



# Full wwPDB X-ray Structure Validation Report ⓘ

Feb 1, 2016 – 10:03 PM GMT

PDB ID : 4V5S  
Title : The crystal structure of EF-Tu and G24A-tRNA-Trp bound to a cognate codon on the 70S ribosome.  
Authors : Schmeing, T.M.; Voorhees, R.M.; Ramakrishnan, V.  
Deposited on : 2010-12-07  
Resolution : 3.10 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.  
We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)  
A user guide is available at  
<http://wwpdb.org/validation/2016/XrayValidationReportHelp>  
with specific help available everywhere you see the ⓘ symbol.

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

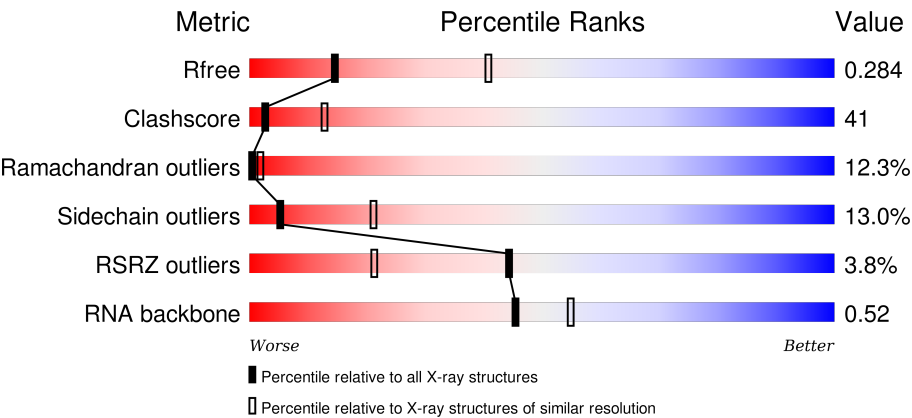
MolProbity : 4.02b-467  
Mogul : 1.7 (RC4), CSD as536be (2015)  
Xtriage (Phenix) : 1.9-1692  
EDS : rb-20026688  
Percentile statistics : 20151230.v01 (using entries in the PDB archive December 30th 2015)  
Refmac : 5.8.0135  
CCP4 : 6.5.0  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : trunk26865

# 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 <sub>free</sub>	91344	1114 (3.14-3.06)
Clashscore	102246	1222 (3.14-3.06)
Ramachandran outliers	100387	1174 (3.14-3.06)
Sidechain outliers	100360	1174 (3.14-3.06)
RSRZ outliers	91569	1119 (3.14-3.06)
RNA backbone	2183	1010 (3.52-2.68)

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. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5%. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	AA	1522	<div><div>2%</div><div>32%</div><div>52%</div><div>12%</div><div>• •</div></div>
1	CA	1522	<div><div>%</div><div>26%</div><div>57%</div><div>13%</div><div>• •</div></div>
2	AB	256	<div><div>2%</div><div>21%</div><div>54%</div><div>15%</div><div>• 9%</div></div>
2	CB	256	<div><div>%</div><div>24%</div><div>52%</div><div>15%</div><div>• 9%</div></div>




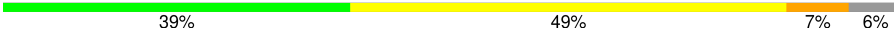
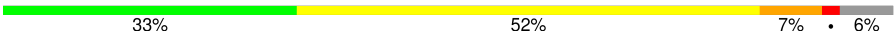
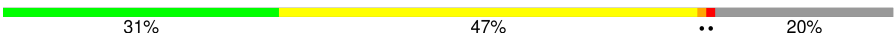
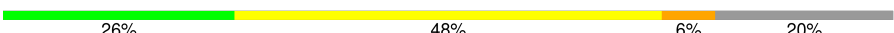
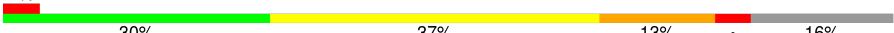
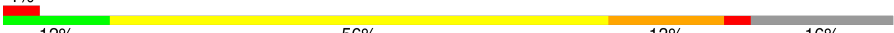





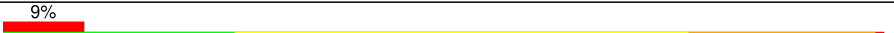



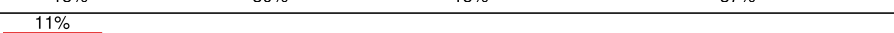
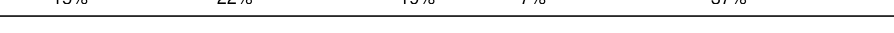


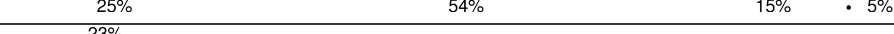
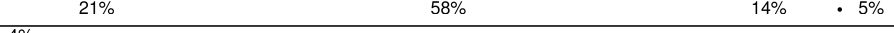

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Mol	Chain	Length	Quality of chain
3	AC	239	
3	CC	239	
4	AD	209	
4	CD	209	
5	AE	162	
5	CE	162	
6	AF	101	
6	CF	101	
7	AG	156	
7	CG	156	
8	AH	138	
8	CH	138	
9	AI	128	
9	CI	128	
10	AJ	105	
10	CJ	105	
11	AK	129	
11	CK	129	
12	AL	131	
12	CL	131	
13	AM	126	
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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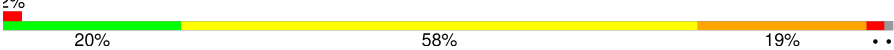
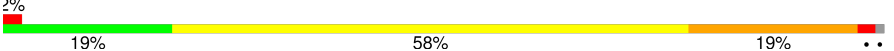
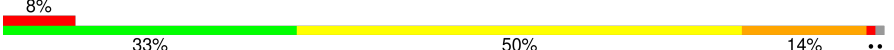
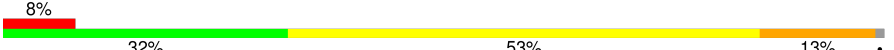
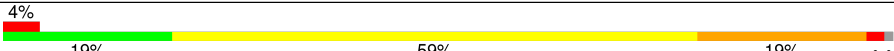
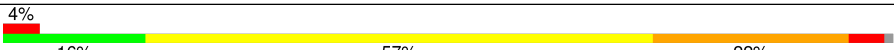
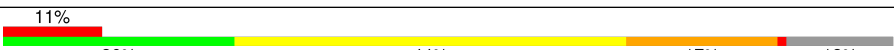
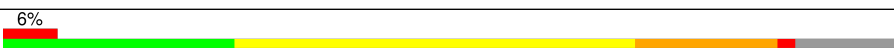
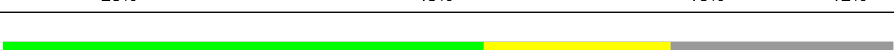

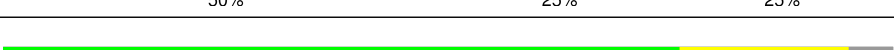

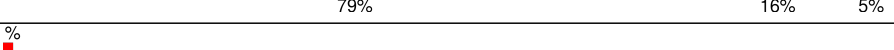
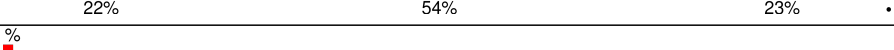
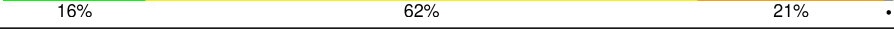


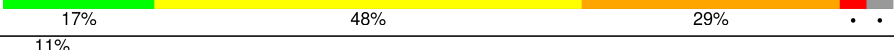



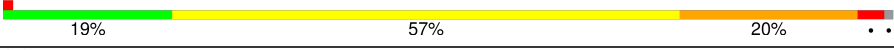
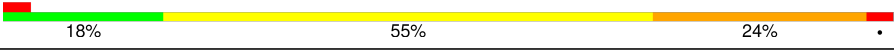



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Mol	Chain	Length	Quality of chain
27	B1	98	
27	D1	98	
28	B2	72	
28	D2	72	
29	B3	60	
29	D3	60	
30	B4	71	
30	D4	71	
31	B5	60	
31	D5	60	
32	B6	54	
32	D6	54	
33	B7	49	
33	D7	49	
34	B8	65	
34	D8	65	
35	B9	37	
35	D9	37	
36	BA	2915	
36	DA	2915	
37	BB	122	
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
60	GDP	CZ	501	-	-	X	-
61	KIR	CZ	502	-	-	-	X

## 2 Entry composition

There are 61 unique types of molecules in this entry. The entry contains 307196 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	1504	Total	C	N	O	P	0	0	0
			32329	14390	5992	10444	1503			
1	CA	1504	Total	C	N	O	P	0	0	0
			32329	14390	5992	10444	1503			

- 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			

- 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			
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
			362	164	68	114	16			
23	CX	17	Total	C	N	O	P	0	0	0
			362	164	68	114	16			

- Molecule 24 is a RNA chain called A-SITE TRNA G24A TRP-TRNA TRP.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
24	AY	77	Total	C	N	O	P	S	0	0	0
			1644	742	289	535	76	2			
24	CY	77	Total	C	N	O	P	S	0	0	0
			1644	742	289	535	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
			2984	1885	524	563	12			
25	CZ	385	Total	C	N	O	S	0	0	0
			2984	1885	524	563	12			

- 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			
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			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
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			
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			

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

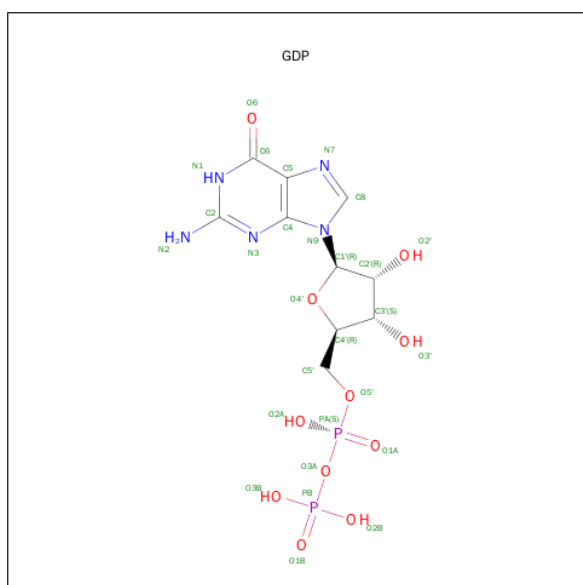
- Molecule 58 is a protein called 50S RIBOSOMAL PROTEIN L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
58	BZ	183	Total	C	N	O	S	0	0	0
			1459	932	260	265	2			
58	DZ	183	Total	C	N	O	S	0	0	0
			1459	932	260	265	2			

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

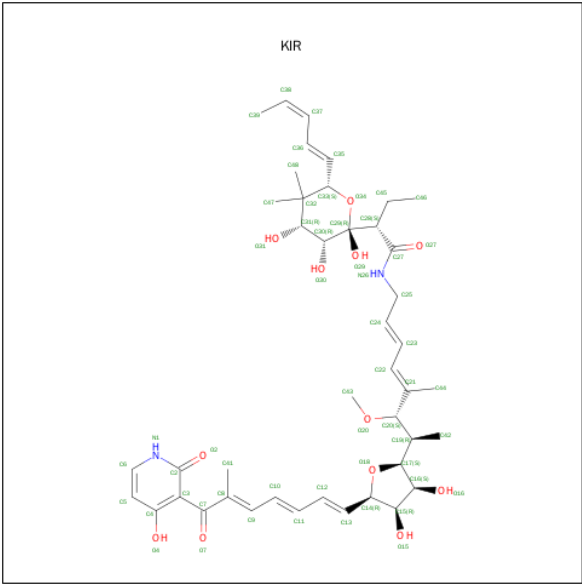
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
59	B4	1	Total	Zn	0	0
			1	1		
59	CN	1	Total	Zn	0	0
			1	1		
59	AN	1	Total	Zn	0	0
			1	1		
59	B9	1	Total	Zn	0	0
			1	1		
59	D9	1	Total	Zn	0	0
			1	1		
59	D4	1	Total	Zn	0	0
			1	1		
59	CD	1	Total	Zn	0	0
			1	1		
59	AD	1	Total	Zn	0	0
			1	1		

- Molecule 60 is GUANOSINE-5'-DIPHOSPHATE (three-letter code: GDP) (formula: C<sub>10</sub>H<sub>15</sub>N<sub>5</sub>O<sub>11</sub>P<sub>2</sub>).



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<sub>43</sub>H<sub>60</sub>N<sub>2</sub>O<sub>12</sub>).

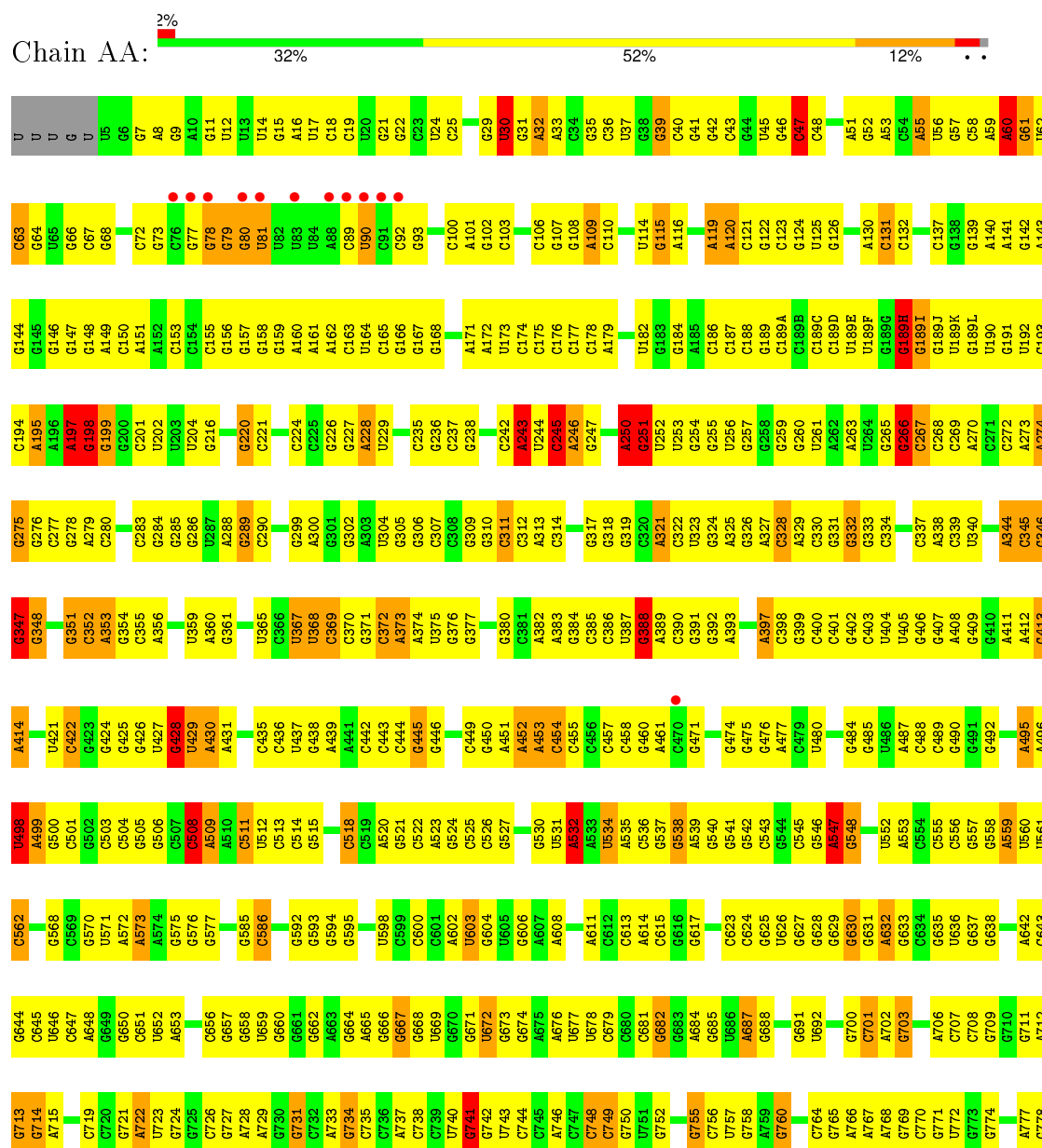


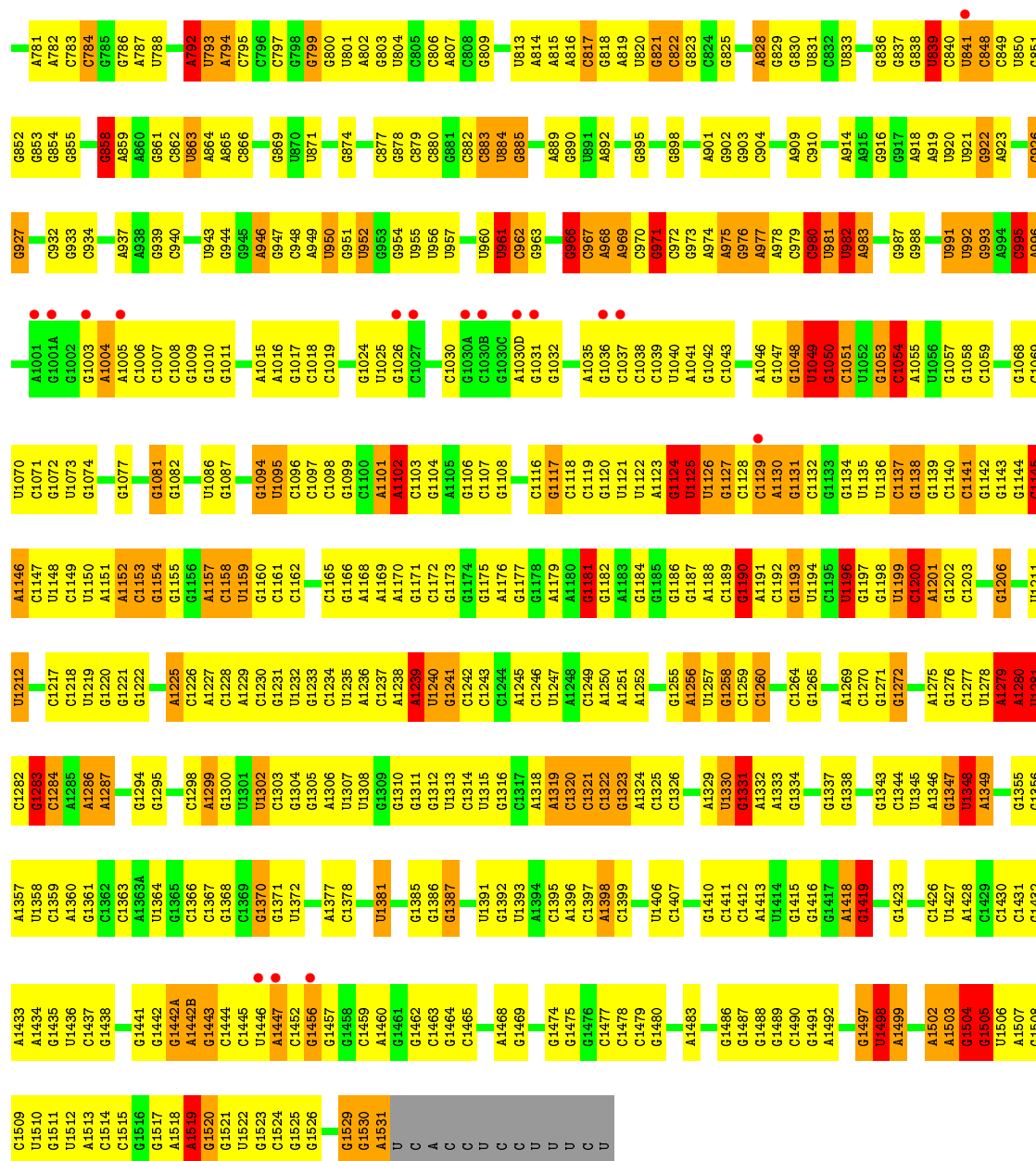


### 3 Residue-property plots

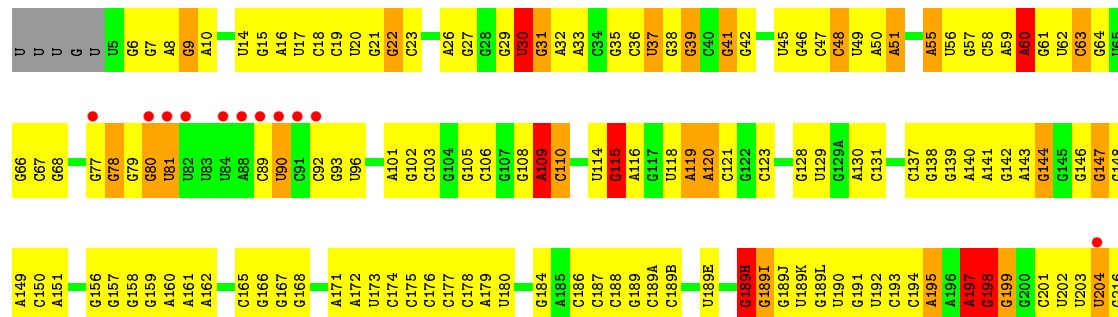
These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according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

- Molecule 1: 16S rRNA

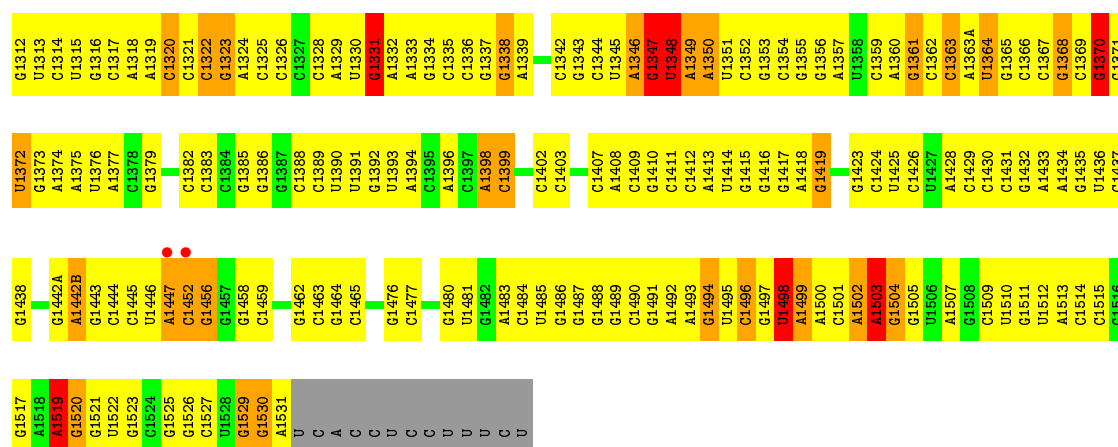




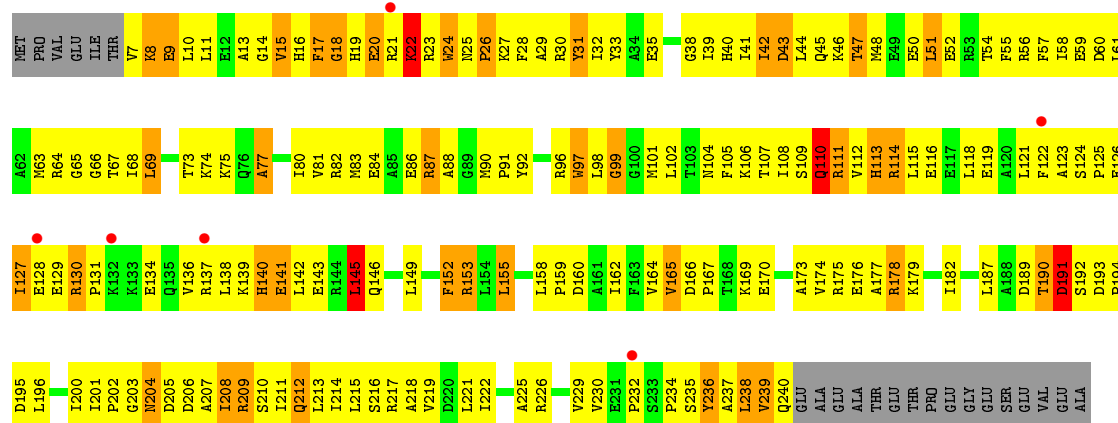
• Molecule 1: 16S rRNA



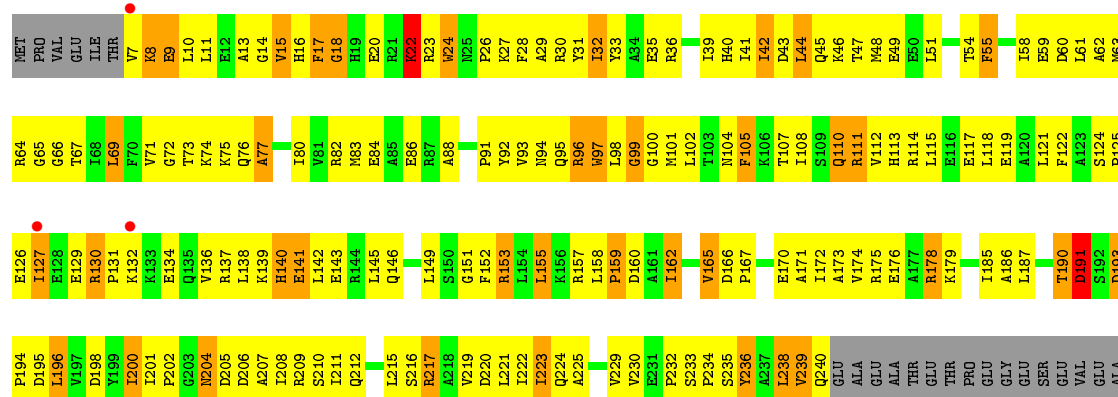
G1249	G1184	G1120	G1054	A923	U841	A777	C708	G638	G566	G492	C418	G351	G285	G220
A1260	G1185	G1123	A1055	C924	C848	G778	G711	G643	G568	G493	C419	C352	A288	C221
A1261	G1186	G1124	G1056	G925	C849	G779	G712	G644	G568	G494	U420	A353	A289	U222
	G1187	G1125	G1057	G926		A780	G713	G645		A495	G422	C355	C290	U223
G1265	A1188	U1126	G1058	G927	G853	A781	G714	G646	A572	U498	G423	A356	C291	C224
A1266	G1189	G1127	G1059	G928	G854	A782	G715	G647	A573	A499	G424	G357	C292	G225
A1267	G1190	C1128	C1060	G929	G858	C783	G716		A574	G500	G425	U358	C293	G226
A1268	G1191	G1129	G1061	C930	A859	C784	G717	G650	G575	C501	U426	U359	U294	G227
C1269	G1192	G1130	U1062		A860	G785	G718	G651	G576	G502	U427	A360	C295	A228
	G1193	A1131	G1063	C931	G861	A787	C719	G652	G577	G503	U428	U296	U299	U229
	U1196	G1132	U1065	A935	C862	U788	G720	G653		C504	U429	G297	C297	G230
	G1197	G1133	G1066	C936	C863	U789	G721	G654	G585	G505	U430	A398	A298	
G1263	G1198	G1134	A1067	A937	A864	A790	A722	A655	C586	G506	A431	G299	A300	C234
C1264	U1199	G1135	G1068	A938	A865	G791	U723	G656	G592	C507		U367	A301	C235
G1265	G1200	U1136	C1069	G939	C866	A792	G724	G657	G593	C508	U434	G302	G302	G236
	A1201	G1137	G1070	G940	G867	U793	G725	G658	G594	A509	C435	G303	A303	C237
G1267	G1202	C1138	G1071	G941	G869	A794	G726	U659	G595	A510	C436	G370	U304	
A1268	G1203	G1139	G1072	G942	U870	C795	G727	G660	C600	C511	U437	G371	G305	C242
A1269	G1204	G1140	U1073	U943	U871	C796		G661			G438	G372		A243
C1270	U1205	C1141	G1077	G944	G874	C797	G731	G662	G596	C518	A439	G373		U244
G1271	G1206	G1142	U1078	G945		U801	C732	A663	U598	C519	A441	A374	G309	C245
G1272	G1207	G1143	G1079	A946	C877	G802	A733	G664	C599	A520	C442	U375	G310	A246
G1273	C1208	G1144	A1080	G947	G878	U803	G734	G665	C600	A521	C443	G376	C311	G247
		G1145	G1081	C948	C879	U804	C735	G666		C522	C444	G377	C312	C248
U1211	U1212	A1146		A949			C736	G667	U603	A523	G445	G378	A313	U249
A1275		C1147	U1086	U950	C882	A807	A737		G604	G524	G446	G379	C314	A250
G1276		U1148	G1087	G951	C883	C908	C738	G673	U605	C525	G447	G380	A315	G251
C1277	G1215	G1149	G1088	G952	U884	G809	G739	G674	G606	C526	A448	G381		
A1279	C1216	U1150	G1089	G953	G885	G810	U740		A607	G527	C449	A382	G319	G254
A1280	C1217	U1151	G1090	G954	G886	C811	G741	U677	A608		G450	A383	C320	G255
U1281	C1218	A1152	U1091	U955	G887	C812		U678	A609	G530	A451	G384	A321	U256
C1282	U1219	A1153	U1092	U956	G888	U813	C744	C679	G610	U531	A452	C385	C322	G257
G1283	G1220	C1153	A1093	U957	A889	A814	C745	C680	A611	A532	A453	C386	U323	G258
A1284	G1221	G1154	G1094	A958	G890	A815	A746	C681	C612	A533	C454	U387	G324	G259
C1285	G1222		U1095	A959	G891	A816	C747	G682	C613	U534	C455	A388	A325	G260
A1286		A1157	U1096	U960	G892	C817	C748	G683	A614	A535	C456	A389	G326	U261
A1287	A1225	G1158	C1096	U961	A893	C817	C749	G684	C615	G536	C457	C390	A327	A262
A1288	C1226	U1159	C1097	U962	C894	A819	C750	G685	G616	G537	C458	G391	C328	A263
A1289	A1227	G1160	C1098	G963	A900	U820	U751	U686	G617	G538	G460	A392	C330	U264
	C1228	C1161	G1099	A964	A901	C821		A687	C618	A539		A393	G331	G265
	A1229	C1162	C1100	A965	G902	C822	C754	G688	U619	G540	G471	G394	G332	G266
U1292	G1230	G1165	A1101	G966	G906	C823	G755	C689	C620	G541	A472		G333	C267
G1294	G1231	A1166	C1102	C967		C824	C756	G690	A621	G542	G473		C333	C268
C1295	U1232	G1168	G1103	A968	A907	G825	U757	G691	A622	C543	G474		C334	C269
C1296	G1233	A1169	G1104	A969	A908	C826	G758	U692	C623	G544	G475			A270
C1297	C1234	G1170	G1105	C970	A909	U827	A759	G693	C624	G545	G476		C337	G271
C1298	U1235	G1171	C1037	G971	C910	A828	G760	A694	G625	G546	U460	A338	C338	C272
A1299	A1236	C1172	C1038	G972	U911	G829		A695	U626	G547	U461	U405	C339	A273
G1300	C1237	G1173	C1039	G973	C912	G830	G763	A696	G627	G548	A481	G407	U340	G274
U1301	A1238	G1174	U1040	A974	A913	U831	C764	U697	G628	C549			C341	G275
C1302	A1239	G1175	A1041	A975	A914	C832	G765	G698	G629			C403	C342	G276
U1303	U1240	A1176	A1046	A976	A915	C833	U766	C699	G630	C555	G483	A408	C343	G277
G1304	G1177	G1178	G1047	A977	G916	C834	A767	G700	G631	C556	G484	G409	U343	C278
G1305	C1242	C1113	G1048	A978	G917	U835		G693	G632	C557	U486	G410	A344	G279
A1306	G1178	G1114	G1049	A979	A918	U836	C770	A702	G633	G558	A487	A411	G345	C280
U1307	C1244	C1115	U1049	C979	A919	G837	G771	G703	C634	A559	C488	A412	G346	G281
U1308	A1245	G1116	G1050	C980	A919	U837		A702	G635	U560	C489	G413	G347	G282
G1309	C1246	G1117	U1051	U981	U921	G838	G774	A706	U636	U561	G490	A414	A348	C283
G1310	U1247	C1118	U1052	U982	U921	U839			G637	C562	G491	A415	G350	G284
G1311	A1248	G1183	G1053	A983	G922	C840		C707						



• Molecule 2: 30S RIBOSOMAL PROTEIN S2

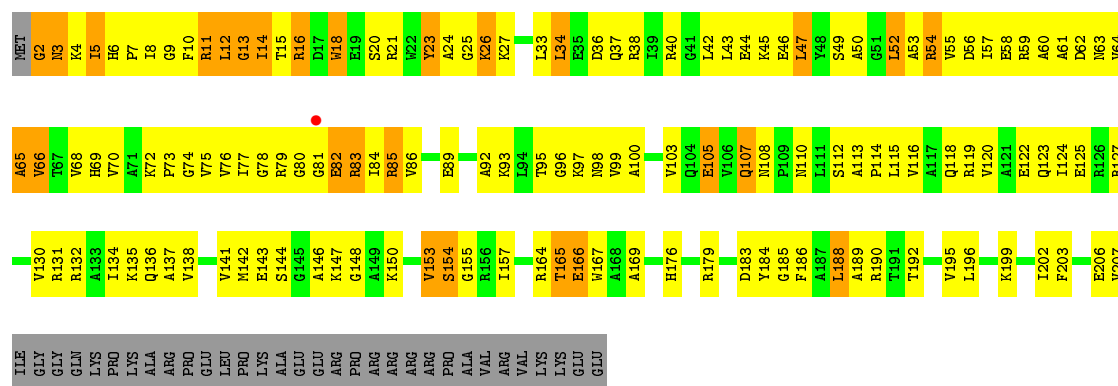


• Molecule 2: 30S RIBOSOMAL PROTEIN S2



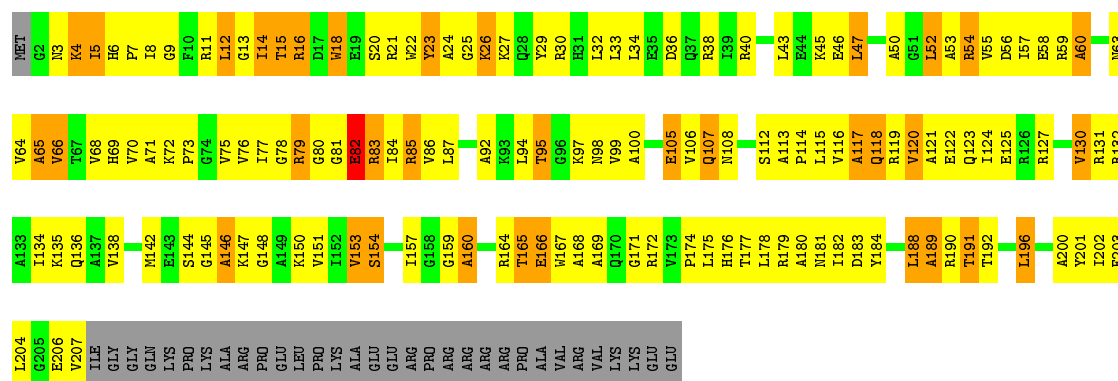
• Molecule 3: 30S RIBOSOMAL PROTEIN S3





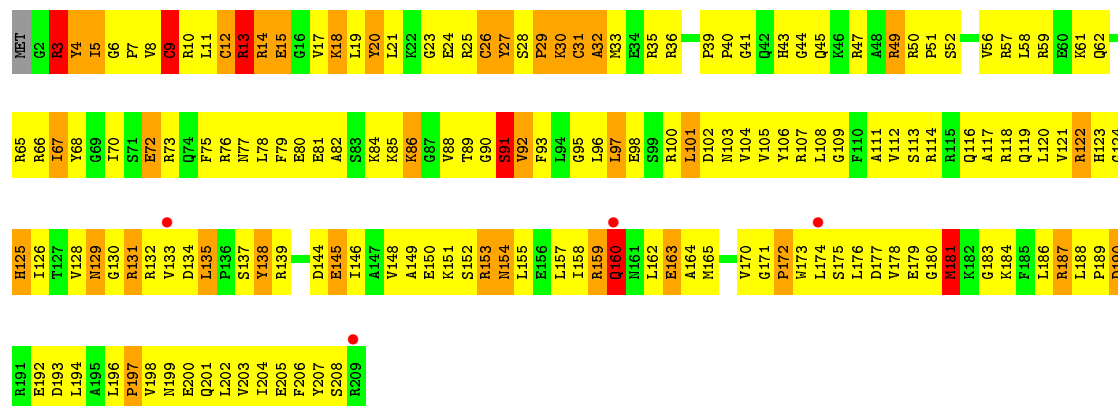
### • Molecule 3: 30S RIBOSOMAL PROTEIN S3

Chain CC: 26% 46% 15% 14%



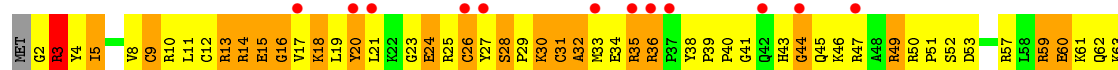
### • Molecule 4: 30S RIBOSOMAL PROTEIN S4

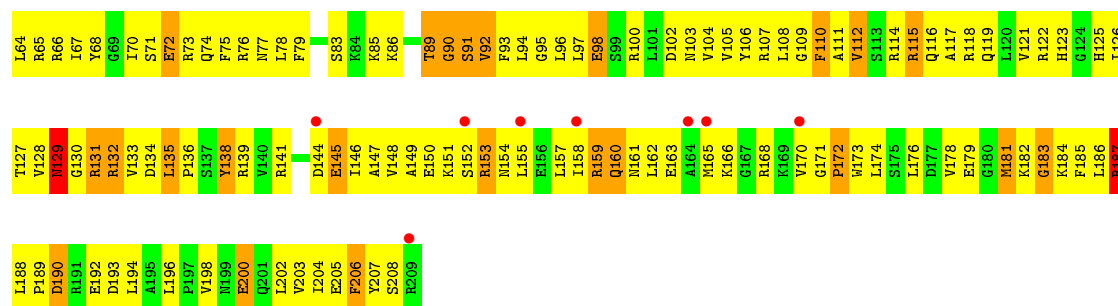
Chain AD: 2% 20% 60% 17%



### • Molecule 4: 30S RIBOSOMAL PROTEIN S4

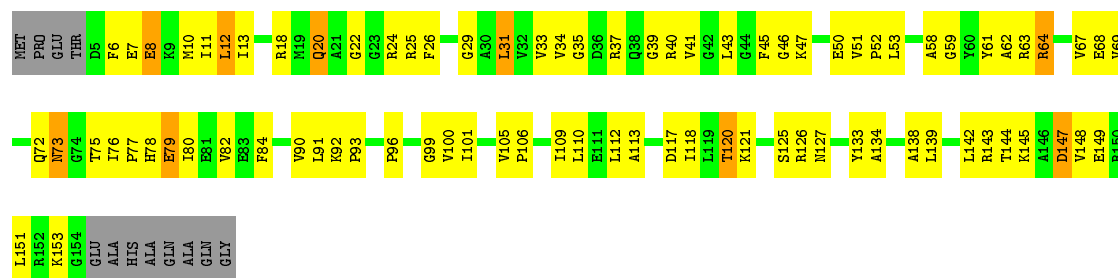
Chain CD: 10% 19% 59% 21%





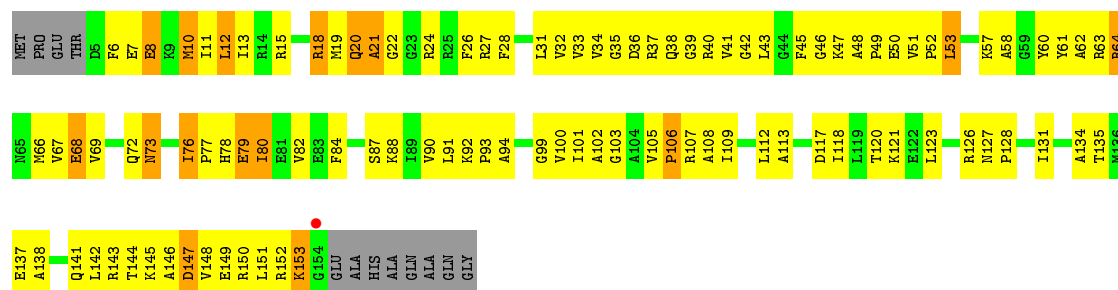
• Molecule 5: 30S RIBOSOMAL PROTEIN S5

Chain AE: 41% 46% 6% 7%



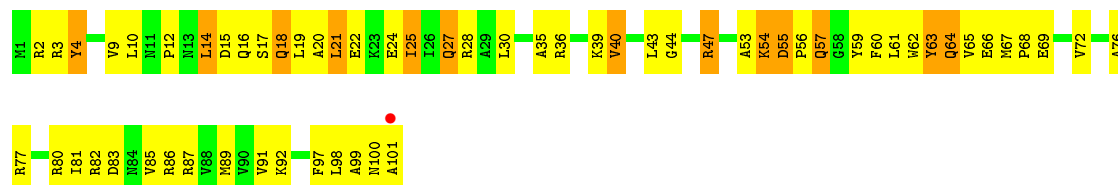
• Molecule 5: 30S RIBOSOMAL PROTEIN S5

Chain CE: 28% 54% 10% 7%



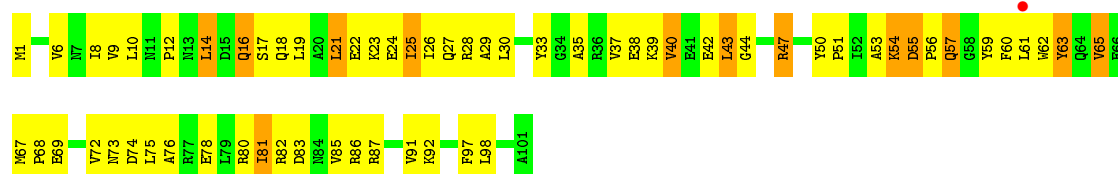
• Molecule 6: 30S RIBOSOMAL PROTEIN S6

Chain AF: 40% 48% 13%

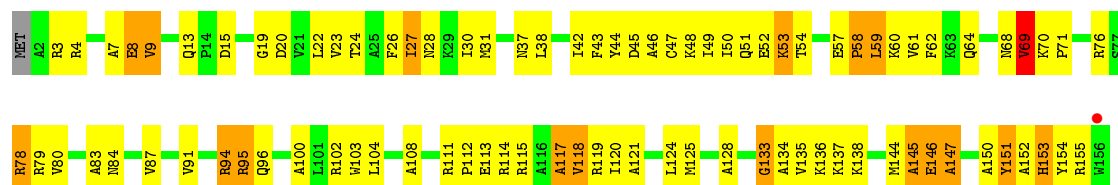
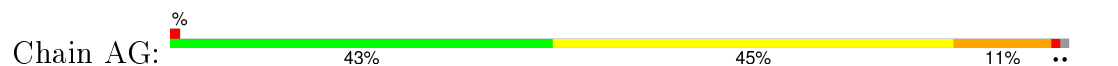


• Molecule 6: 30S RIBOSOMAL PROTEIN S6

Chain CF: 37% 50% 13%



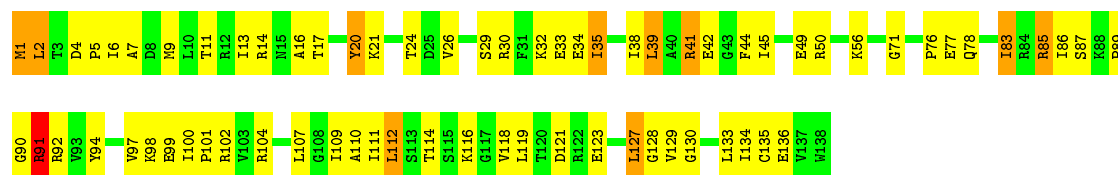
• Molecule 7: 30S RIBOSOMAL PROTEIN S7



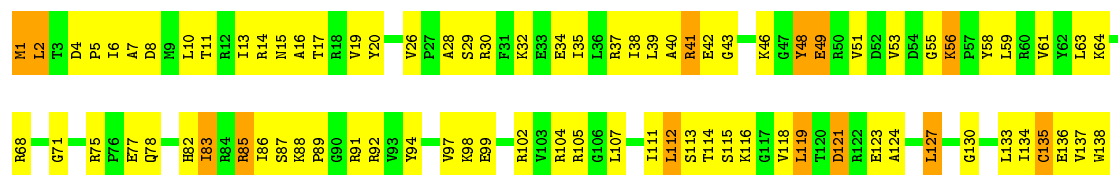
• Molecule 7: 30S RIBOSOMAL PROTEIN S7



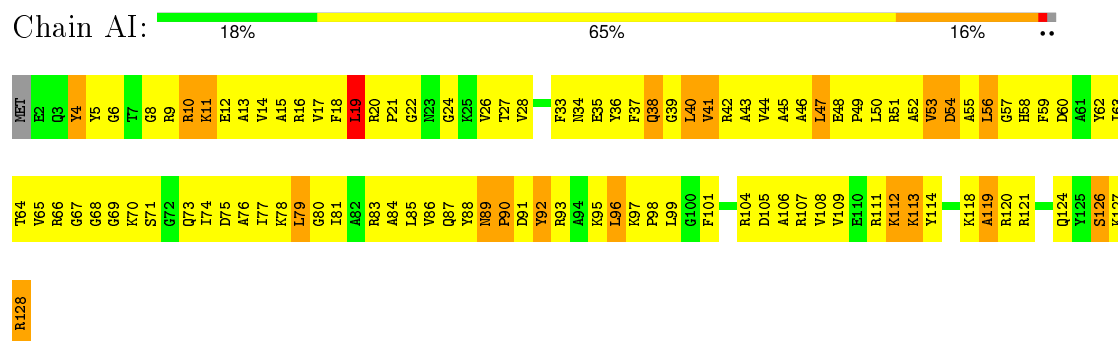
• Molecule 8: 30S RIBOSOMAL PROTEIN S8



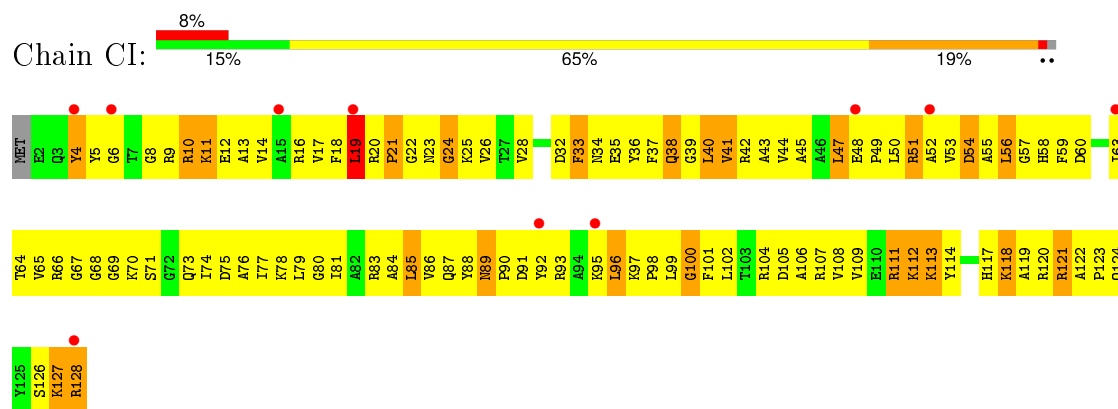
• Molecule 8: 30S RIBOSOMAL PROTEIN S8



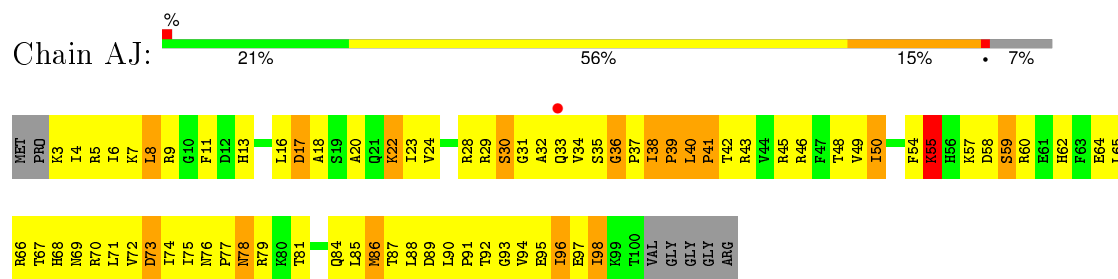
• Molecule 9: 30S RIBOSOMAL PROTEIN S9



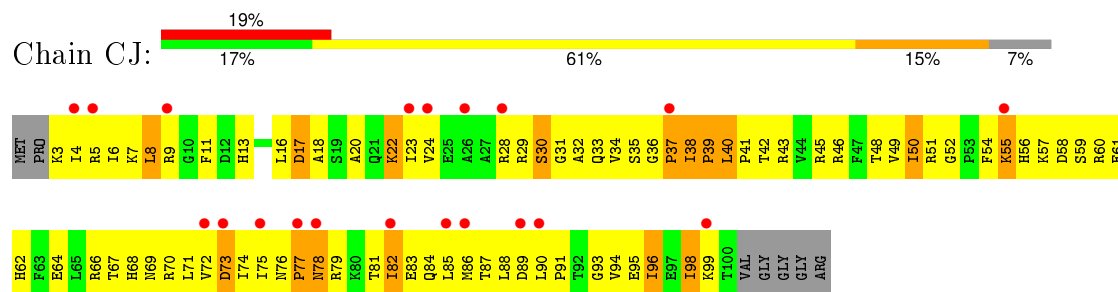
• Molecule 9: 30S RIBOSOMAL PROTEIN S9



• Molecule 10: 30S RIBOSOMAL PROTEIN S10



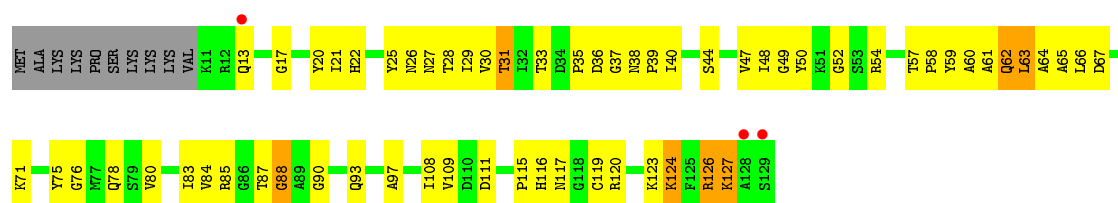
• Molecule 10: 30S RIBOSOMAL PROTEIN S10



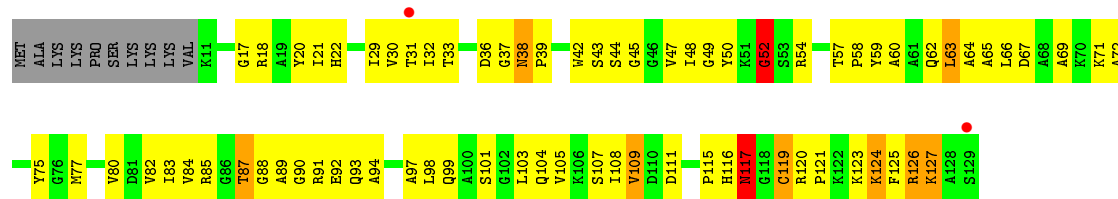
• Molecule 11: 30S RIBOSOMAL PROTEIN S11



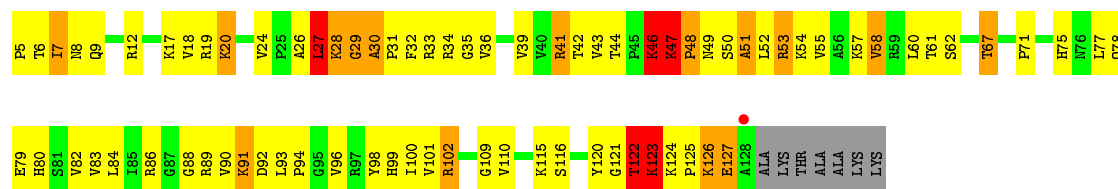




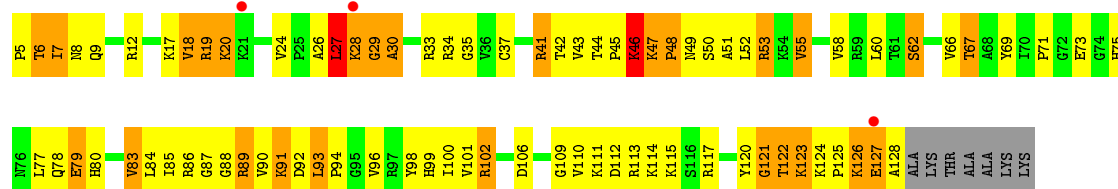
• Molecule 11: 30S RIBOSOMAL PROTEIN S11



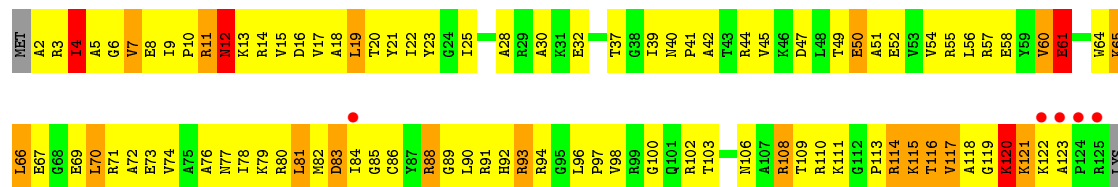
• Molecule 12: 30S RIBOSOMAL PROTEIN S12



• Molecule 12: 30S RIBOSOMAL PROTEIN S12

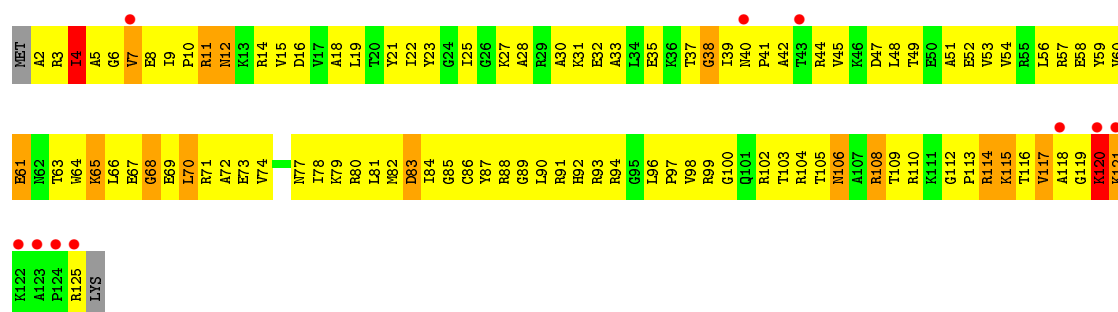


• Molecule 13: 30S RIBOSOMAL PROTEIN S13

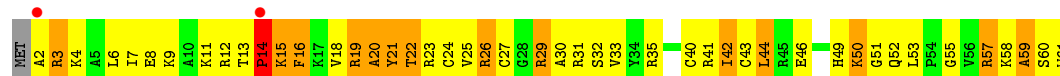


• Molecule 13: 30S RIBOSOMAL PROTEIN S13

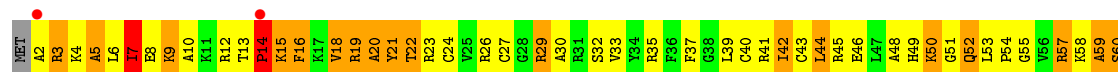
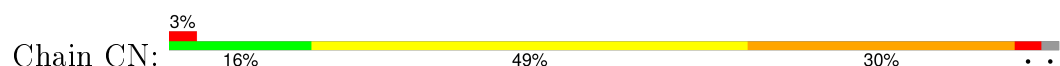




• Molecule 14: 30S RIBOSOMAL PROTEIN S14

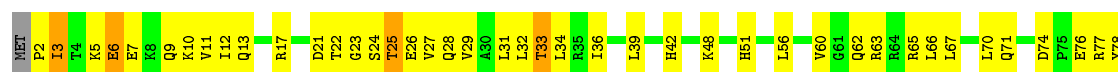


• Molecule 14: 30S RIBOSOMAL PROTEIN S14



W61

• Molecule 15: 30S RIBOSOMAL PROTEIN S15



R79  
I82  
E83  
I87  
R88  
G89

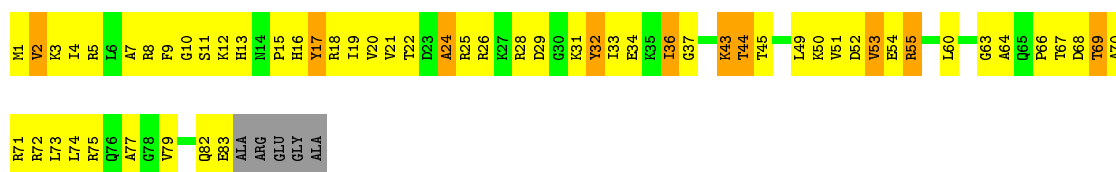
• Molecule 15: 30S RIBOSOMAL PROTEIN S15



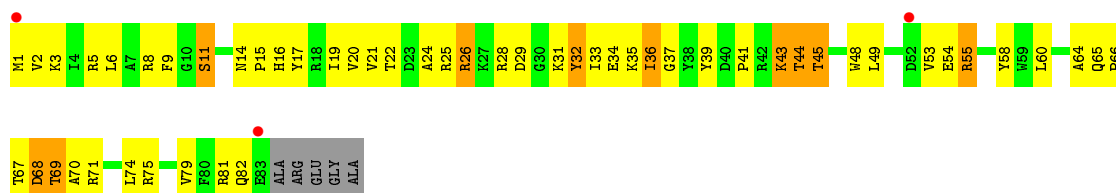
A80  
L81  
I82  
E83  
I87  
R88  
G89

• Molecule 16: 30S RIBOSOMAL PROTEIN S16

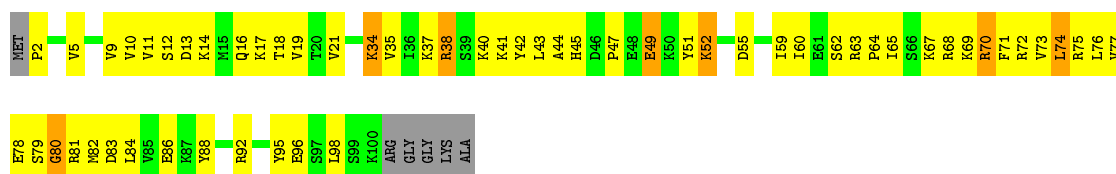




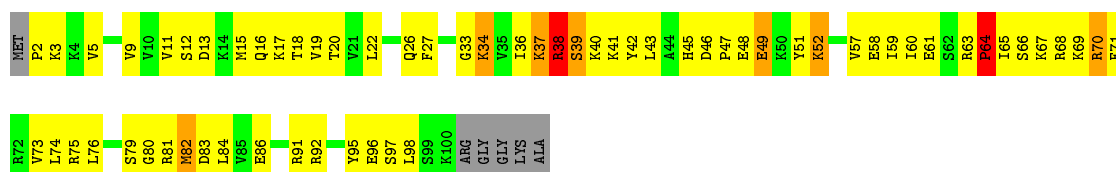
• Molecule 16: 30S RIBOSOMAL PROTEIN S16



• Molecule 17: 30S RIBOSOMAL PROTEIN S17



• Molecule 17: 30S RIBOSOMAL PROTEIN S17



• Molecule 18: 30S RIBOSOMAL PROTEIN S18

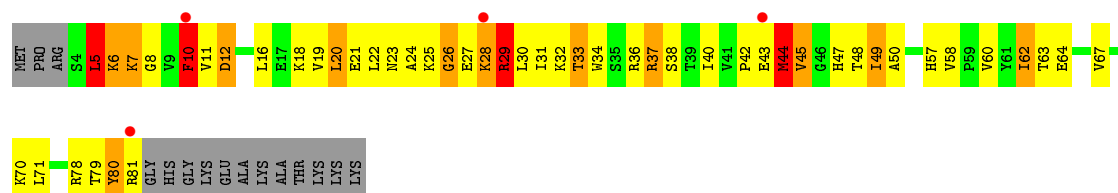


• Molecule 18: 30S RIBOSOMAL PROTEIN S18

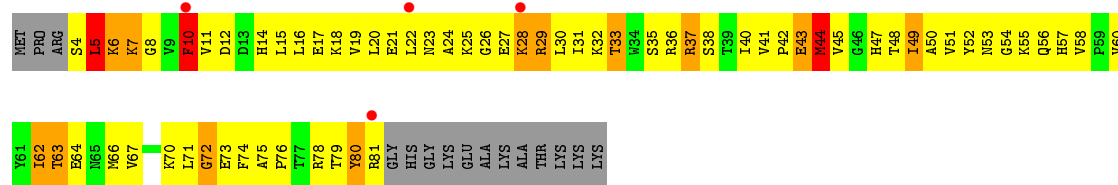
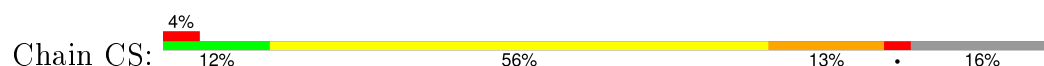




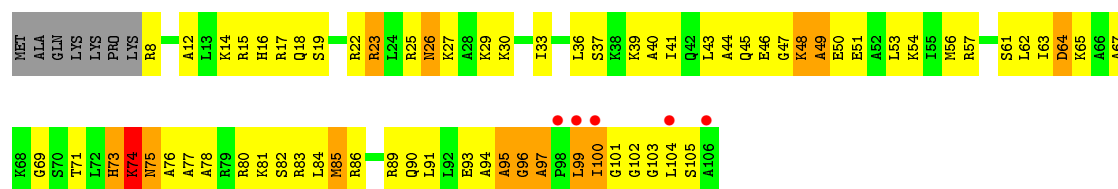
• Molecule 19: 30S RIBOSOMAL PROTEIN S19



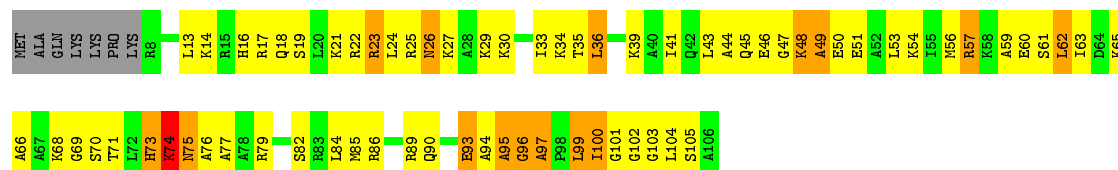
• Molecule 19: 30S RIBOSOMAL PROTEIN S19



• Molecule 20: 30S RIBOSOMAL PROTEIN S20

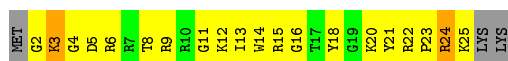


• Molecule 20: 30S RIBOSOMAL PROTEIN S20

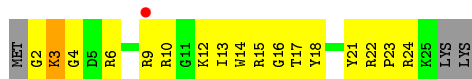


• Molecule 21: 30S RIBOSOMAL PROTEIN THX

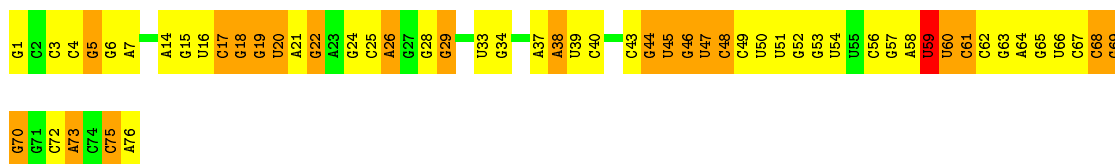




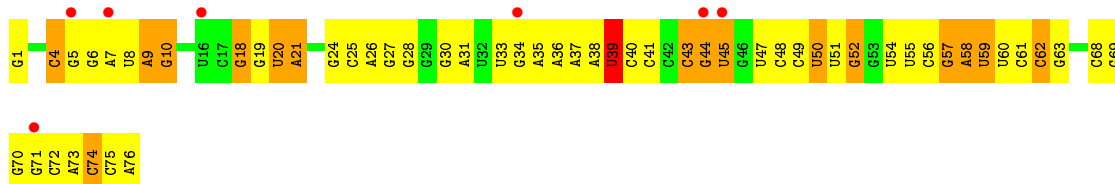
- Molecule 21: 30S RIBOSOMAL PROTEIN THX



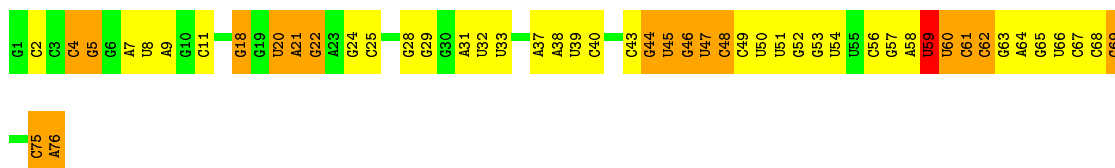
- Molecule 22: E-SITE TRNA PHE OR P-SITE TRNA PHE



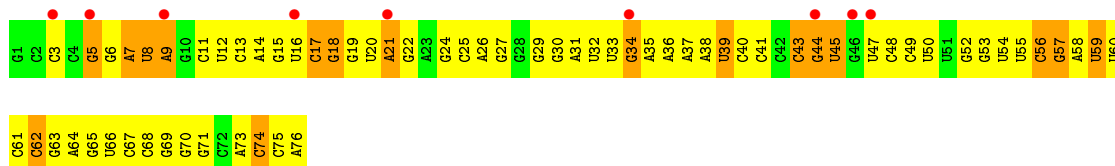
- Molecule 22: E-SITE TRNA PHE OR P-SITE TRNA PHE



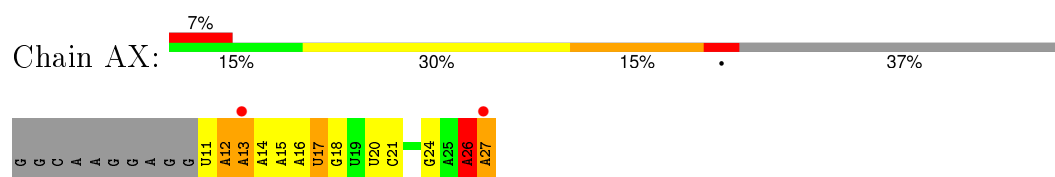
- Molecule 22: E-SITE TRNA PHE OR P-SITE TRNA PHE



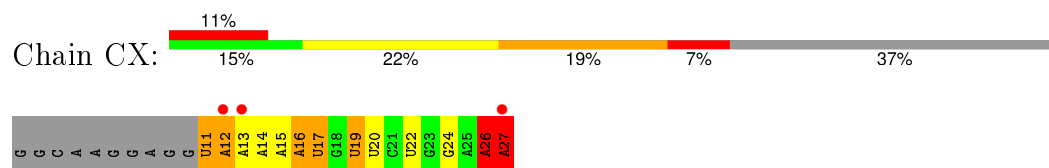
- Molecule 22: E-SITE TRNA PHE OR P-SITE TRNA PHE



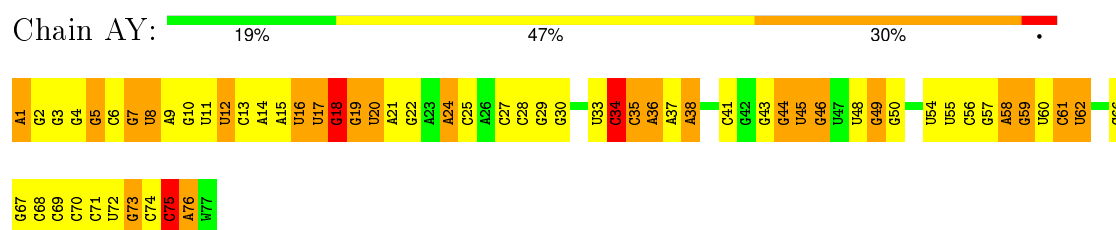
- Molecule 23: MRNA



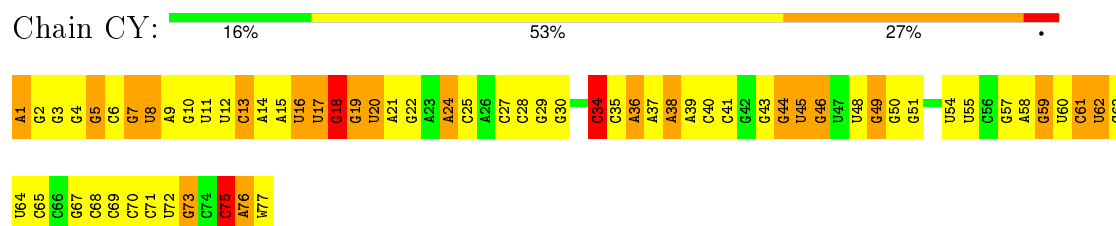
- Molecule 23: MRNA



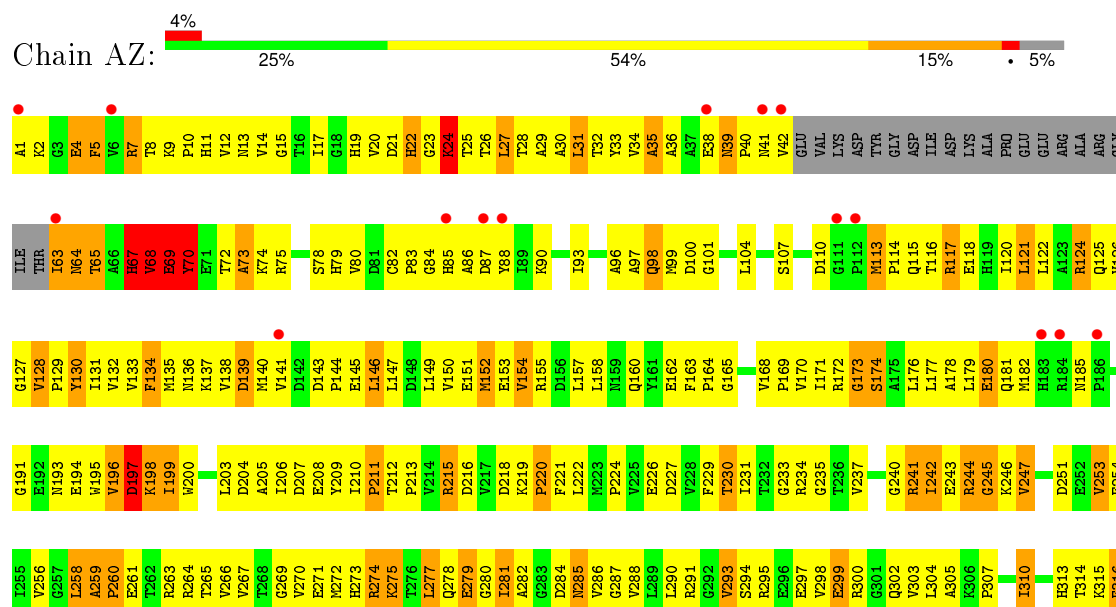
- Molecule 24: A-SITE TRNA G24A TRP-TRNA TRP

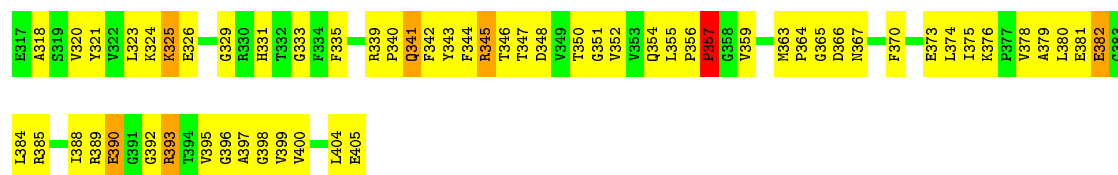


- Molecule 24: A-SITE TRNA G24A TRP-TRNA TRP

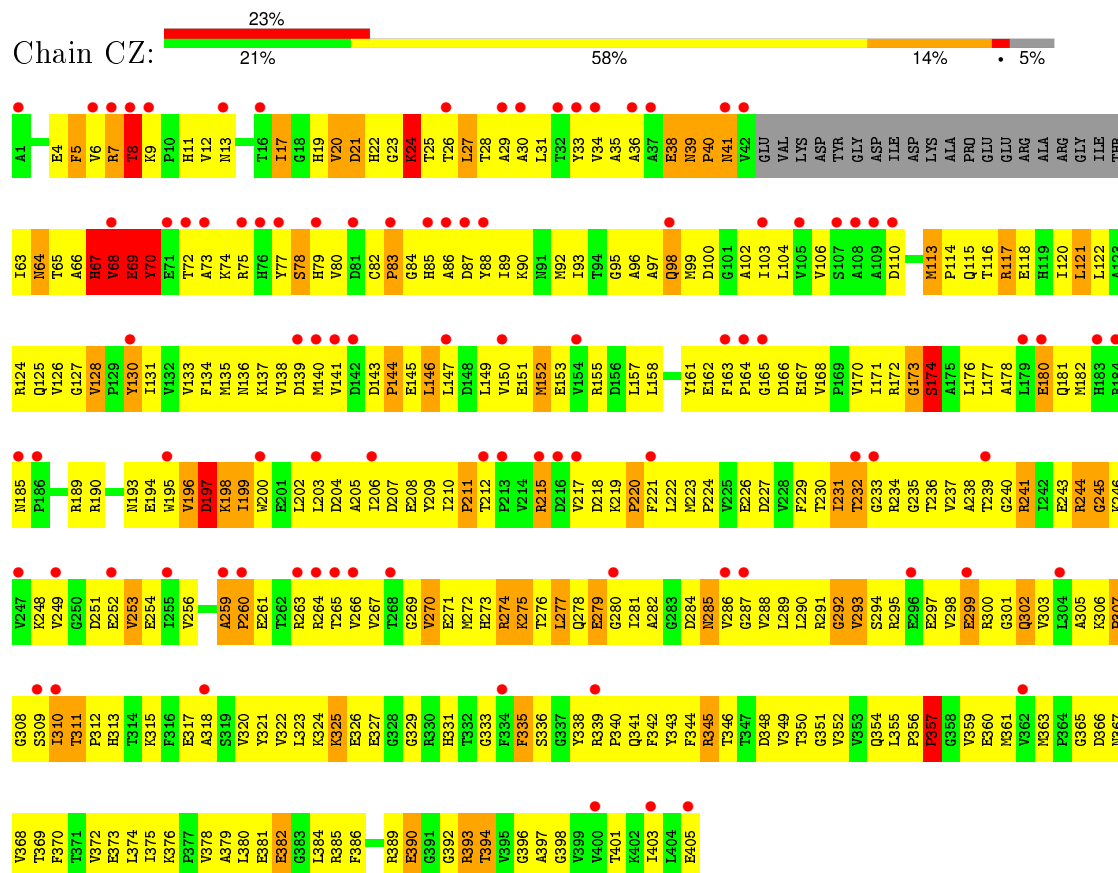


- Molecule 25: ELONGATION FACTOR TU

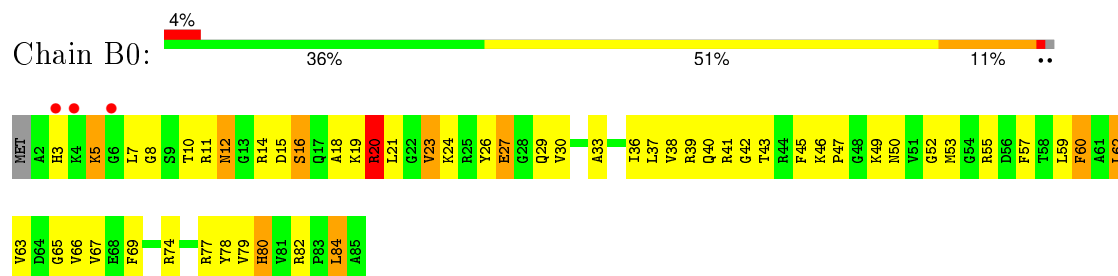




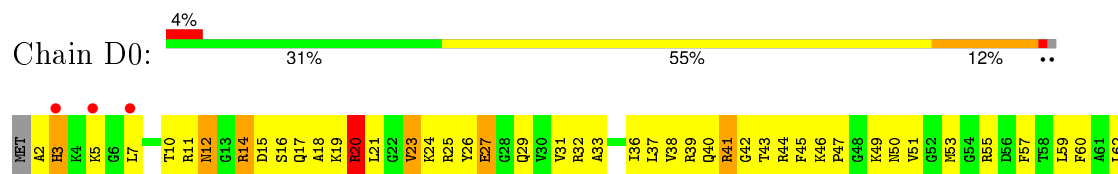
• Molecule 25: ELONGATION FACTOR TU

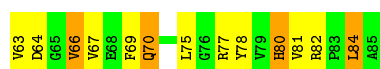


• Molecule 26: 50S RIBOSOMAL PROTEIN L27



• Molecule 26: 50S RIBOSOMAL PROTEIN L27





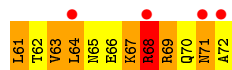
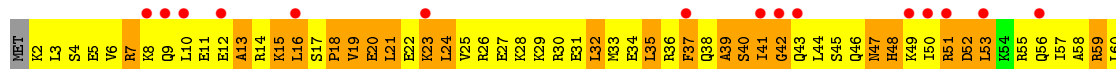
• Molecule 27: 50S RIBOSOMAL PROTEIN L28



• Molecule 27: 50S RIBOSOMAL PROTEIN L28



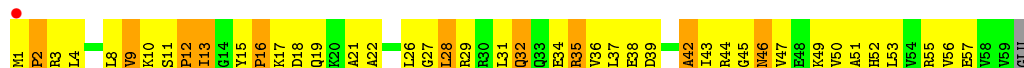
• Molecule 28: 50S RIBOSOMAL PROTEIN L29



• Molecule 28: 50S RIBOSOMAL PROTEIN L29

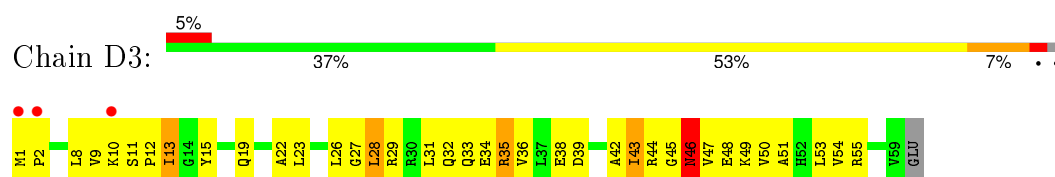


• Molecule 29: 50S RIBOSOMAL PROTEIN L30

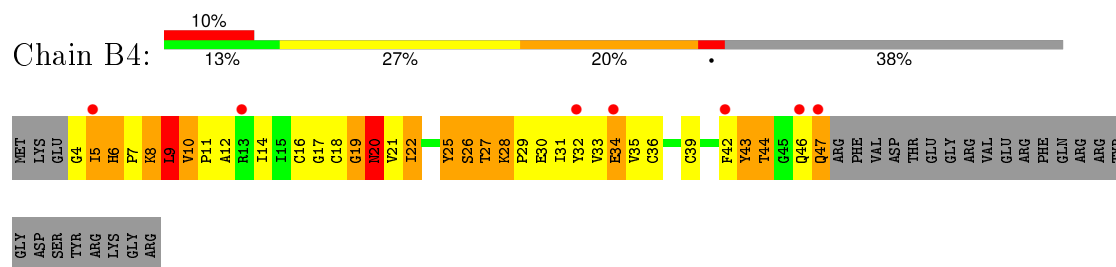


• Molecule 29: 50S RIBOSOMAL PROTEIN L30

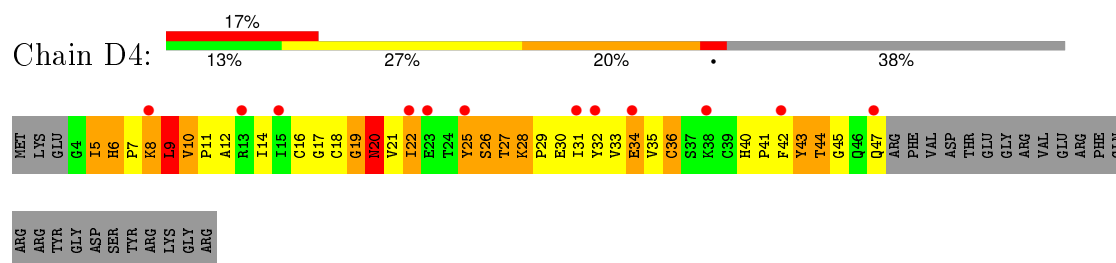




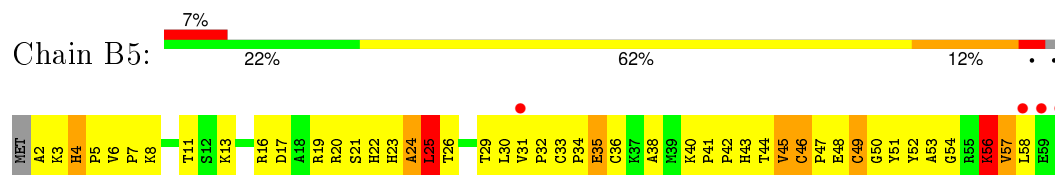
• Molecule 30: 50S RIBOSOMAL PROTEIN L31



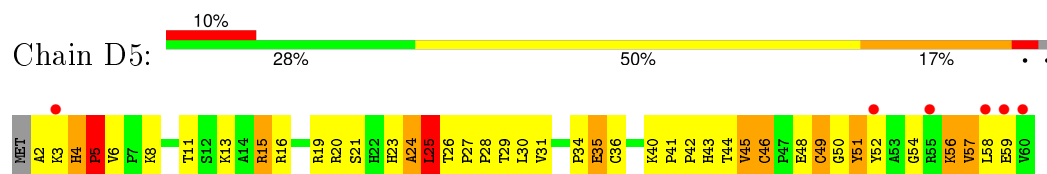
• Molecule 30: 50S RIBOSOMAL PROTEIN L31



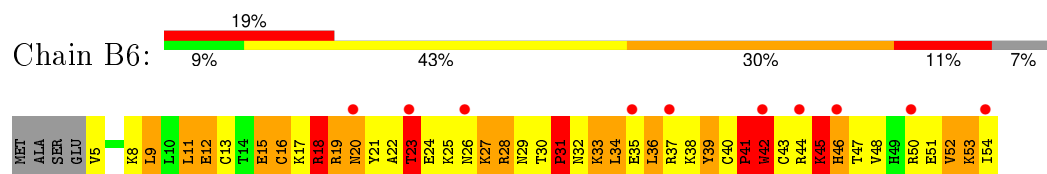
• Molecule 31: 50S RIBOSOMAL PROTEIN L32



• Molecule 31: 50S RIBOSOMAL PROTEIN L32

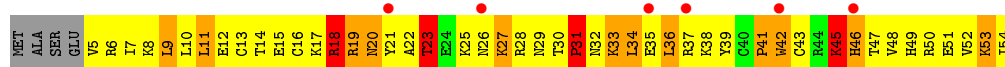


• Molecule 32: 50S RIBOSOMAL PROTEIN L33



• Molecule 32: 50S RIBOSOMAL PROTEIN L33





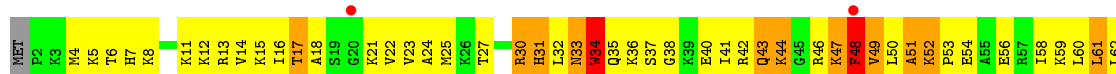
- Molecule 33: 50S RIBOSOMAL PROTEIN L34



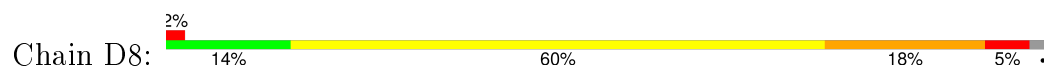
- Molecule 33: 50S RIBOSOMAL PROTEIN L34



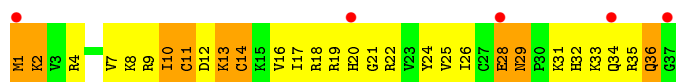
- Molecule 34: 50S RIBOSOMAL PROTEIN L35



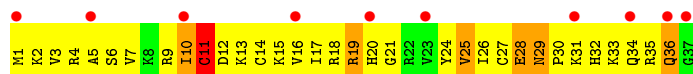
- Molecule 34: 50S RIBOSOMAL PROTEIN L35



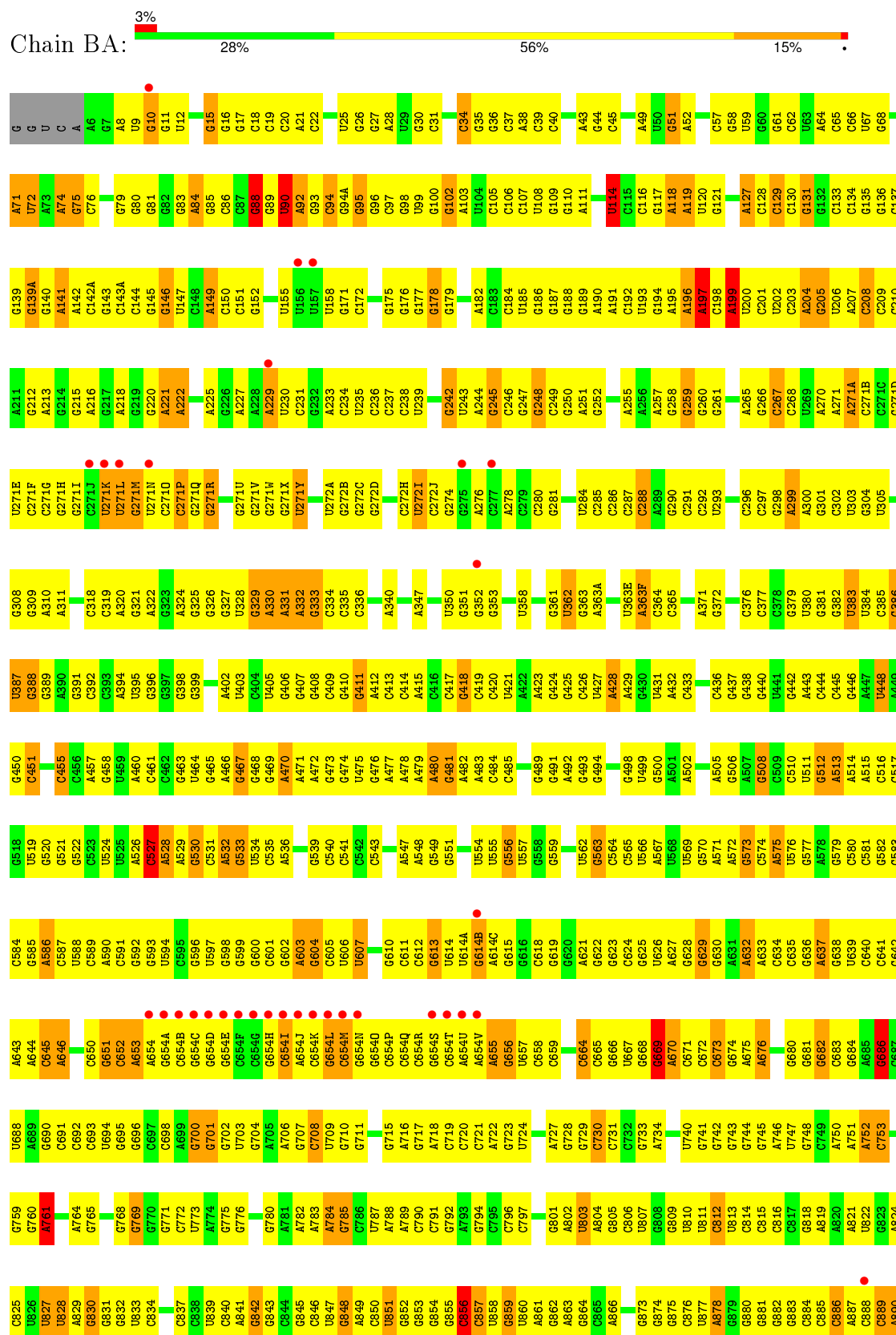
- Molecule 35: 50S RIBOSOMAL PROTEIN L36



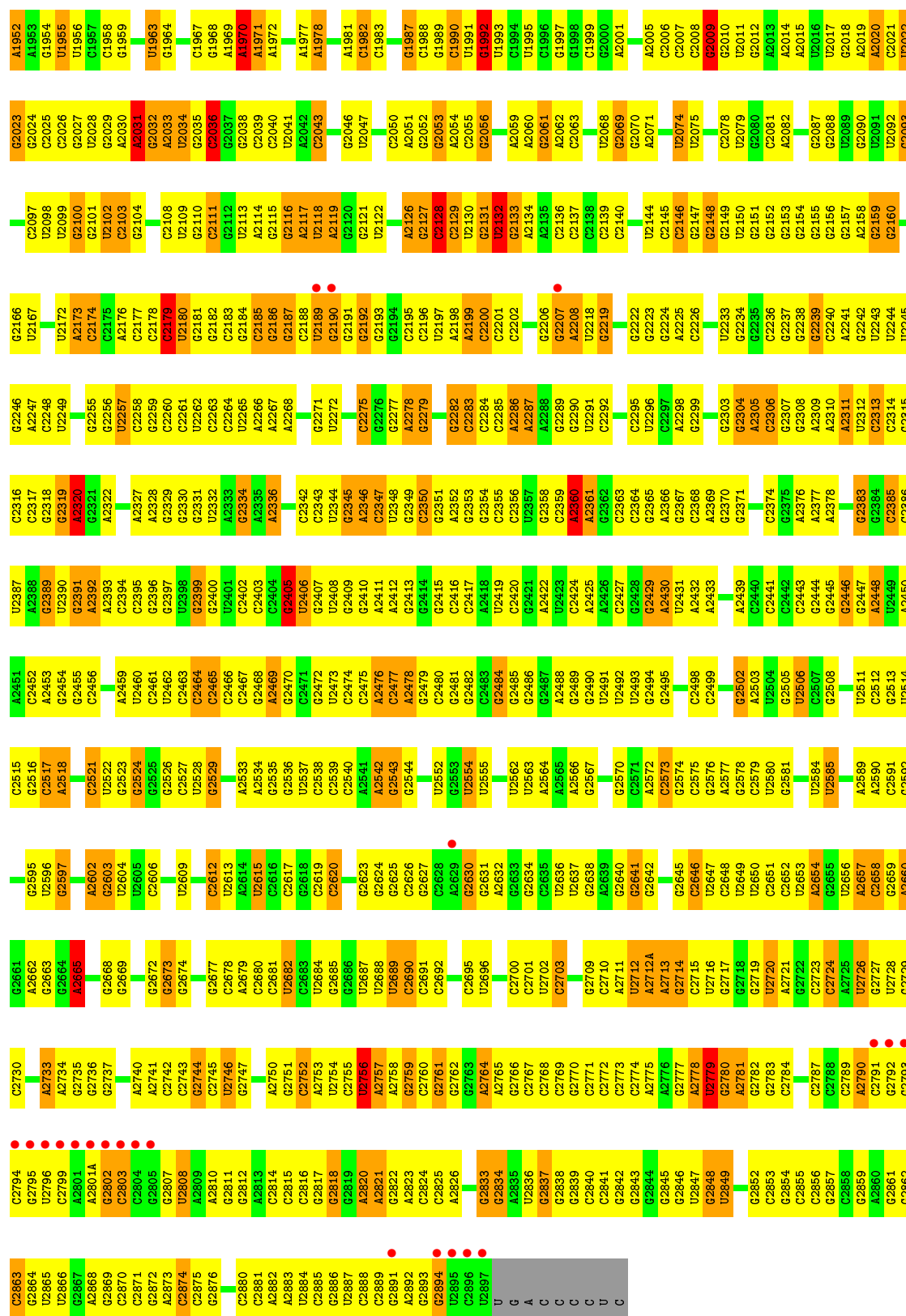
- Molecule 35: 50S RIBOSOMAL PROTEIN L36



- Molecule 36: 23S RIBOSOMAL RNA



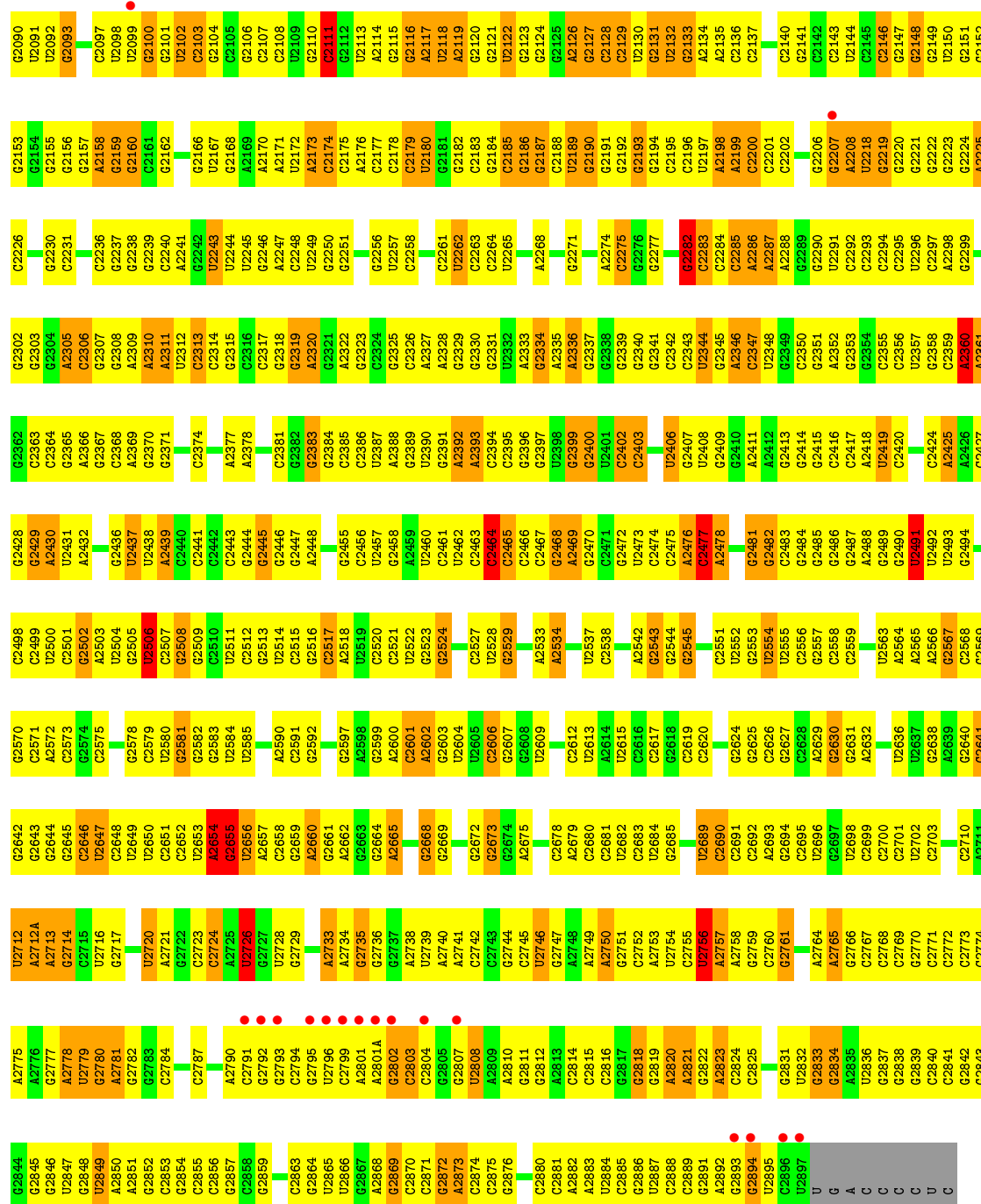
G1865	U1796	G1711	U1639	A1569	A1494	G1424	G1358	C1289	C1234	C1161	A1095	A1028	A960	C892
C1866	C1797	C1712	C1640	A1570	A1495	G1425	G1359	U1292	G1225	C1162	A1096	A1029	C961	C893
A1877	G1799	U1713	A1641	A1571	A1496	G1426	A1360	U1293	A1226	A1162	U1097	A1030	C962	C894
G1878	C1800	G1572	G1642	A1572	A1497	A1427	A1361	C1293	G1227	G1163	G1098	G1031	C963	C895
G1879	G1801	G1573	G1643	G1573	C1498	C1428	G1361	U1294	G1228	U1164	G1099	U1032	C964	A896
C1880	A1802	U1576	G1647	U1576	G1500	U1431	C1362	C1295	G1229	U1165	C1100	A1033	C965	C897
A1803	A1803	C1577	C1648	C1577	G1501	U1432	C1363	G1296	C1230	C1166	U1101	G1034	C966	C898
C1804	C1804	U1578	A1502	U1578	A1502	U1433	C1364	C1297	G1232	U1167	C1102	G1037	G968	C899
U1805	U1805	A1579	G1651	A1579	U1503	U1434	A1365	U1300	G1233	G1168	A1103	C1038	U969	C903
A1809	A1809	A1580	A1652	A1580	C1504	A1434	G1368	A1301	C1234	G1169	C1104	G1039	C970	C904
A1810	A1810	G1582	G1653	G1582	G1505	G1440	G1369	A1302	G1235	U1171	G1106	C1040	G974	U905
C1811	C1811	A1583	A1654	A1583	C1506	G1441	U1372	G1303	G1236	G1173	G1107	G1041	C975	G906
U1812	U1812	C1584	A1655	C1584	A1507	G1442	U1373	C1304	U1240	A1174	U1108	G1042	C976	G907
A1813	A1813	C1585	C1656	C1585	U1508	G1443	A1374	C1305	A1241	U1175	C1109	G1043	G977	A909
G1816	G1816	G1747	C1657	C1586	C1509	A1445	G1375	C1306	U1242	G1176	G1110	G1044	G978	A910
U1817	U1817	A1748	A1658	A1587	A1509A	C1445A	C1376	A1307	A1243	A1177	A1111	A1045	G979	A911
A1818	A1818	G1749	U1659	C1588	A1509B	C1446	C1377	A1308	G1243	C1178	G1112	A1046	C980	C912
C1819	C1819	G1750	C1660	U1589	G1510	G1447	G1377	G1309	G1244	C1179	U1113	G1047	A980	U913
U1820	U1820	C1751	G1661	C1590	C1511	G1448	A1378	G1310	G1245	C1180	G1114	A1048	C981	C914
A1821	A1821	G1752	C1662	G1591	U1512	A1449	A1379	G1311	A1246	C1181	G1115	C1049	A983	C915
G1822	G1822	G1753	A1663	C1592	G1516	A1452	G1380	U1312	A1247	A1182	C1116	A1050	A984	G916
C1823	C1823	C1754	C1664	G1593	G1517	U1453	G1381	U1313	G1248	G1183	G1051	G1051	C985	A917
U1824	U1824	A1755	A1665	G1594	U1518	U1454	G1382	A1322	U1249	G1184	C1052	C1052	C986	A918
G1825	G1825	G1756	G1666	G1595	G1519	G1455	C1383	U1323	G1250	C1185	G1053	C1053	C987	C919
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C1827	C1827	G1758	A1668	A1597	U1523	A1457	G1385	C1327	G1252	G1187	G1122	A1057	C989	G921
U1828	U1828	A1759	G1669	C1598	G1524	C1458	C1386	C1328	A1253	U1188	A990	C1058	A990	U922
A1829	A1829	G1760	C1670	C1599	G1525	A1459	A1387	A1321	U1254	A1189	G1124	G1059	C991	C923
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U1831	U1831	G1762	A1601	G1601	G1527	G1461	U1390	U1323	G1256	G1191	C993	U1060	C993	G928
G1832	G1832	C1763	A1602	U1602	A1528	C1462	U1394	G1327	C1257	G1192	U1130	U1061	A996	U930
U1833	U1833	U1675	A1603	A1603	A1528A	G1463	A1395	C1327	C1258	G1193	G1131	G1062	A996	C931
C1834	C1834	G1678	A1608	A1608	G1529	G1466	U1396	G1328	G1260	C1196	A1132	G1063	C997	C932
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U1838	U1838	G1682	U1534	C1534	U1534	G1470	G1400	G1332	G1266	C1203	G1139	A1069	G1002	G939
G1839	G1839	C1613	A1535	C1535	A1471	A1471	C1401	C1333	U1267	G1204	C1140	A1070	C1005	G940
U1840	U1840	A1614	C1536	A1614	C1472	G1472	C1402	U1335	A1268	A1204	U1141	G1071	C1006	A941
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• Molecule 36: 23S RIBOSOMAL RNA

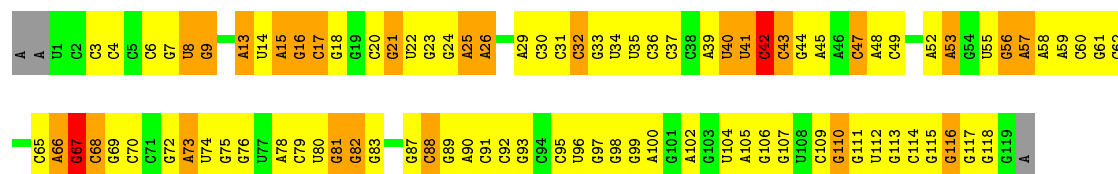


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G2018	U1033	A1096	U1159	A1226	A1302	A1365	U1433	C1509	A1159	A1641	U1710	C1794	G1865	C1947	G2018
A2019	U1034	A1097	A1159	G1227	A1303	A1366	A1434	C1509B	A1159	A1642	C1710	C1795	C1866	C1948	A2019
A2020	U1035	A1098	A1159	G1227	C1304	A1367	G1441	A1509A	A1159	G1643	C1711	U1796	A1876	G1949	A2020
C2021	G1036	A1099	A1159	G1231	C1305	A1368	G1442	A1510	A1159	C1644	C1712	C1797	A1877	C2021	C2021
U2022	C1037	C1100	A1159	G1232	C1306	A1369	G1443	C1511	A1159	U1647	U1713	U1798	G1878	U2022	U2022
G2023	U1038	C1101	A1159	C1233	G1310	G1374	G1444	C1511	A1159	U1648	G1714	U1799	C1879	G2023	G2023
G2024	G1039	U1101	A1159	A1237	G1311	C1375	A1445	C1515	A1159	C1649	G1715	C1800	C1880	A1952	G2024
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G2026	G1041	C1103	A1159	G1238	G1313	C1377	A1447	C1517	A1159	G1651	U1717	A1802	C1882	U1955	C2026
U2027	A1045	U1105	A1159	G1242	U1314	A1378	G1448	C1518	A1159	U1652	U1718	C1803	G1883	U1956	G2027
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							G1523	C1593	A1159	U1727	U1818	U1883	U1963	G2045	
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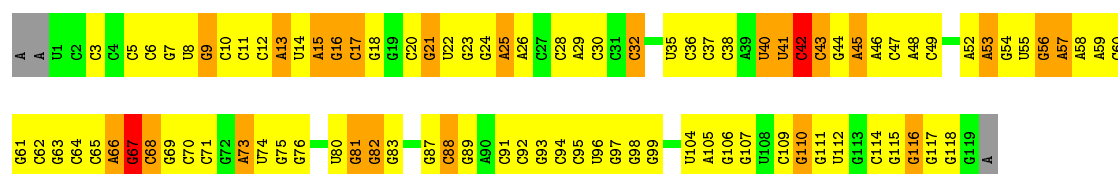
Chain BB: 21% 54% 20%



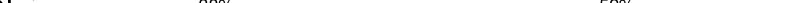
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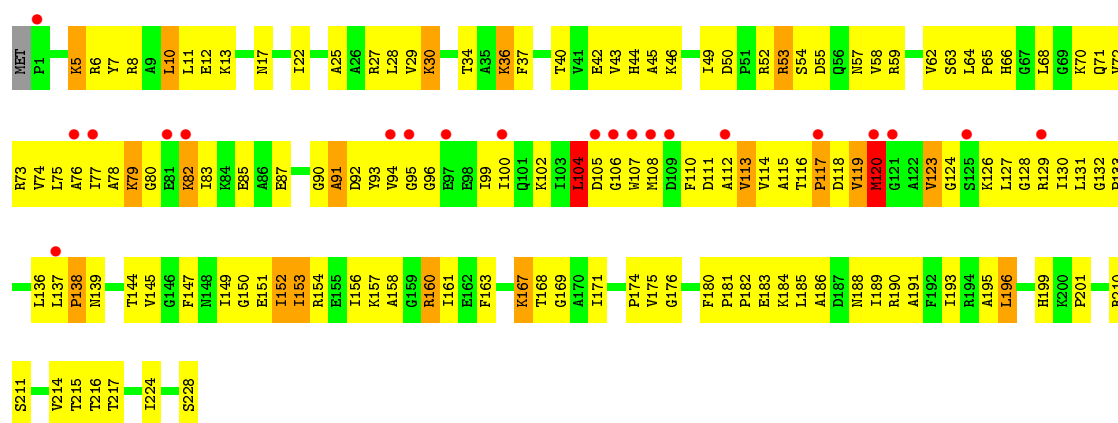


Chain DB: 



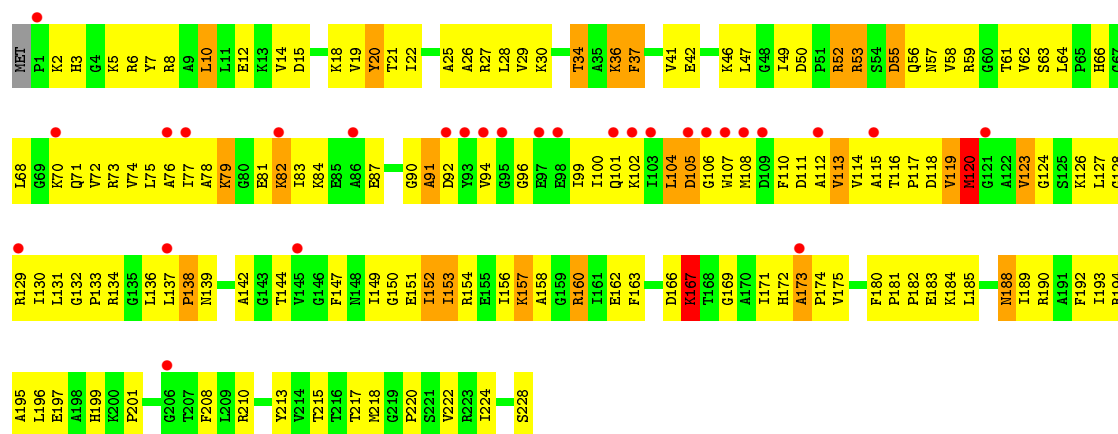
- Molecule 38: 50S RIBOSOMAL PROTEIN L1

Chain BC: 



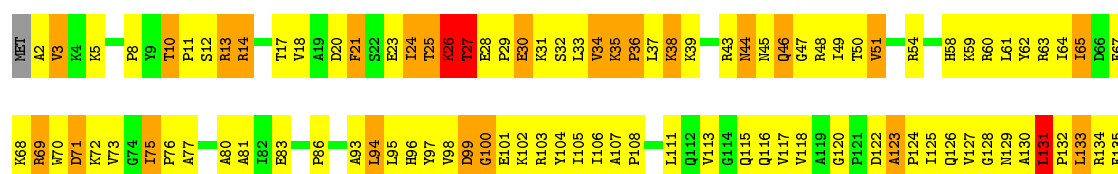
- Molecule 38: 50S RIBOSOMAL PROTEIN L1

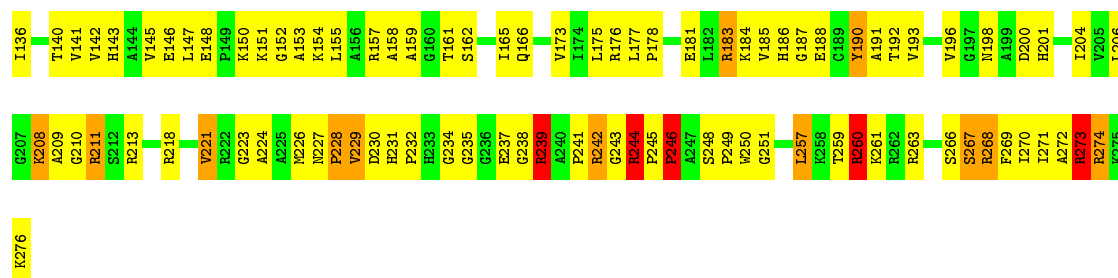
Chain DC: 



- Molecule 39: 50S RIBOSOMAL PROTEIN L2

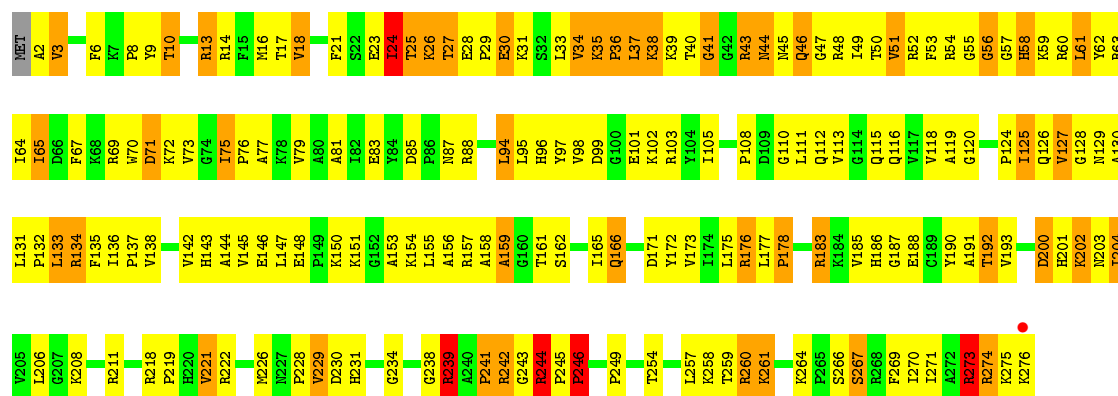
Chain BD:  31% 53% 13% 1%





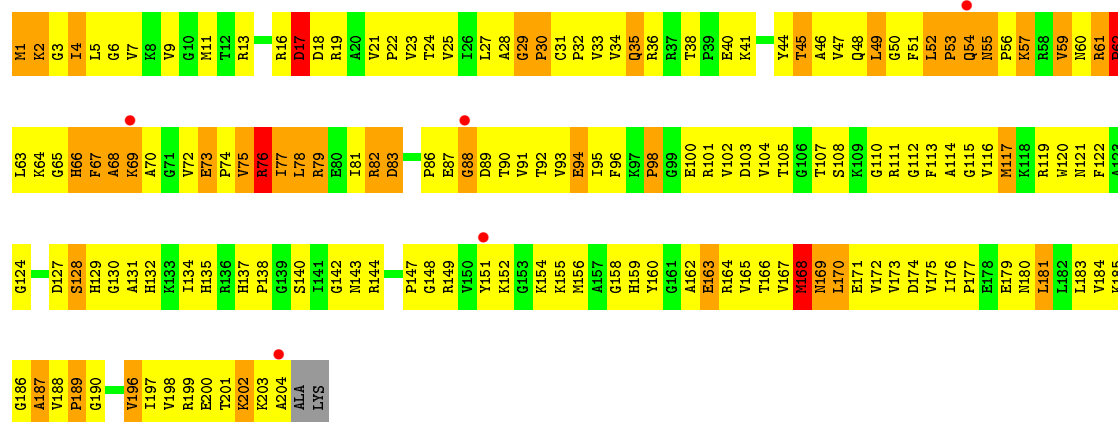
• Molecule 39: 50S RIBOSOMAL PROTEIN L2

Chain DD: 34% 47% 17%



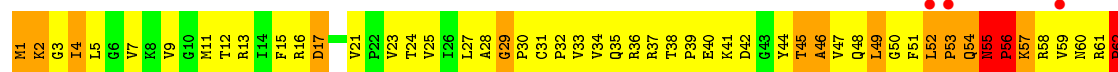
• Molecule 40: 50S RIBOSOMAL PROTEIN L3

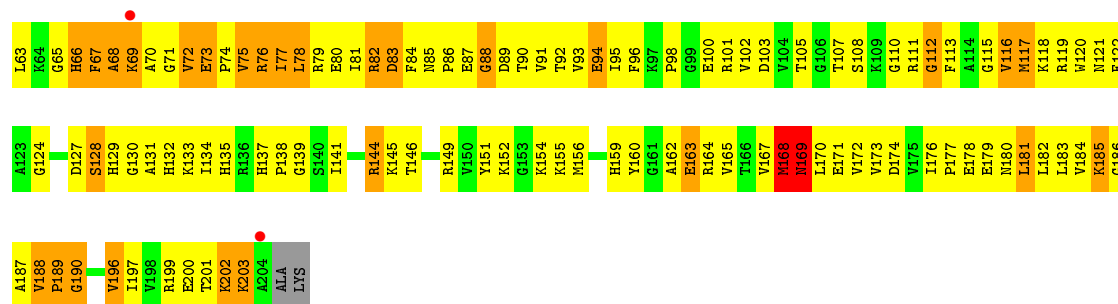
Chain BE: 2% 20% 58% 19%



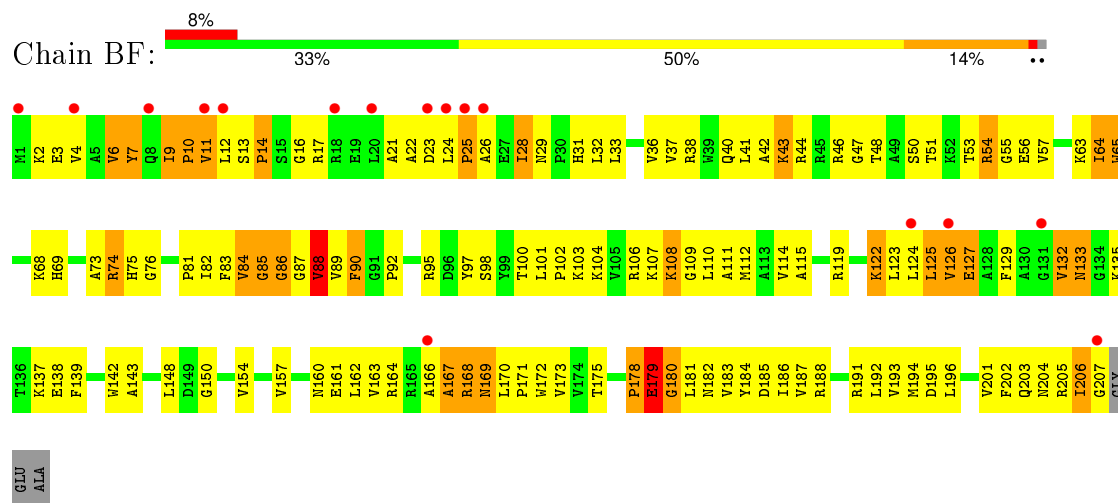
• Molecule 40: 50S RIBOSOMAL PROTEIN L3

Chain DE: 2% 19% 58% 19%

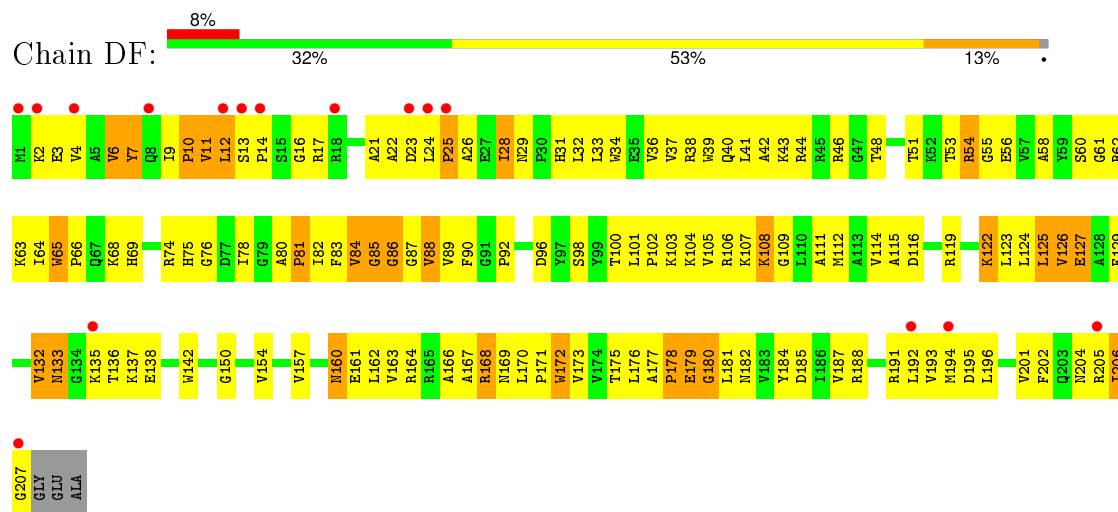




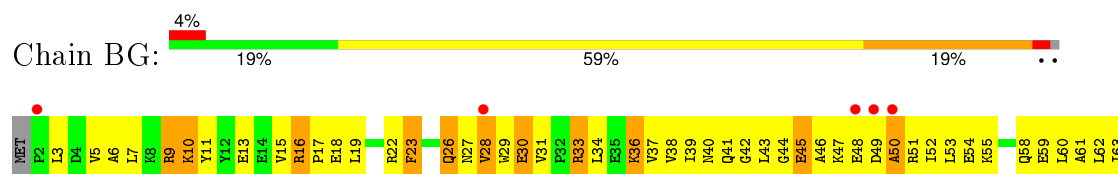
• Molecule 41: 50S RIBOSOMAL PROTEIN L4

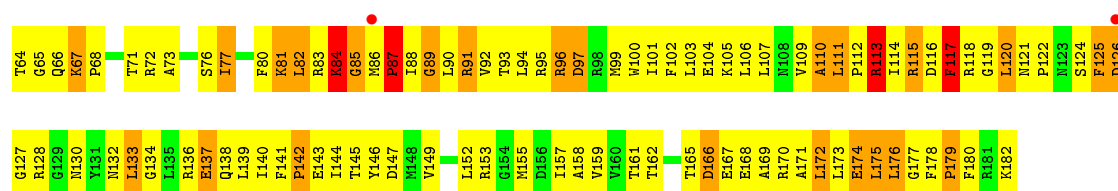


• Molecule 41: 50S RIBOSOMAL PROTEIN L4

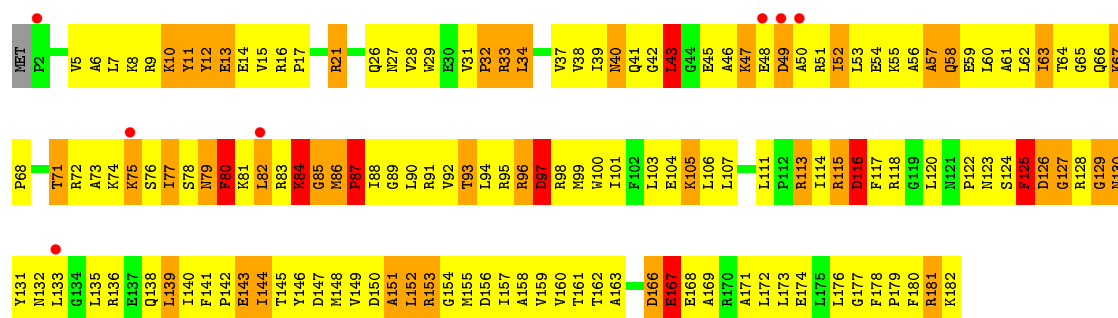
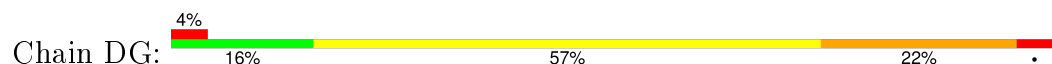


• Molecule 42: 50S RIBOSOMAL PROTEIN L5

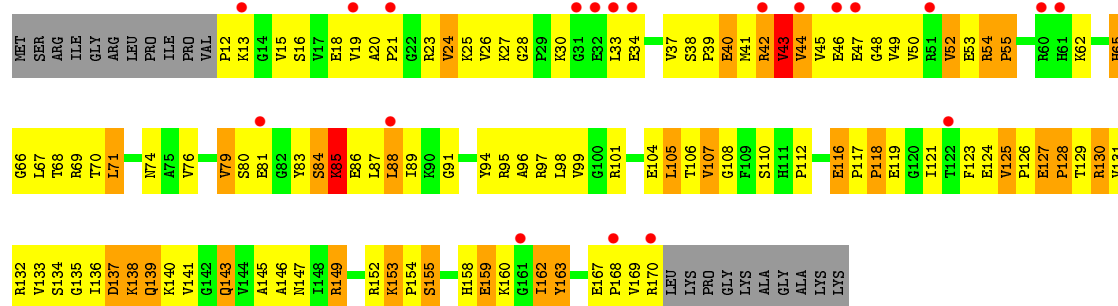




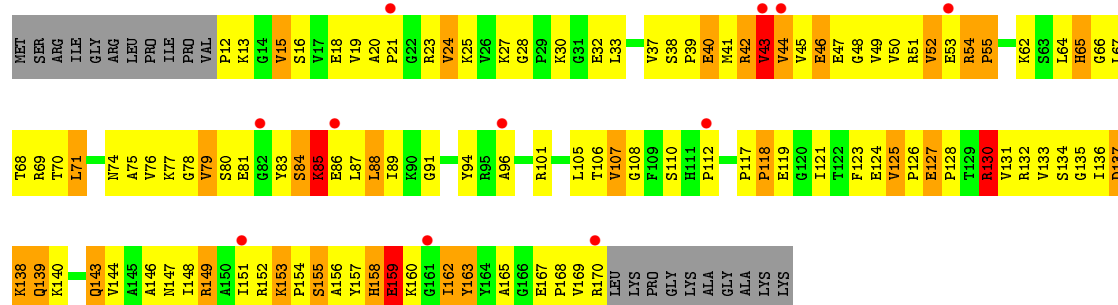
• Molecule 42: 50S RIBOSOMAL PROTEIN L5



• Molecule 43: 50S RIBOSOMAL PROTEIN L6

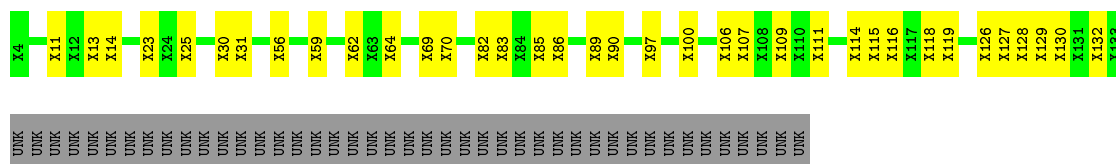


• Molecule 43: 50S RIBOSOMAL PROTEIN L6



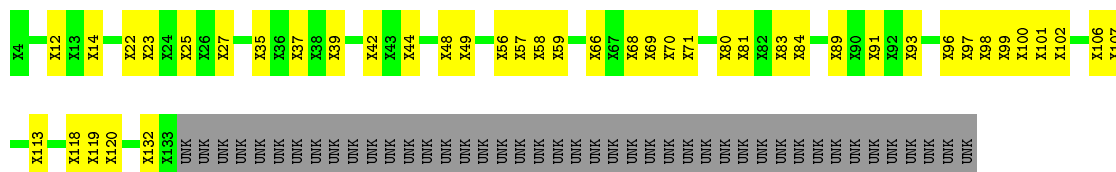
• Molecule 44: 50S RIBOSOMAL PROTEIN L10





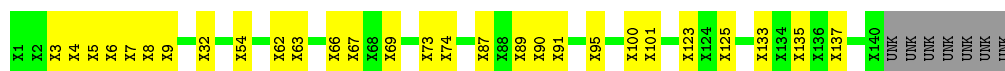
• Molecule 44: 50S RIBOSOMAL PROTEIN L10

Chain DJ: 50% 25% 25%



• Molecule 45: 50S RIBOSOMAL PROTEIN L11

Chain BK: 76% 19% 5%



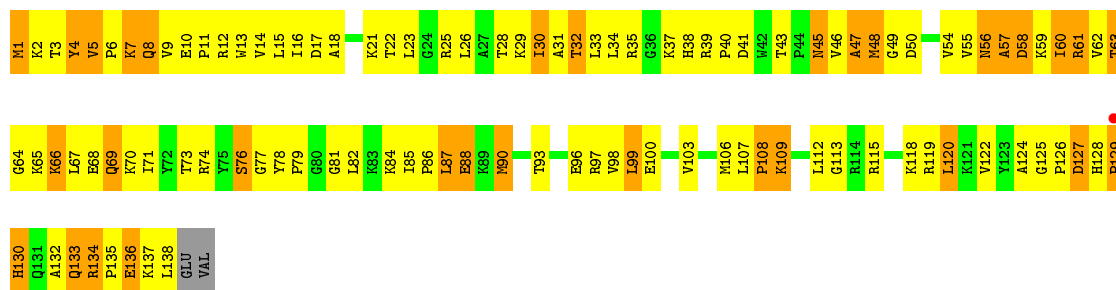
• Molecule 45: 50S RIBOSOMAL PROTEIN L11

Chain DK: 79% 16% 5%



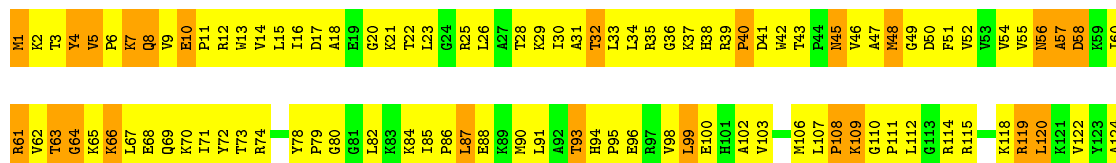
• Molecule 46: 50S RIBOSOMAL PROTEIN L13

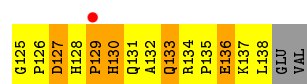
Chain BN: 22% 54% 23%



• Molecule 46: 50S RIBOSOMAL PROTEIN L13

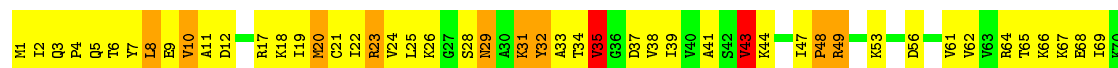
Chain DN: 16% 62% 21%





• Molecule 47: 50S RIBOSOMAL PROTEIN L14

Chain BO: 35% 52% 11%



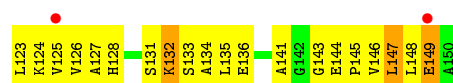
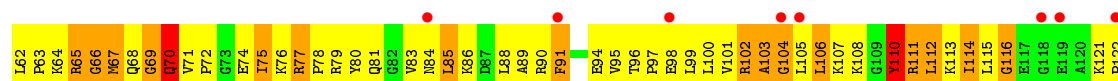
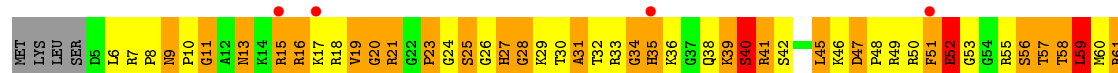
• Molecule 47: 50S RIBOSOMAL PROTEIN L14

Chain DO: 36% 52% 9%



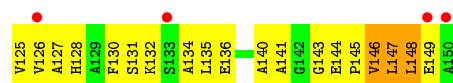
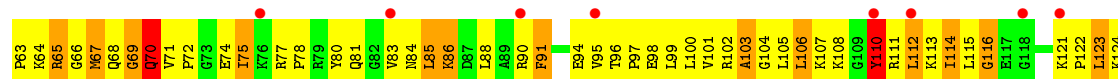
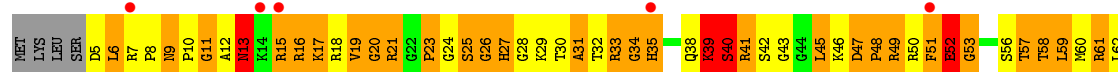
• Molecule 48: 50S RIBOSOMAL PROTEIN L15

Chain BP: 9% 17% 48% 29%

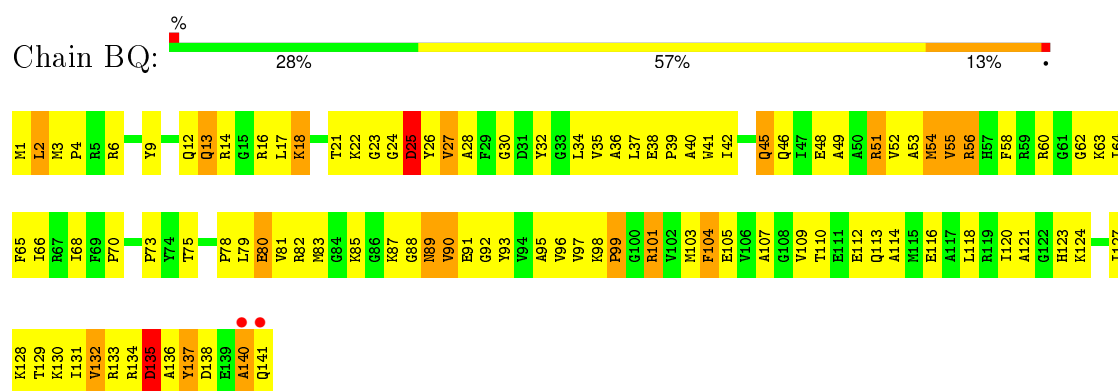


• Molecule 48: 50S RIBOSOMAL PROTEIN L15

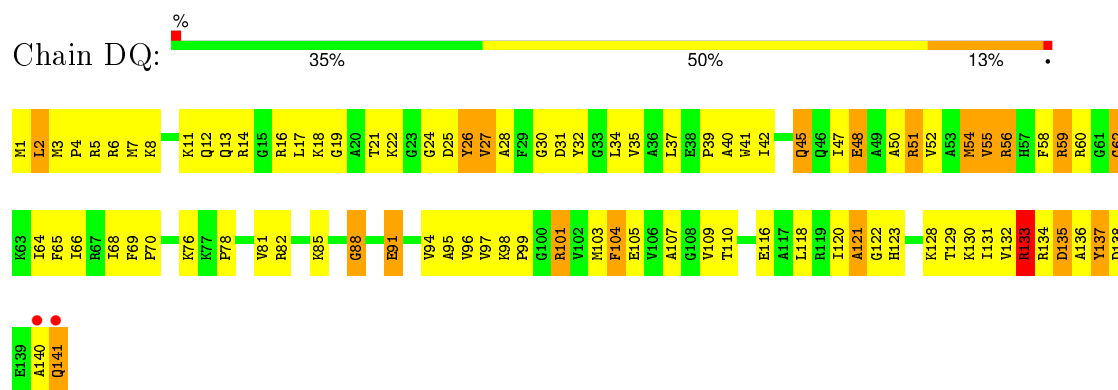
Chain DP: 11% 18% 46% 29%



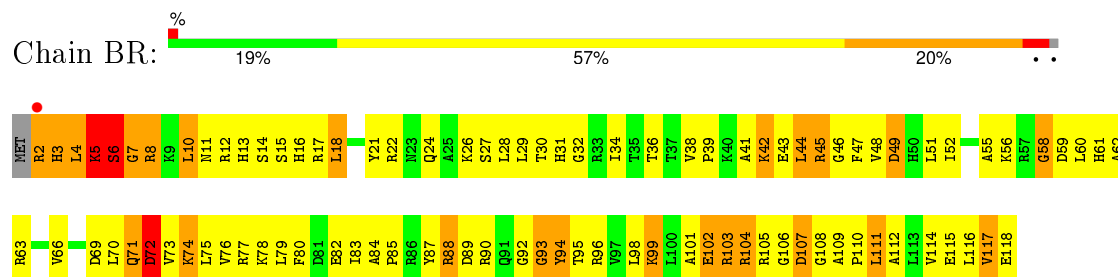
• Molecule 49: 50S RIBOSOMAL PROTEIN L16



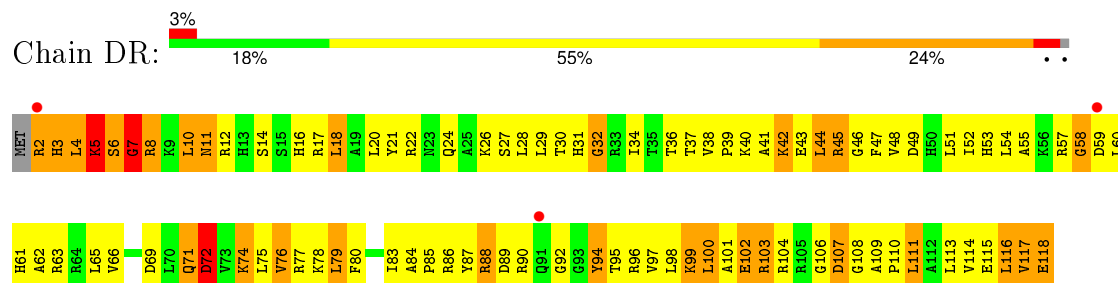
• Molecule 49: 50S RIBOSOMAL PROTEIN L16



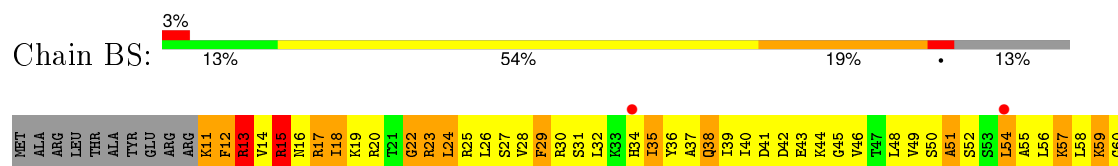
• Molecule 50: 50S RIBOSOMAL PROTEIN L17

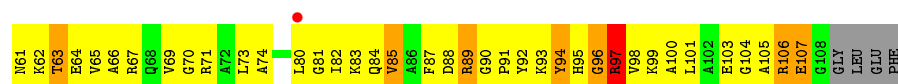


• Molecule 50: 50S RIBOSOMAL PROTEIN L17

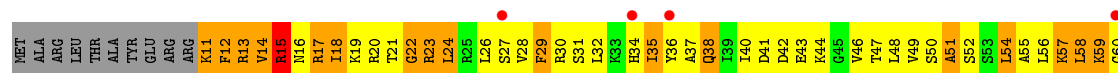
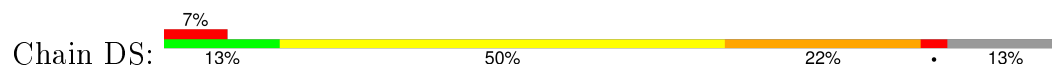


• Molecule 51: 50S RIBOSOMAL PROTEIN L18

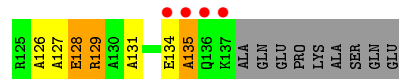
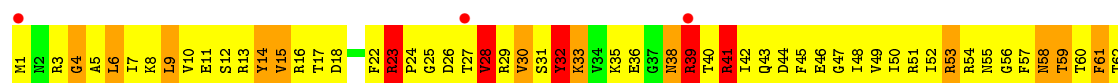
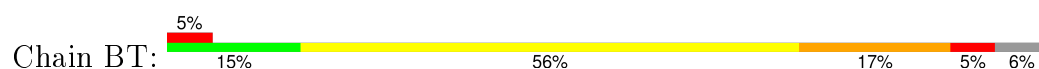




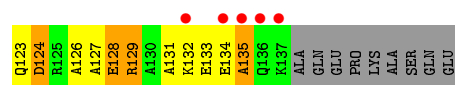
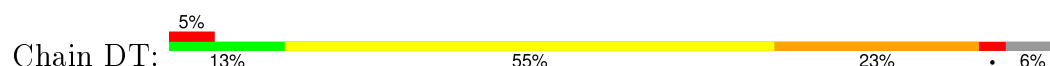
• Molecule 51: 50S RIBOSOMAL PROTEIN L18



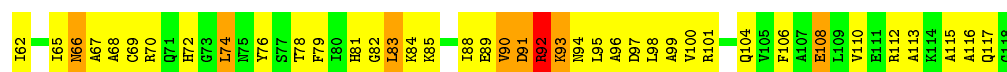
• Molecule 52: 50S RIBOSOMAL PROTEIN L19



• Molecule 52: 50S RIBOSOMAL PROTEIN L19

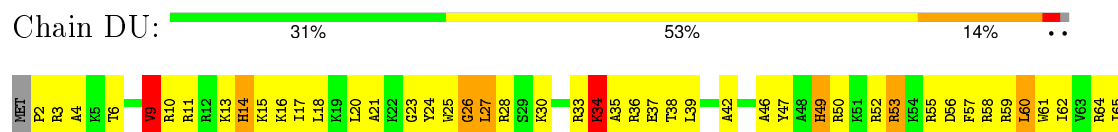


• Molecule 53: 50S RIBOSOMAL PROTEIN L20

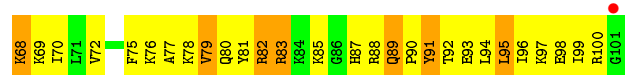
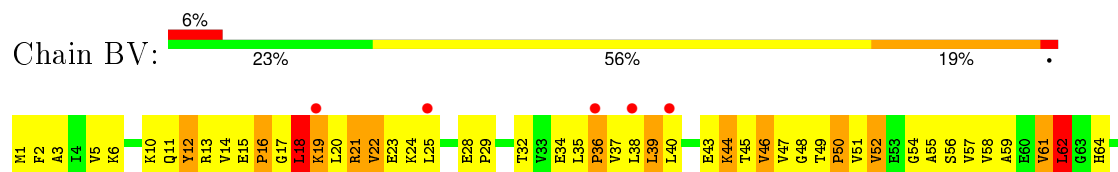


• Molecule 53: 50S RIBOSOMAL PROTEIN L20

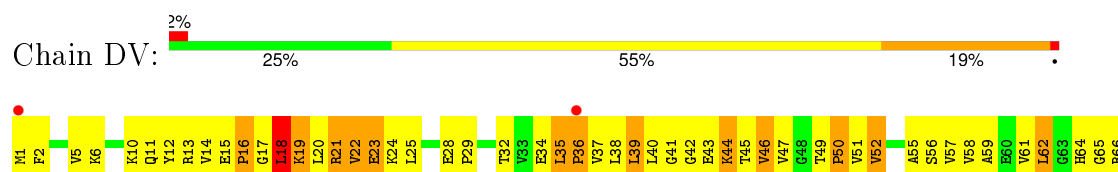




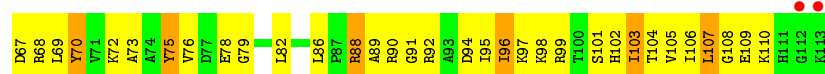
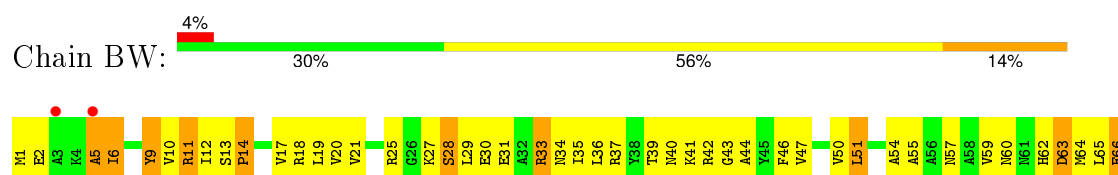
• Molecule 54: 50S RIBOSOMAL PROTEIN L21



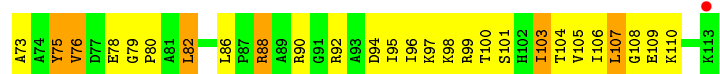
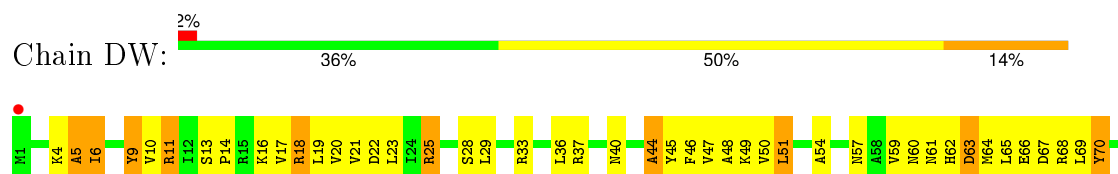
• Molecule 54: 50S RIBOSOMAL PROTEIN L21



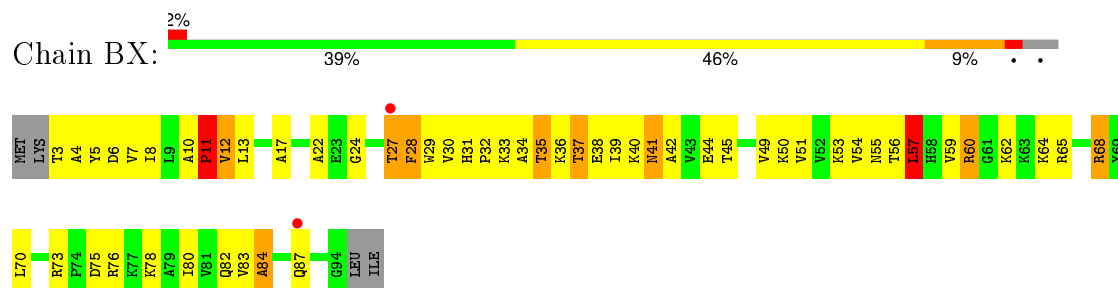
• Molecule 55: 50S RIBOSOMAL PROTEIN L22



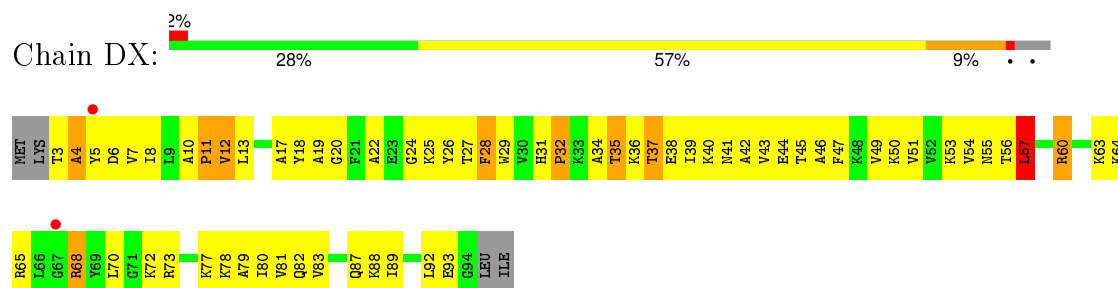
• Molecule 55: 50S RIBOSOMAL PROTEIN L22



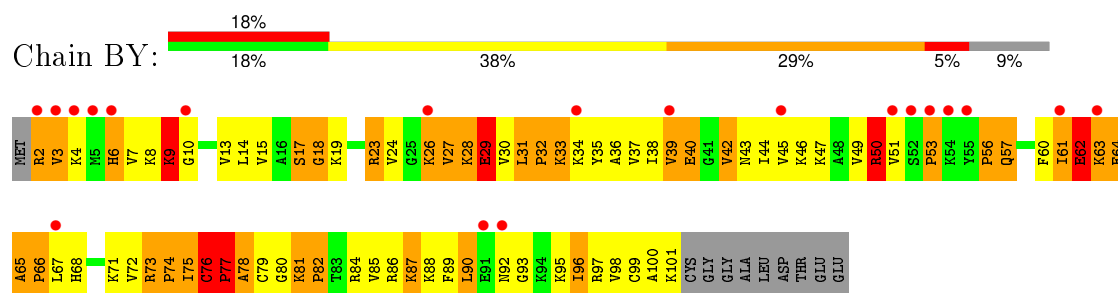
• Molecule 56: 50S RIBOSOMAL PROTEIN L23



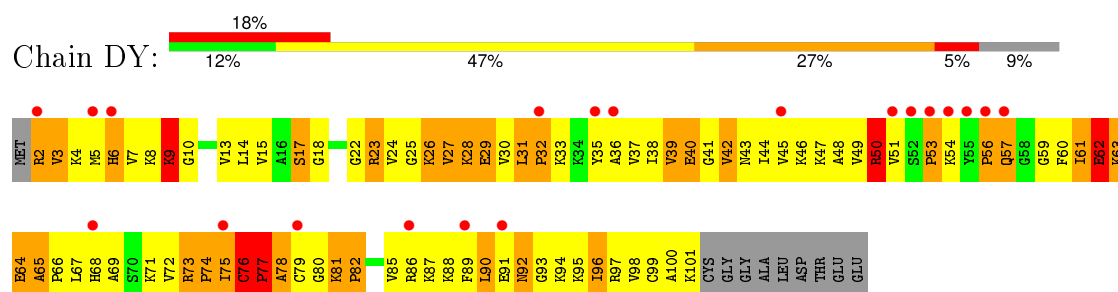
• Molecule 56: 50S RIBOSOMAL PROTEIN L23



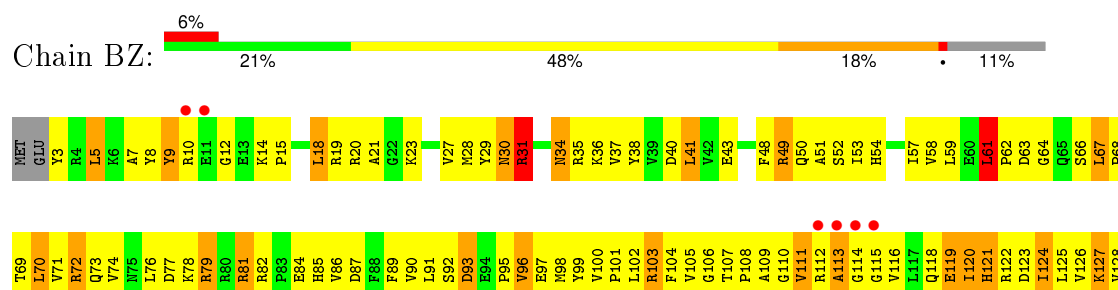
• Molecule 57: 50S RIBOSOMAL PROTEIN L24

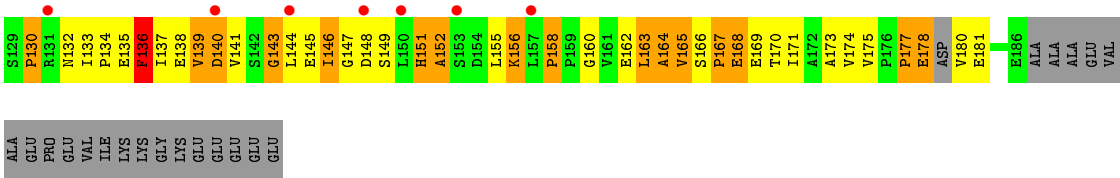


• Molecule 57: 50S RIBOSOMAL PROTEIN L24

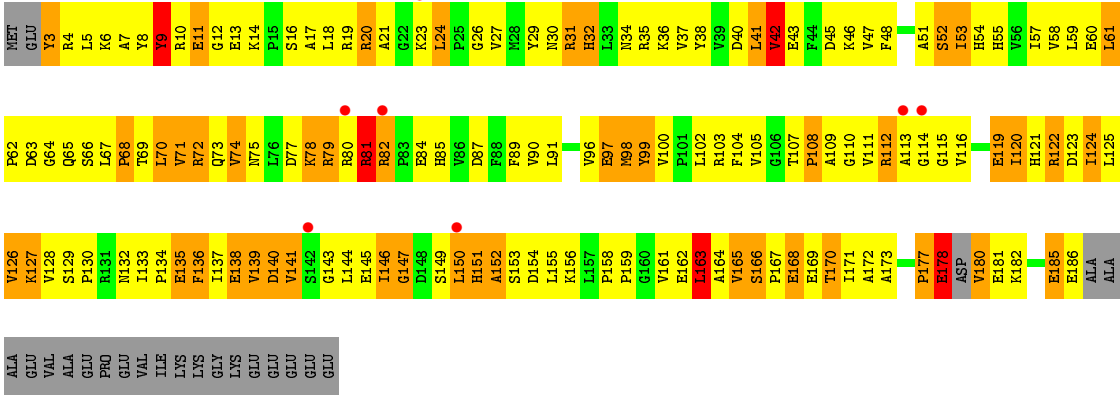
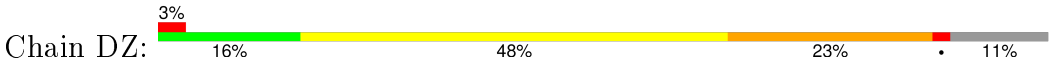


• Molecule 58: 50S RIBOSOMAL PROTEIN L25





● Molecule 58: 50S RIBOSOMAL PROTEIN L25



## 4 Data and refinement statistics

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	289.80Å 269.10Å 403.90Å 90.00° 91.22° 90.00°	Depositor
Resolution (Å)	50.00 – 3.10 49.83 – 2.93	Depositor EDS
% Data completeness (in resolution range)	97.4 (50.00-3.10) 89.6 (49.83-2.93)	Depositor EDS
$R_{merge}$	0.02	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.31 (at 2.96Å)	Xtriage
Refinement program	CNS 1.2	Depositor
R, $R_{free}$	0.247 , 0.285 0.246 , 0.284	Depositor DCC
$R_{free}$ test set	54184 reflections (5.24%)	DCC
Wilson B-factor (Å <sup>2</sup> )	67.3	Xtriage
Anisotropy	0.050	Xtriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.28 , 70.6	EDS
Estimated twinning fraction	0.038 for h,-k,-l	Xtriage
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.43$ , $\langle L^2 \rangle = 0.26$	Xtriage
Outliers	2 of 1182846 reflections (0.000%)	Xtriage
$F_o, F_c$ correlation	0.90	EDS
Total number of atoms	307196	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	83.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 6.99% of the height of the origin peak. No significant pseudotranslation is detected.*

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

<sup>2</sup>Theoretical values of  $\langle |L| \rangle$ ,  $\langle L^2 \rangle$  for acentric reflections are 0.5, 0.375 respectively for untwinned datasets, and 0.333, 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	0.63	5/36190 (0.0%)	0.80	59/56486 (0.1%)
1	CA	0.60	4/36190 (0.0%)	0.78	33/56486 (0.1%)
2	AB	0.51	0/1935	0.76	2/2609 (0.1%)
2	CB	0.49	0/1935	0.76	0/2609
3	AC	0.57	1/1636 (0.1%)	0.81	0/2205
3	CC	0.54	0/1636	0.76	0/2205
4	AD	0.51	0/1733	0.81	2/2318 (0.1%)
4	CD	0.56	0/1733	0.84	1/2318 (0.0%)
5	AE	0.58	0/1162	0.85	0/1564
5	CE	0.56	0/1162	0.84	0/1564
6	AF	0.45	0/856	0.70	0/1154
6	CF	0.45	0/856	0.74	0/1154
7	AG	0.46	0/1276	0.68	2/1709 (0.1%)
7	CG	0.50	0/1276	0.63	0/1709
8	AH	0.51	0/1136	0.80	0/1527
8	CH	0.51	0/1136	0.80	0/1527
9	AI	0.50	0/1029	0.77	0/1379
9	CI	0.49	0/1029	0.74	0/1379
10	AJ	0.51	0/807	0.80	0/1085
10	CJ	0.48	0/807	0.74	0/1085
11	AK	0.56	0/900	0.84	1/1213 (0.1%)
11	CK	0.51	0/900	0.77	1/1213 (0.1%)
12	AL	0.53	0/986	0.90	2/1320 (0.2%)
12	CL	0.54	0/986	0.87	1/1320 (0.1%)
13	AM	0.43	0/998	0.75	0/1336
13	CM	0.42	0/998	0.75	0/1336
14	AN	0.56	0/501	0.87	1/664 (0.2%)
14	CN	0.70	0/501	0.92	0/664
15	AO	0.49	0/745	0.71	0/992
15	CO	0.50	0/745	0.71	0/992
16	AP	0.44	0/716	0.73	0/963
16	CP	0.40	0/716	0.71	0/963

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
17	AQ	0.47	0/836	0.73	0/1117
17	CQ	0.48	0/836	0.76	0/1117
18	AR	0.54	0/579	0.76	0/768
18	CR	0.52	0/579	0.76	0/768
19	AS	0.49	0/642	0.74	1/865 (0.1%)
19	CS	0.45	0/642	0.71	0/865
20	AT	0.40	0/765	0.72	0/1007
20	CT	0.37	0/765	0.70	0/1007
21	AU	0.43	0/212	0.75	0/277
21	CU	0.60	0/212	0.81	0/277
22	AV	0.64	0/1809	0.80	1/2819 (0.0%)
22	AW	0.47	1/1809 (0.1%)	0.74	0/2819
22	CV	0.58	0/1809	0.79	1/2819 (0.0%)
22	CW	0.40	0/1809	0.73	0/2819
23	AX	0.80	0/406	0.89	2/631 (0.3%)
23	CX	0.78	0/406	0.94	2/631 (0.3%)
24	AY	0.80	7/1618 (0.4%)	0.91	7/2514 (0.3%)
24	CY	0.76	4/1618 (0.2%)	0.91	7/2514 (0.3%)
25	AZ	0.72	7/3042 (0.2%)	0.84	8/4129 (0.2%)
25	CZ	0.79	6/3042 (0.2%)	0.88	7/4129 (0.2%)
26	B0	0.44	0/671	0.68	0/892
26	D0	0.45	0/671	0.72	0/892
27	B1	0.47	0/738	0.77	0/981
27	D1	0.42	0/738	0.70	0/981
28	B2	0.39	0/600	0.77	0/793
28	D2	0.34	0/600	0.66	0/793
29	B3	0.43	0/472	0.69	0/634
29	D3	0.39	0/472	0.71	0/634
30	B4	0.53	0/349	0.67	0/474
30	D4	0.52	0/349	0.65	0/474
31	B5	0.44	0/473	0.76	0/639
31	D5	0.43	0/473	0.77	0/639
32	B6	0.62	0/440	0.93	0/586
32	D6	0.60	0/440	0.91	0/586
33	B7	0.51	0/426	0.74	0/561
33	D7	0.47	0/426	0.71	0/561
34	B8	0.59	0/515	0.87	0/679
34	D8	0.56	0/515	0.87	0/679
35	B9	0.53	0/310	0.74	0/407
35	D9	0.61	0/310	0.92	0/407
36	BA	0.55	2/69976 (0.0%)	0.75	50/109244 (0.0%)
36	DA	0.54	3/69976 (0.0%)	0.75	43/109244 (0.0%)
37	BB	0.47	0/2853	0.75	0/4451

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
37	DB	0.49	0/2853	0.75	0/4451
38	BC	0.42	1/1774 (0.1%)	0.68	0/2391
38	DC	0.46	2/1774 (0.1%)	0.65	0/2391
39	BD	0.55	0/2195	0.89	4/2955 (0.1%)
39	DD	0.55	0/2195	0.90	5/2955 (0.2%)
40	BE	0.47	0/1596	0.76	0/2153
40	DE	0.49	0/1596	0.78	1/2153 (0.0%)
41	BF	0.41	0/1658	0.69	0/2244
41	DF	0.39	0/1658	0.67	0/2244
42	BG	0.43	0/1499	0.72	0/2016
42	DG	0.39	0/1499	0.71	0/2016
43	BH	0.40	0/1245	0.68	0/1682
43	DH	0.38	0/1245	0.71	0/1682
46	BN	0.44	0/1131	0.74	0/1525
46	DN	0.41	0/1131	0.72	0/1525
47	BO	0.52	0/943	0.76	1/1269 (0.1%)
47	DO	0.51	0/943	0.77	0/1269
48	BP	0.48	0/1131	1.00	6/1504 (0.4%)
48	DP	0.46	0/1131	1.00	6/1504 (0.4%)
49	BQ	0.51	0/1143	0.77	0/1527
49	DQ	0.50	0/1143	0.79	0/1527
50	BR	0.40	0/974	0.77	0/1302
50	DR	0.39	0/974	0.74	2/1302 (0.2%)
51	BS	0.41	0/778	0.74	0/1036
51	DS	0.41	0/778	0.70	0/1036
52	BT	0.44	0/1155	0.78	2/1542 (0.1%)
52	DT	0.43	0/1155	0.76	1/1542 (0.1%)
53	BU	0.46	0/975	0.75	0/1297
53	DU	0.49	0/975	0.74	0/1297
54	BV	0.40	0/790	0.75	0/1057
54	DV	0.41	0/790	0.73	0/1057
55	BW	0.39	0/907	0.70	0/1216
55	DW	0.40	0/907	0.67	0/1216
56	BX	0.45	0/739	0.70	1/993 (0.1%)
56	DX	0.45	0/739	0.72	1/993 (0.1%)
57	BY	0.38	0/788	0.70	0/1051
57	DY	0.38	0/788	0.73	1/1051 (0.1%)
58	BZ	0.46	0/1491	0.80	1/2024 (0.0%)
58	DZ	0.46	0/1491	0.74	1/2024 (0.0%)
All	All	0.55	43/330118 (0.0%)	0.77	267/493190 (0.1%)

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	6	89
1	CA	4	91
8	AH	0	1
8	CH	0	1
19	AS	0	1
22	AV	0	7
22	CV	0	1
22	CW	0	1
23	AX	0	1
23	CX	0	4
24	AY	2	1
24	CY	2	2
25	AZ	0	2
25	CZ	0	2
36	BA	0	123
36	DA	1	104
37	BB	0	3
37	DB	0	3
39	BD	0	1
49	BQ	0	1
49	DQ	0	1
All	All	15	440

All (43) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
36	DA	761	A	C5-C6	-10.85	1.31	1.41
24	AY	34	C	C5-C6	10.54	1.42	1.34
25	AZ	69	GLU	N-CA	9.82	1.66	1.46
25	CZ	67	HIS	C-O	9.21	1.40	1.23
25	CZ	69	GLU	N-CA	8.60	1.63	1.46
36	BA	761	A	C5-C6	-8.59	1.33	1.41
24	AY	34	C	N1-C2	-8.09	1.32	1.40
25	AZ	69	GLU	CB-CG	-8.09	1.36	1.52
1	CA	1054	C	C4-C5	-7.68	1.36	1.43
25	AZ	68	VAL	C-N	7.44	1.51	1.34
24	CY	1	A	OP3-P	-7.39	1.52	1.61
25	AZ	67	HIS	C-O	7.27	1.37	1.23
24	AY	1	A	OP3-P	-7.25	1.52	1.61
25	CZ	70	TYR	CA-CB	7.23	1.69	1.53
25	CZ	68	VAL	C-N	7.15	1.50	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
36	DA	2506	U	N1-C2	7.09	1.45	1.38
1	CA	1503	A	C6-N6	6.90	1.39	1.33
38	DC	218	MET	CG-SD	6.85	1.99	1.81
24	CY	34	C	N1-C2	-6.74	1.33	1.40
24	AY	34	C	C4-C5	-6.34	1.37	1.43
25	AZ	70	TYR	CA-CB	6.31	1.67	1.53
36	BA	2506	U	N1-C2	6.10	1.44	1.38
1	CA	368	U	N3-C4	-6.00	1.33	1.38
24	AY	12	U	C3'-C2'	5.93	1.59	1.52
1	AA	1054	C	C4-C5	-5.92	1.38	1.43
1	AA	1502	A	C5-C6	-5.90	1.35	1.41
24	CY	12	U	C3'-C2'	5.87	1.59	1.52
25	CZ	69	GLU	CB-CG	-5.68	1.41	1.52
1	AA	858	G	C5-C6	-5.66	1.36	1.42
22	AW	39	U	N1-C2	5.50	1.43	1.38
24	AY	13	C	C5'-C4'	5.49	1.57	1.51
25	AZ	357	PRO	CB-CG	5.47	1.77	1.50
38	DC	120	MET	CG-SD	5.43	1.95	1.81
24	CY	13	C	P-O5'	5.40	1.65	1.59
3	AC	2	GLY	N-CA	5.40	1.54	1.46
25	CZ	68	VAL	CB-CG1	-5.39	1.41	1.52
1	CA	1158	C	N1-C2	5.20	1.45	1.40
25	AZ	1	ALA	CA-CB	5.16	1.63	1.52
24	AY	13	C	P-O5'	5.14	1.64	1.59
38	BC	120	MET	CG-SD	5.07	1.94	1.81
36	DA	761	A	N7-C5	-5.06	1.36	1.39
1	AA	1125	U	C3'-O3'	5.03	1.49	1.42
1	AA	1125	U	O5'-C5'	5.02	1.52	1.44

All (267) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1054	C	N1-C1'-C2'	12.37	130.09	114.00
1	AA	1054	C	N3-C2-O2	12.20	130.44	121.90
1	AA	1498	U	C2'-C3'-O3'	11.43	134.65	109.50
1	CA	1054	C	N1-C1'-C2'	11.34	128.74	114.00
1	CA	1503	A	N9-C1'-C2'	-11.14	99.52	114.00
1	AA	1050	G	N9-C1'-C2'	-10.82	99.93	114.00
36	DA	1786	A	N9-C1'-C2'	10.79	128.03	114.00
25	AZ	68	VAL	N-CA-C	10.63	139.71	111.00
1	AA	961	U	N1-C1'-C2'	-10.61	100.20	114.00
36	BA	1786	A	N9-C1'-C2'	10.48	127.63	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	1498	U	C2'-C3'-O3'	10.47	132.54	109.50
36	DA	945	A	N9-C1'-C2'	10.18	127.23	114.00
1	CA	508	C	C2'-C3'-O3'	9.79	131.04	109.50
1	AA	508	C	C2'-C3'-O3'	9.78	131.02	109.50
1	CA	968	A	C2'-C3'-O3'	9.38	130.13	109.50
1	AA	968	A	C2'-C3'-O3'	9.36	130.08	109.50
36	DA	2360	A	N9-C1'-C2'	-9.30	101.77	112.00
24	CY	75	C	C2'-C3'-O3'	9.27	129.90	109.50
39	BD	244	ARG	C-N-CD	-9.22	100.32	120.60
36	BA	1992	G	C2'-C3'-O3'	9.21	129.76	109.50
1	AA	687	A	C2'-C3'-O3'	9.17	129.68	109.50
25	AZ	68	VAL	CA-CB-CG1	-9.15	97.17	110.90
1	CA	115	G	C2'-C3'-O3'	9.09	129.50	109.50
39	DD	244	ARG	C-N-CD	-9.09	100.61	120.60
1	CA	1050	G	N9-C1'-C2'	-9.04	102.05	112.00
36	BA	1970	A	C5'-C4'-O4'	9.00	119.90	109.10
1	AA	243	A	C2'-C3'-O3'	8.97	129.23	109.50
1	CA	243	A	C2'-C3'-O3'	8.92	129.13	109.50
1	CA	687	A	C2'-C3'-O3'	8.91	129.10	109.50
24	CY	36	A	C2'-C3'-O3'	8.82	128.91	109.50
24	AY	75	C	C2'-C3'-O3'	8.78	128.82	109.50
24	AY	34	C	C6-N1-C2	8.70	123.78	120.30
1	CA	30	U	C2'-C3'-O3'	8.60	128.41	109.50
1	AA	30	U	C2'-C3'-O3'	8.58	128.38	109.50
48	DP	53	GLY	N-CA-C	-8.33	92.28	113.10
1	AA	347	G	N9-C1'-C2'	-8.32	102.84	112.00
1	CA	347	G	N9-C1'-C2'	-8.32	102.84	112.00
25	CZ	68	VAL	N-CA-C	8.29	133.39	111.00
1	AA	1348	U	N1-C1'-C2'	-8.15	103.03	112.00
1	CA	961	U	N1-C1'-C2'	-8.14	103.04	112.00
48	BP	53	GLY	N-CA-C	-8.10	92.86	113.10
1	AA	1054	C	C2-N3-C4	8.08	123.94	119.90
36	DA	1819	A	C2'-C3'-O3'	8.03	127.17	109.50
1	AA	115	G	C2'-C3'-O3'	8.01	127.12	109.50
36	BA	1819	A	C2'-C3'-O3'	7.92	126.93	109.50
1	CA	60	A	C2'-C3'-O3'	7.89	126.86	109.50
1	AA	1504	G	C2'-C3'-O3'	7.76	126.58	109.50
24	AY	36	A	C2'-C3'-O3'	7.73	126.52	109.50
36	DA	2111	C	N1-C1'-C2'	7.54	123.80	114.00
36	DA	1992	G	C2'-C3'-O3'	7.53	126.07	109.50
36	BA	527	C	O4'-C1'-N1	7.49	114.19	108.20
1	AA	1531	A	C2'-C3'-O3'	7.44	125.88	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	DA	1698	A	O4'-C1'-N9	7.43	114.14	108.20
25	AZ	357	PRO	N-CA-C	7.34	131.19	112.10
36	BA	2128	C	N1-C1'-C2'	-7.33	103.94	112.00
36	BA	1799	G	C2'-C3'-O3'	7.32	125.61	109.50
48	DP	52	GLU	N-CA-C	7.24	130.54	111.00
1	AA	792	A	C2'-C3'-O3'	7.22	125.38	109.50
1	AA	1502	A	N9-C1'-C2'	7.21	123.38	114.00
1	CA	1190	G	N9-C1'-C2'	7.14	123.28	114.00
36	BA	945	A	N9-C1'-C2'	7.11	123.24	114.00
25	CZ	68	VAL	CG1-CB-CG2	7.08	122.22	110.90
1	CA	792	A	C2'-C3'-O3'	7.06	125.02	109.50
36	BA	1698	A	O4'-C1'-N9	7.04	113.83	108.20
36	DA	1970	A	C5'-C4'-O4'	7.03	117.53	109.10
25	AZ	68	VAL	C-N-CA	-7.00	104.20	121.70
1	AA	741	G	N9-C1'-C2'	-7.00	104.30	112.00
1	AA	1054	C	N1-C2-N3	-7.00	114.30	119.20
1	AA	1504	G	C4'-C3'-O3'	6.96	126.93	113.00
36	DA	2477	C	C5'-C4'-O4'	-6.94	100.77	109.10
4	AD	12	CYS	N-CA-C	-6.93	92.28	111.00
36	DA	1799	G	C2'-C3'-O3'	6.89	124.73	113.70
36	DA	1653	G	C2'-C3'-O3'	6.89	124.72	113.70
1	AA	1279	A	N9-C1'-C2'	6.87	122.94	114.00
48	BP	52	GLU	N-CA-C	6.81	129.38	111.00
24	AY	35	C	O5'-P-OP1	-6.80	99.58	105.70
1	AA	1498	U	N1-C1'-C2'	6.75	122.77	114.00
11	AK	63	LEU	CA-CB-CG	6.73	130.78	115.30
36	DA	2756	U	C2'-C3'-O3'	6.72	124.46	113.70
1	AA	60	A	C2'-C3'-O3'	6.72	124.45	113.70
24	AY	18	G	C2'-C3'-O3'	6.71	124.44	113.70
1	CA	495	A	C2'-C3'-O3'	6.71	124.44	113.70
25	CZ	68	VAL	CA-C-N	-6.70	102.46	117.20
39	DD	260	ARG	NE-CZ-NH1	6.70	123.65	120.30
47	BO	8	LEU	CA-CB-CG	6.68	130.68	115.30
1	AA	495	A	C2'-C3'-O3'	6.68	124.38	113.70
52	DT	80	SER	N-CA-C	6.66	128.99	111.00
1	AA	995	C	N1-C1'-C2'	-6.62	104.72	112.00
1	AA	760	G	N9-C1'-C2'	-6.59	104.75	112.00
1	AA	245	C	N1-C1'-C2'	-6.58	104.77	112.00
36	BA	527	C	N1-C1'-C2'	6.57	122.54	114.00
1	CA	1054	C	N3-C2-O2	6.56	126.49	121.90
24	CY	18	G	C2'-C3'-O3'	6.56	124.20	113.70
25	AZ	69	GLU	OE1-CD-OE2	-6.54	115.46	123.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	971	G	N9-C1'-C2'	6.52	122.48	114.00
1	AA	1054	C	C4'-C3'-O3'	-6.50	95.74	109.40
36	DA	1970	A	C1'-O4'-C4'	-6.50	104.70	109.90
36	BA	2278	A	C5'-C4'-C3'	6.48	126.37	116.00
36	BA	1781	C	N1-C1'-C2'	6.48	122.42	114.00
4	CD	32	ALA	N-CA-C	-6.47	93.52	111.00
36	BA	2286	A	N9-C1'-C2'	6.44	122.37	114.00
36	BA	1653	G	C2'-C3'-O3'	6.43	123.99	113.70
36	DA	2655	G	N9-C1'-C2'	6.38	122.29	114.00
1	AA	1181	G	N9-C1'-C2'	6.38	122.29	114.00
36	BA	1970	A	C5'-C4'-C3'	6.36	126.17	116.00
1	AA	1054	C	O4'-C1'-N1	-6.35	103.12	108.20
1	CA	887	G	N9-C1'-C2'	-6.33	105.03	112.00
36	DA	856	C	C2'-C3'-O3'	6.30	123.79	113.70
25	CZ	357	PRO	N-CA-C	6.30	128.47	112.10
24	CY	34	C	C6-N1-C2	6.26	122.81	120.30
12	CL	88	GLY	N-CA-C	-6.26	97.44	113.10
1	CA	1049	U	N1-C1'-C2'	6.26	122.14	114.00
1	AA	1054	C	N1-C2-O2	-6.26	115.15	118.90
1	AA	1190	G	N9-C1'-C2'	6.25	122.13	114.00
12	AL	47	LYS	N-CA-C	6.25	127.87	111.00
36	BA	2031	A	N9-C1'-C2'	6.23	122.09	114.00
36	BA	1970	A	C1'-O4'-C4'	-6.19	104.95	109.90
36	DA	1781	C	N1-C1'-C2'	6.18	122.04	114.00
36	DA	1970	A	C5'-C4'-C3'	6.17	125.87	116.00
39	DD	260	ARG	NE-CZ-NH2	-6.15	117.23	120.30
1	AA	428	G	N9-C1'-C2'	6.13	121.97	114.00
36	DA	527	C	N1-C1'-C2'	6.12	121.95	114.00
48	BP	59	LEU	CA-CB-CG	6.10	129.34	115.30
36	DA	2654	A	C2'-C3'-O3'	6.10	123.47	113.70
1	AA	1387	G	C5'-C4'-C3'	-6.10	106.25	116.00
24	AY	34	C	C5'-C4'-O4'	6.09	116.42	109.10
1	CA	198	G	N9-C1'-C2'	-6.08	105.31	112.00
19	AS	5	LEU	CA-CB-CG	5.99	129.07	115.30
1	AA	428	G	C2'-C3'-O3'	5.97	123.26	113.70
36	DA	387	U	C2'-C3'-O3'	5.95	123.22	113.70
23	AX	24	G	C5'-C4'-C3'	-5.95	106.48	116.00
24	CY	34	C	N3-C4-N4	-5.89	113.87	118.00
36	BA	669	G	N9-C1'-C2'	5.89	121.65	114.00
36	DA	1495	A	N9-C1'-C2'	5.88	121.65	114.00
1	AA	532	A	N9-C1'-C2'	5.88	121.64	114.00
22	AV	59	U	N1-C1'-C2'	-5.87	105.55	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	BA	2756	U	C2'-C3'-O3'	5.87	123.09	113.70
52	BT	59	THR	N-CA-C	-5.86	95.18	111.00
40	DE	168	MET	N-CA-C	5.85	126.78	111.00
1	AA	388	G	N9-C1'-C2'	5.83	121.58	114.00
56	DX	57	LEU	CA-CB-CG	5.83	128.70	115.30
36	BA	2464	C	N1-C1'-C2'	-5.82	105.60	112.00
36	DA	975	C	O4'-C1'-N1	5.81	112.85	108.20
36	DA	2464	C	N1-C1'-C2'	-5.81	105.61	112.00
36	DA	1934	C	N1-C1'-C2'	-5.80	105.62	112.00
36	DA	975	C	N1-C1'-C2'	5.79	121.53	114.00
1	AA	1381	U	C5'-C4'-C3'	-5.79	106.74	116.00
36	DA	2286	A	N9-C1'-C2'	5.78	121.51	114.00
25	AZ	68	VAL	CA-C-N	-5.77	104.51	117.20
1	AA	1280	A	N9-C1'-C2'	5.76	121.49	114.00
12	AL	88	GLY	N-CA-C	-5.76	98.69	113.10
1	AA	1504	G	O5'-P-OP1	-5.74	100.53	105.70
36	BA	2132	U	N1-C1'-C2'	5.74	121.46	114.00
7	AG	145	ALA	N-CA-C	-5.74	95.52	111.00
36	DA	1819	A	C4'-C3'-O3'	5.74	124.47	113.00
1	CA	266	G	C2'-C3'-O3'	5.73	122.86	113.70
48	BP	45	LEU	N-CA-C	-5.71	95.59	111.00
25	AZ	68	VAL	CG1-CB-CG2	5.71	120.03	110.90
39	BD	260	ARG	NE-CZ-NH2	-5.70	117.45	120.30
39	DD	176	ARG	N-CA-C	-5.67	95.69	111.00
1	AA	547	A	N9-C1'-C2'	5.67	121.37	114.00
36	BA	958	U	N1-C1'-C2'	5.67	121.37	114.00
1	CA	328	C	N1-C1'-C2'	5.65	121.35	114.00
57	DY	54	LYS	N-CA-C	-5.65	95.75	111.00
36	BA	1617	C	N1-C1'-C2'	5.64	121.33	114.00
36	DA	527	C	O4'-C1'-N1	5.63	112.70	108.20
36	DA	1301	A	N9-C1'-C2'	5.62	121.31	114.00
1	AA	971	G	N9-C1'-C2'	5.62	121.30	114.00
1	AA	772	U	C5'-C4'-C3'	-5.60	107.04	116.00
1	CA	982	U	C2'-C3'-O3'	5.58	122.63	113.70
11	CK	52	GLY	N-CA-C	5.58	127.04	113.10
39	DD	56	GLY	N-CA-C	-5.58	99.16	113.10
36	BA	193	U	C5'-C4'-C3'	-5.57	107.09	116.00
1	AA	1198	G	O5'-P-OP2	5.56	117.37	110.70
25	CZ	69	GLU	OE1-CD-OE2	-5.53	116.66	123.30
1	CA	388	G	N9-C1'-C2'	5.53	121.19	114.00
36	BA	1835	G	C5'-C4'-C3'	-5.52	107.17	116.00
36	BA	1300	U	C2'-C3'-O3'	5.51	122.52	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	BA	1948	G	C5'-C4'-C3'	-5.51	107.18	116.00
36	BA	2405	G	N9-C1'-C2'	5.50	121.16	114.00
1	CA	532	A	O4'-C1'-N9	5.48	112.58	108.20
7	AG	133	GLY	N-CA-C	-5.45	99.47	113.10
36	BA	1313	U	N1-C1'-C2'	5.44	121.07	114.00
1	AA	982	U	C2'-C3'-O3'	5.43	122.40	113.70
1	CA	1502	A	N9-C1'-C2'	5.42	121.04	114.00
36	BA	242	G	N9-C1'-C2'	5.42	121.04	114.00
58	DZ	5	LEU	CA-CB-CG	5.41	127.74	115.30
1	AA	1145	C	C2'-C3'-O3'	5.41	122.35	113.70
1	AA	1239	A	N9-C1'-C2'	5.40	121.02	114.00
1	AA	197	A	N9-C1'-C2'	5.39	121.01	114.00
36	BA	2665	A	N9-C1'-C2'	-5.39	106.06	112.00
1	CA	839	U	N1-C1'-C2'	5.39	121.01	114.00
1	AA	1239	A	C2'-C3'-O3'	5.39	122.33	113.70
25	CZ	68	VAL	CA-CB-CG1	-5.38	102.83	110.90
36	DA	1804	C	N1-C1'-C2'	-5.38	106.08	112.00
36	BA	2360	A	N9-C1'-C2'	-5.37	106.10	112.00
24	AY	34	C	C5'-C4'-C3'	-5.36	107.43	116.00
1	CA	498	U	N1-C1'-C2'	-5.35	106.12	112.00
1	AA	1283	G	N9-C1'-C2'	-5.32	106.15	112.00
56	BX	57	LEU	CA-CB-CG	5.32	127.53	115.30
36	DA	1909	C	C5'-C4'-C3'	-5.32	107.49	116.00
36	BA	2346	A	N9-C1'-C2'	5.32	120.91	114.00
1	AA	1200	C	C2'-C3'-O3'	5.31	122.20	113.70
36	DA	1493	C	N1-C1'-C2'	5.31	120.90	114.00
36	DA	1300	U	C2'-C3'-O3'	5.31	122.19	113.70
39	BD	260	ARG	NE-CZ-NH1	5.30	122.95	120.30
39	BD	68	LYS	N-CA-C	-5.30	96.69	111.00
23	CX	27	A	C2'-C3'-O3'	5.30	122.18	113.70
48	DP	26	GLY	N-CA-C	-5.30	99.85	113.10
52	BT	80	SER	N-CA-C	5.30	125.30	111.00
48	DP	45	LEU	N-CA-C	-5.30	96.70	111.00
1	AA	198	G	N9-C1'-C2'	-5.29	106.18	112.00
36	DA	1459	G	N9-C1'-C2'	5.29	120.88	114.00
24	CY	34	C	C5-C4-N4	5.28	123.90	120.20
23	CX	26	A	N9-C1'-C2'	5.28	120.86	114.00
1	CA	760	G	N9-C1'-C2'	-5.27	106.20	112.00
36	DA	1701	A	C5'-C4'-C3'	-5.26	107.58	116.00
36	BA	1340	U	N1-C1'-C2'	5.25	120.82	114.00
36	DA	1159	U	C5'-C4'-C3'	-5.25	107.61	116.00
2	AB	145	LEU	N-CA-C	-5.24	96.85	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	DA	2606	C	N1-C1'-C2'	-5.24	106.23	112.00
48	DP	40	SER	N-CA-C	-5.23	96.88	111.00
58	BZ	79	ARG	N-CA-C	-5.22	96.89	111.00
36	DA	669	G	N9-C1'-C2'	5.22	120.79	114.00
2	AB	152	PHE	N-CA-C	-5.22	96.91	111.00
36	DA	2346	A	N9-C1'-C2'	5.21	120.77	114.00
36	DA	958	U	N1-C1'-C2'	5.20	120.76	114.00
36	BA	696	G	C5'-C4'-C3'	-5.19	107.69	116.00
48	DP	59	LEU	CA-CB-CG	5.19	127.24	115.30
36	BA	2346	A	O4'-C1'-N9	5.19	112.35	108.20
50	DR	79	LEU	CA-CB-CG	5.19	127.23	115.30
36	BA	676	A	C1'-O4'-C4'	-5.18	105.75	109.90
36	BA	975	C	O4'-C1'-N1	5.18	112.34	108.20
50	DR	7	GLY	N-CA-C	5.16	126.00	113.10
1	AA	839	U	N1-C1'-C2'	5.15	120.70	114.00
36	BA	2521	C	C5'-C4'-C3'	-5.14	107.77	116.00
1	AA	1124	G	N9-C1'-C2'	5.14	120.68	114.00
36	DA	2675	A	C5'-C4'-C3'	-5.14	107.78	116.00
1	CA	727	G	N9-C1'-C2'	-5.14	106.35	112.00
1	AA	243	A	C4'-C3'-O3'	5.13	123.27	113.00
36	BA	2009	G	N9-C1'-C2'	-5.13	106.36	112.00
22	CV	59	U	N1-C1'-C2'	-5.12	106.36	112.00
4	AD	32	ALA	N-CA-C	-5.12	97.17	111.00
25	AZ	67	HIS	C-N-CA	5.12	134.49	121.70
36	DA	2559	C	C5'-C4'-C3'	-5.11	107.82	116.00
36	BA	664	C	N1-C1'-C2'	-5.11	106.38	112.00
36	BA	2604	U	C5'-C4'-C3'	-5.11	107.83	116.00
48	BP	40	SER	N-CA-C	-5.10	97.24	111.00
24	CY	75	C	C4'-C3'-O3'	5.09	123.19	113.00
1	AA	1504	G	OP2-P-O3'	5.09	116.40	105.20
14	AN	53	LEU	CA-CB-CG	5.08	126.99	115.30
36	BA	197	A	O5'-P-OP1	-5.08	101.12	105.70
36	BA	527	C	C5'-C4'-O4'	5.08	115.19	109.10
1	AA	633	G	C5'-C4'-C3'	-5.07	107.89	116.00
1	CA	485	G	N9-C1'-C2'	5.06	120.58	114.00
36	BA	787	U	OP1-P-O3'	5.06	116.32	105.20
48	BP	28	GLY	N-CA-C	-5.04	100.49	113.10
1	AA	1196	U	N1-C1'-C2'	5.04	120.55	114.00
36	BA	945	A	O4'-C1'-N9	5.04	112.23	108.20
36	BA	2179	C	O4'-C1'-N1	5.03	112.22	108.20
36	DA	1616	A	N9-C1'-C2'	5.03	120.53	114.00
23	AX	24	G	C2'-C3'-O3'	5.01	121.72	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	BA	259	G	N9-C1'-C2'	-5.01	106.49	112.00
36	BA	2036	C	C5'-C4'-O4'	-5.01	103.09	109.10
25	CZ	69	GLU	N-CA-CB	5.01	119.61	110.60
1	CA	243	A	C4'-C3'-O3'	5.01	123.01	113.00
36	BA	856	C	C2'-C3'-O3'	5.00	121.70	113.70

All (15) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
1	AA	243	A	C3'
1	AA	508	C	C3'
1	AA	687	A	C3'
1	AA	968	A	C3'
1	AA	1498	U	C3'
1	AA	1504	G	C3'
24	AY	36	A	C3'
24	AY	75	C	C3'
1	CA	243	A	C3'
1	CA	508	C	C3'
1	CA	687	A	C3'
1	CA	1498	U	C3'
24	CY	36	A	C3'
24	CY	75	C	C3'
36	DA	1819	A	C3'

All (440) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	AA	1048	G	Sidechain
1	AA	1049	U	Sidechain
1	AA	1050	G	Sidechain
1	AA	1054	C	Sidechain
1	AA	1077	G	Sidechain
1	AA	1102	A	Sidechain
1	AA	1124	G	Sidechain
1	AA	114	U	Sidechain
1	AA	1153	C	Sidechain
1	AA	1181	G	Sidechain
1	AA	1190	G	Sidechain
1	AA	1196	U	Sidechain
1	AA	1199	U	Sidechain
1	AA	1206	G	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	122	G	Sidechain
1	AA	1241	G	Sidechain
1	AA	1279	A	Sidechain
1	AA	1281	U	Sidechain
1	AA	1283	G	Sidechain
1	AA	1330	U	Sidechain
1	AA	1331	G	Sidechain
1	AA	1381	U	Sidechain
1	AA	1395	C	Sidechain
1	AA	14	U	Sidechain
1	AA	1406	U	Sidechain
1	AA	1407	C	Sidechain
1	AA	1418	A	Sidechain
1	AA	1419	G	Sidechain
1	AA	1474	G	Sidechain
1	AA	1505	G	Sidechain
1	AA	1519	A	Sidechain
1	AA	1524	C	Sidechain
1	AA	189(H)	G	Sidechain
1	AA	197	A	Sidechain
1	AA	198	G	Sidechain
1	AA	245	C	Sidechain
1	AA	250	A	Sidechain
1	AA	251	G	Sidechain
1	AA	266	G	Sidechain
1	AA	290	C	Sidechain
1	AA	311	C	Sidechain
1	AA	347	G	Sidechain
1	AA	361	G	Sidechain
1	AA	445	G	Sidechain
1	AA	47	C	Sidechain
1	AA	498	U	Sidechain
1	AA	501	C	Sidechain
1	AA	508	C	Sidechain
1	AA	509	A	Sidechain
1	AA	538	G	Sidechain
1	AA	547	A	Sidechain
1	AA	570	G	Sidechain
1	AA	586	C	Sidechain
1	AA	603	U	Sidechain
1	AA	667	G	Sidechain
1	AA	672	U	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	682	G	Sidechain
1	AA	713	G	Sidechain
1	AA	714	G	Sidechain
1	AA	727	G	Sidechain
1	AA	741	G	Sidechain
1	AA	760	G	Sidechain
1	AA	774	G	Sidechain
1	AA	784	C	Sidechain
1	AA	792	A	Sidechain
1	AA	799	G	Sidechain
1	AA	809	G	Sidechain
1	AA	813	U	Sidechain
1	AA	822	C	Sidechain
1	AA	852	G	Sidechain
1	AA	855	G	Sidechain
1	AA	858	G	Sidechain
1	AA	863	U	Sidechain
1	AA	883	C	Sidechain
1	AA	895	G	Sidechain
1	AA	898	G	Sidechain
1	AA	901	A	Sidechain
1	AA	916	G	Sidechain
1	AA	922	G	Sidechain
1	AA	937	A	Sidechain
1	AA	946	A	Sidechain
1	AA	950	U	Sidechain
1	AA	952	U	Sidechain
1	AA	961	U	Sidechain
1	AA	966	G	Sidechain
1	AA	971	G	Sidechain
1	AA	980	C	Sidechain
1	AA	981	U	Sidechain
1	AA	995	C	Sidechain
8	AH	20	TYR	Sidechain
19	AS	80	TYR	Sidechain
22	AV	26	A	Sidechain
22	AV	29	G	Sidechain
22	AV	33	U	Sidechain
22	AV	38	A	Sidechain
22	AV	59	U	Sidechain
22	AV	68	C	Sidechain
22	AV	70	G	Sidechain

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Mol	Chain	Res	Type	Group
23	AX	26	A	Sidechain
24	AY	34	C	Sidechain
25	AZ	67	HIS	Mainchain
25	AZ	68	VAL	Mainchain
36	BA	1031	G	Sidechain
36	BA	1136	G	Sidechain
36	BA	114	U	Sidechain
36	BA	1162	G	Sidechain
36	BA	1199	U	Sidechain
36	BA	1215	G	Sidechain
36	BA	127	A	Sidechain
36	BA	1312	U	Sidechain
36	BA	1327	C	Sidechain
36	BA	1376	C	Sidechain
36	BA	1378	A	Sidechain
36	BA	1379	A	Sidechain
36	BA	1385	G	Sidechain
36	BA	1394	U	Sidechain
36	BA	1440	G	Sidechain
36	BA	15	G	Sidechain
36	BA	1603	A	Sidechain
36	BA	1619	G	Sidechain
36	BA	1647	G	Sidechain
36	BA	1664	A	Sidechain
36	BA	1693	U	Sidechain
36	BA	1768	U	Sidechain
36	BA	1771	C	Sidechain
36	BA	1772	G	Sidechain
36	BA	1778	U	Sidechain
36	BA	178	G	Sidechain
36	BA	1791	A	Sidechain
36	BA	1798	U	Sidechain
36	BA	1800	C	Sidechain
36	BA	1809	A	Sidechain
36	BA	1812	A	Sidechain
36	BA	1829	A	Sidechain
36	BA	1831	G	Sidechain
36	BA	1833	U	Sidechain
36	BA	1834	U	Sidechain
36	BA	1886	C	Sidechain
36	BA	1890	A	Sidechain
36	BA	1900	A	Sidechain

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>Group</b>
36	BA	1902	C	Sidechain
36	BA	1905	C	Sidechain
36	BA	1932	A	Sidechain
36	BA	1937	A	Sidechain
36	BA	1943	U	Sidechain
36	BA	1944	U	Sidechain
36	BA	1952	A	Sidechain
36	BA	1954	G	Sidechain
36	BA	1955	U	Sidechain
36	BA	197	A	Sidechain
36	BA	1978	A	Sidechain
36	BA	199	A	Sidechain
36	BA	1990	C	Sidechain
36	BA	1992	G	Sidechain
36	BA	1995	U	Sidechain
36	BA	2009	G	Sidechain
36	BA	2022	U	Sidechain
36	BA	2031	A	Sidechain
36	BA	2038	G	Sidechain
36	BA	2047	U	Sidechain
36	BA	2053	G	Sidechain
36	BA	2061	G	Sidechain
36	BA	2074	U	Sidechain
36	BA	208	C	Sidechain
36	BA	2128	C	Sidechain
36	BA	2132	U	Sidechain
36	BA	2179	C	Sidechain
36	BA	2257	U	Sidechain
36	BA	2279	G	Sidechain
36	BA	2320	A	Sidechain
36	BA	2322	A	Sidechain
36	BA	2329	G	Sidechain
36	BA	2389	G	Sidechain
36	BA	2391	G	Sidechain
36	BA	2405	G	Sidechain
36	BA	2446	G	Sidechain
36	BA	2484	G	Sidechain
36	BA	2506	U	Sidechain
36	BA	2511	U	Sidechain
36	BA	2517	C	Sidechain
36	BA	2521	C	Sidechain
36	BA	2564	A	Sidechain

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Mol	Chain	Res	Type	Group
36	BA	2581	G	Sidechain
36	BA	2585	U	Sidechain
36	BA	2595	G	Sidechain
36	BA	2597	G	Sidechain
36	BA	2603	G	Sidechain
36	BA	2620	C	Sidechain
36	BA	2665	A	Sidechain
36	BA	271(Y)	U	Sidechain
36	BA	2724	C	Sidechain
36	BA	2746	U	Sidechain
36	BA	2779	U	Sidechain
36	BA	2837	G	Sidechain
36	BA	2848	G	Sidechain
36	BA	383	U	Sidechain
36	BA	384	U	Sidechain
36	BA	448	U	Sidechain
36	BA	463	G	Sidechain
36	BA	471	A	Sidechain
36	BA	52	A	Sidechain
36	BA	527	C	Sidechain
36	BA	532	A	Sidechain
36	BA	562	U	Sidechain
36	BA	630	G	Sidechain
36	BA	632	A	Sidechain
36	BA	652	C	Sidechain
36	BA	670	A	Sidechain
36	BA	682	G	Sidechain
36	BA	686	G	Sidechain
36	BA	700	G	Sidechain
36	BA	701	G	Sidechain
36	BA	717	G	Sidechain
36	BA	769	G	Sidechain
36	BA	803	U	Sidechain
36	BA	842	G	Sidechain
36	BA	851	U	Sidechain
36	BA	854	G	Sidechain
36	BA	88	G	Sidechain
36	BA	90	U	Sidechain
36	BA	914	C	Sidechain
36	BA	945	A	Sidechain
36	BA	958	U	Sidechain
36	BA	960	A	Sidechain

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>Group</b>
36	BA	980	A	Sidechain
37	BB	40	U	Sidechain
37	BB	42	C	Sidechain
37	BB	67	G	Sidechain
39	BD	190	TYR	Sidechain
49	BQ	9	TYR	Sidechain
1	CA	1049	U	Sidechain
1	CA	1050	G	Sidechain
1	CA	1054	C	Sidechain
1	CA	1079	G	Sidechain
1	CA	1081	G	Sidechain
1	CA	1086	U	Sidechain
1	CA	109	A	Sidechain
1	CA	1153	C	Sidechain
1	CA	1181	G	Sidechain
1	CA	1196	U	Sidechain
1	CA	1226	C	Sidechain
1	CA	1281	U	Sidechain
1	CA	1283	G	Sidechain
1	CA	129	U	Sidechain
1	CA	1292	U	Sidechain
1	CA	1331	G	Sidechain
1	CA	1347	G	Sidechain
1	CA	1348	U	Sidechain
1	CA	1350	A	Sidechain
1	CA	1361	G	Sidechain
1	CA	1368	G	Sidechain
1	CA	1370	G	Sidechain
1	CA	1372	U	Sidechain
1	CA	14	U	Sidechain
1	CA	1414	U	Sidechain
1	CA	1496	C	Sidechain
1	CA	1503	A	Sidechain
1	CA	1519	A	Sidechain
1	CA	189(H)	G	Sidechain
1	CA	197	A	Sidechain
1	CA	198	G	Sidechain
1	CA	204	U	Sidechain
1	CA	22	G	Sidechain
1	CA	224	C	Sidechain
1	CA	235	C	Sidechain
1	CA	244	U	Sidechain

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Mol	Chain	Res	Type	Group
1	CA	245	C	Sidechain
1	CA	249	U	Sidechain
1	CA	250	A	Sidechain
1	CA	262	A	Sidechain
1	CA	274	A	Sidechain
1	CA	309	G	Sidechain
1	CA	338	A	Sidechain
1	CA	347	G	Sidechain
1	CA	358	U	Sidechain
1	CA	368	U	Sidechain
1	CA	37	U	Sidechain
1	CA	378	G	Sidechain
1	CA	388	G	Sidechain
1	CA	404	U	Sidechain
1	CA	41	G	Sidechain
1	CA	450	G	Sidechain
1	CA	494	U	Sidechain
1	CA	498	U	Sidechain
1	CA	522	C	Sidechain
1	CA	573	A	Sidechain
1	CA	593	G	Sidechain
1	CA	598	U	Sidechain
1	CA	6	G	Sidechain
1	CA	636	U	Sidechain
1	CA	656	C	Sidechain
1	CA	713	G	Sidechain
1	CA	727	G	Sidechain
1	CA	733	A	Sidechain
1	CA	740	U	Sidechain
1	CA	760	G	Sidechain
1	CA	774	G	Sidechain
1	CA	782	A	Sidechain
1	CA	783	C	Sidechain
1	CA	785	G	Sidechain
1	CA	788	U	Sidechain
1	CA	793	U	Sidechain
1	CA	801	U	Sidechain
1	CA	804	U	Sidechain
1	CA	808	C	Sidechain
1	CA	813	U	Sidechain
1	CA	823	G	Sidechain
1	CA	884	U	Sidechain

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Mol	Chain	Res	Type	Group
1	CA	901	A	Sidechain
1	CA	902	G	Sidechain
1	CA	908	A	Sidechain
1	CA	920	U	Sidechain
1	CA	921	U	Sidechain
1	CA	922	G	Sidechain
1	CA	935	A	Sidechain
1	CA	956	U	Sidechain
1	CA	961	U	Sidechain
1	CA	966	G	Sidechain
1	CA	971	G	Sidechain
1	CA	980	C	Sidechain
1	CA	995	C	Sidechain
8	CH	48	TYR	Sidechain
22	CV	59	U	Sidechain
22	CW	34	G	Sidechain
23	CX	14	A	Sidechain
23	CX	15	A	Sidechain
23	CX	19	U	Sidechain
23	CX	22	U	Sidechain
24	CY	11	U	Sidechain
24	CY	34	C	Sidechain
25	CZ	68	VAL	Mainchain
25	CZ	70	TYR	Sidechain
36	DA	1126	A	Sidechain
36	DA	1215	G	Sidechain
36	DA	1238	G	Sidechain
36	DA	1326	U	Sidechain
36	DA	1380	G	Sidechain
36	DA	1405	U	Sidechain
36	DA	1418	G	Sidechain
36	DA	1425	G	Sidechain
36	DA	1455	G	Sidechain
36	DA	15	G	Sidechain
36	DA	1560	G	Sidechain
36	DA	1614	A	Sidechain
36	DA	1618	A	Sidechain
36	DA	1639	U	Sidechain
36	DA	1647	G	Sidechain
36	DA	1693	U	Sidechain
36	DA	1714	G	Sidechain
36	DA	1772	G	Sidechain

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Mol	Chain	Res	Type	Group
36	DA	1781	C	Sidechain
36	DA	1821	A	Sidechain
36	DA	1829	A	Sidechain
36	DA	1831	G	Sidechain
36	DA	1841	U	Sidechain
36	DA	1857	G	Sidechain
36	DA	1907	G	Sidechain
36	DA	1911	U	Sidechain
36	DA	1931	U	Sidechain
36	DA	1934	C	Sidechain
36	DA	1936	A	Sidechain
36	DA	1939	U	Sidechain
36	DA	1946	U	Sidechain
36	DA	1964	G	Sidechain
36	DA	2000	G	Sidechain
36	DA	2009	G	Sidechain
36	DA	2010	G	Sidechain
36	DA	2011	U	Sidechain
36	DA	205	G	Sidechain
36	DA	2073	C	Sidechain
36	DA	2122	U	Sidechain
36	DA	2128	C	Sidechain
36	DA	2132	U	Sidechain
36	DA	2158	A	Sidechain
36	DA	2243	U	Sidechain
36	DA	2250	G	Sidechain
36	DA	2262	U	Sidechain
36	DA	2282	G	Sidechain
36	DA	2285	C	Sidechain
36	DA	2344	U	Sidechain
36	DA	2360	A	Sidechain
36	DA	239	U	Sidechain
36	DA	2393	A	Sidechain
36	DA	2419	U	Sidechain
36	DA	2437	U	Sidechain
36	DA	2445	G	Sidechain
36	DA	2464	C	Sidechain
36	DA	2491	U	Sidechain
36	DA	250	G	Sidechain
36	DA	2504	U	Sidechain
36	DA	2506	U	Sidechain
36	DA	2507	C	Sidechain

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Mol	Chain	Res	Type	Group
36	DA	2508	G	Sidechain
36	DA	2517	C	Sidechain
36	DA	2529	G	Sidechain
36	DA	2534	A	Sidechain
36	DA	2545	G	Sidechain
36	DA	2569	G	Sidechain
36	DA	2581	G	Sidechain
36	DA	2597	G	Sidechain
36	DA	2601	C	Sidechain
36	DA	2604	U	Sidechain
36	DA	2647	U	Sidechain
36	DA	2656	U	Sidechain
36	DA	2665	A	Sidechain
36	DA	2668	G	Sidechain
36	DA	2716	U	Sidechain
36	DA	2724	C	Sidechain
36	DA	2726	U	Sidechain
36	DA	2735	G	Sidechain
36	DA	2746	U	Sidechain
36	DA	2758	A	Sidechain
36	DA	2869	G	Sidechain
36	DA	395	U	Sidechain
36	DA	532	A	Sidechain
36	DA	555	U	Sidechain
36	DA	606	U	Sidechain
36	DA	630	G	Sidechain
36	DA	631	A	Sidechain
36	DA	632	A	Sidechain
36	DA	652	C	Sidechain
36	DA	665	C	Sidechain
36	DA	676	A	Sidechain
36	DA	686	G	Sidechain
36	DA	688	U	Sidechain
36	DA	760	G	Sidechain
36	DA	761	A	Sidechain
36	DA	807	U	Sidechain
36	DA	835	A	Sidechain
36	DA	858	U	Sidechain
36	DA	913	U	Sidechain
36	DA	916	G	Sidechain
36	DA	945	A	Sidechain
36	DA	958	U	Sidechain

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Mol	Chain	Res	Type	Group
36	DA	976	C	Sidechain
36	DA	987	G	Sidechain
37	DB	40	U	Sidechain
37	DB	42	C	Sidechain
37	DB	67	G	Sidechain
49	DQ	26	TYR	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	32329	0	16318	1145	0
1	CA	32329	0	16317	1397	0
2	AB	1900	0	1951	238	3
2	CB	1900	0	1951	239	3
3	AC	1612	0	1677	194	0
3	CC	1612	0	1677	201	0
4	AD	1703	0	1765	249	0
4	CD	1703	0	1763	265	0
5	AE	1146	0	1207	111	0
5	CE	1146	0	1207	159	0
6	AF	843	0	857	75	0
6	CF	843	0	857	82	0
7	AG	1257	0	1296	81	0
7	CG	1257	0	1296	109	0
8	AH	1116	0	1177	72	0
8	CH	1116	0	1177	99	0
9	AI	1010	0	1037	145	0
9	CI	1010	0	1037	159	0
10	AJ	794	0	840	146	0
10	CJ	794	0	840	155	0
11	AK	885	0	904	58	0
11	CK	885	0	904	86	0
12	AL	970	0	1057	118	0
12	CL	970	0	1057	124	0
13	AM	987	0	1059	158	0
13	CM	987	0	1059	179	0
14	AN	492	0	529	70	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
14	CN	492	0	530	115	0
15	AO	734	0	771	64	0
15	CO	734	0	771	61	0
16	AP	700	0	720	71	0
16	CP	700	0	720	77	0
17	AQ	823	0	891	63	0
17	CQ	823	0	891	73	0
18	AR	574	0	644	51	0
18	CR	574	0	644	77	0
19	AS	629	0	652	73	0
19	CS	629	0	652	98	0
20	AT	763	0	861	84	0
20	CT	763	0	861	88	0
21	AU	208	0	221	28	0
21	CU	208	0	221	23	0
22	AV	1619	0	822	88	0
22	AW	1619	0	822	89	0
22	CV	1619	0	822	64	0
22	CW	1619	0	822	97	0
23	AX	362	0	184	13	0
23	CX	362	0	184	11	0
24	AY	1644	0	853	74	0
24	CY	1644	0	853	92	0
25	AZ	2984	0	2997	411	0
25	CZ	2984	0	2997	510	0
26	B0	662	0	688	90	0
26	D0	662	0	688	104	0
27	B1	731	0	808	104	0
27	D1	731	0	808	101	0
28	B2	598	0	653	192	0
28	D2	598	0	653	98	0
29	B3	467	0	523	58	0
29	D3	467	0	523	34	0
30	B4	340	0	336	62	0
30	D4	340	0	337	55	0
31	B5	459	0	480	90	0
31	D5	459	0	480	73	0
32	B6	433	0	461	134	0
32	D6	433	0	461	134	0
33	B7	418	0	467	37	0
33	D7	418	0	467	31	0
34	B8	507	0	576	115	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
34	D8	507	0	576	130	0
35	B9	307	0	336	53	0
35	D9	307	0	338	83	0
36	BA	62477	0	31497	2437	0
36	DA	62477	0	31497	2528	0
37	BB	2551	0	1295	127	0
37	DB	2551	0	1295	122	0
38	BC	1742	0	1800	167	3
38	DC	1742	0	1800	184	3
39	BD	2145	0	2234	266	0
39	DD	2145	0	2234	290	0
40	BE	1563	0	1629	263	0
40	DE	1563	0	1629	276	0
41	BF	1623	0	1677	212	0
41	DF	1623	0	1677	226	0
42	BG	1474	0	1535	247	0
42	DG	1474	0	1535	278	0
43	BH	1222	0	1282	178	0
43	DH	1222	0	1282	193	0
44	BJ	651	0	170	25	0
44	DJ	651	0	157	32	0
45	BK	700	0	180	17	0
45	DK	700	0	176	16	0
46	BN	1104	0	1180	178	0
46	DN	1104	0	1180	205	0
47	BO	933	0	996	116	0
47	DO	933	0	996	108	0
48	BP	1114	0	1187	292	0
48	DP	1114	0	1187	290	0
49	BQ	1122	0	1179	166	0
49	DQ	1122	0	1179	165	0
50	BR	960	0	1021	150	0
50	DR	960	0	1021	154	0
51	BS	770	0	832	148	0
51	DS	770	0	832	140	0
52	BT	1141	0	1202	257	0
52	DT	1141	0	1202	227	0
53	BU	958	0	1015	165	0
53	DU	958	0	1015	154	0
54	BV	779	0	852	122	0
54	DV	779	0	852	122	0
55	BW	896	0	953	98	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
55	DW	896	0	953	93	0
56	BX	725	0	778	91	0
56	DX	725	0	778	108	0
57	BY	775	0	870	165	0
57	DY	775	0	870	168	0
58	BZ	1459	0	1488	216	0
58	DZ	1459	0	1488	254	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	1	0
60	AZ	28	0	12	7	0
60	CZ	28	0	12	17	0
61	AZ	57	0	58	5	0
61	CZ	57	0	58	7	0
All	All	307196	0	208708	20881	6

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 41.

All (20881) 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)
25:AZ:357:PRO:CB	25:AZ:357:PRO:CG	1.77	1.43
38:DC:100:ILE:HG23	38:DC:127:LEU:CD1	1.68	1.23
4:CD:187:ARG:NH1	4:CD:187:ARG:HB3	1.52	1.22
15:AO:87:ILE:HG22	15:AO:88:ARG:H	1.08	1.18
24:CY:76:A:H1'	25:CZ:287:GLY:HA3	1.26	1.18
36:BA:2187:G:H2'	36:BA:2188:C:H5'	1.20	1.17
2:CB:22:LYS:NZ	2:CB:22:LYS:HA	1.60	1.17
25:CZ:67:HIS:HA	25:CZ:79:HIS:O	1.42	1.17
32:B6:27:LYS:HG3	32:B6:30:THR:HB	1.17	1.17
41:DF:168:ARG:HG3	41:DF:175:THR:HG21	1.27	1.16
32:D6:27:LYS:HG3	32:D6:30:THR:HB	1.18	1.16
22:AV:46:G:H3'	22:AV:47:U:H5''	1.21	1.16
47:DO:111:PHE:HB3	47:DO:114:ILE:HD13	1.21	1.16
12:AL:20:LYS:H	12:AL:20:LYS:HD3	1.07	1.16

