:G:P	46:DN:111:PRO:HD2	2.53	0.48
48:DP:98:GLU:H	48:DP:101:VAL:HG13	1.79	0.48
55:DW:4:LYS:CG	55:DW:5:ALA:N	2.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DY:6:HIS:CD2	57:DY:6:HIS:H	2.32	0.48
57:DY:73:ARG:O	57:DY:74:PRO:O	2.31	0.48
58:DZ:123:ASP:C	58:DZ:124:ILE:HG12	2.34	0.48
1:AA:109:A:O3'	1:AA:110:C:H6	1.96	0.48
1:AA:1116:C:H2'	1:AA:1117:G:H5'	1.96	0.48
1:AA:1117:G:C8	1:AA:1117:G:H5'	2.46	0.48
1:AA:345:C:H1'	1:AA:346:G:N2	2.29	0.48
1:AA:46:G:O2'	1:AA:365:U:H1'	2.14	0.48
1:AA:41:G:H2'	1:AA:42:G:C8	2.49	0.48
4:AD:107:ARG:HH21	4:AD:194:LEU:HD12	1.79	0.48
1:AA:933:G:OP2	7:AG:3:ARG:HB3	2.14	0.48
16:AP:58:TYR:O	16:AP:62:VAL:HG22	2.14	0.48
22:AV:63:G:H5'	22:AV:63:G:H8	1.78	0.48
28:B2:51:ARG:HH21	28:B2:55:ARG:NH1	2.11	0.48
30:B4:25:TYR:O	30:B4:26:SER:HB3	2.13	0.48
35:B9:7:VAL:HG21	35:B9:36:GLN:H	1.78	0.48
36:BA:1658:C:H2'	36:BA:1659:U:H6	1.79	0.48
36:BA:2184:G:H2'	36:BA:2185:C:O4'	2.14	0.48
36:BA:2520:C:C6	36:BA:2567:G:H1'	2.49	0.48
36:BA:2651:C:O2'	36:BA:2652:C:H5'	2.13	0.48
36:BA:320:A:H2'	41:BF:136:THR:OG1	2.14	0.48
36:BA:473:G:P	36:BA:508:G:H22	2.37	0.48
36:BA:548:A:H2'	36:BA:549:G:C5'	2.44	0.48
36:BA:654(H):G:H2'	36:BA:654(I):C:C5'	2.39	0.48
37:BB:5:C:O2'	37:BB:6:C:H5'	2.13	0.48
39:BD:146:GLU:HB2	39:BD:189:CYS:HB3	1.95	0.48
39:BD:70:TRP:CZ3	39:BD:150:LYS:HA	2.48	0.48
40:BE:9:VAL:HG13	40:BE:25:VAL:HB	1.95	0.48
40:BE:30:PRO:HD3	40:BE:180:ASN:CG	2.34	0.48
41:BF:114:VAL:HG21	41:BF:202:PHE:HE1	1.78	0.48
42:BG:9:ARG:HB3	42:BG:13:GLU:OE2	2.14	0.48
45:BK:78:UNK:C	45:BK:80:UNK:N	2.76	0.48
46:BN:15:LEU:O	46:BN:136:GLU:HA	2.14	0.48
46:BN:22:THR:O	46:BN:25:ARG:HB2	2.14	0.48
47:BO:87:ILE:HG22	47:BO:88:ASN:O	2.14	0.48
50:BR:78:LYS:O	50:BR:83:ILE:HG12	2.14	0.48
51:BS:74:ALA:O	51:BS:76:LYS:N	2.47	0.48
54:BV:18:LEU:HD23	54:BV:19:LYS:N	2.18	0.48
54:BV:38:LEU:C	54:BV:38:LEU:HD23	2.34	0.48
1:CA:155:C:H2'	1:CA:156:G:C8	2.49	0.48
1:CA:542:G:H2'	1:CA:543:C:C6	2.45	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:190:ARG:HH11	3:CC:190:ARG:HG3	1.78	0.48
3:CC:35:GLU:CG	3:CC:59:ARG:HH22	2.27	0.48
3:CC:79:ARG:O	3:CC:82:GLU:OE2	2.32	0.48
4:CD:121:VAL:CA	4:CD:126:ILE:HD13	2.44	0.48
25:CZ:146:LEU:O	25:CZ:150:VAL:HG23	2.14	0.48
25:CZ:134:PHE:HD1	25:CZ:171:ILE:HB	1.78	0.48
27:D1:20:ARG:HB2	27:D1:32:LYS:HG3	1.96	0.48
36:DA:1061:U:H4'	36:DA:1070:A:C1'	2.43	0.48
36:DA:1498:C:O4'	36:DA:1577:C:H4'	2.14	0.48
36:DA:1842:G:H2'	36:DA:1843:C:C6	2.48	0.48
36:DA:1902:C:C5'	39:DD:246:PRO:HD3	2.44	0.48
35:D9:31:LYS:HE2	36:DA:2478:A:H5'	1.95	0.48
36:DA:2839:G:H2'	36:DA:2840:C:C6	2.48	0.48
36:DA:288:C:H2'	36:DA:289:A:H8	1.79	0.48
42:DG:8:LYS:O	42:DG:11:TYR:HB3	2.13	0.48
42:DG:32:PRO:HB3	42:DG:163:ALA:HA	1.96	0.48
48:DP:17:LYS:C	48:DP:19:VAL:N	2.66	0.48
48:DP:46:LYS:HG2	48:DP:52:GLU:OE2	2.14	0.48
51:DS:99:LYS:NZ	51:DS:99:LYS:CB	2.72	0.48
53:DU:88:ILE:C	53:DU:90:VAL:N	2.67	0.48
54:DV:21:ARG:HB3	54:DV:91:TYR:HB2	1.96	0.48
56:DX:24:GLY:O	56:DX:83:VAL:N	2.47	0.48
57:DY:94:LYS:HG3	57:DY:94:LYS:O	2.14	0.48
1:AA:1029:C:H4'	1:AA:1033:G:N2	2.29	0.47
1:AA:1142:G:C8	1:AA:1143:G:C8	3.02	0.47
1:AA:1202:G:O2'	1:AA:1203:C:H5'	2.13	0.47
1:AA:1286:A:H1'	1:AA:1287:A:H4'	1.95	0.47
1:AA:1317:C:H2'	1:AA:1318:A:O4'	2.14	0.47
1:AA:814:A:H2'	1:AA:816:A:C5'	2.44	0.47
2:AB:122:PHE:O	2:AB:127:ILE:HD11	2.14	0.47
2:AB:142:LEU:CD2	2:AB:146:GLN:NE2	2.76	0.47
4:AD:120:LEU:HB3	4:AD:126:ILE:CD1	2.33	0.47
7:AG:118:VAL:HG23	7:AG:119:ARG:N	2.28	0.47
7:AG:15:ASP:HB3	7:AG:20:ASP:H	1.78	0.47
9:AI:53:VAL:O	9:AI:53:VAL:HG23	2.14	0.47
9:AI:5:TYR:O	9:AI:84:ALA:HA	2.14	0.47
12:AL:111:LYS:O	12:AL:112:ASP:HB2	2.13	0.47
1:AA:1228:C:OP1	13:AM:108:ARG:NH2	2.47	0.47
19:AS:16:LEU:O	19:AS:17:GLU:C	2.51	0.47
25:AZ:98:GLN:HG2	25:AZ:226:GLU:OE2	2.13	0.47
25:AZ:32:THR:HG22	25:AZ:70:TYR:HB3	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:B2:58:ALA:O	28:B2:61:LEU:HB2	2.13	0.47
30:B4:19:GLY:O	30:B4:21:VAL:HG23	2.14	0.47
36:BA:1517:G:O2'	36:BA:1518:U:H5'	2.14	0.47
36:BA:1529:G:C2	36:BA:1541:G:N2	2.81	0.47
36:BA:2206:G:H21	36:BA:2207:G:C4'	2.27	0.47
36:BA:2777:G:C4'	36:BA:2778:A:H5'	2.43	0.47
36:BA:2882:A:H5'	50:BR:96:ARG:HG3	1.96	0.47
36:BA:326:G:H2'	36:BA:327:G:C8	2.47	0.47
36:BA:519:U:H2'	36:BA:520:G:C8	2.48	0.47
40:BE:87:GLU:OE1	40:BE:87:GLU:O	2.32	0.47
41:BF:124:LEU:O	41:BF:193:VAL:HA	2.14	0.47
42:BG:106:LEU:HD12	42:BG:141:PHE:CE1	2.44	0.47
46:BN:91:LEU:CD2	46:BN:98:VAL:HG21	2.43	0.47
47:BO:66:LYS:H	47:BO:82:ASN:ND2	2.12	0.47
48:BP:112:LEU:HD22	48:BP:113:LYS:N	2.29	0.47
53:BU:92:ARG:NH1	54:BV:11:GLN:O	2.47	0.47
56:BX:49:VAL:HG12	56:BX:87:GLN:NE2	2.28	0.47
36:BA:480:A:H1'	57:BY:44:ILE:HG21	1.95	0.47
1:CA:1152:A:HO2'	1:CA:1153:C:H5'	1.78	0.47
1:CA:1222:G:O2'	1:CA:1223:C:H5'	2.14	0.47
1:CA:21:G:H2'	1:CA:22:G:C8	2.49	0.47
1:CA:424:G:H2'	1:CA:425:G:C8	2.38	0.47
4:CD:170:VAL:HG12	4:CD:171:GLY:N	2.29	0.47
5:CE:83:GLU:HG2	5:CE:88:LYS:HB2	1.96	0.47
7:CG:143:ARG:O	7:CG:145:ALA:O	2.32	0.47
13:CM:118:ALA:HB3	22:CV:29:G:C5'	2.44	0.47
13:CM:77:ASN:O	13:CM:81:LEU:CD2	2.62	0.47
16:CP:58:TYR:O	16:CP:62:VAL:HG22	2.14	0.47
16:CP:64:ALA:O	16:CP:66:PRO:HD3	2.13	0.47
19:CS:12:ASP:O	19:CS:15:LEU:HB2	2.14	0.47
25:CZ:126:VAL:O	25:CZ:126:VAL:HG12	2.13	0.47
25:CZ:134:PHE:CD1	25:CZ:202:LEU:HD22	2.49	0.47
27:D1:82:LEU:HD12	27:D1:83:GLU:H	1.78	0.47
28:D2:16:LEU:N	28:D2:67:LYS:NZ	2.62	0.47
30:D4:5:ILE:CG1	30:D4:5:ILE:O	2.62	0.47
36:DA:1097:U:H2'	36:DA:1098:A:C8	2.48	0.47
36:DA:1472:A:C2'	36:DA:1473:G:H5'	2.44	0.47
22:CW:17:C:H42	36:DA:2110:G:H21	1.61	0.47
36:DA:2121:G:H2'	36:DA:2122:U:C6	2.49	0.47
36:DA:2133:G:H4'	36:DA:2133:G:OP1	2.13	0.47
36:DA:2309:A:H2'	36:DA:2310:A:H5'	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2818:G:H4'	36:DA:2837:G:O4'	2.14	0.47
36:DA:431:U:O2'	36:DA:432:A:H5'	2.14	0.47
36:DA:605:C:H5	36:DA:623:G:N1	2.08	0.47
36:DA:669:G:H2'	36:DA:669:G:N3	2.29	0.47
36:DA:745:G:OP1	40:DE:133:LYS:HE3	2.13	0.47
50:DR:7:GLY:O	50:DR:8:ARG:CZ	2.62	0.47
1:AA:1153:C:O2'	1:AA:1154:G:H5''	2.14	0.47
2:AB:142:LEU:HD21	2:AB:146:GLN:HE21	1.79	0.47
14:AN:22:THR:O	14:AN:23:ARG:HB3	2.14	0.47
25:AZ:222:LEU:CD1	25:AZ:303:VAL:HB	2.44	0.47
27:B1:56:GLN:HA	27:B1:56:GLN:OE1	2.13	0.47
27:B1:85:LEU:O	27:B1:86:SER:HB3	2.14	0.47
31:B5:41:PRO:O	31:B5:44:THR:OG1	2.29	0.47
36:BA:102:G:OP1	36:BA:102:G:H4'	2.14	0.47
36:BA:1485:G:O6	36:BA:1504:C:N3	2.46	0.47
36:BA:1607:C:H4'	36:BA:1608:A:O5'	2.14	0.47
36:BA:1675:C:H2'	36:BA:1676:A:O4'	2.13	0.47
36:BA:1720:U:H2'	36:BA:1721:G:O4'	2.14	0.47
36:BA:1771:C:HO2'	36:BA:1786:A:H8	1.61	0.47
36:BA:2187:G:C3'	36:BA:2188:C:H5'	2.44	0.47
36:BA:2692:C:H2'	36:BA:2693:A:H8	1.79	0.47
36:BA:2742:C:O2'	36:BA:2743:C:H5'	2.13	0.47
36:BA:391:G:C2'	36:BA:392:C:H5'	2.44	0.47
36:BA:558:G:P	46:BN:111:PRO:HD2	2.54	0.47
38:BC:63:SER:HA	38:BC:160:ARG:HA	1.95	0.47
41:BF:113:ALA:HB1	41:BF:186:ILE:HG21	1.95	0.47
43:BH:94:TYR:CE1	43:BH:108:GLY:N	2.80	0.47
36:BA:907:U:OP1	49:BQ:24:GLY:N	2.47	0.47
37:BB:115:G:O4'	51:BS:47:THR:HB	2.14	0.47
52:BT:12:SER:C	52:BT:13:ARG:CZ	2.83	0.47
56:BX:25:LYS:HD3	56:BX:80:ILE:HD11	1.96	0.47
57:BY:73:ARG:O	57:BY:74:PRO:O	2.31	0.47
58:BZ:97:GLU:HA	58:BZ:127:LYS:HA	1.96	0.47
1:CA:473:G:H2'	1:CA:474:G:H8	1.79	0.47
4:CD:121:VAL:HG22	4:CD:126:ILE:HG12	1.95	0.47
1:CA:437:U:H5''	4:CD:155:LEU:CD1	2.44	0.47
6:CF:28:ARG:O	6:CF:31:GLU:HB3	2.13	0.47
9:CI:5:TYR:CG	9:CI:6:GLY:N	2.81	0.47
14:CN:27:CYS:SG	14:CN:28:GLY:N	2.87	0.47
18:CR:67:ALA:O	18:CR:71:LYS:HG3	2.14	0.47
25:CZ:113:MET:HG3	25:CZ:114:PRO:CD	2.43	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:D4:45:GLY:O	30:D4:46:GLN:HB2	2.13	0.47
32:D6:15:GLU:CG	32:D6:18:ARG:NH1	2.71	0.47
34:D8:30:ARG:NE	34:D8:30:ARG:HA	2.27	0.47
36:DA:1485:G:O6	36:DA:1504:C:N3	2.47	0.47
36:DA:1537:G:H2'	36:DA:1538:G:H8	1.79	0.47
36:DA:2060:A:H62	41:DF:74:ARG:HH21	1.62	0.47
36:DA:2208:A:O2'	36:DA:2219:G:C8	2.63	0.47
36:DA:2282:G:H5''	36:DA:2283:C:O4'	2.12	0.47
36:DA:2632:A:H2	40:DE:61:ARG:HD2	1.79	0.47
36:DA:2700:C:O2'	36:DA:2701:C:H5'	2.13	0.47
36:DA:2742:C:O2'	36:DA:2743:C:H5'	2.14	0.47
36:DA:2762:G:H2'	36:DA:2763:G:H5'	1.96	0.47
36:DA:609:A:H2'	36:DA:610:G:O4'	2.15	0.47
36:DA:654(N):G:N7	36:DA:654(O):G:C4	2.82	0.47
37:DB:112:U:H2'	37:DB:113:G:C8	2.47	0.47
40:DE:105:THR:HG21	40:DE:164:ARG:HH12	1.78	0.47
43:DH:94:TYR:CE1	43:DH:108:GLY:N	2.79	0.47
47:DO:49:ARG:H	47:DO:49:ARG:CD	2.27	0.47
41:DF:31:HIS:ND1	48:DP:13:ASN:HB2	2.29	0.47
49:DQ:135:ASP:N	49:DQ:137:TYR:CD1	2.78	0.47
1:AA:1314:C:O4'	1:AA:1314:C:O2	2.33	0.47
1:AA:519:C:H2'	1:AA:520:A:O4'	2.14	0.47
1:AA:539:A:H2'	1:AA:540:G:H8	1.79	0.47
1:AA:603:U:H2'	1:AA:604:G:H8	1.78	0.47
1:AA:858:G:C5'	1:AA:858:G:C8	2.94	0.47
4:AD:75:PHE:CE1	4:AD:93:PHE:CZ	3.02	0.47
9:AI:16:ARG:HG3	9:AI:16:ARG:HH11	1.78	0.47
1:AA:1250:A:H5'	9:AI:67:GLY:HA2	1.95	0.47
10:AJ:57:LYS:HZ3	10:AJ:60:ARG:HH22	1.62	0.47
12:AL:59:ARG:HH22	12:AL:63:GLY:HA2	1.79	0.47
1:AA:1308:U:OP1	13:AM:98:VAL:HG22	2.14	0.47
13:AM:2:ALA:N	13:AM:9:ILE:HG23	2.29	0.47
14:AN:26:ARG:NH1	14:AN:47:LEU:HD21	2.22	0.47
16:AP:2:VAL:O	16:AP:64:ALA:HA	2.14	0.47
16:AP:5:ARG:HG3	16:AP:5:ARG:NH1	2.28	0.47
25:AZ:363:MET:HB3	25:AZ:364:PRO:HD2	1.96	0.47
32:B6:52:VAL:HG12	32:B6:53:LYS:HD3	1.95	0.47
32:B6:7:ILE:HG21	32:B6:29:ASN:HD22	1.80	0.47
36:BA:1222:C:C2'	36:BA:1223:G:H5''	2.43	0.47
36:BA:2111:C:H1'	36:BA:2118:U:O4'	2.14	0.47
36:BA:2801(A):A:H5'	36:BA:2802:G:C8	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:547:A:H2'	36:BA:548:A:H8	1.76	0.47
41:BF:119:ARG:HH11	41:BF:119:ARG:HG2	1.80	0.47
42:BG:48:GLU:O	42:BG:50:ALA:N	2.47	0.47
42:BG:96:ARG:O	42:BG:98:ARG:N	2.48	0.47
43:BH:152:ARG:HH11	43:BH:152:ARG:HG3	1.79	0.47
44:BJ:26:UNK:HA	44:BJ:84:UNK:HA	1.95	0.47
45:BK:13:UNK:O	45:BK:52:UNK:HA	2.14	0.47
51:BS:74:ALA:HB2	51:BS:101:LEU:HD13	1.94	0.47
52:BT:102:ILE:HB	52:BT:110:ILE:CD1	2.45	0.47
52:BT:78:LEU:O	52:BT:79:HIS:CD2	2.62	0.47
55:BW:29:LEU:CD1	55:BW:33:ARG:HD2	2.44	0.47
1:CA:1003:G:N2	1:CA:1039:C:N4	2.59	0.47
1:CA:1116:C:H2'	1:CA:1117:G:H5'	1.96	0.47
1:CA:1124:G:C5'	10:CJ:35:SER:HB2	2.41	0.47
1:CA:1221:G:C2'	1:CA:1222:G:H5'	2.44	0.47
1:CA:1314:C:C5	1:CA:1315:U:C4	3.03	0.47
1:CA:542:G:H5'	4:CD:41:GLY:CA	2.44	0.47
6:CF:53:ALA:O	6:CF:54:LYS:HB2	2.13	0.47
6:CF:9:VAL:HG22	6:CF:60:PHE:CE2	2.50	0.47
11:CK:124:LYS:HD2	11:CK:125:PHE:CE2	2.48	0.47
11:CK:48:ILE:HD11	11:CK:67:ASP:HB2	1.96	0.47
12:CL:117:ARG:O	12:CL:118:SER:C	2.50	0.47
14:CN:41:ARG:HG2	14:CN:42:ILE:N	2.29	0.47
17:CQ:40:LYS:HD3	17:CQ:42:TYR:OH	2.14	0.47
25:CZ:187:LYS:HD2	25:CZ:187:LYS:N	2.29	0.47
28:D2:32:LEU:HA	28:D2:53:LEU:HD13	1.95	0.47
31:D5:56:LYS:NZ	31:D5:59:GLU:OE2	2.48	0.47
36:DA:83:G:H22	36:DA:102:G:H2'	1.79	0.47
36:DA:1907:G:O2'	36:DA:1908:C:H5'	2.14	0.47
36:DA:1925:C:O2'	36:DA:1926:U:H5'	2.15	0.47
36:DA:2025:C:H2'	36:DA:2026:C:C6	2.48	0.47
36:DA:2241:A:H2'	36:DA:2242:G:C8	2.50	0.47
36:DA:359:A:C2	36:DA:360:G:H1'	2.48	0.47
36:DA:512:G:O2'	36:DA:513:A:H8	1.98	0.47
36:DA:752:A:H4'	36:DA:753:C:O5'	2.14	0.47
36:DA:904:C:H2'	36:DA:905:U:C6	2.49	0.47
36:DA:907:U:OP1	49:DQ:24:GLY:N	2.46	0.47
38:DC:122:ALA:O	38:DC:126:LYS:HB2	2.14	0.47
38:DC:72:VAL:HG23	38:DC:111:ASP:CB	2.31	0.47
39:DD:10:THR:HG23	39:DD:13:ARG:CB	2.39	0.47
39:DD:72:LYS:NZ	39:DD:75:ILE:HG13	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DE:144:ARG:HG3	40:DE:145:LYS:H	1.80	0.47
40:DE:68:ALA:C	40:DE:70:ALA:H	2.16	0.47
42:DG:107:LEU:HD21	42:DG:178:PHE:CD1	2.49	0.47
42:DG:18:GLU:CG	42:DG:175:LEU:HD13	2.44	0.47
42:DG:180:PHE:C	42:DG:182:LYS:H	2.18	0.47
42:DG:88:ILE:CG2	42:DG:89:GLY:N	2.77	0.47
42:DG:91:ARG:C	42:DG:91:ARG:HD2	2.35	0.47
42:DG:34:LEU:HD11	42:DG:99:MET:HE3	1.96	0.47
43:DH:136:ILE:HD12	43:DH:136:ILE:N	2.29	0.47
43:DH:40:GLU:O	43:DH:41:MET:HB3	2.13	0.47
46:DN:132:ALA:O	46:DN:133:GLN:CB	2.62	0.47
46:DN:22:THR:O	46:DN:25:ARG:HB2	2.14	0.47
34:D8:15:LYS:CG	48:DP:65:ARG:HH21	2.28	0.47
53:DU:59:ARG:CG	53:DU:59:ARG:HH11	2.21	0.47
57:DY:2:ARG:HH11	57:DY:2:ARG:HG2	1.79	0.47
57:DY:73:ARG:HA	57:DY:73:ARG:HE	1.79	0.47
58:DZ:51:ALA:HB1	58:DZ:57:ILE:CD1	2.26	0.47
1:AA:1399:C:H4'	1:AA:1400:C:O5'	2.14	0.47
1:AA:35:G:H2'	1:AA:36:C:H6	1.78	0.47
1:AA:473:G:H2'	1:AA:474:G:H8	1.79	0.47
2:AB:17:PHE:HB3	2:AB:44:LEU:HD21	1.97	0.47
3:AC:29:TYR:O	3:AC:30:ARG:C	2.53	0.47
9:AI:99:LEU:O	9:AI:101:PHE:N	2.47	0.47
10:AJ:85:LEU:C	10:AJ:87:THR:H	2.17	0.47
16:AP:44:THR:O	16:AP:45:THR:HG22	2.14	0.47
20:AT:43:LEU:HB3	20:AT:48:LYS:HB2	1.97	0.47
22:AV:75:C:H2'	22:AV:76:A:O4'	2.14	0.47
25:AZ:325:LYS:HB2	25:AZ:331:HIS:HB3	1.97	0.47
26:B0:51:VAL:CG2	26:B0:81:VAL:HG23	2.44	0.47
29:B3:26:LEU:HB2	29:B3:28:LEU:HD22	1.97	0.47
32:B6:22:ALA:HB2	32:B6:39:TYR:CZ	2.49	0.47
34:B8:23:VAL:CG1	34:B8:46:ARG:HD3	2.44	0.47
36:BA:1166:C:H2'	36:BA:1167:U:H6	1.80	0.47
36:BA:1477:A:C2	36:BA:1515:G:C2	3.03	0.47
36:BA:1536:C:H2'	36:BA:1537:G:H4'	1.94	0.47
36:BA:1632:A:C5	36:BA:1633:G:C6	3.02	0.47
36:BA:2131:G:O4'	36:BA:2133:G:N3	2.48	0.47
36:BA:2292:C:H2'	36:BA:2293:C:H6	1.79	0.47
36:BA:265:A:H1'	36:BA:266:G:O4'	2.13	0.47
36:BA:2777:G:H4'	36:BA:2778:A:H5'	1.97	0.47
31:B5:43:HIS:HE1	36:BA:2884:U:OP2	1.98	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:45:C:H2'	36:BA:47:C:H6	1.74	0.47
36:BA:826:U:H2'	36:BA:828:U:O4'	2.13	0.47
36:BA:926:A:C8	36:BA:926:A:H5'	2.50	0.47
36:BA:996:A:H4'	53:BU:92:ARG:CD	2.44	0.47
39:BD:176:ARG:HG2	39:BD:176:ARG:NH1	2.28	0.47
39:BD:62:TYR:HA	39:BD:87:ASN:HD21	1.80	0.47
42:BG:91:ARG:C	42:BG:91:ARG:CD	2.83	0.47
43:BH:19:VAL:CG1	43:BH:20:ALA:H	2.15	0.47
46:BN:45:ASN:O	46:BN:45:ASN:CG	2.52	0.47
47:BO:35:VAL:CG1	47:BO:69:ILE:HD13	2.43	0.47
48:BP:84:ASN:C	48:BP:86:LYS:N	2.66	0.47
51:BS:16:ASN:O	51:BS:18:ILE:N	2.47	0.47
51:BS:87:PHE:CG	51:BS:88:ASP:N	2.82	0.47
1:AA:345:C:O5'	52:BT:41:ARG:NH2	2.47	0.47
53:BU:92:ARG:CZ	54:BV:11:GLN:H	2.27	0.47
56:BX:13:LEU:HD23	56:BX:18:TYR:HE1	1.80	0.47
57:BY:47:LYS:HD2	57:BY:60:PHE:HE1	1.79	0.47
58:BZ:103:ARG:NH2	58:BZ:136:PHE:CZ	2.82	0.47
58:BZ:128:VAL:CG2	58:BZ:129:SER:H	2.23	0.47
1:CA:1101:A:H4'	1:CA:1102:A:O5'	2.15	0.47
1:CA:1250:A:H5'	9:CI:67:GLY:HA2	1.96	0.47
1:CA:731:G:H5'	1:CA:766:A:H4'	1.95	0.47
4:CD:120:LEU:HB3	4:CD:126:ILE:CD1	2.34	0.47
10:CJ:57:LYS:HZ2	10:CJ:60:ARG:HH22	1.63	0.47
11:CK:125:PHE:C	11:CK:127:LYS:H	2.18	0.47
12:CL:20:LYS:N	12:CL:20:LYS:HD3	2.10	0.47
12:CL:46:LYS:H	12:CL:92:ASP:HB3	1.80	0.47
16:CP:5:ARG:NE	16:CP:22:THR:CG2	2.77	0.47
17:CQ:47:PRO:HG2	17:CQ:48:GLU:H	1.79	0.47
19:CS:16:LEU:O	19:CS:17:GLU:C	2.53	0.47
1:CA:1325:C:H4'	21:CU:17:THR:HG21	1.97	0.47
22:CV:75:C:H2'	22:CV:76:A:O4'	2.14	0.47
25:CZ:176:LEU:O	25:CZ:180:GLU:HG3	2.15	0.47
25:CZ:27:LEU:HD12	25:CZ:27:LEU:C	2.34	0.47
25:CZ:267:VAL:HG23	25:CZ:288:VAL:HG13	1.95	0.47
34:D8:59:LYS:HE3	34:D8:59:LYS:HB2	1.67	0.47
36:DA:1529:G:C2	36:DA:1541:G:N2	2.82	0.47
36:DA:1668:A:N3	36:DA:1670:C:C4	2.82	0.47
36:DA:1720:U:H2'	36:DA:1721:G:O4'	2.13	0.47
36:DA:793:A:OP2	36:DA:2072:G:H5'	2.14	0.47
36:DA:2262:U:O2'	36:DA:2263:C:H5'	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2334:G:H5'	51:DS:13:ARG:HD3	1.97	0.47
36:DA:272(D):G:H1	36:DA:364:C:N4	2.11	0.47
36:DA:652:C:HO2'	36:DA:653:A:P	2.36	0.47
40:DE:14:ILE:HD11	40:DE:173:VAL:CG1	2.41	0.47
41:DF:108:LYS:HB3	41:DF:112:MET:HE3	1.95	0.47
43:DH:104:GLU:HA	43:DH:113:VAL:O	2.14	0.47
43:DH:98:LEU:CB	43:DH:125:VAL:HG21	2.40	0.47
46:DN:39:ARG:C	46:DN:41:ASP:H	2.17	0.47
49:DQ:134:ARG:HA	49:DQ:137:TYR:CE1	2.49	0.47
52:DT:93:ARG:HA	52:DT:93:ARG:HD2	1.63	0.47
53:DU:92:ARG:NH1	54:DV:11:GLN:O	2.48	0.47
1:AA:1125:U:C5'	1:AA:1126:U:H5	2.27	0.47
1:AA:1152:A:H2'	1:AA:1153:C:C6	2.50	0.47
1:AA:1492:A:H1'	23:AX:23:G:O2'	2.15	0.47
1:AA:173:U:H5''	1:AA:197:A:O4'	2.15	0.47
1:AA:399:G:H2'	1:AA:400:C:C6	2.49	0.47
1:AA:405:U:O2	1:AA:498:U:H2'	2.15	0.47
3:AC:25:GLY:O	3:AC:26:LYS:C	2.52	0.47
4:AD:194:LEU:HB3	4:AD:196:LEU:CD1	2.35	0.47
5:AE:148:VAL:HG21	8:AH:107:LEU:HD13	1.97	0.47
8:AH:30:ARG:CB	8:AH:30:ARG:NH1	2.77	0.47
8:AH:86:ILE:HG12	8:AH:135:CYS:HA	1.96	0.47
9:AI:126:SER:O	9:AI:127:LYS:CB	2.62	0.47
13:AM:91:ARG:HB2	13:AM:98:VAL:HG12	1.95	0.47
20:AT:89:ARG:HB2	20:AT:104:LEU:HD12	1.96	0.47
25:AZ:107:SER:CB	25:AZ:137:LYS:HD2	2.44	0.47
25:AZ:311:THR:HB	25:AZ:312:PRO:HD2	1.96	0.47
27:B1:7:ILE:CD1	27:B1:70:VAL:HG22	2.45	0.47
29:B3:1:MET:CE	29:B3:40:THR:HG22	2.44	0.47
32:B6:32:ASN:O	32:B6:33:LYS:HB2	2.14	0.47
36:BA:1528(A):A:H62	36:BA:1541:G:H21	1.59	0.47
36:BA:2052:G:C8	40:BE:141:ILE:HD11	2.49	0.47
36:BA:2347:C:H2'	36:BA:2348:U:C6	2.50	0.47
36:BA:253:C:H2'	36:BA:254:G:O4'	2.15	0.47
36:BA:535:C:O2'	36:BA:536:A:H5'	2.14	0.47
36:BA:580:C:H2'	36:BA:581:C:C6	2.48	0.47
36:BA:664:C:O2'	36:BA:665:C:H5'	2.15	0.47
36:BA:852:G:H2'	36:BA:853:G:C8	2.49	0.47
36:BA:90:U:O3'	36:BA:92:A:O4'	2.33	0.47
38:BC:73:ARG:H	38:BC:111:ASP:CG	2.18	0.47
39:BD:142:VAL:HG21	39:BD:191:ALA:CB	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BF:3:GLU:O	41:BF:19:GLU:HG3	2.15	0.47
42:BG:97:ASP:H	42:BG:100:TRP:HD1	1.63	0.47
42:BG:182:LYS:HD2	42:BG:182:LYS:N	2.29	0.47
43:BH:104:GLU:HA	43:BH:113:VAL:O	2.14	0.47
43:BH:137:ASP:OD2	43:BH:140:LYS:HE3	2.14	0.47
46:BN:11:PRO:O	46:BN:13:TRP:N	2.47	0.47
49:BQ:60:ARG:CZ	49:BQ:60:ARG:HB3	2.44	0.47
55:BW:37:ARG:HG3	55:BW:37:ARG:NH1	2.29	0.47
56:BX:14:SER:H	56:BX:17:ALA:HB3	1.79	0.47
57:BY:39:VAL:HG12	57:BY:40:GLU:N	2.28	0.47
57:BY:75:ILE:HG13	57:BY:76:CYS:H	1.79	0.47
58:BZ:112:ARG:O	58:BZ:113:ALA:O	2.32	0.47
1:CA:189(K):U:H2'	1:CA:189(L):G:H8	1.79	0.47
1:CA:770:C:O2'	1:CA:771:G:H5'	2.13	0.47
2:CB:72:GLY:HA2	2:CB:165:VAL:HG22	1.95	0.47
1:CA:408:A:H4'	4:CD:112:VAL:HG11	1.96	0.47
4:CD:19:LEU:HD23	4:CD:67:ILE:HD12	1.96	0.47
5:CE:40:ARG:HH11	5:CE:40:ARG:HG2	1.79	0.47
9:CI:111:ARG:HG2	9:CI:112:LYS:N	2.29	0.47
9:CI:90:PRO:O	9:CI:91:ASP:O	2.32	0.47
12:CL:45:PRO:O	12:CL:46:LYS:O	2.33	0.47
12:CL:75:HIS:CD2	12:CL:77:LEU:H	2.32	0.47
13:CM:108:ARG:NH2	13:CM:114:ARG:HA	2.30	0.47
18:CR:25:THR:HG22	18:CR:42:ARG:HH11	1.79	0.47
6:CF:97:PHE:O	18:CR:31:LEU:HD23	2.14	0.47
25:CZ:107:SER:HB2	25:CZ:137:LYS:HD2	1.95	0.47
25:CZ:90:LYS:NZ	25:CZ:90:LYS:HB2	2.29	0.47
29:D3:7:LYS:HE2	29:D3:32:GLN:OE1	2.14	0.47
32:D6:20:ASN:OD1	32:D6:21:TYR:N	2.48	0.47
32:D6:11:LEU:HD11	32:D6:26:ASN:HB2	1.97	0.47
34:D8:17:THR:OG1	34:D8:21:LYS:HB2	2.14	0.47
35:D9:19:ARG:HG3	35:D9:20:HIS:ND1	2.30	0.47
36:DA:1288:U:C2	36:DA:1327:C:O2	2.67	0.47
36:DA:142:A:H1'	36:DA:1408:C:C1'	2.45	0.47
36:DA:1681:G:O2'	36:DA:1762:A:C2'	2.59	0.47
36:DA:1747:G:H2'	36:DA:1747(A):G:C8	2.50	0.47
36:DA:2131:G:O4'	36:DA:2133:G:N3	2.47	0.47
36:DA:2801(A):A:H5'	36:DA:2802:G:C8	2.49	0.47
36:DA:2833:G:C3'	36:DA:2834:G:C5'	2.78	0.47
36:DA:425:G:O2'	36:DA:426:C:H5'	2.14	0.47
37:DB:28:C:O2'	37:DB:29:A:H5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DD:24:ILE:C	39:DD:26:LYS:N	2.66	0.47
39:DD:35:LYS:HB3	39:DD:36:PRO:CD	2.45	0.47
40:DE:108:SER:O	40:DE:162:ALA:HA	2.14	0.47
40:DE:98:PRO:HG3	40:DE:175:VAL:HG12	1.96	0.47
41:DF:118:ALA:HA	41:DF:123:LEU:HB3	1.96	0.47
47:DO:35:VAL:CG2	47:DO:103:ALA:HB3	2.40	0.47
48:DP:95:VAL:CG2	48:DP:125:VAL:HA	2.45	0.47
51:DS:85:VAL:C	51:DS:106:ARG:HG3	2.34	0.47
52:DT:78:LEU:O	52:DT:79:HIS:CD2	2.65	0.47
53:DU:99:ALA:HB2	53:DU:106:PHE:CE1	2.49	0.47
58:DZ:108:PRO:C	58:DZ:110:GLY:N	2.67	0.47
58:DZ:57:ILE:N	58:DZ:69:THR:O	2.41	0.47
1:AA:1006:C:H2'	1:AA:1007:C:C5	2.50	0.47
1:AA:69:G:H1	1:AA:100:C:H42	1.63	0.47
1:AA:1286:A:O2'	1:AA:1287:A:P	2.72	0.47
1:AA:1303:C:H2'	1:AA:1304:G:H5'	1.95	0.47
1:AA:635:G:O2'	1:AA:636:U:H5'	2.13	0.47
1:AA:71:C:H2'	1:AA:72:C:C6	2.49	0.47
1:AA:940:C:O2'	1:AA:941:G:H5'	2.14	0.47
1:AA:977:A:N6	1:AA:1224:G:O5'	2.47	0.47
1:AA:995:C:O2'	1:AA:996:A:H8	1.97	0.47
2:AB:131:PRO:CG	2:AB:134:GLU:HG2	2.31	0.47
2:AB:72:GLY:HA2	2:AB:165:VAL:HG22	1.96	0.47
2:AB:229:VAL:CG1	2:AB:230:VAL:N	2.69	0.47
3:AC:137:ALA:O	3:AC:141:VAL:HG23	2.14	0.47
5:AE:80:ILE:CD1	5:AE:142:LEU:HD21	2.44	0.47
10:AJ:3:LYS:O	10:AJ:100:THR:HA	2.14	0.47
19:AS:29:ARG:O	19:AS:31:ILE:HG22	2.13	0.47
25:AZ:139:ASP:OD2	25:AZ:177:LEU:HD11	2.15	0.47
25:AZ:352:VAL:HG12	25:AZ:353:VAL:N	2.29	0.47
26:B0:43:THR:O	26:B0:43:THR:HG23	2.15	0.47
26:B0:51:VAL:HG22	26:B0:81:VAL:HG23	1.97	0.47
36:BA:142:A:H1'	36:BA:1408:C:C1'	2.44	0.47
36:BA:1498:C:O4'	36:BA:1577:C:H4'	2.14	0.47
36:BA:1773:A:H2'	36:BA:1774:C:H5'	1.97	0.47
36:BA:688:U:H5'	36:BA:1780:A:C2	2.49	0.47
36:BA:1952:A:C2	47:BO:22:ILE:HG23	2.49	0.47
36:BA:201:C:C2'	36:BA:202:U:H5'	2.45	0.47
36:BA:2056:G:H2'	36:BA:2056:G:N3	2.29	0.47
36:BA:189:G:H2'	36:BA:205:G:H22	1.80	0.47
36:BA:605:C:H1'	36:BA:657:U:O2'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:64:A:O2'	36:BA:65:C:H5'	2.15	0.47
36:BA:6:A:O2'	46:BN:130:HIS:HB2	2.15	0.47
37:BB:22:U:H2'	37:BB:23:G:C8	2.50	0.47
38:BC:72:VAL:HG11	38:BC:156:ILE:O	2.14	0.47
36:BA:773:U:H4'	39:BD:47:GLY:HA3	1.96	0.47
40:BE:70:ALA:O	40:BE:71:GLY:C	2.53	0.47
42:BG:55:LYS:HG3	42:BG:58:GLN:NE2	2.29	0.47
46:BN:129:PRO:O	46:BN:130:HIS:CB	2.60	0.47
50:BR:18:LEU:HD11	50:BR:22:ARG:CZ	2.43	0.47
51:BS:25:ARG:HD2	51:BS:88:ASP:OD2	2.14	0.47
51:BS:75:GLU:O	51:BS:76:LYS:HB2	2.14	0.47
36:BA:2717:G:O2'	52:BT:96:ARG:HD3	2.15	0.47
53:BU:110:VAL:O	53:BU:113:ALA:HB3	2.14	0.47
53:BU:92:ARG:HB2	54:BV:11:GLN:NE2	2.29	0.47
55:BW:29:LEU:CG	55:BW:33:ARG:HD2	2.43	0.47
1:CA:1261:A:H2'	1:CA:1262:C:H5'	1.97	0.47
1:CA:1485:U:O2'	1:CA:1486:G:H5'	2.15	0.47
1:CA:263:A:OP2	20:CT:79:ARG:NH1	2.47	0.47
1:CA:160:A:H1'	1:CA:344:A:C5	2.50	0.47
1:CA:495:A:O2'	1:CA:496:A:P	2.73	0.47
3:CC:130:VAL:HG21	3:CC:157:ILE:HG23	1.97	0.47
4:CD:177:ASP:O	4:CD:181:MET:N	2.47	0.47
4:CD:85:LYS:HD3	4:CD:92:VAL:HG11	1.97	0.47
5:CE:144:THR:N	5:CE:147:ASP:OD1	2.42	0.47
5:CE:36:ASP:OD1	5:CE:38:GLN:N	2.46	0.47
6:CF:2:ARG:HD2	6:CF:69:GLU:HB3	1.97	0.47
16:CP:3:LYS:HG2	16:CP:65:GLN:O	2.15	0.47
20:CT:82:SER:O	20:CT:86:ARG:HB2	2.14	0.47
25:CZ:14:VAL:HG23	25:CZ:79:HIS:HA	1.96	0.47
25:CZ:333:GLY:CA	25:CZ:363:MET:HA	2.45	0.47
29:D3:1:MET:CE	29:D3:40:THR:HG22	2.44	0.47
32:D6:22:ALA:HB2	32:D6:39:TYR:CE2	2.50	0.47
34:D8:7:HIS:N	34:D8:11:LYS:HE2	2.29	0.47
34:D8:28:GLY:C	34:D8:32:LEU:HD22	2.35	0.47
36:DA:1108:U:H3'	36:DA:1109:C:H6	1.80	0.47
36:DA:1257:C:H2'	36:DA:1258:C:C6	2.47	0.47
36:DA:1517:G:O2'	36:DA:1518:U:H5'	2.14	0.47
36:DA:2126:A:O2'	36:DA:2127:G:OP2	2.30	0.47
36:DA:2292:C:H2'	36:DA:2293:C:C6	2.49	0.47
36:DA:2292:C:H2'	36:DA:2293:C:H6	1.78	0.47
36:DA:2352:A:C4	36:DA:2366:A:C2	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:236:C:H2'	36:DA:237:C:C6	2.49	0.47
36:DA:2636:U:O5'	40:DE:80:GLU:HG3	2.14	0.47
36:DA:331:A:C1'	36:DA:332:A:OP1	2.63	0.47
36:DA:958:U:H5''	49:DQ:14:ARG:HD3	1.94	0.47
38:DC:195:ALA:O	38:DC:198:ALA:HB3	2.15	0.47
39:DD:169:GLU:OE1	39:DD:184:LYS:HD3	2.14	0.47
39:DD:61:LEU:HA	39:DD:61:LEU:HD12	1.74	0.47
40:DE:48:GLN:HA	40:DE:80:GLU:HA	1.96	0.47
48:DP:61:ARG:H	48:DP:61:ARG:HG3	1.46	0.47
51:DS:75:GLU:O	51:DS:76:LYS:HB2	2.15	0.47
40:DE:14:ILE:HB	52:DT:14:TYR:CZ	2.50	0.47
57:DY:2:ARG:HD2	57:DY:3:VAL:HG23	1.97	0.47
58:DZ:72:ARG:HG2	58:DZ:89:PHE:HB2	1.95	0.47
1:AA:1262:C:H2'	1:AA:1263:C:H6	1.79	0.47
1:AA:160:A:H1'	1:AA:344:A:C5	2.50	0.47
1:AA:222:U:H2'	1:AA:223:U:C6	2.50	0.47
1:AA:59:A:H3'	1:AA:331:G:N2	2.25	0.47
3:AC:206:GLU:O	3:AC:207:VAL:C	2.52	0.47
6:AF:22:GLU:O	6:AF:25:ILE:HG22	2.15	0.47
12:AL:35:GLY:O	12:AL:82:VAL:HG13	2.15	0.47
25:AZ:135:MET:HE1	25:AZ:150:VAL:HB	1.97	0.47
28:B2:12:GLU:O	28:B2:15:LYS:HG2	2.14	0.47
32:B6:10:LEU:HD22	32:B6:10:LEU:H	1.76	0.47
36:BA:118:A:H5'	36:BA:119:A:H8	1.79	0.47
36:BA:1963:U:H2'	36:BA:1963:U:O2	2.14	0.47
36:BA:2033:A:O2'	36:BA:2034:U:P	2.73	0.47
36:BA:2247:A:O2'	36:BA:2248:C:H5'	2.14	0.47
36:BA:2282:G:H5''	36:BA:2283:C:O4'	2.14	0.47
36:BA:2485:G:O2'	36:BA:2486:G:H5'	2.15	0.47
36:BA:2811:G:C2'	36:BA:2812:G:H5'	2.44	0.47
36:BA:623:G:H2'	36:BA:624:C:C6	2.49	0.47
36:BA:733:G:N7	36:BA:761:A:C5	2.83	0.47
36:BA:664:C:O4'	36:BA:940:G:H5''	2.15	0.47
29:B3:11:SER:HB3	36:BA:988:A:P	2.54	0.47
39:BD:30:GLU:CA	39:BD:35:LYS:HZ2	2.28	0.47
40:BE:14:ILE:HD11	40:BE:173:VAL:CG1	2.40	0.47
42:BG:146:TYR:C	42:BG:148:MET:H	2.18	0.47
46:BN:34:LEU:HD13	46:BN:34:LEU:O	2.14	0.47
46:BN:43:THR:HG22	46:BN:45:ASN:HD22	1.80	0.47
46:BN:65:LYS:HB3	46:BN:65:LYS:NZ	2.29	0.47
58:BZ:171:ILE:HD13	58:BZ:172:ALA:N	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:920:U:O4'	1:CA:1080:A:C2	2.67	0.47
1:CA:434:U:H2'	1:CA:435:C:H6	1.77	0.47
1:CA:674:G:H4'	18:CR:81:PHE:CD2	2.50	0.47
1:CA:955:U:O2'	1:CA:956:U:H5'	2.14	0.47
2:CB:126:GLU:O	2:CB:129:GLU:HB2	2.15	0.47
2:CB:97:TRP:HH2	2:CB:176:GLU:CD	2.18	0.47
2:CB:178:ARG:NH1	2:CB:178:ARG:HG3	2.29	0.47
3:CC:16:ARG:HH11	3:CC:16:ARG:CB	2.28	0.47
3:CC:81:GLY:O	3:CC:82:GLU:C	2.52	0.47
5:CE:15:ARG:HD2	5:CE:26:PHE:CG	2.50	0.47
8:CH:10:LEU:CD2	8:CH:83:ILE:HD11	2.45	0.47
12:CL:59:ARG:HH22	12:CL:63:GLY:HA2	1.80	0.47
13:CM:28:ALA:O	13:CM:32:GLU:HB2	2.14	0.47
13:CM:37:THR:O	13:CM:39:ILE:HG13	2.15	0.47
20:CT:47:GLY:C	20:CT:49:ALA:H	2.12	0.47
22:CW:59:U:H3'	22:CW:60:U:C6	2.50	0.47
24:CY:40:C:H2'	24:CY:41:C:H5'	1.96	0.47
24:CY:72:U:C3'	24:CY:73:G:H5''	2.44	0.47
25:CZ:341:GLN:NE2	25:CZ:389:ARG:O	2.47	0.47
31:D5:41:PRO:O	31:D5:44:THR:OG1	2.29	0.47
33:D7:1:MET:H3	33:D7:1:MET:HE3	1.79	0.47
36:DA:1543:C:C3'	36:DA:1544:A:C5'	2.81	0.47
36:DA:1658:C:H2'	36:DA:1659:U:C6	2.50	0.47
36:DA:2186:G:H2'	36:DA:2187:G:N9	2.29	0.47
36:DA:21:A:O2'	36:DA:22:C:H5'	2.14	0.47
36:DA:2554:U:H2'	36:DA:2555:U:C6	2.50	0.47
36:DA:2651:C:O2'	36:DA:2652:C:H5'	2.15	0.47
36:DA:2887:U:H2'	36:DA:2888:C:C6	2.49	0.47
36:DA:664:C:O2'	36:DA:665:C:H5'	2.15	0.47
39:DD:48:ARG:NH1	39:DD:48:ARG:HG3	2.29	0.47
40:DE:49:LEU:HD11	40:DE:91:VAL:HG21	1.97	0.47
41:DF:132:VAL:HG13	41:DF:133:ASN:N	2.30	0.47
30:D4:25:TYR:HE2	42:DG:2:PRO:HB3	1.79	0.47
43:DH:101:ARG:O	43:DH:117:PRO:HG3	2.14	0.47
46:DN:62:VAL:HG13	46:DN:62:VAL:O	2.15	0.47
48:DP:71:VAL:CG1	48:DP:72:PRO:HD3	2.44	0.47
50:DR:28:LEU:HD12	50:DR:114:VAL:HG21	1.95	0.47
50:DR:17:ARG:O	50:DR:20:LEU:HB3	2.14	0.47
51:DS:99:LYS:HB3	51:DS:99:LYS:HZ3	1.77	0.47
54:DV:100:ARG:HG3	54:DV:100:ARG:O	2.15	0.47
54:DV:49:THR:CB	54:DV:50:PRO:CD	2.92	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:DW:62:HIS:O	55:DW:63:ASP:C	2.53	0.47
56:DX:13:LEU:HD23	56:DX:18:TYR:HE1	1.79	0.47
58:DZ:29:TYR:CB	58:DZ:34:ASN:CB	2.92	0.47
1:AA:1226:C:C5	13:AM:104:ARG:HB2	2.49	0.47
1:AA:1417:G:N2	1:AA:1482:G:H2'	2.30	0.47
1:AA:21:G:H2'	1:AA:22:G:C8	2.49	0.47
1:AA:28:G:O2'	1:AA:296:U:OP1	2.28	0.47
1:AA:405:U:O2	1:AA:498:U:C6	2.68	0.47
1:AA:792:A:H4'	1:AA:793:U:O5'	2.15	0.47
3:AC:108:ASN:ND2	3:AC:144:SER:OG	2.48	0.47
3:AC:150:LYS:HG3	3:AC:169:ALA:HB2	1.97	0.47
6:AF:47:ARG:O	6:AF:47:ARG:HG3	2.15	0.47
6:AF:9:VAL:HG22	6:AF:60:PHE:CE2	2.50	0.47
16:AP:12:LYS:HG2	16:AP:13:HIS:CD2	2.50	0.47
20:AT:57:ARG:NH1	20:AT:102:GLY:HA2	2.13	0.47
20:AT:22:ARG:O	20:AT:26:ASN:ND2	2.48	0.47
22:AW:39:U:H2'	22:AW:40:C:H5'	1.96	0.47
25:AZ:171:ILE:HG13	25:AZ:202:LEU:HA	1.97	0.47
32:B6:9:LEU:C	32:B6:9:LEU:HD13	2.35	0.47
34:B8:59:LYS:O	34:B8:61:LEU:HD12	2.15	0.47
36:BA:1222:C:H2'	36:BA:1223:G:H5'	1.97	0.47
36:BA:1665:A:H2'	36:BA:1666:G:O4'	2.15	0.47
36:BA:315:G:H2'	36:BA:316:C:C6	2.50	0.47
36:BA:323:G:H2'	41:BF:169:ASN:HD21	1.77	0.47
36:BA:742:G:O2'	36:BA:743:G:H5'	2.15	0.47
36:BA:824:A:H1'	36:BA:2358:G:N7	2.28	0.47
36:BA:896:A:H5''	58:BZ:146:ILE:HG13	1.97	0.47
40:BE:93:VAL:C	40:BE:95:ILE:H	2.18	0.47
43:BH:152:ARG:NH1	43:BH:152:ARG:HG3	2.29	0.47
48:BP:101:VAL:HG12	48:BP:106:LEU:HB2	1.95	0.47
49:BQ:6:ARG:O	49:BQ:7:MET:HG3	2.15	0.47
50:BR:28:LEU:HD23	50:BR:29:LEU:HD12	1.97	0.47
50:BR:51:LEU:HG	50:BR:66:VAL:HG13	1.95	0.47
57:BY:17:SER:HA	57:BY:71:LYS:HD2	1.96	0.47
1:CA:1118:C:H1'	1:CA:1179:A:C4	2.50	0.47
1:CA:276:G:O3'	17:CQ:68:ARG:NH1	2.45	0.47
1:CA:577:G:O2'	1:CA:578:C:H5'	2.14	0.47
1:CA:69:G:H1	1:CA:100:C:H42	1.63	0.47
1:CA:71:C:H2'	1:CA:72:C:C6	2.49	0.47
1:CA:828:A:H4'	1:CA:828:A:OP1	2.15	0.47
2:CB:71:VAL:O	2:CB:164:VAL:HA	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:132:ARG:O	3:CC:136:GLN:HB2	2.14	0.47
4:CD:6:GLY:O	4:CD:8:VAL:HG13	2.15	0.47
1:CA:825:G:N2	8:CH:11:THR:HG21	2.30	0.47
8:CH:86:ILE:HG12	8:CH:135:CYS:HA	1.97	0.47
9:CI:118:LYS:O	9:CI:119:ALA:CB	2.59	0.47
12:CL:17:LYS:HD3	12:CL:18:VAL:H	1.78	0.47
1:CA:1316:G:O2'	14:CN:18:VAL:HG21	2.14	0.47
18:CR:26:LEU:N	18:CR:26:LEU:HD12	2.30	0.47
25:CZ:98:GLN:HG2	25:CZ:226:GLU:OE2	2.14	0.47
36:DA:1142(A):A:C8	36:DA:1142(A):A:H5'	2.50	0.47
36:DA:1632:A:C5	36:DA:1633:G:C6	3.03	0.47
36:DA:208:C:H2'	36:DA:209:C:C6	2.50	0.47
36:DA:2364:C:H2'	36:DA:2365:G:O4'	2.15	0.47
36:DA:2762:G:C2'	36:DA:2763:G:H5'	2.44	0.47
36:DA:2762:G:H2'	36:DA:2763:G:C5'	2.45	0.47
36:DA:27:G:N2	36:DA:512:G:C2'	2.69	0.47
36:DA:2818:G:O2'	36:DA:2837:G:H5'	2.15	0.47
36:DA:32:C:H6	36:DA:32:C:H5'	1.78	0.47
36:DA:480:A:H1'	57:DY:44:ILE:HG21	1.97	0.47
36:DA:580:C:H2'	36:DA:581:C:C6	2.50	0.47
36:DA:80:G:O2'	36:DA:81:G:H5'	2.14	0.47
39:DD:130:ALA:HB2	39:DD:192:THR:HB	1.97	0.47
39:DD:275:LYS:HD2	39:DD:275:LYS:C	2.34	0.47
40:DE:65:GLY:HA2	40:DE:70:ALA:CB	2.44	0.47
42:DG:133:LEU:CD2	42:DG:157:ILE:HB	2.44	0.47
43:DH:104:GLU:OE1	43:DH:106:THR:HG23	2.15	0.47
46:DN:3:THR:CG2	46:DN:4:TYR:N	2.78	0.47
46:DN:62:VAL:HG23	46:DN:66:LYS:HD2	1.93	0.47
47:DO:66:LYS:H	47:DO:82:ASN:ND2	2.13	0.47
50:DR:118:GLU:HA	50:DR:118:GLU:OE1	2.15	0.47
52:DT:33:LYS:HD2	52:DT:43:GLN:CB	2.45	0.47
52:DT:48:ILE:HD12	52:DT:48:ILE:C	2.34	0.47
58:DZ:150:LEU:O	58:DZ:151:HIS:HB3	2.15	0.47
1:AA:1005:A:C3'	1:AA:1006:C:H5'	2.44	0.47
1:AA:401:C:H1'	1:AA:622:A:H1'	1.96	0.47
1:AA:821:G:H2'	1:AA:822:C:H6	1.80	0.47
1:AA:961:U:H5'	1:AA:984:C:H1'	1.97	0.47
3:AC:86:VAL:O	3:AC:89:GLU:HB3	2.15	0.47
4:AD:6:GLY:O	4:AD:8:VAL:HG13	2.15	0.47
5:AE:72:GLN:O	5:AE:75:THR:HG22	2.15	0.47
18:AR:26:LEU:HD12	18:AR:26:LEU:N	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:82:SER:O	20:AT:86:ARG:HB2	2.14	0.47
20:AT:94:ALA:O	20:AT:95:ALA:HB3	2.15	0.47
22:AW:5:G:N2	22:AW:68:C:C2	2.83	0.47
25:AZ:146:LEU:O	25:AZ:150:VAL:HG23	2.15	0.47
25:AZ:164:PRO:O	25:AZ:168:VAL:HG23	2.14	0.47
25:AZ:133:VAL:O	25:AZ:170:VAL:HA	2.14	0.47
27:B1:52:ARG:NH1	27:B1:57:GLU:HB2	2.29	0.47
27:B1:81:LYS:HE2	36:BA:156:U:H5'	1.97	0.47
29:B3:48:GLU:H	29:B3:48:GLU:HG2	1.52	0.47
32:B6:15:GLU:OE1	32:B6:18:ARG:CZ	2.58	0.47
36:BA:1472:A:C2'	36:BA:1473:G:H5'	2.45	0.47
36:BA:1484:G:C3'	36:BA:1485:G:H5''	2.43	0.47
36:BA:1773:A:C2'	36:BA:1774:C:H5'	2.45	0.47
36:BA:2186:G:H2'	36:BA:2187:G:N9	2.29	0.47
36:BA:2262:U:H4'	36:BA:2328:A:C2	2.50	0.47
36:BA:2292:C:H2'	36:BA:2293:C:C6	2.50	0.47
36:BA:2555:U:C2'	36:BA:2556:C:H5'	2.44	0.47
36:BA:2632:A:H2	40:BE:61:ARG:HD2	1.80	0.47
36:BA:2746:U:O2'	36:BA:2747:G:H5'	2.14	0.47
36:BA:2772:C:H2'	36:BA:2773:C:H6	1.80	0.47
36:BA:855:G:H2'	36:BA:856:C:C6	2.50	0.47
37:BB:114:C:O2'	51:BS:46:VAL:HG13	2.15	0.47
37:BB:93:G:H2'	37:BB:94:C:C6	2.50	0.47
38:BC:18:LYS:HD3	38:BC:20:TYR:CZ	2.49	0.47
40:BE:13:ARG:O	52:BT:57:PHE:HE2	1.98	0.47
41:BF:129:PHE:CD2	41:BF:163:VAL:HG21	2.50	0.47
46:BN:128:HIS:O	46:BN:128:HIS:CG	2.68	0.47
48:BP:102:ARG:NH1	48:BP:102:ARG:HB2	2.28	0.47
48:BP:102:ARG:CB	48:BP:102:ARG:HH11	2.28	0.47
48:BP:62:LEU:O	48:BP:62:LEU:HG	2.15	0.47
51:BS:15:ARG:NH1	51:BS:18:ILE:HD11	2.29	0.47
52:BT:28:VAL:HB	52:BT:88:ILE:HG12	1.95	0.47
52:BT:89:VAL:HG12	52:BT:91:ARG:HG3	1.94	0.47
57:BY:6:HIS:H	57:BY:6:HIS:CD2	2.33	0.47
58:BZ:128:VAL:CG2	58:BZ:129:SER:N	2.78	0.47
58:BZ:14:LYS:HB2	58:BZ:17:ALA:HB3	1.97	0.47
1:CA:1522:U:O2'	1:CA:1523:G:H5'	2.15	0.47
1:CA:245:C:O2'	1:CA:246:A:P	2.73	0.47
1:CA:39:G:O2'	1:CA:40:C:H5'	2.14	0.47
1:CA:59:A:C5'	1:CA:60:A:H5''	2.45	0.47
2:CB:27:LYS:HD2	2:CB:193:ASP:OD1	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:126:ILE:CG2	4:CD:127:THR:N	2.78	0.47
1:CA:426:G:P	4:CD:36:ARG:NH2	2.86	0.47
4:CD:5:ILE:O	4:CD:5:ILE:HG22	2.13	0.47
7:CG:97:GLN:O	7:CG:101:LEU:HG	2.15	0.47
10:CJ:55:LYS:HZ2	10:CJ:55:LYS:CA	2.27	0.47
10:CJ:71:LEU:HD12	10:CJ:72:VAL:H	1.78	0.47
12:CL:127:GLU:O	12:CL:128:ALA:C	2.53	0.47
14:CN:39:LEU:CD1	14:CN:47:LEU:HD12	2.44	0.47
15:CO:82:ILE:HD13	15:CO:87:ILE:HB	1.96	0.47
24:CY:61:C:C2'	24:CY:62:U:H5''	2.45	0.47
25:CZ:22:HIS:O	25:CZ:137:LYS:HE2	2.15	0.47
25:CZ:270:VAL:CG1	25:CZ:286:VAL:HG21	2.44	0.47
25:CZ:5:PHE:CD1	25:CZ:5:PHE:C	2.88	0.47
26:D0:55:ARG:HE	26:D0:55:ARG:HB3	1.34	0.47
31:D5:43:HIS:CD2	36:DA:2815:C:O2'	2.68	0.47
36:DA:1097:U:H2'	36:DA:1098:A:H8	1.80	0.47
36:DA:1485:G:H1'	36:DA:1505:C:N4	2.30	0.47
36:DA:2100:G:H1	36:DA:2189:U:H3	1.62	0.47
36:DA:2543:G:H5'	36:DA:2543:G:H8	1.80	0.47
36:DA:391:G:C2'	36:DA:392:C:H5'	2.45	0.47
36:DA:603:A:N3	36:DA:604:G:H1'	2.29	0.47
36:DA:978:G:C2	36:DA:986:C:N3	2.83	0.47
37:DB:22:U:H2'	37:DB:23:G:C8	2.50	0.47
41:DF:162:LEU:HA	41:DF:165:ARG:NH1	2.30	0.47
46:DN:19:GLU:O	46:DN:59:LYS:HB3	2.14	0.47
48:DP:108:LYS:HD2	48:DP:108:LYS:N	2.30	0.47
51:DS:54:LEU:HD11	51:DS:58:LEU:O	2.15	0.47
53:DU:93:LYS:O	53:DU:96:ALA:HB3	2.15	0.47
58:DZ:66:SER:C	58:DZ:67:LEU:HD12	2.35	0.47
1:AA:1095:U:P	1:AA:1108:G:H1	2.38	0.47
1:AA:1261:A:H2'	1:AA:1262:C:H5'	1.97	0.47
1:AA:1320:C:C5'	1:AA:1320:C:H6	2.18	0.47
1:AA:152:A:N6	1:AA:170:U:C2	2.83	0.47
1:AA:526:C:OP2	12:AL:91:LYS:HE3	2.15	0.47
1:AA:714:G:H2'	1:AA:715:A:C8	2.50	0.47
4:AD:45:GLN:O	4:AD:46:LYS:HG2	2.15	0.47
5:AE:40:ARG:NH1	5:AE:40:ARG:HG2	2.30	0.47
6:AF:86:ARG:H	6:AF:86:ARG:HG2	1.39	0.47
8:AH:108:GLY:HA3	8:AH:138:TRP:HB3	1.96	0.47
7:AG:37:ASN:HD21	9:AI:40:LEU:HA	1.79	0.47
9:AI:53:VAL:C	9:AI:55:ALA:N	2.68	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:5:TYR:CG	9:AI:6:GLY:N	2.83	0.47
11:AK:67:ASP:O	11:AK:71:LYS:HG3	2.14	0.47
17:AQ:59:ILE:CG2	17:AQ:71:PHE:HB3	2.45	0.47
26:B0:38:VAL:HB	26:B0:59:LEU:HD12	1.96	0.47
26:B0:40:GLN:NE2	26:B0:44:ARG:N	2.63	0.47
28:B2:46:GLN:O	28:B2:48:HIS:ND1	2.48	0.47
28:B2:63:VAL:O	28:B2:66:GLU:OE2	2.33	0.47
30:B4:37:SER:O	30:B4:38:LYS:CB	2.63	0.47
32:B6:25:LYS:HD2	36:BA:2285:C:N4	2.28	0.47
34:B8:61:LEU:N	34:B8:63:PRO:HD2	2.30	0.47
35:B9:29:ASN:ND2	35:B9:29:ASN:O	2.48	0.47
36:BA:83:G:H22	36:BA:102:G:H2'	1.79	0.47
36:BA:1542:A:H5'	36:BA:1543:C:OP2	2.15	0.47
36:BA:158:U:H3'	36:BA:158:U:O2	2.15	0.47
36:BA:1668:A:N3	36:BA:1670:C:C4	2.83	0.47
36:BA:1817:G:OP1	39:BD:88:ARG:NH2	2.42	0.47
36:BA:2025:C:H2'	36:BA:2026:C:C6	2.48	0.47
36:BA:2352:A:C4	36:BA:2366:A:C2	3.02	0.47
36:BA:2473:U:H5	36:BA:2474:C:C5	2.33	0.47
36:BA:2477:C:O5'	36:BA:2477:C:H6	1.97	0.47
36:BA:2488:A:O2'	36:BA:2489:G:H5'	2.15	0.47
36:BA:2543:G:H8	36:BA:2543:G:H5'	1.80	0.47
36:BA:2687:U:C4	36:BA:2688:U:C5	3.03	0.47
36:BA:876:C:H2'	36:BA:877:U:O4'	2.14	0.47
37:BB:58:A:H2'	37:BB:59:A:O4'	2.15	0.47
39:BD:169:GLU:OE1	39:BD:184:LYS:HD3	2.15	0.47
41:BF:199:TRP:HZ3	41:BF:203:GLN:OE1	1.97	0.47
42:BG:109:VAL:HG12	42:BG:142:PRO:HD3	1.97	0.47
43:BH:101:ARG:O	43:BH:117:PRO:HG3	2.15	0.47
48:BP:114:ILE:HB	48:BP:130:PHE:CD2	2.50	0.47
48:BP:16:ARG:O	48:BP:18:ARG:N	2.47	0.47
51:BS:49:VAL:HG22	51:BS:80:LEU:HD13	1.96	0.47
52:BT:28:VAL:HG22	52:BT:46:GLU:CA	2.44	0.47
52:BT:35:LYS:HZ1	52:BT:41:ARG:HE	1.63	0.47
57:BY:94:LYS:O	57:BY:94:LYS:HG3	2.15	0.47
58:BZ:150:LEU:O	58:BZ:150:LEU:HD23	2.14	0.47
1:CA:1296:C:H4'	1:CA:1302:U:C4	2.50	0.47
1:CA:1411:C:H2'	1:CA:1412:C:C6	2.49	0.47
1:CA:294:U:H2'	1:CA:295:C:C6	2.50	0.47
1:CA:409:G:H3'	1:CA:410:G:H8	1.80	0.47
1:CA:503:C:O2'	1:CA:504:C:H5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:556:C:O2'	1:CA:557:G:H5'	2.15	0.47
3:CC:52:LEU:CD2	3:CC:52:LEU:H	2.26	0.47
3:CC:65:ALA:O	3:CC:100:ALA:O	2.33	0.47
3:CC:86:VAL:O	3:CC:89:GLU:HB3	2.15	0.47
4:CD:3:ARG:HH12	4:CD:118:ARG:HD3	1.78	0.47
5:CE:68:GLU:O	5:CE:68:GLU:HG3	2.15	0.47
6:CF:40:VAL:HG13	6:CF:40:VAL:O	2.15	0.47
9:CI:9:ARG:HG2	9:CI:14:VAL:HG22	1.97	0.47
16:CP:20:VAL:HG21	16:CP:32:TYR:CD1	2.50	0.47
19:CS:31:ILE:O	19:CS:31:ILE:HG23	2.15	0.47
20:CT:73:HIS:HB3	20:CT:74:LYS:NZ	2.30	0.47
22:CV:39:U:H2'	22:CV:40:C:H6	1.80	0.47
24:CY:17:H2U:O2'	24:CY:18:G:OP1	2.30	0.47
25:CZ:164:PRO:O	25:CZ:168:VAL:HG23	2.15	0.47
25:CZ:185:ASN:ND2	25:CZ:185:ASN:O	2.48	0.47
27:D1:84:GLY:O	27:D1:90:ILE:HD11	2.14	0.47
29:D3:6:VAL:HB	29:D3:54:VAL:HG11	1.97	0.47
35:D9:15:LYS:HB3	35:D9:15:LYS:NZ	2.30	0.47
35:D9:27:CYS:SG	35:D9:28:GLU:N	2.88	0.47
36:DA:1036:G:O2'	36:DA:1037:G:H5'	2.15	0.47
36:DA:11:G:H2'	36:DA:12:U:H6	1.80	0.47
36:DA:130:C:O3'	36:DA:1349:A:H1'	2.15	0.47
36:DA:1722:A:O2'	36:DA:1739:U:H5'	2.15	0.47
36:DA:1843:C:H2'	36:DA:1844:C:H6	1.80	0.47
36:DA:1902:C:H5'	39:DD:246:PRO:HD3	1.97	0.47
36:DA:2131:G:H4'	36:DA:2132:U:OP2	2.15	0.47
36:DA:2392:A:H2'	36:DA:2393:A:O4'	2.15	0.47
36:DA:2477:C:O5'	36:DA:2477:C:H6	1.98	0.47
36:DA:2666:C:H5'	36:DA:2667:C:OP2	2.14	0.47
37:DB:105:A:H4'	58:DZ:89:PHE:CE1	2.49	0.47
40:DE:116:VAL:HG22	40:DE:117:MET:H	1.79	0.47
41:DF:127:GLU:HB2	41:DF:196:LEU:HD12	1.96	0.47
43:DH:137:ASP:OD2	43:DH:140:LYS:HE3	2.15	0.47
46:DN:29:LYS:C	46:DN:31:ALA:H	2.19	0.47
48:DP:61:ARG:C	48:DP:62:LEU:CD2	2.83	0.47
51:DS:13:ARG:CG	51:DS:14:VAL:N	2.77	0.47
52:DT:125:ARG:O	52:DT:128:GLU:HG3	2.15	0.47
52:DT:28:VAL:HG11	52:DT:46:GLU:CG	2.39	0.47
55:DW:40:ASN:O	55:DW:41:LYS:HG2	2.15	0.47
1:AA:1126:U:OP2	1:AA:1281:U:O2	2.33	0.47
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:291:C:O2'	1:AA:292:G:H5'	2.15	0.47
1:AA:338:A:H2	1:AA:351:G:H22	1.61	0.47
1:AA:384:G:O2'	1:AA:385:C:H5'	2.15	0.47
2:AB:101:MET:C	2:AB:102:LEU:HD12	2.35	0.47
2:AB:224:GLN:O	2:AB:226:ARG:N	2.48	0.47
5:AE:57:LYS:HG2	5:AE:61:TYR:CE2	2.50	0.47
12:AL:117:ARG:O	12:AL:119:LYS:O	2.32	0.47
16:AP:20:VAL:HG21	16:AP:32:TYR:CD1	2.49	0.47
19:AS:27:GLU:O	19:AS:28:LYS:O	2.33	0.47
25:AZ:139:ASP:CG	25:AZ:139:ASP:O	2.52	0.47
1:AA:367:U:H4'	25:AZ:291:ARG:HE	1.80	0.47
28:B2:55:ARG:NH1	28:B2:55:ARG:HG3	2.28	0.47
29:B3:44:ARG:O	29:B3:48:GLU:HG2	2.15	0.47
31:B5:3:LYS:O	31:B5:4:HIS:O	2.33	0.47
34:B8:32:LEU:CD2	34:B8:36:LYS:HE2	2.41	0.47
36:BA:1389:G:H2'	36:BA:1390:U:H6	1.79	0.47
36:BA:1639:U:O2'	36:BA:1640:C:H5''	2.15	0.47
36:BA:1750:G:H2'	36:BA:1751:C:C6	2.49	0.47
36:BA:2105:C:N3	36:BA:2184:G:N2	2.61	0.47
36:BA:2567:G:H2'	36:BA:2568:C:C6	2.50	0.47
36:BA:304:G:O2'	36:BA:305:U:H5'	2.15	0.47
36:BA:512:G:O2'	36:BA:513:A:H8	1.97	0.47
40:BE:77:ILE:CG2	40:BE:78:LEU:H	2.23	0.47
42:BG:114:ILE:O	42:BG:115:ARG:C	2.54	0.47
42:BG:45:GLU:CD	42:BG:45:GLU:N	2.68	0.47
46:BN:23:LEU:HB3	46:BN:60:ILE:CG2	2.41	0.47
48:BP:90:ARG:HB3	48:BP:91:PHE:CD1	2.50	0.47
49:BQ:110:THR:HG23	49:BQ:113:GLN:HG3	1.96	0.47
49:BQ:52:VAL:O	49:BQ:56:ARG:HB2	2.14	0.47
51:BS:54:LEU:HD11	51:BS:58:LEU:O	2.15	0.47
1:CA:1326:C:P	21:CU:12:LYS:HZ2	2.38	0.47
1:CA:1508:G:H2'	1:CA:1509:C:C6	2.50	0.47
1:CA:836:G:H2'	1:CA:837:G:H8	1.80	0.47
3:CC:77:ILE:HA	3:CC:84:ILE:HB	1.96	0.47
5:CE:80:ILE:CD1	5:CE:142:LEU:HD21	2.45	0.47
5:CE:72:GLN:O	5:CE:73:ASN:HB2	2.15	0.47
5:CE:72:GLN:O	5:CE:75:THR:HG22	2.15	0.47
7:CG:84:ASN:C	7:CG:84:ASN:ND2	2.68	0.47
16:CP:45:THR:O	16:CP:45:THR:HG23	2.15	0.47
23:CX:26:A:H3'	23:CX:27:A:O4'	2.14	0.47
25:CZ:107:SER:CB	25:CZ:137:LYS:HD2	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:138:VAL:C	25:CZ:140:MET:H	2.18	0.47
29:D3:44:ARG:O	29:D3:48:GLU:HG2	2.15	0.47
30:D4:37:SER:O	30:D4:38:LYS:CB	2.63	0.47
34:D8:23:VAL:CG1	34:D8:46:ARG:HD3	2.44	0.47
36:DA:143:G:H2'	36:DA:143(A):C:H6	1.80	0.47
36:DA:143:G:H4'	56:DX:35:THR:HG21	1.97	0.47
36:DA:2064:C:H2'	36:DA:2065:C:C6	2.50	0.47
36:DA:2262:U:H4'	36:DA:2328:A:C2	2.50	0.47
36:DA:2808:U:O2'	36:DA:2809:A:H5'	2.15	0.47
36:DA:2836:U:H2'	36:DA:2837:G:C8	2.50	0.47
36:DA:747:U:C5	36:DA:2613:U:C5	3.03	0.47
36:DA:914:C:C2'	36:DA:915:C:H5'	2.43	0.47
39:DD:142:VAL:HG21	39:DD:191:ALA:CB	2.43	0.47
39:DD:238:GLY:O	39:DD:239:ARG:C	2.52	0.47
41:DF:4:VAL:HA	41:DF:19:GLU:CB	2.43	0.47
43:DH:105:LEU:CD2	43:DH:105:LEU:N	2.78	0.47
43:DH:169:VAL:HG22	43:DH:170:ARG:N	2.30	0.47
49:DQ:52:VAL:O	49:DQ:56:ARG:HB2	2.15	0.47
49:DQ:66:ILE:HD12	49:DQ:66:ILE:C	2.36	0.47
40:DE:13:ARG:O	52:DT:57:PHE:HE2	1.98	0.47
54:DV:16:PRO:O	54:DV:96:ILE:O	2.33	0.47
58:DZ:110:GLY:HA2	58:DZ:114:GLY:O	2.14	0.47
1:AA:542:G:N2	1:AA:543:C:C2	2.83	0.46
1:AA:926:G:H5''	1:AA:927:G:O5'	2.16	0.46
2:AB:111:ARG:NH1	2:AB:111:ARG:HG2	2.29	0.46
4:AD:148:VAL:HG12	4:AD:149:ALA:N	2.29	0.46
4:AD:8:VAL:C	4:AD:10:ARG:N	2.68	0.46
14:AN:3:ARG:NE	14:AN:3:ARG:O	2.47	0.46
22:AV:39:U:H2'	22:AV:40:C:H6	1.81	0.46
28:B2:35:LEU:HD23	28:B2:50:ILE:HG13	1.94	0.46
29:B3:28:LEU:N	29:B3:28:LEU:HD23	2.30	0.46
32:B6:53:LYS:HD3	32:B6:54:ILE:H	1.78	0.46
36:BA:1010:A:H1'	36:BA:1153:C:H1'	1.97	0.46
36:BA:1827:C:C2'	36:BA:1828:G:H5'	2.45	0.46
36:BA:1858:G:H2'	36:BA:1883:G:H22	1.80	0.46
36:BA:1952:A:C5	47:BO:22:ILE:HD12	2.50	0.46
36:BA:2110:G:H5''	36:BA:2145:C:N4	2.31	0.46
36:BA:2206:G:H21	36:BA:2207:G:H5'	1.76	0.46
36:BA:2700:C:O2'	36:BA:2701:C:H5'	2.14	0.46
36:BA:2808:U:O2'	36:BA:2809:A:H5'	2.15	0.46
36:BA:669:G:N3	36:BA:669:G:H2'	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:815:C:H41	48:BP:27:HIS:CE1	2.33	0.46
36:BA:80:G:O2'	36:BA:81:G:H5'	2.15	0.46
39:BD:30:GLU:C	39:BD:35:LYS:HD2	2.36	0.46
42:BG:85:GLY:O	42:BG:87:PRO:HG3	2.15	0.46
43:BH:159:GLU:HG3	43:BH:160:LYS:HG3	1.98	0.46
46:BN:21:LYS:HD3	46:BN:22:THR:H	1.80	0.46
49:BQ:109:VAL:CG1	49:BQ:110:THR:N	2.77	0.46
50:BR:96:ARG:CZ	50:BR:117:VAL:HG23	2.45	0.46
52:BT:128:GLU:O	52:BT:129:ARG:C	2.54	0.46
52:BT:77:PRO:C	52:BT:79:HIS:H	2.18	0.46
52:BT:91:ARG:O	52:BT:92:GLY:C	2.53	0.46
53:BU:51:LYS:HA	53:BU:54:LYS:HE2	1.97	0.46
58:BZ:132:ASN:O	58:BZ:133:ILE:HD13	2.16	0.46
1:CA:109:A:O3'	1:CA:110:C:H6	1.98	0.46
1:CA:266:G:C5'	1:CA:267:C:H5	2.24	0.46
1:CA:59:A:H1'	1:CA:354:G:N2	2.30	0.46
1:CA:501:C:H2'	1:CA:502:G:H8	1.80	0.46
1:CA:539:A:H2'	1:CA:540:G:H8	1.79	0.46
1:CA:720:C:H2'	1:CA:721:G:C8	2.50	0.46
4:CD:148:VAL:HG12	4:CD:149:ALA:N	2.29	0.46
4:CD:3:ARG:HH21	4:CD:5:ILE:CG1	2.28	0.46
10:CJ:6:ILE:HG12	10:CJ:72:VAL:O	2.16	0.46
15:CO:87:ILE:CG2	15:CO:88:ARG:H	2.19	0.46
1:CA:1318:A:H1'	19:CS:37:ARG:HH21	1.80	0.46
25:CZ:133:VAL:O	25:CZ:170:VAL:HA	2.15	0.46
24:CY:77:TRP:O	25:CZ:273:HIS:HA	2.14	0.46
26:D0:40:GLN:NE2	26:D0:44:ARG:N	2.57	0.46
28:D2:64:LEU:O	28:D2:64:LEU:HD23	2.15	0.46
32:D6:9:LEU:HD13	32:D6:9:LEU:C	2.35	0.46
36:DA:1563:G:H2'	36:DA:1564:C:O4'	2.15	0.46
36:DA:2184:G:H2'	36:DA:2185:C:O4'	2.14	0.46
36:DA:2481:G:O2'	36:DA:2482:G:P	2.73	0.46
36:DA:2537:U:H2'	36:DA:2538:C:H6	1.80	0.46
36:DA:2657:A:N3	36:DA:2657:A:H5'	2.31	0.46
36:DA:2872:G:C2	36:DA:2873:A:N6	2.84	0.46
39:DD:242:ARG:HH11	39:DD:242:ARG:HG3	1.78	0.46
41:DF:114:VAL:HG21	41:DF:202:PHE:HE1	1.79	0.46
48:DP:84:ASN:HA	48:DP:115:LEU:O	2.14	0.46
50:DR:117:VAL:HG22	50:DR:118:GLU:H	1.80	0.46
51:DS:40:ILE:HG22	51:DS:47:THR:HG23	1.96	0.46
52:DT:102:ILE:HB	52:DT:110:ILE:CD1	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DT:28:VAL:O	52:DT:28:VAL:HG12	2.15	0.46
52:DT:3:ARG:CD	52:DT:6:LEU:HD12	2.36	0.46
36:DA:534:U:O2'	53:DU:49:HIS:CD2	2.68	0.46
53:DU:112:ARG:HH11	54:DV:46:VAL:HG11	1.80	0.46
55:DW:12:ILE:HD13	55:DW:17:VAL:HG22	1.96	0.46
1:AA:1003:G:N2	1:AA:1039:C:N4	2.58	0.46
1:AA:1238:A:C2	1:AA:1301:U:N3	2.60	0.46
1:AA:892:A:O2'	1:AA:1415:G:H4'	2.15	0.46
2:AB:126:GLU:O	2:AB:129:GLU:HB2	2.15	0.46
2:AB:19:HIS:NE2	2:AB:206:ASP:HB2	2.31	0.46
5:AE:6:PHE:HB2	5:AE:34:VAL:HG22	1.97	0.46
8:AH:87:SER:HB2	8:AH:93:VAL:HB	1.97	0.46
12:AL:26:ALA:O	12:AL:33:ARG:HD2	2.15	0.46
10:AJ:53:PRO:HA	14:AN:42:ILE:HD11	1.98	0.46
15:AO:11:VAL:HG21	15:AO:34:LEU:HD22	1.96	0.46
1:AA:636:U:H5''	17:AQ:2:PRO:HG3	1.97	0.46
19:AS:37:ARG:HG3	19:AS:37:ARG:H	1.39	0.46
20:AT:47:GLY:C	20:AT:49:ALA:H	2.14	0.46
20:AT:48:LYS:HB3	20:AT:51:GLU:HG2	1.96	0.46
25:AZ:28:THR:C	25:AZ:30:ALA:H	2.19	0.46
28:B2:51:ARG:HH21	28:B2:55:ARG:HH12	1.64	0.46
32:B6:22:ALA:HB2	32:B6:39:TYR:CE2	2.50	0.46
33:B7:32:LYS:O	33:B7:36:GLN:HB2	2.14	0.46
36:BA:1097:U:H2'	36:BA:1098:A:C8	2.48	0.46
36:BA:1331:A:C2'	36:BA:1332:G:H5''	2.44	0.46
36:BA:143:G:H2'	36:BA:143(A):C:C6	2.50	0.46
36:BA:1543:C:C3'	36:BA:1544:A:C5'	2.81	0.46
36:BA:1722:A:O2'	36:BA:1739:U:H5'	2.16	0.46
36:BA:1771:C:O2'	36:BA:1786:A:H8	1.99	0.46
36:BA:1902:C:H2'	36:BA:1903:G:O5'	2.14	0.46
36:BA:2039:C:O2'	36:BA:2040:C:H5'	2.15	0.46
36:BA:2108:C:O2	36:BA:2108:C:C2'	2.63	0.46
36:BA:288:C:H2'	36:BA:289:A:H8	1.80	0.46
36:BA:572:A:H5''	36:BA:573:G:OP2	2.16	0.46
36:BA:761:A:C8	36:BA:761:A:C3'	2.98	0.46
37:BB:73:A:C4	37:BB:105:A:C2	3.02	0.46
38:BC:114:VAL:CG2	38:BC:149:ILE:HD11	2.45	0.46
38:BC:72:VAL:HG23	38:BC:111:ASP:CB	2.33	0.46
39:BD:275:LYS:C	39:BD:275:LYS:HD2	2.35	0.46
42:BG:137:GLU:CG	42:BG:138:GLN:H	2.25	0.46
43:BH:94:TYR:CD1	43:BH:107:VAL:CA	2.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BN:14:VAL:CG1	46:BN:137:LYS:HG3	2.45	0.46
47:BO:24:VAL:HG23	47:BO:24:VAL:O	2.15	0.46
50:BR:4:LEU:O	50:BR:6:SER:N	2.48	0.46
53:BU:88:ILE:CD1	53:BU:109:LEU:HD22	2.44	0.46
36:BA:994:C:OP1	53:BU:53:ARG:NH2	2.48	0.46
54:BV:100:ARG:O	54:BV:100:ARG:HG3	2.14	0.46
53:BU:112:ARG:HH11	54:BV:46:VAL:HG11	1.80	0.46
55:BW:62:HIS:O	55:BW:63:ASP:C	2.53	0.46
55:BW:13:SER:HA	55:BW:99:ARG:HB2	1.97	0.46
1:CA:1006:C:H2'	1:CA:1007:C:C5	2.50	0.46
1:CA:1126:U:OP2	1:CA:1281:U:O2	2.34	0.46
1:CA:242:C:H2'	1:CA:243:A:H5'	1.98	0.46
1:CA:338:A:H2	1:CA:351:G:H22	1.63	0.46
1:CA:77:G:H3'	1:CA:78:G:C8	2.50	0.46
1:CA:940:C:O2'	1:CA:941:G:H5'	2.16	0.46
2:CB:112:VAL:O	2:CB:115:LEU:HB3	2.16	0.46
2:CB:132:LYS:O	2:CB:136:VAL:HG23	2.14	0.46
2:CB:95:GLN:HA	2:CB:95:GLN:OE1	2.14	0.46
3:CC:53:ALA:HB2	3:CC:115:LEU:HG	1.98	0.46
4:CD:58:LEU:HD23	4:CD:62:GLN:HG2	1.98	0.46
9:CI:5:TYR:O	9:CI:84:ALA:HA	2.14	0.46
10:CJ:84:GLN:O	10:CJ:88:LEU:N	2.45	0.46
12:CL:78:GLN:O	12:CL:80:HIS:N	2.48	0.46
25:CZ:195:TRP:C	25:CZ:197:ASP:H	2.19	0.46
25:CZ:325:LYS:HB2	25:CZ:331:HIS:HB3	1.96	0.46
25:CZ:363:MET:HB3	25:CZ:364:PRO:HD2	1.96	0.46
32:D6:53:LYS:HG2	32:D6:54:ILE:N	2.31	0.46
36:DA:1279:G:H4'	50:DR:31:HIS:NE2	2.26	0.46
36:DA:1403:C:H2'	36:DA:1404:C:O5'	2.15	0.46
36:DA:1472:A:O2'	36:DA:1473:G:H5'	2.15	0.46
36:DA:2109:U:O2	36:DA:2180:U:H5	1.97	0.46
36:DA:2122:U:H2'	36:DA:2123:G:C8	2.50	0.46
36:DA:2149:G:O2'	36:DA:2150:U:H5'	2.16	0.46
36:DA:2265:U:H3'	36:DA:2266:A:H5''	1.97	0.46
36:DA:2334:G:H21	51:DS:18:ILE:CG2	2.22	0.46
36:DA:2473:U:H5	36:DA:2474:C:C5	2.33	0.46
36:DA:2777:G:H4'	36:DA:2778:A:H5'	1.97	0.46
36:DA:2860:A:C8	36:DA:2861:G:H1'	2.50	0.46
36:DA:605:C:H2'	36:DA:606:U:H6	1.79	0.46
36:DA:990:A:C6	36:DA:1186:G:H1'	2.50	0.46
38:DC:114:VAL:CG2	38:DC:149:ILE:HD11	2.44	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DD:131:LEU:HB2	39:DD:136:ILE:CD1	2.45	0.46
39:DD:62:TYR:HA	39:DD:87:ASN:ND2	2.30	0.46
40:DE:49:LEU:HD22	40:DE:49:LEU:N	2.31	0.46
13:CM:9:ILE:HG21	42:DG:146:TYR:CZ	2.50	0.46
42:DG:16:ARG:N	42:DG:17:PRO:HD2	2.30	0.46
42:DG:52:ILE:N	42:DG:52:ILE:HD13	2.15	0.46
46:DN:22:THR:HG22	46:DN:61:ARG:CB	2.38	0.46
46:DN:42:TRP:CD1	53:DU:63:VAL:HG11	2.50	0.46
26:D0:7:LEU:HD13	49:DQ:85:LYS:CG	2.42	0.46
40:DE:52:LEU:HD21	52:DT:1:MET:CE	2.45	0.46
52:DT:94:ALA:C	52:DT:96:ARG:N	2.68	0.46
56:DX:65:ARG:HH11	56:DX:65:ARG:HG2	1.79	0.46
58:DZ:140:ASP:C	58:DZ:141:VAL:HG22	2.36	0.46
58:DZ:178:GLU:OE1	58:DZ:178:GLU:N	2.48	0.46
58:DZ:29:TYR:CB	58:DZ:34:ASN:HB3	2.45	0.46
1:AA:428:G:O2'	1:AA:429:U:P	2.74	0.46
4:AD:101:LEU:HD23	4:AD:121:VAL:CG1	2.43	0.46
4:AD:177:ASP:O	4:AD:181:MET:N	2.48	0.46
6:AF:97:PHE:O	18:AR:31:LEU:HD23	2.14	0.46
9:AI:86:VAL:CG2	9:AI:93:ARG:HG2	2.45	0.46
10:AJ:54:PHE:O	10:AJ:55:LYS:HB3	2.16	0.46
11:AK:20:TYR:CZ	11:AK:83:ILE:HD12	2.50	0.46
16:AP:8:ARG:HB3	16:AP:28:ARG:HH12	1.80	0.46
22:AV:16:U:HO2'	22:AV:17:C:H5	1.59	0.46
23:AX:26:A:H3'	23:AX:27:A:O4'	2.16	0.46
25:AZ:34:VAL:HA	25:AZ:182:MET:HE2	1.97	0.46
31:B5:36:CYS:SG	31:B5:48:GLU:HB2	2.55	0.46
36:BA:1213:A:N3	36:BA:1238:G:H1'	2.30	0.46
36:BA:122:G:H1	36:BA:129:C:H42	1.63	0.46
36:BA:2201:C:H2'	36:BA:2202:C:C6	2.51	0.46
36:BA:605:C:C4	36:BA:606:U:C5	3.03	0.46
36:BA:852:G:H2'	36:BA:853:G:H8	1.80	0.46
37:BB:111:G:C2'	37:BB:112:U:H5'	2.45	0.46
38:BC:96:GLY:H	38:BC:99:ILE:HG12	1.78	0.46
39:BD:243:GLY:O	39:BD:244:ARG:HB3	2.15	0.46
36:BA:1902:C:C5'	39:BD:246:PRO:HD3	2.45	0.46
39:BD:30:GLU:HG2	39:BD:30:GLU:H	1.42	0.46
39:BD:9:TYR:CD1	39:BD:10:THR:HG22	2.51	0.46
40:BE:188:VAL:HG23	40:BE:189:PRO:HD2	1.97	0.46
41:BF:160:ASN:HD22	41:BF:161:GLU:N	2.12	0.46
43:BH:159:GLU:CG	43:BH:160:LYS:N	2.78	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BK:8:UNK:O	45:BK:9:UNK:C	2.63	0.46
55:BW:4:LYS:CG	55:BW:5:ALA:N	2.76	0.46
56:BX:65:ARG:HH11	56:BX:65:ARG:HG2	1.80	0.46
58:BZ:137:ILE:HD12	58:BZ:158:PRO:HG2	1.98	0.46
1:CA:1063:C:H5	1:CA:1064:G:HO2'	1.64	0.46
1:CA:105:G:H2'	1:CA:106:C:C6	2.49	0.46
1:CA:1511:G:H8	1:CA:1511:G:O5'	1.99	0.46
1:CA:426:G:H2'	1:CA:427:U:C6	2.50	0.46
1:CA:583:A:H2'	1:CA:584:G:O4'	2.16	0.46
1:CA:59:A:H2'	1:CA:59:A:N3	2.31	0.46
1:CA:746:A:O2'	1:CA:747:C:H5'	2.15	0.46
2:CB:17:PHE:HB3	2:CB:44:LEU:HD21	1.96	0.46
4:CD:45:GLN:C	4:CD:46:LYS:CG	2.84	0.46
4:CD:70:ILE:CG2	4:CD:71:SER:N	2.78	0.46
6:CF:87:ARG:CG	6:CF:87:ARG:NH1	2.78	0.46
1:CA:1152:A:OP1	10:CJ:68:HIS:CD2	2.68	0.46
20:CT:89:ARG:HD2	20:CT:104:LEU:CD1	2.45	0.46
20:CT:43:LEU:HB3	20:CT:48:LYS:HB2	1.97	0.46
20:CT:58:LYS:O	20:CT:62:LEU:HD12	2.15	0.46
24:CY:52:A:C2'	24:CY:53:G:H5'	2.46	0.46
26:D0:37:LEU:N	26:D0:59:LEU:O	2.35	0.46
29:D3:23:LEU:CD2	29:D3:50:VAL:HG11	2.45	0.46
31:D5:43:HIS:HE1	36:DA:2884:U:OP2	1.98	0.46
34:D8:15:LYS:HD3	48:DP:65:ARG:HH21	1.81	0.46
36:DA:143:G:H2'	36:DA:143(A):C:C6	2.50	0.46
36:DA:1480:G:C2'	36:DA:1481:U:C5'	2.93	0.46
36:DA:1658:C:OP1	40:DE:132:HIS:CE1	2.69	0.46
36:DA:1889:A:O2'	36:DA:2087:G:H5'	2.16	0.46
36:DA:195:A:C8	36:DA:197:A:OP1	2.69	0.46
36:DA:2131:G:H5'	36:DA:2133:G:O4'	2.15	0.46
36:DA:2457:U:C2'	36:DA:2458:G:H5'	2.46	0.46
36:DA:2733:A:H2'	36:DA:2734:A:O4'	2.15	0.46
35:D9:35:ARG:HD3	36:DA:2742:C:OP1	2.16	0.46
36:DA:2811:G:C2'	36:DA:2812:G:H5'	2.44	0.46
36:DA:332:A:O2'	36:DA:333:G:P	2.73	0.46
36:DA:523:C:H2'	36:DA:524:U:C5'	2.42	0.46
36:DA:755:C:H2'	36:DA:756:C:H6	1.81	0.46
36:DA:869:G:C2'	36:DA:870:A:H5'	2.45	0.46
36:DA:876:C:H2'	36:DA:877:U:O4'	2.15	0.46
28:D2:3:LEU:HB3	36:DA:98:G:OP1	2.15	0.46
38:DC:2:LYS:O	38:DC:2:LYS:HG2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DC:72:VAL:HG11	38:DC:156:ILE:O	2.16	0.46
42:DG:35:GLU:HG2	42:DG:36:LYS:N	2.30	0.46
46:DN:75:TYR:O	46:DN:76:SER:O	2.33	0.46
48:DP:99:LEU:C	48:DP:99:LEU:HD23	2.36	0.46
48:DP:99:LEU:HD23	48:DP:99:LEU:O	2.15	0.46
55:DW:24:ILE:HG21	55:DW:36:LEU:HD21	1.96	0.46
58:DZ:132:ASN:O	58:DZ:133:ILE:HD13	2.14	0.46
1:AA:1423:G:C5	1:AA:1424:C:C5	3.03	0.46
1:AA:720:C:H2'	1:AA:721:G:C8	2.51	0.46
6:AF:82:ARG:HB2	6:AF:85:VAL:CG2	2.43	0.46
9:AI:28:VAL:CG1	9:AI:29:ASN:H	2.08	0.46
10:AJ:4:ILE:HB	10:AJ:74:ILE:HG13	1.98	0.46
10:AJ:9:ARG:HH21	10:AJ:97:GLU:HG3	1.80	0.46
24:AY:61:C:C2'	24:AY:62:U:H5''	2.45	0.46
25:AZ:176:LEU:O	25:AZ:180:GLU:HG3	2.15	0.46
25:AZ:341:GLN:HE22	25:AZ:390:GLU:HA	1.79	0.46
27:B1:68:PRO:C	27:B1:70:VAL:H	2.18	0.46
32:B6:5:VAL:O	32:B6:6:ARG:HB2	2.16	0.46
33:B7:10:ARG:NH1	36:BA:771:G:OP1	2.48	0.46
34:B8:17:THR:OG1	34:B8:21:LYS:HB2	2.14	0.46
36:BA:1142(A):A:OP2	36:BA:1142(A):A:H3'	2.15	0.46
36:BA:1301:A:HO2'	36:BA:1302:A:P	2.38	0.46
36:BA:1652:A:H2'	36:BA:1653:G:H5'	1.98	0.46
24:AY:37:MIA:O2'	36:BA:1913:A:N1	2.42	0.46
36:BA:2312:U:H2'	36:BA:2313:C:H5'	1.98	0.46
36:BA:2360:A:O2'	36:BA:2361:A:O5'	2.34	0.46
36:BA:2715:C:O2'	36:BA:2716:U:H5'	2.15	0.46
36:BA:32:C:H5'	36:BA:32:C:H6	1.80	0.46
36:BA:654(N):G:H2'	36:BA:654(O):G:H5'	1.98	0.46
39:BD:196:VAL:O	39:BD:196:VAL:HG12	2.14	0.46
40:BE:144:ARG:CG	40:BE:145:LYS:H	2.27	0.46
41:BF:132:VAL:HG13	41:BF:133:ASN:N	2.30	0.46
42:BG:144:ILE:O	42:BG:144:ILE:CG2	2.60	0.46
42:BG:146:TYR:O	42:BG:148:MET:N	2.49	0.46
42:BG:16:ARG:N	42:BG:17:PRO:HD2	2.29	0.46
42:BG:16:ARG:NH1	42:BG:16:ARG:HG3	2.29	0.46
42:BG:52:ILE:O	42:BG:53:LEU:C	2.53	0.46
42:BG:2:PRO:HG2	42:BG:98:ARG:NH1	2.31	0.46
47:BO:28:SER:O	47:BO:29:ASN:HB3	2.14	0.46
47:BO:9:GLU:O	47:BO:83:ALA:HA	2.15	0.46
48:BP:40:SER:O	48:BP:41:ARG:CD	2.64	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BS:24:LEU:HD11	51:BS:48:LEU:HD22	1.97	0.46
57:BY:27:VAL:HG12	57:BY:28:LYS:N	2.31	0.46
58:BZ:28:MET:HE3	58:BZ:37:VAL:HG11	1.96	0.46
1:CA:1431:C:C2'	1:CA:1432:G:H5'	2.46	0.46
1:CA:557:G:H2'	1:CA:558:G:O4'	2.16	0.46
3:CC:34:LEU:HD22	3:CC:38:ARG:HE	1.80	0.46
3:CC:5:ILE:O	3:CC:6:HIS:C	2.52	0.46
8:CH:9:MET:O	8:CH:13:ILE:HG12	2.16	0.46
13:CM:22:ILE:CB	13:CM:25:ILE:HD12	2.45	0.46
13:CM:65:LYS:HD3	13:CM:65:LYS:N	2.20	0.46
12:CL:8:ASN:HD22	17:CQ:34:LYS:NZ	2.14	0.46
17:CQ:44:ALA:HB2	17:CQ:59:ILE:HD12	1.96	0.46
22:CW:39:U:C5'	22:CW:39:U:O2	2.63	0.46
22:CW:5:G:N2	22:CW:68:C:C2	2.84	0.46
22:CW:69:G:H2'	22:CW:70:G:C5'	2.41	0.46
24:CY:21:A:H5'	24:CY:22:G:OP1	2.15	0.46
25:CZ:107:SER:OG	25:CZ:137:LYS:HD2	2.15	0.46
25:CZ:300:ARG:HG2	25:CZ:300:ARG:NH1	2.30	0.46
26:D0:51:VAL:HG21	26:D0:79:VAL:O	2.16	0.46
33:D7:4:THR:HG21	36:DA:788:A:H1'	1.97	0.46
33:D7:5:TRP:O	36:DA:1612:C:H4'	2.15	0.46
34:D8:11:LYS:HZ3	34:D8:60:LEU:HA	1.81	0.46
35:D9:1:MET:HB2	35:D9:31:LYS:O	2.15	0.46
36:DA:1010:A:H1'	36:DA:1153:C:H1'	1.96	0.46
36:DA:1166:C:H2'	36:DA:1167:U:H6	1.80	0.46
36:DA:118:A:H5'	36:DA:119:A:H8	1.80	0.46
36:DA:1281:G:H2'	36:DA:1282:U:H6	1.81	0.46
36:DA:1389:G:H2'	36:DA:1390:U:H6	1.79	0.46
36:DA:1684:C:O2'	36:DA:1685:C:H5'	2.15	0.46
36:DA:181:A:C8	36:DA:181:A:H5'	2.41	0.46
36:DA:2102:U:C5	36:DA:2103:C:N3	2.83	0.46
36:DA:2557:G:H2'	36:DA:2558:C:C6	2.51	0.46
36:DA:304:G:O2'	36:DA:305:U:H5'	2.14	0.46
36:DA:855:G:H2'	36:DA:856:C:C6	2.49	0.46
36:DA:996:A:H4'	53:DU:92:ARG:HE	1.79	0.46
37:DB:66:A:H61	37:DB:108:U:C2'	2.27	0.46
38:DC:10:LEU:CD1	38:DC:32:LEU:HA	2.45	0.46
38:DC:73:ARG:H	38:DC:111:ASP:CG	2.19	0.46
38:DC:78:ALA:HA	38:DC:116:THR:N	2.21	0.46
41:DF:24:LEU:HD12	41:DF:118:ALA:HB1	1.97	0.46
41:DF:3:GLU:O	41:DF:19:GLU:HG3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DG:7:LEU:HD22	42:DG:176:LEU:CD2	2.45	0.46
42:DG:66:GLN:HB3	42:DG:92:VAL:HG21	1.97	0.46
43:DH:83:TYR:HB3	43:DH:135:GLY:N	2.29	0.46
36:DA:1107:G:OP1	44:DJ:59:UNK:N	2.49	0.46
45:DK:78:UNK:C	45:DK:80:UNK:N	2.77	0.46
50:DR:11:ASN:OD1	50:DR:11:ASN:O	2.32	0.46
51:DS:24:LEU:HD11	51:DS:48:LEU:HD22	1.97	0.46
51:DS:29:PHE:HD1	51:DS:30:ARG:N	2.13	0.46
51:DS:56:LEU:O	51:DS:57:LYS:O	2.34	0.46
52:DT:128:GLU:O	52:DT:129:ARG:C	2.54	0.46
52:DT:94:ALA:HB1	52:DT:99:LEU:HD23	1.98	0.46
55:DW:14:PRO:HG2	55:DW:78:GLU:CG	2.45	0.46
58:DZ:120:ILE:HG13	58:DZ:170:THR:HG22	1.97	0.46
1:AA:1442(B):A:C2	52:BT:118:ARG:CZ	2.98	0.46
1:AA:583:A:H2'	1:AA:584:G:O4'	2.16	0.46
1:AA:647:C:O2'	1:AA:648:A:H5'	2.16	0.46
1:AA:77:G:H3'	1:AA:78:G:C8	2.50	0.46
1:AA:853:G:O2'	1:AA:854:G:H5'	2.15	0.46
2:AB:114:ARG:NH1	2:AB:118:LEU:CG	2.78	0.46
2:AB:71:VAL:HG13	2:AB:93:VAL:HG13	1.98	0.46
3:AC:77:ILE:HA	3:AC:84:ILE:HB	1.96	0.46
1:AA:408:A:H4'	4:AD:112:VAL:HG11	1.97	0.46
4:AD:121:VAL:CA	4:AD:126:ILE:HD13	2.44	0.46
8:AH:44:PHE:HB3	8:AH:80:ILE:HG12	1.98	0.46
9:AI:18:PHE:O	9:AI:19:LEU:HB2	2.15	0.46
10:AJ:71:LEU:HD12	10:AJ:72:VAL:H	1.79	0.46
12:AL:43:VAL:HG23	12:AL:93:LEU:HD22	1.98	0.46
13:AM:5:ALA:HB1	13:AM:66:LEU:HD23	1.98	0.46
1:AA:263:A:OP2	20:AT:79:ARG:NH1	2.49	0.46
24:AY:6:C:N4	24:AY:67:G:H1	2.10	0.46
25:AZ:134:PHE:CD1	25:AZ:202:LEU:HD22	2.50	0.46
32:B6:27:LYS:O	32:B6:29:ASN:N	2.48	0.46
36:BA:2092:U:H5	36:BA:2226:C:OP2	1.97	0.46
36:BA:2121:G:H2'	36:BA:2122:U:C6	2.50	0.46
36:BA:27:G:N2	36:BA:512:G:C2'	2.68	0.46
36:BA:331:A:C1'	36:BA:332:A:OP1	2.63	0.46
36:BA:528:A:H2	36:BA:2043:C:H5'	1.81	0.46
36:BA:603:A:N3	36:BA:604:G:H1'	2.31	0.46
36:BA:609:A:H2'	36:BA:610:G:O4'	2.15	0.46
39:BD:24:ILE:CG1	39:BD:25:THR:N	2.77	0.46
40:BE:101:ARG:HD3	40:BE:101:ARG:HA	1.68	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BE:111:ARG:HG2	40:BE:160:TYR:O	2.16	0.46
41:BF:53:THR:HG22	41:BF:56:GLU:CG	2.45	0.46
43:BH:66:GLY:HA2	43:BH:69:ARG:CB	2.41	0.46
46:BN:39:ARG:C	46:BN:41:ASP:H	2.18	0.46
46:BN:16:ILE:CG2	46:BN:54:VAL:HG22	2.46	0.46
47:BO:32:TYR:N	47:BO:32:TYR:CD1	2.83	0.46
50:BR:117:VAL:HG22	50:BR:118:GLU:H	1.81	0.46
52:BT:13:ARG:HH12	52:BT:15:VAL:HG12	1.79	0.46
54:BV:41:GLY:HA3	54:BV:45:THR:OG1	2.16	0.46
54:BV:49:THR:CB	54:BV:50:PRO:CD	2.93	0.46
1:CA:1415:G:O2'	1:CA:1416:G:H5'	2.16	0.46
1:CA:1417:G:C6	1:CA:1482:G:C6	3.03	0.46
1:CA:430:A:H2'	1:CA:431:A:O4'	2.16	0.46
1:CA:371:G:H1'	1:CA:482:A:H1'	1.97	0.46
6:CF:10:LEU:HB2	6:CF:59:TYR:HB3	1.98	0.46
1:CA:640:A:O2'	8:CH:115:SER:HB2	2.16	0.46
12:CL:93:LEU:HD13	12:CL:96:VAL:HG21	1.98	0.46
13:CM:15:VAL:CG1	13:CM:45:VAL:HG22	2.46	0.46
13:CM:79:LYS:O	13:CM:82:MET:HG2	2.16	0.46
16:CP:8:ARG:HB3	16:CP:28:ARG:HH12	1.81	0.46
17:CQ:16:GLN:O	17:CQ:17:LYS:HB2	2.15	0.46
20:CT:20:LEU:O	20:CT:23:ARG:HB3	2.16	0.46
25:CZ:223:MET:HG3	25:CZ:223:MET:O	2.15	0.46
32:D6:53:LYS:HD3	32:D6:54:ILE:H	1.80	0.46
34:D8:15:LYS:HG2	48:DP:65:ARG:NH2	2.31	0.46
34:D8:22:VAL:HB	34:D8:53:PRO:CB	2.46	0.46
36:DA:16:G:H2'	36:DA:17:G:H8	1.80	0.46
36:DA:894:C:O2'	36:DA:895:U:H5'	2.15	0.46
29:D3:11:SER:HB3	36:DA:988:A:OP2	2.16	0.46
36:DA:1902:C:OP1	39:DD:242:ARG:NH1	2.49	0.46
40:DE:132:HIS:HA	40:DE:135:HIS:CE1	2.51	0.46
40:DE:183:LEU:N	40:DE:183:LEU:HD12	2.30	0.46
40:DE:70:ALA:O	40:DE:71:GLY:C	2.54	0.46
43:DH:147:ASN:O	43:DH:151:ILE:HG12	2.16	0.46
46:DN:41:ASP:O	46:DN:42:TRP:C	2.54	0.46
46:DN:45:ASN:O	46:DN:45:ASN:CG	2.53	0.46
50:DR:78:LYS:O	50:DR:83:ILE:HG12	2.15	0.46
50:DR:97:VAL:HA	50:DR:113:LEU:O	2.16	0.46
53:DU:14:HIS:CD2	53:DU:36:ARG:NH2	2.84	0.46
55:DW:13:SER:HA	55:DW:99:ARG:HB2	1.97	0.46
58:DZ:177:PRO:O	58:DZ:178:GLU:HB3	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:219:C:H2'	1:AA:220:G:O4'	2.15	0.46
1:AA:319:G:C2'	1:AA:320:C:H5'	2.46	0.46
1:AA:503:C:O2'	1:AA:504:C:H5'	2.16	0.46
1:AA:828:A:OP1	1:AA:828:A:H4'	2.15	0.46
1:AA:945:G:C2	1:AA:946:A:C8	3.04	0.46
2:AB:132:LYS:O	2:AB:136:VAL:HG23	2.15	0.46
2:AB:191:ASP:C	2:AB:191:ASP:OD1	2.54	0.46
9:AI:4:TYR:HA	9:AI:88:TYR:CD1	2.51	0.46
10:AJ:81:THR:C	10:AJ:83:GLU:N	2.68	0.46
1:AA:523:A:N1	12:AL:92:ASP:OD2	2.49	0.46
1:AA:674:G:H4'	18:AR:81:PHE:CD2	2.50	0.46
19:AS:42:PRO:O	19:AS:44:MET:SD	2.73	0.46
19:AS:79:THR:O	19:AS:80:TYR:CB	2.63	0.46
22:AW:59:U:H3'	22:AW:60:U:C6	2.51	0.46
25:AZ:124:ARG:HG2	61:AZ:502:KIR:H421	1.98	0.46
25:AZ:355:LEU:HB2	25:AZ:356:PRO:CD	2.45	0.46
25:AZ:333:GLY:CA	25:AZ:363:MET:HA	2.45	0.46
27:B1:37:ILE:HG13	27:B1:37:ILE:O	2.14	0.46
27:B1:56:GLN:O	27:B1:57:GLU:CB	2.63	0.46
31:B5:6:VAL:HG13	36:BA:2016:U:H1'	1.96	0.46
35:B9:15:LYS:HB3	35:B9:15:LYS:NZ	2.31	0.46
36:BA:1097:U:H2'	36:BA:1098:A:H8	1.80	0.46
36:BA:116:C:H2'	36:BA:117:G:O4'	2.16	0.46
36:BA:1240:U:O2'	36:BA:1241:A:H5'	2.15	0.46
36:BA:1288:U:C2	36:BA:1327:C:O2	2.68	0.46
36:BA:1337:G:H2'	36:BA:1338:G:C8	2.50	0.46
36:BA:1657:C:H2'	36:BA:1658:C:C6	2.51	0.46
36:BA:236:C:H2'	36:BA:237:C:C6	2.50	0.46
36:BA:2533:A:OP1	36:BA:2665:A:H1'	2.16	0.46
36:BA:271(D):G:O2'	36:BA:271(E):U:H5'	2.16	0.46
36:BA:2762:G:H2'	36:BA:2763:G:C5'	2.45	0.46
36:BA:2836:U:H2'	36:BA:2837:G:C8	2.51	0.46
36:BA:2860:A:C8	36:BA:2861:G:H1'	2.50	0.46
36:BA:2893:G:H5'	36:BA:2894:G:C5'	2.34	0.46
36:BA:869:G:C2'	36:BA:870:A:H5'	2.46	0.46
38:BC:83:ILE:HD11	38:BC:97:GLU:CG	2.45	0.46
39:BD:24:ILE:C	39:BD:26:LYS:N	2.66	0.46
40:BE:33:VAL:HG12	40:BE:69:LYS:HD2	1.96	0.46
43:BH:23:ARG:O	43:BH:24:VAL:HG23	2.16	0.46
43:BH:65:HIS:C	43:BH:67:LEU:H	2.19	0.46
46:BN:3:THR:HG22	46:BN:5:VAL:H	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:108:LYS:N	48:BP:108:LYS:HD2	2.30	0.46
48:BP:99:LEU:O	48:BP:99:LEU:HD23	2.15	0.46
49:BQ:134:ARG:HA	49:BQ:137:TYR:CE1	2.51	0.46
52:BT:125:ARG:O	52:BT:128:GLU:HG3	2.15	0.46
40:BE:52:LEU:HD11	52:BT:1:MET:HE2	1.97	0.46
53:BU:46:ALA:O	53:BU:50:ARG:HG3	2.15	0.46
57:BY:30:VAL:HG12	57:BY:31:LEU:N	2.31	0.46
1:CA:1123:A:H2	1:CA:1150:U:C5	2.33	0.46
1:CA:1365:G:O2'	1:CA:1366:C:H5'	2.16	0.46
1:CA:123:C:OP1	1:CA:312:C:H5'	2.16	0.46
1:CA:392:G:H2'	1:CA:393:A:C8	2.50	0.46
1:CA:93:G:H2'	1:CA:96:U:O4'	2.16	0.46
2:CB:127:ILE:HG22	2:CB:128:GLU:N	2.30	0.46
2:CB:25:ASN:O	2:CB:27:LYS:N	2.48	0.46
5:CE:6:PHE:HB2	5:CE:34:VAL:CG2	2.46	0.46
7:CG:76:ARG:HH11	7:CG:76:ARG:HG2	1.81	0.46
9:CI:113:LYS:HD3	9:CI:119:ALA:HA	1.97	0.46
13:CM:91:ARG:HB2	13:CM:98:VAL:HG12	1.96	0.46
19:CS:13:ASP:C	19:CS:15:LEU:N	2.69	0.46
19:CS:36:ARG:HB2	19:CS:72:GLY:CA	2.45	0.46
22:CW:49:C:H42	22:CW:65:G:H1	1.63	0.46
34:D8:15:LYS:HD2	34:D8:16:ILE:N	2.31	0.46
36:DA:1427:A:H4'	36:DA:1428:C:O5'	2.16	0.46
36:DA:201:C:C2'	36:DA:202:U:H5'	2.46	0.46
36:DA:2031:A:N3	36:DA:2455:G:O2'	2.44	0.46
36:DA:2178:C:O2	36:DA:2178:C:O4'	2.34	0.46
36:DA:2405:G:HO2'	36:DA:2406:U:P	2.39	0.46
36:DA:2469:A:H2'	36:DA:2470:G:H5'	1.98	0.46
36:DA:2809:A:H2'	36:DA:2810:A:C8	2.49	0.46
36:DA:832:G:P	48:DP:40:SER:HB3	2.56	0.46
36:DA:852:G:H2'	36:DA:853:G:C8	2.51	0.46
38:DC:118:ASP:C	38:DC:120:MET:N	2.69	0.46
40:DE:1:MET:O	40:DE:2:LYS:O	2.34	0.46
40:DE:35:GLN:CG	40:DE:36:ARG:N	2.79	0.46
41:DF:103:LYS:CG	41:DF:106:ARG:HH21	2.28	0.46
41:DF:24:LEU:O	41:DF:115:ALA:HB1	2.15	0.46
41:DF:129:PHE:CD2	41:DF:163:VAL:HG21	2.51	0.46
41:DF:160:ASN:HD22	41:DF:161:GLU:N	2.14	0.46
41:DF:4:VAL:HG13	41:DF:19:GLU:OE1	2.16	0.46
36:DA:673:C:P	41:DF:81:PRO:HG3	2.56	0.46
42:DG:125:PHE:HD1	42:DG:126:ASP:N	2.13	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DN:16:ILE:CG2	46:DN:54:VAL:HG22	2.46	0.46
46:DN:21:LYS:HD3	46:DN:22:THR:H	1.80	0.46
47:DO:65:THR:HA	47:DO:82:ASN:HD22	1.79	0.46
48:DP:126:VAL:HG22	48:DP:145:PRO:CG	2.46	0.46
36:DA:958:U:OP2	49:DQ:14:ARG:HD3	2.16	0.46
49:DQ:39:PRO:O	49:DQ:40:ALA:HB2	2.16	0.46
55:DW:17:VAL:C	55:DW:19:LEU:N	2.67	0.46
55:DW:55:ALA:C	55:DW:57:ASN:H	2.18	0.46
1:AA:156:G:C6	1:AA:166:G:C6	3.04	0.46
1:AA:409:G:H3'	1:AA:410:G:H8	1.80	0.46
1:AA:371:G:H1'	1:AA:482:A:H1'	1.97	0.46
1:AA:495:A:O2'	1:AA:496:A:P	2.74	0.46
1:AA:542:G:C2	1:AA:543:C:C5	3.04	0.46
1:AA:59:A:N3	1:AA:59:A:H2'	2.30	0.46
1:AA:59:A:C5'	1:AA:60:A:H5''	2.45	0.46
1:AA:655:A:H2'	1:AA:656:C:H6	1.81	0.46
1:AA:746:A:O2'	1:AA:747:C:H5'	2.15	0.46
1:AA:883:C:O2'	1:AA:884:U:H5'	2.16	0.46
3:AC:148:GLY:HA3	3:AC:172:ARG:O	2.14	0.46
4:AD:45:GLN:C	4:AD:46:LYS:CG	2.84	0.46
8:AH:46:LYS:HG3	8:AH:64:LYS:HB2	1.97	0.46
9:AI:90:PRO:O	9:AI:91:ASP:O	2.34	0.46
11:AK:72:ALA:O	11:AK:75:TYR:HB2	2.16	0.46
17:AQ:47:PRO:HG2	17:AQ:48:GLU:H	1.81	0.46
22:AV:20:U:H2'	22:AV:21:A:C5'	2.46	0.46
24:AY:1:A:H5'	25:AZ:300:ARG:HH12	1.78	0.46
30:B4:37:SER:O	30:B4:38:LYS:HB3	2.15	0.46
30:B4:7:PRO:HG3	42:BG:61:ALA:HB1	1.97	0.46
36:BA:1069:A:H1'	36:BA:1070:A:P	2.56	0.46
36:BA:208:C:H2'	36:BA:209:C:C6	2.51	0.46
36:BA:2126:A:O2'	36:BA:2127:G:OP2	2.34	0.46
36:BA:2545:G:O2'	36:BA:2546:U:H5'	2.16	0.46
36:BA:2639:A:H2'	36:BA:2640:G:O4'	2.16	0.46
36:BA:2809:A:H2'	36:BA:2810:A:C8	2.50	0.46
36:BA:605:C:H2'	36:BA:606:U:H6	1.79	0.46
36:BA:622:G:O2'	36:BA:623:G:H5'	2.14	0.46
39:BD:130:ALA:HB2	39:BD:192:THR:HB	1.97	0.46
39:BD:242:ARG:NH1	39:BD:242:ARG:HG2	2.30	0.46
42:BG:116:ASP:O	42:BG:117:PHE:HB3	2.15	0.46
36:BA:2303:G:H4'	42:BG:125:PHE:O	2.15	0.46
42:BG:16:ARG:NE	42:BG:31:VAL:HG11	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BH:105:LEU:HD21	43:BH:113:VAL:HB	1.97	0.46
43:BH:104:GLU:OE1	43:BH:106:THR:HG23	2.16	0.46
48:BP:23:PRO:O	48:BP:33:ARG:CD	2.57	0.46
50:BR:22:ARG:NE	50:BR:69:ASP:HA	2.31	0.46
51:BS:19:LYS:HG2	51:BS:19:LYS:O	2.15	0.46
51:BS:56:LEU:O	51:BS:57:LYS:O	2.34	0.46
51:BS:61:ASN:O	51:BS:65:VAL:HG23	2.15	0.46
1:CA:1152:A:H2'	1:CA:1153:C:H6	1.79	0.46
1:CA:1264:C:H2'	1:CA:1265:G:H8	1.79	0.46
1:CA:1314:C:O2'	1:CA:1315:U:H5'	2.15	0.46
1:CA:383:A:H2'	1:CA:384:G:H5'	1.97	0.46
1:CA:599:C:O2'	1:CA:600:C:H5'	2.16	0.46
4:CD:147:ALA:HA	4:CD:181:MET:O	2.16	0.46
10:CJ:54:PHE:O	10:CJ:55:LYS:HB3	2.15	0.46
20:CT:82:SER:O	20:CT:86:ARG:CB	2.64	0.46
25:CZ:258:LEU:O	25:CZ:259:ALA:CB	2.64	0.46
25:CZ:291:ARG:O	25:CZ:293:VAL:HG23	2.16	0.46
27:D1:67:ILE:N	27:D1:68:PRO:CD	2.78	0.46
30:D4:26:SER:OG	30:D4:27:THR:N	2.48	0.46
30:D4:37:SER:O	30:D4:38:LYS:HB3	2.15	0.46
31:D5:42:PRO:O	31:D5:43:HIS:HB2	2.16	0.46
32:D6:32:ASN:O	32:D6:33:LYS:HB2	2.16	0.46
36:DA:1164:G:H2'	36:DA:1165:U:C6	2.51	0.46
36:DA:1222:C:C2'	36:DA:1223:G:H5''	2.45	0.46
36:DA:360:G:O2'	36:DA:361:G:H5'	2.16	0.46
36:DA:90:U:O3'	36:DA:92:A:O4'	2.33	0.46
37:DB:58:A:H2'	37:DB:59:A:O4'	2.15	0.46
38:DC:83:ILE:HD11	38:DC:97:GLU:CG	2.45	0.46
39:DD:31:LYS:HZ1	39:DD:33:LEU:HD11	1.80	0.46
42:DG:29:TRP:HA	42:DG:29:TRP:CE3	2.51	0.46
42:DG:44:GLY:C	42:DG:47:LYS:HZ3	2.19	0.46
43:DH:23:ARG:O	43:DH:24:VAL:HG23	2.16	0.46
46:DN:120:LEU:HD13	46:DN:120:LEU:C	2.36	0.46
47:DO:86:ILE:O	47:DO:87:ILE:HD13	2.15	0.46
48:DP:40:SER:O	48:DP:41:ARG:CD	2.63	0.46
51:DS:89:ARG:NH1	51:DS:89:ARG:HG2	2.27	0.46
52:DT:12:SER:C	52:DT:13:ARG:CZ	2.84	0.46
52:DT:26:ASP:C	52:DT:26:ASP:OD1	2.53	0.46
53:DU:88:ILE:CD1	53:DU:109:LEU:HD22	2.46	0.46
36:DA:581:C:OP1	53:DU:33:ARG:HG3	2.15	0.46
54:DV:71:LEU:HD23	54:DV:71:LEU:HA	1.75	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:DW:10:VAL:HG23	55:DW:101:SER:O	2.16	0.46
57:DY:30:VAL:HG12	57:DY:31:LEU:N	2.30	0.46
58:DZ:113:ALA:HB1	58:DZ:146:ILE:CD1	2.45	0.46
1:AA:1006:C:H2'	1:AA:1007:C:C6	2.50	0.46
1:AA:1090:U:H2'	1:AA:1091:U:C6	2.51	0.46
1:AA:1180:A:H5''	1:AA:1181:G:OP2	2.15	0.46
1:AA:119:A:O2'	1:AA:120:A:OP2	2.30	0.46
1:AA:1314:C:C5	1:AA:1315:U:C4	3.03	0.46
1:AA:338:A:H2'	1:AA:339:C:C6	2.50	0.46
1:AA:909:A:H2'	1:AA:910:C:O4'	2.16	0.46
1:AA:426:G:P	4:AD:36:ARG:NH2	2.87	0.46
8:AH:9:MET:O	8:AH:13:ILE:HG12	2.16	0.46
10:AJ:4:ILE:HB	10:AJ:74:ILE:CD1	2.45	0.46
12:AL:78:GLN:O	12:AL:80:HIS:N	2.48	0.46
13:AM:52:GLU:HG2	13:AM:55:ARG:NH1	2.31	0.46
13:AM:3:ARG:HH21	13:AM:7:VAL:HG13	1.79	0.46
17:AQ:40:LYS:HD3	17:AQ:42:TYR:OH	2.16	0.46
18:AR:22:VAL:HG23	18:AR:55:ARG:O	2.16	0.46
25:AZ:22:HIS:O	25:AZ:137:LYS:HE2	2.15	0.46
26:B0:11:ARG:O	26:B0:14:ARG:NH2	2.47	0.46
26:B0:49:LYS:HG3	26:B0:49:LYS:H	1.55	0.46
32:B6:32:ASN:O	32:B6:33:LYS:CB	2.64	0.46
34:B8:22:VAL:HB	34:B8:53:PRO:CB	2.45	0.46
35:B9:1:MET:HB2	35:B9:31:LYS:O	2.15	0.46
36:BA:1286:A:OP1	50:BR:105:ARG:NH1	2.49	0.46
36:BA:1472:A:O2'	36:BA:1473:G:H5'	2.15	0.46
36:BA:2100:G:H1	36:BA:2189:U:H3	1.62	0.46
36:BA:2109:U:O2	36:BA:2180:U:H5	1.99	0.46
36:BA:2469:A:H2'	36:BA:2470:G:H5'	1.96	0.46
36:BA:843:G:O2'	36:BA:844:C:H5'	2.15	0.46
38:BC:103:ILE:O	38:BC:106:GLY:N	2.48	0.46
40:BE:48:GLN:HA	40:BE:80:GLU:HA	1.97	0.46
41:BF:127:GLU:HB2	41:BF:196:LEU:HD12	1.97	0.46
42:BG:102:PHE:CZ	42:BG:106:LEU:HD13	2.50	0.46
43:BH:105:LEU:CD2	43:BH:105:LEU:N	2.78	0.46
43:BH:80:SER:O	43:BH:81:GLU:HB2	2.15	0.46
46:BN:34:LEU:CD1	46:BN:116:LEU:HB3	2.46	0.46
46:BN:1:MET:HE1	46:BN:3:THR:OG1	2.16	0.46
48:BP:98:GLU:H	48:BP:101:VAL:HG13	1.80	0.46
48:BP:112:LEU:HD11	48:BP:114:ILE:CD1	2.46	0.46
52:BT:26:ASP:OD1	52:BT:26:ASP:C	2.54	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1105:A:O2'	1:CA:1106:G:H5'	2.15	0.46
1:CA:1243:C:H2'	1:CA:1244:C:H6	1.81	0.46
1:CA:519:C:H2'	1:CA:520:A:O4'	2.15	0.46
1:CA:59:A:H5'	1:CA:60:A:C5'	2.46	0.46
1:CA:957:U:O2	1:CA:959:A:H8	1.99	0.46
2:CB:105:PHE:CE1	2:CB:155:LEU:HD12	2.51	0.46
2:CB:224:GLN:O	2:CB:226:ARG:N	2.49	0.46
2:CB:51:LEU:HD21	2:CB:55:PHE:CZ	2.51	0.46
2:CB:69:LEU:HD13	2:CB:71:VAL:CG2	2.46	0.46
4:CD:151:LYS:O	4:CD:151:LYS:HG2	2.16	0.46
4:CD:18:LYS:HE3	4:CD:31:CYS:CB	2.45	0.46
4:CD:75:PHE:CE1	4:CD:93:PHE:CZ	3.04	0.46
9:CI:53:VAL:O	9:CI:53:VAL:HG23	2.14	0.46
12:CL:26:ALA:O	12:CL:33:ARG:HD2	2.16	0.46
14:CN:22:THR:O	14:CN:23:ARG:HB3	2.14	0.46
15:CO:66:LEU:O	15:CO:69:TYR:HB3	2.15	0.46
19:CS:29:ARG:O	19:CS:31:ILE:HG22	2.15	0.46
22:CW:39:U:H2'	22:CW:40:C:H5'	1.97	0.46
25:CZ:313:HIS:CB	25:CZ:380:LEU:HD12	2.46	0.46
31:D5:3:LYS:O	31:D5:4:HIS:O	2.34	0.46
31:D5:6:VAL:HG13	36:DA:2016:U:H1'	1.98	0.46
36:DA:1286:A:OP1	50:DR:105:ARG:NH1	2.48	0.46
36:DA:1542:A:H2'	36:DA:1544:A:C4'	2.46	0.46
36:DA:2196:C:H2'	36:DA:2197:U:C6	2.50	0.46
35:D9:3:VAL:HG21	36:DA:2539:C:H4'	1.98	0.46
36:DA:2652:C:H42	36:DA:2668:G:H1	1.64	0.46
36:DA:26:G:C6	36:DA:27:G:N1	2.84	0.46
36:DA:2715:C:O2'	36:DA:2716:U:H5'	2.16	0.46
36:DA:2756:U:C1'	36:DA:2757:A:H5''	2.34	0.46
36:DA:589:C:H2'	36:DA:590:A:C8	2.50	0.46
36:DA:605:C:C4	36:DA:606:U:C5	3.04	0.46
36:DA:634:C:H2'	36:DA:635:C:C6	2.51	0.46
36:DA:963:U:H2'	36:DA:964:C:C6	2.51	0.46
38:DC:103:ILE:O	38:DC:106:GLY:N	2.48	0.46
40:DE:101:ARG:CB	40:DE:201:THR:HG21	2.45	0.46
43:DH:130:ARG:O	43:DH:131:VAL:HG23	2.15	0.46
43:DH:159:GLU:HG3	43:DH:160:LYS:HG3	1.98	0.46
46:DN:9:VAL:HG21	46:DN:48:MET:CB	2.45	0.46
48:DP:105:LEU:N	48:DP:105:LEU:CD1	2.75	0.46
48:DP:140:ALA:O	48:DP:141:ALA:HB3	2.16	0.46
48:DP:61:ARG:O	48:DP:62:LEU:CB	2.57	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DR:4:LEU:O	50:DR:6:SER:N	2.49	0.46
52:DT:28:VAL:HG23	52:DT:47:GLY:O	2.16	0.46
53:DU:19:LYS:O	53:DU:22:LYS:HG2	2.15	0.46
55:DW:82:LEU:CD1	55:DW:82:LEU:H	2.23	0.46
56:DX:49:VAL:HG12	56:DX:87:GLN:HB3	1.98	0.46
58:DZ:172:ALA:O	58:DZ:173:ALA:HB2	2.16	0.46
58:DZ:62:PRO:C	58:DZ:64:GLY:N	2.69	0.46
1:AA:1054:C:O2'	1:AA:1055:A:P	2.74	0.46
1:AA:1127:G:C2'	1:AA:1128:C:H5'	2.46	0.46
1:AA:1133:G:C4	1:AA:1142:G:N2	2.84	0.46
1:AA:256:U:H2'	1:AA:257:G:H8	1.80	0.46
1:AA:375:U:O2'	16:AP:28:ARG:HD2	2.16	0.46
1:AA:540:G:O2'	1:AA:541:G:H5'	2.16	0.46
1:AA:826:C:H2'	1:AA:827:U:H6	1.81	0.46
4:AD:174:LEU:HD23	4:AD:185:PHE:HA	1.98	0.46
5:AE:76:ILE:CG1	5:AE:77:PRO:HD2	2.46	0.46
7:AG:118:VAL:O	7:AG:121:ALA:HB3	2.16	0.46
1:AA:1152:A:OP1	10:AJ:68:HIS:CD2	2.69	0.46
10:AJ:96:ILE:HD13	10:AJ:96:ILE:N	2.17	0.46
14:AN:12:ARG:CB	14:AN:12:ARG:HH11	2.29	0.46
3:AC:34:LEU:HG	14:AN:25:VAL:HG11	1.98	0.46
1:AA:1326:C:P	21:AU:12:LYS:HZ2	2.39	0.46
22:AW:39:U:C5'	22:AW:39:U:O2	2.64	0.46
25:AZ:258:LEU:O	25:AZ:259:ALA:CB	2.64	0.46
34:B8:15:LYS:CG	48:BP:65:ARG:HH21	2.28	0.46
36:BA:143:G:H2'	36:BA:143(A):C:H6	1.81	0.46
36:BA:1480:G:C2'	36:BA:1481:U:C5'	2.94	0.46
36:BA:176:G:C2'	36:BA:177:G:H5'	2.45	0.46
36:BA:1862:G:O2'	36:BA:1863:G:H5'	2.16	0.46
36:BA:2257:U:O2'	36:BA:2258:C:H5'	2.15	0.46
36:BA:2330:G:O2'	36:BA:2331:G:H5'	2.15	0.46
36:BA:2666:C:H5'	36:BA:2667:C:OP2	2.16	0.46
33:B7:12:ARG:NH2	36:BA:465:G:OP1	2.46	0.46
36:BA:658:C:C2	36:BA:659:C:C5	3.04	0.46
29:B3:11:SER:HB3	36:BA:988:A:OP2	2.15	0.46
40:BE:108:SER:O	40:BE:162:ALA:HA	2.16	0.46
40:BE:24:THR:HG22	40:BE:186:GLY:CA	2.45	0.46
41:BF:4:VAL:HA	41:BF:19:GLU:CB	2.42	0.46
36:BA:673:C:P	41:BF:81:PRO:HG3	2.56	0.46
43:BH:83:TYR:HB3	43:BH:135:GLY:N	2.31	0.46
46:BN:9:VAL:O	46:BN:10:GLU:OE1	2.34	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BN:55:VAL:CG2	46:BN:126:PRO:HA	2.40	0.46
36:BA:2562:U:H4'	47:BO:25:LEU:HD21	1.98	0.46
49:BQ:58:PHE:O	49:BQ:58:PHE:HD1	1.99	0.46
52:BT:12:SER:C	52:BT:14:TYR:H	2.19	0.46
36:BA:2875:C:O2'	52:BT:5:ALA:HB3	2.15	0.46
53:BU:14:HIS:CD2	53:BU:36:ARG:NH2	2.83	0.46
53:BU:95:LEU:C	53:BU:97:ASP:H	2.18	0.46
53:BU:95:LEU:HD11	54:BV:11:GLN:O	2.16	0.46
55:BW:78:GLU:OE2	55:BW:99:ARG:HD2	2.15	0.46
37:BB:105:A:OP1	58:BZ:72:ARG:NH1	2.49	0.46
1:CA:1153:C:O2'	1:CA:1154:G:C5'	2.64	0.46
1:CA:1220:G:O2'	1:CA:1221:G:H5'	2.15	0.46
1:CA:156:G:O2'	1:CA:157:G:H5'	2.16	0.46
1:CA:308:C:H2'	1:CA:309:G:H8	1.81	0.46
1:CA:346:G:N3	1:CA:346:G:C2'	2.79	0.46
2:CB:169:LYS:HD3	2:CB:169:LYS:O	2.16	0.46
2:CB:191:ASP:OD1	2:CB:191:ASP:C	2.55	0.46
2:CB:47:THR:HG23	2:CB:202:PRO:O	2.16	0.46
7:CG:120:ILE:HG22	7:CG:124:LEU:HD12	1.98	0.46
9:CI:65:VAL:HG21	9:CI:73:GLN:CB	2.45	0.46
10:CJ:81:THR:C	10:CJ:83:GLU:N	2.67	0.46
10:CJ:85:LEU:C	10:CJ:87:THR:H	2.18	0.46
11:CK:110:ASP:HB2	18:CR:88:LYS:CE	2.44	0.46
1:CA:778:G:H1'	11:CK:119:CYS:HB3	1.98	0.46
13:CM:84:ILE:HG13	19:CS:66:MET:SD	2.55	0.46
14:CN:37:PHE:CE1	14:CN:53:LEU:HD13	2.51	0.46
16:CP:5:ARG:NE	16:CP:22:THR:HG21	2.31	0.46
19:CS:21:GLU:HG3	19:CS:21:GLU:O	2.14	0.46
22:CV:20:U:H2'	22:CV:21:A:C5'	2.46	0.46
36:DA:1215:G:O2'	36:DA:1216:G:H5'	2.15	0.46
36:DA:1222:C:H2'	36:DA:1223:G:H5'	1.98	0.46
36:DA:1902:C:H2'	36:DA:1903:G:O5'	2.16	0.46
36:DA:1889:A:H1'	36:DA:2087:G:O4'	2.16	0.46
36:DA:2110:G:H5''	36:DA:2145:C:N4	2.31	0.46
36:DA:2819:G:H2'	36:DA:2821:A:N7	2.30	0.46
36:DA:687:C:H2'	36:DA:688:U:O4'	2.15	0.46
36:DA:761:A:C3'	36:DA:761:A:C8	2.99	0.46
36:DA:761:A:H3'	36:DA:761:A:C8	2.51	0.46
36:DA:815:C:H41	48:DP:27:HIS:CE1	2.33	0.46
38:DC:196:LEU:O	38:DC:199:HIS:N	2.49	0.46
39:DD:131:LEU:N	39:DD:131:LEU:HD12	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DD:243:GLY:O	39:DD:244:ARG:HB3	2.15	0.46
36:DA:1658:C:OP1	40:DE:132:HIS:ND1	2.49	0.46
40:DE:120:TRP:HB3	40:DE:155:LYS:HD3	1.98	0.46
40:DE:34:VAL:CG1	40:DE:48:GLN:HE21	2.28	0.46
40:DE:46:ALA:HB2	40:DE:82:ARG:HA	1.96	0.46
41:DF:171:PRO:C	41:DF:173:VAL:H	2.20	0.46
42:DG:87:PRO:O	42:DG:88:ILE:CG1	2.63	0.46
43:DH:157:TYR:O	43:DH:158:HIS:CG	2.68	0.46
43:DH:45:VAL:C	43:DH:47:GLU:H	2.19	0.46
51:DS:61:ASN:O	51:DS:65:VAL:HG23	2.16	0.46
53:DU:59:ARG:CG	53:DU:59:ARG:NH1	2.79	0.46
58:DZ:23:LYS:O	58:DZ:39:VAL:O	2.34	0.46
58:DZ:29:TYR:O	58:DZ:30:ASN:HB3	2.15	0.46
58:DZ:98:MET:CG	58:DZ:99:TYR:N	2.69	0.46
1:AA:100:C:H2'	1:AA:101:A:O4'	2.16	0.46
1:AA:1067:A:N1	1:AA:1108:G:O2'	2.40	0.46
1:AA:156:G:O2'	1:AA:157:G:H5'	2.16	0.46
1:AA:392:G:H2'	1:AA:393:A:C8	2.49	0.46
1:AA:725:G:O2'	1:AA:726:C:H5'	2.16	0.46
1:AA:911:U:O2'	1:AA:912:C:H5'	2.16	0.46
2:AB:178:ARG:CG	2:AB:178:ARG:HH11	2.29	0.46
2:AB:213:LEU:C	2:AB:213:LEU:HD23	2.36	0.46
4:AD:22:LYS:HB2	4:AD:26:CYS:HB2	1.97	0.46
4:AD:45:GLN:C	4:AD:46:LYS:HG3	2.37	0.46
4:AD:3:ARG:HE	4:AD:5:ILE:HG13	1.81	0.46
7:AG:97:GLN:O	7:AG:101:LEU:HG	2.16	0.46
10:AJ:24:VAL:CG2	10:AJ:37:PRO:HG3	2.45	0.46
22:AW:49:C:H42	22:AW:65:G:H1	1.64	0.46
25:AZ:107:SER:OG	25:AZ:137:LYS:HD2	2.15	0.46
27:B1:92:LYS:HG3	27:B1:92:LYS:O	2.16	0.46
28:B2:51:ARG:CD	36:BA:94(A):G:N2	2.79	0.46
28:B2:51:ARG:HD3	36:BA:94(A):G:N2	2.30	0.46
30:B4:26:SER:OG	30:B4:27:THR:N	2.46	0.46
31:B5:50:GLY:O	31:B5:51:TYR:C	2.54	0.46
32:B6:14:THR:C	32:B6:16:CYS:H	2.19	0.46
34:B8:15:LYS:HG2	48:BP:65:ARG:NH2	2.31	0.46
36:BA:127:A:H5'	36:BA:128:C:O4'	2.15	0.46
36:BA:2110:G:C2	36:BA:2178:C:H5	2.34	0.46
36:BA:2208:A:O2'	36:BA:2219:G:C8	2.64	0.46
36:BA:2309:A:H2'	36:BA:2310:A:H5'	1.96	0.46
39:BD:69:ARG:HG3	39:BD:130:ALA:CB	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BE:7:VAL:CG1	40:BE:27:LEU:HB3	2.45	0.46
40:BE:1:MET:O	40:BE:2:LYS:O	2.33	0.46
40:BE:35:GLN:CG	40:BE:36:ARG:N	2.78	0.46
40:BE:52:LEU:HD21	52:BT:1:MET:CE	2.46	0.46
40:BE:87:GLU:OE1	40:BE:89:ASP:N	2.46	0.46
42:BG:42:GLY:O	42:BG:88:ILE:HG22	2.16	0.46
46:BN:62:VAL:HG23	46:BN:66:LYS:HD2	1.95	0.46
47:BO:49:ARG:CD	47:BO:49:ARG:H	2.28	0.46
48:BP:105:LEU:H	48:BP:105:LEU:CD1	2.25	0.46
48:BP:95:VAL:CG2	48:BP:125:VAL:HA	2.44	0.46
50:BR:17:ARG:O	50:BR:20:LEU:HB3	2.16	0.46
51:BS:40:ILE:HG22	51:BS:47:THR:HG23	1.97	0.46
52:BT:14:TYR:CD1	52:BT:14:TYR:N	2.84	0.46
36:BA:2848:G:H8	52:BT:97:ALA:HB2	1.81	0.46
33:B7:47:ARG:NH2	56:BX:60:ARG:NH1	2.65	0.46
57:BY:10:GLY:C	57:BY:27:VAL:HG22	2.36	0.46
58:BZ:104:PHE:CE2	58:BZ:119:GLU:CB	2.98	0.46
1:CA:1394:A:C5	1:CA:1501:C:H4'	2.51	0.46
1:CA:1397:C:O2	1:CA:1397:C:O4'	2.33	0.46
1:CA:384:G:O2'	1:CA:385:C:H5'	2.15	0.46
1:CA:628:G:C2'	1:CA:629:G:H5'	2.46	0.46
2:CB:166:ASP:HB3	2:CB:169:LYS:CB	2.46	0.46
9:CI:53:VAL:H	9:CI:95:LYS:NZ	2.11	0.46
1:CA:276:G:O2'	17:CQ:68:ARG:NH1	2.49	0.46
25:CZ:171:ILE:HG13	25:CZ:202:LEU:HA	1.97	0.46
25:CZ:69:GLU:CG	25:CZ:70:TYR:N	2.80	0.46
25:CZ:93:ILE:HD11	25:CZ:122:LEU:HD21	1.97	0.46
28:D2:53:LEU:O	28:D2:53:LEU:HD23	2.16	0.46
34:D8:20:GLY:O	34:D8:57:ARG:HD3	2.16	0.46
36:DA:1484:G:C3'	36:DA:1485:G:H5''	2.43	0.46
36:DA:176:G:C2'	36:DA:177:G:H5'	2.46	0.46
36:DA:2036:C:C5'	36:DA:2036:C:H6	2.15	0.46
36:DA:644:A:N1	36:DA:2369:A:H1'	2.30	0.46
36:DA:1782:C:H1'	36:DA:2609:U:C5'	2.45	0.46
36:DA:334:C:P	36:DA:335:C:H41	2.38	0.46
36:DA:444:C:H2'	36:DA:445:C:C6	2.50	0.46
36:DA:736:C:O2'	36:DA:737:C:H5'	2.16	0.46
40:DE:197:ILE:O	40:DE:197:ILE:HG12	2.15	0.46
43:DH:80:SER:O	43:DH:81:GLU:CB	2.63	0.46
46:DN:65:LYS:HD3	46:DN:69:GLN:NE2	2.30	0.46
51:DS:25:ARG:HD2	51:DS:88:ASP:OD2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DT:35:LYS:HZ1	52:DT:41:ARG:HE	1.63	0.46
53:DU:51:LYS:HA	53:DU:54:LYS:HE2	1.97	0.46
57:DY:47:LYS:HE3	57:DY:60:PHE:CZ	2.51	0.46
37:DB:76:G:O3'	58:DZ:19:ARG:NH2	2.49	0.46
1:AA:1054:C:O2'	1:AA:1055:A:H5''	2.16	0.45
1:AA:1101:A:H4'	1:AA:1102:A:O5'	2.15	0.45
1:AA:1221:G:C2'	1:AA:1222:G:H5'	2.46	0.45
1:AA:1399:C:C2	1:AA:1502:A:N6	2.84	0.45
1:AA:163:C:O2'	1:AA:164:U:H5'	2.16	0.45
4:AD:107:ARG:HD2	4:AD:173:TRP:CZ2	2.51	0.45
4:AD:9:CYS:HA	4:AD:12:CYS:HB2	1.99	0.45
5:AE:99:GLY:O	5:AE:117:ASP:HA	2.16	0.45
5:AE:76:ILE:HG13	5:AE:142:LEU:CD1	2.44	0.45
7:AG:28:ASN:OD1	7:AG:36:LYS:HE2	2.16	0.45
13:AM:15:VAL:HG12	13:AM:45:VAL:HG22	1.98	0.45
18:AR:25:THR:HG22	18:AR:42:ARG:HH11	1.80	0.45
19:AS:13:ASP:C	19:AS:15:LEU:N	2.69	0.45
20:AT:89:ARG:HD2	20:AT:104:LEU:CD1	2.46	0.45
25:AZ:17:ILE:HG13	25:AZ:104:LEU:HA	1.98	0.45
25:AZ:203:LEU:HD23	25:AZ:203:LEU:O	2.16	0.45
24:AY:2:G:H4'	25:AZ:88:TYR:CE1	2.51	0.45
26:B0:23:VAL:HG11	26:B0:69:PHE:HZ	1.81	0.45
28:B2:23:LYS:HA	28:B2:26:ARG:CB	2.46	0.45
34:B8:48:PHE:N	34:B8:48:PHE:CD1	2.85	0.45
36:BA:1485:G:H1'	36:BA:1505:C:N4	2.32	0.45
36:BA:1842:G:H2'	36:BA:1843:C:C6	2.51	0.45
36:BA:2653:U:H3'	36:BA:2654:A:C8	2.51	0.45
36:BA:589:C:H2'	36:BA:590:A:C8	2.51	0.45
36:BA:811:U:O2'	36:BA:812:C:C5'	2.63	0.45
37:BB:66:A:H61	37:BB:108:U:C2'	2.28	0.45
38:BC:74:VAL:HG11	38:BC:153:ILE:HG23	1.98	0.45
40:BE:101:ARG:HD3	40:BE:170:LEU:O	2.16	0.45
40:BE:116:VAL:CG2	40:BE:122:PHE:CD2	2.90	0.45
41:BF:162:LEU:HA	41:BF:165:ARG:NH1	2.31	0.45
42:BG:138:GLN:HG2	42:BG:153:ARG:H	1.80	0.45
42:BG:42:GLY:CA	42:BG:89:GLY:HA2	2.46	0.45
44:BJ:64:UNK:C	44:BJ:66:UNK:N	2.77	0.45
46:BN:120:LEU:C	46:BN:120:LEU:HD13	2.37	0.45
49:BQ:135:ASP:O	49:BQ:138:ASP:OD2	2.33	0.45
55:BW:55:ALA:O	55:BW:57:ASN:N	2.50	0.45
58:BZ:162:GLU:C	58:BZ:163:LEU:HD23	2.36	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1031:G:O2'	1:CA:1032:G:H5'	2.16	0.45
1:CA:1029:C:H4'	1:CA:1033:G:N2	2.30	0.45
1:CA:1142:G:C8	1:CA:1143:G:C8	3.04	0.45
1:CA:124:G:C6	1:CA:125:U:C4	3.04	0.45
1:CA:243:A:C2	1:CA:246:A:C8	3.05	0.45
1:CA:858:G:C8	1:CA:869:G:O6	2.69	0.45
1:CA:909:A:H2'	1:CA:910:C:O4'	2.16	0.45
1:CA:945:G:C2	1:CA:946:A:C8	3.04	0.45
1:CA:954:G:H4'	13:CM:120:LYS:CD	2.25	0.45
3:CC:70:VAL:O	3:CC:106:VAL:N	2.44	0.45
4:CD:105:VAL:HG21	4:CD:121:VAL:CG2	2.46	0.45
7:CG:75:VAL:CG1	7:CG:145:ALA:HA	2.45	0.45
9:CI:111:ARG:O	9:CI:113:LYS:HD2	2.15	0.45
9:CI:11:LYS:O	9:CI:11:LYS:HG2	2.16	0.45
9:CI:95:LYS:HG3	9:CI:96:LEU:CD1	2.39	0.45
11:CK:27:ASN:HD21	11:CK:45:GLY:H	1.64	0.45
13:CM:25:ILE:HD11	13:CM:60:VAL:CG1	2.46	0.45
15:CO:31:LEU:O	15:CO:35:ARG:HG3	2.16	0.45
16:CP:20:VAL:CG2	16:CP:21:VAL:N	2.78	0.45
22:CW:29:G:O2'	22:CW:30:G:H5'	2.16	0.45
24:CY:24:G:H2'	24:CY:25:C:O4'	2.17	0.45
25:CZ:277:LEU:HD13	25:CZ:279:GLU:N	2.31	0.45
25:CZ:28:THR:C	25:CZ:30:ALA:H	2.18	0.45
29:D3:48:GLU:H	29:D3:48:GLU:HG2	1.54	0.45
33:D7:47:ARG:NH2	56:DX:60:ARG:NH1	2.64	0.45
36:DA:1059:G:H2'	36:DA:1060:U:C5	2.50	0.45
36:DA:1659:U:C4	36:DA:1660:C:C5	3.04	0.45
36:DA:2154:G:C2	36:DA:2155:G:C4	3.04	0.45
36:DA:2348:U:O2'	36:DA:2349:G:H5'	2.16	0.45
36:DA:2408:U:H2'	36:DA:2409:G:H8	1.81	0.45
38:DC:149:ILE:CG2	38:DC:150:GLY:N	2.80	0.45
39:DD:94:LEU:HB2	39:DD:104:TYR:CE1	2.49	0.45
40:DE:9:VAL:CG1	40:DE:25:VAL:O	2.64	0.45
41:DF:124:LEU:O	41:DF:193:VAL:HA	2.16	0.45
36:DA:1952:A:C5	47:DO:22:ILE:HD12	2.51	0.45
47:DO:87:ILE:HG22	47:DO:88:ASN:O	2.16	0.45
49:DQ:25:ASP:HA	49:DQ:100:GLY:O	2.16	0.45
50:DR:18:LEU:HD13	50:DR:18:LEU:C	2.37	0.45
56:DX:14:SER:H	56:DX:17:ALA:HB3	1.81	0.45
58:DZ:51:ALA:CB	58:DZ:57:ILE:HD11	2.26	0.45
1:AA:542:G:N3	1:AA:543:C:C6	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:814:A:H2'	1:AA:816:A:H5''	1.99	0.45
1:AA:818:G:HO2'	1:AA:820:U:H6	1.62	0.45
2:AB:109:SER:O	2:AB:111:ARG:N	2.49	0.45
3:AC:172:ARG:O	3:AC:173:VAL:HG23	2.15	0.45
4:AD:121:VAL:HG22	4:AD:126:ILE:HG12	1.98	0.45
6:AF:28:ARG:O	6:AF:31:GLU:HB3	2.16	0.45
8:AH:101:PRO:HG2	8:AH:133:LEU:HD21	1.98	0.45
9:AI:81:ILE:O	9:AI:85:LEU:HG	2.16	0.45
12:AL:127:GLU:O	12:AL:128:ALA:C	2.53	0.45
14:AN:26:ARG:HH11	14:AN:47:LEU:CD2	2.23	0.45
1:AA:1202:G:N2	14:AN:46:GLU:OE2	2.44	0.45
16:AP:9:PHE:CE2	16:AP:18:ARG:CZ	2.99	0.45
27:B1:30:VAL:O	27:B1:31:GLY:O	2.35	0.45
28:B2:2:LYS:HG2	28:B2:5:GLU:OE2	2.16	0.45
28:B2:35:LEU:O	28:B2:35:LEU:HD22	2.17	0.45
29:B3:26:LEU:O	29:B3:28:LEU:HD22	2.16	0.45
33:B7:31:LEU:O	33:B7:35:ARG:HB2	2.17	0.45
36:BA:1206:G:C6	36:BA:1207:C:C4	3.04	0.45
36:BA:1544:A:O2'	36:BA:1545:A:H5'	2.17	0.45
36:BA:2181:G:N2	36:BA:2182:G:C2	2.84	0.45
36:BA:2514:U:H2'	36:BA:2515:C:C6	2.52	0.45
36:BA:2801(A):A:C3'	36:BA:2802:G:H5'	2.46	0.45
36:BA:2824:C:H2'	36:BA:2825:C:O4'	2.17	0.45
36:BA:922:U:H2'	36:BA:923:C:C6	2.52	0.45
38:BC:96:GLY:C	38:BC:98:GLU:H	2.20	0.45
40:BE:115:GLY:C	40:BE:116:VAL:O	2.52	0.45
43:BH:45:VAL:C	43:BH:47:GLU:H	2.19	0.45
43:BH:76:VAL:C	43:BH:78:GLY:N	2.68	0.45
46:BN:89:LYS:O	46:BN:93:THR:HG22	2.16	0.45
48:BP:38:GLN:HG3	48:BP:39:LYS:N	2.31	0.45
48:BP:99:LEU:HD23	48:BP:99:LEU:C	2.36	0.45
50:BR:118:GLU:HA	50:BR:118:GLU:OE1	2.16	0.45
50:BR:7:GLY:O	50:BR:8:ARG:CZ	2.64	0.45
52:BT:66:VAL:HA	52:BT:71:GLY:HA2	1.98	0.45
52:BT:50:ILE:HA	52:BT:99:LEU:HD11	1.98	0.45
53:BU:102:GLU:HG3	54:BV:2:PHE:CE2	2.51	0.45
58:BZ:118:GLN:HG2	58:BZ:120:ILE:HD13	1.98	0.45
58:BZ:114:GLY:C	58:BZ:146:ILE:HG22	2.35	0.45
1:CA:1193:G:O2'	1:CA:1194:U:H5'	2.16	0.45
1:CA:265:G:H2'	1:CA:267:C:H5	1.81	0.45
1:CA:56:U:H2'	1:CA:57:G:H8	1.79	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:594:G:C2'	1:CA:595:G:H5'	2.45	0.45
1:CA:782:A:H2'	1:CA:783:C:H5'	1.98	0.45
1:CA:858:G:N1	1:CA:869:G:C8	2.84	0.45
2:CB:114:ARG:NH1	2:CB:118:LEU:CG	2.80	0.45
2:CB:58:ILE:CG2	2:CB:222:ILE:CD1	2.94	0.45
4:CD:104:VAL:HA	4:CD:107:ARG:HB2	1.98	0.45
5:CE:41:VAL:HG13	5:CE:113:ALA:CA	2.45	0.45
6:CF:44:GLY:HA2	6:CF:59:TYR:CE1	2.51	0.45
9:CI:20:ARG:CB	9:CI:20:ARG:NH1	2.72	0.45
9:CI:48:GLU:N	9:CI:49:PRO:HD3	2.31	0.45
9:CI:4:TYR:HA	9:CI:88:TYR:CD1	2.51	0.45
13:CM:3:ARG:HH21	13:CM:7:VAL:HG13	1.80	0.45
3:CC:34:LEU:HG	14:CN:25:VAL:HG11	1.97	0.45
16:CP:75:ARG:O	16:CP:78:GLY:N	2.28	0.45
24:CY:16:H2U:C5'	24:CY:17:H2U:H5'	2.42	0.45
32:D6:18:ARG:HE	32:D6:43:CYS:HB3	1.81	0.45
36:DA:1106:G:C2'	36:DA:1107:G:H5'	2.46	0.45
36:DA:127:A:H5''	36:DA:128:C:O4'	2.16	0.45
36:DA:1697:G:C3'	36:DA:1698:A:H5''	2.38	0.45
36:DA:2127:G:H2'	36:DA:2128:C:C6	2.51	0.45
36:DA:2692:C:H2'	36:DA:2693:A:H8	1.80	0.45
36:DA:580:C:O2'	36:DA:581:C:H5'	2.16	0.45
36:DA:606:U:H4'	36:DA:658:C:H4'	1.98	0.45
36:DA:667:U:H2'	36:DA:668:G:O4'	2.15	0.45
39:DD:162:SER:O	39:DD:178:PRO:HG3	2.16	0.45
36:DA:773:U:H4'	39:DD:47:GLY:HA3	1.98	0.45
43:DH:139:GLN:HE21	43:DH:140:LYS:HA	1.81	0.45
45:DK:5:UNK:O	45:DK:6:UNK:C	2.64	0.45
45:DK:8:UNK:O	45:DK:9:UNK:C	2.63	0.45
36:DA:6:A:O2'	46:DN:130:HIS:HB2	2.16	0.45
47:DO:98:VAL:HG11	47:DO:118:ALA:N	2.31	0.45
48:DP:138:LEU:N	48:DP:138:LEU:HD12	2.31	0.45
51:DS:25:ARG:NH1	51:DS:42:ASP:OD2	2.49	0.45
57:DY:50:ARG:O	57:DY:53:PRO:HG3	2.16	0.45
57:DY:75:ILE:HG13	57:DY:76:CYS:H	1.81	0.45
58:DZ:155:LEU:HD23	58:DZ:155:LEU:H	1.80	0.45
1:AA:1193:G:O2'	1:AA:1194:U:H5'	2.16	0.45
1:AA:1488:G:H2'	1:AA:1489:G:C8	2.52	0.45
1:AA:256:U:H5'	17:AQ:17:LYS:HZ1	1.81	0.45
2:AB:114:ARG:HH11	2:AB:118:LEU:HG	1.81	0.45
2:AB:166:ASP:HB3	2:AB:169:LYS:CB	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:130:VAL:O	3:AC:131:ARG:C	2.55	0.45
3:AC:167:TRP:O	3:AC:168:ALA:CB	2.63	0.45
5:AE:41:VAL:HG13	5:AE:113:ALA:CA	2.45	0.45
6:AF:87:ARG:NH1	6:AF:87:ARG:HG2	2.29	0.45
20:AT:65:LYS:O	20:AT:68:LYS:HB2	2.17	0.45
25:AZ:5:PHE:CD1	25:AZ:277:LEU:HD23	2.51	0.45
29:B3:6:VAL:HB	29:B3:54:VAL:HG11	1.97	0.45
31:B5:56:LYS:NZ	31:B5:59:GLU:OE2	2.49	0.45
33:B7:46:VAL:HG12	33:B7:47:ARG:H	1.82	0.45
34:B8:11:LYS:CD	34:B8:11:LYS:H	2.29	0.45
36:BA:1204:A:N1	36:BA:1241:A:C2	2.84	0.45
36:BA:1300:U:H4'	36:BA:1301:A:O5'	2.17	0.45
36:BA:2001:A:H2'	36:BA:2002:G:C8	2.51	0.45
36:BA:2230:G:H2'	36:BA:2231:C:H6	1.81	0.45
36:BA:644:A:N1	36:BA:2369:A:H1'	2.31	0.45
35:B9:31:LYS:HE2	36:BA:2478:A:H5'	1.99	0.45
36:BA:2693:A:H2'	36:BA:2694:G:C8	2.50	0.45
36:BA:272(D):G:H1	36:BA:364:C:N4	2.10	0.45
36:BA:2740:A:H2'	36:BA:2741:A:C8	2.51	0.45
36:BA:524:U:H4'	36:BA:555:U:H4'	1.98	0.45
39:BD:91:ARG:HH11	39:BD:91:ARG:HG2	1.82	0.45
40:BE:105:THR:HB	40:BE:197:ILE:CG2	2.43	0.45
40:BE:4:ILE:HG12	40:BE:5:LEU:O	2.17	0.45
42:BG:134:GLY:C	42:BG:135:LEU:HD12	2.37	0.45
43:BH:54:ARG:HB2	43:BH:55:PRO:HD2	1.98	0.45
48:BP:33:ARG:O	48:BP:34:GLY:O	2.35	0.45
48:BP:84:ASN:C	48:BP:86:LYS:H	2.19	0.45
49:BQ:27:VAL:O	49:BQ:28:ALA:HB3	2.17	0.45
51:BS:84:GLN:HB3	51:BS:105:ALA:O	2.15	0.45
52:BT:105:LEU:HD22	52:BT:109:GLU:OE2	2.17	0.45
52:BT:39:ARG:CD	52:BT:39:ARG:H	2.12	0.45
53:BU:57:PHE:O	53:BU:58:ARG:C	2.53	0.45
54:BV:49:THR:O	54:BV:50:PRO:C	2.54	0.45
54:BV:21:ARG:HB3	54:BV:91:TYR:HB2	1.98	0.45
58:BZ:119:GLU:CG	58:BZ:122:ARG:NH1	2.78	0.45
58:BZ:42:VAL:HG22	58:BZ:43:GLU:N	2.31	0.45
1:CA:1151:A:O2'	1:CA:1152:A:H8	1.98	0.45
1:CA:1277:C:H1'	1:CA:1282:C:O2	2.16	0.45
1:CA:219:C:H2'	1:CA:220:G:O4'	2.16	0.45
1:CA:624:C:H4'	16:CP:11:SER:N	2.30	0.45
1:CA:655:A:H2'	1:CA:656:C:C6	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:706:A:C5	1:CA:707:C:C5	3.05	0.45
1:CA:814:A:H2'	1:CA:816:A:H5''	1.98	0.45
7:CG:69:VAL:HG11	7:CG:104:LEU:HD22	1.99	0.45
12:CL:43:VAL:HG23	12:CL:93:LEU:HD22	1.98	0.45
13:CM:11:ARG:HG2	13:CM:12:ASN:N	2.17	0.45
22:CW:8:U:C6	22:CW:8:U:OP2	2.69	0.45
25:CZ:355:LEU:HB2	25:CZ:356:PRO:CD	2.46	0.45
36:DA:1528:A:O2'	36:DA:1528(A):A:H5'	2.17	0.45
36:DA:1541:G:O2'	36:DA:1542:A:H5''	2.17	0.45
36:DA:1916:A:H2'	36:DA:1917:U:O4'	2.17	0.45
36:DA:2392:A:N3	36:DA:2392:A:H5'	2.31	0.45
36:DA:2552:U:C2	36:DA:2554:U:H5'	2.51	0.45
36:DA:2585:U:O2	36:DA:2585:U:H5'	2.16	0.45
36:DA:271(Q):G:H1'	36:DA:271(R):G:H8	1.81	0.45
36:DA:659:C:H4'	41:DF:100:THR:O	2.16	0.45
36:DA:742:G:O2'	36:DA:743:G:H5'	2.15	0.45
38:DC:113:VAL:O	38:DC:138:PRO:HG3	2.17	0.45
38:DC:41:VAL:HG21	38:DC:185:LEU:CD2	2.47	0.45
41:DF:42:ALA:O	41:DF:45:ARG:HB2	2.16	0.45
42:DG:34:LEU:O	42:DG:34:LEU:HD12	2.17	0.45
42:DG:5:VAL:HG12	42:DG:7:LEU:H	1.81	0.45
46:DN:112:LEU:O	46:DN:115:ARG:N	2.49	0.45
47:DO:34:THR:O	47:DO:35:VAL:C	2.54	0.45
48:DP:38:GLN:CG	48:DP:39:LYS:H	2.30	0.45
51:DS:49:VAL:HG22	51:DS:80:LEU:HD13	1.99	0.45
52:DT:19:LEU:HD22	52:DT:85:LYS:CD	2.46	0.45
53:DU:82:GLY:O	53:DU:84:LYS:N	2.50	0.45
55:DW:62:HIS:O	55:DW:63:ASP:O	2.33	0.45
57:DY:10:GLY:C	57:DY:27:VAL:HG22	2.37	0.45
1:AA:668:G:O2'	15:AO:46:HIS:HD2	1.99	0.45
2:AB:44:LEU:CD1	2:AB:44:LEU:H	2.18	0.45
7:AG:76:ARG:HH11	7:AG:76:ARG:HG2	1.80	0.45
1:AA:825:G:N2	8:AH:11:THR:HG21	2.31	0.45
13:AM:101:GLN:HB3	13:AM:102:ARG:H	1.58	0.45
19:AS:61:TYR:HD1	19:AS:62:ILE:N	2.14	0.45
22:AV:60:U:H5''	22:AV:61:C:H5	1.81	0.45
25:AZ:24:LYS:HG3	25:AZ:25:THR:N	2.30	0.45
31:B5:20:ARG:HA	31:B5:23:HIS:ND1	2.32	0.45
34:B8:30:ARG:HA	34:B8:30:ARG:NE	2.31	0.45
36:BA:1131:G:O6	36:BA:2040:C:H1'	2.17	0.45
36:BA:1270:C:H5''	36:BA:1271:G:H5'	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1290:C:H2'	36:BA:1291:C:H6	1.81	0.45
36:BA:1982:C:C5'	36:BA:1983:C:OP2	2.65	0.45
26:B0:43:THR:CG2	36:BA:2336:A:H61	2.29	0.45
36:BA:2364:C:H2'	36:BA:2365:G:O4'	2.17	0.45
36:BA:2656:U:N3	36:BA:2665:A:H2	2.04	0.45
36:BA:1709:U:H1'	36:BA:2860:A:N3	2.31	0.45
38:BC:117:PRO:O	38:BC:118:ASP:HB3	2.16	0.45
36:BA:2128:C:P	38:BC:36:LYS:HB2	2.56	0.45
38:BC:74:VAL:HG12	38:BC:75:LEU:N	2.31	0.45
39:BD:43:ARG:HG2	39:BD:43:ARG:O	2.15	0.45
42:BG:138:GLN:HG2	42:BG:153:ARG:O	2.16	0.45
43:BH:28:GLY:HA3	43:BH:79:VAL:HB	1.98	0.45
46:BN:112:LEU:O	46:BN:115:ARG:N	2.50	0.45
48:BP:123:LEU:N	48:BP:123:LEU:HD23	2.31	0.45
48:BP:24:GLY:CA	48:BP:33:ARG:CZ	2.95	0.45
48:BP:46:LYS:HB3	48:BP:52:GLU:HG2	1.98	0.45
49:BQ:132:VAL:HG11	58:BZ:81:ARG:HD2	1.97	0.45
50:BR:97:VAL:HA	50:BR:113:LEU:O	2.15	0.45
52:BT:128:GLU:CD	52:BT:129:ARG:N	2.69	0.45
1:CA:1006:C:H2'	1:CA:1007:C:C6	2.50	0.45
1:CA:706:A:C1'	11:CK:29:ILE:HD11	2.45	0.45
1:CA:865:A:H5'	1:CA:1078:U:C4	2.50	0.45
2:CB:132:LYS:HA	2:CB:135:GLN:OE1	2.16	0.45
6:CF:27:GLN:O	6:CF:31:GLU:HB2	2.16	0.45
7:CG:51:GLN:HA	7:CG:51:GLN:OE1	2.16	0.45
9:CI:16:ARG:HH11	9:CI:16:ARG:HG3	1.82	0.45
9:CI:17:VAL:HG11	9:CI:81:ILE:CD1	2.36	0.45
11:CK:76:GLY:O	11:CK:78:GLN:HG3	2.16	0.45
18:CR:61:LYS:O	18:CR:65:ILE:HG13	2.16	0.45
22:CV:1:G:H1'	26:D0:5:LYS:HZ1	1.80	0.45
22:CV:22:G:C2'	22:CV:23:A:H5"	2.47	0.45
25:CZ:315:LYS:HG2	25:CZ:373:GLU:HG3	1.98	0.45
28:D2:35:LEU:HB3	28:D2:50:ILE:CG1	2.46	0.45
34:D8:61:LEU:N	34:D8:63:PRO:HD2	2.31	0.45
36:DA:1107:G:H4'	44:DJ:81:UNK:CA	2.45	0.45
36:DA:1213:A:N3	36:DA:1238:G:H1'	2.31	0.45
36:DA:1463:C:H2'	36:DA:1464:C:H6	1.81	0.45
36:DA:1666:G:C2'	36:DA:1667:G:H5'	2.46	0.45
36:DA:2110:G:C2	36:DA:2178:C:H5	2.32	0.45
36:DA:2488:A:O2'	36:DA:2489:G:H5'	2.16	0.45
36:DA:2553:G:H3'	36:DA:2554:U:H5"	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1710:C:H1'	36:DA:2859:G:N2	2.31	0.45
36:DA:301:G:C6	36:DA:317:G:C6	3.05	0.45
36:DA:39:C:H2'	36:DA:40:C:H6	1.80	0.45
36:DA:825:C:H4'	36:DA:2428:G:N7	2.32	0.45
36:DA:847:U:OP2	36:DA:928:G:O6	2.35	0.45
42:DG:172:LEU:C	42:DG:172:LEU:HD23	2.36	0.45
43:DH:163:TYR:CE2	43:DH:168:PRO:HD3	2.52	0.45
46:DN:3:THR:HG22	46:DN:5:VAL:H	1.81	0.45
49:DQ:109:VAL:CG1	49:DQ:110:THR:N	2.79	0.45
49:DQ:135:ASP:O	49:DQ:138:ASP:OD2	2.34	0.45
49:DQ:12:GLN:NE2	49:DQ:72:LYS:HG3	2.31	0.45
53:DU:57:PHE:O	53:DU:58:ARG:C	2.53	0.45
57:DY:35:TYR:HD2	57:DY:68:HIS:NE2	2.14	0.45
58:DZ:137:ILE:HD12	58:DZ:158:PRO:CD	2.47	0.45
58:DZ:169:GLU:O	58:DZ:171:ILE:HG23	2.17	0.45
1:AA:265:G:H2'	1:AA:267:C:H5	1.82	0.45
1:AA:902:G:H2'	1:AA:903:G:H8	1.81	0.45
2:AB:27:LYS:HD2	2:AB:193:ASP:OD1	2.17	0.45
3:AC:35:GLU:CG	3:AC:59:ARG:HH22	2.29	0.45
4:AD:61:LYS:HB2	4:AD:203:VAL:HG13	1.97	0.45
9:AI:28:VAL:HG21	9:AI:33:PHE:HA	1.97	0.45
10:AJ:6:ILE:HG12	10:AJ:72:VAL:O	2.16	0.45
10:AJ:86:MET:O	10:AJ:86:MET:CG	2.62	0.45
12:AL:126:LYS:HE2	12:AL:127:GLU:N	2.32	0.45
14:AN:37:PHE:CE1	14:AN:53:LEU:HD13	2.52	0.45
20:AT:58:LYS:O	20:AT:62:LEU:HD12	2.16	0.45
25:AZ:258:LEU:HD12	25:AZ:258:LEU:N	2.32	0.45
25:AZ:93:ILE:HD11	25:AZ:122:LEU:HD21	1.99	0.45
26:B0:72:ARG:HD3	26:B0:75:LEU:HD13	1.97	0.45
28:B2:35:LEU:C	28:B2:35:LEU:HD22	2.37	0.45
28:B2:67:LYS:CA	28:B2:70:GLN:HG2	2.47	0.45
36:BA:1059:G:H2'	36:BA:1060:U:C5	2.51	0.45
36:BA:1275:A:C8	50:BR:16:HIS:CD2	3.04	0.45
36:BA:130:C:O3'	36:BA:1349:A:H1'	2.15	0.45
36:BA:1573:G:C2'	36:BA:1574:C:H5'	2.46	0.45
36:BA:2122:U:H2'	36:BA:2123:G:C8	2.52	0.45
36:BA:2334:G:H5'	51:BS:13:ARG:HD3	1.98	0.45
36:BA:2554:U:H2'	36:BA:2555:U:C6	2.51	0.45
36:BA:1638:C:H5''	36:BA:2710:C:O2'	2.16	0.45
36:BA:2733:A:H2'	36:BA:2734:A:O4'	2.16	0.45
36:BA:860:U:O4'	36:BA:860:U:O2	2.34	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:894:C:O2'	36:BA:895:U:H5'	2.16	0.45
38:BC:2:LYS:O	38:BC:2:LYS:HG2	2.17	0.45
39:BD:127:VAL:HA	39:BD:193:VAL:HG13	1.97	0.45
39:BD:142:VAL:CG2	39:BD:191:ALA:HB1	2.45	0.45
40:BE:49:LEU:HD11	40:BE:91:VAL:HG21	1.97	0.45
41:BF:108:LYS:HB3	41:BF:112:MET:HE3	1.99	0.45
41:BF:160:ASN:ND2	41:BF:162:LEU:N	2.58	0.45
41:BF:4:VAL:HG13	41:BF:19:GLU:OE1	2.16	0.45
42:BG:121:ASN:HD22	42:BG:122:PRO:N	2.13	0.45
43:BH:139:GLN:HE21	43:BH:140:LYS:HA	1.81	0.45
44:BJ:90:UNK:O	44:BJ:91:UNK:C	2.64	0.45
48:BP:147:LEU:CG	48:BP:148:LEU:H	2.21	0.45
36:BA:958:U:O4	49:BQ:17:LEU:HG	2.17	0.45
49:BQ:21:THR:O	49:BQ:22:LYS:CB	2.63	0.45
49:BQ:39:PRO:O	49:BQ:40:ALA:HB2	2.15	0.45
54:BV:82:ARG:HG2	54:BV:82:ARG:HH11	1.81	0.45
55:BW:14:PRO:HG2	55:BW:78:GLU:CG	2.45	0.45
57:BY:26:LYS:HG2	57:BY:27:VAL:N	2.24	0.45
58:BZ:101:PRO:HG2	58:BZ:136:PHE:N	2.30	0.45
58:BZ:146:ILE:HG13	58:BZ:147:GLY:N	2.31	0.45
1:CA:1031:G:H2'	1:CA:1032:G:O4'	2.16	0.45
1:CA:1117:G:H5'	1:CA:1117:G:C8	2.49	0.45
1:CA:1127:G:H1	1:CA:1145:C:N4	2.14	0.45
1:CA:1275:A:O2'	1:CA:1276:G:H5'	2.17	0.45
1:CA:1328:C:O2'	1:CA:1329:A:H5'	2.17	0.45
3:CC:132:ARG:NH1	3:CC:136:GLN:HE22	1.98	0.45
5:CE:12:LEU:O	5:CE:12:LEU:HD13	2.17	0.45
6:CF:38:GLU:O	6:CF:39:LYS:C	2.52	0.45
10:CJ:50:ILE:HG12	14:CN:41:ARG:CD	2.46	0.45
20:CT:62:LEU:HD12	20:CT:62:LEU:N	2.16	0.45
22:CV:60:U:H5''	22:CV:61:C:H5	1.81	0.45
26:D0:24:LYS:HD3	26:D0:24:LYS:HA	1.84	0.45
26:D0:38:VAL:HB	26:D0:59:LEU:HD12	1.97	0.45
32:D6:35:GLU:HB3	32:D6:51:GLU:CB	2.26	0.45
35:D9:24:TYR:CE2	35:D9:35:ARG:HG3	2.52	0.45
36:DA:134:C:H2'	36:DA:135:G:C8	2.50	0.45
36:DA:1344:G:O2'	36:DA:1385:G:H2'	2.17	0.45
36:DA:1665:A:H2'	36:DA:1666:G:O4'	2.16	0.45
36:DA:1817:G:OP1	39:DD:88:ARG:NH2	2.46	0.45
36:DA:1858:G:H2'	36:DA:1883:G:H22	1.82	0.45
36:DA:2056:G:H2'	36:DA:2056:G:N3	2.30	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:825:C:H4'	36:DA:2428:G:C5	2.52	0.45
36:DA:2506:U:C6	36:DA:2506:U:H5'	2.52	0.45
36:DA:2639:A:H2'	36:DA:2640:G:O4'	2.16	0.45
36:DA:662:G:P	48:DP:18:ARG:HD2	2.57	0.45
39:DD:24:ILE:CG1	39:DD:25:THR:N	2.78	0.45
39:DD:30:GLU:C	39:DD:35:LYS:HD2	2.37	0.45
40:DE:4:ILE:HG12	40:DE:5:LEU:O	2.17	0.45
41:DF:170:LEU:HB2	41:DF:173:VAL:HB	1.99	0.45
43:DH:105:LEU:HD21	43:DH:113:VAL:HB	1.99	0.45
43:DH:13:LYS:C	43:DH:15:VAL:H	2.19	0.45
43:DH:65:HIS:C	43:DH:67:LEU:H	2.19	0.45
46:DN:108:PRO:O	46:DN:113:GLY:HA3	2.16	0.45
48:DP:90:ARG:HB3	48:DP:91:PHE:CD1	2.52	0.45
51:DS:37:ALA:O	51:DS:38:GLN:HG3	2.17	0.45
52:DT:50:ILE:HG22	52:DT:51:ARG:N	2.31	0.45
57:DY:27:VAL:HG12	57:DY:28:LYS:N	2.32	0.45
1:AA:1031:G:H2'	1:AA:1032:G:O4'	2.17	0.45
1:AA:501:C:H2'	1:AA:502:G:H8	1.80	0.45
1:AA:80:G:H22	1:AA:90:U:H5'	1.74	0.45
2:AB:104:ASN:O	2:AB:108:ILE:HG12	2.17	0.45
3:AC:3:ASN:ND2	3:AC:4:LYS:H	2.14	0.45
4:AD:126:ILE:CG2	4:AD:127:THR:N	2.79	0.45
4:AD:5:ILE:O	4:AD:5:ILE:HG22	2.16	0.45
9:AI:10:ARG:HH11	9:AI:10:ARG:HG3	1.81	0.45
13:AM:82:MET:HG2	13:AM:83:ASP:H	1.80	0.45
14:AN:28:GLY:O	14:AN:29:ARG:C	2.54	0.45
20:AT:82:SER:O	20:AT:86:ARG:CB	2.65	0.45
24:AY:52:A:C2'	24:AY:53:G:H5'	2.46	0.45
28:B2:35:LEU:CB	28:B2:53:LEU:HD13	2.45	0.45
36:BA:1036:G:O2'	36:BA:1037:G:H5'	2.17	0.45
36:BA:1106:G:C2'	36:BA:1107:G:H5'	2.47	0.45
36:BA:1108:U:H3'	36:BA:1109:C:H6	1.80	0.45
36:BA:1142:U:H5'	36:BA:1142(A):A:C8	2.51	0.45
36:BA:1289:C:H2'	36:BA:1289:C:O2	2.16	0.45
36:BA:133:C:H6	36:BA:133:C:O5'	2.00	0.45
36:BA:1563:G:H2'	36:BA:1564:C:O4'	2.15	0.45
36:BA:2463:C:C2'	36:BA:2464:C:H5'	2.46	0.45
36:BA:1710:C:H1'	36:BA:2859:G:N2	2.32	0.45
36:BA:444:C:H2'	36:BA:445:C:C6	2.52	0.45
36:BA:654(L):G:H2'	36:BA:654(M):C:H4'	1.99	0.45
36:BA:654(U):A:C6	36:BA:654(V):A:N6	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:703:U:C2'	36:BA:704:G:H5'	2.47	0.45
38:BC:149:ILE:CG2	38:BC:150:GLY:N	2.79	0.45
40:BE:132:HIS:HA	40:BE:135:HIS:CE1	2.52	0.45
40:BE:184:VAL:O	40:BE:186:GLY:N	2.50	0.45
41:BF:24:LEU:HD12	41:BF:118:ALA:HB1	1.98	0.45
42:BG:82:LEU:HD22	42:BG:87:PRO:HG3	1.99	0.45
42:BG:88:ILE:HG22	42:BG:89:GLY:N	2.31	0.45
36:BA:806:C:C5	48:BP:39:LYS:HE2	2.51	0.45
47:BO:107:ARG:NH1	52:BT:36:GLU:HG2	2.31	0.45
53:BU:85:LYS:CD	53:BU:117:GLN:HE22	2.16	0.45
55:BW:48:ALA:O	55:BW:49:LYS:C	2.55	0.45
58:BZ:73:GLN:OE1	58:BZ:75:ASN:OD1	2.35	0.45
1:CA:100:C:H2'	1:CA:101:A:O4'	2.16	0.45
1:CA:1303:C:H2'	1:CA:1304:G:H5'	1.97	0.45
1:CA:1468:A:H2'	1:CA:1469:G:O4'	2.15	0.45
1:CA:319:G:C2'	1:CA:320:C:H5'	2.47	0.45
1:CA:332:G:H2'	1:CA:333:G:H8	1.82	0.45
1:CA:369:C:O2'	1:CA:370:C:O5'	2.35	0.45
1:CA:421:U:C6	3:CC:127:ARG:NH1	2.84	0.45
2:CB:97:TRP:CH2	2:CB:176:GLU:CD	2.90	0.45
2:CB:33:TYR:HB2	2:CB:43:ASP:CB	2.41	0.45
3:CC:167:TRP:O	3:CC:168:ALA:CB	2.64	0.45
13:CM:4:ILE:CG2	13:CM:5:ALA:H	2.14	0.45
13:CM:66:LEU:O	13:CM:67:GLU:O	2.35	0.45
13:CM:82:MET:CG	13:CM:83:ASP:H	2.27	0.45
14:CN:15:LYS:HB3	14:CN:16:PHE:CD2	2.52	0.45
25:CZ:17:ILE:HG13	25:CZ:104:LEU:HA	1.99	0.45
25:CZ:5:PHE:CD1	25:CZ:277:LEU:HD23	2.52	0.45
28:D2:51:ARG:HD3	28:D2:55:ARG:NH1	2.22	0.45
36:DA:1204:A:N1	36:DA:1241:A:C2	2.85	0.45
36:DA:1536:C:H2'	36:DA:1537:G:C4'	2.47	0.45
36:DA:2261:C:O2'	36:DA:2262:U:H5'	2.17	0.45
36:DA:2347:C:H2'	36:DA:2348:U:C6	2.51	0.45
36:DA:2567:G:H2'	36:DA:2568:C:C6	2.51	0.45
36:DA:2824:C:H2'	36:DA:2825:C:O4'	2.16	0.45
36:DA:925:C:C3'	36:DA:926:A:H5"	2.46	0.45
39:DD:186:HIS:CD2	39:DD:188:GLU:HB2	2.52	0.45
42:DG:7:LEU:HB3	42:DG:100:TRP:CE3	2.51	0.45
42:DG:121:ASN:HB3	42:DG:124:SER:OG	2.16	0.45
42:DG:125:PHE:CD2	42:DG:131:TYR:HD1	2.34	0.45
46:DN:9:VAL:O	46:DN:10:GLU:OE1	2.34	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DP:12:ALA:O	48:DP:13:ASN:O	2.35	0.45
48:DP:149:GLU:O	48:DP:150:ALA:HB2	2.17	0.45
49:DQ:14:ARG:HG2	49:DQ:41:TRP:HH2	1.80	0.45
52:DT:28:VAL:C	52:DT:29:ARG:HD3	2.37	0.45
53:DU:8:VAL:O	53:DU:9:VAL:C	2.54	0.45
58:DZ:57:ILE:N	58:DZ:57:ILE:HD12	2.30	0.45
1:AA:1428:A:H2'	1:AA:1429:C:C6	2.51	0.45
1:AA:1477:C:H2'	1:AA:1478:C:H6	1.81	0.45
1:AA:341:C:O2	1:AA:349:A:C2	2.70	0.45
1:AA:436:C:OP1	4:AD:156:GLU:OE2	2.33	0.45
1:AA:691:G:H2'	1:AA:692:U:C6	2.52	0.45
1:AA:745:C:O2'	1:AA:746:A:H5'	2.17	0.45
1:AA:980:C:H2'	1:AA:981:U:H5'	1.99	0.45
3:AC:132:ARG:O	3:AC:136:GLN:HB2	2.16	0.45
4:AD:104:VAL:HA	4:AD:107:ARG:HB2	1.97	0.45
4:AD:151:LYS:HG2	4:AD:151:LYS:O	2.17	0.45
6:AF:38:GLU:O	6:AF:39:LYS:C	2.54	0.45
15:AO:39:LEU:HD13	15:AO:56:LEU:CB	2.43	0.45
20:AT:53:LEU:HD11	20:AT:92:LEU:HD11	1.99	0.45
25:AZ:254:GLU:HG3	25:AZ:307:PRO:HA	1.97	0.45
32:B6:17:LYS:O	32:B6:17:LYS:HD3	2.16	0.45
32:B6:53:LYS:HG2	32:B6:54:ILE:N	2.31	0.45
34:B8:50:LEU:N	34:B8:53:PRO:CD	2.80	0.45
36:BA:2131:G:H5'	36:BA:2133:G:O4'	2.17	0.45
36:BA:2169:A:O2'	36:BA:2170:A:H5'	2.17	0.45
36:BA:2657:A:C2'	36:BA:2658:C:H5'	2.38	0.45
36:BA:2688:U:H1'	36:BA:2721:A:H62	1.82	0.45
36:BA:963:U:H2'	36:BA:964:C:C6	2.51	0.45
37:BB:16:G:O2'	37:BB:17:C:H6	1.98	0.45
38:BC:122:ALA:O	38:BC:126:LYS:HB2	2.16	0.45
40:BE:34:VAL:CG1	40:BE:48:GLN:HE21	2.30	0.45
36:BA:2636:U:O5'	40:BE:80:GLU:HG3	2.17	0.45
41:BF:162:LEU:HD12	41:BF:162:LEU:N	2.32	0.45
47:BO:53:LYS:O	47:BO:56:ASP:HB2	2.17	0.45
48:BP:12:ALA:O	48:BP:13:ASN:O	2.34	0.45
49:BQ:140:ALA:O	49:BQ:141:GLN:HB2	2.17	0.45
51:BS:12:PHE:CD1	51:BS:13:ARG:N	2.83	0.45
52:BT:3:ARG:CD	52:BT:6:LEU:HD12	2.37	0.45
54:BV:99:ILE:CD1	54:BV:99:ILE:N	2.73	0.45
55:BW:9:TYR:H	55:BW:102:HIS:HD2	1.65	0.45
1:CA:1062:U:O4	3:CC:2:GLY:HA3	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1170:A:H2'	1:CA:1171:G:O4'	2.16	0.45
1:CA:1431:C:H2'	1:CA:1432:G:H5'	1.97	0.45
1:CA:190:U:O2'	1:CA:191:G:H5'	2.16	0.45
1:CA:542:G:C2	1:CA:543:C:C5	3.05	0.45
1:CA:567:G:H2'	1:CA:568:G:O4'	2.17	0.45
1:CA:635:G:O2'	1:CA:636:U:H5'	2.16	0.45
1:CA:723:U:O2'	1:CA:724:G:H5'	2.17	0.45
1:CA:82:U:O2'	1:CA:83:U:H5'	2.17	0.45
2:CB:104:ASN:O	2:CB:108:ILE:HG12	2.16	0.45
2:CB:131:PRO:CG	2:CB:134:GLU:HG2	2.33	0.45
3:CC:108:ASN:ND2	3:CC:144:SER:OG	2.50	0.45
3:CC:206:GLU:O	3:CC:207:VAL:C	2.55	0.45
3:CC:32:LEU:O	3:CC:35:GLU:HB3	2.17	0.45
3:CC:35:GLU:CD	3:CC:95:THR:HG23	2.37	0.45
5:CE:104:ALA:HA	5:CE:107:ARG:HG2	1.99	0.45
5:CE:64:ARG:HH11	5:CE:64:ARG:CG	2.29	0.45
9:CI:126:SER:O	9:CI:127:LYS:CB	2.65	0.45
10:CJ:45:ARG:HD3	10:CJ:47:PHE:CZ	2.51	0.45
10:CJ:4:ILE:HB	10:CJ:74:ILE:HG13	1.96	0.45
22:CV:19:G:H4'	22:CV:20:U:OP2	2.17	0.45
24:CY:45:U:C3'	24:CY:46:7MG:H5''	2.34	0.45
25:CZ:19:HIS:HA	25:CZ:115:GLN:CB	2.47	0.45
27:D1:30:VAL:HG23	27:D1:31:GLY:N	2.23	0.45
32:D6:17:LYS:O	32:D6:18:ARG:HB3	2.17	0.45
32:D6:30:THR:O	32:D6:32:ASN:N	2.50	0.45
34:D8:59:LYS:O	34:D8:61:LEU:HD12	2.17	0.45
36:DA:1165:U:H2'	36:DA:1166:C:C6	2.52	0.45
36:DA:1188:U:C2'	36:DA:1189:A:H5'	2.47	0.45
36:DA:1278:A:O2'	36:DA:1279:G:H5'	2.17	0.45
36:DA:1289:C:H2'	36:DA:1289:C:O2	2.16	0.45
36:DA:1288:U:C2	36:DA:1327:C:C2	3.04	0.45
36:DA:1349:A:N6	36:DA:1598:C:N4	2.64	0.45
36:DA:2514:U:H2'	36:DA:2515:C:C6	2.51	0.45
36:DA:2626:C:H2'	36:DA:2627:G:O4'	2.16	0.45
36:DA:2801(A):A:C3'	36:DA:2802:G:H5'	2.47	0.45
36:DA:2869:G:H2'	36:DA:2870:C:C6	2.51	0.45
36:DA:528:A:H2	36:DA:2043:C:H5'	1.80	0.45
36:DA:604:G:C6	36:DA:605:C:N4	2.85	0.45
36:DA:638:G:C6	36:DA:639:U:N3	2.85	0.45
36:DA:654(C):G:C3'	36:DA:654(D):G:H5'	2.47	0.45
36:DA:736:C:H2'	36:DA:737:C:H6	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:994:C:OP1	53:DU:53:ARG:NH2	2.49	0.45
37:DB:91:C:O2'	37:DB:92:C:H5'	2.17	0.45
38:DC:117:PRO:HG3	38:DC:145:VAL:HG12	1.99	0.45
39:DD:158:ALA:HB3	39:DD:161:THR:CG2	2.45	0.45
40:DE:116:VAL:CG2	40:DE:117:MET:H	2.29	0.45
40:DE:14:ILE:HG12	40:DE:21:VAL:HG23	1.98	0.45
40:DE:59:VAL:HG13	40:DE:60:ASN:N	2.30	0.45
41:DF:160:ASN:C	41:DF:160:ASN:HD22	2.19	0.45
42:DG:45:GLU:OE1	42:DG:45:GLU:HA	2.16	0.45
43:DH:83:TYR:HB3	43:DH:135:GLY:O	2.17	0.45
47:DO:24:VAL:O	47:DO:24:VAL:HG23	2.17	0.45
49:DQ:140:ALA:O	49:DQ:141:GLN:HB2	2.17	0.45
51:DS:19:LYS:O	51:DS:19:LYS:HG2	2.16	0.45
37:DB:7:G:H4'	51:DS:29:PHE:CD2	2.52	0.45
52:DT:28:VAL:O	52:DT:29:ARG:HG2	2.17	0.45
47:DO:107:ARG:NH1	52:DT:36:GLU:HG2	2.32	0.45
55:DW:107:LEU:N	55:DW:107:LEU:HD12	2.23	0.45
55:DW:9:TYR:H	55:DW:102:HIS:HD2	1.65	0.45
57:DY:80:GLY:O	57:DY:81:LYS:O	2.35	0.45
58:DZ:28:MET:HB3	58:DZ:88:PHE:HB2	1.98	0.45
1:AA:1188:A:H2'	1:AA:1189:C:H5'	1.98	0.45
1:AA:1264:C:H2'	1:AA:1265:G:H8	1.81	0.45
1:AA:346:G:N3	1:AA:346:G:C2'	2.80	0.45
3:AC:130:VAL:HG21	3:AC:157:ILE:HG23	1.99	0.45
4:AD:3:ARG:HH21	4:AD:5:ILE:CG1	2.29	0.45
8:AH:30:ARG:HB2	8:AH:30:ARG:HH11	1.82	0.45
1:AA:1316:G:O2'	14:AN:18:VAL:HG21	2.17	0.45
25:AZ:263:ARG:HG3	25:AZ:264:LYS:H	1.81	0.45
25:AZ:277:LEU:HD13	25:AZ:279:GLU:N	2.31	0.45
36:BA:1053:C:H42	36:BA:1108:U:H3	1.64	0.45
36:BA:1213:A:H1'	36:BA:1238:G:N3	2.31	0.45
36:BA:1652:A:O2'	36:BA:1653:G:H5'	2.17	0.45
36:BA:1747:G:H2'	36:BA:1747(A):G:C8	2.52	0.45
36:BA:2585:U:O2	36:BA:2585:U:H5'	2.16	0.45
36:BA:2661:G:H2'	36:BA:2662:A:C8	2.52	0.45
36:BA:2695:C:H2'	36:BA:2696:U:H6	1.81	0.45
36:BA:2833:G:C3'	36:BA:2834:G:H5"	2.32	0.45
36:BA:655:A:C4'	36:BA:656:G:H5'	2.32	0.45
36:BA:856:C:H5"	36:BA:856:C:H6	1.82	0.45
38:BC:151:GLU:HA	38:BC:154:ARG:HH11	1.82	0.45
38:BC:99:ILE:HG22	38:BC:102:LYS:HB2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:30:GLU:HG3	39:BD:63:ARG:HH21	1.82	0.45
41:BF:24:LEU:O	41:BF:115:ALA:HB1	2.17	0.45
44:BJ:7:UNK:C	44:BJ:9:UNK:N	2.80	0.45
46:BN:57:ALA:O	46:BN:58:ASP:O	2.35	0.45
49:BQ:119:ARG:O	49:BQ:123:HIS:HD2	2.00	0.45
51:BS:13:ARG:O	51:BS:15:ARG:HG3	2.17	0.45
37:BB:49:C:OP1	51:BS:96:GLY:HA3	2.16	0.45
52:BT:93:ARG:HA	52:BT:93:ARG:HD2	1.60	0.45
54:BV:64:HIS:ND1	54:BV:92:THR:HG22	2.32	0.45
56:BX:49:VAL:HG12	56:BX:87:GLN:HB3	1.98	0.45
58:BZ:96:VAL:CG2	58:BZ:97:GLU:N	2.64	0.45
1:CA:1180:A:H5'	1:CA:1181:G:OP2	2.17	0.45
1:CA:163:C:O2'	1:CA:164:U:H5'	2.17	0.45
1:CA:833:U:H2'	1:CA:834:C:C6	2.52	0.45
2:CB:236:TYR:HA	2:CB:239:VAL:HG23	1.98	0.45
7:CG:118:VAL:HG23	7:CG:119:ARG:N	2.30	0.45
1:CA:751:U:C4'	15:CO:24:SER:HA	2.46	0.45
16:CP:5:ARG:NH1	16:CP:5:ARG:HG3	2.31	0.45
19:CS:27:GLU:O	19:CS:28:LYS:O	2.35	0.45
25:CZ:139:ASP:OD2	25:CZ:177:LEU:HD11	2.16	0.45
25:CZ:203:LEU:HD23	25:CZ:203:LEU:O	2.16	0.45
13:CM:57:ARG:NH1	30:D4:34:GLU:HG3	2.32	0.45
32:D6:37:ARG:HD3	32:D6:37:ARG:HA	1.78	0.45
36:DA:1141:U:OP2	46:DN:63:THR:OG1	2.31	0.45
36:DA:1248:G:OP1	53:DU:2:PRO:HD2	2.16	0.45
36:DA:142:A:N6	36:DA:1596:A:H5'	2.31	0.45
36:DA:1540:U:C3'	36:DA:1541:G:H3'	2.35	0.45
36:DA:2863:C:O2	36:DA:2863:C:H2'	2.16	0.45
36:DA:330:A:O2'	36:DA:331:A:C8	2.61	0.45
37:DB:16:G:O2'	37:DB:17:C:H6	1.99	0.45
39:DD:117:VAL:HG21	39:DD:128:GLY:O	2.17	0.45
39:DD:224:ALA:C	39:DD:226:MET:N	2.70	0.45
39:DD:68:LYS:O	39:DD:68:LYS:HG3	2.17	0.45
40:DE:30:PRO:HD3	40:DE:180:ASN:CG	2.37	0.45
41:DF:2:LYS:O	41:DF:25:PRO:HG2	2.17	0.45
42:DG:4:ASP:HA	42:DG:8:LYS:HD3	1.98	0.45
46:DN:14:VAL:HG21	46:DN:137:LYS:HE3	1.98	0.45
46:DN:34:LEU:CD1	46:DN:116:LEU:HB3	2.47	0.45
46:DN:96:GLU:OE1	46:DN:96:GLU:N	2.46	0.45
48:DP:31:ALA:C	48:DP:33:ARG:N	2.70	0.45
48:DP:50:ARG:NH1	48:DP:50:ARG:HG2	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DP:84:ASN:C	48:DP:86:LYS:H	2.20	0.45
48:DP:98:GLU:O	48:DP:101:VAL:HG22	2.16	0.45
50:DR:3:HIS:C	50:DR:5:LYS:N	2.63	0.45
50:DR:51:LEU:HG	50:DR:66:VAL:HG13	1.97	0.45
51:DS:57:LYS:C	51:DS:57:LYS:HD2	2.37	0.45
52:DT:107:ASP:CG	52:DT:108:ARG:H	2.20	0.45
1:CA:1463:C:H5'	52:DT:115:ARG:HH12	1.82	0.45
52:DT:38:ASN:C	52:DT:38:ASN:HD22	2.16	0.45
57:DY:17:SER:HA	57:DY:71:LYS:HD2	1.97	0.45
1:AA:1325:C:H4'	21:AU:17:THR:HG21	1.98	0.45
1:AA:741:G:H2'	1:AA:742:G:O4'	2.17	0.45
6:AF:98:LEU:O	6:AF:98:LEU:HD12	2.16	0.45
7:AG:66:VAL:O	7:AG:69:VAL:HG12	2.17	0.45
9:AI:9:ARG:HG2	9:AI:14:VAL:HG22	1.98	0.45
10:AJ:50:ILE:HG12	14:AN:41:ARG:CD	2.47	0.45
15:AO:8:LYS:O	15:AO:12:ILE:HG13	2.16	0.45
19:AS:10:PHE:O	19:AS:10:PHE:CD2	2.69	0.45
19:AS:32:LYS:H	19:AS:32:LYS:CE	2.30	0.45
20:AT:73:HIS:HB3	20:AT:74:LYS:NZ	2.32	0.45
24:AY:47:U:O2'	24:AY:50:G:H5''	2.17	0.45
25:AZ:193:ASN:C	25:AZ:195:TRP:H	2.20	0.45
25:AZ:291:ARG:O	25:AZ:293:VAL:HG23	2.16	0.45
34:B8:28:GLY:C	34:B8:32:LEU:HD22	2.37	0.45
34:B8:11:LYS:HZ3	34:B8:60:LEU:HA	1.81	0.45
36:BA:1165:U:H2'	36:BA:1166:C:C6	2.52	0.45
36:BA:1299:G:H3'	36:BA:1639:U:O4	2.16	0.45
36:BA:1684:C:O2'	36:BA:1685:C:H5'	2.17	0.45
36:BA:2060:A:N6	41:BF:74:ARG:NH2	2.65	0.45
36:BA:2262:U:O2'	36:BA:2263:C:H5'	2.16	0.45
36:BA:2444:G:OP2	41:BF:68:LYS:NZ	2.48	0.45
36:BA:2692:C:H2'	36:BA:2693:A:C8	2.52	0.45
36:BA:2716:U:O2'	36:BA:2717:G:H5'	2.17	0.45
36:BA:2869:G:H2'	36:BA:2870:C:O4'	2.17	0.45
36:BA:309:G:N3	36:BA:329:G:O2'	2.50	0.45
36:BA:606:U:H4'	36:BA:658:C:H4'	1.97	0.45
36:BA:925:C:C3'	36:BA:926:A:H5''	2.47	0.45
36:BA:958:U:OP2	49:BQ:14:ARG:HD3	2.17	0.45
39:BD:30:GLU:H	39:BD:35:LYS:NZ	1.97	0.45
39:BD:70:TRP:HZ3	39:BD:146:GLU:OE2	1.99	0.45
47:BO:34:THR:OG1	47:BO:35:VAL:N	2.49	0.45
36:BA:941:A:H4'	48:BP:35:HIS:CE1	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:910:A:C5	49:BQ:13:GLN:HG3	2.52	0.45
50:BR:3:HIS:C	50:BR:3:HIS:ND1	2.69	0.45
52:BT:28:VAL:HG12	52:BT:29:ARG:CD	2.45	0.45
52:BT:50:ILE:HA	52:BT:99:LEU:HD12	1.98	0.45
57:BY:11:ASP:H	57:BY:28:LYS:NZ	2.15	0.45
1:CA:1117:G:H21	1:CA:1180:A:H1'	1.81	0.45
1:CA:411:A:H62	1:CA:413:G:N2	2.15	0.45
1:CA:811:C:H4'	1:CA:900:A:N6	2.32	0.45
1:CA:980:C:H2'	1:CA:981:U:H5'	1.99	0.45
3:CC:173:VAL:N	3:CC:174:PRO:HD3	2.32	0.45
1:CA:436:C:OP1	4:CD:156:GLU:OE2	2.35	0.45
7:CG:125:MET:O	7:CG:129:GLU:HG3	2.17	0.45
10:CJ:55:LYS:HB2	10:CJ:55:LYS:NZ	2.07	0.45
10:CJ:86:MET:O	10:CJ:87:THR:HG23	2.16	0.45
7:CG:150:ALA:HB2	11:CK:50:TYR:CZ	2.52	0.45
13:CM:101:GLN:HB3	13:CM:102:ARG:H	1.56	0.45
10:CJ:53:PRO:HA	14:CN:42:ILE:HD11	1.99	0.45
17:CQ:12:SER:HB3	17:CQ:20:THR:HB	1.98	0.45
17:CQ:59:ILE:HG22	17:CQ:71:PHE:HD2	1.80	0.45
19:CS:10:PHE:O	19:CS:10:PHE:CD2	2.70	0.45
25:CZ:258:LEU:HD12	25:CZ:258:LEU:N	2.31	0.45
27:D1:49:VAL:O	27:D1:59:THR:HA	2.16	0.45
27:D1:62:VAL:HG22	27:D1:63:ALA:N	2.32	0.45
28:D2:16:LEU:H	28:D2:67:LYS:NZ	2.15	0.45
36:DA:1069:A:H1'	36:DA:1070:A:P	2.56	0.45
36:DA:1142:U:H5'	36:DA:1142(A):A:C8	2.52	0.45
36:DA:1142(A):A:OP2	36:DA:1142(A):A:H3'	2.17	0.45
36:DA:2340:G:H2'	36:DA:2341:G:H8	1.82	0.45
36:DA:2692:C:H2'	36:DA:2693:A:C8	2.52	0.45
36:DA:648:G:O4'	36:DA:2351:G:H5''	2.16	0.45
36:DA:654(N):G:H2'	36:DA:654(O):G:H5'	1.98	0.45
37:DB:30:C:H1'	37:DB:57:A:H61	1.82	0.45
38:DC:22:ILE:HD13	38:DC:190:ARG:HG2	1.98	0.45
39:DD:146:GLU:HB2	39:DD:189:CYS:HB3	1.98	0.45
39:DD:241:PRO:C	39:DD:242:ARG:HG2	2.36	0.45
40:DE:116:VAL:CG2	40:DE:122:PHE:CD2	2.94	0.45
40:DE:132:HIS:CG	40:DE:135:HIS:CE1	3.05	0.45
40:DE:38:THR:HG23	40:DE:39:PRO:HD2	1.98	0.45
41:DF:157:VAL:O	41:DF:157:VAL:HG23	2.17	0.45
43:DH:126:PRO:O	43:DH:127:GLU:HG3	2.17	0.45
48:DP:112:LEU:C	48:DP:112:LEU:HD22	2.38	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:806:C:OP2	48:DP:39:LYS:HD2	2.16	0.45
50:DR:74:LYS:CD	50:DR:77:ARG:NH1	2.80	0.45
53:DU:46:ALA:O	53:DU:50:ARG:HG3	2.17	0.45
58:DZ:163:LEU:HB2	58:DZ:165:VAL:HG23	1.98	0.45
1:AA:1044:A:H2'	1:AA:1045:C:O5'	2.17	0.45
1:AA:1220:G:O2'	1:AA:1221:G:H5'	2.16	0.45
1:AA:242:C:H2'	1:AA:243:A:H5'	1.98	0.45
1:AA:430:A:H2'	1:AA:431:A:O4'	2.16	0.45
1:AA:556:C:O2'	1:AA:557:G:H5'	2.16	0.45
2:AB:163:PHE:HA	2:AB:185:ILE:O	2.17	0.45
2:AB:19:HIS:O	2:AB:20:GLU:O	2.35	0.45
2:AB:236:TYR:HA	2:AB:239:VAL:HG23	1.99	0.45
3:AC:190:ARG:HG3	3:AC:190:ARG:HH11	1.80	0.45
3:AC:51:GLY:O	3:AC:115:LEU:HD21	2.17	0.45
3:AC:52:LEU:HD23	3:AC:52:LEU:N	2.26	0.45
3:AC:79:ARG:O	3:AC:82:GLU:OE2	2.34	0.45
4:AD:147:ALA:HA	4:AD:181:MET:O	2.16	0.45
12:AL:52:LEU:HD22	12:AL:52:LEU:N	2.32	0.45
13:AM:94:ARG:HD2	13:AM:94:ARG:N	2.32	0.45
17:AQ:12:SER:HB3	17:AQ:20:THR:HB	1.98	0.45
18:AR:67:ALA:O	18:AR:71:LYS:HG3	2.17	0.45
19:AS:50:ALA:HA	19:AS:59:PRO:HA	1.99	0.45
24:AY:42:G:N2	24:AY:43:G:H1'	2.32	0.45
25:AZ:195:TRP:C	25:AZ:197:ASP:H	2.19	0.45
28:B2:35:LEU:O	28:B2:36:ARG:C	2.54	0.45
31:B5:54:GLY:CA	31:B5:56:LYS:HZ2	2.30	0.45
32:B6:20:ASN:OD1	32:B6:21:TYR:N	2.50	0.45
34:B8:8:LYS:CA	34:B8:11:LYS:HD3	2.41	0.45
34:B8:33:ASN:OD1	34:B8:34:TRP:N	2.33	0.45
34:B8:59:LYS:HB2	34:B8:59:LYS:HE3	1.68	0.45
36:BA:1288:U:C2	36:BA:1327:C:C2	3.05	0.45
36:BA:1337:G:H2'	36:BA:1338:G:H8	1.82	0.45
36:BA:141:A:H8	36:BA:1408:C:HO2'	1.55	0.45
36:BA:142:A:N6	36:BA:1596:A:H5'	2.32	0.45
36:BA:1463:C:H2'	36:BA:1464:C:H6	1.81	0.45
36:BA:2136:C:H2'	36:BA:2137:C:H6	1.81	0.45
36:BA:2392:A:H2'	36:BA:2393:A:O4'	2.17	0.45
36:BA:2626:C:H2'	36:BA:2627:G:O4'	2.17	0.45
36:BA:330:A:O2'	36:BA:331:A:C8	2.61	0.45
36:BA:220:G:H2'	36:BA:427:U:O4	2.16	0.45
36:BA:438:G:H2'	36:BA:440:G:C8	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BC:83:ILE:HD11	38:BC:97:GLU:HG2	1.99	0.45
39:BD:94:LEU:HB2	39:BD:104:TYR:CE1	2.51	0.45
36:BA:2572:A:N7	40:BE:144:ARG:HG2	2.28	0.45
36:BA:2572:A:O2'	40:BE:144:ARG:NH1	2.50	0.45
40:BE:49:LEU:O	40:BE:78:LEU:HB2	2.17	0.45
40:BE:9:VAL:CG1	40:BE:25:VAL:O	2.64	0.45
42:BG:143:GLU:O	42:BG:144:ILE:C	2.55	0.45
42:BG:131:TYR:O	42:BG:159:VAL:HG12	2.17	0.45
43:BH:169:VAL:HG22	43:BH:170:ARG:N	2.32	0.45
45:BK:23:UNK:C	45:BK:25:UNK:N	2.80	0.45
47:BO:65:THR:HA	47:BO:82:ASN:HD22	1.80	0.45
50:BR:5:LYS:HD2	50:BR:5:LYS:N	2.32	0.45
36:BA:2012:G:OP2	55:BW:16:LYS:HE3	2.17	0.45
58:BZ:155:LEU:N	58:BZ:155:LEU:CD2	2.80	0.45
1:CA:1305:G:N2	1:CA:1331:G:C2'	2.60	0.45
1:CA:1525:G:O2'	1:CA:1526:G:H5'	2.17	0.45
1:CA:542:G:N3	1:CA:543:C:C6	2.84	0.45
1:CA:8:A:C5	4:CD:209:ARG:HB2	2.52	0.45
2:CB:142:LEU:HD21	2:CB:146:GLN:HE21	1.81	0.45
2:CB:178:ARG:NH1	2:CB:178:ARG:CG	2.79	0.45
4:CD:9:CYS:HA	4:CD:12:CYS:HB2	1.99	0.45
9:CI:42:ARG:NH2	9:CI:75:ASP:OD1	2.50	0.45
1:CA:526:C:OP2	12:CL:91:LYS:HE3	2.16	0.45
25:CZ:193:ASN:C	25:CZ:195:TRP:H	2.20	0.45
25:CZ:254:GLU:HG3	25:CZ:307:PRO:HA	1.98	0.45
26:D0:51:VAL:CG2	26:D0:81:VAL:HG23	2.47	0.45
33:D7:10:ARG:O	33:D7:14:LYS:HG2	2.17	0.45
36:DA:1223:G:H5'	36:DA:1223:G:C8	2.45	0.45
36:DA:1654:A:OP1	50:DR:2:ARG:HA	2.17	0.45
36:DA:203:C:C3'	36:DA:204:A:H5''	2.44	0.45
36:DA:2181:G:N2	36:DA:2182:G:C2	2.85	0.45
36:DA:2717:G:O2'	52:DT:96:ARG:HD3	2.17	0.45
36:DA:2732:G:O2'	36:DA:2733:A:H5'	2.17	0.45
36:DA:2747:G:C2	36:DA:2756:U:H5	2.35	0.45
36:DA:2770:G:H5''	36:DA:2771:C:OP2	2.16	0.45
31:D5:29:THR:CG2	36:DA:2814:C:O2'	2.63	0.45
36:DA:2875:C:O2'	52:DT:5:ALA:HB3	2.17	0.45
36:DA:363(D):G:N3	36:DA:363(D):G:H2'	2.31	0.45
36:DA:382:G:C2'	36:DA:383:U:H5'	2.47	0.45
36:DA:61:G:O5'	36:DA:61:G:H8	1.99	0.45
36:DA:714:U:H2'	36:DA:716:A:OP2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:732:C:O2'	36:DA:733:G:H5'	2.17	0.45
36:DA:918:A:H5''	37:DB:98:G:O2'	2.17	0.45
37:DB:5:C:O2'	37:DB:6:C:H5'	2.16	0.45
40:DE:184:VAL:O	40:DE:186:GLY:N	2.50	0.45
41:DF:107:LYS:HE3	41:DF:205:ARG:HG2	1.99	0.45
42:DG:83:ARG:CB	42:DG:84:LYS:HD2	2.47	0.45
48:DP:112:LEU:HD11	48:DP:114:ILE:CD1	2.46	0.45
36:DA:662:G:OP1	48:DP:18:ARG:HD2	2.17	0.45
48:DP:46:LYS:HB3	48:DP:52:GLU:HG2	1.98	0.45
52:DT:29:ARG:HG2	52:DT:86:ILE:O	2.17	0.45
52:DT:23:ARG:HA	52:DT:52:ILE:HD12	1.98	0.45
53:DU:92:ARG:CZ	54:DV:11:GLN:H	2.29	0.45
55:DW:48:ALA:O	55:DW:49:LYS:C	2.55	0.45
57:DY:28:LYS:C	57:DY:38:ILE:HG22	2.37	0.45
1:AA:184:G:O2'	1:AA:185:A:H5'	2.17	0.44
1:AA:56:U:H2'	1:AA:57:G:H8	1.78	0.44
1:AA:82:U:O2'	1:AA:83:U:H5'	2.16	0.44
2:AB:224:GLN:C	2:AB:226:ARG:N	2.70	0.44
3:AC:132:ARG:HH11	3:AC:136:GLN:NE2	2.02	0.44
5:AE:72:GLN:O	5:AE:73:ASN:HB2	2.17	0.44
15:AO:17:ARG:NH1	15:AO:77:ARG:NH1	2.64	0.44
27:B1:44:PRO:HB2	27:B1:46:LEU:HD21	1.98	0.44
28:B2:17:SER:HB2	28:B2:20:GLU:HB3	1.99	0.44
36:BA:11:G:H2'	36:BA:12:U:H6	1.82	0.44
36:BA:2107:C:H1'	36:BA:2182:G:N2	2.32	0.44
36:BA:2248:C:H2'	36:BA:2249:U:C5'	2.47	0.44
36:BA:648:G:O4'	36:BA:2351:G:H5''	2.17	0.44
32:B6:45:LYS:CB	36:BA:2371:G:H4'	2.47	0.44
36:BA:248:G:H5''	36:BA:386:G:N2	2.31	0.44
36:BA:2807:G:C2'	36:BA:2808:U:H5''	2.46	0.44
36:BA:321:G:O2'	36:BA:340:A:N3	2.47	0.44
36:BA:61:G:O5'	36:BA:61:G:H8	1.99	0.44
36:BA:654(C):G:C3'	36:BA:654(D):G:H5'	2.47	0.44
36:BA:659:C:O2'	36:BA:660:G:H5'	2.17	0.44
38:BC:118:ASP:C	38:BC:120:MET:N	2.69	0.44
38:BC:33:ALA:HA	38:BC:39:GLU:OE2	2.17	0.44
39:BD:35:LYS:O	39:BD:36:PRO:C	2.55	0.44
40:BE:69:LYS:HD3	40:BE:89:ASP:C	2.37	0.44
41:BF:171:PRO:C	41:BF:173:VAL:H	2.21	0.44
43:BH:157:TYR:O	43:BH:158:HIS:CG	2.71	0.44
48:BP:38:GLN:CG	48:BP:39:LYS:H	2.28	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:61:ARG:C	48:BP:62:LEU:HD23	2.38	0.44
49:BQ:1:MET:HE1	49:BQ:44:ALA:C	2.37	0.44
51:BS:30:ARG:NH2	51:BS:62:LYS:HB3	2.32	0.44
40:BE:14:ILE:HB	52:BT:14:TYR:CZ	2.52	0.44
52:BT:82:LEU:N	52:BT:82:LEU:CD1	2.80	0.44
56:BX:27:THR:HG23	56:BX:80:ILE:CB	2.39	0.44
1:CA:1385:G:O2'	1:CA:1386:G:H5'	2.17	0.44
1:CA:1397:C:H1'	23:CX:26:A:H62	1.82	0.44
1:CA:1445:C:O2'	1:CA:1446:U:H5'	2.17	0.44
1:CA:1508:G:H2'	1:CA:1509:C:H6	1.82	0.44
1:CA:647:C:O2'	1:CA:648:A:H5'	2.17	0.44
2:CB:87:ARG:CZ	2:CB:233:SER:HB3	2.48	0.44
1:CA:1378:C:OP1	7:CG:7:ALA:HB2	2.17	0.44
10:CJ:8:LEU:HB3	10:CJ:16:LEU:HD21	1.99	0.44
13:CM:108:ARG:CG	13:CM:108:ARG:HH11	2.29	0.44
13:CM:4:ILE:O	13:CM:6:GLY:N	2.51	0.44
13:CM:94:ARG:N	13:CM:94:ARG:HD2	2.31	0.44
17:CQ:70:ARG:HG2	17:CQ:70:ARG:HH11	1.81	0.44
17:CQ:9:VAL:HG12	17:CQ:56:VAL:HG22	1.98	0.44
19:CS:42:PRO:O	19:CS:44:MET:SD	2.75	0.44
20:CT:25:ARG:HG3	20:CT:25:ARG:NH1	2.32	0.44
23:CX:22:U:O2'	23:CX:23:G:H5'	2.17	0.44
24:CY:47:U:O2'	24:CY:50:G:H5''	2.17	0.44
25:CZ:210:ILE:HG23	25:CZ:210:ILE:O	2.17	0.44
25:CZ:330:ARG:HH21	25:CZ:332:THR:HG1	1.65	0.44
28:D2:24:LEU:HD23	28:D2:24:LEU:C	2.38	0.44
28:D2:34:GLU:HA	28:D2:34:GLU:OE1	2.17	0.44
28:D2:2:LYS:O	28:D2:6:VAL:HG23	2.18	0.44
30:D4:34:GLU:HB2	42:DG:113:ARG:HD2	1.99	0.44
36:DA:1240:U:O2'	36:DA:1241:A:H5'	2.17	0.44
36:DA:1337:G:H2'	36:DA:1338:G:C8	2.52	0.44
36:DA:1367:A:H2'	36:DA:1368:G:H5'	1.99	0.44
36:DA:1419:A:H2'	36:DA:1421:G:N7	2.32	0.44
36:DA:1469:A:H2'	36:DA:1470:G:H8	1.82	0.44
36:DA:1596:A:O2'	36:DA:1597:A:H5'	2.17	0.44
36:DA:1688:U:O2	36:DA:1700:A:H5''	2.17	0.44
36:DA:2039:C:O2'	36:DA:2040:C:H5'	2.17	0.44
36:DA:2617:C:O2'	36:DA:2618:G:H5'	2.16	0.44
25:CZ:19:HIS:CE1	36:DA:2661:G:OP1	2.70	0.44
36:DA:2869:G:H2'	36:DA:2870:C:O4'	2.17	0.44
36:DA:220:G:H2'	36:DA:427:U:O4	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:769:G:O2'	36:DA:770:G:H5'	2.17	0.44
39:DD:101:GLU:OE2	39:DD:103:ARG:HD3	2.18	0.44
39:DD:127:VAL:HA	39:DD:193:VAL:HG13	1.99	0.44
40:DE:132:HIS:ND1	40:DE:135:HIS:HE1	2.16	0.44
40:DE:47:VAL:HG21	40:DE:86:PRO:CD	2.24	0.44
41:DF:108:LYS:HB3	41:DF:112:MET:CE	2.47	0.44
41:DF:89:VAL:HG12	41:DF:90:PHE:H	1.80	0.44
42:DG:102:PHE:CE2	42:DG:106:LEU:HD22	2.51	0.44
43:DH:28:GLY:HA3	43:DH:79:VAL:HB	1.99	0.44
44:DJ:62:UNK:C	44:DJ:64:UNK:N	2.78	0.44
46:DN:43:THR:HG22	46:DN:45:ASN:HD22	1.82	0.44
46:DN:4:TYR:O	46:DN:5:VAL:C	2.55	0.44
52:DT:83:ILE:CG1	52:DT:84:GLN:N	2.80	0.44
53:DU:102:GLU:HG3	54:DV:2:PHE:CE2	2.52	0.44
58:DZ:10:ARG:HD3	58:DZ:37:VAL:O	2.18	0.44
1:AA:723:U:C4	1:AA:1537:U:O2	2.70	0.44
3:AC:108:ASN:OD1	3:AC:110:ASN:N	2.50	0.44
4:AD:141:ARG:HB3	4:AD:142:PRO:CD	2.47	0.44
4:AD:85:LYS:HD3	4:AD:92:VAL:HG11	2.00	0.44
6:AF:38:GLU:O	6:AF:39:LYS:O	2.35	0.44
7:AG:140:ASP:C	7:AG:140:ASP:OD1	2.55	0.44
9:AI:20:ARG:NH1	9:AI:20:ARG:CB	2.72	0.44
12:AL:113:ARG:CB	12:AL:122:THR:HG21	2.48	0.44
14:AN:27:CYS:SG	14:AN:28:GLY:N	2.88	0.44
15:AO:17:ARG:CG	15:AO:17:ARG:HH11	2.21	0.44
24:AY:40:C:H2'	24:AY:41:C:H5'	1.98	0.44
25:AZ:185:ASN:HD22	25:AZ:185:ASN:H	1.65	0.44
25:AZ:185:ASN:ND2	25:AZ:185:ASN:O	2.50	0.44
25:AZ:214:VAL:O	25:AZ:214:VAL:HG13	2.16	0.44
27:B1:34:THR:HG22	27:B1:36:GLY:H	1.82	0.44
32:B6:54:ILE:HD13	36:BA:2398:U:O2	2.17	0.44
36:BA:1222:C:H2'	36:BA:1223:G:H5''	1.99	0.44
36:BA:1517:G:C2'	36:BA:1518:U:H5'	2.47	0.44
36:BA:1526:G:O2'	36:BA:1527:G:H5'	2.17	0.44
36:BA:1540:U:H3'	36:BA:1541:G:O3'	2.18	0.44
36:BA:1542:A:H2'	36:BA:1544:A:C4'	2.47	0.44
36:BA:1697:G:C3'	36:BA:1698:A:H5''	2.38	0.44
36:BA:2199:A:N3	36:BA:2199:A:H2'	2.32	0.44
36:BA:2413:G:N3	48:BP:70:GLN:NE2	2.65	0.44
36:BA:363(D):G:N3	36:BA:363(D):G:H2'	2.32	0.44
36:BA:53:A:H2'	36:BA:54:G:H5'	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BH:163:TYR:CE2	43:BH:168:PRO:HD3	2.52	0.44
46:BN:56:ASN:HA	46:BN:56:ASN:HD22	1.57	0.44
48:BP:107:LYS:O	48:BP:108:LYS:HB2	2.17	0.44
48:BP:126:VAL:HG22	48:BP:145:PRO:CG	2.47	0.44
51:BS:103:GLU:OE1	51:BS:103:GLU:N	2.38	0.44
51:BS:17:ARG:NH2	51:BS:90:GLY:H	2.16	0.44
54:BV:18:LEU:CD2	54:BV:19:LYS:N	2.79	0.44
54:BV:19:LYS:HB2	54:BV:96:ILE:CD1	2.45	0.44
57:BY:85:VAL:HG12	57:BY:86:ARG:H	1.82	0.44
58:BZ:70:LEU:HD21	58:BZ:91:LEU:HD21	1.99	0.44
1:CA:115:G:H4'	1:CA:116:A:O5'	2.17	0.44
1:CA:1306:A:OP2	21:CU:6:ARG:NH2	2.49	0.44
1:CA:160:A:O2'	1:CA:161:A:H5'	2.18	0.44
1:CA:502:G:OP1	12:CL:118:SER:N	2.47	0.44
1:CA:748:C:OP2	1:CA:748:C:H6	2.00	0.44
1:CA:836:G:H2'	1:CA:837:G:C8	2.53	0.44
1:CA:948:C:O2'	1:CA:949:A:H5'	2.16	0.44
4:CD:150:GLU:N	4:CD:150:GLU:OE1	2.50	0.44
4:CD:8:VAL:C	4:CD:10:ARG:N	2.69	0.44
16:CP:44:THR:O	16:CP:45:THR:HG22	2.17	0.44
17:CQ:76:LEU:HG	17:CQ:77:VAL:N	2.31	0.44
19:CS:16:LEU:O	19:CS:20:LEU:N	2.50	0.44
25:CZ:143:ASP:HB3	25:CZ:146:LEU:HB2	1.97	0.44
25:CZ:221:PHE:CG	25:CZ:247:VAL:HG13	2.52	0.44
25:CZ:316:PHE:CE1	25:CZ:372:VAL:HB	2.52	0.44
25:CZ:334:PHE:CD1	25:CZ:334:PHE:N	2.85	0.44
26:D0:10:THR:CG2	26:D0:12:ASN:HB2	2.47	0.44
32:D6:19:ARG:CD	32:D6:20:ASN:H	2.27	0.44
33:D7:43:THR:HG23	33:D7:44:PRO:CD	2.47	0.44
36:DA:1213:A:H1'	36:DA:1238:G:N3	2.32	0.44
36:DA:1570:A:H2'	36:DA:1571:A:C8	2.53	0.44
36:DA:1952:A:C2	47:DO:22:ILE:HG23	2.52	0.44
36:DA:2066:C:O2'	36:DA:2067:G:H5'	2.18	0.44
36:DA:2199:A:H2'	36:DA:2199:A:N3	2.33	0.44
36:DA:2206:G:H21	36:DA:2207:G:C4'	2.28	0.44
36:DA:2307:G:N3	36:DA:2307:G:H3'	2.32	0.44
36:DA:2315:G:O2'	42:DG:128:ARG:HD2	2.17	0.44
36:DA:236:C:H2'	36:DA:237:C:H6	1.82	0.44
36:DA:36:G:C5	36:DA:37:C:C5	3.05	0.44
36:DA:438:G:H2'	36:DA:440:G:C8	2.52	0.44
36:DA:654(L):G:H2'	36:DA:654(M):C:H4'	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:658:C:C2	36:DA:659:C:C5	3.04	0.44
37:DB:111:G:C2'	37:DB:112:U:H5'	2.47	0.44
38:DC:99:ILE:HG22	38:DC:102:LYS:HB2	1.99	0.44
38:DC:78:ALA:O	38:DC:79:LYS:HB2	2.17	0.44
40:DE:50:GLY:CA	40:DE:78:LEU:HB3	2.37	0.44
43:DH:157:TYR:O	43:DH:158:HIS:CD2	2.71	0.44
44:DJ:72:UNK:O	44:DJ:73:UNK:CB	2.64	0.44
46:DN:133:GLN:HG2	46:DN:135:PRO:CD	2.40	0.44
47:DO:32:TYR:CD1	47:DO:32:TYR:N	2.85	0.44
48:DP:24:GLY:CA	48:DP:33:ARG:CZ	2.95	0.44
48:DP:58:THR:O	48:DP:58:THR:CG2	2.63	0.44
50:DR:5:LYS:HD2	50:DR:5:LYS:N	2.32	0.44
36:DA:1755:A:P	52:DT:113:LYS:HZ1	2.40	0.44
52:DT:91:ARG:O	52:DT:92:GLY:C	2.54	0.44
57:DY:11:ASP:H	57:DY:28:LYS:NZ	2.15	0.44
58:DZ:101:PRO:HG2	58:DZ:135:GLU:O	2.17	0.44
58:DZ:81:ARG:CZ	58:DZ:81:ARG:HB3	2.47	0.44
1:AA:1305:G:O2'	1:AA:1331:G:N2	2.49	0.44
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.52	0.44
1:AA:939:G:H5''	7:AG:102:ARG:CZ	2.46	0.44
2:AB:238:LEU:O	2:AB:239:VAL:C	2.56	0.44
2:AB:97:TRP:HH2	2:AB:176:GLU:CD	2.21	0.44
3:AC:5:ILE:O	3:AC:6:HIS:C	2.54	0.44
4:AD:3:ARG:HH11	4:AD:118:ARG:HD3	1.73	0.44
5:AE:131:ILE:HD13	5:AE:131:ILE:HA	1.89	0.44
11:AK:34:ASP:O	11:AK:36:ASP:N	2.50	0.44
13:AM:108:ARG:N	13:AM:108:ARG:HD2	2.32	0.44
14:AN:15:LYS:HB3	14:AN:16:PHE:CD2	2.52	0.44
19:AS:12:ASP:O	19:AS:15:LEU:HB2	2.16	0.44
20:AT:25:ARG:HG3	20:AT:25:ARG:NH1	2.32	0.44
20:AT:26:ASN:HB3	20:AT:71:THR:OG1	2.18	0.44
22:AV:43:C:H5'	22:AV:44:G:OP2	2.17	0.44
24:AY:61:C:H2'	24:AY:62:U:H5'	1.99	0.44
25:AZ:115:GLN:HE21	25:AZ:115:GLN:HA	1.81	0.44
25:AZ:158:LEU:O	25:AZ:163:PHE:HB2	2.17	0.44
29:B3:38:GLU:HB3	29:B3:40:THR:HG23	1.99	0.44
34:B8:23:VAL:CG1	34:B8:46:ARG:HH11	2.15	0.44
36:BA:1076:C:H5''	58:BZ:111:VAL:HG12	1.99	0.44
36:BA:1281:G:H2'	36:BA:1282:U:H6	1.82	0.44
36:BA:1659:U:C4	36:BA:1660:C:C5	3.05	0.44
36:BA:2114:A:C2'	36:BA:2115:G:H5'	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:20:C:O2'	36:BA:21:A:H5'	2.16	0.44
36:BA:2652:C:H42	36:BA:2668:G:H1	1.66	0.44
36:BA:667:U:H2'	36:BA:668:G:O4'	2.17	0.44
36:BA:748:G:O6	36:BA:751:A:H4'	2.17	0.44
36:BA:793:A:OP2	36:BA:2072:G:H5'	2.17	0.44
37:BB:28:C:O2'	37:BB:29:A:H5'	2.16	0.44
37:BB:55:U:H2'	37:BB:56:G:C8	2.53	0.44
38:BC:78:ALA:O	38:BC:79:LYS:HB2	2.16	0.44
38:BC:79:LYS:HA	38:BC:97:GLU:CD	2.38	0.44
39:BD:68:LYS:HG3	39:BD:68:LYS:O	2.17	0.44
40:BE:14:ILE:HG12	40:BE:21:VAL:HG23	1.99	0.44
40:BE:76:ARG:HG2	40:BE:76:ARG:HH11	1.82	0.44
43:BH:80:SER:O	43:BH:81:GLU:CB	2.65	0.44
45:BK:5:UNK:O	45:BK:6:UNK:C	2.65	0.44
46:BN:1:MET:HE1	46:BN:2:LYS:C	2.37	0.44
48:BP:140:ALA:O	48:BP:141:ALA:HB3	2.16	0.44
48:BP:9:ASN:N	48:BP:10:PRO:CD	2.80	0.44
50:BR:10:LEU:HB3	50:BR:17:ARG:HE	1.82	0.44
57:BY:50:ARG:O	57:BY:53:PRO:HG3	2.17	0.44
58:BZ:70:LEU:CD2	58:BZ:91:LEU:HD21	2.47	0.44
1:CA:1127:G:C2'	1:CA:1128:C:H5'	2.48	0.44
1:CA:149:A:H2'	1:CA:150:C:H6	1.81	0.44
1:CA:370:C:O2'	1:CA:371:G:H5'	2.17	0.44
1:CA:376:G:H5''	16:CP:5:ARG:CB	2.41	0.44
1:CA:624:C:H4'	16:CP:10:GLY:HA2	1.99	0.44
1:CA:714:G:H2'	1:CA:715:A:C8	2.52	0.44
1:CA:827:U:H5'	1:CA:828:A:OP2	2.18	0.44
2:CB:111:ARG:NH1	2:CB:111:ARG:HG2	2.32	0.44
13:CM:119:GLY:O	13:CM:120:LYS:CB	2.61	0.44
13:CM:91:ARG:HB3	13:CM:98:VAL:HG12	1.98	0.44
18:CR:55:ARG:HH11	18:CR:55:ARG:HG3	1.83	0.44
18:CR:22:VAL:HG23	18:CR:55:ARG:O	2.17	0.44
24:CY:61:C:H2'	24:CY:62:U:H5'	2.00	0.44
25:CZ:26:THR:HG21	60:CZ:501:GDP:H8	1.81	0.44
25:CZ:357:PRO:O	25:CZ:359:VAL:HG23	2.18	0.44
22:CV:76:A:N7	26:D0:2:ALA:HB1	2.32	0.44
26:D0:51:VAL:HG22	26:D0:81:VAL:HG23	1.99	0.44
27:D1:61:ARG:HG2	27:D1:61:ARG:NH1	2.32	0.44
32:D6:54:ILE:HD13	36:DA:2398:U:O2	2.16	0.44
34:D8:14:VAL:CG2	34:D8:22:VAL:HG13	2.47	0.44
36:DA:1270:C:H5''	36:DA:1271:G:H5'	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1485:G:O2'	36:DA:1486:A:H5'	2.17	0.44
36:DA:1573:G:C2'	36:DA:1574:C:H5'	2.46	0.44
36:DA:1790:C:H2'	36:DA:1791:A:C5	2.53	0.44
36:DA:237:C:H2'	36:DA:238:C:H6	1.82	0.44
36:DA:2772:C:H2'	36:DA:2773:C:H6	1.83	0.44
36:DA:524:U:H4'	36:DA:555:U:H4'	2.00	0.44
36:DA:703:U:C2'	36:DA:704:G:H5'	2.47	0.44
36:DA:877:U:C2'	36:DA:878:A:H5''	2.48	0.44
36:DA:664:C:H4'	36:DA:941:A:OP1	2.18	0.44
39:DD:79:VAL:CG2	39:DD:111:LEU:HD11	2.47	0.44
41:DF:53:THR:HG22	41:DF:56:GLU:CG	2.47	0.44
42:DG:144:ILE:CD1	42:DG:149:VAL:HG11	2.31	0.44
43:DH:154:PRO:HB2	43:DH:155:SER:H	1.64	0.44
43:DH:159:GLU:CG	43:DH:160:LYS:N	2.77	0.44
44:DJ:25:UNK:HA	44:DJ:116:UNK:CB	2.47	0.44
44:DJ:18:UNK:O	44:DJ:20:UNK:N	2.50	0.44
44:DJ:93:UNK:HA	44:DJ:96:UNK:CB	2.47	0.44
45:DK:23:UNK:C	45:DK:25:UNK:N	2.80	0.44
40:DE:152:LYS:HG2	46:DN:78:TYR:CE1	2.52	0.44
48:DP:123:LEU:HD23	48:DP:123:LEU:N	2.32	0.44
50:DR:75:LEU:HD13	50:DR:75:LEU:C	2.37	0.44
51:DS:17:ARG:NH2	51:DS:90:GLY:H	2.15	0.44
52:DT:32:TYR:O	52:DT:33:LYS:HB2	2.17	0.44
55:DW:70:TYR:OH	55:DW:72:LYS:HG2	2.18	0.44
1:AA:105:G:H2'	1:AA:106:C:C6	2.52	0.44
1:AA:1152:A:H2'	1:AA:1153:C:H6	1.82	0.44
1:AA:514:C:H2'	1:AA:515:G:H8	1.83	0.44
1:AA:710:G:O2'	1:AA:711:G:H5'	2.16	0.44
1:AA:743:U:H2'	1:AA:744:C:C6	2.53	0.44
1:AA:948:C:O2'	1:AA:949:A:H5'	2.17	0.44
2:AB:158:LEU:HA	2:AB:159:PRO:HD3	1.86	0.44
2:AB:172:ILE:H	2:AB:172:ILE:CD1	2.23	0.44
1:AA:1255:G:C5'	3:AC:26:LYS:HE2	2.46	0.44
3:AC:49:SER:O	3:AC:50:ALA:CB	2.63	0.44
5:AE:6:PHE:HB2	5:AE:34:VAL:CG2	2.47	0.44
7:AG:51:GLN:HA	7:AG:51:GLN:OE1	2.17	0.44
12:AL:104:VAL:HG12	12:AL:105:TYR:CD1	2.53	0.44
13:AM:108:ARG:NH2	13:AM:114:ARG:HA	2.32	0.44
14:AN:29:ARG:CG	14:AN:29:ARG:NH1	2.80	0.44
16:AP:20:VAL:CG2	16:AP:21:VAL:N	2.80	0.44
17:AQ:44:ALA:HB2	17:AQ:59:ILE:HD12	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1305:G:C5'	21:AU:4:GLY:HA3	2.44	0.44
24:AY:24:G:H2'	24:AY:25:C:O4'	2.17	0.44
25:AZ:343:TYR:CE2	25:AZ:348:ASP:HB3	2.53	0.44
26:B0:50:ASN:ND2	26:B0:63:VAL:CG2	2.75	0.44
28:B2:53:LEU:CG	28:B2:56:GLN:HG3	2.47	0.44
29:B3:23:LEU:CD2	29:B3:50:VAL:HG11	2.47	0.44
29:B3:46:ASN:O	29:B3:50:VAL:HG22	2.17	0.44
36:BA:1528:A:N1	36:BA:1542:A:C2	2.85	0.44
36:BA:1528:A:O2'	36:BA:1528(A):A:H5'	2.18	0.44
36:BA:1536:C:H2'	36:BA:1537:G:C4'	2.47	0.44
36:BA:1666:G:C2'	36:BA:1667:G:H5'	2.47	0.44
36:BA:1688:U:O2	36:BA:1700:A:H5''	2.17	0.44
32:B6:25:LYS:O	36:BA:2286:A:N1	2.50	0.44
36:BA:2348:U:O2'	36:BA:2349:G:H5'	2.18	0.44
36:BA:2818:G:O2'	36:BA:2837:G:H5'	2.17	0.44
36:BA:2863:C:O2	36:BA:2863:C:H2'	2.18	0.44
36:BA:2869:G:H2'	36:BA:2870:C:C6	2.52	0.44
36:BA:36:G:C5	36:BA:37:C:C5	3.06	0.44
36:BA:636:G:H4'	36:BA:638:G:O3'	2.17	0.44
37:BB:91:C:O2'	37:BB:92:C:H5'	2.17	0.44
39:BD:28:GLU:HB2	39:BD:29:PRO:HD3	1.99	0.44
40:BE:77:ILE:HG22	40:BE:78:LEU:CD1	2.47	0.44
41:BF:17:ARG:HG3	41:BF:17:ARG:HH11	1.82	0.44
42:BG:114:ILE:O	42:BG:114:ILE:CG2	2.64	0.44
43:BH:43:VAL:HG11	43:BH:46:GLU:OE2	2.18	0.44
48:BP:121:LYS:O	48:BP:123:LEU:HD23	2.18	0.44
48:BP:111:ARG:HA	48:BP:128:HIS:CD2	2.53	0.44
49:BQ:27:VAL:HG21	49:BQ:134:ARG:HG3	1.99	0.44
50:BR:11:ASN:OD1	50:BR:11:ASN:O	2.35	0.44
50:BR:2:ARG:CD	50:BR:2:ARG:C	2.85	0.44
54:BV:97:LYS:HD3	54:BV:97:LYS:HA	1.83	0.44
1:CA:222:U:H2'	1:CA:223:U:C6	2.52	0.44
1:CA:338:A:H2'	1:CA:339:C:C6	2.52	0.44
1:CA:346:G:O2'	1:CA:347:G:P	2.75	0.44
1:CA:974:A:OP1	1:CA:974:A:H8	2.00	0.44
2:CB:118:LEU:HD21	2:CB:138:LEU:HD22	1.98	0.44
2:CB:28:PHE:CZ	2:CB:189:ASP:HA	2.52	0.44
4:CD:112:VAL:HG12	4:CD:116:GLN:CD	2.38	0.44
4:CD:174:LEU:HD23	4:CD:185:PHE:HA	1.99	0.44
4:CD:148:VAL:HG23	4:CD:181:MET:HB3	1.99	0.44
7:CG:99:LEU:HA	7:CG:102:ARG:HD2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:112:LEU:CD2	8:CH:112:LEU:N	2.75	0.44
13:CM:15:VAL:HA	13:CM:18:ALA:HB3	1.98	0.44
13:CM:70:LEU:C	13:CM:70:LEU:HD23	2.38	0.44
17:CQ:33:GLY:O	17:CQ:34:LYS:C	2.56	0.44
29:D3:38:GLU:HB3	29:D3:40:THR:HG23	1.99	0.44
31:D5:50:GLY:O	31:D5:51:TYR:C	2.56	0.44
32:D6:27:LYS:O	32:D6:29:ASN:N	2.50	0.44
32:D6:36:LEU:HD23	32:D6:37:ARG:N	2.32	0.44
33:D7:10:ARG:HH11	33:D7:10:ARG:HG2	1.82	0.44
36:DA:1514:U:H2'	36:DA:1515:G:C8	2.53	0.44
36:DA:2184:G:H2'	36:DA:2185:C:C6	2.53	0.44
36:DA:2330:G:C2'	36:DA:2331:G:H5'	2.47	0.44
36:DA:2469:A:O2'	49:DQ:56:ARG:HD2	2.17	0.44
36:DA:2653:U:H3'	36:DA:2654:A:C8	2.53	0.44
36:DA:748:G:O6	36:DA:751:A:H4'	2.16	0.44
39:DD:173:VAL:HG12	39:DD:185:VAL:O	2.16	0.44
40:DE:111:ARG:HG2	40:DE:160:TYR:O	2.17	0.44
40:DE:77:ILE:CG2	40:DE:78:LEU:H	2.25	0.44
42:DG:125:PHE:HB3	42:DG:131:TYR:HD1	1.83	0.44
42:DG:123:ASN:O	42:DG:126:ASP:HB2	2.18	0.44
42:DG:52:ILE:O	42:DG:54:GLU:N	2.50	0.44
36:DA:2312:U:OP1	42:DG:73:ALA:CB	2.65	0.44
43:DH:83:TYR:HB3	43:DH:135:GLY:H	1.83	0.44
43:DH:23:ARG:O	43:DH:24:VAL:CG2	2.66	0.44
48:DP:23:PRO:O	48:DP:33:ARG:CD	2.61	0.44
48:DP:59:LEU:CA	48:DP:61:ARG:NE	2.68	0.44
36:DA:1275:A:C8	50:DR:16:HIS:CD2	3.06	0.44
50:DR:28:LEU:HD23	50:DR:29:LEU:HD12	1.98	0.44
51:DS:106:ARG:CG	51:DS:106:ARG:NH1	2.80	0.44
53:DU:52:ARG:HB3	53:DU:52:ARG:HH11	1.83	0.44
53:DU:68:ALA:C	53:DU:70:ARG:H	2.20	0.44
58:DZ:142:SER:OG	58:DZ:143:GLY:N	2.50	0.44
1:AA:1032:G:H2'	1:AA:1033:G:C8	2.52	0.44
1:AA:1053:G:C4'	1:AA:1054:C:C5'	2.80	0.44
1:AA:1123:A:C2	1:AA:1150:U:C5	3.06	0.44
1:AA:1517:G:H1'	36:BA:1919:A:O3'	2.18	0.44
1:AA:383:A:H2'	1:AA:384:G:H5'	2.00	0.44
1:AA:411:A:H62	1:AA:413:G:N2	2.15	0.44
2:AB:124:SER:OG	2:AB:125:PRO:HD2	2.17	0.44
2:AB:33:TYR:HB2	2:AB:43:ASP:CB	2.43	0.44
4:AD:100:ARG:HG2	4:AD:102:ASP:OD1	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:128:VAL:CG1	4:AD:129:ASN:H	2.11	0.44
5:AE:144:THR:N	5:AE:147:ASP:OD1	2.44	0.44
7:AG:75:VAL:CG1	7:AG:145:ALA:HA	2.48	0.44
8:AH:64:LYS:CG	8:AH:79:VAL:HG21	2.42	0.44
9:AI:114:TYR:CD1	10:AJ:60:ARG:HG2	2.53	0.44
10:AJ:7:LYS:HG2	10:AJ:71:LEU:HD13	1.98	0.44
19:AS:11:VAL:HG13	19:AS:16:LEU:HD11	2.00	0.44
19:AS:36:ARG:HB2	19:AS:72:GLY:CA	2.47	0.44
20:AT:45:GLN:OE1	20:AT:45:GLN:N	2.45	0.44
25:AZ:19:HIS:HA	25:AZ:115:GLN:CB	2.47	0.44
25:AZ:141:VAL:HG23	25:AZ:146:LEU:CD2	2.47	0.44
25:AZ:173:GLY:HA2	25:AZ:195:TRP:HZ3	1.82	0.44
25:AZ:334:PHE:CD1	25:AZ:334:PHE:N	2.85	0.44
33:B7:37:LYS:O	36:BA:458:G:H8	2.01	0.44
36:BA:1419:A:H2'	36:BA:1421:G:N7	2.33	0.44
36:BA:1430:C:H2'	36:BA:1431:U:C6	2.52	0.44
36:BA:1541:G:O2'	36:BA:1542:A:H5''	2.18	0.44
36:BA:1661:G:H2'	36:BA:1662:C:H6	1.83	0.44
36:BA:1788:C:O2'	36:BA:1789:A:H5'	2.17	0.44
36:BA:1907:G:O2'	36:BA:1908:C:H5'	2.18	0.44
36:BA:2457:U:C2'	36:BA:2458:G:H5'	2.47	0.44
36:BA:2481:G:C2'	36:BA:2482:G:OP2	2.66	0.44
36:BA:2552:U:C2	36:BA:2554:U:H5'	2.53	0.44
36:BA:2654:A:H1'	36:BA:2656:U:C6	2.52	0.44
36:BA:687:C:H2'	36:BA:688:U:O4'	2.18	0.44
36:BA:878:A:H2'	36:BA:879:G:O4'	2.17	0.44
39:BD:34:VAL:O	39:BD:35:LYS:C	2.55	0.44
40:BE:116:VAL:HG22	40:BE:117:MET:H	1.81	0.44
40:BE:120:TRP:HB3	40:BE:155:LYS:HD3	1.99	0.44
40:BE:98:PRO:HG3	40:BE:175:VAL:HG12	1.98	0.44
42:BG:64:THR:HG22	42:BG:94:LEU:HD11	2.00	0.44
43:BH:13:LYS:C	43:BH:15:VAL:H	2.20	0.44
43:BH:18:GLU:CB	43:BH:25:LYS:HB2	2.43	0.44
46:BN:133:GLN:HG2	46:BN:135:PRO:CD	2.40	0.44
46:BN:41:ASP:O	46:BN:42:TRP:C	2.55	0.44
47:BO:7:TYR:CE1	47:BO:20:MET:HB2	2.52	0.44
48:BP:89:ALA:HB1	48:BP:121:LYS:HD3	1.99	0.44
50:BR:12:ARG:CG	50:BR:12:ARG:HH11	2.30	0.44
52:BT:28:VAL:C	52:BT:29:ARG:HD3	2.37	0.44
52:BT:32:TYR:O	52:BT:33:LYS:HB2	2.18	0.44
53:BU:62:ILE:HG23	53:BU:76:TYR:CE2	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BU:8:VAL:CG1	53:BU:12:ARG:HE	2.30	0.44
1:CA:1015:A:C6	1:CA:1016:A:C6	3.06	0.44
1:CA:1053:G:O6	1:CA:1199:U:H2'	2.17	0.44
1:CA:340:U:C2	1:CA:350:G:N2	2.85	0.44
1:CA:743:U:H2'	1:CA:744:C:C6	2.53	0.44
1:CA:80:G:C3'	1:CA:81:U:H5'	2.48	0.44
1:CA:860:A:H2'	1:CA:861:G:O4'	2.17	0.44
2:CB:239:VAL:O	2:CB:240:GLN:CB	2.65	0.44
3:CC:11:ARG:HH22	3:CC:182:ILE:HD12	1.81	0.44
3:CC:52:LEU:HD12	3:CC:55:VAL:HG23	2.00	0.44
5:CE:36:ASP:O	5:CE:38:GLN:N	2.50	0.44
1:CA:972:C:OP2	10:CJ:57:LYS:HG2	2.16	0.44
10:CJ:81:THR:O	10:CJ:83:GLU:N	2.50	0.44
14:CN:26:ARG:NH1	14:CN:47:LEU:HD21	2.23	0.44
22:CW:38:A:H2'	22:CW:39:U:O4'	2.18	0.44
24:CY:67:G:H2'	24:CY:68:C:C6	2.52	0.44
25:CZ:115:GLN:HA	25:CZ:115:GLN:HE21	1.82	0.44
26:D0:25:ARG:HH11	26:D0:25:ARG:HG2	1.83	0.44
33:D7:46:VAL:HG12	33:D7:47:ARG:H	1.81	0.44
34:D8:50:LEU:N	34:D8:53:PRO:CD	2.81	0.44
35:D9:26:ILE:HG22	35:D9:27:CYS:N	2.33	0.44
36:DA:116:C:H2'	36:DA:117:G:C8	2.52	0.44
36:DA:1283:G:N2	36:DA:1285:G:H3'	2.32	0.44
36:DA:1336:A:H2'	36:DA:1337:G:H8	1.80	0.44
36:DA:1658:C:H2'	36:DA:1659:U:H6	1.81	0.44
36:DA:2389:G:C5'	36:DA:2390:U:H5'	2.45	0.44
36:DA:274:G:H3'	36:DA:274:G:OP2	2.18	0.44
36:DA:303:U:H2'	36:DA:304:G:C8	2.53	0.44
36:DA:514:A:O2'	36:DA:515:A:H5'	2.18	0.44
36:DA:852:G:H2'	36:DA:853:G:H8	1.82	0.44
37:DB:24:G:H1'	37:DB:26:A:H62	1.83	0.44
38:DC:43:VAL:HG23	38:DC:175:VAL:CG2	2.40	0.44
38:DC:83:ILE:HD11	38:DC:97:GLU:HG2	1.99	0.44
39:DD:142:VAL:HG22	39:DD:143:HIS:H	1.82	0.44
39:DD:28:GLU:HB2	39:DD:29:PRO:HD3	1.99	0.44
40:DE:93:VAL:C	40:DE:95:ILE:H	2.19	0.44
41:DF:17:ARG:HH11	41:DF:17:ARG:HG3	1.82	0.44
42:DG:139:LEU:HA	42:DG:144:ILE:CG2	2.37	0.44
42:DG:130:ASN:OD1	42:DG:160:VAL:HG13	2.18	0.44
43:DH:85:LYS:CE	43:DH:85:LYS:C	2.86	0.44
54:DV:49:THR:O	54:DV:50:PRO:C	2.55	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:DV:32:THR:HG23	54:DV:59:ALA:O	2.18	0.44
1:AA:1015:A:O3'	14:AN:15:LYS:NZ	2.48	0.44
1:AA:1129:C:O3'	1:AA:1131:G:OP2	2.36	0.44
1:AA:115:G:H4'	1:AA:116:A:O5'	2.16	0.44
1:AA:160:A:O2'	1:AA:161:A:H5'	2.17	0.44
1:AA:276:G:O3'	17:AQ:68:ARG:NH1	2.48	0.44
1:AA:836:G:H2'	1:AA:837:G:C8	2.53	0.44
2:AB:105:PHE:CE1	2:AB:155:LEU:HD12	2.52	0.44
2:AB:51:LEU:HD21	2:AB:55:PHE:CZ	2.53	0.44
3:AC:14:ILE:HG13	3:AC:15:THR:N	2.32	0.44
1:AA:939:G:C5'	7:AG:102:ARG:HH12	2.24	0.44
7:AG:143:ARG:O	7:AG:145:ALA:O	2.36	0.44
9:AI:28:VAL:O	9:AI:30:GLY:N	2.48	0.44
10:AJ:6:ILE:HD12	10:AJ:23:ILE:HG21	2.00	0.44
13:AM:4:ILE:O	13:AM:6:GLY:N	2.50	0.44
17:AQ:9:VAL:HG12	17:AQ:56:VAL:HG22	1.99	0.44
19:AS:31:ILE:O	19:AS:31:ILE:HG23	2.18	0.44
22:AV:20:U:H2'	22:AV:21:A:H5'	1.98	0.44
24:AY:32:OMC:HM22	24:AY:33:U:H5'	2.00	0.44
24:AY:3:G:O6	24:AY:70:C:N3	2.50	0.44
24:AY:60:U:H2'	24:AY:61:C:C5	2.53	0.44
24:AY:67:G:H2'	24:AY:68:C:C6	2.53	0.44
25:AZ:254:GLU:CD	25:AZ:307:PRO:HA	2.37	0.44
34:B8:4:MET:O	34:B8:62:LEU:CD1	2.62	0.44
35:B9:19:ARG:HG3	35:B9:20:HIS:ND1	2.32	0.44
35:B9:26:ILE:HG22	35:B9:27:CYS:N	2.33	0.44
36:BA:1012:U:C4	46:BN:28:THR:HG21	2.53	0.44
36:BA:1495:A:N3	36:BA:1495:A:H2'	2.32	0.44
36:BA:1654:A:OP1	50:BR:2:ARG:HA	2.18	0.44
36:BA:1946:U:H2'	36:BA:1947:C:C6	2.53	0.44
36:BA:2392:A:H5'	36:BA:2392:A:N3	2.33	0.44
36:BA:26:G:C6	36:BA:27:G:N1	2.85	0.44
36:BA:90:U:O4'	36:BA:92:A:C8	2.69	0.44
37:BB:21:G:H2'	37:BB:22:U:H5'	1.99	0.44
43:BH:139:GLN:HG3	43:BH:140:LYS:N	2.33	0.44
48:BP:48:PRO:O	48:BP:49:ARG:C	2.56	0.44
49:BQ:64:ILE:HG22	49:BQ:65:PHE:N	2.32	0.44
54:BV:61:VAL:HA	54:BV:94:LEU:HD23	2.00	0.44
55:BW:62:HIS:O	55:BW:63:ASP:O	2.36	0.44
56:BX:57:LEU:N	56:BX:57:LEU:CD1	2.80	0.44
1:CA:1030(D):A:C2'	1:CA:1031:G:H5'	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:102:G:O2'	1:CA:103:C:H5'	2.18	0.44
1:CA:1050:G:O2'	1:CA:1051:C:C6	2.66	0.44
1:CA:1188:A:H2'	1:CA:1189:C:H5'	2.00	0.44
1:CA:156:G:C6	1:CA:166:G:C6	3.05	0.44
1:CA:198:G:O2'	1:CA:199:G:O5'	2.34	0.44
1:CA:228:A:C5'	1:CA:228:A:C8	2.96	0.44
1:CA:256:U:P	17:CQ:17:LYS:HZ2	2.41	0.44
1:CA:439:A:H2'	1:CA:441:A:O4'	2.18	0.44
2:CB:11:LEU:CD1	2:CB:217:ARG:NH2	2.81	0.44
4:CD:3:ARG:HE	4:CD:5:ILE:HG13	1.82	0.44
5:CE:57:LYS:HG2	5:CE:61:TYR:CE2	2.52	0.44
5:CE:76:ILE:HG13	5:CE:77:PRO:HD2	1.98	0.44
8:CH:44:PHE:HB3	8:CH:80:ILE:HG12	2.00	0.44
9:CI:40:LEU:C	9:CI:42:ARG:N	2.70	0.44
1:CA:624:C:O3'	16:CP:10:GLY:HA2	2.17	0.44
24:CY:6:C:N4	24:CY:67:G:H1	2.09	0.44
26:D0:36:ILE:HD11	36:DA:2355:C:C4'	2.46	0.44
32:D6:14:THR:C	32:D6:16:CYS:H	2.20	0.44
32:D6:36:LEU:O	32:D6:37:ARG:NE	2.51	0.44
34:D8:11:LYS:H	34:D8:11:LYS:CD	2.30	0.44
36:DA:1473:G:H2'	36:DA:1474:C:O4'	2.18	0.44
36:DA:1914:C:H2'	36:DA:1915:U:O4'	2.17	0.44
36:DA:2128:C:P	38:DC:36:LYS:HB2	2.58	0.44
36:DA:2107:C:H1'	36:DA:2182:G:N2	2.32	0.44
36:DA:2317:C:O2'	36:DA:2318:G:H5'	2.17	0.44
36:DA:2360:A:O2'	36:DA:2361:A:O5'	2.36	0.44
36:DA:548:A:H2'	36:DA:549:G:C5'	2.43	0.44
36:DA:562:U:C4	36:DA:2036:C:O4'	2.70	0.44
36:DA:671:C:C5	48:DP:36:LYS:NZ	2.85	0.44
36:DA:751:A:H5'	55:DW:90:ARG:HA	1.98	0.44
36:DA:833:U:H2'	36:DA:834:C:C6	2.53	0.44
36:DA:922:U:H2'	36:DA:923:C:C6	2.52	0.44
36:DA:992:C:H2'	36:DA:993:G:H8	1.83	0.44
37:DB:43:C:H3'	37:DB:44:G:C5'	2.47	0.44
38:DC:75:LEU:HD21	38:DC:113:VAL:HG22	1.99	0.44
38:DC:151:GLU:HA	38:DC:154:ARG:HH11	1.82	0.44
38:DC:33:ALA:HA	38:DC:39:GLU:OE2	2.17	0.44
39:DD:35:LYS:CG	39:DD:63:ARG:HG2	2.38	0.44
40:DE:174:ASP:OD1	40:DE:175:VAL:N	2.51	0.44
42:DG:52:ILE:HB	42:DG:54:GLU:CG	2.47	0.44
42:DG:64:THR:OG1	42:DG:94:LEU:HD11	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DJ:16:UNK:C	44:DJ:18:UNK:H	2.29	0.44
51:DS:84:GLN:HB3	51:DS:105:ALA:O	2.18	0.44
51:DS:17:ARG:C	51:DS:19:LYS:H	2.21	0.44
51:DS:67:ARG:O	51:DS:71:ARG:HG3	2.18	0.44
52:DT:105:LEU:HD22	52:DT:109:GLU:OE2	2.18	0.44
53:DU:17:ILE:HG23	53:DU:39:LEU:CD1	2.47	0.44
53:DU:79:PHE:O	53:DU:83:LEU:HD13	2.17	0.44
56:DX:25:LYS:HD3	56:DX:80:ILE:HD11	1.99	0.44
58:DZ:24:LEU:HA	58:DZ:25:PRO:HD2	1.73	0.44
1:AA:1145:C:O2'	1:AA:1146:A:O5'	2.34	0.44
1:AA:1275:A:O2'	1:AA:1276:G:H5'	2.18	0.44
1:AA:190:U:O2'	1:AA:191:G:H5'	2.18	0.44
1:AA:340:U:C2	1:AA:350:G:N2	2.85	0.44
1:AA:722:A:O3'	1:AA:723:U:H2'	2.18	0.44
1:AA:731:G:H5'	1:AA:766:A:H4'	1.99	0.44
1:AA:83:U:H2'	1:AA:84:U:C5	2.53	0.44
2:AB:95:GLN:HA	2:AB:95:GLN:OE1	2.18	0.44
3:AC:14:ILE:HG13	3:AC:15:THR:H	1.82	0.44
4:AD:105:VAL:HG21	4:AD:121:VAL:CG2	2.48	0.44
11:AK:57:THR:CG2	11:AK:60:ALA:H	2.27	0.44
12:AL:126:LYS:HZ3	12:AL:128:ALA:H	1.66	0.44
13:AM:19:LEU:O	13:AM:22:ILE:HD13	2.17	0.44
13:AM:70:LEU:HD23	13:AM:70:LEU:C	2.37	0.44
17:AQ:45:HIS:CB	17:AQ:65:ILE:HD13	2.47	0.44
25:AZ:143:ASP:HB3	25:AZ:146:LEU:HB2	1.97	0.44
25:AZ:210:ILE:O	25:AZ:210:ILE:HG23	2.18	0.44
27:B1:13:ILE:HD12	27:B1:14:VAL:C	2.38	0.44
27:B1:50:ARG:CG	27:B1:59:THR:HG22	2.38	0.44
28:B2:31:GLU:OE1	28:B2:31:GLU:HA	2.18	0.44
29:B3:15:TYR:CD2	29:B3:19:GLN:NE2	2.85	0.44
33:B7:43:THR:CG2	33:B7:44:PRO:N	2.81	0.44
36:BA:1164:G:H2'	36:BA:1165:U:C6	2.52	0.44
36:BA:2206:G:C2	36:BA:2207:G:H5'	2.51	0.44
36:BA:2506:U:C6	36:BA:2506:U:H5'	2.53	0.44
36:BA:2553:G:H3'	36:BA:2554:U:H5"	2.00	0.44
36:BA:611:C:H6	36:BA:611:C:O5'	2.00	0.44
36:BA:651:G:H2'	36:BA:652:C:H5'	2.00	0.44
36:BA:848:G:H2'	36:BA:849:A:C8	2.53	0.44
36:BA:856:C:H5"	36:BA:856:C:C6	2.53	0.44
40:BE:33:VAL:CG1	40:BE:69:LYS:HE3	2.48	0.44
41:BF:2:LYS:O	41:BF:25:PRO:HG2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BN:132:ALA:O	46:BN:133:GLN:CB	2.62	0.44
46:BN:3:THR:CG2	46:BN:4:TYR:N	2.80	0.44
47:BO:10:VAL:HG23	47:BO:10:VAL:O	2.18	0.44
47:BO:66:LYS:H	47:BO:82:ASN:HD21	1.65	0.44
50:BR:32:GLY:O	50:BR:115:GLU:HA	2.18	0.44
54:BV:38:LEU:HD22	54:BV:52:VAL:HG11	2.00	0.44
55:BW:29:LEU:CD1	55:BW:51:LEU:HD11	2.48	0.44
57:BY:20:TYR:C	57:BY:22:GLY:H	2.21	0.44
58:BZ:123:ASP:O	58:BZ:124:ILE:HG23	2.18	0.44
1:CA:1044:A:H2'	1:CA:1045:C:O5'	2.17	0.44
1:CA:1129:C:O2'	1:CA:1131:G:C8	2.71	0.44
1:CA:1133:G:C4	1:CA:1142:G:N2	2.85	0.44
1:CA:184:G:O2'	1:CA:185:A:H5'	2.17	0.44
1:CA:83:U:H2'	1:CA:84:U:C5	2.53	0.44
1:CA:894:G:O2'	1:CA:895:G:H5'	2.18	0.44
2:CB:109:SER:O	2:CB:111:ARG:N	2.51	0.44
2:CB:115:LEU:HD13	2:CB:145:LEU:HB3	2.00	0.44
2:CB:151:GLY:C	2:CB:153:ARG:N	2.71	0.44
3:CC:50:ALA:CA	3:CC:72:LYS:HB2	2.46	0.44
4:CD:100:ARG:HG2	4:CD:102:ASP:OD1	2.17	0.44
11:CK:23:ALA:O	11:CK:86:GLY:HA3	2.18	0.44
12:CL:34:ARG:HG3	12:CL:105:TYR:CE2	2.53	0.44
12:CL:52:LEU:N	12:CL:52:LEU:HD22	2.32	0.44
14:CN:12:ARG:CB	14:CN:12:ARG:HH11	2.29	0.44
22:CW:68:C:H2'	22:CW:69:G:C8	2.53	0.44
33:D7:31:LEU:O	33:D7:35:ARG:HB2	2.18	0.44
36:DA:1206:G:C6	36:DA:1207:C:C4	3.05	0.44
36:DA:1495:A:H2'	36:DA:1495:A:N3	2.33	0.44
36:DA:185:U:H2'	36:DA:186:G:C8	2.53	0.44
36:DA:1131:G:O6	36:DA:2040:C:H1'	2.18	0.44
36:DA:2319:G:C4'	36:DA:2319:G:OP2	2.65	0.44
36:DA:2716:U:O2'	36:DA:2717:G:H5'	2.17	0.44
36:DA:492:A:C2	36:DA:493:G:H1'	2.53	0.44
36:DA:878:A:H2'	36:DA:879:G:O4'	2.17	0.44
36:DA:926:A:C8	36:DA:926:A:H5'	2.52	0.44
38:DC:100:ILE:O	38:DC:104:LEU:HB2	2.18	0.44
39:DD:275:LYS:CD	39:DD:276:LYS:N	2.81	0.44
40:DE:7:VAL:CG1	40:DE:27:LEU:HB3	2.44	0.44
42:DG:151:ALA:HB3	42:DG:153:ARG:NH1	2.32	0.44
42:DG:63:ILE:HG21	42:DG:141:PHE:CD2	2.53	0.44
42:DG:67:LYS:O	42:DG:68:PRO:O	2.36	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DH:94:TYR:CD1	43:DH:107:VAL:CA	2.99	0.44
48:DP:121:LYS:O	48:DP:123:LEU:HD23	2.17	0.44
50:DR:22:ARG:NE	50:DR:69:ASP:HA	2.33	0.44
50:DR:74:LYS:HE3	50:DR:77:ARG:HH11	1.83	0.44
51:DS:70:GLY:C	51:DS:72:ALA:N	2.71	0.44
52:DT:12:SER:C	52:DT:14:TYR:H	2.21	0.44
52:DT:35:LYS:O	52:DT:38:ASN:ND2	2.51	0.44
54:DV:41:GLY:HA3	54:DV:45:THR:OG1	2.18	0.44
57:DY:47:LYS:HD2	57:DY:60:PHE:HE1	1.83	0.44
58:DZ:140:ASP:C	58:DZ:141:VAL:CG2	2.85	0.44
1:AA:1222:G:O2'	1:AA:1223:C:H5'	2.17	0.44
1:AA:1392:G:O2'	1:AA:1393:U:H5'	2.18	0.44
1:AA:411:A:H62	1:AA:413:G:H21	1.66	0.44
1:AA:439:A:H2'	1:AA:441:A:O4'	2.18	0.44
1:AA:512:U:C2	1:AA:513:C:C5	3.05	0.44
1:AA:577:G:O2'	1:AA:578:C:H5'	2.18	0.44
1:AA:628:G:C2'	1:AA:629:G:H5'	2.48	0.44
1:AA:860:A:H2'	1:AA:861:G:O4'	2.17	0.44
1:AA:93:G:H2'	1:AA:96:U:O4'	2.17	0.44
2:AB:39:ILE:CG2	2:AB:40:HIS:N	2.81	0.44
4:AD:10:ARG:HH11	4:AD:10:ARG:HG2	1.83	0.44
4:AD:18:LYS:CA	4:AD:33:MET:HE2	2.48	0.44
5:AE:80:ILE:HG12	5:AE:142:LEU:HD21	2.00	0.44
11:AK:58:PRO:HD3	11:AK:89:ALA:HB1	2.00	0.44
14:AN:44:LEU:C	14:AN:44:LEU:HD12	2.39	0.44
16:AP:14:ASN:OD1	16:AP:16:HIS:CE1	2.71	0.44
18:AR:79:LEU:HB3	18:AR:80:PRO:HD2	1.99	0.44
19:AS:60:VAL:O	19:AS:60:VAL:HG13	2.18	0.44
22:AW:8:U:OP2	22:AW:8:U:C6	2.70	0.44
25:AZ:315:LYS:HG2	25:AZ:373:GLU:HG3	1.99	0.44
25:AZ:342:PHE:CD2	25:AZ:388:ILE:HG12	2.53	0.44
25:AZ:357:PRO:O	25:AZ:359:VAL:HG23	2.18	0.44
32:B6:15:GLU:O	32:B6:15:GLU:HG2	2.18	0.44
35:B9:3:VAL:HG21	36:BA:2539:C:H4'	2.00	0.44
36:BA:1052:C:O2'	36:BA:1053:C:P	2.76	0.44
36:BA:2416:C:H2'	36:BA:2417:C:H6	1.83	0.44
36:BA:2491:U:H4'	36:BA:2570:G:OP1	2.18	0.44
36:BA:2819:G:H2'	36:BA:2821:A:N7	2.32	0.44
36:BA:360:G:O2'	36:BA:361:G:H5'	2.18	0.44
36:BA:536:A:H2'	36:BA:537:C:C6	2.53	0.44
36:BA:580:C:O2'	36:BA:581:C:H5'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:723:G:H2'	36:BA:724:U:C6	2.53	0.44
36:BA:828:U:C5	36:BA:829:A:N6	2.86	0.44
40:BE:144:ARG:HG3	40:BE:145:LYS:N	2.32	0.44
41:BF:157:VAL:HG23	41:BF:157:VAL:O	2.17	0.44
46:BN:14:VAL:HG21	46:BN:137:LYS:HE3	1.99	0.44
46:BN:29:LYS:C	46:BN:31:ALA:H	2.19	0.44
48:BP:146:VAL:CG2	48:BP:147:LEU:H	1.99	0.44
49:BQ:137:TYR:CZ	58:BZ:81:ARG:CZ	3.00	0.44
52:BT:33:LYS:HD2	52:BT:43:GLN:CB	2.48	0.44
54:BV:32:THR:HG23	54:BV:59:ALA:O	2.18	0.44
57:BY:2:ARG:HD2	57:BY:3:VAL:HG23	1.97	0.44
1:CA:1442(B):A:H2'	52:DT:118:ARG:HH12	1.83	0.44
1:CA:1392:G:N2	1:CA:1502:A:H8	2.16	0.44
1:CA:792:A:O2'	1:CA:794:A:N7	2.45	0.44
2:CB:213:LEU:C	2:CB:213:LEU:HD23	2.38	0.44
3:CC:46:GLU:O	3:CC:47:LEU:CB	2.54	0.44
4:CD:49:ARG:H	4:CD:49:ARG:HG2	1.65	0.44
1:CA:1346:A:OP1	9:CI:120:ARG:NH2	2.51	0.44
10:CJ:6:ILE:CD1	10:CJ:23:ILE:HG21	2.47	0.44
11:CK:59:TYR:CE2	11:CK:63:LEU:HD11	2.53	0.44
25:CZ:141:VAL:HG23	25:CZ:146:LEU:CD2	2.47	0.44
25:CZ:214:VAL:HG13	25:CZ:214:VAL:O	2.18	0.44
25:CZ:404:LEU:CD2	25:CZ:404:LEU:H	2.30	0.44
27:D1:91:LYS:O	27:D1:92:LYS:C	2.55	0.44
36:DA:104:U:H2'	36:DA:105:C:H5'	2.00	0.44
36:DA:1291:C:H2'	36:DA:1292:U:C6	2.53	0.44
36:DA:1299:G:H3'	36:DA:1639:U:O4	2.18	0.44
36:DA:2189:U:H3'	36:DA:2190:G:H4'	1.99	0.44
36:DA:2206:G:C2	36:DA:2207:G:H5'	2.52	0.44
36:DA:2724:C:OP1	40:DE:118:LYS:NZ	2.51	0.44
36:DA:2770:G:C5'	36:DA:2771:C:OP2	2.65	0.44
36:DA:321:G:O2'	36:DA:340:A:N3	2.46	0.44
36:DA:843:G:O2'	36:DA:844:C:H5'	2.17	0.44
26:D0:26:TYR:CD2	36:DA:857:C:H1'	2.53	0.44
36:DA:910:A:N1	36:DA:2277:G:H1'	2.33	0.44
37:DB:21:G:H2'	37:DB:22:U:H5'	1.99	0.44
37:DB:77:U:P	58:DZ:19:ARG:HH21	2.40	0.44
39:DD:9:TYR:CD1	39:DD:10:THR:HG22	2.52	0.44
36:DA:2572:A:N7	40:DE:144:ARG:HG2	2.31	0.44
41:DF:99:TYR:CD1	41:DF:99:TYR:N	2.85	0.44
42:DG:47:LYS:CE	42:DG:81:LYS:HB2	2.37	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DG:66:GLN:O	42:DG:92:VAL:HG21	2.18	0.44
43:DH:110:SER:O	43:DH:111:HIS:HB2	2.18	0.44
36:DA:1012:U:C4	46:DN:28:THR:HG21	2.53	0.44
48:DP:85:LEU:HA	48:DP:88:LEU:HB3	2.00	0.44
50:DR:3:HIS:C	50:DR:3:HIS:ND1	2.69	0.44
50:DR:74:LYS:HD2	50:DR:77:ARG:HH11	1.82	0.44
51:DS:103:GLU:OE1	51:DS:103:GLU:N	2.39	0.44
52:DT:53:ARG:O	52:DT:59:THR:HB	2.18	0.44
52:DT:95:ARG:NH1	52:DT:95:ARG:HB3	2.32	0.44
58:DZ:132:ASN:ND2	58:DZ:159:PRO:O	2.51	0.44
1:AA:1031:G:O2'	1:AA:1032:G:H5'	2.16	0.44
1:AA:1402:C:O2	1:AA:1500:A:N1	2.50	0.44
1:AA:1513:A:H2'	1:AA:1514:C:H6	1.78	0.44
4:AD:145:GLU:C	4:AD:146:ILE:HD13	2.38	0.44
7:AG:18:TYR:CD2	7:AG:59:LEU:HD13	2.52	0.44
1:AA:1378:C:OP1	7:AG:7:ALA:HB2	2.18	0.44
12:AL:45:PRO:O	12:AL:46:LYS:O	2.36	0.44
12:AL:53:ARG:HB3	12:AL:69:TYR:HE1	1.83	0.44
12:AL:97:ARG:CG	12:AL:97:ARG:HH11	2.30	0.44
14:AN:41:ARG:HG2	14:AN:42:ILE:N	2.30	0.44
22:AV:19:G:H4'	22:AV:20:U:OP2	2.18	0.44
25:AZ:86:ALA:O	25:AZ:88:TYR:N	2.45	0.44
29:B3:31:LEU:O	29:B3:32:GLN:HB2	2.18	0.44
32:B6:17:LYS:O	32:B6:18:ARG:HB3	2.17	0.44
33:B7:10:ARG:HG2	33:B7:10:ARG:HH11	1.83	0.44
36:BA:116:C:H2'	36:BA:117:G:C8	2.53	0.44
36:BA:1485:G:O2'	36:BA:1486:A:H5'	2.18	0.44
36:BA:2243:U:H2'	36:BA:2244:U:C6	2.53	0.44
36:BA:2307:G:H3'	36:BA:2307:G:N3	2.33	0.44
36:BA:2659:G:C2'	36:BA:2660:A:H5''	2.48	0.44
36:BA:470:A:OP1	41:BF:59:TYR:CE1	2.68	0.44
36:BA:630:G:H4'	36:BA:640:C:H4'	1.99	0.44
36:BA:692:C:H2'	36:BA:693:C:C6	2.53	0.44
36:BA:825:C:H4'	36:BA:2428:G:C5	2.53	0.44
37:BB:43:C:H3'	37:BB:44:G:C5'	2.48	0.44
38:BC:30:LYS:HE3	38:BC:30:LYS:HB3	1.83	0.44
38:BC:99:ILE:C	38:BC:101:GLN:N	2.72	0.44
39:BD:158:ALA:HB3	39:BD:161:THR:CG2	2.45	0.44
39:BD:241:PRO:C	39:BD:242:ARG:HG2	2.39	0.44
36:BA:1902:C:H5'	39:BD:246:PRO:HD3	2.00	0.44
39:BD:91:ARG:NH1	39:BD:91:ARG:HG2	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BN:32:THR:C	46:BN:34:LEU:N	2.70	0.44
48:BP:149:GLU:O	48:BP:150:ALA:HB2	2.18	0.44
49:BQ:27:VAL:HG23	49:BQ:137:TYR:CE2	2.53	0.44
51:BS:57:LYS:HD2	51:BS:57:LYS:C	2.38	0.44
51:BS:89:ARG:HB3	51:BS:92:TYR:HB3	1.99	0.44
57:BY:22:GLY:O	57:BY:23:ARG:C	2.56	0.44
57:BY:31:LEU:HD23	57:BY:36:ALA:O	2.18	0.44
1:CA:1005:A:C2'	1:CA:1006:C:H5'	2.47	0.44
1:CA:722:A:O2'	1:CA:724:G:H8	2.00	0.44
2:CB:114:ARG:HH11	2:CB:118:LEU:HG	1.83	0.44
2:CB:152:PHE:O	2:CB:155:LEU:N	2.51	0.44
3:CC:172:ARG:O	3:CC:173:VAL:CG2	2.65	0.44
5:CE:131:ILE:HD13	5:CE:131:ILE:HA	1.87	0.44
7:CG:78:ARG:HH11	7:CG:80:VAL:HG21	1.80	0.44
9:CI:4:TYR:CE2	9:CI:88:TYR:CB	2.96	0.44
9:CI:53:VAL:C	9:CI:55:ALA:N	2.69	0.44
10:CJ:44:VAL:CG2	10:CJ:66:ARG:HH21	2.31	0.44
1:CA:1048:G:OP1	14:CN:4:LYS:HB2	2.18	0.44
17:CQ:99:SER:C	17:CQ:100:LYS:HG3	2.39	0.44
25:CZ:140:MET:CG	60:CZ:501:GDP:HN21	2.31	0.44
25:CZ:67:HIS:ND1	25:CZ:80:VAL:HG22	2.32	0.44
36:DA:85:G:N3	36:DA:103:A:C2	2.85	0.44
36:DA:150:C:O2'	36:DA:151:C:H5'	2.18	0.44
36:DA:1885:A:C8	36:DA:1885:A:H5'	2.52	0.44
36:DA:1929:G:H4'	36:DA:1930:G:OP1	2.16	0.44
36:DA:2101:G:H1	36:DA:2189:U:H3	1.60	0.44
36:DA:2295:C:O2'	36:DA:2296:U:H5'	2.17	0.44
36:DA:9:U:O4	36:DA:2629:A:N7	2.51	0.44
36:DA:265:A:H4'	36:DA:266:G:O5'	2.18	0.44
36:DA:833:U:H5''	48:DP:48:PRO:HB2	2.00	0.44
37:DB:55:U:H2'	37:DB:56:G:C8	2.52	0.44
38:DC:82:LYS:HG3	38:DC:116:THR:HG21	2.00	0.44
39:DD:243:GLY:O	39:DD:244:ARG:CB	2.65	0.44
40:DE:115:GLY:C	40:DE:116:VAL:O	2.53	0.44
40:DE:47:VAL:HG23	40:DE:84:PHE:O	2.18	0.44
42:DG:72:ARG:HB2	42:DG:87:PRO:HD2	2.00	0.44
43:DH:43:VAL:HG11	43:DH:46:GLU:OE2	2.17	0.44
46:DN:3:THR:CG2	46:DN:4:TYR:H	2.26	0.44
36:DA:1665:A:H4'	47:DO:67:LYS:HB2	1.99	0.44
48:DP:41:ARG:CD	48:DP:45:LEU:HD23	2.36	0.44
56:DX:49:VAL:HG12	56:DX:87:GLN:NE2	2.28	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DZ:142:SER:C	58:DZ:144:LEU:N	2.71	0.44
1:AA:109:A:C6	1:AA:326:G:C6	3.06	0.43
1:AA:1202:G:C2'	1:AA:1203:C:H5'	2.48	0.43
1:AA:1238:A:H2'	1:AA:1239:A:H5'	2.00	0.43
1:AA:155:C:H2'	1:AA:156:G:C8	2.50	0.43
1:AA:240:C:H2'	1:AA:241:C:C6	2.52	0.43
1:AA:294:U:H2'	1:AA:295:C:C6	2.52	0.43
1:AA:341:C:H6	1:AA:341:C:O5'	2.01	0.43
3:AC:3:ASN:O	3:AC:4:LYS:HB2	2.17	0.43
1:AA:8:A:N6	4:AD:205:GLU:O	2.51	0.43
9:AI:52:ALA:CB	9:AI:95:LYS:HZ2	2.30	0.43
11:AK:125:PHE:C	11:AK:127:LYS:H	2.20	0.43
7:AG:153:HIS:CE1	11:AK:58:PRO:HD2	2.53	0.43
13:AM:104:ARG:O	13:AM:104:ARG:HG2	2.17	0.43
13:AM:15:VAL:CG1	13:AM:45:VAL:HG22	2.48	0.43
15:AO:6:GLU:CD	15:AO:6:GLU:H	2.18	0.43
25:AZ:257:GLY:O	25:AZ:302:GLN:HG2	2.18	0.43
25:AZ:363:MET:HB3	25:AZ:364:PRO:CD	2.48	0.43
25:AZ:404:LEU:CD2	25:AZ:404:LEU:H	2.32	0.43
25:AZ:69:GLU:CG	25:AZ:70:TYR:N	2.81	0.43
33:B7:34:ARG:HD2	33:B7:34:ARG:HA	1.77	0.43
36:BA:1067:A:H3'	36:BA:1068:G:C5'	2.41	0.43
36:BA:1885:A:C8	36:BA:1885:A:H5'	2.53	0.43
36:BA:2031:A:N3	36:BA:2455:G:O2'	2.49	0.43
36:BA:2154:G:C2	36:BA:2155:G:C4	3.06	0.43
36:BA:2319:G:C4'	36:BA:2319:G:OP2	2.66	0.43
35:B9:22:ARG:NH1	36:BA:2741:A:OP1	2.51	0.43
36:BA:581:C:OP1	53:BU:33:ARG:HG3	2.17	0.43
33:B7:4:THR:HG21	36:BA:788:A:H1'	1.98	0.43
36:BA:847:U:OP2	36:BA:928:G:O6	2.35	0.43
36:BA:977:G:C6	36:BA:987:G:C6	3.05	0.43
39:BD:35:LYS:CG	39:BD:63:ARG:HG2	2.41	0.43
40:BE:38:THR:HG23	40:BE:39:PRO:HD2	1.99	0.43
40:BE:79:ARG:HG2	40:BE:79:ARG:HH11	1.83	0.43
42:BG:138:GLN:HE21	42:BG:152:LEU:HB3	1.83	0.43
42:BG:16:ARG:HH11	42:BG:16:ARG:HG3	1.83	0.43
43:BH:116:GLU:OE1	43:BH:116:GLU:HA	2.18	0.43
43:BH:31:GLY:O	43:BH:79:VAL:HG12	2.18	0.43
46:BN:17:ASP:OD1	46:BN:56:ASN:HB3	2.18	0.43
46:BN:75:TYR:O	46:BN:76:SER:O	2.35	0.43
50:BR:75:LEU:C	50:BR:75:LEU:HD13	2.38	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BS:89:ARG:HG3	51:BS:92:TYR:N	2.33	0.43
56:BX:10:ALA:O	56:BX:28:PHE:CB	2.64	0.43
1:CA:1493:A:C8	23:CX:23:G:H1'	2.53	0.43
1:CA:240:C:H2'	1:CA:241:C:C6	2.53	0.43
1:CA:332:G:O2'	1:CA:333:G:H5'	2.17	0.43
1:CA:724:G:O2'	1:CA:725:G:H5'	2.18	0.43
2:CB:238:LEU:O	2:CB:239:VAL:C	2.55	0.43
3:CC:29:TYR:O	3:CC:30:ARG:C	2.56	0.43
3:CC:90:GLU:O	3:CC:93:LYS:HB3	2.18	0.43
1:CA:8:A:N6	4:CD:205:GLU:O	2.51	0.43
5:CE:12:LEU:HD12	5:CE:31:LEU:CB	2.42	0.43
6:CF:76:ALA:O	6:CF:80:ARG:HG3	2.18	0.43
10:CJ:4:ILE:CB	10:CJ:74:ILE:HD11	2.47	0.43
10:CJ:47:PHE:CE2	14:CN:37:PHE:CE2	3.06	0.43
17:CQ:45:HIS:CB	17:CQ:65:ILE:HD13	2.48	0.43
27:D1:14:VAL:HG11	27:D1:39:LYS:CE	2.48	0.43
29:D3:26:LEU:O	29:D3:28:LEU:HD22	2.18	0.43
31:D5:2:ALA:N	36:DA:2015:A:N3	2.66	0.43
32:D6:25:LYS:O	36:DA:2286:A:N1	2.51	0.43
32:D6:53:LYS:HG2	32:D6:54:ILE:H	1.82	0.43
36:DA:1120:G:H2'	36:DA:1121:C:H6	1.80	0.43
36:DA:1866:C:H6	36:DA:1866:C:O5'	2.00	0.43
36:DA:1651:G:C2	36:DA:2007:C:C2	3.06	0.43
36:DA:2150:U:H2'	36:DA:2151:G:C8	2.53	0.43
36:DA:2659:G:C2'	36:DA:2660:A:H5''	2.48	0.43
40:DE:47:VAL:HG12	40:DE:49:LEU:CD2	2.48	0.43
40:DE:69:LYS:HD3	40:DE:89:ASP:C	2.37	0.43
41:DF:107:LYS:HE3	41:DF:205:ARG:CG	2.48	0.43
41:DF:24:LEU:CD1	41:DF:118:ALA:HB1	2.48	0.43
42:DG:23:PHE:N	42:DG:23:PHE:CD1	2.86	0.43
46:DN:10:GLU:HG3	46:DN:11:PRO:HD2	1.99	0.43
46:DN:38:HIS:C	53:DU:67:ALA:HB1	2.37	0.43
48:DP:74:GLU:C	48:DP:75:ILE:HD12	2.38	0.43
50:DR:100:LEU:CD1	50:DR:100:LEU:N	2.81	0.43
47:DO:104:ARG:HH21	52:DT:33:LYS:HD3	1.81	0.43
1:AA:1039:C:C6	1:AA:1040:U:H5	2.36	0.43
1:AA:102:G:O2'	1:AA:103:C:H5'	2.18	0.43
1:AA:920:U:O4'	1:AA:1080:A:C2	2.72	0.43
1:AA:1190:G:P	3:AC:5:ILE:HD12	2.57	0.43
1:AA:1306:A:OP2	21:AU:6:ARG:NH2	2.51	0.43
1:AA:165:C:H2'	1:AA:166:G:H8	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:309:G:O2'	1:AA:607:A:N1	2.51	0.43
1:AA:60:A:H4'	1:AA:61:G:O5'	2.17	0.43
1:AA:757:U:H2'	1:AA:758:G:O4'	2.18	0.43
2:AB:25:ASN:HD22	2:AB:26:PRO:N	2.16	0.43
3:AC:3:ASN:O	3:AC:4:LYS:CB	2.66	0.43
4:AD:112:VAL:HG12	4:AD:116:GLN:CD	2.39	0.43
9:AI:11:LYS:HG2	9:AI:11:LYS:O	2.17	0.43
9:AI:58:HIS:C	9:AI:59:PHE:HD1	2.20	0.43
10:AJ:37:PRO:HA	10:AJ:72:VAL:HG22	1.99	0.43
1:AA:778:G:H1'	11:AK:119:CYS:HB3	1.99	0.43
11:AK:27:ASN:HD21	11:AK:45:GLY:H	1.66	0.43
12:AL:42:THR:HA	12:AL:53:ARG:O	2.18	0.43
13:AM:37:THR:O	13:AM:39:ILE:HG13	2.17	0.43
14:AN:39:LEU:CD1	14:AN:47:LEU:HD12	2.47	0.43
17:AQ:94:ASN:O	17:AQ:96:GLU:N	2.51	0.43
18:AR:55:ARG:HG3	18:AR:55:ARG:HH11	1.84	0.43
22:AW:68:C:H2'	22:AW:69:G:C8	2.53	0.43
26:B0:51:VAL:HG21	26:B0:79:VAL:O	2.18	0.43
32:B6:27:LYS:HE3	32:B6:30:THR:OG1	2.18	0.43
32:B6:45:LYS:CG	36:BA:2371:G:H4'	2.48	0.43
36:BA:1146:C:O2'	36:BA:1147:C:H5'	2.18	0.43
36:BA:1301:A:HO2'	36:BA:1302:A:C2'	2.21	0.43
36:BA:140:G:C1'	36:BA:141:A:H2	2.31	0.43
36:BA:1446:C:H42	36:BA:1465:G:H1	1.66	0.43
36:BA:1817:G:C2'	36:BA:1818:U:H5'	2.49	0.43
36:BA:2389:G:C5'	36:BA:2390:U:H5'	2.47	0.43
36:BA:271(Q):G:H1'	36:BA:271(R):G:H8	1.81	0.43
36:BA:274:G:H3'	36:BA:274:G:OP2	2.18	0.43
36:BA:2770:G:H5''	36:BA:2771:C:OP2	2.18	0.43
36:BA:303:U:H2'	36:BA:304:G:C8	2.53	0.43
36:BA:358:U:C2'	36:BA:359:A:H5'	2.48	0.43
36:BA:990:A:C6	36:BA:1186:G:H1'	2.52	0.43
37:BB:13:A:O2'	37:BB:15:A:H5'	2.18	0.43
37:BB:24:G:H1'	37:BB:26:A:H62	1.83	0.43
39:BD:173:VAL:HG12	39:BD:185:VAL:O	2.18	0.43
39:BD:28:GLU:CB	39:BD:29:PRO:CD	2.95	0.43
42:BG:141:PHE:O	42:BG:144:ILE:HG22	2.17	0.43
46:BN:31:ALA:O	46:BN:34:LEU:HB3	2.18	0.43
48:BP:115:LEU:HD23	48:BP:115:LEU:N	2.33	0.43
48:BP:98:GLU:CA	48:BP:101:VAL:HG22	2.48	0.43
47:BO:79:PHE:CD2	52:BT:72:VAL:HG12	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BT:93:ARG:HH22	52:BT:95:ARG:HD3	1.81	0.43
53:BU:93:LYS:O	53:BU:96:ALA:HB3	2.17	0.43
54:BV:16:PRO:O	54:BV:96:ILE:O	2.35	0.43
58:BZ:135:GLU:O	58:BZ:136:PHE:O	2.35	0.43