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DT:89:VAL:HG12	52:DT:91:ARG:HG3	1.23	1.15
52:BT:89:VAL:HG12	52:BT:91:ARG:HG3	1.28	1.15
52:DT:28:VAL:HG11	52:DT:46:GLU:HA	1.15	1.14
38:DC:100:ILE:CG2	38:DC:127:LEU:HG	1.75	1.14
41:BF:168:ARG:HG3	41:BF:175:THR:HG21	1.25	1.14
32:B6:15:GLU:HB2	32:B6:20:ASN:HB3	1.31	1.13
1:CA:227:G:C2'	1:CA:228:A:H5''	1.76	1.13
24:CY:72:U:H2'	24:CY:73:G:H5''	1.23	1.13
32:B6:52:VAL:HG12	32:B6:53:LYS:H	1.14	1.13
36:BA:2833:G:H3'	36:BA:2834:G:H5''	1.29	1.13
38:DC:100:ILE:HG12	38:DC:127:LEU:HD12	1.28	1.13
32:D6:17:LYS:HE2	32:D6:17:LYS:HA	1.21	1.13
58:BZ:115:GLY:HA2	58:BZ:177:PRO:HD3	1.31	1.12
36:DA:2833:G:H3'	36:DA:2834:G:H5''	1.26	1.12
12:CL:7:ILE:HD12	12:CL:7:ILE:H	1.09	1.12
57:DY:10:GLY:HA2	57:DY:27:VAL:HG13	1.31	1.12
36:DA:1665:A:H2'	36:DA:1666:G:H5''	1.19	1.12
27:D1:46:LEU:HD22	27:D1:46:LEU:H	1.09	1.12
36:DA:1887:C:H2'	36:DA:1888:G:H5''	1.25	1.11
36:DA:1484:G:H2'	36:DA:1485:G:H5''	1.20	1.11
38:DC:100:ILE:HG23	38:DC:127:LEU:CG	1.81	1.11
39:BD:239:ARG:HH11	39:BD:239:ARG:HG2	1.07	1.11
4:AD:108:LEU:HD11	4:AD:176:LEU:HD13	1.11	1.11
52:BT:55:ASN:H	52:BT:59:THR:HG22	1.00	1.11
53:BU:83:LEU:HG	53:BU:88:ILE:HD11	1.21	1.10
43:BH:16:SER:HB2	43:BH:27:LYS:HB2	1.29	1.10
1:CA:1305:G:N2	1:CA:1331:G:H2'	1.66	1.10
1:CA:227:G:H2'	1:CA:228:A:H5''	1.13	1.10
21:CU:6:ARG:HD3	21:CU:15:ARG:CZ	1.82	1.10
56:BX:12:VAL:HG23	56:BX:13:LEU:H	1.09	1.10
22:CW:73:A:H2'	22:CW:74:C:H5''	1.30	1.10
31:D5:50:GLY:HA3	31:D5:56:LYS:HD2	1.26	1.10
52:BT:53:ARG:HH11	52:BT:53:ARG:HB3	1.11	1.10
36:BA:2491:U:H5'	36:BA:2570:G:H5''	1.34	1.10
2:CB:155:LEU:HD21	2:CB:159:PRO:HG3	1.33	1.10
58:BZ:151:HIS:HB3	58:BZ:170:THR:HA	1.20	1.10
2:AB:114:ARG:HH11	2:AB:118:LEU:HD21	1.15	1.09
1:CA:1149:C:H2'	1:CA:1150:U:O2	1.50	1.09
1:AA:1054:C:O2'	1:AA:1055:A:H5''	1.51	1.09
36:DA:1884:A:H2'	36:DA:1885:A:H5''	1.21	1.09
25:CZ:266:VAL:HG21	25:CZ:291:ARG:HH21	1.17	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:68:VAL:HG13	25:CZ:69:GLU:N	1.68	1.09
48:DP:65:ARG:HB3	48:DP:68:GLN:HE22	1.14	1.09
25:AZ:34:VAL:HG21	25:AZ:199:ILE:HG21	1.34	1.09
39:BD:30:GLU:HB2	39:BD:35:LYS:HD2	1.19	1.09
1:AA:1053:G:H4'	1:AA:1054:C:H5'	1.32	1.09
36:BA:1884:A:H2'	36:BA:1885:A:H5''	1.24	1.09
38:BC:78:ALA:HA	38:BC:116:THR:H	1.17	1.09
43:BH:52:VAL:HG11	43:BH:69:ARG:HD2	1.26	1.09
12:AL:41:ARG:HG2	12:AL:42:THR:H	1.15	1.09
4:CD:187:ARG:HH11	4:CD:187:ARG:HB3	0.96	1.08
48:DP:47:ASP:HB2	48:DP:51:PHE:HB2	1.17	1.08
39:DD:30:GLU:HB2	39:DD:35:LYS:HD2	1.29	1.08
39:DD:43:ARG:NH1	39:DD:44:ASN:HD21	1.49	1.08
1:CA:1190:G:H3'	3:CC:3:ASN:HD21	1.14	1.08
49:DQ:101:ARG:HH11	49:DQ:101:ARG:HG3	1.18	1.08
36:BA:1665:A:H2'	36:BA:1666:G:H5''	1.33	1.08
27:D1:44:PRO:HG2	27:D1:46:LEU:HD21	1.17	1.08
39:DD:71:ASP:HB2	39:DD:103:ARG:HH22	1.01	1.08
25:CZ:34:VAL:HG21	25:CZ:199:ILE:HG21	1.35	1.08
58:BZ:51:ALA:HB1	58:BZ:57:ILE:HD11	1.35	1.08
42:DG:67:LYS:H	42:DG:67:LYS:HD3	1.01	1.08
56:DX:35:THR:HG22	56:DX:37:THR:H	1.18	1.07
28:B2:55:ARG:HA	28:B2:58:ALA:HB2	1.33	1.07
25:CZ:272:MET:HB2	25:CZ:277:LEU:HD23	1.26	1.07
52:DT:55:ASN:N	52:DT:59:THR:HG22	1.68	1.07
39:BD:71:ASP:HB2	39:BD:103:ARG:HH22	1.18	1.07
57:DY:46:LYS:HG2	57:DY:47:LYS:H	1.18	1.07
57:BY:95:LYS:HG3	57:BY:100:ALA:HA	1.36	1.07
34:D8:61:LEU:HD12	34:D8:61:LEU:H	1.06	1.07
43:DH:52:VAL:HG11	43:DH:69:ARG:HD2	1.32	1.07
26:D0:49:LYS:H	26:D0:80:HIS:HB3	1.15	1.07
52:BT:28:VAL:HG21	52:BT:47:GLY:N	1.69	1.07
28:D2:35:LEU:HD11	28:D2:50:ILE:HG13	1.26	1.07
2:CB:101:MET:HA	2:CB:108:ILE:HD12	1.31	1.07
46:BN:133:GLN:HG2	46:BN:135:PRO:HD3	1.38	1.06
36:BA:628:G:H2'	36:BA:629:G:H5''	1.36	1.06
49:BQ:141:GLN:HE22	58:BZ:72:ARG:HA	1.19	1.06
41:BF:53:THR:HG23	41:BF:55:GLY:H	1.20	1.06
2:AB:165:VAL:HG23	2:AB:166:ASP:H	1.20	1.06
57:DY:13:VAL:HG23	57:DY:73:ARG:O	1.54	1.06
50:BR:99:LYS:H	50:BR:99:LYS:HD2	1.21	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1484:G:H2'	36:BA:1485:G:H5''	1.34	1.06
46:DN:133:GLN:HG2	46:DN:135:PRO:HD3	1.33	1.06
1:AA:227:G:H2'	1:AA:228:A:H5''	1.35	1.06
41:DF:103:LYS:HG3	41:DF:106:ARG:HH21	1.14	1.06
1:AA:979:C:H3'	1:AA:980:C:H5''	1.34	1.06
22:CW:73:A:C2'	22:CW:74:C:H5''	1.85	1.05
42:DG:130:ASN:HB3	42:DG:160:VAL:HA	1.31	1.05
34:D8:62:LEU:HD13	36:DA:242:G:H5''	1.10	1.05
1:AA:973:G:H1'	10:AJ:55:LYS:NZ	1.71	1.05
36:DA:2159:G:H2'	36:DA:2160:G:H5''	1.33	1.05
2:AB:22:LYS:HA	2:AB:22:LYS:NZ	1.70	1.05
1:AA:973:G:H1'	10:AJ:55:LYS:CE	1.87	1.05
52:BT:28:VAL:CG1	52:BT:46:GLU:HA	1.84	1.05
42:BG:67:LYS:H	42:BG:67:LYS:HD3	1.17	1.05
52:BT:28:VAL:HG11	52:BT:46:GLU:HA	1.08	1.05
46:BN:48:MET:H	46:BN:48:MET:HE3	1.18	1.05
30:D4:22:ILE:H	30:D4:22:ILE:HD12	1.14	1.05
9:AI:4:TYR:CE2	9:AI:88:TYR:HB2	1.91	1.05
15:CO:87:ILE:HG22	15:CO:88:ARG:H	1.19	1.04
36:DA:2187:G:H2'	36:DA:2188:C:H5'	1.39	1.04
22:CV:44:G:H2'	22:CV:45:U:H5'	1.39	1.04
38:BC:79:LYS:HD3	38:BC:119:VAL:HG12	1.37	1.04
10:CJ:50:ILE:HD13	10:CJ:50:ILE:H	1.20	1.04
39:BD:70:TRP:CH2	39:BD:150:LYS:HA	1.92	1.04
38:DC:131:LEU:HD22	38:DC:136:LEU:HB2	1.39	1.04
36:BA:1301:A:O2'	36:BA:1302:A:H2'	1.56	1.04
28:B2:34:GLU:HA	28:B2:37:PHE:HB2	1.36	1.04
52:DT:60:THR:HG22	52:DT:77:PRO:HA	1.36	1.04
22:CW:38:A:H2'	22:CW:39:U:H5''	1.39	1.04
12:AL:89:ARG:NE	12:AL:91:LYS:HZ3	1.53	1.04
25:AZ:7:ARG:HH11	25:AZ:7:ARG:HG2	1.16	1.04
2:CB:114:ARG:HH11	2:CB:118:LEU:HD21	1.19	1.04
1:CA:1412:C:H2'	1:CA:1413:A:C8	1.91	1.04
38:DC:78:ALA:HA	38:DC:116:THR:H	1.22	1.04
25:CZ:333:GLY:HA3	25:CZ:363:MET:HE1	1.39	1.04
3:CC:16:ARG:HB2	3:CC:16:ARG:HH11	1.19	1.04
3:AC:81:GLY:HA2	3:AC:85:ARG:NE	1.72	1.04
56:DX:12:VAL:HG23	56:DX:13:LEU:H	1.18	1.04
35:D9:4:ARG:HG2	35:D9:34:GLN:NE2	1.73	1.04
1:AA:1305:G:N2	1:AA:1331:G:H2'	1.72	1.04
56:BX:11:PRO:HA	56:BX:28:PHE:HB3	1.38	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1665:A:C2'	36:BA:1666:G:H5''	1.88	1.03
52:DT:58:ASN:ND2	52:DT:58:ASN:H	1.52	1.03
13:AM:22:ILE:HD12	13:AM:25:ILE:HD12	1.40	1.03
12:CL:41:ARG:HH11	12:CL:41:ARG:HB3	1.20	1.03
39:BD:44:ASN:HB3	39:BD:49:ILE:HA	1.40	1.03
38:BC:100:ILE:HG23	38:BC:127:LEU:CD1	1.86	1.03
58:BZ:29:TYR:HB3	58:BZ:34:ASN:HB2	1.39	1.03
41:BF:125:LEU:H	41:BF:125:LEU:HD23	1.24	1.03
10:AJ:38:ILE:HD11	10:AJ:71:LEU:HD22	1.37	1.03
36:DA:628:G:H2'	36:DA:629:G:H5''	1.38	1.03
57:BY:81:LYS:HD3	57:BY:97:ARG:HG3	1.38	1.03
54:BV:24:LYS:HA	54:BV:92:THR:HG23	1.40	1.03
36:BA:2477:C:H6	36:BA:2477:C:H5'	1.17	1.03
32:B6:15:GLU:HG2	32:B6:18:ARG:NH1	1.74	1.03
57:DY:81:LYS:HD3	57:DY:97:ARG:HG3	1.38	1.03
3:CC:46:GLU:O	3:CC:47:LEU:HB2	1.57	1.03
36:DA:1665:A:C2'	36:DA:1666:G:H5''	1.88	1.02
52:BT:27:THR:O	52:BT:28:VAL:HB	1.57	1.02
22:CV:68:C:C2'	22:CV:69:G:H5''	1.89	1.02
29:D3:9:VAL:HG11	29:D3:55:ARG:HD3	1.40	1.02
10:CJ:57:LYS:HE2	10:CJ:60:ARG:HH21	1.21	1.02
54:BV:39:LEU:HD12	54:BV:47:VAL:HG11	1.40	1.02
46:DN:48:MET:H	46:DN:48:MET:HE3	1.24	1.02
53:BU:14:HIS:CD2	53:BU:36:ARG:HH22	1.76	1.02
38:DC:100:ILE:HG21	38:DC:127:LEU:HG	1.39	1.02
38:DC:100:ILE:HG23	38:DC:127:LEU:HD11	1.34	1.02
3:AC:16:ARG:HH11	3:AC:16:ARG:HB2	1.24	1.02
36:BA:272(H):C:H2'	36:BA:272(I):U:H5''	1.39	1.02
43:DH:85:LYS:NZ	43:DH:132:ARG:HA	1.72	1.02
42:BG:51:ARG:HD3	42:BG:53:LEU:HD21	1.38	1.02
48:BP:47:ASP:HB2	48:BP:51:PHE:HB2	1.38	1.02
22:CV:68:C:H2'	22:CV:69:G:H5''	1.41	1.02
9:AI:58:HIS:CD2	9:AI:59:PHE:CE1	2.48	1.02
10:AJ:40:LEU:HD23	10:AJ:40:LEU:H	1.20	1.02
58:BZ:151:HIS:CB	58:BZ:170:THR:HA	1.90	1.01
57:DY:95:LYS:HG3	57:DY:100:ALA:HA	1.42	1.01
36:BA:2312:U:O3'	42:BG:71:THR:HG21	1.59	1.01
3:AC:46:GLU:O	3:AC:47:LEU:HB2	1.57	1.01
4:AD:28:SER:HB3	4:AD:29:PRO:HD2	1.42	1.01
12:CL:20:LYS:H	12:CL:20:LYS:HD3	1.24	1.01
36:DA:2833:G:H3'	36:DA:2834:G:C5'	1.90	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1054:C:H5	1:AA:1196:U:C6	1.79	1.01
1:AA:1190:G:H3'	3:AC:3:ASN:ND2	1.73	1.01
13:CM:10:PRO:HB2	13:CM:18:ALA:HB1	1.43	1.01
12:AL:89:ARG:HE	12:AL:91:LYS:NZ	1.57	1.01
9:AI:16:ARG:HB2	9:AI:64:THR:HB	1.40	1.01
3:CC:81:GLY:HA2	3:CC:85:ARG:HE	1.24	1.01
5:AE:80:ILE:HD11	5:AE:91:LEU:HD22	1.42	1.01
39:DD:70:TRP:CH2	39:DD:150:LYS:HA	1.95	1.01
28:D2:51:ARG:HB2	28:D2:55:ARG:HH12	1.25	1.01
1:CA:1190:G:H3'	3:CC:3:ASN:ND2	1.76	1.01
1:CA:1116:C:H2'	1:CA:1117:G:H5''	1.43	1.01
31:B5:50:GLY:HA3	31:B5:56:LYS:HD2	1.39	1.01
1:CA:534:U:H6	1:CA:534:U:H5'	1.23	1.01
56:DX:50:LYS:H	56:DX:87:GLN:HE22	1.09	1.00
26:B0:27:GLU:OE1	36:BA:856:C:H1'	1.61	1.00
14:AN:4:LYS:O	14:AN:7:ILE:HG12	1.59	1.00
1:CA:1305:G:H22	1:CA:1331:G:H2'	1.24	1.00
28:B2:22:GLU:HA	28:B2:64:LEU:HD21	1.43	1.00
36:BA:271(L):U:H5''	36:BA:271(M):G:H5'	1.40	1.00
49:DQ:60:ARG:HG3	58:DZ:180:VAL:HB	1.41	1.00
12:AL:93:LEU:HB2	12:AL:96:VAL:HG22	1.42	1.00
52:DT:55:ASN:H	52:DT:59:THR:HG22	0.85	1.00
36:DA:2189:U:H2'	36:DA:2190:G:H4'	1.41	1.00
22:CW:38:A:C2'	22:CW:39:U:H5''	1.91	1.00
1:AA:975:A:H4'	1:AA:976:G:H5''	1.43	1.00
9:AI:47:LEU:H	9:AI:47:LEU:HD12	1.25	1.00
25:CZ:7:ARG:HH22	25:CZ:281:ILE:HD11	1.24	1.00
53:DU:83:LEU:HG	53:DU:88:ILE:HD11	1.39	1.00
41:DF:25:PRO:HB3	41:DF:119:ARG:HG3	1.43	1.00
35:D9:10:ILE:O	35:D9:11:CYS:HB3	1.59	1.00
12:AL:41:ARG:NH1	12:AL:41:ARG:HB3	1.76	1.00
3:AC:82:GLU:H	3:AC:85:ARG:HD3	1.27	1.00
36:BA:2179:C:H1'	36:BA:2180:U:H3	1.26	1.00
34:D8:32:LEU:HB3	34:D8:36:LYS:HZ1	1.26	1.00
51:DS:83:LYS:HG2	51:DS:105:ALA:HB3	1.43	1.00
31:B5:4:HIS:HB3	31:B5:5:PRO:HD3	1.41	1.00
54:DV:24:LYS:HA	54:DV:92:THR:HG23	1.42	1.00
41:BF:25:PRO:HB3	41:BF:119:ARG:HG3	1.40	0.99
1:CA:368:U:OP2	25:CZ:291:ARG:HD3	1.60	0.99
36:DA:1484:G:C2'	36:DA:1485:G:H5''	1.91	0.99
57:BY:10:GLY:HA2	57:BY:27:VAL:HG13	1.45	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DH:16:SER:HB2	43:DH:27:LYS:HB2	1.39	0.99
39:BD:206:LEU:HD22	39:BD:211:ARG:HG2	1.41	0.99
9:CI:4:TYR:CE2	9:CI:88:TYR:HB2	1.97	0.99
10:AJ:57:LYS:HE2	10:AJ:60:ARG:HH21	1.27	0.99
35:D9:1:MET:HE3	35:D9:32:HIS:HD2	1.28	0.99
39:DD:239:ARG:HG2	39:DD:239:ARG:HH11	1.25	0.99
41:BF:84:VAL:HG13	41:BF:85:GLY:H	1.24	0.99
36:BA:1378:A:O2'	36:BA:1379:A:H5'	1.62	0.99
13:CM:97:PRO:HA	13:CM:110:ARG:HD3	1.43	0.99
22:CW:48:C:H2'	22:CW:59:U:H1'	1.45	0.99
25:CZ:68:VAL:HG13	25:CZ:69:GLU:H	1.19	0.99
9:AI:53:VAL:HG22	9:AI:95:LYS:NZ	1.78	0.98
52:DT:27:THR:O	52:DT:28:VAL:HB	1.59	0.98
43:DH:85:LYS:HZ2	43:DH:132:ARG:HA	1.26	0.98
36:DA:2477:C:H5'	36:DA:2477:C:H6	1.28	0.98
32:D6:36:LEU:HD12	32:D6:50:ARG:CZ	1.93	0.98
36:DA:1899:G:H21	36:DA:1902:C:H41	1.10	0.98
1:AA:1116:C:H2'	1:AA:1117:G:H5''	1.46	0.98
6:CF:82:ARG:HB2	6:CF:85:VAL:HG23	1.45	0.98
20:CT:57:ARG:HH11	20:CT:102:GLY:HA2	1.28	0.98
39:DD:62:TYR:HA	39:DD:87:ASN:HD21	1.27	0.98
28:D2:10:LEU:HB3	28:D2:14:ARG:HD2	1.44	0.98
25:CZ:266:VAL:CG2	25:CZ:291:ARG:HH21	1.76	0.98
38:BC:100:ILE:CG2	38:BC:127:LEU:HG	1.94	0.98
48:DP:41:ARG:NH1	48:DP:45:LEU:HD23	1.78	0.98
36:BA:612:C:H2'	36:BA:613:G:H5'	1.46	0.98
36:DA:1884:A:C2'	36:DA:1885:A:H5''	1.94	0.98
19:AS:49:ILE:HD12	19:AS:49:ILE:H	1.27	0.98
3:CC:154:SER:HA	3:CC:165:THR:HA	1.45	0.98
36:DA:2287:A:H62	36:DA:2344:U:H3	1.07	0.98
43:BH:85:LYS:HE3	43:BH:87:LEU:HG	1.45	0.98
1:AA:1392:G:N2	1:AA:1502:A:H8	1.62	0.98
25:CZ:254:GLU:HG3	25:CZ:307:PRO:HA	1.44	0.98
40:BE:57:LYS:HA	40:BE:57:LYS:HE3	1.45	0.98
1:CA:966:G:HO2'	1:CA:967:C:H6	1.00	0.98
43:DH:149:ARG:HA	43:DH:162:ILE:HD11	1.44	0.98
36:BA:2833:G:H3'	36:BA:2834:G:C5'	1.94	0.98
36:BA:1024:G:H3'	36:BA:1025:G:H5''	1.45	0.98
48:DP:62:LEU:HD23	48:DP:62:LEU:H	1.28	0.98
20:AT:53:LEU:HB3	20:AT:102:GLY:HA3	1.45	0.98
26:D0:27:GLU:OE1	36:DA:856:C:H1'	1.64	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AV:46:G:H3'	22:AV:47:U:C5'	1.92	0.97
9:CI:16:ARG:HB2	9:CI:64:THR:HB	1.44	0.97
8:AH:116:LYS:HD2	8:AH:129:VAL:HG11	1.46	0.97
48:DP:146:VAL:HG22	48:DP:147:LEU:H	1.26	0.97
36:BA:2183:C:H2'	36:BA:2184:G:H8	1.29	0.97
39:BD:27:THR:HG21	39:BD:83:GLU:HG2	1.46	0.97
25:CZ:215:ARG:HB3	25:CZ:282:ALA:HB1	1.43	0.97
25:CZ:7:ARG:HG2	25:CZ:7:ARG:HH11	1.28	0.97
1:AA:1086:U:H2'	1:AA:1087:G:H5'	1.44	0.97
25:CZ:118:GLU:HA	25:CZ:121:LEU:HD21	1.46	0.97
36:DA:654(E):G:H22	36:DA:654(Q):C:H1'	1.29	0.97
36:BA:2645:G:H3'	36:BA:2646:C:H5'	1.40	0.97
42:DG:125:PHE:HB3	42:DG:131:TYR:HA	1.42	0.97
12:CL:41:ARG:NH1	12:CL:41:ARG:HB3	1.78	0.97
20:AT:57:ARG:HH11	20:AT:102:GLY:HA2	1.29	0.97
1:AA:1463:C:H5'	52:BT:115:ARG:HH21	1.26	0.97
48:BP:146:VAL:HG22	48:BP:147:LEU:H	1.29	0.97
3:CC:6:HIS:ND1	14:CN:49:HIS:HB3	1.79	0.97
12:AL:41:ARG:HH11	12:AL:41:ARG:HB3	1.29	0.97
52:DT:55:ASN:H	52:DT:59:THR:CG2	1.76	0.97
9:AI:58:HIS:CD2	9:AI:59:PHE:HE1	1.81	0.97
22:AW:38:A:H2'	22:AW:39:U:H5''	1.45	0.97
27:B1:36:GLY:O	27:B1:37:ILE:HG13	1.65	0.97
30:B4:22:ILE:H	30:B4:22:ILE:HD12	1.28	0.97
4:CD:62:GLN:O	4:CD:66:ARG:HB2	1.64	0.97
58:DZ:166:SER:H	58:DZ:167:PRO:HA	1.28	0.97
53:DU:13:LYS:HD3	53:DU:13:LYS:H	1.26	0.97
39:DD:132:PRO:HG3	39:DD:190:TYR:CE1	1.99	0.97
9:CI:40:LEU:HD11	9:CI:70:LYS:HG2	1.44	0.97
36:BA:654(E):G:H22	36:BA:654(Q):C:H1'	1.27	0.97
36:DA:1803:A:O3'	39:DD:259:THR:HG21	1.64	0.97
51:BS:17:ARG:HA	51:BS:20:ARG:NH1	1.80	0.97
36:DA:90:U:H1'	36:DA:92:A:H5''	1.45	0.97
12:CL:41:ARG:HG2	12:CL:42:THR:H	1.27	0.97
19:CS:45:VAL:HA	19:CS:62:ILE:HG13	1.46	0.97
36:BA:2187:G:C2'	36:BA:2188:C:H5'	1.95	0.97
41:DF:24:LEU:HB3	41:DF:25:PRO:HD2	1.47	0.97
51:BS:49:VAL:HG12	51:BS:50:SER:H	1.24	0.97
36:DA:271(L):U:H5''	36:DA:271(M):G:H5'	1.47	0.97
16:AP:5:ARG:HH21	16:AP:24:ALA:HA	1.30	0.97
50:DR:99:LYS:H	50:DR:99:LYS:HD2	1.29	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1050:A:H2'	36:BA:1051:G:H5'	1.45	0.96
36:BA:2787:C:H1'	40:BE:61:ARG:HD3	1.46	0.96
48:DP:16:ARG:NE	48:DP:18:ARG:HG2	1.79	0.96
47:BO:76:ALA:HB3	52:BT:75:ILE:HD13	1.46	0.96
15:CO:82:ILE:HD11	15:CO:88:ARG:HB2	1.47	0.96
36:BA:1803:A:O3'	39:BD:259:THR:HG21	1.65	0.96
52:DT:28:VAL:CG1	52:DT:46:GLU:HA	1.95	0.96
58:BZ:166:SER:HB2	58:BZ:168:GLU:H	1.29	0.96
26:D0:40:GLN:HE22	26:D0:45:PHE:H	1.12	0.96
41:BF:24:LEU:HB3	41:BF:25:PRO:HD2	1.45	0.96
36:BA:1517:G:H8	36:BA:1517:G:H5'	1.26	0.96
28:B2:29:LYS:HA	28:B2:32:LEU:HB3	1.44	0.96
36:BA:1720:U:H2'	36:BA:1721:G:H5''	1.47	0.96
14:AN:13:THR:N	14:AN:14:PRO:HD2	1.80	0.96
52:BT:60:THR:HG22	52:BT:77:PRO:HA	1.47	0.96
41:BF:6:VAL:HG12	41:BF:7:TYR:H	1.31	0.96
1:AA:452:A:HO2'	1:AA:453:A:H8	0.99	0.96
36:DA:2640:G:H2'	36:DA:2641:G:H5''	1.47	0.96
2:CB:14:GLY:O	2:CB:15:VAL:HG22	1.63	0.96
42:DG:125:PHE:HD1	42:DG:126:ASP:H	1.14	0.96
1:CA:1053:G:H4'	1:CA:1054:C:H5'	1.44	0.96
31:B5:24:ALA:O	31:B5:25:LEU:HB2	1.61	0.96
36:DA:2760:C:H2'	36:DA:2761:G:H5''	1.46	0.96
32:B6:17:LYS:HA	32:B6:17:LYS:HE2	1.46	0.96
53:BU:36:ARG:HB2	53:BU:36:ARG:HH11	1.28	0.96
13:CM:4:ILE:HD12	13:CM:22:ILE:HD11	1.48	0.96
36:BA:1817:G:H2'	36:BA:1818:U:H5'	1.46	0.96
9:CI:55:ALA:HA	9:CI:58:HIS:HE1	1.29	0.96
9:CI:58:HIS:CD2	9:CI:59:PHE:CE1	2.53	0.96
51:DS:59:LYS:HG2	51:DS:60:GLY:H	1.25	0.95
58:DZ:69:THR:HG22	58:DZ:90:VAL:HA	1.45	0.95
40:BE:9:VAL:HG12	40:BE:25:VAL:O	1.63	0.95
30:D4:8:LYS:O	30:D4:9:LEU:HB2	1.63	0.95
40:DE:7:VAL:HG12	40:DE:27:LEU:HB3	1.48	0.95
38:BC:100:ILE:HG23	38:BC:127:LEU:CG	1.96	0.95
49:DQ:26:TYR:O	49:DQ:27:VAL:HG23	1.65	0.95
12:CL:89:ARG:CG	12:CL:91:LYS:HZ3	1.79	0.95
36:DA:612:C:H2'	36:DA:613:G:H5'	1.47	0.95
36:BA:672:C:H2'	36:BA:673:C:H5''	1.45	0.95
13:CM:97:PRO:CA	13:CM:110:ARG:HD3	1.97	0.95
41:BF:157:VAL:CG2	41:BF:194:MET:HG2	1.97	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1347:G:N2	1:CA:1373:G:H2'	1.80	0.95
34:D8:17:THR:HG22	34:D8:21:LYS:O	1.67	0.95
12:CL:89:ARG:HE	12:CL:91:LYS:NZ	1.63	0.95
40:DE:59:VAL:HG21	40:DE:63:LEU:HA	1.46	0.95
36:DA:655:A:H4'	36:DA:656:G:H5'	1.47	0.95
32:B6:26:ASN:HD22	32:B6:32:ASN:ND2	1.63	0.95
1:AA:1054:C:H6	1:AA:1196:U:C2	1.84	0.95
50:BR:2:ARG:HD2	50:BR:2:ARG:C	1.87	0.95
41:DF:84:VAL:HG13	41:DF:85:GLY:H	1.32	0.95
49:BQ:141:GLN:NE2	58:BZ:72:ARG:HA	1.81	0.95
36:DA:2645:G:H3'	36:DA:2646:C:H5'	1.46	0.95
36:DA:1092:C:H42	36:DA:1100:C:H42	1.11	0.95
3:CC:8:ILE:HG23	3:CC:16:ARG:HG2	1.49	0.95
28:D2:35:LEU:CD1	28:D2:50:ILE:HG13	1.96	0.94
3:CC:16:ARG:NH1	3:CC:16:ARG:HB2	1.82	0.94
36:BA:27:G:H22	36:BA:512:G:H2'	1.27	0.94
37:BB:20:C:H2'	37:BB:21:G:H5''	1.47	0.94
37:BB:30:C:H1'	37:BB:57:A:H61	1.30	0.94
28:B2:11:GLU:HA	28:B2:14:ARG:HG3	1.49	0.94
28:B2:2:LYS:N	36:BA:97:C:H5''	1.81	0.94
57:BY:46:LYS:HG2	57:BY:47:LYS:H	1.28	0.94
47:BO:111:PHE:HB3	47:BO:114:ILE:HD13	1.49	0.94
12:AL:102:ARG:NH1	12:AL:110:VAL:HG22	1.81	0.94
1:AA:1364:U:O2	21:AU:14:TRP:HH2	1.48	0.94
36:BA:2781:A:H5'	36:BA:2782:G:H5'	1.48	0.94
48:BP:16:ARG:HB2	48:BP:16:ARG:NH1	1.81	0.94
39:DD:30:GLU:HB2	39:DD:35:LYS:CD	1.96	0.94
36:BA:1654:A:OP1	50:BR:3:HIS:HB2	1.68	0.94
50:DR:95:THR:HA	50:DR:116:LEU:O	1.66	0.94
51:BS:59:LYS:HG2	51:BS:60:GLY:H	1.31	0.94
37:DB:20:C:H2'	37:DB:21:G:H5''	1.48	0.94
16:CP:22:THR:HA	16:CP:33:ILE:HG12	1.50	0.94
58:DZ:81:ARG:HH11	58:DZ:81:ARG:HB3	1.31	0.94
3:AC:16:ARG:NH1	3:AC:16:ARG:HB2	1.81	0.94
55:BW:14:PRO:HG2	55:BW:78:GLU:HG3	1.49	0.94
32:B6:26:ASN:ND2	32:B6:32:ASN:HD21	1.64	0.94
1:CA:1220:G:H2'	1:CA:1221:G:H8	1.30	0.94
1:AA:1239:A:H62	1:AA:1299:A:N6	1.65	0.94
52:BT:39:ARG:HD2	52:BT:39:ARG:H	1.32	0.94
1:CA:979:C:H3'	1:CA:980:C:H5''	1.48	0.94
38:BC:100:ILE:HG23	38:BC:127:LEU:HG	1.49	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:82:GLU:N	3:AC:85:ARG:HD3	1.81	0.94
9:AI:53:VAL:H	9:AI:95:LYS:HZ2	1.11	0.94
53:DU:9:VAL:HG12	53:DU:13:LYS:HE2	1.48	0.94
51:BS:24:LEU:HB3	51:BS:85:VAL:HG12	1.46	0.94
42:BG:138:GLN:HB3	42:BG:153:ARG:O	1.66	0.94
4:AD:78:LEU:HD21	4:AD:96:LEU:HB3	1.49	0.94
34:D8:62:LEU:HD13	36:DA:242:G:C5'	1.98	0.94
28:B2:61:LEU:HD13	36:BA:72:U:H4'	1.47	0.94
10:AJ:34:VAL:HG22	10:AJ:74:ILE:HA	1.46	0.94
31:D5:24:ALA:O	31:D5:25:LEU:HB2	1.67	0.94
46:DN:21:LYS:HD2	46:DN:26:LEU:HB2	1.50	0.94
1:AA:1054:C:HO2'	1:AA:1055:A:H5''	1.27	0.94
39:DD:37:LEU:HD12	39:DD:64:ILE:HG22	1.49	0.94
38:DC:79:LYS:HD3	38:DC:119:VAL:HG12	1.51	0.93
58:DZ:81:ARG:NH1	58:DZ:81:ARG:HB3	1.82	0.93
36:DA:1050:A:H2'	36:DA:1051:G:H5'	1.48	0.93
36:DA:272(H):C:H2'	36:DA:272(I):U:H5''	1.50	0.93
1:AA:8:A:H62	4:AD:208:SER:HB2	1.32	0.93
48:BP:45:LEU:CD1	48:BP:46:LYS:H	1.81	0.93
10:CJ:34:VAL:HG22	10:CJ:74:ILE:HA	1.51	0.93
32:D6:52:VAL:HG12	32:D6:53:LYS:H	1.33	0.93
36:BA:2334:G:H5'	51:BS:13:ARG:HD3	1.50	0.93
4:CD:30:LYS:C	4:CD:32:ALA:H	1.67	0.93
2:AB:14:GLY:O	2:AB:15:VAL:HG22	1.66	0.93
34:D8:62:LEU:CD1	36:DA:242:G:H5''	1.97	0.93
39:BD:30:GLU:HB2	39:BD:35:LYS:CD	1.96	0.93
35:D9:27:CYS:HG	59:D9:101:ZN:ZN	0.65	0.93
43:BH:117:PRO:HB3	43:BH:123:PHE:HE1	1.33	0.93
48:BP:24:GLY:HA3	48:BP:33:ARG:NH1	1.83	0.93
47:DO:64:ARG:HH21	47:DO:100:GLY:HA3	1.32	0.93
43:DH:117:PRO:HB3	43:DH:123:PHE:HE1	1.32	0.93
1:AA:189(H):G:HO2'	1:AA:189(I):G:H8	1.03	0.93
41:DF:125:LEU:HD23	41:DF:125:LEU:H	1.33	0.93
1:CA:1047:G:H5''	14:CN:4:LYS:HE2	1.47	0.93
25:AZ:133:VAL:HG12	25:AZ:134:PHE:H	1.31	0.93
36:BA:655:A:H4'	36:BA:656:G:H5'	1.50	0.93
42:BG:97:ASP:H	42:BG:100:TRP:HD1	1.12	0.93
32:D6:45:LYS:HZ2	32:D6:45:LYS:H	0.96	0.93
57:DY:17:SER:HA	57:DY:71:LYS:HD2	1.51	0.93
22:CV:68:C:H2'	22:CV:69:G:C5'	1.99	0.93
36:DA:1047:G:H2'	36:DA:1110:G:H21	1.33	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2801(A):A:H4'	36:DA:2802:G:H5'	1.48	0.93
32:D6:18:ARG:HG2	32:D6:18:ARG:HH11	1.33	0.93
14:CN:4:LYS:O	14:CN:7:ILE:HG12	1.68	0.93
25:CZ:224:PRO:HG3	25:CZ:345:ARG:HD3	1.50	0.93
42:DG:77:ILE:HG12	42:DG:81:LYS:O	1.68	0.93
53:DU:16:LYS:O	53:DU:20:LEU:HD23	1.68	0.93
32:D6:41:PRO:HD2	32:D6:46:HIS:H	1.34	0.93
56:BX:10:ALA:O	56:BX:28:PHE:HB2	1.69	0.93
29:B3:35:ARG:HB2	29:B3:35:ARG:HH11	1.34	0.93
1:AA:265:G:H2'	1:AA:266:G:H5''	1.51	0.93
36:BA:2189:U:H2'	36:BA:2190:G:H4'	1.50	0.93
32:D6:45:LYS:H	32:D6:45:LYS:NZ	1.66	0.93
36:BA:1884:A:C2'	36:BA:1885:A:H5''	1.98	0.93
12:AL:24:VAL:HG13	12:AL:98:TYR:HE2	1.34	0.93
5:CE:80:ILE:CD1	5:CE:91:LEU:HB2	1.99	0.93
27:B1:21:ARG:HD3	27:B1:35:THR:HG21	1.51	0.93
36:DA:2312:U:H2'	36:DA:2313:C:H5''	1.50	0.92
38:DC:113:VAL:HG12	38:DC:138:PRO:HG3	1.49	0.92
1:CA:173:U:H5'	1:CA:197:A:O4'	1.68	0.92
42:DG:42:GLY:O	42:DG:89:GLY:HA2	1.70	0.92
36:DA:1301:A:O2'	36:DA:1302:A:H2'	1.69	0.92
39:DD:71:ASP:HB2	39:DD:103:ARG:NH2	1.85	0.92
35:D9:16:VAL:HG11	36:DA:1032:A:H4'	1.49	0.92
40:DE:29:GLY:HA3	40:DE:51:PHE:HE1	1.35	0.92
9:CI:58:HIS:CD2	9:CI:59:PHE:HE1	1.87	0.92
40:DE:57:LYS:HA	40:DE:57:LYS:HE3	1.50	0.92
51:DS:24:LEU:HB3	51:DS:85:VAL:HG12	1.49	0.92
11:CK:21:ILE:HG12	11:CK:30:VAL:HG12	1.51	0.92
7:CG:113:GLU:HG2	7:CG:119:ARG:HG2	1.49	0.92
1:CA:1054:C:H6	1:CA:1196:U:C2	1.87	0.92
1:CA:973:G:H1'	10:CJ:55:LYS:NZ	1.83	0.92
36:DA:1689:A:H62	36:DA:1698:A:H2	1.12	0.92
19:CS:19:VAL:HG11	19:CS:44:MET:HG3	1.48	0.92
58:BZ:69:THR:HG22	58:BZ:90:VAL:HA	1.49	0.92
26:D0:49:LYS:N	26:D0:80:HIS:HB3	1.85	0.92
1:AA:1432:G:OP1	52:BT:107:ASP:HB2	1.69	0.92
13:CM:15:VAL:HG12	13:CM:45:VAL:HG22	1.49	0.92
11:AK:54:ARG:O	11:AK:57:THR:HG22	1.69	0.92
1:CA:265:G:H2'	1:CA:266:G:H5''	1.51	0.92
12:AL:6:THR:OG1	12:AL:9:GLN:HG3	1.70	0.92
1:CA:1270:C:H2'	1:CA:1271:G:C8	2.04	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:D9:11:CYS:SG	35:D9:12:ASP:N	2.39	0.92
16:CP:26:ARG:HH11	16:CP:26:ARG:HG2	1.35	0.92
36:DA:1517:G:H8	36:DA:1517:G:H5'	1.35	0.92
56:BX:50:LYS:H	56:BX:87:GLN:HE22	1.13	0.92
4:CD:187:ARG:CB	4:CD:187:ARG:HH11	1.82	0.92
42:DG:34:LEU:H	42:DG:34:LEU:HD23	1.33	0.92
13:AM:11:ARG:HA	13:AM:45:VAL:HB	1.49	0.92
1:CA:198:G:HO2'	1:CA:199:G:H8	1.05	0.92
34:B8:15:LYS:HD3	48:BP:65:ARG:NH2	1.85	0.92
36:DA:2502:G:H5''	36:DA:2503:A:H5''	1.50	0.92
52:DT:28:VAL:HG21	52:DT:47:GLY:N	1.85	0.92
24:CY:1:A:H61	24:CY:72:U:H3	1.18	0.92
52:BT:53:ARG:NH1	52:BT:53:ARG:HB3	1.84	0.92
10:AJ:50:ILE:H	10:AJ:50:ILE:HD13	1.35	0.92
39:BD:21:PHE:HB3	39:BD:24:ILE:HD12	1.50	0.92
58:DZ:122:ARG:HH11	58:DZ:122:ARG:HG2	1.34	0.92
52:DT:53:ARG:HH11	52:DT:53:ARG:HB3	1.33	0.92
13:CM:11:ARG:HA	13:CM:45:VAL:HB	1.51	0.92
24:AY:1:A:H61	24:AY:72:U:H3	1.09	0.92
49:BQ:141:GLN:OXT	58:BZ:99:TYR:HB2	1.70	0.92
27:B1:42:GLN:NE2	36:BA:379:G:H21	1.66	0.92
37:DB:30:C:H1'	37:DB:57:A:H61	1.31	0.92
32:D6:17:LYS:HA	32:D6:17:LYS:CE	1.98	0.91
22:CW:38:A:H2'	22:CW:39:U:C5'	1.99	0.91
20:CT:53:LEU:HB3	20:CT:102:GLY:HA3	1.51	0.91
51:BS:85:VAL:HG23	51:BS:106:ARG:HG3	1.52	0.91
19:AS:45:VAL:HA	19:AS:62:ILE:HG13	1.50	0.91
5:CE:148:VAL:HG21	8:CH:107:LEU:HD13	1.53	0.91
9:AI:47:LEU:N	9:AI:47:LEU:HD12	1.84	0.91
6:CF:18:GLN:HA	6:CF:21:LEU:HB2	1.52	0.91
13:CM:49:THR:HG22	13:CM:51:ALA:H	1.35	0.91
39:BD:69:ARG:NH2	39:BD:128:GLY:O	2.03	0.91
32:D6:26:ASN:HD22	32:D6:32:ASN:HD21	1.13	0.91
31:D5:48:GLU:O	31:D5:49:CYS:SG	2.28	0.91
36:DA:500:G:N2	36:DA:502:A:H3'	1.84	0.91
1:AA:227:G:C2'	1:AA:228:A:H5''	1.99	0.91
1:AA:1125:U:H3	10:AJ:5:ARG:NH2	1.68	0.91
4:AD:61:LYS:HE2	4:AD:62:GLN:NE2	1.85	0.91
41:BF:28:ILE:HD13	41:BF:28:ILE:H	1.35	0.91
48:BP:62:LEU:HD23	48:BP:62:LEU:H	1.33	0.91
42:DG:51:ARG:HD3	42:DG:53:LEU:HD21	1.51	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BN:26:LEU:HD11	46:BN:30:ILE:HD11	1.52	0.91
14:CN:13:THR:N	14:CN:14:PRO:HD2	1.85	0.91
36:BA:882:G:H2'	36:BA:883:G:H8	1.36	0.91
36:BA:672:C:C2'	36:BA:673:C:H5''	2.00	0.91
58:BZ:163:LEU:HG	58:BZ:165:VAL:HG13	1.51	0.91
5:CE:80:ILE:HD11	5:CE:91:LEU:HB2	1.50	0.91
10:CJ:11:PHE:HE1	10:CJ:67:THR:HG22	1.36	0.91
13:AM:97:PRO:HA	13:AM:110:ARG:HD3	1.49	0.91
31:B5:44:THR:HG21	50:BR:101:ALA:HB2	1.50	0.91
31:D5:54:GLY:H	31:D5:56:LYS:HZ2	1.19	0.91
57:BY:13:VAL:HG23	57:BY:73:ARG:O	1.71	0.91
46:DN:57:ALA:HB3	46:DN:124:ALA:HA	1.51	0.91
36:BA:1887:C:H2'	36:BA:1888:G:H5''	1.52	0.91
36:BA:1899:G:H21	36:BA:1902:C:H41	1.17	0.91
2:CB:80:ILE:H	2:CB:80:ILE:HD12	1.35	0.91
52:DT:29:ARG:HB3	52:DT:85:LYS:HA	1.51	0.91
42:DG:82:LEU:HD13	42:DG:87:PRO:HB2	1.51	0.91
25:CZ:7:ARG:NH2	25:CZ:281:ILE:HD11	1.83	0.91
43:BH:85:LYS:NZ	43:BH:132:ARG:HA	1.84	0.91
1:AA:547:A:H4'	1:AA:548:G:O5'	1.70	0.91
42:BG:166:ASP:HA	42:BG:169:ALA:HB3	1.53	0.91
36:DA:1747(A):G:H2'	36:DA:1748:G:H5''	1.52	0.91
2:AB:114:ARG:NH1	2:AB:118:LEU:HD21	1.86	0.91
2:AB:22:LYS:HZ3	2:AB:22:LYS:HA	1.29	0.91
36:DA:1899:G:N2	36:DA:1902:C:H41	1.69	0.91
12:CL:120:TYR:O	12:CL:122:THR:HG22	1.71	0.91
36:DA:2334:G:H5'	51:DS:13:ARG:HD3	1.52	0.91
48:BP:41:ARG:HH12	48:BP:45:LEU:HD23	1.35	0.91
36:BA:2036:C:H6	36:BA:2036:C:H5'	1.35	0.91
43:BH:117:PRO:HB3	43:BH:123:PHE:CE1	2.05	0.90
51:DS:13:ARG:HG3	51:DS:14:VAL:H	1.36	0.90
50:BR:63:ARG:HH22	50:BR:77:ARG:HG2	1.33	0.90
32:B6:27:LYS:HG3	32:B6:30:THR:CB	2.00	0.90
57:BY:45:VAL:HG12	57:BY:60:PHE:HB3	1.52	0.90
52:BT:62:THR:HG22	52:BT:75:ILE:HG23	1.51	0.90
9:AI:95:LYS:HG3	9:AI:96:LEU:HD13	1.54	0.90
12:CL:27:LEU:O	12:CL:29:GLY:N	2.04	0.90
25:CZ:265:THR:HG22	25:CZ:266:VAL:H	1.35	0.90
36:DA:2313:C:H5'	36:DA:2313:C:H6	1.37	0.90
52:DT:53:ARG:HB3	52:DT:53:ARG:NH1	1.86	0.90
34:B8:62:LEU:HD13	36:BA:242:G:H5''	1.51	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BH:83:TYR:HB2	43:BH:134:SER:HB3	1.53	0.90
36:DA:2760:C:C2'	36:DA:2761:G:H5''	2.01	0.90
36:DA:658:C:H2'	36:DA:659:C:C6	2.05	0.90
36:BA:1190:G:H5'	48:BP:35:HIS:H	1.35	0.90
40:DE:38:THR:HB	40:DE:41:LYS:HG2	1.51	0.90
36:BA:83:G:H22	36:BA:102:G:H2'	1.36	0.90
13:AM:11:ARG:HG2	13:AM:12:ASN:ND2	1.86	0.90
39:DD:27:THR:CG2	39:DD:83:GLU:HG2	2.01	0.90
43:BH:19:VAL:HG12	43:BH:20:ALA:H	1.36	0.90
36:BA:1222:C:H2'	36:BA:1223:G:H5''	1.52	0.90
52:DT:91:ARG:O	52:DT:117:ASP:HB3	1.71	0.90
52:BT:50:ILE:HA	52:BT:99:LEU:CD1	2.01	0.90
1:CA:1054:C:O2'	1:CA:1055:A:H5''	1.69	0.90
1:AA:1116:C:C2'	1:AA:1117:G:H5''	2.02	0.90
32:B6:36:LEU:HD12	32:B6:50:ARG:NH1	1.87	0.90
16:CP:71:ARG:HA	16:CP:74:LEU:HD12	1.52	0.90
10:CJ:40:LEU:HG	10:CJ:69:ASN:HB3	1.51	0.90
36:DA:914:C:H2'	36:DA:915:C:H5'	1.53	0.90
21:AU:6:ARG:HD3	21:AU:15:ARG:CZ	2.02	0.90
50:DR:4:LEU:HD23	50:DR:4:LEU:O	1.71	0.90
36:BA:1071:G:H1'	36:BA:1089:G:H2'	1.52	0.90
39:BD:35:LYS:HA	39:BD:63:ARG:HA	1.51	0.90
11:CK:59:TYR:CE1	11:CK:63:LEU:HD21	2.06	0.90
17:CQ:59:ILE:HD11	17:CQ:73:VAL:HG22	1.54	0.90
39:BD:124:PRO:HG2	39:BD:129:ASN:HD21	1.37	0.90
36:DA:2656:U:H3	36:DA:2665:A:H2	1.19	0.90
3:CC:106:VAL:HG13	3:CC:107:GLN:HE22	1.36	0.90
24:CY:72:U:C2'	24:CY:73:G:H5''	2.01	0.90
52:BT:55:ASN:N	52:BT:59:THR:HG22	1.86	0.90
4:CD:18:LYS:H	4:CD:33:MET:HE3	1.37	0.90
11:AK:33:THR:HG22	11:AK:39:PRO:HA	1.52	0.90
41:DF:178:PRO:HG2	41:DF:179:GLU:OE1	1.70	0.90
10:AJ:33:GLN:O	10:AJ:75:ILE:HG12	1.72	0.90
48:DP:131:SER:OG	48:DP:134:ALA:HB3	1.70	0.90
5:CE:12:LEU:CD1	5:CE:31:LEU:HB3	2.01	0.90
48:DP:23:PRO:HB2	48:DP:33:ARG:HG3	1.55	0.89
3:CC:81:GLY:HA2	3:CC:85:ARG:NE	1.85	0.89
19:AS:5:LEU:HD12	19:AS:6:LYS:H	1.35	0.89
42:BG:39:ILE:HG22	42:BG:157:ILE:HA	1.53	0.89
25:AZ:272:MET:HB2	25:AZ:277:LEU:HD23	1.54	0.89
39:DD:43:ARG:HH11	39:DD:44:ASN:HD21	0.96	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DG:67:LYS:N	42:DG:67:LYS:HD3	1.86	0.89
49:BQ:101:ARG:HG3	49:BQ:101:ARG:HH11	1.32	0.89
52:DT:58:ASN:H	52:DT:58:ASN:HD22	0.92	0.89
1:AA:1502:A:H2	1:AA:1505:G:H1	1.19	0.89
9:CI:18:PHE:O	9:CI:19:LEU:HB2	1.72	0.89
48:BP:23:PRO:HD2	48:BP:33:ARG:HE	1.35	0.89
36:BA:2579:C:H4'	40:BE:134:ILE:HG12	1.54	0.89
57:BY:85:VAL:HG12	57:BY:86:ARG:H	1.36	0.89
47:BO:19:ILE:HG22	47:BO:43:VAL:HA	1.51	0.89
47:DO:104:ARG:HE	52:DT:33:LYS:HE3	1.34	0.89
35:D9:1:MET:HG3	35:D9:31:LYS:O	1.71	0.89
36:BA:2287:A:H62	36:BA:2344:U:H3	1.12	0.89
25:AZ:68:VAL:HG13	25:AZ:69:GLU:N	1.87	0.89
12:CL:93:LEU:HB2	12:CL:96:VAL:HG22	1.53	0.89
27:D1:82:LEU:HD21	27:D1:90:ILE:HD12	1.53	0.89
1:CA:452:A:HO2'	1:CA:453:A:H8	0.92	0.89
41:BF:154:VAL:HG22	41:BF:191:ARG:HB3	1.51	0.89
3:CC:112:SER:HB3	3:CC:115:LEU:HD12	1.53	0.89
36:DA:1887:C:C2'	36:DA:1888:G:H5''	2.02	0.89
13:CM:10:PRO:CB	13:CM:18:ALA:HB1	2.01	0.89
53:DU:95:LEU:HD12	54:DV:11:GLN:HE21	1.37	0.89
29:B3:15:TYR:HD2	29:B3:19:GLN:HE22	1.20	0.89
27:B1:76:ARG:O	27:B1:78:LYS:HG2	1.72	0.89
1:AA:573:A:H8	1:AA:573:A:H5'	1.35	0.89
36:DA:2099:U:H2'	36:DA:2100:G:C8	2.07	0.89
36:DA:628:G:C2'	36:DA:629:G:H5''	2.02	0.89
36:BA:2477:C:C6	36:BA:2477:C:H5'	2.07	0.89
18:AR:58:LEU:HD22	18:AR:62:GLU:HB3	1.52	0.89
36:BA:1747(A):G:C2'	36:BA:1748:G:H5''	2.01	0.89
38:BC:163:PHE:HB2	38:BC:171:ILE:HD11	1.51	0.89
39:DD:44:ASN:HB3	39:DD:49:ILE:HA	1.53	0.89
53:DU:13:LYS:HD3	53:DU:13:LYS:N	1.82	0.89
48:BP:45:LEU:HD13	48:BP:46:LYS:H	1.35	0.89
22:CV:59:U:HO2'	22:CV:60:U:H6	1.20	0.89
46:BN:73:THR:CG2	46:BN:82:LEU:HD11	2.01	0.89
43:DH:19:VAL:HG12	43:DH:20:ALA:H	1.38	0.89
25:AZ:244:ARG:HH11	25:AZ:244:ARG:HB3	1.37	0.89
1:CA:547:A:H4'	1:CA:548:G:O5'	1.71	0.89
34:D8:32:LEU:CB	34:D8:36:LYS:HZ1	1.86	0.89
57:BY:46:LYS:HB3	57:BY:62:GLU:HG2	1.53	0.89
36:BA:1484:G:C2'	36:BA:1485:G:H5''	2.02	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:242:ILE:CG2	25:AZ:282:ALA:HA	2.02	0.89
36:BA:234:C:H2'	36:BA:235:U:H6	1.37	0.89
42:DG:5:VAL:HB	42:DG:8:LYS:HB2	1.55	0.89
5:CE:12:LEU:HD13	5:CE:31:LEU:HB3	1.55	0.89
36:BA:1697:G:H3'	36:BA:1698:A:H5''	1.53	0.89
42:DG:5:VAL:HG11	42:DG:100:TRP:HB3	1.54	0.89
12:AL:6:THR:HG23	12:AL:9:GLN:HE21	1.38	0.89
25:AZ:277:LEU:HD12	25:AZ:279:GLU:H	1.37	0.89
47:BO:64:ARG:CZ	52:BT:70:VAL:HG21	2.03	0.89
47:DO:24:VAL:HA	47:DO:39:ILE:HG22	1.52	0.89
11:CK:33:THR:HG22	11:CK:39:PRO:HA	1.55	0.89
32:B6:5:VAL:N	32:B6:9:LEU:H	1.71	0.89
36:BA:673:C:H6	36:BA:673:C:H5'	1.35	0.89
52:BT:82:LEU:N	52:BT:82:LEU:HD12	1.88	0.88
40:BE:59:VAL:HG21	40:BE:63:LEU:HA	1.55	0.88
4:AD:8:VAL:C	4:AD:10:ARG:H	1.75	0.88
19:CS:49:ILE:HD12	19:CS:49:ILE:H	1.37	0.88
36:DA:271(A):A:H5'	36:DA:271(B):C:OP2	1.71	0.88
36:DA:543:C:H42	36:DA:549:G:H1	1.19	0.88
36:DA:1854:A:H62	36:DA:1888:G:H8	0.89	0.88
40:DE:47:VAL:HG21	40:DE:86:PRO:HD3	1.54	0.88
43:BH:42:ARG:O	43:BH:43:VAL:HG13	1.73	0.88
36:BA:1227:G:OP1	53:BU:13:LYS:HD2	1.74	0.88
51:DS:99:LYS:NZ	51:DS:99:LYS:HB3	1.87	0.88
20:CT:73:HIS:C	20:CT:74:LYS:HD3	1.92	0.88
9:AI:4:TYR:CZ	9:AI:88:TYR:HB2	2.08	0.88
3:AC:81:GLY:HA2	3:AC:85:ARG:HE	1.34	0.88
36:BA:1689:A:H62	36:BA:1698:A:H2	1.20	0.88
39:DD:134:ARG:HG2	39:DD:187:GLY:O	1.73	0.88
25:CZ:235:GLY:HA3	25:CZ:289:LEU:HD11	1.53	0.88
42:DG:114:ILE:HG21	42:DG:117:PHE:HB2	1.56	0.88
52:DT:58:ASN:N	52:DT:58:ASN:HD22	1.65	0.88
22:CV:59:U:O2'	22:CV:60:U:H6	1.56	0.88
43:BH:12:PRO:O	43:BH:15:VAL:HG22	1.74	0.88
31:D5:34:PRO:O	31:D5:35:GLU:HG2	1.73	0.88
56:DX:40:LYS:HG3	56:DX:51:VAL:HB	1.55	0.88
58:DZ:70:LEU:HD11	58:DZ:91:LEU:HD21	1.53	0.88
4:CD:100:ARG:HH21	4:CD:118:ARG:HH22	1.21	0.88
26:D0:23:VAL:H	26:D0:38:VAL:HG13	1.36	0.88
55:DW:36:LEU:HD11	55:DW:47:VAL:HG12	1.52	0.88
24:AY:68:C:H2'	24:AY:69:C:H6	1.35	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BF:65:TRP:HZ3	41:BF:73:ALA:O	1.57	0.88
1:CA:524:G:H2'	1:CA:525:C:C6	2.09	0.88
1:AA:884:U:H4'	1:AA:884:U:OP1	1.73	0.88
36:DA:590:A:H2'	36:DA:591:C:C6	2.07	0.88
49:DQ:101:ARG:CG	49:DQ:101:ARG:HH11	1.86	0.88
35:B9:1:MET:HG3	35:B9:31:LYS:O	1.74	0.88
5:AE:76:ILE:HG13	5:AE:142:LEU:HD13	1.55	0.88
48:DP:27:HIS:CE1	54:DV:83:ARG:HH12	1.91	0.88
22:AW:68:C:H2'	22:AW:69:G:H8	1.39	0.88
25:AZ:267:VAL:HG23	25:AZ:288:VAL:CG1	2.03	0.88
22:CW:39:U:H2'	22:CW:40:C:H5'	1.55	0.88
36:BA:607:U:OP1	41:BF:102:PRO:HA	1.73	0.88
40:DE:1:MET:HB3	40:DE:200:GLU:OE2	1.73	0.88
58:BZ:96:VAL:HG22	58:BZ:97:GLU:H	1.36	0.88
19:CS:5:LEU:HD12	19:CS:6:LYS:H	1.37	0.88
10:CJ:46:ARG:HH11	10:CJ:46:ARG:HG2	1.36	0.88
52:DT:39:ARG:H	52:DT:39:ARG:HD2	1.37	0.88
55:BW:6:ILE:HG12	55:BW:104:THR:CG2	2.04	0.88
40:DE:11:MET:HB3	40:DE:24:THR:HA	1.56	0.88
2:CB:22:LYS:HZ2	2:CB:22:LYS:HA	1.34	0.88
2:CB:22:LYS:HZ3	2:CB:22:LYS:HA	1.33	0.88
43:DH:52:VAL:HG11	43:DH:69:ARG:CD	2.04	0.88
56:DX:12:VAL:HG23	56:DX:13:LEU:N	1.89	0.88
36:DA:658:C:H2'	36:DA:659:C:H6	1.38	0.88
38:DC:22:ILE:HD12	38:DC:228:SER:O	1.74	0.88
13:AM:113:PRO:O	13:AM:114:ARG:HB2	1.72	0.88
25:CZ:67:HIS:CD2	25:CZ:67:HIS:H	1.85	0.88
36:BA:1598:C:H5'	56:BX:36:LYS:HG2	1.54	0.88
36:DA:2183:C:H2'	36:DA:2184:G:H8	1.38	0.88
25:AZ:7:ARG:CG	25:AZ:7:ARG:HH11	1.87	0.88
25:CZ:215:ARG:HB3	25:CZ:282:ALA:CB	2.03	0.88
33:B7:26:GLY:O	33:B7:30:VAL:HG23	1.74	0.88
1:AA:1348:U:O2'	1:AA:1349:A:H8	1.55	0.88
24:CY:24:A:H2'	24:CY:25:C:C6	2.09	0.88
24:CY:76:A:C1'	25:CZ:287:GLY:HA3	2.03	0.88
42:DG:139:LEU:HD22	42:DG:146:TYR:HA	1.56	0.88
35:D9:27:CYS:SG	35:D9:28:GLU:N	2.47	0.88
41:BF:111:ALA:HB2	41:BF:206:ILE:HD12	1.55	0.88
48:BP:115:LEU:HG	48:BP:116:GLY:H	1.38	0.88
36:DA:1747(A):G:C2'	36:DA:1748:G:H5''	2.02	0.88
1:CA:522:C:H41	12:CL:53:ARG:HH22	1.21	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:625:G:H2'	1:AA:626:U:H6	1.37	0.88
36:DA:302:C:H2'	36:DA:303:U:C6	2.08	0.88
15:AO:87:ILE:HG22	15:AO:88:ARG:N	1.89	0.87
5:CE:45:PHE:CE2	5:CE:47:LYS:HD2	2.10	0.87
38:DC:100:ILE:CG2	38:DC:127:LEU:CG	2.45	0.87
52:BT:22:PHE:HE2	52:BT:85:LYS:HZ1	1.21	0.87
41:DF:132:VAL:HG22	41:DF:133:ASN:H	1.39	0.87
5:CE:6:PHE:HB2	5:CE:34:VAL:HG22	1.57	0.87
51:BS:83:LYS:HG2	51:BS:105:ALA:HB3	1.55	0.87
31:D5:4:HIS:HB3	31:D5:5:PRO:CD	2.03	0.87
49:DQ:27:VAL:HG12	49:DQ:28:ALA:N	1.88	0.87
36:BA:628:G:C2'	36:BA:629:G:H5''	2.04	0.87
4:AD:57:ARG:HB3	4:AD:206:PHE:HB2	1.56	0.87
22:AW:74:C:H5'	22:AW:74:C:H6	1.39	0.87
5:AE:7:GLU:HG2	5:AE:112:LEU:HD21	1.55	0.87
58:BZ:180:VAL:HG22	58:BZ:181:GLU:H	1.38	0.87
25:CZ:174:SER:HB3	25:CZ:177:LEU:HD12	1.55	0.87
4:CD:9:CYS:SG	4:CD:32:ALA:HB2	2.13	0.87
36:BA:1348:G:H2'	36:BA:1349:A:H5''	1.56	0.87
2:CB:60:ASP:O	2:CB:64:ARG:HG2	1.74	0.87
36:DA:1536:C:H2'	36:DA:1537:G:H4'	1.54	0.87
36:DA:266:G:H2'	36:DA:267:C:H5''	1.54	0.87
1:CA:227:G:H2'	1:CA:228:A:C5'	2.02	0.87
3:CC:50:ALA:O	3:CC:70:VAL:HG13	1.74	0.87
36:BA:2801(A):A:H4'	36:BA:2802:G:H5'	1.54	0.87
25:AZ:13:ASN:HB3	25:AZ:78:SER:HB3	1.55	0.87
3:AC:34:LEU:HD22	3:AC:38:ARG:HE	1.36	0.87
4:AD:187:ARG:HH11	4:AD:187:ARG:HB3	1.36	0.87
48:DP:83:VAL:HG23	48:DP:105:LEU:HD13	1.55	0.87
52:BT:85:LYS:HZ3	52:BT:85:LYS:HB3	1.40	0.87
42:BG:67:LYS:H	42:BG:67:LYS:CD	1.86	0.87
13:CM:82:MET:HG3	13:CM:83:ASP:N	1.88	0.87
25:AZ:270:VAL:CG1	25:AZ:286:VAL:HG21	2.03	0.87
36:BA:2796:U:O2'	36:BA:2799:C:H5'	1.75	0.87
36:BA:1058:G:H2'	36:BA:1059:G:H5''	1.57	0.87
1:AA:351:G:H4'	1:AA:352:C:OP2	1.74	0.87
32:D6:27:LYS:HG3	32:D6:30:THR:CB	2.03	0.87
1:AA:1054:C:C5	1:AA:1196:U:C6	2.61	0.87
36:BA:1209:G:H21	36:BA:1210:A:H62	1.20	0.87
9:AI:53:VAL:HG13	9:AI:95:LYS:HD3	1.54	0.87
27:D1:62:VAL:HG13	27:D1:67:ILE:HG22	1.57	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1536:C:H2'	36:BA:1537:G:H4'	1.57	0.87
2:CB:165:VAL:HG23	2:CB:166:ASP:H	1.37	0.87
7:CG:70:LYS:HD3	7:CG:96:GLN:HG2	1.57	0.87
1:CA:713:G:H2'	1:CA:714:G:C8	2.08	0.87
32:B6:11:LEU:HD13	32:B6:12:GLU:H	1.40	0.87
1:AA:228:A:H8	1:AA:228:A:H5'	1.38	0.87
3:AC:11:ARG:HG2	3:AC:11:ARG:HH11	1.40	0.87
34:B8:59:LYS:HE2	48:BP:50:ARG:HB3	1.57	0.87
22:AV:56:C:H1'	42:BG:76:SER:O	1.75	0.87
36:BA:2179:C:H1'	36:BA:2180:U:N3	1.88	0.87
1:CA:966:G:O2'	1:CA:967:C:C6	2.27	0.87
36:BA:1854:A:H62	36:BA:1888:G:H8	1.15	0.87
36:DA:1058:G:H2'	36:DA:1059:G:H5''	1.54	0.87
36:DA:2317:C:C2'	36:DA:2318:G:H5'	2.05	0.87
46:DN:70:LYS:HD3	46:DN:87:LEU:HD23	1.56	0.87
25:AZ:324:LYS:HG3	25:AZ:365:GLY:HA3	1.55	0.87
13:AM:82:MET:HG3	13:AM:83:ASP:N	1.87	0.87
13:AM:3:ARG:NE	13:AM:7:VAL:HG13	1.90	0.87
22:AW:71:G:H2'	22:AW:72:C:H5'	1.57	0.87
36:BA:2313:C:H5'	36:BA:2313:C:H6	1.40	0.87
31:D5:25:LEU:HD12	55:DW:19:LEU:HG	1.57	0.87
16:AP:71:ARG:HA	16:AP:74:LEU:HD12	1.56	0.87
2:AB:152:PHE:O	2:AB:153:ARG:HB2	1.73	0.87
12:CL:18:VAL:HG23	12:CL:19:ARG:H	1.36	0.87
1:AA:1036:G:H5''	1:AA:1037:C:H5	1.40	0.87
56:BX:31:HIS:HB3	56:BX:34:ALA:HB2	1.57	0.87
24:CY:76:A:N6	25:CZ:234:ARG:HH12	1.72	0.86
36:DA:1222:C:H2'	36:DA:1223:G:H5''	1.56	0.86
36:BA:760:G:H2'	36:BA:761:A:H5'	1.55	0.86
12:AL:126:LYS:HZ1	12:AL:127:GLU:HB2	1.40	0.86
32:D6:15:GLU:HB2	32:D6:20:ASN:HB3	1.56	0.86
57:BY:95:LYS:HA	57:BY:101:LYS:H	1.38	0.86
36:DA:2159:G:C2'	36:DA:2160:G:H5''	2.04	0.86
1:CA:1054:C:H5	1:CA:1196:U:C6	1.93	0.86
1:CA:961:U:HO2'	1:CA:962:C:H6	0.88	0.86
9:AI:55:ALA:HA	9:AI:58:HIS:HE1	1.36	0.86
48:DP:95:VAL:HG23	48:DP:125:VAL:HA	1.58	0.86
36:BA:2408:U:H2'	36:BA:2409:G:C8	2.08	0.86
39:DD:270:ILE:O	39:DD:270:ILE:HD12	1.74	0.86
25:CZ:64:ASN:N	25:CZ:83:PRO:HG2	1.90	0.86
42:BG:76:SER:HB2	42:BG:84:LYS:H	1.40	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DN:22:THR:HG22	46:DN:61:ARG:HB3	1.55	0.86
4:CD:129:ASN:H	4:CD:129:ASN:HD22	1.21	0.86
56:DX:10:ALA:O	56:DX:28:PHE:HB2	1.76	0.86
56:BX:11:PRO:HA	56:BX:28:PHE:CB	2.05	0.86
56:DX:24:GLY:O	56:DX:82:GLN:HA	1.75	0.86
52:BT:80:SER:HB3	52:BT:81:PRO:HD3	1.54	0.86
28:D2:3:LEU:HD23	36:DA:98:G:H5''	1.57	0.86
46:BN:48:MET:H	46:BN:48:MET:CE	1.88	0.86
25:CZ:326:GLU:H	25:CZ:326:GLU:CD	1.77	0.86
36:BA:2760:C:H2'	36:BA:2761:G:H5''	1.53	0.86
36:DA:2408:U:H2'	36:DA:2409:G:H8	1.39	0.86
8:CH:7:ALA:HB2	8:CH:85:ARG:HD3	1.55	0.86
50:BR:95:THR:HA	50:BR:116:LEU:O	1.74	0.86
58:BZ:108:PRO:HA	58:BZ:141:VAL:HG12	1.56	0.86
36:BA:2248:C:H2'	36:BA:2249:U:H5'	1.58	0.86
36:DA:83:G:N2	36:DA:102:G:H2'	1.89	0.86
36:DA:1854:A:N6	36:DA:1888:G:H8	1.72	0.86
47:BO:104:ARG:HE	52:BT:33:LYS:HE3	1.40	0.86
35:D9:30:PRO:HB2	36:DA:2527:C:H4'	1.54	0.86
1:CA:973:G:H1'	10:CJ:55:LYS:CE	2.06	0.86
13:CM:65:LYS:O	13:CM:66:LEU:HG	1.75	0.86
25:CZ:222:LEU:HD11	25:CZ:303:VAL:HG11	1.57	0.86
40:BE:111:ARG:HA	50:BR:2:ARG:HG3	1.55	0.86
3:CC:147:LYS:HB2	3:CC:203:PHE:CD2	2.11	0.86
36:DA:582:G:H2'	36:DA:583:G:H8	1.37	0.86
39:DD:258:LYS:HE2	39:DD:273:ARG:HE	1.40	0.86
36:DA:2796:U:O2'	36:DA:2799:C:H5'	1.73	0.86
3:CC:58:GLU:HB2	3:CC:65:ALA:CB	2.05	0.86
57:DY:85:VAL:HG12	57:DY:86:ARG:H	1.41	0.86
27:B1:42:GLN:HE22	36:BA:379:G:H21	1.18	0.86
51:DS:98:VAL:HG12	51:DS:100:ALA:HB2	1.55	0.86
36:BA:106:C:H2'	36:BA:107:C:H6	1.41	0.86
22:AW:59:U:H3'	22:AW:60:U:H6	1.39	0.86
36:BA:2657:A:H2'	36:BA:2658:C:H5'	1.55	0.86
58:BZ:70:LEU:HD21	58:BZ:91:LEU:HD21	1.57	0.86
1:CA:573:A:H8	1:CA:573:A:H5'	1.40	0.86
36:DA:654(C):G:H2'	36:DA:654(D):G:H5'	1.58	0.86
57:DY:46:LYS:HB3	57:DY:62:GLU:HG2	1.57	0.86
58:BZ:29:TYR:HB3	58:BZ:34:ASN:CB	2.05	0.86
36:BA:1005:C:H2'	36:BA:1006:C:H6	1.39	0.86
36:DA:2408:U:H2'	36:DA:2409:G:C8	2.10	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DY:2:ARG:HD2	57:DY:3:VAL:HG23	1.58	0.86
36:BA:1779:U:H5	36:BA:1784:A:N7	1.73	0.86
39:BD:43:ARG:HH11	39:BD:44:ASN:HD21	1.23	0.86
41:BF:206:ILE:HG22	41:BF:207:GLY:H	1.39	0.86
1:AA:1364:U:O2	21:AU:14:TRP:CH2	2.28	0.86
48:BP:95:VAL:HG23	48:BP:125:VAL:HA	1.58	0.86
53:BU:13:LYS:HD3	53:BU:13:LYS:N	1.90	0.86
36:DA:1543:C:H3'	36:DA:1544:A:H5''	1.57	0.86
39:DD:8:PRO:HB3	39:DD:14:ARG:HB3	1.55	0.86
50:DR:84:ALA:HB3	50:DR:85:PRO:HD3	1.58	0.86
48:DP:16:ARG:NH1	48:DP:16:ARG:HB2	1.90	0.86
28:B2:25:VAL:HG11	28:B2:57:ILE:HG21	1.57	0.86
39:DD:75:ILE:HG21	39:DD:99:ASP:HB2	1.58	0.86
1:CA:966:G:O2'	1:CA:967:C:H6	1.57	0.86
51:BS:101:LEU:O	51:BS:101:LEU:HD12	1.76	0.86
58:DZ:7:ALA:HB3	58:DZ:61:LEU:HD23	1.58	0.86
30:B4:7:PRO:O	30:B4:8:LYS:HB3	1.76	0.86
36:DA:84:A:H5'	57:DY:9:LYS:HB3	1.58	0.85
25:AZ:174:SER:HB3	25:AZ:177:LEU:HD12	1.58	0.85
52:BT:85:LYS:NZ	52:BT:85:LYS:HB3	1.91	0.85
13:AM:11:ARG:HG2	13:AM:12:ASN:HD22	1.41	0.85
31:B5:4:HIS:HB3	31:B5:5:PRO:CD	2.05	0.85
51:BS:15:ARG:O	51:BS:15:ARG:HD2	1.76	0.85
13:AM:96:LEU:HB3	13:AM:97:PRO:HD2	1.58	0.85
39:BD:80:ALA:HB2	39:BD:96:HIS:CD2	2.11	0.85
48:BP:123:LEU:H	48:BP:123:LEU:HD23	1.41	0.85
47:DO:64:ARG:NH2	47:DO:100:GLY:HA3	1.91	0.85
36:BA:83:G:N2	36:BA:102:G:H2'	1.89	0.85
57:BY:13:VAL:HG21	57:BY:72:VAL:HB	1.58	0.85
58:DZ:37:VAL:HG23	58:DZ:38:TYR:N	1.90	0.85
36:DA:984:A:H5''	36:DA:985:C:H5	1.41	0.85
18:CR:29:PHE:H	18:CR:29:PHE:HD1	1.21	0.85
9:CI:53:VAL:HG22	9:CI:95:LYS:NZ	1.90	0.85
48:DP:59:LEU:HA	48:DP:61:ARG:NE	1.91	0.85
52:DT:85:LYS:HZ3	52:DT:85:LYS:HB3	1.40	0.85
42:BG:67:LYS:HD3	42:BG:67:LYS:N	1.90	0.85
48:BP:40:SER:C	48:BP:41:ARG:HD2	1.95	0.85
20:AT:45:GLN:HE21	20:AT:46:GLU:HG3	1.39	0.85
58:BZ:146:ILE:HA	58:BZ:174:VAL:HG13	1.58	0.85
32:B6:18:ARG:HG2	32:B6:18:ARG:HH11	1.39	0.85
42:BG:138:GLN:HG2	42:BG:153:ARG:HG2	1.58	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:65:ARG:HB3	48:BP:68:GLN:HE22	1.37	0.85
34:B8:32:LEU:HB3	34:B8:36:LYS:HZ1	1.42	0.85
4:AD:12:CYS:SG	4:AD:19:LEU:O	2.35	0.85
25:CZ:266:VAL:HG21	25:CZ:291:ARG:NH2	1.91	0.85
1:CA:1117:G:H5'	1:CA:1117:G:H8	1.40	0.85
24:AY:72:U:H2'	24:AY:73:G:H5''	1.57	0.85
7:AG:78:ARG:HG3	7:AG:79:ARG:N	1.91	0.85
36:BA:84:A:H5'	57:BY:9:LYS:HB3	1.58	0.85
1:AA:1392:G:H21	1:AA:1502:A:H8	1.25	0.85
2:CB:72:GLY:O	2:CB:94:ASN:HA	1.75	0.85
55:DW:4:LYS:HG2	55:DW:5:ALA:H	1.40	0.85
25:CZ:219:LYS:HB2	25:CZ:244:ARG:HB2	1.57	0.85
19:AS:19:VAL:HG11	19:AS:44:MET:HG3	1.56	0.85
56:BX:24:GLY:O	56:BX:82:GLN:HA	1.77	0.85
25:AZ:143:ASP:HB3	25:AZ:146:LEU:CB	2.06	0.85
31:B5:48:GLU:O	31:B5:49:CYS:SG	2.35	0.85
48:DP:126:VAL:HA	48:DP:145:PRO:HB2	1.58	0.85
2:AB:97:TRP:HZ2	2:AB:102:LEU:HD13	1.39	0.85
39:BD:239:ARG:NH1	39:BD:239:ARG:HG2	1.85	0.85
39:BD:43:ARG:HH11	39:BD:44:ASN:ND2	1.73	0.85
36:BA:623:G:H2'	36:BA:624:C:H6	1.41	0.85
17:CQ:43:LEU:HD11	17:CQ:68:ARG:NH1	1.91	0.85
5:AE:76:ILE:HD11	5:AE:142:LEU:HD21	1.58	0.85
36:BA:2745:C:H2'	36:BA:2746:U:C6	2.11	0.85
36:BA:1543:C:H3'	36:BA:1544:A:C5'	2.07	0.85
40:BE:47:VAL:HG21	40:BE:86:PRO:HD3	1.58	0.85
36:BA:2160:G:H8	36:BA:2160:G:H5'	1.41	0.85
1:CA:41:G:H2'	1:CA:42:G:C8	2.12	0.85
8:CH:89:PRO:HA	8:CH:92:ARG:NH1	1.90	0.85
1:AA:1104:G:O5'	2:AB:111:ARG:HD2	1.77	0.85
39:DD:34:VAL:O	39:DD:36:PRO:HD2	1.76	0.85
52:BT:50:ILE:HA	52:BT:99:LEU:HD11	1.59	0.85
28:D2:35:LEU:HD11	28:D2:50:ILE:CG1	2.05	0.85
36:BA:654(E):G:N2	36:BA:654(Q):C:H1'	1.92	0.85
42:BG:61:ALA:HB2	42:BG:68:PRO:HD3	1.59	0.85
1:CA:351:G:H4'	1:CA:352:C:OP2	1.75	0.85
25:AZ:64:ASN:N	25:AZ:64:ASN:HD22	1.75	0.85
27:D1:46:LEU:CD2	27:D1:46:LEU:H	1.88	0.85
39:BD:27:THR:CG2	39:BD:83:GLU:HG2	2.07	0.85
36:BA:208:C:H2'	36:BA:209:C:C6	2.12	0.85
52:DT:100:TYR:HD2	52:DT:103:ARG:HH21	1.23	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1241:G:H2'	1:CA:1242:C:C6	2.11	0.84
41:DF:40:GLN:HE22	41:DF:182:ASN:HB2	1.42	0.84
1:AA:939:G:H5''	7:AG:102:ARG:NH2	1.92	0.84
48:BP:75:ILE:H	48:BP:75:ILE:HD12	1.42	0.84
32:B6:52:VAL:HG12	32:B6:53:LYS:N	1.92	0.84
52:BT:96:ARG:HB2	52:BT:96:ARG:NH1	1.93	0.84
41:DF:103:LYS:HG3	41:DF:106:ARG:NH2	1.92	0.84
1:AA:979:C:C3'	1:AA:980:C:H5''	2.07	0.84
1:AA:63:C:H2'	1:AA:64:G:H5'	1.58	0.84
25:AZ:375:ILE:HD12	25:AZ:376:LYS:HG3	1.59	0.84
47:DO:107:ARG:HH11	52:DT:36:GLU:HG3	1.43	0.84
1:AA:973:G:C1'	10:AJ:55:LYS:HE2	2.07	0.84
38:BC:113:VAL:HG12	38:BC:138:PRO:HG3	1.59	0.84
36:BA:272(H):C:C2'	36:BA:272(I):U:H5''	2.05	0.84
48:DP:40:SER:C	48:DP:41:ARG:HD2	1.98	0.84
50:BR:5:LYS:O	50:BR:6:SER:HB2	1.77	0.84
43:BH:67:LEU:O	43:BH:71:LEU:HB2	1.77	0.84
1:CA:41:G:H2'	1:CA:42:G:H8	1.41	0.84
24:CY:68:C:H2'	24:CY:69:C:H6	1.42	0.84
49:DQ:51:ARG:HH12	49:DQ:52:VAL:HG22	1.41	0.84
32:B6:15:GLU:CD	32:B6:18:ARG:CZ	2.46	0.84
12:CL:7:ILE:HD12	12:CL:7:ILE:N	1.92	0.84
1:CA:368:U:OP2	25:CZ:291:ARG:CD	2.26	0.84
49:DQ:134:ARG:CZ	58:DZ:122:ARG:HH21	1.89	0.84
1:CA:1104:G:O5'	2:CB:111:ARG:HD2	1.76	0.84
49:DQ:19:GLY:HA3	58:DZ:79:ARG:HH12	1.42	0.84
24:CY:62:U:H6	24:CY:62:U:H5'	1.43	0.84
1:CA:63:C:H2'	1:CA:64:G:H5'	1.58	0.84
57:BY:95:LYS:HE3	57:BY:100:ALA:HB2	1.58	0.84
52:BT:29:ARG:HB3	52:BT:85:LYS:HA	1.58	0.84
36:DA:1012:U:O4	46:DN:28:THR:HG21	1.76	0.84
10:CJ:40:LEU:HD23	10:CJ:40:LEU:H	1.39	0.84
39:DD:21:PHE:HB3	39:DD:24:ILE:HD12	1.59	0.84
9:CI:47:LEU:H	9:CI:47:LEU:HD12	1.42	0.84
6:AF:97:PHE:HD1	18:AR:31:LEU:HD21	1.39	0.84
2:CB:97:TRP:CH2	2:CB:173:ALA:HA	2.12	0.84
25:AZ:397:ALA:HB2	61:AZ:502:KIR:H252	1.59	0.84
39:DD:77:ALA:HB2	39:DD:97:TYR:CD1	2.13	0.84
36:DA:2309:A:H2'	36:DA:2310:A:H5''	1.58	0.84
26:D0:40:GLN:HE22	26:D0:45:PHE:N	1.74	0.84
57:DY:96:ILE:HG12	57:DY:99:CYS:HB2	1.57	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:324:LYS:HG3	25:CZ:365:GLY:HA3	1.57	0.84
42:BG:127:GLY:HA2	42:BG:166:ASP:OD1	1.75	0.84
40:DE:131:ALA:HB1	40:DE:134:ILE:HD11	1.58	0.84
49:BQ:63:LYS:HD2	58:BZ:175:VAL:HG21	1.58	0.84
43:DH:52:VAL:CG1	43:DH:69:ARG:HD2	2.08	0.84
1:CA:1053:G:H4'	1:CA:1054:C:C5'	2.07	0.84
53:BU:16:LYS:O	53:BU:20:LEU:HD23	1.78	0.84
1:CA:1348:U:HO2'	1:CA:1349:A:H8	0.84	0.84
48:BP:16:ARG:NE	48:BP:18:ARG:HG2	1.92	0.84
36:BA:1902:C:H1'	39:BD:244:ARG:HG3	1.58	0.84
36:DA:2572:A:C8	40:DE:144:ARG:HD2	2.12	0.84
28:D2:38:GLN:HB3	28:D2:44:LEU:HD22	1.60	0.84
34:D8:61:LEU:HD12	34:D8:61:LEU:N	1.89	0.84
25:AZ:121:LEU:O	25:AZ:125:GLN:HG2	1.78	0.84
43:BH:52:VAL:HG11	43:BH:69:ARG:CD	2.08	0.84
52:DT:50:ILE:HA	52:DT:99:LEU:CD1	2.07	0.84
53:BU:56:ASP:O	53:BU:60:LEU:HG	1.77	0.84
22:AW:4:C:H2'	22:AW:5:G:H8	1.43	0.84
38:BC:53:ARG:HB3	38:BC:53:ARG:HH11	1.42	0.84
36:DA:590:A:H2'	36:DA:591:C:H6	1.40	0.84
1:CA:1236:A:H2'	1:CA:1237:C:C6	2.12	0.84
42:DG:131:TYR:HE2	42:DG:133:LEU:HD23	1.43	0.84
56:DX:35:THR:CG2	56:DX:37:THR:H	1.89	0.84
58:BZ:10:ARG:HH21	58:BZ:36:LYS:HB2	1.39	0.84
13:AM:4:ILE:HD12	13:AM:22:ILE:HD11	1.60	0.84
36:BA:1747(A):G:H2'	36:BA:1748:G:H5''	1.59	0.84
36:DA:582:G:H2'	36:DA:583:G:C8	2.13	0.84
1:CA:1256:A:H1'	1:CA:1258:G:C6	2.13	0.84
1:AA:966:G:HO2'	1:AA:967:C:H6	1.26	0.84
42:BG:77:ILE:H	42:BG:77:ILE:HD13	1.43	0.84
36:BA:2100:G:H22	36:BA:2189:U:H3	1.25	0.84
36:BA:2756:U:H1'	36:BA:2757:A:H5''	1.60	0.84
20:CT:45:GLN:HE21	20:CT:46:GLU:HG3	1.41	0.84
15:AO:11:VAL:HG21	15:AO:34:LEU:HD22	1.58	0.84
13:CM:3:ARG:HH21	13:CM:7:VAL:HG22	1.43	0.84
36:BA:784:A:C5	39:BD:229:VAL:HG11	2.13	0.84
56:BX:12:VAL:HG23	56:BX:13:LEU:N	1.92	0.83
39:DD:71:ASP:CB	39:DD:103:ARG:HH22	1.88	0.83
2:AB:24:TRP:HZ3	2:AB:29:ALA:HB2	1.43	0.83
13:CM:54:VAL:HG22	13:CM:57:ARG:HH12	1.43	0.83
5:AE:148:VAL:HG21	8:AH:107:LEU:HD13	1.59	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:910:A:H62	49:DQ:12:GLN:HA	1.41	0.83
36:BA:92:A:H3'	36:BA:93:G:H8	1.41	0.83
36:BA:654(C):G:H2'	36:BA:654(D):G:H5'	1.60	0.83
6:CF:61:LEU:HB3	6:CF:63:TYR:HE1	1.42	0.83
22:AV:68:C:H2'	22:AV:69:G:H5'	1.59	0.83
29:B3:9:VAL:HG11	29:B3:55:ARG:HD3	1.59	0.83
36:BA:873:G:H2'	36:BA:874:G:H8	1.43	0.83
25:CZ:265:THR:HG22	25:CZ:266:VAL:N	1.89	0.83
39:DD:2:ALA:O	39:DD:3:VAL:HB	1.78	0.83
20:CT:18:GLN:HG2	20:CT:22:ARG:HH12	1.42	0.83
36:DA:1071:G:H1'	36:DA:1089:G:H2'	1.61	0.83
2:AB:7:VAL:N	2:AB:10:LEU:HD12	1.92	0.83
57:DY:46:LYS:HG2	57:DY:47:LYS:N	1.92	0.83
3:AC:82:GLU:O	3:AC:86:VAL:HG13	1.78	0.83
36:BA:2159:G:H2'	36:BA:2160:G:H5''	1.58	0.83
24:CY:4:G:H2'	24:CY:5:G:H5''	1.59	0.83
2:AB:17:PHE:HB3	2:AB:44:LEU:HD21	1.57	0.83
32:B6:5:VAL:N	32:B6:8:LYS:HB3	1.93	0.83
12:CL:89:ARG:NE	12:CL:91:LYS:HZ3	1.75	0.83
42:BG:97:ASP:O	42:BG:101:ILE:HG13	1.78	0.83
12:AL:24:VAL:HG13	12:AL:98:TYR:CE2	2.12	0.83
9:AI:40:LEU:HD11	9:AI:70:LYS:HG2	1.58	0.83
1:AA:1202:G:C2	14:AN:42:ILE:HG21	2.13	0.83
36:BA:1047:G:H2'	36:BA:1110:G:H21	1.43	0.83
12:AL:7:ILE:HD12	12:AL:7:ILE:H	1.43	0.83
42:DG:47:LYS:HG2	42:DG:81:LYS:HD2	1.60	0.83
13:CM:11:ARG:HG2	13:CM:12:ASN:ND2	1.92	0.83
48:BP:85:LEU:HA	48:BP:88:LEU:HB3	1.60	0.83
36:DA:2317:C:H2'	36:DA:2318:G:H5'	1.57	0.83
1:AA:966:G:O2'	1:AA:967:C:C6	2.31	0.83
31:B5:2:ALA:N	36:BA:747:U:C4	2.46	0.83
52:DT:82:LEU:H	52:DT:82:LEU:HD12	1.43	0.83
36:BA:1665:A:H2'	36:BA:1666:G:C5'	2.07	0.83
10:AJ:48:THR:HG22	10:AJ:62:HIS:ND1	1.93	0.83
25:CZ:118:GLU:HA	25:CZ:121:LEU:CD2	2.09	0.83
1:CA:1271:G:C2'	1:CA:1272:G:H5''	2.09	0.83
36:DA:882:G:H2'	36:DA:883:G:H8	1.41	0.83
55:DW:10:VAL:HG23	55:DW:101:SER:O	1.78	0.83
46:BN:40:PRO:HB3	53:BU:68:ALA:HB2	1.59	0.83
32:B6:11:LEU:HD21	32:B6:51:GLU:HG2	1.61	0.83
52:BT:82:LEU:HD12	52:BT:82:LEU:H	1.44	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BH:85:LYS:HZ2	43:BH:132:ARG:HA	1.43	0.83
10:AJ:34:VAL:HG21	10:AJ:74:ILE:HG22	1.59	0.83
41:DF:6:VAL:HG12	41:DF:7:TYR:H	1.44	0.83
24:AY:68:C:H2'	24:AY:69:C:C6	2.14	0.83
15:AO:33:THR:HG23	15:AO:63:ARG:NH1	1.94	0.83
36:DA:1024:G:H3'	36:DA:1025:G:H5''	1.60	0.83
25:AZ:24:LYS:O	25:AZ:26:THR:N	2.12	0.83
39:DD:43:ARG:HH11	39:DD:44:ASN:ND2	1.76	0.83
36:DA:2189:U:H2'	36:DA:2190:G:C4'	2.08	0.83
9:AI:18:PHE:O	9:AI:19:LEU:HB2	1.78	0.83
35:D9:16:VAL:CG1	36:DA:1032:A:H4'	2.09	0.83
4:CD:28:SER:HB3	4:CD:29:PRO:HD2	1.60	0.83
1:CA:265:G:H5'	17:CQ:64:PRO:O	1.78	0.83
5:CE:11:ILE:HB	5:CE:31:LEU:HD12	1.58	0.83
25:AZ:64:ASN:H	25:AZ:64:ASN:HD22	1.26	0.83
36:BA:90:U:H1'	36:BA:92:A:H5''	1.59	0.83
36:DA:2672:G:H2'	36:DA:2673:G:H5''	1.61	0.83
48:DP:75:ILE:HD12	48:DP:75:ILE:H	1.43	0.83
46:BN:57:ALA:HB3	46:BN:124:ALA:HA	1.59	0.83
36:DA:2303:G:H21	42:DG:132:ASN:HD21	1.23	0.83
43:DH:42:ARG:O	43:DH:43:VAL:HG13	1.78	0.83
46:DN:47:ALA:HB2	46:DN:112:LEU:HD11	1.61	0.83
36:DA:1971:A:C4	39:DD:241:PRO:HD3	2.14	0.83
36:BA:2068:U:H3	36:BA:2430:A:H2	1.21	0.83
41:DF:111:ALA:HB2	41:DF:206:ILE:HD12	1.61	0.83
1:AA:356:A:H2	1:AA:368:U:O2	1.61	0.83
48:DP:7:ARG:HB3	48:DP:8:PRO:HD3	1.61	0.83
36:DA:2179:C:H1'	36:DA:2180:U:N3	1.92	0.83
36:BA:2206:G:N2	36:BA:2207:G:H5'	1.92	0.83
5:AE:11:ILE:HD11	5:AE:33:VAL:CG2	2.09	0.83
4:CD:162:LEU:O	4:CD:162:LEU:HD13	1.79	0.83
30:B4:5:ILE:O	30:B4:5:ILE:HG12	1.77	0.83
1:CA:783:C:O2'	1:CA:784:C:H5'	1.79	0.83
4:AD:68:TYR:CE1	4:AD:97:LEU:HD13	2.14	0.83
34:D8:32:LEU:HD23	34:D8:36:LYS:HZ3	1.44	0.83
27:D1:46:LEU:N	27:D1:46:LEU:HD22	1.93	0.83
1:AA:1126:U:O2	1:AA:1126:U:H2'	1.78	0.83
36:BA:832:G:H5'	48:BP:45:LEU:HD21	1.59	0.83
4:AD:119:GLN:HG3	4:AD:123:HIS:CD2	2.13	0.83
36:DA:1681:G:O2'	36:DA:1762:A:H2'	1.78	0.83
1:CA:961:U:O2'	1:CA:962:C:H6	1.61	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BS:19:LYS:HB3	51:BS:20:ARG:NH2	1.94	0.82
36:BA:1720:U:C2'	36:BA:1721:G:H5''	2.09	0.82
36:BA:2852:G:H2'	36:BA:2853:C:H6	1.43	0.82
36:BA:1970:A:H5''	36:BA:1971:A:OP1	1.78	0.82
49:BQ:18:LYS:H	49:BQ:98:LYS:HE3	1.44	0.82
43:BH:52:VAL:CG1	43:BH:69:ARG:HD2	2.09	0.82
36:BA:28:A:N6	36:BA:512:G:H1'	1.95	0.82
25:AZ:222:LEU:HD11	25:AZ:303:VAL:HG11	1.60	0.82
1:CA:1101:A:H4'	1:CA:1102:A:O5'	1.79	0.82
57:DY:90:LEU:HD23	57:DY:90:LEU:H	1.43	0.82
34:D8:25:MET:HG3	48:DP:64:LYS:HB2	1.61	0.82
36:BA:2572:A:C8	40:BE:144:ARG:HD2	2.14	0.82
52:BT:129:ARG:CZ	52:BT:131:ALA:HB3	2.10	0.82
25:CZ:65:THR:HA	25:CZ:83:PRO:HD3	1.59	0.82
34:D8:30:ARG:HE	34:D8:30:ARG:HA	1.44	0.82
28:B2:25:VAL:CG1	28:B2:57:ILE:HD13	2.10	0.82
28:B2:25:VAL:HG13	28:B2:57:ILE:HD13	1.59	0.82
2:AB:111:ARG:HG2	2:AB:111:ARG:HH11	1.44	0.82
38:BC:114:VAL:HG12	38:BC:144:THR:HA	1.60	0.82
36:BA:2781:A:C5'	36:BA:2782:G:H5'	2.09	0.82
36:BA:658:C:H2'	36:BA:659:C:C6	2.14	0.82
3:AC:20:SER:HB2	3:AC:40:ARG:HH22	1.44	0.82
1:CA:559:A:P	5:CE:126:ARG:HH22	2.02	0.82
38:DC:100:ILE:CG2	38:DC:127:LEU:CD1	2.55	0.82
53:BU:88:ILE:HG13	53:BU:88:ILE:O	1.77	0.82
36:DA:2101:G:H2'	36:DA:2102:U:H5''	1.61	0.82
28:D2:51:ARG:HB2	28:D2:55:ARG:NH1	1.94	0.82
54:DV:39:LEU:HD12	54:DV:47:VAL:HG11	1.61	0.82
3:CC:153:VAL:HG12	3:CC:154:SER:H	1.44	0.82
50:DR:2:ARG:HD2	50:DR:2:ARG:C	2.00	0.82
8:CH:38:ILE:HD11	8:CH:118:VAL:O	1.79	0.82
36:DA:27:G:H22	36:DA:512:G:H2'	1.45	0.82
36:BA:2672:G:H2'	36:BA:2673:G:H5''	1.62	0.82
38:BC:87:GLU:HG2	38:BC:94:VAL:HG21	1.61	0.82
57:DY:28:LYS:HG2	57:DY:39:VAL:HG22	1.59	0.82
28:B2:57:ILE:O	28:B2:61:LEU:HB2	1.78	0.82
14:CN:57:ARG:HB3	14:CN:57:ARG:HH11	1.43	0.82
13:CM:97:PRO:HA	13:CM:110:ARG:CD	2.09	0.82
2:CB:54:THR:HG21	2:CB:201:ILE:HD11	1.62	0.82
6:CF:43:LEU:H	6:CF:43:LEU:HD22	1.43	0.82
18:AR:29:PHE:HD1	18:AR:29:PHE:H	1.26	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DF:168:ARG:CG	41:DF:175:THR:HG21	2.08	0.82
36:DA:2187:G:C2'	36:DA:2188:C:H5'	2.10	0.82
36:BA:2312:U:H2'	36:BA:2313:C:H5''	1.61	0.82
43:BH:85:LYS:HZ1	43:BH:87:LEU:N	1.77	0.82
36:BA:733:G:N7	36:BA:761:A:C6	2.47	0.82
13:CM:74:VAL:HA	13:CM:77:ASN:HD22	1.43	0.82
34:B8:23:VAL:HG12	34:B8:46:ARG:HH11	1.43	0.82
1:CA:299:G:H2'	1:CA:300:A:C8	2.14	0.82
36:DA:2491:U:H5'	36:DA:2570:G:H5''	1.60	0.82
38:DC:49:ILE:HD12	38:DC:49:ILE:O	1.80	0.82
1:AA:1423:G:H5'	47:BO:49:ARG:NH2	1.94	0.82
5:CE:51:VAL:HB	5:CE:52:PRO:HD3	1.62	0.82
25:CZ:64:ASN:N	25:CZ:64:ASN:HD22	1.76	0.82
57:BY:28:LYS:HG2	57:BY:39:VAL:HG22	1.60	0.82
1:CA:1116:C:C2'	1:CA:1117:G:H5''	2.10	0.82
1:AA:1125:U:H3	10:AJ:5:ARG:HH21	1.24	0.82
1:CA:1442(A):G:H3'	1:CA:1442(B):A:H5''	1.62	0.82
8:CH:55:GLY:C	8:CH:56:LYS:HD2	2.00	0.82
36:DA:1441:G:O2'	36:DA:1442:G:H5'	1.80	0.82
46:BN:10:GLU:OE2	46:BN:11:PRO:HD2	1.78	0.82
54:DV:16:PRO:O	54:DV:96:ILE:HB	1.78	0.82
25:CZ:271:GLU:O	25:CZ:286:VAL:HG23	1.79	0.82
49:DQ:135:ASP:H	49:DQ:137:TYR:HD2	1.27	0.82
9:AI:58:HIS:NE2	9:AI:59:PHE:CE1	2.47	0.82
3:CC:53:ALA:HB2	3:CC:115:LEU:HG	1.59	0.82
36:BA:208:C:H2'	36:BA:209:C:H6	1.45	0.82
46:DN:30:ILE:O	46:DN:34:LEU:HB2	1.80	0.82
36:BA:2386:C:H2'	36:BA:2387:U:C6	2.15	0.82
36:DA:1151:G:H5''	53:DU:81:HIS:CE1	2.15	0.82
1:AA:858:G:C6	1:AA:869:G:N7	2.47	0.82
24:AY:8:4SU:H5''	24:AY:8:4SU:H6	1.59	0.82
48:DP:59:LEU:HA	48:DP:61:ARG:CZ	2.10	0.82
32:B6:15:GLU:OE1	32:B6:18:ARG:HG3	1.80	0.82
4:AD:108:LEU:HD11	4:AD:176:LEU:CD1	2.04	0.82
42:DG:141:PHE:HB3	42:DG:142:PRO:HD2	1.62	0.82
50:BR:2:ARG:HG3	50:BR:2:ARG:HH11	1.44	0.82
48:BP:125:VAL:O	48:BP:145:PRO:HD2	1.80	0.82
42:DG:51:ARG:NE	42:DG:51:ARG:HA	1.95	0.82
50:BR:45:ARG:HG3	50:BR:46:GLY:H	1.44	0.82
30:B4:10:VAL:HG23	30:B4:11:PRO:HD2	1.61	0.82
40:BE:38:THR:HB	40:BE:41:LYS:HG2	1.60	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:17:VAL:HG11	9:CI:81:ILE:HD13	1.60	0.82
38:BC:175:VAL:HG12	38:BC:188:ASN:HB3	1.62	0.82
36:BA:2245:U:H5'	36:BA:2246:G:H5'	1.60	0.82
36:BA:1318:C:H3'	36:BA:1319:G:H5''	1.60	0.82
32:B6:53:LYS:CG	32:B6:54:ILE:H	1.92	0.81
36:DA:1665:A:H2'	36:DA:1666:G:C5'	2.09	0.81
49:DQ:27:VAL:HG21	49:DQ:134:ARG:HG3	1.61	0.81
1:AA:1392:G:N2	1:AA:1502:A:C8	2.47	0.81
36:BA:1517:G:H5'	36:BA:1517:G:C8	2.15	0.81
14:CN:7:ILE:HG13	14:CN:8:GLU:H	1.44	0.81
36:BA:2159:G:C2'	36:BA:2160:G:H5''	2.09	0.81
17:CQ:9:VAL:HG11	17:CQ:84:LEU:HD13	1.59	0.81
52:DT:13:ARG:HE	52:DT:13:ARG:HA	1.45	0.81
5:CE:152:ARG:HB3	8:CH:43:GLY:O	1.80	0.81
2:CB:7:VAL:N	2:CB:10:LEU:HD12	1.95	0.81
28:B2:35:LEU:HB2	28:B2:50:ILE:HG13	1.61	0.81
28:B2:53:LEU:HA	28:B2:56:GLN:HG3	1.60	0.81
2:AB:165:VAL:HG23	2:AB:166:ASP:N	1.95	0.81
48:BP:41:ARG:NH1	48:BP:45:LEU:HD23	1.94	0.81
10:CJ:34:VAL:HG21	10:CJ:74:ILE:HG22	1.62	0.81
36:BA:556:G:H2'	36:BA:557:U:C6	2.14	0.81
36:DA:845:G:HO2'	36:DA:846:C:H5	1.28	0.81
36:BA:886:C:O2'	36:BA:887:A:H4'	1.80	0.81
25:AZ:5:PHE:HB2	25:AZ:275:LYS:HB3	1.63	0.81
12:CL:7:ILE:H	12:CL:7:ILE:CD1	1.80	0.81
2:AB:142:LEU:HD21	2:AB:146:GLN:HE21	1.45	0.81
38:BC:100:ILE:HG23	38:BC:127:LEU:HD11	1.59	0.81
25:CZ:143:ASP:HB3	25:CZ:146:LEU:HB3	1.63	0.81
36:DA:2312:U:OP1	42:DG:73:ALA:HA	1.79	0.81
41:BF:53:THR:HG23	41:BF:55:GLY:N	1.95	0.81
37:BB:42:C:H4'	42:BG:67:LYS:HG2	1.62	0.81
25:CZ:397:ALA:HB2	61:CZ:502:KIR:H252	1.61	0.81
25:CZ:324:LYS:HB3	25:CZ:326:GLU:OE2	1.80	0.81
14:AN:12:ARG:HB3	14:AN:14:PRO:HG2	1.61	0.81
36:BA:1817:G:C2'	36:BA:1818:U:H5'	2.10	0.81
49:DQ:141:GLN:HE21	49:DQ:141:GLN:HA	1.45	0.81
41:BF:157:VAL:HG21	41:BF:194:MET:HG2	1.62	0.81
36:DA:621:A:H2'	36:DA:622:G:H5'	1.62	0.81
36:DA:605:C:H5	36:DA:623:G:H1	1.29	0.81
41:DF:160:ASN:HD21	41:DF:162:LEU:HB2	1.43	0.81
46:DN:62:VAL:HG11	46:DN:67:LEU:HD11	1.62	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:10:ARG:C	4:AD:11:LEU:HD23	2.00	0.81
4:AD:19:LEU:O	4:AD:26:CYS:SG	2.39	0.81
4:AD:107:ARG:HH21	4:AD:194:LEU:HD12	1.45	0.81
1:CA:62:U:C2'	1:CA:63:C:H5''	2.11	0.81
37:BB:91:C:H5'	49:BQ:17:LEU:O	1.79	0.81
24:AY:8:4SU:HN3	24:AY:14:A:H62	1.28	0.81
1:CA:176:C:H2'	1:CA:177:C:H6	1.45	0.81
9:CI:65:VAL:HG21	9:CI:73:GLN:HB3	1.61	0.81
40:BE:100:GLU:O	40:BE:172:VAL:HG23	1.78	0.81
1:CA:1362:C:O2'	1:CA:1363:C:H5''	1.79	0.81
1:CA:975:A:H4'	1:CA:976:G:H5''	1.60	0.81
36:DA:2524:G:H8	36:DA:2524:G:H5'	1.45	0.81
36:DA:2012:G:H4'	55:DW:96:ILE:HD11	1.62	0.81
1:CA:1036:G:H5''	1:CA:1037:C:H5	1.45	0.81
34:D8:52:LYS:N	34:D8:53:PRO:HD2	1.96	0.81
1:AA:1054:C:C6	1:AA:1196:U:C2	2.67	0.81
10:CJ:50:ILE:HD11	14:CN:41:ARG:HD2	1.62	0.81
4:AD:28:SER:HB3	4:AD:29:PRO:CD	2.08	0.81
32:D6:36:LEU:HD12	32:D6:50:ARG:NH1	1.94	0.81
48:DP:41:ARG:HH12	48:DP:45:LEU:HD23	1.42	0.81
48:BP:16:ARG:HH11	48:BP:16:ARG:HB2	1.44	0.81
42:BG:125:PHE:HB3	42:BG:130:ASN:O	1.81	0.81
4:AD:102:ASP:O	4:AD:105:VAL:HB	1.80	0.81
36:BA:761:A:H8	36:BA:761:A:O5'	1.62	0.81
24:AY:62:U:H5'	24:AY:62:U:H6	1.45	0.81
58:BZ:40:ASP:HB3	58:BZ:43:GLU:HB2	1.60	0.81
1:CA:37:U:OP1	12:CL:124:LYS:HB3	1.80	0.81
27:D1:3:LYS:HG3	27:D1:4:VAL:H	1.46	0.81
38:DC:175:VAL:HG12	38:DC:188:ASN:HB3	1.59	0.81
27:B1:61:ARG:HG2	27:B1:61:ARG:HH11	1.45	0.81
38:BC:131:LEU:HD22	38:BC:136:LEU:HB2	1.63	0.81
57:BY:2:ARG:HD2	57:BY:3:VAL:HG23	1.63	0.81
57:BY:96:ILE:HG12	57:BY:99:CYS:HB2	1.63	0.81
2:CB:152:PHE:O	2:CB:153:ARG:HB2	1.77	0.81
52:DT:96:ARG:HB2	52:DT:96:ARG:NH1	1.95	0.81
2:CB:8:LYS:HB2	2:CB:9:GLU:OE1	1.81	0.81
36:DA:880:G:H1	36:DA:897:C:H42	1.27	0.81
51:DS:17:ARG:HA	51:DS:20:ARG:NH1	1.96	0.81
32:B6:9:LEU:O	32:B6:9:LEU:HD13	1.80	0.81
32:D6:27:LYS:HE3	32:D6:30:THR:OG1	1.80	0.81
32:D6:45:LYS:HZ2	32:D6:45:LYS:N	1.77	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BU:66:ASN:ND2	53:BU:76:TYR:H	1.78	0.81
39:BD:71:ASP:CB	39:BD:103:ARG:HH22	1.92	0.81
36:DA:1819:A:H5''	39:DD:161:THR:HG21	1.61	0.81
31:B5:41:PRO:HG2	31:B5:44:THR:HB	1.62	0.81
3:CC:14:ILE:HG12	3:CC:15:THR:N	1.95	0.81
36:BA:2408:U:H2'	36:BA:2409:G:H8	1.43	0.81
30:B4:8:LYS:O	30:B4:9:LEU:HB2	1.78	0.81
57:BY:50:ARG:HG3	57:BY:56:PRO:HA	1.62	0.81
1:AA:192:U:H2'	1:AA:193:C:H6	1.45	0.81
36:BA:2389:G:H5''	36:BA:2390:U:H5'	1.63	0.81
53:BU:15:LYS:HA	53:BU:18:LEU:HD23	1.60	0.81
50:BR:18:LEU:HD11	50:BR:22:ARG:CZ	2.11	0.81
36:BA:2126:A:H4'	36:BA:2127:G:O5'	1.81	0.81
25:CZ:251:ASP:O	25:CZ:267:VAL:HG12	1.81	0.81
1:AA:973:G:C1'	10:AJ:55:LYS:CE	2.58	0.81
42:DG:34:LEU:HA	42:DG:161:THR:HG22	1.61	0.81
41:BF:84:VAL:HG13	41:BF:85:GLY:N	1.96	0.81
34:B8:61:LEU:HD12	34:B8:61:LEU:H	1.46	0.81
40:DE:59:VAL:CG2	40:DE:63:LEU:HA	2.10	0.81
36:BA:806:C:OP2	48:BP:39:LYS:HD2	1.80	0.81
1:AA:920:U:H2'	1:AA:921:U:C6	2.16	0.81
40:BE:108:SER:HB3	40:BE:165:VAL:HG21	1.63	0.81
39:BD:267:SER:O	39:BD:269:PHE:N	2.12	0.81
36:BA:2514:U:H2'	36:BA:2515:C:H6	1.43	0.81
22:CV:21:A:C2'	22:CV:22:G:H5''	2.11	0.81
1:CA:731:G:OP1	1:CA:766:A:H1'	1.79	0.81
55:BW:69:LEU:HA	55:BW:108:GLY:O	1.81	0.81
36:DA:2245:U:H5'	36:DA:2246:G:H5'	1.61	0.81
52:DT:75:ILE:HD12	52:DT:75:ILE:N	1.94	0.81
43:DH:83:TYR:HB3	43:DH:135:GLY:O	1.80	0.81
42:DG:139:LEU:HD23	42:DG:149:VAL:HG21	1.61	0.81
53:DU:56:ASP:O	53:DU:60:LEU:HG	1.81	0.81
5:CE:145:LYS:O	5:CE:149:GLU:HG3	1.80	0.81
40:DE:128:SER:OG	40:DE:129:HIS:N	2.13	0.81
58:DZ:9:TYR:OH	58:DZ:35:ARG:HG3	1.81	0.81
50:BR:84:ALA:HB3	50:BR:85:PRO:HD3	1.62	0.81
1:AA:353:A:H5'	1:AA:353:A:H8	1.45	0.81
36:BA:145:G:H2'	36:BA:146:G:H5''	1.63	0.81
32:B6:17:LYS:HB2	32:B6:18:ARG:HH12	1.45	0.81
25:CZ:135:MET:HE3	25:CZ:172:ARG:NE	1.96	0.81
28:D2:3:LEU:HB3	36:DA:98:G:OP1	1.80	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1117:G:H5'	1:AA:1117:G:H8	1.45	0.81
36:DA:612:C:C2'	36:DA:613:G:H5'	2.10	0.81
12:AL:102:ARG:HH11	12:AL:110:VAL:HG22	1.45	0.81
1:CA:1271:G:H2'	1:CA:1272:G:H5''	1.62	0.81
16:CP:26:ARG:HD2	16:CP:31:LYS:O	1.80	0.81
46:DN:73:THR:CG2	46:DN:82:LEU:HD11	2.11	0.81
34:B8:52:LYS:N	34:B8:53:PRO:HD2	1.96	0.81
54:BV:28:GLU:HB3	54:BV:29:PRO:HD2	1.63	0.81
40:DE:132:HIS:HA	40:DE:135:HIS:CE1	2.15	0.81
44:BJ:97:UNK:HA	44:BJ:132:UNK:HA	1.63	0.81
52:BT:56:GLY:O	52:BT:59:THR:HG23	1.81	0.81
39:BD:71:ASP:HB2	39:BD:103:ARG:NH2	1.95	0.81
36:DA:2477:C:C6	36:DA:2477:C:H5'	2.15	0.81
36:DA:654(E):G:N2	36:DA:654(Q):C:H1'	1.95	0.81
36:BA:1543:C:H3'	36:BA:1544:A:H5''	1.61	0.81
2:AB:47:THR:O	2:AB:51:LEU:HB2	1.80	0.81
25:CZ:96:ALA:HA	25:CZ:99:MET:HG2	1.62	0.81
24:CY:43:G:H5'	24:CY:44:G:OP2	1.81	0.81
36:BA:880:G:H1	36:BA:897:C:H42	1.27	0.81
38:DC:100:ILE:CG1	38:DC:127:LEU:HD12	2.08	0.80
25:CZ:143:ASP:HB3	25:CZ:146:LEU:CB	2.11	0.80
57:DY:13:VAL:HG21	57:DY:72:VAL:HB	1.64	0.80
42:BG:42:GLY:HA2	42:BG:89:GLY:HA2	1.63	0.80
36:BA:1024:G:H3'	36:BA:1025:G:C5'	2.10	0.80
2:CB:17:PHE:HB3	2:CB:44:LEU:HD21	1.63	0.80
2:CB:121:LEU:HG	2:CB:126:GLU:CB	2.10	0.80
41:DF:185:ASP:HA	41:DF:188:ARG:HG2	1.62	0.80
28:B2:11:GLU:HG2	28:B2:14:ARG:HD2	1.63	0.80
31:D5:44:THR:HG21	50:DR:101:ALA:HB2	1.61	0.80
42:DG:64:THR:HG23	42:DG:66:GLN:H	1.45	0.80
1:CA:1202:G:N3	14:CN:42:ILE:HG21	1.96	0.80
53:DU:92:ARG:HG2	53:DU:94:ASN:HB3	1.64	0.80
48:BP:126:VAL:HA	48:BP:145:PRO:HB2	1.63	0.80
1:AA:1036:G:H5''	1:AA:1037:C:C5	2.17	0.80
25:CZ:97:ALA:HA	25:CZ:126:VAL:HG11	1.62	0.80
43:DH:12:PRO:O	43:DH:15:VAL:HG22	1.81	0.80
51:BS:30:ARG:HH22	51:BS:62:LYS:HB3	1.47	0.80
36:DA:1209:G:H21	36:DA:1210:A:H62	1.26	0.80
40:BE:48:GLN:HE21	40:BE:78:LEU:HD22	1.46	0.80
50:DR:63:ARG:HH22	50:DR:77:ARG:HG2	1.46	0.80
22:CW:69:G:H2'	22:CW:70:G:C8	2.15	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:68:VAL:CG1	25:CZ:69:GLU:N	2.44	0.80
34:D8:32:LEU:HB3	34:D8:36:LYS:NZ	1.95	0.80
53:DU:88:ILE:O	53:DU:88:ILE:HG13	1.80	0.80
36:DA:1047:G:H2'	36:DA:1110:G:N2	1.96	0.80
7:CG:115:ARG:O	7:CG:118:VAL:HG22	1.81	0.80
46:BN:30:ILE:O	46:BN:34:LEU:HB2	1.82	0.80
1:CA:627:G:O2'	1:CA:628:G:H5'	1.81	0.80
1:CA:737:A:H2'	1:CA:738:C:H6	1.46	0.80
35:D9:1:MET:CG	35:D9:31:LYS:O	2.27	0.80
1:CA:1054:C:C5	1:CA:1196:U:C6	2.70	0.80
43:DH:85:LYS:HE3	43:DH:87:LEU:HG	1.63	0.80
22:AV:56:C:N3	42:BG:83:ARG:HD3	1.97	0.80
48:DP:38:GLN:O	48:DP:39:LYS:HB2	1.81	0.80
36:BA:603:A:H1'	36:BA:604:G:OP1	1.79	0.80
25:AZ:324:LYS:HB3	25:AZ:326:GLU:OE2	1.81	0.80
1:CA:585:G:H4'	12:CL:8:ASN:HD21	1.47	0.80
34:D8:15:LYS:HD2	34:D8:16:ILE:H	1.44	0.80
22:AW:57:G:C2'	22:AW:58:A:H5'	2.11	0.80
36:DA:1348:G:H2'	36:DA:1349:A:H5''	1.61	0.80
43:DH:83:TYR:HB2	43:DH:134:SER:HB3	1.62	0.80
31:B5:4:HIS:C	36:BA:2056:G:H22	1.85	0.80
5:CE:76:ILE:HG23	5:CE:93:PRO:HG3	1.61	0.80
51:DS:85:VAL:HG23	51:DS:106:ARG:HG3	1.62	0.80
46:BN:26:LEU:O	46:BN:30:ILE:HG13	1.79	0.80
36:DA:1005:C:H2'	36:DA:1006:C:H6	1.47	0.80
51:DS:15:ARG:HD2	51:DS:15:ARG:O	1.82	0.80
27:D1:88:LYS:HG2	27:D1:92:LYS:HE3	1.62	0.80
36:DA:893:C:H2'	36:DA:894:C:H6	1.45	0.80
36:DA:673:C:H5'	36:DA:673:C:H6	1.43	0.80
13:CM:81:LEU:HD12	13:CM:86:CYS:SG	2.21	0.80
25:AZ:180:GLU:OE1	25:AZ:181:GLN:HG3	1.82	0.80
38:BC:76:ALA:HB2	38:BC:114:VAL:HG23	1.64	0.80
35:D9:6:SER:HB2	36:DA:2466:C:H5''	1.62	0.80
36:BA:234:C:H2'	36:BA:235:U:C6	2.17	0.80
58:DZ:70:LEU:HG	58:DZ:91:LEU:HD11	1.64	0.80
1:AA:194:C:H2'	1:AA:195:A:H5''	1.63	0.80
8:CH:6:ILE:H	8:CH:6:ILE:HD12	1.47	0.80
36:DA:2312:U:H4'	42:DG:71:THR:CG2	2.09	0.80
36:BA:81:G:H21	57:BY:2:ARG:HH12	1.24	0.80
36:BA:2111:C:O2	36:BA:2111:C:H2'	1.82	0.80
49:BQ:62:GLY:HA2	58:BZ:116:VAL:HG21	1.64	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CR:32:ARG:HA	18:CR:69:THR:HG21	1.62	0.80
1:CA:1126:U:H2'	1:CA:1126:U:O2	1.81	0.80
40:BE:170:LEU:HD12	40:BE:170:LEU:H	1.45	0.80
56:DX:12:VAL:HG12	56:DX:27:THR:O	1.80	0.80
35:D9:1:MET:HE2	36:DA:2478:A:OP2	1.81	0.80
1:AA:1305:G:H21	1:AA:1331:G:H2'	1.46	0.80
10:CJ:11:PHE:CE1	10:CJ:67:THR:HG22	2.17	0.80
4:AD:20:TYR:HA	4:AD:26:CYS:SG	2.21	0.80
2:AB:7:VAL:HG13	2:AB:11:LEU:HD12	1.64	0.80
1:AA:920:U:H2'	1:AA:921:U:H6	1.47	0.80
37:DB:46:A:H2'	37:DB:47:C:C6	2.16	0.80
36:DA:2756:U:H1'	36:DA:2757:A:H5''	1.63	0.80
12:AL:86:ARG:HB2	12:AL:101:VAL:HG23	1.61	0.80
52:BT:13:ARG:HA	52:BT:13:ARG:HE	1.45	0.80
36:DA:733:G:N7	36:DA:761:A:C6	2.50	0.80
1:AA:176:C:H2'	1:AA:177:C:H6	1.47	0.80
18:AR:32:ARG:HA	18:AR:69:THR:HG21	1.60	0.80
1:CA:228:A:H5'	1:CA:228:A:H8	1.47	0.80
57:BY:17:SER:HA	57:BY:71:LYS:HD2	1.63	0.80
36:DA:234:C:H2'	36:DA:235:U:H6	1.47	0.80
36:BA:2572:A:C4	40:BE:144:ARG:NH1	2.50	0.80
36:BA:676:A:H8	36:BA:2069:G:H21	1.29	0.80
5:CE:7:GLU:HG2	5:CE:112:LEU:HD21	1.64	0.80
29:D3:44:ARG:O	29:D3:47:VAL:HB	1.80	0.80
36:DA:2131:G:N3	36:DA:2133:G:N2	2.29	0.80
36:DA:272(D):G:H1	36:DA:364:C:H42	1.30	0.80
1:AA:405:U:H3'	1:AA:406:G:H5'	1.64	0.80
1:AA:344:A:H4'	1:AA:345:C:OP1	1.81	0.80
4:CD:194:LEU:HB3	4:CD:196:LEU:HD13	1.64	0.79
36:BA:2183:C:H2'	36:BA:2184:G:C8	2.16	0.79
25:CZ:277:LEU:HD12	25:CZ:279:GLU:H	1.47	0.79
35:D9:1:MET:HE3	35:D9:32:HIS:CD2	2.16	0.79
34:B8:32:LEU:HD23	34:B8:36:LYS:NZ	1.97	0.79
42:BG:114:ILE:O	42:BG:114:ILE:HG23	1.81	0.79
1:CA:1435:G:H2'	1:CA:1436:U:C6	2.16	0.79
41:BF:29:ASN:ND2	41:BF:32:LEU:HB2	1.97	0.79
25:CZ:189:ARG:HG2	25:CZ:190:ARG:H	1.47	0.79
12:AL:27:LEU:O	12:AL:29:GLY:N	2.14	0.79
47:BO:31:LYS:HD3	47:BO:32:TYR:HE1	1.46	0.79
36:DA:2772:C:H5'	40:DE:168:MET:HE1	1.64	0.79
43:BH:149:ARG:HA	43:BH:162:ILE:HD11	1.62	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:853:G:O2'	1:CA:854:G:H5'	1.82	0.79
58:DZ:130:PRO:HA	58:DZ:133:ILE:HD11	1.63	0.79
32:D6:19:ARG:HD2	32:D6:20:ASN:H	1.46	0.79
25:CZ:266:VAL:CB	25:CZ:291:ARG:HH21	1.95	0.79
42:DG:72:ARG:HB3	42:DG:87:PRO:HD2	1.62	0.79
46:BN:133:GLN:CG	46:BN:135:PRO:HD3	2.12	0.79
43:DH:117:PRO:HB3	43:DH:123:PHE:CE1	2.15	0.79
39:DD:62:TYR:HA	39:DD:87:ASN:ND2	1.98	0.79
36:BA:2415:G:H2'	36:BA:2416:C:C6	2.16	0.79
19:CS:6:LYS:O	19:CS:7:LYS:HD3	1.82	0.79
25:AZ:270:VAL:HG13	25:AZ:286:VAL:HG21	1.60	0.79
36:BA:760:G:C2'	36:BA:761:A:H5'	2.12	0.79
36:DA:1210:A:H5''	36:DA:1212:G:O4'	1.82	0.79
29:B3:43:ILE:O	29:B3:47:VAL:HG23	1.82	0.79
58:BZ:76:LEU:HD23	58:BZ:82:ARG:O	1.82	0.79
14:AN:22:THR:HB	14:AN:33:VAL:HG21	1.62	0.79
4:AD:190:ASP:HB3	4:AD:193:ASP:OD2	1.80	0.79
51:BS:98:VAL:HG12	51:BS:100:ALA:HB2	1.63	0.79
43:DH:89:ILE:O	43:DH:89:ILE:HG13	1.80	0.79
22:CW:26:A:H61	22:CW:44:G:H1	1.30	0.79
60:CZ:501:GDP:H8	60:CZ:501:GDP:H5'	1.46	0.79
39:BD:30:GLU:HG3	39:BD:63:ARG:NH2	1.98	0.79
57:BY:27:VAL:HG12	57:BY:29:GLU:OE1	1.81	0.79
36:BA:1899:G:H21	36:BA:1902:C:N4	1.78	0.79
27:B1:76:ARG:HH12	27:B1:95:LEU:HB2	1.45	0.79
36:BA:2852:G:H2'	36:BA:2853:C:C6	2.18	0.79
2:CB:44:LEU:HA	2:CB:47:THR:OG1	1.82	0.79
25:CZ:378:VAL:HG23	25:CZ:380:LEU:HD21	1.63	0.79
24:CY:75:C:H5	25:CZ:232:THR:H	1.26	0.79
48:DP:16:ARG:HD3	48:DP:18:ARG:H	1.46	0.79
52:DT:85:LYS:NZ	52:DT:85:LYS:HB3	1.98	0.79
28:B2:59:ARG:HD3	28:B2:59:ARG:H	1.48	0.79
10:AJ:54:PHE:CG	10:AJ:55:LYS:HE3	2.16	0.79
13:AM:10:PRO:HB2	13:AM:18:ALA:HB1	1.62	0.79
35:B9:1:MET:CG	35:B9:31:LYS:O	2.29	0.79
5:AE:11:ILE:HD11	5:AE:33:VAL:HG21	1.62	0.79
1:CA:737:A:H2'	1:CA:738:C:C6	2.16	0.79
44:DJ:56:UNK:CB	44:DJ:83:UNK:HA	2.11	0.79
5:AE:69:VAL:HG11	5:AE:139:LEU:HD13	1.64	0.79
36:BA:2443:C:O2'	36:BA:2444:G:H5'	1.82	0.79
50:DR:45:ARG:HG3	50:DR:46:GLY:H	1.47	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1396:U:H2'	36:DA:1396:U:O2	1.82	0.79
25:CZ:28:THR:HG23	25:CZ:79:HIS:ND1	1.97	0.79
42:DG:60:LEU:HD22	42:DG:63:ILE:HD11	1.63	0.79
1:AA:1152:A:O2'	1:AA:1153:C:H5'	1.81	0.79
43:BH:85:LYS:HE2	43:BH:86:GLU:N	1.98	0.79
14:CN:7:ILE:CG1	14:CN:8:GLU:H	1.95	0.79
46:DN:57:ALA:CB	46:DN:124:ALA:HA	2.12	0.79
52:DT:94:ALA:O	52:DT:96:ARG:N	2.16	0.79
40:BE:52:LEU:CD1	52:BT:1:MET:HG2	2.13	0.79
54:BV:58:VAL:HG12	54:BV:97:LYS:HB2	1.62	0.79
36:DA:1341:U:H4'	56:DX:57:LEU:HB3	1.64	0.79
25:CZ:325:LYS:HD3	25:CZ:331:HIS:HB3	1.64	0.79
52:BT:93:ARG:HG2	52:BT:117:ASP:HB2	1.65	0.79
52:BT:78:LEU:O	52:BT:79:HIS:HD2	1.64	0.79
36:DA:2312:U:C2'	36:DA:2313:C:H5''	2.12	0.79
57:DY:8:LYS:HD2	57:DY:8:LYS:N	1.98	0.79
3:AC:8:ILE:HG23	3:AC:16:ARG:HG2	1.63	0.79
36:BA:2415:G:H4'	48:BP:66:GLY:O	1.81	0.79
40:BE:50:GLY:HA2	40:BE:78:LEU:HB3	1.64	0.79
2:AB:80:ILE:H	2:AB:80:ILE:HD12	1.48	0.79
44:BJ:85:UNK:HG3	44:BJ:86:UNK:H	1.46	0.79
16:CP:17:TYR:HE1	16:CP:41:PRO:HG3	1.45	0.79
4:CD:107:ARG:NH2	4:CD:194:LEU:HD12	1.98	0.79
49:BQ:60:ARG:HG3	58:BZ:180:VAL:HB	1.65	0.79
49:BQ:26:TYR:O	49:BQ:27:VAL:HG23	1.83	0.79
25:AZ:241:ARG:HA	25:AZ:285:ASN:ND2	1.98	0.79
3:CC:47:LEU:HB3	3:CC:52:LEU:HD22	1.63	0.79
9:AI:9:ARG:HG2	9:AI:14:VAL:HG22	1.64	0.79
4:CD:25:ARG:C	4:CD:27:TYR:H	1.84	0.79
11:CK:21:ILE:HD13	11:CK:94:ALA:HB1	1.64	0.79
1:AA:625:G:H2'	1:AA:626:U:C6	2.17	0.79
36:BA:2760:C:C2'	36:BA:2761:G:H5''	2.11	0.79
2:AB:97:TRP:CZ2	2:AB:102:LEU:HD13	2.17	0.79
36:BA:1446:C:H42	36:BA:1465:G:H1	1.31	0.79
40:BE:7:VAL:HG12	40:BE:27:LEU:HB3	1.65	0.79
47:BO:1:MET:HG3	47:BO:67:LYS:HG2	1.63	0.79
38:BC:73:ARG:O	38:BC:111:ASP:HB2	1.83	0.79
36:BA:2668:G:O2'	36:BA:2669:G:H5'	1.81	0.79
17:AQ:82:MET:O	17:AQ:86:GLU:HG2	1.83	0.79
4:CD:149:ALA:O	4:CD:153:ARG:HG3	1.83	0.79
36:BA:59:U:H3	36:BA:68:G:H1	1.30	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DZ:40:ASP:OD2	58:DZ:42:VAL:HG12	1.81	0.79
19:AS:78:ARG:HB2	19:AS:81:ARG:NH1	1.96	0.79
11:CK:99:GLN:HG2	11:CK:105:VAL:HG21	1.64	0.79
36:DA:1494:A:C2'	36:DA:1495:A:H5''	2.12	0.79
25:AZ:26:THR:HG21	60:AZ:501:GDP:C8	2.17	0.79
56:DX:35:THR:HG22	56:DX:37:THR:N	1.95	0.79
49:DQ:141:GLN:OXT	58:DZ:99:TYR:HB2	1.82	0.79
36:BA:1222:C:C2'	36:BA:1223:G:H5''	2.12	0.79
1:CA:882:C:O2'	1:CA:883:C:H5'	1.82	0.79
46:BN:9:VAL:HG12	46:BN:10:GLU:H	1.47	0.79
1:AA:408:A:H4'	4:AD:112:VAL:HG11	1.64	0.79
41:BF:40:GLN:HE22	41:BF:182:ASN:HB2	1.47	0.79
1:CA:1463:C:H5'	52:DT:115:ARG:HH21	1.48	0.79
54:DV:28:GLU:HB3	54:DV:29:PRO:HD2	1.65	0.79
28:B2:7:ARG:HA	28:B2:11:GLU:HG3	1.64	0.79
42:DG:77:ILE:H	42:DG:77:ILE:HD13	1.46	0.79
28:D2:39:ALA:HA	28:D2:45:SER:HB3	1.64	0.79
57:DY:87:LYS:HG3	57:DY:88:LYS:H	1.48	0.79
56:DX:27:THR:HB	56:DX:80:ILE:HG22	1.65	0.79
35:D9:29:ASN:HD21	35:D9:32:HIS:CE1	2.00	0.79
53:DU:92:ARG:HH22	54:DV:10:LYS:HA	1.46	0.79
36:DA:2287:A:N6	36:DA:2344:U:H3	1.80	0.79
34:B8:15:LYS:HD3	48:BP:65:ARG:HH22	1.48	0.79
4:AD:201:GLN:HA	4:AD:204:ILE:HD12	1.65	0.79
48:BP:59:LEU:HA	48:BP:61:ARG:NE	1.98	0.79
35:B9:10:ILE:HD12	35:B9:10:ILE:H	1.47	0.79
35:B9:35:ARG:HD3	36:BA:2742:C:OP1	1.82	0.79
1:CA:927:G:OP2	1:CA:927:G:H4'	1.81	0.79
36:BA:984:A:H5''	36:BA:985:C:H5	1.48	0.79
15:CO:39:LEU:HD13	15:CO:56:LEU:HB2	1.64	0.79
10:CJ:38:ILE:HD11	10:CJ:71:LEU:HD22	1.63	0.79
25:AZ:133:VAL:HG12	25:AZ:134:PHE:N	1.95	0.79
3:CC:82:GLU:H	3:CC:85:ARG:HD3	1.46	0.79
25:CZ:114:PRO:O	25:CZ:117:ARG:HB2	1.82	0.79
37:BB:20:C:C2'	37:BB:21:G:H5''	2.12	0.79
4:AD:138:TYR:HD1	4:AD:139:ARG:N	1.81	0.79
22:AV:46:G:C3'	22:AV:47:U:H5''	2.10	0.78
32:D6:15:GLU:HG2	32:D6:18:ARG:NH1	1.98	0.78
25:AZ:242:ILE:HG21	25:AZ:282:ALA:HA	1.64	0.78
13:CM:23:TYR:HE1	13:CM:70:LEU:HD22	1.48	0.78
36:DA:1902:C:H1'	39:DD:244:ARG:HG3	1.64	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BN:62:VAL:HG11	46:BN:67:LEU:HD11	1.65	0.78
20:CT:45:GLN:NE2	20:CT:46:GLU:HG3	1.98	0.78
15:AO:33:THR:HG23	15:AO:63:ARG:HH11	1.48	0.78
9:AI:65:VAL:HG21	9:AI:73:GLN:HB3	1.63	0.78
52:DT:33:LYS:HZ1	52:DT:43:GLN:HG2	1.48	0.78
39:BD:77:ALA:HB2	39:BD:97:TYR:CD1	2.18	0.78
1:CA:1348:U:O2'	1:CA:1349:A:H8	1.64	0.78
12:CL:110:VAL:HG23	12:CL:120:TYR:HB3	1.64	0.78
1:AA:1423:G:H5'	47:BO:49:ARG:HH22	1.48	0.78
36:DA:2068:U:H3	36:DA:2430:A:H2	1.27	0.78
3:AC:188:LEU:HD13	3:AC:195:VAL:HG13	1.65	0.78
52:DT:16:ARG:HD2	52:DT:18:ASP:OD1	1.82	0.78
49:DQ:62:GLY:HA2	58:DZ:116:VAL:HG21	1.64	0.78
33:B7:21:ARG:HG2	33:B7:21:ARG:HH11	1.48	0.78
41:DF:28:ILE:HD13	41:DF:28:ILE:H	1.46	0.78
25:CZ:133:VAL:HG23	25:CZ:168:VAL:HG11	1.65	0.78
41:DF:84:VAL:HG13	41:DF:85:GLY:N	1.94	0.78
41:DF:107:LYS:HE3	41:DF:205:ARG:HG2	1.63	0.78
25:AZ:220:PRO:O	25:AZ:245:GLY:HA3	1.84	0.78
41:DF:32:LEU:O	41:DF:36:VAL:HG23	1.83	0.78
47:DO:31:LYS:HD3	47:DO:32:TYR:HE1	1.48	0.78
12:CL:83:VAL:HG21	12:CL:100:ILE:HD13	1.66	0.78
24:AY:20:H2U:H4'	24:AY:21:A:C5'	2.13	0.78
34:D8:54:GLU:O	34:D8:58:ILE:HG12	1.84	0.78
36:BA:484:C:OP1	57:BY:49:VAL:HG13	1.83	0.78
1:CA:858:G:C6	1:CA:869:G:N7	2.51	0.78
1:CA:1049:U:H1'	1:CA:1201:A:N7	1.98	0.78
25:CZ:68:VAL:CG1	25:CZ:69:GLU:H	1.95	0.78
56:BX:12:VAL:CG2	56:BX:13:LEU:H	1.91	0.78
49:DQ:130:LYS:HD3	58:DZ:80:ARG:NH1	1.98	0.78
36:DA:143(A):C:H4'	56:DX:38:GLU:OE2	1.84	0.78
52:BT:28:VAL:HG11	52:BT:46:GLU:CA	2.02	0.78
37:BB:40:U:H3'	37:BB:41:U:H5''	1.65	0.78
56:DX:27:THR:HG22	56:DX:80:ILE:HB	1.65	0.78
3:AC:16:ARG:HH11	3:AC:16:ARG:CB	1.96	0.78
42:BG:73:ALA:O	42:BG:85:GLY:HA2	1.83	0.78
31:B5:54:GLY:H	31:B5:56:LYS:HZ2	1.31	0.78
53:DU:92:ARG:O	53:DU:94:ASN:N	2.15	0.78
58:DZ:152:ALA:HB2	58:DZ:168:GLU:HA	1.64	0.78
41:DF:160:ASN:ND2	41:DF:162:LEU:H	1.80	0.78
41:BF:104:LYS:O	41:BF:108:LYS:HG2	1.84	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:537:G:H5''	12:CL:113:ARG:NH1	1.98	0.78
4:CD:73:ARG:O	4:CD:77:ASN:HB2	1.84	0.78
48:BP:77:ARG:HD3	48:BP:78:PRO:HD2	1.66	0.78
36:BA:654(A):G:H2'	36:BA:654(B):C:H5'	1.65	0.78
48:DP:24:GLY:HA3	48:DP:33:ARG:NH1	1.98	0.78
53:BU:83:LEU:HG	53:BU:88:ILE:CD1	2.10	0.78
49:BQ:27:VAL:HG12	49:BQ:28:ALA:N	1.96	0.78
3:CC:179:ARG:HD2	3:CC:207:VAL:HA	1.64	0.78
25:AZ:267:VAL:HG23	25:AZ:288:VAL:HG13	1.65	0.78
36:DA:708:C:H42	36:DA:723:G:H1	1.30	0.78
32:D6:35:GLU:HB3	32:D6:51:GLU:HB2	1.66	0.78
46:BN:47:ALA:HB2	46:BN:112:LEU:HD11	1.65	0.78
3:CC:153:VAL:HG12	3:CC:154:SER:N	1.99	0.78
36:BA:1899:G:N2	36:BA:1902:C:H41	1.81	0.78
25:AZ:68:VAL:HG13	25:AZ:69:GLU:H	1.48	0.78
27:D1:67:ILE:HG13	27:D1:68:PRO:HD3	1.64	0.78
50:BR:111:LEU:N	50:BR:111:LEU:HD12	1.99	0.78
40:BE:87:GLU:O	40:BE:89:ASP:N	2.17	0.78
36:BA:2319:G:H4'	36:BA:2319:G:OP2	1.81	0.78
36:BA:614(A):U:H4'	36:BA:614(B):G:H5''	1.66	0.78
32:D6:11:LEU:HG	32:D6:26:ASN:OD1	1.84	0.78
47:BO:111:PHE:O	47:BO:115:VAL:HG23	1.83	0.78
37:BB:73:A:H2'	37:BB:74:U:H5'	1.65	0.78
22:AW:38:A:C2'	22:AW:39:U:H5''	2.14	0.78
36:BA:1516:C:C2'	36:BA:1517:G:H5''	2.14	0.78
25:CZ:345:ARG:NH1	25:CZ:384:LEU:HD21	1.98	0.78
36:BA:1348:G:C2'	36:BA:1349:A:H5''	2.13	0.78
56:DX:11:PRO:HA	56:DX:28:PHE:HB3	1.66	0.78
36:BA:2131:G:N3	36:BA:2133:G:N2	2.31	0.78
40:BE:2:LYS:HD3	40:BE:95:ILE:HG22	1.66	0.78
34:D8:14:VAL:HG21	34:D8:22:VAL:CG1	2.14	0.78
36:BA:298:G:H5'	36:BA:299:A:OP1	1.84	0.78
36:DA:674:G:O2'	41:DF:74:ARG:HD3	1.83	0.78
25:AZ:333:GLY:HA3	25:AZ:363:MET:HE1	1.64	0.78
36:DA:1639:U:O2'	36:DA:1640:C:H5''	1.84	0.78
36:DA:1771:C:HO2'	36:DA:1786:A:H8	1.28	0.78
36:BA:2185:C:H2'	36:BA:2186:G:H5'	1.65	0.78
56:BX:27:THR:HB	56:BX:80:ILE:HG22	1.66	0.78
38:BC:78:ALA:H	38:BC:115:ALA:CB	1.96	0.78
36:DA:335:C:H2'	36:DA:336:C:H6	1.49	0.78
58:DZ:180:VAL:HG22	58:DZ:181:GLU:H	1.47	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BF:192:LEU:HD23	41:BF:193:VAL:N	1.99	0.78
1:AA:37:U:OP1	12:AL:124:LYS:HB3	1.84	0.78
1:CA:344:A:H4'	1:CA:345:C:OP1	1.84	0.78
51:BS:89:ARG:NE	51:BS:91:PRO:HG2	1.98	0.78
24:CY:77:TRP:N	25:CZ:285:ASN:O	2.17	0.78
32:B6:11:LEU:O	32:B6:12:GLU:HG3	1.84	0.78
1:CA:367:U:H4'	25:CZ:291:ARG:HD2	1.63	0.78
37:BB:75:G:H21	58:BZ:85:HIS:CE1	2.02	0.78
39:DD:27:THR:HG21	39:DD:83:GLU:HG2	1.63	0.78
2:CB:84:GLU:OE1	2:CB:216:SER:HA	1.83	0.78
36:DA:1658:C:OP1	40:DE:132:HIS:CE1	2.36	0.78
36:DA:2133:G:H2'	36:DA:2157:G:N2	1.99	0.78
48:DP:66:GLY:O	48:DP:67:MET:HB2	1.82	0.77
36:DA:83:G:H22	36:DA:102:G:H2'	1.49	0.77
42:BG:76:SER:HB2	42:BG:84:LYS:N	1.99	0.77
4:AD:31:CYS:C	4:AD:33:MET:H	1.88	0.77
4:AD:194:LEU:HB3	4:AD:196:LEU:HD13	1.66	0.77
48:DP:112:LEU:H	48:DP:128:HIS:HD2	1.30	0.77
42:BG:77:ILE:CD1	42:BG:77:ILE:H	1.96	0.77
20:CT:23:ARG:O	20:CT:27:LYS:HB2	1.85	0.77
36:DA:2523:G:C2'	36:DA:2524:G:H5''	2.14	0.77
38:BC:73:ARG:HH21	38:BC:110:PHE:HD1	1.32	0.77
26:B0:50:ASN:HD22	26:B0:63:VAL:HG21	1.49	0.77
26:D0:7:LEU:HD13	49:DQ:85:LYS:HG3	1.66	0.77
52:BT:91:ARG:O	52:BT:117:ASP:HB3	1.83	0.77
36:DA:2415:G:O3'	48:DP:66:GLY:HA3	1.84	0.77
39:DD:30:GLU:HB2	39:DD:35:LYS:CE	2.14	0.77
36:BA:666:G:H4'	48:BP:49:ARG:HH21	1.48	0.77
36:BA:666:G:H4'	48:BP:49:ARG:NH2	1.99	0.77
19:CS:43:GLU:C	19:CS:45:VAL:H	1.86	0.77
16:AP:5:ARG:NH2	16:AP:24:ALA:HA	1.99	0.77
49:DQ:141:GLN:C	58:DZ:53:ILE:HD12	2.05	0.77
36:BA:266:G:H2'	36:BA:267:C:H5''	1.65	0.77
36:BA:1092:C:H42	36:BA:1100:C:H42	1.30	0.77
25:AZ:254:GLU:HG3	25:AZ:307:PRO:HA	1.65	0.77
51:BS:44:LYS:HB3	51:BS:46:VAL:HG23	1.64	0.77
25:CZ:294:SER:OG	25:CZ:297:GLU:HG3	1.85	0.77
36:BA:744:G:O2'	36:BA:745:G:H5'	1.84	0.77
22:AW:56:C:O4'	38:BC:132:GLY:HA3	1.84	0.77
42:DG:5:VAL:HG11	42:DG:100:TRP:CB	2.14	0.77
36:DA:2185:C:H2'	36:DA:2186:G:H5'	1.65	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:B9:1:MET:SD	36:BA:2477:C:H2'	2.24	0.77
43:BH:136:ILE:HD12	43:BH:136:ILE:H	1.48	0.77
58:BZ:126:VAL:HG12	58:BZ:163:LEU:HB3	1.65	0.77
16:CP:74:LEU:O	16:CP:79:VAL:HG23	1.84	0.77
36:DA:330:A:O2'	36:DA:331:A:H8	1.68	0.77
10:CJ:33:GLN:O	10:CJ:75:ILE:HG12	1.84	0.77
36:BA:284:U:H2'	36:BA:285:C:H6	1.49	0.77
13:CM:40:ASN:HD21	13:CM:42:ALA:HB3	1.49	0.77
27:D1:21:ARG:HG3	27:D1:21:ARG:O	1.84	0.77
52:DT:89:VAL:CG1	52:DT:91:ARG:HG3	2.12	0.77
32:B6:17:LYS:HB2	32:B6:18:ARG:NH1	1.99	0.77
26:D0:49:LYS:HG3	26:D0:80:HIS:HD1	1.48	0.77
3:AC:68:VAL:HG12	3:AC:70:VAL:HG23	1.66	0.77
48:DP:127:ALA:HB3	48:DP:130:PHE:CZ	2.20	0.77
49:DQ:51:ARG:NH1	49:DQ:52:VAL:HG22	2.00	0.77
36:BA:2469:A:O2'	49:BQ:56:ARG:HD2	1.83	0.77
25:AZ:323:LEU:HD13	25:AZ:396:GLY:HA2	1.67	0.77
39:DD:130:ALA:C	39:DD:131:LEU:HD12	2.05	0.77
6:AF:12:PRO:HG3	6:AF:55:ASP:HB3	1.65	0.77
42:DG:52:ILE:HD13	42:DG:52:ILE:H	1.48	0.77
31:B5:34:PRO:O	31:B5:35:GLU:HG2	1.83	0.77
1:AA:173:U:H5'	1:AA:197:A:O4'	1.84	0.77
38:BC:214:VAL:HG23	38:BC:224:ILE:HG21	1.65	0.77
24:CY:20:H2U:H4'	24:CY:21:A:C5'	2.13	0.77
52:BT:53:ARG:HH11	52:BT:53:ARG:CB	1.96	0.77
25:AZ:226:GLU:O	25:AZ:300:ARG:HD2	1.84	0.77
56:DX:12:VAL:CG2	56:DX:13:LEU:H	1.96	0.77
10:AJ:40:LEU:N	10:AJ:40:LEU:HD23	1.98	0.77
36:BA:27:G:N2	36:BA:512:G:H2'	1.99	0.77
36:BA:2206:G:H21	36:BA:2207:G:H5'	1.48	0.77
46:BN:126:PRO:O	46:BN:127:ASP:HB2	1.84	0.77
46:DN:96:GLU:O	46:DN:100:GLU:HG3	1.83	0.77
49:BQ:51:ARG:O	49:BQ:55:VAL:HG12	1.85	0.77
22:AW:43:C:C2	22:AW:44:G:H1'	2.19	0.77
36:BA:969:U:H2'	36:BA:970:C:C6	2.19	0.77
1:CA:1220:G:H2'	1:CA:1221:G:C8	2.19	0.77
49:DQ:133:ARG:HH11	49:DQ:133:ARG:HB2	1.50	0.77
51:BS:58:LEU:HD23	51:BS:65:VAL:HG13	1.66	0.77
36:BA:882:G:H2'	36:BA:883:G:C8	2.20	0.77
31:B5:44:THR:CG2	50:BR:101:ALA:HB2	2.15	0.77
10:CJ:40:LEU:CG	10:CJ:69:ASN:HB3	2.14	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1539:G:H2'	36:BA:1540:U:H5'	1.66	0.77
1:CA:1258:G:H2'	1:CA:1259:C:C6	2.20	0.77
52:DT:82:LEU:HD12	52:DT:82:LEU:N	1.99	0.77
36:DA:969:U:H2'	36:DA:970:C:C6	2.19	0.77
16:CP:25:ARG:HG3	16:CP:25:ARG:HH11	1.49	0.77
58:BZ:166:SER:HB2	58:BZ:168:GLU:N	1.98	0.77
9:CI:9:ARG:HG3	9:CI:14:VAL:HG13	1.67	0.77
43:DH:149:ARG:CA	43:DH:162:ILE:HD11	2.15	0.77
30:D4:10:VAL:HG23	30:D4:11:PRO:HD2	1.67	0.77
34:D8:50:LEU:HD12	34:D8:51:ALA:H	1.50	0.77
27:D1:3:LYS:HD3	36:DA:1364:G:H5''	1.66	0.77
38:BC:99:ILE:HG23	38:BC:102:LYS:HD2	1.65	0.77
46:DN:40:PRO:HB3	53:DU:68:ALA:HB2	1.65	0.77
47:DO:8:LEU:HB2	47:DO:82:ASN:O	1.84	0.77
1:AA:1242:C:H2'	1:AA:1243:C:C6	2.20	0.77
32:B6:45:LYS:HZ2	32:B6:45:LYS:HB3	1.50	0.77
25:AZ:176:LEU:O	25:AZ:176:LEU:HD12	1.83	0.77
34:B8:4:MET:CE	36:BA:666:G:H1'	2.15	0.77
1:AA:1308:U:H5'	13:AM:110:ARG:HH11	1.48	0.77
30:B4:8:LYS:HG2	30:B4:9:LEU:N	1.99	0.77
12:CL:86:ARG:HB2	12:CL:101:VAL:HG23	1.66	0.77
22:AV:44:G:H2'	22:AV:45:U:H5'	1.65	0.77
55:DW:88:ARG:HG2	55:DW:94:ASP:OD2	1.85	0.77
53:DU:14:HIS:CD2	53:DU:36:ARG:HH22	2.02	0.77
48:DP:23:PRO:O	48:DP:33:ARG:HD2	1.85	0.77
36:BA:2491:U:C5'	36:BA:2570:G:H5''	2.14	0.77
12:AL:41:ARG:HG2	12:AL:42:THR:N	1.94	0.77
26:D0:38:VAL:HB	26:D0:59:LEU:HD12	1.66	0.77
22:CV:44:G:H2'	22:CV:45:U:C5'	2.14	0.77
48:BP:46:LYS:HG2	48:BP:52:GLU:OE2	1.84	0.77
36:DA:1517:G:C8	36:DA:1517:G:H5'	2.20	0.77
33:B7:30:VAL:HA	33:B7:33:ARG:NH1	1.98	0.77
31:D5:3:LYS:N	31:D5:3:LYS:HD2	1.98	0.77
34:D8:14:VAL:HG21	34:D8:22:VAL:HG13	1.67	0.77
25:CZ:356:PRO:O	25:CZ:359:VAL:HG23	1.85	0.77
36:BA:1498:C:H2'	36:BA:1499:C:H5''	1.66	0.77
25:CZ:389:ARG:O	25:CZ:390:GLU:HB2	1.85	0.77
52:DT:28:VAL:HG11	52:DT:46:GLU:CA	2.08	0.77
22:CW:39:U:C2'	22:CW:40:C:H5'	2.15	0.77
1:CA:963:G:H21	10:CJ:55:LYS:CD	1.98	0.77
13:CM:9:ILE:HG12	42:DG:146:TYR:CZ	2.19	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DX:50:LYS:H	56:DX:87:GLN:NE2	1.83	0.77
54:DV:35:LEU:HD23	54:DV:57:VAL:HG13	1.65	0.77
10:AJ:57:LYS:C	10:AJ:57:LYS:HD3	2.06	0.77
5:CE:76:ILE:HD11	5:CE:142:LEU:HD21	1.66	0.77
39:BD:124:PRO:HG2	39:BD:129:ASN:ND2	2.00	0.77
5:AE:76:ILE:HG13	5:AE:142:LEU:CD1	2.15	0.77
55:DW:6:ILE:HG12	55:DW:104:THR:CG2	2.15	0.77
49:BQ:18:LYS:HB2	49:BQ:98:LYS:NZ	1.99	0.77
49:BQ:18:LYS:N	49:BQ:98:LYS:HE3	2.00	0.77
24:CY:45:U:H3'	24:CY:46:7MG:C5'	2.15	0.77
46:DN:3:THR:HG22	46:DN:4:TYR:H	1.50	0.77
23:AX:16:A:H5'	23:AX:17:U:OP2	1.85	0.77
36:DA:2113:U:H2'	36:DA:2114:A:H8	1.50	0.77
53:BU:66:ASN:HD21	53:BU:76:TYR:H	1.32	0.76
1:CA:1320:C:H5''	19:CS:70:LYS:HG3	1.64	0.76
46:BN:22:THR:HG22	46:BN:61:ARG:HB3	1.65	0.76
58:DZ:123:ASP:O	58:DZ:124:ILE:HG23	1.84	0.76
41:DF:7:TYR:CE1	41:DF:196:LEU:HD11	2.19	0.76
25:AZ:222:LEU:CD1	25:AZ:303:VAL:HG11	2.14	0.76
48:BP:7:ARG:HB3	48:BP:8:PRO:HD3	1.66	0.76
41:DF:53:THR:HG23	41:DF:55:GLY:H	1.48	0.76
41:DF:108:LYS:O	41:DF:112:MET:HB2	1.85	0.76
1:CA:1015:A:H2'	1:CA:1016:A:C8	2.19	0.76
50:DR:10:LEU:O	50:DR:10:LEU:HD12	1.84	0.76
16:AP:2:VAL:O	16:AP:64:ALA:HA	1.85	0.76
60:CZ:501:GDP:H8	60:CZ:501:GDP:C5'	1.97	0.76
28:B2:46:GLN:O	28:B2:50:ILE:HB	1.85	0.76
25:AZ:118:GLU:HA	25:AZ:121:LEU:CD2	2.15	0.76
49:DQ:27:VAL:HG11	49:DQ:134:ARG:HD2	1.68	0.76
36:BA:1639:U:C2'	36:BA:1640:C:H5''	2.14	0.76
36:DA:1899:G:H21	36:DA:1902:C:N4	1.83	0.76
36:DA:943:U:OP2	48:DP:38:GLN:CD	2.24	0.76
25:CZ:324:LYS:CG	25:CZ:365:GLY:HA3	2.14	0.76
51:BS:15:ARG:HD2	51:BS:18:ILE:HD11	1.67	0.76
1:CA:975:A:H4'	1:CA:976:G:C5'	2.16	0.76
50:DR:96:ARG:HD3	50:DR:98:LEU:HD11	1.66	0.76
38:DC:181:PRO:HG2	38:DC:184:LYS:HG2	1.65	0.76
1:AA:108:G:H5'	1:AA:109:A:H5''	1.66	0.76
20:CT:14:LYS:HA	20:CT:17:ARG:HH21	1.49	0.76
38:DC:63:SER:HA	38:DC:160:ARG:HA	1.68	0.76
1:AA:534:U:H5'	1:AA:534:U:H6	1.50	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:69:LYS:C	17:AQ:70:ARG:HD2	2.05	0.76
36:DA:1720:U:H2'	36:DA:1721:G:H5''	1.67	0.76
1:AA:255:G:H1'	17:AQ:16:GLN:NE2	2.00	0.76
48:DP:30:THR:HG22	48:DP:31:ALA:N	2.00	0.76
1:AA:973:G:H1'	10:AJ:55:LYS:HE2	1.64	0.76
57:DY:45:VAL:HG12	57:DY:60:PHE:HB3	1.67	0.76
46:DN:58:ASP:O	46:DN:60:ILE:HG13	1.85	0.76
12:CL:102:ARG:HH11	12:CL:110:VAL:HG22	1.49	0.76
57:DY:2:ARG:N	57:DY:4:LYS:HE2	2.01	0.76
41:DF:185:ASP:HA	41:DF:188:ARG:CG	2.15	0.76
3:CC:135:LYS:NZ	5:CE:50:GLU:HG2	2.00	0.76
2:AB:189:ASP:HB3	2:AB:203:GLY:O	1.85	0.76
48:DP:77:ARG:HD3	48:DP:78:PRO:HD2	1.67	0.76
1:AA:1256:A:H1'	1:AA:1258:G:C6	2.20	0.76
4:CD:189:PRO:HB2	4:CD:194:LEU:HD21	1.67	0.76
2:CB:114:ARG:NH1	2:CB:118:LEU:HD21	1.99	0.76
9:CI:55:ALA:O	9:CI:58:HIS:CE1	2.39	0.76
51:BS:56:LEU:O	51:BS:56:LEU:HD23	1.84	0.76
42:BG:10:LYS:N	42:BG:10:LYS:HD2	2.00	0.76
42:BG:60:LEU:O	42:BG:60:LEU:HD13	1.85	0.76
29:D3:43:ILE:O	29:D3:47:VAL:HG23	1.86	0.76
1:AA:1242:C:H2'	1:AA:1243:C:H6	1.50	0.76
36:DA:877:U:O2'	36:DA:878:A:H5''	1.85	0.76
57:DY:53:PRO:HB3	57:DY:56:PRO:HG3	1.67	0.76
36:DA:1311:G:H21	36:DA:1603:A:H62	1.32	0.76
44:BJ:23:UNK:HA	44:BJ:118:UNK:HA	1.67	0.76
36:DA:642:G:H21	36:DA:646:A:H2	1.33	0.76
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.21	0.76
36:BA:1771:C:H1'	36:BA:1786:A:C8	2.21	0.76
36:BA:1064:C:H2'	36:BA:1065:U:H5''	1.65	0.76
36:DA:1952:A:C6	47:DO:22:ILE:HD12	2.21	0.76
12:AL:20:LYS:CD	12:AL:20:LYS:H	1.88	0.76
41:BF:168:ARG:CG	41:BF:175:THR:HG21	2.13	0.76
39:DD:44:ASN:OD1	39:DD:44:ASN:N	2.17	0.76
36:DA:2315:G:H21	42:DG:128:ARG:HD2	1.51	0.76
42:DG:38:VAL:HG22	42:DG:93:THR:HG23	1.67	0.76
25:CZ:272:MET:HB2	25:CZ:277:LEU:CD2	2.13	0.76
25:CZ:7:ARG:NH1	25:CZ:7:ARG:HG2	2.01	0.76
46:DN:46:VAL:CG1	46:DN:48:MET:HG3	2.15	0.76
58:DZ:177:PRO:C	58:DZ:178:GLU:HG2	2.05	0.76
20:CT:57:ARG:NH1	20:CT:102:GLY:HA2	1.99	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:18:LYS:H	4:CD:33:MET:CE	1.98	0.76
41:DF:160:ASN:OD1	41:DF:163:VAL:HG23	1.84	0.76
40:DE:34:VAL:HG11	40:DE:78:LEU:HD22	1.67	0.76
1:AA:1271:G:H2'	1:AA:1272:G:H5''	1.67	0.76
20:AT:45:GLN:NE2	20:AT:46:GLU:HG3	2.00	0.76
13:CM:39:ILE:HG22	13:CM:40:ASN:H	1.50	0.76
36:BA:1279:G:H4'	50:BR:31:HIS:CD2	2.20	0.76
40:DE:9:VAL:HG12	40:DE:25:VAL:O	1.85	0.76
44:DJ:25:UNK:O	44:DJ:84:UNK:HA	1.86	0.76
36:DA:2208:A:H1'	36:DA:2219:G:C5	2.20	0.76
36:DA:1779:U:H5	36:DA:1784:A:N7	1.83	0.76
36:BA:2649:U:H2'	36:BA:2650:U:C6	2.21	0.76
25:CZ:234:ARG:O	25:CZ:289:LEU:HD21	1.85	0.76
36:DA:2312:U:H4'	42:DG:71:THR:HG23	1.68	0.76
26:D0:23:VAL:N	26:D0:38:VAL:HG13	1.99	0.76
25:CZ:324:LYS:HG3	25:CZ:365:GLY:CA	2.15	0.76
48:BP:39:LYS:HD3	48:BP:40:SER:N	2.01	0.76
13:CM:113:PRO:O	13:CM:114:ARG:HB2	1.85	0.76
36:DA:888:C:H2'	36:DA:889:C:H4'	1.67	0.76
58:DZ:29:TYR:CB	58:DZ:34:ASN:HB3	2.16	0.76
36:DA:1378:A:O2'	36:DA:1379:A:H5'	1.85	0.76
54:BV:72:VAL:HG23	54:BV:85:LYS:HB3	1.67	0.76
2:AB:101:MET:HA	2:AB:108:ILE:HD12	1.68	0.76
2:CB:71:VAL:HG13	2:CB:93:VAL:CG1	2.15	0.76
25:AZ:164:PRO:O	25:AZ:168:VAL:HG23	1.85	0.76
57:BY:45:VAL:CG1	57:BY:60:PHE:HB3	2.15	0.76
40:BE:63:LEU:HD23	40:BE:63:LEU:O	1.85	0.76
36:DA:1107:G:H4'	44:DJ:81:UNK:CB	2.16	0.76
36:BA:2415:G:H2'	36:BA:2416:C:H6	1.51	0.76
1:AA:1308:U:H5'	13:AM:110:ARG:NH1	2.00	0.76
5:CE:11:ILE:HG21	5:CE:105:VAL:HG13	1.65	0.76
1:AA:1272:G:H5'	1:AA:1272:G:H8	1.51	0.76
3:CC:112:SER:CB	3:CC:115:LEU:HD12	2.15	0.76
40:DE:11:MET:HB2	40:DE:23:VAL:O	1.86	0.76
40:BE:52:LEU:HD11	52:BT:1:MET:HG2	1.66	0.76
36:DA:1064:C:H2'	36:DA:1065:U:H5''	1.65	0.76
24:CY:2:G:OP1	25:CZ:90:LYS:HD3	1.86	0.76
26:B0:38:VAL:HB	26:B0:59:LEU:HD12	1.67	0.76
38:BC:78:ALA:H	38:BC:115:ALA:HB1	1.51	0.76
36:DA:2303:G:H21	42:DG:132:ASN:ND2	1.84	0.76
52:BT:22:PHE:HE2	52:BT:85:LYS:NZ	1.83	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1697:G:H3'	36:DA:1698:A:H5''	1.67	0.76
1:CA:1270:C:H2'	1:CA:1271:G:H8	1.51	0.76
1:CA:452:A:O2'	1:CA:453:A:H8	1.69	0.76
2:AB:8:LYS:HB2	2:AB:9:GLU:OE1	1.86	0.76
39:DD:201:HIS:O	39:DD:204:ILE:HG23	1.86	0.76
1:AA:1499:A:H1'	1:AA:1520:G:H5'	1.66	0.76
53:BU:70:ARG:HA	53:BU:74:LEU:O	1.84	0.76
24:CY:76:A:H1'	25:CZ:287:GLY:CA	2.13	0.76
48:DP:30:THR:CG2	48:DP:31:ALA:N	2.48	0.76
10:AJ:54:PHE:CE2	10:AJ:55:LYS:HD2	2.21	0.76
58:BZ:8:TYR:HB2	58:BZ:38:TYR:CE2	2.21	0.76
46:BN:48:MET:N	46:BN:48:MET:HE3	1.99	0.76
10:CJ:50:ILE:CD1	10:CJ:50:ILE:H	1.95	0.76
36:BA:1639:U:H2'	36:BA:1640:C:H5''	1.65	0.76
39:BD:43:ARG:NH1	39:BD:44:ASN:HD21	1.83	0.76
1:CA:1199:U:H4'	10:CJ:54:PHE:CE1	2.20	0.76
4:CD:21:LEU:HD11	4:CD:66:ARG:O	1.86	0.76
51:DS:89:ARG:HG2	51:DS:92:TYR:HA	1.68	0.76
1:AA:489:C:H2'	1:AA:490:G:H8	1.50	0.76
37:BB:114:C:H2'	37:BB:115:G:C8	2.21	0.76
36:BA:954:G:H4'	49:BQ:13:GLN:NE2	2.00	0.76
36:BA:893:C:H2'	36:BA:894:C:H6	1.50	0.76
6:CF:35:ALA:HA	6:CF:67:MET:HB3	1.68	0.76
2:CB:176:GLU:O	2:CB:179:LYS:HB3	1.86	0.76
3:CC:43:LEU:HD22	3:CC:47:LEU:HD22	1.68	0.76
1:CA:1203:C:OP1	14:CN:3:ARG:HD3	1.86	0.76
48:BP:47:ASP:CB	48:BP:51:PHE:HB2	2.16	0.76
43:BH:136:ILE:HD12	43:BH:136:ILE:N	2.01	0.76
36:DA:1803:A:O3'	39:DD:259:THR:CG2	2.33	0.76
48:BP:23:PRO:HB2	48:BP:33:ARG:HG3	1.68	0.76
5:CE:76:ILE:HD11	5:CE:142:LEU:CD2	2.15	0.76
50:BR:38:VAL:HB	50:BR:39:PRO:HD3	1.67	0.76
9:AI:106:ALA:O	9:AI:108:VAL:HG23	1.86	0.76
21:CU:3:LYS:HB3	21:CU:14:TRP:CD1	2.20	0.76
36:BA:1314:C:H5'	36:BA:1314:C:H6	1.51	0.76
1:CA:691:G:O6	11:CK:52:GLY:HA2	1.86	0.76
36:BA:2189:U:H2'	36:BA:2190:G:C4'	2.16	0.75
1:CA:1306:A:N6	1:CA:1331:G:H1'	2.00	0.75
25:AZ:143:ASP:HB3	25:AZ:146:LEU:HB3	1.67	0.75
42:DG:133:LEU:HD11	42:DG:157:ILE:HD12	1.68	0.75
49:BQ:141:GLN:CD	58:BZ:72:ARG:HE	1.89	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DS:58:LEU:HD23	51:DS:65:VAL:HG13	1.68	0.75
36:DA:1543:C:H3'	36:DA:1544:A:C5'	2.16	0.75
36:DA:2780:G:OP2	46:DN:118:LYS:HE3	1.85	0.75
34:B8:52:LYS:N	34:B8:53:PRO:CD	2.48	0.75
36:BA:2317:C:H2'	36:BA:2318:G:H5'	1.65	0.75
34:B8:54:GLU:O	34:B8:58:ILE:HG12	1.85	0.75
53:BU:28:ARG:HA	53:BU:34:LYS:O	1.85	0.75
37:BB:17:C:H2'	37:BB:18:G:O4'	1.84	0.75
36:DA:2415:G:H4'	48:DP:66:GLY:C	2.07	0.75
28:B2:70:GLN:O	28:B2:71:ASN:HB2	1.84	0.75
25:CZ:266:VAL:HG11	25:CZ:291:ARG:NH2	2.01	0.75
1:CA:972:C:O2	10:CJ:55:LYS:HG2	1.86	0.75
1:AA:1281:U:H4'	1:AA:1282:C:OP2	1.86	0.75
13:CM:65:LYS:HD3	13:CM:65:LYS:H	1.51	0.75
1:AA:1016:A:H2'	1:AA:1017:G:O4'	1.86	0.75
46:DN:74:ARG:HH12	46:DN:85:ILE:HD11	1.51	0.75
9:CI:19:LEU:HD21	9:CI:59:PHE:CD2	2.21	0.75
4:AD:14:ARG:HD2	4:AD:59:ARG:NH1	2.01	0.75
8:CH:49:GLU:HG3	8:CH:49:GLU:O	1.85	0.75
36:DA:1525:G:H2'	36:DA:1526:G:H8	1.50	0.75
34:D8:23:VAL:HG12	34:D8:46:ARG:HH11	1.50	0.75
3:AC:92:ALA:HB2	3:AC:99:VAL:HG21	1.67	0.75
1:AA:532:A:N6	1:AA:1206:G:O2'	2.19	0.75
48:DP:23:PRO:HD2	48:DP:33:ARG:HE	1.51	0.75
32:B6:53:LYS:CD	32:B6:54:ILE:H	1.98	0.75
32:D6:15:GLU:CD	32:D6:18:ARG:CZ	2.54	0.75
1:CA:367:U:H4'	25:CZ:291:ARG:HH11	1.49	0.75
26:D0:40:GLN:NE2	26:D0:45:PHE:H	1.83	0.75
9:CI:4:TYR:CZ	9:CI:88:TYR:HB2	2.21	0.75
50:DR:116:LEU:O	50:DR:117:VAL:HB	1.86	0.75
12:CL:110:VAL:CG2	12:CL:120:TYR:HB3	2.16	0.75
39:DD:27:THR:HG23	39:DD:83:GLU:HG2	1.69	0.75
58:BZ:96:VAL:HG13	58:BZ:97:GLU:N	2.00	0.75
4:AD:189:PRO:HB2	4:AD:194:LEU:HD21	1.67	0.75
43:BH:107:VAL:HG23	43:BH:108:GLY:H	1.50	0.75
58:DZ:10:ARG:HH21	58:DZ:26:GLY:H	1.34	0.75
36:BA:1001:A:H2'	36:BA:1002:G:O4'	1.86	0.75
36:DA:2843:G:H1	36:DA:2874:C:H42	1.33	0.75
38:DC:192:PHE:O	38:DC:195:ALA:HB3	1.86	0.75
36:BA:1270:C:H5''	36:BA:1271:G:O5'	1.85	0.75
57:BY:13:VAL:CG2	57:BY:72:VAL:HB	2.17	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BH:83:TYR:HB3	43:BH:135:GLY:O	1.85	0.75
58:DZ:156:LYS:O	58:DZ:158:PRO:HD3	1.87	0.75
1:CA:1349:A:H2'	1:CA:1350:A:C8	2.22	0.75
48:DP:85:LEU:HA	48:DP:88:LEU:HB3	1.68	0.75
3:CC:113:ALA:HB3	3:CC:114:PRO:HD3	1.67	0.75
22:CW:6:G:O2'	22:CW:7:A:H5'	1.85	0.75
36:DA:2092:U:H4'	36:DA:2093:G:H5''	1.68	0.75
39:BD:45:ASN:CG	39:BD:46:GLN:H	1.90	0.75
37:DB:65:C:N4	37:DB:109:C:H2'	2.01	0.75
15:AO:87:ILE:CG2	15:AO:88:ARG:H	1.93	0.75
32:D6:11:LEU:HD11	32:D6:51:GLU:HG3	1.66	0.75
1:CA:1152:A:O2'	1:CA:1153:C:H5'	1.86	0.75
1:AA:522:C:H41	12:AL:53:ARG:HH22	1.34	0.75
42:DG:124:SER:HB3	42:DG:131:TYR:CE1	2.21	0.75
58:BZ:9:TYR:HE1	58:BZ:35:ARG:NH1	1.84	0.75
1:CA:1239:A:H62	1:CA:1299:A:N6	1.84	0.75
36:BA:873:G:H2'	36:BA:874:G:C8	2.21	0.75
54:BV:19:LYS:NZ	54:BV:20:LEU:H	1.84	0.75
36:DA:30:G:O2'	36:DA:31:C:H5'	1.87	0.75
36:DA:1407:C:H42	36:DA:1595:G:H1	1.34	0.75
1:AA:1096:C:H5''	2:AB:137:ARG:HH21	1.50	0.75
49:BQ:135:ASP:H	49:BQ:137:TYR:HD2	1.33	0.75
53:BU:36:ARG:HB2	53:BU:36:ARG:NH1	2.01	0.75
27:B1:37:ILE:HD12	27:B1:37:ILE:O	1.87	0.75
58:DZ:98:MET:HG2	58:DZ:99:TYR:N	2.01	0.75
37:DB:20:C:C2'	37:DB:21:G:H5''	2.16	0.75
1:CA:1271:G:H2'	1:CA:1272:G:C5'	2.16	0.75
13:CM:49:THR:HB	13:CM:52:GLU:HG3	1.69	0.75
13:AM:97:PRO:CA	13:AM:110:ARG:HD3	2.17	0.75
36:DA:1525:G:H2'	36:DA:1526:G:C8	2.22	0.75
38:DC:53:ARG:HH11	38:DC:53:ARG:HB3	1.51	0.75
38:DC:114:VAL:HG12	38:DC:144:THR:HA	1.69	0.75
1:AA:1157:A:H1'	1:AA:1181:G:N2	2.01	0.75
7:CG:78:ARG:HG3	7:CG:79:ARG:N	2.02	0.75
49:DQ:6:ARG:O	49:DQ:7:MET:HG3	1.86	0.75
6:AF:77:ARG:HG2	6:AF:77:ARG:HH11	1.52	0.75
48:DP:64:LYS:C	48:DP:66:GLY:H	1.90	0.75
31:D5:41:PRO:HG2	31:D5:44:THR:HB	1.67	0.75
10:AJ:54:PHE:CD1	10:AJ:55:LYS:HE3	2.22	0.75
38:BC:100:ILE:HG21	38:BC:127:LEU:HG	1.69	0.75
36:BA:621:A:H2'	36:BA:622:G:H5'	1.67	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:102:ALA:HB1	5:CE:106:PRO:HG2	1.67	0.75
50:BR:116:LEU:O	50:BR:117:VAL:HB	1.84	0.75
41:DF:185:ASP:OD1	41:DF:188:ARG:HD3	1.87	0.75
46:DN:9:VAL:HG12	46:DN:10:GLU:H	1.51	0.75
36:BA:2173:A:H2'	36:BA:2173:A:N3	2.00	0.75
1:CA:598:U:H4'	8:CH:94:TYR:CD2	2.21	0.75
42:DG:40:ASN:OD1	42:DG:156:ASP:HB2	1.87	0.75
26:D0:49:LYS:H	26:D0:80:HIS:CB	1.97	0.75
28:D2:51:ARG:HH11	28:D2:55:ARG:HH12	1.35	0.75
36:DA:139:G:C6	36:DA:140:G:H2'	2.22	0.75
8:AH:114:THR:HG22	8:AH:130:GLY:O	1.87	0.75
50:BR:2:ARG:HG3	50:BR:2:ARG:NH1	2.00	0.75
41:DF:84:VAL:CG1	41:DF:85:GLY:H	2.00	0.75
48:BP:39:LYS:HD3	48:BP:40:SER:H	1.51	0.75
27:B1:29:GLY:HA3	36:BA:2396:G:O2'	1.87	0.75
4:AD:12:CYS:HA	4:AD:19:LEU:HD13	1.69	0.75
13:AM:79:LYS:O	13:AM:82:MET:HG2	1.87	0.75
22:AV:5:G:H8	22:AV:5:G:H5'	1.50	0.75
24:AY:61:C:O2'	24:AY:62:U:H5''	1.86	0.75
36:DA:672:C:C2'	36:DA:673:C:H5''	2.17	0.75
41:DF:154:VAL:HG22	41:DF:191:ARG:HB3	1.69	0.75
36:BA:1184:G:O2'	36:BA:1185:C:H5'	1.86	0.75
1:CA:184:G:C4'	1:CA:224:C:H4'	2.17	0.75
36:BA:330:A:C2	36:BA:1210:A:H2'	2.21	0.75
26:B0:27:GLU:CD	36:BA:856:C:H1'	2.08	0.75
43:BH:96:ALA:HB3	43:BH:128:PRO:O	1.86	0.75
6:CF:87:ARG:HG2	6:CF:87:ARG:HH11	1.52	0.75
49:BQ:32:TYR:O	49:BQ:105:GLU:HB2	1.87	0.75
3:CC:92:ALA:HB2	3:CC:99:VAL:HG21	1.69	0.75
43:DH:143:GLN:HE21	43:DH:143:GLN:C	1.89	0.75
54:BV:35:LEU:O	54:BV:37:VAL:N	2.20	0.75
4:AD:4:TYR:O	4:AD:5:ILE:HB	1.87	0.75
36:BA:2155:G:H3'	36:BA:2156:G:H8	1.51	0.75
1:AA:559:A:P	5:AE:126:ARG:HH22	2.10	0.75
36:DA:1038:C:H2'	36:DA:1039:G:H5''	1.67	0.75
36:DA:252:G:OP2	48:DP:50:ARG:NH2	2.21	0.74
28:B2:42:GLY:O	28:B2:43:GLN:HG3	1.86	0.74
2:CB:101:MET:CA	2:CB:108:ILE:HD12	2.14	0.74
35:D9:6:SER:CB	36:DA:2466:C:H5''	2.17	0.74
36:BA:582:G:H2'	36:BA:583:G:H8	1.52	0.74
53:DU:91:ASP:OD1	53:DU:96:ALA:HB2	1.87	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:57:LYS:HE2	10:AJ:60:ARG:NH2	2.01	0.74
36:BA:2787:C:H1'	40:BE:61:ARG:CD	2.17	0.74
34:B8:25:MET:HG3	48:BP:64:LYS:HB2	1.68	0.74
58:BZ:163:LEU:CG	58:BZ:165:VAL:HG13	2.16	0.74
13:AM:91:ARG:HB3	13:AM:98:VAL:HG22	1.69	0.74
55:DW:10:VAL:HG21	55:DW:103:ILE:HG13	1.68	0.74
36:DA:1340:U:OP1	36:DA:1341:U:H5	1.70	0.74
39:BD:131:LEU:N	39:BD:131:LEU:HD12	2.02	0.74
56:DX:64:LYS:NZ	56:DX:73:ARG:NH2	2.35	0.74
43:DH:67:LEU:O	43:DH:71:LEU:HB2	1.87	0.74
36:DA:2126:A:H4'	36:DA:2127:G:O5'	1.86	0.74
25:CZ:24:LYS:O	25:CZ:26:THR:N	2.20	0.74
34:D8:41:ILE:HD12	36:DA:2419:U:OP1	1.86	0.74
36:BA:2591:C:H2'	36:BA:2592:G:C8	2.22	0.74
28:B2:33:MET:O	28:B2:36:ARG:HB2	1.87	0.74
2:CB:111:ARG:NH2	2:CB:114:ARG:HG2	2.02	0.74
3:AC:52:LEU:HG	3:AC:52:LEU:O	1.88	0.74
9:CI:58:HIS:NE2	9:CI:59:PHE:CE1	2.55	0.74
54:BV:18:LEU:HD23	54:BV:19:LYS:N	2.02	0.74
27:B1:4:VAL:HG23	27:B1:11:ARG:HG3	1.69	0.74
42:DG:28:VAL:O	42:DG:31:VAL:HG12	1.87	0.74
26:B0:49:LYS:H	26:B0:80:HIS:HB3	1.51	0.74
49:BQ:6:ARG:HH11	49:BQ:6:ARG:HB3	1.52	0.74
56:BX:35:THR:CG2	56:BX:37:THR:H	1.99	0.74
42:DG:130:ASN:ND2	42:DG:160:VAL:HG13	2.02	0.74
42:DG:82:LEU:HD13	42:DG:87:PRO:CB	2.16	0.74
57:DY:95:LYS:HA	57:DY:101:LYS:H	1.49	0.74
36:DA:654(L):G:H2'	36:DA:654(M):C:H4'	1.68	0.74
31:B5:45:VAL:HG12	31:B5:46:CYS:H	1.51	0.74
31:D5:4:HIS:HB3	31:D5:5:PRO:HD2	1.69	0.74
39:DD:267:SER:O	39:DD:269:PHE:N	2.16	0.74
43:BH:159:GLU:HG3	43:BH:160:LYS:HG3	1.68	0.74
36:BA:1658:C:OP1	40:BE:132:HIS:CE1	2.40	0.74
1:CA:1157:A:H1'	1:CA:1181:G:N2	2.02	0.74
36:BA:909:A:H2'	36:BA:912:C:C5	2.22	0.74
1:AA:713:G:H2'	1:AA:714:G:C8	2.22	0.74
1:CA:1218:C:H2'	1:CA:1219:U:C6	2.22	0.74
43:DH:54:ARG:HH12	43:DH:62:LYS:HG3	1.52	0.74
50:DR:111:LEU:HD12	50:DR:111:LEU:H	1.51	0.74
37:DB:40:U:C2	37:DB:43:C:H5"	2.21	0.74
42:DG:73:ALA:H	42:DG:87:PRO:CG	2.00	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:D0:37:LEU:N	26:D0:59:LEU:O	2.19	0.74
22:CV:68:C:O2'	22:CV:69:G:H5''	1.85	0.74
1:CA:1053:G:O6	1:CA:1199:U:H2'	1.86	0.74
46:DN:46:VAL:HG13	46:DN:48:MET:HG3	1.69	0.74
43:DH:126:PRO:O	43:DH:127:GLU:HG2	1.86	0.74
1:AA:1149:C:H2'	1:AA:1150:U:O2	1.87	0.74
9:CI:58:HIS:CD2	9:CI:59:PHE:CD1	2.76	0.74
46:DN:18:ALA:CB	46:DN:26:LEU:HD22	2.18	0.74
39:BD:267:SER:C	39:BD:269:PHE:H	1.90	0.74
40:BE:170:LEU:H	40:BE:170:LEU:CD1	2.00	0.74
1:AA:176:C:H2'	1:AA:177:C:C6	2.22	0.74
7:CG:141:VAL:O	7:CG:144:MET:HB2	1.88	0.74
36:DA:2392:A:H2	36:DA:2424:C:H42	1.35	0.74
42:DG:39:ILE:HG22	42:DG:157:ILE:HG23	1.68	0.74
25:AZ:226:GLU:HG3	25:AZ:240:GLY:HA2	1.68	0.74
35:D9:1:MET:CE	35:D9:31:LYS:HB3	2.17	0.74
54:BV:25:LEU:H	54:BV:92:THR:HG21	1.52	0.74
3:AC:6:HIS:ND1	14:AN:49:HIS:HB3	2.03	0.74
53:DU:57:PHE:HA	53:DU:60:LEU:HB2	1.69	0.74
40:BE:59:VAL:CG2	40:BE:63:LEU:HA	2.18	0.74
42:BG:138:GLN:CG	42:BG:153:ARG:H	2.01	0.74
41:DF:7:TYR:HE1	41:DF:196:LEU:HD11	1.53	0.74
40:DE:31:CYS:HB2	40:DE:49:LEU:HD12	1.70	0.74
46:DN:68:GLU:HG3	46:DN:88:GLU:OE1	1.88	0.74
41:DF:157:VAL:CG2	41:DF:194:MET:HG2	2.17	0.74
36:BA:821:A:H5''	36:BA:822:U:C6	2.22	0.74
11:CK:57:THR:OG1	11:CK:58:PRO:HD2	1.87	0.74
1:CA:274:A:O2'	1:CA:275:G:H8	1.70	0.74
36:BA:654(H):G:H2'	36:BA:654(I):C:H5'	1.70	0.74
50:DR:38:VAL:HB	50:DR:39:PRO:HD3	1.70	0.74
51:DS:49:VAL:HG12	51:DS:50:SER:H	1.52	0.74
24:AY:44:G:H4'	24:AY:45:U:OP2	1.88	0.74
25:CZ:270:VAL:HG13	25:CZ:286:VAL:HG21	1.70	0.74
36:BA:2101:G:H2'	36:BA:2102:U:H5''	1.70	0.74
36:DA:1666:G:H5'	36:DA:1666:G:H8	1.51	0.74
25:CZ:265:THR:CG2	25:CZ:291:ARG:N	2.51	0.74
42:DG:7:LEU:HA	42:DG:10:LYS:HB2	1.69	0.74
30:D4:22:ILE:H	30:D4:22:ILE:CD1	1.91	0.74
39:DD:23:GLU:C	39:DD:25:THR:H	1.89	0.74
27:B1:76:ARG:NH1	27:B1:95:LEU:HB2	2.03	0.74
53:BU:50:ARG:HH12	54:BV:72:VAL:HG12	1.51	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:5:VAL:HG22	17:AQ:60:ILE:HG13	1.69	0.74
1:CA:1452:C:H4'	1:CA:1456:G:N2	2.03	0.74
9:AI:118:LYS:O	9:AI:119:ALA:HB3	1.87	0.74
36:DA:753:C:O2'	36:DA:754:C:H5'	1.88	0.74
33:D7:34:ARG:HG3	33:D7:34:ARG:HH11	1.52	0.74
1:AA:1040:U:H2'	1:AA:1041:A:H8	1.52	0.74
52:DT:106:SER:C	52:DT:107:ASP:OD1	2.26	0.74
28:B2:48:HIS:CG	28:B2:49:LYS:H	2.05	0.74
36:BA:482:A:H1'	36:BA:498:G:N2	2.03	0.74
36:BA:1378:A:H4'	36:BA:1379:A:OP1	1.86	0.74
58:DZ:153:SER:HB2	58:DZ:167:PRO:HG2	1.70	0.74
9:CI:55:ALA:CA	9:CI:58:HIS:HE1	1.99	0.74
12:CL:89:ARG:CD	12:CL:91:LYS:HZ3	1.99	0.74
12:AL:120:TYR:O	12:AL:122:THR:HG22	1.87	0.74
41:DF:132:VAL:HG22	41:DF:133:ASN:N	2.01	0.74
31:B5:43:HIS:HD2	36:BA:2815:C:O2'	1.70	0.74
43:BH:19:VAL:HG12	43:BH:20:ALA:N	2.01	0.74
10:AJ:85:LEU:O	10:AJ:87:THR:N	2.19	0.74
37:BB:87:G:H2'	37:BB:88:C:H5''	1.70	0.74
36:BA:801:G:O4'	41:BF:54:ARG:HD2	1.87	0.74
6:CF:76:ALA:O	6:CF:80:ARG:HG3	1.88	0.74
39:DD:148:GLU:HB2	39:DD:151:LYS:HD2	1.67	0.74
47:BO:71:ARG:HH11	47:BO:71:ARG:HG3	1.51	0.74
14:AN:7:ILE:O	14:AN:11:LYS:HG3	1.87	0.74
1:CA:260:G:H2'	1:CA:261:U:C6	2.23	0.74
48:BP:66:GLY:O	48:BP:67:MET:HB2	1.87	0.74
14:CN:13:THR:N	14:CN:14:PRO:CD	2.50	0.74
43:BH:12:PRO:HD2	43:BH:15:VAL:HG21	1.68	0.74
5:AE:40:ARG:HH11	5:AE:40:ARG:HG2	1.52	0.74
25:AZ:265:THR:HG23	25:AZ:291:ARG:O	1.88	0.74
42:BG:111:LEU:O	42:BG:114:ILE:HG22	1.86	0.74
34:B8:50:LEU:HD12	34:B8:51:ALA:H	1.53	0.74
12:AL:28:LYS:C	12:AL:30:ALA:H	1.91	0.74
1:CA:458:C:H2'	1:CA:460:G:H8	1.53	0.74
20:CT:82:SER:O	20:CT:86:ARG:HB2	1.88	0.74
36:DA:127:A:H5''	36:DA:128:C:O4'	1.88	0.74
60:CZ:501:GDP:H5'	60:CZ:501:GDP:C8	2.23	0.74
25:CZ:265:THR:CG2	25:CZ:266:VAL:H	2.00	0.74
42:DG:114:ILE:CG2	42:DG:117:PHE:HB2	2.18	0.74
1:AA:1129:C:OP1	1:AA:1130:A:H5''	1.88	0.74
9:AI:53:VAL:HG22	9:AI:95:LYS:HZ3	1.50	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1019:U:H3	36:BA:1142(A):A:H62	1.34	0.74
32:D6:53:LYS:CG	32:D6:54:ILE:H	2.00	0.74
36:BA:140:G:H1'	36:BA:141:A:H2	1.53	0.74
36:DA:2533:A:H2'	36:DA:2534:A:O4'	1.87	0.74
40:BE:131:ALA:HB1	40:BE:134:ILE:HD11	1.70	0.74
11:CK:33:THR:HB	11:CK:38:ASN:O	1.88	0.74
53:BU:9:VAL:HG12	53:BU:13:LYS:HE2	1.69	0.74
9:CI:53:VAL:HG22	9:CI:95:LYS:HZ3	1.53	0.74
36:DA:2173:A:N3	36:DA:2173:A:H2'	2.03	0.74
31:D5:20:ARG:O	31:D5:23:HIS:HB2	1.87	0.74
1:CA:489:C:H2'	1:CA:490:G:H8	1.53	0.74
33:D7:30:VAL:HA	33:D7:33:ARG:HH12	1.53	0.74
1:CA:848:C:O2'	1:CA:849:C:H5'	1.88	0.74
12:CL:69:TYR:O	12:CL:71:PRO:HD3	1.87	0.74
25:CZ:230:THR:CG2	25:CZ:295:ARG:HD2	2.18	0.74
34:D8:4:MET:SD	34:D8:61:LEU:HD21	2.28	0.74
38:BC:100:ILE:HD11	38:BC:123:VAL:HG23	1.69	0.74
57:DY:75:ILE:O	57:DY:76:CYS:HB2	1.88	0.74
56:DX:50:LYS:N	56:DX:87:GLN:HE22	1.84	0.74
46:BN:60:ILE:HD13	46:BN:99:LEU:HD23	1.70	0.74
30:D4:8:LYS:HG2	30:D4:9:LEU:N	2.03	0.74
41:BF:157:VAL:HG23	41:BF:157:VAL:O	1.86	0.74
36:DA:1018:C:H2'	36:DA:1019:U:H6	1.51	0.74
25:AZ:64:ASN:N	25:AZ:83:PRO:HG2	2.03	0.74
1:CA:784:C:H4'	36:DA:1837:C:OP1	1.88	0.74
56:DX:29:TRP:CE3	56:DX:78:LYS:HB3	2.23	0.74
38:DC:42:GLU:HG3	38:DC:215:THR:HG23	1.68	0.74
42:DG:103:LEU:O	42:DG:107:LEU:HG	1.87	0.74
1:CA:1246:C:O2'	1:CA:1247:U:H5'	1.87	0.74
36:DA:212:G:O2'	36:DA:213:A:H5'	1.88	0.74
36:DA:556:G:H2'	36:DA:557:U:C6	2.22	0.74
36:BA:2630:G:H21	36:BA:2892:A:H1'	1.53	0.74
43:BH:153:LYS:H	43:BH:153:LYS:HD3	1.53	0.74
22:CW:73:A:H2'	22:CW:74:C:C5'	2.15	0.73
28:B2:10:LEU:HD11	28:B2:59:ARG:CG	2.18	0.73
46:BN:115:ARG:HA	46:BN:118:LYS:NZ	2.02	0.73
54:BV:39:LEU:CD1	54:BV:47:VAL:HG11	2.18	0.73
13:CM:96:LEU:HB3	13:CM:97:PRO:HD2	1.69	0.73
1:AA:1116:C:H2'	1:AA:1117:G:C5'	2.17	0.73
40:DE:5:LEU:HD12	40:DE:51:PHE:HB2	1.69	0.73
17:CQ:69:LYS:C	17:CQ:70:ARG:HD2	2.07	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:B1:42:GLN:HE22	36:BA:379:G:N2	1.84	0.73
4:AD:107:ARG:NH2	4:AD:194:LEU:HD12	2.03	0.73
36:BA:106:C:H2'	36:BA:107:C:C6	2.23	0.73
20:CT:18:GLN:HG2	20:CT:22:ARG:NH1	2.02	0.73
36:DA:1209:G:N2	36:DA:1210:A:H62	1.86	0.73
50:DR:55:ALA:HA	50:DR:80:PHE:CE1	2.23	0.73
36:DA:225:A:O2'	36:DA:257:A:H4'	1.88	0.73
51:DS:74:ALA:HB1	51:DS:103:GLU:HG2	1.70	0.73
29:D3:49:LYS:HD2	36:DA:851:U:H5''	1.69	0.73
24:CY:75:C:H6	25:CZ:231:ILE:HA	1.52	0.73
32:B6:30:THR:HG23	32:B6:31:PRO:HD2	1.70	0.73
56:BX:35:THR:HG22	56:BX:37:THR:H	1.51	0.73
22:AW:57:G:O2'	22:AW:58:A:H5'	1.88	0.73
34:B8:48:PHE:O	34:B8:49:VAL:HB	1.86	0.73
49:BQ:141:GLN:HE22	58:BZ:72:ARG:CA	1.98	0.73
36:DA:2189:U:C2'	36:DA:2190:G:H4'	2.17	0.73
56:DX:12:VAL:HG12	56:DX:27:THR:OG1	1.87	0.73
41:DF:206:ILE:HG22	41:DF:207:GLY:H	1.52	0.73
13:AM:3:ARG:CZ	42:BG:113:ARG:HD3	2.18	0.73
2:AB:155:LEU:HD21	2:AB:159:PRO:HG3	1.69	0.73
34:B8:52:LYS:H	34:B8:53:PRO:CD	2.00	0.73
40:DE:132:HIS:CD2	40:DE:135:HIS:NE2	2.57	0.73
36:DA:2772:C:H5'	40:DE:168:MET:CE	2.18	0.73
38:BC:62:VAL:O	38:BC:160:ARG:HA	1.87	0.73
1:CA:189(K):U:H2'	1:CA:189(L):G:C8	2.22	0.73
36:DA:1446:C:H42	36:DA:1465:G:H1	1.33	0.73
37:DB:17:C:H2'	37:DB:18:G:O4'	1.87	0.73
36:DA:634:C:H2'	36:DA:635:C:C6	2.21	0.73
48:DP:110:TYR:CD1	48:DP:111:ARG:HG3	2.24	0.73
27:B1:60:PHE:CZ	27:B1:91:LYS:HG3	2.23	0.73
36:DA:2111:C:O2'	36:DA:2118:U:H4'	1.88	0.73
46:BN:3:THR:CG2	46:BN:5:VAL:HG23	2.19	0.73
36:DA:2599:G:O2'	36:DA:2600:A:H5'	1.88	0.73
58:DZ:110:GLY:HA2	58:DZ:145:GLU:OE1	1.88	0.73
25:CZ:70:TYR:O	25:CZ:77:TYR:HB2	1.87	0.73
25:CZ:149:LEU:O	25:CZ:153:GLU:HG3	1.89	0.73
15:CO:87:ILE:HG22	15:CO:88:ARG:N	1.99	0.73
36:DA:92:A:H3'	36:DA:93:G:H8	1.51	0.73
48:DP:112:LEU:H	48:DP:128:HIS:CD2	2.06	0.73
36:BA:2160:G:C8	36:BA:2160:G:H5'	2.23	0.73
6:CF:62:TRP:C	6:CF:63:TYR:HD1	1.90	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CR:58:LEU:HB3	18:CR:62:GLU:HB3	1.69	0.73
22:CV:21:A:H2'	22:CV:22:G:H5''	1.71	0.73
1:CA:532:A:H2	1:CA:1206:G:H21	1.36	0.73
10:CJ:30:SER:OG	10:CJ:81:THR:HG22	1.87	0.73
54:BV:35:LEU:C	54:BV:37:VAL:H	1.91	0.73
2:CB:209:ARG:NH1	2:CB:239:VAL:HG11	2.03	0.73
6:CF:12:PRO:HG3	6:CF:55:ASP:HB3	1.69	0.73
31:D5:31:VAL:HG13	31:D5:42:PRO:HG3	1.70	0.73
1:CA:353:A:H5'	1:CA:353:A:H8	1.53	0.73
3:AC:179:ARG:HD2	3:AC:207:VAL:HA	1.70	0.73
51:BS:74:ALA:HB1	51:BS:103:GLU:HG2	1.69	0.73
17:CQ:82:MET:O	17:CQ:86:GLU:HG2	1.87	0.73
36:BA:237:C:O2'	36:BA:238:C:H5'	1.88	0.73
3:AC:153:VAL:HG12	3:AC:154:SER:N	2.03	0.73
32:D6:10:LEU:HG	34:D8:34:TRP:HD1	1.52	0.73
39:DD:35:LYS:HA	39:DD:63:ARG:HA	1.71	0.73
25:CZ:177:LEU:HD13	25:CZ:195:TRP:CE2	2.22	0.73
25:CZ:193:ASN:HB3	25:CZ:196:VAL:H	1.53	0.73
51:DS:59:LYS:CG	51:DS:60:GLY:H	2.01	0.73
1:CA:1349:A:H2'	1:CA:1350:A:H8	1.52	0.73
36:DA:272(H):C:C2'	36:DA:272(I):U:H5''	2.17	0.73
50:BR:101:ALA:O	50:BR:102:GLU:HB2	1.86	0.73
12:CL:28:LYS:C	12:CL:30:ALA:H	1.90	0.73
22:AW:59:U:H3'	22:AW:60:U:C6	2.23	0.73
38:DC:64:LEU:HD13	38:DC:188:ASN:ND2	2.03	0.73
49:BQ:3:MET:HB2	49:BQ:4:PRO:HD2	1.68	0.73
22:AW:34:G:H2'	22:AW:35:A:H5'	1.71	0.73
34:B8:30:ARG:HA	34:B8:30:ARG:HE	1.53	0.73
13:AM:49:THR:HG22	13:AM:51:ALA:H	1.53	0.73
36:DA:2584:U:H2'	36:DA:2585:U:H5'	1.71	0.73
52:DT:28:VAL:HG22	52:DT:45:PHE:O	1.87	0.73
1:AA:963:G:H21	10:AJ:55:LYS:CD	2.00	0.73
36:DA:778:G:H5''	39:DD:48:ARG:HD3	1.69	0.73
52:DT:61:PHE:CE1	52:DT:76:PHE:HB2	2.22	0.73
28:D2:35:LEU:C	28:D2:35:LEU:HD13	2.08	0.73
46:BN:12:ARG:HB3	46:BN:50:ASP:OD1	1.87	0.73
57:DY:97:ARG:HH21	57:DY:98:VAL:HG21	1.54	0.73
3:AC:3:ASN:O	3:AC:4:LYS:HB2	1.88	0.73
41:BF:119:ARG:HH11	41:BF:119:ARG:HG2	1.53	0.73
48:BP:52:GLU:HA	48:BP:52:GLU:OE1	1.89	0.73
36:DA:302:C:H2'	36:DA:303:U:H6	1.52	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:53:VAL:HG13	9:CI:95:LYS:HD3	1.70	0.73
41:BF:29:ASN:HD22	41:BF:32:LEU:HB2	1.52	0.73
51:BS:42:ASP:C	51:BS:44:LYS:H	1.92	0.73
53:DU:70:ARG:HA	53:DU:74:LEU:O	1.88	0.73
36:BA:812:C:H3'	48:BP:25:SER:HB2	1.70	0.73
1:AA:475:G:O2'	1:AA:476:G:H5'	1.87	0.73
46:DN:107:LEU:HB3	46:DN:108:PRO:HD2	1.70	0.73
1:AA:59:A:H5'	1:AA:60:A:H5''	1.71	0.73
36:DA:2023:G:H5'	36:DA:2617:C:H4'	1.70	0.73
12:CL:47:LYS:O	12:CL:49:ASN:N	2.22	0.73
36:DA:2884:U:H2'	36:DA:2885:C:H5'	1.70	0.73
36:DA:296:C:O2'	36:DA:297:C:H5'	1.89	0.73
1:CA:57:G:H2'	1:CA:58:C:C6	2.23	0.73
34:D8:61:LEU:CD1	34:D8:61:LEU:H	1.81	0.73
48:DP:16:ARG:C	48:DP:16:ARG:HD3	2.09	0.73
56:DX:35:THR:O	56:DX:39:ILE:HG12	1.89	0.73
39:BD:43:ARG:HB3	39:BD:54:ARG:HB2	1.70	0.73
43:DH:76:VAL:O	43:DH:79:VAL:HG22	1.87	0.73
1:AA:1190:G:H3'	3:AC:3:ASN:HD22	1.52	0.73
39:DD:239:ARG:NH1	39:DD:239:ARG:HG2	2.00	0.73
36:DA:806:C:OP2	48:DP:39:LYS:HD2	1.88	0.73
36:BA:1018:C:H2'	36:BA:1019:U:H6	1.53	0.73
4:CD:13:ARG:NH2	4:CD:36:ARG:NH1	2.35	0.73
30:D4:7:PRO:O	30:D4:8:LYS:HB3	1.89	0.73
1:CA:1343:G:H2'	1:CA:1344:C:C6	2.23	0.73
34:B8:32:LEU:CB	34:B8:36:LYS:HZ1	2.01	0.73
36:BA:1222:C:H2'	36:BA:1223:G:C5'	2.17	0.73
36:DA:1654:A:OP1	50:DR:3:HIS:HB2	1.88	0.73
51:DS:99:LYS:HZ3	51:DS:99:LYS:HB3	1.53	0.73
15:CO:31:LEU:O	15:CO:35:ARG:HG3	1.88	0.73
51:BS:89:ARG:HG2	51:BS:92:TYR:HA	1.70	0.73
53:BU:50:ARG:NH1	54:BV:72:VAL:HG12	2.03	0.73
36:BA:2893:G:H5'	36:BA:2894:G:H5'	1.69	0.73
7:AG:113:GLU:HG2	7:AG:119:ARG:HG2	1.69	0.73
9:CI:98:PRO:HB2	9:CI:99:LEU:HD22	1.70	0.73
2:AB:115:LEU:HB2	2:AB:145:LEU:CD1	2.18	0.73
36:DA:1963:U:H5'	36:DA:1963:U:O2	1.88	0.73
48:DP:30:THR:CG2	48:DP:31:ALA:H	2.01	0.73
28:B2:2:LYS:HG2	28:B2:59:ARG:NH2	2.03	0.73
1:AA:973:G:O3'	14:AN:41:ARG:NH1	2.21	0.73
49:BQ:133:ARG:HG2	49:BQ:134:ARG:N	2.04	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BF:160:ASN:OD1	41:BF:163:VAL:HG23	1.89	0.73
1:AA:1016:A:OP1	14:AN:15:LYS:HE3	1.87	0.73
36:BA:1190:G:H5'	48:BP:35:HIS:N	2.02	0.73
5:CE:79:GLU:HG3	5:CE:93:PRO:HD2	1.71	0.73
13:AM:88:ARG:HH11	13:AM:88:ARG:HG2	1.53	0.73
1:AA:1348:U:HO2'	1:AA:1349:A:H8	0.77	0.73
36:BA:2407:G:N2	36:BA:2408:U:H1'	2.03	0.73
3:AC:206:GLU:O	3:AC:207:VAL:O	2.05	0.73
1:AA:631:G:H2'	1:AA:632:A:C8	2.24	0.73
38:DC:73:ARG:O	38:DC:111:ASP:HB2	1.89	0.73
47:DO:87:ILE:HG22	47:DO:88:ASN:O	1.89	0.73
36:BA:2562:U:H1'	47:BO:23:ARG:HH11	1.52	0.73
8:AH:39:LEU:HD12	8:AH:44:PHE:HB2	1.70	0.73
10:AJ:11:PHE:HE1	10:AJ:67:THR:HG22	1.54	0.73
25:CZ:231:ILE:HD13	25:CZ:237:VAL:HG23	1.71	0.73
47:DO:63:VAL:HG23	47:DO:64:ARG:HG3	1.70	0.73
32:B6:41:PRO:HD2	32:B6:45:LYS:HA	1.69	0.73
36:DA:2312:U:H2'	36:DA:2313:C:C5'	2.16	0.73
36:BA:310:A:OP1	57:BY:17:SER:O	2.07	0.73
36:DA:2186:G:H2'	36:DA:2187:G:N9	2.04	0.73
3:CC:16:ARG:HH11	3:CC:16:ARG:CB	1.99	0.73
14:CN:49:HIS:O	14:CN:51:GLY:N	2.22	0.73
48:BP:40:SER:O	48:BP:41:ARG:HD2	1.89	0.73
4:CD:9:CYS:SG	4:CD:32:ALA:CB	2.76	0.73
36:BA:623:G:H2'	36:BA:624:C:C6	2.23	0.73
48:BP:84:ASN:HA	48:BP:116:GLY:HA3	1.70	0.73
36:BA:744:G:OP1	40:BE:132:HIS:HB3	1.88	0.73
33:D7:34:ARG:HG3	33:D7:34:ARG:NH1	2.03	0.73
36:DA:633:A:H2'	36:DA:634:C:H5'	1.71	0.73
39:BD:93:ALA:HB3	39:BD:105:ILE:HG22	1.71	0.73
2:AB:60:ASP:O	2:AB:64:ARG:HG2	1.89	0.73
1:CA:936:C:H2'	1:CA:937:A:H8	1.52	0.73
36:DA:941:A:H4'	48:DP:35:HIS:CE1	2.24	0.73
57:BY:9:LYS:HG3	57:BY:10:GLY:H	1.50	0.73
26:D0:43:THR:O	26:D0:43:THR:HG23	1.89	0.73
25:CZ:253:VAL:HA	25:CZ:307:PRO:HD3	1.70	0.73
36:DA:234:C:H2'	36:DA:235:U:C6	2.23	0.73
42:BG:38:VAL:HG22	42:BG:93:THR:HG23	1.69	0.73
58:BZ:70:LEU:HD22	58:BZ:91:LEU:HD11	1.71	0.73
24:CY:68:C:H2'	24:CY:69:C:C6	2.23	0.73
1:CA:926:G:H2'	1:CA:1505:G:N3	2.04	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DH:143:GLN:O	43:DH:143:GLN:NE2	2.21	0.73
23:CX:24:G:H1	24:CY:34:C:H42	1.37	0.73
54:DV:72:VAL:HG23	54:DV:85:LYS:HB3	1.70	0.73
36:DA:639:U:H2'	36:DA:640:C:C6	2.24	0.73
7:CG:26:PHE:CE2	7:CG:30:ILE:HD11	2.23	0.73
36:BA:2099:U:H2'	36:BA:2100:G:C8	2.24	0.73
25:AZ:181:GLN:OE1	25:AZ:195:TRP:HB2	1.88	0.73
36:BA:1666:G:H5'	36:BA:1666:G:H8	1.53	0.73
42:DG:131:TYR:HB3	42:DG:159:VAL:CG1	2.19	0.73
43:DH:149:ARG:HA	43:DH:162:ILE:CD1	2.16	0.73
40:BE:60:ASN:OD1	40:BE:62:PRO:HD2	1.89	0.73
40:DE:52:LEU:HD11	52:DT:1:MET:HG2	1.71	0.73
31:B5:41:PRO:HG2	31:B5:44:THR:CB	2.19	0.73
36:DA:548:A:H2'	36:DA:549:G:H5'	1.71	0.73
5:AE:76:ILE:HG23	5:AE:93:PRO:HG3	1.71	0.73
2:AB:8:LYS:HZ3	2:AB:217:ARG:HH12	1.36	0.73
36:DA:2131:G:H1'	36:DA:2133:G:N2	2.03	0.73
1:AA:1003:G:N2	1:AA:1039:C:H42	1.86	0.73
1:CA:444:C:H2'	1:CA:445:G:H8	1.54	0.73
36:DA:2347:C:H2'	36:DA:2348:U:H6	1.53	0.73
36:BA:225:A:O2'	36:BA:257:A:H4'	1.89	0.73
25:AZ:97:ALA:HA	25:AZ:126:VAL:HG11	1.68	0.73
36:BA:958:U:H5''	49:BQ:14:ARG:HD3	1.70	0.73
53:BU:95:LEU:HD12	54:BV:11:GLN:HG3	1.68	0.72
2:AB:114:ARG:O	2:AB:118:LEU:HG	1.89	0.72
25:CZ:265:THR:CG2	25:CZ:291:ARG:H	2.02	0.72
46:BN:46:VAL:CG1	46:BN:48:MET:HG3	2.18	0.72
41:BF:132:VAL:HG22	41:BF:133:ASN:H	1.53	0.72
42:BG:51:ARG:NE	42:BG:51:ARG:HA	2.04	0.72
12:CL:89:ARG:HE	12:CL:91:LYS:HZ3	1.30	0.72
9:CI:119:ALA:O	9:CI:120:ARG:HG2	1.89	0.72
31:B5:29:THR:HG21	36:BA:2814:C:O2'	1.89	0.72
42:BG:172:LEU:HD22	42:BG:173:LEU:HD23	1.70	0.72
1:CA:386:C:C2'	1:CA:387:U:H5'	2.18	0.72
38:BC:22:ILE:HG13	38:BC:228:SER:OG	1.89	0.72
1:CA:946:A:H2'	1:CA:947:G:C8	2.24	0.72
36:BA:1362:C:O2'	36:BA:1363:C:H5'	1.88	0.72
27:B1:50:ARG:HG2	27:B1:59:THR:HG22	1.69	0.72
40:DE:120:TRP:CD1	40:DE:155:LYS:HB3	2.24	0.72
36:BA:212:G:O2'	36:BA:213:A:H5'	1.86	0.72
36:BA:128:C:H2'	36:BA:129:C:H6	1.54	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DC:25:ALA:O	38:DC:29:VAL:HG22	1.88	0.72
36:BA:654:A:H3'	36:BA:654:A:OP1	1.89	0.72
48:BP:99:LEU:O	48:BP:99:LEU:HD23	1.89	0.72
5:AE:37:ARG:HG2	5:AE:37:ARG:HH11	1.54	0.72
36:DA:2893:G:H5'	36:DA:2894:G:H5'	1.70	0.72
25:CZ:162:GLU:N	25:CZ:162:GLU:OE1	2.22	0.72
36:BA:2347:C:H2'	36:BA:2348:U:H6	1.53	0.72
28:B2:65:ASN:HB3	36:BA:72:U:C5	2.24	0.72
41:BF:132:VAL:HG13	41:BF:133:ASN:ND2	2.03	0.72
10:CJ:54:PHE:CG	10:CJ:55:LYS:HE3	2.25	0.72
43:BH:89:ILE:O	43:BH:89:ILE:HG13	1.88	0.72
40:BE:9:VAL:CG1	40:BE:25:VAL:HB	2.19	0.72
48:BP:38:GLN:HG3	48:BP:39:LYS:H	1.53	0.72
48:BP:64:LYS:C	48:BP:66:GLY:H	1.90	0.72
36:BA:1902:C:C1'	39:BD:244:ARG:HG3	2.19	0.72
1:CA:372:C:N4	1:CA:387:U:H2'	2.03	0.72
1:AA:1203:C:OP1	14:AN:3:ARG:HD3	1.88	0.72
5:AE:11:ILE:CG2	5:AE:105:VAL:HG22	2.19	0.72
36:DA:27:G:N2	36:DA:512:G:H2'	2.04	0.72
2:CB:136:VAL:O	2:CB:140:HIS:HB2	1.89	0.72
58:DZ:40:ASP:OD2	58:DZ:43:GLU:HG2	1.89	0.72
36:DA:564:C:O2'	36:DA:565:C:H5'	1.88	0.72
36:DA:2781:A:C5'	36:DA:2782:G:H5'	2.18	0.72
30:D4:5:ILE:H	30:D4:5:ILE:HD13	1.55	0.72
36:BA:888:C:H2'	36:BA:889:C:H4'	1.71	0.72
25:CZ:68:VAL:HG12	25:CZ:79:HIS:HB3	1.72	0.72
46:DN:48:MET:CE	46:DN:48:MET:H	2.00	0.72
36:BA:1005:C:H2'	36:BA:1006:C:C6	2.22	0.72
58:DZ:48:PHE:CE1	58:DZ:52:SER:O	2.42	0.72
36:BA:2415:G:H4'	48:BP:66:GLY:C	2.09	0.72
3:CC:106:VAL:HG13	3:CC:107:GLN:NE2	2.04	0.72
36:BA:2248:C:C2'	36:BA:2249:U:H5'	2.19	0.72
1:CA:1251:A:H2'	1:CA:1252:A:C8	2.24	0.72
54:BV:16:PRO:O	54:BV:96:ILE:HB	1.88	0.72
4:AD:159:ARG:HH11	4:AD:159:ARG:HG3	1.53	0.72
13:CM:88:ARG:HG2	13:CM:88:ARG:HH11	1.54	0.72
12:AL:51:ALA:O	12:AL:52:LEU:HD22	1.89	0.72
3:CC:59:ARG:HA	3:CC:63:ASN:O	1.89	0.72
36:BA:2523:G:C2'	36:BA:2524:G:H5''	2.19	0.72
36:BA:2023:G:H5'	36:BA:2617:C:H4'	1.70	0.72
42:BG:19:LEU:HD23	42:BG:23:PHE:HE1	1.53	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:DW:82:LEU:N	55:DW:82:LEU:HD12	2.04	0.72
1:CA:57:G:H2'	1:CA:58:C:H6	1.54	0.72
52:DT:23:ARG:HG2	52:DT:120:ARG:HH12	1.54	0.72
42:DG:40:ASN:HB2	42:DG:91:ARG:HB2	1.71	0.72
53:DU:57:PHE:CD1	53:DU:60:LEU:HD12	2.24	0.72
1:AA:1502:A:H2	1:AA:1505:G:N1	1.87	0.72
36:BA:1902:C:H4'	39:BD:244:ARG:HA	1.71	0.72
4:AD:187:ARG:NH1	4:AD:187:ARG:HB3	2.04	0.72
39:DD:8:PRO:HB3	39:DD:14:ARG:CB	2.18	0.72
36:BA:614(A):U:H4'	36:BA:614(B):G:C5'	2.19	0.72
51:BS:89:ARG:HG3	51:BS:92:TYR:N	2.03	0.72
58:DZ:141:VAL:HA	58:DZ:144:LEU:HD23	1.70	0.72
30:D4:5:ILE:HG12	30:D4:5:ILE:O	1.90	0.72
36:BA:2190:G:C2	36:BA:2191:G:H1'	2.24	0.72
52:DT:80:SER:HB3	52:DT:81:PRO:HD3	1.71	0.72
25:CZ:174:SER:HB3	25:CZ:177:LEU:CD1	2.18	0.72
52:BT:50:ILE:HD11	52:BT:64:ARG:HD2	1.72	0.72
58:DZ:137:ILE:HD12	58:DZ:158:PRO:HG2	1.72	0.72
40:DE:44:TYR:O	40:DE:45:THR:HB	1.90	0.72
40:DE:50:GLY:HA2	40:DE:78:LEU:HB3	1.71	0.72
46:DN:58:ASP:C	46:DN:60:ILE:H	1.93	0.72
10:CJ:40:LEU:HG	10:CJ:69:ASN:CB	2.18	0.72
48:DP:84:ASN:ND2	48:DP:116:GLY:HA2	2.04	0.72
43:DH:19:VAL:HG12	43:DH:20:ALA:N	2.03	0.72
4:AD:12:CYS:HA	4:AD:19:LEU:CD1	2.20	0.72
25:AZ:265:THR:HG22	25:AZ:266:VAL:N	2.04	0.72
36:DA:1222:C:C2'	36:DA:1223:G:H5''	2.19	0.72
2:AB:24:TRP:CZ3	2:AB:29:ALA:HB2	2.25	0.72
36:DA:1105:U:H2'	36:DA:1106:G:H8	1.54	0.72
36:BA:2206:G:H21	36:BA:2207:G:C5'	2.02	0.72
36:DA:1367:A:H2'	36:DA:1368:G:H5'	1.70	0.72
2:CB:134:GLU:C	2:CB:136:VAL:H	1.92	0.72
6:CF:91:VAL:HG11	18:CR:72:ARG:NH1	2.04	0.72
52:DT:107:ASP:H	52:DT:110:ILE:HG12	1.55	0.72
36:DA:1205:U:C5	41:DF:171:PRO:HA	2.24	0.72
26:B0:3:HIS:HB2	36:BA:2494:G:OP1	1.90	0.72
7:CG:20:ASP:HB3	7:CG:23:VAL:HG23	1.72	0.72
4:CD:109:GLY:HA3	4:CD:165:MET:HE2	1.71	0.72
27:D1:44:PRO:CG	27:D1:46:LEU:HD21	2.09	0.72
38:BC:78:ALA:HA	38:BC:116:THR:N	2.00	0.72
42:DG:46:ALA:O	42:DG:47:LYS:HG3	1.88	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:82:ILE:CG2	15:CO:83:GLU:H	2.01	0.72
13:CM:6:GLY:O	13:CM:8:GLU:N	2.21	0.72
41:BF:25:PRO:HB3	41:BF:119:ARG:CG	2.19	0.72
25:CZ:256:VAL:HG11	25:CZ:310:ILE:HG22	1.71	0.72
22:AW:70:G:H2'	22:AW:71:G:H8	1.54	0.72
58:DZ:23:LYS:HD3	58:DZ:38:TYR:CE1	2.24	0.72
41:DF:185:ASP:HA	41:DF:188:ARG:CD	2.18	0.72
36:BA:2884:U:H2'	36:BA:2885:C:H5'	1.71	0.72
1:CA:1228:C:OP1	13:CM:115:LYS:HE3	1.89	0.72
36:BA:2512:C:H2'	36:BA:2513:G:O4'	1.89	0.72
1:AA:451:A:N6	1:AA:480:U:H2'	2.04	0.72
36:DA:145:G:H2'	36:DA:146:G:H5''	1.71	0.72
36:DA:2291:U:H2'	36:DA:2292:C:C6	2.23	0.72
36:DA:1174:A:OP2	36:DA:1175:U:H5''	1.90	0.72
1:CA:1329:A:P	13:CM:28:ALA:HB3	2.29	0.72
25:CZ:234:ARG:HG3	25:CZ:234:ARG:HH11	1.53	0.72
60:CZ:501:GDP:C5'	60:CZ:501:GDP:C8	2.72	0.72
25:AZ:143:ASP:HB3	25:AZ:146:LEU:HB2	1.71	0.72
42:DG:43:LEU:HB3	42:DG:45:GLU:HG2	1.71	0.72
9:AI:58:HIS:CD2	9:AI:59:PHE:CD1	2.77	0.72
9:CI:117:HIS:O	9:CI:118:LYS:HG3	1.90	0.72
1:CA:1241:G:H2'	1:CA:1242:C:C5	2.25	0.72
19:AS:43:GLU:C	19:AS:45:VAL:H	1.91	0.72
36:BA:2579:C:O2'	40:BE:131:ALA:HB2	1.90	0.72
3:CC:11:ARG:NH2	3:CC:182:ILE:HD12	2.04	0.72
55:BW:107:LEU:H	55:BW:107:LEU:HD12	1.53	0.72
48:DP:97:PRO:O	48:DP:98:GLU:HB3	1.89	0.72
25:AZ:290:LEU:HB2	25:AZ:293:VAL:HG21	1.70	0.72
22:AV:68:C:C2'	22:AV:69:G:H5'	2.19	0.72
34:D8:52:LYS:N	34:D8:53:PRO:CD	2.52	0.72
58:DZ:29:TYR:HB3	58:DZ:34:ASN:CB	2.19	0.72
5:CE:20:GLN:NE2	5:CE:22:GLY:H	1.87	0.72
1:AA:299:G:H2'	1:AA:300:A:C8	2.25	0.72
36:DA:2668:G:O2'	36:DA:2669:G:H5'	1.89	0.72
49:BQ:70:PRO:HA	49:BQ:95:ALA:HB2	1.71	0.72
8:AH:112:LEU:N	8:AH:112:LEU:HD23	2.04	0.72
36:DA:1865:G:H5'	36:DA:1866:C:OP2	1.88	0.72
52:DT:22:PHE:HE2	52:DT:85:LYS:HZ1	1.33	0.72
12:AL:20:LYS:N	12:AL:20:LYS:HD3	1.93	0.72
28:B2:7:ARG:N	28:B2:7:ARG:HD2	2.04	0.72
12:CL:89:ARG:CG	12:CL:91:LYS:NZ	2.53	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BG:139:LEU:HD22	42:BG:149:VAL:HG21	1.71	0.72
40:DE:29:GLY:HA3	40:DE:51:PHE:CE1	2.22	0.72
40:DE:34:VAL:CG1	40:DE:48:GLN:HE21	2.03	0.72
27:B1:76:ARG:HH12	27:B1:95:LEU:HD13	1.53	0.72
1:AA:255:G:H1'	17:AQ:16:GLN:HE21	1.54	0.72
2:CB:209:ARG:HH11	2:CB:239:VAL:HG11	1.55	0.72
6:CF:60:PHE:CZ	18:CR:78:LEU:HD21	2.25	0.72
25:AZ:230:THR:HG22	25:AZ:295:ARG:HD2	1.72	0.72
1:CA:1003:G:C2'	1:CA:1004:A:H4'	2.19	0.72
24:AY:24:A:H2'	24:AY:25:C:C6	2.25	0.72
36:BA:2453:A:H2'	36:BA:2454:G:H8	1.55	0.72
1:CA:1499:A:H1'	1:CA:1520:G:H5'	1.72	0.72
22:CW:24:G:H2'	22:CW:25:C:O4'	1.90	0.72
25:CZ:133:VAL:HG23	25:CZ:168:VAL:CG1	2.19	0.72
57:BY:2:ARG:N	57:BY:4:LYS:HE2	2.05	0.72
1:AA:346:G:C5'	52:BT:43:GLN:HE22	2.03	0.72
46:BN:133:GLN:HG2	46:BN:135:PRO:CD	2.19	0.72
39:BD:44:ASN:N	39:BD:44:ASN:OD1	2.23	0.72
1:AA:1190:G:H3'	3:AC:3:ASN:HD21	1.54	0.72
51:DS:83:LYS:CG	51:DS:105:ALA:HB3	2.19	0.72
28:D2:16:LEU:HD23	28:D2:17:SER:N	2.03	0.72
25:CZ:117:ARG:HD3	25:CZ:157:LEU:HD11	1.72	0.72
36:DA:636:G:H2'	48:DP:115:LEU:HD12	1.72	0.72
36:BA:1748:G:H8	36:BA:1748:G:H5'	1.54	0.72
36:DA:2179:C:H1'	36:DA:2180:U:H3	1.55	0.72
1:CA:1352:C:H2'	1:CA:1353:G:C8	2.24	0.72
27:B1:50:ARG:HG2	27:B1:59:THR:CG2	2.20	0.72
36:DA:2777:G:H5''	36:DA:2778:A:C5'	2.20	0.72
36:DA:2779:U:H1'	36:DA:2781:A:C6	2.23	0.72
9:CI:24:GLY:O	9:CI:25:LYS:HD2	1.90	0.72
43:BH:54:ARG:HB2	43:BH:55:PRO:HD2	1.70	0.72
36:BA:371:A:H5'	36:BA:423:A:N3	2.05	0.72
25:CZ:110:ASP:HB3	25:CZ:113:MET:HE3	1.71	0.72
48:DP:121:LYS:O	48:DP:123:LEU:HD23	1.89	0.72
36:DA:654(H):G:H2'	36:DA:654(I):C:H5'	1.70	0.72
29:B3:31:LEU:O	29:B3:32:GLN:HB2	1.89	0.72
6:CF:82:ARG:HB2	6:CF:85:VAL:CG2	2.19	0.72
9:CI:55:ALA:HA	9:CI:58:HIS:CE1	2.20	0.72
36:DA:1539:G:H2'	36:DA:1540:U:H5'	1.71	0.72
36:DA:672:C:H2'	36:DA:673:C:C5'	2.20	0.72
52:BT:13:ARG:HA	52:BT:13:ARG:NE	2.05	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1321:C:H3'	1:AA:1322:C:H5''	1.70	0.72
3:CC:135:LYS:O	3:CC:138:VAL:HG12	1.90	0.72
36:DA:519:U:H2'	36:DA:520:G:H8	1.53	0.72
8:CH:112:LEU:HD23	8:CH:112:LEU:N	2.05	0.72
36:BA:2712:U:O2'	36:BA:2713:A:H5'	1.89	0.71
28:D2:47:ASN:HD22	28:D2:47:ASN:H	1.33	0.71
46:DN:133:GLN:CG	46:DN:135:PRO:HD3	2.17	0.71
15:CO:82:ILE:CG2	15:CO:83:GLU:N	2.52	0.71
14:CN:57:ARG:CB	14:CN:57:ARG:HH11	2.02	0.71
9:AI:92:TYR:O	9:AI:96:LEU:HD22	1.89	0.71
58:DZ:151:HIS:HA	58:DZ:171:ILE:HG12	1.72	0.71
12:CL:89:ARG:NE	12:CL:91:LYS:NZ	2.35	0.71
40:DE:77:ILE:HG22	40:DE:78:LEU:H	1.54	0.71
40:DE:4:ILE:HD12	40:DE:92:THR:O	1.89	0.71
36:BA:2415:G:O3'	48:BP:66:GLY:HA3	1.90	0.71
31:B5:40:LYS:HD2	31:B5:45:VAL:O	1.89	0.71
46:DN:67:LEU:HB3	46:DN:88:GLU:HG2	1.72	0.71
1:AA:573:A:H5'	1:AA:573:A:C8	2.24	0.71
13:AM:3:ARG:HE	13:AM:7:VAL:HG13	1.54	0.71
36:DA:2807:G:H3'	36:DA:2808:U:H5''	1.71	0.71
26:B0:10:THR:HG22	26:B0:12:ASN:H	1.54	0.71
7:CG:44:TYR:HA	7:CG:47:CYS:SG	2.30	0.71
48:BP:80:TYR:HE1	48:BP:111:ARG:HD2	1.53	0.71
6:AF:17:SER:O	6:AF:18:GLN:HG3	1.90	0.71
38:BC:6:ARG:O	38:BC:10:LEU:HD22	1.90	0.71
1:AA:413:G:N3	1:AA:413:G:H2'	2.05	0.71
46:BN:107:LEU:HB3	46:BN:108:PRO:HD2	1.71	0.71
36:BA:2092:U:H4'	36:BA:2093:G:H5''	1.72	0.71
36:BA:1655:A:H1'	40:BE:113:PHE:CE1	2.25	0.71
48:DP:57:THR:OG1	48:DP:59:LEU:HD22	1.90	0.71
39:DD:33:LEU:HD12	39:DD:102:LYS:HD2	1.72	0.71
37:DB:40:U:H3'	37:DB:41:U:H5''	1.72	0.71
57:BY:95:LYS:HE3	57:BY:99:CYS:O	1.90	0.71
36:DA:335:C:H2'	36:DA:336:C:C6	2.25	0.71
57:DY:88:LYS:NZ	57:DY:93:GLY:HA3	2.05	0.71
1:CA:534:U:C6	1:CA:534:U:H5'	2.15	0.71
36:DA:1899:G:N2	36:DA:1902:C:N4	2.37	0.71
43:BH:124:GLU:HB3	43:BH:126:PRO:HD3	1.69	0.71
36:BA:28:A:H61	36:BA:512:G:H1'	1.54	0.71
25:CZ:345:ARG:HH22	25:CZ:384:LEU:HD22	1.55	0.71
1:AA:1271:G:C2'	1:AA:1272:G:H5''	2.20	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DP:125:VAL:O	48:DP:145:PRO:HD2	1.90	0.71
25:AZ:65:THR:HG23	25:AZ:82:CYS:SG	2.31	0.71
1:CA:176:C:H2'	1:CA:177:C:C6	2.26	0.71
40:BE:34:VAL:HG11	40:BE:78:LEU:HD22	1.71	0.71
4:CD:70:ILE:HG23	4:CD:74:GLN:HB2	1.71	0.71
22:AV:44:G:C2'	22:AV:45:U:H5'	2.20	0.71
17:AQ:43:LEU:O	17:AQ:69:LYS:HG2	1.89	0.71
46:DN:10:GLU:OE2	46:DN:11:PRO:HD2	1.90	0.71
11:CK:54:ARG:O	11:CK:57:THR:HG22	1.90	0.71
1:CA:189(K):U:H2'	1:CA:189(L):G:H8	1.55	0.71
1:CA:1286:A:O2'	1:CA:1287:A:H5''	1.90	0.71
36:BA:2185:C:C2'	36:BA:2186:G:H5'	2.20	0.71
25:AZ:224:PRO:HG3	25:AZ:345:ARG:HD3	1.72	0.71
43:DH:130:ARG:HB3	43:DH:130:ARG:NH1	2.05	0.71
36:DA:2795:G:H2'	36:DA:2796:U:H5'	1.71	0.71
27:D1:11:ARG:HB3	27:D1:11:ARG:HH11	1.54	0.71
36:DA:1494:A:H2'	36:DA:1495:A:H5''	1.71	0.71
13:CM:44:ARG:HB2	13:CM:47:ASP:OD1	1.90	0.71
48:DP:80:TYR:HE1	48:DP:111:ARG:HD2	1.56	0.71
39:DD:65:ILE:H	39:DD:65:ILE:HD13	1.55	0.71
38:DC:87:GLU:HG2	38:DC:94:VAL:HG21	1.72	0.71
2:AB:27:LYS:HD2	2:AB:193:ASP:HB2	1.71	0.71
10:AJ:96:ILE:HD13	10:AJ:96:ILE:H	1.54	0.71
36:BA:469:G:C2'	36:BA:470:A:H5''	2.20	0.71
1:CA:451:A:N6	1:CA:480:U:H2'	2.06	0.71
20:AT:82:SER:O	20:AT:86:ARG:HB2	1.89	0.71
14:AN:44:LEU:HD12	14:AN:44:LEU:O	1.91	0.71
1:AA:18:C:O2'	1:AA:19:C:H5'	1.90	0.71
36:BA:428:A:H3'	36:BA:429:A:H8	1.56	0.71
36:BA:1149:G:H2'	36:BA:1150:C:C6	2.26	0.71
1:AA:261:U:H2'	1:AA:263:A:OP2	1.90	0.71
1:CA:1321:C:H3'	1:CA:1322:C:H5''	1.71	0.71
25:CZ:265:THR:HG21	25:CZ:290:LEU:HB3	1.70	0.71
39:BD:75:ILE:HG21	39:BD:99:ASP:HB2	1.72	0.71
58:DZ:122:ARG:NH1	58:DZ:122:ARG:HG2	2.06	0.71
52:BT:32:TYR:CD2	52:BT:81:PRO:HB2	2.25	0.71
46:DN:12:ARG:O	46:DN:14:VAL:HG23	1.90	0.71
43:BH:85:LYS:HZ1	43:BH:87:LEU:H	1.36	0.71
9:CI:118:LYS:O	9:CI:119:ALA:HB3	1.91	0.71
36:BA:941:A:H4'	48:BP:35:HIS:CE1	2.25	0.71
27:D1:62:VAL:CG1	27:D1:67:ILE:HG22	2.20	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BG:107:LEU:HD11	42:BG:178:PHE:CE1	2.25	0.71
40:BE:5:LEU:HD12	40:BE:51:PHE:HB2	1.72	0.71
39:BD:37:LEU:HD12	39:BD:64:ILE:HG22	1.71	0.71
36:DA:1318:C:H3'	36:DA:1319:G:H5''	1.71	0.71
36:BA:729:G:C5	39:BD:208:LYS:HB3	2.25	0.71
29:B3:13:ILE:HG22	29:B3:13:ILE:O	1.90	0.71
8:CH:114:THR:HG22	8:CH:130:GLY:O	1.90	0.71
39:BD:25:THR:HB	39:BD:26:LYS:HE2	1.72	0.71
49:BQ:24:GLY:HA3	49:BQ:101:ARG:NH1	2.05	0.71
10:CJ:54:PHE:CE2	10:CJ:55:LYS:HD2	2.25	0.71
36:DA:271(L):U:H5''	36:DA:271(M):G:C5'	2.20	0.71
48:BP:30:THR:HG22	48:BP:31:ALA:N	2.05	0.71
51:DS:24:LEU:O	51:DS:85:VAL:HB	1.91	0.71
4:AD:8:VAL:O	4:AD:10:ARG:N	2.19	0.71
36:DA:1223:G:H5'	36:DA:1223:G:H8	1.56	0.71
52:DT:50:ILE:HD11	52:DT:64:ARG:HD2	1.72	0.71
52:DT:50:ILE:HA	52:DT:99:LEU:HD12	1.72	0.71
1:CA:1288:A:H2'	1:CA:1289:A:C8	2.26	0.71
34:B8:14:VAL:HG23	34:B8:24:ALA:HB2	1.73	0.71
51:BS:99:LYS:HB3	51:BS:99:LYS:NZ	2.05	0.71
40:DE:9:VAL:CG1	40:DE:25:VAL:HB	2.20	0.71
39:BD:130:ALA:HB2	39:BD:192:THR:HB	1.71	0.71
1:CA:256:U:H2'	1:CA:257:G:C8	2.26	0.71
40:DE:105:THR:O	40:DE:196:VAL:HG12	1.90	0.71
26:B0:46:LYS:O	26:B0:78:TYR:HA	1.91	0.71
9:AI:79:LEU:HD13	9:AI:83:ARG:HG3	1.72	0.71
51:DS:42:ASP:O	51:DS:43:GLU:HB3	1.90	0.71
3:CC:20:SER:HB2	3:CC:40:ARG:NH2	2.06	0.71
4:AD:122:ARG:HA	4:AD:122:ARG:HH11	1.56	0.71
36:BA:2188:C:H2'	36:BA:2189:U:C6	2.25	0.71
34:D8:25:MET:CG	48:DP:64:LYS:HB2	2.19	0.71
39:DD:43:ARG:NH1	39:DD:44:ASN:ND2	2.34	0.71
41:BF:84:VAL:CG1	41:BF:85:GLY:H	1.99	0.71
22:CV:44:G:C2'	22:CV:45:U:H5'	2.19	0.71
10:CJ:56:HIS:O	10:CJ:58:ASP:O	2.07	0.71
13:CM:6:GLY:C	13:CM:8:GLU:H	1.93	0.71
36:BA:654(L):G:H2'	36:BA:654(M):C:H4'	1.71	0.71
36:DA:2640:G:C2'	36:DA:2641:G:H5''	2.19	0.71
4:AD:13:ARG:O	4:AD:15:GLU:N	2.23	0.71
33:B7:30:VAL:HA	33:B7:33:ARG:HH12	1.55	0.71
4:AD:173:TRP:O	4:AD:174:LEU:HD23	1.91	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BU:47:TYR:O	53:BU:51:LYS:HG2	1.91	0.71
40:BE:170:LEU:N	40:BE:170:LEU:HD12	2.05	0.71
40:BE:22:PRO:O	40:BE:185:LYS:O	2.07	0.71
25:CZ:378:VAL:CG2	25:CZ:380:LEU:HD21	2.20	0.71
41:BF:33:LEU:O	41:BF:37:VAL:HG23	1.91	0.71
36:DA:2777:G:H5''	36:DA:2778:A:H5'	1.71	0.71
38:DC:30:LYS:HE2	38:DC:180:PHE:O	1.91	0.71
36:DA:1880:C:H2'	36:DA:1881:C:H5''	1.72	0.71
39:DD:108:PRO:HG2	39:DD:111:LEU:HB2	1.72	0.71
2:CB:170:GLU:O	2:CB:174:VAL:HG23	1.91	0.71
8:AH:89:PRO:HA	8:AH:92:ARG:NH1	2.05	0.71
8:CH:86:ILE:HD11	8:CH:136:GLU:HG2	1.71	0.71
36:BA:1602:U:H3'	36:BA:1603:A:H5'	1.72	0.71
8:AH:49:GLU:O	8:AH:49:GLU:HG3	1.91	0.71
6:AF:61:LEU:HB3	6:AF:63:TYR:HE1	1.55	0.71
52:DT:83:ILE:HG13	52:DT:84:GLN:HG2	1.72	0.71
4:AD:165:MET:HE3	4:AD:176:LEU:HD21	1.72	0.71
42:DG:73:ALA:HB3	42:DG:87:PRO:HG3	1.72	0.71
57:BY:30:VAL:HA	57:BY:37:VAL:HG12	1.73	0.71
41:BF:160:ASN:ND2	41:BF:162:LEU:H	1.89	0.71
36:BA:2312:U:C2'	36:BA:2313:C:H5''	2.20	0.71
14:AN:7:ILE:HG13	14:AN:8:GLU:N	2.05	0.71
3:CC:134:ILE:HG22	3:CC:168:ALA:HB3	1.72	0.71
41:DF:132:VAL:HG13	41:DF:133:ASN:ND2	2.06	0.71
36:DA:1654:A:P	50:DR:3:HIS:HB2	2.30	0.71
36:DA:626:U:H3	48:DP:105:LEU:HG	1.55	0.71
48:DP:106:LEU:HD21	48:DP:112:LEU:HB2	1.73	0.71
1:AA:383:A:H2'	1:AA:384:G:H5'	1.73	0.71
1:AA:966:G:O2'	1:AA:967:C:H6	1.70	0.71
1:CA:161:A:H2'	1:CA:162:A:C8	2.25	0.71
46:DN:96:GLU:H	46:DN:96:GLU:CD	1.93	0.71
8:CH:86:ILE:HG12	8:CH:135:CYS:HA	1.71	0.71
36:DA:644:A:H2	36:DA:2369:A:H1'	1.56	0.71
42:DG:135:LEU:HD23	42:DG:140:ILE:HD11	1.71	0.71
36:BA:610:G:N2	36:BA:619:G:H1'	2.05	0.71
36:DA:2416:C:H2'	36:DA:2417:C:H6	1.56	0.71
42:DG:67:LYS:CD	42:DG:67:LYS:H	1.84	0.71
26:D0:47:PRO:HG2	26:D0:53:MET:HB2	1.71	0.71
1:CA:1072:G:H2'	1:CA:1073:U:C6	2.25	0.71
13:AM:10:PRO:CB	13:AM:18:ALA:HB1	2.20	0.71
39:DD:146:GLU:OE1	39:DD:190:TYR:HB2	1.90	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:D7:47:ARG:HH11	56:DX:60:ARG:HH21	1.39	0.71
46:DN:108:PRO:HG2	46:DN:109:LYS:H	1.55	0.71
6:AF:87:ARG:HG2	6:AF:87:ARG:HH11	1.55	0.71
1:CA:600:C:OP2	8:CH:97:VAL:HG12	1.90	0.71
21:CU:6:ARG:HD3	21:CU:15:ARG:NH2	2.06	0.71
28:B2:32:LEU:HA	28:B2:53:LEU:HD22	1.73	0.71
56:BX:28:PHE:N	56:BX:28:PHE:CD1	2.57	0.71
57:BY:8:LYS:HD2	57:BY:8:LYS:N	2.06	0.71
52:BT:75:ILE:N	52:BT:75:ILE:HD12	2.05	0.71
42:BG:76:SER:CB	42:BG:84:LYS:H	2.03	0.71
3:CC:75:VAL:O	3:CC:83:ARG:HG2	1.91	0.71
31:B5:50:GLY:HA3	31:B5:56:LYS:CD	2.16	0.71
53:DU:95:LEU:C	53:DU:97:ASP:H	1.91	0.71
51:BS:17:ARG:HA	51:BS:20:ARG:HH11	1.56	0.71
4:AD:30:LYS:C	4:AD:32:ALA:H	1.94	0.71
58:DZ:70:LEU:CD1	58:DZ:91:LEU:HD21	2.21	0.71
1:CA:62:U:H2'	1:CA:63:C:H5''	1.71	0.71
36:BA:556:G:H2'	36:BA:557:U:H6	1.55	0.71
34:B8:50:LEU:C	34:B8:52:LYS:H	1.94	0.71
49:BQ:51:ARG:HG3	49:BQ:51:ARG:HH11	1.54	0.71
1:AA:1206:G:H4'	3:AC:192:THR:O	1.91	0.71
25:AZ:299:GLU:N	25:AZ:302:GLN:OE1	2.22	0.71
5:AE:59:GLY:O	5:AE:62:ALA:HB3	1.91	0.71
23:AX:20:U:O2'	23:AX:21:C:H5'	1.90	0.71
36:BA:877:U:O2'	36:BA:878:A:H5''	1.90	0.71
32:B6:41:PRO:HD2	32:B6:46:HIS:H	1.56	0.71
28:B2:52:ASP:O	28:B2:56:GLN:HG2	1.91	0.71
21:AU:6:ARG:HD3	21:AU:15:ARG:NH2	2.06	0.71
53:DU:93:LYS:HD2	53:DU:93:LYS:H	1.56	0.71
1:CA:192:U:H2'	1:CA:193:C:H6	1.55	0.71
36:BA:612:C:C2'	36:BA:613:G:H5'	2.21	0.71
9:CI:40:LEU:O	9:CI:42:ARG:N	2.23	0.71
48:BP:30:THR:CG2	48:BP:31:ALA:N	2.53	0.71
1:AA:274:A:O2'	1:AA:275:G:H8	1.73	0.71
42:BG:133:LEU:HD11	42:BG:157:ILE:HD12	1.73	0.71
5:AE:79:GLU:HG3	5:AE:93:PRO:HD2	1.72	0.71
9:AI:40:LEU:HD11	9:AI:70:LYS:CG	2.20	0.71
50:DR:94:TYR:HD1	50:DR:94:TYR:N	1.89	0.71
50:BR:103:ARG:HG3	55:BW:40:ASN:CG	2.11	0.71
13:CM:40:ASN:ND2	13:CM:42:ALA:HB3	2.06	0.71
46:DN:3:THR:CG2	46:DN:5:VAL:HG23	2.20	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:51:ALA:O	12:CL:52:LEU:HD22	1.91	0.71
39:DD:176:ARG:HG2	39:DD:176:ARG:HH11	1.55	0.71
36:BA:1506:C:O2	36:BA:1506:C:H2'	1.91	0.71
48:DP:23:PRO:CB	48:DP:33:ARG:HG3	2.21	0.70
39:BD:35:LYS:HG3	39:BD:63:ARG:HG2	1.73	0.70
46:DN:14:VAL:HG11	46:DN:137:LYS:HG3	1.72	0.70
36:DA:2476:A:H2'	36:DA:2477:C:H5'	1.70	0.70
1:CA:1054:C:C6	1:CA:1196:U:C2	2.76	0.70
3:CC:134:ILE:HD11	3:CC:153:VAL:HG21	1.73	0.70
2:CB:80:ILE:CD1	2:CB:80:ILE:H	2.03	0.70
42:BG:107:LEU:HD22	42:BG:177:GLY:O	1.91	0.70
1:AA:1321:C:H5''	1:AA:1322:C:H5''	1.72	0.70
43:DH:74:ASN:HB3	43:DH:138:LYS:HD3	1.73	0.70
36:DA:784:A:N7	39:DD:229:VAL:HG11	2.06	0.70
4:AD:150:GLU:CD	4:AD:151:LYS:H	1.95	0.70
40:BE:98:PRO:HD3	40:BE:175:VAL:HG12	1.72	0.70
55:DW:14:PRO:HG2	55:DW:78:GLU:HG3	1.73	0.70
26:D0:11:ARG:O	26:D0:14:ARG:NH2	2.24	0.70
6:AF:35:ALA:HA	6:AF:67:MET:HB3	1.73	0.70
51:DS:56:LEU:O	51:DS:56:LEU:HD23	1.90	0.70
56:BX:28:PHE:HD1	56:BX:28:PHE:N	1.88	0.70
46:BN:12:ARG:NH2	46:BN:135:PRO:HG2	2.05	0.70
46:BN:46:VAL:HG13	46:BN:48:MET:HG3	1.72	0.70
54:BV:39:LEU:CD1	54:BV:51:VAL:HA	2.21	0.70
36:BA:582:G:H2'	36:BA:583:G:C8	2.25	0.70
43:BH:85:LYS:CE	43:BH:87:LEU:HG	2.21	0.70
36:DA:1227:G:OP1	53:DU:13:LYS:HD2	1.91	0.70
36:DA:2297:C:O2'	36:DA:2298:A:H5'	1.90	0.70
36:DA:1540:U:H3'	36:DA:1541:G:H3'	1.72	0.70
1:CA:386:C:O2'	1:CA:387:U:H5'	1.91	0.70
40:BE:167:VAL:HG13	40:BE:170:LEU:HD11	1.73	0.70
36:DA:886:C:O2'	36:DA:887:A:H4'	1.90	0.70
47:DO:47:ILE:HG23	47:DO:48:PRO:HD2	1.73	0.70
40:BE:94:GLU:OE2	40:BE:177:PRO:HB3	1.90	0.70
26:D0:16:SER:HB2	36:DA:2262:U:H5	1.56	0.70
13:CM:27:LYS:HZ2	13:CM:31:LYS:HE3	1.56	0.70
48:DP:47:ASP:CB	48:DP:51:PHE:HB2	2.09	0.70
2:AB:142:LEU:HD21	2:AB:146:GLN:NE2	2.04	0.70
57:DY:44:ILE:HG22	57:DY:45:VAL:N	2.07	0.70
43:DH:85:LYS:HD3	43:DH:133:VAL:H	1.54	0.70
43:DH:85:LYS:HE2	43:DH:86:GLU:N	2.06	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B8:8:LYS:HD3	34:B8:11:LYS:HD3	1.72	0.70
36:BA:2312:U:OP1	42:BG:73:ALA:HA	1.91	0.70
3:CC:84:ILE:HG23	3:CC:85:ARG:HD2	1.72	0.70
46:BN:28:THR:HG23	46:BN:29:LYS:N	2.05	0.70
25:CZ:323:LEU:HD13	25:CZ:396:GLY:HA2	1.71	0.70
36:DA:914:C:C2'	36:DA:915:C:H5'	2.22	0.70
36:DA:549:G:O2'	36:DA:551:G:H5'	1.90	0.70
50:BR:94:TYR:N	50:BR:94:TYR:HD1	1.88	0.70
58:DZ:14:LYS:O	58:DZ:18:LEU:HD13	1.90	0.70
58:DZ:132:ASN:C	58:DZ:134:PRO:HD3	2.11	0.70
46:BN:55:VAL:HG22	46:BN:56:ASN:H	1.55	0.70
36:BA:2317:C:C2'	36:BA:2318:G:H5'	2.20	0.70
36:BA:2807:G:H3'	36:BA:2808:U:H5''	1.73	0.70
1:CA:1004:A:H2'	1:CA:1005:A:H5'	1.73	0.70
36:BA:2472:G:H5''	36:BA:2473:U:H5''	1.74	0.70
24:AY:70:C:H2'	24:AY:71:C:H6	1.56	0.70
28:D2:65:ASN:HB3	28:D2:69:ARG:HH21	1.56	0.70
24:CY:48:U:C5	24:CY:59:G:H5''	2.26	0.70
42:BG:171:ALA:O	42:BG:175:LEU:HG	1.90	0.70
25:CZ:299:GLU:O	25:CZ:302:GLN:HG2	1.91	0.70
25:AZ:206:ILE:O	25:AZ:210:ILE:HG22	1.91	0.70
36:BA:380:U:H2'	36:BA:381:G:H8	1.56	0.70
36:DA:953:A:OP2	49:DQ:16:ARG:HD3	1.91	0.70
4:CD:98:GLU:HG2	4:CD:189:PRO:HG3	1.72	0.70
32:B6:53:LYS:HG2	32:B6:54:ILE:H	1.56	0.70
56:DX:12:VAL:HB	56:DX:17:ALA:HB3	1.71	0.70
12:CL:41:ARG:HG2	12:CL:42:THR:N	2.05	0.70
35:D9:16:VAL:HG11	36:DA:1032:A:C4'	2.21	0.70
36:DA:1902:C:O2'	39:DD:244:ARG:HB2	1.92	0.70
14:CN:49:HIS:C	14:CN:51:GLY:H	1.93	0.70
36:DA:2502:G:H5''	36:DA:2503:A:C5'	2.20	0.70
36:BA:2394:C:OP1	48:BP:63:PRO:HD2	1.91	0.70
46:DN:22:THR:HG22	46:DN:61:ARG:CB	2.20	0.70
5:CE:6:PHE:HB2	5:CE:34:VAL:CG2	2.21	0.70
36:BA:1542:A:H5'	36:BA:1543:C:OP2	1.91	0.70
9:CI:47:LEU:N	9:CI:47:LEU:HD12	2.06	0.70
52:DT:50:ILE:HA	52:DT:99:LEU:HD11	1.73	0.70
51:DS:19:LYS:HB3	51:DS:20:ARG:NH2	2.07	0.70
41:BF:103:LYS:HG3	41:BF:106:ARG:NH2	2.06	0.70
53:DU:66:ASN:ND2	53:DU:76:TYR:H	1.89	0.70
4:AD:152:SER:O	4:AD:154:ASN:N	2.24	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B8:42:ARG:O	34:B8:44:LYS:N	2.24	0.70
17:CQ:74:LEU:CD1	17:CQ:75:ARG:HD3	2.22	0.70
16:AP:21:VAL:HG12	16:AP:34:GLU:O	1.90	0.70
36:BA:862:G:H2'	36:BA:863:A:O4'	1.90	0.70
37:DB:25:A:H2'	37:DB:25:A:N3	2.06	0.70
32:B6:44:ARG:C	32:B6:45:LYS:HD2	2.12	0.70
32:D6:15:GLU:OE1	32:D6:18:ARG:HG3	1.90	0.70
52:DT:56:GLY:O	52:DT:59:THR:HG23	1.91	0.70
15:CO:82:ILE:CD1	15:CO:88:ARG:HB2	2.20	0.70
22:CW:39:U:H5'	22:CW:39:U:O2	1.92	0.70
12:CL:20:LYS:H	12:CL:20:LYS:CD	2.04	0.70
36:DA:1970:A:H5''	36:DA:1971:A:OP1	1.92	0.70
48:DP:39:LYS:O	48:DP:40:SER:HB2	1.90	0.70
41:DF:160:ASN:HD21	41:DF:162:LEU:CB	2.05	0.70
48:BP:58:THR:O	48:BP:61:ARG:NE	2.24	0.70
42:BG:39:ILE:HG13	42:BG:92:VAL:HG12	1.74	0.70
36:BA:2795:G:H2'	36:BA:2796:U:H5'	1.72	0.70
1:CA:1281:U:H4'	1:CA:1282:C:OP2	1.90	0.70
40:BE:27:LEU:HD22	52:BT:1:MET:N	2.06	0.70
36:DA:761:A:H8	36:DA:761:A:O5'	1.74	0.70
2:AB:170:GLU:O	2:AB:174:VAL:HG23	1.90	0.70
20:AT:26:ASN:ND2	20:AT:26:ASN:H	1.89	0.70
1:CA:436:C:H2'	1:CA:437:U:C6	2.27	0.70
36:BA:549:G:O2'	36:BA:551:G:H5'	1.91	0.70
1:AA:1101:A:H4'	1:AA:1102:A:O5'	1.90	0.70
51:BS:66:ALA:O	51:BS:69:VAL:HG12	1.91	0.70
1:CA:770:C:O2'	1:CA:771:G:H5'	1.91	0.70
1:AA:793:U:H3'	1:AA:794:A:H5''	1.73	0.70
42:DG:62:LEU:HD12	42:DG:62:LEU:H	1.55	0.70
24:AY:4:G:H2'	24:AY:5:G:H5''	1.71	0.70
32:D6:19:ARG:NH1	32:D6:43:CYS:SG	2.64	0.70
31:D5:50:GLY:HA3	31:D5:56:LYS:CD	2.14	0.70
2:AB:130:ARG:HH21	2:AB:134:GLU:HG3	1.55	0.70
1:AA:1306:A:P	21:AU:6:ARG:HH22	2.15	0.70
1:AA:975:A:H5'	1:AA:975:A:H8	1.56	0.70
43:BH:76:VAL:O	43:BH:79:VAL:HG22	1.91	0.70
5:AE:6:PHE:HB3	5:AE:35:GLY:O	1.91	0.70
36:DA:1058:G:C2'	36:DA:1059:G:H5''	2.21	0.70
16:AP:74:LEU:O	16:AP:79:VAL:HG23	1.91	0.70
50:BR:96:ARG:HD3	50:BR:98:LEU:HD11	1.73	0.70
31:B5:3:LYS:H	31:B5:3:LYS:HD2	1.57	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BO:24:VAL:HA	47:BO:39:ILE:HG22	1.73	0.70
40:DE:117:MET:HA	40:DE:122:PHE:H	1.57	0.70
36:BA:2523:G:H2'	36:BA:2524:G:C5'	2.20	0.70
36:DA:848:G:O6	36:DA:928:G:H2'	1.90	0.70
38:BC:186:ALA:O	38:BC:190:ARG:HG2	1.91	0.70
25:CZ:227:ASP:HB3	25:CZ:229:PHE:CE1	2.27	0.70
36:BA:419:C:H2'	36:BA:420:C:H6	1.56	0.70
36:DA:593:G:H1	36:DA:664:C:H42	1.39	0.70
52:DT:23:ARG:O	52:DT:25:GLY:N	2.21	0.70
53:BU:93:LYS:H	53:BU:93:LYS:HD2	1.55	0.70
53:BU:95:LEU:CD1	54:BV:11:GLN:HG3	2.21	0.70
28:B2:9:GLN:HB3	28:B2:60:LEU:HD12	1.73	0.70
1:AA:1359:C:OP2	14:AN:35:ARG:NH1	2.25	0.70
43:BH:85:LYS:NZ	43:BH:87:LEU:H	1.88	0.70
58:DZ:166:SER:N	58:DZ:167:PRO:HA	2.06	0.70
5:CE:79:GLU:HG2	5:CE:92:LYS:HG3	1.72	0.70
36:BA:140:G:H1'	36:BA:141:A:C2	2.26	0.70
22:AW:74:C:O2'	22:AW:75:C:H5'	1.92	0.70
36:BA:2036:C:H5'	36:BA:2036:C:C6	2.25	0.70
17:CQ:59:ILE:HD13	17:CQ:73:VAL:HA	1.73	0.70
55:BW:6:ILE:HG12	55:BW:104:THR:HG22	1.73	0.70
22:AV:4:C:C3'	22:AV:5:G:H5''	2.22	0.70
36:DA:845:G:O2'	36:DA:846:C:H5	1.73	0.70
2:CB:121:LEU:HG	2:CB:126:GLU:HB3	1.74	0.70
35:B9:7:VAL:HG13	35:B9:34:GLN:CG	2.22	0.70
51:BS:89:ARG:HE	51:BS:91:PRO:HG2	1.56	0.70
1:CA:1016:A:H2'	1:CA:1017:G:O4'	1.91	0.70
1:CA:1144:G:H21	1:CA:1146:A:H62	1.39	0.70
1:CA:194:C:H2'	1:CA:195:A:H5''	1.73	0.70
5:AE:51:VAL:HB	5:AE:52:PRO:HD3	1.74	0.70
25:CZ:286:VAL:HG22	25:CZ:287:GLY:O	1.92	0.70
32:D6:17:LYS:HB2	32:D6:18:ARG:HH12	1.57	0.70
41:BF:135:LYS:HG2	41:BF:138:GLU:HG3	1.73	0.70
46:DN:18:ALA:HB1	46:DN:21:LYS:CB	2.22	0.70
8:CH:7:ALA:CB	8:CH:85:ARG:HD3	2.22	0.70
18:CR:67:ALA:O	18:CR:71:LYS:HG3	1.92	0.70
2:AB:7:VAL:HG13	2:AB:11:LEU:CD1	2.21	0.70
1:CA:946:A:H2'	1:CA:947:G:H8	1.55	0.70
43:DH:54:ARG:HG2	43:DH:54:ARG:HH11	1.57	0.70
36:BA:1311:G:H21	36:BA:1603:A:H62	1.38	0.70
36:BA:910:A:H62	49:BQ:12:GLN:HA	1.57	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1198:U:H2'	36:BA:1199:U:C6	2.26	0.70
2:AB:124:SER:OG	2:AB:125:PRO:HD2	1.92	0.70
36:BA:1590:U:H2'	36:BA:1591:G:C8	2.27	0.70
36:DA:2512:C:H2'	36:DA:2513:G:O4'	1.92	0.70
32:B6:45:LYS:N	32:B6:45:LYS:HD2	2.07	0.70
57:BY:76:CYS:SG	57:BY:77:PRO:HD2	2.31	0.70
12:CL:20:LYS:N	12:CL:20:LYS:HD3	2.04	0.70
3:AC:3:ASN:N	3:AC:3:ASN:OD1	2.24	0.70
36:BA:1803:A:O3'	39:BD:259:THR:CG2	2.38	0.70
16:CP:20:VAL:HG21	16:CP:32:TYR:CG	2.27	0.70
46:DN:18:ALA:HB1	46:DN:21:LYS:HB3	1.72	0.70
40:DE:2:LYS:HD3	40:DE:95:ILE:HG22	1.72	0.70
31:B5:45:VAL:HG12	31:B5:46:CYS:N	2.07	0.70
36:BA:1101:U:H2'	36:BA:1102:C:H6	1.55	0.70
50:BR:94:TYR:CD1	50:BR:94:TYR:N	2.59	0.70
36:BA:92:A:H3'	36:BA:93:G:C8	2.26	0.70
38:BC:87:GLU:CG	38:BC:94:VAL:HG21	2.22	0.70
42:DG:52:ILE:N	42:DG:52:ILE:HD13	2.06	0.70
3:CC:117:ALA:O	3:CC:120:VAL:HG13	1.92	0.70
39:DD:16:MET:HE1	39:DD:208:LYS:HD2	1.74	0.70
2:CB:28:PHE:HD2	2:CB:194:PRO:HD3	1.57	0.70
52:BT:23:ARG:HB2	52:BT:24:PRO:CD	2.22	0.70
39:DD:30:GLU:CB	39:DD:35:LYS:HD2	2.17	0.70
36:BA:1720:U:C3'	36:BA:1721:G:H5''	2.21	0.70
1:AA:1015:A:H2'	1:AA:1016:A:C8	2.27	0.70
36:DA:1112:G:O2'	36:DA:1113:U:H5'	1.92	0.70
10:CJ:4:ILE:HB	10:CJ:74:ILE:HD11	1.74	0.70
12:AL:6:THR:HG1	12:AL:9:GLN:HG3	1.56	0.70
34:B8:15:LYS:HD2	34:B8:16:ILE:H	1.57	0.70
1:AA:1225:A:H2'	1:AA:1226:C:C5	2.27	0.70
31:B5:44:THR:HG21	50:BR:101:ALA:CB	2.22	0.70
53:BU:57:PHE:CD1	53:BU:60:LEU:HD12	2.27	0.70
22:AV:4:C:H42	22:AV:69:G:H1	1.36	0.70
52:DT:13:ARG:NE	52:DT:13:ARG:HA	2.06	0.70
40:BE:93:VAL:C	40:BE:95:ILE:H	1.95	0.70
36:DA:2779:U:H1'	36:DA:2781:A:C5	2.26	0.70
29:B3:31:LEU:O	36:BA:1158:C:H4'	1.92	0.70
17:AQ:59:ILE:HD13	17:AQ:73:VAL:HA	1.72	0.70
50:DR:12:ARG:HH11	50:DR:12:ARG:HG3	1.57	0.70
1:AA:848:C:O2'	1:AA:849:C:H5'	1.92	0.70
36:BA:1681:G:O2'	36:BA:1762:A:H2'	1.92	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:123:GLU:O	8:CH:127:LEU:HD23	1.92	0.70
36:DA:559:G:H22	53:DU:49:HIS:CD2	2.10	0.70
42:DG:145:THR:HG22	42:DG:147:ASP:H	1.57	0.70
18:AR:25:THR:HG22	18:AR:25:THR:O	1.92	0.70
40:BE:104:VAL:O	40:BE:166:THR:HG23	1.92	0.70
1:AA:443:C:H2'	1:AA:444:C:H6	1.57	0.70
25:CZ:259:ALA:HB1	25:CZ:260:PRO:HD2	1.73	0.70
25:CZ:270:VAL:CG1	25:CZ:286:VAL:HG21	2.22	0.69
36:DA:99:U:H4'	36:DA:102:G:H1'	1.74	0.69
31:D5:45:VAL:HG13	31:D5:51:TYR:H	1.57	0.69
25:AZ:172:ARG:O	25:AZ:198:LYS:HG3	1.92	0.69
36:DA:2183:C:H2'	36:DA:2184:G:C8	2.24	0.69
43:DH:130:ARG:HB3	43:DH:130:ARG:HH11	1.56	0.69
43:BH:126:PRO:O	43:BH:127:GLU:HG2	1.91	0.69
51:BS:49:VAL:HG12	51:BS:50:SER:N	2.02	0.69
34:B8:32:LEU:CG	34:B8:36:LYS:HZ1	2.05	0.69
36:BA:1826:G:H2'	36:BA:1827:C:H6	1.57	0.69
12:CL:120:TYR:O	12:CL:122:THR:N	2.25	0.69
36:DA:636:G:H2'	48:DP:115:LEU:CD1	2.22	0.69
29:B3:15:TYR:HB3	29:B3:19:GLN:NE2	2.07	0.69
24:CY:4:G:C2'	24:CY:5:G:H5''	2.22	0.69
36:DA:2672:G:C2'	36:DA:2673:G:H5''	2.21	0.69
46:BN:57:ALA:CB	46:BN:124:ALA:HA	2.21	0.69
6:CF:91:VAL:HG12	6:CF:92:LYS:N	2.07	0.69
1:CA:223:U:H2'	1:CA:224:C:H6	1.56	0.69
3:CC:40:ARG:HH11	3:CC:40:ARG:HG3	1.55	0.69
1:AA:332:G:O2'	1:AA:333:G:H5'	1.91	0.69
1:CA:1060:C:O2'	1:CA:1061:G:H5'	1.92	0.69
54:DV:77:ALA:O	54:DV:79:VAL:HG22	1.91	0.69
5:CE:84:PHE:HB3	5:CE:134:ALA:HB2	1.74	0.69
3:AC:53:ALA:O	3:AC:54:ARG:HB3	1.92	0.69
25:CZ:12:VAL:HG13	25:CZ:100:ASP:OD2	1.92	0.69
36:BA:2189:U:C2'	36:BA:2190:G:H4'	2.21	0.69
28:B2:67:LYS:O	28:B2:69:ARG:N	2.26	0.69
2:CB:97:TRP:CZ3	2:CB:172:ILE:HG22	2.27	0.69
10:CJ:6:ILE:HG13	10:CJ:72:VAL:HB	1.74	0.69
12:AL:41:ARG:CG	12:AL:42:THR:H	1.97	0.69
36:DA:2308:G:N7	36:DA:2310:A:H5'	2.07	0.69
52:BT:33:LYS:HZ1	52:BT:43:GLN:HG2	1.55	0.69
41:BF:160:ASN:HD21	41:BF:162:LEU:HD13	1.57	0.69
40:BE:59:VAL:HG22	40:BE:62:PRO:O	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:112:PRO:HD2	7:CG:113:GLU:OE2	1.92	0.69
4:AD:68:TYR:CD2	4:AD:97:LEU:HD22	2.27	0.69
57:BY:53:PRO:HB3	57:BY:56:PRO:HG3	1.73	0.69
40:BE:4:ILE:HD12	40:BE:92:THR:O	1.93	0.69
50:DR:52:ILE:CG2	50:DR:94:TYR:HD2	2.03	0.69
36:BA:127:A:H5''	36:BA:128:C:O4'	1.92	0.69
1:CA:1332:A:H2'	1:CA:1333:A:C8	2.27	0.69
1:CA:242:C:H2'	1:CA:243:A:H5'	1.74	0.69
36:BA:492:A:H2'	36:BA:493:G:O4'	1.93	0.69
1:CA:108:G:H5'	1:CA:109:A:H5''	1.73	0.69
1:AA:1236:A:H2'	1:AA:1237:C:C6	2.26	0.69
50:BR:12:ARG:HG3	50:BR:12:ARG:HH11	1.57	0.69
10:CJ:18:ALA:O	10:CJ:22:LYS:HB2	1.93	0.69
39:BD:35:LYS:HG2	39:BD:36:PRO:N	2.07	0.69
36:BA:650:C:H3'	36:BA:651:G:H5''	1.74	0.69
49:BQ:101:ARG:HG3	49:BQ:101:ARG:NH1	2.07	0.69
49:BQ:141:GLN:HE21	49:BQ:141:GLN:HA	1.57	0.69
1:AA:1306:A:N6	1:AA:1331:G:H1'	2.08	0.69
14:CN:3:ARG:HG2	14:CN:3:ARG:O	1.90	0.69
1:AA:1123:A:C2	1:AA:1150:U:H5	2.09	0.69
35:D9:10:ILE:HG22	35:D9:10:ILE:O	1.90	0.69
3:CC:154:SER:CA	3:CC:165:THR:HA	2.21	0.69
40:BE:111:ARG:HG2	50:BR:2:ARG:CZ	2.22	0.69
19:AS:45:VAL:HA	19:AS:62:ILE:CG1	2.22	0.69
1:AA:427:U:H1'	1:AA:541:G:OP1	1.92	0.69
9:CI:53:VAL:H	9:CI:95:LYS:HZ2	1.38	0.69
9:CI:53:VAL:HG13	9:CI:95:LYS:CD	2.22	0.69
24:CY:61:C:O2'	24:CY:62:U:H5''	1.91	0.69
2:AB:7:VAL:CG1	2:AB:11:LEU:HD12	2.21	0.69
1:CA:1036:G:H5''	1:CA:1037:C:C5	2.26	0.69
24:CY:20:H2U:H4'	24:CY:21:A:H5'	1.73	0.69
36:BA:953:A:OP2	49:BQ:16:ARG:HD3	1.92	0.69
36:BA:1332:G:N2	36:BA:1610:A:C8	2.61	0.69
36:BA:2807:G:C3'	36:BA:2808:U:H5''	2.22	0.69
48:DP:110:TYR:HD1	48:DP:111:ARG:HG3	1.58	0.69
36:DA:2147:G:H2'	36:DA:2148:G:O4'	1.91	0.69
1:AA:45:U:H2'	1:AA:46:G:C8	2.27	0.69
49:BQ:66:ILE:HD12	49:BQ:66:ILE:O	1.92	0.69
48:DP:47:ASP:HB2	48:DP:51:PHE:CB	2.09	0.69
27:D1:44:PRO:HG2	27:D1:46:LEU:CD2	2.11	0.69
47:BO:121:VAL:O	47:BO:122:LEU:HD23	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DY:7:VAL:HB	57:DY:8:LYS:NZ	2.07	0.69
50:BR:99:LYS:N	50:BR:99:LYS:HD2	2.03	0.69
34:B8:4:MET:HE2	36:BA:666:G:H1'	1.73	0.69
36:DA:1053:C:O2'	36:DA:1054:A:H5'	1.91	0.69
4:AD:8:VAL:C	4:AD:10:ARG:N	2.46	0.69
58:BZ:145:GLU:HG3	58:BZ:146:ILE:HG12	1.75	0.69
49:DQ:18:LYS:H	49:DQ:98:LYS:HE3	1.58	0.69
50:BR:22:ARG:O	50:BR:26:LYS:HG3	1.92	0.69
50:DR:24:GLN:NE2	50:DR:36:THR:HG21	2.07	0.69
10:AJ:96:ILE:HD13	10:AJ:96:ILE:N	2.07	0.69
28:D2:65:ASN:HB3	28:D2:69:ARG:NH2	2.07	0.69
5:CE:101:ILE:O	5:CE:120:THR:HB	1.93	0.69
17:CQ:40:LYS:HD3	17:CQ:42:TYR:OH	1.93	0.69
31:B5:19:ARG:HG3	36:BA:2046:G:H5'	1.73	0.69
36:BA:1404:C:O2'	36:BA:1405:U:H5'	1.93	0.69
41:DF:164:ARG:HD3	41:DF:175:THR:OG1	1.92	0.69
28:B2:31:GLU:HA	28:B2:34:GLU:HB2	1.73	0.69
25:CZ:246:LYS:HD3	25:CZ:281:ILE:HG22	1.74	0.69
49:BQ:133:ARG:HB2	49:BQ:133:ARG:HH11	1.57	0.69
13:AM:40:ASN:ND2	13:AM:42:ALA:HB3	2.07	0.69
1:CA:556:C:O2'	1:CA:557:G:H5'	1.93	0.69
9:CI:40:LEU:HD11	9:CI:70:LYS:CG	2.19	0.69
36:BA:664:C:O2'	36:BA:665:C:H5'	1.93	0.69
36:BA:605:C:H6	36:BA:657:U:HO2'	1.41	0.69
48:BP:101:VAL:HG12	48:BP:106:LEU:CB	2.22	0.69
36:DA:744:G:OP1	40:DE:132:HIS:HB3	1.92	0.69
46:DN:10:GLU:CD	46:DN:11:PRO:HD2	2.12	0.69
54:BV:69:LYS:HA	54:BV:87:HIS:O	1.91	0.69
4:CD:121:VAL:HG12	4:CD:134:ASP:C	2.13	0.69
1:CA:631:G:H2'	1:CA:632:A:C8	2.28	0.69
36:BA:2845:G:O2'	36:BA:2846:G:H5'	1.92	0.69
8:CH:20:TYR:HE2	8:CH:75:ARG:HD2	1.57	0.69
48:DP:58:THR:O	48:DP:61:ARG:NE	2.23	0.69
48:DP:62:LEU:H	48:DP:62:LEU:CD2	2.05	0.69
52:BT:92:GLY:O	52:BT:93:ARG:HB2	1.92	0.69
36:BA:330:A:HO2'	36:BA:331:A:H8	1.40	0.69
57:BY:75:ILE:O	57:BY:76:CYS:HB2	1.91	0.69
36:DA:2100:G:H22	36:DA:2189:U:H3	1.41	0.69
38:DC:113:VAL:HG12	38:DC:138:PRO:CG	2.21	0.69
13:AM:2:ALA:N	13:AM:9:ILE:HG23	2.07	0.69
43:BH:85:LYS:NZ	43:BH:87:LEU:N	2.40	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:113:GLU:CG	7:CG:119:ARG:HG2	2.19	0.69
6:CF:18:GLN:HA	6:CF:21:LEU:CB	2.22	0.69
4:CD:145:GLU:HA	4:CD:184:LYS:HA	1.74	0.69
25:AZ:253:VAL:HG12	25:AZ:305:ALA:O	1.93	0.69
36:DA:28:A:N6	36:DA:512:G:H1'	2.08	0.69
2:CB:8:LYS:O	2:CB:10:LEU:N	2.25	0.69
50:BR:18:LEU:O	50:BR:18:LEU:HD22	1.92	0.69
36:BA:1657:C:O2'	36:BA:1658:C:H5'	1.92	0.69
25:CZ:341:GLN:HA	25:CZ:350:THR:HA	1.74	0.69
25:CZ:110:ASP:HB3	25:CZ:113:MET:CE	2.22	0.69
41:BF:103:LYS:HG3	41:BF:106:ARG:HH21	1.58	0.69
8:AH:33:GLU:OE1	8:AH:50:ARG:NH2	2.26	0.69
49:DQ:30:GLY:HA2	49:DQ:107:ALA:HB2	1.75	0.69
16:CP:75:ARG:HH11	16:CP:75:ARG:HG3	1.56	0.69
24:AY:54:5MU:OP1	24:AY:54:5MU:H71	1.92	0.69
52:DT:25:GLY:HA2	52:DT:92:GLY:HA2	1.73	0.69
1:CA:1321:C:H5''	1:CA:1322:C:H5''	1.74	0.69
2:AB:136:VAL:O	2:AB:140:HIS:HB2	1.93	0.69
25:AZ:117:ARG:HD3	25:AZ:157:LEU:HD11	1.73	0.69
43:DH:46:GLU:O	43:DH:47:GLU:HB2	1.93	0.69
1:AA:1305:G:H22	1:AA:1331:G:H2'	1.53	0.69
34:B8:4:MET:SD	34:B8:61:LEU:HD21	2.33	0.69
36:BA:1819:A:H5''	39:BD:161:THR:HG21	1.72	0.69
48:BP:97:PRO:HD3	48:BP:126:VAL:O	1.91	0.69
36:BA:559:G:H22	53:BU:49:HIS:CD2	2.11	0.69
31:B5:3:LYS:N	31:B5:3:LYS:HD2	2.07	0.69
36:DA:2523:G:H2'	36:DA:2524:G:H5''	1.74	0.69
36:DA:2039:C:H2'	36:DA:2040:C:H6	1.58	0.69
36:BA:286:C:H2'	36:BA:287:C:H6	1.56	0.69
36:BA:1242:A:H5'	36:BA:1243:G:OP2	1.92	0.69
39:BD:37:LEU:HD12	39:BD:64:ILE:CG2	2.21	0.69
36:DA:644:A:C2	36:DA:2369:A:H1'	2.27	0.69
1:CA:1128:C:H1'	1:CA:1146:A:H61	1.57	0.69
43:DH:159:GLU:HG3	43:DH:160:LYS:HG3	1.75	0.69
26:D0:10:THR:HG22	26:D0:12:ASN:H	1.57	0.69
36:BA:1865:G:H5'	36:BA:1866:C:OP2	1.92	0.69
26:D0:3:HIS:HB2	36:DA:2494:G:OP1	1.93	0.69
36:BA:884:C:H2'	36:BA:885:C:H5'	1.75	0.69
36:DA:1190:G:H5'	48:DP:35:HIS:H	1.58	0.69
48:DP:58:THR:O	48:DP:58:THR:HG22	1.93	0.69
36:BA:2347:C:H2'	36:BA:2348:U:C6	2.27	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:7:ARG:O	25:CZ:8:THR:HG22	1.93	0.69
3:AC:82:GLU:OE1	3:AC:83:ARG:N	2.22	0.69
56:DX:12:VAL:HB	56:DX:17:ALA:CB	2.23	0.69
1:CA:972:C:OP2	10:CJ:57:LYS:HG3	1.93	0.69
3:AC:2:GLY:N	3:AC:3:ASN:OD1	2.26	0.69
13:CM:2:ALA:HB3	13:CM:9:ILE:HG23	1.75	0.69
3:CC:68:VAL:HG12	3:CC:70:VAL:HG23	1.74	0.69
35:D9:26:ILE:CG2	35:D9:27:CYS:N	2.56	0.69
43:BH:127:GLU:OE1	43:BH:128:PRO:HD3	1.93	0.69
51:BS:17:ARG:HA	51:BS:20:ARG:HH12	1.57	0.69
1:AA:1299:A:N3	1:AA:1299:A:H5''	2.06	0.69
42:DG:51:ARG:NH1	42:DG:53:LEU:HD13	2.07	0.69
42:BG:161:THR:HG21	42:BG:172:LEU:HD13	1.74	0.69
4:AD:11:LEU:N	4:AD:11:LEU:HD23	2.08	0.69
25:AZ:265:THR:HG21	25:AZ:290:LEU:HB3	1.73	0.69
3:CC:58:GLU:HB2	3:CC:65:ALA:HB2	1.73	0.69
36:DA:1543:C:C3'	36:DA:1544:A:H5''	2.22	0.69
36:DA:2579:C:O2'	40:DE:131:ALA:HB2	1.93	0.69
34:B8:23:VAL:HG12	34:B8:46:ARG:NH1	2.08	0.69
54:DV:19:LYS:NZ	54:DV:20:LEU:H	1.90	0.69
34:D8:52:LYS:H	34:D8:53:PRO:CD	2.06	0.69
36:DA:1368:G:O2'	36:DA:1369:G:H5'	1.92	0.69
40:BE:27:LEU:HD22	52:BT:1:MET:H3	1.58	0.69
36:BA:676:A:H2	36:BA:802:A:H61	1.39	0.69
36:BA:284:U:H2'	36:BA:285:C:C6	2.26	0.69
50:BR:44:LEU:O	50:BR:48:VAL:HG12	1.92	0.69
37:BB:15:A:H3'	37:BB:16:G:H5'	1.73	0.69
40:BE:116:VAL:O	40:BE:117:MET:CB	2.40	0.69
36:BA:2822:G:H2'	36:BA:2823:A:H5''	1.74	0.69
36:BA:473:G:H5''	36:BA:508:G:N2	2.08	0.69
36:BA:2767:C:H2'	36:BA:2768:C:H6	1.58	0.69
36:DA:1651:G:OP1	50:DR:40:LYS:NZ	2.26	0.69
36:DA:2485:G:C2'	36:DA:2486:G:H5'	2.23	0.69
48:DP:99:LEU:HD23	48:DP:99:LEU:O	1.92	0.69
36:DA:200:U:H2'	36:DA:201:C:H5'	1.75	0.69
36:BA:1335:U:H2'	36:BA:1336:A:H8	1.57	0.69
1:CA:424:G:H2'	1:CA:425:G:H8	1.56	0.69
1:AA:1415:G:O2'	1:AA:1416:G:H5'	1.93	0.69
36:BA:57:C:O2'	36:BA:58:G:H5'	1.92	0.69
36:DA:654:A:H3'	36:DA:654:A:OP1	1.92	0.69
1:CA:80:G:C2	1:CA:90:U:H5'	2.28	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:52:GLU:O	7:AG:54:THR:N	2.25	0.69
25:CZ:26:THR:HG21	60:CZ:501:GDP:C8	2.28	0.69
25:CZ:64:ASN:HD22	25:CZ:64:ASN:H	1.38	0.69
22:AV:59:U:O2'	22:AV:60:U:C6	2.46	0.69
25:AZ:118:GLU:HA	25:AZ:121:LEU:HD21	1.73	0.69
39:DD:30:GLU:HG3	39:DD:63:ARG:HH21	1.58	0.69
39:DD:44:ASN:ND2	39:DD:49:ILE:HG22	2.08	0.69
42:DG:34:LEU:HD21	42:DG:100:TRP:CH2	2.28	0.69
22:CV:68:C:C2'	22:CV:69:G:C5'	2.65	0.69
42:BG:73:ALA:H	42:BG:87:PRO:CD	2.06	0.69
25:CZ:322:VAL:O	25:CZ:365:GLY:HA2	1.92	0.69
39:BD:65:ILE:HD11	39:BD:67:PHE:CE2	2.27	0.69
42:BG:138:GLN:HG2	42:BG:153:ARG:H	1.57	0.69
46:DN:18:ALA:HB3	46:DN:26:LEU:HD22	1.75	0.69
57:BY:87:LYS:HG3	57:BY:88:LYS:H	1.58	0.69
58:BZ:96:VAL:HG22	58:BZ:97:GLU:N	2.06	0.69
7:AG:78:ARG:HG3	7:AG:79:ARG:H	1.55	0.69
37:DB:91:C:H5'	49:DQ:17:LEU:O	1.92	0.69
1:CA:975:A:C4'	1:CA:976:G:H5''	2.23	0.69
36:DA:2155:G:H3'	36:DA:2156:G:H8	1.56	0.69
37:BB:48:A:H4'	51:BS:95:HIS:CD2	2.27	0.69
41:BF:183:VAL:O	41:BF:187:VAL:HG23	1.92	0.69
9:CI:99:LEU:HB2	9:CI:101:PHE:CE2	2.28	0.69
1:CA:1003:G:O2'	1:CA:1004:A:H4'	1.93	0.69
1:CA:1040:U:H2'	1:CA:1041:A:H8	1.57	0.69
36:BA:1523:U:H2'	36:BA:1524:G:H8	1.58	0.69
1:CA:603:U:H2'	1:CA:604:G:C8	2.28	0.69
46:BN:96:GLU:O	46:BN:100:GLU:HG3	1.91	0.69
36:DA:2108:C:O2	36:DA:2108:C:H2'	1.91	0.69
36:DA:1270:C:H5''	36:DA:1271:G:O5'	1.93	0.69
51:BS:97:ARG:O	51:BS:97:ARG:NE	2.24	0.69
38:BC:75:LEU:HG	38:BC:112:ALA:O	1.93	0.69
2:AB:69:LEU:HD23	2:AB:91:PRO:HB2	1.74	0.69
24:CY:15:A:H3'	24:CY:16:H2U:H5''	1.75	0.69
48:DP:23:PRO:HB2	48:DP:33:ARG:CG	2.24	0.69
28:B2:4:SER:HA	28:B2:7:ARG:HE	1.58	0.69
39:BD:35:LYS:O	39:BD:36:PRO:C	2.31	0.69
39:BD:35:LYS:HB3	39:BD:36:PRO:HD2	1.75	0.69
36:BA:81:G:H21	57:BY:2:ARG:NH1	1.90	0.69
52:BT:98:LYS:HB3	52:BT:100:TYR:CE1	2.27	0.69
49:BQ:133:ARG:HG2	49:BQ:134:ARG:H	1.57	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1086:U:H2'	1:CA:1087:G:H5'	1.74	0.69
25:CZ:333:GLY:CA	25:CZ:363:MET:HE1	2.19	0.69
9:AI:19:LEU:HD11	9:AI:59:PHE:HD2	1.58	0.69
16:AP:67:THR:H	16:AP:70:ALA:HB3	1.56	0.69
39:DD:27:THR:HG23	39:DD:27:THR:O	1.93	0.69
4:AD:17:VAL:HG11	4:AD:197:PRO:HB2	1.75	0.69
25:AZ:270:VAL:HG12	25:AZ:286:VAL:HG21	1.73	0.69
36:BA:1058:G:C2'	36:BA:1059:G:H5''	2.22	0.69
6:CF:61:LEU:HB3	6:CF:63:TYR:CE1	2.25	0.69
1:AA:1049:U:H2'	14:AN:2:ALA:N	2.08	0.69
36:BA:2514:U:H2'	36:BA:2515:C:C6	2.28	0.69
46:DN:73:THR:HG23	46:DN:82:LEU:HD11	1.75	0.69
29:D3:45:GLY:C	29:D3:47:VAL:H	1.94	0.69
1:AA:1278:U:H5''	1:AA:1279:A:O4'	1.93	0.69
37:BB:16:G:N2	37:BB:69:G:H1'	2.07	0.69
27:B1:7:ILE:HG22	27:B1:8:SER:N	2.08	0.69
25:AZ:294:SER:OG	25:AZ:297:GLU:HG3	1.93	0.69
36:BA:278:A:H61	36:BA:362:U:H3	1.41	0.69
36:DA:1434:A:H61	36:DA:1558:A:N6	1.91	0.69
36:DA:394:A:H2'	36:DA:395:U:H5'	1.75	0.69
36:DA:1678:G:N2	36:DA:1989:G:H22	1.91	0.69
32:D6:19:ARG:O	32:D6:20:ASN:O	2.10	0.68
58:BZ:115:GLY:HA2	58:BZ:177:PRO:CD	2.15	0.68
57:DY:76:CYS:SG	57:DY:77:PRO:HD2	2.32	0.68
10:CJ:48:THR:HG22	10:CJ:62:HIS:ND1	2.07	0.68
39:BD:183:ARG:HG2	39:BD:183:ARG:HH11	1.56	0.68
41:DF:11:VAL:HG12	41:DF:12:LEU:H	1.58	0.68
36:BA:1899:G:N2	36:BA:1902:C:N4	2.39	0.68
48:DP:126:VAL:HA	48:DP:145:PRO:CB	2.23	0.68
36:BA:2053:G:H5'	40:BE:144:ARG:O	1.92	0.68
24:AY:20:H2U:H4'	24:AY:21:A:H5'	1.75	0.68
1:AA:629:G:H2'	1:AA:630:G:H5''	1.73	0.68
25:AZ:97:ALA:HA	25:AZ:126:VAL:CG1	2.23	0.68
36:DA:94(A):G:H2'	36:DA:95:G:H5''	1.74	0.68
47:DO:19:ILE:HG22	47:DO:43:VAL:HA	1.74	0.68
17:AQ:9:VAL:HG11	17:AQ:84:LEU:HD13	1.75	0.68
36:BA:17:G:H4'	53:BU:25:TRP:CZ3	2.28	0.68
39:BD:108:PRO:HG2	39:BD:111:LEU:HB2	1.75	0.68
1:AA:1264:C:O2'	1:AA:1265:G:H5'	1.93	0.68
28:B2:22:GLU:CA	28:B2:64:LEU:HD21	2.23	0.68
50:DR:99:LYS:H	50:DR:99:LYS:CD	2.05	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1516:C:H2'	36:BA:1517:G:H5''	1.73	0.68
58:DZ:97:GLU:HG3	58:DZ:127:LYS:HB3	1.73	0.68
40:DE:61:ARG:HG2	40:DE:62:PRO:HD3	1.74	0.68
51:BS:52:SER:HB3	51:BS:55:ALA:HB3	1.75	0.68
36:BA:2334:G:C5'	51:BS:13:ARG:HD3	2.22	0.68
36:BA:2287:A:N6	36:BA:2344:U:H3	1.89	0.68
17:CQ:59:ILE:CD1	17:CQ:73:VAL:HG22	2.23	0.68
12:AL:126:LYS:HA	12:AL:126:LYS:HE2	1.74	0.68
3:CC:58:GLU:HB2	3:CC:65:ALA:HB3	1.73	0.68
36:DA:1528:A:H2'	36:DA:1528:A:N3	2.08	0.68
2:AB:44:LEU:HA	2:AB:47:THR:OG1	1.93	0.68
2:CB:8:LYS:HD3	2:CB:217:ARG:NH2	2.07	0.68
37:BB:15:A:H3'	37:BB:16:G:C5'	2.22	0.68
8:AH:1:MET:HE2	8:AH:2:LEU:H	1.58	0.68
36:DA:237:C:O2'	36:DA:238:C:H5'	1.93	0.68
36:DA:380:U:H2'	36:DA:381:G:H8	1.58	0.68
36:BA:1403:C:H5''	36:BA:1471:A:H1'	1.74	0.68
4:CD:100:ARG:HB3	4:CD:103:ASN:HB3	1.76	0.68
10:CJ:9:ARG:O	10:CJ:94:VAL:HG13	1.94	0.68
25:AZ:226:GLU:CG	25:AZ:240:GLY:HA2	2.23	0.68
2:CB:118:LEU:HD11	2:CB:141:GLU:OE1	1.94	0.68
1:CA:1412:C:H2'	1:CA:1413:A:H8	1.52	0.68
41:BF:126:VAL:HG11	41:BF:142:TRP:HH2	1.57	0.68
3:CC:70:VAL:HG21	3:CC:76:VAL:HG11	1.75	0.68
25:CZ:222:LEU:HB3	25:CZ:243:GLU:HB3	1.76	0.68
36:BA:1012:U:O4	46:BN:28:THR:HG21	1.93	0.68
58:DZ:120:ILE:HD13	58:DZ:120:ILE:O	1.94	0.68
36:BA:139:G:H2'	36:BA:139(A):G:H5''	1.75	0.68
40:DE:111:ARG:HA	50:DR:2:ARG:HG3	1.73	0.68
36:BA:1747(A):G:H2'	36:BA:1748:G:C5'	2.23	0.68
36:BA:1779:U:C5	36:BA:1784:A:N7	2.61	0.68
28:D2:38:GLN:O	28:D2:41:ILE:HG12	1.93	0.68
36:BA:484:C:H2'	36:BA:485:C:C6	2.28	0.68
42:DG:32:PRO:HB3	42:DG:163:ALA:HA	1.74	0.68
46:DN:17:ASP:OD1	46:DN:56:ASN:HB3	1.93	0.68
9:AI:126:SER:O	9:AI:127:LYS:HB3	1.93	0.68
36:BA:1958:C:O2'	36:BA:1959:G:H5'	1.93	0.68
38:DC:100:ILE:HD11	38:DC:123:VAL:HG23	1.75	0.68
25:CZ:64:ASN:N	25:CZ:64:ASN:ND2	2.40	0.68
36:DA:588:U:H2'	36:DA:589:C:C6	2.28	0.68
32:B6:15:GLU:HB2	32:B6:20:ASN:CB	2.19	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DD:31:LYS:NZ	39:DD:33:LEU:HG	2.07	0.68
15:CO:82:ILE:HG23	15:CO:83:GLU:N	2.08	0.68
38:DC:113:VAL:HG11	38:DC:136:LEU:O	1.92	0.68
38:DC:131:LEU:HD22	38:DC:136:LEU:CB	2.22	0.68
3:CC:134:ILE:HD11	3:CC:153:VAL:CG2	2.24	0.68
58:DZ:51:ALA:HB1	58:DZ:57:ILE:HD11	1.75	0.68
32:D6:53:LYS:HG2	32:D6:54:ILE:H	1.57	0.68
17:CQ:66:SER:OG	17:CQ:69:LYS:HB2	1.93	0.68
36:DA:1516:C:C2'	36:DA:1517:G:H5''	2.24	0.68
58:BZ:126:VAL:HA	58:BZ:163:LEU:HA	1.74	0.68
47:BO:64:ARG:NH2	52:BT:70:VAL:HG21	2.09	0.68
43:BH:94:TYR:CD1	43:BH:107:VAL:HA	2.29	0.68
36:BA:2131:G:H1'	36:BA:2133:G:N2	2.06	0.68
36:BA:1047:G:H2'	36:BA:1110:G:N2	2.06	0.68
22:CW:68:C:H2'	22:CW:69:G:C8	2.28	0.68
43:DH:137:ASP:O	43:DH:138:LYS:HB2	1.93	0.68
1:AA:29:G:O2'	1:AA:30:U:H5'	1.93	0.68
1:CA:1423:G:H5'	47:DO:49:ARG:HH22	1.56	0.68
1:AA:191:G:C4	20:AT:105:SER:HB3	2.28	0.68
36:DA:1242:A:H5'	36:DA:1243:G:OP2	1.93	0.68
10:CJ:96:ILE:HD13	10:CJ:96:ILE:N	2.09	0.68
36:DA:736:C:H2'	36:DA:737:C:C6	2.29	0.68
47:BO:47:ILE:HG23	47:BO:48:PRO:HD2	1.75	0.68
32:B6:27:LYS:HE3	32:B6:30:THR:OG1	1.93	0.68
52:DT:85:LYS:NZ	52:DT:85:LYS:CB	2.55	0.68
36:BA:1209:G:H21	36:BA:1210:A:N6	1.90	0.68
52:BT:98:LYS:HB3	52:BT:100:TYR:HE1	1.56	0.68
41:BF:133:ASN:HB2	41:BF:138:GLU:OE1	1.94	0.68
41:BF:160:ASN:ND2	41:BF:162:LEU:HD13	2.08	0.68
3:CC:78:GLY:HA3	3:CC:82:GLU:OE1	1.93	0.68
19:CS:47:HIS:O	19:CS:62:ILE:HG22	1.94	0.68
50:BR:4:LEU:O	50:BR:4:LEU:HD23	1.93	0.68
16:CP:20:VAL:HG23	16:CP:34:GLU:O	1.93	0.68
39:DD:37:LEU:HD12	39:DD:64:ILE:CG2	2.24	0.68
10:CJ:3:LYS:NZ	10:CJ:77:PRO:HD2	2.09	0.68
48:BP:97:PRO:O	48:BP:98:GLU:HB3	1.93	0.68
53:BU:15:LYS:O	53:BU:19:LYS:HG2	1.92	0.68
1:AA:1040:U:H2'	1:AA:1041:A:C8	2.28	0.68
48:DP:123:LEU:H	48:DP:123:LEU:HD23	1.58	0.68
38:DC:87:GLU:CG	38:DC:94:VAL:HG21	2.24	0.68
36:DA:1040:C:H2'	36:DA:1041:G:H8	1.57	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:19:LEU:HD23	6:CF:19:LEU:O	1.92	0.68
38:DC:75:LEU:HG	38:DC:112:ALA:O	1.93	0.68
5:CE:42:GLY:HA3	5:CE:66:MET:HE1	1.75	0.68
6:AF:91:VAL:HG11	18:AR:72:ARG:NH1	2.08	0.68
36:BA:271(A):A:H5'	36:BA:271(B):C:OP2	1.94	0.68
5:CE:18:ARG:HH11	5:CE:18:ARG:HG3	1.59	0.68
15:AO:48:LYS:HA	15:AO:48:LYS:HE2	1.76	0.68
58:BZ:67:LEU:HD12	58:BZ:67:LEU:H	1.57	0.68
36:DA:118:A:OP2	36:DA:119:A:H5''	1.94	0.68
24:CY:72:U:H2'	24:CY:73:G:C5'	2.13	0.68
1:CA:1152:A:OP1	10:CJ:70:ARG:NH2	2.24	0.68
38:BC:113:VAL:HG12	38:BC:138:PRO:CG	2.24	0.68
36:BA:1209:G:N2	36:BA:1210:A:H62	1.91	0.68
1:CA:1096:C:H5''	2:CB:137:ARG:HH21	1.59	0.68
3:AC:84:ILE:O	3:AC:84:ILE:HG12	1.93	0.68
35:D9:7:VAL:HG13	35:D9:34:GLN:CG	2.23	0.68
1:AA:1306:A:H61	1:AA:1331:G:H1'	1.59	0.68
36:BA:2476:A:O2'	36:BA:2477:C:H5''	1.93	0.68
36:DA:607:U:OP1	41:DF:102:PRO:HA	1.93	0.68
42:BG:43:LEU:HB3	42:BG:45:GLU:HG2	1.76	0.68
5:CE:76:ILE:HG13	5:CE:142:LEU:HD13	1.74	0.68
49:DQ:51:ARG:O	49:DQ:55:VAL:HG12	1.93	0.68
2:AB:42:ILE:HD11	2:AB:202:PRO:HB2	1.75	0.68
46:DN:34:LEU:O	46:DN:34:LEU:HD13	1.93	0.68
37:BB:48:A:H4'	51:BS:95:HIS:HD2	1.58	0.68
51:DS:101:LEU:O	51:DS:101:LEU:HD12	1.94	0.68
58:DZ:108:PRO:HB3	58:DZ:141:VAL:HG11	1.76	0.68
36:BA:848:G:N3	36:BA:933:A:H1'	2.09	0.68
6:AF:47:ARG:O	6:AF:47:ARG:HG3	1.94	0.68
28:B2:2:LYS:HE3	28:B2:59:ARG:NH2	2.08	0.68
36:BA:500:G:N2	36:BA:502:A:H3'	2.08	0.68
28:D2:31:GLU:HB3	28:D2:53:LEU:HD11	1.73	0.68
34:B8:32:LEU:HD23	34:B8:36:LYS:HZ3	1.59	0.68
46:DN:60:ILE:HD13	46:DN:99:LEU:HD23	1.75	0.68
27:D1:64:ALA:O	27:D1:67:ILE:HG12	1.94	0.68
36:BA:409:C:O2'	36:BA:410:G:H5'	1.94	0.68
36:DA:654(C):G:C2'	36:DA:654(D):G:H5'	2.24	0.68
54:DV:19:LYS:HB3	54:DV:94:LEU:O	1.94	0.68
36:DA:2136:C:H2'	36:DA:2137:C:H6	1.59	0.68
36:DA:484:C:OP1	57:DY:49:VAL:HG13	1.94	0.68
20:AT:86:ARG:O	20:AT:90:GLN:HG2	1.94	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:10:LEU:HD11	6:AF:61:LEU:CD1	2.23	0.68
1:CA:965:A:C2	1:CA:969:A:C2	2.81	0.68
55:DW:29:LEU:CD2	55:DW:33:ARG:HH11	2.07	0.68
33:D7:5:TRP:CD1	33:D7:7:PRO:HD3	2.28	0.68
32:D6:5:VAL:N	32:D6:9:LEU:H	1.92	0.68
28:B2:22:GLU:O	28:B2:26:ARG:HB2	1.94	0.68
22:AW:18:G:H1	22:AW:55:U:H1'	1.58	0.68
50:BR:99:LYS:CD	50:BR:99:LYS:H	2.01	0.68
35:D9:10:ILE:O	35:D9:11:CYS:CB	2.39	0.68
26:D0:27:GLU:CD	36:DA:856:C:H1'	2.14	0.68
50:DR:87:TYR:O	50:DR:90:ARG:N	2.27	0.68
5:CE:79:GLU:HG3	5:CE:93:PRO:CD	2.23	0.68
37:DB:30:C:H1'	37:DB:57:A:N6	2.07	0.68
37:DB:56:G:H4'	37:DB:57:A:O5'	1.94	0.68
41:DF:192:LEU:HD21	41:DF:194:MET:HG3	1.76	0.68
5:CE:6:PHE:HB3	5:CE:35:GLY:O	1.92	0.68
42:BG:110:ALA:C	42:BG:112:PRO:HD2	2.13	0.68
36:DA:581:C:H2'	36:DA:582:G:C8	2.29	0.68
36:DA:882:G:H2'	36:DA:883:G:C8	2.27	0.68
52:DT:10:VAL:O	52:DT:13:ARG:HG2	1.93	0.68
24:CY:44:G:H4'	24:CY:45:U:OP2	1.92	0.68
41:DF:185:ASP:HA	41:DF:188:ARG:HD3	1.75	0.68
36:BA:2298:A:H62	36:BA:2318:G:H8	1.40	0.68
54:BV:35:LEU:H	54:BV:35:LEU:HD22	1.58	0.68
36:DA:2657:A:O2'	43:DH:160:LYS:HE2	1.94	0.68
36:BA:1336:A:H2'	36:BA:1337:G:C8	2.28	0.68
17:CQ:22:LEU:HD11	17:CQ:39:SER:OG	1.94	0.68
1:CA:250:A:H4'	1:CA:251:G:O5'	1.94	0.68
36:DA:615:G:OP2	41:DF:43:LYS:HE2	1.94	0.68
25:CZ:103:ILE:HD11	25:CZ:206:ILE:CD1	2.24	0.68
1:AA:80:G:C2	1:AA:90:U:H5'	2.28	0.68
29:B3:10:LYS:O	29:B3:53:LEU:HD22	1.94	0.68
25:CZ:67:HIS:H	25:CZ:67:HIS:HD2	1.35	0.68
2:AB:126:GLU:HA	2:AB:129:GLU:CD	2.14	0.68
36:DA:2845:G:O2'	36:DA:2846:G:H5'	1.94	0.68
42:BG:71:THR:HB	42:BG:89:GLY:O	1.94	0.68
53:DU:92:ARG:HG2	53:DU:92:ARG:O	1.93	0.68
41:BF:2:LYS:O	41:BF:25:PRO:HG2	1.94	0.68
1:AA:1463:C:H5'	52:BT:115:ARG:NH2	2.06	0.68
14:AN:13:THR:N	14:AN:14:PRO:CD	2.57	0.68
5:AE:6:PHE:HB2	5:AE:34:VAL:HG22	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DF:40:GLN:NE2	41:DF:182:ASN:HB2	2.08	0.68
36:DA:1104:C:O2'	36:DA:1105:U:H5'	1.92	0.68
3:AC:20:SER:HB2	3:AC:40:ARG:NH2	2.08	0.68
1:AA:737:A:H2'	1:AA:738:C:H6	1.59	0.68
28:B2:13:ALA:HA	28:B2:15:LYS:HE3	1.75	0.68
36:BA:585:G:H2'	36:BA:1251:C:H42	1.59	0.68
6:AF:69:GLU:O	6:AF:72:VAL:HG12	1.92	0.68
36:DA:2064:C:H2'	36:DA:2065:C:C6	2.28	0.68
36:DA:862:G:H2'	36:DA:863:A:O4'	1.94	0.68
52:DT:22:PHE:HE2	52:DT:85:LYS:NZ	1.91	0.68
57:BY:46:LYS:HG2	57:BY:47:LYS:N	2.06	0.68
2:AB:22:LYS:HA	2:AB:22:LYS:HZ2	1.59	0.68
3:CC:13:GLY:H	14:CN:57:ARG:HD2	1.59	0.68
43:DH:88:LEU:HD12	43:DH:130:ARG:HD2	1.76	0.68
39:DD:238:GLY:O	39:DD:239:ARG:O	2.12	0.68
43:BH:85:LYS:HD3	43:BH:133:VAL:H	1.57	0.68
39:BD:147:LEU:HD11	39:BD:183:ARG:HH12	1.58	0.68
4:AD:117:ALA:O	4:AD:121:VAL:HG23	1.94	0.68
1:AA:1226:C:H2'	13:AM:103:THR:HB	1.75	0.68
36:DA:637:A:OP2	48:DP:115:LEU:HB2	1.92	0.68
48:DP:84:ASN:C	48:DP:86:LYS:H	1.96	0.68
41:BF:101:LEU:HD12	41:BF:102:PRO:HD2	1.76	0.68
36:BA:130:C:H2'	36:BA:131:G:H5''	1.74	0.68
2:AB:152:PHE:O	2:AB:153:ARG:CB	2.41	0.68
56:DX:28:PHE:N	56:DX:28:PHE:HD1	1.92	0.68