1:CA:1039:C:C6	1:CA:1040:U:H5	2.35	0.43
1:CA:1202:G:O2'	1:CA:1203:C:H5'	2.18	0.43
1:CA:1536:C:H2'	1:CA:1537:U:C4'	2.47	0.43
1:CA:600:C:OP1	8:CH:97:VAL:HG12	2.18	0.43
1:CA:878:G:H5'	8:CH:89:PRO:HG2	1.99	0.43
4:CD:127:THR:HG22	4:CD:128:VAL:O	2.18	0.43
4:CD:159:ARG:HG3	4:CD:159:ARG:NH1	2.33	0.43
9:CI:85:LEU:HD12	9:CI:85:LEU:C	2.39	0.43
10:CJ:6:ILE:HD12	10:CJ:23:ILE:HG21	2.00	0.43
10:CJ:9:ARG:HH21	10:CJ:97:GLU:HG3	1.84	0.43
13:CM:77:ASN:O	13:CM:80:ARG:HB3	2.18	0.43
22:CV:20:U:H2'	22:CV:21:A:H5'	1.98	0.43
25:CZ:173:GLY:HA2	25:CZ:195:TRP:HZ3	1.83	0.43
25:CZ:185:ASN:N	25:CZ:185:ASN:ND2	2.66	0.43
28:D2:47:ASN:O	28:D2:48:HIS:C	2.56	0.43
32:D6:16:CYS:SG	32:D6:48:VAL:CG2	3.00	0.43
36:DA:1208:C:C2	36:DA:1209:G:C8	3.06	0.43
36:DA:1300:U:H4'	36:DA:1301:A:O5'	2.18	0.43
36:DA:1817:G:C2'	36:DA:1818:U:H5'	2.48	0.43
36:DA:1963:U:O2	36:DA:1963:U:H2'	2.18	0.43
36:DA:2360:A:HO2'	36:DA:2361:A:H8	1.65	0.43
36:DA:600:G:H5'	41:DF:32:LEU:HD12	2.01	0.43
36:DA:813:U:H2'	36:DA:814:C:H6	1.81	0.43
36:DA:941:A:H4'	48:DP:35:HIS:CE1	2.53	0.43
37:DB:13:A:H8	37:DB:13:A:H5'	1.82	0.43
38:DC:117:PRO:O	38:DC:118:ASP:HB3	2.16	0.43
39:DD:242:ARG:CG	39:DD:242:ARG:NH1	2.72	0.43
40:DE:76:ARG:HG2	40:DE:76:ARG:HH11	1.83	0.43
41:DF:21:ALA:C	41:DF:23:ASP:H	2.20	0.43
42:DG:136:ARG:CB	42:DG:136:ARG:HH11	2.31	0.43
43:DH:76:VAL:C	43:DH:78:GLY:N	2.68	0.43
49:DQ:137:TYR:CE2	58:DZ:81:ARG:CZ	3.01	0.43
52:DT:29:ARG:HB2	52:DT:85:LYS:HA	1.98	0.43
55:DW:9:TYR:HE1	55:DW:102:HIS:HE2	1.63	0.43
55:DW:24:ILE:HG21	55:DW:36:LEU:CD2	2.48	0.43
1:AA:1126:U:P	1:AA:1281:U:O2	2.76	0.43
1:AA:622:A:C8	1:AA:623:C:C6	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:80:G:C3'	1:AA:81:U:H5'	2.47	0.43
1:AA:858:G:C8	1:AA:869:G:O6	2.70	0.43
2:AB:88:ALA:HB2	2:AB:219:VAL:CG1	2.47	0.43
2:AB:239:VAL:O	2:AB:240:GLN:CB	2.65	0.43
4:AD:148:VAL:HG23	4:AD:181:MET:HB3	1.99	0.43
4:AD:88:VAL:HG12	4:AD:90:GLY:H	1.82	0.43
9:AI:40:LEU:C	9:AI:42:ARG:N	2.71	0.43
9:AI:47:LEU:H	9:AI:47:LEU:HG	1.58	0.43
12:AL:126:LYS:HE2	12:AL:126:LYS:CA	2.48	0.43
16:AP:28:ARG:HG2	16:AP:28:ARG:HH11	1.84	0.43
17:AQ:26:GLN:HA	17:AQ:36:ILE:O	2.18	0.43
19:AS:35:SER:HB2	19:AS:37:ARG:HD2	1.99	0.43
22:AW:38:A:H2'	22:AW:39:U:O4'	2.18	0.43
25:AZ:133:VAL:HB	25:AZ:170:VAL:HG22	2.00	0.43
25:AZ:178:ALA:HB1	25:AZ:199:ILE:HD11	2.00	0.43
25:AZ:95:GLY:O	25:AZ:99:MET:HE2	2.18	0.43
26:B0:20:ARG:CG	26:B0:20:ARG:NH1	2.78	0.43
28:B2:9:GLN:HB3	28:B2:60:LEU:HD22	2.01	0.43
32:B6:18:ARG:HE	32:B6:43:CYS:HB3	1.83	0.43
32:B6:53:LYS:HG2	32:B6:54:ILE:H	1.83	0.43
36:BA:1843:C:H2'	36:BA:1844:C:H6	1.83	0.43
36:BA:205:G:O2'	36:BA:206:U:OP2	2.33	0.43
36:BA:2150:U:H2'	36:BA:2151:G:C8	2.52	0.43
36:BA:2184:G:H2'	36:BA:2185:C:C6	2.54	0.43
36:BA:237:C:O2'	36:BA:238:C:H5'	2.19	0.43
36:BA:237:C:H2'	36:BA:238:C:H6	1.81	0.43
31:B5:43:HIS:CD2	36:BA:2815:C:O2'	2.71	0.43
36:BA:2872:G:C2	36:BA:2873:A:N6	2.86	0.43
36:BA:877:U:C2'	36:BA:878:A:H5''	2.47	0.43
38:BC:117:PRO:HG3	38:BC:145:VAL:HG12	1.99	0.43
38:BC:82:LYS:HG3	38:BC:116:THR:HG21	2.01	0.43
40:BE:60:ASN:O	40:BE:61:ARG:C	2.55	0.43
42:BG:152:LEU:HD23	42:BG:152:LEU:N	2.31	0.43
47:BO:35:VAL:O	47:BO:35:VAL:CG1	2.66	0.43
48:BP:50:ARG:HG2	48:BP:50:ARG:NH1	2.33	0.43
52:BT:23:ARG:HB2	52:BT:24:PRO:HD2	2.00	0.43
52:BT:89:VAL:HG11	52:BT:91:ARG:HG3	2.00	0.43
53:BU:8:VAL:HG12	53:BU:12:ARG:HG3	2.00	0.43
56:BX:63:LYS:HB2	56:BX:63:LYS:HE3	1.89	0.43
57:BY:87:LYS:O	57:BY:88:LYS:CB	2.67	0.43
58:BZ:135:GLU:O	58:BZ:136:PHE:CG	2.71	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BZ:81:ARG:CB	58:BZ:81:ARG:CZ	2.90	0.43
1:CA:1060:C:H5''	10:CJ:51:ARG:HG2	1.99	0.43
1:CA:1194:U:H2'	1:CA:1195:C:C6	2.53	0.43
1:CA:1227:A:C2	1:CA:1228:C:C2	3.06	0.43
1:CA:1346:A:H5''	9:CI:120:ARG:NH2	2.33	0.43
1:CA:668:G:O2'	15:CO:46:HIS:CD2	2.71	0.43
1:CA:821:G:H2'	1:CA:822:C:H6	1.82	0.43
1:CA:918:A:H2'	1:CA:919:A:O4'	2.18	0.43
2:CB:19:HIS:NE2	2:CB:206:ASP:HB2	2.32	0.43
1:CA:1205:U:O2'	3:CC:195:VAL:HG23	2.18	0.43
4:CD:150:GLU:HG2	4:CD:151:LYS:N	2.33	0.43
4:CD:17:VAL:HG11	4:CD:197:PRO:CB	2.42	0.43
4:CD:194:LEU:HB3	4:CD:196:LEU:CD1	2.36	0.43
5:CE:99:GLY:O	5:CE:117:ASP:HA	2.18	0.43
6:CF:30:LEU:HD11	6:CF:63:TYR:CD2	2.53	0.43
7:CG:99:LEU:HA	7:CG:102:ARG:CD	2.48	0.43
9:CI:110:GLU:OE2	9:CI:113:LYS:NZ	2.51	0.43
10:CJ:48:THR:HG23	10:CJ:62:HIS:ND1	2.32	0.43
10:CJ:7:LYS:C	10:CJ:8:LEU:HD12	2.39	0.43
11:CK:20:TYR:CZ	11:CK:83:ILE:HD12	2.53	0.43
13:CM:104:ARG:O	13:CM:104:ARG:HG2	2.18	0.43
13:CM:58:GLU:O	13:CM:62:ASN:HB2	2.18	0.43
20:CT:10:LEU:HG	20:CT:12:ALA:N	2.32	0.43
20:CT:26:ASN:HB3	20:CT:71:THR:OG1	2.17	0.43
22:CV:22:G:O2'	22:CV:23:A:H5''	2.18	0.43
24:CY:40:C:C2'	24:CY:41:C:C5'	2.93	0.43
25:CZ:257:GLY:O	25:CZ:302:GLN:HG2	2.18	0.43
25:CZ:363:MET:HB3	25:CZ:364:PRO:CD	2.48	0.43
25:CZ:349:VAL:HG23	25:CZ:374:LEU:HD22	2.00	0.43
25:CZ:342:PHE:CD2	25:CZ:388:ILE:HG12	2.53	0.43
26:D0:43:THR:CG2	36:DA:2336:A:H61	2.31	0.43
28:D2:20:GLU:C	28:D2:22:GLU:N	2.72	0.43
30:D4:7:PRO:HG3	42:DG:61:ALA:HB1	1.99	0.43
31:D5:20:ARG:HA	31:D5:23:HIS:ND1	2.33	0.43
32:D6:32:ASN:O	32:D6:33:LYS:CB	2.66	0.43
36:DA:1229:G:H3'	36:DA:1230:C:C6	2.54	0.43
36:DA:2114:A:C2'	36:DA:2115:G:H5'	2.48	0.43
36:DA:2166:G:H2'	36:DA:2167:U:C6	2.53	0.43
36:DA:2414:G:C2	36:DA:2415:G:C8	3.07	0.43
36:DA:2463:C:C2'	36:DA:2464:C:H5'	2.48	0.43
36:DA:2481:G:C2'	36:DA:2482:G:OP2	2.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2545:G:O2'	36:DA:2546:U:H5'	2.18	0.43
36:DA:2661:G:H2'	36:DA:2662:A:C8	2.52	0.43
36:DA:271(D):G:O2'	36:DA:271(E):U:H5'	2.17	0.43
36:DA:309:G:N3	36:DA:329:G:O2'	2.51	0.43
36:DA:391:G:H1'	36:DA:411:G:O4'	2.18	0.43
36:DA:655:A:C4'	36:DA:656:G:H5'	2.32	0.43
36:DA:688:U:H5'	36:DA:1780:A:C2	2.53	0.43
36:DA:692:C:H2'	36:DA:693:C:C6	2.53	0.43
38:DC:74:VAL:HG12	38:DC:75:LEU:N	2.33	0.43
40:DE:101:ARG:HD3	40:DE:170:LEU:O	2.17	0.43
40:DE:87:GLU:OE1	40:DE:87:GLU:O	2.36	0.43
42:DG:22:ARG:HB3	42:DG:23:PHE:CD1	2.53	0.43
43:DH:31:GLY:O	43:DH:79:VAL:HG12	2.18	0.43
45:DK:88:UNK:O	45:DK:89:UNK:C	2.66	0.43
46:DN:17:ASP:OD1	46:DN:56:ASN:HB3	2.18	0.43
48:DP:62:LEU:O	48:DP:62:LEU:HG	2.17	0.43
52:DT:50:ILE:HA	52:DT:99:LEU:HD12	1.99	0.43
54:DV:39:LEU:HD12	54:DV:50:PRO:O	2.19	0.43
56:DX:44:GLU:OE2	56:DX:50:LYS:HG3	2.18	0.43
57:DY:85:VAL:HG12	57:DY:86:ARG:H	1.83	0.43
1:AA:961:U:OP2	1:AA:1223:C:H4'	2.18	0.43
1:AA:167:G:O2'	1:AA:168:G:H5'	2.18	0.43
1:AA:599:C:O2'	1:AA:600:C:H5'	2.18	0.43
1:AA:782:A:H2'	1:AA:783:C:H5'	1.99	0.43
1:AA:783:C:O2'	1:AA:784:C:H5'	2.19	0.43
2:AB:28:PHE:CZ	2:AB:189:ASP:HA	2.54	0.43
2:AB:32:ILE:HD11	2:AB:40:HIS:CD2	2.54	0.43
4:AD:8:VAL:HB	4:AD:21:LEU:HD12	2.01	0.43
5:AE:68:GLU:O	5:AE:68:GLU:HG3	2.17	0.43
12:AL:126:LYS:HE2	12:AL:127:GLU:H	1.82	0.43
12:AL:17:LYS:CD	12:AL:18:VAL:HG22	2.48	0.43
12:AL:45:PRO:HG3	12:AL:53:ARG:CD	2.48	0.43
16:AP:14:ASN:HA	16:AP:42:ARG:NH2	2.34	0.43
25:AZ:188:THR:CG2	25:AZ:193:ASN:HD22	2.27	0.43
27:B1:56:GLN:O	27:B1:57:GLU:HB3	2.18	0.43
28:B2:28:LYS:O	28:B2:31:GLU:N	2.51	0.43
29:B3:16:PRO:HB2	29:B3:19:GLN:HG3	2.00	0.43
34:B8:15:LYS:HD2	34:B8:16:ILE:N	2.33	0.43
36:BA:1416:G:HO2'	36:BA:1417:C:H5	1.65	0.43
36:BA:1596:A:O2'	36:BA:1597:A:H5'	2.18	0.43
36:BA:2657:A:H5'	36:BA:2657:A:N3	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:587:C:O2'	36:BA:588:U:OP2	2.29	0.43
37:BB:16:G:C6	37:BB:69:G:C2	3.06	0.43
38:BC:195:ALA:O	38:BC:198:ALA:HB3	2.18	0.43
39:BD:44:ASN:CB	39:BD:48:ARG:O	2.67	0.43
40:BE:49:LEU:HD22	40:BE:49:LEU:N	2.32	0.43
41:BF:107:LYS:HE3	41:BF:205:ARG:HG2	2.01	0.43
41:BF:170:LEU:HB2	41:BF:173:VAL:HB	2.00	0.43
41:BF:21:ALA:C	41:BF:23:ASP:H	2.21	0.43
41:BF:3:GLU:O	41:BF:3:GLU:HG3	2.17	0.43
42:BG:104:GLU:O	42:BG:108:ASN:HB2	2.17	0.43
44:BJ:52:UNK:CB	44:BJ:87:UNK:HA	2.49	0.43
50:BR:74:LYS:HE3	50:BR:77:ARG:HH11	1.84	0.43
53:BU:83:LEU:HA	53:BU:88:ILE:CG1	2.48	0.43
55:BW:24:ILE:HG21	55:BW:36:LEU:HD21	2.01	0.43
55:BW:55:ALA:C	55:BW:57:ASN:N	2.71	0.43
57:BY:61:ILE:HG22	57:BY:62:GLU:N	2.33	0.43
58:BZ:67:LEU:HD12	58:BZ:67:LEU:H	1.84	0.43
1:CA:1202:G:H2'	1:CA:1203:C:O4'	2.18	0.43
1:CA:427:U:C4	1:CA:428:G:C6	3.06	0.43
1:CA:393:A:H5'	1:CA:483:C:O2'	2.19	0.43
1:CA:484:G:HO2'	1:CA:485:G:P	2.41	0.43
4:CD:106:TYR:C	4:CD:108:LEU:H	2.22	0.43
4:CD:20:TYR:HD1	4:CD:26:CYS:O	2.01	0.43
5:CE:34:VAL:HG12	5:CE:62:ALA:HB1	2.00	0.43
6:CF:80:ARG:NH1	6:CF:88:VAL:HB	2.33	0.43
7:CG:102:ARG:CG	7:CG:103:TRP:N	2.80	0.43
10:CJ:7:LYS:HG2	10:CJ:71:LEU:HD13	2.00	0.43
11:CK:121:PRO:HG2	11:CK:126:ARG:HG3	2.00	0.43
12:CL:97:ARG:HH11	12:CL:97:ARG:CG	2.30	0.43
18:CR:21:LYS:HD2	18:CR:57:GLY:CA	2.49	0.43
19:CS:32:LYS:CE	19:CS:32:LYS:H	2.31	0.43
22:CV:43:C:H5'	22:CV:44:G:OP2	2.19	0.43
22:CW:11:C:O2'	22:CW:12:U:H5'	2.18	0.43
25:CZ:133:VAL:HB	25:CZ:170:VAL:HG22	1.99	0.43
25:CZ:138:VAL:HG21	25:CZ:173:GLY:N	2.33	0.43
25:CZ:178:ALA:HB1	25:CZ:199:ILE:HD11	1.99	0.43
25:CZ:254:GLU:CD	25:CZ:307:PRO:HA	2.38	0.43
25:CZ:317:GLU:O	25:CZ:400:VAL:HA	2.18	0.43
26:D0:43:THR:CG2	36:DA:2332:U:H5'	2.48	0.43
27:D1:53:VAL:CG2	27:D1:74:VAL:HG13	2.48	0.43
32:D6:15:GLU:OE1	32:D6:18:ARG:CZ	2.64	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1052:C:O2'	36:DA:1053:C:P	2.76	0.43
36:DA:116:C:H2'	36:DA:117:G:O4'	2.18	0.43
36:DA:1337:G:H2'	36:DA:1338:G:H8	1.84	0.43
36:DA:1544:A:O2'	36:DA:1545:A:H5'	2.17	0.43
36:DA:1787:A:O4'	36:DA:2589:A:H4'	2.18	0.43
36:DA:2122:U:H2'	36:DA:2123:G:H8	1.81	0.43
36:DA:2330:G:H2'	36:DA:2331:G:O4'	2.17	0.43
36:DA:2444:G:OP2	41:DF:68:LYS:NZ	2.48	0.43
36:DA:2491:U:C5'	36:DA:2570:G:H5''	2.45	0.43
36:DA:2572:A:O2'	40:DE:144:ARG:NH1	2.50	0.43
35:D9:35:ARG:CD	36:DA:2742:C:OP1	2.66	0.43
36:DA:654(E):G:N2	36:DA:654(Q):C:O2'	2.52	0.43
36:DA:709:U:H2'	36:DA:710:G:H8	1.80	0.43
28:D2:59:ARG:HH21	36:DA:77:C:P	2.41	0.43
37:DB:29:A:C2	37:DB:56:G:C2	3.07	0.43
39:DD:49:ILE:HG13	39:DD:49:ILE:O	2.19	0.43
39:DD:70:TRP:CH2	39:DD:150:LYS:CA	2.92	0.43
40:DE:76:ARG:O	40:DE:77:ILE:C	2.57	0.43
41:DF:164:ARG:HD2	41:DF:176:LEU:O	2.19	0.43
43:DH:54:ARG:HB2	43:DH:55:PRO:HD2	1.99	0.43
43:DH:66:GLY:HA2	43:DH:69:ARG:CB	2.40	0.43
43:DH:72:ILE:O	43:DH:75:ALA:N	2.52	0.43
46:DN:3:THR:O	46:DN:4:TYR:CD2	2.71	0.43
46:DN:56:ASN:HD22	46:DN:56:ASN:HA	1.57	0.43
46:DN:73:THR:HA	46:DN:83:LYS:O	2.18	0.43
52:DT:35:LYS:O	52:DT:36:GLU:HB2	2.18	0.43
54:DV:64:HIS:ND1	54:DV:92:THR:HG22	2.33	0.43
55:DW:37:ARG:HG2	55:DW:38:TYR:CD2	2.53	0.43
55:DW:78:GLU:OE2	55:DW:99:ARG:HD2	2.17	0.43
56:DX:57:LEU:CD1	56:DX:57:LEU:N	2.80	0.43
1:AA:1005:A:C2'	1:AA:1006:C:H5'	2.48	0.43
1:AA:1153:C:O2'	1:AA:1154:G:P	2.76	0.43
1:AA:1305:G:N2	1:AA:1331:G:C2'	2.60	0.43
1:AA:1402:C:C5	1:AA:1403:C:C5	3.06	0.43
1:AA:1416:G:C3'	1:AA:1417:G:H5''	2.47	0.43
1:AA:513:C:H2'	1:AA:514:C:H6	1.83	0.43
2:AB:226:ARG:O	2:AB:226:ARG:HD2	2.19	0.43
2:AB:69:LEU:HD13	2:AB:71:VAL:CG2	2.49	0.43
2:AB:74:LYS:NZ	2:AB:166:ASP:HB2	2.33	0.43
2:AB:93:VAL:HG13	2:AB:93:VAL:O	2.19	0.43
3:AC:3:ASN:CG	3:AC:4:LYS:N	2.70	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:6:ARG:O	7:AG:7:ALA:O	2.36	0.43
7:AG:78:ARG:HH11	7:AG:80:VAL:HG21	1.83	0.43
1:AA:1346:A:OP1	9:AI:120:ARG:NH2	2.51	0.43
11:AK:124:LYS:O	11:AK:127:LYS:HG2	2.19	0.43
13:AM:108:ARG:HH11	13:AM:108:ARG:CG	2.31	0.43
13:AM:58:GLU:O	13:AM:62:ASN:HB2	2.19	0.43
10:AJ:47:PHE:CE2	14:AN:37:PHE:HE2	2.37	0.43
26:B0:10:THR:CG2	26:B0:12:ASN:HB2	2.47	0.43
26:B0:43:THR:CG2	36:BA:2332:U:H5'	2.49	0.43
30:B4:14:ILE:N	30:B4:14:ILE:HD12	2.34	0.43
36:BA:1344:G:O2'	36:BA:1385:G:H2'	2.19	0.43
36:BA:1473:G:H2'	36:BA:1474:C:O4'	2.18	0.43
36:BA:1538:G:H2'	36:BA:1539:G:H8	1.83	0.43
36:BA:1916:A:H2'	36:BA:1917:U:O4'	2.18	0.43
36:BA:1991:U:C2'	36:BA:1992:G:H5''	2.47	0.43
36:BA:2166:G:H2'	36:BA:2167:U:C6	2.53	0.43
36:BA:2461:C:H2'	36:BA:2462:U:H6	1.83	0.43
36:BA:2529:G:H5''	36:BA:2530:A:H5''	2.00	0.43
36:BA:2747:G:C2	36:BA:2756:U:H5	2.36	0.43
36:BA:278:A:N1	36:BA:362:U:C4	2.87	0.43
36:BA:391:G:H1'	36:BA:411:G:O4'	2.19	0.43
36:BA:492:A:C2	36:BA:493:G:H1'	2.53	0.43
36:BA:832:G:P	48:BP:40:SER:HB3	2.58	0.43
38:BC:62:VAL:O	38:BC:160:ARG:HA	2.18	0.43
39:BD:238:GLY:O	39:BD:239:ARG:C	2.56	0.43
39:BD:243:GLY:O	39:BD:244:ARG:CB	2.66	0.43
40:BE:24:THR:CG2	40:BE:186:GLY:HA2	2.47	0.43
40:BE:64:LYS:C	40:BE:66:HIS:H	2.22	0.43
43:BH:167:GLU:HB3	43:BH:168:PRO:CD	2.45	0.43
44:BJ:119:UNK:O	44:BJ:120:UNK:CB	2.66	0.43
48:BP:84:ASN:ND2	48:BP:84:ASN:N	2.59	0.43
50:BR:13:HIS:O	50:BR:14:SER:C	2.56	0.43
50:BR:53:HIS:O	50:BR:53:HIS:ND1	2.51	0.43
51:BS:106:ARG:CG	51:BS:106:ARG:NH1	2.80	0.43
52:BT:63:VAL:O	52:BT:73:GLU:HA	2.18	0.43
1:CA:1116:C:C2'	1:CA:1117:G:C5'	2.96	0.43
1:CA:1505:G:H2'	23:CX:18:G:OP2	2.19	0.43
1:CA:321:A:O2'	1:CA:322:C:H5'	2.18	0.43
1:CA:622:A:C8	1:CA:623:C:C6	3.06	0.43
1:CA:741:G:H2'	1:CA:742:G:O4'	2.18	0.43
1:CA:923:A:O4'	1:CA:1398:A:C2	2.70	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:25:ASN:HD22	2:CB:26:PRO:N	2.16	0.43
4:CD:101:LEU:HD23	4:CD:121:VAL:CG1	2.42	0.43
10:CJ:12:ASP:OD1	10:CJ:12:ASP:C	2.57	0.43
12:CL:104:VAL:HG12	12:CL:105:TYR:CD1	2.54	0.43
16:CP:12:LYS:HG2	16:CP:13:HIS:CD2	2.53	0.43
16:CP:53:VAL:HG23	16:CP:54:GLU:N	2.25	0.43
25:CZ:86:ALA:O	25:CZ:88:TYR:N	2.44	0.43
22:CW:75:C:C5'	27:D1:30:VAL:HG11	2.48	0.43
28:D2:8:LYS:O	28:D2:11:GLU:HB2	2.18	0.43
36:DA:1441:G:O2'	36:DA:1442:G:H5'	2.19	0.43
36:DA:1469:A:O2'	36:DA:1470:G:H5'	2.19	0.43
36:DA:1517:G:C2'	36:DA:1518:U:H5'	2.48	0.43
36:DA:1528:A:N1	36:DA:1542:A:C2	2.85	0.43
36:DA:151:C:H2'	36:DA:152:G:H8	1.83	0.43
36:DA:1885:A:H8	36:DA:1885:A:C5'	2.32	0.43
34:D8:34:TRP:HA	36:DA:2420:C:OP1	2.19	0.43
36:DA:2892:A:N6	36:DA:2893:G:H21	2.16	0.43
36:DA:31:C:H2'	36:DA:32:C:H5'	1.95	0.43
36:DA:338:G:N2	36:DA:339:U:H1'	2.33	0.43
36:DA:448:U:H1'	41:DF:84:VAL:HG13	1.99	0.43
36:DA:60:G:C4	36:DA:63:U:C4	3.05	0.43
37:DB:13:A:O2'	37:DB:15:A:H5'	2.19	0.43
40:DE:61:ARG:CB	40:DE:62:PRO:CD	2.95	0.43
40:DE:60:ASN:OD1	40:DE:61:ARG:N	2.52	0.43
40:DE:68:ALA:O	40:DE:70:ALA:N	2.51	0.43
42:DG:125:PHE:O	42:DG:126:ASP:C	2.57	0.43
42:DG:60:LEU:HD22	42:DG:63:ILE:HD12	2.00	0.43
44:DJ:96:UNK:HA	44:DJ:99:UNK:CB	2.49	0.43
45:DK:56:UNK:O	45:DK:68:UNK:C	2.66	0.43
48:DP:110:TYR:O	48:DP:111:ARG:C	2.57	0.43
53:DU:95:LEU:HD11	54:DV:11:GLN:O	2.17	0.43
56:DX:35:THR:HG21	56:DX:37:THR:HG22	2.01	0.43
1:AA:1411:C:O2'	1:AA:1412:C:H5'	2.18	0.43
1:AA:833:U:H2'	1:AA:834:C:C6	2.52	0.43
1:AA:838:G:C6	1:AA:840:C:H1'	2.53	0.43
4:AD:106:TYR:C	4:AD:108:LEU:H	2.21	0.43
4:AD:159:ARG:HG3	4:AD:159:ARG:NH1	2.33	0.43
7:AG:102:ARG:CG	7:AG:103:TRP:N	2.82	0.43
7:AG:99:LEU:HA	7:AG:102:ARG:HD2	2.01	0.43
9:AI:110:GLU:OE2	9:AI:113:LYS:NZ	2.52	0.43
9:AI:113:LYS:HD3	9:AI:119:ALA:HA	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:44:VAL:CG2	10:AJ:66:ARG:HH21	2.30	0.43
10:AJ:96:ILE:CD1	10:AJ:96:ILE:N	2.76	0.43
19:AS:13:ASP:C	19:AS:15:LEU:H	2.22	0.43
20:AT:55:ILE:O	20:AT:58:LYS:HB3	2.19	0.43
22:AV:46:G:C3'	22:AV:47:U:C5'	2.74	0.43
23:AX:22:U:O2'	23:AX:23:G:H5'	2.18	0.43
24:AY:16:H2U:C5'	24:AY:17:H2U:H5'	2.42	0.43
25:AZ:313:HIS:CB	25:AZ:380:LEU:HD12	2.49	0.43
33:B7:43:THR:HG23	33:B7:44:PRO:CD	2.49	0.43
36:BA:1059:G:H3'	36:BA:1060:U:H6	1.84	0.43
36:BA:1068:G:H1'	36:BA:1069:A:O5'	2.19	0.43
36:BA:1929:G:H4'	36:BA:1930:G:OP1	2.18	0.43
36:BA:2126:A:HO2'	36:BA:2127:G:P	2.41	0.43
27:B1:30:VAL:H	36:BA:2396:G:C4'	2.31	0.43
36:BA:1787:A:O4'	36:BA:2589:A:H4'	2.17	0.43
36:BA:301:G:C6	36:BA:317:G:C6	3.06	0.43
36:BA:381:G:O2'	36:BA:382:G:H5'	2.18	0.43
36:BA:500:G:H22	36:BA:502:A:H3'	1.81	0.43
36:BA:614:U:O4'	36:BA:614:U:O2	2.35	0.43
38:BC:100:ILE:O	38:BC:104:LEU:HB2	2.18	0.43
40:BE:144:ARG:HG3	40:BE:145:LYS:H	1.83	0.43
42:BG:138:GLN:HG2	42:BG:153:ARG:HG2	2.00	0.43
42:BG:39:ILE:HG22	42:BG:157:ILE:HG23	2.00	0.43
43:BH:83:TYR:HB3	43:BH:135:GLY:O	2.18	0.43
46:BN:115:ARG:HG3	46:BN:115:ARG:HH11	1.84	0.43
48:BP:74:GLU:C	48:BP:75:ILE:HD12	2.39	0.43
50:BR:41:ALA:C	50:BR:43:GLU:N	2.72	0.43
50:BR:76:VAL:O	50:BR:79:LEU:HB3	2.19	0.43
51:BS:13:ARG:CG	51:BS:14:VAL:N	2.77	0.43
51:BS:14:VAL:HG12	51:BS:15:ARG:N	2.33	0.43
52:BT:106:SER:O	52:BT:107:ASP:HB3	2.19	0.43
54:BV:34:GLU:HA	54:BV:57:VAL:O	2.19	0.43
54:BV:39:LEU:HA	54:BV:47:VAL:HG11	1.99	0.43
57:BY:35:TYR:HD2	57:BY:68:HIS:NE2	2.16	0.43
57:BY:80:GLY:O	57:BY:81:LYS:O	2.36	0.43
58:BZ:114:GLY:N	58:BZ:146:ILE:HG22	2.33	0.43
49:BQ:141:GLN:OXT	58:BZ:53:ILE:HD12	2.19	0.43
1:CA:1262:C:H2'	1:CA:1263:C:C6	2.54	0.43
1:CA:220:G:H2'	1:CA:221:C:H5'	2.00	0.43
1:CA:375:U:O2'	16:CP:28:ARG:HD2	2.18	0.43
1:CA:722:A:O3'	1:CA:723:U:H2'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:936:C:H2'	1:CA:937:A:H8	1.84	0.43
2:CB:163:PHE:HA	2:CB:185:ILE:O	2.18	0.43
2:CB:168:THR:HG21	2:CB:192:SER:HA	1.99	0.43
5:CE:144:THR:O	5:CE:148:VAL:HG23	2.19	0.43
5:CE:69:VAL:O	5:CE:71:LEU:N	2.47	0.43
8:CH:83:ILE:HG13	8:CH:137:VAL:HG22	2.00	0.43
11:CK:105:VAL:HG23	11:CK:105:VAL:O	2.18	0.43
11:CK:124:LYS:O	11:CK:127:LYS:HG2	2.18	0.43
12:CL:33:ARG:HD3	12:CL:62:SER:HG	1.80	0.43
20:CT:38:LYS:O	20:CT:41:ILE:HG12	2.18	0.43
22:CV:63:G:O2'	22:CV:64:A:H5'	2.19	0.43
22:CV:67:C:H2'	22:CV:68:C:H6	1.84	0.43
22:CW:40:C:H2'	22:CW:41:C:H6	1.84	0.43
25:CZ:94:THR:O	25:CZ:96:ALA:N	2.52	0.43
27:D1:69:LYS:HZ1	27:D1:76:ARG:NH2	2.01	0.43
28:D2:47:ASN:ND2	36:DA:95:G:H1'	2.34	0.43
30:D4:14:ILE:N	30:D4:14:ILE:HD12	2.33	0.43
30:D4:28:LYS:HE2	30:D4:29:PRO:HD2	1.99	0.43
32:D6:17:LYS:HD3	32:D6:17:LYS:O	2.19	0.43
34:D8:48:PHE:CD1	34:D8:48:PHE:N	2.85	0.43
34:D8:53:PRO:HA	34:D8:56:GLU:HB2	2.01	0.43
36:DA:1053:C:H42	36:DA:1108:U:H3	1.65	0.43
36:DA:1510:G:C2'	36:DA:1511:C:H5'	2.48	0.43
36:DA:1530:C:H2'	36:DA:1531:C:C6	2.54	0.43
36:DA:2010:G:H2'	36:DA:2011:U:H6	1.83	0.43
36:DA:2012:G:OP2	55:DW:16:LYS:HE3	2.18	0.43
36:DA:2110:G:N2	36:DA:2178:C:C5	2.86	0.43
36:DA:2312:U:H2'	36:DA:2313:C:H5'	1.99	0.43
36:DA:2807:G:C2'	36:DA:2808:U:H5''	2.48	0.43
36:DA:614:U:O2	36:DA:614:U:O4'	2.35	0.43
36:DA:986:C:C2'	36:DA:987:G:H5'	2.48	0.43
36:DA:995:C:N3	46:DN:1:MET:HE2	2.34	0.43
38:DC:98:GLU:O	38:DC:98:GLU:HG3	2.18	0.43
40:DE:33:VAL:CG1	40:DE:69:LYS:HE3	2.48	0.43
36:DA:2060:A:N6	41:DF:74:ARG:NH2	2.66	0.43
42:DG:12:TYR:HA	42:DG:16:ARG:CG	2.48	0.43
42:DG:145:THR:HG22	42:DG:147:ASP:H	1.82	0.43
43:DH:116:GLU:HA	43:DH:116:GLU:OE1	2.19	0.43
48:DP:9:ASN:N	48:DP:10:PRO:CD	2.80	0.43
50:DR:10:LEU:HB3	50:DR:17:ARG:HE	1.83	0.43
51:DS:14:VAL:HG12	51:DS:15:ARG:N	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DY:20:TYR:C	57:DY:22:GLY:H	2.21	0.43
57:DY:22:GLY:O	57:DY:23:ARG:C	2.57	0.43
57:DY:76:CYS:O	57:DY:99:CYS:SG	2.77	0.43
58:DZ:168:GLU:CD	58:DZ:168:GLU:O	2.57	0.43
1:AA:123:C:OP1	1:AA:312:C:H5'	2.18	0.43
1:AA:750:G:N3	15:AO:23:GLY:HA3	2.33	0.43
1:AA:965:A:C2	1:AA:969:A:N1	2.86	0.43
4:AD:150:GLU:N	4:AD:150:GLU:OE1	2.51	0.43
7:AG:37:ASN:HD21	9:AI:41:VAL:H	1.65	0.43
8:AH:10:LEU:CD2	8:AH:83:ILE:HD11	2.47	0.43
9:AI:112:LYS:HA	9:AI:119:ALA:HB2	2.00	0.43
9:AI:111:ARG:O	9:AI:119:ALA:CB	2.66	0.43
9:AI:33:PHE:C	9:AI:35:GLU:N	2.72	0.43
13:AM:15:VAL:HA	13:AM:18:ALA:HB3	1.99	0.43
13:AM:77:ASN:O	13:AM:81:LEU:CD2	2.66	0.43
18:AR:33:ASP:O	18:AR:40:LEU:HD11	2.19	0.43
19:AS:10:PHE:CD1	19:AS:10:PHE:O	2.71	0.43
13:AM:84:ILE:HG13	19:AS:66:MET:SD	2.57	0.43
20:AT:27:LYS:O	20:AT:27:LYS:HD3	2.17	0.43
25:AZ:141:VAL:HG23	25:AZ:146:LEU:HD21	2.01	0.43
25:AZ:152:MET:HE3	25:AZ:156:ASP:HB2	1.98	0.43
25:AZ:94:THR:O	25:AZ:96:ALA:N	2.52	0.43
27:B1:25:LYS:HE2	36:BA:2396:G:H5'	2.01	0.43
27:B1:5:CYS:HB3	27:B1:8:SER:OG	2.18	0.43
30:B4:28:LYS:HE2	30:B4:29:PRO:HD2	2.00	0.43
32:B6:36:LEU:O	32:B6:37:ARG:NE	2.52	0.43
34:B8:34:TRP:HA	36:BA:2420:C:OP1	2.18	0.43
35:B9:27:CYS:SG	35:B9:28:GLU:N	2.92	0.43
36:BA:1090:U:H2'	36:BA:1091:G:O4'	2.18	0.43
36:BA:1532:C:H2'	36:BA:1533:G:O4'	2.19	0.43
36:BA:562:U:C4	36:BA:2036:C:O4'	2.72	0.43
36:BA:2340:G:H2'	36:BA:2341:G:H8	1.83	0.43
36:BA:2774:C:H2'	36:BA:2775:A:O4'	2.19	0.43
36:BA:318:C:H2'	36:BA:319:C:H6	1.84	0.43
36:BA:334:C:P	36:BA:335:C:H41	2.41	0.43
36:BA:85:G:N3	36:BA:103:A:C2	2.86	0.43
36:BA:992:C:H2'	36:BA:993:G:H8	1.83	0.43
39:BD:118:VAL:CG2	39:BD:119:ALA:N	2.80	0.43
39:BD:147:LEU:HD12	39:BD:147:LEU:HA	1.76	0.43
40:BE:11:MET:HB3	40:BE:24:THR:HA	2.00	0.43
41:BF:103:LYS:CG	41:BF:106:ARG:HH21	2.30	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BG:63:ILE:HD13	42:BG:141:PHE:CD2	2.53	0.43
43:BH:98:LEU:CB	43:BH:125:VAL:HG21	2.39	0.43
43:BH:153:LYS:HB2	43:BH:154:PRO:HD2	2.01	0.43
46:BN:108:PRO:O	46:BN:113:GLY:HA3	2.19	0.43
46:BN:87:LEU:O	46:BN:88:GLU:C	2.57	0.43
51:BS:78:LEU:HD11	51:BS:103:GLU:CG	2.35	0.43
46:BN:42:TRP:CD1	53:BU:63:VAL:HG11	2.54	0.43
58:BZ:108:PRO:C	58:BZ:110:GLY:H	2.22	0.43
58:BZ:16:SER:O	58:BZ:20:ARG:HD2	2.19	0.43
1:CA:1255:G:H3'	1:CA:1279:A:H61	1.84	0.43
1:CA:1288:A:H2'	1:CA:1289:A:C8	2.53	0.43
1:CA:1444:C:H2'	1:CA:1445:C:H6	1.82	0.43
1:CA:308:C:H2'	1:CA:309:G:C8	2.53	0.43
1:CA:514:C:H2'	1:CA:515:G:H8	1.82	0.43
3:CC:135:LYS:HZ1	5:CE:50:GLU:HG2	1.82	0.43
6:CF:98:LEU:O	6:CF:98:LEU:HD12	2.18	0.43
7:CG:16:LEU:HD21	9:CI:45:ALA:HB2	2.01	0.43
10:CJ:37:PRO:HA	10:CJ:72:VAL:HG22	1.99	0.43
11:CK:48:ILE:HD11	11:CK:67:ASP:HB3	1.99	0.43
16:CP:50:LYS:C	16:CP:50:LYS:HD3	2.38	0.43
19:CS:10:PHE:O	19:CS:10:PHE:CD1	2.71	0.43
24:CY:54:5MU:H73	24:CY:55:PSU:O2	2.19	0.43
25:CZ:95:GLY:O	25:CZ:99:MET:HE2	2.19	0.43
32:D6:33:LYS:O	32:D6:34:LEU:HB2	2.18	0.43
34:D8:13:ARG:NH2	36:DA:250:G:OP2	2.52	0.43
36:DA:1540:U:H3'	36:DA:1541:G:O3'	2.18	0.43
36:DA:1946:U:H2'	36:DA:1947:C:C6	2.53	0.43
36:DA:1991:U:C2'	36:DA:1992:G:H5''	2.48	0.43
36:DA:2081:C:H2'	36:DA:2082:A:C8	2.54	0.43
36:DA:2262:U:H2'	36:DA:2263:C:H6	1.83	0.43
36:DA:225:A:C2'	36:DA:226:G:H5'	2.48	0.43
36:DA:251:A:H4'	48:DP:51:PHE:HZ	1.84	0.43
36:DA:2842:G:C2	36:DA:2876:G:C2	3.07	0.43
36:DA:318:C:H2'	36:DA:319:C:H6	1.83	0.43
36:DA:516:C:O2'	36:DA:517:C:H5'	2.18	0.43
36:DA:53:A:H2'	36:DA:54:G:H5'	2.01	0.43
36:DA:654(U):A:C6	36:DA:654(V):A:N6	2.87	0.43
36:DA:67:U:H2'	36:DA:68:G:C8	2.52	0.43
38:DC:62:VAL:O	38:DC:160:ARG:HA	2.17	0.43
38:DC:79:LYS:HA	38:DC:97:GLU:CD	2.39	0.43
39:DD:134:ARG:HG3	39:DD:187:GLY:CA	2.44	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DE:79:ARG:HG2	40:DE:79:ARG:HH11	1.83	0.43
41:DF:3:GLU:O	41:DF:3:GLU:HG3	2.18	0.43
36:DA:2315:G:N3	42:DG:128:ARG:HG3	2.33	0.43
49:DQ:27:VAL:O	49:DQ:28:ALA:HB3	2.17	0.43
49:DQ:58:PHE:HD1	49:DQ:58:PHE:O	2.02	0.43
36:DA:1286:A:OP1	50:DR:105:ARG:CZ	2.67	0.43
50:DR:13:HIS:O	50:DR:14:SER:C	2.57	0.43
51:DS:77:ALA:O	51:DS:78:LEU:C	2.57	0.43
52:DT:63:VAL:O	52:DT:73:GLU:HA	2.18	0.43
58:DZ:99:TYR:CD2	58:DZ:123:ASP:HB3	2.46	0.43
1:AA:1060:C:H5'	10:AJ:51:ARG:HG2	2.00	0.43
1:AA:1243:C:H2'	1:AA:1244:C:H6	1.83	0.43
1:AA:1314:C:O2'	1:AA:1315:U:H5'	2.19	0.43
1:AA:1425:U:H2'	1:AA:1426:C:C6	2.54	0.43
1:AA:189(K):U:H2'	1:AA:189(L):G:H8	1.82	0.43
1:AA:894:G:O2'	1:AA:895:G:H5'	2.18	0.43
2:AB:118:LEU:HD21	2:AB:138:LEU:HD22	2.00	0.43
2:AB:200:ILE:HD12	2:AB:200:ILE:N	2.24	0.43
3:AC:186:PHE:CE2	3:AC:188:LEU:HD22	2.53	0.43
1:AA:8:A:C4	4:AD:209:ARG:HB2	2.53	0.43
13:AM:23:TYR:HE2	13:AM:70:LEU:HD22	1.77	0.43
18:AR:61:LYS:O	18:AR:65:ILE:HG13	2.19	0.43
19:AS:45:VAL:C	19:AS:47:HIS:H	2.18	0.43
25:AZ:6:ILE:HD12	25:AZ:6:ILE:N	2.34	0.43
28:B2:44:LEU:C	28:B2:46:GLN:H	2.22	0.43
33:B7:9:ARG:HG3	33:B7:9:ARG:HH11	1.84	0.43
36:BA:151:C:H2'	36:BA:152:G:H8	1.83	0.43
36:BA:1866:C:O5'	36:BA:1866:C:H6	2.01	0.43
36:BA:2414:G:C2	36:BA:2415:G:C8	3.06	0.43
36:BA:2537:U:H2'	36:BA:2538:C:H6	1.79	0.43
36:BA:2684:U:C4	36:BA:2685:G:C5	3.07	0.43
36:BA:2796:U:OP2	36:BA:2799:C:H5	2.02	0.43
36:BA:448:U:H1'	41:BF:84:VAL:HG13	2.01	0.43
36:BA:654(E):G:N2	36:BA:654(Q):C:O2'	2.52	0.43
38:BC:27:ARG:CD	38:BC:182:PRO:CB	2.96	0.43
39:BD:186:HIS:CD2	39:BD:188:GLU:HB2	2.54	0.43
40:BE:47:VAL:HG23	40:BE:84:PHE:O	2.19	0.43
42:BG:45:GLU:O	42:BG:46:ALA:HB2	2.19	0.43
42:BG:43:LEU:HD21	42:BG:90:LEU:HD22	1.99	0.43
43:BH:23:ARG:O	43:BH:24:VAL:CG2	2.66	0.43
48:BP:98:GLU:O	48:BP:101:VAL:HG22	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:16:ARG:HH11	48:BP:16:ARG:CA	2.32	0.43
49:BQ:5:ARG:CZ	49:BQ:5:ARG:CB	2.97	0.43
50:BR:100:LEU:N	50:BR:100:LEU:CD1	2.82	0.43
51:BS:25:ARG:NH1	51:BS:42:ASP:OD2	2.52	0.43
52:BT:134:GLU:O	52:BT:135:ALA:CB	2.66	0.43
52:BT:35:LYS:O	52:BT:38:ASN:ND2	2.51	0.43
57:BY:7:VAL:HG12	57:BY:8:LYS:HD2	2.00	0.43
57:BY:81:LYS:NZ	57:BY:99:CYS:SG	2.80	0.43
1:CA:1371:G:C6	1:CA:1372:U:C4	3.07	0.43
1:CA:167:G:O2'	1:CA:168:G:H5'	2.18	0.43
1:CA:451:A:N6	1:CA:480:U:H2'	2.34	0.43
1:CA:509:A:C6	1:CA:510:A:N1	2.87	0.43
1:CA:60:A:H4'	1:CA:61:G:O5'	2.19	0.43
1:CA:838:G:C6	1:CA:840:C:H1'	2.54	0.43
2:CB:229:VAL:CG1	2:CB:230:VAL:N	2.71	0.43
2:CB:74:LYS:NZ	2:CB:166:ASP:HB2	2.34	0.43
1:CA:939:G:C3'	7:CG:102:ARG:HH22	2.32	0.43
9:CI:81:ILE:O	9:CI:85:LEU:HG	2.19	0.43
10:CJ:5:ARG:CB	10:CJ:99:LYS:HB2	2.37	0.43
12:CL:38:THR:O	12:CL:39:VAL:HG23	2.18	0.43
15:CO:17:ARG:NH1	15:CO:77:ARG:NH1	2.67	0.43
18:CR:33:ASP:O	18:CR:40:LEU:HD11	2.19	0.43
19:CS:37:ARG:HG3	19:CS:37:ARG:H	1.41	0.43
19:CS:35:SER:HB2	19:CS:37:ARG:HD2	2.00	0.43
22:CW:10:G:O2'	22:CW:11:C:H5'	2.18	0.43
25:CZ:116:THR:O	25:CZ:120:ILE:HG13	2.19	0.43
28:D2:54:LYS:HE2	36:DA:73:A:P	2.59	0.43
29:D3:5:LYS:HE3	29:D3:34:GLU:OE1	2.19	0.43
36:DA:1094:U:HO2'	36:DA:1097:U:H5	1.65	0.43
36:DA:1097:U:O2'	36:DA:1098:A:H5'	2.19	0.43
36:DA:1530:C:H2'	36:DA:1531:C:H6	1.84	0.43
36:DA:2137:C:H2'	36:DA:2138:C:H6	1.80	0.43
36:DA:2693:A:H2'	36:DA:2694:G:C8	2.51	0.43
36:DA:285:C:H2'	36:DA:286:C:C6	2.54	0.43
36:DA:299:A:N1	36:DA:322:A:O2'	2.37	0.43
36:DA:248:G:H5''	36:DA:386:G:N2	2.33	0.43
36:DA:34:C:N4	36:DA:447:A:H61	2.05	0.43
36:DA:900:A:H3'	36:DA:901:A:H8	1.84	0.43
37:DB:42:C:O2	42:DG:66:GLN:NE2	2.52	0.43
37:DB:67:G:O2'	37:DB:68:C:O5'	2.37	0.43
38:DC:3:HIS:HB3	38:DC:7:TYR:HD2	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DD:118:VAL:CG2	39:DD:119:ALA:N	2.82	0.43
40:DE:60:ASN:O	40:DE:61:ARG:C	2.56	0.43
41:DF:132:VAL:O	41:DF:138:GLU:OE1	2.37	0.43
43:DH:51:ARG:HG3	43:DH:52:VAL:N	2.34	0.43
46:DN:23:LEU:HB3	46:DN:60:ILE:CG2	2.39	0.43
47:DO:66:LYS:H	47:DO:82:ASN:HD21	1.67	0.43
47:DO:7:TYR:CE1	47:DO:20:MET:HB2	2.54	0.43
48:DP:124:LYS:HD3	48:DP:124:LYS:HA	1.84	0.43
48:DP:46:LYS:HG2	48:DP:52:GLU:HG2	2.01	0.43
52:DT:18:ASP:OD1	52:DT:18:ASP:N	2.51	0.43
55:DW:29:LEU:CD1	55:DW:51:LEU:HD11	2.48	0.43
1:AA:1033:G:H2'	1:AA:1034:G:O4'	2.19	0.43
1:AA:1202:G:H2'	1:AA:1203:C:O4'	2.19	0.43
1:AA:427:U:C4	1:AA:428:G:C6	3.07	0.43
1:AA:66:G:N2	1:AA:172:A:C2	2.87	0.43
1:AA:78:G:H2'	1:AA:79:G:O4'	2.18	0.43
2:AB:112:VAL:O	2:AB:115:LEU:HB3	2.18	0.43
2:AB:87:ARG:NH2	2:AB:233:SER:N	2.62	0.43
1:AA:1205:U:O2'	3:AC:195:VAL:HG23	2.19	0.43
3:AC:28:GLN:O	3:AC:29:TYR:CB	2.66	0.43
4:AD:36:ARG:C	4:AD:38:TYR:N	2.72	0.43
4:AD:8:VAL:C	4:AD:10:ARG:H	2.21	0.43
6:AF:2:ARG:HD2	6:AF:69:GLU:HB3	2.01	0.43
7:AG:125:MET:O	7:AG:129:GLU:HG3	2.19	0.43
7:AG:94:ARG:H	7:AG:94:ARG:HG3	1.62	0.43
9:AI:97:LYS:N	9:AI:98:PRO:CD	2.82	0.43
17:AQ:33:GLY:O	17:AQ:34:LYS:C	2.57	0.43
17:AQ:76:LEU:HG	17:AQ:77:VAL:N	2.34	0.43
22:AV:22:G:C2'	22:AV:23:A:H5''	2.49	0.43
22:AW:40:C:H2'	22:AW:41:C:H6	1.84	0.43
24:AY:66:C:H2'	24:AY:67:G:C8	2.54	0.43
25:AZ:138:VAL:HG21	25:AZ:173:GLY:N	2.34	0.43
25:AZ:67:HIS:ND1	25:AZ:80:VAL:HG22	2.34	0.43
35:B9:35:ARG:HD3	36:BA:2742:C:OP1	2.18	0.43
36:BA:203:C:C3'	36:BA:204:A:H5''	2.44	0.43
36:BA:318:C:O2'	36:BA:319:C:H5'	2.19	0.43
36:BA:625:G:O2'	36:BA:626:U:H5'	2.19	0.43
36:BA:742:G:H2'	36:BA:743:G:H8	1.84	0.43
36:BA:927:G:H3'	36:BA:928:G:H8	1.82	0.43
36:BA:9:U:O4	36:BA:2629:A:N7	2.52	0.43
38:BC:79:LYS:HD2	38:BC:97:GLU:OE1	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BE:116:VAL:CG2	40:BE:117:MET:H	2.32	0.43
40:BE:60:ASN:OD1	40:BE:61:ARG:N	2.52	0.43
41:BF:164:ARG:HD2	41:BF:176:LEU:O	2.19	0.43
42:BG:154:GLY:O	42:BG:155:MET:CB	2.66	0.43
43:BH:147:ASN:O	43:BH:151:ILE:HG12	2.18	0.43
43:BH:85:LYS:CE	43:BH:85:LYS:C	2.87	0.43
44:BJ:25:UNK:HA	44:BJ:116:UNK:CA	2.49	0.43
47:BO:10:VAL:HG21	47:BO:16:ALA:C	2.39	0.43
52:BT:23:ARG:HA	52:BT:52:ILE:HD12	1.98	0.43
56:BX:28:PHE:N	56:BX:28:PHE:CD1	2.87	0.43
57:BY:22:GLY:O	57:BY:23:ARG:O	2.37	0.43
58:BZ:120:ILE:O	58:BZ:121:HIS:HB2	2.19	0.43
1:CA:716:A:N3	11:CK:117:ASN:O	2.51	0.43
1:CA:827:U:C5'	1:CA:828:A:OP2	2.67	0.43
1:CA:896:C:O2'	1:CA:897:C:H5'	2.18	0.43
1:CA:495:A:H61	4:CD:119:GLN:NE2	2.17	0.43
19:CS:61:TYR:HD1	19:CS:62:ILE:N	2.17	0.43
22:CV:57:G:H2'	22:CV:58:A:H5'	2.00	0.43
24:CY:26:A:O2'	24:CY:27:C:H5'	2.19	0.43
25:CZ:120:ILE:O	25:CZ:123:ALA:HB3	2.19	0.43
25:CZ:141:VAL:HG23	25:CZ:146:LEU:HD21	2.00	0.43
25:CZ:158:LEU:O	25:CZ:163:PHE:HB2	2.19	0.43
25:CZ:185:ASN:H	25:CZ:185:ASN:HD22	1.64	0.43
25:CZ:24:LYS:HG3	25:CZ:25:THR:N	2.30	0.43
25:CZ:340:PRO:HG2	25:CZ:342:PHE:CZ	2.54	0.43
25:CZ:68:VAL:O	25:CZ:78:SER:O	2.37	0.43
29:D3:15:TYR:CD2	29:D3:19:GLN:NE2	2.85	0.43
36:DA:1332:G:N2	36:DA:1610:A:H8	2.11	0.43
36:DA:1775:U:H2'	36:DA:1776:G:H5'	2.01	0.43
36:DA:20:C:H2'	36:DA:21:A:C8	2.53	0.43
36:DA:2262:U:H2'	36:DA:2263:C:C6	2.53	0.43
36:DA:2413:G:N3	48:DP:70:GLN:NE2	2.66	0.43
36:DA:747:U:C4	36:DA:2613:U:C5	3.07	0.43
36:DA:343:C:C2'	36:DA:344:G:H5'	2.49	0.43
36:DA:636:G:H4'	36:DA:638:G:O3'	2.19	0.43
36:DA:66:C:H2'	36:DA:67:U:H6	1.84	0.43
39:DD:242:ARG:HB2	39:DD:243:GLY:H	1.38	0.43
41:DF:46:ARG:HA	41:DF:46:ARG:HD2	1.73	0.43
42:DG:37:VAL:O	42:DG:94:LEU:HB2	2.19	0.43
42:DG:98:ARG:HG2	42:DG:98:ARG:H	1.62	0.43
43:DH:153:LYS:HB2	43:DH:154:PRO:HD2	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DN:58:ASP:OD2	46:DN:59:LYS:HG2	2.18	0.43
48:DP:147:LEU:CG	48:DP:148:LEU:H	2.20	0.43
48:DP:33:ARG:O	48:DP:34:GLY:O	2.37	0.43
49:DQ:76:LYS:HB3	49:DQ:91:GLU:CG	2.49	0.43
51:DS:18:ILE:HG13	51:DS:18:ILE:H	1.52	0.43
51:DS:89:ARG:HB3	51:DS:92:TYR:HB3	2.00	0.43
52:DT:134:GLU:O	52:DT:135:ALA:CB	2.67	0.43
1:AA:1117:G:H21	1:AA:1180:A:H1'	1.83	0.43
1:AA:198:G:O2'	1:AA:199:G:O5'	2.37	0.43
1:AA:197:A:C5	1:AA:221:C:H4'	2.54	0.43
1:AA:228:A:C5'	1:AA:228:A:C8	2.97	0.43
1:AA:522:C:H41	12:AL:53:ARG:NH2	2.14	0.43
1:AA:802:A:H3'	1:AA:803:G:H8	1.84	0.43
1:AA:878:G:H5'	8:AH:89:PRO:HG2	2.01	0.43
2:AB:142:LEU:HD23	2:AB:142:LEU:O	2.19	0.43
2:AB:15:VAL:N	2:AB:16:HIS:CE1	2.87	0.43
2:AB:21:ARG:HB3	2:AB:39:ILE:HA	2.01	0.43
4:AD:150:GLU:HG2	4:AD:151:LYS:N	2.34	0.43
1:AA:1298:C:C5	7:AG:114:ARG:NE	2.87	0.43
7:AG:69:VAL:HG11	7:AG:104:LEU:HD22	2.01	0.43
1:AA:706:A:C1'	11:AK:29:ILE:HD11	2.49	0.43
16:AP:50:LYS:HD3	16:AP:50:LYS:C	2.39	0.43
24:AY:26:A:O2'	24:AY:27:C:H5'	2.19	0.43
25:AZ:185:ASN:N	25:AZ:185:ASN:ND2	2.67	0.43
25:AZ:223:MET:HB3	25:AZ:242:ILE:HA	2.01	0.43
27:B1:78:LYS:N	27:B1:78:LYS:HE2	2.34	0.43
27:B1:5:CYS:CB	27:B1:8:SER:HG	2.32	0.43
28:B2:53:LEU:C	28:B2:55:ARG:N	2.72	0.43
34:B8:13:ARG:NH2	36:BA:250:G:OP2	2.52	0.43
36:BA:1124:C:H2'	36:BA:1125:G:O4'	2.19	0.43
36:BA:1259:G:H2'	36:BA:1260:G:C8	2.54	0.43
36:BA:1283:G:N2	36:BA:1285:G:H3'	2.34	0.43
36:BA:134:C:H2'	36:BA:135:G:C8	2.51	0.43
36:BA:1469:A:O2'	36:BA:1470:G:H5'	2.19	0.43
36:BA:2134:A:H61	36:BA:2157:G:H1'	1.76	0.43
36:BA:2188:C:C6	36:BA:2189:U:H5	2.37	0.43
34:B8:5:LYS:HG2	36:BA:242:G:C8	2.54	0.43
36:BA:516:C:O2'	36:BA:517:C:H5'	2.19	0.43
36:BA:747:U:C5	36:BA:2613:U:C5	3.07	0.43
36:BA:676:A:H2	36:BA:802:A:H61	1.67	0.43
39:BD:30:GLU:CG	39:BD:35:LYS:HZ1	2.30	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BF:107:LYS:HE3	41:BF:205:ARG:CG	2.49	0.43
41:BF:42:ALA:O	41:BF:45:ARG:HB2	2.18	0.43
41:BF:46:ARG:HA	41:BF:46:ARG:HD2	1.75	0.43
36:BA:2316:C:O2'	42:BG:128:ARG:NH2	2.52	0.43
43:BH:65:HIS:O	43:BH:67:LEU:N	2.42	0.43
43:BH:72:ILE:O	43:BH:75:ALA:N	2.52	0.43
46:BN:4:TYR:O	46:BN:5:VAL:C	2.57	0.43
46:BN:65:LYS:HD3	46:BN:69:GLN:NE2	2.34	0.43
52:BT:27:THR:CG2	52:BT:28:VAL:H	2.30	0.43
55:BW:79:GLY:CA	55:BW:100:THR:HG23	2.49	0.43
56:BX:51:VAL:HG13	56:BX:81:VAL:HB	2.01	0.43
58:BZ:74:VAL:HG22	58:BZ:86:VAL:CG1	2.48	0.43
1:CA:1150:U:O2'	1:CA:1151:A:H5'	2.19	0.43
1:CA:1153:C:O2'	1:CA:1154:G:H5''	2.19	0.43
1:CA:1286:A:O2'	1:CA:1287:A:P	2.76	0.43
1:CA:341:C:H6	1:CA:341:C:O5'	2.01	0.43
1:CA:542:G:N2	1:CA:543:C:C2	2.87	0.43
1:CA:902:G:H2'	1:CA:903:G:H8	1.82	0.43
4:CD:192:GLU:O	4:CD:193:ASP:C	2.57	0.43
7:CG:140:ASP:C	7:CG:140:ASP:OD1	2.57	0.43
9:CI:18:PHE:O	9:CI:19:LEU:HB2	2.18	0.43
9:CI:5:TYR:CD2	9:CI:6:GLY:N	2.87	0.43
10:CJ:75:ILE:HG13	10:CJ:76:ASN:N	2.28	0.43
12:CL:126:LYS:HE2	12:CL:126:LYS:CA	2.49	0.43
13:CM:99:ARG:C	13:CM:101:GLN:NE2	2.72	0.43
13:CM:66:LEU:CD1	13:CM:66:LEU:N	2.82	0.43
14:CN:44:LEU:C	14:CN:44:LEU:HD12	2.39	0.43
15:CO:39:LEU:O	15:CO:42:HIS:HB3	2.18	0.43
16:CP:14:ASN:OD1	16:CP:16:HIS:CE1	2.71	0.43
24:CY:60:U:H2'	24:CY:61:C:C5	2.53	0.43
24:CY:3:G:O6	24:CY:70:C:N3	2.51	0.43
32:D6:32:ASN:CG	32:D6:33:LYS:N	2.71	0.43
36:DA:1021:A:C3'	36:DA:1021:A:C8	3.02	0.43
36:DA:1059:G:H3'	36:DA:1060:U:H6	1.83	0.43
36:DA:1431:U:H2'	36:DA:1432:C:O4'	2.19	0.43
36:DA:1625:C:H2'	36:DA:1626:G:H5'	2.01	0.43
36:DA:1709:U:H1'	36:DA:2860:A:N3	2.33	0.43
36:DA:1958:C:O2'	36:DA:1959:G:H5'	2.19	0.43
36:DA:2136:C:H2'	36:DA:2137:C:H6	1.80	0.43
36:DA:2358:G:N2	48:DP:55:ARG:NH2	2.66	0.43
31:D5:7:PRO:HA	36:DA:2615:U:C2	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:278:A:N1	36:DA:362:U:C4	2.87	0.43
36:DA:2848:G:H8	52:DT:97:ALA:HB2	1.82	0.43
36:DA:322:A:O4'	36:DA:340:A:H1'	2.19	0.43
38:DC:155:GLU:OE1	38:DC:160:ARG:HD3	2.19	0.43
39:DD:13:ARG:HH11	39:DD:13:ARG:HG3	1.84	0.43
39:DD:62:TYR:CD1	39:DD:62:TYR:C	2.92	0.43
42:DG:120:LEU:HB2	42:DG:179:PRO:O	2.19	0.43
36:DA:2314:C:C5'	42:DG:38:VAL:HG21	2.48	0.43
42:DG:4:ASP:OD2	42:DG:9:ARG:NH2	2.52	0.43
48:DP:115:LEU:HD23	48:DP:115:LEU:N	2.34	0.43
48:DP:48:PRO:O	48:DP:49:ARG:C	2.57	0.43
50:DR:30:THR:HG22	50:DR:31:HIS:CE1	2.54	0.43
50:DR:52:ILE:O	50:DR:55:ALA:HB3	2.19	0.43
52:DT:13:ARG:CZ	52:DT:13:ARG:CA	2.97	0.43
52:DT:33:LYS:HD2	52:DT:43:GLN:HB3	2.01	0.43
53:DU:83:LEU:HA	53:DU:88:ILE:CG1	2.48	0.43
55:DW:25:ARG:HB2	55:DW:25:ARG:NH1	2.33	0.43
57:DY:60:PHE:O	57:DY:61:ILE:CG1	2.67	0.43
58:DZ:70:LEU:HD11	58:DZ:91:LEU:HD21	1.99	0.43
1:AA:1238:A:H2	1:AA:1301:U:N3	2.09	0.42
1:AA:1441:G:H5''	1:AA:1442:G:H5'	2.00	0.42
1:AA:346:G:O2'	1:AA:347:G:O5'	2.37	0.42
1:AA:35:G:H21	12:AL:118:SER:HB2	1.84	0.42
1:AA:416:G:H2'	1:AA:417:C:O4'	2.19	0.42
1:AA:555:C:OP1	12:AL:20:LYS:HE3	2.19	0.42
1:AA:918:A:H2'	1:AA:919:A:O4'	2.19	0.42
2:AB:168:THR:HG21	2:AB:192:SER:HA	2.01	0.42
3:AC:65:ALA:O	3:AC:100:ALA:O	2.37	0.42
5:AE:107:ARG:HG2	5:AE:107:ARG:HH11	1.83	0.42
5:AE:144:THR:O	5:AE:145:LYS:C	2.57	0.42
5:AE:15:ARG:HD2	5:AE:26:PHE:CG	2.54	0.42
5:AE:34:VAL:HG12	5:AE:62:ALA:HB1	2.01	0.42
6:AF:28:ARG:NH1	6:AF:28:ARG:HG3	2.31	0.42
6:AF:52:ILE:O	6:AF:53:ALA:HB3	2.19	0.42
6:AF:10:LEU:HB2	6:AF:59:TYR:HB3	2.00	0.42
7:AG:120:ILE:HG22	7:AG:124:LEU:HD12	2.00	0.42
9:AI:43:ALA:O	9:AI:45:ALA:N	2.52	0.42
9:AI:4:TYR:CZ	9:AI:88:TYR:CB	3.02	0.42
12:AL:60:LEU:HB2	12:AL:64:TYR:O	2.19	0.42
13:AM:66:LEU:CD1	13:AM:66:LEU:N	2.82	0.42
1:AA:1048:G:OP1	14:AN:4:LYS:HB2	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AW:51:U:H2'	22:AW:52:G:C8	2.48	0.42
36:BA:2111:C:C2	36:BA:2147:G:N2	2.82	0.42
36:BA:2282:G:H4'	36:BA:2283:C:O5'	2.19	0.42
36:BA:2668:G:C2'	36:BA:2669:G:H5'	2.48	0.42
36:BA:338:G:N2	36:BA:339:U:H1'	2.34	0.42
38:BC:117:PRO:HD2	38:BC:147:PHE:CD2	2.54	0.42
39:BD:258:LYS:HD3	39:BD:273:ARG:NH2	2.34	0.42
42:BG:170:ARG:NE	42:BG:180:PHE:CD2	2.87	0.42
43:BH:33:LEU:HD12	43:BH:75:ALA:O	2.19	0.42
43:BH:83:TYR:O	43:BH:84:SER:O	2.36	0.42
45:BK:90:UNK:HA	58:BZ:112:ARG:HH22	1.84	0.42
46:BN:3:THR:CG2	46:BN:4:TYR:H	2.28	0.42
47:BO:25:LEU:HB2	47:BO:38:VAL:HG23	2.00	0.42
48:BP:28:GLY:C	48:BP:29:LYS:HD2	2.39	0.42
48:BP:71:VAL:CG1	48:BP:72:PRO:HD3	2.49	0.42
49:BQ:134:ARG:NH1	58:BZ:122:ARG:HH21	2.17	0.42
49:BQ:12:GLN:NE2	49:BQ:72:LYS:HG3	2.34	0.42
52:BT:107:ASP:CG	52:BT:108:ARG:H	2.22	0.42
56:BX:57:LEU:HD13	56:BX:78:LYS:O	2.19	0.42
57:BY:49:VAL:O	57:BY:50:ARG:CB	2.60	0.42
57:BY:67:LEU:HD23	57:BY:68:HIS:N	2.34	0.42
58:BZ:31:ARG:HB2	58:BZ:32:HIS:CE1	2.53	0.42
1:CA:1124:G:H5'	10:CJ:35:SER:CB	2.49	0.42
1:CA:961:U:OP2	1:CA:1223:C:H4'	2.19	0.42
1:CA:1240:U:OP1	7:CG:116:ALA:N	2.49	0.42
1:CA:1251:A:H2'	1:CA:1252:A:C8	2.54	0.42
1:CA:1536:C:H2'	1:CA:1537:U:C5'	2.49	0.42
1:CA:723:U:O4	1:CA:1537:U:H2'	2.19	0.42
1:CA:29:G:O2'	1:CA:30:U:H5'	2.19	0.42
1:CA:341:C:O2	1:CA:349:A:C2	2.72	0.42
1:CA:691:G:H2'	1:CA:692:U:C6	2.54	0.42
1:CA:782:A:O3'	1:CA:1515:C:H4'	2.18	0.42
4:CD:88:VAL:HG12	4:CD:90:GLY:H	1.84	0.42
7:CG:68:ASN:O	7:CG:138:LYS:HD2	2.19	0.42
14:CN:29:ARG:CG	14:CN:29:ARG:NH1	2.80	0.42
15:CO:3:ILE:HA	15:CO:7:GLU:OE1	2.19	0.42
15:CO:82:ILE:CG2	15:CO:83:GLU:N	2.81	0.42
18:CR:43:PHE:CG	18:CR:66:LEU:HD11	2.53	0.42
19:CS:13:ASP:C	19:CS:15:LEU:H	2.21	0.42
19:CS:11:VAL:HG13	19:CS:16:LEU:HD11	2.01	0.42
24:CY:32:OMC:HM22	24:CY:33:U:H5'	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:163:PHE:C	25:CZ:165:GLY:H	2.22	0.42
25:CZ:263:ARG:HG3	25:CZ:264:LYS:H	1.84	0.42
32:D6:17:LYS:O	32:D6:18:ARG:CB	2.67	0.42
36:DA:1021:A:H3'	36:DA:1021:A:H8	1.84	0.42
36:DA:1305:C:O2'	36:DA:1306:C:H5'	2.19	0.42
36:DA:1446:C:H42	36:DA:1465:G:H1	1.67	0.42
36:DA:2645:G:H4'	36:DA:2646:C:OP2	2.19	0.42
36:DA:2654:A:H1'	36:DA:2656:U:C6	2.54	0.42
36:DA:848:G:C4	36:DA:933:A:C8	3.07	0.42
38:DC:96:GLY:C	38:DC:98:GLU:H	2.21	0.42
38:DC:83:ILE:HD11	38:DC:97:GLU:CD	2.39	0.42
40:DE:49:LEU:O	40:DE:78:LEU:HB2	2.19	0.42
41:DF:160:ASN:HD21	41:DF:162:LEU:CB	2.32	0.42
42:DG:149:VAL:C	42:DG:151:ALA:H	2.22	0.42
43:DH:76:VAL:O	43:DH:78:GLY:N	2.52	0.42
48:DP:35:HIS:C	48:DP:36:LYS:HG3	2.39	0.42
51:DS:89:ARG:HG3	51:DS:92:TYR:N	2.34	0.42
52:DT:106:SER:O	52:DT:107:ASP:HB3	2.18	0.42
54:DV:39:LEU:HA	54:DV:47:VAL:HG11	2.00	0.42
56:DX:12:VAL:O	56:DX:13:LEU:HB2	2.19	0.42
1:AA:1030(D):A:C2'	1:AA:1031:G:H5'	2.48	0.42
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.55	0.42
1:AA:1107:C:C4	1:AA:1108:G:C8	3.07	0.42
1:AA:502:G:OP1	12:AL:118:SER:N	2.49	0.42
2:AB:169:LYS:HD3	2:AB:169:LYS:O	2.19	0.42
4:AD:98:GLU:OE1	4:AD:194:LEU:HD11	2.19	0.42
5:AE:64:ARG:HH11	5:AE:64:ARG:CG	2.29	0.42
6:AF:27:GLN:O	6:AF:31:GLU:HB2	2.19	0.42
6:AF:77:ARG:CG	6:AF:77:ARG:NH1	2.82	0.42
8:AH:33:GLU:HG2	8:AH:48:TYR:OH	2.19	0.42
8:AH:60:ARG:HG2	8:AH:62:TYR:CE1	2.54	0.42
13:AM:32:GLU:OE1	13:AM:32:GLU:C	2.58	0.42
13:AM:77:ASN:O	13:AM:80:ARG:HB3	2.19	0.42
13:AM:82:MET:O	13:AM:83:ASP:O	2.37	0.42
24:AY:77:TRP:O	25:AZ:273:HIS:HA	2.19	0.42
25:AZ:317:GLU:O	25:AZ:400:VAL:HA	2.19	0.42
27:B1:42:GLN:HA	36:BA:2231:C:OP1	2.19	0.42
36:BA:1142:U:H5''	36:BA:1142(A):A:H5''	2.01	0.42
36:BA:121:G:H4'	36:BA:149:A:H5'	2.00	0.42
36:BA:1499:C:H2'	36:BA:1500:G:C5'	2.49	0.42
36:BA:1514:U:H2'	36:BA:1515:G:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1747(A):G:C2'	36:BA:1748:G:C5'	2.82	0.42
36:BA:1790:C:H2'	36:BA:1791:A:C5	2.54	0.42
36:BA:2206:G:N2	36:BA:2207:G:C4'	2.83	0.42
36:BA:2295:C:O2'	36:BA:2296:U:H5'	2.19	0.42
36:BA:2317:C:O2'	36:BA:2318:G:H5'	2.17	0.42
36:BA:2639:A:C2'	36:BA:2640:G:H5'	2.50	0.42
36:BA:2661:G:O2'	36:BA:2662:A:H5'	2.20	0.42
36:BA:480:A:H2	36:BA:499:U:O2	2.02	0.42
37:BB:67:G:O2'	37:BB:68:C:O5'	2.37	0.42
38:BC:196:LEU:O	38:BC:199:HIS:N	2.52	0.42
38:BC:28:LEU:HD23	38:BC:28:LEU:O	2.18	0.42
39:BD:80:ALA:HB2	39:BD:96:HIS:CD2	2.53	0.42
40:BE:101:ARG:HE	40:BE:171:GLU:CB	2.32	0.42
42:BG:123:ASN:O	42:BG:126:ASP:OD2	2.37	0.42
43:BH:121:ILE:CG2	43:BH:133:VAL:HG13	2.46	0.42
47:BO:14:THR:HG23	47:BO:16:ALA:H	1.84	0.42
50:BR:49:ASP:OD1	50:BR:95:THR:HB	2.19	0.42
53:BU:13:LYS:HD3	53:BU:13:LYS:N	2.34	0.42
58:BZ:100:VAL:O	58:BZ:123:ASP:O	2.36	0.42
58:BZ:70:LEU:CD2	58:BZ:70:LEU:N	2.83	0.42
1:CA:1121:U:H2'	1:CA:1122:U:C6	2.54	0.42
1:CA:1129:C:O3'	1:CA:1131:G:OP2	2.37	0.42
1:CA:1220:G:H2'	1:CA:1221:G:H8	1.83	0.42
1:CA:1276:G:C6	1:CA:1277:C:C4	3.07	0.42
1:CA:1283:G:O2'	1:CA:1284:C:OP2	2.34	0.42
1:CA:1442(B):A:H4'	1:CA:1443:G:OP1	2.19	0.42
1:CA:405:U:O2	1:CA:498:U:C6	2.72	0.42
1:CA:602:A:H2'	1:CA:603:U:O4'	2.18	0.42
1:CA:78:G:H2'	1:CA:79:G:O4'	2.18	0.42
1:CA:858:G:C8	1:CA:858:G:OP2	2.72	0.42
1:CA:919:A:O2'	1:CA:920:U:H5'	2.19	0.42
2:CB:8:LYS:O	2:CB:12:GLU:HG3	2.20	0.42
3:CC:132:ARG:HH11	3:CC:136:GLN:NE2	1.98	0.42
3:CC:54:ARG:CG	3:CC:55:VAL:N	2.82	0.42
4:CD:145:GLU:C	4:CD:146:ILE:HD13	2.39	0.42
6:CF:9:VAL:HG22	6:CF:60:PHE:CD2	2.54	0.42
7:CG:42:ILE:HD13	7:CG:116:ALA:CB	2.49	0.42
11:CK:85:ARG:HG2	11:CK:111:ASP:O	2.20	0.42
16:CP:14:ASN:OD1	16:CP:14:ASN:O	2.38	0.42
19:CS:9:VAL:HG12	19:CS:10:PHE:N	2.34	0.42
24:CY:1:A:H5'	25:CZ:300:ARG:NH1	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:343:TYR:CE2	25:CZ:348:ASP:HB3	2.53	0.42
25:CZ:366:ASP:C	25:CZ:367:ASN:HD22	2.23	0.42
36:DA:1142:U:H5''	36:DA:1142(A):A:H5''	2.01	0.42
36:DA:1952:A:C6	36:DA:1953:A:N1	2.87	0.42
36:DA:2199:A:C2	36:DA:2200:C:H1'	2.53	0.42
36:DA:2224:G:H4'	36:DA:2226:C:C2	2.54	0.42
36:DA:2542:A:O2'	36:DA:2543:G:H5'	2.19	0.42
36:DA:358:U:C2'	36:DA:359:A:H5'	2.49	0.42
36:DA:607:U:N3	36:DA:621:A:C2	2.87	0.42
32:D6:42:TRP:CH2	36:DA:643:A:N7	2.88	0.42
39:DD:201:HIS:C	39:DD:203:ASN:H	2.21	0.42
40:DE:117:MET:HE3	40:DE:136:ARG:HA	2.00	0.42
40:DE:77:ILE:HG22	40:DE:78:LEU:CD1	2.48	0.42
41:DF:162:LEU:N	41:DF:162:LEU:HD12	2.34	0.42
41:DF:87:GLY:O	41:DF:88:VAL:O	2.37	0.42
42:DG:18:GLU:OE2	42:DG:21:ARG:NH2	2.52	0.42
42:DG:11:TYR:OH	42:DG:33:ARG:HB3	2.19	0.42
47:DO:14:THR:HG23	47:DO:16:ALA:H	1.84	0.42
48:DP:84:ASN:OD1	48:DP:116:GLY:HA2	2.18	0.42
49:DQ:12:GLN:HE21	49:DQ:72:LYS:HG3	1.85	0.42
50:DR:4:LEU:CD1	50:DR:7:GLY:HA3	2.48	0.42
51:DS:13:ARG:O	51:DS:15:ARG:HG3	2.19	0.42
52:DT:128:GLU:CD	52:DT:129:ARG:N	2.72	0.42
52:DT:14:TYR:CD1	52:DT:14:TYR:N	2.86	0.42
55:DW:20:VAL:CG2	55:DW:47:VAL:HG21	2.45	0.42
56:DX:51:VAL:HG13	56:DX:81:VAL:HB	2.00	0.42
57:DY:26:LYS:CG	57:DY:27:VAL:H	2.24	0.42
1:AA:1037:C:H6	1:AA:1037:C:O5'	2.03	0.42
1:AA:1092:A:C6	1:AA:1093:A:C6	3.07	0.42
1:AA:1315:U:O2	1:AA:1360:A:H2	2.02	0.42
1:AA:135:C:C2'	1:AA:136:C:H5'	2.50	0.42
2:AB:155:LEU:HD13	2:AB:157:ARG:H	1.84	0.42
3:AC:11:ARG:O	3:AC:12:LEU:C	2.57	0.42
4:AD:106:TYR:HD2	4:AD:113:SER:C	2.22	0.42
4:AD:200:GLU:HG2	4:AD:201:GLN:H	1.84	0.42
4:AD:91:SER:O	4:AD:92:VAL:C	2.57	0.42
12:AL:38:THR:O	12:AL:39:VAL:HG23	2.19	0.42
13:AM:66:LEU:O	13:AM:67:GLU:O	2.36	0.42
13:AM:79:LYS:O	13:AM:82:MET:HG2	2.18	0.42
1:AA:751:U:C4'	15:AO:24:SER:HA	2.48	0.42
20:AT:38:LYS:O	20:AT:41:ILE:HG12	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AW:11:C:O2'	22:AW:12:U:H5'	2.19	0.42
24:AY:60:U:H2'	24:AY:61:C:H5	1.84	0.42
25:AZ:221:PHE:CG	25:AZ:247:VAL:HG13	2.53	0.42
25:AZ:366:ASP:C	25:AZ:367:ASN:HD22	2.22	0.42
26:B0:26:TYR:CD2	36:BA:857:C:H1'	2.54	0.42
26:B0:7:LEU:HD13	49:BQ:85:LYS:CG	2.44	0.42
28:B2:55:ARG:HA	28:B2:58:ALA:CB	2.48	0.42
32:B6:11:LEU:HD13	32:B6:24:GLU:O	2.19	0.42
34:B8:53:PRO:HA	34:B8:56:GLU:HB2	2.01	0.42
36:BA:1021:A:C3'	36:BA:1021:A:C8	3.02	0.42
36:BA:1133:U:O4	36:BA:2026:C:H1'	2.19	0.42
36:BA:489:G:N2	36:BA:1321:A:OP1	2.49	0.42
36:BA:1431:U:H2'	36:BA:1432:C:O4'	2.20	0.42
36:BA:1469:A:H2'	36:BA:1470:G:H8	1.84	0.42
36:BA:1721:G:C2	36:BA:1739:U:OP2	2.72	0.42
36:BA:1777:U:O2'	36:BA:1778:U:H5'	2.19	0.42
36:BA:1914:C:H2'	36:BA:1915:U:O4'	2.19	0.42
36:BA:2127:G:H2'	36:BA:2128:C:C6	2.54	0.42
36:BA:2131:G:H4'	36:BA:2132:U:OP2	2.18	0.42
36:BA:2330:G:C2'	36:BA:2331:G:H5'	2.48	0.42
36:BA:2389:G:H5''	36:BA:2390:U:O4'	2.19	0.42
36:BA:289:A:H2'	36:BA:290:G:C8	2.55	0.42
36:BA:382:G:C2'	36:BA:383:U:H5'	2.49	0.42
36:BA:506:G:O3'	36:BA:507:A:H8	2.03	0.42
36:BA:514:A:O2'	36:BA:515:A:H5'	2.19	0.42
36:BA:833:U:H2'	36:BA:834:C:C6	2.54	0.42
37:BB:7:G:C3'	37:BB:8:U:C5'	2.97	0.42
38:BC:83:ILE:HD11	38:BC:97:GLU:CD	2.40	0.42
39:BD:238:GLY:O	39:BD:239:ARG:O	2.38	0.42
40:BE:47:VAL:CG2	40:BE:84:PHE:O	2.67	0.42
41:BF:160:ASN:HD21	41:BF:162:LEU:CB	2.31	0.42
42:BG:31:VAL:CG2	42:BG:32:PRO:HD2	2.49	0.42
42:BG:52:ILE:O	42:BG:54:GLU:N	2.53	0.42
45:BK:88:UNK:O	45:BK:89:UNK:C	2.67	0.42
46:BN:28:THR:O	46:BN:31:ALA:HB3	2.19	0.42
46:BN:9:VAL:HG21	46:BN:48:MET:CB	2.49	0.42
48:BP:46:LYS:HG2	48:BP:52:GLU:OE2	2.19	0.42
49:BQ:5:ARG:NH1	49:BQ:5:ARG:CB	2.82	0.42
36:BA:1287:A:OP1	50:BR:105:ARG:O	2.37	0.42
52:BT:109:GLU:HG2	52:BT:112:ARG:CZ	2.49	0.42
52:BT:96:ARG:CB	52:BT:96:ARG:NH1	2.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BZ:29:TYR:HA	58:BZ:33:LEU:O	2.19	0.42
1:CA:1246:C:H2'	1:CA:1247:U:H6	1.84	0.42
1:CA:723:U:N3	1:CA:1537:U:H2'	2.34	0.42
1:CA:66:G:N2	1:CA:172:A:C2	2.86	0.42
1:CA:710:G:O2'	1:CA:711:G:H5'	2.20	0.42
1:CA:858:G:H5''	1:CA:858:G:C8	2.52	0.42
2:CB:231:GLU:HA	2:CB:232:PRO:HD3	1.69	0.42
2:CB:55:PHE:N	2:CB:55:PHE:CD1	2.87	0.42
3:CC:23:TYR:CG	3:CC:24:ALA:N	2.87	0.42
4:CD:10:ARG:HH11	4:CD:10:ARG:HG2	1.84	0.42
4:CD:106:TYR:HD2	4:CD:113:SER:C	2.22	0.42
4:CD:25:ARG:C	4:CD:27:TYR:H	2.23	0.42
4:CD:45:GLN:C	4:CD:46:LYS:HG3	2.38	0.42
5:CE:7:GLU:O	5:CE:8:GLU:HB3	2.19	0.42
1:CA:35:G:H21	12:CL:118:SER:HB2	1.83	0.42
16:CP:14:ASN:HA	16:CP:42:ARG:NH2	2.33	0.42
28:D2:31:GLU:O	28:D2:35:LEU:HD23	2.20	0.42
31:D5:57:VAL:HG12	31:D5:58:LEU:H	1.85	0.42
32:D6:11:LEU:HD13	32:D6:11:LEU:H	1.85	0.42
33:D7:37:LYS:O	36:DA:458:G:H8	2.02	0.42
36:DA:1040:C:H6	36:DA:1040:C:O5'	2.02	0.42
36:DA:1146:C:O2'	36:DA:1147:C:H5'	2.19	0.42
36:DA:1170:G:N2	36:DA:1180:C:C2	2.87	0.42
36:DA:1304:C:O2'	36:DA:1305:C:H5'	2.19	0.42
36:DA:133:C:H6	36:DA:133:C:O5'	2.02	0.42
36:DA:190:A:H3'	36:DA:204:A:H61	1.84	0.42
36:DA:194:G:H2'	36:DA:195:A:O4'	2.20	0.42
36:DA:2881:C:H2'	36:DA:2882:A:C8	2.54	0.42
36:DA:318:C:O2'	36:DA:319:C:H5'	2.19	0.42
37:DB:10:C:O2'	37:DB:11:C:H5'	2.19	0.42
39:DD:28:GLU:CB	39:DD:29:PRO:CD	2.94	0.42
39:DD:41:GLY:O	39:DD:42:GLY:O	2.37	0.42
40:DE:47:VAL:CG2	40:DE:84:PHE:O	2.67	0.42
41:DF:122:LYS:HB3	41:DF:191:ARG:HG3	2.00	0.42
41:DF:26:ALA:HB1	41:DF:27:GLU:OE1	2.20	0.42
43:DH:139:GLN:HG3	43:DH:140:LYS:N	2.34	0.42
43:DH:44:VAL:CG1	43:DH:45:VAL:H	2.17	0.42
46:DN:36:GLY:O	46:DN:37:LYS:HB2	2.19	0.42
47:DO:10:VAL:HG21	47:DO:16:ALA:C	2.40	0.42
47:DO:35:VAL:CG1	47:DO:35:VAL:O	2.67	0.42
51:DS:58:LEU:HG	51:DS:59:LYS:N	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DS:92:TYR:O	51:DS:93:LYS:HB3	2.19	0.42
52:DT:10:VAL:C	52:DT:12:SER:N	2.73	0.42
53:DU:32:PHE:CB	53:DU:36:ARG:HH22	2.31	0.42
56:DX:63:LYS:HE3	56:DX:63:LYS:HB2	1.91	0.42
1:AA:1009:G:H2'	1:AA:1010:G:C8	2.53	0.42
1:AA:1271:G:C3'	1:AA:1272:G:H5''	2.49	0.42
1:AA:1477:C:H2'	1:AA:1478:C:C6	2.53	0.42
1:AA:250:A:H5''	1:AA:251:G:OP1	2.19	0.42
1:AA:407:G:O2'	4:AD:116:GLN:CG	2.64	0.42
1:AA:59:A:H5'	1:AA:60:A:C5'	2.48	0.42
1:AA:656:C:O2'	1:AA:657:G:H5'	2.19	0.42
1:AA:828:A:H2'	1:AA:829:G:O4'	2.19	0.42
1:AA:96:U:H2'	1:AA:97:G:C8	2.54	0.42
2:AB:11:LEU:CD1	2:AB:217:ARG:NH2	2.82	0.42
2:AB:178:ARG:CG	2:AB:178:ARG:NH1	2.82	0.42
3:AC:23:TYR:CG	3:AC:24:ALA:N	2.87	0.42
9:AI:98:PRO:HB2	9:AI:99:LEU:HD22	2.02	0.42
13:AM:25:ILE:HD11	13:AM:60:VAL:CG1	2.50	0.42
19:AS:11:VAL:HG23	19:AS:38:SER:HB3	2.00	0.42
21:AU:5:ASP:O	21:AU:11:GLY:HA3	2.19	0.42
22:AV:61:C:O2	22:AV:61:C:H2'	2.20	0.42
22:AV:67:C:H2'	22:AV:68:C:H6	1.83	0.42
22:AW:10:G:O2'	22:AW:11:C:H5'	2.19	0.42
22:AW:51:U:H3	22:AW:63:G:H1	1.67	0.42
12:AL:80:HIS:HB2	24:AY:68:C:H4'	2.01	0.42
25:AZ:116:THR:O	25:AZ:120:ILE:HG13	2.19	0.42
25:AZ:362:VAL:HG12	25:AZ:362:VAL:O	2.20	0.42
28:B2:35:LEU:HD13	28:B2:35:LEU:C	2.38	0.42
28:B2:54:LYS:CB	36:BA:61:G:OP2	2.67	0.42
35:B9:7:VAL:CG1	35:B9:34:GLN:HG2	2.38	0.42
36:BA:1021:A:H8	36:BA:1021:A:H3'	1.85	0.42
36:BA:1336:A:O2'	36:BA:1337:G:H5'	2.19	0.42
36:BA:1487:G:O2'	36:BA:1488:G:H5'	2.19	0.42
36:BA:1570:A:H2'	36:BA:1571:A:C8	2.54	0.42
36:BA:1947:C:C3'	36:BA:1948:G:H5''	2.49	0.42
36:BA:2224:G:H4'	36:BA:2226:C:C2	2.54	0.42
36:BA:2330:G:H2'	36:BA:2331:G:O4'	2.19	0.42
36:BA:2584:U:O4'	36:BA:2584:U:O2	2.38	0.42
36:BA:2617:C:O2'	36:BA:2618:G:H5'	2.20	0.42
36:BA:2892:A:N6	36:BA:2893:G:H21	2.16	0.42
36:BA:322:A:O4'	36:BA:340:A:H1'	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:478:A:C6	36:BA:480:A:C6	3.08	0.42
36:BA:825:C:H4'	36:BA:2428:G:N7	2.34	0.42
36:BA:877:U:O2'	36:BA:900:A:N6	2.52	0.42
36:BA:942:G:O2'	36:BA:943:U:H5'	2.19	0.42
38:BC:41:VAL:HG21	38:BC:185:LEU:CD2	2.49	0.42
39:BD:107:ALA:HA	39:BD:108:PRO:HD2	1.90	0.42
39:BD:242:ARG:HB2	39:BD:243:GLY:H	1.43	0.42
40:BE:101:ARG:CB	40:BE:201:THR:HG21	2.48	0.42
45:BK:99:UNK:O	45:BK:100:UNK:C	2.67	0.42
46:BN:76:SER:OG	46:BN:77:GLY:N	2.52	0.42
46:BN:7:LYS:O	46:BN:8:GLN:C	2.57	0.42
48:BP:35:HIS:C	48:BP:36:LYS:HG3	2.40	0.42
52:BT:75:ILE:N	52:BT:75:ILE:CD1	2.81	0.42
52:BT:80:SER:CB	52:BT:81:PRO:CD	2.96	0.42
53:BU:24:TYR:HB2	53:BU:29:SER:OG	2.20	0.42
56:BX:55:ASN:HB2	56:BX:80:ILE:CG2	2.43	0.42
57:BY:60:PHE:O	57:BY:61:ILE:CG1	2.67	0.42
58:BZ:79:ARG:O	58:BZ:79:ARG:CG	2.67	0.42
1:CA:1039:C:H2'	1:CA:1040:U:H5	1.78	0.42
1:CA:411:A:H62	1:CA:413:G:H21	1.65	0.42
1:CA:757:U:O2'	1:CA:758:G:H5'	2.19	0.42
2:CB:124:SER:OG	2:CB:125:PRO:HD2	2.19	0.42
3:CC:130:VAL:O	3:CC:131:ARG:C	2.58	0.42
8:CH:20:TYR:HE2	8:CH:76:PRO:HG2	1.81	0.42
1:CA:528:C:H41	12:CL:49:ASN:ND2	2.17	0.42
14:CN:26:ARG:HH11	14:CN:47:LEU:CD2	2.24	0.42
15:CO:29:VAL:HG11	15:CO:67:LEU:HD21	2.01	0.42
1:CA:130:A:C8	17:CQ:63:ARG:HG3	2.54	0.42
19:CS:79:THR:O	19:CS:80:TYR:CB	2.67	0.42
20:CT:53:LEU:HB3	20:CT:102:GLY:HA3	2.01	0.42
25:CZ:309:SER:O	25:CZ:310:ILE:O	2.38	0.42
28:D2:63:VAL:O	28:D2:65:ASN:N	2.52	0.42
29:D3:28:LEU:N	29:D3:28:LEU:HD23	2.33	0.42
30:D4:25:TYR:N	30:D4:25:TYR:CD1	2.88	0.42
36:DA:1068:G:H1'	36:DA:1069:A:O5'	2.19	0.42
36:DA:1070:A:H5'	36:DA:1072:C:OP2	2.20	0.42
36:DA:1090:U:H2'	36:DA:1091:G:O4'	2.19	0.42
36:DA:1387:C:C2	36:DA:1388:G:C8	3.06	0.42
36:DA:1448:G:N3	36:DA:1528(A):A:C2	2.84	0.42
36:DA:1509(A):A:H2'	36:DA:1509(B):A:C8	2.53	0.42
36:DA:199:A:H61	36:DA:2433:A:H2'	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2073:C:O2'	36:DA:2074:U:H5'	2.19	0.42
36:DA:2196:C:O2'	36:DA:2197:U:H5'	2.19	0.42
36:DA:2282:G:H4'	36:DA:2283:C:O5'	2.19	0.42
32:D6:45:LYS:CB	36:DA:2371:G:H4'	2.49	0.42
36:DA:2464:C:O2'	36:DA:2465:C:P	2.78	0.42
36:DA:611:C:H6	36:DA:611:C:O5'	2.01	0.42
36:DA:733:G:N7	36:DA:761:A:C5	2.86	0.42
36:DA:740:U:H2'	36:DA:741:G:C8	2.55	0.42
36:DA:856:C:H6	36:DA:856:C:H5''	1.83	0.42
36:DA:998:C:H2'	36:DA:999:U:O5'	2.19	0.42
37:DB:81:G:H2'	37:DB:82:G:H5'	2.02	0.42
39:DD:24:ILE:CD1	39:DD:25:THR:N	2.81	0.42
40:DE:54:GLN:O	40:DE:75:VAL:CG2	2.62	0.42
41:DF:160:ASN:ND2	41:DF:162:LEU:N	2.59	0.42
42:DG:178:PHE:HD1	42:DG:178:PHE:H	1.67	0.42
43:DH:15:VAL:HG23	43:DH:16:SER:N	2.34	0.42
44:DJ:52:UNK:HA	44:DJ:86:UNK:O	2.20	0.42
48:DP:38:GLN:HG3	48:DP:39:LYS:N	2.35	0.42
50:DR:2:ARG:CD	50:DR:2:ARG:C	2.87	0.42
50:DR:45:ARG:CG	50:DR:46:GLY:H	2.13	0.42
53:DU:15:LYS:HA	53:DU:18:LEU:HD23	2.00	0.42
54:DV:39:LEU:O	54:DV:40:LEU:HB2	2.20	0.42
56:DX:45:THR:OG1	56:DX:46:ALA:N	2.53	0.42
57:DY:61:ILE:HG22	57:DY:62:GLU:N	2.34	0.42
57:DY:81:LYS:CD	57:DY:97:ARG:O	2.67	0.42
37:DB:106:G:H5'	58:DZ:31:ARG:HG2	1.98	0.42
58:DZ:48:PHE:O	58:DZ:52:SER:N	2.48	0.42
1:AA:357:G:C2	1:AA:358:U:C5	3.07	0.42
1:AA:598:U:H2'	1:AA:599:C:C6	2.54	0.42
9:AI:48:GLU:N	9:AI:49:PRO:HD3	2.34	0.42
10:AJ:6:ILE:CD1	10:AJ:23:ILE:HG21	2.49	0.42
12:AL:60:LEU:C	12:AL:62:SER:H	2.23	0.42
1:AA:1226:C:O2'	13:AM:103:THR:O	2.28	0.42
15:AO:82:ILE:CG2	15:AO:83:GLU:N	2.83	0.42
17:AQ:45:HIS:CG	17:AQ:65:ILE:HD13	2.55	0.42
17:AQ:70:ARG:HG2	17:AQ:70:ARG:HH11	1.85	0.42
1:AA:1318:A:H1'	19:AS:37:ARG:HH21	1.85	0.42
19:AS:36:ARG:NH1	19:AS:53:ASN:HA	2.35	0.42
20:AT:10:LEU:HG	20:AT:12:ALA:N	2.34	0.42
20:AT:20:LEU:O	20:AT:23:ARG:HB3	2.20	0.42
36:BA:1278:A:O2'	36:BA:1279:G:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1509(A):A:H2'	36:BA:1509(B):A:C8	2.55	0.42
36:BA:1516:C:C2'	36:BA:1517:G:C5'	2.83	0.42
36:BA:1349:A:N6	36:BA:1598:C:N4	2.67	0.42
36:BA:2178:C:O4'	36:BA:2178:C:O2	2.35	0.42
36:BA:2199:A:C2	36:BA:2200:C:H1'	2.54	0.42
36:BA:2262:U:H2'	36:BA:2263:C:H6	1.84	0.42
36:BA:271(J):C:C2'	36:BA:271(J):C:O2	2.62	0.42
36:BA:451:C:N4	36:BA:454:A:H5'	2.34	0.42
36:BA:67:U:O2'	36:BA:68:G:H5'	2.18	0.42
36:BA:740:U:H2'	36:BA:741:G:C8	2.55	0.42
36:BA:733:G:C8	36:BA:761:A:C6	3.07	0.42
37:BB:30:C:H1'	37:BB:57:A:H61	1.84	0.42
39:BD:97:TYR:C	39:BD:99:ASP:N	2.71	0.42
36:BA:2810:A:H2'	40:BE:61:ARG:NH2	2.34	0.42
41:BF:6:VAL:O	41:BF:7:TYR:HB2	2.20	0.42
42:BG:114:ILE:HG23	42:BG:117:PHE:HB2	1.99	0.42
42:BG:47:LYS:N	42:BG:47:LYS:HD2	2.34	0.42
45:BK:56:UNK:O	45:BK:68:UNK:C	2.67	0.42
49:BQ:24:GLY:O	49:BQ:26:TYR:N	2.50	0.42
50:BR:109:ALA:O	50:BR:111:LEU:HD12	2.19	0.42
50:BR:52:ILE:O	50:BR:55:ALA:N	2.52	0.42
51:BS:17:ARG:C	51:BS:19:LYS:H	2.22	0.42
51:BS:35:ILE:HG23	51:BS:35:ILE:O	2.19	0.42
53:BU:83:LEU:HD12	53:BU:83:LEU:N	2.35	0.42
56:BX:14:SER:N	56:BX:17:ALA:HB3	2.35	0.42
1:CA:1032:G:H2'	1:CA:1033:G:C8	2.54	0.42
1:CA:1068:G:N7	1:CA:1094:G:H2'	2.34	0.42
1:CA:256:U:O2'	1:CA:257:G:H5'	2.19	0.42
1:CA:522:C:H41	12:CL:53:ARG:NH2	2.17	0.42
1:CA:773:G:O2'	1:CA:774:G:H5'	2.19	0.42
1:CA:954:G:H2'	1:CA:955:U:C6	2.54	0.42
2:CB:180:LEU:O	2:CB:181:PHE:HB2	2.19	0.42
4:CD:105:VAL:HG21	4:CD:121:VAL:HG22	2.01	0.42
6:CF:57:GLN:H	6:CF:57:GLN:NE2	2.17	0.42
9:CI:70:LYS:O	9:CI:73:GLN:HB2	2.20	0.42
10:CJ:8:LEU:HB3	10:CJ:16:LEU:CD2	2.50	0.42
15:CO:66:LEU:HD12	15:CO:66:LEU:HA	1.91	0.42
17:CQ:94:ASN:O	17:CQ:96:GLU:N	2.52	0.42
19:CS:48:THR:HG22	19:CS:61:TYR:CB	2.50	0.42
22:CW:37:A:H5'	22:CW:38:A:OP2	2.20	0.42
24:CY:17:H2U:OP2	24:CY:17:H2U:O3'	2.38	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:223:MET:HB3	25:CZ:242:ILE:HA	1.99	0.42
25:CZ:246:LYS:HB3	25:CZ:281:ILE:CG2	2.38	0.42
25:CZ:285:ASN:HD22	25:CZ:285:ASN:HA	1.65	0.42
32:D6:53:LYS:CD	32:D6:53:LYS:N	2.82	0.42
33:D7:34:ARG:HA	33:D7:34:ARG:HD2	1.77	0.42
36:DA:121:G:H4'	36:DA:149:A:H5'	2.00	0.42
36:DA:1499:C:H2'	36:DA:1500:G:H5'	2.01	0.42
36:DA:1721:G:C2	36:DA:1739:U:OP2	2.73	0.42
36:DA:1777:U:O2'	36:DA:1778:U:H5'	2.19	0.42
36:DA:1854:A:H62	36:DA:1888:G:H8	1.66	0.42
36:DA:2169:A:O2'	36:DA:2170:A:H5'	2.18	0.42
36:DA:2390:U:O2'	36:DA:2391:G:H5'	2.20	0.42
36:DA:2419:U:O2'	36:DA:2420:C:H5'	2.18	0.42
36:DA:481:G:C2'	36:DA:482:A:OP2	2.67	0.42
36:DA:586:A:N1	36:DA:809:G:O2'	2.47	0.42
36:DA:671:C:H2'	36:DA:672:C:H6	1.84	0.42
36:DA:67:U:O2'	36:DA:68:G:H5'	2.19	0.42
37:DB:7:G:C3'	37:DB:8:U:C5'	2.98	0.42
39:DD:70:TRP:CZ3	39:DD:146:GLU:OE2	2.72	0.42
40:DE:11:MET:HB3	40:DE:24:THR:HA	2.02	0.42
41:DF:158:THR:HG21	41:DF:163:VAL:HB	2.01	0.42
41:DF:30:PRO:O	41:DF:33:LEU:HB2	2.20	0.42
42:DG:57:ALA:O	42:DG:60:LEU:HB3	2.19	0.42
46:DN:115:ARG:HG3	46:DN:115:ARG:HH11	1.84	0.42
46:DN:54:VAL:HG11	46:DN:99:LEU:CD2	2.49	0.42
48:DP:126:VAL:HA	48:DP:145:PRO:CG	2.49	0.42
48:DP:16:ARG:HH11	48:DP:16:ARG:CA	2.32	0.42
48:DP:98:GLU:CA	48:DP:101:VAL:HG22	2.48	0.42
49:DQ:110:THR:HG23	49:DQ:113:GLN:CG	2.49	0.42
50:DR:12:ARG:HE	50:DR:16:HIS:CE1	2.36	0.42
57:DY:15:VAL:HG12	57:DY:17:SER:H	1.85	0.42
58:DZ:69:THR:HG22	58:DZ:89:PHE:O	2.19	0.42
1:AA:1118:C:OP1	9:AI:104:ARG:NE	2.46	0.42
1:AA:1194:U:H2'	1:AA:1195:C:C6	2.55	0.42
1:AA:1212:U:O2	1:AA:1212:U:O4'	2.37	0.42
1:AA:1431:C:C2'	1:AA:1432:G:H5'	2.50	0.42
1:AA:768:A:H5'	1:AA:1524:C:H1'	2.02	0.42
2:AB:86:GLU:C	2:AB:88:ALA:N	2.73	0.42
4:AD:122:ARG:HA	4:AD:122:ARG:HD2	1.72	0.42
4:AD:192:GLU:O	4:AD:193:ASP:C	2.58	0.42
5:AE:144:THR:O	5:AE:147:ASP:OD1	2.37	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:44:GLY:HA2	6:AF:59:TYR:CE1	2.54	0.42
7:AG:99:LEU:HA	7:AG:102:ARG:CD	2.50	0.42
8:AH:111:ILE:C	8:AH:112:LEU:HD23	2.40	0.42
10:AJ:48:THR:HG23	10:AJ:62:HIS:ND1	2.33	0.42
10:AJ:81:THR:O	10:AJ:83:GLU:N	2.53	0.42
11:AK:20:TYR:CE2	11:AK:83:ILE:HD12	2.55	0.42
12:AL:75:HIS:HA	12:AL:102:ARG:NH2	2.35	0.42
17:AQ:12:SER:HB3	17:AQ:20:THR:CB	2.50	0.42
22:AV:57:G:H2'	22:AV:58:A:H5'	2.01	0.42
25:AZ:65:THR:HA	25:AZ:83:PRO:HD3	2.01	0.42
26:B0:24:LYS:HA	26:B0:24:LYS:HD3	1.86	0.42
31:B5:41:PRO:HA	31:B5:42:PRO:HD3	1.83	0.42
32:B6:5:VAL:O	32:B6:6:ARG:CG	2.68	0.42
36:BA:1173:G:H5'	36:BA:1174:A:OP2	2.19	0.42
36:BA:1396:U:C2'	36:BA:1396:U:O2	2.65	0.42
36:BA:1429:G:H2'	36:BA:1430:C:C6	2.55	0.42
36:BA:1651:G:C2	36:BA:2007:C:C2	3.07	0.42
36:BA:20:C:H2'	36:BA:21:A:C8	2.55	0.42
36:BA:910:A:N1	36:BA:2277:G:H1'	2.34	0.42
36:BA:229:A:H8	36:BA:229:A:OP1	2.02	0.42
36:BA:70:G:H2'	36:BA:113:G:O2'	2.20	0.42
36:BA:998:C:H2'	36:BA:999:U:O5'	2.19	0.42
37:BB:15:A:H1'	37:BB:110:G:C5	2.55	0.42
38:BC:149:ILE:O	38:BC:153:ILE:HG13	2.19	0.42
39:BD:24:ILE:CD1	39:BD:25:THR:N	2.80	0.42
40:BE:132:HIS:CG	40:BE:135:HIS:CE1	3.07	0.42
41:BF:108:LYS:HB3	41:BF:112:MET:CE	2.50	0.42
41:BF:26:ALA:HB1	41:BF:27:GLU:OE1	2.19	0.42
42:BG:181:ARG:HB3	42:BG:181:ARG:HE	1.68	0.42
47:BO:11:ALA:O	47:BO:12:ASP:HB3	2.19	0.42
48:BP:35:HIS:O	48:BP:36:LYS:CB	2.68	0.42
36:BA:251:A:H4'	48:BP:51:PHE:HZ	1.84	0.42
51:BS:29:PHE:HD1	51:BS:30:ARG:N	2.17	0.42
52:BT:119:LYS:O	52:BT:123:GLN:HG2	2.19	0.42
52:BT:19:LEU:HD22	52:BT:85:LYS:CD	2.48	0.42
57:BY:47:LYS:HG3	57:BY:60:PHE:CE1	2.55	0.42
1:CA:1287:A:H2'	1:CA:1288:A:C8	2.54	0.42
1:CA:1392:G:O2'	1:CA:1393:U:H5'	2.18	0.42
1:CA:309:G:O2'	1:CA:607:A:N1	2.52	0.42
1:CA:369:C:HO2'	1:CA:370:C:H6	1.66	0.42
1:CA:513:C:C2	1:CA:514:C:C6	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:827:U:C2	1:CA:870:U:C4	3.07	0.42
1:CA:965:A:C2	1:CA:969:A:N1	2.87	0.42
4:CD:107:ARG:HD2	4:CD:173:TRP:CZ2	2.55	0.42
4:CD:98:GLU:OE1	4:CD:194:LEU:HD11	2.19	0.42
4:CD:2:GLY:O	4:CD:3:ARG:C	2.58	0.42
9:CI:28:VAL:O	9:CI:30:GLY:N	2.49	0.42
11:CK:57:THR:HG22	11:CK:60:ALA:HB2	2.00	0.42
12:CL:119:LYS:O	12:CL:120:TYR:CB	2.65	0.42
12:CL:113:ARG:CB	12:CL:122:THR:HG21	2.50	0.42
12:CL:45:PRO:HG3	12:CL:53:ARG:CD	2.50	0.42
25:CZ:63:ILE:HG13	25:CZ:64:ASN:ND2	2.34	0.42
34:D8:52:LYS:O	34:D8:55:ALA:HB3	2.19	0.42
36:DA:973:A:O4'	36:DA:1188:U:C6	2.72	0.42
36:DA:135:G:O2'	36:DA:136:G:H5'	2.20	0.42
36:DA:135:G:H2'	36:DA:136:G:H8	1.85	0.42
36:DA:2126:A:H8	36:DA:2126:A:OP2	2.03	0.42
36:DA:237:C:O2'	36:DA:238:C:H5'	2.20	0.42
36:DA:2389:G:H5''	36:DA:2390:U:O4'	2.19	0.42
34:D8:5:LYS:HG2	36:DA:242:G:C8	2.55	0.42
36:DA:2544:G:H1'	36:DA:2646:C:H4'	2.02	0.42
36:DA:2740:A:H2'	36:DA:2741:A:C8	2.54	0.42
36:DA:659:C:O2'	36:DA:660:G:H5'	2.19	0.42
36:DA:856:C:H5''	36:DA:856:C:C6	2.53	0.42
37:DB:107:G:O2'	37:DB:108:U:H5'	2.19	0.42
37:DB:94:C:O2'	37:DB:95:C:H5'	2.20	0.42
38:DC:79:LYS:HD2	38:DC:97:GLU:OE1	2.19	0.42
42:DG:54:GLU:O	42:DG:58:GLN:HG2	2.20	0.42
50:DR:53:HIS:O	50:DR:53:HIS:ND1	2.52	0.42
53:DU:14:HIS:O	53:DU:18:LEU:HD23	2.20	0.42
58:DZ:53:ILE:HG22	58:DZ:71:VAL:O	2.20	0.42
1:AA:1053:G:O6	1:AA:1199:U:H2'	2.20	0.42
1:AA:124:G:C6	1:AA:125:U:C4	3.07	0.42
1:AA:1262:C:H2'	1:AA:1263:C:C6	2.54	0.42
1:AA:1296:C:H4'	1:AA:1302:U:C4	2.54	0.42
1:AA:189(E):U:O2'	1:AA:189(F):U:H5'	2.19	0.42
1:AA:373:A:C2	1:AA:374:A:C8	3.08	0.42
1:AA:567:G:H2'	1:AA:568:G:O4'	2.19	0.42
1:AA:594:G:H2'	1:AA:595:G:H5'	2.02	0.42
1:AA:748:C:H6	1:AA:748:C:OP2	2.02	0.42
1:AA:974:A:H8	1:AA:974:A:OP1	2.02	0.42
2:AB:71:VAL:O	2:AB:164:VAL:HA	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:190:THR:O	2:AB:191:ASP:CB	2.67	0.42
2:AB:97:TRP:CH2	2:AB:176:GLU:CD	2.93	0.42
6:AF:27:GLN:NE2	6:AF:27:GLN:HA	2.35	0.42
9:AI:42:ARG:NH2	9:AI:75:ASP:OD1	2.53	0.42
16:AP:45:THR:O	16:AP:45:THR:HG23	2.20	0.42
17:AQ:16:GLN:O	17:AQ:17:LYS:HB2	2.19	0.42
17:AQ:59:ILE:HG22	17:AQ:71:PHE:HD2	1.83	0.42
20:AT:104:LEU:HD23	20:AT:105:SER:N	2.34	0.42
20:AT:26:ASN:CB	20:AT:71:THR:HG23	2.44	0.42
24:AY:54:5MU:H73	24:AY:55:PSU:O2	2.19	0.42
25:AZ:316:PHE:CE1	25:AZ:372:VAL:HB	2.54	0.42
25:AZ:63:ILE:HG13	25:AZ:64:ASN:ND2	2.35	0.42
28:B2:21:LEU:HB3	28:B2:64:LEU:CG	2.47	0.42
28:B2:65:ASN:O	28:B2:69:ARG:NH1	2.52	0.42
30:B4:25:TYR:N	30:B4:25:TYR:CD1	2.88	0.42
36:BA:1097:U:O2'	36:BA:1098:A:H5'	2.19	0.42
36:BA:1286:A:OP1	50:BR:105:ARG:CZ	2.67	0.42
36:BA:135:G:O2'	36:BA:136:G:H5'	2.20	0.42
36:BA:1424:G:H2'	36:BA:1425:G:O4'	2.19	0.42
36:BA:2262:U:H2'	36:BA:2263:C:C6	2.54	0.42
36:BA:2732:G:O2'	36:BA:2733:A:H5'	2.18	0.42
39:BD:239:ARG:HH11	39:BD:239:ARG:HG2	1.85	0.42
40:BE:129:HIS:O	40:BE:130:GLY:C	2.58	0.42
42:BG:47:LYS:HZ2	42:BG:82:LEU:HB2	1.85	0.42
46:BN:58:ASP:O	46:BN:59:LYS:HB2	2.20	0.42
49:BQ:32:TYR:O	49:BQ:105:GLU:CB	2.64	0.42
50:BR:7:GLY:O	50:BR:8:ARG:HB2	2.19	0.42
51:BS:70:GLY:C	51:BS:72:ALA:N	2.72	0.42
51:BS:89:ARG:HB3	51:BS:92:TYR:CB	2.50	0.42
52:BT:74:ARG:C	52:BT:75:ILE:HD12	2.40	0.42
54:BV:39:LEU:O	54:BV:40:LEU:HB2	2.20	0.42
54:BV:71:LEU:HA	54:BV:71:LEU:HD23	1.75	0.42
58:BZ:171:ILE:CD1	58:BZ:171:ILE:H	2.32	0.42
1:CA:1314:C:O4'	1:CA:1314:C:O2	2.37	0.42
1:CA:1444:C:H2'	1:CA:1445:C:C6	2.54	0.42
1:CA:428:G:O2'	1:CA:429:U:P	2.77	0.42
1:CA:454:C:H5''	1:CA:455:C:C5	2.55	0.42
1:CA:515:G:O2'	1:CA:516:U:H5'	2.19	0.42
1:CA:643:C:H2'	1:CA:644:G:H8	1.85	0.42
1:CA:975:A:N6	1:CA:1367:C:O4'	2.52	0.42
2:CB:144:ARG:CG	2:CB:145:LEU:N	2.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:62:ALA:O	2:CB:65:GLY:N	2.43	0.42
4:CD:141:ARG:HB3	4:CD:142:PRO:CD	2.49	0.42
4:CD:6:GLY:O	4:CD:7:PRO:C	2.58	0.42
6:CF:52:ILE:O	6:CF:53:ALA:HB3	2.20	0.42
7:CG:23:VAL:O	7:CG:27:ILE:HG13	2.19	0.42
8:CH:119:LEU:HD12	8:CH:124:ALA:HA	2.00	0.42
8:CH:91:ARG:HG2	8:CH:91:ARG:O	2.20	0.42
10:CJ:49:VAL:HG22	14:CN:41:ARG:HG3	2.02	0.42
15:CO:21:ASP:OD1	15:CO:21:ASP:C	2.58	0.42
16:CP:2:VAL:O	16:CP:64:ALA:HA	2.20	0.42
20:CT:27:LYS:O	20:CT:27:LYS:HD3	2.20	0.42
13:CM:118:ALA:HB3	22:CV:29:G:H5''	2.01	0.42
24:CY:60:U:H2'	24:CY:61:C:H5	1.84	0.42
36:DA:1449:A:N7	36:DA:1450:G:C8	2.88	0.42
36:DA:1486:A:H61	36:DA:1504:C:H42	1.68	0.42
36:DA:1526:G:O2'	36:DA:1527:G:H5'	2.20	0.42
36:DA:528:A:C2	36:DA:2043:C:O5'	2.70	0.42
36:DA:2177:C:H2'	36:DA:2178:C:O2	2.20	0.42
36:DA:2529:G:H5''	36:DA:2530:A:H5''	2.02	0.42
36:DA:2740:A:C6	36:DA:2741:A:C6	3.08	0.42
36:DA:478:A:C6	36:DA:480:A:C6	3.07	0.42
36:DA:569:U:C4	36:DA:570:G:C6	3.08	0.42
36:DA:594:U:H3	36:DA:663:G:H1	1.68	0.42
36:DA:736:C:H2'	36:DA:737:C:C6	2.54	0.42
36:DA:848:G:H2'	36:DA:849:A:C8	2.54	0.42
36:DA:927:G:H3'	36:DA:928:G:H8	1.84	0.42
38:DC:15:ASP:C	38:DC:15:ASP:OD1	2.57	0.42
38:DC:99:ILE:C	38:DC:101:GLN:N	2.72	0.42
39:DD:258:LYS:HD3	39:DD:273:ARG:NH2	2.33	0.42
39:DD:30:GLU:CG	39:DD:63:ARG:HH21	2.32	0.42
40:DE:120:TRP:CE3	40:DE:120:TRP:HA	2.54	0.42
43:DH:83:TYR:O	43:DH:84:SER:O	2.37	0.42
47:DO:28:SER:O	47:DO:29:ASN:HB3	2.19	0.42
49:DQ:109:VAL:HG12	49:DQ:110:THR:H	1.84	0.42
50:DR:109:ALA:O	50:DR:111:LEU:HD12	2.20	0.42
51:DS:74:ALA:HB1	51:DS:103:GLU:CG	2.47	0.42
51:DS:98:VAL:C	51:DS:100:ALA:N	2.73	0.42
52:DT:23:ARG:HB2	52:DT:24:PRO:HD2	2.01	0.42
52:DT:96:ARG:CB	52:DT:96:ARG:NH1	2.83	0.42
56:DX:8:ILE:CD1	56:DX:8:ILE:H	2.30	0.42
58:DZ:61:LEU:HB2	58:DZ:65:GLN:O	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1121:U:H2'	1:AA:1122:U:C6	2.55	0.42
1:AA:1118:C:H1'	1:AA:1179:A:C4	2.54	0.42
1:AA:1221:G:OP1	1:AA:1321:C:N3	2.53	0.42
1:AA:189(H):G:HO2'	1:AA:189(I):G:P	2.42	0.42
1:AA:380:G:C2	1:AA:384:G:C6	3.08	0.42
1:AA:451:A:N6	1:AA:480:U:H2'	2.35	0.42
1:AA:509:A:C6	1:AA:510:A:N1	2.88	0.42
2:AB:28:PHE:O	2:AB:32:ILE:HG22	2.20	0.42
4:AD:127:THR:HG22	4:AD:128:VAL:O	2.19	0.42
4:AD:17:VAL:O	4:AD:18:LYS:O	2.37	0.42
7:AG:42:ILE:HD13	7:AG:116:ALA:CB	2.50	0.42
10:AJ:8:LEU:HB3	10:AJ:16:LEU:HD21	2.02	0.42
10:AJ:35:SER:O	10:AJ:36:GLY:O	2.37	0.42
12:AL:93:LEU:HD13	12:AL:96:VAL:HG21	2.02	0.42
13:AM:94:ARG:HH22	36:BA:887:A:C5'	2.32	0.42
14:AN:12:ARG:NH1	14:AN:12:ARG:CB	2.83	0.42
1:AA:130:A:C8	17:AQ:63:ARG:HG3	2.55	0.42
19:AS:66:MET:H	19:AS:66:MET:HG2	1.67	0.42
24:AY:77:TRP:N	25:AZ:273:HIS:H	2.18	0.42
25:AZ:301:GLY:HA2	25:AZ:347:THR:OG1	2.20	0.42
25:AZ:309:SER:O	25:AZ:310:ILE:O	2.38	0.42
29:B3:17:LYS:HA	29:B3:17:LYS:HD3	1.87	0.42
32:B6:10:LEU:N	32:B6:10:LEU:HD23	2.28	0.42
32:B6:33:LYS:O	32:B6:34:LEU:HB2	2.18	0.42
36:BA:104:U:H2'	36:BA:105:C:H5'	2.00	0.42
36:BA:1095:A:H2'	36:BA:1096:A:C8	2.52	0.42
36:BA:1499:C:H2'	36:BA:1500:G:H5'	2.00	0.42
36:BA:1658:C:OP1	40:BE:132:HIS:ND1	2.53	0.42
36:BA:1906:G:C8	36:BA:1929:G:H2'	2.55	0.42
36:BA:2012:G:H4'	55:BW:96:ILE:HD11	2.00	0.42
36:BA:201:C:O2'	36:BA:202:U:H5'	2.19	0.42
36:BA:2476:A:C2	36:BA:2477:C:C2	3.08	0.42
36:BA:265:A:H4'	36:BA:266:G:O5'	2.20	0.42
36:BA:2807:G:H1	36:BA:2893:G:H1	1.67	0.42
36:BA:600:G:H5'	41:BF:32:LEU:HD12	2.02	0.42
36:BA:671:C:H2'	36:BA:672:C:H6	1.82	0.42
37:BB:13:A:HO2'	37:BB:14:U:H3'	1.85	0.42
39:BD:275:LYS:CD	39:BD:276:LYS:N	2.83	0.42
41:BF:24:LEU:CD1	41:BF:118:ALA:HB1	2.49	0.42
41:BF:99:TYR:CD1	41:BF:99:TYR:N	2.87	0.42
42:BG:173:LEU:HB3	42:BG:178:PHE:CG	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BH:83:TYR:HB3	43:BH:135:GLY:H	1.84	0.42
46:BN:14:VAL:HG11	46:BN:137:LYS:HD2	2.01	0.42
48:BP:110:TYR:O	48:BP:111:ARG:C	2.58	0.42
51:BS:67:ARG:NE	51:BS:98:VAL:HG11	2.35	0.42
52:BT:125:ARG:HD3	52:BT:125:ARG:HA	1.89	0.42
52:BT:35:LYS:O	52:BT:36:GLU:HB2	2.19	0.42
52:BT:29:ARG:HB2	52:BT:85:LYS:HA	2.02	0.42
53:BU:29:SER:HB2	53:BU:30:LYS:HE2	2.02	0.42
57:BY:81:LYS:CD	57:BY:97:ARG:O	2.66	0.42
49:BQ:141:GLN:CB	58:BZ:99:TYR:HE1	2.26	0.42
1:CA:1104:G:O5'	2:CB:111:ARG:CD	2.63	0.42
1:CA:1421:G:H1	1:CA:1479:C:H42	1.67	0.42
1:CA:201:C:H2'	1:CA:202:U:H3'	2.02	0.42
1:CA:639:G:O2'	1:CA:640:A:H5'	2.20	0.42
2:CB:187:LEU:HD11	2:CB:204:ASN:O	2.20	0.42
4:CD:145:GLU:N	4:CD:145:GLU:CD	2.71	0.42
12:CL:34:ARG:HG3	12:CL:105:TYR:HE2	1.85	0.42
13:CM:35:GLU:C	13:CM:37:THR:N	2.73	0.42
15:CO:11:VAL:HG21	15:CO:34:LEU:HD22	2.02	0.42
16:CP:5:ARG:HB2	16:CP:6:LEU:H	1.69	0.42
17:CQ:45:HIS:CG	17:CQ:65:ILE:HD13	2.54	0.42
20:CT:53:LEU:HD11	20:CT:92:LEU:HD11	2.01	0.42
22:CV:42:C:H5'	22:CV:42:C:C6	2.44	0.42
23:CX:23:G:C5	24:CY:36:A:C2	3.08	0.42
25:CZ:136:ASN:HA	25:CZ:173:GLY:O	2.20	0.42
26:D0:53:MET:CG	26:D0:57:PHE:HA	2.49	0.42
34:D8:28:GLY:CA	34:D8:32:LEU:HD22	2.49	0.42
36:DA:990:A:N6	36:DA:1186:G:H1'	2.33	0.42
36:DA:141:A:C8	36:DA:1408:C:O2'	2.70	0.42
36:DA:2086:U:H2'	36:DA:2087:G:C8	2.55	0.42
36:DA:2109:U:O2	36:DA:2180:U:C5	2.73	0.42
36:DA:2187:G:C3'	36:DA:2188:C:H5'	2.49	0.42
36:DA:2283:C:H2'	36:DA:2284:C:O4'	2.20	0.42
36:DA:2524:G:H2'	36:DA:2525:G:O4'	2.19	0.42
36:DA:2475:C:N4	36:DA:2529:G:H22	2.17	0.42
36:DA:2695:C:H2'	36:DA:2696:U:H6	1.84	0.42
36:DA:651:G:H2'	36:DA:652:C:H5'	2.02	0.42
36:DA:70:G:H2'	36:DA:113:G:O2'	2.19	0.42
39:DD:242:ARG:HG2	39:DD:242:ARG:NH1	2.34	0.42
39:DD:27:THR:CG2	39:DD:27:THR:O	2.68	0.42
39:DD:30:GLU:CG	39:DD:35:LYS:HZ1	2.32	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DD:52:ARG:HB3	39:DD:53:PHE:CE2	2.55	0.42
40:DE:116:VAL:HG21	40:DE:122:PHE:CG	2.54	0.42
40:DE:110:GLY:HA3	40:DE:162:ALA:HB2	2.01	0.42
41:DF:113:ALA:HB1	41:DF:186:ILE:CG2	2.49	0.42
41:DF:40:GLN:NE2	41:DF:184:TYR:HB2	2.34	0.42
42:DG:114:ILE:C	42:DG:116:ASP:N	2.73	0.42
42:DG:128:ARG:HA	42:DG:128:ARG:HD3	1.88	0.42
43:DH:122:THR:O	43:DH:133:VAL:HA	2.20	0.42
43:DH:139:GLN:NE2	43:DH:140:LYS:HA	2.35	0.42
40:DE:152:LYS:HG2	46:DN:78:TYR:CZ	2.55	0.42
36:DA:2562:U:H4'	47:DO:25:LEU:HD21	2.00	0.42
48:DP:28:GLY:C	48:DP:29:LYS:HD2	2.39	0.42
48:DP:39:LYS:HD2	48:DP:40:SER:N	2.27	0.42
48:DP:61:ARG:C	48:DP:62:LEU:HD23	2.40	0.42
49:DQ:79:LEU:CD2	49:DQ:80:GLU:H	2.30	0.42
53:DU:115:ALA:C	53:DU:117:GLN:N	2.73	0.42
36:DA:1011:G:OP1	53:DU:75:ASN:HB2	2.20	0.42
57:DY:39:VAL:HG12	57:DY:40:GLU:H	1.85	0.42
1:AA:1104:G:O5'	2:AB:111:ARG:CD	2.62	0.42
1:AA:111:G:O6	1:AA:330:C:N4	2.45	0.42
1:AA:1442(A):G:N2	52:BT:119:LYS:HA	2.34	0.42
1:AA:1536:C:H2'	1:AA:1537:U:C6	2.54	0.42
1:AA:495:A:H61	4:AD:119:GLN:NE2	2.18	0.42
1:AA:515:G:O2'	1:AA:516:U:H5'	2.20	0.42
3:AC:40:ARG:CG	3:AC:40:ARG:NH1	2.81	0.42
3:AC:54:ARG:CG	3:AC:55:VAL:N	2.83	0.42
8:AH:35:ILE:H	8:AH:35:ILE:HG12	1.69	0.42
1:AA:600:C:OP1	8:AH:97:VAL:HG12	2.19	0.42
10:AJ:84:GLN:O	10:AJ:88:LEU:N	2.47	0.42
15:AO:48:LYS:HA	15:AO:48:LYS:HD3	1.79	0.42
25:AZ:136:ASN:HA	25:AZ:173:GLY:O	2.20	0.42
25:AZ:34:VAL:C	25:AZ:36:ALA:H	2.23	0.42
26:B0:25:ARG:HG2	26:B0:25:ARG:HH11	1.85	0.42
28:B2:57:ILE:O	28:B2:61:LEU:N	2.52	0.42
34:B8:20:GLY:O	34:B8:57:ARG:HD3	2.19	0.42
36:BA:1170:G:N2	36:BA:1180:C:C2	2.87	0.42
36:BA:2133:G:C2'	36:BA:2157:G:H22	2.33	0.42
36:BA:236:C:H2'	36:BA:237:C:H6	1.85	0.42
36:BA:2370:G:C6	36:BA:2371:G:C6	3.07	0.42
36:BA:2464:C:O2'	36:BA:2465:C:P	2.77	0.42
36:BA:280:C:N4	36:BA:360:G:H1	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:479:A:HO2'	36:BA:481:G:H8	1.67	0.42
36:BA:60:G:C4	36:BA:63:U:C4	3.08	0.42
36:BA:709:U:H2'	36:BA:710:G:H8	1.78	0.42
38:BC:98:GLU:HG3	38:BC:98:GLU:O	2.20	0.42
40:BE:54:GLN:O	40:BE:75:VAL:CG2	2.65	0.42
40:BE:59:VAL:HG21	40:BE:63:LEU:HA	2.01	0.42
41:BF:87:GLY:O	41:BF:88:VAL:O	2.37	0.42
42:BG:138:GLN:HE21	42:BG:152:LEU:HA	1.84	0.42
43:BH:157:TYR:O	43:BH:158:HIS:CD2	2.73	0.42
46:BN:10:GLU:HG3	46:BN:11:PRO:HD2	2.01	0.42
48:BP:126:VAL:HA	48:BP:145:PRO:CG	2.50	0.42
48:BP:131:SER:O	48:BP:132:LYS:C	2.59	0.42
36:BA:2358:G:N2	48:BP:55:ARG:NH2	2.68	0.42
52:BT:34:VAL:HG22	52:BT:39:ARG:HA	2.01	0.42
1:AA:345:C:O5'	52:BT:41:ARG:CZ	2.68	0.42
52:BT:95:ARG:NH1	52:BT:95:ARG:HB3	2.35	0.42
46:BN:42:TRP:O	53:BU:64:ARG:NH1	2.52	0.42
53:BU:95:LEU:HD11	54:BV:11:GLN:HG3	2.02	0.42
57:BY:39:VAL:HG12	57:BY:40:GLU:H	1.84	0.42
58:BZ:63:ASP:CG	58:BZ:65:GLN:HE21	2.23	0.42
1:CA:1033:G:H2'	1:CA:1034:G:O4'	2.20	0.42
1:CA:109:A:C6	1:CA:326:G:C6	3.07	0.42
1:CA:540:G:O2'	1:CA:541:G:H5'	2.20	0.42
1:CA:656:C:O2'	1:CA:657:G:H5'	2.20	0.42
1:CA:827:U:N3	1:CA:870:U:C4	2.88	0.42
4:CD:18:LYS:CA	4:CD:33:MET:HE2	2.49	0.42
4:CD:8:VAL:HB	4:CD:21:LEU:HD12	2.01	0.42
1:CA:7:G:O2'	5:CE:120:THR:O	2.36	0.42
5:CE:144:THR:O	5:CE:147:ASP:OD1	2.37	0.42
5:CE:36:ASP:OD1	5:CE:36:ASP:C	2.58	0.42
5:CE:51:VAL:O	5:CE:54:ALA:HB3	2.20	0.42
9:CI:43:ALA:O	9:CI:45:ALA:N	2.52	0.42
9:CI:58:HIS:C	9:CI:59:PHE:HD1	2.23	0.42
10:CJ:21:GLN:CG	10:CJ:21:GLN:O	2.68	0.42
13:CM:106:ASN:O	13:CM:107:ALA:HB3	2.20	0.42
15:CO:48:LYS:HD3	15:CO:48:LYS:HA	1.80	0.42
19:CS:11:VAL:HG23	19:CS:38:SER:HB3	2.01	0.42
22:CV:1:G:C1'	26:D0:5:LYS:NZ	2.83	0.42
25:CZ:325:LYS:HE3	25:CZ:331:HIS:HB2	2.02	0.42
26:D0:53:MET:HA	26:D0:58:THR:O	2.20	0.42
27:D1:16:ASN:HD22	27:D1:37:ILE:HG22	1.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D2:12:GLU:HA	28:D2:15:LYS:HE2	2.01	0.42
32:D6:13:CYS:HB3	32:D6:49:HIS:HB3	2.02	0.42
34:D8:8:LYS:CA	34:D8:11:LYS:HD3	2.41	0.42
36:DA:1405:U:H2'	36:DA:1406:U:C6	2.55	0.42
36:DA:1432:C:H2'	36:DA:1433:U:O4'	2.20	0.42
36:DA:1450(A):C:C2	36:DA:1451:C:C5	3.08	0.42
36:DA:1477:A:C2	36:DA:1515:G:C2	3.08	0.42
36:DA:1579:A:H2'	36:DA:1580:A:O4'	2.20	0.42
36:DA:1666:G:H1'	47:DO:3:GLN:HE21	1.84	0.42
36:DA:1906:G:C8	36:DA:1929:G:H2'	2.55	0.42
36:DA:1982:C:C5'	36:DA:1983:C:OP2	2.67	0.42
36:DA:265:A:C8	36:DA:266:G:H1'	2.55	0.42
36:DA:2735:G:H2'	36:DA:2736:G:C8	2.55	0.42
36:DA:625:G:O2'	36:DA:626:U:H5'	2.20	0.42
37:DB:13:A:HO2'	37:DB:14:U:H3'	1.83	0.42
37:DB:43:C:H5'	37:DB:44:G:OP2	2.20	0.42
37:DB:48:A:OP1	51:DS:93:LYS:HB3	2.20	0.42
39:DD:44:ASN:CB	39:DD:48:ARG:O	2.68	0.42
42:DG:133:LEU:N	42:DG:133:LEU:HD23	2.34	0.42
42:DG:45:GLU:O	42:DG:47:LYS:N	2.51	0.42
42:DG:82:LEU:HB3	42:DG:87:PRO:HB3	2.01	0.42
42:DG:81:LYS:HB3	42:DG:82:LEU:H	1.68	0.42
43:DH:89:ILE:HG12	43:DH:129:THR:HA	2.01	0.42
36:DA:1107:G:H4'	44:DJ:81:UNK:HA	2.02	0.42
46:DN:18:ALA:O	46:DN:20:GLY:N	2.53	0.42
46:DN:57:ALA:O	46:DN:58:ASP:O	2.37	0.42
50:DR:32:GLY:O	50:DR:115:GLU:HA	2.20	0.42
52:DT:119:LYS:O	52:DT:123:GLN:HG2	2.20	0.42
52:DT:92:GLY:O	52:DT:94:ALA:N	2.53	0.42
53:DU:13:LYS:HD3	53:DU:13:LYS:N	2.34	0.42
54:DV:52:VAL:O	54:DV:52:VAL:HG13	2.19	0.42
55:DW:2:GLU:HA	55:DW:64:MET:HE1	2.02	0.42
56:DX:13:LEU:HA	56:DX:18:TYR:OH	2.20	0.42
57:DY:47:LYS:HG3	57:DY:60:PHE:CE1	2.54	0.42
58:DZ:108:PRO:O	58:DZ:110:GLY:N	2.52	0.42
1:AA:1015:A:C6	1:AA:1016:A:C6	3.07	0.42
1:AA:1346:A:H5''	9:AI:120:ARG:NH2	2.34	0.42
1:AA:1498:U:H4'	1:AA:1519:A:N1	2.35	0.42
1:AA:623:C:C4	1:AA:624:C:C4	3.08	0.42
2:AB:144:ARG:CG	2:AB:145:LEU:N	2.81	0.42
2:AB:29:ALA:HA	2:AB:32:ILE:HG21	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:50:ALA:CA	3:AC:72:LYS:HB2	2.45	0.42
4:AD:101:LEU:C	4:AD:103:ASN:H	2.23	0.42
1:AA:256:U:C5'	17:AQ:17:LYS:HZ1	2.32	0.42
19:AS:9:VAL:HG12	19:AS:10:PHE:N	2.34	0.42
20:AT:92:LEU:O	20:AT:94:ALA:N	2.52	0.42
22:AW:29:G:O2'	22:AW:30:G:H5'	2.20	0.42
25:AZ:143:ASP:O	25:AZ:147:LEU:HD23	2.19	0.42
27:B1:70:VAL:O	27:B1:73:LEU:HB2	2.20	0.42
29:B3:35:ARG:HG2	29:B3:37:LEU:HG	2.01	0.42
32:B6:32:ASN:CG	32:B6:33:LYS:N	2.73	0.42
35:B9:34:GLN:HB3	35:B9:35:ARG:H	1.71	0.42
36:BA:1510:G:C2'	36:BA:1511:C:H5'	2.49	0.42
36:BA:1946:U:H2'	36:BA:1947:C:H6	1.85	0.42
36:BA:208:C:H2'	36:BA:209:C:H6	1.84	0.42
36:BA:402:A:C2'	36:BA:403:U:H5'	2.49	0.42
36:BA:634:C:H2'	36:BA:635:C:H6	1.84	0.42
36:BA:638:G:C6	36:BA:639:U:N3	2.88	0.42
37:BB:13:A:H2'	37:BB:14:U:H5''	2.02	0.42
38:BC:57:ASN:HA	38:BC:57:ASN:HD22	1.64	0.42
38:BC:75:LEU:HD21	38:BC:113:VAL:HG22	2.01	0.42
39:BD:30:GLU:CG	39:BD:63:ARG:HH21	2.33	0.42
40:BE:11:MET:CB	40:BE:24:THR:HA	2.50	0.42
40:BE:4:ILE:HD11	40:BE:28:ALA:O	2.20	0.42
40:BE:67:PHE:HD1	40:BE:67:PHE:HA	1.72	0.42
40:BE:68:ALA:O	40:BE:70:ALA:N	2.52	0.42
40:BE:76:ARG:O	40:BE:77:ILE:C	2.58	0.42
41:BF:28:ILE:O	41:BF:30:PRO:HD3	2.19	0.42
42:BG:102:PHE:O	42:BG:103:LEU:CB	2.59	0.42
43:BH:110:SER:O	43:BH:111:HIS:HB2	2.20	0.42
43:BH:125:VAL:O	43:BH:125:VAL:HG12	2.19	0.42
44:BJ:125:UNK:C	44:BJ:127:UNK:N	2.82	0.42
46:BN:73:THR:HA	46:BN:83:LYS:O	2.19	0.42
48:BP:124:LYS:HA	48:BP:124:LYS:HD3	1.84	0.42
49:BQ:76:LYS:HB3	49:BQ:91:GLU:CG	2.49	0.42
50:BR:4:LEU:CD1	50:BR:7:GLY:HA3	2.50	0.42
50:BR:57:ARG:O	50:BR:58:GLY:C	2.59	0.42
51:BS:83:LYS:HE2	51:BS:83:LYS:HB3	1.91	0.42
52:BT:50:ILE:HG22	52:BT:51:ARG:N	2.34	0.42
53:BU:17:ILE:HG23	53:BU:39:LEU:CD1	2.49	0.42
54:BV:45:THR:CG2	54:BV:52:VAL:HG21	2.50	0.42
55:BW:92:ARG:O	55:BW:93:ALA:HB3	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BX:46:ALA:C	56:BX:47:PHE:CD1	2.93	0.42
57:BY:75:ILE:CG2	57:BY:76:CYS:N	2.78	0.42
57:BY:81:LYS:HD3	57:BY:97:ARG:NE	2.34	0.42
57:BY:97:ARG:HH21	57:BY:98:VAL:CG2	2.32	0.42
58:BZ:79:ARG:HG3	58:BZ:79:ARG:O	2.18	0.42
1:CA:1037:C:O5'	1:CA:1037:C:H6	2.03	0.42
1:CA:1107:C:C4	1:CA:1108:G:C8	3.07	0.42
1:CA:1442(A):G:C3'	1:CA:1442(B):A:H5''	2.50	0.42
1:CA:16:A:N1	1:CA:919:A:H2	2.18	0.42
1:CA:197:A:C5	1:CA:221:C:H4'	2.54	0.42
1:CA:298:A:H2'	1:CA:299:G:O4'	2.20	0.42
1:CA:412:A:H5'	1:CA:413:G:OP1	2.20	0.42
1:CA:416:G:H2'	1:CA:417:C:O4'	2.20	0.42
3:CC:8:ILE:O	3:CC:11:ARG:N	2.52	0.42
4:CD:100:ARG:HH11	4:CD:100:ARG:HG3	1.85	0.42
4:CD:65:ARG:NH1	4:CD:70:ILE:O	2.53	0.42
7:CG:6:ARG:O	7:CG:7:ALA:O	2.38	0.42
9:CI:18:PHE:HD1	9:CI:62:TYR:O	2.03	0.42
14:CN:3:ARG:NE	14:CN:3:ARG:O	2.49	0.42
15:CO:39:LEU:CD1	15:CO:56:LEU:HB2	2.44	0.42
16:CP:9:PHE:CE2	16:CP:18:ARG:CZ	3.02	0.42
18:CR:59:SER:O	18:CR:60:ALA:C	2.58	0.42
1:CA:1305:G:H5''	21:CU:4:GLY:C	2.39	0.42
22:CV:24:G:C6	22:CV:25:C:C4	3.08	0.42
24:CY:26:A:C2'	24:CY:27:C:H5'	2.50	0.42
25:CZ:188:THR:CG2	25:CZ:193:ASN:HD22	2.28	0.42
25:CZ:178:ALA:HB3	25:CZ:199:ILE:HD11	2.02	0.42
25:CZ:206:ILE:C	25:CZ:208:GLU:N	2.74	0.42
29:D3:23:LEU:HD21	29:D3:50:VAL:HG11	2.02	0.42
31:D5:50:GLY:HA3	31:D5:56:LYS:HD2	2.01	0.42
36:DA:1499:C:H2'	36:DA:1500:G:C5'	2.50	0.42
36:DA:1657:C:H2'	36:DA:1658:C:C6	2.54	0.42
36:DA:1847:A:H2'	36:DA:1847:A:N3	2.35	0.42
36:DA:2308:G:N7	36:DA:2310:A:C5'	2.81	0.42
36:DA:271(I):G:H2'	36:DA:271(J):C:O4'	2.20	0.42
36:DA:596:G:H2'	36:DA:597:U:O4'	2.19	0.42
38:DC:117:PRO:HD2	38:DC:147:PHE:CD2	2.55	0.42
39:DD:147:LEU:HA	39:DD:147:LEU:HD12	1.74	0.42
41:DF:125:LEU:N	41:DF:125:LEU:CD2	2.83	0.42
43:DH:45:VAL:O	43:DH:47:GLU:N	2.53	0.42
45:DK:99:UNK:O	45:DK:100:UNK:C	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DN:32:THR:C	46:DN:34:LEU:N	2.72	0.42
46:DN:39:ARG:O	46:DN:41:ASP:N	2.53	0.42
46:DN:43:THR:HB	46:DN:46:VAL:HG12	2.00	0.42
48:DP:35:HIS:O	48:DP:36:LYS:HB2	2.20	0.42
48:DP:82:GLY:HA3	48:DP:115:LEU:HD21	2.01	0.42
50:DR:58:GLY:CA	50:DR:80:PHE:HE2	2.28	0.42
52:DT:66:VAL:HA	52:DT:71:GLY:HA2	2.00	0.42
58:DZ:10:ARG:HE	58:DZ:36:LYS:HB2	1.85	0.42
1:AA:369:C:HO2'	1:AA:370:C:H6	1.68	0.41
1:AA:751:U:C2'	1:AA:752:G:H5'	2.50	0.41
1:AA:957:U:O2	1:AA:959:A:H8	2.02	0.41
2:AB:102:LEU:HD12	2:AB:102:LEU:N	2.35	0.41
2:AB:18:GLY:O	2:AB:19:HIS:HB2	2.20	0.41
3:AC:106:VAL:O	3:AC:107:GLN:C	2.58	0.41
3:AC:90:GLU:O	3:AC:93:LYS:HB3	2.20	0.41
12:AL:60:LEU:CD2	12:AL:66:VAL:HG22	2.50	0.41
15:AO:32:LEU:O	15:AO:36:ILE:HG13	2.19	0.41
17:AQ:99:SER:C	17:AQ:100:LYS:HG3	2.41	0.41
19:AS:16:LEU:O	19:AS:20:LEU:N	2.51	0.41
19:AS:6:LYS:CD	19:AS:6:LYS:N	2.83	0.41
22:AV:63:G:O2'	22:AV:64:A:H5'	2.18	0.41
1:AA:1505:G:H2'	23:AX:18:G:OP2	2.20	0.41
24:AY:20:H2U:H61	24:AY:20:H2U:H2'	1.88	0.41
25:AZ:163:PHE:C	25:AZ:165:GLY:H	2.22	0.41
25:AZ:206:ILE:O	25:AZ:210:ILE:CG2	2.68	0.41
28:B2:29:LYS:O	28:B2:32:LEU:HB3	2.19	0.41
28:B2:18:PRO:HG2	28:B2:72:ALA:O	2.20	0.41
32:B6:16:CYS:SG	32:B6:48:VAL:CG2	2.98	0.41
36:BA:1526:G:C6	36:BA:1527:G:C2	3.08	0.41
36:BA:2122:U:H2'	36:BA:2123:G:H8	1.84	0.41
36:BA:2149:G:O2'	36:BA:2150:U:H5'	2.19	0.41
36:BA:2110:G:N1	36:BA:2178:C:C5	2.74	0.41
36:BA:252:G:O2'	36:BA:253:C:H5'	2.20	0.41
36:BA:2557:G:H2'	36:BA:2558:C:C6	2.54	0.41
36:BA:607:U:N3	36:BA:621:A:C2	2.87	0.41
36:BA:654(S):G:N7	36:BA:654(T):C:O2	2.53	0.41
36:BA:797:C:H2'	36:BA:798:G:H8	1.85	0.41
38:BC:10:LEU:CD1	38:BC:32:LEU:HA	2.48	0.41
39:BD:242:ARG:HG3	39:BD:242:ARG:HH11	1.81	0.41
41:BF:24:LEU:CB	41:BF:25:PRO:HD2	2.21	0.41
42:BG:48:GLU:O	42:BG:49:ASP:C	2.59	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BH:119:GLU:OE1	43:BH:119:GLU:N	2.53	0.41
46:BN:43:THR:HB	46:BN:46:VAL:HG12	2.02	0.41
48:BP:112:LEU:C	48:BP:112:LEU:HD22	2.41	0.41
50:BR:52:ILE:O	50:BR:55:ALA:HB3	2.20	0.41
51:BS:67:ARG:O	51:BS:71:ARG:HG3	2.20	0.41
51:BS:77:ALA:O	51:BS:78:LEU:C	2.59	0.41
51:BS:92:TYR:O	51:BS:93:LYS:HB3	2.20	0.41
53:BU:59:ARG:CG	53:BU:59:ARG:NH1	2.79	0.41
36:BA:1599:C:OP2	56:BX:36:LYS:HD2	2.19	0.41
58:BZ:104:PHE:HE2	58:BZ:119:GLU:HB3	1.85	0.41
1:CA:1037:C:C5	1:CA:1038:C:N3	2.88	0.41
1:CA:1054:C:O2'	1:CA:1055:A:P	2.78	0.41
1:CA:1307:U:H2'	1:CA:1308:U:C6	2.54	0.41
1:CA:1312:G:O2'	1:CA:1313:U:H5'	2.20	0.41
1:CA:528:C:H41	12:CL:49:ASN:HD21	1.68	0.41
1:CA:665:A:H1'	1:CA:733:A:O4'	2.19	0.41
2:CB:102:LEU:HD12	2:CB:102:LEU:N	2.35	0.41
2:CB:142:LEU:O	2:CB:142:LEU:HD23	2.20	0.41
3:CC:73:PRO:CG	3:CC:105:GLU:HB2	2.47	0.41
3:CC:186:PHE:HE2	3:CC:188:LEU:HD22	1.83	0.41
4:CD:104:VAL:O	4:CD:104:VAL:HG12	2.20	0.41
6:CF:24:GLU:HG2	6:CF:28:ARG:NH1	2.35	0.41
8:CH:111:ILE:C	8:CH:112:LEU:HD23	2.39	0.41
8:CH:20:TYR:HA	8:CH:65:TYR:CZ	2.55	0.41
8:CH:6:ILE:N	8:CH:6:ILE:HD12	2.35	0.41
11:CK:44:SER:OG	11:CK:47:VAL:HG23	2.20	0.41
12:CL:126:LYS:HE2	12:CL:127:GLU:N	2.34	0.41
12:CL:42:THR:HA	12:CL:53:ARG:O	2.19	0.41
13:CM:16:ASP:CA	13:CM:34:LEU:HD11	2.50	0.41
22:CV:44:G:H5''	22:CV:45:U:C5	2.55	0.41
24:CY:61:C:H2'	24:CY:62:U:C5'	2.50	0.41
25:CZ:272:MET:HB2	25:CZ:277:LEU:HB2	2.02	0.41
32:D6:10:LEU:H	32:D6:10:LEU:HD22	1.78	0.41
36:DA:1076:C:O2	45:DK:89:UNK:HA	2.20	0.41
36:DA:142:A:H5''	36:DA:142(A):C:C5	2.54	0.41
36:DA:1470:G:N2	36:DA:1523:U:C4	2.88	0.41
36:DA:1516:C:C2'	36:DA:1517:G:C5'	2.82	0.41
36:DA:1986:A:H2'	36:DA:1986:A:N3	2.35	0.41
36:DA:2008:C:H2'	36:DA:2009:G:H8	1.85	0.41
36:DA:211:A:O2'	36:DA:212:G:H5'	2.20	0.41
36:DA:229:A:OP1	36:DA:229:A:H8	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:250:G:H2'	36:DA:251:A:C8	2.55	0.41
36:DA:761:A:H3'	36:DA:761:A:H8	1.86	0.41
28:D2:47:ASN:HD22	36:DA:95:G:H1'	1.85	0.41
38:DC:57:ASN:HA	38:DC:57:ASN:HD22	1.66	0.41
40:DE:64:LYS:C	40:DE:66:HIS:H	2.21	0.41
41:DF:28:ILE:O	41:DF:30:PRO:HD3	2.20	0.41
41:DF:37:VAL:HG12	41:DF:41:LEU:HD12	2.02	0.41
42:DG:43:LEU:HD22	42:DG:43:LEU:N	2.35	0.41
37:DB:41:U:N3	42:DG:70:VAL:HB	2.35	0.41
43:DH:139:GLN:HE21	43:DH:140:LYS:CA	2.33	0.41
47:DO:104:ARG:N	47:DO:122:LEU:OXT	2.49	0.41
1:CA:1423:G:H5'	47:DO:49:ARG:HH22	1.85	0.41
48:DP:107:LYS:O	48:DP:108:LYS:HB2	2.20	0.41
54:DV:51:VAL:HG12	54:DV:52:VAL:N	2.24	0.41
54:DV:97:LYS:HD3	54:DV:97:LYS:HA	1.84	0.41
56:DX:57:LEU:HD13	56:DX:78:LYS:O	2.20	0.41
36:DA:105:C:O2'	57:DY:2:ARG:HG3	2.20	0.41
1:AA:1150:U:O2'	1:AA:1151:A:H5'	2.21	0.41
1:AA:1305:G:H5''	21:AU:4:GLY:C	2.41	0.41
1:AA:1402:C:H2'	1:AA:1403:C:O4'	2.20	0.41
1:AA:67:C:H2'	1:AA:68:G:C8	2.56	0.41
2:AB:58:ILE:CG2	2:AB:222:ILE:CD1	2.98	0.41
4:AD:49:ARG:HG2	4:AD:49:ARG:H	1.64	0.41
4:AD:59:ARG:HH21	4:AD:62:GLN:CG	2.28	0.41
7:AG:68:ASN:O	7:AG:138:LYS:HD2	2.20	0.41
7:AG:16:LEU:HD21	9:AI:45:ALA:HB2	2.02	0.41
9:AI:85:LEU:C	9:AI:85:LEU:HD12	2.39	0.41
11:AK:61:ALA:HB2	11:AK:90:GLY:HA2	2.02	0.41
28:B2:59:ARG:O	28:B2:63:VAL:HG23	2.20	0.41
32:B6:17:LYS:O	32:B6:18:ARG:CB	2.67	0.41
36:BA:1070:A:H5'	36:BA:1072:C:OP2	2.20	0.41
36:BA:1131:G:O2'	36:BA:1132:A:H8	2.03	0.41
36:BA:1171:G:H3'	36:BA:1173:G:O4'	2.20	0.41
36:BA:1387:C:C2	36:BA:1388:G:C8	3.08	0.41
33:B7:5:TRP:O	36:BA:1612:C:H4'	2.20	0.41
36:BA:1858:G:OP2	36:BA:1858:G:H8	2.02	0.41
36:BA:1889:A:H1'	36:BA:2087:G:O4'	2.19	0.41
36:BA:2489:G:C6	36:BA:2490:G:N1	2.89	0.41
36:BA:2856:C:O2'	36:BA:2857:G:H5'	2.20	0.41
36:BA:79:G:H2'	36:BA:80:G:H8	1.84	0.41
36:BA:833:U:H5''	48:BP:48:PRO:HB2	2.00	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BC:200:LYS:HG3	38:BC:208:PHE:CD1	2.55	0.41
36:BA:1655:A:H1'	40:BE:113:PHE:CE1	2.56	0.41
40:BE:120:TRP:HA	40:BE:120:TRP:CE3	2.55	0.41
40:BE:110:GLY:HA3	40:BE:162:ALA:HB2	2.01	0.41
41:BF:113:ALA:HB1	41:BF:186:ILE:CG2	2.51	0.41
41:BF:169:ASN:ND2	41:BF:169:ASN:O	2.52	0.41
43:BH:46:GLU:O	43:BH:48:GLY:N	2.54	0.41
44:BJ:104:UNK:HA	44:BJ:108:UNK:O	2.20	0.41
47:BO:17:ARG:HD3	47:BO:17:ARG:HA	1.93	0.41
48:BP:107:LYS:HE3	48:BP:107:LYS:HB2	1.87	0.41
48:BP:138:LEU:HD12	48:BP:138:LEU:N	2.34	0.41
48:BP:96:THR:HG22	48:BP:126:VAL:CB	2.45	0.41
49:BQ:42:ILE:HG22	49:BQ:47:ILE:HG13	2.03	0.41
50:BR:74:LYS:CD	50:BR:77:ARG:NH1	2.83	0.41
52:BT:92:GLY:O	52:BT:94:ALA:N	2.53	0.41
53:BU:68:ALA:C	53:BU:70:ARG:H	2.22	0.41
53:BU:70:ARG:NH2	53:BU:75:ASN:HB2	2.34	0.41
56:BX:45:THR:OG1	56:BX:46:ALA:N	2.53	0.41
56:BX:83:VAL:HG12	56:BX:87:GLN:HB2	2.01	0.41
1:CA:1296:C:C4'	1:CA:1302:U:C4	3.03	0.41
1:CA:165:C:H2'	1:CA:166:G:H8	1.84	0.41
1:CA:548:G:H2'	1:CA:549:C:O4'	2.20	0.41
2:CB:224:GLN:C	2:CB:226:ARG:N	2.71	0.41
2:CB:39:ILE:CG2	2:CB:40:HIS:N	2.82	0.41
3:CC:28:GLN:O	3:CC:29:TYR:CB	2.68	0.41
3:CC:76:VAL:O	3:CC:83:ARG:HG3	2.19	0.41
5:CE:126:ARG:O	5:CE:127:ASN:C	2.58	0.41
1:CA:555:C:OP1	12:CL:20:LYS:HE3	2.21	0.41
15:CO:33:THR:HG23	15:CO:63:ARG:NH1	2.36	0.41
17:CQ:36:ILE:HG13	17:CQ:36:ILE:O	2.20	0.41
20:CT:22:ARG:O	20:CT:26:ASN:ND2	2.53	0.41
22:CV:75:C:H2'	22:CV:76:A:H1'	2.01	0.41
25:CZ:65:THR:HA	25:CZ:83:PRO:HD3	2.02	0.41
25:CZ:86:ALA:O	25:CZ:87:ASP:HB2	2.20	0.41
27:D1:23:LYS:CE	27:D1:28:GLY:HA3	2.51	0.41
28:D2:52:ASP:O	28:D2:53:LEU:C	2.57	0.41
35:D9:29:ASN:H	35:D9:29:ASN:ND2	2.17	0.41
35:D9:1:MET:HE3	35:D9:31:LYS:HB3	2.01	0.41
36:DA:1091:G:H22	36:DA:1101:U:H1'	1.85	0.41
36:DA:1424:G:H2'	36:DA:1425:G:O4'	2.20	0.41
36:DA:1534:U:C2'	36:DA:1535:A:H5'	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1588:C:H2'	36:DA:1589:C:C6	2.54	0.41
36:DA:1858:G:OP2	36:DA:1858:G:H8	2.04	0.41
36:DA:2108:C:O2	36:DA:2108:C:C2'	2.63	0.41
36:DA:2236:C:H2'	36:DA:2237:G:O4'	2.20	0.41
36:DA:2335:A:C8	36:DA:2337:G:C5	3.08	0.41
36:DA:260:G:C6	36:DA:261:G:N7	2.88	0.41
28:D2:50:ILE:HG21	36:DA:61:G:H5'	2.02	0.41
36:DA:733:G:C8	36:DA:761:A:C6	3.08	0.41
36:DA:815:C:H2'	36:DA:816:C:C6	2.55	0.41
36:DA:877:U:O2'	36:DA:900:A:N6	2.54	0.41
36:DA:930:U:H4'	36:DA:931:G:O5'	2.20	0.41
37:DB:48:A:H4'	51:DS:95:HIS:HD2	1.85	0.41
38:DC:28:LEU:O	38:DC:28:LEU:HD23	2.20	0.41
48:DP:111:ARG:HA	48:DP:128:HIS:CD2	2.54	0.41
48:DP:17:LYS:O	48:DP:19:VAL:N	2.53	0.41
48:DP:59:LEU:HA	48:DP:61:ARG:CD	2.50	0.41
49:DQ:1:MET:HE1	49:DQ:44:ALA:C	2.40	0.41
55:DW:55:ALA:C	55:DW:57:ASN:N	2.73	0.41
36:DA:26:G:P	55:DW:80:PRO:HB3	2.61	0.41
56:DX:51:VAL:CG1	56:DX:81:VAL:HB	2.50	0.41
57:DY:56:PRO:O	57:DY:57:GLN:O	2.38	0.41
58:DZ:125:LEU:O	58:DZ:164:ALA:HB3	2.19	0.41
1:AA:1008:C:H42	1:AA:1021:G:H1	1.68	0.41
1:AA:1054:C:OP1	1:AA:1197:G:OP1	2.38	0.41
1:AA:1068:G:N7	1:AA:1094:G:H2'	2.35	0.41
1:AA:1151:A:O2'	1:AA:1152:A:H8	2.03	0.41
1:AA:124:G:H2'	1:AA:125:U:O4'	2.20	0.41
1:AA:16:A:N1	1:AA:919:A:C2	2.86	0.41
1:AA:220:G:H2'	1:AA:221:C:H5'	2.01	0.41
1:AA:355:C:C4	1:AA:356:A:N7	2.88	0.41
1:AA:376:G:N3	1:AA:389:A:C2	2.88	0.41
1:AA:409:G:H3'	1:AA:410:G:C8	2.56	0.41
1:AA:454:C:H5''	1:AA:455:C:C5	2.55	0.41
1:AA:586:C:O2'	1:AA:587:G:H5'	2.20	0.41
4:AD:9:CYS:SG	4:AD:31:CYS:O	2.61	0.41
4:AD:58:LEU:HD23	4:AD:62:GLN:HG2	2.01	0.41
5:AE:76:ILE:HG13	5:AE:77:PRO:HD2	2.02	0.41
10:AJ:6:ILE:HG22	10:AJ:98:ILE:CD1	2.48	0.41
11:AK:73:MET:C	11:AK:75:TYR:H	2.24	0.41
25:AZ:135:MET:CE	25:AZ:150:VAL:HB	2.50	0.41
25:AZ:182:MET:SD	25:AZ:188:THR:HB	2.60	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:B1:18:ILE:HG12	27:B1:37:ILE:HG22	2.02	0.41
27:B1:34:THR:CG2	27:B1:36:GLY:H	2.32	0.41
30:B4:5:ILE:CD1	30:B4:5:ILE:N	2.83	0.41
32:B6:36:LEU:HD23	32:B6:37:ARG:N	2.34	0.41
36:BA:1208:C:C2	36:BA:1209:G:C8	3.09	0.41
36:BA:1305:C:O2'	36:BA:1306:C:H5'	2.20	0.41
36:BA:1348:G:C3'	36:BA:1349:A:H5''	2.50	0.41
36:BA:1432:C:H2'	36:BA:1433:U:O4'	2.20	0.41
36:BA:211:A:O2'	36:BA:212:G:H5'	2.20	0.41
36:BA:271(D):G:H1	36:BA:271(T):C:H42	1.68	0.41
36:BA:2750:A:H5''	36:BA:2751:G:OP2	2.19	0.41
36:BA:319:C:O2'	36:BA:320:A:H5'	2.20	0.41
38:BC:155:GLU:OE1	38:BC:160:ARG:HD3	2.20	0.41
39:BD:79:VAL:CG2	39:BD:111:LEU:HD11	2.51	0.41
36:BA:1658:C:OP1	40:BE:132:HIS:CE1	2.73	0.41
40:BE:132:HIS:ND1	40:BE:135:HIS:HE1	2.17	0.41
40:BE:59:VAL:HG13	40:BE:60:ASN:N	2.31	0.41
36:BA:1205:U:C5	41:BF:171:PRO:HA	2.55	0.41
41:BF:28:ILE:HG12	41:BF:28:ILE:O	2.21	0.41
42:BG:55:LYS:HA	42:BG:58:GLN:CG	2.48	0.41
42:BG:46:ALA:CB	42:BG:88:ILE:CD1	2.94	0.41
43:BH:122:THR:O	43:BH:133:VAL:HA	2.19	0.41
43:BH:147:ASN:N	43:BH:147:ASN:ND2	2.69	0.41
44:BJ:4:UNK:C	44:BJ:6:UNK:N	2.80	0.41
45:BK:86:UNK:O	45:BK:87:UNK:CB	2.68	0.41
48:BP:39:LYS:HD2	48:BP:40:SER:N	2.26	0.41
48:BP:45:LEU:CD1	48:BP:46:LYS:N	2.82	0.41
48:BP:82:GLY:HA3	48:BP:115:LEU:HD21	2.02	0.41
50:BR:79:LEU:C	50:BR:79:LEU:HD13	2.41	0.41
51:BS:17:ARG:C	51:BS:19:LYS:N	2.74	0.41
51:BS:58:LEU:HG	51:BS:59:LYS:N	2.32	0.41
51:BS:59:LYS:CG	51:BS:60:GLY:H	2.01	0.41
52:BT:53:ARG:O	52:BT:59:THR:HB	2.21	0.41
36:BA:2875:C:C4'	52:BT:5:ALA:HB2	2.43	0.41
52:BT:6:LEU:HA	52:BT:9:LEU:HD12	2.02	0.41
55:BW:20:VAL:CG2	55:BW:47:VAL:HG21	2.42	0.41
55:BW:50:VAL:HG13	55:BW:51:LEU:N	2.36	0.41
57:BY:47:LYS:HE3	57:BY:60:PHE:CZ	2.54	0.41
58:BZ:121:HIS:HD2	58:BZ:123:ASP:H	1.69	0.41
1:CA:1053:G:C4'	1:CA:1054:C:C5'	2.81	0.41
1:CA:1410:G:H2'	1:CA:1411:C:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:148:G:H2'	1:CA:149:A:C8	2.54	0.41
1:CA:376:G:N3	1:CA:389:A:C2	2.87	0.41
1:CA:512:U:C2	1:CA:513:C:C5	3.08	0.41
1:CA:757:U:H2'	1:CA:758:G:O4'	2.20	0.41
1:CA:942:G:H21	9:CI:124:GLN:HE22	1.62	0.41
4:CD:101:LEU:O	4:CD:102:ASP:C	2.59	0.41
1:CA:436:C:H5''	4:CD:156:GLU:CD	2.40	0.41
5:CE:80:ILE:HG12	5:CE:142:LEU:HD21	2.02	0.41
8:CH:19:VAL:HG23	8:CH:21:LYS:HG3	2.02	0.41
10:CJ:35:SER:O	10:CJ:36:GLY:O	2.37	0.41
12:CL:17:LYS:CD	12:CL:18:VAL:HG22	2.51	0.41
13:CM:32:GLU:OE1	13:CM:32:GLU:C	2.59	0.41
13:CM:5:ALA:HB1	13:CM:66:LEU:HD23	2.00	0.41
13:CM:77:ASN:O	13:CM:81:LEU:HD23	2.20	0.41
13:CM:82:MET:HG2	13:CM:83:ASP:H	1.85	0.41
14:CN:14:PRO:O	14:CN:15:LYS:O	2.38	0.41
14:CN:28:GLY:O	14:CN:29:ARG:C	2.58	0.41
18:CR:79:LEU:HB3	18:CR:80:PRO:HD2	2.01	0.41
25:CZ:152:MET:HG3	25:CZ:153:GLU:N	2.34	0.41
25:CZ:34:VAL:HA	25:CZ:182:MET:HE2	2.02	0.41
28:D2:20:GLU:O	28:D2:22:GLU:N	2.53	0.41
28:D2:2:LYS:HB2	36:DA:97:C:H5''	2.01	0.41
28:D2:31:GLU:HA	28:D2:34:GLU:HB2	2.01	0.41
32:D6:27:LYS:HE3	32:D6:30:THR:OG1	2.20	0.41
32:D6:11:LEU:HG	32:D6:51:GLU:HG3	2.02	0.41
34:D8:56:GLU:O	34:D8:57:ARG:C	2.58	0.41
36:DA:1190:G:H5'	48:DP:35:HIS:CA	2.50	0.41
36:DA:1467:C:O2'	36:DA:1468:C:H5'	2.20	0.41
36:DA:1537:G:H2'	36:DA:1538:G:C8	2.56	0.41
36:DA:1947:C:C3'	36:DA:1948:G:H5''	2.49	0.41
36:DA:2289:G:H1'	36:DA:2346:A:H2	1.85	0.41
32:D6:45:LYS:CG	36:DA:2371:G:H4'	2.50	0.41
36:DA:2668:G:C2'	36:DA:2669:G:H5'	2.49	0.41
36:DA:2885:C:H2'	36:DA:2886:G:O5'	2.21	0.41
36:DA:586:A:H5'	41:DF:89:VAL:HG21	2.01	0.41
36:DA:604:G:C6	36:DA:605:C:C4	3.08	0.41
36:DA:752:A:HO2'	36:DA:753:C:P	2.41	0.41
36:DA:753:C:O5'	36:DA:753:C:H6	2.04	0.41
38:DC:43:VAL:CG2	38:DC:175:VAL:HG21	2.43	0.41
39:DD:35:LYS:CG	39:DD:36:PRO:N	2.77	0.41
39:DD:97:TYR:C	39:DD:99:ASP:N	2.74	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2810:A:H2'	40:DE:61:ARG:NH2	2.34	0.41
46:DN:58:ASP:C	46:DN:60:ILE:N	2.61	0.41
46:DN:87:LEU:O	46:DN:88:GLU:C	2.58	0.41
47:DO:34:THR:OG1	47:DO:35:VAL:N	2.54	0.41
49:DQ:5:ARG:CB	49:DQ:5:ARG:CZ	2.98	0.41
50:DR:63:ARG:HA	50:DR:80:PHE:CZ	2.56	0.41
51:DS:17:ARG:C	51:DS:19:LYS:N	2.73	0.41
52:DT:89:VAL:HG11	52:DT:91:ARG:HG3	1.98	0.41
53:DU:95:LEU:HD11	54:DV:11:GLN:HG3	2.00	0.41
54:DV:18:LEU:CD2	54:DV:19:LYS:N	2.78	0.41
54:DV:61:VAL:HA	54:DV:94:LEU:HD23	2.01	0.41
56:DX:14:SER:N	56:DX:17:ALA:HB3	2.34	0.41
56:DX:82:GLN:O	56:DX:82:GLN:HG3	2.20	0.41
57:DY:75:ILE:O	57:DY:96:ILE:HD13	2.20	0.41
58:DZ:111:VAL:HB	58:DZ:112:ARG:H	1.73	0.41
1:AA:1037:C:C5	1:AA:1038:C:N3	2.89	0.41
1:AA:1116:C:C2'	1:AA:1117:G:C5'	2.94	0.41
1:AA:407:G:H4'	4:AD:115:ARG:O	2.20	0.41
1:AA:513:C:C2	1:AA:514:C:C6	3.08	0.41
1:AA:602:A:H2'	1:AA:603:U:O4'	2.19	0.41
1:AA:658:G:O2'	1:AA:659:U:H5'	2.21	0.41
1:AA:973:G:H3'	1:AA:974:A:H5''	2.01	0.41
1:AA:436:C:H5''	4:AD:156:GLU:CD	2.40	0.41
6:AF:53:ALA:O	6:AF:54:LYS:CB	2.67	0.41
6:AF:78:GLU:O	6:AF:81:ILE:HG13	2.20	0.41
7:AG:42:ILE:HD13	7:AG:116:ALA:HB1	2.02	0.41
9:AI:92:TYR:HA	9:AI:95:LYS:HG2	2.01	0.41
12:AL:34:ARG:HG3	12:AL:105:TYR:CE2	2.55	0.41
12:AL:57:LYS:HA	12:AL:67:THR:HA	2.03	0.41
16:AP:8:ARG:C	16:AP:9:PHE:HD1	2.24	0.41
22:AW:20:U:O2'	22:AW:21:A:H4'	2.20	0.41
24:AY:17:H2U:O3'	24:AY:17:H2U:OP2	2.39	0.41
25:AZ:340:PRO:HG2	25:AZ:342:PHE:CZ	2.55	0.41
22:AV:76:A:N7	26:B0:2:ALA:HB1	2.35	0.41
27:B1:4:VAL:CG2	27:B1:5:CYS:N	2.81	0.41
28:B2:61:LEU:HA	28:B2:61:LEU:HD23	1.73	0.41
32:B6:11:LEU:HD13	32:B6:11:LEU:H	1.85	0.41
34:B8:28:GLY:CA	34:B8:32:LEU:HD22	2.50	0.41
35:B9:35:ARG:CD	36:BA:2742:C:OP1	2.68	0.41
36:BA:1058:G:N2	36:BA:1080:C:H42	2.19	0.41
36:BA:1291:C:H2'	36:BA:1292:U:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2177:C:H2'	36:BA:2178:C:O2	2.20	0.41
27:B1:40:ARG:HH12	36:BA:2232:U:P	2.43	0.41
36:BA:346:A:H2'	36:BA:347:A:H5'	2.02	0.41
36:BA:604:G:C6	36:BA:605:C:N4	2.88	0.41
36:BA:761:A:H8	36:BA:761:A:H3'	1.85	0.41
36:BA:782:A:H5'	36:BA:783:A:C2	2.55	0.41
36:BA:900:A:H3'	36:BA:901:A:H8	1.84	0.41
37:BB:13:A:H5'	37:BB:13:A:H8	1.85	0.41
37:BB:29:A:C2	37:BB:56:G:C2	3.08	0.41
38:BC:116:THR:HA	38:BC:117:PRO:HD3	1.89	0.41
38:BC:97:GLU:O	38:BC:98:GLU:HB3	2.21	0.41
39:BD:131:LEU:N	39:BD:131:LEU:HD12	2.34	0.41
36:BA:1076:C:O2	45:BK:89:UNK:HA	2.20	0.41
46:BN:3:THR:O	46:BN:4:TYR:CD2	2.72	0.41
36:BA:1666:G:H1'	47:BO:3:GLN:HE21	1.85	0.41
47:BO:86:ILE:C	47:BO:87:ILE:HD13	2.40	0.41
48:BP:130:PHE:CG	48:BP:135:LEU:HD23	2.55	0.41
48:BP:85:LEU:HA	48:BP:88:LEU:HB3	2.01	0.41
51:BS:34:HIS:HB2	51:BS:36:TYR:CE1	2.54	0.41
52:BT:110:ILE:C	52:BT:112:ARG:H	2.24	0.41
52:BT:10:VAL:C	52:BT:12:SER:N	2.73	0.41
52:BT:80:SER:HB3	52:BT:81:PRO:CD	2.39	0.41
57:BY:33:LYS:C	57:BY:35:TYR:H	2.23	0.41
58:BZ:29:TYR:CB	58:BZ:34:ASN:CB	2.94	0.41
58:BZ:35:ARG:HD2	58:BZ:36:LYS:N	2.35	0.41
1:CA:1243:C:H2'	1:CA:1244:C:C6	2.55	0.41
1:CA:1376:U:H2'	1:CA:1377:A:H8	1.85	0.41
1:CA:1419:G:H8	1:CA:1419:G:H5''	1.86	0.41
1:CA:189:G:H2'	1:CA:189(A):C:C6	2.55	0.41
1:CA:250:A:H5''	1:CA:251:G:OP1	2.21	0.41
1:CA:586:C:O2'	1:CA:587:G:H5'	2.21	0.41
1:CA:964:A:H1'	10:CJ:55:LYS:HE2	2.01	0.41
2:CB:19:HIS:O	2:CB:20:GLU:O	2.37	0.41
2:CB:93:VAL:HG13	2:CB:93:VAL:O	2.20	0.41
3:CC:94:LEU:O	3:CC:95:THR:CB	2.65	0.41
4:CD:38:TYR:HA	4:CD:39:PRO:HD3	1.96	0.41
4:CD:58:LEU:CD2	4:CD:62:GLN:CG	2.98	0.41
7:CG:42:ILE:HD13	7:CG:116:ALA:HB1	2.03	0.41
8:CH:33:GLU:HG2	8:CH:48:TYR:OH	2.20	0.41
11:CK:34:ASP:O	11:CK:36:ASP:N	2.53	0.41
12:CL:121:GLY:O	12:CL:122:THR:O	2.38	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:241:C:H4'	12:CL:19:ARG:HH22	1.84	0.41
13:CM:97:PRO:CG	13:CM:103:THR:HG22	2.50	0.41
20:CT:50:GLU:CG	20:CT:100:ILE:HD13	2.40	0.41
20:CT:66:ALA:HB1	20:CT:71:THR:HB	2.02	0.41
20:CT:96:GLY:O	20:CT:97:ALA:O	2.38	0.41
22:CW:51:U:H3	22:CW:63:G:H1	1.67	0.41
24:CY:42:G:N2	24:CY:43:G:H1'	2.34	0.41
25:CZ:143:ASP:O	25:CZ:147:LEU:HD23	2.20	0.41
25:CZ:368:VAL:CG1	25:CZ:369:THR:N	2.83	0.41
25:CZ:125:GLN:NE2	25:CZ:394:THR:HB	2.35	0.41
25:CZ:6:ILE:N	25:CZ:6:ILE:HD12	2.34	0.41
29:D3:31:LEU:O	29:D3:32:GLN:HB2	2.20	0.41
36:DA:1192:G:C2'	36:DA:1193:G:H5'	2.51	0.41
36:DA:489:G:N2	36:DA:1321:A:OP1	2.48	0.41
36:DA:1487:G:O2'	36:DA:1488:G:H5'	2.20	0.41
36:DA:1540:U:C4	36:DA:1541:G:N7	2.88	0.41
36:DA:1625:C:C2'	36:DA:1626:G:H5'	2.50	0.41
36:DA:1689:A:N6	36:DA:1698:A:H2	2.01	0.41
36:DA:2133:G:C2'	36:DA:2157:G:H22	2.33	0.41
36:DA:230:U:H2'	36:DA:231:C:C6	2.55	0.41
36:DA:2642:G:O2'	36:DA:2643:G:H5'	2.20	0.41
36:DA:582:G:H2'	36:DA:583:G:H8	1.83	0.41
36:DA:811:U:HO2'	36:DA:812:C:H5''	1.86	0.41
36:DA:833:U:H2'	36:DA:834:C:H6	1.84	0.41
37:DB:16:G:C6	37:DB:69:G:C2	3.08	0.41
41:DF:169:ASN:O	41:DF:169:ASN:ND2	2.52	0.41
42:DG:25:TYR:CD2	42:DG:31:VAL:HG23	2.55	0.41
46:DN:112:LEU:O	46:DN:115:ARG:HB3	2.21	0.41
46:DN:14:VAL:CG2	46:DN:137:LYS:HE3	2.51	0.41
46:DN:58:ASP:O	46:DN:59:LYS:HB2	2.20	0.41
48:DP:89:ALA:HB1	48:DP:121:LYS:HD3	2.01	0.41
36:DA:2873:A:H1'	50:DR:6:SER:OG	2.20	0.41
52:DT:50:ILE:HA	52:DT:99:LEU:HD11	2.01	0.41
52:DT:97:ALA:O	52:DT:98:LYS:HB2	2.21	0.41
53:DU:8:VAL:HG12	53:DU:12:ARG:HG3	2.03	0.41
54:DV:38:LEU:HD22	54:DV:52:VAL:HG11	2.02	0.41
57:DY:87:LYS:O	57:DY:88:LYS:CB	2.65	0.41
58:DZ:109:ALA:HB3	58:DZ:145:GLU:OE1	2.19	0.41
1:AA:1105:A:O2'	1:AA:1106:G:H5'	2.20	0.41
1:AA:1134:G:C2	1:AA:1141:C:C2	3.09	0.41
1:AA:1170:A:H2'	1:AA:1171:G:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1240:U:OP1	7:AG:116:ALA:N	2.50	0.41
1:AA:1417:G:H1'	1:AA:1483:A:N6	2.35	0.41
1:AA:369:C:O2'	1:AA:370:C:H6	2.04	0.41
1:AA:376:G:H5''	16:AP:5:ARG:CB	2.41	0.41
1:AA:413:G:H1'	1:AA:428:G:N2	2.36	0.41
1:AA:621:A:H2'	1:AA:622:A:O4'	2.21	0.41
1:AA:643:C:H2'	1:AA:644:G:H8	1.85	0.41
1:AA:655:A:H2'	1:AA:656:C:C6	2.55	0.41
1:AA:827:U:C5'	1:AA:828:A:OP2	2.69	0.41
2:AB:62:ALA:O	2:AB:65:GLY:N	2.46	0.41
4:AD:85:LYS:HD3	4:AD:92:VAL:CG1	2.50	0.41
5:AE:69:VAL:O	5:AE:71:LEU:N	2.45	0.41
8:AH:112:LEU:N	8:AH:112:LEU:CD2	2.76	0.41
1:AA:1251:A:H5''	9:AI:12:GLU:OE1	2.20	0.41
11:AK:48:ILE:HD11	11:AK:67:ASP:HB3	2.03	0.41
12:AL:121:GLY:O	12:AL:122:THR:O	2.38	0.41
1:AA:241:C:H4'	12:AL:19:ARG:HH22	1.85	0.41
19:AS:24:ALA:O	19:AS:25:LYS:CB	2.68	0.41
25:AZ:152:MET:HG3	25:AZ:153:GLU:N	2.35	0.41
28:B2:43:GLN:C	28:B2:44:LEU:HD12	2.40	0.41
31:B5:3:LYS:N	31:B5:3:LYS:HD2	2.36	0.41
32:B6:36:LEU:C	32:B6:36:LEU:CD2	2.88	0.41
36:BA:1094:U:HO2'	36:BA:1097:U:H5	1.66	0.41
36:BA:1405:U:H2'	36:BA:1406:U:C6	2.54	0.41
36:BA:1414:G:C2	36:BA:1589:C:O2	2.73	0.41
36:BA:1665:A:H4'	47:BO:67:LYS:HB2	2.03	0.41
36:BA:2110:G:N2	36:BA:2178:C:C5	2.87	0.41
36:BA:2319:G:O4'	36:BA:2319:G:P	2.79	0.41
36:BA:2408:U:H2'	36:BA:2409:G:H8	1.83	0.41
36:BA:2475:C:N4	36:BA:2529:G:H22	2.18	0.41
36:BA:2645:G:H4'	36:BA:2646:C:OP2	2.20	0.41
36:BA:596:G:H2'	36:BA:597:U:O4'	2.20	0.41
36:BA:599:G:C6	36:BA:600:G:N7	2.89	0.41
36:BA:845:G:C8	36:BA:845:G:OP2	2.60	0.41
37:BB:22:U:H2'	37:BB:23:G:H8	1.85	0.41
38:BC:113:VAL:O	38:BC:138:PRO:HG3	2.20	0.41
36:BA:2785:C:H1'	40:BE:64:LYS:NZ	2.36	0.41
41:BF:167:ALA:O	41:BF:168:ARG:C	2.59	0.41
42:BG:120:LEU:O	42:BG:121:ASN:C	2.58	0.41
43:BH:89:ILE:HG12	43:BH:129:THR:HA	2.02	0.41
46:BN:39:ARG:O	46:BN:41:ASP:N	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:558:G:H1'	46:BN:45:ASN:HB3	2.01	0.41
46:BN:57:ALA:C	46:BN:58:ASP:O	2.58	0.41
46:BN:62:VAL:HG13	46:BN:62:VAL:O	2.20	0.41
48:BP:8:PRO:O	48:BP:9:ASN:HB2	2.20	0.41
50:BR:2:ARG:CG	50:BR:2:ARG:NH1	2.80	0.41
52:BT:133:GLU:HG2	52:BT:133:GLU:O	2.21	0.41
52:BT:56:GLY:O	52:BT:57:PHE:C	2.59	0.41
53:BU:115:ALA:C	53:BU:117:GLN:N	2.73	0.41
57:BY:77:PRO:O	57:BY:78:ALA:CB	2.69	0.41
1:CA:1488:G:H2'	1:CA:1489:G:C8	2.55	0.41
1:CA:189(H):G:O2'	1:CA:189(I):G:O5'	2.37	0.41
1:CA:294:U:H2'	1:CA:295:C:H6	1.85	0.41
1:CA:369:C:O2'	1:CA:370:C:H6	2.03	0.41
1:CA:542:G:O2'	1:CA:543:C:H5'	2.21	0.41
1:CA:926:G:C5'	1:CA:927:G:O5'	2.68	0.41
2:CB:43:ASP:OD2	2:CB:46:LYS:HE3	2.20	0.41
1:CA:421:U:C5	3:CC:127:ARG:NH1	2.87	0.41
3:CC:11:ARG:O	3:CC:12:LEU:C	2.58	0.41
3:CC:50:ALA:HB1	3:CC:70:VAL:HG11	2.01	0.41
4:CD:39:PRO:O	4:CD:44:GLY:HA3	2.20	0.41
6:CF:24:GLU:HG2	6:CF:28:ARG:HH12	1.85	0.41
11:CK:126:ARG:O	11:CK:128:ALA:N	2.54	0.41
12:CL:109:GLY:HA3	12:CL:122:THR:H	1.86	0.41
12:CL:47:LYS:HB3	12:CL:48:PRO:CD	2.51	0.41
12:CL:89:ARG:HG3	12:CL:89:ARG:H	1.70	0.41
13:CM:49:THR:HB	13:CM:52:GLU:H	1.85	0.41
17:CQ:16:GLN:HB3	17:CQ:16:GLN:HE21	1.56	0.41
13:CM:87:TYR:CD1	19:CS:81:ARG:NH2	2.88	0.41
22:CW:51:U:H2'	22:CW:52:G:C8	2.48	0.41
25:CZ:301:GLY:HA2	25:CZ:347:THR:OG1	2.20	0.41
25:CZ:330:ARG:NH2	25:CZ:332:THR:OG1	2.49	0.41
33:D7:43:THR:CG2	33:D7:44:PRO:N	2.82	0.41
36:DA:1173:G:H5'	36:DA:1174:A:OP2	2.20	0.41
36:DA:1259:G:H2'	36:DA:1260:G:C8	2.55	0.41
36:DA:1532:C:H2'	36:DA:1533:G:O4'	2.19	0.41
36:DA:1538:G:H2'	36:DA:1539:G:H8	1.85	0.41
36:DA:1771:C:HO2'	36:DA:1786:A:H8	1.64	0.41
36:DA:2000:G:HO2'	36:DA:2001:A:H5'	1.85	0.41
36:DA:2111:C:C2	36:DA:2147:G:N2	2.82	0.41
36:DA:2149:G:H2'	36:DA:2150:U:O4'	2.20	0.41
36:DA:2186:G:H2'	36:DA:2187:G:C4	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2762:G:H2'	36:DA:2763:G:O4'	2.21	0.41
36:DA:2854:G:H2'	36:DA:2855:C:H6	1.82	0.41
36:DA:86:C:H2'	36:DA:87:C:H6	1.84	0.41
36:DA:986:C:O2'	36:DA:987:G:H5'	2.21	0.41
39:DD:200:ASP:O	39:DD:203:ASN:HB2	2.20	0.41
39:DD:63:ARG:HH11	39:DD:63:ARG:HG3	1.86	0.41
39:DD:80:ALA:HB2	39:DD:96:HIS:CD2	2.55	0.41
36:DA:2774:C:P	40:DE:164:ARG:HD3	2.60	0.41
40:DE:4:ILE:HD11	40:DE:28:ALA:O	2.20	0.41
43:DH:33:LEU:HD12	43:DH:75:ALA:O	2.20	0.41
46:DN:31:ALA:O	46:DN:34:LEU:HB3	2.21	0.41
48:DP:146:VAL:CG2	48:DP:147:LEU:N	2.71	0.41
55:DW:92:ARG:O	55:DW:93:ALA:HB3	2.19	0.41
56:DX:21:PHE:O	56:DX:22:ALA:C	2.59	0.41
56:DX:46:ALA:C	56:DX:47:PHE:CD1	2.93	0.41
57:DY:22:GLY:O	57:DY:23:ARG:O	2.37	0.41
57:DY:31:LEU:HD23	57:DY:36:ALA:O	2.20	0.41
1:AA:1129:C:O2'	1:AA:1131:G:C8	2.72	0.41
1:AA:1256:A:C2	1:AA:1277:C:C5	3.08	0.41
1:AA:29:G:O2'	1:AA:30:U:H5'	2.20	0.41
1:AA:435:C:H2'	1:AA:436:C:H5'	2.03	0.41
1:AA:818:G:O2'	1:AA:819:A:H5'	2.20	0.41
1:AA:919:A:O2'	1:AA:920:U:H5'	2.21	0.41
3:AC:43:LEU:HD22	3:AC:47:LEU:HD22	2.03	0.41
4:AD:187:ARG:HG2	4:AD:188:LEU:O	2.20	0.41
4:AD:31:CYS:C	4:AD:33:MET:H	2.24	0.41
5:AE:12:LEU:HD12	5:AE:31:LEU:CB	2.44	0.41
6:AF:87:ARG:CG	6:AF:87:ARG:NH1	2.80	0.41
8:AH:123:GLU:O	8:AH:127:LEU:HD23	2.21	0.41
1:AA:878:G:C5'	8:AH:89:PRO:HG2	2.51	0.41
9:AI:70:LYS:O	9:AI:73:GLN:HB2	2.21	0.41
10:AJ:21:GLN:O	10:AJ:21:GLN:CG	2.68	0.41
10:AJ:4:ILE:CD1	10:AJ:77:PRO:HB3	2.51	0.41
11:AK:57:THR:HG22	11:AK:60:ALA:HB2	2.02	0.41
12:AL:47:LYS:HB3	12:AL:48:PRO:CD	2.50	0.41
12:AL:91:LYS:HZ3	12:AL:91:LYS:HB3	1.86	0.41
27:B1:89:GLU:O	27:B1:93:GLU:HB2	2.21	0.41
28:B2:47:ASN:C	28:B2:51:ARG:H	2.23	0.41
28:B2:35:LEU:HD23	28:B2:53:LEU:HD13	2.02	0.41
28:B2:57:ILE:O	28:B2:61:LEU:CG	2.66	0.41
32:B6:19:ARG:CD	32:B6:20:ASN:H	2.28	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:B6:53:LYS:N	32:B6:53:LYS:CD	2.83	0.41
33:B7:46:VAL:HG12	33:B7:47:ARG:N	2.36	0.41
36:BA:1169:G:N2	36:BA:1181:C:C2	2.89	0.41
36:BA:1286:A:N6	36:BA:1289:C:C2	2.88	0.41
36:BA:1449:A:N7	36:BA:1450:G:C8	2.88	0.41
36:BA:1525:G:O2'	36:BA:1526:G:H5'	2.20	0.41
36:BA:1530:C:H2'	36:BA:1531:C:H6	1.85	0.41
36:BA:1692:U:H2'	36:BA:1694:C:C5	2.55	0.41
36:BA:2033:A:H4'	36:BA:2034:U:OP1	2.20	0.41
36:BA:2081:C:H2'	36:BA:2082:A:C8	2.55	0.41
36:BA:2186:G:H2'	36:BA:2187:G:C4	2.55	0.41
36:BA:2698:U:H2'	36:BA:2699:C:C6	2.56	0.41
36:BA:2833:G:C3'	36:BA:2834:G:C5'	2.78	0.41
36:BA:285:C:H2'	36:BA:286:C:C6	2.55	0.41
36:BA:394:A:C2'	36:BA:395:U:H5'	2.51	0.41
36:BA:732:C:O2'	36:BA:733:G:H5'	2.21	0.41
36:BA:736:C:H2'	36:BA:737:C:H6	1.85	0.41
38:BC:87:GLU:CG	38:BC:94:VAL:HG21	2.51	0.41
39:BD:266:SER:O	39:BD:267:SER:O	2.38	0.41
40:BE:60:ASN:OD1	40:BE:62:PRO:HD2	2.20	0.41
43:BH:89:ILE:HD11	43:BH:128:PRO:O	2.20	0.41
44:BJ:70:UNK:O	44:BJ:71:UNK:C	2.69	0.41
46:BN:120:LEU:CD1	46:BN:122:VAL:HG23	2.50	0.41
36:BA:995:C:N3	46:BN:1:MET:HE2	2.36	0.41
46:BN:30:ILE:O	46:BN:30:ILE:HG22	2.20	0.41
48:BP:35:HIS:O	48:BP:36:LYS:HB2	2.19	0.41
36:BA:943:U:OP1	48:BP:38:GLN:HB3	2.21	0.41
50:BR:12:ARG:HE	50:BR:16:HIS:CE1	2.38	0.41
50:BR:63:ARG:HA	50:BR:80:PHE:CZ	2.56	0.41
51:BS:25:ARG:CZ	51:BS:40:ILE:HD11	2.50	0.41
51:BS:63:THR:O	51:BS:67:ARG:HG3	2.20	0.41
52:BT:13:ARG:CA	52:BT:13:ARG:CZ	2.95	0.41
53:BU:15:LYS:HA	53:BU:18:LEU:HD23	2.01	0.41
46:BN:38:HIS:C	53:BU:67:ALA:HB1	2.41	0.41
54:BV:52:VAL:O	54:BV:52:VAL:HG13	2.21	0.41
1:CA:1124:G:HO2'	1:CA:1145:C:N4	2.19	0.41
1:CA:1511:G:H2'	1:CA:1512:U:O4'	2.20	0.41
2:CB:158:LEU:HA	2:CB:159:PRO:HD3	1.86	0.41
2:CB:209:ARG:HH12	2:CB:239:VAL:HG11	1.86	0.41
2:CB:29:ALA:HA	2:CB:32:ILE:HG21	2.01	0.41
6:CF:77:ARG:CG	6:CF:77:ARG:NH1	2.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:29:ILE:HB	11:CK:44:SER:HB3	2.02	0.41
12:CL:60:LEU:CD2	12:CL:66:VAL:HG22	2.51	0.41
13:CM:20:THR:C	13:CM:22:ILE:H	2.24	0.41
15:CO:18:PHE:C	15:CO:18:PHE:CD1	2.94	0.41
22:CV:18:G:O2'	22:CV:57:G:N2	2.54	0.41
25:CZ:263:ARG:CB	25:CZ:263:ARG:NH1	2.81	0.41
27:D1:59:THR:O	27:D1:91:LYS:HE2	2.20	0.41
28:D2:32:LEU:O	28:D2:32:LEU:HD23	2.21	0.41
28:D2:65:ASN:HA	28:D2:65:ASN:HD22	1.59	0.41
29:D3:35:ARG:HG2	29:D3:37:LEU:HG	2.01	0.41
31:D5:3:LYS:N	31:D5:3:LYS:HD2	2.36	0.41
34:D8:32:LEU:CD2	34:D8:36:LYS:HE2	2.43	0.41
36:DA:1258:C:C2	36:DA:1259:G:C8	3.08	0.41
36:DA:1345:C:O2'	36:DA:1346:G:H5'	2.20	0.41
36:DA:1486:A:N6	36:DA:1504:C:H42	2.18	0.41
36:DA:201:C:O2'	36:DA:202:U:H5'	2.21	0.41
36:DA:19:C:O2'	36:DA:20:C:H5'	2.20	0.41
36:DA:2120:G:O2'	36:DA:2121:G:H5'	2.20	0.41
36:DA:233:A:C2'	36:DA:234:C:H5'	2.50	0.41
36:DA:2691:C:H2'	36:DA:2692:C:H6	1.86	0.41
36:DA:2701:C:H2'	36:DA:2702:U:H2'	2.03	0.41
36:DA:2856:C:O2'	36:DA:2857:G:H5'	2.20	0.41
36:DA:428:A:H3'	36:DA:429:A:H8	1.85	0.41
36:DA:445:C:OP1	53:DU:2:PRO:HA	2.20	0.41
36:DA:480:A:H2	36:DA:499:U:O2	2.04	0.41
36:DA:599:G:C6	36:DA:600:G:N7	2.88	0.41
37:DB:96:U:H2'	37:DB:97:G:H8	1.85	0.41
38:DC:87:GLU:CG	38:DC:94:VAL:HG21	2.50	0.41
38:DC:77:ILE:CD1	38:DC:95:GLY:HA3	2.40	0.41
39:DD:102:LYS:C	39:DD:103:ARG:HG2	2.41	0.41
39:DD:124:PRO:HG2	39:DD:129:ASN:HD21	1.86	0.41
39:DD:34:VAL:O	39:DD:35:LYS:C	2.58	0.41
40:DE:69:LYS:C	40:DE:71:GLY:N	2.74	0.41
40:DE:89:ASP:CG	40:DE:90:THR:H	2.24	0.41
36:DA:1205:U:C5	41:DF:171:PRO:HA	2.55	0.41
41:DF:184:TYR:O	41:DF:188:ARG:HG2	2.20	0.41
42:DG:176:LEU:O	42:DG:176:LEU:HD23	2.21	0.41
42:DG:96:ARG:O	42:DG:97:ASP:C	2.58	0.41
46:DN:119:ARG:CB	46:DN:119:ARG:HH11	2.34	0.41
46:DN:90:MET:O	46:DN:93:THR:O	2.37	0.41
47:DO:10:VAL:HG23	47:DO:10:VAL:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DQ:48:GLU:O	49:DQ:49:ALA:C	2.59	0.41
51:DS:67:ARG:NE	51:DS:98:VAL:HG11	2.35	0.41
51:DS:78:LEU:O	51:DS:80:LEU:N	2.48	0.41
53:DU:51:LYS:H	53:DU:51:LYS:HG2	1.67	0.41
55:DW:79:GLY:CA	55:DW:100:THR:HG23	2.51	0.41
56:DX:18:TYR:C	56:DX:20:GLY:N	2.74	0.41
57:DY:36:ALA:HA	57:DY:69:ALA:H	1.85	0.41
1:AA:1211:U:O4'	1:AA:1211:U:O2	2.38	0.41
1:AA:1330:U:H5'	1:AA:1331:G:P	2.60	0.41
1:AA:160:A:H2'	1:AA:161:A:O4'	2.21	0.41
1:AA:189:G:H2'	1:AA:189(A):C:C6	2.56	0.41
1:AA:782:A:C2'	1:AA:783:C:H5'	2.51	0.41
1:AA:973:G:OP1	10:AJ:57:LYS:HD3	2.20	0.41
2:AB:115:LEU:HD13	2:AB:145:LEU:HB3	2.02	0.41
3:AC:60:ALA:O	3:AC:61:ALA:CB	2.66	0.41
4:AD:3:ARG:HH12	4:AD:118:ARG:HD3	1.81	0.41
4:AD:159:ARG:HH11	4:AD:159:ARG:HG3	1.85	0.41
4:AD:20:TYR:HD1	4:AD:26:CYS:O	2.03	0.41
5:AE:127:ASN:HA	5:AE:128:PRO:HD3	1.90	0.41
6:AF:76:ALA:O	6:AF:80:ARG:HG3	2.21	0.41
6:AF:80:ARG:NH1	6:AF:88:VAL:HB	2.35	0.41
10:AJ:79:ARG:HA	10:AJ:79:ARG:HD3	1.93	0.41
11:AK:108:ILE:O	18:AR:87:ARG:N	2.50	0.41
13:AM:49:THR:HB	13:AM:52:GLU:H	1.86	0.41
15:AO:17:ARG:CG	15:AO:17:ARG:NH1	2.83	0.41
15:AO:21:ASP:C	15:AO:21:ASP:OD1	2.58	0.41
22:AW:55:U:C5	22:AW:57:G:H5''	2.56	0.41
25:AZ:206:ILE:O	25:AZ:210:ILE:HG22	2.20	0.41
25:AZ:272:MET:HB2	25:AZ:277:LEU:HB2	2.02	0.41
35:B9:24:TYR:CE2	35:B9:35:ARG:HG3	2.55	0.41
36:BA:1534:U:C2'	36:BA:1535:A:H5'	2.51	0.41
36:BA:16:G:H2'	36:BA:17:G:H8	1.85	0.41
36:BA:1986:A:H2'	36:BA:1986:A:N3	2.36	0.41
36:BA:2087:G:C2'	36:BA:2088:G:H5'	2.51	0.41
36:BA:2283:C:H2'	36:BA:2284:C:O4'	2.21	0.41
36:BA:2544:G:H1'	36:BA:2646:C:H4'	2.01	0.41
36:BA:2854:G:H2'	36:BA:2855:C:H6	1.83	0.41
36:BA:343:C:C2'	36:BA:344:G:H5'	2.50	0.41
36:BA:419:C:C2	36:BA:420:C:C5	3.09	0.41
36:BA:605:C:H5	36:BA:623:G:N1	2.07	0.41
36:BA:650:C:H3'	36:BA:651:G:C5'	2.37	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:724:U:O2'	36:BA:725:G:H5'	2.21	0.41
36:BA:86:C:H2'	36:BA:87:C:H6	1.84	0.41
39:BD:27:THR:O	39:BD:27:THR:CG2	2.69	0.41
41:BF:103:LYS:O	41:BF:106:ARG:N	2.53	0.41
41:BF:132:VAL:O	41:BF:138:GLU:OE1	2.39	0.41
42:BG:40:ASN:HA	42:BG:91:ARG:HA	2.02	0.41
42:BG:42:GLY:O	42:BG:88:ILE:CG2	2.69	0.41
43:BH:76:VAL:O	43:BH:78:GLY:N	2.52	0.41
46:BN:34:LEU:HD11	46:BN:116:LEU:HB3	2.02	0.41
46:BN:36:GLY:O	46:BN:37:LYS:HB2	2.20	0.41
46:BN:54:VAL:HG11	46:BN:99:LEU:CD2	2.51	0.41
48:BP:110:TYR:O	48:BP:111:ARG:O	2.39	0.41
48:BP:110:TYR:HB3	48:BP:111:ARG:H	1.77	0.41
48:BP:122:PRO:HB3	48:BP:141:ALA:HB1	2.03	0.41
51:BS:98:VAL:C	51:BS:100:ALA:N	2.73	0.41
53:BU:14:HIS:O	53:BU:18:LEU:HD23	2.20	0.41
53:BU:8:VAL:O	53:BU:9:VAL:C	2.58	0.41
54:BV:39:LEU:HD12	54:BV:50:PRO:O	2.21	0.41
56:BX:18:TYR:C	56:BX:20:GLY:N	2.74	0.41
57:BY:14:LEU:HD12	57:BY:15:VAL:N	2.31	0.41
58:BZ:119:GLU:CG	58:BZ:122:ARG:HH11	2.32	0.41
58:BZ:126:VAL:HB	58:BZ:161:VAL:HG13	2.02	0.41
58:BZ:67:LEU:N	58:BZ:67:LEU:CD1	2.84	0.41
1:CA:1110:A:H8	1:CA:1110:A:O5'	2.03	0.41
1:CA:1271:G:C3'	1:CA:1272:G:H5''	2.50	0.41
1:CA:1411:C:H2'	1:CA:1412:C:H6	1.85	0.41
1:CA:79:G:H1'	1:CA:80:G:OP1	2.20	0.41
1:CA:828:A:H2'	1:CA:829:G:O4'	2.21	0.41
2:CB:162:ILE:HG21	2:CB:184:VAL:HG22	2.02	0.41
2:CB:236:TYR:C	2:CB:238:LEU:N	2.73	0.41
2:CB:32:ILE:HD11	2:CB:40:HIS:CD2	2.56	0.41
3:CC:35:GLU:HG3	3:CC:95:THR:OG1	2.20	0.41
4:CD:58:LEU:CD2	4:CD:62:GLN:HG2	2.51	0.41
3:CC:135:LYS:HZ2	5:CE:50:GLU:HG2	1.86	0.41
5:CE:82:VAL:HG21	5:CE:138:ALA:HA	2.03	0.41
1:CA:1251:A:H5''	9:CI:12:GLU:OE1	2.20	0.41
12:CL:112:ASP:O	12:CL:113:ARG:C	2.59	0.41
12:CL:126:LYS:HE2	12:CL:127:GLU:H	1.86	0.41
1:CA:363:A:C5	12:CL:31:PRO:HD2	2.55	0.41
13:CM:99:ARG:N	13:CM:101:GLN:HE22	2.18	0.41
22:CV:61:C:H2'	22:CV:61:C:O2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:295:ARG:HG2	25:CZ:295:ARG:O	2.21	0.41
26:D0:20:ARG:CG	26:D0:20:ARG:NH1	2.79	0.41
22:CV:1:G:C1'	26:D0:5:LYS:HZ1	2.34	0.41
34:D8:48:PHE:O	34:D8:49:VAL:CG2	2.69	0.41
34:D8:4:MET:O	34:D8:62:LEU:CD1	2.62	0.41
36:DA:1024:G:H3'	36:DA:1025:G:C5'	2.29	0.41
36:DA:988:A:H4'	36:DA:1155:A:N1	2.36	0.41
36:DA:1171:G:H3'	36:DA:1173:G:O4'	2.21	0.41
36:DA:2030:A:H5''	36:DA:2031:A:OP1	2.20	0.41
36:DA:2409:G:H2'	36:DA:2410:G:O4'	2.20	0.41
36:DA:2698:U:H2'	36:DA:2699:C:C6	2.56	0.41
36:DA:2758:A:C2	36:DA:2759:G:C1'	3.02	0.41
36:DA:319:C:O2'	36:DA:320:A:H5'	2.21	0.41
36:DA:402:A:C2'	36:DA:403:U:H5'	2.50	0.41
36:DA:742:G:H2'	36:DA:743:G:H8	1.86	0.41
36:DA:797:C:H2'	36:DA:798:G:H8	1.86	0.41
36:DA:940:G:H2'	36:DA:941:A:C4'	2.50	0.41
37:DB:98:G:C2'	37:DB:99:G:H5'	2.51	0.41
39:DD:70:TRP:HZ3	39:DD:146:GLU:CD	2.24	0.41
39:DD:158:ALA:O	39:DD:196:VAL:HG11	2.20	0.41
36:DA:2631:G:H21	40:DE:61:ARG:HH12	1.68	0.41
36:DA:2785:C:H1'	40:DE:64:LYS:NZ	2.36	0.41
40:DE:93:VAL:O	40:DE:93:VAL:HG12	2.20	0.41
41:DF:6:VAL:O	41:DF:7:TYR:HB2	2.20	0.41
42:DG:18:GLU:HA	42:DG:18:GLU:OE1	2.21	0.41
42:DG:16:ARG:CZ	42:DG:31:VAL:HG11	2.51	0.41
43:DH:125:VAL:O	43:DH:125:VAL:HG12	2.20	0.41
43:DH:163:TYR:N	43:DH:163:TYR:HD1	2.17	0.41
36:DA:558:G:H1'	46:DN:45:ASN:HB3	2.02	0.41
46:DN:7:LYS:O	46:DN:8:GLN:C	2.59	0.41
51:DS:58:LEU:HD23	51:DS:65:VAL:HG13	2.02	0.41
52:DT:28:VAL:HG12	52:DT:29:ARG:CD	2.45	0.41
52:DT:6:LEU:HA	52:DT:9:LEU:HD12	2.03	0.41
1:AA:1010:G:H2'	1:AA:1011:G:H8	1.86	0.41
1:AA:1053:G:O2'	1:AA:1054:C:P	2.79	0.41
1:AA:1058:G:H2'	1:AA:1059:C:C6	2.56	0.41
1:AA:191:G:C6	1:AA:192:U:C4	3.09	0.41
1:AA:548:G:H2'	1:AA:549:C:O4'	2.20	0.41
2:AB:224:GLN:C	2:AB:226:ARG:H	2.23	0.41
3:AC:179:ARG:HG3	3:AC:206:GLU:HG2	2.03	0.41
4:AD:105:VAL:HG21	4:AD:121:VAL:HG22	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:25:ARG:C	4:AD:27:TYR:H	2.23	0.41
5:AE:118:ILE:HG13	5:AE:119:LEU:N	2.36	0.41
7:AG:51:GLN:C	7:AG:53:LYS:H	2.24	0.41
8:AH:83:ILE:HG23	8:AH:83:ILE:O	2.21	0.41
1:AA:981:U:H5'	14:AN:21:TYR:CE1	2.55	0.41
16:AP:21:VAL:HG21	16:AP:59:TRP:CD2	2.55	0.41
25:AZ:125:GLN:NE2	25:AZ:394:THR:HB	2.36	0.41
25:AZ:206:ILE:HD13	25:AZ:210:ILE:HG21	2.02	0.41
27:B1:82:LEU:C	27:B1:83:GLU:HG3	2.41	0.41
28:B2:66:GLU:CD	28:B2:67:LYS:N	2.74	0.41
32:B6:30:THR:HG22	32:B6:31:PRO:HD2	2.02	0.41
36:BA:1091:G:H22	36:BA:1101:U:H1'	1.85	0.41
36:BA:187:G:N3	36:BA:1365:A:H2	2.18	0.41
36:BA:1437:C:O2	36:BA:1437:C:H2'	2.21	0.41
36:BA:150:C:O2'	36:BA:151:C:H5'	2.21	0.41
36:BA:1353:A:O4'	36:BA:1569:A:H2	2.04	0.41
36:BA:1272:A:C2	36:BA:1618:A:C2	3.08	0.41
36:BA:1775:U:H2'	36:BA:1776:G:H5'	2.02	0.41
36:BA:1902:C:C2'	36:BA:1903:G:O5'	2.69	0.41
36:BA:528:A:C2	36:BA:2043:C:O5'	2.71	0.41
36:BA:2774:C:P	40:BE:164:ARG:HD3	2.61	0.41
36:BA:2811:G:O2'	36:BA:2812:G:H5'	2.21	0.41
36:BA:350:U:O2'	36:BA:351:G:H5'	2.20	0.41
36:BA:654(N):G:C2'	36:BA:654(O):G:H5'	2.51	0.41
36:BA:662:G:OP1	48:BP:18:ARG:HD2	2.21	0.41
36:BA:842:G:H2'	36:BA:843:G:H8	1.85	0.41
38:BC:77:ILE:CD1	38:BC:95:GLY:HA3	2.40	0.41
36:BA:1843:C:O2'	39:BD:256:GLY:O	2.26	0.41
39:BD:63:ARG:HH11	39:BD:63:ARG:HG3	1.85	0.41
40:BE:61:ARG:CB	40:BE:62:PRO:CD	2.94	0.41
43:BH:15:VAL:HG23	43:BH:16:SER:N	2.36	0.41
43:BH:97:ARG:NH2	43:BH:104:GLU:OE2	2.54	0.41
46:BN:112:LEU:O	46:BN:115:ARG:HB3	2.21	0.41
50:BR:16:HIS:O	50:BR:17:ARG:C	2.58	0.41
50:BR:58:GLY:CA	50:BR:80:PHE:HE2	2.27	0.41
50:BR:99:LYS:HA	50:BR:112:ALA:HA	2.03	0.41
53:BU:115:ALA:C	53:BU:117:GLN:H	2.24	0.41
36:BA:1011:G:OP1	53:BU:75:ASN:HB2	2.20	0.41
57:BY:28:LYS:HE3	57:BY:28:LYS:H	1.86	0.41
57:BY:52:SER:O	57:BY:54:LYS:N	2.49	0.41
1:CA:1030(A):G:N3	1:CA:1030(C):G:OP2	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1096:C:H5'	2:CB:137:ARG:NH2	2.34	0.41
1:CA:1305:G:O2'	1:CA:1331:G:N2	2.54	0.41
1:CA:1360:A:O2'	1:CA:1361:G:H5'	2.21	0.41
1:CA:189(E):U:O2'	1:CA:189(F):U:H5'	2.21	0.41
1:CA:380:G:C2	1:CA:384:G:C6	3.09	0.41
1:CA:474:G:H2'	1:CA:475:G:H8	1.86	0.41
1:CA:598:U:H2'	1:CA:599:C:C6	2.56	0.41
1:CA:96:U:H2'	1:CA:97:G:C8	2.55	0.41
2:CB:204:ASN:ND2	2:CB:206:ASP:N	2.54	0.41
3:CC:108:ASN:OD1	3:CC:110:ASN:N	2.52	0.41
3:CC:3:ASN:ND2	3:CC:4:LYS:H	2.19	0.41
1:CA:1190:G:P	3:CC:5:ILE:HD12	2.60	0.41
4:CD:187:ARG:HG2	4:CD:188:LEU:O	2.21	0.41
5:CE:147:ASP:HB3	5:CE:150:ARG:NH1	2.34	0.41
5:CE:6:PHE:HB3	5:CE:34:VAL:HG22	2.03	0.41
6:CF:53:ALA:O	6:CF:54:LYS:CB	2.69	0.41
8:CH:97:VAL:O	8:CH:97:VAL:HG22	2.21	0.41
9:CI:97:LYS:N	9:CI:98:PRO:CD	2.83	0.41
10:CJ:30:SER:HB3	10:CJ:84:GLN:HE22	1.86	0.41
13:CM:87:TYR:CE1	19:CS:81:ARG:NH2	2.89	0.41
17:CQ:91:ARG:HB2	17:CQ:91:ARG:NH1	2.35	0.41
25:CZ:206:ILE:O	25:CZ:210:ILE:CG2	2.69	0.41
25:CZ:210:ILE:HA	25:CZ:211:PRO:HD2	1.94	0.41
27:D1:17:SER:HB2	27:D1:38:SER:HB2	2.03	0.41
32:D6:36:LEU:CD2	32:D6:36:LEU:C	2.89	0.41
36:DA:1076:C:H5	36:DA:1077:A:C4	2.39	0.41
36:DA:142(A):C:C2'	36:DA:143:G:H5'	2.51	0.41
36:DA:1472:A:H2'	36:DA:1473:G:H5'	2.02	0.41
36:DA:1997:G:O2'	36:DA:1998:G:H5'	2.21	0.41
36:DA:2147:G:H2'	36:DA:2148:G:C4'	2.51	0.41
36:DA:2319:G:O4'	36:DA:2319:G:P	2.78	0.41
36:DA:2068:U:N3	36:DA:2430:A:C2	2.66	0.41
36:DA:271(G):C:O2'	36:DA:271(H):G:H5'	2.21	0.41
36:DA:280:C:N4	36:DA:360:G:H1	2.19	0.41
36:DA:380:U:H2'	36:DA:381:G:C8	2.55	0.41
36:DA:394:A:C2'	36:DA:395:U:H5'	2.50	0.41
39:DD:196:VAL:HG12	39:DD:196:VAL:O	2.21	0.41
42:DG:106:LEU:O	42:DG:106:LEU:HG	2.19	0.41
43:DH:154:PRO:O	43:DH:155:SER:HB2	2.20	0.41
44:DJ:80:UNK:O	44:DJ:81:UNK:C	2.69	0.41
46:DN:120:LEU:CD1	46:DN:122:VAL:HG23	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DN:29:LYS:O	46:DN:31:ALA:N	2.53	0.41
46:DN:30:ILE:HG22	46:DN:30:ILE:O	2.21	0.41
48:DP:122:PRO:HB3	48:DP:141:ALA:HB1	2.03	0.41
48:DP:35:HIS:O	48:DP:36:LYS:CB	2.68	0.41
48:DP:46:LYS:HG2	48:DP:52:GLU:CG	2.50	0.41
34:D8:15:LYS:CB	48:DP:65:ARG:NH2	2.84	0.41
36:DA:958:U:O4	49:DQ:17:LEU:HG	2.21	0.41
50:DR:7:GLY:O	50:DR:8:ARG:HB2	2.20	0.41
51:DS:73:LEU:HD23	51:DS:73:LEU:O	2.21	0.41
52:DT:32:TYR:HB2	52:DT:33:LYS:H	1.47	0.41
52:DT:56:GLY:O	52:DT:57:PHE:C	2.58	0.41
52:DT:80:SER:HB3	52:DT:81:PRO:CD	2.39	0.41
53:DU:9:VAL:O	53:DU:12:ARG:HB2	2.20	0.41
58:DZ:145:GLU:O	58:DZ:147:GLY:N	2.53	0.41
1:AA:198:G:O2'	1:AA:199:G:P	2.79	0.41
1:AA:332:G:H2'	1:AA:333:G:H8	1.86	0.41
1:AA:412:A:H5'	1:AA:413:G:OP1	2.21	0.41
1:AA:620:C:O2'	1:AA:621:A:H5'	2.21	0.41
2:AB:151:GLY:C	2:AB:153:ARG:N	2.71	0.41
1:AA:1062:U:O4	3:AC:2:GLY:HA3	2.21	0.41
3:AC:35:GLU:HG2	3:AC:59:ARG:HH22	1.86	0.41
4:AD:2:GLY:O	4:AD:3:ARG:C	2.59	0.41
4:AD:6:GLY:O	4:AD:7:PRO:C	2.59	0.41
6:AF:24:GLU:HG2	6:AF:28:ARG:NH1	2.36	0.41
9:AI:28:VAL:CG1	9:AI:29:ASN:N	2.68	0.41
10:AJ:75:ILE:HG13	10:AJ:76:ASN:N	2.28	0.41
12:AL:75:HIS:HD2	12:AL:77:LEU:H	1.68	0.41
13:AM:11:ARG:CG	13:AM:12:ASN:N	2.81	0.41
16:AP:14:ASN:O	16:AP:14:ASN:OD1	2.39	0.41
25:AZ:20:VAL:O	25:AZ:21:ASP:CB	2.57	0.41
25:AZ:230:THR:HG23	25:AZ:230:THR:O	2.21	0.41
25:AZ:241:ARG:N	25:AZ:285:ASN:HD22	2.19	0.41
25:AZ:315:LYS:HB3	25:AZ:315:LYS:HE2	1.87	0.41
27:B1:8:SER:HB3	27:B1:66:HIS:CG	2.56	0.41
31:B5:57:VAL:HG12	31:B5:58:LEU:H	1.85	0.41
32:B6:14:THR:HB	32:B6:52:VAL:HG21	2.02	0.41
32:B6:28:ARG:C	32:B6:32:ASN:HD22	2.24	0.41
32:B6:42:TRP:CH2	36:BA:643:A:N7	2.89	0.41
36:BA:105:C:O2'	57:BY:2:ARG:HG3	2.20	0.41
36:BA:1076:C:H5	36:BA:1077:A:C4	2.39	0.41
36:BA:1006:C:C2	36:BA:1138:G:N2	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1208:C:C2'	36:BA:1208:C:O2	2.69	0.41
36:BA:1248:G:OP1	53:BU:2:PRO:HD2	2.20	0.41
36:BA:1854:A:H62	36:BA:1888:G:H8	1.68	0.41
36:BA:2009:G:HO2'	36:BA:2010:G:H5'	1.85	0.41
36:BA:2192:G:N3	36:BA:2192:G:H2'	2.35	0.41
36:BA:2489:G:C6	36:BA:2490:G:C6	3.09	0.41
36:BA:2712(A):A:H5''	36:BA:2713:A:OP2	2.20	0.41
36:BA:2756:U:C1'	36:BA:2757:A:H5''	2.34	0.41
36:BA:2758:A:O2'	36:BA:2759:G:P	2.79	0.41
36:BA:651:G:C2'	36:BA:652:C:H5'	2.51	0.41
36:BA:664:C:H4'	36:BA:941:A:OP1	2.21	0.41
36:BA:756:C:C2'	36:BA:757:U:H5'	2.51	0.41
37:BB:66:A:C2'	37:BB:67:G:OP2	2.68	0.41
38:BC:22:ILE:HD13	38:BC:190:ARG:HG2	2.01	0.41
38:BC:77:ILE:HB	38:BC:115:ALA:HB2	2.01	0.41
39:BD:153:ALA:O	39:BD:154:LYS:HG2	2.21	0.41
40:BE:35:GLN:CG	40:BE:36:ARG:H	2.34	0.41
42:BG:55:LYS:O	42:BG:58:GLN:HG2	2.21	0.41
42:BG:57:ALA:C	42:BG:59:GLU:H	2.24	0.41
46:BN:90:MET:O	46:BN:93:THR:O	2.38	0.41
48:BP:31:ALA:C	48:BP:33:ARG:N	2.73	0.41
49:BQ:25:ASP:OD2	58:BZ:78:LYS:HG2	2.21	0.41
52:BT:19:LEU:HA	52:BT:20:PRO:HD3	1.92	0.41
52:BT:28:VAL:O	52:BT:29:ARG:HG2	2.21	0.41
52:BT:28:VAL:CG2	52:BT:46:GLU:HA	2.50	0.41
52:BT:83:ILE:CG1	52:BT:84:GLN:N	2.83	0.41
52:BT:85:LYS:CB	52:BT:85:LYS:HZ2	2.28	0.41
53:BU:35:ALA:O	53:BU:36:ARG:C	2.59	0.41
53:BU:80:ILE:O	53:BU:84:LYS:HB2	2.21	0.41
53:BU:92:ARG:CB	54:BV:11:GLN:NE2	2.84	0.41
55:BW:25:ARG:HB2	55:BW:25:ARG:NH1	2.36	0.41
1:CA:1015:A:H2'	1:CA:1016:A:H8	1.82	0.41
1:CA:1134:G:C2	1:CA:1141:C:C2	3.09	0.41
1:CA:1216:G:H2'	1:CA:1217:C:H6	1.85	0.41
1:CA:1411:C:O2'	1:CA:1412:C:H5'	2.21	0.41
1:CA:1498:U:H4'	1:CA:1519:A:C2	2.56	0.41
1:CA:41:G:H2'	1:CA:42:G:H8	1.86	0.41
1:CA:302:G:O2'	1:CA:556:C:H5''	2.21	0.41
1:CA:637:G:O2'	1:CA:638:G:H5'	2.21	0.41
2:CB:28:PHE:O	2:CB:32:ILE:HG22	2.21	0.41
2:CB:88:ALA:HB2	2:CB:219:VAL:CG1	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:61:LYS:HB2	4:CD:203:VAL:HG13	2.01	0.41
4:CD:65:ARG:HD3	4:CD:75:PHE:CD2	2.56	0.41
4:CD:85:LYS:HD3	4:CD:92:VAL:CG1	2.50	0.41
6:CF:46:ARG:HH22	18:CR:37:VAL:HG13	1.84	0.41
6:CF:34:GLY:CA	6:CF:71:ARG:HH21	2.34	0.41
7:CG:85:TYR:CD2	7:CG:154:TYR:HE2	2.38	0.41
8:CH:107:LEU:HD23	8:CH:107:LEU:N	2.35	0.41
9:CI:92:TYR:HA	9:CI:95:LYS:HG2	2.03	0.41
10:CJ:54:PHE:O	10:CJ:55:LYS:CB	2.68	0.41
11:CK:73:MET:C	11:CK:75:TYR:H	2.23	0.41
13:CM:13:LYS:HA	13:CM:44:ARG:HH11	1.86	0.41
14:CN:23:ARG:NH1	14:CN:30:ALA:HB2	2.36	0.41
1:CA:1059:C:O3'	14:CN:45:ARG:NH2	2.54	0.41
16:CP:21:VAL:HG21	16:CP:59:TRP:CD2	2.56	0.41
19:CS:24:ALA:O	19:CS:25:LYS:CB	2.68	0.41
22:CW:63:G:O2'	22:CW:64:A:H5'	2.21	0.41
23:CX:23:G:H2'	23:CX:24:A:C8	2.55	0.41
32:D6:17:LYS:HA	32:D6:17:LYS:CE	2.45	0.41
32:D6:19:ARG:O	32:D6:20:ASN:O	2.39	0.41
34:D8:48:PHE:C	34:D8:49:VAL:CG2	2.88	0.41
35:D9:1:MET:HE2	36:DA:2478:A:OP2	2.20	0.41
36:DA:118:A:C8	36:DA:119:A:C8	3.08	0.41
36:DA:1263:U:C4	36:DA:1264:G:C6	3.09	0.41
36:DA:1286:A:N6	36:DA:1289:C:C2	2.89	0.41
36:DA:1526:G:C6	36:DA:1527:G:C2	3.09	0.41
36:DA:2033:A:H4'	36:DA:2034:U:OP1	2.20	0.41
36:DA:2192:G:H2'	36:DA:2192:G:N3	2.35	0.41
36:DA:2282:G:OP1	36:DA:2283:C:H1'	2.20	0.41
36:DA:289:A:H2'	36:DA:290:G:C8	2.55	0.41
36:DA:313:C:O2'	36:DA:314:A:H5'	2.21	0.41
36:DA:654(D):G:N1	36:DA:654(O):G:N1	2.69	0.41
36:DA:593:G:C2	36:DA:665:C:C2	3.09	0.41
36:DA:738:G:C6	36:DA:739:G:C2	3.08	0.41
36:DA:806:C:C5	48:DP:39:LYS:HE2	2.56	0.41
36:DA:918:A:H4'	37:DB:98:G:N3	2.36	0.41
38:DC:77:ILE:HB	38:DC:115:ALA:HB2	2.02	0.41
38:DC:97:GLU:O	38:DC:98:GLU:HB3	2.21	0.41
36:DA:2823:A:OP1	40:DE:113:PHE:HB2	2.21	0.41
42:DG:115:ARG:HH22	42:DG:136:ARG:HB2	1.86	0.41
42:DG:136:ARG:HH11	42:DG:136:ARG:CG	2.34	0.41
42:DG:84:LYS:N	42:DG:84:LYS:HD2	2.29	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DH:167:GLU:HB3	43:DH:168:PRO:CD	2.45	0.41
43:DH:28:GLY:HA3	43:DH:79:VAL:CG2	2.50	0.41
47:DO:22:ILE:HA	47:DO:22:ILE:HD13	1.79	0.41
49:DQ:52:VAL:O	49:DQ:53:ALA:C	2.59	0.41
51:DS:30:ARG:NH2	51:DS:62:LYS:HB3	2.34	0.41
52:DT:12:SER:O	52:DT:13:ARG:NH2	2.54	0.41
53:DU:68:ALA:O	53:DU:71:GLN:HG2	2.21	0.41
53:DU:92:ARG:CB	54:DV:11:GLN:NE2	2.84	0.41
36:DA:2012:G:H4'	55:DW:96:ILE:HD11	2.03	0.41
57:DY:28:LYS:HE2	57:DY:28:LYS:N	2.36	0.41
57:DY:76:CYS:CB	57:DY:77:PRO:HD2	2.50	0.41
58:DZ:48:PHE:CE1	58:DZ:71:VAL:HG21	2.55	0.41
1:AA:108:G:C5'	1:AA:109:A:H5''	2.51	0.41
1:AA:1116:C:O2'	1:AA:1117:G:H5''	2.20	0.41
1:AA:1124:G:H5'	10:AJ:35:SER:CB	2.50	0.41
1:AA:1423:G:C6	1:AA:1424:C:C4	3.09	0.41
1:AA:1533:C:C3'	1:AA:1534:A:C5'	2.92	0.41
1:AA:79:G:H1'	1:AA:80:G:OP1	2.21	0.41
2:AB:97:TRP:HZ2	2:AB:102:LEU:CD1	2.33	0.41
2:AB:187:LEU:HD11	2:AB:204:ASN:O	2.20	0.41
2:AB:87:ARG:CZ	2:AB:233:SER:HB3	2.51	0.41
2:AB:235:SER:O	2:AB:237:ALA:N	2.49	0.41
3:AC:50:ALA:HB1	3:AC:70:VAL:HG11	2.02	0.41
4:AD:194:LEU:N	4:AD:194:LEU:HD22	2.35	0.41
6:AF:20:ALA:O	6:AF:24:GLU:HB2	2.21	0.41
7:AG:115:ARG:O	7:AG:116:ALA:C	2.59	0.41
10:AJ:32:ALA:N	10:AJ:78:ASN:ND2	2.65	0.41
10:AJ:97:GLU:OE1	10:AJ:99:LYS:HE2	2.19	0.41
11:AK:61:ALA:CB	11:AK:90:GLY:HA2	2.51	0.41
13:AM:15:VAL:O	13:AM:16:ASP:C	2.59	0.41
13:AM:35:GLU:C	13:AM:37:THR:N	2.74	0.41
14:AN:60:SER:O	14:AN:61:TRP:HB3	2.21	0.41
18:AR:59:SER:O	18:AR:60:ALA:C	2.59	0.41
24:AY:55:PSU:O5'	24:AY:56:C:OP2	2.39	0.41
24:AY:61:C:H2'	24:AY:62:U:C5'	2.50	0.41
26:B0:53:MET:HA	26:B0:58:THR:O	2.21	0.41
27:B1:10:LYS:NZ	27:B1:65:SER:OG	2.54	0.41
31:B5:2:ALA:N	36:BA:2015:A:N3	2.68	0.41
32:B6:20:ASN:O	32:B6:21:TYR:CG	2.72	0.41
34:B8:61:LEU:CG	34:B8:62:LEU:H	2.34	0.41
36:BA:1374:G:H2'	36:BA:1375:C:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:142:A:H5'	36:BA:142(A):C:C5	2.54	0.41
36:BA:1470:G:N2	36:BA:1523:U:C4	2.89	0.41
36:BA:1480:G:C2'	36:BA:1481:U:H5'	2.46	0.41
36:BA:2066:C:O2'	36:BA:2067:G:H5'	2.20	0.41
36:BA:2409:G:H2'	36:BA:2410:G:O4'	2.21	0.41
36:BA:346:A:C2'	36:BA:347:A:H5'	2.51	0.41
36:BA:445:C:OP1	53:BU:2:PRO:HA	2.21	0.41
36:BA:529:A:H4'	36:BA:530:G:O5'	2.21	0.41
36:BA:582:G:H2'	36:BA:583:G:H8	1.86	0.41
36:BA:594:U:H3	36:BA:663:G:H1	1.69	0.41
36:BA:875:G:H2'	36:BA:876:C:C6	2.56	0.41
38:BC:82:LYS:HG2	38:BC:82:LYS:H	1.74	0.41
39:BD:57:GLY:O	39:BD:58:HIS:C	2.59	0.41
40:BE:152:LYS:HG2	46:BN:78:TYR:CE1	2.56	0.41
36:BA:2631:G:H21	40:BE:61:ARG:HH12	1.69	0.41
42:BG:150:ASP:O	42:BG:151:ALA:CB	2.68	0.41
42:BG:72:ARG:HE	42:BG:86:MET:CA	2.32	0.41
43:BH:114:VAL:O	43:BH:114:VAL:HG23	2.21	0.41
45:BK:3:UNK:O	45:BK:4:UNK:C	2.69	0.41
46:BN:58:ASP:OD2	46:BN:59:LYS:HG2	2.21	0.41
36:BA:1453:U:H5'	50:BR:63:ARG:CZ	2.51	0.41
52:BT:8:LYS:HA	52:BT:11:GLU:OE1	2.21	0.41
53:BU:68:ALA:O	53:BU:71:GLN:HG2	2.19	0.41
54:BV:38:LEU:H	54:BV:51:VAL:HG13	1.85	0.41
55:BW:34:ASN:HA	55:BW:34:ASN:HD22	1.74	0.41
57:BY:13:VAL:O	57:BY:24:VAL:HG13	2.21	0.41
58:BZ:108:PRO:HD3	58:BZ:141:VAL:HG11	2.03	0.41
58:BZ:77:ASP:C	58:BZ:79:ARG:H	2.25	0.41
58:BZ:85:HIS:ND1	58:BZ:85:HIS:C	2.74	0.41
58:BZ:8:TYR:N	58:BZ:8:TYR:CD1	2.88	0.41
1:CA:1323:G:H4'	1:CA:1363:C:N3	2.36	0.41
1:CA:937:A:C2	1:CA:1379:G:O6	2.73	0.41
1:CA:67:C:H2'	1:CA:68:G:C8	2.55	0.41
1:CA:708:C:O2'	1:CA:709:G:H5'	2.21	0.41
2:CB:224:GLN:C	2:CB:226:ARG:H	2.24	0.41
3:CC:40:ARG:NH1	3:CC:40:ARG:CG	2.80	0.41
4:CD:158:ILE:CG2	4:CD:181:MET:HE1	2.51	0.41
4:CD:189:PRO:HB2	4:CD:190:ASP:H	1.76	0.41
6:CF:15:ASP:O	6:CF:17:SER:N	2.54	0.41
13:CM:3:ARG:HG2	13:CM:9:ILE:HD11	2.02	0.41
14:CN:60:SER:O	14:CN:61:TRP:HB3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CS:50:ALA:HA	19:CS:59:PRO:HA	2.02	0.41
20:CT:10:LEU:HG	20:CT:12:ALA:H	1.86	0.41
20:CT:92:LEU:O	20:CT:94:ALA:N	2.54	0.41
21:CU:5:ASP:O	21:CU:11:GLY:HA3	2.21	0.41
24:CY:20:H2U:H2'	24:CY:20:H2U:H61	1.88	0.41
24:CY:3:G:H2'	24:CY:4:G:O4'	2.20	0.41
25:CZ:135:MET:CE	25:CZ:150:VAL:HB	2.51	0.41
28:D2:38:GLN:HE21	28:D2:41:ILE:CD1	2.34	0.41
31:D5:20:ARG:O	31:D5:23:HIS:HB2	2.21	0.41
36:DA:1101:U:O2'	36:DA:1102:C:H5'	2.21	0.41
36:DA:1189:A:H2'	36:DA:1190:G:O4'	2.21	0.41
36:DA:1332:G:H4'	36:DA:1333:C:OP2	2.21	0.41
36:DA:1416:G:HO2'	36:DA:1417:C:H5	1.66	0.41
36:DA:1509(B):A:H2'	36:DA:1510:G:O4'	2.21	0.41
36:DA:2157:G:O2'	36:DA:2158:A:H8	2.04	0.41
36:DA:2186:G:P	36:DA:2187:G:OP1	2.79	0.41
36:DA:2415:G:H2'	36:DA:2416:C:H6	1.86	0.41
36:DA:2465:C:O2'	36:DA:2466:C:H5'	2.21	0.41
36:DA:2492:U:H2'	36:DA:2493:U:C6	2.56	0.41
36:DA:272:G:H1	36:DA:404:C:H42	1.69	0.41
36:DA:2766:G:N3	36:DA:2766:G:H2'	2.36	0.41
36:DA:2796:U:OP2	36:DA:2799:C:H5	2.04	0.41
36:DA:343:C:O2'	36:DA:344:G:H5'	2.21	0.41
36:DA:346:A:H2'	36:DA:347:A:H5'	2.03	0.41
36:DA:664:C:H4'	36:DA:940:G:O3'	2.21	0.41
36:DA:953:A:N1	36:DA:964:C:O2	2.54	0.41
37:DB:104:U:O3'	58:DZ:72:ARG:NH1	2.54	0.41
37:DB:95:C:C4	37:DB:96:U:C5	3.09	0.41
38:DC:200:LYS:HE3	38:DC:208:PHE:HB2	2.03	0.41
39:DD:17:THR:O	39:DD:211:ARG:NH2	2.54	0.41
42:DG:125:PHE:HA	42:DG:131:TYR:HA	2.03	0.41
44:DJ:93:UNK:O	44:DJ:97:UNK:N	2.53	0.41
48:DP:84:ASN:CG	48:DP:116:GLY:HA2	2.41	0.41
48:DP:93:GLY:O	48:DP:123:LEU:HD12	2.21	0.41
51:DS:15:ARG:O	51:DS:18:ILE:CG1	2.67	0.41
52:DT:109:GLU:HG2	52:DT:112:ARG:CZ	2.51	0.41
52:DT:12:SER:O	52:DT:13:ARG:CZ	2.69	0.41
52:DT:28:VAL:CG2	52:DT:46:GLU:HA	2.49	0.41
53:DU:10:ARG:C	53:DU:12:ARG:N	2.74	0.41
53:DU:115:ALA:C	53:DU:117:GLN:H	2.24	0.41
54:DV:18:LEU:HD22	54:DV:96:ILE:HG13	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:DV:99:ILE:CD1	54:DV:99:ILE:N	2.73	0.41
1:AA:1039:C:H2'	1:AA:1040:U:H5	1.78	0.41
1:AA:1173:G:O2'	1:AA:1174:G:H5'	2.21	0.41
1:AA:1307:U:H2'	1:AA:1308:U:C6	2.56	0.41
1:AA:1354:C:O2'	1:AA:1355:G:H5'	2.21	0.41
1:AA:1288:A:N1	1:AA:1371:G:H1'	2.36	0.41
1:AA:266:G:O2'	1:AA:267:C:OP2	2.33	0.41
1:AA:528:C:H41	12:AL:49:ASN:ND2	2.19	0.41
1:AA:723:U:O2'	1:AA:724:G:H5'	2.21	0.41
1:AA:980:C:C5'	1:AA:980:C:H6	2.17	0.41
3:AC:53:ALA:HB2	3:AC:115:LEU:HG	2.03	0.41
1:AA:409:G:OP1	4:AD:24:GLU:HB3	2.21	0.41
7:AG:18:TYR:CG	7:AG:59:LEU:HD13	2.56	0.41
8:AH:91:ARG:O	8:AH:91:ARG:HG2	2.20	0.41
9:AI:5:TYR:CD2	9:AI:6:GLY:N	2.89	0.41
11:AK:117:ASN:HD22	11:AK:117:ASN:N	2.17	0.41
12:AL:46:LYS:HB2	12:AL:92:ASP:HA	2.02	0.41
13:AM:108:ARG:HH11	13:AM:108:ARG:HA	1.85	0.41
22:AV:2:C:O2	22:AV:2:C:H2'	2.21	0.41
23:AX:23:G:H2'	23:AX:24:A:C8	2.56	0.41
26:B0:55:ARG:HB3	26:B0:55:ARG:HE	1.33	0.41
36:BA:1139:G:H5''	46:BN:70:LYS:HZ3	1.84	0.41
36:BA:990:A:N6	36:BA:1186:G:H1'	2.36	0.41
36:BA:323:G:HO2'	36:BA:1205:U:H3	1.68	0.41
36:BA:1467:C:O2'	36:BA:1468:C:H5'	2.21	0.41
36:BA:1638:C:H2'	36:BA:1639:U:O4'	2.21	0.41
36:BA:18:C:H4'	53:BU:23:GLY:O	2.21	0.41
36:BA:2008:C:H2'	36:BA:2009:G:H8	1.86	0.41
36:BA:233:A:C2'	36:BA:234:C:H5'	2.51	0.41
36:BA:271(H):G:O2'	36:BA:271(I):G:H8	2.04	0.41
38:BC:73:ARG:HH11	38:BC:73:ARG:HG3	1.86	0.41
40:BE:137:HIS:CB	40:BE:138:PRO:HD2	2.49	0.41
44:BJ:24:UNK:O	44:BJ:116:UNK:HA	2.21	0.41
46:BN:32:THR:O	46:BN:34:LEU:N	2.54	0.41
36:BA:385:C:O2	48:BP:71:VAL:HG21	2.21	0.41
49:BQ:109:VAL:HG12	49:BQ:110:THR:H	1.83	0.41
49:BQ:52:VAL:O	49:BQ:53:ALA:C	2.60	0.41
50:BR:111:LEU:N	50:BR:111:LEU:CD1	2.83	0.41
52:BT:125:ARG:NH1	52:BT:125:ARG:HG2	2.36	0.41
52:BT:18:ASP:N	52:BT:18:ASP:OD1	2.53	0.41
47:BO:104:ARG:HH21	52:BT:33:LYS:HD3	1.81	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:BW:64:MET:HE2	55:BW:109:GLU:HG3	2.02	0.41
36:BA:26:G:P	55:BW:80:PRO:HB3	2.61	0.41
55:BW:95:ILE:O	55:BW:95:ILE:HG13	2.21	0.41
57:BY:15:VAL:HG12	57:BY:17:SER:H	1.86	0.41
58:BZ:108:PRO:C	58:BZ:110:GLY:N	2.75	0.41
1:CA:1067:A:N1	1:CA:1108:G:O2'	2.38	0.41
1:CA:1119:C:OP2	9:CI:9:ARG:NH2	2.54	0.41
1:CA:111:G:O6	1:CA:330:C:N4	2.46	0.41
1:CA:1217:C:O2'	1:CA:1218:C:H5'	2.20	0.41
1:CA:1256:A:C2	1:CA:1277:C:C5	3.09	0.41
1:CA:1498:U:C5	23:CX:20:U:H5'	2.56	0.41
1:CA:560:U:H4'	1:CA:561:U:H5''	2.03	0.41
1:CA:621:A:H2'	1:CA:622:A:O4'	2.21	0.41
1:CA:782:A:C2'	1:CA:783:C:H5'	2.50	0.41
2:CB:48:MET:HA	2:CB:51:LEU:HB2	2.02	0.41
4:CD:150:GLU:C	4:CD:152:SER:N	2.74	0.41
4:CD:17:VAL:O	4:CD:18:LYS:O	2.39	0.41
4:CD:36:ARG:HG2	4:CD:38:TYR:CZ	2.56	0.41
5:CE:118:ILE:HG13	5:CE:119:LEU:N	2.36	0.41
12:CL:46:LYS:HB2	12:CL:92:ASP:HA	2.02	0.41
13:CM:16:ASP:OD1	13:CM:16:ASP:N	2.54	0.41
20:CT:55:ILE:O	20:CT:58:LYS:HB3	2.20	0.41
20:CT:65:LYS:O	20:CT:68:LYS:HB2	2.21	0.41
22:CV:12:U:H4'	36:DA:1908:C:O2	2.20	0.41
25:CZ:182:MET:SD	25:CZ:188:THR:HB	2.61	0.41
25:CZ:274:ARG:O	25:CZ:275:LYS:HD2	2.21	0.41
25:CZ:321:TYR:HD1	25:CZ:367:ASN:ND2	2.19	0.41
28:D2:12:GLU:O	28:D2:16:LEU:HG	2.20	0.41
29:D3:16:PRO:HB2	29:D3:19:GLN:HG3	2.02	0.41
32:D6:14:THR:HB	32:D6:52:VAL:HG21	2.02	0.41
35:D9:32:HIS:O	35:D9:33:LYS:C	2.59	0.41
36:DA:1409:C:O2'	36:DA:1410:G:H5'	2.21	0.41
36:DA:1534:U:O2'	36:DA:1535:A:H5'	2.21	0.41
36:DA:1558:A:O2'	36:DA:1559:G:OP2	2.34	0.41
36:DA:2154:G:N2	36:DA:2155:G:H1'	2.36	0.41
36:DA:2206:G:H21	36:DA:2207:G:H5'	1.77	0.41
36:DA:2533:A:C2'	36:DA:2534:A:H5'	2.51	0.41
36:DA:269:U:O2	36:DA:269:U:H2'	2.20	0.41
36:DA:2750:A:H5''	36:DA:2751:G:OP2	2.22	0.41
36:DA:284:U:H2'	36:DA:285:C:H6	1.81	0.41
36:DA:654(S):G:N7	36:DA:654(T):C:O2	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:691:C:H1'	39:DD:43:ARG:NH1	2.35	0.41
36:DA:806:C:O2'	36:DA:2445:G:H4'	2.21	0.41
36:DA:82:G:H8	36:DA:82:G:OP2	2.04	0.41
36:DA:869:G:O2'	36:DA:870:A:H5'	2.21	0.41
38:DC:149:ILE:O	38:DC:153:ILE:HG13	2.21	0.41
39:DD:35:LYS:O	39:DD:36:PRO:C	2.59	0.41
42:DG:25:TYR:CE2	42:DG:31:VAL:HG23	2.55	0.41
42:DG:5:VAL:HG12	42:DG:6:ALA:N	2.36	0.41
42:DG:90:LEU:HD12	42:DG:90:LEU:HA	1.86	0.41
44:DJ:129:UNK:C	44:DJ:131:UNK:H	2.34	0.41
48:DP:110:TYR:O	48:DP:111:ARG:O	2.38	0.41
48:DP:96:THR:HG22	48:DP:126:VAL:CB	2.48	0.41
50:DR:117:VAL:HG22	50:DR:118:GLU:N	2.36	0.41
50:DR:45:ARG:CG	50:DR:46:GLY:N	2.80	0.41
51:DS:34:HIS:HB2	51:DS:36:TYR:CE1	2.54	0.41
37:DB:115:G:O4'	51:DS:47:THR:HB	2.21	0.41
51:DS:58:LEU:CG	51:DS:59:LYS:N	2.84	0.41
51:DS:67:ARG:HE	51:DS:98:VAL:HG11	1.86	0.41
54:DV:67:GLY:O	54:DV:88:ARG:HD2	2.21	0.41
56:DX:10:ALA:O	56:DX:28:PHE:CB	2.63	0.41
58:DZ:140:ASP:O	58:DZ:141:VAL:HG22	2.20	0.41
58:DZ:109:ALA:HB1	58:DZ:145:GLU:OE1	2.19	0.41
58:DZ:62:PRO:C	58:DZ:64:GLY:H	2.23	0.41
1:AA:106:C:O2'	1:AA:107:G:H5'	2.21	0.40
1:AA:1246:C:H2'	1:AA:1247:U:H6	1.86	0.40
1:AA:308:C:H2'	1:AA:309:G:C8	2.57	0.40
1:AA:308:C:H2'	1:AA:309:G:H8	1.85	0.40
2:AB:180:LEU:O	2:AB:181:PHE:HB2	2.21	0.40
4:AD:101:LEU:O	4:AD:102:ASP:C	2.59	0.40
5:AE:74:GLY:HA3	5:AE:116:THR:OG1	2.21	0.40
6:AF:15:ASP:OD1	6:AF:18:GLN:HG3	2.21	0.40
6:AF:27:GLN:NE2	6:AF:27:GLN:CA	2.83	0.40
11:AK:126:ARG:O	11:AK:128:ALA:N	2.54	0.40
12:AL:111:LYS:H	12:AL:111:LYS:HD3	1.86	0.40
13:AM:16:ASP:N	13:AM:16:ASP:OD1	2.53	0.40
15:AO:3:ILE:HA	15:AO:7:GLU:OE1	2.21	0.40
25:AZ:196:VAL:HG13	25:AZ:196:VAL:O	2.21	0.40
25:AZ:206:ILE:CG2	25:AZ:207:ASP:N	2.84	0.40
26:B0:53:MET:CG	26:B0:57:PHE:HA	2.51	0.40
27:B1:48:LYS:HG2	27:B1:50:ARG:HH21	1.83	0.40
28:B2:28:LYS:HZ2	28:B2:31:GLU:CB	2.34	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:B2:70:GLN:CD	28:B2:70:GLN:N	2.74	0.40
29:B3:15:TYR:HD2	29:B3:19:GLN:NE2	2.17	0.40
36:BA:1018:C:O2'	36:BA:1019:U:H5'	2.21	0.40
36:BA:1461:G:C5	36:BA:1462:C:N3	2.89	0.40
36:BA:1509(B):A:H2'	36:BA:1510:G:O4'	2.20	0.40
36:BA:1902:C:OP1	39:BD:242:ARG:NH1	2.53	0.40
36:BA:190:A:H3'	36:BA:204:A:H61	1.86	0.40
36:BA:271(I):G:H2'	36:BA:271(J):C:O4'	2.21	0.40
36:BA:64:A:C8	56:BX:66:LEU:HD12	2.56	0.40
36:BA:673:C:C2'	36:BA:674:G:H5'	2.52	0.40
36:BA:718:A:H2'	36:BA:719:C:O4'	2.21	0.40
36:BA:743:G:O2'	36:BA:744:G:H5'	2.20	0.40
37:BB:7:G:O5'	51:BS:29:PHE:CE2	2.74	0.40
38:BC:125:SER:C	38:BC:127:LEU:H	2.25	0.40
40:BE:93:VAL:C	40:BE:95:ILE:N	2.74	0.40
42:BG:52:ILE:H	42:BG:52:ILE:CD1	2.33	0.40
46:BN:119:ARG:HH11	46:BN:119:ARG:CB	2.34	0.40
51:BS:13:ARG:HG3	51:BS:14:VAL:N	2.23	0.40
53:BU:59:ARG:O	53:BU:61:TRP:N	2.55	0.40
54:BV:47:VAL:HG21	54:BV:50:PRO:O	2.21	0.40
58:BZ:114:GLY:N	58:BZ:146:ILE:CG2	2.83	0.40
58:BZ:68:PRO:O	58:BZ:68:PRO:HG2	2.21	0.40
1:CA:1137:C:O2'	1:CA:1138:G:N2	2.45	0.40
1:CA:1195:C:H2'	1:CA:1197:G:O4'	2.21	0.40
1:CA:1536:C:C4	1:CA:1537:U:C2	3.09	0.40
1:CA:413:G:O6	4:CD:35:ARG:HD3	2.21	0.40
1:CA:513:C:H2'	1:CA:514:C:H6	1.86	0.40
1:CA:803:G:C6	1:CA:804:U:C4	3.09	0.40
1:CA:959:A:H2'	1:CA:960:U:C4'	2.51	0.40
2:CB:18:GLY:O	2:CB:19:HIS:HB2	2.20	0.40
3:CC:137:ALA:O	3:CC:141:VAL:HG23	2.20	0.40
4:CD:38:TYR:HB2	4:CD:44:GLY:O	2.21	0.40
4:CD:8:VAL:C	4:CD:10:ARG:H	2.23	0.40
9:CI:4:TYR:CZ	9:CI:88:TYR:CB	3.03	0.40
9:CI:85:LEU:HD11	9:CI:96:LEU:CD2	2.45	0.40
13:CM:65:LYS:HB2	13:CM:69:GLU:HG2	2.02	0.40
16:CP:28:ARG:HH11	16:CP:28:ARG:HG2	1.86	0.40
17:CQ:5:VAL:HA	17:CQ:59:ILE:O	2.21	0.40
24:CY:66:C:H2'	24:CY:67:G:C8	2.55	0.40
25:CZ:206:ILE:CG2	25:CZ:207:ASP:N	2.84	0.40
26:D0:10:THR:HG21	36:DA:2277:G:OP2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:D0:50:ASN:HD22	26:D0:63:VAL:HG22	1.82	0.40
29:D3:52:HIS:H	29:D3:52:HIS:CD2	2.38	0.40
32:D6:11:LEU:HD13	32:D6:24:GLU:O	2.21	0.40
36:DA:191:A:H2'	36:DA:192:C:H6	1.83	0.40
36:DA:2309:A:C2'	36:DA:2310:A:H5''	2.51	0.40
36:DA:2309:A:C2'	36:DA:2310:A:C5'	2.98	0.40
36:DA:259:G:H1'	36:DA:621:A:HO2'	1.84	0.40
36:DA:2692:C:O2	36:DA:2847:U:O2'	2.39	0.40
36:DA:637:A:C6	36:DA:652:C:H4'	2.56	0.40
36:DA:751:A:C6	36:DA:789:A:C5	3.09	0.40
38:DC:78:ALA:CB	38:DC:116:THR:HG23	2.51	0.40
39:DD:76:PRO:HG2	39:DD:98:VAL:HG23	2.00	0.40
40:DE:24:THR:HG23	40:DE:184:VAL:HG22	2.02	0.40
42:DG:135:LEU:O	42:DG:154:GLY:HA3	2.21	0.40
45:DK:86:UNK:O	45:DK:87:UNK:CB	2.69	0.40
46:DN:1:MET:HE1	46:DN:3:THR:OG1	2.21	0.40
46:DN:57:ALA:C	46:DN:58:ASP:O	2.59	0.40
36:DA:1131:G:N7	46:DN:75:TYR:CD2	2.90	0.40
46:DN:97:ARG:O	46:DN:98:VAL:C	2.59	0.40
49:DQ:21:THR:O	49:DQ:22:LYS:CB	2.66	0.40
49:DQ:64:ILE:CG2	49:DQ:65:PHE:N	2.84	0.40
50:DR:57:ARG:O	50:DR:58:GLY:C	2.58	0.40
36:DA:2873:A:O4'	50:DR:8:ARG:NH2	2.54	0.40
52:DT:19:LEU:HD13	52:DT:78:LEU:HD23	2.02	0.40
52:DT:26:ASP:OD1	52:DT:26:ASP:O	2.39	0.40
52:DT:35:LYS:NZ	52:DT:41:ARG:CD	2.83	0.40
53:DU:70:ARG:NH2	53:DU:75:ASN:HB2	2.36	0.40
54:DV:15:GLU:O	54:DV:16:PRO:C	2.60	0.40
54:DV:19:LYS:CE	54:DV:20:LEU:H	2.34	0.40
54:DV:69:LYS:HB2	54:DV:88:ARG:HD3	2.03	0.40
56:DX:83:VAL:HG12	56:DX:87:GLN:HB2	2.03	0.40
57:DY:26:LYS:HG2	57:DY:27:VAL:N	2.25	0.40
57:DY:81:LYS:HD3	57:DY:97:ARG:NE	2.35	0.40
58:DZ:126:VAL:HB	58:DZ:161:VAL:HG13	2.03	0.40
58:DZ:98:MET:CG	58:DZ:99:TYR:H	2.33	0.40
1:AA:1134:G:C2'	1:AA:1135:U:H5'	2.51	0.40
1:AA:1276:G:C6	1:AA:1277:C:C4	3.10	0.40
1:AA:500:G:H2'	1:AA:501:C:C6	2.57	0.40
1:AA:7:G:O2'	5:AE:120:THR:O	2.38	0.40
7:AG:23:VAL:O	7:AG:27:ILE:HG13	2.21	0.40
1:AA:1119:C:OP2	9:AI:9:ARG:NH2	2.53	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:23:ALA:O	11:AK:86:GLY:HA3	2.22	0.40
11:AK:48:ILE:HA	11:AK:48:ILE:HD13	1.82	0.40
12:AL:112:ASP:O	12:AL:113:ARG:C	2.59	0.40
13:AM:112:GLY:HA2	13:AM:113:PRO:HD2	1.89	0.40
13:AM:83:ASP:C	13:AM:85:GLY:N	2.74	0.40
17:AQ:16:GLN:HB3	17:AQ:16:GLN:HE21	1.57	0.40
25:AZ:325:LYS:HE3	25:AZ:331:HIS:HB2	2.04	0.40
26:B0:72:ARG:O	26:B0:73:GLY:C	2.59	0.40
28:B2:11:GLU:HA	28:B2:14:ARG:HG3	2.03	0.40
29:B3:31:LEU:C	29:B3:33:GLN:H	2.25	0.40
29:B3:52:HIS:CD2	29:B3:52:HIS:H	2.39	0.40
32:B6:35:GLU:OE1	32:B6:35:GLU:HA	2.21	0.40
34:B8:51:ALA:N	34:B8:53:PRO:HD2	2.36	0.40
36:BA:1332:G:H4'	36:BA:1333:C:OP2	2.22	0.40
36:BA:1367:A:H2'	36:BA:1368:G:H5'	2.03	0.40
36:BA:1469:A:H2'	36:BA:1470:G:O4'	2.21	0.40
36:BA:1682:G:H2'	36:BA:1683:C:C6	2.56	0.40
36:BA:1847:A:H2'	36:BA:1847:A:N3	2.37	0.40
36:BA:214:G:O2'	36:BA:215:G:O4'	2.36	0.40
36:BA:2196:C:H2'	36:BA:2197:U:C6	2.57	0.40
36:BA:2291:U:H2'	36:BA:2292:C:H6	1.84	0.40
36:BA:2068:U:N3	36:BA:2430:A:C2	2.68	0.40
36:BA:2465:C:O2'	36:BA:2466:C:H5'	2.21	0.40
36:BA:2578:G:H4'	36:BA:2578:G:OP2	2.21	0.40
36:BA:2688:U:H2'	36:BA:2719:G:N2	2.35	0.40
36:BA:271(M):G:H2'	36:BA:271(N):U:H5''	2.03	0.40
36:BA:2735:G:H2'	36:BA:2736:G:C8	2.53	0.40
36:BA:380:U:H2'	36:BA:381:G:C8	2.55	0.40
36:BA:517:C:O5'	36:BA:517:C:H6	2.04	0.40
36:BA:67:U:H2'	36:BA:68:G:C8	2.54	0.40
37:BB:101:G:H2'	37:BB:102:A:O4'	2.21	0.40
37:BB:81:G:H2'	37:BB:82:G:C5'	2.51	0.40
38:BC:11:LEU:HD23	38:BC:11:LEU:O	2.20	0.40
38:BC:150:GLY:C	38:BC:154:ARG:NH1	2.75	0.40
38:BC:175:VAL:HG12	38:BC:188:ASN:CB	2.39	0.40
39:BD:13:ARG:HH11	39:BD:13:ARG:HG3	1.86	0.40
39:BD:35:LYS:HB3	39:BD:36:PRO:HD2	2.03	0.40
40:BE:76:ARG:O	40:BE:77:ILE:O	2.39	0.40
42:BG:47:LYS:HG3	42:BG:82:LEU:HD12	2.03	0.40
43:BH:24:VAL:HG11	43:BH:72:ILE:HD12	2.03	0.40
43:BH:37:VAL:HG11	43:BH:68:THR:HG21	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BN:125:GLY:HA2	46:BN:126:PRO:O	2.22	0.40
46:BN:130:HIS:O	46:BN:130:HIS:CG	2.74	0.40
46:BN:14:VAL:CG2	46:BN:137:LYS:HE3	2.51	0.40
48:BP:139:LYS:HG2	48:BP:139:LYS:O	2.22	0.40
48:BP:17:LYS:O	48:BP:19:VAL:N	2.54	0.40
48:BP:71:VAL:N	48:BP:72:PRO:CD	2.85	0.40
51:BS:16:ASN:C	51:BS:18:ILE:N	2.75	0.40
53:BU:70:ARG:NH2	53:BU:75:ASN:CB	2.84	0.40
55:BW:28:SER:C	55:BW:30:GLU:N	2.73	0.40
56:BX:39:ILE:O	56:BX:41:ASN:N	2.52	0.40
57:BY:26:LYS:CG	57:BY:27:VAL:H	2.23	0.40
58:BZ:109:ALA:C	58:BZ:111:VAL:H	2.23	0.40
58:BZ:153:SER:N	58:BZ:167:PRO:HB2	2.36	0.40
1:CA:1116:C:O2'	1:CA:1117:G:H5''	2.21	0.40
1:CA:1173:G:O2'	1:CA:1174:G:H5'	2.21	0.40
1:CA:119:A:O2'	1:CA:120:A:OP2	2.30	0.40
1:CA:124:G:H2'	1:CA:125:U:O4'	2.21	0.40
1:CA:1371:G:O2'	1:CA:1372:U:H5'	2.20	0.40
1:CA:355:C:C4	1:CA:356:A:N7	2.89	0.40
1:CA:621:A:O2'	1:CA:622:A:H5'	2.20	0.40
3:CC:49:SER:O	3:CC:50:ALA:CB	2.64	0.40
1:CA:8:A:C4	4:CD:209:ARG:HB2	2.56	0.40
4:CD:36:ARG:C	4:CD:38:TYR:N	2.72	0.40
4:CD:3:ARG:HH21	4:CD:5:ILE:HG13	1.86	0.40
6:CF:78:GLU:O	6:CF:81:ILE:HG13	2.20	0.40
8:CH:83:ILE:O	8:CH:83:ILE:HG23	2.21	0.40
9:CI:20:ARG:O	9:CI:60:ASP:HB2	2.21	0.40
9:CI:33:PHE:C	9:CI:35:GLU:N	2.73	0.40
9:CI:98:PRO:HB2	9:CI:99:LEU:HD22	2.03	0.40
10:CJ:50:ILE:HG12	14:CN:41:ARG:HD2	2.03	0.40
10:CJ:97:GLU:OE1	10:CJ:99:LYS:HE2	2.20	0.40
12:CL:71:PRO:O	12:CL:72:GLY:O	2.39	0.40
1:CA:1226:C:O2'	13:CM:103:THR:O	2.29	0.40
14:CN:12:ARG:CB	14:CN:12:ARG:NH1	2.84	0.40
16:CP:68:ASP:C	16:CP:70:ALA:N	2.74	0.40
20:CT:104:LEU:HD23	20:CT:105:SER:N	2.36	0.40
24:CY:77:TRP:NE1	25:CZ:67:HIS:HD2	2.19	0.40
27:D1:58:ILE:HG13	27:D1:59:THR:N	2.35	0.40
27:D1:64:ALA:HA	27:D1:67:ILE:HG13	2.02	0.40
30:D4:5:ILE:CD1	30:D4:5:ILE:N	2.83	0.40
31:D5:16:ARG:O	31:D5:19:ARG:HB3	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:D6:15:GLU:O	32:D6:15:GLU:HG2	2.21	0.40
34:D8:32:LEU:CG	34:D8:36:LYS:HZ3	2.32	0.40
36:DA:1142:U:H5''	36:DA:1142(A):A:C5'	2.51	0.40
36:DA:1169:G:N2	36:DA:1181:C:C2	2.89	0.40
36:DA:1480:G:C2'	36:DA:1481:U:H5'	2.46	0.40
36:DA:1692:U:H2'	36:DA:1694:C:C5	2.56	0.40
36:DA:2107:C:H1'	36:DA:2182:G:H22	1.86	0.40
36:DA:2206:G:N2	36:DA:2207:G:C4'	2.83	0.40
36:DA:2345:G:N3	36:DA:2381:C:H2'	2.36	0.40
36:DA:2453:A:O2'	36:DA:2454:G:H5'	2.21	0.40
36:DA:271(H):G:O2'	36:DA:271(I):G:H8	2.05	0.40
36:DA:271(Q):G:N3	36:DA:271(R):G:N7	2.69	0.40
36:DA:2685:G:O2'	36:DA:2726:U:H5	2.03	0.40
36:DA:346:A:C2'	36:DA:347:A:H5'	2.52	0.40
36:DA:605:C:O2	36:DA:605:C:O4'	2.38	0.40
36:DA:723:G:C6	36:DA:724:U:C4	3.09	0.40
36:DA:861:A:H2'	36:DA:862:G:O4'	2.21	0.40
36:DA:860:U:O2'	36:DA:861:A:H5'	2.21	0.40
37:DB:13:A:H2'	37:DB:14:U:H5''	2.02	0.40
37:DB:79:C:H2'	37:DB:80:U:O4'	2.22	0.40
38:DC:119:VAL:HG13	38:DC:120:MET:CE	2.51	0.40
41:DF:18:ARG:HG2	41:DF:19:GLU:N	2.36	0.40
41:DF:196:LEU:HD23	41:DF:196:LEU:HA	1.90	0.40
42:DG:10:LYS:O	42:DG:14:GLU:HB2	2.21	0.40
42:DG:46:ALA:CB	42:DG:88:ILE:CG1	2.98	0.40
43:DH:89:ILE:HD11	43:DH:128:PRO:O	2.20	0.40
51:DS:16:ASN:C	51:DS:18:ILE:N	2.75	0.40
54:DV:38:LEU:H	54:DV:51:VAL:HG13	1.86	0.40
54:DV:47:VAL:HG12	54:DV:52:VAL:CB	2.47	0.40
1:AA:1044:A:C2'	1:AA:1045:C:O5'	2.70	0.40
1:AA:1444:C:O2'	1:AA:1445:C:H5'	2.21	0.40
1:AA:1511:G:O2'	1:AA:1512:U:H5'	2.21	0.40
1:AA:414:A:C5	1:AA:431:A:C2	3.09	0.40
1:AA:416:G:C5	1:AA:417:C:C4	3.09	0.40
1:AA:474:G:H2'	1:AA:475:G:H8	1.86	0.40
1:AA:393:A:H5'	1:AA:483:C:O2'	2.20	0.40
1:AA:858:G:O2'	1:AA:859:A:H5'	2.22	0.40
3:AC:22:TRP:CH2	3:AC:32:LEU:HB2	2.57	0.40
4:AD:39:PRO:O	4:AD:44:GLY:HA3	2.22	0.40
4:AD:65:ARG:HD3	4:AD:75:PHE:CD2	2.56	0.40
5:AE:110:LEU:HD13	5:AE:118:ILE:HG21	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:102:ALA:HB1	5:AE:120:THR:HG21	2.03	0.40
7:AG:91:VAL:HG23	7:AG:95:ARG:HD3	2.04	0.40
9:AI:29:ASN:ND2	9:AI:65:VAL:O	2.55	0.40
14:AN:28:GLY:O	14:AN:29:ARG:O	2.39	0.40
15:AO:39:LEU:O	15:AO:42:HIS:HB3	2.21	0.40
16:AP:53:VAL:HG23	16:AP:54:GLU:N	2.26	0.40
22:AV:18:G:O2'	22:AV:57:G:N2	2.54	0.40
22:AW:37:A:H5'	22:AW:38:A:OP2	2.21	0.40
24:AY:26:A:C2'	24:AY:27:C:H5'	2.51	0.40
25:AZ:126:VAL:HG13	61:AZ:502:KIR:H473	2.02	0.40
25:AZ:193:ASN:O	25:AZ:195:TRP:N	2.46	0.40
25:AZ:321:TYR:HD1	25:AZ:367:ASN:ND2	2.20	0.40
30:B4:6:HIS:HB3	42:BG:67:LYS:HZ2	1.86	0.40
31:B5:42:PRO:O	31:B5:43:HIS:HB2	2.22	0.40
33:B7:6:GLN:O	36:BA:686:G:H1'	2.21	0.40
36:BA:973:A:O4'	36:BA:1188:U:C6	2.75	0.40
36:BA:1229:G:H3'	36:BA:1230:C:C6	2.56	0.40
36:BA:127:A:H5''	36:BA:128:C:C6	2.56	0.40
36:BA:1472:A:H2'	36:BA:1473:G:H5'	2.04	0.40
36:BA:225:A:C2'	36:BA:226:G:H5'	2.52	0.40
36:BA:2287:A:N6	36:BA:2344:U:N3	2.66	0.40
36:BA:2289:G:H1'	36:BA:2346:A:H2	1.87	0.40
36:BA:2642:G:O2'	36:BA:2643:G:H5'	2.21	0.40
36:BA:2701:C:H2'	36:BA:2702:U:H2'	2.02	0.40
36:BA:2526:G:H5'	36:BA:2742:C:O2'	2.21	0.40
36:BA:34:C:N4	36:BA:447:A:H61	2.09	0.40
38:BC:78:ALA:CB	38:BC:116:THR:HG23	2.51	0.40
42:BG:10:LYS:HA	42:BG:14:GLU:HG2	2.03	0.40
47:BO:22:ILE:HD13	47:BO:22:ILE:HA	1.77	0.40
48:BP:121:LYS:HA	48:BP:122:PRO:HD3	1.90	0.40
49:BQ:48:GLU:O	49:BQ:49:ALA:C	2.60	0.40
50:BR:87:TYR:C	50:BR:89:ASP:N	2.74	0.40
55:BW:4:LYS:CA	55:BW:106:ILE:HG22	2.50	0.40
55:BW:4:LYS:CG	55:BW:5:ALA:H	2.34	0.40
56:BX:51:VAL:CG1	56:BX:81:VAL:HB	2.52	0.40
56:BX:8:ILE:H	56:BX:8:ILE:CD1	2.31	0.40
57:BY:28:LYS:N	57:BY:28:LYS:HE2	2.36	0.40
1:CA:1002:G:O2'	1:CA:1003:G:H5'	2.21	0.40
1:CA:1125:U:C5'	1:CA:1126:U:C5	3.02	0.40
1:CA:1330:U:H5'	1:CA:1331:G:P	2.60	0.40
1:CA:1442(A):G:C3'	1:CA:1442(B):A:C5'	2.96	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1487:G:C6	1:CA:1488:G:N7	2.90	0.40
1:CA:551:U:H2'	1:CA:552:U:C6	2.56	0.40
4:CD:192:GLU:OE1	4:CD:192:GLU:HA	2.20	0.40
5:CE:144:THR:O	5:CE:145:LYS:C	2.60	0.40
5:CE:64:ARG:NH1	5:CE:64:ARG:CG	2.84	0.40
6:CF:20:ALA:O	6:CF:24:GLU:HB2	2.21	0.40
7:CG:69:VAL:HG13	7:CG:100:ALA:HB1	2.03	0.40
11:CK:57:THR:CG2	11:CK:60:ALA:H	2.28	0.40
12:CL:111:LYS:H	12:CL:111:LYS:HD3	1.87	0.40
12:CL:91:LYS:HB3	12:CL:91:LYS:HZ2	1.87	0.40
13:CM:108:ARG:N	13:CM:108:ARG:HD2	2.37	0.40
15:CO:4:THR:OG1	15:CO:7:GLU:HG3	2.21	0.40
18:CR:68:LYS:HE2	18:CR:68:LYS:HB2	1.91	0.40
19:CS:16:LEU:N	19:CS:16:LEU:CD1	2.83	0.40
22:CW:67:C:H2'	22:CW:68:C:H6	1.84	0.40
25:CZ:404:LEU:N	25:CZ:404:LEU:HD22	2.36	0.40
29:D3:46:ASN:O	29:D3:50:VAL:HG22	2.20	0.40
32:D6:30:THR:HG22	32:D6:31:PRO:HD2	2.04	0.40
35:D9:34:GLN:HB3	35:D9:35:ARG:H	1.71	0.40
36:DA:1131:G:O2'	36:DA:1132:A:H8	2.03	0.40
36:DA:1006:C:C2	36:DA:1138:G:N2	2.90	0.40
36:DA:115:C:O2'	36:DA:116:C:H5'	2.22	0.40
36:DA:1222:C:H2'	36:DA:1223:G:H5''	2.03	0.40
36:DA:1319:G:C6	36:DA:1320:C:N4	2.89	0.40
36:DA:1639:U:H2'	36:DA:1640:C:C5'	2.47	0.40
36:DA:2127:G:H4'	38:DC:37:PHE:CD1	2.56	0.40
36:DA:2243:U:H2'	36:DA:2244:U:C6	2.56	0.40
36:DA:2533:A:O2'	36:DA:2534:A:H5'	2.22	0.40
36:DA:2712:U:C1'	36:DA:2712(A):A:C8	3.01	0.40
36:DA:653:A:N3	36:DA:653:A:H2'	2.37	0.40
36:DA:654(L):G:H3'	36:DA:654(L):G:N3	2.37	0.40
36:DA:896:A:C8	58:DZ:146:ILE:HD12	2.56	0.40
37:DB:15:A:H1'	37:DB:110:G:C5	2.56	0.40
38:DC:125:SER:C	38:DC:127:LEU:H	2.25	0.40
39:DD:57:GLY:O	39:DD:58:HIS:C	2.59	0.40
40:DE:76:ARG:O	40:DE:77:ILE:O	2.39	0.40
43:DH:115:VAL:O	43:DH:117:PRO:HD3	2.22	0.40
43:DH:46:GLU:O	43:DH:48:GLY:N	2.54	0.40
44:DJ:70:UNK:O	44:DJ:71:UNK:C	2.69	0.40
49:DQ:27:VAL:HG23	49:DQ:137:TYR:CE2	2.56	0.40
49:DQ:42:ILE:HG22	49:DQ:47:ILE:HG13	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DT:34:VAL:HG22	52:DT:39:ARG:HA	2.03	0.40
53:DU:8:VAL:CG1	53:DU:12:ARG:HE	2.34	0.40
53:DU:35:ALA:O	53:DU:36:ARG:C	2.60	0.40
55:DW:55:ALA:O	55:DW:57:ASN:N	2.54	0.40
56:DX:27:THR:HG23	56:DX:80:ILE:CB	2.39	0.40
1:AA:1251:A:H2'	1:AA:1252:A:C8	2.56	0.40
1:AA:294:U:H2'	1:AA:295:C:H6	1.87	0.40
1:AA:773:G:O2'	1:AA:774:G:H5'	2.21	0.40
1:AA:826:C:C2	1:AA:827:U:C5	3.10	0.40
1:AA:955:U:O2'	1:AA:956:U:H5'	2.21	0.40
1:AA:972:C:OP2	10:AJ:57:LYS:HG2	2.22	0.40
2:AB:178:ARG:NH1	2:AB:178:ARG:HG3	2.35	0.40
3:AC:12:LEU:O	3:AC:13:GLY:C	2.60	0.40
3:AC:35:GLU:O	3:AC:39:ILE:HG13	2.22	0.40
4:AD:158:ILE:CG2	4:AD:181:MET:HE1	2.52	0.40
7:AG:41:ARG:O	7:AG:42:ILE:C	2.60	0.40
10:AJ:51:ARG:H	10:AJ:60:ARG:HA	1.86	0.40
10:AJ:32:ALA:N	10:AJ:78:ASN:HD21	2.17	0.40
12:AL:89:ARG:H	12:AL:89:ARG:HG3	1.67	0.40
13:AM:77:ASN:O	13:AM:81:LEU:HD23	2.21	0.40
10:AJ:62:HIS:HB2	14:AN:59:ALA:HB3	2.03	0.40
18:AR:25:THR:HB	18:AR:26:LEU:HD12	2.03	0.40
18:AR:43:PHE:CG	18:AR:66:LEU:HD11	2.56	0.40
22:AV:4:C:C2'	22:AV:5:G:H5'	2.50	0.40
25:AZ:135:MET:O	25:AZ:138:VAL:HG23	2.21	0.40
25:AZ:178:ALA:HB3	25:AZ:199:ILE:HD11	2.04	0.40
25:AZ:266:VAL:HB	25:AZ:291:ARG:NH1	2.36	0.40
26:B0:77:ARG:NH2	36:BA:857:C:H5'	2.37	0.40
28:B2:2:LYS:CE	28:B2:59:ARG:HH22	2.31	0.40
28:B2:62:THR:O	28:B2:63:VAL:C	2.58	0.40
29:B3:49:LYS:HE2	36:BA:850:C:O3'	2.22	0.40
32:B6:13:CYS:HB3	32:B6:49:HIS:HB3	2.03	0.40
32:B6:7:ILE:HG22	32:B6:7:ILE:O	2.22	0.40
34:B8:56:GLU:O	34:B8:57:ARG:C	2.60	0.40
36:BA:1625:C:H2'	36:BA:1626:G:H5'	2.03	0.40
36:BA:1750:G:H2'	36:BA:1751:C:H6	1.87	0.40
36:BA:2026:C:N3	36:BA:2027:G:C8	2.89	0.40
36:BA:2147:G:H2'	36:BA:2148:G:C5'	2.51	0.40
36:BA:2186:G:P	36:BA:2187:G:OP1	2.80	0.40
36:BA:2309:A:C2'	36:BA:2310:A:C5'	2.99	0.40
36:BA:271(M):G:H2'	36:BA:271(N):U:C5'	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2762:G:H2'	36:BA:2763:G:O4'	2.21	0.40
36:BA:2885:C:H2'	36:BA:2886:G:O5'	2.21	0.40
36:BA:671:C:C5	48:BP:36:LYS:NZ	2.90	0.40
36:BA:693:C:H2'	36:BA:694:U:C6	2.57	0.40
37:BB:14:U:OP2	37:BB:71:C:H5'	2.21	0.40
39:BD:62:TYR:HA	39:BD:87:ASN:ND2	2.35	0.40
36:BA:2823:A:OP1	40:BE:113:PHE:HB2	2.21	0.40
41:BF:122:LYS:NZ	41:BF:152:GLU:OE2	2.55	0.40
49:BQ:27:VAL:HG23	49:BQ:137:TYR:CD2	2.57	0.40
49:BQ:58:PHE:CD1	49:BQ:58:PHE:O	2.75	0.40
52:BT:12:SER:O	52:BT:13:ARG:CZ	2.70	0.40
53:BU:8:VAL:HG11	53:BU:12:ARG:HE	1.87	0.40
58:BZ:99:TYR:HA	58:BZ:124:ILE:O	2.20	0.40
1:CA:1007:C:C2'	1:CA:1008:C:H5'	2.51	0.40
1:CA:1054:C:OP1	1:CA:1197:G:OP1	2.39	0.40
1:CA:1238:A:H2'	1:CA:1239:A:H5'	2.03	0.40
1:CA:1266:G:H2'	1:CA:1268:A:OP2	2.22	0.40
1:CA:1320:C:H42	19:CS:36:ARG:HG3	1.86	0.40
1:CA:221:C:O2'	1:CA:222:U:H5'	2.21	0.40
1:CA:623:C:C4	1:CA:624:C:C4	3.10	0.40
1:CA:973:G:OP1	10:CJ:57:LYS:HD3	2.21	0.40
2:CB:21:ARG:HB3	2:CB:39:ILE:HA	2.02	0.40
3:CC:54:ARG:O	3:CC:55:VAL:HG23	2.20	0.40
3:CC:76:VAL:HG21	3:CC:103:VAL:HG11	2.03	0.40
4:CD:107:ARG:HH11	4:CD:107:ARG:HG2	1.86	0.40
4:CD:7:PRO:HB2	4:CD:10:ARG:HD2	2.03	0.40
7:CG:18:TYR:CD2	7:CG:59:LEU:HD13	2.56	0.40
10:CJ:94:VAL:HG12	10:CJ:95:GLU:N	2.36	0.40
12:CL:60:LEU:HB2	12:CL:64:TYR:O	2.21	0.40
13:CM:19:LEU:O	13:CM:22:ILE:HD13	2.21	0.40
14:CN:4:LYS:C	14:CN:6:LEU:N	2.75	0.40
19:CS:29:ARG:HB3	19:CS:47:HIS:HA	2.02	0.40
25:CZ:241:ARG:N	25:CZ:285:ASN:HD22	2.20	0.40
25:CZ:362:VAL:HG12	25:CZ:362:VAL:O	2.21	0.40
26:D0:72:ARG:O	26:D0:73:GLY:C	2.59	0.40
27:D1:14:VAL:HG11	27:D1:39:LYS:HE2	2.02	0.40
28:D2:56:GLN:C	28:D2:58:ALA:N	2.75	0.40
28:D2:68:ARG:NH1	28:D2:68:ARG:HG3	2.36	0.40
36:DA:140:G:C1'	36:DA:141:A:H2	2.33	0.40
36:DA:1599:C:OP2	56:DX:36:LYS:HD2	2.20	0.40
36:DA:1661:G:H2'	36:DA:1662:C:H6	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1668:A:H4'	36:DA:1669:A:O5'	2.21	0.40
27:D1:52:ARG:NH2	36:DA:2218:U:C4'	2.85	0.40
36:DA:2245:U:C5'	36:DA:2246:G:H5'	2.43	0.40
36:DA:2291:U:H2'	36:DA:2292:C:H6	1.80	0.40
36:DA:2364:C:O2'	36:DA:2365:G:H5'	2.21	0.40
36:DA:2461:C:H2'	36:DA:2462:U:H6	1.85	0.40
36:DA:2472:G:H2'	36:DA:2475:C:H42	1.86	0.40
36:DA:2688:U:H2'	36:DA:2719:G:N2	2.35	0.40
36:DA:2694:G:O2'	36:DA:2695:C:H5'	2.22	0.40
36:DA:2758:A:O2'	36:DA:2759:G:P	2.79	0.40
36:DA:529:A:H4'	36:DA:530:G:O5'	2.21	0.40
36:DA:743:G:O2'	36:DA:744:G:H5'	2.21	0.40
37:DB:80:U:O2'	37:DB:81:G:H5''	2.22	0.40
40:DE:120:TRP:CG	40:DE:155:LYS:HB3	2.57	0.40
40:DE:93:VAL:HG12	40:DE:175:VAL:CG2	2.52	0.40
41:DF:183:VAL:HG23	41:DF:183:VAL:O	2.22	0.40
41:DF:28:ILE:HG12	41:DF:28:ILE:O	2.22	0.40
43:DH:37:VAL:HG11	43:DH:68:THR:HG21	2.03	0.40
46:DN:26:LEU:C	46:DN:26:LEU:HD12	2.41	0.40
49:DQ:5:ARG:CB	49:DQ:5:ARG:NH1	2.84	0.40
50:DR:105:ARG:HE	50:DR:105:ARG:H	1.69	0.40
52:DT:7:ILE:O	52:DT:10:VAL:HB	2.21	0.40
52:DT:133:GLU:O	52:DT:133:GLU:HG2	2.21	0.40
53:DU:109:LEU:HA	53:DU:109:LEU:HD23	1.84	0.40
53:DU:83:LEU:HD12	53:DU:83:LEU:N	2.37	0.40
55:DW:47:VAL:O	55:DW:51:LEU:HB2	2.22	0.40
57:DY:28:LYS:H	57:DY:28:LYS:HE3	1.86	0.40
57:DY:67:LEU:HD23	57:DY:68:HIS:N	2.36	0.40
58:DZ:166:SER:H	58:DZ:167:PRO:CA	2.32	0.40
58:DZ:61:LEU:HA	58:DZ:62:PRO:HD3	1.90	0.40
1:AA:1378:C:OP1	7:AG:7:ALA:CB	2.70	0.40
1:AA:189(H):G:O2'	1:AA:189(I):G:P	2.80	0.40
1:AA:370:C:O2'	1:AA:371:G:H5'	2.21	0.40
4:AD:192:GLU:OE1	4:AD:192:GLU:HA	2.21	0.40
4:AD:88:VAL:HG12	4:AD:90:GLY:N	2.37	0.40
6:AF:15:ASP:O	6:AF:17:SER:N	2.54	0.40
6:AF:24:GLU:HG2	6:AF:28:ARG:HH12	1.87	0.40
7:AG:15:ASP:HB3	7:AG:19:GLY:N	2.36	0.40
8:AH:119:LEU:HD12	8:AH:124:ALA:HA	2.03	0.40
11:AK:34:ASP:C	11:AK:36:ASP:H	2.24	0.40
12:AL:34:ARG:HG3	12:AL:105:TYR:HE2	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:42:ARG:C	16:AP:44:THR:H	2.24	0.40
20:AT:53:LEU:HB3	20:AT:102:GLY:HA3	2.03	0.40
22:AV:75:C:H2'	22:AV:76:A:H1'	2.03	0.40
24:AY:51:G:HO2'	25:AZ:338:TYR:HD1	1.67	0.40
25:AZ:210:ILE:HA	25:AZ:211:PRO:HD2	1.94	0.40
24:AY:76:A:O4'	25:AZ:237:VAL:HG11	2.21	0.40
27:B1:4:VAL:HB	27:B1:11:ARG:HB3	2.02	0.40
28:B2:53:LEU:O	28:B2:56:GLN:HB2	2.21	0.40
34:B8:14:VAL:CG2	34:B8:22:VAL:HG13	2.51	0.40
34:B8:48:PHE:O	34:B8:49:VAL:CG2	2.69	0.40
36:BA:1106:G:O6	36:BA:1107:G:N2	2.54	0.40
36:BA:1486:A:N6	36:BA:1504:C:H42	2.20	0.40
36:BA:1530:C:H2'	36:BA:1531:C:C6	2.56	0.40
36:BA:2305:A:C2'	36:BA:2306:C:H5''	2.52	0.40
36:BA:2364:C:O2'	36:BA:2365:G:H5'	2.20	0.40
36:BA:2383:G:C2'	36:BA:2384:G:H5'	2.52	0.40
36:BA:2542:A:O2'	36:BA:2543:G:H5'	2.21	0.40
36:BA:272(A):U:H6	36:BA:272(A):U:H3'	1.86	0.40
36:BA:36:G:O2'	36:BA:37:C:H5'	2.22	0.40
36:BA:376:C:H2'	36:BA:377:C:C6	2.57	0.40
36:BA:428:A:H3'	36:BA:429:A:H8	1.85	0.40
36:BA:797:C:C2	36:BA:798:G:C8	3.09	0.40
36:BA:958:U:H5''	49:BQ:14:ARG:HD3	2.02	0.40
39:BD:270:ILE:HG13	39:BD:270:ILE:H	1.79	0.40
39:BD:97:TYR:O	39:BD:99:ASP:N	2.55	0.40
40:BE:174:ASP:OD1	40:BE:175:VAL:N	2.54	0.40
40:BE:77:ILE:C	40:BE:78:LEU:HG	2.41	0.40
40:BE:33:VAL:CG1	40:BE:89:ASP:O	2.66	0.40
41:BF:110:LEU:C	41:BF:110:LEU:HD13	2.42	0.40
41:BF:18:ARG:HG2	41:BF:19:GLU:N	2.37	0.40
42:BG:52:ILE:HG12	42:BG:54:GLU:N	2.35	0.40
43:BH:51:ARG:HG3	43:BH:52:VAL:N	2.35	0.40
44:BJ:34:UNK:O	44:BJ:38:UNK:N	2.54	0.40
45:BK:23:UNK:O	45:BK:25:UNK:N	2.55	0.40
46:BN:91:LEU:HA	46:BN:91:LEU:HD23	1.81	0.40
50:BR:30:THR:HG22	50:BR:31:HIS:CE1	2.56	0.40
50:BR:51:LEU:HA	50:BR:51:LEU:HD12	1.90	0.40
52:BT:7:ILE:O	52:BT:10:VAL:HB	2.22	0.40
52:BT:10:VAL:O	52:BT:12:SER:N	2.54	0.40
52:BT:35:LYS:NZ	52:BT:41:ARG:CD	2.84	0.40
53:BU:82:GLY:O	53:BU:84:LYS:N	2.55	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BX:80:ILE:O	56:BX:80:ILE:HG12	2.21	0.40
57:BY:56:PRO:O	57:BY:57:GLN:O	2.39	0.40
57:BY:40:GLU:HA	57:BY:64:GLU:OE2	2.22	0.40
1:CA:102:G:H2'	1:CA:103:C:H6	1.86	0.40
1:CA:1266:G:N2	1:CA:1269:A:OP2	2.49	0.40
1:CA:1327:C:OP1	21:CU:20:LYS:HB3	2.22	0.40
1:CA:1315:U:O2	1:CA:1360:A:H2	2.04	0.40
1:CA:802:A:H3'	1:CA:803:G:H8	1.86	0.40
1:CA:861:G:O2'	1:CA:862:C:H5'	2.22	0.40
4:CD:8:VAL:HG11	4:CD:115:ARG:CZ	2.52	0.40
4:CD:31:CYS:C	4:CD:33:MET:H	2.25	0.40
5:CE:50:GLU:HB3	5:CE:52:PRO:HD2	2.03	0.40
7:CG:15:ASP:HB3	7:CG:19:GLY:N	2.36	0.40
11:CK:117:ASN:N	11:CK:117:ASN:HD22	2.19	0.40
13:CM:21:TYR:N	13:CM:21:TYR:CD1	2.89	0.40
1:CA:750:G:N3	15:CO:23:GLY:HA3	2.37	0.40
16:CP:42:ARG:C	16:CP:44:THR:H	2.25	0.40
17:CQ:59:ILE:CG2	17:CQ:71:PHE:CD2	3.03	0.40
18:CR:25:THR:HB	18:CR:26:LEU:HD12	2.03	0.40
19:CS:36:ARG:H	19:CS:36:ARG:HG2	1.70	0.40
25:CZ:266:VAL:HB	25:CZ:291:ARG:NH1	2.37	0.40
26:D0:26:TYR:O	26:D0:29:GLN:HG3	2.21	0.40
27:D1:52:ARG:O	27:D1:53:VAL:O	2.40	0.40
28:D2:25:VAL:O	28:D2:28:LYS:HB2	2.21	0.40
31:D5:23:HIS:O	31:D5:24:ALA:C	2.60	0.40
36:DA:1058:G:C8	36:DA:1059:G:H5'	2.57	0.40
36:DA:1108:U:H5'	36:DA:1109:C:OP2	2.22	0.40
36:DA:1258:C:O2'	36:DA:1259:G:H5'	2.22	0.40
36:DA:1353:A:H2'	36:DA:1354:A:C8	2.56	0.40
36:DA:1429:G:H2'	36:DA:1430:C:C6	2.56	0.40
36:DA:2126:A:HO2'	36:DA:2127:G:P	2.44	0.40
36:DA:2370:G:C6	36:DA:2371:G:C6	3.09	0.40
36:DA:350:U:N3	36:DA:351:G:C2	2.89	0.40
36:DA:350:U:O2'	36:DA:351:G:H5'	2.21	0.40
36:DA:515:A:C8	36:DA:516:C:C5	3.10	0.40
36:DA:556:G:H2'	36:DA:557:U:C6	2.57	0.40
36:DA:531:C:N3	36:DA:563:G:C8	2.90	0.40
36:DA:648:G:O2'	36:DA:649:G:H5'	2.20	0.40
36:DA:954:G:N3	36:DA:2274:A:C2	2.89	0.40
38:DC:150:GLY:C	38:DC:154:ARG:NH1	2.74	0.40
38:DC:40:THR:HG22	38:DC:177:LYS:NZ	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DD:270:ILE:H	39:DD:270:ILE:HG13	1.79	0.40
40:DE:59:VAL:HG21	40:DE:63:LEU:HA	2.01	0.40
40:DE:98:PRO:HD3	40:DE:175:VAL:CG1	2.52	0.40
41:DF:160:ASN:HD21	41:DF:162:LEU:H	1.61	0.40
41:DF:37:VAL:CG1	41:DF:41:LEU:HD12	2.51	0.40
42:DG:82:LEU:HD22	42:DG:87:PRO:CA	2.52	0.40
43:DH:97:ARG:NH2	43:DH:104:GLU:OE2	2.54	0.40
43:DH:119:GLU:OE1	43:DH:119:GLU:N	2.53	0.40
43:DH:19:VAL:O	43:DH:20:ALA:CB	2.70	0.40
43:DH:24:VAL:HG11	43:DH:72:ILE:HD12	2.03	0.40
36:DA:1140:C:H5"	46:DN:66:LYS:NZ	2.37	0.40
47:DO:31:LYS:HB3	47:DO:32:TYR:CD1	2.56	0.40
47:DO:49:ARG:HD3	47:DO:49:ARG:H	1.86	0.40
47:DO:2:ILE:HG13	47:DO:8:LEU:HD21	2.04	0.40
50:DR:12:ARG:HH11	50:DR:12:ARG:CG	2.34	0.40
52:DT:93:ARG:HH22	52:DT:95:ARG:HD3	1.82	0.40
58:DZ:81:ARG:HH11	58:DZ:81:ARG:HB3	1.85	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	AB	232/256 (91%)	175 (75%)	39 (17%)	18 (8%)	1	5
2	CB	232/256 (91%)	173 (75%)	41 (18%)	18 (8%)	1	5
3	AC	204/239 (85%)	161 (79%)	23 (11%)	20 (10%)	0	3
3	CC	204/239 (85%)	159 (78%)	28 (14%)	17 (8%)	1	5
4	AD	206/209 (99%)	134 (65%)	46 (22%)	26 (13%)	0	1
4	CD	206/209 (99%)	133 (65%)	48 (23%)	25 (12%)	0	1
5	AE	148/162 (91%)	138 (93%)	5 (3%)	5 (3%)	3	21