33:D7:34:ARG:HH11	33:D7:34:ARG:CG	2.05	0.68
1:AA:1004:A:H5''	1:AA:1025:U:C2	2.29	0.68
33:D7:30:VAL:HA	33:D7:33:ARG:NH1	2.08	0.68
1:CA:1332:A:H2'	1:CA:1333:A:H8	1.57	0.68
13:CM:68:GLY:HA2	13:CM:71:ARG:HG2	1.76	0.68
36:BA:955:C:OP1	49:BQ:87:LYS:HE2	1.93	0.68
7:AG:4:ARG:HH11	7:AG:4:ARG:HG2	1.59	0.68
1:AA:708:C:O2'	1:AA:709:G:H5'	1.94	0.68
42:DG:152:LEU:N	42:DG:152:LEU:HD23	2.09	0.68
36:DA:2514:U:H2'	36:DA:2515:C:H6	1.57	0.68
36:DA:1862:G:O2'	36:DA:1863:G:H5'	1.93	0.68
38:DC:151:GLU:HA	38:DC:154:ARG:HH11	1.59	0.67
39:DD:49:ILE:HG13	39:DD:49:ILE:O	1.92	0.67
49:DQ:24:GLY:O	49:DQ:26:TYR:N	2.23	0.67
57:DY:46:LYS:CG	57:DY:47:LYS:H	2.03	0.67
41:BF:127:GLU:OE1	41:BF:196:LEU:HD12	1.93	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CV:5:G:H1	22:CV:68:C:H42	1.40	0.67
1:CA:1202:G:O2'	1:CA:1203:C:H5'	1.94	0.67
1:CA:542:G:H5'	4:CD:41:GLY:CA	2.24	0.67
51:DS:57:LYS:O	51:DS:58:LEU:HB2	1.94	0.67
32:B6:25:LYS:HE2	34:B8:34:TRP:HE1	1.59	0.67
11:AK:33:THR:HG22	11:AK:39:PRO:CA	2.22	0.67
25:AZ:65:THR:HA	25:AZ:83:PRO:HD3	1.76	0.67
52:DT:94:ALA:HB1	52:DT:99:LEU:HD23	1.75	0.67
36:DA:2110:G:N1	36:DA:2178:C:H5	1.92	0.67
27:D1:88:LYS:O	27:D1:92:LYS:HG3	1.92	0.67
40:BE:87:GLU:C	40:BE:89:ASP:H	1.95	0.67
51:BS:95:HIS:CG	51:BS:96:GLY:H	2.13	0.67
26:B0:23:VAL:H	26:B0:38:VAL:HG13	1.58	0.67
1:AA:1003:G:C2'	1:AA:1004:A:H4'	2.24	0.67
20:AT:16:HIS:O	20:AT:19:SER:HB3	1.94	0.67
36:BA:2305:A:H2'	36:BA:2306:C:H5''	1.76	0.67
1:CA:722:A:H2'	1:CA:722:A:N3	2.08	0.67
36:DA:2563:U:H4'	47:DO:28:SER:HA	1.76	0.67
1:CA:646:U:H2'	1:CA:647:C:C6	2.29	0.67
36:DA:1921:G:O2'	36:DA:1922:G:H5'	1.93	0.67
51:BS:11:LYS:N	51:BS:11:LYS:HD2	2.09	0.67
2:CB:207:ALA:O	2:CB:211:ILE:HD12	1.93	0.67
24:CY:76:A:O4'	25:CZ:237:VAL:HG11	1.94	0.67
1:CA:227:G:C3'	1:CA:228:A:H5''	2.24	0.67
48:DP:65:ARG:HB3	48:DP:68:GLN:NE2	1.99	0.67
28:B2:46:GLN:C	28:B2:50:ILE:HB	2.13	0.67
25:AZ:138:VAL:HG21	25:AZ:173:GLY:H	1.59	0.67
43:BH:66:GLY:HA2	43:BH:69:ARG:CG	2.24	0.67
56:DX:7:VAL:C	56:DX:8:ILE:HD12	2.13	0.67
28:D2:36:ARG:HA	28:D2:39:ALA:HB3	1.75	0.67
35:D9:7:VAL:HG12	35:D9:25:VAL:HG21	1.75	0.67
10:CJ:57:LYS:C	10:CJ:57:LYS:HD3	2.14	0.67
36:DA:139(A):G:N2	56:DX:44:GLU:OE1	2.24	0.67
41:DF:25:PRO:HB3	41:DF:119:ARG:CG	2.20	0.67
36:DA:1053:C:H41	36:DA:1107:G:N2	1.93	0.67
40:DE:52:LEU:CD1	52:DT:1:MET:HG2	2.24	0.67
1:CA:254:G:OP1	17:CQ:67:LYS:O	2.11	0.67
48:DP:115:LEU:HB3	48:DP:131:SER:HB3	1.77	0.67
36:DA:1542:A:H5'	36:DA:1543:C:OP2	1.94	0.67
36:BA:1543:C:C3'	36:BA:1544:A:H5''	2.25	0.67
36:DA:2122:U:H2'	36:DA:2123:G:H8	1.59	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BE:4:ILE:HD11	40:BE:28:ALA:HB1	1.76	0.67
13:CM:37:THR:O	13:CM:39:ILE:HG13	1.94	0.67
3:CC:135:LYS:HZ1	5:CE:50:GLU:HG2	1.59	0.67
3:CC:60:ALA:HB2	10:CJ:93:GLY:HA2	1.75	0.67
53:BU:29:SER:HB2	53:BU:30:LYS:NZ	2.09	0.67
37:BB:65:C:N4	37:BB:109:C:H2'	2.08	0.67
2:CB:204:ASN:ND2	2:CB:206:ASP:H	1.91	0.67
12:AL:71:PRO:HG3	12:AL:99:HIS:HD2	1.58	0.67
2:CB:112:VAL:O	2:CB:115:LEU:HB3	1.93	0.67
25:AZ:150:VAL:HA	25:AZ:153:GLU:OE2	1.94	0.67
25:CZ:13:ASN:HB3	25:CZ:78:SER:HB3	1.76	0.67
57:BY:63:LYS:HG2	57:BY:64:GLU:H	1.58	0.67
10:CJ:57:LYS:HD3	10:CJ:58:ASP:N	2.08	0.67
36:BA:2308:G:N7	36:BA:2310:A:H5'	2.09	0.67
46:BN:58:ASP:C	46:BN:60:ILE:H	1.97	0.67
46:BN:23:LEU:HB3	46:BN:60:ILE:HG21	1.75	0.67
42:BG:153:ARG:HB3	42:BG:153:ARG:NH1	2.09	0.67
39:BD:129:ASN:O	39:BD:193:VAL:HG12	1.93	0.67
40:BE:77:ILE:HG22	40:BE:78:LEU:H	1.59	0.67
54:BV:58:VAL:CG2	54:BV:98:GLU:HG2	2.24	0.67
1:CA:603:U:H2'	1:CA:604:G:H8	1.59	0.67
38:DC:75:LEU:H	38:DC:112:ALA:HB3	1.57	0.67
19:AS:32:LYS:O	19:AS:33:THR:HB	1.94	0.67
7:CG:9:VAL:HG22	7:CG:94:ARG:NH1	2.08	0.67
1:AA:750:G:N3	15:AO:23:GLY:HA3	2.09	0.67
32:D6:18:ARG:NH1	32:D6:18:ARG:HG2	2.06	0.67
34:D8:15:LYS:HD2	34:D8:16:ILE:N	2.10	0.67
1:AA:1053:G:H4'	1:AA:1054:C:C5'	2.18	0.67
43:BH:66:GLY:HA2	43:BH:69:ARG:HG2	1.77	0.67
57:DY:44:ILE:HD12	57:DY:44:ILE:N	2.08	0.67
43:DH:41:MET:O	43:DH:42:ARG:HB3	1.94	0.67
25:AZ:7:ARG:CG	25:AZ:7:ARG:NH1	2.52	0.67
41:BF:132:VAL:HG13	41:BF:133:ASN:HD22	1.59	0.67
36:BA:581:C:H2'	36:BA:582:G:C8	2.29	0.67
36:BA:1006:C:C2	36:BA:1138:G:N2	2.62	0.67
41:BF:180:GLY:N	41:BF:205:ARG:HH22	1.92	0.67
4:CD:30:LYS:C	4:CD:32:ALA:N	2.45	0.67
42:BG:9:ARG:O	42:BG:13:GLU:HG2	1.94	0.67
34:B8:33:ASN:CG	34:B8:34:TRP:N	2.46	0.67
3:CC:206:GLU:O	3:CC:207:VAL:O	2.13	0.67
56:DX:28:PHE:CD1	56:DX:28:PHE:N	2.61	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DZ:17:ALA:HA	58:DZ:20:ARG:CD	2.25	0.67
40:DE:101:ARG:CB	40:DE:201:THR:HG21	2.25	0.67
43:DH:96:ALA:HB3	43:DH:128:PRO:O	1.93	0.67
26:B0:62:LEU:H	26:B0:62:LEU:HD23	1.59	0.67
36:DA:2078:C:H2'	36:DA:2079:U:C6	2.30	0.67
36:BA:1499:C:H5'	36:BA:1499:C:C6	2.28	0.67
50:BR:24:GLN:HB2	50:BR:44:LEU:HD21	1.76	0.67
51:DS:95:HIS:CG	51:DS:96:GLY:H	2.12	0.67
1:CA:184:G:H4'	1:CA:224:C:H4'	1.75	0.67
11:CK:57:THR:HG23	11:CK:60:ALA:H	1.58	0.67
24:AY:43:G:H5'	24:AY:44:G:OP2	1.95	0.67
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.29	0.67
36:DA:1187:G:H5''	54:DV:81:TYR:CE1	2.29	0.67
36:DA:1813:G:H1'	39:DD:50:THR:OG1	1.93	0.67
43:DH:106:THR:HG22	43:DH:112:PRO:HB3	1.76	0.67
8:CH:30:ARG:HH11	8:CH:30:ARG:HB3	1.60	0.67
29:D3:31:LEU:O	29:D3:32:GLN:HB2	1.93	0.67
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.29	0.67
50:DR:59:ASP:O	50:DR:60:LEU:HB3	1.93	0.67
1:AA:1108:G:H5'	3:AC:176:HIS:CD2	2.28	0.67
2:AB:111:ARG:NH1	2:AB:111:ARG:HG2	2.09	0.67
57:BY:43:ASN:HB2	57:BY:64:GLU:HA	1.77	0.67
36:BA:2477:C:C5'	36:BA:2477:C:H6	2.00	0.67
54:BV:47:VAL:O	54:BV:47:VAL:HG23	1.94	0.67
36:BA:833:U:H5''	48:BP:48:PRO:HB2	1.76	0.67
51:BS:61:ASN:O	51:BS:65:VAL:HG23	1.95	0.67
2:CB:8:LYS:HZ3	2:CB:217:ARG:HH12	1.42	0.67
36:BA:2807:G:H1	36:BA:2893:G:H1	1.43	0.67
36:DA:2657:A:H2'	36:DA:2658:C:H5'	1.76	0.67
36:BA:1810:A:H2'	36:BA:1811:G:O4'	1.94	0.67
4:CD:96:LEU:HG	4:CD:139:ARG:NH2	2.10	0.67
8:CH:82:HIS:CD2	8:CH:138:TRP:NE1	2.62	0.67
25:CZ:29:ALA:O	25:CZ:33:TYR:HD2	1.77	0.67
52:DT:30:VAL:HG12	52:DT:44:ASP:CG	2.15	0.67
43:BH:16:SER:CB	43:BH:27:LYS:HB2	2.18	0.67
12:CL:41:ARG:CG	12:CL:42:THR:H	2.06	0.67
36:BA:673:C:H6	36:BA:673:C:C5'	2.07	0.67
36:BA:761:A:O5'	36:BA:761:A:C8	2.47	0.67
46:DN:30:ILE:CG2	46:DN:120:LEU:HD21	2.24	0.67
50:DR:74:LYS:NZ	50:DR:77:ARG:HH21	1.91	0.67
50:DR:94:TYR:CD1	50:DR:94:TYR:N	2.60	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:189:G:H2'	1:CA:189(A):C:H6	1.58	0.67
36:BA:2092:U:H5	36:BA:2226:C:OP2	1.77	0.67
25:CZ:259:ALA:HB1	25:CZ:260:PRO:CD	2.24	0.67
15:CO:17:ARG:HG3	15:CO:17:ARG:HH11	1.58	0.67
1:AA:861:G:O2'	1:AA:862:C:H5'	1.94	0.67
36:DA:2406:U:N3	48:DP:72:PRO:HB2	2.08	0.67
34:D8:13:ARG:HA	48:DP:63:PRO:HA	1.76	0.67
2:CB:71:VAL:HG13	2:CB:93:VAL:HG13	1.75	0.67
42:DG:120:LEU:HD22	42:DG:133:LEU:HD22	1.77	0.67
52:BT:96:ARG:CZ	52:BT:96:ARG:HB2	2.25	0.67
36:BA:1301:A:H4'	36:BA:1302:A:OP1	1.94	0.67
13:AM:40:ASN:HD21	13:AM:42:ALA:HB3	1.58	0.67
36:BA:2645:G:C3'	36:BA:2646:C:H5'	2.23	0.67
10:AJ:5:ARG:HG2	10:AJ:73:ASP:OD1	1.95	0.67
36:BA:637:A:OP2	48:BP:115:LEU:HB2	1.95	0.67
30:B4:25:TYR:HB2	42:BG:101:ILE:HD13	1.75	0.67
11:AK:57:THR:HG23	11:AK:60:ALA:H	1.60	0.67
4:AD:31:CYS:O	4:AD:32:ALA:HB3	1.94	0.67
39:DD:24:ILE:O	39:DD:24:ILE:HG12	1.93	0.67
42:BG:77:ILE:N	42:BG:77:ILE:HD13	2.10	0.67
36:DA:1101:U:H2'	36:DA:1102:C:H6	1.60	0.67
8:CH:55:GLY:O	8:CH:56:LYS:HD2	1.93	0.67
4:AD:23:GLY:HA3	4:AD:112:VAL:HG22	1.77	0.67
42:DG:31:VAL:HG13	42:DG:31:VAL:O	1.94	0.67
36:BA:2523:G:H2'	36:BA:2524:G:H5''	1.77	0.67
25:CZ:263:ARG:HH11	25:CZ:263:ARG:HG3	1.59	0.67
43:DH:167:GLU:HB3	43:DH:168:PRO:HD2	1.77	0.67
3:AC:131:ARG:HH11	3:AC:166:GLU:HG3	1.59	0.67
37:BB:60:C:O2'	37:BB:61:G:H5'	1.94	0.67
36:DA:2591:C:H2'	36:DA:2592:G:C8	2.30	0.67
3:CC:30:ARG:HG3	14:CN:37:PHE:O	1.94	0.67
13:AM:90:LEU:O	13:AM:94:ARG:HD3	1.94	0.67
25:CZ:265:THR:HG23	25:CZ:291:ARG:O	1.94	0.67
39:BD:23:GLU:C	39:BD:25:THR:H	1.97	0.67
38:BC:119:VAL:HG23	38:BC:123:VAL:HG11	1.77	0.67
36:BA:2476:A:H2'	36:BA:2477:C:H5'	1.76	0.67
36:DA:997:G:O2'	36:DA:998:C:H5'	1.94	0.67
41:DF:119:ARG:HH11	41:DF:119:ARG:HG2	1.60	0.67
9:AI:53:VAL:N	9:AI:95:LYS:HZ2	1.90	0.67
43:DH:153:LYS:N	43:DH:153:LYS:HD3	2.10	0.67
36:DA:2773:C:H5''	40:DE:164:ARG:HG2	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BF:178:PRO:HG2	41:BF:179:GLU:OE1	1.95	0.67
12:AL:110:VAL:HG23	12:AL:120:TYR:HB3	1.76	0.67
48:BP:23:PRO:O	48:BP:33:ARG:HD2	1.93	0.67
40:DE:111:ARG:HD2	40:DE:160:TYR:CD2	2.30	0.67
3:CC:118:GLN:O	3:CC:122:GLU:HG3	1.94	0.67
29:B3:15:TYR:HB3	29:B3:19:GLN:HE21	1.60	0.67
41:DF:37:VAL:HG12	41:DF:41:LEU:HD12	1.76	0.67
13:CM:3:ARG:NE	13:CM:7:VAL:HG13	2.10	0.67
36:DA:761:A:C8	36:DA:761:A:O5'	2.48	0.67
36:DA:363(E):U:H2'	36:DA:363(F):A:C1'	2.25	0.67
51:BS:42:ASP:O	51:BS:43:GLU:HB3	1.93	0.67
36:BA:2023:G:H4'	36:BA:2617:C:O3'	1.95	0.67
40:BE:117:MET:CE	40:BE:124:GLY:HA3	2.25	0.67
25:CZ:298:VAL:HG13	25:CZ:302:GLN:OE1	1.95	0.67
1:AA:731:G:OP1	1:AA:766:A:H1'	1.95	0.67
35:B9:17:ILE:HG21	35:B9:19:ARG:HH21	1.59	0.67
41:BF:185:ASP:HA	41:BF:188:ARG:HG2	1.75	0.67
36:DA:709:U:H2'	36:DA:710:G:C8	2.30	0.67
41:BF:139:PHE:HB2	41:BF:166:ALA:HB1	1.76	0.67
36:DA:1198:U:H2'	36:DA:1199:U:C6	2.30	0.67
2:CB:107:THR:O	2:CB:110:GLN:HG3	1.94	0.67
16:AP:25:ARG:HG3	16:AP:25:ARG:HH11	1.58	0.67
51:DS:66:ALA:O	51:DS:69:VAL:HG12	1.93	0.67
54:DV:2:PHE:HB3	54:DV:42:GLY:CA	2.24	0.67
40:DE:30:PRO:O	40:DE:32:PRO:HD3	1.94	0.67
32:B6:5:VAL:N	32:B6:9:LEU:N	2.43	0.67
52:BT:89:VAL:CG1	52:BT:91:ARG:HG3	2.17	0.67
25:AZ:397:ALA:HB1	61:AZ:502:KIR:O27	1.95	0.67
39:BD:27:THR:HG23	39:BD:27:THR:O	1.94	0.67
36:DA:1790:C:H5''	36:DA:1791:A:OP1	1.95	0.67
36:DA:1348:G:C2'	36:DA:1349:A:H5''	2.25	0.67
49:BQ:24:GLY:O	49:BQ:26:TYR:N	2.27	0.67
39:BD:44:ASN:HB2	39:BD:48:ARG:O	1.95	0.67
10:CJ:57:LYS:HE2	10:CJ:60:ARG:NH2	2.02	0.67
43:DH:123:PHE:HA	43:DH:133:VAL:HG22	1.77	0.67
3:AC:5:ILE:HD13	3:AC:5:ILE:N	2.09	0.67
43:DH:153:LYS:H	43:DH:153:LYS:HD3	1.58	0.67
48:BP:24:GLY:HA3	48:BP:33:ARG:HH12	1.60	0.67
3:CC:179:ARG:CD	3:CC:207:VAL:HA	2.25	0.67
39:DD:134:ARG:HD3	39:DD:188:GLU:OE2	1.95	0.67
13:CM:57:ARG:O	13:CM:61:GLU:HB2	1.95	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BE:36:ARG:HH21	40:BE:88:GLY:HA2	1.59	0.67
36:DA:2840:C:H2'	36:DA:2841:C:H6	1.60	0.67
36:DA:1279:G:H4'	50:DR:31:HIS:CD2	2.28	0.67
25:AZ:210:ILE:O	25:AZ:210:ILE:HG23	1.95	0.67
3:AC:112:SER:HB3	3:AC:115:LEU:HD12	1.75	0.67
54:BV:69:LYS:HB2	54:BV:88:ARG:HD3	1.76	0.67
22:CW:57:G:H2'	22:CW:58:A:O4'	1.94	0.67
13:CM:120:LYS:N	13:CM:120:LYS:HE3	2.09	0.67
1:AA:57:G:H2'	1:AA:58:C:H6	1.60	0.67
31:B5:20:ARG:O	31:B5:23:HIS:HB2	1.95	0.67
1:CA:1296:C:H4'	1:CA:1302:U:C5	2.29	0.67
22:AV:39:U:H2'	22:AV:40:C:H6	1.58	0.67
17:CQ:5:VAL:HG22	17:CQ:60:ILE:HG13	1.77	0.67
42:BG:165:THR:HB	42:BG:167:GLU:OE1	1.95	0.67
22:AV:63:G:H2'	22:AV:64:A:H8	1.58	0.67
16:AP:43:LYS:O	16:AP:45:THR:HG22	1.94	0.67
22:CV:51:U:H2'	22:CV:52:G:H8	1.59	0.67
38:DC:3:HIS:HB3	38:DC:7:TYR:HD2	1.58	0.67
47:BO:9:GLU:HG3	47:BO:10:VAL:N	2.08	0.67
25:CZ:67:HIS:CA	25:CZ:79:HIS:O	2.32	0.67
32:B6:9:LEU:HD12	32:B6:26:ASN:HB2	1.77	0.67
32:B6:11:LEU:HD21	32:B6:51:GLU:CG	2.25	0.67
52:DT:70:VAL:HG12	52:DT:71:GLY:N	2.09	0.67
32:D6:15:GLU:OE2	32:D6:41:PRO:HB2	1.95	0.67
36:BA:310:A:P	57:BY:18:GLY:HA2	2.35	0.67
54:BV:40:LEU:HD22	54:BV:46:VAL:HA	1.77	0.67
13:CM:9:ILE:HG22	13:CM:11:ARG:HB2	1.77	0.67
1:AA:375:U:C2	1:AA:376:G:C8	2.83	0.67
12:CL:89:ARG:HE	12:CL:91:LYS:HZ2	1.42	0.67
36:DA:259:G:H21	36:DA:621:A:H8	1.42	0.67
1:CA:1125:U:H3	10:CJ:5:ARG:NH2	1.93	0.67
10:CJ:3:LYS:HZ3	10:CJ:77:PRO:HD2	1.60	0.67
16:CP:26:ARG:NH1	16:CP:26:ARG:HG2	2.07	0.67
18:CR:53:ARG:HD2	18:CR:59:SER:O	1.95	0.67
18:CR:69:THR:O	18:CR:72:ARG:HB2	1.95	0.67
36:DA:2092:U:H5	36:DA:2226:C:OP2	1.78	0.67
42:BG:16:ARG:NE	42:BG:31:VAL:HG11	2.10	0.67
46:DN:126:PRO:O	46:DN:127:ASP:HB2	1.95	0.67
1:AA:737:A:H2'	1:AA:738:C:C6	2.30	0.67
36:BA:2641:G:P	46:BN:74:ARG:HE	2.17	0.67
1:CA:1161:C:H2'	1:CA:1162:C:H6	1.59	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:142:MET:SD	3:CC:148:GLY:HA2	2.34	0.67
36:DA:1701:A:H5'	36:DA:1702:G:OP2	1.95	0.67
37:BB:35:U:H2'	37:BB:36:C:C6	2.30	0.67
38:BC:30:LYS:HE2	38:BC:180:PHE:O	1.94	0.67
26:B0:7:LEU:HD21	49:BQ:81:VAL:CG2	2.25	0.67
56:DX:65:ARG:HB2	56:DX:70:LEU:HD23	1.75	0.67
36:BA:303:U:H2'	36:BA:304:G:C8	2.30	0.67
1:CA:763:G:H2'	1:CA:764:C:H6	1.60	0.67
36:BA:510:C:O2'	36:BA:511:U:H5'	1.95	0.67
4:CD:98:GLU:HA	4:CD:103:ASN:ND2	2.09	0.66
25:CZ:176:LEU:O	25:CZ:180:GLU:HG3	1.95	0.66
36:DA:1188:U:O2'	36:DA:1189:A:H5'	1.94	0.66
52:BT:118:ARG:HA	52:BT:121:ILE:HB	1.76	0.66
19:CS:10:PHE:CZ	19:CS:70:LYS:HE2	2.29	0.66
1:AA:973:G:O4'	10:AJ:55:LYS:HE2	1.94	0.66
49:DQ:21:THR:CG2	49:DQ:101:ARG:HD2	2.25	0.66
25:CZ:277:LEU:HD13	25:CZ:278:GLN:H	1.60	0.66
36:BA:330:A:O2'	36:BA:331:A:H8	1.77	0.66
52:DT:58:ASN:ND2	52:DT:58:ASN:N	2.27	0.66
13:AM:5:ALA:HB2	13:AM:66:LEU:HD22	1.78	0.66
36:DA:197:A:H5'	36:DA:197:A:C8	2.30	0.66
48:DP:146:VAL:HG22	48:DP:147:LEU:N	2.04	0.66
47:BO:64:ARG:NH2	47:BO:100:GLY:HA3	2.09	0.66
4:AD:100:ARG:O	4:AD:103:ASN:HB3	1.95	0.66
6:CF:63:TYR:N	6:CF:63:TYR:HD1	1.92	0.66
54:DV:19:LYS:HG2	54:DV:94:LEU:HB2	1.77	0.66
52:DT:16:ARG:HH11	52:DT:16:ARG:HG3	1.60	0.66
47:DO:31:LYS:HD3	47:DO:32:TYR:CE1	2.31	0.66
39:DD:131:LEU:N	39:DD:131:LEU:HD12	2.09	0.66
36:BA:1268:A:H2'	36:BA:1269:A:O4'	1.95	0.66
40:DE:117:MET:CE	40:DE:124:GLY:HA3	2.25	0.66
13:CM:118:ALA:HB1	22:CV:28:G:O3'	1.95	0.66
1:CA:1526:G:H2'	1:CA:1527:C:H6	1.60	0.66
54:DV:69:LYS:HB2	54:DV:88:ARG:HD3	1.75	0.66
43:BH:106:THR:HG22	43:BH:112:PRO:HB3	1.77	0.66
22:AV:21:A:C2'	22:AV:22:G:H5''	2.25	0.66
49:BQ:109:VAL:HG12	49:BQ:110:THR:H	1.60	0.66
36:DA:1709:U:H2'	36:DA:1710:C:C6	2.30	0.66
1:CA:22:G:H2'	1:CA:23:C:C6	2.30	0.66
36:DA:1810:A:H2'	36:DA:1811:G:O4'	1.95	0.66
58:BZ:95:PRO:HA	58:BZ:130:PRO:HD3	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BC:181:PRO:HG2	38:BC:184:LYS:HG2	1.77	0.66
43:DH:37:VAL:HG11	43:DH:68:THR:HG21	1.77	0.66
50:DR:62:ALA:O	50:DR:66:VAL:HG23	1.94	0.66
32:B6:5:VAL:HG12	32:B6:5:VAL:O	1.94	0.66
57:BY:67:LEU:HD23	57:BY:68:HIS:O	1.94	0.66
52:BT:106:SER:C	52:BT:107:ASP:OD1	2.33	0.66
52:BT:82:LEU:CD1	52:BT:82:LEU:H	2.08	0.66
41:BF:7:TYR:HB3	41:BF:16:GLY:O	1.95	0.66
34:B8:59:LYS:CE	48:BP:50:ARG:HB3	2.25	0.66
9:CI:91:ASP:C	9:CI:93:ARG:H	1.99	0.66
58:DZ:151:HIS:HB3	58:DZ:170:THR:HA	1.77	0.66
51:DS:61:ASN:O	51:DS:65:VAL:HG23	1.95	0.66
41:BF:206:ILE:HG22	41:BF:207:GLY:N	2.09	0.66
7:CG:111:ARG:HB3	7:CG:113:GLU:OE2	1.94	0.66
4:AD:61:LYS:HE2	4:AD:62:GLN:HE21	1.60	0.66
36:BA:1540:U:H3'	36:BA:1541:G:H3'	1.76	0.66
29:B3:44:ARG:O	29:B3:47:VAL:HB	1.95	0.66
10:CJ:31:GLY:HA3	10:CJ:78:ASN:ND2	2.11	0.66
57:DY:50:ARG:HG3	57:DY:56:PRO:HA	1.76	0.66
36:DA:2087:G:O2'	36:DA:2088:G:H5'	1.95	0.66
6:CF:97:PHE:HD2	18:CR:31:LEU:HD21	1.60	0.66
29:D3:19:GLN:O	29:D3:22:ALA:HB3	1.95	0.66
25:CZ:231:ILE:O	25:CZ:232:THR:C	2.34	0.66
41:BF:164:ARG:HD3	41:BF:175:THR:OG1	1.95	0.66
32:B6:19:ARG:HD2	32:B6:20:ASN:H	1.58	0.66
28:B2:29:LYS:O	28:B2:33:MET:N	2.27	0.66
31:D5:44:THR:CG2	50:DR:101:ALA:HB2	2.25	0.66
36:DA:1858:G:H2'	36:DA:1883:G:H22	1.59	0.66
56:DX:8:ILE:N	56:DX:8:ILE:HD12	2.10	0.66
36:BA:1210:A:H5''	36:BA:1212:G:O4'	1.95	0.66
1:CA:963:G:H21	10:CJ:55:LYS:HD3	1.60	0.66
9:AI:20:ARG:O	9:AI:60:ASP:HB2	1.95	0.66
31:B5:36:CYS:SG	31:B5:48:GLU:O	2.54	0.66
36:BA:2645:G:H3'	36:BA:2646:C:C5'	2.21	0.66
19:CS:45:VAL:HA	19:CS:62:ILE:CG1	2.24	0.66
36:BA:465:G:H2'	36:BA:466:A:C8	2.29	0.66
4:AD:79:PHE:HA	4:AD:93:PHE:CD2	2.30	0.66
43:BH:94:TYR:HE2	43:BH:160:LYS:HB3	1.58	0.66
58:BZ:70:LEU:CD2	58:BZ:91:LEU:HD21	2.23	0.66
41:BF:36:VAL:O	41:BF:40:GLN:HG3	1.96	0.66
36:BA:297:C:H2'	36:BA:298:G:O4'	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:223:U:H2'	1:CA:224:C:C6	2.29	0.66
42:BG:16:ARG:NH1	42:BG:28:VAL:HG13	2.10	0.66
22:CV:50:U:O2'	22:CV:51:U:H5'	1.95	0.66
1:AA:722:A:H2'	1:AA:722:A:N3	2.09	0.66
9:AI:8:GLY:O	9:AI:15:ALA:N	2.27	0.66
3:AC:23:TYR:CD1	3:AC:23:TYR:C	2.68	0.66
38:DC:99:ILE:HG23	38:DC:102:LYS:HD2	1.77	0.66
39:BD:10:THR:HG23	39:BD:13:ARG:CB	2.25	0.66
47:BO:96:THR:O	47:BO:97:ARG:HG2	1.95	0.66
14:CN:22:THR:HB	14:CN:33:VAL:HG21	1.77	0.66
6:CF:22:GLU:O	6:CF:25:ILE:HG22	1.94	0.66
36:BA:644:A:C2	36:BA:2369:A:H1'	2.31	0.66
36:DA:2130:U:OP1	38:DC:5:LYS:HG2	1.95	0.66
25:AZ:93:ILE:HD11	25:AZ:389:ARG:NH1	2.09	0.66
49:DQ:134:ARG:NE	58:DZ:122:ARG:NH2	2.43	0.66
57:DY:42:VAL:HG21	57:DY:67:LEU:HD12	1.76	0.66
36:DA:197:A:H8	36:DA:197:A:H5'	1.61	0.66
36:BA:1721:G:H8	36:BA:1741:A:H62	1.42	0.66
12:CL:89:ARG:HG3	12:CL:91:LYS:HZ3	1.59	0.66
41:BF:157:VAL:HG22	41:BF:194:MET:HG2	1.77	0.66
32:D6:52:VAL:HG12	32:D6:53:LYS:N	2.09	0.66
42:BG:101:ILE:O	42:BG:104:GLU:HB3	1.95	0.66
24:AY:72:U:C2'	24:AY:73:G:H5''	2.26	0.66
12:CL:102:ARG:NH1	12:CL:110:VAL:HG22	2.11	0.66
36:BA:2579:C:C4'	40:BE:134:ILE:HG12	2.24	0.66
47:BO:64:ARG:HH21	47:BO:100:GLY:HA3	1.59	0.66
11:CK:33:THR:HB	11:CK:38:ASN:C	2.16	0.66
1:CA:585:G:H4'	12:CL:8:ASN:ND2	2.10	0.66
36:DA:1024:G:H3'	36:DA:1025:G:C5'	2.26	0.66
54:DV:19:LYS:HD2	54:DV:96:ILE:HD11	1.76	0.66
36:DA:1363:C:H2'	36:DA:1364:G:H8	1.60	0.66
36:BA:221:A:H1'	36:BA:233:A:H1'	1.77	0.66
6:AF:30:LEU:O	6:AF:35:ALA:HB3	1.94	0.66
36:BA:419:C:H2'	36:BA:420:C:C6	2.31	0.66
50:DR:37:THR:OG1	50:DR:40:LYS:HE2	1.95	0.66
36:DA:389:G:H1	48:DP:72:PRO:HD3	1.60	0.66
36:BA:302:C:H2'	36:BA:303:U:C6	2.30	0.66
11:AK:30:VAL:HG21	11:AK:65:ALA:HA	1.77	0.66
22:AV:17:C:H2'	22:AV:18:G:H5''	1.77	0.66
1:AA:778:G:H1'	11:AK:119:CYS:HB3	1.77	0.66
1:CA:1497:G:C2'	1:CA:1498:U:H5'	2.26	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2455:G:H2'	36:BA:2456:C:C6	2.31	0.66
32:B6:53:LYS:CG	32:B6:54:ILE:N	2.59	0.66
1:AA:1096:C:H5''	2:AB:137:ARG:NH2	2.11	0.66
52:DT:53:ARG:HH11	52:DT:53:ARG:CB	2.07	0.66
37:BB:73:A:C2'	37:BB:74:U:H5'	2.24	0.66
25:AZ:7:ARG:HG2	25:AZ:7:ARG:NH1	1.98	0.66
41:DF:2:LYS:O	41:DF:25:PRO:HG2	1.95	0.66
35:D9:9:ARG:HD2	35:D9:16:VAL:CG2	2.26	0.66
43:BH:127:GLU:HB2	43:BH:130:ARG:HB2	1.78	0.66
1:AA:250:A:H4'	1:AA:251:G:O5'	1.95	0.66
46:BN:73:THR:HG23	46:BN:82:LEU:HD11	1.77	0.66
22:AW:59:U:H5'	22:AW:60:U:H5	1.60	0.66
18:CR:56:THR:O	18:CR:58:LEU:N	2.28	0.66
52:BT:3:ARG:O	52:BT:5:ALA:N	2.29	0.66
1:AA:403:C:O2'	1:AA:404:U:H5'	1.95	0.66
22:CW:43:C:H2'	22:CW:44:G:H1'	1.78	0.66
36:DA:1311:G:N2	36:DA:1603:A:H62	1.94	0.66
36:BA:1614:A:N6	55:BW:92:ARG:O	2.29	0.66
13:AM:23:TYR:HE1	13:AM:70:LEU:HD22	1.61	0.66
16:AP:36:ILE:HD13	16:AP:36:ILE:H	1.61	0.66
56:BX:28:PHE:HD1	56:BX:28:PHE:H	1.44	0.66
25:AZ:114:PRO:O	25:AZ:117:ARG:HB2	1.96	0.66
39:BD:24:ILE:HD13	39:BD:25:THR:N	2.10	0.66
39:BD:30:GLU:HG3	39:BD:63:ARG:CZ	2.25	0.66
12:AL:42:THR:HG22	12:AL:54:LYS:HG3	1.77	0.66
36:DA:2312:U:H4'	42:DG:71:THR:HG21	1.77	0.66
1:AA:228:A:H5'	1:AA:228:A:C8	2.26	0.66
25:AZ:7:ARG:NH2	25:AZ:284:ASP:OD2	2.29	0.66
53:BU:14:HIS:NE2	53:BU:36:ARG:NH2	2.43	0.66
36:BA:2309:A:H2'	36:BA:2310:A:H5''	1.76	0.66
39:BD:65:ILE:HD13	39:BD:65:ILE:H	1.60	0.66
9:CI:19:LEU:HD11	9:CI:59:PHE:HD2	1.59	0.66
10:AJ:4:ILE:CG2	10:AJ:74:ILE:HD11	2.26	0.66
42:DG:51:ARG:HD3	42:DG:53:LEU:CD2	2.24	0.66
42:BG:91:ARG:HD2	42:BG:92:VAL:N	2.11	0.66
25:AZ:68:VAL:O	25:AZ:69:GLU:HG2	1.96	0.66
19:CS:31:ILE:HG23	19:CS:49:ILE:HG23	1.77	0.66
18:CR:59:SER:H	18:CR:62:GLU:HB2	1.60	0.66
2:CB:121:LEU:HG	2:CB:126:GLU:HB2	1.77	0.66
8:CH:6:ILE:HD12	8:CH:6:ILE:N	2.10	0.66
34:D8:14:VAL:CG2	34:D8:22:VAL:HG13	2.25	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:318:ALA:O	25:CZ:369:THR:HG23	1.96	0.66
47:BO:24:VAL:HG23	47:BO:24:VAL:O	1.94	0.66
27:B1:87:PRO:HA	27:B1:90:ILE:HB	1.76	0.66
36:DA:2700:C:O2'	36:DA:2701:C:H5'	1.96	0.66
29:B3:28:LEU:N	29:B3:28:LEU:HD23	2.10	0.66
40:BE:11:MET:HB2	40:BE:23:VAL:O	1.96	0.66
7:AG:59:LEU:O	7:AG:59:LEU:HD23	1.96	0.66
36:DA:1506:C:H2'	36:DA:1506:C:O2	1.94	0.66
36:DA:1683:C:H2'	36:DA:1684:C:H6	1.59	0.66
32:B6:12:GLU:HA	32:B6:23:THR:HB	1.77	0.66
53:BU:59:ARG:O	53:BU:61:TRP:N	2.28	0.66
1:CA:1065:U:C5	1:CA:1190:G:H1'	2.31	0.66
49:DQ:134:ARG:NE	58:DZ:122:ARG:HH21	1.93	0.66
36:DA:500:G:H22	36:DA:502:A:H3'	1.59	0.66
57:DY:74:PRO:O	57:DY:75:ILE:HB	1.96	0.66
5:AE:82:VAL:HG21	5:AE:138:ALA:HA	1.78	0.66
36:DA:996:A:H4'	53:DU:92:ARG:NE	2.10	0.66
41:BF:24:LEU:HB3	41:BF:25:PRO:CD	2.23	0.66
51:BS:12:PHE:CD1	51:BS:13:ARG:N	2.64	0.66
19:CS:16:LEU:H	19:CS:16:LEU:HD12	1.61	0.66
13:AM:81:LEU:HD12	13:AM:86:CYS:SG	2.34	0.66
48:BP:89:ALA:HB1	48:BP:121:LYS:CD	2.26	0.66
9:CI:17:VAL:CG1	9:CI:81:ILE:HD13	2.25	0.66
50:BR:22:ARG:HG2	50:BR:69:ASP:HB3	1.76	0.66
41:DF:53:THR:HG22	41:DF:56:GLU:CD	2.16	0.66
43:DH:54:ARG:HB2	43:DH:55:PRO:HD2	1.77	0.66
4:CD:121:VAL:HB	4:CD:136:PRO:HG3	1.78	0.66
36:DA:2485:G:O2'	36:DA:2486:G:H5'	1.96	0.66
22:CW:55:U:H2'	22:CW:56:C:H5''	1.77	0.66
36:BA:1068:G:H1'	36:BA:1069:A:OP2	1.95	0.66
7:CG:152:ALA:O	7:CG:155:ARG:HG3	1.96	0.66
37:BB:25:A:H2'	37:BB:25:A:N3	2.10	0.66
1:AA:143:A:H2	1:AA:220:G:H1	1.42	0.66
1:AA:503:C:H2'	1:AA:504:C:H6	1.61	0.66
38:DC:78:ALA:HA	38:DC:116:THR:N	2.04	0.66
25:CZ:231:ILE:HG12	25:CZ:237:VAL:HG21	1.77	0.66
25:CZ:80:VAL:HG21	25:CZ:98:GLN:OE1	1.96	0.66
32:B6:17:LYS:CE	32:B6:17:LYS:HA	2.25	0.66
28:B2:62:THR:HG21	36:BA:76:C:O2'	1.96	0.66
52:BT:28:VAL:HG21	52:BT:47:GLY:CA	2.25	0.66
49:BQ:137:TYR:CE1	58:BZ:81:ARG:NH2	2.64	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:85:ARG:HD2	3:AC:85:ARG:N	2.11	0.66
35:D9:4:ARG:O	35:D9:36:GLN:HA	1.96	0.66
43:DH:124:GLU:HB3	43:DH:126:PRO:HD3	1.76	0.66
36:BA:271(L):U:C5'	36:BA:271(M):G:H5'	2.22	0.66
4:CD:15:GLU:O	4:CD:17:VAL:HG23	1.96	0.66
36:DA:2811:G:OP1	40:DE:60:ASN:HB2	1.96	0.66
36:DA:2801(A):A:C4'	36:DA:2802:G:H5'	2.25	0.66
36:BA:1902:C:O2'	39:BD:244:ARG:HB2	1.96	0.66
50:BR:28:LEU:HD12	50:BR:114:VAL:HG23	1.78	0.66
36:DA:266:G:C2'	36:DA:267:C:H5''	2.25	0.66
1:AA:369:C:OP2	1:AA:388:G:N2	2.28	0.66
43:BH:94:TYR:HD1	43:BH:107:VAL:HA	1.61	0.66
1:CA:719:C:O2	18:CR:50:ILE:HG12	1.96	0.66
30:B4:5:ILE:H	30:B4:5:ILE:HD13	1.61	0.66
3:AC:188:LEU:HD13	3:AC:195:VAL:CG1	2.25	0.66
54:BV:35:LEU:HD23	54:BV:57:VAL:HG13	1.78	0.66
3:CC:20:SER:HB2	3:CC:40:ARG:HH22	1.60	0.66
36:DA:1040:C:H2'	36:DA:1041:G:C8	2.30	0.66
49:BQ:110:THR:OG1	49:BQ:112:GLU:HG2	1.95	0.66
1:CA:1497:G:H2'	1:CA:1498:U:H5'	1.78	0.66
36:DA:1991:U:H2'	36:DA:1992:G:H5''	1.76	0.66
8:AH:98:LYS:HG3	8:AH:99:GLU:N	2.10	0.66
48:DP:16:ARG:O	48:DP:16:ARG:HD3	1.96	0.66
36:DA:1190:G:H5'	48:DP:35:HIS:N	2.11	0.66
52:DT:89:VAL:HG12	52:DT:91:ARG:CG	2.16	0.66
32:D6:45:LYS:HD2	32:D6:45:LYS:N	2.10	0.66
28:B2:32:LEU:CD1	28:B2:57:ILE:HD12	2.25	0.66
57:DY:13:VAL:CG2	57:DY:72:VAL:HB	2.26	0.66
36:DA:2190:G:C2	36:DA:2191:G:H1'	2.30	0.66
36:DA:997:G:OP1	53:DU:93:LYS:HD3	1.96	0.66
40:BE:111:ARG:HG2	50:BR:2:ARG:NH2	2.11	0.66
50:BR:55:ALA:HA	50:BR:80:PHE:CE1	2.31	0.66
17:CQ:59:ILE:HG22	17:CQ:71:PHE:CD2	2.30	0.66
12:CL:18:VAL:HG23	12:CL:19:ARG:N	2.09	0.66
40:BE:29:GLY:HA3	40:BE:51:PHE:HE1	1.60	0.66
1:AA:1316:G:N2	1:AA:1318:A:H3'	2.10	0.66
50:BR:111:LEU:H	50:BR:111:LEU:HD12	1.60	0.66
54:BV:19:LYS:HG3	54:BV:20:LEU:N	2.09	0.66
9:CI:48:GLU:N	9:CI:49:PRO:HD2	2.10	0.66
40:DE:116:VAL:HG21	40:DE:122:PHE:CD2	2.30	0.66
36:DA:2781:A:H5'	36:DA:2782:G:H5'	1.76	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1525:G:H2'	36:BA:1526:G:C8	2.29	0.66
36:BA:2843:G:H1	36:BA:2874:C:H42	1.44	0.66
16:CP:8:ARG:HB3	16:CP:28:ARG:NH1	2.11	0.66
22:CW:11:C:H2'	22:CW:12:U:H6	1.61	0.66
36:DA:2036:C:H6	36:DA:2036:C:H5'	1.60	0.66
4:AD:129:ASN:H	4:AD:129:ASN:HD22	1.43	0.66
36:BA:1144:G:H2'	36:BA:1145:C:C6	2.30	0.66
22:CW:35:A:H2'	22:CW:36:A:H8	1.61	0.66
1:AA:280:C:O2	17:AQ:38:ARG:HG3	1.96	0.66
25:CZ:166:ASP:HB2	25:CZ:167:GLU:OE2	1.96	0.66
22:AV:59:U:O2'	22:AV:60:U:H6	1.79	0.66
24:CY:70:C:H2'	24:CY:71:C:H6	1.59	0.66
1:CA:980:C:H5'	1:CA:981:U:C5	2.30	0.66
13:AM:6:GLY:O	13:AM:8:GLU:N	2.29	0.66
53:DU:65:ILE:HG13	53:DU:96:ALA:HB1	1.77	0.66
31:B5:4:HIS:CB	31:B5:5:PRO:CD	2.73	0.66
36:DA:654(R):C:H2'	36:DA:654(S):G:C8	2.30	0.66
36:BA:139:G:C6	36:BA:140:G:H2'	2.31	0.66
36:BA:2392:A:H2	36:BA:2424:C:H42	1.42	0.66
41:DF:157:VAL:HG22	41:DF:194:MET:HG2	1.77	0.66
25:AZ:277:LEU:CD1	25:AZ:279:GLU:H	2.08	0.66
43:BH:46:GLU:O	43:BH:47:GLU:HB2	1.95	0.66
19:CS:5:LEU:HG	19:CS:8:GLY:O	1.96	0.66
27:D1:6:GLU:O	27:D1:7:ILE:HG13	1.96	0.66
25:CZ:244:ARG:HH11	25:CZ:244:ARG:HB3	1.60	0.66
47:BO:31:LYS:HD3	47:BO:32:TYR:CE1	2.30	0.66
50:BR:24:GLN:NE2	50:BR:36:THR:HG21	2.11	0.66
36:DA:2745:C:H1'	43:DH:143:GLN:HG2	1.78	0.66
39:BD:146:GLU:OE1	39:BD:190:TYR:HB2	1.96	0.66
22:AW:35:A:H2'	22:AW:36:A:C8	2.31	0.66
46:BN:96:GLU:OE1	46:BN:96:GLU:N	2.26	0.66
38:BC:151:GLU:HA	38:BC:154:ARG:HH11	1.61	0.66
55:BW:50:VAL:HG22	55:BW:105:VAL:HG23	1.78	0.66
20:CT:30:LYS:HE3	20:CT:34:LYS:NZ	2.10	0.66
16:AP:26:ARG:HH11	16:AP:26:ARG:HG2	1.59	0.66
1:AA:961:U:O2'	1:AA:962:C:O5'	2.14	0.66
43:BH:13:LYS:HA	43:BH:13:LYS:HE2	1.76	0.66
4:AD:86:LYS:HA	4:AD:86:LYS:HE3	1.78	0.66
36:BA:1396:U:H2'	36:BA:1396:U:O2	1.94	0.66
18:AR:36:ASN:HD21	18:AR:39:VAL:CG2	2.09	0.66
36:DA:2389:G:H5''	36:DA:2390:U:H5'	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:D8:27:THR:HG22	48:DP:61:ARG:HA	1.77	0.65
58:BZ:115:GLY:CA	58:BZ:177:PRO:HD3	2.18	0.65
28:B2:29:LYS:HG3	56:BX:5:TYR:HB2	1.77	0.65
28:B2:4:SER:O	28:B2:7:ARG:HD3	1.96	0.65
39:DD:43:ARG:HB3	39:DD:54:ARG:HB2	1.77	0.65
36:DA:2309:A:C2'	36:DA:2310:A:H5''	2.25	0.65
47:BO:107:ARG:HH11	52:BT:36:GLU:HG3	1.61	0.65
52:BT:94:ALA:HB1	52:BT:99:LEU:HD23	1.78	0.65
39:BD:70:TRP:O	39:BD:73:VAL:HG23	1.95	0.65
1:AA:1281:U:H5'	1:AA:1282:C:H5	1.61	0.65
34:B8:32:LEU:HD13	36:BA:2392:A:OP1	1.96	0.65
4:AD:100:ARG:HG2	4:AD:102:ASP:OD1	1.95	0.65
39:DD:8:PRO:CB	39:DD:14:ARG:HB3	2.27	0.65
34:B8:23:VAL:CG1	34:B8:46:ARG:HD3	2.26	0.65
56:DX:29:TRP:CZ3	56:DX:78:LYS:HB3	2.32	0.65
43:DH:54:ARG:NH1	43:DH:62:LYS:HG3	2.10	0.65
2:CB:209:ARG:NH1	2:CB:239:VAL:HG21	2.10	0.65
28:D2:66:GLU:HA	28:D2:69:ARG:HD2	1.77	0.65
36:DA:1270:C:H5''	36:DA:1271:G:C5'	2.26	0.65
1:AA:961:U:HO2'	1:AA:962:C:H6	1.44	0.65
1:CA:411:A:O2'	1:CA:413:G:H5'	1.95	0.65
8:CH:29:SER:HB3	8:CH:32:LYS:HG3	1.78	0.65
36:DA:860:U:H5	36:DA:917:A:N7	1.93	0.65
18:CR:36:ASN:HD21	18:CR:39:VAL:CG2	2.09	0.65
36:DA:535:C:O2'	36:DA:536:A:H5'	1.97	0.65
36:DA:1351:C:H2'	36:DA:1352:U:C6	2.30	0.65
36:BA:2502:G:H5''	36:BA:2503:A:H5''	1.77	0.65
13:AM:120:LYS:O	13:AM:121:LYS:HB2	1.96	0.65
30:D4:42:PHE:O	30:D4:42:PHE:CG	2.48	0.65
51:DS:11:LYS:N	51:DS:11:LYS:HD2	2.11	0.65
1:CA:1342:C:H1'	9:CI:124:GLN:HE22	1.61	0.65
25:CZ:27:LEU:HD11	25:CZ:31:LEU:HD21	1.77	0.65
10:CJ:6:ILE:CD1	10:CJ:23:ILE:HG21	2.26	0.65
38:BC:132:GLY:N	38:BC:133:PRO:HD2	2.10	0.65
52:BT:48:ILE:O	52:BT:48:ILE:HD12	1.96	0.65
28:D2:8:LYS:HG2	28:D2:11:GLU:OE2	1.97	0.65
58:BZ:28:MET:O	58:BZ:34:ASN:HA	1.95	0.65
10:CJ:55:LYS:N	10:CJ:55:LYS:HE3	2.11	0.65
13:CM:22:ILE:HD12	13:CM:25:ILE:HD12	1.77	0.65
36:BA:271(L):U:H5''	36:BA:271(M):G:C5'	2.20	0.65
43:BH:89:ILE:CD1	43:BH:96:ALA:HB2	2.26	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:117:ARG:O	25:CZ:121:LEU:HD23	1.96	0.65
36:BA:654(P):C:H2'	36:BA:654(Q):C:O4'	1.95	0.65
11:CK:59:TYR:CZ	11:CK:63:LEU:HD11	2.30	0.65
41:DF:192:LEU:CD2	41:DF:194:MET:HG3	2.27	0.65
43:BH:91:GLY:HA3	43:BH:94:TYR:HD2	1.61	0.65
58:DZ:37:VAL:CG2	58:DZ:38:TYR:N	2.58	0.65
22:CW:7:A:H2'	22:CW:49:C:C6	2.29	0.65
1:CA:736:C:H2'	1:CA:737:A:C8	2.32	0.65
20:AT:84:LEU:C	20:AT:86:ARG:H	2.00	0.65
1:AA:260:G:H2'	1:AA:261:U:C6	2.32	0.65
36:BA:2012:G:H4'	55:BW:96:ILE:HD11	1.77	0.65
49:BQ:68:ILE:HG23	49:BQ:103:MET:HA	1.76	0.65
36:DA:2567:G:H2'	36:DA:2568:C:C6	2.31	0.65
40:BE:179:GLU:O	40:BE:180:ASN:HB2	1.95	0.65
36:DA:2853:C:H2'	36:DA:2854:G:C8	2.31	0.65
36:DA:676:A:H8	36:DA:2069:G:H21	1.44	0.65
1:CA:1415:G:O2'	1:CA:1416:G:H5'	1.96	0.65
36:BA:2464:C:HO2'	36:BA:2465:C:H6	1.44	0.65
32:B6:32:ASN:O	32:B6:33:LYS:HB2	1.94	0.65
47:DO:63:VAL:HB	47:DO:102:VAL:HG12	1.78	0.65
36:BA:2590:A:H2'	36:BA:2591:C:H6	1.60	0.65
1:AA:1054:C:H6	1:AA:1196:U:N3	1.93	0.65
39:BD:34:VAL:O	39:BD:36:PRO:HD2	1.95	0.65
25:CZ:17:ILE:HD13	25:CZ:102:ALA:HB1	1.77	0.65
52:BT:85:LYS:NZ	52:BT:85:LYS:CB	2.58	0.65
43:DH:85:LYS:HZ1	43:DH:87:LEU:N	1.93	0.65
48:DP:46:LYS:HG2	48:DP:52:GLU:OE2	1.95	0.65
42:BG:91:ARG:C	42:BG:91:ARG:HD2	2.16	0.65
36:BA:1539:G:C2'	36:BA:1540:U:H5'	2.25	0.65
25:AZ:63:ILE:HG12	25:AZ:64:ASN:ND2	2.10	0.65
36:BA:2673:G:H5'	36:BA:2673:G:H8	1.62	0.65
1:AA:408:A:OP1	4:AD:113:SER:OG	2.14	0.65
43:BH:149:ARG:HA	43:BH:162:ILE:CD1	2.27	0.65
4:AD:162:LEU:HD13	4:AD:162:LEU:O	1.95	0.65
1:AA:57:G:H2'	1:AA:58:C:C6	2.31	0.65
37:DB:75:G:H21	58:DZ:85:HIS:CE1	2.15	0.65
4:CD:105:VAL:HG21	4:CD:126:ILE:HG12	1.77	0.65
52:BT:16:ARG:HG3	52:BT:16:ARG:HH11	1.60	0.65
36:DA:1184:G:O2'	36:DA:1185:C:H5'	1.96	0.65
46:DN:129:PRO:O	46:DN:130:HIS:HB3	1.96	0.65
36:BA:1305:C:O2'	36:BA:1306:C:H5'	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:90:LEU:HD23	57:BY:90:LEU:H	1.60	0.65
40:BE:1:MET:HG3	40:BE:83:ASP:HB3	1.77	0.65
25:CZ:231:ILE:HD13	25:CZ:237:VAL:CG2	2.27	0.65
31:D5:36:CYS:SG	31:D5:48:GLU:O	2.54	0.65
25:AZ:133:VAL:CG1	25:AZ:134:PHE:H	2.07	0.65
41:BF:7:TYR:OH	41:BF:10:PRO:HB3	1.96	0.65
36:DA:654(P):C:H2'	36:DA:654(Q):C:O4'	1.95	0.65
9:CI:40:LEU:C	9:CI:42:ARG:H	2.00	0.65
36:BA:654(R):C:H2'	36:BA:654(S):G:C8	2.32	0.65
4:AD:65:ARG:HD2	4:AD:72:GLU:HA	1.78	0.65
48:BP:59:LEU:HA	48:BP:61:ARG:CZ	2.26	0.65
36:DA:1144:G:H2'	36:DA:1145:C:H6	1.62	0.65
40:DE:111:ARG:HB2	40:DE:160:TYR:O	1.95	0.65
27:B1:76:ARG:NH1	27:B1:95:LEU:HD13	2.12	0.65
25:AZ:244:ARG:O	25:AZ:245:GLY:O	2.15	0.65
1:CA:737:A:OP1	6:CF:92:LYS:HB2	1.96	0.65
36:BA:286:C:H2'	36:BA:287:C:C6	2.31	0.65
36:BA:1498:C:C2'	36:BA:1499:C:H5''	2.27	0.65
50:BR:24:GLN:HB2	50:BR:44:LEU:CD2	2.26	0.65
37:BB:114:C:H2'	37:BB:115:G:H8	1.60	0.65
40:DE:116:VAL:O	40:DE:117:MET:CB	2.44	0.65
4:CD:121:VAL:O	4:CD:134:ASP:CB	2.45	0.65
46:BN:96:GLU:H	46:BN:96:GLU:CD	2.00	0.65
36:DA:1434:A:H61	36:DA:1558:A:H62	1.44	0.65
5:CE:61:TYR:O	5:CE:64:ARG:HB3	1.96	0.65
5:CE:64:ARG:HB2	5:CE:64:ARG:CZ	2.26	0.65
36:DA:774:A:H2	36:DA:787:U:HO2'	1.45	0.65
11:AK:37:GLY:C	11:AK:38:ASN:HD22	1.99	0.65
39:BD:153:ALA:O	39:BD:154:LYS:HG2	1.95	0.65
26:B0:43:THR:O	26:B0:43:THR:HG23	1.97	0.65
24:AY:27:C:H2'	24:AY:28:C:H6	1.62	0.65
26:D0:64:ASP:O	26:D0:84:LEU:HG	1.97	0.65
36:DA:1217:C:H2'	36:DA:1218:C:H6	1.62	0.65
25:CZ:235:GLY:CA	25:CZ:289:LEU:HD11	2.27	0.65
52:DT:41:ARG:HG2	52:DT:41:ARG:HH11	1.61	0.65
32:B6:53:LYS:HD3	32:B6:54:ILE:H	1.61	0.65
28:B2:38:GLN:OE1	28:B2:44:LEU:HD13	1.97	0.65
39:DD:35:LYS:HB3	39:DD:36:PRO:HD2	1.79	0.65
58:BZ:28:MET:HE2	58:BZ:37:VAL:HG11	1.79	0.65
36:BA:1485:G:H1'	36:BA:1505:C:N4	2.10	0.65
54:DV:35:LEU:O	54:DV:37:VAL:N	2.28	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DR:87:TYR:O	50:DR:89:ASP:N	2.30	0.65
36:DA:1049:C:H2'	36:DA:1050:A:C8	2.32	0.65
48:BP:30:THR:CG2	48:BP:31:ALA:H	2.08	0.65
25:CZ:345:ARG:HH12	25:CZ:384:LEU:HD21	1.60	0.65
40:DE:52:LEU:HD23	40:DE:75:VAL:HB	1.78	0.65
36:DA:547:A:H2'	36:DA:548:A:C8	2.31	0.65
36:BA:2133:G:H2'	36:BA:2157:G:N2	2.10	0.65
49:DQ:32:TYR:O	49:DQ:105:GLU:HB2	1.96	0.65
30:D4:14:ILE:N	30:D4:14:ILE:HD12	2.12	0.65
36:BA:875:G:H2'	36:BA:876:C:C6	2.31	0.65
12:CL:124:LYS:HD2	12:CL:125:PRO:HD2	1.79	0.65
41:BF:40:GLN:NE2	41:BF:182:ASN:HB2	2.11	0.65
43:BH:146:ALA:O	43:BH:149:ARG:HB3	1.96	0.65
41:BF:42:ALA:C	41:BF:44:ARG:H	1.99	0.65
39:BD:132:PRO:HG3	39:BD:190:TYR:CE1	2.31	0.65
41:DF:167:ALA:HB1	41:DF:173:VAL:HG11	1.79	0.65
25:CZ:20:VAL:HB	25:CZ:115:GLN:HE22	1.61	0.65
48:BP:110:TYR:CD1	48:BP:111:ARG:HG3	2.32	0.65
25:AZ:210:ILE:O	25:AZ:210:ILE:CG2	2.44	0.65
4:CD:78:LEU:HD21	4:CD:96:LEU:HB3	1.78	0.65
15:CO:8:LYS:O	15:CO:12:ILE:HG13	1.95	0.65
36:DA:1845:G:O2'	36:DA:1846:G:H5'	1.97	0.65
36:BA:1494:A:C2'	36:BA:1495:A:H5''	2.25	0.65
1:CA:1250:A:H4'	9:CI:68:GLY:N	2.11	0.65
1:AA:1441:G:H5''	1:AA:1442:G:H5'	1.77	0.65
1:AA:424:G:H2'	1:AA:425:G:H8	1.62	0.65
8:CH:13:ILE:HD12	8:CH:61:VAL:HG11	1.79	0.65
32:B6:15:GLU:OE1	32:B6:18:ARG:CG	2.45	0.65
34:D8:15:LYS:HD3	48:DP:65:ARG:NH2	2.11	0.65
53:BU:95:LEU:HD11	54:BV:11:GLN:O	1.96	0.65
52:BT:100:TYR:O	52:BT:103:ARG:HG3	1.97	0.65
36:DA:2185:C:C2'	36:DA:2186:G:H5'	2.27	0.65
3:AC:79:ARG:HH11	3:AC:79:ARG:HB3	1.62	0.65
31:B5:36:CYS:HG	31:B5:49:CYS:HG	1.39	0.65
48:DP:52:GLU:HA	48:DP:52:GLU:OE1	1.96	0.65
36:DA:2286:A:H4'	36:DA:2287:A:O4'	1.96	0.65
1:CA:544:G:OP1	4:CD:59:ARG:NH2	2.30	0.65
58:DZ:165:VAL:HG12	58:DZ:166:SER:N	2.11	0.65
36:DA:2631:G:N2	40:DE:61:ARG:NH2	2.45	0.65
36:DA:1005:C:H2'	36:DA:1006:C:C6	2.30	0.65
4:AD:173:TRP:HB3	4:AD:187:ARG:NH2	2.11	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DP:98:GLU:H	48:DP:101:VAL:HG13	1.62	0.65
36:BA:654(C):G:C2'	36:BA:654(D):G:H5'	2.26	0.65
40:BE:27:LEU:CD2	52:BT:1:MET:H3	2.09	0.65
51:BS:89:ARG:HB3	51:BS:92:TYR:HB3	1.79	0.65
22:AW:44:G:H2'	22:AW:44:G:N3	2.11	0.65
36:BA:1499:C:H6	36:BA:1499:C:H5'	1.61	0.65
41:BF:37:VAL:HG12	41:BF:41:LEU:HD12	1.78	0.65
50:DR:111:LEU:HD12	50:DR:111:LEU:N	2.11	0.65
36:BA:547:A:H2'	36:BA:548:A:H8	1.61	0.65
36:DA:1652:A:O2'	36:DA:1653:G:H5'	1.96	0.65
36:DA:736:C:H2'	36:DA:737:C:H6	1.60	0.65
25:AZ:378:VAL:HG23	25:AZ:380:LEU:HD21	1.78	0.65
16:CP:67:THR:H	16:CP:70:ALA:HB3	1.60	0.65
39:BD:181:GLU:HG3	39:BD:272:ALA:O	1.97	0.65
1:CA:291:C:O2'	1:CA:292:G:H5'	1.96	0.65
10:AJ:46:ARG:HH11	10:AJ:46:ARG:HG2	1.62	0.65
36:DA:59:U:H3	36:DA:68:G:H1	1.45	0.65
38:BC:80:GLY:H	38:BC:83:ILE:HD11	1.62	0.65
50:DR:78:LYS:O	50:DR:83:ILE:HG12	1.96	0.65
53:BU:82:GLY:C	53:BU:84:LYS:H	2.00	0.65
34:D8:30:ARG:NE	34:D8:30:ARG:HA	2.11	0.65
52:DT:38:ASN:O	52:DT:40:THR:N	2.27	0.65
32:B6:15:GLU:CG	32:B6:18:ARG:NH1	2.56	0.65
36:DA:1485:G:H1'	36:DA:1505:C:N4	2.12	0.65
28:B2:7:ARG:HA	28:B2:11:GLU:CG	2.27	0.65
2:AB:134:GLU:C	2:AB:136:VAL:H	1.98	0.65
12:AL:92:ASP:O	12:AL:94:PRO:HD3	1.97	0.65
42:DG:46:ALA:HB2	42:DG:88:ILE:CG1	2.26	0.65
56:DX:35:THR:CG2	56:DX:37:THR:HB	2.25	0.65
54:DV:35:LEU:C	54:DV:37:VAL:H	1.99	0.65
22:CW:59:U:H2'	22:CW:60:U:H5'	1.78	0.65
25:CZ:215:ARG:CB	25:CZ:282:ALA:CB	2.74	0.65
14:CN:51:GLY:O	14:CN:53:LEU:N	2.29	0.65
53:DU:6:THR:O	53:DU:9:VAL:HG23	1.97	0.65
36:BA:672:C:H2'	36:BA:673:C:C5'	2.22	0.65
1:AA:1125:U:O4	10:AJ:5:ARG:NE	2.30	0.65
48:BP:106:LEU:HD21	48:BP:112:LEU:HB2	1.79	0.65
7:CG:118:VAL:HG23	7:CG:119:ARG:N	2.12	0.65
36:BA:2394:C:OP1	48:BP:62:LEU:HB2	1.96	0.65
46:BN:18:ALA:HB3	46:BN:26:LEU:HD22	1.78	0.65
43:BH:41:MET:O	43:BH:42:ARG:HB3	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BE:171:GLU:HB3	40:BE:185:LYS:HG2	1.78	0.65
1:AA:1320:C:H5''	19:AS:70:LYS:HG3	1.78	0.65
36:BA:2651:C:O2'	36:BA:2652:C:H5'	1.96	0.65
49:DQ:6:ARG:HH11	49:DQ:6:ARG:HB3	1.61	0.65
1:CA:1432:G:OP1	52:DT:107:ASP:HB2	1.96	0.65
6:AF:18:GLN:HA	6:AF:21:LEU:HB2	1.78	0.65
36:BA:428:A:H3'	36:BA:429:A:C8	2.32	0.65
36:DA:784:A:C5	39:DD:229:VAL:HG11	2.32	0.65
2:CB:193:ASP:OD1	2:CB:193:ASP:O	2.15	0.65
5:CE:63:ARG:HA	5:CE:66:MET:HE3	1.79	0.65
37:DB:96:U:H2'	37:DB:97:G:H8	1.62	0.65
36:DA:2360:A:O2'	36:DA:2361:A:O4'	2.13	0.65
36:DA:751:A:H5'	55:DW:90:ARG:HA	1.79	0.65
40:BE:112:GLY:O	40:BE:159:HIS:HA	1.97	0.65
36:DA:2741:A:H2'	36:DA:2742:C:O4'	1.97	0.65
2:CB:178:ARG:O	8:CH:71:GLY:HA2	1.97	0.65
39:DD:94:LEU:HD13	39:DD:96:HIS:CE1	2.32	0.65
41:DF:81:PRO:O	41:DF:83:PHE:N	2.29	0.65
1:CA:939:G:H5''	7:CG:102:ARG:NH2	2.11	0.65
27:D1:18:ILE:HD11	27:D1:20:ARG:NH2	2.12	0.65
36:DA:2030:A:H4'	36:DA:2031:A:H8	1.62	0.65
36:DA:1523:U:H2'	36:DA:1524:G:H8	1.62	0.65
36:BA:1982:C:H5'	36:BA:1983:C:OP2	1.95	0.65
38:DC:78:ALA:H	38:DC:115:ALA:CB	2.09	0.65
22:CW:75:C:H5''	27:D1:30:VAL:HG11	1.78	0.65
34:D8:33:ASN:HD21	36:DA:2419:U:H5''	1.62	0.65
32:B6:45:LYS:HG2	36:BA:2371:G:H4'	1.79	0.65
25:AZ:203:LEU:O	25:AZ:207:ASP:OD2	2.15	0.65
3:AC:73:PRO:O	3:AC:76:VAL:HG22	1.97	0.65
13:CM:25:ILE:HG13	13:CM:66:LEU:HD23	1.77	0.65
1:CA:1117:G:H5'	1:CA:1117:G:C8	2.30	0.65
4:CD:25:ARG:HA	4:CD:28:SER:OG	1.97	0.65
41:DF:135:LYS:HG2	41:DF:138:GLU:HG3	1.78	0.65
5:CE:76:ILE:HD13	5:CE:78:HIS:O	1.97	0.65
36:BA:2393:A:H5'	48:BP:62:LEU:HB3	1.79	0.65
19:CS:31:ILE:CG2	19:CS:49:ILE:HG23	2.26	0.65
27:D1:67:ILE:CG1	27:D1:68:PRO:HD3	2.27	0.65
41:DF:29:ASN:HD22	41:DF:32:LEU:HB2	1.60	0.65
6:CF:63:TYR:N	6:CF:63:TYR:CD1	2.64	0.65
25:AZ:5:PHE:C	25:AZ:5:PHE:CD1	2.69	0.65
36:DA:672:C:H2'	36:DA:673:C:H5'	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2840:C:H2'	36:DA:2841:C:C6	2.32	0.65
36:DA:1339:G:N2	36:DA:1603:A:H1'	2.11	0.65
46:DN:9:VAL:HG12	46:DN:10:GLU:N	2.11	0.65
36:DA:519:U:H2'	36:DA:520:G:C8	2.31	0.65
38:DC:74:VAL:HG23	38:DC:157:LYS:HE2	1.79	0.65
5:CE:63:ARG:O	5:CE:64:ARG:HB2	1.97	0.65
54:DV:88:ARG:O	54:DV:90:PRO:HD3	1.96	0.65
49:BQ:109:VAL:HG12	49:BQ:110:THR:N	2.11	0.65
1:CA:411:A:C8	1:CA:413:G:H8	2.15	0.65
36:DA:1352:U:O2'	36:DA:1353:A:H5'	1.97	0.65
1:CA:1250:A:H4'	9:CI:68:GLY:H	1.61	0.65
15:AO:17:ARG:HH11	15:AO:17:ARG:HG3	1.62	0.65
1:AA:1452:C:H4'	1:AA:1456:G:N2	2.12	0.65
36:DA:1331:A:C2'	36:DA:1332:G:H5''	2.27	0.65
4:CD:133:VAL:HG11	4:CD:138:TYR:HD2	1.62	0.65
26:B0:16:SER:HB2	36:BA:2262:U:C5	2.32	0.65
20:AT:36:LEU:HD13	20:AT:36:LEU:O	1.96	0.65
1:CA:407:G:H2'	1:CA:408:A:C8	2.32	0.65
26:D0:62:LEU:O	26:D0:63:VAL:HG13	1.96	0.65
1:CA:503:C:H2'	1:CA:504:C:H6	1.62	0.65
10:CJ:68:HIS:HB3	10:CJ:70:ARG:HH12	1.61	0.65
38:BC:119:VAL:O	38:BC:123:VAL:HG12	1.97	0.65
3:CC:3:ASN:O	3:CC:4:LYS:HB2	1.97	0.65
13:AM:11:ARG:HG2	13:AM:12:ASN:N	2.12	0.65
9:AI:53:VAL:HG13	9:AI:95:LYS:CD	2.26	0.65
46:BN:25:ARG:O	46:BN:28:THR:HG22	1.97	0.65
36:DA:271(L):U:C5'	36:DA:271(M):G:H5'	2.24	0.65
2:CB:15:VAL:HG23	2:CB:15:VAL:O	1.95	0.65
48:BP:16:ARG:CB	48:BP:16:ARG:HH11	2.10	0.65
48:BP:57:THR:OG1	48:BP:59:LEU:HD22	1.96	0.65
27:D1:86:SER:O	27:D1:90:ILE:HG12	1.97	0.65
36:DA:581:C:H2'	36:DA:582:G:H8	1.59	0.65
58:DZ:23:LYS:HD3	58:DZ:38:TYR:CZ	2.32	0.65
54:DV:18:LEU:HD23	54:DV:19:LYS:N	2.12	0.65
36:BA:2677:G:O2'	36:BA:2678:C:H5'	1.97	0.65
23:CX:16:A:H5'	23:CX:17:U:OP2	1.97	0.65
25:CZ:356:PRO:HD3	25:CZ:370:PHE:HB3	1.79	0.65
1:CA:1431:C:H2'	1:CA:1432:G:O4'	1.97	0.65
49:BQ:70:PRO:CA	49:BQ:95:ALA:HB2	2.27	0.65
6:AF:91:VAL:HG11	18:AR:72:ARG:HH12	1.60	0.65
25:CZ:74:LYS:HG2	25:CZ:75:ARG:HG3	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:127:THR:HG23	4:CD:131:ARG:O	1.96	0.65
26:B0:43:THR:H	36:BA:2331:G:H4'	1.60	0.65
32:B6:38:LYS:HD3	32:B6:48:VAL:HG12	1.78	0.65
16:CP:44:THR:O	16:CP:45:THR:HB	1.95	0.65
21:AU:9:ARG:HH12	21:AU:23:PRO:HD2	1.61	0.65
36:BA:2020:A:O2'	36:BA:2021:C:H5'	1.97	0.65
1:CA:179:A:H2'	1:CA:180:U:C6	2.32	0.65
26:B0:33:ALA:O	36:BA:2353:G:H1'	1.97	0.65
36:DA:1359:A:H2'	36:DA:1360:A:H5'	1.79	0.65
36:BA:1040:C:H2'	36:BA:1041:G:H8	1.60	0.65
36:BA:1510:G:O2'	36:BA:1511:C:H5'	1.97	0.65
33:D7:9:ARG:NE	36:DA:1310:G:OP2	2.30	0.65
5:AE:68:GLU:O	5:AE:68:GLU:HG3	1.96	0.65
32:D6:11:LEU:O	32:D6:12:GLU:HG3	1.97	0.65
58:BZ:151:HIS:O	58:BZ:152:ALA:O	2.15	0.65
15:CO:79:ARG:O	15:CO:82:ILE:HG22	1.97	0.65
25:CZ:254:GLU:O	25:CZ:256:VAL:HG23	1.97	0.65
53:DU:13:LYS:CD	53:DU:13:LYS:N	2.59	0.65
49:DQ:141:GLN:O	58:DZ:53:ILE:HB	1.95	0.65
36:DA:2632:A:H2	40:DE:61:ARG:HD3	1.61	0.65
36:DA:2645:G:H3'	36:DA:2646:C:C5'	2.25	0.65
17:CQ:70:ARG:HH11	17:CQ:70:ARG:HG2	1.61	0.65
36:BA:1053:C:H41	36:BA:1107:G:N2	1.95	0.65
4:AD:20:TYR:HA	4:AD:26:CYS:HB3	1.78	0.65
43:BH:91:GLY:HA3	43:BH:94:TYR:CD2	2.31	0.65
9:CI:95:LYS:HG3	9:CI:96:LEU:HD13	1.79	0.65
49:DQ:52:VAL:HA	49:DQ:55:VAL:CG1	2.27	0.65
46:DN:96:GLU:OE1	46:DN:96:GLU:N	2.30	0.65
27:B1:44:PRO:HG2	27:B1:46:LEU:HG	1.77	0.65
24:AY:45:U:H3'	24:AY:46:7MG:C5'	2.25	0.65
34:B8:41:ILE:HD12	36:BA:2419:U:OP1	1.96	0.65
46:BN:108:PRO:O	46:BN:109:LYS:HG3	1.97	0.65
36:BA:1602:U:H3'	36:BA:1603:A:C5'	2.27	0.65
10:CJ:8:LEU:N	10:CJ:8:LEU:HD12	2.12	0.65
8:CH:10:LEU:HD22	8:CH:83:ILE:HD11	1.79	0.65
1:CA:1161:C:H2'	1:CA:1162:C:C6	2.32	0.65
26:D0:50:ASN:HD22	26:D0:63:VAL:HG21	1.62	0.65
3:CC:94:LEU:O	3:CC:94:LEU:HD12	1.97	0.65
36:DA:1570:A:H2'	36:DA:1571:A:C8	2.32	0.65
36:BA:1389:G:H2'	36:BA:1390:U:H6	1.62	0.65
25:AZ:356:PRO:O	25:AZ:359:VAL:HG23	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2103:C:H2'	36:BA:2186:G:N2	2.12	0.64
34:D8:8:LYS:HD3	34:D8:11:LYS:HD3	1.79	0.64
48:DP:47:ASP:HB3	48:DP:48:PRO:CA	2.27	0.64
32:B6:18:ARG:HG2	32:B6:18:ARG:NH1	2.10	0.64
1:CA:393:A:O2'	1:CA:394:G:H5'	1.95	0.64
42:DG:34:LEU:HD23	42:DG:34:LEU:N	2.11	0.64
52:BT:27:THR:O	52:BT:28:VAL:CB	2.36	0.64
49:BQ:27:VAL:HG11	49:BQ:134:ARG:HD2	1.78	0.64
36:BA:581:C:H2'	36:BA:582:G:H8	1.61	0.64
43:DH:85:LYS:CD	43:DH:133:VAL:H	2.11	0.64
13:CM:69:GLU:O	13:CM:70:LEU:HB2	1.97	0.64
13:CM:97:PRO:N	13:CM:110:ARG:HD3	2.12	0.64
1:CA:1347:G:H22	1:CA:1373:G:H2'	1.59	0.64
41:DF:84:VAL:C	41:DF:86:GLY:H	2.01	0.64
37:DB:22:U:H2'	37:DB:23:G:H8	1.62	0.64
41:DF:160:ASN:ND2	41:DF:162:LEU:HD13	2.13	0.64
36:BA:2133:G:O2'	36:BA:2158:A:N6	2.29	0.64
41:DF:33:LEU:O	41:DF:37:VAL:HG23	1.98	0.64
2:AB:8:LYS:NZ	2:AB:217:ARG:HH12	1.94	0.64
55:DW:10:VAL:HG21	55:DW:103:ILE:CG1	2.27	0.64
40:BE:35:GLN:HG2	40:BE:36:ARG:N	2.11	0.64
47:BO:31:LYS:C	47:BO:32:TYR:CD1	2.70	0.64
36:DA:1640:C:O2'	36:DA:1641:A:H5'	1.96	0.64
1:CA:1015:A:H2'	1:CA:1016:A:H8	1.59	0.64
57:DY:50:ARG:HD2	57:DY:56:PRO:HA	1.79	0.64
27:B1:4:VAL:HG23	27:B1:10:LYS:O	1.96	0.64
36:DA:1880:C:C3'	36:DA:1881:C:H5''	2.27	0.64
36:BA:547:A:H2'	36:BA:548:A:C8	2.32	0.64
36:BA:1336:A:H2'	36:BA:1337:G:H8	1.60	0.64
22:AV:61:C:O2	22:AV:61:C:H2'	1.95	0.64
40:BE:128:SER:OG	40:BE:129:HIS:N	2.31	0.64
36:DA:608:A:H2'	36:DA:609:A:C8	2.31	0.64
36:DA:438:G:H2'	36:DA:440:G:H8	1.62	0.64
52:BT:38:ASN:ND2	52:BT:38:ASN:O	2.30	0.64
41:BF:150:GLY:HA2	41:BF:172:TRP:CD2	2.32	0.64
22:AW:62:C:H2'	22:AW:63:G:C8	2.32	0.64
11:CK:43:SER:HA	11:CK:47:VAL:HG21	1.79	0.64
15:AO:31:LEU:N	15:AO:31:LEU:HD12	2.12	0.64
36:DA:1671:U:HO2'	36:DA:1673:U:H5	1.43	0.64
55:BW:68:ARG:O	55:BW:109:GLU:HA	1.97	0.64
40:DE:179:GLU:O	40:DE:180:ASN:HB2	1.96	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:17:GLY:O	11:AK:80:VAL:HA	1.96	0.64
36:DA:666:G:OP1	48:DP:47:ASP:O	2.15	0.64
52:DT:25:GLY:HA2	52:DT:92:GLY:CA	2.28	0.64
1:AA:973:G:H1'	10:AJ:55:LYS:HZ1	1.61	0.64
25:CZ:135:MET:HE2	25:CZ:172:ARG:HG2	1.79	0.64
43:DH:52:VAL:HG21	43:DH:69:ARG:HD2	1.79	0.64
13:AM:54:VAL:HG22	13:AM:57:ARG:HH12	1.62	0.64
5:AE:80:ILE:CD1	5:AE:91:LEU:HB2	2.27	0.64
36:BA:2111:C:O2'	36:BA:2118:U:H4'	1.97	0.64
48:BP:146:VAL:HG22	48:BP:147:LEU:N	2.09	0.64
37:DB:106:G:O2'	37:DB:107:G:H5'	1.96	0.64
50:DR:87:TYR:HD1	50:DR:90:ARG:HD2	1.62	0.64
10:AJ:34:VAL:CG2	10:AJ:74:ILE:HG22	2.24	0.64
36:BA:605:C:H5	36:BA:623:G:H1	1.45	0.64
48:BP:84:ASN:C	48:BP:86:LYS:H	1.99	0.64
19:CS:11:VAL:CG2	19:CS:16:LEU:HD11	2.28	0.64
14:CN:12:ARG:HB3	14:CN:14:PRO:HD2	1.78	0.64
22:AW:71:G:C2'	22:AW:72:C:H5'	2.26	0.64
56:DX:11:PRO:HA	56:DX:28:PHE:CB	2.27	0.64
19:AS:22:LEU:HD13	19:AS:22:LEU:O	1.97	0.64
46:DN:30:ILE:HG21	46:DN:120:LEU:HD21	1.78	0.64
1:AA:194:C:C2'	1:AA:195:A:H5''	2.26	0.64
1:AA:161:A:H2'	1:AA:162:A:C8	2.32	0.64
1:CA:1049:U:H2'	14:CN:2:ALA:N	2.12	0.64
1:CA:274:A:O2'	1:CA:275:G:C8	2.51	0.64
46:BN:3:THR:HG22	46:BN:5:VAL:HG23	1.77	0.64
53:DU:50:ARG:NH1	54:DV:72:VAL:HG12	2.11	0.64
36:BA:1570:A:H2'	36:BA:1571:A:C8	2.33	0.64
17:AQ:88:TYR:CE2	17:AQ:92:ARG:HD2	2.32	0.64
36:BA:1029:A:H5''	49:BQ:128:LYS:HE2	1.80	0.64
1:AA:436:C:H4'	4:AD:157:LEU:HD13	1.79	0.64
36:DA:944:G:H5'	36:DA:945:A:O5'	1.96	0.64
25:AZ:258:LEU:O	25:AZ:259:ALA:HB3	1.97	0.64
58:BZ:180:VAL:HG22	58:BZ:181:GLU:N	2.11	0.64
28:B2:31:GLU:HA	28:B2:34:GLU:CB	2.27	0.64
25:AZ:151:GLU:HG3	25:AZ:170:VAL:HG11	1.79	0.64
39:BD:30:GLU:HG3	39:BD:63:ARG:HH21	1.59	0.64
37:BB:105:A:H2'	37:BB:106:G:O4'	1.96	0.64
46:DN:12:ARG:NH2	46:DN:135:PRO:HG2	2.12	0.64
1:AA:1127:G:H1'	1:AA:1147:C:H42	1.63	0.64
42:DG:139:LEU:HA	42:DG:144:ILE:HD13	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:17:VAL:HG21	4:CD:63:LYS:NZ	2.12	0.64
39:BD:147:LEU:HD11	39:BD:183:ARG:NH1	2.12	0.64
1:CA:1348:U:H4'	9:CI:120:ARG:HD2	1.79	0.64
48:BP:62:LEU:CD2	48:BP:62:LEU:H	2.08	0.64
12:CL:27:LEU:C	12:CL:29:GLY:N	2.51	0.64
1:AA:356:A:C2	1:AA:368:U:O2	2.48	0.64
58:BZ:108:PRO:C	58:BZ:110:GLY:H	2.00	0.64
36:DA:1541:G:O3'	36:DA:1541:G:OP2	2.14	0.64
49:DQ:51:ARG:NH1	49:DQ:52:VAL:CG2	2.59	0.64
4:AD:68:TYR:CZ	4:AD:97:LEU:HD13	2.32	0.64
17:CQ:9:VAL:CG1	17:CQ:84:LEU:HD13	2.28	0.64
40:BE:81:ILE:O	40:BE:81:ILE:HG22	1.95	0.64
36:BA:128:C:H2'	36:BA:129:C:C6	2.32	0.64
36:DA:2807:G:C3'	36:DA:2808:U:H5''	2.27	0.64
36:BA:2573:C:OP1	36:BA:2574:G:H5''	1.96	0.64
36:BA:2773:C:H5''	40:BE:164:ARG:HG2	1.78	0.64
38:DC:163:PHE:HB2	38:DC:171:ILE:HD11	1.80	0.64
1:AA:882:C:O2'	1:AA:883:C:H5'	1.98	0.64
32:D6:17:LYS:HB2	32:D6:18:ARG:NH1	2.11	0.64
36:BA:1598:C:H5'	56:BX:36:LYS:CG	2.26	0.64
31:D5:41:PRO:HG2	31:D5:44:THR:CB	2.27	0.64
2:CB:69:LEU:HD13	2:CB:71:VAL:CG2	2.26	0.64
10:CJ:70:ARG:HH11	10:CJ:70:ARG:HG2	1.62	0.64
1:CA:367:U:H4'	25:CZ:291:ARG:NH1	2.13	0.64
39:DD:70:TRP:O	39:DD:73:VAL:HG23	1.97	0.64
36:DA:1050:A:C2'	36:DA:1051:G:H5'	2.24	0.64
1:AA:266:G:C5'	1:AA:267:C:H5	2.10	0.64
36:DA:1144:G:H2'	36:DA:1145:C:C6	2.33	0.64
36:BA:1826:G:H2'	36:BA:1827:C:C6	2.31	0.64
36:DA:1534:U:H2'	36:DA:1535:A:O4'	1.98	0.64
4:AD:100:ARG:HH21	4:AD:118:ARG:HH22	1.44	0.64
39:DD:183:ARG:HH11	39:DD:183:ARG:HG2	1.60	0.64
49:DQ:17:LEU:HD13	49:DQ:39:PRO:HB2	1.79	0.64
36:BA:784:A:N7	39:BD:229:VAL:HG11	2.11	0.64
4:AD:68:TYR:CE2	4:AD:97:LEU:HD22	2.32	0.64
36:DA:28:A:H61	36:DA:512:G:H1'	1.60	0.64
24:AY:6:C:H2'	24:AY:7:G:C8	2.32	0.64
22:AV:45:U:H2'	22:AV:45:U:OP2	1.96	0.64
12:CL:71:PRO:HG3	12:CL:99:HIS:HD2	1.62	0.64
53:DU:50:ARG:HH12	54:DV:72:VAL:HG12	1.63	0.64
8:AH:89:PRO:HA	8:AH:92:ARG:HH11	1.62	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:841:U:H3'	1:AA:848:C:O4'	1.98	0.64
36:BA:1762:A:O5'	36:BA:1762:A:H8	1.79	0.64
36:DA:201:C:C2'	36:DA:202:U:H5'	2.27	0.64
42:DG:172:LEU:O	42:DG:176:LEU:HB2	1.97	0.64
36:DA:1805:U:O2	39:DD:50:THR:HB	1.98	0.64
5:AE:20:GLN:NE2	5:AE:25:ARG:NH2	2.45	0.64
25:AZ:12:VAL:HG13	25:AZ:100:ASP:OD2	1.97	0.64
36:BA:1400:G:H2'	36:BA:1401:G:C8	2.33	0.64
27:B1:47:GLN:HA	27:B1:47:GLN:OE1	1.95	0.64
25:CZ:230:THR:HG23	25:CZ:295:ARG:HD2	1.80	0.64
52:DT:93:ARG:CG	52:DT:117:ASP:HB2	2.28	0.64
28:B2:18:PRO:HB3	28:B2:71:ASN:O	1.97	0.64
9:CI:9:ARG:CG	9:CI:14:VAL:HG13	2.27	0.64
38:BC:100:ILE:HG12	38:BC:127:LEU:HD12	1.78	0.64
39:DD:36:PRO:HA	39:DD:61:LEU:HD12	1.79	0.64
42:DG:125:PHE:HD1	42:DG:126:ASP:N	1.92	0.64
25:CZ:7:ARG:CG	25:CZ:7:ARG:HH11	2.08	0.64
57:BY:9:LYS:C	57:BY:28:LYS:HZ1	2.01	0.64
34:D8:18:ALA:HB2	36:DA:628:G:H5''	1.80	0.64
4:CD:13:ARG:HB3	4:CD:38:TYR:O	1.98	0.64
12:AL:110:VAL:CG2	12:AL:120:TYR:HB3	2.27	0.64
36:DA:1047:G:C2'	36:DA:1110:G:H21	2.07	0.64
43:BH:42:ARG:HG2	43:BH:43:VAL:H	1.61	0.64
24:AY:76:A:OP1	25:AZ:274:ARG:HD2	1.98	0.64
18:CR:53:ARG:HH11	18:CR:60:ALA:HA	1.62	0.64
2:AB:17:PHE:CB	2:AB:44:LEU:HD21	2.28	0.64
1:CA:1370:G:O3'	9:CI:12:GLU:HG3	1.98	0.64
25:CZ:97:ALA:HA	25:CZ:126:VAL:CG1	2.27	0.64
46:DN:3:THR:HG22	46:DN:4:TYR:N	2.13	0.64
51:DS:88:ASP:OD1	51:DS:89:ARG:N	2.27	0.64
10:AJ:11:PHE:CE1	10:AJ:67:THR:HG22	2.32	0.64
1:CA:35:G:H2'	1:CA:36:C:C6	2.33	0.64
4:AD:124:GLY:O	4:AD:126:ILE:N	2.31	0.64
36:BA:2377:A:H2'	36:BA:2378:A:C8	2.32	0.64
36:DA:371:A:H5'	36:DA:423:A:N3	2.13	0.64
20:CT:62:LEU:HA	20:CT:65:LYS:HG3	1.78	0.64
6:AF:22:GLU:O	6:AF:25:ILE:HG22	1.97	0.64
36:BA:590:A:H2'	36:BA:591:C:C6	2.33	0.64
55:BW:31:GLU:O	55:BW:35:ILE:HG12	1.97	0.64
1:AA:797:C:OP1	11:AK:124:LYS:HE3	1.97	0.64
55:BW:95:ILE:O	55:BW:95:ILE:HG13	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2736:G:O2'	36:BA:2737:G:H5'	1.98	0.64
53:BU:62:ILE:HG23	53:BU:76:TYR:CE2	2.32	0.64
1:CA:1306:A:P	21:CU:6:ARG:HH22	2.21	0.64
10:AJ:54:PHE:CZ	10:AJ:55:LYS:HD2	2.32	0.64
58:BZ:48:PHE:O	58:BZ:52:SER:N	2.28	0.64
36:BA:612:C:H2'	36:BA:613:G:C5'	2.27	0.64
36:BA:2723:C:H4'	50:BR:2:ARG:HE	1.63	0.64
4:AD:138:TYR:CD1	4:AD:139:ARG:N	2.65	0.64
48:BP:45:LEU:HD13	48:BP:46:LYS:N	2.09	0.64
48:BP:112:LEU:H	48:BP:128:HIS:HD2	1.44	0.64
48:BP:115:LEU:HA	48:BP:131:SER:OG	1.96	0.64
48:BP:144:GLU:N	48:BP:145:PRO:HD3	2.12	0.64
58:BZ:163:LEU:O	58:BZ:165:VAL:HG22	1.97	0.64
36:BA:1223:G:H5'	36:BA:1223:G:H8	1.62	0.64
1:AA:62:U:H2'	1:AA:63:C:H5'	1.80	0.64
13:CM:54:VAL:O	13:CM:58:GLU:HG2	1.97	0.64
26:D0:7:LEU:HD13	49:DQ:85:LYS:CG	2.27	0.64
24:CY:65:C:C5'	25:CZ:341:GLN:HG2	2.27	0.64
1:CA:189(J):G:O2'	1:CA:189(K):U:H5'	1.97	0.64
16:AP:20:VAL:HG21	16:AP:32:TYR:CG	2.33	0.64
1:AA:45:U:H2'	1:AA:46:G:H8	1.63	0.64
10:CJ:7:LYS:O	10:CJ:96:ILE:HA	1.97	0.64
36:DA:2514:U:H2'	36:DA:2515:C:C6	2.32	0.64
1:CA:666:G:O2'	1:CA:667:G:H5'	1.98	0.64
1:CA:22:G:H2'	1:CA:23:C:H6	1.61	0.64
46:BN:70:LYS:HD3	46:BN:87:LEU:HD23	1.80	0.64
22:AV:72:C:C3'	22:AV:73:A:H5''	2.27	0.64
22:AW:27:G:O2'	22:AW:28:G:H5'	1.98	0.64
36:BA:845:G:HO2'	36:BA:846:C:H5	1.44	0.64
27:B1:63:ALA:O	27:B1:67:ILE:HG13	1.96	0.64
7:AG:45:ASP:O	7:AG:49:ILE:HG12	1.98	0.64
8:AH:38:ILE:HD11	8:AH:118:VAL:O	1.98	0.64
36:BA:993:G:H4'	54:BV:70:ILE:HD12	1.78	0.64
8:CH:11:THR:HG22	8:CH:15:ASN:ND2	2.12	0.64
25:CZ:26:THR:HB	60:CZ:501:GDP:O2A	1.98	0.64
32:B6:5:VAL:HG11	36:BA:2283:C:H5'	1.78	0.64
28:B2:52:ASP:O	28:B2:56:GLN:N	2.31	0.64
1:CA:973:G:C1'	10:CJ:55:LYS:CE	2.75	0.64
34:B8:63:PRO:O	34:B8:64:TYR:O	2.15	0.64
53:DU:95:LEU:CD1	54:DV:11:GLN:HG3	2.28	0.64
50:BR:2:ARG:HD2	50:BR:3:HIS:N	2.11	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:80:ILE:HD11	5:CE:91:LEU:HD22	1.80	0.64
25:AZ:64:ASN:N	25:AZ:64:ASN:ND2	2.44	0.64
36:DA:1675:C:O2	40:DE:129:HIS:HA	1.97	0.64
40:BE:51:PHE:O	40:BE:74:PRO:CB	2.46	0.64
51:BS:38:GLN:O	51:BS:40:ILE:HG23	1.98	0.64
36:BA:1771:C:C1'	36:BA:1786:A:H8	2.10	0.64
1:CA:1004:A:H5''	1:CA:1025:U:C2	2.33	0.64
43:BH:54:ARG:HG2	43:BH:54:ARG:HH11	1.61	0.64
4:AD:150:GLU:CD	4:AD:151:LYS:N	2.50	0.64
8:CH:83:ILE:HG13	8:CH:137:VAL:HG22	1.79	0.64
13:CM:120:LYS:O	13:CM:121:LYS:HB2	1.97	0.64
49:BQ:1:MET:O	49:BQ:2:LEU:HB3	1.98	0.64
55:DW:69:LEU:HA	55:DW:108:GLY:O	1.96	0.64
43:DH:136:ILE:HD12	43:DH:136:ILE:H	1.62	0.64
36:DA:271(U):G:H2'	36:DA:271(V):G:H8	1.61	0.64
58:BZ:132:ASN:O	58:BZ:134:PRO:HD3	1.97	0.64
58:BZ:105:VAL:HG11	58:BZ:140:ASP:HA	1.80	0.64
1:AA:1498:U:H4'	1:AA:1519:A:C2	2.32	0.64
32:D6:16:CYS:HB2	32:D6:48:VAL:O	1.97	0.64
28:B2:49:LYS:O	28:B2:53:LEU:HB2	1.97	0.64
13:AM:6:GLY:C	13:AM:8:GLU:H	2.00	0.64
41:BF:126:VAL:HG21	41:BF:129:PHE:CZ	2.32	0.64
43:BH:85:LYS:CD	43:BH:133:VAL:H	2.11	0.64
9:CI:40:LEU:HD12	9:CI:74:ILE:HD11	1.80	0.64
44:DJ:80:UNK:O	44:DJ:81:UNK:C	2.46	0.64
34:B8:13:ARG:HA	48:BP:63:PRO:HA	1.80	0.64
34:B8:31:HIS:HE1	36:BA:2392:A:OP2	1.80	0.64
46:DN:23:LEU:HB3	46:DN:60:ILE:HG21	1.79	0.64
46:DN:58:ASP:O	46:DN:60:ILE:N	2.28	0.64
46:BN:73:THR:HG22	46:BN:82:LEU:HD11	1.78	0.64
58:DZ:10:ARG:CG	58:DZ:36:LYS:HG3	2.27	0.64
40:BE:107:THR:HA	40:BE:163:GLU:O	1.98	0.64
51:BS:89:ARG:CG	51:BS:92:TYR:HA	2.27	0.64
13:CM:39:ILE:HG22	13:CM:40:ASN:N	2.13	0.64
54:BV:61:VAL:HG22	54:BV:61:VAL:O	1.98	0.64
36:BA:2807:G:H2'	36:BA:2808:U:H5''	1.80	0.64
58:DZ:105:VAL:O	58:DZ:141:VAL:HG23	1.98	0.64
1:CA:936:C:H2'	1:CA:937:A:C8	2.32	0.64
36:DA:380:U:H2'	36:DA:381:G:C8	2.33	0.64
52:DT:129:ARG:CZ	52:DT:131:ALA:HB3	2.27	0.64
36:DA:2712(A):A:H5''	36:DA:2713:A:OP2	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2201:C:O2'	36:BA:2202:C:H5'	1.98	0.64
3:CC:23:TYR:CD1	3:CC:23:TYR:C	2.70	0.64
36:BA:852:G:H2'	36:BA:853:G:H8	1.63	0.64
20:CT:66:ALA:HB1	20:CT:71:THR:HG21	1.79	0.64
36:DA:813:U:H2'	36:DA:814:C:C6	2.33	0.64
48:DP:16:ARG:CZ	48:DP:18:ARG:HG2	2.27	0.64
53:BU:91:ASP:O	53:BU:95:LEU:HB2	1.98	0.64
1:CA:1316:G:N1	1:CA:1319:A:OP2	2.25	0.64
58:BZ:151:HIS:HA	58:BZ:171:ILE:HG12	1.78	0.64
23:AX:26:A:H5'	23:AX:27:A:C5	2.33	0.64
25:CZ:133:VAL:HG12	25:CZ:134:PHE:N	2.13	0.64
26:D0:36:ILE:HA	26:D0:60:PHE:HA	1.80	0.64
22:CW:39:U:H2'	22:CW:40:C:C5'	2.28	0.64
25:CZ:254:GLU:CG	25:CZ:307:PRO:HA	2.25	0.64
12:CL:91:LYS:HE2	12:CL:91:LYS:N	2.12	0.64
1:AA:1239:A:H62	1:AA:1299:A:H61	1.42	0.64
4:CD:28:SER:HB3	4:CD:29:PRO:CD	2.27	0.64
41:DF:7:TYR:HB3	41:DF:16:GLY:O	1.98	0.64
48:BP:84:ASN:HA	48:BP:116:GLY:CA	2.27	0.64
31:B5:42:PRO:HB2	36:BA:2815:C:O2'	1.98	0.64
36:BA:1534:U:H2'	36:BA:1535:A:O4'	1.98	0.64
42:BG:120:LEU:HD12	42:BG:179:PRO:O	1.98	0.64
52:DT:94:ALA:C	52:DT:96:ARG:H	2.00	0.64
36:BA:1243:G:H2'	36:BA:1244:G:O4'	1.98	0.64
36:DA:1779:U:C5	36:DA:1784:A:N7	2.65	0.64
4:AD:150:GLU:N	4:AD:150:GLU:OE1	2.31	0.64
27:D1:49:VAL:CG1	27:D1:60:PHE:HB2	2.28	0.64
36:DA:16:G:O2'	36:DA:17:G:H5'	1.98	0.64
1:AA:148:G:H2'	1:AA:149:A:H8	1.63	0.64
50:BR:87:TYR:O	50:BR:90:ARG:N	2.29	0.64
36:BA:1880:C:H3'	36:BA:1881:C:H5"	1.78	0.64
48:BP:90:ARG:O	48:BP:90:ARG:HD2	1.98	0.64
54:DV:34:GLU:O	54:DV:36:PRO:HD3	1.97	0.64
25:CZ:67:HIS:CD2	25:CZ:67:HIS:N	2.61	0.64
48:DP:64:LYS:O	48:DP:66:GLY:N	2.26	0.64
25:AZ:33:TYR:CE2	25:AZ:179:LEU:HD11	2.33	0.64
57:BY:26:LYS:HG2	57:BY:27:VAL:H	1.62	0.64
13:AM:15:VAL:HG12	13:AM:45:VAL:HG22	1.80	0.64
42:BG:42:GLY:HA2	42:BG:89:GLY:CA	2.26	0.64
8:AH:116:LYS:HD2	8:AH:129:VAL:CG1	2.25	0.64
48:DP:146:VAL:O	48:DP:148:LEU:HG	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:23:PRO:CD	48:BP:33:ARG:HE	2.10	0.64
5:CE:80:ILE:HD12	5:CE:91:LEU:HB2	1.78	0.64
5:CE:90:VAL:C	5:CE:91:LEU:HD12	2.19	0.64
40:DE:4:ILE:HG13	40:DE:31:CYS:SG	2.38	0.64
36:BA:1887:C:C2'	36:BA:1888:G:H5''	2.26	0.64
10:CJ:46:ARG:NH1	10:CJ:46:ARG:HG2	2.06	0.64
33:B7:5:TRP:CD1	33:B7:7:PRO:HD3	2.33	0.64
58:DZ:18:LEU:HB3	58:DZ:23:LYS:HB2	1.78	0.64
22:CW:7:A:H2'	22:CW:49:C:C5	2.33	0.64
40:BE:101:ARG:HD2	40:BE:169:ASN:O	1.97	0.64
46:BN:55:VAL:HG22	46:BN:126:PRO:HA	1.80	0.64
58:DZ:108:PRO:C	58:DZ:110:GLY:H	2.01	0.64
1:CA:1040:U:H2'	1:CA:1041:A:C8	2.33	0.64
26:D0:16:SER:HB2	36:DA:2262:U:C5	2.33	0.64
40:BE:30:PRO:O	40:BE:32:PRO:HD3	1.96	0.64
39:DD:58:HIS:O	39:DD:59:LYS:C	2.37	0.64
13:AM:118:ALA:HB1	22:AV:28:G:O3'	1.96	0.64
3:AC:113:ALA:HB3	3:AC:114:PRO:HD3	1.78	0.64
51:DS:40:ILE:HG13	51:DS:41:ASP:N	2.12	0.64
36:BA:325:G:O2'	36:BA:326:G:H5'	1.97	0.64
36:DA:1214:A:H2'	36:DA:1215:G:O4'	1.98	0.64
32:D6:11:LEU:HD13	32:D6:12:GLU:H	1.63	0.63
34:D8:4:MET:SD	34:D8:61:LEU:CD2	2.85	0.63
1:CA:1237:C:H2'	1:CA:1336:C:C5	2.33	0.63
56:BX:8:ILE:HD11	56:BX:42:ALA:O	1.97	0.63
1:AA:973:G:O4'	10:AJ:55:LYS:HG3	1.97	0.63
42:BG:72:ARG:HB3	42:BG:87:PRO:HD2	1.80	0.63
36:BA:1141:U:H4'	36:BA:1142(A):A:C8	2.33	0.63
36:BA:1142(A):A:H8	36:BA:1142(A):A:H5'	1.63	0.63
11:CK:21:ILE:HD13	11:CK:94:ALA:CB	2.27	0.63
42:BG:125:PHE:HB2	42:BG:166:ASP:HB3	1.79	0.63
36:BA:1071:G:H4'	36:BA:1089:G:OP2	1.99	0.63
42:BG:133:LEU:HD12	42:BG:133:LEU:O	1.98	0.63
27:B1:76:ARG:HH22	27:B1:95:LEU:CA	2.11	0.63
1:AA:368:U:O4	25:AZ:234:ARG:HD3	1.98	0.63
24:AY:76:A:O4'	25:AZ:237:VAL:HG11	1.98	0.63
13:AM:74:VAL:HA	13:AM:77:ASN:HD22	1.63	0.63
36:DA:2408:U:H3'	36:DA:2408:U:H6	1.61	0.63
58:DZ:4:ARG:HG2	58:DZ:58:VAL:HB	1.81	0.63
19:AS:44:MET:SD	19:AS:44:MET:N	2.70	0.63
52:DT:98:LYS:HB3	52:DT:100:TYR:CE1	2.34	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DH:12:PRO:HD2	43:DH:15:VAL:HG21	1.80	0.63
6:AF:55:ASP:O	6:AF:57:GLN:N	2.32	0.63
56:DX:64:LYS:HZ3	56:DX:73:ARG:NH2	1.96	0.63
6:CF:44:GLY:O	6:CF:60:PHE:N	2.31	0.63
6:AF:19:LEU:HD23	6:AF:19:LEU:O	1.98	0.63
40:BE:98:PRO:HD3	40:BE:175:VAL:CG1	2.28	0.63
36:BA:16:G:O2'	36:BA:17:G:H5'	1.98	0.63
1:AA:80:G:H22	1:AA:89:C:H3'	1.63	0.63
29:D3:28:LEU:N	29:D3:28:LEU:HD23	2.13	0.63
25:AZ:379:ALA:C	25:AZ:380:LEU:HD23	2.17	0.63
16:CP:43:LYS:O	16:CP:45:THR:HG22	1.97	0.63
36:BA:1040:C:H2'	36:BA:1041:G:C8	2.34	0.63
15:AO:27:VAL:HG12	15:AO:31:LEU:CD1	2.28	0.63
36:BA:244:A:H4'	48:BP:74:GLU:HB2	1.80	0.63
20:AT:99:LEU:O	20:AT:100:ILE:C	2.35	0.63
27:B1:23:LYS:HE2	27:B1:28:GLY:HA3	1.80	0.63
30:B4:12:ALA:CB	30:B4:29:PRO:HA	2.28	0.63
47:DO:80:ASP:OD2	52:DT:71:GLY:HA3	1.98	0.63
47:DO:104:ARG:NE	52:DT:33:LYS:HE3	2.12	0.63
36:DA:2416:C:H2'	36:DA:2417:C:C6	2.32	0.63
28:B2:10:LEU:HD11	28:B2:59:ARG:HG3	1.79	0.63
1:CA:367:U:C4'	25:CZ:291:ARG:HD2	2.28	0.63
39:BD:26:LYS:O	39:BD:27:THR:HB	1.97	0.63
38:BC:114:VAL:HG12	38:BC:144:THR:CA	2.27	0.63
49:DQ:134:ARG:HA	49:DQ:137:TYR:CD2	2.33	0.63
36:DA:2314:C:O2'	36:DA:2315:G:H5'	1.97	0.63
56:DX:35:THR:HG22	56:DX:38:GLU:H	1.63	0.63
36:BA:2539:C:O2'	36:BA:2540:C:H5'	1.98	0.63
34:B8:8:LYS:HE3	36:BA:245:G:O6	1.98	0.63
53:DU:65:ILE:HD12	53:DU:65:ILE:N	2.13	0.63
43:BH:89:ILE:HD11	43:BH:96:ALA:HB2	1.81	0.63
1:AA:1239:A:H62	1:AA:1299:A:H62	1.46	0.63
36:DA:1516:C:O2'	36:DA:1517:G:H5''	1.97	0.63
13:AM:92:HIS:CE1	13:AM:98:VAL:HG21	2.33	0.63
31:B5:45:VAL:O	31:B5:46:CYS:HB3	1.97	0.63
5:CE:35:GLY:HA2	5:CE:40:ARG:O	1.97	0.63
12:AL:126:LYS:NZ	12:AL:127:GLU:HB2	2.10	0.63
46:BN:40:PRO:HA	53:BU:67:ALA:HB3	1.79	0.63
57:DY:90:LEU:HD23	57:DY:90:LEU:N	2.12	0.63
36:DA:1658:C:OP1	40:DE:132:HIS:ND1	2.32	0.63
36:DA:330:A:C2	36:DA:1210:A:H2'	2.34	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:654(H):G:C3'	36:DA:654(I):C:H5'	2.28	0.63
42:DG:176:LEU:O	42:DG:176:LEU:HD23	1.98	0.63
6:CF:25:ILE:O	6:CF:25:ILE:HD13	1.98	0.63
1:CA:624:C:H4'	16:CP:11:SER:H	1.64	0.63
1:AA:666:G:H5'	1:AA:726:C:H1'	1.79	0.63
1:AA:458:C:H2'	1:AA:460:G:H8	1.63	0.63
43:BH:44:VAL:HG12	43:BH:45:VAL:H	1.62	0.63
36:BA:740:U:H2'	36:BA:741:G:C8	2.34	0.63
36:BA:203:C:H3'	36:BA:204:A:H5''	1.79	0.63
49:DQ:78:PRO:O	49:DQ:81:VAL:HG12	1.99	0.63
36:BA:1116:C:O2'	36:BA:1117:G:H5'	1.98	0.63
28:B2:41:ILE:HG13	28:B2:42:GLY:H	1.62	0.63
39:DD:77:ALA:HB2	39:DD:97:TYR:CE1	2.33	0.63
36:DA:130:C:H2'	36:DA:131:G:H5''	1.80	0.63
36:BA:332:A:H4'	36:BA:333:G:OP1	1.98	0.63
52:BT:32:TYR:N	52:BT:32:TYR:CD1	2.64	0.63
9:AI:89:ASN:O	9:AI:91:ASP:N	2.32	0.63
3:CC:70:VAL:O	3:CC:105:GLU:HA	1.99	0.63
37:BB:29:A:H2'	37:BB:30:C:C6	2.34	0.63
14:CN:12:ARG:C	14:CN:14:PRO:HD2	2.18	0.63
58:BZ:163:LEU:O	58:BZ:165:VAL:N	2.29	0.63
2:CB:80:ILE:HD12	2:CB:80:ILE:N	2.10	0.63
12:CL:28:LYS:C	12:CL:30:ALA:N	2.52	0.63
5:CE:33:VAL:HG21	5:CE:109:ILE:CG1	2.28	0.63
36:BA:2672:G:C2'	36:BA:2673:G:H5''	2.27	0.63
36:DA:2840:C:H5''	50:DR:53:HIS:CD2	2.33	0.63
1:AA:1316:G:N1	1:AA:1319:A:OP2	2.24	0.63
4:CD:74:GLN:O	4:CD:77:ASN:HB3	1.98	0.63
36:DA:674:G:H1'	41:DF:74:ARG:CD	2.28	0.63
38:BC:214:VAL:CG2	38:BC:224:ILE:HG21	2.28	0.63
24:CY:2:G:OP1	25:CZ:90:LYS:HB2	1.98	0.63
36:BA:2298:A:H2'	36:BA:2299:G:O4'	1.99	0.63
26:D0:19:LYS:HE2	36:DA:2262:U:P	2.38	0.63
25:CZ:103:ILE:CD1	25:CZ:206:ILE:HD11	2.28	0.63
25:CZ:209:TYR:O	25:CZ:211:PRO:HD3	1.97	0.63
16:CP:8:ARG:C	16:CP:9:PHE:HD1	2.02	0.63
1:CA:1509:C:O2'	1:CA:1510:U:H5'	1.99	0.63
38:DC:182:PRO:HD2	38:DC:183:GLU:OE2	1.98	0.63
25:AZ:14:VAL:O	25:AZ:79:HIS:HD2	1.82	0.63
36:BA:2659:G:H2'	36:BA:2660:A:H5''	1.81	0.63
18:CR:25:THR:O	18:CR:26:LEU:HG	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:304:U:H2'	1:CA:305:G:C8	2.33	0.63
37:DB:5:C:O2'	37:DB:6:C:H5'	1.97	0.63
36:BA:110:G:O2'	36:BA:111:A:H5'	1.98	0.63
36:BA:2130:U:OP1	38:BC:5:LYS:HG2	1.98	0.63
37:DB:3:C:H42	37:DB:118:G:H1	1.46	0.63
1:CA:697:U:H2'	1:CA:698:G:H5'	1.81	0.63
36:DA:958:U:H5''	49:DQ:14:ARG:CD	2.27	0.63
32:B6:53:LYS:HG2	32:B6:54:ILE:N	2.13	0.63
39:BD:23:GLU:C	39:BD:25:THR:N	2.51	0.63
48:BP:47:ASP:HB3	48:BP:48:PRO:CA	2.29	0.63
46:BN:67:LEU:HB3	46:BN:88:GLU:HG2	1.81	0.63
36:DA:611:C:H2'	36:DA:612:C:H6	1.63	0.63
37:DB:24:G:H1	37:DB:59:A:H61	1.44	0.63
22:AW:76:A:O2'	36:BA:2394:C:N3	2.30	0.63
41:DF:192:LEU:HD23	41:DF:193:VAL:N	2.13	0.63
26:B0:47:PRO:HG2	26:B0:53:MET:HB2	1.81	0.63
8:CH:86:ILE:HG21	8:CH:133:LEU:HG	1.79	0.63
5:CE:42:GLY:HA3	5:CE:66:MET:CE	2.28	0.63
55:BW:86:LEU:N	55:BW:94:ASP:O	2.31	0.63
36:DA:1684:C:O2'	36:DA:1685:C:H5'	1.97	0.63
52:BT:16:ARG:HD2	52:BT:18:ASP:OD1	1.98	0.63
36:BA:272(D):G:H1	36:BA:364:C:H42	1.46	0.63
41:BF:31:HIS:HB2	48:BP:13:ASN:OD1	1.99	0.63
36:DA:176:G:O2'	36:DA:177:G:H5'	1.99	0.63
36:DA:2649:U:H2'	36:DA:2650:U:C6	2.33	0.63
9:AI:81:ILE:O	9:AI:85:LEU:HD13	1.99	0.63
36:BA:2264:C:H2'	36:BA:2265:U:H6	1.64	0.63
1:CA:681:C:O2'	1:CA:682:G:H5'	1.97	0.63
58:DZ:135:GLU:N	58:DZ:135:GLU:OE1	2.29	0.63
18:AR:44:LEU:N	18:AR:44:LEU:HD12	2.12	0.63
1:CA:718:G:C8	11:CK:116:HIS:HB3	2.34	0.63
4:CD:107:ARG:HH21	4:CD:194:LEU:HD12	1.64	0.63
52:DT:28:VAL:CG2	52:DT:63:VAL:HG11	2.29	0.63
1:AA:1442(A):G:C5	52:BT:118:ARG:HB3	2.34	0.63
53:BU:92:ARG:CZ	54:BV:11:GLN:HG2	2.28	0.63
56:BX:8:ILE:HD12	56:BX:8:ILE:N	2.13	0.63
39:BD:35:LYS:HG3	39:BD:63:ARG:CG	2.29	0.63
38:BC:100:ILE:HD12	38:BC:126:LYS:HB2	1.80	0.63
38:BC:79:LYS:HG2	38:BC:118:ASP:O	1.99	0.63
36:DA:2309:A:H2'	36:DA:2310:A:C5'	2.28	0.63
36:BA:2715:C:H2'	36:BA:2716:U:H6	1.64	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BT:82:LEU:N	52:BT:82:LEU:CD1	2.59	0.63
36:DA:2103:C:H2'	36:DA:2186:G:N2	2.14	0.63
35:D9:7:VAL:HG13	35:D9:34:GLN:HB3	1.80	0.63
36:BA:1101:U:H2'	36:BA:1102:C:C6	2.34	0.63
57:BY:88:LYS:NZ	57:BY:93:GLY:HA3	2.14	0.63
43:BH:158:HIS:HE1	43:BH:169:VAL:CG1	2.12	0.63
18:CR:29:PHE:N	18:CR:29:PHE:HD1	1.95	0.63
18:CR:70:ILE:HG23	18:CR:79:LEU:HD12	1.80	0.63
2:AB:18:GLY:H	2:AB:42:ILE:CG2	2.12	0.63
40:BE:107:THR:O	40:BE:190:GLY:HA2	1.98	0.63
58:DZ:29:TYR:HB3	58:DZ:34:ASN:HB3	1.79	0.63
1:CA:256:U:H2'	1:CA:257:G:H8	1.63	0.63
3:AC:53:ALA:HB2	3:AC:115:LEU:HG	1.81	0.63
38:BC:75:LEU:H	38:BC:112:ALA:HB3	1.62	0.63
1:AA:1231:G:H4'	9:AI:126:SER:OG	1.99	0.63
38:DC:132:GLY:N	38:DC:133:PRO:HD2	2.13	0.63
22:AV:18:G:H2'	22:AV:57:G:N2	2.14	0.63
36:DA:1567:A:H5'	39:DD:58:HIS:CD2	2.33	0.63
25:AZ:310:ILE:HD11	25:AZ:381:GLU:CD	2.19	0.63
44:BJ:109:UNK:C	44:BJ:111:UNK:H	2.11	0.63
3:CC:34:LEU:CD2	3:CC:38:ARG:HE	2.11	0.63
50:DR:76:VAL:O	50:DR:79:LEU:HB3	1.99	0.63
30:B4:42:PHE:CG	30:B4:42:PHE:O	2.51	0.63
1:CA:1306:A:H61	1:CA:1331:G:H1'	1.63	0.63
28:B2:38:GLN:CD	28:B2:44:LEU:HD13	2.19	0.63
36:DA:1827:C:C2'	36:DA:1828:G:H5'	2.28	0.63
25:CZ:181:GLN:HE22	25:CZ:195:TRP:HD1	1.46	0.63
57:DY:43:ASN:HB2	57:DY:64:GLU:HA	1.81	0.63
36:BA:335:C:H2'	36:BA:336:C:H6	1.63	0.63
36:BA:2712:U:H1'	36:BA:2712(A):A:C8	2.34	0.63
52:BT:94:ALA:O	52:BT:96:ARG:N	2.31	0.63
43:BH:85:LYS:HZ3	43:BH:132:ARG:HA	1.63	0.63
46:BN:62:VAL:HG22	46:BN:66:LYS:HB2	1.80	0.63
36:DA:2632:A:O2'	40:DE:61:ARG:NH1	2.31	0.63
48:BP:23:PRO:O	48:BP:29:LYS:O	2.16	0.63
42:BG:7:LEU:HD22	42:BG:100:TRP:CZ3	2.33	0.63
40:DE:93:VAL:C	40:DE:95:ILE:H	2.01	0.63
4:AD:14:ARG:HD2	4:AD:59:ARG:HH11	1.61	0.63
13:AM:97:PRO:HA	13:AM:110:ARG:CD	2.26	0.63
10:AJ:32:ALA:CB	10:AJ:76:ASN:HB2	2.29	0.63
36:DA:1222:C:H2'	36:DA:1223:G:C5'	2.28	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BH:158:HIS:HE1	43:BH:169:VAL:HG13	1.64	0.63
54:BV:72:VAL:CG2	54:BV:85:LYS:HB3	2.27	0.63
54:BV:5:VAL:HG23	54:BV:37:VAL:O	1.98	0.63
2:AB:91:PRO:O	2:AB:92:TYR:HB3	1.99	0.63
29:D3:15:TYR:HD2	29:D3:19:GLN:HE22	1.46	0.63
2:CB:142:LEU:HD21	2:CB:146:GLN:HE21	1.63	0.63
27:D1:75:GLU:O	27:D1:78:LYS:HG2	1.97	0.63
38:BC:161:ILE:HG21	38:BC:174:PRO:HG2	1.81	0.63
36:BA:566:U:O2'	36:BA:567:A:H5'	1.99	0.63
11:AK:48:ILE:HG21	11:AK:63:LEU:HD12	1.81	0.63
40:DE:87:GLU:O	40:DE:89:ASP:N	2.30	0.63
8:AH:17:THR:O	8:AH:78:GLN:NE2	2.29	0.63
42:BG:17:PRO:HG2	42:BG:18:GLU:H	1.62	0.63
25:AZ:67:HIS:CD2	25:AZ:67:HIS:H	2.15	0.63
3:AC:190:ARG:HG3	3:AC:190:ARG:HH11	1.62	0.63
36:BA:2186:G:H2'	36:BA:2187:G:N9	2.14	0.63
32:D6:15:GLU:HG3	32:D6:47:THR:OG1	1.98	0.63
1:CA:1305:G:N2	1:CA:1331:G:C2'	2.55	0.63
25:CZ:265:THR:HG21	25:CZ:291:ARG:N	2.14	0.63
42:DG:131:TYR:CE2	42:DG:133:LEU:HD23	2.29	0.63
58:BZ:29:TYR:O	58:BZ:30:ASN:HB3	1.99	0.63
41:BF:132:VAL:HG22	41:BF:133:ASN:N	2.13	0.63
1:CA:1055:A:H8	1:CA:1055:A:O5'	1.80	0.63
1:AA:1282:C:O2'	1:AA:1283:G:H5'	1.99	0.63
3:CC:76:VAL:O	3:CC:83:ARG:HG3	1.98	0.63
36:DA:92:A:H3'	36:DA:93:G:C8	2.34	0.63
42:DG:51:ARG:HE	42:DG:51:ARG:HA	1.62	0.63
47:DO:24:VAL:HG12	47:DO:33:ALA:HB2	1.81	0.63
13:AM:7:VAL:HG12	13:AM:7:VAL:O	1.99	0.63
42:BG:178:PHE:HB3	42:BG:180:PHE:CE1	2.33	0.63
4:CD:129:ASN:HD21	4:CD:145:GLU:N	1.96	0.63
6:AF:97:PHE:O	18:AR:31:LEU:HD23	1.99	0.63
36:DA:26:G:OP1	55:DW:80:PRO:HB3	1.99	0.63
36:BA:236:C:H2'	36:BA:237:C:C6	2.34	0.63
1:AA:59:A:H3'	1:AA:331:G:H22	1.64	0.63
4:AD:152:SER:O	4:AD:155:LEU:N	2.27	0.63
1:CA:424:G:H2'	1:CA:425:G:C8	2.33	0.63
58:BZ:67:LEU:HD12	58:BZ:67:LEU:N	2.14	0.63
1:AA:722:A:HO2'	1:AA:724:G:H8	1.46	0.63
36:BA:852:G:O2'	36:BA:853:G:H5'	1.99	0.63
36:DA:1567:A:C5'	39:DD:58:HIS:CD2	2.82	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1165:U:H2'	36:BA:1166:C:C6	2.34	0.63
25:CZ:375:ILE:HD12	25:CZ:376:LYS:HG3	1.79	0.63
1:CA:1176:A:H2'	1:CA:1177:G:C8	2.33	0.63
4:CD:85:LYS:HD3	4:CD:92:VAL:CG1	2.28	0.63
40:DE:137:HIS:HB3	40:DE:138:PRO:CD	2.28	0.63
36:BA:949:C:H2'	36:BA:950:G:H8	1.62	0.63
29:D3:35:ARG:HH11	29:D3:35:ARG:HB2	1.64	0.63
3:AC:150:LYS:HG3	3:AC:169:ALA:HB2	1.79	0.63
32:D6:35:GLU:CB	32:D6:51:GLU:HB2	2.29	0.63
42:DG:87:PRO:O	42:DG:88:ILE:HG12	1.99	0.63
52:BT:83:ILE:HG13	52:BT:84:GLN:HG2	1.81	0.63
36:DA:628:G:C3'	36:DA:629:G:H5''	2.28	0.63
22:AV:56:C:C1'	42:BG:76:SER:O	2.46	0.63
13:CM:10:PRO:HB2	13:CM:18:ALA:CB	2.26	0.63
31:B5:57:VAL:HG12	31:B5:58:LEU:N	2.14	0.63
39:DD:242:ARG:HH11	39:DD:242:ARG:HG3	1.64	0.63
28:D2:16:LEU:H	28:D2:67:LYS:NZ	1.95	0.63
36:BA:1023:U:H2'	36:BA:1024:G:H5'	1.79	0.63
1:AA:1086:U:C2'	1:AA:1087:G:H5'	2.24	0.63
36:BA:195:A:N7	36:BA:197:A:OP1	2.31	0.63
48:BP:83:VAL:HG23	48:BP:105:LEU:HD13	1.81	0.63
22:AW:74:C:H2'	22:AW:75:C:O4'	1.98	0.63
42:BG:170:ARG:O	42:BG:174:GLU:HB2	1.98	0.63
36:DA:1748:G:H8	36:DA:1748:G:H5'	1.64	0.63
48:DP:85:LEU:HB3	48:DP:114:ILE:CD1	2.29	0.63
19:CS:32:LYS:O	19:CS:33:THR:HB	1.99	0.63
5:AE:40:ARG:NH1	5:AE:40:ARG:HG2	2.14	0.63
36:BA:2839:G:H5'	50:BR:46:GLY:HA2	1.81	0.63
34:D8:50:LEU:C	34:D8:52:LYS:H	2.02	0.63
36:DA:893:C:H2'	36:DA:894:C:C6	2.30	0.63
40:DE:101:ARG:HB3	40:DE:201:THR:HG21	1.79	0.63
36:BA:296:C:O2'	36:BA:297:C:H5'	1.99	0.63
31:B5:52:TYR:HE2	36:BA:2884:U:H1'	1.64	0.63
36:BA:970:C:H2'	36:BA:971:C:C6	2.33	0.63
41:DF:104:LYS:O	41:DF:108:LYS:HG2	1.98	0.63
36:BA:543:C:H42	36:BA:549:G:H1	1.45	0.63
53:BU:30:LYS:HD3	53:BU:30:LYS:N	2.13	0.63
17:CQ:3:LYS:HB3	17:CQ:61:GLU:HB3	1.81	0.63
58:BZ:130:PRO:O	58:BZ:133:ILE:HD11	1.99	0.63
8:CH:29:SER:HB3	8:CH:32:LYS:CG	2.29	0.63
43:BH:118:PRO:CG	43:BH:121:ILE:HD12	2.29	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:681:C:O2'	1:AA:682:G:H5'	1.98	0.63
36:DA:1192:G:O2'	36:DA:1193:G:H5'	1.98	0.63
48:DP:124:LYS:HD3	48:DP:143:GLY:HA3	1.80	0.63
1:CA:405:U:H3'	1:CA:406:G:H5'	1.80	0.63
34:D8:4:MET:CE	36:DA:592:G:H21	2.12	0.63
32:D6:19:ARG:CD	32:D6:20:ASN:H	2.11	0.63
39:DD:72:LYS:HZ3	39:DD:75:ILE:HG13	1.64	0.63
52:BT:50:ILE:HA	52:BT:99:LEU:HD12	1.80	0.63
46:BN:12:ARG:O	46:BN:14:VAL:HG23	1.98	0.63
13:AM:39:ILE:HG22	13:AM:40:ASN:H	1.64	0.63
39:DD:132:PRO:HG3	39:DD:190:TYR:CZ	2.34	0.63
41:BF:179:GLU:HA	41:BF:205:ARG:NH2	2.14	0.63
1:AA:189(H):G:O2'	1:AA:189(I):G:H8	1.75	0.63
1:CA:1048:G:OP1	14:CN:4:LYS:HB2	1.98	0.63
36:BA:2801(A):A:C4'	36:BA:2802:G:H5'	2.28	0.63
58:DZ:61:LEU:HD11	58:DZ:67:LEU:HD22	1.81	0.63
36:BA:2128:C:O2'	36:BA:2129:C:O5'	2.15	0.63
2:CB:17:PHE:CB	2:CB:44:LEU:HD21	2.28	0.63
2:CB:55:PHE:N	2:CB:55:PHE:HD1	1.96	0.63
57:BY:50:ARG:CG	57:BY:56:PRO:HA	2.29	0.63
36:DA:672:C:O2'	36:DA:673:C:H5''	1.99	0.63
36:BA:1771:C:HO2'	36:BA:1786:A:H8	1.47	0.63
36:DA:1038:C:C2'	36:DA:1039:G:H5''	2.29	0.63
53:BU:82:GLY:O	53:BU:84:LYS:N	2.31	0.63
1:AA:436:C:H4'	4:AD:157:LEU:CD1	2.28	0.63
9:AI:13:ALA:HA	9:AI:67:GLY:O	1.99	0.63
33:B7:34:ARG:NH1	33:B7:42:LEU:HA	2.14	0.63
25:CZ:178:ALA:O	25:CZ:182:MET:HG3	1.99	0.63
2:AB:209:ARG:HH11	2:AB:239:VAL:HG21	1.64	0.63
40:DE:16:ARG:HD3	40:DE:21:VAL:HG11	1.81	0.63
41:DF:51:THR:CG2	41:DF:92:PRO:HD2	2.29	0.63
36:BA:425:G:O2'	36:BA:426:C:H5'	1.99	0.63
2:CB:22:LYS:NZ	2:CB:22:LYS:CA	2.51	0.62
32:D6:11:LEU:HD21	32:D6:51:GLU:HG2	1.81	0.62
36:DA:2415:G:H4'	48:DP:66:GLY:O	1.99	0.62
36:BA:2591:C:H2'	36:BA:2592:G:H8	1.63	0.62
2:AB:118:LEU:HD11	2:AB:141:GLU:OE1	1.98	0.62
22:AW:56:C:H2'	22:AW:57:G:C8	2.34	0.62
52:BT:82:LEU:HD23	52:BT:85:LYS:HD2	1.80	0.62
36:DA:2188:C:H2'	36:DA:2189:U:C6	2.34	0.62
38:DC:113:VAL:HG21	38:DC:136:LEU:HB3	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CV:69:G:H5'	22:CV:69:G:H8	1.64	0.62
3:CC:12:LEU:HB3	3:CC:18:TRP:HZ3	1.63	0.62
42:BG:46:ALA:HB1	42:BG:88:ILE:HG13	1.80	0.62
42:BG:85:GLY:C	42:BG:87:PRO:HD3	2.19	0.62
13:CM:2:ALA:N	13:CM:9:ILE:HG23	2.13	0.62
12:AL:90:VAL:HB	12:AL:96:VAL:CG2	2.28	0.62
36:DA:1902:C:H4'	39:DD:244:ARG:HA	1.81	0.62
25:CZ:345:ARG:NH2	25:CZ:384:LEU:HD22	2.14	0.62
36:BA:1747(A):G:O2'	36:BA:1748:G:H5''	1.99	0.62
13:CM:82:MET:CG	13:CM:83:ASP:N	2.62	0.62
39:DD:258:LYS:CE	39:DD:273:ARG:HE	2.11	0.62
49:DQ:64:ILE:CG2	49:DQ:65:PHE:N	2.62	0.62
1:CA:673:G:H2'	1:CA:674:G:C8	2.33	0.62
36:DA:1101:U:H2'	36:DA:1102:C:C6	2.34	0.62
36:BA:1786:A:H2	36:BA:2606:C:H1'	1.64	0.62
36:DA:654(H):G:C2'	36:DA:654(I):C:H5'	2.29	0.62
36:BA:18:C:H5''	53:BU:24:TYR:O	1.99	0.62
22:AV:50:U:O2'	22:AV:51:U:H5'	1.98	0.62
22:AV:17:C:H2'	22:AV:18:G:C5'	2.29	0.62
16:CP:5:ARG:NH2	16:CP:24:ALA:O	2.33	0.62
20:AT:29:LYS:O	20:AT:33:ILE:HG13	1.99	0.62
36:BA:1187:G:H5''	54:BV:81:TYR:CE2	2.34	0.62
7:CG:57:GLU:O	7:CG:60:LYS:HB3	1.98	0.62
25:AZ:209:TYR:O	25:AZ:211:PRO:HD3	1.99	0.62
43:BH:167:GLU:HB3	43:BH:168:PRO:HD2	1.81	0.62
25:AZ:343:TYR:CZ	25:AZ:348:ASP:HB3	2.34	0.62
1:AA:839:U:O2	1:AA:839:U:H2'	1.98	0.62
36:BA:2078:C:H2'	36:BA:2079:U:C6	2.34	0.62
1:CA:787:A:O2'	1:CA:788:U:H5'	1.99	0.62
53:BU:95:LEU:C	53:BU:97:ASP:H	2.02	0.62
28:B2:3:LEU:HD23	28:B2:4:SER:N	2.13	0.62
28:B2:62:THR:O	28:B2:66:GLU:N	2.32	0.62
39:DD:30:GLU:HG3	39:DD:63:ARG:NH2	2.14	0.62
42:DG:7:LEU:O	42:DG:7:LEU:HD23	1.99	0.62
26:D0:43:THR:HG22	36:DA:2331:G:O2'	2.00	0.62
58:BZ:125:LEU:CD2	58:BZ:164:ALA:HB3	2.29	0.62
3:CC:16:ARG:HH22	3:CC:183:ASP:HA	1.64	0.62
13:CM:69:GLU:HG3	13:CM:69:GLU:O	1.99	0.62
1:AA:1048:G:OP1	14:AN:4:LYS:HB2	1.99	0.62
1:AA:454:C:H5'	1:AA:455:C:OP2	1.97	0.62
1:CA:1346:A:N1	1:CA:1374:A:H5''	2.13	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2645:G:C3'	36:DA:2646:C:H5'	2.26	0.62
36:DA:1099:G:H2'	36:DA:1100:C:H6	1.63	0.62
32:D6:53:LYS:CD	32:D6:54:ILE:H	2.12	0.62
5:CE:92:LYS:O	5:CE:118:ILE:HD12	1.99	0.62
1:CA:266:G:H5''	1:CA:267:C:H5	1.64	0.62
19:AS:6:LYS:N	19:AS:6:LYS:HD3	2.14	0.62
48:DP:27:HIS:CE1	54:DV:83:ARG:NH1	2.66	0.62
58:DZ:58:VAL:HA	58:DZ:67:LEU:O	1.98	0.62
37:DB:9:G:OP1	51:DS:17:ARG:HD3	1.99	0.62
58:DZ:9:TYR:HE1	58:DZ:35:ARG:NH1	1.97	0.62
40:BE:103:ASP:HA	40:BE:168:MET:HA	1.80	0.62
40:BE:101:ARG:CB	40:BE:201:THR:HG21	2.29	0.62
1:AA:1221:G:O2'	1:AA:1222:G:H5'	1.99	0.62
26:B0:49:LYS:N	26:B0:80:HIS:HB3	2.14	0.62
3:AC:179:ARG:CD	3:AC:207:VAL:HA	2.28	0.62
17:CQ:75:ARG:HG3	17:CQ:75:ARG:HH11	1.63	0.62
20:AT:18:GLN:HG2	20:AT:22:ARG:HH12	1.64	0.62
1:CA:234:C:H2'	1:CA:235:C:H6	1.64	0.62
36:DA:2305:A:H2'	36:DA:2306:C:H5''	1.81	0.62
36:DA:2853:C:H2'	36:DA:2854:G:H8	1.63	0.62
5:AE:45:PHE:CE2	5:AE:47:LYS:HD2	2.33	0.62
36:BA:1782:C:H1'	36:BA:2609:U:H5''	1.81	0.62
36:DA:2050:C:H1'	40:DE:156:MET:CE	2.29	0.62
36:DA:1498:C:H2'	36:DA:1499:C:C5'	2.29	0.62
36:DA:2248:C:H2'	36:DA:2249:U:H5'	1.81	0.62
25:CZ:136:ASN:ND2	60:CZ:501:GDP:N7	2.39	0.62
34:D8:32:LEU:HD23	34:D8:36:LYS:NZ	2.13	0.62
36:DA:1854:A:N6	36:DA:1888:G:C8	2.55	0.62
28:B2:35:LEU:O	28:B2:39:ALA:HB2	1.99	0.62
1:CA:1151:A:O2'	1:CA:1152:A:H8	1.83	0.62
39:DD:35:LYS:O	39:DD:36:PRO:C	2.34	0.62
36:DA:479:A:O2'	36:DA:481:G:H5'	1.99	0.62
43:DH:46:GLU:OE1	43:DH:50:VAL:HG22	2.00	0.62
49:BQ:133:ARG:NH1	49:BQ:133:ARG:HB2	2.14	0.62
30:D4:22:ILE:HD12	30:D4:22:ILE:N	2.00	0.62
36:DA:2101:G:C2'	36:DA:2102:U:H5''	2.28	0.62
4:CD:18:LYS:HB2	4:CD:33:MET:HG2	1.80	0.62
1:AA:376:G:H5''	16:AP:5:ARG:HB2	1.81	0.62
55:BW:97:LYS:NZ	55:BW:99:ARG:NH1	2.47	0.62
36:BA:806:C:O2'	36:BA:807:U:H5'	1.99	0.62
34:B8:32:LEU:HB3	34:B8:36:LYS:NZ	2.12	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DE:38:THR:OG1	40:DE:41:LYS:HE2	1.99	0.62
41:DF:157:VAL:O	41:DF:157:VAL:HG23	1.98	0.62
25:AZ:277:LEU:HD13	25:AZ:278:GLN:H	1.64	0.62
13:AM:3:ARG:HH21	13:AM:7:VAL:HG22	1.65	0.62
30:D4:14:ILE:HG13	30:D4:31:ILE:HB	1.80	0.62
2:AB:47:THR:HA	2:AB:202:PRO:HG2	1.81	0.62
1:AA:858:G:C6	1:AA:869:G:C8	2.87	0.62
1:CA:59:A:N6	1:CA:331:G:H1'	2.14	0.62
7:AG:117:ALA:O	7:AG:120:ILE:N	2.32	0.62
36:BA:1351:C:O2	36:BA:1381:G:C2	2.53	0.62
1:AA:792:A:H4'	1:AA:793:U:O5'	1.99	0.62
1:CA:1130:A:C2	1:CA:1146:A:C4	2.87	0.62
36:BA:2306:C:H4'	42:BG:136:ARG:NH2	2.14	0.62
13:AM:120:LYS:HE3	13:AM:120:LYS:N	2.13	0.62
1:CA:407:G:H2'	1:CA:408:A:H8	1.63	0.62
22:AW:62:C:H2'	22:AW:63:G:H8	1.64	0.62
1:CA:403:C:O3'	4:CD:122:ARG:HD3	1.98	0.62
2:CB:59:GLU:HB2	2:CB:221:LEU:HD11	1.80	0.62
40:BE:65:GLY:O	40:BE:70:ALA:HB3	1.99	0.62
36:BA:1462:C:H4'	36:BA:2703:C:O4'	1.99	0.62
1:CA:929:G:O2'	1:CA:930:C:H5'	1.99	0.62
40:BE:137:HIS:HB3	40:BE:138:PRO:HD2	1.80	0.62
4:AD:47:ARG:HD3	4:AD:49:ARG:NH2	2.15	0.62
22:AV:53:G:O2'	22:AV:54:U:H5'	1.99	0.62
49:DQ:45:GLN:H	49:DQ:45:GLN:HE21	1.47	0.62
55:BW:37:ARG:HG3	55:BW:37:ARG:HH11	1.64	0.62
53:BU:61:TRP:O	53:BU:65:ILE:HD13	2.00	0.62
25:AZ:389:ARG:O	25:AZ:390:GLU:HB2	1.99	0.62
39:DD:31:LYS:HZ2	39:DD:33:LEU:HG	1.64	0.62
25:AZ:8:THR:OG1	25:AZ:9:LYS:N	2.32	0.62
35:D9:4:ARG:HB2	36:DA:2466:C:OP1	1.98	0.62
49:DQ:120:ILE:O	49:DQ:123:HIS:N	2.33	0.62
13:AM:4:ILE:HD11	13:AM:10:PRO:HD3	1.81	0.62
13:AM:57:ARG:O	13:AM:61:GLU:HB2	1.99	0.62
41:BF:160:ASN:HD21	41:BF:162:LEU:HB2	1.64	0.62
1:AA:1148:U:H2'	1:AA:1149:C:O4'	2.00	0.62
36:DA:141:A:H8	36:DA:1408:C:HO2'	1.46	0.62
31:B5:4:HIS:HA	36:BA:2056:G:H1	1.64	0.62
9:AI:95:LYS:HG3	9:AI:96:LEU:CD1	2.27	0.62
4:CD:59:ARG:HA	4:CD:59:ARG:HE	1.64	0.62
1:CA:1047:G:H4'	14:CN:4:LYS:HG2	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:274:A:O2'	1:AA:275:G:C8	2.52	0.62
36:BA:2287:A:H2	36:BA:2346:A:N1	1.97	0.62
46:BN:18:ALA:HB1	46:BN:21:LYS:HB3	1.81	0.62
27:D1:82:LEU:HD21	27:D1:90:ILE:CD1	2.27	0.62
11:CK:38:ASN:N	11:CK:38:ASN:HD22	1.97	0.62
36:DA:547:A:H2'	36:DA:548:A:H8	1.63	0.62
39:DD:186:HIS:CD2	39:DD:188:GLU:HB2	2.34	0.62
36:DA:2230:G:H2'	36:DA:2231:C:H6	1.64	0.62
46:BN:10:GLU:CD	46:BN:11:PRO:HD2	2.19	0.62
40:BE:3:GLY:HA3	40:BE:81:ILE:HD12	1.80	0.62
36:DA:1771:C:H1'	36:DA:1786:A:C8	2.34	0.62
22:AW:44:G:H5''	22:AW:45:U:C5	2.34	0.62
42:BG:28:VAL:HG12	42:BG:28:VAL:O	1.98	0.62
36:BA:1352:U:O2'	36:BA:1353:A:H5'	1.99	0.62
36:DA:394:A:C2'	36:DA:395:U:H5'	2.30	0.62
22:AV:39:U:H2'	22:AV:40:C:C6	2.33	0.62
49:BQ:78:PRO:O	49:BQ:81:VAL:HG12	1.99	0.62
15:AO:31:LEU:H	15:AO:31:LEU:HD12	1.64	0.62
25:AZ:259:ALA:HB1	25:AZ:260:PRO:HD2	1.81	0.62
36:BA:272(C):G:H1	36:BA:365:C:H42	1.48	0.62
36:BA:1668:A:N3	36:BA:1670:C:C4	2.68	0.62
1:AA:1329:A:P	13:AM:28:ALA:HB3	2.39	0.62
36:BA:2619:C:O2'	36:BA:2620:C:H5'	1.98	0.62
1:AA:624:C:O3'	16:AP:10:GLY:HA2	1.99	0.62
52:DT:31:SER:HG	52:DT:32:TYR:HE1	1.40	0.62
28:B2:10:LEU:HD21	28:B2:59:ARG:HG2	1.81	0.62
56:BX:36:LYS:HE2	56:BX:54:VAL:O	2.00	0.62
31:D5:54:GLY:H	31:D5:56:LYS:NZ	1.94	0.62
25:AZ:145:GLU:O	25:AZ:149:LEU:N	2.32	0.62
39:BD:27:THR:O	39:BD:27:THR:CG2	2.47	0.62
25:CZ:8:THR:OG1	25:CZ:9:LYS:N	2.32	0.62
58:BZ:125:LEU:HD23	58:BZ:164:ALA:HB3	1.81	0.62
58:BZ:29:TYR:CB	58:BZ:34:ASN:HB2	2.23	0.62
1:AA:979:C:H3'	1:AA:980:C:C5'	2.20	0.62
48:BP:47:ASP:HB3	48:BP:48:PRO:HA	1.81	0.62
36:BA:2313:C:H5'	36:BA:2313:C:C6	2.28	0.62
13:CM:15:VAL:O	13:CM:19:LEU:HD23	1.99	0.62
9:AI:53:VAL:HG22	9:AI:95:LYS:CE	2.28	0.62
48:BP:40:SER:O	48:BP:41:ARG:NH1	2.32	0.62
29:B3:35:ARG:HD3	29:B3:37:LEU:HD12	1.81	0.62
40:DE:77:ILE:HG22	40:DE:78:LEU:N	2.15	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2392:A:H8	48:BP:60:MET:HA	1.64	0.62
46:BN:18:ALA:CB	46:BN:26:LEU:HD22	2.30	0.62
41:DF:202:PHE:O	41:DF:206:ILE:HG12	2.00	0.62
11:CK:33:THR:HG22	11:CK:39:PRO:CA	2.27	0.62
51:DS:35:ILE:HD11	51:DS:99:LYS:HD3	1.80	0.62
13:CM:79:LYS:O	13:CM:82:MET:HG2	1.99	0.62
1:AA:939:G:H5''	7:AG:102:ARG:HH22	1.63	0.62
2:AB:17:PHE:O	2:AB:18:GLY:O	2.18	0.62
36:DA:2672:G:C3'	36:DA:2673:G:H5''	2.28	0.62
2:CB:17:PHE:O	2:CB:18:GLY:O	2.17	0.62
54:DV:15:GLU:HB3	54:DV:16:PRO:HD2	1.81	0.62
54:DV:18:LEU:HD22	54:DV:18:LEU:N	2.14	0.62
12:AL:124:LYS:HD2	12:AL:125:PRO:HD2	1.81	0.62
33:D7:47:ARG:NH1	56:DX:60:ARG:HH21	1.97	0.62
26:B0:40:GLN:HE21	26:B0:59:LEU:HD11	1.65	0.62
1:CA:1158:C:H2'	1:CA:1158:C:O2	2.00	0.62
9:AI:118:LYS:O	9:AI:119:ALA:CB	2.47	0.62
1:AA:1004:A:H2'	1:AA:1005:A:H5'	1.81	0.62
25:CZ:84:GLY:O	25:CZ:85:HIS:HB3	1.99	0.62
4:AD:145:GLU:HA	4:AD:184:LYS:HA	1.81	0.62
36:DA:1353:A:H2'	36:DA:1354:A:C8	2.35	0.62
1:AA:691:G:H2'	1:AA:692:U:C6	2.34	0.62
5:AE:99:GLY:O	5:AE:117:ASP:HA	1.99	0.62
1:AA:1286:A:O2'	1:AA:1287:A:H5''	1.98	0.62
1:CA:807:A:H2'	1:CA:808:C:C6	2.35	0.62
36:DA:614(A):U:H4'	36:DA:614(B):G:H5''	1.80	0.62
48:DP:16:ARG:O	48:DP:16:ARG:NH1	2.32	0.62
52:BT:25:GLY:HA2	52:BT:92:GLY:CA	2.29	0.62
24:CY:70:C:H2'	24:CY:71:C:C6	2.34	0.62
56:BX:35:THR:HG22	56:BX:38:GLU:H	1.65	0.62
3:CC:5:ILE:HD13	3:CC:5:ILE:N	2.14	0.62
25:CZ:277:LEU:CD1	25:CZ:279:GLU:H	2.11	0.62
1:AA:346:G:H5''	52:BT:43:GLN:HE22	1.63	0.62
25:AZ:80:VAL:HG21	25:AZ:98:GLN:OE1	2.00	0.62
13:AM:39:ILE:HG22	13:AM:40:ASN:N	2.15	0.62
13:AM:6:GLY:HA3	13:AM:67:GLU:OE2	2.00	0.62
3:AC:5:ILE:CD1	3:AC:5:ILE:H	2.12	0.62
31:B5:54:GLY:H	31:B5:56:LYS:NZ	1.96	0.62
53:DU:9:VAL:CG1	53:DU:13:LYS:HE2	2.26	0.62
41:BF:179:GLU:HA	41:BF:205:ARG:HH21	1.65	0.62
41:DF:129:PHE:CD2	41:DF:163:VAL:HG21	2.35	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DS:106:ARG:HB3	51:DS:106:ARG:NH1	2.13	0.62
39:DD:25:THR:HB	39:DD:26:LYS:HE2	1.82	0.62
3:CC:179:ARG:HH11	3:CC:206:GLU:HG2	1.64	0.62
27:B1:76:ARG:HH12	27:B1:95:LEU:CB	2.12	0.62
58:DZ:7:ALA:HB3	58:DZ:61:LEU:CD2	2.28	0.62
12:AL:7:ILE:H	12:AL:7:ILE:CD1	2.06	0.62
36:DA:2120:G:O2'	36:DA:2121:G:H5'	2.00	0.62
30:B4:5:ILE:O	30:B4:5:ILE:CG1	2.47	0.62
46:BN:9:VAL:HG12	46:BN:10:GLU:N	2.14	0.62
36:DA:2523:G:H2'	36:DA:2524:G:C5'	2.29	0.62
40:DE:103:ASP:OD2	40:DE:201:THR:HA	1.99	0.62
46:BN:126:PRO:O	46:BN:127:ASP:CB	2.48	0.62
24:CY:65:C:H5'	25:CZ:341:GLN:HG2	1.79	0.62
1:CA:841:U:H3'	1:CA:848:C:O4'	1.99	0.62
3:AC:154:SER:HA	3:AC:165:THR:HA	1.79	0.62
51:DS:42:ASP:C	51:DS:44:LYS:H	2.01	0.62
36:DA:108:U:H2'	36:DA:109:G:H8	1.63	0.62
8:AH:1:MET:CE	8:AH:2:LEU:N	2.63	0.62
1:AA:950:U:H2'	1:AA:951:G:C8	2.34	0.62
55:DW:29:LEU:HD21	55:DW:33:ARG:HH11	1.65	0.62
22:AV:63:G:H2'	22:AV:64:A:C8	2.34	0.62
1:AA:961:U:O2'	1:AA:962:C:H6	1.83	0.62
4:CD:110:PHE:O	4:CD:161:ASN:HB3	1.98	0.62
36:BA:2653:U:H3'	36:BA:2654:A:H8	1.65	0.62
37:BB:6:C:H2'	37:BB:7:G:O4'	2.00	0.62
27:B1:45:ASN:HD21	36:BA:2090:G:H21	1.44	0.62
19:CS:52:TYR:HB2	19:CS:57:HIS:CE1	2.34	0.62
42:BG:36:LYS:HG2	42:BG:37:VAL:N	2.14	0.62
49:DQ:76:LYS:HB3	49:DQ:91:GLU:HG3	1.82	0.62
27:D1:58:ILE:HD12	27:D1:59:THR:H	1.64	0.62
2:AB:109:SER:O	2:AB:111:ARG:N	2.32	0.62
3:CC:5:ILE:CD1	3:CC:5:ILE:H	2.12	0.62
46:DN:131:GLN:NE2	46:DN:133:GLN:H	1.96	0.62
10:AJ:13:HIS:O	10:AJ:17:ASP:HB2	1.99	0.62
53:DU:56:ASP:C	53:DU:60:LEU:HG	2.19	0.62
4:CD:18:LYS:N	4:CD:33:MET:CE	2.63	0.62
58:DZ:152:ALA:HA	58:DZ:167:PRO:O	1.98	0.62
42:BG:6:ALA:O	42:BG:10:LYS:HD3	2.00	0.62
17:CQ:59:ILE:CD1	17:CQ:73:VAL:HA	2.29	0.62
46:DN:15:LEU:O	46:DN:136:GLU:HA	1.99	0.62
1:CA:1288:A:H2'	1:CA:1289:A:H8	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1209:G:H21	36:DA:1210:A:N6	1.97	0.62
6:CF:91:VAL:HG11	18:CR:72:ARG:HH12	1.64	0.62
40:BE:169:ASN:ND2	40:BE:169:ASN:O	2.32	0.62
10:CJ:78:ASN:HD22	10:CJ:81:THR:HG21	1.64	0.62
51:DS:89:ARG:HB3	51:DS:92:TYR:HB3	1.82	0.62
50:DR:103:ARG:HG3	55:DW:40:ASN:CG	2.19	0.62
25:CZ:103:ILE:HD11	25:CZ:206:ILE:HD11	1.81	0.62
36:DA:1861:G:O2'	36:DA:1862:G:H5'	2.00	0.62
4:AD:128:VAL:HG12	4:AD:129:ASN:N	2.13	0.62
36:BA:1341:U:H4'	56:BX:57:LEU:HB3	1.80	0.62
39:BD:226:MET:HB3	39:BD:230:ASP:HB2	1.81	0.62
54:BV:34:GLU:O	54:BV:36:PRO:HD3	1.99	0.62
36:DA:382:G:H1	36:DA:392:C:H42	1.48	0.62
47:DO:64:ARG:HH21	47:DO:100:GLY:CA	2.09	0.62
57:DY:29:GLU:N	57:DY:29:GLU:OE1	2.33	0.62
28:B2:53:LEU:HA	28:B2:56:GLN:CG	2.29	0.62
1:AA:1053:G:O6	1:AA:1200:C:H5"	1.99	0.62
39:BD:36:PRO:HA	39:BD:61:LEU:HD12	1.82	0.62
39:DD:61:LEU:O	39:DD:63:ARG:NH1	2.33	0.62
48:BP:146:VAL:O	48:BP:148:LEU:HG	2.00	0.62
30:D4:8:LYS:O	30:D4:9:LEU:CB	2.43	0.62
41:DF:84:VAL:CG1	41:DF:85:GLY:N	2.61	0.62
36:BA:1190:G:OP1	48:BP:32:THR:OG1	2.17	0.62
58:BZ:100:VAL:HG23	58:BZ:126:VAL:HG21	1.81	0.62
48:BP:123:LEU:N	48:BP:123:LEU:HD23	2.13	0.62
58:DZ:10:ARG:CD	58:DZ:36:LYS:HB2	2.30	0.62
40:BE:81:ILE:O	40:BE:82:ARG:O	2.17	0.62
58:DZ:133:ILE:N	58:DZ:134:PRO:HD3	2.14	0.62
38:BC:214:VAL:HG23	38:BC:224:ILE:CG2	2.28	0.62
58:DZ:29:TYR:HB3	58:DZ:34:ASN:HB2	1.81	0.62
8:CH:48:TYR:O	8:CH:49:GLU:HB3	1.98	0.62
20:CT:86:ARG:O	20:CT:90:GLN:HG2	2.00	0.62
58:DZ:139:VAL:HG23	58:DZ:140:ASP:H	1.65	0.62
1:CA:59:A:H61	1:CA:331:G:H1'	1.64	0.62
9:CI:99:LEU:HD22	9:CI:99:LEU:N	2.14	0.62
36:BA:17:G:H2'	36:BA:18:C:C6	2.35	0.62
17:CQ:60:ILE:HG23	17:CQ:61:GLU:O	1.99	0.62
36:DA:1314:C:H6	36:DA:1314:C:H5'	1.65	0.62
25:AZ:259:ALA:HB1	25:AZ:260:PRO:CD	2.30	0.62
1:CA:680:C:H2'	1:CA:681:C:C6	2.35	0.62
39:BD:221:VAL:HG22	39:BD:226:MET:HE3	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:719:C:H2'	36:DA:720:C:H6	1.63	0.62
32:D6:7:ILE:HG23	32:D6:29:ASN:HD22	1.65	0.62
22:CW:20:U:O2'	22:CW:21:A:H4'	1.99	0.62
56:BX:53:LYS:HD2	56:BX:55:ASN:HD21	1.63	0.62
42:DG:34:LEU:CA	42:DG:161:THR:HG22	2.29	0.62
42:DG:71:THR:HG22	42:DG:89:GLY:CA	2.30	0.62
57:DY:43:ASN:C	57:DY:44:ILE:HD12	2.20	0.62
49:BQ:141:GLN:NE2	49:BQ:141:GLN:HA	2.15	0.62
3:AC:79:ARG:C	3:AC:82:GLU:OE2	2.38	0.62
13:AM:65:LYS:O	13:AM:66:LEU:HG	1.99	0.62
48:BP:23:PRO:HD2	48:BP:33:ARG:NE	2.12	0.62
27:B1:13:ILE:HD13	27:B1:42:GLN:HB2	1.82	0.62
6:CF:62:TRP:C	6:CF:63:TYR:CD1	2.73	0.62
22:AV:4:C:H2'	22:AV:5:G:H5''	1.81	0.62
54:DV:19:LYS:HG3	54:DV:20:LEU:N	2.15	0.62
34:B8:14:VAL:HG21	34:B8:22:VAL:CG1	2.30	0.62
36:DA:1771:C:C1'	36:DA:1786:A:H8	2.13	0.62
25:CZ:298:VAL:HA	25:CZ:302:GLN:OE1	2.00	0.62
36:BA:1523:U:H2'	36:BA:1524:G:C8	2.35	0.62
25:CZ:72:THR:C	25:CZ:74:LYS:H	2.02	0.62
26:B0:42:GLY:HA3	36:BA:2331:G:O4'	2.00	0.62
36:DA:1523:U:H2'	36:DA:1524:G:C8	2.34	0.62
1:AA:1452:C:H4'	1:AA:1456:G:H22	1.63	0.62
31:D5:29:THR:HG21	36:DA:2814:C:O2'	2.00	0.62
36:BA:2554:U:H2'	36:BA:2555:U:C6	2.35	0.62
13:AM:116:THR:HG22	13:AM:117:VAL:N	2.14	0.62
17:AQ:21:VAL:O	17:AQ:41:LYS:HA	2.00	0.62
41:BF:4:VAL:HG11	41:BF:17:ARG:HE	1.63	0.62
48:DP:20:GLY:O	48:DP:21:ARG:HB2	2.00	0.62
52:BT:88:ILE:O	52:BT:89:VAL:C	2.37	0.62
32:B6:19:ARG:HG2	36:BA:2400:G:H4'	1.81	0.62
32:B6:20:ASN:OD1	32:B6:21:TYR:N	2.33	0.62
24:CY:71:C:H2'	24:CY:72:U:C6	2.35	0.62
32:D6:45:LYS:O	32:D6:46:HIS:HB3	2.00	0.62
28:D2:47:ASN:ND2	28:D2:47:ASN:H	1.98	0.62
3:AC:12:LEU:O	3:AC:16:ARG:O	2.18	0.62
42:BG:42:GLY:CA	42:BG:89:GLY:HA2	2.30	0.62
3:CC:82:GLU:O	3:CC:86:VAL:HG13	1.99	0.62
53:DU:110:VAL:O	53:DU:113:ALA:HB3	2.00	0.62
36:DA:259:G:N2	36:DA:621:A:H8	1.97	0.62
1:CA:878:G:H5''	8:CH:89:PRO:HG2	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DC:46:LYS:O	38:DC:210:ARG:HB2	1.99	0.62
4:CD:154:ASN:O	4:CD:159:ARG:NH2	2.33	0.62
1:CA:1049:U:H1'	1:CA:1201:A:C8	2.34	0.62
39:DD:79:VAL:CG1	39:DD:113:VAL:HA	2.30	0.62
1:AA:443:C:H2'	1:AA:444:C:C6	2.35	0.62
13:AM:69:GLU:O	13:AM:69:GLU:HG3	1.99	0.62
16:CP:8:ARG:NH2	16:CP:15:PRO:HG3	2.14	0.62
4:AD:120:LEU:HB3	4:AD:126:ILE:HD13	1.82	0.62
51:BS:28:VAL:HG12	51:BS:29:PHE:N	2.15	0.62
8:CH:41:ARG:HG2	8:CH:42:GLU:N	2.14	0.62
9:CI:43:ALA:O	9:CI:45:ALA:N	2.32	0.62
36:DA:2460:U:O2'	36:DA:2461:C:H5'	2.00	0.62
54:BV:89:GLN:OE1	54:BV:89:GLN:HA	1.99	0.62
3:AC:95:THR:O	3:AC:97:LYS:N	2.33	0.62
48:DP:59:LEU:HA	48:DP:61:ARG:CD	2.29	0.61
32:D6:19:ARG:HG2	36:DA:2400:G:H4'	1.82	0.61
2:AB:142:LEU:CD2	2:AB:146:GLN:NE2	2.63	0.61
2:AB:142:LEU:CD2	2:AB:146:GLN:HE21	2.13	0.61
10:AJ:54:PHE:CD1	10:AJ:55:LYS:CE	2.83	0.61
10:AJ:55:LYS:H	10:AJ:55:LYS:HE3	1.64	0.61
3:CC:5:ILE:H	3:CC:5:ILE:HD13	1.64	0.61
42:DG:131:TYR:HB3	42:DG:159:VAL:HG13	1.82	0.61
49:BQ:21:THR:C	49:BQ:23:GLY:H	2.03	0.61
36:DA:2186:G:H2'	36:DA:2187:G:C8	2.35	0.61
5:AE:80:ILE:HD11	5:AE:91:LEU:CD2	2.25	0.61
36:DA:1899:G:O2'	36:DA:1900:A:H5''	2.00	0.61
4:CD:14:ARG:CZ	4:CD:39:PRO:HB3	2.29	0.61
39:DD:37:LEU:O	39:DD:38:LYS:O	2.18	0.61
1:CA:454:C:H5'	1:CA:455:C:OP2	1.99	0.61
22:AW:68:C:H2'	22:AW:69:G:C8	2.28	0.61
55:BW:54:ALA:HB1	55:BW:107:LEU:HD11	1.82	0.61
4:AD:98:GLU:HG2	4:AD:189:PRO:HG3	1.82	0.61
22:AW:71:G:H2'	22:AW:72:C:C5'	2.29	0.61
36:BA:71:A:H2	56:BX:31:HIS:HE1	1.45	0.61
43:BH:107:VAL:HG21	43:BH:152:ARG:HD3	1.80	0.61
41:DF:32:LEU:HD23	41:DF:32:LEU:O	2.00	0.61
1:AA:384:G:O2'	1:AA:385:C:H5'	2.00	0.61
18:CR:66:LEU:HD11	18:CR:70:ILE:HD11	1.82	0.61
40:BE:48:GLN:NE2	40:BE:78:LEU:HD22	2.15	0.61
43:BH:149:ARG:CA	43:BH:162:ILE:HD11	2.28	0.61
33:B7:21:ARG:NH1	33:B7:21:ARG:HG2	2.13	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1720:U:C2'	36:DA:1721:G:H5''	2.29	0.61
1:AA:1258:G:H2'	1:AA:1259:C:C6	2.35	0.61
52:DT:107:ASP:H	52:DT:110:ILE:CG1	2.13	0.61
40:DE:120:TRP:CE3	40:DE:155:LYS:HE3	2.34	0.61
26:D0:15:ASP:OD1	26:D0:16:SER:N	2.32	0.61
1:CA:19:C:O2'	1:CA:20:U:H5'	1.99	0.61
31:B5:6:VAL:HG22	31:B5:7:PRO:HD2	1.81	0.61
36:DA:691:C:O2'	36:DA:692:C:H5'	1.99	0.61
36:BA:2025:C:H2'	36:BA:2026:C:C6	2.35	0.61
49:DQ:47:ILE:CD1	49:DQ:70:PRO:HD3	2.29	0.61
41:DF:64:ILE:HG21	41:DF:75:HIS:HB2	1.82	0.61
36:BA:1417:C:O2'	36:BA:1418:G:H5'	2.00	0.61
55:BW:29:LEU:HD21	55:BW:33:ARG:HH11	1.65	0.61
15:CO:33:THR:HG23	15:CO:63:ARG:HH11	1.65	0.61
36:BA:1788:C:O2'	36:BA:1789:A:H5'	2.00	0.61
52:DT:29:ARG:CB	52:DT:85:LYS:HA	2.26	0.61
2:CB:69:LEU:HB2	2:CB:159:PRO:HG2	1.82	0.61
42:DG:94:LEU:HD22	42:DG:98:ARG:HG3	1.81	0.61
28:D2:2:LYS:HA	28:D2:5:GLU:OE2	2.01	0.61
54:DV:39:LEU:O	54:DV:40:LEU:HB2	1.99	0.61
9:AI:52:ALA:HB3	9:AI:95:LYS:CE	2.30	0.61
43:BH:88:LEU:HD22	43:BH:88:LEU:H	1.65	0.61
36:BA:195:A:C8	36:BA:197:A:OP1	2.53	0.61
4:CD:30:LYS:O	4:CD:32:ALA:N	2.32	0.61
41:DF:160:ASN:ND2	41:DF:162:LEU:HB2	2.13	0.61
14:CN:4:LYS:O	14:CN:6:LEU:N	2.32	0.61
14:CN:7:ILE:CG1	14:CN:8:GLU:N	2.63	0.61
48:BP:85:LEU:HA	48:BP:88:LEU:CB	2.27	0.61
12:CL:27:LEU:C	12:CL:29:GLY:H	2.04	0.61
48:DP:105:LEU:O	48:DP:106:LEU:HB2	2.00	0.61
2:CB:165:VAL:HG23	2:CB:166:ASP:N	2.10	0.61
36:DA:2317:C:H2'	36:DA:2318:G:C5'	2.30	0.61
30:B4:14:ILE:O	30:B4:21:VAL:HG13	2.00	0.61
2:AB:8:LYS:NZ	2:AB:217:ARG:NH1	2.48	0.61
40:BE:75:VAL:O	40:BE:77:ILE:N	2.33	0.61
8:CH:6:ILE:H	8:CH:6:ILE:CD1	2.12	0.61
36:DA:363(E):U:H2'	36:DA:363(F):A:H1'	1.82	0.61
54:BV:98:GLU:OE2	54:BV:100:ARG:HD3	2.00	0.61
51:BS:89:ARG:HH11	51:BS:89:ARG:HG2	1.65	0.61
36:BA:1771:C:C1'	36:BA:1786:A:C8	2.83	0.61
36:BA:1353:A:O4'	36:BA:1569:A:H2	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DN:126:PRO:O	46:DN:127:ASP:CB	2.48	0.61
1:AA:950:U:OP2	13:AM:102:ARG:HD2	2.00	0.61
36:BA:2305:A:H5''	42:BG:134:GLY:HA3	1.82	0.61
1:CA:939:G:H2'	1:CA:940:C:C6	2.35	0.61
1:AA:149:A:H2'	1:AA:150:C:C6	2.35	0.61
36:BA:247:G:H4'	36:BA:386:G:C5	2.35	0.61
36:BA:2009:G:O2'	36:BA:2010:G:H5'	2.00	0.61
36:DA:884:C:H2'	36:DA:885:C:H5'	1.82	0.61
36:DA:1718:G:H2'	36:DA:1719:G:H8	1.64	0.61
36:DA:2659:G:H2'	36:DA:2660:A:H5''	1.82	0.61
36:BA:860:U:H5	36:BA:917:A:N7	1.98	0.61
49:DQ:1:MET:O	49:DQ:2:LEU:HB3	2.00	0.61
49:DQ:3:MET:HB2	49:DQ:4:PRO:HD2	1.81	0.61
36:BA:1946:U:H2'	36:BA:1947:C:H6	1.64	0.61
36:DA:2327:A:H2'	36:DA:2328:A:C8	2.35	0.61
4:CD:141:ARG:O	4:CD:185:PHE:HD2	1.82	0.61
36:BA:996:A:H4'	53:BU:92:ARG:CZ	2.30	0.61
25:CZ:252:GLU:HG2	25:CZ:266:VAL:HG22	1.82	0.61
49:DQ:27:VAL:HG12	49:DQ:28:ALA:H	1.63	0.61
3:AC:12:LEU:HB3	3:AC:18:TRP:HZ3	1.65	0.61
25:CZ:125:GLN:NE2	25:CZ:394:THR:HB	2.15	0.61
37:BB:9:G:OP1	51:BS:17:ARG:HD3	1.99	0.61
36:BA:1112:G:O2'	36:BA:1113:U:H5'	2.01	0.61
51:DS:59:LYS:HG2	51:DS:60:GLY:N	2.08	0.61
41:DF:101:LEU:HD12	41:DF:102:PRO:HD2	1.82	0.61
4:CD:25:ARG:C	4:CD:27:TYR:N	2.53	0.61
36:BA:604:G:H2'	36:BA:605:C:O2	2.01	0.61
40:DE:5:LEU:CD1	40:DE:51:PHE:HB2	2.31	0.61
42:BG:133:LEU:HD12	42:BG:133:LEU:C	2.20	0.61
33:B7:5:TRP:NE1	33:B7:7:PRO:HB3	2.15	0.61
30:B4:33:VAL:HG21	42:BG:109:VAL:HG11	1.81	0.61
2:CB:8:LYS:NZ	2:CB:217:ARG:HH12	1.97	0.61
36:DA:2246:G:H2'	36:DA:2247:A:C8	2.35	0.61
37:DB:46:A:H2'	37:DB:47:C:H6	1.65	0.61
52:BT:6:LEU:O	52:BT:10:VAL:HG23	2.00	0.61
36:DA:2133:G:O2'	36:DA:2158:A:N6	2.34	0.61
40:DE:168:MET:HG3	40:DE:168:MET:O	1.99	0.61
58:BZ:41:LEU:HD12	58:BZ:82:ARG:NH2	2.14	0.61
4:CD:125:HIS:ND1	4:CD:152:SER:OG	2.31	0.61
36:BA:1242:A:H61	48:BP:8:PRO:HG2	1.65	0.61
53:BU:69:CYS:O	53:BU:74:LEU:HD12	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:D5:52:TYR:HE2	36:DA:2884:U:H1'	1.65	0.61
6:AF:9:VAL:HA	6:AF:59:TYR:O	2.00	0.61
17:CQ:74:LEU:HD12	17:CQ:75:ARG:HD3	1.82	0.61
41:BF:185:ASP:OD1	41:BF:188:ARG:HD3	2.00	0.61
29:B3:26:LEU:HB2	29:B3:28:LEU:HD21	1.82	0.61
36:DA:1991:U:C2'	36:DA:1992:G:H5''	2.30	0.61
16:CP:14:ASN:N	16:CP:15:PRO:HD3	2.15	0.61
22:CW:11:C:H2'	22:CW:12:U:C6	2.35	0.61
30:B4:12:ALA:HB2	30:B4:29:PRO:HA	1.82	0.61
36:DA:1063:G:N2	45:DK:89:UNK:HA	2.15	0.61
55:DW:68:ARG:O	55:DW:109:GLU:HA	2.00	0.61
41:BF:47:GLY:HA2	41:BF:97:TYR:HE2	1.65	0.61
36:DA:8:A:H2'	36:DA:9:U:C6	2.34	0.61
15:AO:29:VAL:HG11	15:AO:67:LEU:HD21	1.81	0.61
15:CO:82:ILE:HG22	15:CO:83:GLU:H	1.62	0.61
14:AN:7:ILE:CG1	14:AN:8:GLU:N	2.63	0.61
1:AA:1368:G:OP2	9:AI:112:LYS:HD3	1.98	0.61
36:BA:1141:U:H2'	46:BN:63:THR:HG21	1.82	0.61
36:BA:27:G:H22	36:BA:512:G:C2'	2.10	0.61
55:BW:14:PRO:O	55:BW:18:ARG:HB2	2.01	0.61
10:CJ:4:ILE:HD13	10:CJ:77:PRO:HB3	1.82	0.61
48:BP:101:VAL:HG12	48:BP:106:LEU:HB2	1.82	0.61
5:CE:80:ILE:HD12	5:CE:80:ILE:H	1.65	0.61
19:CS:11:VAL:HA	19:CS:38:SER:HB2	1.82	0.61
48:BP:64:LYS:C	48:BP:66:GLY:N	2.53	0.61
27:D1:62:VAL:HG21	27:D1:67:ILE:HA	1.82	0.61
2:AB:47:THR:HG22	2:AB:47:THR:O	2.00	0.61
38:DC:76:ALA:HB2	38:DC:114:VAL:HG23	1.82	0.61
51:BS:67:ARG:O	51:BS:71:ARG:HG3	2.01	0.61
13:CM:92:HIS:CE1	13:CM:98:VAL:HG21	2.36	0.61
43:DH:91:GLY:HA3	43:DH:94:TYR:HD2	1.64	0.61
3:AC:124:ILE:HG12	3:AC:130:VAL:HG22	1.82	0.61
51:DS:97:ARG:O	51:DS:97:ARG:NE	2.34	0.61
46:BN:74:ARG:HH12	46:BN:85:ILE:HD11	1.64	0.61
36:DA:2498:C:O2'	36:DA:2499:C:H5'	2.00	0.61
25:AZ:212:THR:HG23	25:AZ:212:THR:O	2.01	0.61
36:BA:2078:C:H2'	36:BA:2079:U:H6	1.65	0.61
40:BE:68:ALA:O	40:BE:70:ALA:N	2.33	0.61
2:AB:139:LYS:O	2:AB:143:GLU:HG3	2.00	0.61
14:CN:44:LEU:C	14:CN:44:LEU:HD12	2.20	0.61
1:AA:613:C:H2'	1:AA:614:A:H8	1.64	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:B6:30:THR:CG2	32:B6:31:PRO:HD2	2.30	0.61
36:DA:2726:U:H5'	36:DA:2726:U:O2	2.00	0.61
28:B2:7:ARG:O	28:B2:11:GLU:HB2	2.01	0.61
25:AZ:135:MET:HE2	25:AZ:151:GLU:HB2	1.83	0.61
25:AZ:176:LEU:O	25:AZ:180:GLU:HG3	2.00	0.61
36:DA:2313:C:H4'	42:DG:91:ARG:HD3	1.83	0.61
37:BB:105:A:OP1	58:BZ:72:ARG:NH1	2.32	0.61
35:D9:7:VAL:HG13	35:D9:34:GLN:CB	2.30	0.61
9:AI:50:LEU:O	9:AI:56:LEU:HA	2.00	0.61
53:DU:92:ARG:NH2	54:DV:10:LYS:HA	2.16	0.61
41:BF:119:ARG:NH1	41:BF:119:ARG:HG2	2.16	0.61
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.36	0.61
46:BN:68:GLU:HG3	46:BN:88:GLU:CD	2.21	0.61
41:BF:107:LYS:O	41:BF:109:GLY:N	2.33	0.61
40:DE:60:ASN:OD1	40:DE:62:PRO:HD2	2.00	0.61
1:CA:266:G:C5'	1:CA:267:C:C5	2.84	0.61
56:BX:50:LYS:H	56:BX:87:GLN:NE2	1.94	0.61
41:BF:28:ILE:CD1	41:BF:28:ILE:H	2.11	0.61
36:BA:1453:U:P	50:BR:77:ARG:HH11	2.22	0.61
48:DP:84:ASN:HA	48:DP:116:GLY:HA3	1.81	0.61
25:AZ:220:PRO:HB2	25:AZ:244:ARG:HD2	1.80	0.61
31:D5:3:LYS:H	31:D5:3:LYS:HD2	1.63	0.61
5:AE:63:ARG:O	5:AE:64:ARG:HB2	2.00	0.61
4:AD:104:VAL:HA	4:AD:107:ARG:HB2	1.83	0.61
49:DQ:39:PRO:O	49:DQ:40:ALA:HB2	2.00	0.61
1:CA:1282:C:O2'	1:CA:1283:G:H5'	2.00	0.61
2:AB:8:LYS:O	2:AB:10:LEU:N	2.33	0.61
12:AL:7:ILE:HD12	12:AL:7:ILE:N	2.13	0.61
38:BC:175:VAL:CG1	38:BC:188:ASN:HB3	2.30	0.61
1:CA:766:A:H2'	1:CA:767:A:H5'	1.82	0.61
40:BE:77:ILE:HG22	40:BE:78:LEU:N	2.15	0.61
3:AC:153:VAL:O	3:AC:154:SER:OG	2.14	0.61
22:AW:34:G:C2'	22:AW:35:A:H5'	2.31	0.61
39:BD:10:THR:HG23	39:BD:13:ARG:HB3	1.81	0.61
1:CA:413:G:N3	1:CA:413:G:H2'	2.14	0.61
1:CA:149:A:H2'	1:CA:150:C:C6	2.36	0.61
36:DA:796:C:H2'	36:DA:797:C:C6	2.35	0.61
1:CA:442:C:H42	1:CA:492:G:H1	1.49	0.61
38:BC:25:ALA:O	38:BC:29:VAL:HG22	2.00	0.61
31:D5:11:THR:HG23	36:DA:1264:G:H5'	1.82	0.61
26:B0:84:LEU:HD12	26:B0:84:LEU:H	1.66	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:839:U:H2'	1:CA:839:U:O2	2.00	0.61
41:BF:43:LYS:HA	41:BF:98:SER:HB3	1.82	0.61
25:CZ:231:ILE:O	25:CZ:234:ARG:HB2	2.00	0.61
53:BU:83:LEU:CG	53:BU:88:ILE:HD11	2.13	0.61
25:AZ:149:LEU:O	25:AZ:153:GLU:HG3	2.00	0.61
37:DB:43:C:H5'	37:DB:44:G:OP2	2.01	0.61
42:DG:73:ALA:H	42:DG:87:PRO:HG2	1.64	0.61
56:DX:36:LYS:HE2	56:DX:54:VAL:O	2.01	0.61
46:BN:46:VAL:O	46:BN:47:ALA:HB3	1.99	0.61
1:CA:973:G:H1'	10:CJ:55:LYS:HZ3	1.65	0.61
34:B8:61:LEU:O	34:B8:64:TYR:N	2.29	0.61
9:AI:16:ARG:CB	9:AI:64:THR:HB	2.25	0.61
41:DF:24:LEU:HB3	41:DF:25:PRO:CD	2.24	0.61
36:BA:195:A:H61	36:BA:198:C:H3'	1.65	0.61
48:BP:64:LYS:O	48:BP:66:GLY:N	2.31	0.61
32:B6:25:LYS:O	36:BA:2286:A:N1	2.34	0.61
22:AW:70:G:H2'	22:AW:71:G:C8	2.35	0.61
39:DD:147:LEU:HD13	39:DD:155:LEU:HD13	1.81	0.61
36:BA:2746:U:O4'	43:BH:139:GLN:HB2	1.99	0.61
39:DD:6:PHE:CE2	39:DD:13:ARG:NH2	2.66	0.61
13:CM:54:VAL:HG12	13:CM:58:GLU:HG2	1.82	0.61
27:D1:4:VAL:HB	27:D1:11:ARG:NH1	2.15	0.61
19:CS:50:ALA:HB1	19:CS:57:HIS:HB3	1.82	0.61
36:BA:528:A:O2'	36:BA:529:A:H5'	2.01	0.61
4:AD:149:ALA:O	4:AD:153:ARG:HG3	2.00	0.61
31:B5:11:THR:CG2	36:BA:1264:G:H5'	2.30	0.61
1:AA:1372:U:OP1	9:AI:71:SER:HB3	1.99	0.61
36:DA:1932:A:H2'	36:DA:1933:G:O4'	2.00	0.61
24:CY:7:G:H3'	24:CY:8:4SU:C5'	2.31	0.61
4:AD:170:VAL:HG12	4:AD:171:GLY:H	1.66	0.61
39:DD:125:ILE:HD12	39:DD:137:PRO:HD3	1.83	0.61
36:DA:2345:G:N3	36:DA:2381:C:H2'	2.15	0.61
1:AA:1218:C:H2'	1:AA:1219:U:C6	2.35	0.61
5:AE:41:VAL:HG13	5:AE:113:ALA:HA	1.82	0.61
36:BA:1407:C:H42	36:BA:1595:G:H1	1.49	0.61
36:BA:2528:U:O2'	36:BA:2529:G:H3'	2.01	0.61
25:CZ:300:ARG:HG3	25:CZ:301:GLY:H	1.65	0.61
26:D0:46:LYS:O	26:D0:78:TYR:HA	2.01	0.61
54:BV:79:VAL:O	54:BV:80:GLN:HB2	2.01	0.61
1:CA:137:C:H42	1:CA:226:G:H1	1.46	0.61
25:AZ:17:ILE:HG13	25:AZ:104:LEU:HA	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:193:ASN:HB3	25:AZ:196:VAL:H	1.66	0.61
47:BO:76:ALA:CB	52:BT:75:ILE:HD13	2.26	0.61
57:DY:7:VAL:HB	57:DY:8:LYS:HD2	1.82	0.61
10:CJ:50:ILE:N	10:CJ:50:ILE:HD13	2.05	0.61
36:DA:2477:C:C5'	36:DA:2477:C:H6	2.08	0.61
1:CA:556:C:C2'	1:CA:557:G:H5'	2.31	0.61
5:AE:80:ILE:O	5:AE:80:ILE:HD12	2.01	0.61
22:CW:48:C:C2'	22:CW:59:U:H1'	2.26	0.61
36:DA:803:U:O2'	36:DA:804:A:H5'	2.00	0.61
3:CC:22:TRP:CZ2	14:CN:54:PRO:HG2	2.35	0.61
36:BA:2787:C:O2	40:BE:61:ARG:NH1	2.33	0.61
40:BE:73:GLU:HA	40:BE:73:GLU:OE1	2.01	0.61
19:CS:41:VAL:HB	19:CS:44:MET:HG2	1.83	0.61
4:AD:88:VAL:HG12	4:AD:90:GLY:H	1.66	0.61
39:DD:147:LEU:HD13	39:DD:155:LEU:CD1	2.28	0.61
36:DA:81:G:H21	57:DY:2:ARG:HH12	1.46	0.61
19:AS:42:PRO:O	19:AS:44:MET:SD	2.58	0.61
1:CA:766:A:C2'	1:CA:767:A:H5'	2.30	0.61
27:B1:50:ARG:HG2	27:B1:59:THR:CB	2.30	0.61
3:CC:40:ARG:NH1	3:CC:40:ARG:HG3	2.14	0.61
10:CJ:96:ILE:H	10:CJ:96:ILE:HD13	1.63	0.61
22:AV:61:C:H5'	22:AV:62:C:OP2	2.01	0.61
36:DA:1165:U:H2'	36:DA:1166:C:C6	2.35	0.61
36:BA:845:G:O2'	36:BA:846:C:H5	1.83	0.61
1:CA:405:U:O2	1:CA:498:U:H2'	2.00	0.61
52:DT:118:ARG:HA	52:DT:121:ILE:HB	1.83	0.61
7:AG:152:ALA:O	7:AG:155:ARG:HG3	2.01	0.61
50:DR:114:VAL:O	50:DR:114:VAL:HG23	1.99	0.61
42:DG:75:LYS:O	42:DG:84:LYS:HA	2.01	0.61
27:B1:56:GLN:O	27:B1:57:GLU:HB3	2.01	0.61
58:DZ:62:PRO:O	58:DZ:64:GLY:N	2.34	0.61
3:CC:189:ALA:HB3	3:CC:196:LEU:HB2	1.82	0.61
9:CI:104:ARG:HG3	9:CI:104:ARG:HH11	1.66	0.61
36:BA:1221:C:H2'	36:BA:1221(A):C:C6	2.35	0.61
7:CG:22:LEU:HD22	7:CG:62:PHE:CE2	2.35	0.61
40:DE:171:GLU:HB3	40:DE:185:LYS:HG2	1.82	0.61
38:DC:119:VAL:HG23	38:DC:123:VAL:HG11	1.82	0.61
2:CB:22:LYS:CA	2:CB:22:LYS:HZ2	2.11	0.61
48:DP:59:LEU:CA	48:DP:61:ARG:CZ	2.78	0.61
2:AB:114:ARG:HD2	2:AB:141:GLU:OE1	2.00	0.61
39:BD:26:LYS:N	39:BD:26:LYS:HE2	2.15	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DG:8:LYS:O	42:DG:11:TYR:HB3	2.00	0.61
3:AC:77:ILE:HA	3:AC:84:ILE:HG22	1.83	0.61
41:BF:125:LEU:HD23	41:BF:125:LEU:N	2.06	0.61
3:AC:12:LEU:HD13	3:AC:18:TRP:CZ3	2.36	0.61
36:BA:2179:C:H1'	36:BA:2180:U:C2	2.35	0.61
36:BA:1141:U:H2'	46:BN:63:THR:CG2	2.31	0.61
48:BP:115:LEU:HB3	48:BP:131:SER:HB3	1.82	0.61
51:DS:98:VAL:CG1	51:DS:100:ALA:HB2	2.29	0.61
25:AZ:13:ASN:CB	25:AZ:78:SER:HB3	2.27	0.61
1:CA:677:U:H3	1:CA:713:G:H22	1.49	0.61
42:BG:178:PHE:O	42:BG:180:PHE:HD1	1.84	0.61
50:BR:96:ARG:HD3	50:BR:98:LEU:CD1	2.31	0.61
1:CA:573:A:H5'	1:CA:573:A:C8	2.30	0.61
49:DQ:64:ILE:HG22	49:DQ:65:PHE:N	2.14	0.61
1:CA:719:C:C2	18:CR:50:ILE:HG12	2.36	0.61
2:AB:7:VAL:O	2:AB:11:LEU:HB2	2.00	0.61
2:CB:55:PHE:N	2:CB:55:PHE:CD1	2.68	0.61
50:DR:52:ILE:O	50:DR:55:ALA:HB3	2.00	0.61
36:DA:271(X):G:O3'	36:DA:272(D):G:H4'	1.99	0.61
49:BQ:56:ARG:HG3	49:BQ:56:ARG:HH11	1.64	0.61
38:BC:99:ILE:CD1	38:BC:102:LYS:NZ	2.63	0.61
36:BA:1332:G:N2	36:BA:1609:A:O2'	2.33	0.61
54:BV:15:GLU:HB3	54:BV:16:PRO:CD	2.31	0.61
36:DA:1173:G:H5'	36:DA:1174:A:OP1	2.01	0.61
36:BA:1311:G:N2	36:BA:1603:A:H62	1.99	0.61
51:DS:52:SER:HB3	51:DS:55:ALA:HB3	1.82	0.61
46:DN:55:VAL:HG22	46:DN:56:ASN:H	1.65	0.61
55:DW:29:LEU:HG	55:DW:33:ARG:HD2	1.82	0.61
51:DS:29:PHE:C	51:DS:29:PHE:CD1	2.73	0.61
2:AB:209:ARG:NH1	2:AB:239:VAL:HG21	2.16	0.61
25:AZ:388:ILE:O	25:AZ:395:VAL:HG22	2.01	0.61
1:AA:743:U:H2'	1:AA:744:C:C6	2.36	0.61
8:AH:86:ILE:HG12	8:AH:135:CYS:HA	1.83	0.61
23:AX:11:U:O2	23:AX:11:U:H2'	1.99	0.61
36:BA:2241:A:H2'	36:BA:2242:G:C8	2.36	0.61
36:DA:1403:C:H5''	36:DA:1471:A:H1'	1.82	0.61
42:BG:152:LEU:HD23	42:BG:152:LEU:H	1.65	0.61
36:DA:1773:A:C2'	36:DA:1774:C:H5'	2.30	0.61
34:D8:33:ASN:CG	34:D8:34:TRP:N	2.54	0.61
34:D8:32:LEU:HD13	36:DA:2392:A:OP1	2.00	0.61
52:DT:23:ARG:HA	52:DT:52:ILE:HD12	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BU:110:VAL:O	53:BU:113:ALA:HB3	2.01	0.61
1:CA:1123:A:C2	1:CA:1150:U:H5	2.19	0.61
25:CZ:131:ILE:HD11	25:CZ:163:PHE:CZ	2.36	0.61
52:BT:106:SER:HA	52:BT:110:ILE:HG12	1.82	0.61
3:AC:50:ALA:HB1	3:AC:70:VAL:HG11	1.82	0.61
43:DH:88:LEU:CD1	43:DH:130:ARG:HD2	2.31	0.61
42:BG:72:ARG:CB	42:BG:87:PRO:HD2	2.31	0.61
10:AJ:57:LYS:HD3	10:AJ:58:ASP:N	2.16	0.61
48:DP:45:LEU:CD1	48:DP:46:LYS:H	2.14	0.61
20:AT:57:ARG:NH1	20:AT:102:GLY:HA2	2.10	0.61
7:CG:37:ASN:HD21	9:CI:40:LEU:HA	1.66	0.61
37:DB:61:G:O2'	37:DB:62:C:H5'	2.01	0.61
1:AA:1239:A:N6	1:AA:1299:A:N6	2.43	0.61
48:BP:33:ARG:O	48:BP:34:GLY:C	2.38	0.61
1:AA:266:G:H5'	1:AA:267:C:C5	2.36	0.61
40:DE:35:GLN:HG2	40:DE:36:ARG:N	2.15	0.61
31:B5:31:VAL:HG13	31:B5:42:PRO:HG3	1.82	0.61
36:BA:1747:G:H2'	36:BA:1747(A):G:C8	2.36	0.61
48:DP:83:VAL:HG12	48:DP:113:LYS:O	2.01	0.61
25:AZ:324:LYS:HG3	25:AZ:365:GLY:CA	2.27	0.61
42:BG:90:LEU:HD12	42:BG:90:LEU:C	2.21	0.61
36:BA:1528:A:H2'	36:BA:1528:A:N3	2.16	0.61
41:DF:37:VAL:HG11	48:DP:7:ARG:HH12	1.66	0.61
1:CA:62:U:H2'	1:CA:63:C:C5'	2.30	0.61
1:CA:1275:A:O2'	1:CA:1276:G:H5'	2.00	0.61
30:D4:31:ILE:CG2	30:D4:33:VAL:HG23	2.31	0.61
37:BB:92:C:H5''	58:BZ:79:ARG:HH22	1.65	0.61
54:DV:19:LYS:CE	54:DV:20:LEU:H	2.13	0.61
49:BQ:52:VAL:O	49:BQ:54:MET:N	2.34	0.61
36:DA:1784:A:H4'	36:DA:1785:A:O5'	2.01	0.61
23:CX:24:G:H1	24:CY:34:C:N4	1.99	0.61
4:CD:102:ASP:OD1	4:CD:136:PRO:O	2.19	0.61
36:DA:201:C:O2'	36:DA:202:U:H5'	2.01	0.61
5:CE:64:ARG:HH11	5:CE:64:ARG:HG3	1.66	0.61
36:DA:2028:U:H2'	36:DA:2029:G:C8	2.36	0.61
1:AA:954:G:O2'	13:AM:120:LYS:HD2	2.01	0.61
36:BA:248:G:H5''	36:BA:386:G:N2	2.15	0.61
1:CA:148:G:H2'	1:CA:149:A:C8	2.36	0.61
36:BA:271(F):C:C2'	36:BA:271(G):C:H5'	2.31	0.61
15:AO:62:GLN:HA	15:AO:62:GLN:HE21	1.66	0.61
39:BD:142:VAL:HG21	39:BD:191:ALA:HB1	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DS:67:ARG:O	51:DS:71:ARG:HG3	2.00	0.61
32:B6:11:LEU:CD1	32:B6:12:GLU:H	2.14	0.61
27:D1:30:VAL:HG23	27:D1:31:GLY:H	1.66	0.61
32:D6:27:LYS:HE2	36:DA:2285:C:OP2	2.00	0.61
52:DT:32:TYR:CD1	52:DT:32:TYR:N	2.69	0.61
42:DG:85:GLY:C	42:DG:87:PRO:HD3	2.21	0.61
36:BA:309:G:O3'	57:BY:18:GLY:HA2	2.01	0.61
22:CV:4:C:H3'	22:CV:5:G:H5''	1.83	0.61
36:DA:1009:A:H1'	53:DU:59:ARG:NH1	2.15	0.61
36:DA:996:A:H4'	53:DU:92:ARG:CD	2.31	0.61
36:BA:2147:G:H2'	36:BA:2148:G:O4'	2.01	0.61
14:CN:48:ALA:HB2	14:CN:53:LEU:HD12	1.83	0.61
46:DN:71:ILE:HG21	46:DN:84:LYS:HB3	1.82	0.61
50:DR:3:HIS:O	50:DR:5:LYS:N	2.29	0.61
25:AZ:267:VAL:CG2	25:AZ:288:VAL:HG13	2.31	0.61
1:AA:370:C:O2'	1:AA:371:G:H5'	2.01	0.61
2:CB:72:GLY:HA2	2:CB:165:VAL:HG22	1.82	0.61
13:AM:80:ARG:C	13:AM:82:MET:H	2.04	0.61
49:DQ:19:GLY:HA3	58:DZ:79:ARG:NH1	2.15	0.61
36:DA:1087:G:O2'	36:DA:1089:G:H5'	2.00	0.61
40:BE:93:VAL:O	40:BE:95:ILE:N	2.33	0.61
36:BA:191:A:O2'	36:BA:192:C:H5'	2.01	0.61
41:BF:32:LEU:O	41:BF:36:VAL:HG23	2.01	0.61
36:DA:1038:C:C3'	36:DA:1039:G:H5''	2.31	0.61
46:BN:3:THR:HG22	46:BN:4:TYR:H	1.66	0.61
46:DN:108:PRO:O	46:DN:109:LYS:HG3	2.00	0.61
36:BA:2453:A:H2'	36:BA:2454:G:C8	2.35	0.61
47:DO:43:VAL:HG23	47:DO:56:ASP:O	2.01	0.61
36:DA:1257:C:H4'	41:DF:83:PHE:CD1	2.35	0.61
36:BA:2199:A:H3'	36:BA:2200:C:H6	1.65	0.61
12:CL:126:LYS:HA	12:CL:126:LYS:HE2	1.82	0.61
27:D1:65:SER:O	27:D1:66:HIS:HB2	1.99	0.61
7:CG:52:GLU:O	7:CG:54:THR:N	2.34	0.61
36:DA:1013:C:H2'	36:DA:1014:U:C6	2.36	0.61
53:DU:82:GLY:C	53:DU:84:LYS:H	2.03	0.61
20:AT:51:GLU:O	20:AT:54:LYS:HB3	2.01	0.61
58:BZ:155:LEU:HD23	58:BZ:155:LEU:H	1.66	0.61
16:AP:22:THR:HA	16:AP:33:ILE:HG12	1.82	0.61
48:DP:16:ARG:HB2	48:DP:16:ARG:HH11	1.65	0.60
31:D5:44:THR:HG21	50:DR:101:ALA:CB	2.28	0.60
52:BT:28:VAL:HG22	52:BT:45:PHE:O	2.00	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BQ:132:VAL:HG11	49:BQ:137:TYR:OH	2.01	0.60
9:AI:88:TYR:O	9:AI:89:ASN:HB2	1.99	0.60
10:AJ:40:LEU:CD2	10:AJ:40:LEU:H	2.06	0.60
46:BN:28:THR:HG23	46:BN:29:LYS:H	1.64	0.60
42:BG:43:LEU:C	42:BG:45:GLU:H	2.02	0.60
14:CN:8:GLU:C	14:CN:10:ALA:H	2.03	0.60
39:DD:26:LYS:O	39:DD:27:THR:HG22	2.01	0.60
53:BU:13:LYS:HD3	53:BU:13:LYS:H	1.66	0.60
3:AC:34:LEU:HD22	3:AC:38:ARG:NE	2.13	0.60
27:D1:7:ILE:CD1	27:D1:70:VAL:HG22	2.31	0.60
57:DY:31:LEU:HB2	57:DY:32:PRO:HA	1.82	0.60
14:AN:3:ARG:O	14:AN:3:ARG:HG2	2.01	0.60
5:AE:11:ILE:HD11	5:AE:33:VAL:HG23	1.82	0.60
50:BR:75:LEU:O	50:BR:75:LEU:HD13	2.01	0.60
36:DA:483:A:H4'	57:DY:48:ALA:O	2.00	0.60
54:BV:19:LYS:HZ3	54:BV:20:LEU:H	1.48	0.60
52:DT:106:SER:HA	52:DT:110:ILE:HD11	1.81	0.60
29:D3:27:GLY:C	29:D3:28:LEU:HD23	2.22	0.60
16:AP:43:LYS:O	16:AP:45:THR:N	2.34	0.60
32:B6:42:TRP:CE3	32:B6:42:TRP:HA	2.36	0.60
22:AV:72:C:H2'	22:AV:73:A:H5''	1.81	0.60
36:DA:719:C:H2'	36:DA:720:C:C6	2.36	0.60
1:AA:39:G:O2'	1:AA:40:C:H5'	2.00	0.60
36:DA:693:C:O2'	36:DA:694:U:H5'	2.01	0.60
36:BA:1323:U:H2'	36:BA:1324:G:H5'	1.81	0.60
36:DA:650:C:H3'	36:DA:651:G:H5''	1.83	0.60
32:B6:11:LEU:HD11	32:B6:51:GLU:HG3	1.81	0.60
32:B6:45:LYS:O	32:B6:46:HIS:HB3	2.00	0.60
28:B2:2:LYS:HE3	28:B2:59:ARG:HH22	1.65	0.60
25:AZ:147:LEU:HB3	25:AZ:172:ARG:NH1	2.17	0.60
25:AZ:241:ARG:HA	25:AZ:285:ASN:HD21	1.66	0.60
3:AC:84:ILE:HG23	3:AC:85:ARG:HD2	1.81	0.60
53:BU:36:ARG:CB	53:BU:36:ARG:HH11	2.08	0.60
1:AA:1368:G:OP2	9:AI:112:LYS:CD	2.50	0.60
36:DA:654(M):C:H2'	36:DA:654(N):G:N7	2.16	0.60
30:B4:22:ILE:N	30:B4:22:ILE:HD12	2.10	0.60
10:AJ:4:ILE:HD13	10:AJ:77:PRO:HB3	1.82	0.60
40:DE:28:ALA:CB	40:DE:93:VAL:HG22	2.31	0.60
1:AA:397:A:N7	1:AA:547:A:O2'	2.30	0.60
33:B7:12:ARG:NH2	36:BA:465:G:OP1	2.32	0.60
25:AZ:326:GLU:H	25:AZ:326:GLU:CD	2.05	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DQ:18:LYS:HB2	49:DQ:98:LYS:NZ	2.16	0.60
49:DQ:39:PRO:HG3	49:DQ:99:PRO:HD3	1.83	0.60
49:DQ:18:LYS:N	49:DQ:98:LYS:HE3	2.16	0.60
1:CA:323:U:H4'	20:CT:22:ARG:HG3	1.82	0.60
37:BB:92:C:H5''	58:BZ:79:ARG:NH2	2.16	0.60
57:BY:49:VAL:O	57:BY:50:ARG:HB2	2.01	0.60
1:CA:827:U:H2'	1:CA:870:U:O4	2.01	0.60
25:CZ:359:VAL:O	25:CZ:359:VAL:HG12	2.01	0.60
46:DN:3:THR:HG21	46:DN:5:VAL:HG23	1.83	0.60
1:AA:532:A:H2	1:AA:1206:G:H21	1.48	0.60
54:BV:15:GLU:HB3	54:BV:16:PRO:HD2	1.82	0.60
1:CA:1003:G:N2	1:CA:1039:C:H42	1.98	0.60
36:DA:1880:C:C2'	36:DA:1881:C:H5''	2.31	0.60
36:BA:644:A:H2	36:BA:2369:A:H1'	1.66	0.60
36:BA:2502:G:H5''	36:BA:2503:A:C5'	2.31	0.60
36:BA:2464:C:O2'	36:BA:2465:C:H6	1.83	0.60
2:CB:142:LEU:CD2	2:CB:146:GLN:HE21	2.14	0.60
36:DA:614(A):U:H4'	36:DA:614(B):G:C5'	2.31	0.60
42:DG:122:PRO:HD3	42:DG:181:ARG:HB3	1.82	0.60
44:DJ:35:UNK:C	44:DJ:37:UNK:N	2.63	0.60
36:DA:320:A:H2'	41:DF:136:THR:OG1	2.02	0.60
45:DK:32:UNK:HA	45:DK:63:UNK:CB	2.31	0.60
1:CA:311:C:HO2'	1:CA:312:C:H5'	1.66	0.60
3:AC:142:MET:C	3:AC:144:SER:H	2.03	0.60
34:D8:62:LEU:N	34:D8:63:PRO:HD2	2.16	0.60
52:DT:91:ARG:HG2	52:DT:116:ALA:HA	1.83	0.60
28:B2:27:GLU:C	28:B2:29:LYS:H	2.03	0.60
25:AZ:23:GLY:O	25:AZ:24:LYS:O	2.18	0.60
49:DQ:133:ARG:CB	49:DQ:133:ARG:HH11	2.13	0.60
36:DA:2302:G:N3	42:DG:128:ARG:HG3	2.15	0.60
41:BF:132:VAL:HG13	41:BF:133:ASN:N	2.16	0.60
58:DZ:151:HIS:CB	58:DZ:170:THR:HA	2.30	0.60
41:BF:108:LYS:O	41:BF:112:MET:HB2	2.01	0.60
36:BA:626:U:N3	48:BP:105:LEU:HG	2.16	0.60
48:BP:84:ASN:HB3	48:BP:86:LYS:HB3	1.83	0.60
32:B6:36:LEU:HD23	32:B6:36:LEU:C	2.22	0.60
4:AD:20:TYR:HA	4:AD:26:CYS:CB	2.31	0.60
12:CL:53:ARG:HD2	12:CL:53:ARG:N	2.16	0.60
27:D1:7:ILE:HD12	27:D1:70:VAL:HG22	1.83	0.60
22:AW:72:C:H2'	22:AW:73:A:O4'	2.01	0.60
58:BZ:146:ILE:HA	58:BZ:174:VAL:CG1	2.28	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:46:LYS:C	2:AB:48:MET:H	2.03	0.60
36:DA:2122:U:H2'	36:DA:2123:G:C8	2.36	0.60
4:AD:25:ARG:C	4:AD:27:TYR:H	2.04	0.60
36:DA:1721:G:H8	36:DA:1741:A:H62	1.47	0.60
36:BA:1771:C:H1'	36:BA:1786:A:H8	1.63	0.60
1:CA:1446:U:O2	1:CA:1452:C:H1'	2.01	0.60
47:BO:24:VAL:HG12	47:BO:33:ALA:HB2	1.82	0.60
42:BG:11:TYR:O	42:BG:15:VAL:HB	2.01	0.60
43:DH:91:GLY:HA3	43:DH:94:TYR:CD2	2.36	0.60
1:CA:1498:U:C5	23:CX:20:U:H5'	2.36	0.60
3:CC:23:TYR:CD1	3:CC:24:ALA:N	2.69	0.60
40:DE:87:GLU:C	40:DE:89:ASP:H	2.04	0.60
13:AM:108:ARG:HH11	13:AM:108:ARG:HG3	1.67	0.60
1:AA:600:C:OP2	8:AH:97:VAL:HG12	2.01	0.60
1:AA:585:G:H4'	12:AL:8:ASN:ND2	2.16	0.60
49:BQ:41:TRP:CD1	49:BQ:96:VAL:HG12	2.36	0.60
1:AA:487:A:H2'	1:AA:488:C:O4'	2.02	0.60
16:CP:1:MET:HG3	16:CP:65:GLN:HG2	1.84	0.60
1:AA:850:U:O2'	1:AA:851:G:H5'	2.02	0.60
36:DA:271(F):C:C2'	36:DA:271(G):C:H5'	2.32	0.60
25:AZ:344:PHE:O	25:AZ:346:THR:N	2.34	0.60
38:BC:215:THR:OG1	38:BC:216:THR:N	2.35	0.60
56:BX:41:ASN:N	56:BX:41:ASN:HD22	1.98	0.60
37:DB:114:C:H2'	37:DB:115:G:C8	2.36	0.60
25:CZ:70:TYR:C	25:CZ:70:TYR:CD1	2.75	0.60
32:B6:35:GLU:HB3	32:B6:51:GLU:HB2	1.84	0.60
36:DA:2685:G:HO2'	36:DA:2726:U:H5	1.46	0.60
39:BD:238:GLY:O	39:BD:239:ARG:O	2.20	0.60
31:D5:57:VAL:HG12	31:D5:58:LEU:N	2.16	0.60
58:BZ:166:SER:HB2	58:BZ:167:PRO:CA	2.31	0.60
25:AZ:155:ARG:HG2	25:AZ:165:GLY:O	2.00	0.60
25:AZ:196:VAL:O	25:AZ:199:ILE:N	2.27	0.60
39:DD:43:ARG:HB3	39:DD:54:ARG:CB	2.31	0.60
39:DD:54:ARG:O	39:DD:218:ARG:NH1	2.34	0.60
25:CZ:195:TRP:CE3	25:CZ:195:TRP:HA	2.36	0.60
42:DG:34:LEU:HD21	42:DG:100:TRP:HH2	1.65	0.60
42:DG:7:LEU:HD22	42:DG:100:TRP:CE3	2.36	0.60
36:DA:481:G:OP2	57:DY:47:LYS:HD2	2.01	0.60
57:BY:44:ILE:HG22	57:BY:45:VAL:N	2.16	0.60
26:D0:36:ILE:HD11	36:DA:2355:C:H4'	1.83	0.60
46:DN:47:ALA:HB2	46:DN:112:LEU:CD1	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2312:U:H2'	36:BA:2313:C:C5'	2.29	0.60
1:CA:555:C:H2'	1:CA:556:C:H6	1.67	0.60
36:DA:999:U:H5''	36:DA:1154:G:O6	2.02	0.60
46:DN:74:ARG:HH12	46:DN:85:ILE:CD1	2.14	0.60
37:DB:105:A:H2'	37:DB:106:G:O4'	2.01	0.60
58:DZ:123:ASP:O	58:DZ:124:ILE:HG12	2.02	0.60
9:CI:118:LYS:O	9:CI:119:ALA:CB	2.49	0.60
42:BG:139:LEU:CD2	42:BG:149:VAL:HG21	2.31	0.60
31:D5:25:LEU:CD2	31:D5:26:THR:H	2.13	0.60
30:B4:27:THR:HG21	42:BG:62:LEU:HG	1.84	0.60
13:CM:49:THR:O	13:CM:53:VAL:HG23	2.01	0.60
46:BN:30:ILE:CG2	46:BN:120:LEU:HD21	2.32	0.60
36:DA:2334:G:C5'	51:DS:13:ARG:HD3	2.29	0.60
51:DS:99:LYS:HB3	51:DS:99:LYS:HZ2	1.66	0.60
4:AD:91:SER:O	4:AD:92:VAL:C	2.40	0.60
36:DA:1798:U:OP2	39:DD:274:ARG:NH2	2.34	0.60
36:DA:330:A:O2'	36:DA:331:A:C8	2.54	0.60
50:BR:103:ARG:HH11	50:BR:110:PRO:HD3	1.65	0.60
36:BA:970:C:H2'	36:BA:971:C:H6	1.65	0.60
36:DA:2199:A:C2	36:DA:2200:C:H1'	2.37	0.60
1:CA:1217:C:OP1	14:CN:9:LYS:HE3	2.00	0.60
9:CI:20:ARG:HH11	9:CI:20:ARG:HG3	1.67	0.60
39:BD:64:ILE:HG13	39:BD:64:ILE:O	2.01	0.60
28:D2:65:ASN:HD21	36:DA:112:U:H5'	1.66	0.60
1:CA:1128:C:O2'	1:CA:1130:A:C8	2.52	0.60
1:CA:620:C:C2	4:CD:135:LEU:HG	2.36	0.60
4:CD:138:TYR:HD1	4:CD:138:TYR:C	2.03	0.60
36:DA:440:G:N2	41:DF:46:ARG:NH2	2.50	0.60
36:DA:18:C:O3'	53:DU:23:GLY:HA2	2.00	0.60
4:AD:170:VAL:HG12	4:AD:171:GLY:N	2.16	0.60
1:AA:748:C:H4'	1:AA:749:C:O5'	2.01	0.60
52:BT:61:PHE:CE1	52:BT:76:PHE:HB2	2.36	0.60
36:BA:2533:A:H2'	36:BA:2534:A:O4'	2.01	0.60
3:CC:172:ARG:HH21	3:CC:174:PRO:HG2	1.66	0.60
16:AP:49:LEU:HD22	16:AP:73:LEU:HD22	1.83	0.60
36:DA:1203:G:H3'	36:DA:1204:A:H5''	1.83	0.60
24:CY:76:A:H62	25:CZ:234:ARG:HH12	1.46	0.60
34:D8:59:LYS:HE2	48:DP:50:ARG:HB3	1.83	0.60
36:DA:833:U:H5''	48:DP:48:PRO:HB2	1.83	0.60
48:DP:56:SER:O	48:DP:58:THR:N	2.35	0.60
36:DA:2428:G:H21	48:DP:60:MET:HE3	1.67	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DY:27:VAL:HG12	57:DY:28:LYS:N	2.16	0.60
25:AZ:145:GLU:O	25:AZ:149:LEU:HB2	2.00	0.60
38:BC:79:LYS:HD3	38:BC:119:VAL:CG1	2.23	0.60
57:DY:63:LYS:HG2	57:DY:64:GLU:H	1.65	0.60
36:BA:99:U:H4'	36:BA:102:G:H1'	1.83	0.60
57:BY:67:LEU:HD21	57:BY:71:LYS:HE2	1.82	0.60
46:BN:115:ARG:HA	46:BN:118:LYS:HZ3	1.66	0.60
3:AC:82:GLU:N	3:AC:85:ARG:CD	2.61	0.60
36:DA:1156:A:OP1	53:DU:55:ARG:NH1	2.35	0.60
1:AA:1117:G:C8	1:AA:1117:G:H5'	2.34	0.60
37:BB:30:C:H1'	37:BB:57:A:N6	2.10	0.60
37:BB:56:G:H4'	37:BB:57:A:O5'	2.01	0.60
16:CP:20:VAL:HG22	16:CP:21:VAL:N	2.17	0.60
48:BP:34:GLY:O	48:BP:35:HIS:HB2	2.00	0.60
14:CN:7:ILE:HG13	14:CN:8:GLU:N	2.15	0.60
29:B3:22:ALA:HA	29:B3:46:ASN:HD21	1.66	0.60
40:DE:24:THR:HG21	40:DE:188:VAL:HG13	1.81	0.60
48:DP:95:VAL:HG23	48:DP:125:VAL:CA	2.31	0.60
36:BA:1528:A:N6	36:BA:1544:A:C2	2.69	0.60
38:DC:63:SER:HA	38:DC:160:ARG:CA	2.31	0.60
1:CA:945:G:C2	1:CA:1337:G:C2	2.90	0.60
37:DB:15:A:H3'	37:DB:16:G:C5'	2.30	0.60
9:AI:79:LEU:O	9:AI:79:LEU:HD13	2.01	0.60
6:AF:67:MET:HB2	6:AF:68:PRO:HD2	1.83	0.60
6:AF:91:VAL:HG12	6:AF:92:LYS:N	2.16	0.60
54:DV:2:PHE:CE2	54:DV:13:ARG:NH1	2.69	0.60
29:B3:27:GLY:C	29:B3:28:LEU:HD23	2.22	0.60
36:BA:1495:A:N3	36:BA:1496:A:C2	2.69	0.60
39:BD:273:ARG:C	39:BD:274:ARG:HG3	2.21	0.60
4:CD:138:TYR:C	4:CD:138:TYR:CD1	2.74	0.60
56:BX:29:TRP:CE3	56:BX:78:LYS:HB3	2.36	0.60
50:DR:28:LEU:HB2	50:DR:34:ILE:HG13	1.83	0.60
47:BO:87:ILE:HG23	47:BO:91:LEU:HA	1.83	0.60
36:BA:2866:U:C6	36:BA:2868:A:H1'	2.37	0.60
1:CA:8:A:N7	4:CD:208:SER:HB2	2.16	0.60
36:DA:280:C:H3'	36:DA:281:G:H8	1.66	0.60
17:AQ:11:VAL:O	17:AQ:12:SER:HB3	2.02	0.60
36:DA:2866:U:C6	36:DA:2868:A:H1'	2.37	0.60
35:B9:2:LYS:HE2	36:BA:2526:G:O2'	2.01	0.60
38:BC:167:LYS:O	38:BC:167:LYS:HD2	2.01	0.60
36:BA:1790:C:H2'	36:BA:1791:A:C5	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:359:VAL:O	25:AZ:359:VAL:HG12	2.02	0.60
32:D6:5:VAL:HB	32:D6:8:LYS:HB3	1.84	0.60
34:D8:42:ARG:O	34:D8:44:LYS:N	2.32	0.60
42:DG:114:ILE:O	42:DG:115:ARG:HB2	2.01	0.60
46:BN:132:ALA:O	46:BN:133:GLN:HB2	2.02	0.60
10:CJ:50:ILE:HG12	14:CN:41:ARG:NE	2.16	0.60
13:CM:9:ILE:N	13:CM:9:ILE:HD12	2.16	0.60
3:CC:85:ARG:N	3:CC:85:ARG:HD2	2.17	0.60
41:DF:84:VAL:O	41:DF:86:GLY:N	2.33	0.60
55:BW:11:ARG:NH2	55:BW:98:LYS:HB3	2.17	0.60
52:BT:39:ARG:CD	52:BT:39:ARG:H	2.08	0.60
36:BA:2068:U:N3	36:BA:2430:A:H2	1.94	0.60
5:CE:144:THR:O	5:CE:148:VAL:HG23	2.01	0.60
4:AD:61:LYS:HE2	4:AD:62:GLN:HE22	1.64	0.60
12:CL:27:LEU:HD23	12:CL:62:SER:HB3	1.83	0.60
4:AD:31:CYS:C	4:AD:33:MET:N	2.53	0.60
31:D5:3:LYS:HE2	36:DA:747:U:OP2	2.01	0.60
36:DA:266:G:H2'	36:DA:267:C:C5'	2.30	0.60
36:DA:2298:A:H2'	36:DA:2299:G:O4'	2.02	0.60
42:BG:60:LEU:O	42:BG:64:THR:HG22	2.01	0.60
3:CC:65:ALA:O	3:CC:100:ALA:O	2.19	0.60
5:AE:148:VAL:O	5:AE:151:LEU:HB2	2.02	0.60
36:DA:1076:C:H42	36:DA:1088:A:H61	1.48	0.60
1:AA:505:G:H2'	1:AA:506:G:H8	1.66	0.60
26:B0:53:MET:CG	26:B0:57:PHE:HA	2.31	0.60
53:BU:69:CYS:HG	53:BU:79:PHE:HD2	1.44	0.60
36:BA:893:C:H2'	36:BA:894:C:C6	2.35	0.60
7:AG:113:GLU:CG	7:AG:119:ARG:HG2	2.32	0.60
4:AD:159:ARG:HG3	4:AD:159:ARG:NH1	2.17	0.60
36:DA:863:A:O2'	36:DA:864:G:H5'	2.00	0.60
36:DA:67:U:O2'	36:DA:68:G:H5'	2.02	0.60
13:AM:118:ALA:CB	22:AV:28:G:O3'	2.49	0.60
40:DE:137:HIS:HB3	40:DE:138:PRO:HD2	1.82	0.60
36:DA:2720:U:O2	36:DA:2720:U:H2'	2.01	0.60
1:AA:1418:A:H3'	1:AA:1419:G:O4'	2.02	0.60
36:BA:752:A:O2'	36:BA:753:C:OP2	2.18	0.60
49:DQ:68:ILE:HD13	49:DQ:103:MET:HG2	1.84	0.60
17:CQ:11:VAL:O	17:CQ:20:THR:HB	2.02	0.60
32:D6:15:GLU:OE1	32:D6:18:ARG:CG	2.49	0.60
39:BD:30:GLU:HG3	39:BD:63:ARG:NE	2.16	0.60
25:CZ:277:LEU:HD12	25:CZ:279:GLU:N	2.17	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:167:PRO:HG2	2:AB:192:SER:OG	2.01	0.60
57:DY:98:VAL:O	57:DY:99:CYS:SG	2.58	0.60
1:AA:980:C:H2'	1:AA:981:U:H5'	1.84	0.60
54:BV:39:LEU:O	54:BV:40:LEU:HB2	2.01	0.60
1:CA:534:U:H6	1:CA:534:U:C5'	2.06	0.60
10:AJ:48:THR:CG2	10:AJ:62:HIS:ND1	2.64	0.60
39:DD:242:ARG:HG3	39:DD:242:ARG:NH1	2.15	0.60
48:DP:147:LEU:O	48:DP:148:LEU:HB2	2.01	0.60
3:CC:33:LEU:HD21	14:CN:53:LEU:HD23	1.84	0.60
40:DE:59:VAL:HG22	40:DE:62:PRO:O	2.02	0.60
48:BP:115:LEU:HG	48:BP:116:GLY:N	2.12	0.60
42:BG:95:ARG:O	42:BG:96:ARG:O	2.20	0.60
12:CL:90:VAL:HB	12:CL:96:VAL:CG2	2.30	0.60
4:AD:18:LYS:HE3	4:AD:31:CYS:CB	2.31	0.60
5:AE:76:ILE:HD11	5:AE:142:LEU:CD2	2.32	0.60
31:D5:4:HIS:HB3	31:D5:5:PRO:HD3	1.79	0.60
1:AA:368:U:OP2	25:AZ:291:ARG:HD3	2.02	0.60
36:BA:1155:A:P	53:BU:55:ARG:HD2	2.41	0.60
1:CA:1442(A):G:H3'	1:CA:1442(B):A:C5'	2.29	0.60
2:CB:130:ARG:HH21	2:CB:134:GLU:HG3	1.66	0.60
52:BT:1:MET:O	52:BT:1:MET:HG3	2.01	0.60
36:DA:760:G:H2'	36:DA:761:A:H5'	1.83	0.60
50:DR:27:SER:O	50:DR:30:THR:HG22	2.00	0.60
15:CO:31:LEU:HD12	15:CO:31:LEU:H	1.67	0.60
36:BA:221:A:H61	36:BA:265:A:H8	1.50	0.60
49:BQ:52:VAL:C	49:BQ:54:MET:H	2.05	0.60
5:AE:37:ARG:NH1	5:AE:37:ARG:HG2	2.17	0.60
1:AA:321:A:C2	1:AA:333:G:C2	2.90	0.60
36:DA:1270:C:H5''	36:DA:1271:G:H5'	1.84	0.60
36:BA:848:G:C4	36:BA:933:A:H8	2.20	0.60
36:BA:2305:A:H2'	36:BA:2306:C:C5'	2.32	0.60
1:CA:1359:C:OP2	14:CN:35:ARG:NH1	2.34	0.60
20:CT:61:SER:O	20:CT:65:LYS:HG2	2.01	0.60
9:AI:17:VAL:HG11	9:AI:81:ILE:HD13	1.83	0.60
3:CC:34:LEU:HD21	3:CC:38:ARG:HH21	1.66	0.60
27:D1:75:GLU:C	27:D1:77:ALA:H	2.04	0.60
36:DA:2488:A:O2'	36:DA:2489:G:H5'	2.00	0.60
36:BA:1946:U:H2'	36:BA:1947:C:C6	2.35	0.60
1:AA:585:G:H4'	12:AL:8:ASN:HD21	1.66	0.60
41:DF:34:TRP:CZ2	48:DP:12:ALA:HB2	2.37	0.60
36:BA:708:C:H42	36:BA:723:G:H1	1.48	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:271(U):G:H2'	36:BA:271(V):G:H8	1.66	0.60
25:AZ:227:ASP:HB3	25:AZ:229:PHE:HE1	1.66	0.60
48:BP:27:HIS:CE1	54:BV:83:ARG:HH12	2.19	0.60
34:D8:47:LYS:HD2	34:D8:49:VAL:HG23	1.84	0.60
5:CE:68:GLU:O	5:CE:68:GLU:HG3	2.00	0.60
9:AI:26:VAL:HG12	9:AI:28:VAL:HG23	1.83	0.60
36:BA:136:G:H2'	36:BA:137:C:H6	1.66	0.60
7:AG:153:HIS:CE1	11:AK:58:PRO:HD2	2.36	0.60
36:DA:2283:C:C2'	36:DA:2284:C:H5'	2.31	0.60
32:B6:19:ARG:NH1	32:B6:43:CYS:SG	2.74	0.60
1:CA:1319:A:H5'	1:CA:1320:C:OP1	2.02	0.60
25:AZ:21:ASP:HA	60:AZ:501:GDP:O1B	2.02	0.60
38:BC:79:LYS:HB3	38:BC:118:ASP:OD2	2.02	0.60
13:AM:19:LEU:HB3	13:AM:25:ILE:HG21	1.82	0.60
3:AC:44:GLU:HA	3:AC:52:LEU:HD21	1.84	0.60
36:DA:623:G:H2'	36:DA:624:C:H6	1.67	0.60
48:BP:23:PRO:C	48:BP:33:ARG:CZ	2.69	0.60
41:DF:126:VAL:HG11	41:DF:142:TRP:HH2	1.66	0.60
36:BA:658:C:H2'	36:BA:659:C:H6	1.65	0.60
56:BX:50:LYS:N	56:BX:87:GLN:HE22	1.92	0.60
46:DN:65:LYS:O	46:DN:67:LEU:N	2.31	0.60
41:DF:206:ILE:HG22	41:DF:207:GLY:N	2.16	0.60
10:AJ:85:LEU:C	10:AJ:87:THR:H	2.03	0.60
57:BY:86:ARG:HG2	57:BY:87:LYS:N	2.15	0.60
30:B4:14:ILE:N	30:B4:14:ILE:HD12	2.16	0.60
52:DT:100:TYR:O	52:DT:103:ARG:HG3	2.02	0.60
52:DT:96:ARG:CZ	52:DT:96:ARG:HB2	2.32	0.60
1:CA:1463:C:H5'	52:DT:115:ARG:NH2	2.16	0.60
41:DF:154:VAL:HG13	41:DF:191:ARG:O	2.02	0.60
47:DO:87:ILE:CG2	47:DO:91:LEU:HA	2.31	0.60
1:AA:260:G:H2'	1:AA:261:U:H6	1.66	0.60
1:CA:1060:C:H5''	10:CJ:51:ARG:HB3	1.82	0.60
37:DB:73:A:H2'	37:DB:74:U:H5'	1.84	0.60
8:CH:11:THR:HG22	8:CH:15:ASN:HD21	1.65	0.60
36:BA:944:G:H5'	36:BA:945:A:O5'	2.01	0.60
33:B7:34:ARG:HH12	33:B7:42:LEU:HA	1.65	0.60
36:BA:2025:C:H2'	36:BA:2026:C:H6	1.64	0.60
1:AA:614:A:O2'	1:AA:615:C:H5'	2.02	0.60
7:CG:22:LEU:HD23	7:CG:22:LEU:O	2.01	0.60
36:DA:514:A:O2'	36:DA:515:A:H5'	2.02	0.60
58:BZ:62:PRO:C	58:BZ:64:GLY:H	2.03	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:471:G:H21	16:CP:82:GLN:NE2	1.99	0.60
58:BZ:54:HIS:HB3	58:BZ:101:PRO:HD3	1.83	0.60
36:DA:1389:G:H2'	36:DA:1390:U:H6	1.66	0.60
55:BW:72:LYS:N	55:BW:106:ILE:O	2.33	0.60
1:AA:627:G:O2'	1:AA:628:G:H5'	2.02	0.60
38:DC:119:VAL:O	38:DC:123:VAL:HG12	2.02	0.60
52:DT:93:ARG:HG2	52:DT:117:ASP:HB2	1.83	0.60
4:AD:109:GLY:O	4:AD:111:ALA:N	2.34	0.60
10:CJ:71:LEU:HD23	10:CJ:72:VAL:N	2.17	0.60
56:DX:8:ILE:HD11	56:DX:42:ALA:O	2.01	0.60
57:DY:14:LEU:HD12	57:DY:15:VAL:H	1.65	0.60
3:AC:50:ALA:O	3:AC:70:VAL:HG13	2.02	0.60
1:CA:1199:U:H4'	10:CJ:54:PHE:CD1	2.37	0.60
28:D2:51:ARG:HB2	28:D2:51:ARG:HH11	1.65	0.60
9:CI:70:LYS:O	9:CI:74:ILE:HG13	2.01	0.60
1:CA:1375:A:H2'	1:CA:1376:U:C6	2.37	0.60
36:DA:656:G:H2'	36:DA:657:U:C6	2.35	0.60
48:BP:16:ARG:CZ	48:BP:18:ARG:HG2	2.31	0.60
36:BA:197:A:C8	36:BA:197:A:H5'	2.37	0.60
48:BP:105:LEU:O	48:BP:106:LEU:HB2	2.02	0.60
36:BA:2286:A:H4'	36:BA:2287:A:O4'	2.02	0.60
36:BA:2287:A:C2	36:BA:2346:A:N1	2.70	0.60
1:CA:1317:C:C2	14:CN:16:PHE:CE1	2.90	0.60
42:BG:166:ASP:HA	42:BG:169:ALA:CB	2.31	0.60
39:DD:23:GLU:C	39:DD:25:THR:N	2.54	0.60
42:BG:107:LEU:HA	42:BG:111:LEU:HD12	1.84	0.60
36:DA:2408:U:C6	36:DA:2408:U:H3'	2.37	0.60
36:DA:1539:G:C2'	36:DA:1540:U:H5'	2.31	0.60
36:BA:2128:C:O2'	36:BA:2129:C:P	2.59	0.60
36:BA:2160:G:H8	36:BA:2160:G:C5'	2.15	0.60
2:AB:88:ALA:HB2	2:AB:219:VAL:HG13	1.82	0.60
36:DA:2524:G:C8	36:DA:2524:G:H5'	2.31	0.60
25:CZ:378:VAL:HG23	25:CZ:380:LEU:CD2	2.29	0.60
47:DO:8:LEU:CB	47:DO:82:ASN:O	2.50	0.60
1:AA:1277:C:O2'	1:AA:1279:A:C8	2.55	0.60
36:DA:888:C:C2'	36:DA:889:C:H4'	2.31	0.60
41:DF:167:ALA:HB1	41:DF:173:VAL:CG1	2.32	0.60
36:BA:1762:A:C8	36:BA:1762:A:O5'	2.55	0.60
25:AZ:72:THR:C	25:AZ:74:LYS:H	2.06	0.60
20:CT:62:LEU:HA	20:CT:65:LYS:CG	2.32	0.60
1:AA:184:G:C4'	1:AA:224:C:H4'	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DX:41:ASN:N	56:DX:41:ASN:HD22	1.99	0.60
7:AG:133:GLY:O	7:AG:136:LYS:HB2	2.02	0.60
36:BA:2052:G:H4'	40:BE:143:ASN:O	2.01	0.60
10:CJ:24:VAL:HG21	10:CJ:37:PRO:HD3	1.83	0.60
1:CA:659:U:O2'	1:CA:660:G:H5'	2.02	0.60
20:CT:47:GLY:O	20:CT:49:ALA:N	2.34	0.60
55:DW:13:SER:HB2	55:DW:16:LYS:HD2	1.84	0.60
36:DA:2176:A:H4'	38:DC:213:TYR:CD1	2.37	0.60
8:CH:121:ASP:N	8:CH:121:ASP:OD1	2.33	0.60
3:AC:147:LYS:HB2	3:AC:203:PHE:CD2	2.37	0.60
1:AA:755:G:OP2	15:AO:65:ARG:HD2	2.02	0.60
16:AP:53:VAL:HG23	16:AP:54:GLU:H	1.67	0.60
25:CZ:29:ALA:O	25:CZ:33:TYR:CD2	2.55	0.60
34:D8:41:ILE:O	34:D8:41:ILE:HG12	2.01	0.60
32:B6:17:LYS:CB	32:B6:18:ARG:NH1	2.64	0.60
42:DG:9:ARG:O	42:DG:11:TYR:N	2.29	0.60
26:D0:40:GLN:NE2	26:D0:45:PHE:HB2	2.17	0.60
57:DY:95:LYS:HE3	57:DY:100:ALA:HB2	1.82	0.60
36:BA:1504:C:O2'	36:BA:1505:C:C5'	2.50	0.60
36:BA:1301:A:HO2'	36:BA:1302:A:H2'	1.64	0.60
14:AN:57:ARG:HG3	14:AN:58:LYS:H	1.66	0.60
42:BG:46:ALA:C	42:BG:47:LYS:HD2	2.22	0.60
13:CM:65:LYS:H	13:CM:65:LYS:CD	2.09	0.60
36:BA:2068:U:N3	36:BA:2430:A:C2	2.66	0.60
48:BP:28:GLY:C	48:BP:29:LYS:HD2	2.22	0.60
17:CQ:67:LYS:O	17:CQ:68:ARG:HB2	2.02	0.60
34:B8:15:LYS:CD	48:BP:65:ARG:HH22	2.13	0.60
12:CL:28:LYS:O	12:CL:30:ALA:N	2.35	0.60
1:CA:521:G:O2'	1:CA:522:C:H5'	2.02	0.60
3:AC:34:LEU:HD21	3:AC:38:ARG:HH21	1.67	0.60
1:AA:939:G:H2'	1:AA:940:C:C6	2.36	0.60
49:DQ:97:VAL:O	49:DQ:97:VAL:HG23	2.02	0.60
6:CF:62:TRP:CG	18:CR:35:ARG:NH1	2.70	0.60
36:BA:886:C:C2'	36:BA:887:A:H4'	2.31	0.60
50:BR:75:LEU:C	50:BR:75:LEU:HD13	2.22	0.60
31:D5:43:HIS:HD2	36:DA:2815:C:O2'	1.85	0.60
26:D0:32:ARG:HA	26:D0:64:ASP:OD1	2.02	0.60
11:AK:59:TYR:CE1	11:AK:63:LEU:HD21	2.36	0.60
24:CY:8:4SU:H6	24:CY:8:4SU:H5''	1.83	0.60
58:DZ:62:PRO:C	58:DZ:64:GLY:H	2.06	0.60
47:BO:87:ILE:CG2	47:BO:91:LEU:HA	2.32	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CW:64:A:H2'	22:CW:65:G:H8	1.67	0.60
36:DA:528:A:H2	36:DA:2043:C:C5'	2.15	0.60
58:BZ:58:VAL:HG22	58:BZ:68:PRO:HB3	1.84	0.60
12:CL:6:THR:HG23	12:CL:9:GLN:HE21	1.66	0.60
40:DE:184:VAL:O	40:DE:186:GLY:N	2.34	0.60
36:BA:2100:G:N2	36:BA:2189:U:H3	1.98	0.59
25:CZ:64:ASN:H	25:CZ:83:PRO:HG2	1.66	0.59
34:D8:32:LEU:CG	34:D8:36:LYS:HZ1	2.15	0.59
53:BU:92:ARG:HH22	54:BV:10:LYS:HA	1.65	0.59
2:AB:142:LEU:HD23	2:AB:142:LEU:C	2.22	0.59
25:AZ:118:GLU:HA	25:AZ:121:LEU:HD23	1.82	0.59
25:CZ:36:ALA:HA	25:CZ:39:ASN:O	2.02	0.59
42:DG:71:THR:HG22	42:DG:89:GLY:C	2.21	0.59
1:AA:1151:A:HO2'	1:AA:1152:A:H8	1.50	0.59
22:AV:56:C:C2	42:BG:83:ARG:HD3	2.37	0.59
13:CM:2:ALA:CB	13:CM:9:ILE:HG23	2.32	0.59
53:DU:95:LEU:HD12	54:DV:11:GLN:HG3	1.84	0.59
32:D6:36:LEU:HD23	32:D6:36:LEU:C	2.23	0.59
3:CC:153:VAL:HG12	3:CC:157:ILE:HD11	1.83	0.59
1:AA:376:G:OP2	16:AP:67:THR:HG21	2.02	0.59
2:CB:13:ALA:C	2:CB:15:VAL:H	2.05	0.59
58:DZ:124:ILE:HG13	58:DZ:124:ILE:O	2.02	0.59
48:BP:38:GLN:HG3	48:BP:39:LYS:N	2.16	0.59
46:BN:21:LYS:HD2	46:BN:26:LEU:HB2	1.84	0.59
48:DP:102:ARG:HH11	48:DP:102:ARG:HB2	1.65	0.59
1:CA:386:C:H2'	1:CA:387:U:H5'	1.83	0.59
36:DA:2179:C:H1'	36:DA:2180:U:C2	2.36	0.59
57:BY:50:ARG:HG3	57:BY:56:PRO:CA	2.31	0.59
36:DA:1210:A:H5''	36:DA:1212:G:C4'	2.32	0.59
40:BE:103:ASP:OD2	40:BE:201:THR:HA	2.02	0.59
36:BA:654(H):G:C2'	36:BA:654(I):C:H5'	2.31	0.59
39:DD:79:VAL:HG12	39:DD:113:VAL:HA	1.84	0.59
4:CD:134:ASP:O	4:CD:136:PRO:HD3	2.01	0.59
36:DA:1469:A:O2'	36:DA:1470:G:H5'	2.02	0.59
36:BA:590:A:OP1	41:BF:95:ARG:NH1	2.35	0.59
25:AZ:227:ASP:HB3	25:AZ:229:PHE:CE1	2.37	0.59
25:AZ:392:GLY:O	25:AZ:393:ARG:HB3	2.02	0.59
36:BA:2695:C:H2'	36:BA:2696:U:C6	2.37	0.59
1:CA:45:U:H2'	1:CA:46:G:C8	2.36	0.59
1:AA:1521:G:H2'	1:AA:1522:U:C6	2.37	0.59
48:DP:30:THR:HG23	48:DP:31:ALA:H	1.66	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1858:G:H2'	36:BA:1883:G:H22	1.66	0.59
57:BY:7:VAL:HB	57:BY:8:LYS:HD2	1.84	0.59
26:D0:40:GLN:OE1	26:D0:44:ARG:N	2.34	0.59
2:CB:104:ASN:O	2:CB:108:ILE:HG13	2.02	0.59
58:BZ:99:TYR:CE1	58:BZ:125:LEU:HA	2.35	0.59
57:DY:88:LYS:NZ	57:DY:93:GLY:CA	2.66	0.59
1:AA:1047:G:H5''	14:AN:4:LYS:HE2	1.84	0.59
14:AN:7:ILE:HG13	14:AN:8:GLU:H	1.65	0.59
1:AA:1366:C:H2'	1:AA:1367:C:C6	2.38	0.59
39:DD:238:GLY:O	39:DD:239:ARG:C	2.40	0.59
46:BN:99:LEU:O	46:BN:103:VAL:HG23	2.02	0.59
22:AW:38:A:H2'	22:AW:39:U:C5'	2.27	0.59
51:BS:49:VAL:HG22	51:BS:80:LEU:CD1	2.33	0.59
36:BA:2777:G:H5''	36:BA:2778:A:C5'	2.32	0.59
36:BA:674:G:H1'	41:BF:74:ARG:HD3	1.83	0.59
10:CJ:5:ARG:HG2	10:CJ:73:ASP:OD1	2.02	0.59
32:D6:53:LYS:CG	32:D6:54:ILE:N	2.65	0.59
36:BA:141:A:C8	36:BA:1408:C:O2'	2.55	0.59
4:AD:73:ARG:O	4:AD:77:ASN:HB2	2.02	0.59
37:BB:87:G:N2	37:BB:89:G:H3'	2.17	0.59
9:CI:81:ILE:O	9:CI:85:LEU:HD13	2.03	0.59
43:DH:12:PRO:HB2	43:DH:15:VAL:CG1	2.32	0.59
40:BE:69:LYS:HE3	40:BE:89:ASP:HA	1.82	0.59
36:DA:1786:A:H2	36:DA:2606:C:H1'	1.67	0.59
26:B0:40:GLN:NE2	26:B0:59:LEU:HD11	2.17	0.59
36:DA:298:G:H5'	36:DA:299:A:OP1	2.01	0.59
36:DA:992:C:O3'	54:DV:72:VAL:HG11	2.02	0.59
25:AZ:126:VAL:O	25:AZ:126:VAL:HG12	2.02	0.59
25:CZ:19:HIS:CD2	25:CZ:113:MET:HB3	2.37	0.59
36:BA:1389:G:H2'	36:BA:1390:U:C6	2.37	0.59
36:DA:1498:C:H2'	36:DA:1499:C:H5'	1.83	0.59
17:AQ:10:VAL:HG23	17:AQ:55:ASP:O	2.01	0.59
42:DG:26:GLN:HG2	42:DG:27:ASN:N	2.16	0.59
32:D6:22:ALA:HB2	32:D6:39:TYR:CE2	2.37	0.59
50:DR:18:LEU:HD11	50:DR:22:ARG:CZ	2.32	0.59
10:AJ:89:ASP:HB3	10:AJ:91:PRO:HD3	1.83	0.59
1:CA:1489:G:O2'	1:CA:1490:C:H5'	2.02	0.59
36:DA:1831:G:H2'	36:DA:1832:C:C6	2.35	0.59
41:BF:22:ALA:HB1	41:BF:26:ALA:HB2	1.85	0.59
7:AG:43:PHE:O	7:AG:46:ALA:HB3	2.01	0.59
14:CN:29:ARG:CG	14:CN:29:ARG:HH11	2.15	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:D6:12:GLU:HA	32:D6:23:THR:HB	1.83	0.59
36:DA:2428:G:H5''	36:DA:2429:G:O5'	2.02	0.59
48:DP:64:LYS:C	48:DP:66:GLY:N	2.55	0.59
10:AJ:55:LYS:HE3	10:AJ:55:LYS:N	2.16	0.59
39:BD:30:GLU:HB2	39:BD:35:LYS:CE	2.33	0.59
57:BY:42:VAL:HG21	57:BY:67:LEU:HD12	1.84	0.59
52:BT:48:ILE:O	52:BT:63:VAL:HG13	2.02	0.59
49:BQ:26:TYR:HD2	49:BQ:27:VAL:H	1.48	0.59
58:BZ:28:MET:CE	58:BZ:37:VAL:HG11	2.33	0.59
3:AC:47:LEU:HB3	3:AC:52:LEU:HD22	1.85	0.59
54:DV:25:LEU:H	54:DV:92:THR:HG21	1.65	0.59
43:BH:98:LEU:HB3	43:BH:125:VAL:HG21	1.83	0.59
39:BD:183:ARG:HG2	39:BD:183:ARG:NH1	2.18	0.59
36:DA:623:G:H2'	36:DA:624:C:C6	2.36	0.59
55:BW:14:PRO:HG2	55:BW:78:GLU:CG	2.28	0.59
41:BF:65:TRP:CH2	41:BF:75:HIS:HD2	2.21	0.59
55:BW:107:LEU:N	55:BW:107:LEU:HD12	2.16	0.59
55:BW:5:ALA:HB2	55:BW:54:ALA:HB2	1.82	0.59
1:AA:390:C:O3'	16:AP:28:ARG:NH2	2.34	0.59
12:AL:126:LYS:HE2	12:AL:127:GLU:H	1.66	0.59
48:BP:121:LYS:O	48:BP:123:LEU:HD23	2.02	0.59
18:CR:40:LEU:O	18:CR:42:ARG:N	2.34	0.59
36:BA:2853:C:H2'	36:BA:2854:G:C8	2.37	0.59
37:BB:87:G:C2'	37:BB:88:C:H5''	2.32	0.59
52:DT:6:LEU:HD23	52:DT:9:LEU:HD12	1.84	0.59
40:BE:69:LYS:CE	40:BE:89:ASP:HA	2.32	0.59
36:BA:894:C:O2'	36:BA:895:U:H5'	2.02	0.59
1:AA:606:G:H2'	1:AA:631:G:H1	1.66	0.59
40:DE:116:VAL:HG22	40:DE:117:MET:N	2.17	0.59
36:BA:2523:G:H2'	36:BA:2524:G:H5'	1.84	0.59
43:BH:39:PRO:O	43:BH:40:GLU:HG2	2.01	0.59
1:AA:189(J):G:O2'	1:AA:189(K):U:H5'	2.01	0.59
1:AA:338:A:O2'	1:AA:339:C:H5'	2.02	0.59
36:BA:528:A:H2	36:BA:2043:C:C5'	2.15	0.59
46:DN:35:ARG:O	46:DN:42:TRP:HZ3	1.85	0.59
10:AJ:24:VAL:HG21	10:AJ:37:PRO:HD3	1.84	0.59
36:BA:270:A:O2'	36:BA:271:A:H5'	2.02	0.59
36:DA:2364:C:H2'	36:DA:2365:G:O4'	2.02	0.59
53:DU:28:ARG:HA	53:DU:34:LYS:O	2.02	0.59
53:DU:15:LYS:HA	53:DU:18:LEU:HD23	1.83	0.59
43:DH:13:LYS:HA	43:DH:13:LYS:HE2	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:B0:18:ALA:HB2	36:BA:2272:U:OP2	2.02	0.59
45:BK:91:UNK:HA	45:BK:133:UNK:CB	2.32	0.59
25:CZ:234:ARG:HH21	25:CZ:289:LEU:HD23	1.67	0.59
25:CZ:291:ARG:O	25:CZ:292:GLY:O	2.21	0.59
39:BD:102:LYS:O	39:BD:103:ARG:HG2	2.03	0.59
1:AA:522:C:O2'	1:AA:523:A:H5'	2.03	0.59
42:DG:133:LEU:C	42:DG:133:LEU:HD12	2.22	0.59
13:AM:9:ILE:HG22	13:AM:11:ARG:HB2	1.83	0.59
10:CJ:64:GLU:OE2	10:CJ:66:ARG:NE	2.36	0.59
14:AN:7:ILE:CG1	14:AN:8:GLU:H	2.14	0.59
43:DH:16:SER:CB	43:DH:27:LYS:HB2	2.23	0.59
48:DP:45:LEU:HD13	48:DP:46:LYS:H	1.67	0.59
1:CA:1346:A:H61	1:CA:1374:A:H3'	1.67	0.59
40:BE:111:ARG:HA	50:BR:2:ARG:CG	2.30	0.59
36:BA:1188:U:O2'	36:BA:1189:A:H5'	2.02	0.59
36:BA:259:G:H21	36:BA:621:A:H8	1.50	0.59
36:BA:656:G:H2'	36:BA:657:U:C6	2.35	0.59
12:AL:24:VAL:O	12:AL:24:VAL:HG12	2.01	0.59
40:DE:36:ARG:HH21	40:DE:88:GLY:HA2	1.68	0.59
51:DS:15:ARG:HD2	51:DS:18:ILE:HD11	1.85	0.59
55:BW:70:TYR:O	55:BW:107:LEU:HA	2.02	0.59
1:AA:63:C:C2'	1:AA:64:G:H5'	2.31	0.59
53:BU:52:ARG:HG2	53:BU:55:ARG:HH22	1.67	0.59
38:BC:73:ARG:NH2	38:BC:110:PHE:HD1	1.99	0.59
35:B9:10:ILE:O	35:B9:11:CYS:HB3	2.02	0.59
42:DG:107:LEU:HD22	42:DG:177:GLY:O	2.02	0.59
34:B8:30:ARG:HA	34:B8:30:ARG:NE	2.17	0.59
1:CA:7:G:O2'	5:CE:120:THR:O	2.18	0.59
31:B5:16:ARG:HH11	31:B5:20:ARG:NH1	1.99	0.59
1:AA:337:C:H2'	1:AA:338:A:C8	2.37	0.59
1:CA:377:G:OP1	16:CP:3:LYS:HD2	2.02	0.59
51:BS:28:VAL:HG12	51:BS:29:PHE:H	1.67	0.59
8:AH:7:ALA:HB2	8:AH:85:ARG:HD3	1.84	0.59
1:AA:276:G:O2'	17:AQ:68:ARG:NH1	2.36	0.59
1:CA:1429:C:H2'	1:CA:1430:C:C6	2.36	0.59
4:CD:116:GLN:O	4:CD:119:GLN:N	2.35	0.59
4:CD:119:GLN:HG3	4:CD:123:HIS:CD2	2.37	0.59
36:BA:1090:U:H2'	36:BA:1091:G:O4'	2.02	0.59
36:DA:523:C:O2'	36:DA:524:U:H5'	2.02	0.59
7:AG:145:ALA:O	7:AG:146:GLU:C	2.40	0.59
4:AD:148:VAL:HG23	4:AD:181:MET:HB3	1.82	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2136:C:H2'	36:BA:2137:C:H6	1.68	0.59
1:CA:1030(D):A:H2'	1:CA:1031:G:H5'	1.84	0.59
3:AC:58:GLU:HB2	3:AC:65:ALA:CB	2.32	0.59
20:CT:99:LEU:O	20:CT:100:ILE:C	2.40	0.59
4:CD:100:ARG:HE	4:CD:118:ARG:HH12	1.50	0.59
25:CZ:5:PHE:CD1	25:CZ:5:PHE:C	2.75	0.59
36:BA:2712:U:OP1	36:BA:2714:G:H4'	2.01	0.59
58:BZ:10:ARG:NH2	58:BZ:36:LYS:HB2	2.15	0.59
13:AM:5:ALA:CB	13:AM:66:LEU:HD22	2.33	0.59
35:B9:1:MET:SD	36:BA:2478:A:OP2	2.60	0.59
41:BF:201:VAL:HG13	41:BF:202:PHE:N	2.18	0.59
4:AD:138:TYR:C	4:AD:138:TYR:HD1	2.05	0.59
32:D6:53:LYS:HG2	32:D6:54:ILE:N	2.16	0.59
48:BP:131:SER:OG	48:BP:134:ALA:HB3	2.01	0.59
10:AJ:32:ALA:HB3	10:AJ:76:ASN:HB2	1.83	0.59
3:CC:53:ALA:O	3:CC:54:ARG:HB3	2.02	0.59
5:CE:36:ASP:O	5:CE:36:ASP:OD1	2.21	0.59
36:DA:626:U:N3	48:DP:105:LEU:HG	2.16	0.59
36:DA:2110:G:H1	36:DA:2178:C:H5	1.50	0.59
36:DA:2039:C:H2'	36:DA:2040:C:C6	2.36	0.59
24:AY:20:H2U:H4'	24:AY:21:A:H5''	1.83	0.59
38:BC:99:ILE:HD12	38:BC:102:LYS:NZ	2.18	0.59
36:DA:1952:A:C5	47:DO:22:ILE:HD12	2.38	0.59
36:DA:753:C:H2'	36:DA:754:C:H6	1.67	0.59
36:DA:633:A:C2'	36:DA:634:C:H5'	2.31	0.59
1:CA:1003:G:H2'	1:CA:1004:A:H4'	1.85	0.59
53:DU:80:ILE:HG22	53:DU:80:ILE:O	2.02	0.59
39:DD:50:THR:O	39:DD:51:VAL:HG23	2.02	0.59
4:CD:78:LEU:O	4:CD:78:LEU:HD23	2.02	0.59
24:AY:28:C:O2'	24:AY:29:G:H5'	2.03	0.59
27:B1:49:VAL:HG11	27:B1:70:VAL:HG11	1.84	0.59
1:CA:992:U:H4'	1:CA:993:G:O5'	2.02	0.59
11:AK:22:HIS:HB3	11:AK:29:ILE:HG12	1.85	0.59
36:DA:1375:C:H2'	36:DA:1376:C:H6	1.66	0.59
36:BA:1231:G:H2'	36:BA:1232:G:H8	1.67	0.59
17:AQ:49:GLU:OE1	17:AQ:49:GLU:HA	2.01	0.59
40:DE:73:GLU:HA	40:DE:73:GLU:OE1	2.02	0.59
25:AZ:341:GLN:NE2	25:AZ:341:GLN:H	2.00	0.59
34:D8:61:LEU:N	34:D8:63:PRO:HD2	2.16	0.59
48:DP:65:ARG:CB	48:DP:68:GLN:HE22	2.02	0.59
28:B2:2:LYS:HA	28:B2:5:GLU:HG2	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DB:40:U:O2	37:DB:43:C:H5''	2.03	0.59
57:BY:38:ILE:O	57:BY:38:ILE:HG23	2.02	0.59
36:BA:1484:G:C3'	36:BA:1485:G:H5''	2.32	0.59
46:DN:131:GLN:HE21	46:DN:133:GLN:H	1.50	0.59
38:DC:131:LEU:HD13	38:DC:136:LEU:O	2.03	0.59
21:AU:2:GLY:O	21:AU:4:GLY:N	2.36	0.59
1:CA:962:C:O2'	1:CA:963:G:H5'	2.02	0.59
43:DH:85:LYS:HZ3	43:DH:132:ARG:HA	1.67	0.59
43:DH:88:LEU:H	43:DH:88:LEU:HD22	1.68	0.59
53:DU:65:ILE:H	53:DU:65:ILE:CD1	2.15	0.59
53:DU:92:ARG:CG	53:DU:94:ASN:HB3	2.31	0.59
58:DZ:124:ILE:O	58:DZ:126:VAL:HG22	2.02	0.59
48:BP:112:LEU:HD12	48:BP:127:ALA:HA	1.83	0.59
1:AA:542:G:H2'	1:AA:543:C:H6	1.66	0.59
39:DD:267:SER:C	39:DD:269:PHE:H	2.05	0.59
40:BE:47:VAL:CG2	40:BE:86:PRO:HD3	2.29	0.59
49:DQ:52:VAL:O	49:DQ:56:ARG:HB2	2.02	0.59
36:BA:2206:G:C2	36:BA:2207:G:H5'	2.38	0.59
46:DN:120:LEU:HD12	46:DN:122:VAL:HG23	1.84	0.59
40:BE:51:PHE:O	40:BE:74:PRO:HB2	2.03	0.59
1:CA:736:C:H2'	1:CA:737:A:H8	1.65	0.59
1:AA:1321:C:H5''	1:AA:1322:C:C5'	2.32	0.59
51:DS:89:ARG:NE	51:DS:91:PRO:HG2	2.17	0.59
33:D7:34:ARG:HD2	33:D7:39:ARG:HG3	1.83	0.59
6:CF:53:ALA:O	6:CF:54:LYS:HG2	2.03	0.59
6:CF:54:LYS:O	6:CF:55:ASP:C	2.41	0.59
40:DE:117:MET:HE2	40:DE:124:GLY:HA3	1.85	0.59
28:D2:66:GLU:HB3	28:D2:69:ARG:NH1	2.17	0.59
1:CA:501:C:H2'	1:CA:502:G:H8	1.68	0.59
36:BA:1221:C:H2'	36:BA:1221(A):C:H6	1.68	0.59
11:AK:58:PRO:HB2	11:AK:93:GLN:HG3	1.83	0.59
36:DA:596:G:H2'	36:DA:597:U:O4'	2.02	0.59
25:CZ:339:ARG:NE	25:CZ:352:VAL:HG22	2.17	0.59
50:DR:21:TYR:HB3	50:DR:47:PHE:CD2	2.37	0.59
12:AL:47:LYS:O	12:AL:48:PRO:C	2.41	0.59
36:BA:596:G:H2'	36:BA:597:U:O4'	2.03	0.59
25:CZ:65:THR:CG2	25:CZ:66:ALA:N	2.66	0.59
48:DP:16:ARG:CZ	48:DP:16:ARG:HB2	2.33	0.59
1:AA:1442(B):A:O2'	1:AA:1443:G:H8	1.86	0.59
19:CS:10:PHE:CE1	19:CS:70:LYS:HE2	2.38	0.59
25:AZ:146:LEU:O	25:AZ:150:VAL:HG12	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:24:ILE:HD13	39:BD:24:ILE:C	2.23	0.59
42:DG:34:LEU:HB3	42:DG:161:THR:HG22	1.85	0.59
3:AC:73:PRO:HG3	3:AC:105:GLU:HB2	1.84	0.59
41:BF:125:LEU:H	41:BF:125:LEU:CD2	2.05	0.59
10:CJ:64:GLU:HG2	14:CN:59:ALA:HA	1.84	0.59
48:DP:40:SER:O	48:DP:41:ARG:NH1	2.36	0.59
46:BN:22:THR:HG22	46:BN:61:ARG:CB	2.31	0.59
36:BA:2632:A:O2'	40:BE:61:ARG:NH2	2.35	0.59
1:AA:452:A:O2'	1:AA:453:A:H8	1.77	0.59
58:DZ:100:VAL:HG23	58:DZ:126:VAL:CG2	2.32	0.59
36:DA:605:C:H6	36:DA:657:U:HO2'	1.47	0.59
51:BS:106:ARG:O	51:BS:106:ARG:HD2	2.01	0.59
36:BA:139(A):G:N2	56:BX:44:GLU:OE1	2.27	0.59
22:AW:74:C:C2'	22:AW:75:C:H5'	2.32	0.59
36:DA:2656:U:N3	36:DA:2665:A:H2	1.95	0.59
36:DA:543:C:N4	36:DA:549:G:H1	1.96	0.59
1:AA:1349:A:OP1	9:AI:120:ARG:HB2	2.02	0.59
42:BG:117:PHE:HZ	42:BG:120:LEU:HG	1.67	0.59
36:DA:105:C:H2'	36:DA:106:C:C6	2.37	0.59
18:CR:29:PHE:HE2	18:CR:43:PHE:HZ	1.51	0.59
8:CH:89:PRO:HA	8:CH:92:ARG:HH11	1.66	0.59
13:CM:7:VAL:HG12	13:CM:7:VAL:O	2.02	0.59
36:DA:894:C:O2'	36:DA:895:U:H5'	2.02	0.59
44:BJ:85:UNK:CG	44:BJ:86:UNK:H	2.13	0.59
20:CT:16:HIS:O	20:CT:19:SER:HB3	2.03	0.59
54:BV:19:LYS:HG2	54:BV:94:LEU:HB2	1.83	0.59
36:BA:821:A:H5''	36:BA:822:U:H6	1.64	0.59
36:BA:863:A:O2'	36:BA:864:G:H5'	2.01	0.59
20:AT:26:ASN:O	20:AT:30:LYS:HB2	2.03	0.59
36:BA:491:G:O2'	36:BA:492:A:H5'	2.03	0.59
22:AV:21:A:H2'	22:AV:22:G:H5''	1.84	0.59
36:BA:2842:G:O2'	36:BA:2843:G:H5'	2.03	0.59
1:CA:438:G:H4'	4:CD:123:HIS:ND1	2.17	0.59
36:BA:8:A:H2'	36:BA:9:U:C6	2.38	0.59
56:BX:65:ARG:HB2	56:BX:70:LEU:HD23	1.84	0.59
36:DA:2870:C:H2'	36:DA:2871:C:O4'	2.01	0.59
1:AA:647:C:O2'	1:AA:648:A:H5'	2.02	0.59
5:CE:72:GLN:O	5:CE:73:ASN:CB	2.51	0.59
1:CA:636:U:H2'	1:CA:637:G:H8	1.68	0.59
39:BD:3:VAL:H	39:BD:20:ASP:HB2	1.67	0.59
36:DA:270:A:O2'	36:DA:271:A:H5'	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:318:G:H2'	1:AA:319:G:H8	1.67	0.59
1:AA:1142:G:H2'	1:AA:1143:G:O4'	2.03	0.59
12:CL:46:LYS:H	12:CL:92:ASP:HB3	1.66	0.59
1:CA:138:G:O2'	1:CA:139:G:H5'	2.02	0.59
25:CZ:231:ILE:N	25:CZ:231:ILE:CD1	2.66	0.59
34:D8:13:ARG:HD2	48:DP:61:ARG:HH11	1.67	0.59
48:DP:62:LEU:N	48:DP:62:LEU:HD23	2.08	0.59
39:DD:30:GLU:HG3	39:DD:63:ARG:HE	1.66	0.59
36:DA:2313:C:H5'	36:DA:2313:C:C6	2.27	0.59
57:DY:44:ILE:HG22	57:DY:45:VAL:H	1.67	0.59
57:BY:17:SER:OG	57:BY:18:GLY:N	2.33	0.59
49:BQ:21:THR:O	49:BQ:22:LYS:HB3	2.01	0.59
58:BZ:48:PHE:CE1	58:BZ:52:SER:HA	2.38	0.59
41:BF:6:VAL:HG12	41:BF:7:TYR:N	2.11	0.59
41:DF:3:GLU:HB3	41:DF:24:LEU:HB2	1.85	0.59
1:CA:1271:G:H5'	1:CA:1314:C:H5''	1.84	0.59
36:BA:141:A:H8	36:BA:1408:C:HO2'	1.43	0.59
12:CL:29:GLY:O	12:CL:30:ALA:C	2.41	0.59
36:DA:2784:C:H1'	40:DE:37:ARG:HH12	1.67	0.59
36:DA:652:C:HO2'	36:DA:653:A:P	2.25	0.59
39:DD:183:ARG:HD2	39:DD:270:ILE:HG22	1.84	0.59
30:D4:20:ASN:HD22	30:D4:21:VAL:N	2.01	0.59
4:AD:68:TYR:CE1	4:AD:97:LEU:CD1	2.85	0.59
40:BE:6:GLY:HA2	40:BE:51:PHE:CZ	2.37	0.59
27:D1:88:LYS:HE2	27:D1:92:LYS:NZ	2.17	0.59
36:BA:2742:C:O2'	36:BA:2743:C:H5'	2.02	0.59
26:B0:23:VAL:N	26:B0:38:VAL:HG13	2.18	0.59
36:DA:752:A:O2'	36:DA:753:C:OP2	2.19	0.59
37:DB:15:A:H1'	37:DB:110:G:C5	2.38	0.59
27:B1:50:ARG:HG2	27:B1:59:THR:HB	1.85	0.59
36:DA:2630:G:H21	36:DA:2892:A:H1'	1.68	0.59
16:AP:34:GLU:OE2	16:AP:55:ARG:HD3	2.01	0.59
13:AM:70:LEU:HD23	13:AM:70:LEU:C	2.23	0.59
25:CZ:226:GLU:HG3	25:CZ:239:THR:O	2.02	0.59
36:BA:1173:G:H5'	36:BA:1174:A:OP1	2.03	0.59
2:CB:16:HIS:HB3	2:CB:210:SER:CB	2.33	0.59
39:BD:261:LYS:NZ	39:BD:263:ARG:NH2	2.50	0.59
20:AT:64:ASP:O	20:AT:67:ALA:HB3	2.01	0.59
49:DQ:118:LEU:CD1	49:DQ:131:ILE:HG23	2.32	0.59
1:AA:719:C:O2'	18:AR:49:LYS:HB3	2.02	0.59
36:DA:1590:U:H2'	36:DA:1591:G:C8	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2283:C:H2'	36:BA:2284:C:H5'	1.84	0.59
34:D8:59:LYS:HZ3	34:D8:59:LYS:HB3	1.67	0.59
52:DT:23:ARG:C	52:DT:25:GLY:H	2.06	0.59
32:B6:41:PRO:C	32:B6:43:CYS:H	2.04	0.59
43:BH:16:SER:HB2	43:BH:27:LYS:CB	2.18	0.59
28:B2:47:ASN:O	28:B2:51:ARG:N	2.36	0.59
58:BZ:81:ARG:HB2	58:BZ:81:ARG:CZ	2.32	0.59
36:BA:583:G:OP2	53:BU:10:ARG:HD2	2.02	0.59
53:DU:57:PHE:O	53:DU:58:ARG:C	2.41	0.59
53:DU:59:ARG:HH11	53:DU:59:ARG:HG2	1.66	0.59
53:DU:88:ILE:HB	53:DU:90:VAL:HG23	1.85	0.59
32:D6:13:CYS:HB3	32:D6:49:HIS:HB3	1.85	0.59
36:DA:194:G:H2'	36:DA:195:A:O4'	2.03	0.59
51:BS:13:ARG:HG3	51:BS:14:VAL:H	1.67	0.59
11:AK:50:TYR:CD2	11:AK:60:ALA:HB2	2.38	0.59
1:AA:1270:C:H2'	1:AA:1271:G:C8	2.37	0.59
57:BY:85:VAL:HG11	57:BY:92:ASN:OD1	2.02	0.59
5:AE:79:GLU:HG3	5:AE:93:PRO:CD	2.32	0.59
36:BA:733:G:C8	36:BA:761:A:N1	2.71	0.59
40:DE:131:ALA:CB	40:DE:134:ILE:HD11	2.32	0.59
36:DA:2673:G:H8	36:DA:2673:G:H5'	1.66	0.59
35:B9:7:VAL:HG12	35:B9:25:VAL:HG21	1.85	0.59
1:AA:67:C:H2'	1:AA:68:G:C8	2.38	0.59
46:BN:17:ASP:OD1	46:BN:56:ASN:HB3	2.03	0.59
36:BA:1362:C:C2'	36:BA:1363:C:H5'	2.33	0.59
36:BA:654(H):G:C3'	36:BA:654(I):C:H5'	2.33	0.59
36:DA:556:G:H2'	36:DA:557:U:H6	1.63	0.59
36:DA:2347:C:H2'	36:DA:2348:U:C6	2.36	0.59
10:AJ:8:LEU:HD22	10:AJ:20:ALA:HB2	1.83	0.59
36:DA:236:C:H2'	36:DA:237:C:C6	2.37	0.59
25:CZ:206:ILE:O	25:CZ:210:ILE:HG22	2.03	0.59
1:AA:80:G:C3'	1:AA:81:U:H5'	2.33	0.59
36:BA:643:A:C2'	36:BA:644:A:H5'	2.33	0.59
36:BA:1399:C:O2'	36:BA:1400:G:H5'	2.02	0.59
36:BA:947:G:H2'	36:BA:948:G:C8	2.38	0.59
37:BB:7:G:H4'	51:BS:29:PHE:HD2	1.67	0.59
1:CA:143:A:H2	1:CA:220:G:H1	1.50	0.59
56:DX:31:HIS:HB3	56:DX:34:ALA:HB2	1.85	0.59
36:BA:49:A:H5''	36:BA:51:G:O4'	2.03	0.59
36:BA:839:U:H2'	36:BA:840:C:C6	2.38	0.59
3:CC:164:ARG:NH2	3:CC:166:GLU:OE2	2.36	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:186:HIS:CD2	39:BD:188:GLU:H	2.21	0.59
37:BB:112:U:H2'	37:BB:113:G:H8	1.68	0.59
31:D5:48:GLU:O	31:D5:49:CYS:CB	2.51	0.59
58:BZ:152:ALA:HA	58:BZ:167:PRO:O	2.03	0.59
12:AL:89:ARG:NH2	12:AL:91:LYS:HD3	2.18	0.59
49:DQ:120:ILE:O	49:DQ:121:ALA:C	2.40	0.59
4:CD:18:LYS:HE3	4:CD:31:CYS:CB	2.33	0.59
4:CD:20:TYR:HA	4:CD:26:CYS:SG	2.42	0.59
19:CS:43:GLU:O	19:CS:45:VAL:N	2.35	0.59
39:BD:183:ARG:HD2	39:BD:270:ILE:HG22	1.84	0.59
37:BB:22:U:H2'	37:BB:23:G:H8	1.67	0.59
55:BW:78:GLU:OE2	55:BW:99:ARG:HD2	2.03	0.59
36:BA:259:G:N2	36:BA:621:A:H8	2.01	0.59
29:B3:35:ARG:CB	29:B3:35:ARG:HH11	2.13	0.59
40:DE:57:LYS:HA	40:DE:57:LYS:CE	2.29	0.59
22:AV:4:C:C2'	22:AV:5:G:H5''	2.33	0.59
2:CB:31:TYR:HD2	2:CB:202:PRO:HG3	1.68	0.59
36:DA:1150:C:C2'	36:DA:1151:G:H5'	2.32	0.59
36:BA:2682:U:O2	40:BE:22:PRO:HB3	2.03	0.59
35:B9:14:CYS:HA	35:B9:26:ILE:O	2.03	0.59
51:DS:95:HIS:CG	51:DS:96:GLY:N	2.70	0.59
37:DB:65:C:H41	37:DB:109:C:H2'	1.68	0.59
54:BV:19:LYS:CE	54:BV:20:LEU:H	2.15	0.59
8:CH:86:ILE:HG21	8:CH:133:LEU:CD2	2.32	0.59
8:CH:30:ARG:NH1	8:CH:30:ARG:HB3	2.17	0.59
51:DS:81:GLY:O	51:DS:82:ILE:HD13	2.03	0.59
39:DD:76:PRO:HG2	39:DD:98:VAL:CG2	2.33	0.59
43:BH:70:THR:O	43:BH:74:ASN:ND2	2.36	0.59
40:DE:13:ARG:HH12	47:DO:74:GLY:HA3	1.68	0.59
7:CG:143:ARG:O	7:CG:145:ALA:O	2.20	0.59
56:BX:33:LYS:HA	56:BX:33:LYS:HE2	1.84	0.59
9:AI:41:VAL:O	9:AI:41:VAL:HG12	2.01	0.59
32:D6:41:PRO:HD2	32:D6:45:LYS:HA	1.85	0.58
1:CA:1318:A:H1'	19:CS:37:ARG:HH21	1.67	0.58
50:DR:101:ALA:O	50:DR:102:GLU:HB2	2.02	0.58
10:AJ:54:PHE:CE1	10:AJ:55:LYS:NZ	2.70	0.58
57:BY:13:VAL:O	57:BY:24:VAL:HG13	2.03	0.58
52:BT:42:ILE:O	52:BT:42:ILE:HG13	2.03	0.58
52:BT:94:ALA:C	52:BT:96:ARG:H	2.06	0.58
28:D2:3:LEU:CD2	36:DA:98:G:H5''	2.29	0.58
46:DN:14:VAL:CG1	46:DN:137:LYS:HG3	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:91:ASP:C	9:AI:93:ARG:H	2.04	0.58
1:AA:1129:C:OP1	1:AA:1130:A:C5'	2.51	0.58
1:AA:1128:C:O2'	1:AA:1130:A:C8	2.51	0.58
48:DP:38:GLN:HG3	48:DP:39:LYS:H	1.68	0.58
43:BH:125:VAL:N	43:BH:126:PRO:CD	2.66	0.58
25:CZ:326:GLU:N	25:CZ:326:GLU:CD	2.55	0.58
19:AS:47:HIS:O	19:AS:62:ILE:HG22	2.03	0.58
42:BG:125:PHE:CD1	42:BG:125:PHE:N	2.71	0.58
50:BR:55:ALA:HB2	50:BR:79:LEU:HD11	1.85	0.58
3:CC:53:ALA:O	3:CC:54:ARG:CB	2.51	0.58
48:DP:112:LEU:O	48:DP:112:LEU:HD13	2.02	0.58
13:AM:77:ASN:O	13:AM:80:ARG:HB3	2.03	0.58
36:BA:414:C:O2'	36:BA:415:A:H5'	2.02	0.58
9:CI:52:ALA:HB3	9:CI:95:LYS:CE	2.33	0.58
2:AB:97:TRP:CH2	2:AB:176:GLU:CD	2.76	0.58
5:AE:144:THR:O	5:AE:148:VAL:HG23	2.03	0.58
36:DA:2179:C:H5''	36:DA:2180:U:OP1	2.02	0.58
18:AR:29:PHE:HD1	18:AR:29:PHE:N	2.00	0.58
36:BA:2389:G:C5'	36:BA:2390:U:H5'	2.33	0.58
50:DR:74:LYS:HZ1	50:DR:77:ARG:HH21	1.51	0.58
6:CF:91:VAL:CG1	6:CF:92:LYS:N	2.65	0.58
4:AD:23:GLY:O	4:AD:27:TYR:HB2	2.02	0.58
36:DA:1494:A:H3'	36:DA:1494:A:N3	2.18	0.58
24:CY:20:H2U:H4'	24:CY:21:A:H5''	1.85	0.58
46:BN:55:VAL:HG22	46:BN:56:ASN:N	2.18	0.58
36:DA:645:C:H5'	36:DA:646:A:OP2	2.03	0.58
54:BV:6:LYS:NZ	54:BV:37:VAL:HG11	2.18	0.58
46:BN:4:TYR:CD1	46:BN:4:TYR:N	2.70	0.58
1:AA:328:C:H4'	1:AA:329:A:H5'	1.84	0.58
20:AT:26:ASN:HB2	20:AT:71:THR:HG23	1.84	0.58
43:DH:107:VAL:HG23	43:DH:108:GLY:H	1.67	0.58
22:CW:56:C:O4'	38:DC:132:GLY:HA3	2.02	0.58
36:DA:958:U:H5''	49:DQ:14:ARG:HD3	1.84	0.58
46:BN:76:SER:C	46:BN:78:TYR:H	2.07	0.58
36:DA:1138:G:H2'	36:DA:1139:G:O4'	2.01	0.58
16:CP:36:ILE:H	16:CP:36:ILE:HD13	1.67	0.58
14:AN:31:ARG:O	14:AN:32:SER:HB2	2.03	0.58
39:DD:46:GLN:OE1	39:DD:46:GLN:N	2.36	0.58
36:BA:1205:U:C5	41:BF:171:PRO:HA	2.37	0.58
9:CI:8:GLY:HA2	9:CI:79:LEU:HD12	1.84	0.58
48:BP:6:LEU:H	48:BP:6:LEU:HD23	1.67	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2544:G:H8	36:DA:2544:G:O5'	1.85	0.58
7:AG:71:PRO:HD3	7:AG:103:TRP:CZ3	2.38	0.58
1:CA:346:G:H2'	1:CA:346:G:N3	2.18	0.58
47:DO:107:ARG:NH1	52:DT:36:GLU:HG3	2.16	0.58
28:B2:48:HIS:CG	28:B2:49:LYS:N	2.71	0.58
2:CB:157:ARG:HH11	2:CB:157:ARG:HG3	1.69	0.58
39:BD:30:GLU:HB3	39:BD:83:GLU:OE1	2.04	0.58
39:DD:35:LYS:HG2	39:DD:36:PRO:N	2.18	0.58
25:CZ:135:MET:CE	25:CZ:172:ARG:HG2	2.33	0.58
52:DT:78:LEU:O	52:DT:79:HIS:HD2	1.85	0.58
57:BY:9:LYS:CG	57:BY:10:GLY:H	2.10	0.58
54:BV:25:LEU:H	54:BV:92:THR:CG2	2.16	0.58
9:CI:88:TYR:O	9:CI:89:ASN:HB2	2.03	0.58
7:CG:16:LEU:HD13	9:CI:42:ARG:HA	1.83	0.58
9:CI:58:HIS:NE2	9:CI:59:PHE:HE1	1.97	0.58
36:BA:655:A:C4'	36:BA:656:G:H5'	2.28	0.58
36:BA:1076:C:H42	36:BA:1088:A:H61	1.51	0.58
43:BH:42:ARG:HG2	43:BH:43:VAL:N	2.18	0.58
36:DA:221:A:H61	36:DA:265:A:H8	1.50	0.58
36:DA:2579:C:H4'	40:DE:134:ILE:HG12	1.86	0.58
13:CM:3:ARG:NH2	42:DG:113:ARG:HD3	2.18	0.58
2:AB:82:ARG:HG2	2:AB:86:GLU:OE1	2.04	0.58
25:CZ:126:VAL:O	25:CZ:126:VAL:HG12	2.01	0.58
29:D3:45:GLY:C	29:D3:47:VAL:N	2.57	0.58
37:BB:15:A:H1'	37:BB:110:G:C5	2.38	0.58
36:DA:2884:U:C2'	36:DA:2885:C:H5'	2.33	0.58
9:CI:20:ARG:O	9:CI:22:GLY:N	2.35	0.58
1:AA:411:A:O2'	1:AA:413:G:H5'	2.02	0.58
36:BA:469:G:H2'	36:BA:470:A:H5''	1.85	0.58
28:D2:66:GLU:HA	28:D2:69:ARG:CD	2.32	0.58
36:BA:2640:G:H2'	36:BA:2641:G:H5''	1.84	0.58
41:DF:65:TRP:CH2	41:DF:75:HIS:HD2	2.20	0.58
36:DA:1718:G:H2'	36:DA:1719:G:C8	2.38	0.58
36:BA:2240:C:O2'	36:BA:2241:A:H5'	2.03	0.58
12:AL:8:ASN:O	12:AL:12:ARG:HG3	2.04	0.58
1:CA:660:G:OP2	15:CO:5:LYS:HE2	2.03	0.58
36:BA:1718:G:H2'	36:BA:1719:G:H8	1.68	0.58
9:CI:33:PHE:O	9:CI:35:GLU:N	2.37	0.58
1:CA:918:A:H2'	1:CA:919:A:C8	2.38	0.58
2:CB:162:ILE:HG12	2:CB:162:ILE:O	2.02	0.58
7:AG:91:VAL:HG23	7:AG:95:ARG:HD3	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:98:GLU:OE2	4:CD:107:ARG:NH2	2.36	0.58
36:DA:2392:A:H2	36:DA:2424:C:N4	1.99	0.58
47:DO:104:ARG:HH21	52:DT:33:LYS:HE2	1.69	0.58
47:DO:64:ARG:HD3	47:DO:79:PHE:CD2	2.37	0.58
52:DT:28:VAL:O	52:DT:29:ARG:HB2	2.02	0.58
53:BU:92:ARG:HG2	53:BU:92:ARG:O	2.03	0.58
1:CA:356:A:H2	1:CA:368:U:O2	1.85	0.58
25:AZ:133:VAL:CG1	25:AZ:134:PHE:N	2.66	0.58
25:AZ:131:ILE:HD11	25:AZ:163:PHE:CE2	2.38	0.58
25:AZ:200:TRP:HA	25:AZ:203:LEU:HB2	1.84	0.58
38:BC:116:THR:HG22	38:BC:147:PHE:HA	1.84	0.58
39:DD:70:TRP:O	39:DD:71:ASP:C	2.42	0.58
10:AJ:38:ILE:HG13	10:AJ:71:LEU:HB3	1.85	0.58
1:CA:1054:C:C5	1:CA:1196:U:C5	2.91	0.58
3:AC:12:LEU:HD22	3:AC:18:TRP:CZ3	2.38	0.58
13:CM:4:ILE:HD11	13:CM:10:PRO:CD	2.34	0.58
14:AN:12:ARG:C	14:AN:14:PRO:HD2	2.23	0.58
58:DZ:72:ARG:HG2	58:DZ:89:PHE:HB2	1.83	0.58
36:DA:1053:C:N4	36:DA:1107:G:N2	2.50	0.58
48:BP:45:LEU:HD12	48:BP:46:LYS:H	1.68	0.58
36:BA:2657:A:H5'	36:BA:2657:A:N3	2.18	0.58
43:DH:12:PRO:CD	43:DH:48:GLY:HA2	2.33	0.58
51:BS:93:LYS:O	51:BS:94:TYR:C	2.41	0.58
37:BB:16:G:H22	37:BB:69:G:H1'	1.67	0.58
1:CA:1218:C:OP2	14:CN:9:LYS:NZ	2.36	0.58
36:DA:2111:C:O2	36:DA:2111:C:H2'	2.03	0.58
6:CF:55:ASP:O	6:CF:57:GLN:N	2.36	0.58
1:AA:59:A:N3	1:AA:59:A:H2'	2.16	0.58
38:BC:7:TYR:HA	38:BC:10:LEU:CD2	2.33	0.58
36:BA:1353:A:H2'	36:BA:1354:A:C8	2.38	0.58
32:D6:42:TRP:HA	32:D6:42:TRP:CE3	2.38	0.58
36:BA:1958:C:C2'	36:BA:1959:G:H5'	2.33	0.58
22:AV:72:C:C2'	22:AV:73:A:H5''	2.33	0.58
3:AC:114:PRO:O	3:AC:118:GLN:HG3	2.04	0.58
9:CI:43:ALA:C	9:CI:45:ALA:H	2.06	0.58
36:DA:1772:G:N2	36:DA:1774:C:H5''	2.18	0.58
36:BA:1567:A:H5'	39:BD:58:HIS:CD2	2.38	0.58
1:CA:165:C:O2'	1:CA:166:G:H5'	2.04	0.58
26:B0:36:ILE:HD11	36:BA:2355:C:H4'	1.84	0.58
1:CA:818:G:O2'	1:CA:819:A:H5'	2.04	0.58
36:DA:990:A:C6	36:DA:1186:G:H1'	2.37	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:77:GLU:HG2	8:CH:78:GLN:N	2.18	0.58
39:DD:153:ALA:O	39:DD:154:LYS:HG2	2.03	0.58
1:AA:658:G:H2'	1:AA:659:U:C6	2.39	0.58
28:D2:37:PHE:HE2	56:DX:92:LEU:HD21	1.68	0.58
7:AG:69:VAL:O	7:AG:138:LYS:HB2	2.03	0.58
1:AA:555:C:OP1	12:AL:20:LYS:HE3	2.03	0.58
25:AZ:163:PHE:HD1	25:AZ:164:PRO:HD2	1.66	0.58
42:DG:12:TYR:HA	42:DG:16:ARG:HG2	1.85	0.58
36:BA:335:C:H2'	36:BA:336:C:C6	2.38	0.58
49:BQ:27:VAL:CG1	49:BQ:28:ALA:N	2.67	0.58
14:CN:40:CYS:SG	14:CN:42:ILE:HG22	2.42	0.58
43:DH:85:LYS:HE2	43:DH:85:LYS:C	2.24	0.58
36:DA:996:A:H1'	53:DU:92:ARG:NH2	2.18	0.58
53:DU:83:LEU:CD1	53:DU:113:ALA:HB2	2.33	0.58
54:DV:40:LEU:HD22	54:DV:46:VAL:HA	1.86	0.58
36:BA:2787:C:C1'	40:BE:61:ARG:HD3	2.29	0.58
41:BF:107:LYS:C	41:BF:109:GLY:N	2.56	0.58
40:DE:75:VAL:O	40:DE:77:ILE:N	2.35	0.58
4:AD:9:CYS:SG	4:AD:12:CYS:SG	3.01	0.58
5:AE:6:PHE:HB2	5:AE:34:VAL:CG2	2.34	0.58
27:D1:67:ILE:N	27:D1:68:PRO:CD	2.67	0.58
36:BA:1541:G:O3'	36:BA:1541:G:OP2	2.22	0.58
36:BA:2128:C:HO2'	36:BA:2129:C:P	2.25	0.58
49:DQ:56:ARG:HG3	49:DQ:56:ARG:HH11	1.66	0.58
49:DQ:17:LEU:HD13	49:DQ:39:PRO:CB	2.34	0.58
36:BA:2206:G:H21	36:BA:2207:G:C4'	2.16	0.58
37:BB:91:C:O2'	37:BB:92:C:H5'	2.03	0.58
24:AY:7:G:H3'	24:AY:8:4SU:H5'	1.85	0.58
34:D8:52:LYS:H	34:D8:53:PRO:HD2	1.62	0.58
1:AA:353:A:H5'	1:AA:353:A:C8	2.33	0.58
1:AA:489:C:H2'	1:AA:490:G:C8	2.36	0.58
1:AA:1003:G:H21	1:AA:1039:C:H42	1.51	0.58
36:DA:2892:A:H62	36:DA:2893:G:H21	1.52	0.58
24:CY:6:C:H2'	24:CY:7:G:C8	2.39	0.58
7:AG:20:ASP:HB3	7:AG:23:VAL:HG23	1.85	0.58
36:DA:2019:A:O4'	53:DU:34:LYS:HD3	2.03	0.58
36:DA:134:C:O2'	36:DA:135:G:H5'	2.04	0.58
2:CB:139:LYS:O	2:CB:143:GLU:HG3	2.02	0.58
37:DB:87:G:H2'	37:DB:88:C:H5''	1.85	0.58
36:BA:2692:C:O2	36:BA:2847:U:O2'	2.16	0.58
24:CY:54:5MU:OP2	24:CY:54:5MU:H71	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1248:G:OP1	53:DU:2:PRO:HD2	2.04	0.58
25:CZ:233:GLY:O	25:CZ:234:ARG:HD2	2.03	0.58
34:D8:59:LYS:CB	34:D8:59:LYS:NZ	2.66	0.58
32:D6:41:PRO:HD2	32:D6:46:HIS:N	2.13	0.58
57:DY:9:LYS:HD3	57:DY:94:LYS:HE2	1.86	0.58
28:B2:51:ARG:HD3	28:B2:55:ARG:NH1	2.19	0.58
25:AZ:131:ILE:HD11	25:AZ:163:PHE:CZ	2.38	0.58
57:DY:85:VAL:HG13	57:DY:93:GLY:O	2.03	0.58
9:AI:89:ASN:H	9:AI:90:PRO:CD	2.17	0.58
34:B8:62:LEU:N	34:B8:63:PRO:HD2	2.17	0.58
3:AC:5:ILE:CD1	3:AC:5:ILE:N	2.67	0.58
1:AA:975:A:H5'	1:AA:975:A:C8	2.38	0.58
36:DA:1092:C:H42	36:DA:1100:C:N4	1.93	0.58
36:DA:414:C:O2'	36:DA:415:A:H5'	2.03	0.58
58:DZ:10:ARG:HG2	58:DZ:36:LYS:HG3	1.83	0.58
57:BY:50:ARG:HD2	57:BY:56:PRO:HA	1.84	0.58
36:DA:672:C:C2'	36:DA:673:C:C5'	2.80	0.58
36:DA:1771:C:C1'	36:DA:1786:A:C8	2.87	0.58
1:CA:489:C:H2'	1:CA:490:G:C8	2.37	0.58
36:DA:566:U:O4	54:DV:78:LYS:HE3	2.03	0.58
36:DA:887:A:H2'	36:DA:887:A:N3	2.18	0.58
3:AC:112:SER:CB	3:AC:115:LEU:HD12	2.33	0.58
36:DA:1652:A:C2'	36:DA:1653:G:H5'	2.34	0.58
1:AA:951:G:O2'	1:AA:952:U:H5'	2.03	0.58
15:CO:17:ARG:HG2	15:CO:26:GLU:HG3	1.85	0.58
36:DA:1499:C:O2'	36:DA:1500:G:H5'	2.04	0.58
31:B5:11:THR:HG21	36:BA:1264:G:H5'	1.86	0.58
47:BO:28:SER:O	47:BO:29:ASN:HB3	2.03	0.58
7:AG:70:LYS:HB3	7:AG:96:GLN:HG2	1.85	0.58
36:BA:2039:C:O2'	36:BA:2040:C:H5'	2.03	0.58
36:DA:191:A:O2'	36:DA:192:C:H5'	2.04	0.58
10:CJ:98:ILE:O	10:CJ:98:ILE:HG23	2.03	0.58
55:DW:95:ILE:O	55:DW:95:ILE:HG13	2.03	0.58
22:CV:57:G:O2'	22:CV:58:A:H5'	2.04	0.58
32:D6:5:VAL:HB	32:D6:8:LYS:CB	2.33	0.58
34:D8:6:THR:CG2	34:D8:63:PRO:HD3	2.33	0.58
36:DA:589:C:H2'	36:DA:590:A:C8	2.39	0.58
28:B2:3:LEU:HD13	36:BA:98:G:H5'	1.85	0.58
47:BO:71:ARG:NH1	47:BO:71:ARG:HG3	2.16	0.58
52:BT:28:VAL:O	52:BT:28:VAL:HG12	2.02	0.58
58:BZ:23:LYS:HD3	58:BZ:38:TYR:CE1	2.37	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BZ:86:VAL:HG12	58:BZ:87:ASP:N	2.19	0.58
13:AM:5:ALA:HB3	13:AM:22:ILE:HG21	1.85	0.58
36:BA:272(H):C:C3'	36:BA:272(I):U:H5''	2.34	0.58
13:CM:11:ARG:HG2	13:CM:12:ASN:HD22	1.68	0.58
50:BR:4:LEU:O	50:BR:6:SER:N	2.32	0.58
40:DE:44:TYR:O	40:DE:45:THR:CB	2.50	0.58
40:DE:52:LEU:HD23	40:DE:75:VAL:CB	2.34	0.58
37:DB:57:A:H1'	42:DG:29:TRP:O	2.04	0.58
57:BY:85:VAL:HG12	57:BY:86:ARG:N	2.15	0.58
27:B1:77:ALA:O	27:B1:79:GLY:N	2.37	0.58
36:BA:1697:G:C3'	36:BA:1698:A:H5''	2.30	0.58
48:DP:91:PHE:CE2	48:DP:95:VAL:HG12	2.38	0.58
36:DA:2317:C:O2'	36:DA:2318:G:H5'	2.03	0.58
12:AL:26:ALA:O	12:AL:27:LEU:O	2.20	0.58
16:CP:25:ARG:HG3	16:CP:25:ARG:NH1	2.17	0.58
25:CZ:341:GLN:C	25:CZ:342:PHE:CD1	2.77	0.58
36:DA:888:C:H2'	36:DA:889:C:C4'	2.33	0.58
7:CG:151:TYR:OH	11:CK:54:ARG:HD3	2.02	0.58
1:AA:1003:G:O2'	1:AA:1004:A:H4'	2.02	0.58
52:DT:106:SER:O	52:DT:107:ASP:OD1	2.21	0.58
8:CH:114:THR:C	8:CH:116:LYS:H	2.07	0.58
54:DV:69:LYS:HA	54:DV:87:HIS:O	2.03	0.58
4:CD:133:VAL:HG11	4:CD:138:TYR:CD2	2.38	0.58
11:CK:117:ASN:N	11:CK:117:ASN:HD22	1.99	0.58
3:AC:190:ARG:HG3	3:AC:190:ARG:NH1	2.19	0.58
1:AA:1228:C:H4'	13:AM:116:THR:O	2.04	0.58
36:DA:2461:C:H2'	36:DA:2462:U:C6	2.39	0.58
1:AA:1245:A:H2'	1:AA:1246:C:C6	2.39	0.58
36:DA:137:C:O2	36:DA:137:C:H2'	2.03	0.58
36:BA:64:A:O2'	36:BA:65:C:H5'	2.03	0.58
36:DA:1983:C:O2'	36:DA:1984:G:H5'	2.02	0.58
39:BD:162:SER:O	39:BD:178:PRO:HG3	2.02	0.58
1:CA:664:G:P	18:CR:64:ARG:HH21	2.27	0.58
36:DA:1290:C:H2'	36:DA:1291:C:H6	1.67	0.58
4:CD:194:LEU:HB3	4:CD:196:LEU:CD1	2.34	0.58
24:CY:76:A:C4	25:CZ:271:GLU:HB2	2.39	0.58
32:D6:8:LYS:O	32:D6:9:LEU:HB3	2.04	0.58
1:AA:963:G:H21	10:AJ:55:LYS:HD3	1.68	0.58
49:DQ:134:ARG:HA	49:DQ:137:TYR:CE2	2.39	0.58
49:DQ:27:VAL:CG1	49:DQ:28:ALA:N	2.60	0.58
1:AA:346:G:N3	1:AA:346:G:H2'	2.19	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DX:18:TYR:O	56:DX:20:GLY:N	2.37	0.58
41:BF:137:LYS:HB2	41:BF:137:LYS:NZ	2.18	0.58
1:CA:973:G:C1'	10:CJ:55:LYS:HE2	2.34	0.58
42:BG:42:GLY:O	42:BG:44:GLY:N	2.32	0.58
3:CC:73:PRO:O	3:CC:76:VAL:HG22	2.04	0.58
51:DS:58:LEU:HG	51:DS:59:LYS:H	1.67	0.58
50:DR:117:VAL:O	50:DR:118:GLU:HB2	2.04	0.58
36:DA:1301:A:HO2'	36:DA:1302:A:H2'	1.67	0.58
48:DP:81:GLN:NE2	48:DP:106:LEU:HA	2.18	0.58
36:DA:2407:G:N2	36:DA:2408:U:H1'	2.18	0.58
30:B4:8:LYS:O	30:B4:9:LEU:CB	2.49	0.58
58:DZ:17:ALA:HA	58:DZ:20:ARG:CG	2.33	0.58
36:BA:92:A:H2'	36:BA:93:G:O4'	2.03	0.58
18:CR:37:VAL:HA	18:CR:40:LEU:HB2	1.86	0.58
36:BA:886:C:H2'	36:BA:887:A:C4'	2.32	0.58
50:DR:29:LEU:HD11	50:DR:52:ILE:HD11	1.84	0.58
56:DX:64:LYS:HZ1	56:DX:73:ARG:HH21	1.51	0.58
33:D7:26:GLY:O	33:D7:30:VAL:HG23	2.02	0.58
37:DB:15:A:H3'	37:DB:16:G:H5'	1.86	0.58
33:B7:47:ARG:HH22	36:BA:1311:G:H2'	1.68	0.58
28:D2:65:ASN:ND2	36:DA:112:U:H5'	2.19	0.58
36:DA:1678:G:H22	36:DA:1989:G:H22	1.51	0.58
36:BA:1473:G:H2'	36:BA:1474:C:O4'	2.03	0.58
38:BC:30:LYS:NZ	38:BC:30:LYS:HB3	2.17	0.58
50:DR:18:LEU:O	50:DR:18:LEU:HD22	2.03	0.58
1:AA:646:U:H2'	1:AA:647:C:C6	2.39	0.58
1:CA:636:U:H2'	1:CA:637:G:C8	2.38	0.58
36:BA:1718:G:H2'	36:BA:1719:G:C8	2.39	0.58
9:CI:33:PHE:C	9:CI:35:GLU:H	2.07	0.58
36:DA:2341:G:H2'	36:DA:2342:C:C6	2.38	0.58
1:AA:1468:A:H2'	1:AA:1469:G:O4'	2.04	0.58
1:AA:41:G:H2'	1:AA:42:G:C8	2.39	0.58
1:CA:67:C:H2'	1:CA:68:G:C8	2.38	0.58
1:CA:1458:G:H2'	1:CA:1459:C:C6	2.38	0.58
36:DA:2749:A:N1	36:DA:2750:A:N6	2.51	0.58
36:DA:1907:G:O2'	36:DA:1908:C:H5'	2.03	0.58
1:CA:954:G:H2'	1:CA:955:U:C6	2.39	0.58
36:DA:654(A):G:H2'	36:DA:654(B):C:H5'	1.86	0.58
36:BA:114:U:H6	36:BA:114:U:H5'	1.68	0.58
42:DG:118:ARG:HG2	42:DG:118:ARG:HH11	1.68	0.58
36:DA:2206:G:N2	36:DA:2207:G:H5'	2.18	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:234:ARG:HG3	25:CZ:234:ARG:NH1	2.17	0.58
25:CZ:234:ARG:O	25:CZ:289:LEU:CD2	2.52	0.58
34:D8:8:LYS:O	34:D8:12:LYS:HG3	2.04	0.58
36:DA:1484:G:C3'	36:DA:1485:G:H5''	2.33	0.58
36:BA:2590:A:O2'	36:BA:2591:C:H5'	2.03	0.58
52:BT:58:ASN:ND2	52:BT:58:ASN:H	2.02	0.58
36:BA:1599:C:H2'	36:BA:1600:C:C6	2.38	0.58
25:AZ:26:THR:HB	60:AZ:501:GDP:O2A	2.04	0.58
57:BY:29:GLU:N	57:BY:29:GLU:OE1	2.37	0.58
52:BT:102:ILE:HB	52:BT:110:ILE:HD12	1.86	0.58
22:CV:68:C:H2'	22:CV:69:G:H5'	1.82	0.58
46:DN:46:VAL:O	46:DN:47:ALA:HB3	2.03	0.58
3:AC:16:ARG:HH22	3:AC:183:ASP:HA	1.67	0.58
42:BG:51:ARG:HA	42:BG:51:ARG:HE	1.69	0.58
48:BP:50:ARG:HH11	48:BP:50:ARG:HG2	1.69	0.58
1:CA:1226:C:H4'	1:CA:1227:A:OP1	2.03	0.58
9:AI:53:VAL:CG1	9:AI:95:LYS:HD3	2.29	0.58
25:CZ:253:VAL:HA	25:CZ:307:PRO:CD	2.33	0.58
51:BS:20:ARG:HG2	51:BS:20:ARG:NH1	2.19	0.58
14:CN:7:ILE:O	14:CN:10:ALA:HB3	2.04	0.58
36:BA:1596:A:O2'	36:BA:1597:A:H5'	2.03	0.58
46:BN:26:LEU:CD1	46:BN:30:ILE:HD11	2.30	0.58
50:BR:78:LYS:O	50:BR:83:ILE:HG12	2.03	0.58
57:BY:88:LYS:NZ	57:BY:93:GLY:CA	2.67	0.58
36:DA:1536:C:C2'	36:DA:1537:G:H4'	2.32	0.58
6:CF:10:LEU:HD11	6:CF:61:LEU:CD1	2.33	0.58
18:CR:32:ARG:CA	18:CR:69:THR:HG21	2.33	0.58
1:AA:407:G:H2'	1:AA:408:A:H8	1.69	0.58
1:AA:1499:A:C1'	1:AA:1520:G:H5'	2.33	0.58
51:DS:47:THR:HG22	51:DS:49:VAL:O	2.04	0.58
53:DU:70:ARG:C	53:DU:72:HIS:H	2.07	0.58
40:BE:116:VAL:HG23	40:BE:120:TRP:HB2	1.85	0.58
36:BA:548:A:H2'	36:BA:549:G:H5'	1.84	0.58
1:CA:1061:G:H2'	1:CA:1062:U:C6	2.38	0.58
40:BE:30:PRO:HD3	40:BE:180:ASN:CG	2.24	0.58
45:DK:123:UNK:O	45:DK:125:UNK:N	2.37	0.58
40:BE:198:VAL:HG12	40:BE:199:ARG:N	2.19	0.58
44:DJ:97:UNK:HA	44:DJ:132:UNK:CA	2.34	0.58
18:AR:55:ARG:HG3	18:AR:55:ARG:HH11	1.68	0.58
36:BA:1930:G:N2	36:BA:1968:G:H2'	2.19	0.58
39:BD:134:ARG:HG3	39:BD:135:PHE:CD2	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DF:87:GLY:O	41:DF:88:VAL:O	2.22	0.58
36:BA:963:U:H2'	36:BA:964:C:C6	2.39	0.58
1:CA:1486:G:H2'	1:CA:1487:G:O4'	2.03	0.58
48:DP:34:GLY:O	48:DP:35:HIS:HB2	2.04	0.58
52:DT:90:GLN:O	52:DT:91:ARG:C	2.42	0.58
36:BA:1009:A:H1'	53:BU:59:ARG:NH1	2.19	0.58
1:AA:1054:C:C5	1:AA:1196:U:C5	2.92	0.58
25:AZ:174:SER:HB3	25:AZ:177:LEU:CD1	2.32	0.58
39:BD:30:GLU:CB	39:BD:35:LYS:HD2	2.14	0.58
49:DQ:35:VAL:HG12	49:DQ:130:LYS:O	2.03	0.58
26:D0:42:GLY:HA3	36:DA:2331:G:O4'	2.03	0.58
46:DN:132:ALA:O	46:DN:133:GLN:HB2	2.03	0.58
46:BN:47:ALA:HB2	46:BN:112:LEU:CD1	2.34	0.58
9:AI:4:TYR:H	9:AI:4:TYR:HD1	1.51	0.58
3:AC:68:VAL:HG12	3:AC:68:VAL:O	2.02	0.58
54:BV:47:VAL:C	54:BV:49:THR:H	2.06	0.58
31:B5:57:VAL:C	31:B5:58:LEU:HD12	2.25	0.58
10:AJ:58:ASP:O	10:AJ:59:SER:HB3	2.04	0.58
25:CZ:121:LEU:HG	25:CZ:122:LEU:N	2.19	0.58
36:BA:1050:A:C2'	36:BA:1051:G:H5'	2.25	0.58
31:B5:25:LEU:HD22	31:B5:26:THR:H	1.69	0.58
36:DA:1301:A:C8	36:DA:1303:G:C8	2.91	0.58
46:BN:18:ALA:HB1	46:BN:21:LYS:CB	2.34	0.58
10:CJ:40:LEU:HD23	10:CJ:40:LEU:N	2.13	0.58
41:DF:201:VAL:HG13	41:DF:202:PHE:N	2.19	0.58
4:AD:173:TRP:CE2	4:AD:189:PRO:HB3	2.39	0.58
4:CD:157:LEU:HA	4:CD:160:GLN:OE1	2.03	0.58
2:CB:8:LYS:NZ	2:CB:217:ARG:NH1	2.52	0.58
40:BE:5:LEU:CD1	40:BE:51:PHE:HB2	2.32	0.58
40:BE:2:LYS:CD	40:BE:95:ILE:HG22	2.34	0.58
40:DE:167:VAL:HG13	40:DE:170:LEU:HD11	1.84	0.58
1:AA:1259:C:C4	1:AA:1260:C:O2	2.57	0.58
36:BA:2807:G:C2'	36:BA:2808:U:H5''	2.34	0.58
50:DR:12:ARG:HD3	50:DR:16:HIS:CD2	2.39	0.58
31:B5:17:ASP:O	31:B5:20:ARG:N	2.35	0.58
11:AK:21:ILE:HG12	11:AK:30:VAL:HG12	1.85	0.58
16:AP:19:ILE:O	16:AP:36:ILE:HD13	2.03	0.58
36:DA:18:C:H5''	53:DU:24:TYR:O	2.04	0.58
36:DA:2050:C:H1'	40:DE:156:MET:HE2	1.84	0.58
41:DF:64:ILE:HD11	41:DF:65:TRP:CZ2	2.39	0.58
36:BA:842:G:O2'	36:BA:843:G:H5'	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:CY:54:5MU:H2'	24:CY:55:PSU:O4'	2.03	0.58
37:BB:13:A:O2'	37:BB:14:U:H3'	2.04	0.58
36:BA:633:A:H2'	36:BA:634:C:H5'	1.85	0.58
20:AT:39:LYS:O	20:AT:43:LEU:HG	2.02	0.58
36:BA:21:A:O2'	36:BA:22:C:H5'	2.04	0.58
6:CF:78:GLU:O	6:CF:81:ILE:HG13	2.03	0.58
3:AC:135:LYS:NZ	5:AE:50:GLU:OE1	2.35	0.58
40:DE:94:GLU:OE2	40:DE:177:PRO:HB3	2.04	0.58
1:AA:1217:C:OP1	14:AN:9:LYS:HE3	2.03	0.58
15:AO:56:LEU:O	15:AO:60:VAL:HG23	2.03	0.58
48:DP:135:LEU:HD13	48:DP:135:LEU:O	2.03	0.58
42:BG:162:THR:O	42:BG:162:THR:HG22	2.03	0.58
1:AA:1073:U:O2'	1:AA:1074:G:H5'	2.03	0.58
48:DP:58:THR:O	48:DP:58:THR:CG2	2.52	0.58
32:B6:20:ASN:O	32:B6:21:TYR:CD1	2.57	0.58
36:DA:84:A:C5'	57:DY:9:LYS:HD2	2.34	0.58
39:DD:75:ILE:HD13	39:DD:75:ILE:H	1.69	0.58
34:B8:17:THR:OG1	34:B8:18:ALA:N	2.36	0.58
35:D9:19:ARG:C	35:D9:21:GLY:H	2.08	0.58
10:CJ:61:GLU:HG3	14:CN:58:LYS:NZ	2.19	0.58
34:B8:6:THR:CG2	34:B8:63:PRO:HD3	2.34	0.58
54:DV:64:HIS:CE1	54:DV:92:THR:HG22	2.39	0.58
1:CA:1226:C:H2'	13:CM:103:THR:HB	1.85	0.58
43:BH:85:LYS:C	43:BH:85:LYS:HE2	2.24	0.58
1:AA:1097:C:O2'	1:AA:1098:C:H5'	2.04	0.58
58:DZ:119:GLU:HA	58:DZ:172:ALA:HA	1.85	0.58
36:DA:603:A:H1'	36:DA:604:G:OP1	2.04	0.58
4:AD:121:VAL:HG12	4:AD:134:ASP:HA	1.86	0.58
48:BP:102:ARG:HH11	48:BP:102:ARG:HB2	1.69	0.58
11:CK:21:ILE:HG12	11:CK:30:VAL:CG1	2.27	0.58
48:DP:85:LEU:HB3	48:DP:114:ILE:HD11	1.86	0.58
48:DP:106:LEU:HD11	48:DP:112:LEU:HD23	1.85	0.58
24:AY:76:A:C8	25:AZ:231:ILE:HG12	2.39	0.58
48:BP:122:PRO:HA	48:BP:141:ALA:O	2.04	0.58
36:DA:1070:A:H2'	36:DA:1097:U:OP1	2.04	0.58
36:DA:1090:U:H2'	36:DA:1091:G:O4'	2.04	0.58
46:DN:32:THR:C	46:DN:34:LEU:H	2.08	0.58
36:DA:2756:U:O2'	36:DA:2757:A:OP2	2.19	0.58
36:DA:760:G:C2'	36:DA:761:A:H5'	2.33	0.58
36:DA:2131:G:H1'	36:DA:2133:G:H21	1.69	0.58
1:AA:1320:C:H6	1:AA:1320:C:H5'	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:B9:10:ILE:O	35:B9:11:CYS:CB	2.51	0.58
49:BQ:30:GLY:N	49:BQ:105:GLU:OE2	2.35	0.58