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
5	CE	148/162 (91%)	138 (93%)	6 (4%)	4 (3%)	5	25
6	AF	99/101 (98%)	80 (81%)	12 (12%)	7 (7%)	1	6
6	CF	99/101 (98%)	81 (82%)	11 (11%)	7 (7%)	1	6
7	AG	153/156 (98%)	123 (80%)	22 (14%)	8 (5%)	2	12
7	CG	153/156 (98%)	123 (80%)	22 (14%)	8 (5%)	2	12
8	AH	136/138 (99%)	125 (92%)	10 (7%)	1 (1%)	22	57
8	CH	136/138 (99%)	125 (92%)	10 (7%)	1 (1%)	22	57
9	AI	125/128 (98%)	85 (68%)	23 (18%)	17 (14%)	0	1
9	CI	125/128 (98%)	84 (67%)	24 (19%)	17 (14%)	0	1
10	AJ	96/105 (91%)	75 (78%)	12 (12%)	9 (9%)	0	3
10	CJ	96/105 (91%)	75 (78%)	12 (12%)	9 (9%)	0	3
11	AK	117/129 (91%)	100 (86%)	10 (8%)	7 (6%)	1	9
11	CK	117/129 (91%)	101 (86%)	9 (8%)	7 (6%)	1	9
12	AL	122/135 (90%)	94 (77%)	15 (12%)	13 (11%)	0	2
12	CL	122/135 (90%)	91 (75%)	18 (15%)	13 (11%)	0	2
13	AM	122/126 (97%)	82 (67%)	26 (21%)	14 (12%)	0	2
13	CM	122/126 (97%)	84 (69%)	24 (20%)	14 (12%)	0	2
14	AN	58/61 (95%)	41 (71%)	6 (10%)	11 (19%)	0	0
14	CN	58/61 (95%)	40 (69%)	7 (12%)	11 (19%)	0	0
15	AO	86/89 (97%)	79 (92%)	7 (8%)	0	100	100
15	CO	86/89 (97%)	79 (92%)	6 (7%)	1 (1%)	13	44
16	AP	81/88 (92%)	52 (64%)	22 (27%)	7 (9%)	1	4
16	CP	81/88 (92%)	52 (64%)	22 (27%)	7 (9%)	1	4
17	AQ	97/105 (92%)	86 (89%)	9 (9%)	2 (2%)	7	30
17	CQ	97/105 (92%)	86 (89%)	9 (9%)	2 (2%)	7	30
18	AR	68/88 (77%)	56 (82%)	11 (16%)	1 (2%)	10	39
18	CR	68/88 (77%)	57 (84%)	10 (15%)	1 (2%)	10	39
19	AS	76/93 (82%)	50 (66%)	16 (21%)	10 (13%)	0	1
19	CS	76/93 (82%)	50 (66%)	16 (21%)	10 (13%)	0	1
20	AT	97/106 (92%)	64 (66%)	24 (25%)	9 (9%)	0	3
20	CT	97/106 (92%)	62 (64%)	26 (27%)	9 (9%)	0	3

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
21	AU	22/27 (82%)	18 (82%)	3 (14%)	1 (4%)	2	15
21	CU	22/27 (82%)	18 (82%)	3 (14%)	1 (4%)	2	15
25	AZ	381/405 (94%)	269 (71%)	82 (22%)	30 (8%)	1	5
25	CZ	381/405 (94%)	268 (70%)	83 (22%)	30 (8%)	1	5
26	B0	82/85 (96%)	69 (84%)	10 (12%)	3 (4%)	3	19
26	D0	82/85 (96%)	69 (84%)	10 (12%)	3 (4%)	3	19
27	B1	91/98 (93%)	70 (77%)	10 (11%)	11 (12%)	0	1
27	D1	91/98 (93%)	71 (78%)	14 (15%)	6 (7%)	1	7
28	B2	69/72 (96%)	40 (58%)	15 (22%)	14 (20%)	0	0
28	D2	69/72 (96%)	44 (64%)	18 (26%)	7 (10%)	0	3
29	B3	57/60 (95%)	47 (82%)	5 (9%)	5 (9%)	1	4
29	D3	57/60 (95%)	47 (82%)	5 (9%)	5 (9%)	1	4
30	B4	42/71 (59%)	20 (48%)	17 (40%)	5 (12%)	0	1
30	D4	42/71 (59%)	20 (48%)	17 (40%)	5 (12%)	0	1
31	B5	57/60 (95%)	39 (68%)	8 (14%)	10 (18%)	0	0
31	D5	57/60 (95%)	39 (68%)	8 (14%)	10 (18%)	0	0
32	B6	48/54 (89%)	24 (50%)	8 (17%)	16 (33%)	0	0
32	D6	48/54 (89%)	24 (50%)	8 (17%)	16 (33%)	0	0
33	B7	46/49 (94%)	42 (91%)	3 (6%)	1 (2%)	6	29
33	D7	46/49 (94%)	42 (91%)	3 (6%)	1 (2%)	6	29
34	B8	61/65 (94%)	34 (56%)	21 (34%)	6 (10%)	0	3
34	D8	61/65 (94%)	34 (56%)	21 (34%)	6 (10%)	0	3
35	B9	35/37 (95%)	25 (71%)	6 (17%)	4 (11%)	0	2
35	D9	35/37 (95%)	24 (69%)	8 (23%)	3 (9%)	1	4
38	BC	226/229 (99%)	170 (75%)	45 (20%)	11 (5%)	2	14
38	DC	226/229 (99%)	171 (76%)	43 (19%)	12 (5%)	2	12
39	BD	273/276 (99%)	219 (80%)	31 (11%)	23 (8%)	1	5
39	DD	273/276 (99%)	217 (80%)	31 (11%)	25 (9%)	1	4
40	BE	202/206 (98%)	134 (66%)	39 (19%)	29 (14%)	0	1
40	DE	202/206 (98%)	134 (66%)	39 (19%)	29 (14%)	0	1
41	BF	205/210 (98%)	148 (72%)	35 (17%)	22 (11%)	0	2