39:BD:130:ALA:C	39:BD:131:LEU:HD12	2.24	0.58
26:B0:49:LYS:HG3	26:B0:80:HIS:HD1	1.69	0.58
2:AB:61:LEU:HD11	2:AB:160:ASP:HB2	1.86	0.58
36:BA:380:U:H2'	36:BA:381:G:C8	2.39	0.58
55:BW:36:LEU:HD11	55:BW:47:VAL:HG12	1.86	0.58
18:CR:36:ASN:OD1	18:CR:38:GLU:HG2	2.03	0.58
1:AA:148:G:H2'	1:AA:149:A:C8	2.39	0.58
36:DA:2660:A:OP1	36:DA:2660:A:H8	1.87	0.58
46:DN:36:GLY:O	46:DN:42:TRP:CE3	2.57	0.58
11:AK:29:ILE:HG22	11:AK:44:SER:HB2	1.85	0.58
3:CC:131:ARG:HH11	3:CC:166:GLU:HG3	1.67	0.58
14:AN:29:ARG:CG	14:AN:29:ARG:HH11	2.17	0.58
36:DA:1935:G:H1'	36:DA:1964:G:N2	2.19	0.58
1:CA:1521:G:H2'	1:CA:1522:U:C6	2.39	0.58
36:DA:2728:U:O2'	36:DA:2729:G:H5'	2.04	0.58
56:DX:56:THR:HG22	56:DX:79:ALA:HB2	1.86	0.58
41:DF:100:THR:O	41:DF:100:THR:HG22	2.03	0.58
25:CZ:267:VAL:HG23	25:CZ:288:VAL:HG13	1.85	0.57
1:AA:1055:A:H8	1:AA:1055:A:O5'	1.87	0.57
25:AZ:136:ASN:ND2	60:AZ:501:GDP:N7	2.51	0.57
49:DQ:133:ARG:HB2	49:DQ:133:ARG:NH1	2.18	0.57
42:DG:16:ARG:N	42:DG:17:PRO:HD2	2.19	0.57
43:DH:41:MET:O	43:DH:42:ARG:CB	2.52	0.57
49:BQ:140:ALA:HB1	58:BZ:99:TYR:CE2	2.39	0.57
58:BZ:81:ARG:O	58:BZ:81:ARG:HG3	2.04	0.57
15:CO:87:ILE:CG2	15:CO:88:ARG:H	2.03	0.57
1:CA:1367:C:OP1	10:CJ:57:LYS:NZ	2.37	0.57
1:CA:973:G:O4'	10:CJ:55:LYS:HG3	2.04	0.57
46:DN:46:VAL:HG11	46:DN:48:MET:HG3	1.86	0.57
36:DA:996:A:H4'	53:DU:92:ARG:CZ	2.32	0.57
43:BH:33:LEU:HD21	43:BH:136:ILE:HG22	1.86	0.57
41:DF:160:ASN:HD21	41:DF:162:LEU:HD13	1.67	0.57
46:DN:67:LEU:HD12	46:DN:67:LEU:N	2.19	0.57
51:DS:15:ARG:HH11	51:DS:15:ARG:HG2	1.69	0.57
50:DR:4:LEU:C	50:DR:6:SER:H	2.06	0.57
1:AA:1271:G:H2'	1:AA:1272:G:C5'	2.33	0.57
57:BY:88:LYS:HZ1	57:BY:93:GLY:CA	2.17	0.57
24:AY:76:A:C2	25:AZ:271:GLU:HG3	2.39	0.57
24:AY:76:A:H5''	25:AZ:231:ILE:HD11	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AV:3:C:H2'	22:AV:4:C:C6	2.39	0.57
36:DA:1278:A:O2'	36:DA:1279:G:H5'	2.03	0.57
51:BS:95:HIS:CG	51:BS:96:GLY:N	2.71	0.57
10:CJ:84:GLN:O	10:CJ:88:LEU:HB3	2.04	0.57
25:CZ:356:PRO:HD3	25:CZ:370:PHE:CB	2.34	0.57
1:CA:945:G:N2	1:CA:946:A:C8	2.72	0.57
54:BV:19:LYS:HD2	54:BV:96:ILE:HD11	1.86	0.57
43:DH:54:ARG:HH22	43:DH:62:LYS:CE	2.16	0.57
36:BA:1655:A:H1'	40:BE:113:PHE:HE1	1.69	0.57
36:DA:848:G:N9	36:DA:933:A:H8	2.02	0.57
46:DN:56:ASN:HA	46:DN:125:GLY:C	2.24	0.57
36:DA:1243:G:H2'	36:DA:1244:G:O4'	2.04	0.57
1:CA:725:G:O2'	1:CA:726:C:H5'	2.03	0.57
18:CR:36:ASN:HD21	18:CR:39:VAL:HG21	1.68	0.57
36:DA:438:G:O2'	36:DA:440:G:H5'	2.03	0.57
1:AA:436:C:H2'	1:AA:437:U:C6	2.39	0.57
25:AZ:341:GLN:N	25:AZ:341:GLN:NE2	2.52	0.57
36:DA:426:C:O2'	36:DA:427:U:H5'	2.03	0.57
1:AA:106:C:O2'	1:AA:107:G:H5'	2.04	0.57
36:DA:350:U:H2'	36:DA:351:G:O4'	2.04	0.57
46:BN:2:LYS:HZ3	54:BV:12:TYR:HA	1.69	0.57
54:BV:21:ARG:HG2	54:BV:21:ARG:HH11	1.69	0.57
46:DN:72:TYR:CD1	46:DN:90:MET:HG3	2.38	0.57
36:DA:464:U:H2'	36:DA:465:G:O4'	2.03	0.57
36:DA:2439:A:C8	36:DA:2439:A:H5'	2.39	0.57
36:BA:2543:G:H2'	36:BA:2544:G:C8	2.38	0.57
1:AA:711:G:O2'	1:AA:712:A:H5'	2.03	0.57
1:AA:1378:C:OP1	7:AG:7:ALA:HB3	2.04	0.57
36:DA:2282:G:OP1	36:DA:2283:C:H1'	2.03	0.57
27:D1:30:VAL:O	36:DA:2395:C:O2'	2.22	0.57
52:DT:27:THR:HA	52:DT:87:ASP:HB2	1.85	0.57
32:B6:15:GLU:OE2	32:B6:18:ARG:CZ	2.52	0.57
53:BU:92:ARG:HB3	54:BV:11:GLN:NE2	2.18	0.57
56:BX:36:LYS:HA	56:BX:39:ILE:HG12	1.86	0.57
2:AB:111:ARG:NH2	2:AB:114:ARG:HG2	2.19	0.57
2:AB:121:LEU:HG	2:AB:126:GLU:CB	2.34	0.57
25:AZ:93:ILE:HD13	61:AZ:502:KIR:H381	1.85	0.57
57:BY:77:PRO:O	57:BY:78:ALA:HB2	2.04	0.57
35:D9:1:MET:HA	35:D9:4:ARG:NH2	2.19	0.57
13:AM:9:ILE:N	13:AM:9:ILE:HD12	2.18	0.57
10:AJ:6:ILE:HG13	10:AJ:72:VAL:HB	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AN:59:ALA:HB1	14:AN:61:TRP:HZ3	1.69	0.57
58:DZ:98:MET:HG2	58:DZ:99:TYR:H	1.69	0.57
19:CS:42:PRO:O	19:CS:44:MET:SD	2.62	0.57
34:B8:15:LYS:HD2	34:B8:16:ILE:N	2.18	0.57
13:CM:49:THR:HB	13:CM:52:GLU:H	1.68	0.57
48:DP:84:ASN:HA	48:DP:116:GLY:CA	2.34	0.57
2:CB:74:LYS:HD2	2:CB:166:ASP:HB2	1.86	0.57
15:AO:3:ILE:O	15:AO:3:ILE:HG13	2.02	0.57
52:BT:129:ARG:NH2	52:BT:131:ALA:HB3	2.19	0.57
36:DA:300:A:H2'	36:DA:334:C:O2'	2.05	0.57
40:DE:103:ASP:HA	40:DE:168:MET:HA	1.85	0.57
50:DR:30:THR:HG23	50:DR:31:HIS:ND1	2.19	0.57
17:AQ:70:ARG:N	17:AQ:70:ARG:HD2	2.20	0.57
58:DZ:144:LEU:HD21	58:DZ:150:LEU:HD13	1.86	0.57
17:CQ:75:ARG:HG3	17:CQ:75:ARG:NH1	2.19	0.57
5:CE:41:VAL:HG13	5:CE:113:ALA:HA	1.85	0.57
37:BB:65:C:H2'	37:BB:109:C:N4	2.19	0.57
36:DA:2590:A:O2'	36:DA:2591:C:H5'	2.04	0.57
36:BA:1525:G:H2'	36:BA:1526:G:H8	1.68	0.57
36:DA:1352:U:C2'	36:DA:1353:A:H5'	2.34	0.57
7:CG:102:ARG:HG2	7:CG:106:GLN:NE2	2.19	0.57
36:BA:1038:C:C3'	36:BA:1039:G:H5''	2.34	0.57
36:BA:1038:C:H2'	36:BA:1039:G:H5''	1.86	0.57
40:DE:69:LYS:HE3	40:DE:89:ASP:HA	1.86	0.57
1:CA:403:C:O2'	1:CA:404:U:H5'	2.04	0.57
1:CA:310:G:H2'	1:CA:311:C:H6	1.68	0.57
36:BA:752:A:H4'	36:BA:753:C:O5'	2.04	0.57
36:DA:315:G:H2'	36:DA:316:C:C6	2.39	0.57
38:DC:68:LEU:HD22	38:DC:70:LYS:HB3	1.85	0.57
2:AB:238:LEU:O	2:AB:238:LEU:HG	2.03	0.57
36:BA:2492:U:O2'	36:BA:2493:U:H5'	2.04	0.57
36:BA:394:A:H2'	36:BA:395:U:H5'	1.85	0.57
6:CF:26:ILE:O	6:CF:29:ALA:HB3	2.03	0.57
25:CZ:27:LEU:CD1	25:CZ:31:LEU:HD21	2.34	0.57
34:D8:4:MET:O	34:D8:62:LEU:HD12	2.05	0.57
36:DA:589:C:H2'	36:DA:590:A:H8	1.70	0.57
42:DG:159:VAL:O	42:DG:159:VAL:HG13	2.04	0.57
42:DG:130:ASN:CB	42:DG:160:VAL:HA	2.21	0.57
49:BQ:133:ARG:CG	49:BQ:134:ARG:H	2.16	0.57
9:AI:4:TYR:CD2	9:AI:88:TYR:HB2	2.38	0.57
14:CN:42:ILE:HG22	14:CN:43:CYS:N	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B8:62:LEU:CD1	36:BA:242:G:H5''	2.29	0.57
1:CA:555:C:H2'	1:CA:556:C:C6	2.38	0.57
58:DZ:162:GLU:C	58:DZ:163:LEU:HD23	2.24	0.57
10:CJ:34:VAL:CG2	10:CJ:74:ILE:HG22	2.32	0.57
36:DA:2822:G:OP1	40:DE:159:HIS:NE2	2.38	0.57
17:CQ:59:ILE:HG23	17:CQ:71:PHE:HB3	1.86	0.57
33:B7:43:THR:HG23	33:B7:44:PRO:HD2	1.85	0.57
5:AE:8:GLU:N	5:AE:34:VAL:HG23	2.19	0.57
7:CG:70:LYS:HG2	7:CG:100:ALA:HB2	1.85	0.57
2:AB:97:TRP:CH2	2:AB:173:ALA:HA	2.38	0.57
1:CA:1278:U:H5''	1:CA:1279:A:O4'	2.04	0.57
39:DD:2:ALA:O	39:DD:3:VAL:CB	2.52	0.57
40:BE:34:VAL:O	40:BE:34:VAL:HG22	2.04	0.57
50:DR:74:LYS:NZ	50:DR:77:ARG:NH2	2.51	0.57
1:CA:1435:G:H2'	1:CA:1436:U:H6	1.67	0.57
13:CM:27:LYS:HZ2	13:CM:31:LYS:CE	2.17	0.57
1:CA:1118:C:H1'	1:CA:1179:A:C4	2.40	0.57
1:CA:664:G:H22	1:CA:741:G:H1	1.52	0.57
1:AA:903:G:H2'	1:AA:904:C:H6	1.70	0.57
36:DA:492:A:H2'	36:DA:493:G:O4'	2.04	0.57
26:B0:21:LEU:HB3	26:B0:39:ARG:O	2.04	0.57
27:B1:14:VAL:HG13	27:B1:40:ARG:O	2.04	0.57
58:DZ:19:ARG:C	58:DZ:21:ALA:H	2.07	0.57
25:AZ:86:ALA:C	25:AZ:88:TYR:H	2.07	0.57
50:BR:10:LEU:HD12	50:BR:10:LEU:O	2.04	0.57
20:CT:29:LYS:O	20:CT:33:ILE:HG13	2.04	0.57
1:AA:992:U:H4'	1:AA:993:G:O5'	2.05	0.57
53:BU:115:ALA:C	53:BU:117:GLN:H	2.06	0.57
28:B2:32:LEU:HD12	28:B2:57:ILE:HD12	1.84	0.57
49:BQ:140:ALA:HB1	58:BZ:99:TYR:HE2	1.69	0.57
41:BF:137:LYS:HB2	41:BF:137:LYS:HZ2	1.68	0.57
34:D8:17:THR:CG2	34:D8:21:LYS:O	2.47	0.57
1:AA:976:G:H5'	1:AA:1358:U:O2'	2.04	0.57
36:DA:195:A:H5''	36:DA:196:A:OP2	2.03	0.57
19:CS:63:THR:HG23	19:CS:66:MET:HG2	1.85	0.57
36:BA:26:G:O2'	36:BA:27:G:H5'	2.05	0.57
12:AL:121:GLY:O	12:AL:122:THR:C	2.43	0.57
40:DE:51:PHE:CG	40:DE:52:LEU:N	2.73	0.57
36:BA:1053:C:O2'	36:BA:1054:A:H5'	2.05	0.57
29:B3:16:PRO:HD2	29:B3:19:GLN:NE2	2.19	0.57
40:BE:44:TYR:O	40:BE:45:THR:CB	2.52	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:405:U:O2	1:AA:498:U:H2'	2.03	0.57
12:CL:86:ARG:HB2	12:CL:101:VAL:CG2	2.33	0.57
25:CZ:341:GLN:HE22	25:CZ:390:GLU:HA	1.69	0.57
41:DF:53:THR:HG22	41:DF:56:GLU:CG	2.35	0.57
58:DZ:145:GLU:O	58:DZ:147:GLY:N	2.37	0.57
55:DW:78:GLU:OE2	55:DW:99:ARG:HD2	2.05	0.57
1:AA:47:C:H6	1:AA:365:U:H2'	1.70	0.57
38:DC:75:LEU:HD12	38:DC:75:LEU:O	2.04	0.57
3:AC:131:ARG:NH1	3:AC:166:GLU:HG3	2.18	0.57
15:AO:17:ARG:HG2	15:AO:26:GLU:HG3	1.85	0.57
39:DD:125:ILE:CD1	39:DD:137:PRO:HD3	2.34	0.57
3:AC:66:VAL:HG12	3:AC:66:VAL:O	2.03	0.57
1:CA:1485:U:O2'	1:CA:1486:G:H5'	2.04	0.57
36:BA:20:C:O2'	36:BA:21:A:H5'	2.04	0.57
1:CA:789:U:H2'	1:CA:791:G:OP2	2.04	0.57
1:CA:1513:A:H2'	1:CA:1514:C:C6	2.40	0.57
39:DD:206:LEU:HD22	39:DD:211:ARG:HG2	1.86	0.57
1:CA:1170:A:H2'	1:CA:1171:G:O4'	2.05	0.57
1:AA:603:U:H2'	1:AA:604:G:H8	1.68	0.57
7:AG:87:VAL:HG13	7:AG:151:TYR:O	2.04	0.57
1:AA:957:U:H4'	19:AS:79:THR:HB	1.86	0.57
36:DA:1001:A:H2'	36:DA:1002:G:O4'	2.04	0.57
52:DT:5:ALA:HA	52:DT:8:LYS:HE2	1.85	0.57
25:CZ:231:ILE:HG22	25:CZ:234:ARG:HB2	1.86	0.57
25:CZ:28:THR:HG23	25:CZ:79:HIS:CE1	2.38	0.57
48:DP:16:ARG:HE	48:DP:18:ARG:HG2	1.68	0.57
1:CA:987:G:O2'	1:CA:988:G:H5'	2.03	0.57
28:B2:41:ILE:HG13	28:B2:42:GLY:N	2.20	0.57
25:CZ:266:VAL:CB	25:CZ:291:ARG:NH2	2.65	0.57
25:AZ:135:MET:HE1	25:AZ:172:ARG:NE	2.19	0.57
57:BY:95:LYS:CE	57:BY:100:ALA:HB2	2.33	0.57
49:BQ:134:ARG:CZ	58:BZ:122:ARG:HH21	2.16	0.57
3:CC:47:LEU:HB3	3:CC:52:LEU:CD2	2.34	0.57
14:CN:57:ARG:NH1	14:CN:57:ARG:HB3	2.17	0.57
36:BA:252:G:P	48:BP:50:ARG:HH21	2.28	0.57
54:DV:47:VAL:O	54:DV:47:VAL:HG23	2.05	0.57
50:BR:4:LEU:C	50:BR:6:SER:H	2.07	0.57
37:BB:55:U:H2'	37:BB:56:G:C8	2.39	0.57
36:BA:2777:G:H5''	36:BA:2778:A:H5'	1.85	0.57
51:BS:57:LYS:O	51:BS:58:LEU:HB2	2.05	0.57
1:AA:266:G:C5'	1:AA:267:C:C5	2.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DE:52:LEU:HB3	40:DE:75:VAL:HB	1.86	0.57
17:CQ:70:ARG:HD2	17:CQ:70:ARG:N	2.19	0.57
13:AM:88:ARG:NH1	13:AM:88:ARG:HG2	2.18	0.57
36:BA:1103:A:H5'	36:BA:1104:C:OP2	2.05	0.57
5:CE:7:GLU:HG2	5:CE:112:LEU:CD2	2.34	0.57
58:DZ:10:ARG:H	58:DZ:37:VAL:HA	1.69	0.57
55:DW:5:ALA:O	55:DW:6:ILE:HB	2.04	0.57
24:CY:62:U:O2'	24:CY:63:C:H5'	2.04	0.57
2:AB:207:ALA:O	2:AB:211:ILE:HD12	2.04	0.57
4:CD:159:ARG:HH11	4:CD:159:ARG:HG3	1.68	0.57
34:D8:50:LEU:O	34:D8:52:LYS:N	2.38	0.57
36:DA:2068:U:N3	36:DA:2430:A:H2	2.01	0.57
51:BS:25:ARG:NH1	51:BS:40:ILE:HD11	2.20	0.57
49:BQ:52:VAL:C	49:BQ:54:MET:N	2.58	0.57
1:CA:1061:G:H2'	1:CA:1062:U:H6	1.68	0.57
56:BX:64:LYS:NZ	56:BX:73:ARG:NH2	2.51	0.57
46:DN:55:VAL:HG22	46:DN:56:ASN:N	2.20	0.57
53:BU:26:GLY:O	53:BU:30:LYS:HE2	2.03	0.57
37:BB:35:U:H2'	37:BB:36:C:H6	1.70	0.57
11:CK:29:ILE:HG22	11:CK:44:SER:HB2	1.86	0.57
33:B7:34:ARG:HG3	33:B7:34:ARG:HH11	1.69	0.57
49:DQ:70:PRO:HA	49:DQ:95:ALA:HB2	1.86	0.57
36:DA:648:G:O2'	36:DA:649:G:H5'	2.05	0.57
11:AK:26:ASN:O	11:AK:27:ASN:HB2	2.03	0.57
8:AH:11:THR:HA	8:AH:14:ARG:NH1	2.20	0.57
1:AA:652:U:C2	1:AA:752:G:N2	2.73	0.57
36:BA:1661:G:O2'	36:BA:1662:C:H5'	2.04	0.57
36:BA:703:U:C2'	36:BA:704:G:H5'	2.34	0.57
34:D8:38:GLY:O	34:D8:42:ARG:HB2	2.05	0.57
58:BZ:166:SER:HB2	58:BZ:167:PRO:HA	1.87	0.57
10:CJ:6:ILE:HD12	10:CJ:23:ILE:HG21	1.87	0.57
39:BD:77:ALA:O	39:BD:116:GLN:HG3	2.03	0.57
39:DD:75:ILE:HD13	39:DD:75:ILE:N	2.19	0.57
25:CZ:143:ASP:HB3	25:CZ:146:LEU:HB2	1.85	0.57
25:CZ:196:VAL:O	25:CZ:199:ILE:N	2.32	0.57
36:DA:1349:A:N6	36:DA:1598:C:N4	2.53	0.57
46:BN:134:ARG:N	46:BN:135:PRO:HD3	2.19	0.57
35:D9:1:MET:CE	36:DA:2478:A:OP2	2.50	0.57
31:B5:48:GLU:O	31:B5:49:CYS:CB	2.53	0.57
36:DA:140:G:H1'	36:DA:141:A:C2	2.40	0.57
36:BA:1019:U:H2'	36:BA:1021:A:N1	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:147:LEU:CD1	39:BD:183:ARG:HH12	2.18	0.57
58:DZ:125:LEU:HD21	58:DZ:164:ALA:HB3	1.86	0.57
36:BA:943:U:OP2	48:BP:38:GLN:CD	2.43	0.57
1:CA:1271:G:O2'	1:CA:1272:G:H5''	2.04	0.57
13:CM:49:THR:CB	13:CM:52:GLU:HG3	2.35	0.57
41:DF:180:GLY:N	41:DF:205:ARG:HH22	2.03	0.57
48:DP:84:ASN:C	48:DP:86:LYS:N	2.58	0.57
4:CD:129:ASN:HD21	4:CD:145:GLU:H	1.52	0.57
2:AB:31:TYR:HD2	2:AB:202:PRO:HG3	1.69	0.57
40:BE:34:VAL:HG11	40:BE:78:LEU:CD2	2.35	0.57
36:DA:2078:C:H2'	36:DA:2079:U:H6	1.68	0.57
50:DR:97:VAL:HA	50:DR:113:LEU:O	2.04	0.57
1:AA:1277:C:H2'	1:AA:1278:U:H5'	1.85	0.57
53:BU:69:CYS:SG	53:BU:79:PHE:CD2	2.98	0.57
38:DC:193:ILE:C	38:DC:195:ALA:N	2.57	0.57
56:DX:64:LYS:HE2	56:DX:73:ARG:CZ	2.34	0.57
43:DH:39:PRO:O	43:DH:40:GLU:HG2	2.04	0.57
37:DB:16:G:HO2'	37:DB:17:C:H6	1.52	0.57
1:AA:189:G:H2'	1:AA:189(A):C:H6	1.69	0.57
1:AA:187:C:OP1	20:AT:82:SER:HB2	2.04	0.57
46:DN:17:ASP:CG	46:DN:56:ASN:HB3	2.24	0.57
16:CP:5:ARG:HH21	16:CP:24:ALA:HA	1.70	0.57
1:AA:1228:C:H2'	1:AA:1229:A:H8	1.69	0.57
36:DA:2001:A:H2'	36:DA:2002:G:C8	2.40	0.57
2:CB:24:TRP:HZ3	2:CB:29:ALA:HB2	1.70	0.57
1:AA:16:A:N1	1:AA:919:A:H2	2.02	0.57
37:DB:111:G:O2'	37:DB:112:U:H5'	2.04	0.57
25:CZ:231:ILE:O	25:CZ:234:ARG:N	2.38	0.57
47:DO:64:ARG:CZ	52:DT:70:VAL:HG21	2.34	0.57
1:CA:228:A:H5'	1:CA:228:A:C8	2.34	0.57
32:D6:41:PRO:CD	32:D6:46:HIS:H	2.12	0.57
31:D5:45:VAL:HG12	31:D5:46:CYS:N	2.20	0.57
12:AL:53:ARG:HD2	12:AL:53:ARG:N	2.20	0.57
57:DY:45:VAL:CG1	57:DY:60:PHE:HB3	2.34	0.57
28:D2:5:GLU:O	28:D2:8:LYS:HB2	2.05	0.57
58:BZ:37:VAL:HG23	58:BZ:38:TYR:N	2.19	0.57
35:D9:17:ILE:HG21	35:D9:19:ARG:HH21	1.69	0.57
46:DN:43:THR:HB	46:DN:46:VAL:CG1	2.35	0.57
36:BA:1252:G:N3	53:BU:33:ARG:HD2	2.20	0.57
3:AC:11:ARG:CG	3:AC:11:ARG:HH11	2.15	0.57
13:CM:65:LYS:HD3	13:CM:65:LYS:N	2.20	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:D9:16:VAL:HG11	36:DA:1032:A:O3'	2.05	0.57
55:BW:97:LYS:HZ1	55:BW:99:ARG:NH1	2.03	0.57
5:CE:12:LEU:CD1	5:CE:31:LEU:CB	2.79	0.57
43:BH:107:VAL:HG23	43:BH:108:GLY:N	2.19	0.57
1:CA:63:C:C2'	1:CA:64:G:H5'	2.33	0.57
36:DA:910:A:C5	49:DQ:13:GLN:HG3	2.40	0.57
4:AD:119:GLN:O	4:AD:123:HIS:HD2	1.87	0.57
22:CW:71:G:O2'	36:DA:1851:U:H4'	2.05	0.57
55:BW:40:ASN:O	55:BW:41:LYS:HG2	2.05	0.57
46:DN:3:THR:HG22	46:DN:5:VAL:H	1.70	0.57
1:CA:945:G:C2	1:CA:946:A:C8	2.92	0.57
58:DZ:108:PRO:HA	58:DZ:141:VAL:HG12	1.85	0.57
34:B8:30:ARG:NH2	36:BA:2419:U:O4	2.38	0.57
6:CF:44:GLY:O	6:CF:59:TYR:HA	2.04	0.57
8:CH:111:ILE:C	8:CH:112:LEU:HD23	2.24	0.57
9:AI:79:LEU:HD11	9:AI:83:ARG:NE	2.20	0.57
32:D6:42:TRP:CH2	36:DA:643:A:N7	2.73	0.57
1:AA:47:C:C6	1:AA:365:U:H2'	2.40	0.57
36:BA:884:C:C2'	36:BA:885:C:H5'	2.33	0.57
36:BA:1335:U:H2'	36:BA:1336:A:C8	2.38	0.57
9:AI:126:SER:O	9:AI:127:LYS:CB	2.52	0.57
36:DA:860:U:C5	36:DA:917:A:N7	2.72	0.57
36:DA:1331:A:H2'	36:DA:1333:C:C5	2.40	0.57
36:DA:371:A:H61	36:DA:401:A:H5''	1.68	0.57
43:BH:44:VAL:HG12	43:BH:45:VAL:N	2.19	0.57
25:AZ:256:VAL:HG11	25:AZ:310:ILE:HG22	1.86	0.57
9:CI:35:GLU:HG3	9:CI:38:GLN:OE1	2.04	0.57
11:AK:66:LEU:HD21	11:AK:97:ALA:HB1	1.85	0.57
36:BA:1163:G:O2'	36:BA:1164:G:H5'	2.05	0.57
4:CD:71:SER:O	4:CD:72:GLU:C	2.43	0.57
36:BA:445:C:OP1	53:BU:2:PRO:HA	2.05	0.57
36:DA:1841:U:H2'	36:DA:1842:G:H8	1.70	0.57
36:DA:2555:U:H2'	36:DA:2556:C:H5'	1.87	0.57
25:AZ:315:LYS:HG3	25:AZ:405:GLU:OE1	2.05	0.57
39:BD:155:LEU:HD23	39:BD:177:LEU:CD2	2.35	0.57
9:CI:5:TYR:CD1	9:CI:6:GLY:N	2.73	0.57
1:CA:1493:A:H5''	1:CA:1494:G:OP2	2.05	0.57
36:BA:2602:A:H4'	36:BA:2603:G:H5'	1.87	0.57
6:AF:40:VAL:O	6:AF:40:VAL:HG13	2.04	0.57
36:BA:300:A:H2'	36:BA:334:C:O2'	2.05	0.57
25:CZ:5:PHE:HB2	25:CZ:275:LYS:HB3	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:D6:9:LEU:HD13	32:D6:9:LEU:C	2.24	0.57
34:D8:33:ASN:OD1	34:D8:34:TRP:N	2.37	0.57
52:BT:23:ARG:HA	52:BT:52:ILE:HD12	1.85	0.57
32:B6:45:LYS:HZ3	32:B6:45:LYS:H	1.53	0.57
56:BX:35:THR:O	56:BX:38:GLU:HB2	2.04	0.57
36:DA:478:A:C6	36:DA:480:A:C6	2.93	0.57
57:BY:39:VAL:O	57:BY:40:GLU:HG2	2.05	0.57
57:BY:74:PRO:O	57:BY:75:ILE:HB	2.04	0.57
49:BQ:141:GLN:CD	58:BZ:72:ARG:NE	2.58	0.57
1:CA:1105:A:O2'	1:CA:1106:G:H5'	2.05	0.57
12:CL:41:ARG:NH1	12:CL:41:ARG:CB	2.60	0.57
53:DU:108:GLU:O	53:DU:112:ARG:HG2	2.04	0.57
4:CD:67:ILE:O	4:CD:67:ILE:CG2	2.53	0.57
42:BG:27:ASN:C	42:BG:29:TRP:H	2.07	0.57
40:DE:46:ALA:HB2	40:DE:82:ARG:HA	1.86	0.57
5:CE:147:ASP:HA	5:CE:150:ARG:NH1	2.20	0.57
36:DA:1747(A):G:H2'	36:DA:1748:G:C5'	2.30	0.57
1:CA:539:A:OP2	12:CL:115:LYS:NZ	2.37	0.57
32:B6:36:LEU:HD12	32:B6:50:ARG:CZ	2.34	0.57
36:BA:1105:U:H2'	36:BA:1106:G:H8	1.70	0.57
48:DP:127:ALA:HB3	48:DP:130:PHE:CE2	2.39	0.57
25:AZ:219:LYS:HB2	25:AZ:244:ARG:HB2	1.87	0.57
5:AE:92:LYS:O	5:AE:118:ILE:HD12	2.05	0.57
13:AM:84:ILE:O	13:AM:84:ILE:HG22	2.05	0.57
36:BA:2839:G:H2'	36:BA:2840:C:C6	2.39	0.57
9:CI:53:VAL:O	9:CI:54:ASP:HB2	2.05	0.57
25:CZ:221:PHE:N	25:CZ:244:ARG:HD2	2.20	0.57
36:BA:1543:C:C3'	36:BA:1544:A:C5'	2.82	0.57
1:AA:383:A:C2'	1:AA:384:G:H5'	2.35	0.57
36:DA:1105:U:H2'	36:DA:1106:G:C8	2.38	0.57
36:BA:1493:C:O2	36:BA:1493:C:H2'	2.04	0.57
54:DV:15:GLU:HB3	54:DV:16:PRO:CD	2.33	0.57
36:DA:1362:C:O2'	36:DA:1363:C:H5'	2.05	0.57
34:B8:50:LEU:O	34:B8:52:LYS:N	2.38	0.57
40:BE:77:ILE:HG22	40:BE:78:LEU:HD12	1.87	0.57
1:AA:160:A:H1'	1:AA:344:A:C5	2.39	0.57
58:DZ:114:GLY:O	58:DZ:146:ILE:HG22	2.04	0.57
36:DA:2781:A:H5''	36:DA:2782:G:H5'	1.87	0.57
39:DD:111:LEU:HD22	39:DD:115:GLN:OE1	2.05	0.57
38:DC:7:TYR:HA	38:DC:10:LEU:CD2	2.34	0.57
15:AO:26:GLU:OE2	15:AO:77:ARG:HD2	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:28:THR:HG23	25:AZ:79:HIS:ND1	2.19	0.57
36:DA:1499:C:H5'	36:DA:1499:C:H6	1.69	0.57
36:DA:720:C:H2'	36:DA:721:C:H6	1.68	0.57
1:CA:311:C:O2'	1:CA:312:C:H5'	2.04	0.57
14:CN:27:CYS:O	14:CN:29:ARG:N	2.37	0.57
1:CA:67:C:O2'	1:CA:171:A:H1'	2.05	0.57
58:DZ:19:ARG:NH1	58:DZ:84:GLU:O	2.38	0.57
36:BA:1907:G:O2'	36:BA:1908:C:H5'	2.04	0.57
36:BA:1917:U:C2'	36:BA:1918:A:H5'	2.35	0.57
8:AH:123:GLU:O	8:AH:127:LEU:HD23	2.05	0.57
36:BA:2406:U:N3	48:BP:72:PRO:HB2	2.20	0.57
40:DE:65:GLY:O	40:DE:70:ALA:HB3	2.04	0.57
1:AA:932:C:C6	7:AG:3:ARG:HD3	2.40	0.57
40:DE:107:THR:O	40:DE:190:GLY:CA	2.53	0.57
1:CA:1111:A:O2'	1:CA:1112:C:H5'	2.05	0.57
1:CA:1113:C:O2'	1:CA:1114:C:H5'	2.05	0.57
36:DA:1274:A:N3	36:DA:1297:C:H1'	2.19	0.57
16:AP:4:ILE:HG22	16:AP:4:ILE:O	2.02	0.57
6:CF:40:VAL:HG22	6:CF:40:VAL:O	2.04	0.57
1:CA:55:A:C8	25:CZ:233:GLY:HA3	2.40	0.57
52:DT:90:GLN:O	52:DT:92:GLY:N	2.37	0.57
31:D5:41:PRO:O	31:D5:44:THR:HB	2.05	0.57
1:CA:1189:C:H5''	3:CC:5:ILE:HG21	1.87	0.57
36:BA:1665:A:C3'	36:BA:1666:G:H5''	2.35	0.57
56:DX:53:LYS:HD2	56:DX:55:ASN:HD21	1.69	0.57
43:DH:42:ARG:HG2	43:DH:43:VAL:H	1.70	0.57
28:D2:50:ILE:H	28:D2:50:ILE:HD12	1.70	0.57
36:BA:628:G:C3'	36:BA:629:G:H5''	2.34	0.57
2:CB:111:ARG:HH22	2:CB:114:ARG:HG2	1.70	0.57
56:DX:12:VAL:CG1	56:DX:17:ALA:HB1	2.35	0.57
14:CN:59:ALA:O	14:CN:60:SER:HB2	2.05	0.57
9:AI:55:ALA:O	9:AI:58:HIS:CE1	2.58	0.57
42:BG:47:LYS:HE3	42:BG:81:LYS:HB3	1.87	0.57
36:BA:1138:G:H2'	36:BA:1139:G:O4'	2.05	0.57
39:DD:161:THR:O	39:DD:162:SER:HB3	2.04	0.57
32:D6:14:THR:HB	32:D6:52:VAL:HG21	1.87	0.57
14:CN:23:ARG:HA	14:CN:30:ALA:HA	1.87	0.57
42:DG:53:LEU:N	42:DG:53:LEU:HD22	2.20	0.57
50:BR:117:VAL:O	50:BR:118:GLU:HB2	2.04	0.57
35:B9:25:VAL:HB	35:B9:34:GLN:HB3	1.86	0.57
4:CD:70:ILE:HG22	4:CD:75:PHE:HB2	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:16:ASP:HB3	13:CM:41:PRO:HB3	1.87	0.57
1:AA:67:C:OP1	1:AA:199:G:H5''	2.04	0.57
54:BV:18:LEU:HD23	54:BV:19:LYS:H	1.67	0.57
7:CG:153:HIS:CE1	11:CK:58:PRO:HD2	2.39	0.57
1:AA:1006:C:H2'	1:AA:1007:C:H6	1.69	0.57
36:DA:954:G:N3	36:DA:2274:A:C2	2.73	0.57
3:AC:23:TYR:CD1	3:AC:24:ALA:N	2.73	0.57
36:DA:1163:G:O2'	36:DA:1164:G:H5'	2.05	0.57
27:B1:67:ILE:O	27:B1:70:VAL:HG23	2.03	0.57
1:CA:148:G:H2'	1:CA:149:A:H8	1.69	0.57
9:CI:8:GLY:O	9:CI:76:ALA:HB1	2.04	0.57
36:BA:2295:C:O2'	36:BA:2296:U:H5'	2.05	0.57
1:AA:1464:G:O2'	1:AA:1465:C:H5'	2.04	0.57
58:DZ:11:GLU:OE1	58:DZ:13:GLU:HB2	2.05	0.57
1:CA:434:U:H2'	1:CA:435:C:C6	2.39	0.57
45:DK:91:UNK:HA	45:DK:133:UNK:CB	2.35	0.57
2:AB:56:ARG:HG2	2:AB:56:ARG:HH11	1.70	0.57
11:AK:67:ASP:OD1	11:AK:71:LYS:HD2	2.05	0.57
2:AB:204:ASN:ND2	2:AB:206:ASP:H	2.03	0.57
1:AA:781:A:H2'	1:AA:782:A:H5'	1.87	0.57
3:CC:79:ARG:HH11	3:CC:79:ARG:HB3	1.70	0.57
36:BA:2087:G:O2'	36:BA:2088:G:H5'	2.04	0.57
36:DA:973:A:O4'	36:DA:1188:U:C6	2.58	0.57
36:DA:2685:G:O2'	36:DA:2726:U:H5	1.86	0.57
28:B2:20:GLU:OE1	28:B2:23:LYS:HB2	2.05	0.57
25:CZ:200:TRP:HA	25:CZ:203:LEU:HB2	1.86	0.57
22:CV:43:C:H2'	22:CV:44:G:C8	2.39	0.57
13:AM:16:ASP:HB3	13:AM:41:PRO:HB3	1.87	0.57
43:DH:124:GLU:HG3	43:DH:132:ARG:HG3	1.87	0.57
42:BG:71:THR:HG22	42:BG:72:ARG:N	2.20	0.57
42:BG:76:SER:OG	42:BG:83:ARG:HB3	2.05	0.57
1:AA:1367:C:O2'	10:AJ:48:THR:HG21	2.05	0.57
43:BH:83:TYR:CB	43:BH:134:SER:HB3	2.33	0.57
43:BH:136:ILE:H	43:BH:136:ILE:CD1	2.16	0.57
31:B5:25:LEU:CD2	31:B5:26:THR:H	2.17	0.57
36:BA:673:C:C6	36:BA:673:C:H5'	2.28	0.57
41:BF:192:LEU:HD21	41:BF:194:MET:HG3	1.87	0.57
4:AD:138:TYR:CD1	4:AD:138:TYR:C	2.78	0.57
36:DA:1747:G:H2'	36:DA:1747(A):G:C8	2.40	0.57
40:DE:111:ARG:HD2	40:DE:160:TYR:CE2	2.40	0.57
41:DF:123:LEU:HD12	41:DF:124:LEU:H	1.70	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:69:GLU:HG3	25:AZ:70:TYR:N	2.19	0.57
3:CC:14:ILE:CG1	3:CC:15:THR:N	2.67	0.57
3:CC:53:ALA:HB2	3:CC:115:LEU:CG	2.34	0.57
39:DD:6:PHE:HE1	39:DD:18:VAL:HG12	1.69	0.57
49:DQ:39:PRO:HG3	49:DQ:99:PRO:CD	2.35	0.57
54:BV:58:VAL:CG1	54:BV:97:LYS:HB2	2.33	0.57
1:CA:826:C:H2'	1:CA:827:U:C6	2.40	0.57
51:BS:93:LYS:O	51:BS:95:HIS:HB2	2.04	0.57
1:CA:1337:G:H5''	1:CA:1338:G:OP2	2.05	0.57
39:BD:132:PRO:HG3	39:BD:190:TYR:CZ	2.40	0.57
47:DO:12:ASP:OD2	47:DO:85:VAL:HG13	2.04	0.57
4:CD:108:LEU:O	4:CD:165:MET:HE2	2.04	0.57
36:BA:610:G:H22	36:BA:619:G:H1'	1.69	0.57
5:AE:20:GLN:NE2	5:AE:25:ARG:HH21	2.03	0.57
36:DA:17:G:H2'	36:DA:18:C:C6	2.40	0.57
36:BA:2552:U:C2	36:BA:2554:U:H5'	2.39	0.57
15:CO:33:THR:HG23	15:CO:63:ARG:NH1	2.20	0.57
36:DA:8:A:H2'	36:DA:9:U:C5	2.40	0.57
3:CC:172:ARG:HH21	3:CC:174:PRO:CG	2.18	0.57
40:BE:198:VAL:HG12	40:BE:199:ARG:H	1.68	0.57
6:AF:76:ALA:O	6:AF:80:ARG:HG3	2.05	0.57
15:CO:2:PRO:O	15:CO:3:ILE:C	2.43	0.57
1:CA:996:A:H2'	1:CA:997:U:C6	2.40	0.57
36:BA:36:G:H4'	36:BA:451:C:C2	2.39	0.57
33:D7:10:ARG:O	33:D7:14:LYS:HG2	2.05	0.57
8:CH:37:ARG:O	8:CH:40:ALA:HB3	2.05	0.57
36:BA:2027:G:O2'	36:BA:2028:U:H5'	2.05	0.57
40:BE:147:PRO:HB2	40:BE:149:ARG:HG2	1.87	0.57
3:CC:64:VAL:HB	3:CC:98:ASN:O	2.03	0.57
22:CV:53:G:O2'	22:CV:54:U:H5'	2.05	0.57
9:AI:37:PHE:O	9:AI:39:GLY:N	2.38	0.57
38:DC:78:ALA:H	38:DC:115:ALA:HB1	1.68	0.56
25:CZ:5:PHE:CD1	25:CZ:6:VAL:N	2.73	0.56
32:B6:19:ARG:O	32:B6:20:ASN:O	2.22	0.56
42:DG:71:THR:HG22	42:DG:89:GLY:HA3	1.87	0.56
52:BT:32:TYR:O	52:BT:33:LYS:HB2	2.05	0.56
53:BU:108:GLU:HG3	54:BV:44:LYS:HD3	1.86	0.56
10:AJ:40:LEU:HB2	10:AJ:41:PRO:HD2	1.87	0.56
1:AA:1086:U:H2'	1:AA:1087:G:C5'	2.27	0.56
36:BA:1049:C:H2'	36:BA:1050:A:C8	2.40	0.56
36:BA:25:U:C5'	55:BW:79:GLY:HA2	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:28:SER:CB	4:CD:29:PRO:HD2	2.33	0.56
36:BA:636:G:H2'	48:BP:115:LEU:CD1	2.35	0.56
36:BA:626:U:H3	48:BP:105:LEU:HG	1.69	0.56
5:CE:93:PRO:HD2	8:CH:105:ARG:HH21	1.69	0.56
1:CA:454:C:H5''	1:CA:455:C:C5	2.40	0.56
1:AA:1036:G:H3'	1:AA:1037:C:C6	2.40	0.56
36:BA:93:G:H2'	36:BA:94:C:C6	2.39	0.56
1:CA:559:A:OP2	5:CE:126:ARG:NH2	2.37	0.56
2:CB:201:ILE:O	2:CB:201:ILE:HG22	2.04	0.56
29:B3:45:GLY:C	29:B3:47:VAL:H	2.08	0.56
54:BV:35:LEU:N	54:BV:35:LEU:HD22	2.18	0.56
51:DS:73:LEU:O	51:DS:73:LEU:HD23	2.05	0.56
58:DZ:144:LEU:HD11	58:DZ:150:LEU:HD22	1.86	0.56
1:AA:737:A:OP1	6:AF:92:LYS:HB2	2.05	0.56
36:BA:848:G:H8	36:BA:848:G:H5'	1.70	0.56
22:CW:57:G:C2'	22:CW:58:A:H5'	2.35	0.56
3:CC:142:MET:C	3:CC:144:SER:H	2.08	0.56
37:DB:82:G:O2'	37:DB:83:G:H5'	2.04	0.56
15:AO:17:ARG:NH1	15:AO:77:ARG:NH1	2.52	0.56
27:B1:67:ILE:N	27:B1:68:PRO:HD2	2.19	0.56
36:BA:1862:G:O2'	36:BA:1863:G:H5'	2.06	0.56
1:AA:706:A:O2'	11:AK:31:THR:HG21	2.05	0.56
57:DY:33:LYS:C	57:DY:35:TYR:H	2.08	0.56
56:DX:3:THR:HA	56:DX:6:ASP:OD2	2.05	0.56
36:DA:2836:U:H2'	36:DA:2837:G:C8	2.40	0.56
4:CD:150:GLU:CD	4:CD:151:LYS:H	2.08	0.56
26:D0:55:ARG:NH2	36:DA:2387:U:OP1	2.37	0.56
1:CA:1308:U:OP2	13:CM:99:ARG:HG3	2.05	0.56
1:CA:428:G:H8	1:CA:428:G:OP1	1.87	0.56
8:AH:83:ILE:HG23	8:AH:83:ILE:O	2.05	0.56
43:BH:116:GLU:OE1	43:BH:116:GLU:HA	2.05	0.56
56:BX:3:THR:HA	56:BX:6:ASP:OD2	2.05	0.56
32:B6:35:GLU:OE1	32:B6:35:GLU:HA	2.06	0.56
32:D6:12:GLU:CG	32:D6:23:THR:HB	2.35	0.56
52:BT:23:ARG:HG2	52:BT:120:ARG:HH12	1.70	0.56
32:D6:48:VAL:HG23	32:D6:48:VAL:O	2.05	0.56
58:BZ:177:PRO:O	58:BZ:178:GLU:HB3	2.05	0.56
25:CZ:246:LYS:HD3	25:CZ:281:ILE:CG2	2.34	0.56
25:CZ:279:GLU:HG2	25:CZ:279:GLU:O	2.06	0.56
36:BA:1642:G:O2'	36:BA:1643:G:H5'	2.05	0.56
42:BG:52:ILE:HG13	42:BG:53:LEU:H	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D2:51:ARG:CB	28:D2:51:ARG:NH1	2.68	0.56
36:DA:803:U:C2'	36:DA:804:A:H5'	2.35	0.56
58:DZ:155:LEU:HD23	58:DZ:155:LEU:H	1.70	0.56
1:AA:375:U:OP1	16:AP:69:THR:HG21	2.05	0.56
36:DA:2760:C:C3'	36:DA:2761:G:H5''	2.34	0.56
58:DZ:137:ILE:HG23	58:DZ:158:PRO:HG2	1.87	0.56
36:BA:2781:A:H5'	36:BA:2782:G:C5'	2.30	0.56
1:AA:1125:U:N3	10:AJ:5:ARG:NH2	2.46	0.56
55:DW:44:ALA:O	55:DW:47:VAL:N	2.37	0.56
36:DA:1107:G:H5''	44:DJ:59:UNK:CB	2.35	0.56
51:DS:106:ARG:C	51:DS:106:ARG:HH11	2.07	0.56
27:B1:29:GLY:O	27:B1:30:VAL:HG22	2.06	0.56
50:BR:28:LEU:HD23	50:BR:29:LEU:HD12	1.88	0.56
36:BA:1076:C:H4'	58:BZ:112:ARG:HH21	1.69	0.56
47:BO:43:VAL:HG23	47:BO:56:ASP:O	2.05	0.56
48:DP:144:GLU:N	48:DP:145:PRO:HD3	2.21	0.56
25:AZ:271:GLU:O	25:AZ:286:VAL:HG23	2.05	0.56
2:CB:165:VAL:CG2	2:CB:166:ASP:H	2.10	0.56
58:BZ:110:GLY:HA2	58:BZ:113:ALA:HB3	1.86	0.56
58:DZ:18:LEU:HG	58:DZ:23:LYS:HD2	1.87	0.56
58:DZ:17:ALA:HA	58:DZ:20:ARG:HG2	1.86	0.56
19:AS:16:LEU:N	19:AS:16:LEU:HD12	2.20	0.56
25:AZ:222:LEU:HD12	25:AZ:305:ALA:HB2	1.86	0.56
36:BA:144:C:O2'	36:BA:145:G:H5'	2.04	0.56
24:CY:45:U:H3'	24:CY:46:7MG:H5''	1.87	0.56
40:BE:34:VAL:O	40:BE:35:GLN:HB2	2.05	0.56
40:BE:52:LEU:HD23	40:BE:75:VAL:HB	1.86	0.56
51:BS:35:ILE:HD11	51:BS:99:LYS:HE3	1.85	0.56
36:BA:2884:U:C2'	36:BA:2885:C:H5'	2.34	0.56
1:CA:1157:A:O2'	1:CA:1158:C:OP2	2.23	0.56
52:DT:106:SER:O	52:DT:107:ASP:CB	2.53	0.56
1:AA:629:G:C2'	1:AA:630:G:H5''	2.35	0.56
39:BD:37:LEU:O	39:BD:38:LYS:O	2.23	0.56
36:BA:1144:G:H2'	36:BA:1145:C:H6	1.69	0.56
15:AO:17:ARG:HH11	15:AO:77:ARG:NH1	2.03	0.56
42:DG:84:LYS:N	42:DG:84:LYS:HD2	2.19	0.56
34:D8:48:PHE:O	34:D8:49:VAL:HB	2.04	0.56
36:BA:137:C:O2	36:BA:137:C:H2'	2.03	0.56
39:BD:2:ALA:O	39:BD:3:VAL:HB	2.05	0.56
1:AA:272:C:O2'	1:AA:273:A:H5'	2.05	0.56
36:DA:2166:G:H2'	36:DA:2167:U:C6	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1345:C:H2'	36:DA:1346:G:H8	1.68	0.56
36:DA:1268:A:H2'	36:DA:1269:A:O4'	2.04	0.56
36:DA:2850:A:C2	50:DR:61:HIS:CD2	2.93	0.56
38:BC:59:ARG:HH22	38:BC:139:ASN:HD22	1.53	0.56
1:CA:255:G:H1'	17:CQ:16:GLN:NE2	2.20	0.56
22:AV:59:U:O2'	22:AV:60:U:O5'	2.23	0.56
52:DT:32:TYR:O	52:DT:33:LYS:HB2	2.04	0.56
36:DA:2832:U:C2	36:DA:2834:G:N2	2.73	0.56
53:BU:91:ASP:OD1	53:BU:96:ALA:HB2	2.05	0.56
1:CA:1321:C:C3'	1:CA:1322:C:H5''	2.34	0.56
28:B2:35:LEU:HD13	28:B2:36:ARG:N	2.20	0.56
28:B2:25:VAL:HG11	28:B2:57:ILE:HD13	1.87	0.56
43:BH:37:VAL:HG11	43:BH:68:THR:HG21	1.86	0.56
36:BA:1666:G:H5'	36:BA:1666:G:C8	2.39	0.56
25:CZ:171:ILE:HD12	25:CZ:171:ILE:N	2.21	0.56
56:DX:35:THR:HG21	56:DX:37:THR:HB	1.86	0.56
1:AA:346:G:P	52:BT:43:GLN:HE22	2.29	0.56
28:D2:2:LYS:HB3	36:DA:97:C:H5''	1.86	0.56
57:DY:8:LYS:CD	57:DY:8:LYS:N	2.68	0.56
10:AJ:6:ILE:HD12	10:AJ:23:ILE:HG21	1.86	0.56
53:BU:14:HIS:CD2	53:BU:36:ARG:NH2	2.60	0.56
43:DH:125:VAL:N	43:DH:126:PRO:CD	2.66	0.56
1:AA:1129:C:O5'	1:AA:1130:A:H5'	2.05	0.56
1:AA:1150:U:O2'	1:AA:1151:A:H5'	2.04	0.56
30:D4:27:THR:HG23	42:DG:143:GLU:OE1	2.05	0.56
36:DA:996:A:O2'	36:DA:997:G:H5'	2.05	0.56
53:DU:90:VAL:O	53:DU:92:ARG:N	2.38	0.56
9:AI:53:VAL:HG22	9:AI:95:LYS:HZ2	1.67	0.56
28:D2:16:LEU:H	28:D2:67:LYS:HZ1	1.52	0.56
25:CZ:215:ARG:CB	25:CZ:282:ALA:HB3	2.35	0.56
4:CD:57:ARG:HB3	4:CD:206:PHE:HB2	1.86	0.56
4:CD:31:CYS:C	4:CD:33:MET:H	2.09	0.56
58:DZ:127:LYS:HB3	58:DZ:127:LYS:NZ	2.20	0.56
58:DZ:137:ILE:HG23	58:DZ:158:PRO:CG	2.35	0.56
58:DZ:137:ILE:HG22	58:DZ:137:ILE:O	2.05	0.56
36:DA:2787:C:H1'	40:DE:61:ARG:HG3	1.85	0.56
36:DA:2632:A:C2	40:DE:61:ARG:HD3	2.40	0.56
36:DA:260:G:C6	36:DA:261:G:C5	2.93	0.56
41:DF:163:VAL:O	41:DF:166:ALA:HB3	2.05	0.56
19:AS:45:VAL:C	19:AS:47:HIS:H	2.08	0.56
13:AM:89:GLY:O	13:AM:93:ARG:HD2	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:43:VAL:HG22	12:CL:55:VAL:HG11	1.87	0.56
22:CV:59:U:O2'	22:CV:60:U:O4'	2.22	0.56
33:B7:5:TRP:CZ3	36:BA:464:U:H4'	2.41	0.56
4:AD:92:VAL:O	4:AD:95:GLY:N	2.38	0.56
1:AA:367:U:H4'	25:AZ:291:ARG:HD2	1.86	0.56
27:D1:45:ASN:HD21	36:DA:2090:G:H21	1.53	0.56
39:DD:10:THR:HG23	39:DD:13:ARG:HB3	1.86	0.56
9:CI:53:VAL:CG1	9:CI:95:LYS:HD3	2.35	0.56
2:AB:176:GLU:O	2:AB:179:LYS:HB3	2.05	0.56
1:CA:1256:A:C2	1:CA:1277:C:H2'	2.39	0.56
36:DA:2491:U:O2'	36:DA:2492:U:H5'	2.05	0.56
54:DV:16:PRO:O	54:DV:96:ILE:O	2.22	0.56
46:DN:115:ARG:HA	46:DN:118:LYS:HZ2	1.71	0.56
50:BR:18:LEU:HD13	50:BR:18:LEU:C	2.25	0.56
40:BE:202:LYS:HD2	40:BE:202:LYS:N	2.20	0.56
36:DA:1720:U:C3'	36:DA:1721:G:H5''	2.36	0.56
38:DC:66:HIS:CD2	38:DC:184:LYS:HA	2.40	0.56
54:BV:5:VAL:HG22	54:BV:6:LYS:N	2.20	0.56
1:CA:189:G:H2'	1:CA:189(A):C:C6	2.39	0.56
38:BC:63:SER:HA	38:BC:160:ARG:HA	1.88	0.56
54:DV:72:VAL:CG2	54:DV:85:LYS:HB3	2.35	0.56
36:BA:888:C:C2'	36:BA:889:C:H4'	2.34	0.56
48:DP:122:PRO:HA	48:DP:141:ALA:O	2.05	0.56
42:DG:145:THR:HB	42:DG:148:MET:CB	2.35	0.56
43:DH:94:TYR:CD1	43:DH:107:VAL:HA	2.40	0.56
1:CA:80:G:H22	1:CA:89:C:H3'	1.70	0.56
36:BA:2641:G:P	46:BN:74:ARG:HH21	2.27	0.56
36:DA:535:C:C2'	36:DA:536:A:H5'	2.35	0.56
26:B0:43:THR:CG2	36:BA:2332:U:H5'	2.35	0.56
2:CB:178:ARG:NH2	2:CB:198:ASP:OD1	2.38	0.56
32:B6:22:ALA:CB	32:B6:39:TYR:CZ	2.89	0.56
27:D1:75:GLU:O	27:D1:77:ALA:N	2.32	0.56
11:AK:59:TYR:CZ	11:AK:63:LEU:HD21	2.40	0.56
1:AA:1286:A:C2	21:AU:18:TYR:OH	2.58	0.56
36:BA:1232:G:H2'	36:BA:1233:C:C6	2.40	0.56
1:CA:819:A:H4'	1:CA:820:U:OP2	2.05	0.56
42:BG:162:THR:CG2	42:BG:162:THR:O	2.53	0.56
2:AB:204:ASN:HD22	2:AB:205:ASP:N	2.03	0.56
36:DA:1782:C:H1'	36:DA:2609:U:H5''	1.88	0.56
47:DO:35:VAL:HB	47:DO:69:ILE:HD13	1.87	0.56
36:DA:412:A:N7	36:DA:2411:A:H2	2.02	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DJ:99:UNK:C	44:DJ:101:UNK:N	2.68	0.56
6:AF:24:GLU:HG3	6:AF:28:ARG:NH1	2.19	0.56
36:DA:2767:C:H2'	36:DA:2768:C:H6	1.70	0.56
36:DA:285:C:H2'	36:DA:286:C:C6	2.41	0.56
36:BA:773:U:H4'	39:BD:47:GLY:HA3	1.86	0.56
43:BH:18:GLU:HB2	43:BH:25:LYS:HB2	1.87	0.56
36:BA:350:U:H2'	36:BA:351:G:O4'	2.06	0.56
36:BA:280:C:H3'	36:BA:281:G:H8	1.71	0.56
1:CA:1119:C:O2'	1:CA:1120:G:H5'	2.05	0.56
48:DP:90:ARG:O	48:DP:90:ARG:HD2	2.05	0.56
36:BA:1275:A:N6	36:BA:1296:G:H4'	2.20	0.56
25:CZ:231:ILE:CG2	25:CZ:234:ARG:HB2	2.35	0.56
32:D6:32:ASN:O	32:D6:33:LYS:CB	2.53	0.56
34:D8:62:LEU:N	34:D8:63:PRO:CD	2.69	0.56
36:DA:1189:A:C2	36:DA:1190:G:H1'	2.41	0.56
36:DA:2394:C:OP1	48:DP:62:LEU:HB2	2.05	0.56
48:DP:24:GLY:HA3	48:DP:33:ARG:HH12	1.70	0.56
52:DT:38:ASN:N	52:DT:38:ASN:HD22	2.03	0.56
28:B2:21:LEU:O	28:B2:64:LEU:HG	2.06	0.56
1:CA:1148:U:H2'	1:CA:1149:C:O4'	2.05	0.56
38:BC:78:ALA:N	38:BC:115:ALA:HB1	2.18	0.56
49:BQ:133:ARG:CB	49:BQ:133:ARG:HH11	2.18	0.56
49:BQ:27:VAL:HG12	49:BQ:28:ALA:H	1.70	0.56
57:DY:85:VAL:HG12	57:DY:86:ARG:N	2.18	0.56
36:DA:2160:G:H8	36:DA:2160:G:H5'	1.71	0.56
36:DA:2184:G:H2'	36:DA:2185:C:C1'	2.36	0.56
56:DX:12:VAL:CG1	56:DX:27:THR:O	2.53	0.56
42:BG:53:LEU:N	42:BG:53:LEU:HD22	2.20	0.56
53:DU:99:ALA:HB2	53:DU:106:PHE:CE1	2.41	0.56
58:DZ:52:SER:O	58:DZ:53:ILE:HG23	2.05	0.56
7:CG:28:ASN:OD1	7:CG:36:LYS:NZ	2.39	0.56
36:BA:260:G:H1'	36:BA:621:A:H1'	1.88	0.56
1:AA:265:G:C2'	1:AA:266:G:H5''	2.32	0.56
48:BP:58:THR:C	48:BP:61:ARG:HE	2.07	0.56
48:DP:102:ARG:NH1	48:DP:102:ARG:HB2	2.19	0.56
48:DP:101:VAL:HG12	48:DP:106:LEU:CB	2.34	0.56
52:DT:48:ILE:CD1	52:DT:64:ARG:HB3	2.36	0.56
27:B1:61:ARG:NH1	27:B1:61:ARG:HG2	2.17	0.56
36:BA:2679:A:O2'	36:BA:2680:C:H5'	2.05	0.56
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.40	0.56
1:CA:826:C:H2'	1:CA:827:U:H6	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:999:U:H5''	36:BA:1154:G:O6	2.05	0.56
27:B1:8:SER:HB3	27:B1:66:HIS:CD2	2.40	0.56
36:BA:812:C:H1'	36:BA:1250:G:N2	2.21	0.56
1:AA:611:A:H2	1:AA:629:G:H22	1.52	0.56
1:AA:189:G:H2'	1:AA:189(A):C:C6	2.40	0.56
20:AT:22:ARG:O	20:AT:26:ASN:ND2	2.38	0.56
13:AM:120:LYS:O	13:AM:121:LYS:CB	2.53	0.56
36:DA:438:G:H2'	36:DA:440:G:C8	2.41	0.56
12:AL:8:ASN:HD22	17:AQ:34:LYS:CE	2.18	0.56
46:DN:36:GLY:O	46:DN:42:TRP:HE3	1.88	0.56
5:AE:84:PHE:HB3	5:AE:134:ALA:HB2	1.86	0.56
36:DA:2624:G:O2'	36:DA:2625:G:H5'	2.06	0.56
50:BR:7:GLY:O	50:BR:8:ARG:HB2	2.04	0.56
49:BQ:120:ILE:O	49:BQ:123:HIS:N	2.38	0.56
36:BA:1932:A:H2'	36:BA:1933:G:O4'	2.05	0.56
45:BK:5:UNK:O	45:BK:6:UNK:C	2.54	0.56
36:BA:598:G:H5'	48:BP:15:ARG:HB3	1.87	0.56
40:DE:173:VAL:O	40:DE:174:ASP:HB2	2.06	0.56
38:DC:79:LYS:HB3	38:DC:118:ASP:OD2	2.06	0.56
32:B6:15:GLU:CD	32:B6:18:ARG:NE	2.58	0.56
36:BA:2399:G:O6	36:BA:2417:C:N3	2.38	0.56
32:D6:15:GLU:OE2	32:D6:41:PRO:CB	2.53	0.56
1:CA:1221:G:OP1	1:CA:1320:C:N4	2.38	0.56
39:BD:33:LEU:CD1	39:BD:102:LYS:HD2	2.35	0.56
39:BD:43:ARG:NH1	39:BD:44:ASN:ND2	2.46	0.56
9:AI:58:HIS:NE2	9:AI:59:PHE:HE1	1.94	0.56
54:DV:5:VAL:HG22	54:DV:6:LYS:N	2.21	0.56
1:CA:190:U:O2	20:CT:105:SER:HB2	2.04	0.56
53:DU:9:VAL:HG12	53:DU:13:LYS:CE	2.29	0.56
36:DA:1051:G:H2'	36:DA:1052:C:C4	2.40	0.56
48:BP:112:LEU:CD1	48:BP:127:ALA:HA	2.35	0.56
4:AD:62:GLN:O	4:AD:66:ARG:HB2	2.06	0.56
4:AD:62:GLN:HB3	4:AD:66:ARG:HD2	1.87	0.56
51:DS:12:PHE:CD1	51:DS:13:ARG:N	2.74	0.56
27:D1:82:LEU:CD2	27:D1:90:ILE:HD12	2.31	0.56
4:AD:15:GLU:O	4:AD:17:VAL:HG23	2.05	0.56
42:BG:64:THR:OG1	42:BG:94:LEU:HD11	2.05	0.56
19:AS:16:LEU:H	19:AS:16:LEU:HD12	1.69	0.56
5:AE:148:VAL:CG2	8:AH:107:LEU:HD13	2.34	0.56
18:CR:35:ARG:O	18:CR:37:VAL:HG12	2.06	0.56
2:AB:47:THR:HG23	2:AB:202:PRO:O	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:42:ILE:HD11	2:CB:202:PRO:HB2	1.87	0.56
36:DA:672:C:H2'	36:DA:673:C:H5''	1.82	0.56
5:AE:69:VAL:CG1	5:AE:139:LEU:HD13	2.34	0.56
50:BR:103:ARG:NH1	50:BR:110:PRO:HD3	2.20	0.56
36:BA:1658:C:OP1	40:BE:132:HIS:O	2.23	0.56
1:AA:197:A:N6	1:AA:221:C:H5'	2.21	0.56
38:BC:99:ILE:HG22	38:BC:99:ILE:O	2.05	0.56
49:BQ:6:ARG:HB3	49:BQ:6:ARG:NH1	2.19	0.56
36:DA:2022:U:O2'	36:DA:2617:C:H5'	2.06	0.56
8:AH:39:LEU:HB3	8:AH:45:ILE:HD13	1.87	0.56
24:AY:74:C:O2	25:AZ:295:ARG:NH2	2.38	0.56
1:CA:1007:C:O2'	1:CA:1008:C:H5'	2.06	0.56
8:CH:114:THR:HG22	8:CH:130:GLY:C	2.26	0.56
32:D6:42:TRP:HA	32:D6:42:TRP:HE3	1.70	0.56
1:CA:234:C:H2'	1:CA:235:C:C6	2.41	0.56
4:CD:102:ASP:OD1	4:CD:136:PRO:HB3	2.05	0.56
36:BA:17:G:H4'	53:BU:25:TRP:CH2	2.41	0.56
1:CA:22:G:H4'	1:CA:885:G:C8	2.41	0.56
40:BE:24:THR:HG21	40:BE:188:VAL:HG13	1.86	0.56
36:DA:2359:C:H2'	36:DA:2360:A:C8	2.41	0.56
8:AH:17:THR:C	8:AH:78:GLN:HE22	2.07	0.56
24:CY:8:4SU:HN3	24:CY:14:A:H62	1.52	0.56
53:DU:82:GLY:O	53:DU:86:ALA:N	2.36	0.56
36:DA:1831:G:H2'	36:DA:1832:C:H6	1.70	0.56
1:CA:139:G:O2'	1:CA:140:A:H5'	2.05	0.56
7:CG:145:ALA:O	7:CG:147:ALA:N	2.38	0.56
36:DA:1290:C:H2'	36:DA:1291:C:C6	2.39	0.56
11:CK:108:ILE:O	18:CR:87:ARG:N	2.38	0.56
46:BN:15:LEU:O	46:BN:136:GLU:HA	2.05	0.56
21:CU:12:LYS:HG2	21:CU:22:ARG:CB	2.36	0.56
45:BK:32:UNK:HA	45:BK:63:UNK:CB	2.36	0.56
36:BA:1963:U:H2'	36:BA:1963:U:O2	2.04	0.56
42:BG:41:GLN:HE21	42:BG:155:MET:HB3	1.71	0.56
32:B6:32:ASN:O	32:B6:33:LYS:CB	2.52	0.56
47:DO:114:ILE:HD12	47:DO:114:ILE:H	1.69	0.56
52:DT:33:LYS:NZ	52:DT:43:GLN:HG2	2.18	0.56
57:DY:9:LYS:HG3	57:DY:10:GLY:H	1.71	0.56
57:DY:39:VAL:O	57:DY:40:GLU:HG2	2.06	0.56
53:BU:65:ILE:HD11	53:BU:96:ALA:HB3	1.87	0.56
28:B2:3:LEU:HB3	36:BA:98:G:OP1	2.05	0.56
39:DD:30:GLU:HG3	39:DD:63:ARG:NE	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DH:43:VAL:HG12	43:DH:46:GLU:OE2	2.05	0.56
46:DN:12:ARG:HB3	46:DN:50:ASP:OD1	2.06	0.56
34:B8:61:LEU:CD2	36:BA:593:G:H4'	2.36	0.56
41:DF:125:LEU:HD23	41:DF:125:LEU:N	2.12	0.56
18:AR:56:THR:C	18:AR:58:LEU:H	2.09	0.56
2:AB:102:LEU:HD23	2:AB:182:ILE:HD12	1.86	0.56
41:DF:29:ASN:ND2	41:DF:32:LEU:HB2	2.20	0.56
24:CY:63:C:H2'	24:CY:64:U:C6	2.41	0.56
2:AB:30:ARG:HE	2:AB:31:TYR:HE1	1.54	0.56
2:CB:84:GLU:CD	2:CB:216:SER:HA	2.25	0.56
1:CA:975:A:H5'	1:CA:975:A:H8	1.70	0.56
12:CL:117:ARG:NH2	12:CL:124:LYS:HB2	2.20	0.56
27:D1:11:ARG:HB3	27:D1:11:ARG:NH1	2.21	0.56
41:BF:38:ARG:O	41:BF:42:ALA:HB2	2.05	0.56
36:BA:813:U:H2'	36:BA:814:C:C6	2.41	0.56
47:DO:88:ASN:HD21	47:DO:92:GLU:HB2	1.71	0.56
7:CG:45:ASP:O	7:CG:49:ILE:HG12	2.05	0.56
36:DA:111:A:C2	36:DA:112:U:C2	2.93	0.56
2:AB:92:TYR:C	2:AB:92:TYR:CD1	2.79	0.56
6:AF:91:VAL:CG1	6:AF:92:LYS:N	2.68	0.56
36:BA:2641:G:OP1	46:BN:74:ARG:NE	2.37	0.56
13:CM:118:ALA:HB2	22:CV:29:G:H5'	1.86	0.56
36:DA:1889:A:O2'	36:DA:2087:G:H5'	2.06	0.56
13:AM:69:GLU:O	13:AM:70:LEU:HB2	2.04	0.56
1:CA:376:G:O2'	1:CA:377:G:H5'	2.05	0.56
36:BA:1798:U:OP2	39:BD:274:ARG:NH2	2.39	0.56
1:CA:179:A:H2'	1:CA:180:U:H6	1.69	0.56
36:DA:1264:G:H2'	36:DA:1265:A:C8	2.41	0.56
47:BO:86:ILE:C	47:BO:87:ILE:HD13	2.26	0.56
36:DA:286:C:H2'	36:DA:287:C:H6	1.71	0.56
43:DH:154:PRO:O	43:DH:155:SER:HB3	2.06	0.56
36:BA:2836:U:H2'	36:BA:2837:G:C8	2.41	0.56
1:CA:613:C:H2'	1:CA:614:A:H8	1.70	0.56
7:CG:71:PRO:HG2	7:CG:91:VAL:HG11	1.86	0.56
1:CA:1382:C:H2'	1:CA:1383:C:H6	1.70	0.56
36:DA:2128:C:O2'	36:DA:2129:C:P	2.63	0.56
57:DY:6:HIS:N	57:DY:6:HIS:CD2	2.73	0.56
27:D1:40:ARG:O	27:D1:41:ARG:HG2	2.06	0.56
1:CA:55:A:C2	25:CZ:234:ARG:HD3	2.41	0.56
32:B6:30:THR:O	32:B6:31:PRO:C	2.44	0.56
52:DT:70:VAL:CG1	52:DT:71:GLY:N	2.68	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1305:G:H21	1:CA:1331:G:H2'	1.64	0.56
13:CM:78:ILE:HA	13:CM:81:LEU:HD23	1.87	0.56
31:D5:57:VAL:C	31:D5:58:LEU:HD12	2.25	0.56
2:CB:71:VAL:HG22	2:CB:93:VAL:HG12	1.87	0.56
2:AB:109:SER:C	2:AB:111:ARG:N	2.59	0.56
1:CA:1151:A:C6	1:CA:1152:A:N6	2.73	0.56
52:BT:106:SER:O	52:BT:107:ASP:CB	2.54	0.56
41:DF:39:TRP:CH2	41:DF:106:ARG:HD3	2.40	0.56
22:CW:38:A:H2'	22:CW:39:U:H5'	1.86	0.56
41:BF:132:VAL:HG13	41:BF:133:ASN:H	1.70	0.56
54:BV:47:VAL:HG12	54:BV:52:VAL:HB	1.88	0.56
4:CD:12:CYS:HB3	4:CD:33:MET:HB2	1.86	0.56
4:CD:63:LYS:O	4:CD:67:ILE:HG13	2.06	0.56
40:DE:7:VAL:HG12	40:DE:27:LEU:CB	2.30	0.56
14:CN:4:LYS:O	14:CN:5:ALA:C	2.44	0.56
5:CE:80:ILE:HD12	5:CE:80:ILE:O	2.06	0.56
1:CA:1299:A:N3	1:CA:1299:A:H5''	2.20	0.56
5:CE:150:ARG:HB2	5:CE:150:ARG:CZ	2.35	0.56
36:DA:1141:U:H4'	36:DA:1142(A):A:C8	2.40	0.56
39:BD:124:PRO:O	39:BD:129:ASN:ND2	2.38	0.56
27:D1:84:GLY:O	27:D1:86:SER:N	2.35	0.56
55:BW:5:ALA:O	55:BW:6:ILE:HB	2.06	0.56
36:DA:303:U:H2'	36:DA:304:G:C8	2.40	0.56
39:DD:183:ARG:HG3	39:DD:269:PHE:O	2.05	0.56
2:AB:42:ILE:CD1	2:AB:202:PRO:HB2	2.36	0.56
36:DA:1649:G:O2'	36:DA:1650:G:H5'	2.05	0.56
22:CW:5:G:H1'	22:CW:69:G:N2	2.21	0.56
22:CW:5:G:N2	22:CW:68:C:H42	2.02	0.56
22:CW:66:U:H2'	22:CW:67:C:C6	2.41	0.56
12:AL:29:GLY:O	12:AL:30:ALA:C	2.42	0.56
26:B0:62:LEU:O	26:B0:63:VAL:HG13	2.05	0.56
1:AA:1277:C:C2'	1:AA:1278:U:H5'	2.36	0.56
1:CA:1338:G:H2'	1:CA:1339:A:C8	2.41	0.56
1:CA:458:C:H2'	1:CA:460:G:C8	2.38	0.56
36:BA:371:A:H5'	36:BA:423:A:C2	2.41	0.56
1:AA:424:G:H2'	1:AA:425:G:C8	2.41	0.56
41:DF:78:ILE:HA	41:DF:83:PHE:CD2	2.40	0.56
5:AE:20:GLN:NE2	5:AE:22:GLY:H	2.03	0.56
25:AZ:67:HIS:CD2	25:AZ:67:HIS:N	2.74	0.56
36:BA:2653:U:H3'	36:BA:2654:A:C8	2.40	0.56
5:AE:24:ARG:HG3	5:AE:26:PHE:CZ	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1127:G:H1'	1:CA:1147:C:H42	1.70	0.56
1:CA:473:G:H5''	16:CP:81:ARG:HH21	1.70	0.56
50:DR:7:GLY:O	50:DR:8:ARG:NE	2.38	0.56
36:BA:1684:C:O2'	36:BA:1685:C:H5'	2.06	0.56
47:DO:67:LYS:HD2	47:DO:68:GLU:OE2	2.06	0.56
36:BA:1678:G:N2	36:BA:1989:G:H22	2.02	0.56
36:DA:1305:C:O2'	36:DA:1306:C:H5'	2.06	0.56
19:AS:27:GLU:O	19:AS:28:LYS:O	2.23	0.56
25:CZ:4:GLU:HA	25:CZ:276:THR:HB	1.87	0.56
22:CW:73:A:C3'	22:CW:74:C:H5''	2.35	0.56
53:BU:95:LEU:HD12	54:BV:11:GLN:HE21	1.70	0.56
28:B2:52:ASP:O	28:B2:56:GLN:CG	2.53	0.56
28:B2:53:LEU:C	28:B2:55:ARG:N	2.58	0.56
42:DG:133:LEU:CD1	42:DG:157:ILE:HD12	2.35	0.56
36:BA:331:A:H1'	36:BA:332:A:OP1	2.05	0.56
49:BQ:21:THR:CG2	49:BQ:101:ARG:HD2	2.36	0.56
36:DA:2101:G:H2'	36:DA:2102:U:O4'	2.06	0.56
13:AM:39:ILE:HD12	13:AM:56:LEU:HD23	1.88	0.56
10:CJ:58:ASP:O	10:CJ:59:SER:HB3	2.05	0.56
53:BU:108:GLU:OE1	53:BU:112:ARG:HD3	2.05	0.56
58:DZ:127:LYS:HZ1	58:DZ:164:ALA:HB2	1.71	0.56
36:BA:526:A:H5''	36:BA:527:C:OP1	2.05	0.56
41:DF:132:VAL:HG13	41:DF:133:ASN:N	2.21	0.56
41:DF:11:VAL:C	41:DF:13:SER:H	2.08	0.56
48:BP:91:PHE:N	48:BP:91:PHE:CD1	2.73	0.56
39:DD:25:THR:O	39:DD:26:LYS:HB2	2.06	0.56
20:CT:73:HIS:O	20:CT:74:LYS:HD3	2.06	0.56
2:CB:61:LEU:HD11	2:CB:160:ASP:HB2	1.87	0.56
36:DA:221:A:H1'	36:DA:233:A:H1'	1.87	0.56
48:DP:94:GLU:HG2	48:DP:96:THR:HG23	1.87	0.56
13:AM:3:ARG:HH21	13:AM:7:VAL:CG2	2.18	0.56
39:DD:6:PHE:HE2	39:DD:13:ARG:HH21	1.46	0.56
15:AO:7:GLU:O	15:AO:11:VAL:HG23	2.06	0.56
1:CA:323:U:H5'	20:CT:23:ARG:HB2	1.88	0.56
38:DC:49:ILE:HD11	38:DC:169:GLY:HA2	1.87	0.56
36:BA:887:A:N3	36:BA:887:A:H2'	2.20	0.56
40:BE:181:LEU:HD21	52:BT:7:ILE:CG2	2.35	0.56
25:AZ:333:GLY:CA	25:AZ:363:MET:HE1	2.32	0.56
46:DN:3:THR:HG22	46:DN:5:VAL:HG23	1.88	0.56
36:DA:1378:A:H4'	36:DA:1379:A:OP1	2.06	0.56
46:BN:108:PRO:HG2	46:BN:109:LYS:H	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1652:A:N7	36:DA:1653:G:C6	2.73	0.56
32:B6:42:TRP:HA	32:B6:42:TRP:HE3	1.69	0.56
4:AD:129:ASN:HD21	4:AD:145:GLU:N	2.04	0.56
36:BA:2701:C:H2'	36:BA:2702:U:H2'	1.88	0.56
37:BB:79:C:O2'	37:BB:80:U:H5'	2.04	0.56
3:AC:142:MET:SD	3:AC:148:GLY:HA2	2.45	0.56
49:DQ:118:LEU:HD12	49:DQ:131:ILE:HG23	1.87	0.56
39:DD:76:PRO:HG2	39:DD:98:VAL:HG21	1.86	0.56
16:CP:19:ILE:N	16:CP:37:GLY:O	2.39	0.56
36:BA:2563:U:H4'	47:BO:28:SER:HA	1.86	0.56
36:DA:2074:U:H2'	36:DA:2075:U:C6	2.41	0.56
36:DA:1231:G:H2'	36:DA:1232:G:H8	1.69	0.56
36:DA:1510:G:O2'	36:DA:1511:C:H5'	2.06	0.56
36:DA:19:C:H5'	36:DA:554:U:OP1	2.06	0.56
6:AF:43:LEU:H	6:AF:43:LEU:HD22	1.71	0.56
44:DJ:69:UNK:O	44:DJ:71:UNK:N	2.39	0.56
52:DT:31:SER:OG	52:DT:32:TYR:CE1	2.56	0.56
52:DT:41:ARG:HD3	52:DT:42:ILE:N	2.21	0.56
48:DP:66:GLY:O	48:DP:67:MET:CB	2.53	0.56
52:BT:53:ARG:HH12	52:BT:60:THR:H	1.53	0.56
25:AZ:117:ARG:CD	25:AZ:157:LEU:HD11	2.36	0.56
39:BD:99:ASP:OD1	39:BD:99:ASP:C	2.44	0.56
39:DD:30:GLU:HB2	39:DD:35:LYS:NZ	2.21	0.56
25:CZ:172:ARG:O	25:CZ:198:LYS:HG3	2.05	0.56
43:DH:50:VAL:HG12	43:DH:52:VAL:HG22	1.86	0.56
47:BO:114:ILE:HD12	47:BO:114:ILE:H	1.71	0.56
36:BA:1639:U:O2'	36:BA:1640:C:H5"	2.06	0.56
35:D9:7:VAL:CG1	35:D9:25:VAL:HG21	2.36	0.56
54:BV:52:VAL:HG13	54:BV:55:ALA:HB3	1.86	0.56
36:DA:141:A:H8	36:DA:1408:C:O2'	1.88	0.56
54:DV:38:LEU:O	54:DV:52:VAL:HG12	2.05	0.56
43:BH:30:LYS:HG3	43:BH:79:VAL:C	2.26	0.56
25:CZ:253:VAL:HA	25:CZ:307:PRO:CG	2.36	0.56
51:BS:106:ARG:HH11	51:BS:106:ARG:C	2.09	0.56
51:DS:16:ASN:C	51:DS:18:ILE:H	2.09	0.56
19:AS:6:LYS:O	19:AS:7:LYS:HD3	2.06	0.56
43:DH:19:VAL:CG1	43:DH:20:ALA:H	2.15	0.56
25:AZ:251:ASP:O	25:AZ:267:VAL:HG12	2.06	0.56
24:AY:76:A:OP1	25:AZ:274:ARG:CD	2.54	0.56
30:B4:20:ASN:HD22	30:B4:21:VAL:N	2.04	0.56
50:BR:56:LYS:HE3	50:BR:94:TYR:CE2	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1252:G:N3	53:DU:33:ARG:HD2	2.21	0.56
36:DA:583:G:OP2	53:DU:10:ARG:HD2	2.05	0.56
58:BZ:70:LEU:HD23	58:BZ:70:LEU:H	1.70	0.56
36:BA:2853:C:H2'	36:BA:2854:G:H8	1.70	0.56
25:AZ:222:LEU:HB3	25:AZ:243:GLU:HB3	1.86	0.56
38:DC:49:ILE:HD12	38:DC:49:ILE:C	2.26	0.56
36:DA:1150:C:H2'	36:DA:1151:G:H5'	1.86	0.56
2:CB:126:GLU:HA	2:CB:129:GLU:CD	2.26	0.56
1:AA:407:G:H2'	1:AA:408:A:C8	2.41	0.56
40:BE:49:LEU:HD11	40:BE:91:VAL:CG2	2.36	0.56
10:CJ:78:ASN:O	10:CJ:79:ARG:HD3	2.05	0.56
51:DS:89:ARG:HG3	51:DS:92:TYR:N	2.21	0.56
2:CB:209:ARG:HH11	2:CB:239:VAL:HG21	1.71	0.56
13:CM:92:HIS:CE1	13:CM:98:VAL:HG11	2.41	0.56
1:CA:436:C:H2'	1:CA:437:U:H6	1.71	0.56
1:CA:629:G:H2'	1:CA:630:G:H5''	1.86	0.56
36:DA:2485:G:H2'	36:DA:2486:G:H5'	1.87	0.56
51:BS:97:ARG:HE	51:BS:97:ARG:C	2.08	0.56
25:CZ:130:TYR:CE2	25:CZ:211:PRO:HG2	2.41	0.56
7:CG:152:ALA:O	7:CG:154:TYR:N	2.39	0.56
26:B0:43:THR:N	36:BA:2331:G:H4'	2.21	0.56
33:B7:34:ARG:CG	33:B7:34:ARG:HH11	2.18	0.56
49:DQ:1:MET:O	49:DQ:2:LEU:CB	2.53	0.56
14:CN:27:CYS:C	14:CN:29:ARG:H	2.10	0.56
1:CA:1266:G:N2	1:CA:1268:A:H3'	2.21	0.56
44:BJ:56:UNK:HA	44:BJ:82:UNK:O	2.06	0.56
25:CZ:313:HIS:CD2	25:CZ:403:ILE:HD13	2.41	0.56
38:DC:196:LEU:O	38:DC:199:HIS:N	2.37	0.56
2:AB:16:HIS:HB3	2:AB:210:SER:HB2	1.87	0.56
1:CA:1315:U:H2'	1:CA:1316:G:C8	2.41	0.56
28:B2:33:MET:HA	28:B2:36:ARG:HD2	1.88	0.56
28:B2:6:VAL:N	28:B2:7:ARG:HD2	2.21	0.56
2:CB:69:LEU:HD13	2:CB:71:VAL:HG23	1.87	0.56
25:AZ:34:VAL:C	25:AZ:36:ALA:H	2.08	0.56
36:DA:2355:C:C4	36:DA:2356:C:C4	2.94	0.56
46:DN:132:ALA:O	46:DN:133:GLN:CB	2.53	0.56
2:CB:114:ARG:O	2:CB:118:LEU:HG	2.06	0.56
41:BF:123:LEU:HD12	41:BF:124:LEU:H	1.70	0.56
9:AI:20:ARG:O	9:AI:22:GLY:N	2.39	0.56
9:AI:46:ALA:HB2	9:AI:74:ILE:HG23	1.88	0.56
54:DV:35:LEU:HD23	54:DV:57:VAL:CG1	2.34	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DZ:166:SER:H	58:DZ:167:PRO:CA	2.12	0.56
4:AD:96:LEU:HG	4:AD:139:ARG:NH2	2.20	0.56
51:BS:16:ASN:C	51:BS:18:ILE:H	2.07	0.56
2:AB:15:VAL:O	2:AB:15:VAL:HG23	2.06	0.56
1:CA:266:G:C5'	1:CA:267:C:H5	2.16	0.56
1:CA:1272:G:H5'	1:CA:1272:G:H8	1.69	0.56
36:DA:2298:A:H62	36:DA:2318:G:H8	1.53	0.56
36:DA:80:G:O2'	36:DA:81:G:H5'	2.05	0.56
1:AA:372:C:N4	1:AA:387:U:H2'	2.21	0.56
37:BB:92:C:O2'	37:BB:93:G:H5'	2.06	0.56
46:DN:34:LEU:C	46:DN:34:LEU:HD13	2.26	0.56
46:DN:32:THR:HG22	46:DN:37:LYS:HD3	1.88	0.56
38:DC:190:ARG:O	38:DC:194:ARG:HG3	2.06	0.56
40:BE:101:ARG:HB3	40:BE:201:THR:HG21	1.86	0.56
51:DS:92:TYR:HD2	51:DS:94:TYR:HB2	1.71	0.56
14:CN:19:ARG:O	14:CN:20:ALA:O	2.24	0.56
4:CD:109:GLY:O	4:CD:111:ALA:N	2.39	0.56
25:AZ:230:THR:HG23	25:AZ:295:ARG:HH11	1.71	0.56
6:AF:63:TYR:HD1	6:AF:63:TYR:N	2.03	0.56
36:BA:57:C:C2'	36:BA:58:G:H5'	2.36	0.56
42:DG:32:PRO:HB2	42:DG:172:LEU:HD12	1.88	0.56
7:AG:4:ARG:NH1	7:AG:4:ARG:HG2	2.21	0.56
13:CM:118:ALA:CB	22:CV:28:G:O3'	2.54	0.56
36:DA:2852:G:H2'	36:DA:2853:C:C6	2.41	0.56
24:CY:7:G:H3'	24:CY:8:4SU:H5'	1.87	0.56
27:B1:51:VAL:HG11	27:B1:74:VAL:HG21	1.87	0.56
1:CA:992:U:O2	1:CA:992:U:H2'	2.05	0.56
11:AK:27:ASN:OD1	11:AK:28:THR:N	2.38	0.56
36:BA:246:C:H5'	48:BP:71:VAL:HG23	1.88	0.56
36:DA:1509(A):A:H2'	36:DA:1509(B):A:C8	2.41	0.56
36:DA:2738:A:C2	36:DA:2739:U:H1'	2.41	0.56
11:CK:67:ASP:O	11:CK:71:LYS:HB2	2.05	0.56
1:AA:676:A:H1'	11:AK:115:PRO:HB3	1.88	0.56
55:DW:9:TYR:CD1	55:DW:9:TYR:N	2.72	0.56
25:AZ:90:LYS:H	25:AZ:90:LYS:HD2	1.71	0.56
41:BF:51:THR:CG2	41:BF:92:PRO:HD2	2.35	0.56
52:DT:24:PRO:HA	52:DT:49:VAL:HG22	1.87	0.55
21:CU:2:GLY:O	21:CU:4:GLY:N	2.39	0.55
28:B2:25:VAL:HG12	28:B2:29:LYS:CE	2.36	0.55
43:BH:66:GLY:HA2	43:BH:69:ARG:HD3	1.88	0.55
41:BF:57:VAL:HG21	41:BF:86:GLY:O	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:D9:7:VAL:HG22	35:D9:34:GLN:HG3	1.88	0.55
13:AM:65:LYS:H	13:AM:65:LYS:CD	2.18	0.55
34:B8:4:MET:SD	34:B8:61:LEU:CD2	2.94	0.55
1:AA:1128:C:H1'	1:AA:1146:A:H61	1.71	0.55
42:DG:144:ILE:HG23	42:DG:144:ILE:O	2.06	0.55
36:DA:1971:A:N3	39:DD:241:PRO:HD3	2.22	0.55
25:CZ:397:ALA:HB1	61:CZ:502:KIR:O27	2.05	0.55
48:BP:100:LEU:HD13	48:BP:100:LEU:O	2.04	0.55
42:BG:10:LYS:N	42:BG:10:LYS:CD	2.68	0.55
36:DA:1022:G:N2	36:DA:1142(A):A:C2	2.74	0.55
46:DN:67:LEU:C	46:DN:69:GLN:H	2.09	0.55
12:CL:26:ALA:O	12:CL:27:LEU:O	2.24	0.55
43:BH:19:VAL:CG1	43:BH:20:ALA:H	2.13	0.55
48:DP:91:PHE:N	48:DP:91:PHE:CD1	2.74	0.55
42:BG:178:PHE:HB3	42:BG:180:PHE:HE1	1.71	0.55
9:CI:56:LEU:HD23	9:CI:57:GLY:N	2.20	0.55
1:AA:966:G:O2'	1:AA:967:C:P	2.65	0.55
1:AA:1007:C:O2'	1:AA:1008:C:H5'	2.06	0.55
7:AG:84:ASN:OD1	22:AW:33:U:H5'	2.06	0.55
36:DA:2777:G:C5'	36:DA:2778:A:H5'	2.35	0.55
36:DA:527:C:O5'	36:DA:2779:U:H5	1.88	0.55
6:AF:10:LEU:HD11	6:AF:61:LEU:HD11	1.87	0.55
24:AY:4:G:C2'	24:AY:5:G:H5''	2.36	0.55
1:CA:1142:G:H2'	1:CA:1143:G:O4'	2.05	0.55
6:CF:19:LEU:O	6:CF:23:LYS:HB2	2.06	0.55
38:DC:128:GLY:HA2	38:DC:137:LEU:HD23	1.87	0.55
11:AK:38:ASN:HD22	11:AK:38:ASN:N	2.02	0.55
36:DA:1331:A:H2'	36:DA:1332:G:H5''	1.87	0.55
36:BA:1880:C:C3'	36:BA:1881:C:H5''	2.36	0.55
2:CB:142:LEU:HD23	2:CB:142:LEU:O	2.06	0.55
33:B7:34:ARG:NH1	33:B7:34:ARG:HG3	2.20	0.55
36:DA:1013:C:H2'	36:DA:1014:U:H6	1.71	0.55
37:BB:111:G:O2'	37:BB:112:U:H5'	2.06	0.55
49:BQ:120:ILE:O	49:BQ:121:ALA:C	2.45	0.55
22:CV:64:A:H2'	22:CV:65:G:H8	1.71	0.55
36:DA:1400:G:H2'	36:DA:1401:G:C8	2.41	0.55
36:BA:709:U:H2'	36:BA:710:G:C8	2.41	0.55
36:BA:30:G:O2'	36:BA:31:C:H5'	2.06	0.55
36:DA:981:A:H8	36:DA:982:C:C5	2.24	0.55
1:CA:29:G:O2'	1:CA:30:U:H5'	2.05	0.55
36:BA:742:G:H2'	36:BA:743:G:H8	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:8:PRO:HB3	39:BD:14:ARG:CB	2.35	0.55
36:BA:2887:U:H2'	36:BA:2888:C:H6	1.71	0.55
24:AY:49:G:O2'	24:AY:50:G:H5'	2.06	0.55
1:CA:505:G:H2'	1:CA:506:G:H8	1.71	0.55
32:D6:32:ASN:O	32:D6:33:LYS:HB2	2.06	0.55
53:BU:93:LYS:H	53:BU:93:LYS:CD	2.20	0.55
43:BH:50:VAL:HG12	43:BH:52:VAL:HG22	1.89	0.55
43:DH:51:ARG:HG3	43:DH:52:VAL:H	1.70	0.55
52:BT:31:SER:HB2	52:BT:32:TYR:CD1	2.41	0.55
41:BF:84:VAL:C	41:BF:86:GLY:H	2.09	0.55
46:DN:14:VAL:HG13	46:DN:135:PRO:O	2.04	0.55
46:DN:43:THR:HB	46:DN:46:VAL:HG11	1.87	0.55
3:AC:12:LEU:HD22	3:AC:18:TRP:CE3	2.41	0.55
36:BA:2111:C:H1'	36:BA:2118:U:O4'	2.07	0.55
36:BA:512:G:O2'	36:BA:513:A:H8	1.89	0.55
36:BA:527:C:O5'	36:BA:2779:U:H5	1.88	0.55
51:BS:106:ARG:HH11	51:BS:107:GLU:N	2.03	0.55
40:DE:47:VAL:CG2	40:DE:86:PRO:HD3	2.31	0.55
36:DA:2319:G:OP2	36:DA:2319:G:H4'	2.06	0.55
27:B1:76:ARG:HH12	27:B1:95:LEU:CD1	2.19	0.55
4:AD:31:CYS:O	4:AD:31:CYS:SG	2.63	0.55
9:CI:56:LEU:CD2	9:CI:57:GLY:N	2.69	0.55
37:DB:92:C:H5''	58:DZ:79:ARG:NH2	2.21	0.55
30:D4:20:ASN:HD22	30:D4:20:ASN:C	2.10	0.55
22:AV:4:C:H3'	22:AV:5:G:H5''	1.87	0.55
36:DA:674:G:H1'	41:DF:74:ARG:HD3	1.88	0.55
38:BC:96:GLY:H	38:BC:99:ILE:CG1	2.19	0.55
50:DR:100:LEU:HD21	50:DR:113:LEU:HB2	1.88	0.55
1:AA:505:G:H2'	1:AA:506:G:C8	2.41	0.55
1:AA:1157:A:O2'	1:AA:1158:C:OP2	2.23	0.55
36:DA:2744:G:N7	36:DA:2755:C:H1'	2.22	0.55
43:BH:153:LYS:N	43:BH:153:LYS:HD3	2.19	0.55
36:DA:1446:C:O2'	36:DA:1447:G:H5'	2.06	0.55
36:DA:896:A:C8	58:DZ:146:ILE:HD12	2.42	0.55
31:D5:31:VAL:CG1	31:D5:42:PRO:HG3	2.35	0.55
36:DA:246:C:H5'	48:DP:71:VAL:HG23	1.87	0.55
54:DV:2:PHE:O	54:DV:41:GLY:HA2	2.07	0.55
37:DB:73:A:C2'	37:DB:74:U:H5'	2.36	0.55
52:BT:16:ARG:NH1	52:BT:16:ARG:HG3	2.20	0.55
1:AA:425:G:O2'	1:AA:426:G:H5'	2.06	0.55
49:BQ:1:MET:HE2	49:BQ:1:MET:O	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1286:A:O2'	1:AA:1287:A:OP2	2.24	0.55
49:DQ:70:PRO:CA	49:DQ:95:ALA:HB2	2.36	0.55
28:D2:34:GLU:HA	28:D2:37:PHE:HB2	1.87	0.55
46:BN:129:PRO:O	46:BN:130:HIS:HB3	2.07	0.55
36:DA:668:G:H2'	36:DA:670:A:H62	1.71	0.55
25:AZ:339:ARG:NE	25:AZ:352:VAL:HG22	2.21	0.55
36:DA:839:U:H2'	36:DA:840:C:C6	2.41	0.55
36:DA:840:C:H2'	36:DA:841:A:C8	2.41	0.55
6:AF:60:PHE:CZ	18:AR:78:LEU:HD21	2.41	0.55
22:CW:52:G:N3	22:CW:52:G:H2'	2.21	0.55
45:DK:54:UNK:O	45:DK:69:UNK:HA	2.05	0.55
50:BR:13:HIS:HE1	50:BR:15:SER:OG	1.89	0.55
1:CA:1418:A:H3'	1:CA:1419:G:O4'	2.06	0.55
1:CA:978:A:N7	1:CA:1319:A:C2	2.75	0.55
28:B2:68:ARG:HB3	28:B2:69:ARG:NH2	2.21	0.55
56:BX:27:THR:HG22	56:BX:80:ILE:HB	1.87	0.55
1:AA:1054:C:C5	1:AA:1196:U:N1	2.74	0.55
1:AA:963:G:N2	10:AJ:55:LYS:HG2	2.20	0.55
25:AZ:104:LEU:HD21	25:AZ:120:ILE:HD11	1.89	0.55
25:AZ:138:VAL:HG21	25:AZ:173:GLY:N	2.21	0.55
25:CZ:34:VAL:HG11	25:CZ:203:LEU:HD11	1.87	0.55
47:BO:114:ILE:HD12	47:BO:114:ILE:N	2.21	0.55
56:DX:27:THR:CB	56:DX:80:ILE:HG22	2.37	0.55
10:CJ:55:LYS:H	10:CJ:55:LYS:HE3	1.72	0.55
14:CN:59:ALA:O	14:CN:60:SER:CB	2.55	0.55
54:DV:47:VAL:HG12	54:DV:52:VAL:HB	1.88	0.55
13:CM:91:ARG:HH12	13:CM:96:LEU:HD13	1.71	0.55
1:CA:1374:A:O2'	7:CG:28:ASN:HB3	2.06	0.55
30:B4:25:TYR:O	30:B4:26:SER:HB3	2.06	0.55
42:BG:10:LYS:H	42:BG:10:LYS:HD2	1.70	0.55
36:DA:1301:A:H4'	36:DA:1302:A:OP1	2.06	0.55
11:CK:91:ARG:O	11:CK:94:ALA:HB3	2.07	0.55
19:CS:19:VAL:CG1	19:CS:44:MET:HG3	2.29	0.55
36:BA:1902:C:H5''	39:BD:246:PRO:HD3	1.88	0.55
51:DS:12:PHE:O	51:DS:14:VAL:HG23	2.06	0.55
10:AJ:78:ASN:HD22	10:AJ:81:THR:HG21	1.72	0.55
53:BU:6:THR:O	53:BU:9:VAL:HG23	2.06	0.55
12:CL:8:ASN:O	12:CL:12:ARG:HG3	2.06	0.55
30:D4:14:ILE:O	30:D4:21:VAL:HG13	2.06	0.55
30:D4:31:ILE:HG22	30:D4:31:ILE:O	2.06	0.55
6:CF:62:TRP:CD1	18:CR:35:ARG:NH1	2.75	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DS:17:ARG:HA	51:DS:20:ARG:HH12	1.72	0.55
2:CB:134:GLU:C	2:CB:136:VAL:N	2.59	0.55
40:BE:52:LEU:HD13	52:BT:1:MET:HG2	1.87	0.55
36:BA:1658:C:OP1	40:BE:132:HIS:ND1	2.38	0.55
6:AF:54:LYS:O	6:AF:55:ASP:C	2.43	0.55
39:BD:136:ILE:HB	39:BD:165:ILE:CD1	2.36	0.55
1:CA:187:C:OP1	20:CT:82:SER:HB2	2.06	0.55
7:CG:44:TYR:O	7:CG:47:CYS:N	2.39	0.55
38:BC:10:LEU:O	38:BC:13:LYS:HG3	2.06	0.55
36:DA:559:G:N2	53:DU:49:HIS:NE2	2.53	0.55
43:DH:158:HIS:HE1	43:DH:169:VAL:HG13	1.71	0.55
22:CV:51:U:H2'	22:CV:52:G:C8	2.41	0.55
38:DC:99:ILE:O	38:DC:99:ILE:HG22	2.06	0.55
3:CC:95:THR:CG2	3:CC:97:LYS:HD2	2.37	0.55
3:AC:122:GLU:O	3:AC:123:GLN:C	2.43	0.55
9:AI:11:LYS:O	9:AI:13:ALA:N	2.39	0.55
36:DA:2248:C:C2'	36:DA:2249:U:H5'	2.36	0.55
27:B1:51:VAL:O	27:B1:57:GLU:HA	2.07	0.55
7:AG:145:ALA:O	7:AG:147:ALA:N	2.40	0.55
14:AN:29:ARG:HG3	14:AN:29:ARG:HH11	1.70	0.55
1:CA:918:A:H2'	1:CA:919:A:H8	1.71	0.55
36:DA:1345:C:H2'	36:DA:1346:G:C8	2.41	0.55
36:BA:1345:C:H2'	36:BA:1346:G:H8	1.70	0.55
7:AG:61:VAL:O	7:AG:64:GLN:HB3	2.06	0.55
36:DA:1254:A:C8	36:DA:1256:G:C8	2.93	0.55
43:DH:44:VAL:HG12	43:DH:45:VAL:H	1.71	0.55
36:DA:2052:G:C8	40:DE:141:ILE:HD11	2.41	0.55
38:DC:152:ILE:O	38:DC:152:ILE:HG22	2.06	0.55
30:B4:46:GLN:NE2	30:B4:47:GLN:HG2	2.22	0.55
37:BB:95:C:C2'	37:BB:96:U:H5'	2.37	0.55
55:DW:22:ASP:HA	55:DW:25:ARG:HH12	1.70	0.55
1:CA:418:C:H2'	1:CA:419:C:C6	2.42	0.55
25:CZ:65:THR:HG21	25:CZ:80:VAL:HG13	1.89	0.55
1:CA:978:A:C5	1:CA:1319:A:C2	2.95	0.55
1:CA:986:A:H2'	1:CA:987:G:C8	2.40	0.55
25:AZ:150:VAL:HG13	25:AZ:151:GLU:H	1.71	0.55
39:BD:24:ILE:HG12	39:BD:24:ILE:O	2.06	0.55
38:BC:113:VAL:O	38:BC:138:PRO:HG3	2.06	0.55
36:DA:1827:C:H2'	36:DA:1828:G:H5'	1.88	0.55
49:DQ:137:TYR:CE1	58:DZ:81:ARG:NH2	2.74	0.55
25:CZ:7:ARG:NH1	25:CZ:7:ARG:CG	2.67	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2715:C:O2'	36:BA:2716:U:H5'	2.06	0.55
57:DY:81:LYS:HD2	57:DY:96:ILE:CD1	2.36	0.55
57:DY:88:LYS:HZ2	57:DY:93:GLY:HA3	1.71	0.55
9:AI:47:LEU:H	9:AI:47:LEU:CD1	2.07	0.55
25:CZ:121:LEU:O	25:CZ:125:GLN:HG2	2.06	0.55
58:DZ:151:HIS:HB2	58:DZ:169:GLU:O	2.06	0.55
36:DA:654(V):A:H8	36:DA:655:A:H2'	1.72	0.55
37:BB:31:C:H4'	42:BG:29:TRP:CZ2	2.41	0.55
1:AA:269:C:H2'	1:AA:270:A:C8	2.42	0.55
19:CS:12:ASP:H	19:CS:38:SER:HB2	1.71	0.55
1:CA:1271:G:C2'	1:CA:1272:G:C5'	2.81	0.55
10:CJ:40:LEU:HB2	10:CJ:41:PRO:HD2	1.87	0.55
17:CQ:59:ILE:CG2	17:CQ:71:PHE:HB3	2.36	0.55
3:CC:53:ALA:CB	3:CC:115:LEU:HG	2.35	0.55
4:AD:18:LYS:HE3	4:AD:31:CYS:HB2	1.89	0.55
3:AC:34:LEU:CD2	3:AC:38:ARG:HE	2.12	0.55
36:DA:1528(A):A:N6	36:DA:1541:G:C2	2.72	0.55
52:DT:105:LEU:HD22	52:DT:109:GLU:OE1	2.07	0.55
28:D2:38:GLN:OE1	28:D2:44:LEU:HD13	2.06	0.55
36:BA:1493:C:C4	36:BA:2206:G:O2'	2.59	0.55
9:CI:50:LEU:HD23	9:CI:85:LEU:HD21	1.87	0.55
18:AR:30:ASP:C	18:AR:32:ARG:H	2.09	0.55
50:BR:103:ARG:O	50:BR:104:ARG:HB2	2.05	0.55
41:BF:41:LEU:HD11	48:BP:7:ARG:HH22	1.71	0.55
36:BA:212:G:C2'	36:BA:213:A:H5'	2.36	0.55
25:AZ:230:THR:CG2	25:AZ:295:ARG:HD2	2.36	0.55
36:DA:1678:G:N2	36:DA:1989:G:N2	2.54	0.55
25:CZ:210:ILE:CG2	25:CZ:210:ILE:O	2.54	0.55
36:BA:1809:A:C6	36:BA:1810:A:C6	2.95	0.55
36:BA:1070:A:H3'	36:BA:1072:C:H5	1.72	0.55
1:CA:375:U:C2	1:CA:376:G:C8	2.93	0.55
1:CA:377:G:H2'	1:CA:378:G:C8	2.42	0.55
21:AU:8:THR:O	21:AU:12:LYS:HB2	2.06	0.55
48:DP:124:LYS:HE2	48:DP:143:GLY:HA2	1.88	0.55
36:BA:36:G:O2'	36:BA:37:C:H5'	2.07	0.55
46:BN:128:HIS:O	46:BN:130:HIS:N	2.39	0.55
47:BO:105:GLU:O	47:BO:109:LYS:HG2	2.07	0.55
44:DJ:106:UNK:O	44:DJ:107:UNK:CB	2.54	0.55
37:BB:52:A:O2'	37:BB:53:A:C8	2.59	0.55
36:BA:1214:A:H2'	36:BA:1215:G:O4'	2.06	0.55
52:DT:66:VAL:O	52:DT:66:VAL:HG23	2.05	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:349:VAL:HG23	25:CZ:349:VAL:O	2.05	0.55
10:AJ:18:ALA:O	10:AJ:22:LYS:HB2	2.05	0.55
55:BW:9:TYR:N	55:BW:9:TYR:CD1	2.71	0.55
2:AB:109:SER:C	2:AB:111:ARG:H	2.09	0.55
2:AB:129:GLU:O	2:AB:130:ARG:O	2.25	0.55
25:CZ:266:VAL:CG1	25:CZ:291:ARG:NH2	2.68	0.55
1:CA:1190:G:OP1	3:CC:5:ILE:N	2.39	0.55
25:CZ:139:ASP:HB2	25:CZ:177:LEU:HD11	1.88	0.55
42:DG:37:VAL:HG22	42:DG:159:VAL:HG23	1.87	0.55
52:BT:110:ILE:C	52:BT:112:ARG:H	2.10	0.55
2:CB:152:PHE:O	2:CB:153:ARG:CB	2.52	0.55
41:BF:133:ASN:N	41:BF:133:ASN:HD22	2.04	0.55
10:CJ:61:GLU:OE2	14:CN:58:LYS:HE2	2.06	0.55
54:BV:47:VAL:O	54:BV:49:THR:N	2.39	0.55
3:CC:82:GLU:N	3:CC:85:ARG:HD3	2.18	0.55
5:AE:80:ILE:HD11	5:AE:91:LEU:HB2	1.87	0.55
53:DU:95:LEU:C	53:DU:97:ASP:N	2.60	0.55
54:DV:52:VAL:O	54:DV:52:VAL:HG22	2.06	0.55
10:AJ:57:LYS:C	10:AJ:58:ASP:O	2.40	0.55
36:DA:198:C:H5'	36:DA:2244:U:OP1	2.07	0.55
25:CZ:326:GLU:O	61:CZ:502:KIR:H101	2.07	0.55
30:D4:10:VAL:HG23	30:D4:11:PRO:CD	2.36	0.55
7:CG:27:ILE:HG22	7:CG:28:ASN:N	2.22	0.55
11:CK:59:TYR:O	11:CK:62:GLN:HB3	2.06	0.55
7:CG:117:ALA:O	7:CG:120:ILE:N	2.39	0.55
34:B8:32:LEU:HD23	34:B8:36:LYS:HZ1	1.70	0.55
36:DA:1019:U:H2'	36:DA:1021:A:N1	2.20	0.55
36:BA:185:U:H2'	36:BA:186:G:C8	2.42	0.55
24:AY:76:A:N6	25:AZ:234:ARG:NH1	2.54	0.55
36:DA:2297:C:C2'	36:DA:2298:A:H5'	2.36	0.55
36:DA:585:G:H2'	36:DA:1251:C:H42	1.70	0.55
49:DQ:19:GLY:O	49:DQ:98:LYS:HE2	2.05	0.55
31:B5:2:ALA:N	36:BA:747:U:C5	2.75	0.55
2:CB:30:ARG:NE	2:CB:31:TYR:HE1	2.03	0.55
34:B8:23:VAL:HG11	34:B8:46:ARG:HD3	1.88	0.55
1:CA:1372:U:OP1	9:CI:71:SER:HB3	2.07	0.55
1:CA:1436:U:H2'	1:CA:1437:C:O4'	2.07	0.55
11:CK:105:VAL:HG23	11:CK:105:VAL:O	2.05	0.55
36:BA:2650:U:O2'	36:BA:2651:C:H5'	2.06	0.55
36:BA:1363:C:H2'	36:BA:1364:G:H8	1.72	0.55
7:AG:118:VAL:HG23	7:AG:119:ARG:N	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:25:ASN:O	2:AB:27:LYS:N	2.40	0.55
6:AF:10:LEU:HD11	6:AF:61:LEU:HD12	1.87	0.55
55:DW:14:PRO:HG2	55:DW:78:GLU:CG	2.36	0.55
4:CD:121:VAL:O	4:CD:134:ASP:HA	2.07	0.55
4:AD:128:VAL:O	4:AD:130:GLY:N	2.39	0.55
36:BA:201:C:C2'	36:BA:202:U:H5'	2.37	0.55
37:DB:3:C:N4	37:DB:118:G:H1	2.05	0.55
36:BA:2700:C:O2'	36:BA:2701:C:H5'	2.06	0.55
1:AA:603:U:H2'	1:AA:604:G:C8	2.41	0.55
11:CK:108:ILE:HG22	18:CR:88:LYS:HB2	1.89	0.55
36:BA:521:G:H2'	36:BA:522:G:C8	2.42	0.55
9:AI:48:GLU:N	9:AI:49:PRO:HD2	2.22	0.55
36:DA:1146:C:O2'	36:DA:1147:C:H5'	2.06	0.55
9:CI:37:PHE:O	9:CI:39:GLY:N	2.36	0.55
1:CA:49:U:C2	1:CA:361:G:N2	2.75	0.55
5:AE:101:ILE:O	5:AE:120:THR:HB	2.07	0.55
44:BJ:25:UNK:HA	44:BJ:116:UNK:CB	2.36	0.55
20:AT:73:HIS:C	20:AT:74:LYS:HD3	2.27	0.55
1:AA:130:A:C8	17:AQ:63:ARG:HG3	2.41	0.55
1:CA:865:A:O2'	1:CA:866:C:H5'	2.06	0.55
1:AA:1511:G:O2'	1:AA:1512:U:H5'	2.07	0.55
22:CV:47:U:H3'	22:CV:48:C:C5'	2.37	0.55
23:CX:26:A:H5'	23:CX:27:A:C5	2.41	0.55
38:BC:128:GLY:HA2	38:BC:137:LEU:HD23	1.87	0.55
39:BD:81:ALA:HA	39:BD:113:VAL:HG11	1.88	0.55
36:BA:151:C:H2'	36:BA:152:G:C8	2.41	0.55
48:DP:24:GLY:CA	48:DP:33:ARG:NH1	2.70	0.55
1:CA:1149:C:OP1	9:CI:9:ARG:HD3	2.06	0.55
39:DD:63:ARG:HG3	39:DD:63:ARG:NH1	2.21	0.55
49:DQ:132:VAL:HG11	49:DQ:137:TYR:OH	2.07	0.55
57:DY:47:LYS:HG2	57:DY:60:PHE:CZ	2.41	0.55
43:DH:52:VAL:CB	43:DH:69:ARG:HD2	2.36	0.55
52:BT:22:PHE:CD1	52:BT:22:PHE:C	2.80	0.55
52:BT:50:ILE:HD11	52:BT:64:ARG:CD	2.36	0.55
52:BT:82:LEU:CD2	52:BT:85:LYS:HD2	2.36	0.55
2:AB:165:VAL:CG2	2:AB:166:ASP:N	2.66	0.55
2:CB:137:ARG:O	2:CB:141:GLU:HB2	2.07	0.55
22:CV:67:C:H2'	22:CV:68:C:C6	2.41	0.55
9:AI:19:LEU:HD21	9:AI:59:PHE:CD2	2.42	0.55
54:DV:35:LEU:HD22	54:DV:35:LEU:H	1.71	0.55
36:BA:2111:C:O2	36:BA:2111:C:C2'	2.54	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:57:LYS:CE	10:AJ:60:ARG:HH21	2.11	0.55
25:CZ:256:VAL:HG11	25:CZ:310:ILE:CG2	2.37	0.55
36:BA:806:C:O2'	36:BA:2445:G:H4'	2.06	0.55
40:DE:55:ASN:HD21	40:DE:58:ARG:HH11	1.55	0.55
11:CK:84:VAL:HG21	11:CK:91:ARG:HD3	1.89	0.55
1:CA:260:G:H2'	1:CA:261:U:H6	1.71	0.55
37:DB:55:U:H2'	37:DB:56:G:C8	2.40	0.55
19:CS:6:LYS:N	19:CS:6:LYS:HD3	2.22	0.55
57:DY:4:LYS:HD2	57:DY:32:PRO:CG	2.36	0.55
30:D4:14:ILE:HG23	30:D4:31:ILE:HG22	1.89	0.55
36:DA:1103:A:H5'	36:DA:1104:C:OP2	2.05	0.55
2:CB:44:LEU:HA	2:CB:47:THR:CB	2.36	0.55
54:BV:28:GLU:HB3	54:BV:29:PRO:CD	2.36	0.55
35:B9:11:CYS:SG	35:B9:12:ASP:N	2.80	0.55
36:BA:654(A):G:C2'	36:BA:654(B):C:H5'	2.34	0.55
1:AA:1039:C:H2'	1:AA:1040:U:C5	2.41	0.55
36:DA:527:C:O5'	36:DA:2779:U:C5	2.59	0.55
54:BV:69:LYS:HG3	54:BV:87:HIS:H	1.72	0.55
36:BA:2767:C:H2'	36:BA:2768:C:C6	2.41	0.55
37:BB:61:G:O2'	37:BB:62:C:H5'	2.06	0.55
36:BA:301:G:H1'	36:BA:302:C:C6	2.41	0.55
16:CP:14:ASN:OD1	16:CP:16:HIS:HE1	1.89	0.55
1:CA:411:A:N7	1:CA:413:G:H8	2.03	0.55
1:CA:892:A:O2'	1:CA:1415:G:H4'	2.07	0.55
36:BA:947:G:H2'	36:BA:948:G:H8	1.71	0.55
55:BW:29:LEU:CD2	55:BW:33:ARG:HH11	2.19	0.55
1:CA:167:G:O2'	1:CA:168:G:H5'	2.06	0.55
1:CA:955:U:O2'	1:CA:956:U:H5'	2.07	0.55
36:DA:491:G:O2'	36:DA:492:A:H5'	2.07	0.55
36:BA:703:U:O2'	36:BA:704:G:H5'	2.05	0.55
36:DA:2556:C:H2'	36:DA:2557:G:O4'	2.07	0.55
1:AA:1477:C:H2'	1:AA:1478:C:H6	1.71	0.55
17:CQ:46:ASP:OD1	17:CQ:51:TYR:HD1	1.89	0.55
36:DA:374:A:C2	36:DA:375:C:H1'	2.41	0.55
9:AI:104:ARG:HG3	9:AI:104:ARG:HH11	1.71	0.55
20:AT:8:ARG:HG3	20:AT:8:ARG:HH11	1.70	0.55
15:AO:82:ILE:CG2	15:AO:83:GLU:N	2.69	0.55
1:CA:1320:C:H2'	1:CA:1321:C:O4'	2.06	0.55
1:CA:979:C:H3'	1:CA:980:C:C5'	2.31	0.55
28:B2:66:GLU:OE2	28:B2:67:LYS:HG2	2.06	0.55
56:BX:53:LYS:H	56:BX:82:GLN:HB3	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:D5:54:GLY:N	31:D5:56:LYS:HZ2	1.97	0.55
22:AW:57:G:H2'	22:AW:58:A:H5'	1.87	0.55
57:BY:77:PRO:O	57:BY:99:CYS:SG	2.65	0.55
26:D0:70:GLN:NE2	26:D0:80:HIS:CE1	2.74	0.55
37:BB:74:U:H2'	37:BB:75:G:O4'	2.06	0.55
49:BQ:26:TYR:HB2	49:BQ:137:TYR:HD1	1.71	0.55
35:D9:7:VAL:HG13	35:D9:34:GLN:HG2	1.88	0.55
42:BG:76:SER:HB2	42:BG:84:LYS:CA	2.36	0.55
3:AC:52:LEU:HD12	3:AC:55:VAL:HG23	1.88	0.55
1:AA:1190:G:OP1	3:AC:4:LYS:HA	2.06	0.55
53:DU:92:ARG:CZ	54:DV:11:GLN:HG2	2.36	0.55
35:D9:26:ILE:HG22	35:D9:27:CYS:N	2.22	0.55
41:BF:25:PRO:CB	41:BF:119:ARG:HG3	2.26	0.55
9:CI:93:ARG:HD2	9:CI:102:LEU:HD11	1.88	0.55
25:CZ:253:VAL:HG12	25:CZ:305:ALA:O	2.06	0.55
20:AT:53:LEU:O	20:AT:57:ARG:HB2	2.06	0.55
4:CD:60:GLU:HB3	4:CD:203:VAL:HG22	1.88	0.55
51:BS:15:ARG:O	51:BS:15:ARG:CD	2.53	0.55
46:BN:32:THR:HG22	46:BN:37:LYS:HD3	1.89	0.55
36:BA:1827:C:C2'	36:BA:1828:G:H5'	2.37	0.55
36:BA:1748:G:C8	36:BA:1748:G:H5'	2.38	0.55
36:DA:1221:C:H2'	36:DA:1221(A):C:C6	2.41	0.55
19:AS:19:VAL:CG1	19:AS:44:MET:HG3	2.32	0.55
41:DF:40:GLN:OE1	41:DF:184:TYR:HB2	2.06	0.55
36:DA:911:A:N1	36:DA:2277:G:O2'	2.37	0.55
1:CA:719:C:O2'	18:CR:49:LYS:HB3	2.07	0.55
43:DH:12:PRO:HD3	43:DH:48:GLY:HA2	1.87	0.55
36:BA:265:A:H4'	36:BA:266:G:O5'	2.06	0.55
1:CA:945:G:H2'	1:CA:945:G:N3	2.20	0.55
58:DZ:145:GLU:HG3	58:DZ:146:ILE:HG12	1.89	0.55
9:CI:97:LYS:N	9:CI:98:PRO:CD	2.69	0.55
2:AB:60:ASP:O	2:AB:63:MET:HB3	2.06	0.55
9:AI:79:LEU:CD1	9:AI:83:ARG:HG3	2.37	0.55
6:AF:63:TYR:N	6:AF:63:TYR:CD1	2.73	0.55
1:CA:243:A:C2	1:CA:246:A:C8	2.94	0.55
1:CA:109:A:C6	1:CA:326:G:C6	2.95	0.55
20:CT:30:LYS:HG2	20:CT:34:LYS:HE3	1.89	0.55
1:CA:36:C:H5"	12:CL:123:LYS:HA	1.89	0.55
32:B6:22:ALA:HB2	32:B6:39:TYR:CZ	2.42	0.55
15:AO:27:VAL:HG12	15:AO:31:LEU:HD11	1.89	0.55
36:DA:1498:C:C2'	36:DA:1499:C:H5"	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1908:C:H2'	36:DA:1909:C:H6	1.72	0.55
1:AA:781:A:C3'	1:AA:782:A:H5'	2.37	0.55
1:AA:637:G:O2'	1:AA:638:G:H5'	2.07	0.55
25:AZ:384:LEU:O	25:AZ:400:VAL:HG23	2.06	0.55
12:AL:18:VAL:HG23	12:AL:19:ARG:H	1.72	0.55
23:CX:11:U:H2'	23:CX:11:U:O2	2.06	0.55
39:DD:276:LYS:OXT	39:DD:276:LYS:HD3	2.07	0.55
36:BA:1547:C:O2'	36:BA:1548:C:H5'	2.06	0.55
41:DF:116:ASP:OD2	48:DP:5:ASP:N	2.39	0.55
36:BA:2145:C:H5''	36:BA:2146:C:OP2	2.05	0.55
36:BA:2108:C:O2	36:BA:2108:C:H2'	2.06	0.55
36:BA:2174:C:H1'	38:BC:217:THR:O	2.07	0.55
8:AH:41:ARG:HG2	8:AH:42:GLU:N	2.21	0.55
25:CZ:343:TYR:CZ	25:CZ:348:ASP:HB3	2.42	0.55
52:BT:25:GLY:HA2	52:BT:92:GLY:HA2	1.89	0.55
32:D6:45:LYS:O	32:D6:46:HIS:CB	2.55	0.55
28:B2:6:VAL:HG12	28:B2:7:ARG:CZ	2.37	0.55
10:CJ:16:LEU:C	10:CJ:16:LEU:HD13	2.27	0.55
25:AZ:139:ASP:O	25:AZ:140:MET:HG2	2.06	0.55
42:DG:39:ILE:O	42:DG:39:ILE:HG13	2.06	0.55
52:BT:28:VAL:CG2	52:BT:63:VAL:HG11	2.37	0.55
35:B9:1:MET:HG2	35:B9:31:LYS:O	2.06	0.55
1:CA:1203:C:O2'	1:CA:1204:A:H5'	2.07	0.55
3:AC:9:GLY:HA2	3:AC:12:LEU:HG	1.89	0.55
53:DU:108:GLU:HG3	54:DV:44:LYS:HD3	1.88	0.55
36:BA:2176:A:H8	36:BA:2176:A:H3'	1.71	0.55
36:DA:195:A:C8	36:DA:197:A:OP1	2.60	0.55
56:BX:49:VAL:HB	56:BX:83:VAL:HG13	1.89	0.55
39:DD:27:THR:CG2	39:DD:27:THR:O	2.55	0.55
50:DR:5:LYS:O	50:DR:6:SER:HB2	2.06	0.55
10:AJ:29:ARG:HH11	10:AJ:29:ARG:HG2	1.72	0.55
2:CB:61:LEU:HD11	2:CB:160:ASP:CB	2.36	0.55
25:AZ:286:VAL:HG22	25:AZ:287:GLY:N	2.22	0.55
30:B4:30:GLU:C	30:B4:31:ILE:HD12	2.27	0.55
39:BD:80:ALA:CB	39:BD:96:HIS:CD2	2.87	0.55
36:BA:1543:C:H3'	36:BA:1544:A:H5'	1.89	0.55
36:BA:89:G:H3'	36:BA:90:U:H5'	1.87	0.55
20:CT:18:GLN:HE21	20:CT:22:ARG:HH12	1.55	0.55
5:AE:33:VAL:HG22	5:AE:43:LEU:HD13	1.89	0.55
2:CB:18:GLY:H	2:CB:42:ILE:HG23	1.72	0.55
2:CB:9:GLU:OE1	2:CB:9:GLU:N	2.38	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BE:28:ALA:CB	40:BE:93:VAL:HG22	2.37	0.55
12:AL:31:PRO:HB2	12:AL:32:PHE:CD1	2.42	0.55
50:DR:44:LEU:HD13	50:DR:44:LEU:O	2.07	0.55
12:CL:83:VAL:HG13	12:CL:84:LEU:N	2.21	0.55
49:BQ:30:GLY:HA2	49:BQ:107:ALA:HB2	1.88	0.55
27:B1:3:LYS:HB2	36:BA:1364:G:OP2	2.07	0.55
1:AA:474:G:H2'	1:AA:475:G:H8	1.71	0.55
55:DW:82:LEU:CD1	55:DW:82:LEU:N	2.70	0.55
36:BA:2012:G:H4'	55:BW:96:ILE:CD1	2.37	0.55
49:BQ:40:ALA:O	49:BQ:97:VAL:HG22	2.07	0.55
1:CA:501:C:H2'	1:CA:502:G:C8	2.40	0.55
1:CA:617:G:H4'	16:CP:44:THR:O	2.06	0.55
38:DC:47:LEU:HD12	38:DC:47:LEU:H	1.70	0.55
36:DA:2712:U:O2'	36:DA:2712(A):A:H3'	2.07	0.55
39:BD:223:GLY:O	39:BD:226:MET:N	2.35	0.55
9:CI:26:VAL:HG12	9:CI:28:VAL:HG23	1.89	0.55
6:AF:44:GLY:O	6:AF:60:PHE:N	2.39	0.55
2:CB:219:VAL:HA	2:CB:222:ILE:HG12	1.88	0.55
1:AA:245:C:O2'	1:AA:246:A:P	2.65	0.55
36:DA:2455:G:H2'	36:DA:2456:C:C6	2.41	0.55
38:DC:83:ILE:HG22	38:DC:83:ILE:O	2.06	0.55
7:AG:68:ASN:O	7:AG:135:VAL:HG22	2.07	0.55
25:AZ:124:ARG:NH2	25:AZ:127:GLY:O	2.40	0.55
36:DA:1547:C:O2'	36:DA:1548:C:H5'	2.06	0.55
17:CQ:52:LYS:N	17:CQ:52:LYS:HE3	2.22	0.55
22:CW:32:U:H2'	22:CW:33:U:C6	2.42	0.55
1:AA:1249:C:H4'	9:AI:36:TYR:OH	2.07	0.55
24:AY:37:MIA:H121	24:AY:38:A:C2	2.41	0.55
41:BF:167:ALA:O	41:BF:170:LEU:HD23	2.07	0.55
32:B6:15:GLU:CG	32:B6:18:ARG:CZ	2.84	0.55
32:B6:45:LYS:O	32:B6:46:HIS:CB	2.54	0.55
28:B2:2:LYS:CD	28:B2:59:ARG:HH22	2.20	0.55
28:B2:7:ARG:HG3	28:B2:11:GLU:OE2	2.07	0.55
36:BA:94(A):G:H2'	36:BA:95:G:H5''	1.88	0.55
2:CB:97:TRP:CZ3	2:CB:176:GLU:OE2	2.60	0.55
2:AB:138:LEU:C	2:AB:140:HIS:H	2.10	0.55
39:BD:72:LYS:HE2	39:BD:101:GLU:OE1	2.07	0.55
42:DG:43:LEU:HD22	42:DG:43:LEU:N	2.22	0.55
36:BA:481:G:OP2	57:BY:47:LYS:HD2	2.07	0.55
46:BN:137:LYS:O	46:BN:138:LEU:HD23	2.07	0.55
58:BZ:29:TYR:OH	58:BZ:87:ASP:HB3	2.05	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DY:77:PRO:O	57:DY:78:ALA:HB2	2.07	0.55
12:AL:93:LEU:HB2	12:AL:96:VAL:CG2	2.27	0.55
53:DU:59:ARG:HG2	53:DU:59:ARG:NH1	2.22	0.55
1:CA:1226:C:C5	13:CM:104:ARG:HB2	2.42	0.55
1:CA:1226:C:OP1	13:CM:91:ARG:NH2	2.40	0.55
48:DP:148:LEU:O	48:DP:149:GLU:HB2	2.07	0.55
4:CD:16:GLY:C	4:CD:33:MET:HE1	2.27	0.55
58:DZ:125:LEU:CD2	58:DZ:164:ALA:HB3	2.37	0.55
12:AL:102:ARG:HH12	12:AL:110:VAL:HG22	1.70	0.55
10:AJ:3:LYS:C	10:AJ:4:ILE:HD12	2.28	0.55
1:AA:545:C:OP1	4:AD:61:LYS:NZ	2.40	0.55
34:B8:36:LYS:O	34:B8:37:SER:C	2.45	0.55
48:BP:56:SER:HB2	48:BP:60:MET:CE	2.37	0.55
36:DA:1747(A):G:O2'	36:DA:1748:G:H5''	2.07	0.55
36:DA:2818:G:O2'	36:DA:2819:G:H5'	2.06	0.55
5:CE:11:ILE:HB	5:CE:31:LEU:CD1	2.32	0.55
29:B3:19:GLN:O	29:B3:22:ALA:HB3	2.07	0.55
36:DA:410:G:C2	36:DA:2407:G:N7	2.75	0.55
36:BA:2657:A:H2'	36:BA:2658:C:C5'	2.31	0.55
36:DA:81:G:H21	57:DY:2:ARG:NH1	2.05	0.55
1:AA:1202:G:C2	14:AN:42:ILE:CG2	2.87	0.55
36:BA:2673:G:O2'	36:BA:2674:G:H5'	2.07	0.55
36:BA:2389:G:H5''	36:BA:2390:U:C5'	2.34	0.55
52:BT:3:ARG:H	52:BT:7:ILE:HD11	1.71	0.55
51:BS:88:ASP:OD1	51:BS:89:ARG:N	2.27	0.55
50:BR:27:SER:O	50:BR:30:THR:HG22	2.06	0.55
36:BA:954:G:H4'	49:BQ:13:GLN:HE21	1.68	0.55
34:D8:23:VAL:CG1	34:D8:46:ARG:HD3	2.37	0.55
36:BA:1270:C:H5''	36:BA:1271:G:C5'	2.36	0.55
39:BD:45:ASN:CG	39:BD:46:GLN:N	2.60	0.55
58:DZ:104:PHE:HD1	58:DZ:139:VAL:HG21	1.72	0.55
13:CM:118:ALA:HB2	22:CV:28:G:O2'	2.07	0.55
36:BA:363(E):U:H2'	36:BA:363(F):A:H1'	1.88	0.55
36:BA:2050:C:H1'	40:BE:156:MET:CE	2.37	0.55
36:DA:1472:A:C2'	36:DA:1473:G:H5'	2.36	0.55
4:CD:150:GLU:CG	4:CD:151:LYS:N	2.70	0.55
1:AA:814:A:H2'	1:AA:816:A:H5''	1.88	0.55
36:BA:2291:U:H2'	36:BA:2292:C:C6	2.41	0.55
25:AZ:20:VAL:H	25:AZ:115:GLN:HE21	1.55	0.55
36:DA:1328:G:H2'	36:DA:1330:C:C5	2.41	0.55
36:DA:1751:C:H2'	36:DA:1752:C:C6	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:43:HIS:O	4:AD:45:GLN:N	2.40	0.55
1:CA:832:C:O2'	1:CA:833:U:H5'	2.07	0.55
36:DA:271(P):C:C2'	36:DA:271(Q):G:H5'	2.37	0.55
7:AG:15:ASP:HB3	7:AG:19:GLY:N	2.21	0.55
1:CA:101:A:O2'	1:CA:102:G:H5'	2.06	0.55
22:AW:7:A:H2'	22:AW:8:U:C5'	2.37	0.55
27:B1:5:CYS:O	27:B1:9:GLY:HA2	2.06	0.55
8:AH:30:ARG:HB3	8:AH:30:ARG:NH1	2.22	0.55
9:CI:126:SER:O	9:CI:127:LYS:CB	2.54	0.55
4:CD:170:VAL:CG1	4:CD:174:LEU:HB2	2.37	0.55
36:DA:664:C:H4'	36:DA:941:A:OP1	2.05	0.55
52:DT:23:ARG:HA	52:DT:52:ILE:CD1	2.37	0.55
52:BT:93:ARG:CG	52:BT:117:ASP:HB2	2.33	0.55
49:DQ:26:TYR:O	49:DQ:27:VAL:CG2	2.49	0.55
57:BY:2:ARG:HG2	57:BY:2:ARG:HH11	1.72	0.55
1:CA:1054:C:H6	1:CA:1196:U:N3	2.03	0.55
13:CM:15:VAL:CG1	13:CM:45:VAL:HG22	2.32	0.55
36:DA:139:G:H2'	36:DA:140:G:N7	2.22	0.55
9:CI:89:ASN:H	9:CI:90:PRO:CD	2.19	0.55
25:CZ:322:VAL:O	25:CZ:365:GLY:CA	2.55	0.55
36:DA:92:A:H2'	36:DA:93:G:O4'	2.07	0.55
36:DA:272(H):C:C3'	36:DA:272(I):U:H5''	2.37	0.55
41:DF:129:PHE:O	41:DF:132:VAL:HB	2.07	0.55
36:BA:605:C:H1'	36:BA:657:U:O2'	2.07	0.55
29:B3:35:ARG:CG	29:B3:36:VAL:N	2.70	0.55
27:B1:21:ARG:HH11	27:B1:21:ARG:HG3	1.70	0.55
40:DE:36:ARG:NH2	40:DE:88:GLY:HA2	2.22	0.55
1:CA:453:A:C2	1:CA:454:C:C2	2.95	0.55
43:BH:12:PRO:HB2	43:BH:15:VAL:CG1	2.36	0.55
41:BF:65:TRP:CZ3	41:BF:73:ALA:O	2.48	0.55
36:BA:89:G:H3'	36:BA:90:U:C5'	2.36	0.55
24:AY:8:4SU:C5'	24:AY:8:4SU:H6	2.36	0.55
39:BD:266:SER:O	39:BD:267:SER:O	2.25	0.55
36:DA:1385:G:O2'	36:DA:1396:U:C6	2.56	0.55
36:DA:674:G:H1'	41:DF:74:ARG:HD2	1.88	0.55
22:AV:43:C:H5'	22:AV:44:G:OP2	2.07	0.55
36:DA:2199:A:N3	36:DA:2199:A:H2'	2.21	0.55
1:CA:936:C:O2'	1:CA:937:A:H5'	2.07	0.55
3:CC:59:ARG:O	3:CC:60:ALA:HB3	2.07	0.55
29:B3:31:LEU:HD12	36:BA:989:G:P	2.46	0.55
8:CH:113:SER:HB2	8:CH:134:ILE:HD11	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D2:63:VAL:C	28:D2:65:ASN:H	2.10	0.55
35:B9:19:ARG:C	35:B9:21:GLY:H	2.09	0.55
26:B0:43:THR:HG22	36:BA:2331:G:O2'	2.06	0.55
26:B0:43:THR:HG22	36:BA:2331:G:O3'	2.05	0.55
41:DF:63:LYS:HG3	41:DF:76:GLY:HA2	1.89	0.55
4:AD:177:ASP:O	4:AD:180:GLY:N	2.40	0.55
42:DG:167:GLU:OE1	42:DG:168:GLU:HG3	2.07	0.55
36:DA:598:G:H5'	48:DP:15:ARG:HB3	1.88	0.55
36:DA:325:G:H2'	36:DA:326:G:H8	1.72	0.55
36:BA:903:C:O2'	36:BA:904:C:H5'	2.06	0.55
42:DG:180:PHE:O	42:DG:182:LYS:N	2.41	0.55
6:AF:89:MET:SD	18:AR:76:LEU:HD21	2.47	0.55
36:BA:1292:U:H2'	36:BA:1293:C:C6	2.42	0.55
44:DJ:23:UNK:HA	44:DJ:118:UNK:HA	1.88	0.55
1:AA:123:C:O5'	1:AA:123:C:H6	1.89	0.55
11:AK:87:THR:O	11:AK:88:GLY:O	2.24	0.55
25:CZ:315:LYS:HG3	25:CZ:405:GLU:OE1	2.07	0.55
4:CD:168:ARG:N	4:CD:168:ARG:HD2	2.21	0.55
58:DZ:3:TYR:N	58:DZ:3:TYR:CD1	2.74	0.55
36:DA:2886:G:H2'	36:DA:2887:U:C6	2.42	0.55
36:BA:600:G:H2'	36:BA:601:C:C6	2.42	0.55
32:D6:5:VAL:N	32:D6:9:LEU:N	2.55	0.54
34:D8:6:THR:OG1	34:D8:11:LYS:HD2	2.08	0.54
1:AA:557:G:H2'	1:AA:558:G:O4'	2.06	0.54
39:BD:239:ARG:HH11	39:BD:239:ARG:CG	1.97	0.54
28:B2:41:ILE:HD11	28:B2:44:LEU:HD12	1.89	0.54
10:AJ:54:PHE:CD1	10:AJ:55:LYS:NZ	2.75	0.54
25:AZ:33:TYR:CE2	25:AZ:179:LEU:CD1	2.90	0.54
42:DG:77:ILE:N	42:DG:77:ILE:HD13	2.17	0.54
36:BA:650:C:C3'	36:BA:651:G:H5''	2.37	0.54
36:BA:1259:G:O2'	36:BA:1260:G:H5'	2.07	0.54
34:B8:61:LEU:HD22	36:BA:593:G:H4'	1.88	0.54
48:BP:47:ASP:HB2	48:BP:51:PHE:CB	2.25	0.54
53:DU:112:ARG:NH1	54:DV:46:VAL:HG11	2.22	0.54
36:DA:1799:G:H5'	36:DA:1819:A:H61	1.72	0.54
51:BS:20:ARG:HG2	51:BS:20:ARG:HH11	1.72	0.54
58:DZ:48:PHE:CZ	58:DZ:74:VAL:HG21	2.42	0.54
55:DW:20:VAL:HG23	55:DW:47:VAL:HG21	1.89	0.54
46:DN:21:LYS:HD2	46:DN:26:LEU:CB	2.33	0.54
10:CJ:34:VAL:HG13	10:CJ:73:ASP:C	2.28	0.54
4:CD:29:PRO:C	4:CD:30:LYS:HG2	2.27	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:106:LEU:HD11	48:BP:112:LEU:HD23	1.88	0.54
48:BP:84:ASN:ND2	48:BP:116:GLY:HA2	2.22	0.54
40:BE:131:ALA:CB	40:BE:134:ILE:HD11	2.37	0.54
41:BF:154:VAL:HA	41:BF:191:ARG:O	2.06	0.54
18:AR:58:LEU:CD2	18:AR:62:GLU:HB3	2.33	0.54
25:AZ:244:ARG:HH11	25:AZ:244:ARG:CB	2.16	0.54
12:AL:126:LYS:NZ	12:AL:127:GLU:N	2.54	0.54
55:DW:4:LYS:HG2	55:DW:5:ALA:N	2.17	0.54
5:AE:12:LEU:HD13	5:AE:12:LEU:O	2.06	0.54
54:DV:93:GLU:O	54:DV:94:LEU:HD23	2.08	0.54
15:CO:27:VAL:HG12	15:CO:31:LEU:CD1	2.37	0.54
26:D0:7:LEU:HB3	49:DQ:85:LYS:HG3	1.88	0.54
20:CT:84:LEU:C	20:CT:86:ARG:H	2.09	0.54
31:D5:52:TYR:CE2	36:DA:2884:U:H1'	2.42	0.54
2:AB:113:HIS:C	2:AB:115:LEU:N	2.59	0.54
39:BD:12:SER:O	39:BD:13:ARG:HB2	2.07	0.54
1:CA:429:U:H1'	1:CA:430:A:H5''	1.88	0.54
38:DC:47:LEU:HD11	38:DC:171:ILE:HG22	1.88	0.54
36:BA:1116:C:C2'	36:BA:1117:G:H5'	2.37	0.54
56:BX:41:ASN:O	56:BX:45:THR:HG23	2.07	0.54
36:BA:1678:G:H22	36:BA:1989:G:H1	1.54	0.54
38:DC:61:THR:HG22	38:DC:162:GLU:HA	1.88	0.54
1:AA:756:C:H2'	1:AA:757:U:O4'	2.07	0.54
17:CQ:27:PHE:CE1	17:CQ:36:ILE:HD11	2.42	0.54
1:AA:1070:U:O2'	1:AA:1071:C:H5'	2.07	0.54
46:BN:16:ILE:O	46:BN:54:VAL:HA	2.06	0.54
4:CD:173:TRP:CE2	4:CD:189:PRO:HB3	2.42	0.54
48:DP:16:ARG:CB	48:DP:16:ARG:HH11	2.21	0.54
48:DP:23:PRO:HB2	48:DP:33:ARG:CD	2.38	0.54
1:CA:1123:A:H4'	10:CJ:36:GLY:HA3	1.89	0.54
39:BD:26:LYS:O	39:BD:27:THR:CB	2.55	0.54
12:AL:53:ARG:NH1	12:AL:92:ASP:OD2	2.40	0.54
58:BZ:18:LEU:HB3	58:BZ:23:LYS:HB2	1.89	0.54
37:BB:42:C:O3'	42:BG:67:LYS:HE2	2.07	0.54
1:AA:1305:G:P	21:AU:2:GLY:N	2.81	0.54
54:BV:38:LEU:O	54:BV:39:LEU:HD13	2.06	0.54
34:B8:4:MET:HE1	36:BA:666:G:H1'	1.88	0.54
5:AE:80:ILE:HD13	5:AE:138:ALA:HB1	1.88	0.54
56:DX:83:VAL:HG12	56:DX:87:GLN:HB2	1.90	0.54
53:DU:92:ARG:O	53:DU:93:LYS:C	2.46	0.54
25:CZ:118:GLU:C	25:CZ:120:ILE:H	2.11	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DN:25:ARG:O	46:DN:28:THR:HG22	2.06	0.54
46:DN:58:ASP:C	46:DN:60:ILE:N	2.60	0.54
1:CA:537:G:H2'	1:CA:538:G:C8	2.41	0.54
39:BD:124:PRO:CG	39:BD:129:ASN:HD21	2.17	0.54
20:CT:74:LYS:O	20:CT:76:ALA:N	2.40	0.54
36:DA:2230:G:O2'	36:DA:2231:C:H5'	2.07	0.54
2:AB:107:THR:O	2:AB:110:GLN:HG3	2.07	0.54
36:BA:2758:A:N6	43:BH:67:LEU:HD11	2.21	0.54
28:D2:43:GLN:HG2	28:D2:44:LEU:H	1.72	0.54
52:DT:96:ARG:HB2	52:DT:96:ARG:HH11	1.70	0.54
2:CB:47:THR:O	2:CB:51:LEU:HB2	2.07	0.54
58:DZ:9:TYR:CE1	58:DZ:35:ARG:NH1	2.74	0.54
47:BO:31:LYS:HB2	47:BO:32:TYR:CE1	2.42	0.54
15:CO:31:LEU:N	15:CO:31:LEU:HD12	2.22	0.54
27:B1:3:LYS:HG2	27:B1:4:VAL:H	1.72	0.54
26:B0:49:LYS:H	26:B0:80:HIS:HD1	1.54	0.54
46:BN:3:THR:HG22	46:BN:4:TYR:N	2.23	0.54
2:CB:209:ARG:HH11	2:CB:239:VAL:CG1	2.18	0.54
38:DC:73:ARG:HH21	38:DC:110:PHE:HD1	1.55	0.54
36:DA:1880:C:H3'	36:DA:1881:C:H5''	1.88	0.54
1:CA:245:C:O2'	1:CA:246:A:P	2.65	0.54
36:DA:440:G:H22	41:DF:46:ARG:HH22	1.54	0.54
25:AZ:28:THR:O	25:AZ:32:THR:HG23	2.07	0.54
36:BA:2653:U:O2'	43:BH:110:SER:HB2	2.07	0.54
1:AA:613:C:O2'	1:AA:614:A:H5'	2.07	0.54
36:BA:1219:G:C2	36:BA:1221:C:N4	2.76	0.54
41:DF:31:HIS:HB2	48:DP:13:ASN:OD1	2.06	0.54
58:BZ:62:PRO:C	58:BZ:64:GLY:N	2.59	0.54
58:BZ:54:HIS:O	58:BZ:98:MET:CE	2.55	0.54
21:CU:12:LYS:HG2	21:CU:22:ARG:HB3	1.87	0.54
2:AB:178:ARG:NH1	8:AH:71:GLY:O	2.39	0.54
36:BA:645:C:H5'	36:BA:646:A:OP2	2.07	0.54
36:BA:2624:G:H2'	36:BA:2625:G:H5'	1.89	0.54
3:AC:59:ARG:O	3:AC:60:ALA:HB3	2.08	0.54
36:BA:824:A:H1'	36:BA:2358:G:N7	2.22	0.54
8:AH:6:ILE:N	8:AH:6:ILE:HD12	2.22	0.54
36:DA:2294:C:O2	36:DA:2294:C:H2'	2.05	0.54
35:D9:15:LYS:HB3	35:D9:15:LYS:NZ	2.22	0.54
4:CD:49:ARG:O	4:CD:51:PRO:HD3	2.08	0.54
24:CY:27:C:H2'	24:CY:28:C:H6	1.71	0.54
38:DC:147:PHE:C	38:DC:149:ILE:H	2.10	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:176:LEU:HD12	25:CZ:176:LEU:O	2.07	0.54
32:D6:33:LYS:HA	32:D6:33:LYS:HE2	1.89	0.54
48:DP:47:ASP:OD2	48:DP:50:ARG:NH1	2.40	0.54
52:DT:33:LYS:HZ1	52:DT:43:GLN:CG	2.19	0.54
28:B2:33:MET:O	28:B2:37:PHE:HD1	1.91	0.54
31:D5:40:LYS:HD2	31:D5:44:THR:O	2.07	0.54
25:CZ:265:THR:HG22	25:CZ:291:ARG:H	1.72	0.54
42:DG:82:LEU:HD22	42:DG:87:PRO:HB3	1.89	0.54
57:DY:15:VAL:HG12	57:DY:17:SER:H	1.72	0.54
36:DA:328:U:H4'	57:DY:68:HIS:CD2	2.42	0.54
36:DA:2101:G:H2'	36:DA:2102:U:C5'	2.35	0.54
3:AC:82:GLU:N	3:AC:82:GLU:CD	2.60	0.54
13:AM:12:ASN:N	13:AM:12:ASN:HD22	2.04	0.54
3:AC:16:ARG:NH2	3:AC:183:ASP:HA	2.22	0.54
3:AC:43:LEU:O	3:AC:46:GLU:O	2.26	0.54
25:CZ:323:LEU:HD22	25:CZ:394:THR:O	2.06	0.54
4:CD:31:CYS:C	4:CD:33:MET:N	2.60	0.54
4:CD:11:LEU:HD13	4:CD:66:ARG:CD	2.36	0.54
42:BG:138:GLN:HG3	42:BG:153:ARG:H	1.69	0.54
19:CS:12:ASP:H	19:CS:38:SER:CB	2.20	0.54
42:DG:51:ARG:HH11	42:DG:53:LEU:HD13	1.72	0.54
4:AD:8:VAL:HG23	4:AD:9:CYS:N	2.23	0.54
25:AZ:251:ASP:H	25:AZ:267:VAL:CG1	2.20	0.54
55:BW:75:TYR:N	55:BW:75:TYR:CD1	2.75	0.54
4:AD:100:ARG:O	4:AD:101:LEU:C	2.46	0.54
4:AD:79:PHE:HA	4:AD:93:PHE:CE2	2.42	0.54
42:BG:111:LEU:N	42:BG:112:PRO:HD2	2.21	0.54
42:BG:107:LEU:HD11	42:BG:178:PHE:HE1	1.71	0.54
36:DA:105:C:H2'	36:DA:106:C:H6	1.72	0.54
36:DA:2717:G:O2'	52:DT:96:ARG:HD3	2.06	0.54
19:AS:10:PHE:CE1	19:AS:70:LYS:HE2	2.42	0.54
1:CA:1464:G:H2'	1:CA:1465:C:H6	1.72	0.54
22:AW:44:G:H5''	22:AW:45:U:H5	1.72	0.54
27:B1:60:PHE:HZ	27:B1:91:LYS:CG	2.20	0.54
36:BA:812:C:H5'	48:BP:25:SER:CB	2.38	0.54
36:DA:530:G:C5	36:DA:2022:U:H5''	2.42	0.54
12:CL:47:LYS:HB3	12:CL:48:PRO:CD	2.36	0.54
40:DE:117:MET:O	40:DE:121:ASN:HA	2.07	0.54
1:CA:1310:G:O2'	1:CA:1311:G:H5'	2.07	0.54
48:BP:79:ARG:O	48:BP:110:TYR:HB3	2.06	0.54
39:BD:39:LYS:HB2	39:BD:62:TYR:HB2	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:110:G:O2'	36:DA:111:A:H5'	2.08	0.54
20:AT:18:GLN:HG2	20:AT:22:ARG:NH1	2.22	0.54
20:AT:23:ARG:O	20:AT:27:LYS:HB2	2.07	0.54
36:BA:1682:G:H5'	36:BA:1762:A:O2'	2.07	0.54
43:DH:158:HIS:O	43:DH:159:GLU:HB2	2.06	0.54
36:BA:1336:A:OP2	56:BX:64:LYS:HD2	2.06	0.54
42:DG:136:ARG:O	42:DG:154:GLY:HA2	2.08	0.54
22:AV:51:U:H2'	22:AV:52:G:C8	2.42	0.54
49:BQ:78:PRO:HD2	49:BQ:81:VAL:HG11	1.89	0.54
22:CW:35:A:H2'	22:CW:36:A:C8	2.42	0.54
39:BD:273:ARG:HH11	39:BD:273:ARG:HG2	1.72	0.54
1:CA:294:U:H2'	1:CA:295:C:H6	1.71	0.54
36:BA:1124:C:H2'	36:BA:1125:G:O4'	2.08	0.54
41:DF:63:LYS:HG2	41:DF:65:TRP:O	2.07	0.54
53:DU:64:ARG:HG2	53:DU:64:ARG:HH11	1.72	0.54
1:AA:318:G:H2'	1:AA:319:G:C8	2.42	0.54
36:DA:287:C:H2'	36:DA:288:C:C6	2.42	0.54
1:CA:614:A:H2'	1:CA:615:C:O4'	2.07	0.54
1:CA:102:G:O2'	1:CA:103:C:H5'	2.07	0.54
53:DU:115:ALA:C	53:DU:117:GLN:H	2.11	0.54
1:AA:285:G:O2'	1:AA:286:G:H5'	2.06	0.54
36:DA:1419:A:O2'	36:DA:1420:U:H5''	2.07	0.54
36:DA:979:G:H3'	36:DA:980:A:H5''	1.90	0.54
3:AC:189:ALA:HB3	3:AC:196:LEU:HB2	1.88	0.54
1:AA:671:G:O2'	1:AA:672:U:H5'	2.07	0.54
1:AA:537:G:H2'	1:AA:538:G:H8	1.72	0.54
15:AO:82:ILE:HD11	15:AO:88:ARG:HB2	1.90	0.54
1:CA:228:A:C5'	1:CA:228:A:H8	2.19	0.54
53:BU:66:ASN:ND2	53:BU:76:TYR:HB2	2.22	0.54
28:B2:3:LEU:O	28:B2:6:VAL:HG12	2.08	0.54
31:D5:49:CYS:SG	31:D5:50:GLY:N	2.76	0.54
52:BT:78:LEU:O	52:BT:79:HIS:CD2	2.53	0.54
1:CA:355:C:C4	1:CA:356:A:N7	2.76	0.54
57:BY:31:LEU:HD23	57:BY:36:ALA:O	2.07	0.54
57:BY:98:VAL:O	57:BY:99:CYS:SG	2.64	0.54
46:BN:14:VAL:HG11	46:BN:137:LYS:HG3	1.88	0.54
46:BN:67:LEU:HB3	46:BN:88:GLU:CG	2.37	0.54
20:AT:53:LEU:N	20:AT:53:LEU:HD12	2.21	0.54
40:BE:55:ASN:HB3	40:BE:73:GLU:O	2.07	0.54
55:BW:97:LYS:HZ3	55:BW:99:ARG:CZ	2.20	0.54
41:DF:133:ASN:HB2	41:DF:138:GLU:OE1	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:126:VAL:HA	48:BP:145:PRO:CB	2.33	0.54
19:CS:44:MET:N	19:CS:44:MET:SD	2.79	0.54
27:B1:30:VAL:O	27:B1:30:VAL:HG23	2.07	0.54
46:BN:120:LEU:HD12	46:BN:122:VAL:HG23	1.90	0.54
46:DN:28:THR:HG23	46:DN:29:LYS:N	2.22	0.54
12:CL:121:GLY:O	12:CL:122:THR:C	2.45	0.54
5:AE:7:GLU:O	5:AE:8:GLU:HB3	2.07	0.54
12:AL:126:LYS:HE2	12:AL:126:LYS:CA	2.37	0.54
58:DZ:20:ARG:HB3	58:DZ:20:ARG:NH1	2.22	0.54
49:DQ:54:MET:HG2	49:DQ:64:ILE:HD11	1.89	0.54
53:BU:57:PHE:O	53:BU:58:ARG:C	2.45	0.54
14:AN:42:ILE:HG22	14:AN:43:CYS:N	2.23	0.54
36:DA:1149:G:H2'	36:DA:1150:C:C6	2.42	0.54
38:BC:175:VAL:HG12	38:BC:175:VAL:O	2.07	0.54
36:BA:2875:C:H4'	52:BT:5:ALA:HB2	1.88	0.54
14:AN:24:CYS:HB2	14:AN:33:VAL:HG12	1.89	0.54
56:DX:57:LEU:HD13	56:DX:78:LYS:O	2.07	0.54
44:BJ:85:UNK:HG3	44:BJ:86:UNK:N	2.20	0.54
10:CJ:32:ALA:CB	10:CJ:76:ASN:HB2	2.37	0.54
36:BA:2884:U:H2'	36:BA:2885:C:C5'	2.38	0.54
41:BF:37:VAL:HG11	48:BP:7:ARG:HH12	1.71	0.54
1:CA:1004:A:H5''	1:CA:1025:U:N3	2.23	0.54
33:B7:47:ARG:NH2	36:BA:1311:G:H2'	2.23	0.54
46:DN:56:ASN:H	46:DN:125:GLY:HA3	1.72	0.54
36:BA:1494:A:N3	36:BA:1494:A:H3'	2.22	0.54
1:CA:178:C:O2'	1:CA:179:A:H5'	2.07	0.54
36:BA:325:G:H2'	36:BA:326:G:H8	1.73	0.54
54:BV:82:ARG:HG2	54:BV:82:ARG:HH11	1.72	0.54
36:DA:1389:G:H2'	36:DA:1390:U:C6	2.42	0.54
36:DA:528:A:H2	36:DA:2043:C:O5'	1.90	0.54
4:AD:177:ASP:OD1	4:AD:180:GLY:N	2.37	0.54
55:DW:9:TYR:HD1	55:DW:9:TYR:N	2.05	0.54
11:AK:25:TYR:HE1	11:AK:87:THR:HB	1.71	0.54
36:BA:2467:C:O2	49:BQ:124:LYS:NZ	2.40	0.54
36:BA:1434:A:H61	36:BA:1558:A:H62	1.55	0.54
36:BA:438:G:O2'	36:BA:440:G:H5'	2.08	0.54
36:DA:222:A:H5''	36:DA:421:U:OP1	2.07	0.54
17:AQ:76:LEU:HD11	17:AQ:78:GLU:O	2.07	0.54
1:AA:1479:C:H2'	1:AA:1480:G:H8	1.73	0.54
1:CA:1303:C:H2'	1:CA:1304:G:H5'	1.89	0.54
1:CA:9:G:C2	1:CA:10:A:C8	2.95	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:922:U:H2'	36:DA:923:C:C6	2.42	0.54
1:CA:114:U:O2'	1:CA:115:G:H5'	2.08	0.54
36:DA:2629:A:N3	36:DA:2629:A:H5'	2.22	0.54
36:BA:61:G:O5'	36:BA:61:G:H8	1.91	0.54
1:AA:525:C:N4	1:AA:526:C:N4	2.55	0.54
1:AA:15:G:H21	5:AE:18:ARG:HA	1.71	0.54
48:DP:23:PRO:C	48:DP:33:ARG:CZ	2.76	0.54
52:DT:28:VAL:HG23	52:DT:63:VAL:HG11	1.89	0.54
36:DA:2724:C:OP1	40:DE:118:LYS:NZ	2.41	0.54
28:B2:51:ARG:HG3	28:B2:52:ASP:N	2.22	0.54
56:BX:35:THR:HG22	56:BX:37:THR:N	2.20	0.54
2:CB:69:LEU:HD23	2:CB:91:PRO:HB2	1.88	0.54
38:BC:132:GLY:N	38:BC:133:PRO:CD	2.70	0.54
52:BT:96:ARG:HG2	52:BT:98:LYS:O	2.08	0.54
1:AA:1306:A:OP2	21:AU:6:ARG:NH2	2.38	0.54
9:CI:114:TYR:HE2	10:CJ:59:SER:HA	1.71	0.54
9:AI:52:ALA:CB	9:AI:95:LYS:HD2	2.37	0.54
48:DP:41:ARG:HH11	48:DP:45:LEU:HD23	1.67	0.54
25:CZ:222:LEU:HB3	25:CZ:243:GLU:CB	2.36	0.54
36:DA:605:C:H5	36:DA:623:G:N1	2.01	0.54
36:DA:655:A:C4'	36:DA:656:G:H5'	2.27	0.54
1:AA:1239:A:N6	1:AA:1299:A:H62	2.04	0.54
48:BP:38:GLN:O	48:BP:39:LYS:HB2	2.06	0.54
48:BP:84:ASN:C	48:BP:86:LYS:N	2.60	0.54
1:CA:266:G:H5'	1:CA:267:C:C5	2.43	0.54
27:B1:30:VAL:O	27:B1:31:GLY:O	2.25	0.54
13:AM:91:ARG:CB	13:AM:98:VAL:HG22	2.36	0.54
50:DR:2:ARG:HG3	50:DR:2:ARG:HH11	1.72	0.54
36:DA:2665:A:H4'	36:DA:2665:A:OP1	2.06	0.54
5:CE:11:ILE:HD12	5:CE:31:LEU:HD11	1.89	0.54
36:DA:548:A:C2'	36:DA:549:G:H5'	2.36	0.54
38:DC:20:TYR:HD1	38:DC:20:TYR:H	1.54	0.54
39:DD:9:TYR:CD1	39:DD:10:THR:HG22	2.42	0.54
55:DW:5:ALA:HB2	55:DW:54:ALA:HB2	1.88	0.54
49:DQ:17:LEU:O	49:DQ:18:LYS:HG3	2.07	0.54
2:AB:18:GLY:H	2:AB:42:ILE:HG23	1.72	0.54
36:DA:881:G:H2'	36:DA:882:G:O4'	2.08	0.54
57:BY:50:ARG:CD	57:BY:56:PRO:HA	2.37	0.54
40:DE:167:VAL:CG1	40:DE:170:LEU:HD11	2.38	0.54
40:DE:169:ASN:O	40:DE:169:ASN:ND2	2.38	0.54
35:B9:35:ARG:O	35:B9:36:GLN:O	2.25	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:221:A:H1'	36:BA:233:A:C1'	2.36	0.54
2:AB:98:LEU:O	2:AB:101:MET:HG3	2.07	0.54
22:AW:34:G:H2'	22:AW:35:A:C5'	2.37	0.54
1:AA:59:A:C5'	1:AA:60:A:H5''	2.38	0.54
38:DC:72:VAL:CG2	38:DC:111:ASP:HB3	2.37	0.54
36:BA:2305:A:H2'	36:BA:2306:C:C4'	2.37	0.54
36:BA:1072:C:H5''	36:BA:1073:A:OP1	2.08	0.54
1:CA:376:G:H5''	16:CP:5:ARG:HB2	1.89	0.54
20:CT:66:ALA:HB1	20:CT:71:THR:CG2	2.38	0.54
36:BA:202:U:O2'	36:BA:203:C:H5'	2.07	0.54
51:DS:28:VAL:HG12	51:DS:29:PHE:N	2.21	0.54
11:AK:59:TYR:O	11:AK:62:GLN:HB3	2.07	0.54
15:CO:29:VAL:HG13	15:CO:63:ARG:HG3	1.89	0.54
36:DA:1263:U:C4	36:DA:1264:G:C6	2.96	0.54
15:AO:62:GLN:NE2	15:AO:62:GLN:HA	2.22	0.54
7:AG:7:ALA:O	7:AG:8:GLU:HB2	2.08	0.54
9:CI:126:SER:O	9:CI:127:LYS:HB3	2.08	0.54
36:BA:930:U:H4'	36:BA:931:G:O5'	2.07	0.54
55:DW:37:ARG:HG3	55:DW:37:ARG:HH11	1.72	0.54
17:CQ:49:GLU:HA	17:CQ:49:GLU:OE1	2.06	0.54
10:CJ:29:ARG:HH11	10:CJ:29:ARG:HG2	1.72	0.54
40:DE:96:PHE:HA	40:DE:100:GLU:OE1	2.06	0.54
6:AF:3:ARG:HG2	6:AF:64:GLN:HE21	1.72	0.54
39:BD:210:GLY:O	39:BD:213:ARG:HB2	2.08	0.54
36:BA:2189:U:H3'	36:BA:2190:G:H5''	1.89	0.54
32:D6:45:LYS:HG2	36:DA:2371:G:H4'	1.90	0.54
53:BU:65:ILE:HG13	53:BU:96:ALA:HB1	1.88	0.54
28:B2:6:VAL:HG12	28:B2:7:ARG:NH1	2.23	0.54
9:CI:9:ARG:HG2	9:CI:14:VAL:HG22	1.90	0.54
38:BC:113:VAL:HG11	38:BC:136:LEU:O	2.07	0.54
39:DD:63:ARG:HG3	39:DD:63:ARG:HH11	1.73	0.54
25:CZ:102:ALA:O	25:CZ:131:ILE:HG23	2.07	0.54
25:CZ:131:ILE:HD11	25:CZ:163:PHE:CE2	2.43	0.54
25:CZ:177:LEU:HD13	25:CZ:195:TRP:CZ2	2.43	0.54
1:AA:227:G:C3'	1:AA:228:A:H5''	2.37	0.54
41:BF:129:PHE:O	41:BF:132:VAL:HB	2.07	0.54
22:CV:5:G:H1	22:CV:68:C:N4	2.06	0.54
14:CN:59:ALA:HB1	14:CN:61:TRP:HZ3	1.71	0.54
43:DH:83:TYR:CB	43:DH:134:SER:HB3	2.35	0.54
34:B8:62:LEU:N	34:B8:63:PRO:CD	2.71	0.54
1:AA:1150:U:O2	1:AA:1150:U:O4'	2.26	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:DV:39:LEU:HD12	54:DV:51:VAL:HA	1.90	0.54
46:BN:65:LYS:O	46:BN:67:LEU:N	2.38	0.54
58:DZ:120:ILE:HG21	58:DZ:170:THR:O	2.07	0.54
58:DZ:126:VAL:HA	58:DZ:163:LEU:HA	1.89	0.54
36:DA:1051:G:H2'	36:DA:1052:C:C5	2.43	0.54
48:BP:35:HIS:C	48:BP:36:LYS:HG2	2.28	0.54
6:CF:18:GLN:HA	6:CF:21:LEU:CG	2.38	0.54
36:BA:2394:C:H2'	36:BA:2395:C:H5'	1.90	0.54
42:DG:51:ARG:HH11	42:DG:53:LEU:CD1	2.20	0.54
55:BW:6:ILE:HG12	55:BW:104:THR:CB	2.37	0.54
33:B7:5:TRP:CE2	33:B7:7:PRO:HB3	2.42	0.54
36:BA:2839:G:H2'	36:BA:2840:C:H6	1.73	0.54
19:AS:11:VAL:CG2	19:AS:16:LEU:HD11	2.38	0.54
1:CA:1260:C:H1'	1:CA:1275:A:H61	1.72	0.54
22:AV:5:G:H5'	22:AV:5:G:C8	2.39	0.54
5:AE:31:LEU:CD2	5:AE:43:LEU:HD11	2.38	0.54
50:BR:72:ASP:HB3	50:BR:75:LEU:HB3	1.89	0.54
41:DF:185:ASP:CA	41:DF:188:ARG:HG2	2.37	0.54
36:DA:331:A:H1'	36:DA:332:A:OP1	2.06	0.54
40:BE:51:PHE:O	40:BE:74:PRO:HB3	2.07	0.54
40:BE:13:ARG:HB3	40:BE:22:PRO:HA	1.89	0.54
36:DA:2134:A:H62	36:DA:2157:G:H1'	1.72	0.54
36:BA:2741:A:H2'	36:BA:2742:C:O4'	2.08	0.54
46:DN:3:THR:C	46:DN:4:TYR:CG	2.81	0.54
57:DY:51:VAL:O	57:DY:53:PRO:HD3	2.07	0.54
1:AA:878:G:C5'	8:AH:89:PRO:HG2	2.37	0.54
10:CJ:90:LEU:N	10:CJ:91:PRO:CD	2.70	0.54
31:B5:16:ARG:HG2	31:B5:16:ARG:HH11	1.72	0.54
16:CP:67:THR:HB	16:CP:70:ALA:H	1.72	0.54
5:AE:20:GLN:HE22	5:AE:25:ARG:HH21	1.55	0.54
1:CA:1118:C:OP1	9:CI:104:ARG:NE	2.41	0.54
7:CG:145:ALA:O	7:CG:146:GLU:C	2.46	0.54
36:DA:136:G:H2'	36:DA:137:C:H6	1.72	0.54
11:CK:66:LEU:O	11:CK:69:ALA:N	2.41	0.54
37:BB:95:C:O2'	37:BB:96:U:H5'	2.08	0.54
1:AA:552:U:O2'	1:AA:553:A:H5'	2.07	0.54
4:AD:76:ARG:HD2	4:AD:207:TYR:CE1	2.43	0.54
19:CS:24:ALA:O	19:CS:25:LYS:HB2	2.08	0.54
36:DA:2823:A:OP1	40:DE:113:PHE:HB2	2.07	0.54
50:BR:59:ASP:O	50:BR:60:LEU:HB3	2.08	0.54
27:D1:94:LEU:H	27:D1:94:LEU:HD12	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CP:64:ALA:O	16:CP:66:PRO:HD3	2.08	0.54
36:BA:391:G:O2'	36:BA:392:C:H5'	2.08	0.54
1:AA:594:G:C2'	1:AA:595:G:H5'	2.38	0.54
24:AY:15:A:H3'	24:AY:16:H2U:H5''	1.88	0.54
36:BA:1952:A:C6	47:BO:22:ILE:HD12	2.43	0.54
27:D1:37:ILE:HD12	27:D1:37:ILE:O	2.08	0.54
50:DR:11:ASN:O	50:DR:11:ASN:ND2	2.41	0.54
27:B1:81:LYS:C	27:B1:82:LEU:HD12	2.28	0.54
36:DA:2240:C:O2'	36:DA:2241:A:H5'	2.07	0.54
36:DA:216:A:C8	36:DA:432:A:C6	2.96	0.54
25:CZ:68:VAL:CG1	25:CZ:79:HIS:HB3	2.36	0.54
25:CZ:70:TYR:HE1	25:CZ:77:TYR:CD2	2.26	0.54
48:DP:16:ARG:HD3	48:DP:18:ARG:N	2.18	0.54
47:DO:76:ALA:HB3	52:DT:75:ILE:HD13	1.89	0.54
21:CU:6:ARG:HD3	21:CU:15:ARG:NE	2.22	0.54
25:AZ:27:LEU:HD11	25:AZ:31:LEU:HD21	1.90	0.54
26:D0:45:PHE:HB2	26:D0:59:LEU:HD11	1.90	0.54
1:AA:346:G:P	52:BT:43:GLN:NE2	2.81	0.54
52:BT:50:ILE:HD11	52:BT:64:ARG:HB2	1.89	0.54
58:BZ:99:TYR:HE1	58:BZ:125:LEU:HD12	1.72	0.54
57:DY:88:LYS:HZ1	57:DY:93:GLY:CA	2.19	0.54
36:DA:2464:C:O2'	36:DA:2465:C:H6	1.91	0.54
41:BF:135:LYS:HD2	41:BF:137:LYS:HZ2	1.73	0.54
25:CZ:222:LEU:CD1	25:CZ:303:VAL:HG11	2.32	0.54
4:CD:38:TYR:HB2	4:CD:44:GLY:O	2.07	0.54
19:CS:15:LEU:O	19:CS:19:VAL:HG23	2.08	0.54
58:BZ:69:THR:CG2	58:BZ:90:VAL:HA	2.29	0.54
36:BA:140:G:C1'	36:BA:141:A:H2	2.21	0.54
46:DN:62:VAL:HG22	46:DN:66:LYS:HB2	1.90	0.54
36:BA:1053:C:H2'	36:BA:1054:A:H8	1.73	0.54
36:DA:304:G:O2'	36:DA:305:U:H5'	2.06	0.54
36:BA:2746:U:O2'	36:BA:2747:G:H5'	2.07	0.54
58:BZ:70:LEU:HD23	58:BZ:70:LEU:N	2.23	0.54
2:AB:97:TRP:CZ3	2:AB:176:GLU:OE2	2.61	0.54
39:DD:24:ILE:HD13	39:DD:24:ILE:C	2.28	0.54
40:DE:131:ALA:HB1	40:DE:134:ILE:CD1	2.36	0.54
1:AA:966:G:O2'	1:AA:967:C:O5'	2.24	0.54
36:DA:910:A:H2'	36:DA:911:A:C8	2.42	0.54
5:AE:12:LEU:CD1	5:AE:31:LEU:HB3	2.38	0.54
36:BA:192:C:O2'	36:BA:802:A:N3	2.41	0.54
25:CZ:356:PRO:HD3	25:CZ:370:PHE:HA	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:30:LEU:O	6:CF:35:ALA:HB3	2.08	0.54
1:CA:1246:C:C2'	1:CA:1247:U:H5'	2.37	0.54
58:DZ:146:ILE:HG13	58:DZ:147:GLY:N	2.23	0.54
36:BA:814:C:H2'	36:BA:815:C:H6	1.73	0.54
25:AZ:96:ALA:O	25:AZ:126:VAL:HG11	2.08	0.54
36:DA:2777:G:C4'	36:DA:2778:A:H5'	2.38	0.54
6:AF:30:LEU:HB3	6:AF:35:ALA:HB3	1.88	0.54
1:AA:333:G:O2'	1:AA:334:C:H5'	2.08	0.54
28:B2:13:ALA:CB	28:B2:16:LEU:HD12	2.38	0.54
42:DG:138:GLN:HB3	42:DG:153:ARG:O	2.08	0.54
12:AL:71:PRO:HG3	12:AL:99:HIS:CD2	2.41	0.54
55:BW:50:VAL:CG2	55:BW:105:VAL:HG23	2.37	0.54
36:DA:2358:G:H2'	36:DA:2359:C:H6	1.73	0.54
1:CA:706:A:C4'	11:CK:29:ILE:HD11	2.38	0.54
15:AO:24:SER:OG	15:AO:27:VAL:HG23	2.08	0.54
36:DA:2712:U:OP1	36:DA:2714:G:H4'	2.08	0.54
1:CA:498:U:O2'	1:CA:499:A:H8	1.91	0.54
54:BV:77:ALA:O	54:BV:79:VAL:HG22	2.08	0.54
1:AA:1246:C:O2'	1:AA:1247:U:H5'	2.08	0.54
53:BU:85:LYS:HD3	53:BU:117:GLN:HE22	1.73	0.54
39:DD:211:ARG:HG3	39:DD:211:ARG:O	2.08	0.54
36:DA:2508:G:O2'	36:DA:2509:G:H5'	2.08	0.54
36:DA:1231:G:H2'	36:DA:1232:G:C8	2.43	0.54
9:CI:36:TYR:CD2	9:CI:37:PHE:CE1	2.95	0.54
24:CY:29:G:H1	24:CY:41:C:H42	1.56	0.54
39:BD:228:PRO:HD3	39:BD:235:GLY:CA	2.38	0.54
15:AO:6:GLU:N	15:AO:6:GLU:OE1	2.40	0.54
10:CJ:82:ILE:HG22	10:CJ:82:ILE:O	2.08	0.54
9:AI:27:THR:HB	9:AI:62:TYR:HA	1.90	0.54
25:CZ:251:ASP:H	25:CZ:267:VAL:HG13	1.73	0.54
60:CZ:501:GDP:H5''	60:CZ:501:GDP:C8	2.43	0.54
34:D8:33:ASN:HA	34:D8:36:LYS:HE3	1.89	0.54
47:DO:111:PHE:O	47:DO:115:VAL:HG23	2.07	0.54
57:DY:27:VAL:HG12	57:DY:28:LYS:H	1.73	0.54
4:AD:175:SER:O	4:AD:176:LEU:HB2	2.07	0.54
1:CA:1320:C:H6	1:CA:1320:C:H5'	1.72	0.54
28:B2:39:ALA:HA	28:B2:45:SER:HB3	1.88	0.54
28:B2:5:GLU:C	28:B2:7:ARG:H	2.11	0.54
31:D5:45:VAL:O	31:D5:46:CYS:HB3	2.08	0.54
10:CJ:70:ARG:NH1	10:CJ:70:ARG:HG2	2.22	0.54
38:BC:116:THR:HB	38:BC:147:PHE:CE1	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BH:65:HIS:HE1	43:BH:69:ARG:HH11	1.55	0.54
36:DA:779:U:OP1	39:DD:49:ILE:HG23	2.07	0.54
9:AI:88:TYR:O	9:AI:89:ASN:CB	2.56	0.54
36:DA:2188:C:H2'	36:DA:2189:U:C5	2.43	0.54
25:AZ:242:ILE:CB	25:AZ:282:ALA:HA	2.37	0.54
35:D9:1:MET:HB3	35:D9:4:ARG:HH12	1.73	0.54
43:DH:30:LYS:HG3	43:DH:79:VAL:C	2.28	0.54
53:DU:88:ILE:C	53:DU:90:VAL:H	2.11	0.54
1:CA:1225:A:H2'	1:CA:1226:C:C5	2.42	0.54
26:D0:27:GLU:HA	26:D0:67:VAL:O	2.07	0.54
1:AA:1462:G:O2'	52:BT:115:ARG:NH2	2.41	0.54
22:AW:38:A:C3'	22:AW:39:U:H5''	2.38	0.54
58:DZ:152:ALA:O	58:DZ:155:LEU:HD22	2.08	0.54
1:CA:1375:A:H2'	1:CA:1376:U:H6	1.73	0.54
12:AL:109:GLY:HA3	12:AL:122:THR:H	1.72	0.54
48:BP:18:ARG:O	48:BP:20:GLY:N	2.40	0.54
36:BA:195:A:OP1	48:BP:46:LYS:HE2	2.08	0.54
1:CA:1239:A:H4'	1:CA:1240:U:O5'	2.08	0.54
32:B6:25:LYS:CE	34:B8:34:TRP:HE1	2.19	0.54
5:CE:6:PHE:CB	5:CE:34:VAL:HG22	2.34	0.54
1:AA:390:C:H2'	1:AA:391:G:H8	1.73	0.54
57:DY:2:ARG:HG2	57:DY:2:ARG:HH11	1.73	0.54
39:DD:6:PHE:CE1	39:DD:18:VAL:HG12	2.43	0.54
1:CA:673:G:H5''	6:CF:87:ARG:NH1	2.23	0.54
18:CR:40:LEU:C	18:CR:42:ARG:H	2.11	0.54
25:AZ:303:VAL:CG1	25:AZ:304:LEU:N	2.71	0.54
40:DE:201:THR:OG1	40:DE:202:LYS:N	2.41	0.54
25:CZ:356:PRO:CG	25:CZ:370:PHE:HA	2.38	0.54
26:B0:80:HIS:N	26:B0:80:HIS:CD2	2.75	0.54
1:CA:59:A:H1'	1:CA:354:G:N2	2.23	0.54
2:AB:113:HIS:C	2:AB:115:LEU:H	2.09	0.54
10:CJ:90:LEU:H	10:CJ:91:PRO:HD3	1.73	0.54
25:CZ:263:ARG:HG2	25:CZ:264:ARG:N	2.22	0.54
11:CK:44:SER:H	11:CK:47:VAL:CG2	2.19	0.54
51:DS:38:GLN:O	51:DS:40:ILE:HG23	2.07	0.54
40:DE:21:VAL:HG23	40:DE:21:VAL:O	2.08	0.54
36:BA:1782:C:H1'	36:BA:2609:U:C5'	2.37	0.54
46:DN:39:ARG:C	46:DN:41:ASP:H	2.10	0.54
36:BA:1192:G:O2'	36:BA:1193:G:H5'	2.08	0.54
36:BA:818:G:H5'	36:BA:839:U:OP1	2.08	0.54
22:AW:8:U:H5'	22:AW:49:C:OP1	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:29:ARG:HG2	10:CJ:29:ARG:O	2.08	0.54
36:BA:2074:U:H2'	36:BA:2075:U:C6	2.43	0.54
39:DD:124:PRO:HG2	39:DD:129:ASN:ND2	2.22	0.54
36:DA:558:G:OP2	46:DN:111:PRO:HD2	2.08	0.54
1:CA:824:C:H1'	8:CH:1:MET:CE	2.37	0.54
1:CA:1365:G:O2'	1:CA:1366:C:H5'	2.08	0.54
2:AB:54:THR:HG21	2:AB:201:ILE:HD11	1.89	0.54
36:DA:2472:G:C5'	36:DA:2473:U:H5''	2.38	0.54
36:DA:2472:G:H5''	36:DA:2473:U:H5''	1.90	0.54
49:BQ:92:GLY:C	49:BQ:93:TYR:CD1	2.81	0.54
36:BA:322:A:OP2	41:BF:169:ASN:HB2	2.08	0.54
36:BA:2726:U:O2	36:BA:2726:U:H5'	2.07	0.54
9:CI:128:ARG:OXT	9:CI:128:ARG:HG2	2.08	0.54
44:DJ:57:UNK:O	44:DJ:58:UNK:O	2.26	0.54
11:CK:101:SER:OG	11:CK:103:LEU:HD23	2.08	0.54
28:B2:57:ILE:HG22	28:B2:61:LEU:HG	1.88	0.54
28:B2:62:THR:HG22	28:B2:66:GLU:CG	2.38	0.54
42:DG:47:LYS:HE3	42:DG:81:LYS:CB	2.38	0.54
42:DG:5:VAL:CG2	42:DG:8:LYS:HD2	2.38	0.54
46:BN:14:VAL:HG13	46:BN:135:PRO:O	2.08	0.54
57:DY:86:ARG:HG2	57:DY:87:LYS:N	2.22	0.54
2:AB:22:LYS:NZ	2:AB:40:HIS:HE1	2.05	0.54
3:AC:79:ARG:NH1	3:AC:79:ARG:HB3	2.22	0.54
3:AC:43:LEU:HD22	3:AC:47:LEU:HD22	1.89	0.54
13:CM:11:ARG:HG2	13:CM:12:ASN:N	2.22	0.54
13:CM:19:LEU:HD22	13:CM:19:LEU:H	1.73	0.54
20:AT:53:LEU:HD12	20:AT:53:LEU:H	1.73	0.54
39:DD:133:LEU:O	39:DD:135:PHE:N	2.41	0.54
36:DA:2641:G:H2'	36:DA:2642:G:O4'	2.07	0.54
51:BS:15:ARG:HG2	51:BS:15:ARG:HH11	1.72	0.54
48:BP:101:VAL:HG12	48:BP:106:LEU:HB3	1.90	0.54
1:CA:1269:A:H2	1:CA:1312:G:N3	2.06	0.54
50:DR:2:ARG:HD3	50:DR:5:LYS:HD3	1.90	0.54
36:BA:2408:U:H6	36:BA:2408:U:H3'	1.73	0.54
1:CA:372:C:H41	1:CA:387:U:H2'	1.73	0.54
2:AB:77:ALA:HA	2:AB:80:ILE:HD13	1.89	0.54
35:B9:12:ASP:C	35:B9:14:CYS:H	2.10	0.54
4:CD:70:ILE:CG2	4:CD:75:PHE:HB2	2.38	0.54
1:AA:197:A:H4'	1:AA:198:G:O5'	2.08	0.54
36:DA:1721:G:H5'	36:DA:1721:G:N3	2.23	0.54
51:DS:93:LYS:O	51:DS:94:TYR:C	2.46	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BQ:6:ARG:CB	49:BQ:6:ARG:NH1	2.71	0.54
58:DZ:145:GLU:HA	58:DZ:145:GLU:OE1	2.08	0.54
3:AC:153:VAL:HG12	3:AC:154:SER:H	1.67	0.54
25:AZ:96:ALA:HA	25:AZ:99:MET:HG2	1.90	0.54
36:BA:2472:G:C5'	36:BA:2473:U:H5''	2.38	0.54
28:B2:13:ALA:C	28:B2:15:LYS:H	2.09	0.54
28:B2:13:ALA:HB1	28:B2:16:LEU:HD12	1.90	0.54
36:BA:1094:U:H2'	36:BA:1096:A:OP2	2.08	0.54
36:DA:2027:G:O2'	36:DA:2028:U:H5'	2.06	0.54
36:DA:1163:G:H2'	36:DA:1164:G:H8	1.73	0.54
27:D1:49:VAL:HG13	27:D1:49:VAL:O	2.07	0.54
13:AM:108:ARG:HG3	13:AM:108:ARG:NH1	2.23	0.54
12:CL:126:LYS:O	12:CL:128:ALA:N	2.41	0.54
38:DC:172:HIS:O	38:DC:173:ALA:HB2	2.07	0.54
1:CA:1171:G:O2'	1:CA:1172:C:H5'	2.07	0.54
1:CA:1308:U:P	13:CM:99:ARG:HG3	2.48	0.54
36:DA:2625:G:H2'	36:DA:2626:C:C6	2.43	0.54
20:AT:73:HIS:HB3	20:AT:74:LYS:HD3	1.89	0.54
36:BA:1368:G:O2'	36:BA:1369:G:H5'	2.08	0.54
36:DA:1425:G:H2'	36:DA:1426:G:O4'	2.08	0.54
36:DA:11:G:H2'	36:DA:12:U:H6	1.73	0.54
1:AA:1030(D):A:H2'	1:AA:1031:G:H5'	1.89	0.54
1:CA:860:A:H2'	1:CA:861:G:O4'	2.08	0.54
20:CT:41:ILE:C	20:CT:43:LEU:H	2.09	0.54
36:BA:1409:C:H2'	36:BA:1410:G:H8	1.72	0.54
15:CO:18:PHE:O	15:CO:18:PHE:CD1	2.60	0.54
36:BA:759:G:O4'	36:BA:1981:A:C2	2.61	0.54
25:CZ:23:GLY:O	25:CZ:27:LEU:HB3	2.08	0.54
36:DA:1190:G:OP1	48:DP:32:THR:OG1	2.23	0.54
52:DT:88:ILE:O	52:DT:89:VAL:C	2.46	0.54
52:BT:23:ARG:HA	52:BT:52:ILE:CD1	2.38	0.54
32:B6:19:ARG:CD	32:B6:20:ASN:H	2.20	0.54
32:B6:17:LYS:HB2	32:B6:47:THR:HG21	1.90	0.54
36:DA:99:U:C4'	36:DA:102:G:H1'	2.38	0.54
2:CB:155:LEU:HD11	2:CB:157:ARG:O	2.08	0.54
1:CA:1151:A:C4	1:CA:1152:A:N7	2.76	0.54
36:DA:780:G:OP1	39:DD:218:ARG:NH2	2.41	0.54
42:DG:91:ARG:HG2	42:DG:92:VAL:N	2.23	0.54
25:CZ:246:LYS:HD2	25:CZ:279:GLU:CD	2.28	0.54
57:BY:9:LYS:O	57:BY:28:LYS:NZ	2.41	0.54
57:DY:17:SER:OG	57:DY:18:GLY:N	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:89:ASN:C	9:AI:91:ASP:H	2.11	0.54
25:AZ:242:ILE:HG12	25:AZ:284:ASP:O	2.07	0.54
1:CA:1097:C:O2'	1:CA:1098:C:H5'	2.07	0.54
1:CA:1411:C:H2'	1:CA:1412:C:C6	2.42	0.54
41:DF:119:ARG:NH1	41:DF:119:ARG:HG2	2.22	0.54
3:CC:22:TRP:CE2	14:CN:54:PRO:HG2	2.42	0.54
36:BA:1722:A:O2'	36:BA:1739:U:C5'	2.56	0.54
36:BA:1800:C:H5"	39:BD:147:LEU:CD2	2.38	0.54
41:DF:132:VAL:HG13	41:DF:133:ASN:HD22	1.74	0.54
51:DS:24:LEU:HD11	51:DS:48:LEU:HD22	1.89	0.54
27:B1:13:ILE:CD1	27:B1:42:GLN:HB2	2.37	0.54
14:CN:14:PRO:O	14:CN:15:LYS:O	2.26	0.54
36:BA:1104:C:O2'	36:BA:1105:U:H5'	2.08	0.54
36:BA:185:U:H2'	36:BA:186:G:H8	1.73	0.54
4:AD:85:LYS:HD3	4:AD:92:VAL:HG13	1.90	0.54
58:DZ:65:GLN:HG2	58:DZ:67:LEU:HD13	1.90	0.54
30:B4:10:VAL:HG23	30:B4:11:PRO:CD	2.34	0.54
36:BA:1528:A:N7	36:BA:1544:A:N6	2.55	0.54
1:CA:323:U:O3'	20:CT:22:ARG:HD3	2.08	0.54
24:CY:4:G:C3'	24:CY:5:G:H5"	2.38	0.54
31:B5:2:ALA:CB	36:BA:2015:A:H1'	2.37	0.54
52:BT:129:ARG:NH1	52:BT:131:ALA:H	2.06	0.54
46:DN:15:LEU:HD13	46:DN:16:ILE:N	2.23	0.54
52:DT:13:ARG:HH21	52:DT:15:VAL:CG1	2.19	0.54
1:CA:1369:C:H2'	1:CA:1370:G:C8	2.43	0.54
36:DA:1210:A:H5'	36:DA:1210:A:H8	1.73	0.54
12:AL:29:GLY:O	12:AL:30:ALA:O	2.25	0.54
1:AA:1256:A:C2	1:AA:1277:C:H2'	2.42	0.54
57:DY:49:VAL:O	57:DY:50:ARG:HB2	2.08	0.54
50:BR:30:THR:HG23	50:BR:31:HIS:ND1	2.23	0.54
54:BV:14:VAL:HB	54:BV:96:ILE:HG21	1.90	0.54
1:AA:1158:C:H2'	1:AA:1158:C:O2	2.08	0.54
1:CA:1452:C:H4'	1:CA:1456:G:H22	1.73	0.54
21:CU:9:ARG:HH12	21:CU:23:PRO:HD2	1.73	0.54
36:BA:888:C:H2'	36:BA:889:C:C4'	2.38	0.54
42:BG:15:VAL:CG1	42:BG:19:LEU:HD12	2.38	0.54
1:CA:599:C:H4'	8:CH:130:GLY:C	2.27	0.54
36:DA:2305:A:H2'	36:DA:2306:C:C5'	2.38	0.54
36:DA:1164:G:C6	36:DA:1165:U:C4	2.96	0.54
25:AZ:12:VAL:HG21	25:AZ:75:ARG:NH2	2.22	0.54
20:AT:50:GLU:OE2	20:AT:100:ILE:HD13	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1165:U:H2'	36:BA:1166:C:H6	1.73	0.54
36:DA:1773:A:H2'	36:DA:1774:C:H5'	1.88	0.54
36:BA:2526:G:C6	36:BA:2527:C:C4	2.96	0.54
7:AG:69:VAL:HG13	7:AG:100:ALA:HA	1.90	0.54
1:AA:933:G:OP2	7:AG:3:ARG:HB3	2.07	0.54
13:CM:116:THR:HG22	13:CM:117:VAL:N	2.23	0.54
52:DT:122:ASP:C	52:DT:124:ASP:H	2.09	0.54
36:DA:151:C:H2'	36:DA:152:G:C8	2.43	0.54
36:BA:2208:A:H1'	36:BA:2219:G:C5	2.42	0.54
39:BD:5:LYS:HA	39:BD:17:THR:HG22	1.89	0.54
36:BA:653:A:H2'	36:BA:653:A:N3	2.22	0.54
9:AI:99:LEU:HD22	9:AI:99:LEU:N	2.22	0.54
27:B1:53:VAL:O	27:B1:54:ALA:HB3	2.08	0.54
57:DY:79:CYS:SG	57:DY:80:GLY:N	2.81	0.54
1:CA:779:C:H2'	1:CA:780:A:O4'	2.08	0.54
36:DA:2152:G:O2'	36:DA:2153:G:H5'	2.08	0.54
52:DT:32:TYR:CD2	52:DT:81:PRO:HB2	2.43	0.53
32:B6:41:PRO:C	32:B6:43:CYS:N	2.61	0.53
1:CA:1323:G:H2'	1:CA:1324:A:C8	2.43	0.53
28:B2:20:GLU:O	28:B2:21:LEU:C	2.46	0.53
28:B2:35:LEU:HB3	28:B2:53:LEU:CD1	2.38	0.53
2:CB:97:TRP:HZ3	2:CB:172:ILE:HG22	1.70	0.53
38:BC:113:VAL:HG21	38:BC:136:LEU:HB3	1.90	0.53
43:DH:52:VAL:HG21	43:DH:69:ARG:CD	2.38	0.53
58:BZ:18:LEU:O	58:BZ:21:ALA:HB3	2.08	0.53
39:BD:54:ARG:O	39:BD:218:ARG:NH1	2.41	0.53
1:AA:1145:C:O2'	1:AA:1146:A:O5'	2.24	0.53
3:CC:83:ARG:O	3:CC:87:LEU:HG	2.08	0.53
36:DA:994:C:OP1	53:DU:53:ARG:NH2	2.41	0.53
53:DU:65:ILE:HD12	53:DU:65:ILE:H	1.71	0.53
43:BH:130:ARG:NH1	43:BH:130:ARG:HB3	2.24	0.53
1:CA:542:G:P	4:CD:10:ARG:HH21	2.30	0.53
4:CD:12:CYS:O	4:CD:33:MET:HE2	2.08	0.53
4:CD:18:LYS:HA	4:CD:33:MET:HE2	1.89	0.53
49:DQ:141:GLN:NE2	58:DZ:72:ARG:HA	2.23	0.53
41:DF:125:LEU:H	41:DF:125:LEU:CD2	2.15	0.53
42:BG:7:LEU:O	42:BG:7:LEU:HD23	2.07	0.53
1:CA:1312:G:O2'	1:CA:1313:U:H5'	2.08	0.53
51:BS:83:LYS:CG	51:BS:105:ALA:HB3	2.33	0.53
30:B4:14:ILE:H	30:B4:14:ILE:HD12	1.73	0.53
25:CZ:220:PRO:HB2	25:CZ:244:ARG:HD2	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2177:C:H2'	36:DA:2178:C:O2	2.08	0.53
36:DA:2177:C:H4'	38:DC:46:LYS:HD3	1.90	0.53
54:DV:15:GLU:O	54:DV:16:PRO:O	2.26	0.53
36:DA:1367:A:C2'	36:DA:1368:G:H5'	2.37	0.53
40:DE:167:VAL:HG22	40:DE:170:LEU:HD11	1.90	0.53
1:AA:1220:G:H2'	1:AA:1221:G:H8	1.72	0.53
31:B5:52:TYR:CE2	36:BA:2884:U:H1'	2.42	0.53
38:BC:99:ILE:CD1	38:BC:102:LYS:HZ3	2.21	0.53
2:AB:61:LEU:HD11	2:AB:160:ASP:CB	2.38	0.53
36:DA:2777:G:H5''	36:DA:2778:A:H5''	1.89	0.53
13:CM:120:LYS:O	13:CM:121:LYS:CB	2.55	0.53
38:DC:96:GLY:H	38:DC:99:ILE:CG1	2.22	0.53
36:DA:860:U:O2	36:DA:2268:A:O4'	2.26	0.53
36:DA:1428:C:C5	36:DA:1569:A:H5''	2.43	0.53
36:BA:1796:U:H2'	36:BA:1797:C:C6	2.44	0.53
36:BA:2575:C:H2'	36:BA:2578:G:O6	2.08	0.53
49:BQ:1:MET:HE1	49:BQ:45:GLN:HA	1.89	0.53
39:BD:227:ASN:O	39:BD:230:ASP:N	2.40	0.53
50:DR:18:LEU:C	50:DR:18:LEU:HD13	2.29	0.53
1:CA:992:U:H1'	1:CA:993:G:C2	2.43	0.53
36:BA:2033:A:O2'	36:BA:2034:U:P	2.66	0.53
50:DR:7:GLY:O	50:DR:8:ARG:HB2	2.08	0.53
41:DF:54:ARG:HD3	41:DF:54:ARG:C	2.29	0.53
43:DH:44:VAL:HG12	43:DH:45:VAL:N	2.23	0.53
39:DD:275:LYS:HD2	39:DD:276:LYS:N	2.23	0.53
36:DA:1466:G:H5'	36:DA:1467:C:OP1	2.08	0.53
1:AA:819:A:H4'	1:AA:820:U:OP2	2.07	0.53
36:BA:914:C:H2'	36:BA:915:C:H5'	1.90	0.53
58:BZ:7:ALA:O	58:BZ:61:LEU:HA	2.07	0.53
26:B0:30:VAL:HA	26:B0:65:GLY:O	2.07	0.53
36:BA:2239:G:H5'	39:BD:251:GLY:HA3	1.89	0.53
36:DA:291:C:H2'	36:DA:292:C:H6	1.73	0.53
4:CD:171:GLY:HA3	4:CD:173:TRP:CZ3	2.43	0.53
48:DP:23:PRO:HG2	48:DP:33:ARG:HG3	1.90	0.53
36:DA:1666:G:H5'	36:DA:1666:G:C8	2.40	0.53
1:CA:986:A:H2'	1:CA:987:G:H8	1.71	0.53
2:CB:97:TRP:CZ3	2:CB:173:ALA:HA	2.43	0.53
10:CJ:38:ILE:O	10:CJ:70:ARG:HA	2.08	0.53
10:CJ:9:ARG:HH11	10:CJ:9:ARG:HG2	1.73	0.53
39:BD:30:GLU:HG2	39:BD:35:LYS:HZ1	1.73	0.53
43:DH:50:VAL:O	43:DH:52:VAL:HG23	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BO:104:ARG:C	47:BO:106:LEU:N	2.59	0.53
36:BA:1639:U:H2'	36:BA:1640:C:C5'	2.37	0.53
54:BV:64:HIS:CE1	54:BV:92:THR:HG22	2.43	0.53
1:AA:1149:C:OP1	9:AI:9:ARG:HD3	2.08	0.53
36:DA:806:C:O2'	36:DA:2445:G:H4'	2.07	0.53
19:AS:49:ILE:HD12	19:AS:49:ILE:N	2.09	0.53
9:CI:42:ARG:NH2	9:CI:75:ASP:OD1	2.37	0.53
36:BA:1049:C:H2'	36:BA:1050:A:H8	1.72	0.53
14:AN:12:ARG:HB3	14:AN:14:PRO:CG	2.35	0.53
55:BW:18:ARG:HG3	55:BW:18:ARG:HH11	1.73	0.53
36:DA:1049:C:H2'	36:DA:1050:A:H8	1.72	0.53
36:BA:197:A:N6	36:BA:2430:A:H2'	2.23	0.53
2:AB:13:ALA:C	2:AB:15:VAL:H	2.12	0.53
48:BP:114:ILE:HD12	48:BP:115:LEU:N	2.23	0.53
48:BP:144:GLU:H	48:BP:145:PRO:HD3	1.71	0.53
36:DA:1516:C:H2'	36:DA:1517:G:C5'	2.38	0.53
36:BA:142:A:N6	36:BA:1596:A:H5'	2.23	0.53
19:CS:31:ILE:HG12	19:CS:32:LYS:O	2.08	0.53
19:AS:11:VAL:HG21	19:AS:16:LEU:HD11	1.90	0.53
1:CA:1281:U:H5'	1:CA:1282:C:H5	1.73	0.53
36:BA:1318:C:C3'	36:BA:1319:G:H5''	2.36	0.53
36:DA:332:A:H4'	36:DA:333:G:OP1	2.08	0.53
50:BR:103:ARG:HD2	50:BR:108:GLY:O	2.09	0.53
3:AC:92:ALA:HB2	3:AC:99:VAL:CG2	2.36	0.53
49:DQ:6:ARG:C	49:DQ:7:MET:HG3	2.28	0.53
1:AA:1003:G:H2'	1:AA:1004:A:H4'	1.90	0.53
36:DA:297:C:H2'	36:DA:298:G:O4'	2.07	0.53
1:AA:413:G:C2'	1:AA:413:G:N3	2.71	0.53
49:DQ:30:GLY:CA	49:DQ:107:ALA:HB2	2.37	0.53
26:D0:10:THR:CG2	26:D0:12:ASN:OD1	2.57	0.53
56:BX:62:LYS:HE3	56:BX:73:ARG:NH1	2.23	0.53
33:D7:12:ARG:NH2	33:D7:44:PRO:HB3	2.23	0.53
36:BA:1069:A:O2'	36:BA:1070:A:P	2.65	0.53
7:CG:150:ALA:HB2	11:CK:50:TYR:OH	2.08	0.53
19:CS:79:THR:O	19:CS:80:TYR:HB3	2.07	0.53
36:DA:1914:C:H2'	36:DA:1915:U:O4'	2.07	0.53
1:CA:757:U:H5''	1:CA:822:C:O2	2.07	0.53
27:D1:25:LYS:HG3	36:DA:388:G:OP1	2.09	0.53
4:CD:114:ARG:HG3	4:CD:114:ARG:HH11	1.74	0.53
25:AZ:350:THR:HG22	25:AZ:351:GLY:N	2.22	0.53
36:BA:1805:U:O2	39:BD:50:THR:HB	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:9:MET:O	8:AH:13:ILE:HG12	2.08	0.53
32:D6:12:GLU:HG2	32:D6:23:THR:CG2	2.38	0.53
36:DA:1858:G:H2'	36:DA:1883:G:N2	2.22	0.53
49:DQ:101:ARG:HG3	49:DQ:101:ARG:NH1	2.00	0.53
25:CZ:34:VAL:C	25:CZ:36:ALA:H	2.11	0.53
42:DG:39:ILE:CG2	42:DG:157:ILE:HG23	2.38	0.53
42:DG:5:VAL:HG23	42:DG:8:LYS:HD2	1.91	0.53
57:BY:38:ILE:HD11	57:BY:64:GLU:HB2	1.91	0.53
57:DY:13:VAL:HG22	57:DY:14:LEU:N	2.22	0.53
37:BB:40:U:H3'	37:BB:41:U:C5'	2.37	0.53
46:BN:46:VAL:HG11	46:BN:48:MET:HG3	1.90	0.53
36:DA:2184:G:H2'	36:DA:2185:C:H1'	1.90	0.53
13:AM:25:ILE:HG13	13:AM:66:LEU:HD23	1.90	0.53
43:DH:85:LYS:HZ1	43:DH:87:LEU:H	1.54	0.53
1:CA:297:G:H4'	1:CA:557:G:H4'	1.89	0.53
53:DU:91:ASP:O	53:DU:92:ARG:HB3	2.08	0.53
25:CZ:254:GLU:CD	25:CZ:308:GLY:H	2.12	0.53
25:CZ:125:GLN:NE2	25:CZ:394:THR:CB	2.72	0.53
1:CA:542:G:H5'	4:CD:41:GLY:HA2	1.90	0.53
42:BG:146:TYR:O	42:BG:149:VAL:HG22	2.08	0.53
19:AS:40:ILE:HB	19:AS:67:VAL:O	2.08	0.53
36:BA:1902:C:H2'	36:BA:1903:G:O5'	2.07	0.53
1:AA:1314:C:OP2	19:AS:6:LYS:HG3	2.07	0.53
20:CT:69:GLY:O	20:CT:73:HIS:NE2	2.41	0.53
41:BF:101:LEU:HD12	41:BF:102:PRO:CD	2.37	0.53
36:BA:71:A:C2	56:BX:31:HIS:HE1	2.25	0.53
36:BA:559:G:N2	53:BU:49:HIS:CD2	2.77	0.53
46:BN:39:ARG:C	53:BU:67:ALA:HB1	2.29	0.53
36:DA:1681:G:O2'	36:DA:1762:A:C2'	2.55	0.53
52:BT:126:ALA:C	52:BT:128:GLU:H	2.11	0.53
25:CZ:354:GLN:O	25:CZ:370:PHE:HB2	2.08	0.53
36:BA:1268:A:C2	36:BA:1269:A:H1'	2.43	0.53
39:BD:45:ASN:OD1	39:BD:46:GLN:N	2.41	0.53
41:BF:54:ARG:C	41:BF:54:ARG:HD3	2.28	0.53
46:BN:1:MET:HE3	46:BN:3:THR:OG1	2.08	0.53
58:DZ:108:PRO:HA	58:DZ:141:VAL:CG1	2.38	0.53
36:DA:1963:U:O2	36:DA:1963:U:H2'	2.08	0.53
40:BE:116:VAL:HG21	40:BE:122:PHE:CD2	2.43	0.53
36:DA:654(H):G:H3'	36:DA:654(I):C:H5'	1.91	0.53
36:BA:2092:U:C4'	36:BA:2093:G:H5''	2.37	0.53
14:AN:44:LEU:C	14:AN:44:LEU:HD12	2.27	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BG:37:VAL:HG22	42:BG:159:VAL:HG22	1.89	0.53
1:CA:138:G:C2'	1:CA:139:G:H5'	2.39	0.53
36:DA:1592:C:H2'	36:DA:1593:G:H8	1.73	0.53
8:CH:77:GLU:HG2	8:CH:78:GLN:H	1.72	0.53
37:DB:111:G:C2'	37:DB:112:U:H5'	2.39	0.53
36:DA:284:U:H2'	36:DA:285:C:C6	2.43	0.53
36:DA:420:C:H2'	36:DA:421:U:C6	2.44	0.53
27:D1:94:LEU:N	27:D1:94:LEU:HD12	2.23	0.53
2:CB:83:MET:SD	2:CB:234:PRO:HB2	2.49	0.53
38:BC:156:ILE:C	38:BC:158:ALA:H	2.11	0.53
2:AB:83:MET:SD	2:AB:234:PRO:HB2	2.48	0.53
36:DA:2653:U:H3'	36:DA:2654:A:C8	2.43	0.53
1:AA:770:C:O2'	1:AA:771:G:H5'	2.08	0.53
3:AC:137:ALA:O	3:AC:141:VAL:HG23	2.08	0.53
2:AB:28:PHE:O	2:AB:28:PHE:CD1	2.61	0.53
22:CW:76:A:H1'	36:DA:2395:C:C2	2.43	0.53
34:D8:30:ARG:NH2	36:DA:2419:U:O4	2.41	0.53
36:DA:593:G:H1	36:DA:664:C:N4	2.06	0.53
48:DP:24:GLY:O	48:DP:25:SER:HB3	2.09	0.53
36:BA:1599:C:H2'	36:BA:1600:C:H6	1.73	0.53
39:DD:30:GLU:CG	39:DD:63:ARG:HE	2.21	0.53
42:DG:133:LEU:HD12	42:DG:133:LEU:O	2.07	0.53
42:DG:39:ILE:CD1	42:DG:60:LEU:HD11	2.37	0.53
36:BA:477:A:C2	36:BA:478:A:C4	2.96	0.53
52:BT:29:ARG:HG2	52:BT:86:ILE:HG22	1.89	0.53
49:BQ:141:GLN:HG2	58:BZ:72:ARG:CZ	2.38	0.53
58:BZ:102:LEU:HD21	58:BZ:124:ILE:CD1	2.38	0.53
12:AL:89:ARG:NE	12:AL:91:LYS:NZ	2.33	0.53
3:AC:81:GLY:HA2	3:AC:85:ARG:CD	2.36	0.53
3:CC:12:LEU:HB3	3:CC:18:TRP:CZ3	2.41	0.53
43:DH:125:VAL:O	43:DH:125:VAL:HG12	2.08	0.53
48:DP:147:LEU:HG	48:DP:148:LEU:N	2.23	0.53
37:DB:105:A:H4'	58:DZ:89:PHE:CE1	2.44	0.53
1:CA:1313:U:H2'	1:CA:1314:C:H6	1.73	0.53
4:AD:199:ASN:O	4:AD:199:ASN:OD1	2.27	0.53
22:AW:74:C:H2'	22:AW:75:C:C5'	2.38	0.53
34:B8:13:ARG:NH1	48:BP:59:LEU:HD12	2.22	0.53
36:DA:1141:U:H2'	46:DN:63:THR:CG2	2.38	0.53
36:DA:1140:C:OP2	46:DN:66:LYS:HE2	2.09	0.53
36:DA:2319:G:H1	36:DA:2334:G:P	2.32	0.53
42:BG:91:ARG:CD	42:BG:91:ARG:C	2.76	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:31:CYS:O	4:AD:32:ALA:CB	2.56	0.53
30:B4:36:CYS:HA	42:BG:112:PRO:HG3	1.90	0.53
49:BQ:18:LYS:HB2	49:BQ:98:LYS:HZ3	1.73	0.53
36:BA:145:G:C2'	36:BA:146:G:H5'	2.36	0.53
40:BE:35:GLN:CG	40:BE:36:ARG:N	2.72	0.53
40:BE:167:VAL:HG13	40:BE:168:MET:H	1.72	0.53
36:DA:761:A:H3'	36:DA:761:A:C8	2.43	0.53
51:BS:89:ARG:CG	51:BS:92:TYR:CA	2.87	0.53
6:AF:55:ASP:C	6:AF:57:GLN:H	2.11	0.53
48:DP:77:ARG:HG2	48:DP:77:ARG:HH11	1.73	0.53
57:DY:50:ARG:CD	57:DY:56:PRO:HA	2.38	0.53
7:CG:78:ARG:NH2	7:CG:156:TRP:HB3	2.23	0.53
36:DA:1039:G:N1	36:DA:1116:C:N4	2.55	0.53
56:DX:64:LYS:HE2	56:DX:73:ARG:NE	2.24	0.53
2:AB:61:LEU:HA	2:AB:64:ARG:NE	2.23	0.53
6:AF:15:ASP:OD1	6:AF:18:GLN:HB2	2.09	0.53
20:AT:56:MET:CE	20:AT:85:MET:HG2	2.39	0.53
43:DH:94:TYR:HD1	43:DH:107:VAL:HA	1.74	0.53
36:DA:1677:A:H2'	36:DA:1678:G:C8	2.44	0.53
5:CE:63:ARG:HA	5:CE:66:MET:CE	2.39	0.53
1:CA:1525:G:O2'	1:CA:1526:G:H5'	2.08	0.53
36:DA:1313:U:C2	36:DA:1610:A:C2	2.96	0.53
36:DA:2650:U:H2'	36:DA:2651:C:H6	1.73	0.53
7:CG:59:LEU:O	7:CG:59:LEU:HD23	2.08	0.53
36:DA:1472:A:H2'	36:DA:1473:G:H5'	1.90	0.53
36:BA:1232:G:H2'	36:BA:1233:C:H6	1.71	0.53
50:DR:7:GLY:O	50:DR:8:ARG:CZ	2.56	0.53
1:AA:524:G:H2'	1:AA:525:C:C6	2.43	0.53
8:AH:29:SER:HB3	8:AH:32:LYS:HG3	1.89	0.53
36:DA:1315:C:H2'	36:DA:1316:U:H6	1.73	0.53
36:BA:2584:U:H2'	36:BA:2585:U:H5'	1.89	0.53
27:B1:32:LYS:C	27:B1:33:LYS:HD2	2.29	0.53
42:DG:95:ARG:O	42:DG:96:ARG:O	2.25	0.53
36:DA:1573:G:H2'	36:DA:1574:C:H5'	1.89	0.53
22:AW:24:G:O2'	22:AW:25:C:H5'	2.08	0.53
1:CA:828:A:H4'	1:CA:828:A:OP1	2.08	0.53
1:AA:864:A:H2'	1:AA:865:A:C8	2.43	0.53
16:AP:17:TYR:CD1	16:AP:17:TYR:N	2.75	0.53
1:CA:1483:A:H1'	36:DA:1948:G:H1'	1.89	0.53
55:BW:82:LEU:HD12	55:BW:82:LEU:N	2.23	0.53
42:DG:150:ASP:O	42:DG:151:ALA:HB2	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1176:A:H2'	1:AA:1177:G:C8	2.43	0.53
34:D8:5:LYS:HG2	36:DA:242:G:C8	2.44	0.53
48:DP:16:ARG:CB	48:DP:16:ARG:NH1	2.70	0.53
48:DP:59:LEU:HA	48:DP:61:ARG:HD2	1.89	0.53
52:BT:23:ARG:HG2	52:BT:120:ARG:NH1	2.23	0.53
27:D1:43:TYR:O	27:D1:44:PRO:O	2.25	0.53
28:B2:38:GLN:NE2	28:B2:44:LEU:HD13	2.24	0.53
58:BZ:120:ILE:HG22	58:BZ:121:HIS:N	2.24	0.53
38:BC:76:ALA:CB	38:BC:114:VAL:HG23	2.33	0.53
39:DD:35:LYS:HG3	39:DD:63:ARG:CG	2.38	0.53
42:DG:55:LYS:C	42:DG:57:ALA:N	2.61	0.53
42:DG:73:ALA:H	42:DG:87:PRO:HG3	1.73	0.53
42:DG:68:PRO:CB	42:DG:92:VAL:HB	2.38	0.53
58:BZ:28:MET:HG3	58:BZ:28:MET:O	2.09	0.53
22:CW:38:A:C2'	22:CW:39:U:C5'	2.68	0.53
22:CW:37:A:H3'	22:CW:38:A:H8	1.74	0.53
39:BD:43:ARG:HD3	39:BD:49:ILE:HG22	1.91	0.53
34:B8:62:LEU:HD13	36:BA:242:G:C5'	2.33	0.53
3:CC:77:ILE:O	3:CC:83:ARG:HB3	2.09	0.53
36:DA:994:C:O2'	36:DA:996:A:OP1	2.26	0.53
53:DU:110:VAL:O	53:DU:114:LYS:HG2	2.08	0.53
36:BA:2111:C:C2	36:BA:2147:G:N2	2.71	0.53
6:CF:8:ILE:HG23	6:CF:85:VAL:HG13	1.90	0.53
36:DA:604:G:H2'	36:DA:605:C:O2	2.08	0.53
16:CP:20:VAL:CG2	16:CP:21:VAL:N	2.71	0.53
10:AJ:34:VAL:HG13	10:AJ:73:ASP:O	2.09	0.53
48:BP:30:THR:HG23	48:BP:31:ALA:H	1.73	0.53
31:B5:42:PRO:O	31:B5:43:HIS:HB2	2.08	0.53
27:B1:76:ARG:HH22	27:B1:95:LEU:HA	1.73	0.53
27:D1:45:ASN:HB3	27:D1:64:ALA:HB2	1.90	0.53
39:DD:13:ARG:O	39:DD:13:ARG:HG3	2.07	0.53
58:BZ:114:GLY:CA	58:BZ:146:ILE:HG21	2.38	0.53
9:CI:106:ALA:O	9:CI:108:VAL:HG23	2.08	0.53
36:BA:2680:C:H5'	40:BE:189:PRO:HA	1.90	0.53
40:BE:36:ARG:NH2	40:BE:88:GLY:HA2	2.24	0.53
25:CZ:378:VAL:O	25:CZ:380:LEU:HG	2.08	0.53
36:BA:287:C:H2'	36:BA:288:C:C6	2.42	0.53
36:BA:2019:A:O4'	53:BU:34:LYS:HD3	2.07	0.53
1:CA:274:A:O2'	1:CA:275:G:O4'	2.25	0.53
16:AP:20:VAL:HG22	16:AP:21:VAL:N	2.23	0.53
16:AP:52:ASP:OD2	16:AP:55:ARG:HG3	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2641:G:H2'	36:BA:2642:G:O4'	2.08	0.53
38:DC:96:GLY:H	38:DC:99:ILE:HG13	1.74	0.53
25:AZ:378:VAL:HG23	25:AZ:380:LEU:CD2	2.38	0.53
43:DH:136:ILE:HD12	43:DH:136:ILE:N	2.21	0.53
36:DA:2651:C:O2'	36:DA:2652:C:H5'	2.09	0.53
9:AI:17:VAL:HG21	9:AI:80:GLY:HA3	1.91	0.53
36:BA:2241:A:H2'	36:BA:2242:G:H8	1.73	0.53
1:AA:1483:A:H1'	36:BA:1948:G:H1'	1.91	0.53
1:AA:825:G:N2	8:AH:11:THR:HG21	2.23	0.53
16:AP:75:ARG:HG3	16:AP:75:ARG:HH11	1.73	0.53
36:BA:1812:A:H2'	36:BA:1813:G:H8	1.73	0.53
1:AA:837:G:O2'	1:AA:838:G:H5'	2.07	0.53
36:DA:2457:U:C2'	36:DA:2458:G:H5'	2.39	0.53
1:CA:1356:G:H2'	1:CA:1357:A:C8	2.44	0.53
36:BA:1469:A:H2'	36:BA:1470:G:C8	2.43	0.53
1:CA:1091:U:H2'	1:CA:1093:A:OP2	2.09	0.53
1:CA:119:A:H4'	1:CA:120:A:O5'	2.08	0.53
11:CK:18:ARG:O	11:CK:32:ILE:HG23	2.08	0.53
1:CA:942:G:N2	1:CA:943:U:H1'	2.23	0.53
43:BH:163:TYR:CD1	43:BH:163:TYR:N	2.77	0.53
2:CB:124:SER:OG	2:CB:125:PRO:HD2	2.08	0.53
58:DZ:149:SER:CB	58:DZ:173:ALA:HA	2.39	0.53
58:DZ:149:SER:OG	58:DZ:173:ALA:HA	2.08	0.53
1:CA:347:G:H21	1:CA:348:G:H1'	1.73	0.53
47:DO:114:ILE:HD12	47:DO:114:ILE:N	2.23	0.53
1:AA:1442(A):G:H3'	1:AA:1442(B):A:H5''	1.91	0.53
32:D6:45:LYS:O	32:D6:46:HIS:ND1	2.42	0.53
4:AD:108:LEU:CD1	4:AD:176:LEU:HD13	2.07	0.53
2:CB:97:TRP:CZ2	2:CB:173:ALA:HA	2.43	0.53
1:AA:1053:G:O2'	1:AA:1054:C:P	2.67	0.53
57:BY:97:ARG:HH21	57:BY:98:VAL:HG21	1.72	0.53
34:B8:17:THR:OG1	36:BA:651:G:OP1	2.25	0.53
57:DY:7:VAL:HB	57:DY:8:LYS:HZ2	1.73	0.53
10:CJ:50:ILE:CG1	14:CN:41:ARG:NE	2.71	0.53
1:CA:961:U:O2'	1:CA:962:C:O5'	2.27	0.53
1:AA:1150:U:C2'	1:AA:1151:A:H5'	2.39	0.53
1:AA:1152:A:H4'	10:AJ:13:HIS:CD2	2.43	0.53
35:D9:10:ILE:H	35:D9:10:ILE:HD12	1.74	0.53
35:D9:9:ARG:HB2	35:D9:9:ARG:HH11	1.73	0.53
9:CI:88:TYR:O	9:CI:89:ASN:CB	2.56	0.53
48:DP:40:SER:O	48:DP:41:ARG:HD2	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1019:U:H3	36:BA:1142(A):A:N6	2.02	0.53
46:BN:62:VAL:CG2	46:BN:66:LYS:HB2	2.39	0.53
26:D0:27:GLU:N	26:D0:27:GLU:CD	2.62	0.53
36:DA:656:G:H2'	36:DA:657:U:H6	1.73	0.53
55:BW:10:VAL:HB	55:BW:101:SER:OG	2.09	0.53
48:BP:112:LEU:HD13	48:BP:112:LEU:O	2.08	0.53
1:AA:256:U:H2'	1:AA:257:G:C8	2.44	0.53
40:DE:3:GLY:O	40:DE:4:ILE:HB	2.08	0.53
34:B8:32:LEU:CD2	34:B8:36:LYS:HZ1	2.22	0.53
36:BA:1053:C:N4	36:BA:1107:G:N2	2.57	0.53
52:BT:66:VAL:HG12	52:BT:71:GLY:HA2	1.91	0.53
4:AD:30:LYS:C	4:AD:32:ALA:N	2.62	0.53
42:BG:107:LEU:HA	42:BG:111:LEU:CD1	2.38	0.53
12:AL:126:LYS:HE2	12:AL:127:GLU:N	2.23	0.53
36:DA:2795:G:C2'	36:DA:2796:U:H5'	2.37	0.53
36:DA:106:C:H2'	36:DA:107:C:H6	1.73	0.53
1:CA:1258:G:H2'	1:CA:1259:C:H6	1.71	0.53
18:CR:48:GLY:O	18:CR:74:ARG:NH2	2.42	0.53
4:CD:155:LEU:O	4:CD:159:ARG:HG2	2.08	0.53
36:DA:2010:G:C5	36:DA:2011:U:C5	2.96	0.53
40:BE:108:SER:HB3	40:BE:165:VAL:CG2	2.37	0.53
36:BA:266:G:C2'	36:BA:267:C:H5''	2.35	0.53
38:DC:76:ALA:O	38:DC:77:ILE:HD13	2.08	0.53
1:AA:59:A:H5'	1:AA:60:A:C5'	2.39	0.53
9:CI:99:LEU:HB2	9:CI:101:PHE:CD2	2.43	0.53
1:CA:1329:A:H2'	1:CA:1330:U:O4'	2.09	0.53
6:AF:10:LEU:HB2	6:AF:59:TYR:HB3	1.89	0.53
2:CB:27:LYS:HD2	2:CB:193:ASP:HB2	1.91	0.53
1:AA:189(K):U:H2'	1:AA:189(L):G:C8	2.43	0.53
22:CW:55:U:C2'	22:CW:56:C:H5''	2.38	0.53
25:AZ:378:VAL:CG2	25:AZ:380:LEU:HD21	2.39	0.53
36:BA:2880:C:O2'	50:BR:90:ARG:NH1	2.40	0.53
37:BB:80:U:H2'	37:BB:81:G:H21	1.74	0.53
26:D0:46:LYS:HD2	26:D0:78:TYR:CZ	2.43	0.53
1:CA:1490:C:O2'	1:CA:1491:G:H5'	2.09	0.53
1:CA:919:A:O2'	1:CA:920:U:H5'	2.08	0.53
36:BA:394:A:C2'	36:BA:395:U:H5'	2.38	0.53
1:AA:156:G:O2'	1:AA:157:G:H5'	2.09	0.53
44:DJ:12:UNK:C	44:DJ:14:UNK:N	2.69	0.53
36:BA:1203:G:H3'	36:BA:1204:A:H5''	1.91	0.53
14:AN:21:TYR:N	14:AN:21:TYR:CD1	2.75	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2059:A:O3'	41:DF:69:HIS:HA	2.08	0.53
33:B7:10:ARG:O	33:B7:14:LYS:HG2	2.09	0.53
36:DA:2320:A:H2'	36:DA:2320:A:N3	2.22	0.53
1:CA:414:A:C5	1:CA:431:A:C2	2.97	0.53
4:CD:187:ARG:CB	4:CD:187:ARG:NH1	2.47	0.53
28:B2:34:GLU:O	28:B2:38:GLN:N	2.42	0.53
31:D5:45:VAL:O	31:D5:46:CYS:CB	2.57	0.53
10:AJ:49:VAL:CG2	14:AN:41:ARG:HB2	2.38	0.53
36:DA:1884:A:C3'	36:DA:1885:A:H5''	2.38	0.53
39:BD:35:LYS:CB	39:BD:36:PRO:CD	2.86	0.53
42:DG:61:ALA:O	42:DG:65:GLY:N	2.35	0.53
42:DG:37:VAL:HG23	42:DG:99:MET:SD	2.49	0.53
25:CZ:7:ARG:NH2	25:CZ:281:ILE:CD1	2.67	0.53
57:DY:44:ILE:CG2	57:DY:45:VAL:N	2.72	0.53
47:BO:104:ARG:O	47:BO:106:LEU:N	2.42	0.53
46:DN:137:LYS:O	46:DN:138:LEU:HD23	2.09	0.53
54:DV:38:LEU:C	54:DV:39:LEU:HD13	2.29	0.53
36:BA:1517:G:H2'	36:BA:1518:U:O4'	2.08	0.53
49:DQ:141:GLN:OE1	58:DZ:72:ARG:HA	2.09	0.53
41:BF:107:LYS:C	41:BF:109:GLY:H	2.11	0.53
1:CA:197:A:N6	1:CA:221:C:H5'	2.23	0.53
36:BA:1087:G:H8	36:BA:1088:A:H4'	1.73	0.53
36:DA:637:A:N1	36:DA:652:C:H5'	2.24	0.53
27:D1:82:LEU:C	27:D1:83:GLU:HG3	2.28	0.53
12:AL:126:LYS:HZ3	12:AL:127:GLU:N	2.06	0.53
57:DY:30:VAL:HG12	57:DY:31:LEU:N	2.23	0.53
36:DA:1544:A:O2'	36:DA:1545:A:H5'	2.08	0.53
36:DA:1070:A:H3'	36:DA:1072:C:H5	1.72	0.53
58:DZ:9:TYR:HE1	58:DZ:35:ARG:CZ	2.22	0.53
36:DA:1208:C:O2	36:DA:1208:C:H2'	2.09	0.53
52:BT:10:VAL:O	52:BT:13:ARG:HG2	2.09	0.53
18:AR:32:ARG:CA	18:AR:69:THR:HG21	2.36	0.53
51:BS:92:TYR:C	51:BS:94:TYR:N	2.57	0.53
4:AD:4:TYR:O	4:AD:5:ILE:CB	2.57	0.53
1:CA:1216:G:O2'	1:CA:1217:C:H5'	2.08	0.53
22:AW:35:A:H2'	22:AW:36:A:H8	1.72	0.53
7:CG:15:ASP:HB3	7:CG:19:GLY:N	2.24	0.53
25:CZ:85:HIS:HE1	36:DA:2661:G:O2'	1.92	0.53
48:DP:123:LEU:HD23	48:DP:123:LEU:N	2.22	0.53
36:DA:559:G:N2	53:DU:49:HIS:CD2	2.77	0.53
38:BC:75:LEU:O	38:BC:75:LEU:HD12	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:280:C:H3'	36:DA:281:G:C8	2.44	0.53
40:DE:163:GLU:O	40:DE:165:VAL:HG23	2.09	0.53
55:BW:9:TYR:N	55:BW:9:TYR:HD1	2.05	0.53
27:B1:93:GLU:C	27:B1:94:LEU:HD12	2.29	0.53
33:B7:24:THR:HG23	33:B7:27:GLY:HA3	1.91	0.53
1:CA:77:G:H5''	1:CA:78:G:C8	2.43	0.53
14:AN:19:ARG:O	14:AN:20:ALA:O	2.26	0.53
36:DA:2195:C:O2'	36:DA:2196:C:H5'	2.08	0.53
21:CU:13:ILE:O	21:CU:16:GLY:N	2.41	0.53
36:DA:171:G:O2'	36:DA:172:C:H5'	2.08	0.53
16:AP:15:PRO:O	16:AP:16:HIS:ND1	2.41	0.53
1:AA:313:A:H2'	1:AA:314:C:C6	2.43	0.53
11:AK:85:ARG:HE	11:AK:111:ASP:HB3	1.73	0.53
36:DA:1034:G:N2	36:DA:1122:G:H1'	2.24	0.53
38:DC:8:ARG:O	38:DC:12:GLU:HG2	2.09	0.53
1:CA:358:U:H2'	1:CA:359:U:C6	2.44	0.53
2:CB:33:TYR:HB2	2:CB:43:ASP:HB2	1.90	0.53
32:B6:26:ASN:HD22	32:B6:32:ASN:HD21	0.79	0.53
48:DP:18:ARG:O	48:DP:20:GLY:N	2.42	0.53
52:DT:62:THR:HA	52:DT:74:ARG:O	2.09	0.53
32:B6:20:ASN:C	32:B6:21:TYR:CG	2.82	0.53
32:D6:45:LYS:CD	32:D6:45:LYS:N	2.71	0.53
57:DY:10:GLY:CA	57:DY:27:VAL:HG13	2.22	0.53
1:CA:1316:G:N2	1:CA:1318:A:H3'	2.22	0.53
1:CA:978:A:C8	1:CA:1319:A:C2	2.97	0.53
28:B2:38:GLN:O	28:B2:40:SER:N	2.42	0.53
28:B2:48:HIS:O	28:B2:52:ASP:HB2	2.09	0.53
1:AA:1104:G:O5'	2:AB:111:ARG:CD	2.55	0.53
49:BQ:134:ARG:HB3	49:BQ:134:ARG:CZ	2.39	0.53
49:BQ:24:GLY:HA3	49:BQ:101:ARG:HH12	1.74	0.53
57:DY:36:ALA:HB1	57:DY:67:LEU:O	2.09	0.53
25:AZ:8:THR:OG1	25:AZ:9:LYS:HG3	2.08	0.53
10:CJ:57:LYS:C	10:CJ:58:ASP:O	2.44	0.53
54:BV:39:LEU:HD22	54:BV:39:LEU:N	2.22	0.53
14:AN:49:HIS:O	14:AN:51:GLY:N	2.42	0.53
10:AJ:9:ARG:HA	10:AJ:68:HIS:O	2.09	0.53
36:BA:1517:G:H8	36:BA:1517:G:C5'	2.10	0.53
51:DS:85:VAL:C	51:DS:106:ARG:HG2	2.28	0.53
19:CS:11:VAL:HG21	19:CS:16:LEU:HD11	1.91	0.53
48:BP:59:LEU:HA	48:BP:61:ARG:CD	2.38	0.53
39:BD:241:PRO:O	39:BD:242:ARG:HB2	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:12:LEU:HD11	5:CE:31:LEU:CB	2.39	0.53
43:BH:41:MET:O	43:BH:42:ARG:CB	2.57	0.53
5:AE:100:VAL:HG12	5:AE:118:ILE:HG22	1.90	0.53
58:BZ:127:LYS:O	58:BZ:127:LYS:HG3	2.08	0.53
42:BG:114:ILE:O	42:BG:114:ILE:CG2	2.53	0.53
36:BA:2159:G:H2'	36:BA:2160:G:C5'	2.33	0.53
18:CR:58:LEU:HB3	18:CR:62:GLU:CB	2.39	0.53
36:BA:2853:C:O2'	36:BA:2854:G:H5'	2.07	0.53
36:DA:2012:G:H4'	55:DW:96:ILE:CD1	2.35	0.53
36:BA:133:C:N3	36:BA:146:G:O6	2.41	0.53
34:B8:50:LEU:C	34:B8:52:LYS:N	2.62	0.53
35:B9:35:ARG:HG2	35:B9:35:ARG:O	2.09	0.53
13:CM:113:PRO:O	13:CM:114:ARG:CB	2.53	0.53
9:AI:108:VAL:HG12	9:AI:109:VAL:N	2.24	0.53
4:CD:109:GLY:CA	4:CD:165:MET:HE2	2.39	0.53
36:BA:2823:A:OP1	40:BE:113:PHE:HB2	2.08	0.53
1:CA:1286:A:O2'	1:CA:1287:A:C5'	2.57	0.53
8:AH:1:MET:HE3	8:AH:2:LEU:N	2.23	0.53
10:CJ:8:LEU:HD22	10:CJ:20:ALA:HB2	1.90	0.53
1:CA:913:A:H4'	1:CA:914:A:H4'	1.91	0.53
36:BA:1982:C:C5'	36:BA:1983:C:OP2	2.56	0.53
37:BB:79:C:C2'	37:BB:80:U:H5'	2.38	0.53
1:CA:756:C:H2'	1:CA:757:U:O4'	2.08	0.53
42:DG:127:GLY:N	42:DG:166:ASP:OD1	2.39	0.53
36:DA:963:U:H2'	36:DA:964:C:C6	2.44	0.53
7:CG:64:GLN:O	7:CG:67:GLU:HB3	2.09	0.53
1:CA:1186:G:N2	1:CA:1187:G:H1'	2.23	0.53
20:CT:63:ILE:HG22	20:CT:77:ALA:HB1	1.91	0.53
37:BB:3:C:N4	37:BB:118:G:H1	2.07	0.53
1:AA:520:A:N1	1:AA:536:C:H1'	2.23	0.53
15:CO:24:SER:O	15:CO:28:GLN:HG3	2.09	0.53
1:CA:280:C:N4	17:CQ:91:ARG:NH1	2.56	0.53
60:CZ:501:GDP:H8	60:CZ:501:GDP:H5''	1.74	0.53
25:CZ:176:LEU:HB3	60:CZ:501:GDP:N1	2.24	0.53
22:CW:74:C:O2'	22:CW:75:C:H5'	2.09	0.53
36:DA:812:C:H3'	48:DP:25:SER:HB2	1.91	0.53
1:CA:346:G:H5''	52:DT:43:GLN:HE22	1.74	0.53
25:AZ:135:MET:HE3	25:AZ:172:ARG:HG2	1.91	0.53
43:BH:37:VAL:HG12	43:BH:38:SER:N	2.23	0.53
1:CA:1188:A:H2'	1:CA:1189:C:H5'	1.90	0.53
42:DG:125:PHE:CD1	42:DG:126:ASP:N	2.72	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2302:G:H1'	42:DG:128:ARG:HE	1.73	0.53
36:BA:79:G:O2'	36:BA:80:G:H5'	2.09	0.53
57:BY:44:ILE:N	57:BY:44:ILE:HD12	2.24	0.53
41:BF:53:THR:HG22	41:BF:56:GLU:CG	2.39	0.53
13:AM:37:THR:O	13:AM:39:ILE:HG13	2.08	0.53
43:DH:101:ARG:O	43:DH:117:PRO:HG3	2.09	0.53
1:AA:1123:A:N1	1:AA:1150:U:H5	2.06	0.53
36:DA:140:G:H1'	36:DA:141:A:H2	1.73	0.53
54:DV:47:VAL:HB	54:DV:49:THR:O	2.09	0.53
36:BA:2148:G:N2	36:BA:2149:G:C4	2.76	0.53
43:BH:88:LEU:HD22	43:BH:88:LEU:N	2.24	0.53
46:BN:58:ASP:O	46:BN:60:ILE:HG13	2.09	0.53
46:BN:60:ILE:CD1	46:BN:99:LEU:HD23	2.37	0.53
36:BA:1051:G:H2'	36:BA:1052:C:C4	2.43	0.53
12:CL:89:ARG:HG3	12:CL:91:LYS:NZ	2.21	0.53
1:AA:949:A:C1'	1:AA:1364:U:H5	2.22	0.53
36:BA:832:G:O3'	48:BP:45:LEU:HD11	2.09	0.53
40:DE:47:VAL:HG12	40:DE:48:GLN:N	2.24	0.53
25:AZ:277:LEU:HD12	25:AZ:279:GLU:N	2.15	0.53
55:BW:6:ILE:HG12	55:BW:104:THR:HB	1.91	0.53
4:AD:79:PHE:HA	4:AD:93:PHE:HD2	1.73	0.53
13:AM:82:MET:O	13:AM:83:ASP:O	2.27	0.53
1:CA:382:A:H2'	1:CA:383:A:H8	1.73	0.53
6:CF:87:ARG:HG2	6:CF:87:ARG:NH1	2.22	0.53
36:BA:2206:G:H21	36:BA:2207:G:H4'	1.74	0.53
46:DN:30:ILE:HG22	46:DN:30:ILE:O	2.09	0.53
9:CI:81:ILE:O	9:CI:84:ALA:HB3	2.08	0.53
1:AA:192:U:O2'	1:AA:193:C:H5'	2.09	0.53
52:BT:5:ALA:HA	52:BT:8:LYS:HE2	1.91	0.53
36:DA:272(D):G:O2'	36:DA:272(E):G:H5'	2.09	0.53
40:DE:170:LEU:HD12	40:DE:170:LEU:N	2.24	0.53
1:CA:922:G:C6	1:CA:923:A:C6	2.97	0.53
36:BA:266:G:H2'	36:BA:267:C:C5'	2.37	0.53
26:B0:47:PRO:HG3	26:B0:59:LEU:CD2	2.39	0.53
52:DT:106:SER:HA	52:DT:110:ILE:CD1	2.39	0.53
46:DN:107:LEU:HB3	46:DN:108:PRO:CD	2.36	0.53
1:CA:194:C:C2'	1:CA:195:A:H5''	2.39	0.53
22:AV:17:C:O5'	22:AV:17:C:H6	1.92	0.53
36:BA:1400:G:H2'	36:BA:1401:G:H8	1.74	0.53
36:DA:121:G:H4'	36:DA:149:A:H5'	1.91	0.53
7:CG:57:GLU:HB2	7:CG:60:LYS:CB	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:658:G:H2'	1:CA:659:U:C6	2.44	0.53
37:BB:111:G:C2'	37:BB:112:U:H5'	2.38	0.53
1:CA:1521:G:H2'	1:CA:1522:U:H6	1.74	0.53
1:CA:1111:A:H2'	1:CA:1112:C:H6	1.74	0.53
44:DJ:96:UNK:HA	44:DJ:99:UNK:CB	2.39	0.53
8:CH:2:LEU:HD23	8:CH:2:LEU:C	2.29	0.53
36:BA:1529:G:C2	36:BA:1530:C:C2	2.96	0.53
2:CB:95:GLN:O	2:CB:96:ARG:O	2.27	0.53
50:BR:32:GLY:O	50:BR:115:GLU:HA	2.08	0.53
39:BD:94:LEU:HD22	39:BD:95:LEU:N	2.24	0.53
36:DA:2889:C:H2'	36:DA:2891:G:O4'	2.08	0.53
36:DA:1423:G:OP1	36:DA:1492:G:O2'	2.25	0.53
38:DC:90:GLY:O	38:DC:91:ALA:HB2	2.09	0.53
1:AA:1118:C:H6	1:AA:1118:C:O5'	1.92	0.53
49:DQ:34:LEU:HD23	49:DQ:104:PHE:HE1	1.73	0.53
17:CQ:92:ARG:O	17:CQ:95:TYR:HB2	2.08	0.53
36:DA:1596:A:O2'	36:DA:1597:A:H5'	2.09	0.53
36:DA:2393:A:H3'	36:DA:2394:C:C6	2.44	0.53
47:DO:104:ARG:HH21	52:DT:33:LYS:CE	2.21	0.53
36:BA:2863:C:OP1	52:BT:93:ARG:NH2	2.41	0.53
1:CA:1321:C:C5'	1:CA:1322:C:H5''	2.38	0.53
28:B2:2:LYS:HA	28:B2:5:GLU:CG	2.39	0.53
25:CZ:266:VAL:HB	25:CZ:291:ARG:HE	1.74	0.53
26:D0:47:PRO:CG	26:D0:53:MET:HB2	2.39	0.53
28:D2:53:LEU:O	28:D2:57:ILE:HG12	2.08	0.53
25:AZ:241:ARG:CA	25:AZ:285:ASN:HD21	2.21	0.53
1:CA:1096:C:H5''	2:CB:137:ARG:NH2	2.24	0.53
1:AA:1283:G:O2'	1:AA:1284:C:P	2.67	0.53
9:AI:114:TYR:HE1	10:AJ:59:SER:HA	1.74	0.53
25:CZ:323:LEU:CD1	25:CZ:396:GLY:HA2	2.39	0.53
30:D4:6:HIS:CB	30:D4:7:PRO:CD	2.87	0.53
1:CA:1348:U:H4'	9:CI:120:ARG:CD	2.39	0.53
16:CP:21:VAL:HG12	16:CP:34:GLU:O	2.08	0.53
36:BA:654(V):A:H8	36:BA:655:A:H2'	1.74	0.53
51:DS:106:ARG:HD2	51:DS:106:ARG:O	2.09	0.53
19:AS:45:VAL:HG11	19:AS:64:GLU:HA	1.90	0.53
1:AA:1348:U:C2'	1:AA:1349:A:H8	2.20	0.53
5:CE:40:ARG:HH11	5:CE:40:ARG:HG2	1.74	0.53
2:CB:73:THR:HG22	2:CB:94:ASN:C	2.29	0.53
43:BH:94:TYR:CE2	43:BH:160:LYS:HB3	2.43	0.53
48:BP:89:ALA:HB1	48:BP:121:LYS:HD2	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:75:ILE:CD1	48:BP:75:ILE:H	2.07	0.53
36:BA:803:U:O2'	36:BA:804:A:H5'	2.09	0.53
14:AN:33:VAL:HA	14:AN:40:CYS:HA	1.90	0.53
14:AN:22:THR:CB	14:AN:33:VAL:HG21	2.36	0.53
5:AE:39:GLY:O	5:AE:69:VAL:HG22	2.09	0.53
50:DR:45:ARG:O	50:DR:48:VAL:HG12	2.08	0.53
36:DA:723:G:C6	36:DA:724:U:C4	2.96	0.53
47:DO:2:ILE:HD11	47:DO:82:ASN:HB3	1.91	0.53
36:BA:257:A:C2'	36:BA:258:G:H5'	2.39	0.53
4:CD:109:GLY:HA3	4:CD:165:MET:CE	2.38	0.53
43:BH:40:GLU:OE1	43:BH:55:PRO:HG3	2.08	0.53
36:BA:2305:A:C2'	36:BA:2306:C:H5''	2.39	0.53
36:BA:304:G:O2'	36:BA:305:U:H5'	2.09	0.53
4:AD:128:VAL:CG1	4:AD:129:ASN:N	2.72	0.53
38:DC:47:LEU:HD23	38:DC:208:PHE:CZ	2.44	0.53
36:BA:363(E):U:H2'	36:BA:363(F):A:C1'	2.39	0.53
36:DA:1268:A:C2	36:DA:1269:A:H1'	2.43	0.53
41:DF:54:ARG:NH2	41:DF:80:ALA:HB2	2.24	0.53
1:AA:1510:U:H2'	1:AA:1511:G:C8	2.43	0.53
39:DD:129:ASN:O	39:DD:193:VAL:HG12	2.08	0.53
36:BA:652:C:HO2'	36:BA:653:A:P	2.32	0.53
36:BA:809:G:O4'	36:BA:1254:A:H1'	2.09	0.53
1:CA:1433:A:N6	1:CA:1434:A:C6	2.76	0.53
2:AB:21:ARG:HB2	2:AB:38:GLY:O	2.09	0.53
36:BA:2488:A:O2'	36:BA:2489:G:H5'	2.09	0.53
36:BA:2113:U:H2'	36:BA:2114:A:H8	1.74	0.53
36:BA:1196:C:H2'	36:BA:1197:G:C8	2.44	0.53
36:DA:521:G:H2'	36:DA:522:G:H8	1.73	0.53
36:BA:1480:G:C2	36:BA:1512:U:O2	2.61	0.53
40:BE:197:ILE:O	40:BE:197:ILE:HG13	2.08	0.53
18:CR:44:LEU:N	18:CR:44:LEU:HD12	2.24	0.53
39:DD:166:GLN:HE21	39:DD:166:GLN:CA	2.21	0.53
36:DA:2511:U:O2'	40:DE:139:GLY:HA3	2.09	0.53
52:DT:38:ASN:ND2	52:DT:38:ASN:O	2.41	0.52
52:DT:23:ARG:HG2	52:DT:120:ARG:NH1	2.23	0.52
36:DA:1504:C:O2'	36:DA:1505:C:C5'	2.57	0.52
13:CM:81:LEU:HD12	13:CM:86:CYS:HG	1.75	0.52
28:B2:27:GLU:C	28:B2:29:LYS:N	2.62	0.52
28:B2:47:ASN:O	28:B2:51:ARG:HB3	2.09	0.52
28:B2:10:LEU:CD2	28:B2:60:LEU:HA	2.39	0.52
28:B2:6:VAL:CG1	28:B2:7:ARG:NH1	2.72	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1150:U:O2'	1:CA:1151:A:H5'	2.09	0.52
57:DY:64:GLU:O	57:DY:65:ALA:HB2	2.10	0.52
57:BY:81:LYS:HD2	57:BY:96:ILE:HG13	1.90	0.52
3:AC:83:ARG:C	3:AC:85:ARG:H	2.13	0.52
41:BF:6:VAL:O	41:BF:125:LEU:HD21	2.09	0.52
36:BA:2476:A:C2'	36:BA:2477:C:C5'	2.87	0.52
5:AE:80:ILE:HD12	5:AE:91:LEU:HB2	1.91	0.52
50:DR:87:TYR:CD1	50:DR:90:ARG:HD2	2.43	0.52
37:DB:22:U:H2'	37:DB:23:G:C8	2.44	0.52
31:D5:25:LEU:HD22	31:D5:26:THR:H	1.74	0.52
48:BP:56:SER:HB2	48:BP:60:MET:HE3	1.89	0.52
43:BH:12:PRO:HB2	43:BH:15:VAL:HG13	1.91	0.52
30:B4:18:CYS:SG	30:B4:19:GLY:N	2.82	0.52
50:BR:116:LEU:O	50:BR:117:VAL:CB	2.55	0.52
39:DD:273:ARG:C	39:DD:274:ARG:HG3	2.30	0.52
58:DZ:10:ARG:NH2	58:DZ:26:GLY:H	2.02	0.52
22:AV:3:C:H2'	22:AV:4:C:H6	1.74	0.52
36:DA:1068:G:H1'	36:DA:1069:A:OP2	2.08	0.52
36:DA:1076:C:N4	36:DA:1088:A:H61	2.07	0.52
52:DT:13:ARG:HH21	52:DT:15:VAL:HG13	1.75	0.52
50:DR:45:ARG:HG3	50:DR:46:GLY:N	2.21	0.52
48:BP:77:ARG:CZ	48:BP:77:ARG:HB2	2.38	0.52
46:DN:4:TYR:N	46:DN:4:TYR:CD1	2.78	0.52
53:BU:69:CYS:O	53:BU:74:LEU:O	2.27	0.52
1:AA:559:A:OP1	5:AE:126:ARG:NH2	2.41	0.52
36:DA:128:C:H2'	36:DA:129:C:C6	2.43	0.52
27:B1:6:GLU:C	27:B1:7:ILE:HD12	2.29	0.52
40:DE:116:VAL:O	40:DE:117:MET:HB2	2.08	0.52
20:AT:56:MET:HG3	20:AT:84:LEU:HG	1.90	0.52
36:BA:877:U:C2'	36:BA:878:A:H5''	2.39	0.52
15:CO:17:ARG:HD3	15:CO:26:GLU:HG3	1.91	0.52
54:DV:2:PHE:CD2	54:DV:13:ARG:NH1	2.78	0.52
1:CA:294:U:H2'	1:CA:295:C:C6	2.44	0.52
36:BA:2659:G:C2'	36:BA:2660:A:H5''	2.39	0.52
58:BZ:54:HIS:O	58:BZ:98:MET:HE3	2.10	0.52
19:AS:79:THR:O	19:AS:80:TYR:HB3	2.09	0.52
36:DA:11:G:O2'	36:DA:12:U:H5'	2.09	0.52
1:CA:333:G:O2'	1:CA:334:C:H5'	2.08	0.52
36:BA:576:U:H2'	36:BA:577:G:C8	2.44	0.52
6:AF:2:ARG:HB2	6:AF:4:TYR:HE1	1.74	0.52
19:CS:53:ASN:C	19:CS:55:LYS:H	2.12	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BN:90:MET:CE	46:BN:90:MET:HA	2.39	0.52
52:DT:26:ASP:OD1	52:DT:26:ASP:O	2.27	0.52
1:CA:1523:G:OP1	11:CK:123:LYS:HD3	2.10	0.52
32:B6:12:GLU:HA	32:B6:23:THR:HA	1.91	0.52
48:DP:48:PRO:O	48:DP:49:ARG:O	2.27	0.52
52:DT:62:THR:HG22	52:DT:75:ILE:HG23	1.91	0.52
24:CY:70:C:O2'	24:CY:71:C:H5'	2.09	0.52
1:AA:1055:A:C8	1:AA:1055:A:O5'	2.62	0.52
25:CZ:143:ASP:OD1	25:CZ:144:PRO:HD2	2.08	0.52
25:CZ:196:VAL:O	25:CZ:198:LYS:N	2.43	0.52
36:BA:333:G:N3	36:BA:333:G:H2'	2.24	0.52
43:DH:42:ARG:HG2	43:DH:43:VAL:N	2.24	0.52
41:DF:39:TRP:CZ2	41:DF:106:ARG:HD3	2.44	0.52
46:BN:112:LEU:O	46:BN:115:ARG:N	2.42	0.52
3:AC:84:ILE:O	3:AC:84:ILE:CG1	2.57	0.52
13:AM:4:ILE:HD11	13:AM:10:PRO:CD	2.38	0.52
3:AC:12:LEU:HB3	3:AC:18:TRP:CZ3	2.45	0.52
43:DH:126:PRO:O	43:DH:127:GLU:CG	2.56	0.52
42:BG:52:ILE:HB	42:BG:54:GLU:OE1	2.10	0.52
36:BA:2309:A:C2'	36:BA:2310:A:H5''	2.38	0.52
30:D4:25:TYR:N	30:D4:25:TYR:CD1	2.77	0.52
42:DG:105:LYS:HE2	42:DG:142:PRO:HG3	1.91	0.52
53:DU:65:ILE:N	53:DU:65:ILE:CD1	2.73	0.52
9:AI:53:VAL:CG2	9:AI:95:LYS:HZ3	2.21	0.52
48:BP:148:LEU:O	48:BP:149:GLU:HB2	2.10	0.52
49:DQ:141:GLN:NE2	58:DZ:72:ARG:O	2.42	0.52
58:DZ:99:TYR:CZ	58:DZ:125:LEU:HB2	2.44	0.52
1:CA:537:G:H2'	1:CA:538:G:H8	1.73	0.52
50:BR:28:LEU:HB2	50:BR:34:ILE:HG13	1.91	0.52
36:DA:2723:C:H4'	50:DR:2:ARG:HE	1.74	0.52
11:AK:33:THR:HA	11:AK:40:ILE:HG12	1.90	0.52
25:AZ:246:LYS:HD2	25:AZ:279:GLU:CD	2.30	0.52
51:DS:35:ILE:CD1	51:DS:99:LYS:HD3	2.40	0.52
48:DP:83:VAL:CG2	48:DP:105:LEU:HD13	2.33	0.52
25:AZ:265:THR:HG22	25:AZ:266:VAL:H	1.72	0.52
25:AZ:265:THR:CG2	25:AZ:266:VAL:N	2.71	0.52
36:DA:1069:A:O2'	36:DA:1070:A:P	2.67	0.52
1:AA:1202:G:N3	14:AN:42:ILE:HG21	2.23	0.52
36:BA:2572:A:C5	40:BE:144:ARG:NH1	2.67	0.52
36:DA:2491:U:C2'	36:DA:2492:U:H5'	2.39	0.52
54:DV:19:LYS:HE2	54:DV:19:LYS:HA	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:B0:55:ARG:NH2	36:BA:2387:U:OP1	2.42	0.52
55:DW:96:ILE:HG23	55:DW:96:ILE:O	2.09	0.52
1:CA:1036:G:H3'	1:CA:1037:C:C6	2.43	0.52
43:DH:12:PRO:HB2	43:DH:15:VAL:HG13	1.91	0.52
40:BE:101:ARG:HB2	40:BE:201:THR:HG21	1.91	0.52
4:AD:24:GLU:H	4:AD:112:VAL:HG21	1.73	0.52
50:DR:44:LEU:CD1	50:DR:48:VAL:HB	2.39	0.52
10:CJ:28:ARG:HG2	10:CJ:33:GLN:HA	1.91	0.52
1:AA:1277:C:O2'	1:AA:1279:A:H8	1.91	0.52
36:DA:1311:G:H21	36:DA:1603:A:N6	2.05	0.52
1:CA:946:A:C2	1:CA:947:G:C5	2.97	0.52
36:DA:2884:U:H2'	36:DA:2885:C:C5'	2.39	0.52
40:BE:117:MET:HA	40:BE:122:PHE:H	1.74	0.52
41:BF:185:ASP:HA	41:BF:188:ARG:CG	2.39	0.52
38:DC:10:LEU:HD22	38:DC:10:LEU:H	1.74	0.52
1:CA:390:C:H2'	1:CA:391:G:H8	1.74	0.52
32:B6:48:VAL:HG23	32:B6:48:VAL:O	2.09	0.52
41:BF:17:ARG:HG3	41:BF:17:ARG:HH11	1.74	0.52
25:CZ:300:ARG:CG	25:CZ:301:GLY:N	2.72	0.52
25:CZ:300:ARG:CG	25:CZ:301:GLY:H	2.22	0.52
45:DK:62:UNK:O	45:DK:63:UNK:C	2.57	0.52
40:DE:186:GLY:O	40:DE:187:ALA:HB3	2.09	0.52
36:BA:1275:A:N1	36:BA:1295:C:O2'	2.39	0.52
36:BA:2144:U:H2'	36:BA:2146:C:H5	1.75	0.52
1:AA:1030:C:H42	1:AA:1032:G:N2	2.07	0.52
36:DA:292:C:H2'	36:DA:293:U:C6	2.43	0.52
51:BS:22:GLY:O	51:BS:23:ARG:O	2.27	0.52
24:CY:49:G:O2'	24:CY:50:G:H5'	2.08	0.52
36:DA:443:A:H1'	36:DA:1201:C:O4'	2.08	0.52
3:AC:42:LEU:HD12	3:AC:42:LEU:O	2.09	0.52
30:D4:12:ALA:CB	30:D4:29:PRO:HA	2.39	0.52
57:BY:33:LYS:C	57:BY:35:TYR:H	2.12	0.52
4:CD:4:TYR:O	4:CD:5:ILE:HB	2.09	0.52
53:BU:92:ARG:O	53:BU:94:ASN:N	2.42	0.52
28:B2:25:VAL:O	28:B2:25:VAL:HG12	2.09	0.52
28:B2:32:LEU:HA	28:B2:53:LEU:CD2	2.40	0.52
56:BX:53:LYS:HB3	56:BX:82:GLN:CB	2.40	0.52
39:BD:30:GLU:CG	39:BD:63:ARG:HH21	2.21	0.52
56:DX:54:VAL:HG13	56:DX:81:VAL:HG12	1.91	0.52
52:BT:62:THR:CG2	52:BT:75:ILE:HG23	2.34	0.52
36:DA:2476:A:H2'	36:DA:2477:C:C5'	2.37	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1305:G:OP2	21:AU:2:GLY:N	2.43	0.52
13:AM:19:LEU:HD22	13:AM:19:LEU:H	1.74	0.52
39:BD:43:ARG:CB	39:BD:54:ARG:HB2	2.39	0.52
3:CC:18:TRP:N	3:CC:18:TRP:CE3	2.77	0.52
54:BV:39:LEU:HD12	54:BV:51:VAL:HA	1.92	0.52
53:BU:8:VAL:O	53:BU:12:ARG:HG3	2.09	0.52
14:AN:57:ARG:HH11	14:AN:57:ARG:CB	2.23	0.52
34:B8:5:LYS:HG2	36:BA:242:G:C8	2.43	0.52
42:BG:84:LYS:O	42:BG:85:GLY:O	2.27	0.52
42:BG:82:LEU:HD13	42:BG:87:PRO:HB3	1.92	0.52
13:CM:65:LYS:C	13:CM:66:LEU:HG	2.28	0.52
25:CZ:117:ARG:O	25:CZ:120:ILE:HB	2.10	0.52
58:DZ:48:PHE:HE1	58:DZ:52:SER:O	1.92	0.52
48:BP:16:ARG:HD3	48:BP:16:ARG:C	2.30	0.52
48:BP:45:LEU:CD1	48:BP:46:LYS:N	2.63	0.52
5:CE:91:LEU:HD12	5:CE:91:LEU:N	2.23	0.52
1:CA:266:G:H5''	1:CA:267:C:C5	2.43	0.52
36:DA:2061:G:H5''	36:DA:2503:A:C2	2.45	0.52
46:BN:32:THR:C	46:BN:34:LEU:H	2.12	0.52
27:B1:75:GLU:O	27:B1:76:ARG:O	2.26	0.52
27:B1:76:ARG:HH22	27:B1:95:LEU:N	2.06	0.52
33:B7:43:THR:CG2	33:B7:44:PRO:N	2.72	0.52
30:B4:14:ILE:H	30:B4:14:ILE:CD1	2.22	0.52
36:DA:1658:C:OP1	40:DE:132:HIS:O	2.26	0.52
25:CZ:389:ARG:O	25:CZ:390:GLU:CB	2.55	0.52
26:B0:38:VAL:CB	26:B0:59:LEU:HD12	2.36	0.52
36:DA:752:A:H4'	36:DA:753:C:O5'	2.09	0.52
39:BD:62:TYR:CD1	39:BD:62:TYR:C	2.83	0.52
36:BA:1682:G:H2'	36:BA:1683:C:C6	2.45	0.52
1:AA:950:U:H2'	1:AA:951:G:H8	1.73	0.52
1:AA:707:C:H2'	1:AA:708:C:C6	2.44	0.52
1:AA:339:C:OP2	47:BO:97:ARG:NH1	2.42	0.52
16:CP:15:PRO:O	16:CP:16:HIS:ND1	2.41	0.52
36:DA:917:A:N1	37:DB:80:U:H4'	2.25	0.52
36:BA:2463:C:H1'	36:BA:2518:A:H2	1.74	0.52
58:DZ:73:GLN:HB3	58:DZ:87:ASP:HB2	1.92	0.52
36:BA:950:G:H2'	36:BA:951:C:C6	2.45	0.52
39:BD:221:VAL:HG22	39:BD:226:MET:CE	2.38	0.52
25:CZ:223:MET:HE3	25:CZ:240:GLY:H	1.72	0.52
36:BA:1231:G:H2'	36:BA:1232:G:C8	2.44	0.52
1:CA:16:A:C6	1:CA:17:U:C5	2.96	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:41:ILE:C	20:AT:43:LEU:H	2.12	0.52
40:DE:65:GLY:O	40:DE:66:HIS:O	2.27	0.52
36:BA:2087:G:C2'	36:BA:2088:G:H5'	2.40	0.52
36:DA:271(Q):G:H1'	36:DA:271(R):G:C8	2.45	0.52
36:BA:1530:C:H6	36:BA:1530:C:O5'	1.93	0.52
36:DA:2872:G:C2	36:DA:2873:A:N6	2.77	0.52
1:CA:890:G:O2'	1:CA:906:G:O6	2.18	0.52
36:BA:2792:G:O2'	36:BA:2793:G:H5'	2.10	0.52
36:DA:2765:A:H2	36:DA:2766:G:O4'	1.92	0.52
1:AA:1038:C:O5'	1:AA:1038:C:H6	1.92	0.52
24:CY:51:G:HO2'	25:CZ:338:TYR:HD1	1.56	0.52
25:AZ:356:PRO:HD3	25:AZ:370:PHE:HA	1.91	0.52
36:DA:660:G:O3'	41:DF:38:ARG:NH2	2.42	0.52
48:DP:33:ARG:O	48:DP:34:GLY:C	2.47	0.52
52:DT:75:ILE:CD1	52:DT:75:ILE:N	2.65	0.52
52:BT:23:ARG:HB2	52:BT:24:PRO:HD2	1.91	0.52
32:B6:53:LYS:O	32:B6:54:ILE:OXT	2.27	0.52
28:B2:46:GLN:H	28:B2:50:ILE:HG12	1.74	0.52
1:AA:973:G:H1'	10:AJ:55:LYS:HZ3	1.68	0.52
12:AL:46:LYS:H	12:AL:92:ASP:HB3	1.75	0.52
39:DD:30:GLU:CB	39:DD:35:LYS:NZ	2.73	0.52
39:DD:77:ALA:O	39:DD:116:GLN:HG3	2.09	0.52
28:D2:50:ILE:N	28:D2:50:ILE:HD12	2.24	0.52
58:BZ:122:ARG:HH11	58:BZ:122:ARG:HG2	1.74	0.52
9:AI:55:ALA:CA	9:AI:58:HIS:HE1	2.14	0.52
53:DU:88:ILE:HG22	54:DV:47:VAL:O	2.08	0.52
54:DV:49:THR:HB	54:DV:50:PRO:HD2	1.92	0.52
43:DH:163:TYR:N	43:DH:163:TYR:CD1	2.78	0.52
46:BN:65:LYS:O	46:BN:69:GLN:HB2	2.09	0.52
4:CD:67:ILE:HG22	4:CD:68:TYR:CE1	2.45	0.52
58:DZ:153:SER:O	58:DZ:155:LEU:N	2.42	0.52
1:CA:1343:G:H2'	1:CA:1344:C:H6	1.72	0.52
46:DN:18:ALA:HB1	46:DN:21:LYS:HB2	1.92	0.52
48:BP:81:GLN:NE2	48:BP:106:LEU:HA	2.24	0.52
36:DA:1689:A:N6	36:DA:1698:A:H2	1.95	0.52
36:DA:1142(A):A:H8	36:DA:1142(A):A:H5'	1.74	0.52
32:B6:36:LEU:C	32:B6:36:LEU:CD2	2.78	0.52
41:DF:201:VAL:HA	41:DF:204:ASN:HD22	1.74	0.52
4:AD:88:VAL:O	4:AD:92:VAL:HG23	2.09	0.52
42:BG:106:LEU:O	42:BG:110:ALA:HB3	2.10	0.52
58:BZ:145:GLU:O	58:BZ:147:GLY:N	2.41	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:18:GLY:H	2:CB:42:ILE:CG2	2.23	0.52
2:CB:30:ARG:NE	2:CB:31:TYR:CE1	2.78	0.52
36:DA:2009:G:O2'	36:DA:2010:G:H5'	2.09	0.52
36:DA:1361:G:O2'	36:DA:1362:C:H5'	2.10	0.52
1:AA:198:G:O2'	1:AA:199:G:H8	1.93	0.52
1:AA:1158:C:C2'	1:AA:1158:C:O2	2.58	0.52
36:BA:1350:C:O2'	36:BA:1351:C:H5'	2.09	0.52
9:AI:79:LEU:C	9:AI:79:LEU:HD13	2.30	0.52
42:DG:145:THR:HB	42:DG:148:MET:HB2	1.91	0.52
18:AR:25:THR:O	18:AR:26:LEU:HG	2.08	0.52
36:BA:1471:A:H3'	36:BA:1472:A:H8	1.75	0.52
4:AD:128:VAL:O	4:AD:129:ASN:C	2.47	0.52
26:B0:16:SER:HB2	36:BA:2262:U:H5	1.73	0.52
36:DA:2650:U:H2'	36:DA:2651:C:C6	2.44	0.52
36:BA:2554:U:H2'	36:BA:2555:U:H6	1.74	0.52
22:CV:56:C:O2	42:DG:78:SER:HB2	2.07	0.52
3:AC:65:ALA:O	3:AC:66:VAL:HB	2.09	0.52
36:BA:8:A:H2'	36:BA:9:U:C5	2.45	0.52
25:CZ:366:ASP:OD1	25:CZ:367:ASN:N	2.41	0.52
36:BA:702:G:H1	36:BA:730:C:H42	1.56	0.52
1:AA:77:G:H2'	1:AA:77:G:N3	2.23	0.52
1:CA:105:G:H2'	1:CA:106:C:C6	2.45	0.52
7:CG:95:ARG:NH2	7:CG:99:LEU:HD21	2.24	0.52
7:AG:27:ILE:HG22	7:AG:28:ASN:N	2.23	0.52
36:DA:383:U:H2'	36:DA:385:C:H5	1.74	0.52
29:B3:4:LEU:HD11	29:B3:39:ASP:OD1	2.09	0.52
44:DJ:27:UNK:HA	44:DJ:113:UNK:CB	2.39	0.52
1:CA:695:A:H2'	1:CA:696:A:C8	2.44	0.52
25:CZ:234:ARG:HH21	25:CZ:289:LEU:CD2	2.22	0.52
32:B6:33:LYS:O	32:B6:34:LEU:HB2	2.09	0.52
32:D6:11:LEU:HD21	32:D6:51:GLU:CG	2.40	0.52
36:DA:2283:C:O2'	36:DA:2284:C:H5'	2.09	0.52
32:B6:15:GLU:OE2	32:B6:18:ARG:NH2	2.41	0.52
31:D5:44:THR:HG21	50:DR:101:ALA:CA	2.39	0.52
57:BY:28:LYS:CG	57:BY:39:VAL:HG22	2.34	0.52
47:BO:107:ARG:HH11	52:BT:36:GLU:CG	2.21	0.52
3:AC:76:VAL:HG21	3:AC:103:VAL:HG11	1.91	0.52
35:D9:18:ARG:O	35:D9:19:ARG:HB3	2.09	0.52
1:AA:1333:A:H2'	1:AA:1334:G:H5'	1.91	0.52
26:B0:27:GLU:HA	26:B0:67:VAL:HG12	1.91	0.52
12:AL:39:VAL:HB	12:AL:57:LYS:HB3	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1378:A:C4'	36:BA:1379:A:OP1	2.56	0.52
1:CA:191:G:C4	20:CT:105:SER:HB3	2.45	0.52
36:DA:195:A:OP1	48:DP:46:LYS:HE2	2.10	0.52
1:AA:1505:G:H2'	23:AX:18:G:OP2	2.10	0.52
4:CD:13:ARG:NH2	4:CD:36:ARG:HH11	2.03	0.52
4:CD:11:LEU:HD13	4:CD:66:ARG:NE	2.25	0.52
36:DA:622:G:O2'	36:DA:623:G:H5'	2.10	0.52
37:BB:56:G:O2'	37:BB:57:A:OP2	2.26	0.52
40:DE:35:GLN:HG2	40:DE:36:ARG:H	1.73	0.52
40:DE:3:GLY:HA3	40:DE:81:ILE:HD12	1.92	0.52
1:CA:1271:G:H2'	1:CA:1272:G:H5'	1.91	0.52
36:BA:142:A:C8	36:BA:1408:C:H1'	2.44	0.52
5:CE:144:THR:N	5:CE:147:ASP:OD1	2.39	0.52
5:CE:11:ILE:HD12	5:CE:31:LEU:CD1	2.39	0.52
18:AR:59:SER:H	18:AR:62:GLU:HB2	1.74	0.52
33:B7:43:THR:HG23	33:B7:44:PRO:CD	2.39	0.52
1:CA:678:U:H4'	1:CA:778:G:OP1	2.09	0.52
56:DX:10:ALA:HB1	56:DX:11:PRO:HD2	1.90	0.52
1:CA:877:C:O2'	1:CA:878:G:H5'	2.09	0.52
40:BE:101:ARG:HD3	40:BE:171:GLU:HA	1.92	0.52
1:AA:499:A:H4'	1:AA:500:G:OP1	2.10	0.52
40:DE:101:ARG:HB2	40:DE:201:THR:HG21	1.90	0.52
37:BB:37:C:O2	51:BS:95:HIS:NE2	2.37	0.52
22:AV:44:G:C3'	22:AV:45:U:H5'	2.39	0.52
25:CZ:392:GLY:O	25:CZ:393:ARG:HB3	2.09	0.52
7:CG:78:ARG:CG	7:CG:79:ARG:N	2.71	0.52
27:B1:4:VAL:CG2	27:B1:11:ARG:HG3	2.38	0.52
14:CN:19:ARG:O	14:CN:20:ALA:C	2.47	0.52
36:DA:753:C:H2'	36:DA:754:C:C6	2.44	0.52
58:DZ:108:PRO:HG2	58:DZ:111:VAL:CG2	2.39	0.52
2:AB:113:HIS:O	2:AB:115:LEU:N	2.42	0.52
36:BA:2523:G:C2'	36:BA:2524:G:C5'	2.83	0.52
25:CZ:19:HIS:CD2	25:CZ:115:GLN:HB2	2.45	0.52
36:DA:2305:A:C4	42:DG:154:GLY:HA3	2.45	0.52
15:CO:26:GLU:OE2	15:CO:77:ARG:NH1	2.42	0.52
13:AM:119:GLY:O	13:AM:120:LYS:HB2	2.10	0.52
43:DH:33:LEU:HD21	43:DH:136:ILE:HG22	1.92	0.52
36:BA:1038:C:H3'	36:BA:1039:G:H5''	1.91	0.52
53:DU:82:GLY:O	53:DU:84:LYS:N	2.42	0.52
17:AQ:11:VAL:O	17:AQ:11:VAL:HG23	2.09	0.52
56:DX:41:ASN:O	56:DX:45:THR:HG23	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:176:G:C2'	36:BA:177:G:H5'	2.38	0.52
14:AN:29:ARG:NH1	14:AN:31:ARG:O	2.43	0.52
3:CC:79:ARG:NH1	3:CC:79:ARG:HB3	2.25	0.52
22:CV:53:G:H2'	22:CV:54:U:H6	1.74	0.52
42:DG:150:ASP:O	42:DG:151:ALA:CB	2.58	0.52
52:DT:26:ASP:OD1	52:DT:26:ASP:C	2.48	0.52
36:BA:2196:C:O2'	36:BA:2197:U:H5'	2.10	0.52
31:D5:15:ARG:O	31:D5:16:ARG:C	2.47	0.52
18:AR:40:LEU:C	18:AR:42:ARG:H	2.13	0.52
1:CA:341:C:O2'	1:CA:342:C:H5'	2.10	0.52
10:CJ:13:HIS:O	10:CJ:17:ASP:HB2	2.08	0.52
36:BA:990:A:C6	36:BA:1186:G:H1'	2.45	0.52
36:DA:600:G:H2'	36:DA:601:C:C6	2.44	0.52
42:DG:104:GLU:C	42:DG:106:LEU:H	2.12	0.52
11:AK:76:GLY:O	11:AK:78:GLN:HG3	2.09	0.52
38:DC:2:LYS:O	38:DC:2:LYS:HG2	2.09	0.52
40:BE:19:ARG:O	40:BE:19:ARG:HG3	2.07	0.52
47:DO:11:ALA:HB1	47:DO:99:PHE:H	1.75	0.52
11:CK:77:MET:SD	11:CK:80:VAL:HG12	2.50	0.52
32:D6:41:PRO:C	32:D6:43:CYS:H	2.13	0.52
28:B2:3:LEU:HD13	36:BA:98:G:C5'	2.39	0.52
2:CB:155:LEU:CD1	2:CB:157:ARG:O	2.58	0.52
39:BD:75:ILE:N	39:BD:75:ILE:HD13	2.24	0.52
22:AW:54:U:H2'	22:AW:55:U:O4'	2.10	0.52
42:DG:13:GLU:HG3	42:DG:14:GLU:HG3	1.92	0.52
42:DG:34:LEU:HA	42:DG:161:THR:HA	1.92	0.52
25:CZ:78:SER:OG	25:CZ:273:HIS:CE1	2.63	0.52
36:BA:480:A:H2	36:BA:499:U:O2	1.93	0.52
58:BZ:102:LEU:CD2	58:BZ:137:ILE:HB	2.40	0.52
46:BN:115:ARG:HA	46:BN:118:LYS:HZ2	1.72	0.52
22:CW:37:A:H3'	22:CW:38:A:C8	2.43	0.52
12:AL:89:ARG:HE	12:AL:91:LYS:HZ3	0.71	0.52
35:D9:29:ASN:O	35:D9:29:ASN:ND2	2.42	0.52
41:BF:160:ASN:HD21	41:BF:162:LEU:CB	2.23	0.52
14:AN:57:ARG:HG3	14:AN:58:LYS:N	2.25	0.52
43:DH:85:LYS:NZ	43:DH:132:ARG:CA	2.61	0.52
43:DH:85:LYS:CE	43:DH:87:LEU:HG	2.38	0.52
34:B8:6:THR:HG22	34:B8:63:PRO:HD3	1.92	0.52
1:CA:545:C:OP1	4:CD:61:LYS:NZ	2.42	0.52
39:DD:142:VAL:HG21	39:DD:191:ALA:HB1	1.92	0.52
9:CI:55:ALA:O	9:CI:58:HIS:ND1	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:610:G:C6	36:DA:611:C:N4	2.78	0.52
36:DA:657:U:H2'	36:DA:658:C:C6	2.45	0.52
4:AD:133:VAL:HG11	4:AD:138:TYR:HD2	1.75	0.52
57:BY:87:LYS:O	57:BY:88:LYS:HB2	2.09	0.52
12:CL:93:LEU:HD12	12:CL:96:VAL:HG21	1.90	0.52
20:CT:74:LYS:HG2	20:CT:75:ASN:N	2.25	0.52
5:CE:36:ASP:O	5:CE:38:GLN:N	2.43	0.52
36:DA:267:C:C2	36:DA:268:C:C5	2.98	0.52
19:AS:19:VAL:O	19:AS:20:LEU:C	2.48	0.52
8:CH:4:ASP:OD2	8:CH:89:PRO:HD3	2.09	0.52
36:DA:2572:A:C4	40:DE:144:ARG:NH1	2.77	0.52
53:BU:52:ARG:HG2	53:BU:55:ARG:NH2	2.24	0.52
22:AW:4:C:H2'	22:AW:5:G:C8	2.33	0.52
39:BD:267:SER:C	39:BD:269:PHE:N	2.56	0.52
36:DA:1208:C:C4	36:DA:1209:G:N7	2.78	0.52
40:BE:101:ARG:NH1	40:BE:171:GLU:HB2	2.25	0.52
12:AL:28:LYS:O	12:AL:30:ALA:N	2.42	0.52
36:DA:2839:G:H5'	50:DR:46:GLY:HA2	1.91	0.52
1:CA:1462:G:O2'	52:DT:115:ARG:NH2	2.42	0.52
26:B0:40:GLN:HE21	26:B0:59:LEU:CD1	2.23	0.52
51:DS:50:SER:O	51:DS:51:ALA:HB2	2.09	0.52
36:DA:2584:U:C2'	36:DA:2585:U:H5'	2.38	0.52
2:AB:61:LEU:HD23	2:AB:68:ILE:HD11	1.91	0.52
40:DE:117:MET:HA	40:DE:122:PHE:N	2.23	0.52
1:CA:1061:G:O2'	1:CA:1062:U:H5'	2.10	0.52
8:CH:29:SER:HB3	8:CH:32:LYS:HB2	1.90	0.52
39:DD:94:LEU:HD13	39:DD:96:HIS:HE1	1.72	0.52
36:BA:2130:U:OP1	38:BC:5:LYS:CG	2.57	0.52
46:BN:76:SER:O	46:BN:78:TYR:N	2.43	0.52
44:DJ:97:UNK:HA	44:DJ:132:UNK:HA	1.90	0.52
9:AI:48:GLU:HG3	9:AI:101:PHE:HZ	1.74	0.52
1:CA:414:A:C6	1:CA:431:A:C2	2.98	0.52
50:BR:21:TYR:HB3	50:BR:47:PHE:CD2	2.45	0.52
36:DA:2175:C:OP1	38:DC:220:PRO:HA	2.10	0.52
7:AG:13:GLN:O	7:AG:24:THR:OG1	2.18	0.52
36:DA:2447:G:HO2'	36:DA:2500:U:H5	1.58	0.52
2:AB:213:LEU:C	2:AB:213:LEU:HD23	2.29	0.52
36:DA:208:C:H2'	36:DA:209:C:C6	2.44	0.52
36:BA:1423:G:N2	36:BA:1576:U:H1'	2.24	0.52
2:CB:122:PHE:HA	2:CB:127:ILE:HD11	1.90	0.52
32:D6:16:CYS:CB	32:D6:48:VAL:O	2.57	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DY:26:LYS:HG2	57:DY:27:VAL:H	1.75	0.52
53:BU:88:ILE:C	53:BU:90:VAL:H	2.11	0.52
53:BU:90:VAL:O	53:BU:92:ARG:N	2.43	0.52
1:CA:1324:A:H2'	1:CA:1325:C:O4'	2.09	0.52
2:AB:109:SER:O	2:AB:112:VAL:N	2.37	0.52
25:AZ:19:HIS:CB	25:AZ:113:MET:HB3	2.40	0.52
25:AZ:155:ARG:NH2	25:AZ:170:VAL:HG23	2.25	0.52
39:DD:33:LEU:CD1	39:DD:102:LYS:HD2	2.37	0.52
42:DG:11:TYR:HD1	42:DG:15:VAL:HG21	1.75	0.52
57:BY:47:LYS:HG2	57:BY:60:PHE:CZ	2.44	0.52
49:BQ:140:ALA:O	58:BZ:99:TYR:CE2	2.63	0.52
58:BZ:102:LEU:HD23	58:BZ:137:ILE:HB	1.91	0.52
41:BF:53:THR:O	41:BF:57:VAL:HG23	2.10	0.52
36:DA:2189:U:H3'	36:DA:2190:G:H5''	1.92	0.52
14:CN:42:ILE:CG2	14:CN:43:CYS:N	2.71	0.52
3:AC:18:TRP:CE3	3:AC:18:TRP:N	2.78	0.52
34:B8:7:HIS:CB	34:B8:59:LYS:HZ3	2.22	0.52
9:AI:114:TYR:CE1	10:AJ:59:SER:HA	2.45	0.52
1:CA:192:U:H2'	1:CA:193:C:C6	2.41	0.52
25:CZ:122:LEU:O	25:CZ:125:GLN:N	2.41	0.52
25:CZ:320:VAL:HG13	25:CZ:397:ALA:O	2.08	0.52
4:CD:17:VAL:HG21	4:CD:63:LYS:HZ3	1.74	0.52
12:AL:75:HIS:CD2	12:AL:77:LEU:H	2.28	0.52
48:BP:38:GLN:CG	48:BP:39:LYS:H	2.19	0.52
48:BP:23:PRO:CB	48:BP:33:ARG:HG3	2.38	0.52
42:BG:10:LYS:H	42:BG:10:LYS:CD	2.22	0.52
42:BG:173:LEU:O	42:BG:176:LEU:HB3	2.10	0.52
5:CE:33:VAL:HG21	5:CE:109:ILE:HG12	1.92	0.52
19:AS:5:LEU:HG	19:AS:8:GLY:O	2.09	0.52
1:CA:38:G:C2	1:CA:397:A:C2	2.98	0.52
19:CS:4:SER:O	19:CS:5:LEU:O	2.27	0.52
36:BA:466:A:C2'	36:BA:467:G:H5'	2.39	0.52
5:CE:47:LYS:O	5:CE:48:ALA:HB2	2.08	0.52
58:BZ:108:PRO:C	58:BZ:110:GLY:N	2.61	0.52
57:DY:30:VAL:HG12	57:DY:31:LEU:H	1.75	0.52
19:AS:16:LEU:C	19:AS:18:LYS:N	2.60	0.52
37:BB:92:C:H2'	37:BB:93:G:H8	1.75	0.52
9:CI:17:VAL:HG21	9:CI:80:GLY:HA3	1.92	0.52
36:BA:2679:A:H4'	40:BE:165:VAL:HG11	1.92	0.52
40:BE:44:TYR:HE2	40:BE:46:ALA:HB3	1.74	0.52
54:BV:58:VAL:HB	54:BV:98:GLU:HG2	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:858:G:N2	1:CA:870:U:OP2	2.43	0.52
51:BS:89:ARG:HG3	51:BS:92:TYR:CA	2.38	0.52
1:CA:945:G:N2	1:CA:1337:G:N2	2.57	0.52
36:DA:1336:A:OP2	56:DX:64:LYS:HD2	2.10	0.52
9:CI:24:GLY:N	9:CI:60:ASP:OD1	2.43	0.52
20:AT:14:LYS:HA	20:AT:17:ARG:HH21	1.75	0.52
36:BA:15:G:O2'	36:BA:16:G:H5'	2.10	0.52
15:CO:17:ARG:CD	15:CO:26:GLU:HG3	2.40	0.52
38:DC:59:ARG:HH22	38:DC:139:ASN:HD22	1.56	0.52
16:AP:19:ILE:N	16:AP:37:GLY:O	2.42	0.52
36:DA:2033:A:O2'	36:DA:2034:U:P	2.68	0.52
36:BA:1862:G:N2	36:BA:1881:C:H1'	2.25	0.52
1:AA:1286:A:O2'	1:AA:1287:A:P	2.67	0.52
1:CA:310:G:H2'	1:CA:311:C:C6	2.44	0.52
47:BO:86:ILE:N	47:BO:86:ILE:HD12	2.24	0.52
12:CL:92:ASP:O	12:CL:94:PRO:HD3	2.09	0.52
56:DX:31:HIS:ND1	56:DX:32:PRO:HD2	2.24	0.52
26:D0:41:ARG:NH2	36:DA:2387:U:C1'	2.72	0.52
12:AL:18:VAL:HG23	12:AL:19:ARG:N	2.25	0.52
36:BA:2342:C:O2'	36:BA:2374:C:H5''	2.09	0.52
38:DC:106:GLY:O	38:DC:107:TRP:HB3	2.10	0.52
7:CG:48:LYS:O	7:CG:51:GLN:HB2	2.10	0.52
17:CQ:33:GLY:O	17:CQ:34:LYS:O	2.27	0.52
1:CA:1014:A:H4'	19:CS:14:HIS:CE1	2.45	0.52
36:DA:706:A:C2	36:DA:707:G:H1'	2.45	0.52
36:BA:2774:C:H2'	36:BA:2775:A:O4'	2.10	0.52
36:DA:361:G:H2'	36:DA:362:U:H4'	1.91	0.52
36:BA:1120:G:H2'	36:BA:1121:C:H6	1.74	0.52
2:AB:75:LYS:C	2:AB:75:LYS:HD3	2.30	0.52
36:DA:769:G:O2'	36:DA:770:G:H5'	2.09	0.52
1:AA:806:C:O2'	1:AA:807:A:H5'	2.09	0.52
36:BA:2101:G:C2'	36:BA:2102:U:H5''	2.40	0.52
25:CZ:23:GLY:O	25:CZ:24:LYS:O	2.26	0.52
25:CZ:65:THR:HG22	25:CZ:66:ALA:N	2.24	0.52
34:D8:56:GLU:O	34:D8:59:LYS:N	2.34	0.52
32:B6:52:VAL:CG1	32:B6:53:LYS:N	2.65	0.52
28:B2:7:ARG:CD	28:B2:7:ARG:N	2.68	0.52
10:CJ:94:VAL:HG12	10:CJ:95:GLU:N	2.23	0.52
1:CA:369:C:OP2	1:CA:388:G:N2	2.42	0.52
25:AZ:36:ALA:HA	25:AZ:39:ASN:O	2.10	0.52
49:DQ:101:ARG:CG	49:DQ:101:ARG:NH1	2.55	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DQ:133:ARG:HG2	49:DQ:134:ARG:N	2.24	0.52
25:CZ:17:ILE:HG13	25:CZ:104:LEU:HA	1.91	0.52
52:BT:62:THR:HA	52:BT:74:ARG:O	2.10	0.52
22:CW:38:A:O2'	22:CW:39:U:H5''	2.09	0.52
35:D9:1:MET:HE2	35:D9:31:LYS:HB3	1.90	0.52
13:CM:66:LEU:O	13:CM:70:LEU:HB3	2.10	0.52
36:DA:999:U:O2'	36:DA:1000:A:H5'	2.10	0.52
51:DS:59:LYS:CG	51:DS:60:GLY:N	2.72	0.52
49:DQ:141:GLN:HE22	58:DZ:72:ARG:HA	1.75	0.52
58:DZ:57:ILE:N	58:DZ:69:THR:O	2.42	0.52
1:AA:949:A:C1'	1:AA:1364:U:C5	2.93	0.52
55:DW:36:LEU:CD1	55:DW:47:VAL:HG12	2.34	0.52
48:BP:105:LEU:HD12	48:BP:105:LEU:N	2.25	0.52
5:CE:76:ILE:HD11	5:CE:142:LEU:HD22	1.90	0.52
11:CK:89:ALA:O	11:CK:91:ARG:N	2.43	0.52
1:CA:1239:A:H62	1:CA:1299:A:H61	1.58	0.52
31:B5:44:THR:O	31:B5:45:VAL:O	2.28	0.52
36:DA:2784:C:H1'	40:DE:37:ARG:NH1	2.25	0.52
18:AR:67:ALA:O	18:AR:71:LYS:HG3	2.10	0.52
47:DO:24:VAL:O	47:DO:24:VAL:HG23	2.10	0.52
10:CJ:46:ARG:NH1	10:CJ:46:ARG:CG	2.73	0.52
27:D1:62:VAL:HG11	27:D1:70:VAL:HG21	1.91	0.52
42:BG:141:PHE:O	42:BG:144:ILE:HG22	2.10	0.52
43:BH:158:HIS:CE1	43:BH:169:VAL:HG13	2.42	0.52
6:CF:63:TYR:O	6:CF:65:VAL:HG13	2.08	0.52
2:CB:47:THR:HA	2:CB:202:PRO:HG2	1.91	0.52
40:DE:101:ARG:HB2	40:DE:201:THR:CG2	2.39	0.52
35:B9:29:ASN:ND2	35:B9:29:ASN:O	2.42	0.52
1:CA:948:C:O2'	1:CA:949:A:H5'	2.10	0.52
38:DC:53:ARG:HD3	38:DC:56:GLN:NE2	2.25	0.52
36:BA:2155:G:H3'	36:BA:2156:G:C8	2.38	0.52
50:DR:103:ARG:HH11	50:DR:110:PRO:HD3	1.75	0.52
51:DS:49:VAL:HG12	51:DS:50:SER:N	2.23	0.52
36:DA:184:C:H2'	36:DA:185:U:C6	2.45	0.52
1:CA:1005:A:H2'	1:CA:1006:C:H5'	1.91	0.52
29:B3:31:LEU:HD23	29:B3:32:GLN:N	2.25	0.52
24:AY:70:C:H2'	24:AY:71:C:C6	2.40	0.52
1:AA:328:C:O2	1:AA:328:C:C2'	2.57	0.52
5:CE:84:PHE:CB	5:CE:134:ALA:HB2	2.38	0.52
11:CK:29:ILE:HG22	11:CK:44:SER:CB	2.40	0.52
36:BA:2772:C:H2'	36:BA:2773:C:C6	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:122:GLU:O	3:AC:125:GLU:N	2.43	0.52
1:CA:680:C:H2'	1:CA:681:C:H6	1.73	0.52
1:AA:624:C:H4'	16:AP:11:SER:H	1.75	0.52
50:DR:21:TYR:OH	50:DR:43:GLU:HG2	2.10	0.52
36:DA:1796:U:OP1	39:DD:276:LYS:HE3	2.10	0.52
1:CA:831:U:H2'	1:CA:832:C:C6	2.45	0.52
36:DA:2887:U:H2'	36:DA:2888:C:H6	1.74	0.52
4:CD:49:ARG:O	4:CD:51:PRO:N	2.43	0.52
4:CD:49:ARG:O	4:CD:51:PRO:CD	2.58	0.52
49:BQ:93:TYR:N	49:BQ:93:TYR:CD1	2.78	0.52
9:AI:97:LYS:N	9:AI:98:PRO:CD	2.72	0.52
36:DA:2653:U:O2'	43:DH:110:SER:HB2	2.09	0.52
1:AA:157:G:H2'	1:AA:158:G:H8	1.73	0.52
42:BG:49:ASP:O	42:BG:50:ALA:HB3	2.10	0.52
1:CA:744:C:H2'	1:CA:745:C:H6	1.75	0.52
58:BZ:143:GLY:C	58:BZ:144:LEU:HD22	2.30	0.52
1:CA:689:C:O2'	1:CA:690:G:H5'	2.10	0.52
36:DA:2193:G:H5'	36:DA:2193:G:H8	1.74	0.52
24:CY:17:H2U:OP2	24:CY:18:G:H4'	2.10	0.52
36:BA:2636:U:H2'	36:BA:2637:U:C6	2.45	0.52
1:AA:1427:U:H2'	1:AA:1428:A:C8	2.45	0.52
15:AO:82:ILE:HG23	15:AO:83:GLU:N	2.24	0.52
25:CZ:231:ILE:CD1	25:CZ:237:VAL:CG2	2.87	0.52
36:DA:2393:A:H3'	36:DA:2394:C:H6	1.75	0.52
1:AA:1103:C:H2'	1:AA:1104:G:O4'	2.10	0.52
25:AZ:21:ASP:O	25:AZ:22:HIS:C	2.47	0.52
25:AZ:33:TYR:O	25:AZ:36:ALA:HB3	2.10	0.52
39:BD:63:ARG:HH11	39:BD:63:ARG:HG3	1.75	0.52
25:CZ:38:GLU:O	25:CZ:38:GLU:HG2	2.09	0.52
57:DY:43:ASN:HA	57:DY:65:ALA:HB3	1.92	0.52
36:BA:310:A:C6	36:BA:330:A:C6	2.97	0.52
36:BA:86:C:OP1	57:BY:32:PRO:HD2	2.10	0.52
47:BO:104:ARG:C	47:BO:106:LEU:H	2.12	0.52
28:D2:47:ASN:HD22	28:D2:47:ASN:N	1.98	0.52
34:B8:21:LYS:HD2	34:B8:48:PHE:CE1	2.45	0.52
36:BA:1503:U:O2'	36:BA:1504:C:H5'	2.10	0.52
36:BA:1303:G:O2'	36:BA:1304:C:H5'	2.10	0.52
22:CV:66:U:O2'	22:CV:67:C:H5'	2.10	0.52
43:DH:88:LEU:N	43:DH:88:LEU:HD22	2.24	0.52
1:AA:1126:U:O2	1:AA:1126:U:C2'	2.53	0.52
13:CM:23:TYR:CE1	13:CM:70:LEU:HD22	2.37	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:33:PHE:C	9:AI:35:GLU:H	2.13	0.52
43:BH:124:GLU:HG2	43:BH:132:ARG:O	2.10	0.52
19:CS:43:GLU:C	19:CS:45:VAL:N	2.58	0.52
36:BA:2811:G:OP1	40:BE:60:ASN:HB2	2.10	0.52
10:AJ:5:ARG:O	10:AJ:98:ILE:HD12	2.10	0.52
39:DD:64:ILE:O	39:DD:64:ILE:HG13	2.09	0.52
40:DE:45:THR:O	40:DE:46:ALA:HB2	2.10	0.52
14:CN:15:LYS:O	14:CN:16:PHE:O	2.28	0.52
51:DS:15:ARG:NH1	51:DS:15:ARG:HG2	2.25	0.52
48:DP:131:SER:HG	48:DP:134:ALA:HB3	1.75	0.52
2:CB:61:LEU:HA	2:CB:64:ARG:NE	2.25	0.52
16:AP:8:ARG:C	16:AP:9:PHE:HD1	2.12	0.52
3:CC:147:LYS:O	3:CC:203:PHE:HD2	1.93	0.52
58:DZ:17:ALA:HA	58:DZ:20:ARG:HD3	1.91	0.52
7:AG:78:ARG:CG	7:AG:79:ARG:N	2.67	0.52
19:AS:16:LEU:C	19:AS:18:LYS:H	2.12	0.52
30:D4:14:ILE:CD1	30:D4:14:ILE:H	2.23	0.52
30:D4:20:ASN:ND2	30:D4:20:ASN:C	2.64	0.52
5:AE:12:LEU:CD1	5:AE:31:LEU:CB	2.88	0.52
36:BA:483:A:H2'	36:BA:484:C:O4'	2.10	0.52
22:CW:5:G:H22	22:CW:68:C:H42	1.58	0.52
8:CH:5:PRO:HB2	8:CH:6:ILE:HD12	1.91	0.52
16:AP:2:VAL:HG13	16:AP:63:GLY:O	2.10	0.52
57:DY:50:ARG:CG	57:DY:56:PRO:HA	2.39	0.52
1:CA:945:G:N1	1:CA:1337:G:C2	2.78	0.52
1:CA:950:U:H2'	1:CA:951:G:C8	2.44	0.52
38:DC:142:ALA:O	38:DC:144:THR:HG23	2.10	0.52
37:DB:70:C:O2'	37:DB:71:C:H5'	2.10	0.52
36:BA:815:C:H2'	36:BA:816:C:C6	2.45	0.52
36:DA:2892:A:H62	36:DA:2893:G:N2	2.07	0.52
25:AZ:230:THR:HA	25:AZ:235:GLY:O	2.10	0.52
36:BA:2474:C:H5'	36:BA:2475:C:OP2	2.10	0.52
36:BA:2463:C:O2'	36:BA:2464:C:H5'	2.09	0.52
1:CA:376:G:OP2	16:CP:67:THR:HG21	2.10	0.52
38:BC:80:GLY:O	38:BC:83:ILE:HG13	2.09	0.52
1:AA:1497:G:O2'	1:AA:1518:A:N1	2.43	0.52
36:DA:176:G:C2'	36:DA:177:G:H5'	2.40	0.52
36:BA:271(U):G:H2'	36:BA:271(V):G:C8	2.44	0.52
56:DX:4:ALA:N	56:DX:6:ASP:OD2	2.38	0.52
36:DA:284:U:H2'	36:DA:285:C:H6	1.75	0.52
22:AW:7:A:H2'	22:AW:8:U:H5'	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:598:G:H5'	48:DP:15:ARG:CB	2.40	0.52
1:CA:519:C:H2'	1:CA:520:A:C8	2.45	0.52
58:DZ:128:VAL:HG22	58:DZ:129:SER:N	2.25	0.52
36:BA:2115:G:H22	36:BA:2119:A:P	2.33	0.52
36:BA:1286:A:N6	36:BA:1289:C:C2	2.78	0.52
36:BA:571:A:C8	36:BA:2030:A:N6	2.78	0.52
47:DO:105:GLU:O	47:DO:108:GLU:HG2	2.09	0.52
1:CA:269:C:H2'	1:CA:270:A:C8	2.45	0.52
54:DV:21:ARG:HH11	54:DV:21:ARG:HG2	1.75	0.52
36:DA:1657:C:H4'	40:DE:133:LYS:HG2	1.92	0.52
8:CH:119:LEU:HD12	8:CH:124:ALA:HA	1.90	0.52
50:DR:107:ASP:OD1	50:DR:107:ASP:C	2.48	0.52
36:BA:229:A:N3	36:BA:229:A:H2'	2.25	0.52
26:D0:2:ALA:HB3	36:DA:2602:A:H61	1.75	0.52
1:AA:178:C:O2'	1:AA:179:A:H5'	2.10	0.52
4:CD:100:ARG:HH11	4:CD:100:ARG:HG3	1.75	0.52
25:CZ:176:LEU:HD23	60:CZ:501:GDP:C2	2.44	0.52
32:B6:45:LYS:N	32:B6:45:LYS:CD	2.73	0.52
53:BU:97:ASP:OD2	53:BU:101:ARG:NH1	2.43	0.52
53:BU:59:ARG:HH11	53:BU:59:ARG:HG2	1.74	0.52
25:AZ:151:GLU:HG2	25:AZ:155:ARG:HE	1.74	0.52
25:CZ:181:GLN:OE1	25:CZ:195:TRP:HB2	2.10	0.52
57:BY:4:LYS:HD2	57:BY:32:PRO:CG	2.40	0.52
52:BT:27:THR:OG1	52:BT:28:VAL:N	2.41	0.52
46:DN:131:GLN:HE21	46:DN:133:GLN:N	2.08	0.52
56:DX:18:TYR:C	56:DX:20:GLY:H	2.13	0.52
1:CA:973:G:O4'	10:CJ:55:LYS:HE2	2.10	0.52
53:DU:99:ALA:HB2	53:DU:106:PHE:CD1	2.44	0.52
54:DV:49:THR:HB	54:DV:50:PRO:CD	2.40	0.52
54:DV:5:VAL:HG23	54:DV:37:VAL:O	2.10	0.52
39:DD:241:PRO:O	39:DD:243:GLY:N	2.43	0.52
20:CT:57:ARG:HD3	20:CT:103:GLY:N	2.25	0.52
36:DA:2810:A:H1'	40:DE:61:ARG:NH2	2.24	0.52
36:DA:1099:G:H2'	36:DA:1100:C:C6	2.43	0.52
11:CK:85:ARG:HE	11:CK:111:ASP:HB3	1.75	0.52
7:CG:111:ARG:HB2	7:CG:119:ARG:HD2	1.92	0.52
36:BA:1826:G:H4'	39:BD:242:ARG:HH21	1.75	0.52
50:DR:2:ARG:HG3	50:DR:2:ARG:NH1	2.25	0.52
4:AD:188:LEU:HD23	4:AD:189:PRO:O	2.09	0.52
42:BG:122:PRO:HA	42:BG:180:PHE:HD2	1.75	0.52
39:DD:183:ARG:HG2	39:DD:183:ARG:NH1	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2840:C:H2'	36:BA:2841:C:C6	2.45	0.52
51:BS:70:GLY:C	51:BS:101:LEU:HB3	2.30	0.52
7:AG:78:ARG:CG	7:AG:79:ARG:H	2.22	0.52
22:AV:67:C:H2'	22:AV:68:C:C6	2.45	0.52
52:DT:82:LEU:H	52:DT:82:LEU:CD1	2.16	0.52
2:CB:42:ILE:CD1	2:CB:202:PRO:HB2	2.40	0.52
2:AB:80:ILE:CD1	2:AB:80:ILE:H	2.22	0.52
50:DR:103:ARG:O	50:DR:111:LEU:HD11	2.09	0.52
37:DB:68:C:H2'	37:DB:69:G:H8	1.75	0.52
1:CA:59:A:H2'	1:CA:59:A:N3	2.25	0.52
3:AC:154:SER:HA	3:AC:164:ARG:O	2.09	0.52
40:BE:116:VAL:O	40:BE:117:MET:HB2	2.09	0.52
39:DD:65:ILE:HD11	39:DD:67:PHE:CE2	2.45	0.52
36:BA:1351:C:H2'	36:BA:1352:U:C6	2.45	0.52
36:DA:933:A:H2'	36:DA:934:G:O4'	2.09	0.52
50:BR:12:ARG:CG	50:BR:12:ARG:HH11	2.21	0.52
36:BA:361:G:H2'	36:BA:362:U:H4'	1.92	0.52
36:BA:1403:C:H5''	36:BA:1471:A:C1'	2.40	0.52
1:AA:1355:G:O2'	1:AA:1356:G:H5'	2.09	0.52
3:AC:130:VAL:HG12	3:AC:134:ILE:HD11	1.92	0.52
1:AA:617:G:H4'	16:AP:44:THR:O	2.10	0.52
2:CB:142:LEU:HD23	2:CB:142:LEU:C	2.30	0.52
36:BA:565:C:H4'	36:BA:1253:A:C6	2.45	0.52
36:DA:1191:G:H2'	36:DA:1192:G:O4'	2.10	0.52
36:DA:2176:A:H8	36:DA:2176:A:H3'	1.75	0.52
40:DE:13:ARG:HH12	47:DO:74:GLY:CA	2.22	0.52
1:CA:792:A:H4'	1:CA:793:U:O5'	2.10	0.52
2:CB:223:ILE:O	2:CB:224:GLN:C	2.47	0.52
1:AA:1250:A:H4'	9:AI:68:GLY:H	1.73	0.52
36:DA:1259:G:O2'	36:DA:1260:G:H5'	2.10	0.52
1:AA:201:C:H2'	1:AA:202:U:H2'	1.92	0.52
12:AL:58:VAL:CG2	12:AL:60:LEU:HD21	2.40	0.52
36:BA:2259:G:O2'	36:BA:2260:C:H5'	2.09	0.52
36:BA:1114:G:H2'	36:BA:1115:G:C8	2.44	0.52
1:AA:1269:A:C2	1:AA:1313:U:O4'	2.62	0.52
46:BN:7:LYS:O	46:BN:8:GLN:C	2.48	0.52
38:DC:150:GLY:O	38:DC:154:ARG:NH1	2.43	0.51
47:DO:104:ARG:HE	52:DT:33:LYS:CE	2.14	0.51
52:DT:91:ARG:CG	52:DT:116:ALA:HA	2.39	0.51
28:B2:25:VAL:HA	28:B2:28:LYS:HB2	1.92	0.51
36:BA:1884:A:C3'	36:BA:1885:A:H5''	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:D9:1:MET:HE3	35:D9:31:LYS:HB3	1.89	0.51
56:DX:44:GLU:HG3	56:DX:50:LYS:HA	1.92	0.51
1:CA:1225:A:C4'	19:CS:78:ARG:HE	2.24	0.51
32:D6:53:LYS:O	32:D6:54:ILE:OXT	2.28	0.51
51:BS:15:ARG:HG2	51:BS:15:ARG:NH1	2.24	0.51
1:CA:1240:U:H4'	1:CA:1241:G:OP2	2.10	0.51
56:BX:44:GLU:HG3	56:BX:50:LYS:HA	1.91	0.51
22:AW:75:C:H5'	27:B1:30:VAL:HG21	1.92	0.51
40:DE:38:THR:HG22	40:DE:40:GLU:N	2.25	0.51
5:CE:12:LEU:C	5:CE:12:LEU:HD22	2.31	0.51
27:D1:86:SER:C	27:D1:90:ILE:HG12	2.31	0.51
13:CM:83:ASP:CG	13:CM:84:ILE:H	2.12	0.51
50:BR:92:GLY:CA	50:BR:94:TYR:HE1	2.23	0.51
55:DW:70:TYR:O	55:DW:107:LEU:HA	2.10	0.51
1:CA:62:U:O2'	1:CA:63:C:H5''	2.10	0.51
53:BU:57:PHE:HA	53:BU:60:LEU:HB2	1.91	0.51
15:AO:2:PRO:O	15:AO:3:ILE:C	2.47	0.51
30:D4:14:ILE:H	30:D4:14:ILE:HD12	1.73	0.51
31:B5:2:ALA:HB2	36:BA:2015:A:H1'	1.91	0.51
31:B5:2:ALA:HA	36:BA:2015:A:H1'	1.92	0.51
1:CA:783:C:C2'	1:CA:784:C:H5'	2.39	0.51
1:AA:408:A:H5'	4:AD:116:GLN:HB2	1.91	0.51
50:DR:45:ARG:O	50:DR:46:GLY:C	2.48	0.51
51:BS:25:ARG:NH1	51:BS:42:ASP:OD1	2.42	0.51
36:BA:1064:C:H4'	45:BK:87:UNK:CB	2.40	0.51
34:D8:23:VAL:HG12	34:D8:46:ARG:NH1	2.24	0.51
7:AG:111:ARG:HB3	7:AG:113:GLU:OE2	2.10	0.51
4:AD:159:ARG:O	4:AD:162:LEU:N	2.43	0.51
25:CZ:82:CYS:O	25:CZ:84:GLY:N	2.42	0.51
36:BA:469:G:O2'	36:BA:470:A:H5''	2.08	0.51
8:CH:86:ILE:HG21	8:CH:133:LEU:CG	2.40	0.51
47:DO:47:ILE:HG23	47:DO:48:PRO:CD	2.39	0.51
2:CB:28:PHE:CD1	2:CB:190:THR:HA	2.45	0.51
55:DW:29:LEU:HD21	55:DW:33:ARG:NH1	2.25	0.51
26:B0:7:LEU:HD21	49:BQ:81:VAL:HG21	1.92	0.51
36:BA:643:A:O2'	36:BA:644:A:H5'	2.11	0.51
13:AM:119:GLY:O	13:AM:120:LYS:CB	2.57	0.51
41:DF:64:ILE:HG21	41:DF:75:HIS:CB	2.40	0.51
25:CZ:223:MET:HE3	25:CZ:240:GLY:N	2.24	0.51
1:CA:123:C:O5'	1:CA:123:C:H6	1.92	0.51
10:AJ:90:LEU:N	10:AJ:91:PRO:HD3	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:58:GLU:HB2	3:AC:65:ALA:HB2	1.91	0.51
40:DE:108:SER:O	40:DE:162:ALA:N	2.44	0.51
7:AG:15:ASP:HB3	7:AG:19:GLY:H	1.74	0.51
22:AW:8:U:O2'	22:AW:9:A:H5''	2.10	0.51
9:AI:43:ALA:C	9:AI:45:ALA:H	2.14	0.51
52:DT:134:GLU:O	52:DT:135:ALA:HB3	2.10	0.51
50:BR:41:ALA:O	50:BR:43:GLU:N	2.43	0.51
2:AB:20:GLU:HB2	2:AB:190:THR:OG1	2.10	0.51
47:BO:78:ARG:NH2	52:BT:73:GLU:OE1	2.42	0.51
1:AA:1234:C:O2'	1:AA:1235:U:H5'	2.10	0.51
36:DA:71:A:OP2	36:DA:71:A:H3'	2.11	0.51
1:AA:1172:C:H2'	1:AA:1173:G:C8	2.45	0.51
25:CZ:231:ILE:CD1	25:CZ:237:VAL:HG21	2.40	0.51
32:D6:9:LEU:HD13	32:D6:10:LEU:O	2.10	0.51
58:BZ:177:PRO:O	58:BZ:178:GLU:CB	2.58	0.51
13:CM:86:CYS:HB2	19:CS:73:GLU:OE1	2.10	0.51
49:DQ:130:LYS:NZ	58:DZ:81:ARG:HG3	2.25	0.51
36:DA:482:A:H1'	36:DA:498:G:N2	2.25	0.51
47:BO:104:ARG:HE	52:BT:33:LYS:CE	2.16	0.51
47:BO:104:ARG:HH12	52:BT:35:LYS:HB3	1.76	0.51
1:CA:1410:G:H2'	1:CA:1411:C:C6	2.45	0.51
13:AM:11:ARG:HA	13:AM:45:VAL:CB	2.32	0.51
22:CV:4:C:C3'	22:CV:5:G:H5''	2.40	0.51
5:AE:80:ILE:CD1	5:AE:91:LEU:HD22	2.29	0.51
36:DA:139:G:H2'	36:DA:139(A):G:H5''	1.91	0.51
46:BN:28:THR:CG2	46:BN:29:LYS:N	2.73	0.51
37:BB:20:C:C3'	37:BB:21:G:H5''	2.41	0.51
55:BW:13:SER:HA	55:BW:99:ARG:HB2	1.91	0.51
14:CN:7:ILE:HG13	14:CN:8:GLU:HG2	1.91	0.51
30:B4:26:SER:HB2	42:BG:143:GLU:OE2	2.11	0.51
48:BP:59:LEU:CA	48:BP:61:ARG:CZ	2.89	0.51
47:BO:19:ILE:HB	47:BO:41:ALA:HB1	1.92	0.51
4:AD:100:ARG:HE	4:AD:118:ARG:HH12	1.57	0.51
36:BA:2795:G:C2'	36:BA:2796:U:H5'	2.38	0.51
36:BA:2760:C:C3'	36:BA:2761:G:H5''	2.40	0.51
41:DF:41:LEU:HD11	48:DP:7:ARG:HH22	1.75	0.51
13:CM:54:VAL:HG11	30:D4:17:GLY:O	2.10	0.51
36:DA:733:G:N7	36:DA:761:A:C5	2.77	0.51
12:AL:28:LYS:C	12:AL:30:ALA:N	2.59	0.51
51:BS:90:GLY:N	51:BS:91:PRO:HD2	2.26	0.51
36:BA:1099:G:H2'	36:BA:1100:C:H6	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DS:74:ALA:HB1	51:DS:103:GLU:CG	2.39	0.51
36:DA:850:C:O2'	36:DA:851:U:H5'	2.10	0.51
1:AA:629:G:C3'	1:AA:630:G:H5''	2.40	0.51
36:BA:2562:U:C1'	47:BO:23:ARG:HH11	2.21	0.51
1:AA:451:A:H61	1:AA:480:U:H2'	1.75	0.51
51:BS:66:ALA:HA	51:BS:69:VAL:HG12	1.91	0.51
36:BA:1494:A:H2'	36:BA:1495:A:H5''	1.91	0.51
1:CA:498:U:HO2'	1:CA:499:A:H8	1.56	0.51
47:DO:1:MET:HG3	47:DO:67:LYS:HG2	1.93	0.51
1:CA:114:U:H2'	1:CA:115:G:C8	2.46	0.51
36:DA:558:G:P	46:DN:111:PRO:HD2	2.50	0.51
36:DA:2654:A:O5'	36:DA:2654:A:H8	1.93	0.51
36:BA:638:G:H2'	36:BA:639:U:O4'	2.09	0.51
1:CA:1173:G:O2'	1:CA:1174:G:H5'	2.11	0.51
1:CA:475:G:O2'	1:CA:476:G:H5'	2.10	0.51
22:CV:24:G:C6	22:CV:25:C:C4	2.98	0.51
1:CA:575:G:H4'	1:CA:576:G:O5'	2.10	0.51
11:CK:126:ARG:HH11	11:CK:126:ARG:HB3	1.73	0.51
25:CZ:344:PHE:O	25:CZ:346:THR:N	2.43	0.51
34:D8:7:HIS:CB	34:D8:59:LYS:HZ3	2.23	0.51
34:D8:6:THR:HG21	34:D8:63:PRO:HD3	1.91	0.51
28:B2:60:LEU:O	28:B2:60:LEU:HD23	2.10	0.51
39:BD:30:GLU:CG	39:BD:35:LYS:HZ1	2.23	0.51
25:CZ:145:GLU:O	25:CZ:149:LEU:N	2.43	0.51
42:DG:125:PHE:O	42:DG:126:ASP:O	2.28	0.51
1:AA:347:G:H21	1:AA:348:G:H1'	1.75	0.51
1:AA:228:A:H8	1:AA:228:A:C5'	2.18	0.51
1:CA:963:G:N2	10:CJ:55:LYS:HD3	2.24	0.51
36:DA:139:G:C5	36:DA:140:G:H2'	2.45	0.51
36:DA:1154:G:C5'	53:DU:59:ARG:HH12	2.24	0.51
54:DV:47:VAL:C	54:DV:49:THR:H	2.14	0.51
43:BH:88:LEU:HD12	43:BH:130:ARG:HD2	1.92	0.51
8:AH:114:THR:HG21	8:AH:129:VAL:HG23	1.92	0.51
58:DZ:171:ILE:HG13	58:DZ:172:ALA:N	2.25	0.51
58:DZ:125:LEU:HD23	58:DZ:125:LEU:O	2.11	0.51
36:BA:2779:U:H1'	36:BA:2781:A:C5	2.46	0.51
39:DD:37:LEU:O	39:DD:38:LYS:C	2.48	0.51
36:BA:194:G:H2'	36:BA:195:A:O4'	2.09	0.51
48:BP:85:LEU:H	48:BP:85:LEU:CD2	2.23	0.51
1:AA:266:G:H5'	1:AA:267:C:H5	1.71	0.51
40:DE:31:CYS:CB	40:DE:49:LEU:HD12	2.38	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:139:G:C2'	36:BA:139(A):G:H5''	2.39	0.51
19:AS:43:GLU:O	19:AS:45:VAL:N	2.43	0.51
36:BA:2392:A:H1'	48:BP:60:MET:HB3	1.92	0.51
46:BN:30:ILE:O	46:BN:30:ILE:HG22	2.11	0.51
42:BG:173:LEU:O	42:BG:174:GLU:C	2.49	0.51
10:AJ:30:SER:OG	10:AJ:81:THR:HG22	2.11	0.51
47:DO:24:VAL:HG21	47:DO:30:ALA:O	2.10	0.51
36:DA:585:G:C6	36:DA:1251:C:C2	2.98	0.51
6:AF:97:PHE:CD1	18:AR:31:LEU:HD21	2.31	0.51
9:AI:40:LEU:C	9:AI:42:ARG:H	2.13	0.51
40:BE:107:THR:O	40:BE:190:GLY:CA	2.58	0.51
36:DA:1210:A:H5''	36:DA:1212:G:H5'	1.91	0.51
52:DT:16:ARG:NH1	52:DT:16:ARG:HG3	2.21	0.51
48:BP:77:ARG:HG3	48:BP:78:PRO:N	2.26	0.51
36:DA:2843:G:H1	36:DA:2874:C:N4	2.06	0.51
24:AY:46:7MG:H82	24:AY:46:7MG:H5'	1.92	0.51
3:AC:154:SER:CA	3:AC:165:THR:HA	2.41	0.51
47:DO:86:ILE:N	47:DO:86:ILE:HD12	2.25	0.51
36:BA:958:U:H5''	49:BQ:14:ARG:CD	2.40	0.51
1:CA:1003:G:H2'	1:CA:1004:A:C4'	2.41	0.51
10:AJ:8:LEU:N	10:AJ:8:LEU:HD12	2.25	0.51
1:AA:18:C:C2'	1:AA:19:C:H5'	2.40	0.51
36:DA:534:U:H5'	53:DU:42:ALA:HB1	1.91	0.51
25:CZ:263:ARG:CG	25:CZ:264:ARG:N	2.72	0.51
56:DX:65:ARG:HH11	56:DX:65:ARG:HG2	1.75	0.51
16:AP:36:ILE:HD13	16:AP:36:ILE:N	2.23	0.51
18:CR:25:THR:O	18:CR:25:THR:HG22	2.09	0.51
25:CZ:226:GLU:O	25:CZ:300:ARG:HD2	2.11	0.51
36:DA:1403:C:H5''	36:DA:1471:A:C1'	2.40	0.51
36:DA:271(F):C:O2'	36:DA:271(G):C:H5'	2.10	0.51
32:D6:22:ALA:CB	32:D6:39:TYR:CZ	2.93	0.51
36:BA:445:C:O2'	36:BA:446:G:H5'	2.10	0.51
7:AG:28:ASN:O	7:AG:31:MET:HB3	2.10	0.51
39:BD:148:GLU:HB2	39:BD:151:LYS:HD2	1.92	0.51
40:DE:71:GLY:O	40:DE:72:VAL:O	2.29	0.51
36:DA:1381:G:C2'	36:DA:1382:G:H5'	2.40	0.51
1:AA:414:A:C5	1:AA:431:A:C2	2.98	0.51
36:BA:1328:G:H2'	36:BA:1330:C:C5	2.45	0.51
36:BA:898:C:H2'	36:BA:899:A:O4'	2.10	0.51
34:D8:32:LEU:HD11	36:DA:2391:G:OP1	2.09	0.51
36:DA:1853:A:H2'	36:DA:1854:A:C8	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:147:LEU:H	25:AZ:147:LEU:HD22	1.75	0.51
25:AZ:196:VAL:O	25:AZ:198:LYS:N	2.44	0.51
57:BY:81:LYS:HD3	57:BY:97:ARG:O	2.11	0.51
26:D0:80:HIS:N	26:D0:80:HIS:CD2	2.78	0.51
52:BT:31:SER:HG	52:BT:32:TYR:HE1	1.56	0.51
1:AA:346:G:H5'	52:BT:43:GLN:OE1	2.10	0.51
38:DC:113:VAL:O	38:DC:138:PRO:HG3	2.11	0.51
3:CC:9:GLY:HA2	3:CC:12:LEU:HG	1.91	0.51
1:AA:1126:U:H2'	1:AA:1127:G:O5'	2.11	0.51
28:D2:51:ARG:NH1	28:D2:55:ARG:HH22	2.07	0.51
53:DU:92:ARG:HH12	54:DV:10:LYS:CA	2.24	0.51
1:AA:1168:A:C6	1:AA:1169:A:C6	2.98	0.51
39:DD:132:PRO:HB2	39:DD:135:PHE:HD2	1.75	0.51
36:DA:1799:G:OP1	39:DD:260:ARG:HD2	2.10	0.51
37:BB:8:U:H5'	51:BS:17:ARG:NH1	2.25	0.51
55:DW:17:VAL:O	55:DW:20:VAL:HG22	2.10	0.51
4:CD:28:SER:CB	4:CD:29:PRO:CD	2.88	0.51
41:DF:160:ASN:ND2	41:DF:162:LEU:N	2.55	0.51
40:DE:34:VAL:CG1	40:DE:48:GLN:NE2	2.73	0.51
19:AS:43:GLU:C	19:AS:45:VAL:N	2.62	0.51
33:B7:43:THR:HG22	33:B7:44:PRO:O	2.11	0.51
4:AD:88:VAL:HG12	4:AD:90:GLY:N	2.25	0.51
1:AA:388:G:H4'	1:AA:390:C:N4	2.26	0.51
1:AA:368:U:H5	25:AZ:234:ARG:NE	2.09	0.51
43:BH:139:GLN:O	43:BH:143:GLN:HB2	2.11	0.51
1:AA:64:G:H4'	1:AA:66:G:OP1	2.10	0.51
1:CA:323:U:H2'	1:CA:324:G:O4'	2.09	0.51
36:BA:1109:C:H2'	36:BA:1110:G:H5'	1.92	0.51
1:CA:1101:A:O2'	1:CA:1102:A:OP2	2.27	0.51
9:CI:63:ILE:HD11	9:CI:81:ILE:HD11	1.91	0.51
34:B8:14:VAL:HG21	34:B8:22:VAL:HG13	1.91	0.51
40:BE:4:ILE:CD1	40:BE:28:ALA:HB1	2.40	0.51
52:BT:14:TYR:CD1	52:BT:14:TYR:N	2.78	0.51
58:BZ:76:LEU:HD23	58:BZ:82:ARG:C	2.29	0.51
36:DA:1341:U:O4'	56:DX:57:LEU:HG	2.10	0.51
36:DA:877:U:C2'	36:DA:878:A:H5''	2.40	0.51
36:DA:1339:G:H21	36:DA:1603:A:H1'	1.76	0.51
36:BA:953:A:OP2	49:BQ:16:ARG:CD	2.58	0.51
39:BD:132:PRO:O	39:BD:133:LEU:C	2.48	0.51
22:CW:30:G:O2'	22:CW:31:A:H5'	2.11	0.51
1:CA:1431:C:C2'	1:CA:1432:G:H5'	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DD:108:PRO:HB3	39:DD:143:HIS:CE1	2.45	0.51
25:CZ:227:ASP:HB3	25:CZ:229:PHE:HE1	1.75	0.51
36:DA:201:C:H2'	36:DA:202:U:H5'	1.91	0.51
42:DG:172:LEU:HD23	42:DG:176:LEU:HD12	1.93	0.51
14:CN:24:CYS:HB2	14:CN:33:VAL:HG12	1.93	0.51
36:BA:1526:G:O2'	36:BA:1527:G:H5'	2.11	0.51
1:CA:413:G:N3	1:CA:413:G:C2'	2.73	0.51
1:CA:706:A:H4'	11:CK:29:ILE:HD11	1.92	0.51
15:AO:27:VAL:HG12	15:AO:31:LEU:HD13	1.91	0.51
40:DE:33:VAL:O	40:DE:33:VAL:HG13	2.10	0.51
7:AG:152:ALA:O	7:AG:154:TYR:N	2.43	0.51
11:AK:44:SER:OG	11:AK:47:VAL:HG23	2.11	0.51
36:BA:118:A:OP2	36:BA:119:A:H5''	2.10	0.51
54:BV:12:TYR:CE1	54:BV:22:VAL:HG12	2.44	0.51
1:CA:792:A:H1'	1:CA:794:A:N7	2.25	0.51
36:BA:2358:G:H2'	36:BA:2359:C:H6	1.76	0.51
36:BA:1409:C:H2'	36:BA:1410:G:C8	2.45	0.51
52:BT:122:ASP:C	52:BT:124:ASP:H	2.14	0.51
10:AJ:42:THR:HG22	10:AJ:43:ARG:N	2.25	0.51
39:DD:69:ARG:NH2	39:DD:128:GLY:O	2.43	0.51
1:CA:915:A:H2'	1:CA:916:G:H5'	1.92	0.51
1:CA:282:A:C6	1:CA:283:C:C2	2.98	0.51
22:AV:1:G:O4'	26:B0:5:LYS:HE2	2.10	0.51
1:CA:685:G:O2'	1:CA:686:U:H5'	2.11	0.51
55:BW:59:VAL:HG12	55:BW:59:VAL:O	2.11	0.51
50:DR:51:LEU:H	50:DR:51:LEU:CD1	2.23	0.51
44:DJ:22:UNK:O	44:DJ:119:UNK:N	2.44	0.51
25:AZ:150:VAL:HG13	25:AZ:151:GLU:N	2.25	0.51
39:BD:34:VAL:O	39:BD:36:PRO:CD	2.59	0.51
38:BC:116:THR:HB	38:BC:147:PHE:CD1	2.45	0.51
36:BA:1665:A:C2'	36:BA:1666:G:C5'	2.75	0.51
42:DG:68:PRO:HB3	42:DG:92:VAL:HB	1.91	0.51
57:DY:38:ILE:O	57:DY:38:ILE:HG23	2.11	0.51
57:BY:28:LYS:HG2	57:BY:39:VAL:CG2	2.38	0.51
47:BO:107:ARG:NH1	52:BT:36:GLU:HG3	2.26	0.51
36:DA:2465:C:O2'	36:DA:2466:C:H5'	2.10	0.51
49:DQ:116:GLU:O	49:DQ:120:ILE:HG12	2.11	0.51
10:CJ:54:PHE:CZ	10:CJ:55:LYS:HD2	2.45	0.51
53:DU:95:LEU:HD12	54:DV:11:GLN:NE2	2.17	0.51
36:BA:2176:A:H3'	36:BA:2176:A:C8	2.45	0.51
43:DH:16:SER:HB2	43:DH:27:LYS:CB	2.28	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:253:VAL:HA	25:CZ:307:PRO:HG3	1.93	0.51
9:CI:16:ARG:CB	9:CI:64:THR:HB	2.28	0.51
36:DA:271(K):U:H3'	36:DA:271(L):U:H5'	1.91	0.51
10:CJ:34:VAL:HG13	10:CJ:73:ASP:O	2.10	0.51
25:CZ:345:ARG:HH12	25:CZ:384:LEU:CD2	2.23	0.51
11:CK:30:VAL:HG21	11:CK:65:ALA:HA	1.91	0.51
50:BR:63:ARG:HG2	50:BR:80:PHE:CE2	2.46	0.51
39:DD:26:LYS:N	39:DD:26:LYS:HE2	2.26	0.51
40:DE:1:MET:HG3	40:DE:83:ASP:HB3	1.92	0.51
4:AD:173:TRP:HB3	4:AD:187:ARG:HH22	1.74	0.51
48:DP:102:ARG:O	48:DP:103:ALA:HB2	2.10	0.51
36:BA:415:A:N1	36:BA:2409:G:C6	2.78	0.51
30:D4:18:CYS:SG	30:D4:19:GLY:N	2.84	0.51
5:AE:33:VAL:CG2	5:AE:43:LEU:HD13	2.41	0.51
36:DA:892:G:H2'	36:DA:893:C:C6	2.46	0.51
1:CA:1049:U:C1'	1:CA:1201:A:C8	2.93	0.51
41:BF:38:ARG:O	41:BF:42:ALA:CB	2.58	0.51
51:BS:42:ASP:C	51:BS:44:LYS:N	2.61	0.51
1:AA:1256:A:N1	1:AA:1277:C:H2'	2.25	0.51
56:DX:64:LYS:NZ	56:DX:73:ARG:HH21	2.06	0.51
46:BN:3:THR:C	46:BN:4:TYR:CG	2.84	0.51
1:CA:1006:C:H2'	1:CA:1007:C:H6	1.74	0.51
8:CH:114:THR:O	8:CH:116:LYS:N	2.43	0.51
12:CL:50:SER:O	12:CL:51:ALA:HB2	2.10	0.51
36:DA:953:A:O2'	36:DA:954:G:H5'	2.09	0.51
16:AP:32:TYR:HD1	16:AP:32:TYR:O	1.93	0.51
16:AP:51:VAL:HG12	16:AP:52:ASP:N	2.25	0.51
36:DA:848:G:C8	36:DA:848:G:H5'	2.46	0.51
36:DA:2305:A:C3'	36:DA:2306:C:H5''	2.40	0.51
54:DV:69:LYS:HG3	54:DV:87:HIS:H	1.75	0.51
40:BE:23:VAL:HG12	40:BE:184:VAL:O	2.11	0.51
37:DB:95:C:O2'	37:DB:96:U:H5'	2.10	0.51
4:CD:133:VAL:HG13	4:CD:135:LEU:HD22	1.92	0.51
50:BR:87:TYR:O	50:BR:88:ARG:C	2.49	0.51
39:DD:57:GLY:O	39:DD:58:HIS:HB2	2.11	0.51
36:BA:740:U:H2'	36:BA:741:G:H8	1.72	0.51
1:CA:637:G:O2'	1:CA:638:G:H5'	2.10	0.51
36:DA:2340:G:O2'	36:DA:2341:G:H5'	2.09	0.51
40:BE:198:VAL:O	40:BE:199:ARG:HB2	2.10	0.51
25:AZ:339:ARG:HE	25:AZ:352:VAL:HG22	1.76	0.51
36:BA:391:G:C2'	36:BA:392:C:H5'	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2257:U:O2'	36:DA:2258:C:H5'	2.10	0.51
1:AA:828:A:H2'	1:AA:829:G:O4'	2.10	0.51
36:BA:698:C:O2'	36:BA:734:A:N6	2.43	0.51
36:BA:1272:A:C2	36:BA:1618:A:C2	2.99	0.51
58:BZ:59:LEU:O	58:BZ:66:SER:HB2	2.10	0.51
36:BA:206:U:O2	36:BA:206:U:H2'	2.11	0.51
5:CE:87:SER:HB3	5:CE:131:ILE:HD13	1.92	0.51
50:DR:32:GLY:O	50:DR:115:GLU:HA	2.11	0.51
36:DA:1817:G:H2'	36:DA:1818:U:H5'	1.92	0.51
44:BJ:126:UNK:C	44:BJ:128:UNK:N	2.72	0.51
1:AA:991:U:O2	1:AA:991:U:H2'	2.10	0.51
38:DC:50:ASP:OD2	38:DC:52:ARG:HB2	2.10	0.51
36:DA:1120:G:H2'	36:DA:1121:C:H6	1.76	0.51
40:BE:203:LYS:HG3	40:BE:204:ALA:N	2.25	0.51
36:BA:2186:G:H2'	36:BA:2187:G:C8	2.45	0.51
25:AZ:26:THR:O	25:AZ:29:ALA:HB3	2.10	0.51
25:CZ:150:VAL:HG13	25:CZ:151:GLU:H	1.75	0.51
25:CZ:277:LEU:HD13	25:CZ:278:GLN:N	2.23	0.51
36:DA:479:A:N1	36:DA:506:G:N2	2.58	0.51
57:BY:31:LEU:HB2	57:BY:32:PRO:HA	1.92	0.51
57:BY:6:HIS:CD2	57:BY:6:HIS:H	2.29	0.51
36:BA:84:A:H5''	57:BY:9:LYS:HD2	1.92	0.51
49:BQ:134:ARG:HB3	49:BQ:134:ARG:NH1	2.25	0.51
25:AZ:98:GLN:HB2	25:AZ:241:ARG:HG3	1.92	0.51
25:AZ:240:GLY:O	25:AZ:285:ASN:ND2	2.44	0.51
35:D9:24:TYR:O	35:D9:25:VAL:HG23	2.11	0.51
13:AM:11:ARG:CG	13:AM:12:ASN:ND2	2.69	0.51
41:BF:11:VAL:HG12	41:BF:12:LEU:H	1.75	0.51
10:AJ:6:ILE:CD1	10:AJ:23:ILE:HG21	2.41	0.51
12:AL:90:VAL:HG11	12:AL:93:LEU:HG	1.91	0.51
36:DA:832:G:O3'	48:DP:45:LEU:HD11	2.10	0.51
8:AH:116:LYS:CD	8:AH:129:VAL:HG11	2.29	0.51
7:AG:144:MET:CE	22:AW:31:A:H1'	2.41	0.51
55:BW:97:LYS:NZ	55:BW:99:ARG:CZ	2.74	0.51
4:CD:23:GLY:HA3	4:CD:112:VAL:HG22	1.91	0.51
36:BA:664:C:H4'	36:BA:941:A:OP1	2.11	0.51
48:BP:23:PRO:O	48:BP:33:ARG:CD	2.58	0.51
14:CN:4:LYS:C	14:CN:6:LEU:N	2.64	0.51
48:BP:102:ARG:NH1	48:BP:102:ARG:HB2	2.25	0.51
1:AA:266:G:H5''	1:AA:267:C:H5	1.74	0.51
36:BA:141:A:H8	36:BA:1408:C:O2'	1.90	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:92:HIS:ND1	13:AM:98:VAL:HG21	2.26	0.51
46:DN:65:LYS:C	46:DN:67:LEU:H	2.13	0.51
36:BA:1827:C:H2'	36:BA:1828:G:H5'	1.93	0.51
1:CA:539:A:H2'	1:CA:540:G:H8	1.75	0.51
48:DP:84:ASN:CG	48:DP:116:GLY:HA2	2.30	0.51
5:CE:11:ILE:HD13	5:CE:105:VAL:HG13	1.92	0.51
55:BW:54:ALA:CB	55:BW:107:LEU:HD11	2.41	0.51
16:AP:8:ARG:HB3	16:AP:28:ARG:NH1	2.26	0.51
7:CG:66:VAL:O	7:CG:69:VAL:HG12	2.11	0.51
13:AM:78:ILE:HA	13:AM:81:LEU:HD23	1.92	0.51
42:BG:106:LEU:O	42:BG:111:LEU:HG	2.11	0.51
36:DA:1528:A:C2'	36:DA:1528:A:N3	2.73	0.51
24:CY:63:C:H2'	24:CY:64:U:H6	1.76	0.51
18:CR:56:THR:C	18:CR:58:LEU:H	2.13	0.51
46:DN:31:ALA:O	46:DN:34:LEU:HB3	2.09	0.51
36:DA:2011:U:O2'	36:DA:2012:G:H5'	2.10	0.51
36:DA:2136:C:C5	36:DA:2137:C:H5	2.28	0.51
26:B0:62:LEU:HD23	26:B0:62:LEU:N	2.24	0.51
51:BS:40:ILE:HG13	51:BS:41:ASP:N	2.24	0.51
24:CY:65:C:H4'	25:CZ:341:GLN:CG	2.41	0.51
1:CA:1218:C:H2'	1:CA:1219:U:C5	2.44	0.51
1:AA:411:A:N7	1:AA:413:G:H8	2.09	0.51
36:BA:1150:C:O2'	36:BA:1151:G:H5'	2.10	0.51
1:AA:1488:G:H2'	1:AA:1489:G:C8	2.45	0.51
25:CZ:263:ARG:CG	25:CZ:264:ARG:H	2.23	0.51
4:AD:86:LYS:HE3	4:AD:86:LYS:CA	2.41	0.51
36:DA:49:A:H5''	36:DA:51:G:O4'	2.10	0.51
4:CD:85:LYS:HD3	4:CD:92:VAL:HG11	1.92	0.51
4:CD:91:SER:O	4:CD:92:VAL:C	2.49	0.51
1:AA:1286:A:O2'	1:AA:1287:A:C5'	2.59	0.51
36:DA:884:C:C2'	36:DA:885:C:H5'	2.40	0.51
55:DW:63:ASP:O	55:DW:64:MET:HG3	2.10	0.51
7:AG:9:VAL:HG22	7:AG:94:ARG:NH1	2.25	0.51
36:BA:1653:G:O6	50:BR:10:LEU:O	2.29	0.51
1:CA:1166:G:N2	1:CA:1169:A:H3'	2.25	0.51
36:BA:438:G:H2'	36:BA:440:G:H8	1.74	0.51
2:AB:190:THR:O	2:AB:191:ASP:CB	2.59	0.51
47:BO:61:VAL:O	47:BO:84:ALA:HA	2.11	0.51
40:DE:151:TYR:HB3	46:DN:79:PRO:HG3	1.92	0.51
36:BA:2870:C:H2'	36:BA:2871:C:O4'	2.10	0.51
39:BD:28:GLU:HB2	39:BD:29:PRO:HD3	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BO:119:PRO:HB2	52:BT:68:TYR:CE2	2.46	0.51
42:BG:26:GLN:N	42:BG:26:GLN:OE1	2.44	0.51
48:BP:135:LEU:O	48:BP:135:LEU:HD13	2.10	0.51
48:DP:23:PRO:CD	48:DP:33:ARG:HE	2.21	0.51
32:B6:41:PRO:O	32:B6:43:CYS:N	2.44	0.51
53:BU:61:TRP:C	53:BU:65:ILE:HD13	2.31	0.51
53:BU:96:ALA:C	53:BU:98:LEU:H	2.14	0.51
2:CB:69:LEU:HB2	2:CB:159:PRO:CG	2.40	0.51
39:DD:102:LYS:O	39:DD:103:ARG:HG2	2.10	0.51
42:DG:130:ASN:CG	42:DG:160:VAL:HG13	2.31	0.51
42:DG:125:PHE:CD2	42:DG:131:TYR:HD1	2.29	0.51
57:BY:67:LEU:HD21	57:BY:71:LYS:CE	2.39	0.51
57:BY:77:PRO:O	57:BY:78:ALA:CB	2.59	0.51
58:BZ:8:TYR:N	58:BZ:8:TYR:CD1	2.79	0.51
1:AA:137:C:H42	1:AA:226:G:H1	1.58	0.51
36:BA:2537:U:H2'	36:BA:2538:C:C6	2.46	0.51
42:BG:44:GLY:O	42:BG:47:LYS:HE2	2.10	0.51
36:BA:25:U:H5'	55:BW:78:GLU:O	2.10	0.51
41:DF:132:VAL:CG2	41:DF:133:ASN:H	2.11	0.51
48:BP:102:ARG:O	48:BP:103:ALA:HB2	2.11	0.51
7:CG:117:ALA:O	7:CG:118:VAL:C	2.48	0.51
46:DN:67:LEU:O	46:DN:68:GLU:HB2	2.11	0.51
3:CC:112:SER:O	3:CC:113:ALA:C	2.49	0.51
31:D5:4:HIS:CB	31:D5:5:PRO:CD	2.80	0.51
7:CG:70:LYS:HB3	7:CG:96:GLN:HG2	1.93	0.51
36:DA:104:U:H2'	36:DA:105:C:H5'	1.93	0.51
6:CF:43:LEU:HD22	6:CF:43:LEU:N	2.20	0.51
1:CA:1288:A:H1'	1:CA:1352:C:O2'	2.11	0.51
36:DA:2377:A:H2'	36:DA:2378:A:C8	2.46	0.51
22:CV:21:A:O2'	22:CV:22:G:H5''	2.09	0.51
51:BS:30:ARG:NH2	51:BS:62:LYS:HB3	2.22	0.51
40:BE:168:MET:HG3	40:BE:168:MET:O	2.10	0.51
51:BS:99:LYS:HZ3	51:BS:99:LYS:HB3	1.76	0.51
36:BA:2444:G:OP2	41:BF:68:LYS:NZ	2.30	0.51
38:BC:73:ARG:HB2	38:BC:111:ASP:OD2	2.11	0.51
51:BS:92:TYR:O	51:BS:93:LYS:C	2.49	0.51
49:BQ:54:MET:HG2	49:BQ:64:ILE:HD11	1.93	0.51
36:BA:2419:U:H2'	36:BA:2420:C:C6	2.46	0.51
36:BA:2512:C:H4'	40:BE:122:PHE:CE2	2.46	0.51
25:CZ:116:THR:O	25:CZ:116:THR:HG22	2.11	0.51
38:BC:6:ARG:O	38:BC:10:LEU:CD2	2.58	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DG:62:LEU:CD1	42:DG:62:LEU:H	2.23	0.51
39:DD:16:MET:CE	39:DD:208:LYS:HD2	2.39	0.51
1:AA:29:G:C2'	1:AA:30:U:H5'	2.40	0.51
29:D3:31:LEU:HD23	29:D3:32:GLN:H	1.74	0.51
3:AC:131:ARG:HH11	3:AC:166:GLU:CG	2.23	0.51
1:CA:763:G:O2'	1:CA:764:C:H5'	2.11	0.51
14:CN:24:CYS:SG	14:CN:39:LEU:HA	2.50	0.51
37:DB:80:U:H2'	37:DB:81:G:H21	1.75	0.51
1:CA:292:G:N7	1:CA:293:G:H1'	2.25	0.51
27:D1:32:LYS:C	27:D1:33:LYS:HG2	2.31	0.51
1:AA:624:C:H4'	16:AP:11:SER:N	2.26	0.51
32:D6:7:ILE:CG2	32:D6:29:ASN:HD22	2.23	0.51
13:AM:117:VAL:O	13:AM:117:VAL:HG12	2.09	0.51
42:DG:84:LYS:HD2	42:DG:84:LYS:H	1.75	0.51
38:DC:6:ARG:HD2	38:DC:34:THR:O	2.11	0.51
36:BA:171:G:O2'	36:BA:172:C:H5'	2.11	0.51
7:AG:125:MET:O	7:AG:128:ALA:HB3	2.10	0.51
1:AA:946:A:H2'	1:AA:947:G:C8	2.46	0.51
1:AA:1525:G:O2'	1:AA:1526:G:H5'	2.11	0.51
1:CA:935:A:N1	7:CG:3:ARG:NH2	2.59	0.51
36:BA:1208:C:O2	36:BA:1208:C:H2'	2.10	0.51
52:BT:134:GLU:O	52:BT:135:ALA:HB3	2.10	0.51
28:B2:3:LEU:HD23	28:B2:3:LEU:C	2.32	0.51
28:B2:9:GLN:HB3	28:B2:60:LEU:CD1	2.39	0.51
1:AA:963:G:N2	10:AJ:55:LYS:HD3	2.26	0.51
58:DZ:122:ARG:NH1	58:DZ:122:ARG:CG	2.74	0.51
39:DD:73:VAL:HG13	39:DD:120:GLY:HA2	1.92	0.51
42:DG:46:ALA:HB2	42:DG:88:ILE:HG13	1.93	0.51
36:DA:481:G:H1'	36:DA:506:G:N2	2.26	0.51
49:BQ:27:VAL:HG21	49:BQ:134:ARG:HG3	1.91	0.51
58:BZ:49:ARG:O	58:BZ:50:GLN:C	2.48	0.51
57:DY:85:VAL:HG11	57:DY:92:ASN:OD1	2.11	0.51
49:DQ:120:ILE:O	49:DQ:122:GLY:N	2.43	0.51
36:DA:141:A:C8	36:DA:1408:C:O2'	2.61	0.51
36:BA:271(K):U:H3'	36:BA:271(L):U:H5'	1.92	0.51
58:DZ:178:GLU:O	58:DZ:180:VAL:HB	2.10	0.51
39:DD:132:PRO:O	39:DD:133:LEU:C	2.49	0.51
58:DZ:30:ASN:OD1	58:DZ:90:VAL:HB	2.11	0.51
36:BA:27:G:N2	36:BA:512:G:C2'	2.72	0.51
36:BA:657:U:H2'	36:BA:658:C:C6	2.46	0.51
52:DT:1:MET:O	52:DT:1:MET:HG3	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:268:C:H42	36:DA:424:G:H1	1.59	0.51
39:DD:270:ILE:C	39:DD:270:ILE:HD12	2.30	0.51
36:BA:2128:C:P	38:BC:36:LYS:HB2	2.51	0.51
53:BU:56:ASP:C	53:BU:60:LEU:HG	2.30	0.51
30:D4:16:CYS:SG	30:D4:17:GLY:N	2.84	0.51
31:B5:3:LYS:HE2	36:BA:747:U:OP2	2.11	0.51
46:BN:39:ARG:C	46:BN:41:ASP:H	2.13	0.51
46:DN:16:ILE:O	46:DN:54:VAL:HA	2.10	0.51
6:CF:91:VAL:CG1	6:CF:92:LYS:H	2.23	0.51
1:CA:858:G:C6	1:CA:869:G:C8	2.99	0.51
57:DY:50:ARG:HG3	57:DY:56:PRO:CA	2.41	0.51
1:CA:443:C:H2'	1:CA:444:C:C6	2.46	0.51
37:DB:68:C:H2'	37:DB:69:G:O4'	2.10	0.51
9:CI:20:ARG:HG3	9:CI:20:ARG:NH1	2.24	0.51
3:AC:53:ALA:HB2	3:AC:115:LEU:CD2	2.41	0.51
24:AY:54:5MU:H2'	24:AY:55:PSU:O4'	2.11	0.51
15:CO:17:ARG:CG	15:CO:26:GLU:HG3	2.41	0.51
1:CA:763:G:H2'	1:CA:764:C:C6	2.42	0.51
55:BW:44:ALA:O	55:BW:47:VAL:N	2.44	0.51
36:BA:2012:G:O3'	55:BW:96:ILE:HG13	2.11	0.51
36:DA:824:A:H1'	36:DA:2358:G:N7	2.26	0.51
36:BA:1030:G:C6	36:BA:1125:G:N2	2.79	0.51
36:BA:1398:C:H2'	36:BA:1399:C:C6	2.46	0.51
36:DA:271(U):G:H2'	36:DA:271(V):G:C8	2.43	0.51
36:BA:247:G:C8	36:BA:249:C:C6	2.98	0.51
36:DA:2489:G:C6	36:DA:2490:G:C6	2.98	0.51
36:DA:320:A:OP2	41:DF:137:LYS:HE3	2.11	0.51
36:DA:528:A:H5''	36:DA:528:A:C8	2.45	0.51
1:AA:659:U:O2'	1:AA:660:G:H5'	2.11	0.51
18:AR:53:ARG:C	18:AR:55:ARG:H	2.12	0.51
38:BC:59:ARG:HH22	38:BC:139:ASN:ND2	2.08	0.51
36:BA:2886:G:H2'	36:BA:2887:U:C6	2.45	0.51
36:DA:840:C:H2'	36:DA:841:A:H8	1.76	0.51
22:AW:24:G:H2'	22:AW:25:C:O4'	2.10	0.51
11:CK:126:ARG:O	11:CK:127:LYS:C	2.49	0.51
48:BP:9:ASN:H	48:BP:10:PRO:CD	2.24	0.51
36:DA:2174:C:H1'	38:DC:217:THR:O	2.11	0.51
2:AB:226:ARG:C	2:AB:226:ARG:HD2	2.30	0.51
36:DA:114:U:H5'	36:DA:114:U:H6	1.75	0.51
1:CA:314:C:O2'	1:CA:315:A:H5'	2.11	0.51
36:DA:496:G:H1'	55:DW:61:ASN:ND2	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2098:U:H3	36:BA:2191:G:H1	1.59	0.51
34:D8:7:HIS:HB3	34:D8:59:LYS:HZ3	1.75	0.51
36:DA:2389:G:C5'	36:DA:2390:U:H5'	2.39	0.51
52:DT:41:ARG:NH1	52:DT:41:ARG:HG2	2.26	0.51
10:AJ:55:LYS:N	10:AJ:55:LYS:CE	2.73	0.51
25:AZ:196:VAL:O	25:AZ:197:ASP:C	2.48	0.51
39:DD:43:ARG:CB	39:DD:54:ARG:HB2	2.41	0.51
25:CZ:150:VAL:HG13	25:CZ:151:GLU:N	2.26	0.51
42:DG:38:VAL:O	42:DG:158:ALA:N	2.36	0.51
57:BY:36:ALA:HB1	57:BY:67:LEU:O	2.11	0.51
57:BY:6:HIS:N	57:BY:6:HIS:CD2	2.79	0.51
25:AZ:224:PRO:O	25:AZ:240:GLY:HA3	2.11	0.51
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.45	0.51
54:BV:38:LEU:C	54:BV:39:LEU:HD13	2.32	0.51
3:CC:50:ALA:HB1	3:CC:70:VAL:HG11	1.92	0.51
39:DD:173:VAL:HG12	39:DD:185:VAL:O	2.11	0.51
55:BW:10:VAL:HG21	55:BW:103:ILE:HG13	1.92	0.51
14:CN:8:GLU:C	14:CN:10:ALA:N	2.64	0.51
36:DA:1109:C:H2'	36:DA:1110:G:H5'	1.93	0.51
36:DA:1301:A:O2'	36:DA:1302:A:C2'	2.49	0.51
19:CS:16:LEU:C	19:CS:18:LYS:H	2.13	0.51
1:CA:1312:G:N2	1:CA:1313:U:C2	2.79	0.51
36:BA:139(A):G:H3'	36:BA:140:G:H8	1.75	0.51
25:AZ:277:LEU:HD13	25:AZ:278:GLN:N	2.25	0.51
4:AD:17:VAL:O	4:AD:18:LYS:O	2.28	0.51
19:CS:32:LYS:O	19:CS:33:THR:CB	2.59	0.51
58:BZ:96:VAL:HG13	58:BZ:97:GLU:H	1.74	0.51
13:AM:3:ARG:HB2	30:B4:34:GLU:HG2	1.93	0.51
36:BA:2758:A:C2	36:BA:2759:G:H1'	2.45	0.51
49:DQ:31:ASP:O	49:DQ:32:TYR:CG	2.64	0.51
18:CR:53:ARG:NH1	18:CR:60:ALA:HA	2.26	0.51
1:AA:1049:U:H4'	1:AA:1050:G:OP2	2.10	0.51
52:DT:6:LEU:O	52:DT:10:VAL:HG23	2.11	0.51
36:DA:2523:G:C2'	36:DA:2524:G:C5'	2.87	0.51
27:D1:4:VAL:HG22	27:D1:5:CYS:N	2.26	0.51
40:BE:35:GLN:HG2	40:BE:36:ARG:H	1.73	0.51
22:CW:6:G:H2'	22:CW:7:A:O4'	2.11	0.51
35:B9:29:ASN:HD21	35:B9:32:HIS:CE1	2.29	0.51
1:CA:858:G:C5'	1:CA:858:G:H8	2.24	0.51
1:CA:1050:G:O2'	1:CA:1051:C:O5'	2.29	0.51
36:DA:1771:C:O2'	36:DA:1786:A:H8	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:90:LYS:HD2	25:CZ:90:LYS:H	1.76	0.51
26:B0:37:LEU:N	26:B0:59:LEU:O	2.35	0.51
36:BA:953:A:O2'	36:BA:954:G:H5'	2.11	0.51
54:BV:15:GLU:O	54:BV:16:PRO:O	2.27	0.51
39:BD:131:LEU:HB3	39:BD:132:PRO:CD	2.41	0.51
1:AA:188:C:O2'	1:AA:189:G:H5'	2.11	0.51
36:DA:954:G:N3	36:DA:2274:A:H2	2.07	0.51
20:AT:14:LYS:O	20:AT:18:GLN:HB2	2.11	0.51
51:BS:97:ARG:O	51:BS:97:ARG:NH2	2.44	0.51
38:BC:30:LYS:HD3	38:BC:185:LEU:HD12	1.93	0.51
1:CA:1415:G:H2'	1:CA:1416:G:H8	1.75	0.51
39:BD:276:LYS:HD3	39:BD:276:LYS:OXT	2.11	0.51
1:CA:304:U:H2'	1:CA:305:G:H8	1.72	0.51
36:BA:860:U:C5	36:BA:917:A:N7	2.79	0.51
22:CV:63:G:H2'	22:CV:64:A:C8	2.46	0.51
25:AZ:20:VAL:HG12	25:AZ:115:GLN:NE2	2.26	0.51
38:DC:90:GLY:O	38:DC:153:ILE:HG21	2.11	0.51
1:AA:242:C:H2'	1:AA:243:A:H5'	1.92	0.51
36:DA:2351:G:HO2'	36:DA:2352:A:H8	1.57	0.51
36:BA:1632:A:C5	36:BA:1633:G:C6	2.98	0.51
1:AA:678:U:H2'	1:AA:679:C:C6	2.45	0.51
1:CA:1197:G:O2'	1:CA:1198:G:H5'	2.11	0.51
1:CA:1385:G:C2'	1:CA:1386:G:H5'	2.40	0.51
36:DA:487:C:C5	36:DA:488:G:N7	2.79	0.51
36:BA:859:G:C2	36:BA:2268:A:C2	2.99	0.51
25:CZ:147:LEU:H	25:CZ:147:LEU:HD22	1.76	0.51
40:DE:176:ILE:HG22	40:DE:176:ILE:O	2.09	0.51
20:CT:13:LEU:HD23	20:CT:13:LEU:N	2.24	0.51
32:D6:30:THR:CG2	32:D6:31:PRO:HD2	2.41	0.51
34:D8:13:ARG:CA	48:DP:63:PRO:HA	2.41	0.51
28:B2:35:LEU:O	28:B2:39:ALA:CB	2.57	0.51
28:B2:70:GLN:O	28:B2:71:ASN:CB	2.57	0.51
56:BX:12:VAL:HB	56:BX:17:ALA:HB3	1.92	0.51
36:BA:1857:G:C6	36:BA:1858:G:C2	2.99	0.51
36:BA:330:A:N1	36:BA:1210:A:H2'	2.25	0.51
26:D0:51:VAL:HG13	26:D0:60:PHE:O	2.10	0.51
52:BT:30:VAL:HG22	52:BT:84:GLN:HG3	1.92	0.51
52:BT:29:ARG:CB	52:BT:85:LYS:HA	2.38	0.51
2:CB:98:LEU:O	2:CB:99:GLY:C	2.49	0.51
1:AA:228:A:H2'	1:AA:229:U:O4'	2.11	0.51
36:BA:2476:A:H2'	36:BA:2477:C:C5'	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BU:8:VAL:HG12	53:BU:11:ARG:NH2	2.26	0.51
36:BA:1139:G:N2	36:BA:1140:C:C2	2.78	0.51
46:BN:23:LEU:HB3	46:BN:60:ILE:CG2	2.41	0.51
46:BN:25:ARG:O	46:BN:28:THR:CG2	2.59	0.51
1:CA:542:G:H2'	1:CA:543:C:H6	1.76	0.51
4:CD:13:ARG:O	4:CD:15:GLU:N	2.44	0.51
36:BA:671:C:H2'	36:BA:672:C:H6	1.75	0.51
36:DA:260:G:H1'	36:DA:621:A:H1'	1.93	0.51
42:BG:138:GLN:CB	42:BG:153:ARG:O	2.49	0.51
32:D6:53:LYS:HD3	32:D6:54:ILE:H	1.76	0.51
40:DE:77:ILE:HG22	40:DE:78:LEU:HD12	1.93	0.51
7:CG:118:VAL:CG2	7:CG:119:ARG:N	2.74	0.51
32:B6:25:LYS:HZ1	34:B8:34:TRP:HZ2	1.59	0.51
48:DP:114:ILE:HD12	48:DP:115:LEU:N	2.26	0.51
20:CT:74:LYS:HD3	20:CT:74:LYS:N	2.26	0.51
4:AD:196:LEU:C	4:AD:198:VAL:H	2.14	0.51
20:AT:45:GLN:NE2	20:AT:46:GLU:N	2.59	0.51
52:DT:98:LYS:HB3	52:DT:100:TYR:HE1	1.74	0.51
28:D2:43:GLN:HG2	28:D2:44:LEU:N	2.26	0.51
36:BA:2756:U:C1'	36:BA:2757:A:H5''	2.38	0.51
4:AD:67:ILE:HG22	4:AD:68:TYR:CD1	2.45	0.51
36:BA:2864:G:H2'	36:BA:2865:U:O4'	2.11	0.51
17:CQ:9:VAL:HG11	17:CQ:84:LEU:CD1	2.36	0.51
36:DA:2039:C:O2'	36:DA:2040:C:H5'	2.11	0.51
51:BS:35:ILE:HD11	51:BS:99:LYS:CE	2.41	0.51
36:DA:1064:C:H4'	45:DK:87:UNK:CB	2.41	0.51
26:B0:45:PHE:HB2	26:B0:59:LEU:HD11	1.92	0.51
39:DD:201:HIS:O	39:DD:203:ASN:N	2.44	0.51
43:DH:143:GLN:C	43:DH:143:GLN:NE2	2.62	0.51
33:D7:27:GLY:O	33:D7:30:VAL:HB	2.11	0.51
1:CA:451:A:H61	1:CA:480:U:H2'	1.74	0.51
14:CN:22:THR:CB	14:CN:33:VAL:HG21	2.41	0.51
36:BA:590:A:H2'	36:BA:591:C:H6	1.74	0.51
36:DA:1374:G:C6	36:DA:1375:C:C4	2.99	0.51
15:AO:39:LEU:HD13	15:AO:56:LEU:HB2	1.92	0.51
11:CK:108:ILE:O	18:CR:87:ARG:HA	2.11	0.51
36:BA:710:G:O2'	36:BA:711:G:H5'	2.11	0.51
1:AA:821:G:H2'	1:AA:822:C:H6	1.76	0.51
1:AA:537:G:H2'	1:AA:538:G:C8	2.46	0.51
15:AO:6:GLU:CD	15:AO:6:GLU:H	2.14	0.51
36:DA:1316:U:O2'	36:DA:1317:A:H5'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:960:A:C8	36:DA:962:G:C8	2.99	0.51
37:BB:3:C:H42	37:BB:118:G:H1	1.59	0.51
20:AT:94:ALA:O	20:AT:95:ALA:HB3	2.11	0.51
20:CT:94:ALA:O	20:CT:95:ALA:HB3	2.11	0.51
38:DC:41:VAL:HG21	38:DC:185:LEU:HD22	1.93	0.51
36:BA:108:U:H2'	36:BA:109:G:H8	1.75	0.51
10:AJ:84:GLN:O	10:AJ:88:LEU:HB3	2.11	0.51
36:DA:1429:G:H2'	36:DA:1430:C:C6	2.46	0.51
52:BT:95:ARG:HH11	52:BT:95:ARG:HB3	1.76	0.51
36:DA:158:U:H3'	36:DA:158:U:O2	2.11	0.51
25:CZ:194:GLU:HA	25:CZ:194:GLU:OE1	2.11	0.51
20:AT:80:ARG:HG2	20:AT:80:ARG:HH11	1.76	0.51
36:BA:796:C:H2'	36:BA:797:C:C6	2.46	0.51
1:CA:130:A:C8	17:CQ:63:ARG:HG3	2.45	0.51
39:DD:144:ALA:HB3	39:DD:192:THR:CG2	2.42	0.51
36:BA:1695:G:H2'	36:BA:1696:G:O4'	2.11	0.51
4:CD:170:VAL:HG12	4:CD:171:GLY:N	2.26	0.50
25:CZ:269:GLY:C	25:CZ:270:VAL:HG23	2.31	0.50
34:D8:39:LYS:O	34:D8:43:GLN:HG3	2.10	0.50
52:BT:120:ARG:HA	52:BT:123:GLN:HG2	1.93	0.50
41:BF:167:ALA:HB1	41:BF:173:VAL:HG11	1.92	0.50
36:DA:1887:C:C3'	36:DA:1888:G:H5''	2.40	0.50
36:BA:2590:A:H2'	36:BA:2591:C:C6	2.44	0.50
28:B2:18:PRO:O	28:B2:21:LEU:HD12	2.11	0.50
25:CZ:163:PHE:HD1	25:CZ:164:PRO:HD2	1.76	0.50
36:DA:2310:A:O2'	36:DA:2311:A:H5'	2.11	0.50
42:DG:12:TYR:O	42:DG:13:GLU:HB3	2.10	0.50
36:DA:2681:C:H2'	36:DA:2681:C:O2	2.11	0.50
43:DH:50:VAL:HG12	43:DH:52:VAL:CG2	2.41	0.50
58:BZ:35:ARG:O	58:BZ:37:VAL:HG13	2.12	0.50
9:AI:4:TYR:CZ	9:AI:88:TYR:CB	2.91	0.50
41:BF:126:VAL:HG11	41:BF:142:TRP:CH2	2.44	0.50
10:CJ:54:PHE:CD1	10:CJ:55:LYS:HE3	2.46	0.50
54:BV:49:THR:HB	54:BV:50:PRO:CD	2.41	0.50
26:B0:77:ARG:NH2	36:BA:857:C:H5'	2.26	0.50
48:DP:146:VAL:HG13	48:DP:147:LEU:N	2.26	0.50
41:BF:178:PRO:O	41:BF:180:GLY:N	2.44	0.50
36:DA:605:C:H6	36:DA:657:U:O2'	1.94	0.50
51:BS:59:LYS:HG2	51:BS:60:GLY:N	2.12	0.50
55:BW:18:ARG:HA	55:BW:76:VAL:HG11	1.93	0.50
40:DE:35:GLN:CG	40:DE:36:ARG:H	2.24	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:59:TYR:CE2	11:CK:63:LEU:HD11	2.46	0.50
19:CS:11:VAL:HG22	19:CS:16:LEU:HD11	1.92	0.50
34:B8:25:MET:CG	48:BP:64:LYS:HB2	2.38	0.50
36:BA:218:A:C2	36:BA:235:U:H4'	2.46	0.50
39:DD:172:TYR:CD1	39:DD:186:HIS:HA	2.46	0.50
25:AZ:267:VAL:CG2	25:AZ:288:VAL:CG1	2.83	0.50
38:DC:15:ASP:OD2	38:DC:18:LYS:HB2	2.10	0.50
36:DA:1536:C:C4	36:DA:1537:G:H1'	2.47	0.50
25:AZ:11:HIS:CE1	25:AZ:78:SER:HB2	2.45	0.50
36:BA:2408:U:C6	36:BA:2408:U:H3'	2.46	0.50
58:DZ:14:LYS:HB3	58:DZ:17:ALA:HB3	1.93	0.50
55:DW:6:ILE:HG12	55:DW:104:THR:HG21	1.92	0.50
36:BA:2159:G:O2'	36:BA:2160:G:H5''	2.11	0.50
8:CH:88:LYS:HB3	8:CH:89:PRO:HD2	1.93	0.50
39:DD:24:ILE:O	39:DD:24:ILE:CG1	2.59	0.50
13:CM:54:VAL:HA	13:CM:57:ARG:NH1	2.26	0.50
1:AA:1201:A:H5'	1:AA:1203:C:OP2	2.11	0.50
36:DA:1761:C:H3'	36:DA:1762:A:H8	1.76	0.50
1:CA:1392:G:N2	1:CA:1502:A:C8	2.79	0.50
1:CA:1392:G:O2'	1:CA:1393:U:H5'	2.10	0.50
1:CA:1206:G:H4'	3:CC:192:THR:O	2.11	0.50
36:DA:2606:C:O2'	36:DA:2607:G:H5'	2.11	0.50
52:DT:110:ILE:C	52:DT:112:ARG:H	2.15	0.50
13:AM:49:THR:HB	13:AM:52:GLU:HG3	1.93	0.50
38:DC:26:ALA:O	38:DC:30:LYS:HG2	2.11	0.50
15:CO:11:VAL:O	15:CO:12:ILE:C	2.50	0.50
39:DD:94:LEU:HD22	39:DD:95:LEU:N	2.26	0.50
8:CH:11:THR:HA	8:CH:14:ARG:NH1	2.25	0.50
40:BE:68:ALA:C	40:BE:70:ALA:H	2.15	0.50
36:BA:2008:C:H2'	36:BA:2009:G:H8	1.76	0.50
36:DA:2128:C:O2'	36:DA:2129:C:O5'	2.26	0.50
43:DH:45:VAL:HG12	43:DH:45:VAL:O	2.11	0.50
8:CH:1:MET:O	8:CH:2:LEU:O	2.29	0.50
9:AI:98:PRO:HB2	9:AI:99:LEU:HD22	1.92	0.50
1:AA:158:G:O2'	1:AA:159:G:H5'	2.11	0.50
1:CA:332:G:O2'	1:CA:333:G:H5'	2.11	0.50
18:AR:40:LEU:C	18:AR:42:ARG:N	2.65	0.50
1:CA:744:C:O2'	1:CA:745:C:H5'	2.11	0.50
7:AG:57:GLU:O	7:AG:60:LYS:HB3	2.11	0.50
36:DA:407:G:H2'	36:DA:408:G:H8	1.76	0.50
9:AI:63:ILE:HD13	9:AI:77:ILE:HG23	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:30:ALA:C	13:AM:32:GLU:H	2.14	0.50
26:D0:18:ALA:HB1	36:DA:2271:G:OP1	2.11	0.50
42:BG:34:LEU:O	42:BG:34:LEU:HD12	2.10	0.50
41:DF:150:GLY:HA2	41:DF:172:TRP:CD2	2.46	0.50
1:AA:667:G:H4'	15:AO:51:HIS:ND1	2.26	0.50
36:DA:1322:A:OP1	55:DW:11:ARG:HG3	2.11	0.50
17:CQ:81:ARG:C	17:CQ:83:ASP:N	2.63	0.50
22:AW:51:U:H2'	22:AW:52:G:C8	2.46	0.50
47:DO:9:GLU:HG3	47:DO:10:VAL:N	2.26	0.50
25:CZ:241:ARG:HA	25:CZ:285:ASN:ND2	2.25	0.50
34:D8:35:GLN:O	34:D8:36:LYS:HG3	2.12	0.50
48:DP:16:ARG:CD	48:DP:18:ARG:H	2.18	0.50
48:DP:28:GLY:C	48:DP:29:LYS:HD2	2.31	0.50
47:DO:107:ARG:HA	47:DO:112:MET:CE	2.42	0.50
32:B6:15:GLU:O	32:B6:17:LYS:N	2.43	0.50
32:D6:20:ASN:C	32:D6:21:TYR:CG	2.85	0.50
28:B2:30:ARG:O	28:B2:34:GLU:HB2	2.12	0.50
28:B2:4:SER:CA	28:B2:7:ARG:HE	2.24	0.50
2:CB:97:TRP:CH2	2:CB:176:GLU:CD	2.85	0.50
57:DY:38:ILE:HD11	57:DY:64:GLU:HB2	1.92	0.50
52:BT:106:SER:O	52:BT:107:ASP:OD1	2.28	0.50
36:BA:1641:A:H3'	36:BA:1642:G:H8	1.76	0.50
1:CA:1086:U:C2'	1:CA:1087:G:H5'	2.42	0.50
3:AC:77:ILE:HA	3:AC:84:ILE:CG2	2.41	0.50
35:D9:1:MET:HA	35:D9:4:ARG:CZ	2.41	0.50
43:DH:83:TYR:CD1	43:DH:134:SER:HB3	2.46	0.50
31:B5:33:CYS:CB	31:B5:36:CYS:SG	2.99	0.50
56:DX:49:VAL:HB	56:DX:83:VAL:HG13	1.92	0.50
26:B0:69:PHE:CD2	26:B0:79:VAL:HG22	2.47	0.50
22:CW:60:U:H2'	22:CW:60:U:O2	2.10	0.50
51:BS:17:ARG:CA	51:BS:20:ARG:NH1	2.66	0.50
36:DA:610:G:N2	36:DA:619:G:H1'	2.26	0.50
41:BF:180:GLY:H	41:BF:205:ARG:HH22	1.59	0.50
39:DD:23:GLU:O	39:DD:25:THR:N	2.45	0.50
30:B4:9:LEU:HD13	30:B4:10:VAL:H	1.76	0.50
55:DW:46:PHE:O	55:DW:50:VAL:HG12	2.10	0.50
25:CZ:219:LYS:O	25:CZ:220:PRO:O	2.30	0.50
36:BA:2206:G:N3	36:BA:2206:G:H3'	2.26	0.50
4:CD:159:ARG:NH1	4:CD:159:ARG:HG3	2.26	0.50
37:BB:90:A:O2'	49:BQ:17:LEU:HD12	2.10	0.50
34:B8:23:VAL:O	34:B8:46:ARG:NH1	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:192:U:O4'	20:AT:103:GLY:HA2	2.11	0.50
36:DA:363(E):U:H2'	36:DA:363(F):A:O4'	2.11	0.50
40:BE:31:CYS:HB3	40:BE:49:LEU:HD12	1.94	0.50
36:DA:1786:A:C2	36:DA:2606:C:H1'	2.47	0.50
39:BD:130:ALA:CB	39:BD:192:THR:HB	2.42	0.50
46:BN:3:THR:HG21	46:BN:5:VAL:HG23	1.90	0.50
36:DA:2600:A:H2'	36:DA:2601:C:C6	2.46	0.50
12:CL:47:LYS:O	12:CL:48:PRO:C	2.49	0.50
36:DA:2777:G:H4'	36:DA:2778:A:H5'	1.94	0.50
1:AA:187:C:H2'	1:AA:188:C:C6	2.46	0.50
1:AA:323:U:H5'	20:AT:23:ARG:HB2	1.92	0.50
38:DC:132:GLY:N	38:DC:133:PRO:CD	2.73	0.50
26:B0:43:THR:HG21	36:BA:2332:U:H5'	1.92	0.50
36:BA:1398:C:H2'	36:BA:1399:C:H6	1.76	0.50
36:BA:949:C:H2'	36:BA:950:G:C8	2.44	0.50
41:BF:47:GLY:HA2	41:BF:97:TYR:CE2	2.46	0.50
1:CA:1030(A):G:H1'	1:CA:1031:G:H1	1.76	0.50
6:AF:40:VAL:O	6:AF:40:VAL:HG22	2.11	0.50
36:BA:189:G:H2'	36:BA:205:G:N2	2.27	0.50
36:BA:2869:G:H2'	36:BA:2870:C:O4'	2.12	0.50
15:AO:74:ASP:OD1	15:AO:76:GLU:HB3	2.11	0.50
39:BD:140:THR:HG22	39:BD:141:VAL:O	2.11	0.50
1:CA:834:C:H2'	1:CA:835:U:H6	1.75	0.50
36:DA:1289:C:H2'	36:DA:1289:C:O2	2.10	0.50
36:DA:1906:G:OP2	36:DA:1929:G:O2'	2.29	0.50
20:AT:25:ARG:HG3	20:AT:25:ARG:HH11	1.76	0.50
16:CP:48:TRP:CE3	16:CP:48:TRP:O	2.65	0.50
22:AW:1:G:H2'	22:AW:1:G:N3	2.26	0.50
1:AA:165:C:O2'	1:AA:166:G:H5'	2.12	0.50
1:CA:1402:C:C2'	1:CA:1403:C:H5'	2.42	0.50
36:DA:765:G:O2'	36:DA:766:C:H5'	2.11	0.50
25:AZ:263:ARG:CG	25:AZ:264:ARG:N	2.74	0.50
55:BW:2:GLU:HA	55:BW:64:MET:HE3	1.93	0.50
25:AZ:117:ARG:HD3	25:AZ:157:LEU:HD21	1.93	0.50
38:BC:149:ILE:HG23	38:BC:150:GLY:N	2.27	0.50
38:BC:76:ALA:O	38:BC:77:ILE:HD13	2.11	0.50
42:DG:9:ARG:HG2	42:DG:13:GLU:OE2	2.11	0.50
26:D0:51:VAL:HG21	26:D0:80:HIS:HA	1.94	0.50
49:BQ:27:VAL:O	49:BQ:28:ALA:HB3	2.10	0.50
36:BA:1503:U:H2'	36:BA:1504:C:C6	2.46	0.50
10:AJ:71:LEU:HD23	10:AJ:72:VAL:N	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:DU:92:ARG:HH12	54:DV:10:LYS:CB	2.23	0.50
35:D9:9:ARG:HD2	35:D9:16:VAL:HG22	1.93	0.50
43:BH:123:PHE:HA	43:BH:133:VAL:HG22	1.94	0.50
43:BH:127:GLU:HG3	43:BH:130:ARG:NE	2.25	0.50
2:CB:14:GLY:O	2:CB:15:VAL:CG2	2.48	0.50
12:CL:91:LYS:CA	12:CL:91:LYS:HE2	2.41	0.50
36:DA:605:C:H1'	36:DA:657:U:O2'	2.11	0.50
37:BB:21:G:H2'	37:BB:22:U:H5'	1.92	0.50
1:AA:1364:U:O4'	1:AA:1364:U:O2	2.29	0.50
4:CD:23:GLY:O	4:CD:27:TYR:HB2	2.12	0.50
48:BP:101:VAL:C	48:BP:103:ALA:H	2.14	0.50
40:DE:28:ALA:HB1	40:DE:93:VAL:HG22	1.91	0.50
36:BA:1087:G:O2'	36:BA:1089:G:H5'	2.11	0.50
36:DA:653:A:N3	36:DA:653:A:H2'	2.26	0.50
47:BO:19:ILE:HG22	47:BO:43:VAL:CA	2.32	0.50
1:AA:427:U:OP1	4:AD:13:ARG:NH2	2.43	0.50
4:AD:8:VAL:O	4:AD:11:LEU:N	2.34	0.50
36:DA:267:C:H2'	36:DA:268:C:H6	1.75	0.50
3:AC:34:LEU:HG	14:AN:25:VAL:HG11	1.93	0.50
4:AD:107:ARG:HH21	4:AD:194:LEU:CD1	2.18	0.50
1:AA:102:G:O2'	1:AA:103:C:H5'	2.11	0.50
1:AA:380:G:C2	1:AA:384:G:C6	2.99	0.50
2:AB:44:LEU:HA	2:AB:47:THR:CB	2.41	0.50
36:DA:2179:C:C1'	36:DA:2180:U:H3	2.25	0.50
12:AL:86:ARG:HB2	12:AL:101:VAL:CG2	2.35	0.50
36:BA:221:A:N6	36:BA:265:A:H8	2.10	0.50
38:BC:22:ILE:HG13	38:BC:228:SER:HG	1.73	0.50
49:BQ:64:ILE:HG22	49:BQ:65:PHE:N	2.26	0.50
55:DW:88:ARG:HD3	55:DW:94:ASP:OD2	2.12	0.50
36:DA:1952:A:C6	36:DA:1953:A:N1	2.79	0.50
36:DA:2208:A:H1'	36:DA:2219:G:C6	2.46	0.50
50:BR:38:VAL:CB	50:BR:39:PRO:HD3	2.40	0.50
27:D1:50:ARG:HH12	36:DA:2199:A:H5'	1.76	0.50
36:DA:2746:U:O2'	36:DA:2747:G:H5'	2.11	0.50
52:DT:106:SER:HA	52:DT:110:ILE:CG1	2.41	0.50
30:D4:5:ILE:CG1	30:D4:5:ILE:O	2.57	0.50
1:AA:191:G:N3	20:AT:105:SER:HB3	2.27	0.50
42:DG:41:GLN:NE2	42:DG:153:ARG:HG3	2.27	0.50
31:B5:21:SER:C	31:B5:23:HIS:H	2.15	0.50
4:AD:129:ASN:HD21	4:AD:145:GLU:H	1.59	0.50
37:DB:82:G:H2'	37:DB:83:G:H8	1.75	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2853:C:O2'	36:DA:2854:G:H5'	2.10	0.50
1:CA:293:G:C6	1:CA:294:U:C4	2.99	0.50
36:DA:1313:U:C2	36:DA:1610:A:H2	2.29	0.50
26:B0:19:LYS:HE2	36:BA:2262:U:P	2.51	0.50
1:CA:36:C:O2'	1:CA:501:C:OP1	2.27	0.50
55:BW:66:GLU:O	55:BW:68:ARG:N	2.31	0.50
53:DU:21:ALA:HB1	53:DU:24:TYR:CD2	2.46	0.50
36:BA:1037:G:H2'	36:BA:1038:C:C6	2.46	0.50
1:AA:1286:A:H2	21:AU:18:TYR:HH	1.51	0.50
53:DU:26:GLY:O	53:DU:28:ARG:N	2.43	0.50
54:BV:22:VAL:O	54:BV:23:GLU:HB2	2.11	0.50
2:AB:237:ALA:O	2:AB:238:LEU:HB3	2.10	0.50
25:AZ:315:LYS:HE3	25:AZ:373:GLU:HB2	1.93	0.50
4:CD:150:GLU:HG2	4:CD:151:LYS:N	2.26	0.50
36:BA:280:C:H3'	36:BA:281:G:C8	2.46	0.50
36:BA:2195:C:O2'	36:BA:2196:C:H5'	2.12	0.50
24:CY:19:G:O4'	24:CY:57:G:N2	2.44	0.50
41:BF:81:PRO:O	41:BF:83:PHE:N	2.44	0.50
47:DO:7:TYR:CZ	47:DO:44:LYS:HG3	2.46	0.50
1:CA:811:C:H4'	1:CA:900:A:N6	2.26	0.50
36:DA:1029:A:H2'	36:DA:1030:G:O4'	2.12	0.50
1:CA:1326:C:OP1	21:CU:17:THR:OG1	2.23	0.50
25:CZ:231:ILE:HB	25:CZ:234:ARG:HB2	1.92	0.50
52:DT:23:ARG:CG	52:DT:120:ARG:NH1	2.75	0.50
32:B6:41:PRO:CD	32:B6:46:HIS:H	2.22	0.50
32:D6:20:ASN:OD1	32:D6:21:TYR:N	2.45	0.50
1:CA:1305:G:H22	1:CA:1331:G:C2'	2.10	0.50
19:CS:10:PHE:HZ	19:CS:70:LYS:CE	2.23	0.50
28:B2:35:LEU:HD13	28:B2:36:ARG:HG3	1.92	0.50
25:AZ:22:HIS:CE1	25:AZ:113:MET:HB2	2.46	0.50
25:AZ:145:GLU:O	25:AZ:149:LEU:CB	2.60	0.50
49:DQ:21:THR:O	49:DQ:22:LYS:HB3	2.11	0.50
47:BO:4:PRO:O	47:BO:5:GLN:HB2	2.09	0.50
42:DG:34:LEU:HA	42:DG:161:THR:CG2	2.38	0.50
52:BT:102:ILE:HB	52:BT:110:ILE:CD1	2.41	0.50
49:BQ:141:GLN:H	58:BZ:53:ILE:HD12	1.76	0.50
49:BQ:141:GLN:HG2	58:BZ:72:ARG:NE	2.27	0.50
35:B9:31:LYS:HE2	36:BA:2478:A:OP1	2.10	0.50
36:BA:2538:C:O2'	36:BA:2539:C:H5'	2.11	0.50
10:CJ:55:LYS:CE	10:CJ:55:LYS:N	2.74	0.50
53:BU:108:GLU:O	53:BU:112:ARG:HG2	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:40:LEU:N	10:AJ:40:LEU:CD2	2.70	0.50
36:BA:2311:A:O2'	36:BA:2312:U:O4'	2.30	0.50
13:CM:91:ARG:NH1	13:CM:96:LEU:HD13	2.27	0.50
1:AA:1504:G:OP1	1:AA:1507:A:H4'	2.11	0.50
22:AW:37:A:H3'	22:AW:38:A:H8	1.76	0.50
55:DW:20:VAL:HG23	55:DW:21:VAL:N	2.27	0.50
10:CJ:74:ILE:O	10:CJ:74:ILE:HG13	2.11	0.50
1:AA:266:G:H5'	1:AA:268:C:H41	1.76	0.50
40:DE:35:GLN:CG	40:DE:36:ARG:N	2.73	0.50
13:CM:49:THR:HB	13:CM:52:GLU:CG	2.41	0.50
18:AR:66:LEU:O	18:AR:67:ALA:C	2.49	0.50
51:DS:98:VAL:HG12	51:DS:100:ALA:CB	2.35	0.50
48:DP:97:PRO:HA	48:DP:100:LEU:HB3	1.92	0.50
30:B4:31:ILE:CG2	30:B4:33:VAL:HG23	2.42	0.50
50:BR:45:ARG:HG3	50:BR:46:GLY:N	2.20	0.50
43:BH:94:TYR:CD1	43:BH:107:VAL:CA	2.95	0.50
49:DQ:52:VAL:C	49:DQ:54:MET:N	2.65	0.50
30:D4:19:GLY:O	30:D4:20:ASN:C	2.50	0.50
36:DA:2673:G:C8	36:DA:2673:G:H5'	2.47	0.50
4:AD:67:ILE:HG22	4:AD:68:TYR:CE1	2.46	0.50
36:DA:363(F):A:HO2'	36:DA:364:C:H5	1.58	0.50
40:DE:202:LYS:HD2	40:DE:202:LYS:N	2.27	0.50
51:BS:99:LYS:HB3	51:BS:99:LYS:HZ2	1.75	0.50
1:CA:827:U:O2'	1:CA:859:A:N1	2.38	0.50
37:BB:68:C:H2'	37:BB:69:G:H8	1.75	0.50
36:BA:2892:A:H62	36:BA:2893:G:H21	1.59	0.50
36:DA:2111:C:H1'	36:DA:2118:U:O4'	2.11	0.50
28:D2:66:GLU:HA	28:D2:69:ARG:CZ	2.42	0.50
20:AT:26:ASN:ND2	20:AT:26:ASN:N	2.55	0.50
36:DA:848:G:H8	36:DA:848:G:H5'	1.76	0.50
49:BQ:66:ILE:HA	49:BQ:104:PHE:HB3	1.92	0.50
36:BA:278:A:N6	36:BA:362:U:H3	2.07	0.50
46:DN:55:VAL:HG22	46:DN:126:PRO:HA	1.94	0.50
36:BA:933:A:H2'	36:BA:934:G:O4'	2.11	0.50
49:BQ:75:THR:HG21	49:BQ:87:LYS:HZ2	1.76	0.50
36:DA:2591:C:H2'	36:DA:2592:G:H8	1.75	0.50
1:AA:339:C:H2'	1:AA:340:U:C6	2.47	0.50
1:CA:390:C:O3'	16:CP:28:ARG:NH2	2.45	0.50
2:AB:209:ARG:HH11	2:AB:239:VAL:HG11	1.77	0.50
51:BS:29:PHE:CD1	51:BS:29:PHE:C	2.81	0.50
56:BX:57:LEU:HD22	56:BX:57:LEU:O	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DZ:62:PRO:C	58:DZ:64:GLY:N	2.65	0.50
58:DZ:75:ASN:O	58:DZ:84:GLU:HB3	2.12	0.50
1:CA:1112:C:O2	3:CC:177:THR:HG23	2.11	0.50
22:CV:48:C:OP2	22:CV:48:C:H6	1.95	0.50
20:CT:39:LYS:O	20:CT:43:LEU:HG	2.11	0.50
36:BA:1469:A:O2'	36:BA:1470:G:H5'	2.11	0.50
1:CA:1068:G:N7	1:CA:1094:G:H2'	2.26	0.50
17:AQ:45:HIS:CD2	17:AQ:47:PRO:HD3	2.47	0.50
1:AA:650:G:O2'	1:AA:651:C:H5'	2.12	0.50
5:CE:88:LYS:HB3	5:CE:123:LEU:O	2.11	0.50
12:AL:36:VAL:HG12	12:AL:82:VAL:HG22	1.93	0.50
25:AZ:84:GLY:O	25:AZ:85:HIS:HB3	2.11	0.50
36:BA:1925:C:O2'	36:BA:1926:U:H5'	2.10	0.50
36:DA:455:C:N3	36:DA:473:G:H5'	2.26	0.50
49:BQ:118:LEU:HD12	49:BQ:131:ILE:HG23	1.93	0.50
36:DA:363(A):A:C2	36:DA:363(B):G:C8	2.99	0.50
27:D1:23:LYS:HE2	27:D1:28:GLY:HA3	1.93	0.50
54:DV:32:THR:HG23	54:DV:59:ALA:O	2.11	0.50
36:BA:220:G:H2'	36:BA:427:U:O4	2.12	0.50
4:CD:100:ARG:NH2	4:CD:118:ARG:HH22	2.01	0.50
32:B6:30:THR:O	32:B6:32:ASN:N	2.44	0.50
36:DA:660:G:H2'	36:DA:661:C:C6	2.46	0.50
48:DP:16:ARG:C	48:DP:16:ARG:HH11	2.15	0.50
1:CA:347:G:O2'	1:CA:348:G:O4'	2.30	0.50
32:B6:45:LYS:O	32:B6:46:HIS:ND1	2.44	0.50
1:CA:977:A:H2'	1:CA:978:A:H5''	1.93	0.50
28:B2:6:VAL:C	28:B2:7:ARG:HD2	2.32	0.50
57:BY:95:LYS:HG3	57:BY:100:ALA:CA	2.25	0.50
34:B8:18:ALA:HB2	36:BA:628:G:H5''	1.92	0.50
22:CW:39:U:O2	22:CW:39:U:H3'	2.12	0.50
2:CB:111:ARG:HG2	2:CB:111:ARG:HH11	1.76	0.50
53:BU:12:ARG:O	53:BU:16:LYS:HG3	2.12	0.50
31:B5:54:GLY:N	31:B5:56:LYS:HZ2	2.05	0.50
26:B0:27:GLU:N	26:B0:27:GLU:CD	2.64	0.50
36:DA:832:G:H5'	48:DP:45:LEU:HD21	1.93	0.50
3:CC:134:ILE:HG22	3:CC:168:ALA:CB	2.41	0.50
36:BA:1142(A):A:C8	36:BA:1142(A):A:H5'	2.45	0.50
22:AW:39:U:C5'	22:AW:39:U:O2	2.58	0.50
58:DZ:120:ILE:HG22	58:DZ:171:ILE:HA	1.93	0.50
49:DQ:141:GLN:HE21	49:DQ:141:GLN:CA	2.14	0.50
58:DZ:99:TYR:CE1	58:DZ:125:LEU:HB2	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BF:110:LEU:HD21	41:BF:181:LEU:O	2.11	0.50
7:CG:27:ILE:HD11	7:CG:43:PHE:CG	2.47	0.50
42:BG:43:LEU:CD1	42:BG:153:ARG:HH11	2.24	0.50
1:CA:409:G:OP1	4:CD:25:ARG:N	2.32	0.50
48:BP:83:VAL:HG12	48:BP:114:ILE:HA	1.92	0.50
5:CE:33:VAL:HG21	5:CE:109:ILE:HG13	1.92	0.50
12:CL:90:VAL:HG11	12:CL:93:LEU:HG	1.94	0.50
36:DA:548:A:H2'	36:DA:549:G:C5'	2.39	0.50
36:BA:464:U:H2'	36:BA:465:G:O4'	2.12	0.50
1:AA:1348:U:O2'	1:AA:1349:A:O5'	2.29	0.50
4:AD:98:GLU:CB	4:AD:189:PRO:HG3	2.41	0.50
24:AY:75:C:H6	25:AZ:231:ILE:HA	1.77	0.50
36:DA:2408:U:C6	36:DA:2408:U:O5'	2.64	0.50
22:AW:59:U:H2'	22:AW:60:U:H5'	1.94	0.50
36:BA:2134:A:H62	36:BA:2157:G:H1'	1.77	0.50
24:AY:61:C:C2'	24:AY:62:U:H5''	2.41	0.50
38:DC:175:VAL:O	38:DC:188:ASN:ND2	2.44	0.50
4:AD:24:GLU:H	4:AD:112:VAL:CG2	2.25	0.50
1:AA:407:G:O2'	4:AD:116:GLN:HG3	2.12	0.50
1:AA:1318:A:H1'	19:AS:37:ARG:HH21	1.76	0.50
35:B9:7:VAL:CG1	35:B9:25:VAL:HG21	2.42	0.50
53:DU:68:ALA:O	53:DU:71:GLN:HG2	2.11	0.50
26:B0:38:VAL:CG2	26:B0:59:LEU:HD12	2.42	0.50
58:DZ:108:PRO:HG2	58:DZ:111:VAL:HG23	1.93	0.50
31:D5:30:LEU:HA	31:D5:42:PRO:HD3	1.94	0.50
36:BA:2562:U:O2'	47:BO:23:ARG:HD3	2.11	0.50
36:BA:257:A:H2'	36:BA:258:G:H5'	1.93	0.50
4:CD:165:MET:HE3	4:CD:176:LEU:CD2	2.42	0.50
8:AH:2:LEU:HD23	8:AH:2:LEU:C	2.32	0.50
22:CW:56:C:H1'	38:DC:128:GLY:O	2.12	0.50
1:CA:412:A:H5'	1:CA:413:G:OP2	2.12	0.50
36:BA:1039:G:N1	36:BA:1116:C:N4	2.60	0.50
36:BA:2024:G:O2'	36:BA:2025:C:H5'	2.11	0.50
8:AH:97:VAL:HG21	8:AH:128:GLY:HA2	1.93	0.50
10:AJ:90:LEU:N	10:AJ:91:PRO:CD	2.75	0.50
26:B0:36:ILE:HG13	26:B0:36:ILE:O	2.10	0.50
8:AH:11:THR:HA	8:AH:14:ARG:HH12	1.74	0.50
45:BK:62:UNK:O	45:BK:63:UNK:C	2.59	0.50
36:DA:669:G:N3	36:DA:669:G:H2'	2.26	0.50
1:CA:319:G:O2'	1:CA:320:C:H5'	2.11	0.50
50:DR:51:LEU:HD12	50:DR:51:LEU:N	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1359:A:H2'	36:BA:1360:A:H5'	1.92	0.50
36:BA:2139:C:O2'	36:BA:2140:C:H5'	2.11	0.50
8:CH:46:LYS:HG3	8:CH:64:LYS:HB2	1.92	0.50
40:BE:186:GLY:O	40:BE:187:ALA:HB3	2.11	0.50
19:CS:17:GLU:HG2	19:CS:17:GLU:O	2.11	0.50
43:DH:147:ASN:O	43:DH:151:ILE:HG12	2.11	0.50
36:BA:700:G:H2'	36:BA:701:G:H8	1.76	0.50
36:DA:2220:G:O2'	36:DA:2221:G:H5'	2.11	0.50
36:BA:2181:G:O2'	36:BA:2182:G:H5'	2.12	0.50
36:BA:2283:C:C2'	36:BA:2284:C:H5'	2.41	0.50
48:DP:47:ASP:HB3	48:DP:48:PRO:HA	1.94	0.50
32:B6:15:GLU:HG2	32:B6:18:ARG:CZ	2.40	0.50
36:DA:1858:G:C2'	36:DA:1883:G:H22	2.25	0.50
26:D0:23:VAL:CA	26:D0:38:VAL:HG13	2.42	0.50
2:CB:105:PHE:O	2:CB:108:ILE:N	2.44	0.50
2:AB:165:VAL:CG2	2:AB:166:ASP:H	2.01	0.50
57:DY:42:VAL:CG2	57:DY:67:LEU:HD12	2.41	0.50
1:CA:1095:U:P	1:CA:1108:G:H1	2.35	0.50
1:AA:1302:U:C5	13:AM:17:VAL:HG21	2.47	0.50
13:AM:54:VAL:HG12	13:AM:58:GLU:HG2	1.93	0.50
43:DH:130:ARG:O	43:DH:131:VAL:HG23	2.12	0.50
13:CM:25:ILE:HD11	13:CM:60:VAL:CG1	2.41	0.50
13:CM:6:GLY:C	13:CM:8:GLU:N	2.62	0.50
9:AI:33:PHE:CE2	9:AI:47:LEU:HD11	2.46	0.50
54:DV:35:LEU:HD22	54:DV:35:LEU:N	2.26	0.50
35:D9:11:CYS:HG	35:D9:12:ASP:H	1.49	0.50
48:DP:41:ARG:HH12	48:DP:45:LEU:CD2	2.20	0.50
36:DA:2290:G:H5'	36:DA:2346:A:OP2	2.11	0.50
1:CA:542:G:H5'	4:CD:41:GLY:HA3	1.92	0.50
4:CD:10:ARG:HH11	4:CD:10:ARG:HG2	1.77	0.50
4:CD:14:ARG:H	4:CD:39:PRO:HA	1.75	0.50
58:DZ:97:GLU:HG3	58:DZ:127:LYS:CB	2.41	0.50
40:DE:61:ARG:HG2	40:DE:62:PRO:CD	2.39	0.50
12:AL:121:GLY:O	12:AL:122:THR:O	2.30	0.50
31:D5:26:THR:O	31:D5:26:THR:HG23	2.10	0.50
48:BP:124:LYS:HE2	48:BP:143:GLY:HA2	1.93	0.50
36:DA:1019:U:O2'	36:DA:1021:A:C2	2.64	0.50
36:DA:1748:G:C8	36:DA:1748:G:H5'	2.45	0.50
18:AR:58:LEU:CD1	18:AR:66:LEU:HD22	2.41	0.50
48:DP:126:VAL:HA	48:DP:145:PRO:CG	2.42	0.50
36:BA:1532:C:O2'	36:BA:1533:G:H5'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:145:GLU:OE1	4:CD:145:GLU:O	2.29	0.50
55:DW:6:ILE:HG12	55:DW:104:THR:HG22	1.93	0.50
41:DF:184:TYR:HE1	48:DP:7:ARG:NH2	2.09	0.50
4:AD:119:GLN:HG3	4:AD:123:HIS:NE2	2.26	0.50
46:DN:120:LEU:CD1	46:DN:122:VAL:HG23	2.41	0.50
40:BE:29:GLY:HA3	40:BE:51:PHE:CE1	2.43	0.50
35:B9:12:ASP:O	35:B9:14:CYS:N	2.44	0.50
25:CZ:340:PRO:HG2	25:CZ:342:PHE:CE1	2.46	0.50
1:CA:947:G:H2'	1:CA:948:C:C6	2.46	0.50
54:BV:61:VAL:O	54:BV:62:LEU:O	2.30	0.50
1:CA:597:G:C8	1:CA:598:U:C5	3.00	0.50
1:CA:1218:C:P	14:CN:9:LYS:HE2	2.52	0.50
55:DW:82:LEU:HD12	55:DW:82:LEU:H	1.76	0.50
48:BP:80:TYR:CD1	48:BP:111:ARG:HB2	2.47	0.50
39:DD:110:GLY:O	39:DD:112:GLN:HG2	2.11	0.50
29:D3:23:LEU:HD23	29:D3:50:VAL:HG11	1.93	0.50
15:AO:21:ASP:C	15:AO:21:ASP:OD1	2.48	0.50
7:CG:58:PRO:HG2	7:CG:59:LEU:H	1.77	0.50
55:BW:37:ARG:HG3	55:BW:37:ARG:NH1	2.26	0.50
13:AM:116:THR:O	13:AM:117:VAL:HB	2.12	0.50
42:DG:76:SER:HB2	42:DG:84:LYS:CA	2.41	0.50
36:BA:1174:A:OP2	36:BA:1175:U:H5''	2.11	0.50
36:DA:1841:U:H2'	36:DA:1842:G:C8	2.46	0.50
36:BA:1917:U:H2'	36:BA:1918:A:H5'	1.93	0.50
55:BW:9:TYR:H	55:BW:9:TYR:HD1	1.59	0.50
36:DA:521:G:H2'	36:DA:522:G:C8	2.47	0.50
9:CI:83:ARG:O	9:CI:86:VAL:HG12	2.11	0.50
36:BA:2485:G:C2'	36:BA:2486:G:H5'	2.41	0.50
55:BW:12:ILE:HD12	55:BW:42:ARG:NH1	2.27	0.50
36:BA:2766:G:N3	36:BA:2766:G:H2'	2.26	0.50
36:DA:1272:A:C2	36:DA:1618:A:C2	3.00	0.50
1:AA:879:C:O2'	1:AA:880:C:H5'	2.11	0.50
22:CW:14:A:H2'	22:CW:15:G:H5'	1.94	0.50
36:BA:1445(A):C:O5'	36:BA:1445(A):C:H6	1.95	0.50
38:BC:152:ILE:HG22	38:BC:152:ILE:O	2.11	0.50
36:DA:2283:C:H2'	36:DA:2284:C:O4'	2.12	0.50
36:DA:811:U:O2'	36:DA:812:C:C5'	2.60	0.50
48:DP:23:PRO:CG	48:DP:33:ARG:HG3	2.41	0.50
25:AZ:22:HIS:HE1	25:AZ:113:MET:HB2	1.77	0.50
42:DG:47:LYS:HE3	42:DG:81:LYS:HB3	1.93	0.50
42:DG:60:LEU:HD22	42:DG:63:ILE:CD1	2.39	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:43:ASN:CB	57:BY:64:GLU:HA	2.40	0.50
52:BT:28:VAL:HG21	52:BT:47:GLY:H	1.68	0.50
52:BT:50:ILE:HG23	52:BT:99:LEU:O	2.11	0.50
28:D2:36:ARG:HA	28:D2:39:ALA:CB	2.42	0.50
49:BQ:21:THR:O	49:BQ:23:GLY:N	2.43	0.50
58:BZ:122:ARG:HG2	58:BZ:122:ARG:NH1	2.27	0.50
58:BZ:14:LYS:O	58:BZ:18:LEU:HD22	2.11	0.50
10:CJ:49:VAL:HG22	10:CJ:50:ILE:N	2.27	0.50
1:AA:1324:A:H2'	1:AA:1325:C:O4'	2.11	0.50
43:DH:83:TYR:HB2	43:DH:134:SER:CB	2.38	0.50
13:CM:67:GLU:O	13:CM:69:GLU:N	2.43	0.50
30:D4:25:TYR:O	30:D4:26:SER:HB3	2.11	0.50
53:DU:52:ARG:O	53:DU:55:ARG:N	2.44	0.50
35:D9:9:ARG:NH1	35:D9:9:ARG:CB	2.75	0.50
4:CD:14:ARG:HD2	4:CD:59:ARG:NH1	2.26	0.50
36:DA:90:U:O2	36:DA:90:U:C2'	2.60	0.50
30:D4:9:LEU:C	30:D4:10:VAL:HG12	2.32	0.50
9:CI:117:HIS:HB2	9:CI:121:ARG:HD2	1.94	0.50
48:BP:18:ARG:O	48:BP:19:VAL:C	2.49	0.50
50:DR:116:LEU:O	50:DR:117:VAL:CB	2.58	0.50
36:BA:636:G:H2'	48:BP:115:LEU:HD12	1.94	0.50
1:CA:267:C:OP2	17:CQ:67:LYS:HD2	2.12	0.50
5:CE:148:VAL:CG2	8:CH:107:LEU:HD13	2.34	0.50
34:B8:33:ASN:CG	34:B8:34:TRP:H	2.13	0.50
48:DP:115:LEU:HG	48:DP:116:GLY:H	1.77	0.50
5:CE:10:MET:HE2	5:CE:13:ILE:HD11	1.94	0.50
42:BG:157:ILE:HG22	42:BG:158:ALA:N	2.26	0.50
3:CC:125:GLU:HG2	3:CC:190:ARG:O	2.11	0.50
42:BG:117:PHE:HD1	42:BG:118:ARG:N	2.10	0.50
41:DF:32:LEU:C	41:DF:32:LEU:HD23	2.32	0.50
36:DA:2011:U:C2'	36:DA:2012:G:H5'	2.41	0.50
50:BR:71:GLN:O	50:BR:72:ASP:C	2.50	0.50
40:BE:52:LEU:HB3	40:BE:75:VAL:HB	1.93	0.50
47:BO:32:TYR:N	47:BO:32:TYR:CD1	2.79	0.50
1:CA:1464:G:H2'	1:CA:1465:C:C6	2.47	0.50
40:BE:87:GLU:C	40:BE:89:ASP:N	2.64	0.50
26:B0:49:LYS:H	26:B0:80:HIS:CB	2.24	0.50
22:AW:33:U:O2	22:AW:35:A:H3'	2.12	0.50
2:AB:145:LEU:O	2:AB:149:LEU:HB2	2.11	0.50
8:AH:44:PHE:HE2	8:AH:109:ILE:HD13	1.77	0.50
7:CG:20:ASP:HB3	7:CG:23:VAL:CG2	2.40	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:455:C:N3	36:BA:472:A:H2'	2.27	0.50
53:BU:29:SER:C	53:BU:30:LYS:HD3	2.31	0.50
36:DA:536:A:H2'	36:DA:537:C:C6	2.47	0.50
32:B6:22:ALA:HB1	32:B6:39:TYR:CE2	2.47	0.50
36:DA:223:A:C5	36:DA:422:A:C8	3.00	0.50
51:DS:29:PHE:HD1	51:DS:29:PHE:C	2.13	0.50
25:AZ:381:GLU:O	25:AZ:382:GLU:O	2.30	0.50
40:DE:69:LYS:CE	40:DE:89:ASP:HA	2.42	0.50
4:CD:91:SER:O	4:CD:94:LEU:N	2.45	0.50
25:AZ:130:TYR:CE2	25:AZ:211:PRO:HG2	2.46	0.50
47:DO:34:THR:OG1	47:DO:35:VAL:N	2.45	0.50
36:DA:286:C:H2'	36:DA:287:C:C6	2.46	0.50
47:BO:105:GLU:OE1	47:BO:105:GLU:N	2.44	0.50
9:CI:39:GLY:O	9:CI:41:VAL:N	2.44	0.50
36:BA:2624:G:C2'	36:BA:2625:G:H5'	2.42	0.50
1:AA:157:G:H2'	1:AA:158:G:C8	2.47	0.50
24:CY:37:MIA:H121	24:CY:38:A:C2	2.47	0.50
30:D4:43:TYR:CG	30:D4:44:THR:N	2.80	0.50
16:CP:53:VAL:HG23	16:CP:54:GLU:H	1.77	0.50
36:BA:825:C:O2'	48:BP:55:ARG:HD3	2.11	0.50
36:BA:376:C:H2'	36:BA:377:C:C6	2.46	0.50
36:BA:2303:G:H4'	42:BG:124:SER:O	2.12	0.50
1:AA:1490:C:O2'	1:AA:1491:G:H5'	2.12	0.50
36:DA:21:A:O2'	36:DA:22:C:H5'	2.12	0.50
1:AA:1131:G:C6	1:AA:1132:C:N4	2.80	0.50
25:CZ:86:ALA:C	25:CZ:88:TYR:H	2.13	0.50
2:AB:229:VAL:HG12	2:AB:230:VAL:N	2.27	0.50
36:DA:2620:C:OP1	40:DE:152:LYS:HG3	2.11	0.50
14:AN:50:LYS:HB3	14:AN:52:GLN:HE21	1.77	0.50
1:CA:189(E):U:OP2	1:CA:189(E):U:H6	1.94	0.50
5:CE:39:GLY:O	5:CE:69:VAL:HG22	2.11	0.50
25:CZ:234:ARG:NH2	25:CZ:289:LEU:HD22	2.26	0.50
25:CZ:69:GLU:HG3	25:CZ:70:TYR:N	2.25	0.50
34:D8:33:ASN:ND2	36:DA:2419:U:OP1	2.45	0.50
34:D8:61:LEU:C	34:D8:63:PRO:HD2	2.31	0.50
1:CA:346:G:C5'	52:DT:43:GLN:HE22	2.25	0.50
52:DT:74:ARG:C	52:DT:75:ILE:HD12	2.32	0.50
28:B2:3:LEU:O	28:B2:7:ARG:NE	2.45	0.50
28:B2:41:ILE:HD11	28:B2:44:LEU:CD1	2.42	0.50
10:CJ:6:ILE:CG1	10:CJ:72:VAL:HB	2.40	0.50
39:BD:32:SER:O	39:BD:36:PRO:CG	2.60	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AW:56:C:O2'	38:BC:129:ARG:HA	2.12	0.50
38:BC:116:THR:O	38:BC:118:ASP:N	2.38	0.50
1:CA:1188:A:C2'	1:CA:1189:C:H5'	2.41	0.50
39:DD:70:TRP:CH2	39:DD:150:LYS:CA	2.83	0.50
26:D0:51:VAL:CG2	26:D0:80:HIS:HA	2.41	0.50
52:BT:48:ILE:CD1	52:BT:64:ARG:HB3	2.42	0.50
36:DA:309:G:O3'	57:DY:18:GLY:HA2	2.12	0.50
57:DY:96:ILE:CG1	57:DY:99:CYS:HB2	2.36	0.50
36:DA:2099:U:H2'	36:DA:2100:G:H8	1.70	0.50
36:DA:2463:C:O2'	36:DA:2464:C:H5'	2.12	0.50
28:D2:10:LEU:O	28:D2:14:ARG:HG3	2.11	0.50
43:BH:85:LYS:HZ1	43:BH:87:LEU:CB	2.25	0.50
36:DA:89:G:H3'	36:DA:90:U:H5'	1.92	0.50
58:DZ:53:ILE:HG22	58:DZ:71:VAL:HB	1.93	0.50
48:BP:16:ARG:HD3	48:BP:18:ARG:H	1.76	0.50
37:DB:61:G:N2	37:DB:62:C:H1'	2.27	0.50
36:BA:25:U:H5''	55:BW:79:GLY:HA2	1.94	0.50
36:DA:1049:C:N4	36:DA:1050:A:H62	2.10	0.50
36:DA:272(I):U:O2'	36:DA:272(J):C:H5'	2.10	0.50
4:AD:200:GLU:O	4:AD:204:ILE:HG13	2.11	0.50
42:BG:174:GLU:O	42:BG:176:LEU:N	2.44	0.50
50:BR:28:LEU:HD23	50:BR:29:LEU:CD1	2.42	0.50
36:BA:1453:U:OP1	50:BR:63:ARG:NH2	2.45	0.50
50:DR:2:ARG:HG2	50:DR:5:LYS:NZ	2.27	0.50
25:AZ:279:GLU:HG2	25:AZ:279:GLU:O	2.11	0.50
22:AW:68:C:H6	22:AW:68:C:O5'	1.95	0.50
2:CB:60:ASP:O	2:CB:63:MET:HB3	2.11	0.50
25:AZ:273:HIS:C	25:AZ:274:ARG:CG	2.79	0.50
58:BZ:110:GLY:HA2	58:BZ:113:ALA:CB	2.42	0.50
58:DZ:10:ARG:NH2	58:DZ:26:GLY:O	2.44	0.50
36:DA:2469:A:O2'	49:DQ:56:ARG:HD2	2.12	0.50
1:CA:383:A:H2'	1:CA:384:G:H5'	1.94	0.50
30:D4:31:ILE:HG22	30:D4:33:VAL:HG23	1.92	0.50
1:AA:1050:G:O2'	1:AA:1051:C:C6	2.65	0.50
41:BF:32:LEU:O	41:BF:32:LEU:HD23	2.10	0.50
58:DZ:41:LEU:O	58:DZ:43:GLU:N	2.45	0.50
40:BE:89:ASP:CG	40:BE:90:THR:H	2.14	0.50
38:BC:96:GLY:H	38:BC:99:ILE:HG13	1.76	0.50
36:DA:1602:U:H3'	36:DA:1603:A:C5'	2.41	0.50
36:DA:2199:A:H3'	36:DA:2200:C:C6	2.46	0.50
50:DR:103:ARG:HG3	55:DW:40:ASN:OD1	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:B1:6:GLU:OE1	27:B1:60:PHE:CD1	2.65	0.50
38:DC:72:VAL:HG23	38:DC:111:ASP:HB3	1.93	0.50
6:CF:9:VAL:HG12	6:CF:86:ARG:HG3	1.93	0.50
36:BA:551:G:O2'	36:BA:1220:A:N3	2.42	0.50
1:CA:631:G:H5''	1:CA:632:A:OP1	2.11	0.50
36:DA:2851:A:H2'	36:DA:2852:G:H8	1.76	0.50
4:CD:126:ILE:CG2	4:CD:127:THR:N	2.75	0.50
16:CP:67:THR:HB	16:CP:70:ALA:CB	2.42	0.50
16:CP:67:THR:N	16:CP:70:ALA:HB3	2.27	0.50
36:BA:1399:C:H2'	36:BA:1400:G:H8	1.76	0.50
36:BA:413:C:H4'	36:BA:1880:C:O2'	2.11	0.50
36:BA:202:U:H2'	36:BA:203:C:C6	2.47	0.50
1:CA:404:U:H2'	1:CA:405:U:C6	2.47	0.50
36:BA:2552:U:H6	36:BA:2552:U:O5'	1.95	0.50
15:AO:25:THR:O	15:AO:29:VAL:HG23	2.11	0.50
36:BA:1790:C:H4'	39:BD:209:ALA:CB	2.41	0.50
1:AA:184:G:H4'	1:AA:224:C:H4'	1.94	0.50
11:AK:66:LEU:CD2	11:AK:97:ALA:HB1	2.42	0.50
40:DE:107:THR:O	40:DE:190:GLY:HA2	2.12	0.50
36:DA:841:A:H2'	36:DA:842:G:C8	2.47	0.50
36:BA:322:A:H5'	36:BA:340:A:H1'	1.94	0.50
36:DA:1381:G:H2'	36:DA:1382:G:H5'	1.93	0.50
36:BA:2303:G:H5''	42:BG:126:ASP:OD2	2.12	0.50
1:CA:991:U:O2	1:CA:991:U:H2'	2.11	0.50
41:BF:89:VAL:HG12	41:BF:90:PHE:CD2	2.46	0.50
3:AC:186:PHE:HD1	3:AC:199:LYS:HG2	1.75	0.50
36:BA:1013:C:H2'	36:BA:1014:U:C6	2.47	0.50
56:DX:63:LYS:HA	56:DX:72:LYS:HA	1.92	0.50
36:BA:2081:C:H2'	36:BA:2082:A:H8	1.77	0.50
36:DA:36:G:H4'	36:DA:451:C:C2	2.47	0.50
4:CD:171:GLY:O	4:CD:173:TRP:N	2.36	0.50
2:CB:43:ASP:OD2	2:CB:46:LYS:HB2	2.12	0.50
22:CW:75:C:OP1	27:D1:30:VAL:HG21	2.12	0.50
36:BA:143:G:H1'	56:BX:37:THR:CG2	2.42	0.50
1:AA:1196:U:C4	23:AX:27:A:OP1	2.65	0.50
25:AZ:136:ASN:O	25:AZ:137:LYS:HB2	2.11	0.50
25:AZ:191:GLY:HA2	25:AZ:197:ASP:OD1	2.11	0.50
36:BA:1858:G:H2'	36:BA:1883:G:N2	2.27	0.50
52:BT:41:ARG:HG2	52:BT:41:ARG:HH11	1.77	0.50
47:BO:71:ARG:HH12	52:BT:74:ARG:NH2	2.10	0.50
1:CA:1409:C:H2'	1:CA:1410:G:H8	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:55:ALA:HA	9:AI:58:HIS:CE1	2.29	0.50
36:BA:1024:G:OP2	36:BA:1025:G:H3'	2.12	0.50
36:BA:1722:A:O2'	36:BA:1739:U:H5'	2.12	0.50
49:DQ:140:ALA:O	49:DQ:141:GLN:CB	2.60	0.50
1:AA:949:A:H1'	1:AA:1364:U:C5	2.47	0.50
51:BS:59:LYS:CG	51:BS:60:GLY:H	2.10	0.50
51:BS:85:VAL:C	51:BS:106:ARG:HG2	2.32	0.50
42:BG:43:LEU:O	42:BG:45:GLU:N	2.43	0.50
36:BA:1854:A:N6	36:BA:1888:G:H8	1.96	0.50
36:BA:2036:C:H6	36:BA:2036:C:C5'	2.17	0.50
39:DD:26:LYS:O	39:DD:27:THR:CB	2.59	0.50
47:DO:23:ARG:HG3	47:DO:24:VAL:N	2.26	0.50
42:BG:111:LEU:HD22	42:BG:117:PHE:HE2	1.77	0.50
42:BG:106:LEU:HD13	42:BG:141:PHE:HE1	1.76	0.50
42:BG:105:LYS:HD2	42:BG:142:PRO:CG	2.42	0.50
36:DA:2408:U:C6	36:DA:2408:U:C3'	2.94	0.50
57:DY:4:LYS:HD2	57:DY:32:PRO:HG3	1.94	0.50
57:DY:2:ARG:CD	57:DY:3:VAL:HG23	2.36	0.50
18:CR:40:LEU:HB3	18:CR:79:LEU:HD11	1.94	0.50
36:BA:1047:G:C2'	36:BA:1110:G:H21	2.20	0.50
1:AA:438:G:H4'	4:AD:123:HIS:ND1	2.27	0.50
37:BB:87:G:N2	37:BB:89:G:H5''	2.27	0.50
36:BA:2386:C:H2'	36:BA:2387:U:H6	1.74	0.50
38:BC:43:VAL:CG1	38:BC:44:HIS:N	2.75	0.50
36:DA:333:G:N3	36:DA:333:G:H2'	2.26	0.50
52:BT:8:LYS:C	52:BT:10:VAL:N	2.66	0.50
36:DA:1786:A:H1'	36:DA:1938:A:N6	2.27	0.50
29:B3:18:ASP:O	29:B3:21:ALA:HB3	2.12	0.50
36:DA:896:A:C2	58:DZ:114:GLY:HA3	2.47	0.50
36:DA:2883:A:C5'	36:DA:2884:U:H5'	2.42	0.50
36:DA:145:G:C2'	36:DA:146:G:H5''	2.38	0.50
9:CI:20:ARG:O	9:CI:60:ASP:HB2	2.11	0.50
51:DS:44:LYS:HB3	51:DS:46:VAL:HG23	1.93	0.50
55:DW:29:LEU:HD23	55:DW:33:ARG:HH11	1.76	0.50
48:DP:69:GLY:O	48:DP:70:GLN:O	2.29	0.50
22:CW:57:G:H2'	22:CW:58:A:C4'	2.41	0.50
1:CA:1525:G:OP1	11:CK:120:ARG:NH2	2.44	0.50
36:BA:1614:A:H2'	36:BA:1615:C:H5'	1.94	0.50
55:BW:47:VAL:O	55:BW:51:LEU:HB2	2.12	0.50
16:AP:26:ARG:CD	16:AP:31:LYS:O	2.60	0.50
1:CA:373:A:O2'	1:CA:374:A:H5'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2359:C:O2'	36:DA:2360:A:H5'	2.12	0.50
25:AZ:258:LEU:O	25:AZ:259:ALA:CB	2.59	0.50
25:AZ:30:ALA:O	25:AZ:32:THR:N	2.45	0.50
18:AR:44:LEU:CD1	18:AR:44:LEU:N	2.74	0.50
36:BA:2010:G:C5	36:BA:2011:U:C5	3.00	0.50
36:DA:2659:G:C2'	36:DA:2660:A:H5''	2.42	0.50
42:DG:76:SER:HB2	42:DG:84:LYS:HA	1.94	0.50
42:DG:83:ARG:HB3	42:DG:84:LYS:HD2	1.94	0.50
42:DG:26:GLN:HG2	42:DG:27:ASN:H	1.75	0.50
50:DR:22:ARG:HG2	50:DR:69:ASP:HB3	1.94	0.50
36:DA:2018:G:O2'	53:DU:34:LYS:HD2	2.11	0.50
1:AA:277:C:H5'	17:AQ:68:ARG:HH12	1.77	0.50
39:BD:261:LYS:HZ2	39:BD:263:ARG:NH2	2.10	0.50
19:AS:24:ALA:O	19:AS:25:LYS:HB2	2.12	0.50
3:AC:59:ARG:HA	3:AC:63:ASN:O	2.12	0.50
29:B3:1:MET:O	29:B3:2:PRO:C	2.50	0.50
36:DA:1404:C:O2'	36:DA:1405:U:H5'	2.11	0.50
4:CD:83:SER:HA	4:CD:89:THR:HG23	1.93	0.50
36:DA:2516:G:O2'	36:DA:2517:C:H5'	2.12	0.50
36:BA:407:G:H2'	36:BA:408:G:H8	1.77	0.50
15:AO:71:GLN:O	15:AO:71:GLN:HG2	2.10	0.50
1:CA:328:C:O2	1:CA:328:C:C2'	2.59	0.50
38:DC:79:LYS:HD3	38:DC:119:VAL:CG1	2.33	0.49
34:D8:33:ASN:ND2	36:DA:2419:U:H5''	2.24	0.49
52:BT:58:ASN:N	52:BT:58:ASN:HD22	2.10	0.49
38:BC:138:PRO:HA	38:BC:144:THR:OG1	2.12	0.49
39:DD:35:LYS:CB	39:DD:36:PRO:CD	2.89	0.49
36:DA:2313:C:H6	36:DA:2313:C:C5'	2.17	0.49
43:DH:43:VAL:CG1	43:DH:46:GLU:OE2	2.60	0.49
43:DH:65:HIS:CE1	43:DH:69:ARG:HH11	2.30	0.49
43:DH:52:VAL:CG2	43:DH:69:ARG:HD2	2.40	0.49
36:DA:2356:C:O2'	36:DA:2357:U:H5'	2.12	0.49
52:BT:48:ILE:HD11	52:BT:64:ARG:HB3	1.93	0.49
36:BA:2685:G:OP2	52:BT:51:ARG:NH1	2.44	0.49
52:BT:64:ARG:HD3	52:BT:102:ILE:HD11	1.93	0.49
57:DY:86:ARG:NH2	57:DY:95:LYS:HD3	2.26	0.49
1:CA:1109:C:OP2	3:CC:176:HIS:ND1	2.45	0.49
3:AC:86:VAL:O	3:AC:89:GLU:HB3	2.11	0.49
13:AM:9:ILE:O	13:AM:10:PRO:C	2.49	0.49
1:CA:1055:A:C8	1:CA:1055:A:O5'	2.62	0.49
53:BU:108:GLU:CG	54:BV:44:LYS:HD3	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BV:47:VAL:C	54:BV:49:THR:N	2.65	0.49
1:AA:1151:A:O2'	1:AA:1152:A:H8	1.95	0.49
13:CM:56:LEU:HD13	13:CM:60:VAL:HG23	1.93	0.49
9:AI:52:ALA:HB3	9:AI:95:LYS:CD	2.42	0.49
48:BP:147:LEU:HG	48:BP:148:LEU:N	2.27	0.49
3:CC:22:TRP:CH2	3:CC:32:LEU:HB2	2.47	0.49
58:DZ:167:PRO:O	58:DZ:169:GLU:N	2.45	0.49
36:BA:1516:C:H2'	36:BA:1517:G:C5'	2.40	0.49
40:DE:77:ILE:C	40:DE:78:LEU:HG	2.32	0.49
5:CE:147:ASP:N	5:CE:147:ASP:OD1	2.37	0.49
34:B8:32:LEU:HD11	36:BA:2391:G:OP1	2.12	0.49
19:CS:31:ILE:HG23	19:CS:49:ILE:CG2	2.42	0.49
9:CI:53:VAL:O	9:CI:54:ASP:CB	2.60	0.49
13:CM:58:GLU:HA	13:CM:58:GLU:OE1	2.12	0.49
36:DA:1069:A:H1'	36:DA:1070:A:OP1	2.12	0.49
6:CF:43:LEU:H	6:CF:43:LEU:CD2	2.21	0.49
54:DV:17:GLY:O	54:DV:18:LEU:HD13	2.12	0.49
46:DN:15:LEU:HD13	46:DN:15:LEU:C	2.32	0.49
36:BA:191:A:H2'	36:BA:192:C:C6	2.47	0.49
41:BF:36:VAL:HG12	41:BF:36:VAL:O	2.10	0.49
36:DA:1396:U:C2'	36:DA:1396:U:O2	2.56	0.49
35:B9:25:VAL:HB	35:B9:34:GLN:CB	2.41	0.49
50:BR:103:ARG:HB3	50:BR:108:GLY:HA2	1.94	0.49
46:BN:56:ASN:HA	46:BN:125:GLY:C	2.31	0.49
46:BN:55:VAL:HG21	46:BN:127:ASP:H	1.76	0.49
36:DA:2113:U:H2'	36:DA:2114:A:C8	2.40	0.49
36:DA:2745:C:C1'	43:DH:143:GLN:HG2	2.42	0.49
7:AG:115:ARG:O	7:AG:118:VAL:HG22	2.10	0.49
7:AG:117:ALA:O	7:AG:119:ARG:N	2.45	0.49
36:DA:2807:G:H1	36:DA:2893:G:H1	1.60	0.49
4:AD:158:ILE:O	4:AD:162:LEU:HB2	2.12	0.49
7:CG:15:ASP:CB	7:CG:20:ASP:H	2.25	0.49
36:BA:729:G:N7	39:BD:208:LYS:HB3	2.26	0.49
28:D2:56:GLN:HA	28:D2:59:ARG:HE	1.77	0.49
42:BG:175:LEU:HD23	42:BG:175:LEU:H	1.76	0.49
22:AV:50:U:O5'	22:AV:50:U:H6	1.95	0.49
36:BA:302:C:H2'	36:BA:303:U:H6	1.76	0.49
14:CN:24:CYS:N	14:CN:33:VAL:HG11	2.26	0.49
36:BA:201:C:O2'	36:BA:202:U:H5'	2.11	0.49
36:BA:569:U:OP1	36:BA:945:A:C8	2.65	0.49
7:CG:18:TYR:HE2	7:CG:58:PRO:HG2	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DR:34:ILE:HB	50:DR:114:VAL:CG2	2.42	0.49
55:DW:13:SER:HB2	55:DW:16:LYS:CD	2.42	0.49
36:BA:176:G:O2'	36:BA:177:G:H5'	2.12	0.49
39:DD:118:VAL:HG22	39:DD:119:ALA:N	2.27	0.49
1:AA:902:G:H2'	1:AA:903:G:H8	1.77	0.49
1:AA:903:G:H2'	1:AA:904:C:C6	2.47	0.49
36:DA:2554:U:H2'	36:DA:2555:U:C6	2.47	0.49
36:DA:1400:G:C6	36:DA:1401:G:C6	2.99	0.49
13:CM:116:THR:O	13:CM:117:VAL:O	2.30	0.49
18:AR:40:LEU:O	18:AR:42:ARG:N	2.45	0.49
36:DA:114:U:OP2	36:DA:114:U:H3'	2.12	0.49
22:AV:14:A:C2'	22:AV:15:G:H5'	2.42	0.49
39:DD:28:GLU:H	39:DD:29:PRO:HD2	1.76	0.49
38:DC:156:ILE:C	38:DC:158:ALA:H	2.15	0.49
36:DA:540:C:H2'	36:DA:541:C:C6	2.47	0.49
36:DA:871:U:H2'	36:DA:871:U:O2	2.10	0.49
36:BA:2881:C:C2	36:BA:2882:A:C8	3.00	0.49
50:DR:72:ASP:HB3	50:DR:75:LEU:HB3	1.93	0.49
49:DQ:41:TRP:CD1	49:DQ:96:VAL:HG12	2.47	0.49
36:BA:1240:U:O2'	36:BA:1241:A:H5'	2.12	0.49
4:CD:98:GLU:C	4:CD:100:ARG:N	2.66	0.49
36:BA:2282:G:OP1	36:BA:2283:C:H1'	2.11	0.49
34:D8:7:HIS:HB3	34:D8:59:LYS:NZ	2.27	0.49
52:DT:19:LEU:HD22	52:DT:85:LYS:HD3	1.94	0.49
58:BZ:178:GLU:HG3	58:BZ:178:GLU:O	2.12	0.49
28:B2:25:VAL:HG21	28:B2:57:ILE:HG23	1.94	0.49
36:BA:142(A):C:O2'	36:BA:143:G:H5'	2.11	0.49
31:D5:57:VAL:HG12	31:D5:58:LEU:HD13	1.92	0.49
2:AB:137:ARG:O	2:AB:141:GLU:HB2	2.12	0.49
1:CA:367:U:C6	1:CA:394:G:N2	2.80	0.49
49:DQ:130:LYS:HZ2	58:DZ:81:ARG:HG3	1.76	0.49
42:DG:34:LEU:CB	42:DG:161:THR:HG22	2.42	0.49
52:DT:59:THR:OG1	52:DT:78:LEU:HD12	2.12	0.49
57:BY:10:GLY:O	57:BY:27:VAL:HG22	2.12	0.49
39:BD:49:ILE:O	39:BD:49:ILE:HG13	2.13	0.49
1:AA:1130:A:C2	1:AA:1146:A:C4	2.99	0.49
1:AA:1280:A:H5''	10:AJ:40:LEU:HD12	1.93	0.49
13:CM:4:ILE:C	13:CM:6:GLY:H	2.15	0.49
28:D2:51:ARG:NH1	28:D2:51:ARG:HB2	2.26	0.49
58:DZ:180:VAL:HG13	58:DZ:181:GLU:N	2.26	0.49
53:DU:95:LEU:O	53:DU:98:LEU:HG	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DP:146:VAL:CG2	48:DP:147:LEU:H	2.03	0.49
36:BA:513:A:N6	36:BA:514:A:N6	2.60	0.49
55:BW:76:VAL:HB	55:BW:103:ILE:HG23	1.92	0.49
55:BW:18:ARG:NH1	55:BW:76:VAL:HG13	2.27	0.49
36:BA:657:U:C4	36:BA:658:C:N4	2.80	0.49
42:BG:5:VAL:HG12	42:BG:7:LEU:H	1.76	0.49
34:B8:15:LYS:CG	48:BP:65:ARG:HH22	2.25	0.49
40:DE:199:ARG:HG2	40:DE:200:GLU:N	2.26	0.49
36:DA:1060:U:O2'	36:DA:1061:U:OP2	2.26	0.49
13:AM:82:MET:CG	13:AM:83:ASP:N	2.66	0.49
30:B4:30:GLU:O	30:B4:31:ILE:HD12	2.12	0.49
36:BA:2128:C:OP2	38:BC:36:LYS:HD2	2.12	0.49
8:CH:87:SER:OG	8:CH:92:ARG:HA	2.12	0.49
36:BA:534:U:O2	53:BU:49:HIS:CD2	2.65	0.49
13:CM:3:ARG:HH21	13:CM:7:VAL:CG2	2.17	0.49
2:AB:86:GLU:C	2:AB:88:ALA:H	2.15	0.49
5:AE:11:ILE:HD12	5:AE:31:LEU:CD1	2.42	0.49
1:AA:438:G:C4'	4:AD:123:HIS:ND1	2.75	0.49
36:DA:2155:G:H3'	36:DA:2156:G:C8	2.44	0.49
35:B9:9:ARG:O	35:B9:11:CYS:N	2.45	0.49
50:BR:103:ARG:O	50:BR:111:LEU:HD11	2.12	0.49
51:BS:88:ASP:O	51:BS:89:ARG:HB3	2.11	0.49
36:BA:1657:C:H2'	36:BA:1658:C:H6	1.76	0.49
10:CJ:32:ALA:HB3	10:CJ:76:ASN:HB2	1.95	0.49
13:CM:14:ARG:HG3	13:CM:44:ARG:CZ	2.42	0.49
25:CZ:356:PRO:HG2	25:CZ:369:THR:O	2.12	0.49
36:BA:1498:C:H2'	36:BA:1499:C:C5'	2.39	0.49
2:AB:104:ASN:O	2:AB:108:ILE:HG13	2.12	0.49
6:CF:1:MET:HA	6:CF:67:MET:O	2.12	0.49
36:BA:1608:A:H1'	36:BA:1610:A:OP2	2.12	0.49
1:AA:1158:C:O2'	1:AA:1159:U:H4'	2.11	0.49
36:DA:2144:U:H2'	36:DA:2146:C:H5	1.76	0.49
28:D2:69:ARG:O	28:D2:70:GLN:CB	2.60	0.49
19:AS:32:LYS:O	19:AS:33:THR:CB	2.60	0.49
15:CO:11:VAL:O	15:CO:14:GLU:N	2.37	0.49
58:BZ:128:VAL:HG21	58:BZ:134:PRO:CD	2.42	0.49
50:BR:87:TYR:HD1	50:BR:90:ARG:HD2	1.77	0.49
11:AK:62:GLN:HG2	11:AK:63:LEU:N	2.27	0.49
36:BA:950:G:H2'	36:BA:951:C:H6	1.76	0.49
36:DA:1471:A:H3'	36:DA:1472:A:H8	1.77	0.49
12:AL:47:LYS:HB3	12:AL:48:PRO:CD	2.41	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1567:A:C5'	39:BD:58:HIS:CD2	2.96	0.49
36:DA:1493:C:O2	36:DA:1493:C:H2'	2.12	0.49
36:BA:1651:G:H2'	36:BA:1652:A:O4'	2.12	0.49
40:DE:107:THR:HG23	40:DE:163:GLU:N	2.27	0.49
25:CZ:312:PRO:O	25:CZ:313:HIS:ND1	2.45	0.49
20:CT:41:ILE:C	20:CT:43:LEU:N	2.64	0.49
1:AA:982:U:H4'	1:AA:983:A:O5'	2.12	0.49
36:BA:2709:G:H2'	36:BA:2710:C:C6	2.46	0.49
36:DA:428:A:H3'	36:DA:429:A:C8	2.48	0.49
1:AA:1010:G:H2'	1:AA:1011:G:H8	1.77	0.49
55:DW:18:ARG:NH1	55:DW:76:VAL:HG13	2.27	0.49
37:DB:11:C:OP2	37:DB:12:C:H5	1.95	0.49
1:CA:884:U:H4'	1:CA:884:U:OP1	2.11	0.49
42:DG:162:THR:HG22	42:DG:162:THR:O	2.11	0.49
38:DC:116:THR:HB	38:DC:147:PHE:CE1	2.47	0.49
4:CD:100:ARG:HG3	4:CD:100:ARG:NH1	2.28	0.49
32:D6:11:LEU:HD22	32:D6:12:GLU:H	1.77	0.49
52:DT:28:VAL:HG21	52:DT:47:GLY:CA	2.41	0.49
28:B2:35:LEU:HD23	28:B2:50:ILE:HG23	1.94	0.49
28:B2:39:ALA:CA	28:B2:45:SER:HB3	2.42	0.49
28:B2:62:THR:OG1	36:BA:76:C:H4'	2.12	0.49
25:AZ:157:LEU:O	25:AZ:160:GLN:HB3	2.12	0.49
25:AZ:158:LEU:O	25:AZ:163:PHE:HB2	2.12	0.49
52:BT:107:ASP:H	52:BT:110:ILE:HG12	1.77	0.49
58:BZ:29:TYR:CB	58:BZ:34:ASN:CB	2.85	0.49
35:D9:31:LYS:HG2	36:DA:2478:A:H5'	1.93	0.49
39:BD:43:ARG:HB3	39:BD:54:ARG:CB	2.41	0.49
41:BF:123:LEU:HD12	41:BF:124:LEU:N	2.26	0.49
3:CC:18:TRP:HH2	14:CN:57:ARG:HD3	1.77	0.49
10:CJ:48:THR:CG2	10:CJ:62:HIS:ND1	2.73	0.49
1:AA:1283:G:O2'	1:AA:1284:C:C6	2.65	0.49
13:CM:12:ASN:N	13:CM:12:ASN:HD22	2.10	0.49
36:BA:1140:C:OP2	46:BN:66:LYS:HE2	2.11	0.49
36:DA:1819:A:H5''	39:DD:161:THR:CG2	2.39	0.49
5:CE:79:GLU:HB3	5:CE:91:LEU:O	2.12	0.49
11:CK:89:ALA:C	11:CK:91:ARG:H	2.15	0.49
7:CG:118:VAL:O	7:CG:121:ALA:HB3	2.12	0.49
19:CS:16:LEU:N	19:CS:16:LEU:HD12	2.25	0.49
36:BA:2287:A:C2	36:BA:2346:A:C2	2.99	0.49
41:BF:122:LYS:HG3	41:BF:191:ARG:HA	1.94	0.49
31:D5:2:ALA:N	36:DA:747:U:C4	2.80	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:77:ASN:O	13:AM:81:LEU:CD2	2.60	0.49
36:BA:896:A:H5''	58:BZ:146:ILE:HG13	1.95	0.49
46:DN:115:ARG:HA	46:DN:118:LYS:NZ	2.27	0.49
2:CB:7:VAL:HG13	2:CB:11:LEU:HD12	1.95	0.49
1:CA:1371:G:C2	1:CA:1372:U:C2	3.00	0.49
9:CI:65:VAL:O	9:CI:65:VAL:HG13	2.13	0.49
36:DA:1363:C:H2'	36:DA:1364:G:C8	2.42	0.49
51:DS:17:ARG:HA	51:DS:20:ARG:HH11	1.72	0.49
34:B8:22:VAL:CG2	34:B8:53:PRO:HB2	2.42	0.49
43:BH:146:ALA:O	43:BH:149:ARG:N	2.45	0.49
58:BZ:41:LEU:CD1	58:BZ:82:ARG:NH2	2.75	0.49
22:CW:9:A:H2	22:CW:44:G:C6	2.30	0.49
51:BS:27:SER:HA	51:BS:88:ASP:CB	2.43	0.49
51:BS:92:TYR:HD2	51:BS:94:TYR:HB2	1.77	0.49
38:BC:22:ILE:HG12	38:BC:224:ILE:HD12	1.93	0.49
25:CZ:355:LEU:HD23	25:CZ:370:PHE:HB3	1.94	0.49
53:BU:70:ARG:C	53:BU:72:HIS:H	2.15	0.49
52:DT:107:ASP:N	52:DT:110:ILE:HG12	2.25	0.49
46:DN:108:PRO:HG2	46:DN:109:LYS:N	2.25	0.49
36:DA:1651:G:H2'	36:DA:1652:A:O4'	2.12	0.49
36:BA:278:A:N1	36:BA:362:U:C4	2.80	0.49
36:BA:848:G:O6	36:BA:928:G:H2'	2.12	0.49
1:AA:1488:G:H2'	1:AA:1489:G:H8	1.76	0.49
29:D3:28:LEU:HA	29:D3:33:GLN:OE1	2.12	0.49
2:CB:107:THR:O	2:CB:110:GLN:CG	2.60	0.49
1:AA:722:A:O2'	1:AA:724:G:H8	1.93	0.49
55:BW:20:VAL:HG21	55:BW:43:GLY:C	2.33	0.49
1:CA:411:A:C8	1:CA:413:G:C8	3.00	0.49
36:DA:2359:C:H2'	36:DA:2360:A:H8	1.75	0.49
26:B0:19:LYS:HE2	36:BA:2262:U:OP2	2.13	0.49
25:AZ:381:GLU:O	25:AZ:382:GLU:HB3	2.13	0.49
20:CT:100:ILE:HG22	20:CT:100:ILE:O	2.12	0.49
1:AA:825:G:H21	8:AH:11:THR:HG21	1.77	0.49
1:AA:781:A:C5	1:AA:802:A:C2	2.99	0.49
36:BA:642:G:H21	36:BA:646:A:H2	1.59	0.49
24:CY:27:C:C2	24:CY:28:C:C5	3.00	0.49
1:AA:594:G:H2'	1:AA:595:G:H5'	1.94	0.49
36:DA:2352:A:C4	36:DA:2366:A:C2	3.00	0.49
5:AE:143:ARG:NH1	8:AH:77:GLU:OE2	2.46	0.49
17:CQ:45:HIS:CD2	17:CQ:47:PRO:HD3	2.47	0.49
45:DK:5:UNK:O	45:DK:6:UNK:C	2.59	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1427:A:H4'	36:BA:1428:C:O5'	2.13	0.49
25:AZ:171:ILE:N	25:AZ:171:ILE:HD12	2.26	0.49
38:DC:100:ILE:HD12	38:DC:126:LYS:HB2	1.94	0.49
52:BT:91:ARG:HG2	52:BT:116:ALA:HA	1.94	0.49
53:BU:83:LEU:CD1	53:BU:113:ALA:HB2	2.42	0.49
1:CA:1305:G:P	21:CU:2:GLY:N	2.86	0.49
28:B2:10:LEU:HD11	28:B2:59:ARG:HB2	1.93	0.49
28:B2:21:LEU:O	28:B2:24:LEU:HB2	2.13	0.49
56:BX:35:THR:HG23	56:BX:37:THR:H	1.77	0.49
39:BD:35:LYS:CB	39:BD:36:PRO:HD2	2.42	0.49
1:AA:521:G:O2'	1:AA:522:C:H5'	2.12	0.49
26:D0:40:GLN:HE22	26:D0:45:PHE:CA	2.25	0.49
57:DY:77:PRO:O	57:DY:99:CYS:SG	2.70	0.49
13:AM:56:LEU:HD13	13:AM:60:VAL:HG23	1.93	0.49
36:BA:2309:A:H2'	36:BA:2310:A:C5'	2.40	0.49
36:DA:804:A:H2'	36:DA:806:C:C4	2.47	0.49
3:CC:154:SER:HB2	3:CC:165:THR:HB	1.93	0.49
1:AA:1015:A:H2'	1:AA:1016:A:H8	1.74	0.49
36:BA:2777:G:H4'	36:BA:2778:A:H5'	1.93	0.49
48:BP:84:ASN:CA	48:BP:116:GLY:HA3	2.40	0.49
5:CE:79:GLU:HG3	5:CE:93:PRO:HD3	1.95	0.49
40:DE:56:PRO:O	40:DE:57:LYS:HE3	2.12	0.49
1:CA:454:C:H3'	1:CA:455:C:C6	2.47	0.49
52:BT:66:VAL:HA	52:BT:71:GLY:HA2	1.94	0.49
36:DA:2678:C:H2'	36:DA:2679:A:O4'	2.12	0.49
42:BG:112:PRO:C	42:BG:114:ILE:H	2.15	0.49
36:DA:984:A:H5''	36:DA:985:C:C5	2.33	0.49
52:DT:94:ALA:CB	52:DT:99:LEU:HD23	2.39	0.49
53:BU:52:ARG:O	53:BU:55:ARG:N	2.46	0.49
2:AB:84:GLU:HB3	2:AB:219:VAL:HG21	1.94	0.49
36:BA:2572:A:C2	40:BE:144:ARG:NH1	2.80	0.49
24:AY:6:C:H2'	24:AY:7:G:H8	1.76	0.49
36:BA:886:C:H2'	36:BA:887:A:H4'	1.94	0.49
50:DR:63:ARG:HG2	50:DR:80:PHE:CE2	2.48	0.49
38:BC:106:GLY:O	38:BC:107:TRP:HB3	2.12	0.49
9:AI:73:GLN:O	9:AI:76:ALA:HB3	2.13	0.49
26:B0:50:ASN:HD22	26:B0:63:VAL:CG2	2.23	0.49
49:BQ:52:VAL:HA	49:BQ:55:VAL:CG1	2.43	0.49
51:DS:89:ARG:CG	51:DS:92:TYR:HA	2.40	0.49
36:DA:2092:U:C4'	36:DA:2093:G:H5''	2.41	0.49
37:DB:65:C:H2'	37:DB:109:C:N4	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:444:C:H2'	1:CA:445:G:C8	2.41	0.49
1:CA:445:G:C6	1:CA:490:G:C6	3.01	0.49
27:B1:6:GLU:O	27:B1:7:ILE:HD12	2.13	0.49
1:AA:261:U:O2	1:AA:263:A:C8	2.66	0.49
17:AQ:59:ILE:HG23	17:AQ:71:PHE:HB3	1.94	0.49
36:DA:94(A):G:H2'	36:DA:95:G:O4'	2.12	0.49
42:DG:172:LEU:O	42:DG:172:LEU:HD23	2.12	0.49
1:AA:80:G:H3'	1:AA:81:U:H5'	1.94	0.49
16:AP:25:ARG:NH1	16:AP:25:ARG:HG3	2.24	0.49
22:CW:55:U:C3'	22:CW:56:C:H5''	2.43	0.49
47:BO:9:GLU:HG3	47:BO:10:VAL:H	1.77	0.49
36:DA:1683:C:H2'	36:DA:1684:C:C6	2.43	0.49
24:AY:28:C:C2	24:AY:29:G:C8	3.01	0.49
22:AW:27:G:C2'	22:AW:28:G:H5'	2.41	0.49
49:BQ:1:MET:HA	49:BQ:1:MET:HE3	1.94	0.49
36:DA:15:G:O2'	36:DA:16:G:H5'	2.13	0.49
4:CD:85:LYS:HD3	4:CD:92:VAL:HG13	1.94	0.49
43:BH:118:PRO:HG2	43:BH:121:ILE:HD12	1.94	0.49
1:AA:623:C:C2'	1:AA:624:C:H5'	2.43	0.49
46:DN:41:ASP:C	53:DU:64:ARG:HH12	2.15	0.49
36:DA:2194:G:C2	36:DA:2195:C:C2	3.00	0.49
50:DR:106:GLY:O	50:DR:107:ASP:HB3	2.11	0.49
36:DA:2517:C:C6	36:DA:2542:A:C2	3.01	0.49
36:BA:1709:U:H2'	36:BA:1710:C:C6	2.47	0.49
36:DA:2443:C:O2'	36:DA:2444:G:H5'	2.11	0.49
18:AR:61:LYS:O	18:AR:65:ILE:HG13	2.12	0.49
36:DA:2197:U:H1'	36:DA:2198:A:C8	2.47	0.49
58:BZ:77:ASP:O	58:BZ:78:LYS:HB2	2.12	0.49
49:BQ:89:ASN:O	49:BQ:90:VAL:C	2.49	0.49
36:DA:1821:A:H2'	36:DA:1822:G:H8	1.77	0.49
36:BA:1308:A:H2'	36:BA:1309:G:O4'	2.13	0.49
36:BA:1777:U:O2'	36:BA:1778:U:H5'	2.11	0.49
44:DJ:48:UNK:O	44:DJ:49:UNK:CB	2.61	0.49
36:BA:85:G:N3	36:BA:103:A:C2	2.81	0.49
43:BH:34:GLU:HA	43:BH:34:GLU:OE1	2.12	0.49
46:DN:93:THR:O	46:DN:93:THR:HG23	2.13	0.49
6:CF:24:GLU:HG3	6:CF:28:ARG:NH1	2.27	0.49
24:AY:19:G:O4'	24:AY:57:G:N2	2.45	0.49
1:CA:55:A:H2'	1:CA:56:U:H5'	1.94	0.49
32:D6:30:THR:O	32:D6:31:PRO:C	2.50	0.49
47:DO:114:ILE:O	47:DO:118:ALA:N	2.41	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DT:29:ARG:CD	52:DT:30:VAL:HG13	2.43	0.49
36:DA:1502:C:H5'	36:DA:1503:U:OP2	2.13	0.49
28:B2:17:SER:O	28:B2:18:PRO:C	2.51	0.49
2:CB:92:TYR:CE1	2:CB:151:GLY:HA2	2.47	0.49
25:AZ:107:SER:HA	25:AZ:136:ASN:O	2.11	0.49
39:BD:97:TYR:C	39:BD:99:ASP:H	2.15	0.49
39:BD:97:TYR:C	39:BD:99:ASP:N	2.64	0.49
39:DD:44:ASN:CB	39:DD:48:ARG:O	2.61	0.49
42:DG:129:GLY:O	42:DG:130:ASN:HB2	2.11	0.49
42:DG:39:ILE:HD11	42:DG:60:LEU:HD11	1.93	0.49
57:BY:13:VAL:HG22	57:BY:14:LEU:N	2.28	0.49
43:DH:66:GLY:HA2	43:DH:69:ARG:HD3	1.93	0.49
57:DY:7:VAL:C	57:DY:8:LYS:HD2	2.33	0.49
46:DN:133:GLN:HG2	46:DN:135:PRO:CD	2.22	0.49
1:AA:1152:A:OP1	10:AJ:68:HIS:HD2	1.95	0.49
36:DA:1010:A:H1'	36:DA:1153:C:H1'	1.94	0.49
1:AA:1502:A:C2	1:AA:1504:G:C2	3.01	0.49
36:BA:2778:A:H4'	36:BA:2779:U:OP1	2.13	0.49
51:BS:65:VAL:O	51:BS:65:VAL:HG12	2.12	0.49
36:BA:657:U:N3	36:BA:658:C:C4	2.80	0.49
36:DA:1516:C:C2'	36:DA:1517:G:C5'	2.90	0.49
13:AM:96:LEU:HB3	13:AM:97:PRO:CD	2.36	0.49
46:DN:65:LYS:O	46:DN:69:GLN:HB2	2.12	0.49
27:D1:82:LEU:HD21	27:D1:90:ILE:HG23	1.94	0.49
58:BZ:96:VAL:CG2	58:BZ:97:GLU:N	2.73	0.49
36:BA:2249:U:H4'	36:BA:2275:C:C5	2.48	0.49
36:DA:106:C:H1'	57:DY:2:ARG:NH2	2.26	0.49
58:DZ:78:LYS:O	58:DZ:79:ARG:O	2.30	0.49
1:CA:1277:C:O2'	1:CA:1279:A:C8	2.64	0.49
6:CF:10:LEU:HD11	6:CF:61:LEU:HD12	1.94	0.49
1:CA:674:G:OP1	6:CF:87:ARG:NH2	2.44	0.49
2:AB:46:LYS:C	2:AB:48:MET:N	2.65	0.49
36:DA:1362:C:C2'	36:DA:1363:C:H5'	2.43	0.49
40:DE:102:VAL:O	40:DE:169:ASN:N	2.44	0.49
1:AA:1315:U:H2'	1:AA:1316:G:O4'	2.13	0.49
41:BF:42:ALA:C	41:BF:44:ARG:N	2.64	0.49
36:BA:968:G:C5	36:BA:969:U:C5	3.00	0.49
1:AA:1242:C:O2'	1:AA:1243:C:H5'	2.11	0.49
25:CZ:355:LEU:HB3	25:CZ:359:VAL:HB	1.94	0.49
1:AA:1434:A:C8	1:AA:1435:G:N7	2.81	0.49
51:DS:89:ARG:HG2	51:DS:92:TYR:CA	2.41	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DR:103:ARG:NH1	50:DR:110:PRO:HD3	2.27	0.49
36:DA:2369:A:O2'	36:DA:2370:G:H5'	2.13	0.49
36:DA:2262:U:O2'	36:DA:2263:C:H5'	2.13	0.49
53:DU:76:TYR:CE1	53:DU:80:ILE:HG13	2.48	0.49
50:DR:12:ARG:HD3	50:DR:16:HIS:NE2	2.28	0.49
1:AA:892:A:O2'	1:AA:1415:G:H4'	2.13	0.49
18:CR:36:ASN:OD1	18:CR:38:GLU:CG	2.59	0.49
36:DA:1217:C:C2	36:DA:1218:C:C5	3.01	0.49
1:CA:698:G:H2'	1:CA:699:C:H6	1.76	0.49
41:DF:65:TRP:CZ3	41:DF:75:HIS:HD2	2.29	0.49
55:DW:62:HIS:O	55:DW:63:ASP:O	2.30	0.49
8:AH:110:ALA:HA	8:AH:136:GLU:HA	1.93	0.49
36:BA:841:A:H2'	36:BA:842:G:C8	2.48	0.49
36:DA:2626:C:O2'	36:DA:2627:G:H5'	2.12	0.49
43:DH:154:PRO:O	43:DH:155:SER:CB	2.60	0.49
55:BW:9:TYR:HE1	55:BW:102:HIS:HE2	1.60	0.49
36:BA:1547:C:H2'	36:BA:1548:C:C6	2.48	0.49
1:CA:1231:G:H4'	9:CI:126:SER:OG	2.12	0.49
11:AK:25:TYR:CE1	11:AK:87:THR:HB	2.47	0.49
1:CA:518:C:H5''	1:CA:519:C:C6	2.48	0.49
36:BA:38:A:C2	36:BA:442:G:C2	3.01	0.49
36:BA:398:G:H2'	36:BA:399:G:O4'	2.12	0.49
37:BB:76:G:O3'	58:BZ:19:ARG:NH2	2.46	0.49
11:AK:117:ASN:HD22	11:AK:117:ASN:N	2.09	0.49
43:BH:137:ASP:O	43:BH:138:LYS:HB2	2.11	0.49
46:DN:94:HIS:N	46:DN:95:PRO:CD	2.76	0.49
36:BA:74:A:H5''	36:BA:75:G:O4'	2.12	0.49
51:BS:81:GLY:O	51:BS:82:ILE:HD13	2.12	0.49
36:BA:977:G:O2'	36:BA:978:G:H5'	2.12	0.49
2:CB:39:ILE:HG22	2:CB:40:HIS:N	2.27	0.49
28:B2:50:ILE:HG22	28:B2:51:ARG:N	2.28	0.49
25:AZ:138:VAL:N	25:AZ:174:SER:HB2	2.27	0.49
25:AZ:195:TRP:CE3	25:AZ:195:TRP:HA	2.48	0.49
49:DQ:135:ASP:N	49:DQ:137:TYR:HD2	2.04	0.49
34:B8:48:PHE:O	34:B8:49:VAL:CB	2.55	0.49
57:DY:88:LYS:HZ1	57:DY:93:GLY:HA3	1.73	0.49
56:DX:12:VAL:CG2	56:DX:13:LEU:N	2.61	0.49
36:DA:2468:G:C8	36:DA:2476:A:C2	3.00	0.49
3:AC:12:LEU:O	3:AC:14:ILE:N	2.45	0.49
43:DH:83:TYR:O	43:DH:84:SER:O	2.31	0.49
9:AI:9:ARG:HG3	9:AI:14:VAL:HG13	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:215:ARG:HB2	25:CZ:282:ALA:HB3	1.94	0.49
51:BS:49:VAL:CG1	51:BS:50:SER:H	2.08	0.49
1:AA:373:A:O2'	1:AA:374:A:H5'	2.13	0.49
37:DB:106:G:C2	37:DB:107:G:C8	3.01	0.49
50:BR:2:ARG:CD	50:BR:2:ARG:C	2.72	0.49
48:BP:20:GLY:O	48:BP:21:ARG:HB2	2.12	0.49
36:BA:656:G:H2'	36:BA:657:U:H6	1.77	0.49
40:DE:4:ILE:HD11	40:DE:28:ALA:HB1	1.93	0.49
34:B8:15:LYS:HD3	48:BP:65:ARG:HH21	1.74	0.49
37:DB:24:G:O6	37:DB:56:G:H2'	2.13	0.49
36:BA:2396:G:O2'	36:BA:2397:G:H5'	2.12	0.49
46:DN:68:GLU:HG3	46:DN:88:GLU:CD	2.32	0.49
42:BG:91:ARG:CG	42:BG:92:VAL:N	2.75	0.49
12:CL:67:THR:OG1	12:CL:96:VAL:HG12	2.13	0.49
3:CC:116:VAL:HG21	3:CC:202:ILE:HD11	1.94	0.49
52:BT:66:VAL:O	52:BT:66:VAL:HG23	2.13	0.49
39:DD:186:HIS:HD2	39:DD:188:GLU:HB2	1.78	0.49
4:AD:189:PRO:HB2	4:AD:194:LEU:CD2	2.40	0.49
1:AA:368:U:P	25:AZ:291:ARG:HH11	2.35	0.49
46:DN:87:LEU:CD1	46:DN:91:LEU:HG	2.43	0.49
36:BA:733:G:N7	36:BA:761:A:N1	2.61	0.49
3:CC:147:LYS:HB2	3:CC:203:PHE:CE2	2.47	0.49
30:B4:9:LEU:CD1	30:B4:10:VAL:H	2.24	0.49
20:AT:45:GLN:NE2	20:AT:46:GLU:H	2.10	0.49
58:BZ:145:GLU:HG3	58:BZ:146:ILE:N	2.27	0.49
30:D4:14:ILE:N	30:D4:14:ILE:CD1	2.75	0.49
22:CW:17:C:N4	36:DA:2110:G:N3	2.61	0.49
4:AD:67:ILE:O	4:AD:67:ILE:CG2	2.60	0.49
40:BE:144:ARG:O	40:BE:148:GLY:HA2	2.13	0.49
4:CD:125:HIS:CG	4:CD:152:SER:HG	2.28	0.49
36:BA:67:U:O2'	36:BA:68:G:H5'	2.12	0.49
51:BS:89:ARG:NH1	51:BS:89:ARG:HG2	2.27	0.49
51:BS:92:TYR:CG	51:BS:93:LYS:N	2.80	0.49
54:BV:19:LYS:HB3	54:BV:94:LEU:O	2.12	0.49
1:CA:1444:C:O2'	1:CA:1445:C:H5'	2.11	0.49
36:BA:2523:G:O2'	36:BA:2524:G:H5''	2.12	0.49
36:BA:2452:C:C4	36:BA:2453:A:C6	3.00	0.49
29:B3:31:LEU:O	29:B3:32:GLN:CB	2.60	0.49
46:DN:55:VAL:HG22	46:DN:125:GLY:HA3	1.95	0.49
33:D7:43:THR:HG22	33:D7:44:PRO:N	2.28	0.49
36:BA:1072:C:H1'	36:BA:1094:U:H3	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BE:1:MET:HG3	40:BE:83:ASP:O	2.13	0.49
52:DT:126:ALA:C	52:DT:128:GLU:H	2.15	0.49
36:BA:2620:C:OP1	40:BE:152:LYS:HG3	2.13	0.49
1:CA:123:C:OP1	1:CA:312:C:H5'	2.12	0.49
1:CA:659:U:H2'	1:CA:660:G:H8	1.76	0.49
20:CT:47:GLY:C	20:CT:49:ALA:H	2.16	0.49
58:BZ:58:VAL:HG22	58:BZ:68:PRO:CB	2.42	0.49
9:CI:5:TYR:CG	9:CI:6:GLY:N	2.80	0.49
9:CI:41:VAL:HG12	9:CI:41:VAL:O	2.13	0.49
36:DA:291:C:H2'	36:DA:292:C:C6	2.48	0.49
17:CQ:81:ARG:C	17:CQ:83:ASP:H	2.16	0.49
17:AQ:95:TYR:HA	17:AQ:98:LEU:HD13	1.94	0.49
1:CA:309:G:H1'	1:CA:608:A:C2	2.47	0.49
36:BA:2166:G:H2'	36:BA:2167:U:C6	2.47	0.49
29:D3:11:SER:HB3	36:DA:988:A:P	2.52	0.49
33:D7:38:GLY:O	36:DA:458:G:H2'	2.13	0.49
36:DA:902:C:H2'	36:DA:903:C:H6	1.77	0.49
38:BC:40:THR:HG23	38:BC:176:GLY:O	2.12	0.49
27:D1:52:ARG:O	27:D1:53:VAL:HB	2.12	0.49
9:CI:122:ALA:HB1	9:CI:123:PRO:HD2	1.94	0.49
31:B5:13:LYS:HE2	36:BA:517:C:OP2	2.12	0.49
25:AZ:356:PRO:HD3	25:AZ:370:PHE:HB3	1.95	0.49
36:DA:2391:G:O6	36:DA:2425:A:H8	1.95	0.49
52:DT:27:THR:HG23	52:DT:28:VAL:N	2.28	0.49
1:CA:987:G:H2'	1:CA:988:G:H8	1.78	0.49
28:B2:48:HIS:O	28:B2:52:ASP:CB	2.60	0.49
3:CC:3:ASN:N	3:CC:3:ASN:OD1	2.45	0.49
49:DQ:35:VAL:HG23	49:DQ:101:ARG:O	2.13	0.49
25:CZ:134:PHE:HZ	25:CZ:173:GLY:O	1.95	0.49
57:BY:6:HIS:CE1	57:BY:30:VAL:HG11	2.48	0.49
26:D0:24:LYS:HG3	36:DA:2355:C:H4'	1.94	0.49
52:BT:28:VAL:CG1	52:BT:46:GLU:CA	2.75	0.49
36:BA:2476:A:C2'	36:BA:2477:C:H5''	2.42	0.49
54:BV:47:VAL:HG21	54:BV:50:PRO:O	2.13	0.49
53:BU:10:ARG:O	53:BU:12:ARG:N	2.46	0.49
13:CM:66:LEU:O	13:CM:70:LEU:CB	2.61	0.49
42:DG:139:LEU:C	42:DG:139:LEU:HD12	2.33	0.49
31:B5:38:ALA:CB	31:B5:48:GLU:HG3	2.42	0.49
36:DA:996:A:C4'	53:DU:92:ARG:CZ	2.91	0.49
41:BF:3:GLU:HB3	41:BF:24:LEU:HB2	1.95	0.49
1:AA:454:C:H5''	1:AA:455:C:C5	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DB:106:G:H2'	37:DB:107:G:H8	1.78	0.49
36:BA:635:C:O2'	36:BA:636:G:H5'	2.12	0.49
5:CE:80:ILE:HD11	5:CE:91:LEU:CB	2.34	0.49
46:DN:98:VAL:O	46:DN:102:ALA:HB2	2.13	0.49
42:BG:161:THR:HG21	42:BG:172:LEU:CD1	2.42	0.49
41:DF:157:VAL:HG21	41:DF:194:MET:HG2	1.95	0.49
12:CL:43:VAL:HG22	12:CL:55:VAL:CG1	2.42	0.49
4:AD:12:CYS:CA	4:AD:19:LEU:HD13	2.40	0.49
1:CA:262:A:H5'	20:CT:74:LYS:HE2	1.93	0.49
43:BH:12:PRO:CD	43:BH:48:GLY:HA2	2.43	0.49
1:AA:355:C:H4'	1:AA:388:G:O2'	2.12	0.49
36:DA:1060:U:H1'	36:DA:1061:U:O5'	2.12	0.49
25:CZ:219:LYS:CB	25:CZ:244:ARG:HB2	2.37	0.49
49:DQ:31:ASP:O	49:DQ:32:TYR:CD1	2.65	0.49
36:DA:761:A:H3'	36:DA:761:A:H8	1.76	0.49
1:AA:160:A:H1'	1:AA:344:A:N7	2.26	0.49
14:AN:22:THR:O	14:AN:23:ARG:HB3	2.12	0.49
50:DR:48:VAL:HG13	50:DR:49:ASP:N	2.28	0.49
2:AB:80:ILE:N	2:AB:80:ILE:HD12	2.23	0.49
1:CA:691:G:H2'	1:CA:692:U:C6	2.47	0.49
36:DA:2842:G:C2	36:DA:2876:G:C2	3.01	0.49
54:BV:19:LYS:HE2	54:BV:19:LYS:HA	1.94	0.49
43:DH:139:GLN:O	43:DH:143:GLN:HB2	2.11	0.49
1:AA:677:U:H3	1:AA:713:G:H22	1.60	0.49
36:BA:2562:U:H1'	47:BO:23:ARG:NH1	2.23	0.49
36:DA:638:G:C6	36:DA:639:U:N3	2.81	0.49
48:BP:110:TYR:HD1	48:BP:111:ARG:HG3	1.78	0.49
36:BA:1352:U:C2'	36:BA:1353:A:H5'	2.43	0.49
8:CH:114:THR:C	8:CH:116:LYS:N	2.64	0.49
40:BE:96:PHE:O	40:BE:175:VAL:HG11	2.12	0.49
1:CA:80:G:C3'	1:CA:81:U:H5'	2.43	0.49
37:BB:65:C:H2'	37:BB:66:A:H5'	1.93	0.49
36:BA:1038:C:C2'	36:BA:1039:G:H5''	2.43	0.49
1:AA:706:A:O4'	11:AK:29:ILE:HD11	2.13	0.49
36:DA:2339:G:O2'	36:DA:2340:G:H5'	2.13	0.49
58:DZ:19:ARG:HD3	58:DZ:82:ARG:HH22	1.77	0.49
1:CA:794:A:H2'	1:CA:795:C:C6	2.47	0.49
1:CA:472:A:H2'	1:CA:473:G:H8	1.77	0.49
36:BA:1345:C:H2'	36:BA:1346:G:C8	2.47	0.49
36:DA:271(H):G:O2'	36:DA:271(I):G:H8	1.96	0.49
1:CA:77:G:H2'	1:CA:77:G:N3	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:4:TYR:N	6:AF:4:TYR:CD1	2.80	0.49
1:AA:1525:G:OP1	11:AK:120:ARG:NH2	2.45	0.49
52:BT:95:ARG:NH1	52:BT:95:ARG:HB3	2.27	0.49
1:CA:1402:C:H2'	1:CA:1403:C:O4'	2.12	0.49
36:DA:1168:G:N1	36:DA:1182:A:C2	2.81	0.49
40:BE:151:TYR:HB3	46:BN:79:PRO:HG3	1.94	0.49
36:DA:25:U:C5'	55:DW:79:GLY:HA2	2.43	0.49
36:DA:773:U:H4'	39:DD:47:GLY:HA3	1.95	0.49
4:CD:187:ARG:HG2	4:CD:188:LEU:N	2.27	0.49
25:CZ:269:GLY:O	25:CZ:270:VAL:CG2	2.60	0.49
1:AA:1442(A):G:C6	52:BT:118:ARG:HB3	2.47	0.49
36:DA:2415:G:C2	36:DA:2416:C:C2	3.00	0.49
56:BX:35:THR:HG22	56:BX:38:GLU:N	2.26	0.49
25:CZ:266:VAL:HB	25:CZ:291:ARG:NE	2.27	0.49
25:AZ:199:ILE:HG22	25:AZ:200:TRP:N	2.26	0.49
38:BC:120:MET:O	38:BC:124:GLY:N	2.43	0.49
39:DD:35:LYS:HG3	39:DD:63:ARG:HG2	1.93	0.49
49:DQ:134:ARG:CZ	58:DZ:122:ARG:NH2	2.66	0.49
42:DG:124:SER:HB3	42:DG:131:TYR:HE1	1.73	0.49
52:DT:61:PHE:HD1	52:DT:61:PHE:H	1.59	0.49
57:BY:27:VAL:HG12	57:BY:28:LYS:N	2.27	0.49
57:BY:73:ARG:O	57:BY:74:PRO:O	2.31	0.49
26:D0:21:LEU:HB3	26:D0:39:ARG:O	2.12	0.49
46:DN:12:ARG:CZ	46:DN:135:PRO:HG2	2.43	0.49
14:AN:57:ARG:HH11	14:AN:57:ARG:HB2	1.78	0.49
1:AA:975:A:C4'	1:AA:976:G:H5''	2.29	0.49
43:BH:125:VAL:H	43:BH:126:PRO:CD	2.26	0.49
46:BN:58:ASP:C	46:BN:60:ILE:N	2.66	0.49
25:CZ:320:VAL:HG13	25:CZ:397:ALA:C	2.33	0.49
1:CA:543:C:O2'	1:CA:544:G:H5'	2.12	0.49
4:CD:20:TYR:N	4:CD:20:TYR:CD1	2.80	0.49
4:AD:78:LEU:HD21	4:AD:96:LEU:CB	2.32	0.49
1:AA:269:C:H2'	1:AA:270:A:H8	1.78	0.49
46:BN:30:ILE:HG21	46:BN:120:LEU:HD21	1.94	0.49
42:BG:176:LEU:O	42:BG:176:LEU:HD23	2.12	0.49
5:CE:103:GLY:C	5:CE:106:PRO:HD2	2.33	0.49
13:AM:83:ASP:CG	13:AM:84:ILE:H	2.15	0.49
42:BG:61:ALA:HA	42:BG:64:THR:HG22	1.94	0.49
36:BA:1465:G:H4'	36:BA:1528:A:H8	1.78	0.49
41:DF:29:ASN:ND2	41:DF:32:LEU:H	2.11	0.49
41:DF:37:VAL:CG1	48:DP:7:ARG:HH12	2.25	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BU:46:ALA:O	53:BU:49:HIS:N	2.45	0.49
5:AE:147:ASP:N	5:AE:147:ASP:OD1	2.34	0.49
2:AB:84:GLU:OE1	2:AB:216:SER:HA	2.13	0.49
5:AE:11:ILE:HD12	5:AE:31:LEU:HD13	1.95	0.49
37:DB:45:A:C5	37:DB:46:A:C8	3.00	0.49
36:DA:363(F):A:O2'	36:DA:364:C:H5	1.96	0.49
1:CA:1399:C:C2	1:CA:1502:A:N6	2.80	0.49
1:CA:160:A:O2'	1:CA:161:A:H5'	2.13	0.49
31:B5:34:PRO:HG3	36:BA:2885:C:O2'	2.13	0.49
29:B3:17:LYS:HE2	36:BA:969:U:OP1	2.13	0.49
36:DA:970:C:H2'	36:DA:971:C:H6	1.77	0.49
41:BF:184:TYR:HE1	48:BP:7:ARG:CZ	2.26	0.49
36:DA:1378:A:C4'	36:DA:1379:A:OP1	2.60	0.49
48:DP:80:TYR:HE1	48:DP:111:ARG:CD	2.23	0.49
27:B1:60:PHE:HZ	27:B1:91:LYS:HG3	1.74	0.49
58:DZ:104:PHE:CD1	58:DZ:139:VAL:HG21	2.47	0.49
2:AB:115:LEU:HB2	2:AB:145:LEU:HD13	1.94	0.49
16:CP:75:ARG:NH1	16:CP:75:ARG:HG3	2.25	0.49
1:AA:79:G:O2'	1:AA:80:G:H5''	2.13	0.49
51:DS:97:ARG:HE	51:DS:97:ARG:C	2.14	0.49
36:DA:1667:G:O2'	36:DA:1991:U:O4	2.30	0.49
37:DB:74:U:H2'	37:DB:75:G:O4'	2.13	0.49
15:CO:9:GLN:O	15:CO:10:LYS:C	2.51	0.49
15:AO:21:ASP:OD1	15:AO:22:THR:N	2.46	0.49
1:CA:1510:U:H2'	1:CA:1511:G:C8	2.48	0.49
36:BA:917:A:N1	37:BB:80:U:H4'	2.27	0.49
7:AG:152:ALA:C	7:AG:154:TYR:H	2.15	0.49
40:DE:184:VAL:C	40:DE:186:GLY:H	2.16	0.49
49:BQ:116:GLU:O	49:BQ:120:ILE:HG12	2.13	0.49
25:CZ:313:HIS:CD2	25:CZ:403:ILE:HG21	2.48	0.49
37:BB:96:U:H2'	37:BB:97:G:H8	1.77	0.49
1:AA:1312:G:O2'	1:AA:1313:U:H5'	2.12	0.49
36:DA:1430:C:H42	36:DA:1563:G:H1	1.59	0.49
13:AM:32:GLU:OE1	13:AM:32:GLU:C	2.51	0.49
36:DA:2619:C:H2'	36:DA:2620:C:H6	1.76	0.49
24:AY:17:H2U:OP2	24:AY:18:G:H4'	2.13	0.49
38:BC:90:GLY:O	38:BC:153:ILE:HG21	2.12	0.49
1:AA:119:A:O2'	1:AA:120:A:OP2	2.22	0.49
46:BN:93:THR:HG23	46:BN:93:THR:O	2.11	0.49
1:AA:1251:A:H2'	1:AA:1252:A:C8	2.47	0.49
36:BA:2101:G:H2'	36:BA:2102:U:C5'	2.40	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:21:ASP:O	60:CZ:501:GDP:O5'	2.31	0.49
52:BT:25:GLY:HA2	52:BT:92:GLY:HA3	1.94	0.49
52:BT:52:ILE:O	52:BT:52:ILE:HG22	2.11	0.49
27:D1:43:TYR:C	27:D1:44:PRO:O	2.52	0.49
19:CS:71:LEU:O	19:CS:73:GLU:N	2.46	0.49
28:B2:25:VAL:O	28:B2:29:LYS:HE2	2.12	0.49
28:B2:29:LYS:CA	28:B2:32:LEU:HB3	2.30	0.49
36:BA:143:G:H1'	56:BX:37:THR:HG21	1.95	0.49
1:AA:972:C:O2	10:AJ:55:LYS:HG2	2.13	0.49
36:DA:143:G:H5''	36:DA:1598:C:O2'	2.13	0.49
36:DA:479:A:N3	36:DA:481:G:O4'	2.45	0.49
36:BA:328:U:H4'	57:BY:68:HIS:CD2	2.48	0.49
57:BY:28:LYS:HB3	57:BY:39:VAL:HG22	1.95	0.49
58:BZ:99:TYR:HE1	58:BZ:125:LEU:HA	1.78	0.49
57:DY:13:VAL:CG2	57:DY:14:LEU:N	2.75	0.49
22:CV:44:G:C2'	22:CV:45:U:C5'	2.85	0.49
39:BD:70:TRP:CZ2	39:BD:150:LYS:HA	2.44	0.49
36:DA:2476:A:O2'	36:DA:2477:C:H5''	2.13	0.49
43:DH:85:LYS:NZ	43:DH:87:LEU:N	2.60	0.49
1:AA:1189:C:H5''	3:AC:5:ILE:HG21	1.94	0.49
13:CM:6:GLY:HA3	13:CM:67:GLU:OE2	2.12	0.49
30:D4:28:LYS:HA	30:D4:28:LYS:HE3	1.94	0.49
9:CI:4:TYR:CD2	9:CI:88:TYR:HB2	2.47	0.49
22:CW:60:U:O2	22:CW:60:U:C2'	2.61	0.49
9:AI:52:ALA:HB3	9:AI:95:LYS:HD2	1.94	0.49
39:DD:243:GLY:O	39:DD:244:ARG:HB3	2.11	0.49
25:CZ:222:LEU:CD1	25:CZ:305:ALA:HB2	2.43	0.49
36:BA:1142:U:H5''	36:BA:1142(A):A:C8	2.48	0.49
48:BP:147:LEU:O	48:BP:148:LEU:HB2	2.13	0.49
14:CN:49:HIS:C	14:CN:51:GLY:N	2.59	0.49
4:CD:18:LYS:N	4:CD:33:MET:HE2	2.28	0.49
36:BA:1999:C:H4'	36:BA:2723:C:O2	2.12	0.49
50:DR:117:VAL:HG22	50:DR:118:GLU:N	2.28	0.49
1:AA:189(C):C:C2	1:AA:189(I):G:C2	3.01	0.49
1:CA:1047:G:O3'	14:CN:4:LYS:HG2	2.13	0.49
19:CS:16:LEU:C	19:CS:18:LYS:N	2.66	0.49
36:BA:141:A:H1'	36:BA:1408:C:O2'	2.12	0.49
1:AA:1307:U:H2'	1:AA:1308:U:C6	2.48	0.49
36:BA:1107:G:H5''	44:BJ:59:UNK:CB	2.43	0.49
3:CC:122:GLU:O	3:CC:125:GLU:N	2.46	0.49
36:DA:2230:G:H2'	36:DA:2231:C:C6	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:B4:31:ILE:HG22	30:B4:33:VAL:HG23	1.95	0.49
30:B4:33:VAL:CG1	30:B4:34:GLU:N	2.76	0.49
30:B4:16:CYS:SG	30:B4:36:CYS:SG	3.11	0.49
42:BG:59:GLU:C	42:BG:61:ALA:N	2.66	0.49
36:BA:410:G:C2	36:BA:2407:G:N7	2.81	0.49
58:DZ:66:SER:O	58:DZ:67:LEU:HD12	2.12	0.49
58:DZ:10:ARG:HH21	58:DZ:26:GLY:N	2.06	0.49
41:DF:36:VAL:O	41:DF:40:GLN:HG3	2.13	0.49
24:CY:67:G:O2'	24:CY:68:C:H5'	2.13	0.49
5:AE:147:ASP:O	5:AE:151:LEU:HG	2.12	0.49
2:AB:9:GLU:N	2:AB:9:GLU:OE1	2.41	0.49
2:CB:47:THR:HG23	2:CB:202:PRO:O	2.12	0.49
58:DZ:8:TYR:O	58:DZ:9:TYR:C	2.51	0.49
36:DA:1131:G:H21	46:DN:73:THR:HG21	1.77	0.49
40:BE:28:ALA:HB3	40:BE:93:VAL:HG22	1.95	0.49
58:DZ:130:PRO:HA	58:DZ:133:ILE:CD1	2.37	0.49
37:BB:115:G:H2'	37:BB:116:G:H8	1.77	0.49
36:DA:2199:A:H3'	36:DA:2200:C:H6	1.78	0.49
17:AQ:60:ILE:HB	17:AQ:74:LEU:HD23	1.95	0.49
1:CA:189(I):G:O2'	1:CA:189(J):G:H5'	2.13	0.49
4:CD:165:MET:HE3	4:CD:176:LEU:HD21	1.95	0.49
8:CH:111:ILE:O	8:CH:134:ILE:HB	2.12	0.49
39:DD:176:ARG:CG	39:DD:176:ARG:HH11	2.24	0.49
3:AC:116:VAL:HG21	3:AC:202:ILE:HD11	1.95	0.49
1:CA:1333:A:C2	1:CA:1334:G:H1'	2.47	0.49
4:CD:121:VAL:O	4:CD:134:ASP:HB3	2.13	0.49
36:BA:18:C:O3'	53:BU:23:GLY:HA2	2.12	0.49
8:CH:30:ARG:CB	8:CH:30:ARG:HH11	2.24	0.49
25:CZ:263:ARG:HG3	25:CZ:263:ARG:NH1	2.27	0.49
7:CG:152:ALA:C	7:CG:154:TYR:H	2.15	0.49
55:BW:20:VAL:HG23	55:BW:47:VAL:HG21	1.95	0.49
36:DA:2851:A:H2'	36:DA:2852:G:C8	2.48	0.49
40:DE:89:ASP:CG	40:DE:90:THR:H	2.16	0.49
1:AA:1228:C:OP1	13:AM:115:LYS:HE3	2.11	0.49
1:CA:166:G:O2'	1:CA:167:G:H5'	2.12	0.49
1:CA:793:U:H3'	1:CA:794:A:H5''	1.93	0.49
2:AB:52:GLU:C	2:AB:52:GLU:OE1	2.51	0.49
27:B1:52:ARG:O	27:B1:53:VAL:O	2.31	0.49
36:BA:2636:U:H2'	36:BA:2637:U:H6	1.78	0.49
36:BA:571:A:C8	36:BA:2030:A:C6	3.01	0.49
11:AK:116:HIS:O	11:AK:117:ASN:HB2	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:930:U:H4'	36:DA:931:G:O5'	2.12	0.49
39:DD:126:GLN:O	39:DD:127:VAL:C	2.50	0.49
5:CE:99:GLY:O	5:CE:117:ASP:HA	2.12	0.49
1:CA:1131:G:C6	1:CA:1132:C:N4	2.80	0.49
40:DE:182:LEU:C	40:DE:183:LEU:HD12	2.33	0.49
4:CD:141:ARG:HB2	4:CD:144:ASP:OD2	2.12	0.49
32:B6:12:GLU:HA	32:B6:23:THR:CB	2.41	0.49
34:D8:9:GLY:O	34:D8:13:ARG:HG2	2.13	0.49
48:DP:23:PRO:O	48:DP:29:LYS:O	2.30	0.49
34:D8:15:LYS:HD3	48:DP:65:ARG:HH22	1.78	0.49
36:DA:1486:A:C2	36:DA:1504:C:N3	2.81	0.49
28:B2:19:VAL:O	28:B2:21:LEU:N	2.46	0.49
52:DT:78:LEU:C	52:DT:79:HIS:HD2	2.16	0.49
36:BA:84:A:H5'	57:BY:9:LYS:CB	2.39	0.49
57:BY:27:VAL:HG12	57:BY:29:GLU:H	1.78	0.49
47:BO:115:VAL:CG1	47:BO:121:VAL:HG21	2.43	0.49
43:DH:85:LYS:HZ3	43:DH:86:GLU:HA	1.77	0.49
31:B5:56:LYS:O	31:B5:57:VAL:O	2.31	0.49
26:B0:27:GLU:HB3	26:B0:69:PHE:HD1	1.77	0.49
9:AI:46:ALA:N	9:AI:47:LEU:HD12	2.28	0.49
36:DA:996:A:H4'	53:DU:92:ARG:HD3	1.94	0.49
54:DV:39:LEU:CD1	54:DV:51:VAL:HA	2.43	0.49
36:BA:2179:C:H4'	36:BA:2180:U:OP1	2.13	0.49
39:DD:39:LYS:HB2	39:DD:62:TYR:HB2	1.94	0.49
36:BA:612:C:C2'	36:BA:613:G:C5'	2.88	0.49
22:AW:31:A:N1	22:AW:39:U:O4	2.46	0.49
22:AW:37:A:H3'	22:AW:38:A:C8	2.48	0.49
36:BA:2631:G:H22	40:BE:61:ARG:NH1	2.11	0.49
9:CI:19:LEU:HD21	9:CI:59:PHE:HD2	1.72	0.49
58:DZ:162:GLU:O	58:DZ:163:LEU:O	2.31	0.49
30:D4:9:LEU:HD13	30:D4:10:VAL:H	1.78	0.49
36:BA:2820:A:O3'	50:BR:5:LYS:HE2	2.13	0.49
51:BS:52:SER:HB2	51:BS:56:LEU:HB2	1.95	0.49
10:AJ:4:ILE:HG22	10:AJ:74:ILE:HD11	1.93	0.49
1:AA:8:A:H62	4:AD:208:SER:CB	2.15	0.49
10:CJ:4:ILE:CB	10:CJ:74:ILE:HD11	2.42	0.49
41:DF:6:VAL:HG12	41:DF:7:TYR:N	2.21	0.49
42:BG:96:ARG:O	42:BG:97:ASP:HB2	2.12	0.49
1:AA:256:U:H3	1:AA:270:A:H61	1.60	0.49
40:DE:77:ILE:CG2	40:DE:78:LEU:H	2.21	0.49
36:BA:2287:A:N1	36:BA:2346:A:C2	2.81	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B8:32:LEU:CD1	36:BA:2392:A:OP1	2.61	0.49
1:AA:1272:G:H5'	1:AA:1272:G:C8	2.40	0.49
25:AZ:269:GLY:O	25:AZ:288:VAL:HA	2.13	0.49
1:AA:390:C:H2'	1:AA:391:G:C8	2.48	0.49
12:CL:18:VAL:CG2	12:CL:19:ARG:H	2.16	0.49
58:DZ:14:LYS:HB3	58:DZ:17:ALA:CB	2.42	0.49
25:CZ:219:LYS:HB3	25:CZ:244:ARG:HD3	1.95	0.49
2:AB:97:TRP:CZ3	2:AB:176:GLU:CD	2.86	0.49
1:CA:1255:G:O2'	1:CA:1258:G:H1'	2.12	0.49
54:DV:19:LYS:HZ3	54:DV:20:LEU:H	1.58	0.49
24:AY:60:U:H5''	24:AY:61:C:C5	2.48	0.49
40:BE:3:GLY:O	40:BE:4:ILE:HB	2.13	0.49
40:BE:51:PHE:CG	40:BE:52:LEU:N	2.80	0.49
40:BE:51:PHE:O	40:BE:52:LEU:C	2.50	0.49
22:CW:7:A:H2'	22:CW:49:C:H6	1.78	0.49
40:BE:167:VAL:CG1	40:BE:170:LEU:HD11	2.41	0.49
29:B3:45:GLY:C	29:B3:47:VAL:N	2.66	0.49
25:CZ:325:LYS:NZ	25:CZ:331:HIS:HB2	2.28	0.49
36:BA:221:A:C1'	36:BA:233:A:H1'	2.41	0.49
36:BA:1609:A:H4'	36:BA:1617:C:OP1	2.13	0.49
1:CA:597:G:H2'	1:CA:598:U:H5'	1.95	0.49
29:B3:29:ARG:HD2	36:BA:1184:G:OP1	2.13	0.49
1:CA:59:A:H5''	1:CA:60:A:H5''	1.93	0.49
13:CM:88:ARG:HG2	13:CM:88:ARG:NH1	2.26	0.49
1:CA:1329:A:OP1	13:CM:28:ALA:HB3	2.13	0.49
3:CC:40:ARG:CZ	3:CC:57:ILE:HD12	2.43	0.49
1:AA:792:A:H1'	1:AA:794:A:N7	2.28	0.49
43:DH:107:VAL:HG23	43:DH:108:GLY:N	2.28	0.49
13:CM:68:GLY:CA	13:CM:71:ARG:HG2	2.43	0.49
36:DA:2305:A:C2'	36:DA:2306:C:H5''	2.43	0.49
1:CA:724:G:O2'	1:CA:725:G:H5'	2.13	0.49
22:CW:56:C:O2'	38:DC:129:ARG:HA	2.13	0.49
36:DA:1683:C:O2'	36:DA:1684:C:H5'	2.13	0.49
18:AR:36:ASN:HD21	18:AR:39:VAL:HG21	1.75	0.49
36:BA:1495:A:H2'	36:BA:1495:A:N3	2.28	0.49
1:AA:623:C:H2'	1:AA:624:C:H5'	1.95	0.49
37:BB:7:G:H4'	51:BS:29:PHE:CD2	2.48	0.49
36:BA:64:A:H2'	36:BA:65:C:H6	1.78	0.49
2:CB:222:ILE:O	2:CB:225:ALA:HB3	2.11	0.49
27:B1:22:GLY:HA3	27:B1:32:LYS:HA	1.94	0.49
55:DW:79:GLY:O	55:DW:100:THR:HG22	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1462:C:H4'	36:DA:2703:C:O4'	2.13	0.49
49:BQ:35:VAL:CG1	49:BQ:130:LYS:HB3	2.43	0.49
20:AT:96:GLY:O	20:AT:97:ALA:HB3	2.13	0.49
36:BA:1441:G:O2'	36:BA:1442:G:H5'	2.13	0.49
44:DJ:89:UNK:C	44:DJ:91:UNK:H	2.26	0.49
36:BA:271(Q):G:H1'	36:BA:271(R):G:C8	2.47	0.49
36:BA:460:A:H2'	36:BA:461:C:O4'	2.12	0.49
15:CO:74:ASP:OD1	15:CO:76:GLU:HB3	2.13	0.49
36:BA:1688:U:O2	36:BA:1700:A:H8	1.96	0.49
7:AG:76:ARG:HG2	7:AG:76:ARG:HH11	1.78	0.49
36:DA:852:G:O2'	36:DA:853:G:H5'	2.11	0.49
1:AA:421:U:H5''	1:AA:422:C:OP2	2.12	0.49
36:BA:519:U:H2'	36:BA:520:G:H8	1.78	0.49
34:D8:4:MET:HE3	36:DA:592:G:H21	1.78	0.48
36:DA:940:G:H2'	36:DA:941:A:O4'	2.13	0.48
1:AA:1442(B):A:O2'	1:AA:1443:G:C8	2.66	0.48
32:D6:17:LYS:HE2	32:D6:17:LYS:CA	2.14	0.48
28:B2:23:LYS:HA	28:B2:26:ARG:HB3	1.94	0.48
56:BX:12:VAL:HA	56:BX:27:THR:O	2.13	0.48
39:BD:75:ILE:HD13	39:BD:75:ILE:H	1.78	0.48
25:CZ:133:VAL:HB	25:CZ:170:VAL:HG22	1.94	0.48
25:CZ:8:THR:OG1	25:CZ:9:LYS:HG3	2.12	0.48
57:BY:64:GLU:O	57:BY:65:ALA:HB2	2.13	0.48
2:CB:100:GLY:C	2:CB:108:ILE:HD11	2.33	0.48
49:BQ:134:ARG:HA	49:BQ:137:TYR:CD2	2.48	0.48
36:DA:327:G:O2'	36:DA:328:U:H5'	2.13	0.48
57:DY:73:ARG:O	57:DY:74:PRO:O	2.30	0.48
41:BF:160:ASN:HD21	41:BF:162:LEU:CD1	2.24	0.48
54:BV:52:VAL:HG22	54:BV:52:VAL:O	2.11	0.48
3:AC:8:ILE:HD11	3:AC:184:TYR:HB3	1.95	0.48
10:AJ:9:ARG:HH11	10:AJ:9:ARG:HG2	1.77	0.48
13:CM:19:LEU:HB3	13:CM:25:ILE:HG21	1.95	0.48
9:AI:33:PHE:CZ	9:AI:47:LEU:HD11	2.48	0.48
36:DA:1009:A:OP2	36:DA:1010:A:OP2	2.31	0.48
4:CD:21:LEU:O	4:CD:115:ARG:HG3	2.12	0.48
4:CD:18:LYS:HE3	4:CD:31:CYS:SG	2.53	0.48
4:CD:202:LEU:HA	4:CD:202:LEU:HD23	1.55	0.48
36:BA:2626:C:H2'	36:BA:2627:G:O4'	2.13	0.48
36:BA:664:C:O4'	36:BA:940:G:H5''	2.13	0.48
30:B4:25:TYR:N	30:B4:25:TYR:CD1	2.81	0.48
27:B1:21:ARG:NH1	27:B1:21:ARG:HG3	2.27	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DE:81:ILE:O	40:DE:81:ILE:HG22	2.13	0.48
11:AK:61:ALA:O	11:AK:64:ALA:HB3	2.13	0.48
1:CA:539:A:H2'	1:CA:540:G:C8	2.48	0.48
41:DF:107:LYS:O	41:DF:109:GLY:N	2.46	0.48
5:CE:33:VAL:CG2	5:CE:43:LEU:HD13	2.43	0.48
27:D1:82:LEU:HD12	27:D1:83:GLU:H	1.77	0.48
33:B7:43:THR:HG22	33:B7:44:PRO:N	2.28	0.48
25:AZ:286:VAL:CG2	25:AZ:287:GLY:N	2.75	0.48
4:CD:128:VAL:O	4:CD:130:GLY:N	2.46	0.48
4:CD:129:ASN:H	4:CD:129:ASN:ND2	2.00	0.48
4:CD:145:GLU:HB3	4:CD:184:LYS:HG2	1.94	0.48
49:DQ:55:VAL:HG13	49:DQ:56:ARG:H	1.77	0.48
13:CM:57:ARG:NH2	30:D4:34:GLU:HG3	2.28	0.48
36:BA:2206:G:N2	36:BA:2207:G:O3'	2.46	0.48
36:BA:2672:G:C3'	36:BA:2673:G:H5''	2.43	0.48
36:DA:2246:G:H2'	36:DA:2247:A:H8	1.76	0.48
40:BE:35:GLN:CG	40:BE:36:ARG:H	2.26	0.48
4:CD:148:VAL:HG12	4:CD:149:ALA:O	2.13	0.48
36:DA:2606:C:C2'	36:DA:2607:G:H5'	2.42	0.48
41:BF:37:VAL:CG1	48:BP:7:ARG:HH12	2.24	0.48
17:AQ:18:THR:CG2	17:AQ:69:LYS:HD2	2.42	0.48
58:DZ:139:VAL:HG23	58:DZ:140:ASP:N	2.27	0.48
8:CH:20:TYR:CE2	8:CH:75:ARG:HD2	2.44	0.48
36:DA:1651:G:C2	36:DA:2007:C:C2	3.00	0.48
36:DA:2305:A:H3'	36:DA:2306:C:H5''	1.95	0.48
8:CH:10:LEU:HD22	8:CH:83:ILE:CD1	2.41	0.48
22:CW:56:C:P	38:DC:139:ASN:HD21	2.36	0.48
36:DA:562:U:O4	36:DA:2036:C:H1'	2.13	0.48
36:DA:2855:C:O2'	36:DA:2856:C:H5'	2.12	0.48
2:CB:178:ARG:HH21	2:CB:198:ASP:CG	2.16	0.48
7:CG:88:PRO:HB2	7:CG:145:ALA:HB1	1.95	0.48
36:DA:350:U:O2'	36:DA:351:G:H5'	2.13	0.48
1:AA:992:U:H1'	1:AA:993:G:C2	2.48	0.48
36:BA:389:G:H1	48:BP:72:PRO:HD3	1.78	0.48
47:DO:34:THR:O	47:DO:35:VAL:C	2.50	0.48
36:BA:2887:U:H2'	36:BA:2888:C:C6	2.48	0.48
8:AH:13:ILE:HD13	8:AH:24:THR:HG21	1.95	0.48
36:BA:2303:G:O2'	42:BG:132:ASN:HB2	2.13	0.48
36:BA:1840:G:C5	36:BA:1841:U:C5	3.01	0.48
36:BA:116:C:O2'	36:BA:117:G:H5'	2.13	0.48
24:CY:76:A:N6	25:CZ:234:ARG:NH1	2.52	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:D6:33:LYS:O	32:D6:34:LEU:HB2	2.12	0.48
52:DT:89:VAL:O	52:DT:91:ARG:N	2.46	0.48
28:B2:10:LEU:HD22	28:B2:60:LEU:HA	1.95	0.48
2:AB:130:ARG:HB3	2:AB:131:PRO:HD2	1.94	0.48
1:CA:1152:A:OP1	10:CJ:68:HIS:HD2	1.96	0.48
1:AA:1199:U:H4'	10:AJ:54:PHE:CE1	2.48	0.48
25:CZ:135:MET:HE3	25:CZ:172:ARG:HE	1.74	0.48
42:DG:40:ASN:HB2	42:DG:91:ARG:CB	2.42	0.48
58:BZ:10:ARG:HG2	58:BZ:12:GLY:H	1.78	0.48
36:DA:2101:G:C3'	36:DA:2102:U:H5''	2.43	0.48
13:CM:96:LEU:HB3	13:CM:97:PRO:CD	2.41	0.48
46:BN:67:LEU:N	46:BN:67:LEU:HD12	2.28	0.48
9:CI:40:LEU:C	9:CI:42:ARG:N	2.65	0.48
9:CI:55:ALA:C	9:CI:58:HIS:CE1	2.86	0.48
12:AL:75:HIS:HD2	12:AL:77:LEU:H	1.60	0.48
10:AJ:98:ILE:HG23	10:AJ:98:ILE:O	2.13	0.48
36:BA:621:A:H2'	36:BA:622:G:C5'	2.40	0.48
40:DE:53:PRO:O	40:DE:54:GLN:C	2.51	0.48
31:B5:45:VAL:O	31:B5:46:CYS:CB	2.61	0.48
19:CS:31:ILE:HG23	19:CS:49:ILE:HA	1.94	0.48
1:AA:355:C:C2	1:AA:356:A:C8	3.02	0.48
42:BG:61:ALA:HA	42:BG:64:THR:CG2	2.43	0.48
36:BA:1784:A:H4'	36:BA:1785:A:O5'	2.13	0.48
36:BA:896:A:O4'	58:BZ:146:ILE:HD12	2.13	0.48
58:BZ:114:GLY:HA3	58:BZ:146:ILE:HG21	1.93	0.48
2:AB:97:TRP:HH2	2:AB:176:GLU:CD	2.17	0.48
36:BA:2131:G:H1'	36:BA:2133:G:H21	1.76	0.48
25:AZ:63:ILE:N	25:AZ:83:PRO:HB3	2.28	0.48
1:CA:1255:G:H3'	1:CA:1279:A:H61	1.78	0.48
36:DA:1762:A:C8	36:DA:1762:A:O5'	2.66	0.48
36:DA:1131:G:H21	46:DN:73:THR:CG2	2.25	0.48
2:CB:138:LEU:C	2:CB:140:HIS:H	2.15	0.48
1:AA:404:U:H2'	1:AA:405:U:C6	2.48	0.48
36:BA:744:G:C2'	36:BA:745:G:H5'	2.43	0.48
36:BA:2469:A:O2'	49:BQ:56:ARG:CD	2.59	0.48
31:B5:52:TYR:CD1	31:B5:52:TYR:O	2.66	0.48
55:DW:88:ARG:HG2	55:DW:94:ASP:CG	2.33	0.48
40:DE:120:TRP:CG	40:DE:155:LYS:HB3	2.48	0.48
12:AL:50:SER:O	12:AL:51:ALA:HB2	2.13	0.48
7:CG:44:TYR:O	7:CG:45:ASP:C	2.50	0.48
36:BA:1339:G:N2	36:BA:1603:A:H1'	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:321:A:H2'	1:AA:322:C:C6	2.48	0.48
10:CJ:96:ILE:N	10:CJ:96:ILE:CD1	2.76	0.48
6:AF:20:ALA:C	6:AF:22:GLU:H	2.14	0.48
49:BQ:1:MET:O	49:BQ:2:LEU:CB	2.62	0.48
36:DA:1498:C:C2'	36:DA:1499:C:C5'	2.90	0.48
49:DQ:45:GLN:H	49:DQ:45:GLN:NE2	2.11	0.48
1:CA:1488:G:H2'	1:CA:1489:G:H8	1.78	0.48
36:BA:246:C:C5'	48:BP:71:VAL:HG23	2.43	0.48
18:CR:88:LYS:C	18:CR:88:LYS:HD3	2.34	0.48
47:BO:105:GLU:O	47:BO:109:LYS:CG	2.61	0.48
1:AA:245:C:O2'	1:AA:246:A:O5'	2.30	0.48
42:DG:167:GLU:OE1	42:DG:168:GLU:N	2.46	0.48
36:DA:2886:G:H2'	36:DA:2887:U:H6	1.78	0.48
36:DA:2149:G:O2'	36:DA:2150:U:H5'	2.13	0.48
11:CK:45:GLY:O	11:CK:50:TYR:HB2	2.13	0.48
55:BW:62:HIS:O	55:BW:63:ASP:O	2.31	0.48
28:D2:21:LEU:O	28:D2:25:VAL:HG23	2.13	0.48
3:AC:25:GLY:O	3:AC:27:LYS:N	2.45	0.48
36:BA:1824:G:O2'	36:BA:1825:A:H5'	2.13	0.48
36:BA:1787:A:O4'	36:BA:2589:A:H4'	2.13	0.48
19:CS:22:LEU:HD13	19:CS:22:LEU:O	2.13	0.48
33:B7:9:ARG:HH11	33:B7:9:ARG:HG3	1.78	0.48
39:DD:165:ILE:HA	39:DD:175:LEU:HD23	1.95	0.48
47:BO:25:LEU:HB2	47:BO:38:VAL:O	2.13	0.48
36:DA:447:A:C5	36:DA:454:A:N7	2.81	0.48
36:DA:271(D):G:O2'	36:DA:271(E):U:H5'	2.13	0.48
1:AA:131:C:H2'	1:AA:132:C:H6	1.77	0.48
1:AA:1042:G:O2'	1:AA:1043:C:H5'	2.13	0.48
1:AA:1161:C:H2'	1:AA:1162:C:C6	2.48	0.48
45:DK:101:UNK:CB	45:DK:137:UNK:H	2.25	0.48
36:DA:869:G:C2'	36:DA:870:A:H5'	2.43	0.48
36:BA:2187:G:H2'	36:BA:2188:C:C5'	2.14	0.48
25:CZ:24:LYS:O	25:CZ:27:LEU:N	2.40	0.48
48:DP:56:SER:O	48:DP:57:THR:C	2.52	0.48
1:CA:347:G:N2	1:CA:348:G:H1'	2.27	0.48
53:BU:65:ILE:HD12	53:BU:65:ILE:H	1.78	0.48
1:AA:1095:U:H2'	1:AA:1096:C:O4'	2.12	0.48
22:AW:18:G:H22	22:AW:55:U:H6	1.61	0.48
25:CZ:137:LYS:O	25:CZ:140:MET:HB2	2.13	0.48
47:BO:122:LEU:CD1	52:BT:72:VAL:HG11	2.43	0.48
49:BQ:141:GLN:HG2	58:BZ:72:ARG:NH2	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:166:ASP:O	2:AB:169:LYS:N	2.47	0.48
56:DX:80:ILE:HG13	56:DX:80:ILE:O	2.14	0.48
34:B8:61:LEU:C	34:B8:63:PRO:HD2	2.33	0.48
54:DV:38:LEU:HD23	54:DV:38:LEU:C	2.34	0.48
36:BA:2150:U:H2'	36:BA:2151:G:C8	2.48	0.48
1:AA:1367:C:P	10:AJ:57:LYS:HZ1	2.36	0.48
1:CA:191:G:H2'	1:CA:192:U:C6	2.48	0.48
3:CC:33:LEU:O	3:CC:33:LEU:HD22	2.13	0.48
36:BA:1720:U:H3'	36:BA:1721:G:H5''	1.93	0.48
30:D4:8:LYS:HG2	30:D4:9:LEU:O	2.14	0.48
37:DB:62:C:C2	37:DB:63:G:C8	3.01	0.48
1:AA:1125:U:H3	10:AJ:5:ARG:CZ	2.25	0.48
48:BP:34:GLY:O	48:BP:35:HIS:CB	2.62	0.48
41:DF:125:LEU:HD12	41:DF:196:LEU:CD2	2.44	0.48
36:BA:881:G:H2'	36:BA:882:G:O4'	2.12	0.48
36:BA:1794:U:H1'	36:BA:1900:A:C2	2.48	0.48
50:BR:114:VAL:HG23	50:BR:114:VAL:O	2.13	0.48
1:AA:884:U:C4'	1:AA:884:U:OP1	2.55	0.48
58:BZ:96:VAL:CG1	58:BZ:97:GLU:N	2.68	0.48
40:DE:24:THR:HG21	40:DE:188:VAL:CG1	2.43	0.48
4:AD:100:ARG:NH2	4:AD:118:ARG:HH22	2.11	0.48
48:DP:125:VAL:O	48:DP:125:VAL:HG13	2.14	0.48
25:AZ:231:ILE:HD13	25:AZ:237:VAL:CG2	2.42	0.48
30:B4:16:CYS:SG	30:B4:17:GLY:N	2.86	0.48
36:DA:1221:C:H2'	36:DA:1221(A):C:H6	1.78	0.48
18:CR:40:LEU:C	18:CR:42:ARG:N	2.67	0.48
1:AA:1202:G:O2'	1:AA:1203:C:H5'	2.12	0.48
13:CM:77:ASN:O	13:CM:80:ARG:HB3	2.13	0.48
46:DN:54:VAL:HB	46:DN:122:VAL:HG22	1.94	0.48
36:BA:1319:G:O2'	36:BA:1320:C:H5'	2.13	0.48
2:CB:8:LYS:C	2:CB:10:LEU:H	2.16	0.48
36:DA:2523:G:O2'	36:DA:2524:G:H5''	2.12	0.48
36:DA:2012:G:O3'	55:DW:96:ILE:HG13	2.14	0.48
36:DA:880:G:H1	36:DA:897:C:N4	2.05	0.48
51:DS:20:ARG:NH1	51:DS:20:ARG:HG2	2.28	0.48
52:BT:5:ALA:O	52:BT:8:LYS:N	2.46	0.48
58:DZ:133:ILE:N	58:DZ:134:PRO:CD	2.76	0.48
1:AA:109:A:C6	1:AA:326:G:C6	3.01	0.48
36:DA:2842:G:O2'	36:DA:2843:G:H5'	2.14	0.48
36:DA:2146:C:H4'	36:DA:2147:G:C8	2.48	0.48
1:CA:51:A:C2	1:CA:353:A:N1	2.82	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:DV:72:VAL:HG23	54:DV:72:VAL:O	2.14	0.48
36:DA:954:G:H2'	36:DA:955:C:H5'	1.94	0.48
17:AQ:44:ALA:CB	17:AQ:59:ILE:HD12	2.44	0.48
5:CE:18:ARG:NH1	5:CE:18:ARG:HG3	2.25	0.48
42:DG:41:GLN:HG2	42:DG:154:GLY:O	2.14	0.48
22:CW:53:G:O2'	22:CW:54:U:H5'	2.13	0.48
38:DC:10:LEU:N	38:DC:10:LEU:HD13	2.27	0.48
29:D3:29:ARG:HD2	36:DA:1184:G:OP1	2.12	0.48
36:DA:1165:U:H2'	36:DA:1166:C:C5	2.49	0.48
32:B6:22:ALA:HB2	32:B6:39:TYR:CE1	2.47	0.48
50:BR:87:TYR:O	50:BR:89:ASP:N	2.47	0.48
36:BA:244:A:C2	36:BA:255:A:C4	3.01	0.48
36:BA:200:U:H2'	36:BA:201:C:H5'	1.95	0.48
36:BA:271(F):C:H2'	36:BA:271(G):C:H5'	1.93	0.48
1:AA:277:C:H5'	17:AQ:68:ARG:NH1	2.29	0.48
1:AA:706:A:O2'	11:AK:31:THR:CG2	2.60	0.48
36:DA:2836:U:H6	36:DA:2836:U:O5'	1.96	0.48
55:DW:9:TYR:H	55:DW:9:TYR:HD1	1.61	0.48
46:BN:128:HIS:O	46:BN:128:HIS:CG	2.64	0.48
1:AA:769:G:H4'	1:AA:1513:A:H4'	1.94	0.48
1:CA:933:G:OP2	7:CG:3:ARG:HB3	2.12	0.48
36:BA:1914:C:H2'	36:BA:1915:U:O4'	2.14	0.48
5:CE:135:THR:O	5:CE:138:ALA:HB3	2.13	0.48
1:CA:665:A:H1'	1:CA:733:A:O4'	2.12	0.48
44:BJ:100:UNK:CB	44:BJ:129:UNK:HA	2.43	0.48
10:CJ:42:THR:HG22	10:CJ:43:ARG:N	2.28	0.48
3:CC:25:GLY:O	3:CC:27:LYS:N	2.47	0.48
1:AA:399:G:H2'	1:AA:400:C:C6	2.47	0.48
38:BC:50:ASP:OD2	38:BC:52:ARG:HB2	2.14	0.48
36:BA:684:G:C4	36:BA:794:G:N2	2.81	0.48
36:DA:569:U:C4	36:DA:570:G:C6	3.01	0.48
28:D2:24:LEU:HD23	28:D2:24:LEU:C	2.34	0.48
37:DB:32:C:H6	37:DB:32:C:H5'	1.76	0.48
39:DD:40:THR:O	39:DD:41:GLY:O	2.30	0.48
38:DC:79:LYS:HG2	38:DC:118:ASP:O	2.13	0.48
25:CZ:231:ILE:CG1	25:CZ:237:VAL:HG21	2.41	0.48
25:CZ:231:ILE:CB	25:CZ:234:ARG:HB2	2.43	0.48
25:CZ:98:GLN:HB2	25:CZ:241:ARG:HG3	1.94	0.48
25:CZ:176:LEU:HB3	60:CZ:501:GDP:C2	2.48	0.48
32:B6:11:LEU:HG	32:B6:26:ASN:OD1	2.14	0.48
32:D6:12:GLU:HA	32:D6:23:THR:HA	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:302:G:O2'	1:AA:556:C:H5''	2.13	0.48
57:DY:40:GLU:HA	57:DY:40:GLU:OE1	2.12	0.48
2:CB:93:VAL:HG11	2:CB:97:TRP:HD1	1.78	0.48
2:AB:142:LEU:HD23	2:AB:142:LEU:O	2.13	0.48
1:AA:1054:C:C6	1:AA:1196:U:N1	2.81	0.48
1:AA:1053:G:O6	1:AA:1199:U:H2'	2.14	0.48
42:DG:114:ILE:O	42:DG:115:ARG:CB	2.61	0.48
36:DA:142(A):C:O2'	36:DA:143:G:H5'	2.13	0.48
36:DA:2329:G:O2'	36:DA:2330:G:H5'	2.12	0.48
52:BT:28:VAL:CG2	52:BT:47:GLY:O	2.61	0.48
57:DY:67:LEU:HD21	57:DY:71:LYS:HE2	1.95	0.48
1:CA:1202:G:N2	14:CN:46:GLU:OE1	2.45	0.48
14:AN:49:HIS:C	14:AN:51:GLY:N	2.67	0.48
13:CM:25:ILE:HD11	13:CM:60:VAL:HG13	1.96	0.48
31:B5:33:CYS:HB3	31:B5:36:CYS:SG	2.53	0.48
58:DZ:178:GLU:O	58:DZ:180:VAL:CB	2.61	0.48
43:BH:125:VAL:H	43:BH:126:PRO:HD3	1.78	0.48
43:BH:89:ILE:HD13	43:BH:96:ALA:HB2	1.95	0.48
1:CA:966:G:O2'	1:CA:967:C:P	2.71	0.48
5:CE:144:THR:O	5:CE:147:ASP:OD1	2.31	0.48
36:DA:1012:U:C4	46:DN:28:THR:HG21	2.47	0.48
40:DE:37:ARG:HA	40:DE:42:ASP:OD2	2.13	0.48
10:AJ:81:THR:O	10:AJ:85:LEU:HG	2.14	0.48
25:AZ:277:LEU:HD12	25:AZ:280:GLY:N	2.28	0.48
13:CM:84:ILE:HG22	13:CM:84:ILE:O	2.13	0.48
25:AZ:231:ILE:N	25:AZ:231:ILE:CD1	2.77	0.48
48:DP:7:ARG:CB	48:DP:8:PRO:HD3	2.36	0.48
18:CR:50:ILE:HD13	18:CR:74:ARG:NH2	2.28	0.48
25:AZ:222:LEU:HD23	25:AZ:243:GLU:HG2	1.95	0.48
1:CA:299:G:H2'	1:CA:300:A:H8	1.70	0.48
5:CE:28:PHE:CD2	5:CE:51:VAL:HG22	2.48	0.48
38:BC:43:VAL:HG23	38:BC:175:VAL:HG21	1.95	0.48
22:CW:70:G:C2'	22:CW:71:G:O5'	2.62	0.48
6:AF:53:ALA:O	6:AF:54:LYS:HG2	2.13	0.48
36:BA:1278:A:H5''	50:BR:36:THR:HG22	1.95	0.48
13:CM:108:ARG:NH2	13:CM:114:ARG:HA	2.27	0.48
51:DS:92:TYR:CD2	51:DS:94:TYR:HB2	2.49	0.48
14:CN:9:LYS:HG2	14:CN:9:LYS:O	2.12	0.48
6:AF:87:ARG:NH1	6:AF:87:ARG:HG2	2.27	0.48
25:CZ:298:VAL:CG1	25:CZ:302:GLN:OE1	2.61	0.48
1:CA:1139:G:N2	1:CA:1143:G:C6	2.82	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2768:C:O2'	36:BA:2769:C:H5'	2.13	0.48
5:CE:41:VAL:HG13	5:CE:113:ALA:CA	2.43	0.48
5:CE:64:ARG:HH11	5:CE:64:ARG:CG	2.26	0.48
25:CZ:207:ASP:HB3	25:CZ:208:GLU:OE2	2.13	0.48
42:DG:56:ALA:HA	42:DG:153:ARG:NH2	2.29	0.48
2:CB:204:ASN:HD22	2:CB:205:ASP:N	2.11	0.48
40:DE:179:GLU:HG3	40:DE:179:GLU:O	2.14	0.48
25:AZ:28:THR:HG23	25:AZ:79:HIS:CE1	2.49	0.48
9:AI:17:VAL:CG2	9:AI:80:GLY:HA3	2.43	0.48
53:DU:82:GLY:C	53:DU:84:LYS:N	2.67	0.48
1:AA:706:A:C4'	11:AK:29:ILE:HD11	2.43	0.48
1:AA:719:C:O2	18:AR:50:ILE:HG12	2.13	0.48
1:AA:660:G:OP2	15:AO:5:LYS:HE2	2.14	0.48
36:BA:1275:A:C4	50:BR:16:HIS:ND1	2.81	0.48
2:AB:16:HIS:HD2	2:AB:210:SER:N	2.12	0.48
36:BA:2290:G:H2'	36:BA:2291:U:O4'	2.14	0.48
1:CA:824:C:H1'	8:CH:1:MET:HE2	1.95	0.48
36:BA:2485:G:H2'	36:BA:2486:G:H5'	1.94	0.48
36:BA:1448:G:N2	36:BA:1528(A):A:C2	2.80	0.48
36:BA:751:A:H5'	55:BW:90:ARG:HA	1.94	0.48
36:DA:2537:U:H2'	36:DA:2538:C:C6	2.47	0.48
46:DN:1:MET:HE2	46:DN:2:LYS:N	2.28	0.48
1:CA:277:C:OP1	17:CQ:41:LYS:HE3	2.14	0.48
5:AE:13:ILE:HA	5:AE:29:GLY:O	2.13	0.48
9:CI:10:ARG:NH2	9:CI:105:ASP:OD2	2.46	0.48
45:BK:101:UNK:CB	45:BK:137:UNK:H	2.27	0.48
36:BA:2816:C:O2	36:BA:2883:A:O2'	2.30	0.48
36:BA:2733:A:O2'	36:BA:2734:A:H5'	2.13	0.48
25:CZ:234:ARG:NH2	25:CZ:289:LEU:CD2	2.76	0.48
34:D8:32:LEU:CG	34:D8:36:LYS:NZ	2.77	0.48
1:CA:346:G:N3	1:CA:346:G:C2'	2.77	0.48
32:B6:53:LYS:HD3	32:B6:54:ILE:N	2.27	0.48
36:DA:2400:G:N2	36:DA:2417:C:C2	2.82	0.48
57:DY:28:LYS:CG	57:DY:39:VAL:HG22	2.37	0.48
28:B2:40:SER:OG	56:BX:13:LEU:HD11	2.14	0.48
25:AZ:110:ASP:HB3	25:AZ:113:MET:CE	2.44	0.48
39:BD:33:LEU:HD12	39:BD:102:LYS:HD2	1.94	0.48
39:BD:35:LYS:HG2	39:BD:36:PRO:CD	2.43	0.48
36:DA:1790:C:H2'	36:DA:1791:A:C5	2.49	0.48
39:DD:97:TYR:C	39:DD:99:ASP:N	2.65	0.48
57:DY:44:ILE:CG2	57:DY:45:VAL:H	2.25	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:D0:43:THR:H	36:DA:2331:G:H4'	1.78	0.48
52:BT:64:ARG:HD3	52:BT:102:ILE:CD1	2.44	0.48
52:BT:33:LYS:NZ	52:BT:43:GLN:HG2	2.26	0.48
49:BQ:141:GLN:C	58:BZ:53:ILE:HD12	2.34	0.48
36:DA:306:U:H2'	36:DA:307:G:O4'	2.14	0.48
57:DY:87:LYS:CG	57:DY:88:LYS:H	2.22	0.48
10:CJ:50:ILE:HG12	14:CN:41:ARG:HE	1.78	0.48
3:CC:8:ILE:HG13	3:CC:184:TYR:HB3	1.96	0.48
1:AA:1281:U:H5'	1:AA:1282:C:C5	2.45	0.48
53:DU:95:LEU:HD11	54:DV:11:GLN:HG3	1.95	0.48
35:D9:14:CYS:HA	35:D9:27:CYS:HB2	1.95	0.48
43:DH:146:ALA:O	43:DH:149:ARG:HB3	2.13	0.48
1:CA:264:U:O2'	17:CQ:64:PRO:HB2	2.14	0.48
1:CA:263:A:OP2	20:CT:79:ARG:NH1	2.45	0.48
42:BG:172:LEU:HD23	42:BG:176:LEU:HD12	1.95	0.48
57:BY:87:LYS:CG	57:BY:88:LYS:H	2.27	0.48
1:AA:540:G:O2'	1:AA:541:G:H5'	2.14	0.48
36:DA:1060:U:H1'	36:DA:1061:U:H5''	1.95	0.48
30:B4:16:CYS:HB2	30:B4:36:CYS:SG	2.54	0.48
36:DA:1221(A):C:H2'	36:DA:1222:C:C6	2.48	0.48
36:DA:1131:G:O6	36:DA:2040:C:H1'	2.13	0.48
34:B8:52:LYS:H	34:B8:53:PRO:HD2	1.63	0.48
36:DA:761:A:C3'	36:DA:761:A:C8	2.96	0.48
10:CJ:79:ARG:HH11	10:CJ:79:ARG:HG2	1.79	0.48
49:BQ:51:ARG:CG	49:BQ:51:ARG:HH11	2.24	0.48
50:DR:10:LEU:C	50:DR:10:LEU:HD12	2.34	0.48
16:AP:2:VAL:O	16:AP:2:VAL:HG22	2.12	0.48
36:DA:2842:G:C2'	36:DA:2843:G:H5'	2.43	0.48
20:CT:56:MET:HE3	20:CT:85:MET:HG2	1.95	0.48
58:DZ:108:PRO:C	58:DZ:110:GLY:N	2.66	0.48
47:DO:12:ASP:OD2	47:DO:86:ILE:N	2.46	0.48
1:CA:1286:A:C2	21:CU:18:TYR:OH	2.67	0.48
38:DC:84:LYS:HA	38:DC:87:GLU:OE1	2.13	0.48
2:AB:123:ALA:O	2:AB:124:SER:HB2	2.13	0.48
36:DA:2305:A:H2'	36:DA:2306:C:C4'	2.43	0.48
15:CO:26:GLU:OE2	15:CO:77:ARG:HD2	2.13	0.48
48:DP:71:VAL:N	48:DP:72:PRO:CD	2.77	0.48
36:DA:1708:C:O2'	36:DA:1709:U:H5'	2.13	0.48
29:B3:8:LEU:HB2	29:B3:28:LEU:HD12	1.95	0.48
4:AD:124:GLY:O	4:AD:125:HIS:C	2.52	0.48
58:BZ:128:VAL:HG21	58:BZ:134:PRO:HD2	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:34:LEU:HD23	3:CC:34:LEU:O	2.12	0.48
40:BE:154:LYS:O	40:BE:156:MET:HG3	2.13	0.48
25:CZ:223:MET:CE	25:CZ:238:ALA:O	2.61	0.48
12:CL:5:PRO:O	12:CL:6:THR:C	2.50	0.48
36:BA:2406:U:C2	48:BP:72:PRO:HB2	2.48	0.48
36:BA:1678:G:N2	36:BA:1989:G:H1	2.12	0.48
24:AY:2:G:OP1	25:AZ:90:LYS:HD3	2.13	0.48
36:BA:30:G:C5	36:BA:31:C:C4	3.01	0.48
36:BA:521:G:H2'	36:BA:522:G:H8	1.78	0.48
36:DA:2653:U:H5''	36:DA:2654:A:H2'	1.95	0.48
36:BA:2792:G:C2'	36:BA:2793:G:H5'	2.43	0.48
1:CA:1014:A:H5'	19:CS:14:HIS:CD2	2.48	0.48
1:AA:1171:G:O2'	1:AA:1172:C:H5'	2.13	0.48
36:DA:1120:G:H2'	36:DA:1121:C:C6	2.49	0.48
36:BA:586:A:H5'	41:BF:89:VAL:HB	1.95	0.48
36:DA:902:C:H2'	36:DA:903:C:C6	2.48	0.48
36:BA:1432:C:H2'	36:BA:1433:U:O4'	2.12	0.48
4:CD:79:PHE:HA	4:CD:93:PHE:CD1	2.48	0.48
45:BK:3:UNK:O	45:BK:4:UNK:C	2.62	0.48
58:BZ:103:ARG:HE	58:BZ:138:GLU:HG3	1.77	0.48
25:AZ:325:LYS:HB2	25:AZ:331:HIS:HB3	1.94	0.48
2:CB:48:MET:O	2:CB:49:GLU:C	2.51	0.48
1:CA:189(H):G:OP2	1:CA:189(H):G:H2'	2.13	0.48
47:DO:3:GLN:O	47:DO:21:CYS:HB3	2.14	0.48
47:BO:66:LYS:H	47:BO:82:ASN:ND2	2.11	0.48
51:DS:34:HIS:CE1	51:DS:54:LEU:HB3	2.48	0.48
4:CD:170:VAL:HG12	4:CD:174:LEU:HB2	1.93	0.48
52:DT:27:THR:OG1	52:DT:28:VAL:N	2.46	0.48
1:AA:1104:G:P	2:AB:111:ARG:HD2	2.53	0.48
25:AZ:113:MET:O	25:AZ:116:THR:HB	2.13	0.48
38:BC:147:PHE:C	38:BC:149:ILE:H	2.17	0.48
38:BC:76:ALA:HB2	38:BC:114:VAL:CG2	2.41	0.48
56:DX:36:LYS:HA	56:DX:39:ILE:HG12	1.94	0.48
52:BT:106:SER:HA	52:BT:110:ILE:CG1	2.44	0.48
49:BQ:27:VAL:HG11	49:BQ:134:ARG:CD	2.44	0.48
36:DA:336:C:O2'	36:DA:337:C:H5'	2.14	0.48
35:D9:18:ARG:NH2	36:DA:1123:C:H1'	2.29	0.48
41:BF:135:LYS:HB3	41:BF:138:GLU:CD	2.34	0.48
43:DH:83:TYR:CG	43:DH:134:SER:HB3	2.48	0.48
1:CA:1117:G:C5'	1:CA:1117:G:H8	2.20	0.48
36:DA:1409:C:O2'	36:DA:1410:G:H5'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:DV:1:MET:SD	54:DV:43:GLU:HG2	2.53	0.48
36:DA:1902:C:C1'	39:DD:244:ARG:HG3	2.38	0.48
3:CC:153:VAL:O	3:CC:154:SER:CB	2.61	0.48
26:D0:27:GLU:CD	26:D0:27:GLU:H	2.17	0.48
25:CZ:125:GLN:HE22	25:CZ:394:THR:HB	1.78	0.48
4:CD:61:LYS:HA	4:CD:203:VAL:HG13	1.96	0.48
36:BA:1817:G:H2'	36:BA:1818:U:C5'	2.31	0.48
58:DZ:99:TYR:HD2	58:DZ:123:ASP:HB3	1.77	0.48
1:CA:1376:U:H2'	1:CA:1377:A:C8	2.48	0.48
12:CL:109:GLY:HA3	12:CL:122:THR:H	1.78	0.48
12:CL:60:LEU:C	12:CL:62:SER:H	2.15	0.48
41:DF:206:ILE:CG2	41:DF:207:GLY:H	2.18	0.48
48:DP:115:LEU:HA	48:DP:131:SER:OG	2.13	0.48
41:BF:154:VAL:HG13	41:BF:191:ARG:O	2.13	0.48
36:BA:466:A:H2'	36:BA:467:G:H5'	1.94	0.48
42:BG:110:ALA:H	42:BG:112:PRO:HD2	1.78	0.48
1:CA:382:A:H2'	1:CA:383:A:C8	2.48	0.48
30:D4:16:CYS:HB2	30:D4:36:CYS:SG	2.52	0.48
30:D4:30:GLU:C	30:D4:31:ILE:HD12	2.33	0.48
2:AB:215:LEU:O	2:AB:218:ALA:HB3	2.13	0.48
2:AB:215:LEU:O	2:AB:219:VAL:HG23	2.13	0.48
36:BA:2515:C:H2'	36:BA:2516:G:H8	1.79	0.48
34:B8:14:VAL:CG2	34:B8:24:ALA:HB2	2.40	0.48
36:DA:333:G:N2	36:DA:334:C:H1'	2.29	0.48
51:BS:98:VAL:CG1	51:BS:100:ALA:HB2	2.39	0.48
5:AE:39:GLY:HA2	5:AE:69:VAL:HG23	1.95	0.48
42:DG:52:ILE:N	42:DG:52:ILE:CD1	2.75	0.48
29:B3:17:LYS:O	29:B3:18:ASP:C	2.52	0.48
36:BA:1313:U:C2	36:BA:1610:A:H2	2.32	0.48
43:DH:139:GLN:NE2	43:DH:140:LYS:HA	2.29	0.48
36:BA:1361:G:O2'	36:BA:1362:C:H5'	2.13	0.48
1:AA:1039:C:H6	1:AA:1040:U:H5	1.62	0.48
1:CA:353:A:H5'	1:CA:353:A:C8	2.42	0.48
31:D5:52:TYR:O	31:D5:52:TYR:CD1	2.66	0.48
47:BO:24:VAL:CG1	47:BO:33:ALA:HB2	2.44	0.48
55:DW:82:LEU:CD1	55:DW:82:LEU:H	2.27	0.48
28:D2:66:GLU:HA	28:D2:69:ARG:NE	2.29	0.48
1:AA:324:G:OP1	20:AT:22:ARG:HD3	2.14	0.48
1:AA:444:C:H2'	1:AA:445:G:H8	1.78	0.48
2:CB:204:ASN:HD22	2:CB:206:ASP:H	1.58	0.48
13:AM:23:TYR:CE1	13:AM:70:LEU:HD22	2.45	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1146:C:O2'	36:BA:1147:C:H5'	2.14	0.48
1:CA:377:G:H2'	1:CA:378:G:H8	1.76	0.48
36:DA:2358:G:O2'	36:DA:2359:C:H5'	2.14	0.48
1:AA:1228:C:OP1	13:AM:108:ARG:NH2	2.45	0.48
36:DA:2176:A:N3	38:DC:172:HIS:CE1	2.82	0.48
4:CD:116:GLN:O	4:CD:117:ALA:C	2.51	0.48
36:DA:1592:C:H2'	36:DA:1593:G:C8	2.48	0.48
36:DA:2206:G:N3	36:DA:2206:G:H3'	2.28	0.48
54:BV:21:ARG:HB3	54:BV:91:TYR:HD2	1.78	0.48
20:AT:8:ARG:HG3	20:AT:8:ARG:NH1	2.29	0.48
36:BA:1466:G:N2	36:BA:1547:C:N3	2.61	0.48
4:AD:76:ARG:O	4:AD:80:GLU:HG2	2.13	0.48
27:B1:53:VAL:HG13	27:B1:58:ILE:HD13	1.95	0.48
2:AB:190:THR:O	2:AB:191:ASP:HB2	2.13	0.48
36:BA:693:C:O2'	36:BA:694:U:H5'	2.13	0.48
12:CL:78:GLN:O	12:CL:80:HIS:N	2.47	0.48
1:AA:987:G:O2'	1:AA:988:G:H5'	2.13	0.48
1:AA:955:U:O2'	1:AA:956:U:H5'	2.14	0.48
40:BE:16:ARG:O	40:BE:17:ASP:HB2	2.12	0.48
36:BA:1412:A:O2'	36:BA:1413:G:H5'	2.14	0.48
1:AA:139:G:O2'	1:AA:140:A:H5'	2.13	0.48
36:DA:821:A:H5''	36:DA:822:U:C6	2.48	0.48
1:AA:236:G:OP1	17:AQ:40:LYS:NZ	2.38	0.48
20:CT:24:LEU:HD22	20:CT:24:LEU:O	2.14	0.48
25:CZ:212:THR:O	25:CZ:212:THR:HG23	2.14	0.48
36:DA:2236:C:H2'	36:DA:2237:G:O4'	2.12	0.48
24:AY:56:C:C2	36:BA:1067:A:H2	2.32	0.48
4:CD:98:GLU:HA	4:CD:103:ASN:HD22	1.75	0.48
1:CA:358:U:H1'	25:CZ:233:GLY:HA2	1.96	0.48
32:D6:5:VAL:O	32:D6:6:ARG:HB2	2.13	0.48
36:DA:252:G:O2'	36:DA:253:C:H5'	2.13	0.48
48:DP:23:PRO:C	48:DP:33:ARG:NE	2.67	0.48
48:DP:47:ASP:HB3	48:DP:49:ARG:N	2.29	0.48
52:DT:91:ARG:CB	52:DT:116:ALA:HA	2.44	0.48
36:BA:2400:G:N2	36:BA:2417:C:C2	2.81	0.48
58:BZ:120:ILE:HG13	58:BZ:170:THR:HG22	1.95	0.48
1:CA:1149:C:C2'	1:CA:1150:U:O2	2.41	0.48
39:BD:76:PRO:HA	39:BD:118:VAL:HG23	1.95	0.48
39:BD:117:VAL:HG22	39:BD:118:VAL:N	2.29	0.48
38:BC:114:VAL:HG12	38:BC:144:THR:CB	2.43	0.48
39:DD:101:GLU:HG2	39:DD:102:LYS:N	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:130:C:O3'	36:DA:1349:A:H1'	2.13	0.48
26:D0:43:THR:HG21	36:DA:2336:A:H61	1.79	0.48
36:BA:906:G:H5'	49:BQ:26:TYR:OH	2.13	0.48
41:BF:84:VAL:O	41:BF:86:GLY:N	2.40	0.48
35:D9:29:ASN:H	35:D9:29:ASN:HD22	1.61	0.48
36:BA:2538:C:H2'	36:BA:2539:C:H6	1.79	0.48
29:D3:54:VAL:HG12	29:D3:55:ARG:N	2.29	0.48
1:CA:1202:G:C2	14:CN:42:ILE:CG2	2.96	0.48
3:AC:11:ARG:HG2	3:AC:11:ARG:NH1	2.18	0.48
1:AA:1126:U:H1'	1:AA:1280:A:C5	2.49	0.48
9:AI:33:PHE:O	9:AI:35:GLU:N	2.47	0.48
36:DA:2287:A:C2	36:DA:2346:A:C2	3.02	0.48
25:CZ:89:ILE:O	25:CZ:92:MET:HB3	2.13	0.48
39:DD:142:VAL:CG2	39:DD:191:ALA:HB1	2.44	0.48
40:BE:63:LEU:O	40:BE:64:LYS:C	2.51	0.48
58:DZ:53:ILE:HG22	58:DZ:71:VAL:O	2.14	0.48
1:CA:1346:A:C8	7:CG:10:ARG:NH2	2.82	0.48
42:BG:27:ASN:HD21	42:BG:30:GLU:HB2	1.78	0.48
40:DE:34:VAL:HG13	40:DE:48:GLN:NE2	2.28	0.48
40:DE:51:PHE:O	40:DE:52:LEU:C	2.52	0.48
51:DS:104:GLY:O	51:DS:106:ARG:N	2.45	0.48
27:D1:56:GLN:HG3	27:D1:87:PRO:HD3	1.95	0.48
55:BW:75:TYR:CE1	55:BW:104:THR:OG1	2.66	0.48
1:AA:625:G:O2'	1:AA:626:U:H5'	2.13	0.48
12:CL:18:VAL:O	12:CL:19:ARG:HB3	2.14	0.48
36:DA:580:C:P	53:DU:33:ARG:HH21	2.36	0.48
30:B4:7:PRO:O	30:B4:8:LYS:CB	2.56	0.48
1:CA:878:G:C5'	8:CH:89:PRO:HG2	2.42	0.48
24:CY:61:C:C2'	24:CY:62:U:H5''	2.43	0.48
4:AD:67:ILE:O	4:AD:67:ILE:HG23	2.14	0.48
36:DA:1761:C:H3'	36:DA:1762:A:C8	2.49	0.48
49:BQ:18:LYS:HB2	49:BQ:98:LYS:HZ1	1.76	0.48
2:CB:30:ARG:HE	2:CB:31:TYR:HE1	1.62	0.48
36:DA:2491:U:C5'	36:DA:2570:G:H5''	2.38	0.48
52:BT:11:GLU:H	52:BT:11:GLU:CD	2.17	0.48
12:AL:27:LEU:C	12:AL:29:GLY:H	2.17	0.48
40:DE:167:VAL:CG2	40:DE:170:LEU:HD11	2.43	0.48
22:CW:26:A:H2'	22:CW:27:G:C8	2.48	0.48
55:DW:88:ARG:CG	55:DW:94:ASP:OD2	2.58	0.48
1:CA:1015:A:C6	1:CA:1016:A:C6	3.01	0.48
1:CA:691:G:C6	11:CK:52:GLY:HA2	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:165:ILE:HA	39:BD:175:LEU:HD23	1.96	0.48
37:DB:16:G:N2	37:DB:69:G:H1'	2.28	0.48
40:DE:117:MET:HE2	40:DE:124:GLY:CA	2.43	0.48
39:DD:79:VAL:HG21	39:DD:111:LEU:HD21	1.94	0.48
6:AF:87:ARG:CG	6:AF:87:ARG:HH11	2.25	0.48
5:CE:120:THR:CG2	5:CE:121:LYS:N	2.76	0.48
36:DA:2107:C:C5	36:DA:2108:C:H5	2.32	0.48
1:CA:1296:C:H4'	1:CA:1302:U:H5	1.78	0.48
22:CW:34:G:C8	22:CW:35:A:N7	2.81	0.48
25:AZ:380:LEU:N	25:AZ:380:LEU:HD23	2.29	0.48
36:DA:440:G:H22	41:DF:46:ARG:NH2	2.11	0.48
41:BF:150:GLY:HA2	41:BF:172:TRP:CE3	2.48	0.48
36:DA:1671:U:O2'	36:DA:1673:U:H5	1.96	0.48
27:B1:67:ILE:O	27:B1:70:VAL:CG2	2.62	0.48
37:DB:7:G:H4'	51:DS:29:PHE:HD2	1.78	0.48
36:DA:2649:U:H2'	36:DA:2650:U:H6	1.76	0.48
7:CG:21:VAL:HG23	7:CG:22:LEU:N	2.29	0.48
37:DB:114:C:H2'	37:DB:115:G:H8	1.78	0.48
1:AA:748:C:H1'	1:AA:749:C:H5	1.79	0.48
36:DA:515:A:C8	36:DA:516:C:C6	3.01	0.48
36:DA:2176:A:C8	36:DA:2176:A:H3'	2.48	0.48
36:BA:1230:C:O2'	36:BA:1231:G:H5'	2.14	0.48
36:DA:489:G:N2	36:DA:1321:A:OP1	2.42	0.48
36:BA:598:G:H5'	48:BP:15:ARG:CB	2.44	0.48
25:CZ:313:HIS:HD2	25:CZ:403:ILE:HD13	1.77	0.48
36:DA:2602:A:H4'	36:DA:2603:G:C5'	2.43	0.48
1:CA:328:C:O2	1:CA:328:C:H2'	2.12	0.48
33:B7:9:ARG:NE	36:BA:1310:G:OP2	2.45	0.48
3:CC:25:GLY:O	3:CC:26:LYS:C	2.51	0.48
44:BJ:11:UNK:C	44:BJ:13:UNK:N	2.76	0.48
22:CV:75:C:H2'	22:CV:76:A:O4'	2.13	0.48
36:DA:2256:G:N2	36:DA:2275:C:C4	2.81	0.48
1:CA:622:A:C8	1:CA:623:C:C5	3.02	0.48
36:BA:1820:U:O2	39:BD:201:HIS:HB3	2.13	0.48
20:AT:48:LYS:O	20:AT:49:ALA:C	2.51	0.48
36:DA:1177:A:H5'	36:DA:1178:C:C5	2.48	0.48
1:AA:1137:C:H4'	1:AA:1138:G:C2	2.48	0.48
49:BQ:39:PRO:CA	49:BQ:99:PRO:HD3	2.44	0.48
3:AC:157:ILE:HD12	3:AC:157:ILE:H	1.78	0.48
16:AP:60:LEU:HD23	16:AP:60:LEU:HA	1.73	0.48
10:AJ:86:MET:O	10:AJ:86:MET:HG2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:64:A:H2'	36:DA:65:C:H6	1.78	0.48
25:CZ:5:PHE:HB3	25:CZ:276:THR:O	2.13	0.48
25:CZ:24:LYS:HE2	25:CZ:24:LYS:HB2	1.64	0.48
36:DA:833:U:H2'	36:DA:834:C:C6	2.49	0.48
48:DP:23:PRO:O	48:DP:33:ARG:CD	2.57	0.48
34:D8:13:ARG:HB3	48:DP:63:PRO:HA	1.96	0.48
52:DT:35:LYS:O	52:DT:36:GLU:HB2	2.12	0.48
19:CS:70:LYS:O	19:CS:71:LEU:C	2.52	0.48
28:B2:35:LEU:C	28:B2:35:LEU:HD22	2.34	0.48
28:B2:53:LEU:C	28:B2:55:ARG:H	2.16	0.48
2:AB:140:HIS:C	2:AB:142:LEU:N	2.65	0.48
1:AA:1054:C:C6	1:AA:1196:U:N3	2.78	0.48
25:AZ:110:ASP:HB3	25:AZ:113:MET:HE1	1.96	0.48
25:AZ:135:MET:SD	25:AZ:150:VAL:CG1	3.02	0.48
25:AZ:176:LEU:HD12	25:AZ:176:LEU:C	2.34	0.48
38:BC:131:LEU:C	38:BC:133:PRO:HD2	2.34	0.48
36:DA:1827:C:O2'	36:DA:1828:G:H5'	2.13	0.48
42:DG:126:ASP:O	42:DG:128:ARG:N	2.46	0.48
36:DA:2476:A:C2'	36:DA:2477:C:C5'	2.92	0.48
54:BV:64:HIS:CE1	54:BV:92:THR:CG2	2.97	0.48
1:AA:1190:G:OP1	3:AC:5:ILE:HD12	2.14	0.48
36:BA:1818:U:H2'	39:BD:157:ARG:HG3	1.96	0.48
1:CA:1343:G:O2'	9:CI:121:ARG:HA	2.13	0.48
16:CP:55:ARG:NH2	16:CP:58:TYR:CG	2.81	0.48
51:BS:12:PHE:CD1	51:BS:12:PHE:C	2.85	0.48
5:CE:78:HIS:HE1	5:CE:143:ARG:H	1.61	0.48
5:CE:79:GLU:HA	5:CE:91:LEU:O	2.14	0.48
7:CG:118:VAL:HG23	7:CG:119:ARG:H	1.79	0.48
4:AD:61:LYS:HA	4:AD:203:VAL:HG13	1.96	0.48
51:DS:15:ARG:CD	51:DS:15:ARG:O	2.57	0.48
39:DD:26:LYS:O	39:DD:27:THR:HB	2.14	0.48
47:BO:64:ARG:HD3	47:BO:79:PHE:CD1	2.49	0.48
55:DW:107:LEU:N	55:DW:107:LEU:HD12	2.29	0.48
36:BA:1528:A:N6	36:BA:1544:A:N1	2.60	0.48
52:DT:48:ILE:HD12	52:DT:64:ARG:O	2.13	0.48
1:CA:1259:C:H3'	1:CA:1260:C:H5''	1.96	0.48
2:AB:24:TRP:CZ3	2:AB:26:PRO:HA	2.48	0.48
52:BT:129:ARG:O	52:BT:129:ARG:HG3	2.13	0.48
9:CI:50:LEU:O	9:CI:51:ARG:HG3	2.13	0.48
22:CW:8:U:H5'	22:CW:49:C:OP1	2.13	0.48
43:DH:89:ILE:CD1	43:DH:96:ALA:HB2	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DQ:62:GLY:HA2	58:DZ:116:VAL:CG2	2.41	0.48
36:DA:1407:C:N4	36:DA:1595:G:H1	2.07	0.48
36:BA:909:A:H2'	36:BA:912:C:H5	1.75	0.48
7:CG:134:ALA:O	7:CG:135:VAL:C	2.52	0.48
51:BS:74:ALA:HB1	51:BS:103:GLU:CG	2.41	0.48
51:BS:66:ALA:O	51:BS:69:VAL:N	2.46	0.48
1:CA:1134:G:C2'	1:CA:1135:U:H5'	2.43	0.48
1:CA:666:G:H5'	1:CA:726:C:H1'	1.95	0.48
29:D3:31:LEU:HD23	29:D3:32:GLN:N	2.29	0.48
29:D3:8:LEU:HD22	29:D3:31:LEU:HG	1.95	0.48
49:BQ:109:VAL:CG1	49:BQ:113:GLN:OE1	2.62	0.48
36:DA:860:U:C2	36:DA:2268:A:O4'	2.66	0.48
25:AZ:378:VAL:HG23	25:AZ:380:LEU:CG	2.44	0.48
25:AZ:379:ALA:O	25:AZ:380:LEU:HD23	2.13	0.48
1:CA:940:C:O2'	1:CA:941:G:H5'	2.14	0.48
39:BD:8:PRO:HB3	39:BD:14:ARG:HB3	1.96	0.48
50:BR:13:HIS:CE1	50:BR:15:SER:OG	2.66	0.48
1:CA:418:C:H2'	1:CA:419:C:H6	1.77	0.48
7:AG:134:ALA:O	7:AG:135:VAL:C	2.52	0.48
2:AB:178:ARG:HG3	2:AB:178:ARG:NH1	2.27	0.48
36:DA:290:G:O2'	36:DA:291:C:H5'	2.12	0.48
12:AL:58:VAL:HG21	12:AL:60:LEU:HD21	1.95	0.48
44:BJ:127:UNK:HA	44:BJ:130:UNK:CB	2.44	0.48
36:BA:2870:C:H5'	50:BR:61:HIS:HE1	1.78	0.48
17:CQ:81:ARG:O	17:CQ:83:ASP:N	2.47	0.48
15:CO:74:ASP:O	15:CO:76:GLU:N	2.47	0.48
36:DA:2170:A:OP1	38:DC:134:ARG:NH1	2.46	0.48
37:BB:33:G:C2'	37:BB:34:U:H5'	2.43	0.48
36:DA:250:G:H2'	36:DA:251:A:C8	2.49	0.48
1:CA:1360:A:H2'	1:CA:1361:G:O4'	2.14	0.48
37:BB:82:G:O2'	37:BB:83:G:H5'	2.13	0.48
22:AW:40:C:H2'	22:AW:41:C:H6	1.79	0.48
36:DA:1283:G:N2	36:DA:1285:G:H3'	2.28	0.48
36:BA:975:C:OP2	36:BA:975:C:H4'	2.14	0.48
37:DB:52:A:O2'	37:DB:53:A:C8	2.67	0.48
8:CH:98:LYS:HG3	8:CH:99:GLU:HG3	1.94	0.48
36:DA:1950:G:N2	36:DA:1954:G:C8	2.82	0.48
38:DC:82:LYS:HG3	38:DC:116:THR:HG21	1.96	0.48
24:CY:75:C:C6	25:CZ:231:ILE:HA	2.41	0.48
36:BA:2187:G:C3'	36:BA:2188:C:H5'	2.44	0.48
25:CZ:241:ARG:HB2	25:CZ:285:ASN:HD21	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:B6:35:GLU:CB	32:B6:51:GLU:HB2	2.43	0.48
36:DA:2419:U:O2'	36:DA:2420:C:H5'	2.14	0.48
48:DP:24:GLY:HA3	48:DP:33:ARG:CZ	2.44	0.48
48:DP:31:ALA:C	48:DP:33:ARG:N	2.67	0.48
52:BT:89:VAL:HG12	52:BT:91:ARG:CG	2.20	0.48
39:BD:238:GLY:O	39:BD:239:ARG:C	2.51	0.48
28:B2:2:LYS:CE	28:B2:59:ARG:HH22	2.25	0.48
2:AB:140:HIS:C	2:AB:142:LEU:H	2.15	0.48
39:DD:44:ASN:HB2	39:DD:48:ARG:O	2.14	0.48
57:DY:76:CYS:O	57:DY:77:PRO:C	2.51	0.48
36:BA:1502:C:H5'	36:BA:1503:U:OP2	2.13	0.48
25:AZ:226:GLU:O	25:AZ:300:ARG:CD	2.58	0.48
36:DA:2466:C:O2'	36:DA:2467:C:H5'	2.14	0.48
36:DA:2478:A:O2'	36:DA:2528:U:H1'	2.13	0.48
41:BF:6:VAL:CG1	41:BF:7:TYR:H	2.13	0.48
1:CA:1054:C:H5	1:CA:1196:U:C5	2.27	0.48
1:CA:1204:A:C2	1:CA:1205:U:C2	3.02	0.48
28:D2:16:LEU:HD23	28:D2:17:SER:H	1.75	0.48
43:DH:152:ARG:HB3	43:DH:162:ILE:HG23	1.95	0.48
36:BA:1142(A):A:H4'	46:BN:25:ARG:HH22	1.79	0.48
46:BN:65:LYS:C	46:BN:67:LEU:H	2.17	0.48
36:DA:89:G:H3'	36:DA:90:U:C5'	2.42	0.48
40:DE:181:LEU:HD21	52:DT:7:ILE:CG2	2.43	0.48
51:BS:12:PHE:HD1	51:BS:13:ARG:N	2.12	0.48
41:DF:7:TYR:OH	41:DF:10:PRO:HB3	2.13	0.48
36:BA:605:C:H1'	36:BA:657:U:HO2'	1.78	0.48
11:CK:62:GLN:O	11:CK:65:ALA:N	2.47	0.48
1:CA:1272:G:H2'	1:CA:1273:G:O4'	2.14	0.48
4:AD:59:ARG:HH21	4:AD:62:GLN:HG3	1.78	0.48
55:BW:75:TYR:HD1	55:BW:75:TYR:N	2.12	0.48
36:DA:265:A:H1'	36:DA:266:G:O4'	2.14	0.48
46:DN:70:LYS:O	46:DN:86:PRO:HA	2.14	0.48
57:DY:2:ARG:O	57:DY:3:VAL:HB	2.14	0.48
25:AZ:375:ILE:HD12	25:AZ:375:ILE:O	2.14	0.48
24:CY:67:G:H2'	24:CY:68:C:C6	2.49	0.48
36:DA:2481:G:O2'	36:DA:2482:G:P	2.72	0.48
22:AV:5:G:O2'	22:AV:6:G:H5'	2.14	0.48
36:DA:1071:G:H4'	36:DA:1089:G:OP2	2.14	0.48
36:DA:1150:C:O2'	36:DA:1151:G:H5'	2.14	0.48
40:BE:46:ALA:HB2	40:BE:82:ARG:HA	1.95	0.48
22:CW:6:G:C2'	22:CW:7:A:H5'	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1495:A:N3	36:DA:1496:A:C2	2.82	0.48
1:CA:1502:A:H2	1:CA:1505:G:H1	1.60	0.48
49:BQ:64:ILE:CG2	49:BQ:65:PHE:N	2.77	0.48
41:BF:184:TYR:HD1	48:BP:7:ARG:NH1	2.12	0.48
36:DA:484:C:H2'	36:DA:485:C:C6	2.49	0.48
57:DY:50:ARG:HG3	57:DY:56:PRO:C	2.34	0.48
36:BA:1278:A:C5'	50:BR:36:THR:HG22	2.44	0.48
36:BA:1279:G:H4'	50:BR:31:HIS:HD2	1.78	0.48
52:DT:106:SER:O	52:DT:107:ASP:CG	2.52	0.48
43:BH:153:LYS:H	43:BH:153:LYS:CD	2.23	0.48
46:BN:3:THR:HG22	46:BN:5:VAL:H	1.78	0.48
58:DZ:104:PHE:HA	58:DZ:139:VAL:CG2	2.42	0.48
36:BA:1151:G:H5''	53:BU:81:HIS:CE1	2.48	0.48
9:AI:83:ARG:HA	9:AI:86:VAL:HG12	1.96	0.48
1:AA:878:G:H5''	8:AH:89:PRO:HG2	1.96	0.48
10:CJ:89:ASP:HB3	10:CJ:91:PRO:HD3	1.96	0.48
36:DA:200:U:C2'	36:DA:201:C:H5'	2.44	0.48
41:DF:43:LYS:HA	41:DF:98:SER:HB3	1.96	0.48
36:BA:2773:C:H5''	40:BE:164:ARG:CG	2.43	0.48
36:BA:589:C:H2'	36:BA:590:A:H8	1.78	0.48
13:AM:118:ALA:HB2	22:AV:29:G:H5'	1.95	0.48
2:CB:142:LEU:CD2	2:CB:146:GLN:NE2	2.76	0.48
36:BA:948:G:O2'	36:BA:949:C:H5'	2.14	0.48
1:CA:39:G:C8	1:CA:498:U:C4	3.01	0.48
33:B7:34:ARG:HH12	33:B7:42:LEU:CA	2.27	0.48
36:DA:1498:C:H2'	36:DA:1499:C:H5''	1.94	0.48
37:BB:7:G:O5'	51:BS:29:PHE:CE2	2.66	0.48
36:DA:2462:U:C2	36:DA:2489:G:N2	2.82	0.48
44:DJ:37:UNK:C	44:DJ:39:UNK:N	2.74	0.48
46:DN:42:TRP:O	53:DU:64:ARG:NH1	2.46	0.48
36:BA:840:C:H2'	36:BA:841:A:H8	1.79	0.48
1:CA:17:U:H2'	1:CA:18:C:C6	2.49	0.48
36:DA:445:C:OP1	53:DU:2:PRO:HA	2.14	0.48
1:CA:791:G:H2'	1:CA:792:A:H5'	1.95	0.48
36:DA:2129:C:OP1	38:DC:6:ARG:HB3	2.12	0.48
36:BA:150:C:O2'	36:BA:151:C:H5'	2.14	0.48
2:CB:233:SER:HB2	2:CB:234:PRO:CD	2.44	0.48
1:CA:337:C:H2'	1:CA:338:A:C8	2.49	0.48
21:AU:5:ASP:O	21:AU:11:GLY:HA3	2.13	0.48
51:BS:26:LEU:HG	51:BS:39:ILE:HG12	1.96	0.48
36:BA:1821:A:H2'	36:BA:1822:G:H8	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BQ:34:LEU:HD11	49:BQ:129:THR:OG1	2.14	0.48
36:BA:1756:G:H4'	36:BA:1758:G:O4'	2.14	0.48
38:BC:58:VAL:HG22	38:BC:201:PRO:HD3	1.95	0.48
36:DA:1477:A:H5'	36:DA:1478:G:OP2	2.13	0.48
57:BY:23:ARG:HH11	57:BY:23:ARG:HG2	1.79	0.48
36:DA:229:A:H2'	36:DA:229:A:N3	2.29	0.48
26:D0:81:VAL:HG12	26:D0:81:VAL:O	2.13	0.48
40:DE:149:ARG:NH1	40:DE:149:ARG:HG3	2.28	0.48
6:CF:33:TYR:HD2	6:CF:75:LEU:HD13	1.78	0.48
34:D8:4:MET:CE	36:DA:666:G:H1'	2.44	0.48
32:B6:40:CYS:SG	32:B6:45:LYS:HB2	2.54	0.48
34:D8:15:LYS:CG	48:DP:65:ARG:HH22	2.26	0.48
56:BX:35:THR:O	56:BX:39:ILE:HG12	2.14	0.48
36:DA:2315:G:H21	42:DG:128:ARG:CD	2.23	0.48
42:DG:94:LEU:HD22	42:DG:98:ARG:CG	2.44	0.48
26:D0:42:GLY:O	26:D0:57:PHE:HD2	1.97	0.48
36:DA:310:A:OP1	57:DY:17:SER:O	2.32	0.48
3:AC:3:ASN:O	3:AC:4:LYS:CB	2.58	0.48
36:BA:2176:A:C3'	36:BA:2176:A:C8	2.97	0.48
43:BH:127:GLU:HG3	43:BH:130:ARG:HE	1.79	0.48
36:BA:2645:G:H4'	36:BA:2646:C:OP2	2.13	0.48
49:DQ:140:ALA:HB1	58:DZ:99:TYR:CE2	2.49	0.48
1:CA:1350:A:OP2	9:CI:118:LYS:NZ	2.43	0.48
16:CP:21:VAL:HG13	16:CP:33:ILE:HB	1.95	0.48
55:BW:14:PRO:HG3	55:BW:101:SER:HB3	1.96	0.48
36:BA:832:G:C5'	48:BP:45:LEU:HD21	2.38	0.48
14:CN:4:LYS:O	14:CN:7:ILE:CG1	2.52	0.48
36:BA:621:A:C2'	36:BA:622:G:H5'	2.41	0.48
48:BP:83:VAL:HG12	48:BP:113:LYS:O	2.14	0.48
27:B1:34:THR:HG22	27:B1:35:THR:N	2.27	0.48
40:DE:47:VAL:HG21	40:DE:86:PRO:CD	2.35	0.48
17:CQ:43:LEU:O	17:CQ:69:LYS:HG2	2.14	0.48
1:AA:545:C:H5''	4:AD:72:GLU:HG2	1.95	0.48
34:B8:37:SER:CB	36:BA:2383:G:OP2	2.61	0.48
50:BR:101:ALA:O	50:BR:102:GLU:CB	2.59	0.48
47:BO:64:ARG:HD3	47:BO:79:PHE:CG	2.48	0.48
5:CE:7:GLU:O	5:CE:8:GLU:HB3	2.13	0.48
4:AD:75:PHE:CZ	4:AD:93:PHE:CZ	3.02	0.48
42:BG:68:PRO:HB2	42:BG:90:LEU:HD13	1.96	0.48
58:DZ:60:GLU:O	58:DZ:61:LEU:O	2.32	0.48
5:AE:149:GLU:C	5:AE:151:LEU:H	2.18	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:74:VAL:HA	13:CM:77:ASN:ND2	2.22	0.48
1:AA:858:G:C5'	1:AA:858:G:H8	2.27	0.48
1:AA:858:G:O6	1:AA:869:G:N7	2.46	0.48
50:DR:52:ILE:HG21	50:DR:94:TYR:HD2	1.77	0.48
1:AA:160:A:O2'	1:AA:161:A:H5'	2.14	0.48
27:D1:21:ARG:NH1	36:DA:2079:U:OP1	2.45	0.48
36:DA:2882:A:H5'	50:DR:96:ARG:HG3	1.96	0.48
57:DY:53:PRO:CB	57:DY:56:PRO:HG3	2.41	0.48
1:AA:1157:A:HO2'	1:AA:1158:C:P	2.37	0.48
36:DA:1115:G:N1	36:DA:1116:C:C4	2.82	0.48
43:DH:64:LEU:O	43:DH:67:LEU:HB3	2.14	0.48
1:CA:1158:C:O2	1:CA:1158:C:C2'	2.61	0.48
7:CG:86:GLN:HE22	22:CW:31:A:H2	1.61	0.48
39:DD:67:PHE:CZ	39:DD:157:ARG:CZ	2.97	0.48
2:AB:27:LYS:HD2	2:AB:193:ASP:CB	2.43	0.48
36:BA:861:A:H2'	36:BA:862:G:O4'	2.14	0.48
36:BA:420:C:H2'	36:BA:421:U:C6	2.49	0.48
49:BQ:66:ILE:HD12	49:BQ:66:ILE:C	2.33	0.48
38:DC:3:HIS:CG	38:DC:7:TYR:CD2	3.02	0.48
4:AD:129:ASN:HD21	4:AD:144:ASP:HA	1.79	0.48
1:CA:1233:G:OP2	9:CI:124:GLN:HG3	2.14	0.48
1:CA:375:U:OP1	16:CP:69:THR:HG21	2.13	0.48
11:CK:22:HIS:HB3	11:CK:29:ILE:HG12	1.95	0.48
36:BA:2573:C:OP1	36:BA:2574:G:OP1	2.32	0.48
55:DW:69:LEU:HD23	55:DW:108:GLY:O	2.14	0.48
36:BA:247:G:C8	36:BA:249:C:C5	3.02	0.48
1:CA:1111:A:H2'	1:CA:1112:C:C6	2.49	0.48
1:AA:781:A:C2'	1:AA:782:A:H5'	2.44	0.48
1:CA:1308:U:C5	13:CM:99:ARG:CZ	2.97	0.48
36:BA:1434:A:H61	36:BA:1558:A:N6	2.12	0.48
17:AQ:76:LEU:HD12	17:AQ:77:VAL:N	2.29	0.48
1:CA:157:G:H2'	1:CA:158:G:H8	1.79	0.48
1:AA:947:G:H2'	1:AA:948:C:O4'	2.14	0.48
38:BC:90:GLY:O	38:BC:91:ALA:HB2	2.14	0.48
17:AQ:62:SER:OG	17:AQ:72:ARG:NE	2.47	0.48
36:DA:2695:C:H2'	36:DA:2696:U:C6	2.48	0.48
18:AR:88:LYS:HD3	18:AR:88:LYS:C	2.33	0.48
36:DA:1056:G:H4'	36:DA:1086:A:N7	2.28	0.48
36:DA:729:G:H2'	36:DA:1775:U:H1'	1.96	0.48
36:BA:2266:A:H4'	36:BA:2267:A:N3	2.29	0.48
1:AA:512:U:H2'	1:AA:513:C:H6	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:890:A:N6	36:BA:892:G:C2	2.82	0.48
15:AO:79:ARG:O	15:AO:83:GLU:HB3	2.15	0.47
1:AA:1442(B):A:HO2'	1:AA:1443:G:H8	1.59	0.47
4:AD:165:MET:HE3	4:AD:176:LEU:CD2	2.41	0.47
53:BU:59:ARG:O	53:BU:62:ILE:N	2.47	0.47
1:CA:986:A:C6	1:CA:1220:G:N1	2.82	0.47
28:B2:7:ARG:HG3	28:B2:7:ARG:HH11	1.77	0.47
2:AB:134:GLU:C	2:AB:136:VAL:N	2.67	0.47
25:CZ:131:ILE:O	25:CZ:168:VAL:HG13	2.14	0.47
25:CZ:7:ARG:C	25:CZ:8:THR:CG2	2.82	0.47
46:BN:134:ARG:H	46:BN:135:PRO:HD3	1.78	0.47
58:BZ:9:TYR:CE1	58:BZ:35:ARG:NH1	2.73	0.47
41:BF:84:VAL:CG1	41:BF:85:GLY:N	2.65	0.47
36:BA:579:G:H2'	36:BA:580:C:C6	2.49	0.47
14:AN:49:HIS:C	14:AN:51:GLY:H	2.17	0.47
14:AN:4:LYS:O	14:AN:7:ILE:CG1	2.48	0.47
13:CM:96:LEU:CB	13:CM:97:PRO:HD2	2.41	0.47
46:BN:58:ASP:O	46:BN:60:ILE:N	2.43	0.47
48:BP:146:VAL:HG13	48:BP:147:LEU:N	2.29	0.47
36:BA:1802:A:H2'	36:BA:1803:A:C8	2.49	0.47
51:DS:65:VAL:HG12	51:DS:65:VAL:O	2.14	0.47
48:BP:16:ARG:CZ	48:BP:16:ARG:HB2	2.43	0.47
10:CJ:5:ARG:HB2	10:CJ:99:LYS:HB2	1.95	0.47
36:BA:625:G:O2'	36:BA:626:U:H5'	2.14	0.47
40:DE:93:VAL:C	40:DE:95:ILE:N	2.66	0.47
51:DS:24:LEU:O	51:DS:85:VAL:CB	2.61	0.47
24:AY:72:U:C3'	24:AY:73:G:H5"	2.44	0.47
1:AA:546:G:P	4:AD:72:GLU:HB3	2.54	0.47
50:BR:52:ILE:O	50:BR:55:ALA:HB3	2.14	0.47
41:DF:181:LEU:HD23	41:DF:202:PHE:HD2	1.78	0.47
5:CE:11:ILE:HD11	5:CE:33:VAL:CG2	2.44	0.47
27:B1:76:ARG:NH2	27:B1:95:LEU:N	2.62	0.47
38:BC:163:PHE:HB2	38:BC:171:ILE:CD1	2.35	0.47
25:AZ:219:LYS:O	25:AZ:220:PRO:O	2.32	0.47
5:AE:8:GLU:H	5:AE:34:VAL:HG23	1.76	0.47
36:DA:265:A:H4'	36:DA:266:G:O5'	2.14	0.47
4:AD:75:PHE:CZ	4:AD:93:PHE:HZ	2.32	0.47
2:AB:97:TRP:HZ3	2:AB:176:GLU:OE2	1.97	0.47
30:D4:33:VAL:CG1	30:D4:34:GLU:N	2.76	0.47
36:DA:1089:G:H22	36:DA:1102:C:H42	1.62	0.47
36:DA:2121:G:C2	36:DA:2177:C:O2	2.67	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1762:A:H8	36:DA:1762:A:O5'	1.97	0.47
1:CA:975:A:H4'	1:CA:976:G:H5'	1.94	0.47
57:BY:53:PRO:O	57:BY:56:PRO:HD3	2.14	0.47
43:DH:12:PRO:HB2	43:DH:15:VAL:HG11	1.96	0.47
36:BA:2682:U:H6	36:BA:2682:U:H5'	1.79	0.47
4:AD:25:ARG:C	4:AD:27:TYR:N	2.64	0.47
50:DR:45:ARG:CG	50:DR:46:GLY:H	2.20	0.47
19:AS:70:LYS:O	19:AS:71:LEU:C	2.52	0.47
35:B9:7:VAL:CG1	35:B9:25:VAL:CG2	2.91	0.47
35:B9:4:ARG:O	35:B9:36:GLN:HA	2.14	0.47
1:CA:1206:G:C4	1:CA:1207:G:C8	3.02	0.47
31:B5:32:PRO:O	31:B5:34:PRO:HD3	2.14	0.47
1:CA:1364:U:H5'	21:CU:14:TRP:CH2	2.48	0.47
54:BV:61:VAL:HA	54:BV:94:LEU:HD23	1.96	0.47
27:B1:3:LYS:NZ	27:B1:3:LYS:CB	2.77	0.47
39:BD:93:ALA:O	39:BD:104:TYR:HA	2.13	0.47
40:DE:120:TRP:CE3	40:DE:120:TRP:HA	2.49	0.47
5:CE:20:GLN:HE22	5:CE:22:GLY:H	1.61	0.47
36:DA:953:A:OP2	49:DQ:16:ARG:CD	2.61	0.47
17:CQ:74:LEU:HD12	17:CQ:75:ARG:CD	2.44	0.47
36:DA:847:U:OP2	36:DA:928:G:O6	2.32	0.47
39:BD:111:LEU:HD22	39:BD:115:GLN:OE1	2.14	0.47
36:BA:2305:A:H1'	42:BG:136:ARG:CG	2.44	0.47
48:DP:71:VAL:O	48:DP:71:VAL:HG22	2.14	0.47
36:BA:2640:G:OP1	46:BN:97:ARG:NH1	2.41	0.47
43:DH:37:VAL:HG12	43:DH:38:SER:N	2.29	0.47
4:AD:129:ASN:HD21	4:AD:144:ASP:CA	2.26	0.47
1:CA:429:U:H4'	1:CA:430:A:O5'	2.13	0.47
49:BQ:103:MET:CE	49:BQ:127:ILE:HD11	2.43	0.47
36:BA:1668:A:C2	36:BA:1670:C:N3	2.82	0.47
1:AA:658:G:O2'	1:AA:659:U:H5'	2.14	0.47
36:BA:1286:A:H2'	36:BA:1288:U:OP2	2.14	0.47
2:AB:20:GLU:HB2	2:AB:190:THR:HG1	1.79	0.47
1:CA:1402:C:O2	1:CA:1500:A:N1	2.46	0.47
36:DA:428:A:H3'	36:DA:429:A:H8	1.79	0.47
58:BZ:19:ARG:NH1	58:BZ:84:GLU:O	2.45	0.47
36:DA:869:G:C6	36:DA:870:A:N7	2.82	0.47
12:AL:34:ARG:O	12:AL:61:THR:HG23	2.14	0.47
1:CA:814:A:H2'	1:CA:816:A:H5''	1.96	0.47
5:CE:137:GLU:OE1	5:CE:141:GLN:NE2	2.45	0.47
36:DA:907:U:H2'	36:DA:908:C:H5'	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:586:A:H5'	41:DF:89:VAL:HB	1.96	0.47
38:BC:104:LEU:HD13	38:BC:105:ASP:H	1.79	0.47
1:CA:93:G:H2'	1:CA:96:U:O4'	2.13	0.47
36:BA:706:A:H2'	36:BA:707:G:O4'	2.13	0.47
32:D6:30:THR:HG23	32:D6:31:PRO:HD2	1.96	0.47
36:DA:590:A:C4	36:DA:591:C:C5	3.01	0.47
36:DA:661:C:H4'	48:DP:16:ARG:HH12	1.79	0.47
36:DA:815:C:H2'	36:DA:816:C:C6	2.48	0.47
41:BF:167:ALA:HB1	41:BF:173:VAL:CG1	2.44	0.47
52:BT:58:ASN:H	52:BT:58:ASN:HD22	1.61	0.47
1:CA:1331:G:OP1	1:CA:1331:G:H4'	2.13	0.47
39:DD:36:PRO:HA	39:DD:61:LEU:CD1	2.44	0.47
39:DD:99:ASP:OD1	39:DD:99:ASP:C	2.53	0.47
25:CZ:34:VAL:HG11	25:CZ:203:LEU:CD1	2.44	0.47
42:DG:57:ALA:HA	42:DG:90:LEU:HD21	1.96	0.47
42:DG:73:ALA:O	42:DG:85:GLY:HA2	2.14	0.47
42:DG:87:PRO:O	42:DG:88:ILE:CG1	2.62	0.47
28:D2:3:LEU:O	28:D2:6:VAL:N	2.48	0.47
36:DA:2160:G:H8	36:DA:2160:G:C5'	2.26	0.47
12:AL:89:ARG:CZ	12:AL:91:LYS:HD3	2.45	0.47
22:CV:67:C:H2'	22:CV:68:C:H6	1.79	0.47
36:BA:580:C:P	53:BU:33:ARG:HH21	2.38	0.47
13:CM:4:ILE:HD11	13:CM:10:PRO:HD3	1.95	0.47
1:AA:1366:C:H2'	1:AA:1367:C:H6	1.79	0.47
36:DA:2641:G:P	46:DN:74:ARG:HE	2.38	0.47
42:BG:43:LEU:C	42:BG:45:GLU:N	2.67	0.47
48:BP:33:ARG:O	48:BP:34:GLY:O	2.32	0.47
48:BP:106:LEU:O	48:BP:107:LYS:HG2	2.14	0.47
42:BG:102:PHE:C	42:BG:104:GLU:N	2.66	0.47
48:BP:65:ARG:HB3	48:BP:68:GLN:NE2	2.18	0.47
4:AD:59:ARG:HA	4:AD:59:ARG:NE	2.29	0.47
12:CL:120:TYR:C	12:CL:122:THR:HG22	2.33	0.47
41:DF:176:LEU:HG	41:DF:177:ALA:H	1.79	0.47
3:CC:15:THR:HG21	3:CC:181:ASN:HA	1.95	0.47
25:AZ:219:LYS:HB3	25:AZ:244:ARG:HD3	1.96	0.47
22:AW:69:G:N3	22:AW:69:G:H2'	2.28	0.47
48:DP:98:GLU:O	48:DP:102:ARG:NH1	2.47	0.47
39:DD:155:LEU:HD23	39:DD:177:LEU:HD22	1.95	0.47
4:CD:129:ASN:N	4:CD:129:ASN:ND2	2.60	0.47
36:BA:2839:G:H21	50:BR:92:GLY:HA3	1.78	0.47
36:DA:580:C:OP2	53:DU:33:ARG:NH2	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1255:G:H3'	1:CA:1279:A:N6	2.29	0.47
18:CR:56:THR:O	18:CR:58:LEU:HG	2.13	0.47
18:CR:59:SER:N	18:CR:62:GLU:HB2	2.27	0.47
18:CR:70:ILE:HG23	18:CR:79:LEU:CD1	2.43	0.47
22:AV:67:C:H2'	22:AV:68:C:H6	1.79	0.47
22:AV:69:G:H2'	22:AV:70:G:H8	1.78	0.47
1:AA:1050:G:O2'	1:AA:1051:C:P	2.72	0.47
51:BS:25:ARG:HH12	51:BS:40:ILE:HD11	1.79	0.47
47:DO:2:ILE:HD11	47:DO:82:ASN:ND2	2.29	0.47
38:DC:62:VAL:O	38:DC:160:ARG:HA	2.14	0.47
6:AF:77:ARG:CG	6:AF:77:ARG:HH11	2.20	0.47
43:DH:137:ASP:OD2	43:DH:140:LYS:HG3	2.14	0.47
6:CF:55:ASP:C	6:CF:57:GLN:H	2.17	0.47
36:DA:2831:G:O4'	36:DA:2883:A:C2	2.68	0.47
8:AH:39:LEU:HB3	8:AH:45:ILE:CD1	2.44	0.47
28:D2:63:VAL:C	28:D2:65:ASN:N	2.67	0.47
36:DA:848:G:N3	36:DA:933:A:H1'	2.30	0.47
1:CA:1128:C:H1'	1:CA:1146:A:N6	2.28	0.47
36:DA:1652:A:C2	36:DA:2006:C:N3	2.82	0.47
22:AV:19:G:N2	22:AV:57:G:H1'	2.28	0.47
18:AR:36:ASN:ND2	18:AR:39:VAL:HB	2.28	0.47
3:CC:95:THR:HG23	3:CC:97:LYS:HD2	1.96	0.47
36:DA:371:A:N6	36:DA:401:A:H5''	2.28	0.47
36:BA:2199:A:H5'	36:BA:2200:C:OP2	2.14	0.47
55:DW:64:MET:O	55:DW:65:LEU:HB3	2.14	0.47
50:DR:28:LEU:HD12	50:DR:114:VAL:HG23	1.95	0.47
39:BD:3:VAL:H	39:BD:20:ASP:CB	2.27	0.47
22:CV:18:G:N2	22:CV:58:A:C8	2.82	0.47
36:DA:1982:C:C5'	36:DA:1983:C:OP2	2.62	0.47
36:DA:2320:A:C2	36:DA:2333:A:C8	3.02	0.47
36:DA:2619:C:O2'	36:DA:2620:C:H5'	2.13	0.47
37:DB:10:C:O2'	37:DB:11:C:H5'	2.14	0.47
47:DO:4:PRO:O	47:DO:5:GLN:HB2	2.14	0.47
22:CV:61:C:C2'	22:CV:62:C:H5'	2.44	0.47
36:DA:402:A:O2'	36:DA:403:U:H5'	2.15	0.47
16:AP:82:GLN:O	16:AP:83:GLU:HB2	2.14	0.47
39:BD:231:HIS:ND1	39:BD:232:PRO:HD2	2.29	0.47
12:CL:24:VAL:HG13	12:CL:98:TYR:CE1	2.49	0.47
36:BA:1923:U:H2'	36:BA:1924:C:H6	1.79	0.47
1:AA:442:C:H42	1:AA:492:G:H1	1.61	0.47
36:BA:938:G:C2	36:BA:939:G:N7	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1476:G:H2'	1:CA:1477:C:C6	2.49	0.47
36:DA:1487:G:H2'	36:DA:1487:G:N3	2.29	0.47
1:CA:147:G:N3	1:CA:147:G:H2'	2.29	0.47
20:CT:36:LEU:HD13	20:CT:36:LEU:O	2.14	0.47
8:AH:34:GLU:O	8:AH:35:ILE:C	2.52	0.47
36:DA:946:G:H2'	36:DA:947:G:H8	1.79	0.47
29:B3:11:SER:HB2	36:BA:988:A:O5'	2.14	0.47
1:CA:141:A:H2'	1:CA:142:G:O4'	2.14	0.47
25:CZ:234:ARG:CZ	25:CZ:289:LEU:HD22	2.44	0.47
32:D6:9:LEU:HD12	32:D6:26:ASN:HB2	1.96	0.47
34:D8:4:MET:HB3	36:DA:592:G:O2'	2.13	0.47
36:DA:664:C:OP1	48:DP:21:ARG:NH1	2.48	0.47
34:D8:13:ARG:HB3	48:DP:63:PRO:CA	2.45	0.47
47:DO:121:VAL:O	47:DO:122:LEU:HD23	2.14	0.47
27:D1:47:GLN:OE1	36:DA:2091:U:H1'	2.14	0.47
53:BU:92:ARG:O	53:BU:93:LYS:C	2.52	0.47
36:DA:143(A):C:H2'	36:DA:144:C:H6	1.79	0.47
49:BQ:21:THR:CG2	49:BQ:23:GLY:O	2.62	0.47
58:BZ:10:ARG:HH21	58:BZ:36:LYS:CB	2.18	0.47
58:BZ:27:VAL:HG22	58:BZ:28:MET:H	1.80	0.47
57:DY:77:PRO:O	57:DY:78:ALA:CB	2.62	0.47
57:DY:81:LYS:NZ	57:DY:98:VAL:HB	2.28	0.47
36:DA:2160:G:H5'	36:DA:2160:G:C8	2.49	0.47
36:DA:2100:G:N2	36:DA:2189:U:H3	2.09	0.47
3:AC:83:ARG:C	3:AC:85:ARG:N	2.66	0.47
13:AM:25:ILE:HD11	13:AM:60:VAL:CG1	2.44	0.47
1:CA:1053:G:O2'	1:CA:1054:C:P	2.71	0.47
34:B8:61:LEU:N	34:B8:63:PRO:HD2	2.29	0.47
3:CC:85:ARG:N	3:CC:85:ARG:CD	2.77	0.47
36:BA:856:C:OP2	36:BA:856:C:H6	1.96	0.47
36:BA:1022:G:N2	36:BA:1142(A):A:C2	2.82	0.47
46:BN:22:THR:O	46:BN:25:ARG:HB2	2.15	0.47
46:BN:67:LEU:O	46:BN:68:GLU:HB2	2.14	0.47
26:D0:31:VAL:CG1	26:D0:67:VAL:HG23	2.44	0.47
1:AA:1097:C:C2'	1:AA:1098:C:H5'	2.45	0.47
4:CD:10:ARG:NH1	4:CD:10:ARG:HG2	2.30	0.47
37:DB:106:G:H5''	58:DZ:31:ARG:HB3	1.97	0.47
41:BF:206:ILE:CG2	41:BF:207:GLY:H	2.11	0.47
12:AL:75:HIS:HA	12:AL:102:ARG:NH2	2.30	0.47
37:DB:60:C:O2'	37:DB:61:G:H5'	2.14	0.47
55:BW:10:VAL:O	55:BW:11:ARG:C	2.52	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DF:133:ASN:N	41:DF:133:ASN:HD22	2.11	0.47
36:BA:622:G:O2'	36:BA:623:G:H5'	2.13	0.47
6:CF:17:SER:O	6:CF:18:GLN:HG3	2.14	0.47
46:DN:23:LEU:HB3	46:DN:60:ILE:CG2	2.45	0.47
27:B1:78:LYS:HG3	27:B1:79:GLY:H	1.79	0.47
39:DD:134:ARG:NH1	39:DD:188:GLU:OE2	2.47	0.47
42:BG:111:LEU:HD22	42:BG:117:PHE:CE2	2.49	0.47
30:B4:6:HIS:CB	30:B4:7:PRO:CD	2.92	0.47
15:AO:9:GLN:O	15:AO:10:LYS:C	2.53	0.47
46:BN:6:PRO:HB3	46:BN:41:ASP:OD1	2.13	0.47
2:CB:17:PHE:CD2	2:CB:44:LEU:HD11	2.49	0.47
46:BN:45:ASN:HD22	46:BN:45:ASN:H	1.63	0.47
38:DC:175:VAL:HG11	38:DC:189:ILE:CG1	2.45	0.47
50:BR:51:LEU:HD23	50:BR:70:LEU:HD11	1.95	0.47
34:B8:51:ALA:N	34:B8:53:PRO:HD2	2.29	0.47
40:BE:34:VAL:CG1	40:BE:48:GLN:HE21	2.27	0.47
54:BV:58:VAL:HB	54:BV:98:GLU:H	1.79	0.47
36:BA:1657:C:H2'	36:BA:1658:C:C6	2.50	0.47
39:DD:131:LEU:CD1	39:DD:131:LEU:N	2.77	0.47
36:BA:2649:U:O2'	36:BA:2650:U:H5'	2.14	0.47
36:BA:999:U:O2'	36:BA:1000:A:H5'	2.14	0.47
43:DH:74:ASN:CB	43:DH:138:LYS:HD3	2.43	0.47
39:BD:136:ILE:HB	39:BD:165:ILE:HD11	1.95	0.47
1:CA:1215:G:C2'	1:CA:1216:G:H5'	2.44	0.47
7:CG:134:ALA:O	7:CG:137:LYS:HB2	2.14	0.47
51:DS:73:LEU:C	51:DS:73:LEU:HD23	2.34	0.47
36:DA:185:U:C2	36:DA:212:G:N2	2.82	0.47
1:AA:474:G:H2'	1:AA:475:G:C8	2.50	0.47
1:AA:476:G:H2'	1:AA:477:A:C8	2.49	0.47
46:DN:108:PRO:O	46:DN:109:LYS:HE2	2.14	0.47
41:DF:171:PRO:C	41:DF:173:VAL:H	2.17	0.47
17:CQ:40:LYS:HD3	17:CQ:42:TYR:CZ	2.49	0.47
17:AQ:83:ASP:CG	17:AQ:84:LEU:N	2.67	0.47
1:AA:707:C:H2'	1:AA:708:C:H6	1.78	0.47
22:AV:51:U:H2'	22:AV:52:G:H8	1.79	0.47
1:CA:390:C:H2'	1:CA:391:G:C8	2.49	0.47
36:DA:2864:G:H2'	36:DA:2865:U:O4'	2.14	0.47
21:AU:12:LYS:HG2	21:AU:22:ARG:CB	2.44	0.47
52:DT:129:ARG:HG3	52:DT:129:ARG:O	2.13	0.47
37:BB:80:U:O2'	37:BB:81:G:H5"	2.13	0.47
17:CQ:11:VAL:O	17:CQ:11:VAL:HG23	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AN:29:ARG:CG	14:AN:29:ARG:NH1	2.77	0.47
1:AA:636:U:C5'	17:AQ:2:PRO:HG3	2.44	0.47
1:AA:77:G:H5''	1:AA:78:G:C8	2.49	0.47
36:DA:2366:A:H2'	36:DA:2367:G:H5'	1.96	0.47
17:CQ:47:PRO:HG2	17:CQ:48:GLU:H	1.78	0.47
40:DE:183:LEU:N	40:DE:183:LEU:HD12	2.29	0.47
1:CA:92:C:H2'	1:CA:93:G:H8	1.79	0.47
36:BA:39:C:H2'	36:BA:40:C:C6	2.49	0.47
41:DF:4:VAL:HG11	41:DF:17:ARG:HE	1.79	0.47
36:DA:39:C:O2'	36:DA:40:C:H5'	2.14	0.47
47:BO:11:ALA:HB1	47:BO:99:PHE:H	1.79	0.47
48:DP:6:LEU:H	48:DP:6:LEU:HD23	1.79	0.47
53:DU:46:ALA:O	53:DU:47:TYR:C	2.52	0.47
38:DC:100:ILE:HG12	38:DC:127:LEU:CD1	2.21	0.47
38:DC:100:ILE:O	38:DC:100:ILE:HG22	2.14	0.47
2:CB:22:LYS:NZ	2:CB:40:HIS:HE1	2.12	0.47
1:AA:302:G:O3'	12:AL:17:LYS:HE3	2.13	0.47
36:DA:84:A:H5''	57:DY:9:LYS:HD2	1.95	0.47
28:B2:57:ILE:HA	28:B2:60:LEU:HB3	1.97	0.47
28:B2:62:THR:O	28:B2:65:ASN:N	2.46	0.47
10:CJ:38:ILE:HG13	10:CJ:71:LEU:HB3	1.96	0.47
25:AZ:116:THR:O	25:AZ:120:ILE:HG13	2.13	0.47
39:BD:30:GLU:HG3	39:BD:63:ARG:HE	1.79	0.47
38:BC:82:LYS:HD3	38:BC:147:PHE:O	2.15	0.47
43:BH:65:HIS:CE1	43:BH:69:ARG:HH11	2.31	0.47
25:CZ:195:TRP:HA	25:CZ:195:TRP:HE3	1.80	0.47
43:DH:52:VAL:HG21	43:DH:69:ARG:CG	2.44	0.47
2:AB:165:VAL:O	2:AB:167:PRO:HD3	2.15	0.47
57:DY:86:ARG:HH22	57:DY:95:LYS:NZ	2.12	0.47
53:DU:108:GLU:OE1	53:DU:112:ARG:HD3	2.14	0.47
9:AI:112:LYS:HD3	9:AI:112:LYS:C	2.34	0.47
36:BA:768:G:H2'	36:BA:769:G:H8	1.79	0.47
48:DP:39:LYS:HD3	48:DP:40:SER:N	2.29	0.47
36:DA:271(K):U:H3'	36:DA:271(L):U:C5'	2.43	0.47
36:BA:2631:G:N2	40:BE:61:ARG:NH1	2.61	0.47
37:DB:29:A:O2'	37:DB:58:A:N1	2.46	0.47
37:DB:29:A:OP2	51:DS:32:LEU:HD12	2.14	0.47
48:BP:56:SER:O	48:BP:58:THR:N	2.47	0.47
1:AA:1227:A:OP2	13:AM:111:LYS:HE2	2.14	0.47
36:DA:1018:C:H2'	36:DA:1019:U:C6	2.40	0.47
46:DN:66:LYS:C	46:DN:67:LEU:HD12	2.34	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:538:G:O2'	1:CA:539:A:H5'	2.14	0.47
41:DF:178:PRO:O	41:DF:180:GLY:N	2.46	0.47
36:DA:637:A:C6	36:DA:652:C:H4'	2.49	0.47
1:CA:547:A:OP2	4:CD:2:GLY:HA2	2.15	0.47
53:BU:9:VAL:HG12	53:BU:13:LYS:CE	2.41	0.47
30:B4:16:CYS:HA	30:B4:33:VAL:HG12	1.97	0.47
41:DF:187:VAL:HG12	48:DP:7:ARG:HA	1.97	0.47
36:DA:2178:C:H2'	36:DA:2179:C:O5'	2.14	0.47
36:DA:1210:A:C8	36:DA:1210:A:H5'	2.49	0.47
40:BE:167:VAL:HG22	40:BE:170:LEU:HD11	1.95	0.47
1:AA:1321:C:C3'	1:AA:1322:C:H5''	2.42	0.47
13:CM:37:THR:O	13:CM:39:ILE:N	2.48	0.47
22:AW:44:G:N3	22:AW:44:G:C2'	2.77	0.47
43:DH:139:GLN:HE21	43:DH:140:LYS:HA	1.79	0.47
4:AD:3:ARG:HD3	4:AD:5:ILE:HG13	1.94	0.47
39:BD:131:LEU:HB2	39:BD:136:ILE:HD11	1.96	0.47
52:DT:106:SER:HA	52:DT:110:ILE:HG12	1.95	0.47
4:CD:109:GLY:HA3	4:CD:165:MET:SD	2.54	0.47
1:AA:877:C:O2'	1:AA:878:G:H5'	2.14	0.47
36:BA:618:C:H2'	36:BA:619:G:O4'	2.13	0.47
16:AP:20:VAL:HG21	16:AP:32:TYR:CD2	2.48	0.47
1:AA:322:C:O2'	20:AT:23:ARG:HB2	2.14	0.47
43:DH:158:HIS:HE1	43:DH:169:VAL:CG1	2.27	0.47
36:BA:2767:C:C2	36:BA:2768:C:C5	3.03	0.47
8:AH:1:MET:HE2	8:AH:2:LEU:N	2.24	0.47
26:B0:7:LEU:HD13	49:BQ:85:LYS:HG3	1.96	0.47
36:DA:860:U:O2'	36:DA:861:A:H5'	2.14	0.47
40:BE:30:PRO:HD3	40:BE:180:ASN:ND2	2.28	0.47
36:DA:823:G:H2'	36:DA:824:A:C8	2.49	0.47
56:BX:57:LEU:HD13	56:BX:78:LYS:O	2.14	0.47
13:AM:115:LYS:N	13:AM:115:LYS:HD3	2.30	0.47
1:AA:278:G:OP2	17:AQ:41:LYS:NZ	2.42	0.47
36:BA:1788:C:C2'	36:BA:1789:A:H5'	2.45	0.47
36:DA:2659:G:C3'	36:DA:2660:A:H5''	2.44	0.47
56:DX:41:ASN:N	56:DX:41:ASN:ND2	2.61	0.47
36:BA:2040:C:H2'	36:BA:2041:U:O4'	2.14	0.47
36:BA:962:G:O2'	36:BA:963:U:H5'	2.14	0.47
36:BA:2028:U:O4	36:BA:2033:A:OP1	2.33	0.47
36:BA:438:G:H2'	36:BA:440:G:C8	2.50	0.47
46:DN:111:PRO:HA	46:DN:114:ARG:NH1	2.29	0.47
36:BA:652:C:O2'	36:BA:653:A:O5'	2.31	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:414:A:H2'	1:CA:415:A:O4'	2.13	0.47
1:CA:474:G:H2'	1:CA:475:G:H8	1.80	0.47
5:CE:39:GLY:HA2	5:CE:69:VAL:CG2	2.45	0.47
1:CA:421:U:C5	3:CC:127:ARG:NH1	2.83	0.47
39:DD:55:GLY:C	39:DD:56:GLY:O	2.51	0.47
1:CA:1354:C:H2'	1:CA:1355:G:H8	1.79	0.47
58:BZ:104:PHE:CE2	58:BZ:119:GLU:HB3	2.49	0.47
36:DA:1094:U:H2'	36:DA:1096:A:OP2	2.15	0.47
25:AZ:194:GLU:OE1	25:AZ:194:GLU:HA	2.15	0.47
36:BA:1619:G:H8	36:BA:1619:G:O5'	1.96	0.47
36:DA:308:G:N2	36:DA:477:A:C8	2.83	0.47
38:DC:82:LYS:HD3	38:DC:147:PHE:O	2.14	0.47
32:B6:12:GLU:HA	32:B6:23:THR:CA	2.44	0.47
53:BU:61:TRP:O	53:BU:65:ILE:CD1	2.62	0.47
53:BU:88:ILE:O	53:BU:90:VAL:N	2.37	0.47
36:BA:997:G:OP1	53:BU:93:LYS:HD3	2.14	0.47
1:CA:1320:C:OP1	19:CS:70:LYS:NZ	2.44	0.47
56:BX:12:VAL:HG12	56:BX:27:THR:O	2.15	0.47
36:DA:1858:G:O2'	36:DA:1884:A:N6	2.47	0.47
25:CZ:290:LEU:HB2	25:CZ:293:VAL:HG21	1.95	0.47
38:BC:78:ALA:O	38:BC:79:LYS:HB2	2.15	0.47
25:CZ:146:LEU:O	25:CZ:149:LEU:N	2.41	0.47
42:DG:77:ILE:C	42:DG:79:ASN:H	2.17	0.47
42:DG:73:ALA:CB	42:DG:87:PRO:HG3	2.42	0.47
25:CZ:246:LYS:HB2	25:CZ:280:GLY:O	2.14	0.47
37:BB:40:U:C2	37:BB:43:C:H5''	2.49	0.47
1:CA:1096:C:O2'	1:CA:1097:C:H5'	2.14	0.47
3:AC:70:VAL:O	3:AC:105:GLU:HA	2.14	0.47
10:CJ:61:GLU:OE1	14:CN:45:ARG:HD2	2.14	0.47
34:B8:8:LYS:O	34:B8:12:LYS:HG3	2.13	0.47
34:B8:56:GLU:O	34:B8:59:LYS:N	2.37	0.47
42:BG:73:ALA:H	42:BG:87:PRO:HD2	1.77	0.47
42:BG:87:PRO:O	42:BG:88:ILE:HD13	2.14	0.47
35:D9:9:ARG:O	35:D9:11:CYS:N	2.47	0.47
35:D9:12:ASP:C	35:D9:14:CYS:H	2.18	0.47
26:D0:25:ARG:HD2	26:D0:29:GLN:NE2	2.29	0.47
1:CA:544:G:C6	1:CA:545:C:C4	3.02	0.47
39:BD:67:PHE:CE2	39:BD:157:ARG:NH2	2.82	0.47
58:DZ:103:ARG:HD3	58:DZ:138:GLU:HG3	1.96	0.47
37:BB:22:U:H2'	37:BB:23:G:C8	2.47	0.47
48:BP:23:PRO:HB2	48:BP:33:ARG:CG	2.42	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:23:PRO:HD2	48:BP:33:ARG:HH21	1.79	0.47
48:BP:85:LEU:HD22	48:BP:115:LEU:O	2.14	0.47
48:BP:95:VAL:HG23	48:BP:125:VAL:CA	2.38	0.47
36:DA:1109:C:C2'	36:DA:1110:G:H5'	2.45	0.47
31:B5:44:THR:HG21	50:BR:101:ALA:CA	2.45	0.47
36:DA:1142(A):A:H4'	46:DN:25:ARG:HH22	1.79	0.47
10:AJ:78:ASN:HD22	10:AJ:81:THR:CG2	2.27	0.47
4:AD:12:CYS:HA	4:AD:19:LEU:HB2	1.95	0.47
53:BU:9:VAL:O	53:BU:13:LYS:HE2	2.14	0.47
25:AZ:267:VAL:HG13	25:AZ:267:VAL:O	2.12	0.47
36:DA:221:A:N6	36:DA:265:A:H8	2.12	0.47
13:CM:82:MET:HG3	13:CM:83:ASP:H	1.74	0.47
16:AP:74:LEU:HB3	16:AP:79:VAL:HG21	1.97	0.47
43:BH:158:HIS:CE1	43:BH:169:VAL:O	2.67	0.47
58:BZ:116:VAL:O	58:BZ:174:VAL:HG23	2.15	0.47
58:DZ:77:ASP:O	58:DZ:78:LYS:CB	2.62	0.47
36:BA:747:U:C4	36:BA:2613:U:C5	3.02	0.47
4:CD:158:ILE:O	4:CD:162:LEU:HB2	2.15	0.47
40:DE:132:HIS:ND1	40:DE:132:HIS:O	2.46	0.47
22:CW:44:G:C2'	22:CW:45:U:OP1	2.63	0.47
1:AA:1318:A:O3'	19:AS:10:PHE:CD2	2.67	0.47
57:DY:53:PRO:O	57:DY:56:PRO:HD3	2.14	0.47
51:DS:89:ARG:HE	51:DS:91:PRO:HG2	1.79	0.47
1:CA:950:U:H2'	1:CA:951:G:H8	1.78	0.47
39:BD:131:LEU:N	39:BD:131:LEU:CD1	2.73	0.47
1:AA:1039:C:H2'	1:AA:1040:U:C6	2.50	0.47
36:DA:896:A:N6	58:DZ:113:ALA:O	2.47	0.47
28:D2:59:ARG:O	28:D2:63:VAL:HG23	2.13	0.47
1:AA:445:G:H2'	1:AA:446:G:C8	2.49	0.47
1:CA:629:G:C3'	1:CA:630:G:H5''	2.44	0.47
36:DA:2106:G:O2'	36:DA:2107:C:H5'	2.15	0.47
36:DA:94(A):G:C2'	36:DA:95:G:H5''	2.42	0.47
36:DA:389:G:H22	48:DP:72:PRO:CG	2.28	0.47
35:B9:19:ARG:O	35:B9:20:HIS:HB2	2.15	0.47
22:CW:57:G:O2'	22:CW:58:A:H5'	2.14	0.47
22:AV:52:G:C6	22:AV:63:G:C6	3.03	0.47
50:DR:54:LEU:O	50:DR:62:ALA:HB1	2.14	0.47
32:B6:42:TRP:CH2	36:BA:643:A:N7	2.83	0.47
36:DA:2854:G:C2	36:DA:2855:C:C2	3.02	0.47
2:CB:178:ARG:NH1	8:CH:71:GLY:O	2.45	0.47
27:D1:75:GLU:OE1	27:D1:75:GLU:HA	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BX:29:TRP:HZ3	56:BX:59:VAL:HG21	1.79	0.47
41:DF:64:ILE:CD1	41:DF:65:TRP:CZ2	2.98	0.47
1:CA:1488:G:H2'	1:CA:1489:G:C8	2.50	0.47
37:DB:87:G:C2'	37:DB:88:C:H5''	2.44	0.47
44:DJ:97:UNK:CB	44:DJ:132:UNK:HA	2.45	0.47
36:BA:2602:A:H4'	36:BA:2603:G:C5'	2.45	0.47
36:DA:2624:G:C2'	36:DA:2625:G:H5'	2.45	0.47
36:BA:2358:G:O2'	36:BA:2359:C:H5'	2.15	0.47
42:DG:96:ARG:O	42:DG:97:ASP:C	2.52	0.47
36:DA:1573:G:C2'	36:DA:1574:C:H5'	2.44	0.47
55:BW:12:ILE:HD12	55:BW:42:ARG:HG2	1.97	0.47
36:BA:271(P):C:C2'	36:BA:271(Q):G:H5'	2.45	0.47
28:D2:64:LEU:O	28:D2:64:LEU:HD23	2.14	0.47
12:CL:24:VAL:HG12	12:CL:24:VAL:O	2.13	0.47
36:BA:718:A:H2'	36:BA:719:C:O4'	2.14	0.47
26:B0:20:ARG:HD3	36:BA:2356:C:O3'	2.14	0.47
36:DA:2692:C:O2'	36:DA:2693:A:H5'	2.14	0.47
19:CS:27:GLU:O	19:CS:28:LYS:O	2.32	0.47
50:DR:17:ARG:O	50:DR:20:LEU:N	2.46	0.47
36:DA:2295:C:O2'	36:DA:2296:U:H5'	2.14	0.47
36:BA:2535:G:O2'	36:BA:2536:G:H5'	2.14	0.47
36:BA:199:A:H61	36:BA:2433:A:H2'	1.79	0.47
36:BA:158:U:H3'	36:BA:158:U:O2	2.15	0.47
36:BA:1265:A:OP1	36:BA:1265:A:H8	1.98	0.47
1:AA:252:U:C4	1:AA:253:U:O4	2.67	0.47
1:AA:1529:G:H4'	1:AA:1530:G:OP2	2.15	0.47
36:DA:1777:U:O2'	36:DA:1778:U:H5'	2.15	0.47
25:AZ:356:PRO:HD3	25:AZ:370:PHE:CB	2.45	0.47
1:CA:55:A:C6	1:CA:56:U:C2	3.02	0.47
25:CZ:65:THR:HG22	25:CZ:67:HIS:CD2	2.50	0.47
32:B6:23:THR:O	32:B6:24:GLU:CD	2.53	0.47
32:B6:8:LYS:HA	32:B6:8:LYS:HD2	1.65	0.47
36:DA:2392:A:H1'	48:DP:60:MET:HB3	1.97	0.47
48:DP:57:THR:OG1	48:DP:58:THR:N	2.47	0.47
36:DA:83:G:HO2'	36:DA:84:A:H8	1.59	0.47
53:BU:92:ARG:CG	53:BU:94:ASN:HB3	2.45	0.47
28:B2:51:ARG:HH21	36:BA:94(A):G:N2	2.11	0.47
25:AZ:181:GLN:OE1	25:AZ:195:TRP:CB	2.60	0.47
39:DD:70:TRP:CZ3	39:DD:150:LYS:HA	2.44	0.47
57:BY:67:LEU:HD21	57:BY:71:LYS:NZ	2.29	0.47
49:BQ:138:ASP:HB3	58:BZ:53:ILE:CD1	2.43	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:89:ARG:HG3	12:AL:91:LYS:HZ1	1.78	0.47
13:AM:15:VAL:HA	13:AM:18:ALA:CB	2.44	0.47
36:BA:2476:A:C2'	36:BA:2477:C:H5'	2.44	0.47
1:AA:1151:A:O4'	10:AJ:39:PRO:HB2	2.15	0.47
3:AC:52:LEU:CG	3:AC:52:LEU:O	2.59	0.47
42:DG:101:ILE:O	42:DG:105:LYS:HG2	2.14	0.47
41:DF:3:GLU:CA	41:DF:24:LEU:HG	2.44	0.47
32:D6:36:LEU:CD2	32:D6:36:LEU:C	2.83	0.47
36:DA:93:G:H2'	36:DA:94:C:C6	2.49	0.47
36:BA:1722:A:H2	36:BA:1740:G:H2'	1.79	0.47
37:DB:104:U:O2'	37:DB:105:A:H5'	2.15	0.47
36:BA:2445:G:P	41:BF:74:ARG:HH22	2.36	0.47
51:DS:86:ALA:HA	51:DS:106:ARG:HD3	1.97	0.47
16:CP:26:ARG:NH1	16:CP:26:ARG:CG	2.72	0.47
22:CV:59:U:O2'	22:CV:60:U:C6	2.43	0.47
13:CM:83:ASP:CG	13:CM:84:ILE:N	2.67	0.47
36:DA:1060:U:H1'	36:DA:1061:U:C5'	2.43	0.47
18:CR:29:PHE:HE2	18:CR:43:PHE:CZ	2.30	0.47
38:BC:53:ARG:HB3	38:BC:53:ARG:NH1	2.21	0.47
1:CA:322:C:O2'	20:CT:23:ARG:HB2	2.14	0.47
25:AZ:222:LEU:HA	25:AZ:304:LEU:O	2.14	0.47
52:BT:6:LEU:HD23	52:BT:9:LEU:HD12	1.97	0.47
36:DA:2137:C:C4	36:DA:2155:G:N1	2.83	0.47
36:DA:2771:C:H2'	36:DA:2772:C:C6	2.49	0.47
36:DA:2839:G:H2'	36:DA:2840:C:C6	2.50	0.47
41:DF:154:VAL:HA	41:DF:191:ARG:O	2.14	0.47
36:DA:2127:G:C5	36:DA:2162:G:C2	3.02	0.47
9:CI:48:GLU:HG3	9:CI:101:PHE:CZ	2.50	0.47
9:CI:48:GLU:N	9:CI:49:PRO:CD	2.76	0.47
42:BG:11:TYR:OH	42:BG:33:ARG:HA	2.14	0.47
40:BE:98:PRO:HG3	40:BE:174:ASP:HA	1.96	0.47
36:DA:108:U:H2'	36:DA:109:G:C8	2.47	0.47
37:BB:65:C:H41	37:BB:109:C:H2'	1.80	0.47
51:DS:97:ARG:HG3	51:DS:97:ARG:H	1.41	0.47
40:BE:23:VAL:CG1	40:BE:173:VAL:HG21	2.45	0.47
36:BA:1267:U:C5	36:BA:2012:G:N2	2.82	0.47
2:CB:178:ARG:NH1	2:CB:178:ARG:HG3	2.28	0.47
36:BA:852:G:H2'	36:BA:853:G:C8	2.46	0.47
1:AA:458:C:H2'	1:AA:460:G:C8	2.47	0.47
36:BA:201:C:H2'	36:BA:202:U:H5'	1.97	0.47
36:BA:948:G:C6	36:BA:949:C:C4	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2050:C:O2	40:DE:156:MET:HE1	2.13	0.47
31:B5:11:THR:HG23	36:BA:1264:G:H5'	1.96	0.47
36:DA:1473:G:H2'	36:DA:1474:C:O4'	2.14	0.47
1:CA:45:U:H2'	1:CA:46:G:H8	1.77	0.47
36:DA:1908:C:O5'	36:DA:1908:C:H6	1.97	0.47
36:DA:1750:G:H2'	36:DA:1751:C:C6	2.49	0.47
1:CA:156:G:O2'	1:CA:157:G:H5'	2.15	0.47
14:AN:19:ARG:O	14:AN:20:ALA:C	2.53	0.47
7:AG:50:ILE:HD12	7:AG:125:MET:HG3	1.97	0.47
1:CA:933:G:C2	1:CA:935:A:O4'	2.68	0.47
36:BA:2764:A:H2'	36:BA:2766:G:C8	2.49	0.47
9:CI:13:ALA:HA	9:CI:67:GLY:O	2.14	0.47
45:BK:123:UNK:O	45:BK:125:UNK:N	2.47	0.47
1:AA:642:A:H2'	1:AA:643:C:C6	2.50	0.47
43:DH:18:GLU:HB2	43:DH:25:LYS:HB2	1.96	0.47
1:CA:1069:C:H2'	1:CA:1070:U:O5'	2.14	0.47
36:DA:898:C:H2'	36:DA:899:A:O4'	2.14	0.47
1:AA:1120:G:O2'	1:AA:1121:U:H5'	2.14	0.47
43:BH:80:SER:O	43:BH:81:GLU:HB2	2.14	0.47
36:DA:2857:G:N2	36:DA:2859:G:H3'	2.28	0.47
25:CZ:317:GLU:O	25:CZ:401:THR:HB	2.15	0.47
36:BA:669:G:N3	36:BA:669:G:H2'	2.28	0.47
22:CV:39:U:O2'	22:CV:40:C:H5'	2.15	0.47
36:BA:1225:G:C5	36:BA:1226:A:C6	3.03	0.47
38:DC:116:THR:O	38:DC:118:ASP:N	2.36	0.47
25:CZ:248:LYS:O	25:CZ:249:VAL:C	2.53	0.47
25:CZ:26:THR:O	25:CZ:29:ALA:HB3	2.15	0.47
25:CZ:70:TYR:O	25:CZ:70:TYR:CD1	2.67	0.47
25:CZ:24:LYS:HB2	60:CZ:501:GDP:O3B	2.14	0.47
36:DA:2397:G:N2	36:DA:2420:C:H1'	2.30	0.47
36:DA:833:U:OP1	48:DP:48:PRO:HB3	2.15	0.47
32:D6:15:GLU:O	32:D6:16:CYS:HB3	2.14	0.47
32:D6:15:GLU:OE2	32:D6:41:PRO:CG	2.63	0.47
57:DY:27:VAL:HG12	57:DY:29:GLU:H	1.77	0.47
4:AD:163:GLU:C	4:AD:165:MET:H	2.17	0.47
19:CS:10:PHE:CZ	19:CS:70:LYS:CE	2.97	0.47
56:BX:24:GLY:H	56:BX:82:GLN:HE22	1.63	0.47
28:B2:49:LYS:O	28:B2:53:LEU:CB	2.61	0.47
58:BZ:151:HIS:HB2	58:BZ:169:GLU:O	2.14	0.47
1:CA:1149:C:H2'	1:CA:1150:U:C2	2.39	0.47
25:AZ:154:VAL:O	25:AZ:157:LEU:N	2.37	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BC:123:VAL:HG13	38:BC:124:GLY:N	2.29	0.47
43:BH:66:GLY:HA2	43:BH:69:ARG:CD	2.43	0.47
36:DA:1568:G:H5'	39:DD:61:LEU:HD23	1.96	0.47
25:CZ:177:LEU:HD13	25:CZ:195:TRP:CD2	2.50	0.47
25:CZ:17:ILE:HG13	25:CZ:104:LEU:HD12	1.97	0.47
57:BY:9:LYS:CG	57:BY:10:GLY:N	2.77	0.47
57:BY:27:VAL:CG1	57:BY:29:GLU:OE1	2.59	0.47
52:BT:106:SER:O	52:BT:107:ASP:HB3	2.15	0.47
52:BT:96:ARG:HH11	52:BT:96:ARG:HB2	1.73	0.47
28:D2:28:LYS:O	28:D2:53:LEU:HD21	2.15	0.47
57:DY:7:VAL:CB	57:DY:8:LYS:HD2	2.44	0.47
57:DY:87:LYS:HG3	57:DY:88:LYS:N	2.24	0.47
36:BA:1504:C:O2'	36:BA:1505:C:H5'	2.14	0.47
25:AZ:242:ILE:HB	25:AZ:282:ALA:HA	1.95	0.47
56:DX:27:THR:HG22	56:DX:80:ILE:CB	2.38	0.47
13:AM:65:LYS:HD3	13:AM:65:LYS:N	2.29	0.47
34:B8:4:MET:O	34:B8:62:LEU:HD12	2.15	0.47
1:AA:1127:G:H1'	1:AA:1147:C:N4	2.30	0.47
3:CC:70:VAL:HG12	3:CC:72:LYS:N	2.30	0.47
3:CC:73:PRO:HD3	3:CC:105:GLU:HB2	1.95	0.47
56:DX:49:VAL:HG12	56:DX:87:GLN:HB3	1.97	0.47
56:DX:49:VAL:HG12	56:DX:87:GLN:HE21	1.80	0.47
53:DU:61:TRP:C	53:DU:65:ILE:HD13	2.35	0.47
41:DF:22:ALA:HB1	41:DF:26:ALA:HB2	1.96	0.47
36:BA:2151:G:H2'	36:BA:2152:G:H8	1.80	0.47
1:CA:958:A:C6	1:CA:959:A:N1	2.83	0.47
43:DH:152:ARG:O	43:DH:153:LYS:C	2.53	0.47
43:DH:149:ARG:N	43:DH:162:ILE:HD11	2.29	0.47
48:DP:146:VAL:CG2	48:DP:147:LEU:N	2.73	0.47
1:AA:1017:G:O2'	1:AA:1018:C:H5'	2.15	0.47
50:BR:2:ARG:HG2	50:BR:5:LYS:NZ	2.30	0.47
41:DF:84:VAL:C	41:DF:86:GLY:N	2.68	0.47
37:BB:31:C:H4'	42:BG:29:TRP:CH2	2.50	0.47
10:AJ:4:ILE:O	10:AJ:74:ILE:HG12	2.15	0.47
41:DF:160:ASN:HD21	41:DF:162:LEU:CD1	2.27	0.47
41:DF:6:VAL:O	41:DF:125:LEU:HD21	2.14	0.47
14:CN:8:GLU:O	14:CN:10:ALA:N	2.48	0.47
11:CK:84:VAL:HG12	11:CK:109:VAL:O	2.15	0.47
7:CG:117:ALA:O	7:CG:119:ARG:N	2.48	0.47
1:CA:267:C:H2'	1:CA:268:C:H6	1.79	0.47
36:DA:1516:C:H2'	36:DA:1517:G:H5'	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AS:62:ILE:HG13	19:AS:62:ILE:O	2.15	0.47
5:CE:147:ASP:HA	5:CE:150:ARG:HH12	1.78	0.47
48:BP:58:THR:HB	48:BP:61:ARG:HH21	1.79	0.47
5:CE:10:MET:HB3	5:CE:32:VAL:HG22	1.97	0.47
36:BA:2576:G:H4'	36:BA:2579:C:H5	1.80	0.47
27:B1:78:LYS:HE2	27:B1:78:LYS:HB3	1.77	0.47
25:AZ:251:ASP:H	25:AZ:267:VAL:HG12	1.78	0.47
36:BA:1536:C:C2'	36:BA:1537:G:H4'	2.35	0.47
42:BG:117:PHE:CZ	42:BG:120:LEU:HG	2.48	0.47
13:AM:83:ASP:CG	13:AM:84:ILE:N	2.68	0.47
22:AW:70:G:C4	22:AW:71:G:N7	2.83	0.47
58:BZ:108:PRO:O	58:BZ:110:GLY:N	2.47	0.47
50:BR:117:VAL:HG22	50:BR:118:GLU:N	2.30	0.47
43:BH:159:GLU:CG	43:BH:160:LYS:N	2.77	0.47
39:DD:8:PRO:C	39:DD:10:THR:H	2.17	0.47
19:AS:23:ASN:O	19:AS:26:GLY:N	2.47	0.47
19:AS:19:VAL:HG11	19:AS:44:MET:CG	2.38	0.47
1:CA:1282:C:C2'	1:CA:1283:G:H5'	2.44	0.47
18:CR:50:ILE:CD1	18:CR:74:ARG:NH2	2.78	0.47
36:DA:1071:G:N2	36:DA:1091:G:N7	2.63	0.47
5:CE:51:VAL:HB	5:CE:52:PRO:CD	2.39	0.47
24:AY:7:G:H3'	24:AY:8:4SU:C5'	2.45	0.47
36:DA:1361:G:H2'	36:DA:1362:C:H6	1.79	0.47
51:DS:20:ARG:HH11	51:DS:20:ARG:HG2	1.80	0.47
36:BA:2127:G:H4'	38:BC:37:PHE:CD1	2.49	0.47
29:D3:45:GLY:O	29:D3:47:VAL:N	2.48	0.47
1:CA:924:C:H4'	1:CA:1399:C:OP2	2.15	0.47
36:BA:2743:C:O2	36:BA:2762:G:C2	2.67	0.47
1:CA:858:G:C8	1:CA:858:G:OP2	2.67	0.47
25:AZ:363:MET:HB3	25:AZ:364:PRO:HD2	1.97	0.47
34:D8:14:VAL:HG13	34:D8:14:VAL:O	2.13	0.47
25:CZ:356:PRO:CD	25:CZ:370:PHE:HA	2.44	0.47
48:BP:7:ARG:CB	48:BP:8:PRO:HD3	2.41	0.47
39:DD:200:ASP:O	39:DD:203:ASN:HB2	2.15	0.47
54:BV:18:LEU:HD22	54:BV:18:LEU:N	2.29	0.47
6:AF:77:ARG:NH1	6:AF:77:ARG:HG2	2.27	0.47
36:DA:1039:G:H1	36:DA:1116:C:N4	2.13	0.47
1:CA:1217:C:O2'	1:CA:1218:C:H5'	2.15	0.47
1:CA:445:G:H2'	1:CA:446:G:H8	1.79	0.47
1:CA:443:C:H2'	1:CA:444:C:H6	1.80	0.47
36:DA:2807:G:H2'	36:DA:2808:U:H5''	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:85:HIS:CE1	36:DA:2662:A:H5'	2.49	0.47
29:B3:31:LEU:HD13	36:BA:1157:G:O2'	2.15	0.47
36:BA:2224:G:H4'	36:BA:2226:C:C2	2.50	0.47
20:AT:84:LEU:O	20:AT:86:ARG:N	2.48	0.47
39:BD:64:ILE:CG1	39:BD:64:ILE:O	2.62	0.47
1:AA:878:G:H5'	8:AH:89:PRO:HG2	1.95	0.47
8:CH:86:ILE:HG21	8:CH:133:LEU:HD23	1.96	0.47
3:AC:53:ALA:HB2	3:AC:115:LEU:CG	2.42	0.47
36:BA:1472:A:C2'	36:BA:1473:G:H5'	2.45	0.47
36:BA:848:G:N9	36:BA:933:A:H8	2.13	0.47
53:BU:29:SER:HB2	53:BU:30:LYS:HZ3	1.77	0.47
22:CW:18:G:N2	22:CW:57:G:N7	2.63	0.47
13:AM:73:GLU:O	13:AM:76:ALA:HB3	2.15	0.47
36:DA:1683:C:C2	36:DA:1684:C:C5	3.02	0.47
36:BA:1070:A:H2'	36:BA:1097:U:OP1	2.14	0.47
1:AA:503:C:H2'	1:AA:504:C:C6	2.44	0.47
1:AA:961:U:O2'	1:AA:962:C:P	2.72	0.47
37:DB:96:U:C2	37:DB:97:G:N7	2.83	0.47
37:DB:95:C:H2'	37:DB:96:U:O4'	2.15	0.47
49:BQ:68:ILE:HG13	49:BQ:68:ILE:O	2.14	0.47
4:CD:127:THR:N	4:CD:147:ALA:O	2.47	0.47
53:BU:82:GLY:C	53:BU:84:LYS:N	2.67	0.47
36:DA:2030:A:H4'	36:DA:2031:A:C8	2.48	0.47
36:DA:2031:A:C6	36:DA:2498:C:H1'	2.50	0.47
37:DB:7:G:H4'	51:DS:29:PHE:CD2	2.50	0.47
36:BA:2264:C:H2'	36:BA:2265:U:C6	2.47	0.47
11:CK:115:PRO:C	11:CK:117:ASN:H	2.18	0.47
30:B4:42:PHE:O	30:B4:43:TYR:O	2.32	0.47
36:BA:2050:C:H1'	40:BE:156:MET:HE2	1.94	0.47
36:BA:2009:G:C2'	36:BA:2010:G:H5'	2.44	0.47
7:CG:22:LEU:HD22	7:CG:62:PHE:HE2	1.80	0.47
1:AA:1134:G:C2'	1:AA:1135:U:H5'	2.45	0.47
36:DA:2728:U:H2'	36:DA:2729:G:H8	1.79	0.47
36:BA:2405:G:HO2'	36:BA:2406:U:P	2.37	0.47
26:D0:41:ARG:HH21	36:DA:2387:U:H1'	1.79	0.47
44:DJ:69:UNK:C	44:DJ:71:UNK:N	2.77	0.47
36:DA:1750:G:O2'	36:DA:1751:C:H5'	2.15	0.47
3:AC:60:ALA:HB2	10:AJ:92:THR:O	2.14	0.47
37:BB:117:G:H2'	37:BB:118:G:O4'	2.15	0.47
46:BN:90:MET:HE2	46:BN:90:MET:HA	1.97	0.47
36:BA:205:G:O2'	36:BA:206:U:OP2	2.33	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:78:HIS:HE1	5:AE:143:ARG:H	1.63	0.47