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
41	DF	205/210 (98%)	149 (73%)	34 (17%)	22 (11%)	0	2
42	BG	179/182 (98%)	118 (66%)	33 (18%)	28 (16%)	0	0
42	DG	179/182 (98%)	119 (66%)	31 (17%)	29 (16%)	0	0
43	BH	157/180 (87%)	93 (59%)	34 (22%)	30 (19%)	0	0
43	DH	157/180 (87%)	94 (60%)	33 (21%)	30 (19%)	0	0
46	BN	136/140 (97%)	93 (68%)	20 (15%)	23 (17%)	0	0
46	DN	136/140 (97%)	93 (68%)	20 (15%)	23 (17%)	0	0
47	BO	120/122 (98%)	106 (88%)	8 (7%)	6 (5%)	2	13
47	DO	120/122 (98%)	106 (88%)	8 (7%)	6 (5%)	2	13
48	BP	144/150 (96%)	78 (54%)	36 (25%)	30 (21%)	0	0
48	DP	144/150 (96%)	77 (54%)	37 (26%)	30 (21%)	0	0
49	BQ	139/141 (99%)	114 (82%)	20 (14%)	5 (4%)	3	20
49	DQ	139/141 (99%)	114 (82%)	20 (14%)	5 (4%)	3	20
50	BR	115/118 (98%)	83 (72%)	16 (14%)	16 (14%)	0	1
50	DR	115/118 (98%)	83 (72%)	17 (15%)	15 (13%)	0	1
51	BS	96/112 (86%)	50 (52%)	24 (25%)	22 (23%)	0	0
51	DS	96/112 (86%)	49 (51%)	23 (24%)	24 (25%)	0	0
52	BT	135/146 (92%)	82 (61%)	30 (22%)	23 (17%)	0	0
52	DT	135/146 (92%)	82 (61%)	30 (22%)	23 (17%)	0	0
53	BU	115/118 (98%)	83 (72%)	25 (22%)	7 (6%)	1	9
53	DU	115/118 (98%)	83 (72%)	25 (22%)	7 (6%)	1	9
54	BV	99/101 (98%)	61 (62%)	23 (23%)	15 (15%)	0	0
54	DV	99/101 (98%)	62 (63%)	22 (22%)	15 (15%)	0	0
55	BW	111/113 (98%)	87 (78%)	12 (11%)	12 (11%)	0	2
55	DW	111/113 (98%)	85 (77%)	14 (13%)	12 (11%)	0	2
56	BX	90/96 (94%)	64 (71%)	20 (22%)	6 (7%)	1	7
56	DX	90/96 (94%)	65 (72%)	19 (21%)	6 (7%)	1	7
57	BY	98/110 (89%)	41 (42%)	31 (32%)	26 (26%)	0	0
57	DY	98/110 (89%)	43 (44%)	29 (30%)	26 (26%)	0	0
58	BZ	174/206 (84%)	109 (63%)	27 (16%)	38 (22%)	0	0
58	DZ	174/206 (84%)	109 (63%)	47 (27%)	18 (10%)	0	3