17:CQ:45:HIS:HB2	17:CQ:65:ILE:CD1	2.45	0.47
36:DA:447:A:H4'	36:DA:449:A:N7	2.30	0.47
36:DA:64:A:H2'	36:DA:65:C:O4'	2.15	0.47
36:DA:2170:A:H5''	38:DC:134:ARG:HD2	1.97	0.47
37:DB:53:A:H2'	37:DB:54:G:H5'	1.97	0.47
22:CV:61:C:H2'	22:CV:62:C:H5'	1.97	0.47
36:DA:843:G:C2'	36:DA:844:C:H5'	2.44	0.47
1:AA:1396:A:O4'	1:AA:1398:A:H1'	2.15	0.47
1:AA:943:U:H2'	1:AA:944:G:H5'	1.96	0.47
36:DA:1081:U:H2'	36:DA:1082:U:C2	2.49	0.47
36:BA:1751:C:H2'	36:BA:1752:C:H6	1.80	0.47
36:BA:1751:C:H2'	36:BA:1752:C:C6	2.50	0.47
1:CA:560:U:H5'	1:CA:566:G:N2	2.30	0.47
4:CD:182:LYS:O	4:CD:183:GLY:O	2.33	0.47
42:BG:182:LYS:HD2	42:BG:182:LYS:N	2.29	0.47
22:CW:13:C:O2	22:CW:13:C:H2'	2.15	0.47
36:BA:121:G:H4'	36:BA:149:A:H5'	1.96	0.47
49:DQ:136:ALA:C	49:DQ:138:ASP:H	2.17	0.47
1:AA:514:C:O2'	1:AA:515:G:H5'	2.14	0.47
10:CJ:85:LEU:O	10:CJ:87:THR:N	2.47	0.47
28:D2:58:ALA:CB	36:DA:76:C:H4'	2.44	0.47
13:CM:59:TYR:O	13:CM:63:THR:OG1	2.32	0.47
36:DA:1237:A:H1'	36:DA:1238:G:H1'	1.97	0.47
29:D3:10:LYS:HD3	29:D3:53:LEU:HD23	1.97	0.47
36:DA:1642:G:O2'	36:DA:1643:G:H5'	2.15	0.47
9:CI:111:ARG:O	9:CI:113:LYS:HD2	2.15	0.47
49:DQ:109:VAL:HG12	49:DQ:110:THR:N	2.28	0.47
37:DB:35:U:H2'	37:DB:36:C:C6	2.49	0.47
2:CB:75:LYS:HD3	2:CB:75:LYS:C	2.35	0.47
38:DC:28:LEU:O	38:DC:28:LEU:HD23	2.14	0.47
48:DP:58:THR:C	48:DP:60:MET:H	2.18	0.47
32:B6:20:ASN:O	32:B6:21:TYR:CG	2.67	0.47
53:BU:91:ASP:O	53:BU:92:ARG:O	2.33	0.47
36:BA:94(A):G:H2'	36:BA:95:G:O4'	2.14	0.47
39:DD:35:LYS:HE3	39:DD:63:ARG:NH2	2.30	0.47
57:BY:2:ARG:CD	57:BY:3:VAL:HG23	2.40	0.47
26:D0:53:MET:CG	26:D0:57:PHE:HA	2.45	0.47
36:BA:2715:C:H2'	36:BA:2716:U:C6	2.47	0.47
52:BT:32:TYR:HD1	52:BT:32:TYR:N	2.10	0.47
49:BQ:25:ASP:OD1	49:BQ:26:TYR:HD1	1.98	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1054:C:C6	1:CA:1196:U:N1	2.83	0.47
3:AC:6:HIS:CG	14:AN:49:HIS:HB3	2.49	0.47
13:CM:5:ALA:HB2	13:CM:66:LEU:HD22	1.96	0.47
12:AL:93:LEU:HD12	12:AL:96:VAL:HG21	1.96	0.47
41:DF:24:LEU:O	41:DF:26:ALA:N	2.48	0.47
9:CI:4:TYR:H	9:CI:4:TYR:HD1	1.61	0.47
36:BA:1005:C:C2	36:BA:1006:C:C5	3.03	0.47
1:AA:1097:C:O2	1:AA:1169:A:H2	1.98	0.47
3:CC:29:TYR:OH	14:CN:54:PRO:O	2.28	0.47
41:BF:157:VAL:HG11	41:BF:181:LEU:HD13	1.96	0.47
36:BA:1245:G:OP1	48:BP:16:ARG:NE	2.48	0.47
36:BA:1188:U:C2'	36:BA:1189:A:H5'	2.43	0.47
48:BP:132:LYS:O	48:BP:134:ALA:N	2.48	0.47
5:CE:76:ILE:HG12	5:CE:77:PRO:N	2.30	0.47
19:AS:45:VAL:O	19:AS:47:HIS:N	2.48	0.47
50:DR:4:LEU:CD2	50:DR:4:LEU:O	2.52	0.47
3:CC:107:GLN:CD	3:CC:108:ASN:H	2.17	0.47
19:AS:5:LEU:HD12	19:AS:6:LYS:N	2.17	0.47
19:CS:4:SER:C	19:CS:5:LEU:O	2.53	0.47
2:CB:74:LYS:HB3	2:CB:74:LYS:NZ	2.30	0.47
58:DZ:17:ALA:CA	58:DZ:20:ARG:HG2	2.45	0.47
19:AS:16:LEU:O	19:AS:18:LYS:N	2.48	0.47
49:DQ:54:MET:O	49:DQ:55:VAL:C	2.52	0.47
30:D4:35:VAL:CG1	30:D4:36:CYS:N	2.77	0.47
36:DA:1837:C:O2'	36:DA:1927:A:N3	2.41	0.47
2:CB:51:LEU:HD21	2:CB:55:PHE:CZ	2.50	0.47
1:AA:32:A:C6	1:AA:33:A:C6	3.02	0.47
12:AL:27:LEU:C	12:AL:29:GLY:N	2.64	0.47
51:BS:98:VAL:O	51:BS:99:LYS:C	2.53	0.47
36:DA:1385:G:H4'	36:DA:1386:C:OP1	2.14	0.47
36:BA:1287:A:OP1	50:BR:105:ARG:O	2.33	0.47
40:BE:49:LEU:HD11	40:BE:91:VAL:HG21	1.95	0.47
51:BS:88:ASP:CG	51:BS:89:ARG:H	2.08	0.47
36:DA:1038:C:H3'	36:DA:1039:G:H5''	1.97	0.47
48:DP:80:TYR:CD1	48:DP:111:ARG:HB2	2.49	0.47
42:BG:16:ARG:CZ	42:BG:31:VAL:HG11	2.45	0.47
41:DF:170:LEU:HB2	41:DF:173:VAL:HB	1.96	0.47
36:BA:1655:A:H4'	40:BE:115:GLY:N	2.29	0.47
1:AA:674:G:OP1	6:AF:87:ARG:NH2	2.47	0.47
10:CJ:90:LEU:N	10:CJ:91:PRO:HD3	2.29	0.47
4:CD:102:ASP:CG	4:CD:136:PRO:HB3	2.35	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DH:68:THR:C	43:DH:70:THR:H	2.18	0.47
13:AM:119:GLY:O	13:AM:120:LYS:HG2	2.14	0.47
4:CD:133:VAL:HG12	4:CD:135:LEU:H	1.78	0.47
1:CA:503:C:H2'	1:CA:504:C:C6	2.45	0.47
36:BA:1038:C:H3'	36:BA:1039:G:C5'	2.45	0.47
36:DA:675:A:OP1	41:DF:63:LYS:HE2	2.14	0.47
55:DW:63:ASP:C	55:DW:64:MET:HG3	2.36	0.47
53:BU:40:PHE:O	53:BU:44:ASN:HB2	2.15	0.47
1:CA:1030(D):A:C2'	1:CA:1031:G:H5'	2.44	0.47
1:AA:1377:A:OP2	7:AG:94:ARG:HD2	2.15	0.47
36:BA:1907:G:H2'	36:BA:1908:C:C6	2.50	0.47
19:AS:25:LYS:C	19:AS:27:GLU:OE1	2.53	0.47
11:CK:69:ALA:O	11:CK:72:ALA:HB3	2.14	0.47
36:DA:981:A:C8	36:DA:982:C:C5	3.02	0.47
39:BD:8:PRO:HB3	39:BD:14:ARG:HB2	1.95	0.47
36:DA:817:C:H4'	36:DA:932:G:C5	2.49	0.47
47:BO:105:GLU:HA	47:BO:108:GLU:HG2	1.95	0.47
1:AA:822:C:O2'	1:AA:823:G:H5'	2.15	0.47
36:BA:321:G:O2'	36:BA:340:A:N3	2.46	0.47
36:DA:2457:U:H2'	36:DA:2458:G:H5'	1.96	0.47
24:AY:18:G:O2'	24:AY:57:G:N2	2.36	0.47
43:BH:137:ASP:OD2	43:BH:140:LYS:HE3	2.14	0.47
36:DA:2694:G:O2'	36:DA:2695:C:H5'	2.15	0.47
36:DA:1973:G:H2'	36:DA:1974:C:C6	2.50	0.47
36:BA:385:C:O2'	36:BA:388:G:N2	2.47	0.47
36:BA:1579:A:H2'	36:BA:1580:A:O4'	2.14	0.47
6:AF:36:ARG:NH1	6:AF:66:GLU:OE2	2.47	0.47
36:BA:681:G:C6	36:BA:682:G:C5	3.03	0.47
47:BO:26:LYS:CD	47:BO:37:ASP:OD1	2.63	0.47
36:DA:1619:G:H8	36:DA:1619:G:O5'	1.98	0.47
54:DV:89:GLN:OE1	54:DV:89:GLN:HA	2.15	0.47
43:BH:147:ASN:N	43:BH:147:ASN:HD22	2.10	0.47
29:B3:50:VAL:O	29:B3:52:HIS:N	2.48	0.47
36:BA:1987:G:H5'	36:BA:1988:C:OP2	2.15	0.47
4:CD:188:LEU:HD23	4:CD:189:PRO:O	2.14	0.47
34:D8:4:MET:O	34:D8:62:LEU:CD1	2.63	0.47
48:DP:34:GLY:O	48:DP:35:HIS:CB	2.63	0.47
36:DA:1190:G:H5'	48:DP:35:HIS:CA	2.45	0.47
47:DO:104:ARG:HB3	47:DO:121:VAL:CG1	2.45	0.47
52:BT:57:PHE:HE1	52:BT:79:HIS:HD1	1.63	0.47
25:AZ:193:ASN:HB3	25:AZ:196:VAL:HB	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:77:ALA:HB2	39:BD:97:TYR:CE1	2.50	0.47
3:CC:5:ILE:CD1	3:CC:5:ILE:N	2.74	0.47
25:CZ:133:VAL:CG1	25:CZ:134:PHE:N	2.77	0.47
42:DG:125:PHE:HB3	42:DG:131:TYR:CA	2.29	0.47
42:DG:42:GLY:CA	42:DG:90:LEU:H	2.28	0.47
2:CB:105:PHE:HE1	2:CB:152:PHE:CZ	2.32	0.47
25:AZ:215:ARG:HB3	25:AZ:282:ALA:HB3	1.96	0.47
35:D9:19:ARG:O	35:D9:21:GLY:N	2.45	0.47
36:BA:2110:G:N1	36:BA:2178:C:H5	2.13	0.47
1:CA:958:A:H8	1:CA:958:A:O5'	1.98	0.47
1:CA:1226:C:H2'	13:CM:103:THR:CB	2.45	0.47
36:BA:1021:A:H2'	36:BA:1023:U:H5''	1.96	0.47
41:BF:202:PHE:O	41:BF:206:ILE:HG12	2.14	0.47
36:DA:2810:A:H2'	36:DA:2811:G:O4'	2.15	0.47
36:BA:2334:G:C4	51:BS:15:ARG:NH2	2.77	0.47
48:BP:98:GLU:O	48:BP:102:ARG:NH1	2.48	0.47
48:BP:125:VAL:O	48:BP:145:PRO:CD	2.57	0.47
25:CZ:345:ARG:NH1	25:CZ:384:LEU:CD2	2.74	0.47
48:BP:58:THR:O	48:BP:58:THR:HG22	2.15	0.47
41:DF:107:LYS:C	41:DF:109:GLY:N	2.68	0.47
41:DF:205:ARG:O	41:DF:206:ILE:HD13	2.14	0.47
10:AJ:75:ILE:HG13	10:AJ:76:ASN:N	2.30	0.47
29:B3:22:ALA:CA	29:B3:46:ASN:HD21	2.28	0.47
5:AE:6:PHE:HD2	5:AE:63:ARG:NH1	2.13	0.47
4:AD:92:VAL:HG12	4:AD:93:PHE:N	2.28	0.47
1:CA:573:A:N3	1:CA:883:C:O2'	2.44	0.47
58:DZ:37:VAL:HG23	58:DZ:38:TYR:H	1.75	0.47
1:AA:63:C:H2'	1:AA:64:G:C5'	2.39	0.47
49:DQ:52:VAL:HA	49:DQ:55:VAL:HG12	1.96	0.47
1:CA:1259:C:C4	1:CA:1260:C:O2	2.68	0.47
36:BA:2754:U:H2'	36:BA:2756:U:OP1	2.14	0.47
36:DA:2178:C:O5'	36:DA:2178:C:O2	2.33	0.47
1:CA:558:G:H2'	1:CA:559:A:C2	2.49	0.47
40:BE:93:VAL:C	40:BE:95:ILE:N	2.61	0.47
52:BT:10:VAL:O	52:BT:11:GLU:C	2.52	0.47
1:AA:408:A:C4	1:AA:409:G:C8	3.03	0.47
50:DR:24:GLN:HB2	50:DR:44:LEU:CD2	2.45	0.47
25:CZ:325:LYS:HZ2	25:CZ:331:HIS:HB2	1.80	0.47
1:CA:858:G:H5''	1:CA:858:G:H8	1.80	0.47
36:BA:1499:C:O2'	36:BA:1500:G:H5'	2.15	0.47
26:B0:38:VAL:H	26:B0:59:LEU:HB2	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1005:A:H2'	1:AA:1006:C:H5'	1.96	0.47
1:AA:1004:A:H5''	1:AA:1025:U:N3	2.30	0.47
29:D3:46:ASN:HA	36:DA:851:U:H4'	1.96	0.47
9:CI:48:GLU:HG3	9:CI:101:PHE:HZ	1.79	0.47
10:AJ:8:LEU:HG	10:AJ:96:ILE:HG22	1.96	0.47
17:AQ:59:ILE:CD1	17:AQ:73:VAL:HA	2.42	0.47
38:DC:130:ILE:C	38:DC:133:PRO:HD2	2.35	0.47
43:BH:95:ARG:HB2	43:BH:106:THR:OG1	2.15	0.47
1:CA:1498:U:H4'	1:CA:1519:A:C2	2.49	0.47
55:BW:86:LEU:HB3	55:BW:94:ASP:CB	2.44	0.47
13:AM:70:LEU:CD2	13:AM:70:LEU:C	2.84	0.47
36:DA:1359:A:C2'	36:DA:1360:A:H5'	2.43	0.47
1:AA:691:G:O2'	1:AA:797:C:H4'	2.15	0.47
7:CG:58:PRO:O	7:CG:60:LYS:N	2.47	0.47
36:DA:692:C:C2	36:DA:771:G:C2	3.03	0.47
36:BA:1790:C:H4'	39:BD:209:ALA:HB1	1.96	0.47
36:BA:2695:C:H2'	36:BA:2696:U:H6	1.80	0.47
12:AL:47:LYS:O	12:AL:49:ASN:N	2.47	0.47
36:BA:178:G:C6	36:BA:179:G:N7	2.83	0.47
1:AA:658:G:H2'	1:AA:659:U:H6	1.79	0.47
36:DA:315:G:C5	36:DA:316:C:C4	3.02	0.47
36:DA:2875:C:H4'	52:DT:5:ALA:HB2	1.97	0.47
36:DA:2508:G:O3'	36:DA:2555:U:H5'	2.15	0.47
11:CK:108:ILE:O	18:CR:87:ARG:CA	2.63	0.47
55:DW:22:ASP:HA	55:DW:25:ARG:NH1	2.29	0.47
5:AE:120:THR:HG23	5:AE:121:LYS:N	2.29	0.47
36:BA:151:C:H2'	36:BA:152:G:H8	1.78	0.47
1:AA:538:G:OP2	12:AL:115:LYS:HB2	2.15	0.47
36:BA:2466:C:O2'	36:BA:2467:C:H5'	2.15	0.47
36:DA:2472:G:H2'	36:DA:2475:C:H42	1.80	0.47
1:AA:167:G:O2'	1:AA:168:G:H5'	2.15	0.47
1:AA:1009:G:O2'	1:AA:1010:G:H5'	2.15	0.47
36:BA:74:A:H4'	36:BA:75:G:O5'	2.15	0.47
40:DE:183:LEU:N	40:DE:183:LEU:CD1	2.78	0.47
1:CA:277:C:OP2	17:CQ:41:LYS:NZ	2.46	0.47
36:BA:937:U:C2	36:BA:938:G:C8	3.02	0.47
31:B5:8:LYS:O	36:BA:2017:U:H4'	2.15	0.47
36:BA:318:C:H2'	36:BA:319:C:H6	1.80	0.47
36:DA:1820:U:C2	39:DD:202:LYS:HD2	2.50	0.47
2:AB:194:PRO:HB2	2:AB:200:ILE:HD13	1.97	0.47
36:DA:2698:U:H2'	36:DA:2699:C:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:DU:17:ILE:HG23	53:DU:39:LEU:HD12	1.97	0.47
8:AH:16:ALA:HB1	8:AH:21:LYS:HB3	1.96	0.47
36:DA:2801:A:O2'	36:DA:2895:U:H5'	2.14	0.47
4:CD:187:ARG:HG2	4:CD:188:LEU:O	2.15	0.47
32:B6:33:LYS:HA	32:B6:33:LYS:HE2	1.96	0.47
36:DA:2388:A:H5'	36:DA:2389:G:OP2	2.15	0.47
48:DP:31:ALA:C	48:DP:33:ARG:H	2.18	0.47
36:DA:1664:A:C6	36:DA:1665:A:C6	3.03	0.47
31:D5:50:GLY:C	31:D5:56:LYS:HE3	2.35	0.47
2:CB:157:ARG:O	2:CB:158:LEU:C	2.50	0.47
25:AZ:155:ARG:NH2	25:AZ:170:VAL:CG2	2.78	0.47
25:AZ:35:ALA:O	25:AZ:39:ASN:OD1	2.33	0.47
39:BD:30:GLU:CB	39:BD:35:LYS:NZ	2.78	0.47
56:DX:7:VAL:HB	56:DX:8:ILE:HD12	1.96	0.47
57:BY:42:VAL:CG2	57:BY:67:LEU:HD12	2.44	0.47
52:BT:80:SER:HB3	52:BT:81:PRO:CD	2.36	0.47
28:D2:45:SER:O	28:D2:46:GLN:NE2	2.48	0.47
49:BQ:140:ALA:O	49:BQ:141:GLN:CB	2.62	0.47
3:CC:16:ARG:NH2	3:CC:183:ASP:HA	2.28	0.47
3:CC:18:TRP:HE3	3:CC:18:TRP:N	2.13	0.47
1:AA:1126:U:C2'	1:AA:1127:G:O5'	2.62	0.47
1:AA:1144:G:H21	1:AA:1146:A:H62	1.63	0.47
13:CM:9:ILE:O	13:CM:10:PRO:C	2.52	0.47
12:AL:57:LYS:HB2	12:AL:57:LYS:NZ	2.30	0.47
53:DU:92:ARG:C	53:DU:94:ASN:N	2.67	0.47
1:AA:1367:C:OP1	10:AJ:57:LYS:NZ	2.47	0.47
1:AA:453:A:C2	1:AA:454:C:C2	3.03	0.47
12:CL:89:ARG:HG2	12:CL:91:LYS:NZ	2.29	0.47
10:AJ:97:GLU:O	10:AJ:98:ILE:HB	2.15	0.47
55:DW:17:VAL:O	55:DW:19:LEU:N	2.48	0.47
1:CA:1048:G:P	14:CN:4:LYS:HB2	2.54	0.47
48:BP:100:LEU:HD13	48:BP:100:LEU:C	2.36	0.47
40:DE:51:PHE:O	40:DE:74:PRO:HB2	2.15	0.47
19:CS:19:VAL:O	19:CS:23:ASN:N	2.42	0.47
1:CA:261:U:O2	1:CA:263:A:C8	2.68	0.47
6:CF:18:GLN:CA	6:CF:21:LEU:HB2	2.36	0.47
46:BN:34:LEU:O	46:BN:34:LEU:HD13	2.14	0.47
50:BR:74:LYS:NZ	50:BR:77:ARG:HH21	2.13	0.47
57:BY:88:LYS:O	57:BY:89:PHE:HB2	2.15	0.47
12:CL:43:VAL:CG2	12:CL:93:LEU:HD22	2.44	0.47
36:BA:184:C:H2'	36:BA:185:U:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:9:CYS:HA	4:AD:12:CYS:SG	2.55	0.47
48:DP:100:LEU:HD13	48:DP:100:LEU:O	2.15	0.47
1:AA:368:U:OP1	25:AZ:291:ARG:NH1	2.48	0.47
16:AP:28:ARG:NH1	16:AP:29:ASP:OD1	2.46	0.47
7:CG:69:VAL:HG13	7:CG:100:ALA:HA	1.96	0.47
30:B4:14:ILE:N	30:B4:14:ILE:CD1	2.78	0.47
36:BA:2657:A:C2'	36:BA:2658:C:H5'	2.37	0.47
58:DZ:10:ARG:NE	58:DZ:36:LYS:HB2	2.30	0.47
58:DZ:10:ARG:NH2	58:DZ:26:GLY:N	2.63	0.47
18:CR:29:PHE:CD1	18:CR:29:PHE:N	2.67	0.47
41:DF:37:VAL:HG11	48:DP:7:ARG:NH1	2.30	0.47
41:DF:184:TYR:HE1	48:DP:7:ARG:CZ	2.28	0.47
53:BU:52:ARG:O	53:BU:56:ASP:OD1	2.33	0.47
1:AA:966:G:C2	22:AV:34:G:H5'	2.50	0.47
18:CR:74:ARG:HB3	18:CR:81:PHE:CE1	2.50	0.47
1:CA:323:U:O3'	20:CT:22:ARG:CD	2.63	0.47
36:BA:2673:G:H5'	36:BA:2673:G:C8	2.47	0.47
1:AA:192:U:H2'	1:AA:193:C:C6	2.35	0.47
25:CZ:126:VAL:CG1	25:CZ:126:VAL:O	2.63	0.47
36:DA:2756:U:C6	36:DA:2757:A:N7	2.83	0.47
52:BT:8:LYS:O	52:BT:10:VAL:N	2.47	0.47
29:D3:45:GLY:HA2	29:D3:48:GLU:HG2	1.97	0.47
22:CW:43:C:H2'	22:CW:44:G:C1'	2.44	0.47
54:BV:58:VAL:CB	54:BV:98:GLU:HG2	2.45	0.47
35:B9:7:VAL:O	35:B9:8:LYS:HE3	2.15	0.47
22:AV:26:A:N1	22:AV:44:G:O6	2.48	0.47
57:DY:56:PRO:O	57:DY:57:GLN:O	2.32	0.47
36:BA:1771:C:O2'	36:BA:1786:A:H8	1.98	0.47
51:DS:92:TYR:C	51:DS:94:TYR:N	2.68	0.47
1:CA:952:U:H2'	1:CA:953:G:H8	1.80	0.47
39:BD:146:GLU:HG2	39:BD:152:GLY:C	2.35	0.47
36:DA:212:G:C2'	36:DA:213:A:H5'	2.45	0.47
47:DO:47:ILE:O	47:DO:48:PRO:O	2.33	0.47
1:CA:611:A:H2	1:CA:629:G:H22	1.62	0.47
38:BC:74:VAL:HG12	38:BC:75:LEU:N	2.29	0.47
1:AA:80:G:C2'	1:AA:81:U:H5'	2.45	0.47
36:DA:2406:U:C2	48:DP:72:PRO:HB2	2.50	0.47
47:BO:98:VAL:HG12	47:BO:117:LEU:HB3	1.96	0.47
16:CP:43:LYS:HD2	16:CP:43:LYS:N	2.30	0.47
15:AO:31:LEU:CD1	15:AO:31:LEU:H	2.25	0.47
7:CG:58:PRO:C	7:CG:60:LYS:N	2.68	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BX:56:THR:O	56:BX:57:LEU:HB3	2.15	0.47
1:AA:1228:C:H2'	1:AA:1229:A:C8	2.47	0.47
36:DA:692:C:N3	36:DA:771:G:C2	2.83	0.47
39:BD:186:HIS:CD2	39:BD:188:GLU:HB2	2.50	0.47
7:AG:91:VAL:CG2	7:AG:95:ARG:HB3	2.45	0.47
36:BA:554:U:C4	36:BA:555:U:C4	3.03	0.47
50:BR:7:GLY:O	50:BR:8:ARG:NE	2.48	0.47
36:BA:2836:U:O5'	36:BA:2836:U:H6	1.97	0.47
47:DO:68:GLU:H	47:DO:68:GLU:CD	2.17	0.47
36:BA:2358:G:H2'	36:BA:2359:C:C6	2.50	0.47
36:BA:440:G:N2	41:BF:46:ARG:NH2	2.63	0.47
27:D1:37:ILE:CD1	27:D1:37:ILE:O	2.63	0.47
1:AA:155:C:O2'	1:AA:156:G:H5'	2.15	0.47
36:BA:1196:C:H2'	36:BA:1197:G:H8	1.80	0.47
58:DZ:128:VAL:CG2	58:DZ:129:SER:N	2.77	0.47
9:AI:43:ALA:O	9:AI:45:ALA:N	2.48	0.47
40:DE:152:LYS:HG2	46:DN:78:TYR:CZ	2.50	0.47
36:BA:271(H):G:H1	36:BA:271(P):C:N4	2.13	0.47
44:BJ:11:UNK:O	44:BJ:14:UNK:N	2.48	0.47
36:DA:907:U:C2'	36:DA:908:C:H5'	2.45	0.47
36:BA:1923:U:H2'	36:BA:1924:C:C6	2.50	0.47
36:DA:2437:U:O2'	36:DA:2438:U:H5'	2.15	0.47
36:BA:2001:A:H4'	36:BA:2689:U:H2'	1.97	0.47
36:DA:1756:G:H4'	36:DA:1758:G:O4'	2.15	0.47
25:AZ:318:ALA:HB1	25:AZ:399:VAL:O	2.15	0.47
25:AZ:320:VAL:HG22	25:AZ:398:GLY:HA3	1.97	0.47
1:AA:592:G:H2'	1:AA:593:G:H8	1.79	0.47
33:D7:21:ARG:HG2	33:D7:21:ARG:HH11	1.78	0.47
36:BA:2720:U:H2'	36:BA:2720:U:O2	2.15	0.47
1:CA:1503:A:O2'	1:CA:1504:G:P	2.73	0.47
36:DA:1599:C:H2'	36:DA:1600:C:C6	2.50	0.47
48:DP:18:ARG:O	48:DP:19:VAL:C	2.54	0.46
32:D6:15:GLU:CG	32:D6:18:ARG:NH1	2.74	0.46
57:DY:27:VAL:C	57:DY:28:LYS:HG3	2.35	0.46
31:D5:54:GLY:O	31:D5:59:GLU:OE2	2.33	0.46
1:AA:1095:U:P	1:AA:1108:G:H1	2.38	0.46
25:CZ:292:GLY:O	25:CZ:293:VAL:HG13	2.15	0.46
25:AZ:147:LEU:H	25:AZ:147:LEU:CD2	2.28	0.46
36:DA:780:G:H2'	36:DA:782:A:N7	2.30	0.46
36:DA:2310:A:H4'	36:DA:2310:A:OP1	2.15	0.46
42:DG:42:GLY:H	42:DG:90:LEU:H	1.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DG:46:ALA:HB2	42:DG:88:ILE:HB	1.97	0.46
28:D2:2:LYS:HE3	28:D2:52:ASP:OD2	2.14	0.46
36:DA:335:C:O2'	57:DY:73:ARG:NH2	2.48	0.46
12:AL:89:ARG:CG	12:AL:91:LYS:HZ1	2.28	0.46
1:CA:1107:C:C4	1:CA:1108:G:C8	3.03	0.46
10:CJ:62:HIS:O	14:CN:59:ALA:HB3	2.15	0.46
54:BV:51:VAL:HG12	54:BV:52:VAL:N	2.30	0.46
28:D2:51:ARG:NH1	28:D2:55:ARG:HH12	2.07	0.46
54:DV:52:VAL:HG13	54:DV:55:ALA:HB3	1.98	0.46
35:D9:26:ILE:HG23	35:D9:27:CYS:N	2.30	0.46
35:D9:9:ARG:HH11	35:D9:9:ARG:CB	2.28	0.46
4:CD:19:LEU:O	4:CD:26:CYS:SG	2.73	0.46
39:DD:145:VAL:HG12	39:DD:146:GLU:O	2.14	0.46
36:BA:1740:G:H4'	36:BA:1741:A:OP1	2.14	0.46
50:DR:87:TYR:HE1	50:DR:117:VAL:CG1	2.28	0.46
48:BP:31:ALA:C	48:BP:33:ARG:N	2.69	0.46
36:DA:1301:A:HO2'	36:DA:1302:A:C2'	2.27	0.46
1:CA:263:A:O2'	1:CA:264:U:H5'	2.16	0.46
4:AD:65:ARG:NH1	4:AD:72:GLU:H	2.12	0.46
31:B5:41:PRO:O	31:B5:44:THR:HB	2.14	0.46
1:AA:428:G:H5''	4:AD:10:ARG:HD2	1.97	0.46
36:BA:760:G:H2'	36:BA:761:A:C5'	2.38	0.46
3:CC:65:ALA:O	3:CC:66:VAL:HB	2.15	0.46
50:DR:84:ALA:HB3	50:DR:85:PRO:CD	2.36	0.46
6:CF:10:LEU:HD11	6:CF:61:LEU:HD11	1.97	0.46
9:CI:69:GLY:O	9:CI:73:GLN:HG3	2.15	0.46
36:DA:2010:G:H2'	36:DA:2011:U:H6	1.80	0.46
36:BA:146:G:C6	36:BA:147:U:C2	3.04	0.46
36:BA:1287:A:OP1	50:BR:104:ARG:HG2	2.15	0.46
47:DO:66:LYS:H	47:DO:82:ASN:HD21	1.63	0.46
1:AA:505:G:H5'	1:AA:534:U:H2'	1.96	0.46
36:DA:2746:U:H5'	43:DH:139:GLN:HA	1.96	0.46
1:CA:1432:G:OP2	52:DT:108:ARG:CZ	2.63	0.46
36:DA:185:U:H2'	36:DA:186:G:C8	2.50	0.46
58:DZ:140:ASP:O	58:DZ:141:VAL:HG22	2.15	0.46
36:DA:2583:G:H2'	36:DA:2584:U:O2	2.14	0.46
31:D5:43:HIS:HE1	36:DA:2884:U:OP2	1.97	0.46
42:BG:31:VAL:HG13	42:BG:31:VAL:O	2.15	0.46
38:BC:10:LEU:H	38:BC:10:LEU:HD22	1.80	0.46
1:CA:80:G:N2	1:CA:90:U:H5'	2.29	0.46
47:DO:19:ILE:HB	47:DO:41:ALA:HB1	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1472:A:H2'	36:BA:1473:G:H5'	1.97	0.46
36:BA:2305:A:C3'	36:BA:2306:C:H5''	2.44	0.46
36:DA:389:G:H22	48:DP:72:PRO:HG2	1.80	0.46
38:DC:128:GLY:C	38:DC:130:ILE:H	2.18	0.46
26:B0:7:LEU:HD21	49:BQ:81:VAL:HG22	1.96	0.46
36:DA:1164:G:H1	36:DA:1185:C:H42	1.63	0.46
26:D0:62:LEU:H	26:D0:62:LEU:HD23	1.80	0.46
36:BA:2050:C:H2'	36:BA:2051:A:O4'	2.16	0.46
31:B5:6:VAL:HG22	31:B5:7:PRO:CD	2.44	0.46
36:DA:515:A:C8	36:DA:516:C:C5	3.03	0.46
10:AJ:92:THR:HG23	10:AJ:93:GLY:N	2.29	0.46
24:CY:28:C:O2'	24:CY:29:G:H5'	2.15	0.46
36:DA:150:C:O2'	36:DA:151:C:H5'	2.14	0.46
1:AA:1426:C:H2'	1:AA:1427:U:C6	2.49	0.46
36:BA:734:A:O2'	36:BA:1635:G:H5'	2.15	0.46
7:AG:47:CYS:SG	7:AG:58:PRO:HB2	2.55	0.46
1:AA:279:A:C8	17:AQ:98:LEU:HD23	2.50	0.46
36:DA:34:C:H41	36:DA:447:A:H61	1.62	0.46
36:BA:1448:G:N2	36:BA:1528(A):A:H2	2.13	0.46
36:BA:2733:A:H2'	36:BA:2734:A:C8	2.50	0.46
49:DQ:136:ALA:O	49:DQ:138:ASP:N	2.48	0.46
20:CT:96:GLY:O	20:CT:97:ALA:HB3	2.15	0.46
36:DA:2085:C:OP1	39:DD:261:LYS:HE2	2.15	0.46
30:D4:40:HIS:CD2	30:D4:41:PRO:HA	2.49	0.46
36:BA:2824:C:H2'	36:BA:2825:C:O4'	2.15	0.46
36:BA:2688:U:H3'	36:BA:2688:U:O2	2.15	0.46
8:AH:90:GLY:O	8:AH:91:ARG:HB2	2.15	0.46
1:AA:92:C:H2'	1:AA:93:G:H8	1.80	0.46
36:DA:247:G:H4'	36:DA:386:G:C5	2.50	0.46
14:CN:21:TYR:N	14:CN:21:TYR:CD1	2.82	0.46
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.50	0.46
1:AA:1444:C:O2'	1:AA:1445:C:H5'	2.16	0.46
1:AA:1081:G:O2'	1:AA:1082:G:H5'	2.15	0.46
36:DA:1958:C:O2'	36:DA:1959:G:H5'	2.15	0.46
36:BA:2191:G:H3'	36:BA:2192:G:H8	1.81	0.46
52:DT:33:LYS:NZ	52:DT:43:GLN:HB3	2.30	0.46
1:AA:556:C:O2'	1:AA:557:G:H5'	2.14	0.46
32:D6:20:ASN:C	32:D6:21:TYR:CD1	2.89	0.46
57:DY:28:LYS:N	57:DY:28:LYS:CE	2.78	0.46
53:BU:88:ILE:HB	53:BU:90:VAL:HG23	1.97	0.46
28:B2:32:LEU:HD13	28:B2:57:ILE:HD12	1.94	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:B2:59:ARG:O	28:B2:62:THR:HB	2.15	0.46
36:BA:2491:U:H5'	36:BA:2570:G:C5'	2.25	0.46
12:AL:41:ARG:CG	12:AL:42:THR:N	2.62	0.46
39:DD:30:GLU:HG3	39:DD:63:ARG:CZ	2.45	0.46
25:CZ:138:VAL:C	25:CZ:140:MET:H	2.19	0.46
42:DG:42:GLY:HA2	42:DG:90:LEU:H	1.80	0.46
36:DA:2845:G:H5''	52:DT:55:ASN:HA	1.97	0.46
36:BA:335:C:O2'	57:BY:73:ARG:NH2	2.48	0.46
47:BO:121:VAL:HG12	47:BO:122:LEU:N	2.29	0.46
57:DY:81:LYS:O	57:DY:82:PRO:O	2.33	0.46
46:DN:12:ARG:NH2	46:DN:135:PRO:CG	2.79	0.46
1:AA:979:C:C3'	1:AA:980:C:C5'	2.88	0.46
2:AB:40:HIS:C	2:AB:41:ILE:HD12	2.36	0.46
21:AU:2:GLY:C	21:AU:4:GLY:H	2.18	0.46
42:BG:47:LYS:HZ2	42:BG:82:LEU:HD12	1.80	0.46
9:CI:4:TYR:CD1	9:CI:4:TYR:N	2.84	0.46
36:BA:768:G:O2'	36:BA:1379:A:N6	2.48	0.46
36:DA:803:U:H2'	36:DA:804:A:H5'	1.97	0.46
51:BS:51:ALA:HB3	51:BS:73:LEU:HD12	1.96	0.46
41:BF:201:VAL:HG13	41:BF:202:PHE:H	1.80	0.46
42:BG:139:LEU:HB3	42:BG:149:VAL:HG11	1.96	0.46
41:DF:126:VAL:HG23	41:DF:127:GLU:N	2.30	0.46
36:BA:605:C:H5	36:BA:623:G:N1	2.10	0.46
27:B1:29:GLY:O	27:B1:30:VAL:CG2	2.63	0.46
42:BG:128:ARG:N	42:BG:166:ASP:OD2	2.47	0.46
39:DD:26:LYS:O	39:DD:27:THR:CG2	2.63	0.46
36:BA:1076:C:N4	36:BA:1088:A:H61	2.12	0.46
41:DF:114:VAL:HG21	41:DF:202:PHE:CE2	2.50	0.46
19:AS:6:LYS:C	19:AS:7:LYS:HD3	2.35	0.46
38:BC:195:ALA:O	38:BC:196:LEU:C	2.53	0.46
19:CS:49:ILE:H	19:CS:49:ILE:CD1	2.08	0.46
12:CL:53:ARG:HD2	12:CL:53:ARG:H	1.79	0.46
5:CE:45:PHE:CD2	5:CE:47:LYS:HD2	2.49	0.46
4:AD:84:LYS:O	4:AD:85:LYS:C	2.53	0.46
13:AM:74:VAL:HA	13:AM:77:ASN:ND2	2.29	0.46
13:AM:77:ASN:O	13:AM:81:LEU:HD22	2.14	0.46
58:DZ:60:GLU:HA	58:DZ:66:SER:HA	1.97	0.46
19:AS:19:VAL:O	19:AS:21:GLU:N	2.49	0.46
1:AA:64:G:OP1	1:AA:382:A:N6	2.48	0.46
18:CR:66:LEU:CD1	18:CR:70:ILE:HD11	2.45	0.46
36:DA:1649:G:N1	36:DA:2009:G:C6	2.83	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:192:U:C2	1:AA:193:C:C5	3.03	0.46
12:AL:30:ALA:O	12:AL:31:PRO:C	2.52	0.46
36:DA:1278:A:OP1	50:DR:36:THR:HG22	2.15	0.46
35:B9:24:TYR:O	35:B9:25:VAL:HG23	2.15	0.46
51:BS:27:SER:HA	51:BS:88:ASP:HB3	1.98	0.46
36:BA:221:A:H4'	36:BA:222:A:O5'	2.15	0.46
16:AP:64:ALA:O	16:AP:66:PRO:HD3	2.16	0.46
33:D7:47:ARG:HH22	36:DA:1311:G:H2'	1.80	0.46
39:BD:145:VAL:HG12	39:BD:146:GLU:N	2.31	0.46
1:CA:186:C:H2'	1:CA:187:C:C6	2.50	0.46
42:DG:103:LEU:HD22	42:DG:178:PHE:HZ	1.79	0.46
27:B1:88:LYS:O	27:B1:91:LYS:HB3	2.16	0.46
1:AA:17:U:H2'	1:AA:18:C:C6	2.50	0.46
36:DA:1319:G:C6	36:DA:1320:C:N4	2.83	0.46
56:BX:64:LYS:HZ1	56:BX:73:ARG:HH21	1.62	0.46
36:DA:1678:G:H22	36:DA:1989:G:H1	1.64	0.46
51:DS:64:GLU:C	51:DS:66:ALA:N	2.68	0.46
36:BA:303:U:H2'	36:BA:304:G:H8	1.75	0.46
38:BC:83:ILE:O	38:BC:83:ILE:HG22	2.14	0.46
27:D1:72:GLU:O	27:D1:75:GLU:HB2	2.16	0.46
1:CA:1118:C:H5'	9:CI:104:ARG:HG2	1.96	0.46
42:BG:152:LEU:CD2	42:BG:152:LEU:H	2.28	0.46
3:AC:65:ALA:O	3:AC:100:ALA:O	2.33	0.46
20:CT:50:GLU:HG3	20:CT:100:ILE:HB	1.96	0.46
36:DA:1375:C:H2'	36:DA:1376:C:C6	2.49	0.46
36:BA:2847:U:C5	36:BA:2848:G:C6	3.03	0.46
36:DA:2767:C:H2'	36:DA:2768:C:C6	2.50	0.46
41:BF:46:ARG:HH11	41:BF:46:ARG:HG3	1.79	0.46
1:CA:781:A:OP1	1:CA:1523:G:H5'	2.15	0.46
40:BE:16:ARG:HD3	40:BE:21:VAL:HG11	1.97	0.46
1:AA:1275:A:O2'	1:AA:1276:G:H5'	2.15	0.46
36:DA:1412:A:O2'	36:DA:1413:G:H5'	2.15	0.46
8:AH:20:TYR:CE1	8:AH:76:PRO:HG2	2.50	0.46
36:DA:2849:U:OP1	52:DT:95:ARG:NH1	2.48	0.46
1:CA:26:A:H2'	1:CA:27:G:H5'	1.98	0.46
58:BZ:71:VAL:HG11	58:BZ:74:VAL:HG23	1.97	0.46
36:DA:1628:G:H2'	36:DA:1629:U:C6	2.50	0.46
57:DY:37:VAL:HG13	57:DY:69:ALA:HB2	1.98	0.46
36:BA:1766:U:O2'	36:BA:1767:C:H5'	2.15	0.46
40:DE:197:ILE:O	40:DE:197:ILE:HG13	2.15	0.46
1:AA:1523:G:OP1	11:AK:123:LYS:HD3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:37:VAL:HG12	6:CF:38:GLU:N	2.30	0.46
4:CD:187:ARG:CZ	4:CD:187:ARG:HB3	2.34	0.46
52:DT:28:VAL:HG21	52:DT:46:GLU:C	2.32	0.46
1:CA:1321:C:H5''	1:CA:1322:C:C5'	2.45	0.46
36:BA:1600:C:O2'	36:BA:1601:G:H5'	2.15	0.46
22:AW:55:U:HO2'	22:AW:56:C:H5	1.59	0.46
3:CC:3:ASN:O	3:CC:4:LYS:CB	2.62	0.46
49:DQ:27:VAL:HG21	49:DQ:134:ARG:CG	2.39	0.46
25:CZ:17:ILE:HG13	25:CZ:104:LEU:CD1	2.45	0.46
36:DA:2314:C:OP1	42:DG:91:ARG:NH1	2.49	0.46
42:DG:58:GLN:O	42:DG:61:ALA:HB3	2.14	0.46
25:CZ:13:ASN:CB	25:CZ:78:SER:HB3	2.45	0.46
36:BA:476:G:H4'	36:BA:502:A:N1	2.30	0.46
26:D0:36:ILE:HD11	36:DA:2355:C:C4'	2.45	0.46
52:BT:28:VAL:O	52:BT:29:ARG:HB2	2.16	0.46
49:BQ:21:THR:C	49:BQ:23:GLY:N	2.66	0.46
36:DA:2184:G:H2'	36:DA:2185:C:O4'	2.15	0.46
13:AM:15:VAL:HA	13:AM:18:ALA:HB3	1.97	0.46
42:BG:83:ARG:HB2	42:BG:84:LYS:HD2	1.97	0.46
3:AC:46:GLU:O	3:AC:47:LEU:CB	2.44	0.46
9:AI:53:VAL:O	9:AI:54:ASP:CB	2.63	0.46
36:DA:2243:U:H2'	36:DA:2244:U:C6	2.50	0.46
1:CA:545:C:O2'	1:CA:549:C:OP1	2.33	0.46
49:DQ:141:GLN:HG2	58:DZ:72:ARG:NH1	2.31	0.46
42:BG:146:TYR:HA	42:BG:149:VAL:HG22	1.98	0.46
10:AJ:34:VAL:HG13	10:AJ:73:ASP:C	2.35	0.46
36:DA:1053:C:H2'	36:DA:1054:A:H8	1.80	0.46
41:DF:126:VAL:O	41:DF:196:LEU:HG	2.15	0.46
36:BA:603:A:C1'	36:BA:604:G:OP1	2.59	0.46
5:CE:79:GLU:H	5:CE:79:GLU:CD	2.18	0.46
1:CA:198:G:C2	1:CA:199:G:C8	3.03	0.46
40:DE:93:VAL:O	40:DE:95:ILE:N	2.49	0.46
56:BX:40:LYS:HG3	56:BX:51:VAL:HB	1.96	0.46
42:BG:173:LEU:O	42:BG:176:LEU:CB	2.63	0.46
36:DA:1543:C:C3'	36:DA:1544:A:C5'	2.87	0.46
19:AS:16:LEU:O	19:AS:19:VAL:N	2.45	0.46
36:DA:2579:C:C4'	40:DE:134:ILE:HG12	2.45	0.46
1:CA:1258:G:O2'	1:CA:1259:C:H5'	2.16	0.46
40:BE:81:ILE:O	40:BE:81:ILE:CG2	2.63	0.46
35:B9:7:VAL:HG13	35:B9:34:GLN:HG3	1.95	0.46
1:CA:1502:A:H2	1:CA:1505:G:N1	2.12	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:27:VAL:HG12	15:CO:31:LEU:HD11	1.97	0.46
1:CA:1228:C:H2'	1:CA:1229:A:C8	2.51	0.46
1:CA:1245:A:OP2	21:CU:9:ARG:NH2	2.47	0.46
51:DS:101:LEU:HD13	51:DS:103:GLU:O	2.14	0.46
40:BE:117:MET:HE3	40:BE:124:GLY:HA3	1.95	0.46
8:CH:86:ILE:HB	8:CH:133:LEU:O	2.16	0.46
6:AF:19:LEU:HD11	6:AF:59:TYR:CZ	2.51	0.46
28:D2:65:ASN:HD21	36:DA:112:U:C5'	2.29	0.46
42:DG:62:LEU:HD12	42:DG:62:LEU:N	2.25	0.46
5:CE:41:VAL:HG23	5:CE:67:VAL:CG1	2.46	0.46
1:AA:862:C:O2'	1:AA:863:U:H5'	2.15	0.46
41:BF:139:PHE:CB	41:BF:166:ALA:HB1	2.44	0.46
43:BH:106:THR:CG2	43:BH:112:PRO:HB3	2.42	0.46
1:AA:722:A:H2	1:AA:733:A:H61	1.63	0.46
14:CN:24:CYS:SG	14:CN:39:LEU:HD23	2.55	0.46
46:DN:128:HIS:O	46:DN:130:HIS:N	2.48	0.46
36:BA:2262:U:O2'	36:BA:2263:C:H5'	2.14	0.46
5:AE:20:GLN:HE22	5:AE:25:ARG:NH2	2.11	0.46
36:BA:2199:A:H3'	36:BA:2200:C:C6	2.49	0.46
36:BA:569:U:C4	36:BA:570:G:C6	3.03	0.46
36:DA:2018:G:C6	36:DA:2019:A:C6	3.03	0.46
36:BA:1652:A:C2'	36:BA:1653:G:H5'	2.44	0.46
20:AT:74:LYS:O	20:AT:76:ALA:N	2.48	0.46
36:DA:325:G:O2'	36:DA:326:G:H5'	2.16	0.46
1:AA:865:A:C2	1:AA:918:A:H4'	2.50	0.46
58:BZ:144:LEU:HD22	58:BZ:144:LEU:N	2.29	0.46
25:CZ:86:ALA:O	25:CZ:87:ASP:HB2	2.15	0.46
36:BA:2166:G:C5	36:BA:2167:U:C4	3.04	0.46
36:BA:319:C:H2'	36:BA:320:A:C8	2.50	0.46
36:DA:2849:U:P	52:DT:95:ARG:NH1	2.88	0.46
36:DA:86:C:H2'	36:DA:87:C:C6	2.50	0.46
1:CA:349:A:H2'	1:CA:350:G:C8	2.50	0.46
36:BA:1385:G:H4'	36:BA:1386:C:OP1	2.16	0.46
54:DV:22:VAL:O	54:DV:23:GLU:O	2.34	0.46
13:AM:44:ARG:O	13:AM:47:ASP:N	2.39	0.46
2:AB:59:GLU:HB2	2:AB:221:LEU:HD11	1.97	0.46
36:BA:1419:A:O2'	36:BA:1420:U:H5''	2.14	0.46
52:BT:117:ASP:O	52:BT:121:ILE:HG13	2.15	0.46
24:CY:72:U:C3'	24:CY:73:G:H5''	2.46	0.46
32:D6:41:PRO:C	32:D6:43:CYS:N	2.68	0.46
28:B2:65:ASN:HB3	36:BA:72:U:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BX:12:VAL:CG1	56:BX:17:ALA:HB1	2.46	0.46
36:BA:1568:G:H5''	39:BD:61:LEU:HD23	1.98	0.46
39:DD:35:LYS:HB3	39:DD:36:PRO:CD	2.44	0.46
58:BZ:123:ASP:C	58:BZ:124:ILE:HG12	2.36	0.46
57:DY:76:CYS:O	57:DY:78:ALA:N	2.48	0.46
57:DY:81:LYS:HZ3	57:DY:98:VAL:HB	1.80	0.46
35:D9:1:MET:CE	35:D9:31:LYS:O	2.64	0.46
13:AM:17:VAL:O	13:AM:20:THR:HB	2.16	0.46
39:BD:44:ASN:CB	39:BD:48:ARG:O	2.62	0.46
1:AA:1128:C:H2'	1:AA:1129:C:H5''	1.98	0.46
1:CA:555:C:OP1	12:CL:20:LYS:HE3	2.16	0.46
58:DZ:178:GLU:HB2	58:DZ:180:VAL:H	1.48	0.46
36:DA:998:C:C2'	36:DA:999:U:O5'	2.63	0.46
13:CM:96:LEU:O	13:CM:110:ARG:NE	2.48	0.46
36:DA:2445:G:O2'	36:DA:2446:G:H5'	2.15	0.46
43:BH:98:LEU:HD22	43:BH:123:PHE:O	2.15	0.46
4:CD:36:ARG:C	4:CD:38:TYR:H	2.18	0.46
36:BA:1051:G:H2'	36:BA:1052:C:C5	2.50	0.46
51:BS:52:SER:HB2	51:BS:56:LEU:CB	2.45	0.46
31:D5:27:PRO:N	55:DW:23:LEU:HD11	2.30	0.46
55:DW:20:VAL:O	55:DW:23:LEU:N	2.36	0.46
36:BA:195:A:H5''	36:BA:196:A:OP2	2.14	0.46
41:DF:132:VAL:HG13	41:DF:133:ASN:H	1.80	0.46
5:CE:79:GLU:CD	5:CE:79:GLU:N	2.68	0.46
27:B1:34:THR:CG2	27:B1:35:THR:N	2.79	0.46
51:DS:106:ARG:HH11	51:DS:107:GLU:N	2.14	0.46
11:AK:50:TYR:HD2	11:AK:60:ALA:HB2	1.79	0.46
36:DA:1141:U:H6	46:DN:63:THR:HG21	1.80	0.46
46:DN:67:LEU:HB3	46:DN:88:GLU:CG	2.42	0.46
1:CA:454:C:H5''	1:CA:455:C:H5	1.80	0.46
43:DH:20:ALA:HB3	43:DH:23:ARG:O	2.15	0.46
1:AA:542:G:H2'	1:AA:543:C:C6	2.49	0.46
4:AD:196:LEU:O	4:AD:198:VAL:N	2.48	0.46
36:BA:1060:U:H1'	36:BA:1061:U:O5'	2.16	0.46
27:D1:63:ALA:O	27:D1:67:ILE:HG23	2.15	0.46
37:DB:91:C:O2'	37:DB:92:C:H5'	2.15	0.46
1:CA:1284:C:H2'	1:CA:1285:A:C8	2.50	0.46
36:DA:910:A:C6	36:DA:911:A:C6	3.04	0.46
6:CF:62:TRP:CE2	18:CR:35:ARG:NH2	2.83	0.46
53:DU:78:THR:O	53:DU:81:HIS:HB3	2.16	0.46
38:BC:43:VAL:HG12	38:BC:44:HIS:N	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:625:G:H2'	1:CA:626:U:C6	2.50	0.46
6:CF:91:VAL:HG12	6:CF:92:LYS:H	1.81	0.46
43:DH:74:ASN:OD1	43:DH:138:LYS:HE3	2.15	0.46
1:CA:1219:U:OP1	14:CN:19:ARG:NH2	2.47	0.46
1:AA:22:G:H4'	1:AA:885:G:C8	2.50	0.46
36:BA:814:C:O2'	36:BA:815:C:H5'	2.15	0.46
39:BD:39:LYS:NZ	39:BD:60:ARG:HD2	2.29	0.46
36:DA:643:A:O2'	36:DA:644:A:H5'	2.15	0.46
33:D7:43:THR:HG23	33:D7:44:PRO:HD2	1.96	0.46
1:CA:624:C:H4'	16:CP:11:SER:N	2.31	0.46
16:CP:8:ARG:O	16:CP:9:PHE:HD1	1.98	0.46
10:AJ:46:ARG:HH11	10:AJ:46:ARG:CG	2.27	0.46
36:DA:1469:A:H2'	36:DA:1470:G:C8	2.51	0.46
36:BA:2735:G:O2'	36:BA:2736:G:H5'	2.15	0.46
36:DA:271(V):G:O2'	36:DA:271(W):G:H5'	2.16	0.46
54:DV:34:GLU:O	54:DV:36:PRO:CD	2.63	0.46
3:AC:113:ALA:HB1	3:AC:185:GLY:N	2.29	0.46
36:DA:720:C:H2'	36:DA:721:C:C6	2.49	0.46
37:DB:116:G:H2'	37:DB:116:G:N3	2.31	0.46
32:D6:22:ALA:HB2	32:D6:39:TYR:CZ	2.51	0.46
53:DU:25:TRP:C	53:DU:25:TRP:CD1	2.88	0.46
1:CA:16:A:N1	1:CA:919:A:H2	2.14	0.46
5:AE:120:THR:CG2	5:AE:121:LYS:N	2.76	0.46
42:DG:167:GLU:N	42:DG:167:GLU:CD	2.69	0.46
1:AA:818:G:O2'	1:AA:819:A:H5'	2.15	0.46
1:CA:757:U:H2'	1:CA:758:G:O4'	2.16	0.46
36:BA:1812:A:H2'	36:BA:1813:G:C8	2.50	0.46
50:DR:107:ASP:O	50:DR:109:ALA:N	2.48	0.46
36:BA:1427:A:H1'	36:BA:1428:C:OP2	2.14	0.46
36:BA:74:A:O2'	36:BA:75:G:OP2	2.30	0.46
36:BA:519:U:H2'	36:BA:520:G:C8	2.50	0.46
17:AQ:40:LYS:HD3	17:AQ:42:TYR:CZ	2.51	0.46
10:CJ:85:LEU:C	10:CJ:87:THR:H	2.17	0.46
36:BA:1257:C:H2'	36:BA:1258:C:C6	2.51	0.46
36:BA:715:G:O2'	36:BA:716:A:H5'	2.14	0.46
54:BV:32:THR:HG23	54:BV:59:ALA:O	2.15	0.46
36:BA:34:C:H5'	36:BA:35:G:OP1	2.15	0.46
1:AA:764:C:O2'	1:AA:765:G:H5'	2.16	0.46
1:CA:644:G:O2'	1:CA:645:C:H5'	2.15	0.46
1:CA:656:C:O2'	1:CA:657:G:H5'	2.15	0.46
36:DA:2117:A:N6	36:DA:2171:A:N1	2.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1009:G:O2'	1:CA:1010:G:H5'	2.15	0.46
17:CQ:19:VAL:O	17:CQ:19:VAL:HG23	2.15	0.46
45:BK:100:UNK:N	45:BK:135:UNK:CB	2.79	0.46
36:DA:54:G:C6	36:DA:117:G:N2	2.84	0.46
36:DA:941:A:H4'	48:DP:35:HIS:HE1	1.79	0.46
47:DO:104:ARG:HH12	52:DT:35:LYS:HB3	1.80	0.46
1:AA:555:C:H2'	1:AA:556:C:C6	2.50	0.46
4:AD:163:GLU:O	4:AD:165:MET:N	2.49	0.46
28:B2:2:LYS:HG2	28:B2:59:ARG:HH21	1.78	0.46
28:B2:40:SER:O	28:B2:42:GLY:N	2.49	0.46
28:B2:47:ASN:HB3	36:BA:95:G:H1'	1.98	0.46
25:AZ:117:ARG:O	25:AZ:121:LEU:HD23	2.15	0.46
39:BD:35:LYS:CG	39:BD:36:PRO:CD	2.94	0.46
25:CZ:17:ILE:CG1	25:CZ:104:LEU:HA	2.46	0.46
42:DG:116:ASP:O	42:DG:117:PHE:HB3	2.15	0.46
42:DG:79:ASN:O	42:DG:80:PHE:HB2	2.15	0.46
52:DT:78:LEU:C	52:DT:79:HIS:CD2	2.89	0.46
58:BZ:23:LYS:CD	58:BZ:38:TYR:CE1	2.99	0.46
57:DY:81:LYS:HD3	57:DY:97:ARG:O	2.16	0.46
46:DN:12:ARG:HG3	46:DN:12:ARG:O	2.16	0.46
3:AC:70:VAL:HG21	3:AC:76:VAL:HG11	1.96	0.46
14:CN:57:ARG:HG3	14:CN:58:LYS:N	2.30	0.46
42:BG:88:ILE:HG22	42:BG:89:GLY:N	2.31	0.46
9:AI:95:LYS:O	9:AI:96:LEU:HD12	2.15	0.46
46:BN:67:LEU:C	46:BN:69:GLN:H	2.17	0.46
36:BA:2810:A:H2'	36:BA:2811:G:O4'	2.16	0.46
46:DN:71:ILE:HA	46:DN:85:ILE:O	2.16	0.46
36:DA:605:C:C4	36:DA:606:U:C5	3.03	0.46
36:DA:1050:A:H2'	36:DA:1050:A:N3	2.29	0.46
40:DE:82:ARG:O	40:DE:84:PHE:N	2.49	0.46
16:CP:26:ARG:CD	16:CP:31:LYS:O	2.59	0.46
24:AY:72:U:H2'	24:AY:73:G:C5'	2.39	0.46
46:DN:25:ARG:O	46:DN:28:THR:CG2	2.63	0.46
3:CC:181:ASN:OD1	3:CC:204:LEU:HD12	2.15	0.46
47:BO:64:ARG:HH21	47:BO:100:GLY:CA	2.28	0.46
13:AM:3:ARG:CZ	13:AM:7:VAL:HG13	2.44	0.46
50:BR:96:ARG:HH12	50:BR:117:VAL:HA	1.80	0.46
58:BZ:108:PRO:HA	58:BZ:141:VAL:O	2.15	0.46
1:CA:585:G:C4'	12:CL:8:ASN:HD21	2.23	0.46
18:CR:70:ILE:O	18:CR:73:ALA:N	2.49	0.46
22:AV:5:G:H2'	22:AV:6:G:O4'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:84:GLU:OE2	2:AB:87:ARG:NH2	2.49	0.46
2:CB:17:PHE:H	2:CB:17:PHE:HD1	1.63	0.46
27:D1:3:LYS:HG3	27:D1:4:VAL:N	2.21	0.46
36:DA:2038:G:C6	36:DA:2039:C:C4	3.04	0.46
36:BA:2740:A:C6	36:BA:2741:A:C6	3.04	0.46
1:AA:197:A:N6	1:AA:221:C:C5'	2.79	0.46
41:BF:184:TYR:CE1	48:BP:7:ARG:CZ	2.99	0.46
17:AQ:18:THR:HG21	17:AQ:69:LYS:HD2	1.96	0.46
3:CC:135:LYS:NZ	5:CE:50:GLU:CG	2.76	0.46
36:DA:2199:A:H5'	36:DA:2200:C:OP2	2.15	0.46
36:BA:2419:U:H2'	36:BA:2420:C:H6	1.79	0.46
40:BE:120:TRP:CD1	40:BE:155:LYS:HB3	2.50	0.46
6:CF:9:VAL:HA	6:CF:59:TYR:O	2.16	0.46
1:AA:187:C:H2'	1:AA:188:C:H6	1.80	0.46
36:BA:1402:C:O2'	36:BA:1403:C:H5'	2.15	0.46
5:CE:41:VAL:O	5:CE:66:MET:HA	2.16	0.46
31:B5:16:ARG:NH1	31:B5:17:ASP:OD1	2.49	0.46
22:AV:61:C:O2	22:AV:61:C:C2'	2.61	0.46
36:DA:2029:G:O6	36:DA:2033:A:OP1	2.34	0.46
20:CT:30:LYS:HE3	20:CT:34:LYS:HZ2	1.81	0.46
40:BE:179:GLU:HG3	40:BE:179:GLU:O	2.15	0.46
36:BA:2462:U:H2'	36:BA:2463:C:C6	2.51	0.46
49:BQ:1:MET:CE	49:BQ:1:MET:O	2.63	0.46
52:DT:129:ARG:NH2	52:DT:131:ALA:HB3	2.31	0.46
25:AZ:347:THR:OG1	25:AZ:348:ASP:N	2.49	0.46
36:DA:1264:G:H3'	36:DA:1265:A:H5''	1.98	0.46
36:DA:1264:G:H2'	36:DA:1265:A:H8	1.81	0.46
54:BV:82:ARG:NH1	54:BV:82:ARG:HG2	2.30	0.46
36:DA:2850:A:H2	50:DR:61:HIS:CD2	2.33	0.46
48:BP:10:PRO:HG2	48:BP:11:GLY:H	1.80	0.46
17:CQ:45:HIS:HB2	17:CQ:65:ILE:HD13	1.98	0.46
58:BZ:135:GLU:O	58:BZ:136:PHE:O	2.33	0.46
8:CH:28:ALA:CB	8:CH:59:LEU:HG	2.45	0.46
1:AA:1191:A:H2'	1:AA:1192:C:C6	2.51	0.46
1:AA:288:A:H2'	1:AA:289:G:H4'	1.97	0.46
47:BO:34:THR:O	47:BO:35:VAL:C	2.54	0.46
1:AA:598:U:H4'	8:AH:94:TYR:CD2	2.51	0.46
55:BW:30:GLU:O	55:BW:34:ASN:ND2	2.49	0.46
36:DA:1835:G:C5'	36:DA:1836:C:OP2	2.63	0.46
43:BH:154:PRO:O	43:BH:155:SER:HB3	2.15	0.46
36:BA:1977:A:O2'	36:BA:1978:A:H5'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2360:A:O2'	36:BA:2361:A:O5'	2.32	0.46
38:DC:100:ILE:HD13	38:DC:127:LEU:CB	2.46	0.46
32:B6:9:LEU:C	32:B6:9:LEU:HD13	2.36	0.46
34:D8:36:LYS:O	34:D8:37:SER:C	2.53	0.46
34:D8:7:HIS:O	34:D8:9:GLY:N	2.48	0.46
36:BA:2345:G:H5'	36:BA:2347:C:O4'	2.15	0.46
36:DA:1665:A:C3'	36:DA:1666:G:H5''	2.41	0.46
28:B2:10:LEU:HD11	28:B2:59:ARG:CB	2.46	0.46
28:B2:52:ASP:HA	28:B2:55:ARG:HB2	1.97	0.46
25:AZ:193:ASN:C	25:AZ:195:TRP:H	2.18	0.46
47:BO:3:GLN:O	47:BO:21:CYS:HB3	2.15	0.46
57:BY:76:CYS:O	57:BY:77:PRO:C	2.54	0.46
36:BA:2712:U:O4'	36:BA:2712:U:O2	2.32	0.46
36:DA:327:G:H2'	36:DA:328:U:H6	1.80	0.46
1:CA:1095:U:H2'	1:CA:1096:C:O4'	2.16	0.46
35:D9:36:GLN:HG2	36:DA:1124:C:O2'	2.16	0.46
13:AM:65:LYS:HD3	13:AM:65:LYS:H	1.80	0.46
46:DN:43:THR:O	46:DN:46:VAL:HG12	2.16	0.46
34:B8:11:LYS:HG2	34:B8:60:LEU:CD2	2.46	0.46
9:AI:19:LEU:HD23	9:AI:20:ARG:N	2.30	0.46
36:BA:271(K):U:H3'	36:BA:271(L):U:C5'	2.45	0.46
53:DU:96:ALA:C	53:DU:98:LEU:H	2.19	0.46
39:DD:39:LYS:NZ	39:DD:60:ARG:HD2	2.30	0.46
36:BA:1023:U:C2'	36:BA:1024:G:H5'	2.44	0.46
4:CD:8:VAL:C	4:CD:10:ARG:H	2.18	0.46
36:BA:654(M):C:H2'	36:BA:654(N):G:N7	2.29	0.46
50:DR:99:LYS:N	50:DR:99:LYS:HD2	2.12	0.46
40:BE:61:ARG:CG	40:BE:62:PRO:HD3	2.46	0.46
36:DA:258:G:H2'	36:DA:259:G:C8	2.51	0.46
36:DA:621:A:C2'	36:DA:622:G:H5'	2.39	0.46
36:BA:196:A:H2'	36:BA:2068:U:H5	1.80	0.46
1:AA:275:G:H5'	17:AQ:14:LYS:HB2	1.98	0.46
11:CK:84:VAL:C	11:CK:85:ARG:HG3	2.35	0.46
36:BA:2287:A:C8	36:BA:2289:G:C6	3.04	0.46
48:BP:62:LEU:HD23	48:BP:62:LEU:N	2.12	0.46
42:BG:91:ARG:HD2	42:BG:92:VAL:CA	2.46	0.46
22:CV:59:U:C2'	22:CV:60:U:H6	2.26	0.46
1:CA:677:U:O2'	1:CA:678:U:H5'	2.16	0.46
43:BH:158:HIS:O	43:BH:159:GLU:HB2	2.15	0.46
53:BU:46:ALA:O	53:BU:47:TYR:C	2.53	0.46
31:B5:2:ALA:CA	36:BA:2015:A:H1'	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BT:128:GLU:O	52:BT:129:ARG:C	2.54	0.46
36:DA:512:G:O2'	36:DA:513:A:H8	1.99	0.46
46:DN:118:LYS:O	46:DN:120:LEU:N	2.49	0.46
36:BA:1319:G:C6	36:BA:1320:C:N4	2.83	0.46
36:BA:146:G:H2'	36:BA:147:U:H5'	1.96	0.46
36:DA:732:C:H2'	36:DA:733:G:O4'	2.15	0.46
36:BA:803:U:C2'	36:BA:804:A:H5'	2.45	0.46
36:DA:271(Y):U:OP2	36:DA:272(D):G:H5''	2.15	0.46
1:CA:1049:U:O2'	1:CA:1050:G:P	2.73	0.46
1:CA:1206:G:C6	1:CA:1207:G:C5	3.03	0.46
51:BS:93:LYS:O	51:BS:95:HIS:N	2.49	0.46
22:AV:24:G:C6	22:AV:25:C:C4	3.04	0.46
53:BU:27:LEU:O	53:BU:31:SER:HB3	2.16	0.46
37:DB:65:C:H2'	37:DB:66:A:H5'	1.97	0.46
54:BV:17:GLY:O	54:BV:18:LEU:HD13	2.15	0.46
36:DA:1116:C:O2'	36:DA:1117:G:H5'	2.16	0.46
27:B1:59:THR:O	27:B1:60:PHE:CG	2.69	0.46
1:AA:59:A:H61	1:AA:331:G:H1'	1.79	0.46
43:BH:54:ARG:HG2	43:BH:54:ARG:NH1	2.30	0.46
1:AA:1101:A:C4	2:AB:99:GLY:HA3	2.50	0.46
1:CA:1525:G:P	11:CK:120:ARG:HH22	2.39	0.46
1:AA:1498:U:H4'	1:AA:1519:A:N1	2.30	0.46
52:DT:131:ALA:O	52:DT:133:GLU:N	2.48	0.46
25:CZ:223:MET:CE	25:CZ:240:GLY:N	2.79	0.46
36:BA:1221:C:O2'	36:BA:1221(A):C:H5'	2.16	0.46
36:DA:1402:C:O2'	36:DA:1403:C:H5'	2.16	0.46
58:BZ:155:LEU:H	58:BZ:155:LEU:CD2	2.28	0.46
44:DJ:35:UNK:O	44:DJ:37:UNK:N	2.49	0.46
14:CN:29:ARG:HH11	14:CN:29:ARG:HG3	1.81	0.46
1:CA:1030:C:H2'	1:CA:1030(A):G:H5'	1.97	0.46
36:DA:1493:C:C5	36:DA:2206:G:O2'	2.69	0.46
54:BV:21:ARG:O	54:BV:22:VAL:HG13	2.15	0.46
6:AF:24:GLU:HG3	6:AF:28:ARG:HH12	1.81	0.46
36:DA:2626:C:H2'	36:DA:2627:G:O4'	2.16	0.46
44:DJ:66:UNK:C	44:DJ:68:UNK:N	2.77	0.46
36:DA:841:A:H2'	36:DA:842:G:H8	1.80	0.46
36:DA:1466:G:H2'	36:DA:1547:C:N4	2.30	0.46
36:BA:645:C:H3'	36:BA:645:C:O2	2.16	0.46
1:AA:283:C:C2'	1:AA:284:G:H5'	2.45	0.46
36:DA:946:G:H2'	36:DA:947:G:C8	2.50	0.46
19:AS:50:ALA:HB1	19:AS:57:HIS:HB3	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:910:C:H2'	1:CA:911:U:O4'	2.16	0.46
1:CA:370:C:O2'	1:CA:371:G:H5'	2.16	0.46
36:BA:1488:G:N1	36:BA:1489:U:O2	2.48	0.46
36:BA:2412:A:C2'	36:BA:2413:G:H5'	2.45	0.46
44:BJ:69:UNK:O	44:BJ:70:UNK:C	2.63	0.46
36:DA:924:C:O2'	36:DA:925:C:H5'	2.16	0.46
2:CB:32:ILE:HD11	2:CB:40:HIS:CG	2.51	0.46
32:D6:12:GLU:HG3	32:D6:23:THR:HB	1.98	0.46
36:DA:2283:C:H2'	36:DA:2284:C:H5'	1.96	0.46
36:DA:663:G:C6	36:DA:664:C:C4	3.03	0.46
36:DA:666:G:O2'	36:DA:667:U:H5'	2.15	0.46
53:BU:92:ARG:HD2	54:BV:11:GLN:CG	2.46	0.46
28:B2:19:VAL:HG12	28:B2:20:GLU:N	2.31	0.46
36:BA:1210:A:H8	36:BA:1210:A:H5'	1.81	0.46
36:BA:2684:U:C5	36:BA:2685:G:N7	2.84	0.46
52:BT:94:ALA:CB	52:BT:99:LEU:HD23	2.44	0.46
1:CA:1202:G:N3	14:CN:42:ILE:CG2	2.75	0.46
14:CN:59:ALA:HB1	14:CN:61:TRP:CZ3	2.50	0.46
13:CM:11:ARG:HE	13:CM:12:ASN:HD21	1.62	0.46
3:CC:82:GLU:O	3:CC:85:ARG:HB2	2.15	0.46
58:DZ:181:GLU:O	58:DZ:182:LYS:HG3	2.16	0.46
40:BE:57:LYS:HA	40:BE:57:LYS:CE	2.29	0.46
37:BB:29:A:O2'	37:BB:58:A:N1	2.48	0.46
50:DR:87:TYR:O	50:DR:88:ARG:C	2.54	0.46
37:DB:23:G:H1	37:DB:60:C:H42	1.63	0.46
1:AA:189(H):G:O2'	1:AA:189(I):G:O5'	2.32	0.46
36:BA:2415:G:O2'	36:BA:2416:C:H5'	2.16	0.46
19:AS:43:GLU:O	19:AS:43:GLU:HG2	2.15	0.46
4:AD:202:LEU:O	4:AD:205:GLU:N	2.49	0.46
58:BZ:126:VAL:HG12	58:BZ:163:LEU:CB	2.41	0.46
36:DA:1747:G:H2'	36:DA:1747(A):G:H8	1.79	0.46
41:DF:176:LEU:HD21	41:DF:180:GLY:O	2.15	0.46
5:CE:11:ILE:CG2	5:CE:105:VAL:HG22	2.45	0.46
5:CE:103:GLY:O	5:CE:106:PRO:HD2	2.16	0.46
4:AD:20:TYR:HD2	4:AD:26:CYS:O	1.99	0.46
25:AZ:267:VAL:HG23	25:AZ:288:VAL:HG12	1.95	0.46
13:AM:83:ASP:OD1	13:AM:84:ILE:N	2.48	0.46
42:BG:114:ILE:CG2	42:BG:117:PHE:HB2	2.46	0.46
2:AB:177:ALA:HB1	2:AB:182:ILE:HB	1.97	0.46
36:BA:208:C:C2	36:BA:209:C:C5	3.04	0.46
48:DP:75:ILE:H	48:DP:75:ILE:CD1	2.11	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1442(B):A:O2'	1:CA:1443:G:C8	2.69	0.46
8:CH:5:PRO:O	8:CH:8:ASP:HB3	2.15	0.46
40:DE:201:THR:C	40:DE:202:LYS:HD2	2.36	0.46
1:CA:923:A:O4'	1:CA:1398:A:C2	2.69	0.46
25:AZ:323:LEU:CD1	25:AZ:396:GLY:HA2	2.41	0.46
17:AQ:16:GLN:O	17:AQ:17:LYS:HB2	2.15	0.46
26:B0:53:MET:SD	26:B0:57:PHE:HA	2.56	0.46
36:DA:2092:U:C5	36:DA:2226:C:OP2	2.63	0.46
36:DA:1446:C:H2'	36:DA:1447:G:H8	1.81	0.46
36:DA:2147:G:H2'	36:DA:2148:G:C4'	2.45	0.46
36:DA:133:C:H6	36:DA:133:C:O5'	1.99	0.46
29:D3:8:LEU:HB2	29:D3:28:LEU:HD12	1.97	0.46
36:DA:2864:G:H2'	36:DA:2865:U:C6	2.50	0.46
39:BD:181:GLU:HB2	39:BD:273:ARG:O	2.15	0.46
36:DA:1609:A:H4'	36:DA:1617:C:OP1	2.16	0.46
36:DA:944:G:H5'	36:DA:945:A:C5'	2.46	0.46
25:AZ:75:ARG:NH2	25:AZ:212:THR:HB	2.31	0.46
1:CA:303:A:O2'	1:CA:304:U:H5'	2.16	0.46
7:CG:57:GLU:HB2	7:CG:60:LYS:HB2	1.98	0.46
36:DA:2050:C:H1'	40:DE:156:MET:HE1	1.98	0.46
37:BB:6:C:O2'	51:BS:36:TYR:HE2	1.99	0.46
41:DF:65:TRP:HB3	41:DF:66:PRO:CD	2.45	0.46
15:CO:29:VAL:O	15:CO:33:THR:OG1	2.33	0.46
36:BA:1263:U:C4	36:BA:1264:G:C6	3.03	0.46
12:AL:8:ASN:HD22	17:AQ:34:LYS:HE3	1.81	0.46
1:AA:1418:A:H2	36:BA:1948:G:N3	2.14	0.46
1:CA:658:G:O2'	1:CA:659:U:H5'	2.15	0.46
58:BZ:58:VAL:HA	58:BZ:68:PRO:HA	1.98	0.46
38:DC:196:LEU:O	38:DC:197:GLU:C	2.54	0.46
36:BA:2888:C:H2'	36:BA:2889:C:C6	2.51	0.46
1:CA:830:G:O2'	1:CA:831:U:H5'	2.16	0.46
3:AC:59:ARG:O	3:AC:63:ASN:ND2	2.48	0.46
1:CA:77:G:H5'	1:CA:78:G:OP2	2.15	0.46
49:DQ:41:TRP:HB3	49:DQ:94:VAL:HG11	1.97	0.46
1:AA:943:U:C2'	1:AA:944:G:H5'	2.46	0.46
36:BA:682:G:O2'	36:BA:683:C:H5'	2.16	0.46
21:AU:13:ILE:O	21:AU:16:GLY:N	2.48	0.46
37:BB:24:G:H1	37:BB:59:A:H61	1.62	0.46
1:CA:1088:G:O2'	1:CA:1089:G:H5'	2.15	0.46
1:AA:1046:A:H62	1:AA:1211:U:H6	1.64	0.46
16:AP:12:LYS:HG2	16:AP:13:HIS:N	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:15:ARG:HD2	5:CE:26:PHE:CD2	2.50	0.46
36:DA:2056:G:H2'	36:DA:2056:G:N3	2.30	0.46
36:BA:105:C:O5'	36:BA:105:C:H6	1.99	0.46
45:DK:3:UNK:O	45:DK:4:UNK:C	2.63	0.46
40:BE:105:THR:O	40:BE:196:VAL:HG12	2.15	0.46
36:BA:1063:G:N2	45:BK:89:UNK:HA	2.31	0.46
34:D8:7:HIS:CD2	48:DP:50:ARG:HD3	2.50	0.46
34:D8:4:MET:HE1	36:DA:592:G:H21	1.79	0.46
32:B6:15:GLU:HG3	32:B6:47:THR:OG1	2.15	0.46
53:BU:65:ILE:HD12	53:BU:65:ILE:N	2.30	0.46
53:BU:92:ARG:HG2	53:BU:94:ASN:HB3	1.98	0.46
1:CA:1318:A:O3'	19:CS:10:PHE:CD2	2.69	0.46
19:CS:36:ARG:HB2	19:CS:72:GLY:CA	2.46	0.46
28:B2:29:LYS:HD2	28:B2:32:LEU:HD22	1.97	0.46
2:CB:97:TRP:HH2	2:CB:176:GLU:HB2	1.81	0.46
52:DT:53:ARG:HH12	52:DT:60:THR:H	1.64	0.46
2:CB:101:MET:C	2:CB:102:LEU:HD12	2.36	0.46
3:AC:85:ARG:CD	3:AC:85:ARG:N	2.78	0.46
56:DX:12:VAL:HG12	56:DX:27:THR:HG1	1.80	0.46
35:D9:7:VAL:CG1	35:D9:25:VAL:CG2	2.94	0.46
21:AU:2:GLY:C	21:AU:4:GLY:N	2.68	0.46
1:AA:1280:A:O2'	1:AA:1281:U:OP1	2.30	0.46
42:BG:72:ARG:CA	42:BG:87:PRO:HD2	2.46	0.46
13:CM:45:VAL:HA	13:CM:48:LEU:CD1	2.46	0.46
13:CM:104:ARG:O	13:CM:104:ARG:HG2	2.16	0.46
43:BH:85:LYS:O	43:BH:132:ARG:HB2	2.16	0.46
58:DZ:51:ALA:O	58:DZ:52:SER:HB3	2.16	0.46
42:BG:146:TYR:C	42:BG:149:VAL:HG22	2.36	0.46
1:CA:1263:C:C2	1:CA:1273:G:N2	2.83	0.46
24:AY:1:A:N6	24:AY:72:U:H3	1.93	0.46
36:DA:2820:A:O3'	50:DR:5:LYS:HE2	2.16	0.46
42:BG:91:ARG:HG2	42:BG:92:VAL:N	2.31	0.46
48:DP:97:PRO:HD3	48:DP:126:VAL:O	2.15	0.46
25:AZ:273:HIS:C	25:AZ:274:ARG:HG2	2.34	0.46
7:CG:101:LEU:O	7:CG:104:LEU:HB2	2.15	0.46
4:CD:129:ASN:N	4:CD:129:ASN:HD22	1.91	0.46
30:B4:4:GLY:N	30:B4:6:HIS:CE1	2.84	0.46
2:AB:33:TYR:HB2	2:AB:43:ASP:HB2	1.98	0.46
2:AB:43:ASP:OD2	2:AB:46:LYS:HB2	2.16	0.46
9:CI:108:VAL:HG12	9:CI:109:VAL:N	2.31	0.46
38:DC:175:VAL:HG11	38:DC:189:ILE:HG12	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:50:ARG:HG3	57:BY:56:PRO:C	2.36	0.46
36:BA:2634:G:O3'	40:BE:77:ILE:HG21	2.16	0.46
1:AA:1220:G:H2'	1:AA:1221:G:C8	2.49	0.46
1:AA:1319:A:H5'	1:AA:1320:C:OP1	2.15	0.46
1:CA:825:G:C6	1:CA:826:C:C4	3.04	0.46
51:DS:93:LYS:O	51:DS:95:HIS:HB2	2.15	0.46
54:BV:35:LEU:C	54:BV:37:VAL:N	2.62	0.46
36:DA:184:C:H2'	36:DA:185:U:H6	1.81	0.46
53:DU:70:ARG:C	53:DU:72:HIS:N	2.68	0.46
40:DE:116:VAL:CG2	40:DE:122:PHE:CG	2.99	0.46
42:BG:11:TYR:HA	42:BG:15:VAL:CG2	2.46	0.46
4:CD:108:LEU:C	4:CD:165:MET:HE2	2.36	0.46
36:DA:1170:G:H5''	36:DA:1173:G:H22	1.81	0.46
38:BC:10:LEU:HA	38:BC:13:LYS:HG3	1.98	0.46
36:BA:610:G:H2'	36:BA:611:C:C6	2.51	0.46
5:AE:61:TYR:O	5:AE:62:ALA:C	2.54	0.46
51:BS:64:GLU:C	51:BS:66:ALA:N	2.69	0.46
1:CA:237:C:OP2	17:CQ:40:LYS:NZ	2.49	0.46
36:BA:1337:G:H2'	36:BA:1338:G:H8	1.81	0.46
8:CH:10:LEU:HD22	8:CH:83:ILE:CG1	2.46	0.46
23:CX:19:U:H2'	23:CX:20:U:O4'	2.15	0.46
55:BW:88:ARG:HG2	55:BW:94:ASP:OD2	2.16	0.46
16:CP:28:ARG:HG3	16:CP:29:ASP:OD1	2.16	0.46
15:CO:9:GLN:O	15:CO:13:GLN:HG2	2.16	0.46
32:B6:13:CYS:HB2	32:B6:22:ALA:HB3	1.95	0.46
49:BQ:45:GLN:O	49:BQ:48:GLU:N	2.49	0.46
13:AM:118:ALA:CB	22:AV:29:G:H5'	2.46	0.46
1:CA:499:A:H4'	1:CA:500:G:H5'	1.97	0.46
36:BA:1416:G:H1'	36:BA:1417:C:C6	2.50	0.46
36:DA:2720:U:C2	36:DA:2721:A:C8	3.04	0.46
1:CA:635:G:O2'	1:CA:636:U:H5'	2.16	0.46
48:BP:6:LEU:CD2	48:BP:6:LEU:H	2.27	0.46
36:DA:2206:G:C2	36:DA:2207:G:H5'	2.51	0.46
36:BA:1163:G:H2'	36:BA:1164:G:H8	1.79	0.46
36:DA:2555:U:C2'	36:DA:2556:C:H5'	2.46	0.46
58:DZ:11:GLU:O	58:DZ:13:GLU:HG3	2.15	0.46
19:AS:28:LYS:C	19:AS:29:ARG:HG3	2.36	0.46
44:BJ:56:UNK:HA	44:BJ:83:UNK:HA	1.97	0.46
20:AT:74:LYS:HD3	20:AT:74:LYS:N	2.31	0.46
1:AA:310:G:H2'	1:AA:311:C:H6	1.81	0.46
36:DA:361:G:N2	36:DA:362:U:H1'	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2444:G:P	41:DF:68:LYS:HD3	2.56	0.46
36:BA:1448:G:H5'	36:BA:1449:A:P	2.56	0.46
36:BA:1821:A:H2'	36:BA:1822:G:C8	2.50	0.46
38:BC:104:LEU:HD13	38:BC:105:ASP:N	2.31	0.46
36:DA:32:C:OP1	36:DA:1238:G:H5'	2.16	0.46
36:BA:1940:U:C4	36:BA:1964:G:H4'	2.50	0.46
36:DA:1712:C:O2'	36:DA:1713:U:H5'	2.16	0.46
36:DA:450:G:O6	36:DA:453:C:OP1	2.33	0.46
36:DA:2201:C:O2'	36:DA:2202:C:H5'	2.16	0.46
38:BC:68:LEU:O	38:BC:68:LEU:HD23	2.15	0.46
36:BA:2728:U:H2'	36:BA:2729:G:H8	1.81	0.46
38:DC:100:ILE:HD13	38:DC:127:LEU:HB2	1.98	0.46
4:CD:194:LEU:N	4:CD:194:LEU:HD22	2.31	0.46
47:DO:107:ARG:HH11	52:DT:36:GLU:CG	2.22	0.46
47:DO:115:VAL:HG13	47:DO:121:VAL:HG21	1.98	0.46
52:DT:28:VAL:CG2	52:DT:45:PHE:O	2.60	0.46
24:CY:71:C:H2'	24:CY:72:U:H6	1.79	0.46
53:BU:92:ARG:HD3	53:BU:94:ASN:HB3	1.98	0.46
56:BX:12:VAL:HB	56:BX:17:ALA:CB	2.45	0.46
10:AJ:50:ILE:HG12	14:AN:41:ARG:NE	2.31	0.46
25:AZ:104:LEU:CD2	25:AZ:120:ILE:HD11	2.45	0.46
39:BD:101:GLU:HG2	39:BD:102:LYS:N	2.31	0.46
39:BD:76:PRO:O	39:BD:97:TYR:HD1	1.99	0.46
22:AW:18:G:H1	22:AW:55:U:H6	1.64	0.46
25:CZ:151:GLU:HG2	25:CZ:155:ARG:HE	1.80	0.46
43:DH:66:GLY:HA2	43:DH:69:ARG:HB3	1.98	0.46
49:BQ:101:ARG:NH1	49:BQ:101:ARG:CG	2.77	0.46
57:DY:88:LYS:O	57:DY:89:PHE:HB2	2.15	0.46
46:DN:134:ARG:N	46:DN:135:PRO:HD3	2.31	0.46
36:DA:2186:G:H2'	36:DA:2187:G:C4	2.51	0.46
13:AM:18:ALA:O	13:AM:20:THR:N	2.49	0.46
41:BF:126:VAL:HG23	41:BF:127:GLU:N	2.31	0.46
36:BA:581:C:C2	36:BA:1260:G:N2	2.83	0.46
1:AA:1123:A:N1	1:AA:1150:U:C5	2.84	0.46
13:CM:70:LEU:C	13:CM:72:ALA:N	2.69	0.46
3:CC:77:ILE:HA	3:CC:84:ILE:HG22	1.97	0.46
31:B5:49:CYS:SG	31:B5:50:GLY:N	2.83	0.46
31:B5:57:VAL:HG12	31:B5:58:LEU:H	1.80	0.46
36:DA:139(A):G:H22	56:DX:44:GLU:CD	2.16	0.46
9:AI:35:GLU:HA	9:AI:38:GLN:HB2	1.97	0.46
36:BA:2121:G:C2	36:BA:2177:C:O2	2.69	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2149:G:O2'	36:BA:2150:U:H5'	2.16	0.46
1:CA:967:C:H2'	1:CA:968:A:C8	2.51	0.46
39:BD:270:ILE:HD12	39:BD:270:ILE:O	2.16	0.46
36:BA:142:A:H1'	36:BA:1408:C:O4'	2.15	0.46
4:AD:202:LEU:C	4:AD:204:ILE:N	2.69	0.46
36:BA:1106:G:H2'	36:BA:1107:G:O4'	2.16	0.46
39:BD:124:PRO:CG	39:BD:129:ASN:ND2	2.76	0.46
36:DA:2533:A:OP1	36:DA:2665:A:H1'	2.16	0.46
3:CC:182:ILE:HA	3:CC:202:ILE:O	2.16	0.46
12:CL:45:PRO:HB3	12:CL:53:ARG:HD3	1.97	0.46
36:BA:130:C:H2'	36:BA:131:G:C5'	2.44	0.46
4:AD:100:ARG:NH1	4:AD:100:ARG:HG3	2.29	0.46
42:BG:93:THR:O	42:BG:94:LEU:HD23	2.15	0.46
9:CI:53:VAL:HG13	9:CI:95:LYS:HD2	1.98	0.46
1:CA:384:G:C6	1:CA:385:C:N4	2.84	0.46
1:CA:1283:G:O2'	1:CA:1284:C:P	2.74	0.46
36:BA:90:U:C2'	36:BA:90:U:O2	2.64	0.46
36:DA:1649:G:C6	36:DA:2009:G:C6	3.04	0.46
4:AD:112:VAL:HG13	4:AD:113:SER:H	1.81	0.46
15:CO:27:VAL:CG1	15:CO:31:LEU:HD11	2.45	0.46
47:DO:66:LYS:H	47:DO:82:ASN:ND2	2.14	0.46
36:BA:1497:U:C5'	36:BA:1498:C:H5	2.29	0.46
36:BA:1499:C:C2'	36:BA:1500:G:H5'	2.46	0.46
51:DS:89:ARG:CG	51:DS:92:TYR:CA	2.93	0.46
51:DS:89:ARG:CB	51:DS:92:TYR:HB3	2.46	0.46
34:D8:23:VAL:HG11	34:D8:46:ARG:HD3	1.97	0.46
1:AA:1003:G:H2'	1:AA:1004:A:C4'	2.46	0.46
2:AB:61:LEU:O	2:AB:64:ARG:HG3	2.15	0.46
29:B3:31:LEU:HD12	36:BA:989:G:OP1	2.14	0.46
36:BA:1353:A:H62	36:BA:1377:G:H2'	1.81	0.46
3:CC:36:ASP:HB3	3:CC:40:ARG:HH12	1.80	0.46
54:DV:79:VAL:O	54:DV:80:GLN:HB2	2.15	0.46
36:BA:455:C:N3	36:BA:473:G:H5'	2.31	0.46
8:AH:1:MET:CE	8:AH:2:LEU:H	2.22	0.46
2:CB:115:LEU:C	2:CB:117:GLU:H	2.19	0.46
13:CM:119:GLY:C	13:CM:120:LYS:HE3	2.37	0.46
36:BA:2059:A:O3'	41:BF:69:HIS:HA	2.15	0.46
36:DA:2567:G:H2'	36:DA:2568:C:H6	1.80	0.46
1:CA:374:A:O2'	1:CA:375:U:H5'	2.15	0.46
9:AI:10:ARG:O	9:AI:11:LYS:O	2.34	0.46
40:BE:66:HIS:O	40:BE:67:PHE:C	2.53	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:614:A:H2'	1:AA:615:C:H6	1.81	0.46
31:D5:11:THR:CG2	36:DA:1264:G:H5'	2.44	0.46
58:BZ:62:PRO:O	58:BZ:64:GLY:N	2.49	0.46
20:AT:41:ILE:C	20:AT:43:LEU:N	2.68	0.46
1:AA:106:C:C2'	1:AA:107:G:H5'	2.46	0.46
52:DT:3:ARG:O	52:DT:4:GLY:C	2.53	0.46
1:AA:782:A:C2'	1:AA:783:C:H5'	2.46	0.46
6:AF:28:ARG:HH11	6:AF:28:ARG:HG3	1.81	0.46
36:BA:2886:G:H2'	36:BA:2887:U:H6	1.79	0.46
1:CA:746:A:O2'	1:CA:747:C:H5'	2.16	0.46
7:AG:57:GLU:HB2	7:AG:60:LYS:CB	2.46	0.46
42:BG:121:ASN:ND2	42:BG:124:SER:N	2.63	0.46
36:BA:1660:C:C2	36:BA:2001:A:C2	3.03	0.46
46:DN:119:ARG:HG3	46:DN:119:ARG:HH11	1.80	0.46
13:AM:13:LYS:O	13:AM:14:ARG:C	2.55	0.46
1:CA:1300:G:C6	1:CA:1335:C:C5	3.04	0.46
36:BA:827:U:H5'	36:BA:828:U:O5'	2.15	0.46
36:BA:748:G:OP1	36:BA:2612:C:N4	2.48	0.46
36:BA:849:A:C8	36:BA:850:C:C5	3.04	0.46
36:DA:2124:G:H5'	38:DC:174:PRO:HD3	1.98	0.46
2:AB:58:ILE:CG2	2:AB:222:ILE:HD13	2.46	0.46
36:BA:230:U:H2'	36:BA:231:C:H6	1.80	0.46
1:CA:339:C:OP2	47:DO:97:ARG:NH1	2.49	0.46
10:AJ:65:LEU:CD1	14:AN:55:GLY:HA3	2.46	0.46
36:BA:134:C:O2'	36:BA:135:G:H5'	2.16	0.46
38:DC:123:VAL:HG13	38:DC:124:GLY:N	2.31	0.46
4:CD:95:GLY:O	4:CD:98:GLU:N	2.47	0.46
36:BA:2101:G:H2'	36:BA:2102:U:O4'	2.16	0.46
25:CZ:70:TYR:CE1	25:CZ:77:TYR:CD2	3.04	0.46
47:DO:71:ARG:HH22	47:DO:122:LEU:C	2.20	0.46
53:BU:59:ARG:NH1	53:BU:59:ARG:HG2	2.31	0.46
28:B2:38:GLN:C	28:B2:40:SER:N	2.69	0.46
36:BA:2491:U:H4'	36:BA:2570:G:OP1	2.16	0.46
1:CA:1150:U:O4'	1:CA:1150:U:O2	2.31	0.46
1:CA:393:A:H5'	1:CA:483:C:O2'	2.15	0.46
25:CZ:252:GLU:HA	25:CZ:266:VAL:HA	1.98	0.46
37:DB:42:C:HO2'	37:DB:43:C:P	2.39	0.46
42:DG:16:ARG:NH2	42:DG:33:ARG:HB3	2.31	0.46
42:DG:15:VAL:C	42:DG:17:PRO:HD2	2.37	0.46
42:DG:72:ARG:CB	42:DG:87:PRO:HD2	2.38	0.46
36:DA:2681:C:H6	36:DA:2683:C:H41	1.64	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:2:ARG:O	57:BY:3:VAL:HB	2.16	0.46
57:BY:45:VAL:CG1	57:BY:61:ILE:H	2.29	0.46
57:BY:81:LYS:HD2	57:BY:96:ILE:CD1	2.46	0.46
36:BA:833:U:OP1	48:BP:48:PRO:HB3	2.15	0.46
1:AA:1119:C:OP2	9:AI:9:ARG:NH2	2.45	0.46
31:B5:50:GLY:HA3	31:B5:56:LYS:CE	2.45	0.46
9:AI:33:PHE:CE2	9:AI:47:LEU:HD21	2.51	0.46
36:BA:2178:C:O4'	36:BA:2178:C:O2	2.34	0.46
13:CM:89:GLY:C	13:CM:91:ARG:N	2.69	0.46
43:BH:83:TYR:O	43:BH:84:SER:O	2.33	0.46
36:BA:605:C:OP1	41:BF:104:LYS:NZ	2.49	0.46
1:CA:259:G:C6	1:CA:260:G:C5	3.04	0.46
36:BA:2579:C:HO2'	40:BE:131:ALA:HB2	1.81	0.46
22:CV:59:U:O2'	22:CV:60:U:O5'	2.34	0.46
5:AE:100:VAL:HG23	5:AE:100:VAL:O	2.15	0.46
5:CE:6:PHE:HD2	5:CE:36:ASP:HB3	1.81	0.46
31:D5:3:LYS:H	31:D5:3:LYS:CD	2.26	0.46
25:AZ:233:GLY:O	25:AZ:234:ARG:HD2	2.16	0.46
42:BG:107:LEU:HD23	42:BG:111:LEU:HD11	1.98	0.46
55:DW:50:VAL:HG22	55:DW:105:VAL:HG23	1.98	0.46
38:BC:53:ARG:HH11	38:BC:53:ARG:CB	2.20	0.46
1:CA:1277:C:H2'	1:CA:1278:U:H5'	1.98	0.46
40:BE:38:THR:C	40:BE:40:GLU:H	2.19	0.46
1:CA:1288:A:N1	1:CA:1371:G:H1'	2.31	0.46
40:DE:170:LEU:CD1	40:DE:170:LEU:N	2.79	0.46
2:AB:77:ALA:O	2:AB:81:VAL:HG23	2.16	0.46
13:CM:14:ARG:NH2	13:CM:16:ASP:OD2	2.47	0.46
22:AV:24:G:C5	22:AV:25:C:C4	3.04	0.46
36:BA:1332:G:N2	36:BA:1610:A:H8	2.14	0.46
3:CC:99:VAL:HG23	3:CC:99:VAL:O	2.16	0.46
36:DA:1446:C:N4	36:DA:1465:G:H1	2.08	0.46
8:AH:44:PHE:HE2	8:AH:109:ILE:CD1	2.29	0.46
36:BA:548:A:C2'	36:BA:549:G:H5'	2.46	0.46
10:CJ:22:LYS:HE2	10:CJ:90:LEU:HD23	1.98	0.46
1:CA:423:G:C2'	1:CA:424:G:H5'	2.46	0.46
1:AA:190:U:O2	20:AT:105:SER:HB2	2.16	0.46
51:DS:63:THR:HB	51:DS:64:GLU:OE1	2.15	0.46
37:DB:96:U:N3	37:DB:97:G:N7	2.64	0.46
26:D0:50:ASN:ND2	26:D0:63:VAL:HG11	2.31	0.46
36:DA:956:G:O6	36:DA:958:U:H4'	2.16	0.46
40:BE:65:GLY:O	40:BE:66:HIS:O	2.34	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:382:G:H1	36:DA:392:C:N4	2.12	0.46
41:BF:22:ALA:HB1	41:BF:26:ALA:CB	2.46	0.46
7:AG:7:ALA:O	7:AG:8:GLU:CB	2.64	0.46
36:BA:389:G:H22	48:BP:72:PRO:CG	2.28	0.46
1:AA:782:A:O3'	1:AA:1515:C:H4'	2.16	0.46
22:CV:63:G:H2'	22:CV:64:A:O4'	2.15	0.46
2:CB:219:VAL:O	2:CB:220:ASP:C	2.54	0.46
52:DT:122:ASP:C	52:DT:124:ASP:N	2.69	0.46
36:DA:2060:A:OP1	41:DF:69:HIS:N	2.39	0.46
54:DV:21:ARG:HB3	54:DV:91:TYR:HD2	1.81	0.46
17:AQ:45:HIS:HB2	17:AQ:65:ILE:HD12	1.97	0.46
54:DV:59:ALA:HA	54:DV:95:LEU:O	2.16	0.46
22:AV:14:A:H2'	22:AV:15:G:H5'	1.98	0.46
36:DA:821:A:H5''	36:DA:822:U:H6	1.80	0.46
22:AW:40:C:H2'	22:AW:41:C:C6	2.51	0.46
36:DA:1755:A:H2'	36:DA:1756:G:H5'	1.98	0.46
36:DA:1956:U:H2'	36:DA:1957:C:H5'	1.97	0.46
1:CA:339:C:H2'	1:CA:340:U:C6	2.50	0.46
43:DH:156:ALA:O	43:DH:157:TYR:C	2.54	0.46
44:BJ:30:UNK:O	44:BJ:31:UNK:CB	2.63	0.46
36:DA:1850:G:N2	36:DA:1893:C:H1'	2.31	0.46
36:BA:2261:C:O2	36:BA:2327:A:C2	2.69	0.46
45:BK:8:UNK:O	45:BK:9:UNK:C	2.64	0.46
36:BA:771:G:O2'	36:BA:772:C:H5'	2.16	0.46
44:BJ:89:UNK:O	44:BJ:90:UNK:CB	2.63	0.46
1:CA:1495:U:H2'	1:CA:1496:C:C6	2.51	0.46
2:AB:208:ILE:H	2:AB:208:ILE:HG13	1.44	0.46
36:BA:2328:A:O5'	36:BA:2328:A:H8	1.99	0.46
38:DC:100:ILE:CG1	38:DC:127:LEU:CD1	2.89	0.45
38:DC:100:ILE:HD13	38:DC:127:LEU:HG	1.98	0.45
34:D8:43:GLN:C	34:D8:44:LYS:HD2	2.36	0.45
34:D8:57:ARG:C	34:D8:59:LYS:H	2.20	0.45
48:DP:56:SER:HB2	48:DP:60:MET:HE2	1.98	0.45
1:CA:1234:C:O2'	1:CA:1235:U:H5'	2.15	0.45
52:BT:78:LEU:C	52:BT:79:HIS:CD2	2.89	0.45
52:DT:77:PRO:C	52:DT:79:HIS:H	2.19	0.45
36:BA:327:G:O2'	36:BA:328:U:H5'	2.17	0.45
26:D0:70:GLN:NE2	26:D0:80:HIS:NE2	2.63	0.45
52:BT:22:PHE:CD1	52:BT:22:PHE:O	2.69	0.45
52:BT:50:ILE:CD1	52:BT:64:ARG:HB2	2.46	0.45
46:BN:43:THR:HB	46:BN:46:VAL:HG11	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BF:13:SER:O	41:BF:14:PRO:O	2.35	0.45
36:BA:2479:G:O6	36:BA:2480:C:C4	2.70	0.45
34:B8:4:MET:O	34:B8:62:LEU:CD1	2.65	0.45
30:D4:26:SER:CB	42:DG:105:LYS:HE3	2.46	0.45
36:DA:195:A:H61	36:DA:198:C:H3'	1.80	0.45
32:D6:38:LYS:HG3	36:DA:2344:U:OP1	2.16	0.45
43:DH:163:TYR:N	43:DH:163:TYR:HD1	2.13	0.45
4:CD:61:LYS:HE2	4:CD:62:GLN:NE2	2.31	0.45
19:CS:45:VAL:HG11	19:CS:64:GLU:HA	1.97	0.45
36:DA:1051:G:C4	36:DA:1052:C:N4	2.85	0.45
11:AK:54:ARG:O	11:AK:57:THR:CG2	2.54	0.45
6:CF:21:LEU:N	6:CF:21:LEU:CD2	2.79	0.45
2:CB:77:ALA:HA	2:CB:80:ILE:HD13	1.97	0.45
40:DE:110:GLY:O	50:DR:5:LYS:NZ	2.37	0.45
48:DP:84:ASN:HB3	48:DP:86:LYS:HB3	1.97	0.45
2:CB:72:GLY:HA2	2:CB:165:VAL:CG2	2.45	0.45
42:BG:112:PRO:O	42:BG:114:ILE:N	2.47	0.45
36:BA:2745:C:H2'	36:BA:2746:U:H6	1.71	0.45
36:BA:2657:A:O2'	43:BH:160:LYS:HE2	2.15	0.45
58:DZ:77:ASP:O	58:DZ:78:LYS:HB2	2.16	0.45
2:AB:17:PHE:CD2	2:AB:44:LEU:HD11	2.51	0.45
2:CB:31:TYR:CD2	2:CB:202:PRO:HG3	2.49	0.45
18:AR:29:PHE:CD1	18:AR:29:PHE:N	2.70	0.45
36:BA:2246:G:H2'	36:BA:2247:A:C8	2.51	0.45
2:CB:7:VAL:CG1	2:CB:11:LEU:HD12	2.46	0.45
12:CL:124:LYS:HD2	12:CL:125:PRO:CD	2.44	0.45
25:CZ:390:GLU:O	25:CZ:393:ARG:HG2	2.16	0.45
36:BA:1786:A:C2	36:BA:2606:C:H1'	2.49	0.45
1:CA:1160:G:C6	1:CA:1181:G:O6	2.69	0.45
7:CG:137:LYS:O	7:CG:141:VAL:HG23	2.16	0.45
1:AA:1006:C:N4	1:AA:1024:G:H21	2.13	0.45
46:DN:108:PRO:O	46:DN:109:LYS:CG	2.63	0.45
47:BO:24:VAL:O	47:BO:24:VAL:CG2	2.64	0.45
25:CZ:161:TYR:C	25:CZ:162:GLU:OE1	2.53	0.45
36:DA:564:C:C2'	36:DA:565:C:H5'	2.46	0.45
36:DA:2778:A:H4'	36:DA:2779:U:OP1	2.16	0.45
1:CA:1310:G:C2	1:CA:1328:C:C2	3.05	0.45
25:AZ:230:THR:CG2	25:AZ:295:ARG:HH11	2.29	0.45
25:AZ:298:VAL:HA	25:AZ:302:GLN:OE1	2.16	0.45
17:AQ:81:ARG:NH2	17:AQ:84:LEU:HD11	2.31	0.45
51:DS:11:LYS:N	51:DS:11:LYS:CD	2.78	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:135:LEU:HD13	4:CD:135:LEU:N	2.31	0.45
21:AU:9:ARG:NH1	21:AU:23:PRO:HD2	2.30	0.45
37:DB:3:C:N4	37:DB:118:G:H22	2.14	0.45
36:DA:2248:C:H2'	36:DA:2249:U:C5'	2.44	0.45
51:BS:29:PHE:HD1	51:BS:29:PHE:C	2.18	0.45
36:BA:2552:U:O2	36:BA:2554:U:H5'	2.16	0.45
1:CA:955:U:O5'	1:CA:955:U:H6	1.99	0.45
3:AC:135:LYS:O	3:AC:138:VAL:HG12	2.15	0.45
1:CA:1168:A:C6	1:CA:1169:A:C6	3.04	0.45
36:BA:1917:U:O2'	36:BA:1918:A:H5'	2.15	0.45
1:CA:1111:A:N1	3:CC:177:THR:OG1	2.46	0.45
36:DA:688:U:H5'	36:DA:1780:A:C2	2.51	0.45
36:DA:2684:U:O5'	36:DA:2684:U:H6	2.00	0.45
23:CX:11:U:C2'	23:CX:12:A:OP1	2.64	0.45
17:AQ:76:LEU:HD12	17:AQ:77:VAL:H	1.81	0.45
16:AP:72:ARG:O	16:AP:75:ARG:HB3	2.16	0.45
1:CA:745:C:O2'	1:CA:746:A:H5'	2.16	0.45
1:CA:1197:G:C2	1:CA:1198:G:C8	3.04	0.45
19:CS:21:GLU:HG3	19:CS:22:LEU:N	2.30	0.45
36:BA:751:A:C6	36:BA:789:A:C5	3.03	0.45
4:CD:76:ARG:O	4:CD:79:PHE:HB3	2.16	0.45
1:CA:621:A:O2'	1:CA:622:A:H5'	2.15	0.45
36:BA:2687:U:C4	36:BA:2688:U:C5	3.04	0.45
1:AA:377:G:OP1	16:AP:3:LYS:HD2	2.15	0.45
36:DA:85:G:N3	36:DA:103:A:C2	2.84	0.45
36:BA:2255:G:C4	36:BA:2256:G:C8	3.04	0.45
36:DA:2691:C:H6	36:DA:2691:C:H5'	1.80	0.45
25:AZ:162:GLU:N	25:AZ:162:GLU:OE1	2.49	0.45
36:BA:2063:C:O2	36:BA:2450:A:N1	2.49	0.45
4:CD:141:ARG:C	4:CD:185:PHE:HD2	2.19	0.45
32:B6:8:LYS:O	32:B6:9:LEU:HB3	2.17	0.45
36:DA:588:U:C2	41:DF:90:PHE:CE1	3.03	0.45
32:D6:15:GLU:OE1	32:D6:18:ARG:NE	2.49	0.45
36:DA:2415:G:H2'	36:DA:2416:C:C6	2.51	0.45
1:CA:977:A:O2'	1:CA:979:C:OP2	2.33	0.45
56:BX:80:ILE:O	56:BX:80:ILE:HG13	2.15	0.45
38:BC:100:ILE:CD1	38:BC:126:LYS:HB2	2.47	0.45
39:DD:30:GLU:H	39:DD:30:GLU:HG2	1.55	0.45
36:DA:1827:C:H2'	36:DA:1828:G:C5'	2.46	0.45
25:CZ:150:VAL:HA	25:CZ:153:GLU:OE2	2.17	0.45
36:DA:479:A:HO2'	36:DA:481:G:H8	1.58	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:479:A:H4'	36:BA:480:A:H5'	1.98	0.45
57:BY:30:VAL:HG12	57:BY:31:LEU:N	2.30	0.45
57:BY:81:LYS:O	57:BY:82:PRO:O	2.34	0.45
1:AA:347:G:N2	1:AA:348:G:H1'	2.31	0.45
13:AM:22:ILE:CD1	13:AM:25:ILE:HD12	2.29	0.45
43:DH:77:LYS:C	43:DH:79:VAL:H	2.20	0.45
1:AA:1127:G:H4'	1:AA:1148:U:O2	2.16	0.45
3:CC:77:ILE:C	3:CC:83:ARG:HB3	2.36	0.45
10:AJ:59:SER:OG	10:AJ:59:SER:O	2.28	0.45
1:CA:1225:A:H4'	19:CS:78:ARG:NE	2.32	0.45
28:D2:14:ARG:O	28:D2:67:LYS:HE2	2.16	0.45
58:DZ:51:ALA:CB	58:DZ:57:ILE:HD11	2.44	0.45
40:DE:49:LEU:N	40:DE:49:LEU:HD22	2.31	0.45
40:DE:82:ARG:HG3	40:DE:82:ARG:HH11	1.81	0.45
5:CE:147:ASP:O	5:CE:151:LEU:HG	2.16	0.45
36:DA:1142:U:H5''	36:DA:1142(A):A:C8	2.52	0.45
10:CJ:40:LEU:HD23	10:CJ:69:ASN:O	2.16	0.45
25:AZ:277:LEU:CD1	25:AZ:280:GLY:N	2.78	0.45
4:AD:10:ARG:O	4:AD:11:LEU:HD23	2.15	0.45
38:DC:18:LYS:HB3	38:DC:20:TYR:CE1	2.51	0.45
1:AA:1347:G:O2'	1:AA:1348:U:P	2.74	0.45
36:DA:221:A:N1	36:DA:265:A:O2'	2.47	0.45
36:BA:2408:U:C3'	36:BA:2408:U:C6	2.99	0.45
58:DZ:10:ARG:HG3	58:DZ:12:GLY:H	1.82	0.45
49:DQ:65:PHE:HD1	49:DQ:105:GLU:O	1.98	0.45
28:D2:38:GLN:CB	28:D2:44:LEU:HD22	2.39	0.45
36:BA:2756:U:H1'	36:BA:2757:A:C5'	2.40	0.45
5:AE:11:ILE:HG21	5:AE:105:VAL:HG22	1.96	0.45
9:CI:11:LYS:HG3	9:CI:108:VAL:HG13	1.98	0.45
40:BE:77:ILE:CG2	40:BE:78:LEU:H	2.24	0.45
50:DR:63:ARG:HA	50:DR:80:PHE:CE2	2.51	0.45
22:CW:7:A:H2	22:CW:67:C:N3	2.14	0.45
40:DE:101:ARG:HD2	40:DE:169:ASN:O	2.16	0.45
36:DA:2840:C:H5''	50:DR:53:HIS:HD2	1.77	0.45
36:DA:1341:U:OP1	36:DA:1397:U:N3	2.44	0.45
12:CL:34:ARG:HG2	12:CL:35:GLY:N	2.31	0.45
36:BA:745:G:H2'	36:BA:746:A:H5'	1.98	0.45
46:BN:55:VAL:CG2	46:BN:126:PRO:HA	2.45	0.45
49:DQ:6:ARG:HB3	49:DQ:6:ARG:NH1	2.28	0.45
41:DF:122:LYS:HG3	41:DF:191:ARG:HG3	1.98	0.45
36:DA:1038:C:H3'	36:DA:1039:G:C5'	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2893:G:H5'	36:BA:2894:G:C5'	2.41	0.45
37:DB:67:G:O2'	37:DB:68:C:O5'	2.35	0.45
58:DZ:145:GLU:O	58:DZ:146:ILE:C	2.54	0.45
49:BQ:3:MET:HB2	49:BQ:4:PRO:CD	2.42	0.45
1:CA:1329:A:OP2	13:CM:28:ALA:HB3	2.16	0.45
36:DA:886:C:H2'	36:DA:887:A:C4'	2.46	0.45
36:DA:1652:A:H2'	36:DA:1653:G:H5'	1.98	0.45
10:CJ:8:LEU:HG	10:CJ:96:ILE:HG22	1.97	0.45
22:AV:65:G:O2'	22:AV:66:U:H5'	2.16	0.45
22:AV:18:G:H2'	22:AV:57:G:H22	1.81	0.45
36:BA:1069:A:HO2'	36:BA:1070:A:P	2.39	0.45
4:CD:127:THR:HG23	4:CD:131:ARG:C	2.37	0.45
1:CA:35:G:H2'	1:CA:36:C:H6	1.80	0.45
36:BA:2578:G:C5	40:BE:140:SER:HB2	2.51	0.45
36:BA:810:U:OP1	36:BA:1253:A:N7	2.50	0.45
7:CG:57:GLU:HB2	7:CG:60:LYS:HB3	1.98	0.45
36:BA:528:A:H2	36:BA:2043:C:O5'	1.98	0.45
14:CN:27:CYS:C	14:CN:29:ARG:N	2.70	0.45
1:CA:992:U:HO2'	1:CA:993:G:P	2.39	0.45
2:CB:24:TRP:CZ3	2:CB:29:ALA:HB2	2.49	0.45
36:BA:36:G:N3	36:BA:450:G:O2'	2.50	0.45
36:DA:1304:C:O2'	36:DA:1305:C:H5'	2.16	0.45
22:CV:47:U:O2'	22:CV:48:C:OP1	2.30	0.45
39:BD:81:ALA:HA	39:BD:113:VAL:CG1	2.46	0.45
23:CX:11:U:H3'	23:CX:12:A:C8	2.51	0.45
16:CP:60:LEU:HD21	16:CP:66:PRO:CG	2.46	0.45
15:AO:6:GLU:N	15:AO:6:GLU:CD	2.70	0.45
31:D5:13:LYS:HG2	31:D5:16:ARG:HH21	1.80	0.45
1:AA:1250:A:H4'	9:AI:68:GLY:N	2.31	0.45
9:AI:75:ASP:O	9:AI:78:LYS:HB3	2.16	0.45
40:BE:17:ASP:HB3	40:BE:18:ASP:H	1.53	0.45
1:CA:622:A:C8	1:CA:623:C:C6	3.04	0.45
36:DA:729:G:H5'	36:DA:730:C:H5'	1.98	0.45
29:D3:10:LYS:HD3	29:D3:53:LEU:CD2	2.46	0.45
36:BA:250:G:H2'	36:BA:251:A:C8	2.51	0.45
1:AA:728:A:H2'	1:AA:729:A:C8	2.52	0.45
39:DD:52:ARG:HB3	39:DD:53:PHE:CD2	2.52	0.45
1:CA:1079:G:C6	1:CA:1080:A:N6	2.85	0.45
46:DN:7:LYS:O	46:DN:8:GLN:C	2.55	0.45
39:BD:158:ALA:O	39:BD:159:ALA:C	2.54	0.45
22:AV:37:A:H3'	22:AV:38:A:H8	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1382:G:O4'	36:BA:1572:A:H2	1.99	0.45
1:CA:484:G:H4'	1:CA:485:G:O5'	2.16	0.45
37:DB:37:C:C2'	37:DB:38:C:H5'	2.46	0.45
2:AB:23:ARG:HD2	2:AB:23:ARG:HA	1.64	0.45
24:AY:48:U:C5	24:AY:59:G:H5''	2.50	0.45
51:DS:77:ALA:O	51:DS:78:LEU:C	2.53	0.45
25:CZ:267:VAL:CG2	25:CZ:269:GLY:O	2.65	0.45
32:D6:27:LYS:HE2	36:DA:2285:C:P	2.55	0.45
58:BZ:180:VAL:CG2	58:BZ:181:GLU:H	2.21	0.45
36:DA:1503:U:H2'	36:DA:1504:C:C6	2.51	0.45
1:CA:1235:U:H2'	1:CA:1236:A:O5'	2.16	0.45
31:D5:49:CYS:O	31:D5:56:LYS:HG3	2.17	0.45
1:CA:1150:U:C2'	1:CA:1151:A:H5'	2.46	0.45
1:CA:1123:A:C2	1:CA:1150:U:C5	3.02	0.45
23:AX:26:A:H5'	23:AX:27:A:N7	2.31	0.45
36:DA:778:G:H5'	39:DD:48:ARG:HE	1.80	0.45
42:DG:60:LEU:O	42:DG:61:ALA:C	2.54	0.45
42:DG:72:ARG:NH1	42:DG:86:MET:HG3	2.32	0.45
57:BY:13:VAL:CG2	57:BY:14:LEU:N	2.79	0.45
43:DH:51:ARG:HG3	43:DH:52:VAL:N	2.32	0.45
1:AA:346:G:H5''	52:BT:43:GLN:NE2	2.31	0.45
1:AA:346:G:O2'	1:AA:347:G:P	2.74	0.45
28:D2:31:GLU:O	28:D2:35:LEU:N	2.42	0.45
49:BQ:136:ALA:O	49:BQ:138:ASP:N	2.49	0.45
35:D9:6:SER:HB3	36:DA:2466:C:H5''	1.98	0.45
1:CA:1203:C:H2'	1:CA:1204:A:H8	1.81	0.45
42:BG:47:LYS:N	42:BG:47:LYS:HD2	2.30	0.45
36:BA:2312:U:C3'	42:BG:71:THR:HG21	2.45	0.45
36:DA:1000:A:C2	36:DA:1155:A:C4	3.05	0.45
53:DU:104:GLN:HB3	54:DV:44:LYS:NZ	2.31	0.45
36:DA:2287:A:N6	36:DA:2344:U:N3	2.57	0.45
43:BH:125:VAL:HG12	43:BH:125:VAL:O	2.15	0.45
49:DQ:141:GLN:HE22	58:DZ:72:ARG:CA	2.29	0.45
36:BA:2777:G:C4'	36:BA:2778:A:H5'	2.47	0.45
37:DB:20:C:C3'	37:DB:21:G:H5''	2.47	0.45
42:BG:138:GLN:HG2	42:BG:153:ARG:CG	2.40	0.45
36:BA:624:C:O2	36:BA:624:C:H2'	2.15	0.45
1:CA:1239:A:N6	1:CA:1299:A:N6	2.58	0.45
17:CQ:15:MET:HB2	17:CQ:18:THR:HB	1.99	0.45
37:DB:30:C:C1'	37:DB:57:A:H61	2.15	0.45
36:BA:2346:A:H5'	36:BA:2383:G:C1'	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DR:2:ARG:HD2	50:DR:2:ARG:O	2.16	0.45
36:BA:1105:U:H2'	36:BA:1106:G:C8	2.50	0.45
27:D1:87:PRO:HA	27:D1:90:ILE:CG1	2.46	0.45
5:AE:75:THR:OG1	5:AE:76:ILE:N	2.48	0.45
12:AL:126:LYS:CE	12:AL:127:GLU:N	2.79	0.45
56:DX:28:PHE:H	56:DX:28:PHE:HD1	1.63	0.45
36:DA:1528:A:N6	36:DA:1544:A:C2	2.83	0.45
49:DQ:32:TYR:O	49:DQ:105:GLU:CB	2.64	0.45
58:DZ:77:ASP:O	58:DZ:78:LYS:HG2	2.17	0.45
1:CA:1256:A:N1	1:CA:1277:C:H2'	2.31	0.45
40:BE:77:ILE:C	40:BE:78:LEU:HG	2.37	0.45
22:CW:70:G:H2'	22:CW:71:G:O5'	2.15	0.45
22:CW:7:A:H4'	22:CW:8:U:OP1	2.15	0.45
38:BC:107:TRP:HE1	38:BC:110:PHE:HE2	1.63	0.45
36:DA:970:C:H2'	36:DA:971:C:C6	2.51	0.45
36:DA:1064:C:H2'	36:DA:1065:U:C5'	2.42	0.45
39:DD:201:HIS:C	39:DD:203:ASN:H	2.19	0.45
37:BB:67:G:O2'	37:BB:68:C:O5'	2.34	0.45
43:DH:137:ASP:CG	43:DH:140:LYS:HG3	2.36	0.45
43:DH:139:GLN:HE21	43:DH:140:LYS:CA	2.29	0.45
51:BS:67:ARG:HB3	51:BS:67:ARG:HE	1.57	0.45
36:DA:638:G:H2'	36:DA:639:U:O4'	2.16	0.45
36:BA:530:G:C5	36:BA:2022:U:H5''	2.51	0.45
17:AQ:44:ALA:HA	17:AQ:71:PHE:O	2.16	0.45
17:AQ:51:TYR:CZ	17:AQ:73:VAL:HG11	2.52	0.45
42:DG:145:THR:HB	42:DG:148:MET:HB3	1.98	0.45
43:DH:94:TYR:HE2	43:DH:160:LYS:HB3	1.81	0.45
17:AQ:80:GLY:O	17:AQ:81:ARG:HG2	2.16	0.45
3:AC:130:VAL:CG1	3:AC:134:ILE:HD11	2.46	0.45
54:DV:2:PHE:HB3	54:DV:42:GLY:HA2	1.98	0.45
37:DB:82:G:H1	37:DB:95:C:H42	1.64	0.45
49:BQ:97:VAL:O	49:BQ:97:VAL:HG23	2.16	0.45
20:AT:63:ILE:HG22	20:AT:77:ALA:HB1	1.98	0.45
36:DA:1471:A:H2'	36:DA:1472:A:C8	2.51	0.45
36:BA:271(F):C:O2'	36:BA:271(G):C:H5'	2.17	0.45
36:DA:271(F):C:H2'	36:DA:271(G):C:H5'	1.97	0.45
39:BD:2:ALA:O	39:BD:3:VAL:CB	2.64	0.45
1:AA:660:G:C2	1:AA:746:A:C2	3.05	0.45
46:DN:90:MET:HA	46:DN:90:MET:CE	2.46	0.45
36:BA:1917:U:H2'	36:BA:1918:A:C5'	2.46	0.45
36:BA:1963:U:H5'	36:BA:1963:U:O2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:410:G:N1	1:CA:431:A:OP2	2.46	0.45
49:DQ:66:ILE:HA	49:DQ:104:PHE:HB3	1.98	0.45
22:CV:24:G:C5	22:CV:25:C:C5	3.05	0.45
1:AA:955:U:H2'	1:AA:956:U:O4'	2.16	0.45
36:BA:2689:U:H5''	36:BA:2690:C:H5'	1.98	0.45
43:BH:154:PRO:O	43:BH:155:SER:CB	2.65	0.45
36:BA:2412:A:H2'	36:BA:2413:G:H5'	1.99	0.45
36:BA:431:U:O2'	36:BA:432:A:H5'	2.17	0.45
14:CN:50:LYS:C	14:CN:52:GLN:H	2.18	0.45
47:DO:25:LEU:HB2	47:DO:38:VAL:O	2.16	0.45
3:CC:151:VAL:HG22	3:CC:200:ALA:HA	1.98	0.45
1:AA:1303:C:H2'	1:AA:1304:G:H5'	1.97	0.45
44:BJ:62:UNK:C	44:BJ:64:UNK:H	2.29	0.45
43:BH:141:VAL:O	43:BH:145:ALA:N	2.49	0.45
36:DA:469:G:C2'	36:DA:470:A:H5''	2.46	0.45
7:AG:22:LEU:HD23	7:AG:22:LEU:O	2.16	0.45
1:CA:1480:G:O2'	1:CA:1481:U:H5'	2.17	0.45
36:DA:745:G:H2'	36:DA:746:A:H5'	1.97	0.45
1:CA:1038:C:H6	1:CA:1038:C:O5'	1.99	0.45
1:AA:1437:C:H2'	1:AA:1438:G:C8	2.50	0.45
36:BA:2817:G:H2'	36:BA:2818:G:O4'	2.17	0.45
47:BO:7:TYR:HE1	47:BO:20:MET:HE3	1.81	0.45
52:BT:93:ARG:HG2	52:BT:117:ASP:CB	2.40	0.45
32:D6:17:LYS:CB	32:D6:18:ARG:NH1	2.80	0.45
1:CA:1316:G:O2'	14:CN:18:VAL:HG11	2.16	0.45
28:B2:24:LEU:HD22	28:B2:25:VAL:HG23	1.98	0.45
25:AZ:197:ASP:C	25:AZ:199:ILE:H	2.20	0.45
60:AZ:501:GDP:H5'	60:AZ:501:GDP:H8	1.80	0.45
36:BA:1856:G:H2'	36:BA:1857:G:O4'	2.16	0.45
37:DB:42:C:O2	42:DG:92:VAL:HG23	2.16	0.45
57:BY:14:LEU:HD12	57:BY:15:VAL:H	1.81	0.45
57:BY:28:LYS:CG	57:BY:39:VAL:HG13	2.46	0.45
52:BT:28:VAL:HG23	52:BT:63:VAL:HG11	1.98	0.45
25:AZ:281:ILE:O	25:AZ:284:ASP:HB2	2.16	0.45
35:D9:30:PRO:O	35:D9:31:LYS:C	2.54	0.45
41:BF:137:LYS:CB	41:BF:137:LYS:NZ	2.79	0.45
1:CA:1202:G:H2'	1:CA:1203:C:O5'	2.17	0.45
48:BP:50:ARG:HG2	48:BP:50:ARG:NH1	2.31	0.45
13:CM:5:ALA:CB	13:CM:66:LEU:HD22	2.46	0.45
9:CI:91:ASP:C	9:CI:93:ARG:N	2.68	0.45
19:CS:43:GLU:O	19:CS:43:GLU:HG2	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1018:C:H2'	1:AA:1019:C:C6	2.52	0.45
58:DZ:100:VAL:HG23	58:DZ:126:VAL:HG21	1.98	0.45
55:DW:36:LEU:HD11	55:DW:47:VAL:CG1	2.37	0.45
14:CN:6:LEU:HD13	14:CN:23:ARG:HH22	1.81	0.45
48:BP:94:GLU:HG2	48:BP:96:THR:HG23	1.98	0.45
1:CA:198:G:N3	1:CA:199:G:C8	2.85	0.45
40:DE:47:VAL:CG2	40:DE:86:PRO:CD	2.95	0.45
48:BP:65:ARG:O	48:BP:67:MET:N	2.49	0.45
36:BA:2346:A:H5'	36:BA:2383:G:O4'	2.17	0.45
48:BP:59:LEU:HA	48:BP:61:ARG:HD2	1.98	0.45
4:AD:17:VAL:O	4:AD:18:LYS:C	2.55	0.45
58:BZ:97:GLU:HA	58:BZ:127:LYS:HA	1.98	0.45
4:AD:98:GLU:CG	4:AD:189:PRO:HG3	2.45	0.45
19:AS:21:GLU:HG3	19:AS:22:LEU:N	2.32	0.45
36:BA:2206:G:N2	36:BA:2207:G:C4'	2.79	0.45
1:AA:1423:G:C5'	47:BO:49:ARG:NH2	2.75	0.45
54:DV:61:VAL:HA	54:DV:93:GLU:O	2.16	0.45
46:DN:30:ILE:O	46:DN:34:LEU:CB	2.59	0.45
36:DA:1367:A:C5	36:DA:1368:G:H1'	2.51	0.45
50:BR:18:LEU:HD11	50:BR:22:ARG:NH2	2.32	0.45
36:DA:894:C:C2'	36:DA:895:U:H5'	2.47	0.45
1:CA:858:G:C5	1:CA:869:G:N7	2.84	0.45
13:CM:16:ASP:OD1	13:CM:16:ASP:N	2.49	0.45
6:AF:53:ALA:O	6:AF:54:LYS:CB	2.63	0.45
49:BQ:51:ARG:HG3	49:BQ:51:ARG:NH1	2.26	0.45
41:DF:53:THR:HG22	41:DF:56:GLU:HG3	1.97	0.45
43:BH:54:ARG:HH12	43:BH:62:LYS:HG3	1.81	0.45
29:B3:12:PRO:HG2	29:B3:13:ILE:H	1.81	0.45
39:DD:112:GLN:O	39:DD:115:GLN:HB3	2.17	0.45
8:CH:86:ILE:HG12	8:CH:135:CYS:CA	2.41	0.45
1:CA:1060:C:H4'	10:CJ:52:GLY:N	2.32	0.45
18:AR:72:ARG:O	18:AR:73:ALA:C	2.55	0.45
38:DC:3:HIS:CB	38:DC:7:TYR:HD2	2.28	0.45
1:CA:21:G:H2'	1:CA:22:G:C8	2.51	0.45
43:DH:68:THR:C	43:DH:70:THR:N	2.69	0.45
36:BA:1145:C:H2'	36:BA:1146:C:C6	2.52	0.45
36:DA:1470:G:N2	36:DA:1523:U:C4	2.84	0.45
1:CA:502:G:H2'	1:CA:503:C:C6	2.51	0.45
1:CA:706:A:O2'	11:CK:31:THR:HG21	2.15	0.45
40:DE:33:VAL:HG11	40:DE:89:ASP:O	2.17	0.45
20:AT:33:ILE:CG2	20:AT:63:ILE:HG12	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1416:G:N2	36:BA:1582:C:O2	2.49	0.45
31:B5:11:THR:HG21	36:BA:1264:G:C5'	2.47	0.45
12:CL:126:LYS:HE2	12:CL:126:LYS:CA	2.44	0.45
36:BA:723:G:C6	36:BA:724:U:C4	3.05	0.45
26:B0:36:ILE:HD11	36:BA:2355:C:C4'	2.45	0.45
36:DA:445:C:O2'	36:DA:446:G:H5'	2.16	0.45
1:CA:1514:C:O2'	1:CA:1515:C:H5'	2.17	0.45
47:DO:35:VAL:CB	47:DO:69:ILE:HD13	2.46	0.45
1:CA:684:A:O2'	1:CA:685:G:H5'	2.16	0.45
9:AI:77:ILE:O	9:AI:78:LYS:C	2.55	0.45
36:DA:1286:A:N6	36:DA:1289:C:C2	2.85	0.45
36:DA:473:G:O2'	36:DA:474:G:H5'	2.17	0.45
43:DH:148:ILE:O	43:DH:151:ILE:HB	2.16	0.45
42:BG:121:ASN:HD22	42:BG:124:SER:N	2.14	0.45
39:DD:136:ILE:HB	39:DD:165:ILE:CD1	2.47	0.45
13:CM:33:ALA:HB1	13:CM:59:TYR:HD2	1.81	0.45
36:BA:268:C:H42	36:BA:424:G:H1	1.63	0.45
36:DA:2689:U:O2'	36:DA:2690:C:OP2	2.29	0.45
1:AA:1294:G:O2'	1:AA:1295:G:H5'	2.17	0.45
4:AD:131:ARG:HD3	4:AD:131:ARG:H	1.82	0.45
2:AB:55:PHE:N	2:AB:55:PHE:HD1	2.15	0.45
38:DC:19:VAL:O	38:DC:19:VAL:HG12	2.17	0.45
36:BA:88:G:N3	36:BA:88:G:H2'	2.31	0.45
26:D0:69:PHE:CB	36:DA:857:C:OP2	2.64	0.45
32:B6:28:ARG:O	32:B6:32:ASN:HB3	2.17	0.45
48:DP:16:ARG:O	48:DP:18:ARG:N	2.50	0.45
2:CB:91:PRO:HG2	2:CB:155:LEU:CD2	2.47	0.45
1:CA:1151:A:O4'	10:CJ:39:PRO:HB2	2.16	0.45
39:DD:70:TRP:O	39:DD:72:LYS:N	2.49	0.45
37:DB:40:U:H3'	37:DB:41:U:C5'	2.45	0.45
42:DG:111:LEU:HD21	42:DG:120:LEU:HD21	1.98	0.45
42:DG:55:LYS:C	42:DG:57:ALA:H	2.20	0.45
52:BT:41:ARG:HD3	52:BT:42:ILE:N	2.31	0.45
2:CB:149:LEU:O	2:CB:152:PHE:O	2.34	0.45
57:DY:7:VAL:HB	57:DY:8:LYS:CD	2.47	0.45
46:BN:43:THR:HB	46:BN:46:VAL:CG1	2.47	0.45
39:BD:70:TRP:HA	39:BD:73:VAL:HG22	1.97	0.45
35:D9:35:ARG:O	35:D9:35:ARG:HG2	2.17	0.45
28:D2:51:ARG:HB3	28:D2:51:ARG:CZ	2.46	0.45
53:DU:106:PHE:O	53:DU:110:VAL:HG23	2.16	0.45
53:DU:98:LEU:C	53:DU:100:VAL:H	2.20	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DZ:168:GLU:O	58:DZ:168:GLU:CD	2.55	0.45
36:DA:606:U:H4'	36:DA:658:C:H4'	1.99	0.45
36:BA:2777:G:C5'	36:BA:2778:A:H5'	2.47	0.45
51:BS:24:LEU:HD11	51:BS:48:LEU:HD22	1.97	0.45
55:DW:48:ALA:O	55:DW:49:LYS:C	2.53	0.45
48:BP:97:PRO:O	48:BP:98:GLU:CB	2.62	0.45
1:CA:1242:C:O2'	1:CA:1243:C:H5'	2.16	0.45
27:B1:42:GLN:NE2	36:BA:379:G:N2	2.46	0.45
50:BR:79:LEU:O	50:BR:79:LEU:HD22	2.17	0.45
50:BR:82:GLU:O	50:BR:83:ILE:HD13	2.16	0.45
43:DH:19:VAL:CG1	43:DH:20:ALA:N	2.74	0.45
1:AA:1475:G:OP1	36:BA:1689:A:H1'	2.17	0.45
4:AD:10:ARG:HH11	4:AD:10:ARG:HG2	1.82	0.45
4:AD:19:LEU:O	4:AD:31:CYS:SG	2.75	0.45
36:DA:266:G:C3'	36:DA:267:C:H5''	2.47	0.45
30:B4:35:VAL:CG1	30:B4:36:CYS:N	2.80	0.45
36:DA:106:C:H2'	36:DA:107:C:C6	2.51	0.45
36:BA:535:C:O4'	53:BU:49:HIS:HB3	2.16	0.45
2:AB:30:ARG:NE	2:AB:31:TYR:HE1	2.14	0.45
36:BA:1109:C:C2'	36:BA:1110:G:H5'	2.47	0.45
36:DA:2491:U:H4'	36:DA:2570:G:OP1	2.16	0.45
5:CE:27:ARG:HG2	5:CE:28:PHE:N	2.31	0.45
40:BE:201:THR:OG1	40:BE:202:LYS:N	2.49	0.45
35:B9:7:VAL:HG21	35:B9:36:GLN:HB2	1.99	0.45
38:DC:193:ILE:C	38:DC:195:ALA:H	2.19	0.45
36:BA:1269:A:C6	36:BA:1270:C:N4	2.85	0.45
54:BV:61:VAL:HA	54:BV:93:GLU:O	2.17	0.45
2:CB:238:LEU:HG	2:CB:238:LEU:O	2.15	0.45
2:AB:115:LEU:O	2:AB:119:GLU:HG3	2.16	0.45
36:DA:2807:G:C2'	36:DA:2808:U:H5''	2.47	0.45
36:DA:2291:U:H2'	36:DA:2292:C:H6	1.78	0.45
23:AX:20:U:C2'	23:AX:21:C:H5'	2.45	0.45
1:AA:321:A:O2'	1:AA:322:C:H5'	2.17	0.45
2:CB:190:THR:O	2:CB:191:ASP:CB	2.64	0.45
2:CB:28:PHE:CD2	2:CB:194:PRO:HD3	2.44	0.45
7:AG:52:GLU:O	7:AG:53:LYS:C	2.55	0.45
1:AA:189(L):G:H2'	1:AA:190:U:C6	2.52	0.45
1:AA:80:G:N2	1:AA:90:U:H5'	2.31	0.45
53:BU:29:SER:CB	53:BU:30:LYS:NZ	2.78	0.45
51:DS:64:GLU:C	51:DS:66:ALA:H	2.19	0.45
16:AP:26:ARG:NH1	16:AP:26:ARG:HG2	2.27	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:620:C:N1	4:CD:135:LEU:HG	2.32	0.45
36:BA:2770:G:C5'	36:BA:2771:C:OP2	2.64	0.45
29:D3:35:ARG:CG	29:D3:36:VAL:N	2.78	0.45
41:DF:51:THR:HG23	41:DF:92:PRO:HD2	1.98	0.45
51:BS:31:SER:O	51:BS:32:LEU:C	2.55	0.45
36:BA:2039:C:H2'	36:BA:2040:C:H6	1.82	0.45
26:D0:41:ARG:NH2	36:DA:2387:U:H1'	2.32	0.45
1:CA:50:A:N6	1:CA:361:G:H4'	2.31	0.45
40:DE:100:GLU:O	40:DE:172:VAL:HG23	2.17	0.45
1:AA:865:A:H2	1:AA:918:A:H4'	1.81	0.45
1:CA:694:A:H2'	1:CA:695:A:O4'	2.17	0.45
1:CA:1385:G:O2'	1:CA:1386:G:H5'	2.17	0.45
36:BA:2236:C:H2'	36:BA:2237:G:O4'	2.16	0.45
58:BZ:103:ARG:HD2	58:BZ:136:PHE:HB2	1.97	0.45
36:BA:1619:G:C8	36:BA:1619:G:O5'	2.70	0.45
36:DA:1237:A:H1'	36:DA:1238:G:C1'	2.47	0.45
36:BA:387:U:H6	36:BA:387:U:O5'	1.99	0.45
24:AY:33:U:H2'	24:AY:34:C:H5''	1.99	0.45
36:BA:1169:G:N2	36:BA:1181:C:C2	2.85	0.45
46:BN:71:ILE:HG21	46:BN:84:LYS:HB3	1.98	0.45
8:CH:53:VAL:HG23	8:CH:58:TYR:HB2	1.98	0.45
1:CA:302:G:O3'	12:CL:17:LYS:HE3	2.17	0.45
1:AA:401:C:H2'	1:AA:402:G:H8	1.81	0.45
25:CZ:185:ASN:OD1	25:CZ:185:ASN:O	2.35	0.45
36:BA:1920:C:H2'	36:BA:1920:C:O2	2.16	0.45
28:B2:12:GLU:O	28:B2:12:GLU:HG2	2.17	0.45
39:BD:176:ARG:HG2	39:BD:176:ARG:HH11	1.81	0.45
17:AQ:19:VAL:HG23	17:AQ:19:VAL:O	2.17	0.45
51:BS:84:GLN:HG3	51:BS:84:GLN:O	2.17	0.45
5:CE:19:MET:SD	5:CE:24:ARG:HB3	2.57	0.45
1:CA:55:A:H8	1:CA:55:A:H5'	1.81	0.45
32:D6:11:LEU:HD22	32:D6:12:GLU:N	2.31	0.45
52:DT:42:ILE:HG13	52:DT:42:ILE:O	2.15	0.45
28:B2:38:GLN:OE1	28:B2:44:LEU:HD22	2.17	0.45
28:B2:59:ARG:HD3	28:B2:59:ARG:N	2.24	0.45
25:AZ:139:ASP:HB2	25:AZ:177:LEU:HD11	1.99	0.45
1:CA:1190:G:OP1	3:CC:5:ILE:HD12	2.16	0.45
36:BA:84:A:C5'	57:BY:9:LYS:HD2	2.46	0.45
57:BY:43:ASN:C	57:BY:44:ILE:HD12	2.37	0.45
52:BT:110:ILE:O	52:BT:112:ARG:N	2.49	0.45
22:CW:40:C:H2'	22:CW:41:C:C6	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1305:G:O2'	1:AA:1331:G:N2	2.49	0.45
1:AA:1330:U:H3'	1:AA:1331:G:O4'	2.16	0.45
10:AJ:38:ILE:CD1	10:AJ:71:LEU:HD22	2.28	0.45
10:CJ:45:ARG:O	10:CJ:64:GLU:HA	2.17	0.45
3:AC:14:ILE:HG12	3:AC:15:THR:N	2.31	0.45
36:BA:667:U:H2'	36:BA:668:G:O4'	2.17	0.45
54:DV:47:VAL:C	54:DV:49:THR:N	2.69	0.45
1:CA:192:U:O4'	20:CT:103:GLY:HA2	2.16	0.45
39:DD:85:ASP:OD1	39:DD:87:ASN:HB2	2.16	0.45
19:AS:31:ILE:HG23	19:AS:49:ILE:HA	1.98	0.45
43:BH:26:VAL:HG12	43:BH:79:VAL:HG11	1.98	0.45
25:CZ:306:LYS:O	25:CZ:309:SER:HB3	2.17	0.45
36:DA:654(P):C:O2'	36:DA:654(Q):C:H5'	2.17	0.45
4:CD:13:ARG:NH2	4:CD:36:ARG:HH12	2.11	0.45
58:DZ:153:SER:N	58:DZ:167:PRO:HB2	2.32	0.45
39:DD:156:ALA:HB1	39:DD:162:SER:HA	1.98	0.45
1:AA:375:U:C4	1:AA:376:G:N7	2.85	0.45
36:BA:1722:A:O2'	36:BA:1739:U:H5''	2.16	0.45
37:BB:57:A:C5	42:BG:29:TRP:HD1	2.35	0.45
55:BW:11:ARG:CZ	55:BW:98:LYS:HB3	2.47	0.45
11:CK:87:THR:HA	11:CK:91:ARG:HH21	1.81	0.45
1:CA:1239:A:O2'	1:CA:1240:U:OP2	2.28	0.45
37:DB:28:C:O2'	37:DB:29:A:H5'	2.16	0.45
46:DN:67:LEU:C	46:DN:69:GLN:N	2.69	0.45
50:BR:79:LEU:HA	50:BR:83:ILE:HG13	1.97	0.45
10:AJ:32:ALA:HB1	10:AJ:75:ILE:HD11	1.99	0.45
43:DH:23:ARG:O	43:DH:24:VAL:HG23	2.16	0.45
31:D5:4:HIS:CB	31:D5:5:PRO:HD2	2.43	0.45
36:DA:221:A:H1'	36:DA:233:A:C1'	2.47	0.45
13:AM:80:ARG:C	13:AM:82:MET:N	2.70	0.45
30:B4:20:ASN:HD22	30:B4:20:ASN:C	2.20	0.45
1:CA:324:G:OP1	20:CT:70:SER:HB2	2.15	0.45
20:CT:26:ASN:HD22	20:CT:27:LYS:N	2.15	0.45
2:AB:31:TYR:HE2	2:AB:50:GLU:HG3	1.82	0.45
36:DA:2178:C:O2	36:DA:2178:C:O4'	2.32	0.45
5:AE:12:LEU:HD13	5:AE:31:LEU:HB3	1.99	0.45
36:BA:557:U:O2	46:BN:45:ASN:HB2	2.17	0.45
1:CA:766:A:H2'	1:CA:767:A:C5'	2.44	0.45
24:CY:45:U:C3'	24:CY:46:7MG:H5''	2.45	0.45
36:DA:1210:A:H5''	36:DA:1212:G:C5'	2.46	0.45
36:DA:332:A:O2'	36:DA:333:G:O5'	2.34	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BE:7:VAL:HG11	52:BT:1:MET:H3	1.80	0.45
15:CO:39:LEU:O	15:CO:39:LEU:HD23	2.17	0.45
25:CZ:336:SER:HB3	25:CZ:355:LEU:HG	1.99	0.45
36:DA:1721:G:C6	36:DA:1739:U:H5'	2.51	0.45
36:DA:2199:A:C8	36:DA:2225:A:C6	3.04	0.45
1:AA:1157:A:H4'	1:AA:1158:C:O5'	2.17	0.45
14:CN:9:LYS:CG	14:CN:9:LYS:O	2.65	0.45
52:DT:106:SER:O	52:DT:107:ASP:HB3	2.16	0.45
27:B1:8:SER:HB3	27:B1:66:HIS:NE2	2.31	0.45
46:BN:3:THR:C	46:BN:4:TYR:CD1	2.90	0.45
1:CA:937:A:C2	1:CA:1379:G:C6	3.05	0.45
36:DA:639:U:H2'	36:DA:640:C:C5	2.51	0.45
7:CG:15:ASP:HB3	7:CG:20:ASP:H	1.81	0.45
26:D0:20:ARG:HG2	26:D0:20:ARG:HH11	1.81	0.45
36:BA:1344:G:H4'	36:BA:1384:A:C5	2.52	0.45
36:DA:2657:A:H2'	36:DA:2658:C:C5'	2.46	0.45
22:AV:7:A:C5	22:AV:49:C:C4	3.05	0.45
16:CP:8:ARG:O	16:CP:9:PHE:CD1	2.69	0.45
4:AD:145:GLU:C	4:AD:146:ILE:HD13	2.37	0.45
4:AD:145:GLU:CG	4:AD:184:LYS:HG2	2.47	0.45
36:DA:1332:G:N2	36:DA:1609:A:O2'	2.43	0.45
1:AA:1326:C:OP1	21:AU:12:LYS:HE3	2.16	0.45
21:AU:9:ARG:HD3	21:AU:22:ARG:HG3	1.97	0.45
36:BA:2020:A:C2	36:BA:2035:G:N1	2.85	0.45
1:CA:707:C:H2'	1:CA:708:C:C6	2.51	0.45
36:BA:589:C:H2'	36:BA:590:A:C8	2.51	0.45
11:CK:116:HIS:O	11:CK:117:ASN:HB2	2.17	0.45
1:CA:499:A:H4'	1:CA:500:G:OP1	2.16	0.45
36:DA:2176:A:C3'	36:DA:2176:A:C8	3.00	0.45
39:DD:118:VAL:HG22	39:DD:119:ALA:H	1.80	0.45
20:AT:44:ALA:O	20:AT:91:LEU:HB3	2.17	0.45
40:DE:65:GLY:O	40:DE:66:HIS:C	2.54	0.45
15:CO:3:ILE:O	15:CO:3:ILE:HG13	2.16	0.45
36:DA:688:U:O2'	36:DA:689:A:H5'	2.16	0.45
36:DA:669:G:H5''	36:DA:670:A:OP2	2.17	0.45
22:CW:32:U:H2'	22:CW:33:U:H6	1.80	0.45
1:AA:1069:C:C2'	1:AA:1070:U:O5'	2.64	0.45
20:CT:41:ILE:O	20:CT:43:LEU:N	2.49	0.45
24:CY:49:G:C2	24:CY:50:G:C8	3.05	0.45
47:DO:105:GLU:HA	47:DO:108:GLU:HG2	1.98	0.45
1:CA:933:G:N2	1:CA:935:A:O4'	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:58:PRO:O	7:AG:60:LYS:N	2.49	0.45
5:CE:94:ALA:HB3	5:CE:117:ASP:C	2.36	0.45
36:BA:1755:A:P	52:BT:113:LYS:NZ	2.90	0.45
1:AA:471:G:H21	16:AP:82:GLN:NE2	2.15	0.45
58:BZ:104:PHE:CZ	58:BZ:119:GLU:HB3	2.52	0.45
36:DA:1835:G:H5''	36:DA:1836:C:OP2	2.17	0.45
1:AA:1370:G:O3'	9:AI:12:GLU:HG3	2.16	0.45
20:AT:61:SER:O	20:AT:65:LYS:HG2	2.17	0.45
45:BK:54:UNK:O	45:BK:69:UNK:HA	2.17	0.45
2:AB:127:ILE:HG22	2:AB:128:GLU:N	2.32	0.45
1:CA:1368:G:OP2	9:CI:112:LYS:HD3	2.15	0.45
1:CA:662:G:H2'	1:CA:663:A:C8	2.51	0.45
25:AZ:178:ALA:O	25:AZ:182:MET:HG3	2.17	0.45
3:CC:175:LEU:HD21	3:CC:201:TYR:CD2	2.52	0.45
1:CA:56:U:H2'	1:CA:57:G:C8	2.51	0.45
57:DY:27:VAL:HG12	57:DY:29:GLU:OE1	2.17	0.45
1:CA:1123:A:H2	1:CA:1150:U:H5	1.62	0.45
1:CA:355:C:C2	1:CA:356:A:C8	3.05	0.45
57:BY:15:VAL:HG12	57:BY:17:SER:H	1.82	0.45
57:BY:45:VAL:HG13	57:BY:61:ILE:H	1.82	0.45
36:DA:2335:A:O2'	36:DA:2336:A:H5''	2.16	0.45
36:BA:1754:C:OP1	52:BT:96:ARG:NH1	2.35	0.45
49:DQ:120:ILE:C	49:DQ:122:GLY:N	2.69	0.45
41:BF:129:PHE:CD2	41:BF:163:VAL:HG21	2.52	0.45
14:CN:42:ILE:HG22	14:CN:43:CYS:H	1.80	0.45
20:CT:53:LEU:HD12	20:CT:53:LEU:H	1.81	0.45
43:BH:84:SER:O	43:BH:85:LYS:HB3	2.17	0.45
46:BN:68:GLU:HG3	46:BN:88:GLU:OE1	2.16	0.45
36:BA:1517:G:C5'	36:BA:1517:G:C8	2.93	0.45
1:CA:265:G:C2'	1:CA:266:G:H5''	2.35	0.45
31:B5:40:LYS:HB2	31:B5:41:PRO:HD2	1.99	0.45
42:BG:169:ALA:O	42:BG:172:LEU:HB3	2.17	0.45
48:DP:114:ILE:HG23	48:DP:130:PHE:CD1	2.52	0.45
5:CE:12:LEU:N	5:CE:12:LEU:CD1	2.79	0.45
27:D1:82:LEU:HD11	27:D1:90:ILE:CD1	2.47	0.45
13:CM:83:ASP:OD1	13:CM:85:GLY:N	2.49	0.45
36:BA:1059:G:H2'	36:BA:1060:U:C5	2.51	0.45
5:AE:144:THR:O	5:AE:145:LYS:C	2.55	0.45
2:AB:216:SER:OG	2:AB:217:ARG:N	2.49	0.45
6:AF:99:ALA:O	6:AF:100:ASN:HB2	2.16	0.45
1:AA:858:G:C5	1:AA:869:G:N7	2.83	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1370:G:O2'	1:CA:1371:G:H5'	2.17	0.45
40:BE:44:TYR:O	40:BE:45:THR:OG1	2.31	0.45
36:DA:2838:G:O2'	50:DR:45:ARG:HD3	2.16	0.45
4:CD:148:VAL:HG23	4:CD:181:MET:HB3	1.99	0.45
15:CO:39:LEU:HD13	15:CO:56:LEU:CB	2.41	0.45
40:BE:87:GLU:HG3	40:BE:89:ASP:H	1.82	0.45
25:AZ:363:MET:HB3	25:AZ:364:PRO:CD	2.47	0.45
50:DR:98:LEU:O	50:DR:113:LEU:N	2.42	0.45
1:CA:1228:C:OP1	13:CM:108:ARG:NH2	2.50	0.45
7:CG:78:ARG:HG3	7:CG:79:ARG:H	1.80	0.45
27:B1:11:ARG:HH11	27:B1:11:ARG:HG2	1.82	0.45
36:BA:654(H):G:H3'	36:BA:654(I):C:H5'	1.98	0.45
1:CA:1445:C:O2'	1:CA:1446:U:H5'	2.16	0.45
29:D3:49:LYS:NZ	36:DA:851:U:OP1	2.38	0.45
48:DP:110:TYR:HD1	48:DP:111:ARG:H	1.64	0.45
50:BR:12:ARG:CG	50:BR:12:ARG:NH1	2.77	0.45
36:DA:2108:C:C2'	36:DA:2108:C:O2	2.62	0.45
1:CA:15:G:H21	5:CE:18:ARG:HA	1.81	0.45
53:BU:29:SER:HB2	53:BU:30:LYS:CE	2.46	0.45
1:AA:337:C:H2'	1:AA:338:A:H8	1.81	0.45
36:BA:2012:G:C5'	55:BW:96:ILE:HD11	2.47	0.45
36:BA:2574:G:H2'	36:BA:2575:C:C6	2.52	0.45
27:B1:65:SER:O	27:B1:68:PRO:HD2	2.16	0.45
36:DA:271(V):G:H2'	36:DA:271(W):G:O4'	2.16	0.45
36:DA:2648:C:H2'	36:DA:2649:U:C6	2.51	0.45
48:DP:124:LYS:HE2	48:DP:143:GLY:CA	2.46	0.45
35:B9:2:LYS:CE	36:BA:2526:G:O2'	2.64	0.45
15:CO:5:LYS:HA	15:CO:5:LYS:HD2	1.77	0.45
39:DD:45:ASN:C	39:DD:46:GLN:OE1	2.55	0.45
18:AR:53:ARG:C	18:AR:55:ARG:N	2.69	0.45
36:DA:1796:U:H2'	36:DA:1797:C:C6	2.52	0.45
3:AC:60:ALA:HB2	10:AJ:93:GLY:HA2	1.98	0.45
36:DA:209:C:O2'	36:DA:210:C:H5'	2.16	0.45
36:DA:768:G:C6	36:DA:769:G:C6	3.05	0.45
49:DQ:42:ILE:O	49:DQ:94:VAL:HA	2.16	0.45
17:CQ:45:HIS:CB	17:CQ:65:ILE:HD13	2.46	0.45
1:CA:665:A:N1	1:CA:732:C:C4	2.85	0.45
1:CA:1504:G:OP1	1:CA:1507:A:H4'	2.16	0.45
2:AB:58:ILE:CG2	2:AB:222:ILE:CD1	2.95	0.45
1:CA:1056:U:O2'	1:CA:1057:G:H5'	2.17	0.45
36:DA:1417:C:H2'	36:DA:1418:G:O4'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1794:U:H2'	36:DA:1795:C:C6	2.52	0.45
1:AA:740:U:O2'	1:AA:741:G:H5'	2.16	0.45
13:CM:90:LEU:O	13:CM:94:ARG:HD3	2.17	0.45
20:AT:89:ARG:HD2	20:AT:104:LEU:HD22	1.99	0.45
36:BA:2314:C:O2'	36:BA:2315:G:H5'	2.16	0.45
2:AB:73:THR:O	2:AB:74:LYS:C	2.55	0.45
1:AA:1058:G:H2'	1:AA:1059:C:O4'	2.17	0.45
36:DA:60:G:C8	36:DA:63:U:C6	3.04	0.45
32:D6:5:VAL:CB	32:D6:8:LYS:HB3	2.46	0.45
34:D8:55:ALA:O	34:D8:59:LYS:HG3	2.17	0.45
1:CA:1221:G:O2'	1:CA:1222:G:H5'	2.17	0.45
22:AW:18:G:O4'	22:AW:58:A:C2	2.70	0.45
47:BO:3:GLN:HB2	47:BO:4:PRO:HD2	1.99	0.45
25:CZ:196:VAL:O	25:CZ:197:ASP:C	2.55	0.45
42:DG:11:TYR:CG	42:DG:12:TYR:N	2.85	0.45
42:DG:128:ARG:O	42:DG:129:GLY:O	2.35	0.45
36:DA:480:A:H1'	57:DY:44:ILE:HG21	1.98	0.45
57:DY:60:PHE:HB3	57:DY:61:ILE:H	1.58	0.45
26:D0:39:ARG:HH21	36:DA:2355:C:H1'	1.82	0.45
36:BA:1486:A:C2	36:BA:1504:C:N3	2.84	0.45
25:AZ:241:ARG:O	25:AZ:242:ILE:C	2.55	0.45
3:AC:78:GLY:HA3	3:AC:82:GLU:OE1	2.17	0.45
36:DA:2476:A:C2'	36:DA:2477:C:H5'	2.43	0.45
3:AC:6:HIS:HD1	14:AN:49:HIS:HB3	1.80	0.45
48:BP:50:ARG:HG3	48:BP:51:PHE:N	2.31	0.45
1:AA:1154:G:O2'	1:AA:1155:G:H5'	2.17	0.45
28:D2:51:ARG:CB	28:D2:51:ARG:HH11	2.27	0.45
54:DV:64:HIS:CE1	54:DV:92:THR:CG2	2.99	0.45
9:CI:4:TYR:HD1	9:CI:4:TYR:N	2.14	0.45
9:CI:42:ARG:HH22	9:CI:75:ASP:CG	2.20	0.45
9:CI:19:LEU:HD11	9:CI:59:PHE:CD2	2.45	0.45
41:BF:107:LYS:O	41:BF:110:LEU:N	2.43	0.45
41:BF:23:ASP:O	41:BF:115:ALA:HA	2.17	0.45
7:CG:28:ASN:O	7:CG:31:MET:N	2.50	0.45
55:BW:97:LYS:HZ3	55:BW:99:ARG:NH2	2.15	0.45
48:BP:124:LYS:HD3	48:BP:143:GLY:HA3	1.99	0.45
40:DE:49:LEU:HD11	40:DE:91:VAL:CG2	2.47	0.45
1:AA:546:G:OP1	4:AD:73:ARG:HB2	2.17	0.45
22:AW:74:C:C2'	22:AW:75:C:C5'	2.94	0.45
1:CA:538:G:H5''	12:CL:114:LYS:HB2	1.98	0.45
43:BH:23:ARG:O	43:BH:24:VAL:HG23	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2822:G:O6	50:DR:4:LEU:HD22	2.17	0.45
3:CC:179:ARG:NH1	3:CC:206:GLU:OE2	2.48	0.45
29:B3:15:TYR:CD2	29:B3:19:GLN:NE2	2.80	0.45
43:BH:41:MET:SD	43:BH:53:GLU:O	2.75	0.45
24:AY:66:C:H2'	24:AY:67:G:C8	2.51	0.45
42:BG:122:PRO:HA	42:BG:180:PHE:CD2	2.52	0.45
42:BG:60:LEU:HD22	42:BG:63:ILE:HD11	1.99	0.45
39:DD:147:LEU:HD11	39:DD:183:ARG:NH1	2.32	0.45
4:CD:128:VAL:O	4:CD:129:ASN:C	2.55	0.45
36:DA:415:A:N1	36:DA:2408:U:O2	2.50	0.45
58:DZ:10:ARG:HD2	58:DZ:36:LYS:HB2	1.98	0.45
1:CA:674:G:H4'	18:CR:81:PHE:CD2	2.51	0.45
47:BO:49:ARG:N	47:BO:49:ARG:HD3	2.32	0.45
1:CA:1371:G:OP2	9:CI:11:LYS:HD2	2.17	0.45
2:CB:130:ARG:HB3	2:CB:131:PRO:HD2	1.98	0.45
40:BE:102:VAL:O	40:BE:169:ASN:N	2.45	0.45
36:DA:1278:A:H5''	50:DR:36:THR:HG22	1.99	0.45
35:B9:9:ARG:HD2	35:B9:16:VAL:CG2	2.47	0.45
36:DA:1639:U:C2'	36:DA:1640:C:H5''	2.47	0.45
25:CZ:342:PHE:N	25:CZ:342:PHE:CD1	2.84	0.45
51:DS:30:ARG:HB3	51:DS:89:ARG:CZ	2.47	0.45
37:BB:68:C:O2'	37:BB:69:G:H5'	2.16	0.45
1:CA:446:G:H2'	1:CA:447:G:H5'	1.99	0.45
36:DA:896:A:N1	58:DZ:114:GLY:HA3	2.32	0.45
36:DA:146:G:H2'	36:DA:147:U:H5'	1.98	0.45
1:CA:1309:G:C6	1:CA:1329:A:C2	3.05	0.45
1:AA:80:G:H3'	1:AA:81:U:C5'	2.46	0.45
18:CR:31:LEU:H	18:CR:31:LEU:CD2	2.30	0.45
18:CR:31:LEU:HD23	18:CR:31:LEU:H	1.82	0.45
40:BE:1:MET:CG	40:BE:83:ASP:O	2.64	0.45
36:DA:1257:C:H4'	41:DF:83:PHE:CE1	2.51	0.45
27:D1:69:LYS:NZ	27:D1:72:GLU:HG2	2.32	0.45
36:BA:944:G:H5'	36:BA:945:A:C5'	2.46	0.45
39:BD:142:VAL:HG22	39:BD:143:HIS:N	2.31	0.45
36:DA:516:C:O2'	36:DA:517:C:H5'	2.16	0.45
55:BW:73:ALA:O	55:BW:106:ILE:HB	2.16	0.45
36:BA:2695:C:O2'	36:BA:2696:U:H5'	2.16	0.45
36:DA:532:A:C2	53:DU:28:ARG:NH2	2.81	0.45
1:AA:647:C:C2'	1:AA:648:A:H5'	2.46	0.45
36:BA:840:C:H2'	36:BA:841:A:C8	2.51	0.45
36:BA:633:A:C2'	36:BA:634:C:H5'	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2887:U:H2'	36:DA:2888:C:C6	2.51	0.45
36:DA:278:A:N1	36:DA:362:U:C4	2.85	0.45
15:CO:74:ASP:C	15:CO:76:GLU:H	2.20	0.45
36:BA:319:C:H2'	36:BA:320:A:O4'	2.16	0.45
2:AB:55:PHE:N	2:AB:55:PHE:CD1	2.84	0.45
1:AA:449:C:N4	1:AA:450:G:C2	2.85	0.45
37:DB:48:A:H2'	37:DB:49:C:C6	2.52	0.45
36:DA:433:C:O2'	36:DA:434:U:H5'	2.17	0.45
36:DA:398:G:H2'	36:DA:399:G:O4'	2.17	0.45
53:DU:30:LYS:HD3	53:DU:30:LYS:N	2.31	0.45
36:BA:2184:G:H2'	36:BA:2185:C:H1'	1.99	0.45
36:DA:2393:A:C3'	36:DA:2394:C:H6	2.29	0.45
36:DA:2394:C:OP1	48:DP:63:PRO:HD2	2.17	0.45
1:CA:346:G:O2'	1:CA:347:G:P	2.74	0.45
52:DT:32:TYR:HB2	52:DT:33:LYS:H	1.48	0.45
52:BT:77:PRO:C	52:BT:79:HIS:H	2.20	0.45
1:CA:393:A:C2'	1:CA:394:G:H5'	2.47	0.45
36:DA:782:A:N1	39:DD:226:MET:CE	2.79	0.45
36:BA:480:A:C2	36:BA:499:U:O2	2.70	0.45
26:D0:57:PHE:CD1	26:D0:57:PHE:N	2.83	0.45
1:AA:346:G:HO2'	1:AA:347:G:H8	1.64	0.45
1:AA:346:G:O2'	1:AA:347:G:O4'	2.35	0.45
52:BT:51:ARG:HB2	52:BT:98:LYS:HE3	1.98	0.45
25:AZ:9:LYS:NZ	25:AZ:73:ALA:HA	2.32	0.45
35:D9:1:MET:CE	35:D9:32:HIS:HD2	2.15	0.45
34:B8:7:HIS:HB3	34:B8:59:LYS:HZ3	1.82	0.45
9:AI:50:LEU:HA	9:AI:55:ALA:HB3	1.99	0.45
1:AA:1129:C:H4'	1:AA:1130:A:H8	1.82	0.45
42:DG:142:PRO:HG2	42:DG:143:GLU:HG2	1.98	0.45
36:BA:2110:G:OP1	36:BA:2118:U:N3	2.49	0.45
39:DD:243:GLY:O	39:DD:244:ARG:CB	2.65	0.45
43:BH:28:GLY:HA3	43:BH:79:VAL:HB	1.97	0.45
36:DA:654(Q):C:O2'	36:DA:654(R):C:H5'	2.16	0.45
36:BA:654(Q):C:O2'	36:BA:654(R):C:H5'	2.16	0.45
40:DE:27:LEU:HD12	40:DE:181:LEU:CD1	2.46	0.45
36:DA:611:C:H2'	36:DA:612:C:C6	2.47	0.45
7:CG:31:MET:HB2	7:CG:39:ALA:HB2	1.99	0.45
37:DB:21:G:H2'	37:DB:22:U:H5'	1.98	0.45
51:BS:106:ARG:HB3	51:BS:106:ARG:NH1	2.31	0.45
14:CN:4:LYS:O	14:CN:7:ILE:N	2.50	0.45
48:BP:83:VAL:H	48:BP:115:LEU:HD23	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:80:ILE:CD1	5:CE:80:ILE:O	2.65	0.45
40:DE:54:GLN:O	40:DE:75:VAL:CG2	2.65	0.45
1:CA:1242:C:H2'	1:CA:1243:C:C6	2.52	0.45
36:BA:2416:C:P	48:BP:66:GLY:HA3	2.57	0.45
36:BA:1452:A:O3'	50:BR:77:ARG:NH1	2.49	0.45
43:BH:20:ALA:HB3	43:BH:23:ARG:O	2.17	0.45
25:AZ:70:TYR:CD1	25:AZ:70:TYR:C	2.89	0.45
12:CL:43:VAL:HG23	12:CL:93:LEU:HD22	1.99	0.45
5:AE:110:LEU:HD13	5:AE:118:ILE:HG21	1.97	0.45
36:BA:467:G:O2'	36:BA:468:G:H5'	2.17	0.45
4:AD:79:PHE:O	4:AD:82:ALA:HB3	2.16	0.45
1:AA:368:U:C5	25:AZ:234:ARG:NE	2.85	0.45
2:CB:165:VAL:CG2	2:CB:166:ASP:N	2.76	0.45
56:BX:30:VAL:HG23	56:BX:31:HIS:N	2.32	0.45
36:BA:2133:G:C4'	36:BA:2133:G:OP1	2.64	0.45
18:CR:66:LEU:HG	18:CR:70:ILE:HD12	1.99	0.45
55:DW:10:VAL:HG11	55:DW:103:ILE:HD11	1.98	0.45
5:AE:31:LEU:HD22	5:AE:43:LEU:HD11	1.99	0.45
3:AC:20:SER:OG	3:AC:36:ASP:OD2	2.24	0.45
13:CM:74:VAL:O	13:CM:77:ASN:HB2	2.17	0.45
5:CE:27:ARG:C	5:CE:28:PHE:CD1	2.91	0.45
41:BF:32:LEU:C	41:BF:32:LEU:HD23	2.38	0.45
40:DE:170:LEU:H	40:DE:170:LEU:CD1	2.30	0.45
50:DR:26:LYS:O	50:DR:30:THR:HB	2.17	0.45
19:AS:78:ARG:HB2	19:AS:81:ARG:HH12	1.76	0.45
1:AA:1321:C:O2'	19:AS:78:ARG:NH1	2.50	0.45
35:B9:32:HIS:O	35:B9:34:GLN:N	2.49	0.45
1:CA:1050:G:O2'	1:CA:1051:C:P	2.74	0.45
36:BA:614(B):G:O2'	41:BF:44:ARG:HD2	2.17	0.45
36:BA:1658:C:H2'	36:BA:1659:U:C6	2.52	0.45
36:DA:483:A:H2'	36:DA:484:C:O4'	2.17	0.45
1:CA:952:U:O2'	1:CA:953:G:H5'	2.17	0.45
36:BA:1269:A:C4	36:BA:1270:C:C5	3.05	0.45
39:DD:148:GLU:CB	39:DD:151:LYS:HD2	2.42	0.45
47:DO:87:ILE:HG21	47:DO:91:LEU:HA	1.97	0.45
6:AF:62:TRP:C	6:AF:63:TYR:HD1	2.20	0.45
32:D6:42:TRP:HH2	36:DA:643:A:N7	2.15	0.45
43:DH:159:GLU:CG	43:DH:160:LYS:N	2.80	0.45
1:AA:970:C:N4	9:AI:128:ARG:OXT	2.47	0.45
1:AA:1412:C:H2'	1:AA:1413:A:H8	1.79	0.45
47:BO:97:ARG:C	47:BO:98:VAL:HG12	2.37	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CP:28:ARG:NH1	16:CP:29:ASP:OD1	2.49	0.45
36:DA:1427:A:H1'	36:DA:1428:C:OP2	2.17	0.45
15:CO:11:VAL:O	15:CO:13:GLN:N	2.50	0.45
36:BA:1797:C:C2'	36:BA:1798:U:H5'	2.47	0.45
36:BA:1507:A:O2'	36:BA:1509(A):A:H2	1.99	0.45
36:DA:370:G:H4'	36:DA:371:A:OP2	2.16	0.45
1:AA:1497:G:C2'	1:AA:1498:U:H5'	2.47	0.45
2:CB:142:LEU:HD21	2:CB:146:GLN:NE2	2.30	0.45
56:BX:29:TRP:CZ3	56:BX:78:LYS:HB3	2.52	0.45
1:AA:742:G:C2'	1:AA:743:U:H5'	2.47	0.45
8:AH:86:ILE:HD11	8:AH:136:GLU:HG2	1.99	0.45
36:BA:271(V):G:O2'	36:BA:271(W):G:H5'	2.17	0.45
36:DA:1812:A:H1'	39:DD:46:GLN:HE22	1.82	0.45
36:BA:2847:U:C5	36:BA:2848:G:C5	3.05	0.45
1:AA:106:C:HO2'	1:AA:107:G:H5'	1.82	0.45
36:DA:489:G:N2	36:DA:491:G:H1'	2.32	0.45
1:CA:1512:U:O2'	1:CA:1513:A:H5'	2.17	0.45
48:BP:71:VAL:N	48:BP:72:PRO:CD	2.80	0.45
36:BA:2295:C:C2	36:BA:2296:U:C5	3.05	0.45
36:BA:1215:G:O2'	36:BA:1216:G:H5'	2.17	0.45
3:AC:61:ALA:O	3:AC:63:ASN:N	2.50	0.45
36:DA:151:C:H2'	36:DA:152:G:H8	1.80	0.45
1:CA:158:G:O2'	1:CA:159:G:H5'	2.16	0.45
27:B1:33:LYS:N	27:B1:33:LYS:HD2	2.32	0.45
1:AA:313:A:H2'	1:AA:314:C:H6	1.82	0.45
39:BD:94:LEU:HD22	39:BD:95:LEU:H	1.81	0.45
36:DA:768:G:C6	36:DA:769:G:C5	3.05	0.45
1:CA:834:C:H2'	1:CA:835:U:C6	2.51	0.45
39:DD:28:GLU:N	39:DD:28:GLU:CD	2.71	0.45
20:AT:47:GLY:C	20:AT:49:ALA:H	2.19	0.45
26:B0:11:ARG:O	26:B0:14:ARG:NH2	2.50	0.45
22:CW:62:C:H2'	22:CW:63:G:H8	1.82	0.45
36:DA:1324:G:H4'	36:DA:1616:A:C2	2.51	0.45
2:AB:35:GLU:HA	2:AB:39:ILE:O	2.17	0.45
36:DA:2545:G:N3	36:DA:2565:A:H2	2.15	0.45
39:BD:248:SER:HB2	39:BD:249:PRO:HD2	1.98	0.45
1:CA:449:C:N4	1:CA:450:G:C2	2.85	0.45
36:BA:2031:A:C6	36:BA:2498:C:H1'	2.51	0.45
36:DA:1635:G:O2'	36:DA:1636:C:H5'	2.17	0.45
36:DA:1551:C:C5	36:DA:1552:G:N7	2.85	0.45
1:AA:141:A:H1'	1:AA:182:U:C2	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:758:G:H8	1:AA:758:G:O5'	2.00	0.45
36:DA:55:G:H2'	36:DA:56:A:H8	1.82	0.45
1:AA:11:G:H2'	1:AA:12:U:O4'	2.17	0.45
1:AA:359:U:O2'	1:AA:360:A:H5'	2.17	0.45
1:CA:509:A:C6	1:CA:510:A:N1	2.85	0.45
28:B2:25:VAL:HG12	28:B2:29:LYS:NZ	2.32	0.45
25:AZ:118:GLU:C	25:AZ:120:ILE:H	2.18	0.45
39:BD:99:ASP:OD1	39:BD:100:GLY:N	2.50	0.45
43:BH:52:VAL:HG21	43:BH:69:ARG:HD2	1.99	0.45
42:DG:57:ALA:O	42:DG:59:GLU:N	2.50	0.45
36:DA:143:G:C1'	56:DX:37:THR:HG21	2.47	0.45
57:BY:28:LYS:HB2	57:BY:37:VAL:HB	1.99	0.45
57:BY:76:CYS:O	57:BY:78:ALA:N	2.50	0.45
28:D2:52:ASP:O	28:D2:53:LEU:C	2.55	0.45
2:CB:119:GLU:OE1	2:CB:153:ARG:NH2	2.50	0.45
58:BZ:102:LEU:HD21	58:BZ:124:ILE:HD13	1.98	0.45
2:CB:114:ARG:HD2	2:CB:141:GLU:OE1	2.17	0.45
36:BA:690:G:H2'	36:BA:691:C:C6	2.52	0.45
5:AE:82:VAL:HG21	5:AE:138:ALA:CA	2.46	0.45
5:AE:90:VAL:C	5:AE:91:LEU:HD12	2.37	0.45
26:D0:31:VAL:HG11	26:D0:67:VAL:CG2	2.47	0.45
19:CS:40:ILE:HB	19:CS:67:VAL:O	2.16	0.45
51:BS:52:SER:H	51:BS:56:LEU:HD13	1.82	0.45
16:CP:21:VAL:CG1	16:CP:34:GLU:HB3	2.47	0.45
52:BT:39:ARG:N	52:BT:39:ARG:HD2	2.15	0.45
4:AD:81:GLU:OE2	4:AD:139:ARG:NH1	2.49	0.45
39:DD:64:ILE:O	39:DD:64:ILE:CG1	2.64	0.45
51:BS:16:ASN:C	51:BS:18:ILE:N	2.69	0.45
1:CA:1240:U:OP1	7:CG:116:ALA:HA	2.17	0.45
48:BP:59:LEU:CA	48:BP:61:ARG:NE	2.76	0.45
46:DN:23:LEU:C	46:DN:25:ARG:H	2.20	0.45
40:DE:38:THR:HG23	40:DE:39:PRO:HD2	1.99	0.45
39:BD:126:GLN:O	39:BD:193:VAL:HG11	2.17	0.45
41:DF:123:LEU:HD13	41:DF:192:LEU:HD22	1.98	0.45
48:DP:115:LEU:O	48:DP:116:GLY:O	2.34	0.45
1:CA:397:A:N7	1:CA:547:A:O2'	2.34	0.45
19:CS:6:LYS:C	19:CS:7:LYS:HD3	2.35	0.45
33:B7:33:ARG:HD2	36:BA:467:G:OP1	2.17	0.45
48:DP:97:PRO:O	48:DP:98:GLU:CB	2.62	0.45
8:CH:7:ALA:CA	8:CH:85:ARG:HD3	2.46	0.45
30:B4:9:LEU:C	30:B4:10:VAL:HG12	2.38	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1446:C:N4	36:BA:1465:G:H1	2.07	0.45
49:DQ:52:VAL:C	49:DQ:54:MET:H	2.20	0.45
52:DT:94:ALA:C	52:DT:96:ARG:N	2.67	0.45
2:AB:8:LYS:C	2:AB:10:LEU:N	2.71	0.45
2:AB:46:LYS:O	2:AB:48:MET:N	2.50	0.45
1:AA:192:U:C1'	20:AT:103:GLY:HA2	2.47	0.45
50:BR:26:LYS:NZ	50:BR:71:GLN:HE21	2.14	0.45
15:CO:35:ARG:O	15:CO:36:ILE:C	2.54	0.45
1:CA:160:A:H2'	1:CA:161:A:O4'	2.17	0.45
50:BR:44:LEU:CD1	50:BR:48:VAL:HB	2.47	0.45
36:DA:2293:C:H5''	51:DS:92:TYR:OH	2.17	0.45
36:BA:2317:C:H2'	36:BA:2318:G:C5'	2.42	0.45
37:BB:16:G:HO2'	37:BB:17:C:H6	1.62	0.45
27:D1:50:ARG:HD3	27:D1:57:GLU:OE2	2.17	0.45
8:AH:112:LEU:CD2	8:AH:112:LEU:N	2.75	0.45
1:AA:186:C:H2'	1:AA:187:C:C6	2.52	0.45
25:CZ:229:PHE:O	25:CZ:236:THR:HA	2.17	0.45
36:DA:572:A:N1	36:DA:2033:A:C2	2.85	0.45
55:BW:46:PHE:O	55:BW:50:VAL:HG12	2.17	0.45
8:CH:29:SER:HB3	8:CH:32:LYS:CB	2.46	0.45
25:AZ:72:THR:C	25:AZ:74:LYS:N	2.69	0.45
1:CA:697:U:C2'	1:CA:698:G:H5'	2.46	0.45
3:CC:34:LEU:CD2	3:CC:38:ARG:NE	2.80	0.45
36:DA:1499:C:C6	36:DA:1499:C:H5'	2.50	0.45
36:DA:2489:G:C5	36:DA:2490:G:C6	3.05	0.45
27:D1:65:SER:O	27:D1:66:HIS:CB	2.64	0.45
36:DA:318:C:H2'	36:DA:319:C:H6	1.81	0.45
36:DA:320:A:H4'	36:DA:322:A:C8	2.52	0.45
53:DU:2:PRO:O	53:DU:4:ALA:N	2.50	0.45
36:DA:2749:A:C4	36:DA:2750:A:N7	2.85	0.45
17:CQ:16:GLN:O	17:CQ:17:LYS:HB2	2.17	0.45
5:AE:84:PHE:CE2	5:AE:133:TYR:HB3	2.52	0.45
11:CK:66:LEU:O	11:CK:67:ASP:C	2.55	0.45
1:AA:1477:C:H2'	1:AA:1478:C:C6	2.52	0.45
24:CY:40:C:H2'	24:CY:41:C:C6	2.52	0.45
58:DZ:149:SER:HB3	58:DZ:173:ALA:HA	1.99	0.45
30:D4:12:ALA:HB2	30:D4:29:PRO:HA	1.97	0.45
24:CY:51:G:O2'	25:CZ:338:TYR:HD1	2.00	0.45
36:BA:571:A:C5	36:BA:575:A:C8	3.05	0.45
47:DO:105:GLU:N	47:DO:105:GLU:OE1	2.50	0.45
1:CA:1385:G:H2'	1:CA:1386:G:H5'	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2221:G:C2	36:DA:2222:G:C8	3.05	0.45
15:AO:71:GLN:CG	15:AO:71:GLN:O	2.65	0.45
36:BA:271(H):G:O2'	36:BA:271(I):G:H8	2.00	0.45
51:BS:26:LEU:O	51:BS:26:LEU:HD23	2.17	0.45
1:AA:642:A:C6	1:AA:643:C:C4	3.04	0.45
1:AA:764:C:C2'	1:AA:765:G:H5'	2.47	0.45
1:CA:643:C:O2'	1:CA:644:G:H5'	2.16	0.45
24:AY:34:C:H2'	24:AY:35:C:C6	2.52	0.45
40:BE:114:ALA:N	40:BE:158:GLY:O	2.49	0.45
1:AA:833:U:H1'	1:AA:854:G:N2	2.32	0.45
10:AJ:94:VAL:HG12	10:AJ:95:GLU:N	2.32	0.45
11:AK:20:TYR:CE2	11:AK:83:ILE:HD12	2.52	0.45
36:DA:88:G:H2'	36:DA:88:G:N3	2.31	0.45
40:BE:79:ARG:HH11	40:BE:79:ARG:HG2	1.81	0.45
19:AS:58:VAL:O	19:AS:58:VAL:HG23	2.16	0.45
38:BC:45:ALA:HA	38:BC:211:SER:O	2.16	0.45
36:BA:957:A:N6	36:BA:2459:A:C8	2.84	0.45
25:CZ:24:LYS:HD3	60:CZ:501:GDP:O1B	2.16	0.44
47:DO:122:LEU:HD13	52:DT:72:VAL:HG11	2.00	0.44
52:DT:89:VAL:CG1	52:DT:91:ARG:HE	2.30	0.44
32:B6:15:GLU:OE2	32:B6:41:PRO:HB2	2.17	0.44
32:B6:15:GLU:OE1	32:B6:18:ARG:CD	2.65	0.44
53:BU:88:ILE:C	53:BU:90:VAL:HG23	2.37	0.44
36:DA:1858:G:OP2	36:DA:1858:G:H8	1.99	0.44
25:AZ:117:ARG:O	25:AZ:120:ILE:HB	2.17	0.44
36:BA:1858:G:O2'	36:BA:1884:A:N6	2.51	0.44
36:DA:1789:A:H2'	36:DA:1790:C:H6	1.82	0.44
39:DD:49:ILE:CG1	39:DD:49:ILE:O	2.65	0.44
25:CZ:173:GLY:O	25:CZ:174:SER:C	2.55	0.44
42:DG:120:LEU:N	42:DG:179:PRO:O	2.47	0.44
56:DX:53:LYS:HB3	56:DX:82:GLN:HB3	1.99	0.44
56:DX:7:VAL:O	56:DX:7:VAL:HG12	2.17	0.44
25:CZ:277:LEU:CD1	25:CZ:278:GLN:N	2.80	0.44
57:BY:44:ILE:CG2	57:BY:45:VAL:N	2.80	0.44
28:D2:35:LEU:HD13	28:D2:36:ARG:N	2.32	0.44
22:CW:39:U:O2'	22:CW:40:C:H5'	2.16	0.44
13:AM:54:VAL:O	13:AM:55:ARG:C	2.54	0.44
41:BF:10:PRO:HG2	41:BF:13:SER:OG	2.16	0.44
36:BA:583:G:C4	36:BA:584:C:C5	3.05	0.44
3:AC:6:HIS:HD2	3:AC:8:ILE:H	1.65	0.44
1:AA:1127:G:O2'	1:AA:1128:C:H5'	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:70:ARG:HG2	10:AJ:70:ARG:HH11	1.81	0.44
54:DV:47:VAL:O	54:DV:49:THR:N	2.50	0.44
36:DA:943:U:OP2	48:DP:38:GLN:NE2	2.50	0.44
4:CD:202:LEU:O	4:CD:205:GLU:N	2.50	0.44
12:AL:102:ARG:HH11	12:AL:102:ARG:HG2	1.82	0.44
36:BA:2779:U:H1'	36:BA:2781:A:C6	2.52	0.44
55:BW:10:VAL:HG23	55:BW:101:SER:O	2.16	0.44
10:CJ:4:ILE:HB	10:CJ:74:ILE:CD1	2.45	0.44
4:CD:24:GLU:O	4:CD:27:TYR:HB3	2.17	0.44
48:BP:24:GLY:CA	48:BP:33:ARG:NH1	2.69	0.44
36:BA:606:U:H4'	36:BA:658:C:H4'	1.99	0.44
51:DS:85:VAL:O	51:DS:106:ARG:HG2	2.17	0.44
11:CK:59:TYR:CZ	11:CK:63:LEU:HD21	2.49	0.44
22:AW:74:C:H5'	22:AW:74:C:C6	2.32	0.44
13:AM:96:LEU:CB	13:AM:97:PRO:HD2	2.38	0.44
31:B5:45:VAL:CG1	31:B5:46:CYS:H	2.17	0.44
12:CL:102:ARG:HG2	12:CL:102:ARG:HH11	1.82	0.44
51:DS:12:PHE:CD1	51:DS:12:PHE:C	2.90	0.44
5:CE:32:VAL:O	5:CE:43:LEU:HD12	2.17	0.44
3:CC:115:LEU:O	3:CC:116:VAL:C	2.53	0.44
43:BH:12:PRO:HD3	43:BH:48:GLY:HA2	1.99	0.44
1:CA:524:G:H2'	1:CA:525:C:H6	1.71	0.44
31:D5:4:HIS:O	31:D5:5:PRO:O	2.35	0.44
30:B4:16:CYS:HA	30:B4:33:VAL:CG1	2.48	0.44
30:B4:19:GLY:O	30:B4:20:ASN:C	2.56	0.44
36:BA:2840:C:H2'	36:BA:2841:C:H6	1.82	0.44
36:DA:1531:C:N3	36:DA:1539:G:N2	2.64	0.44
36:BA:2206:G:N2	36:BA:2207:G:C5'	2.66	0.44
2:CB:8:LYS:CE	2:CB:217:ARG:HH22	2.30	0.44
36:DA:331:A:C1'	36:DA:332:A:OP1	2.65	0.44
10:CJ:30:SER:HB3	10:CJ:84:GLN:NE2	2.32	0.44
5:CE:50:GLU:HB2	5:CE:53:LEU:HB2	1.99	0.44
20:CT:56:MET:CE	20:CT:85:MET:HG2	2.47	0.44
36:BA:2892:A:H62	36:BA:2893:G:N2	2.14	0.44
42:BG:31:VAL:O	42:BG:33:ARG:HD3	2.17	0.44
1:CA:1309:G:C6	1:CA:1329:A:N1	2.85	0.44
1:CA:1005:A:C2'	1:CA:1006:C:H5'	2.47	0.44
46:BN:108:PRO:O	46:BN:109:LYS:CG	2.65	0.44
49:BQ:113:GLN:O	49:BQ:114:ALA:C	2.55	0.44
36:BA:2463:C:C2'	36:BA:2464:C:H5'	2.47	0.44
26:B0:43:THR:HG21	36:BA:2336:A:H61	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:D0:84:LEU:H	26:D0:84:LEU:HD12	1.81	0.44
36:DA:1331:A:H2'	36:DA:1333:C:H5	1.81	0.44
36:DA:1607:C:H4'	36:DA:1608:A:O5'	2.16	0.44
36:BA:1509(B):A:H2'	36:BA:1510:G:O4'	2.16	0.44
36:DA:690:G:H2'	36:DA:691:C:C6	2.52	0.44
56:DX:46:ALA:C	56:DX:47:PHE:CD1	2.90	0.44
40:DE:184:VAL:C	40:DE:186:GLY:N	2.70	0.44
17:AQ:52:LYS:HD2	17:AQ:52:LYS:H	1.81	0.44
39:BD:261:LYS:HZ1	39:BD:263:ARG:NH2	2.14	0.44
7:AG:94:ARG:O	7:AG:95:ARG:C	2.55	0.44
1:CA:1458:G:OP1	20:CT:35:THR:OG1	2.30	0.44
1:CA:1165:C:O2'	1:CA:1166:G:H5'	2.17	0.44
36:BA:2405:G:O2'	36:BA:2406:U:OP2	2.35	0.44
36:DA:2386:C:H2'	36:DA:2387:U:C6	2.52	0.44
1:CA:472:A:H2'	1:CA:473:G:C8	2.52	0.44
1:AA:1513:A:H2'	1:AA:1514:C:C6	2.52	0.44
12:AL:18:VAL:O	12:AL:19:ARG:HB3	2.17	0.44
1:CA:828:A:H2'	1:CA:829:G:O4'	2.17	0.44
36:DA:1034:G:H2'	36:DA:1035:U:O4'	2.16	0.44
1:AA:421:U:C5	3:AC:127:ARG:NH1	2.86	0.44
36:BA:938:G:C2	36:BA:939:G:C8	3.05	0.44
36:BA:2623:G:O5'	36:BA:2826:A:H1'	2.17	0.44
36:BA:11:G:H2'	36:BA:12:U:H6	1.82	0.44
44:DJ:98:UNK:O	44:DJ:102:UNK:CB	2.65	0.44
36:DA:244:A:H4'	48:DP:74:GLU:HB2	1.98	0.44
36:DA:2016:U:H2'	36:DA:2017:U:C6	2.52	0.44
7:AG:26:PHE:CE2	7:AG:30:ILE:HD11	2.52	0.44
1:AA:1232:U:H5''	9:AI:124:GLN:HB2	2.00	0.44
3:CC:188:LEU:N	3:CC:188:LEU:HD23	2.32	0.44
25:AZ:366:ASP:OD1	25:AZ:367:ASN:N	2.50	0.44
25:AZ:41:ASN:O	25:AZ:42:VAL:C	2.56	0.44
36:DA:466:A:O4'	36:DA:683:C:H4'	2.17	0.44
20:AT:12:ALA:O	20:AT:15:ARG:HB2	2.16	0.44
36:BA:2184:G:H2'	36:BA:2185:C:C1'	2.47	0.44
2:CB:36:ARG:H	2:CB:41:ILE:HD13	1.82	0.44
47:DO:107:ARG:HA	47:DO:112:MET:HE2	1.98	0.44
36:BA:996:A:H1'	53:BU:92:ARG:NH2	2.31	0.44
2:AB:126:GLU:HA	2:AB:129:GLU:OE2	2.16	0.44
36:BA:481:G:H1'	36:BA:506:G:N2	2.32	0.44
57:BY:84:ARG:NH2	57:BY:97:ARG:HD2	2.32	0.44
49:BQ:141:GLN:NE2	49:BQ:141:GLN:CA	2.76	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BZ:123:ASP:O	58:BZ:124:ILE:HG23	2.17	0.44
36:DA:310:A:P	57:DY:18:GLY:HA2	2.57	0.44
36:BA:2780:G:OP2	46:BN:118:LYS:HE3	2.16	0.44
3:CC:43:LEU:HA	3:CC:43:LEU:HD23	1.70	0.44
3:AC:12:LEU:CB	3:AC:18:TRP:HZ3	2.28	0.44
43:DH:85:LYS:NZ	43:DH:87:LEU:H	2.16	0.44
36:BA:833:U:H2'	36:BA:834:C:C6	2.52	0.44
1:AA:1145:C:HO2'	1:AA:1146:A:P	2.40	0.44
32:D6:25:LYS:O	36:DA:2286:A:N1	2.50	0.44
43:BH:98:LEU:HB3	43:BH:125:VAL:CG2	2.47	0.44
36:BA:2777:G:H5''	36:BA:2778:A:H5''	1.99	0.44
42:BG:103:LEU:O	42:BG:104:GLU:C	2.56	0.44
8:CH:105:ARG:HG3	8:CH:105:ARG:O	2.17	0.44
40:DE:54:GLN:O	40:DE:75:VAL:HG23	2.18	0.44
4:AD:202:LEU:O	4:AD:204:ILE:N	2.50	0.44
50:BR:73:VAL:HG12	50:BR:77:ARG:NH1	2.32	0.44
10:AJ:78:ASN:O	10:AJ:79:ARG:HD3	2.17	0.44
31:D5:3:LYS:N	31:D5:3:LYS:CD	2.73	0.44
36:DA:747:U:O2	36:DA:2014:A:H1'	2.17	0.44
12:AL:126:LYS:CE	12:AL:127:GLU:H	2.29	0.44
1:CA:385:C:O2'	1:CA:386:C:H5'	2.18	0.44
53:BU:46:ALA:HA	53:BU:49:HIS:HB2	1.99	0.44
53:BU:53:ARG:HA	53:BU:56:ASP:CG	2.38	0.44
1:AA:1050:G:O2'	1:AA:1051:C:H6	1.98	0.44
5:AE:105:VAL:HB	5:AE:106:PRO:CD	2.47	0.44
4:CD:162:LEU:HD11	4:CD:178:VAL:O	2.17	0.44
2:CB:8:LYS:C	2:CB:10:LEU:N	2.69	0.44
2:CB:8:LYS:HZ2	2:CB:217:ARG:NH1	2.14	0.44
1:CA:735:C:H2'	1:CA:736:C:H6	1.82	0.44
36:DA:673:C:H6	36:DA:673:C:C5'	2.23	0.44
40:BE:167:VAL:HG13	40:BE:168:MET:N	2.32	0.44
40:BE:181:LEU:HD21	52:BT:7:ILE:HG23	1.99	0.44
36:DA:2839:G:H2'	36:DA:2840:C:H6	1.80	0.44
49:BQ:51:ARG:CG	49:BQ:51:ARG:NH1	2.80	0.44
37:BB:68:C:H2'	37:BB:69:G:O4'	2.17	0.44
36:DA:2224:G:H4'	36:DA:2226:C:C2	2.52	0.44
38:DC:114:VAL:HG12	38:DC:144:THR:CA	2.44	0.44
6:AF:77:ARG:NH1	6:AF:77:ARG:CG	2.78	0.44
36:DA:849:A:C8	36:DA:850:C:C5	3.05	0.44
36:DA:2111:C:C2	36:DA:2147:G:N2	2.80	0.44
36:DA:2893:G:H5'	36:DA:2894:G:C5'	2.43	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:187:C:H4'	20:AT:85:MET:O	2.18	0.44
9:AI:79:LEU:C	9:AI:79:LEU:CD1	2.86	0.44
9:AI:83:ARG:O	9:AI:86:VAL:HG12	2.17	0.44
25:AZ:132:VAL:HG21	25:AZ:206:ILE:HG12	1.99	0.44
54:DV:13:ARG:HG3	54:DV:13:ARG:HH11	1.81	0.44
36:DA:2852:G:H1	36:DA:2865:U:H3	1.65	0.44
36:DA:422:A:C2	36:DA:423:A:C4	3.05	0.44
27:B1:62:VAL:HG13	27:B1:67:ILE:HG12	1.98	0.44
1:AA:1229:A:H2'	1:AA:1230:C:C6	2.52	0.44
40:BE:142:GLY:O	40:BE:143:ASN:ND2	2.46	0.44
36:BA:2136:C:C5	36:BA:2137:C:H5	2.35	0.44
37:DB:87:G:N2	37:DB:89:G:H5"	2.32	0.44
42:DG:118:ARG:NH1	42:DG:118:ARG:HG2	2.31	0.44
27:B1:14:VAL:HG12	27:B1:15:ALA:N	2.32	0.44
48:BP:71:VAL:HG22	48:BP:71:VAL:O	2.16	0.44
41:BF:51:THR:HG23	41:BF:92:PRO:HD2	1.98	0.44
36:BA:2888:C:H2'	36:BA:2889:C:H6	1.83	0.44
20:AT:69:GLY:O	20:AT:73:HIS:NE2	2.50	0.44
36:DA:271(P):C:H2'	36:DA:271(Q):G:H5'	1.98	0.44
20:CT:41:ILE:O	20:CT:44:ALA:N	2.50	0.44
36:DA:1382:G:O4'	36:DA:1572:A:H2	1.99	0.44
36:DA:455:C:N3	36:DA:472:A:H2'	2.32	0.44
36:BA:1011:G:O2'	36:BA:1013:C:H5"	2.17	0.44
50:DR:75:LEU:HD13	50:DR:75:LEU:C	2.37	0.44
27:D1:52:ARG:NH2	36:DA:2218:U:O2	2.50	0.44
1:AA:1162:C:C2	1:AA:1175:G:N2	2.85	0.44
45:BK:3:UNK:O	45:BK:4:UNK:O	2.35	0.44
8:CH:98:LYS:HG3	8:CH:99:GLU:N	2.33	0.44
36:BA:680:G:H2'	36:BA:681:G:C8	2.51	0.44
46:DN:51:PHE:CE1	46:DN:119:ARG:HD2	2.52	0.44
7:AG:22:LEU:HD22	7:AG:62:PHE:CE2	2.53	0.44
36:BA:1990:C:H2'	36:BA:1991:U:O4'	2.17	0.44
36:BA:1620:G:O2'	36:BA:1621:U:H5'	2.17	0.44
52:DT:119:LYS:O	52:DT:123:GLN:HG2	2.16	0.44
36:BA:1374:G:H2'	36:BA:1375:C:C6	2.52	0.44
36:DA:1998:G:O2'	36:DA:1999:C:H5'	2.16	0.44
51:DS:22:GLY:O	51:DS:23:ARG:O	2.35	0.44
36:DA:1917:U:C2'	36:DA:1918:A:H5'	2.47	0.44
25:AZ:316:PHE:N	25:AZ:316:PHE:CD1	2.85	0.44
36:DA:1644:C:O2	36:DA:1644:C:H2'	2.16	0.44
22:CV:37:A:H3'	22:CV:38:A:H8	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D2:48:HIS:CD2	36:DA:96:G:H4'	2.52	0.44
4:CD:98:GLU:CD	4:CD:107:ARG:HH21	2.21	0.44
25:CZ:251:ASP:H	25:CZ:267:VAL:CG1	2.29	0.44
36:BA:2283:C:H2'	36:BA:2284:C:C5'	2.46	0.44
34:D8:62:LEU:HB3	36:DA:242:G:H5'	1.99	0.44
36:BA:996:A:H4'	53:BU:92:ARG:NE	2.32	0.44
28:B2:19:VAL:O	28:B2:20:GLU:C	2.55	0.44
28:B2:2:LYS:HG2	28:B2:59:ARG:HH22	1.78	0.44
25:AZ:147:LEU:HD22	25:AZ:147:LEU:N	2.32	0.44
25:AZ:177:LEU:HA	25:AZ:180:GLU:OE2	2.17	0.44
38:BC:119:VAL:C	38:BC:123:VAL:HG12	2.37	0.44
38:BC:77:ILE:HD13	38:BC:95:GLY:HA3	1.99	0.44
36:DA:2308:G:O6	36:DA:2310:A:H2'	2.17	0.44
36:BA:479:A:N1	36:BA:506:G:N2	2.65	0.44
36:BA:1759:A:H5'	36:BA:2715:C:H1'	1.97	0.44
36:BA:2712:U:O2'	36:BA:2712(A):A:P	2.75	0.44
36:BA:1301:A:O2'	36:BA:1302:A:C2'	2.47	0.44
2:CB:114:ARG:HD3	2:CB:114:ARG:O	2.16	0.44
3:AC:50:ALA:HB1	3:AC:70:VAL:CG1	2.46	0.44
13:AM:58:GLU:HA	13:AM:58:GLU:OE1	2.18	0.44
36:BA:691:C:H2'	36:BA:692:C:C6	2.52	0.44
36:BA:2312:U:H4'	42:BG:71:THR:CG2	2.48	0.44
36:DA:1154:G:H5'	53:DU:59:ARG:HH12	1.82	0.44
36:DA:998:C:H2'	36:DA:999:U:O5'	2.17	0.44
54:DV:45:THR:O	54:DV:46:VAL:O	2.35	0.44
26:D0:27:GLU:OE2	36:DA:855:G:N2	2.49	0.44
25:CZ:385:ARG:HD3	61:CZ:502:KIR:C45	2.48	0.44
4:CD:11:LEU:HD13	4:CD:66:ARG:HD3	2.00	0.44
40:BE:61:ARG:HG2	40:BE:62:PRO:HD3	1.98	0.44
9:CI:21:PRO:HA	9:CI:59:PHE:HA	1.99	0.44
49:DQ:141:GLN:NE2	49:DQ:141:GLN:HA	2.23	0.44
36:BA:527:C:O5'	36:BA:2779:U:C5	2.70	0.44
55:BW:10:VAL:O	55:BW:10:VAL:HG12	2.17	0.44
1:CA:1047:G:O3'	14:CN:4:LYS:CG	2.66	0.44
36:DA:2802:G:O2'	36:DA:2803:C:H5''	2.16	0.44
40:DE:54:GLN:O	40:DE:55:ASN:HB2	2.18	0.44
5:CE:12:LEU:O	5:CE:12:LEU:HD13	2.18	0.44
1:AA:540:G:H2'	1:AA:541:G:O4'	2.17	0.44
4:AD:30:LYS:O	4:AD:32:ALA:N	2.50	0.44
1:AA:542:G:H5'	4:AD:41:GLY:CA	2.47	0.44
51:DS:35:ILE:HD11	51:DS:99:LYS:CD	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DD:171:ASP:HB3	39:DD:186:HIS:CE1	2.53	0.44
36:BA:130:C:O3'	36:BA:1349:A:H1'	2.17	0.44
48:DP:101:VAL:HG12	48:DP:106:LEU:HB3	1.98	0.44
39:DD:155:LEU:HD23	39:DD:177:LEU:CD2	2.48	0.44
50:BR:45:ARG:CG	50:BR:46:GLY:H	2.19	0.44
43:BH:107:VAL:CG2	43:BH:108:GLY:H	2.19	0.44
36:BA:1539:G:C6	36:BA:1540:U:H1'	2.52	0.44
36:BA:2131:G:O5'	36:BA:2131:G:H8	2.01	0.44
1:CA:586:C:O3'	8:CH:89:PRO:HB2	2.17	0.44
1:AA:386:C:C2'	1:AA:387:U:H5'	2.47	0.44
40:DE:144:ARG:HB3	40:DE:145:LYS:H	1.49	0.44
28:D2:43:GLN:O	28:D2:44:LEU:CB	2.66	0.44
25:AZ:222:LEU:CD1	25:AZ:303:VAL:CG1	2.91	0.44
38:DC:175:VAL:CG1	38:DC:188:ASN:HB3	2.39	0.44
40:DE:167:VAL:HG13	40:DE:170:LEU:CD1	2.47	0.44
25:CZ:374:LEU:CD1	25:CZ:378:VAL:HG21	2.47	0.44
46:BN:56:ASN:ND2	46:BN:125:GLY:O	2.51	0.44
36:BA:1242:A:N6	48:BP:8:PRO:HG2	2.32	0.44
37:BB:69:G:N2	37:BB:70:C:H1'	2.32	0.44
36:DA:2816:C:O2	36:DA:2883:A:O2'	2.36	0.44
36:BA:1380:G:C2	36:BA:1381:G:C8	3.06	0.44
43:DH:159:GLU:C	43:DH:159:GLU:CD	2.76	0.44
17:AQ:9:VAL:CG1	17:AQ:84:LEU:HD13	2.45	0.44
46:DN:56:ASN:HA	46:DN:125:GLY:CA	2.47	0.44
47:BO:47:ILE:HG23	47:BO:48:PRO:CD	2.44	0.44
42:DG:138:GLN:CD	42:DG:152:LEU:HA	2.38	0.44
3:AC:130:VAL:O	3:AC:131:ARG:C	2.56	0.44
3:CC:30:ARG:HD3	14:CN:35:ARG:O	2.17	0.44
36:DA:710:G:H2'	36:DA:711:G:H8	1.81	0.44
49:BQ:36:ALA:HB2	49:BQ:103:MET:HE3	1.99	0.44
36:DA:1331:A:O2'	36:DA:1332:G:H5"	2.18	0.44
32:B6:16:CYS:HB3	32:B6:48:VAL:O	2.17	0.44
21:AU:12:LYS:HG2	21:AU:22:ARG:HB2	1.99	0.44
11:CK:31:THR:HA	11:CK:42:TRP:HA	1.98	0.44
36:DA:2660:A:H2'	36:DA:2660:A:N3	2.32	0.44
37:BB:78:A:H2'	37:BB:79:C:O4'	2.17	0.44
3:AC:142:MET:C	3:AC:144:SER:N	2.69	0.44
3:AC:57:ILE:HG12	3:AC:66:VAL:HG22	1.99	0.44
49:DQ:118:LEU:HD12	49:DQ:131:ILE:CG2	2.47	0.44
1:CA:955:U:C2'	1:CA:956:U:H5'	2.47	0.44
20:AT:41:ILE:O	20:AT:44:ALA:N	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2768:C:O2'	36:DA:2769:C:H5'	2.18	0.44
41:BF:50:SER:HA	41:BF:92:PRO:O	2.16	0.44
36:DA:979:G:H3'	36:DA:980:A:C5'	2.47	0.44
1:CA:1303:C:C2'	1:CA:1304:G:H5'	2.47	0.44
17:CQ:95:TYR:C	17:CQ:97:SER:H	2.20	0.44
1:CA:320:C:H2'	1:CA:321:A:C8	2.52	0.44
11:CK:77:MET:SD	11:CK:80:VAL:CG1	3.05	0.44
36:BA:516:C:O2'	36:BA:517:C:H5'	2.17	0.44
36:BA:2720:U:C2	36:BA:2721:A:C8	3.06	0.44
36:BA:828:U:H4'	36:BA:831:G:N1	2.32	0.44
36:BA:961:C:N4	36:BA:2031:A:H1'	2.32	0.44
35:B9:13:LYS:HD2	35:B9:28:GLU:HB2	1.98	0.44
41:BF:87:GLY:O	41:BF:88:VAL:O	2.34	0.44
36:DA:1625:C:C2'	36:DA:1626:G:H5'	2.47	0.44
4:CD:45:GLN:C	4:CD:46:LYS:HG3	2.37	0.44
7:AG:48:LYS:O	7:AG:51:GLN:HB2	2.17	0.44
36:BA:1860:G:OP1	38:BC:210:ARG:NH2	2.49	0.44
36:BA:783:A:C4	36:BA:785:G:H1'	2.53	0.44
39:BD:122:ASP:O	39:BD:123:ALA:C	2.54	0.44
25:CZ:27:LEU:O	25:CZ:27:LEU:HD12	2.17	0.44
34:D8:34:TRP:HA	36:DA:2420:C:OP1	2.18	0.44
41:DF:38:ARG:O	41:DF:42:ALA:N	2.50	0.44
25:AZ:193:ASN:C	25:AZ:195:TRP:N	2.71	0.44
38:BC:119:VAL:HG23	38:BC:123:VAL:CG1	2.45	0.44
38:BC:130:ILE:C	38:BC:133:PRO:HD2	2.37	0.44
47:BO:3:GLN:HB2	47:BO:4:PRO:CD	2.48	0.44
56:DX:54:VAL:C	56:DX:55:ASN:HD22	2.20	0.44
36:DA:498:G:O2'	36:DA:499:U:H5'	2.18	0.44
57:DY:59:GLY:C	57:DY:60:PHE:HD1	2.21	0.44
57:BY:4:LYS:HD2	57:BY:32:PRO:HG3	1.99	0.44
58:BZ:35:ARG:HH21	58:BZ:36:LYS:HG2	1.81	0.44
2:AB:41:ILE:CD1	2:AB:41:ILE:N	2.81	0.44
56:DX:13:LEU:HA	56:DX:18:TYR:OH	2.18	0.44
53:BU:112:ARG:NH1	54:BV:46:VAL:HG11	2.31	0.44
1:AA:1152:A:HO2'	1:AA:1153:C:H5'	1.79	0.44
10:AJ:40:LEU:HD23	10:AJ:69:ASN:O	2.17	0.44
53:DU:92:ARG:HH12	54:DV:10:LYS:HA	1.82	0.44
36:BA:2121:G:H2'	36:BA:2122:U:O4'	2.18	0.44
13:CM:89:GLY:C	13:CM:91:ARG:H	2.21	0.44
14:CN:51:GLY:C	14:CN:53:LEU:H	2.21	0.44
4:CD:203:VAL:O	4:CD:206:PHE:HB3	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:75:ASP:O	9:CI:78:LYS:HB3	2.18	0.44
49:DQ:140:ALA:O	49:DQ:141:GLN:HB3	2.17	0.44
1:CA:1349:A:C2'	1:CA:1350:A:H8	2.24	0.44
42:BG:27:ASN:O	42:BG:29:TRP:N	2.49	0.44
51:BS:58:LEU:HG	51:BS:59:LYS:H	1.83	0.44
4:AD:133:VAL:HG12	4:AD:134:ASP:N	2.31	0.44
48:BP:23:PRO:C	48:BP:33:ARG:NE	2.70	0.44
12:CL:102:ARG:NH1	12:CL:102:ARG:CG	2.80	0.44
51:DS:12:PHE:C	51:DS:13:ARG:HG2	2.37	0.44
19:CS:31:ILE:HG21	19:CS:49:ILE:HG23	1.99	0.44
30:B4:36:CYS:O	30:B4:39:CYS:HB2	2.17	0.44
48:DP:10:PRO:O	48:DP:11:GLY:O	2.36	0.44
2:AB:8:LYS:O	2:AB:11:LEU:N	2.50	0.44
36:BA:2572:A:N3	40:BE:144:ARG:NH1	2.65	0.44
36:DA:2378:A:N1	51:DS:19:LYS:HE3	2.32	0.44
57:BY:56:PRO:O	57:BY:57:GLN:O	2.35	0.44
40:DE:132:HIS:CG	40:DE:132:HIS:O	2.71	0.44
36:DA:2156:G:N1	36:DA:2157:G:N2	2.65	0.44
43:BH:149:ARG:N	43:BH:162:ILE:HD11	2.31	0.44
35:B9:16:VAL:HG11	36:BA:1032:A:O3'	2.17	0.44
35:B9:29:ASN:N	35:B9:29:ASN:HD22	2.15	0.44
40:BE:31:CYS:CB	40:BE:49:LEU:HD12	2.48	0.44
46:DN:96:GLU:CD	46:DN:96:GLU:N	2.68	0.44
36:DA:1722:A:O2'	36:DA:1739:U:C5'	2.65	0.44
26:B0:49:LYS:N	26:B0:80:HIS:HD1	2.16	0.44
51:DS:51:ALA:HB2	51:DS:73:LEU:HG	1.99	0.44
1:CA:1244:C:H2'	1:CA:1245:A:C8	2.52	0.44
1:CA:1244:C:H2'	1:CA:1245:A:H8	1.81	0.44
46:BN:107:LEU:HB3	46:BN:108:PRO:CD	2.43	0.44
20:AT:56:MET:HE3	20:AT:85:MET:HG2	1.99	0.44
9:AI:83:ARG:C	9:AI:86:VAL:HG12	2.37	0.44
8:AH:4:ASP:OD2	8:AH:89:PRO:HD3	2.17	0.44
1:AA:46:G:O2'	1:AA:365:U:H1'	2.17	0.44
1:CA:606:G:H2'	1:CA:631:G:H1	1.81	0.44
38:BC:66:HIS:CD2	38:BC:184:LYS:HA	2.52	0.44
36:DA:2033:A:HO2'	36:DA:2034:U:P	2.41	0.44
36:BA:2464:C:O2'	36:BA:2465:C:O5'	2.35	0.44
4:CD:127:THR:HA	4:CD:132:ARG:HA	1.99	0.44
27:D1:20:ARG:HD2	27:D1:32:LYS:CG	2.47	0.44
32:B6:38:LYS:O	32:B6:39:TYR:HB2	2.16	0.44
36:BA:200:U:O4	36:BA:248:G:C2	2.71	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1416:G:HO2'	36:BA:1417:C:H5	1.65	0.44
17:AQ:52:LYS:HD2	17:AQ:55:ASP:CG	2.37	0.44
49:DQ:118:LEU:HD13	49:DQ:131:ILE:HG23	1.99	0.44
8:CH:17:THR:O	8:CH:78:GLN:NE2	2.47	0.44
36:BA:2358:G:C4	36:BA:2359:C:C5	3.05	0.44
1:AA:1030(D):A:N7	1:AA:1031:G:N3	2.66	0.44
1:AA:1269:A:H2	1:AA:1312:G:N3	2.15	0.44
48:BP:9:ASN:N	48:BP:10:PRO:CD	2.80	0.44
36:DA:2367:G:H2'	36:DA:2368:C:H6	1.82	0.44
55:BW:64:MET:O	55:BW:65:LEU:HB3	2.17	0.44
36:DA:473:G:H5''	36:DA:508:G:N2	2.31	0.44
47:DO:3:GLN:HB2	47:DO:4:PRO:CD	2.47	0.44
52:BT:113:LYS:HA	52:BT:113:LYS:HD3	1.83	0.44
50:DR:17:ARG:O	50:DR:20:LEU:HB3	2.18	0.44
1:CA:1010:G:H2'	1:CA:1011:G:H8	1.83	0.44
47:BO:7:TYR:CE1	47:BO:20:MET:HB2	2.53	0.44
5:CE:46:GLY:H	5:CE:58:ALA:HB2	1.82	0.44
6:AF:82:ARG:HB2	6:AF:85:VAL:HG23	2.00	0.44
36:DA:2097:C:O2'	36:DA:2098:U:H5'	2.17	0.44
36:DA:2824:C:H2'	36:DA:2825:C:O4'	2.17	0.44
36:DA:2733:A:H2'	36:DA:2734:A:O4'	2.18	0.44
58:DZ:185:GLU:HG2	58:DZ:186:GLU:N	2.32	0.44
22:AV:75:C:H2'	22:AV:76:A:O4'	2.18	0.44
36:DA:2575:C:H2'	36:DA:2578:G:O6	2.17	0.44
1:CA:748:C:H4'	1:CA:749:C:O5'	2.18	0.44
47:BO:17:ARG:O	47:BO:18:LYS:HG3	2.18	0.44
36:BA:686:G:N2	36:BA:788:A:H61	2.14	0.44
54:BV:1:MET:SD	54:BV:43:GLU:HG2	2.58	0.44
13:CM:32:GLU:OE1	13:CM:32:GLU:C	2.56	0.44
13:CM:30:ALA:C	13:CM:32:GLU:H	2.20	0.44
52:DT:113:LYS:HA	52:DT:113:LYS:HD3	1.83	0.44
4:AD:114:ARG:HG3	4:AD:114:ARG:HH11	1.82	0.44
36:BA:1425:G:H2'	36:BA:1426:G:C8	2.52	0.44
25:CZ:27:LEU:O	25:CZ:30:ALA:N	2.50	0.44
32:D6:5:VAL:N	32:D6:8:LYS:HB3	2.33	0.44
48:DP:24:GLY:N	48:DP:33:ARG:CZ	2.81	0.44
36:DA:1190:G:C5'	48:DP:35:HIS:H	2.29	0.44
40:DE:15:PHE:CD2	52:DT:80:SER:HB2	2.52	0.44
41:BF:170:LEU:HB2	41:BF:173:VAL:HB	1.99	0.44
1:CA:986:A:C6	1:CA:987:G:C6	3.05	0.44
28:B2:35:LEU:CG	28:B2:53:LEU:HD13	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:B2:6:VAL:HG13	28:B2:6:VAL:O	2.16	0.44
58:BZ:166:SER:CB	58:BZ:167:PRO:HA	2.46	0.44
2:AB:121:LEU:HG	2:AB:126:GLU:HB2	1.98	0.44
25:AZ:163:PHE:CD1	25:AZ:164:PRO:HD2	2.49	0.44
25:AZ:93:ILE:HD11	25:AZ:389:ARG:HH11	1.80	0.44
39:DD:30:GLU:CD	39:DD:63:ARG:HE	2.20	0.44
42:DG:125:PHE:CG	42:DG:131:TYR:HD1	2.34	0.44
47:BO:122:LEU:HD12	52:BT:72:VAL:HG11	1.99	0.44
52:BT:41:ARG:HG2	52:BT:41:ARG:NH1	2.32	0.44
49:BQ:141:GLN:HE21	49:BQ:141:GLN:CA	2.22	0.44
9:AI:89:ASN:C	9:AI:91:ASP:N	2.71	0.44
35:D9:30:PRO:CB	36:DA:2527:C:H4'	2.37	0.44
13:AM:6:GLY:C	13:AM:8:GLU:N	2.68	0.44
53:BU:14:HIS:O	53:BU:16:LYS:N	2.51	0.44
13:CM:15:VAL:HA	13:CM:18:ALA:HB3	2.00	0.44
20:CT:51:GLU:O	20:CT:54:LYS:HB3	2.18	0.44
1:AA:1098:C:H2'	1:AA:1099:G:O4'	2.17	0.44
51:BS:73:LEU:HD23	51:BS:73:LEU:C	2.38	0.44
1:CA:1345:U:C2	1:CA:1377:A:C6	3.05	0.44
55:BW:10:VAL:HG21	55:BW:103:ILE:CG1	2.47	0.44
55:BW:18:ARG:CA	55:BW:76:VAL:HG11	2.47	0.44
4:CD:25:ARG:O	4:CD:27:TYR:N	2.51	0.44
1:AA:250:A:C2	1:AA:274:A:N6	2.85	0.44
1:CA:1269:A:C2	1:CA:1313:U:O4'	2.70	0.44
34:B8:33:ASN:HA	34:B8:36:LYS:HE3	1.98	0.44
36:DA:2819:G:C6	36:DA:2821:A:C2	3.05	0.44
40:DE:111:ARG:HG2	50:DR:2:ARG:NH2	2.32	0.44
41:DF:107:LYS:C	41:DF:109:GLY:H	2.21	0.44
10:AJ:85:LEU:C	10:AJ:87:THR:N	2.69	0.44
42:BG:40:ASN:HB2	42:BG:91:ARG:HB2	1.99	0.44
5:AE:76:ILE:HG22	5:AE:118:ILE:HD13	1.99	0.44
1:AA:625:G:C4	1:AA:626:U:C5	3.05	0.44
25:AZ:231:ILE:HD12	25:AZ:231:ILE:N	2.32	0.44
36:BA:1060:U:H1'	36:BA:1061:U:H5''	2.00	0.44
42:BG:111:LEU:O	42:BG:114:ILE:CG2	2.59	0.44
36:BA:2759:G:N2	36:BA:2760:C:H1'	2.32	0.44
36:BA:2160:G:C5'	36:BA:2160:G:C8	2.96	0.44
1:CA:381:C:H2'	1:CA:382:A:O4'	2.18	0.44
36:BA:2756:U:O2'	36:BA:2757:A:OP2	2.30	0.44
6:CF:62:TRP:CD1	18:CR:35:ARG:CZ	3.01	0.44
18:CR:53:ARG:HA	18:CR:56:THR:OG1	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:18:GLN:O	20:CT:21:LYS:HB2	2.18	0.44
2:AB:7:VAL:O	2:AB:8:LYS:O	2.36	0.44
36:DA:2570:G:O2'	36:DA:2571:C:H5'	2.18	0.44
2:CB:7:VAL:HG13	2:CB:11:LEU:CD1	2.47	0.44
1:CA:1036:G:H3'	1:CA:1037:C:H6	1.82	0.44
36:DA:1131:G:OP1	46:DN:80:GLY:N	2.48	0.44
40:DE:132:HIS:CG	40:DE:135:HIS:NE2	2.86	0.44
22:CW:5:G:H1'	22:CW:69:G:H21	1.81	0.44
36:DA:1494:A:O2'	36:DA:1495:A:H5''	2.18	0.44
35:B9:7:VAL:HG13	35:B9:34:GLN:HG2	1.99	0.44
1:CA:926:G:C8	1:CA:1505:G:C2	3.06	0.44
4:CD:65:ARG:HB2	4:CD:75:PHE:CD2	2.52	0.44
6:AF:55:ASP:C	6:AF:57:GLN:N	2.68	0.44
46:BN:125:GLY:HA3	46:BN:126:PRO:C	2.38	0.44
46:BN:17:ASP:HB2	46:BN:55:VAL:HG12	2.00	0.44
41:BF:187:VAL:HG12	48:BP:7:ARG:HA	2.00	0.44
54:BV:19:LYS:HB2	54:BV:96:ILE:HG12	1.99	0.44
36:DA:1336:A:H2'	36:DA:1337:G:C8	2.53	0.44
17:AQ:74:LEU:HD12	17:AQ:75:ARG:HD3	2.00	0.44
36:BA:811:U:O2'	36:BA:812:C:C5'	2.66	0.44
56:BX:64:LYS:HE2	56:BX:73:ARG:CZ	2.48	0.44
38:BC:92:ASP:O	38:BC:93:TYR:CD1	2.71	0.44
38:DC:75:LEU:N	38:DC:112:ALA:HB3	2.30	0.44
36:BA:2842:G:C2	36:BA:2876:G:C2	3.05	0.44
37:DB:80:U:O2'	37:DB:81:G:H5''	2.17	0.44
24:AY:28:C:H2'	24:AY:29:G:H8	1.82	0.44
27:D1:75:GLU:C	27:D1:77:ALA:N	2.69	0.44
3:CC:196:LEU:HD22	3:CC:196:LEU:N	2.32	0.44
1:CA:1031:G:H2'	1:CA:1032:G:C8	2.52	0.44
56:DX:32:PRO:O	56:DX:77:LYS:HD3	2.18	0.44
36:DA:1661:G:C4	36:DA:2000:G:N2	2.86	0.44
36:DA:1780:A:H4'	36:DA:1780:A:OP1	2.18	0.44
36:DA:1232:G:H2'	36:DA:1233:C:C6	2.53	0.44
36:BA:599:G:C6	36:BA:600:G:N7	2.85	0.44
24:CY:30:G:O6	24:CY:40:C:N3	2.50	0.44
36:DA:420:C:H2'	36:DA:421:U:H6	1.82	0.44
11:CK:48:ILE:O	11:CK:50:TYR:N	2.51	0.44
22:AW:25:C:H2'	22:AW:26:A:C8	2.52	0.44
36:BA:2116:G:N7	36:BA:2117:A:C6	2.85	0.44
36:DA:2367:G:O2'	36:DA:2368:C:H5'	2.17	0.44
36:BA:858:U:O2	36:BA:2268:A:H2'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1358:G:O2'	36:BA:1359:A:H5''	2.18	0.44
47:BO:66:LYS:H	47:BO:82:ASN:HD21	1.65	0.44
36:BA:720:C:H2'	36:BA:721:C:H6	1.83	0.44
36:BA:1578:U:H2'	36:BA:1579:A:H5'	1.99	0.44
36:BA:2360:A:O2'	36:BA:2361:A:O4'	2.27	0.44
37:DB:98:G:C2'	37:DB:99:G:H5'	2.48	0.44
7:CG:7:ALA:O	7:CG:8:GLU:HB2	2.17	0.44
36:BA:2856:C:C2	36:BA:2862:G:N2	2.86	0.44
25:CZ:202:LEU:HA	25:CZ:205:ALA:HB3	2.00	0.44
36:DA:705:A:C2	36:DA:727:A:H1'	2.53	0.44
39:DD:246:PRO:C	39:DD:254:THR:HG22	2.38	0.44
1:AA:1410:G:H2'	1:AA:1411:C:C6	2.53	0.44
36:BA:417:C:H2'	36:BA:418:G:O4'	2.18	0.44
10:AJ:16:LEU:HD13	10:AJ:16:LEU:C	2.37	0.44
25:AZ:355:LEU:HD23	25:AZ:370:PHE:HB3	1.99	0.44
2:CB:35:GLU:HA	2:CB:39:ILE:O	2.18	0.44
2:CB:40:HIS:C	2:CB:41:ILE:HD12	2.38	0.44
25:CZ:31:LEU:HD23	25:CZ:31:LEU:N	2.31	0.44
28:B2:47:ASN:HB2	36:BA:94(A):G:O2'	2.18	0.44
31:D5:36:CYS:HG	31:D5:49:CYS:HG	1.63	0.44
25:AZ:33:TYR:CD2	25:AZ:179:LEU:CD1	3.00	0.44
22:AW:18:G:OP2	22:AW:18:G:H3'	2.18	0.44
58:DZ:81:ARG:CB	58:DZ:81:ARG:HH11	2.15	0.44
25:CZ:151:GLU:HG3	25:CZ:170:VAL:HG11	1.99	0.44
25:CZ:138:VAL:HG21	25:CZ:173:GLY:H	1.81	0.44
49:BQ:141:GLN:N	58:BZ:53:ILE:HD12	2.32	0.44
58:BZ:35:ARG:HD2	58:BZ:35:ARG:HA	1.72	0.44
1:CA:1086:U:H2'	1:CA:1087:G:C5'	2.43	0.44
35:D9:7:VAL:CG1	35:D9:34:GLN:HB3	2.47	0.44
35:D9:21:GLY:O	36:DA:1123:C:O2'	2.36	0.44
36:DA:2467:C:O2'	36:DA:2468:G:H5'	2.17	0.44
36:BA:252:G:OP2	48:BP:50:ARG:NH2	2.44	0.44
34:B8:4:MET:CE	36:BA:592:G:H21	2.31	0.44
36:BA:593:G:C6	36:BA:594:U:C4	3.05	0.44
26:B0:27:GLU:OE1	26:B0:27:GLU:N	2.50	0.44
36:BA:2177:C:H2'	36:BA:2178:C:O2	2.18	0.44
9:CI:93:ARG:HD2	9:CI:102:LEU:CD1	2.48	0.44
36:BA:1019:U:O2'	36:BA:1021:A:C2	2.63	0.44
58:DZ:99:TYR:CD1	58:DZ:99:TYR:N	2.85	0.44
48:BP:41:ARG:N	48:BP:41:ARG:HD2	2.33	0.44
14:CN:6:LEU:HB3	14:CN:23:ARG:NH2	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1226:C:H4'	1:AA:1227:A:OP1	2.17	0.44
13:AM:89:GLY:C	13:AM:91:ARG:N	2.71	0.44
41:DF:177:ALA:HB1	41:DF:178:PRO:HD2	1.99	0.44
10:AJ:32:ALA:HB2	10:AJ:76:ASN:HB2	1.98	0.44
36:DA:652:C:O2'	36:DA:653:A:O5'	2.35	0.44
3:CC:15:THR:CG2	3:CC:181:ASN:HA	2.47	0.44
3:CC:11:ARG:HH21	3:CC:182:ILE:HD12	1.80	0.44
36:DA:304:G:C2	36:DA:314:A:N3	2.86	0.44
2:AB:106:LYS:HG3	2:AB:107:THR:N	2.33	0.44
36:DA:1528:A:H2	36:DA:1541:G:C6	2.36	0.44
9:CI:53:VAL:HG22	9:CI:95:LYS:CE	2.47	0.44
9:CI:52:ALA:CB	9:CI:95:LYS:HD2	2.47	0.44
1:AA:62:U:O2'	1:AA:63:C:H5''	2.18	0.44
30:D4:14:ILE:HG13	30:D4:31:ILE:CB	2.47	0.44
2:AB:8:LYS:HD3	2:AB:217:ARG:NH2	2.32	0.44
24:CY:5:G:C5'	24:CY:5:G:H8	2.31	0.44
36:DA:1367:A:H2'	36:DA:1368:G:C5'	2.44	0.44
52:BT:13:ARG:HH21	52:BT:15:VAL:HG13	1.83	0.44
47:BO:1:MET:CE	47:BO:32:TYR:CD2	3.00	0.44
35:B9:36:GLN:HE22	36:BA:1031:G:H21	1.65	0.44
38:BC:99:ILE:CD1	38:BC:102:LYS:HZ2	2.31	0.44
36:DA:1602:U:H3'	36:DA:1603:A:H5'	1.99	0.44
36:DA:1526:G:O2'	36:DA:1527:G:H5'	2.18	0.44
36:DA:2127:G:C6	36:DA:2162:G:C2	3.05	0.44
43:DH:54:ARG:NH2	43:DH:62:LYS:HD2	2.33	0.44
7:CG:87:VAL:HG13	7:CG:151:TYR:O	2.17	0.44
36:BA:801:G:N9	41:BF:54:ARG:HD2	2.33	0.44
1:AA:186:C:O4'	20:AT:81:LYS:HE2	2.18	0.44
51:DS:52:SER:HB2	51:DS:56:LEU:HB2	2.00	0.44
36:DA:886:C:C2'	36:DA:887:A:H4'	2.47	0.44
36:DA:954:G:C2'	36:DA:955:C:H5'	2.47	0.44
20:AT:26:ASN:HD22	20:AT:26:ASN:H	1.65	0.44
36:BA:1336:A:O2'	36:BA:1337:G:H5'	2.18	0.44
33:D7:7:PRO:HA	36:DA:686:G:C8	2.52	0.44
41:BF:185:ASP:HA	41:BF:188:ARG:CD	2.47	0.44
49:DQ:81:VAL:HG22	49:DQ:82:ARG:N	2.32	0.44
9:AI:17:VAL:CG1	9:AI:81:ILE:HD13	2.48	0.44
25:AZ:129:PRO:HB2	25:AZ:130:TYR:CD2	2.53	0.44
1:CA:839:U:C2'	1:CA:839:U:O2	2.66	0.44
36:DA:1472:A:O2'	36:DA:1473:G:H5'	2.17	0.44
36:BA:750:A:C2	36:BA:753:C:C6	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DD:46:GLN:CD	39:DD:46:GLN:N	2.71	0.44
36:BA:1651:G:O2'	36:BA:1652:A:H5'	2.17	0.44
36:DA:2553:G:H2'	36:DA:2554:U:H4'	1.99	0.44
36:DA:2557:G:H2'	36:DA:2558:C:C6	2.53	0.44
36:DA:2850:A:N3	50:DR:61:HIS:CD2	2.86	0.44
25:AZ:20:VAL:HB	25:AZ:115:GLN:HE22	1.82	0.44
36:DA:363(A):A:N3	36:DA:363(A):A:H2'	2.32	0.44
36:DA:540:C:H2'	36:DA:541:C:H6	1.83	0.44
37:BB:33:G:O2'	37:BB:34:U:H5'	2.18	0.44
39:DD:158:ALA:O	39:DD:159:ALA:C	2.55	0.44
54:DV:22:VAL:O	54:DV:22:VAL:HG23	2.17	0.44
47:BO:35:VAL:HA	47:BO:62:VAL:O	2.18	0.44
47:BO:7:TYR:CZ	47:BO:44:LYS:HG3	2.52	0.44
1:CA:796:C:O2'	1:CA:797:C:H5'	2.17	0.44
36:BA:1623:G:H2'	36:BA:1624:G:H8	1.82	0.44
36:BA:2580:U:O3'	40:BE:130:GLY:HA3	2.18	0.44
36:BA:1455:G:C2	36:BA:1456:G:C8	3.06	0.44
1:CA:711:G:H2'	1:CA:712:A:C8	2.52	0.44
51:BS:34:HIS:NE2	51:BS:54:LEU:HB3	2.32	0.44
26:B0:52:GLY:C	26:B0:60:PHE:CE1	2.91	0.44
36:DA:467:G:O2'	36:DA:468:G:H5'	2.17	0.44
36:BA:2070:G:H2'	36:BA:2071:A:C8	2.52	0.44
36:DA:1847:A:H2'	36:DA:1847:A:N3	2.33	0.44
4:AD:135:LEU:HD13	4:AD:135:LEU:N	2.32	0.44
38:DC:167:LYS:O	38:DC:167:LYS:HD2	2.17	0.44
36:DA:1767:C:O2'	36:DA:1768:U:H5'	2.18	0.44
36:DA:1680:U:O2	36:DA:1763:G:H3'	2.17	0.44
1:CA:358:U:H4'	25:CZ:235:GLY:N	2.32	0.44
25:CZ:27:LEU:O	25:CZ:30:ALA:HB3	2.17	0.44
25:CZ:176:LEU:HD23	60:CZ:501:GDP:N2	2.33	0.44
32:D6:35:GLU:H	32:D6:51:GLU:HB2	1.83	0.44
48:DP:57:THR:OG1	48:DP:59:LEU:CD2	2.63	0.44
1:CA:137:C:N4	1:CA:226:G:H1	2.14	0.44
32:D6:18:ARG:NH2	32:D6:43:CYS:O	2.39	0.44
53:BU:88:ILE:C	53:BU:90:VAL:N	2.71	0.44
36:BA:143:G:C1'	56:BX:37:THR:HG21	2.48	0.44
25:AZ:135:MET:SD	25:AZ:150:VAL:HG13	2.58	0.44
57:BY:28:LYS:N	57:BY:28:LYS:CE	2.81	0.44
46:DN:12:ARG:HG3	46:DN:14:VAL:CG2	2.48	0.44
37:BB:44:G:H1'	37:BB:47:C:N4	2.33	0.44
46:BN:119:ARG:HG3	46:BN:119:ARG:HH11	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:281:ILE:HG13	25:AZ:281:ILE:H	1.49	0.44
56:DX:12:VAL:HG11	56:DX:17:ALA:HB1	2.00	0.44
1:CA:973:G:H1'	10:CJ:55:LYS:CD	2.47	0.44
1:CA:1202:G:C2	14:CN:42:ILE:HG21	2.51	0.44
54:BV:38:LEU:O	54:BV:52:VAL:HG12	2.17	0.44
43:DH:84:SER:O	43:DH:85:LYS:HB3	2.18	0.44
54:DV:25:LEU:H	54:DV:92:THR:CG2	2.30	0.44
28:D2:16:LEU:O	28:D2:67:LYS:NZ	2.48	0.44
43:BH:30:LYS:HG3	43:BH:79:VAL:O	2.16	0.44
43:BH:88:LEU:CD1	43:BH:130:ARG:HD2	2.48	0.44
25:CZ:385:ARG:HD3	61:CZ:502:KIR:H451	1.98	0.44
36:DA:624:C:H5	48:DP:107:LYS:NZ	2.15	0.44
37:BB:21:G:C2'	37:BB:22:U:H5'	2.48	0.44
36:DA:272(H):C:O5'	36:DA:272(H):C:H6	2.00	0.44
1:CA:197:A:H4'	1:CA:198:G:O5'	2.17	0.44
1:CA:1313:U:H2'	1:CA:1314:C:C6	2.52	0.44
48:BP:65:ARG:HH11	48:BP:65:ARG:HG2	1.83	0.44
46:DN:62:VAL:HG22	46:DN:62:VAL:O	2.17	0.44
41:DF:176:LEU:CG	41:DF:177:ALA:H	2.30	0.44
27:D1:86:SER:O	27:D1:87:PRO:C	2.54	0.44
27:D1:87:PRO:CA	27:D1:90:ILE:HG12	2.48	0.44
1:AA:542:G:H5'	4:AD:41:GLY:HA2	2.00	0.44
4:AD:12:CYS:SG	4:AD:26:CYS:SG	3.16	0.44
36:DA:267:C:H2'	36:DA:268:C:C6	2.52	0.44
36:BA:1536:C:C4	36:BA:1537:G:H1'	2.52	0.44
58:DZ:10:ARG:HG2	58:DZ:36:LYS:C	2.38	0.44
1:CA:1251:A:H4'	9:CI:12:GLU:OE1	2.17	0.44
50:BR:26:LYS:HZ3	50:BR:71:GLN:HB2	1.81	0.44
36:DA:2753:A:O2'	36:DA:2754:U:H5'	2.17	0.44
19:AS:10:PHE:CE2	19:AS:37:ARG:O	2.70	0.44
36:BA:1279:G:H4'	50:BR:31:HIS:NE2	2.33	0.44
36:DA:889:C:O2'	36:DA:890:A:P	2.76	0.44
6:CF:67:MET:HB2	6:CF:68:PRO:HD2	1.99	0.44
54:BV:3:ALA:O	54:BV:14:VAL:HG22	2.17	0.44
58:DZ:107:THR:HA	58:DZ:108:PRO:HD2	1.76	0.44
36:DA:526:A:H5''	36:DA:527:C:OP1	2.17	0.44
24:AY:4:G:C3'	24:AY:5:G:H5''	2.48	0.44
36:DA:2107:C:C2	36:DA:2182:G:N2	2.86	0.44
38:DC:74:VAL:HG12	38:DC:75:LEU:N	2.33	0.44
42:DG:138:GLN:OE1	42:DG:153:ARG:NE	2.50	0.44
22:AV:51:U:O2	22:AV:64:A:C2	2.71	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BZ:130:PRO:O	58:BZ:133:ILE:CD1	2.65	0.44
30:D4:42:PHE:O	30:D4:42:PHE:CD2	2.71	0.44
36:DA:2358:G:H2'	36:DA:2359:C:C6	2.52	0.44
4:CD:85:LYS:NZ	4:CD:92:VAL:HG13	2.31	0.44
21:AU:18:TYR:CD2	21:AU:24:ARG:HG3	2.52	0.44
36:BA:1956:U:H1'	36:BA:2552:U:OP1	2.18	0.44
25:CZ:226:GLU:HG3	25:CZ:240:GLY:HA2	1.98	0.44
55:BW:72:LYS:HB3	55:BW:106:ILE:HG22	1.99	0.44
36:DA:1831:G:C4	36:DA:1832:C:C5	3.06	0.44
16:CP:36:ILE:N	16:CP:36:ILE:HD13	2.33	0.44
47:BO:29:ASN:OD1	47:BO:29:ASN:O	2.35	0.44
36:DA:2206:G:H21	36:DA:2207:G:H4'	1.82	0.44
2:AB:238:LEU:O	2:AB:240:GLN:N	2.51	0.44
36:BA:1652:A:O2'	36:BA:1653:G:H5'	2.18	0.44
36:BA:2358:G:C6	36:BA:2359:C:C4	3.06	0.44
36:BA:322:A:H5'	36:BA:340:A:C1'	2.47	0.44
36:DA:70:G:H21	36:DA:71:A:H62	1.63	0.44
7:AG:57:GLU:HB2	7:AG:60:LYS:HB2	1.99	0.44
25:AZ:263:ARG:HG3	25:AZ:264:ARG:N	2.33	0.44
36:BA:2857:G:N2	36:BA:2859:G:H3'	2.32	0.44
36:BA:116:C:H2'	36:BA:117:G:O4'	2.18	0.44
1:CA:1069:C:C2'	1:CA:1070:U:O5'	2.66	0.44
42:BG:55:LYS:O	42:BG:58:GLN:HG2	2.18	0.44
19:CS:58:VAL:HG21	19:CS:75:ALA:HA	1.99	0.44
25:CZ:40:PRO:O	25:CZ:41:ASN:HB3	2.17	0.44
1:AA:100:C:H2'	1:AA:101:A:C8	2.52	0.44
50:BR:62:ALA:O	50:BR:66:VAL:HG23	2.17	0.44
38:BC:191:ALA:O	38:BC:193:ILE:N	2.50	0.44
36:DA:2025:C:C2	36:DA:2026:C:C5	3.05	0.44
15:CO:48:LYS:HA	15:CO:48:LYS:HE2	1.99	0.44
1:AA:1430:C:H2'	1:AA:1431:C:H6	1.81	0.44
52:DT:14:TYR:CD1	52:DT:14:TYR:N	2.86	0.44
30:B4:28:LYS:HE3	30:B4:28:LYS:HA	1.98	0.44
36:BA:2366:A:H2'	36:BA:2367:G:H5'	1.99	0.44
12:CL:111:LYS:O	12:CL:112:ASP:HB2	2.17	0.44
38:DC:120:MET:O	38:DC:124:GLY:N	2.45	0.44
4:CD:174:LEU:HD23	4:CD:185:PHE:HA	2.00	0.44
34:D8:63:PRO:O	34:D8:64:TYR:O	2.36	0.44
34:D8:7:HIS:CD2	48:DP:50:ARG:CD	3.00	0.44
57:DY:10:GLY:HA2	57:DY:27:VAL:CG1	2.23	0.44
36:DA:1503:U:O2'	36:DA:1504:C:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:B2:20:GLU:O	28:B2:22:GLU:N	2.50	0.44
28:B2:29:LYS:O	28:B2:33:MET:HG3	2.18	0.44
28:B2:53:LEU:C	28:B2:56:GLN:H	2.21	0.44
42:DG:46:ALA:C	42:DG:47:LYS:HG3	2.37	0.44
42:DG:71:THR:CG2	42:DG:89:GLY:HA3	2.47	0.44
42:DG:68:PRO:HA	42:DG:92:VAL:HB	1.99	0.44
25:CZ:11:HIS:CE1	25:CZ:78:SER:HB2	2.53	0.44
49:BQ:26:TYR:CB	49:BQ:137:TYR:HD1	2.31	0.44
1:AA:1331:G:H4'	1:AA:1331:G:OP1	2.18	0.44
3:AC:6:HIS:HB2	14:AN:49:HIS:CD2	2.53	0.44
36:DA:996:A:C1'	53:DU:92:ARG:NH2	2.81	0.44
43:DH:27:LYS:HE2	43:DH:27:LYS:HB3	1.82	0.44
22:CW:59:U:C2'	22:CW:60:U:H5'	2.47	0.44
43:BH:124:GLU:HB3	43:BH:126:PRO:CD	2.44	0.44
36:BA:1721:G:H5'	36:BA:1721:G:N3	2.33	0.44
41:BF:201:VAL:HA	41:BF:204:ASN:HD22	1.82	0.44
7:CG:31:MET:SD	7:CG:34:GLY:O	2.76	0.44
36:DA:260:G:C6	36:DA:261:G:N7	2.86	0.44
37:BB:57:A:C5	42:BG:29:TRP:CD1	3.06	0.44
36:BA:1246:A:OP1	48:BP:16:ARG:NH2	2.49	0.44
4:AD:133:VAL:HG11	4:AD:138:TYR:CD2	2.52	0.44
10:CJ:35:SER:OG	10:CJ:73:ASP:HB2	2.18	0.44
10:CJ:3:LYS:HG3	10:CJ:77:PRO:HD3	1.99	0.44
41:DF:135:LYS:HB3	41:DF:138:GLU:CD	2.38	0.44
48:BP:115:LEU:HD23	48:BP:115:LEU:N	2.32	0.44
1:CA:173:U:C5'	1:CA:197:A:O4'	2.54	0.44
51:DS:85:VAL:HG23	51:DS:86:ALA:N	2.33	0.44
6:CF:17:SER:O	6:CF:21:LEU:HG	2.18	0.44
4:AD:59:ARG:NH2	4:AD:62:GLN:HG3	2.32	0.44
41:BF:28:ILE:HD13	41:BF:28:ILE:N	2.17	0.44
36:BA:2392:A:H5'	36:BA:2392:A:N3	2.33	0.44
31:B5:29:THR:O	31:B5:42:PRO:HD3	2.17	0.44
36:BA:1902:C:O2'	39:BD:244:ARG:CB	2.63	0.44
50:BR:58:GLY:HA2	50:BR:80:PHE:CE1	2.53	0.44
42:BG:91:ARG:CD	42:BG:92:VAL:N	2.80	0.44
58:DZ:55:HIS:O	58:DZ:70:LEU:HB3	2.17	0.44
5:CE:8:GLU:N	5:CE:34:VAL:HG23	2.33	0.44
36:DA:233:A:H2'	36:DA:234:C:O4'	2.18	0.44
36:BA:1060:U:H1'	36:BA:1061:U:C5'	2.48	0.44
1:CA:677:U:H2'	1:CA:678:U:H6	1.83	0.44
36:BA:2745:C:H1'	43:BH:143:GLN:HG2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BR:45:ARG:O	50:BR:49:ASP:OD1	2.35	0.44
50:BR:93:GLY:C	50:BR:94:TYR:HD1	2.20	0.44
43:BH:107:VAL:CG2	43:BH:152:ARG:HD3	2.48	0.44
36:DA:1539:G:H2'	36:DA:1540:U:C5'	2.45	0.44
50:DR:84:ALA:CB	50:DR:85:PRO:HD3	2.39	0.44
30:B4:8:LYS:HG2	30:B4:9:LEU:O	2.18	0.44
36:BA:2128:C:H42	36:BA:2160:G:H1	1.66	0.44
36:DA:2469:A:C5	36:DA:2482:G:C8	3.06	0.44
49:DQ:51:ARG:HG3	49:DQ:52:VAL:N	2.32	0.44
24:CY:5:G:H5'	24:CY:5:G:H8	1.83	0.44
36:BA:2572:A:C8	40:BE:144:ARG:CD	2.96	0.44
36:DA:2377:A:O2'	36:DA:2378:A:H5'	2.17	0.44
2:CB:132:LYS:O	2:CB:136:VAL:HG23	2.18	0.44
43:DH:12:PRO:N	43:DH:48:GLY:HA2	2.32	0.44
25:CZ:374:LEU:HD12	25:CZ:378:VAL:CG2	2.48	0.44
11:CK:99:GLN:HG2	11:CK:105:VAL:CG2	2.42	0.44
36:DA:1379:A:N3	36:DA:1379:A:O4'	2.51	0.44
2:CB:209:ARG:HH11	2:CB:239:VAL:CG2	2.30	0.44
29:B3:32:GLN:HB2	36:BA:1158:C:H4'	2.00	0.44
38:BC:7:TYR:HA	38:BC:10:LEU:HD23	1.99	0.44
49:BQ:12:GLN:HG2	49:BQ:73:PRO:HD2	2.00	0.44
1:CA:235:C:H2'	1:CA:236:G:H8	1.83	0.44
1:CA:630:G:C2'	1:CA:631:G:H5'	2.48	0.44
28:B2:13:ALA:C	28:B2:15:LYS:N	2.71	0.44
2:CB:211:ILE:HG23	2:CB:215:LEU:HD23	2.00	0.44
36:DA:1804:C:O2'	36:DA:1805:U:H5'	2.17	0.44
36:DA:1191:G:O2'	36:DA:1192:G:H5'	2.18	0.44
36:DA:9:U:O2'	36:DA:10:G:P	2.76	0.44
42:BG:152:LEU:HD23	42:BG:152:LEU:N	2.31	0.44
36:DA:322:A:H5'	36:DA:340:A:H1'	1.99	0.44
48:DP:12:ALA:O	48:DP:13:ASN:O	2.35	0.44
36:DA:532:A:H4'	36:DA:533:G:O4'	2.18	0.44
1:CA:67:C:H2'	1:CA:68:G:H8	1.81	0.44
36:BA:30:G:C6	36:BA:31:C:N3	2.86	0.44
1:AA:1030(D):A:C2'	1:AA:1031:G:H5'	2.47	0.44
20:CT:41:ILE:HA	20:CT:44:ALA:HB3	1.99	0.44
18:CR:44:LEU:CD1	18:CR:44:LEU:N	2.81	0.44
6:CF:33:TYR:CD2	6:CF:75:LEU:HD13	2.53	0.44
1:AA:1068:G:N7	1:AA:1094:G:H2'	2.32	0.44
1:AA:141:A:H2'	1:AA:142:G:O4'	2.18	0.44
1:AA:854:G:C8	1:AA:871:U:O4	2.70	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:229:VAL:HG12	2:CB:230:VAL:N	2.33	0.44
1:CA:1066:C:H5'	1:CA:1067:A:OP2	2.18	0.44
1:CA:1264:C:O2'	1:CA:1265:G:H5'	2.17	0.44
36:DA:1614:A:H2'	36:DA:1615:C:H5'	2.00	0.44
36:DA:1801:G:H3'	36:DA:1802:A:H5'	2.00	0.44
36:BA:1027:A:C2	36:BA:1028:A:N7	2.86	0.44
36:BA:764:A:H3'	36:BA:765:G:H5'	2.00	0.44
19:CS:60:VAL:HG21	19:CS:74:PHE:HB2	2.00	0.44
36:DA:614:U:O2	36:DA:614:U:O4'	2.36	0.44
40:BE:176:ILE:HG22	40:BE:176:ILE:O	2.18	0.44
1:AA:795:C:H6	1:AA:795:C:O5'	2.01	0.44
38:DC:78:ALA:N	38:DC:115:ALA:HB1	2.32	0.44
32:B6:26:ASN:O	32:B6:27:LYS:HB2	2.17	0.44
32:D6:12:GLU:HA	32:D6:23:THR:CB	2.46	0.44
32:D6:26:ASN:O	32:D6:27:LYS:HB2	2.18	0.44
52:BT:23:ARG:O	52:BT:25:GLY:N	2.49	0.44
56:BX:36:LYS:HA	56:BX:39:ILE:CG1	2.48	0.44
56:BX:53:LYS:CD	56:BX:55:ASN:HD21	2.27	0.44
2:CB:92:TYR:CE1	2:CB:151:GLY:CA	3.01	0.44
1:CA:355:C:H4'	1:CA:388:G:O2'	2.17	0.44
1:CA:368:U:P	25:CZ:291:ARG:HD3	2.57	0.44
25:AZ:139:ASP:CB	25:AZ:177:LEU:HD11	2.47	0.44
36:DA:143:G:O4'	56:DX:37:THR:HG21	2.17	0.44
36:BA:308:G:O2'	57:BY:19:LYS:NZ	2.51	0.44
57:BY:81:LYS:CD	57:BY:97:ARG:O	2.66	0.44
36:DA:2330:G:C2'	36:DA:2331:G:H5'	2.48	0.44
2:CB:98:LEU:HB2	2:CB:101:MET:HG3	2.00	0.44
49:BQ:136:ALA:C	49:BQ:138:ASP:H	2.22	0.44
57:DY:13:VAL:O	57:DY:24:VAL:HG13	2.18	0.44
57:DY:8:LYS:HE2	57:DY:72:VAL:O	2.17	0.44
39:BD:43:ARG:HG2	39:BD:54:ARG:O	2.18	0.44
3:CC:13:GLY:H	14:CN:57:ARG:CD	2.30	0.44
54:BV:46:VAL:O	54:BV:46:VAL:HG13	2.18	0.44
43:DH:125:VAL:H	43:DH:126:PRO:HD3	1.82	0.44
34:B8:7:HIS:O	34:B8:11:LYS:HG3	2.17	0.44
9:AI:55:ALA:O	9:AI:58:HIS:ND1	2.51	0.44
42:DG:139:LEU:HA	42:DG:144:ILE:HG21	1.99	0.44
42:DG:142:PRO:HG2	42:DG:143:GLU:H	1.83	0.44
28:D2:51:ARG:HB3	28:D2:51:ARG:NH1	2.33	0.44
1:CA:1226:C:C2'	13:CM:103:THR:HB	2.47	0.44
46:BN:23:LEU:C	46:BN:25:ARG:H	2.21	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CS:45:VAL:C	19:CS:47:HIS:H	2.21	0.44
1:AA:374:A:C4	1:AA:375:U:C5	3.05	0.44
1:CA:1349:A:C6	1:CA:1374:A:C8	3.05	0.44
36:DA:1049:C:O2	36:DA:1113:U:H4'	2.16	0.44
10:CJ:4:ILE:CG2	10:CJ:74:ILE:HD11	2.48	0.44
36:BA:664:C:H4'	36:BA:941:A:P	2.57	0.44
1:AA:266:G:O2'	1:AA:267:C:OP2	2.32	0.44
1:CA:197:A:N6	1:CA:221:C:C5'	2.81	0.44
19:AS:64:GLU:O	19:AS:67:VAL:HG23	2.17	0.44
27:B1:25:LYS:HE2	36:BA:2396:G:O5'	2.18	0.44
46:BN:26:LEU:HD12	46:BN:26:LEU:O	2.18	0.44
36:DA:1141:U:H6	46:DN:63:THR:CG2	2.30	0.44
46:DN:63:THR:HB	46:DN:66:LYS:NZ	2.33	0.44
19:AS:6:LYS:CD	19:AS:6:LYS:N	2.80	0.44
57:BY:88:LYS:HZ2	57:BY:93:GLY:HA3	1.80	0.44
27:D1:87:PRO:HA	27:D1:90:ILE:HG12	2.00	0.44
3:CC:122:GLU:O	3:CC:123:GLN:C	2.56	0.44
25:AZ:11:HIS:HE1	25:AZ:78:SER:HB2	1.83	0.44
7:CG:97:GLN:O	7:CG:100:ALA:HB3	2.18	0.44
2:AB:105:PHE:HE1	2:AB:152:PHE:CZ	2.36	0.44
9:CI:56:LEU:CD2	9:CI:57:GLY:H	2.31	0.44
55:DW:6:ILE:HA	55:DW:104:THR:HG22	2.00	0.44
2:AB:97:TRP:HZ2	2:AB:102:LEU:CD1	2.21	0.44
41:DF:184:TYR:CE1	48:DP:7:ARG:NH2	2.86	0.44
1:AA:385:C:O2'	1:AA:386:C:H5'	2.18	0.44
49:DQ:31:ASP:C	49:DQ:32:TYR:CD1	2.92	0.44
1:AA:438:G:H5'	4:AD:123:HIS:HB3	1.99	0.44
37:BB:87:G:H22	37:BB:89:G:H3'	1.82	0.44
54:DV:18:LEU:CD2	54:DV:18:LEU:N	2.80	0.44
38:BC:175:VAL:O	38:BC:188:ASN:ND2	2.48	0.44
4:AD:112:VAL:HG12	4:AD:116:GLN:OE1	2.17	0.44
25:CZ:189:ARG:HG2	25:CZ:190:ARG:N	2.26	0.44
40:DE:167:VAL:HG13	40:DE:168:MET:N	2.32	0.44
16:CP:39:TYR:O	16:CP:41:PRO:HD3	2.18	0.44
51:BS:87:PHE:CG	51:BS:88:ASP:N	2.86	0.44
26:D0:7:LEU:CD1	49:DQ:85:LYS:HG3	2.43	0.44
10:CJ:32:ALA:HB1	10:CJ:75:ILE:HD11	2.00	0.44
6:AF:12:PRO:HG3	6:AF:57:GLN:O	2.17	0.44
36:BA:2018:G:O2'	53:BU:34:LYS:HD2	2.18	0.44
36:DA:2223:G:H2'	36:DA:2224:G:H5'	2.00	0.44
36:DA:1335:U:H2'	36:DA:1336:A:H8	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:B0:49:LYS:O	26:B0:80:HIS:HB3	2.18	0.44
43:DH:54:ARG:CG	43:DH:54:ARG:HH11	2.27	0.44
12:CL:71:PRO:HG3	12:CL:99:HIS:CD2	2.48	0.44
36:BA:812:C:H5'	48:BP:25:SER:HB3	1.99	0.44
1:AA:631:G:H5''	1:AA:632:A:OP1	2.17	0.44
36:BA:2562:U:O2'	47:BO:23:ARG:NH1	2.50	0.44
40:DE:117:MET:HE1	40:DE:124:GLY:HA3	2.00	0.44
6:AF:15:ASP:OD2	6:AF:17:SER:HB2	2.17	0.44
36:BA:1339:G:H21	36:BA:1603:A:H1'	1.83	0.44
1:CA:1128:C:C1'	1:CA:1146:A:H61	2.27	0.44
4:CD:121:VAL:O	4:CD:134:ASP:CA	2.65	0.44
36:BA:510:C:H2'	36:BA:511:U:O4'	2.17	0.44
1:AA:503:C:OP2	12:AL:116:SER:OG	2.33	0.44
36:BA:992:C:H2'	36:BA:993:G:H8	1.83	0.44
27:D1:60:PHE:CD1	27:D1:91:LYS:NZ	2.78	0.44
36:BA:110:G:HO2'	36:BA:111:A:H5'	1.83	0.44
37:DB:117:G:H2'	37:DB:118:G:O4'	2.18	0.44
36:DA:771:G:O2'	36:DA:772:C:H5'	2.18	0.44
41:DF:64:ILE:HG22	41:DF:76:GLY:O	2.18	0.44
3:CC:191:THR:HG23	3:CC:196:LEU:HD23	1.98	0.44
8:AH:7:ALA:CB	8:AH:85:ARG:HD3	2.47	0.44
36:DA:2869:G:C6	36:DA:2870:C:C4	3.06	0.44
1:AA:1134:G:O2'	1:AA:1135:U:H5'	2.17	0.44
12:CL:46:LYS:HB2	12:CL:92:ASP:HA	2.00	0.44
40:BE:199:ARG:HG2	40:BE:200:GLU:N	2.33	0.44
46:DN:72:TYR:CE1	46:DN:90:MET:HG3	2.53	0.44
19:AS:27:GLU:N	19:AS:27:GLU:OE1	2.50	0.44
3:AC:155:GLY:HA3	3:AC:196:LEU:HD13	1.99	0.44
1:AA:15:G:N2	5:AE:18:ARG:HA	2.32	0.44
1:AA:1525:G:P	11:AK:120:ARG:HH22	2.41	0.44
1:CA:277:C:P	17:CQ:41:LYS:NZ	2.90	0.44
36:DA:1619:G:O5'	36:DA:1619:G:C8	2.70	0.44
1:AA:254:G:OP1	17:AQ:67:LYS:O	2.35	0.44
28:D2:68:ARG:HG2	28:D2:72:ALA:HB2	2.00	0.44
21:AU:20:LYS:HD3	21:AU:21:TYR:CE1	2.52	0.44
36:BA:187:G:C2	36:BA:210:C:O2	2.71	0.44
2:AB:235:SER:O	2:AB:236:TYR:C	2.56	0.44
1:CA:1046:A:H62	1:CA:1211:U:H6	1.65	0.44
3:AC:132:ARG:O	3:AC:136:GLN:HG3	2.17	0.44
36:BA:2153:G:H2'	36:BA:2154:G:H8	1.82	0.44
1:AA:36:C:H5''	12:AL:123:LYS:HA	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:76:GLN:O	2:CB:76:GLN:HG2	2.17	0.44
46:DN:45:ASN:HD22	46:DN:45:ASN:N	2.16	0.44
37:BB:32:C:H5'	37:BB:32:C:H6	1.82	0.44
13:AM:50:GLU:H	13:AM:50:GLU:HG2	1.60	0.44
7:AG:38:LEU:O	7:AG:42:ILE:HG13	2.17	0.44
1:AA:995:C:O2'	1:AA:996:A:P	2.75	0.44
4:CD:173:TRP:HB2	4:CD:187:ARG:O	2.18	0.43
4:CD:98:GLU:O	4:CD:100:ARG:N	2.51	0.43
36:DA:590:A:C6	36:DA:591:C:N4	2.86	0.43
48:DP:16:ARG:CA	48:DP:16:ARG:HH11	2.31	0.43
52:DT:33:LYS:HZ3	52:DT:43:GLN:HB3	1.82	0.43
1:CA:1235:U:C2'	1:CA:1236:A:O5'	2.65	0.43
10:AJ:50:ILE:N	10:AJ:50:ILE:HD13	2.17	0.43
36:DA:1791:A:N6	36:DA:1828:G:O2'	2.48	0.43
25:CZ:171:ILE:CD1	25:CZ:171:ILE:N	2.81	0.43
37:BB:106:G:O2'	37:BB:107:G:H5'	2.18	0.43
1:AA:226:G:O2'	1:AA:227:G:H5'	2.18	0.43
56:DX:18:TYR:C	56:DX:20:GLY:N	2.71	0.43
35:D9:29:ASN:N	35:D9:29:ASN:HD22	2.15	0.43
54:BV:47:VAL:O	54:BV:49:THR:O	2.35	0.43
53:BU:14:HIS:C	53:BU:16:LYS:H	2.22	0.43
36:BA:2310:A:O2'	36:BA:2311:A:C5'	2.66	0.43
42:BG:71:THR:CG2	42:BG:72:ARG:N	2.81	0.43
3:AC:5:ILE:HD13	3:AC:5:ILE:H	1.71	0.43
53:DU:61:TRP:O	53:DU:65:ILE:HD13	2.17	0.43
35:D9:9:ARG:HB3	35:D9:9:ARG:NH1	2.33	0.43
36:DA:94:C:O2	36:DA:94:C:H2'	2.18	0.43
41:BF:114:VAL:HG21	41:BF:202:PHE:CE2	2.53	0.43
36:BA:1190:G:H5'	48:BP:35:HIS:CA	2.48	0.43
40:DE:34:VAL:O	40:DE:35:GLN:HB2	2.18	0.43
40:DE:84:PHE:CD1	40:DE:85:ASN:N	2.86	0.43
36:DA:1517:G:O2'	36:DA:1518:U:H5'	2.18	0.43
4:AD:202:LEU:O	4:AD:203:VAL:C	2.56	0.43
46:DN:22:THR:O	46:DN:25:ARG:HB2	2.18	0.43
46:DN:62:VAL:CG2	46:DN:66:LYS:HB2	2.47	0.43
50:DR:2:ARG:HG2	50:DR:5:LYS:HZ1	1.83	0.43
36:BA:1106:G:O2'	36:BA:1107:G:H5'	2.18	0.43
27:D1:82:LEU:CD2	27:D1:90:ILE:HG23	2.48	0.43
27:B1:78:LYS:C	27:B1:80:LEU:H	2.22	0.43
40:DE:12:THR:O	40:DE:23:VAL:HG22	2.18	0.43
33:B7:7:PRO:HG3	36:BA:1612:C:H5'	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:218:A:C2	36:DA:235:U:H4'	2.53	0.43
1:CA:778:G:H1'	11:CK:119:CYS:HB3	1.99	0.43
36:DA:1057:A:O2'	36:DA:1058:G:H5'	2.17	0.43
39:DD:266:SER:C	39:DD:267:SER:O	2.56	0.43
36:DA:1541:G:C8	36:DA:1542:A:C2	3.06	0.43
49:DQ:54:MET:HG2	49:DQ:64:ILE:CD1	2.48	0.43
30:D4:14:ILE:HG23	30:D4:31:ILE:CG2	2.48	0.43
2:AB:212:GLN:HE22	2:AB:216:SER:HB3	1.82	0.43
2:AB:31:TYR:CD2	2:AB:202:PRO:HG3	2.51	0.43
1:AA:1050:G:O2'	1:AA:1051:C:O5'	2.35	0.43
5:AE:11:ILE:HG22	5:AE:105:VAL:HG22	1.99	0.43
36:DA:2570:G:C2'	36:DA:2571:C:H5'	2.48	0.43
36:DA:2010:G:O2'	36:DA:2011:U:H5'	2.17	0.43
36:BA:2679:A:H2'	36:BA:2680:C:H6	1.82	0.43
50:DR:74:LYS:CE	50:DR:77:ARG:NH2	2.81	0.43
36:DA:2135:A:C5	36:DA:2136:C:N3	2.86	0.43
1:AA:498:U:HO2'	1:AA:499:A:P	2.41	0.43
40:DE:101:ARG:HD2	40:DE:169:ASN:ND2	2.33	0.43
29:B3:42:ALA:O	29:B3:43:ILE:C	2.56	0.43
58:BZ:41:LEU:CD2	58:BZ:41:LEU:C	2.86	0.43
36:DA:1341:U:O2	36:DA:1398:C:H5'	2.18	0.43
1:CA:926:G:H2'	1:CA:1505:G:C2	2.53	0.43
4:CD:65:ARG:HB2	4:CD:75:PHE:CE2	2.53	0.43
36:DA:970:C:O5'	36:DA:970:C:H6	2.00	0.43
41:BF:41:LEU:HD11	48:BP:7:ARG:NH2	2.31	0.43
1:AA:1433:A:N6	1:AA:1434:A:C6	2.86	0.43
39:BD:130:ALA:HA	39:BD:192:THR:HA	1.99	0.43
43:DH:54:ARG:HH22	43:DH:62:LYS:NZ	2.15	0.43
36:BA:814:C:H2'	36:BA:815:C:C6	2.53	0.43
2:AB:61:LEU:HD23	2:AB:68:ILE:CG1	2.48	0.43
1:CA:937:A:C5	1:CA:938:A:N7	2.86	0.43
42:BG:16:ARG:HH12	42:BG:28:VAL:HG13	1.83	0.43
36:DA:413:C:H4'	36:DA:1880:C:O2'	2.18	0.43
36:DA:643:A:C2'	36:DA:644:A:H5'	2.48	0.43
24:CY:48:U:C4	24:CY:59:G:H5"	2.53	0.43
34:B8:43:GLN:C	34:B8:44:LYS:HD2	2.39	0.43
1:AA:328:C:H2'	1:AA:328:C:O2	2.18	0.43
1:CA:1129:C:OP1	1:CA:1130:A:H5"	2.18	0.43
46:DN:17:ASP:HB2	46:DN:55:VAL:CG1	2.47	0.43
8:CH:83:ILE:O	8:CH:83:ILE:HG23	2.17	0.43
51:DS:64:GLU:O	51:DS:66:ALA:N	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:70:LEU:HD23	13:AM:70:LEU:O	2.17	0.43
36:BA:1095:A:H2'	36:BA:1096:A:C8	2.53	0.43
57:BY:90:LEU:N	57:BY:90:LEU:HD23	2.28	0.43
36:BA:2770:G:H5''	36:BA:2771:C:OP2	2.18	0.43
20:AT:100:ILE:HG22	20:AT:100:ILE:O	2.18	0.43
7:CG:18:TYR:OH	7:CG:58:PRO:HG3	2.18	0.43
1:CA:8:A:N7	4:CD:208:SER:CB	2.79	0.43
10:AJ:90:LEU:H	10:AJ:91:PRO:HD3	1.83	0.43
39:DD:76:PRO:HA	39:DD:118:VAL:HG23	1.99	0.43
36:DA:1493:C:C4	36:DA:2206:G:O2'	2.71	0.43
18:AR:53:ARG:NH1	18:AR:60:ALA:HA	2.33	0.43
20:AT:41:ILE:HA	20:AT:44:ALA:CB	2.48	0.43
20:AT:44:ALA:HB3	20:AT:91:LEU:HD12	2.00	0.43
36:DA:1782:C:H1'	36:DA:2609:U:C5'	2.47	0.43
1:CA:505:G:C6	1:CA:535:A:C2	3.05	0.43
36:DA:2653:U:C4	36:DA:2654:A:C6	3.06	0.43
1:CA:828:A:N3	2:CB:26:PRO:HG3	2.33	0.43
6:AF:2:ARG:HB2	6:AF:4:TYR:CE1	2.52	0.43
36:BA:188:G:O6	36:BA:189:G:C2	2.71	0.43
1:CA:276:G:O2'	1:CA:277:C:H5'	2.17	0.43
47:BO:2:ILE:HD11	47:BO:82:ASN:ND2	2.32	0.43
33:D7:21:ARG:HG2	33:D7:21:ARG:NH1	2.33	0.43
1:CA:1010:G:O2'	1:CA:1011:G:H5'	2.18	0.43
1:AA:1068:G:N2	1:AA:1191:A:N3	2.63	0.43
47:DO:26:LYS:HB3	47:DO:27:GLY:H	1.67	0.43
36:DA:2264:C:H2'	36:DA:2265:U:C6	2.53	0.43
36:BA:2233:U:H2'	36:BA:2234:G:C8	2.53	0.43
17:CQ:57:VAL:HG12	17:CQ:76:LEU:HA	2.00	0.43
1:CA:487:A:H2'	1:CA:488:C:O4'	2.18	0.43
45:BK:73:UNK:O	45:BK:74:UNK:C	2.65	0.43
25:CZ:152:MET:C	25:CZ:152:MET:SD	2.97	0.43
1:CA:592:G:H2'	1:CA:593:G:H8	1.83	0.43
36:DA:1127:A:H2'	36:DA:1128:A:H5''	2.00	0.43
4:CD:189:PRO:HB2	4:CD:194:LEU:CD2	2.43	0.43
36:BA:2182:G:O2'	36:BA:2183:C:H5'	2.17	0.43
32:D6:5:VAL:O	32:D6:5:VAL:HG12	2.18	0.43
36:DA:593:G:O2'	36:DA:594:U:H5'	2.18	0.43
47:DO:107:ARG:CZ	52:DT:35:LYS:HB2	2.47	0.43
52:DT:35:LYS:O	52:DT:38:ASN:ND2	2.51	0.43
47:DO:64:ARG:NH2	52:DT:70:VAL:HG21	2.33	0.43
32:B6:45:LYS:H	32:B6:45:LYS:NZ	2.15	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:226:G:O2'	1:CA:227:G:H5'	2.18	0.43
49:BQ:60:ARG:HA	58:BZ:178:GLU:O	2.17	0.43
1:CA:1325:C:H5''	21:CU:15:ARG:NH1	2.33	0.43
56:BX:55:ASN:HB2	56:BX:80:ILE:HG12	2.00	0.43
10:CJ:16:LEU:HD23	10:CJ:94:VAL:CG1	2.48	0.43
42:DG:130:ASN:HB2	42:DG:160:VAL:HG22	1.99	0.43
36:BA:102:G:OP1	36:BA:102:G:H4'	2.17	0.43
36:BA:480:A:H1'	57:BY:44:ILE:HG21	2.00	0.43
36:BA:79:G:H2'	36:BA:80:G:O4'	2.18	0.43
26:D0:43:THR:N	36:DA:2331:G:H4'	2.32	0.43
57:DY:87:LYS:O	57:DY:88:LYS:HB2	2.18	0.43
57:DY:95:LYS:HE3	57:DY:99:CYS:O	2.17	0.43
36:DA:2100:G:H2'	36:DA:2101:G:C8	2.53	0.43
13:AM:4:ILE:HB	13:AM:5:ALA:H	1.45	0.43
41:BF:11:VAL:C	41:BF:13:SER:H	2.21	0.43
1:CA:961:U:O2'	1:CA:962:C:P	2.75	0.43
43:DH:28:GLY:HA3	43:DH:79:VAL:HB	1.98	0.43
9:AI:56:LEU:HD23	9:AI:57:GLY:N	2.33	0.43
36:BA:2312:U:H4'	42:BG:71:THR:HG21	2.00	0.43
12:AL:43:VAL:HG21	12:AL:93:LEU:HD22	2.00	0.43
53:DU:92:ARG:HD2	54:DV:11:GLN:CG	2.49	0.43
36:BA:2178:C:O5'	36:BA:2178:C:O2	2.36	0.43
20:CT:54:LYS:HA	20:CT:57:ARG:NH2	2.32	0.43
36:DA:195:A:N7	36:DA:197:A:OP1	2.51	0.43
36:DA:2346:A:H5'	36:DA:2383:G:C1'	2.49	0.43
43:BH:124:GLU:HG3	43:BH:132:ARG:HG3	1.99	0.43
46:BN:28:THR:CG2	46:BN:29:LYS:H	2.28	0.43
4:CD:67:ILE:HG22	4:CD:68:TYR:CD1	2.53	0.43
4:CD:9:CYS:SG	4:CD:32:ALA:HB3	2.58	0.43
36:BA:941:A:H2'	36:BA:942:G:O4'	2.17	0.43
1:CA:1047:G:C4'	14:CN:4:LYS:HG2	2.47	0.43
40:DE:34:VAL:HG22	40:DE:34:VAL:O	2.17	0.43
7:CG:118:VAL:CG2	7:CG:119:ARG:H	2.31	0.43
19:CS:16:LEU:HA	19:CS:19:VAL:HB	1.99	0.43
56:BX:83:VAL:O	56:BX:84:ALA:O	2.35	0.43
36:DA:1142(A):A:C8	36:DA:1142(A):A:H5'	2.53	0.43
36:DA:2679:A:O2'	36:DA:2680:C:H5'	2.17	0.43
4:AD:187:ARG:HG2	4:AD:188:LEU:N	2.33	0.43
24:AY:76:A:H61	25:AZ:234:ARG:CZ	2.32	0.43
36:DA:1251:C:OP1	53:DU:10:ARG:HG3	2.18	0.43
58:BZ:70:LEU:CD2	58:BZ:70:LEU:N	2.81	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1541:G:C8	36:BA:1542:A:C2	3.06	0.43
36:DA:2572:A:C5	40:DE:144:ARG:NH1	2.81	0.43
36:BA:535:C:O2'	36:BA:536:A:H5'	2.18	0.43
36:DA:1087:G:H8	36:DA:1088:A:H4'	1.84	0.43
36:DA:2121:G:H2'	36:DA:2122:U:O4'	2.18	0.43
52:BT:129:ARG:HG3	52:BT:129:ARG:HH11	1.83	0.43
22:CW:7:A:H5''	22:CW:8:U:P	2.57	0.43
36:DA:1494:A:H2'	36:DA:1495:A:C5'	2.45	0.43
55:DW:88:ARG:HB3	55:DW:92:ARG:HB2	2.00	0.43
36:DA:30:G:C2'	36:DA:31:C:H5'	2.48	0.43
9:AI:113:LYS:HD3	9:AI:119:ALA:HA	1.99	0.43
36:BA:801:G:O4'	41:BF:54:ARG:CD	2.62	0.43
36:DA:2143:C:O2'	36:DA:2144:U:H5'	2.18	0.43
3:AC:153:VAL:O	3:AC:154:SER:CB	2.66	0.43
46:BN:108:PRO:HG2	46:BN:113:GLY:HA3	1.99	0.43
8:CH:136:GLU:HG3	8:CH:136:GLU:O	2.18	0.43
36:BA:1761:C:H3'	36:BA:1762:A:C8	2.53	0.43
36:BA:847:U:H2'	36:BA:848:G:H5''	2.00	0.43
36:BA:643:A:H2'	36:BA:644:A:H5'	2.00	0.43
49:BQ:97:VAL:HG21	49:BQ:103:MET:CE	2.49	0.43
16:CP:43:LYS:O	16:CP:45:THR:N	2.52	0.43
36:BA:2199:A:C5'	36:BA:2200:C:OP2	2.67	0.43
54:DV:34:GLU:CG	54:DV:56:SER:HB2	2.48	0.43
40:DE:87:GLU:C	40:DE:89:ASP:N	2.71	0.43
41:DF:51:THR:HG21	41:DF:92:PRO:HD2	1.99	0.43
36:BA:272(C):G:H1	36:BA:365:C:N4	2.14	0.43
51:BS:29:PHE:CE1	51:BS:31:SER:HB2	2.53	0.43
54:BV:34:GLU:CG	54:BV:56:SER:HB2	2.47	0.43
31:D5:19:ARG:NH1	36:DA:1265:A:H3'	2.33	0.43
36:DA:650:C:C3'	36:DA:651:G:H5''	2.47	0.43
36:DA:271(F):C:H2'	36:DA:271(G):C:C5'	2.48	0.43
20:CT:47:GLY:C	20:CT:49:ALA:N	2.70	0.43
48:BP:6:LEU:N	48:BP:6:LEU:HD23	2.32	0.43
36:BA:2492:U:H2'	36:BA:2493:U:H6	1.83	0.43
36:BA:703:U:H2'	36:BA:704:G:H5'	1.99	0.43
36:DA:2140:C:H2'	36:DA:2141:G:H8	1.83	0.43
22:AW:24:G:C2'	22:AW:25:C:H5'	2.48	0.43
36:DA:959:A:C6	36:DA:960:A:C6	3.06	0.43
1:CA:342:C:C4	1:CA:343:U:C4	3.06	0.43
47:DO:105:GLU:HG3	47:DO:108:GLU:OE2	2.18	0.43
3:AC:157:ILE:HD12	3:AC:157:ILE:N	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:24:VAL:HG13	12:CL:98:TYR:HE1	1.82	0.43
36:DA:2116:G:N7	36:DA:2117:A:C6	2.86	0.43
1:CA:1057:G:H2'	1:CA:1058:G:O4'	2.19	0.43
36:BA:1991:U:H2'	36:BA:1992:G:H5''	2.00	0.43
36:DA:2024:G:H2'	36:DA:2025:C:H6	1.82	0.43
36:BA:182:A:H2	36:BA:433:C:O2	2.01	0.43
57:DY:22:GLY:O	57:DY:23:ARG:O	2.37	0.43
50:BR:106:GLY:O	50:BR:107:ASP:HB3	2.18	0.43
36:BA:382:G:H2'	36:BA:383:U:H5'	2.00	0.43
1:CA:650:G:O2'	1:CA:651:C:H5'	2.17	0.43
36:DA:836:G:H2'	36:DA:837:C:C6	2.53	0.43
6:CF:47:ARG:O	6:CF:47:ARG:HG3	2.18	0.43
38:BC:34:THR:HG22	38:BC:34:THR:O	2.19	0.43
1:CA:1484:C:H6	1:CA:1484:C:O5'	2.01	0.43
55:BW:55:ALA:C	55:BW:57:ASN:H	2.21	0.43
1:AA:803:G:H2'	1:AA:804:U:O4'	2.17	0.43
25:AZ:356:PRO:HA	25:AZ:357:PRO:HD2	1.82	0.43
32:D6:10:LEU:HG	34:D8:34:TRP:CD1	2.43	0.43
36:DA:941:A:H2'	36:DA:942:G:O4'	2.18	0.43
52:DT:28:VAL:O	52:DT:28:VAL:HG12	2.17	0.43
1:CA:1152:A:C6	1:CA:1153:C:C4	3.07	0.43
39:BD:31:LYS:NZ	39:BD:33:LEU:HG	2.33	0.43
39:DD:218:ARG:HB3	39:DD:219:PRO:HD2	2.00	0.43
42:DG:5:VAL:HG11	42:DG:100:TRP:HB2	1.98	0.43
42:DG:79:ASN:O	42:DG:80:PHE:CB	2.66	0.43
37:DB:42:C:N4	42:DG:91:ARG:NH2	2.65	0.43
36:BA:1210:A:H5''	36:BA:1212:G:C4'	2.48	0.43
52:BT:30:VAL:CG2	52:BT:84:GLN:HG3	2.48	0.43
36:DA:2103:C:C4	36:DA:2186:G:N1	2.82	0.43
36:BA:583:G:C2	36:BA:584:C:C6	3.06	0.43
3:CC:81:GLY:C	3:CC:82:GLU:HG3	2.38	0.43
36:DA:139(A):G:H3'	36:DA:140:G:H8	1.82	0.43
9:AI:53:VAL:HG22	9:AI:95:LYS:CD	2.48	0.43
25:CZ:253:VAL:CA	25:CZ:307:PRO:HG3	2.48	0.43
36:DA:654(O):G:H2'	36:DA:654(P):C:C5	2.53	0.43
30:B4:22:ILE:CD1	30:B4:22:ILE:H	2.01	0.43
36:BA:654(E):G:H22	36:BA:654(Q):C:C1'	2.14	0.43
9:CI:55:ALA:C	9:CI:58:HIS:HE1	2.19	0.43
41:BF:202:PHE:CD1	41:BF:203:GLN:NE2	2.87	0.43
51:BS:58:LEU:O	51:BS:59:LYS:O	2.36	0.43
16:CP:21:VAL:O	16:CP:21:VAL:HG13	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:605:C:H2'	36:BA:606:U:H6	1.83	0.43
48:BP:91:PHE:CE2	48:BP:95:VAL:HG12	2.54	0.43
1:AA:265:G:H5'	17:AQ:64:PRO:O	2.18	0.43
1:CA:66:G:H4'	1:CA:173:U:C5	2.53	0.43
36:DA:1697:G:C3'	36:DA:1698:A:H5''	2.42	0.43
12:CL:27:LEU:O	12:CL:28:LYS:C	2.53	0.43
40:DE:39:PRO:C	40:DE:40:GLU:HG3	2.37	0.43
40:DE:111:ARG:HG2	50:DR:2:ARG:CZ	2.47	0.43
29:B3:19:GLN:O	29:B3:22:ALA:N	2.51	0.43
36:BA:1057:A:O2'	36:BA:1058:G:H5'	2.17	0.43
42:BG:110:ALA:C	42:BG:112:PRO:CD	2.86	0.43
56:DX:10:ALA:HB1	56:DX:11:PRO:CD	2.47	0.43
50:BR:94:TYR:O	50:BR:116:LEU:O	2.36	0.43
36:BA:2839:G:C5'	50:BR:46:GLY:HA2	2.47	0.43
52:DT:103:ARG:O	52:DT:105:LEU:N	2.52	0.43
1:CA:1258:G:C6	1:CA:1259:C:N4	2.86	0.43
2:CB:31:TYR:O	2:CB:42:ILE:HG13	2.19	0.43
9:CI:17:VAL:CG2	9:CI:80:GLY:HA3	2.48	0.43
36:BA:146:G:C2'	36:BA:147:U:H5'	2.48	0.43
2:CB:129:GLU:O	2:CB:130:ARG:O	2.37	0.43
54:DV:28:GLU:HB3	54:DV:29:PRO:CD	2.39	0.43
36:BA:563:G:C4	36:BA:2018:G:C2	3.06	0.43
36:DA:2126:A:O2'	36:DA:2127:G:OP2	2.35	0.43
1:CA:1157:A:H4'	1:CA:1158:C:O5'	2.18	0.43
36:BA:238:C:H2'	36:BA:239:U:O4'	2.18	0.43
25:AZ:96:ALA:HA	25:AZ:99:MET:CG	2.49	0.43
1:CA:1006:C:N4	1:CA:1024:G:H21	2.15	0.43
39:DD:65:ILE:N	39:DD:65:ILE:HD13	2.28	0.43
25:AZ:206:ILE:O	25:AZ:210:ILE:CG2	2.63	0.43
1:CA:1129:C:N4	1:CA:1135:U:H3	2.16	0.43
36:BA:1591:G:C6	36:BA:1592:C:C4	3.06	0.43
1:CA:242:C:C2'	1:CA:243:A:H5'	2.45	0.43
36:BA:489:G:N2	36:BA:491:G:H1'	2.33	0.43
28:B2:13:ALA:HB1	28:B2:16:LEU:HB2	1.99	0.43
36:DA:864:G:N2	36:DA:913:U:C2	2.87	0.43
1:CA:1526:G:O2'	1:CA:1527:C:H5'	2.18	0.43
36:BA:2369:A:H2'	36:BA:2370:G:C8	2.53	0.43
36:BA:2330:G:O2'	36:BA:2331:G:H5'	2.18	0.43
36:DA:751:A:C6	36:DA:789:A:C5	3.07	0.43
17:AQ:88:TYR:OH	17:AQ:92:ARG:CZ	2.66	0.43
38:DC:47:LEU:HD11	38:DC:171:ILE:CG2	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:565:C:O2'	36:BA:566:U:H5'	2.17	0.43
25:AZ:129:PRO:O	25:AZ:130:TYR:O	2.36	0.43
40:DE:171:GLU:CB	40:DE:185:LYS:HG2	2.47	0.43
8:AH:86:ILE:HB	8:AH:133:LEU:O	2.19	0.43
1:CA:46:G:O2'	1:CA:365:U:H1'	2.18	0.43
53:DU:25:TRP:O	53:DU:28:ARG:HB2	2.18	0.43
1:CA:1032:G:H2'	1:CA:1033:G:C8	2.54	0.43
2:AB:52:GLU:OE1	2:AB:52:GLU:O	2.35	0.43
46:BN:130:HIS:O	46:BN:130:HIS:CG	2.72	0.43
1:AA:284:G:H2'	1:AA:285:G:H8	1.83	0.43
39:DD:124:PRO:HG2	39:DD:129:ASN:HD21	1.81	0.43
24:CY:51:G:O2'	25:CZ:338:TYR:CD1	2.72	0.43
36:DA:763:G:O2'	36:DA:764:A:H3'	2.18	0.43
1:CA:328:C:H4'	1:CA:329:A:H5'	2.00	0.43
1:AA:131:C:H2'	1:AA:132:C:C6	2.53	0.43
36:DA:2849:U:OP2	52:DT:95:ARG:NH1	2.51	0.43
2:AB:222:ILE:O	2:AB:225:ALA:HB3	2.18	0.43
1:AA:644:G:C5	1:AA:645:C:C5	3.05	0.43
6:CF:50:TYR:HB2	6:CF:51:PRO:HD2	2.00	0.43
26:B0:29:GLN:OE1	36:BA:923:C:O4'	2.36	0.43
36:BA:290:G:O2'	36:BA:291:C:H5'	2.17	0.43
36:BA:292:C:H2'	36:BA:293:U:C6	2.52	0.43
43:DH:80:SER:O	43:DH:81:GLU:HB2	2.18	0.43
36:BA:190:A:C4	36:BA:207:A:C2	3.06	0.43
20:CT:60:GLU:HG2	20:CT:60:GLU:O	2.17	0.43
1:CA:688:G:C5	1:CA:700:G:C2	3.06	0.43
47:DO:77:ILE:HG23	47:DO:77:ILE:O	2.18	0.43
36:BA:1671:U:O5'	36:BA:1671:U:H6	2.00	0.43
15:CO:21:ASP:OD1	15:CO:22:THR:N	2.51	0.43
36:DA:57:C:O2'	36:DA:58:G:H5'	2.19	0.43
1:AA:174:C:O2'	1:AA:175:C:H5'	2.18	0.43
38:DC:82:LYS:CB	38:DC:116:THR:HG21	2.48	0.43
4:CD:173:TRP:CD2	4:CD:189:PRO:HB3	2.53	0.43
24:CY:75:C:C6	25:CZ:230:THR:O	2.71	0.43
32:B6:20:ASN:C	32:B6:21:TYR:CD2	2.92	0.43
36:BA:1347:G:N2	36:BA:1600:C:C2	2.86	0.43
25:AZ:135:MET:CE	25:AZ:172:ARG:HG2	2.48	0.43
22:AW:55:U:C5	22:AW:57:G:H5''	2.53	0.43
39:DD:221:VAL:HG22	39:DD:226:MET:HE3	2.01	0.43
25:CZ:106:VAL:O	25:CZ:135:MET:HA	2.18	0.43
52:DT:54:ARG:HA	52:DT:59:THR:HB	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:D0:38:VAL:CB	26:D0:59:LEU:HD12	2.44	0.43
52:BT:32:TYR:HB2	52:BT:33:LYS:H	1.47	0.43
46:DN:12:ARG:HG3	46:DN:14:VAL:HG23	2.00	0.43
3:AC:79:ARG:CB	3:AC:79:ARG:NH1	2.82	0.43
13:AM:66:LEU:HD12	13:AM:66:LEU:N	2.33	0.43
41:BF:7:TYR:CE1	41:BF:196:LEU:HD11	2.54	0.43
3:CC:52:LEU:O	3:CC:52:LEU:HG	2.19	0.43
3:AC:12:LEU:O	3:AC:13:GLY:C	2.56	0.43
34:B8:6:THR:HG21	34:B8:63:PRO:HD3	2.00	0.43
1:AA:1123:A:H2	1:AA:1150:U:H5	1.60	0.43
1:AA:1188:A:H2'	1:AA:1189:C:H5'	2.00	0.43
3:CC:77:ILE:HA	3:CC:84:ILE:CG2	2.48	0.43
54:DV:6:LYS:HE2	54:DV:37:VAL:HG21	2.00	0.43
36:DA:1031:G:C6	36:DA:1032:A:C6	3.06	0.43
36:BA:2110:G:N1	36:BA:2178:C:C5	2.86	0.43
36:DA:1903:G:OP2	39:DD:241:PRO:HB2	2.19	0.43
26:D0:26:TYR:HB3	26:D0:27:GLU:OE1	2.18	0.43
36:DA:654(E):G:H22	36:DA:654(Q):C:C1'	2.15	0.43
4:CD:18:LYS:HE3	4:CD:31:CYS:HB2	1.98	0.43
1:CA:1374:A:C2	1:CA:1375:A:C8	3.06	0.43
50:BR:4:LEU:C	50:BR:6:SER:N	2.70	0.43
1:AA:189(E):U:OP2	1:AA:189(E):U:H6	2.01	0.43
1:CA:1239:A:C4	1:CA:1298:C:N4	2.86	0.43
7:CG:115:ARG:O	7:CG:116:ALA:C	2.56	0.43
11:AK:61:ALA:HB2	11:AK:90:GLY:HA3	2.00	0.43
56:BX:83:VAL:HG12	56:BX:87:GLN:HB2	2.00	0.43
4:AD:59:ARG:HE	4:AD:59:ARG:HA	1.83	0.43
58:BZ:162:GLU:O	58:BZ:162:GLU:HG3	2.18	0.43
36:BA:1453:U:P	50:BR:77:ARG:NH1	2.89	0.43
5:CE:48:ALA:HA	5:CE:49:PRO:HD3	1.77	0.43
4:AD:98:GLU:HA	4:AD:103:ASN:ND2	2.33	0.43
13:AM:3:ARG:NH2	42:BG:113:ARG:HD3	2.34	0.43
39:DD:147:LEU:HD12	39:DD:147:LEU:HA	1.69	0.43
36:DA:2408:U:C2	36:DA:2409:G:N7	2.86	0.43
36:DA:1529:G:C2	36:DA:1541:G:N2	2.86	0.43
36:BA:2134:A:H1'	36:BA:2159:G:N3	2.32	0.43
1:AA:383:A:H2'	1:AA:384:G:C5'	2.45	0.43
36:DA:1087:G:H21	36:DA:1103:A:H61	1.65	0.43
52:BT:129:ARG:CZ	52:BT:131:ALA:CB	2.90	0.43
36:DA:1442:G:H1	36:DA:1549:C:H42	1.65	0.43
36:DA:1658:C:H2'	36:DA:1659:U:H6	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DR:55:ALA:HA	50:DR:80:PHE:HE1	1.76	0.43
35:B9:29:ASN:HD22	35:B9:29:ASN:H	1.65	0.43
43:DH:137:ASP:O	43:DH:138:LYS:CB	2.65	0.43
39:BD:120:GLY:O	39:BD:131:LEU:HG	2.18	0.43
21:CU:21:TYR:C	21:CU:23:PRO:HD3	2.39	0.43
36:BA:812:C:C2	36:BA:813:U:C5	3.07	0.43
36:DA:133:C:N3	36:DA:146:G:O6	2.51	0.43
25:CZ:19:HIS:CE1	36:DA:2661:G:OP1	2.71	0.43
38:DC:180:PHE:HD1	38:DC:180:PHE:H	1.66	0.43
28:D2:63:VAL:O	28:D2:65:ASN:N	2.52	0.43
20:AT:26:ASN:HD22	20:AT:26:ASN:N	2.16	0.43
1:CA:1129:C:H4'	1:CA:1130:A:H8	1.83	0.43
50:DR:12:ARG:HG3	50:DR:12:ARG:NH1	2.27	0.43
55:BW:21:VAL:HG23	55:BW:47:VAL:CG2	2.49	0.43
36:BA:1509(A):A:H2'	36:BA:1509(B):A:C8	2.54	0.43
36:BA:247:G:H4'	36:BA:386:G:C4	2.53	0.43
1:CA:404:U:H5''	4:CD:122:ARG:HG2	2.01	0.43
56:BX:59:VAL:N	56:BX:76:ARG:O	2.48	0.43
41:DF:31:HIS:O	41:DF:34:TRP:HB3	2.17	0.43
56:DX:45:THR:C	56:DX:47:PHE:H	2.22	0.43
39:BD:58:HIS:O	39:BD:59:LYS:C	2.57	0.43
1:AA:782:A:N6	1:AA:801:U:C5	2.86	0.43
1:AA:636:U:H2'	1:AA:637:G:C8	2.53	0.43
38:BC:156:ILE:O	38:BC:158:ALA:N	2.51	0.43
36:DA:962:G:O2'	36:DA:963:U:H5'	2.17	0.43
20:CT:59:ALA:O	20:CT:63:ILE:HG13	2.18	0.43
36:BA:2489:G:C6	36:BA:2490:G:N1	2.87	0.43
36:BA:1120:G:H2'	36:BA:1121:C:C6	2.52	0.43
15:AO:76:GLU:C	15:AO:78:TYR:H	2.20	0.43
8:AH:35:ILE:CD1	8:AH:134:ILE:HD13	2.48	0.43
36:DA:244:A:C2	36:DA:255:A:C4	3.06	0.43
36:BA:2691:C:C4	36:BA:2719:G:N2	2.86	0.43
36:BA:2350:C:O2'	36:BA:2351:G:H5'	2.17	0.43
38:BC:8:ARG:O	38:BC:12:GLU:HG2	2.18	0.43
43:DH:118:PRO:CG	43:DH:121:ILE:HD12	2.48	0.43
6:AF:14:LEU:HD13	6:AF:14:LEU:HA	1.81	0.43
29:B3:56:VAL:CG1	29:B3:57:GLU:N	2.81	0.43
36:DA:742:G:H4'	36:DA:1676:A:H5'	1.99	0.43
38:DC:119:VAL:C	38:DC:123:VAL:HG12	2.39	0.43
25:CZ:231:ILE:O	25:CZ:231:ILE:HG22	2.17	0.43
25:CZ:231:ILE:O	25:CZ:232:THR:O	2.37	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2283:C:C4	36:DA:2389:G:C4	3.07	0.43
1:AA:963:G:N2	10:AJ:55:LYS:CD	2.75	0.43
1:CA:355:C:N3	1:CA:356:A:N7	2.67	0.43
25:AZ:26:THR:HG23	25:AZ:27:LEU:N	2.34	0.43
39:BD:72:LYS:HB3	39:BD:75:ILE:HG12	1.99	0.43
38:BC:77:ILE:O	38:BC:78:ALA:HB3	2.18	0.43
49:DQ:26:TYR:HB2	49:DQ:137:TYR:HD1	1.84	0.43
42:DG:129:GLY:O	42:DG:130:ASN:CB	2.66	0.43
42:DG:45:GLU:O	42:DG:47:LYS:N	2.52	0.43
52:DT:76:PHE:HA	52:DT:77:PRO:HD3	1.75	0.43
36:DA:2330:G:O2'	36:DA:2331:G:H5'	2.18	0.43
47:BO:107:ARG:HA	47:BO:112:MET:HE2	2.01	0.43
58:BZ:102:LEU:HD21	58:BZ:124:ILE:HD11	2.01	0.43
9:AI:91:ASP:C	9:AI:93:ARG:N	2.72	0.43
34:D8:17:THR:OG1	34:D8:18:ALA:N	2.52	0.43
14:CN:57:ARG:HG3	14:CN:58:LYS:H	1.84	0.43
3:AC:183:ASP:OD1	3:AC:184:TYR:N	2.51	0.43
1:AA:1282:C:C2'	1:AA:1283:G:H5'	2.48	0.43
12:AL:67:THR:OG1	12:AL:96:VAL:HG12	2.19	0.43
36:DA:996:A:O2'	53:DU:92:ARG:NH2	2.51	0.43
9:CI:89:ASN:C	9:CI:91:ASP:H	2.21	0.43
43:BH:26:VAL:CG1	43:BH:79:VAL:HG11	2.49	0.43
36:BA:1018:C:H2'	36:BA:1019:U:C6	2.43	0.43
25:CZ:89:ILE:HG22	25:CZ:93:ILE:HD11	1.99	0.43
58:DZ:155:LEU:CD2	58:DZ:155:LEU:H	2.31	0.43
36:DA:2640:G:H1	36:DA:2774:C:H42	1.66	0.43
58:DZ:137:ILE:O	58:DZ:138:GLU:O	2.36	0.43
36:BA:832:G:OP1	48:BP:40:SER:HB3	2.18	0.43
36:BA:1189:A:C2	36:BA:1190:G:H1'	2.54	0.43
48:BP:103:ALA:O	48:BP:104:GLY:O	2.35	0.43
5:CE:91:LEU:N	5:CE:91:LEU:CD1	2.81	0.43
37:DB:56:G:O2'	37:DB:57:A:OP2	2.36	0.43
36:BA:1902:C:C2'	36:BA:1903:G:O5'	2.67	0.43
41:DF:192:LEU:C	41:DF:192:LEU:HD23	2.38	0.43
55:BW:6:ILE:HA	55:BW:104:THR:HA	1.99	0.43
4:AD:95:GLY:HA3	4:AD:188:LEU:HD21	2.00	0.43
1:CA:882:C:C2'	1:CA:883:C:H5'	2.49	0.43
36:BA:2756:U:C6	36:BA:2757:A:N7	2.86	0.43
15:AO:7:GLU:O	15:AO:10:LYS:HB3	2.19	0.43
36:DA:1072:C:H3'	36:DA:1072:C:OP2	2.19	0.43
5:AE:11:ILE:HB	5:AE:31:LEU:CD1	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BT:129:ARG:NE	52:BT:131:ALA:HB3	2.33	0.43
24:AY:60:U:H5''	24:AY:61:C:H5	1.82	0.43
38:DC:189:ILE:O	38:DC:190:ARG:C	2.56	0.43
36:DA:2754:U:H2'	36:DA:2756:U:OP1	2.18	0.43
25:CZ:374:LEU:HD12	25:CZ:378:VAL:HG22	1.99	0.43
1:CA:160:A:H1'	1:CA:344:A:C5	2.53	0.43
26:B0:40:GLN:NE2	26:B0:45:PHE:HB2	2.33	0.43
1:CA:949:A:O2'	1:CA:950:U:H5'	2.18	0.43
36:DA:2199:A:C5'	36:DA:2200:C:OP2	2.66	0.43
36:BA:1363:C:H2'	36:BA:1364:G:C8	2.51	0.43
1:CA:1215:G:H2'	1:CA:1216:G:H5'	2.00	0.43
1:CA:1245:A:H2'	1:CA:1246:C:C6	2.54	0.43
47:BO:23:ARG:HG3	47:BO:24:VAL:N	2.33	0.43
40:BE:116:VAL:O	40:BE:117:MET:HB3	2.17	0.43
5:CE:20:GLN:O	5:CE:21:ALA:C	2.56	0.43
1:AA:323:U:O3'	20:AT:22:ARG:CD	2.67	0.43
1:CA:1134:G:C6	1:CA:1142:G:N1	2.86	0.43
1:CA:234:C:O2'	1:CA:235:C:H5'	2.18	0.43
36:BA:57:C:H2'	36:BA:58:G:O4'	2.18	0.43
36:DA:2106:G:C5	36:DA:2107:C:N3	2.86	0.43
36:BA:848:G:C4	36:BA:933:A:C8	3.04	0.43
33:D7:12:ARG:HG3	36:DA:686:G:O6	2.18	0.43
31:B5:16:ARG:HG2	31:B5:16:ARG:NH1	2.34	0.43
36:DA:2069:G:O2'	36:DA:2070:G:H5'	2.19	0.43
26:D0:50:ASN:HD22	26:D0:63:VAL:HG11	1.83	0.43
11:CK:29:ILE:O	11:CK:29:ILE:HG13	2.18	0.43
36:BA:860:U:O4'	36:BA:860:U:O2	2.37	0.43
36:DA:528:A:H5''	36:DA:528:A:H8	1.82	0.43
1:CA:1428:A:H2'	1:CA:1429:C:C6	2.53	0.43
36:BA:840:C:H4'	36:BA:1192:G:H4'	2.00	0.43
1:AA:1217:C:OP1	14:AN:9:LYS:CE	2.67	0.43
2:AB:52:GLU:OE2	2:AB:56:ARG:NH2	2.51	0.43
1:AA:782:A:H2'	1:AA:783:C:H5'	2.00	0.43
11:CK:108:ILE:HG21	18:CR:88:LYS:HB3	2.00	0.43
1:CA:506:G:H2'	1:CA:507:C:C6	2.53	0.43
36:BA:653:A:C2'	36:BA:653:A:N3	2.81	0.43
20:AT:80:ARG:NH1	20:AT:80:ARG:HG2	2.32	0.43
36:DA:1287:A:C6	36:DA:1288:U:C4	3.06	0.43
25:AZ:263:ARG:HG3	25:AZ:264:ARG:H	1.83	0.43
36:BA:1358:G:N2	36:BA:1372:U:C5	2.86	0.43
36:BA:978:G:C2	36:BA:986:C:N3	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BQ:37:LEU:HG	49:BQ:129:THR:HA	1.99	0.43
8:AH:16:ALA:HB1	8:AH:21:LYS:CB	2.48	0.43
36:BA:2728:U:O2'	36:BA:2729:G:H5'	2.18	0.43
1:AA:664:G:H22	1:AA:741:G:H1	1.65	0.43
25:CZ:372:VAL:HG12	25:CZ:373:GLU:N	2.34	0.43
1:CA:272:C:O2'	1:CA:273:A:H5'	2.18	0.43
18:AR:86:VAL:HG12	18:AR:87:ARG:N	2.34	0.43
36:BA:2410:G:H2'	36:BA:2411:A:O4'	2.19	0.43
39:BD:173:VAL:HG12	39:BD:185:VAL:O	2.17	0.43
25:AZ:340:PRO:HG2	25:AZ:342:PHE:CE1	2.54	0.43
1:CA:1137:C:O2'	1:CA:1138:G:N2	2.50	0.43
36:BA:2097:C:O2'	36:BA:2098:U:H5'	2.19	0.43
36:BA:2101:G:C6	36:BA:2102:U:C4	3.07	0.43
2:CB:33:TYR:HB3	2:CB:41:ILE:O	2.18	0.43
25:CZ:26:THR:HG23	25:CZ:27:LEU:N	2.33	0.43
27:D1:29:GLY:O	27:D1:31:GLY:N	2.52	0.43
41:DF:42:ALA:C	41:DF:44:ARG:H	2.20	0.43
34:D8:13:ARG:NH1	48:DP:59:LEU:HD12	2.34	0.43
47:DO:121:VAL:HG12	47:DO:122:LEU:N	2.32	0.43
52:DT:19:LEU:HA	52:DT:20:PRO:HD3	1.78	0.43
32:D6:45:LYS:HZ2	32:D6:45:LYS:CB	2.31	0.43
19:CS:37:ARG:HG3	19:CS:37:ARG:H	1.64	0.43
58:BZ:151:HIS:HB2	58:BZ:170:THR:HA	1.92	0.43
10:CJ:6:ILE:O	10:CJ:6:ILE:HG13	2.18	0.43
36:BA:1855:G:C2'	36:BA:1856:G:H5'	2.49	0.43
12:AL:53:ARG:HD2	12:AL:53:ARG:H	1.83	0.43
39:DD:72:LYS:NZ	39:DD:75:ILE:HG13	2.33	0.43
25:CZ:143:ASP:OD2	25:CZ:146:LEU:HB2	2.17	0.43
57:BY:28:LYS:HG2	57:BY:39:VAL:HG13	1.99	0.43
57:DY:81:LYS:HD2	57:DY:96:ILE:HG13	2.00	0.43
1:AA:980:C:C2'	1:AA:981:U:H5'	2.48	0.43
25:AZ:7:ARG:C	25:AZ:8:THR:CG2	2.87	0.43
25:AZ:98:GLN:NE2	25:AZ:226:GLU:OE2	2.52	0.43
41:BF:125:LEU:CD2	41:BF:125:LEU:N	2.75	0.43
41:BF:9:ILE:HG22	41:BF:11:VAL:O	2.19	0.43
36:BA:580:C:H2'	36:BA:581:C:C6	2.54	0.43
1:AA:1152:A:C6	1:AA:1153:C:C4	3.07	0.43
13:CM:5:ALA:HB3	13:CM:22:ILE:HG21	2.00	0.43
53:DU:55:ARG:O	53:DU:59:ARG:HG3	2.19	0.43
53:DU:92:ARG:CD	53:DU:94:ASN:HB3	2.49	0.43
48:DP:41:ARG:HD2	48:DP:41:ARG:N	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:614:U:O4'	36:BA:614:U:O2	2.36	0.43
3:CC:157:ILE:HD12	3:CC:157:ILE:N	2.34	0.43
36:DA:2346:A:H5'	36:DA:2383:G:H1'	1.99	0.43
7:AG:144:MET:HE1	22:AW:31:A:H1'	1.98	0.43
19:CS:62:ILE:HD12	19:CS:63:THR:N	2.33	0.43
36:DA:620:G:H4'	36:DA:621:A:H5''	2.01	0.43
36:DA:656:G:C5	36:DA:657:U:C4	3.06	0.43
16:CP:32:TYR:O	16:CP:32:TYR:HD1	2.02	0.43
55:DW:47:VAL:O	55:DW:51:LEU:HB2	2.18	0.43
1:CA:409:G:OP1	4:CD:24:GLU:HB3	2.18	0.43
36:BA:1190:G:C5'	48:BP:35:HIS:H	2.19	0.43
29:B3:36:VAL:HG23	29:B3:36:VAL:O	2.19	0.43
1:CA:1269:A:H2'	1:CA:1270:C:H5'	2.01	0.43
36:DA:1141:U:H2'	46:DN:63:THR:HG21	2.01	0.43
41:DF:206:ILE:CG2	41:DF:207:GLY:N	2.80	0.43
51:BS:83:LYS:HB3	51:BS:83:LYS:HE2	1.71	0.43
31:D5:3:LYS:O	31:D5:4:HIS:HB2	2.18	0.43
16:AP:71:ARG:CA	16:AP:74:LEU:HD12	2.39	0.43
36:BA:2746:U:C2'	36:BA:2747:G:H5'	2.49	0.43
58:DZ:59:LEU:N	58:DZ:67:LEU:O	2.44	0.43
36:BA:2852:G:H1	36:BA:2865:U:H3	1.66	0.43
36:BA:2053:G:C5'	40:BE:144:ARG:O	2.65	0.43
24:CY:45:U:C3'	24:CY:46:7MG:C5'	2.94	0.43
10:CJ:78:ASN:HD22	10:CJ:81:THR:CG2	2.29	0.43
36:DA:1720:U:H3'	36:DA:1721:G:H5''	2.01	0.43
36:DA:877:U:HO2'	36:DA:878:A:H5''	1.81	0.43
36:BA:1277:G:H2'	36:BA:1278:A:O4'	2.18	0.43
6:CF:1:MET:SD	6:CF:68:PRO:HD3	2.59	0.43
47:BO:23:ARG:O	47:BO:39:ILE:HB	2.19	0.43
1:AA:323:U:O3'	20:AT:22:ARG:HD2	2.18	0.43
51:BS:64:GLU:C	51:BS:66:ALA:H	2.20	0.43
25:CZ:206:ILE:O	25:CZ:207:ASP:C	2.57	0.43
42:DG:152:LEU:N	42:DG:152:LEU:CD2	2.79	0.43
2:CB:211:ILE:H	2:CB:211:ILE:HD12	1.83	0.43
15:CO:17:ARG:HG3	15:CO:17:ARG:NH1	2.30	0.43
16:AP:43:LYS:C	16:AP:45:THR:N	2.72	0.43
13:AM:70:LEU:O	13:AM:73:GLU:HB3	2.19	0.43
36:BA:1068:G:N3	36:BA:1068:G:C2'	2.81	0.43
36:DA:2851:A:C5	36:DA:2852:G:C5	3.06	0.43
16:CP:67:THR:HB	16:CP:70:ALA:HB2	2.00	0.43
36:BA:1340:U:OP1	36:BA:1341:U:H5	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DE:171:GLU:H	40:DE:185:LYS:HB2	1.83	0.43
36:BA:271(F):C:H2'	36:BA:271(G):C:C5'	2.49	0.43
41:DF:34:TRP:CE2	48:DP:12:ALA:HB2	2.52	0.43
4:AD:177:ASP:O	4:AD:181:MET:N	2.51	0.43
16:CP:19:ILE:HG22	16:CP:36:ILE:HD11	2.01	0.43
36:BA:2812:G:N2	36:BA:2889:C:C2	2.86	0.43
1:AA:7:G:O2'	5:AE:120:THR:O	2.29	0.43
50:DR:51:LEU:HD12	50:DR:51:LEU:H	1.82	0.43
5:AE:143:ARG:NH1	8:AH:77:GLU:CD	2.72	0.43
36:BA:1688:U:H1'	36:BA:1701:A:C6	2.54	0.43
36:BA:2733:A:H2'	36:BA:2734:A:H8	1.84	0.43
20:AT:47:GLY:O	20:AT:49:ALA:N	2.51	0.43
36:BA:1755:A:H2'	36:BA:1756:G:H5'	2.01	0.43
36:BA:719:C:H2'	36:BA:720:C:C6	2.54	0.43
25:AZ:320:VAL:HG12	25:AZ:321:TYR:N	2.34	0.43
1:CA:657:G:C2	1:CA:750:G:C5	3.06	0.43
36:BA:2727:G:C6	36:BA:2728:U:C4	3.06	0.43
36:DA:745:G:C2'	36:DA:746:A:H5'	2.48	0.43
5:CE:57:LYS:O	5:CE:60:TYR:HB3	2.18	0.43
38:BC:117:PRO:HG3	38:BC:145:VAL:HG12	2.00	0.43
36:DA:1692:U:H2'	36:DA:1694:C:C5	2.54	0.43
17:CQ:37:LYS:O	17:CQ:38:ARG:HB2	2.18	0.43
55:DW:73:ALA:O	55:DW:106:ILE:HB	2.19	0.43
38:BC:64:LEU:HA	38:BC:65:PRO:HD3	1.84	0.43
42:DG:48:GLU:O	42:DG:49:ASP:CB	2.66	0.43
3:CC:150:LYS:HG3	3:CC:169:ALA:HB2	2.00	0.43
38:BC:182:PRO:O	38:BC:183:GLU:C	2.57	0.43
11:AK:126:ARG:O	11:AK:127:LYS:C	2.56	0.43
4:CD:34:GLU:O	4:CD:35:ARG:HB2	2.18	0.43
36:DA:206:U:H2'	36:DA:206:U:O2	2.17	0.43
4:AD:21:LEU:HA	4:AD:21:LEU:HD23	1.75	0.43
41:DF:105:VAL:HG12	41:DF:105:VAL:O	2.19	0.43
36:BA:2316:C:O2	36:BA:2316:C:H2'	2.18	0.43
36:DA:2402:C:H2'	36:DA:2403:C:H5'	2.01	0.43
36:BA:1702:G:H2'	36:BA:1703:G:O4'	2.19	0.43
1:CA:55:A:C8	1:CA:55:A:H5'	2.53	0.43
22:CW:76:A:OP2	36:DA:2432:A:H4'	2.18	0.43
48:DP:17:LYS:O	48:DP:18:ARG:C	2.56	0.43
48:DP:47:ASP:HB3	48:DP:48:PRO:C	2.38	0.43
47:DO:114:ILE:O	47:DO:118:ALA:HB2	2.19	0.43
52:DT:38:ASN:N	52:DT:38:ASN:ND2	2.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BT:120:ARG:HA	52:BT:123:GLN:CG	2.49	0.43
32:D6:19:ARG:HB2	32:D6:21:TYR:OH	2.19	0.43
52:BT:55:ASN:O	52:BT:58:ASN:O	2.37	0.43
28:B2:18:PRO:HG2	28:B2:19:VAL:H	1.84	0.43
28:B2:25:VAL:O	28:B2:25:VAL:CG1	2.67	0.43
56:BX:53:LYS:HB3	56:BX:82:GLN:HB3	2.00	0.43
31:D5:56:LYS:O	31:D5:57:VAL:C	2.56	0.43
1:CA:367:U:C4	1:CA:394:G:N1	2.87	0.43
25:AZ:121:LEU:HD13	61:AZ:502:KIR:O4	2.17	0.43
56:DX:8:ILE:CD1	56:DX:42:ALA:O	2.66	0.43
36:BA:331:A:C1'	36:BA:332:A:OP1	2.66	0.43
57:BY:8:LYS:N	57:BY:8:LYS:CD	2.77	0.43
26:D0:49:LYS:H	26:D0:80:HIS:CG	2.37	0.43
36:BA:2716:U:O2'	36:BA:2717:G:H5'	2.18	0.43
35:D9:1:MET:HB3	35:D9:4:ARG:NH1	2.33	0.43
36:DA:2464:C:O2'	36:DA:2465:C:O5'	2.34	0.43
3:AC:8:ILE:CD1	3:AC:184:TYR:HB3	2.48	0.43
1:AA:1123:A:H4'	10:AJ:36:GLY:HA3	2.00	0.43
42:DG:149:VAL:O	42:DG:149:VAL:HG23	2.19	0.43
36:DA:997:G:OP1	53:DU:93:LYS:CD	2.66	0.43
54:DV:43:GLU:O	54:DV:44:LYS:CB	2.66	0.43
1:AA:1367:C:C4	1:AA:1368:G:N7	2.86	0.43
43:BH:136:ILE:N	43:BH:136:ILE:CD1	2.71	0.43
43:BH:88:LEU:CD2	43:BH:88:LEU:H	2.31	0.43
43:DH:162:ILE:C	43:DH:163:TYR:CD1	2.92	0.43
46:BN:58:ASP:O	46:BN:59:LYS:HB2	2.19	0.43
4:CD:12:CYS:O	4:CD:33:MET:CE	2.66	0.43
4:CD:18:LYS:CB	4:CD:33:MET:HG2	2.46	0.43
36:DA:90:U:O2'	36:DA:92:A:P	2.76	0.43
1:AA:375:U:N3	1:AA:376:G:N7	2.67	0.43
36:BA:1049:C:N4	36:BA:1050:A:H62	2.17	0.43
36:DA:2641:G:H5'	36:DA:2641:G:H8	1.84	0.43
36:BA:514:A:O2'	36:BA:515:A:H5'	2.19	0.43
1:CA:1240:U:H3'	1:CA:1241:G:H5'	2.01	0.43
51:DS:31:SER:OG	51:DS:32:LEU:N	2.52	0.43
32:B6:25:LYS:HE2	34:B8:34:TRP:NE1	2.30	0.43
12:CL:110:VAL:O	12:CL:122:THR:HB	2.18	0.43
40:DE:38:THR:O	40:DE:42:ASP:HB2	2.18	0.43
40:DE:119:ARG:HG3	40:DE:160:TYR:CD1	2.54	0.43
17:CQ:58:GLU:O	17:CQ:59:ILE:HD13	2.18	0.43
48:DP:84:ASN:ND2	48:DP:116:GLY:CA	2.79	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AR:56:THR:C	18:AR:58:LEU:N	2.72	0.43
43:DH:19:VAL:O	43:DH:20:ALA:HB2	2.19	0.43
41:BF:64:ILE:HG23	41:BF:65:TRP:H	1.83	0.43
36:DA:2090:G:C2	36:DA:2230:G:C5	3.06	0.43
36:BA:2407:G:C2	36:BA:2408:U:O2	2.72	0.43
36:BA:106:C:C2	36:BA:107:C:C5	3.07	0.43
19:AS:16:LEU:H	19:AS:16:LEU:CD1	2.31	0.43
1:CA:386:C:H2'	1:CA:387:U:C5'	2.47	0.43
25:AZ:222:LEU:HD12	25:AZ:303:VAL:CG1	2.49	0.43
2:CB:51:LEU:HD23	2:CB:55:PHE:CE1	2.54	0.43
36:DA:1151:G:H5''	53:DU:81:HIS:NE2	2.31	0.43
5:CE:152:ARG:O	5:CE:153:LYS:O	2.36	0.43
50:BR:26:LYS:HE2	50:BR:70:LEU:HA	2.00	0.43
36:DA:272(D):G:H1	36:DA:364:C:N4	2.08	0.43
19:AS:10:PHE:CZ	19:AS:70:LYS:HD2	2.54	0.43
41:DF:28:ILE:CD1	41:DF:28:ILE:H	2.24	0.43
1:CA:858:G:H5''	1:CA:858:G:C8	2.53	0.43
1:CA:1206:G:H2'	1:CA:1207:G:H8	1.84	0.43
36:DA:708:C:N4	36:DA:723:G:H1	2.05	0.43
50:BR:103:ARG:HG3	55:BW:40:ASN:OD1	2.17	0.43
27:D1:21:ARG:CG	27:D1:21:ARG:O	2.60	0.43
46:BN:55:VAL:HG21	46:BN:127:ASP:N	2.33	0.43
38:BC:99:ILE:HD13	38:BC:102:LYS:NZ	2.33	0.43
36:BA:1499:C:H6	36:BA:1499:C:C5'	2.29	0.43
25:CZ:340:PRO:HG2	25:CZ:342:PHE:CZ	2.52	0.43
51:DS:87:PHE:CG	51:DS:88:ASP:N	2.87	0.43
36:BA:894:C:C2'	36:BA:895:U:H5'	2.49	0.43
36:BA:1268:A:N3	36:BA:1269:A:H1'	2.34	0.43
36:BA:1313:U:H2'	36:BA:1610:A:C2	2.54	0.43
36:DA:1114:G:H2'	36:DA:1115:G:C8	2.54	0.43
53:DU:50:ARG:HH12	54:DV:72:VAL:HA	1.83	0.43
36:DA:1170:G:N2	36:DA:1180:C:N3	2.66	0.43
36:BA:2006:C:O2'	36:BA:2823:A:N3	2.46	0.43
1:AA:793:U:C3'	1:AA:794:A:H5''	2.45	0.43
1:AA:445:G:H2'	1:AA:446:G:H8	1.82	0.43
18:AR:73:ALA:O	18:AR:74:ARG:C	2.57	0.43
1:CA:722:A:O2'	1:CA:724:G:C8	2.70	0.43
51:DS:97:ARG:CA	51:DS:97:ARG:HE	2.31	0.43
51:DS:66:ALA:HB2	51:DS:97:ARG:HB3	2.01	0.43
37:DB:96:U:H2'	37:DB:97:G:C8	2.48	0.43
1:CA:144:G:O6	1:CA:179:A:C6	2.72	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:322:A:OP2	41:DF:169:ASN:HB2	2.19	0.43
56:DX:89:ILE:O	56:DX:93:GLU:HG3	2.19	0.43
3:AC:58:GLU:H	3:AC:65:ALA:HB3	1.83	0.43
2:CB:16:HIS:HB3	2:CB:210:SER:HB2	2.00	0.43
3:AC:135:LYS:HZ1	5:AE:50:GLU:HG2	1.83	0.43
25:AZ:86:ALA:O	25:AZ:87:ASP:HB2	2.19	0.43
52:DT:3:ARG:O	52:DT:5:ALA:N	2.52	0.43
8:AH:127:LEU:N	8:AH:127:LEU:CD2	2.82	0.43
40:DE:108:SER:HB3	40:DE:165:VAL:HG21	2.00	0.43
36:BA:2028:U:H2'	36:BA:2029:G:O4'	2.19	0.43
1:CA:505:G:H2'	1:CA:506:G:C8	2.53	0.43
23:CX:11:U:H3'	23:CX:12:A:N7	2.34	0.43
3:AC:155:GLY:HA3	3:AC:196:LEU:CD1	2.49	0.43
11:CK:17:GLY:O	11:CK:80:VAL:HA	2.19	0.43
36:BA:1120:G:C5	36:BA:1121:C:C5	3.06	0.43
36:DA:1129:A:H4'	36:DA:2516:G:H5'	1.99	0.43
15:CO:74:ASP:C	15:CO:76:GLU:N	2.72	0.43
22:AW:30:G:C2	22:AW:41:C:N3	2.87	0.43
1:AA:429:U:H1'	1:AA:430:A:H5''	2.01	0.43
3:CC:132:ARG:O	3:CC:136:GLN:HG3	2.19	0.43
42:BG:115:ARG:HB3	42:BG:116:ASP:H	1.61	0.43
38:BC:46:LYS:NZ	38:BC:168:THR:O	2.50	0.43
36:BA:1283:G:N2	36:BA:1285:G:H3'	2.33	0.43
1:AA:662:G:O2'	1:AA:836:G:H5''	2.18	0.43
3:CC:178:LEU:HD22	3:CC:178:LEU:N	2.34	0.43
36:BA:2517:C:C2	36:BA:2542:A:N6	2.87	0.43
36:BA:2257:U:O2'	36:BA:2258:C:H5'	2.19	0.43
36:BA:1383:C:O5'	36:BA:1383:C:H6	2.02	0.43
55:DW:75:TYR:N	55:DW:75:TYR:CD1	2.87	0.43
36:BA:2320:A:H2'	36:BA:2320:A:N3	2.34	0.43
52:BT:114:LEU:HD23	52:BT:114:LEU:HA	1.83	0.43
1:CA:1407:C:O2'	1:CA:1408:A:H5'	2.19	0.43
4:CD:52:SER:O	4:CD:53:ASP:C	2.57	0.43
58:BZ:118:GLN:HB3	58:BZ:173:ALA:O	2.19	0.43
34:D8:37:SER:C	34:D8:39:LYS:N	2.71	0.43
36:DA:587:C:O2'	36:DA:588:U:OP2	2.34	0.43
47:DO:71:ARG:HH12	52:DT:74:ARG:NH2	2.16	0.43
32:B6:18:ARG:HH12	32:B6:47:THR:HG21	1.83	0.43
1:CA:1305:G:OP1	21:CU:2:GLY:N	2.52	0.43
25:AZ:24:LYS:HE2	25:AZ:24:LYS:HB2	1.73	0.43
39:DD:97:TYR:O	39:DD:99:ASP:N	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:29:GLU:N	57:BY:29:GLU:CD	2.71	0.43
57:BY:31:LEU:HD22	57:BY:31:LEU:N	2.34	0.43
35:D9:1:MET:HE3	35:D9:31:LYS:C	2.39	0.43
36:BA:580:C:H2'	36:BA:581:C:H6	1.84	0.43
1:AA:1152:A:C2'	1:AA:1153:C:H5'	2.48	0.43
13:CM:4:ILE:HB	13:CM:5:ALA:H	1.42	0.43
42:DG:143:GLU:O	42:DG:144:ILE:O	2.35	0.43
53:DU:114:LYS:H	53:DU:114:LYS:HG2	1.59	0.43
53:DU:57:PHE:O	53:DU:59:ARG:N	2.52	0.43
43:BH:130:ARG:O	43:BH:131:VAL:HG23	2.19	0.43
4:CD:26:CYS:HA	4:CD:31:CYS:HA	2.00	0.43
36:BA:2631:G:N2	40:BE:61:ARG:HH12	2.16	0.43
36:DA:2641:G:C5'	36:DA:2641:G:H8	2.31	0.43
36:DA:618:C:H2'	36:DA:619:G:O4'	2.19	0.43
41:BF:192:LEU:HD23	41:BF:192:LEU:C	2.39	0.43
55:DW:48:ALA:O	55:DW:51:LEU:N	2.51	0.43
1:AA:189(D):C:H2'	1:AA:189(E):U:O4'	2.19	0.43
40:DE:51:PHE:O	40:DE:74:PRO:CB	2.66	0.43
11:CK:62:GLN:O	11:CK:64:ALA:N	2.52	0.43
11:CK:87:THR:HB	11:CK:88:GLY:H	1.64	0.43
7:AG:150:ALA:HB2	11:AK:50:TYR:OH	2.18	0.43
42:DG:53:LEU:CD2	42:DG:53:LEU:N	2.82	0.43
31:B5:42:PRO:O	31:B5:43:HIS:CB	2.66	0.43
36:BA:1899:G:O2'	36:BA:1900:A:H5''	2.19	0.43
43:BH:19:VAL:O	43:BH:20:ALA:HB2	2.19	0.43
22:AW:6:G:N2	22:AW:68:C:N4	2.66	0.43
40:DE:188:VAL:HG23	40:DE:189:PRO:HD2	1.99	0.43
38:DC:22:ILE:HG12	38:DC:224:ILE:HD12	2.00	0.43
4:AD:173:TRP:HB2	4:AD:187:ARG:O	2.19	0.43
30:B4:31:ILE:O	30:B4:31:ILE:HG22	2.19	0.43
43:BH:159:GLU:HG3	43:BH:160:LYS:H	1.82	0.43
18:CR:29:PHE:CE2	18:CR:43:PHE:HZ	2.35	0.43
36:BA:747:U:O2	36:BA:2014:A:H1'	2.19	0.43
36:DA:26:G:O2'	36:DA:27:G:H5'	2.19	0.43
2:CB:17:PHE:HD2	2:CB:44:LEU:HD11	1.83	0.43
54:DV:19:LYS:HE2	54:DV:20:LEU:H	1.82	0.43
9:CI:63:ILE:HD13	9:CI:77:ILE:HG23	2.01	0.43
18:CR:30:ASP:C	18:CR:32:ARG:H	2.21	0.43
1:CA:926:G:O2'	23:CX:16:A:N3	2.42	0.43
40:BE:49:LEU:CD2	40:BE:49:LEU:N	2.81	0.43
36:DA:642:G:N2	36:DA:646:A:H2	2.09	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DN:9:VAL:CG1	46:DN:10:GLU:H	2.25	0.43
1:CA:457:C:N4	1:CA:458:C:H41	2.16	0.43
1:CA:444:C:O2'	1:CA:445:G:H5'	2.18	0.43
58:DZ:139:VAL:O	58:DZ:140:ASP:HB3	2.19	0.43
6:CF:55:ASP:C	6:CF:57:GLN:N	2.71	0.43
36:DA:2585:U:O2	36:DA:2585:U:H5'	2.19	0.43
36:DA:565:C:H2'	36:DA:566:U:O4'	2.19	0.43
48:DP:140:ALA:O	48:DP:141:ALA:HB3	2.19	0.43
8:AH:49:GLU:CG	8:AH:49:GLU:O	2.63	0.43
28:D2:69:ARG:O	28:D2:70:GLN:HB3	2.19	0.43
50:DR:12:ARG:HB3	50:DR:16:HIS:CD2	2.53	0.43
24:AY:54:5MU:O5'	24:AY:54:5MU:H6	2.01	0.43
38:BC:74:VAL:CG1	38:BC:75:LEU:N	2.81	0.43
1:CA:1296:C:C5	1:CA:1297:C:C5	3.07	0.43
36:BA:2059:A:C2	36:BA:2503:A:N6	2.87	0.43
25:AZ:378:VAL:O	25:AZ:380:LEU:HG	2.19	0.43
36:BA:1675:C:O2	40:BE:129:HIS:HA	2.18	0.43
36:BA:1399:C:H2'	36:BA:1400:G:C8	2.54	0.43
36:DA:1063:G:H22	45:DK:89:UNK:HA	1.81	0.43
22:CV:56:C:O4'	42:DG:76:SER:HB3	2.19	0.43
49:DQ:68:ILE:HG23	49:DQ:103:MET:HA	2.00	0.43
1:AA:1345:U:C4	1:AA:1377:A:C2	3.06	0.43
36:BA:1567:A:H3'	39:BD:86:PRO:HG3	1.99	0.43
36:DA:990:A:OP2	36:DA:991:C:OP2	2.36	0.43
1:AA:993:G:N3	1:AA:993:G:H2'	2.34	0.43
25:AZ:314:THR:O	25:AZ:373:GLU:HA	2.18	0.43
36:BA:1466:G:H2'	36:BA:1547:C:N4	2.34	0.43
2:CB:222:ILE:O	2:CB:223:ILE:C	2.57	0.43
36:DA:2141:G:C4	36:DA:2151:G:N2	2.87	0.43
43:BH:163:TYR:HD1	43:BH:163:TYR:N	2.17	0.43
36:DA:769:G:C2'	36:DA:770:G:H5'	2.49	0.43
36:DA:472:A:O3'	36:DA:508:G:N2	2.50	0.43
3:AC:25:GLY:O	3:AC:26:LYS:C	2.57	0.43
36:DA:34:C:H5'	36:DA:35:G:OP1	2.19	0.43
28:D2:58:ALA:HB1	36:DA:76:C:H4'	2.00	0.43
36:BA:319:C:H2'	36:BA:320:A:H8	1.83	0.43
6:CF:37:VAL:HG12	6:CF:38:GLU:O	2.19	0.43
36:BA:849:A:N7	36:BA:850:C:C4	2.86	0.43
36:BA:2153:G:O2'	36:BA:2154:G:H5'	2.18	0.43
36:BA:2351:G:HO2'	36:BA:2352:A:H8	1.64	0.43
36:BA:436:C:H2'	36:BA:437:G:H8	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:49:ASP:OD2	15:CO:52:SER:HB2	2.19	0.43
9:AI:5:TYR:CD1	9:AI:6:GLY:N	2.87	0.43
36:DA:2115:G:H22	36:DA:2119:A:P	2.41	0.43
36:BA:1901:A:OP2	36:BA:1901:A:H4'	2.19	0.43
1:CA:1447:A:H2'	1:CA:1447:A:N3	2.34	0.43
42:BG:86:MET:O	42:BG:86:MET:HG2	2.19	0.43
1:AA:163:C:O2'	1:AA:164:U:H5'	2.19	0.43
15:AO:28:GLN:OE1	15:AO:66:LEU:HD21	2.18	0.43
36:DA:74:A:H4'	36:DA:75:G:O5'	2.18	0.43
8:CH:16:ALA:O	8:CH:19:VAL:HG22	2.18	0.43
25:CZ:289:LEU:HD12	25:CZ:289:LEU:HA	1.78	0.43
32:B6:11:LEU:HD22	32:B6:12:GLU:N	2.34	0.43
52:DT:42:ILE:HD13	52:DT:83:ILE:HD13	2.01	0.43
52:DT:84:GLN:C	52:DT:85:LYS:HG3	2.38	0.43
36:BA:2849:U:O4	52:BT:23:ARG:NH2	2.52	0.43
36:DA:83:G:H21	36:DA:84:A:N6	2.17	0.43
28:B2:5:GLU:HB2	28:B2:8:LYS:HB2	2.01	0.43
56:BX:7:VAL:C	56:BX:8:ILE:HD12	2.39	0.43
2:AB:121:LEU:HG	2:AB:126:GLU:HB3	2.01	0.43
10:CJ:16:LEU:HD11	10:CJ:70:ARG:HG2	2.01	0.43
25:AZ:27:LEU:CD1	25:AZ:31:LEU:HD21	2.48	0.43
1:CA:1190:G:OP1	3:CC:4:LYS:HA	2.19	0.43
25:CZ:133:VAL:HG12	25:CZ:134:PHE:H	1.83	0.43
25:CZ:177:LEU:HB3	25:CZ:195:TRP:CG	2.54	0.43
25:CZ:193:ASN:C	25:CZ:195:TRP:H	2.21	0.43
25:CZ:196:VAL:HG12	25:CZ:197:ASP:N	2.34	0.43
42:DG:40:ASN:CB	42:DG:91:ARG:HG3	2.49	0.43
25:CZ:78:SER:HG	25:CZ:273:HIS:CE1	2.37	0.43
36:BA:336:C:H5''	57:BY:7:VAL:HG21	2.01	0.43
15:CO:75:PRO:O	15:CO:79:ARG:HD2	2.18	0.43
35:D9:4:ARG:HG2	35:D9:34:GLN:HE21	1.75	0.43
1:AA:1325:C:H5''	21:AU:15:ARG:NH1	2.34	0.43
41:BF:6:VAL:HB	41:BF:124:LEU:CD1	2.49	0.43
36:BA:2478:A:H2'	36:BA:2479:G:H5'	2.00	0.43
1:CA:1367:C:O2'	10:CJ:48:THR:HG21	2.18	0.43
53:BU:10:ARG:C	53:BU:12:ARG:H	2.22	0.43
43:DH:85:LYS:CE	43:DH:85:LYS:C	2.87	0.43
34:B8:59:LYS:CB	34:B8:59:LYS:NZ	2.82	0.43
1:AA:1129:C:H4'	1:AA:1130:A:C8	2.54	0.43
13:CM:19:LEU:C	13:CM:21:TYR:N	2.71	0.43
13:CM:4:ILE:C	13:CM:6:GLY:N	2.72	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:77:ILE:HG22	3:CC:78:GLY:O	2.18	0.43
3:CC:82:GLU:H	3:CC:85:ARG:CD	2.25	0.43
54:DV:6:LYS:NZ	54:DV:37:VAL:HG11	2.34	0.43
1:CA:960:U:C5	1:CA:1225:A:C8	3.07	0.43
36:BA:1012:U:O2	46:BN:25:ARG:NH1	2.51	0.43
26:D0:29:GLN:O	26:D0:31:VAL:HG13	2.19	0.43
16:AP:67:THR:O	16:AP:68:ASP:C	2.56	0.43
58:DZ:137:ILE:O	58:DZ:138:GLU:C	2.58	0.43
40:BE:9:VAL:HG12	40:BE:25:VAL:C	2.37	0.43
40:DE:63:LEU:HD23	40:DE:63:LEU:O	2.19	0.43
40:BE:111:ARG:HD2	40:BE:160:TYR:CD2	2.54	0.43
1:CA:1125:U:H3	10:CJ:5:ARG:HH21	1.64	0.43
48:BP:96:THR:HG22	48:BP:126:VAL:HB	2.01	0.43
19:CS:15:LEU:O	19:CS:19:VAL:N	2.52	0.43
1:AA:1226:C:H2'	13:AM:103:THR:CB	2.46	0.43
42:BG:172:LEU:CD2	42:BG:176:LEU:HD12	2.48	0.43
51:DS:35:ILE:HD11	51:DS:99:LYS:CE	2.48	0.43
31:D5:2:ALA:HA	36:DA:2015:A:H1'	2.00	0.43
36:DA:2014:A:C2	36:DA:2613:U:C2	3.07	0.43
4:AD:75:PHE:CD1	4:AD:75:PHE:C	2.92	0.43
16:AP:28:ARG:NH1	16:AP:29:ASP:OD2	2.51	0.43
36:BA:1533:G:N2	36:BA:1535:A:OP1	2.52	0.43
6:CF:87:ARG:CG	6:CF:87:ARG:NH1	2.81	0.43
9:AI:40:LEU:HD23	9:AI:40:LEU:N	2.33	0.43
49:BQ:17:LEU:O	49:BQ:18:LYS:HG3	2.19	0.43
34:D8:50:LEU:C	34:D8:52:LYS:N	2.69	0.43
36:BA:2678:C:C2	36:BA:2679:A:C8	3.07	0.43
40:BE:6:GLY:HA2	40:BE:27:LEU:O	2.18	0.43
40:BE:101:ARG:CZ	40:BE:171:GLU:HB2	2.48	0.43
1:AA:176:C:O2'	1:AA:1447:A:H1'	2.18	0.43
36:BA:802:A:H2'	36:BA:803:U:C6	2.54	0.43
1:AA:160:A:H2'	1:AA:161:A:O4'	2.19	0.43
19:AS:10:PHE:HZ	19:AS:70:LYS:HD2	1.84	0.43
36:DA:723:G:H2'	36:DA:724:U:C6	2.54	0.43
1:AA:67:C:O2'	1:AA:171:A:H1'	2.19	0.43
22:AV:25:C:O2'	22:AV:26:A:H5'	2.19	0.43
36:BA:1331:A:O2'	36:BA:1332:G:H8	2.01	0.43
36:DA:2223:G:C2'	36:DA:2224:G:H5'	2.49	0.43
1:CA:187:C:H2'	1:CA:188:C:C6	2.54	0.43
34:B8:38:GLY:O	34:B8:41:ILE:CG2	2.66	0.43
33:B7:47:ARG:HH11	56:BX:60:ARG:NH1	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1506:C:C2'	36:BA:1506:C:O2	2.62	0.43
1:CA:1134:G:O2'	1:CA:1135:U:H5'	2.19	0.43
1:AA:969:A:H2'	1:AA:970:C:H5'	2.01	0.43
1:AA:969:A:C2'	1:AA:970:C:H5'	2.48	0.43
5:CE:61:TYR:O	5:CE:62:ALA:C	2.55	0.43
1:AA:80:G:O2'	1:AA:81:U:H5'	2.19	0.43
38:BC:180:PHE:HB2	38:BC:185:LEU:HD21	2.00	0.43
58:BZ:130:PRO:HA	58:BZ:133:ILE:HD11	2.01	0.43
36:BA:1526:G:H2'	36:BA:1527:G:O4'	2.19	0.43
55:BW:47:VAL:HA	55:BW:50:VAL:CG1	2.48	0.43
27:D1:32:LYS:O	27:D1:33:LYS:HG2	2.19	0.43
36:DA:1313:U:H3'	36:DA:1314:C:H5'	1.99	0.43
21:AU:12:LYS:HA	21:AU:12:LYS:HD2	1.78	0.43
36:BA:2771:C:H2'	36:BA:2772:C:C6	2.54	0.43
58:BZ:105:VAL:CG1	58:BZ:140:ASP:HA	2.46	0.43
25:AZ:15:GLY:HA2	25:AZ:79:HIS:CD2	2.54	0.43
51:DS:28:VAL:HG12	51:DS:29:PHE:H	1.81	0.43
36:DA:958:U:H5''	49:DQ:14:ARG:HD2	1.98	0.43
9:AI:81:ILE:O	9:AI:84:ALA:HB3	2.18	0.43
2:CB:59:GLU:CB	2:CB:221:LEU:HD11	2.47	0.43
36:BA:2051:A:OP1	40:BE:137:HIS:ND1	2.50	0.43
41:DF:64:ILE:CD1	41:DF:65:TRP:CE2	3.02	0.43
36:DA:1264:G:C2'	36:DA:1265:A:OP1	2.66	0.43
5:AE:41:VAL:HG13	5:AE:113:ALA:CA	2.49	0.43
51:DS:67:ARG:HB3	51:DS:67:ARG:HE	1.58	0.43
48:BP:71:VAL:H	48:BP:72:PRO:HD3	1.84	0.43
36:DA:1387:C:H42	36:DA:1400:G:H1	1.67	0.43
36:BA:1469:A:H2'	36:BA:1470:G:O4'	2.19	0.43
39:DD:166:GLN:CA	39:DD:166:GLN:NE2	2.81	0.43
2:AB:190:THR:O	2:AB:190:THR:OG1	2.30	0.43
50:DR:51:LEU:N	50:DR:51:LEU:CD1	2.82	0.43
15:AO:74:ASP:O	15:AO:76:GLU:N	2.52	0.43
36:BA:2764:A:N7	36:BA:2766:G:C6	2.87	0.43
36:DA:702:G:H1	36:DA:730:C:H42	1.65	0.43
8:AH:111:ILE:HG22	8:AH:134:ILE:HD12	2.01	0.43
36:DA:1956:U:C2'	36:DA:1957:C:H5'	2.49	0.43
36:DA:1628:G:C6	36:DA:1629:U:C4	3.07	0.43
36:BA:2367:G:O2'	36:BA:2368:C:H5'	2.18	0.43
1:CA:593:G:O2'	1:CA:594:G:H5'	2.18	0.43
1:AA:909:A:H2'	1:AA:910:C:O4'	2.18	0.43
36:DA:1969:A:O2'	36:DA:1972:A:N3	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2792:G:O2'	36:DA:2793:G:H5'	2.19	0.43
36:DA:1638:C:H4'	36:DA:2710:C:O2	2.18	0.43
36:BA:271(D):G:O2'	36:BA:271(E):U:H5'	2.18	0.43
36:BA:1274:A:N3	36:BA:1297:C:H1'	2.34	0.43
37:DB:13:A:O2'	37:DB:14:U:H3'	2.18	0.43
36:DA:1630:G:C2	36:DA:1637:A:C2	3.06	0.43
26:B0:66:VAL:HG12	26:B0:82:ARG:HB3	2.01	0.43
4:CD:3:ARG:HD3	4:CD:3:ARG:C	2.40	0.43
15:CO:71:GLN:O	15:CO:71:GLN:HG2	2.18	0.43
37:BB:49:C:H6	37:BB:49:C:O5'	2.02	0.43
24:CY:76:A:OP1	25:CZ:274:ARG:HD3	2.19	0.43
34:D8:61:LEU:O	34:D8:64:TYR:N	2.35	0.43
36:DA:2393:A:H2'	36:DA:2394:C:H6	1.84	0.43
36:DA:664:C:H4'	36:DA:941:A:P	2.59	0.43
36:DA:814:C:H2'	36:DA:815:C:H6	1.84	0.43
52:DT:23:ARG:HB2	52:DT:24:PRO:CD	2.49	0.43
25:AZ:158:LEU:HB2	25:AZ:165:GLY:HA3	2.01	0.43
25:AZ:200:TRP:HA	25:AZ:203:LEU:HD12	2.01	0.43
57:BY:76:CYS:SG	57:BY:77:PRO:CD	3.04	0.43
1:AA:346:G:C5'	52:BT:43:GLN:NE2	2.77	0.43
52:BT:35:LYS:HZ3	52:BT:41:ARG:HD2	1.84	0.43
37:BB:72:G:H1'	37:BB:106:G:N2	2.34	0.43
37:BB:39:A:C2	37:BB:44:G:C2	3.06	0.43
12:AL:91:LYS:HE2	12:AL:91:LYS:N	2.34	0.43
36:BA:666:G:C5	36:BA:667:U:C5	3.07	0.43
36:BA:2304:G:H22	36:BA:2312:U:H3	1.67	0.43
13:CM:9:ILE:HG12	42:DG:146:TYR:CE1	2.53	0.43
31:B5:56:LYS:O	31:B5:57:VAL:C	2.58	0.43
53:DU:92:ARG:HB3	54:DV:11:GLN:NE2	2.34	0.43
43:BH:30:LYS:HZ3	43:BH:83:TYR:HE2	1.63	0.43
8:AH:114:THR:HG22	8:AH:130:GLY:C	2.39	0.43
25:CZ:92:MET:O	25:CZ:92:MET:HE3	2.18	0.43
4:CD:59:ARG:CA	4:CD:59:ARG:HE	2.30	0.43
39:DD:259:THR:O	39:DD:260:ARG:C	2.57	0.43
36:BA:672:C:C3'	36:BA:673:C:H5''	2.49	0.43
36:BA:605:C:C4	36:BA:606:U:C5	3.07	0.43
48:BP:65:ARG:O	48:BP:68:GLN:OE1	2.37	0.43
48:BP:57:THR:OG1	48:BP:59:LEU:CD2	2.65	0.43
39:BD:241:PRO:O	39:BD:242:ARG:CB	2.66	0.43
36:DA:2334:G:C5	51:DS:15:ARG:NH2	2.87	0.43
17:CQ:59:ILE:HG22	17:CQ:71:PHE:HD2	1.78	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:29:ARG:O	10:AJ:30:SER:HB3	2.19	0.43
36:DA:1059:G:H2'	36:DA:1060:U:C5	2.54	0.43
36:BA:227:A:C2	36:BA:2407:G:H1'	2.53	0.43
19:AS:11:VAL:HA	19:AS:38:SER:HB2	2.01	0.43
57:BY:51:VAL:O	57:BY:53:PRO:HD3	2.18	0.43
52:BT:13:ARG:HH21	52:BT:15:VAL:CG1	2.32	0.43
1:CA:1435:G:H8	1:CA:1435:G:O5'	2.02	0.43
36:DA:1037:G:H2'	36:DA:1038:C:C6	2.53	0.43
1:CA:189(A):C:H2'	1:CA:189(B):C:C6	2.54	0.43
1:CA:1309:G:O6	1:CA:1329:A:C6	2.72	0.43
20:AT:84:LEU:C	20:AT:86:ARG:N	2.67	0.43
1:AA:673:G:H5''	6:AF:87:ARG:NH1	2.33	0.43
26:D0:19:LYS:O	26:D0:20:ARG:C	2.57	0.43
36:BA:2472:G:H3'	36:BA:2475:C:N4	2.33	0.43
36:DA:1187:G:H8	36:DA:1187:G:O5'	2.02	0.43
15:CO:17:ARG:HD3	15:CO:77:ARG:HH11	1.83	0.43
1:CA:20:U:H2'	1:CA:21:G:O4'	2.19	0.43
11:AK:38:ASN:ND2	11:AK:38:ASN:N	2.66	0.43
1:CA:706:A:C5	1:CA:707:C:C5	3.07	0.43
1:CA:1509:C:C2'	1:CA:1510:U:H5'	2.49	0.43
36:BA:2264:C:H2'	36:BA:2265:U:O4'	2.19	0.43
36:DA:1499:C:C2'	36:DA:1500:G:H5'	2.48	0.43
23:AX:11:U:C2'	23:AX:12:A:OP1	2.67	0.43
22:CW:64:A:H2'	22:CW:65:G:C8	2.51	0.43
1:AA:1521:G:H2'	1:AA:1522:U:H6	1.82	0.43
2:CB:16:HIS:HB3	2:CB:210:SER:OG	2.19	0.43
36:BA:177:G:H3'	36:BA:178:G:C8	2.54	0.43
36:BA:632:A:H2'	36:BA:633:A:C8	2.54	0.43
15:AO:39:LEU:O	15:AO:42:HIS:HB3	2.19	0.43
52:DT:5:ALA:O	52:DT:8:LYS:N	2.48	0.43
36:BA:2836:U:H2'	36:BA:2837:G:H8	1.82	0.43
1:CA:1127:G:H1'	1:CA:1147:C:N4	2.33	0.43
1:AA:538:G:H2'	1:AA:539:A:C8	2.53	0.43
17:CQ:95:TYR:HA	17:CQ:98:LEU:HD13	2.01	0.43
36:BA:575:A:OP2	36:BA:2499:C:O2'	2.36	0.43
36:BA:1412:A:H2'	36:BA:1413:G:O4'	2.19	0.43
1:AA:1121:U:C4	1:AA:1122:U:C4	3.07	0.43
36:DA:1917:U:H2'	36:DA:1918:A:H5'	2.00	0.43
36:BA:2861:G:O2'	36:BA:2862:G:H5'	2.19	0.43
54:DV:58:VAL:CG2	54:DV:98:GLU:HG2	2.49	0.43
1:AA:701:C:OP1	1:AA:703:G:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DH:144:VAL:O	43:DH:144:VAL:HG12	2.18	0.43
39:BD:257:LEU:C	39:BD:257:LEU:CD2	2.87	0.43
51:DS:36:TYR:N	51:DS:36:TYR:CD1	2.83	0.43
1:AA:309:G:H1'	1:AA:608:A:C2	2.54	0.43
25:AZ:354:GLN:O	25:AZ:370:PHE:HB2	2.19	0.42
52:DT:92:GLY:O	52:DT:93:ARG:HB2	2.19	0.42
32:D6:18:ARG:NH1	32:D6:18:ARG:CG	2.78	0.42
36:DA:2399:G:O6	36:DA:2417:C:N3	2.52	0.42
53:BU:61:TRP:CD2	53:BU:94:ASN:HA	2.54	0.42
53:BU:92:ARG:CD	53:BU:94:ASN:HB3	2.49	0.42
28:B2:62:THR:CG2	28:B2:66:GLU:HB3	2.49	0.42
36:BA:143(A):C:H4'	56:BX:38:GLU:OE2	2.19	0.42
56:BX:10:ALA:HB1	56:BX:11:PRO:HD2	2.00	0.42
25:CZ:291:ARG:O	25:CZ:292:GLY:C	2.57	0.42
25:CZ:292:GLY:C	25:CZ:293:VAL:HG22	2.39	0.42
25:AZ:134:PHE:HZ	25:AZ:173:GLY:O	2.02	0.42
39:BD:36:PRO:HA	39:BD:61:LEU:CD1	2.47	0.42
36:BA:1855:G:O2'	36:BA:1856:G:H5'	2.19	0.42
38:BC:123:VAL:CG1	38:BC:124:GLY:N	2.82	0.42
36:BA:1666:G:H1'	47:BO:3:GLN:HE21	1.83	0.42
39:DD:31:LYS:HZ1	39:DD:33:LEU:HG	1.80	0.42
25:CZ:102:ALA:O	25:CZ:131:ILE:CG2	2.67	0.42
42:DG:131:TYR:HB2	42:DG:173:LEU:CD1	2.48	0.42
36:DA:143:G:H1'	56:DX:37:THR:HG21	2.01	0.42
36:DA:482:A:H4'	57:DY:47:LYS:HD3	2.01	0.42
36:BA:99:U:C4'	36:BA:102:G:H1'	2.49	0.42
36:BA:308:G:N2	36:BA:477:A:C8	2.87	0.42
52:BT:106:SER:O	52:BT:107:ASP:CG	2.58	0.42
28:D2:5:GLU:HG3	28:D2:6:VAL:N	2.34	0.42
34:B8:47:LYS:HD2	34:B8:49:VAL:HG23	2.01	0.42
36:BA:1638:C:H2'	36:BA:1639:U:O4'	2.18	0.42
36:BA:1303:G:H1'	36:BA:1641:A:N1	2.33	0.42
1:CA:1104:G:P	2:CB:111:ARG:HD2	2.58	0.42
3:AC:76:VAL:O	3:AC:84:ILE:HB	2.19	0.42
1:AA:1306:A:H1'	1:AA:1332:A:C2	2.54	0.42
34:D8:17:THR:CG2	34:D8:21:LYS:HB2	2.48	0.42
3:AC:14:ILE:O	3:AC:15:THR:HB	2.18	0.42
1:AA:1123:A:C2	1:AA:1150:U:C5	2.98	0.42
10:AJ:9:ARG:NH1	10:AJ:9:ARG:HG2	2.34	0.42
3:CC:70:VAL:CG1	3:CC:71:ALA:N	2.82	0.42
36:DA:1156:A:H8	36:DA:1156:A:OP1	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1902:C:H2'	36:DA:1903:G:O5'	2.17	0.42
26:D0:27:GLU:O	26:D0:27:GLU:OE2	2.37	0.42
25:CZ:121:LEU:HG	25:CZ:122:LEU:H	1.81	0.42
36:BA:2334:G:C5	51:BS:15:ARG:NH2	2.87	0.42
29:B3:35:ARG:HG3	29:B3:36:VAL:H	1.84	0.42
1:CA:198:G:O2'	1:CA:199:G:O5'	2.36	0.42
1:CA:1270:C:H4'	1:CA:1313:U:O2'	2.19	0.42
3:CC:106:VAL:CG1	3:CC:107:GLN:NE2	2.78	0.42
5:CE:12:LEU:N	5:CE:12:LEU:HD13	2.33	0.42
2:CB:58:ILE:O	2:CB:61:LEU:HB3	2.19	0.42
36:BA:1534:U:O2'	36:BA:1535:A:H5'	2.19	0.42
7:CG:104:LEU:HA	7:CG:104:LEU:HD13	1.83	0.42
42:BG:61:ALA:O	42:BG:65:GLY:N	2.52	0.42
39:DD:264:LYS:HG2	39:DD:266:SER:HB3	2.01	0.42
36:BA:2838:G:N2	50:BR:93:GLY:HA3	2.34	0.42
50:BR:42:LYS:O	50:BR:45:ARG:HD2	2.19	0.42
2:AB:8:LYS:HZ2	2:AB:217:ARG:NH1	2.17	0.42
5:AE:33:VAL:HG11	5:AE:109:ILE:HA	2.00	0.42
6:AF:99:ALA:HB3	18:AR:29:PHE:CE1	2.54	0.42
36:DA:1443:G:C2	36:DA:1549:C:C2	3.07	0.42
24:AY:58:A:C5	24:AY:61:C:C4	3.07	0.42
50:DR:52:ILE:HG22	50:DR:94:TYR:HD2	1.83	0.42
4:AD:106:TYR:CE1	4:AD:113:SER:HA	2.55	0.42
35:B9:22:ARG:NH2	36:BA:2741:A:OP1	2.40	0.42
10:CJ:32:ALA:HB2	10:CJ:76:ASN:HB2	2.01	0.42
10:CJ:76:ASN:O	10:CJ:78:ASN:N	2.52	0.42
25:CZ:350:THR:HG22	25:CZ:351:GLY:N	2.35	0.42
36:DA:1952:A:C6	36:DA:1953:A:C6	3.07	0.42
41:DF:122:LYS:HG3	41:DF:191:ARG:HA	2.01	0.42
33:D7:34:ARG:NH1	33:D7:42:LEU:HA	2.34	0.42
1:CA:445:G:H2'	1:CA:446:G:C8	2.54	0.42
48:DP:110:TYR:HD1	48:DP:111:ARG:N	2.16	0.42
47:DO:14:THR:HG21	47:DO:86:ILE:HB	2.01	0.42
25:AZ:230:THR:HG23	25:AZ:295:ARG:NH1	2.34	0.42
36:DA:654(H):G:H3'	36:DA:654(I):C:C5'	2.49	0.42
25:CZ:229:PHE:N	25:CZ:229:PHE:CD1	2.86	0.42
36:BA:910:A:N1	36:BA:2277:G:H1'	2.33	0.42
36:DA:614(C):A:N3	36:DA:615:G:H1'	2.33	0.42
25:CZ:74:LYS:C	25:CZ:75:ARG:HG3	2.39	0.42
37:BB:61:G:N2	37:BB:62:C:H1'	2.33	0.42
26:B0:7:LEU:CD2	49:BQ:81:VAL:CG2	2.95	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1567:A:H5''	39:DD:58:HIS:CD2	2.53	0.42
36:BA:363(F):A:O2'	36:BA:364:C:H5	2.01	0.42
36:BA:2702:U:H4'	36:BA:2703:C:OP1	2.19	0.42
41:DF:65:TRP:CB	41:DF:66:PRO:CD	2.96	0.42
1:CA:1179:A:H2'	1:CA:1180:A:O4'	2.19	0.42
36:DA:649:G:H2'	36:DA:650:C:C6	2.54	0.42
36:DA:2869:G:H2'	36:DA:2870:C:C6	2.54	0.42
37:BB:112:U:H2'	37:BB:113:G:C8	2.50	0.42
37:BB:113:G:N2	51:BS:45:GLY:O	2.52	0.42
1:AA:1245:A:H2'	1:AA:1246:C:H6	1.83	0.42
52:DT:8:LYS:HA	52:DT:11:GLU:OE1	2.19	0.42
25:AZ:127:GLY:O	25:AZ:128:VAL:C	2.57	0.42
1:AA:1069:C:H2'	1:AA:1070:U:O5'	2.18	0.42
25:AZ:350:THR:CG2	25:AZ:351:GLY:N	2.81	0.42
36:DA:2447:G:C6	36:DA:2501:C:C2	3.07	0.42
1:AA:1170:A:H2'	1:AA:1171:G:O4'	2.19	0.42
36:BA:1632:A:N7	36:BA:1633:G:C6	2.87	0.42
36:BA:38:A:C2	36:BA:442:G:N1	2.87	0.42
11:AK:108:ILE:HG22	18:AR:88:LYS:HB2	2.00	0.42
1:CA:910:C:O5'	1:CA:910:C:H6	2.02	0.42
26:D0:69:PHE:CG	36:DA:857:C:OP2	2.72	0.42
11:AK:20:TYR:CZ	11:AK:83:ILE:HD12	2.54	0.42
40:BE:79:ARG:NH1	40:BE:79:ARG:HG2	2.34	0.42
36:BA:2855:C:O2'	36:BA:2856:C:H5'	2.19	0.42
1:AA:1459:C:H2'	1:AA:1460:A:H8	1.84	0.42
8:AH:100:ILE:HA	8:AH:101:PRO:HD3	1.82	0.42
2:CB:235:SER:O	2:CB:236:TYR:C	2.56	0.42
7:CG:50:ILE:HD12	7:CG:125:MET:HG3	2.01	0.42
23:AX:13:A:O2'	23:AX:14:A:C8	2.71	0.42
36:BA:1847:A:H3'	36:BA:1848:A:C5'	2.49	0.42
1:AA:124:G:C6	1:AA:125:U:C4	3.07	0.42
1:AA:1310:G:O2'	1:AA:1311:G:H5'	2.19	0.42
36:BA:1679:U:O2'	36:BA:1680:U:H5'	2.19	0.42
49:DQ:11:LYS:NZ	49:DQ:88:GLY:O	2.50	0.42
36:DA:1399:C:O5'	36:DA:1399:C:H6	2.01	0.42
46:DN:52:VAL:HG12	46:DN:52:VAL:O	2.18	0.42
36:BA:475:U:O5'	36:BA:475:U:H6	2.02	0.42
2:CB:23:ARG:HA	2:CB:23:ARG:HD2	1.76	0.42
58:DZ:102:LEU:HA	58:DZ:102:LEU:HD23	1.85	0.42
25:CZ:217:VAL:HA	25:CZ:245:GLY:HA2	2.00	0.42
36:DA:679:C:H2'	36:DA:680:G:H8	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:715:A:H1'	1:AA:777:A:N1	2.34	0.42
1:AA:1240:U:H3'	1:AA:1241:G:H5'	2.00	0.42
4:CD:107:ARG:HH21	4:CD:194:LEU:CD1	2.31	0.42
4:CD:186:LEU:O	4:CD:187:ARG:HB2	2.18	0.42
32:B6:27:LYS:HG2	36:BA:2285:C:OP2	2.19	0.42
34:D8:41:ILE:HD12	36:DA:2419:U:P	2.58	0.42
36:DA:811:U:O2'	36:DA:812:C:H5'	2.19	0.42
36:BA:2348:U:O2'	36:BA:2349:G:H5'	2.18	0.42
32:D6:45:LYS:NZ	32:D6:45:LYS:N	2.49	0.42
27:D1:46:LEU:C	27:D1:47:GLN:HG2	2.38	0.42
1:CA:1220:G:O2'	1:CA:1221:G:H5'	2.19	0.42
28:B2:10:LEU:HD22	28:B2:63:VAL:HG23	2.01	0.42
2:AB:118:LEU:HB3	2:AB:142:LEU:HD12	2.01	0.42
10:AJ:50:ILE:CD1	10:AJ:50:ILE:H	2.07	0.42
39:BD:35:LYS:CG	39:BD:63:ARG:HG2	2.47	0.42
25:CZ:168:VAL:O	25:CZ:170:VAL:HG23	2.19	0.42
56:DX:25:LYS:HA	56:DX:81:VAL:O	2.19	0.42
26:D0:47:PRO:HB3	26:D0:51:VAL:O	2.18	0.42
49:BQ:135:ASP:OD2	58:BZ:49:ARG:NH1	2.52	0.42
58:BZ:86:VAL:HG12	58:BZ:87:ASP:H	1.83	0.42
57:DY:76:CYS:CB	57:DY:77:PRO:HD2	2.48	0.42
36:BA:691:C:O4'	39:BD:43:ARG:NH2	2.53	0.42
3:CC:46:GLU:O	3:CC:47:LEU:CB	2.45	0.42
1:CA:1053:G:HO2'	1:CA:1054:C:P	2.42	0.42
53:BU:10:ARG:C	53:BU:12:ARG:N	2.73	0.42
3:AC:11:ARG:HB3	3:AC:14:ILE:O	2.19	0.42
3:AC:7:PRO:HG2	3:AC:184:TYR:HB2	1.99	0.42
26:B0:26:TYR:CE2	36:BA:857:C:H1'	2.54	0.42
26:B0:26:TYR:HB3	26:B0:27:GLU:OE1	2.19	0.42
1:AA:1358:U:OP1	14:AN:35:ARG:HG3	2.19	0.42
54:DV:35:LEU:C	54:DV:37:VAL:N	2.69	0.42
35:D9:14:CYS:HA	35:D9:26:ILE:O	2.19	0.42
4:CD:202:LEU:O	4:CD:203:VAL:C	2.57	0.42
4:CD:19:LEU:HD23	4:CD:67:ILE:CG1	2.49	0.42
51:BS:49:VAL:HG22	51:BS:80:LEU:HD13	2.01	0.42
7:CG:31:MET:HA	7:CG:39:ALA:HB2	2.00	0.42
7:CG:31:MET:HB2	7:CG:39:ALA:CB	2.49	0.42
1:AA:189(D):C:O2	1:AA:189(H):G:C6	2.72	0.42
48:BP:97:PRO:HA	48:BP:100:LEU:HB3	2.01	0.42
51:DS:85:VAL:CG2	51:DS:106:ARG:HG3	2.41	0.42
17:CQ:69:LYS:O	17:CQ:70:ARG:HD2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:199:ASN:O	4:AD:200:GLU:C	2.57	0.42
46:BN:30:ILE:HG22	46:BN:120:LEU:HD21	2.01	0.42
12:CL:113:ARG:HB3	12:CL:122:THR:HG21	2.00	0.42
36:DA:1654:A:P	50:DR:3:HIS:CB	3.03	0.42
39:BD:126:GLN:O	39:BD:193:VAL:CG1	2.67	0.42
2:CB:61:LEU:O	2:CB:64:ARG:HG3	2.19	0.42
36:BA:761:A:C8	36:BA:761:A:H3'	2.54	0.42
36:DA:2408:U:O5'	36:DA:2408:U:H6	2.01	0.42
43:BH:159:GLU:HG3	43:BH:160:LYS:N	2.34	0.42
36:BA:1446:C:O2'	36:BA:1447:G:H5'	2.19	0.42
2:AB:18:GLY:H	2:AB:42:ILE:HG22	1.84	0.42
37:BB:89:G:C6	37:BB:90:A:C6	3.07	0.42
25:AZ:303:VAL:HG12	25:AZ:304:LEU:N	2.33	0.42
2:CB:30:ARG:HE	2:CB:30:ARG:HB3	1.67	0.42
2:CB:31:TYR:OH	2:CB:200:ILE:HD12	2.19	0.42
36:DA:2770:G:C5'	36:DA:2771:C:OP2	2.67	0.42
36:DA:1342:A:N7	36:DA:1397:U:C2	2.88	0.42
35:B9:7:VAL:HG11	35:B9:25:VAL:HG23	2.01	0.42
51:BS:25:ARG:CZ	51:BS:40:ILE:HD11	2.49	0.42
36:DA:2208:A:N3	36:DA:2219:G:N1	2.67	0.42
54:BV:72:VAL:HG23	54:BV:72:VAL:O	2.19	0.42
36:BA:1000:A:N6	36:BA:1001:A:C6	2.87	0.42
54:BV:6:LYS:HZ1	54:BV:37:VAL:HG11	1.84	0.42
27:B1:3:LYS:O	27:B1:46:LEU:HD11	2.19	0.42
36:DA:2600:A:H2'	36:DA:2601:C:H6	1.83	0.42
3:AC:165:THR:O	3:AC:165:THR:HG23	2.19	0.42
36:BA:2022:U:O2'	36:BA:2617:C:H5'	2.19	0.42
56:BX:60:ARG:HA	56:BX:75:ASP:OD1	2.18	0.42
1:CA:109:A:O2'	1:CA:110:C:OP1	2.30	0.42
51:BS:11:LYS:N	51:BS:11:LYS:CD	2.80	0.42
22:AV:50:U:H2'	22:AV:51:U:C6	2.54	0.42
49:BQ:79:LEU:O	49:BQ:81:VAL:N	2.53	0.42
55:BW:88:ARG:HB3	55:BW:92:ARG:HB2	2.01	0.42
8:CH:13:ILE:HD11	8:CH:61:VAL:HG21	2.00	0.42
25:AZ:374:LEU:CD1	25:AZ:378:VAL:HG21	2.49	0.42
36:DA:1359:A:H2'	36:DA:1360:A:C5'	2.49	0.42
15:AO:31:LEU:CD1	15:AO:31:LEU:N	2.80	0.42
4:CD:90:GLY:O	4:CD:91:SER:C	2.57	0.42
4:CD:122:ARG:O	4:CD:122:ARG:HG3	2.19	0.42
33:B7:34:ARG:NH1	33:B7:34:ARG:CG	2.79	0.42
36:BA:688:U:H5'	36:BA:1780:A:C2	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:797:C:H2'	36:DA:798:G:H8	1.84	0.42
27:B1:56:GLN:O	27:B1:57:GLU:CB	2.67	0.42
56:DX:45:THR:C	56:DX:47:PHE:N	2.72	0.42
4:CD:119:GLN:O	4:CD:123:HIS:HD2	2.02	0.42
15:CO:3:ILE:HA	15:CO:7:GLU:OE1	2.19	0.42
36:DA:554:U:H2'	36:DA:555:U:C6	2.54	0.42
17:CQ:33:GLY:O	17:CQ:34:LYS:C	2.57	0.42
36:DA:1817:G:OP1	39:DD:88:ARG:NH2	2.52	0.42
55:DW:11:ARG:NH2	55:DW:98:LYS:HB3	2.34	0.42
1:AA:153:C:H42	1:AA:168:G:H1	1.67	0.42
6:CF:24:GLU:CG	6:CF:28:ARG:HH12	2.32	0.42
36:BA:1914:C:O4'	36:BA:1914:C:O2	2.36	0.42
10:CJ:43:ARG:HH11	10:CJ:43:ARG:HG3	1.84	0.42
29:B3:11:SER:HB3	36:BA:988:A:OP2	2.18	0.42
36:BA:850:C:H2'	36:BA:851:U:H6	1.83	0.42
2:AB:58:ILE:HG21	2:AB:222:ILE:CD1	2.48	0.42
36:BA:1572:A:H2'	36:BA:1573:G:C8	2.54	0.42
36:DA:469:G:H2'	36:DA:470:A:H5''	2.01	0.42
36:DA:1890:A:H2'	36:DA:1891:G:H5'	2.02	0.42
36:DA:1625:C:H2'	36:DA:1626:G:H5'	2.01	0.42
37:DB:98:G:O2'	37:DB:99:G:H5'	2.18	0.42
1:CA:1137:C:H4'	1:CA:1138:G:C2	2.54	0.42
3:CC:178:LEU:C	3:CC:180:ALA:H	2.22	0.42
36:DA:2521:C:C4	36:DA:2522:U:C4	3.07	0.42
1:CA:618:C:H3'	1:CA:619:U:H5''	2.01	0.42
1:AA:1386:G:H2'	1:AA:1387:G:H8	1.84	0.42
43:BH:97:ARG:NH2	43:BH:104:GLU:OE1	2.52	0.42
36:DA:703:U:H2'	36:DA:704:G:O4'	2.19	0.42
1:CA:284:G:H2'	1:CA:285:G:H8	1.83	0.42
20:AT:75:ASN:HA	20:AT:78:ALA:HB3	2.00	0.42
39:DD:231:HIS:CD2	39:DD:249:PRO:HG3	2.54	0.42
4:CD:106:TYR:CD2	4:CD:106:TYR:C	2.93	0.42
5:CE:100:VAL:HG23	5:CE:100:VAL:O	2.18	0.42
45:BK:90:UNK:CB	45:BK:95:UNK:HA	2.49	0.42
1:CA:229:U:O2'	1:CA:230:G:H5'	2.19	0.42
4:CD:98:GLU:C	4:CD:100:ARG:H	2.23	0.42
34:D8:6:THR:HG22	34:D8:63:PRO:HD3	2.01	0.42
36:DA:588:U:H2'	36:DA:589:C:H6	1.81	0.42
22:AV:48:C:N4	22:AV:59:U:C4	2.88	0.42
36:DA:2415:G:C6	36:DA:2416:C:N3	2.88	0.42
57:DY:25:GLY:HA3	57:DY:39:VAL:HG12	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:2:GLY:C	21:CU:4:GLY:H	2.22	0.42
49:DQ:133:ARG:CG	49:DQ:134:ARG:H	2.31	0.42
49:DQ:133:ARG:HG2	49:DQ:134:ARG:H	1.83	0.42
52:BT:31:SER:O	52:BT:32:TYR:O	2.36	0.42
28:D2:47:ASN:O	28:D2:50:ILE:CD1	2.67	0.42
9:AI:4:TYR:CD1	9:AI:4:TYR:N	2.87	0.42
1:AA:1333:A:C2'	1:AA:1334:G:H5'	2.48	0.42
9:AI:56:LEU:CD2	9:AI:57:GLY:N	2.82	0.42
1:AA:1145:C:O2'	1:AA:1146:A:P	2.78	0.42
36:DA:141:A:H1'	36:DA:1408:C:O2'	2.19	0.42
36:DA:1152:C:H2'	36:DA:1153:C:H6	1.85	0.42
46:BN:66:LYS:C	46:BN:67:LEU:HD12	2.39	0.42
26:D0:27:GLU:HA	26:D0:67:VAL:HG12	2.01	0.42
39:BD:259:THR:O	39:BD:260:ARG:C	2.58	0.42
2:CB:15:VAL:CG2	2:CB:15:VAL:O	2.66	0.42
58:DZ:100:VAL:HG11	58:DZ:137:ILE:HD11	2.00	0.42
7:CG:40:ALA:O	7:CG:43:PHE:N	2.51	0.42
41:DF:10:PRO:HG2	41:DF:11:VAL:H	1.85	0.42
1:AA:268:C:O2'	1:AA:269:C:H5'	2.18	0.42
27:B1:21:ARG:NH1	36:BA:2432:A:H2	2.16	0.42
40:DE:49:LEU:N	40:DE:49:LEU:CD2	2.82	0.42
40:DE:77:ILE:CG2	40:DE:78:LEU:N	2.80	0.42
36:BA:1106:G:C6	36:BA:1107:G:C2	3.07	0.42
41:DF:192:LEU:HD21	41:DF:194:MET:CE	2.49	0.42
25:AZ:221:PHE:CD1	25:AZ:247:VAL:HG13	2.54	0.42
19:CS:32:LYS:HB3	19:CS:33:THR:H	1.68	0.42
48:DP:126:VAL:HA	48:DP:145:PRO:HG2	2.00	0.42
36:DA:1058:G:C2	36:DA:1059:G:C8	3.07	0.42
36:BA:761:A:C8	36:BA:761:A:C3'	3.02	0.42
36:DA:1542:A:C8	36:DA:1544:A:H5'	2.55	0.42
1:CA:62:U:C2'	1:CA:63:C:C5'	2.88	0.42
18:CR:53:ARG:NH1	18:CR:60:ALA:CA	2.83	0.42
22:AV:4:C:H3'	22:AV:5:G:C5'	2.50	0.42
36:DA:2122:U:H1'	38:DC:166:ASP:OD2	2.19	0.42
36:DA:1208:C:N3	36:DA:1209:G:C8	2.87	0.42
40:BE:3:GLY:O	40:BE:4:ILE:CB	2.66	0.42
58:DZ:133:ILE:O	58:DZ:133:ILE:HG22	2.19	0.42
19:AS:10:PHE:CZ	19:AS:70:LYS:HE2	2.55	0.42
41:BF:42:ALA:O	41:BF:44:ARG:N	2.51	0.42
1:CA:160:A:H1'	1:CA:344:A:N7	2.34	0.42
13:CM:40:ASN:HA	13:CM:41:PRO:HD3	1.89	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:14:LYS:HA	20:CT:17:ARG:NH2	2.26	0.42
36:BA:1278:A:O2'	36:BA:1279:G:H5'	2.19	0.42
36:BA:2650:U:H6	36:BA:2650:U:O5'	2.01	0.42
26:B0:24:LYS:N	26:B0:37:LEU:O	2.30	0.42
5:AE:126:ARG:O	5:AE:127:ASN:C	2.57	0.42
1:CA:1431:C:H2'	1:CA:1432:G:H5'	1.99	0.42
39:DD:148:GLU:O	39:DD:151:LYS:HB2	2.19	0.42
1:AA:630:G:C2'	1:AA:631:G:H5'	2.50	0.42
30:D4:5:ILE:CD1	30:D4:5:ILE:N	2.82	0.42
1:CA:1309:G:O2'	1:CA:1310:G:H5'	2.19	0.42
48:BP:80:TYR:HE1	48:BP:111:ARG:CD	2.26	0.42
39:DD:79:VAL:HG12	39:DD:113:VAL:HG12	2.00	0.42
36:BA:2845:G:H5''	52:BT:54:ARG:O	2.19	0.42
36:BA:57:C:H2'	36:BA:58:G:C5'	2.50	0.42
33:D7:5:TRP:O	36:DA:1612:C:H4'	2.18	0.42
54:DV:66:ARG:NH2	54:DV:88:ARG:HG3	2.34	0.42
54:DV:66:ARG:O	54:DV:67:GLY:C	2.57	0.42
24:AY:29:G:H1	24:AY:41:C:H42	1.66	0.42
16:CP:67:THR:HG22	16:CP:68:ASP:N	2.35	0.42
5:AE:20:GLN:HE21	5:AE:20:GLN:HB3	1.54	0.42
25:AZ:74:LYS:HG2	25:AZ:75:ARG:HG3	2.01	0.42
46:BN:70:LYS:O	46:BN:86:PRO:HA	2.18	0.42
52:DT:133:GLU:O	52:DT:133:GLU:HG2	2.19	0.42
1:AA:1329:A:OP1	13:AM:28:ALA:HB3	2.19	0.42
31:D5:19:ARG:NH1	36:DA:1266:G:OP2	2.47	0.42
1:AA:656:C:H4'	15:AO:62:GLN:OE1	2.19	0.42
36:BA:1948:G:N3	36:BA:1948:G:H2'	2.33	0.42
36:BA:271(V):G:H2'	36:BA:271(W):G:O4'	2.19	0.42
7:AG:23:VAL:HG13	7:AG:43:PHE:CZ	2.54	0.42
46:DN:35:ARG:O	46:DN:42:TRP:CZ3	2.69	0.42
36:BA:65:C:O2'	36:BA:66:C:H5'	2.19	0.42
50:BR:10:LEU:HB2	50:BR:17:ARG:HE	1.84	0.42
36:DA:578:A:H5'	36:DA:1254:A:OP1	2.18	0.42
36:BA:1217:C:H2'	36:BA:1218:C:H6	1.85	0.42
9:AI:48:GLU:N	9:AI:49:PRO:CD	2.82	0.42
7:AG:15:ASP:OD1	7:AG:44:TYR:OH	2.35	0.42
1:AA:310:G:H2'	1:AA:311:C:C6	2.54	0.42
27:D1:94:LEU:O	27:D1:95:LEU:O	2.36	0.42
1:CA:957:U:H4'	19:CS:79:THR:HB	2.01	0.42
36:DA:278:A:H61	36:DA:362:U:H3	1.68	0.42
25:AZ:171:ILE:N	25:AZ:171:ILE:CD1	2.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BB:76:G:OP1	58:BZ:15:PRO:HB3	2.19	0.42
36:BA:1431:U:H2'	36:BA:1432:C:C6	2.55	0.42
38:DC:28:LEU:C	38:DC:28:LEU:HD23	2.39	0.42
1:CA:1503:A:C2	1:CA:1507:A:OP2	2.72	0.42
1:AA:1233:G:OP2	9:AI:124:GLN:HG3	2.19	0.42
4:CD:34:GLU:O	4:CD:35:ARG:CB	2.67	0.42
12:CL:75:HIS:HD2	12:CL:77:LEU:HG	1.83	0.42
36:DA:2735:G:O2'	36:DA:2736:G:H5'	2.19	0.42
1:AA:1486:G:H2'	1:AA:1487:G:O4'	2.18	0.42
11:CK:20:TYR:HA	11:CK:83:ILE:O	2.19	0.42
1:AA:304:U:H2'	1:AA:305:G:C8	2.54	0.42
1:CA:862:C:C2'	1:CA:863:U:H5'	2.49	0.42
1:CA:1294:G:O2'	1:CA:1295:G:H5'	2.20	0.42
47:DO:17:ARG:HA	47:DO:17:ARG:HD3	1.84	0.42
16:CP:35:LYS:HD3	16:CP:35:LYS:C	2.39	0.42
25:CZ:136:ASN:OD1	60:CZ:501:GDP:O6	2.37	0.42
27:D1:29:GLY:HA3	36:DA:2396:G:O2'	2.19	0.42
34:D8:61:LEU:HD23	36:DA:593:G:H4'	2.01	0.42
48:DP:50:ARG:CG	48:DP:51:PHE:N	2.82	0.42
1:CA:346:G:O2'	1:CA:347:G:O5'	2.37	0.42
52:DT:30:VAL:HG23	52:DT:83:ILE:HG12	2.01	0.42
36:BA:2345:G:C6	36:BA:2347:C:N4	2.88	0.42
36:DA:99:U:C6	36:DA:102:G:N2	2.88	0.42
1:CA:1323:G:C6	1:CA:1324:A:N6	2.87	0.42
39:DD:222:ARG:O	39:DD:226:MET:HG3	2.20	0.42
36:DA:2303:G:H4'	42:DG:124:SER:O	2.19	0.42
42:DG:131:TYR:CE2	42:DG:133:LEU:HB3	2.54	0.42
42:DG:131:TYR:HB2	42:DG:173:LEU:HD11	2.00	0.42
42:DG:40:ASN:O	42:DG:155:MET:HA	2.19	0.42
42:DG:42:GLY:N	42:DG:90:LEU:H	2.18	0.42
42:DG:5:VAL:HB	42:DG:8:LYS:HD2	2.01	0.42
36:BA:2717:G:O2'	52:BT:96:ARG:HD3	2.20	0.42
49:BQ:138:ASP:HB3	58:BZ:53:ILE:HD13	2.01	0.42
1:AA:228:A:C5'	1:AA:228:A:C8	2.99	0.42
46:BN:48:MET:SD	46:BN:49:GLY:N	2.92	0.42
13:AM:25:ILE:HD11	13:AM:60:VAL:HG13	2.01	0.42
3:CC:52:LEU:HD12	3:CC:55:VAL:HG23	2.00	0.42
1:CA:961:U:O2'	1:CA:962:C:C5'	2.67	0.42
53:BU:104:GLN:HB3	54:BV:44:LYS:NZ	2.35	0.42
42:BG:52:ILE:HG13	42:BG:53:LEU:N	2.32	0.42
3:AC:5:ILE:HG12	3:AC:10:PHE:HB2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:67:THR:N	16:AP:70:ALA:HB3	2.30	0.42
36:DA:2774:C:H2'	36:DA:2775:A:O4'	2.19	0.42
39:BD:183:ARG:HD2	39:BD:270:ILE:CG2	2.47	0.42
36:BA:671:C:H2'	36:BA:672:C:C6	2.54	0.42
41:BF:192:LEU:CD2	41:BF:194:MET:HG3	2.50	0.42
1:CA:1125:U:H3	10:CJ:5:ARG:CZ	2.32	0.42
41:DF:163:VAL:O	41:DF:163:VAL:HG12	2.19	0.42
40:DE:57:LYS:HE3	40:DE:57:LYS:CA	2.37	0.42
7:CG:121:ALA:O	7:CG:124:LEU:HB2	2.19	0.42
36:DA:1142(A):A:C4	36:DA:1144:G:N7	2.87	0.42
51:DS:16:ASN:C	51:DS:18:ILE:N	2.72	0.42
50:BR:79:LEU:C	50:BR:79:LEU:HD13	2.40	0.42
5:CE:11:ILE:HD11	5:CE:33:VAL:HG21	2.02	0.42
46:BN:82:LEU:HA	46:BN:82:LEU:HD12	1.82	0.42
40:DE:188:VAL:HG23	40:DE:189:PRO:CD	2.50	0.42
36:BA:1061:U:H2'	36:BA:1062:G:H5'	2.01	0.42
36:DA:1059:G:H5'	36:DA:1060:U:H2'	2.01	0.42
1:AA:1036:G:H3'	1:AA:1037:C:H6	1.82	0.42
36:DA:579:G:N2	36:DA:580:C:C2	2.88	0.42
58:BZ:145:GLU:HG3	58:BZ:146:ILE:H	1.84	0.42
36:BA:2128:C:HO2'	36:BA:2129:C:C5'	2.27	0.42
25:AZ:375:ILE:C	25:AZ:375:ILE:HD12	2.40	0.42
36:DA:2579:C:O2'	40:DE:131:ALA:CB	2.64	0.42
29:B3:9:VAL:HG21	29:B3:55:ARG:HG3	2.01	0.42
4:CD:155:LEU:HB2	4:CD:158:ILE:HG12	2.00	0.42
4:CD:159:ARG:O	4:CD:162:LEU:N	2.52	0.42
1:CA:976:G:N1	1:CA:1363(A):A:C2	2.87	0.42
36:DA:1658:C:H2'	36:DA:1659:U:C6	2.54	0.42
36:DA:1210:A:C5'	36:DA:1212:G:H5'	2.50	0.42
40:BE:48:GLN:NE2	40:BE:78:LEU:HD13	2.34	0.42
50:DR:92:GLY:CA	50:DR:94:TYR:HE1	2.32	0.42
18:AR:30:ASP:O	18:AR:32:ARG:N	2.53	0.42
4:AD:23:GLY:O	4:AD:24:GLU:C	2.58	0.42
35:B9:35:ARG:HH11	36:BA:2742:C:P	2.43	0.42
1:CA:1207:G:H2'	1:CA:1208:C:H6	1.83	0.42
10:CJ:30:SER:HB3	10:CJ:84:GLN:HE22	1.84	0.42
25:CZ:355:LEU:CD1	25:CZ:360:GLU:HA	2.50	0.42
7:CG:134:ALA:O	7:CG:137:LYS:N	2.53	0.42
1:CA:1431:C:H2'	1:CA:1432:G:C5'	2.49	0.42
20:CT:86:ARG:HG3	20:CT:86:ARG:HH11	1.84	0.42
37:DB:68:C:H2'	37:DB:69:G:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DB:69:G:N2	37:DB:70:C:H1'	2.34	0.42
27:B1:60:PHE:CZ	27:B1:91:LYS:CG	2.93	0.42
51:BS:71:ARG:O	51:BS:74:ALA:HB3	2.20	0.42
25:CZ:20:VAL:H	25:CZ:115:GLN:HE21	1.68	0.42
10:AJ:96:ILE:CD1	10:AJ:96:ILE:N	2.76	0.42
39:DD:113:VAL:C	39:DD:115:GLN:H	2.22	0.42
2:CB:28:PHE:CD1	2:CB:28:PHE:O	2.72	0.42
1:CA:629:G:C2'	1:CA:630:G:H5''	2.47	0.42
36:DA:389:G:C6	48:DP:70:GLN:HG3	2.54	0.42
22:CW:54:U:C5	22:CW:55:U:C4	3.08	0.42
16:AP:44:THR:O	16:AP:45:THR:HB	2.20	0.42
16:CP:11:SER:OG	16:CP:14:ASN:HB3	2.19	0.42
36:BA:2059:A:C5	36:BA:2503:A:C2	3.07	0.42
37:DB:75:G:H5'	37:DB:76:G:OP2	2.20	0.42
46:DN:128:HIS:O	46:DN:128:HIS:CG	2.72	0.42
36:DA:1217:C:H2'	36:DA:1218:C:C6	2.47	0.42
1:CA:376:G:P	16:CP:67:THR:HG21	2.59	0.42
36:DA:1314:C:OP1	36:DA:1332:G:OP1	2.36	0.42
26:D0:50:ASN:HD22	26:D0:63:VAL:CG2	2.29	0.42
2:CB:142:LEU:C	2:CB:142:LEU:CD2	2.88	0.42
8:CH:41:ARG:HD3	8:CH:42:GLU:OE2	2.19	0.42
3:AC:93:LYS:C	3:AC:95:THR:H	2.23	0.42
14:CN:44:LEU:O	14:CN:44:LEU:HD12	2.19	0.42
56:BX:41:ASN:ND2	56:BX:41:ASN:N	2.66	0.42
36:DA:991:C:OP2	36:DA:1186:G:OP2	2.37	0.42
18:AR:55:ARG:HG3	18:AR:55:ARG:NH1	2.32	0.42
39:DD:17:THR:O	39:DD:211:ARG:NH2	2.45	0.42
1:AA:123:C:OP1	1:AA:312:C:H5'	2.19	0.42
1:AA:311:C:HO2'	1:AA:312:C:H5'	1.84	0.42
36:DA:2812:G:N2	36:DA:2889:C:C2	2.88	0.42
36:DA:2543:G:N3	36:DA:2765:A:H2'	2.34	0.42
25:CZ:321:TYR:HB2	25:CZ:367:ASN:ND2	2.34	0.42
47:BO:119:PRO:HB2	52:BT:68:TYR:CD2	2.55	0.42
36:DA:1029:A:OP1	49:DQ:128:LYS:NZ	2.44	0.42
2:AB:200:ILE:HG13	2:AB:200:ILE:H	1.58	0.42
36:DA:2436:G:O2'	36:DA:2437:U:H5'	2.19	0.42
36:DA:1957:C:H2'	36:DA:1958:C:H6	1.83	0.42
41:DF:23:ASP:O	41:DF:115:ALA:HA	2.20	0.42
11:CK:97:ALA:O	11:CK:98:LEU:C	2.57	0.42
36:BA:524:U:C5'	36:BA:539:G:N2	2.82	0.42
36:DA:1792:G:H2'	36:DA:1793:C:C6	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:272(J):C:H2'	36:BA:274:G:H5''	2.01	0.42
36:BA:640:C:H2'	36:BA:641:C:C6	2.55	0.42
36:DA:347:A:H2'	36:DA:348:G:C8	2.54	0.42
7:CG:73:MET:HG2	7:CG:90:GLU:HA	2.01	0.42
53:BU:37:GLU:O	53:BU:39:LEU:N	2.52	0.42
55:BW:17:VAL:C	55:BW:19:LEU:N	2.72	0.42
36:BA:2054:A:H61	36:BA:2615:U:H3	1.67	0.42
1:CA:201:C:H2'	1:CA:202:U:H2'	2.02	0.42
22:CV:49:C:O5'	22:CV:49:C:H6	2.01	0.42
36:BA:2821:A:OP2	40:BE:110:GLY:HA3	2.19	0.42
36:BA:2100:G:H2'	36:BA:2101:G:C8	2.54	0.42
53:BU:66:ASN:HA	53:BU:66:ASN:HD22	1.59	0.42
53:BU:66:ASN:ND2	53:BU:76:TYR:N	2.58	0.42
1:CA:986:A:C6	1:CA:1220:G:C6	3.07	0.42
1:CA:1236:A:OP1	21:CU:2:GLY:HA3	2.19	0.42
28:B2:48:HIS:HB3	36:BA:96:G:P	2.58	0.42
58:BZ:151:HIS:ND1	58:BZ:152:ALA:N	2.61	0.42
1:AA:1103:C:C4	1:AA:1104:G:N7	2.88	0.42
38:BC:85:GLU:OE2	38:BC:150:GLY:N	2.43	0.42
12:AL:41:ARG:CZ	12:AL:41:ARG:HB3	2.44	0.42
25:CZ:38:GLU:O	25:CZ:39:ASN:CB	2.68	0.42
42:DG:46:ALA:HB2	42:DG:88:ILE:CB	2.50	0.42
47:BO:104:ARG:HH21	52:BT:33:LYS:HE2	1.83	0.42
57:DY:98:VAL:HG12	57:DY:98:VAL:O	2.19	0.42
57:DY:95:LYS:HG3	57:DY:99:CYS:O	2.20	0.42
3:CC:55:VAL:O	3:CC:55:VAL:HG12	2.18	0.42
31:B5:47:PRO:C	31:B5:49:CYS:H	2.22	0.42
36:DA:1409:C:H2'	36:DA:1410:G:H8	1.84	0.42
36:BA:695:G:N1	36:BA:768:G:C5	2.88	0.42
39:DD:242:ARG:HB2	39:DD:243:GLY:H	1.61	0.42
19:AS:31:ILE:HD13	19:AS:49:ILE:HG23	2.00	0.42
46:BN:62:VAL:O	46:BN:63:THR:CB	2.68	0.42
25:CZ:320:VAL:HG22	25:CZ:386:PHE:CZ	2.55	0.42
4:CD:11:LEU:CD1	4:CD:66:ARG:NE	2.82	0.42
16:AP:5:ARG:NH2	16:AP:24:ALA:CA	2.77	0.42
14:AN:14:PRO:O	14:AN:15:LYS:O	2.37	0.42
41:BF:201:VAL:CG1	41:BF:202:PHE:N	2.83	0.42
1:CA:1346:A:O3'	1:CA:1347:G:H4'	2.19	0.42
21:AU:3:LYS:HB3	21:AU:14:TRP:CD1	2.55	0.42
10:AJ:74:ILE:HG13	10:AJ:74:ILE:O	2.18	0.42
36:BA:626:U:C2	48:BP:105:LEU:HG	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:85:LEU:CD2	48:BP:85:LEU:N	2.82	0.42
1:CA:1298:C:N4	7:CG:114:ARG:HB2	2.33	0.42
17:CQ:18:THR:CG2	17:CQ:69:LYS:HD2	2.49	0.42
56:BX:40:LYS:O	56:BX:44:GLU:HB2	2.19	0.42
36:BA:2395:C:C2	36:BA:2396:G:C8	3.08	0.42
13:AM:88:ARG:O	13:AM:91:ARG:HB2	2.19	0.42
36:DA:1005:C:HO2'	46:DN:28:THR:HG1	1.62	0.42
12:CL:102:ARG:CG	12:CL:102:ARG:HH11	2.31	0.42
40:DE:38:THR:C	40:DE:40:GLU:H	2.22	0.42
3:CC:107:GLN:N	3:CC:107:GLN:NE2	2.68	0.42
36:BA:185:U:H4'	36:BA:218:A:H4'	2.02	0.42
4:AD:18:LYS:C	4:AD:19:LEU:HD12	2.40	0.42
4:AD:9:CYS:SG	4:AD:31:CYS:O	2.78	0.42
1:AA:1348:U:O2'	1:AA:1349:A:C8	2.44	0.42
5:CE:34:VAL:O	5:CE:34:VAL:HG13	2.20	0.42
30:B4:14:ILE:HG13	30:B4:31:ILE:HB	2.02	0.42
58:DZ:18:LEU:CD1	58:DZ:18:LEU:N	2.82	0.42
22:AV:4:C:N4	22:AV:69:G:H1	2.09	0.42
1:AA:858:G:C5	1:AA:869:G:C5	3.07	0.42
34:D8:50:LEU:HD12	34:D8:51:ALA:N	2.25	0.42
36:DA:2378:A:H2	51:DS:20:ARG:HH21	1.65	0.42
15:CO:36:ILE:HG23	15:CO:56:LEU:HD11	2.02	0.42
36:DA:674:G:C1'	41:DF:74:ARG:HD3	2.49	0.42
1:CA:1018:C:H2'	1:CA:1019:C:C6	2.54	0.42
1:AA:235:C:OP1	17:AQ:70:ARG:NH1	2.53	0.42
54:BV:18:LEU:CD2	54:BV:19:LYS:H	2.32	0.42
36:DA:2746:U:O4'	43:DH:139:GLN:HB2	2.19	0.42
36:DA:2744:G:N7	36:DA:2755:C:C1'	2.83	0.42
58:DZ:110:GLY:O	58:DZ:115:GLY:HA3	2.20	0.42
39:BD:62:TYR:CE1	39:BD:64:ILE:HA	2.55	0.42
51:DS:42:ASP:C	51:DS:44:LYS:N	2.69	0.42
55:DW:97:LYS:HE2	55:DW:99:ARG:CZ	2.49	0.42
51:BS:97:ARG:HE	51:BS:97:ARG:CA	2.33	0.42
36:BA:533:G:H5'	53:BU:24:TYR:CE1	2.53	0.42
36:DA:238:C:C4	36:DA:239:U:C5	3.08	0.42
1:CA:646:U:H2'	1:CA:647:C:H6	1.83	0.42
37:BB:66:A:C2	37:BB:109:C:C2	3.08	0.42
35:B9:20:HIS:HE1	36:BA:2755:C:O2	2.01	0.42
41:BF:185:ASP:HA	41:BF:188:ARG:HD3	2.01	0.42
38:DC:3:HIS:CG	38:DC:7:TYR:HD2	2.37	0.42
26:B0:7:LEU:CD2	49:BQ:81:VAL:HG21	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:223:A:C4	36:DA:422:A:C8	3.07	0.42
13:AM:118:ALA:HB2	22:AV:28:G:O2'	2.19	0.42
48:DP:124:LYS:CD	48:DP:143:GLY:HA3	2.47	0.42
36:BA:1780:A:H3'	36:BA:1781:C:H2'	2.00	0.42
36:BA:1780:A:OP2	36:BA:1782:C:OP1	2.37	0.42
21:AU:24:ARG:O	21:AU:25:LYS:HB3	2.20	0.42
41:DF:64:ILE:HG23	41:DF:65:TRP:H	1.84	0.42
25:CZ:223:MET:HE2	25:CZ:240:GLY:HA3	2.00	0.42
1:CA:1429:C:H2'	1:CA:1430:C:H6	1.81	0.42
9:CI:32:ASP:O	9:CI:35:GLU:N	2.53	0.42
1:CA:1169:A:C6	1:CA:1170:A:C6	3.08	0.42
39:BD:155:LEU:HD23	39:BD:177:LEU:HD21	2.02	0.42
36:DA:817:C:H2'	36:DA:818:G:O4'	2.19	0.42
22:CV:47:U:H3'	22:CV:48:C:H5'	2.01	0.42
36:DA:375:C:C4	36:DA:376:C:N4	2.88	0.42
42:DG:167:GLU:CD	42:DG:168:GLU:H	2.23	0.42
36:DA:706:A:H2'	36:DA:707:G:O4'	2.19	0.42
36:DA:407:G:H2'	36:DA:408:G:C8	2.54	0.42
42:BG:34:LEU:HD13	42:BG:99:MET:HE2	2.01	0.42
55:BW:1:MET:O	55:BW:64:MET:HE2	2.19	0.42
39:DD:28:GLU:N	39:DD:29:PRO:HD2	2.33	0.42
36:DA:871:U:OP1	49:DQ:5:ARG:HG3	2.20	0.42
1:CA:189(H):G:P	1:CA:189(H):G:H2'	2.59	0.42
47:BO:35:VAL:HG21	47:BO:103:ALA:HB3	2.02	0.42
45:DK:3:UNK:O	45:DK:4:UNK:O	2.37	0.42
36:BA:2728:U:H2'	36:BA:2729:G:C8	2.54	0.42
36:DA:1418:G:OP2	36:DA:1588:C:O2'	2.34	0.42
36:DA:1833:U:O2	36:DA:1969:A:H2	2.03	0.42
36:BA:2656:U:N3	36:BA:2665:A:H2	2.18	0.42
48:BP:69:GLY:O	48:BP:70:GLN:O	2.37	0.42
36:DA:1448:G:H5'	36:DA:1449:A:OP2	2.19	0.42
44:BJ:106:UNK:O	44:BJ:107:UNK:CB	2.68	0.42
36:BA:2427:C:H5''	36:BA:2429:G:H5'	2.01	0.42
36:DA:1196:C:O4'	36:DA:1226:A:C2	2.72	0.42
36:DA:1564:C:O2'	36:DA:1565:C:H5'	2.20	0.42
25:AZ:185:ASN:OD1	25:AZ:185:ASN:O	2.38	0.42
13:CM:105:THR:O	13:CM:106:ASN:C	2.58	0.42
36:BA:2522:U:O2'	36:BA:2647:U:OP1	2.32	0.42
4:CD:171:GLY:HA2	4:CD:172:PRO:HD3	1.81	0.42
34:D8:32:LEU:CD2	34:D8:36:LYS:NZ	2.82	0.42
34:D8:33:ASN:ND2	36:DA:2419:U:P	2.93	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DT:32:TYR:HD1	52:DT:32:TYR:N	2.18	0.42
41:BF:167:ALA:O	41:BF:168:ARG:C	2.58	0.42
32:D6:20:ASN:O	32:D6:21:TYR:CD2	2.72	0.42
36:DA:2832:U:C2	36:DA:2834:G:C2	3.08	0.42
36:DA:1664:A:H1'	36:DA:2726:U:C5	2.55	0.42
27:D1:44:PRO:HA	36:DA:396:G:O3'	2.20	0.42
36:BA:2591:C:P	39:BD:239:ARG:HB2	2.59	0.42
19:CS:35:SER:C	19:CS:37:ARG:H	2.21	0.42
58:BZ:168:GLU:O	58:BZ:168:GLU:OE1	2.36	0.42
25:AZ:133:VAL:HG23	25:AZ:168:VAL:HG11	2.01	0.42
38:BC:78:ALA:O	38:BC:119:VAL:CG1	2.67	0.42
43:BH:50:VAL:O	43:BH:52:VAL:HG23	2.19	0.42
39:DD:35:LYS:HG3	39:DD:63:ARG:HG3	2.00	0.42
36:DA:1827:C:OP2	39:DD:222:ARG:NH1	2.51	0.42
42:DG:86:MET:N	42:DG:87:PRO:HD3	2.33	0.42
57:BY:28:LYS:O	57:BY:38:ILE:N	2.51	0.42
57:BY:44:ILE:HG22	57:BY:45:VAL:H	1.84	0.42
47:BO:104:ARG:HB3	47:BO:121:VAL:CG1	2.49	0.42
47:BO:104:ARG:HG2	47:BO:122:LEU:OXT	2.20	0.42
47:BO:107:ARG:HD3	52:BT:36:GLU:HG2	2.01	0.42
28:D2:6:VAL:HA	28:D2:9:GLN:OE1	2.19	0.42
22:CW:29:G:H1	22:CW:41:C:H42	1.66	0.42
22:CW:39:U:C2'	22:CW:40:C:C5'	2.93	0.42
1:CA:1108:G:C5	1:CA:1109:C:C5	3.07	0.42
3:CC:7:PRO:HG2	3:CC:184:TYR:HB2	2.01	0.42
36:DA:2464:C:C2	36:DA:2487:G:N2	2.87	0.42
3:AC:11:ARG:CG	3:AC:11:ARG:NH1	2.77	0.42
48:BP:50:ARG:CG	48:BP:51:PHE:N	2.82	0.42
53:DU:65:ILE:HG13	53:DU:96:ALA:CB	2.47	0.42
36:DA:943:U:OP2	48:DP:38:GLN:OE1	2.37	0.42
36:BA:1006:C:O2'	46:BN:106:MET:HB3	2.19	0.42
49:DQ:141:GLN:CD	58:DZ:72:ARG:HA	2.39	0.42
58:DZ:123:ASP:O	58:DZ:124:ILE:CG2	2.59	0.42
36:BA:1654:A:P	50:BR:3:HIS:HB2	2.58	0.42
31:D5:27:PRO:O	31:D5:28:PRO:C	2.57	0.42
1:AA:189(D):C:H1'	1:AA:189(H):G:C2	2.55	0.42
48:BP:95:VAL:HG22	48:BP:124:LYS:O	2.20	0.42
32:B6:36:LEU:HD23	32:B6:37:ARG:N	2.35	0.42
41:DF:202:PHE:CD1	41:DF:202:PHE:C	2.92	0.42
5:CE:105:VAL:O	5:CE:108:ALA:HB3	2.19	0.42
57:BY:86:ARG:HG2	57:BY:87:LYS:H	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:B1:76:ARG:HH12	27:B1:95:LEU:CG	2.32	0.42
25:AZ:221:PHE:N	25:AZ:244:ARG:HD2	2.34	0.42
48:DP:101:VAL:HG12	48:DP:106:LEU:HB2	2.00	0.42
27:D1:62:VAL:HG22	27:D1:63:ALA:O	2.20	0.42
36:BA:2407:G:N1	36:BA:2408:U:O2	2.53	0.42
19:AS:12:ASP:H	19:AS:38:SER:HB2	1.84	0.42
1:CA:585:G:H2'	1:CA:586:C:O4'	2.20	0.42
48:DP:9:ASN:N	48:DP:10:PRO:CD	2.82	0.42
52:BT:126:ALA:O	52:BT:128:GLU:N	2.52	0.42
1:AA:858:G:C8	1:AA:869:G:O6	2.73	0.42
9:CI:17:VAL:HG11	9:CI:81:ILE:HA	2.01	0.42
36:DA:1367:A:N7	36:DA:1368:G:H1'	2.34	0.42
39:BD:267:SER:O	39:BD:268:ARG:HB2	2.20	0.42
18:AR:30:ASP:C	18:AR:32:ARG:N	2.72	0.42
16:CP:17:TYR:N	16:CP:17:TYR:CD1	2.86	0.42
4:CD:125:HIS:O	4:CD:149:ALA:N	2.37	0.42
41:DF:53:THR:HG23	41:DF:55:GLY:N	2.26	0.42
51:DS:27:SER:HA	51:DS:88:ASP:CB	2.49	0.42
38:DC:56:GLN:HA	38:DC:201:PRO:HG2	2.02	0.42
58:DZ:108:PRO:O	58:DZ:110:GLY:N	2.52	0.42
7:CG:30:ILE:HD13	7:CG:105:VAL:HG22	2.02	0.42
40:DE:120:TRP:CE2	40:DE:155:LYS:HG2	2.54	0.42
1:CA:1002:G:O2'	1:CA:1003:G:H5'	2.19	0.42
36:BA:1655:A:H1'	40:BE:113:PHE:CD1	2.54	0.42
9:AI:83:ARG:HA	9:AI:86:VAL:CG1	2.48	0.42
50:DR:12:ARG:CG	50:DR:12:ARG:NH1	2.82	0.42
36:BA:1344:G:C2	36:BA:1404:C:C2	3.08	0.42
38:BC:74:VAL:O	38:BC:92:ASP:HB2	2.20	0.42
39:BD:107:ALA:O	39:BD:196:VAL:O	2.38	0.42
38:DC:74:VAL:O	38:DC:92:ASP:HB2	2.19	0.42
1:AA:722:A:O2'	1:AA:724:G:C8	2.67	0.42
36:DA:2852:G:H2'	36:DA:2853:C:H6	1.84	0.42
36:DA:774:A:H2	36:DA:787:U:O2'	1.99	0.42
1:CA:373:A:C2	1:CA:482:A:C6	3.07	0.42
1:CA:698:G:H2'	1:CA:699:C:C6	2.53	0.42
36:BA:569:U:H1'	36:BA:947:G:O4'	2.20	0.42
55:DW:66:GLU:O	55:DW:68:ARG:N	2.44	0.42
36:DA:1137:G:N2	36:DA:1138:G:H1'	2.34	0.42
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.55	0.42
6:AF:27:GLN:O	6:AF:28:ARG:C	2.58	0.42
36:BA:1216:G:O2'	36:BA:1217:C:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:88:ALA:HB2	2:CB:219:VAL:HG13	2.00	0.42
22:AV:1:G:C4'	26:B0:5:LYS:HE2	2.49	0.42
1:CA:935:A:C2	7:CG:3:ARG:NH2	2.87	0.42
36:BA:516:C:O5'	36:BA:516:C:H6	2.03	0.42
1:AA:1255:G:H5''	3:AC:26:LYS:HE2	2.01	0.42
13:CM:33:ALA:HB1	13:CM:59:TYR:CD2	2.55	0.42
47:BO:26:LYS:HD2	47:BO:37:ASP:OD1	2.18	0.42
36:DA:1820:U:N3	39:DD:202:LYS:HD2	2.34	0.42
1:CA:644:G:H2'	1:CA:645:C:H6	1.85	0.42
29:B3:49:LYS:HD2	36:BA:851:U:C5'	2.49	0.42
1:AA:1057:G:H2'	1:AA:1058:G:O4'	2.20	0.42
36:DA:60:G:C8	36:DA:63:U:C5	3.08	0.42
36:BA:2278:A:H2'	36:BA:2279:G:O5'	2.20	0.42
36:BA:11:G:H2'	36:BA:12:U:C6	2.54	0.42
1:AA:1459:C:H2'	1:AA:1460:A:C8	2.54	0.42
1:AA:1193:G:O2'	1:AA:1194:U:H5'	2.20	0.42
36:BA:540:C:H2'	36:BA:541:C:C6	2.55	0.42
5:CE:127:ASN:HA	5:CE:128:PRO:HD3	1.89	0.42
2:CB:62:ALA:O	2:CB:65:GLY:N	2.33	0.42
36:DA:2506:U:C6	36:DA:2506:U:H5'	2.55	0.42
47:BO:53:LYS:N	47:BO:53:LYS:HD2	2.35	0.42
15:AO:70:LEU:HA	15:AO:70:LEU:HD12	1.87	0.42
6:AF:81:ILE:H	6:AF:81:ILE:HG13	1.61	0.42
20:CT:25:ARG:HG3	20:CT:25:ARG:HH11	1.83	0.42
49:DQ:59:ARG:HD3	49:DQ:59:ARG:O	2.19	0.42
37:BB:98:G:H2'	37:BB:99:G:H5'	2.02	0.42
1:AA:518:C:H2'	1:AA:530:G:C4	2.55	0.42
36:BA:2460:U:H2'	36:BA:2461:C:O4'	2.19	0.42
38:DC:100:ILE:HD13	38:DC:127:LEU:CG	2.49	0.42
38:DC:123:VAL:CG1	38:DC:124:GLY:N	2.83	0.42
4:CD:194:LEU:H	4:CD:194:LEU:HD22	1.83	0.42
32:D6:12:GLU:HG2	32:D6:23:THR:HB	2.02	0.42
34:D8:8:LYS:HE3	36:DA:245:G:O6	2.20	0.42
48:DP:24:GLY:O	48:DP:25:SER:CB	2.67	0.42
36:DA:1190:G:H5'	48:DP:35:HIS:HA	2.02	0.42
23:AX:26:A:H5'	23:AX:27:A:C8	2.55	0.42
39:BD:33:LEU:HG	39:BD:33:LEU:H	1.69	0.42
38:BC:82:LYS:HG3	38:BC:116:THR:HG21	2.02	0.42
25:CZ:135:MET:HE3	25:CZ:172:ARG:CD	2.49	0.42
42:DG:111:LEU:HD22	42:DG:117:PHE:CE1	2.55	0.42
36:BA:80:G:O2'	36:BA:81:G:H5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DH:50:VAL:CG1	43:DH:52:VAL:HG22	2.49	0.42
52:BT:30:VAL:CG2	52:BT:84:GLN:CG	2.98	0.42
46:BN:12:ARG:NH2	46:BN:135:PRO:CG	2.79	0.42
1:CA:1105:A:C2	1:CA:1106:G:C8	3.08	0.42
3:AC:81:GLY:C	3:AC:85:ARG:HG2	2.40	0.42
10:AJ:70:ARG:HG2	10:AJ:70:ARG:NH1	2.35	0.42
1:AA:1188:A:C2'	1:AA:1189:C:H5'	2.50	0.42
53:DU:88:ILE:O	53:DU:88:ILE:CG1	2.58	0.42
54:DV:37:VAL:O	54:DV:38:LEU:HB2	2.19	0.42
36:DA:2346:A:H5'	36:DA:2383:G:O4'	2.20	0.42
14:AN:15:LYS:O	14:AN:16:PHE:O	2.37	0.42
1:AA:453:A:O2'	1:AA:454:C:O4'	2.37	0.42
48:BP:23:PRO:O	48:BP:33:ARG:NE	2.53	0.42
41:DF:126:VAL:HG21	41:DF:129:PHE:CZ	2.55	0.42
40:DE:111:ARG:O	40:DE:112:GLY:C	2.56	0.42
3:CC:118:GLN:HA	3:CC:121:ALA:HB3	2.00	0.42
36:BA:1747:G:H2'	36:BA:1747(A):G:H8	1.81	0.42
1:AA:542:G:OP1	4:AD:10:ARG:NH2	2.51	0.42
36:BA:1348:G:C3'	36:BA:1349:A:H5''	2.49	0.42
48:DP:101:VAL:HA	48:DP:105:LEU:O	2.20	0.42
24:AY:76:A:H61	25:AZ:234:ARG:NH2	2.17	0.42
7:CG:97:GLN:O	7:CG:101:LEU:HG	2.19	0.42
42:BG:117:PHE:HE1	42:BG:119:GLY:C	2.23	0.42
36:BA:733:G:C8	36:BA:761:A:C6	3.08	0.42
36:BA:2744:G:C2	36:BA:2761:G:C4	3.07	0.42
58:DZ:17:ALA:O	58:DZ:20:ARG:HG2	2.19	0.42
1:CA:585:G:N3	1:CA:879:C:H4'	2.35	0.42
49:DQ:64:ILE:CG2	49:DQ:65:PHE:H	2.33	0.42
18:CR:70:ILE:O	18:CR:71:LYS:C	2.58	0.42
25:AZ:222:LEU:HD12	25:AZ:303:VAL:HG11	1.99	0.42
36:DA:2492:U:O2'	36:DA:2493:U:H5'	2.20	0.42
36:DA:2010:G:C6	36:DA:2011:U:C5	3.08	0.42
36:DA:363(F):A:O2'	36:DA:364:C:C5	2.73	0.42
36:BA:979:G:N2	36:BA:985:C:N4	2.68	0.42
12:CL:35:GLY:O	12:CL:83:VAL:N	2.50	0.42
29:B3:17:LYS:HG2	36:BA:969:U:OP1	2.20	0.42
1:AA:325:A:N6	1:AA:326:G:N1	2.68	0.42
51:DS:30:ARG:HH22	51:DS:62:LYS:HB3	1.84	0.42
6:CF:30:LEU:HB3	6:CF:35:ALA:HB3	2.01	0.42
1:CA:1364:U:O4'	1:CA:1364:U:O2	2.37	0.42
27:B1:3:LYS:HD3	36:BA:1364:G:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DZ:150:LEU:HD23	58:DZ:150:LEU:O	2.19	0.42
34:B8:38:GLY:O	34:B8:41:ILE:HG23	2.19	0.42
36:DA:2883:A:H5'	36:DA:2884:U:H5'	2.01	0.42
47:DO:90:GLN:O	47:DO:92:GLU:N	2.53	0.42
13:CM:88:ARG:HA	13:CM:98:VAL:HG13	2.01	0.42
3:CC:59:ARG:O	3:CC:60:ALA:CB	2.68	0.42
25:CZ:113:MET:O	25:CZ:116:THR:HB	2.20	0.42
36:DA:654(H):G:C3'	36:DA:654(I):C:C5'	2.97	0.42
1:AA:586:C:O3'	8:AH:89:PRO:HB2	2.20	0.42
5:AE:51:VAL:HB	5:AE:52:PRO:CD	2.47	0.42
1:CA:235:C:H2'	1:CA:236:G:C8	2.55	0.42
36:BA:1404:C:C2'	36:BA:1405:U:H5'	2.50	0.42
4:CD:121:VAL:CB	4:CD:136:PRO:HG3	2.48	0.42
36:BA:2305:A:H1'	42:BG:136:ARG:HG2	2.01	0.42
2:CB:113:HIS:C	2:CB:115:LEU:N	2.71	0.42
36:DA:709:U:H2'	36:DA:710:G:H8	1.80	0.42
4:CD:131:ARG:HD3	4:CD:131:ARG:H	1.84	0.42
36:DA:2360:A:O2'	36:DA:2361:A:O5'	2.38	0.42
27:D1:20:ARG:HD2	27:D1:32:LYS:HG2	2.02	0.42
55:BW:66:GLU:C	55:BW:68:ARG:H	2.18	0.42
1:AA:437:U:H4'	4:AD:125:HIS:NE2	2.34	0.42
22:CV:56:C:C4	42:DG:84:LYS:HE3	2.55	0.42
1:CA:1118:C:C2	1:CA:1179:A:C2	3.08	0.42
37:DB:115:G:H2'	37:DB:116:G:H8	1.85	0.42
36:DA:1203:G:H3'	36:DA:1204:A:C5'	2.47	0.42
56:DX:47:PHE:CD2	56:DX:89:ILE:HD13	2.55	0.42
1:CA:567:G:H2'	1:CA:568:G:O4'	2.19	0.42
16:CP:6:LEU:HD11	16:CP:19:ILE:CD1	2.49	0.42
36:BA:2847:U:H5''	52:BT:97:ALA:HB2	2.01	0.42
44:DJ:70:UNK:O	44:DJ:71:UNK:C	2.68	0.42
36:DA:325:G:H2'	36:DA:326:G:C8	2.53	0.42
41:BF:46:ARG:HG3	41:BF:48:THR:HG23	2.02	0.42
36:BA:2584:U:O4'	36:BA:2584:U:O2	2.38	0.42
1:CA:106:C:O2	1:CA:379:C:H4'	2.20	0.42
29:B3:1:MET:HE2	29:B3:39:ASP:O	2.20	0.42
1:AA:1172:C:H2'	1:AA:1173:G:H8	1.82	0.42
11:CK:121:PRO:HG2	11:CK:126:ARG:HG3	2.02	0.42
36:DA:1381:G:O2'	36:DA:1382:G:H5'	2.20	0.42
36:BA:188:G:C6	36:BA:189:G:C4	3.07	0.42
9:CI:105:ASP:OD1	9:CI:107:ARG:HG3	2.19	0.42
49:BQ:39:PRO:HA	49:BQ:99:PRO:HD3	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:124:ILE:HG12	3:CC:130:VAL:HG22	2.01	0.42
26:D0:33:ALA:O	36:DA:2353:G:H1'	2.20	0.42
41:BF:143:ALA:HB1	41:BF:148:LEU:HB2	2.02	0.42
1:CA:1388:C:H2'	1:CA:1389:C:C6	2.55	0.42
28:D2:13:ALA:O	28:D2:15:LYS:N	2.53	0.42
1:AA:799:G:O2'	1:AA:800:G:H5'	2.19	0.42
51:DS:26:LEU:O	51:DS:26:LEU:HD23	2.20	0.42
39:BD:198:ASN:OD1	39:BD:198:ASN:O	2.38	0.42
25:CZ:269:GLY:O	25:CZ:270:VAL:HG23	2.19	0.42
34:D8:28:GLY:O	34:D8:32:LEU:HD22	2.19	0.42
1:AA:555:C:H2'	1:AA:556:C:H6	1.85	0.42
56:BX:24:GLY:N	56:BX:82:GLN:HE22	2.17	0.42
2:AB:130:ARG:NH2	2:AB:134:GLU:HG3	2.30	0.42
25:AZ:138:VAL:O	25:AZ:140:MET:N	2.46	0.42
25:AZ:385:ARG:HD3	61:AZ:502:KIR:C45	2.50	0.42
39:BD:32:SER:O	39:BD:33:LEU:C	2.58	0.42
42:DG:6:ALA:O	42:DG:10:LYS:HD3	2.20	0.42
36:BA:2681:C:O2	36:BA:2681:C:H2'	2.19	0.42
28:D2:35:LEU:CD1	28:D2:35:LEU:C	2.81	0.42
36:BA:1640:C:C2'	36:BA:1641:A:H5'	2.50	0.42
13:AM:11:ARG:NE	13:AM:12:ASN:HD21	2.16	0.42
14:CN:58:LYS:O	14:CN:59:ALA:O	2.37	0.42
54:BV:45:THR:O	54:BV:46:VAL:O	2.38	0.42
13:CM:15:VAL:O	13:CM:19:LEU:CD2	2.66	0.42
36:DA:1009:A:H1'	53:DU:59:ARG:HH11	1.84	0.42
1:CA:959:A:H2'	1:CA:960:U:C4'	2.49	0.42
28:D2:17:SER:HB2	28:D2:20:GLU:HB3	2.01	0.42
36:DA:803:U:H2'	36:DA:804:A:C5'	2.49	0.42
48:DP:38:GLN:HG3	48:DP:41:ARG:HD3	2.02	0.42
25:CZ:310:ILE:HG23	25:CZ:311:THR:N	2.34	0.42
25:CZ:93:ILE:HG21	61:CZ:502:KIR:C37	2.49	0.42
36:BA:654(N):G:N7	36:BA:654(O):G:N3	2.67	0.42
39:BD:183:ARG:HG3	39:BD:184:LYS:N	2.35	0.42
40:DE:57:LYS:C	40:DE:58:ARG:HG3	2.40	0.42
19:CS:16:LEU:H	19:CS:16:LEU:CD1	2.30	0.42
6:CF:16:GLN:HG2	6:CF:17:SER:N	2.35	0.42
1:CA:33:A:OP2	1:CA:398:C:H5'	2.19	0.42
4:AD:17:VAL:O	4:AD:19:LEU:CD1	2.68	0.42
53:BU:9:VAL:CG1	53:BU:13:LYS:HE2	2.46	0.42
36:DA:304:G:H2'	36:DA:305:U:O4'	2.19	0.42
16:AP:9:PHE:CE2	16:AP:18:ARG:CZ	3.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BX:31:HIS:O	56:BX:32:PRO:C	2.58	0.42
36:BA:829:A:N7	36:BA:2248:C:H5'	2.34	0.42
36:BA:535:C:C2'	36:BA:536:A:H5'	2.49	0.42
2:AB:9:GLU:N	2:AB:9:GLU:CD	2.72	0.42
2:CB:18:GLY:HA2	2:CB:42:ILE:HG22	2.02	0.42
46:DN:118:LYS:C	46:DN:120:LEU:N	2.72	0.42
46:DN:30:ILE:HD13	46:DN:54:VAL:HG21	2.00	0.42
36:BA:2385:C:O2'	36:BA:2386:C:H5'	2.20	0.42
36:BA:483:A:O3'	57:BY:49:VAL:HG22	2.19	0.42
57:BY:49:VAL:O	57:BY:50:ARG:CB	2.67	0.42
46:DN:82:LEU:HA	46:DN:82:LEU:HD12	1.81	0.42
40:BE:44:TYR:CE2	40:BE:46:ALA:HB3	2.53	0.42
14:AN:6:LEU:HB3	14:AN:23:ARG:NH2	2.34	0.42
50:DR:44:LEU:HD22	50:DR:44:LEU:HA	1.86	0.42
36:BA:2648:C:O2'	36:BA:2649:U:H5'	2.20	0.42
36:BA:2650:U:H2'	36:BA:2651:C:H6	1.84	0.42
39:DD:201:HIS:C	39:DD:203:ASN:N	2.73	0.42
1:CA:184:G:H4'	1:CA:224:C:C4'	2.48	0.42
1:AA:1039:C:C6	1:AA:1040:U:H5	2.38	0.42
6:CF:12:PRO:HG3	6:CF:57:GLN:O	2.19	0.42
6:CF:57:GLN:NE2	6:CF:57:GLN:H	2.18	0.42
36:DA:531:C:N3	36:DA:563:G:C8	2.88	0.42
36:BA:1337:G:H2'	36:BA:1338:G:C8	2.53	0.42
29:D3:26:LEU:CB	29:D3:28:LEU:HD21	2.49	0.42
8:CH:10:LEU:CD2	8:CH:83:ILE:HD11	2.45	0.42
55:BW:47:VAL:HA	55:BW:50:VAL:HG12	2.01	0.42
55:BW:50:VAL:HG22	55:BW:105:VAL:CG2	2.48	0.42
13:AM:119:GLY:C	13:AM:120:LYS:HE3	2.39	0.42
36:DA:1332:G:H4'	36:DA:1333:C:OP2	2.20	0.42
36:DA:1608:A:H1'	36:DA:1610:A:OP2	2.19	0.42
26:B0:15:ASP:OD1	26:B0:16:SER:N	2.46	0.42
11:CK:44:SER:OG	11:CK:47:VAL:HG23	2.19	0.42
36:BA:564:C:O2'	36:BA:565:C:H5'	2.20	0.42
40:DE:33:VAL:CG1	40:DE:89:ASP:O	2.68	0.42
42:BG:18:GLU:HA	42:BG:18:GLU:OE1	2.19	0.42
1:CA:808:C:O2'	1:CA:809:G:H5'	2.20	0.42
54:BV:34:GLU:O	54:BV:36:PRO:CD	2.67	0.42
36:BA:1418:G:OP2	36:BA:1588:C:O2'	2.37	0.42
26:D0:46:LYS:NZ	26:D0:75:LEU:O	2.47	0.42
58:BZ:54:HIS:O	58:BZ:98:MET:HE1	2.19	0.42
36:DA:2206:G:H21	36:DA:2207:G:C5'	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BJ:56:UNK:HA	44:BJ:83:UNK:CA	2.50	0.42
22:AW:7:A:C4	22:AW:49:C:H5	2.38	0.42
2:AB:54:THR:O	2:AB:57:PHE:HB3	2.20	0.42
1:AA:837:G:C2'	1:AA:838:G:H5'	2.49	0.42
1:CA:342:C:O2'	1:CA:343:U:H5'	2.19	0.42
36:BA:108:U:H4'	36:BA:347:A:H2	1.85	0.42
22:AW:50:U:O2'	22:AW:51:U:H5'	2.20	0.42
28:D2:21:LEU:HB2	28:D2:64:LEU:HD12	2.02	0.42
36:BA:2825:C:H2'	36:BA:2826:A:H5'	2.02	0.42
1:CA:750:G:O2'	1:CA:751:U:H5'	2.19	0.42
1:CA:1495:U:H2'	1:CA:1496:C:H6	1.84	0.42
26:B0:14:ARG:HD2	36:BA:2279:G:O6	2.20	0.42
31:D5:8:LYS:O	36:DA:2017:U:H4'	2.19	0.42
36:DA:74:A:H5''	36:DA:75:G:O4'	2.20	0.42
36:DA:74:A:O2'	36:DA:75:G:OP2	2.31	0.42
36:BA:1161:C:H2'	36:BA:1162:G:H8	1.85	0.42
1:CA:247:G:H2'	1:CA:248:C:H6	1.84	0.42
1:CA:1351:U:H5'	7:CG:33:ASP:OD1	2.19	0.42
1:AA:767:A:H2'	1:AA:768:A:O4'	2.20	0.42
36:DA:1579:A:H2'	36:DA:1580:A:O4'	2.20	0.42
36:DA:919:G:C6	36:DA:920:G:C5	3.08	0.42
19:AS:60:VAL:O	19:AS:60:VAL:HG22	2.19	0.42
36:DA:2325:G:C6	36:DA:2326:C:N4	2.88	0.42
11:CK:82:VAL:HB	11:CK:107:SER:O	2.20	0.42
38:DC:78:ALA:HB1	38:DC:116:THR:HG23	2.02	0.42
4:CD:170:VAL:HG12	4:CD:171:GLY:H	1.85	0.42
1:CA:359:U:H2'	1:CA:360:A:C8	2.54	0.42
32:D6:9:LEU:HD13	32:D6:9:LEU:O	2.19	0.42
34:D8:33:ASN:ND2	36:DA:2419:U:C5'	2.83	0.42
34:D8:33:ASN:N	34:D8:36:LYS:NZ	2.67	0.42
52:DT:30:VAL:HG12	52:DT:44:ASP:OD2	2.20	0.42
1:AA:1442(A):G:H3'	1:AA:1442(B):A:C5'	2.50	0.42
32:D6:18:ARG:HH12	32:D6:47:THR:HG21	1.85	0.42
32:D6:20:ASN:CG	32:D6:21:TYR:N	2.74	0.42
1:CA:1319:A:C5	1:CA:1323:G:C4	3.07	0.42
1:CA:1237:C:H3'	1:CA:1336:C:H41	1.85	0.42
28:B2:49:LYS:HB2	28:B2:49:LYS:NZ	2.35	0.42
36:BA:1599:C:OP2	56:BX:36:LYS:HD2	2.20	0.42
56:BX:54:VAL:C	56:BX:55:ASN:HD22	2.24	0.42
58:BZ:166:SER:H	58:BZ:167:PRO:HA	1.84	0.42
1:AA:974:A:P	14:AN:41:ARG:HH11	2.42	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:19:HIS:HB2	25:AZ:113:MET:HB3	2.02	0.42
39:BD:35:LYS:HB3	39:BD:36:PRO:CD	2.43	0.42
42:DG:130:ASN:CG	42:DG:161:THR:H	2.23	0.42
36:DA:2683:C:OP1	52:DT:53:ARG:NH2	2.53	0.42
1:AA:346:G:O2'	1:AA:347:G:O5'	2.38	0.42
52:BT:31:SER:C	52:BT:32:TYR:HD1	2.23	0.42
28:D2:3:LEU:HG	28:D2:4:SER:N	2.35	0.42
37:BB:104:U:O2'	37:BB:105:A:H5'	2.20	0.42
37:BB:73:A:H2'	37:BB:74:U:C5'	2.44	0.42
37:BB:42:C:HO2'	37:BB:43:C:P	2.43	0.42
46:BN:47:ALA:O	46:BN:119:ARG:NH2	2.50	0.42
25:AZ:215:ARG:HB3	25:AZ:282:ALA:CB	2.50	0.42
35:D9:35:ARG:O	35:D9:36:GLN:O	2.37	0.42
36:DA:2468:G:H5''	49:DQ:120:ILE:CD1	2.50	0.42
36:DA:2468:G:C5'	49:DQ:120:ILE:HD12	2.50	0.42
36:BA:2479:G:OP1	36:BA:2537:U:H1'	2.20	0.42
14:CN:45:ARG:O	14:CN:46:GLU:C	2.58	0.42
43:DH:127:GLU:HB2	43:DH:130:ARG:HB2	2.02	0.42
36:BA:2310:A:O2'	36:BA:2311:A:H5''	2.20	0.42
53:DU:88:ILE:HB	53:DU:90:VAL:CG2	2.49	0.42
53:DU:93:LYS:O	53:DU:96:ALA:HB3	2.20	0.42
10:AJ:48:THR:CG2	10:AJ:62:HIS:CE1	3.03	0.42
43:BH:101:ARG:O	43:BH:117:PRO:HG3	2.20	0.42
58:DZ:153:SER:C	58:DZ:155:LEU:H	2.23	0.42
36:BA:2811:G:C6	36:BA:2891:G:N2	2.88	0.42
40:BE:63:LEU:HD23	40:BE:63:LEU:C	2.39	0.42
36:BA:1721:G:C6	36:BA:1739:U:H5'	2.55	0.42
36:BA:1817:G:O2'	36:BA:1818:U:H5'	2.19	0.42
58:DZ:30:ASN:ND2	58:DZ:32:HIS:HB2	2.34	0.42
48:BP:16:ARG:HD3	48:BP:16:ARG:O	2.19	0.42
55:DW:44:ALA:O	55:DW:45:TYR:C	2.58	0.42
42:BG:9:ARG:HB2	42:BG:10:LYS:HD2	2.01	0.42
46:BN:32:THR:HG22	46:BN:37:LYS:HB3	2.01	0.42
31:B5:30:LEU:HD22	31:B5:40:LYS:C	2.39	0.42
46:DN:20:GLY:O	46:DN:61:ARG:HG3	2.20	0.42
5:CE:102:ALA:HB1	5:CE:106:PRO:CG	2.45	0.42
27:B1:77:ALA:O	27:B1:78:LYS:C	2.57	0.42
33:B7:12:ARG:NH2	33:B7:44:PRO:HB3	2.35	0.42
13:AM:83:ASP:OD1	13:AM:85:GLY:N	2.52	0.42
36:BA:227:A:N6	36:BA:2407:G:C8	2.88	0.42
36:BA:2747:G:O2'	43:BH:67:LEU:HD12	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:414:C:H4'	36:DA:1879:C:O2	2.20	0.42
43:BH:94:TYR:CE1	43:BH:107:VAL:C	2.93	0.42
1:CA:1277:C:O2'	1:CA:1279:A:H8	2.03	0.42
22:AV:68:C:C2'	22:AV:69:G:C5'	2.93	0.42
20:CT:26:ASN:ND2	20:CT:26:ASN:H	2.17	0.42
52:BT:129:ARG:NE	52:BT:131:ALA:CB	2.83	0.42
46:DN:34:LEU:C	46:DN:34:LEU:CD1	2.88	0.42
1:CA:1352:C:H2'	1:CA:1353:G:H8	1.79	0.42
1:CA:1352:C:O2	1:CA:1371:G:C2	2.73	0.42
36:DA:1365:A:N6	36:DA:1366:A:C6	2.88	0.42
36:DA:2245:U:C5'	36:DA:2246:G:H5'	2.41	0.42
52:BT:7:ILE:O	52:BT:10:VAL:HB	2.19	0.42
1:CA:1463:C:O2'	1:CA:1464:G:H5'	2.20	0.42
1:CA:1396:A:O4'	1:CA:1398:A:H1'	2.20	0.42
37:BB:48:A:OP1	51:BS:93:LYS:HB3	2.20	0.42
25:CZ:356:PRO:O	25:CZ:357:PRO:C	2.58	0.42
57:DY:57:GLN:HA	57:DY:57:GLN:OE1	2.19	0.42
26:B0:53:MET:HG2	26:B0:57:PHE:HA	2.01	0.42
1:CA:951:G:C2	1:CA:952:U:C2	3.08	0.42
52:DT:102:ILE:HB	52:DT:110:ILE:HD12	2.02	0.42
1:CA:187:C:H2'	1:CA:188:C:H6	1.85	0.42
1:AA:59:A:N6	1:AA:331:G:H1'	2.35	0.42
36:DA:1170:G:H1	36:DA:1179:C:H42	1.67	0.42
25:AZ:230:THR:OG1	25:AZ:230:THR:O	2.38	0.42
3:CC:40:ARG:HH11	3:CC:40:ARG:CG	2.27	0.42
13:CM:27:LYS:NZ	13:CM:31:LYS:NZ	2.68	0.42
16:AP:21:VAL:HG13	16:AP:21:VAL:O	2.19	0.42
2:CB:193:ASP:HA	2:CB:194:PRO:HD2	1.81	0.42
17:AQ:59:ILE:HD13	17:AQ:59:ILE:HA	1.81	0.42
17:AQ:51:TYR:CE2	17:AQ:73:VAL:HG11	2.55	0.42
31:B5:19:ARG:NH1	36:BA:1266:G:OP2	2.52	0.42
51:DS:97:ARG:O	51:DS:97:ARG:NH2	2.50	0.42
22:CW:56:C:H2'	22:CW:57:G:C8	2.54	0.42
36:DA:1701:A:C5'	36:DA:1702:G:OP2	2.65	0.42
1:CA:1526:G:H2'	1:CA:1527:C:C6	2.45	0.42
38:DC:99:ILE:C	38:DC:101:GLN:H	2.23	0.42
26:D0:62:LEU:HD23	26:D0:62:LEU:N	2.34	0.42
11:CK:44:SER:H	11:CK:47:VAL:HG23	1.84	0.42
36:BA:2200:C:H5'	36:BA:2201:C:OP2	2.18	0.42
1:AA:457:C:N4	1:AA:458:C:H41	2.18	0.42
36:BA:1668:A:N3	36:BA:1670:C:N3	2.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2508:G:O3'	36:BA:2555:U:H5'	2.20	0.42
1:AA:1229:A:H2'	1:AA:1230:C:H6	1.85	0.42
37:BB:78:A:C6	37:BB:100:A:C8	3.08	0.42
56:DX:45:THR:OG1	56:DX:46:ALA:N	2.53	0.42
50:DR:41:ALA:O	50:DR:43:GLU:N	2.53	0.42
1:AA:1134:G:N1	1:AA:1141:C:C4	2.87	0.42
36:DA:2342:C:O2'	36:DA:2374:C:H5''	2.20	0.42
53:BU:115:ALA:C	53:BU:117:GLN:N	2.71	0.42
53:BU:115:ALA:O	53:BU:117:GLN:N	2.53	0.42
36:BA:1275:A:C4	50:BR:16:HIS:CE1	3.08	0.42
36:DA:2128:C:P	38:DC:36:LYS:HB2	2.60	0.42
57:DY:6:HIS:CD2	57:DY:6:HIS:H	2.36	0.42
30:B4:47:GLN:HB3	30:B4:47:GLN:HE21	1.59	0.42
36:DA:271(H):G:H1	36:DA:271(P):C:N4	2.18	0.42
36:BA:2358:G:C5	36:BA:2359:C:C5	3.08	0.42
4:CD:114:ARG:HG3	4:CD:114:ARG:NH1	2.34	0.42
36:BA:2115:G:N3	36:BA:2117:A:N7	2.68	0.42
39:BD:28:GLU:CD	39:BD:28:GLU:N	2.73	0.42
26:D0:17:GLN:O	26:D0:18:ALA:C	2.58	0.42
55:BW:63:ASP:O	55:BW:64:MET:HG3	2.19	0.42
47:BO:65:THR:HA	47:BO:82:ASN:HD22	1.85	0.42
49:DQ:136:ALA:C	49:DQ:138:ASP:N	2.73	0.42
54:BV:59:ALA:HA	54:BV:95:LEU:O	2.19	0.42
47:DO:98:VAL:HG12	47:DO:117:LEU:HB3	2.02	0.42
36:BA:1572:A:H2'	36:BA:1573:G:H8	1.84	0.42
36:DA:1912:A:C8	36:DA:1918:A:C2	3.08	0.42
1:CA:786:G:C2	1:CA:797:C:C2	3.08	0.42
13:CM:35:GLU:C	13:CM:38:GLY:H	2.23	0.42
55:BW:27:LYS:O	55:BW:28:SER:O	2.38	0.42
25:CZ:335:PHE:CD1	25:CZ:335:PHE:N	2.86	0.42
25:CZ:361:MET:CE	25:CZ:361:MET:HA	2.50	0.42
36:BA:363(A):A:H2'	36:BA:363(A):A:N3	2.35	0.42
22:AV:20:U:H6	22:AV:20:U:H3'	1.84	0.42
15:AO:13:GLN:H	15:AO:13:GLN:HG2	1.65	0.42
25:CZ:68:VAL:O	25:CZ:69:GLU:HG2	2.20	0.42
32:B6:28:ARG:O	32:B6:29:ASN:C	2.57	0.42
32:D6:12:GLU:HA	32:D6:23:THR:CA	2.49	0.42
36:DA:2283:C:H2'	36:DA:2284:C:C5'	2.50	0.42
36:DA:2425:A:H5''	36:DA:2427:C:O4'	2.20	0.42
47:DO:104:ARG:HB3	47:DO:121:VAL:HG11	2.01	0.42
52:BT:90:GLN:O	52:BT:92:GLY:N	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BF:164:ARG:HH11	41:BF:164:ARG:HG2	1.85	0.42
58:BZ:115:GLY:HA3	58:BZ:175:VAL:O	2.19	0.42
4:AD:108:LEU:O	4:AD:109:GLY:C	2.56	0.42
1:CA:986:A:N6	1:CA:1220:G:C6	2.88	0.42
1:CA:986:A:H1'	19:CS:54:GLY:O	2.20	0.42
28:B2:33:MET:O	28:B2:36:ARG:CB	2.65	0.42
1:AA:1104:G:P	2:AB:111:ARG:CD	3.08	0.42
42:DG:7:LEU:O	42:DG:10:LYS:C	2.58	0.42
26:D0:24:LYS:HD3	26:D0:24:LYS:HA	1.82	0.42
26:D0:45:PHE:CZ	26:D0:77:ARG:NH2	2.88	0.42
1:AA:346:G:N3	1:AA:346:G:C2'	2.83	0.42
36:BA:2681:C:C4	36:BA:2724:C:C5	3.08	0.42
2:CB:105:PHE:CE1	2:CB:152:PHE:CZ	3.08	0.42
37:BB:106:G:OP1	58:BZ:31:ARG:HG2	2.20	0.42
57:DY:17:SER:CB	57:DY:71:LYS:HE2	2.49	0.42
46:DN:13:TRP:O	46:DN:135:PRO:HD2	2.20	0.42
36:BA:1640:C:H2'	36:BA:1641:A:O4'	2.19	0.42
3:AC:74:GLY:O	3:AC:77:ILE:N	2.48	0.42
3:AC:75:VAL:O	3:AC:83:ARG:HG2	2.20	0.42
35:D9:30:PRO:C	35:D9:32:HIS:N	2.70	0.42
36:BA:780:G:OP1	39:BD:218:ARG:NH2	2.53	0.42
1:CA:1367:C:P	10:CJ:57:LYS:HZ1	2.41	0.42
12:AL:57:LYS:HA	12:AL:67:THR:HA	2.02	0.42
54:DV:5:VAL:CG2	54:DV:6:LYS:N	2.83	0.42
36:DA:2383:G:H2'	36:DA:2384:G:C8	2.55	0.42
43:BH:26:VAL:HB	43:BH:33:LEU:H	1.84	0.42
51:DS:58:LEU:HA	51:DS:58:LEU:HD12	1.91	0.42
37:DB:106:G:C5'	58:DZ:31:ARG:HB3	2.50	0.42
40:BE:119:ARG:HG3	40:BE:160:TYR:CD1	2.55	0.42
50:BR:2:ARG:CG	50:BR:2:ARG:HH11	2.17	0.42
37:BB:21:G:H2'	37:BB:22:U:C5'	2.49	0.42
10:AJ:3:LYS:HG3	10:AJ:77:PRO:HD3	2.02	0.42
36:DA:1052:C:O2'	36:DA:1053:C:P	2.77	0.42
48:BP:38:GLN:CG	48:BP:39:LYS:N	2.81	0.42
41:DF:10:PRO:HG2	41:DF:13:SER:OG	2.19	0.42
48:BP:107:LYS:HG3	48:BP:107:LYS:O	2.19	0.42
42:BG:62:LEU:O	42:BG:143:GLU:OE1	2.38	0.42
48:BP:58:THR:O	48:BP:61:ARG:HG3	2.19	0.42
13:AM:91:ARG:HD3	13:AM:97:PRO:O	2.20	0.42
50:BR:29:LEU:HD11	50:BR:52:ILE:HD11	2.02	0.42
36:BA:1089:G:H22	36:BA:1102:C:H42	1.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CQ:59:ILE:HA	17:CQ:59:ILE:HD13	1.78	0.42
5:CE:33:VAL:HG22	5:CE:43:LEU:HD13	2.02	0.42
25:AZ:277:LEU:CD1	25:AZ:278:GLN:N	2.82	0.42
3:CC:53:ALA:HB1	3:CC:114:PRO:HB2	2.01	0.42
1:CA:397:A:H5'	1:CA:398:C:OP1	2.20	0.42
11:CK:37:GLY:C	11:CK:38:ASN:HD22	2.24	0.42
43:BH:43:VAL:HG12	43:BH:46:GLU:OE2	2.19	0.42
5:CE:112:LEU:HD23	5:CE:112:LEU:HA	1.79	0.42
36:DA:1535:A:H3'	36:DA:1536:C:C6	2.55	0.42
1:AA:369:C:O2'	1:AA:370:C:H5'	2.20	0.42
2:AB:105:PHE:CE1	2:AB:152:PHE:HZ	2.38	0.42
39:DD:10:THR:HG23	39:DD:13:ARG:CB	2.47	0.42
55:DW:54:ALA:CB	55:DW:107:LEU:HD11	2.50	0.42
36:DA:2469:A:O2'	49:DQ:56:ARG:NH1	2.52	0.42
15:AO:34:LEU:HD12	15:AO:34:LEU:HA	1.81	0.42
36:BA:62:C:H42	36:BA:93:G:H1	1.68	0.42
22:AV:69:G:C8	22:AV:69:G:H3'	2.54	0.42
4:CD:159:ARG:O	4:CD:160:GLN:C	2.58	0.42
36:DA:1682:G:H5'	36:DA:1762:A:O2'	2.20	0.42
1:CA:1035:A:H2'	1:CA:1036:G:O4'	2.20	0.42
34:D8:51:ALA:N	34:D8:53:PRO:HD2	2.35	0.42
36:BA:67:U:H2'	36:BA:68:G:C8	2.55	0.42
1:CA:1206:G:C5	1:CA:1207:G:N7	2.88	0.42
48:BP:77:ARG:CD	48:BP:78:PRO:HD2	2.42	0.42
50:BR:103:ARG:O	50:BR:111:LEU:CD1	2.67	0.42
12:AL:124:LYS:HD2	12:AL:125:PRO:CD	2.48	0.42
46:BN:17:ASP:HB2	46:BN:55:VAL:CG1	2.49	0.42
1:AA:109:A:C4	1:AA:327:A:C2	3.08	0.42
2:AB:98:LEU:HB2	2:AB:101:MET:HG3	2.02	0.42
9:AI:108:VAL:HG12	9:AI:109:VAL:H	1.84	0.42
1:AA:1158:C:C4	1:AA:1160:G:H1'	2.55	0.42
52:DT:107:ASP:OD1	52:DT:107:ASP:N	2.52	0.42
1:CA:188:C:H2'	1:CA:189:G:H8	1.85	0.42
1:AA:631:G:C2'	1:AA:632:A:C8	2.99	0.42
25:CZ:110:ASP:HB3	25:CZ:113:MET:HE2	2.01	0.42
10:AJ:7:LYS:O	10:AJ:96:ILE:HA	2.20	0.42
1:CA:1129:C:O5'	1:CA:1130:A:H5'	2.20	0.42
25:CZ:210:ILE:HG23	25:CZ:210:ILE:O	2.20	0.42
2:CB:204:ASN:C	2:CB:204:ASN:HD22	2.22	0.42
36:DA:2406:U:C4	48:DP:72:PRO:HB2	2.55	0.42
36:BA:1614:A:N1	55:BW:91:GLY:HA2	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:B0:16:SER:OG	36:BA:2262:U:OP2	2.35	0.42
52:BT:38:ASN:HD22	52:BT:38:ASN:N	2.18	0.42
1:AA:435:C:H2'	1:AA:436:C:H6	1.85	0.42
43:DH:32:GLU:O	43:DH:33:LEU:HD23	2.19	0.42
36:DA:16:G:H2'	36:DA:17:G:H8	1.84	0.42
39:BD:223:GLY:O	39:BD:224:ALA:C	2.57	0.42
50:DR:28:LEU:HD12	50:DR:114:VAL:CG2	2.50	0.42
36:DA:271(F):C:H2'	36:DA:271(G):C:O4'	2.20	0.42
11:AK:44:SER:H	11:AK:47:VAL:CG2	2.33	0.42
1:AA:647:C:HO2'	1:AA:648:A:H5'	1.84	0.42
39:BD:134:ARG:HG2	39:BD:187:GLY:O	2.20	0.42
36:DA:1268:A:H2'	36:DA:1269:A:H8	1.85	0.42
36:DA:1780:A:OP2	36:DA:1782:C:OP1	2.38	0.42
1:AA:636:U:H2'	1:AA:637:G:H8	1.83	0.42
15:CO:23:GLY:O	15:CO:28:GLN:NE2	2.49	0.42
1:AA:166:G:O2'	1:AA:167:G:H5'	2.19	0.42
36:DA:1821:A:H2'	36:DA:1822:G:C8	2.55	0.42
28:D2:21:LEU:HB2	28:D2:64:LEU:CD1	2.50	0.42
22:CV:61:C:C3'	22:CV:62:C:H5'	2.49	0.42
1:CA:748:C:O2'	1:CA:749:C:OP2	2.35	0.42
38:BC:191:ALA:C	38:BC:193:ILE:N	2.74	0.42
38:BC:183:GLU:CD	38:BC:183:GLU:H	2.22	0.42
42:DG:171:ALA:HA	42:DG:174:GLU:HB3	2.01	0.42
27:D1:71:TYR:HA	27:D1:74:VAL:HG23	2.02	0.42
36:DA:793:A:OP2	36:DA:2072:G:H5'	2.20	0.42
36:DA:2636:U:H4'	40:DE:80:GLU:OE1	2.20	0.42
58:BZ:107:THR:OG1	58:BZ:111:VAL:HG22	2.19	0.42
36:DA:2643:G:H2'	36:DA:2644:G:O4'	2.20	0.42
58:DZ:45:ASP:O	58:DZ:47:VAL:N	2.52	0.42
36:BA:573:G:O2'	36:BA:574:C:H3'	2.20	0.42
45:DK:94:UNK:CB	58:DZ:112:ARG:HH12	2.33	0.42
53:BU:99:ALA:HB2	53:BU:106:PHE:CE1	2.55	0.42
36:DA:1445(A):C:H6	36:DA:1445(A):C:O5'	2.02	0.42
22:CV:9:A:H5'	22:CV:46:G:N3	2.33	0.42
5:AE:72:GLN:O	5:AE:73:ASN:CB	2.68	0.42
4:CD:170:VAL:HG11	4:CD:174:LEU:HB2	2.01	0.41
25:CZ:248:LYS:O	25:CZ:251:ASP:OD2	2.37	0.41
57:DY:9:LYS:H	57:DY:28:LYS:NZ	2.18	0.41
53:BU:98:LEU:C	53:BU:100:VAL:N	2.73	0.41
19:CS:10:PHE:HZ	19:CS:70:LYS:HE2	1.78	0.41
1:AA:1095:U:OP2	1:AA:1108:G:O6	2.38	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:114:ARG:HD3	2:AB:114:ARG:O	2.19	0.41
25:AZ:204:ASP:O	25:AZ:208:GLU:HG2	2.20	0.41
39:BD:32:SER:O	39:BD:36:PRO:HG2	2.20	0.41
36:DA:2314:C:C5'	42:DG:38:VAL:HG21	2.50	0.41
36:DA:481:G:C2'	36:DA:482:A:OP2	2.68	0.41
47:BO:71:ARG:NH2	47:BO:122:LEU:O	2.42	0.41
28:D2:8:LYS:O	28:D2:9:GLN:C	2.58	0.41
34:B8:17:THR:CG2	34:B8:21:LYS:O	2.68	0.41
36:DA:2101:G:C6	36:DA:2102:U:C4	3.07	0.41
1:CA:1072:G:C6	1:CA:1104:G:C2	3.08	0.41
3:AC:83:ARG:O	3:AC:85:ARG:N	2.53	0.41
35:D9:5:ALA:HB3	36:DA:2465:C:O2'	2.20	0.41
10:CJ:54:PHE:CE1	10:CJ:55:LYS:NZ	2.83	0.41
14:CN:57:ARG:CG	14:CN:58:LYS:N	2.82	0.41
46:DN:46:VAL:O	46:DN:47:ALA:CB	2.68	0.41
43:DH:85:LYS:O	43:DH:132:ARG:HB2	2.20	0.41
10:AJ:35:SER:O	10:AJ:36:GLY:C	2.58	0.41
36:DA:1409:C:H2'	36:DA:1410:G:C8	2.54	0.41
53:DU:91:ASP:OD1	53:DU:96:ALA:CB	2.63	0.41
53:DU:65:ILE:HD11	53:DU:96:ALA:HB3	2.01	0.41
41:DF:25:PRO:HB3	41:DF:119:ARG:CB	2.50	0.41
36:BA:2056:G:H2'	36:BA:2056:G:N3	2.35	0.41
43:BH:98:LEU:HD12	43:BH:99:VAL:N	2.35	0.41
4:CD:14:ARG:C	4:CD:16:GLY:H	2.24	0.41
4:CD:19:LEU:HD23	4:CD:67:ILE:HG12	2.03	0.41
36:DA:1108:U:H6	36:DA:1109:C:C6	2.37	0.41
27:B1:21:ARG:HH11	36:BA:2432:A:H2	1.67	0.41
1:CA:66:G:H4'	1:CA:173:U:C4	2.55	0.41
40:DE:55:ASN:HD21	40:DE:58:ARG:NH1	2.18	0.41
36:BA:139:G:C5	36:BA:140:G:H2'	2.55	0.41
4:AD:59:ARG:HE	4:AD:59:ARG:CA	2.33	0.41
48:BP:59:LEU:HG	48:BP:59:LEU:O	2.20	0.41
58:BZ:162:GLU:O	58:BZ:163:LEU:C	2.58	0.41
36:BA:1903:G:OP2	39:BD:241:PRO:HB2	2.20	0.41
40:DE:111:ARG:HA	50:DR:2:ARG:CG	2.47	0.41
42:BG:40:ASN:HA	42:BG:91:ARG:HA	2.02	0.41
36:BA:1747(A):G:C2'	36:BA:1748:G:C5'	2.83	0.41
4:AD:19:LEU:HD12	4:AD:19:LEU:N	2.34	0.41
36:DA:549:G:C2'	36:DA:551:G:H5'	2.50	0.41
40:DE:11:MET:CB	40:DE:23:VAL:O	2.63	0.41
36:DA:301:G:HO2'	36:DA:302:C:H6	1.66	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BG:178:PHE:HB3	42:BG:180:PHE:CD1	2.55	0.41
2:AB:105:PHE:O	2:AB:106:LYS:C	2.58	0.41
1:CA:573:A:C2	1:CA:574:A:C2	3.08	0.41
41:DF:184:TYR:CE1	48:DP:7:ARG:CZ	3.03	0.41
49:DQ:17:LEU:C	49:DQ:18:LYS:HG3	2.40	0.41
1:CA:63:C:H2'	1:CA:64:G:C5'	2.40	0.41
1:CA:1255:G:N1	1:CA:1283:G:C6	2.88	0.41
20:CT:26:ASN:C	20:CT:26:ASN:HD22	2.23	0.41
2:AB:211:ILE:O	2:AB:212:GLN:C	2.58	0.41
54:DV:14:VAL:HB	54:DV:96:ILE:HG21	2.01	0.41
27:D1:4:VAL:HB	27:D1:11:ARG:HH11	1.82	0.41
34:B8:22:VAL:HB	34:B8:53:PRO:HB3	2.02	0.41
36:DA:733:G:C8	36:DA:761:A:C6	3.08	0.41
1:AA:1446:U:O2'	1:AA:1447:A:H3'	2.19	0.41
36:DA:2136:C:C6	36:DA:2137:C:H5	2.37	0.41
36:DA:363(E):U:C2'	36:DA:363(F):A:O4'	2.68	0.41
38:BC:72:VAL:CG2	38:BC:111:ASP:HB3	2.50	0.41
27:B1:3:LYS:HA	36:BA:1365:A:OP2	2.20	0.41
26:B0:49:LYS:H	26:B0:80:HIS:CG	2.38	0.41
27:B1:86:SER:C	27:B1:88:LYS:H	2.22	0.41
7:AG:108:ALA:O	7:AG:119:ARG:HD2	2.19	0.41
36:DA:1171:G:C8	36:DA:1173:G:H1'	2.55	0.41
36:BA:2032:G:OP2	36:BA:2454:G:O2'	2.21	0.41
53:DU:76:TYR:C	53:DU:76:TYR:CD1	2.93	0.41
17:AQ:59:ILE:HD11	17:AQ:73:VAL:HG22	2.01	0.41
43:DH:169:VAL:HG22	43:DH:170:ARG:N	2.35	0.41
42:DG:172:LEU:C	42:DG:172:LEU:HD23	2.41	0.41
9:AI:126:SER:O	9:AI:128:ARG:HD2	2.19	0.41
41:DF:96:ASP:C	41:DF:98:SER:H	2.23	0.41
54:DV:76:LYS:HB2	54:DV:81:TYR:HB3	2.02	0.41
29:D3:23:LEU:O	29:D3:26:LEU:N	2.53	0.41
48:DP:70:GLN:HB3	48:DP:71:VAL:H	1.62	0.41
22:AV:18:G:H1'	22:AV:58:A:C2	2.54	0.41
13:AM:70:LEU:C	13:AM:72:ALA:N	2.74	0.41
36:BA:1068:G:N2	36:BA:1096:A:H4'	2.34	0.41
15:AO:17:ARG:NH1	15:AO:17:ARG:HG3	2.31	0.41
15:AO:17:ARG:NH1	15:AO:77:ARG:CZ	2.82	0.41
25:AZ:72:THR:O	25:AZ:74:LYS:N	2.53	0.41
36:BA:2376:A:H2'	36:BA:2377:A:O4'	2.20	0.41
36:DA:956:G:OP2	49:DQ:14:ARG:NH2	2.53	0.41
25:AZ:392:GLY:O	25:AZ:393:ARG:CB	2.66	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:740:U:O2'	1:CA:741:G:H5'	2.20	0.41
36:DA:2553:G:H2'	36:DA:2554:U:C4'	2.49	0.41
25:AZ:315:LYS:CB	25:AZ:404:LEU:HB2	2.50	0.41
40:DE:66:HIS:O	40:DE:67:PHE:C	2.57	0.41
36:BA:572:A:C2	36:BA:2033:A:C2	3.08	0.41
44:DJ:68:UNK:O	44:DJ:70:UNK:N	2.53	0.41
11:CK:72:ALA:O	11:CK:75:TYR:HB2	2.20	0.41
17:CQ:26:GLN:HA	17:CQ:36:ILE:O	2.20	0.41
24:CY:28:C:C2	24:CY:29:G:C8	3.08	0.41
19:CS:79:THR:O	19:CS:80:TYR:CB	2.68	0.41
2:AB:21:ARG:CB	2:AB:38:GLY:O	2.68	0.41
36:BA:1120:G:C6	36:BA:1121:C:C4	3.08	0.41
1:AA:667:G:H4'	15:AO:51:HIS:CE1	2.55	0.41
36:DA:1286:A:H2'	36:DA:1288:U:OP2	2.20	0.41
12:AL:36:VAL:CG1	12:AL:82:VAL:HG22	2.49	0.41
36:BA:407:G:H2'	36:BA:408:G:C8	2.55	0.41
36:BA:1753:G:N3	36:BA:1755:A:C8	2.87	0.41
36:BA:1750:G:H2'	36:BA:1751:C:C6	2.54	0.41
19:CS:75:ALA:O	19:CS:76:PRO:C	2.57	0.41
1:CA:618:C:H3'	1:CA:619:U:C5'	2.48	0.41
53:BU:39:LEU:HA	53:BU:42:ALA:HB3	2.02	0.41
1:AA:830:G:O2'	1:AA:831:U:H5'	2.19	0.41
1:CA:1077:G:N2	1:CA:1081:G:C4	2.88	0.41
36:BA:2495:G:H5'	49:BQ:82:ARG:HB3	2.02	0.41
44:BJ:114:UNK:O	44:BJ:115:UNK:CB	2.68	0.41
13:CM:125:ARG:NH1	36:DA:1913:A:N7	2.68	0.41
58:BZ:92:SER:OG	58:BZ:93:ASP:N	2.53	0.41
36:DA:1555:G:C2	36:DA:1556:C:C6	3.08	0.41
41:BF:100:THR:O	41:BF:100:THR:HG22	2.20	0.41
38:BC:49:ILE:O	38:BC:49:ILE:HD12	2.20	0.41
15:AO:87:ILE:CG2	15:AO:88:ARG:N	2.63	0.41
32:B6:29:ASN:O	32:B6:30:THR:C	2.58	0.41
52:DT:27:THR:HA	52:DT:87:ASP:CB	2.48	0.41
39:BD:30:GLU:HG2	39:BD:30:GLU:H	1.53	0.41
25:CZ:139:ASP:CB	25:CZ:177:LEU:HD11	2.50	0.41
25:CZ:38:GLU:H	25:CZ:38:GLU:CD	2.23	0.41
42:DG:93:THR:HG22	42:DG:94:LEU:H	1.83	0.41
36:BA:2714:G:H2'	36:BA:2715:C:H6	1.84	0.41
49:BQ:134:ARG:HA	49:BQ:137:TYR:CE2	2.55	0.41
3:AC:70:VAL:HG12	3:AC:72:LYS:N	2.35	0.41
22:CV:69:G:C8	22:CV:69:G:H5'	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1202:G:C2'	1:CA:1203:C:O5'	2.68	0.41
43:DH:125:VAL:N	43:DH:126:PRO:HD3	2.34	0.41
9:AI:20:ARG:HG3	9:AI:20:ARG:HH11	1.85	0.41
10:AJ:17:ASP:OD1	10:AJ:70:ARG:NH2	2.53	0.41
36:DA:139:G:C3'	36:DA:139(A):G:H5''	2.50	0.41
54:DV:43:GLU:O	54:DV:44:LYS:HB2	2.20	0.41
41:BF:25:PRO:HB3	41:BF:119:ARG:CB	2.49	0.41
9:CI:100:GLY:C	9:CI:102:LEU:H	2.22	0.41
36:DA:832:G:H21	48:DP:53:GLY:CA	2.32	0.41
27:B1:36:GLY:C	27:B1:37:ILE:HG13	2.36	0.41
4:CD:57:ARG:HH22	5:CE:107:ARG:CD	2.33	0.41
39:BD:147:LEU:HD12	39:BD:147:LEU:HA	1.82	0.41
41:DF:160:ASN:ND2	41:DF:160:ASN:C	2.72	0.41
42:BG:101:ILE:HG22	42:BG:101:ILE:O	2.20	0.41
36:DA:1301:A:HO2'	36:DA:1302:A:C3'	2.32	0.41
1:CA:1239:A:N6	1:CA:1299:A:H62	2.19	0.41
58:BZ:69:THR:HB	58:BZ:89:PHE:O	2.19	0.41
58:BZ:69:THR:HG21	58:BZ:90:VAL:HG22	2.02	0.41
10:AJ:31:GLY:HA3	10:AJ:78:ASN:ND2	2.35	0.41
18:AR:56:THR:O	18:AR:58:LEU:N	2.53	0.41
1:CA:547:A:C4'	1:CA:548:G:O5'	2.55	0.41
36:BA:2802:G:O2'	36:BA:2803:C:H5''	2.19	0.41
4:AD:186:LEU:O	4:AD:187:ARG:CB	2.67	0.41
48:DP:101:VAL:C	48:DP:103:ALA:H	2.22	0.41
36:BA:1532:C:H2'	36:BA:1533:G:O4'	2.20	0.41
2:CB:73:THR:HG22	2:CB:94:ASN:O	2.20	0.41
30:B4:33:VAL:HG13	30:B4:34:GLU:N	2.35	0.41
16:AP:74:LEU:O	16:AP:77:ALA:HB3	2.20	0.41
1:AA:1035:A:H2'	1:AA:1036:G:O4'	2.20	0.41
58:DZ:20:ARG:HH11	58:DZ:20:ARG:HB3	1.85	0.41
1:CA:558:G:H2'	1:CA:559:A:H2	1.86	0.41
36:DA:1364:G:C2	36:DA:1368:G:C5	3.09	0.41
36:BA:483:A:H3'	36:BA:484:C:C6	2.55	0.41
1:CA:766:A:O2'	1:CA:767:A:H5'	2.19	0.41
40:DE:103:ASP:OD1	40:DE:201:THR:CB	2.68	0.41
40:DE:103:ASP:OD1	40:DE:201:THR:HB	2.19	0.41
36:BA:2443:C:C2'	36:BA:2444:G:H5'	2.50	0.41
56:DX:57:LEU:CD1	56:DX:57:LEU:N	2.83	0.41
46:BN:56:ASN:HD22	46:BN:56:ASN:HA	1.64	0.41
22:AW:43:C:H2'	22:AW:44:G:C1'	2.50	0.41
41:DF:108:LYS:H	41:DF:108:LYS:HG2	1.70	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:949:A:O4'	1:CA:1364:U:C5	2.73	0.41
1:CA:950:U:OP2	13:CM:102:ARG:HD2	2.20	0.41
36:DA:2744:G:C6	36:DA:2745:C:C4	3.08	0.41
24:AY:43:G:N2	24:AY:45:U:C4	2.88	0.41
1:CA:354:G:N3	1:CA:354:G:H2'	2.35	0.41
7:AG:117:ALA:O	7:AG:118:VAL:C	2.58	0.41
40:DE:116:VAL:CG2	40:DE:117:MET:N	2.82	0.41
1:CA:1039:C:H2'	1:CA:1040:U:C5	2.55	0.41
9:CI:23:ASN:OD1	9:CI:24:GLY:N	2.53	0.41
25:AZ:101:GLY:HA3	25:AZ:210:ILE:HD11	2.02	0.41
4:CD:102:ASP:OD1	4:CD:136:PRO:CB	2.68	0.41
36:DA:201:C:H2'	36:DA:202:U:C5'	2.49	0.41
1:CA:425:G:O2'	1:CA:426:G:H5'	2.21	0.41
25:CZ:72:THR:C	25:CZ:74:LYS:N	2.69	0.41
16:CP:8:ARG:HH22	16:CP:15:PRO:HG3	1.82	0.41
36:DA:1353:A:O4'	36:DA:1569:A:H2	2.02	0.41
36:BA:1982:C:O2	36:BA:1982:C:H2'	2.19	0.41
1:CA:503:C:C2	1:CA:504:C:C5	3.08	0.41
41:DF:46:ARG:HG3	41:DF:48:THR:HG23	2.01	0.41
15:AO:21:ASP:OD2	15:AO:24:SER:HB3	2.20	0.41
54:BV:76:LYS:HB2	54:BV:81:TYR:HB3	2.02	0.41
36:BA:1668:A:H1'	36:BA:1670:C:C5	2.55	0.41
55:DW:65:LEU:HD23	55:DW:68:ARG:HD2	2.02	0.41
24:CY:13:C:O2'	24:CY:14:A:H5'	2.20	0.41
25:CZ:223:MET:HG2	25:CZ:240:GLY:HA3	2.01	0.41
12:CL:126:LYS:C	12:CL:128:ALA:N	2.73	0.41
12:CL:5:PRO:O	12:CL:6:THR:O	2.39	0.41
36:DA:523:C:C2'	36:DA:524:U:H5'	2.50	0.41
1:AA:646:U:H2'	1:AA:647:C:H6	1.83	0.41
46:BN:76:SER:C	46:BN:78:TYR:N	2.73	0.41
36:BA:2354:G:C2	36:BA:2355:C:C6	3.08	0.41
1:AA:42:G:H2'	1:AA:43:C:C6	2.55	0.41
1:AA:16:A:N1	1:AA:919:A:C2	2.85	0.41
26:D0:41:ARG:NH2	36:DA:2387:U:O2'	2.52	0.41
1:AA:1512:U:H2'	1:AA:1513:A:C8	2.55	0.41
1:AA:283:C:H2'	1:AA:284:G:H5'	2.03	0.41
47:BO:22:ILE:HD13	47:BO:22:ILE:HA	1.85	0.41
36:DA:1259:G:H2'	36:DA:1260:G:C8	2.55	0.41
36:DA:2517:C:C4	36:DA:2542:A:C6	3.08	0.41
25:AZ:171:ILE:HD11	25:AZ:205:ALA:HB2	2.01	0.41
36:BA:1431:U:H2'	36:BA:1432:C:H6	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:511:C:C2	1:AA:512:U:C5	3.08	0.41
36:BA:850:C:O2'	36:BA:851:U:H5'	2.20	0.41
12:CL:75:HIS:CD2	12:CL:77:LEU:H	2.38	0.41
37:BB:98:G:C2'	37:BB:99:G:H5'	2.50	0.41
49:BQ:82:ARG:HB2	49:BQ:83:MET:H	1.75	0.41
58:BZ:156:LYS:O	58:BZ:158:PRO:HD3	2.20	0.41
3:CC:145:GLY:O	3:CC:146:ALA:O	2.39	0.41
36:BA:1132:A:O2'	36:BA:1133:U:H5'	2.20	0.41
36:BA:2596:U:H2'	36:BA:2597:G:O4'	2.21	0.41
1:CA:837:G:O2'	1:CA:838:G:H5'	2.20	0.41
36:BA:2243:U:O2'	36:BA:2244:U:H5'	2.21	0.41
15:AO:32:LEU:O	15:AO:36:ILE:HG13	2.20	0.41
11:AK:13:GLN:HG2	11:AK:75:TYR:O	2.20	0.41
32:D6:5:VAL:HG11	36:DA:2283:C:H5'	2.02	0.41
47:DO:104:ARG:C	47:DO:106:LEU:N	2.71	0.41
47:DO:71:ARG:NH2	47:DO:122:LEU:OXT	2.53	0.41
32:B6:15:GLU:C	32:B6:17:LYS:H	2.23	0.41
53:BU:92:ARG:NH1	54:BV:11:GLN:HG2	2.35	0.41
1:CA:1319:A:H2'	1:CA:1323:G:N7	2.35	0.41
1:CA:977:A:C2'	1:CA:978:A:H5''	2.50	0.41
28:B2:35:LEU:HB3	28:B2:53:LEU:HD13	2.01	0.41
39:BD:75:ILE:CD1	39:BD:75:ILE:H	2.33	0.41
25:CZ:133:VAL:HG23	25:CZ:168:VAL:HG12	2.01	0.41
37:DB:40:U:N3	37:DB:43:C:H5''	2.34	0.41
42:DG:38:VAL:HB	42:DG:158:ALA:HB3	2.02	0.41
42:DG:7:LEU:HD22	42:DG:100:TRP:HE3	1.82	0.41
42:DG:88:ILE:CG2	42:DG:89:GLY:N	2.83	0.41
52:BT:80:SER:CB	52:BT:81:PRO:HD3	2.38	0.41
13:AM:16:ASP:OD1	13:AM:17:VAL:N	2.53	0.41
13:AM:65:LYS:C	13:AM:66:LEU:HG	2.40	0.41
12:CL:41:ARG:CG	12:CL:42:THR:N	2.72	0.41
41:BF:10:PRO:HG2	41:BF:11:VAL:H	1.85	0.41
3:CC:18:TRP:HE1	14:CN:55:GLY:HA2	1.85	0.41
3:AC:12:LEU:HD23	3:AC:12:LEU:HA	1.66	0.41
34:B8:59:LYS:HE2	48:BP:50:ARG:CB	2.40	0.41
34:B8:6:THR:HG21	36:BA:243:U:OP1	2.20	0.41
13:CM:2:ALA:O	13:CM:4:ILE:HG12	2.20	0.41
13:CM:15:VAL:HG11	13:CM:48:LEU:HD11	2.01	0.41
19:CS:78:ARG:HB2	19:CS:81:ARG:NH1	2.34	0.41
36:DA:2287:A:H2	36:DA:2346:A:C2	2.38	0.41
36:DA:2383:G:O2'	36:DA:2384:G:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:310:ILE:HD11	25:CZ:381:GLU:HB3	2.03	0.41
43:DH:153:LYS:H	43:DH:153:LYS:CD	2.31	0.41
39:DD:133:LEU:HB3	39:DD:173:VAL:HG11	2.02	0.41
36:BA:654(O):G:H2'	36:BA:654(P):C:C5	2.56	0.41
36:BA:654(P):C:O2'	36:BA:654(Q):C:H5'	2.19	0.41
1:AA:374:A:H2'	1:AA:375:U:H6	1.85	0.41
36:DA:605:C:O2	36:DA:605:C:O4'	2.36	0.41
16:CP:55:ARG:HE	16:CP:55:ARG:HA	1.84	0.41
36:BA:623:G:C4	36:BA:624:C:C5	3.09	0.41
48:BP:112:LEU:H	48:BP:128:HIS:CD2	2.31	0.41
40:DE:31:CYS:HB3	40:DE:49:LEU:HB3	2.02	0.41
40:DE:4:ILE:HG23	40:DE:4:ILE:O	2.19	0.41
40:DE:47:VAL:HG23	40:DE:84:PHE:O	2.20	0.41
5:CE:144:THR:O	5:CE:145:LYS:C	2.59	0.41
27:B1:29:GLY:C	27:B1:30:VAL:HG22	2.40	0.41
1:AA:1226:C:OP1	13:AM:91:ARG:NH2	2.46	0.41
36:BA:1827:C:H2'	36:BA:1828:G:C5'	2.50	0.41
39:BD:243:GLY:O	39:BD:244:ARG:CB	2.67	0.41
36:BA:1087:G:H21	36:BA:1103:A:H61	1.69	0.41
39:BD:124:PRO:O	39:BD:126:GLN:HG2	2.20	0.41
5:CE:33:VAL:HG11	5:CE:109:ILE:HA	2.00	0.41
1:AA:1271:G:H5'	1:AA:1314:C:H5''	2.02	0.41
52:BT:70:VAL:HG12	52:BT:71:GLY:O	2.20	0.41
5:CE:40:ARG:HG2	5:CE:40:ARG:NH1	2.33	0.41
7:CG:96:GLN:O	7:CG:100:ALA:HB2	2.21	0.41
43:BH:169:VAL:O	43:BH:170:ARG:C	2.58	0.41
48:DP:7:ARG:O	48:DP:10:PRO:CD	2.68	0.41
24:CY:60:U:H5''	24:CY:61:C:C5	2.56	0.41
15:AO:11:VAL:O	15:AO:12:ILE:C	2.58	0.41
36:DA:1068:G:H2'	36:DA:1068:G:N3	2.36	0.41
36:DA:1072:C:H5''	36:DA:1073:A:OP1	2.21	0.41
36:DA:2178:C:C2'	36:DA:2179:C:O5'	2.69	0.41
50:BR:26:LYS:HE2	50:BR:71:GLN:H	1.84	0.41
22:CW:5:G:C4	22:CW:6:G:N7	2.88	0.41
40:BE:103:ASP:OD1	40:BE:201:THR:CB	2.68	0.41
52:BT:8:LYS:HA	52:BT:11:GLU:OE1	2.20	0.41
1:CA:926:G:H5''	1:CA:927:G:O5'	2.20	0.41
48:BP:77:ARG:HH11	48:BP:77:ARG:HG2	1.85	0.41
40:BE:31:CYS:O	40:BE:90:THR:HG23	2.21	0.41
31:B5:52:TYR:O	31:B5:53:ALA:C	2.58	0.41
25:CZ:359:VAL:O	25:CZ:359:VAL:CG1	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:505:G:C6	1:AA:535:A:C2	3.08	0.41
27:B1:84:GLY:O	27:B1:86:SER:N	2.53	0.41
58:DZ:139:VAL:CG2	58:DZ:140:ASP:H	2.29	0.41
48:DP:121:LYS:HA	48:DP:122:PRO:HD3	1.78	0.41
39:DD:111:LEU:CD2	39:DD:115:GLN:OE1	2.68	0.41
6:AF:87:ARG:CG	6:AF:87:ARG:NH1	2.81	0.41
38:BC:189:ILE:O	38:BC:190:ARG:C	2.58	0.41
1:CA:1141:C:O2'	1:CA:1142:G:H5'	2.20	0.41
1:CA:1144:G:N2	1:CA:1146:A:H62	2.12	0.41
3:AC:115:LEU:O	3:AC:116:VAL:C	2.58	0.41
25:CZ:208:GLU:O	25:CZ:209:TYR:HB3	2.20	0.41
16:AP:43:LYS:N	16:AP:43:LYS:HD2	2.35	0.41
36:BA:474:G:C6	36:BA:510:C:N4	2.88	0.41
38:DC:47:LEU:N	38:DC:47:LEU:HD12	2.35	0.41
27:B1:68:PRO:HG2	27:B1:69:LYS:H	1.84	0.41
33:B7:34:ARG:HD2	33:B7:39:ARG:HG3	2.01	0.41
14:AN:27:CYS:SG	14:AN:29:ARG:HB2	2.60	0.41
37:DB:87:G:N2	37:DB:89:G:H3'	2.36	0.41
36:BA:2493:U:O2'	49:BQ:80:GLU:OE1	2.38	0.41
36:BA:1652:A:H2'	36:BA:1653:G:H5'	2.02	0.41
24:CY:29:G:H1	24:CY:41:C:N4	2.19	0.41
20:CT:41:ILE:HA	20:CT:44:ALA:CB	2.50	0.41
1:AA:865:A:H2'	1:AA:866:C:C6	2.55	0.41
16:AP:75:ARG:HG3	16:AP:75:ARG:NH1	2.36	0.41
42:DG:166:ASP:O	42:DG:169:ALA:N	2.52	0.41
1:CA:279:A:OP1	1:CA:280:C:O2'	2.24	0.41
57:BY:33:LYS:C	57:BY:35:TYR:N	2.73	0.41
29:B3:1:MET:HA	29:B3:2:PRO:HD2	1.92	0.41
1:AA:201:C:C2'	1:AA:202:U:H2'	2.50	0.41
44:BJ:126:UNK:O	44:BJ:128:UNK:N	2.54	0.41
36:BA:108:U:H2'	36:BA:109:G:C8	2.54	0.41
36:DA:2221:G:N3	36:DA:2222:G:C8	2.89	0.41
36:BA:1688:U:O2	36:BA:1700:A:H5''	2.19	0.41
12:AL:34:ARG:HG2	12:AL:35:GLY:N	2.34	0.41
36:BA:680:G:H2'	36:BA:681:G:H8	1.84	0.41
46:DN:119:ARG:NH1	46:DN:119:ARG:HG3	2.35	0.41
36:BA:831:G:H8	36:BA:831:G:O5'	2.03	0.41
47:DO:97:ARG:HB3	47:DO:98:VAL:H	1.68	0.41
2:AB:122:PHE:HA	2:AB:127:ILE:HD11	2.02	0.41
1:AA:853:G:O2'	1:AA:854:G:H5'	2.20	0.41
36:DA:1801:G:H3'	36:DA:1802:A:C5'	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BC:49:ILE:HD12	38:BC:49:ILE:C	2.41	0.41
20:CT:89:ARG:HB2	20:CT:104:LEU:HD11	2.01	0.41
6:CF:69:GLU:O	6:CF:72:VAL:HG12	2.19	0.41
36:BA:43:A:O2'	36:BA:44:G:H5'	2.20	0.41
3:CC:159:GLY:O	3:CC:160:ALA:C	2.58	0.41
1:AA:1508:G:O2'	1:AA:1509:C:H5'	2.20	0.41
1:AA:977:A:H2'	1:AA:978:A:H5''	2.01	0.41
1:CA:1417:G:H8	1:CA:1417:G:O5'	2.04	0.41
4:AD:160:GLN:H	4:AD:160:GLN:HG3	1.53	0.41
55:DW:59:VAL:HG12	55:DW:59:VAL:O	2.20	0.41
40:DE:203:LYS:HD2	40:DE:203:LYS:O	2.21	0.41
51:DS:21:THR:HG22	51:DS:21:THR:O	2.20	0.41
38:DC:82:LYS:CG	38:DC:116:THR:HG21	2.50	0.41
34:D8:7:HIS:C	34:D8:9:GLY:H	2.23	0.41
36:DA:1246:A:P	48:DP:16:ARG:NH2	2.94	0.41
36:DA:241:A:O4'	36:DA:243:U:C6	2.74	0.41
52:DT:30:VAL:O	52:DT:31:SER:HB3	2.20	0.41
52:DT:91:ARG:HB3	52:DT:116:ALA:HA	2.01	0.41
36:DA:1502:C:H2'	36:DA:1502:C:O2	2.20	0.41
53:BU:65:ILE:HG13	53:BU:96:ALA:CB	2.49	0.41
31:D5:45:VAL:HG12	31:D5:50:GLY:HA2	2.01	0.41
2:AB:142:LEU:CD2	2:AB:142:LEU:C	2.88	0.41
25:AZ:173:GLY:HA2	25:AZ:198:LYS:HG2	2.02	0.41
25:AZ:176:LEU:HD23	60:AZ:501:GDP:C2	2.55	0.41
39:BD:25:THR:HB	39:BD:26:LYS:CE	2.48	0.41
43:BH:66:GLY:C	43:BH:68:THR:N	2.71	0.41
39:DD:44:ASN:ND2	39:DD:49:ILE:CG2	2.79	0.41
37:DB:42:C:H4'	42:DG:67:LYS:HG2	2.02	0.41
42:DG:5:VAL:O	42:DG:8:LYS:HB2	2.20	0.41
56:DX:36:LYS:CE	56:DX:54:VAL:O	2.67	0.41
57:BY:100:ALA:O	57:BY:101:LYS:HB3	2.20	0.41
36:BA:2711:A:OP1	36:BA:2712(A):A:P	2.79	0.41
52:BT:29:ARG:CG	52:BT:30:VAL:H	2.34	0.41
28:D2:3:LEU:N	28:D2:6:VAL:HG23	2.35	0.41
58:BZ:99:TYR:HA	58:BZ:124:ILE:O	2.21	0.41
57:DY:7:VAL:HB	57:DY:8:LYS:CE	2.51	0.41
57:DY:91:GLU:HB3	57:DY:92:ASN:H	1.61	0.41
53:BU:33:ARG:C	53:BU:35:ALA:H	2.22	0.41
43:DH:130:ARG:CB	43:DH:130:ARG:NH1	2.81	0.41
58:DZ:178:GLU:O	58:DZ:180:VAL:HG12	2.20	0.41
36:DA:1154:G:H5''	53:DU:59:ARG:NH1	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:200:GLU:O	4:CD:202:LEU:N	2.53	0.41
58:DZ:127:LYS:HB3	58:DZ:127:LYS:HZ2	1.84	0.41
41:BF:111:ALA:O	41:BF:115:ALA:HB2	2.19	0.41
41:BF:114:VAL:HG22	41:BF:186:ILE:HD13	2.03	0.41
40:DE:4:ILE:HG12	40:DE:5:LEU:O	2.20	0.41
1:CA:265:G:C5'	17:CQ:64:PRO:O	2.60	0.41
48:BP:58:THR:C	48:BP:61:ARG:NE	2.70	0.41
5:CE:105:VAL:N	5:CE:106:PRO:HD2	2.35	0.41
4:AD:20:TYR:CA	4:AD:26:CYS:HB3	2.50	0.41
4:AD:8:VAL:HG23	4:AD:9:CYS:H	1.84	0.41
1:CA:63:C:H5'	1:CA:63:C:H6	1.83	0.41
36:DA:1070:A:H4'	36:DA:1071:G:OP2	2.20	0.41
40:BE:4:ILE:HG12	40:BE:5:LEU:O	2.19	0.41
52:BT:3:ARG:O	52:BT:4:GLY:C	2.59	0.41
36:DA:733:G:O6	36:DA:761:A:C8	2.73	0.41
1:CA:923:A:C2	1:CA:924:C:C2	3.08	0.41
36:BA:1098:A:H2'	36:BA:1099:G:O4'	2.20	0.41
57:DY:51:VAL:C	57:DY:53:PRO:HD3	2.41	0.41
1:AA:1434:A:C8	1:AA:1435:G:C8	3.08	0.41
36:BA:2649:U:H2'	36:BA:2650:U:H6	1.79	0.41
7:CG:78:ARG:CG	7:CG:79:ARG:H	2.34	0.41
1:CA:596:C:O2'	1:CA:597:G:H5'	2.20	0.41
36:BA:1184:G:C2'	36:BA:1185:C:H5'	2.50	0.41
36:DA:2127:G:H4'	38:DC:37:PHE:CD1	2.55	0.41
1:CA:1218:C:OP2	14:CN:9:LYS:HE2	2.20	0.41
24:AY:44:G:H1'	24:AY:45:U:C6	2.55	0.41
1:CA:841:U:C3'	1:CA:848:C:O4'	2.67	0.41
21:CU:9:ARG:NH1	21:CU:23:PRO:HD2	2.35	0.41
37:DB:70:C:H2'	37:DB:71:C:H6	1.84	0.41
1:AA:60:A:H4'	1:AA:61:G:O5'	2.20	0.41
47:DO:12:ASP:H	47:DO:85:VAL:HG22	1.84	0.41
43:BH:54:ARG:HH22	43:BH:62:LYS:CE	2.33	0.41
6:AF:17:SER:O	6:AF:21:LEU:HG	2.20	0.41
36:BA:1655:A:N7	36:BA:2005:A:H2	2.17	0.41
40:BE:98:PRO:CD	40:BE:175:VAL:HG12	2.47	0.41
36:BA:2846:G:OP2	52:BT:54:ARG:HB2	2.21	0.41
22:CW:57:G:H2'	22:CW:58:A:C5'	2.50	0.41
36:BA:1069:A:H1'	36:BA:1070:A:OP1	2.19	0.41
37:BB:25:A:C2	37:BB:26:A:C4	3.09	0.41
24:AY:29:G:H2'	24:AY:30:G:O4'	2.19	0.41
49:BQ:45:GLN:O	49:BQ:46:GLN:C	2.58	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DC:183:GLU:CD	38:DC:183:GLU:H	2.23	0.41
4:AD:49:ARG:O	4:AD:51:PRO:HD3	2.20	0.41
12:CL:126:LYS:HE2	12:CL:127:GLU:H	1.85	0.41
12:CL:126:LYS:HE2	12:CL:127:GLU:N	2.35	0.41
16:AP:49:LEU:O	16:AP:49:LEU:HG	2.19	0.41
36:DA:2019:A:H2'	36:DA:2020:A:O5'	2.20	0.41
2:AB:16:HIS:HB3	2:AB:210:SER:CB	2.51	0.41
39:BD:50:THR:C	39:BD:51:VAL:HG23	2.40	0.41
1:AA:77:G:H5'	1:AA:78:G:OP2	2.20	0.41
36:BA:1576:U:C2	36:BA:1577:C:C5	3.08	0.41
36:DA:768:G:H2'	36:DA:769:G:H8	1.85	0.41
58:DZ:128:VAL:HG22	58:DZ:129:SER:O	2.21	0.41
1:CA:474:G:H2'	1:CA:475:G:C8	2.55	0.41
36:DA:763:G:H2'	36:DA:765:G:OP2	2.20	0.41
36:BA:271(P):C:H2'	36:BA:271(Q):G:H5'	2.03	0.41
1:AA:1120:G:H2'	1:AA:1121:U:C6	2.56	0.41
36:BA:1488:G:C6	36:BA:1489:U:C2	3.07	0.41
1:AA:1211:U:O2	1:AA:1211:U:O4'	2.38	0.41
36:DA:1891:G:C6	36:DA:1892:C:C4	3.08	0.41
36:BA:2363:C:O2'	36:BA:2364:C:H5'	2.21	0.41
4:CD:3:ARG:HD3	4:CD:3:ARG:O	2.20	0.41
1:AA:815:A:H4'	1:AA:817:C:C5	2.56	0.41
53:DU:35:ALA:C	53:DU:37:GLU:N	2.73	0.41
36:BA:855:G:H1	36:BA:922:U:H3	1.67	0.41
36:BA:2222:G:O2'	36:BA:2223:G:H5'	2.20	0.41
36:BA:1010:A:H1'	36:BA:1153:C:H1'	2.02	0.41
36:DA:1633:G:C2'	36:DA:1634:A:H5''	2.50	0.41
4:AD:52:SER:O	4:AD:56:VAL:HG23	2.19	0.41
4:CD:64:LEU:HD22	4:CD:198:VAL:HG11	2.02	0.41
25:CZ:127:GLY:O	25:CZ:128:VAL:C	2.59	0.41
12:CL:37:CYS:O	12:CL:79:GLU:O	2.37	0.41
58:DZ:24:LEU:CD2	58:DZ:24:LEU:C	2.88	0.41
18:AR:84:LYS:HD3	18:AR:84:LYS:HA	1.84	0.41
1:AA:1212:U:O4'	1:AA:1212:U:O2	2.38	0.41
28:D2:33:MET:SD	56:DX:5:TYR:HB3	2.61	0.41
36:BA:602:G:N1	36:BA:654(U):A:N7	2.68	0.41
36:BA:1249:U:C4'	53:BU:4:ALA:HB3	2.51	0.41
25:CZ:63:ILE:HG12	25:CZ:64:ASN:ND2	2.36	0.41
34:D8:56:GLU:O	34:D8:57:ARG:C	2.58	0.41
52:DT:31:SER:C	52:DT:32:TYR:HD1	2.22	0.41
41:BF:161:GLU:HA	41:BF:164:ARG:HB2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2399:G:N2	36:DA:2418:A:H1'	2.35	0.41
19:CS:71:LEU:HD23	19:CS:71:LEU:HA	1.77	0.41
56:BX:11:PRO:O	56:BX:12:VAL:C	2.58	0.41
2:CB:97:TRP:CE3	2:CB:172:ILE:HG22	2.55	0.41
25:AZ:146:LEU:O	25:AZ:149:LEU:N	2.49	0.41
36:DA:2311:A:O2'	36:DA:2312:U:O4'	2.39	0.41
36:BA:1210:A:C8	36:BA:1210:A:H5'	2.56	0.41
36:DA:327:G:H2'	36:DA:328:U:C6	2.55	0.41
1:AA:1332:A:H2'	1:AA:1333:A:C8	2.55	0.41
13:AM:4:ILE:C	13:AM:6:GLY:H	2.23	0.41
14:CN:40:CYS:SG	14:CN:43:CYS:N	2.71	0.41
36:DA:1408:C:O2'	36:DA:1409:C:H5'	2.20	0.41
9:AI:53:VAL:O	9:AI:54:ASP:HB2	2.20	0.41
25:CZ:222:LEU:CD1	25:CZ:303:VAL:CG1	2.97	0.41
25:CZ:306:LYS:O	25:CZ:307:PRO:C	2.59	0.41
36:BA:1020:A:N1	36:BA:1141:U:H1'	2.36	0.41
46:BN:23:LEU:CD1	46:BN:98:VAL:HG12	2.50	0.41
1:CA:543:C:C2	1:CA:544:G:C8	3.08	0.41
58:DZ:72:ARG:CG	58:DZ:89:PHE:HB2	2.49	0.41
58:DZ:69:THR:HB	58:DZ:89:PHE:O	2.20	0.41
9:CI:117:HIS:O	9:CI:118:LYS:CG	2.66	0.41
16:CP:34:GLU:OE2	16:CP:55:ARG:HD3	2.21	0.41
36:DA:1053:C:N4	36:DA:1107:G:H21	2.18	0.41
48:BP:24:GLY:HA3	48:BP:33:ARG:CZ	2.48	0.41
40:DE:3:GLY:O	40:DE:4:ILE:CB	2.68	0.41
14:CN:12:ARG:HB3	14:CN:14:PRO:CD	2.47	0.41
36:DA:2821:A:OP2	36:DA:2822:G:OP2	2.38	0.41
3:CC:113:ALA:HB3	3:CC:114:PRO:CD	2.45	0.41
36:DA:1535:A:C8	36:DA:1536:C:C4	3.08	0.41
42:BG:63:ILE:HG21	42:BG:141:PHE:CB	2.51	0.41
36:BA:2408:U:O5'	36:BA:2408:U:C6	2.73	0.41
36:DA:585:G:N1	36:DA:1251:C:O2	2.54	0.41
36:DA:105:C:O2'	57:DY:2:ARG:HG3	2.20	0.41
37:DB:92:C:OP1	49:DQ:19:GLY:N	2.54	0.41
18:CR:74:ARG:HD3	18:CR:81:PHE:CD1	2.54	0.41
4:AD:70:ILE:HD12	4:AD:97:LEU:HD21	2.03	0.41
24:AY:62:U:H5'	24:AY:62:U:C6	2.37	0.41
2:CB:121:LEU:O	2:CB:121:LEU:HD23	2.20	0.41
52:BT:13:ARG:H	52:BT:14:TYR:HD1	1.69	0.41
1:AA:33:A:N3	12:AL:32:PHE:HE1	2.19	0.41
35:B9:9:ARG:HD2	35:B9:16:VAL:HG22	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:B9:7:VAL:HG22	35:B9:34:GLN:HG3	2.02	0.41
6:AF:53:ALA:O	6:AF:54:LYS:HB2	2.19	0.41
46:DN:3:THR:CG2	46:DN:4:TYR:N	2.83	0.41
38:DC:63:SER:OG	38:DC:160:ARG:HB2	2.21	0.41
51:DS:89:ARG:HG3	51:DS:92:TYR:H	1.83	0.41
51:DS:92:TYR:CG	51:DS:93:LYS:N	2.89	0.41
36:DA:2199:A:H5'	36:DA:2200:C:P	2.60	0.41
1:AA:21:G:H2'	1:AA:22:G:C8	2.55	0.41
34:B8:40:GLU:O	34:B8:44:LYS:HE3	2.19	0.41
36:DA:534:U:O2'	53:DU:49:HIS:CD2	2.74	0.41
7:AG:53:LYS:HD3	7:AG:53:LYS:HA	1.97	0.41
17:AQ:81:ARG:C	17:AQ:83:ASP:N	2.74	0.41
46:DN:55:VAL:HG21	46:DN:127:ASP:H	1.84	0.41
50:DR:59:ASP:O	50:DR:60:LEU:CB	2.66	0.41
38:DC:59:ARG:HH22	38:DC:139:ASN:ND2	2.17	0.41
36:DA:2033:A:N6	36:DA:2036:C:C2	2.89	0.41
15:CO:14:GLU:OE1	15:CO:14:GLU:HA	2.20	0.41
36:BA:1491:G:OP1	36:BA:1494:A:N7	2.53	0.41
36:BA:1797:C:O2'	36:BA:1798:U:H5'	2.20	0.41
1:CA:707:C:H2'	1:CA:708:C:H6	1.86	0.41
1:CA:716:A:N3	11:CK:117:ASN:O	2.54	0.41
1:AA:1228:C:P	13:AM:108:ARG:NH2	2.93	0.41
9:CI:43:ALA:C	9:CI:45:ALA:N	2.73	0.41
53:BU:40:PHE:CD2	54:BV:75:PHE:CE2	3.09	0.41
35:B9:2:LYS:HD3	35:B9:2:LYS:HA	1.63	0.41
48:BP:27:HIS:CE1	54:BV:83:ARG:NH1	2.86	0.41
36:DA:2019:A:H5''	53:DU:27:LEU:HD22	2.03	0.41
36:BA:118:A:C8	36:BA:119:A:C8	3.09	0.41
1:AA:781:A:C4	1:AA:802:A:C2	3.08	0.41
1:AA:602:A:C2	1:AA:637:G:C2	3.08	0.41
1:AA:636:U:H5'	17:AQ:2:PRO:HG3	2.02	0.41
3:AC:61:ALA:C	3:AC:63:ASN:H	2.24	0.41
1:CA:824:C:H1'	8:CH:1:MET:HE1	2.02	0.41
36:DA:2150:U:H2'	36:DA:2151:G:C8	2.55	0.41
42:DG:95:ARG:O	42:DG:96:ARG:C	2.58	0.41
42:DG:106:LEU:HG	42:DG:106:LEU:O	2.19	0.41
44:BJ:128:UNK:C	44:BJ:130:UNK:N	2.81	0.41
41:BF:89:VAL:HG12	41:BF:90:PHE:N	2.34	0.41
36:BA:199:A:N6	36:BA:2433:A:H2'	2.36	0.41
1:CA:1079:G:H2'	1:CA:1080:A:C8	2.55	0.41
28:D2:68:ARG:CG	28:D2:72:ALA:HB2	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D1:71:TYR:O	27:D1:74:VAL:HB	2.21	0.41
36:DA:1975:G:C6	36:DA:1976:U:C4	3.08	0.41
22:CV:32:U:H5'	22:CV:33:U:OP2	2.21	0.41
37:DB:93:G:O2'	37:DB:94:C:H5'	2.19	0.41
38:DC:14:VAL:HG11	38:DC:222:VAL:HG22	2.02	0.41
36:DA:1169:G:N2	36:DA:1181:C:C2	2.88	0.41
36:DA:2564:A:C2	36:DA:2647:U:H4'	2.56	0.41
33:D7:1:MET:N	33:D7:1:MET:SD	2.88	0.41
36:DA:2413:G:N2	36:DA:2414:G:H1'	2.35	0.41
35:D9:2:LYS:C	35:D9:3:VAL:HG23	2.41	0.41
36:DA:2880:C:N3	36:DA:2881:C:C5	2.88	0.41
45:DK:8:UNK:O	45:DK:9:UNK:C	2.68	0.41
11:CK:124:LYS:HD3	11:CK:125:PHE:CZ	2.55	0.41
1:CA:56:U:O2'	1:CA:57:G:H5'	2.20	0.41
25:CZ:267:VAL:HG23	25:CZ:269:GLY:O	2.20	0.41
36:BA:2103:C:H2'	36:BA:2186:G:H22	1.83	0.41
36:BA:2190:G:C6	36:BA:2191:G:C4	3.08	0.41
28:B2:31:GLU:O	28:B2:35:LEU:HD12	2.21	0.41
28:B2:48:HIS:O	28:B2:49:LYS:C	2.58	0.41
2:CB:158:LEU:HA	2:CB:158:LEU:HD23	1.82	0.41
2:CB:97:TRP:HH2	2:CB:176:GLU:CB	2.34	0.41
25:AZ:120:ILE:C	25:AZ:122:LEU:N	2.73	0.41
25:AZ:173:GLY:O	25:AZ:174:SER:C	2.58	0.41
39:DD:30:GLU:CA	39:DD:35:LYS:HZ2	2.33	0.41
36:DA:2310:A:O2'	36:DA:2311:A:C5'	2.68	0.41
42:DG:125:PHE:CD1	42:DG:125:PHE:N	2.85	0.41
36:BA:84:A:H3'	57:BY:9:LYS:HB2	2.01	0.41
52:BT:31:SER:CB	52:BT:32:TYR:CD1	3.04	0.41
52:BT:45:PHE:CE2	52:BT:74:ARG:HB2	2.55	0.41
49:BQ:140:ALA:O	49:BQ:141:GLN:HB3	2.20	0.41
58:BZ:48:PHE:O	58:BZ:49:ARG:C	2.58	0.41
58:BZ:85:HIS:CE1	58:BZ:86:VAL:O	2.73	0.41
3:AC:12:LEU:HD22	3:AC:18:TRP:HZ3	1.85	0.41
43:DH:126:PRO:O	43:DH:127:GLU:CB	2.69	0.41
13:CM:56:LEU:HD13	13:CM:60:VAL:CG2	2.50	0.41
13:CM:70:LEU:C	13:CM:70:LEU:HD23	2.41	0.41
36:DA:802:A:H2'	36:DA:803:U:C6	2.56	0.41
4:CD:16:GLY:C	4:CD:33:MET:CE	2.89	0.41
2:CB:14:GLY:C	2:CB:15:VAL:HG13	2.41	0.41
51:DS:57:LYS:HG2	51:DS:58:LEU:N	2.35	0.41
58:DZ:163:LEU:HD23	58:DZ:163:LEU:N	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:137:SER:O	4:AD:138:TYR:C	2.58	0.41
36:BA:624:C:H5'	36:BA:625:G:OP2	2.20	0.41
29:B3:35:ARG:HG3	29:B3:36:VAL:N	2.35	0.41
1:CA:1298:C:H4'	1:CA:1299:A:C4	2.55	0.41
27:B1:13:ILE:HD11	27:B1:42:GLN:HE21	1.84	0.41
46:BN:34:LEU:HD13	46:BN:34:LEU:C	2.41	0.41
50:BR:63:ARG:HA	50:BR:80:PHE:CE2	2.56	0.41
5:CE:12:LEU:O	5:CE:12:LEU:HD22	2.20	0.41
25:AZ:279:GLU:O	25:AZ:280:GLY:C	2.58	0.41
36:BA:2579:C:O2'	40:BE:131:ALA:CB	2.64	0.41
36:BA:1227:G:O2'	36:BA:1228:G:H5'	2.21	0.41
5:CE:36:ASP:OD1	5:CE:36:ASP:C	2.58	0.41
39:DD:9:TYR:C	39:DD:10:THR:HG22	2.41	0.41
7:AG:79:ARG:HA	7:AG:83:ALA:O	2.20	0.41
1:CA:1258:G:H2'	1:CA:1259:C:C5	2.52	0.41
15:AO:3:ILE:HA	15:AO:7:GLU:OE1	2.21	0.41
2:AB:8:LYS:NZ	2:AB:217:ARG:NH2	2.69	0.41
36:DA:1209:G:N2	36:DA:1210:A:N6	2.61	0.41
40:BE:52:LEU:HD12	40:BE:52:LEU:HA	1.87	0.41
36:DA:2133:G:H2'	36:DA:2157:G:H21	1.78	0.41
1:AA:160:A:C1'	1:AA:344:A:C5	3.03	0.41
50:DR:48:VAL:HG13	50:DR:49:ASP:H	1.86	0.41
36:BA:1099:G:H2'	36:BA:1100:C:C6	2.55	0.41
36:BA:285:C:H2'	36:BA:286:C:C6	2.56	0.41
33:D7:47:ARG:NH2	36:DA:1311:G:H2'	2.36	0.41
34:B8:58:ILE:HG22	34:B8:58:ILE:O	2.20	0.41
36:BA:1271:G:C2	36:BA:1617:C:H4'	2.56	0.41
37:DB:66:A:C2	37:DB:109:C:C2	3.08	0.41
36:DA:2126:A:H1'	36:DA:2127:G:O4'	2.20	0.41
24:AY:45:U:H3'	24:AY:46:7MG:H5''	2.03	0.41
1:CA:1445:C:H2'	1:CA:1446:U:O4'	2.20	0.41
36:DA:752:A:HO2'	36:DA:753:C:P	2.42	0.41
2:CB:238:LEU:O	2:CB:239:VAL:C	2.59	0.41
36:BA:956:G:OP2	49:BQ:14:ARG:NH2	2.53	0.41
38:DC:87:GLU:HG3	38:DC:94:VAL:HG21	2.00	0.41
39:DD:229:VAL:CG2	39:DD:230:ASP:N	2.83	0.41
26:D0:20:ARG:CG	26:D0:20:ARG:HH11	2.33	0.41
36:DA:2261:C:O2'	36:DA:2262:U:H5'	2.21	0.41
24:AY:5:G:H8	24:AY:5:G:C5'	2.34	0.41
39:BD:106:ILE:O	39:BD:108:PRO:HD3	2.21	0.41
38:DC:75:LEU:HD12	38:DC:75:LEU:C	2.41	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:301:G:HO2'	36:BA:302:C:H6	1.64	0.41
6:CF:97:PHE:O	18:CR:31:LEU:HD23	2.20	0.41
22:AV:18:G:C2	22:AV:58:A:C5	3.09	0.41
36:DA:437:G:H2'	36:DA:438:G:C8	2.56	0.41
4:AD:50:ARG:O	4:AD:51:PRO:C	2.59	0.41
19:CS:51:VAL:O	19:CS:57:HIS:HA	2.20	0.41
36:DA:2000:G:O2'	36:DA:2001:A:H5'	2.20	0.41
57:DY:33:LYS:C	57:DY:35:TYR:N	2.74	0.41
45:BK:5:UNK:O	45:BK:7:UNK:N	2.54	0.41
36:DA:1510:G:C2'	36:DA:1511:C:H5'	2.51	0.41
22:AW:8:U:O2'	22:AW:9:A:C5'	2.69	0.41
24:CY:27:C:N3	24:CY:28:C:C5	2.89	0.41
36:DA:214:G:H1'	36:DA:216:A:O2'	2.20	0.41
1:AA:1031:G:H2'	1:AA:1032:G:C8	2.55	0.41
1:CA:828:A:H2'	1:CA:829:G:O5'	2.19	0.41
29:B3:1:MET:O	29:B3:3:ARG:N	2.54	0.41
12:AL:58:VAL:CG2	12:AL:58:VAL:O	2.67	0.41
1:CA:933:G:C4	1:CA:935:A:C8	3.09	0.41
36:DA:1429:G:H2'	36:DA:1430:C:H6	1.86	0.41
25:AZ:171:ILE:HD11	25:AZ:205:ALA:CB	2.50	0.41
49:BQ:38:GLU:HA	49:BQ:39:PRO:HD3	1.91	0.41
1:CA:814:A:N7	1:CA:816:A:C4	2.89	0.41
36:BA:387:U:H1'	36:BA:388:G:OP2	2.21	0.41
36:BA:2729:G:C2	36:BA:2730:C:C2	3.08	0.41
36:BA:524:U:H5'	36:BA:539:G:H22	1.86	0.41
36:BA:2656:U:H3	36:BA:2665:A:H2	1.68	0.41
36:BA:2460:U:O2'	36:BA:2461:C:H5'	2.20	0.41
36:DA:1877:A:H5'	36:DA:1878:G:OP2	2.21	0.41
1:CA:1425:U:H2'	1:CA:1426:C:C6	2.56	0.41
12:AL:78:GLN:O	12:AL:80:HIS:N	2.54	0.41
1:AA:734:G:C6	1:AA:735:C:N3	2.88	0.41
7:AG:124:LEU:HA	7:AG:124:LEU:HD23	1.90	0.41
1:CA:609:A:H2'	1:CA:610:G:H5'	2.02	0.41
29:D3:1:MET:HE2	29:D3:39:ASP:O	2.20	0.41
9:AI:105:ASP:OD1	9:AI:107:ARG:CG	2.68	0.41
6:CF:73:ASN:O	6:CF:74:ASP:C	2.58	0.41
41:DF:60:SER:OG	41:DF:61:GLY:N	2.53	0.41
13:AM:122:LYS:O	13:AM:123:ALA:HB2	2.21	0.41
24:CY:39:A:O5'	24:CY:39:A:H8	2.03	0.41
7:CG:76:ARG:HH11	7:CG:76:ARG:HG2	1.84	0.41
25:AZ:356:PRO:CD	25:AZ:370:PHE:HA	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DC:100:ILE:O	38:DC:100:ILE:CG2	2.68	0.41
36:DA:2396:G:O2'	36:DA:2397:G:H5'	2.20	0.41
34:D8:6:THR:CG2	36:DA:243:U:OP1	2.69	0.41
48:DP:57:THR:CG2	48:DP:59:LEU:HD22	2.51	0.41
47:DO:102:VAL:HG22	47:DO:118:ALA:HB1	2.02	0.41
47:DO:104:ARG:NH1	47:DO:104:ARG:CB	2.84	0.41
52:DT:23:ARG:C	52:DT:25:GLY:N	2.70	0.41
28:B2:25:VAL:O	28:B2:29:LYS:HG2	2.21	0.41
28:B2:2:LYS:CG	28:B2:59:ARG:HH22	2.34	0.41
31:D5:40:LYS:HD2	31:D5:45:VAL:O	2.21	0.41
2:AB:138:LEU:C	2:AB:140:HIS:N	2.70	0.41
36:DA:1858:G:HO2'	36:DA:1859:A:H8	1.68	0.41
1:CA:367:U:C5'	25:CZ:291:ARG:HD2	2.50	0.41
60:AZ:501:GDP:C8	60:AZ:501:GDP:H5'	2.56	0.41
42:DG:42:GLY:C	42:DG:43:LEU:HD22	2.41	0.41
42:DG:7:LEU:O	42:DG:8:LYS:C	2.59	0.41
57:BY:81:LYS:NZ	57:BY:98:VAL:HB	2.36	0.41
26:D0:40:GLN:HE22	26:D0:45:PHE:HB2	1.84	0.41
36:BA:2712:U:HO2'	36:BA:2712(A):A:P	2.43	0.41
52:BT:100:TYR:HD2	52:BT:103:ARG:HH21	1.67	0.41
9:AI:4:TYR:CE2	9:AI:88:TYR:O	2.73	0.41
36:BA:1301:A:O2'	36:BA:1302:A:P	2.79	0.41
1:CA:1103:C:H2'	1:CA:1104:G:O4'	2.21	0.41
1:AA:1305:G:N2	1:AA:1331:G:C2'	2.62	0.41
13:AM:39:ILE:CG2	13:AM:40:ASN:N	2.84	0.41
42:BG:88:ILE:CG2	42:BG:89:GLY:N	2.84	0.41
31:B5:50:GLY:C	31:B5:56:LYS:HE3	2.41	0.41
31:B5:57:VAL:CG1	31:B5:58:LEU:H	2.34	0.41
31:B5:57:VAL:HG12	31:B5:58:LEU:HD13	2.03	0.41
53:DU:90:VAL:O	53:DU:91:ASP:C	2.59	0.41
39:DD:145:VAL:HG22	39:DD:191:ALA:HB1	2.01	0.41
19:CS:40:ILE:HG21	19:CS:66:MET:O	2.21	0.41
51:BS:73:LEU:O	51:BS:73:LEU:HD23	2.20	0.41
1:AA:376:G:P	16:AP:67:THR:HG21	2.60	0.41
41:DF:135:LYS:HE2	41:DF:138:GLU:OE2	2.20	0.41
48:BP:115:LEU:CG	48:BP:116:GLY:H	2.20	0.41
48:BP:144:GLU:N	48:BP:145:PRO:CD	2.81	0.41
19:CS:15:LEU:HA	19:CS:15:LEU:HD23	1.95	0.41
36:DA:1019:U:H3	36:DA:1142(A):A:H62	1.68	0.41
46:DN:57:ALA:C	46:DN:58:ASP:OD1	2.59	0.41
36:BA:1088:A:N3	36:BA:1088:A:H3'	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DF:123:LEU:HD12	41:DF:124:LEU:N	2.34	0.41
41:DF:123:LEU:CD1	41:DF:192:LEU:HD22	2.50	0.41
20:CT:73:HIS:HB3	20:CT:74:LYS:HD3	2.03	0.41
1:CA:524:G:H2'	1:CA:525:C:C5	2.54	0.41
36:DA:2680:C:H5'	40:DE:189:PRO:HA	2.02	0.41
4:AD:98:GLU:OE2	4:AD:107:ARG:NH2	2.54	0.41
42:BG:110:ALA:O	42:BG:111:LEU:C	2.59	0.41
36:DA:105:C:H6	36:DA:105:C:O5'	2.04	0.41
30:B4:10:VAL:CG2	30:B4:11:PRO:N	2.84	0.41
36:DA:2481:G:HO2'	36:DA:2482:G:P	2.43	0.41
13:CM:54:VAL:HG12	13:CM:58:GLU:CG	2.48	0.41
2:AB:8:LYS:HZ3	2:AB:217:ARG:NH1	2.06	0.41
5:AE:31:LEU:HD21	5:AE:43:LEU:HD11	2.02	0.41
40:BE:38:THR:HG22	40:BE:40:GLU:N	2.36	0.41
36:BA:2638:G:P	40:BE:82:ARG:HH21	2.44	0.41
58:DZ:132:ASN:O	58:DZ:133:ILE:HD13	2.21	0.41
35:B9:16:VAL:HG12	35:B9:16:VAL:O	2.21	0.41
40:BE:132:HIS:HA	40:BE:135:HIS:CE1	2.55	0.41
50:BR:24:GLN:HB2	50:BR:44:LEU:HD23	2.00	0.41
37:BB:116:G:H2'	37:BB:116:G:N3	2.34	0.41
1:CA:946:A:C4	1:CA:947:G:N7	2.89	0.41
38:DC:76:ALA:CB	38:DC:114:VAL:HG23	2.48	0.41
36:DA:1116:C:C2'	36:DA:1117:G:H5'	2.51	0.41
36:DA:1335:U:H2'	36:DA:1336:A:C8	2.56	0.41
36:DA:1337:G:H2'	36:DA:1338:G:O4'	2.20	0.41
11:CK:58:PRO:HB2	11:CK:93:GLN:HG3	2.02	0.41
9:AI:118:LYS:HE2	9:AI:118:LYS:HB3	1.86	0.41
1:CA:353:A:H2'	1:CA:354:G:OP2	2.20	0.41
1:CA:59:A:C5'	1:CA:60:A:H5''	2.50	0.41
36:BA:236:C:H2'	36:BA:237:C:C5	2.55	0.41
36:BA:814:C:H6	36:BA:814:C:O5'	2.03	0.41
47:DO:88:ASN:OD1	47:DO:90:GLN:N	2.53	0.41
34:B8:40:GLU:O	34:B8:44:LYS:CD	2.69	0.41
1:CA:80:G:C2'	1:CA:81:U:H5'	2.51	0.41
33:D7:12:ARG:HG3	33:D7:12:ARG:HH11	1.86	0.41
22:AV:64:A:O2'	22:AV:65:G:H5'	2.21	0.41
36:DA:2028:U:H2'	36:DA:2029:G:H8	1.82	0.41
1:CA:429:U:O2	1:CA:430:A:C8	2.73	0.41
50:DR:83:ILE:HA	50:DR:86:ARG:HD3	2.02	0.41
36:DA:1313:U:H2'	36:DA:1610:A:N1	2.36	0.41
20:CT:65:LYS:O	20:CT:68:LYS:HG3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:20:ALA:C	6:AF:22:GLU:N	2.74	0.41
54:DV:34:GLU:HG2	54:DV:56:SER:HB2	2.02	0.41
36:BA:949:C:O2'	36:BA:950:G:H5'	2.21	0.41
2:AB:209:ARG:NH1	2:AB:239:VAL:HG11	2.35	0.41
36:BA:1416:G:H1'	36:BA:1417:C:C5	2.55	0.41
36:BA:1588:C:N4	36:BA:1589:C:N4	2.68	0.41
12:CL:126:LYS:C	12:CL:128:ALA:H	2.24	0.41
36:DA:319:C:H2'	36:DA:320:A:O4'	2.20	0.41
47:BO:12:ASP:OD2	47:BO:86:ILE:N	2.53	0.41
14:CN:27:CYS:SG	14:CN:29:ARG:HB2	2.61	0.41
36:DA:1591:G:C6	36:DA:1592:C:C4	3.09	0.41
9:CI:28:VAL:HG21	9:CI:33:PHE:HD1	1.86	0.41
7:AG:9:VAL:HG13	7:AG:94:ARG:HD3	2.03	0.41
1:AA:41:G:H2'	1:AA:42:G:H8	1.83	0.41
1:CA:791:G:C2'	1:CA:792:A:H5'	2.51	0.41
25:AZ:313:HIS:HB3	25:AZ:405:GLU:OXT	2.20	0.41
2:AB:56:ARG:NH1	2:AB:56:ARG:HG2	2.33	0.41
44:DJ:93:UNK:HA	44:DJ:96:UNK:CB	2.50	0.41
11:CK:108:ILE:CG2	18:CR:88:LYS:HB2	2.51	0.41
46:BN:15:LEU:C	46:BN:15:LEU:HD13	2.41	0.41
36:BA:742:G:H2'	36:BA:743:G:C8	2.54	0.41
36:BA:2624:G:H2'	36:BA:2625:G:C5'	2.51	0.41
16:CP:60:LEU:HD23	16:CP:64:ALA:O	2.21	0.41
1:CA:756:C:O2'	1:CA:757:U:H5'	2.21	0.41
1:CA:321:A:C2	1:CA:333:G:C2	3.08	0.41
25:CZ:194:GLU:OE1	25:CZ:194:GLU:CA	2.68	0.41
46:BN:79:PRO:C	46:BN:81:GLY:N	2.74	0.41
36:DA:1847:A:N3	36:DA:1847:A:C2'	2.83	0.41
1:AA:1360:A:H2'	1:AA:1361:G:C8	2.56	0.41
36:DA:874:G:H2'	36:DA:875:G:H8	1.86	0.41
1:AA:926:G:H5''	1:AA:927:G:O5'	2.20	0.41
7:CG:56:GLN:HB3	7:CG:61:VAL:HG23	2.03	0.41
1:AA:392:G:H2'	1:AA:393:A:H8	1.86	0.41
1:CA:31:G:N1	1:CA:48:C:H5''	2.35	0.41
8:CH:68:ARG:HH11	8:CH:68:ARG:HG2	1.85	0.41
51:DS:79:ALA:O	51:DS:80:LEU:HG	2.21	0.41
15:AO:82:ILE:CD1	15:AO:87:ILE:HB	2.51	0.41
25:CZ:27:LEU:HG	25:CZ:28:THR:N	2.35	0.41
34:D8:6:THR:HG21	36:DA:243:U:OP1	2.21	0.41
36:DA:591:C:C2	36:DA:592:G:C8	3.09	0.41
36:DA:594:U:H2'	36:DA:595:C:H6	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:660:G:H2'	36:DA:661:C:H6	1.86	0.41
53:BU:95:LEU:C	53:BU:97:ASP:N	2.71	0.41
53:BU:95:LEU:HD11	54:BV:11:GLN:HG3	1.99	0.41
19:CS:71:LEU:O	19:CS:72:GLY:C	2.59	0.41
28:B2:42:GLY:C	28:B2:43:GLN:HG3	2.40	0.41
25:AZ:19:HIS:CG	25:AZ:113:MET:HB3	2.55	0.41
25:CZ:135:MET:SD	25:CZ:150:VAL:HG13	2.60	0.41
42:DG:11:TYR:HA	42:DG:15:VAL:HG23	2.03	0.41
42:DG:17:PRO:O	42:DG:21:ARG:HB2	2.20	0.41
25:CZ:272:MET:O	25:CZ:273:HIS:HB2	2.21	0.41
46:BN:132:ALA:O	46:BN:133:GLN:CB	2.66	0.41
36:DA:307:G:N1	36:DA:310:A:OP2	2.53	0.41
36:DA:2467:C:H4'	49:DQ:123:HIS:ND1	2.36	0.41
41:BF:133:ASN:N	41:BF:133:ASN:ND2	2.67	0.41
41:BF:160:ASN:ND2	41:BF:160:ASN:C	2.71	0.41
3:AC:13:GLY:H	14:AN:57:ARG:CD	2.34	0.41
43:DH:88:LEU:H	43:DH:88:LEU:CD2	2.33	0.41
42:DG:139:LEU:CA	42:DG:144:ILE:HD13	2.50	0.41
58:DZ:166:SER:N	58:DZ:167:PRO:CA	2.79	0.41
40:BE:59:VAL:HG23	40:BE:73:GLU:HG2	2.03	0.41
41:BF:205:ARG:O	41:BF:206:ILE:HD13	2.21	0.41
37:DB:63:G:C2	37:DB:64:C:C2	3.09	0.41
4:CD:24:GLU:O	4:CD:28:SER:OG	2.37	0.41
48:BP:126:VAL:HG22	48:BP:145:PRO:HG2	2.02	0.41
58:BZ:126:VAL:O	58:BZ:126:VAL:HG23	2.21	0.41
46:DN:64:GLY:C	46:DN:66:LYS:H	2.23	0.41
4:AD:11:LEU:O	4:AD:13:ARG:O	2.39	0.41
51:DS:98:VAL:O	51:DS:99:LYS:C	2.57	0.41
24:AY:67:G:O2'	24:AY:68:C:H5'	2.21	0.41
36:DA:304:G:C6	36:DA:305:U:N3	2.89	0.41
13:CM:82:MET:CG	13:CM:83:ASP:H	2.29	0.41
24:AY:76:A:C5'	25:AZ:231:ILE:HD11	2.49	0.41
30:B4:20:ASN:ND2	30:B4:20:ASN:C	2.73	0.41
2:AB:105:PHE:CE1	2:AB:152:PHE:CZ	3.08	0.41
1:CA:572:A:H5'	1:CA:573:A:OP2	2.21	0.41
24:CY:60:U:OP1	24:CY:60:U:H6	2.04	0.41
2:AB:48:MET:HA	2:AB:51:LEU:HB2	2.03	0.41
5:AE:11:ILE:CD1	5:AE:33:VAL:HG23	2.50	0.41
36:BA:2854:G:C2	36:BA:2864:G:C2	3.08	0.41
57:BY:57:GLN:HA	57:BY:57:GLN:OE1	2.19	0.41
24:CY:44:G:H1'	24:CY:45:U:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:738:C:OP1	6:CF:92:LYS:HE3	2.21	0.41
1:CA:945:G:C6	1:CA:1337:G:C4	3.09	0.41
37:BB:15:A:H1'	37:BB:110:G:C6	2.55	0.41
36:DA:565:C:H4'	36:DA:1253:A:C6	2.56	0.41
1:CA:1286:A:O2'	1:CA:1287:A:P	2.78	0.41
1:AA:259:G:C6	1:AA:260:G:C5	3.08	0.41
1:AA:321:A:N7	1:AA:328:C:H1'	2.35	0.41
8:CH:127:LEU:CD2	8:CH:127:LEU:N	2.84	0.41
54:DV:77:ALA:O	54:DV:79:VAL:N	2.53	0.41
36:BA:2845:G:C2'	36:BA:2846:G:H5'	2.51	0.41
36:DA:2107:C:C5	36:DA:2108:C:C5	3.09	0.41
42:DG:172:LEU:O	42:DG:176:LEU:HD12	2.21	0.41
9:AI:128:ARG:H	9:AI:128:ARG:HD2	1.85	0.41
25:CZ:204:ASP:O	25:CZ:208:GLU:HG2	2.21	0.41
1:AA:80:G:C3'	1:AA:81:U:C5'	2.99	0.41
36:DA:1921:G:C2'	36:DA:1922:G:H5'	2.50	0.41
31:B5:21:SER:C	31:B5:23:HIS:N	2.73	0.41
22:AV:58:A:C2	22:AV:61:C:C5	3.08	0.41
29:B3:26:LEU:CB	29:B3:28:LEU:HD21	2.49	0.41
36:BA:1068:G:N3	36:BA:1068:G:H2'	2.36	0.41
16:AP:26:ARG:HD2	16:AP:31:LYS:O	2.20	0.41
36:BA:1029:A:H2'	36:BA:1030:G:O4'	2.21	0.41
20:CT:62:LEU:HA	20:CT:65:LYS:HB2	2.03	0.41
1:AA:839:U:O2	1:AA:839:U:C2'	2.68	0.41
32:D6:7:ILE:HG23	32:D6:29:ASN:ND2	2.34	0.41
49:DQ:2:LEU:HD11	49:DQ:69:PHE:CE1	2.56	0.41
50:DR:34:ILE:O	50:DR:114:VAL:HG22	2.21	0.41
16:AP:53:VAL:HG23	16:AP:54:GLU:N	2.34	0.41
56:DX:31:HIS:O	56:DX:34:ALA:HB3	2.21	0.41
36:BA:839:U:H2'	36:BA:840:C:H6	1.85	0.41
9:CI:8:GLY:CA	9:CI:79:LEU:HD12	2.50	0.41
58:DZ:19:ARG:C	58:DZ:21:ALA:N	2.73	0.41
36:BA:1651:G:C2	36:BA:2007:C:C2	3.09	0.41
50:BR:10:LEU:HD12	50:BR:10:LEU:C	2.40	0.41
1:CA:795:C:H6	1:CA:795:C:O5'	2.03	0.41
21:CU:12:LYS:HG2	21:CU:22:ARG:HB2	2.02	0.41
36:DA:2684:U:O2'	47:DO:68:GLU:HG3	2.20	0.41
36:BA:1678:G:N2	36:BA:1989:G:N2	2.69	0.41
36:BA:709:U:H2'	36:BA:710:G:H8	1.86	0.41
36:DA:801:G:O4'	41:DF:54:ARG:HD2	2.21	0.41
36:DA:817:C:O2'	36:DA:839:U:OP1	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:635:G:O2'	1:AA:636:U:H5'	2.21	0.41
36:BA:2291:U:O2'	36:BA:2374:C:H1'	2.20	0.41
36:BA:391:G:H1'	36:BA:411:G:O4'	2.20	0.41
36:DA:431:U:O2'	36:DA:432:A:H5'	2.21	0.41
1:AA:571:U:O2	1:AA:918:A:H5'	2.21	0.41
49:DQ:66:ILE:HD12	49:DQ:66:ILE:C	2.40	0.41
42:BG:48:GLU:C	42:BG:50:ALA:H	2.24	0.41
36:DA:114:U:H2'	36:DA:115:C:C6	2.55	0.41
36:DA:25:U:H5''	55:DW:79:GLY:HA2	2.02	0.41
1:AA:119:A:H5'	1:AA:120:A:C4	2.56	0.41
1:AA:461:A:C6	1:AA:471:G:C5	3.09	0.41
36:DA:2025:C:H2'	36:DA:2026:C:H6	1.86	0.41
1:AA:35:G:H2'	1:AA:36:C:C6	2.55	0.41
36:BA:1679:U:C5	36:BA:1680:U:C4	3.08	0.41
7:AG:121:ALA:O	7:AG:124:LEU:HB2	2.20	0.41
1:CA:1529:G:H4'	1:CA:1530:G:OP2	2.21	0.41
1:AA:52:G:C6	1:AA:53:A:C6	3.08	0.41
1:AA:1106:G:O2'	1:AA:1107:C:H5'	2.21	0.41
1:CA:633:G:H5'	1:CA:634:C:OP2	2.20	0.41
1:CA:118:U:H3'	1:CA:288:A:H61	1.86	0.41
25:AZ:4:GLU:HG2	25:AZ:4:GLU:H	1.60	0.41
36:DA:1582:C:H2'	36:DA:1583:A:H8	1.85	0.41
38:DC:78:ALA:CB	38:DC:116:THR:HG23	2.51	0.41
25:CZ:26:THR:CG2	25:CZ:27:LEU:N	2.84	0.41
36:DA:1188:U:C2'	36:DA:1189:A:H5'	2.50	0.41
34:D8:3:LYS:HD3	36:DA:242:G:O5'	2.21	0.41
36:DA:253:C:H2'	36:DA:254:G:O4'	2.19	0.41
52:DT:27:THR:O	52:DT:28:VAL:CB	2.45	0.41
32:B6:41:PRO:HG2	32:B6:41:PRO:O	2.21	0.41
57:DY:9:LYS:CG	57:DY:10:GLY:H	2.30	0.41
53:BU:59:ARG:C	53:BU:61:TRP:N	2.74	0.41
13:CM:86:CYS:O	13:CM:87:TYR:C	2.58	0.41
19:CS:10:PHE:CZ	19:CS:70:LYS:HD2	2.55	0.41
28:B2:11:GLU:HA	28:B2:14:ARG:CG	2.34	0.41
28:B2:48:HIS:CA	36:BA:95:G:O2'	2.68	0.41
56:BX:11:PRO:HA	56:BX:28:PHE:HB2	1.97	0.41
31:D5:57:VAL:CG1	31:D5:58:LEU:N	2.79	0.41
23:AX:26:A:H3'	23:AX:27:A:O4'	2.21	0.41
39:BD:30:GLU:HB2	39:BD:35:LYS:NZ	2.36	0.41
22:AW:18:G:N1	22:AW:55:U:H1'	2.30	0.41
1:AA:521:G:OP2	12:AL:54:LYS:HE2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DD:77:ALA:O	39:DD:116:GLN:CG	2.68	0.41
25:CZ:134:PHE:HA	25:CZ:171:ILE:O	2.21	0.41
42:DG:40:ASN:HB3	42:DG:91:ARG:HG3	2.03	0.41
57:BY:31:LEU:HD23	57:BY:36:ALA:C	2.41	0.41
57:DY:43:ASN:CB	57:DY:64:GLU:HA	2.49	0.41
26:D0:47:PRO:HG3	26:D0:59:LEU:CD2	2.51	0.41
26:D0:40:GLN:OE1	26:D0:43:THR:HA	2.21	0.41
28:D2:47:ASN:O	28:D2:50:ILE:HD12	2.19	0.41
58:BZ:18:LEU:HD22	58:BZ:18:LEU:H	1.86	0.41
2:AB:164:VAL:HG11	2:AB:167:PRO:HA	2.03	0.41
57:DY:41:GLY:O	57:DY:42:VAL:O	2.38	0.41
46:DN:137:LYS:HB3	46:DN:138:LEU:H	1.75	0.41
2:AB:41:ILE:HD12	2:AB:41:ILE:N	2.36	0.41
37:BB:43:C:H5'	37:BB:44:G:OP2	2.21	0.41
37:BB:42:C:O2'	37:BB:43:C:P	2.79	0.41
1:CA:1098:C:H2'	1:CA:1099:G:O4'	2.20	0.41
1:CA:1106:G:H2'	1:CA:1107:C:H6	1.85	0.41
35:D9:17:ILE:O	35:D9:24:TYR:N	2.54	0.41
1:CA:1054:C:C6	1:CA:1196:U:N3	2.87	0.41
53:BU:11:ARG:HG2	53:BU:11:ARG:O	2.20	0.41
36:BA:666:G:C6	36:BA:667:U:C4	3.08	0.41
42:BG:84:LYS:O	42:BG:85:GLY:C	2.60	0.41
1:AA:1189:C:H4'	3:AC:10:PHE:CE1	2.55	0.41
13:CM:65:LYS:C	13:CM:66:LEU:CG	2.89	0.41
13:CM:70:LEU:O	13:CM:73:GLU:N	2.54	0.41
26:B0:27:GLU:HB3	26:B0:69:PHE:CD1	2.56	0.41
12:AL:43:VAL:CG2	12:AL:93:LEU:HD22	2.50	0.41
53:DU:98:LEU:C	53:DU:100:VAL:N	2.74	0.41
10:AJ:58:ASP:O	10:AJ:59:SER:CB	2.64	0.41
1:CA:192:U:C1'	20:CT:103:GLY:HA2	2.50	0.41
36:BA:613:G:N1	36:BA:614:U:C4	2.89	0.41
19:AS:49:ILE:H	19:AS:49:ILE:CD1	2.06	0.41
25:CZ:381:GLU:HG3	25:CZ:381:GLU:O	2.20	0.41
1:AA:1392:G:C2'	1:AA:1393:U:H5'	2.51	0.41
25:CZ:381:GLU:O	25:CZ:382:GLU:O	2.39	0.41
25:CZ:322:VAL:O	25:CZ:323:LEU:C	2.60	0.41
14:CN:53:LEU:HA	14:CN:54:PRO:HD3	1.80	0.41
4:CD:17:VAL:HG12	4:CD:17:VAL:O	2.21	0.41
39:DD:162:SER:O	39:DD:178:PRO:HG3	2.20	0.41
51:BS:50:SER:O	51:BS:51:ALA:HB2	2.20	0.41
36:BA:1817:G:C2'	36:BA:1818:U:C5'	2.92	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1799:G:H5'	36:BA:1819:A:H61	1.86	0.41
58:DZ:54:HIS:O	58:DZ:98:MET:HE1	2.21	0.41
58:DZ:126:VAL:HG11	58:DZ:161:VAL:HG13	2.03	0.41
41:BF:205:ARG:O	41:BF:205:ARG:HG2	2.19	0.41
1:CA:1376:U:H2'	1:CA:1377:A:H8	1.86	0.41
1:CA:1346:A:C5	7:CG:10:ARG:NH2	2.89	0.41
36:DA:2810:A:H1'	40:DE:61:ARG:HH22	1.85	0.41
10:AJ:74:ILE:HG12	10:AJ:74:ILE:H	1.67	0.41
4:CD:24:GLU:H	4:CD:112:VAL:CG2	2.34	0.41
10:CJ:3:LYS:N	10:CJ:74:ILE:O	2.53	0.41
1:AA:189(E):U:O2'	1:AA:189(F):U:C5'	2.69	0.41
1:AA:189(E):U:O2'	1:AA:189(F):U:H5'	2.20	0.41
1:CA:1047:G:O3'	14:CN:4:LYS:HB2	2.21	0.41
48:BP:84:ASN:CG	48:BP:116:GLY:HA2	2.42	0.41
29:B3:35:ARG:NH1	29:B3:35:ARG:HB2	2.17	0.41
5:CE:79:GLU:HB3	5:CE:92:LYS:HA	2.03	0.41
19:CS:44:MET:HA	19:CS:44:MET:CE	2.51	0.41
37:DB:58:A:C2'	37:DB:59:A:H5'	2.51	0.41
5:CE:144:THR:C	5:CE:146:ALA:N	2.73	0.41
5:CE:144:THR:O	5:CE:146:ALA:N	2.54	0.41
46:DN:63:THR:HB	46:DN:66:LYS:HZ3	1.86	0.41
36:BA:1827:C:O2'	36:BA:1828:G:H5'	2.21	0.41
42:BG:168:GLU:O	42:BG:169:ALA:C	2.59	0.41
1:CA:1280:A:H5''	10:CJ:40:LEU:HD12	2.03	0.41
41:DF:192:LEU:HD11	41:DF:194:MET:HE2	2.02	0.41
5:CE:31:LEU:CD2	5:CE:43:LEU:HD11	2.51	0.41
41:DF:114:VAL:HG21	41:DF:202:PHE:HE2	1.86	0.41
5:CE:10:MET:HA	5:CE:32:VAL:HA	2.03	0.41
3:CC:11:ARG:HH11	3:CC:11:ARG:HG2	1.86	0.41
1:AA:573:A:H8	1:AA:573:A:C5'	2.19	0.41
38:BC:171:ILE:HD13	38:BC:196:LEU:HD21	2.02	0.41
47:BO:64:ARG:NE	52:BT:70:VAL:HG21	2.35	0.41
41:BF:64:ILE:HG21	41:BF:75:HIS:HB2	2.03	0.41
1:CA:524:G:C6	1:CA:525:C:N4	2.89	0.41
38:DC:20:TYR:O	38:DC:224:ILE:HA	2.21	0.41
13:CM:79:LYS:O	13:CM:82:MET:CG	2.66	0.41
27:D1:45:ASN:CG	27:D1:64:ALA:HB2	2.41	0.41
36:BA:2838:G:O2'	50:BR:45:ARG:HD3	2.21	0.41
19:AS:23:ASN:ND2	19:AS:44:MET:CE	2.84	0.41
36:BA:1528:A:C2'	36:BA:1528:A:N3	2.81	0.41
36:BA:1539:G:H2'	36:BA:1540:U:C5'	2.44	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1256:A:C2	1:CA:1277:C:C2	3.09	0.41
18:CR:53:ARG:C	18:CR:55:ARG:H	2.24	0.41
18:CR:74:ARG:HA	18:CR:79:LEU:O	2.21	0.41
46:BN:39:ARG:C	46:BN:41:ASP:N	2.74	0.41
36:DA:2179:C:H4'	36:DA:2180:U:OP1	2.20	0.41
9:CI:50:LEU:CD2	9:CI:85:LEU:HD21	2.50	0.41
36:DA:1366:A:H2'	36:DA:1367:A:O4'	2.21	0.41
22:CV:20:U:H3'	22:CV:21:A:C5'	2.51	0.41
36:BA:191:A:H2'	36:BA:192:C:H6	1.85	0.41
4:AD:112:VAL:HG13	4:AD:113:SER:N	2.36	0.41
1:AA:1320:C:H2'	1:AA:1321:C:O4'	2.20	0.41
1:CA:983:A:O2'	1:CA:1201:A:N6	2.53	0.41
4:CD:65:ARG:O	4:CD:65:ARG:HG2	2.20	0.41
40:BE:49:LEU:HD22	40:BE:49:LEU:N	2.36	0.41
10:CJ:81:THR:C	10:CJ:83:GLU:H	2.24	0.41
1:AA:173:U:C5'	1:AA:197:A:O4'	2.62	0.41
41:BF:184:TYR:CD1	48:BP:7:ARG:NH1	2.89	0.41
36:DA:1722:A:O2'	36:DA:1739:U:H5'	2.20	0.41
51:DS:89:ARG:O	51:DS:92:TYR:HB3	2.20	0.41
49:BQ:13:GLN:H	49:BQ:13:GLN:HG3	1.59	0.41
1:CA:949:A:H4'	1:CA:1364:U:H5	1.86	0.41
1:CA:945:G:C6	1:CA:1337:G:C5	3.09	0.41
27:D1:50:ARG:NH2	36:DA:2200:C:OP2	2.52	0.41
58:DZ:140:ASP:C	58:DZ:141:VAL:CG2	2.88	0.41
36:BA:812:C:H2'	36:BA:813:U:H6	1.85	0.41
7:AG:118:VAL:CG2	7:AG:119:ARG:N	2.83	0.41
9:CI:48:GLU:HB3	9:CI:101:PHE:HE1	1.85	0.41
36:DA:563:G:N3	36:DA:563:G:H2'	2.35	0.41
41:DF:167:ALA:O	41:DF:170:LEU:HD23	2.20	0.41
25:CZ:19:HIS:CB	25:CZ:116:THR:OG1	2.69	0.41
20:AT:83:ARG:O	20:AT:86:ARG:HB3	2.20	0.41
39:DD:81:ALA:HA	39:DD:113:VAL:HG11	2.03	0.41
42:DG:140:ILE:HD12	42:DG:140:ILE:C	2.41	0.41
1:CA:1145:C:O2'	1:CA:1146:A:P	2.78	0.41
36:BA:1682:G:H5'	36:BA:1762:A:HO2'	1.85	0.41
31:B5:19:ARG:HA	36:BA:2046:G:O5'	2.20	0.41
5:CE:64:ARG:NH1	5:CE:64:ARG:CG	2.82	0.41
36:DA:614(C):A:H1'	36:DA:615:G:O4'	2.20	0.41
25:CZ:103:ILE:HD11	25:CZ:206:ILE:HD13	2.00	0.41
1:AA:1413:A:C2	1:AA:1488:G:C2	3.09	0.41
29:D3:28:LEU:CD2	29:D3:28:LEU:N	2.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AV:49:C:H2'	22:AV:50:U:C6	2.56	0.41
54:DV:65:GLY:O	54:DV:66:ARG:HG3	2.20	0.41
47:BO:113:LYS:O	47:BO:117:LEU:HG	2.21	0.41
40:BE:11:MET:HB3	40:BE:24:THR:HA	2.03	0.41
20:CT:30:LYS:HE3	20:CT:34:LYS:HZ1	1.83	0.41
8:CH:29:SER:CB	8:CH:32:LYS:HG3	2.48	0.41
37:DB:81:G:C2	37:DB:82:G:N7	2.89	0.41
1:CA:411:A:C6	1:CA:429:U:C4	3.08	0.41
1:CA:1249:C:O2'	9:CI:68:GLY:O	2.39	0.41
10:AJ:46:ARG:NH1	10:AJ:46:ARG:CG	2.83	0.41
36:DA:67:U:H2'	36:DA:68:G:C8	2.56	0.41
36:DA:2740:A:C6	36:DA:2741:A:C6	3.09	0.41
36:DA:1314:C:C6	36:DA:1314:C:H5'	2.52	0.41
3:CC:94:LEU:O	3:CC:95:THR:OG1	2.35	0.41
36:DA:608:A:H2'	36:DA:609:A:H8	1.84	0.41
36:BA:2577:A:H5''	36:BA:2578:G:H5'	2.03	0.41
36:BA:2574:G:H2'	36:BA:2575:C:H6	1.85	0.41
36:DA:15:G:C6	36:DA:16:G:N7	2.88	0.41
3:AC:113:ALA:N	3:AC:114:PRO:CD	2.83	0.41
36:BA:271(X):G:O3'	36:BA:272(D):G:H4'	2.19	0.41
36:BA:566:U:O4	54:BV:78:LYS:HE3	2.21	0.41
37:BB:6:C:HO2'	51:BS:36:TYR:HE2	1.67	0.41
36:DA:2489:G:C6	36:DA:2490:G:N1	2.88	0.41
1:CA:441:A:H3'	1:CA:442:C:H6	1.86	0.41
25:AZ:229:PHE:CD1	25:AZ:229:PHE:N	2.88	0.41
46:DN:39:ARG:C	46:DN:41:ASP:N	2.74	0.41
46:DN:41:ASP:C	53:DU:64:ARG:NH1	2.74	0.41
36:DA:2363:C:O2'	36:DA:2364:C:H5'	2.21	0.41
36:BA:1233:C:C2	36:BA:1234:U:C6	3.09	0.41
36:DA:2870:C:H5''	50:DR:65:LEU:CD2	2.50	0.41
44:DJ:97:UNK:CA	44:DJ:132:UNK:HA	2.51	0.41
36:DA:1782:C:O5'	36:DA:1782:C:H6	2.04	0.41
36:BA:1963:U:C2'	36:BA:1963:U:O2	2.69	0.41
36:DA:2151:G:O2'	36:DA:2152:G:H5'	2.21	0.41
1:CA:157:G:H2'	1:CA:158:G:C8	2.56	0.41
36:BA:1805:U:H5''	39:BD:250:TRP:CD2	2.56	0.41
22:AW:10:G:C6	22:AW:26:A:C2	3.09	0.41
1:CA:1187:G:H2'	1:CA:1187:G:N3	2.36	0.41
7:AG:28:ASN:O	7:AG:31:MET:N	2.52	0.41
1:CA:518:C:H2'	1:CA:530:G:N3	2.36	0.41
25:AZ:263:ARG:HG3	25:AZ:263:ARG:HH11	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:B0:20:ARG:NH1	36:BA:2271:G:C5'	2.84	0.41
1:CA:484:G:O2'	1:CA:485:G:H5''	2.21	0.41
47:BO:6:THR:O	47:BO:20:MET:HA	2.21	0.41
36:DA:2016:U:C6	36:DA:2017:U:C5	3.09	0.41
36:DA:1916:A:H2'	36:DA:1917:U:O4'	2.21	0.41
39:BD:122:ASP:O	39:BD:123:ALA:O	2.39	0.41
26:B0:60:PHE:N	26:B0:60:PHE:CD1	2.89	0.41
36:BA:382:G:C2'	36:BA:383:U:H5'	2.51	0.41
1:CA:687:A:N1	1:CA:700:G:O2'	2.46	0.41
3:CC:178:LEU:C	3:CC:180:ALA:N	2.74	0.41
7:CG:50:ILE:HD12	7:CG:125:MET:CG	2.51	0.41
1:AA:1385:G:O2'	1:AA:1386:G:H5'	2.21	0.41
43:BH:104:GLU:HG2	43:BH:105:LEU:N	2.35	0.41
1:CA:202:U:H4'	1:CA:203:U:OP2	2.21	0.41
53:DU:37:GLU:O	53:DU:38:THR:C	2.60	0.41
36:DA:2413:G:C2	36:DA:2414:G:H1'	2.55	0.41
35:D9:2:LYS:HA	35:D9:2:LYS:HD3	1.77	0.41
1:CA:1424:C:O2'	1:CA:1425:U:H5'	2.21	0.41
36:DA:1416:G:N2	36:DA:1582:C:O2	2.53	0.41
36:BA:1712:C:H2'	36:BA:1713:U:O4'	2.20	0.41
8:CH:34:GLU:O	8:CH:35:ILE:C	2.58	0.41
1:AA:568:G:O6	12:AL:5:PRO:HD3	2.21	0.41
2:CB:167:PRO:O	2:CB:171:ALA:N	2.54	0.41
36:DA:1432:C:H2'	36:DA:1433:U:O4'	2.21	0.41
29:D3:12:PRO:O	29:D3:13:ILE:C	2.58	0.41
22:AW:20:U:O2'	22:AW:21:A:H5''	2.21	0.41
36:DA:1355:G:O2'	36:DA:1356:G:H5'	2.20	0.41
36:BA:2783:G:H2'	36:BA:2784:C:C6	2.56	0.41
36:BA:2446:G:H2'	36:BA:2447:G:H5''	2.03	0.41
36:DA:1459:G:C6	36:DA:1461:G:C5	3.09	0.41
6:CF:14:LEU:HA	6:CF:14:LEU:HD13	1.82	0.41
56:BX:68:ARG:O	56:BX:68:ARG:HD3	2.21	0.41
1:AA:1165:C:C2'	1:AA:1166:G:H5'	2.50	0.41
1:AA:24:U:H2'	1:AA:25:C:C6	2.56	0.41
19:AS:34:TRP:O	19:AS:36:ARG:N	2.53	0.41
47:BO:69:ILE:HB	47:BO:77:ILE:CG2	2.51	0.41
26:D0:66:VAL:HG12	26:D0:82:ARG:HB3	2.03	0.41
1:CA:128:G:H5'	17:CQ:2:PRO:N	2.36	0.41
36:BA:1842:G:H2'	36:BA:1843:C:C6	2.55	0.41
4:CD:190:ASP:HB3	4:CD:193:ASP:OD2	2.21	0.41
1:AA:306:G:O2'	1:AA:307:C:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1167:U:C2	36:DA:1183:G:N2	2.89	0.41
56:DX:26:TYR:OH	56:DX:88:LYS:HB2	2.21	0.41
45:BK:66:UNK:O	45:BK:67:UNK:C	2.69	0.41
36:BA:402:A:O2'	36:BA:403:U:H5'	2.21	0.41
36:DA:61:G:O5'	36:DA:61:G:H8	2.04	0.41
3:AC:33:LEU:C	3:AC:33:LEU:HD13	2.42	0.41
54:DV:82:ARG:HH11	54:DV:82:ARG:HG2	1.86	0.41
58:DZ:68:PRO:O	58:DZ:68:PRO:HG2	2.21	0.41
6:AF:101:ALA:OXT	18:AR:28:GLU:HG2	2.20	0.41
45:DK:66:UNK:O	45:DK:67:UNK:C	2.68	0.41
38:DC:149:ILE:HG23	38:DC:150:GLY:N	2.36	0.41
52:DT:33:LYS:HZ1	52:DT:43:GLN:CB	2.34	0.41
52:DT:29:ARG:HG2	52:DT:86:ILE:HG22	2.03	0.41
24:CY:1:A:N6	24:CY:72:U:H3	2.01	0.41
32:D6:20:ASN:O	32:D6:21:TYR:CG	2.74	0.41
28:B2:18:PRO:HG3	28:B2:72:ALA:HA	2.03	0.41
28:B2:46:GLN:HB3	28:B2:48:HIS:CE1	2.56	0.41
28:B2:52:ASP:N	28:B2:52:ASP:OD1	2.53	0.41
28:B2:55:ARG:HG3	28:B2:55:ARG:HH11	1.85	0.41
25:AZ:204:ASP:HA	25:AZ:207:ASP:HB2	2.03	0.41
38:BC:78:ALA:HB1	38:BC:116:THR:HG23	2.03	0.41
3:CC:3:ASN:HB2	3:CC:4:LYS:H	1.70	0.41
49:DQ:21:THR:HG22	49:DQ:101:ARG:HD2	2.00	0.41
25:CZ:158:LEU:O	25:CZ:163:PHE:HB2	2.21	0.41
37:DB:42:C:O2'	37:DB:43:C:P	2.79	0.41
36:DA:143:G:H1'	56:DX:37:THR:CG2	2.51	0.41
36:BA:480:A:H3'	36:BA:481:G:H5''	2.02	0.41
57:BY:39:VAL:HB	57:BY:40:GLU:H	1.73	0.41
57:BY:43:ASN:HA	57:BY:65:ALA:HB3	2.01	0.41
43:DH:51:ARG:C	43:DH:52:VAL:HG23	2.41	0.41
52:BT:50:ILE:CA	52:BT:99:LEU:HD12	2.49	0.41
57:DY:97:ARG:HH21	57:DY:98:VAL:CG2	2.28	0.41
13:AM:54:VAL:O	13:AM:58:GLU:HG2	2.21	0.41
14:CN:3:ARG:HB3	14:CN:3:ARG:HE	1.76	0.41
3:CC:13:GLY:HA3	14:CN:57:ARG:HE	1.86	0.41
34:B8:6:THR:OG1	34:B8:11:LYS:HD2	2.21	0.41
1:AA:1186:G:H21	14:AN:61:TRP:C	2.24	0.41
36:BA:769:G:H5'	36:BA:1379:A:H61	1.86	0.41
36:BA:1006:C:HO2'	46:BN:106:MET:HB3	1.86	0.41
36:BA:1138:G:H3'	36:BA:1139:G:C8	2.56	0.41
25:CZ:320:VAL:HG22	25:CZ:398:GLY:HA3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:544:G:OP2	4:CD:66:ARG:NH2	2.54	0.41
36:DA:1799:G:H5'	36:DA:1819:A:N6	2.36	0.41
1:AA:373:A:C2	1:AA:374:A:C8	3.09	0.41
40:BE:73:GLU:CA	40:BE:73:GLU:OE1	2.67	0.41
36:BA:1799:G:N3	36:BA:1800:C:H5	2.19	0.41
30:D4:10:VAL:CG2	30:D4:11:PRO:N	2.84	0.41
42:BG:27:ASN:C	42:BG:29:TRP:N	2.73	0.41
1:AA:1298:C:H4'	1:AA:1299:A:C4	2.56	0.41
51:BS:106:ARG:HD2	51:BS:106:ARG:C	2.42	0.41
48:BP:23:PRO:HG2	48:BP:33:ARG:HG3	2.03	0.41
42:BG:7:LEU:C	42:BG:9:ARG:N	2.74	0.41
40:DE:52:LEU:HA	40:DE:52:LEU:HD12	1.89	0.41
11:CK:84:VAL:CG1	11:CK:109:VAL:O	2.69	0.41
19:CS:16:LEU:O	19:CS:20:LEU:N	2.54	0.41
4:AD:14:ARG:H	4:AD:39:PRO:HA	1.85	0.41
4:AD:206:PHE:O	4:AD:206:PHE:CG	2.73	0.41
41:DF:157:VAL:HG11	41:DF:181:LEU:HD13	2.03	0.41
10:AJ:28:ARG:HG2	10:AJ:33:GLN:HA	2.02	0.41
25:AZ:68:VAL:HG12	25:AZ:68:VAL:H	1.71	0.41
4:AD:6:GLY:O	4:AD:8:VAL:HG13	2.21	0.41
38:DC:21:THR:HB	38:DC:228:SER:HB2	2.03	0.41
1:CA:521:G:O5'	12:CL:73:GLU:HB3	2.20	0.41
12:CL:73:GLU:HG2	12:CL:73:GLU:H	1.65	0.41
4:AD:186:LEU:O	4:AD:187:ARG:HB2	2.20	0.41
25:AZ:265:THR:CG2	25:AZ:266:VAL:H	2.32	0.41
36:BA:2407:G:N2	36:BA:2408:U:C1'	2.78	0.41
50:BR:92:GLY:C	50:BR:94:TYR:CE1	2.95	0.41
2:AB:158:LEU:HB3	2:AB:182:ILE:HD11	2.03	0.41
49:DQ:40:ALA:O	49:DQ:97:VAL:HG22	2.20	0.41
6:AF:97:PHE:O	18:AR:31:LEU:CD2	2.68	0.41
36:BA:1108:U:H6	36:BA:1109:C:C6	2.40	0.41
36:DA:512:G:C2'	36:DA:513:A:OP2	2.69	0.41
1:CA:1371:G:O3'	9:CI:69:GLY:HA3	2.21	0.41
57:BY:53:PRO:CB	57:BY:56:PRO:HG3	2.45	0.41
34:B8:50:LEU:CA	34:B8:53:PRO:HD3	2.51	0.41
1:CA:1126:U:O2	1:CA:1126:U:C2'	2.54	0.41
4:CD:70:ILE:CG2	4:CD:75:PHE:H	2.34	0.41
1:CA:1339:A:C2	22:CV:31:A:H4'	2.56	0.41
8:CH:49:GLU:O	8:CH:51:VAL:HG13	2.21	0.41
36:DA:754:C:O2'	36:DA:755:C:H5'	2.21	0.41
7:AG:111:ARG:HB2	7:AG:119:ARG:HD2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1319:G:O2'	36:DA:1320:C:H5'	2.21	0.41
1:CA:256:U:O2'	1:CA:257:G:H5'	2.21	0.41
36:BA:548:A:H2'	36:BA:549:G:C5'	2.51	0.41
1:CA:1129:C:H41	1:CA:1135:U:H3	1.69	0.41
50:DR:12:ARG:HH11	50:DR:12:ARG:CG	2.27	0.41
1:CA:245:C:O2'	1:CA:246:A:O5'	2.39	0.41
1:CA:7:G:H3'	5:CE:101:ILE:HG21	2.03	0.41
2:AB:90:MET:HA	2:AB:91:PRO:HD3	1.92	0.41
58:DZ:85:HIS:CE1	58:DZ:87:ASP:OD1	2.74	0.41
36:BA:589:C:O5'	36:BA:589:C:H6	2.04	0.41
58:BZ:139:VAL:HB	58:BZ:140:ASP:H	1.61	0.41
20:AT:50:GLU:H	20:AT:99:LEU:HD12	1.86	0.41
27:D1:75:GLU:OE1	27:D1:78:LYS:HE3	2.21	0.41
12:CL:126:LYS:HZ1	12:CL:127:GLU:HB2	1.86	0.41
1:AA:1134:G:C6	1:AA:1142:G:N1	2.89	0.41
36:BA:118:A:N3	36:BA:178:G:H1'	2.36	0.41
36:DA:425:G:O2'	36:DA:426:C:H5'	2.20	0.41
36:BA:2492:U:H2'	36:BA:2493:U:C6	2.56	0.41
40:DE:68:ALA:O	40:DE:70:ALA:N	2.54	0.41
1:AA:932:C:C5	7:AG:3:ARG:HD3	2.56	0.41
36:BA:1295:C:H2'	36:BA:1296:G:H8	1.86	0.41
36:DA:669:G:C2	36:DA:801:G:C6	3.09	0.41
1:CA:781:A:C3'	1:CA:782:A:H5'	2.51	0.41
44:DJ:119:UNK:O	44:DJ:120:UNK:C	2.69	0.41
1:CA:990:C:H2'	1:CA:991:U:C6	2.56	0.41
22:CV:75:C:H2'	22:CV:76:A:C1'	2.51	0.41
36:DA:2168:G:N2	36:DA:2170:A:H3'	2.35	0.41
38:BC:104:LEU:O	38:BC:105:ASP:CB	2.69	0.41
25:AZ:194:GLU:OE1	25:AZ:194:GLU:CA	2.69	0.41
19:CS:58:VAL:HG23	19:CS:58:VAL:O	2.21	0.41
36:DA:2793:G:N2	36:DA:2804:C:O2	2.54	0.41
36:BA:2752:C:C5	36:BA:2753:A:C5	3.09	0.41
1:AA:55:A:C2	1:AA:56:U:H1'	2.56	0.41
1:AA:55:A:C8	1:AA:55:A:H5'	2.55	0.41
20:AT:37:SER:O	20:AT:40:ALA:HB3	2.21	0.41
1:AA:668:G:H2'	1:AA:669:U:H6	1.86	0.41
36:BA:919:G:C6	36:BA:920:G:C5	3.09	0.41
36:BA:830:G:H1'	36:BA:2448:A:N1	2.36	0.41
1:AA:684:A:C6	1:AA:685:G:C6	3.08	0.41
18:CR:84:LYS:HA	18:CR:84:LYS:HD3	1.93	0.41
1:CA:1230:C:O5'	1:CA:1230:C:H6	2.04	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DD:105:ILE:HD12	39:DD:105:ILE:HA	1.79	0.41
36:DA:718:A:O5'	36:DA:718:A:H8	2.04	0.41
8:CH:63:LEU:HD13	8:CH:63:LEU:HA	1.82	0.41
49:DQ:8:LYS:HB3	49:DQ:8:LYS:HE2	1.92	0.41
1:CA:1394:A:C5	1:CA:1501:C:H4'	2.56	0.41
2:CB:82:ARG:HG2	2:CB:86:GLU:OE1	2.22	0.41
2:CB:22:LYS:NZ	2:CB:40:HIS:CE1	2.89	0.40
41:DF:161:GLU:O	41:DF:164:ARG:HB3	2.20	0.40
36:DA:812:C:C2	36:DA:813:U:C5	3.09	0.40
1:AA:556:C:C2'	1:AA:557:G:H5'	2.51	0.40
36:BA:996:A:H2'	36:BA:997:G:H8	1.86	0.40
53:BU:91:ASP:O	53:BU:92:ARG:HB3	2.20	0.40
2:CB:91:PRO:O	2:CB:92:TYR:HB3	2.20	0.40
36:DA:1789:A:C5	36:DA:1790:C:C5	3.09	0.40
25:CZ:193:ASN:HB3	25:CZ:196:VAL:HB	2.03	0.40
36:DA:130:C:H2'	36:DA:131:G:C5'	2.50	0.40
36:DA:478:A:N1	36:DA:500:G:H4'	2.35	0.40
36:BA:482:A:H4'	57:BY:47:LYS:HD3	2.02	0.40
52:BT:32:TYR:O	52:BT:33:LYS:CB	2.68	0.40
58:BZ:125:LEU:HG	58:BZ:164:ALA:HB3	2.03	0.40
36:DA:335:C:C6	36:DA:336:C:H5	2.39	0.40
46:BN:48:MET:C	46:BN:48:MET:SD	3.00	0.40
3:AC:80:GLY:N	3:AC:82:GLU:OE2	2.53	0.40
43:DH:30:LYS:HG3	43:DH:79:VAL:O	2.21	0.40
43:DH:30:LYS:HZ3	43:DH:83:TYR:HE2	1.64	0.40
34:B8:62:LEU:HB3	36:BA:242:G:H5'	2.03	0.40
30:D4:27:THR:O	30:D4:28:LYS:HB3	2.21	0.40
3:CC:80:GLY:C	3:CC:82:GLU:OE2	2.60	0.40
3:CC:83:ARG:O	3:CC:86:VAL:HG22	2.20	0.40
36:BA:769:G:H5'	36:BA:1379:A:N6	2.36	0.40
13:CM:96:LEU:C	13:CM:110:ARG:HE	2.23	0.40
32:D6:13:CYS:HA	32:D6:50:ARG:O	2.21	0.40
26:D0:25:ARG:HD2	26:D0:29:GLN:HE21	1.86	0.40
48:DP:147:LEU:O	48:DP:148:LEU:CB	2.65	0.40
25:CZ:117:ARG:CD	25:CZ:157:LEU:HD11	2.46	0.40
36:DA:654(N):G:H2'	36:DA:654(O):G:H5'	2.03	0.40
4:CD:200:GLU:O	4:CD:204:ILE:HG13	2.21	0.40
36:DA:271(L):U:C4'	36:DA:271(M):G:H5'	2.51	0.40
36:BA:1818:U:O2'	36:BA:1819:A:OP2	2.38	0.40
58:DZ:97:GLU:HA	58:DZ:127:LYS:HA	2.03	0.40
36:DA:258:G:H2'	36:DA:259:G:H8	1.84	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BS:56:LEU:O	51:BS:57:LYS:O	2.39	0.40
10:CJ:4:ILE:CD1	10:CJ:77:PRO:HB3	2.50	0.40
48:BP:83:VAL:CG2	48:BP:105:LEU:HD13	2.51	0.40
17:CQ:70:ARG:NH1	17:CQ:70:ARG:HG2	2.32	0.40
1:CA:263:A:P	20:CT:79:ARG:NH1	2.93	0.40
4:AD:57:ARG:NH2	4:AD:205:GLU:OE1	2.48	0.40
58:BZ:100:VAL:HG23	58:BZ:126:VAL:CG2	2.49	0.40
13:AM:96:LEU:O	13:AM:110:ARG:NE	2.54	0.40
46:DN:99:LEU:O	46:DN:102:ALA:HB3	2.21	0.40
36:DA:1006:C:H1'	46:DN:106:MET:SD	2.61	0.40
46:DN:60:ILE:HG13	46:DN:60:ILE:H	1.55	0.40
58:BZ:96:VAL:CG2	58:BZ:97:GLU:H	2.07	0.40
2:CB:61:LEU:HD11	2:CB:160:ASP:HB3	2.04	0.40
4:AD:104:VAL:O	4:AD:105:VAL:C	2.58	0.40
48:DP:96:THR:HG22	48:DP:126:VAL:CG2	2.51	0.40
36:DA:2230:G:C5	36:DA:2231:C:C5	3.09	0.40
1:CA:677:U:H2'	1:CA:678:U:C6	2.56	0.40
36:DA:1058:G:C3'	36:DA:1059:G:H5''	2.51	0.40
42:BG:141:PHE:HA	42:BG:142:PRO:HD2	1.74	0.40
42:BG:144:ILE:O	42:BG:144:ILE:HG23	2.21	0.40
36:BA:2408:U:C2	36:BA:2409:G:N7	2.89	0.40
39:DD:266:SER:O	39:DD:267:SER:O	2.39	0.40
1:AA:62:U:C2'	1:AA:63:C:C5'	2.99	0.40
36:DA:2579:C:HO2'	40:DE:131:ALA:HB2	1.84	0.40
1:CA:1256:A:H1'	1:CA:1258:G:C5	2.53	0.40
30:D4:30:GLU:O	30:D4:31:ILE:HD12	2.21	0.40
18:CR:58:LEU:HD11	18:CR:66:LEU:HD22	2.02	0.40
9:CI:63:ILE:HG21	9:CI:77:ILE:CD1	2.51	0.40
36:BA:2679:A:C5	36:BA:2680:C:C5	3.09	0.40
40:BE:108:SER:N	40:BE:163:GLU:O	2.48	0.40
36:DA:1453:U:OP1	50:DR:77:ARG:HD3	2.20	0.40
40:BE:183:LEU:HD21	52:BT:11:GLU:CG	2.51	0.40
1:CA:1437:C:H2'	1:CA:1438:G:C8	2.57	0.40
36:DA:1278:A:H5''	50:DR:36:THR:CG2	2.51	0.40
46:DN:3:THR:C	46:DN:4:TYR:CD1	2.95	0.40
20:CT:16:HIS:O	20:CT:17:ARG:C	2.59	0.40
36:DA:1740:G:H4'	36:DA:1741:A:OP1	2.20	0.40
2:AB:101:MET:CA	2:AB:108:ILE:HD12	2.46	0.40
1:CA:949:A:C4'	1:CA:1364:U:H5	2.35	0.40
1:CA:1364:U:O2	21:CU:14:TRP:CH2	2.74	0.40
36:DA:1526:G:C6	36:DA:1527:G:C2	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DQ:6:ARG:CB	49:DQ:6:ARG:NH1	2.84	0.40
27:B1:4:VAL:HB	27:B1:11:ARG:HG2	2.02	0.40
36:BA:821:A:C5'	36:BA:822:U:C6	2.98	0.40
50:DR:38:VAL:CG1	50:DR:42:LYS:HE3	2.51	0.40
33:D7:34:ARG:HH12	33:D7:42:LEU:C	2.25	0.40
1:CA:187:C:H4'	20:CT:85:MET:O	2.21	0.40
36:DA:2023:G:H4'	36:DA:2617:C:O3'	2.20	0.40
40:BE:120:TRP:HA	40:BE:120:TRP:CE3	2.56	0.40
40:BE:120:TRP:CD2	40:BE:155:LYS:HG2	2.56	0.40
36:BA:1351:C:O2'	36:BA:1571:A:H1'	2.21	0.40
33:B7:47:ARG:HG3	33:B7:48:LYS:N	2.36	0.40
28:D2:69:ARG:O	28:D2:70:GLN:CG	2.69	0.40
5:AE:51:VAL:O	5:AE:52:PRO:C	2.59	0.40
1:CA:236:G:H2'	1:CA:237:C:C6	2.55	0.40
1:AA:1415:G:C2'	1:AA:1416:G:H5'	2.52	0.40
29:B3:28:LEU:N	29:B3:28:LEU:CD2	2.80	0.40
36:DA:1353:A:H62	36:DA:1377:G:H2'	1.86	0.40
36:BA:1494:A:O2'	36:BA:1495:A:H5''	2.21	0.40
36:BA:1796:U:OP1	39:BD:276:LYS:HE3	2.22	0.40
52:BT:38:ASN:C	52:BT:40:THR:H	2.24	0.40
52:DT:129:ARG:HD2	52:DT:129:ARG:C	2.41	0.40
36:DA:120:U:H1'	36:DA:149:A:N7	2.36	0.40
36:DA:49:A:N6	36:DA:177:G:C4	2.89	0.40
30:B4:43:TYR:CG	30:B4:44:THR:N	2.89	0.40
40:DE:16:ARG:O	40:DE:17:ASP:HB2	2.20	0.40
1:AA:656:C:O2'	1:AA:657:G:H5'	2.22	0.40
36:DA:319:C:H2'	36:DA:320:A:C8	2.56	0.40
1:CA:123:C:OP1	1:CA:311:C:O2'	2.36	0.40
46:DN:6:PRO:HB3	46:DN:41:ASP:OD1	2.21	0.40
8:AH:85:ARG:CZ	8:AH:87:SER:O	2.69	0.40
56:DX:31:HIS:O	56:DX:34:ALA:CB	2.69	0.40
8:CH:17:THR:C	8:CH:78:GLN:HE22	2.24	0.40
39:DD:206:LEU:HD23	39:DD:206:LEU:HA	1.87	0.40
40:DE:107:THR:O	40:DE:190:GLY:N	2.54	0.40
2:AB:19:HIS:NE2	2:AB:206:ASP:HB3	2.37	0.40
38:DC:81:GLU:O	38:DC:83:ILE:N	2.43	0.40
38:DC:81:GLU:C	38:DC:83:ILE:H	2.24	0.40
24:CY:29:G:H2'	24:CY:30:G:O4'	2.21	0.40
27:D1:94:LEU:O	27:D1:95:LEU:C	2.59	0.40
36:DA:2473:U:C5	36:DA:2474:C:O2	2.74	0.40
7:CG:95:ARG:NH2	7:CG:99:LEU:HD11	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CP:53:VAL:HG23	16:CP:54:GLU:N	2.34	0.40
36:DA:2197:U:O2'	36:DA:2198:A:H2'	2.21	0.40
36:DA:569:U:O4	36:DA:570:G:C6	2.74	0.40
1:AA:1137:C:O2'	1:AA:1138:G:N2	2.52	0.40
36:DA:1599:C:H2'	36:DA:1600:C:H6	1.87	0.40
36:BA:1767:C:O2'	36:BA:1768:U:H5'	2.20	0.40
1:CA:1300:G:C5	1:CA:1335:C:C5	3.09	0.40
1:AA:700:G:C2'	1:AA:701:C:H5''	2.51	0.40
36:BA:1458:C:H4'	36:BA:1459:G:O5'	2.20	0.40
36:BA:1168:G:N1	36:BA:1182:A:C2	2.89	0.40
49:DQ:37:LEU:HG	49:DQ:129:THR:HA	2.03	0.40
10:AJ:45:ARG:O	10:AJ:64:GLU:HA	2.21	0.40
10:AJ:64:GLU:OE2	10:AJ:66:ARG:NE	2.54	0.40
1:AA:784:C:H4'	36:BA:1837:C:OP1	2.21	0.40
36:DA:1532:C:O2'	36:DA:1533:G:H5'	2.20	0.40
42:BG:137:GLU:O	42:BG:140:ILE:HG23	2.21	0.40
1:AA:72:C:H2'	1:AA:73:G:C8	2.56	0.40
36:DA:2655:G:H1'	36:DA:2664:G:C6	2.55	0.40
41:BF:63:LYS:HG3	41:BF:76:GLY:HA2	2.02	0.40
39:BD:98:VAL:HG12	39:BD:98:VAL:O	2.21	0.40
55:DW:57:ASN:HA	55:DW:57:ASN:HD22	1.66	0.40
56:DX:68:ARG:HD3	56:DX:68:ARG:O	2.21	0.40
25:AZ:152:MET:O	25:AZ:152:MET:SD	2.78	0.40
18:CR:63:GLN:OE1	18:CR:63:GLN:HA	2.21	0.40
40:BE:33:VAL:HG13	40:BE:33:VAL:O	2.21	0.40
36:DA:2322:A:O2'	36:DA:2323:G:H5'	2.21	0.40
25:AZ:355:LEU:HD23	25:AZ:370:PHE:CB	2.52	0.40
4:CD:100:ARG:O	4:CD:104:VAL:HG23	2.21	0.40
2:CB:36:ARG:HB3	2:CB:41:ILE:CD1	2.51	0.40
34:D8:4:MET:HE2	36:DA:666:G:H1'	2.04	0.40
34:D8:59:LYS:HB3	34:D8:59:LYS:NZ	2.29	0.40
36:DA:2283:C:C5	36:DA:2389:G:C4	3.10	0.40
32:D6:8:LYS:HE2	36:DA:2285:C:H5	1.86	0.40
36:BA:143:G:H5''	36:BA:1598:C:O2'	2.21	0.40
31:D5:56:LYS:O	31:D5:57:VAL:O	2.40	0.40
25:AZ:19:HIS:CD2	25:AZ:113:MET:HG3	2.56	0.40
25:AZ:154:VAL:O	25:AZ:157:LEU:HB3	2.22	0.40
43:BH:50:VAL:HG12	43:BH:52:VAL:CG2	2.51	0.40
42:DG:124:SER:O	42:DG:125:PHE:C	2.59	0.40
36:DA:480:A:H3'	36:DA:481:G:H5''	2.03	0.40
36:BA:81:G:N2	57:BY:2:ARG:HH12	2.05	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:65:ALA:O	57:BY:66:PRO:O	2.40	0.40
43:DH:52:VAL:HG12	43:DH:65:HIS:HE1	1.86	0.40
47:BO:121:VAL:CG1	47:BO:122:LEU:N	2.84	0.40
25:AZ:241:ARG:CB	25:AZ:285:ASN:HD21	2.34	0.40
1:CA:963:G:HO2'	10:CJ:54:PHE:HZ	1.69	0.40
36:BA:2178:C:H2'	36:BA:2179:C:O5'	2.21	0.40
36:DA:832:G:H21	48:DP:53:GLY:HA2	1.86	0.40
36:BA:1012:U:O4	46:BN:25:ARG:HA	2.21	0.40
25:CZ:327:GLU:OE2	61:CZ:502:KIR:H433	2.21	0.40
4:CD:205:GLU:O	4:CD:207:TYR:N	2.54	0.40
36:BA:1516:C:O2'	36:BA:1517:G:H5''	2.20	0.40
36:BA:673:C:C6	36:BA:673:C:C5'	2.97	0.40
41:BF:114:VAL:HG21	41:BF:202:PHE:HE2	1.86	0.40
36:BA:512:G:C2'	36:BA:513:A:OP2	2.69	0.40
36:DA:1054:A:O2'	36:DA:1055:G:H5'	2.21	0.40
40:DE:34:VAL:HG11	40:DE:48:GLN:HE21	1.81	0.40
19:CS:11:VAL:HG21	19:CS:41:VAL:HG22	2.03	0.40
1:CA:1263:C:O2	1:CA:1273:G:N2	2.54	0.40
11:AK:33:THR:HG22	11:AK:39:PRO:N	2.36	0.40
47:DO:29:ASN:O	47:DO:30:ALA:C	2.60	0.40
36:BA:1227:G:C2'	36:BA:1228:G:H5'	2.51	0.40
41:BF:101:LEU:HA	41:BF:102:PRO:HD3	1.91	0.40
48:BP:121:LYS:HA	48:BP:122:PRO:HD3	1.89	0.40
12:CL:8:ASN:OD1	12:CL:12:ARG:HD2	2.21	0.40
1:CA:62:U:OP2	1:CA:385:C:O2'	2.35	0.40
55:DW:10:VAL:HG21	55:DW:103:ILE:CD1	2.51	0.40
22:CW:16:U:H5'	22:CW:17:C:OP2	2.21	0.40
40:BE:108:SER:O	40:BE:162:ALA:N	2.53	0.40
25:CZ:95:GLY:C	25:CZ:97:ALA:H	2.25	0.40
36:DA:2770:G:H5''	36:DA:2771:C:OP2	2.21	0.40
1:AA:1221:G:OP1	1:AA:1320:C:N4	2.54	0.40
26:D0:7:LEU:HD22	49:DQ:85:LYS:CB	2.52	0.40
55:DW:86:LEU:HB3	55:DW:94:ASP:HB2	2.04	0.40
46:DN:4:TYR:O	46:DN:5:VAL:C	2.58	0.40
13:CM:108:ARG:HH22	13:CM:114:ARG:HA	1.86	0.40
54:BV:5:VAL:CG2	54:BV:6:LYS:N	2.84	0.40
26:B0:80:HIS:CD2	26:B0:80:HIS:H	2.38	0.40
6:CF:53:ALA:O	6:CF:54:LYS:CB	2.69	0.40
40:DE:120:TRP:CZ3	40:DE:155:LYS:HE3	2.56	0.40
46:BN:109:LYS:HE3	46:BN:109:LYS:HB2	1.82	0.40
36:BA:1655:A:H4'	40:BE:115:GLY:H	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1655:A:O3'	40:BE:115:GLY:HA3	2.21	0.40
36:BA:1569:A:O2'	39:BD:38:LYS:CD	2.69	0.40
4:AD:150:GLU:OE1	4:AD:151:LYS:N	2.51	0.40
54:BV:88:ARG:O	54:BV:90:PRO:HD3	2.22	0.40
43:DH:158:HIS:CE1	43:DH:169:VAL:HG13	2.52	0.40
33:D7:7:PRO:HA	36:DA:686:G:H8	1.86	0.40
8:CH:137:VAL:HG12	8:CH:138:TRP:N	2.36	0.40
1:AA:731:G:H5'	1:AA:766:A:H4'	2.03	0.40
26:B0:7:LEU:HD23	26:B0:7:LEU:HA	1.88	0.40
37:DB:81:G:H2'	37:DB:82:G:H5'	2.03	0.40
1:CA:892:A:C6	1:CA:893:C:C4	3.09	0.40
46:DN:130:HIS:CG	46:DN:130:HIS:O	2.74	0.40
36:BA:110:G:C2'	36:BA:111:A:H5'	2.51	0.40
5:AE:45:PHE:CD2	5:AE:47:LYS:HD2	2.55	0.40
41:DF:64:ILE:HG12	41:DF:65:TRP:CD1	2.56	0.40
36:DA:797:C:O2'	36:DA:798:G:H5'	2.21	0.40
20:CT:48:LYS:O	20:CT:49:ALA:C	2.59	0.40
36:DA:2018:G:C2	36:DA:2019:A:C4	3.09	0.40
1:CA:992:U:O2	1:CA:992:U:C2'	2.69	0.40
36:BA:9:U:HO2'	36:BA:10:G:P	2.43	0.40
1:CA:1458:G:H2'	1:CA:1459:C:H6	1.80	0.40
36:BA:19:C:H5'	36:BA:554:U:OP1	2.22	0.40
36:DA:2728:U:H2'	36:DA:2729:G:C8	2.56	0.40
36:DA:2001:A:H2'	36:DA:2002:G:H8	1.82	0.40
27:D1:40:ARG:HB2	27:D1:41:ARG:H	1.60	0.40
22:AW:8:U:OP1	22:AW:8:U:H3'	2.21	0.40
1:AA:757:U:H5''	1:AA:822:C:O2	2.20	0.40
2:AB:201:ILE:HG22	2:AB:201:ILE:O	2.20	0.40
16:AP:7:ALA:O	16:AP:17:TYR:HA	2.20	0.40
33:B7:24:THR:HG23	33:B7:27:GLY:H	1.86	0.40
1:CA:889:A:H4'	1:CA:890:G:OP1	2.22	0.40
50:DR:75:LEU:HD13	50:DR:75:LEU:O	2.21	0.40
19:CS:21:GLU:CG	19:CS:22:LEU:N	2.84	0.40
38:BC:58:VAL:HG13	38:BC:199:HIS:HB3	2.03	0.40
13:CM:59:TYR:CE1	13:CM:63:THR:OG1	2.74	0.40
1:AA:1303:C:N4	1:AA:1304:G:C6	2.89	0.40
38:BC:46:LYS:HD2	38:BC:169:GLY:O	2.21	0.40
43:BH:105:LEU:HD23	43:BH:105:LEU:H	1.86	0.40
36:DA:1792:G:H2'	36:DA:1793:C:H6	1.86	0.40
1:CA:1389:C:O2'	1:CA:1390:U:H5'	2.21	0.40
45:DK:74:UNK:C	45:DK:76:UNK:H	2.32	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:727:A:N6	36:BA:728:G:N1	2.69	0.40
36:DA:1655:A:H4'	40:DE:115:GLY:N	2.37	0.40
57:BY:79:CYS:SG	57:BY:80:GLY:N	2.94	0.40
36:DA:178:G:C6	36:DA:179:G:N7	2.90	0.40
36:DA:2847:U:H5'	36:DA:2848:G:OP2	2.21	0.40
36:DA:725:G:O2'	36:DA:726:G:H5'	2.21	0.40
1:AA:237:C:O2'	1:AA:238:G:H5'	2.21	0.40
5:AE:46:GLY:H	5:AE:58:ALA:HB2	1.86	0.40
43:DH:75:ALA:C	43:DH:78:GLY:H	2.24	0.40
25:CZ:271:GLU:HG2	25:CZ:276:THR:HA	2.03	0.40
34:D8:31:HIS:O	34:D8:32:LEU:C	2.59	0.40
32:B6:53:LYS:NZ	32:B6:54:ILE:HG13	2.36	0.40
36:BA:996:A:C4'	53:BU:92:ARG:CZ	2.97	0.40
28:B2:48:HIS:HA	36:BA:95:G:O2'	2.21	0.40
58:BZ:166:SER:N	58:BZ:167:PRO:HA	2.35	0.40
58:BZ:166:SER:CB	58:BZ:168:GLU:H	2.16	0.40
49:DQ:22:LYS:O	49:DQ:22:LYS:HG2	2.21	0.40
42:DG:61:ALA:O	42:DG:64:THR:HG22	2.22	0.40
36:BA:476:G:N2	36:BA:479:A:C8	2.89	0.40
52:BT:35:LYS:O	52:BT:36:GLU:HB2	2.21	0.40
52:BT:94:ALA:C	52:BT:96:ARG:N	2.73	0.40
28:D2:28:LYS:O	28:D2:31:GLU:HB2	2.21	0.40
36:DA:335:C:O2'	36:DA:336:C:H5'	2.21	0.40
57:DY:67:LEU:HD21	57:DY:71:LYS:NZ	2.35	0.40
35:D9:6:SER:HG	36:DA:2467:C:P	2.45	0.40
13:AM:56:LEU:O	13:AM:57:ARG:C	2.58	0.40
1:CA:963:G:N2	10:CJ:55:LYS:HG2	2.37	0.40
43:DH:124:GLU:CB	43:DH:126:PRO:HD3	2.49	0.40
5:AE:82:VAL:CG2	5:AE:138:ALA:HA	2.49	0.40
36:DA:1155:A:P	53:DU:55:ARG:HD2	2.62	0.40
36:DA:1154:G:H5''	53:DU:59:ARG:HH12	1.85	0.40
36:BA:2179:C:C1'	36:BA:2180:U:H3	2.14	0.40
32:D6:36:LEU:O	32:D6:37:ARG:NE	2.55	0.40
41:BF:107:LYS:HE3	41:BF:205:ARG:HG2	2.03	0.40
1:CA:1346:A:O4'	1:CA:1348:U:C6	2.74	0.40
36:BA:2627:G:N3	36:BA:2781:A:H2	2.19	0.40
36:DA:1055:G:HO2'	36:DA:1085:A:H2	1.66	0.40
41:DF:133:ASN:N	41:DF:133:ASN:ND2	2.70	0.40
48:BP:85:LEU:HD13	48:BP:114:ILE:HD11	2.04	0.40
40:DE:78:LEU:HD12	40:DE:78:LEU:O	2.21	0.40
1:CA:1269:A:C2'	1:CA:1270:C:H5'	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:144:THR:OG1	5:CE:147:ASP:OD1	2.27	0.40
36:BA:2346:A:H5'	36:BA:2383:G:H1'	2.03	0.40
31:B5:41:PRO:HA	31:B5:42:PRO:HD3	1.79	0.40
39:DD:25:THR:HB	39:DD:26:LYS:CE	2.49	0.40
1:CA:453:A:O2'	1:CA:454:C:O4'	2.39	0.40
3:CC:114:PRO:O	3:CC:118:GLN:HG3	2.21	0.40
43:BH:12:PRO:N	43:BH:48:GLY:HA2	2.36	0.40
5:AE:76:ILE:HA	5:AE:77:PRO:HD2	1.92	0.40
38:DC:20:TYR:CD1	38:DC:20:TYR:N	2.88	0.40
5:AE:35:GLY:HA2	5:AE:40:ARG:O	2.21	0.40
14:AN:25:VAL:O	14:AN:26:ARG:O	2.39	0.40
36:BA:1536:C:O5'	36:BA:1536:C:H6	2.04	0.40
36:DA:1528:A:OP1	36:DA:1540:U:O4	2.40	0.40
41:DF:36:VAL:HG12	41:DF:36:VAL:O	2.22	0.40
1:AA:62:U:C2'	1:AA:63:C:H5'	2.47	0.40
36:BA:874:G:H2'	36:BA:875:G:H8	1.86	0.40
2:AB:214:ILE:O	2:AB:218:ALA:HB2	2.21	0.40
1:AA:1049:U:H1'	1:AA:1201:A:N7	2.36	0.40
12:AL:86:ARG:O	12:AL:86:ARG:HG2	2.21	0.40
47:BO:1:MET:HB3	47:BO:32:TYR:HD2	1.85	0.40
14:AN:23:ARG:HA	14:AN:30:ALA:HA	2.02	0.40
35:B9:4:ARG:HB3	35:B9:4:ARG:HE	1.57	0.40
15:CO:27:VAL:HG12	15:CO:31:LEU:HD13	2.03	0.40
15:CO:35:ARG:O	15:CO:38:ARG:N	2.54	0.40
36:DA:1038:C:C3'	36:DA:1039:G:C5'	2.99	0.40
31:D5:21:SER:C	31:D5:23:HIS:H	2.25	0.40
36:DA:633:A:C3'	36:DA:634:C:H5'	2.51	0.40
36:BA:237:C:H2'	36:BA:238:C:H6	1.85	0.40
46:DN:108:PRO:CG	46:DN:109:LYS:N	2.84	0.40
47:DO:86:ILE:N	47:DO:86:ILE:CD1	2.84	0.40
24:CY:34:C:H2'	24:CY:35:C:O4'	2.22	0.40
36:BA:2523:G:C6	36:BA:2524:G:N7	2.90	0.40
26:B0:10:THR:CG2	26:B0:12:ASN:OD1	2.69	0.40
36:DA:109:G:H2'	36:DA:110:G:H8	1.86	0.40
1:CA:1129:C:H4'	1:CA:1130:A:C8	2.56	0.40
17:AQ:59:ILE:CG2	17:AQ:71:PHE:HB3	2.51	0.40
36:DA:2657:A:C2	36:DA:2658:C:C5	3.10	0.40
39:BD:107:ALA:HA	39:BD:108:PRO:HD2	1.88	0.40
25:CZ:74:LYS:HD3	25:CZ:207:ASP:OD1	2.22	0.40
40:BE:23:VAL:HG12	40:BE:173:VAL:HG21	2.03	0.40
1:CA:391:G:H2'	1:CA:392:G:O4'	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:145:GLU:HG3	4:AD:184:LYS:HG2	2.03	0.40
27:D1:20:ARG:HB3	27:D1:32:LYS:HG3	2.03	0.40
36:DA:1469:A:H2'	36:DA:1470:G:O4'	2.21	0.40
32:B6:16:CYS:CB	32:B6:48:VAL:O	2.69	0.40
33:D7:9:ARG:HG3	33:D7:9:ARG:HH11	1.86	0.40
22:AV:28:G:H2'	22:AV:29:G:H8	1.86	0.40
20:AT:99:LEU:O	20:AT:100:ILE:O	2.38	0.40
37:DB:6:C:H2'	37:DB:7:G:O4'	2.20	0.40
33:B7:34:ARG:HH12	33:B7:42:LEU:C	2.24	0.40
4:AD:171:GLY:HA2	4:AD:172:PRO:HD3	1.84	0.40
54:BV:75:PHE:HE1	54:BV:77:ALA:HB2	1.86	0.40
1:CA:568:G:O6	12:CL:5:PRO:HD3	2.21	0.40
36:BA:19:C:O2'	36:BA:20:C:H5'	2.22	0.40
3:AC:135:LYS:NZ	5:AE:50:GLU:HG2	2.36	0.40
27:B1:40:ARG:CG	27:B1:41:ARG:N	2.84	0.40
36:DA:1268:A:H2'	36:DA:1269:A:C8	2.56	0.40
36:BA:1217:C:C2	36:BA:1218:C:C5	3.09	0.40
1:CA:823:G:O2'	1:CA:824:C:H5'	2.21	0.40
1:AA:1030:C:N4	1:AA:1032:G:N2	2.69	0.40
37:BB:4:C:N3	37:BB:118:G:N2	2.69	0.40
1:AA:1118:C:H1'	1:AA:1179:A:C4	2.56	0.40
24:CY:18:G:O2'	24:CY:19:G:O5'	2.37	0.40
8:CH:119:LEU:CD1	8:CH:124:ALA:HA	2.51	0.40
12:AL:58:VAL:CG2	12:AL:60:LEU:CD2	2.99	0.40
36:BA:638:G:C6	36:BA:639:U:N3	2.89	0.40
36:DA:406:G:C6	36:DA:407:G:C5	3.10	0.40
36:DA:1288:U:H4'	36:DA:1289:C:OP2	2.21	0.40
55:DW:18:ARG:HH11	55:DW:18:ARG:HG3	1.87	0.40
28:D2:25:VAL:HG22	28:D2:60:LEU:HD22	2.03	0.40
28:D2:21:LEU:CB	28:D2:64:LEU:HD12	2.51	0.40
36:DA:1835:G:H2'	36:DA:1835:G:N3	2.36	0.40
47:DO:25:LEU:HD11	47:DO:40:VAL:HG23	2.03	0.40
1:CA:1211:U:O2	1:CA:1211:U:O4'	2.39	0.40
37:BB:98:G:H2'	37:BB:99:G:C5'	2.50	0.40
36:DA:920:G:O2'	36:DA:921:G:H5'	2.22	0.40
22:AW:20:U:H2'	22:AW:20:U:OP2	2.22	0.40
36:BA:1170:G:H1	36:BA:1179:C:H42	1.67	0.40
36:BA:2662:A:H2'	36:BA:2663:G:O4'	2.21	0.40
1:CA:174:C:O2'	1:CA:175:C:H5'	2.21	0.40
49:DQ:48:GLU:C	49:DQ:50:ALA:N	2.70	0.40
2:CB:185:ILE:O	2:CB:186:ALA:HB2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:655:A:C2	1:CA:754:C:C4	3.09	0.40
3:AC:64:VAL:HB	3:AC:98:ASN:O	2.20	0.40
1:AA:787:A:O2'	1:AA:788:U:H5'	2.21	0.40
46:BN:31:ALA:O	46:BN:35:ARG:HG2	2.21	0.40
15:CO:81:LEU:HD13	15:CO:81:LEU:C	2.40	0.40
36:BA:1877:A:H5'	36:BA:1878:G:OP2	2.21	0.40
22:CW:74:C:C2'	22:CW:75:C:H5'	2.51	0.40
36:DA:594:U:H2'	36:DA:595:C:C6	2.57	0.40
22:AV:47:U:H3'	22:AV:48:C:C5'	2.52	0.40
52:DT:32:TYR:O	52:DT:33:LYS:CB	2.69	0.40
48:DP:65:ARG:O	48:DP:67:MET:N	2.55	0.40
56:BX:7:VAL:CG1	56:BX:39:ILE:HD13	2.51	0.40
1:AA:1055:A:OP1	1:AA:1200:C:N4	2.52	0.40
10:AJ:49:VAL:HG23	14:AN:41:ARG:HB2	2.01	0.40
39:BD:72:LYS:CE	39:BD:101:GLU:OE1	2.69	0.40
36:BA:1665:A:C3'	36:BA:1666:G:C5'	2.98	0.40
42:DG:111:LEU:HD22	42:DG:117:PHE:CZ	2.56	0.40
42:DG:130:ASN:HB3	42:DG:160:VAL:CA	2.22	0.40
36:DA:143:G:H4'	56:DX:35:THR:HG21	2.03	0.40
36:BA:309:G:H1'	36:BA:329:G:O2'	2.21	0.40
57:BY:60:PHE:O	57:BY:61:ILE:HB	2.21	0.40
36:DA:2335:A:C8	36:DA:2337:G:C5	3.09	0.40
52:BT:29:ARG:HG3	52:BT:30:VAL:HG22	2.02	0.40
52:BT:45:PHE:CZ	52:BT:74:ARG:HB2	2.57	0.40
49:BQ:141:GLN:O	58:BZ:53:ILE:HB	2.21	0.40
58:BZ:72:ARG:HB2	58:BZ:87:ASP:O	2.21	0.40
57:DY:67:LEU:HD23	57:DY:68:HIS:O	2.21	0.40
36:BA:1301:A:C8	36:BA:1303:G:C8	3.09	0.40
25:AZ:241:ARG:HA	25:AZ:285:ASN:HD22	1.81	0.40
36:BA:691:C:O2'	36:BA:692:C:H5'	2.21	0.40
1:AA:1153:C:O2'	1:AA:1154:G:P	2.79	0.40
54:DV:46:VAL:O	54:DV:46:VAL:HG13	2.21	0.40
10:AJ:62:HIS:HB2	14:AN:59:ALA:HB3	2.02	0.40
36:BA:1654:A:OP1	50:BR:3:HIS:CB	2.54	0.40
42:BG:153:ARG:HB3	42:BG:153:ARG:CZ	2.51	0.40
41:DF:11:VAL:C	41:DF:13:SER:N	2.74	0.40
1:AA:251:G:C6	1:AA:266:G:C6	3.10	0.40
1:CA:198:G:O2'	1:CA:199:G:H8	1.84	0.40
34:B8:15:LYS:HB2	48:BP:65:ARG:HH12	1.86	0.40
34:B8:15:LYS:CB	48:BP:65:ARG:HH22	2.33	0.40
58:BZ:100:VAL:CG2	58:BZ:126:VAL:HG21	2.50	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:B3:15:TYR:HB3	29:B3:16:PRO:HD2	2.02	0.40
40:DE:11:MET:CB	40:DE:24:THR:HA	2.37	0.40
36:BA:1535:A:H3'	36:BA:1536:C:C6	2.56	0.40
2:AB:105:PHE:CE1	2:AB:155:LEU:HD12	2.57	0.40
36:DA:580:C:O2'	36:DA:581:C:H5'	2.21	0.40
58:DZ:10:ARG:HG3	58:DZ:36:LYS:HG3	2.02	0.40
1:AA:382:A:H2'	1:AA:383:A:C8	2.56	0.40
1:CA:384:G:O2'	1:CA:385:C:H5'	2.21	0.40
1:CA:1276:G:O2'	1:CA:1277:C:H5'	2.21	0.40
55:DW:10:VAL:HB	55:DW:101:SER:OG	2.21	0.40
1:CA:1442(B):A:O2'	1:CA:1443:G:H8	2.05	0.40
1:CA:976:G:N2	1:CA:1363:C:OP2	2.51	0.40
1:CA:626:U:O2'	1:CA:627:G:H5'	2.22	0.40
36:DA:1279:G:H4'	50:DR:31:HIS:NE2	2.37	0.40
25:CZ:325:LYS:HB2	25:CZ:331:HIS:HB3	2.03	0.40
52:DT:115:ARG:HH11	52:DT:115:ARG:HG3	1.86	0.40
35:B9:7:VAL:CG2	35:B9:36:GLN:HB2	2.52	0.40
50:BR:109:ALA:HA	50:BR:110:PRO:HD2	1.94	0.40
51:BS:89:ARG:HG3	51:BS:92:TYR:H	1.82	0.40
10:CJ:75:ILE:HG13	10:CJ:76:ASN:N	2.36	0.40
1:CA:1017:G:O2'	1:CA:1018:C:H5'	2.21	0.40
1:AA:1258:G:C6	1:AA:1259:C:N4	2.90	0.40
13:CM:108:ARG:HD2	13:CM:108:ARG:N	2.36	0.40
13:CM:112:GLY:C	13:CM:114:ARG:H	2.25	0.40
53:BU:31:SER:HB3	53:BU:34:LYS:HB2	2.03	0.40
36:BA:1000:A:C6	36:BA:1001:A:C6	3.10	0.40
43:DH:137:ASP:OD2	43:DH:140:LYS:HE3	2.21	0.40
39:BD:146:GLU:HG2	39:BD:152:GLY:O	2.21	0.40
43:DH:40:GLU:OE1	43:DH:55:PRO:HG3	2.22	0.40
29:D3:49:LYS:HD2	36:DA:851:U:C5'	2.45	0.40
58:DZ:144:LEU:HD22	58:DZ:144:LEU:N	2.37	0.40
2:AB:113:HIS:O	2:AB:116:GLU:N	2.55	0.40
47:DO:86:ILE:C	47:DO:87:ILE:HD13	2.42	0.40
36:DA:2892:A:N7	36:DA:2893:G:N3	2.70	0.40
39:DD:176:ARG:NH1	39:DD:176:ARG:CG	2.83	0.40
37:DB:25:A:C2'	37:DB:25:A:N3	2.82	0.40
2:CB:193:ASP:OD1	2:CB:196:LEU:HG	2.21	0.40
51:BS:97:ARG:O	51:BS:97:ARG:CZ	2.69	0.40
38:DC:74:VAL:CG1	38:DC:75:LEU:N	2.83	0.40
13:CM:119:GLY:O	13:CM:120:LYS:HB2	2.22	0.40
36:BA:1069:A:H4'	36:BA:1070:A:C8	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:30:G:H2'	24:AY:30:G:N3	2.36	0.40
36:BA:2262:U:H2'	36:BA:2263:C:H6	1.86	0.40
1:AA:692:U:OP1	11:AK:124:LYS:HE2	2.20	0.40
3:AC:118:GLN:O	3:AC:122:GLU:HG3	2.21	0.40
36:BA:325:G:H2'	36:BA:326:G:C8	2.54	0.40
36:DA:2651:C:C2'	36:DA:2652:C:H5'	2.51	0.40
30:B4:42:PHE:CD2	30:B4:42:PHE:O	2.75	0.40
1:CA:498:U:O2'	1:CA:499:A:O5'	2.40	0.40
41:DF:65:TRP:CZ3	41:DF:75:HIS:CD2	3.09	0.40
20:CT:50:GLU:HB2	20:CT:99:LEU:HB2	2.02	0.40
36:BA:9:U:O2'	36:BA:10:G:P	2.79	0.40
1:AA:317:G:C6	1:AA:318:G:N7	2.89	0.40
1:CA:793:U:C3'	1:CA:794:A:H5''	2.51	0.40
44:DJ:96:UNK:O	44:DJ:100:UNK:N	2.54	0.40
37:BB:95:C:H2'	37:BB:96:U:O4'	2.21	0.40
36:DA:374:A:H2'	36:DA:375:C:O4'	2.22	0.40
8:AH:6:ILE:N	8:AH:6:ILE:CD1	2.83	0.40
36:BA:702:G:C2	36:BA:731:C:N3	2.89	0.40
42:DG:104:GLU:O	42:DG:106:LEU:N	2.45	0.40
5:CE:82:VAL:HG21	5:CE:138:ALA:HA	2.03	0.40
10:CJ:43:ARG:NH1	10:CJ:43:ARG:HG3	2.36	0.40
36:DA:1668:A:OP1	47:DO:5:GLN:HG2	2.21	0.40
1:CA:657:G:C2	1:CA:750:G:C4	3.10	0.40
38:BC:68:LEU:HD22	38:BC:70:LYS:HB3	2.03	0.40
29:B3:56:VAL:HG12	29:B3:57:GLU:N	2.36	0.40
1:AA:125:U:H2'	1:AA:126:G:C8	2.57	0.40
36:DA:1693:U:C4	36:DA:1977:A:C4	3.10	0.40
1:AA:922:G:C6	1:AA:923:A:C6	3.08	0.40
33:B7:38:GLY:O	36:BA:458:G:H5''	2.22	0.40
1:AA:1371:G:O3'	9:AI:69:GLY:HA3	2.22	0.40
36:DA:2551:C:H2'	36:DA:2552:U:C6	2.55	0.40
3:AC:108:ASN:OD1	3:AC:110:ASN:N	2.52	0.40
36:BA:2789:C:O3'	36:BA:2790:A:O4'	2.40	0.40
36:DA:2580:U:O3'	40:DE:130:GLY:HA3	2.22	0.40
44:DJ:42:UNK:C	44:DJ:44:UNK:N	2.84	0.40
47:DO:73:ASP:C	47:DO:73:ASP:OD1	2.60	0.40
40:BE:53:PRO:O	40:BE:54:GLN:C	2.59	0.40
25:AZ:359:VAL:O	25:AZ:359:VAL:CG1	2.68	0.40
38:DC:78:ALA:O	38:DC:79:LYS:HB2	2.22	0.40
34:D8:40:GLU:O	34:D8:44:LYS:HE3	2.22	0.40
34:D8:59:LYS:CE	48:DP:50:ARG:HB3	2.48	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DO:104:ARG:CZ	47:DO:104:ARG:HB3	2.52	0.40
28:B2:35:LEU:CD1	28:B2:36:ARG:HG3	2.51	0.40
25:AZ:196:VAL:HG12	25:AZ:197:ASP:N	2.36	0.40
56:DX:7:VAL:CG1	56:DX:39:ILE:HD13	2.52	0.40
36:BA:479:A:O2'	36:BA:481:G:H5'	2.22	0.40
36:BA:478:A:N1	36:BA:500:G:H4'	2.37	0.40
43:DH:41:MET:SD	43:DH:53:GLU:O	2.80	0.40
52:BT:98:LYS:CB	52:BT:100:TYR:HE1	2.27	0.40
52:BT:28:VAL:HG23	52:BT:47:GLY:O	2.21	0.40
52:BT:75:ILE:HD12	52:BT:75:ILE:H	1.85	0.40
58:BZ:102:LEU:HD12	58:BZ:122:ARG:HA	2.04	0.40
57:DY:75:ILE:O	57:DY:76:CYS:CB	2.60	0.40
50:BR:99:LYS:HA	50:BR:112:ALA:HA	2.04	0.40
46:DN:133:GLN:CG	46:DN:134:ARG:N	2.85	0.40
41:BF:126:VAL:CG1	41:BF:142:TRP:HH2	2.29	0.40
1:AA:1128:C:O2'	1:AA:1130:A:N7	2.50	0.40
3:CC:84:ILE:O	3:CC:84:ILE:HG12	2.21	0.40
35:D9:12:ASP:CG	35:D9:13:LYS:N	2.75	0.40
1:CA:959:A:H2'	1:CA:960:U:H4'	2.04	0.40
3:CC:157:ILE:HD12	3:CC:157:ILE:H	1.86	0.40
36:BA:1049:C:O2	36:BA:1113:U:H4'	2.22	0.40
36:DA:607:U:H5	36:DA:619:G:C4	2.40	0.40
36:DA:605:C:H2'	36:DA:606:U:H6	1.86	0.40
1:AA:949:A:O4'	1:AA:1364:U:C5	2.75	0.40
42:BG:138:GLN:HE22	42:BG:149:VAL:HG12	1.86	0.40
42:BG:43:LEU:O	42:BG:45:GLU:CD	2.59	0.40
36:BA:837:C:N4	36:BA:941:A:N6	2.70	0.40
1:AA:189(D):C:H1'	1:AA:189(H):G:N2	2.37	0.40
36:DA:2638:G:P	40:DE:82:ARG:HH21	2.44	0.40
19:CS:19:VAL:O	19:CS:20:LEU:C	2.60	0.40
11:AK:60:ALA:O	11:AK:61:ALA:C	2.59	0.40
36:DA:1515:G:H2'	36:DA:1516:C:O4'	2.21	0.40
36:DA:1516:C:H2'	36:DA:1517:G:H5''	1.96	0.40
34:B8:27:THR:HG22	48:BP:61:ARG:HA	2.04	0.40
46:DN:99:LEU:O	46:DN:103:VAL:HG23	2.21	0.40
41:DF:201:VAL:CG1	41:DF:202:PHE:N	2.84	0.40
10:AJ:76:ASN:O	10:AJ:78:ASN:N	2.55	0.40
42:BG:133:LEU:C	42:BG:133:LEU:CD1	2.88	0.40
3:CC:14:ILE:HD11	3:CC:179:ARG:HA	2.02	0.40
3:CC:11:ARG:HB3	3:CC:15:THR:HB	2.02	0.40
41:BF:64:ILE:HG23	41:BF:65:TRP:N	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:523:A:H61	12:CL:53:ARG:HH12	1.70	0.40
25:AZ:290:LEU:HB2	25:AZ:293:VAL:CG2	2.47	0.40
42:BG:64:THR:HG23	42:BG:66:GLN:H	1.86	0.40
57:DY:31:LEU:HA	57:DY:31:LEU:HD13	1.93	0.40
9:CI:54:ASP:C	9:CI:56:LEU:N	2.73	0.40
55:DW:5:ALA:HB3	55:DW:105:VAL:H	1.86	0.40
36:BA:535:C:O2'	53:BU:53:ARG:HB2	2.22	0.40
36:DA:910:A:N1	36:DA:2277:G:H1'	2.36	0.40
2:AB:31:TYR:CD1	2:AB:31:TYR:N	2.88	0.40
2:CB:54:THR:HG22	2:CB:55:PHE:CD1	2.55	0.40
2:CB:216:SER:OG	2:CB:217:ARG:N	2.55	0.40
1:CA:1288:A:O4'	1:CA:1353:G:H4'	2.21	0.40
40:BE:76:ARG:O	40:BE:77:ILE:O	2.38	0.40
1:AA:406:G:H2'	1:AA:407:G:H8	1.87	0.40
26:D0:7:LEU:HD22	49:DQ:85:LYS:HB2	2.02	0.40
44:BJ:118:UNK:O	44:BJ:119:UNK:CB	2.70	0.40
51:DS:93:LYS:HA	51:DS:93:LYS:HD2	1.87	0.40
36:BA:1331:A:H2'	36:BA:1333:C:C5	2.56	0.40
54:BV:93:GLU:O	54:BV:94:LEU:HD23	2.21	0.40
36:DA:2126:A:N1	36:DA:2173:A:N6	2.70	0.40
7:CG:144:MET:HE1	22:CW:31:A:H1'	2.03	0.40
58:DZ:108:PRO:CB	58:DZ:141:VAL:HG11	2.50	0.40
2:CB:238:LEU:O	2:CB:240:GLN:N	2.55	0.40
8:AH:39:LEU:HD12	8:AH:44:PHE:CB	2.46	0.40
40:DE:116:VAL:HG23	40:DE:120:TRP:HB2	2.04	0.40
36:DA:563:G:N2	36:DA:564:C:C2	2.90	0.40
42:BG:15:VAL:HG12	42:BG:19:LEU:HD12	2.02	0.40
36:BA:549:G:C2'	36:BA:551:G:H5'	2.51	0.40
43:DH:169:VAL:HG22	43:DH:170:ARG:HG2	2.03	0.40
36:BA:361:G:N2	36:BA:362:U:H1'	2.36	0.40
1:AA:951:G:C6	1:AA:1231:G:C6	3.10	0.40
1:CA:722:A:O2'	1:CA:724:G:H8	2.03	0.40
16:AP:43:LYS:O	16:AP:44:THR:C	2.59	0.40
1:CA:19:C:H2'	1:CA:20:U:H6	1.86	0.40
36:DA:1218:C:O2	36:DA:1218:C:H2'	2.21	0.40
16:CP:67:THR:HB	16:CP:70:ALA:N	2.36	0.40
36:DA:2740:A:H2'	36:DA:2741:A:C8	2.56	0.40
38:DC:163:PHE:HB2	38:DC:171:ILE:CD1	2.50	0.40
52:DT:128:GLU:O	52:DT:129:ARG:C	2.59	0.40
19:CS:52:TYR:HA	19:CS:56:GLN:O	2.21	0.40
27:D1:8:SER:HB3	27:D1:66:HIS:CE1	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:11:VAL:CG2	17:AQ:11:VAL:O	2.69	0.40
54:BV:82:ARG:O	54:BV:83:ARG:HD3	2.22	0.40
55:DW:13:SER:CB	55:DW:16:LYS:HD2	2.51	0.40
12:CL:6:THR:OG1	12:CL:9:GLN:HG3	2.22	0.40
16:CP:6:LEU:HD11	16:CP:19:ILE:HD12	2.03	0.40
1:CA:793:U:H5'	1:CA:794:A:H5''	2.03	0.40
36:BA:703:U:H2'	36:BA:704:G:C5'	2.52	0.40
33:D7:10:ARG:HH11	33:D7:10:ARG:HG2	1.86	0.40
43:DH:155:SER:OG	43:DH:155:SER:O	2.31	0.40
20:AT:73:HIS:O	20:AT:74:LYS:O	2.39	0.40
39:BD:50:THR:O	39:BD:51:VAL:HG23	2.22	0.40
8:AH:29:SER:HB3	8:AH:32:LYS:CG	2.51	0.40
1:CA:414:A:O2'	1:CA:415:A:H5'	2.21	0.40
27:B1:94:LEU:N	27:B1:94:LEU:HD12	2.36	0.40
39:DD:166:GLN:HA	39:DD:166:GLN:NE2	2.36	0.40
1:AA:1426:C:H2'	1:AA:1427:U:H6	1.87	0.40
58:BZ:5:LEU:O	58:BZ:59:LEU:HA	2.21	0.40
20:CT:93:GLU:OE1	20:CT:94:ALA:N	2.54	0.40
22:CW:14:A:C2'	22:CW:15:G:H5'	2.52	0.40
36:BA:1441:G:O3'	36:BA:1628:G:H5''	2.21	0.40
36:DA:1668:A:H1'	36:DA:1670:C:C5	2.56	0.40
4:CD:146:ILE:O	4:CD:182:LYS:O	2.39	0.40
36:DA:1820:U:O2'	39:DD:159:ALA:HB3	2.22	0.40
1:AA:764:C:H2'	1:AA:765:G:C5'	2.52	0.40
37:DB:37:C:H2'	37:DB:38:C:H5'	2.04	0.40
1:AA:401:C:H2'	1:AA:402:G:C8	2.56	0.40
26:B0:11:ARG:NH2	36:BA:2279:G:OP2	2.54	0.40
36:BA:2364:C:O2'	36:BA:2365:G:H5'	2.21	0.40
36:DA:1691:C:O2'	36:DA:1692:U:H5'	2.21	0.40
1:AA:910:C:H6	1:AA:910:C:O5'	2.04	0.40
36:BA:2821:A:OP2	40:BE:110:GLY:CA	2.69	0.40
1:AA:1165:C:O2'	1:AA:1166:G:H5'	2.21	0.40
36:BA:675:A:OP1	41:BF:63:LYS:HE2	2.20	0.40
1:AA:786:G:H2'	1:AA:787:A:O4'	2.21	0.40
38:DC:104:LEU:O	38:DC:105:ASP:CB	2.68	0.40
1:AA:1503:A:H1'	23:AX:15:A:N6	2.37	0.40
50:DR:57:ARG:O	50:DR:58:GLY:C	2.59	0.40
1:AA:562:C:H6	1:AA:562:C:H5'	1.87	0.40
36:BA:1034:G:H8	36:BA:1034:G:OP1	2.04	0.40