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
All	All	12256/13106 (94%)	8858 (72%)	2104 (17%)	1294 (11%)	0 3

All (1294) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	15	VAL
2	AB	18	GLY
2	AB	190	THR
2	AB	191	ASP
2	AB	230	VAL
2	AB	234	PRO
3	AC	15	THR
3	AC	61	ALA
3	AC	82	GLU
3	AC	93	LYS
4	AD	3	ARG
4	AD	18	LYS
4	AD	30	LYS
4	AD	35	ARG
4	AD	125	HIS
4	AD	189	PRO
5	AE	153	LYS
7	AG	7	ALA
7	AG	8	GLU
7	AG	79	ARG
8	AH	83	ILE
9	AI	21	PRO
9	AI	28	VAL
9	AI	54	ASP
9	AI	91	ASP
9	AI	101	PHE
10	AJ	36	GLY
10	AJ	75	ILE
10	AJ	85	LEU
11	AK	89	ALA
11	AK	128	ALA
12	AL	46	LYS
12	AL	71	PRO
12	AL	79	GLU
12	AL	91	LYS
12	AL	122	THR
13	AM	12	ASN

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Mol	Chain	Res	Type
13	AM	67	GLU
13	AM	83	ASP
13	AM	113	PRO
13	AM	117	VAL
14	AN	14	PRO
14	AN	15	LYS
14	AN	16	PHE
14	AN	22	THR
14	AN	29	ARG
14	AN	59	ALA
14	AN	60	SER
16	AP	26	ARG
16	AP	44	THR
16	AP	45	THR
16	AP	53	VAL
17	AQ	68	ARG
19	AS	28	LYS
19	AS	44	MET
19	AS	67	VAL
19	AS	80	TYR
20	AT	48	LYS
20	AT	73	HIS
20	AT	99	LEU
25	AZ	24	LYS
25	AZ	189	ARG
25	AZ	310	ILE
26	B0	75	LEU
27	B1	53	VAL
27	B1	83	GLU
28	B2	16	LEU
28	B2	63	VAL
28	B2	66	GLU
28	B2	68	ARG
30	B4	26	SER
30	B4	43	TYR
31	B5	4	HIS
31	B5	24	ALA
31	B5	25	LEU
31	B5	37	LYS
31	B5	49	CYS
31	B5	52	TYR
31	B5	57	VAL

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Mol	Chain	Res	Type
32	B6	6	ARG
32	B6	16	CYS
32	B6	18	ARG
32	B6	20	ASN
32	B6	23	THR
32	B6	28	ARG
32	B6	31	PRO
32	B6	33	LYS
32	B6	49	HIS
34	B8	29	LYS
34	B8	34	TRP
34	B8	43	GLN
34	B8	49	VAL
35	B9	35	ARG
35	B9	36	GLN
38	BC	98	GLU
39	BD	25	THR
39	BD	34	VAL
39	BD	35	LYS
39	BD	224	ALA
39	BD	239	ARG
39	BD	245	PRO
39	BD	246	PRO
39	BD	267	SER
39	BD	273	ARG
39	BD	275	LYS
40	BE	2	LYS
40	BE	4	ILE
40	BE	56	PRO
40	BE	66	HIS
40	BE	69	LYS
40	BE	75	VAL
40	BE	76	ARG
40	BE	82	ARG
40	BE	185	LYS
40	BE	186	GLY
40	BE	189	PRO
41	BF	10	PRO
41	BF	14	PRO
41	BF	21	ALA
41	BF	26	ALA
41	BF	86	GLY

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Mol	Chain	Res	Type
41	BF	88	VAL
41	BF	89	VAL
41	BF	134	GLY
42	BG	25	TYR
42	BG	43	LEU
42	BG	46	ALA
42	BG	48	GLU
42	BG	49	ASP
42	BG	81	LYS
42	BG	87	PRO
42	BG	96	ARG
42	BG	103	LEU
42	BG	115	ARG
42	BG	125	PHE
42	BG	147	ASP
42	BG	176	LEU
43	BH	24	VAL
43	BH	46	GLU
43	BH	55	PRO
43	BH	81	GLU
43	BH	84	SER
43	BH	127	GLU
43	BH	137	ASP
43	BH	138	LYS
43	BH	158	HIS
43	BH	165	ALA
46	BN	19	GLU
46	BN	76	SER
46	BN	130	HIS
47	BO	29	ASN
47	BO	48	PRO
47	BO	68	GLU
48	BP	11	GLY
48	BP	13	ASN
48	BP	17	LYS
48	BP	21	ARG
48	BP	47	ASP
48	BP	56	SER
48	BP	57	THR
48	BP	58	THR
48	BP	61	ARG
48	BP	67	MET

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Mol	Chain	Res	Type
48	BP	110	TYR
48	BP	111	ARG
48	BP	147	LEU
49	BQ	2	LEU
49	BQ	25	ASP
50	BR	4	LEU
50	BR	8	ARG
50	BR	9	LYS
50	BR	11	ASN
50	BR	45	ARG
50	BR	88	ARG
50	BR	104	ARG
50	BR	117	VAL
51	BS	23	ARG
51	BS	57	LYS
51	BS	59	LYS
51	BS	76	LYS
51	BS	92	TYR
51	BS	93	LYS
51	BS	94	TYR
51	BS	97	ARG
51	BS	98	VAL
51	BS	103	GLU
52	BT	2	ASN
52	BT	24	PRO
52	BT	27	THR
52	BT	28	VAL
52	BT	30	VAL
52	BT	32	TYR
52	BT	80	SER
52	BT	91	ARG
52	BT	95	ARG
52	BT	107	ASP
53	BU	91	ASP
53	BU	93	LYS
54	BV	16	PRO
54	BV	22	VAL
54	BV	46	VAL
54	BV	79	VAL
55	BW	6	ILE
55	BW	63	ASP
55	BW	110	LYS

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Mol	Chain	Res	Type
56	BX	12	VAL
57	BY	23	ARG
57	BY	42	VAL
57	BY	50	ARG
57	BY	56	PRO
57	BY	57	GLN
57	BY	61	ILE
57	BY	63	LYS
57	BY	74	PRO
57	BY	75	ILE
57	BY	77	PRO
57	BY	78	ALA
57	BY	82	PRO
57	BY	90	LEU
58	BZ	30	ASN
58	BZ	34	ASN
58	BZ	50	GLN
58	BZ	78	LYS
58	BZ	80	ARG
58	BZ	81	ARG
58	BZ	96	VAL
58	BZ	97	GLU
58	BZ	111	VAL
58	BZ	113	ALA
58	BZ	120	ILE
58	BZ	136	PHE
58	BZ	140	ASP
58	BZ	146	ILE
58	BZ	152	ALA
58	BZ	163	LEU
58	BZ	166	SER
58	BZ	168	GLU
2	CB	15	VAL
2	CB	18	GLY
2	CB	190	THR
2	CB	191	ASP
2	CB	230	VAL
2	CB	234	PRO
3	CC	15	THR
3	CC	61	ALA
3	CC	82	GLU
3	CC	93	LYS

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Mol	Chain	Res	Type
4	CD	3	ARG
4	CD	18	LYS
4	CD	30	LYS
4	CD	35	ARG
4	CD	125	HIS
4	CD	189	PRO
5	CE	153	LYS
6	CF	36	ARG
7	CG	7	ALA
7	CG	8	GLU
7	CG	79	ARG
8	CH	83	ILE
9	CI	21	PRO
9	CI	28	VAL
9	CI	54	ASP
9	CI	91	ASP
9	CI	101	PHE
10	CJ	36	GLY
10	CJ	75	ILE
10	CJ	85	LEU
11	CK	89	ALA
11	CK	128	ALA
12	CL	46	LYS
12	CL	71	PRO
12	CL	79	GLU
12	CL	91	LYS
12	CL	122	THR
13	CM	12	ASN
13	CM	67	GLU
13	CM	83	ASP
13	CM	113	PRO
13	CM	117	VAL
14	CN	14	PRO
14	CN	15	LYS
14	CN	16	PHE
14	CN	22	THR
14	CN	29	ARG
14	CN	59	ALA
14	CN	60	SER
16	CP	26	ARG
16	CP	44	THR
16	CP	45	THR

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Mol	Chain	Res	Type
16	CP	53	VAL
17	CQ	68	ARG
19	CS	28	LYS
19	CS	44	MET
19	CS	67	VAL
19	CS	80	TYR
20	CT	48	LYS
20	CT	73	HIS
20	CT	99	LEU
25	CZ	24	LYS
25	CZ	189	ARG
25	CZ	310	ILE
26	D0	75	LEU
27	D1	30	VAL
27	D1	83	GLU
27	D1	85	LEU
28	D2	11	GLU
28	D2	47	ASN
28	D2	48	HIS
28	D2	70	GLN
30	D4	26	SER
30	D4	43	TYR
31	D5	4	HIS
31	D5	24	ALA
31	D5	25	LEU
31	D5	37	LYS
31	D5	49	CYS
31	D5	52	TYR
31	D5	57	VAL
32	D6	6	ARG
32	D6	16	CYS
32	D6	18	ARG
32	D6	20	ASN
32	D6	23	THR
32	D6	28	ARG
32	D6	31	PRO
32	D6	33	LYS
32	D6	49	HIS
34	D8	29	LYS
34	D8	34	TRP
34	D8	43	GLN
34	D8	49	VAL

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Mol	Chain	Res	Type
35	D9	35	ARG
35	D9	36	GLN
38	DC	98	GLU
39	DD	25	THR
39	DD	34	VAL
39	DD	35	LYS
39	DD	224	ALA
39	DD	239	ARG
39	DD	245	PRO
39	DD	246	PRO
39	DD	273	ARG
39	DD	275	LYS
40	DE	2	LYS
40	DE	4	ILE
40	DE	66	HIS
40	DE	69	LYS
40	DE	75	VAL
40	DE	76	ARG
40	DE	82	ARG
40	DE	185	LYS
40	DE	186	GLY
40	DE	189	PRO
41	DF	10	PRO
41	DF	14	PRO
41	DF	21	ALA
41	DF	26	ALA
41	DF	86	GLY
41	DF	88	VAL
41	DF	89	VAL
41	DF	134	GLY
42	DG	11	TYR
42	DG	28	VAL
42	DG	68	PRO
42	DG	81	LYS
42	DG	82	LEU
42	DG	84	LYS
42	DG	86	MET
42	DG	114	ILE
42	DG	115	ARG
42	DG	117	PHE
42	DG	126	ASP
42	DG	129	GLY

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Mol	Chain	Res	Type
43	DH	24	VAL
43	DH	46	GLU
43	DH	55	PRO
43	DH	81	GLU
43	DH	84	SER
43	DH	127	GLU
43	DH	137	ASP
43	DH	138	LYS
43	DH	158	HIS
43	DH	165	ALA
46	DN	19	GLU
46	DN	76	SER
46	DN	130	HIS
47	DO	29	ASN
47	DO	48	PRO
47	DO	68	GLU
48	DP	11	GLY
48	DP	13	ASN
48	DP	17	LYS
48	DP	21	ARG
48	DP	47	ASP
48	DP	57	THR
48	DP	58	THR
48	DP	61	ARG
48	DP	67	MET
48	DP	110	TYR
48	DP	111	ARG
48	DP	147	LEU
49	DQ	25	ASP
50	DR	4	LEU
50	DR	8	ARG
50	DR	9	LYS
50	DR	11	ASN
50	DR	45	ARG
50	DR	88	ARG
50	DR	103	ARG
50	DR	104	ARG
50	DR	117	VAL
51	DS	23	ARG
51	DS	57	LYS
51	DS	59	LYS
51	DS	76	LYS

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Mol	Chain	Res	Type
51	DS	92	TYR
51	DS	93	LYS
51	DS	94	TYR
51	DS	97	ARG
51	DS	98	VAL
51	DS	103	GLU
52	DT	2	ASN
52	DT	24	PRO
52	DT	27	THR
52	DT	28	VAL
52	DT	30	VAL
52	DT	32	TYR
52	DT	80	SER
52	DT	91	ARG
52	DT	95	ARG
52	DT	107	ASP
53	DU	91	ASP
53	DU	93	LYS
54	DV	16	PRO
54	DV	22	VAL
54	DV	46	VAL
54	DV	79	VAL
55	DW	6	ILE
55	DW	63	ASP
55	DW	110	LYS
56	DX	12	VAL
56	DX	41	ASN
57	DY	23	ARG
57	DY	42	VAL
57	DY	50	ARG
57	DY	56	PRO
57	DY	57	GLN
57	DY	61	ILE
57	DY	63	LYS
57	DY	74	PRO
57	DY	75	ILE
57	DY	77	PRO
57	DY	78	ALA
57	DY	82	PRO
57	DY	90	LEU
58	DZ	14	LYS
58	DZ	124	ILE

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Mol	Chain	Res	Type
58	DZ	163	LEU
58	DZ	168	GLU
2	AB	20	GLU
2	AB	237	ALA
3	AC	47	LEU
3	AC	51	GLY
3	AC	96	GLY
3	AC	107	GLN
3	AC	130	VAL
3	AC	146	ALA
4	AD	27	TYR
4	AD	44	GLY
4	AD	70	ILE
4	AD	110	PHE
4	AD	129	ASN
4	AD	153	ARG
6	AF	16	GLN
6	AF	36	ARG
6	AF	39	LYS
6	AF	40	VAL
6	AF	42	GLU
7	AG	146	GLU
9	AI	34	ASN
9	AI	41	VAL
9	AI	44	VAL
9	AI	56	LEU
9	AI	89	ASN
9	AI	100	GLY
10	AJ	32	ALA
10	AJ	59	SER
10	AJ	86	MET
12	AL	18	VAL
12	AL	72	GLY
13	AM	4	ILE
13	AM	116	THR
14	AN	4	LYS
16	AP	47	ASP
16	AP	81	ARG
17	AQ	95	TYR
19	AS	5	LEU
19	AS	26	GLY
19	AS	30	LEU

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Mol	Chain	Res	Type
19	AS	46	GLY
25	AZ	21	ASP
25	AZ	110	ASP
25	AZ	141	VAL
25	AZ	221	PHE
25	AZ	274	ARG
25	AZ	323	LEU
25	AZ	329	GLY
25	AZ	331	HIS
26	B0	13	GLY
26	B0	74	ARG
27	B1	30	VAL
27	B1	31	GLY
27	B1	78	LYS
28	B2	9	GLN
28	B2	37	PHE
28	B2	41	ILE
28	B2	47	ASN
28	B2	65	ASN
29	B3	30	ARG
30	B4	44	THR
31	B5	51	TYR
32	B6	9	LEU
32	B6	17	LYS
32	B6	44	ARG
33	B7	17	GLY
34	B8	31	HIS
34	B8	33	ASN
35	B9	11	CYS
38	BC	67	GLY
38	BC	118	ASP
38	BC	128	GLY
38	BC	160	ARG
39	BD	37	LEU
39	BD	41	GLY
39	BD	42	GLY
39	BD	58	HIS
39	BD	127	VAL
39	BD	268	ARG
40	BE	29	GLY
40	BE	45	THR
40	BE	46	ALA

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Mol	Chain	Res	Type
40	BE	71	GLY
40	BE	77	ILE
40	BE	124	GLY
40	BE	190	GLY
40	BE	197	ILE
41	BF	7	TYR
41	BF	85	GLY
41	BF	117	ARG
41	BF	126	VAL
41	BF	132	VAL
42	BG	9	ARG
42	BG	10	LYS
42	BG	21	ARG
42	BG	80	PHE
42	BG	82	LEU
42	BG	155	MET
43	BH	18	GLU
43	BH	43	VAL
43	BH	47	GLU
43	BH	49	VAL
43	BH	52	VAL
43	BH	160	LYS
46	BN	8	GLN
46	BN	36	GLY
46	BN	37	LYS
46	BN	57	ALA
46	BN	58	ASP
47	BO	5	GLN
47	BO	49	ARG
48	BP	9	ASN
48	BP	20	GLY
48	BP	25	SER
48	BP	31	ALA
48	BP	34	GLY
48	BP	52	GLU
48	BP	62	LEU
48	BP	65	ARG
48	BP	70	GLN
49	BQ	62	GLY
49	BQ	135	ASP
50	BR	5	LYS
50	BR	6	SER

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Mol	Chain	Res	Type
50	BR	14	SER
50	BR	58	GLY
50	BR	103	ARG
51	BS	17	ARG
51	BS	80	LEU
51	BS	88	ASP
51	BS	102	ALA
52	BT	4	GLY
52	BT	17	THR
52	BT	41	ARG
52	BT	55	ASN
52	BT	92	GLY
52	BT	93	ARG
52	BT	135	ALA
53	BU	9	VAL
53	BU	90	VAL
54	BV	18	LEU
54	BV	53	GLU
55	BW	40	ASN
56	BX	19	ALA
56	BX	41	ASN
56	BX	53	LYS
57	BY	3	VAL
57	BY	69	ALA
57	BY	81	LYS
58	BZ	13	GLU
58	BZ	27	VAL
58	BZ	124	ILE
58	BZ	158	PRO
58	BZ	161	VAL
2	CB	20	GLU
2	CB	237	ALA
3	CC	12	LEU
3	CC	47	LEU
3	CC	51	GLY
3	CC	96	GLY
3	CC	130	VAL
3	CC	146	ALA
3	CC	160	ALA
4	CD	27	TYR
4	CD	44	GLY
4	CD	70	ILE

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Mol	Chain	Res	Type
4	CD	110	PHE
4	CD	129	ASN
4	CD	153	ARG
6	CF	16	GLN
6	CF	39	LYS
6	CF	40	VAL
6	CF	42	GLU
7	CG	146	GLU
9	CI	34	ASN
9	CI	41	VAL
9	CI	44	VAL
9	CI	56	LEU
9	CI	89	ASN
9	CI	100	GLY
10	CJ	32	ALA
10	CJ	59	SER
10	CJ	86	MET
12	CL	18	VAL
12	CL	72	GLY
13	CM	4	ILE
13	CM	116	THR
14	CN	4	LYS
16	CP	47	ASP
16	CP	81	ARG
17	CQ	95	TYR
19	CS	5	LEU
19	CS	26	GLY
19	CS	30	LEU
19	CS	46	GLY
25	CZ	21	ASP
25	CZ	110	ASP
25	CZ	141	VAL
25	CZ	221	PHE
25	CZ	274	ARG
25	CZ	323	LEU
25	CZ	329	GLY
25	CZ	331	HIS
25	CZ	379	ALA
26	D0	13	GLY
26	D0	74	ARG
27	D1	28	GLY
27	D1	53	VAL

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Mol	Chain	Res	Type
27	D1	91	LYS
29	D3	30	ARG
30	D4	44	THR
31	D5	51	TYR
32	D6	9	LEU
32	D6	17	LYS
32	D6	44	ARG
33	D7	17	GLY
34	D8	31	HIS
34	D8	33	ASN
35	D9	11	CYS
38	DC	67	GLY
38	DC	118	ASP
38	DC	128	GLY
38	DC	160	ARG
39	DD	37	LEU
39	DD	41	GLY
39	DD	42	GLY
39	DD	58	HIS
39	DD	127	VAL
39	DD	267	SER
39	DD	268	ARG
40	DE	29	GLY
40	DE	45	THR
40	DE	46	ALA
40	DE	56	PRO
40	DE	71	GLY
40	DE	77	ILE
40	DE	124	GLY
40	DE	190	GLY
40	DE	197	ILE
41	DF	7	TYR
41	DF	85	GLY
41	DF	117	ARG
41	DF	126	VAL
41	DF	132	VAL
42	DG	14	GLU
42	DG	29	TRP
42	DG	53	LEU
42	DG	75	LYS
42	DG	80	PHE
42	DG	87	PRO

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Mol	Chain	Res	Type
42	DG	96	ARG
42	DG	97	ASP
43	DH	18	GLU
43	DH	43	VAL
43	DH	47	GLU
43	DH	49	VAL
43	DH	52	VAL
43	DH	160	LYS
46	DN	8	GLN
46	DN	9	VAL
46	DN	36	GLY
46	DN	37	LYS
46	DN	57	ALA
46	DN	58	ASP
47	DO	5	GLN
47	DO	49	ARG
48	DP	9	ASN
48	DP	20	GLY
48	DP	25	SER
48	DP	31	ALA
48	DP	34	GLY
48	DP	56	SER
48	DP	62	LEU
48	DP	65	ARG
48	DP	70	GLN
49	DQ	2	LEU
49	DQ	62	GLY
49	DQ	135	ASP
50	DR	5	LYS
50	DR	6	SER
50	DR	14	SER
50	DR	58	GLY
51	DS	17	ARG
51	DS	80	LEU
51	DS	88	ASP
51	DS	102	ALA
52	DT	4	GLY
52	DT	17	THR
52	DT	41	ARG
52	DT	55	ASN
52	DT	92	GLY
52	DT	93	ARG

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Mol	Chain	Res	Type
52	DT	135	ALA
53	DU	9	VAL
53	DU	90	VAL
54	DV	18	LEU
54	DV	53	GLU
56	DX	13	LEU
56	DX	19	ALA
56	DX	53	LYS
57	DY	3	VAL
57	DY	69	ALA
57	DY	81	LYS
58	DZ	152	ALA
58	DZ	166	SER
58	DZ	177	PRO
2	AB	26	PRO
2	AB	238	LEU
3	AC	12	LEU
3	AC	95	THR
3	AC	160	ALA
3	AC	168	ALA
4	AD	4	TYR
4	AD	102	ASP
4	AD	137	SER
5	AE	8	GLU
6	AF	54	LYS
6	AF	62	TRP
7	AG	52	GLU
7	AG	137	LYS
7	AG	145	ALA
7	AG	155	ARG
9	AI	90	PRO
9	AI	120	ARG
12	AL	47	LYS
12	AL	115	LYS
12	AL	127	GLU
13	AM	5	ALA
13	AM	21	TYR
13	AM	60	VAL
13	AM	85	GLY
13	AM	120	LYS
14	AN	3	ARG
14	AN	20	ALA

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Mol	Chain	Res	Type
18	AR	87	ARG
19	AS	14	HIS
20	AT	75	ASN
20	AT	96	GLY
20	AT	97	ALA
21	AU	3	LYS
25	AZ	94	THR
25	AZ	169	PRO
25	AZ	186	PRO
25	AZ	258	LEU
25	AZ	326	GLU
25	AZ	379	ALA
25	AZ	381	GLU
25	AZ	404	LEU
27	B1	80	LEU
27	B1	92	LYS
28	B2	58	ALA
29	B3	3	ARG
38	BC	79	LYS
38	BC	82	LYS
38	BC	117	PRO
38	BC	127	LEU
39	BD	24	ILE
39	BD	36	PRO
40	BE	62	PRO
40	BE	72	VAL
40	BE	169	ASN
41	BF	25	PRO
41	BF	83	PHE
41	BF	133	ASN
41	BF	142	TRP
41	BF	168	ARG
41	BF	178	PRO
42	BG	53	LEU
42	BG	84	LYS
42	BG	86	MET
42	BG	97	ASP
42	BG	138	GLN
43	BH	20	ALA
43	BH	77	LYS
43	BH	129	THR
43	BH	154	PRO

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Mol	Chain	Res	Type
43	BH	156	ALA
43	BH	167	GLU
46	BN	7	LYS
46	BN	9	VAL
46	BN	33	LEU
46	BN	42	TRP
46	BN	47	ALA
46	BN	135	PRO
48	BP	36	LYS
48	BP	107	LYS
48	BP	149	GLU
50	BR	3	HIS
51	BS	13	ARG
51	BS	14	VAL
51	BS	22	GLY
51	BS	53	SER
52	BT	12	SER
52	BT	29	ARG
52	BT	98	LYS
52	BT	111	ARG
53	BU	60	LEU
54	BV	2	PHE
54	BV	36	PRO
54	BV	50	PRO
54	BV	56	SER
54	BV	100	ARG
55	BW	18	ARG
55	BW	56	ALA
55	BW	60	ASN
56	BX	13	LEU
57	BY	66	PRO
57	BY	92	ASN
58	BZ	41	LEU
58	BZ	66	SER
58	BZ	148	ASP
58	BZ	151	HIS
58	BZ	156	LYS
58	BZ	177	PRO
2	CB	26	PRO
2	CB	238	LEU
3	CC	95	THR
3	CC	107	GLN

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Mol	Chain	Res	Type
3	CC	168	ALA
4	CD	4	TYR
4	CD	137	SER
5	CE	8	GLU
5	CE	37	ARG
6	CF	54	LYS
6	CF	62	TRP
7	CG	52	GLU
7	CG	137	LYS
7	CG	155	ARG
9	CI	90	PRO
9	CI	120	ARG
12	CL	47	LYS
12	CL	115	LYS
12	CL	127	GLU
13	CM	5	ALA
13	CM	21	TYR
13	CM	85	GLY
13	CM	120	LYS
14	CN	3	ARG
14	CN	20	ALA
18	CR	87	ARG
19	CS	14	HIS
20	CT	75	ASN
20	CT	96	GLY
20	CT	97	ALA
21	CU	3	LYS
25	CZ	94	THR
25	CZ	169	PRO
25	CZ	186	PRO
25	CZ	258	LEU
25	CZ	326	GLU
25	CZ	381	GLU
25	CZ	404	LEU
29	D3	3	ARG
38	DC	79	LYS
38	DC	82	LYS
38	DC	117	PRO
38	DC	127	LEU
39	DD	24	ILE
39	DD	202	LYS
39	DD	225	ALA

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Mol	Chain	Res	Type
40	DE	62	PRO
40	DE	72	VAL
40	DE	169	ASN
41	DF	25	PRO
41	DF	82	ILE
41	DF	83	PHE
41	DF	133	ASN
41	DF	142	TRP
41	DF	178	PRO
42	DG	49	ASP
42	DG	116	ASP
42	DG	151	ALA
43	DH	20	ALA
43	DH	76	VAL
43	DH	77	LYS
43	DH	129	THR
43	DH	154	PRO
43	DH	156	ALA
43	DH	167	GLU
46	DN	7	LYS
46	DN	42	TRP
46	DN	47	ALA
46	DN	135	PRO
48	DP	35	HIS
48	DP	36	LYS
48	DP	52	GLU
48	DP	107	LYS
48	DP	149	GLU
50	DR	3	HIS
51	DS	13	ARG
51	DS	14	VAL
51	DS	22	GLY
51	DS	53	SER
52	DT	12	SER
52	DT	29	ARG
52	DT	111	ARG
53	DU	83	LEU
54	DV	2	PHE
54	DV	36	PRO
54	DV	50	PRO
54	DV	56	SER
54	DV	100	ARG

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Mol	Chain	Res	Type
55	DW	18	ARG
55	DW	25	ARG
55	DW	36	LEU
55	DW	40	ASN
55	DW	60	ASN
57	DY	27	VAL
57	DY	66	PRO
57	DY	92	ASN
58	DZ	112	ARG
2	AB	95	GLN
2	AB	225	ALA
4	AD	32	ALA
4	AD	40	PRO
4	AD	107	ARG
4	AD	159	ARG
9	AI	55	ALA
9	AI	92	TYR
10	AJ	27	ALA
11	AK	127	LYS
12	AL	48	PRO
12	AL	51	ALA
13	AM	114	ARG
19	AS	45	VAL
20	AT	93	GLU
20	AT	95	ALA
25	AZ	22	HIS
25	AZ	95	GLY
25	AZ	130	TYR
25	AZ	139	ASP
25	AZ	292	GLY
27	B1	57	GLU
27	B1	86	SER
28	B2	14	ARG
28	B2	38	GLN
29	B3	29	ARG
30	B4	28	LYS
30	B4	40	HIS
31	B5	53	ALA
31	B5	56	LYS
32	B6	52	VAL
38	BC	104	LEU
39	BD	3	VAL

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Mol	Chain	Res	Type
39	BD	225	ALA
39	BD	244	ARG
41	BF	6	VAL
41	BF	82	ILE
42	BG	126	ASP
42	BG	144	ILE
42	BG	174	GLU
43	BH	76	VAL
43	BH	152	ARG
46	BN	40	PRO
46	BN	77	GLY
46	BN	127	ASP
46	BN	129	PRO
47	BO	13	ASN
48	BP	23	PRO
48	BP	35	HIS
48	BP	43	GLY
48	BP	148	LEU
50	BR	102	GLU
51	BS	104	GLY
52	BT	36	GLU
55	BW	25	ARG
55	BW	36	LEU
55	BW	72	LYS
56	BX	46	ALA
57	BY	27	VAL
57	BY	39	VAL
57	BY	64	GLU
58	BZ	150	LEU
2	CB	95	GLN
2	CB	225	ALA
4	CD	32	ALA
4	CD	40	PRO
4	CD	102	ASP
4	CD	107	ARG
4	CD	159	ARG
7	CG	145	ALA
9	CI	11	LYS
9	CI	55	ALA
9	CI	92	TYR
10	CJ	27	ALA
11	CK	127	LYS

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Mol	Chain	Res	Type
12	CL	48	PRO
13	CM	60	VAL
13	CM	114	ARG
19	CS	45	VAL
20	CT	95	ALA
25	CZ	22	HIS
25	CZ	130	TYR
25	CZ	139	ASP
28	D2	14	ARG
28	D2	21	LEU
29	D3	29	ARG
30	D4	28	LYS
30	D4	40	HIS
31	D5	53	ALA
31	D5	56	LYS
32	D6	52	VAL
38	DC	104	LEU
39	DD	3	VAL
39	DD	36	PRO
39	DD	244	ARG
40	DE	116	VAL
41	DF	6	VAL
41	DF	168	ARG
42	DG	43	LEU
42	DG	128	ARG
42	DG	181	ARG
43	DH	41	MET
43	DH	152	ARG
46	DN	4	TYR
46	DN	33	LEU
46	DN	40	PRO
46	DN	77	GLY
46	DN	127	ASP
46	DN	129	PRO
47	DO	13	ASN
48	DP	43	GLY
48	DP	148	LEU
50	DR	102	GLU
51	DS	104	GLY
52	DT	36	GLU
52	DT	98	LYS
52	DT	131	ALA

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Mol	Chain	Res	Type
55	DW	56	ALA
55	DW	72	LYS
57	DY	39	VAL
57	DY	64	GLU
58	DZ	16	SER
58	DZ	24	LEU
58	DZ	61	LEU
58	DZ	151	HIS
2	AB	232	PRO
2	AB	239	VAL
3	AC	26	LYS
3	AC	131	ARG
4	AD	5	ILE
4	AD	168	ARG
5	AE	37	ARG
9	AI	11	LYS
10	AJ	90	LEU
11	AK	27	ASN
11	AK	35	PRO
11	AK	91	ARG
12	AL	40	VAL
13	AM	124	PRO
16	AP	43	LYS
25	AZ	23	GLY
25	AZ	109	ALA
25	AZ	128	VAL
25	AZ	211	PRO
27	B1	69	LYS
27	B1	91	LYS
28	B2	44	LEU
29	B3	2	PRO
32	B6	15	GLU
32	B6	27	LYS
39	BD	242	ARG
40	BE	55	ASN
40	BE	61	ARG
40	BE	116	VAL
40	BE	119	ARG
41	BF	58	ALA
42	BG	90	LEU
43	BH	41	MET
46	BN	4	TYR

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Mol	Chain	Res	Type
46	BN	133	GLN
51	BS	24	LEU
51	BS	89	ARG
52	BT	131	ALA
53	BU	83	LEU
55	BW	93	ALA
57	BY	26	LYS
57	BY	53	PRO
57	BY	65	ALA
58	BZ	46	LYS
58	BZ	51	ALA
2	CB	232	PRO
2	CB	239	VAL
3	CC	26	LYS
3	CC	83	ARG
4	CD	5	ILE
4	CD	168	ARG
10	CJ	90	LEU
11	CK	27	ASN
11	CK	35	PRO
11	CK	91	ARG
12	CL	51	ALA
13	CM	124	PRO
14	CN	19	ARG
15	CO	88	ARG
16	CP	43	LYS
20	CT	63	ILE
20	CT	93	GLU
25	CZ	23	GLY
25	CZ	95	GLY
25	CZ	109	ALA
25	CZ	128	VAL
25	CZ	211	PRO
25	CZ	292	GLY
28	D2	64	LEU
29	D3	2	PRO
32	D6	15	GLU
32	D6	27	LYS
38	DC	37	PHE
39	DD	242	ARG
40	DE	55	ASN
40	DE	61	ARG

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Mol	Chain	Res	Type
40	DE	119	ARG
43	DH	58	GLU
46	DN	12	ARG
46	DN	133	GLN
48	DP	23	PRO
51	DS	24	LEU
51	DS	87	PHE
51	DS	89	ARG
51	DS	90	GLY
51	DS	105	ALA
53	DU	60	LEU
55	DW	35	ILE
55	DW	93	ALA
56	DX	46	ALA
57	DY	53	PRO
57	DY	65	ALA
58	DZ	30	ASN
58	DZ	139	VAL
2	AB	165	VAL
3	AC	3	ASN
3	AC	29	TYR
3	AC	66	VAL
3	AC	83	ARG
4	AD	128	VAL
14	AN	19	ARG
20	AT	63	ILE
25	AZ	368	VAL
39	BD	28	GLU
43	BH	21	PRO
43	BH	44	VAL
43	BH	58	GLU
46	BN	5	VAL
46	BN	12	ARG
51	BS	90	GLY
53	BU	11	ARG
54	BV	37	VAL
55	BW	35	ILE
2	CB	165	VAL
11	CK	90	GLY
12	CL	40	VAL
25	CZ	368	VAL
39	DD	28	GLU

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Mol	Chain	Res	Type
41	DF	58	ALA
42	DG	67	LYS
42	DG	71	THR
43	DH	44	VAL
46	DN	5	VAL
53	DU	11	ARG
54	DV	23	GLU
54	DV	37	VAL
57	DY	26	LYS
4	AD	39	PRO
10	AJ	91	PRO
43	BH	107	VAL
48	BP	19	VAL
57	BY	31	LEU
58	BZ	130	PRO
58	BZ	147	GLY
3	CC	66	VAL
4	CD	128	VAL
10	CJ	91	PRO
39	DD	234	GLY
40	DE	98	PRO
43	DH	21	PRO
43	DH	107	VAL
49	DQ	27	VAL
57	DY	31	LEU
58	DZ	146	ILE
2	AB	127	ILE
4	AD	92	VAL
5	AE	67	VAL
11	AK	90	GLY
29	B3	27	GLY
43	BH	45	VAL
46	BN	46	VAL
49	BQ	27	VAL
54	BV	54	GLY
58	BZ	12	GLY
58	BZ	143	GLY
29	D3	27	GLY
46	DN	46	VAL
48	DP	19	VAL
54	DV	54	GLY
58	DZ	111	VAL

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Mol	Chain	Res	Type
2	AB	130	ARG
4	AD	172	PRO
25	AZ	191	GLY
32	B6	41	PRO
40	BE	98	PRO
40	BE	130	GLY
54	BV	48	GLY
57	BY	76	CYS
2	CB	127	ILE
2	CB	130	ARG
4	CD	172	PRO
5	CE	67	VAL
25	CZ	191	GLY
40	DE	53	PRO
42	DG	85	GLY
43	DH	45	VAL
54	DV	35	LEU
57	DY	76	CYS
58	DZ	12	GLY
58	DZ	141	VAL
5	AE	70	PRO
28	B2	42	GLY
35	B9	10	ILE
38	BC	119	VAL
40	BE	53	PRO
50	BR	46	GLY
58	BZ	14	LYS
58	BZ	139	VAL
4	CD	37	PRO
4	CD	39	PRO
9	CI	57	GLY
32	D6	41	PRO
38	DC	119	VAL
40	DE	130	GLY
2	AB	131	PRO
4	AD	37	PRO
9	AI	57	GLY
54	BV	35	LEU
2	CB	131	PRO

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	AB	202/220 (92%)	178 (88%)	24 (12%)	5	20
2	CB	202/220 (92%)	180 (89%)	22 (11%)	6	25
3	AC	160/188 (85%)	143 (89%)	17 (11%)	6	26
3	CC	160/188 (85%)	144 (90%)	16 (10%)	7	28
4	AD	180/181 (99%)	157 (87%)	23 (13%)	4	18
4	CD	180/181 (99%)	157 (87%)	23 (13%)	4	18
5	AE	115/123 (94%)	104 (90%)	11 (10%)	8	31
5	CE	115/123 (94%)	105 (91%)	10 (9%)	10	36
6	AF	90/90 (100%)	81 (90%)	9 (10%)	7	28
6	CF	90/90 (100%)	82 (91%)	8 (9%)	9	34
7	AG	126/127 (99%)	116 (92%)	10 (8%)	12	40
7	CG	126/127 (99%)	116 (92%)	10 (8%)	12	40
8	AH	119/119 (100%)	109 (92%)	10 (8%)	11	38
8	CH	119/119 (100%)	109 (92%)	10 (8%)	11	38
9	AI	98/99 (99%)	89 (91%)	9 (9%)	9	33
9	CI	98/99 (99%)	89 (91%)	9 (9%)	9	33
10	AJ	88/92 (96%)	80 (91%)	8 (9%)	9	33
10	CJ	88/92 (96%)	80 (91%)	8 (9%)	9	33
11	AK	90/99 (91%)	81 (90%)	9 (10%)	7	28
11	CK	90/99 (91%)	82 (91%)	8 (9%)	9	34
12	AL	104/111 (94%)	95 (91%)	9 (9%)	10	36
12	CL	104/111 (94%)	97 (93%)	7 (7%)	16	46
13	AM	99/101 (98%)	86 (87%)	13 (13%)	4	17
13	CM	99/101 (98%)	86 (87%)	13 (13%)	4	17
14	AN	49/50 (98%)	39 (80%)	10 (20%)	1	5
14	CN	49/50 (98%)	39 (80%)	10 (20%)	1	5

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
15	AO	79/80 (99%)	70 (89%)	9 (11%)	5	23
15	CO	79/80 (99%)	71 (90%)	8 (10%)	7	28
16	AP	72/74 (97%)	66 (92%)	6 (8%)	11	38
16	CP	72/74 (97%)	66 (92%)	6 (8%)	11	38
17	AQ	94/97 (97%)	87 (93%)	7 (7%)	13	42
17	CQ	94/97 (97%)	87 (93%)	7 (7%)	13	42
18	AR	61/77 (79%)	54 (88%)	7 (12%)	5	22
18	CR	61/77 (79%)	54 (88%)	7 (12%)	5	22
19	AS	69/80 (86%)	56 (81%)	13 (19%)	1	6
19	CS	69/80 (86%)	56 (81%)	13 (19%)	1	6
20	AT	76/82 (93%)	71 (93%)	5 (7%)	16	47
20	CT	76/82 (93%)	71 (93%)	5 (7%)	16	47
21	AU	19/22 (86%)	18 (95%)	1 (5%)	22	54
21	CU	19/22 (86%)	18 (95%)	1 (5%)	22	54
25	AZ	322/338 (95%)	299 (93%)	23 (7%)	14	44
25	CZ	322/338 (95%)	299 (93%)	23 (7%)	14	44
26	B0	66/67 (98%)	58 (88%)	8 (12%)	5	20
26	D0	66/67 (98%)	56 (85%)	10 (15%)	3	12
27	B1	78/83 (94%)	67 (86%)	11 (14%)	3	15
27	D1	78/83 (94%)	71 (91%)	7 (9%)	9	34
28	B2	66/67 (98%)	61 (92%)	5 (8%)	13	41
28	D2	66/67 (98%)	60 (91%)	6 (9%)	9	33
29	B3	51/52 (98%)	44 (86%)	7 (14%)	3	16
29	D3	51/52 (98%)	44 (86%)	7 (14%)	3	16
30	B4	39/63 (62%)	32 (82%)	7 (18%)	2	8
30	D4	39/63 (62%)	32 (82%)	7 (18%)	2	8
31	B5	51/52 (98%)	43 (84%)	8 (16%)	2	11
31	D5	51/52 (98%)	43 (84%)	8 (16%)	2	11
32	B6	49/52 (94%)	36 (74%)	13 (26%)	0	1
32	D6	49/52 (94%)	37 (76%)	12 (24%)	0	2
33	B7	41/42 (98%)	35 (85%)	6 (15%)	3	13

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
33	D7	41/42 (98%)	35 (85%)	6 (15%)	3	13
34	B8	53/55 (96%)	45 (85%)	8 (15%)	3	12
34	D8	53/55 (96%)	45 (85%)	8 (15%)	3	12
35	B9	34/34 (100%)	31 (91%)	3 (9%)	10	36
35	D9	34/34 (100%)	31 (91%)	3 (9%)	10	36
38	BC	180/181 (99%)	170 (94%)	10 (6%)	21	52
38	DC	180/181 (99%)	171 (95%)	9 (5%)	24	57
39	BD	217/218 (100%)	187 (86%)	30 (14%)	3	16
39	DD	217/218 (100%)	186 (86%)	31 (14%)	3	14
40	BE	165/166 (99%)	148 (90%)	17 (10%)	7	27
40	DE	165/166 (99%)	148 (90%)	17 (10%)	7	27
41	BF	165/166 (99%)	150 (91%)	15 (9%)	9	33
41	DF	165/166 (99%)	150 (91%)	15 (9%)	9	33
42	BG	155/156 (99%)	132 (85%)	23 (15%)	3	13
42	DG	155/156 (99%)	138 (89%)	17 (11%)	6	25
43	BH	132/148 (89%)	116 (88%)	16 (12%)	5	20
43	DH	132/148 (89%)	116 (88%)	16 (12%)	5	20
46	BN	117/119 (98%)	102 (87%)	15 (13%)	4	18
46	DN	117/119 (98%)	102 (87%)	15 (13%)	4	18
47	BO	100/100 (100%)	95 (95%)	5 (5%)	24	57
47	DO	100/100 (100%)	95 (95%)	5 (5%)	24	57
48	BP	112/116 (97%)	97 (87%)	15 (13%)	4	16
48	DP	112/116 (97%)	97 (87%)	15 (13%)	4	16
49	BQ	111/111 (100%)	96 (86%)	15 (14%)	4	16
49	DQ	111/111 (100%)	97 (87%)	14 (13%)	4	18
50	BR	100/101 (99%)	89 (89%)	11 (11%)	6	25
50	DR	100/101 (99%)	90 (90%)	10 (10%)	7	28
51	BS	77/88 (88%)	68 (88%)	9 (12%)	5	22
51	DS	77/88 (88%)	68 (88%)	9 (12%)	5	22
52	BT	120/127 (94%)	97 (81%)	23 (19%)	1	6
52	DT	120/127 (94%)	98 (82%)	22 (18%)	1	7

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
53	BU	92/94 (98%)	83 (90%)	9 (10%)	8	29
53	DU	92/94 (98%)	84 (91%)	8 (9%)	10	36
54	BV	82/82 (100%)	66 (80%)	16 (20%)	1	6
54	DV	82/82 (100%)	66 (80%)	16 (20%)	1	6
55	BW	91/92 (99%)	86 (94%)	5 (6%)	21	53
55	DW	91/92 (99%)	86 (94%)	5 (6%)	21	53
56	BX	74/78 (95%)	64 (86%)	10 (14%)	4	16
56	DX	74/78 (95%)	64 (86%)	10 (14%)	4	16
57	BY	84/91 (92%)	70 (83%)	14 (17%)	2	9
57	DY	84/91 (92%)	70 (83%)	14 (17%)	2	9
58	BZ	155/179 (87%)	126 (81%)	29 (19%)	1	7
58	DZ	155/179 (87%)	135 (87%)	20 (13%)	4	18
All	All	10338/10860 (95%)	9176 (89%)	1162 (11%)	6	24

All (1162) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	15	VAL
2	AB	17	PHE
2	AB	24	TRP
2	AB	25	ASN
2	AB	32	ILE
2	AB	36	ARG
2	AB	42	ILE
2	AB	51	LEU
2	AB	69	LEU
2	AB	76	GLN
2	AB	144	ARG
2	AB	145	LEU
2	AB	155	LEU
2	AB	162	ILE
2	AB	163	PHE
2	AB	170	GLU
2	AB	178	ARG
2	AB	187	LEU
2	AB	191	ASP
2	AB	196	LEU
2	AB	200	ILE

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Mol	Chain	Res	Type
2	AB	204	ASN
2	AB	230	VAL
2	AB	234	PRO
3	AC	5	ILE
3	AC	14	ILE
3	AC	16	ARG
3	AC	29	TYR
3	AC	34	LEU
3	AC	38	ARG
3	AC	40	ARG
3	AC	49	SER
3	AC	70	VAL
3	AC	79	ARG
3	AC	105	GLU
3	AC	107	GLN
3	AC	119	ARG
3	AC	127	ARG
3	AC	132	ARG
3	AC	167	TRP
3	AC	192	THR
4	AD	3	ARG
4	AD	15	GLU
4	AD	27	TYR
4	AD	33	MET
4	AD	36	ARG
4	AD	49	ARG
4	AD	58	LEU
4	AD	59	ARG
4	AD	67	ILE
4	AD	86	LYS
4	AD	97	LEU
4	AD	110	PHE
4	AD	129	ASN
4	AD	131	ARG
4	AD	132	ARG
4	AD	135	LEU
4	AD	138	TYR
4	AD	145	GLU
4	AD	154	ASN
4	AD	162	LEU
4	AD	179	GLU
4	AD	187	ARG

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Mol	Chain	Res	Type
4	AD	202	LEU
5	AE	12	LEU
5	AE	20	GLN
5	AE	31	LEU
5	AE	38	GLN
5	AE	41	VAL
5	AE	79	GLU
5	AE	80	ILE
5	AE	107	ARG
5	AE	116	THR
5	AE	120	THR
5	AE	147	ASP
6	AF	25	ILE
6	AF	27	GLN
6	AF	31	GLU
6	AF	32	ASN
6	AF	57	GLN
6	AF	63	TYR
6	AF	83	ASP
6	AF	86	ARG
6	AF	92	LYS
7	AG	24	THR
7	AG	36	LYS
7	AG	54	THR
7	AG	74	GLU
7	AG	84	ASN
7	AG	86	GLN
7	AG	98	SER
7	AG	104	LEU
7	AG	114	ARG
7	AG	137	LYS
8	AH	1	MET
8	AH	26	VAL
8	AH	30	ARG
8	AH	56	LYS
8	AH	63	LEU
8	AH	102	ARG
8	AH	104	ARG
8	AH	112	LEU
8	AH	115	SER
8	AH	119	LEU
9	AI	4	TYR

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Mol	Chain	Res	Type
9	AI	10	ARG
9	AI	37	PHE
9	AI	47	LEU
9	AI	79	LEU
9	AI	99	LEU
9	AI	120	ARG
9	AI	121	ARG
9	AI	128	ARG
10	AJ	28	ARG
10	AJ	38	ILE
10	AJ	49	VAL
10	AJ	50	ILE
10	AJ	55	LYS
10	AJ	60	ARG
10	AJ	67	THR
10	AJ	96	ILE
11	AK	27	ASN
11	AK	29	ILE
11	AK	30	VAL
11	AK	36	ASP
11	AK	87	THR
11	AK	92	GLU
11	AK	103	LEU
11	AK	106	LYS
11	AK	116	HIS
12	AL	7	ILE
12	AL	20	LYS
12	AL	53	ARG
12	AL	84	LEU
12	AL	89	ARG
12	AL	97	ARG
12	AL	102	ARG
12	AL	122	THR
12	AL	126	LYS
13	AM	15	VAL
13	AM	50	GLU
13	AM	64	TRP
13	AM	65	LYS
13	AM	66	LEU
13	AM	71	ARG
13	AM	93	ARG
13	AM	101	GLN

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Mol	Chain	Res	Type
13	AM	108	ARG
13	AM	109	THR
13	AM	113	PRO
13	AM	115	LYS
13	AM	120	LYS
14	AN	3	ARG
14	AN	14	PRO
14	AN	16	PHE
14	AN	18	VAL
14	AN	22	THR
14	AN	29	ARG
14	AN	33	VAL
14	AN	41	ARG
14	AN	44	LEU
14	AN	60	SER
15	AO	6	GLU
15	AO	25	THR
15	AO	26	GLU
15	AO	38	ARG
15	AO	39	LEU
15	AO	41	GLU
15	AO	66	LEU
15	AO	82	ILE
15	AO	88	ARG
16	AP	2	VAL
16	AP	5	ARG
16	AP	11	SER
16	AP	25	ARG
16	AP	62	VAL
16	AP	69	THR
17	AQ	7	THR
17	AQ	18	THR
17	AQ	26	GLN
17	AQ	38	ARG
17	AQ	52	LYS
17	AQ	70	ARG
17	AQ	79	SER
18	AR	31	LEU
18	AR	37	VAL
18	AR	38	GLU
18	AR	44	LEU
18	AR	47	THR

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Mol	Chain	Res	Type
18	AR	54	ARG
18	AR	66	LEU
19	AS	5	LEU
19	AS	6	LYS
19	AS	7	LYS
19	AS	10	PHE
19	AS	15	LEU
19	AS	22	LEU
19	AS	29	ARG
19	AS	32	LYS
19	AS	34	TRP
19	AS	37	ARG
19	AS	61	TYR
19	AS	63	THR
19	AS	66	MET
20	AT	23	ARG
20	AT	24	LEU
20	AT	26	ASN
20	AT	45	GLN
20	AT	74	LYS
21	AU	22	ARG
25	AZ	21	ASP
25	AZ	38	GLU
25	AZ	64	ASN
25	AZ	93	ILE
25	AZ	98	GLN
25	AZ	117	ARG
25	AZ	122	LEU
25	AZ	185	ASN
25	AZ	198	LYS
25	AZ	201	GLU
25	AZ	206	ILE
25	AZ	241	ARG
25	AZ	263	ARG
25	AZ	272	MET
25	AZ	275	LYS
25	AZ	284	ASP
25	AZ	285	ASN
25	AZ	291	ARG
25	AZ	300	ARG
25	AZ	341	GLN
25	AZ	345	ARG

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Mol	Chain	Res	Type
25	AZ	347	THR
25	AZ	355	LEU
26	B0	9	SER
26	B0	14	ARG
26	B0	20	ARG
26	B0	27	GLU
26	B0	41	ARG
26	B0	49	LYS
26	B0	75	LEU
26	B0	84	LEU
27	B1	3	LYS
27	B1	4	VAL
27	B1	13	ILE
27	B1	20	ARG
27	B1	21	ARG
27	B1	26	ARG
27	B1	38	SER
27	B1	57	GLU
27	B1	60	PHE
27	B1	83	GLU
27	B1	86	SER
28	B2	12	GLU
28	B2	35	LEU
28	B2	53	LEU
28	B2	64	LEU
28	B2	66	GLU
29	B3	29	ARG
29	B3	31	LEU
29	B3	35	ARG
29	B3	38	GLU
29	B3	46	ASN
29	B3	48	GLU
29	B3	50	VAL
30	B4	5	ILE
30	B4	9	LEU
30	B4	20	ASN
30	B4	32	TYR
30	B4	34	GLU
30	B4	43	TYR
30	B4	47	GLN
31	B5	6	VAL
31	B5	15	ARG

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Mol	Chain	Res	Type
31	B5	25	LEU
31	B5	40	LYS
31	B5	46	CYS
31	B5	48	GLU
31	B5	51	TYR
31	B5	56	LYS
32	B6	6	ARG
32	B6	9	LEU
32	B6	10	LEU
32	B6	11	LEU
32	B6	18	ARG
32	B6	19	ARG
32	B6	21	TYR
32	B6	31	PRO
32	B6	33	LYS
32	B6	36	LEU
32	B6	41	PRO
32	B6	42	TRP
32	B6	53	LYS
33	B7	1	MET
33	B7	4	THR
33	B7	12	ARG
33	B7	24	THR
33	B7	34	ARG
33	B7	37	LYS
34	B8	30	ARG
34	B8	31	HIS
34	B8	34	TRP
34	B8	40	GLU
34	B8	41	ILE
34	B8	56	GLU
34	B8	61	LEU
34	B8	64	TYR
35	B9	1	MET
35	B9	29	ASN
35	B9	34	GLN
38	BC	28	LEU
38	BC	36	LYS
38	BC	55	ASP
38	BC	57	ASN
38	BC	68	LEU
38	BC	71	GLN

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Mol	Chain	Res	Type
38	BC	104	LEU
38	BC	105	ASP
38	BC	167	LYS
38	BC	175	VAL
39	BD	10	THR
39	BD	13	ARG
39	BD	20	ASP
39	BD	24	ILE
39	BD	26	LYS
39	BD	30	GLU
39	BD	33	LEU
39	BD	43	ARG
39	BD	44	ASN
39	BD	46	GLN
39	BD	61	LEU
39	BD	65	ILE
39	BD	68	LYS
39	BD	75	ILE
39	BD	95	LEU
39	BD	99	ASP
39	BD	122	ASP
39	BD	166	GLN
39	BD	176	ARG
39	BD	183	ARG
39	BD	192	THR
39	BD	211	ARG
39	BD	217	ARG
39	BD	218	ARG
39	BD	239	ARG
39	BD	242	ARG
39	BD	246	PRO
39	BD	257	LEU
39	BD	260	ARG
39	BD	275	LYS
40	BE	18	ASP
40	BE	34	VAL
40	BE	55	ASN
40	BE	57	LYS
40	BE	62	PRO
40	BE	67	PHE
40	BE	73	GLU
40	BE	76	ARG

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Mol	Chain	Res	Type
40	BE	78	LEU
40	BE	82	ARG
40	BE	87	GLU
40	BE	121	ASN
40	BE	128	SER
40	BE	181	LEU
40	BE	197	ILE
40	BE	202	LYS
40	BE	203	LYS
41	BF	19	GLU
41	BF	23	ASP
41	BF	28	ILE
41	BF	51	THR
41	BF	64	ILE
41	BF	70	THR
41	BF	88	VAL
41	BF	95	ARG
41	BF	98	SER
41	BF	125	LEU
41	BF	160	ASN
41	BF	164	ARG
41	BF	169	ASN
41	BF	179	GLU
41	BF	183	VAL
42	BG	21	ARG
42	BG	26	GLN
42	BG	33	ARG
42	BG	40	ASN
42	BG	51	ARG
42	BG	52	ILE
42	BG	67	LYS
42	BG	82	LEU
42	BG	83	ARG
42	BG	90	LEU
42	BG	91	ARG
42	BG	106	LEU
42	BG	107	LEU
42	BG	113	ARG
42	BG	120	LEU
42	BG	121	ASN
42	BG	140	ILE
42	BG	143	GLU

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Mol	Chain	Res	Type
42	BG	152	LEU
42	BG	153	ARG
42	BG	164	GLU
42	BG	175	LEU
42	BG	176	LEU
43	BH	43	VAL
43	BH	54	ARG
43	BH	71	LEU
43	BH	83	TYR
43	BH	85	LYS
43	BH	104	GLU
43	BH	105	LEU
43	BH	116	GLU
43	BH	119	GLU
43	BH	139	GLN
43	BH	143	GLN
43	BH	153	LYS
43	BH	157	TYR
43	BH	159	GLU
43	BH	162	ILE
43	BH	163	TYR
46	BN	1	MET
46	BN	4	TYR
46	BN	25	ARG
46	BN	28	THR
46	BN	32	THR
46	BN	38	HIS
46	BN	41	ASP
46	BN	45	ASN
46	BN	48	MET
46	BN	56	ASN
46	BN	63	THR
46	BN	65	LYS
46	BN	87	LEU
46	BN	109	LYS
46	BN	119	ARG
47	BO	23	ARG
47	BO	47	ILE
47	BO	48	PRO
47	BO	49	ARG
47	BO	65	THR
48	BP	16	ARG

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Mol	Chain	Res	Type
48	BP	39	LYS
48	BP	41	ARG
48	BP	42	SER
48	BP	48	PRO
48	BP	61	ARG
48	BP	70	GLN
48	BP	84	ASN
48	BP	85	LEU
48	BP	90	ARG
48	BP	91	PHE
48	BP	100	LEU
48	BP	105	LEU
48	BP	108	LYS
48	BP	112	LEU
49	BQ	1	MET
49	BQ	14	ARG
49	BQ	16	ARG
49	BQ	18	LYS
49	BQ	25	ASP
49	BQ	45	GLN
49	BQ	55	VAL
49	BQ	56	ARG
49	BQ	58	PHE
49	BQ	59	ARG
49	BQ	79	LEU
49	BQ	104	PHE
49	BQ	110	THR
49	BQ	133	ARG
49	BQ	135	ASP
50	BR	2	ARG
50	BR	5	LYS
50	BR	6	SER
50	BR	10	LEU
50	BR	12	ARG
50	BR	31	HIS
50	BR	33	ARG
50	BR	51	LEU
50	BR	99	LYS
50	BR	100	LEU
50	BR	117	VAL
51	BS	11	LYS
51	BS	12	PHE

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Mol	Chain	Res	Type
51	BS	15	ARG
51	BS	29	PHE
51	BS	36	TYR
51	BS	73	LEU
51	BS	80	LEU
51	BS	92	TYR
51	BS	97	ARG
52	BT	13	ARG
52	BT	21	GLU
52	BT	24	PRO
52	BT	29	ARG
52	BT	30	VAL
52	BT	32	TYR
52	BT	38	ASN
52	BT	39	ARG
52	BT	41	ARG
52	BT	43	GLN
52	BT	48	ILE
52	BT	49	VAL
52	BT	50	ILE
52	BT	53	ARG
52	BT	58	ASN
52	BT	66	VAL
52	BT	82	LEU
52	BT	83	ILE
52	BT	90	GLN
52	BT	99	LEU
52	BT	108	ARG
52	BT	124	ASP
52	BT	128	GLU
53	BU	9	VAL
53	BU	36	ARG
53	BU	49	HIS
53	BU	66	ASN
53	BU	72	HIS
53	BU	74	LEU
53	BU	78	THR
53	BU	92	ARG
53	BU	108	GLU
54	BV	2	PHE
54	BV	12	TYR
54	BV	16	PRO

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Mol	Chain	Res	Type
54	BV	18	LEU
54	BV	19	LYS
54	BV	21	ARG
54	BV	37	VAL
54	BV	39	LEU
54	BV	40	LEU
54	BV	61	VAL
54	BV	68	LYS
54	BV	82	ARG
54	BV	89	GLN
54	BV	91	TYR
54	BV	95	LEU
54	BV	99	ILE
55	BW	11	ARG
55	BW	36	LEU
55	BW	76	VAL
55	BW	82	LEU
55	BW	107	LEU
56	BX	6	ASP
56	BX	14	SER
56	BX	27	THR
56	BX	28	PHE
56	BX	37	THR
56	BX	40	LYS
56	BX	57	LEU
56	BX	66	LEU
56	BX	68	ARG
56	BX	80	ILE
57	BY	2	ARG
57	BY	6	HIS
57	BY	28	LYS
57	BY	29	GLU
57	BY	32	PRO
57	BY	50	ARG
57	BY	55	TYR
57	BY	62	GLU
57	BY	73	ARG
57	BY	76	CYS
57	BY	77	PRO
57	BY	90	LEU
57	BY	96	ILE
57	BY	97	ARG

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Mol	Chain	Res	Type
58	BZ	9	TYR
58	BZ	24	LEU
58	BZ	30	ASN
58	BZ	32	HIS
58	BZ	34	ASN
58	BZ	35	ARG
58	BZ	37	VAL
58	BZ	41	LEU
58	BZ	42	VAL
58	BZ	50	GLN
58	BZ	60	GLU
58	BZ	63	ASP
58	BZ	67	LEU
58	BZ	70	LEU
58	BZ	72	ARG
58	BZ	73	GLN
58	BZ	79	ARG
58	BZ	80	ARG
58	BZ	81	ARG
58	BZ	86	VAL
58	BZ	93	ASP
58	BZ	107	THR
58	BZ	123	ASP
58	BZ	127	LYS
58	BZ	150	LEU
58	BZ	151	HIS
58	BZ	155	LEU
58	BZ	171	ILE
58	BZ	178	GLU
2	CB	15	VAL
2	CB	17	PHE
2	CB	24	TRP
2	CB	25	ASN
2	CB	32	ILE
2	CB	36	ARG
2	CB	42	ILE
2	CB	51	LEU
2	CB	69	LEU
2	CB	76	GLN
2	CB	144	ARG
2	CB	155	LEU
2	CB	163	PHE

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Mol	Chain	Res	Type
2	CB	170	GLU
2	CB	178	ARG
2	CB	187	LEU
2	CB	191	ASP
2	CB	196	LEU
2	CB	200	ILE
2	CB	204	ASN
2	CB	230	VAL
2	CB	234	PRO
3	CC	5	ILE
3	CC	14	ILE
3	CC	16	ARG
3	CC	29	TYR
3	CC	38	ARG
3	CC	40	ARG
3	CC	49	SER
3	CC	70	VAL
3	CC	79	ARG
3	CC	105	GLU
3	CC	107	GLN
3	CC	119	ARG
3	CC	127	ARG
3	CC	132	ARG
3	CC	167	TRP
3	CC	192	THR
4	CD	3	ARG
4	CD	15	GLU
4	CD	27	TYR
4	CD	33	MET
4	CD	36	ARG
4	CD	49	ARG
4	CD	58	LEU
4	CD	59	ARG
4	CD	67	ILE
4	CD	86	LYS
4	CD	97	LEU
4	CD	110	PHE
4	CD	129	ASN
4	CD	131	ARG
4	CD	132	ARG
4	CD	135	LEU
4	CD	138	TYR

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Mol	Chain	Res	Type
4	CD	145	GLU
4	CD	154	ASN
4	CD	162	LEU
4	CD	179	GLU
4	CD	187	ARG
4	CD	202	LEU
5	CE	12	LEU
5	CE	20	GLN
5	CE	31	LEU
5	CE	38	GLN
5	CE	41	VAL
5	CE	80	ILE
5	CE	107	ARG
5	CE	116	THR
5	CE	120	THR
5	CE	147	ASP
6	CF	25	ILE
6	CF	27	GLN
6	CF	32	ASN
6	CF	57	GLN
6	CF	63	TYR
6	CF	83	ASP
6	CF	86	ARG
6	CF	92	LYS
7	CG	24	THR
7	CG	36	LYS
7	CG	54	THR
7	CG	74	GLU
7	CG	84	ASN
7	CG	86	GLN
7	CG	98	SER
7	CG	104	LEU
7	CG	114	ARG
7	CG	137	LYS
8	CH	1	MET
8	CH	5	PRO
8	CH	26	VAL
8	CH	30	ARG
8	CH	56	LYS
8	CH	102	ARG
8	CH	104	ARG
8	CH	112	LEU

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Mol	Chain	Res	Type
8	CH	115	SER
8	CH	119	LEU
9	CI	4	TYR
9	CI	10	ARG
9	CI	37	PHE
9	CI	47	LEU
9	CI	79	LEU
9	CI	99	LEU
9	CI	120	ARG
9	CI	121	ARG
9	CI	128	ARG
10	CJ	28	ARG
10	CJ	38	ILE
10	CJ	49	VAL
10	CJ	50	ILE
10	CJ	55	LYS
10	CJ	60	ARG
10	CJ	67	THR
10	CJ	96	ILE
11	CK	27	ASN
11	CK	29	ILE
11	CK	30	VAL
11	CK	87	THR
11	CK	92	GLU
11	CK	103	LEU
11	CK	106	LYS
11	CK	116	HIS
12	CL	7	ILE
12	CL	20	LYS
12	CL	84	LEU
12	CL	89	ARG
12	CL	97	ARG
12	CL	122	THR
12	CL	126	LYS
13	CM	15	VAL
13	CM	50	GLU
13	CM	64	TRP
13	CM	65	LYS
13	CM	66	LEU
13	CM	71	ARG
13	CM	93	ARG
13	CM	101	GLN

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Mol	Chain	Res	Type
13	CM	108	ARG
13	CM	109	THR
13	CM	113	PRO
13	CM	115	LYS
13	CM	120	LYS
14	CN	3	ARG
14	CN	14	PRO
14	CN	16	PHE
14	CN	18	VAL
14	CN	22	THR
14	CN	29	ARG
14	CN	33	VAL
14	CN	41	ARG
14	CN	44	LEU
14	CN	60	SER
15	CO	25	THR
15	CO	26	GLU
15	CO	38	ARG
15	CO	39	LEU
15	CO	41	GLU
15	CO	66	LEU
15	CO	82	ILE
15	CO	88	ARG
16	CP	2	VAL
16	CP	5	ARG
16	CP	11	SER
16	CP	25	ARG
16	CP	62	VAL
16	CP	69	THR
17	CQ	7	THR
17	CQ	18	THR
17	CQ	26	GLN
17	CQ	38	ARG
17	CQ	52	LYS
17	CQ	70	ARG
17	CQ	79	SER
18	CR	31	LEU
18	CR	37	VAL
18	CR	38	GLU
18	CR	44	LEU
18	CR	47	THR
18	CR	54	ARG

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Mol	Chain	Res	Type
18	CR	66	LEU
19	CS	5	LEU
19	CS	6	LYS
19	CS	7	LYS
19	CS	10	PHE
19	CS	15	LEU
19	CS	22	LEU
19	CS	29	ARG
19	CS	32	LYS
19	CS	34	TRP
19	CS	37	ARG
19	CS	61	TYR
19	CS	63	THR
19	CS	66	MET
20	CT	23	ARG
20	CT	24	LEU
20	CT	26	ASN
20	CT	45	GLN
20	CT	74	LYS
21	CU	22	ARG
25	CZ	21	ASP
25	CZ	38	GLU
25	CZ	64	ASN
25	CZ	93	ILE
25	CZ	98	GLN
25	CZ	117	ARG
25	CZ	122	LEU
25	CZ	185	ASN
25	CZ	198	LYS
25	CZ	201	GLU
25	CZ	206	ILE
25	CZ	241	ARG
25	CZ	263	ARG
25	CZ	272	MET
25	CZ	275	LYS
25	CZ	284	ASP
25	CZ	285	ASN
25	CZ	291	ARG
25	CZ	300	ARG
25	CZ	341	GLN
25	CZ	345	ARG
25	CZ	347	THR

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Mol	Chain	Res	Type
25	CZ	355	LEU
26	D0	9	SER
26	D0	14	ARG
26	D0	20	ARG
26	D0	27	GLU
26	D0	41	ARG
26	D0	49	LYS
26	D0	55	ARG
26	D0	64	ASP
26	D0	75	LEU
26	D0	84	LEU
27	D1	3	LYS
27	D1	26	ARG
27	D1	38	SER
27	D1	45	ASN
27	D1	46	LEU
27	D1	75	GLU
27	D1	83	GLU
28	D2	20	GLU
28	D2	21	LEU
28	D2	37	PHE
28	D2	47	ASN
28	D2	59	ARG
28	D2	65	ASN
29	D3	29	ARG
29	D3	31	LEU
29	D3	35	ARG
29	D3	38	GLU
29	D3	46	ASN
29	D3	48	GLU
29	D3	50	VAL
30	D4	5	ILE
30	D4	9	LEU
30	D4	20	ASN
30	D4	32	TYR
30	D4	34	GLU
30	D4	43	TYR
30	D4	47	GLN
31	D5	6	VAL
31	D5	15	ARG
31	D5	25	LEU
31	D5	40	LYS

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Mol	Chain	Res	Type
31	D5	46	CYS
31	D5	48	GLU
31	D5	51	TYR
31	D5	56	LYS
32	D6	6	ARG
32	D6	10	LEU
32	D6	11	LEU
32	D6	18	ARG
32	D6	19	ARG
32	D6	21	TYR
32	D6	31	PRO
32	D6	33	LYS
32	D6	36	LEU
32	D6	41	PRO
32	D6	42	TRP
32	D6	53	LYS
33	D7	1	MET
33	D7	4	THR
33	D7	12	ARG
33	D7	24	THR
33	D7	34	ARG
33	D7	37	LYS
34	D8	30	ARG
34	D8	31	HIS
34	D8	34	TRP
34	D8	40	GLU
34	D8	41	ILE
34	D8	56	GLU
34	D8	61	LEU
34	D8	64	TYR
35	D9	1	MET
35	D9	29	ASN
35	D9	34	GLN
38	DC	28	LEU
38	DC	36	LYS
38	DC	55	ASP
38	DC	57	ASN
38	DC	71	GLN
38	DC	104	LEU
38	DC	105	ASP
38	DC	167	LYS
38	DC	175	VAL

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Mol	Chain	Res	Type
39	DD	10	THR
39	DD	13	ARG
39	DD	20	ASP
39	DD	24	ILE
39	DD	26	LYS
39	DD	30	GLU
39	DD	33	LEU
39	DD	43	ARG
39	DD	44	ASN
39	DD	46	GLN
39	DD	61	LEU
39	DD	65	ILE
39	DD	68	LYS
39	DD	75	ILE
39	DD	95	LEU
39	DD	99	ASP
39	DD	122	ASP
39	DD	166	GLN
39	DD	176	ARG
39	DD	183	ARG
39	DD	192	THR
39	DD	198	ASN
39	DD	211	ARG
39	DD	217	ARG
39	DD	218	ARG
39	DD	239	ARG
39	DD	242	ARG
39	DD	246	PRO
39	DD	257	LEU
39	DD	260	ARG
39	DD	275	LYS
40	DE	18	ASP
40	DE	34	VAL
40	DE	55	ASN
40	DE	57	LYS
40	DE	62	PRO
40	DE	67	PHE
40	DE	73	GLU
40	DE	76	ARG
40	DE	78	LEU
40	DE	82	ARG
40	DE	87	GLU

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Mol	Chain	Res	Type
40	DE	121	ASN
40	DE	128	SER
40	DE	181	LEU
40	DE	197	ILE
40	DE	202	LYS
40	DE	203	LYS
41	DF	19	GLU
41	DF	23	ASP
41	DF	28	ILE
41	DF	51	THR
41	DF	64	ILE
41	DF	70	THR
41	DF	88	VAL
41	DF	95	ARG
41	DF	98	SER
41	DF	125	LEU
41	DF	160	ASN
41	DF	164	ARG
41	DF	169	ASN
41	DF	179	GLU
41	DF	183	VAL
42	DG	12	TYR
42	DG	16	ARG
42	DG	33	ARG
42	DG	43	LEU
42	DG	52	ILE
42	DG	54	GLU
42	DG	67	LYS
42	DG	71	THR
42	DG	77	ILE
42	DG	86	MET
42	DG	104	GLU
42	DG	105	LYS
42	DG	116	ASP
42	DG	125	PHE
42	DG	136	ARG
42	DG	153	ARG
42	DG	174	GLU
43	DH	43	VAL
43	DH	54	ARG
43	DH	71	LEU
43	DH	83	TYR

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Mol	Chain	Res	Type
43	DH	85	LYS
43	DH	104	GLU
43	DH	105	LEU
43	DH	116	GLU
43	DH	119	GLU
43	DH	139	GLN
43	DH	143	GLN
43	DH	153	LYS
43	DH	157	TYR
43	DH	159	GLU
43	DH	162	ILE
43	DH	163	TYR
46	DN	1	MET
46	DN	4	TYR
46	DN	25	ARG
46	DN	28	THR
46	DN	32	THR
46	DN	38	HIS
46	DN	41	ASP
46	DN	45	ASN
46	DN	48	MET
46	DN	56	ASN
46	DN	63	THR
46	DN	65	LYS
46	DN	87	LEU
46	DN	109	LYS
46	DN	119	ARG
47	DO	23	ARG
47	DO	47	ILE
47	DO	48	PRO
47	DO	49	ARG
47	DO	65	THR
48	DP	16	ARG
48	DP	39	LYS
48	DP	41	ARG
48	DP	42	SER
48	DP	48	PRO
48	DP	61	ARG
48	DP	70	GLN
48	DP	84	ASN
48	DP	85	LEU
48	DP	90	ARG

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Mol	Chain	Res	Type
48	DP	91	PHE
48	DP	100	LEU
48	DP	105	LEU
48	DP	108	LYS
48	DP	112	LEU
49	DQ	1	MET
49	DQ	16	ARG
49	DQ	18	LYS
49	DQ	25	ASP
49	DQ	45	GLN
49	DQ	55	VAL
49	DQ	56	ARG
49	DQ	58	PHE
49	DQ	59	ARG
49	DQ	79	LEU
49	DQ	104	PHE
49	DQ	110	THR
49	DQ	133	ARG
49	DQ	135	ASP
50	DR	2	ARG
50	DR	5	LYS
50	DR	6	SER
50	DR	10	LEU
50	DR	12	ARG
50	DR	31	HIS
50	DR	33	ARG
50	DR	51	LEU
50	DR	99	LYS
50	DR	117	VAL
51	DS	11	LYS
51	DS	12	PHE
51	DS	15	ARG
51	DS	29	PHE
51	DS	36	TYR
51	DS	73	LEU
51	DS	80	LEU
51	DS	92	TYR
51	DS	97	ARG
52	DT	13	ARG
52	DT	21	GLU
52	DT	24	PRO
52	DT	29	ARG

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Mol	Chain	Res	Type
52	DT	30	VAL
52	DT	32	TYR
52	DT	38	ASN
52	DT	39	ARG
52	DT	41	ARG
52	DT	43	GLN
52	DT	48	ILE
52	DT	49	VAL
52	DT	53	ARG
52	DT	58	ASN
52	DT	66	VAL
52	DT	82	LEU
52	DT	83	ILE
52	DT	90	GLN
52	DT	99	LEU
52	DT	108	ARG
52	DT	124	ASP
52	DT	128	GLU
53	DU	9	VAL
53	DU	49	HIS
53	DU	66	ASN
53	DU	72	HIS
53	DU	74	LEU
53	DU	78	THR
53	DU	92	ARG
53	DU	108	GLU
54	DV	2	PHE
54	DV	12	TYR
54	DV	16	PRO
54	DV	18	LEU
54	DV	19	LYS
54	DV	21	ARG
54	DV	37	VAL
54	DV	39	LEU
54	DV	40	LEU
54	DV	61	VAL
54	DV	68	LYS
54	DV	82	ARG
54	DV	89	GLN
54	DV	91	TYR
54	DV	95	LEU
54	DV	99	ILE

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Mol	Chain	Res	Type
55	DW	11	ARG
55	DW	36	LEU
55	DW	76	VAL
55	DW	82	LEU
55	DW	107	LEU
56	DX	6	ASP
56	DX	14	SER
56	DX	27	THR
56	DX	28	PHE
56	DX	37	THR
56	DX	40	LYS
56	DX	57	LEU
56	DX	66	LEU
56	DX	68	ARG
56	DX	80	ILE
57	DY	2	ARG
57	DY	6	HIS
57	DY	28	LYS
57	DY	29	GLU
57	DY	32	PRO
57	DY	50	ARG
57	DY	55	TYR
57	DY	62	GLU
57	DY	73	ARG
57	DY	76	CYS
57	DY	77	PRO
57	DY	90	LEU
57	DY	96	ILE
57	DY	97	ARG
58	DZ	6	LYS
58	DZ	9	TYR
58	DZ	11	GLU
58	DZ	14	LYS
58	DZ	28	MET
58	DZ	38	TYR
58	DZ	41	LEU
58	DZ	43	GLU
58	DZ	70	LEU
58	DZ	81	ARG
58	DZ	86	VAL
58	DZ	87	ASP
58	DZ	97	GLU

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Mol	Chain	Res	Type
58	DZ	122	ARG
58	DZ	138	GLU
58	DZ	141	VAL
58	DZ	150	LEU
58	DZ	155	LEU
58	DZ	163	LEU
58	DZ	166	SER

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (301) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	25	ASN
2	AB	37	ASN
2	AB	45	GLN
2	AB	78	GLN
2	AB	95	GLN
2	AB	146	GLN
2	AB	204	ASN
3	AC	118	GLN
3	AC	136	GLN
3	AC	139	GLN
3	AC	170	GLN
3	AC	181	ASN
4	AD	62	GLN
4	AD	129	ASN
4	AD	201	GLN
5	AE	20	GLN
6	AF	27	GLN
6	AF	32	ASN
6	AF	57	GLN
6	AF	73	ASN
6	AF	84	ASN
6	AF	100	ASN
7	AG	13	GLN
7	AG	37	ASN
7	AG	84	ASN
7	AG	86	GLN
7	AG	106	GLN
9	AI	29	ASN
9	AI	124	GLN
10	AJ	13	HIS
10	AJ	56	HIS

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Mol	Chain	Res	Type
10	AJ	68	HIS
10	AJ	78	ASN
10	AJ	84	GLN
11	AK	27	ASN
11	AK	38	ASN
11	AK	117	ASN
12	AL	8	ASN
12	AL	9	GLN
12	AL	49	ASN
12	AL	75	HIS
12	AL	78	GLN
13	AM	12	ASN
13	AM	92	HIS
13	AM	101	GLN
14	AN	49	HIS
15	AO	46	HIS
15	AO	53	HIS
16	AP	13	HIS
17	AQ	16	GLN
20	AT	16	HIS
20	AT	26	ASN
20	AT	42	GLN
20	AT	73	HIS
25	AZ	64	ASN
25	AZ	85	HIS
25	AZ	98	GLN
25	AZ	115	GLN
25	AZ	125	GLN
25	AZ	185	ASN
25	AZ	193	ASN
25	AZ	285	ASN
25	AZ	341	GLN
25	AZ	367	ASN
26	B0	12	ASN
26	B0	40	GLN
26	B0	50	ASN
26	B0	70	GLN
28	B2	43	GLN
28	B2	70	GLN
29	B3	19	GLN
29	B3	46	ASN
29	B3	52	HIS

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Mol	Chain	Res	Type
30	B4	20	ASN
30	B4	47	GLN
31	B5	43	HIS
32	B6	29	ASN
32	B6	49	HIS
34	B8	43	GLN
35	B9	29	ASN
38	BC	57	ASN
38	BC	165	ASN
39	BD	44	ASN
39	BD	126	GLN
39	BD	166	GLN
39	BD	186	HIS
39	BD	198	ASN
40	BE	48	GLN
40	BE	54	GLN
40	BE	55	ASN
40	BE	129	HIS
40	BE	135	HIS
40	BE	169	ASN
40	BE	192	ASN
41	BF	29	ASN
41	BF	40	GLN
41	BF	69	HIS
41	BF	75	HIS
41	BF	133	ASN
41	BF	160	ASN
41	BF	169	ASN
41	BF	204	ASN
42	BG	40	ASN
42	BG	121	ASN
42	BG	138	GLN
43	BH	139	GLN
43	BH	147	ASN
46	BN	45	ASN
46	BN	56	ASN
46	BN	133	GLN
47	BO	3	GLN
47	BO	82	ASN
48	BP	38	GLN
48	BP	68	GLN
48	BP	84	ASN

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Mol	Chain	Res	Type
48	BP	128	HIS
49	BQ	12	GLN
49	BQ	45	GLN
49	BQ	123	HIS
49	BQ	141	GLN
50	BR	11	ASN
50	BR	13	HIS
50	BR	16	HIS
50	BR	23	ASN
50	BR	24	GLN
50	BR	71	GLN
51	BS	34	HIS
52	BT	2	ASN
52	BT	38	ASN
52	BT	43	GLN
52	BT	55	ASN
52	BT	58	ASN
52	BT	90	GLN
53	BU	44	ASN
53	BU	49	HIS
53	BU	66	ASN
53	BU	94	ASN
53	BU	117	GLN
54	BV	11	GLN
55	BW	34	ASN
55	BW	57	ASN
55	BW	61	ASN
56	BX	87	GLN
58	BZ	30	ASN
58	BZ	55	HIS
58	BZ	65	GLN
58	BZ	75	ASN
58	BZ	118	GLN
58	BZ	121	HIS
2	CB	25	ASN
2	CB	37	ASN
2	CB	45	GLN
2	CB	78	GLN
2	CB	95	GLN
2	CB	146	GLN
2	CB	204	ASN
3	CC	37	GLN

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Mol	Chain	Res	Type
3	CC	118	GLN
3	CC	136	GLN
3	CC	139	GLN
3	CC	170	GLN
3	CC	181	ASN
4	CD	62	GLN
4	CD	74	GLN
4	CD	129	ASN
4	CD	201	GLN
5	CE	20	GLN
6	CF	27	GLN
6	CF	32	ASN
6	CF	57	GLN
6	CF	73	ASN
6	CF	84	ASN
6	CF	100	ASN
7	CG	13	GLN
7	CG	37	ASN
7	CG	84	ASN
7	CG	86	GLN
7	CG	106	GLN
9	CI	29	ASN
9	CI	58	HIS
9	CI	124	GLN
10	CJ	13	HIS
10	CJ	56	HIS
10	CJ	68	HIS
10	CJ	78	ASN
10	CJ	84	GLN
11	CK	27	ASN
11	CK	38	ASN
11	CK	117	ASN
12	CL	8	ASN
12	CL	9	GLN
12	CL	49	ASN
12	CL	75	HIS
12	CL	78	GLN
13	CM	12	ASN
13	CM	92	HIS
13	CM	101	GLN
14	CN	49	HIS
15	CO	46	HIS

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Mol	Chain	Res	Type
16	CP	13	HIS
17	CQ	16	GLN
20	CT	16	HIS
20	CT	26	ASN
20	CT	42	GLN
20	CT	73	HIS
25	CZ	19	HIS
25	CZ	64	ASN
25	CZ	85	HIS
25	CZ	98	GLN
25	CZ	115	GLN
25	CZ	125	GLN
25	CZ	185	ASN
25	CZ	193	ASN
25	CZ	285	ASN
25	CZ	341	GLN
25	CZ	367	ASN
26	D0	12	ASN
26	D0	40	GLN
26	D0	50	ASN
26	D0	70	GLN
27	D1	16	ASN
27	D1	19	GLN
27	D1	45	ASN
28	D2	43	GLN
28	D2	47	ASN
28	D2	70	GLN
29	D3	19	GLN
29	D3	46	ASN
29	D3	52	HIS
30	D4	20	ASN
30	D4	47	GLN
31	D5	43	HIS
32	D6	29	ASN
32	D6	49	HIS
35	D9	29	ASN
38	DC	57	ASN
38	DC	165	ASN
39	DD	44	ASN
39	DD	96	HIS
39	DD	126	GLN
39	DD	166	GLN

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Mol	Chain	Res	Type
39	DD	186	HIS
39	DD	198	ASN
40	DE	48	GLN
40	DE	54	GLN
40	DE	55	ASN
40	DE	129	HIS
40	DE	135	HIS
40	DE	169	ASN
40	DE	192	ASN
41	DF	29	ASN
41	DF	40	GLN
41	DF	69	HIS
41	DF	75	HIS
41	DF	133	ASN
41	DF	160	ASN
41	DF	169	ASN
41	DF	204	ASN
42	DG	40	ASN
43	DH	139	GLN
43	DH	147	ASN
46	DN	45	ASN
46	DN	56	ASN
46	DN	133	GLN
47	DO	3	GLN
47	DO	82	ASN
48	DP	38	GLN
48	DP	68	GLN
48	DP	84	ASN
48	DP	128	HIS
49	DQ	12	GLN
49	DQ	45	GLN
49	DQ	123	HIS
49	DQ	141	GLN
50	DR	11	ASN
50	DR	13	HIS
50	DR	16	HIS
50	DR	23	ASN
50	DR	24	GLN
50	DR	71	GLN
51	DS	34	HIS
52	DT	2	ASN
52	DT	38	ASN

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Mol	Chain	Res	Type
52	DT	43	GLN
52	DT	55	ASN
52	DT	58	ASN
52	DT	90	GLN
53	DU	44	ASN
53	DU	49	HIS
53	DU	66	ASN
53	DU	94	ASN
53	DU	117	GLN
54	DV	11	GLN
55	DW	34	ASN
55	DW	57	ASN
55	DW	61	ASN
56	DX	87	GLN
58	DZ	55	HIS
58	DZ	73	GLN
58	DZ	118	GLN
58	DZ	132	ASN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1509/1522 (99%)	240 (15%)	49 (3%)
1	CA	1509/1522 (99%)	234 (15%)	47 (3%)
22	AV	75/76 (98%)	19 (25%)	2 (2%)
22	AW	75/76 (98%)	17 (22%)	0
22	CV	75/76 (98%)	19 (25%)	1 (1%)
22	CW	75/76 (98%)	17 (22%)	0
23	AX	16/27 (59%)	6 (37%)	0
23	CX	16/27 (59%)	6 (37%)	0
24	AY	74/77 (96%)	25 (33%)	5 (6%)
24	CY	74/77 (96%)	25 (33%)	5 (6%)
36	BA	2900/2915 (99%)	510 (17%)	46 (1%)
36	DA	2900/2915 (99%)	508 (17%)	46 (1%)
37	BB	118/122 (96%)	25 (21%)	2 (1%)
37	DB	118/122 (96%)	25 (21%)	2 (1%)
All	All	9534/9630 (99%)	1676 (17%)	205 (2%)

All (1676) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	7	G
1	AA	9	G
1	AA	31	G
1	AA	32	A
1	AA	39	G
1	AA	47	C
1	AA	48	C
1	AA	51	A
1	AA	55	A
1	AA	60	A
1	AA	61	G
1	AA	65	U
1	AA	79	G
1	AA	80	G
1	AA	81	U
1	AA	88	A
1	AA	90	U
1	AA	101	A
1	AA	110	C
1	AA	116	A
1	AA	120	A
1	AA	121	C
1	AA	131	C
1	AA	144	G
1	AA	146	G
1	AA	147	G
1	AA	172	A
1	AA	173	U
1	AA	182	U
1	AA	189(I)	G
1	AA	195	A
1	AA	197	A
1	AA	198	G
1	AA	199	G
1	AA	202	U
1	AA	203	U
1	AA	228	A
1	AA	244	U
1	AA	246	A
1	AA	247	G
1	AA	251	G
1	AA	267	C
1	AA	274	A

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Mol	Chain	Res	Type
1	AA	275	G
1	AA	289	G
1	AA	321	A
1	AA	328	C
1	AA	330	C
1	AA	332	G
1	AA	344	A
1	AA	345	C
1	AA	346	G
1	AA	347	G
1	AA	348	G
1	AA	352	C
1	AA	353	A
1	AA	354	G
1	AA	367	U
1	AA	370	C
1	AA	372	C
1	AA	373	A
1	AA	397	A
1	AA	398	C
1	AA	406	G
1	AA	412	A
1	AA	413	G
1	AA	414	A
1	AA	422	C
1	AA	423	G
1	AA	428	G
1	AA	429	U
1	AA	430	A
1	AA	439	A
1	AA	452	A
1	AA	453	A
1	AA	454	C
1	AA	484	G
1	AA	485	G
1	AA	495	A
1	AA	496	A
1	AA	499	A
1	AA	505	G
1	AA	508	C
1	AA	509	A
1	AA	511	C

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Mol	Chain	Res	Type
1	AA	518	C
1	AA	527	G
1	AA	530	G
1	AA	531	U
1	AA	532	A
1	AA	533	A
1	AA	534	U
1	AA	548	G
1	AA	559	A
1	AA	561	U
1	AA	562	C
1	AA	572	A
1	AA	573	A
1	AA	576	G
1	AA	577	G
1	AA	588	G
1	AA	632	A
1	AA	633	G
1	AA	653	A
1	AA	665	A
1	AA	688	G
1	AA	701	C
1	AA	702	A
1	AA	721	G
1	AA	722	A
1	AA	723	U
1	AA	731	G
1	AA	748	C
1	AA	749	C
1	AA	755	G
1	AA	777	A
1	AA	787	A
1	AA	793	U
1	AA	794	A
1	AA	816	A
1	AA	817	C
1	AA	821	G
1	AA	827	U
1	AA	828	A
1	AA	839	U
1	AA	840	C
1	AA	841	U

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Mol	Chain	Res	Type
1	AA	848	C
1	AA	858	G
1	AA	859	A
1	AA	914	A
1	AA	926	G
1	AA	927	G
1	AA	934	C
1	AA	935	A
1	AA	960	U
1	AA	961	U
1	AA	962	C
1	AA	968	A
1	AA	969	A
1	AA	974	A
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	978	A
1	AA	980	C
1	AA	981	U
1	AA	982	U
1	AA	983	A
1	AA	991	U
1	AA	992	U
1	AA	993	G
1	AA	996	A
1	AA	1004	A
1	AA	1026	G
1	AA	1030	C
1	AA	1050	G
1	AA	1051	C
1	AA	1054	C
1	AA	1055	A
1	AA	1065	U
1	AA	1081	G
1	AA	1094	G
1	AA	1095	U
1	AA	1101	A
1	AA	1102	A
1	AA	1117	G
1	AA	1124	G
1	AA	1125	U

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Mol	Chain	Res	Type
1	AA	1126	U
1	AA	1129	C
1	AA	1130	A
1	AA	1131	G
1	AA	1136	U
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1140	C
1	AA	1141	C
1	AA	1146	A
1	AA	1152	A
1	AA	1154	G
1	AA	1158	C
1	AA	1159	U
1	AA	1171	G
1	AA	1181	G
1	AA	1184	G
1	AA	1187	G
1	AA	1196	U
1	AA	1197	G
1	AA	1200	C
1	AA	1201	A
1	AA	1212	U
1	AA	1213	A
1	AA	1238	A
1	AA	1240	U
1	AA	1256	A
1	AA	1257	U
1	AA	1272	G
1	AA	1280	A
1	AA	1281	U
1	AA	1284	C
1	AA	1285	A
1	AA	1286	A
1	AA	1287	A
1	AA	1300	G
1	AA	1301	U
1	AA	1302	U
1	AA	1320	C
1	AA	1322	C
1	AA	1323	G

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Mol	Chain	Res	Type
1	AA	1331	G
1	AA	1334	G
1	AA	1347	G
1	AA	1364	U
1	AA	1379	G
1	AA	1398	A
1	AA	1417	G
1	AA	1418	A
1	AA	1419	G
1	AA	1439	C
1	AA	1442	G
1	AA	1442(A)	G
1	AA	1447	A
1	AA	1452	C
1	AA	1456	G
1	AA	1457	G
1	AA	1492	A
1	AA	1499	A
1	AA	1503	A
1	AA	1504	G
1	AA	1505	G
1	AA	1506	U
1	AA	1517	G
1	AA	1529	G
1	AA	1530	G
1	AA	1531	A
1	AA	1532	U
1	AA	1534	A
1	AA	1537	U
22	AV	5	G
22	AV	8	U
22	AV	16	U
22	AV	17	C
22	AV	18	G
22	AV	19	G
22	AV	21	A
22	AV	22	G
22	AV	23	A
22	AV	42	C
22	AV	44	G
22	AV	45	U
22	AV	46	G

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Mol	Chain	Res	Type
22	AV	47	U
22	AV	48	C
22	AV	61	C
22	AV	62	C
22	AV	63	G
22	AV	74	C
22	AW	4	C
22	AW	8	U
22	AW	9	A
22	AW	16	U
22	AW	17	C
22	AW	18	G
22	AW	19	G
22	AW	21	A
22	AW	39	U
22	AW	40	C
22	AW	44	G
22	AW	47	U
22	AW	48	C
22	AW	50	U
22	AW	59	U
22	AW	61	C
22	AW	70	G
23	AX	12	A
23	AX	13	A
23	AX	16	A
23	AX	17	U
23	AX	26	A
23	AX	27	A
24	AY	3	G
24	AY	5	G
24	AY	8	4SU
24	AY	9	C
24	AY	12	U
24	AY	16	H2U
24	AY	17	H2U
24	AY	18	G
24	AY	19	G
24	AY	20	H2U
24	AY	21	A
24	AY	41	C
24	AY	44	G

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Mol	Chain	Res	Type
24	AY	45	U
24	AY	46	7MG
24	AY	47	U
24	AY	55	PSU
24	AY	56	C
24	AY	59	G
24	AY	62	U
24	AY	69	C
24	AY	70	C
24	AY	71	C
24	AY	73	G
24	AY	76	A
36	BA	10	G
36	BA	32	C
36	BA	34	C
36	BA	45	C
36	BA	71	A
36	BA	72	U
36	BA	74	A
36	BA	75	G
36	BA	83	G
36	BA	84	A
36	BA	88	G
36	BA	90	U
36	BA	92	A
36	BA	94	C
36	BA	96	G
36	BA	100	G
36	BA	102	G
36	BA	118	A
36	BA	119	A
36	BA	120	U
36	BA	129	C
36	BA	139(A)	G
36	BA	141	A
36	BA	146	G
36	BA	173	G
36	BA	174	C
36	BA	181	A
36	BA	182	A
36	BA	196	A
36	BA	197	A

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Mol	Chain	Res	Type
36	BA	199	A
36	BA	200	U
36	BA	204	A
36	BA	205	G
36	BA	215	G
36	BA	216	A
36	BA	221	A
36	BA	222	A
36	BA	229	A
36	BA	233	A
36	BA	245	G
36	BA	248	G
36	BA	261	G
36	BA	267	C
36	BA	271(K)	U
36	BA	271(L)	U
36	BA	271(M)	G
36	BA	271(N)	U
36	BA	271(O)	C
36	BA	271(P)	C
36	BA	271(R)	G
36	BA	271(Y)	U
36	BA	272(A)	U
36	BA	272(B)	G
36	BA	272(I)	U
36	BA	274	G
36	BA	276	A
36	BA	278	A
36	BA	288	C
36	BA	299	A
36	BA	310	A
36	BA	324	A
36	BA	329	G
36	BA	330	A
36	BA	332	A
36	BA	333	G
36	BA	352	G
36	BA	353	G
36	BA	358	U
36	BA	362	U
36	BA	363	G
36	BA	363(E)	U

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Mol	Chain	Res	Type
36	BA	363(F)	A
36	BA	372	G
36	BA	386	G
36	BA	388	G
36	BA	396	G
36	BA	405	U
36	BA	406	G
36	BA	411	G
36	BA	412	A
36	BA	428	A
36	BA	444	C
36	BA	448	U
36	BA	451	C
36	BA	457	A
36	BA	470	A
36	BA	481	G
36	BA	482	A
36	BA	494	G
36	BA	505	A
36	BA	508	G
36	BA	509	C
36	BA	512	G
36	BA	528	A
36	BA	529	A
36	BA	530	G
36	BA	531	C
36	BA	532	A
36	BA	533	G
36	BA	537	C
36	BA	556	G
36	BA	563	G
36	BA	573	G
36	BA	575	A
36	BA	586	A
36	BA	588	U
36	BA	603	A
36	BA	604	G
36	BA	607	U
36	BA	613	G
36	BA	614(B)	G
36	BA	615	G
36	BA	622	G

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Mol	Chain	Res	Type
36	BA	627	A
36	BA	629	G
36	BA	637	A
36	BA	645	C
36	BA	646	A
36	BA	650	C
36	BA	651	G
36	BA	653	A
36	BA	654(I)	C
36	BA	654(J)	A
36	BA	654(M)	C
36	BA	654(T)	C
36	BA	655	A
36	BA	656	G
36	BA	673	C
36	BA	686	G
36	BA	708	C
36	BA	717	G
36	BA	722	A
36	BA	730	C
36	BA	753	C
36	BA	761	A
36	BA	764	A
36	BA	776	G
36	BA	782	A
36	BA	784	A
36	BA	785	G
36	BA	790	C
36	BA	791	C
36	BA	792	G
36	BA	805	G
36	BA	812	C
36	BA	819	A
36	BA	827	U
36	BA	828	U
36	BA	830	G
36	BA	848	G
36	BA	857	C
36	BA	859	G
36	BA	866	A
36	BA	878	A
36	BA	886	C

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Mol	Chain	Res	Type
36	BA	889	C
36	BA	890	A
36	BA	896	A
36	BA	897	C
36	BA	901	A
36	BA	910	A
36	BA	917	A
36	BA	926	A
36	BA	932	G
36	BA	941	A
36	BA	945	A
36	BA	946	G
36	BA	953	A
36	BA	958	U
36	BA	959	A
36	BA	961	C
36	BA	974	G
36	BA	975	C
36	BA	983	A
36	BA	991	C
36	BA	996	A
36	BA	1011	G
36	BA	1012	U
36	BA	1013	C
36	BA	1022	G
36	BA	1023	U
36	BA	1025	G
36	BA	1026	U
36	BA	1027	A
36	BA	1033	U
36	BA	1038	C
36	BA	1039	G
36	BA	1041	G
36	BA	1045	A
36	BA	1047	G
36	BA	1048	A
36	BA	1051	G
36	BA	1053	C
36	BA	1059	G
36	BA	1061	U
36	BA	1062	G
36	BA	1065	U

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Mol	Chain	Res	Type
36	BA	1067	A
36	BA	1068	G
36	BA	1069	A
36	BA	1070	A
36	BA	1071	G
36	BA	1073	A
36	BA	1074	G
36	BA	1079	C
36	BA	1087	G
36	BA	1088	A
36	BA	1103	A
36	BA	1111	A
36	BA	1112	G
36	BA	1116	C
36	BA	1135	C
36	BA	1136	G
36	BA	1142	U
36	BA	1143	A
36	BA	1155	A
36	BA	1170	G
36	BA	1174	A
36	BA	1175	U
36	BA	1176	G
36	BA	1178	C
36	BA	1205	U
36	BA	1210	A
36	BA	1211	U
36	BA	1212	G
36	BA	1223	G
36	BA	1236	G
36	BA	1244	G
36	BA	1247	A
36	BA	1248	G
36	BA	1250	G
36	BA	1253	A
36	BA	1256	G
36	BA	1265	A
36	BA	1271	G
36	BA	1272	A
36	BA	1273	U
36	BA	1300	U
36	BA	1301	A

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Mol	Chain	Res	Type
36	BA	1302	A
36	BA	1314	C
36	BA	1319	G
36	BA	1321	A
36	BA	1330	C
36	BA	1332	G
36	BA	1349	A
36	BA	1359	A
36	BA	1365	A
36	BA	1379	A
36	BA	1380	G
36	BA	1384	A
36	BA	1385	G
36	BA	1386	C
36	BA	1395	A
36	BA	1396	U
36	BA	1407	C
36	BA	1416	G
36	BA	1419	A
36	BA	1427	A
36	BA	1428	C
36	BA	1437	C
36	BA	1445	A
36	BA	1449	A
36	BA	1455	G
36	BA	1460	A
36	BA	1461	G
36	BA	1467	C
36	BA	1471	A
36	BA	1474	C
36	BA	1475	G
36	BA	1478	G
36	BA	1481	U
36	BA	1482	G
36	BA	1485	G
36	BA	1490	A
36	BA	1493	C
36	BA	1494	A
36	BA	1495	A
36	BA	1497	U
36	BA	1499	C
36	BA	1502	C

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Mol	Chain	Res	Type
36	BA	1505	C
36	BA	1509	C
36	BA	1509(A)	A
36	BA	1517	G
36	BA	1541	G
36	BA	1542	A
36	BA	1544	A
36	BA	1554	A
36	BA	1558	A
36	BA	1559	G
36	BA	1569	A
36	BA	1578	U
36	BA	1579	A
36	BA	1584	C
36	BA	1586	A
36	BA	1588	C
36	BA	1593	G
36	BA	1603	A
36	BA	1608	A
36	BA	1617	C
36	BA	1618	A
36	BA	1634	A
36	BA	1640	C
36	BA	1648	C
36	BA	1654	A
36	BA	1674	G
36	BA	1696	G
36	BA	1698	A
36	BA	1699	G
36	BA	1721	G
36	BA	1722	A
36	BA	1739	U
36	BA	1745(A)	C
36	BA	1746	G
36	BA	1748	G
36	BA	1763	G
36	BA	1764	G
36	BA	1773	A
36	BA	1791	A
36	BA	1799	G
36	BA	1800	C
36	BA	1801	G

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Mol	Chain	Res	Type
36	BA	1816	G
36	BA	1820	U
36	BA	1821	A
36	BA	1835	G
36	BA	1847	A
36	BA	1858	G
36	BA	1865	G
36	BA	1878	G
36	BA	1881	C
36	BA	1885	A
36	BA	1888	G
36	BA	1889	A
36	BA	1900	A
36	BA	1906	G
36	BA	1929	G
36	BA	1930	G
36	BA	1936	A
36	BA	1937	A
36	BA	1938	A
36	BA	1948	G
36	BA	1955	U
36	BA	1963	U
36	BA	1967	C
36	BA	1969	A
36	BA	1970	A
36	BA	1971	A
36	BA	1972	A
36	BA	1982	C
36	BA	1987	G
36	BA	1991	U
36	BA	1992	G
36	BA	1993	U
36	BA	1997	G
36	BA	2020	A
36	BA	2023	G
36	BA	2031	A
36	BA	2033	A
36	BA	2034	U
36	BA	2036	C
36	BA	2043	C
36	BA	2055	C
36	BA	2056	G

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Mol	Chain	Res	Type
36	BA	2060	A
36	BA	2061	G
36	BA	2062	A
36	BA	2069	G
36	BA	2093	G
36	BA	2100	G
36	BA	2102	U
36	BA	2104	G
36	BA	2112	G
36	BA	2116	G
36	BA	2118	U
36	BA	2126	A
36	BA	2127	G
36	BA	2131	G
36	BA	2132	U
36	BA	2133	G
36	BA	2146	C
36	BA	2148	G
36	BA	2158	A
36	BA	2159	G
36	BA	2160	G
36	BA	2172	U
36	BA	2173	A
36	BA	2174	C
36	BA	2177	C
36	BA	2179	C
36	BA	2180	U
36	BA	2185	C
36	BA	2186	G
36	BA	2187	G
36	BA	2189	U
36	BA	2190	G
36	BA	2192	G
36	BA	2193	G
36	BA	2198	A
36	BA	2199	A
36	BA	2200	C
36	BA	2207	G
36	BA	2208	A
36	BA	2218	U
36	BA	2219	G
36	BA	2225	A

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Mol	Chain	Res	Type
36	BA	2238	G
36	BA	2239	G
36	BA	2266	A
36	BA	2275	C
36	BA	2283	C
36	BA	2287	A
36	BA	2288	A
36	BA	2305	A
36	BA	2306	C
36	BA	2307	G
36	BA	2308	G
36	BA	2313	C
36	BA	2316	C
36	BA	2319	G
36	BA	2320	A
36	BA	2336	A
36	BA	2347	C
36	BA	2350	C
36	BA	2361	A
36	BA	2383	G
36	BA	2385	C
36	BA	2392	A
36	BA	2402	C
36	BA	2423	U
36	BA	2425	A
36	BA	2429	G
36	BA	2430	A
36	BA	2431	U
36	BA	2434	A
36	BA	2439	A
36	BA	2441	C
36	BA	2448	A
36	BA	2465	C
36	BA	2469	A
36	BA	2475	C
36	BA	2476	A
36	BA	2482	G
36	BA	2491	U
36	BA	2502	G
36	BA	2505	G
36	BA	2518	A
36	BA	2524	G

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Mol	Chain	Res	Type
36	BA	2529	G
36	BA	2543	G
36	BA	2554	U
36	BA	2566	A
36	BA	2567	G
36	BA	2573	C
36	BA	2582	G
36	BA	2602	A
36	BA	2612	C
36	BA	2630	G
36	BA	2646	C
36	BA	2654	A
36	BA	2655	G
36	BA	2657	A
36	BA	2658	C
36	BA	2660	A
36	BA	2673	G
36	BA	2682	U
36	BA	2690	C
36	BA	2691	C
36	BA	2702	U
36	BA	2703	C
36	BA	2712	U
36	BA	2712(A)	A
36	BA	2713	A
36	BA	2714	G
36	BA	2720	U
36	BA	2726	U
36	BA	2733	A
36	BA	2750	A
36	BA	2751	G
36	BA	2752	C
36	BA	2757	A
36	BA	2759	G
36	BA	2761	G
36	BA	2762	G
36	BA	2764	A
36	BA	2765	A
36	BA	2766	G
36	BA	2778	A
36	BA	2779	U
36	BA	2780	G

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Mol	Chain	Res	Type
36	BA	2789	C
36	BA	2790	A
36	BA	2791	C
36	BA	2794	C
36	BA	2799	C
36	BA	2802	G
36	BA	2803	C
36	BA	2808	U
36	BA	2820	A
36	BA	2821	A
36	BA	2823	A
36	BA	2833	G
36	BA	2834	G
36	BA	2847	U
36	BA	2849	U
36	BA	2872	G
36	BA	2880	C
36	BA	2894	G
37	BB	8	U
37	BB	13	A
37	BB	15	A
37	BB	16	G
37	BB	17	C
37	BB	21	G
37	BB	25	A
37	BB	27	C
37	BB	32	C
37	BB	41	U
37	BB	42	C
37	BB	43	C
37	BB	45	A
37	BB	53	A
37	BB	57	A
37	BB	66	A
37	BB	67	G
37	BB	68	C
37	BB	73	A
37	BB	81	G
37	BB	82	G
37	BB	88	C
37	BB	89	G
37	BB	110	G

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Mol	Chain	Res	Type
37	BB	113	G
1	CA	7	G
1	CA	9	G
1	CA	31	G
1	CA	32	A
1	CA	39	G
1	CA	47	C
1	CA	48	C
1	CA	51	A
1	CA	55	A
1	CA	60	A
1	CA	61	G
1	CA	65	U
1	CA	79	G
1	CA	80	G
1	CA	81	U
1	CA	88	A
1	CA	90	U
1	CA	101	A
1	CA	110	C
1	CA	116	A
1	CA	120	A
1	CA	121	C
1	CA	131	C
1	CA	144	G
1	CA	146	G
1	CA	147	G
1	CA	172	A
1	CA	173	U
1	CA	182	U
1	CA	189(I)	G
1	CA	195	A
1	CA	197	A
1	CA	198	G
1	CA	199	G
1	CA	202	U
1	CA	203	U
1	CA	228	A
1	CA	244	U
1	CA	246	A
1	CA	247	G
1	CA	251	G

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Mol	Chain	Res	Type
1	CA	267	C
1	CA	274	A
1	CA	275	G
1	CA	289	G
1	CA	321	A
1	CA	328	C
1	CA	330	C
1	CA	332	G
1	CA	344	A
1	CA	345	C
1	CA	346	G
1	CA	347	G
1	CA	348	G
1	CA	352	C
1	CA	353	A
1	CA	354	G
1	CA	367	U
1	CA	370	C
1	CA	372	C
1	CA	373	A
1	CA	397	A
1	CA	398	C
1	CA	406	G
1	CA	412	A
1	CA	413	G
1	CA	414	A
1	CA	422	C
1	CA	423	G
1	CA	428	G
1	CA	429	U
1	CA	430	A
1	CA	439	A
1	CA	452	A
1	CA	453	A
1	CA	454	C
1	CA	484	G
1	CA	485	G
1	CA	495	A
1	CA	496	A
1	CA	499	A
1	CA	505	G
1	CA	508	C

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Mol	Chain	Res	Type
1	CA	509	A
1	CA	511	C
1	CA	518	C
1	CA	527	G
1	CA	530	G
1	CA	531	U
1	CA	532	A
1	CA	533	A
1	CA	534	U
1	CA	548	G
1	CA	559	A
1	CA	561	U
1	CA	562	C
1	CA	572	A
1	CA	573	A
1	CA	576	G
1	CA	577	G
1	CA	588	G
1	CA	632	A
1	CA	633	G
1	CA	653	A
1	CA	665	A
1	CA	688	G
1	CA	701	C
1	CA	702	A
1	CA	722	A
1	CA	723	U
1	CA	731	G
1	CA	748	C
1	CA	749	C
1	CA	755	G
1	CA	777	A
1	CA	787	A
1	CA	793	U
1	CA	794	A
1	CA	816	A
1	CA	817	C
1	CA	821	G
1	CA	827	U
1	CA	828	A
1	CA	839	U
1	CA	840	C

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Mol	Chain	Res	Type
1	CA	841	U
1	CA	848	C
1	CA	859	A
1	CA	914	A
1	CA	926	G
1	CA	927	G
1	CA	934	C
1	CA	935	A
1	CA	960	U
1	CA	961	U
1	CA	962	C
1	CA	968	A
1	CA	969	A
1	CA	974	A
1	CA	975	A
1	CA	976	G
1	CA	977	A
1	CA	978	A
1	CA	980	C
1	CA	981	U
1	CA	982	U
1	CA	983	A
1	CA	991	U
1	CA	992	U
1	CA	993	G
1	CA	996	A
1	CA	1004	A
1	CA	1026	G
1	CA	1030	C
1	CA	1050	G
1	CA	1051	C
1	CA	1054	C
1	CA	1055	A
1	CA	1065	U
1	CA	1081	G
1	CA	1094	G
1	CA	1095	U
1	CA	1101	A
1	CA	1102	A
1	CA	1117	G
1	CA	1124	G
1	CA	1125	U

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Mol	Chain	Res	Type
1	CA	1126	U
1	CA	1129	C
1	CA	1130	A
1	CA	1131	G
1	CA	1136	U
1	CA	1137	C
1	CA	1138	G
1	CA	1139	G
1	CA	1140	C
1	CA	1141	C
1	CA	1146	A
1	CA	1152	A
1	CA	1154	G
1	CA	1158	C
1	CA	1159	U
1	CA	1171	G
1	CA	1181	G
1	CA	1184	G
1	CA	1187	G
1	CA	1196	U
1	CA	1197	G
1	CA	1200	C
1	CA	1201	A
1	CA	1212	U
1	CA	1213	A
1	CA	1238	A
1	CA	1240	U
1	CA	1256	A
1	CA	1257	U
1	CA	1272	G
1	CA	1280	A
1	CA	1281	U
1	CA	1284	C
1	CA	1285	A
1	CA	1286	A
1	CA	1287	A
1	CA	1300	G
1	CA	1301	U
1	CA	1302	U
1	CA	1320	C
1	CA	1322	C
1	CA	1323	G

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Mol	Chain	Res	Type
1	CA	1331	G
1	CA	1334	G
1	CA	1347	G
1	CA	1363	C
1	CA	1364	U
1	CA	1379	G
1	CA	1397	C
1	CA	1398	A
1	CA	1400	C
1	CA	1419	G
1	CA	1442	G
1	CA	1442(B)	A
1	CA	1443	G
1	CA	1447	A
1	CA	1452	C
1	CA	1456	G
1	CA	1492	A
1	CA	1499	A
1	CA	1503	A
1	CA	1506	U
1	CA	1517	G
1	CA	1519	A
1	CA	1529	G
1	CA	1530	G
1	CA	1534	A
22	CV	5	G
22	CV	8	U
22	CV	16	U
22	CV	17	C
22	CV	18	G
22	CV	19	G
22	CV	21	A
22	CV	22	G
22	CV	23	A
22	CV	42	C
22	CV	44	G
22	CV	45	U
22	CV	46	G
22	CV	47	U
22	CV	48	C
22	CV	61	C
22	CV	62	C

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Mol	Chain	Res	Type
22	CV	63	G
22	CV	74	C
22	CW	4	C
22	CW	8	U
22	CW	9	A
22	CW	16	U
22	CW	17	C
22	CW	18	G
22	CW	19	G
22	CW	21	A
22	CW	39	U
22	CW	40	C
22	CW	44	G
22	CW	47	U
22	CW	48	C
22	CW	50	U
22	CW	59	U
22	CW	61	C
22	CW	70	G
23	CX	12	A
23	CX	13	A
23	CX	16	A
23	CX	17	U
23	CX	26	A
23	CX	27	A
24	CY	3	G
24	CY	5	G
24	CY	8	4SU
24	CY	9	C
24	CY	12	U
24	CY	16	H2U
24	CY	17	H2U
24	CY	18	G
24	CY	19	G
24	CY	20	H2U
24	CY	21	A
24	CY	41	C
24	CY	44	G
24	CY	45	U
24	CY	46	7MG
24	CY	47	U
24	CY	55	PSU

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Mol	Chain	Res	Type
24	CY	56	C
24	CY	59	G
24	CY	62	U
24	CY	69	C
24	CY	70	C
24	CY	71	C
24	CY	73	G
24	CY	76	A
36	DA	10	G
36	DA	32	C
36	DA	34	C
36	DA	45	C
36	DA	71	A
36	DA	72	U
36	DA	74	A
36	DA	75	G
36	DA	83	G
36	DA	84	A
36	DA	88	G
36	DA	90	U
36	DA	92	A
36	DA	94	C
36	DA	96	G
36	DA	100	G
36	DA	102	G
36	DA	118	A
36	DA	119	A
36	DA	120	U
36	DA	129	C
36	DA	139(A)	G
36	DA	141	A
36	DA	146	G
36	DA	173	G
36	DA	174	C
36	DA	181	A
36	DA	182	A
36	DA	196	A
36	DA	197	A
36	DA	199	A
36	DA	200	U
36	DA	204	A
36	DA	205	G

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Mol	Chain	Res	Type
36	DA	215	G
36	DA	216	A
36	DA	221	A
36	DA	222	A
36	DA	229	A
36	DA	233	A
36	DA	245	G
36	DA	248	G
36	DA	261	G
36	DA	267	C
36	DA	271(K)	U
36	DA	271(L)	U
36	DA	271(M)	G
36	DA	271(N)	U
36	DA	271(O)	C
36	DA	271(P)	C
36	DA	271(R)	G
36	DA	271(Y)	U
36	DA	272(A)	U
36	DA	272(B)	G
36	DA	272(I)	U
36	DA	274	G
36	DA	276	A
36	DA	278	A
36	DA	288	C
36	DA	299	A
36	DA	310	A
36	DA	324	A
36	DA	329	G
36	DA	330	A
36	DA	332	A
36	DA	333	G
36	DA	352	G
36	DA	353	G
36	DA	358	U
36	DA	362	U
36	DA	363	G
36	DA	363(E)	U
36	DA	363(F)	A
36	DA	372	G
36	DA	386	G
36	DA	388	G

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Mol	Chain	Res	Type
36	DA	396	G
36	DA	405	U
36	DA	406	G
36	DA	411	G
36	DA	412	A
36	DA	428	A
36	DA	444	C
36	DA	448	U
36	DA	457	A
36	DA	470	A
36	DA	481	G
36	DA	482	A
36	DA	494	G
36	DA	505	A
36	DA	508	G
36	DA	509	C
36	DA	512	G
36	DA	528	A
36	DA	529	A
36	DA	530	G
36	DA	531	C
36	DA	532	A
36	DA	533	G
36	DA	537	C
36	DA	556	G
36	DA	563	G
36	DA	573	G
36	DA	575	A
36	DA	586	A
36	DA	588	U
36	DA	603	A
36	DA	604	G
36	DA	607	U
36	DA	613	G
36	DA	614(B)	G
36	DA	615	G
36	DA	622	G
36	DA	627	A
36	DA	629	G
36	DA	637	A
36	DA	645	C
36	DA	646	A

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Mol	Chain	Res	Type
36	DA	650	C
36	DA	651	G
36	DA	653	A
36	DA	654(I)	C
36	DA	654(J)	A
36	DA	654(M)	C
36	DA	654(T)	C
36	DA	655	A
36	DA	656	G
36	DA	673	C
36	DA	686	G
36	DA	708	C
36	DA	717	G
36	DA	722	A
36	DA	730	C
36	DA	753	C
36	DA	764	A
36	DA	776	G
36	DA	782	A
36	DA	784	A
36	DA	785	G
36	DA	790	C
36	DA	791	C
36	DA	792	G
36	DA	805	G
36	DA	812	C
36	DA	819	A
36	DA	827	U
36	DA	828	U
36	DA	830	G
36	DA	848	G
36	DA	857	C
36	DA	859	G
36	DA	866	A
36	DA	878	A
36	DA	886	C
36	DA	889	C
36	DA	890	A
36	DA	896	A
36	DA	897	C
36	DA	901	A
36	DA	910	A

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Mol	Chain	Res	Type
36	DA	917	A
36	DA	926	A
36	DA	932	G
36	DA	941	A
36	DA	945	A
36	DA	946	G
36	DA	953	A
36	DA	958	U
36	DA	959	A
36	DA	961	C
36	DA	974	G
36	DA	975	C
36	DA	983	A
36	DA	991	C
36	DA	996	A
36	DA	1011	G
36	DA	1012	U
36	DA	1013	C
36	DA	1022	G
36	DA	1023	U
36	DA	1025	G
36	DA	1026	U
36	DA	1027	A
36	DA	1033	U
36	DA	1038	C
36	DA	1039	G
36	DA	1041	G
36	DA	1045	A
36	DA	1047	G
36	DA	1048	A
36	DA	1051	G
36	DA	1053	C
36	DA	1059	G
36	DA	1061	U
36	DA	1062	G
36	DA	1065	U
36	DA	1067	A
36	DA	1068	G
36	DA	1069	A
36	DA	1070	A
36	DA	1071	G
36	DA	1073	A

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Mol	Chain	Res	Type
36	DA	1074	G
36	DA	1079	C
36	DA	1087	G
36	DA	1088	A
36	DA	1103	A
36	DA	1111	A
36	DA	1112	G
36	DA	1116	C
36	DA	1135	C
36	DA	1136	G
36	DA	1142	U
36	DA	1143	A
36	DA	1155	A
36	DA	1170	G
36	DA	1174	A
36	DA	1175	U
36	DA	1176	G
36	DA	1178	C
36	DA	1205	U
36	DA	1210	A
36	DA	1211	U
36	DA	1212	G
36	DA	1223	G
36	DA	1236	G
36	DA	1244	G
36	DA	1247	A
36	DA	1248	G
36	DA	1250	G
36	DA	1253	A
36	DA	1256	G
36	DA	1265	A
36	DA	1271	G
36	DA	1272	A
36	DA	1273	U
36	DA	1300	U
36	DA	1301	A
36	DA	1302	A
36	DA	1314	C
36	DA	1319	G
36	DA	1321	A
36	DA	1330	C
36	DA	1332	G

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Mol	Chain	Res	Type
36	DA	1349	A
36	DA	1359	A
36	DA	1365	A
36	DA	1379	A
36	DA	1380	G
36	DA	1384	A
36	DA	1385	G
36	DA	1386	C
36	DA	1395	A
36	DA	1396	U
36	DA	1407	C
36	DA	1416	G
36	DA	1419	A
36	DA	1427	A
36	DA	1428	C
36	DA	1437	C
36	DA	1445	A
36	DA	1449	A
36	DA	1455	G
36	DA	1460	A
36	DA	1461	G
36	DA	1467	C
36	DA	1471	A
36	DA	1474	C
36	DA	1475	G
36	DA	1478	G
36	DA	1481	U
36	DA	1482	G
36	DA	1485	G
36	DA	1490	A
36	DA	1493	C
36	DA	1494	A
36	DA	1495	A
36	DA	1497	U
36	DA	1499	C
36	DA	1502	C
36	DA	1505	C
36	DA	1509	C
36	DA	1509(A)	A
36	DA	1517	G
36	DA	1541	G
36	DA	1542	A

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Mol	Chain	Res	Type
36	DA	1544	A
36	DA	1554	A
36	DA	1558	A
36	DA	1559	G
36	DA	1569	A
36	DA	1578	U
36	DA	1579	A
36	DA	1584	C
36	DA	1586	A
36	DA	1588	C
36	DA	1593	G
36	DA	1603	A
36	DA	1608	A
36	DA	1617	C
36	DA	1618	A
36	DA	1634	A
36	DA	1640	C
36	DA	1648	C
36	DA	1654	A
36	DA	1674	G
36	DA	1696	G
36	DA	1698	A
36	DA	1699	G
36	DA	1721	G
36	DA	1722	A
36	DA	1739	U
36	DA	1745(A)	C
36	DA	1746	G
36	DA	1748	G
36	DA	1763	G
36	DA	1764	G
36	DA	1773	A
36	DA	1791	A
36	DA	1799	G
36	DA	1800	C
36	DA	1801	G
36	DA	1816	G
36	DA	1820	U
36	DA	1821	A
36	DA	1835	G
36	DA	1847	A
36	DA	1858	G