All (6) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:65:GLY:O	38:DC:27:ARG:NH2[2_646]	1.45	0.75
2:AB:65:GLY:O	38:BC:27:ARG:NH2[2_445]	1.59	0.61
2:CB:66:GLY:CA	38:DC:27:ARG:NH2[2_646]	1.87	0.33
2:AB:66:GLY:CA	38:BC:27:ARG:NH2[2_445]	1.94	0.26
2:CB:65:GLY:C	38:DC:27:ARG:NH2[2_646]	2.04	0.16
2:AB:65:GLY:C	38:BC:27:ARG:NH2[2_445]	2.12	0.08

## 5.3 Torsion angles [i](#)

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

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	AB	232/256 (91%)	163 (70%)	43 (18%)	26 (11%)	0	3
2	CB	232/256 (91%)	157 (68%)	52 (22%)	23 (10%)	1	4
3	AC	204/239 (85%)	148 (72%)	37 (18%)	19 (9%)	1	4
3	CC	204/239 (85%)	136 (67%)	43 (21%)	25 (12%)	0	2
4	AD	206/209 (99%)	130 (63%)	48 (23%)	28 (14%)	0	1
4	CD	206/209 (99%)	124 (60%)	53 (26%)	29 (14%)	0	1
5	AE	148/162 (91%)	131 (88%)	13 (9%)	4 (3%)	6	31
5	CE	148/162 (91%)	125 (84%)	18 (12%)	5 (3%)	5	25
6	AF	99/101 (98%)	79 (80%)	14 (14%)	6 (6%)	2	11
6	CF	99/101 (98%)	76 (77%)	16 (16%)	7 (7%)	1	8
7	AG	153/156 (98%)	113 (74%)	27 (18%)	13 (8%)	1	5
7	CG	153/156 (98%)	113 (74%)	23 (15%)	17 (11%)	0	3
8	AH	136/138 (99%)	120 (88%)	12 (9%)	4 (3%)	6	29
8	CH	136/138 (99%)	118 (87%)	13 (10%)	5 (4%)	4	23
9	AI	125/128 (98%)	79 (63%)	29 (23%)	17 (14%)	0	1
9	CI	125/128 (98%)	81 (65%)	25 (20%)	19 (15%)	0	0
10	AJ	96/105 (91%)	69 (72%)	19 (20%)	8 (8%)	1	6

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
10	CJ	96/105 (91%)	71 (74%)	17 (18%)	8 (8%)	1	6
11	AK	117/129 (91%)	98 (84%)	13 (11%)	6 (5%)	2	15
11	CK	117/129 (91%)	88 (75%)	22 (19%)	7 (6%)	2	11
12	AL	122/131 (93%)	93 (76%)	17 (14%)	12 (10%)	1	4
12	CL	122/131 (93%)	86 (70%)	19 (16%)	17 (14%)	0	1
13	AM	122/126 (97%)	70 (57%)	34 (28%)	18 (15%)	0	1
13	CM	122/126 (97%)	72 (59%)	36 (30%)	14 (12%)	0	2
14	AN	58/61 (95%)	39 (67%)	8 (14%)	11 (19%)	0	0
14	CN	58/61 (95%)	29 (50%)	14 (24%)	15 (26%)	0	0
15	AO	86/89 (97%)	71 (83%)	12 (14%)	3 (4%)	4	24
15	CO	86/89 (97%)	64 (74%)	18 (21%)	4 (5%)	3	17
16	AP	81/88 (92%)	63 (78%)	14 (17%)	4 (5%)	3	16
16	CP	81/88 (92%)	60 (74%)	15 (18%)	6 (7%)	1	7
17	AQ	97/105 (92%)	82 (84%)	11 (11%)	4 (4%)	3	20
17	CQ	97/105 (92%)	77 (79%)	13 (13%)	7 (7%)	1	7
18	AR	68/88 (77%)	45 (66%)	19 (28%)	4 (6%)	2	12
18	CR	68/88 (77%)	49 (72%)	15 (22%)	4 (6%)	2	12
19	AS	76/93 (82%)	47 (62%)	20 (26%)	9 (12%)	0	2
19	CS	76/93 (82%)	41 (54%)	25 (33%)	10 (13%)	0	1
20	AT	97/106 (92%)	65 (67%)	20 (21%)	12 (12%)	0	1
20	CT	97/106 (92%)	67 (69%)	19 (20%)	11 (11%)	0	2
21	AU	22/27 (82%)	19 (86%)	2 (9%)	1 (4%)	3	17
21	CU	22/27 (82%)	15 (68%)	6 (27%)	1 (4%)	3	17
25	AZ	381/405 (94%)	268 (70%)	74 (19%)	39 (10%)	1	4
25	CZ	381/405 (94%)	275 (72%)	61 (16%)	45 (12%)	0	2
26	B0	82/85 (96%)	61 (74%)	16 (20%)	5 (6%)	2	11
26	D0	82/85 (96%)	63 (77%)	16 (20%)	3 (4%)	4	23
27	B1	91/98 (93%)	60 (66%)	19 (21%)	12 (13%)	0	1
27	D1	91/98 (93%)	62 (68%)	15 (16%)	14 (15%)	0	0
28	B2	69/72 (96%)	36 (52%)	14 (20%)	19 (28%)	0	0
28	D2	69/72 (96%)	43 (62%)	19 (28%)	7 (10%)	1	4

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
29	B3	57/60 (95%)	39 (68%)	10 (18%)	8 (14%)	0	1
29	D3	57/60 (95%)	43 (75%)	7 (12%)	7 (12%)	0	2
30	B4	42/71 (59%)	24 (57%)	10 (24%)	8 (19%)	0	0
30	D4	42/71 (59%)	19 (45%)	13 (31%)	10 (24%)	0	0
31	B5	57/60 (95%)	33 (58%)	14 (25%)	10 (18%)	0	0
31	D5	57/60 (95%)	35 (61%)	13 (23%)	9 (16%)	0	0
32	B6	48/54 (89%)	20 (42%)	11 (23%)	17 (35%)	0	0
32	D6	48/54 (89%)	23 (48%)	13 (27%)	12 (25%)	0	0
33	B7	46/49 (94%)	41 (89%)	4 (9%)	1 (2%)	8	36
33	D7	46/49 (94%)	31 (67%)	14 (30%)	1 (2%)	8	36
34	B8	61/65 (94%)	39 (64%)	15 (25%)	7 (12%)	0	2
34	D8	61/65 (94%)	40 (66%)	12 (20%)	9 (15%)	0	1
35	B9	35/37 (95%)	18 (51%)	12 (34%)	5 (14%)	0	1
35	D9	35/37 (95%)	18 (51%)	10 (29%)	7 (20%)	0	0
38	BC	226/229 (99%)	159 (70%)	52 (23%)	15 (7%)	1	9
38	DC	226/229 (99%)	153 (68%)	54 (24%)	19 (8%)	1	6
39	BD	273/276 (99%)	194 (71%)	51 (19%)	28 (10%)	1	4
39	DD	273/276 (99%)	200 (73%)	47 (17%)	26 (10%)	1	4
40	BE	202/206 (98%)	133 (66%)	41 (20%)	28 (14%)	0	1
40	DE	202/206 (98%)	134 (66%)	37 (18%)	31 (15%)	0	0
41	BF	205/210 (98%)	137 (67%)	40 (20%)	28 (14%)	0	1
41	DF	205/210 (98%)	140 (68%)	37 (18%)	28 (14%)	0	1
42	BG	179/182 (98%)	109 (61%)	44 (25%)	26 (14%)	0	1
42	DG	179/182 (98%)	103 (58%)	40 (22%)	36 (20%)	0	0
43	BH	157/180 (87%)	94 (60%)	40 (26%)	23 (15%)	0	1
43	DH	157/180 (87%)	94 (60%)	39 (25%)	24 (15%)	0	0
46	BN	136/140 (97%)	85 (62%)	29 (21%)	22 (16%)	0	0
46	DN	136/140 (97%)	89 (65%)	27 (20%)	20 (15%)	0	1
47	BO	120/122 (98%)	102 (85%)	10 (8%)	8 (7%)	1	9
47	DO	120/122 (98%)	99 (82%)	14 (12%)	7 (6%)	2	12
48	BP	144/150 (96%)	66 (46%)	39 (27%)	39 (27%)	0	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
48	DP	144/150 (96%)	68 (47%)	39 (27%)	37 (26%)	0	0
49	BQ	139/141 (99%)	97 (70%)	28 (20%)	14 (10%)	1	4
49	DQ	139/141 (99%)	102 (73%)	29 (21%)	8 (6%)	2	12
50	BR	115/118 (98%)	79 (69%)	17 (15%)	19 (16%)	0	0
50	DR	115/118 (98%)	69 (60%)	24 (21%)	22 (19%)	0	0
51	BS	96/112 (86%)	53 (55%)	24 (25%)	19 (20%)	0	0
51	DS	96/112 (86%)	52 (54%)	23 (24%)	21 (22%)	0	0
52	BT	135/146 (92%)	79 (58%)	32 (24%)	24 (18%)	0	0
52	DT	135/146 (92%)	77 (57%)	34 (25%)	24 (18%)	0	0
53	BU	115/118 (98%)	75 (65%)	27 (24%)	13 (11%)	0	2
53	DU	115/118 (98%)	76 (66%)	25 (22%)	14 (12%)	0	2
54	BV	99/101 (98%)	63 (64%)	23 (23%)	13 (13%)	0	1
54	DV	99/101 (98%)	61 (62%)	26 (26%)	12 (12%)	0	2
55	BW	111/113 (98%)	79 (71%)	21 (19%)	11 (10%)	1	4
55	DW	111/113 (98%)	81 (73%)	20 (18%)	10 (9%)	1	5
56	BX	90/96 (94%)	64 (71%)	21 (23%)	5 (6%)	2	13
56	DX	90/96 (94%)	64 (71%)	19 (21%)	7 (8%)	1	6
57	BY	98/110 (89%)	39 (40%)	27 (28%)	32 (33%)	0	0
57	DY	98/110 (89%)	43 (44%)	26 (26%)	29 (30%)	0	0
58	BZ	181/206 (88%)	114 (63%)	39 (22%)	28 (16%)	0	0
58	DZ	181/206 (88%)	106 (59%)	34 (19%)	41 (23%)	0	0
All	All	12270/13098 (94%)	8296 (68%)	2465 (20%)	1509 (12%)	0	2

All (1509) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	8	LYS
2	AB	9	GLU
2	AB	15	VAL
2	AB	18	GLY
2	AB	77	ALA
2	AB	96	ARG
2	AB	130	ARG
2	AB	191	ASP
2	AB	238	LEU

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Mol	Chain	Res	Type
2	AB	239	VAL
3	AC	47	LEU
4	AD	14	ARG
4	AD	18	LYS
4	AD	30	LYS
4	AD	35	ARG
4	AD	44	GLY
4	AD	91	SER
4	AD	92	VAL
4	AD	125	HIS
4	AD	129	ASN
4	AD	153	ARG
4	AD	159	ARG
5	AE	64	ARG
5	AE	153	LYS
6	AF	40	VAL
6	AF	54	LYS
7	AG	8	GLU
7	AG	53	LYS
7	AG	118	VAL
7	AG	146	GLU
7	AG	153	HIS
8	AH	2	LEU
8	AH	83	ILE
9	AI	21	PRO
9	AI	38	GLN
9	AI	44	VAL
9	AI	54	ASP
9	AI	56	LEU
9	AI	89	ASN
10	AJ	30	SER
10	AJ	86	MET
12	AL	27	LEU
12	AL	28	LYS
12	AL	30	ALA
12	AL	46	LYS
12	AL	122	THR
12	AL	123	LYS
13	AM	7	VAL
13	AM	70	LEU
13	AM	83	ASP
13	AM	120	LYS

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Mol	Chain	Res	Type
13	AM	121	LYS
14	AN	14	PRO
14	AN	15	LYS
14	AN	16	PHE
14	AN	20	ALA
14	AN	26	ARG
14	AN	59	ALA
15	AO	3	ILE
16	AP	44	THR
19	AS	5	LEU
19	AS	28	LYS
19	AS	29	ARG
19	AS	33	THR
20	AT	74	LYS
20	AT	75	ASN
20	AT	100	ILE
25	AZ	22	HIS
25	AZ	24	LYS
25	AZ	25	THR
25	AZ	130	TYR
25	AZ	141	VAL
25	AZ	197	ASP
25	AZ	211	PRO
25	AZ	220	PRO
25	AZ	245	GLY
25	AZ	279	GLU
25	AZ	310	ILE
25	AZ	329	GLY
25	AZ	345	ARG
25	AZ	357	PRO
26	B0	23	VAL
27	B1	24	ALA
27	B1	31	GLY
27	B1	53	VAL
27	B1	76	ARG
27	B1	78	LYS
28	B2	19	VAL
28	B2	20	GLU
28	B2	24	LEU
28	B2	48	HIS
28	B2	67	LYS
28	B2	68	ARG

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Mol	Chain	Res	Type
28	B2	71	ASN
29	B3	13	ILE
30	B4	43	TYR
31	B5	4	HIS
31	B5	25	LEU
31	B5	45	VAL
31	B5	46	CYS
31	B5	49	CYS
31	B5	57	VAL
32	B6	18	ARG
32	B6	20	ASN
32	B6	23	THR
32	B6	27	LYS
32	B6	28	ARG
32	B6	31	PRO
32	B6	33	LYS
32	B6	45	LYS
32	B6	46	HIS
34	B8	34	TRP
34	B8	43	GLN
35	B9	10	ILE
35	B9	11	CYS
35	B9	33	LYS
35	B9	36	GLN
38	BC	79	LYS
39	BD	13	ARG
39	BD	27	THR
39	BD	35	LYS
39	BD	38	LYS
39	BD	239	ARG
39	BD	245	PRO
39	BD	246	PRO
39	BD	267	SER
40	BE	4	ILE
40	BE	45	THR
40	BE	53	PRO
40	BE	56	PRO
40	BE	66	HIS
40	BE	69	LYS
40	BE	76	ARG
40	BE	77	ILE
40	BE	82	ARG

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Mol	Chain	Res	Type
40	BE	94	GLU
40	BE	189	PRO
41	BF	14	PRO
41	BF	21	ALA
41	BF	84	VAL
41	BF	86	GLY
41	BF	88	VAL
41	BF	132	VAL
41	BF	168	ARG
42	BG	22	ARG
42	BG	28	VAL
42	BG	81	LYS
42	BG	85	GLY
42	BG	87	PRO
42	BG	96	ARG
42	BG	110	ALA
42	BG	172	LEU
42	BG	174	GLU
43	BH	40	GLU
43	BH	55	PRO
43	BH	84	SER
43	BH	118	PRO
43	BH	137	ASP
43	BH	138	LYS
43	BH	155	SER
43	BH	159	GLU
46	BN	7	LYS
46	BN	63	THR
46	BN	66	LYS
46	BN	109	LYS
46	BN	127	ASP
46	BN	129	PRO
47	BO	29	ASN
47	BO	43	VAL
47	BO	48	PRO
47	BO	98	VAL
48	BP	9	ASN
48	BP	13	ASN
48	BP	17	LYS
48	BP	19	VAL
48	BP	21	ARG
48	BP	23	PRO

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Mol	Chain	Res	Type
48	BP	34	GLY
48	BP	40	SER
48	BP	51	PHE
48	BP	52	GLU
48	BP	57	THR
48	BP	58	THR
48	BP	67	MET
48	BP	70	GLN
48	BP	103	ALA
48	BP	104	GLY
48	BP	132	LYS
49	BQ	25	ASP
49	BQ	27	VAL
49	BQ	80	GLU
50	BR	4	LEU
50	BR	6	SER
50	BR	8	ARG
50	BR	11	ASN
50	BR	88	ARG
50	BR	103	ARG
50	BR	117	VAL
51	BS	15	ARG
51	BS	23	ARG
51	BS	38	GLN
51	BS	57	LYS
51	BS	59	LYS
51	BS	63	THR
51	BS	94	TYR
52	BT	28	VAL
52	BT	32	TYR
52	BT	80	SER
52	BT	89	VAL
52	BT	95	ARG
52	BT	107	ASP
52	BT	129	ARG
53	BU	60	LEU
53	BU	83	LEU
53	BU	91	ASP
54	BV	16	PRO
54	BV	18	LEU
54	BV	46	VAL
54	BV	62	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
54	BV	68	LYS
55	BW	28	SER
55	BW	63	ASP
55	BW	67	ASP
56	BX	12	VAL
57	BY	3	VAL
57	BY	42	VAL
57	BY	56	PRO
57	BY	57	GLN
57	BY	63	LYS
57	BY	74	PRO
57	BY	76	CYS
57	BY	77	PRO
57	BY	78	ALA
58	BZ	111	VAL
58	BZ	113	ALA
58	BZ	120	ILE
58	BZ	136	PHE
58	BZ	146	ILE
58	BZ	152	ALA
58	BZ	163	LEU
58	BZ	177	PRO
58	BZ	178	GLU
2	CB	8	LYS
2	CB	9	GLU
2	CB	15	VAL
2	CB	18	GLY
2	CB	96	ARG
2	CB	145	LEU
2	CB	153	ARG
2	CB	165	VAL
2	CB	190	THR
2	CB	191	ASP
2	CB	238	LEU
2	CB	239	VAL
3	CC	12	LEU
3	CC	45	LYS
3	CC	47	LEU
3	CC	146	ALA
4	CD	18	LYS
4	CD	30	LYS
4	CD	35	ARG

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Mol	Chain	Res	Type
4	CD	92	VAL
4	CD	129	ASN
5	CE	37	ARG
5	CE	64	ARG
5	CE	153	LYS
6	CF	54	LYS
7	CG	8	GLU
7	CG	53	LYS
7	CG	69	VAL
7	CG	118	VAL
7	CG	146	GLU
7	CG	153	HIS
8	CH	2	LEU
9	CI	21	PRO
9	CI	34	ASN
9	CI	38	GLN
9	CI	40	LEU
9	CI	41	VAL
9	CI	44	VAL
9	CI	54	ASP
9	CI	56	LEU
9	CI	89	ASN
10	CJ	98	ILE
12	CL	27	LEU
12	CL	28	LYS
12	CL	46	LYS
12	CL	47	LYS
12	CL	48	PRO
12	CL	122	THR
12	CL	123	LYS
13	CM	7	VAL
13	CM	11	ARG
13	CM	70	LEU
13	CM	83	ASP
13	CM	120	LYS
13	CM	121	LYS
14	CN	14	PRO
14	CN	15	LYS
14	CN	16	PHE
14	CN	19	ARG
14	CN	20	ALA
14	CN	26	ARG

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Mol	Chain	Res	Type
14	CN	50	LYS
14	CN	52	GLN
14	CN	59	ALA
14	CN	60	SER
15	CO	3	ILE
16	CP	11	SER
16	CP	26	ARG
16	CP	49	LEU
17	CQ	34	LYS
19	CS	5	LEU
19	CS	10	PHE
19	CS	28	LYS
19	CS	33	THR
20	CT	74	LYS
20	CT	75	ASN
20	CT	100	ILE
25	CZ	22	HIS
25	CZ	24	LYS
25	CZ	25	THR
25	CZ	39	ASN
25	CZ	141	VAL
25	CZ	197	ASP
25	CZ	220	PRO
25	CZ	245	GLY
25	CZ	310	ILE
25	CZ	345	ARG
25	CZ	390	GLU
26	D0	23	VAL
27	D1	7	ILE
27	D1	64	ALA
27	D1	66	HIS
28	D2	47	ASN
28	D2	70	GLN
29	D3	38	GLU
29	D3	42	ALA
30	D4	9	LEU
30	D4	43	TYR
31	D5	5	PRO
31	D5	25	LEU
31	D5	45	VAL
31	D5	46	CYS
31	D5	49	CYS

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Mol	Chain	Res	Type
31	D5	57	VAL
32	D6	18	ARG
32	D6	20	ASN
32	D6	23	THR
32	D6	27	LYS
32	D6	28	ARG
32	D6	31	PRO
32	D6	33	LYS
32	D6	46	HIS
34	D8	33	ASN
34	D8	34	TRP
34	D8	43	GLN
35	D9	10	ILE
35	D9	11	CYS
38	DC	82	LYS
38	DC	160	ARG
39	DD	13	ARG
39	DD	27	THR
39	DD	35	LYS
39	DD	38	LYS
39	DD	127	VAL
39	DD	134	ARG
39	DD	239	ARG
39	DD	245	PRO
39	DD	246	PRO
39	DD	267	SER
40	DE	4	ILE
40	DE	53	PRO
40	DE	56	PRO
40	DE	66	HIS
40	DE	69	LYS
40	DE	75	VAL
40	DE	76	ARG
40	DE	77	ILE
40	DE	83	ASP
40	DE	168	MET
40	DE	185	LYS
41	DF	14	PRO
41	DF	21	ALA
41	DF	82	ILE
41	DF	86	GLY
41	DF	88	VAL

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Mol	Chain	Res	Type
41	DF	132	VAL
41	DF	168	ARG
42	DG	13	GLU
42	DG	49	ASP
42	DG	75	LYS
42	DG	80	PHE
42	DG	82	LEU
42	DG	85	GLY
42	DG	87	PRO
42	DG	96	ARG
42	DG	97	ASP
42	DG	115	ARG
42	DG	116	ASP
42	DG	126	ASP
42	DG	129	GLY
42	DG	144	ILE
42	DG	151	ALA
42	DG	166	ASP
43	DH	40	GLU
43	DH	55	PRO
43	DH	84	SER
43	DH	118	PRO
43	DH	138	LYS
43	DH	155	SER
43	DH	159	GLU
46	DN	57	ALA
46	DN	66	LYS
46	DN	108	PRO
46	DN	127	ASP
46	DN	129	PRO
46	DN	130	HIS
46	DN	133	GLN
47	DO	43	VAL
47	DO	48	PRO
47	DO	91	LEU
48	DP	11	GLY
48	DP	13	ASN
48	DP	17	LYS
48	DP	19	VAL
48	DP	21	ARG
48	DP	25	SER
48	DP	34	GLY

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Mol	Chain	Res	Type
48	DP	35	HIS
48	DP	39	LYS
48	DP	40	SER
48	DP	49	ARG
48	DP	52	GLU
48	DP	57	THR
48	DP	58	THR
48	DP	67	MET
48	DP	69	GLY
48	DP	70	GLN
48	DP	103	ALA
48	DP	116	GLY
48	DP	132	LYS
48	DP	147	LEU
49	DQ	25	ASP
49	DQ	27	VAL
50	DR	4	LEU
50	DR	6	SER
50	DR	8	ARG
50	DR	45	ARG
50	DR	88	ARG
50	DR	103	ARG
50	DR	107	ASP
50	DR	117	VAL
51	DS	15	ARG
51	DS	23	ARG
51	DS	38	GLN
51	DS	59	LYS
51	DS	63	THR
52	DT	28	VAL
52	DT	30	VAL
52	DT	32	TYR
52	DT	80	SER
52	DT	89	VAL
52	DT	95	ARG
52	DT	107	ASP
53	DU	91	ASP
53	DU	93	LYS
54	DV	16	PRO
54	DV	18	LEU
54	DV	46	VAL
54	DV	62	LEU

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Mol	Chain	Res	Type
55	DW	28	SER
55	DW	63	ASP
57	DY	3	VAL
57	DY	17	SER
57	DY	23	ARG
57	DY	42	VAL
57	DY	56	PRO
57	DY	57	GLN
57	DY	74	PRO
57	DY	76	CYS
57	DY	77	PRO
57	DY	78	ALA
57	DY	82	PRO
58	DZ	9	TYR
58	DZ	53	ILE
58	DZ	61	LEU
58	DZ	71	VAL
58	DZ	78	LYS
58	DZ	79	ARG
58	DZ	81	ARG
58	DZ	82	ARG
58	DZ	124	ILE
58	DZ	138	GLU
58	DZ	146	ILE
58	DZ	151	HIS
58	DZ	152	ALA
58	DZ	159	PRO
58	DZ	163	LEU
58	DZ	166	SER
58	DZ	177	PRO
58	DZ	180	VAL
58	DZ	185	GLU
2	AB	20	GLU
2	AB	43	ASP
2	AB	110	GLN
2	AB	127	ILE
2	AB	145	LEU
2	AB	153	ARG
2	AB	165	VAL
2	AB	190	THR
2	AB	236	TYR
3	AC	13	GLY

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Mol	Chain	Res	Type
3	AC	26	LYS
3	AC	96	GLY
4	AD	3	ARG
4	AD	40	PRO
4	AD	72	GLU
4	AD	101	LEU
4	AD	164	ALA
4	AD	183	GLY
7	AG	9	VAL
7	AG	58	PRO
7	AG	69	VAL
7	AG	117	ALA
7	AG	147	ALA
9	AI	11	LYS
9	AI	19	LEU
9	AI	34	ASN
9	AI	90	PRO
10	AJ	98	ILE
11	AK	49	GLY
11	AK	88	GLY
12	AL	47	LYS
12	AL	79	GLU
13	AM	11	ARG
13	AM	19	LEU
13	AM	100	GLY
13	AM	114	ARG
16	AP	53	VAL
17	AQ	13	ASP
17	AQ	80	GLY
19	AS	10	PHE
19	AS	26	GLY
20	AT	49	ALA
20	AT	73	HIS
20	AT	85	MET
20	AT	95	ALA
20	AT	96	GLY
20	AT	101	GLY
21	AU	3	LYS
25	AZ	31	LEU
25	AZ	196	VAL
25	AZ	258	LEU
25	AZ	393	ARG

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Mol	Chain	Res	Type
26	B0	8	GLY
26	B0	16	SER
26	B0	20	ARG
27	B1	83	GLU
27	B1	85	LEU
28	B2	37	PHE
28	B2	39	ALA
28	B2	47	ASN
28	B2	63	VAL
29	B3	38	GLU
29	B3	42	ALA
29	B3	51	ALA
30	B4	8	LYS
30	B4	9	LEU
30	B4	26	SER
31	B5	35	GLU
32	B6	16	CYS
33	B7	17	GLY
34	B8	33	ASN
35	B9	13	LYS
38	BC	82	LYS
38	BC	117	PRO
38	BC	123	VAL
38	BC	157	LYS
38	BC	160	ARG
39	BD	3	VAL
39	BD	21	PHE
39	BD	34	VAL
39	BD	36	PRO
39	BD	125	ILE
39	BD	127	VAL
40	BE	2	LYS
40	BE	29	GLY
40	BE	72	VAL
40	BE	75	VAL
40	BE	88	GLY
40	BE	117	MET
40	BE	168	MET
41	BF	6	VAL
41	BF	7	TYR
41	BF	10	PRO
41	BF	64	ILE

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Mol	Chain	Res	Type
41	BF	82	ILE
41	BF	108	LYS
41	BF	126	VAL
41	BF	127	GLU
41	BF	133	ASN
41	BF	206	ILE
42	BG	3	LEU
42	BG	50	ALA
42	BG	84	LYS
42	BG	89	GLY
42	BG	113	ARG
42	BG	176	LEU
43	BH	24	VAL
43	BH	43	VAL
43	BH	44	VAL
46	BN	8	GLN
46	BN	58	ASP
46	BN	64	GLY
46	BN	108	PRO
46	BN	130	HIS
46	BN	133	GLN
47	BO	91	LEU
48	BP	11	GLY
48	BP	25	SER
48	BP	31	ALA
48	BP	35	HIS
48	BP	56	SER
48	BP	69	GLY
48	BP	116	GLY
48	BP	133	SER
48	BP	147	LEU
49	BQ	13	GLN
49	BQ	53	ALA
49	BQ	88	GLY
49	BQ	137	TYR
50	BR	3	HIS
50	BR	7	GLY
50	BR	14	SER
50	BR	42	LYS
50	BR	45	ARG
50	BR	58	GLY
50	BR	72	ASP

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Mol	Chain	Res	Type
50	BR	93	GLY
50	BR	104	ARG
50	BR	107	ASP
51	BS	24	LEU
51	BS	97	ARG
52	BT	4	GLY
52	BT	12	SER
52	BT	23	ARG
52	BT	30	VAL
52	BT	41	ARG
52	BT	111	ARG
53	BU	90	VAL
53	BU	93	LYS
54	BV	36	PRO
55	BW	89	ALA
57	BY	17	SER
57	BY	26	LYS
57	BY	61	ILE
57	BY	66	PRO
57	BY	82	PRO
58	BZ	49	ARG
58	BZ	106	GLY
58	BZ	156	LYS
58	BZ	164	ALA
2	CB	77	ALA
2	CB	99	GLY
2	CB	223	ILE
2	CB	236	TYR
3	CC	26	LYS
3	CC	60	ALA
3	CC	153	VAL
3	CC	189	ALA
4	CD	3	ARG
4	CD	16	GLY
4	CD	40	PRO
4	CD	44	GLY
4	CD	72	GLU
4	CD	90	GLY
4	CD	91	SER
4	CD	159	ARG
4	CD	166	LYS
4	CD	172	PRO

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Mol	Chain	Res	Type
4	CD	181	MET
4	CD	183	GLY
4	CD	206	PHE
6	CF	40	VAL
6	CF	42	GLU
7	CG	33	ASP
7	CG	35	LYS
7	CG	58	PRO
8	CH	49	GLU
9	CI	11	LYS
9	CI	19	LEU
9	CI	51	ARG
9	CI	100	GLY
10	CJ	30	SER
10	CJ	86	MET
11	CK	49	GLY
11	CK	90	GLY
12	CL	29	GLY
12	CL	79	GLU
12	CL	121	GLY
12	CL	127	GLU
13	CM	4	ILE
13	CM	12	ASN
13	CM	38	GLY
13	CM	100	GLY
13	CM	117	VAL
14	CN	5	ALA
15	CO	12	ILE
17	CQ	13	ASP
17	CQ	80	GLY
17	CQ	96	GLU
18	CR	41	LYS
18	CR	57	GLY
19	CS	26	GLY
19	CS	29	ARG
19	CS	44	MET
19	CS	72	GLY
20	CT	48	LYS
20	CT	49	ALA
20	CT	73	HIS
20	CT	96	GLY
20	CT	101	GLY

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Mol	Chain	Res	Type
21	CU	3	LYS
25	CZ	8	THR
25	CZ	69	GLU
25	CZ	70	TYR
25	CZ	146	LEU
25	CZ	165	GLY
25	CZ	279	GLU
25	CZ	292	GLY
25	CZ	329	GLY
25	CZ	357	PRO
25	CZ	379	ALA
25	CZ	382	GLU
25	CZ	393	ARG
25	CZ	394	THR
27	D1	30	VAL
27	D1	33	LYS
27	D1	44	PRO
27	D1	52	ARG
27	D1	53	VAL
27	D1	76	ARG
27	D1	85	LEU
28	D2	3	LEU
28	D2	14	ARG
28	D2	48	HIS
29	D3	13	ILE
30	D4	26	SER
31	D5	4	HIS
31	D5	24	ALA
31	D5	35	GLU
34	D8	8	LYS
34	D8	51	ALA
35	D9	25	VAL
35	D9	36	GLN
38	DC	37	PHE
38	DC	58	VAL
38	DC	79	LYS
38	DC	91	ALA
38	DC	117	PRO
39	DD	3	VAL
39	DD	41	GLY
39	DD	58	HIS
39	DD	202	LYS

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Mol	Chain	Res	Type
39	DD	234	GLY
39	DD	273	ARG
40	DE	2	LYS
40	DE	29	GLY
40	DE	45	THR
40	DE	72	VAL
40	DE	88	GLY
40	DE	98	PRO
40	DE	117	MET
40	DE	189	PRO
41	DF	10	PRO
41	DF	25	PRO
41	DF	58	ALA
41	DF	81	PRO
41	DF	84	VAL
42	DG	10	LYS
42	DG	43	LEU
42	DG	58	GLN
42	DG	74	LYS
42	DG	84	LYS
42	DG	127	GLY
42	DG	181	ARG
43	DH	44	VAL
43	DH	127	GLU
43	DH	137	ASP
46	DN	8	GLN
46	DN	58	ASP
46	DN	63	THR
46	DN	64	GLY
46	DN	109	LYS
47	DO	98	VAL
48	DP	31	ALA
48	DP	104	GLY
49	DQ	2	LEU
49	DQ	62	GLY
49	DQ	88	GLY
49	DQ	137	TYR
50	DR	7	GLY
50	DR	58	GLY
50	DR	72	ASP
50	DR	108	GLY
51	DS	13	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
51	DS	57	LYS
51	DS	94	TYR
51	DS	97	ARG
52	DT	4	GLY
52	DT	39	ARG
52	DT	90	GLN
52	DT	91	ARG
52	DT	104	ASN
52	DT	129	ARG
52	DT	132	LYS
53	DU	27	LEU
53	DU	60	LEU
53	DU	83	LEU
53	DU	90	VAL
54	DV	36	PRO
54	DV	68	LYS
54	DV	78	LYS
55	DW	5	ALA
55	DW	18	ARG
55	DW	25	ARG
55	DW	67	ASP
56	DX	19	ALA
56	DX	22	ALA
57	DY	5	MET
57	DY	27	VAL
57	DY	62	GLU
57	DY	63	LYS
57	DY	64	GLU
57	DY	75	ILE
58	DZ	42	VAL
58	DZ	63	ASP
58	DZ	112	ARG
58	DZ	135	GLU
58	DZ	154	ASP
58	DZ	168	GLU
2	AB	47	THR
2	AB	232	PRO
3	AC	12	LEU
3	AC	45	LYS
3	AC	65	ALA
3	AC	146	ALA
4	AD	9	CYS

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Mol	Chain	Res	Type
4	AD	13	ARG
4	AD	172	PRO
5	AE	8	GLU
6	AF	56	PRO
7	AG	59	LEU
8	AH	91	ARG
9	AI	24	GLY
9	AI	87	GLN
10	AJ	78	ASN
11	AK	127	LYS
12	AL	127	GLU
13	AM	4	ILE
13	AM	12	ASN
13	AM	81	LEU
13	AM	116	THR
14	AN	3	ARG
14	AN	19	ARG
14	AN	22	THR
15	AO	88	ARG
17	AQ	34	LYS
17	AQ	96	GLU
18	AR	31	LEU
19	AS	20	LEU
19	AS	44	MET
20	AT	48	LYS
20	AT	99	LEU
25	AZ	144	PRO
25	AZ	173	GLY
25	AZ	174	SER
25	AZ	259	ALA
25	AZ	382	GLU
25	AZ	390	GLU
28	B2	16	LEU
28	B2	21	LEU
28	B2	40	SER
28	B2	42	GLY
29	B3	32	GLN
30	B4	20	ASN
30	B4	44	THR
32	B6	15	GLU
34	B8	48	PHE
34	B8	51	ALA

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Mol	Chain	Res	Type
38	BC	91	ALA
38	BC	152	ILE
39	BD	51	VAL
39	BD	260	ARG
40	BE	17	ASP
40	BE	54	GLN
40	BE	68	ALA
40	BE	83	ASP
41	BF	25	PRO
41	BF	90	PHE
41	BF	178	PRO
41	BF	180	GLY
42	BG	137	GLU
42	BG	145	THR
43	BH	21	PRO
43	BH	49	VAL
43	BH	130	ARG
46	BN	77	GLY
46	BN	88	GLU
48	BP	20	GLY
48	BP	39	LYS
48	BP	47	ASP
48	BP	76	LYS
48	BP	106	LEU
49	BQ	99	PRO
49	BQ	140	ALA
50	BR	5	LYS
51	BS	17	ARG
51	BS	107	GLU
52	BT	6	LEU
52	BT	17	THR
52	BT	33	LYS
52	BT	39	ARG
52	BT	127	ALA
53	BU	11	ARG
53	BU	15	LYS
53	BU	38	THR
53	BU	89	GLU
53	BU	116	ALA
54	BV	2	PHE
54	BV	22	VAL
54	BV	44	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
54	BV	48	GLY
54	BV	54	GLY
55	BW	5	ALA
55	BW	25	ARG
55	BW	33	ARG
55	BW	60	ASN
56	BX	4	ALA
56	BX	22	ALA
57	BY	9	LYS
57	BY	23	ARG
57	BY	33	LYS
57	BY	50	ARG
57	BY	53	PRO
57	BY	75	ILE
58	BZ	30	ASN
58	BZ	31	ARG
58	BZ	96	VAL
58	BZ	109	ALA
58	BZ	149	SER
58	BZ	151	HIS
58	BZ	158	PRO
2	CB	20	GLU
2	CB	22	LYS
2	CB	130	ARG
3	CC	4	LYS
3	CC	54	ARG
3	CC	65	ALA
3	CC	79	ARG
3	CC	117	ALA
3	CC	118	GLN
3	CC	154	SER
3	CC	160	ALA
4	CD	14	ARG
4	CD	31	CYS
4	CD	47	ARG
4	CD	110	PHE
4	CD	115	ARG
4	CD	153	ARG
4	CD	187	ARG
5	CE	8	GLU
5	CE	21	ALA
6	CF	56	PRO

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
7	CG	147	ALA
8	CH	115	SER
9	CI	87	GLN
9	CI	127	LYS
10	CJ	78	ASN
11	CK	52	GLY
11	CK	63	LEU
11	CK	117	ASN
11	CK	127	LYS
12	CL	6	THR
13	CM	68	GLY
13	CM	114	ARG
14	CN	9	LYS
14	CN	22	THR
16	CP	44	THR
18	CR	45	SER
20	CT	95	ALA
20	CT	99	LEU
25	CZ	174	SER
25	CZ	196	VAL
25	CZ	211	PRO
25	CZ	260	PRO
25	CZ	270	VAL
26	D0	20	ARG
26	D0	70	GLN
27	D1	79	GLY
27	D1	83	GLU
28	D2	11	GLU
29	D3	2	PRO
29	D3	43	ILE
29	D3	51	ALA
30	D4	8	LYS
30	D4	20	ASN
32	D6	41	PRO
32	D6	45	LYS
34	D8	31	HIS
34	D8	49	VAL
38	DC	167	LYS
39	DD	36	PRO
39	DD	159	ALA
40	DE	46	ALA
40	DE	54	GLN

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Mol	Chain	Res	Type
40	DE	82	ARG
40	DE	94	GLU
41	DF	7	TYR
41	DF	127	GLU
41	DF	195	ASP
41	DF	206	ILE
42	DG	11	TYR
42	DG	57	ALA
42	DG	105	LYS
43	DH	24	VAL
43	DH	42	ARG
43	DH	46	GLU
43	DH	79	VAL
46	DN	7	LYS
46	DN	119	ARG
47	DO	5	GLN
47	DO	29	ASN
48	DP	15	ARG
48	DP	20	GLY
48	DP	23	PRO
48	DP	26	GLY
48	DP	33	ARG
48	DP	51	PHE
48	DP	65	ARG
48	DP	106	LEU
48	DP	110	TYR
50	DR	14	SER
50	DR	71	GLN
51	DS	17	ARG
51	DS	22	GLY
51	DS	24	LEU
51	DS	37	ALA
51	DS	51	ALA
51	DS	105	ALA
52	DT	27	THR
52	DT	33	LYS
52	DT	127	ALA
53	DU	3	ARG
54	DV	23	GLU
54	DV	44	LYS
55	DW	44	ALA
55	DW	60	ASN

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Mol	Chain	Res	Type
55	DW	110	LYS
56	DX	4	ALA
57	DY	9	LYS
57	DY	26	LYS
57	DY	40	GLU
57	DY	53	PRO
57	DY	66	PRO
57	DY	92	ASN
58	DZ	32	HIS
58	DZ	46	LYS
58	DZ	109	ALA
58	DZ	141	VAL
58	DZ	178	GLU
2	AB	87	ARG
3	AC	54	ARG
3	AC	62	ASP
3	AC	66	VAL
3	AC	69	HIS
3	AC	83	ARG
3	AC	107	GLN
3	AC	143	GLU
3	AC	153	VAL
4	AD	4	TYR
4	AD	31	CYS
4	AD	160	GLN
4	AD	181	MET
7	AG	112	PRO
9	AI	51	ARG
9	AI	92	TYR
9	AI	119	ALA
10	AJ	55	LYS
12	AL	51	ALA
13	AM	61	GLU
13	AM	106	ASN
14	AN	50	LYS
16	AP	24	ALA
16	AP	43	LYS
20	AT	97	ALA
25	AZ	35	ALA
25	AZ	70	TYR
25	AZ	73	ALA
25	AZ	134	PHE

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Mol	Chain	Res	Type
25	AZ	146	LEU
25	AZ	213	PRO
28	B2	13	ALA
28	B2	41	ILE
29	B3	2	PRO
29	B3	16	PRO
30	B4	28	LYS
31	B5	22	HIS
31	B5	24	ALA
32	B6	12	GLU
32	B6	41	PRO
32	B6	42	TRP
34	B8	49	VAL
38	BC	113	VAL
38	BC	120	MET
39	BD	11	PRO
39	BD	244	ARG
39	BD	273	ARG
40	BE	98	PRO
41	BF	43	LYS
41	BF	179	GLU
41	BF	195	ASP
42	BG	126	ASP
43	BH	42	ARG
46	BN	33	LEU
46	BN	57	ALA
47	BO	68	GLU
48	BP	15	ARG
48	BP	102	ARG
48	BP	110	TYR
48	BP	111	ARG
49	BQ	2	LEU
49	BQ	135	ASP
50	BR	102	GLU
51	BS	13	ARG
51	BS	22	GLY
51	BS	37	ALA
51	BS	89	ARG
51	BS	104	GLY
52	BT	9	LEU
52	BT	26	ASP
52	BT	91	ARG

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Mol	Chain	Res	Type
52	BT	135	ALA
53	BU	5	LYS
53	BU	92	ARG
55	BW	6	ILE
55	BW	66	GLU
55	BW	110	LYS
57	BY	29	GLU
57	BY	39	VAL
57	BY	62	GLU
58	BZ	143	GLY
58	BZ	167	PRO
2	CB	127	ILE
2	CB	232	PRO
3	CC	66	VAL
3	CC	82	GLU
3	CC	95	THR
4	CD	43	HIS
7	CG	116	ALA
7	CG	117	ALA
9	CI	33	PHE
9	CI	92	TYR
9	CI	118	LYS
11	CK	87	THR
12	CL	19	ARG
16	CP	43	LYS
16	CP	45	THR
17	CQ	82	MET
18	CR	87	ARG
20	CT	97	ALA
25	CZ	41	ASN
25	CZ	73	ALA
25	CZ	128	VAL
25	CZ	173	GLY
25	CZ	232	THR
25	CZ	302	GLN
30	D4	28	LYS
30	D4	44	THR
32	D6	9	LEU
32	D6	34	LEU
33	D7	7	PRO
35	D9	33	LYS
38	DC	55	ASP

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Mol	Chain	Res	Type
38	DC	105	ASP
38	DC	120	MET
38	DC	123	VAL
38	DC	138	PRO
38	DC	157	LYS
39	DD	133	LEU
39	DD	242	ARG
39	DD	244	ARG
40	DE	68	ALA
40	DE	169	ASN
41	DF	12	LEU
41	DF	126	VAL
41	DF	133	ASN
41	DF	172	TRP
41	DF	180	GLY
42	DG	32	PRO
42	DG	47	LYS
42	DG	50	ALA
42	DG	143	GLU
43	DH	43	VAL
43	DH	52	VAL
43	DH	85	LYS
43	DH	165	ALA
46	DN	49	GLY
46	DN	93	THR
48	DP	9	ASN
48	DP	47	ASP
49	DQ	121	ALA
49	DQ	133	ARG
50	DR	3	HIS
50	DR	5	LYS
50	DR	42	LYS
50	DR	102	GLU
50	DR	116	LEU
51	DS	58	LEU
51	DS	107	GLU
52	DT	17	THR
52	DT	41	ARG
52	DT	135	ALA
53	DU	62	ILE
54	DV	22	VAL
55	DW	6	ILE

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Mol	Chain	Res	Type
56	DX	12	VAL
57	DY	31	LEU
57	DY	50	ARG
57	DY	81	LYS
58	DZ	52	SER
58	DZ	140	ASP
58	DZ	143	GLY
2	AB	22	LYS
2	AB	26	PRO
2	AB	114	ARG
3	AC	49	SER
3	AC	154	SER
4	AD	5	ILE
4	AD	7	PRO
6	AF	18	GLN
6	AF	39	LYS
6	AF	55	ASP
9	AI	40	LEU
10	AJ	41	PRO
11	AK	52	GLY
13	AM	117	VAL
14	AN	60	SER
18	AR	41	LYS
18	AR	68	LYS
25	AZ	39	ASN
25	AZ	128	VAL
25	AZ	139	ASP
26	B0	74	ARG
27	B1	18	ILE
27	B1	92	LYS
28	B2	23	LYS
31	B5	56	LYS
32	B6	34	LEU
38	BC	104	LEU
38	BC	119	VAL
38	BC	138	PRO
39	BD	26	LYS
39	BD	123	ALA
39	BD	133	LEU
39	BD	237	GLU
39	BD	242	ARG
40	BE	30	PRO

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Mol	Chain	Res	Type
40	BE	35	GLN
40	BE	62	PRO
40	BE	187	ALA
41	BF	11	VAL
41	BF	167	ALA
42	BG	80	PHE
42	BG	82	LEU
42	BG	115	ARG
42	BG	117	PHE
42	BG	179	PRO
43	BH	52	VAL
43	BH	85	LYS
43	BH	125	VAL
43	BH	129	THR
46	BN	5	VAL
46	BN	13	TRP
46	BN	47	ALA
48	BP	26	GLY
48	BP	149	GLU
49	BQ	18	LYS
49	BQ	49	ALA
51	BS	96	GLY
52	BT	78	LEU
52	BT	93	ARG
53	BU	34	LYS
54	BV	52	VAL
56	BX	84	ALA
57	BY	40	GLU
57	BY	64	GLU
57	BY	81	LYS
58	BZ	63	ASP
58	BZ	139	VAL
58	BZ	140	ASP
58	BZ	160	GLY
2	CB	105	PHE
3	CC	15	THR
3	CC	69	HIS
3	CC	83	ARG
3	CC	188	LEU
4	CD	5	ILE
4	CD	28	SER
7	CG	4	ARG

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Mol	Chain	Res	Type
7	CG	80	VAL
8	CH	135	CYS
13	CM	106	ASN
14	CN	3	ARG
17	CQ	38	ARG
17	CQ	64	PRO
19	CS	43	GLU
19	CS	80	TYR
25	CZ	17	ILE
25	CZ	35	ALA
25	CZ	130	TYR
28	D2	58	ALA
29	D3	46	ASN
30	D4	36	CYS
34	D8	48	PHE
35	D9	19	ARG
35	D9	20	HIS
38	DC	152	ILE
39	DD	51	VAL
39	DD	241	PRO
40	DE	52	LEU
40	DE	62	PRO
41	DF	62	ARG
41	DF	108	LYS
41	DF	178	PRO
42	DG	139	LEU
42	DG	167	GLU
43	DH	21	PRO
43	DH	107	VAL
43	DH	158	HIS
46	DN	33	LEU
48	DP	148	LEU
50	DR	11	ASN
50	DR	104	ARG
52	DT	24	PRO
52	DT	55	ASN
53	DU	53	ARG
53	DU	92	ARG
57	DY	65	ALA
58	DZ	20	ARG
58	DZ	136	PHE
58	DZ	139	VAL

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Mol	Chain	Res	Type
3	AC	37	GLN
9	AI	41	VAL
10	AJ	36	GLY
11	AK	62	GLN
12	AL	48	PRO
13	AM	21	TYR
18	AR	57	GLY
25	AZ	10	PRO
27	B1	55	GLY
27	B1	57	GLU
32	B6	39	TYR
38	BC	196	LEU
39	BD	131	LEU
39	BD	268	ARG
40	BE	52	LEU
42	BG	111	LEU
42	BG	142	PRO
43	BH	128	PRO
46	BN	30	ILE
47	BO	105	GLU
48	BP	65	ARG
51	BS	51	ALA
51	BS	85	VAL
54	BV	50	PRO
57	BY	27	VAL
57	BY	31	LEU
57	BY	34	LYS
57	BY	65	ALA
57	BY	87	LYS
3	CC	171	GLY
6	CF	39	LYS
7	CG	59	LEU
12	CL	30	ALA
15	CO	36	ILE
25	CZ	83	PRO
25	CZ	144	PRO
25	CZ	259	ALA
27	D1	28	GLY
27	D1	40	ARG
38	DC	113	VAL
39	DD	24	ILE
41	DF	6	VAL

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Mol	Chain	Res	Type
42	DG	86	MET
42	DG	125	PHE
42	DG	130	ASN
43	DH	49	VAL
43	DH	125	VAL
43	DH	130	ARG
46	DN	110	GLY
48	DP	43	GLY
51	DS	14	VAL
51	DS	83	LYS
51	DS	85	VAL
52	DT	12	SER
53	DU	34	LYS
53	DU	94	ASN
58	DZ	147	GLY
4	AD	178	VAL
15	AO	87	ILE
25	AZ	154	VAL
29	B3	12	PRO
30	B4	19	GLY
39	BD	234	GLY
43	BH	79	VAL
43	BH	107	VAL
56	BX	11	PRO
57	BY	18	GLY
58	BZ	130	PRO
7	CG	112	PRO
8	CH	83	ILE
9	CI	24	GLY
10	CJ	37	PRO
12	CL	87	GLY
25	CZ	20	VAL
25	CZ	368	VAL
38	DC	119	VAL
40	DE	112	GLY
46	DN	5	VAL
47	DO	35	VAL
54	DV	52	VAL
58	DZ	108	PRO
58	DZ	165	VAL
4	AD	197	PRO
5	AE	67	VAL

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Mol	Chain	Res	Type
25	AZ	242	ILE
47	BO	35	VAL
6	CF	6	VAL
10	CJ	82	ILE
14	CN	7	ILE
15	CO	82	ILE
30	D4	19	GLY
40	DE	116	VAL
41	DF	11	VAL
42	DG	63	ILE
56	DX	11	PRO
57	DY	39	VAL
57	DY	61	ILE
58	DZ	27	VAL
58	DZ	74	VAL
2	AB	99	GLY
10	AJ	39	PRO
12	AL	29	GLY
25	AZ	260	PRO
27	B1	37	ILE
39	BD	100	GLY
41	BF	85	GLY
46	BN	60	ILE
49	BQ	90	VAL
3	CC	130	VAL
12	CL	93	LEU
25	CZ	307	PRO
30	D4	45	GLY
38	DC	173	ALA
39	DD	125	ILE
40	DE	190	GLY
41	DF	9	ILE
48	DP	146	VAL
50	DR	32	GLY
52	DT	81	PRO
53	DU	9	VAL
56	DX	32	PRO
7	AG	80	VAL
11	AK	35	PRO
13	AM	60	VAL
28	B2	18	PRO
38	BC	153	ILE

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Mol	Chain	Res	Type
41	BF	9	ILE
43	BH	127	GLU
46	BN	134	ARG
2	CB	159	PRO
7	CG	88	PRO
10	CJ	39	PRO
10	CJ	77	PRO
38	DC	153	ILE
39	DD	34	VAL
46	DN	40	PRO
54	DV	50	PRO
8	AH	35	ILE
19	AS	45	VAL
25	AZ	169	PRO
32	B6	52	VAL
34	B8	52	LYS
42	BG	16	ARG
48	BP	66	GLY
58	BZ	61	LEU
4	CD	50	ARG
6	CF	55	ASP
12	CL	18	VAL
34	D8	58	ILE
40	DE	55	ASN
41	DF	85	GLY
51	DS	65	VAL
53	DU	26	GLY
56	DX	43	VAL
25	CZ	40	PRO
25	AZ	40	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%)	174 (86%)	28 (14%)	4 19

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	CB	202/220 (92%)	173 (86%)	29 (14%)	4	17
3	AC	160/188 (85%)	139 (87%)	21 (13%)	5	21
3	CC	160/188 (85%)	141 (88%)	19 (12%)	6	25
4	AD	180/181 (99%)	150 (83%)	30 (17%)	3	11
4	CD	180/181 (99%)	151 (84%)	29 (16%)	3	13
5	AE	115/123 (94%)	104 (90%)	11 (10%)	10	37
5	CE	115/123 (94%)	103 (90%)	12 (10%)	9	32
6	AF	90/90 (100%)	76 (84%)	14 (16%)	3	14
6	CF	90/90 (100%)	77 (86%)	13 (14%)	4	17
7	AG	126/127 (99%)	116 (92%)	10 (8%)	15	49
7	CG	126/127 (99%)	118 (94%)	8 (6%)	22	58
8	AH	119/119 (100%)	105 (88%)	14 (12%)	6	25
8	CH	119/119 (100%)	106 (89%)	13 (11%)	8	30
9	AI	98/99 (99%)	84 (86%)	14 (14%)	4	17
9	CI	98/99 (99%)	86 (88%)	12 (12%)	6	24
10	AJ	88/92 (96%)	78 (89%)	10 (11%)	7	28
10	CJ	88/92 (96%)	79 (90%)	9 (10%)	9	33
11	AK	90/99 (91%)	84 (93%)	6 (7%)	20	56
11	CK	90/99 (91%)	81 (90%)	9 (10%)	9	34
12	AL	104/108 (96%)	84 (81%)	20 (19%)	2	8
12	CL	104/108 (96%)	84 (81%)	20 (19%)	2	8
13	AM	99/101 (98%)	85 (86%)	14 (14%)	4	18
13	CM	99/101 (98%)	90 (91%)	9 (9%)	12	40
14	AN	49/50 (98%)	41 (84%)	8 (16%)	3	12
14	CN	49/50 (98%)	40 (82%)	9 (18%)	2	9
15	AO	79/80 (99%)	73 (92%)	6 (8%)	16	51
15	CO	79/80 (99%)	69 (87%)	10 (13%)	5	22
16	AP	72/74 (97%)	64 (89%)	8 (11%)	8	29
16	CP	72/74 (97%)	66 (92%)	6 (8%)	14	46
17	AQ	94/97 (97%)	86 (92%)	8 (8%)	13	45
17	CQ	94/97 (97%)	85 (90%)	9 (10%)	10	37

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
18	AR	61/77 (79%)	55 (90%)	6 (10%)	10	36
18	CR	61/77 (79%)	54 (88%)	7 (12%)	7	27
19	AS	69/80 (86%)	56 (81%)	13 (19%)	2	8
19	CS	69/80 (86%)	57 (83%)	12 (17%)	2	11
20	AT	76/82 (93%)	70 (92%)	6 (8%)	15	49
20	CT	76/82 (93%)	69 (91%)	7 (9%)	11	40
21	AU	19/22 (86%)	18 (95%)	1 (5%)	28	64
21	CU	19/22 (86%)	17 (90%)	2 (10%)	8	31
25	AZ	322/338 (95%)	281 (87%)	41 (13%)	5	22
25	CZ	322/338 (95%)	284 (88%)	38 (12%)	6	25
26	B0	66/67 (98%)	57 (86%)	9 (14%)	5	19
26	D0	66/67 (98%)	56 (85%)	10 (15%)	3	14
27	B1	78/83 (94%)	67 (86%)	11 (14%)	4	18
27	D1	78/83 (94%)	64 (82%)	14 (18%)	2	10
28	B2	66/67 (98%)	54 (82%)	12 (18%)	2	9
28	D2	66/67 (98%)	60 (91%)	6 (9%)	12	40
29	B3	51/52 (98%)	46 (90%)	5 (10%)	10	36
29	D3	51/52 (98%)	47 (92%)	4 (8%)	16	49
30	B4	39/63 (62%)	28 (72%)	11 (28%)	0	1
30	D4	39/63 (62%)	28 (72%)	11 (28%)	0	1
31	B5	51/52 (98%)	48 (94%)	3 (6%)	24	60
31	D5	51/52 (98%)	45 (88%)	6 (12%)	6	25
32	B6	49/52 (94%)	38 (78%)	11 (22%)	1	4
32	D6	49/52 (94%)	40 (82%)	9 (18%)	2	9
33	B7	41/42 (98%)	34 (83%)	7 (17%)	2	11
33	D7	41/42 (98%)	34 (83%)	7 (17%)	2	11
34	B8	53/55 (96%)	43 (81%)	10 (19%)	2	8
34	D8	53/55 (96%)	44 (83%)	9 (17%)	2	11
35	B9	34/34 (100%)	28 (82%)	6 (18%)	2	10
35	D9	34/34 (100%)	31 (91%)	3 (9%)	12	43
38	BC	180/181 (99%)	164 (91%)	16 (9%)	12	42

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
38	DC	180/181 (99%)	167 (93%)	13 (7%)	18	53
39	BD	217/218 (100%)	185 (85%)	32 (15%)	4	16
39	DD	217/218 (100%)	185 (85%)	32 (15%)	4	16
40	BE	165/166 (99%)	142 (86%)	23 (14%)	4	19
40	DE	165/166 (99%)	139 (84%)	26 (16%)	3	13
41	BF	165/166 (99%)	156 (94%)	9 (6%)	27	63
41	DF	165/166 (99%)	158 (96%)	7 (4%)	36	73
42	BG	155/156 (99%)	133 (86%)	22 (14%)	4	18
42	DG	155/156 (99%)	131 (84%)	24 (16%)	3	14
43	BH	132/148 (89%)	117 (89%)	15 (11%)	7	28
43	DH	132/148 (89%)	115 (87%)	17 (13%)	5	21
46	BN	117/119 (98%)	102 (87%)	15 (13%)	5	21
46	DN	117/119 (98%)	104 (89%)	13 (11%)	8	29
47	BO	100/100 (100%)	88 (88%)	12 (12%)	6	24
47	DO	100/100 (100%)	90 (90%)	10 (10%)	9	34
48	BP	112/116 (97%)	95 (85%)	17 (15%)	3	14
48	DP	112/116 (97%)	90 (80%)	22 (20%)	1	7
49	BQ	111/111 (100%)	97 (87%)	14 (13%)	5	22
49	DQ	111/111 (100%)	97 (87%)	14 (13%)	5	22
50	BR	100/101 (99%)	86 (86%)	14 (14%)	4	18
50	DR	100/101 (99%)	86 (86%)	14 (14%)	4	18
51	BS	77/88 (88%)	66 (86%)	11 (14%)	4	17
51	DS	77/88 (88%)	66 (86%)	11 (14%)	4	17
52	BT	120/127 (94%)	98 (82%)	22 (18%)	2	9
52	DT	120/127 (94%)	99 (82%)	21 (18%)	2	10
53	BU	92/94 (98%)	82 (89%)	10 (11%)	8	30
53	DU	92/94 (98%)	83 (90%)	9 (10%)	10	36
54	BV	82/82 (100%)	66 (80%)	16 (20%)	2	7
54	DV	82/82 (100%)	69 (84%)	13 (16%)	3	13
55	BW	91/92 (99%)	80 (88%)	11 (12%)	6	24
55	DW	91/92 (99%)	81 (89%)	10 (11%)	8	30

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
56	BX	74/78 (95%)	65 (88%)	9 (12%)	6	24
56	DX	74/78 (95%)	68 (92%)	6 (8%)	15	47
57	BY	84/91 (92%)	71 (84%)	13 (16%)	3	14
57	DY	84/91 (92%)	71 (84%)	13 (16%)	3	14
58	BZ	161/179 (90%)	137 (85%)	24 (15%)	4	15
58	DZ	161/179 (90%)	133 (83%)	28 (17%)	2	11
All	All	10350/10854 (95%)	9007 (87%)	1343 (13%)	5	21

All (1343) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	17	PHE
2	AB	22	LYS
2	AB	24	TRP
2	AB	31	TYR
2	AB	32	ILE
2	AB	42	ILE
2	AB	45	GLN
2	AB	51	LEU
2	AB	67	THR
2	AB	69	LEU
2	AB	97	TRP
2	AB	110	GLN
2	AB	111	ARG
2	AB	113	HIS
2	AB	140	HIS
2	AB	141	GLU
2	AB	155	LEU
2	AB	162	ILE
2	AB	175	ARG
2	AB	178	ARG
2	AB	187	LEU
2	AB	191	ASP
2	AB	195	ASP
2	AB	196	LEU
2	AB	204	ASN
2	AB	208	ILE
2	AB	209	ARG
2	AB	212	GLN
3	AC	3	ASN

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Mol	Chain	Res	Type
3	AC	5	ILE
3	AC	11	ARG
3	AC	14	ILE
3	AC	16	ARG
3	AC	18	TRP
3	AC	21	ARG
3	AC	23	TYR
3	AC	34	LEU
3	AC	52	LEU
3	AC	56	ASP
3	AC	82	GLU
3	AC	85	ARG
3	AC	105	GLU
3	AC	107	GLN
3	AC	119	ARG
3	AC	120	VAL
3	AC	165	THR
3	AC	166	GLU
3	AC	167	TRP
3	AC	188	LEU
4	AD	3	ARG
4	AD	9	CYS
4	AD	13	ARG
4	AD	15	GLU
4	AD	20	TYR
4	AD	26	CYS
4	AD	27	TYR
4	AD	29	PRO
4	AD	36	ARG
4	AD	49	ARG
4	AD	58	LEU
4	AD	67	ILE
4	AD	86	LYS
4	AD	89	THR
4	AD	91	SER
4	AD	97	LEU
4	AD	122	ARG
4	AD	131	ARG
4	AD	132	ARG
4	AD	135	LEU
4	AD	138	TYR
4	AD	145	GLU

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Mol	Chain	Res	Type
4	AD	154	ASN
4	AD	160	GLN
4	AD	163	GLU
4	AD	179	GLU
4	AD	181	MET
4	AD	187	ARG
4	AD	190	ASP
4	AD	192	GLU
5	AE	10	MET
5	AE	12	LEU
5	AE	20	GLN
5	AE	31	LEU
5	AE	53	LEU
5	AE	73	ASN
5	AE	79	GLU
5	AE	96	PRO
5	AE	120	THR
5	AE	125	SER
5	AE	147	ASP
6	AF	4	TYR
6	AF	14	LEU
6	AF	16	GLN
6	AF	21	LEU
6	AF	25	ILE
6	AF	27	GLN
6	AF	47	ARG
6	AF	57	GLN
6	AF	63	TYR
6	AF	64	GLN
6	AF	65	VAL
6	AF	83	ASP
6	AF	86	ARG
6	AF	98	LEU
7	AG	27	ILE
7	AG	37	ASN
7	AG	69	VAL
7	AG	78	ARG
7	AG	94	ARG
7	AG	95	ARG
7	AG	104	LEU
7	AG	114	ARG
7	AG	137	LYS

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Mol	Chain	Res	Type
7	AG	151	TYR
8	AH	1	MET
8	AH	5	PRO
8	AH	26	VAL
8	AH	39	LEU
8	AH	41	ARG
8	AH	56	LYS
8	AH	85	ARG
8	AH	91	ARG
8	AH	102	ARG
8	AH	104	ARG
8	AH	112	LEU
8	AH	119	LEU
8	AH	121	ASP
8	AH	127	LEU
9	AI	4	TYR
9	AI	10	ARG
9	AI	19	LEU
9	AI	47	LEU
9	AI	53	VAL
9	AI	66	ARG
9	AI	79	LEU
9	AI	96	LEU
9	AI	111	ARG
9	AI	112	LYS
9	AI	113	LYS
9	AI	121	ARG
9	AI	126	SER
9	AI	128	ARG
10	AJ	8	LEU
10	AJ	17	ASP
10	AJ	22	LYS
10	AJ	38	ILE
10	AJ	40	LEU
10	AJ	50	ILE
10	AJ	55	LYS
10	AJ	59	SER
10	AJ	73	ASP
10	AJ	96	ILE
11	AK	31	THR
11	AK	36	ASP
11	AK	84	VAL

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Mol	Chain	Res	Type
11	AK	109	VAL
11	AK	124	LYS
11	AK	126	ARG
12	AL	7	ILE
12	AL	20	LYS
12	AL	27	LEU
12	AL	33	ARG
12	AL	41	ARG
12	AL	44	THR
12	AL	46	LYS
12	AL	53	ARG
12	AL	55	VAL
12	AL	58	VAL
12	AL	62	SER
12	AL	67	THR
12	AL	83	VAL
12	AL	84	LEU
12	AL	91	LYS
12	AL	100	ILE
12	AL	102	ARG
12	AL	122	THR
12	AL	123	LYS
12	AL	126	LYS
13	AM	4	ILE
13	AM	12	ASN
13	AM	50	GLU
13	AM	61	GLU
13	AM	64	TRP
13	AM	65	LYS
13	AM	66	LEU
13	AM	71	ARG
13	AM	88	ARG
13	AM	93	ARG
13	AM	108	ARG
13	AM	109	THR
13	AM	115	LYS
13	AM	120	LYS
14	AN	14	PRO
14	AN	18	VAL
14	AN	21	TYR
14	AN	29	ARG
14	AN	42	ILE

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Mol	Chain	Res	Type
14	AN	44	LEU
14	AN	46	GLU
14	AN	57	ARG
15	AO	6	GLU
15	AO	25	THR
15	AO	33	THR
15	AO	82	ILE
15	AO	83	GLU
15	AO	88	ARG
16	AP	1	MET
16	AP	2	VAL
16	AP	17	TYR
16	AP	32	TYR
16	AP	36	ILE
16	AP	50	LYS
16	AP	55	ARG
16	AP	69	THR
17	AQ	35	VAL
17	AQ	37	LYS
17	AQ	38	ARG
17	AQ	49	GLU
17	AQ	52	LYS
17	AQ	70	ARG
17	AQ	74	LEU
17	AQ	79	SER
18	AR	29	PHE
18	AR	31	LEU
18	AR	37	VAL
18	AR	38	GLU
18	AR	46	GLU
18	AR	47	THR
19	AS	5	LEU
19	AS	6	LYS
19	AS	7	LYS
19	AS	10	PHE
19	AS	12	ASP
19	AS	29	ARG
19	AS	30	LEU
19	AS	37	ARG
19	AS	44	MET
19	AS	48	THR
19	AS	49	ILE

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Mol	Chain	Res	Type
19	AS	62	ILE
19	AS	63	THR
20	AT	23	ARG
20	AT	26	ASN
20	AT	62	LEU
20	AT	64	ASP
20	AT	74	LYS
20	AT	93	GLU
21	AU	24	ARG
25	AZ	2	LYS
25	AZ	4	GLU
25	AZ	5	PHE
25	AZ	7	ARG
25	AZ	24	LYS
25	AZ	27	LEU
25	AZ	38	GLU
25	AZ	63	ILE
25	AZ	64	ASN
25	AZ	65	THR
25	AZ	69	GLU
25	AZ	98	GLN
25	AZ	113	MET
25	AZ	117	ARG
25	AZ	121	LEU
25	AZ	124	ARG
25	AZ	152	MET
25	AZ	180	GLU
25	AZ	197	ASP
25	AZ	198	LYS
25	AZ	199	ILE
25	AZ	215	ARG
25	AZ	216	ASP
25	AZ	218	ASP
25	AZ	230	THR
25	AZ	241	ARG
25	AZ	244	ARG
25	AZ	247	VAL
25	AZ	253	VAL
25	AZ	261	GLU
25	AZ	274	ARG
25	AZ	275	LYS
25	AZ	277	LEU

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Mol	Chain	Res	Type
25	AZ	281	ILE
25	AZ	285	ASN
25	AZ	293	VAL
25	AZ	299	GLU
25	AZ	316	PHE
25	AZ	325	LYS
25	AZ	335	PHE
25	AZ	341	GLN
26	B0	5	LYS
26	B0	12	ASN
26	B0	20	ARG
26	B0	27	GLU
26	B0	41	ARG
26	B0	60	PHE
26	B0	62	LEU
26	B0	80	HIS
26	B0	84	LEU
27	B1	11	ARG
27	B1	13	ILE
27	B1	21	ARG
27	B1	26	ARG
27	B1	33	LYS
27	B1	38	SER
27	B1	39	LYS
27	B1	40	ARG
27	B1	45	ASN
27	B1	60	PHE
27	B1	83	GLU
28	B2	7	ARG
28	B2	15	LYS
28	B2	32	LEU
28	B2	35	LEU
28	B2	51	ARG
28	B2	52	ASP
28	B2	53	LEU
28	B2	59	ARG
28	B2	61	LEU
28	B2	64	LEU
28	B2	68	ARG
28	B2	69	ARG
29	B3	9	VAL
29	B3	28	LEU

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Mol	Chain	Res	Type
29	B3	34	GLU
29	B3	35	ARG
29	B3	46	ASN
30	B4	5	ILE
30	B4	6	HIS
30	B4	9	LEU
30	B4	10	VAL
30	B4	20	ASN
30	B4	22	ILE
30	B4	25	TYR
30	B4	27	THR
30	B4	32	TYR
30	B4	34	GLU
30	B4	47	GLN
31	B5	25	LEU
31	B5	51	TYR
31	B5	56	LYS
32	B6	9	LEU
32	B6	11	LEU
32	B6	18	ARG
32	B6	19	ARG
32	B6	23	THR
32	B6	31	PRO
32	B6	36	LEU
32	B6	41	PRO
32	B6	42	TRP
32	B6	45	LYS
32	B6	53	LYS
33	B7	1	MET
33	B7	4	THR
33	B7	23	ARG
33	B7	24	THR
33	B7	34	ARG
33	B7	37	LYS
33	B7	47	ARG
34	B8	17	THR
34	B8	30	ARG
34	B8	31	HIS
34	B8	34	TRP
34	B8	35	GLN
34	B8	44	LYS
34	B8	47	LYS

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Mol	Chain	Res	Type
34	B8	48	PHE
34	B8	61	LEU
34	B8	64	TYR
35	B9	1	MET
35	B9	2	LYS
35	B9	14	CYS
35	B9	18	ARG
35	B9	28	GLU
35	B9	29	ASN
38	BC	5	LYS
38	BC	10	LEU
38	BC	11	LEU
38	BC	17	ASN
38	BC	28	LEU
38	BC	30	LYS
38	BC	36	LYS
38	BC	42	GLU
38	BC	53	ARG
38	BC	54	SER
38	BC	55	ASP
38	BC	57	ASN
38	BC	71	GLN
38	BC	104	LEU
38	BC	108	MET
38	BC	167	LYS
39	BD	10	THR
39	BD	14	ARG
39	BD	18	VAL
39	BD	24	ILE
39	BD	25	THR
39	BD	26	LYS
39	BD	27	THR
39	BD	30	GLU
39	BD	44	ASN
39	BD	46	GLN
39	BD	65	ILE
39	BD	69	ARG
39	BD	71	ASP
39	BD	75	ILE
39	BD	94	LEU
39	BD	99	ASP
39	BD	131	LEU

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Mol	Chain	Res	Type
39	BD	166	GLN
39	BD	183	ARG
39	BD	200	ASP
39	BD	204	ILE
39	BD	208	LYS
39	BD	211	ARG
39	BD	221	VAL
39	BD	228	PRO
39	BD	229	VAL
39	BD	239	ARG
39	BD	246	PRO
39	BD	257	LEU
39	BD	271	ILE
39	BD	273	ARG
39	BD	274	ARG
40	BE	1	MET
40	BE	17	ASP
40	BE	49	LEU
40	BE	55	ASN
40	BE	57	LYS
40	BE	59	VAL
40	BE	61	ARG
40	BE	62	PRO
40	BE	67	PHE
40	BE	73	GLU
40	BE	76	ARG
40	BE	78	LEU
40	BE	79	ARG
40	BE	121	ASN
40	BE	127	ASP
40	BE	128	SER
40	BE	163	GLU
40	BE	168	MET
40	BE	169	ASN
40	BE	170	LEU
40	BE	181	LEU
40	BE	196	VAL
40	BE	202	LYS
41	BF	28	ILE
41	BF	54	ARG
41	BF	65	TRP
41	BF	74	ARG

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Mol	Chain	Res	Type
41	BF	88	VAL
41	BF	122	LYS
41	BF	125	LEU
41	BF	169	ASN
41	BF	179	GLU
42	BG	9	ARG
42	BG	10	LYS
42	BG	23	PHE
42	BG	26	GLN
42	BG	30	GLU
42	BG	33	ARG
42	BG	36	LYS
42	BG	45	GLU
42	BG	67	LYS
42	BG	77	ILE
42	BG	84	LYS
42	BG	87	PRO
42	BG	91	ARG
42	BG	97	ASP
42	BG	113	ARG
42	BG	117	PHE
42	BG	120	LEU
42	BG	125	PHE
42	BG	133	LEU
42	BG	147	ASP
42	BG	166	ASP
42	BG	175	LEU
43	BH	43	VAL
43	BH	54	ARG
43	BH	65	HIS
43	BH	71	LEU
43	BH	85	LYS
43	BH	88	LEU
43	BH	105	LEU
43	BH	116	GLU
43	BH	119	GLU
43	BH	139	GLN
43	BH	143	GLN
43	BH	149	ARG
43	BH	153	LYS
43	BH	162	ILE
43	BH	163	TYR

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Mol	Chain	Res	Type
46	BN	1	MET
46	BN	4	TYR
46	BN	32	THR
46	BN	38	HIS
46	BN	45	ASN
46	BN	48	MET
46	BN	56	ASN
46	BN	61	ARG
46	BN	69	GLN
46	BN	76	SER
46	BN	87	LEU
46	BN	90	MET
46	BN	99	LEU
46	BN	120	LEU
46	BN	136	GLU
47	BO	8	LEU
47	BO	10	VAL
47	BO	20	MET
47	BO	23	ARG
47	BO	31	LYS
47	BO	32	TYR
47	BO	35	VAL
47	BO	43	VAL
47	BO	49	ARG
47	BO	87	ILE
47	BO	98	VAL
47	BO	104	ARG
48	BP	16	ARG
48	BP	27	HIS
48	BP	41	ARG
48	BP	42	SER
48	BP	52	GLU
48	BP	59	LEU
48	BP	61	ARG
48	BP	70	GLN
48	BP	75	ILE
48	BP	77	ARG
48	BP	85	LEU
48	BP	91	PHE
48	BP	108	LYS
48	BP	110	TYR
48	BP	112	LEU

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Mol	Chain	Res	Type
48	BP	114	ILE
48	BP	136	GLU
49	BQ	25	ASP
49	BQ	42	ILE
49	BQ	45	GLN
49	BQ	51	ARG
49	BQ	54	MET
49	BQ	55	VAL
49	BQ	56	ARG
49	BQ	58	PHE
49	BQ	89	ASN
49	BQ	91	GLU
49	BQ	101	ARG
49	BQ	104	PHE
49	BQ	132	VAL
49	BQ	135	ASP
50	BR	2	ARG
50	BR	5	LYS
50	BR	6	SER
50	BR	10	LEU
50	BR	18	LEU
50	BR	44	LEU
50	BR	49	ASP
50	BR	71	GLN
50	BR	72	ASP
50	BR	74	LYS
50	BR	76	VAL
50	BR	94	TYR
50	BR	99	LYS
50	BR	111	LEU
51	BS	11	LYS
51	BS	12	PHE
51	BS	13	ARG
51	BS	15	ARG
51	BS	18	ILE
51	BS	29	PHE
51	BS	35	ILE
51	BS	54	LEU
51	BS	63	THR
51	BS	97	ARG
51	BS	106	ARG
52	BT	14	TYR

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Mol	Chain	Res	Type
52	BT	15	VAL
52	BT	23	ARG
52	BT	28	VAL
52	BT	32	TYR
52	BT	38	ASN
52	BT	39	ARG
52	BT	41	ARG
52	BT	44	ASP
52	BT	49	VAL
52	BT	53	ARG
52	BT	58	ASN
52	BT	61	PHE
52	BT	78	LEU
52	BT	82	LEU
52	BT	83	ILE
52	BT	93	ARG
52	BT	99	LEU
52	BT	115	ARG
52	BT	118	ARG
52	BT	124	ASP
52	BT	128	GLU
53	BU	9	VAL
53	BU	11	ARG
53	BU	34	LYS
53	BU	36	ARG
53	BU	49	HIS
53	BU	66	ASN
53	BU	74	LEU
53	BU	78	THR
53	BU	92	ARG
53	BU	108	GLU
54	BV	12	TYR
54	BV	13	ARG
54	BV	18	LEU
54	BV	19	LYS
54	BV	21	ARG
54	BV	39	LEU
54	BV	61	VAL
54	BV	62	LEU
54	BV	68	LYS
54	BV	79	VAL
54	BV	82	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
54	BV	83	ARG
54	BV	89	GLN
54	BV	91	TYR
54	BV	95	LEU
54	BV	99	ILE
55	BW	9	TYR
55	BW	11	ARG
55	BW	14	PRO
55	BW	39	THR
55	BW	51	LEU
55	BW	70	TYR
55	BW	75	TYR
55	BW	88	ARG
55	BW	96	ILE
55	BW	103	ILE
55	BW	107	LEU
56	BX	11	PRO
56	BX	27	THR
56	BX	28	PHE
56	BX	35	THR
56	BX	37	THR
56	BX	41	ASN
56	BX	57	LEU
56	BX	60	ARG
56	BX	68	ARG
57	BY	2	ARG
57	BY	6	HIS
57	BY	9	LYS
57	BY	28	LYS
57	BY	29	GLU
57	BY	32	PRO
57	BY	50	ARG
57	BY	62	GLU
57	BY	73	ARG
57	BY	76	CYS
57	BY	77	PRO
57	BY	90	LEU
57	BY	96	ILE
58	BZ	3	TYR
58	BZ	5	LEU
58	BZ	9	TYR
58	BZ	18	LEU

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Mol	Chain	Res	Type
58	BZ	20	ARG
58	BZ	31	ARG
58	BZ	34	ASN
58	BZ	41	LEU
58	BZ	61	LEU
58	BZ	67	LEU
58	BZ	70	LEU
58	BZ	72	ARG
58	BZ	73	GLN
58	BZ	81	ARG
58	BZ	93	ASP
58	BZ	103	ARG
58	BZ	119	GLU
58	BZ	121	HIS
58	BZ	124	ILE
58	BZ	127	LYS
58	BZ	136	PHE
58	BZ	148	ASP
58	BZ	165	VAL
58	BZ	168	GLU
2	CB	17	PHE
2	CB	22	LYS
2	CB	24	TRP
2	CB	32	ILE
2	CB	42	ILE
2	CB	44	LEU
2	CB	45	GLN
2	CB	55	PHE
2	CB	67	THR
2	CB	69	LEU
2	CB	97	TRP
2	CB	110	GLN
2	CB	111	ARG
2	CB	140	HIS
2	CB	141	GLU
2	CB	155	LEU
2	CB	162	ILE
2	CB	175	ARG
2	CB	178	ARG
2	CB	187	LEU
2	CB	191	ASP
2	CB	193	ASP

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Mol	Chain	Res	Type
2	CB	195	ASP
2	CB	196	LEU
2	CB	200	ILE
2	CB	204	ASN
2	CB	208	ILE
2	CB	212	GLN
2	CB	217	ARG
3	CC	5	ILE
3	CC	14	ILE
3	CC	16	ARG
3	CC	18	TRP
3	CC	21	ARG
3	CC	23	TYR
3	CC	52	LEU
3	CC	56	ASP
3	CC	82	GLU
3	CC	85	ARG
3	CC	105	GLU
3	CC	107	GLN
3	CC	119	ARG
3	CC	120	VAL
3	CC	165	THR
3	CC	166	GLU
3	CC	167	TRP
3	CC	191	THR
3	CC	196	LEU
4	CD	3	ARG
4	CD	9	CYS
4	CD	13	ARG
4	CD	15	GLU
4	CD	20	TYR
4	CD	24	GLU
4	CD	26	CYS
4	CD	36	ARG
4	CD	49	ARG
4	CD	59	ARG
4	CD	60	GLU
4	CD	86	LYS
4	CD	89	THR
4	CD	97	LEU
4	CD	98	GLU
4	CD	112	VAL

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Mol	Chain	Res	Type
4	CD	129	ASN
4	CD	131	ARG
4	CD	132	ARG
4	CD	135	LEU
4	CD	138	TYR
4	CD	145	GLU
4	CD	160	GLN
4	CD	163	GLU
4	CD	179	GLU
4	CD	187	ARG
4	CD	190	ASP
4	CD	192	GLU
4	CD	200	GLU
5	CE	10	MET
5	CE	12	LEU
5	CE	18	ARG
5	CE	20	GLN
5	CE	53	LEU
5	CE	68	GLU
5	CE	73	ASN
5	CE	76	ILE
5	CE	79	GLU
5	CE	80	ILE
5	CE	106	PRO
5	CE	147	ASP
6	CF	14	LEU
6	CF	16	GLN
6	CF	21	LEU
6	CF	25	ILE
6	CF	27	GLN
6	CF	43	LEU
6	CF	47	ARG
6	CF	57	GLN
6	CF	63	TYR
6	CF	65	VAL
6	CF	81	ILE
6	CF	83	ASP
6	CF	98	LEU
7	CG	37	ASN
7	CG	69	VAL
7	CG	78	ARG
7	CG	95	ARG

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Mol	Chain	Res	Type
7	CG	104	LEU
7	CG	114	ARG
7	CG	137	LYS
7	CG	151	TYR
8	CH	1	MET
8	CH	26	VAL
8	CH	39	LEU
8	CH	41	ARG
8	CH	56	LYS
8	CH	85	ARG
8	CH	91	ARG
8	CH	102	ARG
8	CH	104	ARG
8	CH	112	LEU
8	CH	119	LEU
8	CH	121	ASP
8	CH	127	LEU
9	CI	4	TYR
9	CI	10	ARG
9	CI	19	LEU
9	CI	47	LEU
9	CI	66	ARG
9	CI	85	LEU
9	CI	96	LEU
9	CI	111	ARG
9	CI	112	LYS
9	CI	113	LYS
9	CI	121	ARG
9	CI	128	ARG
10	CJ	8	LEU
10	CJ	17	ASP
10	CJ	22	LYS
10	CJ	38	ILE
10	CJ	40	LEU
10	CJ	50	ILE
10	CJ	55	LYS
10	CJ	73	ASP
10	CJ	96	ILE
11	CK	36	ASP
11	CK	38	ASN
11	CK	92	GLU
11	CK	104	GLN

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Mol	Chain	Res	Type
11	CK	109	VAL
11	CK	117	ASN
11	CK	119	CYS
11	CK	124	LYS
11	CK	126	ARG
12	CL	7	ILE
12	CL	20	LYS
12	CL	27	LEU
12	CL	33	ARG
12	CL	41	ARG
12	CL	44	THR
12	CL	46	LYS
12	CL	53	ARG
12	CL	55	VAL
12	CL	58	VAL
12	CL	62	SER
12	CL	66	VAL
12	CL	67	THR
12	CL	83	VAL
12	CL	85	ILE
12	CL	89	ARG
12	CL	91	LYS
12	CL	102	ARG
12	CL	106	ASP
12	CL	126	LYS
13	CM	4	ILE
13	CM	61	GLU
13	CM	64	TRP
13	CM	65	LYS
13	CM	93	ARG
13	CM	108	ARG
13	CM	109	THR
13	CM	115	LYS
13	CM	120	LYS
14	CN	7	ILE
14	CN	14	PRO
14	CN	18	VAL
14	CN	21	TYR
14	CN	29	ARG
14	CN	32	SER
14	CN	42	ILE
14	CN	44	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
14	CN	57	ARG
15	CO	6	GLU
15	CO	19	PRO
15	CO	25	THR
15	CO	33	THR
15	CO	39	LEU
15	CO	41	GLU
15	CO	66	LEU
15	CO	82	ILE
15	CO	83	GLU
15	CO	88	ARG
16	CP	2	VAL
16	CP	32	TYR
16	CP	36	ILE
16	CP	55	ARG
16	CP	68	ASP
16	CP	69	THR
17	CQ	12	SER
17	CQ	37	LYS
17	CQ	38	ARG
17	CQ	39	SER
17	CQ	49	GLU
17	CQ	52	LYS
17	CQ	64	PRO
17	CQ	70	ARG
17	CQ	79	SER
18	CR	29	PHE
18	CR	31	LEU
18	CR	37	VAL
18	CR	38	GLU
18	CR	46	GLU
18	CR	47	THR
18	CR	80	PRO
19	CS	5	LEU
19	CS	6	LYS
19	CS	7	LYS
19	CS	10	PHE
19	CS	29	ARG
19	CS	30	LEU
19	CS	37	ARG
19	CS	44	MET
19	CS	48	THR

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Mol	Chain	Res	Type
19	CS	49	ILE
19	CS	62	ILE
19	CS	63	THR
20	CT	23	ARG
20	CT	26	ASN
20	CT	36	LEU
20	CT	57	ARG
20	CT	62	LEU
20	CT	74	LYS
20	CT	93	GLU
21	CU	10	ARG
21	CU	24	ARG
25	CZ	5	PHE
25	CZ	7	ARG
25	CZ	8	THR
25	CZ	21	ASP
25	CZ	24	LYS
25	CZ	27	LEU
25	CZ	38	GLU
25	CZ	64	ASN
25	CZ	67	HIS
25	CZ	78	SER
25	CZ	98	GLN
25	CZ	113	MET
25	CZ	117	ARG
25	CZ	121	LEU
25	CZ	124	ARG
25	CZ	152	MET
25	CZ	174	SER
25	CZ	180	GLU
25	CZ	197	ASP
25	CZ	198	LYS
25	CZ	199	ILE
25	CZ	215	ARG
25	CZ	218	ASP
25	CZ	231	ILE
25	CZ	241	ARG
25	CZ	244	ARG
25	CZ	253	VAL
25	CZ	261	GLU
25	CZ	274	ARG
25	CZ	275	LYS

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Mol	Chain	Res	Type
25	CZ	277	LEU
25	CZ	284	ASP
25	CZ	285	ASN
25	CZ	293	VAL
25	CZ	299	GLU
25	CZ	311	THR
25	CZ	325	LYS
25	CZ	335	PHE
26	D0	3	HIS
26	D0	5	LYS
26	D0	12	ASN
26	D0	14	ARG
26	D0	20	ARG
26	D0	27	GLU
26	D0	41	ARG
26	D0	66	VAL
26	D0	80	HIS
26	D0	84	LEU
27	D1	7	ILE
27	D1	11	ARG
27	D1	27	GLU
27	D1	33	LYS
27	D1	35	THR
27	D1	39	LYS
27	D1	45	ASN
27	D1	46	LEU
27	D1	52	ARG
27	D1	66	HIS
27	D1	69	LYS
27	D1	75	GLU
27	D1	80	LEU
27	D1	83	GLU
28	D2	4	SER
28	D2	31	GLU
28	D2	37	PHE
28	D2	51	ARG
28	D2	64	LEU
28	D2	65	ASN
29	D3	28	LEU
29	D3	34	GLU
29	D3	35	ARG
29	D3	46	ASN

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Mol	Chain	Res	Type
30	D4	5	ILE
30	D4	6	HIS
30	D4	9	LEU
30	D4	10	VAL
30	D4	20	ASN
30	D4	22	ILE
30	D4	25	TYR
30	D4	27	THR
30	D4	32	TYR
30	D4	34	GLU
30	D4	47	GLN
31	D5	5	PRO
31	D5	6	VAL
31	D5	15	ARG
31	D5	25	LEU
31	D5	51	TYR
31	D5	56	LYS
32	D6	11	LEU
32	D6	18	ARG
32	D6	19	ARG
32	D6	23	THR
32	D6	31	PRO
32	D6	36	LEU
32	D6	42	TRP
32	D6	45	LYS
32	D6	53	LYS
33	D7	1	MET
33	D7	4	THR
33	D7	23	ARG
33	D7	24	THR
33	D7	34	ARG
33	D7	36	GLN
33	D7	47	ARG
34	D8	30	ARG
34	D8	31	HIS
34	D8	34	TRP
34	D8	35	GLN
34	D8	44	LYS
34	D8	47	LYS
34	D8	48	PHE
34	D8	61	LEU
34	D8	64	TYR

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Mol	Chain	Res	Type
35	D9	11	CYS
35	D9	28	GLU
35	D9	29	ASN
38	DC	10	LEU
38	DC	20	TYR
38	DC	34	THR
38	DC	36	LYS
38	DC	52	ARG
38	DC	53	ARG
38	DC	55	ASP
38	DC	57	ASN
38	DC	71	GLN
38	DC	104	LEU
38	DC	108	MET
38	DC	167	LYS
38	DC	188	ASN
39	DD	10	THR
39	DD	18	VAL
39	DD	24	ILE
39	DD	25	THR
39	DD	26	LYS
39	DD	30	GLU
39	DD	37	LEU
39	DD	43	ARG
39	DD	44	ASN
39	DD	46	GLN
39	DD	61	LEU
39	DD	65	ILE
39	DD	71	ASP
39	DD	75	ILE
39	DD	94	LEU
39	DD	138	VAL
39	DD	166	GLN
39	DD	178	PRO
39	DD	183	ARG
39	DD	192	THR
39	DD	200	ASP
39	DD	204	ILE
39	DD	221	VAL
39	DD	228	PRO
39	DD	229	VAL
39	DD	239	ARG

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Mol	Chain	Res	Type
39	DD	246	PRO
39	DD	257	LEU
39	DD	261	LYS
39	DD	271	ILE
39	DD	273	ARG
39	DD	274	ARG
40	DE	1	MET
40	DE	17	ASP
40	DE	49	LEU
40	DE	55	ASN
40	DE	56	PRO
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	79	ARG
40	DE	127	ASP
40	DE	128	SER
40	DE	144	ARG
40	DE	146	THR
40	DE	154	LYS
40	DE	163	GLU
40	DE	168	MET
40	DE	169	ASN
40	DE	178	GLU
40	DE	181	LEU
40	DE	188	VAL
40	DE	196	VAL
40	DE	202	LYS
40	DE	203	LYS
41	DF	28	ILE
41	DF	54	ARG
41	DF	65	TRP
41	DF	122	LYS
41	DF	125	LEU
41	DF	160	ASN
41	DF	179	GLU
42	DG	12	TYR
42	DG	21	ARG
42	DG	33	ARG

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Mol	Chain	Res	Type
42	DG	34	LEU
42	DG	40	ASN
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	79	ASN
42	DG	80	PHE
42	DG	84	LYS
42	DG	87	PRO
42	DG	93	THR
42	DG	97	ASP
42	DG	113	ARG
42	DG	116	ASP
42	DG	123	ASN
42	DG	125	PHE
42	DG	152	LEU
42	DG	153	ARG
42	DG	167	GLU
43	DH	15	VAL
43	DH	43	VAL
43	DH	54	ARG
43	DH	65	HIS
43	DH	71	LEU
43	DH	85	LYS
43	DH	88	LEU
43	DH	105	LEU
43	DH	119	GLU
43	DH	130	ARG
43	DH	139	GLN
43	DH	143	GLN
43	DH	149	ARG
43	DH	153	LYS
43	DH	159	GLU
43	DH	162	ILE
43	DH	163	TYR
46	DN	1	MET
46	DN	4	TYR
46	DN	10	GLU
46	DN	32	THR

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Mol	Chain	Res	Type
46	DN	38	HIS
46	DN	45	ASN
46	DN	48	MET
46	DN	56	ASN
46	DN	61	ARG
46	DN	87	LEU
46	DN	99	LEU
46	DN	120	LEU
46	DN	136	GLU
47	DO	8	LEU
47	DO	9	GLU
47	DO	10	VAL
47	DO	23	ARG
47	DO	31	LYS
47	DO	35	VAL
47	DO	48	PRO
47	DO	49	ARG
47	DO	98	VAL
47	DO	104	ARG
48	DP	6	LEU
48	DP	13	ASN
48	DP	16	ARG
48	DP	27	HIS
48	DP	39	LYS
48	DP	40	SER
48	DP	41	ARG
48	DP	42	SER
48	DP	48	PRO
48	DP	52	GLU
48	DP	61	ARG
48	DP	70	GLN
48	DP	75	ILE
48	DP	85	LEU
48	DP	86	LYS
48	DP	91	PHE
48	DP	108	LYS
48	DP	110	TYR
48	DP	112	LEU
48	DP	114	ILE
48	DP	123	LEU
48	DP	136	GLU
49	DQ	45	GLN

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Mol	Chain	Res	Type
49	DQ	48	GLU
49	DQ	51	ARG
49	DQ	54	MET
49	DQ	55	VAL
49	DQ	56	ARG
49	DQ	58	PHE
49	DQ	59	ARG
49	DQ	91	GLU
49	DQ	101	ARG
49	DQ	104	PHE
49	DQ	133	ARG
49	DQ	135	ASP
49	DQ	141	GLN
50	DR	2	ARG
50	DR	5	LYS
50	DR	10	LEU
50	DR	18	LEU
50	DR	44	LEU
50	DR	71	GLN
50	DR	72	ASP
50	DR	74	LYS
50	DR	76	VAL
50	DR	94	TYR
50	DR	99	LYS
50	DR	100	LEU
50	DR	111	LEU
50	DR	118	GLU
51	DS	11	LYS
51	DS	12	PHE
51	DS	15	ARG
51	DS	18	ILE
51	DS	29	PHE
51	DS	35	ILE
51	DS	54	LEU
51	DS	63	THR
51	DS	97	ARG
51	DS	99	LYS
51	DS	106	ARG
52	DT	13	ARG
52	DT	14	TYR
52	DT	15	VAL
52	DT	23	ARG

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Mol	Chain	Res	Type
52	DT	32	TYR
52	DT	38	ASN
52	DT	39	ARG
52	DT	41	ARG
52	DT	44	ASP
52	DT	49	VAL
52	DT	53	ARG
52	DT	58	ASN
52	DT	61	PHE
52	DT	78	LEU
52	DT	82	LEU
52	DT	93	ARG
52	DT	99	LEU
52	DT	115	ARG
52	DT	118	ARG
52	DT	124	ASP
52	DT	128	GLU
53	DU	9	VAL
53	DU	11	ARG
53	DU	14	HIS
53	DU	34	LYS
53	DU	49	HIS
53	DU	66	ASN
53	DU	74	LEU
53	DU	78	THR
53	DU	108	GLU
54	DV	12	TYR
54	DV	18	LEU
54	DV	19	LYS
54	DV	21	ARG
54	DV	35	LEU
54	DV	39	LEU
54	DV	62	LEU
54	DV	68	LYS
54	DV	83	ARG
54	DV	89	GLN
54	DV	91	TYR
54	DV	95	LEU
54	DV	99	ILE
55	DW	9	TYR
55	DW	11	ARG
55	DW	51	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
55	DW	70	TYR
55	DW	75	TYR
55	DW	76	VAL
55	DW	82	LEU
55	DW	88	ARG
55	DW	103	ILE
55	DW	107	LEU
56	DX	28	PHE
56	DX	35	THR
56	DX	37	THR
56	DX	57	LEU
56	DX	60	ARG
56	DX	68	ARG
57	DY	2	ARG
57	DY	6	HIS
57	DY	9	LYS
57	DY	28	LYS
57	DY	29	GLU
57	DY	32	PRO
57	DY	50	ARG
57	DY	62	GLU
57	DY	73	ARG
57	DY	76	CYS
57	DY	77	PRO
57	DY	90	LEU
57	DY	96	ILE
58	DZ	3	TYR
58	DZ	6	LYS
58	DZ	9	TYR
58	DZ	11	GLU
58	DZ	16	SER
58	DZ	24	LEU
58	DZ	31	ARG
58	DZ	41	LEU
58	DZ	42	VAL
58	DZ	68	PRO
58	DZ	70	LEU
58	DZ	72	ARG
58	DZ	81	ARG
58	DZ	96	VAL
58	DZ	97	GLU
58	DZ	98	MET

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Mol	Chain	Res	Type
58	DZ	99	TYR
58	DZ	119	GLU
58	DZ	120	ILE
58	DZ	121	HIS
58	DZ	122	ARG
58	DZ	126	VAL
58	DZ	127	LYS
58	DZ	136	PHE
58	DZ	150	LEU
58	DZ	163	LEU
58	DZ	170	THR
58	DZ	178	GLU

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (317) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	16	HIS
2	AB	40	HIS
2	AB	45	GLN
2	AB	146	GLN
2	AB	204	ASN
2	AB	212	GLN
3	AC	28	GLN
3	AC	104	GLN
3	AC	118	GLN
3	AC	139	GLN
3	AC	170	GLN
3	AC	176	HIS
4	AD	42	GLN
4	AD	62	GLN
4	AD	74	GLN
4	AD	129	ASN
4	AD	201	GLN
5	AE	20	GLN
5	AE	73	ASN
5	AE	78	HIS
6	AF	27	GLN
6	AF	57	GLN
6	AF	64	GLN
6	AF	84	ASN
6	AF	100	ASN
7	AG	13	GLN

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Mol	Chain	Res	Type
7	AG	106	GLN
8	AH	82	HIS
9	AI	31	GLN
9	AI	58	HIS
10	AJ	13	HIS
10	AJ	56	HIS
10	AJ	68	HIS
10	AJ	78	ASN
10	AJ	84	GLN
11	AK	38	ASN
11	AK	117	ASN
12	AL	8	ASN
12	AL	9	GLN
12	AL	75	HIS
13	AM	12	ASN
13	AM	40	ASN
13	AM	77	ASN
14	AN	49	HIS
14	AN	52	GLN
15	AO	9	GLN
15	AO	37	ASN
15	AO	62	GLN
16	AP	76	GLN
17	AQ	16	GLN
17	AQ	26	GLN
18	AR	36	ASN
19	AS	14	HIS
19	AS	23	ASN
20	AT	18	GLN
20	AT	26	ASN
20	AT	42	GLN
25	AZ	22	HIS
25	AZ	64	ASN
25	AZ	67	HIS
25	AZ	79	HIS
25	AZ	98	GLN
25	AZ	115	GLN
25	AZ	193	ASN
25	AZ	285	ASN
25	AZ	341	GLN
25	AZ	367	ASN
26	B0	35	ASN

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Mol	Chain	Res	Type
26	B0	40	GLN
26	B0	50	ASN
26	B0	70	GLN
27	B1	42	GLN
27	B1	45	ASN
27	B1	56	GLN
28	B2	43	GLN
28	B2	47	ASN
29	B3	19	GLN
29	B3	46	ASN
30	B4	20	ASN
30	B4	40	HIS
30	B4	46	GLN
30	B4	47	GLN
31	B5	43	HIS
32	B6	32	ASN
34	B8	31	HIS
34	B8	35	GLN
35	B9	20	HIS
35	B9	29	ASN
35	B9	36	GLN
38	BC	57	ASN
38	BC	139	ASN
39	BD	58	HIS
39	BD	96	HIS
39	BD	126	GLN
39	BD	129	ASN
39	BD	166	GLN
39	BD	186	HIS
40	BE	48	GLN
40	BE	54	GLN
40	BE	55	ASN
40	BE	66	HIS
40	BE	132	HIS
40	BE	143	ASN
40	BE	192	ASN
41	BF	8	GLN
41	BF	29	ASN
41	BF	69	HIS
41	BF	75	HIS
41	BF	133	ASN
41	BF	160	ASN

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Mol	Chain	Res	Type
41	BF	203	GLN
41	BF	204	ASN
42	BG	41	GLN
42	BG	66	GLN
42	BG	121	ASN
42	BG	138	GLN
43	BH	65	HIS
43	BH	74	ASN
43	BH	139	GLN
43	BH	147	ASN
43	BH	158	HIS
46	BN	45	ASN
46	BN	56	ASN
46	BN	131	GLN
47	BO	3	GLN
47	BO	5	GLN
47	BO	82	ASN
48	BP	27	HIS
48	BP	38	GLN
48	BP	68	GLN
48	BP	81	GLN
48	BP	84	ASN
48	BP	128	HIS
49	BQ	13	GLN
49	BQ	57	HIS
49	BQ	141	GLN
50	BR	13	HIS
50	BR	23	ASN
50	BR	61	HIS
50	BR	71	GLN
52	BT	38	ASN
52	BT	90	GLN
53	BU	49	HIS
53	BU	66	ASN
53	BU	81	HIS
53	BU	117	GLN
54	BV	11	GLN
54	BV	64	HIS
55	BW	57	ASN
56	BX	31	HIS
56	BX	41	ASN
56	BX	55	ASN

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Mol	Chain	Res	Type
56	BX	82	GLN
56	BX	87	GLN
57	BY	6	HIS
58	BZ	32	HIS
58	BZ	73	GLN
58	BZ	85	HIS
58	BZ	118	GLN
2	CB	37	ASN
2	CB	40	HIS
2	CB	45	GLN
2	CB	78	GLN
2	CB	146	GLN
2	CB	204	ASN
3	CC	28	GLN
3	CC	37	GLN
3	CC	104	GLN
3	CC	107	GLN
3	CC	118	GLN
3	CC	123	GLN
3	CC	139	GLN
3	CC	170	GLN
4	CD	62	GLN
4	CD	129	ASN
5	CE	20	GLN
5	CE	73	ASN
5	CE	78	HIS
6	CF	27	GLN
6	CF	57	GLN
6	CF	84	ASN
6	CF	100	ASN
7	CG	13	GLN
7	CG	37	ASN
7	CG	64	GLN
7	CG	68	ASN
7	CG	86	GLN
7	CG	106	GLN
7	CG	153	HIS
8	CH	82	HIS
9	CI	31	GLN
9	CI	58	HIS
9	CI	124	GLN
10	CJ	13	HIS

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Mol	Chain	Res	Type
10	CJ	56	HIS
10	CJ	78	ASN
10	CJ	84	GLN
11	CK	38	ASN
11	CK	62	GLN
11	CK	117	ASN
12	CL	8	ASN
12	CL	75	HIS
13	CM	12	ASN
13	CM	40	ASN
13	CM	77	ASN
14	CN	52	GLN
15	CO	37	ASN
15	CO	46	HIS
15	CO	62	GLN
16	CP	16	HIS
16	CP	76	GLN
17	CQ	16	GLN
17	CQ	26	GLN
19	CS	14	HIS
19	CS	23	ASN
19	CS	57	HIS
20	CT	16	HIS
20	CT	18	GLN
20	CT	26	ASN
20	CT	42	GLN
20	CT	75	ASN
25	CZ	11	HIS
25	CZ	64	ASN
25	CZ	67	HIS
25	CZ	79	HIS
25	CZ	85	HIS
25	CZ	115	GLN
25	CZ	125	GLN
25	CZ	285	ASN
25	CZ	341	GLN
25	CZ	367	ASN
26	D0	29	GLN
26	D0	40	GLN
26	D0	50	ASN
26	D0	70	GLN
27	D1	45	ASN

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Mol	Chain	Res	Type
27	D1	66	HIS
28	D2	43	GLN
28	D2	47	ASN
28	D2	56	GLN
28	D2	65	ASN
29	D3	19	GLN
29	D3	46	ASN
29	D3	52	HIS
30	D4	20	ASN
30	D4	40	HIS
30	D4	47	GLN
31	D5	43	HIS
32	D6	29	ASN
32	D6	32	ASN
35	D9	29	ASN
35	D9	32	HIS
35	D9	34	GLN
38	DC	57	ASN
38	DC	66	HIS
38	DC	139	ASN
38	DC	165	ASN
39	DD	44	ASN
39	DD	58	HIS
39	DD	96	HIS
39	DD	126	GLN
39	DD	164	GLN
39	DD	166	GLN
39	DD	186	HIS
39	DD	198	ASN
40	DE	48	GLN
40	DE	54	GLN
40	DE	55	ASN
40	DE	143	ASN
40	DE	192	ASN
41	DF	8	GLN
41	DF	29	ASN
41	DF	69	HIS
41	DF	75	HIS
41	DF	133	ASN
41	DF	160	ASN
41	DF	203	GLN
41	DF	204	ASN

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Mol	Chain	Res	Type
42	DG	41	GLN
42	DG	108	ASN
42	DG	132	ASN
43	DH	65	HIS
43	DH	139	GLN
43	DH	147	ASN
43	DH	158	HIS
46	DN	45	ASN
46	DN	56	ASN
46	DN	131	GLN
47	DO	3	GLN
47	DO	5	GLN
47	DO	82	ASN
48	DP	27	HIS
48	DP	38	GLN
48	DP	68	GLN
48	DP	81	GLN
48	DP	84	ASN
48	DP	128	HIS
49	DQ	45	GLN
49	DQ	141	GLN
50	DR	11	ASN
50	DR	23	ASN
50	DR	61	HIS
50	DR	71	GLN
52	DT	38	ASN
52	DT	58	ASN
52	DT	90	GLN
53	DU	49	HIS
53	DU	66	ASN
54	DV	11	GLN
54	DV	64	HIS
55	DW	57	ASN
56	DX	41	ASN
56	DX	55	ASN
56	DX	87	GLN
58	DZ	75	ASN
58	DZ	85	HIS
58	DZ	118	GLN

### 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1503/1522 (98%)	236 (15%)	51 (3%)
1	CA	1503/1522 (98%)	237 (15%)	46 (3%)
22	AV	75/76 (98%)	17 (22%)	1 (1%)
22	AW	75/76 (98%)	21 (28%)	0
22	CV	75/76 (98%)	21 (28%)	0
22	CW	75/76 (98%)	21 (28%)	2 (2%)
23	AX	16/27 (59%)	5 (31%)	0
23	CX	17/27 (62%)	6 (35%)	1 (5%)
24	AY	74/77 (96%)	29 (39%)	4 (5%)
24	CY	74/77 (96%)	27 (36%)	3 (4%)
36	BA	2900/2915 (99%)	525 (18%)	49 (1%)
36	DA	2900/2915 (99%)	520 (17%)	46 (1%)
37	BB	118/122 (96%)	26 (22%)	2 (1%)
37	DB	118/122 (96%)	24 (20%)	3 (2%)
All	All	9523/9630 (98%)	1715 (18%)	208 (2%)

All (1715) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
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	61	G
1	AA	63	C
1	AA	78	G
1	AA	79	G
1	AA	80	G
1	AA	81	U
1	AA	90	U
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	151	A

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Mol	Chain	Res	Type
1	AA	172	A
1	AA	189(H)	G
1	AA	189(I)	G
1	AA	195	A
1	AA	197	A
1	AA	198	G
1	AA	199	G
1	AA	204	U
1	AA	216	G
1	AA	220	G
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	275	G
1	AA	289	G
1	AA	321	A
1	AA	328	C
1	AA	330	C
1	AA	332	G
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	369	C
1	AA	372	C
1	AA	373	A
1	AA	388	G
1	AA	389	A
1	AA	397	A
1	AA	398	C
1	AA	412	A
1	AA	413	G
1	AA	414	A
1	AA	422	C
1	AA	428	G

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Mol	Chain	Res	Type
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	496	A
1	AA	498	U
1	AA	499	A
1	AA	508	C
1	AA	509	A
1	AA	511	C
1	AA	518	C
1	AA	527	G
1	AA	531	U
1	AA	532	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	630	G
1	AA	632	A
1	AA	653	A
1	AA	665	A
1	AA	688	G
1	AA	701	C
1	AA	702	A
1	AA	703	G
1	AA	721	G
1	AA	722	A
1	AA	723	U
1	AA	731	G
1	AA	734	G
1	AA	748	C
1	AA	749	C

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Mol	Chain	Res	Type
1	AA	755	G
1	AA	792	A
1	AA	793	U
1	AA	794	A
1	AA	817	C
1	AA	821	G
1	AA	828	A
1	AA	839	U
1	AA	840	C
1	AA	841	U
1	AA	848	C
1	AA	858	G
1	AA	859	A
1	AA	874	G
1	AA	884	U
1	AA	885	G
1	AA	889	A
1	AA	890	G
1	AA	914	A
1	AA	926	G
1	AA	927	G
1	AA	934	C
1	AA	960	U
1	AA	962	C
1	AA	966	G
1	AA	967	C
1	AA	969	A
1	AA	971	G
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	980	C
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	1050	G
1	AA	1051	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	AA	1054	C
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
1	AA	1126	U
1	AA	1127	G
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	1145	C
1	AA	1146	A
1	AA	1152	A
1	AA	1154	G
1	AA	1158	C
1	AA	1159	U
1	AA	1182	G
1	AA	1184	G
1	AA	1187	G
1	AA	1193	G
1	AA	1196	U
1	AA	1197	G
1	AA	1200	C
1	AA	1201	A
1	AA	1212	U
1	AA	1225	A
1	AA	1238	A
1	AA	1240	U
1	AA	1256	A
1	AA	1257	U
1	AA	1258	G
1	AA	1260	C

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Mol	Chain	Res	Type
1	AA	1272	G
1	AA	1280	A
1	AA	1281	U
1	AA	1284	C
1	AA	1286	A
1	AA	1287	A
1	AA	1299	A
1	AA	1300	G
1	AA	1302	U
1	AA	1320	C
1	AA	1321	C
1	AA	1322	C
1	AA	1323	G
1	AA	1331	G
1	AA	1338	G
1	AA	1346	A
1	AA	1347	G
1	AA	1348	U
1	AA	1349	A
1	AA	1363	C
1	AA	1370	G
1	AA	1397	C
1	AA	1398	A
1	AA	1399	C
1	AA	1419	G
1	AA	1442(A)	G
1	AA	1442(B)	A
1	AA	1443	G
1	AA	1447	A
1	AA	1456	G
1	AA	1457	G
1	AA	1492	A
1	AA	1497	G
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	1519	A
1	AA	1520	G
1	AA	1529	G

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Mol	Chain	Res	Type
1	AA	1530	G
1	AA	1531	A
22	AV	5	G
22	AV	16	U
22	AV	17	C
22	AV	18	G
22	AV	19	G
22	AV	20	U
22	AV	22	G
22	AV	44	G
22	AV	45	U
22	AV	46	G
22	AV	47	U
22	AV	48	C
22	AV	60	U
22	AV	61	C
22	AV	69	G
22	AV	73	A
22	AV	75	C
22	AW	4	C
22	AW	9	A
22	AW	10	G
22	AW	18	G
22	AW	19	G
22	AW	20	U
22	AW	21	A
22	AW	39	U
22	AW	43	C
22	AW	44	G
22	AW	45	U
22	AW	47	U
22	AW	48	C
22	AW	50	U
22	AW	52	G
22	AW	57	G
22	AW	58	A
22	AW	59	U
22	AW	61	C
22	AW	62	C
22	AW	74	C
23	AX	12	A
23	AX	13	A

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Mol	Chain	Res	Type
23	AX	17	U
23	AX	26	A
23	AX	27	A
24	AY	3	G
24	AY	5	G
24	AY	7	G
24	AY	8	4SU
24	AY	9	A
24	AY	10	G
24	AY	11	U
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	22	G
24	AY	24	A
24	AY	34	C
24	AY	36	A
24	AY	38	A
24	AY	44	G
24	AY	45	U
24	AY	46	7MG
24	AY	49	G
24	AY	58	A
24	AY	59	G
24	AY	61	C
24	AY	62	U
24	AY	73	G
24	AY	75	C
24	AY	76	A
36	BA	10	G
36	BA	34	C
36	BA	45	C
36	BA	51	G
36	BA	71	A
36	BA	72	U
36	BA	75	G
36	BA	84	A
36	BA	88	G
36	BA	90	U

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Mol	Chain	Res	Type
36	BA	92	A
36	BA	94	C
36	BA	95	G
36	BA	100	G
36	BA	102	G
36	BA	114	U
36	BA	118	A
36	BA	119	A
36	BA	120	U
36	BA	129	C
36	BA	131	G
36	BA	139(A)	G
36	BA	141	A
36	BA	146	G
36	BA	149	A
36	BA	155	U
36	BA	175	G
36	BA	196	A
36	BA	197	A
36	BA	199	A
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	245	G
36	BA	248	G
36	BA	261	G
36	BA	267	C
36	BA	271(A)	A
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

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Mol	Chain	Res	Type
36	BA	272(I)	U
36	BA	276	A
36	BA	288	C
36	BA	299	A
36	BA	311	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(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	418	G
36	BA	428	A
36	BA	443	A
36	BA	444	C
36	BA	448	U
36	BA	451	C
36	BA	455	C
36	BA	457	A
36	BA	467	G
36	BA	470	A
36	BA	480	A
36	BA	481	G
36	BA	494	G
36	BA	505	A
36	BA	508	G
36	BA	512	G
36	BA	513	A
36	BA	528	A

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Mol	Chain	Res	Type
36	BA	530	G
36	BA	531	C
36	BA	532	A
36	BA	533	G
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	627	A
36	BA	629	G
36	BA	637	A
36	BA	645	C
36	BA	646	A
36	BA	651	G
36	BA	653	A
36	BA	654(I)	C
36	BA	654(J)	A
36	BA	654(K)	C
36	BA	654(L)	G
36	BA	654(M)	C
36	BA	654(T)	C
36	BA	655	A
36	BA	656	G
36	BA	669	G
36	BA	670	A
36	BA	673	C
36	BA	686	G
36	BA	708	C
36	BA	722	A
36	BA	730	C
36	BA	753	C
36	BA	761	A
36	BA	775	G
36	BA	776	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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	856	C
36	BA	857	C
36	BA	859	G
36	BA	866	A
36	BA	878	A
36	BA	886	C
36	BA	889	C
36	BA	890	A
36	BA	896	A
36	BA	897	C
36	BA	910	A
36	BA	917	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	964	C
36	BA	965	C
36	BA	974	G
36	BA	983	A
36	BA	985	C
36	BA	996	A
36	BA	1010	A
36	BA	1011	G
36	BA	1012	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
36	BA	1013	C
36	BA	1022	G
36	BA	1023	U
36	BA	1025	G
36	BA	1026	U
36	BA	1038	C
36	BA	1039	G
36	BA	1045	A
36	BA	1046	A
36	BA	1047	G
36	BA	1048	A
36	BA	1053	C
36	BA	1059	G
36	BA	1061	U
36	BA	1062	G
36	BA	1065	U
36	BA	1067	A
36	BA	1068	G
36	BA	1069	A
36	BA	1070	A
36	BA	1072	C
36	BA	1073	A
36	BA	1074	G
36	BA	1079	C
36	BA	1087	G
36	BA	1088	A
36	BA	1111	A
36	BA	1112	G
36	BA	1114	G
36	BA	1122	G
36	BA	1130	U
36	BA	1131	G
36	BA	1135	C
36	BA	1136	G
36	BA	1140	C
36	BA	1155	A
36	BA	1174	A
36	BA	1175	U
36	BA	1176	G
36	BA	1177	A
36	BA	1178	C
36	BA	1205	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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	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
36	BA	1302	A
36	BA	1314	C
36	BA	1319	G
36	BA	1321	A
36	BA	1332	G
36	BA	1347	G
36	BA	1349	A
36	BA	1359	A
36	BA	1365	A
36	BA	1368	G
36	BA	1378	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	1428	C
36	BA	1445	A
36	BA	1449	A
36	BA	1455	G
36	BA	1460	A

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Mol	Chain	Res	Type
36	BA	1461	G
36	BA	1467	C
36	BA	1471	A
36	BA	1475	G
36	BA	1478	G
36	BA	1482	G
36	BA	1485	G
36	BA	1487	G
36	BA	1488	G
36	BA	1490	A
36	BA	1493	C
36	BA	1494	A
36	BA	1495	A
36	BA	1496	A
36	BA	1497	U
36	BA	1498	C
36	BA	1499	C
36	BA	1502	C
36	BA	1505	C
36	BA	1509	C
36	BA	1509(A)	A
36	BA	1517	G
36	BA	1528(A)	A
36	BA	1537	G
36	BA	1541	G
36	BA	1542	A
36	BA	1543	C
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	1591	G
36	BA	1593	G
36	BA	1598	C
36	BA	1602	U
36	BA	1603	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
36	BA	1608	A
36	BA	1616	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	1666	G
36	BA	1667	G
36	BA	1674	G
36	BA	1694	C
36	BA	1696	G
36	BA	1698	A
36	BA	1721	G
36	BA	1739	U
36	BA	1742	G
36	BA	1748	G
36	BA	1756	G
36	BA	1763	G
36	BA	1764	G
36	BA	1773	A
36	BA	1780	A
36	BA	1781	C
36	BA	1791	A
36	BA	1799	G
36	BA	1800	C
36	BA	1801	G
36	BA	1816	G
36	BA	1820	U
36	BA	1835	G
36	BA	1839	G
36	BA	1847	A
36	BA	1848	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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
36	BA	1903	G
36	BA	1906	G
36	BA	1920	C
36	BA	1929	G
36	BA	1930	G
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	1992	G
36	BA	1993	U
36	BA	1997	G
36	BA	2020	A
36	BA	2023	G
36	BA	2031	A
36	BA	2032	G
36	BA	2033	A
36	BA	2034	U
36	BA	2036	C
36	BA	2043	C
36	BA	2055	C
36	BA	2056	G
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	2103	C
36	BA	2104	G
36	BA	2109	U
36	BA	2111	C
36	BA	2116	G
36	BA	2117	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
36	BA	2118	U
36	BA	2119	A
36	BA	2127	G
36	BA	2129	C
36	BA	2132	U
36	BA	2133	G
36	BA	2146	C
36	BA	2148	G
36	BA	2159	G
36	BA	2160	G
36	BA	2172	U
36	BA	2173	A
36	BA	2174	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
36	BA	2238	G
36	BA	2239	G
36	BA	2275	C
36	BA	2283	C
36	BA	2287	A
36	BA	2304	G
36	BA	2305	A
36	BA	2306	C
36	BA	2307	G
36	BA	2311	A
36	BA	2313	C
36	BA	2319	G

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Mol	Chain	Res	Type
36	BA	2320	A
36	BA	2334	G
36	BA	2336	A
36	BA	2343	C
36	BA	2345	G
36	BA	2347	C
36	BA	2350	C
36	BA	2360	A
36	BA	2361	A
36	BA	2383	G
36	BA	2385	C
36	BA	2392	A
36	BA	2399	G
36	BA	2402	C
36	BA	2403	C
36	BA	2406	U
36	BA	2422	A
36	BA	2425	A
36	BA	2429	G
36	BA	2430	A
36	BA	2431	U
36	BA	2439	A
36	BA	2441	C
36	BA	2448	A
36	BA	2465	C
36	BA	2468	G
36	BA	2469	A
36	BA	2470	G
36	BA	2476	A
36	BA	2477	C
36	BA	2478	A
36	BA	2482	G
36	BA	2484	G
36	BA	2502	G
36	BA	2505	G
36	BA	2518	A
36	BA	2524	G
36	BA	2529	G
36	BA	2542	A
36	BA	2543	G
36	BA	2554	U
36	BA	2566	A

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Mol	Chain	Res	Type
36	BA	2567	G
36	BA	2573	C
36	BA	2602	A
36	BA	2612	C
36	BA	2615	U
36	BA	2630	G
36	BA	2641	G
36	BA	2646	C
36	BA	2654	A
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	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	2744	G
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	2764	A
36	BA	2765	A
36	BA	2778	A
36	BA	2779	U
36	BA	2780	G
36	BA	2781	A
36	BA	2790	A
36	BA	2791	C
36	BA	2794	C
36	BA	2802	G
36	BA	2803	C
36	BA	2808	U

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Mol	Chain	Res	Type
36	BA	2818	G
36	BA	2820	A
36	BA	2821	A
36	BA	2833	G
36	BA	2834	G
36	BA	2849	U
36	BA	2863	C
36	BA	2872	G
36	BA	2873	A
36	BA	2874	C
36	BA	2894	G
37	BB	8	U
37	BB	9	G
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	26	A
37	BB	32	C
37	BB	41	U
37	BB	42	C
37	BB	43	C
37	BB	45	A
37	BB	47	C
37	BB	53	A
37	BB	57	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	102	A
37	BB	110	G
37	BB	116	G
1	CA	9	G
1	CA	31	G
1	CA	32	A
1	CA	39	G
1	CA	47	C

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Mol	Chain	Res	Type
1	CA	48	C
1	CA	51	A
1	CA	55	A
1	CA	61	G
1	CA	63	C
1	CA	78	G
1	CA	79	G
1	CA	80	G
1	CA	81	U
1	CA	90	U
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	151	A
1	CA	172	A
1	CA	189(H)	G
1	CA	189(I)	G
1	CA	195	A
1	CA	197	A
1	CA	198	G
1	CA	199	G
1	CA	204	U
1	CA	216	G
1	CA	220	G
1	CA	228	A
1	CA	244	U
1	CA	246	A
1	CA	247	G
1	CA	250	A
1	CA	251	G
1	CA	267	C
1	CA	275	G
1	CA	289	G
1	CA	328	C
1	CA	330	C
1	CA	332	G
1	CA	345	C

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Mol	Chain	Res	Type
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	368	U
1	CA	369	C
1	CA	372	C
1	CA	388	G
1	CA	389	A
1	CA	397	A
1	CA	398	C
1	CA	412	A
1	CA	413	G
1	CA	414	A
1	CA	422	C
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	498	U
1	CA	499	A
1	CA	508	C
1	CA	509	A
1	CA	511	C
1	CA	518	C
1	CA	527	G
1	CA	531	U
1	CA	532	A
1	CA	534	U
1	CA	548	G
1	CA	559	A
1	CA	561	U

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Mol	Chain	Res	Type
1	CA	562	C
1	CA	572	A
1	CA	573	A
1	CA	576	G
1	CA	577	G
1	CA	607	A
1	CA	630	G
1	CA	632	A
1	CA	653	A
1	CA	665	A
1	CA	688	G
1	CA	701	C
1	CA	702	A
1	CA	703	G
1	CA	721	G
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	792	A
1	CA	793	U
1	CA	794	A
1	CA	817	C
1	CA	828	A
1	CA	839	U
1	CA	840	C
1	CA	841	U
1	CA	848	C
1	CA	859	A
1	CA	874	G
1	CA	884	U
1	CA	885	G
1	CA	889	A
1	CA	890	G
1	CA	914	A
1	CA	926	G
1	CA	927	G
1	CA	934	C
1	CA	935	A

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Mol	Chain	Res	Type
1	CA	960	U
1	CA	962	C
1	CA	966	G
1	CA	967	C
1	CA	968	A
1	CA	969	A
1	CA	971	G
1	CA	975	A
1	CA	976	G
1	CA	977	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	1050	G
1	CA	1051	C
1	CA	1054	C
1	CA	1066	C
1	CA	1070	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
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

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Mol	Chain	Res	Type
1	CA	1141	C
1	CA	1145	C
1	CA	1146	A
1	CA	1152	A
1	CA	1154	G
1	CA	1158	C
1	CA	1159	U
1	CA	1181	G
1	CA	1182	G
1	CA	1184	G
1	CA	1187	G
1	CA	1193	G
1	CA	1196	U
1	CA	1197	G
1	CA	1200	C
1	CA	1201	A
1	CA	1212	U
1	CA	1225	A
1	CA	1227	A
1	CA	1238	A
1	CA	1240	U
1	CA	1255	G
1	CA	1256	A
1	CA	1257	U
1	CA	1260	C
1	CA	1272	G
1	CA	1280	A
1	CA	1281	U
1	CA	1284	C
1	CA	1286	A
1	CA	1287	A
1	CA	1299	A
1	CA	1300	G
1	CA	1302	U
1	CA	1320	C
1	CA	1322	C
1	CA	1323	G
1	CA	1331	G
1	CA	1338	G
1	CA	1346	A
1	CA	1347	G
1	CA	1348	U

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Mol	Chain	Res	Type
1	CA	1349	A
1	CA	1363	C
1	CA	1364	U
1	CA	1370	G
1	CA	1398	A
1	CA	1399	C
1	CA	1419	G
1	CA	1442(B)	A
1	CA	1447	A
1	CA	1452	C
1	CA	1456	G
1	CA	1492	A
1	CA	1494	G
1	CA	1499	A
1	CA	1503	A
1	CA	1504	G
1	CA	1517	G
1	CA	1519	A
1	CA	1520	G
1	CA	1529	G
1	CA	1530	G
1	CA	1531	A
22	CV	2	C
22	CV	4	C
22	CV	5	G
22	CV	7	A
22	CV	8	U
22	CV	11	C
22	CV	18	G
22	CV	20	U
22	CV	21	A
22	CV	22	G
22	CV	44	G
22	CV	45	U
22	CV	46	G
22	CV	47	U
22	CV	48	C
22	CV	60	U
22	CV	61	C
22	CV	62	C
22	CV	69	G
22	CV	75	C

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Mol	Chain	Res	Type
22	CV	76	A
22	CW	3	C
22	CW	5	G
22	CW	8	U
22	CW	9	A
22	CW	17	C
22	CW	18	G
22	CW	19	G
22	CW	21	A
22	CW	22	G
22	CW	39	U
22	CW	43	C
22	CW	44	G
22	CW	45	U
22	CW	47	U
22	CW	50	U
22	CW	56	C
22	CW	57	G
22	CW	59	U
22	CW	61	C
22	CW	62	C
22	CW	74	C
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	7	G
24	CY	8	4SU
24	CY	9	A
24	CY	10	G
24	CY	16	H2U
24	CY	17	H2U
24	CY	18	G
24	CY	19	G
24	CY	20	H2U
24	CY	22	G
24	CY	24	A
24	CY	34	C

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Mol	Chain	Res	Type
24	CY	36	A
24	CY	38	A
24	CY	44	G
24	CY	45	U
24	CY	46	7MG
24	CY	49	G
24	CY	58	A
24	CY	59	G
24	CY	61	C
24	CY	62	U
24	CY	73	G
24	CY	75	C
24	CY	76	A
36	DA	10	G
36	DA	45	C
36	DA	51	G
36	DA	71	A
36	DA	72	U
36	DA	75	G
36	DA	84	A
36	DA	88	G
36	DA	90	U
36	DA	92	A
36	DA	94	C
36	DA	95	G
36	DA	100	G
36	DA	102	G
36	DA	114	U
36	DA	118	A
36	DA	119	A
36	DA	120	U
36	DA	131	G
36	DA	139(A)	G
36	DA	141	A
36	DA	146	G
36	DA	149	A
36	DA	155	U
36	DA	175	G
36	DA	196	A
36	DA	197	A
36	DA	199	A
36	DA	204	A

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Mol	Chain	Res	Type
36	DA	205	G
36	DA	215	G
36	DA	216	A
36	DA	221	A
36	DA	222	A
36	DA	228	A
36	DA	229	A
36	DA	233	A
36	DA	245	G
36	DA	248	G
36	DA	252	G
36	DA	261	G
36	DA	267	C
36	DA	271(A)	A
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	276	A
36	DA	288	C
36	DA	299	A
36	DA	311	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

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Mol	Chain	Res	Type
36	DA	386	G
36	DA	387	U
36	DA	388	G
36	DA	396	G
36	DA	405	U
36	DA	406	G
36	DA	411	G
36	DA	412	A
36	DA	418	G
36	DA	428	A
36	DA	443	A
36	DA	444	C
36	DA	448	U
36	DA	455	C
36	DA	457	A
36	DA	470	A
36	DA	481	G
36	DA	494	G
36	DA	505	A
36	DA	508	G
36	DA	509	C
36	DA	512	G
36	DA	513	A
36	DA	528	A
36	DA	530	G
36	DA	531	C
36	DA	532	A
36	DA	533	G
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	614(C)	A
36	DA	615	G
36	DA	621	A

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Mol	Chain	Res	Type
36	DA	627	A
36	DA	629	G
36	DA	637	A
36	DA	645	C
36	DA	646	A
36	DA	651	G
36	DA	653	A
36	DA	654(J)	A
36	DA	654(K)	C
36	DA	654(L)	G
36	DA	654(M)	C
36	DA	654(T)	C
36	DA	655	A
36	DA	656	G
36	DA	669	G
36	DA	670	A
36	DA	673	C
36	DA	686	G
36	DA	708	C
36	DA	722	A
36	DA	730	C
36	DA	753	C
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
36	DA	890	A
36	DA	896	A
36	DA	897	C
36	DA	910	A
36	DA	917	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	965	C
36	DA	974	G
36	DA	983	A
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	1038	C
36	DA	1039	G
36	DA	1045	A
36	DA	1046	A
36	DA	1047	G
36	DA	1048	A
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	1072	C
36	DA	1073	A
36	DA	1074	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
36	DA	1079	C
36	DA	1087	G
36	DA	1088	A
36	DA	1111	A
36	DA	1112	G
36	DA	1114	G
36	DA	1122	G
36	DA	1130	U
36	DA	1131	G
36	DA	1135	C
36	DA	1136	G
36	DA	1140	C
36	DA	1155	A
36	DA	1170	G
36	DA	1174	A
36	DA	1175	U
36	DA	1176	G
36	DA	1177	A
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	1244	G
36	DA	1247	A
36	DA	1248	G
36	DA	1250	G
36	DA	1253	A
36	DA	1255	U
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	1332	G

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Mol	Chain	Res	Type
36	DA	1347	G
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	1428	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	1475	G
36	DA	1478	G
36	DA	1482	G
36	DA	1485	G
36	DA	1487	G
36	DA	1490	A
36	DA	1493	C
36	DA	1494	A
36	DA	1495	A
36	DA	1496	A
36	DA	1497	U
36	DA	1498	C
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	1528(A)	A
36	DA	1537	G

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Mol	Chain	Res	Type
36	DA	1541	G
36	DA	1542	A
36	DA	1543	C
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	1591	G
36	DA	1593	G
36	DA	1603	A
36	DA	1608	A
36	DA	1616	A
36	DA	1617	C
36	DA	1618	A
36	DA	1634	A
36	DA	1640	C
36	DA	1647	G
36	DA	1648	C
36	DA	1653	G
36	DA	1654	A
36	DA	1666	G
36	DA	1674	G
36	DA	1694	C
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	1742	G
36	DA	1748	G
36	DA	1763	G
36	DA	1764	G
36	DA	1773	A
36	DA	1780	A
36	DA	1781	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
36	DA	1791	A
36	DA	1799	G
36	DA	1800	C
36	DA	1801	G
36	DA	1802	A
36	DA	1816	G
36	DA	1820	U
36	DA	1835	G
36	DA	1847	A
36	DA	1848	A
36	DA	1858	G
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	1903	G
36	DA	1906	G
36	DA	1920	C
36	DA	1929	G
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	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

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Mol	Chain	Res	Type
36	DA	2037	G
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
36	DA	2102	U
36	DA	2103	C
36	DA	2104	G
36	DA	2111	C
36	DA	2116	G
36	DA	2117	A
36	DA	2118	U
36	DA	2119	A
36	DA	2127	G
36	DA	2129	C
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	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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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	2251	G
36	DA	2275	C
36	DA	2283	C
36	DA	2287	A
36	DA	2288	A
36	DA	2305	A
36	DA	2306	C
36	DA	2307	G
36	DA	2310	A
36	DA	2311	A
36	DA	2313	C
36	DA	2319	G
36	DA	2320	A
36	DA	2334	G
36	DA	2336	A
36	DA	2343	C
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	2399	G
36	DA	2400	G
36	DA	2402	C
36	DA	2403	C
36	DA	2406	U
36	DA	2425	A
36	DA	2429	G
36	DA	2430	A
36	DA	2431	U
36	DA	2439	A
36	DA	2441	C
36	DA	2448	A
36	DA	2465	C

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Mol	Chain	Res	Type
36	DA	2468	G
36	DA	2469	A
36	DA	2470	G
36	DA	2476	A
36	DA	2477	C
36	DA	2478	A
36	DA	2482	G
36	DA	2483	C
36	DA	2484	G
36	DA	2491	U
36	DA	2502	G
36	DA	2505	G
36	DA	2518	A
36	DA	2520	C
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
36	DA	2581	G
36	DA	2582	G
36	DA	2602	A
36	DA	2612	C
36	DA	2615	U
36	DA	2630	G
36	DA	2641	G
36	DA	2646	C
36	DA	2654	A
36	DA	2655	G
36	DA	2660	A
36	DA	2673	G
36	DA	2682	U
36	DA	2690	C
36	DA	2702	U
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

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Mol	Chain	Res	Type
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	2764	A
36	DA	2765	A
36	DA	2778	A
36	DA	2779	U
36	DA	2780	G
36	DA	2781	A
36	DA	2790	A
36	DA	2791	C
36	DA	2794	C
36	DA	2802	G
36	DA	2803	C
36	DA	2808	U
36	DA	2818	G
36	DA	2820	A
36	DA	2821	A
36	DA	2823	A
36	DA	2833	G
36	DA	2834	G
36	DA	2849	U
36	DA	2863	C
36	DA	2872	G
36	DA	2894	G
37	DB	8	U
37	DB	9	G
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	26	A
37	DB	32	C
37	DB	41	U
37	DB	42	C
37	DB	43	C

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Mol	Chain	Res	Type
37	DB	45	A
37	DB	53	A
37	DB	57	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	110	G
37	DB	116	G

All (208) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	30	U
1	AA	60	A
1	AA	79	G
1	AA	109	A
1	AA	115	G
1	AA	119	A
1	AA	197	A
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	368	U
1	AA	428	G
1	AA	429	U
1	AA	484	G
1	AA	495	A
1	AA	508	C
1	AA	534	U
1	AA	547	A
1	AA	560	U
1	AA	573	A
1	AA	575	G
1	AA	687	A
1	AA	748	C

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Mol	Chain	Res	Type
1	AA	792	A
1	AA	889	A
1	AA	961	U
1	AA	968	A
1	AA	982	U
1	AA	992	U
1	AA	1049	U
1	AA	1050	G
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	1239	A
1	AA	1280	A
1	AA	1283	G
1	AA	1286	A
1	AA	1319	A
1	AA	1337	G
1	AA	1348	U
1	AA	1498	U
1	AA	1504	G
1	AA	1529	G
22	AV	48	C
24	AY	11	U
24	AY	18	G
24	AY	20	H2U
24	AY	75	C
36	BA	71	A
36	BA	74	A
36	BA	197	A
36	BA	199	A
36	BA	221	A
36	BA	331	A
36	BA	332	A
36	BA	387	U
36	BA	512	G
36	BA	527	C
36	BA	528	A
36	BA	587	C
36	BA	603	A

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Mol	Chain	Res	Type
36	BA	614(C)	A
36	BA	669	G
36	BA	752	A
36	BA	790	C
36	BA	856	C
36	BA	958	U
36	BA	974	G
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	1528	A
36	BA	1541	G
36	BA	1558	A
36	BA	1653	G
36	BA	1799	G
36	BA	1819	A
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	2179	C
36	BA	2282	G
36	BA	2360	A
36	BA	2477	C
36	BA	2481	G
36	BA	2689	U
36	BA	2756	U
36	BA	2873	A
37	BB	56	G
37	BB	66	A
1	CA	30	U
1	CA	60	A
1	CA	79	G
1	CA	109	A

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Mol	Chain	Res	Type
1	CA	115	G
1	CA	119	A
1	CA	197	A
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	368	U
1	CA	428	G
1	CA	429	U
1	CA	484	G
1	CA	495	A
1	CA	508	C
1	CA	534	U
1	CA	547	A
1	CA	560	U
1	CA	575	G
1	CA	576	G
1	CA	687	A
1	CA	748	C
1	CA	792	A
1	CA	889	A
1	CA	961	U
1	CA	968	A
1	CA	982	U
1	CA	992	U
1	CA	1049	U
1	CA	1050	G
1	CA	1053	G
1	CA	1054	C
1	CA	1101	A
1	CA	1117	G
1	CA	1145	C
1	CA	1157	A
1	CA	1200	C
1	CA	1239	A
1	CA	1286	A
1	CA	1498	U
1	CA	1503	A

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Mol	Chain	Res	Type
22	CW	7	A
22	CW	44	G
23	CX	11	U
24	CY	18	G
24	CY	20	H2U
24	CY	75	C
36	DA	71	A
36	DA	74	A
36	DA	199	A
36	DA	331	A
36	DA	332	A
36	DA	387	U
36	DA	512	G
36	DA	528	A
36	DA	587	C
36	DA	603	A
36	DA	614(C)	A
36	DA	752	A
36	DA	790	C
36	DA	856	C
36	DA	958	U
36	DA	974	G
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	1528	A
36	DA	1541	G
36	DA	1558	A
36	DA	1653	G
36	DA	1799	G
36	DA	1819	A
36	DA	1970	A
36	DA	1992	G
36	DA	2033	A
36	DA	2126	A
36	DA	2131	G

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Mol	Chain	Res	Type
36	DA	2179	C
36	DA	2282	G
36	DA	2360	A
36	DA	2439	A
36	DA	2477	C
36	DA	2481	G
36	DA	2654	A
36	DA	2689	U
36	DA	2756	U
36	DA	2873	A
37	DB	42	C
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	H2U	AY	16	24	17,21,22	0.97	0	23,30,33	1.88	4 (17%)
24	H2U	AY	17	24	17,21,22	0.89	0	23,30,33	1.92	5 (21%)
24	H2U	AY	20	24	17,21,22	1.05	1 (5%)	23,30,33	1.87	6 (26%)
24	OMC	AY	32	24	13,22,23	0.77	0	20,31,34	1.02	2 (10%)
24	MIA	AY	37	24	21,31,32	1.45	4 (19%)	26,44,47	2.41	4 (15%)
24	7MG	AY	46	24	19,26,27	1.61	3 (15%)	24,39,42	2.30	3 (12%)
24	5MU	AY	54	24	12,22,23	1.38	3 (25%)	14,32,35	4.48	3 (21%)
24	PSU	AY	55	24	13,21,22	1.24	3 (23%)	18,30,33	3.69	8 (44%)
24	4SU	AY	8	24	11,21,22	1.62	4 (36%)	13,30,33	2.36	1 (7%)
24	H2U	CY	16	24	17,21,22	1.00	0	23,30,33	1.84	4 (17%)
24	H2U	CY	17	24	17,21,22	0.96	1 (5%)	23,30,33	1.89	4 (17%)
24	H2U	CY	20	24	17,21,22	1.09	2 (11%)	23,30,33	1.92	6 (26%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
24	OMC	CY	32	24	13,22,23	0.76	0	20,31,34	0.99	2 (10%)
24	MIA	CY	37	24	21,31,32	2.13	4 (19%)	26,44,47	2.28	5 (19%)
24	7MG	CY	46	24	19,26,27	1.62	3 (15%)	24,39,42	2.31	3 (12%)
24	5MU	CY	54	24	12,22,23	1.33	3 (25%)	14,32,35	4.49	3 (21%)
24	PSU	CY	55	24	13,21,22	1.06	2 (15%)	18,30,33	3.80	8 (44%)
24	4SU	CY	8	24	11,21,22	1.67	3 (27%)	13,30,33	2.33	1 (7%)

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	H2U	AY	16	24	-	0/7/38/39	0/2/2/2
24	H2U	AY	17	24	-	0/7/38/39	0/2/2/2
24	H2U	AY	20	24	-	0/7/38/39	0/2/2/2
24	OMC	AY	32	24	-	0/5/27/28	0/2/2/2
24	MIA	AY	37	24	-	0/11/33/34	0/3/3/3
24	7MG	AY	46	24	-	0/7/37/38	0/3/3/3
24	5MU	AY	54	24	-	0/3/25/26	0/2/2/2
24	PSU	AY	55	24	-	0/7/25/26	0/2/2/2
24	4SU	AY	8	24	-	0/3/25/26	0/2/2/2
24	H2U	CY	16	24	-	0/7/38/39	0/2/2/2
24	H2U	CY	17	24	-	0/7/38/39	0/2/2/2
24	H2U	CY	20	24	-	0/7/38/39	0/2/2/2
24	OMC	CY	32	24	-	0/5/27/28	0/2/2/2
24	MIA	CY	37	24	-	0/11/33/34	0/3/3/3
24	7MG	CY	46	24	-	0/7/37/38	0/3/3/3
24	5MU	CY	54	24	-	0/3/25/26	0/2/2/2
24	PSU	CY	55	24	-	0/7/25/26	0/2/2/2
24	4SU	CY	8	24	-	0/3/25/26	0/2/2/2

All (36) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	CY	46	7MG	C8-N9	-5.00	1.38	1.45
24	AY	46	7MG	C8-N9	-4.58	1.38	1.45
24	CY	37	MIA	C12-N6	-2.88	1.39	1.46
24	AY	37	MIA	C12-N6	-2.87	1.39	1.46
24	CY	46	7MG	C8-N7	-2.76	1.30	1.43
24	AY	46	7MG	C8-N7	-2.70	1.31	1.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	CY	54	5MU	C6-C5	-2.10	1.34	1.40
24	AY	54	5MU	C6-C5	-2.10	1.34	1.40
24	AY	8	4SU	C6-C5	-2.04	1.33	1.38
24	CY	37	MIA	C8-N7	-2.03	1.30	1.34
24	AY	37	MIA	C8-N7	-2.02	1.30	1.34
24	CY	20	H2U	C6-N1	2.01	1.49	1.47
24	AY	37	MIA	C6-N1	2.07	1.35	1.33
24	AY	8	4SU	C4-S4	2.25	1.71	1.67
24	CY	8	4SU	C6-N1	2.30	1.39	1.35
24	CY	55	PSU	C4-N3	2.30	1.37	1.33
24	CY	55	PSU	C6-N1	2.31	1.39	1.34
24	CY	17	H2U	C2-N1	2.33	1.39	1.35
24	AY	55	PSU	C6-N1	2.35	1.39	1.34
24	CY	8	4SU	C4-S4	2.40	1.72	1.67
24	CY	54	5MU	C6-N1	2.42	1.38	1.35
24	AY	20	H2U	C1'-N1	2.45	1.50	1.45
24	AY	55	PSU	C5-C1'	2.46	1.54	1.52
24	AY	54	5MU	C6-N1	2.49	1.38	1.35
24	AY	55	PSU	C4-N3	2.49	1.37	1.33
24	AY	8	4SU	C6-N1	2.68	1.39	1.35
24	CY	20	H2U	C1'-N1	2.75	1.51	1.45
24	CY	37	MIA	C6-N1	2.86	1.37	1.33
24	CY	54	5MU	C4-N3	3.00	1.38	1.33
24	AY	54	5MU	C4-N3	3.26	1.39	1.33
24	CY	46	7MG	C6-N1	3.35	1.39	1.33
24	AY	8	4SU	C5-C4	3.43	1.43	1.38
24	AY	46	7MG	C6-N1	3.61	1.39	1.33
24	AY	37	MIA	C2-S10	3.89	1.79	1.75
24	CY	8	4SU	C5-C4	3.93	1.43	1.38
24	CY	37	MIA	C2-S10	7.89	1.82	1.75

All (72) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	CY	55	PSU	N1-C2-N3	-12.65	120.26	128.33
24	AY	55	PSU	N1-C2-N3	-12.20	120.55	128.33
24	CY	54	5MU	C5-C4-N3	-8.96	115.16	125.14
24	AY	54	5MU	C5-C4-N3	-8.92	115.21	125.14
24	AY	8	4SU	C5-C4-N3	-8.26	115.54	123.63
24	CY	8	4SU	C5-C4-N3	-8.25	115.55	123.63
24	CY	46	7MG	C5-C6-N1	-7.88	111.34	123.46
24	AY	46	7MG	C5-C6-N1	-7.79	111.49	123.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	CY	17	H2U	C4-N3-C2	-5.13	121.56	125.79
24	AY	17	H2U	C4-N3-C2	-4.95	121.71	125.79
24	AY	16	H2U	C4-N3-C2	-4.77	121.86	125.79
24	AY	20	H2U	C4-N3-C2	-4.74	121.88	125.79
24	CY	20	H2U	C4-N3-C2	-4.72	121.90	125.79
24	CY	16	H2U	C4-N3-C2	-4.69	121.92	125.79
24	CY	37	MIA	C2'-C1'-N9	-3.29	109.27	114.29
24	CY	55	PSU	C5-C1'-C2'	-3.19	109.85	115.52
24	AY	55	PSU	C5-C6-N1	-2.96	120.21	124.39
24	CY	55	PSU	C5-C6-N1	-2.89	120.31	124.39
24	AY	55	PSU	C5-C1'-C2'	-2.84	110.48	115.52
24	AY	32	OMC	CM2-O2'-C2'	-2.48	107.58	114.59
24	AY	37	MIA	C5-C6-N1	-2.45	117.95	120.48
24	CY	32	OMC	CM2-O2'-C2'	-2.37	107.89	114.59
24	CY	20	H2U	O2-C2-N1	-2.34	120.24	123.30
24	AY	16	H2U	O2-C2-N1	-2.32	120.26	123.30
24	CY	20	H2U	O4'-C1'-C2'	-2.32	101.21	106.58
24	CY	16	H2U	O2-C2-N1	-2.30	120.29	123.30
24	CY	37	MIA	C1'-N9-C4	-2.26	123.53	126.94
24	AY	20	H2U	O4'-C1'-C2'	-2.17	101.55	106.58
24	AY	37	MIA	C1'-N9-C4	-2.16	123.68	126.94
24	AY	17	H2U	O2-C2-N1	-2.14	120.51	123.30
24	CY	37	MIA	C5-C6-N1	-2.11	118.31	120.48
24	AY	20	H2U	O2-C2-N1	-2.11	120.55	123.30
24	CY	54	5MU	C5M-C5-C6	2.03	122.69	118.62
24	AY	54	5MU	C5M-C5-C6	2.18	123.01	118.62
24	AY	55	PSU	O4'-C1'-C2'	2.24	107.01	104.73
24	AY	17	H2U	C1'-N1-C2	2.37	121.55	118.27
24	CY	46	7MG	CM7-N7-C8	2.46	127.49	120.52
24	AY	46	7MG	CM7-N7-C8	2.48	127.57	120.52
24	CY	55	PSU	O4'-C1'-C2'	2.70	107.48	104.73
24	CY	17	H2U	C1'-N1-C2	2.71	122.02	118.27
24	CY	55	PSU	O3'-C3'-C4'	2.75	119.29	111.05
24	AY	55	PSU	O3'-C3'-C2'	2.98	121.51	111.83
24	AY	20	H2U	C1'-N1-C2	2.99	122.41	118.27
24	AY	55	PSU	O3'-C3'-C4'	3.00	120.05	111.05
24	AY	32	OMC	C2-N3-C4	3.07	119.94	115.61
24	CY	20	H2U	C1'-N1-C2	3.09	122.54	118.27
24	CY	32	OMC	C2-N3-C4	3.11	120.00	115.61
24	CY	55	PSU	O3'-C3'-C2'	3.23	122.34	111.83
24	CY	20	H2U	C5-C4-N3	3.26	119.78	116.71
24	CY	37	MIA	C12-N6-C6	3.26	127.48	123.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	AY	20	H2U	C5-C4-N3	3.32	119.83	116.71
24	CY	55	PSU	C6-N1-C2	3.36	120.87	115.47
24	AY	55	PSU	C6-N1-C2	3.45	121.01	115.47
24	AY	37	MIA	C12-N6-C6	3.77	128.11	123.42
24	CY	17	H2U	N3-C2-N1	3.98	120.57	116.60
24	AY	20	H2U	N3-C2-N1	4.02	120.62	116.60
24	CY	16	H2U	C5-C4-N3	4.23	120.69	116.71
24	CY	20	H2U	N3-C2-N1	4.25	120.85	116.60
24	AY	17	H2U	N3-C2-N1	4.33	120.93	116.60
24	CY	17	H2U	C5-C4-N3	4.50	120.94	116.71
24	CY	16	H2U	N3-C2-N1	4.52	121.11	116.60
24	AY	16	H2U	C5-C4-N3	4.53	120.97	116.71
24	AY	17	H2U	C5-C4-N3	4.61	121.05	116.71
24	AY	16	H2U	N3-C2-N1	4.61	121.20	116.60
24	AY	55	PSU	C4-N3-C2	6.49	120.86	115.25
24	CY	55	PSU	C4-N3-C2	6.50	120.86	115.25
24	CY	46	7MG	C6-N1-C2	6.74	125.30	115.94
24	AY	46	7MG	C6-N1-C2	6.77	125.33	115.94
24	CY	37	MIA	C11-S10-C2	9.30	108.22	102.26
24	AY	37	MIA	C11-S10-C2	10.38	108.91	102.26
24	AY	54	5MU	C4-N3-C2	13.99	127.34	115.25
24	CY	54	5MU	C4-N3-C2	14.04	127.39	115.25

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

16 monomers are involved in 33 short contacts:

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

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
24	CY	46	7MG	4	0
24	CY	54	5MU	2	0
24	CY	55	PSU	1	0
24	CY	8	4SU	4	0

## 5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

## 5.6 Ligand geometry [i](#)

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	-	23,30,30	2.13	4 (17%)	30,47,47	2.51	10 (33%)
61	KIR	AZ	502	-	55,59,59	3.81	22 (40%)	53,84,84	1.73	11 (20%)
60	GDP	CZ	501	-	23,30,30	1.82	5 (21%)	30,47,47	2.19	8 (26%)
61	KIR	CZ	502	-	55,59,59	3.90	23 (41%)	53,84,84	1.66	11 (20%)

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	AZ	502	-	-	0/54/98/98	0/3/3/3
60	GDP	CZ	501	-	-	0/12/32/32	0/3/3/3
61	KIR	CZ	502	-	-	0/54/98/98	0/3/3/3

All (54) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
61	CZ	502	KIR	O18-C17	-14.37	1.22	1.44
61	AZ	502	KIR	O18-C17	-14.20	1.23	1.44
61	CZ	502	KIR	O30-C30	-12.09	1.17	1.42
61	AZ	502	KIR	O30-C30	-12.05	1.17	1.42
61	AZ	502	KIR	O34-C33	-11.26	1.29	1.44
61	CZ	502	KIR	O34-C33	-9.99	1.30	1.44
60	AZ	501	GDP	C6-C5	-6.77	1.27	1.41
60	CZ	501	GDP	O6-C6	-3.01	1.17	1.24
60	CZ	501	GDP	C5-C4	-2.40	1.35	1.40
60	AZ	501	GDP	PB-O3B	-2.02	1.47	1.54
60	CZ	501	GDP	PB-O3B	-2.01	1.47	1.54
61	CZ	502	KIR	C47-C32	2.02	1.59	1.53
61	CZ	502	KIR	C25-C24	2.07	1.54	1.50
61	AZ	502	KIR	C44-C21	2.08	1.54	1.50
61	AZ	502	KIR	O20-C20	2.24	1.46	1.42
61	CZ	502	KIR	C44-C21	2.39	1.55	1.50
61	AZ	502	KIR	O34-C29	2.46	1.47	1.43
61	AZ	502	KIR	C16-C17	2.55	1.58	1.53
61	CZ	502	KIR	C6-N1	2.68	1.40	1.34
61	AZ	502	KIR	C6-N1	2.72	1.40	1.34
61	AZ	502	KIR	C29-C30	2.72	1.58	1.53
61	CZ	502	KIR	C16-C17	2.75	1.59	1.53
61	CZ	502	KIR	C29-C30	2.84	1.58	1.53
61	AZ	502	KIR	C20-C21	2.95	1.56	1.51
61	AZ	502	KIR	C8-C7	3.10	1.56	1.47
61	CZ	502	KIR	C8-C7	3.13	1.56	1.47
61	AZ	502	KIR	O29-C29	3.26	1.47	1.40
61	AZ	502	KIR	C37-C38	3.32	1.38	1.32
61	AZ	502	KIR	C32-C31	3.38	1.60	1.55
61	AZ	502	KIR	C42-C19	3.42	1.61	1.53
61	CZ	502	KIR	C42-C19	3.48	1.61	1.53
61	CZ	502	KIR	O34-C29	3.67	1.50	1.43
61	CZ	502	KIR	O29-C29	3.69	1.48	1.40
61	CZ	502	KIR	C20-C21	3.81	1.58	1.51
60	AZ	501	GDP	C6-N1	3.86	1.40	1.33
61	AZ	502	KIR	C5-C4	4.01	1.46	1.39
61	AZ	502	KIR	C19-C17	4.10	1.65	1.54
61	CZ	502	KIR	C32-C31	4.12	1.61	1.55
61	CZ	502	KIR	C37-C38	4.16	1.40	1.32
60	AZ	501	GDP	O4'-C1'	4.18	1.46	1.41
61	CZ	502	KIR	C19-C17	4.24	1.65	1.54
61	CZ	502	KIR	C5-C4	4.32	1.47	1.39
60	CZ	501	GDP	O4'-C1'	4.38	1.46	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
60	CZ	501	GDP	C6-N1	4.43	1.41	1.33
61	AZ	502	KIR	C27-N26	4.58	1.43	1.33
61	CZ	502	KIR	C2-N1	4.62	1.41	1.33
61	CZ	502	KIR	C27-N26	4.81	1.43	1.33
61	AZ	502	KIR	C2-N1	4.85	1.42	1.33
61	CZ	502	KIR	C45-C28	5.62	1.61	1.54
61	AZ	502	KIR	C19-C20	5.76	1.63	1.53
61	AZ	502	KIR	C45-C28	5.91	1.62	1.54
61	CZ	502	KIR	C19-C20	6.46	1.64	1.53
61	AZ	502	KIR	C22-C21	6.71	1.39	1.34
61	CZ	502	KIR	C22-C21	7.60	1.40	1.34

All (40) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
60	AZ	501	GDP	C4-C5-N7	-7.26	102.80	109.48
60	CZ	501	GDP	C5-C6-N1	-6.33	114.93	123.59
60	AZ	501	GDP	N3-C2-N1	-5.31	119.35	127.44
61	CZ	502	KIR	O29-C29-O34	-5.30	101.42	110.18
61	AZ	502	KIR	O29-C29-O34	-5.12	101.72	110.18
60	CZ	501	GDP	N3-C2-N1	-4.63	120.39	127.44
60	AZ	501	GDP	C5-C6-N1	-4.63	117.26	123.59
60	AZ	501	GDP	PA-O3A-PB	-4.06	119.06	132.67
61	AZ	502	KIR	C11-C10-C9	-3.74	115.13	123.39
60	CZ	501	GDP	PA-O3A-PB	-3.70	120.28	132.67
61	AZ	502	KIR	C48-C32-C47	-3.54	101.88	107.74
61	CZ	502	KIR	C48-C32-C47	-3.51	101.92	107.74
60	CZ	501	GDP	C2'-C1'-N9	-3.38	109.13	114.29
60	AZ	501	GDP	C2'-C1'-N9	-3.35	109.17	114.29
61	CZ	502	KIR	C11-C10-C9	-3.27	116.17	123.39
61	CZ	502	KIR	C5-C6-N1	-2.85	120.65	123.90
60	CZ	501	GDP	C4'-O4'-C1'	-2.78	106.66	109.72
61	CZ	502	KIR	O4-C4-C3	-2.77	118.95	121.84
61	AZ	502	KIR	C5-C6-N1	-2.67	120.85	123.90
60	AZ	501	GDP	C5'-C4'-C3'	-2.47	105.40	115.21
61	AZ	502	KIR	C29-C30-C31	-2.37	107.32	110.76
61	AZ	502	KIR	O4-C4-C3	-2.23	119.52	121.84
60	AZ	501	GDP	C1'-N9-C4	-2.13	123.72	126.94
60	CZ	501	GDP	O4'-C4'-C3'	-2.11	100.90	105.15
61	CZ	502	KIR	C22-C23-C24	-2.04	118.84	123.80
60	CZ	501	GDP	C1'-N9-C4	-2.02	123.89	126.94
61	CZ	502	KIR	C48-C32-C31	2.13	112.87	109.19

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
61	AZ	502	KIR	O18-C17-C16	2.17	108.63	104.21
61	AZ	502	KIR	C44-C21-C20	2.18	119.40	115.58
61	CZ	502	KIR	O18-C17-C16	2.24	108.77	104.21
60	AZ	501	GDP	N2-C2-N1	2.27	120.95	117.20
61	CZ	502	KIR	C15-C16-C17	2.30	105.57	102.49
61	AZ	502	KIR	C48-C32-C31	2.33	113.21	109.19
60	AZ	501	GDP	C6-C5-C4	2.40	123.77	120.90
61	AZ	502	KIR	C6-N1-C2	2.69	123.42	116.57
61	CZ	502	KIR	C6-N1-C2	2.78	123.65	116.57
60	AZ	501	GDP	C6-N1-C2	3.65	121.00	115.94
61	CZ	502	KIR	C45-C28-C27	3.80	112.07	108.29
60	CZ	501	GDP	C6-N1-C2	4.16	121.71	115.94
61	AZ	502	KIR	C45-C28-C27	5.81	114.07	108.29

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

4 monomers are involved in 36 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
60	AZ	501	GDP	7	0
61	AZ	502	KIR	5	0
60	CZ	501	GDP	17	0
61	CZ	502	KIR	7	0

## 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, 95<sup>th</sup> percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q< 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
1	AA	1504/1522 (98%)	-0.22	29 (1%) 70 48	21, 54, 143, 200	0
1	CA	1504/1522 (98%)	-0.16	16 (1%) 82 66	31, 70, 146, 200	0
2	AB	234/256 (91%)	-0.28	6 (2%) 59 35	31, 60, 136, 149	0
2	CB	234/256 (91%)	-0.18	3 (1%) 79 62	46, 81, 139, 148	0
3	AC	206/239 (86%)	-0.51	1 (0%) 91 83	20, 46, 78, 89	0
3	CC	206/239 (86%)	-0.26	0 100 100	49, 74, 96, 100	0
4	AD	208/209 (99%)	0.19	4 (1%) 70 48	45, 83, 112, 119	0
4	CD	208/209 (99%)	0.38	20 (9%) 10 3	64, 95, 118, 126	0
5	AE	150/162 (92%)	-0.55	0 100 100	25, 42, 69, 86	0
5	CE	150/162 (92%)	-0.37	1 (0%) 89 78	43, 58, 82, 100	0
6	AF	101/101 (100%)	-0.40	1 (0%) 84 69	44, 70, 86, 94	0
6	CF	101/101 (100%)	-0.17	1 (0%) 84 69	64, 86, 97, 101	0
7	AG	155/156 (99%)	-0.31	1 (0%) 90 80	37, 66, 97, 113	0
7	CG	155/156 (99%)	0.07	8 (5%) 31 13	67, 87, 107, 122	0
8	AH	138/138 (100%)	-0.54	0 100 100	31, 47, 68, 75	0
8	CH	138/138 (100%)	-0.40	0 100 100	41, 61, 75, 84	0
9	AI	127/128 (99%)	-0.08	0 100 100	32, 72, 111, 123	0
9	CI	127/128 (99%)	0.42	10 (7%) 15 5	59, 97, 119, 124	0
10	AJ	98/105 (93%)	0.14	1 (1%) 84 69	30, 73, 126, 129	0
10	CJ	98/105 (93%)	0.77	20 (20%) 1 0	57, 102, 133, 137	0
11	AK	119/129 (92%)	-0.34	3 (2%) 61 37	29, 45, 78, 105	0
11	CK	119/129 (92%)	-0.23	2 (1%) 73 52	43, 66, 91, 106	0
12	AL	124/131 (94%)	-0.35	1 (0%) 87 75	24, 49, 70, 103	0
12	CL	124/131 (94%)	-0.26	3 (2%) 62 39	38, 54, 78, 111	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
13	AM	124/126 (98%)	0.04	5 (4%) 42 20	46, 82, 106, 147	0
13	CM	124/126 (98%)	0.29	10 (8%) 15 5	67, 92, 114, 148	0
14	AN	60/61 (98%)	-0.14	2 (3%) 50 26	28, 51, 84, 90	0
14	CN	60/61 (98%)	0.44	2 (3%) 50 26	65, 78, 98, 105	0
15	AO	88/89 (98%)	-0.35	0 100 100	31, 51, 79, 85	0
15	CO	88/89 (98%)	-0.20	0 100 100	41, 63, 85, 92	0
16	AP	83/88 (94%)	-0.04	0 100 100	48, 67, 85, 123	0
16	CP	83/88 (94%)	0.01	3 (3%) 46 23	62, 77, 92, 122	0
17	AQ	99/105 (94%)	-0.33	0 100 100	40, 58, 77, 85	0
17	CQ	99/105 (94%)	-0.25	0 100 100	44, 65, 85, 93	0
18	AR	70/88 (79%)	-0.47	0 100 100	35, 55, 88, 104	0
18	CR	70/88 (79%)	-0.27	0 100 100	47, 73, 100, 113	0
19	AS	78/93 (83%)	0.16	4 (5%) 32 13	48, 75, 119, 122	0
19	CS	78/93 (83%)	0.26	4 (5%) 32 13	71, 91, 120, 124	0
20	AT	99/106 (93%)	0.14	5 (5%) 32 13	65, 83, 117, 119	0
20	CT	99/106 (93%)	0.11	0 100 100	64, 84, 117, 118	0
21	AU	24/27 (88%)	-0.10	0 100 100	45, 61, 75, 90	0
21	CU	24/27 (88%)	0.48	1 (4%) 40 19	67, 79, 92, 94	0
22	AV	76/76 (100%)	-0.36	0 100 100	35, 70, 102, 112	0
22	AW	76/76 (100%)	0.37	7 (9%) 11 4	63, 136, 178, 190	0
22	CV	76/76 (100%)	-0.34	0 100 100	48, 76, 115, 128	0
22	CW	76/76 (100%)	0.52	9 (11%) 6 2	71, 165, 186, 196	0
23	AX	17/27 (62%)	0.50	2 (11%) 6 2	30, 82, 132, 133	0
23	CX	17/27 (62%)	0.93	3 (17%) 2 1	36, 99, 145, 145	0
24	AY	68/77 (88%)	-0.03	0 100 100	37, 108, 152, 185	0
24	CY	68/77 (88%)	0.03	0 100 100	45, 111, 145, 185	0
25	AZ	385/405 (95%)	0.18	15 (3%) 43 21	63, 105, 134, 163	0
25	CZ	385/405 (95%)	1.24	94 (24%) 1 0	93, 117, 143, 169	0
26	B0	84/85 (98%)	0.21	3 (3%) 46 23	62, 73, 100, 114	0
26	D0	84/85 (98%)	0.38	3 (3%) 46 23	66, 79, 101, 111	0
27	B1	93/98 (94%)	0.08	2 (2%) 65 42	47, 63, 120, 125	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
27	D1	93/98 (94%)	0.13	1 (1%) 82 66	51, 74, 115, 120	0
28	B2	71/72 (98%)	1.38	19 (26%) 1 0	122, 140, 151, 153	0
28	D2	71/72 (98%)	0.23	4 (5%) 28 11	90, 106, 126, 139	0
29	B3	59/60 (98%)	0.40	1 (1%) 73 52	59, 79, 101, 116	0
29	D3	59/60 (98%)	0.30	3 (5%) 32 13	58, 80, 97, 114	0
30	B4	44/71 (61%)	1.10	7 (15%) 3 1	102, 156, 180, 186	0
30	D4	44/71 (61%)	1.25	12 (27%) 1 0	113, 165, 186, 187	0
31	B5	59/60 (98%)	0.31	4 (6%) 20 7	52, 86, 150, 164	0
31	D5	59/60 (98%)	0.15	6 (10%) 9 3	55, 80, 148, 161	0
32	B6	50/54 (92%)	0.77	10 (20%) 1 0	55, 88, 106, 112	0
32	D6	50/54 (92%)	0.68	6 (12%) 6 2	57, 95, 107, 113	0
33	B7	48/49 (97%)	0.20	2 (4%) 40 19	47, 61, 95, 116	0
33	D7	48/49 (97%)	-0.10	0 100 100	47, 61, 91, 109	0
34	B8	63/65 (96%)	0.18	2 (3%) 51 27	55, 72, 84, 112	0
34	D8	63/65 (96%)	0.09	1 (1%) 74 55	56, 73, 85, 109	0
35	B9	37/37 (100%)	1.03	5 (13%) 4 2	79, 98, 112, 116	0
35	D9	37/37 (100%)	1.72	10 (27%) 1 0	84, 104, 115, 119	0
36	BA	2901/2915 (99%)	-0.05	85 (2%) 55 31	25, 74, 176, 200	0
36	DA	2901/2915 (99%)	-0.06	76 (2%) 59 35	32, 76, 175, 200	0
37	BB	119/122 (97%)	-0.25	0 100 100	54, 97, 123, 144	0
37	DB	119/122 (97%)	-0.25	0 100 100	61, 104, 128, 140	0
38	BC	228/229 (99%)	0.29	21 (9%) 11 4	40, 73, 163, 176	0
38	DC	228/229 (99%)	0.51	28 (12%) 5 2	64, 87, 166, 174	0
39	BD	275/276 (99%)	-0.38	0 100 100	28, 48, 78, 93	0
39	DD	275/276 (99%)	-0.32	1 (0%) 93 85	28, 53, 80, 94	0
40	BE	204/206 (99%)	0.08	5 (2%) 61 37	46, 73, 120, 129	0
40	DE	204/206 (99%)	-0.01	5 (2%) 61 37	39, 72, 122, 132	0
41	BF	207/210 (98%)	0.38	16 (7%) 16 5	42, 102, 155, 162	0
41	DF	207/210 (98%)	0.32	16 (7%) 16 5	47, 105, 155, 161	0
42	BG	181/182 (99%)	-0.00	7 (3%) 43 21	66, 85, 120, 134	0
42	DG	181/182 (99%)	0.20	7 (3%) 43 21	89, 108, 130, 139	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
43	BH	159/180 (88%)	0.78	20 (12%) 5 2	85, 123, 148, 152	0
43	DH	159/180 (88%)	0.60	11 (6%) 20 7	85, 123, 145, 150	0
44	BJ	0/173	-	-	-	-
44	DJ	0/173	-	-	-	-
45	BK	0/147	-	-	-	-
45	DK	0/147	-	-	-	-
46	BN	138/140 (98%)	0.00	1 (0%) 89 78	56, 86, 130, 138	0
46	DN	138/140 (98%)	0.03	1 (0%) 89 78	61, 83, 132, 136	0
47	BO	122/122 (100%)	-0.36	0 100 100	43, 60, 73, 82	0
47	DO	122/122 (100%)	-0.39	0 100 100	40, 60, 73, 77	0
48	BP	146/150 (97%)	0.62	14 (9%) 10 3	49, 98, 124, 145	0
48	DP	146/150 (97%)	0.64	17 (11%) 6 2	47, 102, 126, 141	0
49	BQ	141/141 (100%)	-0.21	2 (1%) 78 60	47, 61, 84, 125	0
49	DQ	141/141 (100%)	-0.19	2 (1%) 78 60	43, 60, 87, 122	0
50	BR	117/118 (99%)	0.17	1 (0%) 85 72	55, 84, 101, 108	0
50	DR	117/118 (99%)	0.06	3 (2%) 59 35	52, 79, 97, 106	0
51	BS	98/112 (87%)	0.32	3 (3%) 52 28	69, 101, 122, 126	0
51	DS	98/112 (87%)	0.70	8 (8%) 14 5	86, 106, 124, 126	0
52	BT	137/146 (93%)	0.11	7 (5%) 32 13	54, 84, 135, 163	0
52	DT	137/146 (93%)	-0.04	7 (5%) 32 13	56, 81, 137, 160	0
53	BU	117/118 (99%)	-0.11	0 100 100	60, 74, 102, 111	0
53	DU	117/118 (99%)	-0.17	0 100 100	52, 74, 100, 108	0
54	BV	101/101 (100%)	0.29	6 (5%) 26 11	61, 102, 117, 121	0
54	DV	101/101 (100%)	0.25	2 (1%) 68 46	50, 102, 117, 119	0
55	BW	113/113 (100%)	0.08	4 (3%) 48 23	60, 83, 111, 140	0
55	DW	113/113 (100%)	0.08	2 (1%) 71 50	59, 76, 112, 143	0
56	BX	92/96 (95%)	0.28	2 (2%) 65 42	69, 86, 109, 120	0
56	DX	92/96 (95%)	0.21	2 (2%) 65 42	60, 88, 108, 121	0
57	BY	100/110 (90%)	1.27	20 (20%) 1 0	103, 121, 153, 159	0
57	DY	100/110 (90%)	1.19	20 (20%) 1 0	99, 119, 153, 162	0
58	BZ	183/206 (88%)	0.13	13 (7%) 19 7	53, 85, 129, 139	0
58	DZ	183/206 (88%)	0.16	7 (3%) 44 21	59, 85, 124, 132	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
All	All	21996/23368 (94%)	0.03	840 (3%) 44 21	20, 77, 144, 200	0

All (840) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
38	BC	106	GLY	16.6
57	BY	2	ARG	12.4
28	B2	72	ALA	9.7
36	BA	654(C)	G	9.1
28	B2	42	GLY	8.7
41	DF	1	MET	8.6
35	D9	37	GLY	8.5
1	CA	88	A	8.5
41	BF	24	LEU	8.4
38	DC	106	GLY	8.4
57	DY	79	CYS	8.2
49	DQ	141	GLN	8.2
42	DG	2	PRO	8.1
1	CA	89	C	8.0
49	BQ	141	GLN	7.6
35	D9	1	MET	7.6
42	DG	48	GLU	7.6
30	B4	47	GLN	7.5
42	BG	48	GLU	7.5
14	CN	2	ALA	7.4
25	CZ	36	ALA	7.4
36	BA	654(K)	C	7.3
36	BA	2802	G	7.2
36	DA	654(C)	G	7.0
36	DA	654(E)	G	7.0
25	CZ	183	HIS	6.8
31	B5	60	VAL	6.8
25	CZ	141	VAL	6.7
35	B9	1	MET	6.6
13	AM	125	ARG	6.6
25	AZ	42	VAL	6.5
54	DV	36	PRO	6.5
58	DZ	114	GLY	6.5
36	DA	2802	G	6.5
36	DA	1066	U	6.5
38	DC	97	GLU	6.5
25	CZ	42	VAL	6.5

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Mol	Chain	Res	Type	RSRZ
13	CM	123	ALA	6.4
31	D5	60	VAL	6.3
38	BC	107	TRP	6.3
57	BY	51	VAL	6.2
36	BA	654(I)	C	6.2
1	AA	89	C	6.2
36	DA	2896	C	6.2
25	CZ	213	PRO	6.1
36	BA	1077	A	6.0
41	BF	20	LEU	6.0
28	B2	68	ARG	6.0
30	D4	38	LYS	6.0
43	DH	170	ARG	6.0
57	DY	2	ARG	5.9
36	DA	1087	G	5.9
38	BC	1	PRO	5.9
32	B6	42	TRP	5.9
36	BA	654(J)	A	5.8
36	BA	1066	U	5.8
28	B2	71	ASN	5.7
41	BF	1	MET	5.7
27	B1	85	LEU	5.7
38	BC	121	GLY	5.7
58	BZ	113	ALA	5.6
36	BA	2894	G	5.6
58	DZ	142	SER	5.6
36	DA	654(V)	A	5.6
36	DA	1077	A	5.5
14	AN	2	ALA	5.5
52	BT	135	ALA	5.5
38	BC	105	ASP	5.5
51	DS	80	LEU	5.5
11	AK	129	SER	5.5
31	D5	59	GLU	5.4
25	CZ	73	ALA	5.4
1	AA	88	A	5.4
36	DA	654(K)	C	5.3
25	CZ	195	TRP	5.3
28	B2	9	GLN	5.3
41	BF	25	PRO	5.3
57	BY	52	SER	5.3
36	BA	1509	C	5.3

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Mol	Chain	Res	Type	RSRZ
25	CZ	33	TYR	5.3
36	BA	2795	G	5.2
38	DC	105	ASP	5.2
7	CG	81	GLY	5.2
38	DC	107	TRP	5.2
36	BA	2796	U	5.1
52	DT	1	MET	5.1
58	DZ	113	ALA	5.1
25	CZ	68	VAL	5.1
30	B4	42	PHE	5.1
25	CZ	37	ALA	5.1
30	B4	32	TYR	5.1
20	AT	106	ALA	5.0
36	DA	654(J)	A	5.0
25	CZ	1	ALA	5.0
36	DA	654(I)	C	5.0
57	DY	51	VAL	5.0
52	BT	136	GLN	5.0
36	DA	654(H)	G	5.0
26	B0	3	HIS	5.0
57	BY	61	ILE	5.0
42	BG	2	PRO	5.0
36	BA	654(E)	G	5.0
40	DE	204	ALA	4.9
1	CA	81	U	4.9
43	BH	88	LEU	4.9
36	BA	1093	G	4.9
25	CZ	79	HIS	4.8
30	D4	32	TYR	4.8
31	B5	59	GLU	4.7
43	BH	81	GLU	4.7
36	BA	654(T)	C	4.7
36	BA	654(S)	G	4.7
36	DA	275	G	4.7
57	BY	53	PRO	4.7
13	CM	43	THR	4.7
26	B0	4	LYS	4.6
36	BA	654(G)	C	4.6
13	AM	84	ILE	4.6
25	CZ	318	ALA	4.6
36	BA	654(H)	G	4.6
1	CA	91	C	4.6

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Mol	Chain	Res	Type	RSRZ
29	D3	1	MET	4.6
36	DA	2801	A	4.6
25	CZ	260	PRO	4.6
43	BH	170	ARG	4.6
57	DY	54	LYS	4.5
1	CA	82	U	4.5
36	DA	352	G	4.5
28	B2	64	LEU	4.5
41	DF	25	PRO	4.5
43	DH	86	GLU	4.5
28	B2	50	ILE	4.5
38	BC	108	MET	4.5
36	BA	654(F)	C	4.5
32	D6	26	ASN	4.5
38	DC	77	ILE	4.5
36	DA	2796	U	4.4
25	CZ	186	PRO	4.4
36	DA	654(G)	C	4.4
36	BA	1174	A	4.4
36	BA	2799	C	4.4
52	DT	135	ALA	4.4
36	DA	1174	A	4.4
36	DA	1509	C	4.3
25	CZ	72	THR	4.3
7	CG	156	TRP	4.3
29	B3	1	MET	4.3
57	BY	6	HIS	4.3
42	DG	49	ASP	4.3
13	CM	122	LYS	4.2
31	B5	58	LEU	4.2
25	CZ	179	LEU	4.2
1	AA	1447	A	4.2
40	BE	204	ALA	4.2
57	DY	55	TYR	4.2
25	AZ	85	HIS	4.2
36	BA	654(L)	G	4.2
38	BC	117	PRO	4.2
30	B4	34	GLU	4.2
2	CB	132	LYS	4.1
28	B2	41	ILE	4.1
25	CZ	203	LEU	4.1
36	BA	654(V)	A	4.1

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Mol	Chain	Res	Type	RSRZ
57	DY	5	MET	4.1
33	B7	48	LYS	4.1
38	DC	109	ASP	4.1
13	CM	125	ARG	4.1
25	CZ	147	LEU	4.0
1	CA	80	G	4.0
36	DA	654(S)	G	4.0
42	BG	49	ASP	4.0
30	D4	13	ARG	4.0
41	DF	24	LEU	4.0
25	CZ	217	VAL	4.0
36	DA	277	C	4.0
25	CZ	310	ILE	4.0
1	CA	1036	G	4.0
36	DA	156	U	4.0
40	DE	69	LYS	4.0
9	CI	19	LEU	4.0
13	AM	122	LYS	4.0
26	D0	5	LYS	4.0
36	DA	1104	C	3.9
41	DF	2	LYS	3.9
32	D6	42	TRP	3.9
25	CZ	26	THR	3.9
48	BP	118	GLY	3.9
41	BF	12	LEU	3.9
10	CJ	99	LYS	3.9
10	CJ	73	ASP	3.9
12	AL	128	ALA	3.9
57	DY	52	SER	3.9
32	B6	23	THR	3.9
42	BG	50	ALA	3.9
7	CG	80	VAL	3.8
36	BA	275	G	3.8
57	BY	92	ASN	3.8
4	CD	47	ARG	3.8
25	CZ	180	GLU	3.8
36	BA	2207	G	3.8
1	AA	92	C	3.8
14	CN	14	PRO	3.8
25	CZ	139	ASP	3.8
36	BA	1091	G	3.8
25	CZ	266	VAL	3.8

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
36	DA	654(F)	C	3.8
6	AF	101	ALA	3.8
9	CI	4	TYR	3.8
55	DW	113	LYS	3.8
25	CZ	185	ASN	3.7
57	DY	35	TYR	3.7
4	AD	209	ARG	3.7
36	DA	2793	G	3.7
43	DH	82	GLY	3.7
28	B2	8	LYS	3.7
36	BA	2803	C	3.7
38	BC	100	ILE	3.7
22	CW	44	G	3.7
36	BA	654(D)	G	3.7
25	CZ	287	GLY	3.7
38	BC	112	ALA	3.7
57	BY	3	VAL	3.7
57	BY	5	MET	3.7
1	AA	81	U	3.7
32	B6	46	HIS	3.7
36	BA	352	G	3.7
36	DA	1089	G	3.7
1	AA	76	C	3.6
25	CZ	232	THR	3.6
25	CZ	259	ALA	3.6
36	BA	2801(A)	A	3.6
36	BA	271(J)	C	3.6
36	DA	1173	G	3.6
25	CZ	252	GLU	3.6
36	BA	2896	C	3.6
57	BY	45	VAL	3.6
38	DC	115	ALA	3.6
30	D4	34	GLU	3.6
40	BE	54	GLN	3.6
35	B9	28	GLU	3.6
36	BA	271(L)	U	3.6
28	B2	43	GLN	3.6
10	CJ	28	ARG	3.6
58	DZ	150	LEU	3.6
36	BA	2805	G	3.6
36	BA	2801	A	3.6
25	CZ	77	TYR	3.5

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Mol	Chain	Res	Type	RSRZ
29	D3	2	PRO	3.5
25	CZ	71	GLU	3.5
55	BW	112	GLY	3.5
57	DY	53	PRO	3.5
36	DA	2804	C	3.5
36	BA	654(U)	A	3.5
36	DA	1535	A	3.5
58	BZ	114	GLY	3.5
1	AA	1030(B)	C	3.5
36	BA	2189	U	3.5
1	AA	78	G	3.5
36	BA	229	A	3.5
10	CJ	5	ARG	3.5
28	B2	10	LEU	3.4
36	BA	1420	U	3.4
38	DC	137	LEU	3.4
51	BS	54	LEU	3.4
25	CZ	88	TYR	3.4
25	CZ	41	ASN	3.4
52	DT	134	GLU	3.4
25	CZ	154	VAL	3.4
28	D2	72	ALA	3.4
25	AZ	63	ILE	3.4
38	DC	76	ALA	3.4
36	BA	157	U	3.4
36	BA	1177	A	3.4
19	AS	10	PHE	3.4
13	CM	7	VAL	3.4
13	AM	124	PRO	3.4
7	CG	82	GLY	3.4
25	CZ	233	GLY	3.4
9	CI	128	ARG	3.3
36	DA	2799	C	3.3
41	DF	23	ASP	3.3
48	DP	83	VAL	3.3
43	BH	46	GLU	3.3
36	BA	1079	C	3.3
30	D4	47	GLN	3.3
51	DS	34	HIS	3.3
54	DV	1	MET	3.3
11	AK	13	GLN	3.3
1	AA	1030(A)	G	3.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
36	DA	614(B)	G	3.3
43	BH	34	GLU	3.3
35	D9	5	ALA	3.3
38	DC	112	ALA	3.3
36	DA	654(D)	G	3.3
52	BT	27	THR	3.3
19	AS	81	ARG	3.3
36	DA	2795	G	3.3
41	BF	131	GLY	3.3
43	BH	51	ARG	3.2
43	DH	96	ALA	3.2
22	AW	44	G	3.2
36	DA	1062	G	3.2
57	BY	54	LYS	3.2
25	AZ	41	ASN	3.2
36	DA	1534	U	3.2
1	AA	1129	C	3.2
36	BA	1049	C	3.2
52	DT	136	GLN	3.2
57	BY	4	LYS	3.2
23	CX	13	A	3.2
25	CZ	184	ARG	3.2
1	CA	1447	A	3.2
10	CJ	4	ILE	3.2
36	DA	1065	U	3.2
1	AA	1030(D)	A	3.2
36	DA	2893	G	3.2
2	CB	7	VAL	3.1
25	CZ	85	HIS	3.1
43	BH	44	VAL	3.1
36	BA	654	A	3.1
35	D9	34	GLN	3.1
41	DF	205	ARG	3.1
36	DA	1074	G	3.1
51	DS	79	ALA	3.1
1	CA	1129	C	3.1
11	CK	129	SER	3.1
36	BA	1075	C	3.1
36	DA	654(L)	G	3.1
57	DY	75	ILE	3.1
13	CM	40	ASN	3.1
26	D0	3	HIS	3.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
43	DH	53	GLU	3.1
36	DA	157	U	3.1
36	BA	277	C	3.1
7	AG	156	TRP	3.1
23	AX	13	A	3.1
35	B9	37	GLY	3.1
36	DA	1097	U	3.1
38	DC	1	PRO	3.1
38	DC	145	VAL	3.1
52	DT	137	LYS	3.1
36	DA	1088	A	3.1
43	BH	161	GLY	3.1
38	DC	108	MET	3.1
57	DY	89	PHE	3.1
31	B5	31	VAL	3.1
36	DA	271(L)	U	3.1
38	BC	95	GLY	3.1
25	CZ	29	ALA	3.0
31	D5	52	TYR	3.0
41	DF	12	LEU	3.0
25	CZ	8	THR	3.0
42	DG	50	ALA	3.0
38	DC	94	VAL	3.0
52	BT	137	LYS	3.0
36	BA	156	U	3.0
41	BF	8	GLN	3.0
19	CS	81	ARG	3.0
38	BC	82	LYS	3.0
1	AA	91	C	3.0
41	DF	4	VAL	3.0
23	CX	27	A	3.0
32	B6	54	ILE	3.0
10	CJ	77	PRO	3.0
22	CW	3	C	3.0
38	DC	70	LYS	3.0
58	BZ	150	LEU	3.0
30	B4	5	ILE	3.0
32	D6	46	HIS	3.0
36	DA	888	C	3.0
54	BV	101	GLY	3.0
38	BC	120	MET	3.0
30	D4	42	PHE	3.0

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Mol	Chain	Res	Type	RSRZ
22	AW	34	G	3.0
25	AZ	183	HIS	3.0
25	CZ	280	GLY	3.0
48	DP	76	LYS	3.0
1	AA	1026	G	3.0
30	D4	15	ILE	3.0
36	BA	614(B)	G	2.9
36	BA	1046	A	2.9
7	CG	85	TYR	2.9
25	AZ	186	PRO	2.9
28	B2	49	LYS	2.9
25	CZ	264	ARG	2.9
31	D5	58	LEU	2.9
36	BA	1087	G	2.9
43	DH	151	ILE	2.9
38	BC	94	VAL	2.9
22	AW	7	A	2.9
36	BA	271(K)	U	2.9
38	DC	103	ILE	2.9
36	BA	1080	C	2.9
36	DA	1072	C	2.9
25	CZ	164	PRO	2.9
42	BG	28	VAL	2.9
10	CJ	23	ILE	2.9
35	B9	34	GLN	2.9
12	CL	127	GLU	2.9
19	AS	43	GLU	2.9
57	DY	91	GLU	2.9
54	BV	36	PRO	2.9
57	BY	91	GLU	2.9
25	AZ	112	PRO	2.9
13	AM	123	ALA	2.9
1	AA	1001	A	2.9
23	AX	27	A	2.9
25	CZ	32	THR	2.9
26	D0	7	LEU	2.9
1	AA	1027	C	2.9
58	BZ	148	ASP	2.9
36	DA	2894	G	2.9
35	D9	10	ILE	2.9
36	BA	1094	U	2.9
36	DA	1064	C	2.9

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	AA	1036	G	2.8
36	DA	2207	G	2.8
55	BW	113	LYS	2.8
1	AA	1037	C	2.8
36	BA	654(M)	C	2.8
36	DA	1076	C	2.8
36	DA	2791	C	2.8
1	CA	90	U	2.8
13	CM	124	PRO	2.8
16	CP	52	ASP	2.8
11	AK	128	ALA	2.8
48	DP	150	ALA	2.8
36	BA	2793	G	2.8
7	CG	79	ARG	2.8
36	BA	1175	U	2.8
25	CZ	81	ASP	2.8
38	BC	125	SER	2.8
32	B6	26	ASN	2.8
48	DP	15	ARG	2.8
48	DP	121	LYS	2.8
1	CA	77	G	2.8
4	CD	42	GLN	2.8
38	DC	92	ASP	2.8
4	CD	21	LEU	2.8
48	BP	149	GLU	2.8
57	BY	63	LYS	2.8
2	AB	122	PHE	2.8
52	BT	134	GLU	2.8
52	BT	1	MET	2.8
22	CW	47	U	2.7
56	BX	87	GLN	2.7
41	BF	124	LEU	2.7
43	BH	21	PRO	2.7
10	CJ	86	MET	2.7
36	BA	654(A)	G	2.7
40	BE	69	LYS	2.7
48	DP	14	LYS	2.7
21	CU	9	ARG	2.7
25	CZ	110	ASP	2.7
10	CJ	85	LEU	2.7
38	BC	109	ASP	2.7
36	BA	1048	A	2.7

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Mol	Chain	Res	Type	RSRZ
56	DX	5	TYR	2.7
39	DD	276	LYS	2.7
25	CZ	339	ARG	2.7
38	DC	93	TYR	2.7
38	BC	77	ILE	2.7
30	D4	25	TYR	2.7
25	CZ	86	ALA	2.7
28	B2	12	GLU	2.7
41	BF	18	ARG	2.7
23	CX	12	A	2.7
25	CZ	247	VAL	2.7
34	B8	20	GLY	2.7
32	B6	20	ASN	2.7
1	CA	1005	A	2.6
7	CG	83	ALA	2.6
43	BH	31	GLY	2.6
51	DS	27	SER	2.6
10	CJ	75	ILE	2.6
25	CZ	140	MET	2.6
13	CM	121	LYS	2.6
36	BA	1065	U	2.6
25	CZ	268	THR	2.6
36	DA	2801(A)	A	2.6
31	D5	3	LYS	2.6
25	CZ	405	GLU	2.6
36	BA	2794	C	2.6
25	CZ	6	VAL	2.6
40	DE	59	VAL	2.6
43	BH	33	LEU	2.6
22	CW	21	A	2.6
38	DC	102	LYS	2.6
4	AD	174	LEU	2.6
25	CZ	83	PRO	2.6
41	BF	26	ALA	2.6
57	DY	68	HIS	2.6
35	D9	36	GLN	2.6
48	BP	17	LYS	2.6
4	CD	20	TYR	2.6
9	CI	92	TYR	2.6
41	DF	14	PRO	2.6
36	DA	271(K)	U	2.6
25	CZ	103	ILE	2.6

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Mol	Chain	Res	Type	RSRZ
43	DH	112	PRO	2.6
25	CZ	34	VAL	2.6
55	DW	1	MET	2.6
38	BC	97	GLU	2.6
22	AW	5	G	2.6
36	BA	1176	G	2.6
36	DA	1045	A	2.6
35	D9	16	VAL	2.6
42	BG	126	ASP	2.6
2	AB	137	ARG	2.6
36	BA	1089	G	2.6
36	BA	888	C	2.6
57	DY	57	GLN	2.5
1	AA	1003	G	2.5
36	BA	1173	G	2.5
2	AB	128	GLU	2.5
28	B2	16	LEU	2.5
48	BP	119	GLU	2.5
10	CJ	78	ASN	2.5
13	CM	120	LYS	2.5
25	CZ	206	ILE	2.5
25	CZ	263	ARG	2.5
34	D8	64	TYR	2.5
41	BF	166	ALA	2.5
32	D6	35	GLU	2.5
36	BA	271(N)	U	2.5
48	DP	7	ARG	2.5
25	CZ	334	PHE	2.5
27	B1	89	GLU	2.5
4	CD	165	MET	2.5
52	DT	27	THR	2.5
10	CJ	82	ILE	2.5
1	CA	204	U	2.5
36	DA	11	G	2.5
41	DF	8	GLN	2.5
32	D6	21	TYR	2.5
48	DP	95	VAL	2.5
49	DQ	140	ALA	2.5
25	CZ	212	THR	2.5
28	B2	51	ARG	2.5
25	AZ	141	VAL	2.5
22	CW	34	G	2.5

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Mol	Chain	Res	Type	RSRZ
30	D4	8	LYS	2.5
57	BY	55	TYR	2.5
9	CI	6	GLY	2.5
40	BE	88	GLY	2.5
25	CZ	9	LYS	2.5
1	AA	1031	G	2.5
36	BA	2190	G	2.5
58	BZ	140	ASP	2.5
25	CZ	221	PHE	2.5
54	BV	25	LEU	2.5
38	BC	81	GLU	2.5
25	CZ	108	ALA	2.5
42	DG	75	LYS	2.5
14	AN	14	PRO	2.5
36	BA	1114	G	2.5
28	B2	56	GLN	2.5
58	BZ	144	LEU	2.5
20	AT	98	PRO	2.4
52	BT	39	ARG	2.4
1	AA	470	C	2.4
46	BN	129	PRO	2.4
25	CZ	286	VAL	2.4
25	CZ	309	SER	2.4
57	BY	34	LYS	2.4
48	DP	118	GLY	2.4
12	CL	28	LYS	2.4
25	CZ	216	ASP	2.4
48	BP	15	ARG	2.4
36	DA	654(T)	C	2.4
57	DY	32	PRO	2.4
57	DY	6	HIS	2.4
25	CZ	16	THR	2.4
25	CZ	87	ASP	2.4
4	CD	36	ARG	2.4
10	CJ	55	LYS	2.4
10	AJ	33	GLN	2.4
1	AA	80	G	2.4
25	CZ	200	TRP	2.4
36	DA	654	A	2.4
48	BP	51	PHE	2.4
48	BP	125	VAL	2.4
36	DA	1093	G	2.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
4	CD	35	ARG	2.4
10	CJ	26	ALA	2.4
2	AB	232	PRO	2.4
4	CD	17	VAL	2.4
25	CZ	76	HIS	2.4
38	BC	129	ARG	2.4
48	DP	90	ARG	2.4
4	CD	152	SER	2.4
36	BA	1078	U	2.4
36	DA	158	U	2.4
36	DA	2897	U	2.4
4	AD	133	VAL	2.4
43	DH	43	VAL	2.4
38	BC	76	ALA	2.4
2	AB	132	LYS	2.4
36	BA	1534	U	2.4
36	BA	2897	U	2.4
41	BF	126	VAL	2.4
1	AA	1456	G	2.4
50	BR	2	ARG	2.4
52	DT	132	LYS	2.4
54	BV	40	LEU	2.4
36	BA	1095	A	2.4
13	CM	118	ALA	2.4
36	DA	654(N)	G	2.4
25	CZ	403	ILE	2.4
30	D4	22	ILE	2.4
1	AA	90	U	2.4
25	AZ	1	ALA	2.4
28	B2	23	LYS	2.4
36	DA	2099	U	2.4
36	BA	1067	A	2.4
25	AZ	87	ASP	2.3
19	CS	28	LYS	2.3
48	BP	84	ASN	2.3
25	CZ	304	LEU	2.3
36	DA	1067	A	2.3
40	DE	53	PRO	2.3
25	CZ	109	ALA	2.3
43	DH	161	GLY	2.3
48	DP	112	LEU	2.3
4	CD	209	ARG	2.3

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Mol	Chain	Res	Type	RSRZ
31	D5	55	ARG	2.3
25	CZ	163	PHE	2.3
54	BV	38	LEU	2.3
30	B4	46	GLN	2.3
30	D4	23	GLU	2.3
25	CZ	400	VAL	2.3
36	DA	2792	G	2.3
58	BZ	157	LEU	2.3
25	CZ	150	VAL	2.3
25	CZ	239	THR	2.3
56	BX	27	THR	2.3
48	DP	35	HIS	2.3
25	AZ	38	GLU	2.3
40	DE	52	LEU	2.3
10	CJ	72	VAL	2.3
25	CZ	249	VAL	2.3
22	CW	5	G	2.3
25	CZ	130	TYR	2.3
1	AA	1005	A	2.3
16	CP	1	MET	2.3
28	D2	71	ASN	2.3
22	CW	9	A	2.3
38	DC	121	GLY	2.3
48	BP	104	GLY	2.3
9	CI	63	ILE	2.3
28	D2	24	LEU	2.3
36	BA	1541	G	2.3
1	AA	841	U	2.3
50	DR	2	ARG	2.3
10	CJ	89	ASP	2.3
48	BP	98	GLU	2.3
4	CD	155	LEU	2.3
41	DF	192	LEU	2.3
48	DP	51	PHE	2.3
25	CZ	215	ARG	2.3
33	B7	47	ARG	2.3
36	DA	271(G)	C	2.3
38	DC	129	ARG	2.3
58	DZ	80	ARG	2.3
10	CJ	37	PRO	2.3
28	D2	64	LEU	2.2
1	AA	1446	U	2.2

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Mol	Chain	Res	Type	RSRZ
49	BQ	140	ALA	2.2
57	DY	86	ARG	2.2
58	BZ	11	GLU	2.2
35	D9	31	LYS	2.2
38	BC	137	LEU	2.2
38	DC	95	GLY	2.2
41	BF	23	ASP	2.2
41	DF	135	LYS	2.2
56	DX	67	GLY	2.2
4	CD	158	ILE	2.2
41	DF	13	SER	2.2
57	DY	36	ALA	2.2
22	CW	46	G	2.2
36	BA	2792	G	2.2
43	BH	47	GLU	2.2
55	BW	3	ALA	2.2
12	CL	21	LYS	2.2
43	BH	122	THR	2.2
28	B2	37	PHE	2.2
43	DH	21	PRO	2.2
19	AS	28	LYS	2.2
48	BP	35	HIS	2.2
55	BW	5	ALA	2.2
36	DA	1063	G	2.2
3	AC	81	GLY	2.2
4	CD	44	GLY	2.2
25	AZ	184	ARG	2.2
28	B2	53	LEU	2.2
41	DF	207	GLY	2.2
48	BP	91	PHE	2.2
43	BH	19	VAL	2.2
43	DH	44	VAL	2.2
48	DP	126	VAL	2.2
25	CZ	142	ASP	2.2
38	DC	101	GLN	2.2
43	BH	168	PRO	2.2
46	DN	129	PRO	2.2
32	B6	37	ARG	2.2
36	DA	2807	G	2.2
25	AZ	111	GLY	2.2
26	B0	6	GLY	2.2
43	BH	60	ARG	2.2

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Mol	Chain	Res	Type	RSRZ
20	AT	99	LEU	2.2
41	BF	207	GLY	2.2
48	BP	105	LEU	2.2
4	CD	170	VAL	2.2
25	AZ	88	TYR	2.2
25	CZ	299	GLU	2.2
5	CE	154	GLY	2.2
22	AW	71	G	2.2
41	BF	11	VAL	2.2
57	BY	39	VAL	2.2
25	CZ	296	GLU	2.2
30	B4	13	ARG	2.2
41	DF	194	MET	2.2
48	DP	133	SER	2.2
6	CF	61	LEU	2.2
51	BS	80	LEU	2.2
22	CW	16	U	2.2
32	B6	44	ARG	2.2
1	AA	1001(A)	G	2.2
4	CD	164	ALA	2.2
29	D3	10	LYS	2.2
36	BA	10	G	2.2
22	AW	45	U	2.1
36	DA	6	A	2.1
36	DA	155	U	2.1
43	BH	32	GLU	2.1
32	B6	50	ARG	2.1
25	CZ	255	ILE	2.1
36	DA	1068	G	2.1
50	DR	59	ASP	2.1
4	CD	27	TYR	2.1
36	DA	229	A	2.1
2	CB	127	ILE	2.1
10	CJ	24	VAL	2.1
36	BA	1100	C	2.1
25	CZ	13	ASN	2.1
51	BS	34	HIS	2.1
1	AA	77	G	2.1
36	DA	1091	G	2.1
42	DG	82	LEU	2.1
43	BH	42	ARG	2.1
58	BZ	112	ARG	2.1

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Mol	Chain	Res	Type	RSRZ
9	CI	48	GLU	2.1
20	AT	100	ILE	2.1
25	CZ	105	VAL	2.1
36	DA	1509(A)	A	2.1
1	CA	1452	C	2.1
36	BA	1076	C	2.1
4	CD	33	MET	2.1
41	BF	4	VAL	2.1
25	CZ	75	ARG	2.1
42	DG	133	LEU	2.1
57	BY	67	LEU	2.1
36	DA	654(R)	C	2.1
54	BV	19	LYS	2.1
57	BY	10	GLY	2.1
41	DF	18	ARG	2.1
40	BE	151	TYR	2.1
48	DP	110	TYR	2.1
7	CG	65	ALA	2.1
36	BA	2629	A	2.1
58	BZ	115	GLY	2.1
36	BA	2804	C	2.1
9	CI	95	LYS	2.1
10	CJ	90	LEU	2.1
38	DC	82	LYS	2.1
35	B9	20	HIS	2.1
51	DS	90	GLY	2.1
30	D4	31	ILE	2.1
36	DA	1071	G	2.1
36	DA	1099	G	2.1
58	DZ	82	ARG	2.1
1	CA	92	C	2.1
4	CD	26	CYS	2.1
19	CS	22	LEU	2.1
20	AT	104	LEU	2.1
51	DS	36	TYR	2.1
11	CK	31	THR	2.1
25	CZ	362	VAL	2.1
48	DP	149	GLU	2.1
9	CI	15	ALA	2.1
16	CP	83	GLU	2.1
22	AW	16	U	2.1
25	CZ	165	GLY	2.1

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Mol	Chain	Res	Type	RSRZ
32	D6	37	ARG	2.1
35	D9	20	HIS	2.1
36	BA	654(B)	C	2.1
36	BA	2791	C	2.1
48	BP	122	PRO	2.1
57	DY	45	VAL	2.1
4	CD	144	ASP	2.1
42	BG	86	MET	2.1
43	BH	13	LYS	2.1
51	DS	77	ALA	2.1
1	AA	83	U	2.1
4	AD	160	GLN	2.1
36	BA	2895	U	2.1
19	CS	10	PHE	2.1
4	CD	37	PRO	2.1
27	D1	89	GLU	2.1
51	DS	60	GLY	2.1
38	DC	173	ALA	2.1
43	BH	61	HIS	2.0
25	CZ	265	THR	2.0
36	BA	654(N)	G	2.0
58	DZ	23	LYS	2.0
9	CI	52	ALA	2.0
58	BZ	131	ARG	2.0
57	BY	26	LYS	2.0
36	DA	1079	C	2.0
38	DC	98	GLU	2.0
25	AZ	6	VAL	2.0
25	CZ	30	ALA	2.0
36	BA	2891	G	2.0
38	DC	86	ALA	2.0
32	B6	35	GLU	2.0
36	BA	1072	C	2.0
25	CZ	98	GLN	2.0
50	DR	91	GLN	2.0
25	CZ	107	SER	2.0
58	BZ	153	SER	2.0
10	CJ	9	ARG	2.0
35	D9	23	VAL	2.0
58	BZ	10	ARG	2.0
57	DY	56	PRO	2.0
36	BA	1043	C	2.0

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Mol	Chain	Res	Type	RSRZ
2	AB	21	ARG	2.0
25	CZ	7	ARG	2.0
38	DC	206	GLY	2.0
1	CA	84	U	2.0
34	B8	48	PHE	2.0

## 6.2 Non-standard residues in protein, DNA, RNA chains [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. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 95<sup>th</sup> 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	LLDF	B-factors(Å <sup>2</sup> )	Q<0.9
24	7MG	CY	46	24/25	0.85	0.26	-	125,128,129,130	0
24	H2U	AY	17	20/21	0.72	0.43	-	186,190,190,191	0
24	7MG	AY	46	24/25	0.84	0.26	-	121,123,124,124	0
24	OMC	CY	32	21/22	0.93	0.22	-	78,83,93,94	0
24	4SU	CY	8	20/21	0.82	0.25	-	115,116,119,119	0
24	H2U	AY	16	20/21	0.68	0.61	-	172,183,184,185	0
24	H2U	CY	17	20/21	0.61	0.53	-	186,194,196,196	0
24	OMC	AY	32	21/22	0.93	0.18	-	61,66,79,80	0
24	MIA	CY	37	29/30	0.93	0.24	-	52,66,80,85	0
24	H2U	CY	16	20/21	0.68	0.39	-	171,181,183,185	0
24	H2U	AY	20	20/21	0.83	0.31	-	174,177,179,179	0
24	5MU	CY	54	21/22	0.85	0.22	-	113,125,126,129	0
24	PSU	AY	55	20/21	0.83	0.24	-	130,139,140,140	0
24	PSU	CY	55	20/21	0.80	0.21	-	131,134,135,136	0
24	H2U	CY	20	20/21	0.76	0.28	-	176,177,180,180	0
24	MIA	AY	37	29/30	0.95	0.21	-	42,52,67,76	0
24	4SU	AY	8	20/21	0.85	0.23	-	110,113,114,115	0
24	5MU	AY	54	21/22	0.91	0.15	-	108,122,123,127	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. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 95<sup>th</sup> 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	LLDF	B-factors(Å <sup>2</sup> )	Q<0.9
61	KIR	CZ	502	57/57	0.76	0.51	2.45	115,117,122,122	0
61	KIR	AZ	502	57/57	0.86	0.32	1.07	100,107,118,119	0
59	ZN	AN	101	1/1	0.98	0.18	-0.05	42,42,42,42	0
60	GDP	CZ	501	28/28	0.81	0.27	-0.35	114,131,139,140	0
60	GDP	AZ	501	28/28	0.89	0.20	-0.45	114,118,123,123	0
59	ZN	AD	301	1/1	0.99	0.25	-0.65	61,61,61,61	0
59	ZN	CD	301	1/1	0.97	0.26	-0.67	75,75,75,75	0
59	ZN	D4	101	1/1	0.95	0.08	-0.82	103,103,103,103	0
59	ZN	B4	101	1/1	0.96	0.15	-1.05	91,91,91,91	0
59	ZN	CN	101	1/1	0.97	0.16	-1.37	69,69,69,69	0
59	ZN	B9	101	1/1	0.88	0.13	-1.37	103,103,103,103	0
59	ZN	D9	101	1/1	0.97	0.14	-1.51	87,87,87,87	0

## 6.5 Other polymers [i](#)

There are no such residues in this entry.