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Mol	Chain	Res	Type
36	DA	1865	G
36	DA	1878	G
36	DA	1881	C
36	DA	1885	A
36	DA	1888	G
36	DA	1889	A
36	DA	1900	A
36	DA	1906	G
36	DA	1929	G
36	DA	1930	G
36	DA	1936	A
36	DA	1937	A
36	DA	1938	A
36	DA	1948	G
36	DA	1955	U
36	DA	1963	U
36	DA	1967	C
36	DA	1969	A
36	DA	1970	A
36	DA	1971	A
36	DA	1972	A
36	DA	1982	C
36	DA	1987	G
36	DA	1991	U
36	DA	1992	G
36	DA	1993	U
36	DA	1997	G
36	DA	2020	A
36	DA	2023	G
36	DA	2031	A
36	DA	2033	A
36	DA	2034	U
36	DA	2036	C
36	DA	2043	C
36	DA	2055	C
36	DA	2056	G
36	DA	2060	A
36	DA	2061	G
36	DA	2062	A
36	DA	2069	G
36	DA	2093	G
36	DA	2100	G

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Mol	Chain	Res	Type
36	DA	2102	U
36	DA	2104	G
36	DA	2112	G
36	DA	2116	G
36	DA	2118	U
36	DA	2126	A
36	DA	2127	G
36	DA	2131	G
36	DA	2132	U
36	DA	2133	G
36	DA	2146	C
36	DA	2148	G
36	DA	2159	G
36	DA	2160	G
36	DA	2172	U
36	DA	2173	A
36	DA	2174	C
36	DA	2177	C
36	DA	2179	C
36	DA	2180	U
36	DA	2185	C
36	DA	2186	G
36	DA	2187	G
36	DA	2189	U
36	DA	2190	G
36	DA	2192	G
36	DA	2193	G
36	DA	2198	A
36	DA	2199	A
36	DA	2200	C
36	DA	2207	G
36	DA	2208	A
36	DA	2218	U
36	DA	2219	G
36	DA	2225	A
36	DA	2238	G
36	DA	2239	G
36	DA	2266	A
36	DA	2268	A
36	DA	2275	C
36	DA	2283	C
36	DA	2287	A

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Mol	Chain	Res	Type
36	DA	2288	A
36	DA	2305	A
36	DA	2306	C
36	DA	2307	G
36	DA	2308	G
36	DA	2313	C
36	DA	2316	C
36	DA	2319	G
36	DA	2320	A
36	DA	2336	A
36	DA	2347	C
36	DA	2350	C
36	DA	2361	A
36	DA	2383	G
36	DA	2385	C
36	DA	2392	A
36	DA	2402	C
36	DA	2423	U
36	DA	2425	A
36	DA	2429	G
36	DA	2430	A
36	DA	2431	U
36	DA	2434	A
36	DA	2439	A
36	DA	2441	C
36	DA	2448	A
36	DA	2465	C
36	DA	2469	A
36	DA	2475	C
36	DA	2476	A
36	DA	2482	G
36	DA	2491	U
36	DA	2502	G
36	DA	2505	G
36	DA	2518	A
36	DA	2524	G
36	DA	2529	G
36	DA	2543	G
36	DA	2554	U
36	DA	2566	A
36	DA	2567	G
36	DA	2573	C

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Mol	Chain	Res	Type
36	DA	2582	G
36	DA	2602	A
36	DA	2612	C
36	DA	2630	G
36	DA	2646	C
36	DA	2654	A
36	DA	2655	G
36	DA	2657	A
36	DA	2658	C
36	DA	2660	A
36	DA	2673	G
36	DA	2682	U
36	DA	2690	C
36	DA	2691	C
36	DA	2702	U
36	DA	2703	C
36	DA	2712	U
36	DA	2712(A)	A
36	DA	2713	A
36	DA	2714	G
36	DA	2720	U
36	DA	2726	U
36	DA	2733	A
36	DA	2750	A
36	DA	2751	G
36	DA	2752	C
36	DA	2757	A
36	DA	2759	G
36	DA	2761	G
36	DA	2762	G
36	DA	2764	A
36	DA	2765	A
36	DA	2766	G
36	DA	2778	A
36	DA	2779	U
36	DA	2780	G
36	DA	2789	C
36	DA	2790	A
36	DA	2791	C
36	DA	2794	C
36	DA	2799	C
36	DA	2802	G

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Mol	Chain	Res	Type
36	DA	2803	C
36	DA	2808	U
36	DA	2820	A
36	DA	2821	A
36	DA	2823	A
36	DA	2833	G
36	DA	2834	G
36	DA	2847	U
36	DA	2849	U
36	DA	2872	G
36	DA	2880	C
36	DA	2894	G
37	DB	8	U
37	DB	13	A
37	DB	15	A
37	DB	16	G
37	DB	17	C
37	DB	21	G
37	DB	25	A
37	DB	27	C
37	DB	32	C
37	DB	41	U
37	DB	42	C
37	DB	43	C
37	DB	45	A
37	DB	53	A
37	DB	57	A
37	DB	66	A
37	DB	67	G
37	DB	68	C
37	DB	73	A
37	DB	81	G
37	DB	82	G
37	DB	88	C
37	DB	89	G
37	DB	110	G
37	DB	113	G

All (205) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	30	U

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Mol	Chain	Res	Type
1	AA	60	A
1	AA	64	G
1	AA	79	G
1	AA	109	A
1	AA	115	G
1	AA	119	A
1	AA	197	A
1	AA	202	U
1	AA	243	A
1	AA	250	A
1	AA	266	G
1	AA	274	A
1	AA	344	A
1	AA	347	G
1	AA	351	G
1	AA	369	C
1	AA	428	G
1	AA	429	U
1	AA	484	G
1	AA	495	A
1	AA	508	C
1	AA	547	A
1	AA	560	U
1	AA	573	A
1	AA	575	G
1	AA	687	A
1	AA	748	C
1	AA	792	A
1	AA	793	U
1	AA	980	C
1	AA	982	U
1	AA	992	U
1	AA	1049	U
1	AA	1053	G
1	AA	1054	C
1	AA	1101	A
1	AA	1145	C
1	AA	1157	A
1	AA	1200	C
1	AA	1211	U
1	AA	1239	A
1	AA	1285	A

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Mol	Chain	Res	Type
1	AA	1320	C
1	AA	1417	G
1	AA	1498	U
1	AA	1504	G
1	AA	1529	G
1	AA	1531	A
22	AV	18	G
22	AV	23	A
24	AY	16	H2U
24	AY	17	H2U
24	AY	20	H2U
24	AY	55	PSU
24	AY	69	C
36	BA	71	A
36	BA	181	A
36	BA	199	A
36	BA	221	A
36	BA	331	A
36	BA	332	A
36	BA	387	U
36	BA	481	G
36	BA	528	A
36	BA	587	C
36	BA	603	A
36	BA	614(C)	A
36	BA	752	A
36	BA	790	C
36	BA	856	C
36	BA	958	U
36	BA	1052	C
36	BA	1060	U
36	BA	1068	G
36	BA	1069	A
36	BA	1210	A
36	BA	1300	U
36	BA	1301	A
36	BA	1378	A
36	BA	1427	A
36	BA	1541	G
36	BA	1558	A
36	BA	1653	G
36	BA	1799	G

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Mol	Chain	Res	Type
36	BA	1819	A
36	BA	1820	U
36	BA	1948	G
36	BA	1970	A
36	BA	1992	G
36	BA	2033	A
36	BA	2036	C
36	BA	2126	A
36	BA	2131	G
36	BA	2145	C
36	BA	2282	G
36	BA	2286	A
36	BA	2422	A
36	BA	2481	G
36	BA	2689	U
36	BA	2750	A
36	BA	2756	U
37	BB	56	G
37	BB	66	A
1	CA	30	U
1	CA	60	A
1	CA	64	G
1	CA	79	G
1	CA	109	A
1	CA	115	G
1	CA	119	A
1	CA	197	A
1	CA	202	U
1	CA	243	A
1	CA	250	A
1	CA	266	G
1	CA	274	A
1	CA	344	A
1	CA	347	G
1	CA	351	G
1	CA	428	G
1	CA	429	U
1	CA	484	G
1	CA	495	A
1	CA	508	C
1	CA	547	A
1	CA	560	U

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Mol	Chain	Res	Type
1	CA	573	A
1	CA	575	G
1	CA	687	A
1	CA	748	C
1	CA	792	A
1	CA	793	U
1	CA	980	C
1	CA	982	U
1	CA	992	U
1	CA	1049	U
1	CA	1053	G
1	CA	1054	C
1	CA	1101	A
1	CA	1145	C
1	CA	1157	A
1	CA	1200	C
1	CA	1211	U
1	CA	1239	A
1	CA	1285	A
1	CA	1320	C
1	CA	1399	C
1	CA	1442(A)	G
1	CA	1493	A
1	CA	1498	U
22	CV	18	G
24	CY	16	H2U
24	CY	17	H2U
24	CY	20	H2U
24	CY	55	PSU
24	CY	69	C
36	DA	71	A
36	DA	181	A
36	DA	199	A
36	DA	221	A
36	DA	331	A
36	DA	332	A
36	DA	387	U
36	DA	481	G
36	DA	528	A
36	DA	587	C
36	DA	603	A
36	DA	614(C)	A

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Mol	Chain	Res	Type
36	DA	752	A
36	DA	790	C
36	DA	856	C
36	DA	958	U
36	DA	1052	C
36	DA	1060	U
36	DA	1068	G
36	DA	1069	A
36	DA	1210	A
36	DA	1300	U
36	DA	1301	A
36	DA	1378	A
36	DA	1427	A
36	DA	1541	G
36	DA	1558	A
36	DA	1653	G
36	DA	1799	G
36	DA	1819	A
36	DA	1820	U
36	DA	1948	G
36	DA	1970	A
36	DA	1992	G
36	DA	2033	A
36	DA	2126	A
36	DA	2131	G
36	DA	2145	C
36	DA	2160	G
36	DA	2282	G
36	DA	2286	A
36	DA	2422	A
36	DA	2481	G
36	DA	2689	U
36	DA	2750	A
36	DA	2756	U
37	DB	56	G
37	DB	66	A

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

18 non-standard protein/DNA/RNA residues are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and

the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
24	OMC	CY	32	24	15,22,23	0.75	0	17,31,34	1.19	2 (11%)
24	H2U	AY	20	24	18,21,22	0.87	0	21,30,33	1.92	4 (19%)
24	7MG	CY	46	24	22,26,27	1.23	2 (9%)	28,39,42	2.28	5 (17%)
24	MIA	AY	37	24	24,31,32	1.19	2 (8%)	26,44,47	1.71	4 (15%)
24	4SU	AY	8	24	14,21,22	1.50	3 (21%)	15,30,33	2.63	2 (13%)
24	PSU	CY	55	24	17,21,22	1.19	2 (11%)	20,30,33	3.28	6 (30%)
24	7MG	AY	46	24	22,26,27	1.25	2 (9%)	28,39,42	2.27	5 (17%)
24	5MU	CY	54	24	15,22,23	1.17	2 (13%)	16,32,35	3.71	1 (6%)
24	H2U	CY	20	24	18,21,22	0.85	0	21,30,33	1.92	4 (19%)
24	5MU	AY	54	24	15,22,23	1.15	2 (13%)	16,32,35	3.73	1 (6%)
24	H2U	CY	16	24	18,21,22	0.94	0	21,30,33	1.79	4 (19%)
24	MIA	CY	37	24	24,31,32	1.02	1 (4%)	26,44,47	1.71	4 (15%)
24	H2U	AY	17	24	18,21,22	0.86	0	21,30,33	2.01	5 (23%)
24	OMC	AY	32	24	15,22,23	0.79	0	17,31,34	1.23	2 (11%)
24	PSU	AY	55	24	17,21,22	1.20	2 (11%)	20,30,33	3.27	6 (30%)
24	H2U	CY	17	24	18,21,22	0.86	0	21,30,33	2.02	6 (28%)
24	H2U	AY	16	24	18,21,22	0.89	0	21,30,33	1.79	4 (19%)
24	4SU	CY	8	24	14,21,22	1.52	4 (28%)	15,30,33	2.62	2 (13%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
24	OMC	CY	32	24	-	0/7/27/28	0/2/2/2
24	H2U	AY	20	24	-	1/7/38/39	0/2/2/2
24	7MG	CY	46	24	-	2/7/37/38	0/3/3/3
24	MIA	AY	37	24	-	2/11/33/34	0/3/3/3
24	4SU	AY	8	24	-	1/5/25/26	0/2/2/2
24	PSU	CY	55	24	1/1/5/5	1/7/25/26	0/2/2/2
24	7MG	AY	46	24	-	2/7/37/38	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
24	5MU	CY	54	24	-	0/5/25/26	0/2/2/2
24	H2U	CY	20	24	-	1/7/38/39	0/2/2/2
24	5MU	AY	54	24	-	0/5/25/26	0/2/2/2
24	PSU	AY	55	24	1/1/5/5	1/7/25/26	0/2/2/2
24	MIA	CY	37	24	-	2/11/33/34	0/3/3/3
24	H2U	AY	17	24	-	3/7/38/39	0/2/2/2
24	OMC	AY	32	24	-	0/7/27/28	0/2/2/2
24	H2U	CY	16	24	-	0/7/38/39	0/2/2/2
24	H2U	CY	17	24	-	3/7/38/39	0/2/2/2
24	H2U	AY	16	24	-	0/7/38/39	0/2/2/2
24	4SU	CY	8	24	-	1/5/25/26	0/2/2/2

All (22) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	AY	46	7MG	C6-N1	4.04	1.40	1.33
24	CY	46	7MG	C6-N1	3.99	1.40	1.33
24	CY	8	4SU	C5-C4	3.94	1.42	1.38
24	AY	8	4SU	C5-C4	3.91	1.42	1.38
24	AY	37	MIA	C2-S10	3.49	1.78	1.75
24	CY	54	5MU	C4-N3	3.31	1.38	1.33
24	AY	54	5MU	C4-N3	3.17	1.38	1.33
24	CY	46	7MG	C8-N9	-3.00	1.38	1.45
24	AY	46	7MG	C8-N9	-3.00	1.38	1.45
24	AY	55	PSU	C4-N3	2.75	1.37	1.33
24	CY	55	PSU	C4-N3	2.73	1.37	1.33
24	AY	8	4SU	C6-N1	2.65	1.39	1.35
24	CY	8	4SU	C6-N1	2.62	1.39	1.35
24	CY	55	PSU	C6-N1	2.46	1.39	1.34
24	AY	55	PSU	C6-N1	2.37	1.39	1.34
24	CY	37	MIA	C6-N1	2.29	1.36	1.32
24	AY	37	MIA	C6-N1	2.25	1.35	1.32
24	CY	8	4SU	C4-S4	2.19	1.71	1.67
24	AY	8	4SU	C4-S4	2.13	1.71	1.67
24	AY	54	5MU	C6-C5	-2.11	1.34	1.40
24	CY	54	5MU	C6-C5	-2.10	1.34	1.40
24	CY	8	4SU	C6-C5	-2.09	1.33	1.38

All (67) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	AY	54	5MU	C4-N3-C2	14.57	127.44	115.14
24	CY	54	5MU	C4-N3-C2	14.47	127.36	115.14
24	CY	55	PSU	N1-C2-N3	-10.19	120.33	128.43
24	AY	55	PSU	N1-C2-N3	-10.07	120.43	128.43
24	AY	8	4SU	C2-N3-C4	7.95	126.67	115.15
24	CY	8	4SU	C2-N3-C4	7.94	126.67	115.15
24	AY	55	PSU	C4-N3-C2	7.05	121.09	115.14
24	CY	55	PSU	C4-N3-C2	7.00	121.05	115.14
24	CY	46	7MG	N7-C8-N9	6.62	112.85	103.38
24	AY	46	7MG	N7-C8-N9	6.59	112.81	103.38
24	AY	8	4SU	C5-C4-N3	-6.13	115.63	123.83
24	CY	8	4SU	C5-C4-N3	-6.10	115.67	123.83
24	AY	46	7MG	C6-N1-C2	5.94	125.36	115.93
24	CY	46	7MG	C6-N1-C2	5.92	125.33	115.93
24	CY	46	7MG	C5-C6-N1	-5.67	111.48	123.14
24	AY	46	7MG	C5-C6-N1	-5.67	111.49	123.14
24	CY	37	MIA	C11-S10-C2	5.58	106.44	102.27
24	AY	37	MIA	C11-S10-C2	5.50	106.38	102.27
24	CY	20	H2U	C4-N3-C2	-5.18	121.49	125.79
24	AY	20	H2U	C4-N3-C2	-5.14	121.53	125.79
24	CY	16	H2U	C4-N3-C2	-4.89	121.73	125.79
24	CY	17	H2U	C4-N3-C2	-4.88	121.75	125.79
24	AY	16	H2U	C4-N3-C2	-4.87	121.75	125.79
24	AY	17	H2U	C4-N3-C2	-4.85	121.77	125.79
24	AY	55	PSU	C5-C4-N3	-4.59	119.45	125.36
24	CY	55	PSU	C5-C4-N3	-4.51	119.55	125.36
24	AY	16	H2U	N3-C2-N1	4.20	121.10	116.65
24	CY	17	H2U	N3-C2-N1	4.18	121.07	116.65
24	CY	16	H2U	N3-C2-N1	4.13	121.02	116.65
24	AY	17	H2U	N3-C2-N1	4.11	121.00	116.65
24	AY	37	MIA	C5-C6-N1	-4.08	117.42	120.81
24	CY	37	MIA	C5-C6-N1	-4.03	117.46	120.81
24	AY	20	H2U	N3-C2-N1	3.89	120.77	116.65
24	CY	20	H2U	N3-C2-N1	3.87	120.75	116.65
24	AY	32	OMC	C2-N3-C4	3.72	120.11	116.34
24	CY	17	H2U	C5-C4-N3	3.58	120.67	116.65
24	AY	20	H2U	C5-C4-N3	3.56	120.64	116.65
24	CY	32	OMC	C2-N3-C4	3.55	119.94	116.34
24	AY	17	H2U	C5-C4-N3	3.54	120.63	116.65
24	CY	20	H2U	C5-C4-N3	3.54	120.62	116.65
24	CY	16	H2U	C5-C4-N3	3.52	120.61	116.65
24	AY	17	H2U	O3'-C3'-C2'	3.42	122.88	111.82
24	AY	16	H2U	C5-C4-N3	3.40	120.47	116.65

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	AY	55	PSU	C5-C1'-C2'	-3.40	109.26	115.32
24	CY	55	PSU	C5-C6-N1	-3.39	120.27	124.44
24	CY	17	H2U	O3'-C3'-C2'	3.37	122.73	111.82
24	CY	55	PSU	C5-C1'-C2'	-3.36	109.32	115.32
24	CY	55	PSU	C6-N1-C2	3.34	120.88	115.36
24	AY	37	MIA	C12-N6-C6	3.33	127.48	122.55
24	AY	55	PSU	C6-N1-C2	3.30	120.81	115.36
24	AY	55	PSU	C5-C6-N1	-3.27	120.42	124.44
24	CY	37	MIA	C12-N6-C6	3.26	127.38	122.55
24	CY	46	7MG	C6-C5-C4	3.20	118.63	115.20
24	AY	46	7MG	C6-C5-C4	3.15	118.58	115.20
24	CY	37	MIA	C2-N3-C4	-3.09	111.07	115.32
24	AY	37	MIA	C2-N3-C4	-3.06	111.10	115.32
24	AY	32	OMC	CM2-O2'-C2'	-2.70	107.45	114.52
24	CY	32	OMC	CM2-O2'-C2'	-2.65	107.57	114.52
24	CY	46	7MG	C4-C5-N7	2.48	110.77	106.98
24	AY	46	7MG	C4-C5-N7	2.47	110.76	106.98
24	AY	16	H2U	O2-C2-N1	-2.29	120.23	123.11
24	CY	17	H2U	O2-C2-N1	-2.23	120.31	123.11
24	CY	16	H2U	O2-C2-N1	-2.23	120.31	123.11
24	AY	17	H2U	O2-C2-N1	-2.18	120.37	123.11
24	AY	20	H2U	O2-C2-N1	-2.11	120.45	123.11
24	CY	17	H2U	O2'-C2'-C3'	2.00	118.30	111.82
24	CY	20	H2U	O2-C2-N1	-2.00	120.59	123.11

All (2) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
24	CY	55	PSU	C3'
24	AY	55	PSU	C3'

All (20) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
24	AY	37	MIA	C5-C6-N6-C12
24	CY	37	MIA	C5-C6-N6-C12
24	AY	17	H2U	C4'-C5'-O5'-P
24	CY	17	H2U	C4'-C5'-O5'-P
24	AY	17	H2U	O4'-C4'-C5'-O5'
24	AY	17	H2U	C3'-C4'-C5'-O5'
24	CY	17	H2U	O4'-C4'-C5'-O5'
24	CY	17	H2U	C3'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
24	AY	37	MIA	N1-C6-N6-C12
24	CY	37	MIA	N1-C6-N6-C12
24	CY	55	PSU	O4'-C1'-C5-C4
24	AY	55	PSU	O4'-C1'-C5-C4
24	AY	46	7MG	C4'-C5'-O5'-P
24	AY	8	4SU	O4'-C4'-C5'-O5'
24	CY	8	4SU	O4'-C4'-C5'-O5'
24	CY	46	7MG	C4'-C5'-O5'-P
24	CY	46	7MG	O4'-C4'-C5'-O5'
24	AY	46	7MG	O4'-C4'-C5'-O5'
24	CY	20	H2U	O4'-C4'-C5'-O5'
24	AY	20	H2U	O4'-C4'-C5'-O5'

There are no ring outliers.

17 monomers are involved in 32 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
24	CY	32	OMC	1	0
24	AY	20	H2U	2	0
24	CY	46	7MG	4	0
24	AY	37	MIA	1	0
24	AY	8	4SU	1	0
24	CY	55	PSU	2	0
24	AY	46	7MG	4	0
24	CY	54	5MU	1	0
24	CY	20	H2U	2	0
24	AY	54	5MU	1	0
24	CY	16	H2U	3	0
24	AY	17	H2U	5	0
24	AY	32	OMC	1	0
24	AY	55	PSU	3	0
24	CY	17	H2U	5	0
24	AY	16	H2U	3	0
24	CY	8	4SU	1	0

5.5 Carbohydrates ⓘ

There are no carbohydrates in this entry.

5.6 Ligand geometry

Of 12 ligands modelled in this entry, 8 are monoatomic - leaving 4 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
60	GDP	AZ	501	-	24,30,30	1.37	3 (12%)	31,47,47	2.14	9 (29%)
61	KIR	CZ	502	-	56,59,59	3.45	23 (41%)	62,84,84	1.67	13 (20%)
61	KIR	AZ	502	-	56,59,59	3.48	23 (41%)	62,84,84	1.68	13 (20%)
60	GDP	CZ	501	-	24,30,30	1.41	3 (12%)	31,47,47	1.96	7 (22%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
60	GDP	AZ	501	-	-	0/12/32/32	0/3/3/3
61	KIR	CZ	502	-	-	3/54/98/98	0/3/3/3
61	KIR	AZ	502	-	-	4/54/98/98	0/3/3/3
60	GDP	CZ	501	-	-	0/12/32/32	0/3/3/3

All (52) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
61	AZ	502	KIR	O18-C17	-14.83	1.22	1.44
61	CZ	502	KIR	O18-C17	-14.56	1.22	1.44
61	AZ	502	KIR	O30-C30	-12.56	1.17	1.42
61	CZ	502	KIR	O30-C30	-12.50	1.17	1.42
61	AZ	502	KIR	C22-C21	5.64	1.39	1.33
61	CZ	502	KIR	C22-C21	5.13	1.38	1.33
61	CZ	502	KIR	C45-C28	4.94	1.62	1.53
61	AZ	502	KIR	C45-C28	4.85	1.62	1.53
61	CZ	502	KIR	C32-C31	4.73	1.61	1.54
61	CZ	502	KIR	C2-N1	4.72	1.41	1.33
61	AZ	502	KIR	C32-C31	4.72	1.61	1.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
61	AZ	502	KIR	C2-N1	4.61	1.41	1.33
61	AZ	502	KIR	C27-N26	4.59	1.43	1.33
61	CZ	502	KIR	C5-C4	4.50	1.47	1.39
60	CZ	501	GDP	C6-N1	4.38	1.40	1.33
61	CZ	502	KIR	C27-N26	4.28	1.43	1.33
60	AZ	501	GDP	C6-N1	4.27	1.40	1.33
61	CZ	502	KIR	O29-C29	4.19	1.48	1.40
61	AZ	502	KIR	O29-C29	4.15	1.48	1.40
61	AZ	502	KIR	C5-C4	4.10	1.46	1.39
61	CZ	502	KIR	C29-C28	4.08	1.62	1.54
61	AZ	502	KIR	C19-C17	4.07	1.64	1.54
61	CZ	502	KIR	C19-C17	4.01	1.64	1.54
61	AZ	502	KIR	C29-C28	3.94	1.62	1.54
61	CZ	502	KIR	C42-C19	3.53	1.60	1.53
61	AZ	502	KIR	C42-C19	3.50	1.60	1.53
61	CZ	502	KIR	C8-C7	3.21	1.56	1.48
60	CZ	501	GDP	C2-N1	3.20	1.41	1.35
61	AZ	502	KIR	C8-C7	3.11	1.55	1.48
61	AZ	502	KIR	O34-C29	3.04	1.48	1.43
61	CZ	502	KIR	O34-C29	3.01	1.48	1.43
61	CZ	502	KIR	C16-C17	2.93	1.59	1.52
60	AZ	501	GDP	C2-N1	2.90	1.40	1.35
61	AZ	502	KIR	C6-N1	2.84	1.40	1.34
61	AZ	502	KIR	C16-C17	2.75	1.59	1.52
61	CZ	502	KIR	C6-N1	2.69	1.40	1.34
61	AZ	502	KIR	C29-C30	2.60	1.58	1.53
61	AZ	502	KIR	C20-C21	2.59	1.55	1.51
60	CZ	501	GDP	O4'-C1'	2.56	1.44	1.41
61	CZ	502	KIR	C29-C30	2.56	1.58	1.53
61	CZ	502	KIR	C37-C38	2.49	1.38	1.32
61	CZ	502	KIR	C31-C30	2.40	1.58	1.54
61	CZ	502	KIR	C20-C21	2.39	1.55	1.51
60	AZ	501	GDP	O4'-C1'	2.32	1.44	1.41
61	AZ	502	KIR	C37-C38	2.32	1.38	1.32
61	CZ	502	KIR	C32-C33	2.32	1.58	1.55
61	AZ	502	KIR	C31-C30	2.27	1.58	1.54
61	AZ	502	KIR	C32-C33	2.26	1.58	1.55
61	CZ	502	KIR	C44-C21	2.26	1.54	1.50
61	AZ	502	KIR	C9-C8	2.22	1.41	1.34
61	CZ	502	KIR	C9-C8	2.14	1.40	1.34
61	AZ	502	KIR	C44-C21	2.13	1.54	1.50

All (42) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
60	AZ	501	GDP	N3-C2-N1	-6.10	119.08	127.22
60	AZ	501	GDP	C2-N3-C4	5.90	122.10	115.36
60	CZ	501	GDP	C2-N3-C4	5.62	121.77	115.36
60	CZ	501	GDP	N3-C2-N1	-5.13	120.38	127.22
61	AZ	502	KIR	O29-C29-O34	-4.75	102.25	110.21
61	CZ	502	KIR	O29-C29-O34	-4.61	102.48	110.21
61	AZ	502	KIR	C48-C32-C47	-4.46	101.36	107.72
61	CZ	502	KIR	C11-C10-C9	-4.46	114.34	123.47
61	AZ	502	KIR	C11-C10-C9	-4.45	114.37	123.47
61	CZ	502	KIR	C48-C32-C47	-4.38	101.47	107.72
60	AZ	501	GDP	C5-C6-N1	-3.54	118.59	123.43
60	AZ	501	GDP	PA-O3A-PB	-3.50	120.81	132.83
60	CZ	501	GDP	PA-O3A-PB	-3.50	120.82	132.83
61	AZ	502	KIR	O34-C29-C28	3.17	112.76	104.46
61	CZ	502	KIR	O34-C29-C28	3.16	112.74	104.46
61	AZ	502	KIR	C45-C28-C27	2.97	113.05	108.86
61	CZ	502	KIR	C6-N1-C2	2.95	123.50	116.43
61	AZ	502	KIR	C6-N1-C2	2.93	123.44	116.43
60	CZ	501	GDP	C5-C6-N1	-2.92	119.44	123.43
60	CZ	501	GDP	C4-C5-N7	-2.83	106.45	109.40
61	CZ	502	KIR	C45-C28-C27	2.78	112.79	108.86
60	CZ	501	GDP	C3'-C2'-C1'	-2.76	96.82	100.98
60	AZ	501	GDP	C6-N1-C2	2.69	120.21	115.93
61	AZ	502	KIR	C48-C32-C31	2.57	113.59	109.29
61	CZ	502	KIR	O18-C17-C16	2.56	109.07	104.27
61	CZ	502	KIR	C48-C32-C31	2.53	113.53	109.29
61	AZ	502	KIR	O18-C17-C16	2.50	108.96	104.27
61	CZ	502	KIR	C5-C6-N1	-2.49	120.87	123.96
61	AZ	502	KIR	C29-C30-C31	-2.47	107.39	110.66
60	AZ	501	GDP	C3'-C2'-C1'	-2.44	97.30	100.98
61	AZ	502	KIR	C44-C21-C20	2.40	119.83	115.68
61	AZ	502	KIR	C5-C6-N1	-2.38	121.00	123.96
61	CZ	502	KIR	C44-C21-C20	2.35	119.73	115.68
61	CZ	502	KIR	C29-C30-C31	-2.33	107.58	110.66
60	AZ	501	GDP	N2-C2-N1	2.25	120.75	117.25
61	AZ	502	KIR	C20-C21-C22	-2.19	117.05	119.13
60	CZ	501	GDP	N2-C2-N1	2.12	120.56	117.25
60	AZ	501	GDP	C4-C5-N7	-2.12	107.19	109.40
61	CZ	502	KIR	O4-C4-C3	-2.11	119.39	121.76
61	AZ	502	KIR	O4-C4-C3	-2.05	119.46	121.76
60	AZ	501	GDP	C6-C5-C4	-2.03	118.86	120.80
61	CZ	502	KIR	C20-C21-C22	-2.01	117.22	119.13

There are no chirality outliers.

All (7) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
61	AZ	502	KIR	C11-C10-C9-C8
61	CZ	502	KIR	C11-C10-C9-C8
61	AZ	502	KIR	C36-C37-C38-C39
61	CZ	502	KIR	C36-C37-C38-C39
61	AZ	502	KIR	C19-C20-O20-C43
61	CZ	502	KIR	C19-C20-O20-C43
61	AZ	502	KIR	C21-C20-O20-C43

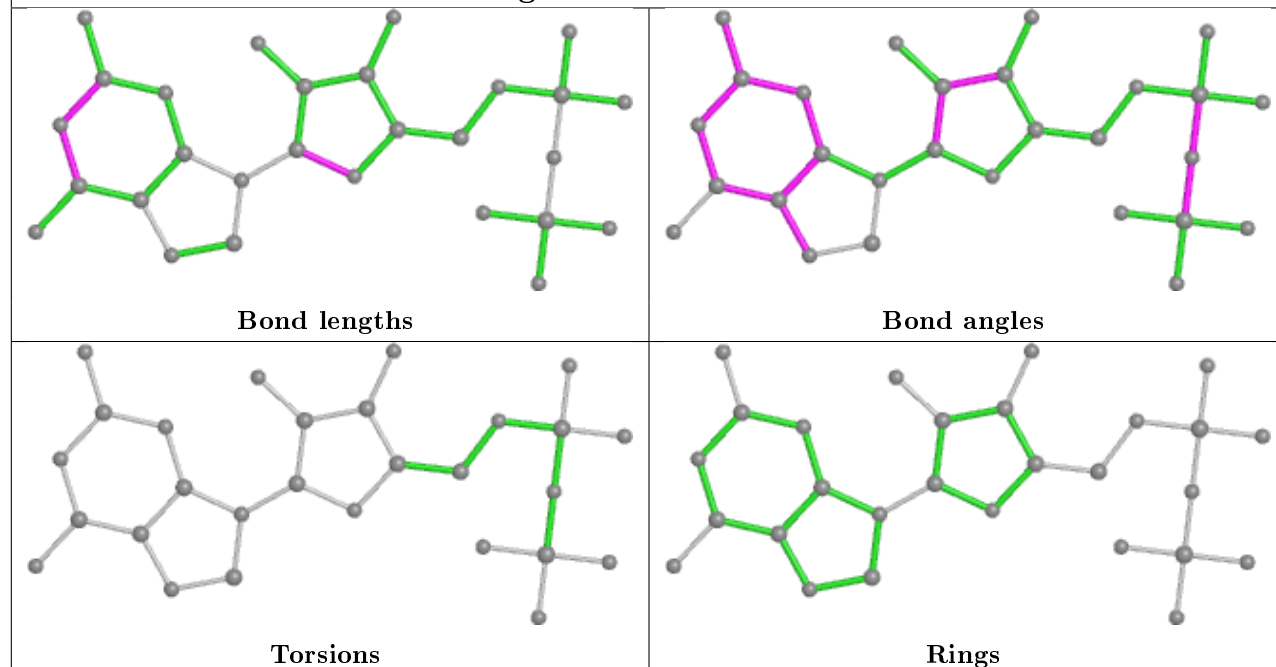
There are no ring outliers.

4 monomers are involved in 13 short contacts:

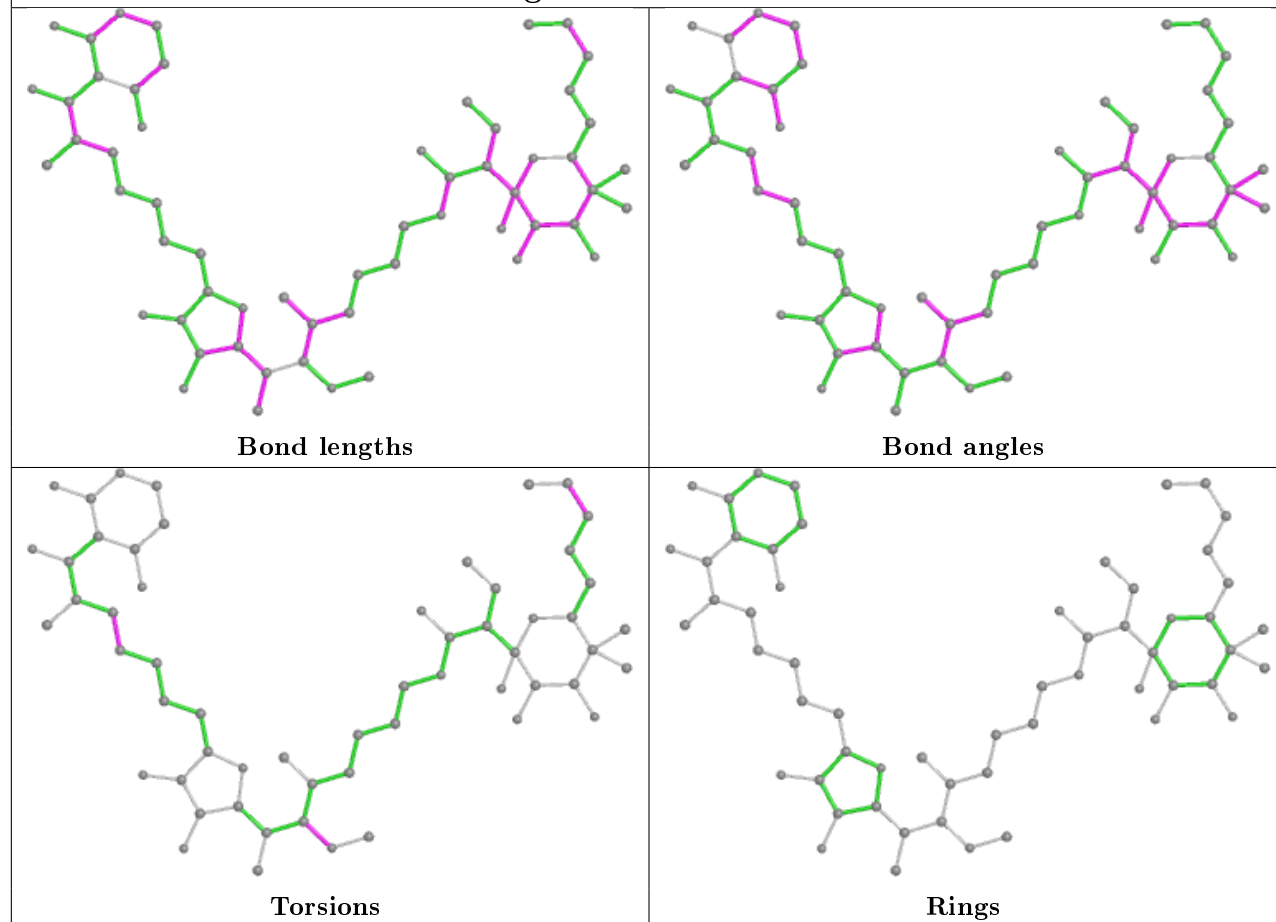
Mol	Chain	Res	Type	Clashes	Symm-Clashes
60	AZ	501	GDP	2	0
61	CZ	502	KIR	2	0
61	AZ	502	KIR	3	0
60	CZ	501	GDP	6	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

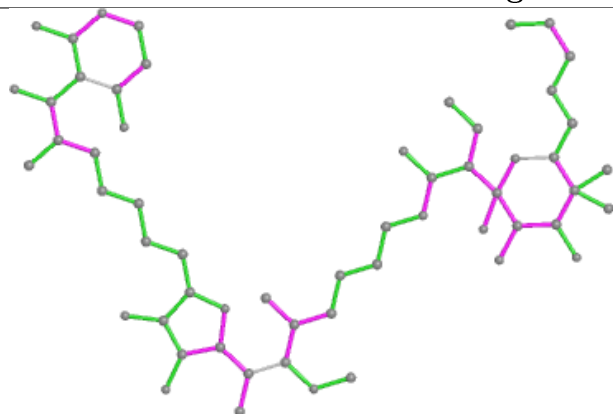
Ligand GDP AZ 501



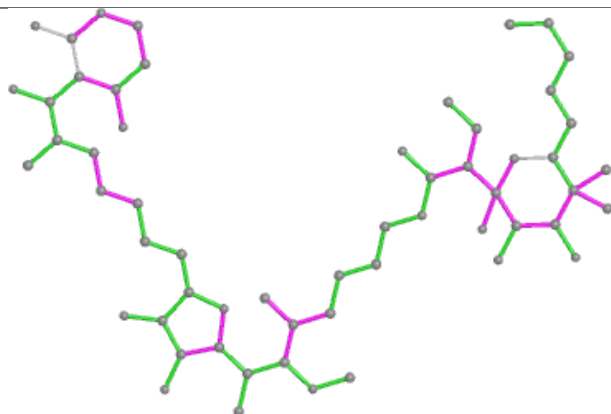
Ligand KIR CZ 502



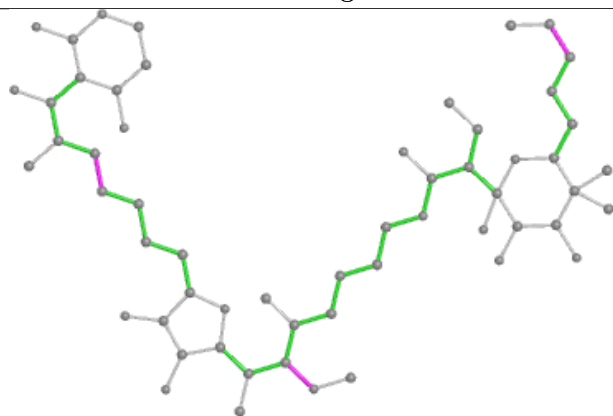
Ligand KIR AZ 502



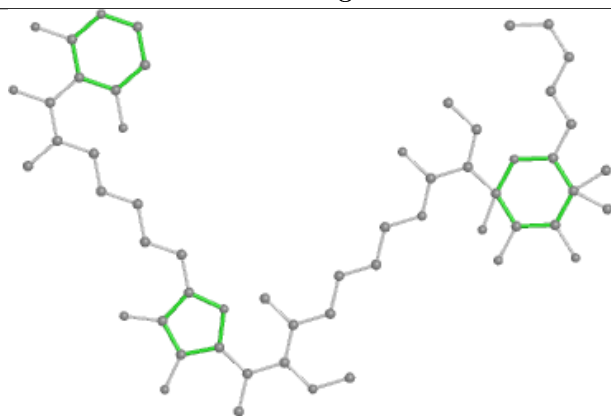
Bond lengths



Bond angles

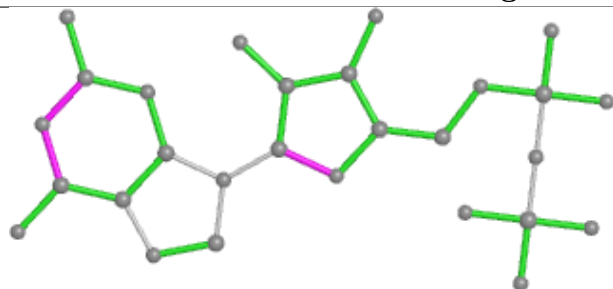


Torsions

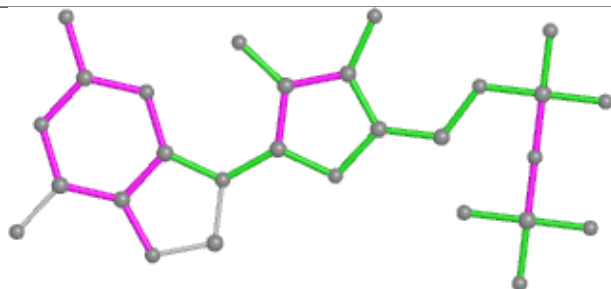


Rings

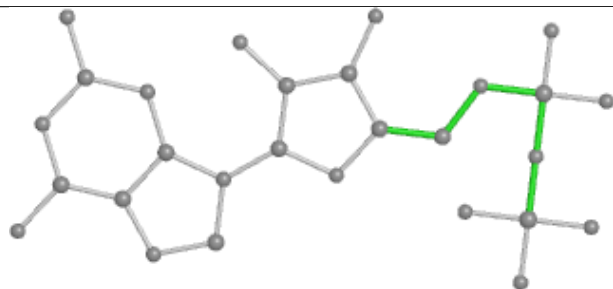
Ligand GDP CZ 501



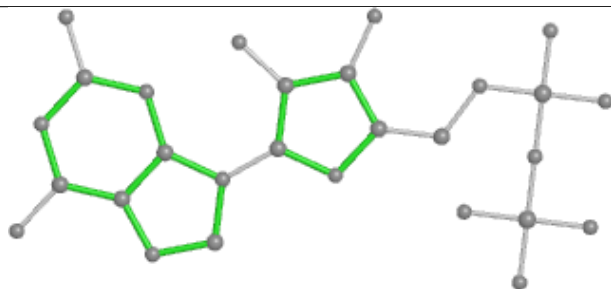
Bond lengths



Bond angles



Torsions



Rings

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 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	AA	1510/1522 (99%)	0.02	32 (2%) 63 43	17, 54, 143, 200	0
1	CA	1510/1522 (99%)	-0.17	26 (1%) 70 49	26, 58, 145, 200	0
2	AB	234/256 (91%)	-0.14	2 (0%) 84 69	34, 64, 130, 141	0
2	CB	234/256 (91%)	-0.12	6 (2%) 56 33	36, 65, 130, 142	0
3	AC	206/239 (86%)	-0.30	0 100 100	27, 48, 81, 86	0
3	CC	206/239 (86%)	-0.41	0 100 100	32, 52, 82, 88	0
4	AD	208/209 (99%)	0.29	8 (3%) 40 20	55, 89, 119, 122	0
4	CD	208/209 (99%)	0.22	12 (5%) 23 10	55, 90, 119, 122	0
5	AE	150/162 (92%)	-0.43	0 100 100	23, 41, 62, 84	0
5	CE	150/162 (92%)	-0.43	0 100 100	30, 44, 64, 86	0
6	AF	101/101 (100%)	-0.25	1 (0%) 82 67	48, 72, 88, 94	0
6	CF	101/101 (100%)	0.04	1 (0%) 82 67	52, 74, 90, 95	0
7	AG	155/156 (99%)	-0.13	4 (2%) 56 33	40, 64, 100, 115	0
7	CG	155/156 (99%)	-0.10	4 (2%) 56 33	45, 67, 101, 115	0
8	AH	138/138 (100%)	-0.41	0 100 100	30, 44, 61, 71	0
8	CH	138/138 (100%)	-0.50	0 100 100	31, 47, 62, 72	0
9	AI	127/128 (99%)	0.26	2 (1%) 72 51	33, 73, 113, 120	0
9	CI	127/128 (99%)	0.34	8 (6%) 20 8	40, 77, 114, 120	0
10	AJ	98/105 (93%)	0.47	5 (5%) 28 13	41, 80, 133, 136	0
10	CJ	98/105 (93%)	0.72	15 (15%) 2 1	44, 84, 134, 137	0
11	AK	119/129 (92%)	-0.13	3 (2%) 57 34	28, 49, 80, 104	0
11	CK	119/129 (92%)	-0.17	3 (2%) 57 34	32, 53, 82, 104	0
12	AL	124/135 (91%)	-0.01	2 (1%) 72 51	28, 66, 87, 125	0
12	CL	124/135 (91%)	0.10	2 (1%) 72 51	30, 67, 88, 124	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
13	AM	124/126 (98%)	0.09	5 (4%) 38 19	50, 73, 100, 137	0
13	CM	124/126 (98%)	0.17	8 (6%) 18 8	53, 76, 101, 137	0
14	AN	60/61 (98%)	-0.04	1 (1%) 70 49	33, 48, 76, 79	0
14	CN	60/61 (98%)	-0.19	1 (1%) 70 49	39, 53, 76, 80	0
15	AO	88/89 (98%)	-0.35	0 100 100	36, 51, 73, 81	0
15	CO	88/89 (98%)	-0.22	0 100 100	37, 53, 73, 81	0
16	AP	83/88 (94%)	0.28	0 100 100	62, 78, 99, 125	0
16	CP	83/88 (94%)	0.34	3 (3%) 42 22	62, 80, 100, 124	0
17	AQ	99/105 (94%)	-0.20	0 100 100	33, 55, 72, 83	0
17	CQ	99/105 (94%)	-0.17	0 100 100	39, 56, 73, 83	0
18	AR	70/88 (79%)	-0.25	1 (1%) 75 56	37, 55, 87, 99	0
18	CR	70/88 (79%)	-0.15	2 (2%) 51 28	43, 59, 88, 99	0
19	AS	78/93 (83%)	0.38	6 (7%) 13 5	61, 81, 116, 125	0
19	CS	78/93 (83%)	0.53	6 (7%) 13 5	63, 83, 117, 125	0
20	AT	99/106 (93%)	0.20	5 (5%) 28 13	49, 77, 112, 115	0
20	CT	99/106 (93%)	0.30	4 (4%) 38 19	52, 78, 113, 115	0
21	AU	24/27 (88%)	0.31	1 (4%) 36 18	43, 55, 76, 93	0
21	CU	24/27 (88%)	0.56	3 (12%) 3 1	46, 59, 78, 92	0
22	AV	76/76 (100%)	-0.13	0 100 100	34, 64, 95, 113	0
22	AW	76/76 (100%)	0.89	11 (14%) 2 1	60, 165, 193, 200	0
22	CV	76/76 (100%)	-0.21	0 100 100	38, 66, 97, 114	0
22	CW	76/76 (100%)	1.03	14 (18%) 1 0	63, 166, 193, 200	0
23	AX	17/27 (62%)	0.76	3 (17%) 1 0	27, 87, 137, 139	0
23	CX	17/27 (62%)	0.83	5 (29%) 0 0	32, 89, 137, 140	0
24	AY	68/77 (88%)	1.50	20 (29%) 0 0	70, 145, 175, 178	0
24	CY	68/77 (88%)	1.77	29 (42%) 0 0	72, 146, 174, 178	0
25	AZ	385/405 (95%)	0.86	54 (14%) 2 1	84, 129, 155, 177	0
25	CZ	385/405 (95%)	0.97	57 (14%) 2 1	85, 129, 155, 177	0
26	B0	84/85 (98%)	0.28	7 (8%) 11 4	47, 64, 95, 108	0
26	D0	84/85 (98%)	0.38	7 (8%) 11 4	50, 66, 95, 108	0
27	B1	93/98 (94%)	0.03	1 (1%) 80 64	38, 55, 114, 120	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
27	D1	93/98 (94%)	0.31	5 (5%) 25 12	54, 71, 121, 129	0
28	B2	71/72 (98%)	1.35	19 (26%) 0 0	108, 136, 147, 149	0
28	D2	71/72 (98%)	0.55	4 (5%) 24 11	88, 107, 126, 142	0
29	B3	59/60 (98%)	0.23	1 (1%) 70 49	50, 71, 91, 116	0
29	D3	59/60 (98%)	0.53	3 (5%) 28 13	51, 72, 91, 116	0
30	B4	44/71 (61%)	0.98	5 (11%) 5 2	109, 148, 172, 176	0
30	D4	44/71 (61%)	0.53	3 (6%) 17 7	110, 148, 172, 176	0
31	B5	59/60 (98%)	0.10	3 (5%) 28 13	45, 71, 131, 148	0
31	D5	59/60 (98%)	0.19	4 (6%) 17 7	46, 73, 130, 148	0
32	B6	50/54 (92%)	1.03	6 (12%) 4 2	50, 80, 106, 112	0
32	D6	50/54 (92%)	0.92	6 (12%) 4 2	54, 82, 106, 114	0
33	B7	48/49 (97%)	0.07	1 (2%) 63 43	45, 53, 90, 110	0
33	D7	48/49 (97%)	-0.05	0 100 100	47, 55, 89, 110	0
34	B8	63/65 (96%)	0.29	3 (4%) 30 14	49, 63, 79, 101	0
34	D8	63/65 (96%)	0.29	4 (6%) 20 8	51, 65, 80, 101	0
35	B9	37/37 (100%)	0.37	1 (2%) 54 31	62, 75, 96, 98	0
35	D9	37/37 (100%)	0.61	2 (5%) 25 12	61, 77, 96, 98	0
36	BA	2901/2915 (99%)	0.12	116 (3%) 38 19	21, 65, 173, 200	0
36	DA	2901/2915 (99%)	0.05	107 (3%) 41 21	26, 67, 173, 200	0
37	BB	119/122 (97%)	-0.16	0 100 100	52, 81, 104, 123	0
37	DB	119/122 (97%)	-0.27	0 100 100	55, 82, 104, 123	0
38	BC	228/229 (99%)	0.21	13 (5%) 23 11	47, 78, 152, 166	0
38	DC	228/229 (99%)	0.63	29 (12%) 3 1	51, 80, 152, 167	0
39	BD	275/276 (99%)	-0.27	3 (1%) 80 64	27, 44, 71, 96	0
39	DD	275/276 (99%)	-0.30	2 (0%) 87 75	29, 46, 71, 96	0
40	BE	204/206 (99%)	0.14	9 (4%) 34 17	40, 65, 114, 124	0
40	DE	204/206 (99%)	0.11	8 (3%) 39 20	41, 65, 114, 124	0
41	BF	207/210 (98%)	0.30	12 (5%) 23 10	45, 96, 152, 159	0
41	DF	207/210 (98%)	0.40	16 (7%) 13 5	45, 97, 152, 159	0
42	BG	181/182 (99%)	-0.09	6 (3%) 46 24	50, 73, 111, 132	0
42	DG	181/182 (99%)	0.21	8 (4%) 34 17	78, 100, 124, 135	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
43	BH	159/180 (88%)	1.03	24 (15%) 2 1	84, 119, 144, 150	0
43	DH	159/180 (88%)	0.94	21 (13%) 3 1	83, 119, 144, 151	0
44	BJ	0/173	-	-	-	-
44	DJ	0/173	-	-	-	-
45	BK	0/147	-	-	-	-
45	DK	0/147	-	-	-	-
46	BN	138/140 (98%)	0.03	1 (0%) 87 75	51, 74, 118, 123	0
46	DN	138/140 (98%)	0.04	1 (0%) 87 75	51, 75, 118, 123	0
47	BO	122/122 (100%)	-0.32	0 100 100	35, 49, 62, 66	0
47	DO	122/122 (100%)	-0.40	0 100 100	35, 50, 62, 65	0
48	BP	146/150 (97%)	0.73	11 (7%) 14 5	47, 93, 118, 139	0
48	DP	146/150 (97%)	0.83	19 (13%) 3 1	49, 95, 118, 139	0
49	BQ	141/141 (100%)	-0.08	2 (1%) 75 56	35, 54, 75, 117	0
49	DQ	141/141 (100%)	-0.09	2 (1%) 75 56	39, 54, 76, 117	0
50	BR	117/118 (99%)	0.14	1 (0%) 84 69	51, 70, 88, 93	0
50	DR	117/118 (99%)	0.12	4 (3%) 45 24	52, 71, 89, 93	0
51	BS	98/112 (87%)	0.37	3 (3%) 49 26	69, 89, 114, 118	0
51	DS	98/112 (87%)	0.72	12 (12%) 4 1	71, 90, 114, 117	0
52	BT	137/146 (93%)	0.20	10 (7%) 15 6	50, 71, 133, 164	0
52	DT	137/146 (93%)	0.17	10 (7%) 15 6	51, 72, 134, 164	0
53	BU	117/118 (99%)	-0.00	1 (0%) 84 69	51, 68, 90, 112	0
53	DU	117/118 (99%)	-0.07	1 (0%) 84 69	52, 69, 89, 112	0
54	BV	101/101 (100%)	0.35	4 (3%) 38 19	52, 98, 113, 116	0
54	DV	101/101 (100%)	0.41	6 (5%) 22 10	52, 98, 113, 116	0
55	BW	113/113 (100%)	0.05	2 (1%) 68 47	56, 71, 102, 133	0
55	DW	113/113 (100%)	0.19	2 (1%) 68 47	56, 72, 103, 134	0
56	BX	92/96 (95%)	0.28	0 100 100	64, 83, 101, 111	0
56	DX	92/96 (95%)	0.23	0 100 100	65, 84, 102, 112	0
57	BY	100/110 (90%)	1.35	22 (22%) 0 0	93, 114, 151, 160	0
57	DY	100/110 (90%)	1.50	31 (31%) 0 0	93, 114, 151, 160	0
58	BZ	176/206 (85%)	0.06	5 (2%) 53 30	44, 71, 117, 123	0
58	DZ	176/206 (85%)	0.17	5 (2%) 53 30	56, 78, 111, 119	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
All	All	21994/23376 (94%)	0.14	989 (4%) 33 16	17, 69, 146, 200	0

All (989) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
36	BA	2802	G	12.0
49	DQ	141	GLN	10.9
58	DZ	113	ALA	10.7
36	DA	2802	G	10.3
42	DG	2	PRO	9.6
57	BY	52	SER	9.4
49	BQ	141	GLN	9.1
1	CA	89	C	8.9
36	BA	654(K)	C	8.8
36	DA	654(E)	G	8.8
57	BY	2	ARG	8.8
36	BA	654(J)	A	8.7
32	B6	46	HIS	8.4
11	AK	129	SER	8.4
57	DY	51	VAL	8.3
36	DA	654(K)	C	8.3
1	AA	1036	G	8.2
25	CZ	36	ALA	8.0
1	CA	88	A	8.0
36	BA	1077	A	7.9
38	DC	1	PRO	7.9
1	CA	1036	G	7.8
25	AZ	85	HIS	7.7
36	BA	2799	C	7.7
42	BG	48	GLU	7.6
38	BC	105	ASP	7.6
28	B2	71	ASN	7.5
43	BH	53	GLU	7.5
24	AY	44	G	7.4
36	BA	654(C)	G	7.4
36	BA	654(G)	C	7.3
19	AS	81	ARG	7.2
38	BC	109	ASP	7.1
36	DA	654(J)	A	7.0
36	BA	1087	G	6.9
26	B0	3	HIS	6.9
36	BA	654(I)	C	6.9

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Mol	Chain	Res	Type	RSRZ
57	BY	51	VAL	6.8
38	DC	109	ASP	6.8
36	BA	2795	G	6.8
36	BA	654(E)	G	6.8
36	BA	1065	U	6.8
36	BA	1078	U	6.8
43	BH	52	VAL	6.8
24	CY	44	G	6.7
25	AZ	199	ILE	6.7
36	DA	1066	U	6.6
36	BA	2801	A	6.6
36	DA	654(V)	A	6.6
36	BA	1093	G	6.3
36	BA	654(F)	C	6.3
43	BH	170	ARG	6.3
36	DA	2896	C	6.3
25	CZ	141	VAL	6.3
43	DH	169	VAL	6.2
28	D2	72	ALA	6.2
22	CW	44	G	6.2
25	AZ	42	VAL	6.2
36	BA	654(H)	G	6.1
43	BH	169	VAL	6.1
57	DY	52	SER	6.1
32	B6	42	TRP	6.1
36	BA	1079	C	6.1
36	BA	654(V)	A	6.1
36	DA	654(G)	C	6.0
38	BC	1	PRO	6.0
42	BG	2	PRO	6.0
58	BZ	113	ALA	6.0
28	B2	64	LEU	6.0
29	B3	1	MET	6.0
25	CZ	72	THR	5.9
1	CA	81	U	5.9
25	CZ	193	ASN	5.9
48	BP	149	GLU	5.9
52	DT	137	LYS	5.9
1	AA	1026	G	5.9
36	DA	654(L)	G	5.9
31	D5	59	GLU	5.8
52	DT	135	ALA	5.8

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Mol	Chain	Res	Type	RSRZ
52	BT	136	GLN	5.8
36	DA	654(F)	C	5.7
32	D6	42	TRP	5.7
38	DC	77	ILE	5.7
40	BE	204	ALA	5.7
36	DA	1077	A	5.7
36	DA	654(C)	G	5.6
29	D3	1	MET	5.6
28	B2	42	GLY	5.6
25	AZ	112	PRO	5.6
36	BA	2894	G	5.6
36	BA	1066	U	5.6
48	BP	150	ALA	5.6
36	DA	352	G	5.6
52	BT	135	ALA	5.5
36	BA	2801(A)	A	5.5
57	BY	55	TYR	5.5
2	CB	7	VAL	5.5
28	B2	72	ALA	5.5
36	DA	2796	U	5.5
25	CZ	183	HIS	5.4
43	DH	170	ARG	5.4
25	CZ	203	LEU	5.4
12	CL	127	GLU	5.4
22	CW	3	C	5.4
1	AA	1030(B)	C	5.3
36	DA	2799	C	5.3
54	BV	36	PRO	5.3
36	DA	1065	U	5.3
38	DC	105	ASP	5.3
43	DH	21	PRO	5.3
42	DG	48	GLU	5.2
48	BP	107	LYS	5.2
25	CZ	33	TYR	5.2
41	BF	11	VAL	5.2
41	BF	9	ILE	5.2
36	DA	2801	A	5.2
1	AA	89	C	5.1
36	BA	654(T)	C	5.1
25	CZ	199	ILE	5.1
25	CZ	140	MET	5.1
1	AA	81	U	5.1

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Mol	Chain	Res	Type	RSRZ
41	BF	24	LEU	5.1
22	CW	34	G	5.1
36	BA	654(L)	G	5.1
32	D6	46	HIS	5.1
57	DY	2	ARG	5.1
1	AA	1037	C	5.1
36	BA	2896	C	5.0
36	BA	1080	C	5.0
38	DC	115	ALA	5.0
19	CS	81	ARG	5.0
36	BA	1073	A	5.0
25	AZ	41	ASN	5.0
1	AA	1030(A)	G	4.9
25	CZ	29	ALA	4.9
36	DA	229	A	4.9
36	BA	2796	U	4.9
36	DA	2897	U	4.9
1	CA	82	U	4.8
36	DA	654(I)	C	4.8
51	BS	54	LEU	4.8
36	BA	1094	U	4.8
36	BA	352	G	4.8
36	DA	2795	G	4.8
41	BF	8	GLN	4.8
36	DA	1082	U	4.8
58	DZ	114	GLY	4.8
2	CB	132	LYS	4.7
36	DA	2804	C	4.7
13	CM	123	ALA	4.7
1	AA	88	A	4.7
43	DH	53	GLU	4.7
53	BU	118	GLY	4.7
36	BA	1064	C	4.7
38	DC	97	GLU	4.7
36	DA	1076	C	4.6
14	AN	2	ALA	4.6
36	DA	1067	A	4.6
22	AW	34	G	4.6
52	DT	136	GLN	4.5
21	AU	25	LYS	4.5
36	DA	1090	U	4.5
54	DV	36	PRO	4.5

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Mol	Chain	Res	Type	RSRZ
25	CZ	37	ALA	4.5
36	DA	1087	G	4.5
36	DA	2801(A)	A	4.5
1	CA	80	G	4.5
14	CN	2	ALA	4.5
57	DY	54	LYS	4.5
36	BA	654	A	4.5
48	DP	149	GLU	4.5
1	AA	1038	C	4.5
13	AM	125	ARG	4.4
36	BA	1069	A	4.4
35	D9	1	MET	4.4
4	CD	112	VAL	4.4
57	DY	55	TYR	4.4
36	DA	1080	C	4.4
36	DA	654(H)	G	4.4
36	BA	1072	C	4.4
25	AZ	203	LEU	4.4
23	CX	27	A	4.4
36	BA	1068	G	4.4
4	AD	152	SER	4.3
11	CK	129	SER	4.3
40	DE	76	ARG	4.3
36	DA	1064	C	4.3
38	DC	106	GLY	4.3
24	AY	15	A	4.3
26	D0	3	HIS	4.3
22	AW	6	G	4.3
32	B6	54	ILE	4.3
22	CW	6	G	4.2
25	CZ	366	ASP	4.2
57	BY	45	VAL	4.2
57	BY	54	LYS	4.2
13	CM	7	VAL	4.2
43	DH	52	VAL	4.2
13	AM	84	ILE	4.2
24	AY	24	G	4.2
40	DE	204	ALA	4.2
36	BA	1067	A	4.2
30	B4	42	PHE	4.2
22	CW	47	U	4.1
24	AY	45	U	4.1

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Mol	Chain	Res	Type	RSRZ
36	BA	1091	G	4.1
57	DY	75	ILE	4.1
35	B9	1	MET	4.1
42	BG	50	ALA	4.1
25	CZ	142	ASP	4.1
24	AY	19	G	4.1
57	BY	61	ILE	4.1
28	D2	71	ASN	4.1
28	B2	50	ILE	4.1
31	D5	60	VAL	4.1
32	D6	26	ASN	4.1
36	DA	156	U	4.0
43	BH	51	ARG	4.0
24	CY	45	U	4.0
41	BF	20	LEU	4.0
25	AZ	38	GLU	4.0
38	BC	107	TRP	4.0
58	BZ	114	GLY	4.0
10	CJ	77	PRO	4.0
48	DP	150	ALA	4.0
36	BA	1062	G	4.0
57	BY	56	PRO	4.0
41	BF	12	LEU	4.0
1	CA	90	U	4.0
25	AZ	141	VAL	4.0
31	B5	59	GLU	3.9
28	B2	49	LYS	3.9
42	DG	49	ASP	3.9
25	AZ	84	GLY	3.9
39	BD	276	LYS	3.9
1	AA	78	G	3.9
24	AY	18	G	3.9
36	BA	2207	G	3.9
25	CZ	42	VAL	3.9
38	BC	117	PRO	3.9
7	CG	84	ASN	3.9
28	B2	9	GLN	3.9
36	BA	1089	G	3.9
36	DA	1068	G	3.9
36	BA	654(S)	G	3.9
20	CT	73	HIS	3.9
25	CZ	73	ALA	3.9

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Mol	Chain	Res	Type	RSRZ
36	DA	2805	G	3.9
39	DD	276	LYS	3.9
23	AX	27	A	3.9
25	CZ	1	ALA	3.9
31	B5	60	VAL	3.8
24	CY	18	G	3.8
48	BP	118	GLY	3.8
25	AZ	372	VAL	3.8
36	DA	654(S)	G	3.8
52	BT	39	ARG	3.8
38	DC	107	TRP	3.8
52	DT	132	LYS	3.8
36	BA	229	A	3.8
4	CD	152	SER	3.8
43	DH	96	ALA	3.7
31	B5	58	LEU	3.7
42	BG	49	ASP	3.7
43	DH	86	GLU	3.7
1	CA	1030(B)	C	3.7
10	CJ	90	LEU	3.7
36	BA	156	U	3.7
36	BA	614(B)	G	3.7
25	AZ	184	ARG	3.7
36	DA	654(D)	G	3.7
57	BY	53	PRO	3.7
51	DS	34	HIS	3.7
4	CD	47	ARG	3.7
22	AW	44	G	3.7
36	BA	654(D)	G	3.7
36	BA	271(L)	U	3.7
36	BA	1096	A	3.7
36	BA	1082	U	3.6
12	AL	127	GLU	3.6
28	B2	41	ILE	3.6
35	D9	37	GLY	3.6
26	B0	4	LYS	3.6
20	AT	9	ASN	3.6
36	DA	2803	C	3.6
58	BZ	115	GLY	3.6
10	CJ	85	LEU	3.6
43	BH	44	VAL	3.6
26	D0	6	GLY	3.6

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Mol	Chain	Res	Type	RSRZ
36	BA	654(U)	A	3.6
29	D3	2	PRO	3.6
40	BE	69	LYS	3.6
36	DA	1085	A	3.6
1	AA	1030(C)	G	3.6
36	BA	1071	G	3.6
36	DA	1062	G	3.6
57	DY	17	SER	3.6
25	AZ	33	TYR	3.6
43	BH	33	LEU	3.5
52	BT	132	LYS	3.5
58	DZ	167	PRO	3.5
25	AZ	111	GLY	3.5
26	B0	2	ALA	3.5
36	DA	1078	U	3.5
1	AA	470	C	3.5
36	BA	2803	C	3.5
22	AW	5	G	3.5
51	DS	60	GLY	3.5
7	CG	79	ARG	3.5
36	DA	1073	A	3.5
25	CZ	326	GLU	3.5
57	DY	45	VAL	3.5
28	B2	57	ILE	3.5
10	CJ	89	ASP	3.5
40	DE	88	GLY	3.5
36	BA	1081	U	3.5
57	BY	96	ILE	3.5
10	AJ	34	VAL	3.4
49	BQ	140	ALA	3.4
1	CA	1137	C	3.4
38	DC	76	ALA	3.4
25	CZ	105	VAL	3.4
24	AY	14	A	3.4
36	BA	2173	A	3.4
36	DA	271(L)	U	3.4
41	DF	11	VAL	3.4
57	DY	28	LYS	3.4
25	AZ	130	TYR	3.4
36	DA	654(R)	C	3.4
12	AL	128	ALA	3.4
48	BP	98	GLU	3.4

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Mol	Chain	Res	Type	RSRZ
1	AA	76	C	3.4
1	CA	91	C	3.4
43	DH	168	PRO	3.4
57	BY	79	CYS	3.4
36	DA	1174	A	3.4
1	AA	204	U	3.4
25	CZ	147	LEU	3.4
36	BA	271(K)	U	3.4
9	CI	6	GLY	3.4
36	BA	888	C	3.4
1	CA	1037	C	3.3
24	CY	61	C	3.3
24	CY	42	G	3.3
24	CY	31	U	3.3
42	DG	82	LEU	3.3
22	CW	45	U	3.3
41	DF	8	GLN	3.3
40	DE	53	PRO	3.3
51	BS	107	GLU	3.3
38	DC	121	GLY	3.3
25	AZ	150	VAL	3.3
36	DA	2793	G	3.3
4	CD	154	ASN	3.3
27	B1	85	LEU	3.3
30	B4	32	TYR	3.3
24	CY	43	G	3.3
24	AY	25	C	3.3
50	BR	3	HIS	3.3
10	CJ	86	MET	3.2
43	DH	167	GLU	3.2
36	DA	1104	C	3.2
4	CD	23	GLY	3.2
24	CY	47	U	3.2
41	BF	14	PRO	3.2
48	BP	51	PHE	3.2
24	AY	57	G	3.2
57	DY	19	LYS	3.2
38	DC	78	ALA	3.2
34	B8	64	TYR	3.2
38	BC	108	MET	3.2
57	BY	85	VAL	3.2
20	AT	73	HIS	3.2

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Mol	Chain	Res	Type	RSRZ
25	CZ	85	HIS	3.2
36	DA	1420	U	3.2
48	DP	110	TYR	3.2
36	DA	1535	A	3.2
36	DA	2892	A	3.2
28	B2	47	ASN	3.2
20	AT	104	LEU	3.2
52	DT	1	MET	3.2
25	CZ	185	ASN	3.2
34	D8	64	TYR	3.2
43	BH	88	LEU	3.2
1	AA	91	C	3.2
24	AY	9	C	3.2
36	DA	1071	G	3.2
9	AI	21	PRO	3.1
36	BA	654(M)	C	3.1
41	DF	12	LEU	3.1
9	CI	4	TYR	3.1
18	AR	88	LYS	3.1
43	BH	42	ARG	3.1
30	B4	47	GLN	3.1
52	BT	134	GLU	3.1
2	CB	96	ARG	3.1
23	CX	26	A	3.1
25	AZ	368	VAL	3.1
36	BA	1086	A	3.1
57	BY	39	VAL	3.1
36	BA	1541	G	3.1
57	DY	79	CYS	3.1
52	DT	39	ARG	3.1
10	CJ	23	ILE	3.1
25	CZ	186	PRO	3.1
36	DA	654(Q)	C	3.1
42	BG	86	MET	3.1
25	AZ	108	ALA	3.1
41	DF	207	GLY	3.1
36	DA	155	U	3.1
25	CZ	196	VAL	3.1
36	DA	278	A	3.1
36	DA	2794	C	3.1
1	CA	412	A	3.1
10	AJ	33	GLN	3.1

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Mol	Chain	Res	Type	RSRZ
36	DA	2893	G	3.1
26	D0	4	LYS	3.1
28	D2	19	VAL	3.1
24	CY	19	G	3.1
41	DF	24	LEU	3.1
25	AZ	40	PRO	3.0
48	BP	110	TYR	3.0
13	CM	43	THR	3.0
13	CM	84	ILE	3.0
25	AZ	6	ILE	3.0
36	DA	2792	G	3.0
25	CZ	359	VAL	3.0
25	AZ	404	LEU	3.0
38	DC	108	MET	3.0
52	DT	27	THR	3.0
36	BA	1063	G	3.0
40	BE	88	GLY	3.0
52	BT	137	LYS	3.0
1	CA	204	U	3.0
24	CY	15	A	3.0
38	DC	112	ALA	3.0
48	DP	76	LYS	3.0
31	D5	58	LEU	3.0
22	AW	45	U	3.0
36	DA	271(K)	U	3.0
55	DW	1	MET	3.0
20	AT	106	ALA	3.0
36	DA	1074	G	3.0
24	AY	13	C	3.0
57	BY	92	ASN	3.0
1	AA	1031	G	3.0
28	B2	38	GLN	3.0
22	CW	2	C	3.0
9	CI	82	ALA	2.9
24	CY	24	G	2.9
38	DC	93	TYR	2.9
57	DY	53	PRO	2.9
36	BA	654(A)	G	2.9
36	DA	1740	G	2.9
25	CZ	213	PRO	2.9
1	AA	1030(D)	A	2.9
25	CZ	71	GLU	2.9

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Mol	Chain	Res	Type	RSRZ
27	D1	82	LEU	2.9
24	CY	25	C	2.9
36	DA	271(G)	C	2.9
36	DA	157	U	2.9
41	DF	1	MET	2.9
6	AF	101	ALA	2.9
38	DC	89	ALA	2.9
57	DY	36	ALA	2.9
24	CY	9	C	2.9
24	CY	21	A	2.9
41	BF	7	TYR	2.9
28	B2	54	LYS	2.9
10	CJ	79	ARG	2.9
25	CZ	6	ILE	2.9
38	DC	81	GLU	2.9
21	CU	2	GLY	2.9
48	DP	7	ARG	2.9
43	DH	88	LEU	2.9
51	DS	59	LYS	2.9
25	CZ	21	ASP	2.9
13	AM	122	LYS	2.9
20	CT	103	GLY	2.9
36	BA	157	U	2.9
36	DA	1063	G	2.9
2	CB	236	TYR	2.9
25	AZ	180	GLU	2.9
36	DA	2099	U	2.9
48	DP	114	ILE	2.9
25	AZ	369	THR	2.9
38	DC	95	GLY	2.9
57	BY	86	ARG	2.8
19	CS	28	LYS	2.8
43	BH	86	GLU	2.8
1	CA	77	G	2.8
25	AZ	101	GLY	2.8
57	BY	60	PHE	2.8
40	DE	69	LYS	2.8
20	AT	100	ILE	2.8
24	CY	26	A	2.8
36	DA	1088	A	2.8
29	D3	22	ALA	2.8
36	DA	1044	G	2.8

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Mol	Chain	Res	Type	RSRZ
1	CA	1029	C	2.8
48	DP	83	VAL	2.8
41	BF	25	PRO	2.8
49	DQ	140	ALA	2.8
7	AG	79	ARG	2.8
13	CM	125	ARG	2.8
26	B0	6	GLY	2.8
57	DY	91	GLU	2.8
46	DN	8	GLN	2.8
19	CS	10	PHE	2.8
48	DP	125	VAL	2.8
36	DA	654	A	2.8
4	AD	209	ARG	2.8
38	BC	125	SER	2.8
28	B2	23	LYS	2.8
58	DZ	112	ARG	2.8
25	CZ	75	ARG	2.8
36	BA	2794	C	2.8
36	DA	1059	G	2.8
38	BC	79	LYS	2.8
7	AG	156	TRP	2.8
36	BA	1057	A	2.8
1	CA	1129	C	2.8
43	BH	122	THR	2.8
36	DA	2207	G	2.8
36	BA	155	U	2.8
36	BA	614(A)	U	2.8
36	BA	1177	A	2.8
38	BC	122	ALA	2.8
25	AZ	183	HIS	2.8
36	DA	1072	C	2.8
1	CA	1024	G	2.7
22	AW	47	U	2.7
36	BA	1100	C	2.7
38	BC	104	LEU	2.7
38	DC	126	LYS	2.7
12	CL	128	ALA	2.7
36	DA	1046	A	2.7
43	BH	168	PRO	2.7
1	AA	1456	G	2.7
36	DA	1541	G	2.7
41	DF	2	LYS	2.7

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Mol	Chain	Res	Type	RSRZ
1	AA	1447	A	2.7
48	BP	15	ARG	2.7
25	AZ	193	ASN	2.7
52	DT	6	LEU	2.7
22	AW	7	A	2.7
11	CK	11	LYS	2.7
25	AZ	75	ARG	2.7
28	B2	68	ARG	2.7
51	DS	35	ILE	2.7
9	CI	7	THR	2.7
25	CZ	296	GLU	2.7
42	DG	50	ALA	2.7
57	DY	74	PRO	2.7
18	CR	88	LYS	2.7
23	AX	26	A	2.7
31	D5	55	ARG	2.7
38	DC	118	ASP	2.7
25	AZ	326	GLU	2.7
36	BA	1046	A	2.7
36	BA	1088	A	2.7
36	BA	1420	U	2.7
57	DY	4	LYS	2.7
25	CZ	115	GLN	2.7
40	BE	76	ARG	2.7
48	DP	27	HIS	2.7
25	CZ	63	ILE	2.7
1	AA	90	U	2.7
7	AG	84	ASN	2.7
36	BA	362	U	2.7
36	DA	1509	C	2.7
4	AD	107	ARG	2.6
25	AZ	370	PHE	2.6
1	AA	1035	A	2.6
22	CW	16	U	2.6
24	AY	60	U	2.6
52	DT	134	GLU	2.6
58	DZ	165	VAL	2.6
25	CZ	336	SER	2.6
25	AZ	142	ASP	2.6
36	BA	2189	U	2.6
51	DS	107	GLU	2.6
1	CA	92	C	2.6

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Mol	Chain	Res	Type	RSRZ
36	BA	654(B)	C	2.6
38	DC	101	GLN	2.6
38	DC	130	ILE	2.6
36	BA	2892	A	2.6
1	AA	1027	C	2.6
36	BA	277	C	2.6
43	BH	13	LYS	2.6
25	CZ	206	ILE	2.6
25	AZ	65	THR	2.6
27	D1	85	LEU	2.6
43	DH	22	GLY	2.6
57	DY	39	VAL	2.6
38	DC	125	SER	2.6
36	BA	1509(A)	A	2.6
34	B8	48	PHE	2.6
13	CM	124	PRO	2.6
13	AM	117	VAL	2.6
53	DU	118	GLY	2.6
24	CY	10	G	2.6
24	CY	22	G	2.6
32	D6	21	TYR	2.6
1	AA	1001	A	2.6
36	DA	654(U)	A	2.6
10	AJ	25	GLU	2.6
36	DA	271(J)	C	2.6
32	D6	54	ILE	2.6
43	BH	101	ARG	2.6
36	BA	1059	G	2.6
36	DA	1079	C	2.6
34	D8	35	GLN	2.6
36	BA	1090	U	2.6
36	BA	2897	U	2.6
25	CZ	319	SER	2.6
25	AZ	261	GLU	2.6
48	DP	118	GLY	2.6
24	CY	57	G	2.6
24	CY	73	G	2.6
36	BA	1095	A	2.6
36	DA	1081	U	2.6
38	DC	92	ASP	2.6
25	AZ	11	HIS	2.6
19	AS	28	LYS	2.5

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Mol	Chain	Res	Type	RSRZ
36	BA	1085	A	2.5
40	BE	10	GLY	2.5
48	DP	90	ARG	2.5
54	BV	101	GLY	2.5
43	BH	96	ALA	2.5
51	DS	90	GLY	2.5
39	DD	25	THR	2.5
51	DS	68	GLN	2.5
52	BT	27	THR	2.5
54	BV	54	GLY	2.5
4	AD	37	PRO	2.5
36	BA	1104	C	2.5
18	CR	24	ALA	2.5
25	AZ	196	VAL	2.5
36	BA	275	G	2.5
36	BA	2190	G	2.5
4	AD	184	LYS	2.5
38	DC	110	PHE	2.5
57	DY	44	ILE	2.5
13	AM	7	VAL	2.5
39	BD	25	THR	2.5
10	CJ	75	ILE	2.5
36	DA	1089	G	2.5
19	AS	29	ARG	2.5
25	CZ	405	GLU	2.5
25	CZ	392	GLY	2.5
38	DC	94	VAL	2.5
25	CZ	195	TRP	2.5
57	DY	60	PHE	2.5
1	AA	1005	A	2.5
1	AA	1129	C	2.5
7	CG	81	GLY	2.5
25	CZ	146	LEU	2.5
38	DC	129	ARG	2.5
52	BT	3	ARG	2.5
57	BY	65	ALA	2.5
36	DA	2807	G	2.5
39	BD	275	LYS	2.5
51	DS	83	LYS	2.5
1	AA	92	C	2.5
10	CJ	73	ASP	2.5
10	CJ	91	PRO	2.5

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Mol	Chain	Res	Type	RSRZ
36	BA	654(Q)	C	2.5
36	BA	1543	C	2.5
26	B0	84	LEU	2.5
25	AZ	110	ASP	2.5
43	BH	43	VAL	2.5
9	CI	88	TYR	2.5
40	DE	68	ALA	2.5
24	AY	29	G	2.5
51	DS	40	ILE	2.5
36	DA	888	C	2.4
41	BF	1	MET	2.4
30	B4	15	ILE	2.4
57	DY	64	GLU	2.4
1	AA	79	G	2.4
1	CA	1001(A)	G	2.4
28	B2	53	LEU	2.4
36	BA	2793	G	2.4
43	DH	113	VAL	2.4
36	DA	884	C	2.4
34	D8	48	PHE	2.4
1	AA	1125	U	2.4
23	AX	13	A	2.4
36	DA	405	U	2.4
57	DY	56	PRO	2.4
43	DH	41	MET	2.4
25	CZ	35	ALA	2.4
43	DH	54	ARG	2.4
1	AA	82	U	2.4
13	CM	122	LYS	2.4
24	AY	43	G	2.4
24	AY	47	U	2.4
36	DA	1534	U	2.4
41	DF	14	PRO	2.4
50	DR	58	GLY	2.4
25	AZ	185	ASN	2.4
51	DS	80	LEU	2.4
1	CA	1026	G	2.4
36	BA	655	A	2.4
36	DA	1099	G	2.4
36	DA	1847	A	2.4
2	AB	122	PHE	2.4
51	BS	33	LYS	2.4

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Mol	Chain	Res	Type	RSRZ
10	CJ	72	VAL	2.4
36	BA	2804	C	2.4
36	BA	1535	A	2.4
36	DA	345	A	2.4
36	DA	2894	G	2.4
25	AZ	1	ALA	2.4
25	CZ	310	ILE	2.4
36	BA	2103	C	2.4
25	CZ	34	VAL	2.4
38	BC	102	LYS	2.4
36	BA	1097	U	2.4
20	CT	104	LEU	2.4
26	D0	7	LEU	2.4
57	DY	67	LEU	2.4
16	CP	46	PRO	2.4
24	AY	73	G	2.4
36	DA	614(B)	G	2.4
1	AA	1029	C	2.4
10	AJ	80	LYS	2.4
22	CW	7	A	2.4
36	DA	1098	A	2.4
4	CD	178	VAL	2.4
1	AA	1032	G	2.4
1	CA	73	G	2.4
4	AD	47	ARG	2.4
10	CJ	5	ARG	2.4
40	BE	54	GLN	2.4
43	DH	42	ARG	2.4
48	DP	51	PHE	2.4
58	BZ	82	ARG	2.4
4	CD	169	LYS	2.4
24	CY	74	C	2.4
36	BA	34	C	2.4
2	CB	133	LYS	2.3
19	AS	43	GLU	2.3
26	D0	5	LYS	2.3
36	DA	1033	U	2.3
57	DY	63	LYS	2.3
25	AZ	397	ALA	2.3
41	DF	124	LEU	2.3
19	CS	9	VAL	2.3
40	BE	132	HIS	2.3

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Mol	Chain	Res	Type	RSRZ
4	CD	155	LEU	2.3
25	AZ	76	HIS	2.3
24	AY	40	C	2.3
25	CZ	341	GLN	2.3
36	BA	1092	C	2.3
36	BA	1536	C	2.3
36	DA	2402	C	2.3
57	BY	91	GLU	2.3
25	AZ	131	ILE	2.3
41	BF	10	PRO	2.3
11	CK	12	ARG	2.3
24	AY	74	C	2.3
24	CY	13	C	2.3
25	CZ	77	TYR	2.3
36	BA	1509	C	2.3
36	DA	1075	C	2.3
40	BE	52	LEU	2.3
25	CZ	64	ASN	2.3
41	DF	172	TRP	2.3
52	DT	133	GLU	2.3
28	B2	56	GLN	2.3
52	BT	91	ARG	2.3
24	CY	40	C	2.3
25	AZ	186	PRO	2.3
41	DF	18	ARG	2.3
22	AW	21	A	2.3
25	CZ	367	ASN	2.3
36	BA	1174	A	2.3
48	DP	107	LYS	2.3
9	CI	90	PRO	2.3
9	AI	58	HIS	2.3
36	BA	1740	G	2.3
36	BA	2895	U	2.3
7	CG	85	TYR	2.3
24	AY	21	A	2.3
54	DV	27	ALA	2.3
25	CZ	261	GLU	2.3
43	BH	81	GLU	2.3
36	DA	277	C	2.3
36	DA	158	U	2.3
43	DH	148	ILE	2.3
42	DG	80	PHE	2.3

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Mol	Chain	Res	Type	RSRZ
57	DY	69	ALA	2.3
4	CD	157	LEU	2.3
38	DC	137	LEU	2.3
26	D0	70	GLN	2.3
36	BA	1083	U	2.3
36	DA	34	C	2.3
36	DA	654(T)	C	2.3
57	DY	30	VAL	2.3
36	BA	271(N)	U	2.3
36	DA	1061	U	2.3
43	BH	14	GLY	2.3
25	AZ	83	PRO	2.3
22	CW	53	G	2.3
36	DA	275	G	2.3
36	DA	1096	A	2.3
48	DP	15	ARG	2.3
42	BG	81	LYS	2.3
48	DP	104	GLY	2.3
25	AZ	218	ASP	2.3
36	BA	2805	G	2.2
1	CA	1537	U	2.2
21	CU	24	ARG	2.2
25	AZ	314	THR	2.2
30	D4	38	LYS	2.2
27	D1	76	ARG	2.2
23	CX	18	G	2.2
25	AZ	401	THR	2.2
36	BA	11	G	2.2
19	AS	41	VAL	2.2
16	CP	19	ILE	2.2
25	AZ	120	ILE	2.2
25	AZ	356	PRO	2.2
25	CZ	124	ARG	2.2
36	DA	1091	G	2.2
57	DY	35	TYR	2.2
36	BA	2179	C	2.2
57	BY	3	VAL	2.2
1	CA	1447	A	2.2
2	AB	21	ARG	2.2
4	CD	151	LYS	2.2
6	CF	101	ALA	2.2
24	CY	58	A	2.2

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Mol	Chain	Res	Type	RSRZ
30	B4	34	GLU	2.2
46	BN	3	THR	2.2
36	BA	654(N)	G	2.2
54	DV	1	MET	2.2
43	BH	17	VAL	2.2
43	BH	54	ARG	2.2
25	AZ	260	PRO	2.2
30	D4	32	TYR	2.2
55	DW	112	GLY	2.2
36	DA	1097	U	2.2
48	DP	77	ARG	2.2
1	CA	1131	G	2.2
24	CY	53	G	2.2
26	B0	74	ARG	2.2
10	CJ	82	ILE	2.2
24	CY	23	A	2.2
36	BA	1103	A	2.2
36	DA	1083	U	2.2
38	DC	113	VAL	2.2
24	CY	56	C	2.2
25	AZ	357	PRO	2.2
22	CW	5	G	2.2
28	B2	8	LYS	2.2
32	B6	26	ASN	2.2
50	DR	80	PHE	2.2
10	CJ	6	ILE	2.2
36	BA	1534	U	2.2
50	DR	105	ARG	2.2
50	DR	3	HIS	2.2
58	BZ	139	VAL	2.2
36	BA	508	G	2.2
11	AK	128	ALA	2.2
25	AZ	109	ALA	2.2
36	BA	1175	U	2.2
36	DA	2895	U	2.2
25	AZ	344	PHE	2.2
38	DC	117	PRO	2.2
25	AZ	332	THR	2.2
32	B6	23	THR	2.2
57	DY	86	ARG	2.2
41	DF	181	LEU	2.1
40	DE	128	SER	2.1

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Mol	Chain	Res	Type	RSRZ
25	AZ	169	PRO	2.1
25	CZ	179	LEU	2.1
57	BY	83	THR	2.1
4	AD	175	SER	2.1
33	B7	48	LYS	2.1
43	BH	128	PRO	2.1
57	DY	34	LYS	2.1
26	D0	85	ALA	2.1
24	CY	14	A	2.1
25	CZ	291	ARG	2.1
25	CZ	322	VAL	2.1
25	CZ	260	PRO	2.1
41	DF	194	MET	2.1
23	CX	11	U	2.1
24	CY	28	C	2.1
36	BA	1076	C	2.1
54	DV	40	LEU	2.1
1	CA	1005	A	2.1
22	CW	21	A	2.1
28	D2	24	LEU	2.1
36	BA	10	G	2.1
51	DS	53	SER	2.1
2	CB	136	VAL	2.1
9	CI	17	VAL	2.1
52	BT	36	GLU	2.1
4	AD	174	LEU	2.1
41	DF	15	SER	2.1
36	DA	1173	G	2.1
43	BH	161	GLY	2.1
25	CZ	117	ARG	2.1
32	B6	37	ARG	2.1
57	BY	47	LYS	2.1
16	CP	83	GLU	2.1
26	B0	85	ALA	2.1
36	BA	2310	A	2.1
57	DY	38	ILE	2.1
1	CA	1456	G	2.1
25	CZ	65	THR	2.1
34	B8	35	GLN	2.1
57	DY	71	LYS	2.1
48	DP	91	PHE	2.1
10	AJ	83	GLU	2.1

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Mol	Chain	Res	Type	RSRZ
19	AS	67	VAL	2.1
54	BV	19	LYS	2.1
32	D6	36	LEU	2.1
48	DP	26	GLY	2.1
55	BW	112	GLY	2.1
22	CW	46	G	2.1
36	DA	654(N)	G	2.1
10	CJ	4	ILE	2.1
30	D4	13	ARG	2.1
43	DH	103	LEU	2.1
11	AK	127	LYS	2.1
34	D8	63	PRO	2.1
43	DH	97	ARG	2.1
48	DP	144	GLU	2.1
22	AW	56	C	2.1
36	BA	2789	C	2.1
48	BP	71	VAL	2.1
9	CI	8	GLY	2.1
40	DE	54	GLN	2.1
40	BE	61	ARG	2.1
38	BC	78	ALA	2.1
48	BP	127	ALA	2.1
23	CX	13	A	2.1
36	DA	654(B)	C	2.1
43	DH	56	SER	2.1
38	BC	110	PHE	2.0
57	DY	5	MET	2.1
19	CS	58	VAL	2.0
25	CZ	130	TYR	2.0
36	DA	508	G	2.0
4	CD	146	ILE	2.0
48	BP	148	LEU	2.0
24	AY	58	A	2.0
55	BW	113	LYS	2.0
41	DF	205	ARG	2.0
43	DH	60	ARG	2.0
43	BH	49	VAL	2.0
20	CT	9	ASN	2.0
1	AA	1002	G	2.0
25	CZ	2	LYS	2.0
27	D1	88	LYS	2.0
36	BA	1099	G	2.0

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Mol	Chain	Res	Type	RSRZ
7	AG	78	ARG	2.0
21	CU	9	ARG	2.0
28	B2	51	ARG	2.0
22	AW	3	C	2.0
28	B2	16	LEU	2.0
36	DA	2791	C	2.0
42	DG	75	LYS	2.0
57	BY	28	LYS	2.0
41	DF	161	GLU	2.0
54	DV	93	GLU	2.0
13	CM	117	VAL	2.0
54	DV	37	VAL	2.0
25	AZ	146	LEU	2.0
27	D1	80	LEU	2.0
41	BF	166	ALA	2.0
22	AW	2	C	2.0
36	BA	271(J)	C	2.0
36	BA	2791	C	2.0
25	CZ	337	GLY	2.0
43	DH	109	PHE	2.0
19	CS	33	THR	2.0
25	AZ	4	GLU	2.0
22	CW	13	C	2.0
24	CY	75	C	2.0
42	DG	81	LYS	2.0
4	CD	170	VAL	2.0
43	BH	24	VAL	2.0
51	DS	54	LEU	2.0

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

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
24	7MG	CY	46	24/25	0.50	0.47	170,172,175,176	0
24	H2U	CY	16	20/21	0.53	0.58	170,173,173,174	0
24	H2U	AY	16	20/21	0.54	0.60	169,173,173,174	0
24	7MG	AY	46	24/25	0.59	0.38	170,172,175,176	0
24	H2U	CY	20	20/21	0.59	0.44	178,179,179,180	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
24	4SU	AY	8	20/21	0.63	0.34	145,147,149,149	0
24	H2U	CY	17	20/21	0.65	0.52	170,173,175,176	0
24	H2U	AY	17	20/21	0.67	0.62	170,174,175,176	0
24	PSU	CY	55	20/21	0.70	0.43	154,160,160,160	0
24	H2U	AY	20	20/21	0.71	0.52	178,179,179,179	0
24	PSU	AY	55	20/21	0.74	0.39	154,159,160,161	0
24	4SU	CY	8	20/21	0.74	0.34	146,147,148,149	0
24	5MU	AY	54	21/22	0.78	0.32	145,149,150,153	0
24	5MU	CY	54	21/22	0.80	0.39	144,149,151,153	0
24	OMC	CY	32	21/22	0.82	0.50	107,112,121,122	0
24	MIA	AY	37	29/30	0.90	0.32	71,88,103,104	0
24	OMC	AY	32	21/22	0.90	0.31	107,112,120,121	0
24	MIA	CY	37	29/30	0.93	0.25	74,88,101,102	0

6.3 Carbohydrates [i](#)

There are no carbohydrates in this entry.

6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

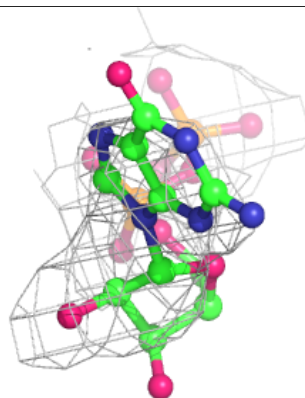
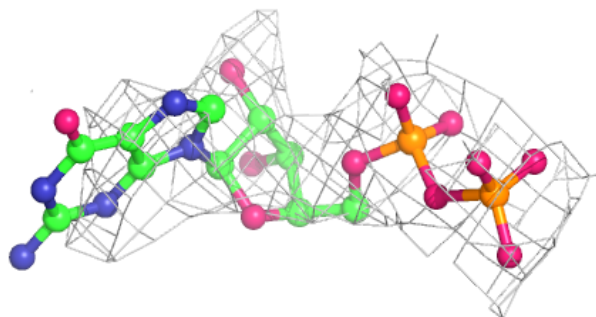
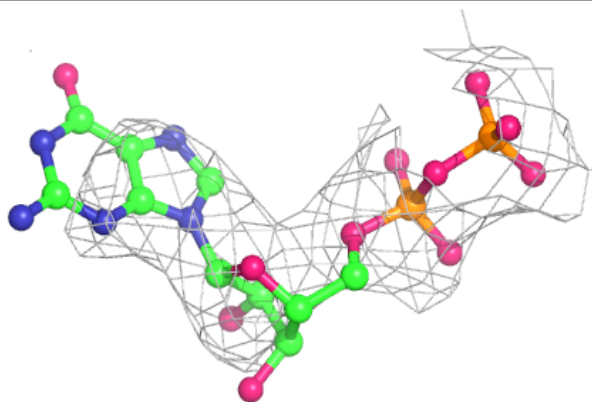
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
60	GDP	AZ	501	28/28	0.78	0.31	130,136,140,141	0
61	KIR	CZ	502	57/57	0.84	0.35	118,120,121,123	0
61	KIR	AZ	502	57/57	0.85	0.31	117,119,121,122	0
60	GDP	CZ	501	28/28	0.86	0.17	129,136,140,140	0
59	ZN	D4	101	1/1	0.94	0.10	115,115,115,115	0
59	ZN	B4	101	1/1	0.97	0.17	90,90,90,90	0
59	ZN	D9	101	1/1	0.97	0.11	81,81,81,81	0
59	ZN	B9	101	1/1	0.99	0.11	82,82,82,82	0
59	ZN	AD	301	1/1	0.99	0.25	59,59,59,59	0
59	ZN	CN	101	1/1	0.99	0.17	60,60,60,60	0
59	ZN	AN	101	1/1	1.00	0.16	34,34,34,34	0
59	ZN	CD	301	1/1	1.00	0.26	72,72,72,72	0

The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers

as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

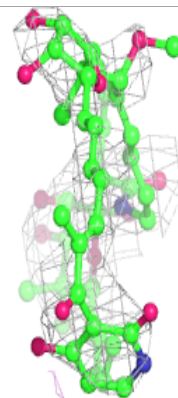
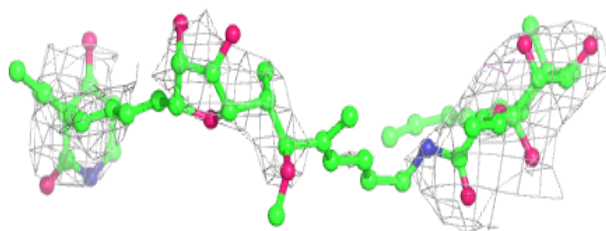
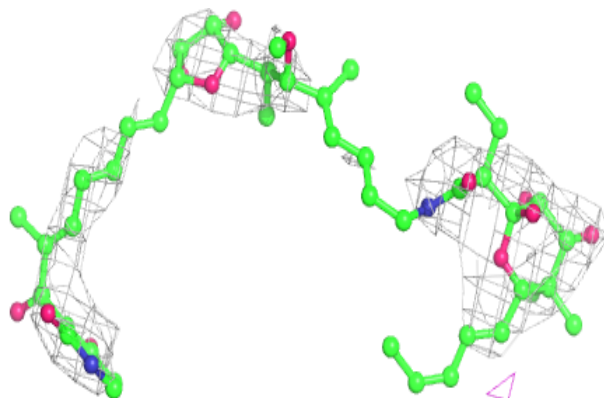
Electron density around GDP AZ 501:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



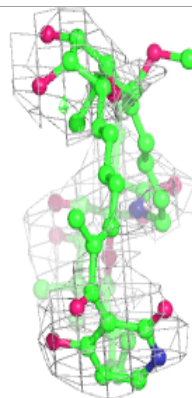
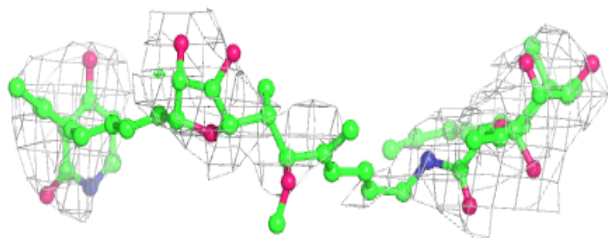
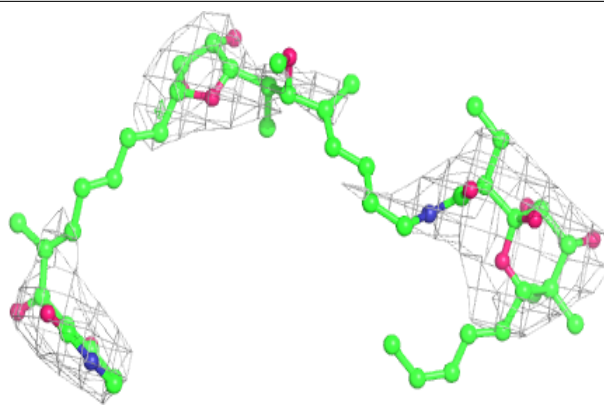
Electron density around KIR CZ 502:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

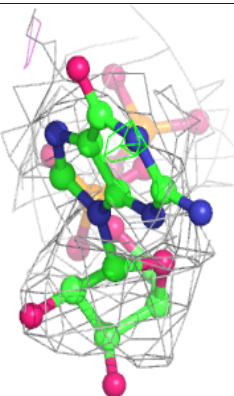
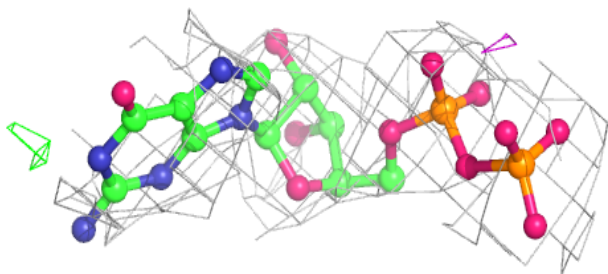
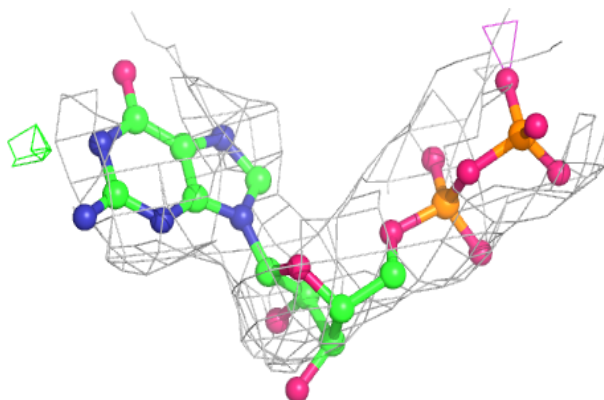


Electron density around KIR AZ 502:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

**Electron density around GDP CZ 501:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



6.5 Other polymers [i](#)

There are no such residues in this entry.